



HAINES BOROUGH, ALASKA

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December 7, 2012

The Honorable Sean Parnell, Governor
P.O. Box 110001
Juneau, AK 99811-0001

Dear Governor Parnell:

The Haines Borough respectfully requests your consideration for inclusion in your Fiscal Year 2014 capital budget submittal, the following:

Haines Port Chilkoot Dock - \$800,000. The Port Chilkoot Dock serves cruise ships that rely on Haines for ports of call and disembarkation and embarkation of passengers. The Phase II project consists of the following components: constructing a new 360-foot access trestle; 306-foot approach dock; ADA compliant 120-foot gangway and gangway access/queuing area; mooring dolphin; and ambulance turnaround area; as well as lightering dock and other improvements. Funding in the amount of \$800,000 is needed to complete the project; construction is scheduled to begin August 2013.

The Borough commissioned PND Engineers to perform a condition assessment of the existing approach trestle timber piles at the Port Chilkoot Dock (a copy of the PND report cover letter dated May 11, 2011 is attached). Of the approximately 104 timber piles, PND found that 101 exhibit "severe deterioration and loss of structural integrity." The three structurally sound piles have little to no remaining creosote below the splash zone. PND concludes that the trestle is "approaching the end of its useful life and is estimated to have less than 5 years of service remaining." PND recommends that the Borough refrain from operating vehicles while pedestrians occupy the approach trestle and that it be replaced in its entirety. Based on this recommendation, the Borough has placed severe restrictions on vehicle use at the Port Chilkoot Dock.

It should be noted that the timber piles supporting the approach dock are only in marginally better condition than the approach trestle piles and need to be replaced. The new mooring dolphin is needed to accommodate cruise ships when the approach dock is demolished and replaced with the new approach dock. Additionally, the gangway accessing the lightering dock is not ADA compliant. Cruise ship passengers have been severely injured in falls while using this facility during extreme low tides. The project is needed to ensure the safety of cruise ship passengers and safe moorage of cruise ships making ports of call at Haines.

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Thank you for your consideration of our request. We recognize the difficult decisions you have to make, but we believe that the proposed project would result in substantial benefit for the Haines Borough and for the State of Alaska. We are prepared to answer any questions or provide additional information for you or your staff.

Sincerely,

A handwritten signature in black ink that reads "Mark Earnest". The signature is written in a cursive style with a large initial "M" and a distinct "E".

Mark Earnest
Borough Manager

cc: The Honorable Bert Stedman, Senator



ENGINEERS, INC.

May 3, 2011

PND 092014.04

Brad Maynard
Capital Projects Manager
Haines Borough
P.O. Box 1209
Haines, Alaska 99827

Re: PC – Approach Trestle Pile Condition Assessment

Dear Mr. Maynard:

At your request, PND Engineers, Inc. (PND) made a Port Chilkoot Approach Trestle Pile Condition Assessment on April 18th & 19th, 2011. The following is a summary report of the condition assessment of the piles and conclusions.

SUMMARY:

The approach trestle consists of approximately 104 timber piles. PND inspected the piles using visual, drilling, and stress wave timing techniques. The primary inspection method was stress wave timing at various elevations. The stress wave transmission results indicated that 101 of the timber piles exhibited severe deterioration and loss of structural integrity.

BACKGROUND:

In April, 2007, PND made recommendations to the Haines Borough that a 5-year replacement plan be implemented for the approach trestle decking above the piles. Although not inspected with instrumentation in 2007, the existing trestle support piles were assumed to have a 10-15 year life expectancy.

OBJECTIVES:

The objectives of this assessment were:

1. To detect the location and severity of deterioration in the approach trestle timber piles through selective scanning using a stress wave transmission technique;
2. To determine how many of the timber piles need to be replaced in order to increase the load capacity of the approach trestle.

MATERIALS AND METHOD:

The approach trestle consists of 104 timber piles, typically arranged in four piles per bent. The pile bents are as labeled on Figure 1 bent 5 through bent 30. The piles are assigned a number one through four, with the farthest south being number one. Each timber pile was selectively scanned for deterioration. The above ground length of piles varies from 7 to 36 feet. The timber pile diameters at the elevation scanned ranged between 8 to 12 inches. PND utilized the extreme low tides to access and take measurements at the mud line. The scanning included pile bent 5 near the pile cap due to recently placed armor rock at that location. The top of the piles at bent 5 verified the data as a control point because the piles were in good condition. The lower elevations of bent 5 were inaccessible and assumed in poor condition. Inspection near the splash zone (area of barnacle growth $\pm 3.0'$) of the piles was conducted from a skiff. The piles were scanned near the lower cross bracing connections due to visible surface decay, splits, marine growth and mechanical damage. (See Photos)

May 3, 2011

PC – Approach Trestle Pile Condition Assessment

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RESULTS:

The results from stress wave scans are shown on Table 1. The stress wave transmission time measured, radial (perpendicular) to the grain, was in microseconds. The table includes the scanning raw data, location and notes. Typical stress wave transmission times for non-decayed Douglas-fir are approximately 244 $\mu\text{s}/\text{ft}$ and severely degraded members exhibit values of 1,000 $\mu\text{s}/\text{ft}$ or higher. The presence of decay greatly affects the stress wave transmission times and the strength of the member. A 30% increase in the stress wave timing implies a 50% loss in strength and/or a greater reading than 317 $\mu\text{s}/\text{ft}$. A 50% increase in the stress wave timing indicates severely decayed wood and/or greater reading than 366 $\mu\text{s}/\text{ft}$. A FAKOPP Microsecond Timer was used to measure wave timing at various elevations of the piles, perpendicular to the grain. The average of three timings at each point is an indicator of the soundness of wood in that area. If the three data points have significant disparity, it indicates that a pile anomaly exists in that area. The pile condition assessment did not include the portion of the piles above the splash zone to the pile caps.

CONCLUSIONS:

PND found 101 of the timber piles exhibited severe deterioration and loss of structural integrity. It appears that three piles exhibited soundness at the points of scanning. However, the three sound piles have little to no remaining creosote below the splash zone. PND concludes that if the approach trestle loading is to be maintained or increased, the piles should be replaced.

PND recommends that the Haines Borough immediately use caution when utilizing this approach trestle. The approach trestle is approaching the end of its useful life and is estimated to have less than 5 years of service remaining. Refrain from operating vehicles while pedestrians occupy the approach trestle. PND further recommends that the trestle be replaced in its entirety.

PND appreciates the opportunity to provide engineering services on this project. Please feel free to contact us should you have any questions or require additional information regarding this matter.

Sincerely,

PND Engineers, Inc. | Juneau Office



Per Christian L. Rasmussen, Staff Engineer

Enclosure

REFERENCES:

Robert J. Ross, Brian K. Bradshaw, Xiping Wang, Robert H. White and Roy F. Pellerin. 2004. Wood and Timber Condition Assessment Manual. Pp. 13-52.

