

Ecological No Net Loss Assessment Report

Prepared for

**Richard Buchan
9150 Fortuna Dr
Mercer Island, WA 98040**

Prepared by



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Seattle, WA 98103
206-234-2520

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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 boat lift installation.

Location

The subject property is located at 9150 Fortuna Drive, Mercer Island, Washington (see Appendix A – Sheet A1.0). The parcel is on the waterfront of Lake Washington that contains several endangered fish species listed under the Endangered Species Act and Washington State designated priority fish species.

Project Description

The proposed work includes installing a free standing boat lift. No new overwater coverage is proposed.

During construction, a floating boom will surround the work barge and pier.

Project drawings are included in Attachment A sheets 1 to 4 of 4.

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/>)

Site Description

The subject property is at Covenant Shores, a senior living facility. It has shoreline on its northern boundary with a large lawn area with some landscaping beds and trees. The lift will be placed at the existing marina.

The shoreline is a timber bulkhead. The marina consists of a wood decked pier with several side piers of the main leading to individual slips. Eurasian milfoil is present starting at the finger piers. Lake substrates are gravel with some cobble. (Photos 1 through 6).

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 may rear in the waters near the project when traveling from spawning sites on other lake tributaries to the lake's outlet at the Locks. The project site is accessible to any fish migrating or rearing in the lake.

The shoreline is not mapped as a Sockeye spawning area by WDFW.

Gallagher Hill Open Space is mapped as a biodiversity area and is approximately 1,250 feet to the south of the site. No priority habitats are directly associated with the project site except for Lake Washington.

The Mercer Island GIS portal maps an unpiPED watercourse on the property. The piped watercourse will not be affected by activities at the marina. No vegetation will be removed along the shoreline.

Project Impacts and Conservation Measurements

Direct Impacts:

Sediments: Sediment disturbance will occur below the OHWM and along the shoreline of Lake Washington during installation of the lift. Additionally, the tug and barge propwash may disturb sediments temporarily when making trips to/from the site.

A floating boom will surround the work area to contain floating debris. Work will be completed during the in-water work window when juvenile fish are not expected to be present. The project will meet state water quality standards.

Placing the lifts approximately 60 feet from the shoreline in water 6 to 7 feet deep will minimize instances of propwash in the nearshore environment from moored watercraft at the site over the life of the project.

Noise: Construction equipment will create noise audible to neighbors. Noise disturbance will be short-term and should not affect 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.

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 of the small amount of petroleum products available for spillage during typical construction activities, and because of spill containment measures that will be employed should a spill occur.

Indirect Impacts:

Shading: The boat lift will not be a significant source of shading. The owner can currently moor a boat at the site. The boat lift will simply lift the boat out of the water and will allow more light under the boat when it is lifted over floating in the water.

Recreational Boating: The project supports continued recreational boating, which has been identified as a limiting factor for salmonid populations in Lake Washington. The lifts and boat cover will not introduce additional boating to Lake Washington, as the owners could still moor boats at the pier without the lifts.

Other Conservation measures:

In-lieu Fee: The project also 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 mitigation at the subject property and the property owner has opted to 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 the King County Conservation District.

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 materials 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.

Conclusion

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

There will be minor, temporary noise disturbance during installation of the lift and negligible sediment disturbance during construction. No change in overwater coverage is proposed and the new lift will be placed in the deepest water possible about 60 feet from shore. Placing the lifts more than 30 feet from the shoreline will keep boats in deeper water and minimize the

amount of propwash in the nearshore environment. Juvenile salmon tend to stay in shallower water, so this configuration will minimize impacts to the aquatic environment.

The project will minimize construction effects on the aquatic environment by following the prescribed fish window and using applicable BMPs to prevent construction spills and debris from entering Lake Washington and allow for quick clean up if debris enter the lake or a spill occurs.

The owner is proposing to pay into the in lieu fee program established by National Marine Fisheries and the King County Conservation District will use the money for salmon conservation projects within 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	30 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

- Kitsap Conservation District (Kitsap). 2024. Kitsap Conservation District Native Plant Sale <https://kitsapcd.org/plant-sale> accessed 2024.
- ThruFlow. 2020. Legacy Series. Online at <https://thruflow.com/products/legacy/>.
- US Army Corps of Engineers (USACE). 2004. Final Biological Evaluation, Regional General Permit: Construction of New or Expansion of Existing Residential Overwater Structures and Driving of Moorage Piling. Lake Washington, Lake Sammamish, the Sammamish River and Lake Union, Including the Lake Washington Ship Canal, in the State of Washington.
- Washington Department of Fish and Wildlife (WDFW). 2024. Priority Habitats and Species. Online database. Accessed January 2024 at <http://apps.wdfw.wa.gov/phsontheweb/>
- WDFW. 2024. SalmonScape. Online database. Accessed January 2024 at <http://apps.wdfw.wa.gov/salmonscape/>

Appendix A: Project Drawings

PROJECT INFORMATION

APPLICANT:
RICHARD BUCHAN

DRAWINGS BY:
ECCO DESIGN INC.
7413 GREENWOOD AVE N
SEATTLE, WA 98103
206-706-3937

SITE ADDRESS:
9150 FORTUNA DR
MERCER ISLAND, WA 98040

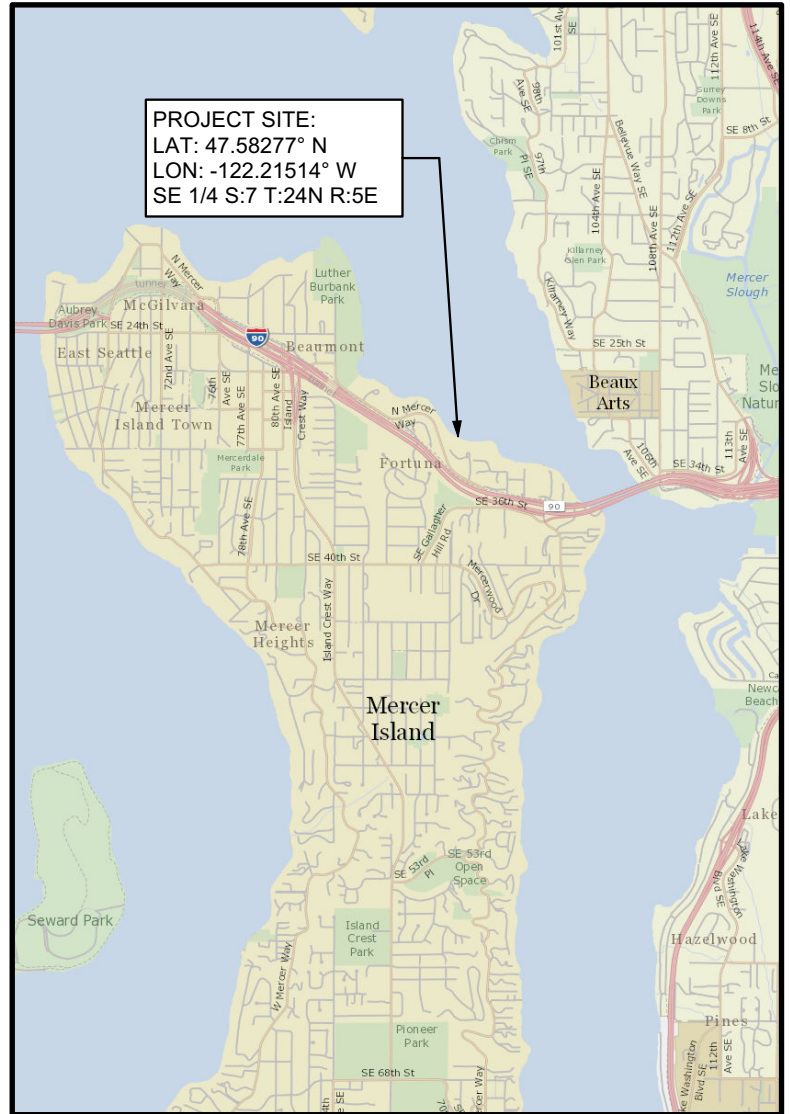
PARCEL NUMBER:
072405-9016

BODY OF WATER:
LAKE WASHINGTON

LEGAL DESCRIPTION:
POR OF GL 4 & LOTS 24 & 25 SUNNYBANK ADD
DAF - BEG 658 FT N & 826 FT W OF SE COR GL 4
TH S 00-10-12 E TO NLY MGN N MERCER WAY &
TPOB TH N 00-10-12 W TO SH LN LK WASH TH N
75-16-00 W 103.49 FT TH S 87-36-00 W 100.60 FT
TH N 67-33-00 W 111.66 FT TH N 52-10-00 W
100.65 FT TH N 56-26-00 W 100.08 FT TH N
40-43-00 W 107.71 FT TH N 32-08-00 W 66.66 FT
TO NW COR LOT 24 SUNNYBANK TH S 41-23-31
W 252.293 FT TO NELY MGN MERCER WAY TH
SELY ALG SD NELY MGN TO TPOB TGW SH LDS
ADJ AKA POR MI LL REVISION 89-03-04 REC
#8905119011 "PORTION TAXABLE"

PROJECT DESCRIPTION:
INSTALL NEW BOAT LIFT.

VICINITY MAP



REFERENCE:

DATUM: C.O.E. Locks Datum

ADJACENT PROPERTY OWNERS:

1. City of Mercer Island
2. Thomas Lamperti

APPLICANT: Richard Buchan

LOCATION: 9150 Fortuna Dr
Mercer Island, WA 98040

LAT/LONG: 47.58277°/-122.21514°

PROPOSED PROJECT: Boat Lift

IN: Lake Washington

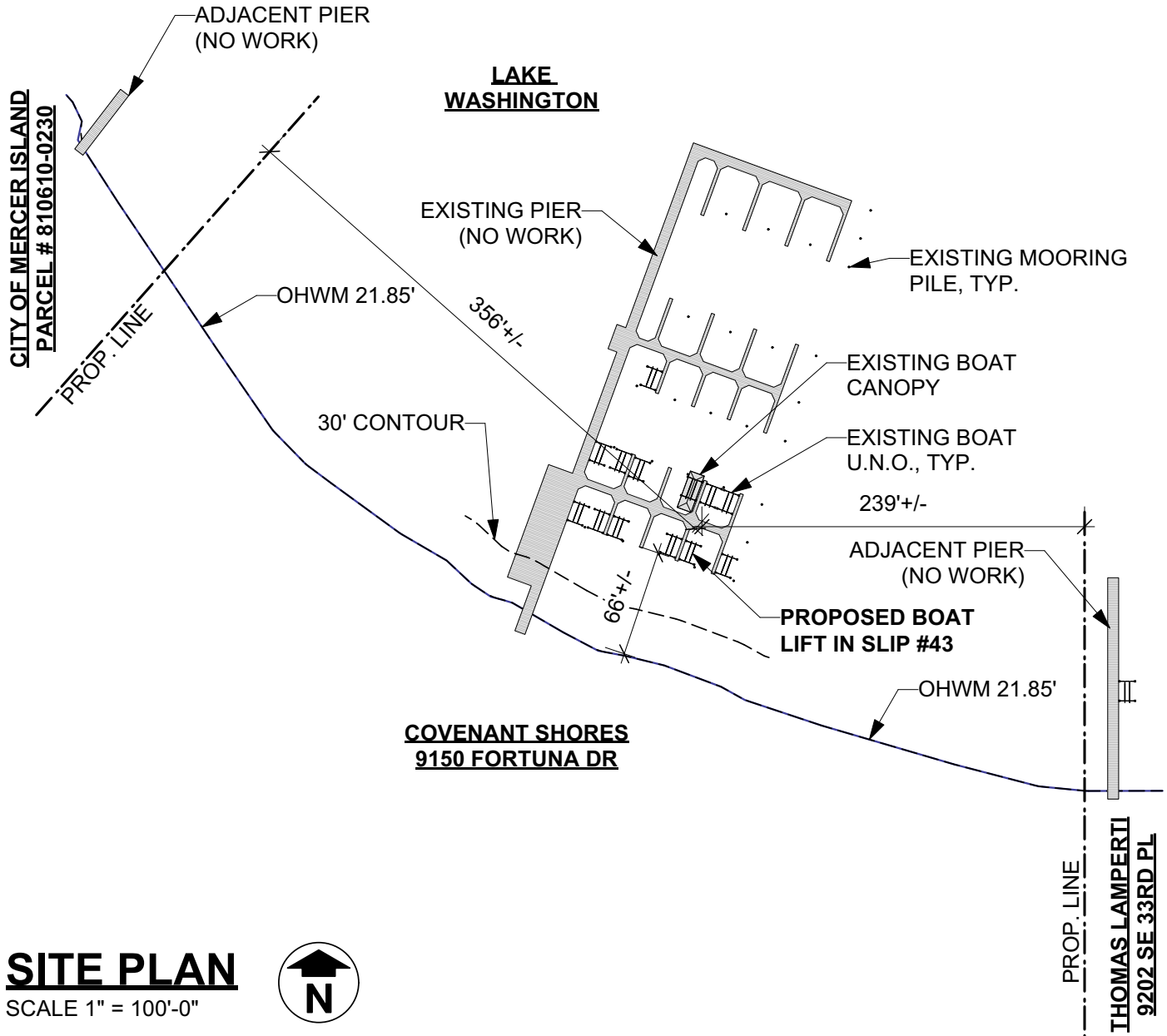
NEAR/AT: Mercer Island

COUNTY: King **STATE:** WA

SHEET 1 of 4

DATE: September 29, 2023

PLEASE NOTE THAT THE SHORELINE CONFIGURATION AND PROPERTY LINE LOCATIONS ARE APPROXIMATE ONLY. PROPERTY LINES ARE BASED ON KING COUNTY GIS.



SITE PLAN

SCALE 1" = 100'-0"



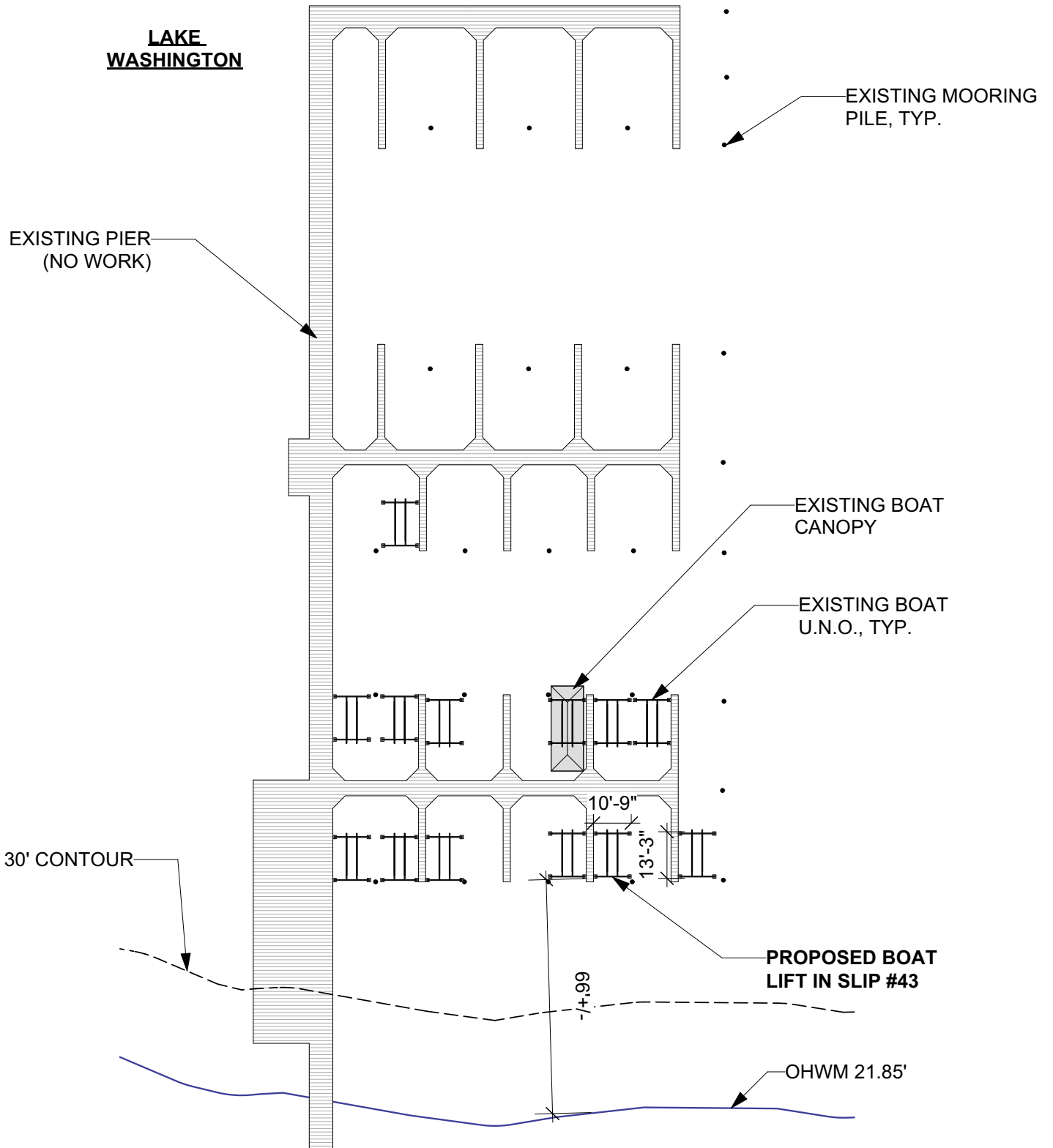
Reference:

Applicant: Richard Buchan

Proposed: Boat Lift

Location: Mercer Island, WA

**LAKE
WASHINGTON**



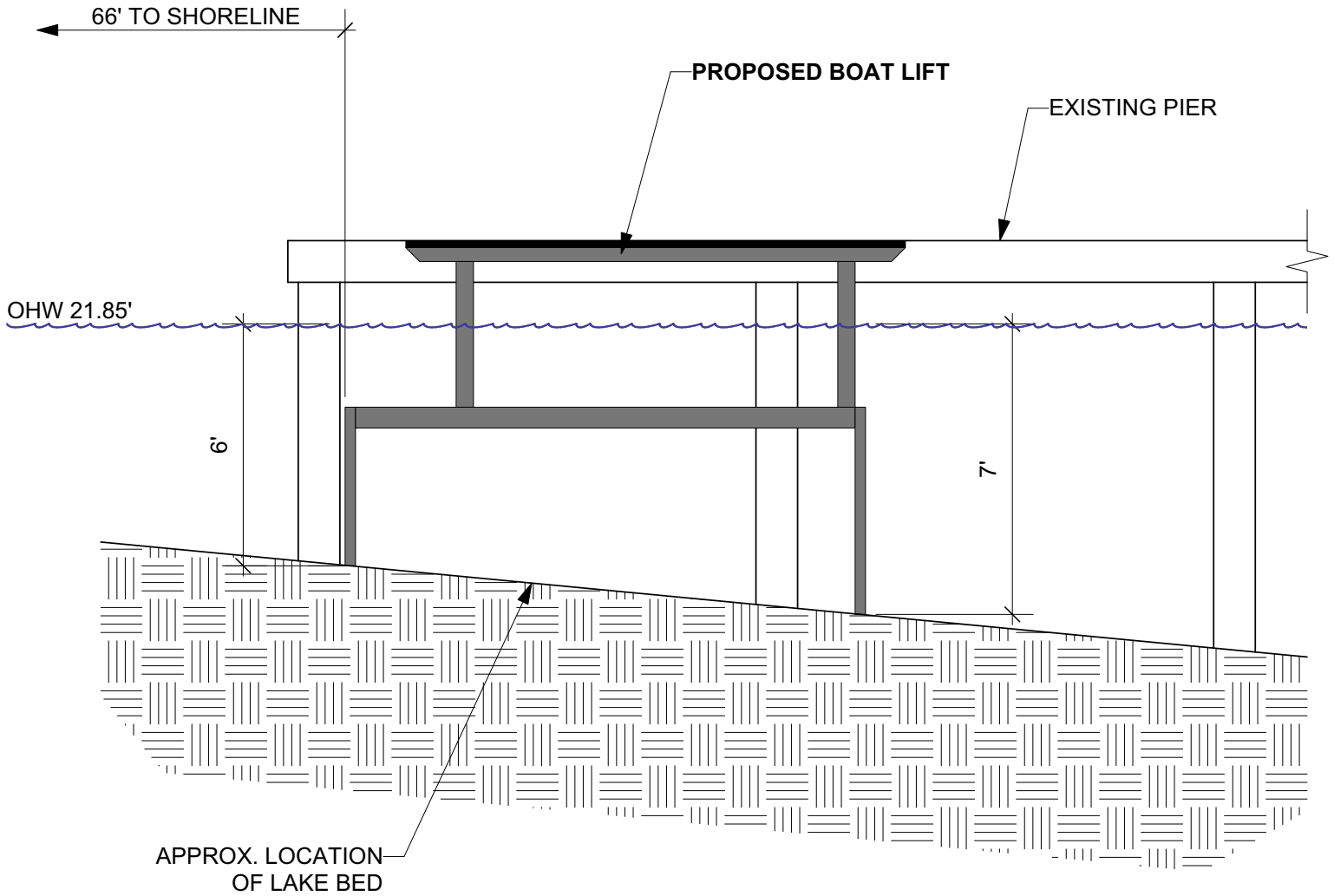
ENLARGED PLAN

SCALE 1" = 40'-0"



Reference:
Applicant: Richard Buchan

Proposed: Boat Lift
Location: Mercer Island, WA



ELEVATION

SCALE 1/4" = 1'-0"



Reference:
Applicant: Richard Buchan

Proposed: Boat Lift
Location: Mercer Island, WA

Sheet 4 of 4 **Date:** 9/29/2023

Appendix B: Site Photographs



Photo 1 - Existing marina looking waterward.



Photo 2 - Existing pier looking east from main dock.



Photo 3 - Existing shoreline looking east.



Photo 4 - Existing shoreline looking west.



Photo 5 - Existing slip looking waterward.



Photo 6 - Existing slip looking landward.