

My name is Andy Romine. I live at [REDACTED]. I have lived in Anchorage since 1983.

The purpose of this letter is to comment on the recent PND work shop presentation held at City Hall on 2/22/13. I was there to listen to the presentation.

I was the on-site manager for MKB Constructors, the contractor who installed the sheet pile for the project as a sub-contractor to Quality Asphalt Paving (QAP). MKB Constructors is a partnership based in Kirkland Washington. My office is here in Anchorage. I started working with MKB in the spring of 2008 to manage the Port of Anchorage Expansion project and follow on projects in Alaska. Prior to working with MKB I spent nearly 20 years working for Swalling Construction Co., Inc. The last 9 years as operations manager overseeing all construction activities.

PND essentially focused on two aspects of the project. One was the construction quality of the QAP/MKB contract and the other being the conservative engineering analysis provided by CH2M HILL. My comments focus on the construction quality portion of PND's presentation.

PND's inference that West Construction was able to successfully install the work as "originally designed" is simply not true. Significant changes were made to the design and construction drawings utilized in the West Construction Contract compared to the QAP contract.

The "original design" (QAP contract) was based on the typical installation method of the OCSP structure which is basically building an elevated earthen platform to work from. In fact the contract plans stated "This project anticipates the creation of a containment dike by placing fill in the water to create a **work platform**, granular fill shall be placed within 200 feet of the bulkhead control line at centerline of wyes, from the top of the embankment to the mud line sloping shoreward forming a dike". Prior to installing the work platform/dike, dredging was completed to remove a portion of the existing Bootlegger Cove Soil Formation to within 10' of the tips of sheet piles that were to be installed in the face and the deeper portions of the tail walls in the OCSP structure. The contract referred to this work as slot dredging. The QAP contract required that this slot be backfilled within 7 days after dredging. QAP provided the dredging and backfilling of the slot in the summer of 2008. Pile installation work on the North Extension of the project started in April of 2009.

During construction of the OCSP as originally designed (QAP contract) one of the major impacts to the constructability was the fact that the face of the work dike crept seaward during construction. This meant that as you built the multiple horse shoe shaped enclosures (OCSP) the fill materials would move forward/ seaward, and put pressure on the wall causing a condition termed "iron binding" by PND. Iron binding is essentially a resistance in the pile to pile connections of the sheet piles during driving operations. As the wall moved seaward the forces produced by the fill materials pressing against the wall and the friction in the interlocks (iron binding) caused the driving to become more difficult and sometimes impossible. Additionally due to the increased driving resistance it was impossible to know if and when obstructions may be limiting the driving depth. Also at a certain point it became impossible to

remove the sheets because there was too much pressure on them from the fill pushing against the wall and the iron binding occurring in the connections. Considerable effort was made, based on PND's recommendations, to eliminate the seaward movement of the work dike during installation of the OCSP but the project records show none were successful.

West Construction was able to install certain portions of OCSP wall sections because they did not use a work platform. They did the work from floating construction barges. Based on PND's presentation in the work session PND apparently has now taken the position that working from a barge is the preferred "method" even though their original design drawings indicate that they anticipated the work being done from an earthen **work platform**. It should also be noted that PND presumably estimated the original project cost based on their "original design" which anticipated the work being completed by utilizing land based equipment and construction methods which is less expensive than barge based construction. This is a typical selling point of the OCSP and in fact is even included in their design patents. The West contract allowed dredging within 5' of the tip of the piles (compared to within 10' in the QAP contract) and did not require the slot to be backfilled within 7 days as was required in the QAP contract. This allowed West Construction to dredge the face and immediate tail wall sections of the OCSP and install their work into significantly less fill depths with as little as 5' of native materials.

The purpose of this letter is not to defend MKB's quality of work. I would just state; however, that after two years of intensive investigative work by independent engineers and months long discussions concerning the contractual issues relating to the project that MKB received a favorable settlement in regards to the changed conditions encountered on the project.

The purpose of this letter is to express my concern that PND wants to convince the Assembly that their "original design" is adequate both in terms of constructability and design and in fact even stated if not for the construction problems encountered due to, in their opinion, an inexperienced contractor there would have been no need for the work shop presentation in the first place. First and foremost is the fact that the design concerns expressed by CH2M Hill of the finished OCSP need to be resolved regardless of the constructability issues encountered in 2008 and 2009. Secondly, the elimination of the dike/work platform, allowing dredging to within 5' of planned pile tip, and eliminating the requirement to backfill the dredged area within 7 days, all changes to the original design, allowed West Construction to install a small number of cells. To state or infer that West Construction installed work under the "original design" is misleading at best. Additionally to term the work as successful one would have to evaluate the cost of this redesigned work as well as analyze the feasibility of installing a multitude of the OCSP cells based on the redesigned work without damage as it is project record that West also found damage to some of the sheets they installed, even with the scrutiny and inspection at exceedingly high levels.

If you would like to discuss this project further you can reach me at [REDACTED].

Andrew Romine