

Technical Memorandum

TO: City of Mukilteo
CC: Laura Gurley, Planning Director, Port of Everett
FROM: Daniel Joseph, PE
DATE: March 17, 2022
RE: **Floodplain Development Assessment**
Mukilteo Parklet
700 Front Street
Mukilteo, Washington
Project No. 0147055.010

Introduction

The Port of Everett (Port) is proposing development of a “parklet” at 700 Front Street on two parcels [Snohomish County Parcel No. 28040400200100 and upland portion of Parcel No. 28040400203000 (Site)] that were part of the approach ramp for the former Washington State Ferry Terminal (Figure 1). The Port is partnering with Ivar’s to repurpose the parcel with public park space and extra seasonal outdoor dining space. The dining space will be leased to Ivar’s and will be separated from the publicly accessible portion of the parklet. The Port is working with HBB Landscape Architecture (HBB) for design of the project. The City of Mukilteo (City) has indicated that the proposed project will require a Floodplain Development Permit (permit) because proposed site furniture (i.e., benches/tables) are considered “building” in accordance with Mukilteo Municipal Code (MMC) Chapter 15.12 – Flood Damage. The technical memorandum herein has been prepared in accordance with MMC Chapter 15.12 – Flood Damage Prevention and with MMC Chapter 17B.52D – Flood Hazard Regulation to meet permit submittal requirements.

Existing Conditions

The project area (Site) is currently paved with asphalt, with a railing at the north end of the Site and a concrete block wall bordering to the west (Figure 2).

Much of the Site is mapped within the Federal Emergency Management Act (FEMA) flood hazard area Zone AE, with a base flood elevation (BFE) of 13 feet (ft) relative to the North American Vertical Datum of 1988 [NAVD88, 15.03 ft mean lower low water (MLLW); Figure 2]. Considering the BFE, locations below 13 ft have a 1-percent annual chance of flood hazard (Figure 2). Spot elevation survey data for the Site indicates that the Site may range from 11.62 ft to 13.32 ft elevation (NAVD88; 13.65 ft to 15.35 ft MLLW; see Figure 2), with some portions of the Site above the BFE.

In accordance with MMC Chapter 17B, the FEMA flood insurance rate map indicates that all ground surfaces within 200 ft of the Site are within Zone AE, with a BFE of 13 ft, except for a location immediately south of the Site, which is outside of the FEMA BFE.

Extreme water levels data for Seattle, Washington reported by the National Oceanic and Atmospheric Administration (NOAA) indicate that the 10-year coastal flood elevation is 2.34 meters (7.68 ft) above mean sea level (NOAA, accessed March 15, 2022), which corresponds to 12.1 ft (NAVD88; 14.16 MLLW). Select locations within the Site are understood to be below this 10-year flood elevation; however, the seawall onsite is estimated to be approximately 13.1 ft NAVD88 and may provide protection from flooding on the Site during the 10-year coastal flood.

The Site is not located within a floodway.

The existing Site conditions are limited to asphalt and absent of vegetation or other natural features providing ecological or shoreline functions (see Figure 2). The Site is mapped within a geologic sensitive area. The Site is not within other critical areas or a buffer.

Floodplain Development Assessment

The proposed improvements for the Site include seal coating the existing asphalt, creating the public parklet and seasonal outdoor dining space, and bringing in electrical power to the Site. The parklet will include permanent seating, picnic tables, and plant containers. The seasonal outdoor dining space to be provided by Ivar's will include temporary tables and chairs for outdoor dining. In the right-of-way in front of Ivar's, an existing plant container/bench will be replaced with a new permanent planter and bench. Reference the project Site plans, including the landscaping plan prepared by HBB, for additional details on the proposed improvements. The temporary tables and chairs will be removed from the Site during winter months when potential flooding is expected. These temporary items will be stored by Ivar's outside of the BFE.

No grading or fill will take place for this proposal. As a result, the proposal will not alter the natural water course during potential flooding conditions.

It is Landau's understanding that the proposed improvements will be designed to meet the minimum design standards as required by MMC Chapter 15.12. The proposal's permanent amenities will be anchored to the ground, or buried in the case of electrical improvements, to prevent floatation, collapse, or lateral movement. The planters and picnic tables will be anchored using flush mount asphalt anchors (BoltHold SP-18 or equivalent) with a rating of 2,500 pounds pull force and Grade 8 bolts. Because of the corrosion resistance and strength of the bolt material, and the large bolt diameters, the anchors will be resistant to shear forces that may result during flooding. A minimum of four anchors per plant container, picnic table, and bench is recommended.

The proposal includes bringing power to the Site, from Front Street within a buried electrical conduit, to provide additional accent lighting along the existing concrete block wall on the west side of the Site. The electrical connections used for lighting will be outdoor rated, ground-fault circuit interrupter operated, and installed on the concrete block wall on the west side of the project above the BFE.

The proposed improvements, including the plant containers and picnic tables, are not fully enclosed areas and therefore are exempt from Section 15.12.220 standards for floodproofing.

Conclusion

The Port is proposing the Mukilteo Parklet, which occurs within FEMA designated 100-year floodplain and is subject to flood damage prevention in accordance with MMC Chapter 15.12 and MMC Chapter 17B.52D. The proposed project elements subject to this application satisfy the regulations of the MMC. Information presented in the Site plans prepared for the project provide supplemental information to this application.

Use of This Technical Memorandum

Landau Associates has prepared this technical memorandum for the exclusive use of the Port of Everett, for specific application to the Port of Everett Mukilteo Parklet in Mukilteo, Washington. No other party is entitled to rely on the information, conclusions, and recommendations included in this document without the express written consent of Landau Associates. Reuse of the information, conclusions, and recommendations provided herein for extensions of the project or for any other project, without review and authorization by Landau Associates, shall be at the user's sole risk. Landau Associates warrants that, within the limitations of scope, schedule, and budget, its services have been provided in a manner consistent with that level of skill and care ordinarily exercised by members of the profession currently practicing in the same locality, under similar conditions as this project. Landau Associates makes no other warranty, either express or implied.

LANDAU ASSOCIATES, INC.



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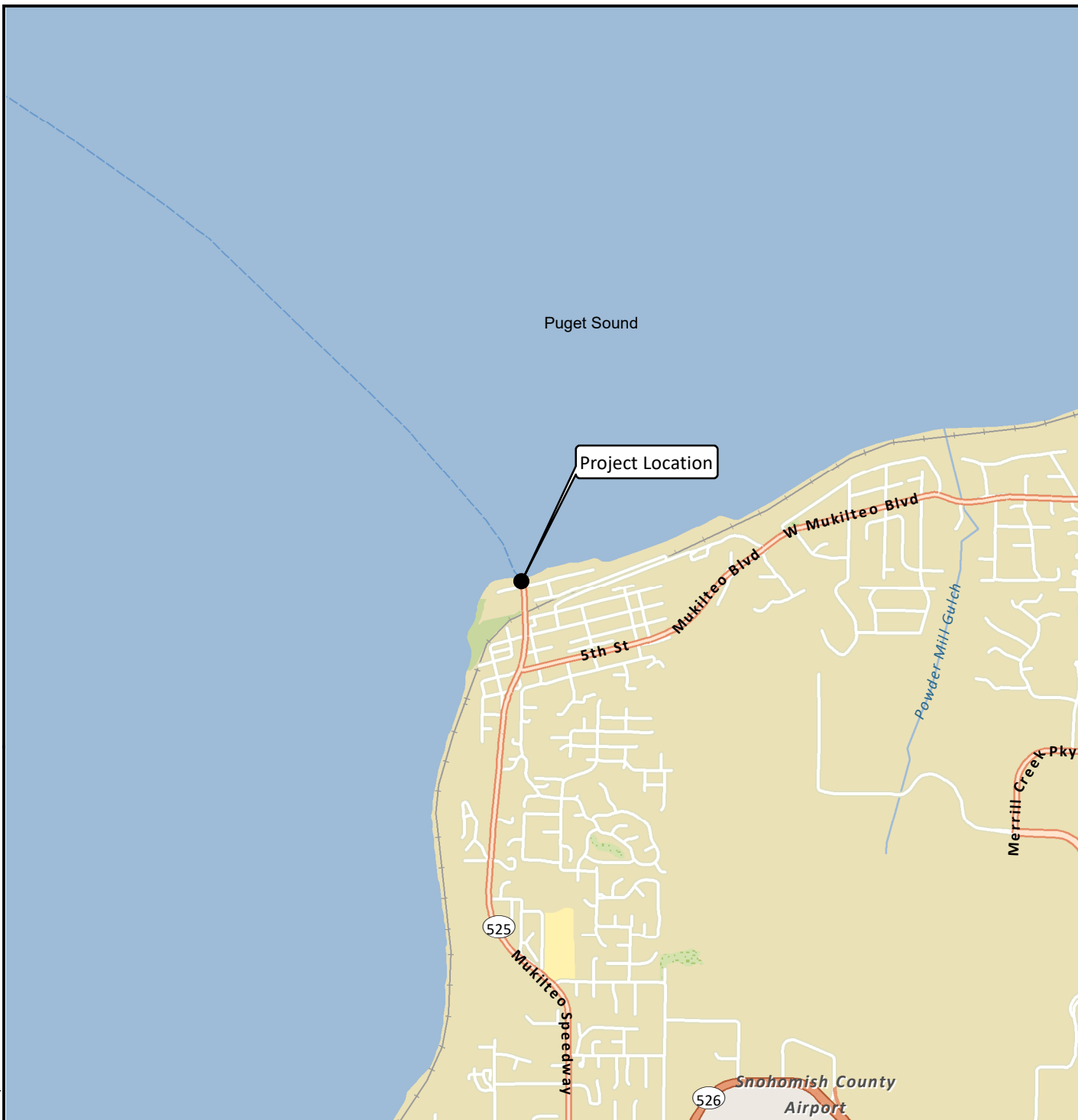
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[\\EDMDATA01\PROJECTS\147\055\R\FLOODPLAIN\FLOODPLAIN DEVELOPMENT ASSESSMENT TM FINAL 03-17-22.DOCX]

Attachments: Figure 1. Vicinity Map
Figure 2. Floodplain Development Assessment Site Map

Reference

NOAA. Exceedance Probability Levels and Tidal Datums 9447130 Seattle, WA. Accessed, accessed March 15, 2022. <https://tidesandcurrents.noaa.gov/est/stickdiagram.shtml?stnid=9447130>

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Data Source: Esri.



Mukilteo Parklet
700 Front Street
Mukilteo, Washington

Vicinity Map

Figure
1

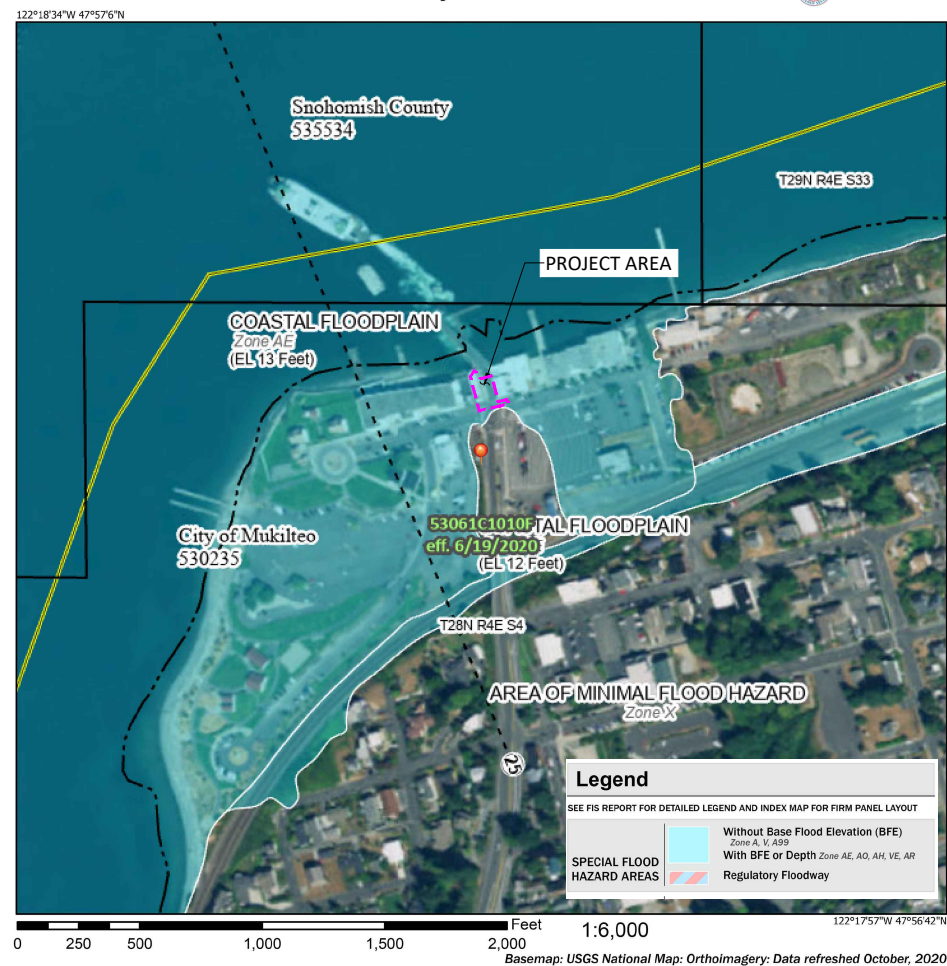
Landau Associates | G:\Projects\147\055\010\Permit Plan Set\F02_FHA SiteMap.dwg | 3/16/2022 5:15 PM | ezick

Point	Finish HMA or Top of Sidewalk**	Top of Wall**
A	15.15	15.25
B	15.25	15.35
C	15.35	15.45
D	15.15	15.25
E	15.10	15.20
F	15.10	15.20
G	15.22	15.22
H	15.30	
I	14.10	
J	14.02	
K	13.65	

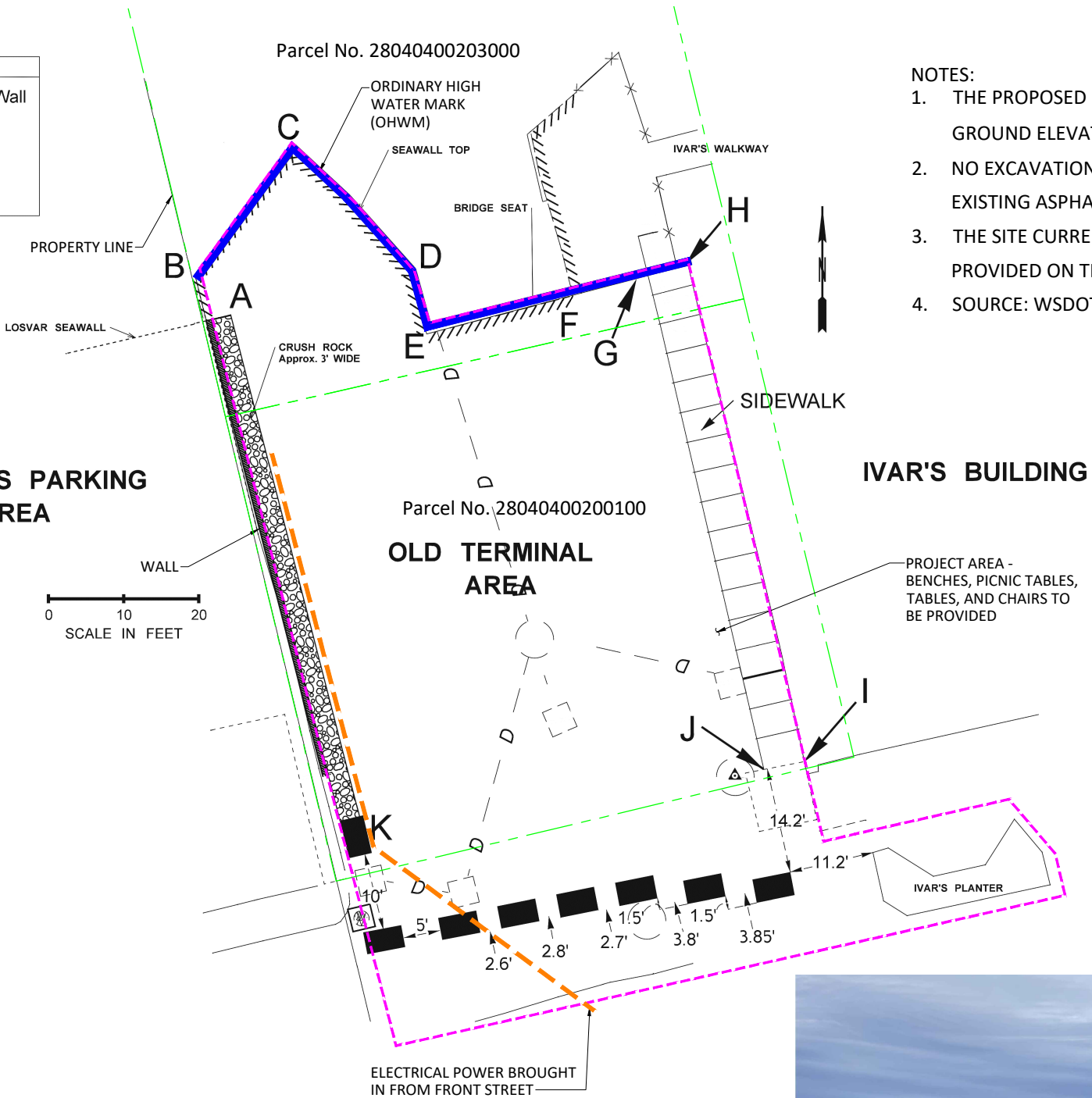
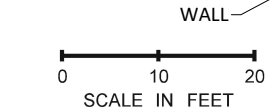
** Elevations in MLLW. Conversion from MLLW to NAVD88 is MLLW minus 2.03 feet. Conversion from MLLW to MSL is MLLW minus 6.48 feet.

LEGEND	
	New WSDOT Retaining Wall
	Existing Handrail
	Reclaimed Handrail
	5.1' x 3.1' Planter Box
	Water Meter Box

National Flood Hazard Layer FIRMette



LOSVAR'S PARKING AREA



- NOTES:
1. THE PROPOSED PROJECT WILL NOT CHANGE EXISTING GROUND ELEVATIONS/CONTOURS.
 2. NO EXCAVATION OR FILL WILL OCCUR IN AREAS OF EXISTING ASPHALT.
 3. THE SITE CURRENTLY COVERED IN ASPHALT; SEE PHOTO PROVIDED ON THIS SHEET.
 4. SOURCE: WSDOT.



SITE PHOTO



Mukilteo Parklet
700 Front Street
Mukilteo, Washington

Floodplain Development
Assessment Site Map

Figure
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