

APPENDIX A, DRAFT 12-2-15

All cost estimates shown in this report are preliminary, they are based on conceptual designs and approximate quantities obtained from on-site measurements, aerial photographs and from record drawings in Port files. In the case of buildings, particularly at Point Hudson, they are focused on exteriors and major mechanical / electrical systems; building elements where the Port has maintenance responsibility. For instance, included are window and door replacement; wall, floor and attic insulation to increase energy efficiency; replacement of 80 year old roofing shingles to protect the building structure; asbestos removal for worker and occupant safety; and heating and ventilation system upgrades for occupant comfort. Interior improvements such as floor coverings, bathroom and lighting fixtures, etc were not considered. Exterior improvements for Boat Haven buildings are similar except, because of their industrial nature, the extent is less and the materials are a lesser grade, consistent with the original construction.

The Point Hudson buildings were found to be structurally sound (with only minor exceptions), they were built with quality materials and good craftsmanship and they have a historic significance worth preserving. Several of the buildings have had recent paint and related exterior work. Others are scheduled for improvement but, as one would expect, they are weathered by the marine environment and look worse than they actually are. The Boat Haven buildings are not of the same initial quality. They were intended to be utilitarian industrial grade shelters (without the Federal government funded quality present in Point Hudson) and do not have the same long term expected service life. However, these Boat Haven buildings will continue to be serviceable , in spite of being over 40 years old, provided they receive the periodic maintenance suggested.

Generally, estimate resources used for all buildings include proprietary software published by RS Means, bids for re-roofing officer houses at Fort Worden, and estimates prepared by Roen Associates for Building 202 at Fort Worden. Dock estimates are based on bids received by the Port for Point Hudson reconstruction, Boat Haven A&B dock redevelopment, C&D dock repair, Commercial Basin float repair, bids for a Port of Everett project and from conversations with staff at Bellingham Marine. Pavement estimates use unit prices available at the WSDOT web site, Unit Bid History. All estimates are in 2015 dollars. Dock costs, for instance, are made current by using 3% per year inflation from the date of bid to now. All estimates are in Appendix _ and may be reviewed to see specifically what is included in the bottom line cost. These numbers are shown in this report to the nearest one dollar. This does not imply a degree of accuracy. Instead, numbers to the nearest one dollar are used to be consistent throughout the report.

1. Point Hudson Jetty

The entrance breakwater repair is in the permit stage with construction anticipated to start in spring 2016. The permit phase cost is \$40,000. The construction cost is estimated to be \$4,000,000 and, as yet, is not funded.

2. Boat Haven Storm Water Lift Station

The current storm water outfall consists of a tide gate (intended for one way flow only) in a 98" diameter manhole and a 42" concrete pipe that discharges into the marina east of the 300 ton haul-out dock. This tide gate does not work well. At higher tides, it allows seawater to flow back into the drainage system which adversely affects treatment effectiveness and increases the periodic system cleaning costs. The proposed storm water lift station would correct this problem by replacing the tide gate with pumped flow. It would consist of four 950 gallon per minute pumps with float switch controls to sequentially start individual pumps. This would produce incremental pumped rates of 950, 1900, 2850 and 3800 gallons per minute as required to match inflow. The estimated storm inflows are $Q_2 = 1971$ gpm, $Q_{10} = 2812$ gpm and $Q_{100} = 3767$ gpm, according to a February 17, 2010 memorandum from Reid Middleton to Landau Associates. Two of the new pumps would reside in the existing manhole and the other two would be in a new manhole adjacent to and downstream from the existing manhole. There would be one 18" diameter pipe for pumped discharge entering the marina at approximate elevation 11.0. The existing 12" pumped discharge pipe (now entering the tide gate manhole) would be re-routed adjacent to the new 18" pipe. The estimated cost for the Boat Haven Storm Water Lift Station is \$180,000.

3. Boat Haven Commercial Basin Breakwater

The east 600 or so feet of the Boat Haven Breakwater is part of the original marina (now the commercial basin) built in 1935. It has been damaged by wind driven waves twice in the past 20 years. Emergency repairs were completed each time. A future and more severe failure would significantly jeopardize the Commercial Basin.

This length of breakwater, due to its configuration, is much more vulnerable than the newer breakwater that encloses the recreational basin. The old breakwater is built with an outer layer of rock on each side with granular fill inside the rock layers. Two rows of timber walls on wood pilings are visible on each side of the breakwater. It appears that these walls were used to support large rocks being installed more or less concurrent with placing the interior fill being dredged from the new harbor. I have discussed this with Ty Hillman and he agrees except he thinks dredged fill was placed and then the rock was installed. The newer breakwater has a similar exterior appearance except it consists only of large rock and has no internal fill.

The differences described, and other more subtle differences, are shown by the sketches that follow. The old breakwater is more vulnerable because

- it has a thinner layer of rock armoring
- the timber / piling wall (that helped protect the granular fill) is essentially gone, and
- the rock fill is on the seabed and is vulnerable to erosion from wind driven waves that can occur during low tide. For comparison, the new breakwater is on a rock pad.

The approximate costs of this project are \$60,000 for an engineer's report and possibly \$3,000,000 for anticipated repairs.

4. Point Hudson Armory Building Life / Safety

The Armory Building has a life / safety code violation, with its current occupancy, according to East Jefferson Fire Rescue and the City. The building has roughly 10,000 square feet on the first floor and 3000 SF on the second floor. The lower floor is primarily occupied by a shipwright that specializes in wood work. Other lower floor rooms house canvas and rigging businesses, restrooms and storage space. The second floor is a sail loft. There is an unused observation tower at the east end of the building above the second floor.

The Port is currently investigating solutions to this code issue. They include

- installation of fire sprinkler systems and an emergency egress stairway, or
- changing to a non-hazardous occupancy on the lower floor, or
- reducing the shipwright's floor area and installing interior fire separation sheathing (eg, sheet rock on walls and ceiling)

Before fire sprinkler installation begins, there are three maintenance projects recommended by staff that should be completed. They include;

- lifting the sunken column that has caused roof sag together with installation of a new reinforced concrete footing,
- removing the shed on the south end of the building together with new siding and paint, etc. on the remaining building, to match the existing appearance, and
- removing the third floor observation tower and replacing the roof system as needed to match existing

Building lifting is required for obvious cosmetic reasons and to facilitate installation of rigid steel fire sprinkler pipes.

By code, if the shed is not removed it will also need sprinklers pipes and heads and a minimum 40° F interior temperature. Additionally, this shed is an unused, dirty, rat habitat, eyesore and un-historic addition to this lovely building.

The tower is none of these things and its proposed removal will not go over well with the community. However, it too, technically, should have a sprinkler system and 40° F minimum temperatures. Additionally, the tower adds weight and wind area to a building it was probably not designed to support. Replacement of the south end large door header could be done concurrent with tower removal.

The sprinkler / stairs project estimated cost is \$150,000. Other improvement costs, estimated to be \$112,537, include new doors, windows and insulation plus \$5,000 for lifting the sunken column.

5. JCIA Runway Resurfacing

This work is mandated by the FAA and is required every ?? years. The estimated cost is \$2,000,000. The Federal government will fund 80% and the Port 20%.

6. Boat Haven C&S, LAW, Johnson Building

This structure includes 3 connected buildings that are roughly 40'x60', 30'x60', 25'x60' in plan dimension; with an approximate total area of 5700 square feet. The majority of this project is replacement of the roof over the Johnson & LAW areas. The C&S portion has new roof. The roof to be replaced seems amateur built with corrugated steel roofing nailed to wood rafters and trusses. It has numerous leaks and is probably not capable of withstanding the required 25 psf snow load or 30 psf uplift from high wind. The work also includes door, window, exterior lighting and some rusted siding replacement. The estimated project cost is \$163,048.

7. Boat Haven Shoreline Armoring

Recent shoreline erosion resulting from a strong wind and concurrent high tide damaged the Larry Scott Trail, adjacent to the beach high tide line. A future similar event or events could conceivably damage the 300 ton lift wash-down pad and equipment building, located roughly 40 feet from the damaged trail. The recommendation is to conduct an engineering assessment of this potential and, if justified, construct beach armoring. Approximate costs are \$25,000 for the assessment and \$?? for beach armoring.

8. Point Hudson Asbestos Removal

This project is removal and disposal of asbestos insulated unused steam heat piping in the crawl spaces of the Main Building (Shanghai, Hudson Point Café) and the Duplex and Commander's Beach House buildings. Included is removal and disposal of an assumed 2" of asbestos contaminated soil over the entire crawl space area of each building. This is an important undertaking in that Port staff are not allowed in asbestos contaminated crawl spaces, if for instance, access is required for emergency repairs of leaking plumbing, etc. The estimated cost of this work is \$91,643.

9. Boat Haven C, D, Linear Dock Repair

The work in this task is to repair these docks to extend their useful life another 5 to 10 years. Included is replacing rub boards, whalers and associated through rods & nuts; installation of miscellaneous hardware; adding supplemental flotation and patching deteriorated concrete surfaces where needed. The estimated project cost for C&D Docks is \$826,574 and for the Linear Dock, \$208,351. These numbers are based on a 2013 contractor bid for A, B & C docks in the commercial basin, extrapolated and adjusted for inflation to 2015.

10. Boat Haven Public Restroom Renovation

This work involves adding a new roof and replacing doors; windows; exterior lighting; all interior bathroom, shower and laundry fixtures; all laundry appliances; and all mechanical equipment. This cost is estimated to be \$58,191.

11. Boat Haven D Dock Commercial Basin Repair

This is an existing concrete dock. The work in this task is repair to extend its useful life another 5 to 10 years. Included is replacing roughly 300 lineal feet of 2x8 rub boards, and 4x8 whalers; and associated through rods & nuts; installation of miscellaneous hardware; adding supplemental flotation and patching deteriorated concrete surfaces. The estimated project cost is \$30,740. This is based on a 2013 contractor bid for A, B & C docks in the commercial basin, extrapolated and adjusted for inflation to 2015.

12. Quilcene Marina Restroom Renovation

This work involves adding a new roof and replacing doors; windows; exterior lighting; all interior bathroom, shower and laundry fixtures. This cost is estimated to be \$54,177.

13. Quilcene Marina Entrance Dredging

In 2010 the Port conducted comprehensive dredging of the marina entrance channel. Due to littoral sediment drift within Quilcene Bay, Coast & Harbor Engineering has recommended maintenance dredging be undertaken every 5-7 years to maintain minimum depths necessary for safe navigation. It has recently been observed that sediment has been accumulating within the channel, and that maintenance dredging is likely to be necessary within the next two years. The estimated project cost is \$178,850.

14. Point Hudson Paving Overlay

This work is rehabilitation of existing 80 year old paved roads and new pavement for graveled areas on Jackson and Hudson Streets. Included is 70,000 square feet of 2-inch overlay with transitions to existing pavement. The cost is estimated to be \$132,514.

15. Quilcene, Herb Beck Marina Dock Repairs

The south side dock (to angle point) has concrete floats. The main portion has new stringers except for 30' +/- of length before angle point and at south ramp. The remaining 120 lf of main dock and all fingers need new stringers. The south side dock, after the angle point, is timber on foam filled tires. It is in satisfactory condition. The west side dock has concrete floats which need all new stringers. The north side dock has concrete floats. The main portion has new stringers. However, all fingers need new stringers, including the 12' x40' dock at bottom of north ramp. The main dock needs three new concrete floats and one supplemental floatation billet.

Stringer replacement on all docks will require removal and replacement of water and power lines which are mounted on the stringers.

Both ramps are 4' x 38' and should receive the following:

- Add horizontal railings (1" galv pipe) to get code required spacing

- New axels, wheels and hinges

- Sand blast and paint

- Re-deck with 2x12's and grate

The estimated cost for dock and ramp repair is \$200,928.

16. Point Hudson Cupola House & Annex Repairs

The Cupola Building has 1680 square feet of floor area and the Annex Building has 1100 square feet. These buildings are connected by an 8x12 foot covered passageway. The Cupola is fully finished but is in need of substantial window, door, insulation, electrical and plumbing upgrades. The Annex has similar needs and it requires exterior siding and trim (which was never been installed). This Cupola cost estimate is \$75,629, the Annex is \$67,684 and the total is \$143,313.

17. Point Hudson, WDF&W Roof

This work is for new a roof only and it is the last significant element in the Port's 2-year long building rehabilitation project. Included is removal of about 5500 square feet of old roof shingles that contain asbestos. The replacement shingles will made from modern, environmentally compatible material, intended to visually replicate the original shingles. This applies to all Point Hudson buildings. (Roof material is subject to approval by the City's Historic Preservation Committee.) Additionally, there will be about 3000 square feet of nearly flat roof that requires elastomeric sheet roofing material and the existing brick chimney will be repointed. This cost is estimated to be \$50,887 with asphalt shingles or \$87,802 faux slate shingles.

18. Mats Mats Bay Boat Ramp & Dock Repairs

The Mats Mats boat launch ramp is made with 6"x16"x12' pre-cast concrete planks, with transverse placement, probably laid on buried longitudinal timber stringers. The stringers are used to provide a uniform foundation for the concrete planks. The spacing between planks is about 3". A low tide inspection revealed that about 30 of these planks are in bad condition and need to be replaced. The dock is 6-feet wide and 216-feet long. It consists of a 2x12 wooden deck on longitudinal stringers supported by timber encased foam floats. The dock structure is anchored with 10 creosoted pilings. The stringers, floats and piling are in good condition and should not require anything in the next 5 to 8 years. The recommended dock work is replacement of the 2x12 deck and re-building the short wooden ramp up to the dock surface. This ramp plus dock cost is estimated to be \$78,263.

19. Point Hudson Shanghai Restaurant Building Repairs

This building has roughly 10,000 square feet of floor area (second largest at Point Hudson) and is in the most run-down condition. Suggested repair work includes new roofing (faux slate shingles); new doors and windows; wall, ceiling and floor insulation; a new electric boiler hydronic heating system; and exterior painting. The new roof has an additional cost included for removal and disposal of the existing asbestos containing roof shingles. Desirable but not mandatory improvements include installation of a fire alarm and sprinkler system. The estimated cost is \$483,592.

20. Point Hudson Doc's Restaurant Roof

This work is for new a roof only and it is the last significant element in the Port's recent exterior rehabilitation project. Included is removal of about 3300 square feet of old roof shingles that contain asbestos. The replacement shingles will made from modern,

environmentally compatible material, intended to visually replicate the original shingles. Additionally, there will be about 700 square feet of nearly flat roof that requires elastomeric sheet roofing material and the existing brick chimney will be repointed. The estimated cost is \$51,082.

21. Boat Haven Goldstar Marine Building Repair.

This facility consists of 3 steel buildings, as follows:

building #1, 70x80 = 5600 sf + loft, 25' eave ht

building #2, 100x110 = 11000 sf + loft, 25' eave ht

building #3, 76x60 = 4560 sf + loft, 25' eave ht

The building numbers are from east to west. Also, there is a 30'x75' fabric structure quonset type building on concrete blocks at the NE corner of building #1. It is owned by Goldstar. Attached to building #3, on its north side, is a 40'x80' wood pole barn that is structurally very questionable. It has 3-2x6 wood columns tied to the frames of building #3 and 3-2x6 wood columns reinforced with steel wide flange members (W6x4x1/4) on its north side. The columns have significant deflection, and the column bases are inadequate. This structure is owned by the Shipwrights Coop.

The priority work needed on Goldstar is replacing the three 32'x24' sliding doors, repairing roof or flashing leaks on the south edge of building #1, and rebuilding the passage way between buildings 2&3. The new doors will be on rollers top and bottom, and will be manually operated. The estimated cost is \$143,748.

22. Boat Haven Admiral Ship Supply Building Repairs

Work on this building includes removal of 8 pedestrian doors and interior walls that create mini-storage spaces, replacement of doors and windows, partial replacement of rusted siding and roofing, and new exterior lighting. The estimated cost is \$68,147.

23. Point Hudson Pygmy Kayak Building Repairs

Suggested repair work includes new roofing; new doors and windows; wall, ceiling and floor insulation; a new electric boiler hydronic heating system; and exterior painting. The new roof has an additional cost included for removal and disposal of the existing asbestos containing roof shingles. Desirable but not mandatory improvements include installation of a fire alarm and sprinkler system. The estimated cost is \$xx. Deck repair, crawl space asbestos removal and water service for fire sprinklers is not yet part of this estimate.

24. Point Hudson Commander's Beach House Repairs

Suggested repair work includes a new roof; new doors and windows; wall, ceiling and floor insulation. The new roof has an additional cost included for removal and disposal of existing asbestos containing roof shingles. The estimated cost is \$83,206.

25. JCIA Building A Repairs

This work includes steel siding and structural steel repair, a new standing seam metal roof, new rain gutters and downspouts, drywells for runoff disposal and sliding door track work at the SW & NE corners. The estimated cost is \$132,432.

26. JCIA Building B Repairs

This work includes steel siding and structural steel repair, a new standing seam metal roof, new rain gutters and downspouts, drywells for runoff disposal and one new pedestrian door. The estimated cost is \$130,568.

27. JCIA Tailspin Tommie's Building Repairs

This building is currently being leased by Arora Aviation (Tailspin Tommy on the sign). This is a 70 year old structure that has received very little exterior maintenance. It appears, however, that the structural frame and foundation is in good condition. The end walls, the south wall and the roof need new siding and roofing. The roof and original siding are reported to have a tar coating that contains asbestos. The north wall has relatively new siding, installed directly over the old. Both the old and new siding on this wall should be removed and replaced. There is an overhead door (with pedestrian door) on west, and a sliding door on the east end. They do not look good but their actual conditions are unknown. The building has clerestory windows that are obscured by interior insulation. The building frame is thought to be in good condition. It is built from riveted steel with laced roof beams, or trusses, and laced columns. The interior walls and roof have fiber glass batt insulation held in place with white plastic sheets fastened to the insides. There are locations where roof leaks have saturated the insulation and the additional weight has torn the plastic sheets. The renovation work includes new roof and siding, repair of the sliding and overhead doors at the east and west ends, respectively, a new concrete curb under the north wall. Siding replacement on the north side will involve removal and replacement of electric meters and conduit. The estimated cost is \$246,881.

28. Point Hudson – Duplex Building

Suggested repair work includes a new roof; new doors and windows; wall, ceiling and floor insulation. The new roof has an additional cost included for removal and disposal of existing asbestos containing roof shingles. The estimated cost is \$142,083.

29. Point Hudson – Puget Sound Express

Suggested repair work includes new doors and windows; wall, ceiling and floor insulation; new rain gutters and downspouts. The estimated cost is \$45,128.

30. Point Hudson - SV Martha Building Repairs

Suggested repair work includes a new standing seam metal roof; new doors and windows; wall, ceiling and floor insulation; new rain gutters and downspouts; an interior concrete slab; electrical system up-grades; interior gypsum board walls and ceilings; and exterior Hardi-Plank siding. The estimated cost is \$100,809.

31. Boat Haven - Craftsman United Building Repairs

Work includes rusted wall and roof repair, door and window replacement and new exterior lighting. The estimated cost for this work is \$73,205.

32. Boat Haven - Design Craft / Blue Moose Building Repairs

Work includes rusted wall and roof repair, door and window replacement, new exterior lighting, rebuilding the 6'x30' addition to replicate the original building look, and removal of 8 pedestrian doors and interior walls that create mini-storage spaces. The estimated cost for this work is \$68,147.

33. Boat Haven - CJ's Restroom Renovation

This is a 20'x20'x8' building built with CMU walls and a cast-in-place concrete roof. The work includes all new fixtures, new windows and doors, interior wall and ceiling insulation, a ventilation system, and a chemical water proof seal on the exterior roof. The estimated cost is \$35,303.

34. Boat Haven - Key City Fish Building Repairs

Work includes rusted wall and roof repair, door and window replacement and new exterior lighting. The estimated cost is \$39,930.

35. Boat Haven - Steelhead Marine Building Repairs

Work includes rusted wall and roof repair, reconstruction of 10'x20' of exterior wall, door and window replacement, new exterior lighting, and removal of 8 pedestrian doors and interior walls that create mini-storage spaces. The estimated cost is \$68,946.

36. Boat Haven - PoPT Maintenance Buildings Repairs

Work includes door and window replacement and new exterior lighting. The estimated cost is \$33,275.

37. Boat Haven - Sunrise Coffee/PT Furniture Building Repairs

Work includes rusted wall and roof repair, door and window replacement and new exterior lighting. The estimated cost is \$39,930.

38. Boat Haven - Peter's Marine Building Repairs

Work includes rusted wall and roof repair, door and window replacement and new exterior lighting. The estimated cost is \$39,930.

39. Boat Haven - Taku Marine / PT Brewing Building Repairs

Work includes rusted wall and roof repair, door and window replacement and new exterior lighting. The estimated cost is \$39,930.

40. Boat Haven - PT Brewing Building Repairs

Work includes rusted wall and roof repair, door and window replacement and new exterior lighting. The estimated cost is \$49,247.

41. Boat Haven Net Float Replacement

The existing structure, roughly 20'x112', is built with WWII anti-submarine net floats (which are heavily creosoted) with timber beams and wood decking on the floats. It is anchored with 2 steel and 1 timber pile and the connection to C Float. The new structure envisioned, also 20'x112', has concrete floats, 6 steel pilings and a new ramp. The new structure cost is estimated to be \$467,849 which includes \$10,000 for demolition and disposal of the old dock

42. JCIA Fuel Tank Replacement

This work is removal and disposal of the existing buried fuel tanks system and replacement with an above ground system that includes pumps, appurtenances and a containment berm. The estimated cost is \$125,000.