CITY OF KIRKLAND
Planning and Building Department
123 Fifth Avenue, Kirkland, WA 98033
425.587.3600 - www.kirklandwa.gov

ADVISORY REPORT
FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

To: Kirkland Hearing Examiner

From: Christian Geitz, Project Planner
Eric R. Shields, AICP, Planning Director

Date: May 25, 2016

File: MARINA PARK BOAT LAUNCH, SHR15-01902

Hearing Date and Place: June 2nd, 2016 at 9:00am
City Hall Peter Kirk Room
123 Fifth Avenue, Kirkland

TABLE OF CONTENTS

I. INTRODUCTION

A. APPLICATION

1. Applicant: City of Kirkland Parks Department
2. Site Location: 25 Lakeshore Plaza Drive (Marina Park) (see Attachment 1)
3. Request: The City of Kirkland Parks Department is proposing to repair and replace the existing boat launch facility at Marina Park, which is located within the street end of the Market Street right-of-way. The request includes the replacement of the existing concrete ramp, minor expansion of the ramp length, installation of a grated material surrounding the ramp to support lakebed stability, and dredging an area of approximately 500 square feet at the end of the ramp within Lake Washington (see Attachment 2).
4. Review Process: Both the boat launch and dredging require a Shoreline Conditional Use Permit, Process IIA, Hearing Examiner conducts public hearing and makes recommendation; Washington State Department of Ecology makes final decision.
5. Summary of Key Issues:
   a. Compliance with Shoreline Master Program (see Section II.E).
   b. Compliance with applicable Comprehensive Plan Policies (see Section II.F).
   c. Compliance with the Washington Administrative Code burden of proof standards for Shoreline Conditional Permits (see Section II.D).
   d. Applicable Development Regulations (see Section II.G).

B. RECOMMENDATIONS

Based on Statements of Fact and Conclusions (Section II), and Attachments in this report, we recommend approval of this application subject to the following conditions.

1. This application is subject to the applicable requirements contained in the Kirkland Municipal Code, Zoning Code, and Building and Fire Code. It is the responsibility of the applicant to ensure compliance with the various provisions contained in these ordinances. Attachment 3, Development Standards, is provided in this report to familiarize the applicant with some of the additional development regulations. This attachment does not include all of the additional regulations. When a condition of approval conflicts with a development regulation in Attachment 3, the condition of approval shall be followed.
2. Prior to issuance of a building permit, the applicant shall provide documentation of project approvals for design from relevant state and federal agencies, including but not limited to the Department of Fish and Wildlife and the Army Corps of Engineers (see Recreational Use Standards table in Section II.E.1).
3. As part of the application for a Building Permit the applicant shall submit all of the items listed in KZC 83.320.5 (see Dredging and Dredge Disposal table in Section II.E.2).

II. FINDINGS OF FACT AND CONCLUSIONS

A. SITE DESCRIPTION

1. Site Development and Zoning:

   a. Facts:

      (1) Size: The existing boat launch is located within the street end of the public right-of-way and has no associated independent parcel square footage. The area of work includes the space from the upper most extent of the boat ramp to a location approximately 46 feet waterward of the Ordinary High Water Mark (OHWM), an area of approximately 1,200 square feet (see Attachments 1 & 2).

      (2) Land Use: Park Use

      (3) Zoning: Park Zoning (Chapter 45 KZC)

      (4) Shoreline Designation: Urban Mixed/ UM

      (5) Terrain and Vegetation: The current street end boat launch facility is entirely developed with paving and concrete ramp extending into Lake Washington. No vegetation exists within the boat launch portion of the right-of-way street end or within the nearshore area.

   b. Conclusions: Size, Zoning, Terrain, Vegetation are not constraining factors in the review of this application. The existing boat launch facility is entirely located within the right-of-way and contains no vegetation.

2. Neighboring Development and Zoning:

   a. Facts: The neighboring properties are zoned as follows and contain the following uses:

      (1) North: Zoned WD I, multifamily condominium building

      (2) South: Zoned Park (P), Marina Park pier, beach, and park facility.

      (3) East: Zoned CBD 2, Lakeshore Plaza Parking Lot serving adjoining commercial development and the downtown area.

   b. Conclusion: The neighboring development and zoning are not constraining factors in the review of this application.

3. History:

   a. Facts:

      (1) The existing boat launch has been in existence and operating since the 1970s.

      (2) The City applied for a Conditional Use Permit and Substantial Development Permit (SDP) in 1981 (file CC-81-80 and SD 81-81) for the dredging of the area at the end of the boat launch (800 cubic yards). This request was approved.

      (3) The City applied in 1988 for zoning permit and SDP approval (file SD-IIB-88-139) to dredge 800 cubic yards around the boat launch area. The request included conditional approval for additional maintenance dredging every three years for a period of nine years, beginning in 1989. This request was approved.

(4) Years of boat launch activity and use have deteriorated the in water concrete ramp and developed a mound of sediment at the waterward extent of the ramp, impacting use and navigability.

b. Conclusion: Standard use of the facility has resulted in the current condition. The proposed development plans illustrate best design and management practices that will reduce or eliminate the need for future dredging and repairs.

B. PUBLIC COMMENT

The public comment period for the project ran from October 29, 2015 to November 30, 2015. One public comment was received (see Attachment 4). The comments are listed with staff response below.

Public Comments: Concerns were submitted related to the type and location of mitigation for the proposed application. Specific to fish habitat, the comments questioned mitigation for the expanded boat launch and the cumulative impacts to salmon habitat from the project and repairs to piers at the adjacent marina.

Staff Response: The area of work for the ramp extension and Armorflex perimeter expansion will include replacement and replenishment of spawning gravel mix along the lakebed. The current condition of the lakebed surrounding the ramp is deteriorated, containing sediment and silt build up. The proposed plans identify the replacement and improvement of the lakebed around the ramp. The design of the ramp is intended to eliminate propeller wash from disturbing lakebed gravels and the need for future dredging at the site (see sections II.E and G).

C. STATE ENVIRONMENTAL POLICY ACT (SEPA)

1. Facts: A Determination of Nonsignificance (DNS) was issued on February 18, 2016. The appeal period for the SEPA Determination ended on March 3, 2016. No appeals were received. The determination is included as Attachment 5.

2. Conclusion: The applicant and the City have satisfied the requirements of SEPA.

D. APPROVAL CRITERIA

1. SHORELINE CONDITIONAL USE

a. Facts: The Hearing Examiner may approve a proposed shoreline conditional use permit only if:

(1) Pursuant to Kirkland Zoning Code section 141.70(2)(d) the application is consistent with the Washington Administrative Code sections WAC 173-27-140 and 173-27-160, and

(2) Zoning Code section 150.65 states that the Hearing Examiner may approve a proposed shoreline conditional use permit only if it is consistent with all the applicable development regulations, and to the extent there are no applicable development regulation, the Comprehensive Plan, and it is consistent with the public health, safety, and welfare.

b. Conclusion: The proposal complies with Kirkland Zoning Code section 140.70.2 and Zoning Code section 150.65. It is consistent with the

Comprehensive Plan Shoreline Area chapter (see Section II.F). With the recommended conditions of approval, it is consistent with the Zoning Code and the Shoreline Master Program (see Sections II.E & G).

2. **WAC 173-27-140 REVIEW CRITERIA FOR SHORELINE DEVELOPMENT**

a. Facts: WAC 173-27-140 establishes the general review criteria under which the City may issue a permit for development on the shoreline. The criteria are listed below with staff response following.

(1) No authorization to undertake use or development on shorelines of the state shall be granted by the local government unless upon review the use or development is determined to be consistent with the policy and provisions of the Shoreline Management Act and the Master program.

Staff Response: The proposed application is consistent with the Kirkland Shoreline Master Program (see sections II.E and G). The Kirkland Shoreline Master Program was reviewed and approved for consistency with the Shoreline Management Act by the Department of Ecology. The application is consistent with both the Shoreline Master Program and Shoreline Management Act.

(2) No permit shall be issued for any new or expanded building or structure of more than thirty-five feet above average grade level on shorelines of the state that will obstruct the view of substantial number of residences on areas adjoining such shorelines except where a master program does not prohibit the same and then only when overriding considerations of the public interest will be served.

Staff Response: There is no structure proposed to be located above finished grade.

b. Conclusion: The proposal complies with WAC 173-27-140.

3. **WAC 173-27-160 REVIEW CRITERIA FOR CONDITIONAL USE PERMITS**

a. Facts: WAC 173-27-160 establishes the criteria that must be met for a conditional use permit to be granted. The purpose of a conditional use permit is to provide a system within the master program which allows flexibility in the application of use regulations in a manner consistent with the policies of RCW 90.58.020. In authorizing a conditional use, special conditions may be attached to the permit by local government or the department to prevent undesirable effects of the proposed use and/or to assure consistency of the project with the act and the local master program. The criteria are listed below with staff response following.

(1) Uses which are classified or set forth in the applicable master program as conditional uses may be authorized provided that the applicant demonstrates all of the following:

(a) That the proposed use is consistent with the policies of RCW 90.58.020 and the master program;

Staff Response: The application proposes the repair and maintenance of the existing public motorized boat launch along the shoreline of Lake Washington. A boat launch facility complies with the RCW 90.58.020 policy and the

local master program purpose and intent (KZC 83.30), which designate uses that increase public access to publicly owned areas of the shorelines and increase recreational opportunities for the public in the shoreline shall be allowed. The application is consistent with RCW 90.58.020 and the Kirkland Shoreline Master Program.

(b) That the proposed use will not interfere with the normal public use of public shorelines;

Staff Response: The application is for the maintenance and improvement of the existing public boat launch facility, operated by the City of Kirkland Parks Department. The boat launch provides direct access for public boating use of Lake Washington and supports the public use of the shoreline.

(c) That the proposed use of the site and design of the project is compatible with other authorized uses within the area and with uses planned for the area under the comprehensive plan and shoreline master program;

Staff Response: The proposed use is for the continued operation of the public boat launch facility. The boat launch is located adjacent to Marina Park, private and public marinas and the downtown commercial center. The continued operation of the public boat launch for motorized boats is compatible with the other authorized uses in the area.

(d) That the proposed use will cause no significant adverse effects to the shoreline environment in which it is to be located; and

Staff Response: The proposed application is for the removal and replacement of an existing boat launch facility, both upland and in water. The proposed ramp for the facility is essentially the same shape and size as the existing ramp. The proposal includes the use of a grated material to extend around the perimeter of the in water portion of the ramp, providing improved retention of natural lakebed gravels and preventing future need for dredging (see Attachment 2). The proposal includes the removal of disturbed sediments and replacing them with WDFW spawning gravels around the entire solid concrete portion of the ramp and throughout the grated (Armorflex) material. The proposal will improve the current condition of the lakebed through installation of additional gravels and will have no significant adverse effects to the shoreline environment.

(e) That the public interest suffers no substantial detrimental effect.

Staff Response: The current boat launch facility has been

in operation for decades. The application is for the repair and maintenance of the existing facility with no change to size or location. There is no change and therefore the public suffers no substantial detrimental effect.

(2) In the granting of all conditional use permits, consideration shall be given to the cumulative impact of additional requests for like actions in the area. For example, if conditional use permits were granted for other developments in the area where similar circumstances exist, the total of the conditional uses shall also remain consistent with the policies of RCW 90.58.020 and shall not produce substantial adverse effects to the shoreline environment.

Staff Response: The Shoreline Master Program limits the location for motorized boat launch facilities to Urban Mixed designation environments. The Marina Park boat launch is the only existing public motorized boat launch facility along the Kirkland shoreline of Lake Washington in the Urban Mixed shoreline environment. The proposal is for the repair and maintenance of the existing boat launch. There are no other existing or proposed developments in the area with similar circumstances, creating no cumulative impacts nor producing any adverse effects to the shoreline environment.

(3) Other uses which are not classified or set forth in the applicable master program may be authorized as conditional uses provided the applicant can demonstrate consistency with the requirements of this section and the requirements for conditional uses contained in the master program.

Staff Response: Boat launch facilities for motorized boats are defined as a water-dependent uses allowed to be located through a Conditional Use Permit pursuant to the Shoreline Master Program, Chapter 83.170 of the Kirkland Zoning Code.

(4) Uses which are specifically prohibited by the master program may not be authorized.

Staff Response: The Kirkland Shoreline Master Program, pursuant to KZC 83.170, allows for boat launch facilities for motorized boats in the Urban Mixed shoreline designation areas. The existing boat launch facility is located within the Urban Mixed shoreline environmental designation area. The use is allowed by the local Shoreline Master Program.

(5) The City will not issue a conditional use permit for a use which is not listed as allowed in the shoreline master program

Staff Response: The proposed use is allowed pursuant to KZC 83.170. The City may issue a conditional use permit for the proposed use.

b. Conclusion: The proposal complies with WAC 173-27-160.

E. DEVELOPMENT REGULATIONS

The following is a review, in both checklist and discussion format, of compliance with the design requirements for shoreline projects found in the Shoreline Master Program (KZC 83).

1.

Not Applicable	Complies as proposed	Complies as conditioned	Code Section
			KZC 83.220.7 – Recreational Use Standards *Boat launch facilities serving motorized boats are subject to the following regulations.*
Location Standards:			
☐	☒	☐	Boat launches shall be proposed in locations where the development will not require maintenance dredging during the life of the development or use. Staff analysis: Applicant is proposing to lengthen the boat ramp to achieve a water depth that will eliminate propeller wash, the leading contributor of the requirement to dredge. The installation of the Armorflex material will assist in stabilizing the lakebed. (see Attachment 2)
☐	☒	☐	Boat launches shall be separated from existing designated swimming areas by a minimum of 25 feet.
☐	☒	☐	Boat launches shall meet KZC 83.360 for avoiding impacts to fish and wildlife habitats. (see Section II.E.3)
☐	☒	☐	Launches shall be located at sites with suitable transportation access.
☐	☒	☐	Launches shall not be located within 25 feet of a moorage structure not on the subject property or within 50 feet of the outlet of a stream, including piped streams. See analysis in Non-Conforming structure section II.E.4.
Size Standards:			
☐	☒	☐	The length of the ramp shall be the minimum necessary to safely launch the intended craft.
☐	☒	☐	Launch ramps shall not extend beyond the point where the water depth is six (6) feet below the OHWM.
Design Standards:			
☐	☒	☐	Preferred ramp designs in order of priority should include: ☒ 1) Open grid designs with minimum coverage of lake substrate. ☐ 2) Seasonal ramps that can be removed. ☒ 3) Segmented pads and flexible connections, leaving space for natural beach substrate and can adapt to changes in shoreline profile.

☐	☐	☒	Design shall comply with all regulations as stipulated by state and federal agencies, affected tribes or other agencies with jurisdiction.
			Other:
☐	☒	☐	Boat launches shall provide adequate trailer spaces commensurate with projected demand.

2.

Not Applicable	Complies as proposed	Complies as conditioned	**Code Section**
			KZC 83.320 – Dredging and Dredge Disposal *The process of dredging within the waters of Lake Washington are subject to the following regulations.*
☐	☒	☐	General: New development shall be sited and designed to avoid and/or minimize the need for new and maintenance dredging.
			Dredging waterward of the OHWM may be allowed for only the following purposes:
☒	☐	☐	To establish, expand, relocate or reconfigure navigation channels and basins where necessary for assuring safe and efficient accommodation of existing navigational uses and then only when significant ecological impacts are minimized and when mitigation is provided. Maintenance dredging of established navigation channels and basins must be restricted to maintaining previously dredged and/or existing authorized location, depth, and width.
☐	☒	☐	To maintain the use of existing private or public boat moorage, water-dependent use, or other public access use. Maintenance dredging is restricted to maintaining previously dredged and/or existing authorized location, depth, and width.
☒	☐	☐	To restore ecological functions, provided the applicant can demonstrate a clear connection between the proposed dredging and the expected environmental benefits to water quality and/or fish and wildlife habitat.
☒	☐	☐	To obtain fill or construction material when necessary for the restoration of ecological functions. Dredging waterward of the OHWM for the primary purpose of obtaining fill or construction materials is not permitted under other circumstances. When allowed, the site where the fill is to be placed must be located waterward of the OHWM. The project must be associated with a significant habitat enhancement project.
			General Standards:
☒	☐	☐	Depositing dredge materials waterward of the OHWM shall only be allowed in approved sites, only when the material meets or exceeds state pollutant standards, and only for the purposes of fish or wildlife habitat improvement or permitted beach enhancement.
			Dredging Design Standards

☐	☒	☐	All dredging must be the minimum area and volume necessary to accommodate the existing or proposed use, and must be implemented in compliance with state water quality standards.
☐	☒	☐	Dredging projects shall be designed and carried out to prevent direct and indirect impacts on adjacent properties.
☐	☐	☒	Other: Development application shall meet submittal requirements described in KZC 83.320.5.

3. No Net Loss Mitigation Sequencing

a. Facts:

(1) Pursuant to KZC 83.360.1(b), an applicant shall provide an analysis of measures taken to mitigate environmental impacts where a conditional use application is proposed.

(2) Pursuant to KZC 83.170, dredging and dredge material disposal within the Urban Mixed designation requires a Conditional Use Permit.

(3) Under Chapter 173-26 WAC, uses and shoreline modifications along Kirkland's shoreline shall be designed to achieve no net loss of shoreline ecological functions.

(4) The applicant has submitted a no net loss analysis assessment as part of the application (see Attachment 6).

(5) Pursuant to KZC 83.360.2, an applicant is required to complete the no net loss mitigation sequencing. The following is a list of all six guidelines that must be considered in the design, construction and operation of the proposal:

(a) Avoid the impact altogether by not taking a certain action or parts of an action;

(b) Minimize impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts;

(c) Rectify the impact by repairing, rehabilitating, or restoring the affected environment;

(d) Reduce or eliminate the impact over time by preservation and maintenance operations;

(e) Compensate for the impact by replacing, enhancing, or providing substitute resources or environments; and

(f) Monitor the impact and the compensation projects and taking appropriate corrective measures.

(6) The applicant is proposing to repair the existing boat launch and dredge an area of sediment that has built up into a mound at the end of the ramp over time due to propeller wash.

(7) The existing boat ramp is currently in poor condition requiring repair and replacement. The applicant is proposing to repair and replace the existing boat launch.

(8) The installation of the Armorflex grated material is designed to stabilize lakebed gravels and eliminate the impacts of propeller wash and sediment disturbance.

(9) The application identifies the lakebed surrounding the disturbed area that will be restored through the installation of new and replacement spawning gravel.

b. Conclusions:

(1) The applicant is proposing the minimum necessary to repair and

replace the existing boat ramp. The additional length and Armorflex installation is designed to prevent future need for dredging and will reduce the magnitude of future impacts to the lakebed and shoreline environment.

(2) The proposed application is consistent with the no net loss mitigation sequencing standards of KZC 83.360.

4. Shoreline Master Program Nonconformances

a. Facts:

(1) Pursuant to KZC section 83.220.7(a)(2)(d), boat launch facilities for motorized boats shall not be designed and located within 50 feet of the outlet of a piped or open stream.

(2) The current boat launch is located within 10 feet of a piped stream outlet. The stream outlet is located under the adjoining public pier, used for the operation of the launch facility.

(3) Section 83.550 of the Kirkland Zoning Code establishes standards for when and under what circumstances nonconforming aspects of a use or development must be brought into conformance.

(4) Section 83.550.5(b)(2) allows for a nonconforming structure to be repaired, maintained, altered, remodeled and continued: provided, that a nonconforming structure shall not be enlarged, intensified, increased or altered in any way that increases the degree of the nonconformity.

(5) The common method for repair of a precast concrete plank ramp located in water is through the removal and replacement of new precast concrete planks.

(6) The boat launch facility is not being enlarged. The launch provides access to one trailer at a time and will continue to operate as a single trailer ramp.

(7) The applicant is proposing to remove the existing concrete planks and install new planks of similar size. The ramp will be slightly extended to achieve an adequate water depth (see Attachment 2).

(8) The perimeter of the planks will include the installation of a grated cable and metal Armorflex system will incorporate fish approved spawning gravels, designed to prevent future dredging and enhance the lakebed environment (see Attachment 2).

b. Conclusions:

The proposed application complies with the repair and maintenance provisions of KZC 83.550. The applicant should follow proposed plans for the removal and replacement of the boat launch.

F. COMPREHENSIVE PLAN

1. Facts: A Shoreline Conditional Use Permit application must be consistent with the Shoreline Area Chapter of the Comprehensive plan. Below are the applicable shoreline policies found in the Comprehensive Plan for the proposal, followed by staff response.

a. **Policy SA-8.1**: Locate new boating facilities and allow expansion of existing facilities at sites with suitable environmental conditions, shoreline configuration, and access.

(1) Meet health, safety, and welfare requirements, including provisions for pump-out facilities:

(2) Mitigate aesthetic impacts;

(3) Minimize impacts to neighboring uses;

(4) Provide public access;

(5) Assure no net loss of shoreline ecological functions and prevent other significant adverse impacts; and

(6) Protect the rights of navigation and access to recreational areas.

Response: The boat launch facility has been in this location for decades, providing adequate public access as part of the Marina Park facility in the downtown commercial area. The current application is for the repair and maintenance of the existing facility and is not considered expansion.

b. **Policy SA-8.2**: Require restoration activities when substantial improvements or repair to existing boating facilities is planned.

Response: Restoration of the lakebed with installation of WDFW spawning gravel is proposed by applicant. The spawning gravel installation will improve the surrounding area of lakebed previously disturbed from boating activity.

c. **Policy SA-10.4**: Design and locate new shoreline development to avoid the need for dredging.

Response: The proposed design includes a more gradual ramp along with Armorflex grid matting around the ramp. The gradual ramp along with the grid matting is designed to prevent the loss of gravel and lakebed scour from propeller wash, preventing sediment displacement and the need for future dredging.

d. **Policy SA-18.5**: Ensure that development of recreational uses does not adversely impact shoreline ecological functions. Limit the development of facilities which can increase the amount of physical access and activity including motorized watercraft access. Recreational uses shall be appropriately sited and planned to minimize any resultant impacts.

Response: The application is for the maintenance and repair of an existing boat launch facility. The boat launch is only one of two public launch sites within the City of Kirkland and consists of a single launch ramp. The size and location of the facility provides adequate public access while the size minimizes ecological impacts to the shoreline.

2. Conclusion: The proposal is consistent with policies of the City's Shoreline Area Chapter of the Comprehensive Plan and as implemented in Chapter 83.

G. DEVELOPMENT STANDARDS

1. Fact: Additional comments and requirements placed on the project are found on the Development Standards, Attachment 3.

2. Conclusion: The applicant should follow the requirements set forth in Attachment 3.

III. SUBSEQUENT MODIFICATIONS

Modifications to the approval may be requested and reviewed pursuant to the applicable modification procedures and criteria in effect at the time of the requested modification.

IV. APPEALS

The following is a summary of the deadlines and procedures for appeals. Any person wishing to file or respond to an appeal should contact the Planning Department for further procedural information.

APPEALS

Appeal to Shoreline Hearings Board:

Pursuant to RCW 90.58.180 and WAC 173-27-220 any person aggrieved by the City's final decision on the Shoreline Conditional Use Permit may seek appeal to the State Shoreline Hearings Board by filing a petition for review. All petitions for review shall be filed with the Shoreline Hearings Board within 21 days of the date the decision of the Department of Ecology is transmitted by the department to the City. Within seven days of filing any petition for review with the Shoreline Hearings Board, the petitioner shall serve copies of the petition for review on the Department of Ecology, the State Attorney General and the City of Kirkland. The petition for review must contain items required by WAC 461-08-350.

V. LAPSE OF APPROVAL

Pursuant to RCW 90.58.200 and WAC 173-27-090, construction or substantial progress toward construction of a project for which a Shoreline Conditional Use Permit has been granted pursuant to the Shoreline Management Act must be undertaken within two (2) years after the date of filing. The project must be completed within five (5) years and a one (1) year extension may be considered.

"Date of filing" means the date the decision of the Department of Ecology is transmitted by the department to the City of Kirkland. The permit time periods do not include the time during which a use or activity was not actually pursued due to the pendency of administrative appeals or legal actions pursuant to RCW 90.58.180 and WAC 173-27-220.

VI. APPENDICES

Attachments 1 through 6 are attached.

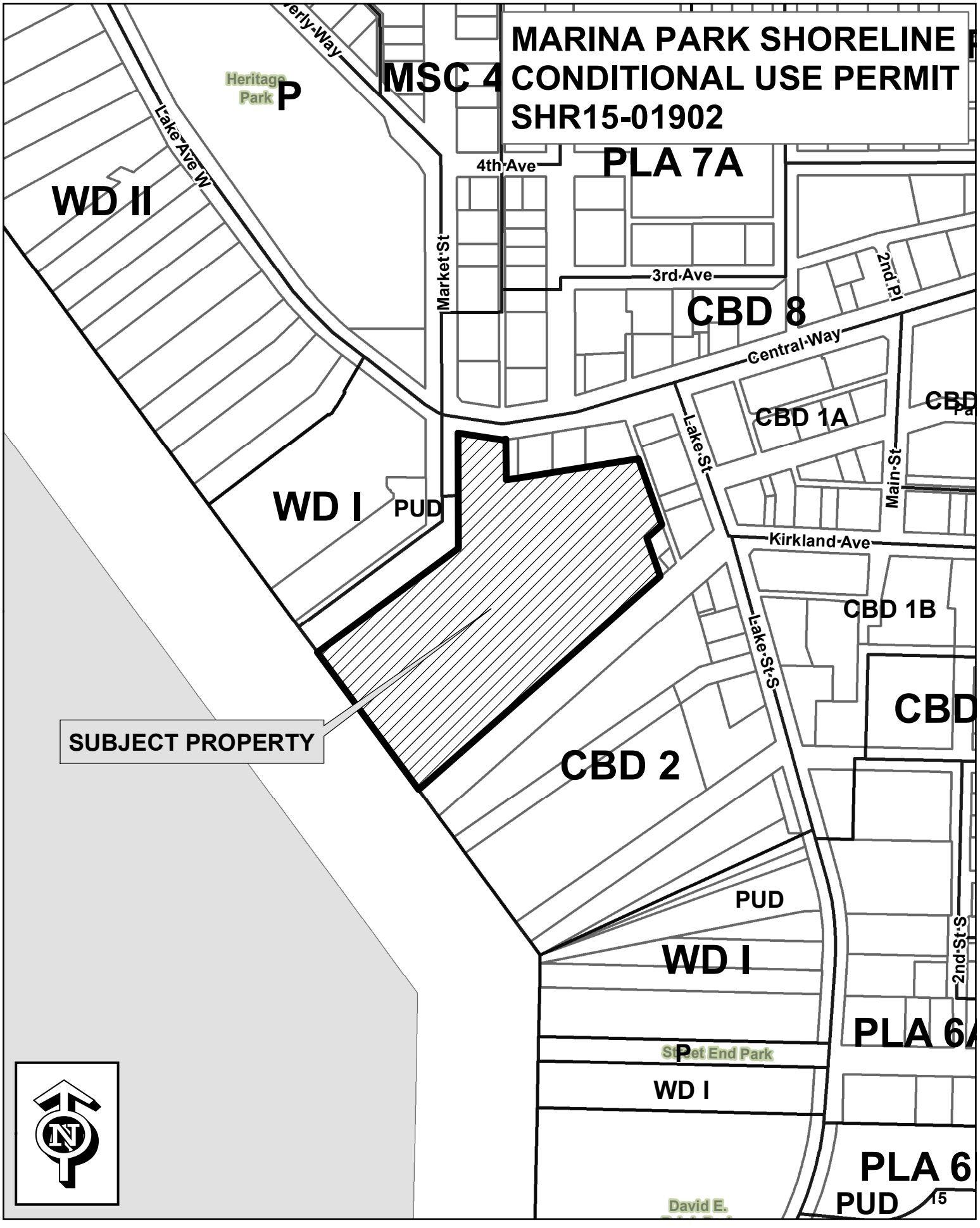
1. Vicinity Map
2. Proposed Plans
3. Development Standards
4. Public Comments
5. Environmental Checklist (SEPA)
6. No Net Loss Submittal

VII. PARTIES OF RECORD

Applicant; Jason Filan, City of Kirkland Parks Department, 123 5th Avenue, Kirkland, WA 98033
Carl Hadley, Cedarock Consultants, Inc.
Planning and Building Department
Department of Public Works

A written recommendation will be issued by the Hearing Examiner within eight calendar days of the date of the open record hearing.

ATTACHMENT 1
SHR16-01902



MARINA PARK
BOAT LAUNCH REPLACEMENT

25 LAKE SHORE PLAZA DRIVE, KIRKLAND WA 98033

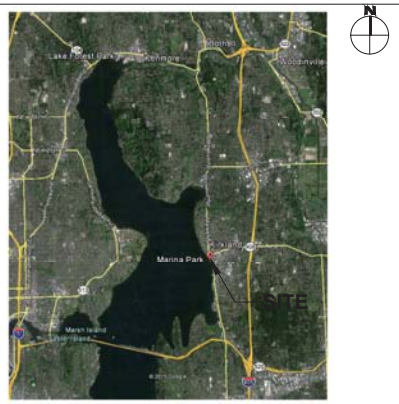
SCOPE OF WORK

SCOPE OF WORK FOR THIS PROJECT CONSISTS OF REMOVAL AND REPLACEMENT OF THE EXISTING BOAT LAUNCH RAMP WITH A NEW RAMP STRUCTURE.

THE NEW RAMP GENERALLY CONSISTS OF A CAST-IN-PLACE CONCRETE SLAB ABOVE THE HIGH WATER LINE AND PRECAST SLAB SEGMENTS BELOW THE HIGH WATER LINE. THE PRECAST SLAB SEGMENTS ARE SPECIFIED TO BE RIMMED WITH ARMORFLEX TO THE EXTENT POSSIBLE GIVEN EXISTING LAYOUT AND ACCESS. ARMORLEX CONSIST OF PERVIOUS INTERLOCKING CONCRETE PANELS TO BE USED FOR EROSION PROTECTION ALONG THE MARGINS OF THE RAMP. REFER TO THE ADDITIONAL DETAIL ON SHEET S-2.2.

WORK WILL BE PERFORMED ACCORDING TO THE REQUIREMENTS OF THE REPAIR AND MAINTENANCE PROVISIONS OF THE SHORELINE MASTER PROGRAM / KIRKLAND / ZONING CODE, SECTIONS 83.290 AND 83.300.

AREA MAP



PROJECT PHOTOGRAPH

PHOTO: BOAT LAUNCH STRUCTURE (KIRKLAND CITY DOCK)

PROJECT INFORMATION

SITE ADDRESS
25 LAKE SHORE PLAZA DRIVE
KIRKLAND, WA 98033

OWNER / CLIENT
CITY OF KIRKLAND PARKS DEPARTMENT
CONTACT: JASON FILAN

STRUCTURAL ENGINEER / ARCHITECT
OAC SERVICES, INC.
701 DEXTER AVENUE N. #301
SEATTLE, WA 98109
PHONE: 206-285-4300
FAX: 206-285-4371

GEOTECHNICAL ENGINEER
ASSOCIATED EARTH SCIENCES, INC
911 5H AVE
KIRKLAND, WA
PHONE: 425-827-7701

LEGAL DESCRIPTION:
CITY OF KIRKLAND PARKS DEPARTMENT
CONTACT: JASON FILAN

PARCEL NO.: 062505-9031 JURISDICTION: KIRKLAND
ZONING: P (PARK/OPEN SPACE) YEAR BUILT: N/A
OCCUPANCY: 3.5 ACRES

APPLICABLE CODE: CITY OF KIRKLAND SHORELINE MASTER PROGRAM, ZONING CODE 83.290 AND 83.300.

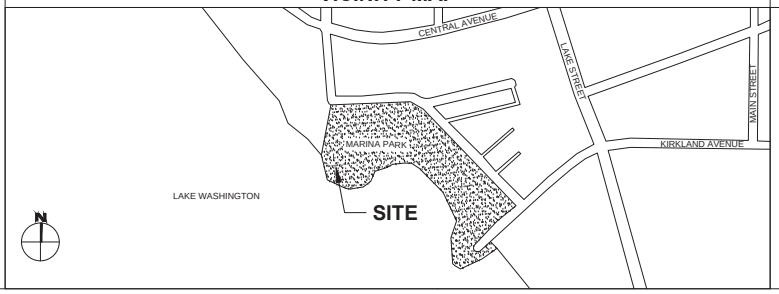
ABBREVIATIONS

AFF	ABOVE FINISH FLOOR	F.V.	FIELD VERIFY	OPP	OPPOSITE
ALT	ALTERNATE	GALV	GALVANIZED	PFF	PENETRATION FLASHING
ALUM	ALUMINUM	GLB	GLU-LAM BEAM	PPT	PRESERVATIVE PRESSURE-TREATED
APPROX	APPROXIMATE(LY)	GWB	GYPSUM WALLBOARD	PT	POST TENSION(ED)
BLDG	BUILDING	HORIZ	HORIZONTAL	PVC	POLYVINYL CHLORIDE
BS	BUG SCREEN	ID	INSIDE DIAMETER	QUANT	QUANTITY
BTWN	BETWEEN	INSUL	INSULATION	SAFF	SELF-ADHESIVE FLEXIBLE FLASHING
CL	CENTER LINE	INT	INTERIOR	SF	SQUARE FEET
CLG	CEILING	KSI	KIP PER SQUARE INCH	SHT	SHEATHING
CLR	CLEAR	LBF	POUNDS PER FOOT	SIM	SIMILAR
CONC	CONCRETE	LF	LINEAR FEET	SGD	SLIDING GLASS DOOR
CONT	CONTINUOUS	LOCAT	LOCATIONS	SL	SLOPE(D)
DIA(Ø)	DIAMETER	LWE	LOW WATER ELEVATION	SM	SHEET METAL
DS	DOWNSPOUT	MAX	MAXIMUM	SST	STAINLESS STEEL
DWG(S)	DRAWINGS	MIN	MINIMUM	TS	TUBE STEEL
EQ	EQUAL	MR	MOISTURE RESISTANT	TYP	TYPICAL
EXIST	EXISTING	NTS	NOT TO SCALE	UNO	UNLESS NOTED OTHERWISE
EXT	EXTERIOR	OC	ON CENTER	VERT	VERTICAL
FC	FIBER CEMENT	OD	OUTSIDE DIAMETER	W/	WITH
FOB	FACE OF BUILDING	OF	OVERFLOW	WD	WOOD
FOC	FACE OF CONCRETE	OH	OVERHANG(HEAD)	WP	WATERPROOFING
FOS	FACE OF SHEATHING	OHW	ORDINARY HIGH WATER	WPM	WATERPROOF MEMBRANE
				WRB	WEATHER RESISTIVE BARRIER

SHEET INDEX

SHEET	TITLE
A 1.0	PROJECT INFORMATION
A 1.1	SITE PLAN / PROPOSED AREA OF WORK
A 1.2	REPRESENTATIVE PHOTOS
A 2.1	BOAT LAUNCH DEMOLITION PLAN AND PROFILE
S 1.0	GENERAL STRUCTURAL NOTES AND MATL SPECS & REPAIR NOTES
S1.1	WATER QUALITY PROTECTION MEASURES AND EROSION / SEDIMENTATION CONTROL - PLAN NOTES
S 2.1	BOAT LAUNCH REPLACEMENT PLAN & PROFILE
S 2.2	BOAT LAUNCH DETAILS
S 2.3	BOAT LAUNCH DETAILS

VICINITY MAP



SYMBOLS

DETAIL TITLE BLOCK — 1 TITLE / SCALE
GRID LINE & TAG — GRID
DETAIL CALL OUT — 1 / WP1.00
DETAIL CALL OUT — 1 / WP1.00
DIMENSIONAL LUMBER
CONCRETE
WOOD TRIM

MARINA PARK
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PROJECT INFORMATION

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CHECK	LED

A 1.0

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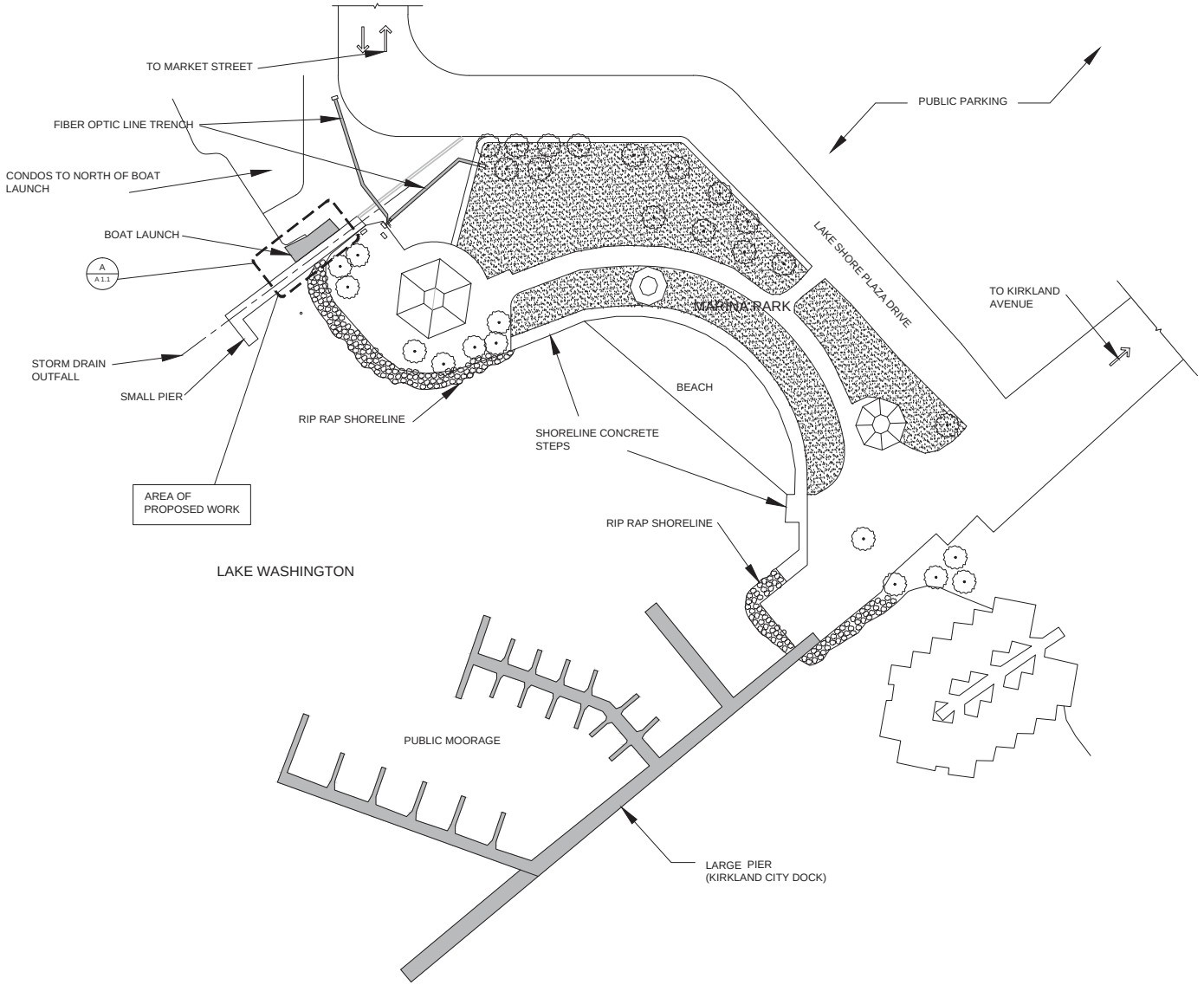

1 MARINA PARK - EXISTING SITE PLAN / PROPOSED AREA OF WORK
SCALE: 1/200" = 1'-0"

A BOAT LAUNCH AERIAL VIEW
(GOOGLE EARTH)

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SITE PLAN / PROPOSED AREA OF WORK

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DESIGN	LED
DRAWN	MD / KM
CHECK	LED

A1.1

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1 SMALL PIER AND BOAT LAUNCH LOOKING EAST

2 BOAT LAUNCH ADJACENT TO SMALL PIER

3 BOAT LAUNCH

4 SMALL PIER AND BOAT LAUNCH LOOKING WEST

5 EQUIPMENT PANEL AND CONTROL UNIT / SUPPORT

6 BOAT LAUNCH SLAB / ASPHALT EDGE

7 RETRACTABLE BOLLARD UNIT - CONTROL UNIT / SUPPORT

8 RETRACTABLE BOLLARD UNIT

9 FIBER OPTIC LINE TRENCH LOOKING SOUTH

10 EQUIP PANEL / ELECTRICAL LINE TRENCH LOOKING WEST

11 ELECTRICAL LINE TRENCH LOOKING EAST

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REPRESENTATIVE PHOTOS

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DESIGN	LED
DRAWN	MD
CHECK	LED

A 1.2

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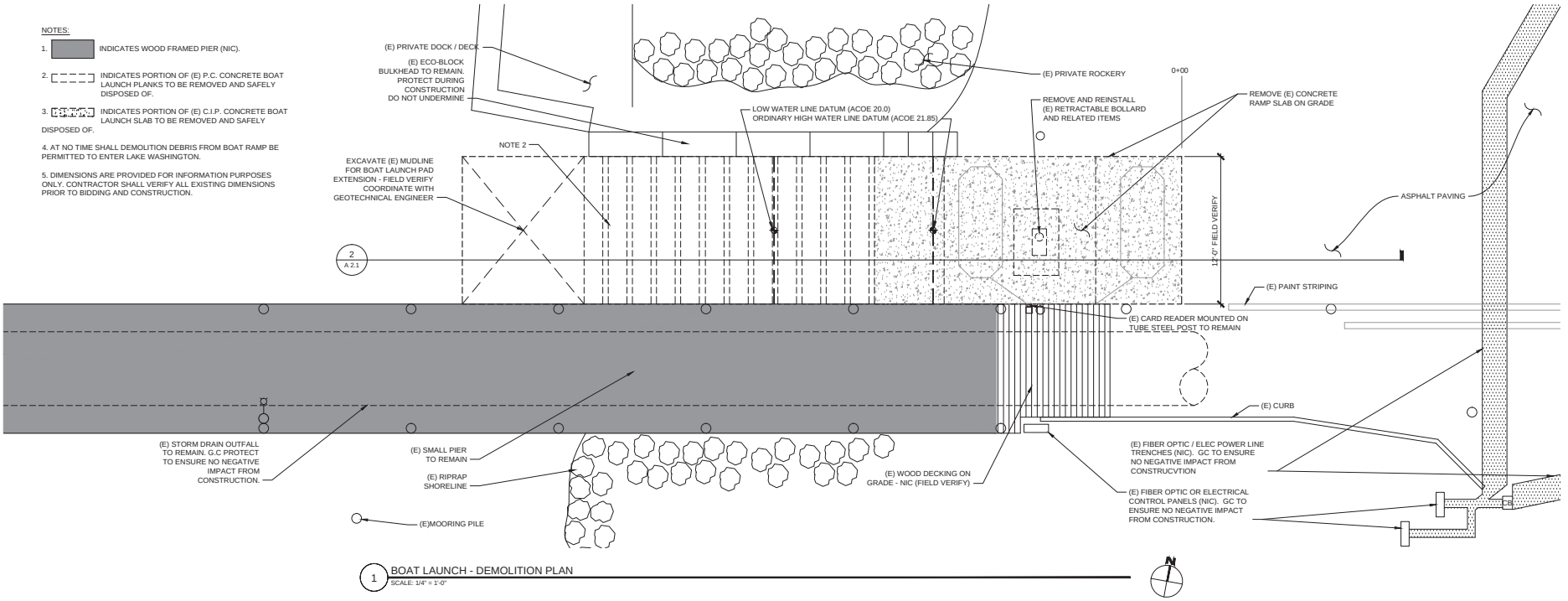
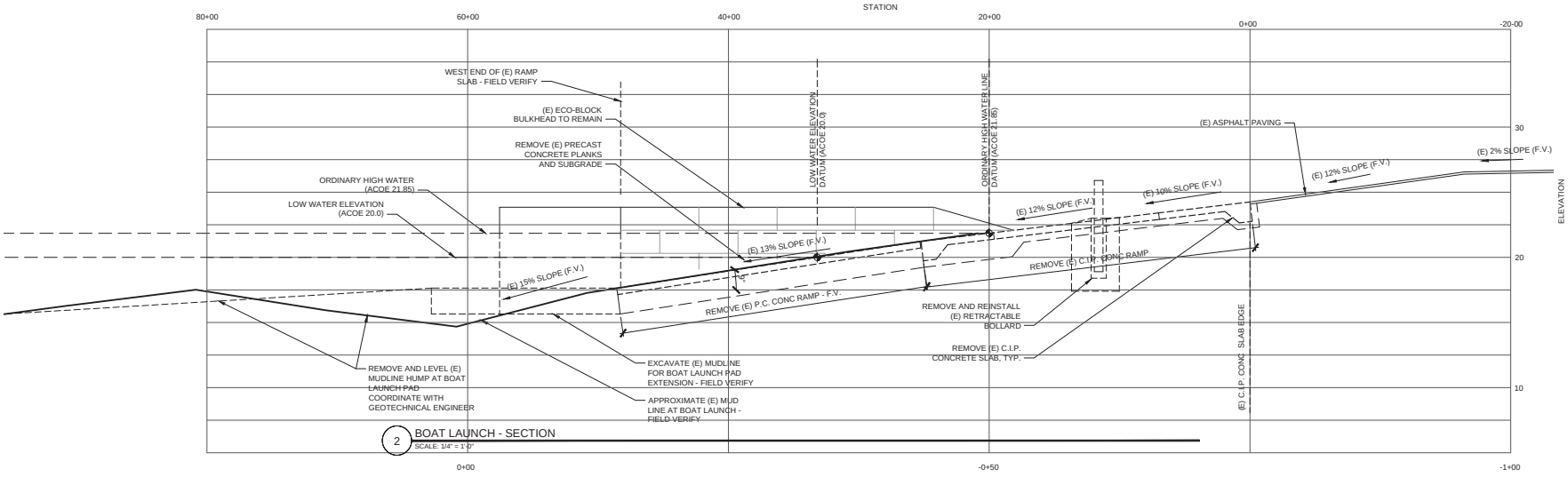
NOTES:

1. INDICATES WOOD FRAMED PIER (NIC).
2. INDICATES PORTION OF (E) P.C. CONCRETE BOAT LAUNCH PLANKS TO BE REMOVED AND SAFELY DISPOSED OF.
3. INDICATES PORTION OF (E) C.I.P. CONCRETE BOAT LAUNCH SLAB TO BE REMOVED AND SAFELY DISPOSED OF.
4. AT NO TIME SHALL DEMOLITION DEBRIS FROM BOAT RAMP BE PERMITTED TO ENTER LAKE WASHINGTON.
5. DIMENSIONS ARE PROVIDED FOR INFORMATION PURPOSES ONLY. CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS PRIOR TO BIDDING AND CONSTRUCTION.



1 BOAT LAUNCH - DEMOLITION PLAN
SCALE: 1/4" = 1'-0"



2 BOAT LAUNCH - SECTION
SCALE: 1/4" = 1'-0"

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BOAT LAUNCH DEMOLITION PLAN AND PROFILE

09-08-2015 PERMIT SET
9/8/2015

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CHECK	LED

A 2.1

OAC PROJ. No.	2013092

GENERAL NOTES AND MATERIAL SPECS

THE FOLLOWING APPLY U.N.O. ON PLANS

A. GENERAL

1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS AND THE INTERNATIONAL BUILDING CODE (IBC) 2012 EDITION, AND CITY OF KIRKLAND BUILDING CODE AMENDMENTS TO THE INTERNATIONAL BUILDING CODE.
2. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS FOR BIDDING PURPOSES ONLY. CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY AND SHALL NOTIFY STRUCTURAL ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED.
4. DEMOLITION: CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING ANY DEMOLITION. DEMOLITION DEBRIS SHALL NOT BE ALLOWED TO DAMAGE OR OVERLOAD THE EXISTING STRUCTURE. LIMIT CONSTRUCTION LOADING, INCLUDING DEMOLITION DEBRIS, ON EXISTING STRUCTURES TO 40 PSF.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE WORK.
6. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED, BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER.
7. ALL STRUCTURAL SYSTEMS WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERECTED SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.
8. SPECIAL INSPECTION SHALL BE PERFORMED BY A WABO CERTIFIED TESTING AGENCY DESIGNATED BY THE ARCHITECT AND APPROVED BY THE OWNER. INSPECTION AGENCIES DUTIES SHALL INCLUDE THE FOLLOWING:
   a. VERIFICATION OF STRUCTURAL MEMBER SIZES
   b. VERIFICATION OF SPECIFIED STRESS GRADES OF STRUCTURAL MEMBERS
   c. INSPECTION OF FRAMING ANCHORS, AND BOLTED AND NAILED CONNECTIONS
   d. INSPECTION OF SHEATHING NAILING SIZE, SPACING, AND INSTALLATION
   e. INSPECTION OF WELDING
   f. INSPECTION FOR COMPLETENESS OF STRUCTURAL SYSTEM AS DESCRIBED IN THE CONTRACT DOCUMENTS
10. PRE-ENGINEERED STRUCTURAL COMPONENTS: PRE-MANUFACTURED AND/OR PRE-ENGINEERED STRUCTURAL COMPONENTS SHALL BE DESIGNED BASED ON THE CRITERIA SPECIFIED IN THE SEATTLE BUILDING CODE, 2012 EDITION. STRUCTURAL CALCULATIONS SUPPORTING THE COMPONENT DESIGN SHALL BE STAMPED AND SIGNED BY A REGISTERED STRUCTURAL ENGINEER IN THE STATE OF WASHINGTON. THE COMPONENT DESIGNER IS RESPONSIBLE FOR CODE CONFORMANCE, TEMPORARY AND PERMANENT BRACING AND ALL NECESSARY CONNECTIONS, INCLUDING CONNECTIONS TO THE PRIMARY STRUCTURE NOT SPECIFICALLY CALLED OUT ON THE STRUCTURAL DRAWINGS.
    a. PRECAST CONCRETE PLANK LOADS SHOWN IN PART B1.
11. SHOP DRAWINGS: SHOP DRAWINGS AND CALCULATIONS FOR PRE-MANUFACTURED / PRE-ENGINEERED STRUCTURAL COMPONENTS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW PRIOR TO FABRICATION. STRUCTURAL ENGINEER OF RECORD SHALL REVIEW SHOP DRAWINGS FOR DESIGN INTENT ONLY. DIMENSIONS AND QUANTITIES ARE NOT GUARANTEED BY THE ENGINEER OF RECORD AND THEREFORE MUST BE VERIFIED BY THE GENERAL CONTRACTOR. DRAWINGS FOR COMPONENTS DESIGNED PRIMARILY BY OTHERS SHALL BE APPROVED BY THE COMPONENT DESIGNER PRIOR TO CURSORY REVIEW BY THE STRUCTURAL ENGINEER OF RECORD FOR LOADS IMPOSED ON THE BASIC STRUCTURE. SUBMITTALS SHALL INCLUDE A REPRODUCIBLE AND A COPY; REPRODUCIBLE WILL BE REVIEWED AND RETURNED. SHOP DRAWINGS MUST BE REVIEWED AND STAMPED BY GENERAL CONTRACTOR PRIOR TO REVIEW BY STRUCTURAL ENGINEER OF RECORD.

B. DESIGN CRITERIA

1. DESIGN LOAD

   a. POINT LOAD..... 3000 LBF TO 4.5" x 4.5" AREA

C. STRUCTURAL STEEL

1. STRUCTURAL STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE BASED ON THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS," LATEST EDITION, PLUS ALL REFERENCED CODES. ALL EXPOSED STEEL MEMBERS SHOWN ON THE DRAWINGS, SHALL BE GALVANIZED.
2. ALL "W" (WIDE FLANGE BEAM AND COLUMN) SHAPES SHALL CONFORM TO ASTM A992, Fy = 50 KSI. PLATES, BARS AND OTHER ROLLED SHAPES SHALL CONFORM TO ASTM A36, Fy = 36 KSI.
3. UNLESS OTHERWISE NOTED, WOOD TO WOOD AND STEEL TO WOOD CONNECTION BOLTS SHALL CONFORM TO ASTM A307. ALL EXPOSED BOLTS SHALL BE CORROSION-RESISTANT.
4. ALL FASTENERS SHALL BE ZMAX HOT-DIPPED GALVANIZED (G185), STAINLESS STEEL, OR MEET ASTM 153 REQUIREMENTS.

D. CONCRETE

1. ULTIMATE STRENGTH DESIGN PER ACI 318, LATEST EDITION.
2. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF f'c = 3000 PSI AND MIX SHALL CONTAIN NOT LESS THAN 5 ½ SACKS OF CEMENT PER CUBIC YARD AND SHALL BE PROPORTIONED TO PRODUCE A SLUMP OF 5" OR LESS.
3. ALL CONCRETE EXPOSED TO FREEZING TEMPERATURES WHILE CURING AND ALL CONCRETE PERMANENTLY EXPOSED TO WEATHER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT APPROVED BY THE ENGINEER OF RECORD. NO ADMIXTURES, OTHER THAN FOR AIR-ENTRAINMENT, SHALL BE USED WITHOUT PRIOR REVIEW BY THE STRUCTURAL ENGINEER.
4. REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 (INCLUDING SUPPLEMENT S1), GRADE 60, Fy = 60, 000 PSI. DO NOT WELD GRADE 60 REINFORCING.
5. REINFORCING STEEL SHALL BE DETAILED (INCLUDING HOOKS AND BENDS) IN ACCORDANCE WITH ACI 315, LATEST EDITION. LAP ALL CONTINUOUS REINFORCEMENT PER NOTE D.5. NO BARS PARTIALLY EMBEDDED IN CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.
6. REINFORCING STEEL LAP SPLICE LENGTH = 64 BAR DIAMETERS, UNLESS OTHERWISE NOTED ON PLANS. ALL HOOKS SHALL BE "STANDARD" IN ACCORDANCE WITH ACI 318.
7. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE 3" FOR FORMED SURFACES EXPOSED TO EARTH AND 1 ½" FOR FORMED SURFACES EXPOSED TO WEATHER.

E. ARMORFLEX:

RAMP INSTALLATION NOTES:

1. EXCAVATE RAMP PROFILE TO SUBRAGE ELEVATIONS. TYPICAL RAMP SLOPE SHALL BE BETWEEN 12% AND 15% TO MATCH EXISTING.
2. INSTALL GEOTEXTILE.
3. PLACE QUARRY SPALLS AND WASHED ROCK.
4. CONNECT ANCHORS TO CONNECTION PLATES TO CREATE CONNECTION PLATE ASSEMBLY.
5. PLACE STEEL BAR ON CRUSHED ROCK FOR TEMPORARY GUIDE TRACK.
6. LAY FIRST TWO PLANKS AT WATER'S EDGE AND FASTEN TOGETHER WITH CONNECTION PLATE ASSEMBLY.
7. PUSH PLANKS INTO WATER. CONNECT SUBSEQUENT PLANKS AND CONTINUE TO PUSH RAMP UNTIL FINAL END IS REACHED.
8. ASSEMBLE REMAINING PLANKS ABOVE WATER.
9. WEAVE CABLE THROUGH ARMORFLEX TO ASSEMBLY MATS TO DESIRED DIMENSIONS PER MANUFACTURERS RECOMMENDATION. FASTEN GEOTEXTILE TO THE BOTTOM OF THE MAT.
10. LAY ARMORFLEX MATS PER LAYOUT. USE CENTER OF MAT TO ALIGN PLACEMENT. TOP ELEVATION OF ARMORFLEX SHALL MATCH FINISHED GROUND SURFACE UNLESS NOTED OTHERWISE.
11. CONNECT MATS TO EARTH ANCHORS PER DETAILS. ANCHORS SHALL BE REQUIRED AT 4-FOOT ON CENTER EACH DIRECTION, UNLESS OTHERWISE NOTED.
12. FILL VOIDS WITH THE "FISH GRAVEL", THE MATERIAL CONSIST OF HARD, DURABLE PIECES OF ROUNDED GRAVEL / RIVER ROCK PRE-WASHED BEFORE DELIVERY UNTIL RUNOFF IS CLEAN. 100% LESS THAN 2 INCHES, 85% LESS THAN 1", AND GREATER THAN 40% BETWEEN 0.25 AND 0.75 INCH.

NOTE:
SEE DETAILS FOR INSTALLATION OF THE ANCHORING FOR THE ARMORFLEX MAT.

GENERAL REPAIR NOTES

FOR BIDDING PURPOSES ASSUME THE FOLLOWING U.N.O.:

1. 100% OF EXISTING C.I.P. SLAB AND PRECAST CONCRETE PLANKS WILL REQUIRE REMOVAL AND REPLACEMENT IN-KIND AT THE BOAT LAUNCH RAMP.
2. PROTECT (E) ECO-BLOCK BULKHEAD TO REMAIN AND DO NOT UNDERMINE DURING CONSTRUCTION.
3. PROVIDE A MINIMUM ESTIMATING CONTINGENCY FOR UNKNOWNS OF 15% OF THE TOTAL UNBURDENED REPAIR COST ESTIMATE.
4. COORDINATE WITH GEOTECHNICAL ENGINEER ON SLOPES, CUTS, FILL AND RAMP SLAB SUBGRADE PREPARATION.

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GENERAL STRUCTURAL NOTES AND MATL SPECS & REPAIR NOTES

09-08-2015 PERMIT SET
9/8/2015

LEE EDWARD DUNLAP
STATE OF WASHINGTON
19318
REGISTERED PROFESSIONAL ENGINEER

DESIGN	LED
DRAWN	MD
CHECK	LED

S 1.0

OAC PROJ. No.	2013092

WATER QUALITY PROTECTION MEASURES

GENERAL CONSTRUCTION NOTES:
1. A FULL LENGTH FLOATING SILT CURTAIN, WITH WEIGHTED BOTTOM, SHALL BE DEPLOYED AROUND THE IN-WATER EXCAVATION WORK AREA PRIOR TO COMMENCING SOIL DISTURBING ACTIVITIES AT THE SITE.
2. ALL WORK BELOW OHW WILL BE DONE BETWEEN OCTOBER 1 AND APRIL 15 OR AS OTHERWISE RESTRICTED IN THE HYDRAULIC PROJECT APPROVAL (HPA) PERMIT TO BE ISSUED BY THE WASHINGTON DEPARTMENT OF FISH AND WILDLIFE (WDFW).

PROJECT OVERSIGHT:
THE CONTRACTOR SHALL HAVE A PROJECT MANAGER OR OTHER ASSIGNED PERSONNEL ON SITE. OVERSIGHT RESPONSIBILITIES WILL INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
1. WATER QUALITY MONITORING TO ENSURE TURBIDITY LEVELS REMAIN WITHIN REQUIRED PARAMETERS AND OIL SHEEN IS NOT PRODUCED.
2. ENSURE WORK FOLLOWS BMPS.
3. ENSURE WORK IS IN COMPLIANCE WITH CONTRACT AND PERMIT REQUIREMENTS.
4. ENSURE CORRECT STRUCTURES ARE REMOVED AND NO DAMAGE OCCURS TO NEIGHBORING STRUCTURES.
5. MAINTAIN CONTACT WITH REGULATORY AGENCIES SHOULD ISSUES OR EMERGENCIES ARISE AND FULFILL REPORTING REQUIREMENTS OF PROJECT PERMITS.

CONCRETE WORK
1. NO FRESH CONCRETE SHALL BE POURED BELOW OHW. ALL NEW CONCRETE TO BE USED BELOW OHW WILL CONSIST OF PRE-CAST PANELS BROUGHT TO THE SITE IN A FULLY CURED CONDITION AND INSTALLED ON A PREPARED WASHED ROCK BED.
2. NO GROUTING OF THE PRE-CAST CONCRETE PANELS IS REQUIRED AFTER PLACEMENT.
3. THE UPPER PORTION OF THE RAMP SHALL BE PAVED BY POURING A CONCRETE SLAB ON GRADE.
4. UNCURED CONCRETE SHALL NOT BE PERMITTED TO ENTER THE STORM DRAINAGE SYSTEM OR LAKE WASHINGTON. A BERM WILL BE ESTABLISHED DOWNSLOPE OF ALL FRESH CONCRETE WORK TO PROTECT AGAINST ANY RUNOFF OR SPILLAGE FROM REACHING LAKE WASHINGTON.
5. PLASTIC COVER SHALL BE EMPLOYED TO PROTECT STORM RUNOFF FROM RECENTLY POURED CONCRETE IN THE EVENT OF RAIN.
6. CONCRETE TRUCK RINSATE SHALL BE RETURNED WITH THE TRUCKS TO THE OFF-SITE BATCH PLANTS FOR RE-USE AS PROCESS WATER.
7. MINOR RINSATE FROM OTHER CONCRETE EQUIPMENT SHALL BE CONTROLLED BY CONFINING IT TO PLASTIC-LINED PITS THAT ARE SEPARATELY MANAGED FROM THE STORM DRAINAGE CONTROL SYSTEM (WITH CONTENTS LEGALLY DISPOSED OF OFF-SITE).

WATER QUALITY MONITORING:
1. MONITORED ACTIVITIES: WATER QUALITY MONITORING FOR TURBIDITY SHALL BE COMPLETED DURING ALL EXCAVATION/DREDGING BELOW OHW. MONITORING FOR PH SHALL BE COMPLETED DURING ALL CONCRETE WORK.
2. MONITORING VARIABLES AND CRITERIA: SEE TABLE 1.
3. POINT OF COMPLIANCE: TURBIDITY - IN LAKE WASHINGTON WITHIN 150-FEET OF THE ACTIVE WORK AREA. pH - AT LOCATION OF CONCRETE WORK.
4. CONTINGENCY MEASURES: IN THE EVENT ANY PARAMETER EXCEEDS THE BENCHMARK VALUE AT THE POINT OF COMPLIANCE, CONTINGENCY MEASURES WILL BE IMPLEMENTED TO INCLUDE IDENTIFICATION AND CORRECTION OF ALL POTENTIAL CONTRIBUTING FACTORS, NOTIFICATION OF THE DEPARTMENT OF ECOLOGY, AND INCREASED FREQUENCY OF SAMPLING FOR THE NEXT 24-HOURS (SEE TABLE 1).

TABLE 1. WATER QUALITY MONITORING VARIABLES AND SAMPLING REQUIREMENTS

PARAMETER	UNITS	BENCHMARK VALUE	ANALYTICAL METHOD	QUANT. LEVEL	MINIMUM SAMPLING FREQUENCY
TURBIDITY	NTU	- 5 NTU OVER BACKGROUND <50 NTU (a); OR - 10% INCREASE OVER BACKGROUND > 50 NTU	EPA 180.1 METER	0.5 NTU	- FIRST DAY OF EXCAVATION/DREDGING BELOW OHW: EVERY 2 HRS; - SUBSEQUENT DAYS OF IN-WATER WORK: EVERY 4 HOURS; - NEXT DAY AFTER ANY EXCEEDENCE: EVERY 2 HRS.
pH	STD. UNITS	BETWEEN 6.5 AND 8.5, WITH A HUMAN-CAUSED VARIATION WITHIN THE ABOVE RANGE OF LESS THAN 0.2 UNITS	CALIBRATED pH METER	±0.5	EVERY TWO HOURS DURING FRESH CONCRETE INSTALLATION AND AGAIN 2 HOURS AFTER WORK IS COMPLETE. SAMPLING WILL CONTINUE ON A TWICE DAILY BASIS UNTIL CONDITIONS ARE DOCUMENTED TO BE BELOW pH 8.5
OIL SHEEN	YES/NO	NO VISIBLE SHEEN	VISUAL	N/A	CONCURRENT WITH TURBIDITY (DESCRIBED ABOVE).

(a) BACKGROUND SAMPLING TO BE CONDUCTED WITHIN 300 FEET OF THE SITE CONCURRENT WITH COMPLIANCE SAMPLING.

IN-WATER EXCAVATION/DREDGING:
1. CONSTRUCTION STORMWATER CONTROL MEASURES AS SHOWN ON THE APPROVED CONSTRUCTION PLANS SHALL BE IMPLEMENTED PRIOR TO START OF GRADING. CONSTRUCTION STORMWATER CONTROL NOTES SHOULD BE REVIEWED FOR ADDITIONAL REQUIREMENTS DURING EXCAVATION AND CONSTRUCTION.
2. CONSULT THE GEOTECHNICAL ENGINEER FOR ANY ADDITIONAL WATER QUALITY PROTECTION REQUIREMENTS.
3. ALL IN-WATER EXCAVATION/DREDGING/FILLING SHALL BE CONDUCTED USING LAND-BASED EXCAVATION EQUIPMENT. THE CONTRACTOR HAS AN OPTION FOR USING DREDGE BARGE EXCAVATOR EQUIPMENT AS REQUIRED FOR LEVELING THE EXISTING MUDLINE HUMP WHERE INDICATED ON THE DRAWINGS. EXCAVATION/DREDGING EFFORTS FOR RAMP CONSTRUCTION, SHALL BE ACCOMPLISHED IN A MANNER THAT MINIMIZES THE AMOUNT OF WATER ADDED TO RECOVERED SEDIMENT AND AVOIDS RE-SUSPENSION OF SEDIMENT IN THE WATER COLUMN. THE CONTRACTOR HAVE AN OPTION TO USE BARGE-SET EXCAVATION EQUIPMENT.
4. MACHINERY TO BE USED FOR EXCAVATION SHALL NOT OPERATE BELOW THE ORDINARY HIGH WATER LINE EXCEPT FOR THE BUCKET. EQUIPMENT SHALL BE FREE OF EXTERNAL PETROLEUM-BASED PRODUCTS WHILE WORKING AROUND THE LAKE. EQUIPMENT SHALL BE CHECKED DAILY FOR LEAKS AND ANY NECESSARY REPAIRS SHALL BE COMPLETED PRIOR TO COMMENCING WORK ACTIVITIES AT THE SITE. FUELING SHALL BE CONDUCTED A MINIMUM OF 100 FEET FROM THE WETTED PERIMETER OF THE LAKE.
5. IN-WATER EXCAVATION/DREDGING TO BE CONDUCTED ON THIS PROJECT WILL BE CONDUCTED ON A SLOPE. AN EXCAVATOR WITH THUMB OR EXCAVATOR-MOUNTED CLAMSHELL DREDGE BUCKET IS EXPECTED TO BE NECESSARY TO CONDUCT THE WORK.
6. PROCEDURES SHALL BE USED DURING EXCAVATION SO THAT FREE WATER IS ABLE TO DRAIN FROM THE EXCAVATED MATERIAL IN THE BUCKET, MINIMIZING THE AMOUNT OF WATER IN THE MATERIAL TO BE DISPOSED OFF-SITE. UPON REMOVAL OF EACH BUCKET OR SCOOP FROM THE WATER, THE EQUIPMENT SHALL PAUSE AT THE WATER SURFACE TO ALLOW FREE WATER TO DRAIN BACK INTO THE LAKE WITHIN THE WORK AREA BEHIND THE SILT CURTAIN.
7. EXCAVATED MATERIAL SHALL NOT BE STOCKPILED IN WATER. IF ANY EXCAVATED MATERIAL IS STOCKPILED IN THE UPLAND SITE AREA PRIOR TO LOADING FOR DISPOSAL, THE UPLAND STOCKPILE AREAS SHALL BE CONTAINED WITH EROSION CONTROLS. WATER DRAINING FROM STOCKPILED MATERIAL SHALL BE FILTERED THROUGH SILT FENCE AND OTHER EROSION CONTROLS AS NECESSARY SUCH THAT WATER DRAINING BACK TO THE WORK AREA WITHIN THE LAKE IS VISUALLY CLEAR.
8. ALL EXCAVATED MATERIAL SHALL BE RE-USED OR TRANSPORTED FOR DISPOSAL OFF-SITE.
9. CONTRACTOR SHALL ENSURE THAT NO FUEL, GARBAGE OR DEBRIS ENTERS THE LAKE FROM THE EQUIPMENT USED TO CONDUCT THE PROJECT, OR FROM THE UPLAND WORK AREA.
10. FLOATING DEBRIS WITHIN THE IN-WATER WORK AREA SHALL BE COLLECTED FOR UPLAND DISPOSAL.
11. ABSORBENT MATERIALS SHALL BE PREPARED FOR DEPLOYMENT WITHIN THE SILT CURTAIN CONTAINED WORK AREA, SHOULD A SHEEN DEVELOP DURING EXCAVATION ACTIVITIES.

QUANTITIES TABLE

	(6" THICK) CONCRETE RAMP (SF)				(6" THICK) PC CONC. RAMP (SF)		PERVIOUS AREA (SF)		ARMORFLEX AREA (SF)		EXCAVATION (CY)				FILL- QUARRY SPALL (CY)				FILL-GRAVEL (CY)				FILL - FISH GRAVEL (CY)			
	ABOVE OHW		BELOW OHW		BELOW OHW		ABOVE OHW		BELOW OHW		ABOVE OHW		BELOW OHW		ABOVE OHW		BELOW OHW		ABOVE OHW		BELOW OHW		ABOVE OHW		BELOW OHW	
EXISTING CONDITIONS	243	SF	60	SF	285	SF	0	SF	0	SF	0	CY	0	CY	0	CY	0	CY	0	CY	0	CY	0	CY	0	CY
PROPOSED CONDITIONS	216	SF	0	SF	528	SF	0	SF	300	SF	0	CY	20	CY	0	CY	15	CY	7	CY	10	CY	0	CY	10	CY

EROSION / SEDIMENTATION CONTROL - PLAN NOTES

LAST REVISED 01/2015 BY THE CITY OF KIRKLAND

1. The approved Construction Sequence shall be as follows:
   a. Conduct pre-construction meeting.
   b. Flag or fence clearing limits.
   c. Post sign with name and phone number of TESC supervisor.
   d. Install catch basin protection if required.
   e. Grade and install construction entrance(s).
   f. Install perimeter protection (silt fence, brush barrier, etc.).
   g. Construct sediment ponds and traps.
   h. Grade and stabilize construction roads.
   i. Construct surface water controls (interceptor dikes, pipe slope drains, etc.) simultaneously with clearing and grading for project development.
   j. Maintain erosion control measure in accordance with City of Kirkland Standards and manufacturer's recommendations.
   k. Relocate erosion control measures or install new measures so that as site conditions change, the erosion and sediment control is always in accordance with the City TESC minimum requirements.
   l. Cover all areas within the specified time frame with straw, wood fiber mulch, compost, plastic sheeting, crushed rock or equivalent.
   m. Stabilize all areas that reach final grade within 7 days.
   n. Seed or sod any areas to remain unworked for more than 30 days.
   o. Upon completion of the project, all disturbed areas must be stabilized and best management practices removed if appropriate.
2. All work and materials shall be in accordance with City of Kirkland standards and specifications.
3. The boundaries of the clearing limits shown on this plan shall be set by survey and clearly flagged in the field by a clearing control fence prior to construction. During the construction period, no disturbance or removal of any ground cover beyond the flagged clearing limits shall be permitted. The flagging shall be maintained by the Permittee/Contractor for the duration of construction.
4. Approval of this erosion/sedimentation control (ESC) plan does not constitute an approval of permanent road or drainage design (e.g., size and location of roads, pipes, restrictors, channels, retention facilities, utilities, etc.).
5. The implementation of this ESC plan and the construction, maintenance, replacement, and upgrading of these ESC facilities is the responsibility of the Permittee/Contractor until all construction is approved.
6. A copy of the approved ESC plans must be on the job site whenever construction is in progress.
7. The ESC facilities shown on this plan must be constructed prior to or in conjunction with all clearing and grading activities in such a manner as to ensure that sediment-laden water does not enter the drainage system or violate applicable water standards. Wherever possible, maintain natural vegetation for silt control.
8. The ESC facilities shall be constructed in accordance with the details on the approved plans. Locations may be moved to suit field conditions, subject to approval by the Engineer and the City of Kirkland Inspector.
9. The ESC facilities shown on this plan are the minimum requirements for anticipated site conditions. During the construction period, these ESC facilities shall be upgraded (e.g., additional sumps, relocation of ditches and silt fences, etc.) as needed for unexpected storm events. Additionally, more ESC facilities may be required to ensure complete siltation control. Therefore, during the course of construction it shall be the obligation and responsibility of the Contractor to address any new conditions that may be created by his activities and to provide additional facilities over and above the minimum requirements as may be needed.
10. The ESC facilities shall be inspected by the Permittee/Contractor daily during non-rainfall periods, every hour (daylight) during a rainfall event, and at the end of every rainfall, and maintained as necessary to ensure their continued functioning. In addition, temporary siltation ponds and all temporary siltation controls shall be maintained in a satisfactory condition until such time that clearing and/or construction is completed, permanent drainage facilities are operational, and the potential for erosion has passed. Written records shall be kept documenting the reviews of the ESC facilities.
11. The ESC facilities on inactive sites shall be inspected and maintained a minimum of once a month or within 48 hours following a storm event.
12. Stabilized construction entrances shall be installed at the beginning of construction and maintained for the duration of the project. Additional measures, such as wash pads, may be required to ensure that all paved areas are kept clean for the duration of the project.
13. All denuded soils must be stabilized with an approved TESC method (e.g. seeding, mulching, plastic covering, crushed rock) within the following timelines:
    - May 1 to September 30 – soils must be stabilized within 7 days of grading.
    - October 1 to April 30 – soils must be stabilized within 2 days of grading.
    - Stabilize soils at the end of the workday prior to a weekend, holiday, or predicted rain event.
14. Where seeding for temporary erosion control is required, fast germinating grasses shall be applied at an appropriate rate (example: annual or perennial rye applied at approximately 80 pounds per acre).
15. Where straw mulch is required for temporary erosion control, it shall be applied at a minimum thickness of 2".
16. All lots adjoining or having any native growth protection easements (NGPE) shall have a 6' high temporary construction fence (chain link with pier blocks) separating the lot (or buildable portions of the lot) from the area restricted by the NGPE and shall be installed prior to any grading or clearing and remain in place until the Planning Department authorizes removal.
17. Clearing limits shall be delineated with a clearing control fence. The clearing control fence shall consist of a 6-ft. high chain link fence adjacent the drip line of trees to be saved, wetland or stream buffers, and sensitive slopes. Clearing control fences along wetland or stream buffers or upslope of sensitive slopes shall be accompanied by an erosion control fence. If approved by the City, a four-foot high orange mesh clearing control fence may be used to delineate clearing limits in all other areas.
18. Off-site streets must be kept clean at all times. If dirt is deposited on the public street system, the street shall be immediately cleaned with power sweeper or other equipment. All vehicles shall leave the site by way of the construction entrance and shall be cleaned of all dirt that would be deposited on the public streets.
19. Rock for erosion protection of roadway ditches, where required, must be of sound quarry rock, placed to a depth of 1' and must meet the following specifications: 4"-8" rock/40%-70% passing; 2"-4" rock/30%-40% passing; and 1"-2" rock/10%-20% passing. Recycled concrete shall not be used for construction entrance or temporary stabilization elsewhere on the site.
20. If any part(s) of the clearing limit boundary or temporary erosion/sedimentation control plan is/are damaged, it shall be repaired immediately.
21. All properties adjacent to the project site shall be protected from sediment deposition and runoff.
22. At no time shall more than 1' of sediment be allowed to accumulate within a catch basin. All catch basins and conveyance lines shall be cleaned immediately following removal of erosion control BMPs. The cleaning operation shall not flush sediment-laden water into the downstream system.
23. Any permanent retention/detention facility used as a temporary settling basin shall be modified with the necessary erosion control measures and shall provide adequate storage capacity. If the permanent facility is to function ultimately as an infiltration or dispersion system, the facility shall not be used as a temporary settling basin. No underground detention tank, detention vault, or system which backs under or into a pond shall be used as a temporary settling basin.
24. All erosion/sedimentation control ponds with a dead storage depth exceeding 6" must have a perimeter fence with a minimum height of 3'.
25. The washed gravel backfill adjacent to the filter fabric fence shall be replaced and the filter fabric cleaned if it is nonfunctional by excessive silt accumulation as determined by the City of Kirkland. Also, all interceptor swales shall be cleaned if silt accumulation exceeds one-quarter depth.
26. Prior to the October 1 of each year (the beginning of the wet season), all disturbed areas shall be reviewed to identify which ones can be seeded in preparation for the winter rains. The identified disturbed area shall be seeded within one week after October 1. A site plan depicting the areas to be seeded and the areas to remain uncovered shall be submitted to the Public Works Construction Inspector. The Inspector can require seeding of additional areas in order to protect surface waters, adjacent properties, or drainage facilities.
27. Any area to be used for infiltration or pervious pavement (including a 5-foot buffer) must be surrounded by silt fence prior to construction and until final stabilization of the site to prevent soil compaction and siltation by construction activities.
28. If the temporary construction entrance or any other area with heavy vehicle loading is located in the same area to be used for infiltration or pervious pavement, 6" of sediment below the gravel shall be removed prior to installation of the infiltration facility or pervious pavement (to remove fines accumulated during construction).
29. Any catch basins collecting runoff from the site, whether they are on or off the site, shall have adequate protection from sediment. Catch basins directly downstream of the construction entrance or any other catch basin as determined by the City Inspector shall be protected with a "storm drain protection insert" or equivalent.
30. If a sediment pond is not proposed, a baker tank or other temporary ground and/or surface water storage tank may be required during construction, depending on weather conditions.
31. Do not flush concrete by-products or trucks near or into the storm drainage system. If exposed aggregate is flushed into the storm system, it could mean re-cleaning the entire downstream storm system, or possibly re-laying the storm line.
32. Construction dewatering discharges shall always meet water quality guidelines listed in CDK Policy E-1. Specifically, discharges to the public stormwater drainage system must be below 25ntu, and not considered a prohibited discharge (per KMC 15.52.090). Temporary discharges to sanitary sewer require prior authorization and permit from King County Industrial Waste Program (206-263-3000) and notification to the Public Works Construction Inspector.

MARINA PARK
BOAT LAUNCH REPLACEMENT
25 LAKE SHORE PLAZA DRIVE
KIRKLAND WA 98033

OAC
701 Dexter Avenue North #301
Seattle, WA 98109-4342
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w: www.oacsvcs.com

WATER QUALITY PROTECTION MEASURES/ EROSION CONTROL PLAN NOTES

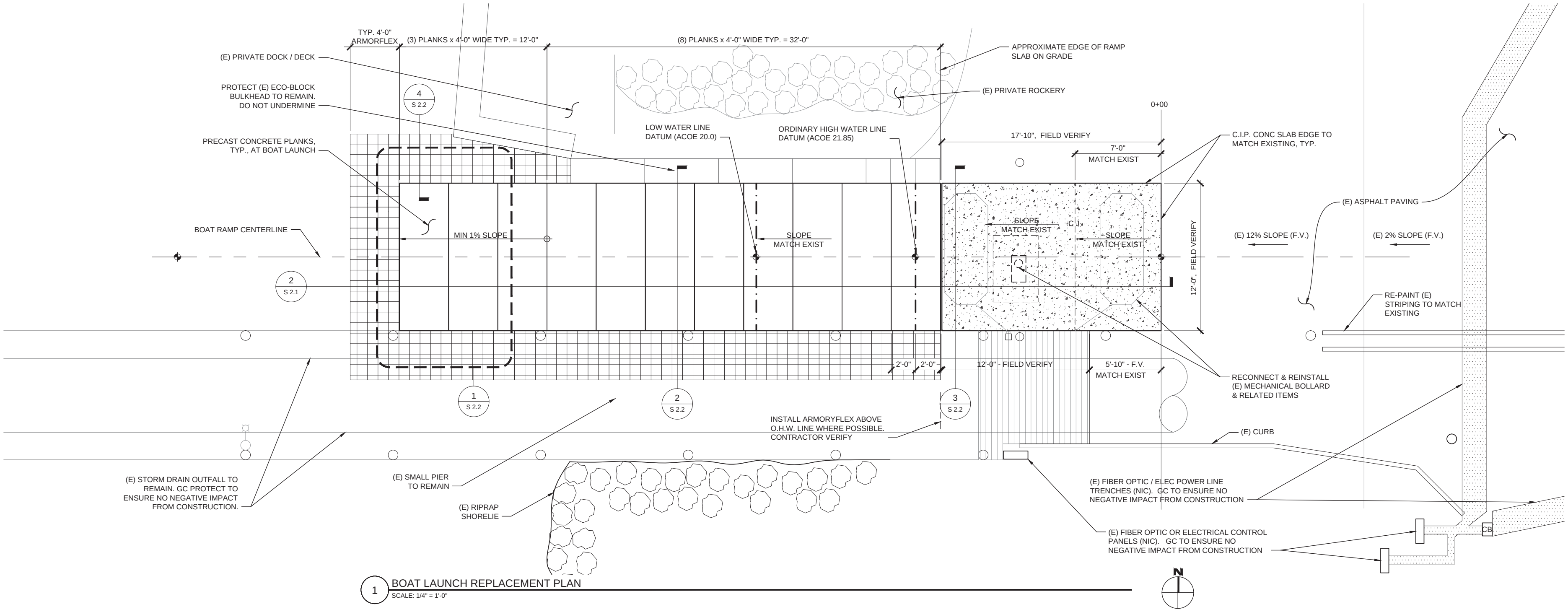
09-08-2015 PERMIT SET
9/8/2015

DESIGN	LED
DRAWN	MD
CHECK	LED

S 1.1

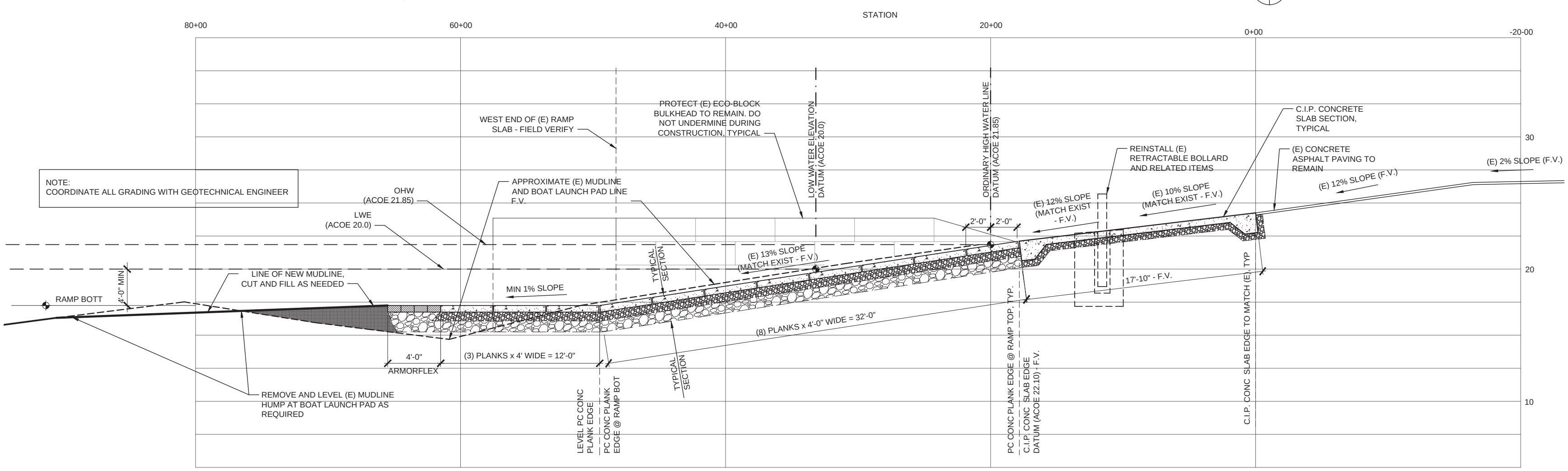
OAC PROJ. No. 2013092

ATTACHMENT 2
SHR15-01902



TYP. 4'-0" ARMORFLEX
(3) PLANKS x 4'-0" WIDE TYP. = 12'-0"
(8) PLANKS x 4'-0" WIDE TYP. = 32'-0"
(E) PRIVATE DOCK / DECK
APPROXIMATE EDGE OF RAMP SLAB ON GRADE
PROTECT (E) ECO-BLOCK BULKHEAD TO REMAIN. DO NOT UNDERMINE
(E) PRIVATE ROCKERY
4
S 2.2
0+00
LOW WATER LINE DATUM (ACOE 20.0)
ORDINARY HIGH WATER LINE DATUM (ACOE 21.85)
17'-10", FIELD VERIFY
7'-0"
MATCH EXIST
C.I.P. CONC SLAB EDGE TO MATCH EXISTING, TYP.
PRECAST CONCRETE PLANKS, TYP., AT BOAT LAUNCH
(E) ASPHALT PAVING
BOAT RAMP CENTERLINE
MIN 1% SLOPE
SLOPE MATCH EXIST
C.J.
12'-0", FIELD VERIFY
(E) 12% SLOPE (F.V.)
(E) 2% SLOPE (F.V.)
2
S 2.1
RE-PAINT (E) STRIPING TO MATCH EXISTING
2'-0"
2'-0"
12'-0" - FIELD VERIFY
5'-10" - F.V.
MATCH EXIST
RECONNECT & REINSTALL (E) MECHANICAL BOLLARD & RELATED ITEMS
1
S 2.2
2
S 2.2
3
S 2.2
INSTALL ARMORYFLEX ABOVE O.H.W. LINE WHERE POSSIBLE. CONTRACTOR VERIFY
(E) CURB
(E) STORM DRAIN OUTFALL TO REMAIN. GC PROTECT TO ENSURE NO NEGATIVE IMPACT FROM CONSTRUCTION.
(E) SMALL PIER TO REMAIN
(E) FIBER OPTIC / ELEC POWER LINE TRENCHES (NIC). GC TO ENSURE NO NEGATIVE IMPACT FROM CONSTRUCTION
(E) RIPRAP SHORELIE
(E) FIBER OPTIC OR ELECTRICAL CONTROL PANELS (NIC). GC TO ENSURE NO NEGATIVE IMPACT FROM CONSTRUCTION
CB
N

1 BOAT LAUNCH REPLACEMENT PLAN
SCALE: 1/4" = 1'-0"



STATION
80+00
60+00
40+00
20+00
0+00
-20+00
PROTECT (E) ECO-BLOCK BULKHEAD TO REMAIN. DO NOT UNDERMINE DURING CONSTRUCTION, TYPICAL
WEST END OF (E) RAMP SLAB - FIELD VERIFY
LOW WATER ELEVATION DATUM (ACOE 20.0)
ORDINARY HIGH WATER LINE DATUM (ACOE 21.85)
C.I.P. CONCRETE SLAB SECTION, TYPICAL
REINSTALL (E) RETRACTABLE BOLLARD AND RELATED ITEMS
(E) CONCRETE ASPHALT PAVING TO REMAIN
30
(E) 2% SLOPE (F.V.)
NOTE:
COORDINATE ALL GRADING WITH GEOTECHNICAL ENGINEER
OHW (ACOE 21.85)
APPROXIMATE (E) MUDLINE AND BOAT LAUNCH PAD LINE F.V.
(E) 12% SLOPE (F.V.)
(E) 10% SLOPE (MATCH EXIST - F.V.)
(E) 12% SLOPE (MATCH EXIST - F.V.)
ELEVATION
LWE (ACOE 20.0)
2'-0"
2'-0"
TYPICAL SECTION
(E) 13% SLOPE (MATCH EXIST - F.V.)
20
4'-0" MIN
LINE OF NEW MUDLINE, CUT AND FILL AS NEEDED
17'-10" - F.V.
RAMP BOTT
MIN 1% SLOPE
(8) PLANKS x 4'-0" WIDE = 32'-0"
4'-0"
ARMORFLEX
(3) PLANKS x 4' WIDE = 12'-0"
TYPICAL SECTION
REMOVE AND LEVEL (E) MUDLINE HUMP AT BOAT LAUNCH PAD AS REQUIRED
10
LEVEL PC CONC PLANK EDGE
PC CONC PLANK EDGE @ RAMP BOT
PC CONC PLANK EDGE @ RAMP TOP, TYP.
C.I.P. CONC. SLAB EDGE DATUM (ACOE 22.10) - F.V.
C.I.P. CONC. SLAB EDGE TO MATCH (E), TYP

2 PROFILE
SCALE:1:2 VERTICAL

MARINA PARK BOAT LAUNCH REPLACEMENT

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BOAT LAUNCH REPLACEMENT PLAN AND PROFILE

09-08-2015 PERMIT SET

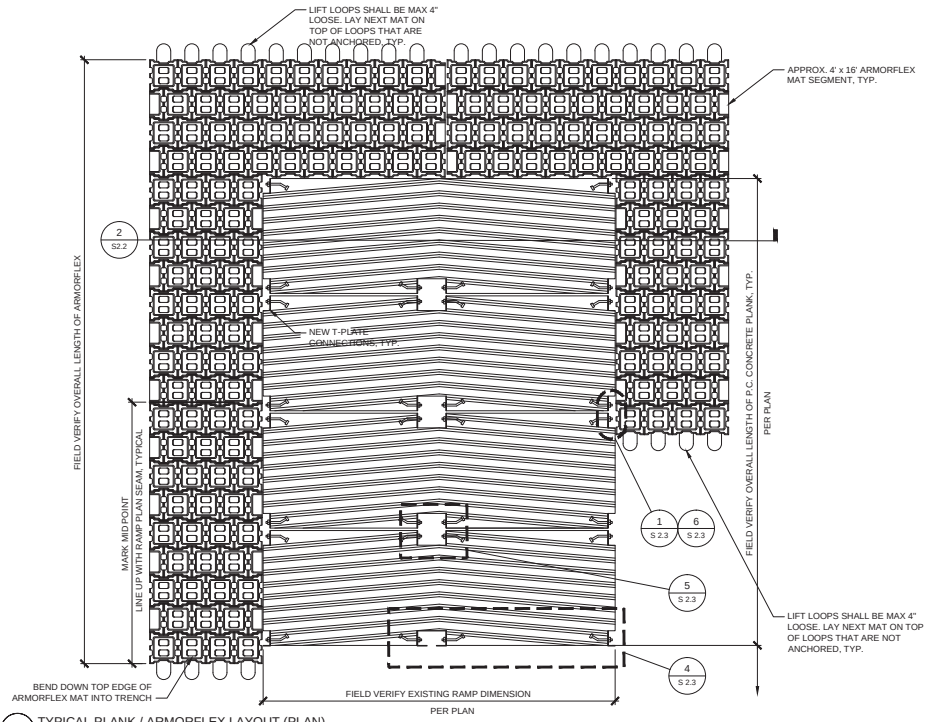
9/8/2015

LEE EDWARD DUNHAM
STATE OF WASHINGTON
38319
PROFESSIONAL ENGINEER

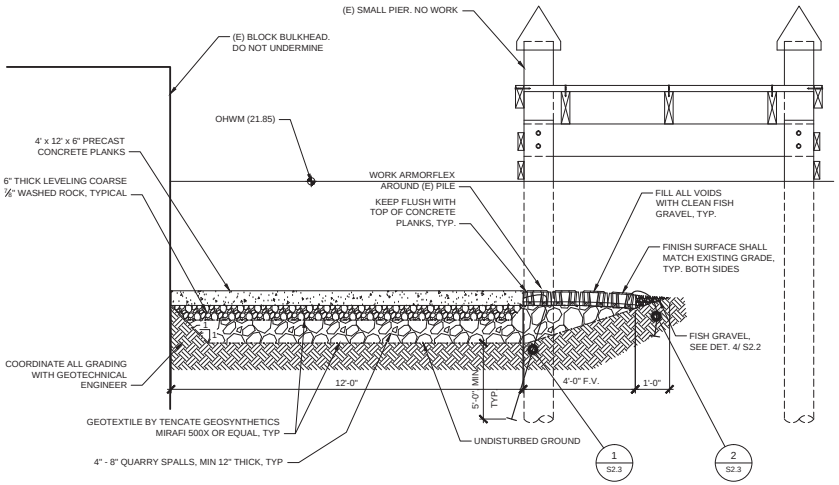
DESIGN	LED
DRAWN	MD
CHECK	LED

S 2.1

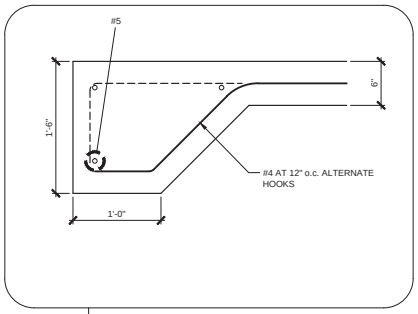
OAC PROJ. No.	2013092

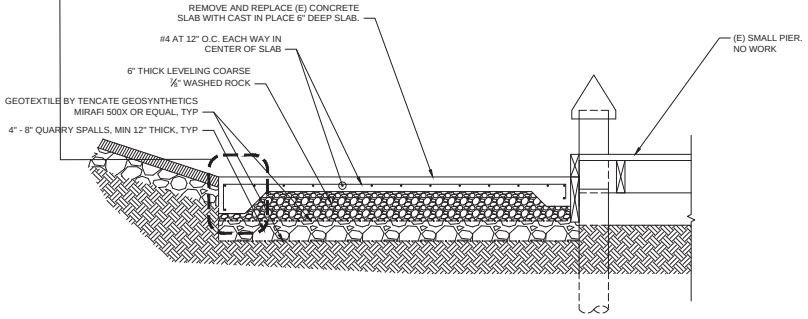


1 TYPICAL PLANK / ARMORFLEX LAYOUT (PLAN)
SCALE: 1/2" = 1'-0"

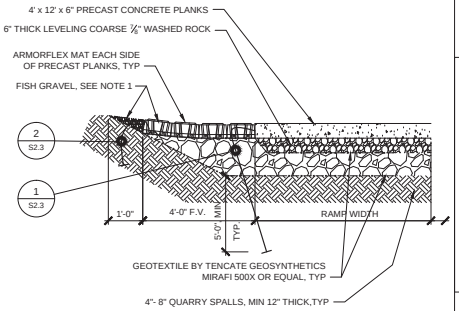


2 RAMP CROSS SECTION AT EXISTING BULK HEAD / DOCK
SCALE: 1/2" = 1'-0"





3 TYPICAL RAMP CROSS SECTION AT CAST IN PLACE CONCRETE RAMP
SCALE: 1/2" = 1'-0"



NOTE:
1. FISH GRAVEL SHALL CONSIST OF HARD, DURABLE PIECES OF ROUNDED GRAVEL/RIVER ROCK PRE-WASHED BEFORE DELIVERY UNTIL RUNOFF IS CLEAN. 100% LESS THAN 2 INCHES, 85% LESS THAN 1 INCH, AND GREATER THAN 40% BETWEEN 0.25 AND 0.75 INCH.

4 PARTIAL RAMP SECTION
SCALE: NTS

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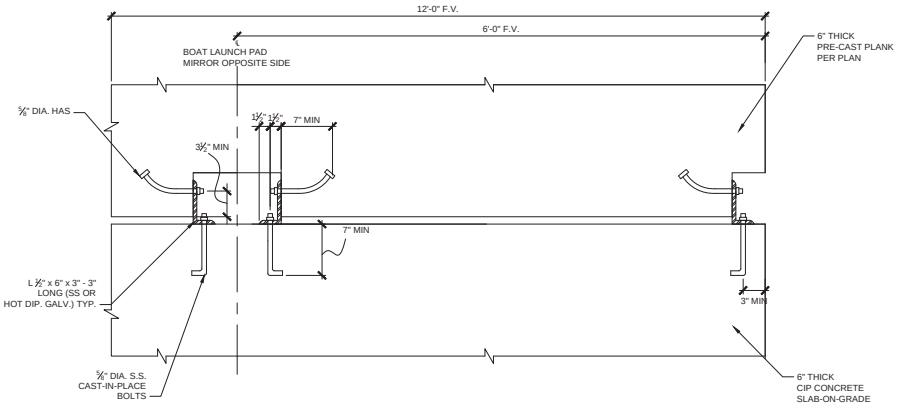
BOAT LAUNCH DETAILS

09-08-2015 PERMIT SET
9/8/2015

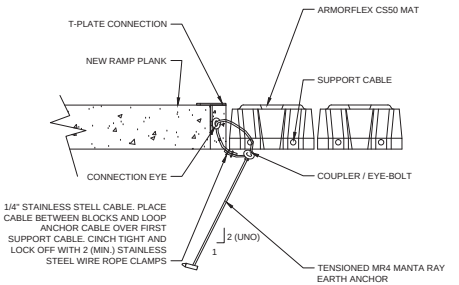
DESIGN	LED
DRAWN	MD
CHECK	LED

S 2.2

OAC PROJ. No.	2013092



4 CIP/PC PLANK CONNECTION DETAIL
SCALE: 1 1/2" = 1'-0"



1 PLANK/ ARMORFLEX MAT ANCHORING DETAIL
SCALE: 1 1/2" = 1'-0"

CONNECTIONS AND ANCHORAGE COMPONENTS

1. GENERAL
   A. ALL CONNECTIONS AND ANCHORAGE TO BE STAINLESS STEEL, U.N.O.

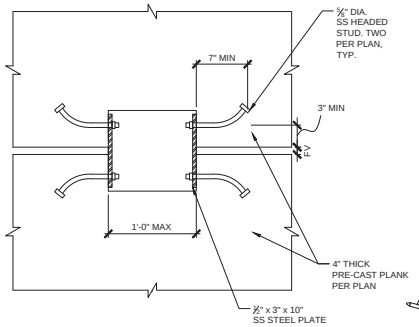
2. EARTH ANCHORS / ARMORFLEX:

   A. EARTH ANCHORS SHOWN ON DRAWINGS SHALL BE MANTA RAY ANCHORS AS MANUFACTURED BY FORESIGHT PRODUCTS, COMMERCE CITY, CO, OR APPROVED EQUAL.

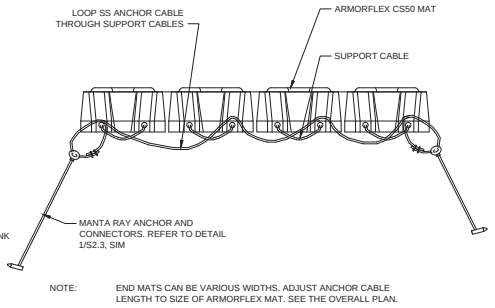
   B. MANTA RAY ANCHORS SHALL BE HOT DIPPED GALVANIZED MR4 ANCHORS INSTALLED AT A MINIMUM DEPTH OF 6'-0" BELOW THE MUDLINE. ANCHORS SHALL BE DRIVEN, TESTED AND LOCKED OFF IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

   C. CONTRACTOR SUBMIT SHOP DRAWINGS FOR EARTH ANCHOR LAYOUT AND COMPONENTS, INCLUDING ALL CONNECTION DEVICES, FOR ENGINEERS REVIEW.

   D. ANCHOR RAMP SIDE AND OUTSIDE EDGES OF ARMORFLEX FOR ICE PROTECTION. SEE THE OVERALL PLAN. UNLESS NOTED OTHERWISE, MANTA RAY ANCHORS SHALL BE INSTALLED AND CONNECTED TO ARMORFLEX MATS AT 4'-0" o.c. EACH DIRECTION. ARMORFLEX ANCHORS AND CONNECTORS SHALL NOT STICK UP ABOVE TOP SURFACE OF ARMORFLEX.

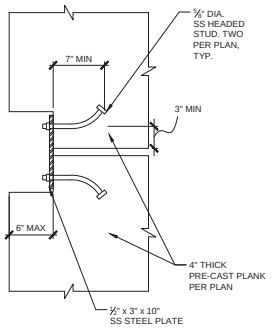


5 TYPICAL PRE-CAST PLANK MID SPLICE - (2) PER PLAN
SCALE: 1 1/2" = 1'-0"

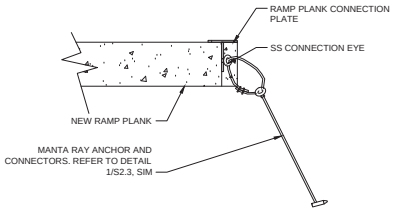


NOTE: END MATS CAN BE VARIOUS WIDTHS. ADJUST ANCHOR CABLE LENGTH TO SIZE OF ARMORFLEX MAT. SEE THE OVERALL PLAN.

2 END OF ARMORFLEX MAT ANCHORING DETAIL
SCALE: 1 1/2" = 1'-0"



6 TYPICAL PRE-CAST PLANK END SPLICE - (2) PER PLAN
SCALE: 1 1/2" = 1'-0"



3 CABLE INSTALLATION DETAIL
SCALE: 1 1/2" = 1'-0"

MARINA PARK
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BOAT LAUNCH DETAILS

09-08-2015 PERMIT SET
9/8/2015

DESIGN	LED
DRAWN	MD
CHECK	LED

S 2.3

OAC PROJ. No.	2013092

CITY OF KIRKLAND
Planning and Community Development Department
123 Fifth Avenue, Kirkland, WA 98033
425.587-3225 ~ www.kirklandwa.gov

DEVELOPMENT STANDARDS LIST

File: SHR15-01902

SHORELINE MASTER PROGRAM STANDARDS

24.05.165.9 Prohibited Substances. No part of moorage structures or other components that may come into contact with the lake may be treated with or consist of creosote, oil base, toxic, or other substances that would be harmful to the aquatic environment.

WAC173-27-190 Substantial Development, Conditional Use, or Variance Permits. Construction pursuant to a substantial development, conditional use, or variance permit shall not begin and is not authorized until 21 days from the date of filing, or until all review proceedings initiated within 20 days from the date of filing have been terminated, except as provided in RCW90.58.140(5)(a) & (b).

CHAPER 83 SHORELINE MANAGEMENT Kirkland Zoning Code:

83.340 Fill standards

- Fill shall be permitted only where it is demonstrated that the proposed action will not: Result in significant damage to water quality, fish, aquatic habitat, and/or wildlife habitat; or adversely alter natural drainage and circulation patterns, currents, or stream flows, or significantly reduce floodwater-holding capabilities.

- Fills landward and waterward of the OHWM shall be designed, constructed, and maintained to prevent, minimize, and control all material movement, erosion, and sedimentation from the affected area.

- Fills waterward of the OHWM shall be permitted only in conjunction with an approved water-dependent use or public access use, including maintenance of beaches; or

- Any placement of materials landward of the OHWM shall comply with the provisions in KZC 83.330 for land surface modification.

83.400 Shoreline Vegetation Plant materials must be native and selected from the Kirkland Native Plant List, or other native or shoreline appropriate species approved by the Planning Official or Urban Forester.

83.430: <u>In Water Construction:</u> The following standards shall apply to in-water work, including, but not limited to, installation of new structures, repair of existing structures, restoration projects, and aquatic vegetation removal:

a. In-water structures and activities shall be sited and designed to avoid the need for future shoreline stabilization activities and dredging, giving due consideration to watershed functions and processes, with special emphasis on protecting and restoring priority habitat and species.

b. In-water structures and activities are not subject to the shoreline setbacks established in KZC 83.180.

c. See KZC 83.370 for federal and state approval and timing restrictions.

d. Removal of existing structures shall be accomplished so the structure and associated material does not re-enter the lake.

e. Waste material and unauthorized fill, such as construction debris, silt or excess dirt resulting from in-water structure installation, concrete blocks or pieces, bricks, asphalt, metal, treated wood, glass, paper and any other similar material upland of or below the OHWM shall be removed.

f. Measurements shall be taken in advance and during construction to ensure that no petroleum products, hydraulic fluid, cement, sediments, sediment-laden water, chemicals, or any other toxic or deleterious materials are allowed to enter or leach into the lake during in-water activities. Appropriate spill clean-up materials must be on-site at all times, and any spills must be contained and cleaned immediately after discovery.

g. In-water work shall be conducted in a manner that causes little or no siltation to adjacent areas. A sediment control curtain shall be used in those instances where siltation is expected. The curtain shall be maintained in a functional manner that contains suspended sediments during project installation.

h. Any trenches, depressions, or holes created below the OHWM shall be backfilled prior to inundation by high water or wave action.

i. Fresh concrete or concrete by-products shall not be allowed to enter the lake at any time during in-water installation. All forms used for concrete shall be completely sealed to prevent the possibility of fresh concrete from entering the lake.

j. Alteration or disturbance of the bank and bank vegetation shall be limited to that necessary to perform the in-water work. All disturbed areas shall be protected from erosion using vegetation or other means.

k. If at any time, as a result of in-water work, water quality problems develop, immediate notification shall be made to the Washington State Department of Ecology.

Prior to issuance of a grading or building permit:

<u>CHAPER 83 SHORELINE MANAGEMENT Kirkland Zoning Code:</u>

83.370: <u>Federal and State Approval</u>: Documentation verifying necessary state and federal agency approvals must be submitted to the City prior to the submittal of a Building or Land Surface Modification Permit.

ADDITIONAL ZONING CODE STANDARDS

115.25 Work Hours. It is a violation of this Code to engage in any development activity or to operate any heavy equipment before 7:00 am. or after 8:00 pm Monday through Friday, or before 9:00 am or after 6:00 pm Saturday. No development activity or use of heavy equipment may occur on Sundays or on the following holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas Day. The applicant will be required to comply with these regulations and any violation of this section will result in enforcement action, unless written permission is obtained from the Planning official.

145.22.2 Public Notice Signs. Within seven (7) calendar days after the end of the 21-day period following the City's final decision on the permit, the applicant shall remove all public notice signs.

Christian Geitz

From: Karen Walter <KWalter@muckleshoot.nsn.us>
Sent: Monday, November 30, 2015 5:50 PM
To: Christian Geitz
Subject: FW: Notice of Application and Optional SEPA - Marina Park Boat Launch SHR15-01902
Attachments: Marina Park Boat Launch Notice of Application - SHR15-01902.pdf; Marina Park Boat Launch Site Plan SHR15-01902.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Categories: Zoning Permits

Christian,

We have reviewed the Notice of Application for the City's proposed boat launch at Marina Park and offer the following comments and questions:

The project should be renoticed under SEPA as the original notice did not include the environmental checklist and should have per WAC 197-11-340 (2)(b) from the SEPA rules, states:

> *"(b) The responsible official shall send the DNS and environmental checklist to agencies with jurisdiction, the department of ecology, and affected tribes, and each local agency or political subdivision whose public services would be changed as a result of implementation of the proposal, and shall give notice under WAC 197-11-510."*

I checked the City's website under mybuildingpermit.com and could not find the checklist.

2. We will be reviewing this project for potential impacts to salmon habitat and tribal fishing activities. With respect to tribal fishing activities, these issues will be addressed via the Corps' permitting process.
For fish habitat, what is proposed as mitigation for the expanded boat launch?

3. What is the City proposes as mitigation for cumulative impacts to salmon habitat from this boat launch project and the marina pier repairs occurring at this site?

We appreciate the opportunity to review this project and look forward to the City's responses. We may have further comments subsequently.

Thank you,

Karen Walter
Watersheds and Land Use Team Leader

Muckleshoot Indian Tribe Fisheries Division
Habitat Program
39015 172nd Ave SE
Auburn, WA 98092
253-876-3116

From: Angela Martin [mailto:aamartin@kirklandwa.gov]
Sent: Friday, October 23, 2015 10:17 AM
To: Christian Geitz
Subject: Notice of Application and Optional SEPA - Marina Park Boat Launch SHR15-01902

Attached for your information are the Notice of Application and Site Plan for the **Marina Park Boat Launch, File No. SHR15-01902.**

If you have any questions you may contact **Planner Christian Geitz** at cgeitz@kirklandwa.gov or 425-587-3246.

Thank you,

Angela Martin
Planning & Building Department
Office Specialist
425-587-3237
aamartin@kirklandwa.gov


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CITY OF KIRKLAND
Planning and Building Department
123 Fifth Avenue, Kirkland, WA 98033
www.kirklandwa.gov ~ 425.587.3225

DETERMINATION OF NON-SIGNIFICANCE (DNS)

Case No.: SEP15-01903 **DATE ISSUED:** February 18, 2016

Project Name: Marina Park Boat Launch Repair and Dredging project

Project Location: Marina Park, 25 Lakeshore Plaza

Project Description: Shoreline Conditional Use Permit for the repair and extension of the existing Marina Park Boat Launch along the shore of Lake Washington. Associated dredging of the lakebed around the limits of the launch is also proposed.

Proponent: City of Kirkland Parks Department

Project Planner: Christian Geitz

Lead agency is the City of Kirkland

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21.030 (2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public upon request.

☒ This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for 14 days from the date issued. Comments must be submitted to Christian Geitz, project planner at cgeitz@kirklandwa.gov by 5:00 PM on March 3, 2016. Please reference case number SEP15-01903.

Responsible official: _____ 2/18/16
Eric R. Shields, AICP, Planning Director Date
City of Kirkland
Planning & Building Department
123 Fifth Avenue, Kirkland, WA 98033 - (425) 587-3225

☒ You may appeal this determination to the Planning & Building Department at City of Kirkland, 123 Fifth Avenue, Kirkland, WA 98033 no later than 5:00 PM on March 3, 2016 (date, 14 days from date issued) by a Written Notice of Appeal. You should be prepared to make specific factual objections and reference case number SEP15-01903. Contact Christian Geitz, project planner in the Planning & Building Department at (425) 587-3246 to ask about the procedures for SEPA appeals. See also KMC 24.02.230 Administrative Appeals.

Publish in The Seattle Times on: February 22, 2016
Distribute this notice with a copy of the Environmental Checklist to:

GENERAL NOTICING

- Department of Ecology - Environmental Review
- Muckleshoot Tribal Council - Environmental Division, Tribal Archeologist
- Muckleshoot Tribal Council - Environmental Division, Fisheries Division Habitat
- Cascade Water Alliance – Director of Planning
- Moss Bay Neighborhood Association

AGENCIES WITH JURISDICTION, AFFECTED AGENCIES, AND/OR INTERESTED PARTIES

- Department of Ecology - Environmental Review Department of Fish and Wildlife – Olympia
- Muckleshoot Tribal Council - Environmental Division, Fisheries Division Habitat Program
- U.S. Army Corps of Engineers - Seattle District
- Eastside Audubon Society
- Parties of Record

cc: Applicant
Planning Department File, Case No. SHR15-01902

Distributed by: _____ 2/18/16
(Angela Martin, Office Specialist) Date

CEDAROCK CONSULTANTS, INC.

MEMORANDUM

Date: September 15, 2015

From: Carl Hadley

Subject: Response to Decision Criteria
Marina Park Boat Ramp Replacement Project

WAC 173-27-140
(1) No authorization to undertake use or development on shorelines of the state shall be granted by the local government unless upon review the use or development is determined to be consistent with the policy and provisions of the Shoreline Management Act and the master program.

Sections of Chapter 83 (City of Kirkland Shoreline Management) relevant to the proposed action are listed here with a description of how the proposed action is consistent with said policies.

- Section 83.140 - *The purpose of the Urban Mixed environment is to ensure active use of shoreline areas that are presently urbanized or planned for intense urbanization, while protecting existing ecological functions and restoring ecological functions in areas that have been previously degraded.*

  The proposed action will allow continued use of existing shoreline activities by repairing/replacing the current public boat ramp such that it meets current standards for safe use. Environmental mitigation measures have been included (e.g. enhanced prop wash control, use of fish-friendly gravels) to provide further protection of inwater ecological functions. The site is completely paved and provides no existing riparian benefits. This will not change under the proposed action.

- Section 83.220(7) – *This section provides standards for motorized boat launches.*

  With minor discrepancies to accommodate enhanced erosion protection, the proposed project will duplicate the location, size, footprint, and materials of the existing boat launch.

- Section 83.320 - *This section provides standards for dredging waterward of the OHWM.*

  Only minor sediment removal is proposed as needed to accommodate structural fill under the proposed concrete panels, and to remove sediment that has aggraded at the waterward end of the ramp due to decades of ramp use. These purposes are allowed under Section 83.320(2)(b) when necessary to maintain an existing public water-dependent access use within the existing authorized location, depth, and width.

- Section 83.340 - *This section provides standards for filling waterward of the OHWM.*

  Only minor filling is proposed as needed to create a structurally sound base for the proposed ramp. Fill will replace dredged materials in a volume only as needed to recreate the existing elevation of the current ramp (see plans).

- Section 83.360 - *This section requires no-net-loss of shoreline ecological functions.*

  The proposed action is a conditional use because of the dredging that must be completed to ensure long-term stability of the replacement ramp. Replacing the ramp on the unknown sediments located below the existing ramp would not provide the long-term solution required by the applicant. Mitigation sequencing for the proposed action is as follows:

  - Impact avoidance: the proposed ramp will replace an existing ramp and with minor exception has been located within the same footprint as the existing ramp. The new ramp will be the same length, width, depth, and basic material (concrete) as the existing ramp. The new ramp will not facilitate increased use of the area. No riparian functions will be disturbed due to the complete lack of native vegetation or unpaved land at the site. Construction BMPs have been specifically designed for this project to avoid adverse effects to the natural aquatic environment.
  - Impact minimization: The new ramp will be built to a higher standard than the existing ramp in the hopes that a longer life will increase the replacement period and subsequent environmental disturbances. The slight increase in ramp width being proposed is a measure designed to reduce prop wash effects on the surrounding lake bed. Fish-friendly (WDFW approved) gravel will border the new ramp in an armorflex grid designed to keep the gravel from being washed away.

    Proposed dredging and fill will be balanced to create a stable bed for the replacement ramp at the current ramp elevation.

  In shoreline areas the standard for protection is “no-net-loss”. No-net-loss means that, following an action, shoreline ecological functions necessary to sustain shoreline natural resources are equivalent to or greater than ecological functions immediately prior to the action. As noted in Ecology guidelines for the Shoreline Management Act, the “no-net-loss” standard focuses on shoreline ecological functions “as they currently exist”. In this case “as they currently exist” refers to the conditions with the existing boat ramp and a 100-percent paved riparian area.

  With the proposed mitigation measures, the final developed condition of the boat ramp is expected to be nearly identical to the current condition with no change (increase or decrease) in shoreline ecological function.

- Section 83.370 - *This section requires that all applicable state and federal permits be acquired.*

  The applicant is coordinating with the Washington State Department of Fish and Wildlife as needed for Hydraulic Project Approval, Washington State Department of Ecology as needed for the Section 401 permit, and the Army Corps of Engineers as needed for the Section 10 permit.

- Section 83.400 - *This section describes vegetation maintenance in the shoreline.*

  With the complete lack of any vegetation or unpaved area within the proposed work area, and the inability to provide any in the future given the highly active uses of the area and existing 100 percent developed shoreline, this section is not applicable to the proposed action.

- Section 83.430 - *This section describes inwater construction standards.*

  Construction BMPs have been specifically designed for this project to avoid adverse effects to the natural aquatic environment. BMPs for the protection of water quality and erosion meet all relevant specifications listed in Section 83.430. Details and specific actions are included in the plans.

- Section 83.430 - *This section describes lighting requirements.*

  No lighting currently exists or is proposed as part of the project.

- Section 83.480 - *This section describes water quality, stormwater, and nonpoint pollution measures that are required.*

  Construction BMPs designed for this project to avoid adverse effects to the natural aquatic environment are included in the plans. The proposed use as a boat launch makes most other types of stormwater control inapplicable.

- Section 83.490 - *This section applies to other critical areas that may be found within the shoreline management area.*

  No other critical areas are associated with the proposed action.

(2) No permit shall be issued for any new or expanded building or structure of more than thirty-five feet above average grade level on shorelines of the state that will obstruct the view of a substantial number of residences on areas adjoining such shorelines except where a master program does not prohibit the same and then only when overriding considerations of the public interest will be served.

The proposed action will generally be at, or below grade and will not obstruct any views.

WAC 173-27-160

(1) Uses which are classified or set forth in the applicable master program as conditional uses may be authorized provided that the applicant demonstrates all of the following:

(a) *That the proposed use is consistent with the policies of RCW 90.58.020 and the master program*;

The proposed action consists of replacement of a public boat ramp substantially within its existing footprint, which, by its nature will be consistent with the legislative goals of providing public recreational use of Lake Washington while preserving the character and ecological benefits of the existing shoreline.

(b) *That the proposed use will not interfere with the normal public use of public shorelines*;

The proposed action is designed specifically to preserve and enhance public use of the public shoreline. No normal public use will suffer interference.

(c) *That the proposed use of the site and design of the project is compatible with other authorized uses within the area and with uses planned for the area under the comprehensive plan and shoreline master program*;

The proposed action will replace an existing public boat ramp located within a public park in downtown Kirkland. This use is entirely consistent with the comprehensive plan and shoreline master program designations for this location.

(d) *That the proposed use will cause no significant adverse effects to the shoreline environment in which it is to be located*; and

The proposed action will continue the long term use of this site as a public entrance point for recreational boater access to Lake Washington. There will be no change in the scope, footprint, or frequency of use facilitated by the project. No significant adverse effects to the shoreline environment are anticipated.

(e) *That the public interest suffers no substantial detrimental effect*.

With no proposed change in use, the public interest is not expected to suffer any detrimental effect.

(2) In the granting of all conditional use permits, consideration shall be given to the cumulative impact of additional requests for like actions in the area. For example, if conditional use permits were granted for other developments in the area where similar circumstances exist, the total of the conditional uses shall also remain consistent with the policies of RCW 90.58.020 and shall not produce substantial adverse effects to the shoreline environment.

The proposed action consists entirely of replacement of an existing public facility with a new facility of substantially the same function, size, and footprint. The result of any other similar requests for this type of conditional use would not be detrimental to the character of the shoreline environment, nor would they be inconsistent with the policies of RCW 90.58.020.