

Ecological No Net Loss Assessment Report

Prepared for

Wellmon Residence
6333 77th Ave SE
Mercer Island, WA 98040

Prepared by

 **Northwest**
Environmental Consulting, LLC

Northwest Environmental Consulting, LLC
600 North 36th Street, Suite 423
Seattle, WA 98103
206-234-2520

November 2023

Purpose

The purpose of this report is to fulfill the requirements of City of Mercer Island Municipal Code 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 repairs and associated moorage improvements.

Location

The subject property is located at 6333 77th Ave SE (King County parcel number 4097100010) 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

The proposed work will remove the existing 592 square foot deck from the dock. The existing timber piles (3 8-inch, 3 10-inch, 5 12-inch and 1 8-inch brace pile) will be repaired by pile splicing. The deck will be replaced with grated decking and expanded by 35 square feet by widening the main and two finger piers. A new 117 square foot fully grated platform lift will be placed between the finger piers. See Appendix A – Sheets A2.0 to A12.0.

During construction, a floating boom will surround the work barge and dock. (See Appendix A – Sheets A7.0)

A shoreline vegetation plan is proposed, that will add 2 native conifers and 3 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 A8.0 and A9.0).

Project drawings are included in Attachment A.

Approach

Northwest Environmental Consulting LLC (NVEC) biologist Brad Thiele conducted a site visit on October 25, 2023 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 western boundary with single-family homes to the east and west along the shoreline.

The only existing structures on the property are the house and dock.

The shoreline is armored with a basalt bulkhead with a beach cove. The house was under construction at the time of the visit and an unmaintained lawn with a few planting beds were present up to the edge of the bulkhead. The substrates along the shore are sand with gravel. Eurasian milfoil was present starting about 40 feet from shore.

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 wetlands about 1,300 feet to the south and north of the project along the shoreline.

The City of Mercer Island GIS Portal does not indicate any watercourses at the site. No upland work will be completed on the site except for the planting plan.

Project Impacts and Conservation Measurements

Direct Impacts:

Sediments: Sediment disturbance could occur during pile splicing. 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 piling repair. The project will meet state water quality standards.

Shoreline: Planting native vegetation, including a western red cedar, shore pine 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 A – Sheet 8.0).

Lakebed: Piling repair will not change lakebed coverage. The platform lift will be free standing.

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 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 35 square feet. The new platform lift will increase overwater shading at the site by 117 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
Existing Dock (SF)	592		n/a		
Proposed Dock (SF)		627	0.57	357	270
Platform lift (SF)		117	0.57	67	50
TOTAL (SF)	592	744		424	320

The use of grated decking at the site reduces the effective coverage of the new structure by 320 square feet and reduces the overall effective coverage at the site by 168 square feet over existing.

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 December 31). 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. Lake Washington is a Shoreline of the State.

There will be temporary impacts from noise and disturbed sediments during construction. Increasing overwater coverage by 152 square feet will degrade ecological conditions at the site.

The dock will use grated decking to reduce the effective overwater coverage by 168 square feet over existing. The grating reduces the hard shadows favored by salmonid predators and increases productivity under the pier. Overwater structures may slow juvenile salmonid outmigration times. Using grated decking may reduce the chances of delaying outmigrating juvenile salmonids.

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 2 native trees and 3 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

29 years of experience

Northwest Environmental
Consulting, LLC (NVEC)

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. 2023. King County iMap. Online database. Accessed October 2023 at <https://gismaps.kingcounty.gov/iMap/>

Washington Department of Fish and Wildlife (WDFW). 2023. Priority Habitats and Species. Online database. Accessed October 2023 at <http://apps.wdfw.wa.gov/phsontheweb/>

WDFW. 2023. SalmonScape. Online database. Accessed October 2023 at <http://apps.wdfw.wa.gov/salmonscape/>

Appendix A: Project Drawings

GENERAL NOTES:

CODE REFERENCES: Mercer Island

For our proposed platform lift 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:

- i. The surface coverage area of the moorage facility is:
 - a. Four hundred eighty square feet or less for a single property owner;
 - b. Seven hundred square feet or less for two residential property owners (residential); or
 - c. One thousand square feet or less for three or more residential property owners;
- ii. Piers, docks, and platform lifts must be fully grated with materials that allow a minimum of 40 percent light transmittance;
- 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;

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

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;

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 pentochlorophenol, creosote, CCA or comparably toxic compounds; 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;

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

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.

CODE REFERENCES: Mercer Island

For the repair work we are applying for the permit to be reviewed under the:

“Development Standards for Replacement, Repair and Maintenance of Overwater Structures, Including Moorage Facilities” per MIMC 19.13050(F)(2).

2. Development Standards for Replacement, Repair and Maintenance of Overwater Structures, Including Moorage Facilities. The maintenance, repair and complete replacement of legally existing overwater structures is permitted; provided, that:

- i. All permit requirements of federal and state agencies are met;
- ii. The area, width, or length of the structure is not increased, but may be decreased;
- iii. The height of any structure is not increased, but may be decreased; provided, that the height above the OHWM may be increased as provided in subsection (F)(2)(ix)(b) of this section;

iv. The location of any structure is not changed unless the applicant demonstrates to the director’s satisfaction that the proposed change in location results in: (A) a net gain in ecological function, and (B) a higher degree of conformity with the location standards for a new overwater structure;

v. 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;

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

vii. 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;

viii. 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; Ch. 19.13 Shoreline Master Program | Mercer Island City Code Page 29 of 34 The Mercer Island City Code is current through Ordinance 20C-13, passed June 16, 2020.

ix. Structural Repair. The structural repair, which may include replacement of framing elements, of moorage facilities that results in the repair of more than 50 percent of the structure’s framing elements within a five-year period shall comply with subsections (F)(2)(ix)(a) through (F)(2)(ix)(c) of this section. For this section, framing elements include, but are not limited to, stringers, piles, pile caps, and attachment brackets, as shown in Figure D:

- a. One hundred percent of the decking area of the pier, dock, and any platform lifts must be fully grated with materials that allow a minimum of 40 percent light transmittance;
- b. The height above the OHWM for moorage facilities, except floats, shall be a minimum of one and one-half feet and a maximum of five feet; and
- c. An existing moorage facility that is five feet wide or more within 30 feet waterward from the OHWM shall be replaced or repaired with a moorage face

Last permit issued for property: E05-06120 Electrical Permit: 12/21/2005

Dock established/constructed: 88-718 11/16/1988

County: King County
Location: Lake Washington

Applicant: Wellmon Residence
6333 77TH AVE SE
MERCER ISLAND, WA 98040

Datum: CORPS OF ENGINEERS 1919
SE Quarter Of Section 24, Township 24, Range 04

Adjacent Owners:
DEMOPULOS PETER A+DIANE K
6339 77TH AVE SE 98040

Last Updated: 10/2/2023 9:43 AM Shop

Created: 08/24/23



Seaborn Pile Driving
1080 W Ewing St
Seattle, WA 98119

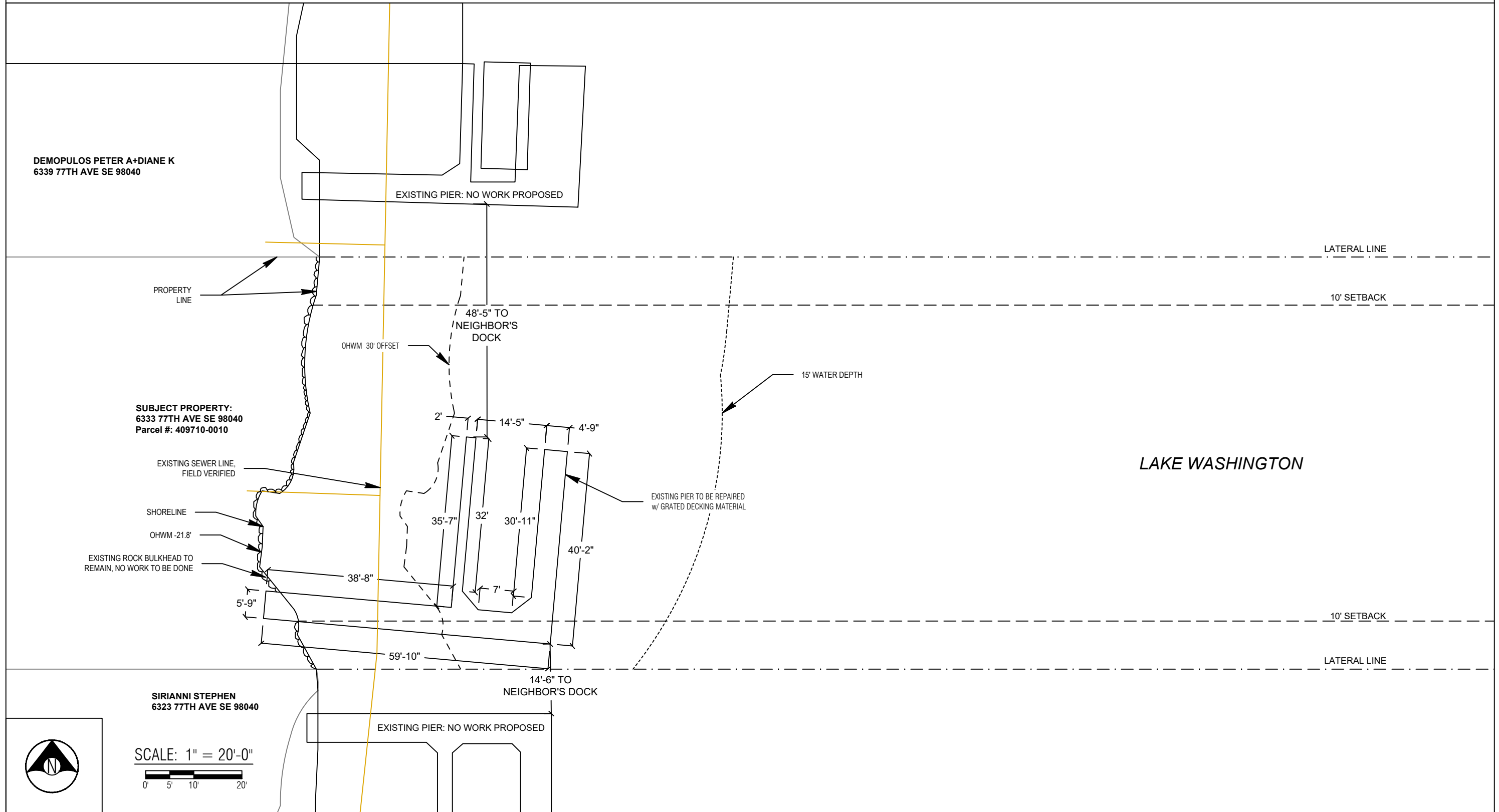
Office: 206-236-1700 ext. 3
www.seabornpiledriving.com

Scope of Work: We propose to repair (11) existing piles, repair (1) existing brace pile, repair the existing dock, and install a platform lift.

SHEET
2.0

EXISTING CONDITIONS

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



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



Seaborn Pile Driving
 1080 W Ewing St
 Seattle, WA 98119

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

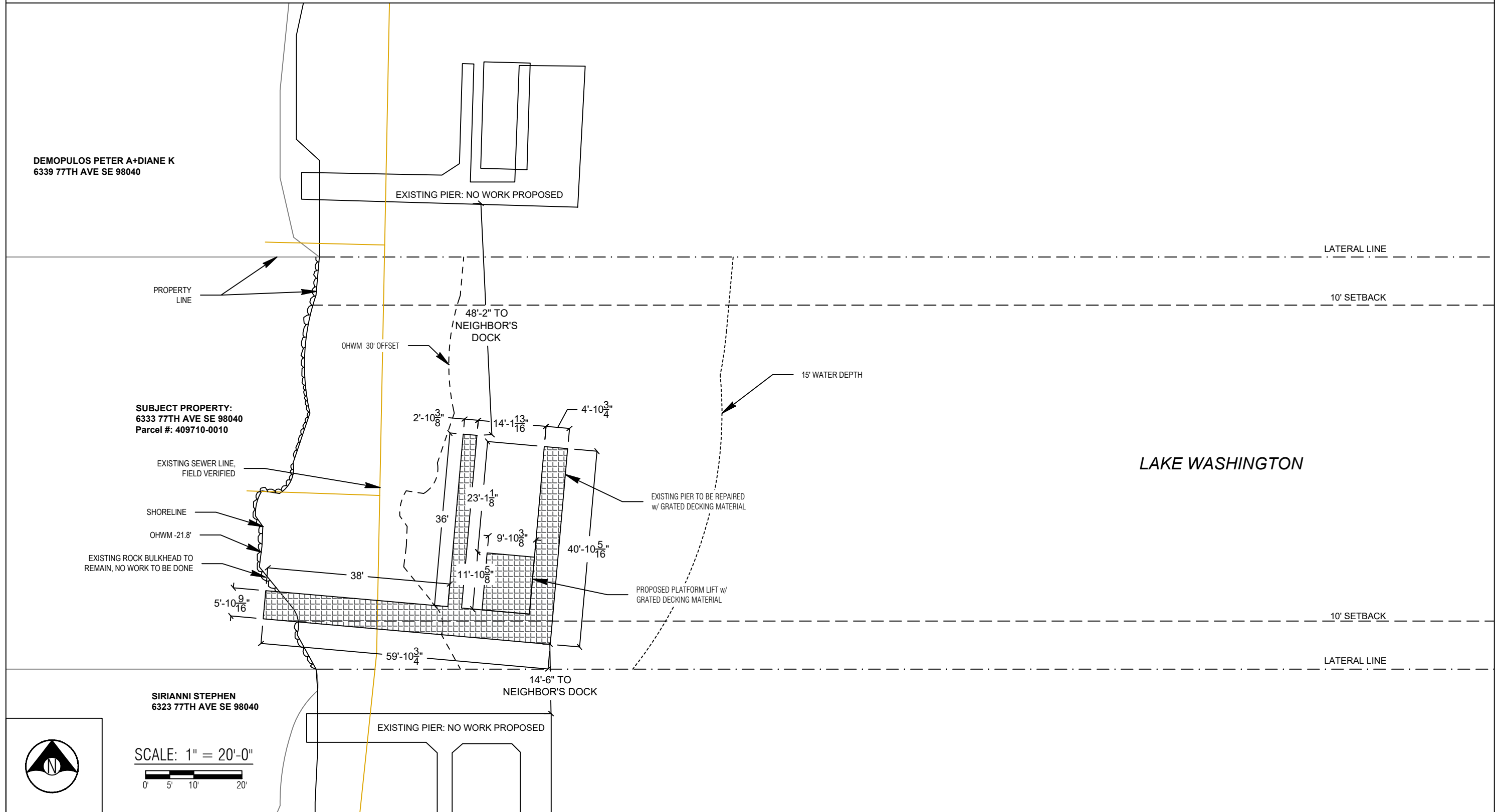
Scope of Work: We propose to repair (11) existing piles, repair (1) existing brace pile, repair the existing dock, and install a platform lift.

County: King County
 Location: Lake Washington
 Applicant: Wellmon Residence
 6333 77TH AVE SE
 MERCER ISLAND, WA 98040
 Datum: CORPS OF ENGINEERS 1919
 SE Quarter Of Section 24, Township 24, Range 04
 Adjacent Owners:
 SIRIANNI STEPHEN
 6323 77TH AVE SE 98040
 DEMOPULOS PETER A+DIANE K
 6339 77TH AVE SE 98040
 Last Updated: 10/2/2023 9:43 AM Shop
 Created: 08/24/23

**SHEET
 3.0**

PROPOSED CONDITIONS

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



County: King County
Location: Lake Washington

Applicant: Wellmon Residence
6333 77TH AVE SE
MERCER ISLAND, WA 98040

Datum: CORPS OF ENGINEERS 1919
SE Quarter Of Section 24, Township 24, Range 04

Adjacent Owners:
DEMOPULOS PETER A+DIANE K
6339 77TH AVE SE 98040

SIRIANNI STEPHEN
6323 77TH AVE SE 98040

Last Updated: 10/2/2023 9:43 AM Shop
Created: 08/24/23



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 repair (11) existing piles, repair (1) existing brace pile, repair the existing dock, and install a platform lift.

SHEET
4.0

PIER DETAILS - PROPOSED PLAN VIEW

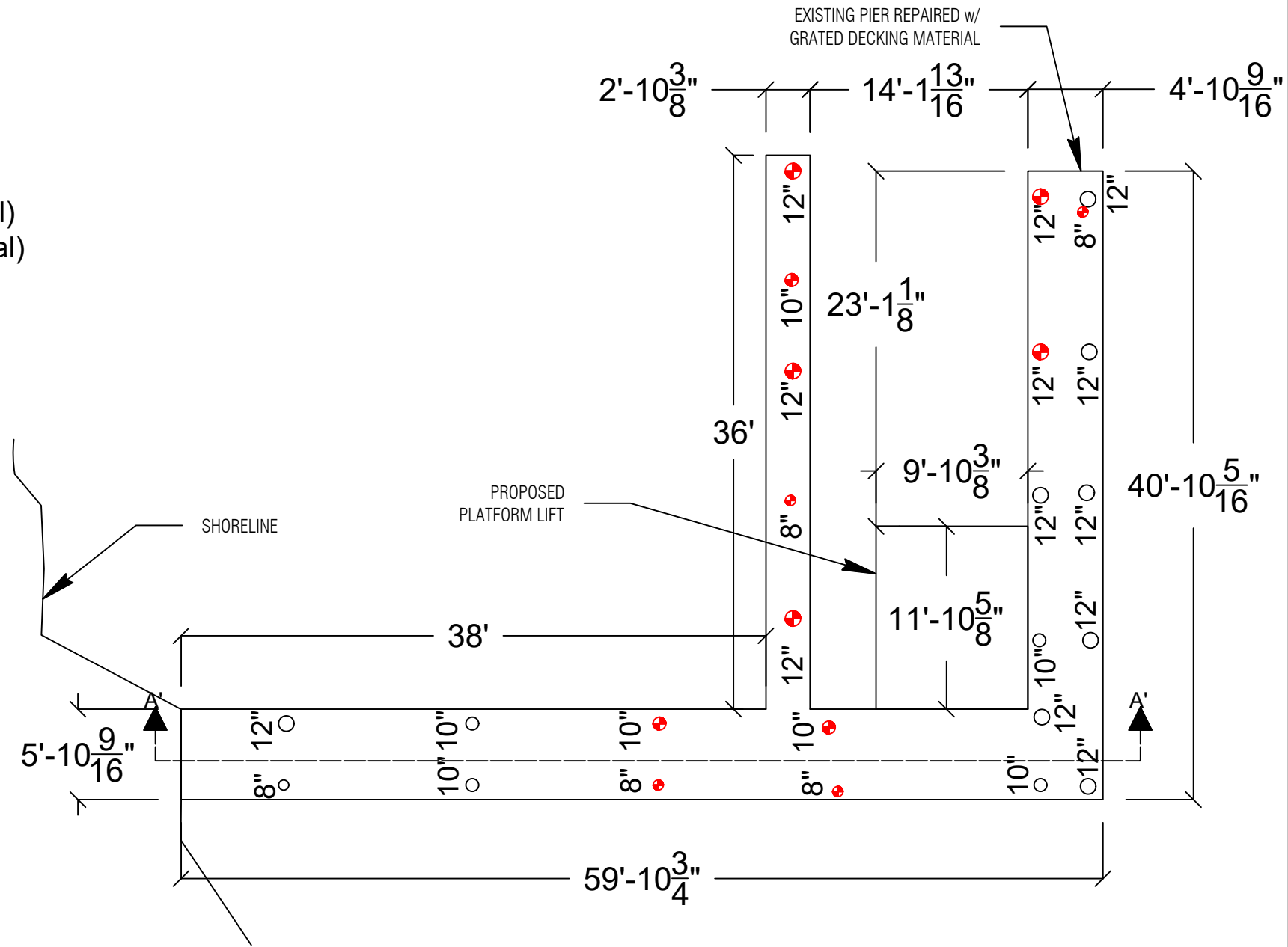
LEGEND

- ⊕ (11) EXISTING PILES - TO BE REPAIRED
- ⊕ (1) EXISTING BRACE PILE - TO BE REPAIRED
- (13) EXISTING PILES - NO WORK TO BE DONE

Existing Pier Total: 592 sqft (to be repaired with grated decking material)
 Existing Overwater: 592 sqft (to be repaired with grated decking material)

Proposed Platform Lift: 117 sqft (grated decking material)
 New Pier Total: 627 sqft (grated decking material)
 New Overwater Total: 744 sqft (grated decking material)

**Grated decking is 43% light permeable



PLAN VIEW



Seaborn Pile Driving
 1080 W Ewing St
 Seattle, WA 98119

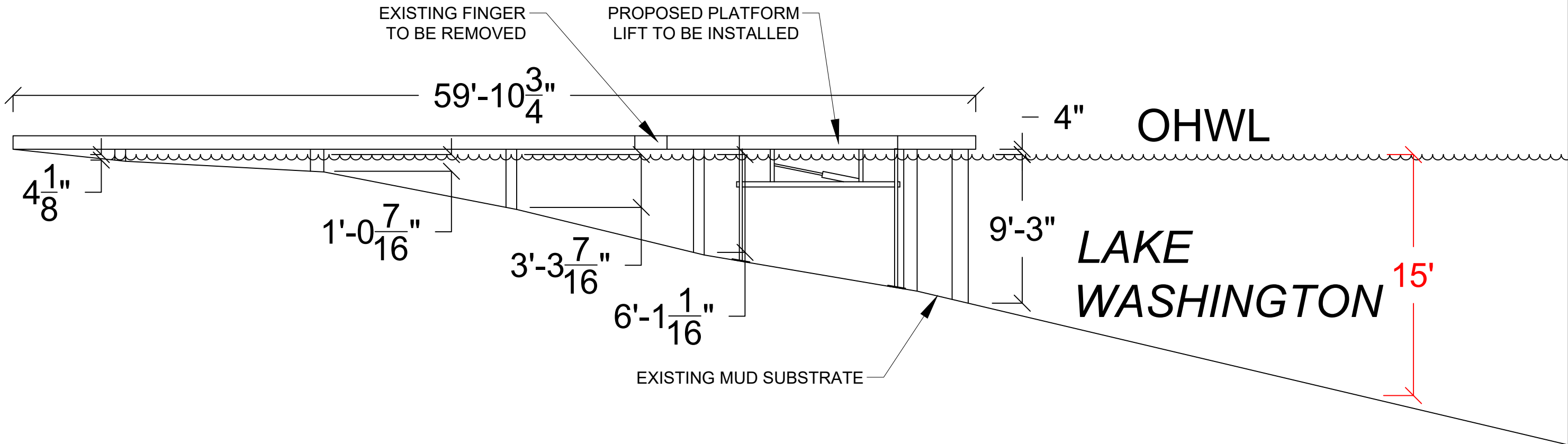
Office: 206-236-1700 ext. 3
www.seabornpiledriving.com

Scope of Work: We propose to repair (11) existing piles, repair (1) existing brace pile, repair the existing dock, and install a platform lift.

County: King County
 Location: Lake Washington
 Applicant: Wellmon Residence
 6333 77TH AVE SE
 MERCER ISLAND, WA 98040
 Datum: CORPS OF ENGINEERS 1919
 SE Quarter Of Section 24, Township 24, Range 04
 Adjacent Owners:
 DEMOPULOS PETER A+DIANE K
 6339 77TH AVE SE 98040
 SIRIANNI STEPHEN
 6323 77TH AVE SE 98040
 Created: 08/24/23
 Last Updated: 10/2/2023 9:43 AM Shop

SHEET
5.0

PIER DETAILS EXISTING/PROPOSED - SECTION VIEW



SECTION VIEW: A'-A'



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 repair (11) existing piles, repair (1) existing brace pile, repair the existing dock, and install a platform lift.

County: King County
 Location: Lake Washington

Applicant: Wellmon Residence
 6333 77TH AVE SE
 MERCER ISLAND, WA 98040

Datum: CORPS OF ENGINEERS 1919
 SE Quarter Of Section 24, Township 24, Range 04

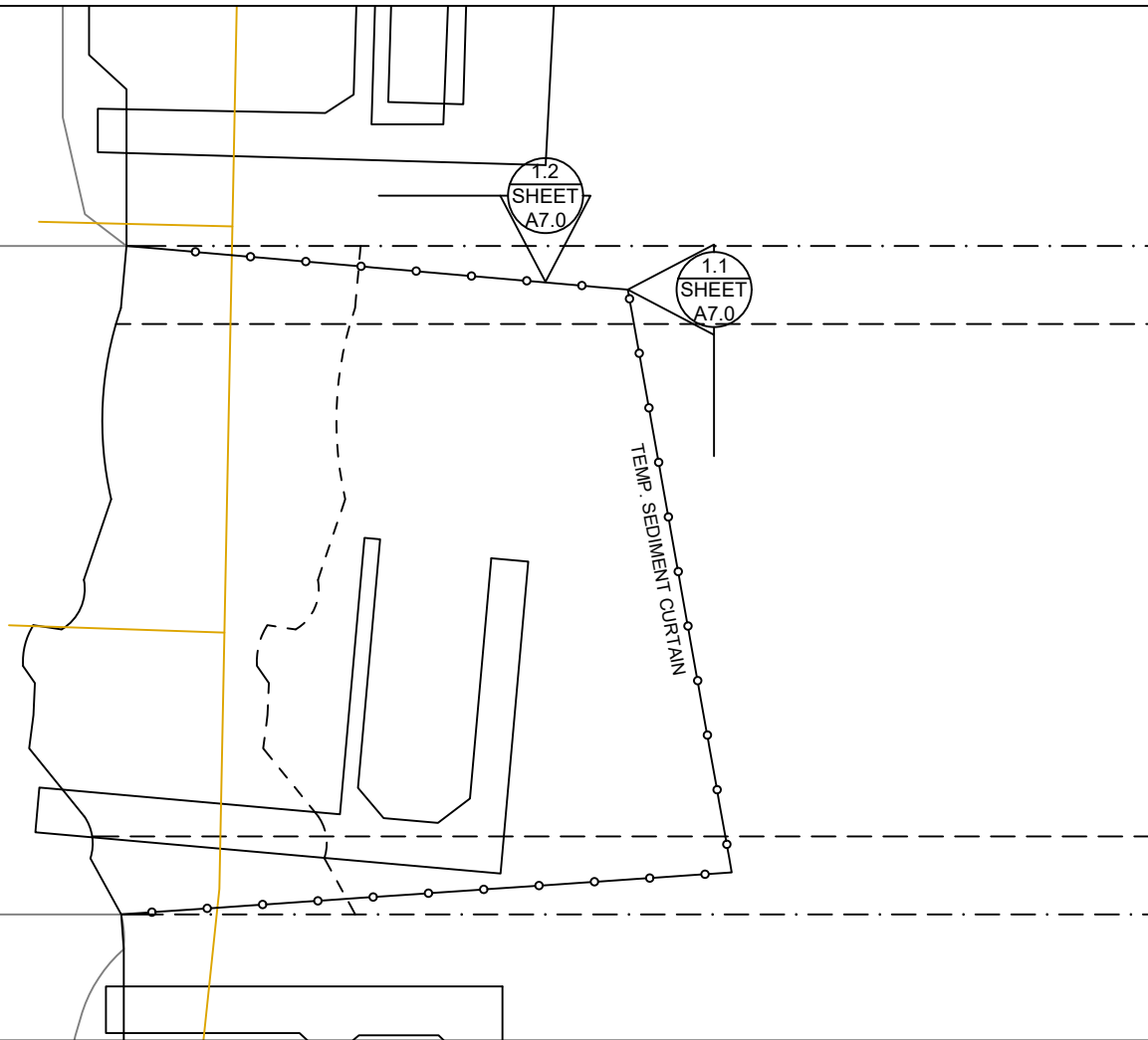
Adjacent Owners:
 DEMOPULOS PETER A+DIANE K
 6339 77TH AVE SE 98040

SIRIANNI STEPHEN
 6323 77TH AVE SE 98040

Created: 08/24/23
 Last Updated: 10/2/2023 9:43 AM Shop

SHEET
6.0

BMP INFORMATION

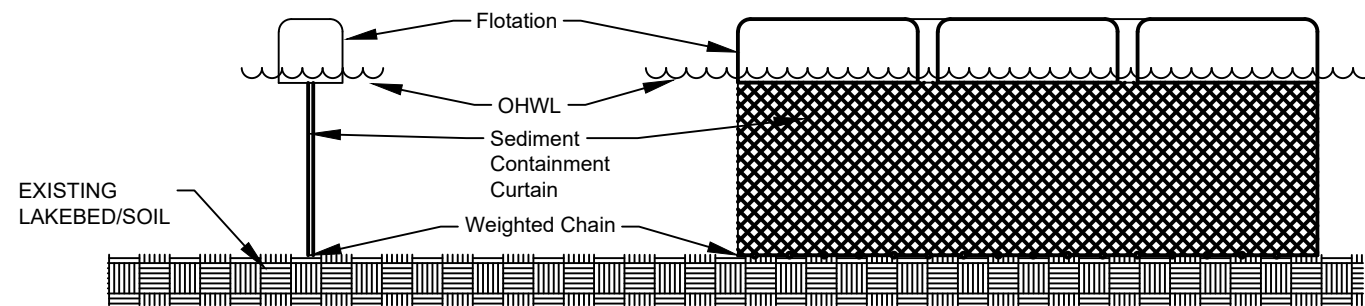


BMP NOTES:

- 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 curtain 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 curtain.
 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



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 repair (11) existing piles, repair (1) existing brace pile, repair the existing dock, and install a platform lift.

Datum: CORPS OF ENGINEERS 1919
SE Quarter Of Section 24, Township 24, Range 04

County: King County
Location: Lake Washington

Applicant: Wellmon Residence
6333 77TH AVE SE
MERCER ISLAND, WA 98040

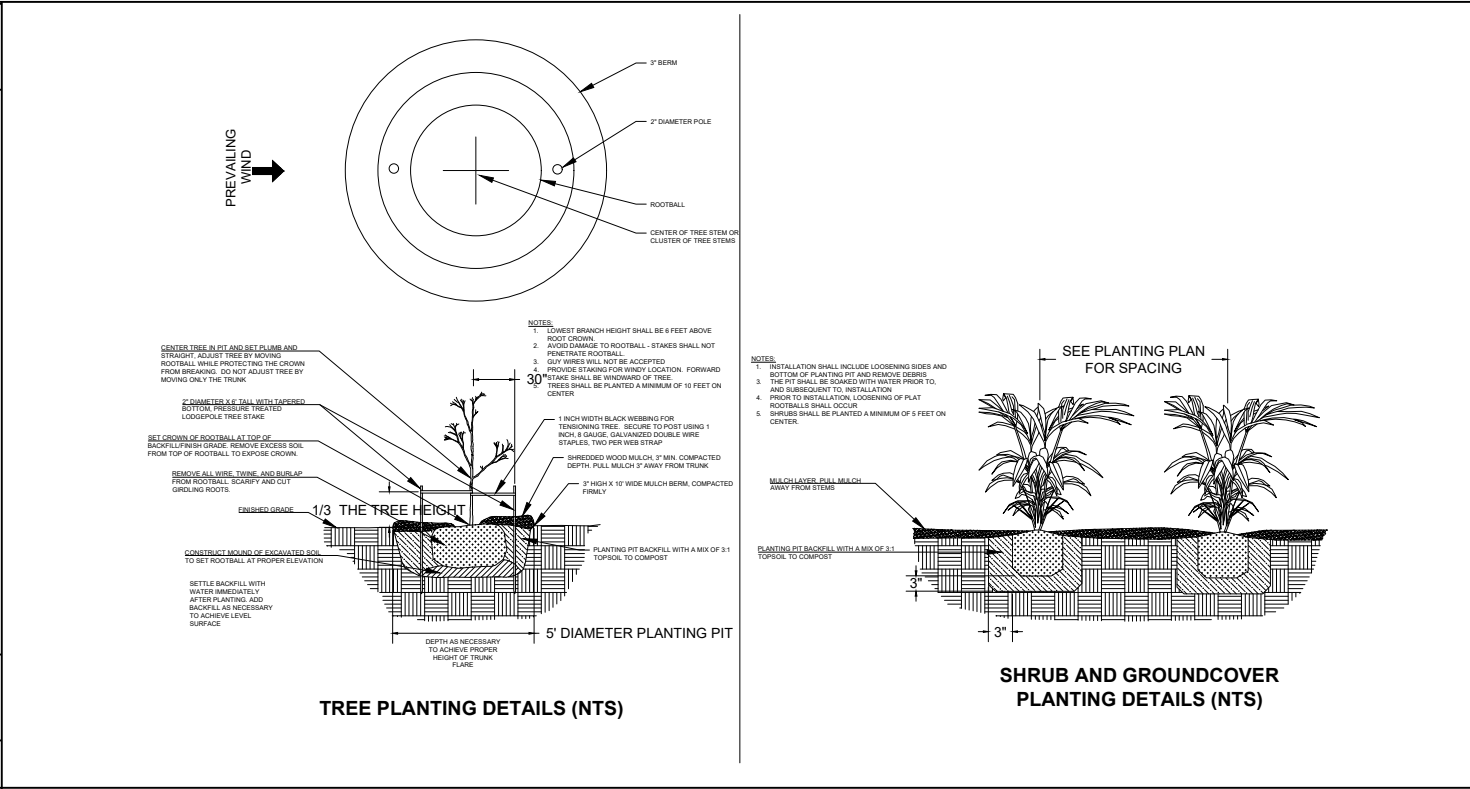
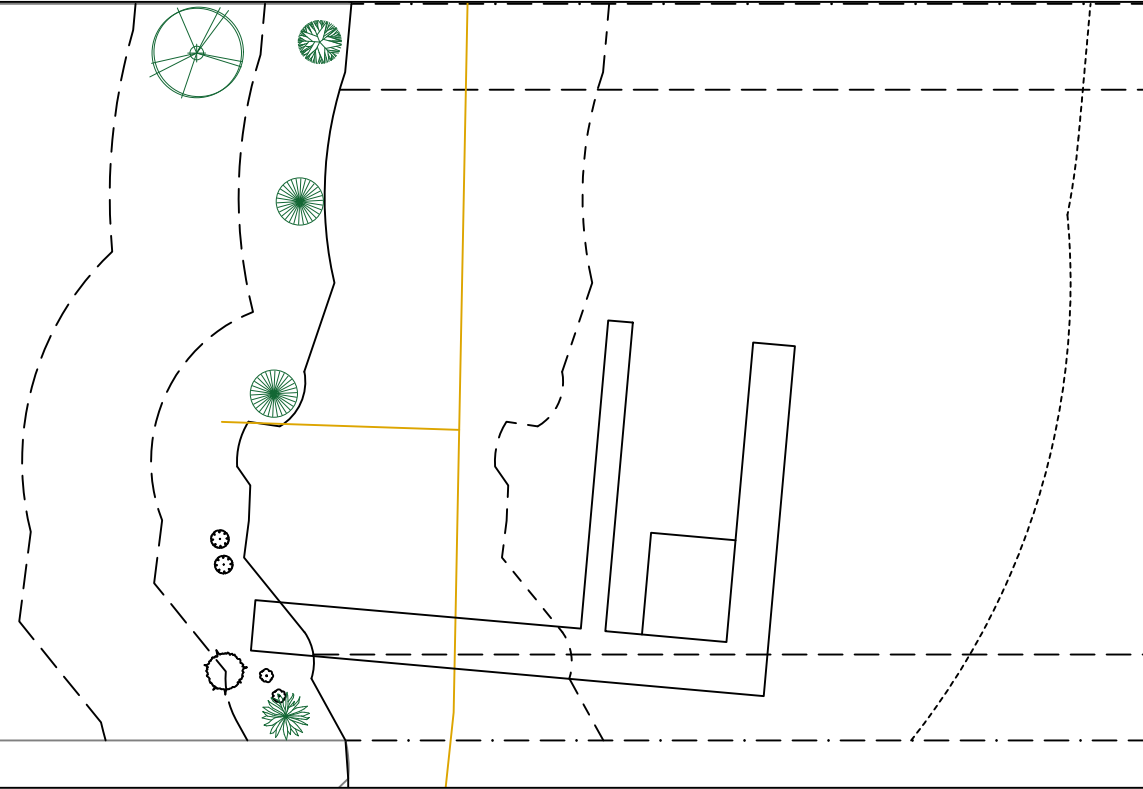
Adjacent Owners:
DEMOPULOS PETER A+DIANE K
6333 77TH AVE SE 98040

SIRIANNI STEPHEN
6323 77TH AVE SE 98040

Created: 08/24/23
Last Updated: 10/2/2023 9:43 AM Shop

SHEET
7.0

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.

PROPOSED PLANTING SPECIES/QUANTITIES

SYMBOL	LATIN NAME	COMMON NAME	QTY	SIZE
	<i>Thuja plicata</i>	Western Red Cedar	1	3 ft
	<i>Pinus contorta v contorta</i>	Shore pine	1	3 ft
	<i>Rosa nutkana</i>	Nootka Rose	1	1 Gallon
	<i>Philadelphus lewisii</i>	Mock Orange	2	1 Gallon

PLANTS: Shrubs to be installed 5ft on center and trees to be installed 10ft on center. All proposed existing plants for credit have been established for 5 years or more on the property.

County: King County
 Location: Lake Washington
 Applicant: Wellmon Residence
 6333 77TH AVE SE
 MERCER ISLAND, WA 98040
 Datum: CORPS OF ENGINEERS 1919
 SE Quarter Of Section 24, Township 24, Range 04
 Adjacent Owners:
 DEMOPULOS PETER A+DIANE K
 6333 77TH AVE SE 98040
 SIRIANNI STEPHEN
 6323 77TH AVE SE 98040
 Created: 08/24/23
 Last Updated: 10/2/2023 9:43 AM Shop

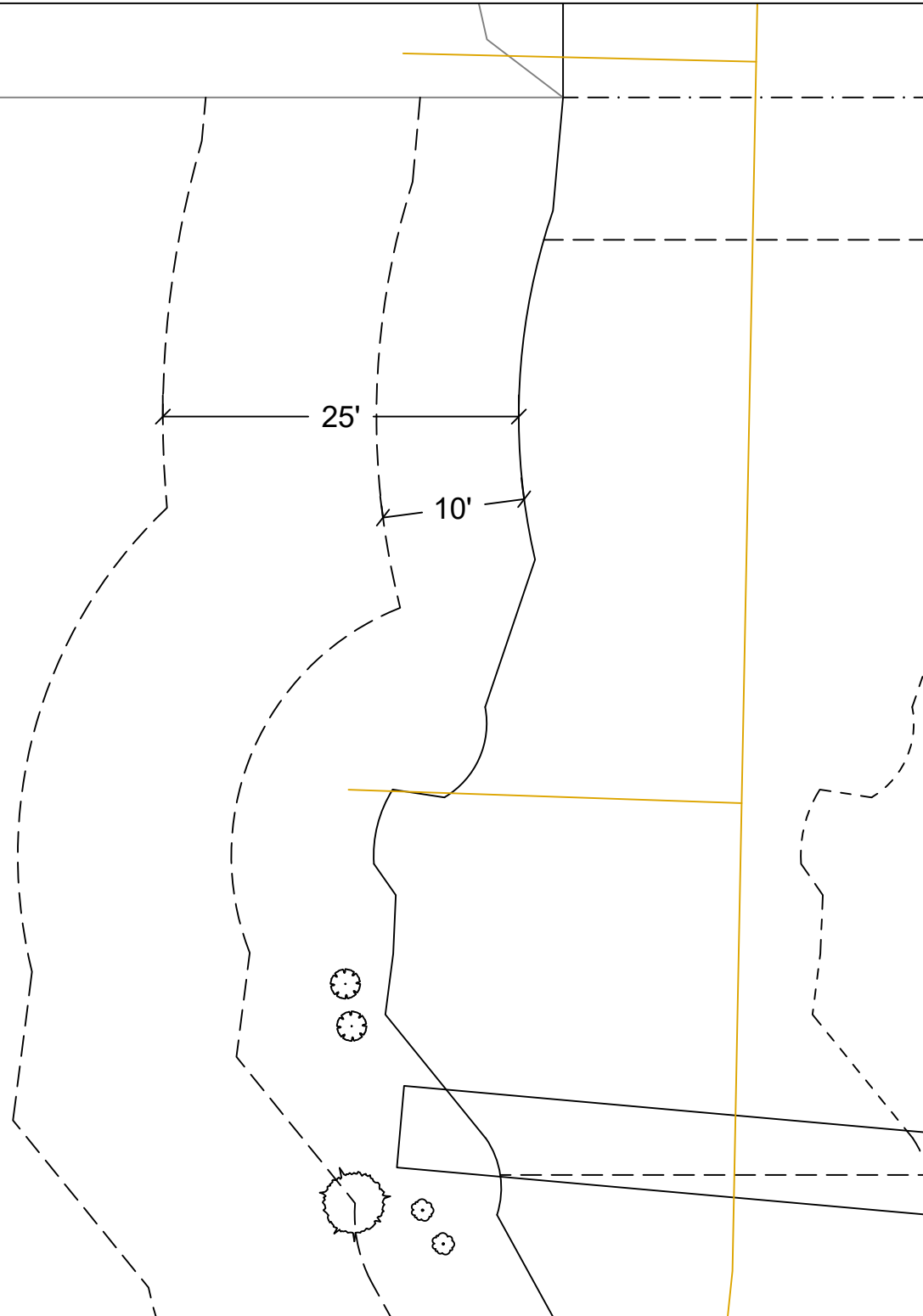


Seaborn Pile Driving
 1080 W Ewing St
 Seattle, WA 98119
 Office: 206-236-1700 ext. 3
www.seabornpiledriving.com

Scope of Work: We propose to repair (11) existing piles, repair (1) existing brace pile, repair the existing dock, and install a platform lift.

SHEET 8.0

EXISTING PLANT PLAN



EXISTING PLANTING SPECIES/QUANTITIES

SYMBOL	SCIENTIFIC NAME	COMMON NAME	QTY	SIZE
	<i>Pyrus communis</i>	Common Pear	1	~5'
	<i>Sonchus oleraceus</i>	Common Sowthistle	2	~2ft
	<i>Leucanthemum maximum</i>	Shasta Daisy	2	~ 2ft

PLAN VIEW

EXISTING PLANTS TABLE



Seaborn Pile Driving
1080 W Ewing St
Seattle, WA 98119

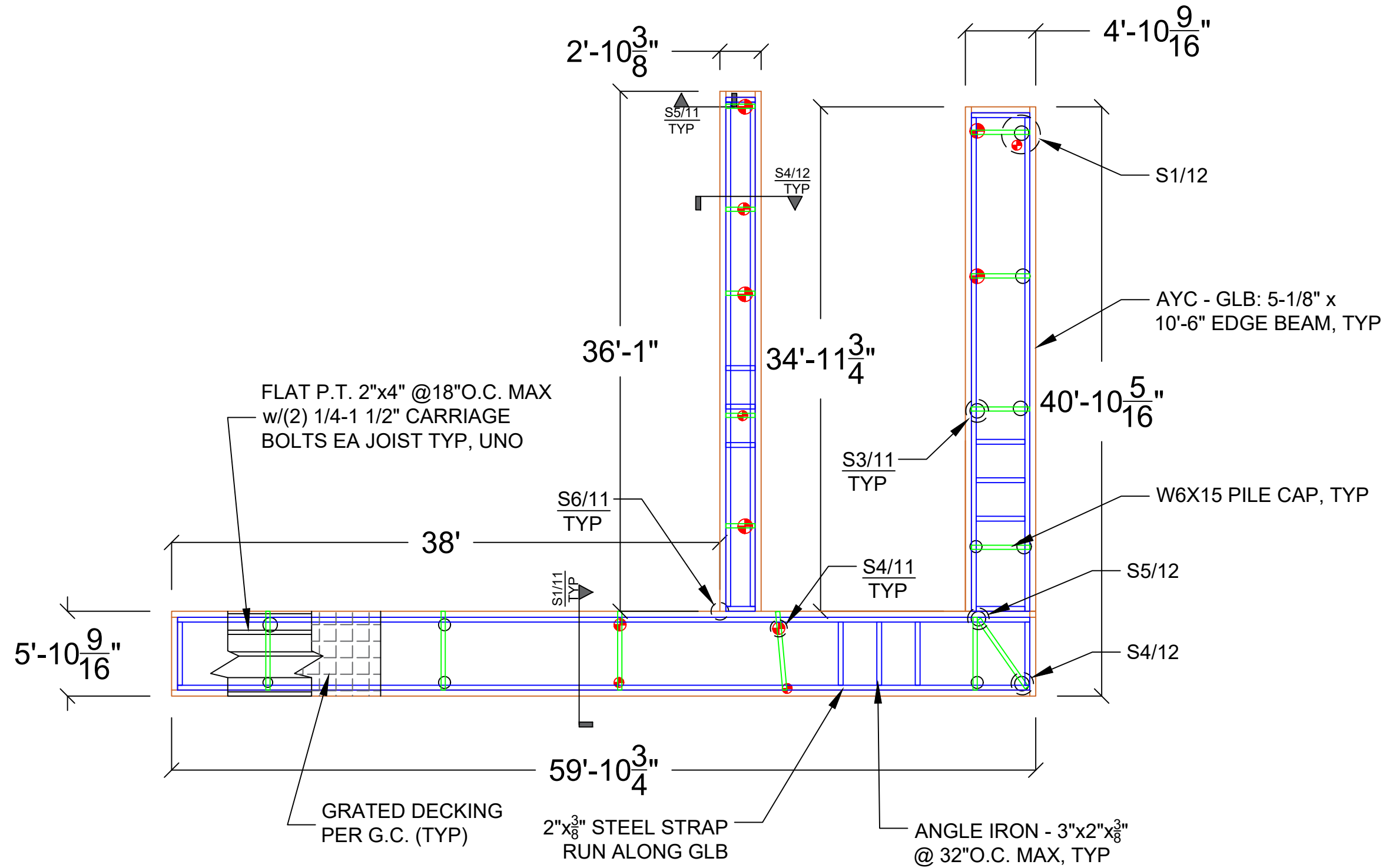
Office: 206-236-1700 ext. 3
www.seabornpiledriving.com

Scope of Work: We propose to repair (11) existing piles, repair (1) existing brace pile, repair the existing dock, and install a platform lift.

County: King County
Location: Lake Washington
Applicant: Wellmon Residence
6333 77TH AVE SE
MERCER ISLAND, WA 98040
Datum: CORPS OF ENGINEERS 1919
SE Quarter Of Section 24, Township 24, Range 04
Adjacent Owners:
DEMOPULOS PETER A+DIANE K
6339 77TH AVE SE 98040
SIRIANNI STEPHEN
6323 77TH AVE SE 98040
Created: 08/24/23
Last Updated: 10/2/2023 9:43 AM Shop

SHEET
9.0

FRAMING PLAN



Datum: CORPS OF ENGINEERS 1919
 SE Quarter Of Section 24, Township 24, Range 04
 County: King County
 Location: Lake Washington
 Applicant: Wellmon Residence
 6333 77TH AVE SE
 MERCER ISLAND, WA 98040
 Adjacent Owners:
 DEMOPULOS PETER A+DIANE K
 6339 77TH AVE SE 98040
 SIRIANNI STEPHEN
 6323 77TH AVE SE 98040
 Created: 08/24/23
 Last Updated: 10/2/2023 9:43 AM Shop

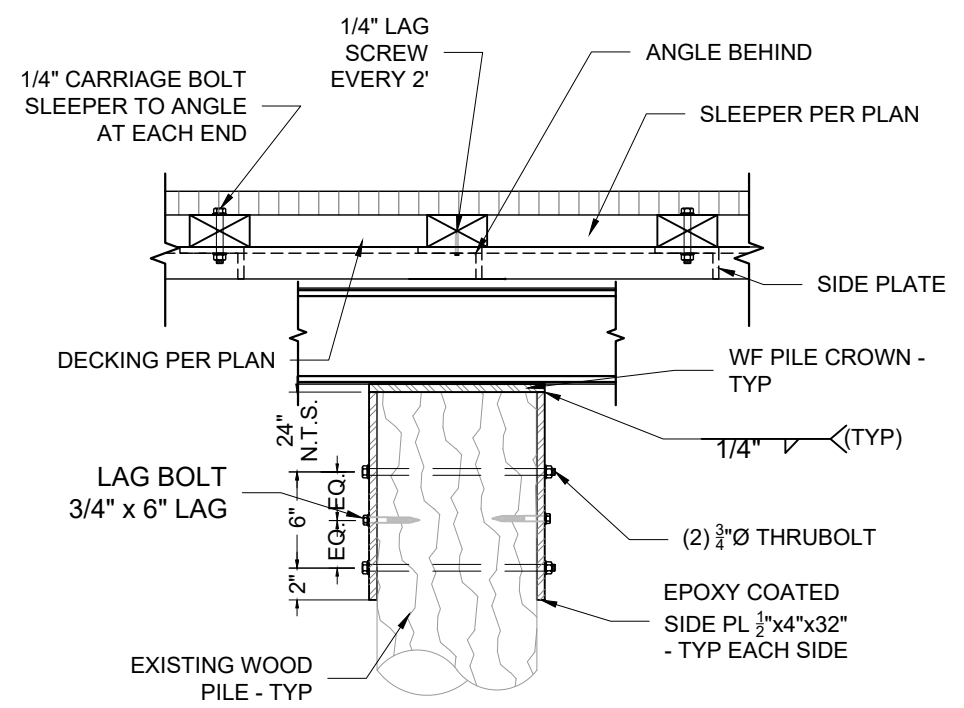
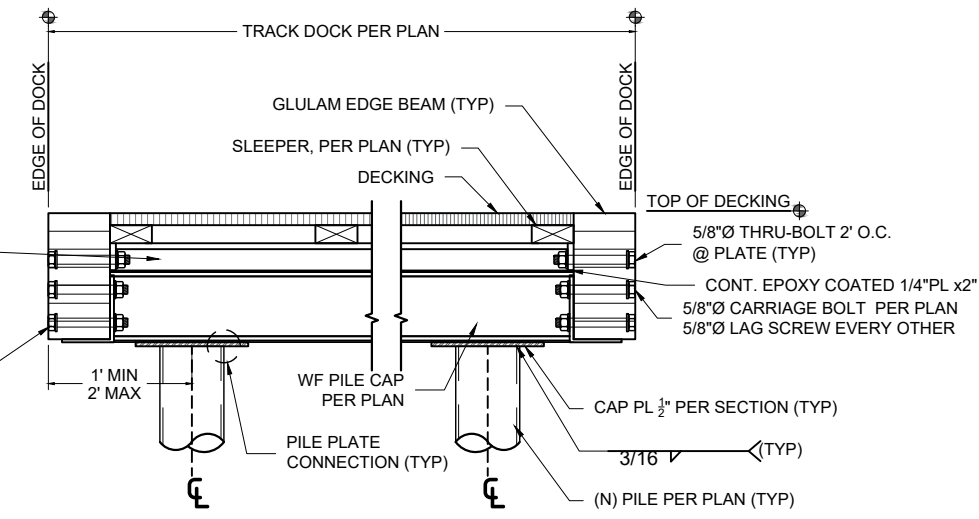
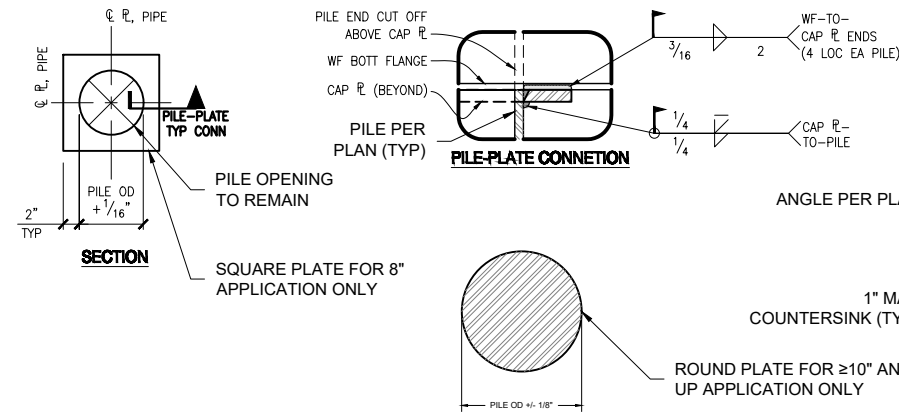


Seaborn Pile Driving
 1080 W Ewing St
 Seattle, WA 98119
 Office: 206-236-1700 ext. 3
 www.seabornpiledriving.com

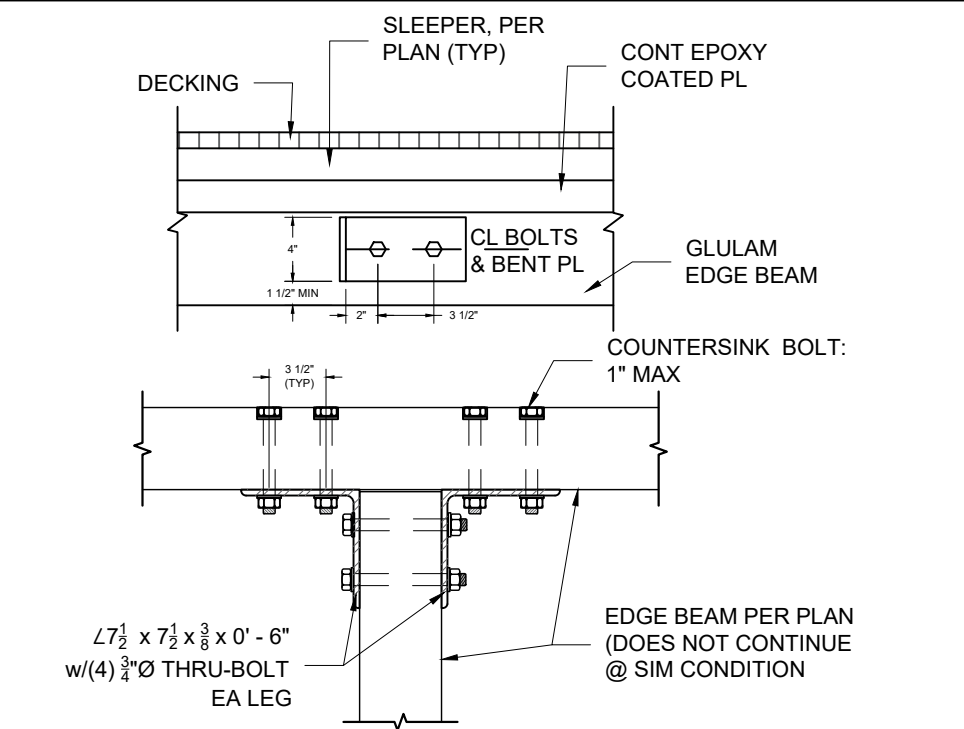
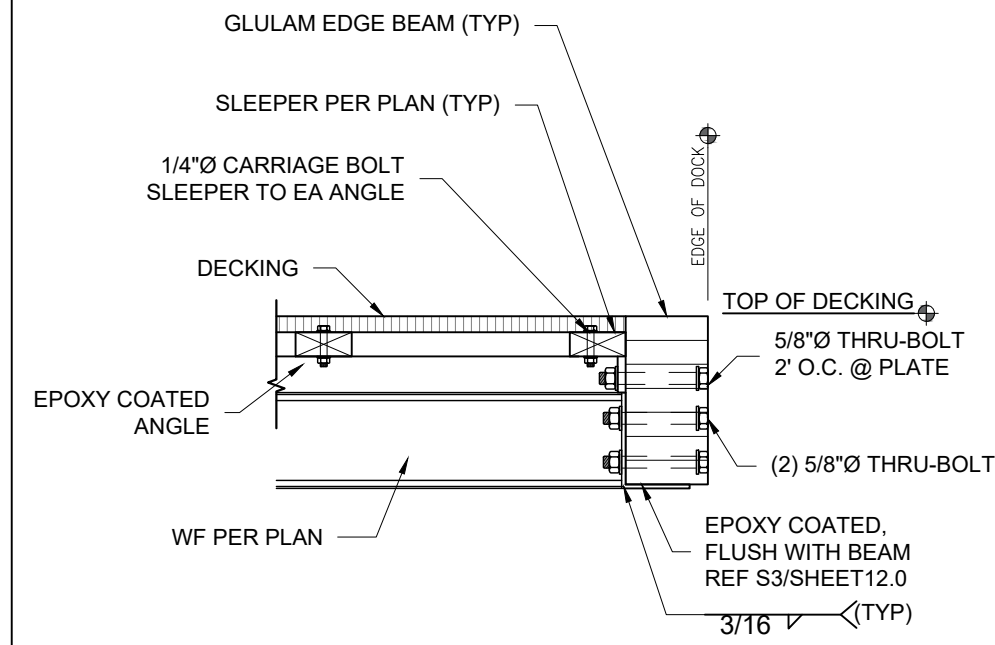
Scope of Work: We propose to repair (11) existing piles, repair (1) existing brace pile, repair the existing dock, and install a platform lift.

SHEET 10.0

DETAILS - TRACK



PILE Ø	MIN D
8"	27"
10"	30"
12"+	36"



S1 DOCK SECTION w/PILES - TYP
SCALE: 1" = 1'

S3 I-BEAM CAP TO WOOD PILE - TYP
SCALE: 1" = 1'

S4 SLEEVE PILE REPAIR
SCALE: 1/2" = 1'

S5 EDGE SECTION (STEEL TRACK) - TYP
SCALE: 1" = 1'

S6 BEAM TO BEAM - TYP
SCALE: 1" = 1'



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 repair (11) existing piles, repair (1) existing brace pile, repair the existing dock, and install a platform lift.

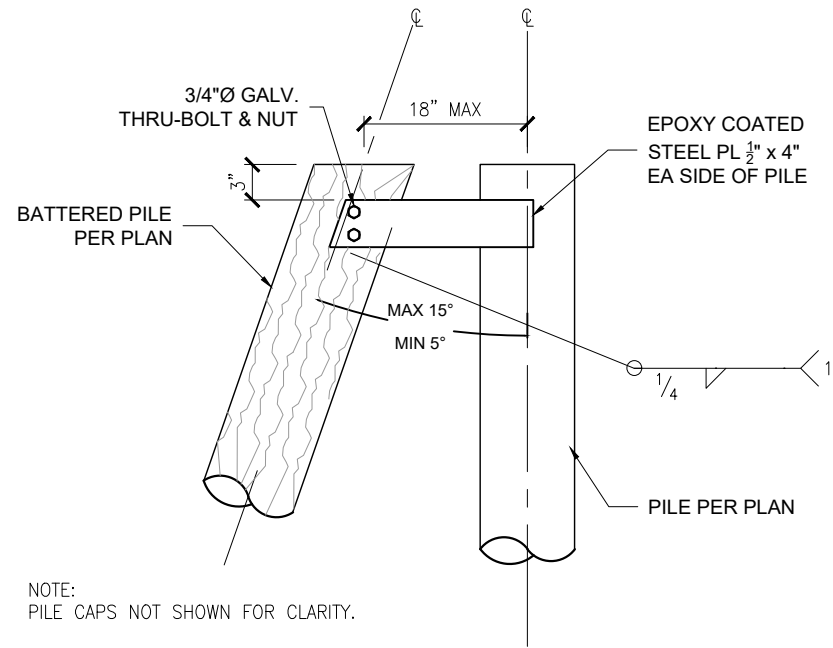
County: King County
Location: Lake Washington

Applicant: Wellmon Residence
6333 77TH AVE SE
MERCER ISLAND, WA 98040

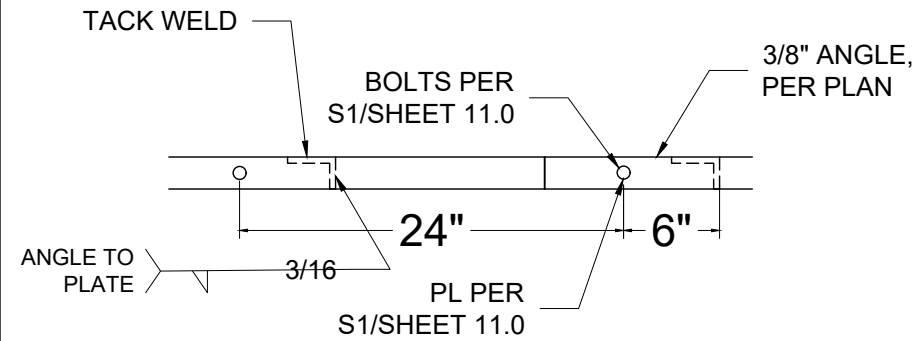
Datum: CORPS OF ENGINEERS 1919
SE Quarter Of Section 24, Township 24, Range 04
Adjacent Owners:
DEMOPULOS PETER A+DIANE K
6333 77TH AVE SE 98040

SHEET
11.0

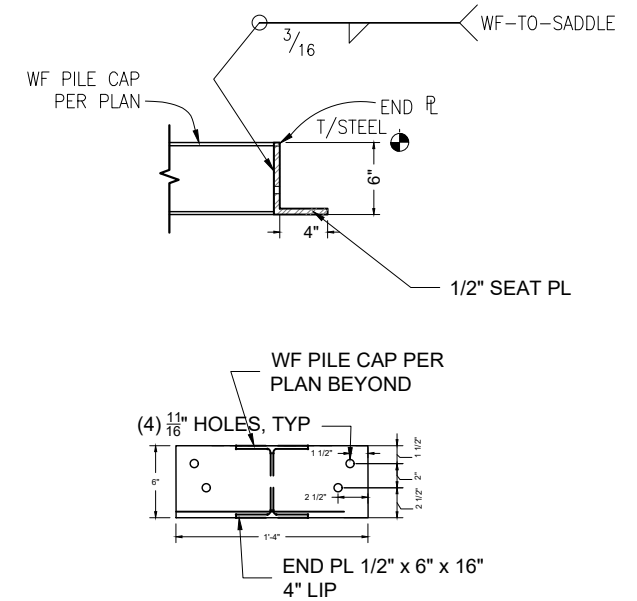
DETAILS - TRACK



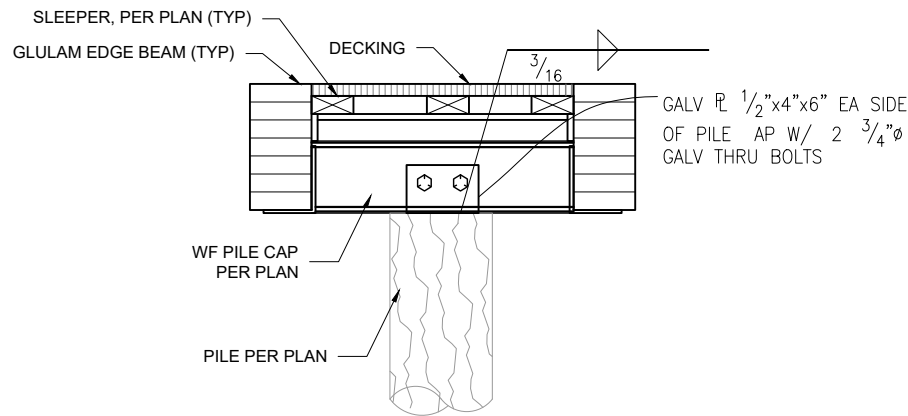
S1 BRACE PILES - TYP
SCALE: 3/4" - 1"



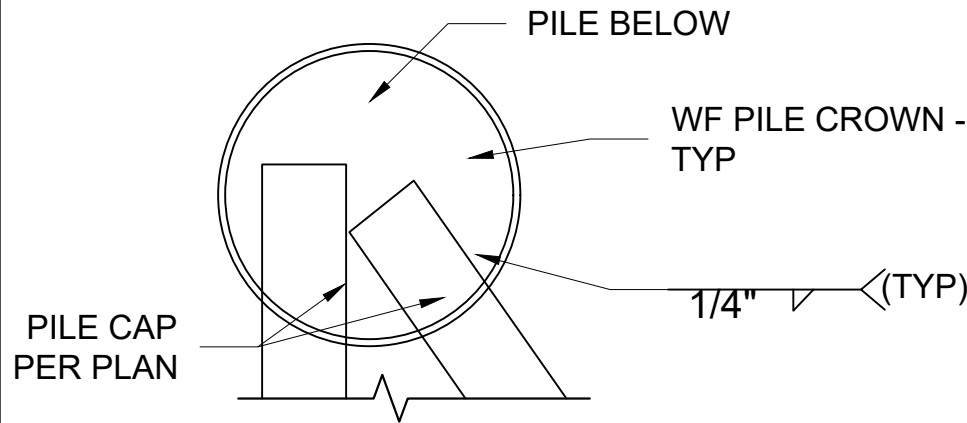
S2 ANGLE TO PLATE - TYP
SCALE: 1" - 1"



S3 BEAM SADDLE BRACKET
SCALE: 3/4" - 1"



S4 DOCK SECTION AT SINGLE WOOD PILE
SCALE: 3/4" - 1"



S5 DOUBLE I-BEAM CAP TO WOOD PILE
SCALE: 1-1/2" - 1"

S6 DETAIL NOT IN USE



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 repair (11) existing piles, repair (1) existing brace pile, repair the existing dock, and install a platform lift.

County: King County
Location: Lake Washington

Applicant: Wellmon Residence
6333 77TH AVE SE
MERCER ISLAND, WA 98040

Datum: CORPS OF ENGINEERS 1919
SE Quarter Of Section 24, Township 24, Range 04

Adjacent Owners:
DEMOPULOS PETER A+DIANE K
6333 77TH AVE SE 98040

Last Updated: 10/2/2023 9:43 AM Shop

Created: 08/24/23

SHEET
12.0

Appendix B: Site Photographs



Photo 1 - Existing dock looking waterward.



Photo 2 - Existing dock looking landward.



Photo 3 - Existing shoreline north of dock.



Photo 4 - Existing shoreline looking south.



Photo 5 - Existing conditions north of site.



Photo 6 - Existing shoreline south of site.