

# MUNICIPALITY OF ANCHORAGE

Community Development Department  
Planning Division



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*Mayor Dan Sullivan*

## GEOTECHNICAL ADVISORY COMMISSION

December 8, 2010

Mr. Patrick Flynn, Chair  
Assembly Port Committee  
Municipality of Anchorage  
P.O. Box 196650  
Anchorage, AK 99519-6650

RE: Port of Anchorage Intermodal Expansion Project

Dear Mr. Flynn:

The Geotechnical Advisory Commission wishes to thank the Assembly Port Committee for the opportunity to attend its October 14, 2010 meeting. The Commission has maintained a particular interest in the Port of Anchorage Intermodal Expansion Project since its inception, given its local and statewide significance and scale, as well as the quality, scope, and progressive level of geotechnical engineering completed to date. The Commission spent much time during its October and November meetings discussing this project, and there are three important aspects which the Commission, in its advisory capacity, would like to bring to your attention.

1. Independent Review: On every occasion that the Commission has provided comments to the Port of Anchorage, the Commission has consistently recommended that the Project be subjected to an independent review. The Port of Anchorage's most recent reply to the Commission, dated September 7, 2010, clarified the contractual independence of the reviewers who have completed the reviews to date. Nonetheless, each of the "reviewers" had also provided professional services directly associated with the Project and, therefore, in the Commission's opinion, were not independent of the Project.

Additionally, the Commission is aware of documentation from only one peer review, in early 2008, by a member of the Port's design team. However, that review only addressed the geotechnical analysis and did not consider the structural aspects of the open cell design, nor construction plans and specifications for any specific improvement. During the Assembly Port Committee's October 14 meeting, Commission members understood that a representative of ICRC, the Project's program manager, said documentation summarizing the comments and recommendations generated during their other peer reviews would be provided. The Commission looks forward to receiving these documents.

Notwithstanding the above, the Commission continues to recommend that all future phases of the Project receive truly independent reviews by a qualified entity that is or has not been associated with the Project. Further, the independent review should consider all aspects of the design, including the geotechnical, structural, and civil engineering, as well as constructability of the prepared design.

2. Wet Barge Berth and North Extension I & II Sheet Pile Damage: The Commission members that attended the Assembly Port Committee's October 14 meeting appreciated learning about the preliminary findings from inspections of the recently constructed sheet pile cells forming the Wet Barge Berth and North Extension I & II. Given the unique aspects of the open-cell design, combined with the very challenging geotechnical and marine conditions at the Port of Anchorage, it is certainly reasonable to expect that some problems would be encountered during a construction project of this magnitude. However, the Commission is troubled by the apparent high frequency and concentration of damaged piling revealed during the recent inspections.

The Commission understands that the Project design engineering firm is presently investigating the extent, types, and causes of damage in the constructed sheet pile cells; after which they will evaluate the effects of the damage on the facility and then prepare plans to repair the damaged piling. While the Commission is confident that, in the end, the sheet pile problems will be resolved to the Municipality's satisfaction, the Commission nonetheless recommends that the Port of Anchorage enlist a qualified firm, one that is not already involved with the Project, to provide an independent review of the designer's analysis and repairs. Further, the Commission believes the independent review firm should be contracted as soon as possible so that they can witness firsthand the field investigations currently underway to identify and quantify the damaged piling.

3. Seismic Instrumentation: The Commission understands it is the state of practice for key port facilities in seismically active areas to include strong motion instrumentation. Ground motions recorded at port facilities during recent earthquakes have been demonstrated to provide information that was extremely beneficial to (a) help evaluate the seismic performance and response of the critical structures (e.g., docks, cranes, bulkheads, fills, etc.) and (b) validate the capacity of the facility to resist future seismic events. The Port of Anchorage recently informed the Commission that the plans for completion of the Wet Barge Berth or North Extension I & II facilities do not include seismic instrumentation, although the Port also said they supported such instrumentation subject to funding. Given the importance of the Port of Anchorage to the economy of Alaska, the Commission believes seismic instrumentation should be

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a fundamental and required component of the Project. Therefore, the Commission has committed to providing the Port with a resolution supporting seismic instrumentation and assistance with establishing such a program.

The Geotechnical Advisory Commission is available at your convenience to discuss these topics further, or to assist the Assembly as you may desire. Please feel free to contact me at 646-9613 or David Tremont with the MOA Community Development Department at 343-7915.

Sincerely,

**GEOTECHNICAL ADVISORY COMMISSION**

A handwritten signature in black ink, appearing to read "R. L. Scher".

Robert L. Scher, P.E.  
Chair

cc: William J. Sheffield, Director, Port of Anchorage  
Steven Ribuffo, Deputy Director, Port of Anchorage  
Jerry T. Weaver, Jr., Director, Community Development Department