

Ecological No Net Loss Assessment Report

Prepared for

Jim Cherberg
9418 SE 33rd Street
Mercer Island, WA 98040

Prepared by

 **Northwest**
Environmental Consulting, LLC

Northwest Environmental Consulting, LLC
600 North 36th Street, Suite 423
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October 2022

Purpose

The purpose of this report is to fulfill the requirements of City of Mercer Island Municipal Code (MICC) 19.07.110 Shoreline Master Program by assessing overall project impacts and proposed mitigation to determine if the project meets the “No Net Loss” General Regulation of the Shoreline Master Program.

No Net Loss is defined as “An ecological concept whereby conservation losses in one geographic or otherwise defined area are equaled by conservation gains in function in another area.”

Permits are being applied for a dock extension and associated moorage improvements.

Location

The subject property is located at 9418 SE 33rd Street (King County parcel number 4139300405) in the City of Mercer Island, Washington (see Appendix A – Sheet A1.0). The parcel is on the waterfront of Lake Washington, a shoreline of the state, that contains several endangered fish species listed under the Endangered Species Act and Washington State designated priority fish species.

Project Description

A new dock is proposed at the waterfront residence. The new dock will be constructed by driving 20 8-inch epoxy coated steel piles to support the new dock. The new 468 square foot dock will be fully grated. A new boatlift and personal watercraft lift will also be placed along the dock for moorage. See Appendix A – Sheets A2.0 to A5.0.

During construction, a floating boom will surround the work barge and dock. (See Appendix A – Sheets A6.0)

A shoreline vegetation plan is proposed, that will add 5 native conifers and 7 native shrubs. These shoreline plantings will provide shade and allow beneficial allochthonous material to enter the lake along the shoreline. Existing vegetation will be persevered. (See Appendix A – Sheet A7.0 and SHD Landscape Architecture Plans).

Project drawings are included in Attachment A.

Approach

Northwest Environmental Consulting LLC (NVEC) biologist Brad Thiele conducted a site visit on October 5, 2022 to evaluate conditions on site and adjacent to the site. NVEC also consulted the following sources for information on potential critical fish and wildlife habitat along this shoreline:

- Washington Department of Fish and Wildlife (WDFW): Priority Habitats and Species online database (<http://apps.wdfw.wa.gov/phsontheweb/>)
- WDFW SalmonScape online database of fish distribution and ESA listing units (<https://apps.wdfw.wa.gov/salmonscape/>)

- Mercer Island GIS online database (<https://chgis1.mercergov.org/Html5Viewer/Index.html?viewer=PubMaps&viewer=PubMaps>)

Site Description

The subject property is a shoreline tract in a residential neighborhood. It has shoreline on its northern boundary with single-family homes to the east and west along the shoreline.

The only existing structures on the property are the house and a few outbuildings.

The shoreline is armored with a basalt bulkhead with a beach cove. Planting beds are present along the waterward edge of the bulkhead with a lawn landward of the planting beds. The substrates along the shore are sand with gravel. No aquatic vegetation was present at the time of the site visit.

The neighboring shorelines are landscaped with bulkheads and docks. See attached photos in Appendix B- Photos.

Species Use

WDFW's PHS mapping and SalmonScape mapping tools show the following salmonid species using Lake Washington for migration and/or rearing: residential coastal cutthroat (*Oncorhynchus clarkii*), winter steelhead (*O. mykiss*), Dolly Varden/bull trout (*Salvelinus malma*), sockeye salmon (*O. nerka*), fall Chinook (*O. tshawytscha*), coho salmon (*O. kisutch*), and kokanee (*O. nerka*). The SalmonScape database maps the site as accessible to the Endangered Species Units (ESU) of Threatened Chinook and steelhead. Juveniles migrate and may rear in the waters near the project when traveling from spawning sites on other lake tributaries to the lakes system's outlet at the Hiram M. Chittenden Locks. The project site is accessible to any fish migrating or rearing in the lake. The shoreline is not mapped as a Sockeye spawning location.

Priority Habitats and Species mapping, maps Mercer Island Open Space at Gallagher Hill about 1,500 feet to the southwest.

The City of Mercer Island GIS Portal indicates a watercourse on the property about 140 feet from the proposed dock. No upland work will be completed on the site except for the planting plan.

Project Impacts and Conservation Measurements

Direct Impacts:

Sediments: Sediment disturbance will occur below the OHWM during pile installation, Additionally, the tug and barge propwash may disturb sediments temporarily when making trips to and from the site.

Impacts to sediments should be minimal from installation of the pilings. The project will meet state water quality standards.

Shoreline: Planting native vegetation, including a western hemlock and shore pines and shrubs, will increase the habitat functions of the shoreline by creating shade along the shoreline

that will be an improvement from the existing baseline habitat conditions at the project site. These plants will provide overhanging cover for fish, structural diversity for birds and wildlife, detritus for aquatic invertebrates and long-term recruitment of woody material and other allochthonous food sources. The proposed planting plan is included (see Appendix Mitigation Planting Schedule).

Lakebed: Construction of the dock construction includes driving 20, 8-inch pilings. This will result in 7 square feet of lake bottom displacement.

Stream: A watercourse is present about 140 feet south of the dock. No upland work except for planting native vegetation is proposed. The extension will not affect the watercourse.

Noise: Construction equipment will create noise audible to neighbors and in-water. Noise disturbance will be short-term and should have negligible effects on fish and wildlife in the area. Work will be completed during the in-water work window when juvenile fish are not expected to be present in larger numbers.

Potential spills: Short-term risks include the potential for petroleum spills that can occur with any equipment operation. The level of impact to the aquatic environment is expected to be minor because a trained crew will be onsite that will implement spill containment measures should a spill occur.

Shading: The proposed dock will increase overwater coverage by 468 square feet. The proposed decking will be ThruFlow grated decking. Grated decking allows light to penetrate the waters below the dock, which can increase productivity in the water column, and reduce the full shade favored by salmonid predators. Salmonid predators are known to use hard shadowing under solid-decked docks to ambush juvenile salmonids. Reducing these hard shadows limits their ability to effectively hunt salmonids. In addition, hard shadowing may increase juvenile salmonid outmigration times when encountered along the shoreline.

ThruFlow grated decking has a measured performance at 43 percent light penetration (ThruFlow, 2021). Thus, the increase in lighting under the pier is effectively 57% of the area of a solid decked structure. Table 1 provides a summary of effective coverage:

Table 1 – Effective coverage

	Existing/ Proposed	Proposed grated	Conversion	Effective coverage	Reduction in effective coverage
New Grated Dock (SF)	0	468	0.57	267	201

The use of grated decking at the site reduces the effective coverage of the new structure by 201 square feet. Using boat lifts to lift watercraft out of the water reduces shading under the boat that would otherwise be tied to the dock.

In addition the new dock configuration will place moorage into water 4 to 8 feet deep. The dock has also been designed to be the narrowest within the first 30 feet of shore and placed the closest moorage over 40 feet from shore. Juvenile salmonids often follow the shoreline while migrating so placing the moorage away from shore is least impacting to the salmonid using the Lake.

Recreational Boating: The project supports continued recreational boating, which has been identified as a limiting factor for salmonid populations in Lake Washington. The pier will not

introduce additional boating to Lake Washington, as the owners could still access the lake from a public boat launch or private moorage facility.

Other Conservation measures:

Work window: The work will be completed during the prescribed in-water work window for this area of Lake Washington (July 16 to April 30). Operating within this time frame helps protect Chinook salmon, steelhead, bull trout and other salmonid fish species by doing work when juvenile fish are not expected to be present.

Best Management Practices: Applicable BMPs will be used, such as a floating boom around the in-water work area, to contain any floating debris that may escape during construction. The barge will have a perimeter containment sock to absorb oil and grease that might inadvertently wash from the barge during construction.

Hazardous material containment supplies such as spill absorbent pads and trained personnel will be required onsite during any phase of construction where machinery is in operation near surface waters.

In-lieu Fee: The shoreline on the subject property will be planted with native, overhanging vegetation. The project also requires approval from the National Marine Fisheries Service (NMFS). NMFS has developed a calculator to determine appropriate mitigation costs for proposed in-water structures in Lake Washington. This calculator has established a fund that owners can pay into if they are not willing or cannot find mitigation to offset impacts from the project. The owner is not able to complete the required mitigation at the subject property required by NMFS and the property owners will pay into the in-lieu fee program to mitigate project impacts. An in-lieu fee program is defined as follows:

“A program involving the restoration, establishment, enhancement, and/or preservation of aquatic resources through funds paid to a governmental or non-profit natural resources management entity to satisfy compensatory mitigation requirements... Similar to a mitigation bank, an in-lieu fee program sells compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is then transferred to the in-lieu program sponsor.” (Fed. Reg. 40 CFR Part 230)

The fee has been determined using the Restoration And Permitting (RAP) Calculator for Lake Washington and will be paid to King County Water & Land Resources Division. This funding has been used to remove 350 derelict piles from the mouth of the Cedar River in Lake Washington.

Conclusion

Juvenile Chinook salmon, and other salmonids, rear and migrate along the Lake Washington shoreline.

There will be temporary impacts from noise and disturbed sediments during construction. Construction disturbance will degrade ecological conditions at the site by increasing overwater coverage at the site.

The dock will use grated decking to minimize the effective overwater coverage to a net gain of 267 square feet. The grating reduces the hard shadows favored by salmonid predators and increases productivity under the pier. In addition, the new moorage is in deeper water more than 30 feet from shore. Overwater structures may slow juvenile salmonid outmigration times.

Constructing the new moorage away from shore will reduce the chances of delaying outmigrating juvenile salmonids.

The project will displace about 7 square feet of lakebed from installation of new pilings.

The project will minimize construction effects on the environment by following the prescribed fish window and using applicable BMPs to prevent construction spills, turbidity, and floating debris from escaping the area. The construction crew will retrieve all dropped items from the bottom and dispose of them properly. The effects of construction will be short term.

A shoreline planting plan will be implemented that will add 5 native trees and 7 native shrubs to the shoreline that will provide natural shading, allochthonous food sources and will eventually be a source of woody materials that will improve shoreline conditions at the site in the long-term. The owner has also opted to pay into the In Lieu Fee program that will be used for conservation projects that benefit salmon in King County.

This project has been designed to meet current residential dock standards and will use Best Management Practices to reduce project impacts. The conservation measures are designed to improve ecological functions or prevent further degradation of habitat **and will result in No Net Loss of ecological functions.**

Document Preparers

Brad Thiele	Biologist	28 years of experience	Northwest Environmental Consulting, LLC (NVEC)
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The conclusions and findings in this report are based on field observations and measurements and represent our best professional judgment and to some extent rely on other professional service firms and available site information. Within the limitations of project scope, budget, and seasonal variations, we believe the information provided herein is accurate and true to the best of our knowledge. Northwest Environmental Consulting does not warrant any assumptions or conclusions not expressly made in this report, or based on information or analyses other than what is included herein.

REFERENCES

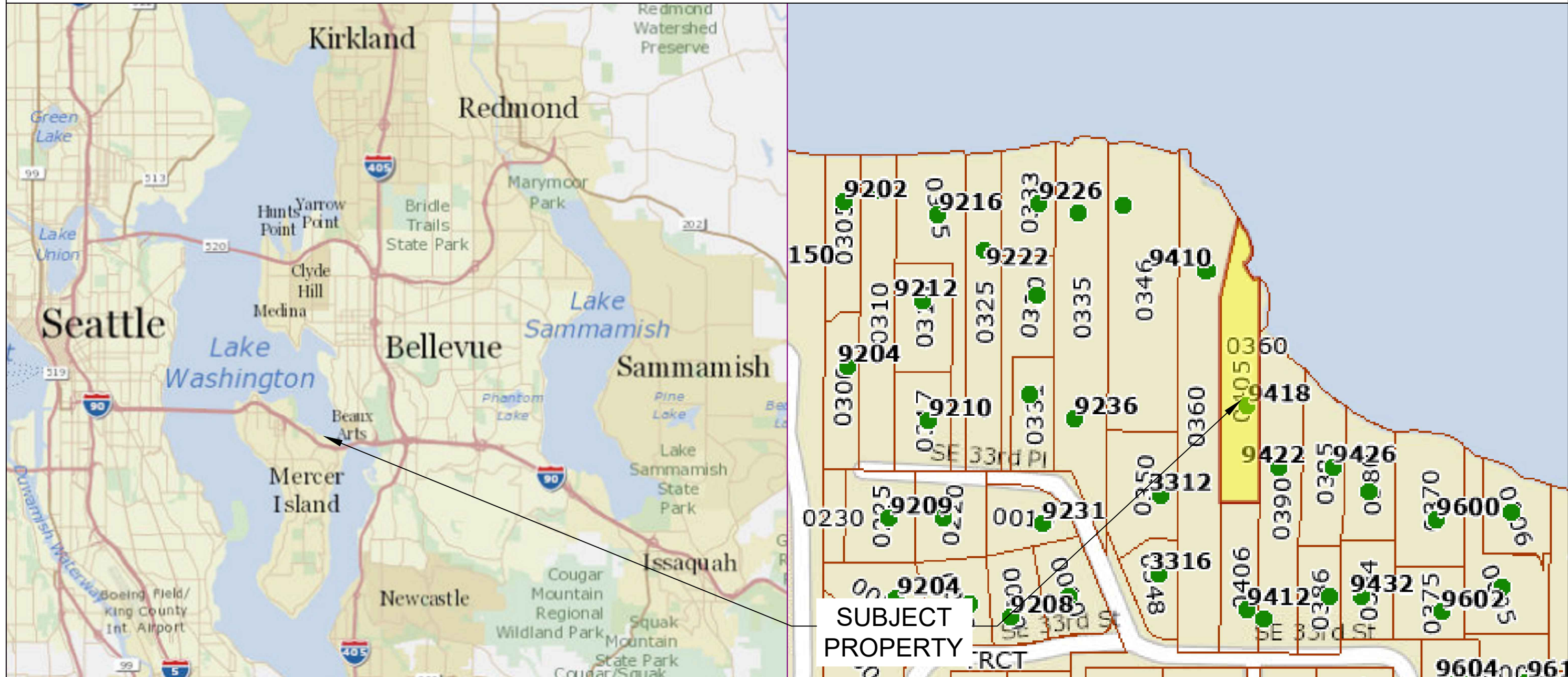
King County. 2022. King County iMap. Online database. Accessed October 2022 at <https://gismaps.kingcounty.gov/iMap/>

Washington Department of Fish and Wildlife (WDFW). 2022. Priority Habitats and Species. Online database. Accessed October 2022 at <http://apps.wdfw.wa.gov/phsontheweb/>

WDFW. 2022. SalmonScape. Online database. Accessed October 2022 at <http://apps.wdfw.wa.gov/salmonscape/>

Appendix A: Project Drawings

SITE PLAN



Pin: 4139300405

Legal Description: LAKEMONT ADD UNREC POR GL 4 SEC 7-24-5 DAF - BAAP 834 FT N & 211 FT W OF SE COR SD GL 4 TH W 65 FT TH N TO SH OF LAKE WASH TH SELY ON SD SH LN 150 FT M/L TAP N OF POB TH S TO POB LESS S 212.60 FT LESS POR LY WITHIN FOLG BAAP 834 FT N & 276 FT W OF SE COR SD GL 4 TH N TAP 100 FT S OF SH LAKE WASH & TPOB TH CONTG N 100 FT TO SH LAKE WASH TH ON SD SH LN SELY 50 FT TH SWLY TAP 10 FT E OF TPOB TH S TO LN 834 FT N OF S LN SD GL 4 TH W ON SD LN 10 FT TH N TO TPOB TGW 2ND CL SH LDS ADJ REMAINDER TH OF LY NWLY OF LN DAF - BAAP 834 FT N & 211 FT W OF SE COR SD GL 4 TH N 528.31 TO ORDINARY HIGH WATER LN & POB SD LN TH N 36-04-18 E TO OUTER LIMITS OF 2ND CL SH LDS & TERM SD LN PER LATERAL LN AGREEMENT REC# 20160408000136 & SURV REC# 20160408900001

Plat Block:
 Plat Lot: D
 PARCEL:
 LAT: 47.58148
 LONG: -122.21175
 DOCK:
 LAT: 47.582071
 LONG: -122.211743



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 1080 W Ewing St
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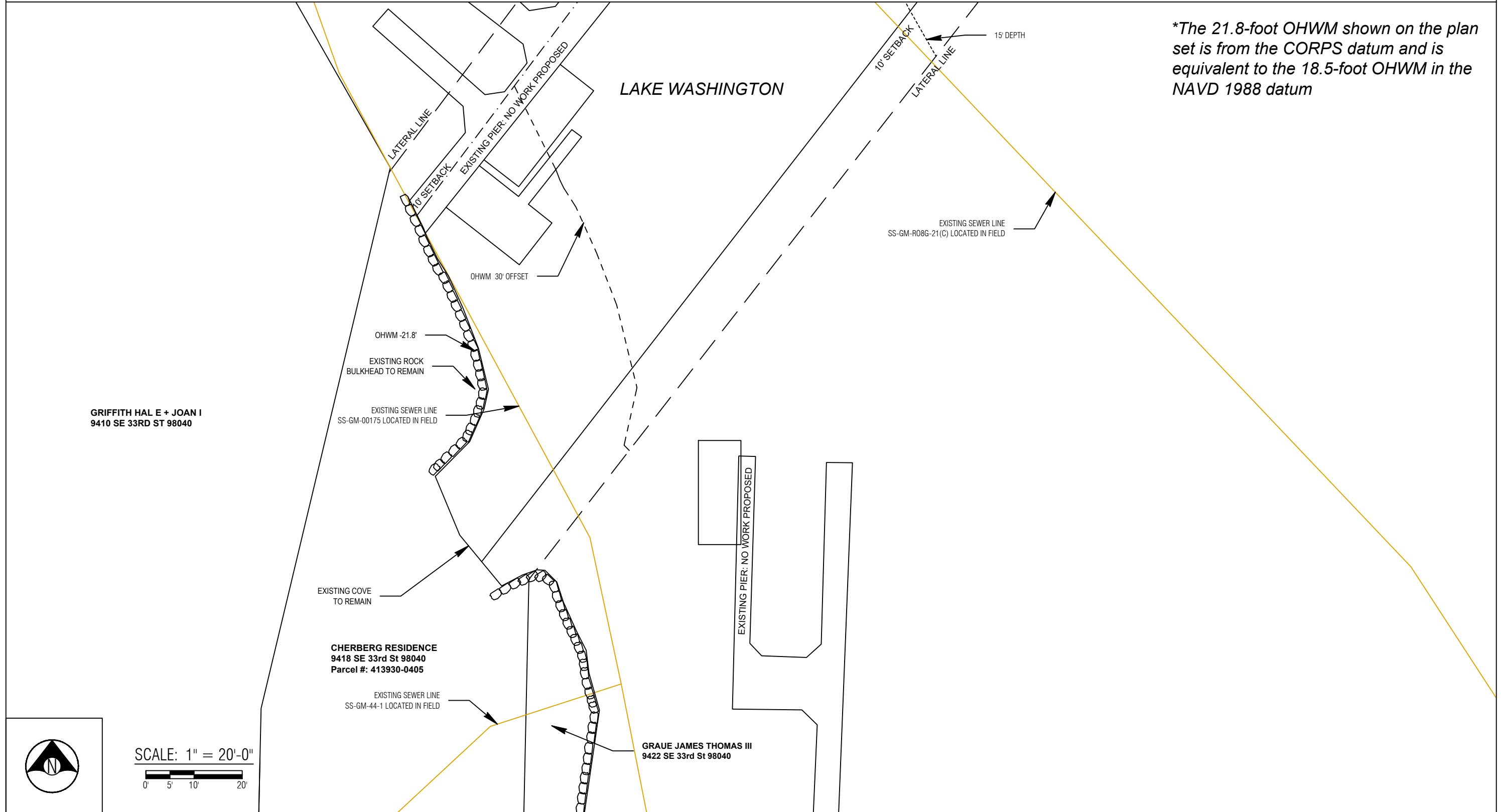
Scope of Work: We propose to drive (20) 8" steel piles and construct a new dock with grated decking material. We also propose to install (1) new boat lift and (1) new PWC lift.

County: King County
 Location: Lake Washington
 Applicant: Cherberg Residence
 9418 SE 33rd Street
 Mercer Island, WA 98040
 Datum: CORPS OF ENGINEERS 1919
 SE Quarter Of Section 07, Township 24, Range 05
 Adjacent Owners:
 GRIFFITH HAL E+JOANI
 9410 SE 33RD ST 98040
 GRAUE JAMES THOMAS III
 9422 SE 33RD ST 98040
 Created:
 Last Updated: 10/12/2022 1:03 PM Zion
SHEET A1.0
 NWS-2013-565
 PAGE 1 OF 17

EXISTING CONDITIONS

****CLEAN UP LAKE AROUND PROJECT****

**The 21.8-foot OHWM shown on the plan set is from the CORPS datum and is equivalent to the 18.5-foot OHWM in the NAVD 1988 datum*



GRIFFITH HAL E + JOAN I
9410 SE 33RD ST 98040

CHERBERG RESIDENCE
9418 SE 33rd St 98040
Parcel #: 413930-0405

GRAUE JAMES THOMAS III
9422 SE 33rd St 98040



SCALE: 1" = 20'-0"
0' 5' 10' 20'



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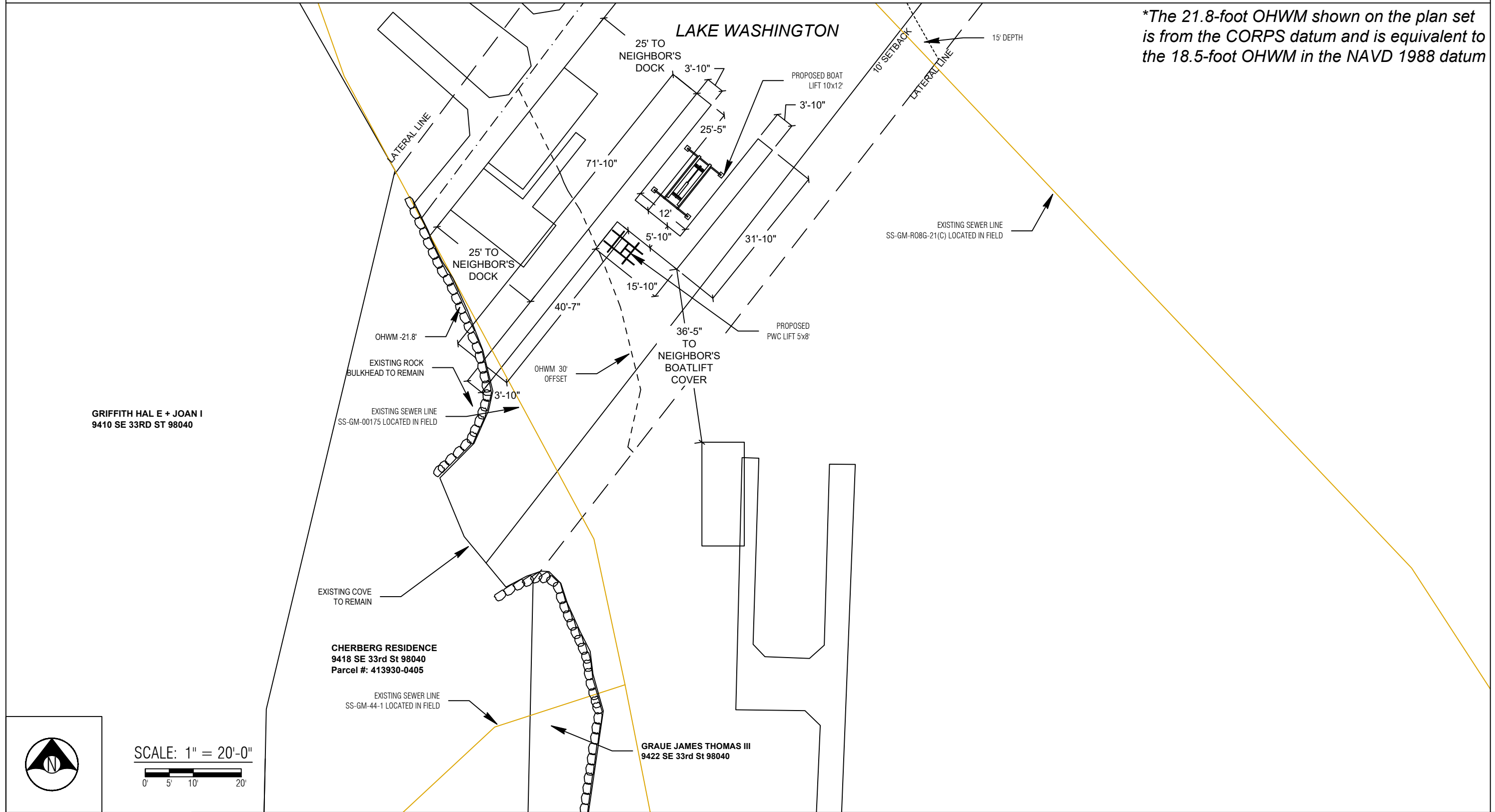
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9422 SE 33RD ST 98040

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PROPOSED

CLEAN UP LAKE AROUND PROJECT



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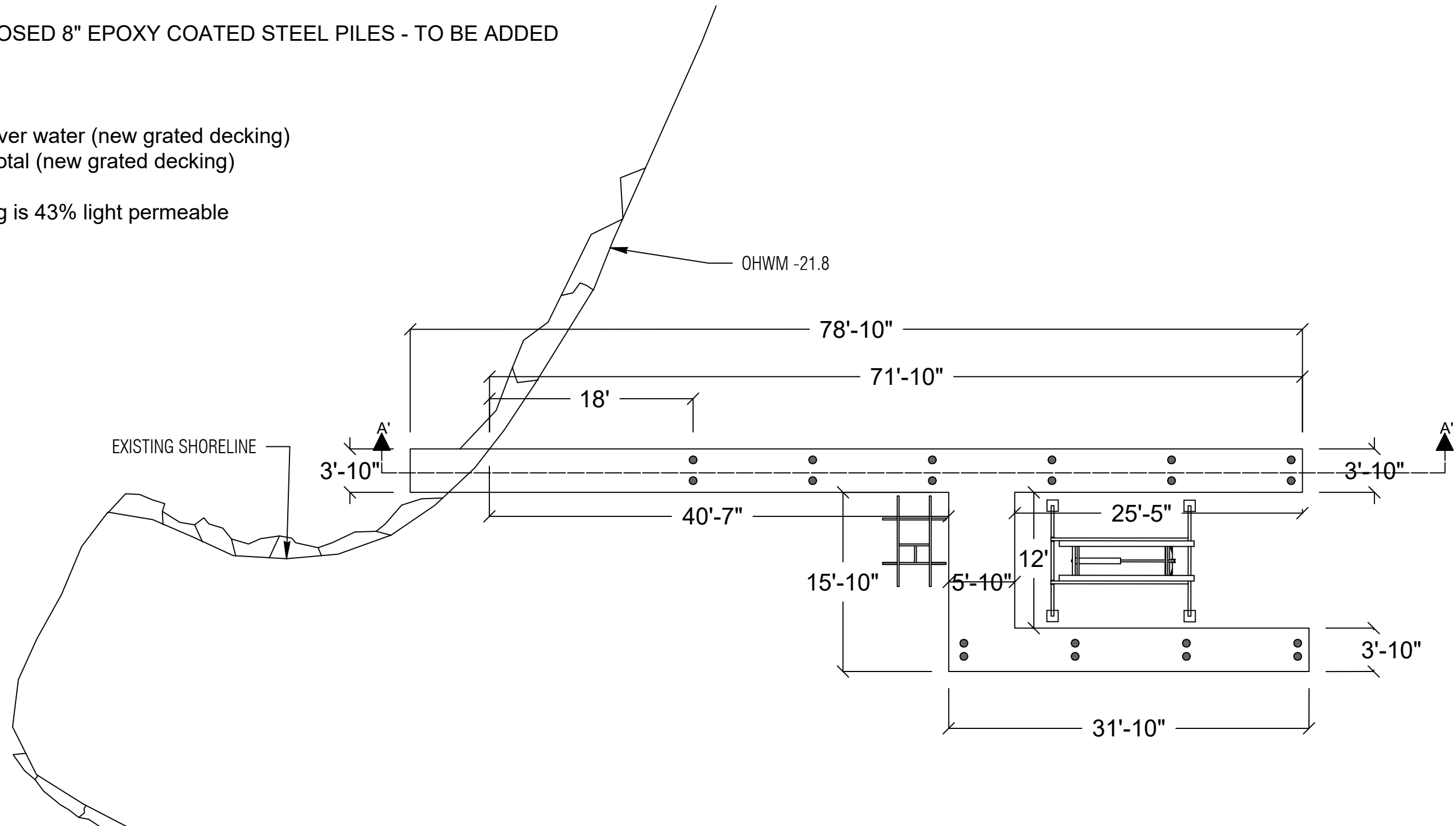
PIER DETAILS - EXISTING/PROPOSED

LEGEND

● (20) PROPOSED 8" EPOXY COATED STEEL PILES - TO BE ADDED

Area: 468 sqft over water (new grated decking)
494 sqft total (new grated decking)

**Grated decking is 43% light permeable



PLAN VIEW



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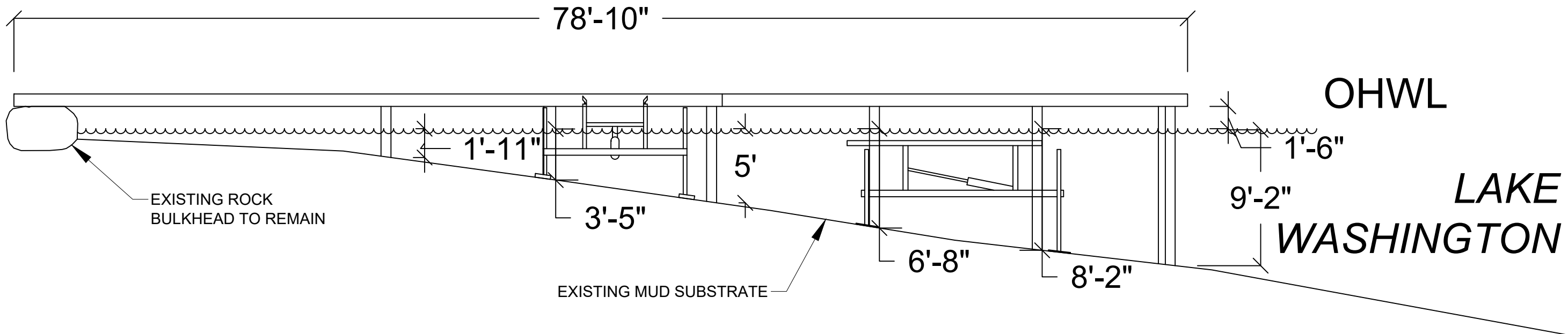
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PIER DETAILS PROPOSED



SECTION VIEW: A'-A'



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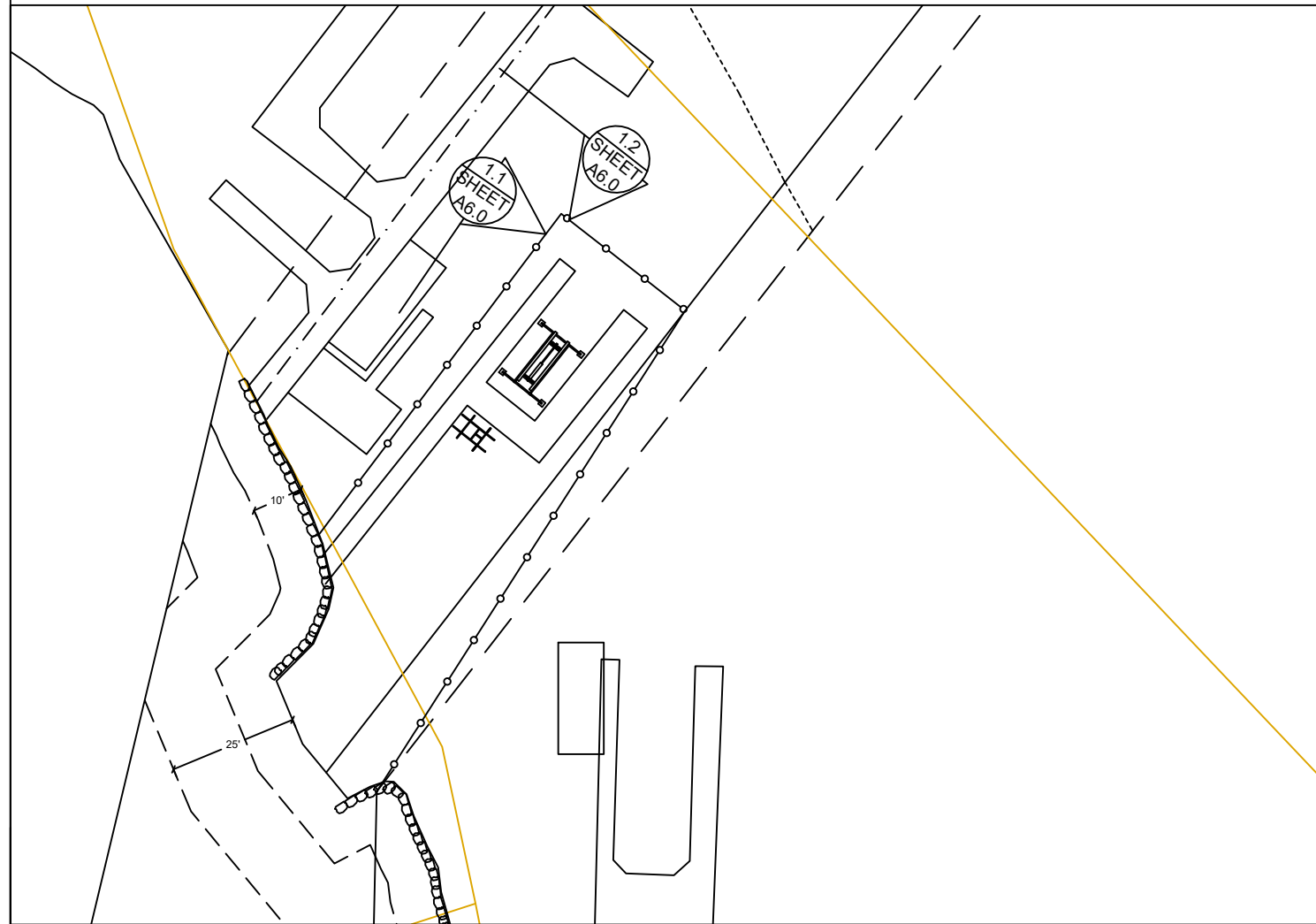
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BMP INFORMATION

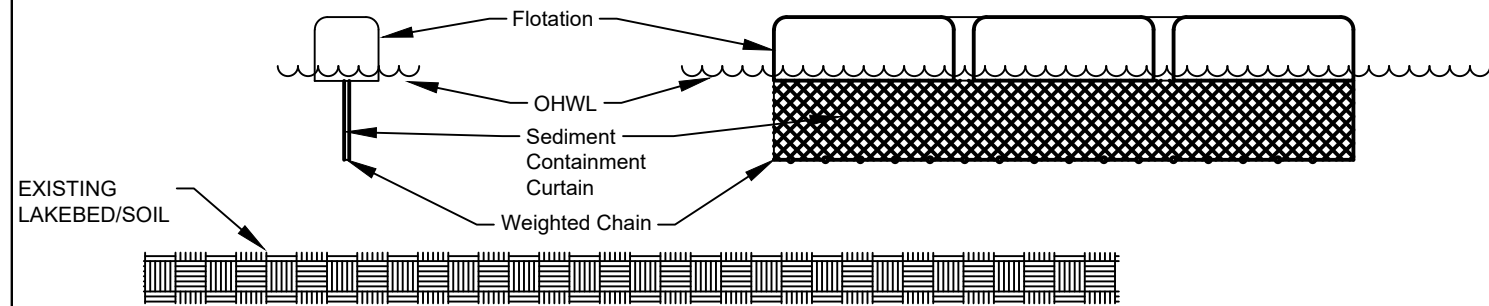


BMP NOTES:

- A. Constant vigilance shall be kept for the presence of protected fish species during all aspects of the proposed action, particularly during in-water activities such as vessel movement, deployment of anchors & spuds, pile driving, dredging, and placement of gravels and other fill.
1. The project manager shall designate an appropriate number of competent observers to survey the project site and adjacent areas for protected species, including the presence of fish as conditions allow.
 2. Visual surveys shall be made prior to the start of work each day, and prior to resumption of work following any break of more than an hour. Periodic additional visual surveys throughout the work day are strongly recommended.
 3. All in-water work shall be done during the in-water work window for the waterbody. Where there is a difference between the USCOE and WDFW work windows, the overlap of the two shall apply.
 4. All pile driving and extraction shall be postponed or halted when obvious aggregations or schooling of fish are observed within 50 yards of that work, and shall only begin/resume after the animals have voluntarily departed the area.
 5. When piloting vessels, vessel operators shall operate at speeds and power settings to avoid grounding vessels, and minimize substrate scour and mobilization of bottom sediments.
- B. No contamination of the marine environment shall result from project-related activities.
1. Appropriate materials to contain and clean potential spills shall be stored and readily available at the work site and/or aboard project-related vessels.
 2. The project manager and heavy equipment operators shall perform daily pre-work equipment inspections for cleanliness and leaks. All heavy equipment operations shall be postponed or halted should a leak be detected, and shall not proceed until the leak is repaired and the equipment is cleaned.
 3. To the greatest extent practicable, utilize biodegradable oils for equipment that would be operated in or near water.
 4. Fueling of land-based vehicles and equipment shall take place at least 50 feet away from the water, preferably over an impervious surface. Fueling of vessels shall be done at approved fueling facilities.
 5. Turbidity and siltation from project-related work shall be minimized and contained through the appropriate use of erosion control practices, effective silt containment devices, and the curtailment of work during adverse weather and tidal/flow conditions.
 6. All wastes shall be collected and contained for proper disposal at approved upland disposal sites appropriate for the material(s).
 7. When removing piles and other similarly treated wood, containment booms must fully enclose the work area. Wood debris, oils, and any other materials released into lake waters must be collected, removed, and properly disposed of at approved disposal sites.
 8. All in- and over-water wood cutting would be limited to the minimum required to remove the subject wood component, and all cutting work should be enclosed within floating containment booms.
 9. When removing piles, no actions shall be taken that would cause adhering sediments to return to lake waters.
 10. Above-water containment shall be installed around removed piles to prevent sediment laden waters from returning to lake waters.
 11. Construction staging (including stocking of materials, etc.) will occur on the supply barge.
 12. All Exposed wood to be used on the project will be treated with a cheminite treatment.

DETAIL 1.1

DETAIL 1.2



DETAIL 1.1 & 1.2

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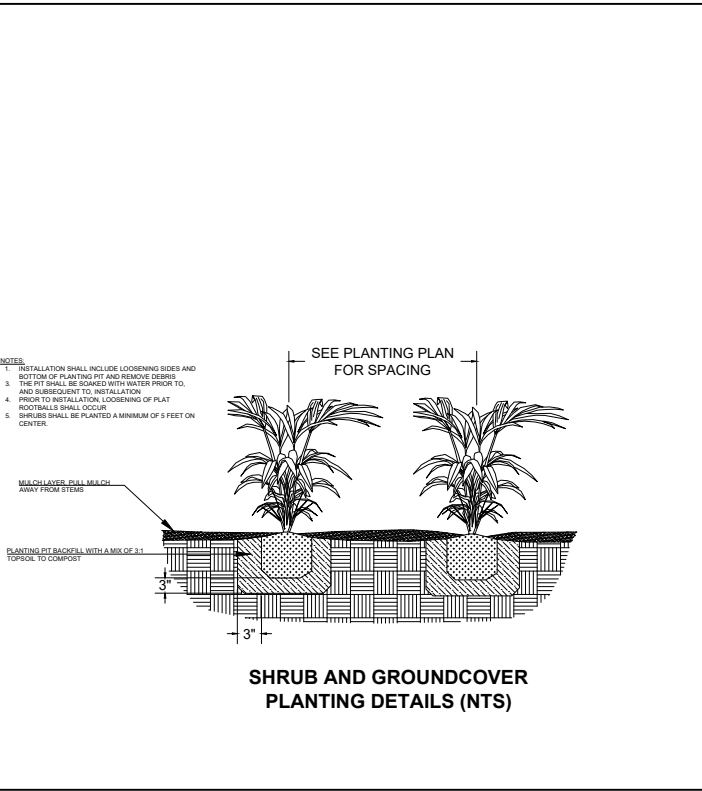
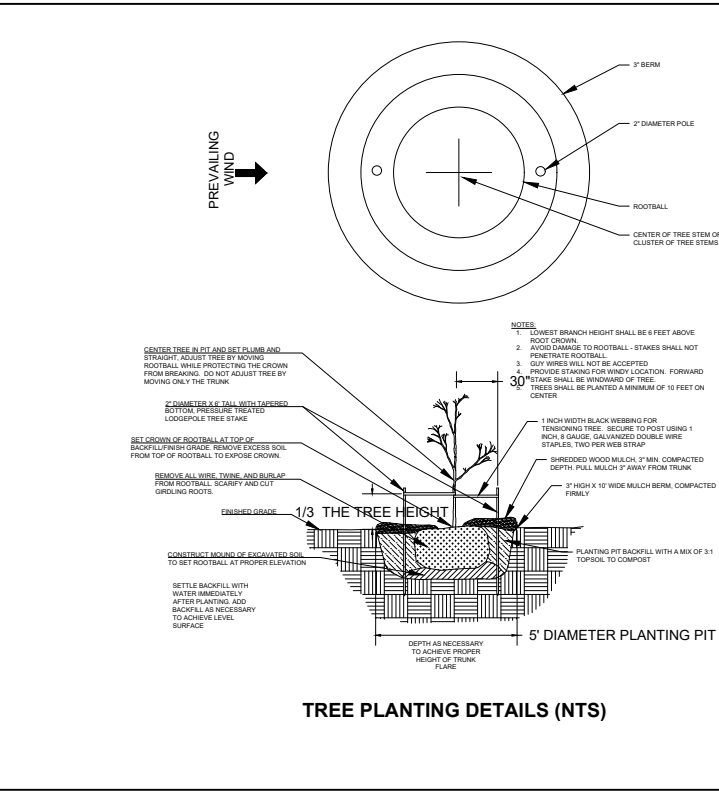
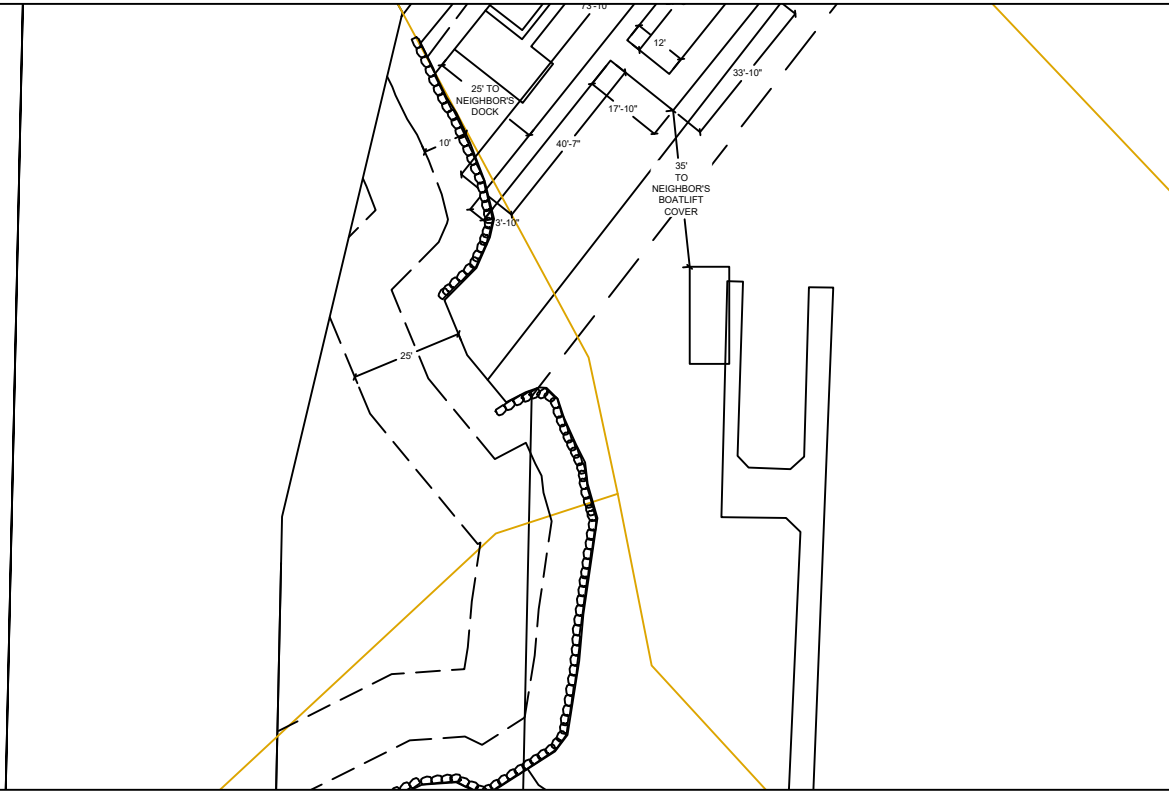
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MITIGATION PLAN



Notes:

1. Shrubs are show, and shall be planted, at least five feet on center. Trees are show, and shall be planted, at least ten feet to center.
2. The property owner will implement and abide by the shoreline planting plan. The plants shall be installed before or concurrent with the work authorized by this permit. A report, as-built drawing and photographs demonstrating the plants have been installed or a report on the status of project construction will be submitted to the U.S. Army Corps of Engineers, Seattle District, Regulatory Branch, within 12 months from the date of permit issuance. This reporting requirement may be met by completing and submitting a U.S. Army Corps of Engineers approved Report for Mitigation Work Completion form.
3. The property owner will maintain and monitor the survival of installed shoreline plantings for five years after the U.S. Army Corps of Engineers accepts the as-built report. Installed plants shall achieve 100% survival during monitoring Years 1 and 2. Installed plants shall achieve at least 80% survival during monitoring Years 3, 4 and 5. Percent survival is based on the total number of plants installed in accordance with the approved riparian planting plan. Individual plants that die will be replaced with native riparian species in order to meet the survival performance standards.
4. The property owner will provide annual monitoring reports for five years (Monitoring Years 1-5). Each annual monitoring report will include written and photographic documentation on plant mortality and replanting efforts and will document whether the performance standards are being met. Photos will be taken from established points and used repeatedly for each monitoring year. In addition to photos at designated points, photo documentation will include a panoramic view of the entire planting area. Submitted photos will be formatted on standard 8 1/2 x 11" paper, dated with the date the photo was taken, and clearly labeled with the direction from which the photo was taken. The photo location points will be identified on an appropriate drawing. Annual shoreline planting monitoring reports will be submitted to the U.S. Army Corps of Engineers, Seattle District, Regulatory Branch, by November 31 of each monitoring year. This reporting requirement may be met by completing and submitting a U.S. Army Corps of Engineers approved Mitigation Planting Monitoring Report form.

SEE LANDSCAPE PLAN BY OTHERS

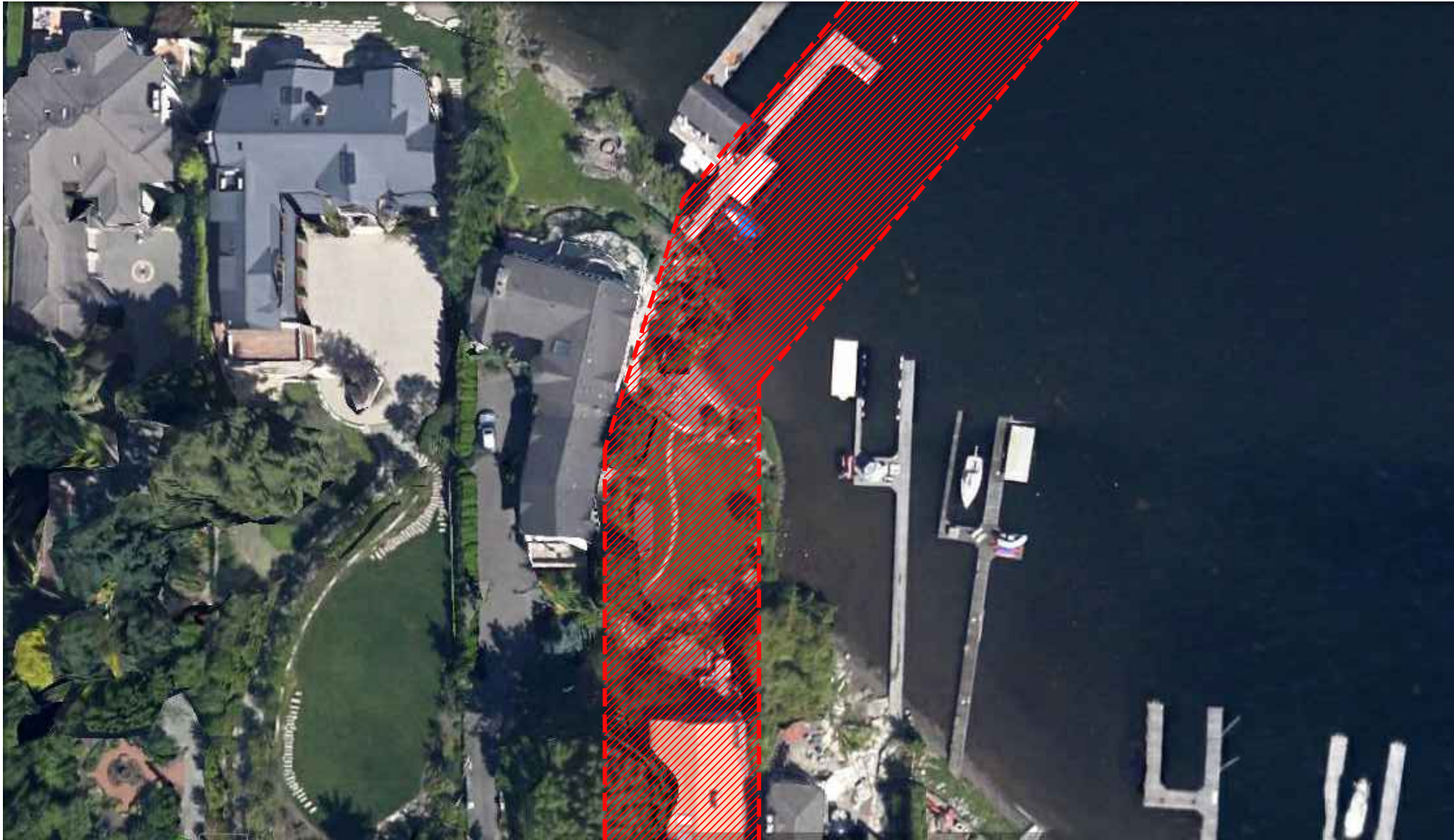
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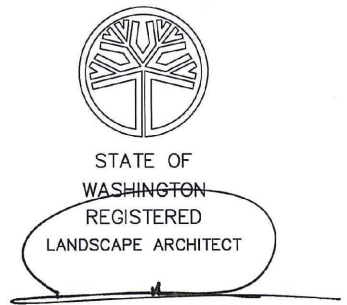


PROJECT #: NWS-2013-0565
OCTOBER 10, 2022

CHERBERG
PIER
9418 SE 33RD STREET
MERCER ISLAND, WA

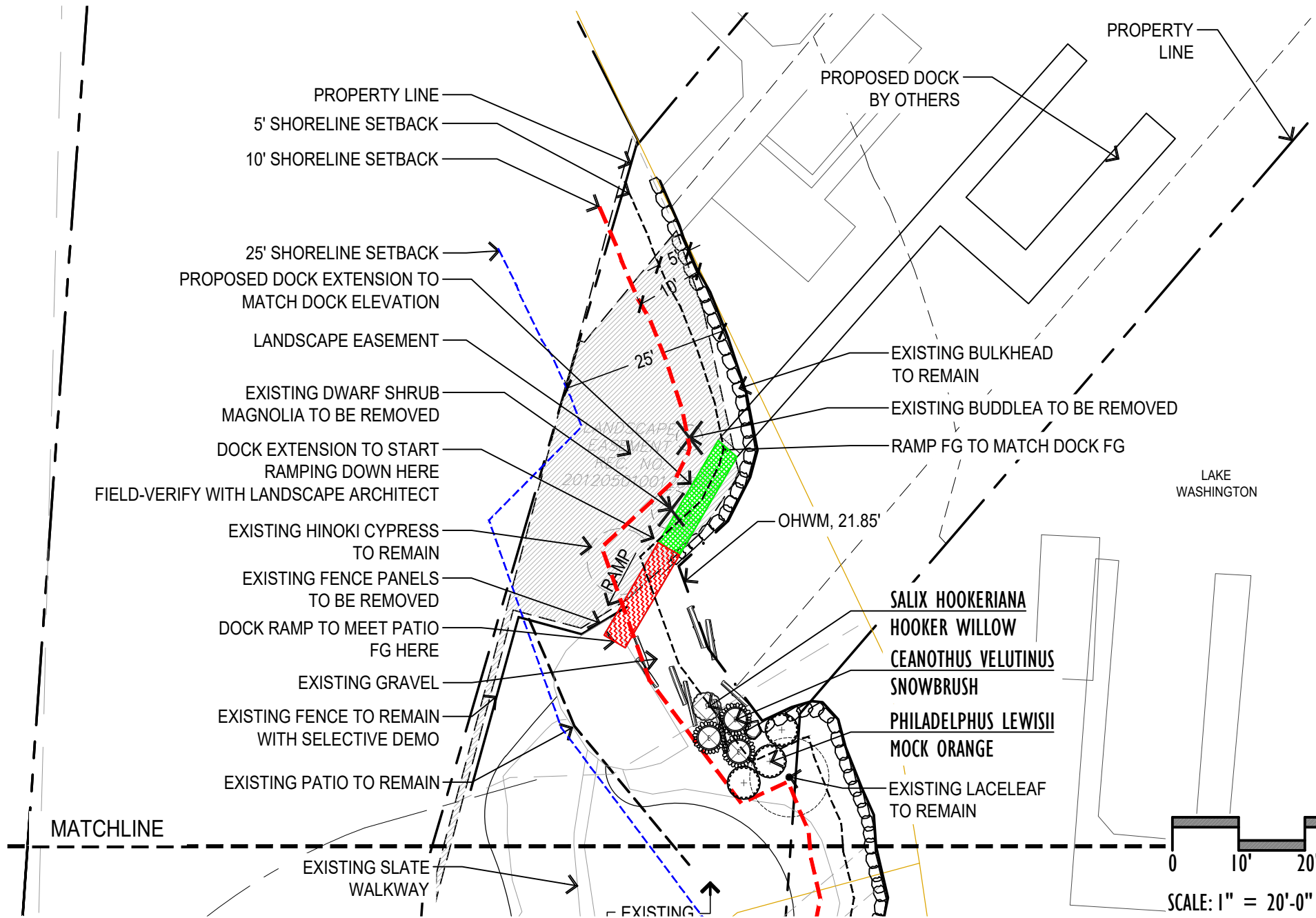
MITIGATION PLANTING PLAN

SHEET 9 OF 12



SCOTT A. HOLSAPPLE
CERTIFICATE No. 1268

SHD LANDSCAPE
ARCHITECTURE
SCOTT HOLSAPPLE
DESIGN
4303 STONE WAY N SEATTLE WA 98103
(206) 745-5822 www.shd-la.com

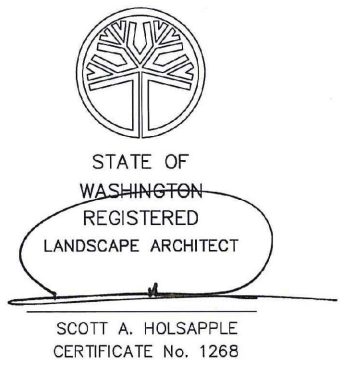
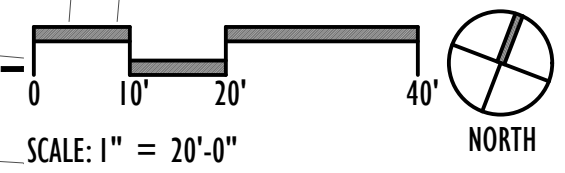


REQUIRED PLANTING IN SHORELINE SETBACK

MIN. NUMBER OF TREES REQUIRED: 7
 NUMBER OF TREES PROVIDED: 5
 MIN. NUMBER OF SHRUBS REQUIRED: 5
 NUMBER OF SHRUBS PROVIDED: 7

LEGEND

- EXISTING TREES TO REMAIN
- PROPERTY LINE
- EXISTING BULKHEAD
- EXISTING LAWN
- EXISTING TIMBER EDGING
- OHWM (ORDINARY HIGH WATER MARK)
- LOGS
- 5' SHORELINE SETBACK
- 10' SHORELINE SETBACK
- 25' SHORELINE SETBACK



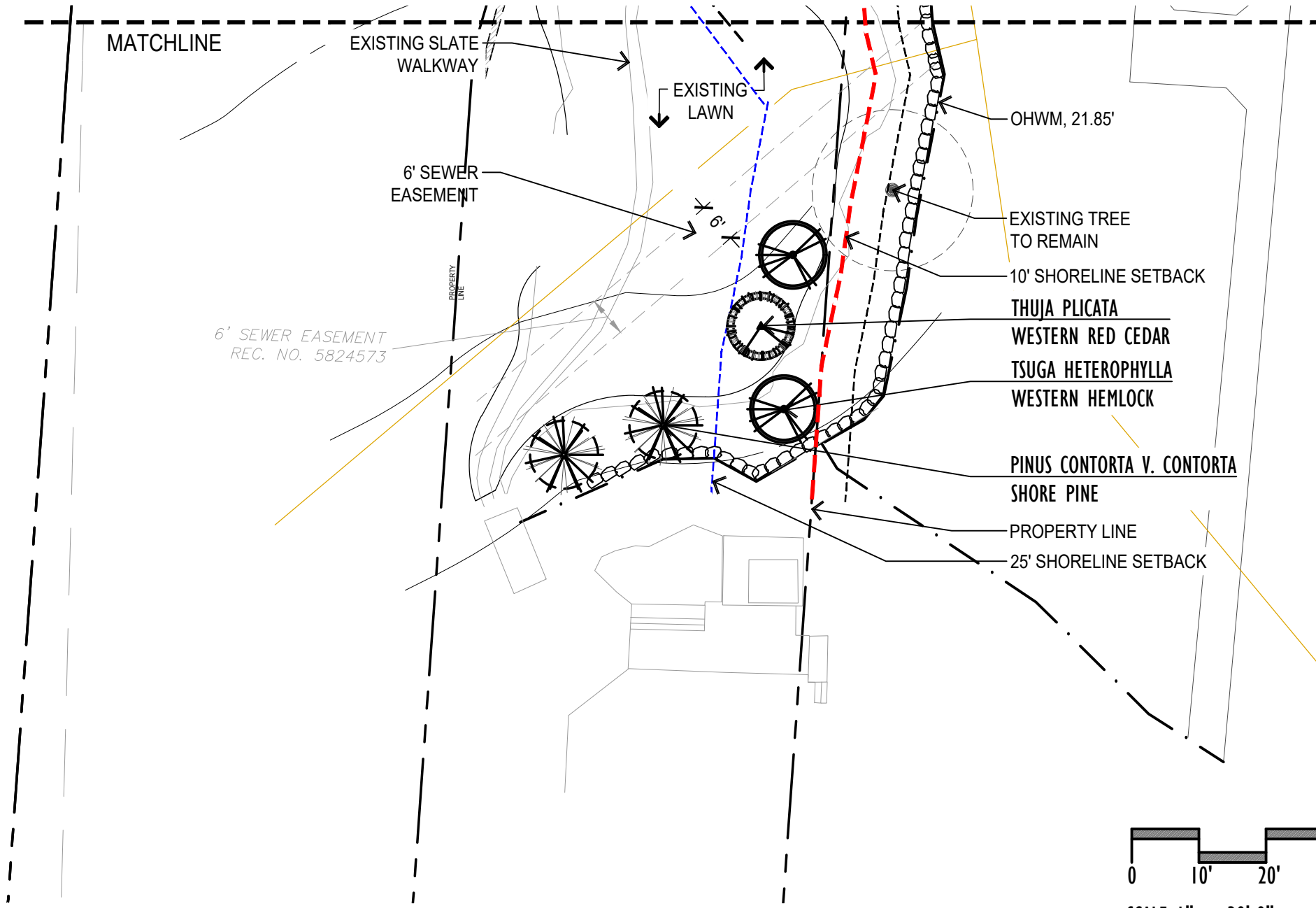
**CHERBERG
 PIER**
 9418 SE 33RD STREET
 MERCER ISLAND, WA

**MITIGATION
 PLANTING PLAN**
 project #: NWS-2013-0565

Date	Issue
Feb 25, 2022	PERMIT REVISION
Apr 20, 2022	PERMIT REVISION
June 15, 2022	PERMIT REVISION
October 10, 2022	PERMIT REVISION

L1.0
 9 OF 11

**SHD LANDSCAPE
 ARCHITECTURE**
 SCOTT HOLSAPPLE
 DESIGN
 4303 STONE WAY N SEATTLE WA 98103
 (206) 745-5822 www.shd-la.com

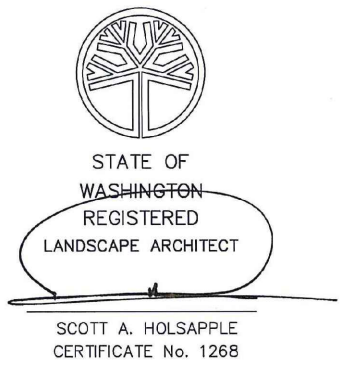
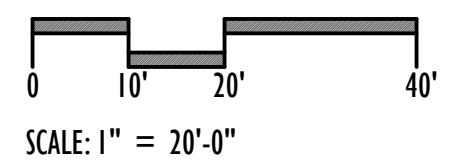


REQUIRED PLANTING IN SHORELINE SETBACK

MIN. NUMBER OF TREES REQUIRED: 7
 NUMBER OF TREES PROVIDED: 5
 MIN. NUMBER OF SHRUBS REQUIRED: 5
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LEGEND

- EXISTING TREES TO REMAIN
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CHERBERG PIER
 9418 SE 33RD STREET
 MERCER ISLAND, WA

MITIGATION PLANTING PLAN

project #: NWS-2013-0565

Date	Feb 25, 2022	Issue	PERMIT REVISION
	Apr 20, 2022		PERMIT REVISION
	June 15, 2022		PERMIT REVISION
	October 10, 2022		PERMIT REVISION

L1.1

10 OF 11

SHD LANDSCAPE ARCHITECTURE
 SCOTT HOLSAPPLE
 D E S I G N
 4303 STONE WAY N SEATTLE WA 98103
 (206) 745-5822 www.shd-la.com

CHERBERG PLANT SCHEDULE

QTY	BOTANICAL NAME	COMMON NAME	SIZE	NOTES
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TREES



2	PINUS CONTORTA V. CONTORTA	SHORE PINE	6' HT.	FULL AND WELL ROOTED
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1	THUJA PLICATA	WESTERN RED CEDAR	6' HT.	FULL AND WELL ROOTED
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2	TSUGA HETEROPHYLLA	WESTERN HEMLOCK	6' HT.	FULL AND WELL ROOTED
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SHRUBS



3	CEANOTHUS VELUTINUS	SNOWBRUSH	2 GAL., 5' HT. 5' O.C., FULL & WELL ROOTED
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3	PHILADELPHUS LEWISII	MOCK ORANGE	2 GAL., 5' HT. 5' O.C., FULL & WELL ROOTED
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1	SALIX HOOKERIANA	HOOKER WILLOW	2 GAL., 5' HT. FULL AND WELL ROOTED
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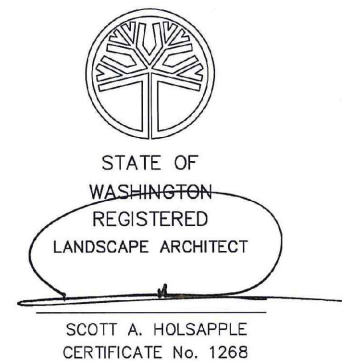
CHERBERG
PIER
9418 SE 33RD STREET
MERCER ISLAND, WA

MITIGATION
PLANTING SCHEDULE
project #: NWS-2013-0565

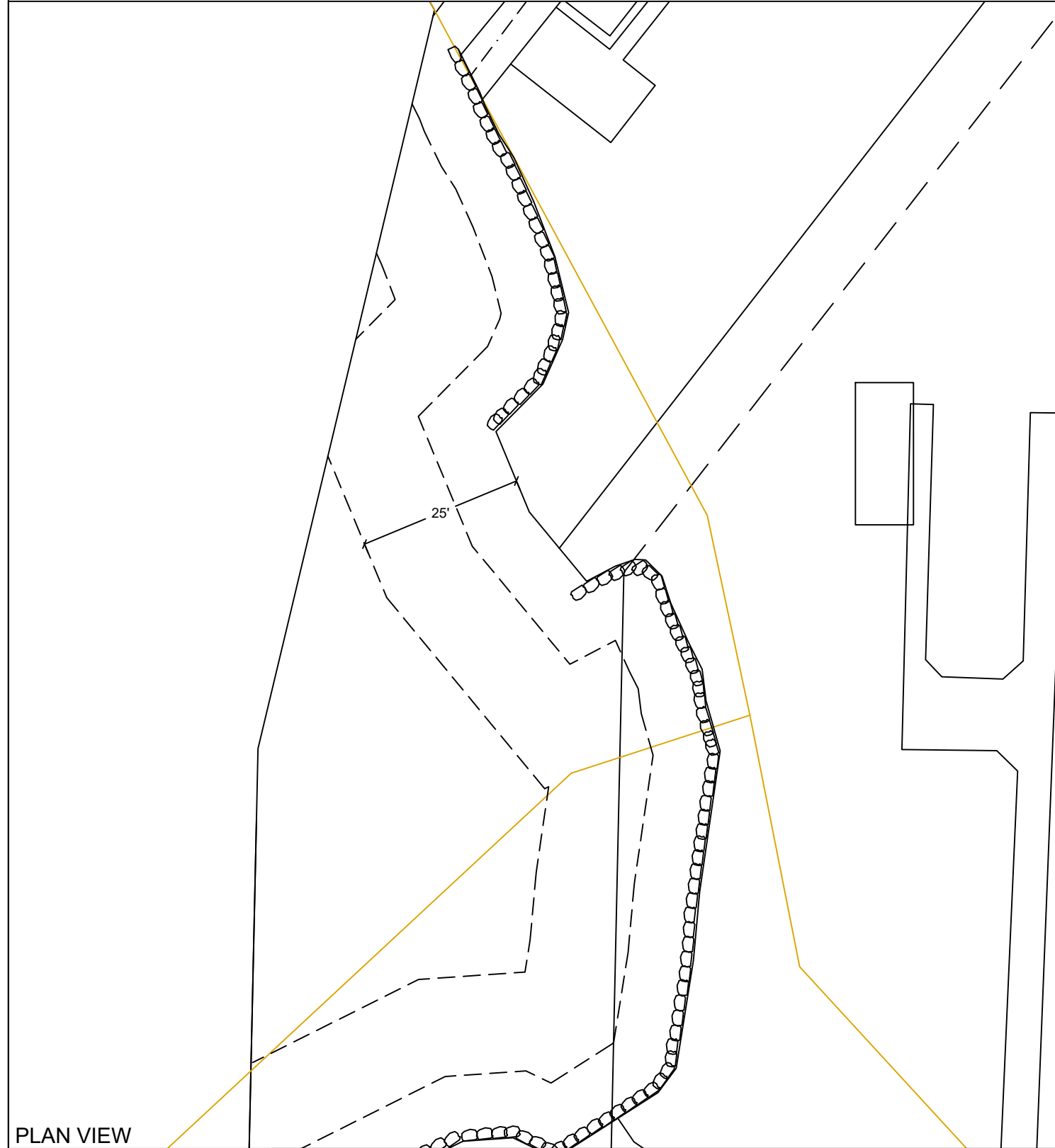
Date	Issue
<u>Feb 25, 2022</u>	<u>PERMIT REVISION</u>
<u>Apr 20, 2022</u>	<u>PERMIT REVISION</u>
<u>June 15, 2022</u>	<u>PERMIT REVISION</u>
<u>October 10, 2022</u>	<u>PERMIT REVISION</u>

L2.0
11 OF 11

SHD LANDSCAPE
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SCOTT HOLSAPPLE
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(206) 745-5822 www.shd-la.com



EXISTING PLANT PLAN



**SEE LANDSCAPE PLAN
BY OWNER**

PLAN VIEW



Seaborn Pile Driving
1080 W Ewing St
Seattle, WA 98119

Office: 206-236-1700 ext. 3
www.seabornpiledriving.com

Scope of Work: We propose to drive (20) 8" steel piles and construct a new dock with grated decking material. We also propose to install (1) new boat lift and (1) new PWC lift.

County: King County
Location: Lake Washington

Applicant: Cherberg Residence
9418 SE 33rd Street
Mercer Island, WA 98040

Datum: CORPS OF ENGINEERS 1919
SE Quarter Of Section 07, Township 24, Range 05

Adjacent Owners:
GRIFFITH HAL E+JOAN I
9410 SE 33RD ST 98040
GRAUE JAMES THOMAS III
9422 SE 33RD ST 98040

Created:

Last Updated: 10/12/2022 1:03 PM Zion

**SHEET
A12.0**

GENERAL NOTES:

MATERIALS SPEC LIST:

Lifts: Aluminum

- * Boat Lift - 10'x12'
- * PWC Lift - 5'x8'

Decking Material: FRPP - Fiberglass reinforced polypropylene

Light permeable percentage:

- * Surface - 43%
- * 18" Dock Height - 61%

SEWER:

- * All sewer is field verified by probing the lake bed manually during the allowed work windows for the area.

PILES:

- * All new piles are epoxy coated steel piles *size varies, see plan set
- * Piles are driven using the vibro method

CODE REFERENCES: Mercer Island

We are applying for the permit to be reviewed under the:
 "Development Standards for New and Expanded Moorage Facilities" per MIMC 19.13050(F)(1).

F. Moorage Facilities. All permits for new and expanded moorage facility, other than public access piers or boardwalks, shall meet the following standards unless otherwise exempted. Moorage facilities have the option of meeting either the development standards prescribed in subsection (F)(1) or (F)(2) of this section, or the "alternative development standards" in subsection (F)(3) of this section.

1. Development Standards for New and Expanded Moorage Facilities. A proposed moorage facility shall be presumed to not create a net loss of ecological functions pursuant to subsection (B)(2) of this section if:

No net loss report is attached

i. The surface coverage area of the moorage facility is:

Not applicable

a. Four hundred eighty square feet or less for a single property owner;

Not applicable

b. Seven hundred square feet or less for two residential property owners (residential); or

Not applicable

c. One thousand square feet or less for three or more residential property owners;

Not applicable

ii. Piers, docks, and platform lifts must be fully grated with materials that allow a minimum of 40 percent light transmittance;

Grated decking material is 43% light permeable

iii. Vegetation. The code official approves a vegetation plan that conforms to the following:

Ch. 19.13 Shoreline Master Program | Mercer Island City Code Page 27 of 34

The Mercer Island City Code is current through Ordinance 20C-13, passed June 16, 2020.

Vegetation must be planted as provided in Figure C and as follows: Within the 25-foot shoreline setback, a 20-foot vegetation area shall be established, measured landward from the OHWM. Twenty-five percent of the area shall contain vegetation coverage. The five feet nearest the OHWM shall contain at least 25 percent native vegetation coverage. A shoreline vegetation plan shall be submitted to the city for approval. The vegetation coverage shall consist of a variety of ground cover shrubs and trees, excluding nonnative grasses. No plants on the current King County noxious weed lists shall be planted within the shorelands.

Figure C: Vegetation Plan

iv. Only docks, ramps, and boatlifts may be within the first 30 feet from the OHWM. No skirting is allowed on any structure;

No skirting is being installed

v. The height above the OHWM for docks shall be a minimum of one and one-half feet and a maximum of five feet;

The dock will be installed at 1'-6" above OHWM

vi. The first in-water (nearest the OHWM) set of pilings shall be steel, 10 inches in diameter or less, and at least 18 feet from the OHWM. Piling sets beyond the first shall also be spaced at least 18 feet apart and shall not be greater than 12 inches in diameter. Piles shall not be treated with pentachlorophenol, creosote, CCA or comparably toxic compounds. If ammoniacal copper zinc arsenate (ACZA) pilings are proposed, the applicant shall meet all of the best management practices, including a post-treatment

procedure, as outlined in the amended Best Management Practices of the Western Wood Preservers. All piling sizes are in nominal diameter;

The piles are within the constrictions above

vii. Any paint, stain or preservative applied to components of the dock must be leach resistant, completely dried or cured prior to installation. Materials shall not be treated with pentachlorophenol, creosote, CCA or comparably toxic compounds;

Piles are epoxy coated steel

Ch. 19.13 Shoreline Master Program | Mercer Island City Code Page 28 of 34

The Mercer Island City Code is current through Ordinance 20C-13, passed June 16, 2020.

viii. No more than two mooring piles shall be installed per structure. Joint-use structures may have up to four mooring piles. The limits include existing mooring piles. Moorage piling shall not be installed within 30 feet of the OHWM. These piles shall be as far offshore as possible;

No mooring piles are to be driven

ix. The applicant shall abide by the work windows for listed species established by the U.S. Army Corps of Engineers and Washington Fish and Wildlife; and

Work will be done within the work windows

x. Disturbance of bank vegetation shall be limited to the minimum amount necessary to accomplish the project. Disturbed bank vegetation shall be replaced with native, locally adapted herbaceous and/or woody vegetation. Herbaceous plantings shall occur within 48 hours of the completion of construction. Woody vegetation components shall be planted in the fall or early winter, whichever occurs first. The applicant shall take appropriate measures to ensure revegetation success.

No bank vegetation will be disturbed

Last permit issued for property:

Dock established/constructed: date

County: King County
 Location: Lake Washington
 Applicant: Cherberg Residence
 9418 SE 33rd Street
 Mercer Island, WA 98040
 Datum: CORPS OF ENGINEERS 1919
 SE Quarter Of Section 07, Township 24, Range 05
 Adjacent Owners:
 GRAUE JAMES THOMAS III
 9422 SE 33RD ST 98040
 GRIFFITH HALL E+JOAN I
 9410 SE 33RD ST 98040
 Created:
 Last Updated: 10/12/2022 1:03 PM Zion



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Scope of Work: We propose to drive (20) 8" steel piles and construct a new dock with grated decking material. We also propose to install (1) new boat lift and (1) new PWC lift.

**SHEET
 A13.0**

Plotted: May 02, 2022 - 12:46pm ktran Layout: CHB1_S1.1 - STRUCTURAL NOTES
 N: \2021\2100134 Seaborn Pile Driving On-Call\2022 Projects\005\Cherberg, James\KPF Drawings\CURRENT\CHB1_S1.1 - STRUCTURAL NOTES.dwg

GENERAL

- ALL CONSTRUCTION SHALL CONFORM TO THESE PLANS.
- CONTRACTOR SHALL VERIFY ALL LEVELS, DIMENSIONS, AND EXISTING CONDITIONS IN THE FIELD BEFORE PROCEEDING. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR FIELD CHANGES PRIOR TO INSTALLATION OR FABRICATION. IN CASE OF DISCREPANCIES BETWEEN THE EXISTING CONDITIONS AND THE DRAWINGS, THE CONTRACTOR SHALL OBTAIN DIRECTION FROM THE ENGINEER BEFORE PROCEEDING. DIMENSIONS NOTED AS PLUS OR MINUS (\pm) OR REF INDICATE UNVERIFIED DIMENSIONS AND ARE APPROXIMATE. NOTIFY ENGINEER IMMEDIATELY OF CONFLICTS OR EXCESSIVE VARIATIONS FROM INDICATED DIMENSIONS, NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS - DO NOT SCALE DRAWINGS. DIMENSIONS OF EXISTING CONDITIONS ARE BASED ON RECORD DRAWINGS AND ARE TO BE FIELD-VERIFIED BY THE CONTRACTOR.
- CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND BRACING OF ALL STRUCTURAL MEMBERS AND EXISTING MEMBERS, AS REQUIRED, AND IN A MANNER SUITABLE TO WORK SEQUENCE. TEMPORARY SHORING AND BRACING SHALL NOT BE REMOVED UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE DRAWINGS AND MATERIALS HAVE ACHIEVED DESIGN STRENGTH.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES REQUIRED TO PERFORM THE WORK.
- ALL MATERIALS SHALL BE NEW, UNO.
- ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE DRAWINGS, NOTES, AND MANUFACTURER RECOMMENDATIONS. IF THERE ARE ANY CONFLICTS BETWEEN THESE DOCUMENTS, THE ENGINEER SHALL BE CONTACTED FOR DIRECTION.
- THE CONTRACTOR SHALL CAREFULLY DECONSTRUCT EXISTING ELEMENTS AS NECESSARY TO ACCESS THE WORK AREAS. SUCH DECONSTRUCTION MAY INCLUDE, INTERIOR AND EXTERIOR FINISHES. ALL DECONSTRUCTION ELEMENTS SHALL BE RECONSTRUCTED TO MATCH THE ORIGINAL APPEARANCE AND MEET THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE.
- ALL MOORAGE COVERS AND LIFTS SHALL BE FREESTANDING AND SHALL NOT BE ATTACHED TO THE DOCK, UNLESS NOTED OTHERWISE.

CODES AND STANDARDS

- ALL METHODS AND MATERIALS SHALL CONFORM TO THE INTERNATIONAL BUILDING CODE, 2018 EDITION.
- AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD 7-16 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.
- WOOD WORK SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATION (NDS) 2018 EDITION.
- AMERICAN SOCIETY FOR TESTING AND MATERIALS, CURRENT EDITION

DESIGN CRITERIA

GRAVITY LOADS: LIVE LOAD = 40 PSF
SNOW LOAD = 25 PSF + 5 PSF RAIN ON SNOW SURCHARGE

WIND DESIGN: WIND LOAD IS BASED ON ASCE 7 CHAPTER 29 WITH THE FOLLOWING FACTORS

EXPOSURE CATEGORY = D RISK CATEGORY = II
 $V_{3s} = 98$ MPH WIND IMPORTANCE FACTOR, $I_w = 1.0$

DESIGN VESSEL IS 30' LONG WITH MAX SAIL AREA OF 345 SF

WAVE LOADS: P = 328 LBS PER PILE

SEISMIC LOADS: DOCK PILING R = 2.0
SEISMIC IMPORTANCE = 1.0
SD1 = 0.597 g

THE PORTION OF DOCK OF WIDTH 6'-5" HAS NOT BEEN DESIGNED FOR WIND ON VESSEL LOADS AND IS INTENDED TO ONLY BE USED AS A BERTHING GUIDE OR WALKING SURFACE. THE VESSEL SHALL BE PRIMARILY MOORED TO THE MAIN DOCK UTILIZING MOORING FIXTURES CONSISTENT WITH THE OWNER'S MOORAGE PLAN FOR SAFE VESSEL MOORAGE. CLEATS SHALL NOT BE INSTALLED ON THIS PORTION OF THE DOCK.

STRUCTURAL STEEL

- ALL MISCELLANEOUS STEEL SHAPES AND PLATES, EXCEPT AS NOTED BELOW, SHALL CONFORM TO ASTM 36.
- ALL WF SHAPES SHALL CONFORM TO ASTM A992, $F_y = 50$ KSI
- ALL PILES SHALL CONFORM TO ASTM A252 GRADE 3, $F_y = 45$ KSI
- ALL BOLTS SHALL BE ASTM A307, UNO.
- ALL NUTS SHALL BE ASTM A563, UNO.
- ALL WASHERS SHALL BE ASTM F436, UNO.
- ALL THREADED RODS SHALL CONFORM TO ASTM F1554, GRADE 36.
- ALL STEEL MEMBERS AND FASTENERS THAT ARE NOT EPOXY COATED SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 AS APPLICABLE.

WELDING

- ALL WELDING SHALL BE PERFORMED BY WELDERS QUALIFIED FOR THE WELD AND POSITION SHOWN IN ACCORDANCE WITH AWS AND HAVING CURRENT CERTIFICATION FROM WABO.
- ALL WELDS SHALL BE PERFORMED WITH PROCEDURES PREQUALIFIED OR QUALIFIED IN ACCORDANCE WITH AWS D1.1.
- THE WELDS SHOWN ARE FOR THE FINAL CONNECTIONS, FIELD WELD SYMBOLS ARE SHOWN WHERE FIELD WELDS ARE REQUIRED BY THE STRUCTURAL DESIGN. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING IF A WELD SHOULD BE SHOP OR FIELD WELDED IN ORDER TO FACILITATE THE STRUCTURAL STEEL ERECTION.
- WELDING ELECTRODES SHALL BE 70 KSI STRENGTH AND SHALL BE "LOW-HYDROGEN ELECTRODES."

WOOD

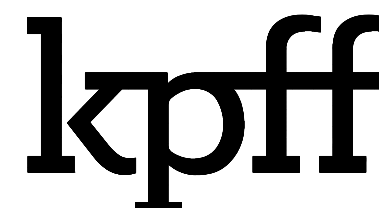
- EACH PIECE OF LUMBER SHALL BEAR A STAMP INDICATING A GRADE MARK OF THE WEST COAST LUMBER INSPECTION BUREAU (WCLIB), WESTERN WOOD PRODUCTS ASSOCIATION (WWPA), OR OTHER AGENCY ACCREDITED BY THE AMERICAN STANDARD COMMITTEE (ALSC).
- DIMENSION LUMBER SHALL BE P.T. DOUG-FIR NO 2 OR BETTER.
- STRUCTURAL GLUED LAMINATED TIMBER SHALL BE ALASKAN CEDAR AC.AC 20F-V12.
- WOOD SHALL BE SEASONED DRY WITH A MAXIMUM MOISTURE CONTENT OF 19%.
- PRESERVATIVE TREATED WOOD SHALL CONFORM TO THE AMERICAN WOOD PROTECTION ASSOCIATION (AWPA) UC4A. ALL WOOD SHALL BEAR A TREATMENT IDENTIFICATION MARK BY THE CERTIFYING AGENCY.
- ALL BOLT HOLES IN WOOD MEMBERS SHALL BE A MINIMUM OF 1/32" TO MAXIMUM OF 1/16" LARGER THAN THE BOLT DIAMETER. PROVIDE PLATE WASHERS WHERE NUTS, BEAR ON WOOD. CUT WASHERS SHALL MEASURE 2 1/4" ϕ x 3/16" THICK.

DECKING

- DECK GRATING SHALL BE SUNWALK 90 SERIES OR APPROVED EQUAL.

ABBREVIATIONS

@	AT
AWS	AMERICAN WELDING SOCIETY
CL	CENTER LINE
CLR	CLEAR
COL	COLUMN
CONT.	CONTINUOUS
DF	DOUG FIR
EA	EACH
EX OR (E)	EXISTING
GLB	GLULAM BEAM
INT	INTERMEDIATE
LLH	LONG LEG HORIZONTAL
MIN	MINIMUM
MNFR	MANUFACTURER
OC	ON CENTER
OPP	OPPOSITE
PL	PLATE
PSI	POUNDS PER SQUARE INCH
PSF	POUNDS PER SQUARE FOOT
P.T.	PRESERVATIVE TREATED
SF	SQUARE FOOT
REF	REFERENCE
SIM	SIMILAR
SS	STAINLESS STEEL
t	THICK
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VIF	VERIFY IN FIELD
WABO	WASHINGTON ASSOCIATION OF BUILDING OFFICIALS
WF	WIDE FLANGE
W/	WITH



2407 North 31st Street, Suite 100
Tacoma, Washington 98407
(253) 396-0150 Fax (253) 396-0162



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NO.	DATE	BY	REVISION

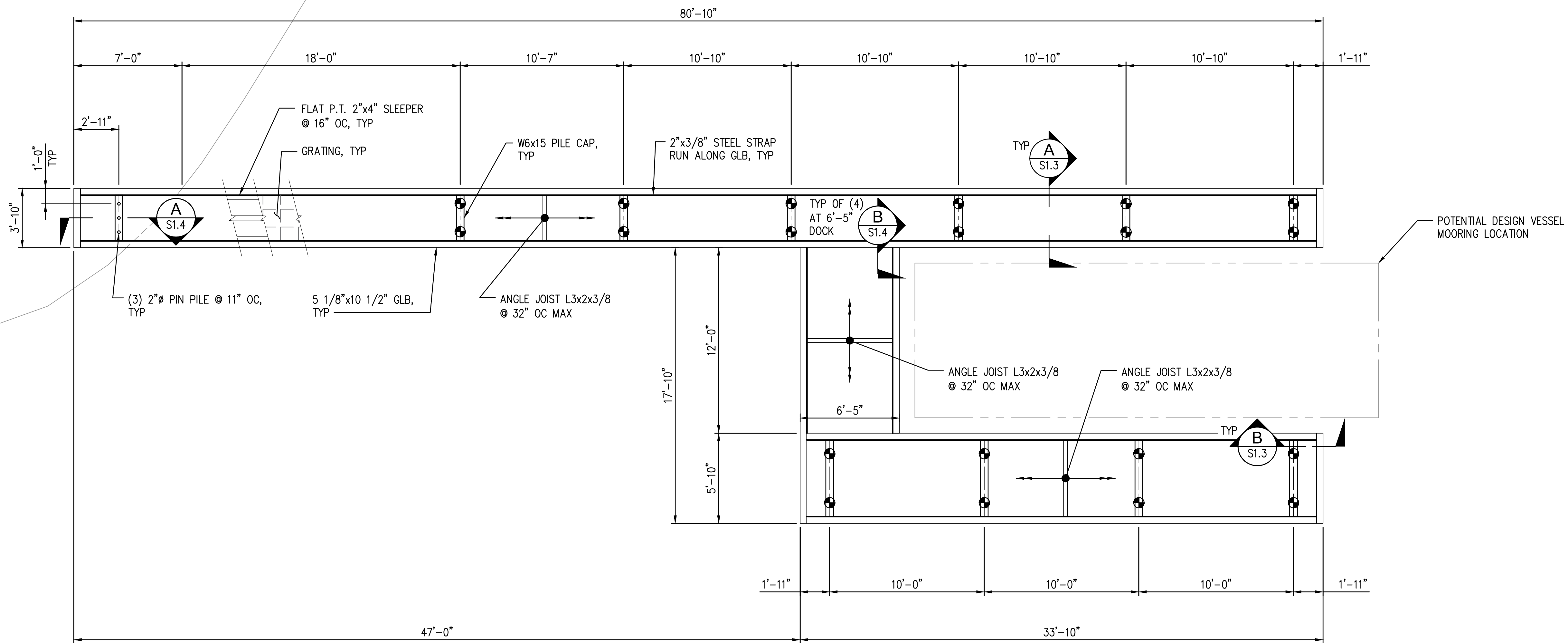
CHERBERG, JAMES RESIDENCE
9418 SE 33RD STREET MERCER ISLAND, WA 98040

STRUCTURAL NOTES

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DESIGN: KPT	SCALE: AS SHOWN
CHECKED: AWB	DATE: 05/04/2022
DRAWING NO.	S1.1
SHEET NO.	01 OF 04

FOR PERMIT

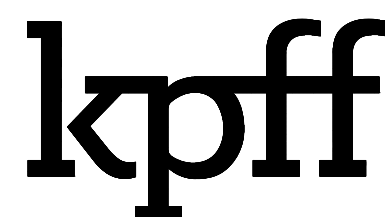
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FRAMING PLAN
SCALE: 1/4" = 1'-0"

LEGEND

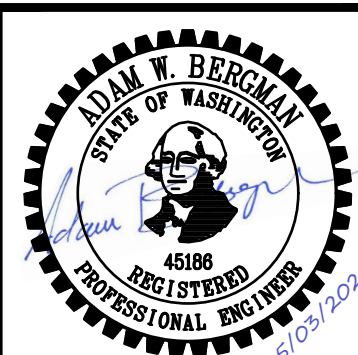
- (20) PROPOSED 8" Ø STEEL PIPE PILE, WITH MINIMUM EMBEDMENT OF 14'. THE ENGINEER SHALL BE NOTIFIED IF PILE REACHES REFUSAL BEFORE 14'.



2407 North 31st Street, Suite 100
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NO.	DATE	BY	REVISION

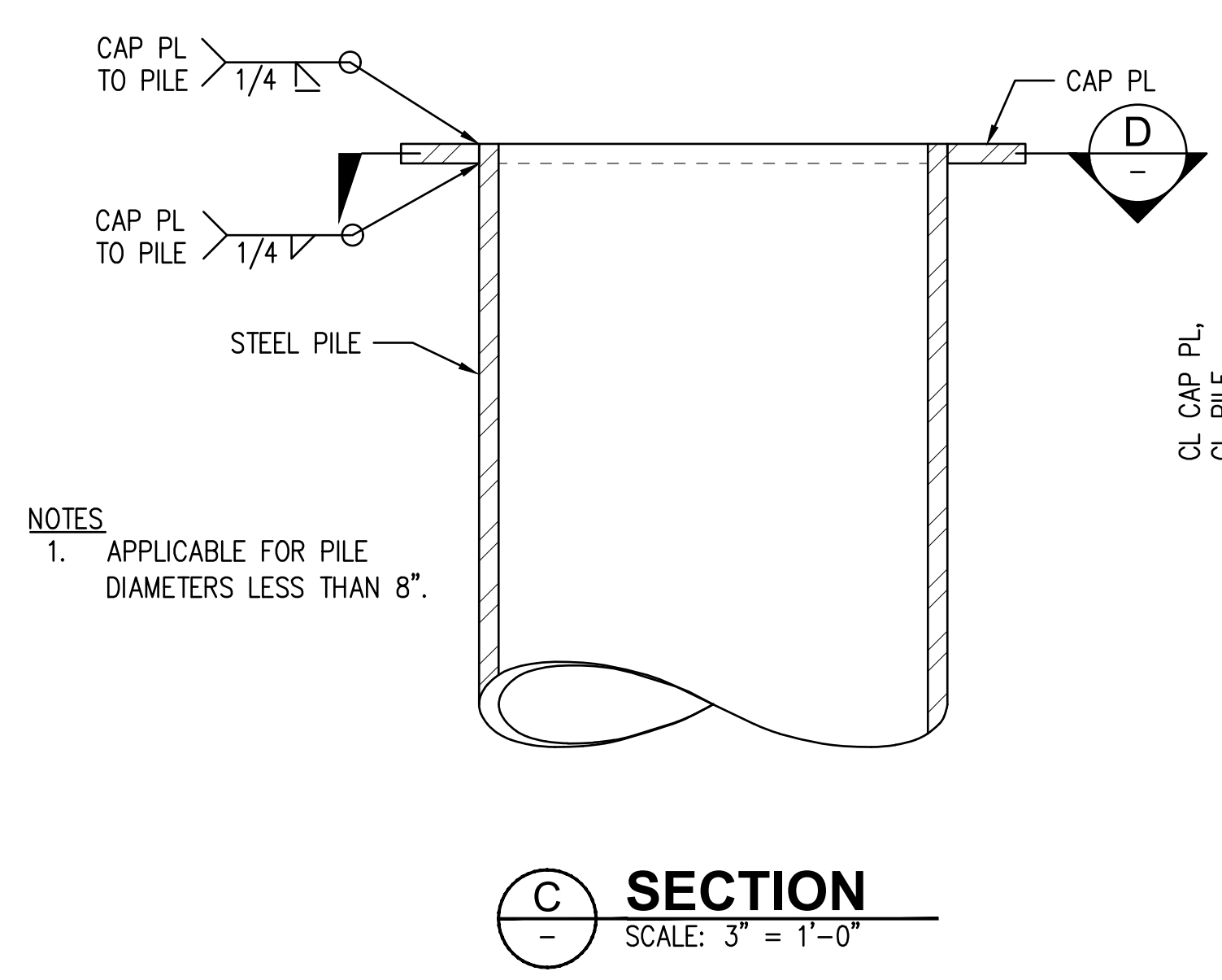
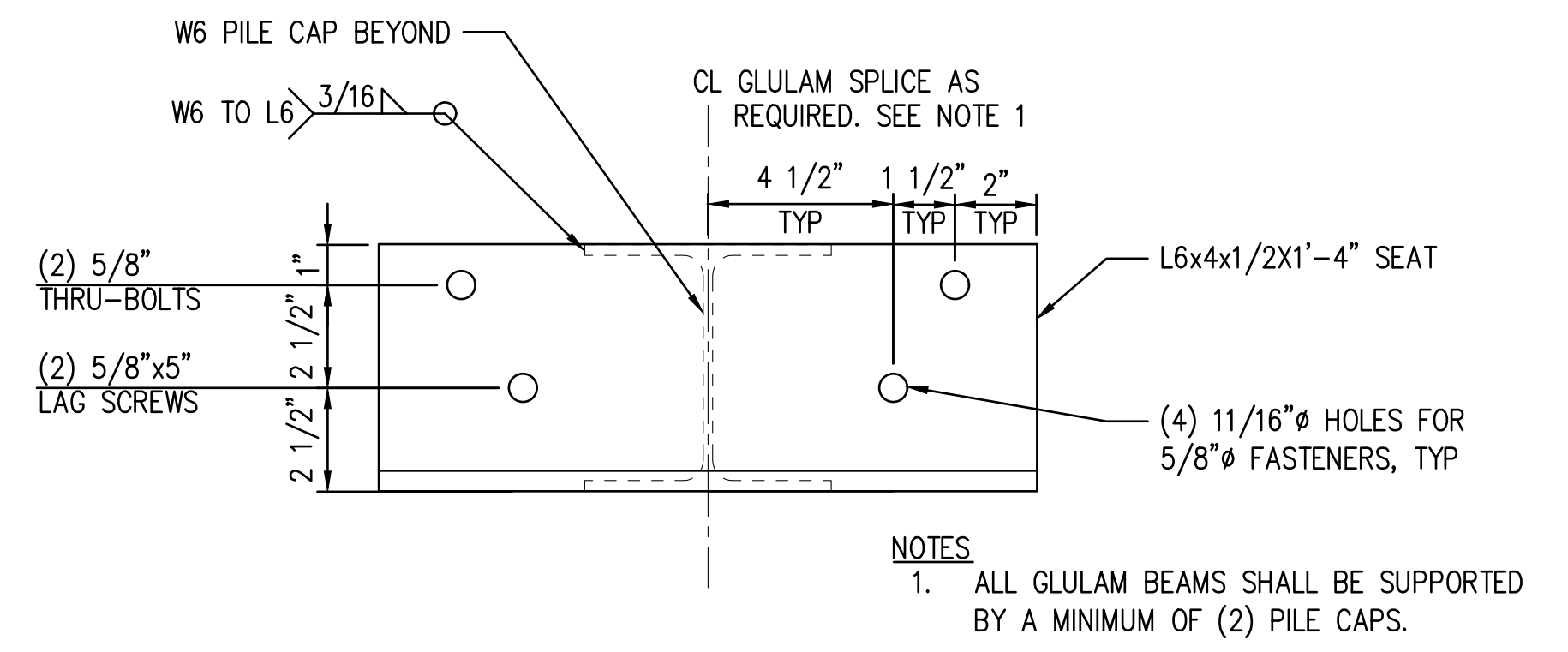
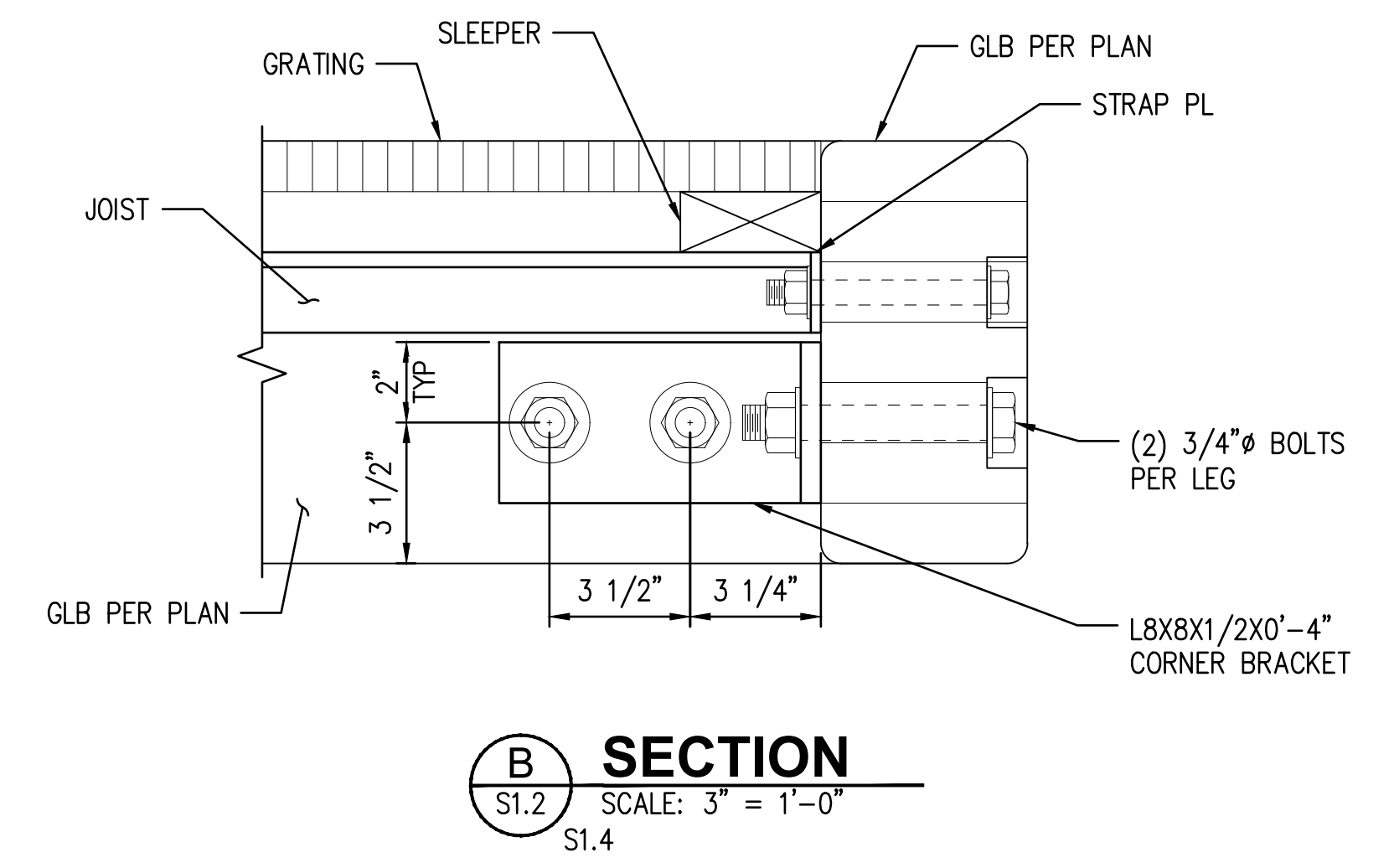
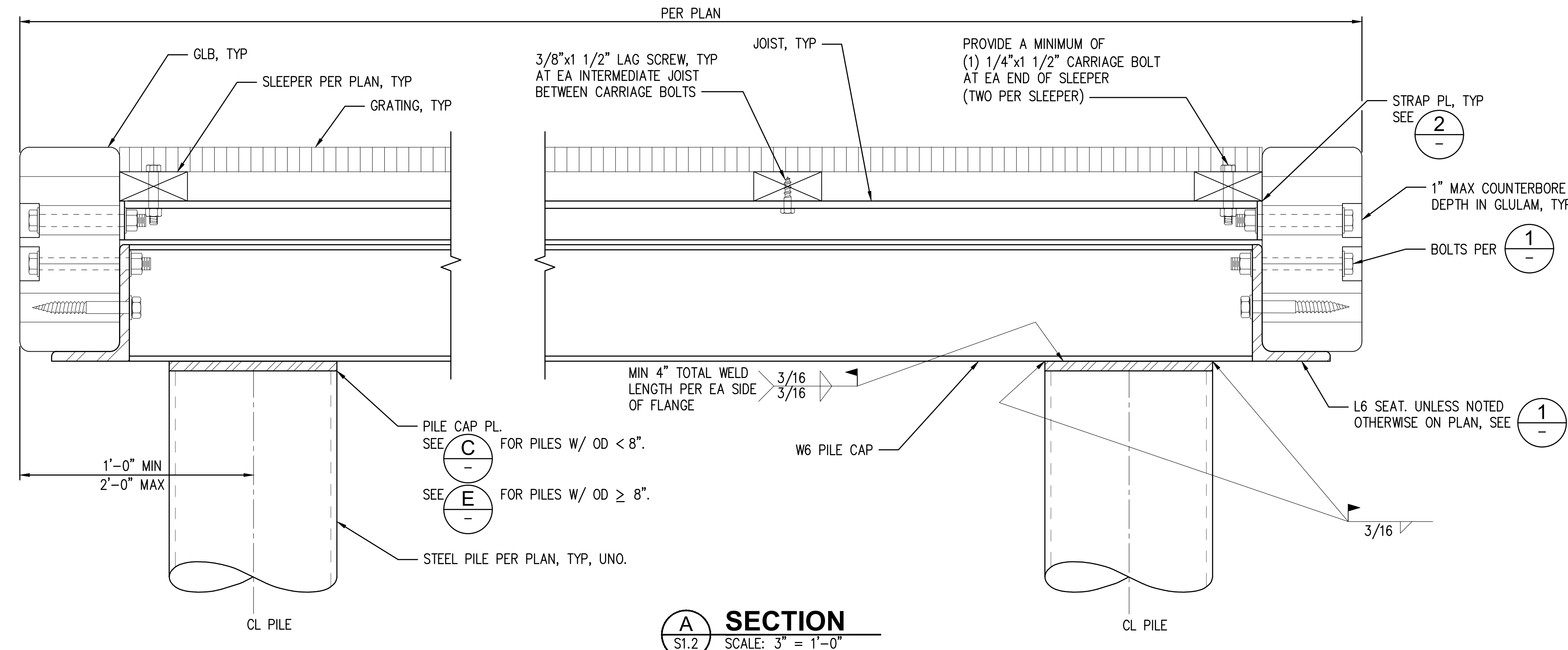
CHERBERG, JAMES RESIDENCE
9418 SE 33RD STREET MERCER ISLAND, WA 98040

DECK FRAMING PLAN

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CHECKED: AWB	DATE: 05/04/2022
DRAWING NO.	S1.2
SHEET NO.	02 OF 04

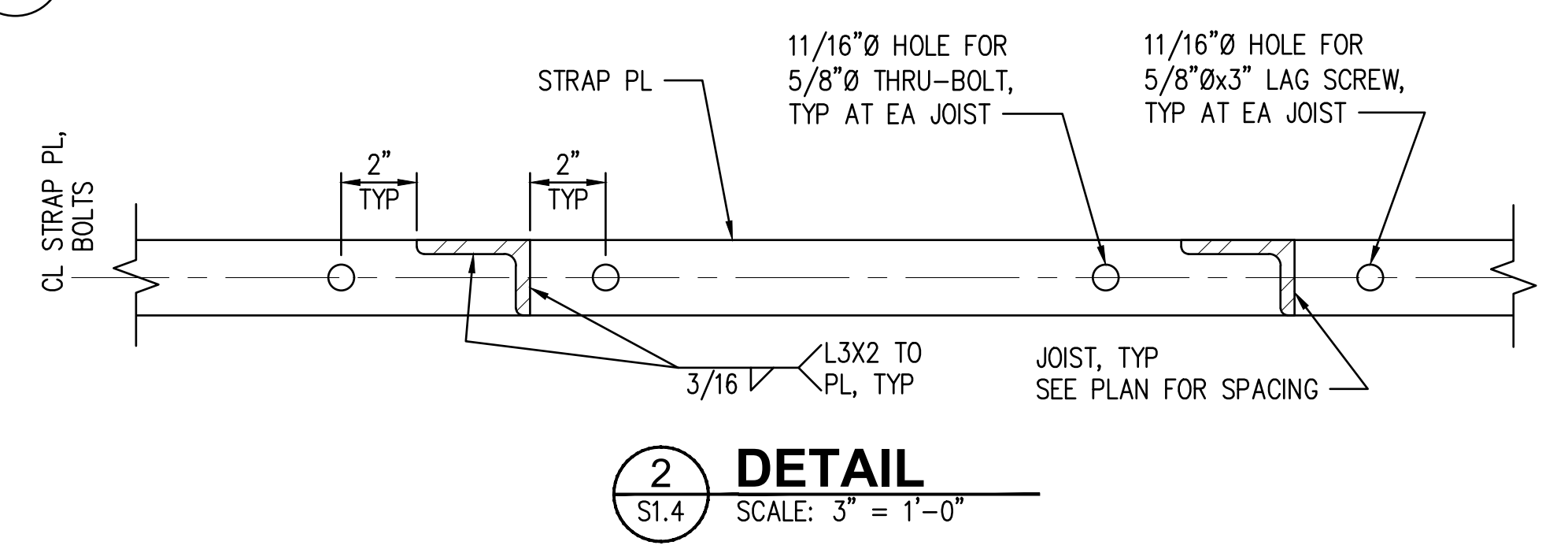
FOR PERMIT

Plotted: May 02, 2022 - 12:47pm ktran Layout: CHB3_S1.3 - SECTIONS AND DETAILS
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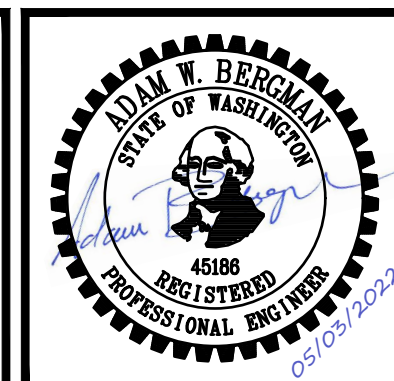


NOTES
1. APPLICABLE FOR PILE DIAMETERS LESS THAN 8".

NOTES
1. APPLICABLE FOR PILE DIAMETERS GREATER THAN OR EQUAL TO 8".
2. IF EX PILE SIZE/LOCATION DOES NOT ALLOW FOR MIN 4" WELD BETWEEN CAP PL AND PILE CAP, A SQUARE CAP PL SHALL BE USED PER **C**



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Seattle, WA 98119
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NO.	DATE	BY	REVISION

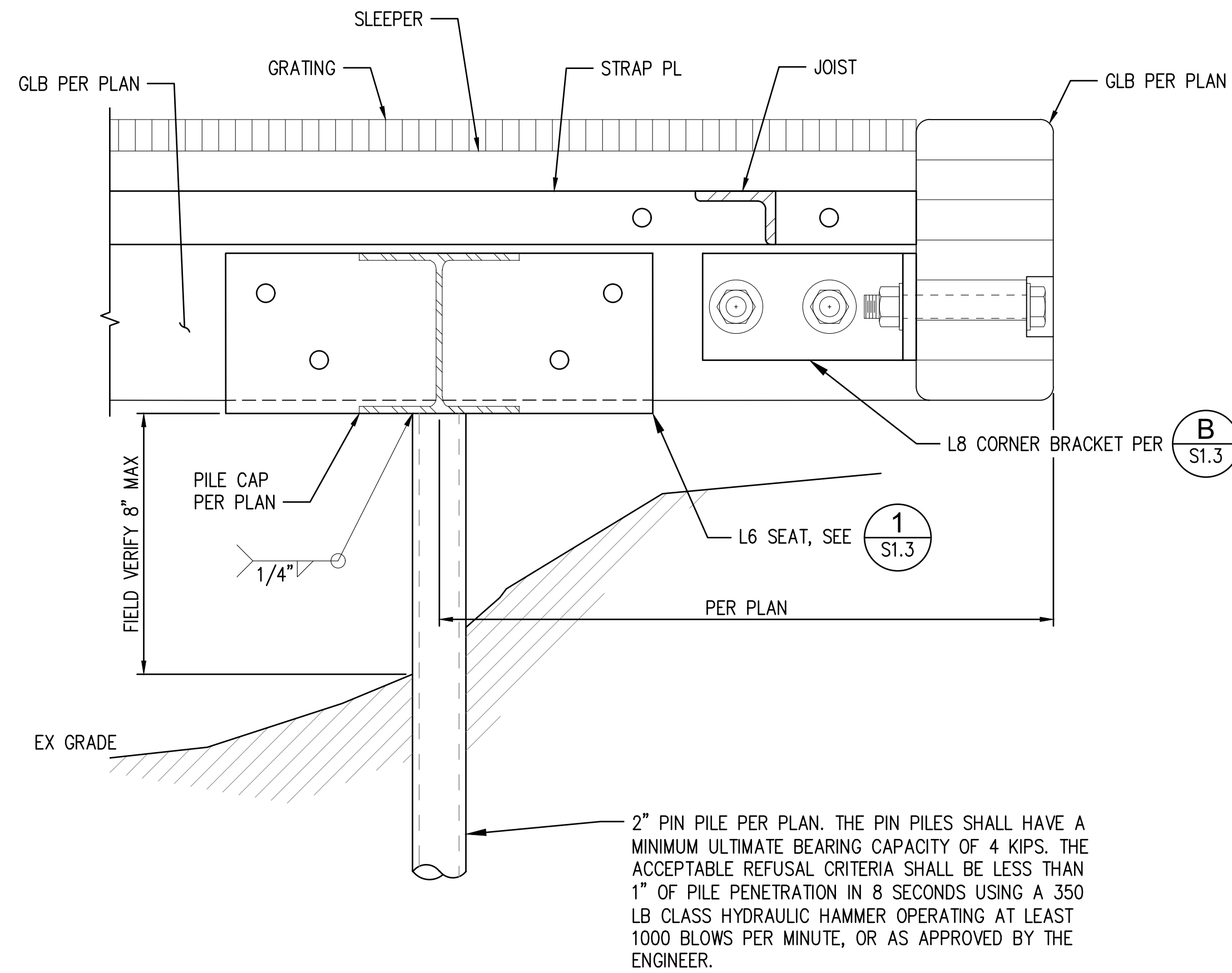
CHERBERG, JAMES RESIDENCE
9418 SE 33RD STREET MERCER ISLAND, WA 98040

SECTIONS AND DETAILS

DRAWN: KPT	PROJECT NO.: 2100134
DESIGN: KPT	SCALE: AS SHOWN
CHECKED: AWB	DATE: 05/04/2022
DRAWING NO.	S1.3
SHEET NO.	03 OF 04

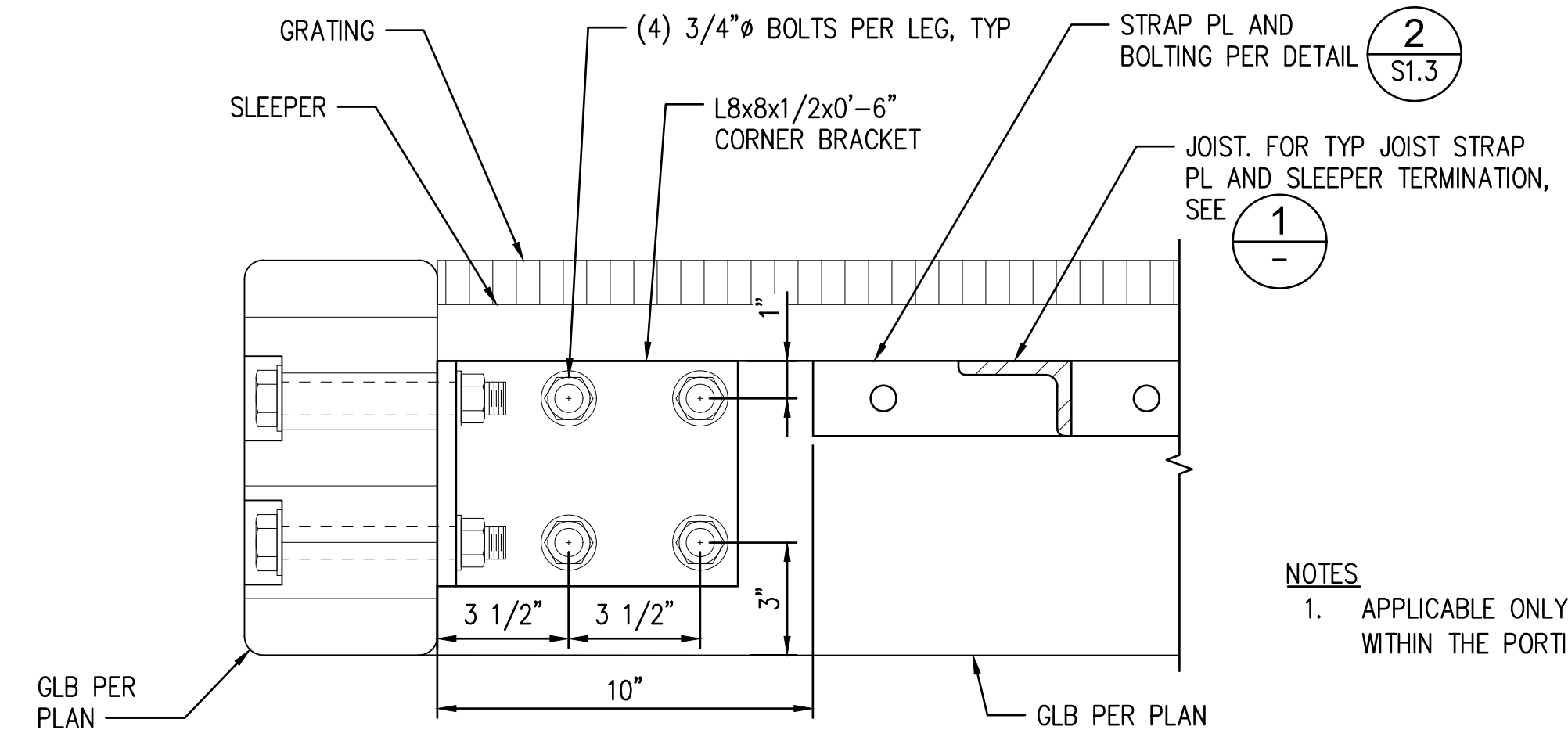
FOR PERMIT

Plotted: May 02, 2022 - 1:35pm ktran Layout: CHB4_S1.4 - SECTIONS AND DETAILS
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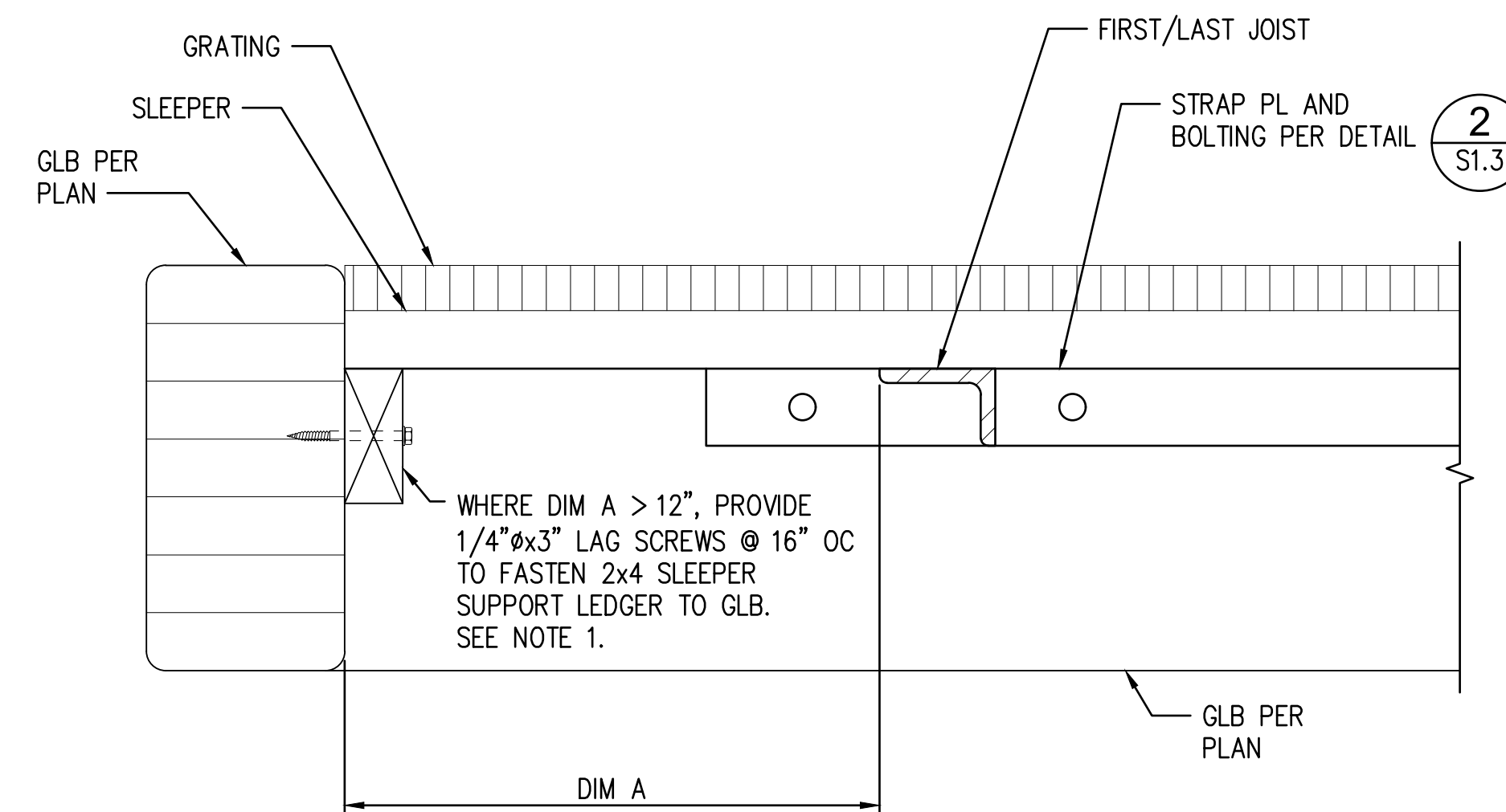
A SECTION
S1.2 SCALE: 3" = 1'-0"

2" PIN PILE PER PLAN. THE PIN PILES SHALL HAVE A MINIMUM ULTIMATE BEARING CAPACITY OF 4 KIPS. THE ACCEPTABLE REFUSAL CRITERIA SHALL BE LESS THAN 1" OF PILE PENETRATION IN 8 SECONDS USING A 350 LB CLASS HYDRAULIC HAMMER OPERATING AT LEAST 1000 BLOWS PER MINUTE, OR AS APPROVED BY THE ENGINEER.



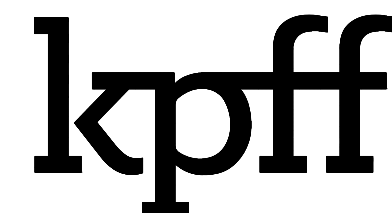
B SECTION
S1.2 SCALE: 3" = 1'-0"

NOTES
1. APPLICABLE ONLY AT (4) CORNER CONNECTIONS WITHIN THE PORTION OF DOCK OF WIDTH 6'-5".



NOTES
1. 2x4 SLEEPER SUPPORT MAY BE PROVIDED BY CONTRACTOR FOR DIM A LESS THAN 12" TO REDUCE DEFLECTION AT CONTRACTOR'S OPTION.

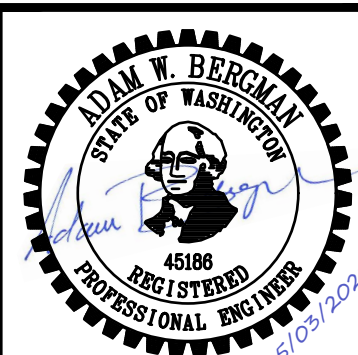
1 TYP JOIST STRAP PL AND SLEEPER TERMINATION
SCALE: 3" = 1'-0"



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NO.	DATE	BY	REVISION

CHERBERG, JAMES RESIDENCE
9418 SE 33RD STREET MERCER ISLAND, WA 98040

SECTIONS AND DETAILS

DRAWN: KPT	PROJECT NO.: 2100134
DESIGN: KPT	SCALE: AS SHOWN
CHECKED: AWB	DATE: 05/04/2022
DRAWING NO.	S1.4
SHEET NO.	04 OF 04

FOR PERMIT

Appendix B: Site Photographs



Photo 1 - Shoreline conditions where new dock will be built.



Photo 2 - Shoreline conditions looking east from new dock location.



Photo 3 - Beach cove at site.



Photo 4 - New dock location in Lake Washington.