Engineers, Surveyors, Planners, Scientists

MEMO

Date: July 21, 2017

To: Rick Warwick (ERC), Ron Tope (M/I Homes)

From: Shawn Arden, PE

Subject: Minerva Park Lake Dam: Contractor Questions from Monday July 17, 2017

Copies: Keith Libben, PE (ODNR), Ryan Ely, PE (EMH&T), Mike McGannon (GCI), Mayor Lynn Eisentrout (Minerva Park)

The following questions were raised by ERC on Monday July 17 and Tuesday July 18. Responses have been approved through the ODNR Dam Safety Program for implementation.

Question 1: A concrete wall was encountered extending from the spillway abutments along the embankment axis. The concrete wall will conflict with the proposed foundations for the pedestrian wall. How should this conflict be addressed?

Response: The Contractor shall carefully remove the concrete wall where it conflicts with the proposed pedestrian bridge foundation. Existing concrete that does not conflict with the proposed work shall remain intact. Provide RCP as specified on the plans between the spillway abutment and bridge foundation above existing concrete wall.

Question 2: While working on the existing spillway structure, a crack developed in the spillway apron concrete slab. The Contractor noted a void area under the slab in the vicinity of the crack. How should this issue be corrected?

Response: The Contractor shall core 2 holes (1 hole for inserting material and 1 hole as an air vent) in the spillway apron concrete slab above the void space. The Contractor shall then fill the void space beneath the slab and the core holes with CMS Item 613 Flowable Controlled Density Fill, Type 2.

The Contractor shall then prepare the crack for repair following ODOT CMS 512.07: Clean concrete surfaces adjacent to the cracks only to the extent necessary to achieve an adequate bond, and only by procedures which will not cause abrasive grits or concrete dust to penetrate the cracks. Do not permit the use of solvents or thinners in cracks or on bonding surfaces.

The Contractor shall fill the cracks with concrete during the pour of the apron slab overlay as shown on Plan Sheets 17 and 18.

Question 3: Can a mud mat be installed under the spillway chute to facilitate construction?

Response: Yes. The Contractor may install a 3-inch mud mat consisting of non-reinforced concrete with minimum compressive strength of 3,000 psi at 28 days. The Contractor shall reduce the volume of #8 aggregate fill to accommodate the thickness of the mud mat. The spillway chute shall be constructed of the materials and at the dimensions shown on the plans.

Question 4: Plan sheet 17 indicates unsuitable material shall be removed and replaced with #8 stone. Please confirm #8 stone is desired under the spillway inlet box.

Response: Following consultation with GCI and ERC, the Contractor shall take the following action:

1. Excavate unsuitable soils below the proposed structure and extending outward a minimum 5 feet on all sides.
2. Place and compact Item 601 Rock Channel Protection, Type D with filter fabric into the subgrade to stabilize. Bring Type D material to within 6 inches of the bottom elevation of the inlet box slab.
3. Cap Type D material with 3 inches of Item 304 Aggregate Base or #57 aggregate.
4. Install 3 inch mud mat above stone to the bottom elevation of the inlet box slab. Mud mat shall consist of non-reinforced concrete with a minimum 3,000 psi compressive strength at 28 days.

Question 5: What type of repairs are required for the exposed concrete spillway walls?

Response: Plan Sheet 19 indicates a non-epoxy sealer shall be applied to the exposed existing concrete spillway walls on the inside of the spillway structure. In addition, the Contractor shall apply the sealer to the existing concrete walls on the exterior of the spillway structure after excavation for, but prior to installing RCP Type A as shown on the plans. The Contractor shall prepare the surface prior to application of the sealer by removing moss, foreign objects, and unsound concrete.