

EXHIBIT O

Applicant's Technical Memo: "Engineering Peer Review Response"

(February 16, 2021)

Date: February 16, 2021
To: Marla Powers, Associate Planner, Poulsbo PED
From: John Piccone, P.E., Soundwest Engineering Assoc.
Carol Tripp, Manager, Port of Poulsbo
Subject: Port response to Anchor QEA Engineering Peer Review and Request for Information

Notwithstanding the fact that the Port of Poulsbo was asked to reimburse the City for the fees associated with the peer review, the Port's design team appreciates the suggestions provided by Anchor QEA in their January 27, 2021 peer review memorandum. Although the comments were primarily focused on a level of detail consistent with 90-100% complete design documents (as opposed to the 60% documents reviewed), the Port's design team found the majority of the suggestions to be appropriate considerations, and generally consistent with the design teams' intent for final design documents.

The Port's design team includes nine senior level professional engineers registered in the State of Washington, each with considerable experience in their respective roles on this project, including structural, geotechnical, electrical, mechanical, and coastal disciplines. Additionally, the planned project design process includes a robust QA/QC review focused heavily on structural and constructability components following completion of the 90% design. Given that fact, it is not clear to the Port why the City would require third party confirmation of the design adequacy as a condition of the various shoreline permits? It seems to raise the question as to whether the City is a responsible party in confirming the design adequacy relative to safety and operation once constructed?

The Port is certainly willing to provide detailed responses to the Anchor QEA peer review request for additional information at the appropriate 90% stage of design however, further discussion between the Port and City seems necessary prior to that submittal. Primarily, the Port would like to more clearly understand the City's review responsibility relative to design adequacy and what cost/benefit the Port can expect following an additional iteration of review by the City's consultant Anchor QEA.

For the purposes of the City's SSDP and SCUP review of the project, the Port offers the following responses to the seven items of additional information requested in the Anchor QEA January 27, 2021 memorandum:

1. Blue Coast Engineering review of the current plans and provision of comments regarding differential movements of wave attenuator components and the various attached accessory floats.

Differential movements between structures is mainly addressed by providing a gap between each structure. For example, the access float will not be physically connected to the proposed breakwater or the Dock AA. Likewise, the southern length of breakwater is separate from the southwestern length of breakwater. The FLUPSY and floating restroom will be moored as shown on the 60% plans. Each will be tied to the breakwater and adjacent fingers as would any floating vessel. The FLUPSY has been designed and constructed by others. A transition plate will span the gap between the breakwater and the restroom and will be designed to accommodate ADA access.

2. Structural calculations justifying the design of the guide piles and embedment into the basin floor.

The current structural calculations have been developed in coordination with the project geotechnical engineer. The current geotechnical report is based in part on information gathered through three

marine borings drilled at the project site in early 2020. Structural calculations are currently being developed to the 90% level, and this effort includes further coordination with the geotechnical engineer to ensure that subsurface conditions are accurately considered.

3. *Geotechnical report with recommendations for the various guide piles.*

A 90% geotechnical report was prepared prior to finalizing the 60% structural calculations. The final geotechnical report will be prepared following the 90% design and QA/QC process.

4. *Justification analysis of the attachment details of fingers attached to the back side of the wave attenuator.*

Structural calculations and design of finger attachment to the breakwater will be finalized with the 90% design. The attachment details provided to the City with the 60% plans were schematically shown and were not fully designed. The finger connections will be designed with the necessary degrees of freedom and will account for expected vessel and environmental loads. The fingers and finger guide piles are not part of the lateral load path for wave attenuation. Wave attenuation will be accounted for by the breakwater floats and breakwater float guide piles.

5. *Confirmation that the floating restroom and FLUPSY can withstand the wave attenuator movements and forces and can maintain safe access per ADA requirements.*

See response to item 1.

6. *Analysis of all dock changes in alignment and the consideration of free-floating versus the noted fixed rigid connections.*

See response to items 1 and 4. Fingers will likely have a flexible attachment to the breakwater, like the Elliott Bay Marina design (see as-built sheet 32/Detail E, 5/9/1990, Job No. 90-1385).

7. *Reassessment of the various transition plates to assure they can handle all the degrees of freedom without sustaining damage.*

The transition plates will be designed in such a way as to allow the necessary degrees of freedom to move freely with the connecting structures. With the anticipated multi-axis motions, connections other than suggested hinges will be evaluated to reduce the necessary maintenance and wear on the transitions.

The Port of Poulsbo respectfully request confirmation that this memorandum fully satisfies the City's review process of this project relative to design adequacy, or clarification as described on page one of this memorandum.