

Record Date: 8/13/2021 3:51 PM

Electronically Recorded King County, WA

Return Address:

Sunny Becker

Toxics Cleanup Program

Department of Ecology

Northwest Regional Office

P.O. Box 330318

Shoreline, WA 98133-9716

Please print or type information **WASHINGTON STATE RECORDER'S Cover Sheet** (RCW 65.04)**Document Title(s)** (or transactions contained therein): (all areas applicable to your document must be filled in)

1. Environmental Covenant 2. _____
3. _____ 4. _____

Reference Number(s) of Documents assigned or released:

Additional reference #'s on page _____ of document

**1ST AM
CM-5905****Grantor(s)** Exactly as name(s) appear on document

1. State of Washington, Department of Natural Resources

THIS DOCUMENT IS RECORDED
AS A COURTESY ONLY
~~FIRST-AMERICAN TITLE INSURANCE CO~~
ASSUMES NO LIABILITY FOR
SUFFICIENCY, VALIDITY OR ACCURACY

2. _____

Additional names on page _____ of document.

Grantee(s) Exactly as name(s) appear on document

1. State of Washington, Department of Ecology

2. _____

Additional names on page _____ of document.

Legal description (abbreviated: i.e. lot, block, plat or section, township, range)

Area "C" – That portion of the Northeast quarter of Section 12, Township 24 North, Range 3 East,

Willamette Meridian, City of Seattle, King County, Washington (See attached Exhibit B for full legal description)

Additional legal is on page 30 of document.**Assessor's Property Tax Parcel/Account Number**

assigned

Tax Parcel No.: 7666705206

☐ Assessor Tax # not yet

The Auditor/Recorder will rely on the information provided on this form. The staff will not read the document to verify the accuracy or completeness of the indexing information provided herein.

"I am signing below and paying an additional \$50 recording fee (as provided in RCW 36.18.010 and referred to as an emergency nonstandard document), because this document does not meet margin and formatting requirements. Furthermore, I hereby understand that the recording process may cover up or otherwise obscure some part of the text of the original document as a result of this request."

Signature of Requesting Party

Note to submitter: Do not sign above nor pay additional \$50 fee if the document meets margin/formatting requirements

After Recording Return
Original Signed Covenant to:
Sunny Becker
Toxics Cleanup Program
Department of Ecology
Northwest Regional Office
P.O. Box 330316
Shoreline, WA 98133-9716

ENVIRONMENTAL COVENANT

Grantor: State of Washington, Department of Natural Resources (hereafter DNR)

Grantee: State of Washington, Department of Ecology (hereafter Ecology)

Brief Legal Description: Area "C"; see Exhibit B.

Tax Parcel No.: 7666705206

Cross Reference: Unilateral Administrative Order for Remedial Design and Remedial Action;
CERCLA Docket No 10-2015-0079

RECITALS

- a. This document grants a valid and enforceable environmental (restrictive) covenant (hereafter Covenant) executed pursuant to Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9601 et seq., the Model Toxics Control Act (MTCA), chapter 70A.305 RCW, and Uniform Environmental Covenants Act (UECA), chapter 64.70 RCW.
- b. The covenants granted herein are required conditions of a Unilateral Administrative Order (UAO) issued to Lockheed Martin Corporation (Lockheed Martin) by the United States Environmental Protection Agency (EPA) March 5, 2015. EPA has determined that these conditions are necessary to protect public health and the environment. EPA made this determination on August 28, 2013, by issuing a Record of Decision (ROD) for the Lockheed West Seattle Superfund Site.
- c. The Property that is the subject of this Covenant is part of a site commonly known as the Lockheed West Seattle Superfund Site (also known as the Comprehensive Remediation Area – Seattle Yard 2), which site is legally described and illustrated in the attached Exhibit A and also referred to herein as the Project Boundary or the Site. The Property is legally described and illustrated in the attached Exhibit B (herein Property). If there are differences between the respective legal descriptions and their accompanying illustrations, the legal descriptions shall prevail.
- d. There was a remedial action conducted at this Site under Section 104 of the Comprehensive, Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9604. The remedial action was an "environmental response project" within the meaning of UECA. This Covenant is required because residual contamination remains on the Property after

completion of remedial actions. Specifically, the following principal contaminants remain on the Property:

| Medium | Principal Contaminants Present |
|----------|--|
| Sediment | Total PCBs; Arsenic; Copper; Lead; Mercury |

The two tables attached as Exhibits C and D include a list of contaminants of concern (COCs) and the respective chemical concentrations that had to be met. Exhibit C lists Remedial Action Levels (RALs), which are the concentrations of COCs that were to be met at the post-dredging sediment surface. Exhibit D lists Cleanup Levels that had to be (and were) met at the sediment surface following placement of cover material. The actual surface concentrations across the Site are between these levels as mixing of the cover material and the underlying sediment continues, and with ongoing movement of surface sediment in Elliott Bay. In some areas near the shoreline where the slopes were too steep for complete dredging or where structural stability was a concern, the sediment concentrations at the dredge surface may exceed RALs for some COCs. These areas are covered with several feet of riprap.

EPA and the U.S. Coast Guard established a Regulated Navigation Area (RNA), which created a no-anchor zone over capped areas of the Puget Sound Resources (PSR) site, which is adjacent to the Lockheed West Seattle Superfund Site. The RNA, which was published in the Federal Register on April 10, 2012, prohibits any activities that would disturb the seabed or otherwise disrupt the integrity of the sediment cap that covers the northwest corner of the Marine Sediment Unit of the PSR Superfund Site and extends into the northwest corner of the Lockheed West Seattle Site. Prohibited activities include anchoring, dragging, trawling, and spudding. Transit and navigation are not restricted.

e. It is the purpose of this Covenant to restrict certain activities and uses of the Property to protect public health and the environment and the integrity of remedial actions conducted at the site. A copy of the administrative record supporting the remedial action is on file with EPA Region 10 or its successor agency and is available for public review. To make arrangements for such review, a person may contact the EPA Superfund Records Center by calling telephone number (206) 553-4494. The EPA Region 10 office is located at 1200 Sixth Avenue, Seattle, Washington. The records include Remedial Design/Remedial Action (RD/RA) Work Plans and Design Documents and the Remedial Action Construction and Completion Report (RACCR).

f. This Covenant grants Ecology, as Holder of this Covenant, certain rights under UECA and as specified in this Covenant. As a Holder of this Covenant under UECA, Ecology has an interest in real property, however, this is not an ownership interest under MTCA or the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9601 *et seq.* The rights of Ecology and EPA as an "agency" under UECA, other than Ecology's right as a holder, are not an interest in real property.

COVENANT

DNR, as Grantor and fee simple owner of the Property, hereby grants to the Washington State Department of Ecology the following covenants. Furthermore, it is the intent of the Grantor that such covenants shall supersede any prior interests the Grantor has in the property and run with the land and be binding on all current and future owners of any portion of, or interest in, the Property. Ecology and EPA have the full rights to enforce the restrictions, conditions, or other rights set forth in this Covenant, as provided by law, including but not limited to CERCLA, MTCA and UECA.

Section 1. General Restrictions and Requirements.

The following general restrictions and requirements shall apply to the Property:

- a. **Interference with Remedial Action.** The Grantor shall not engage in any activity on the Property that may impact or interfere with the remedial action and any operation, maintenance, inspection or monitoring of that remedial action without prior written approval from Ecology and EPA.
- b. **Protection of Public Health and the Environment.** The Grantor shall not engage in any activity on the Property that may threaten continued protection of public health or the environment without prior written approval from Ecology and EPA. This includes, but is not limited to, any activity that results in the release of residual contamination that was contained as a part of the remedial action or that exacerbates or creates a new exposure to residual contamination remaining on the Property.
- c. **Continued Compliance Required.** Grantor shall not convey any interest in any portion of the Property without providing for the continued adequate and complete operation, maintenance and monitoring of remedial actions and continued compliance with this Covenant.
- d. **Leases.** Grantor shall restrict any lease for any portion of the Property to uses and activities consistent with this Covenant and notify all lessees of the restrictions on the use of the Property.
- e. **Preservation of Reference Monuments.** Grantor shall make a good faith effort to preserve any reference monuments and boundary markers used to define the areal extent of coverage of this Covenant. Should a monument or marker be damaged or destroyed, Grantor shall have it replaced by a licensed professional surveyor within 30 days of discovery of the damage or destruction.
- f. **Sediments.** The final sediment surface was sampled and demonstrated to have met all cleanup levels, which were defined based on concentrations that are protective of human health and aquatic biota. Though the completed remedy is protective, residual sediment contamination was left above cleanup levels at depth and left above RALs under shoreline riprap and adjacent to the sheetpile wall in the shipway. For details regarding sampling results immediately post construction cleanup activities refer to the "Final Remedial Action Construction and Completion Report, Lockheed West Seattle Superfund Site, Seattle Washington" dated September 2020. As such, the following restrictions shall apply to notify EPA and Ecology and to minimize potential disturbance of these sediments within the Project Boundary legally described and illustrated in Exhibit A:

1. Any activity within the Project Boundary that will compromise the integrity of the cover including: dredging; drilling; digging; piercing the cover with sampling device, post, stake or similar device that would penetrate deeper than 6 inches; excavation; installation of buried utilities; removal of the cover; or, application of loads in excess of the cover load bearing capacity, is prohibited without prior written approval by Ecology and EPA.

2. No docks or other structures shall be constructed or removed within the Project Boundary without prior written approval of Ecology and EPA.

3. No removal of the sheetpile wall in the Shipway within the Project Boundary without prior written approval of Ecology and EPA.

4. No removal of riprap shall be allowed within the Project Boundary without prior written approval of Ecology and EPA.

Section 2. Access.

a. The Grantor shall maintain clear access to all remedial action components necessary to construct, operate, inspect, monitor, and maintain the remedial action.

b. The Grantor freely and voluntarily consents to provide Ecology, EPA, and their authorized representatives, upon reasonable notice, the right to enter the Property at reasonable times to evaluate the effectiveness of this Covenant and associated remedial actions, and enforce compliance with this Covenant and those actions, including the right to take samples, inspect any remedial actions conducted on the Property, and to inspect related records.

c. No right of access or use by a third party to any portion of the Property is conveyed or consensually provided by this instrument.

Section 3. Notice Requirements.

a. **Conveyance of Any Interest.** The Grantor, when conveying any interest within the area of the Property legally described and illustrated in Exhibit B, including but not limited to title, easement, leases, and security or other interests, must:

- i. Unless otherwise agreed to in writing by Ecology and EPA, provide written notice to Ecology and EPA of the intended conveyance at least thirty (30) days in advance of the conveyance.
- ii. Include in the conveying document a notice in substantially the following form, as well as a complete copy of this Covenant:

NOTICE: PURSUANT TO A REMEDIAL ACTION OVERSEEN BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY, THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL COVENANT GRANTED TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY ON [ADD DATE] AND RECORDED WITH THE KING COUNTY AUDITOR UNDER RECORDING NUMBER [ADD RECORDING NUMBER]. USES AND ACTIVITIES ON THIS

PROPERTY MUST COMPLY WITH THAT COVENANT, A COMPLETE COPY OF WHICH IS ATTACHED TO THIS DOCUMENT.

- iii. Unless otherwise agreed to in writing by Ecology and EPA, provide Ecology and EPA with a complete copy of the executed document within thirty (30) days of the date of execution of such document.
- b. **Reporting Violations.** Should the Grantor become aware of any violation of this Covenant, Grantor shall promptly report such violation in writing to Ecology and EPA.
- c. **Emergencies.** For any emergency or significant change in site conditions due to Acts of Nature (for example, flood, fire) resulting in a violation of this Covenant, the Grantor is authorized to respond to such an event in accordance with state and federal law. The Grantor must notify Ecology and EPA in writing of the event and response actions planned or taken as soon as practical but no later than within 24 hours of the discovery of the event.
- d. **Notification procedure.** Any required written notice, approval, reporting or other communication shall be either personally delivered or sent by first class parcel post to the following persons. Any change in this contact information shall be submitted in writing and in advance of such change to all parties to this Covenant. Upon mutual agreement of the parties to this Covenant, an alternative to personal delivery or first-class parcel post, such as e-mail or other electronic means, may be used for these communications.

| | | |
|---|---|--|
| Sediment Quality Unit Supervisor, Aquatic Resources Division, Washington State Department of Natural Resources Natural Resources Building 1111 Washington Street Olympia, WA 98504 | Director, Superfund and Emergency Management Division USEPA 1200 Sixth Avenue Seattle, WA 98101-3188 | Environmental Covenants Coordinator Washington State Department of Ecology Toxics Cleanup Program Northwest Regional Office P.O. Box 330316 Shoreline, WA 98133-9716 <u>ToxicsCleanupProgramHQ</u> <u>@ecy.wa.gov</u> |
|---|---|--|

Section 4. Modification or Termination.

- a. Grantor must provide written notice and obtain approval from Ecology and EPA at least sixty (60) days in advance of any proposed activity or use of the Property in a manner that is inconsistent with this Covenant. For any proposal that is inconsistent with this Covenant and permanently modifies an activity or use restriction at the site: ¹

¹ An example of an activity that is unlikely to be considered a permanent modification is a proposal to disturb a cap to repair an existing underground utility that passes through the site. However, installing a new underground utility within a capped area would be a permanent change.

- i. Ecology or EPA must issue a public notice and provide an opportunity for the public to comment on the proposal; and
 - ii. If Ecology and EPA approve of the proposal, the Covenant must be amended to reflect the change before the activity or use can proceed.
- b. If the conditions at the site requiring a Covenant have changed or no longer exist, then the Grantor may submit a request to Ecology and EPA that this Covenant be amended or terminated. Any amendment or termination of this Covenant must follow the procedures in MTCA and UECA and any rules promulgated under these chapters.
- c. If the original signatories to this Covenant, other than Ecology and EPA, do not have any legal interest remaining in the Property, they agree per RCW 64.70.100 to waive all rights to sign amendments to and termination of this Covenant.

Section 5. Enforcement and Construction.

- a. This Covenant is being freely and voluntarily granted by the Grantor.
- b. Within ten (10) days of execution of this Covenant, Grantor shall provide Ecology with an original signed Covenant and proof of recording and a copy of the Covenant and proof of recording to EPA and others required by RCW 64.70.070.
- c. Ecology and EPA shall be entitled to enforce the terms of this Covenant by resort to specific performance or legal process. All remedies available in this Covenant shall be in addition to any and all remedies at law or in equity, including CERCLA, MTCA and UECA. Enforcement of the terms of this Covenant shall be at the discretion of Ecology and EPA, and any forbearance, delay or omission to exercise its rights under this Covenant in the event of a breach of any term of this Covenant is not a waiver by Ecology or EPA of that term or of any subsequent breach of that term, or any other term in this Covenant, or of any rights of Ecology and EPA under this Covenant.
- d. The Grantor shall be responsible for all costs associated with implementation of this Covenant. Furthermore, the Grantor, upon request from Ecology or EPA, shall be obligated to pay for Ecology's and EPA's costs to process a request for any modification or termination of this Covenant and any approval required by this Covenant.
- e. This Covenant shall be liberally construed to meet the intent of CERCLA, MTCA and UECA.
- f. The provisions of this Covenant shall be severable. If any provision in this Covenant or its application to any person or circumstance is held invalid, the remainder of this Covenant or its application to any person or circumstance is not affected and shall continue in full force and effect as though such void provision had not been contained herein.
- g. A heading used at the beginning of any section or paragraph or exhibit of this Covenant may be used to aid in the interpretation of that section or paragraph or exhibit but does not override the specific requirements in that section or paragraph.

STATE OF WASHINGTON, DEPARTMENT OF NATURAL RESOURCES

The undersigned Grantor warrants it holds the title to the Property and has authority to execute this Covenant.

EXECUTED this 29th day of July, 2021.

By: Hilary S. Franz

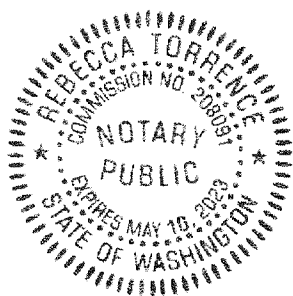
Title: Commissioner of Public Lands

STATE OF WASHINGTON, DEPARTMENT OF NATURAL RESOURCES
ACKNOWLEDGMENT

STATE OF WASHINGTON

COUNTY OF THURSTON

On this 29th day of July, 2021, I certify that Hilary S. Franz
personally appeared before me, acknowledged that he or she is the Commissioner of Public Lands
of the State of Washington, Department of Natural Resources, and signed said instrument by free and
voluntary act and deed, for the uses and purposes therein mentioned, and on oath stated that he or she
was authorized to execute said instrument for the Port of Seattle.



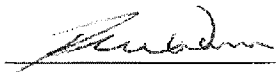
Rebecca Torrence
Notary Public in and for the State of Washington

Residing at Pierce County

WASHINGTON STATE DEPARTMENT OF ECOLOGY

The Department of Ecology, hereby accepts the status as GRANTEE and HOLDER of the above described Environmental Covenant.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY



Area C; CERCLA Docket No 10-2015-0079

Robert W. Warren

Section Manager
Toxics Cleanup Program
Northwest Regional Office of Department of Ecology

Dated: 8-5-21

U.S. ENVIRONMENTAL PROTECTION AGENCY

The U.S. Environmental Protection Agency hereby approves of the above described Environmental Covenant.

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY, REGION 10



Calvin J. Terada

Director
Superfund and Emergency Management Division
U.S. EPA, Region 10

Dated: 8-4-2021

Exhibit A

LEGAL DESCRIPTION AND ILLUSTRATION OF LOCKHEED WEST SEATTLE SUPERFUND SITE

LEGAL DESCRIPTION
COMPREHENSIVE REMEDIATION AREA – SEATTLE YARD 2

THAT PORTION OF THE NORTHEAST QUARTER AND THE SOUTHEAST QUARTER OF SECTION 12,
TOWNSHIP 24 NORTH, RANGE 3 EAST, WILLAMETTE MERIDIAN, CITY OF SEATTLE, KING COUNTY,
WASHINGTON, SPECIFICALLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE NORTHERLY MARGIN OF VACATED SOUTHWEST FLORIDA
STREET WITH THE INNER HARBOR LINE AS ESTABLISHED BY THE 1991 SUPPLEMENTAL MAP OF SEATTLE
HARBOR;

THENCE SOUTH 77°50'35" WEST, ALONG SAID NORTHERLY MARGIN, 7.80 FEET TO **THE POINT OF
BEGINNING;**

THENCE NORTH 00°58'56" WEST, 20.93 FEET;
THENCE NORTH 27°11'24" WEST, 15.67 FEET;
THENCE SOUTH 80°26'41" WEST, 12.20 FEET;
THENCE NORTH 10°47'52" WEST, 9.79 FEET;
THENCE NORTH 38°27'26" EAST, 10.62 FEET;
THENCE NORTH 33°50'51" WEST, 5.79 FEET;
THENCE NORTH 59°05'27" WEST, 5.42 FEET;
THENCE NORTH 06°14'49" WEST, 71.72 FEET;
THENCE NORTH 05°19'38" WEST, 91.66 FEET;
THENCE NORTH 04°08'23" WEST, 51.75 FEET;
THENCE NORTH 10°06'07" WEST, 20.88 FEET;
THENCE NORTH 01°40'02" WEST, 10.10 FEET;
THENCE NORTH 06°34'23" WEST, 29.15 FEET;
THENCE NORTH 03°19'22" WEST, 23.99 FEET;
THENCE NORTH 71°09'53" WEST, 8.60 FEET;
THENCE SOUTH 71°01'35" WEST, 3.80 FEET;
THENCE SOUTH 89°52'32" WEST, 3.03 FEET;
THENCE NORTH 42°23'03" WEST, 3.64 FEET;
THENCE NORTH 65°16'15" WEST, 21.66 FEET;
THENCE NORTH 52°54'49" WEST, 15.94 FEET;
THENCE NORTH 36°50'47" WEST, 10.59 FEET;
THENCE NORTH 47°17'52" WEST, 21.35 FEET;
THENCE NORTH 67°50'51" WEST, 0.84 FEET;
THENCE SOUTH 79°55'39" WEST, 1.05 FEET;
THENCE NORTH 77°01'14" WEST, 1.36 FEET;
THENCE NORTH 50°27'06" WEST, 13.71 FEET;
THENCE NORTH 77°20'35" WEST, 2.38 FEET;
THENCE NORTH 71°10'22" WEST, 2.91 FEET;
THENCE NORTH 72°44'01" WEST, 12.48 FEET;
THENCE NORTH 73°41'22" WEST, 9.34 FEET;
THENCE NORTH 69°38'16" WEST, 9.37 FEET;
THENCE SOUTH 81°02'50" WEST, 12.88 FEET;
THENCE NORTH 82°11'26" WEST, 17.86 FEET;

THENCE NORTH 81°34'51" WEST, 18.54 FEET;
THENCE NORTH 51°47'02" WEST, 7.20 FEET;
THENCE NORTH 63°17'41" WEST, 6.01 FEET;
THENCE NORTH 12°38'25" WEST, 5.16 FEET;
THENCE NORTH 87°21'59" WEST, 16.14 FEET;
THENCE NORTH 85°02'40" WEST, 12.26 FEET;
THENCE NORTH 69°49'09" WEST, 5.37 FEET;
THENCE NORTH 88°21'34" WEST, 12.21 FEET;
THENCE SOUTH 83°47'26" WEST, 0.22 FEET;
THENCE NORTH 88°20'45" WEST, 27.17 FEET;
THENCE NORTH 89°15'50" WEST, 21.56 FEET;
THENCE SOUTH 89°00'20" WEST, 33.15 FEET;
THENCE SOUTH 74°07'22" WEST, 4.66 FEET;
THENCE NORTH 88°41'37" WEST, 25.44 FEET;
THENCE SOUTH 87°07'49" WEST, 12.29 FEET;
THENCE SOUTH 29°39'08" WEST, 9.21 FEET;
THENCE SOUTH 87°09'06" WEST, 8.56 FEET;
THENCE NORTH 68°10'46" EAST, 7.33 FEET;
THENCE NORTH 86°30'08" WEST, 3.45 FEET;
THENCE SOUTH 70°28'20" WEST, 2.58 FEET;
THENCE SOUTH 64°29'00" WEST, 1.12 FEET;
THENCE CONTINUING SOUTH 64°29'00" WEST, 0.95 FEET;
THENCE SOUTH 87°46'32" WEST, 3.78 FEET;
THENCE NORTH 79°05'33" WEST, 2.42 FEET;
THENCE NORTH 75°02'15" WEST, 7.30 FEET;
THENCE SOUTH 84°24'32" WEST, 4.04 FEET;
THENCE NORTH 85°56'18" WEST, 1.74 FEET;
THENCE NORTH 64°41'44" WEST, 4.75 FEET;
THENCE SOUTH 83°33'01" WEST, 1.07 FEET;
THENCE NORTH 82°36'51" WEST, 3.49 FEET;
THENCE SOUTH 89°36'13" WEST, 4.96 FEET;
THENCE NORTH 66°27'05" WEST, 4.69 FEET;
THENCE NORTH 07°24'37" WEST, 8.18 FEET;
THENCE NORTH 87°46'15" WEST, 17.17 FEET;
THENCE NORTH 87°49'22" WEST, 14.66 FEET;
THENCE NORTH 26°10'27" WEST, 4.74 FEET;
THENCE NORTH 70°21'12" WEST, 6.62 FEET;
THENCE SOUTH 86°39'01" WEST, 7.90 FEET;
THENCE SOUTH 79°16'39" WEST, 12.53 FEET;
THENCE NORTH 86°58'29" WEST, 11.49 FEET;
THENCE NORTH 75°05'08" WEST, 13.50 FEET;
THENCE NORTH 79°31'14" WEST, 12.39 FEET;
THENCE NORTH 68°47'31" WEST, 8.84 FEET;
THENCE NORTH 83°59'58" WEST, 8.73 FEET;
THENCE SOUTH 76°16'41" WEST, 9.38 FEET;
THENCE SOUTH 83°16'52" WEST, 12.66 FEET;

THENCE SOUTH 89°38'26" WEST, 27.09 FEET;
THENCE SOUTH 83°41'32" WEST, 16.08 FEET;
THENCE NORTH 81°46'47" WEST, 10.37 FEET;
THENCE NORTH 84°14'36" WEST, 15.13 FEET;
THENCE SOUTH 87°32'15" WEST, 11.99 FEET;
THENCE SOUTH 75°17'17" WEST, 6.86 FEET;
THENCE SOUTH 86°59'27" WEST, 10.48 FEET;
THENCE SOUTH 66°01'09" WEST, 11.07 FEET;
THENCE SOUTH 75°10'15" WEST, 4.08 FEET;
THENCE SOUTH 89°21'14" WEST, 5.23 FEET;
THENCE NORTH 75°13'37" WEST, 4.56 FEET;
THENCE SOUTH 85°43'31" WEST, 9.16 FEET;
THENCE NORTH 82°27'36" WEST, 7.94 FEET;
THENCE SOUTH 78°10'14" WEST, 0.95 FEET;
THENCE NORTH 78°01'07" WEST, 4.27 FEET;
THENCE NORTH 71°08'58" WEST, 2.65 FEET;
THENCE NORTH 50°36'12" WEST, 5.06 FEET;
THENCE NORTH 36°26'44" WEST, 3.78 FEET;
THENCE NORTH 61°28'07" WEST, 14.65 FEET;
THENCE NORTH 68°47'48" WEST, 6.47 FEET;
THENCE NORTH 86°19'16" WEST, 9.49 FEET;
THENCE SOUTH 66°31'54" WEST, 3.06 FEET;
THENCE SOUTH 71°50'08" WEST, 0.67 FEET;
THENCE SOUTH 89°14'58" WEST, 3.48 FEET;
THENCE SOUTH 85°55'45" WEST, 4.29 FEET;
THENCE SOUTH 82°16'04" WEST, 4.35 FEET;
THENCE NORTH 85°49'27" WEST, 3.66 FEET;
THENCE SOUTH 46°50'16" WEST, 0.61 FEET;
THENCE NORTH 85°15'01" WEST, 1.98 FEET;
THENCE NORTH 80°54'47" WEST, 0.83 FEET;
THENCE SOUTH 89°02'33" WEST, 5.10 FEET;
THENCE SOUTH 70°13'03" WEST, 0.06 FEET;
THENCE SOUTH 79°35'19" WEST, 0.02 FEET;
THENCE SOUTH 85°13'44" WEST, 6.36 FEET;
THENCE SOUTH 86°55'10" WEST, 1.64 FEET;
THENCE NORTH 78°54'12" WEST, 4.37 FEET;
THENCE SOUTH 76°05'34" WEST, 0.84 FEET;
THENCE SOUTH 44°20'07" WEST, 2.41 FEET;
THENCE SOUTH 33°54'27" WEST, 1.34 FEET;
THENCE SOUTH 74°42'13" WEST, 2.31 FEET;
THENCE NORTH 50°50'56" WEST, 0.46 FEET;
THENCE NORTH 75°18'12" WEST, 3.56 FEET;
THENCE SOUTH 67°55'28" WEST, 3.17 FEET;
THENCE SOUTH 37°19'14" EAST, 1.48 FEET;
THENCE SOUTH 64°52'40" WEST, 3.31 FEET;
THENCE NORTH 50°08'05" WEST, 0.17 FEET;

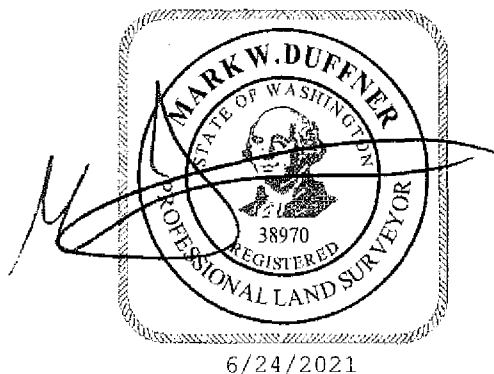
THENCE SOUTH 76°12'17" WEST, 2.94 FEET;
THENCE SOUTH 37°05'09" EAST, 0.34 FEET;
THENCE SOUTH 88°57'47" WEST, 1.83 FEET;
THENCE NORTH 63°25'15" WEST, 3.92 FEET;
THENCE NORTH 40°54'23" WEST, 1.14 FEET;
THENCE NORTH 48°17'21" WEST, 3.29 FEET;
THENCE NORTH 50°27'10" WEST, 6.40 FEET;
THENCE NORTH 69°19'13" WEST, 2.29 FEET;
THENCE NORTH 78°51'00" WEST, 3.33 FEET;
THENCE SOUTH 77°08'43" WEST, 1.77 FEET;
THENCE SOUTH 76°53'51" WEST, 6.19 FEET;
THENCE SOUTH 80°56'03" WEST, 3.66 FEET;
THENCE SOUTH 73°54'44" WEST, 1.39 FEET;
THENCE SOUTH 82°14'18" WEST, 4.80 FEET;
THENCE SOUTH 75°03'24" WEST, 21.24 FEET;
THENCE SOUTH 89°56'44" WEST, 4.75 FEET;
THENCE SOUTH 81°39'17" WEST, 19.40 FEET;
THENCE SOUTH 04°46'58" WEST, 23.31 FEET;
THENCE SOUTH 00°08'30" EAST, 16.44 FEET;
THENCE NORTH 89°19'05" WEST, 99.57 FEET;
THENCE NORTH 00°52'18" EAST, 16.73 FEET;
THENCE NORTH 00°36'43" WEST, 22.26 FEET;
THENCE NORTH 01°04'46" EAST, 63.47 FEET;
THENCE NORTH 00°43'44" EAST, 40.71 FEET;
THENCE NORTH 01°46'05" WEST, 17.74 FEET;
THENCE NORTH 03°26'40" WEST, 0.00 FEET;
THENCE NORTH 02°42'29" WEST, 1.89 FEET;
THENCE NORTH 05°04'35" WEST, 0.64 FEET;
THENCE NORTH 00°37'21" WEST, 15.89 FEET;
THENCE NORTH 06°25'19" EAST, 16.05 FEET;
THENCE NORTH 01°13'55" EAST, 56.23 FEET;
THENCE NORTH 60°37'14" WEST, 21.42 FEET;
THENCE NORTH 08°42'57" EAST, 55.05 FEET;
THENCE NORTH 08°26'43" EAST, 120.77 FEET;
THENCE NORTH 09°34'48" EAST, 37.79 FEET;
THENCE NORTH 34°58'02" EAST, 348.69 FEET;
THENCE NORTH 06°15'08" EAST, 119.53 FEET;
THENCE NORTH 02°20'57" EAST, 70.48 FEET;
THENCE NORTH 29°27'39" EAST, 3.03 FEET;
THENCE NORTH 75°15'23" EAST, 25.97 FEET;
THENCE SOUTH 85°36'05" EAST, 34.47 FEET;
THENCE NORTH 79°52'31" EAST, 37.60 FEET;
THENCE NORTH 67°37'12" EAST, 24.31 FEET;
THENCE NORTH 65°22'35" EAST, 34.90 FEET;
THENCE NORTH 62°06'10" EAST, 25.43 FEET;
THENCE NORTH 77°11'45" EAST, 29.83 FEET;

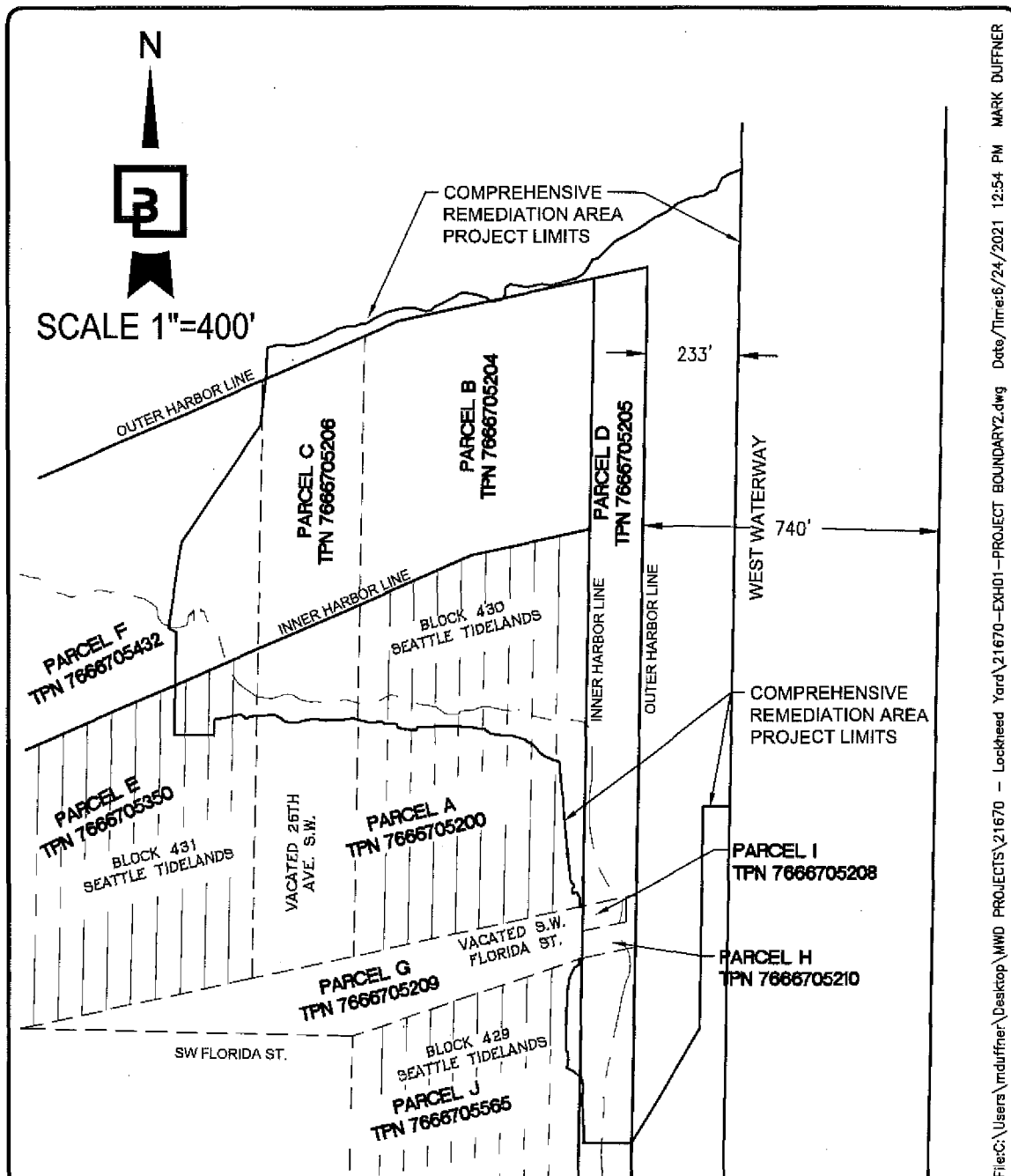
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THENCE NORTH 85°14'11" EAST, 15.92 FEET;
THENCE NORTH 56°18'36" EAST, 19.07 FEET;
THENCE NORTH 60°56'43" EAST, 27.22 FEET;
THENCE NORTH 74°03'17" EAST, 28.87 FEET;
THENCE NORTH 78°06'41" EAST, 25.67 FEET;
THENCE EAST, 29.08 FEET;
THENCE SOUTH 73°18'03" EAST, 27.60 FEET;
THENCE NORTH 78°41'24" EAST, 13.48 FEET;
THENCE NORTH 48°21'59" EAST, 15.92 FEET;
THENCE NORTH 70°20'46" EAST, 19.65 FEET;
THENCE NORTH 63°26'06" EAST, 32.52 FEET;
THENCE NORTH 58°23'33" EAST, 20.18 FEET;
THENCE NORTH 00°00'00" EAST, 15.86 FEET;
THENCE SOUTH 80°32'16" EAST, 24.12 FEET;
THENCE SOUTH 72°28'28" EAST, 26.34 FEET;
THENCE SOUTH 50°11'40" EAST, 10.33 FEET;
THENCE SOUTH 00°00'00" EAST, 15.86 FEET;
THENCE NORTH 75°57'50" EAST, 10.90 FEET;
THENCE NORTH 51°20'25" EAST, 8.47 FEET;
THENCE NORTH 26°33'54" EAST, 8.87 FEET;
THENCE NORTH 00°00'00" EAST, 15.86 FEET;
THENCE NORTH 52°07'30" EAST, 15.07 FEET;
THENCE SOUTH 78°06'41" EAST, 25.67 FEET;
THENCE SOUTH 82°52'30" EAST, 21.32 FEET;
THENCE NORTH 75°57'50" EAST, 32.71 FEET;
THENCE SOUTH 78°41'24" EAST, 20.22 FEET;
THENCE NORTH 74°50'45" EAST, 65.74 FEET;
THENCE NORTH 60°38'32" EAST, 24.27 FEET;
THENCE NORTH 34°59'31" EAST, 16.14 FEET;
THENCE NORTH 29°21'28" EAST, 24.27 FEET;
THENCE NORTH 75°05'35" EAST, 13.44 FEET;
THENCE NORTH 45°07'38" EAST, 58.29 FEET;
THENCE NORTH 61°23'22" EAST, 63.49 FEET;
THENCE NORTH 55°29'29" EAST, 49.19 FEET;
THENCE NORTH 65°28'24" EAST, 36.14 FEET;
THENCE NORTH 55°18'17" EAST, 35.94 FEET;
THENCE NORTH 68°11'55" EAST, 36.72 FEET;
THENCE NORTH 81°40'28" EAST, 31.39 FEET;
THENCE NORTH 56°58'34" EAST, 18.07 FEET;
THENCE NORTH 75°22'45" EAST, 18.01 FEET;
THENCE NORTH 24°06'08" EAST, 31.54 FEET;
THENCE NORTH 61°49'17" EAST, 24.07 FEET;
THENCE NORTH 68°14'51" EAST, 29.64 FEET;
THENCE SOUTH 01°22'47" WEST, 1,564.35 FEET;

THENCE SOUTH 89°45'41" WEST, 67.70 FEET;
THENCE SOUTH 00°53'24" WEST, 313.14 FEET;
THENCE SOUTH 00°59'54" WEST, 230.80 FEET;
THENCE SOUTH 31°35'40" WEST, 332.77 FEET;
THENCE NORTH 89°52'50" WEST, 117.63 FEET;
THENCE NORTH 04°47'40" EAST, 0.75 FEET;
THENCE NORTH 74°07'58" EAST, 5.13 FEET;
THENCE NORTH 32°17'03" WEST, 7.26 FEET;
THENCE NORTH 00°31'57" EAST, 18.15 FEET;
THENCE NORTH 09°15'15" WEST, 5.63 FEET;
THENCE NORTH 10°54'11" EAST, 3.29 FEET;
THENCE NORTH 01°24'52" WEST, 18.14 FEET;
THENCE NORTH 01°19'20" EAST, 8.12 FEET;
THENCE NORTH 05°02'20" WEST, 24.22 FEET;
THENCE NORTH 02°35'10" WEST, 18.96 FEET;
THENCE NORTH 10°43'19" WEST, 6.46 FEET;
THENCE NORTH 01°23'57" EAST, 0.97 FEET;
THENCE NORTH 11°36'40" EAST, 12.39 FEET;
THENCE NORTH 06°30'16" EAST, 15.15 FEET;
THENCE NORTH 13°15'41" WEST, 20.60 FEET;
THENCE NORTH 31°58'35" WEST, 4.29 FEET;
THENCE NORTH 53°56'21" WEST, 15.43 FEET;
THENCE NORTH 41°54'26" WEST, 4.75 FEET;
THENCE NORTH 64°04'07" WEST, 20.48 FEET;
THENCE NORTH 04°37'20" EAST, 13.62 FEET;
THENCE NORTH 14°28'18" EAST, 7.08 FEET;
THENCE NORTH 01°25'36" WEST, 18.08 FEET;
THENCE NORTH 52°57'35" WEST, 6.36 FEET;
THENCE NORTH 01°49'04" WEST, 11.92 FEET;
THENCE NORTH 02°07'08" EAST, 27.73 FEET;
THENCE NORTH 06°51'40" WEST, 5.47 FEET;
THENCE NORTH 00°32'18" EAST, 19.31 FEET;
THENCE NORTH 35°13'31" EAST, 4.27 FEET;
THENCE NORTH 00°23'32" WEST, 12.09 FEET;
THENCE NORTH 04°31'49" WEST, 19.86 FEET;
THENCE NORTH 16°00'01" EAST, 6.18 FEET;
THENCE NORTH 05°44'41" EAST, 18.84 FEET;
THENCE NORTH 02°58'00" EAST, 8.41 FEET;
THENCE NORTH 00°20'28" WEST, 22.38 FEET;
THENCE NORTH 25°08'29" EAST, 3.16 FEET;
THENCE NORTH 19°55'38" EAST, 3.56 FEET;
THENCE NORTH 01°57'28" EAST, 13.79 FEET;
THENCE NORTH 21°26'40" EAST, 7.00 FEET;
THENCE NORTH 24°10'30" EAST, 17.99 FEET;
THENCE NORTH 34°06'22" EAST, 8.31 FEET;
THENCE NORTH 58°36'42" EAST, 13.17 FEET;


THENCE NORTH 04°26'41" EAST, 3.47 FEET;
THENCE NORTH 01°09'33" EAST, 10.01 FEET TO THE SOUTHERLY MARGIN OF SAID VACATED
SOUTHWEST FLORIDA STREET;
THENCE NORTH 71°36'05" EAST ALONG SAID SOUTHERLY MARGIN, 7.14 FEET TO THE EAST LINE OF TAX
PARCEL NUMBER 7666705209;
THENCE NORTH 01°08'22" EAST ALONG SAID EAST LINE, 128.44 FEET TO SAID INTERSECTION OF THE
NORTHERLY MARGIN OF VACATED SOUTHWEST FLORIDA STREET WITH THE INNER HARBOR LINE;
THENCE SOUTH 77°50'35" WEST, ALONG SAID NORTHERLY MARGIN, 7.80 FEET TO THE **POINT OF
BEGINNING.**

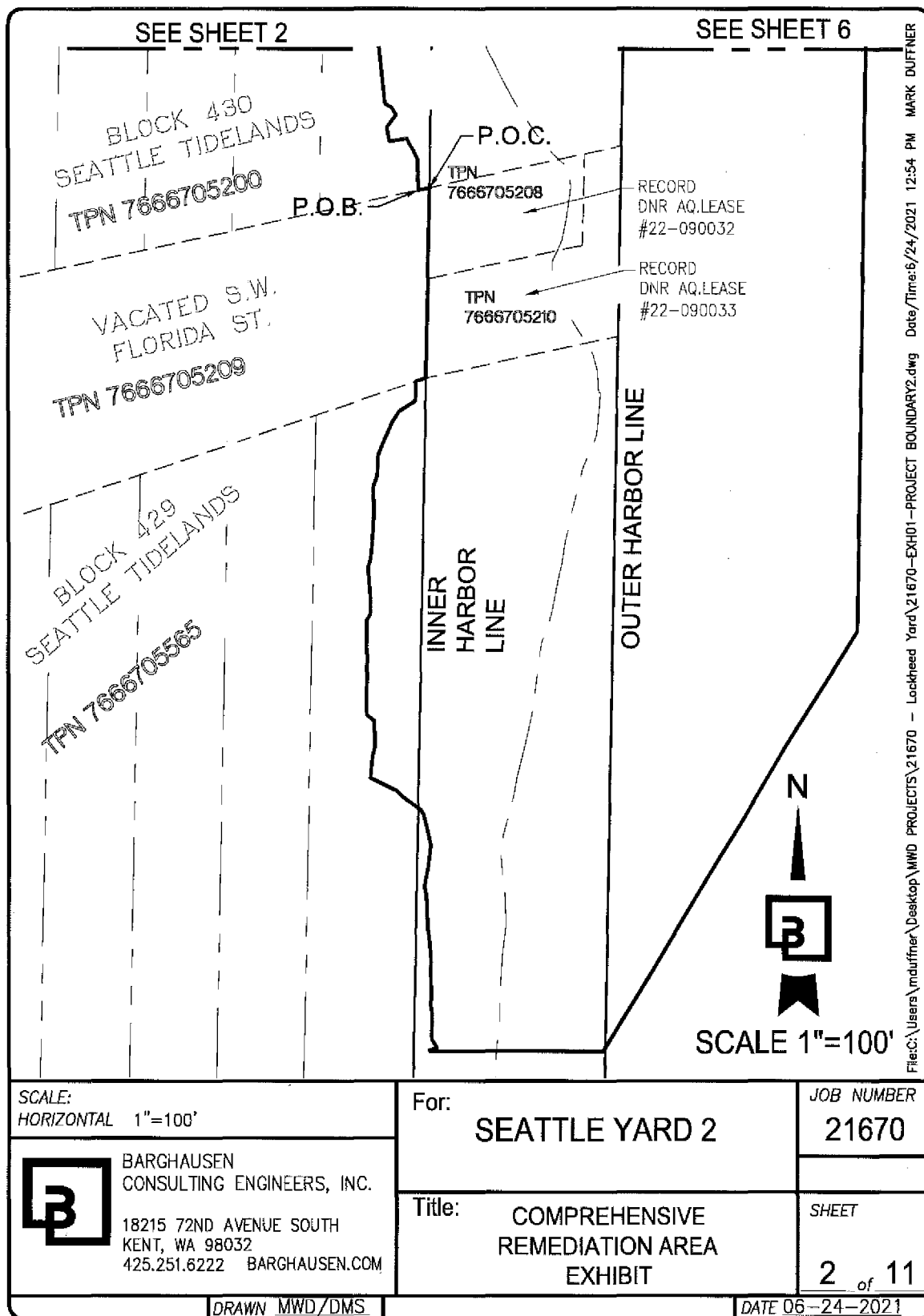
CONTAINS 40.1± ACRES.

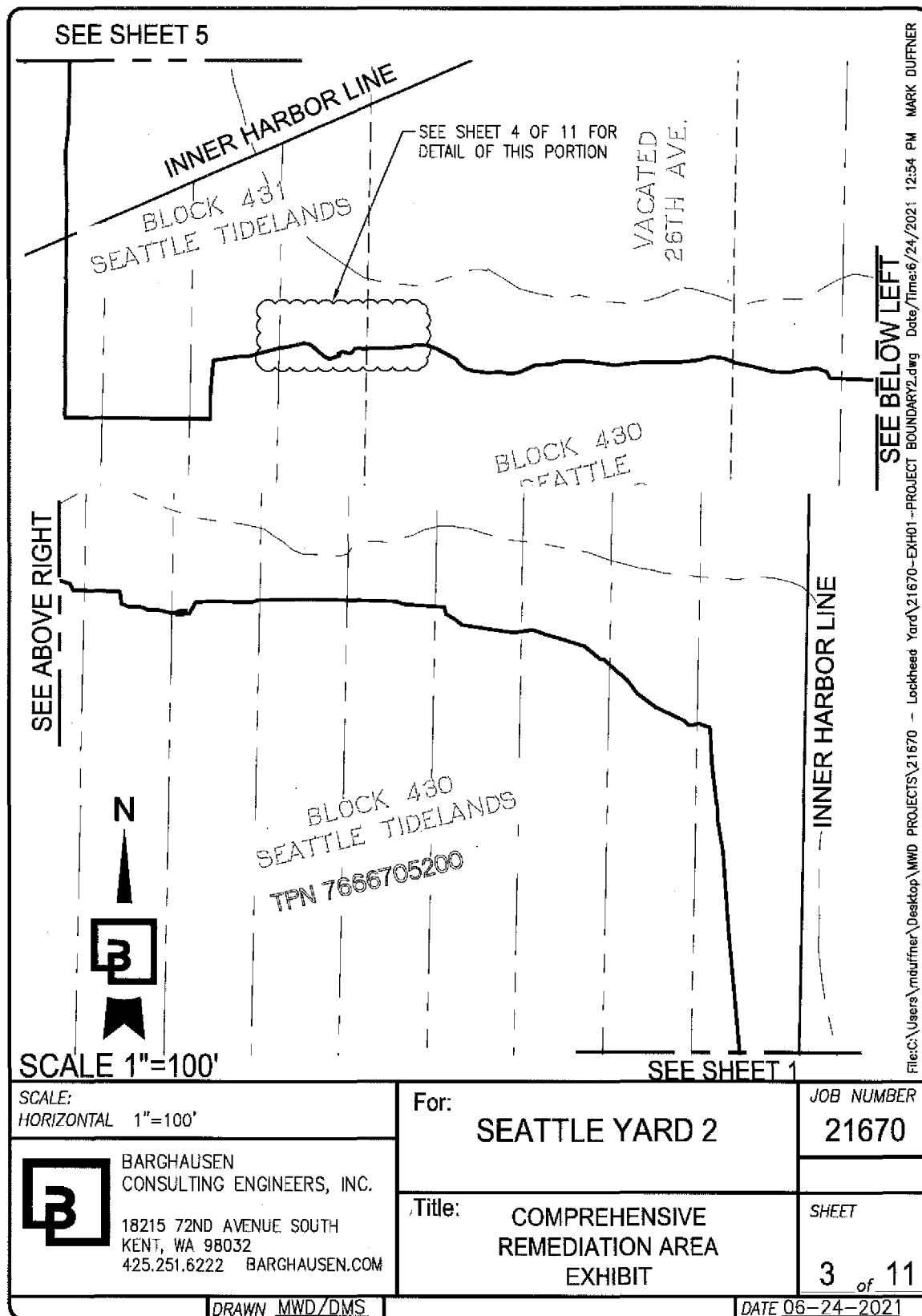


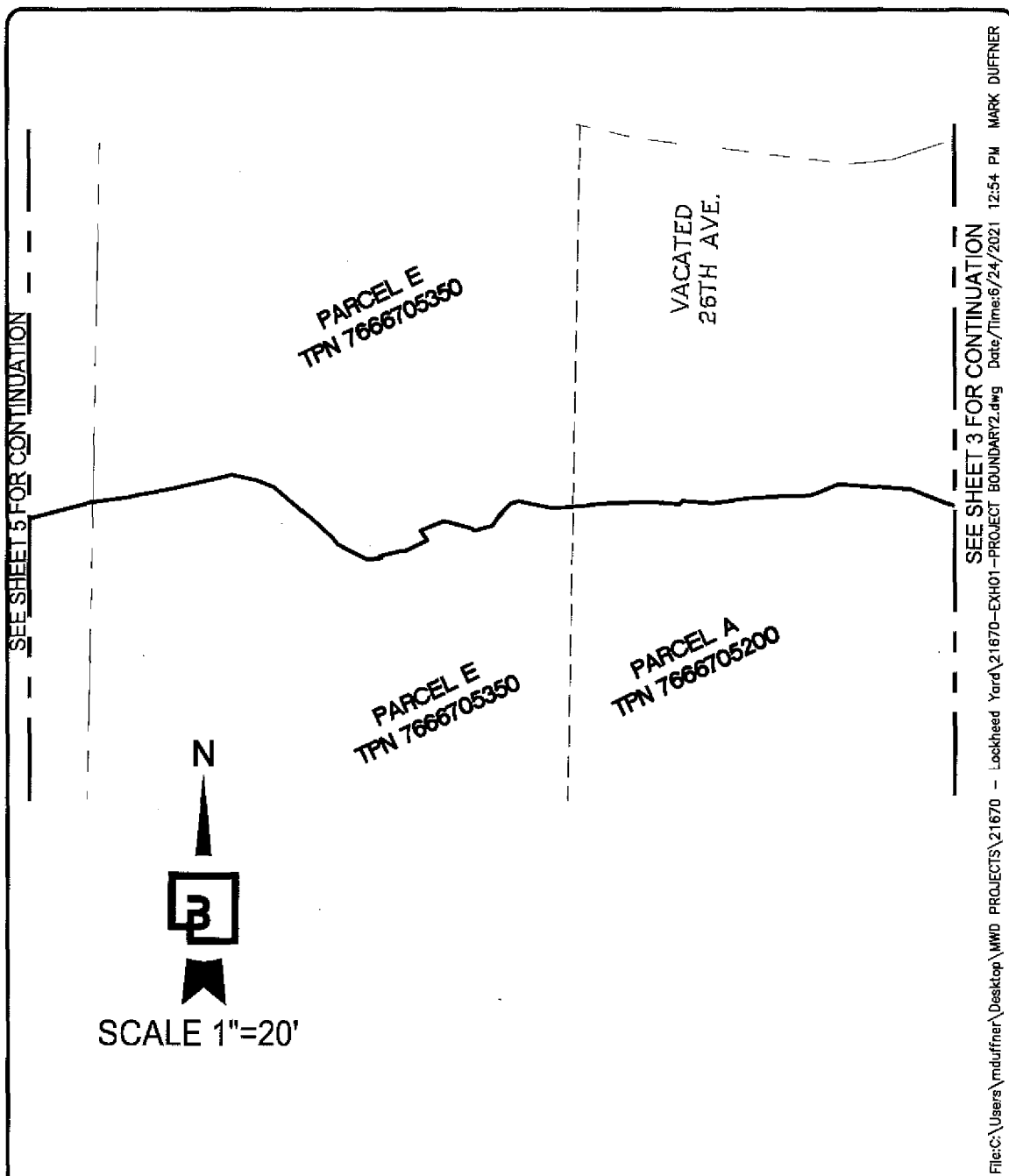



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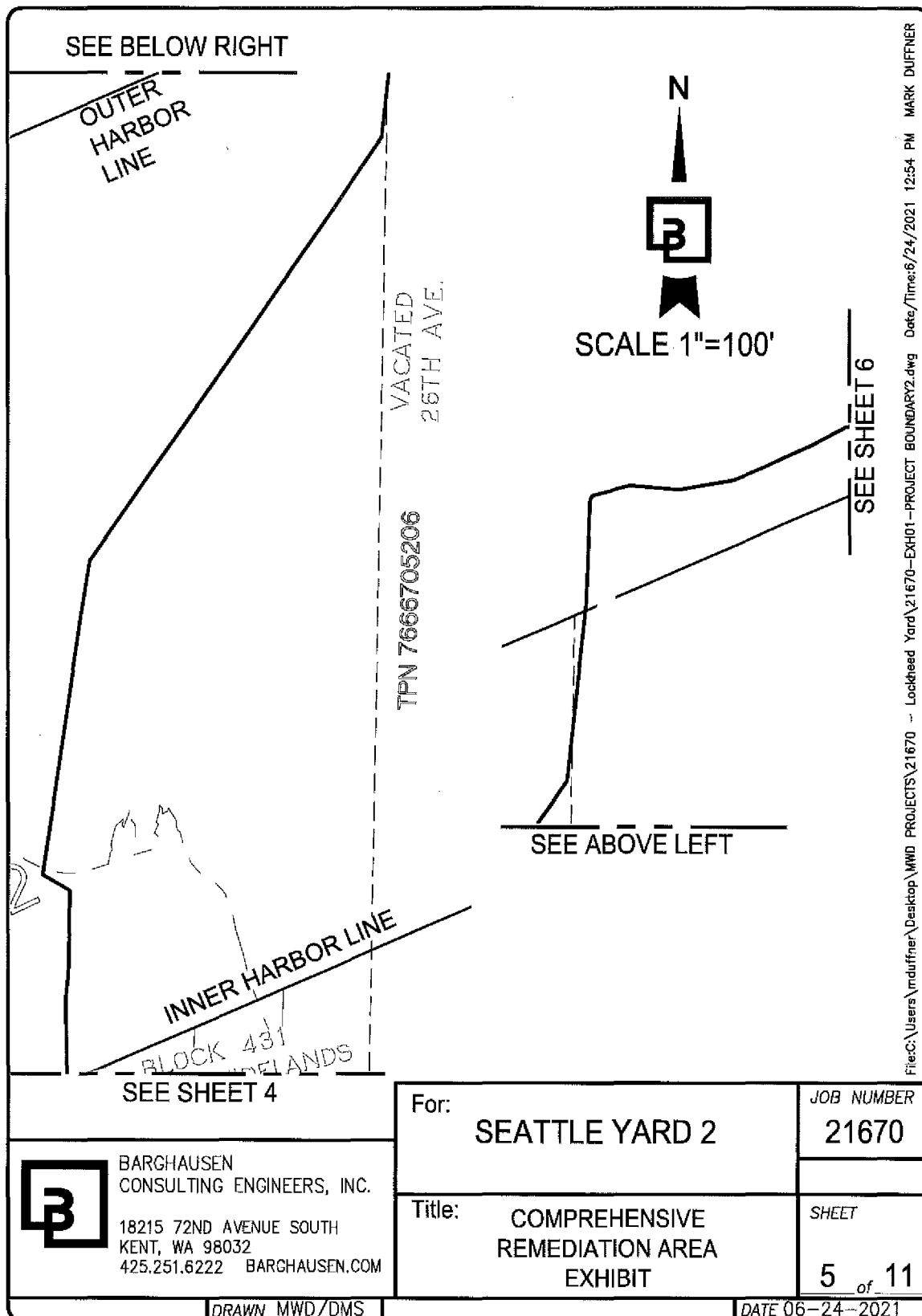
| | | |
|--|---------------------|----------------------|
| SCALE: HORIZONTAL 1"=400' | For: SEATTLE YARD 2 | JOB NUMBER 21670 |
|  BARGHAUSEN CONSULTING ENGINEERS, INC. 18215 72ND AVENUE SOUTH KENT, WA 98032 425.251.6222 BARGHAUSEN.COM | | SHEET 1 of 11 |
| DRAWN MWD/DMS | DATE 06-24-2021 | |

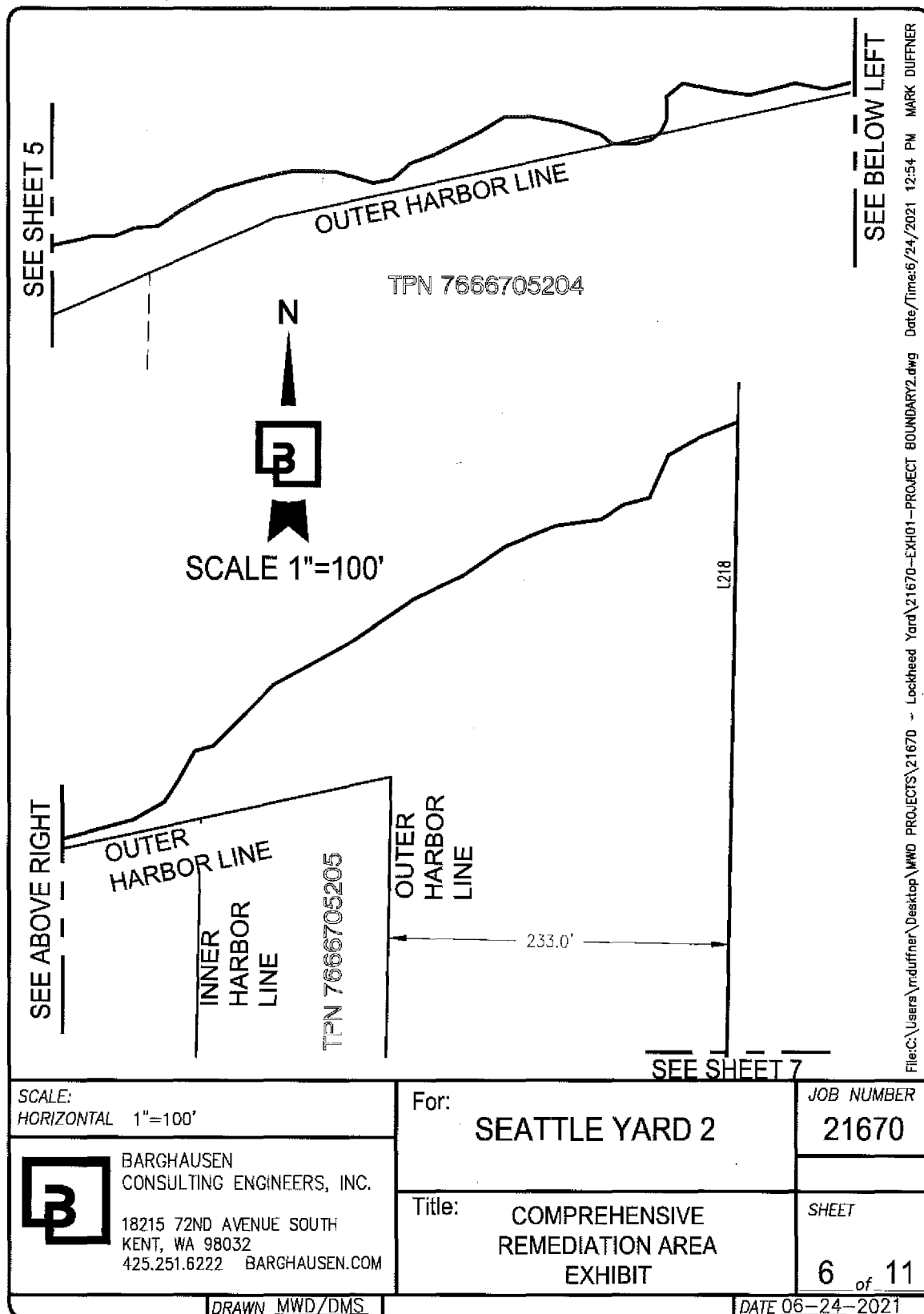


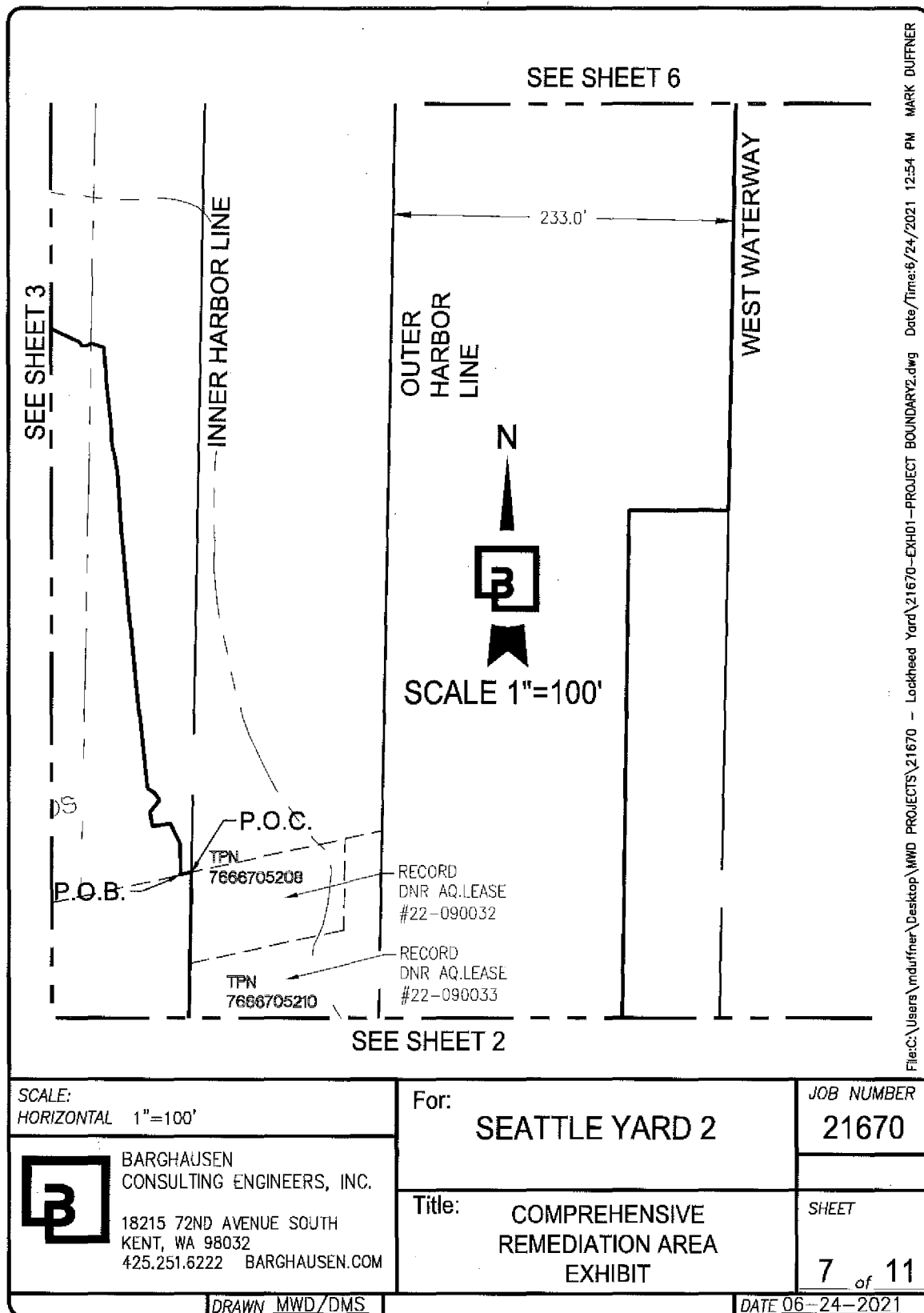




| | | |
|--|---------------------|---------------------|
| SCALE: HORIZONTAL 1"=20' | For: SEATTLE YARD 2 | JOB NUMBER 21670 |
|  BARGHAUSEN CONSULTING ENGINEERS, INC. 18215 72ND AVENUE SOUTH KENT, WA 98032 425.251.6222 BARGHAUSEN.COM | | SHEET 4 of 11 |
| DRAWN MWD/DMS | DATE 06-24-2021 | |








| LINE TABLE | | | LINE TABLE | | | LINE TABLE | | |
|------------|-------------|--------|------------|-------------|--------|------------|-------------|--------|
| LINE | BEARING | DIST | LINE | BEARING | DIST | LINE | BEARING | DIST |
| L1 | S77°50'35"W | 7.80' | L26 | N77°01'14"W | 1.36' | L51 | S87°09'06"W | 8.56' |
| L2 | N00°58'56"W | 20.93' | L27 | N50°27'06"W | 13.71' | L52 | N68°10'46"E | 7.33' |
| L3 | N27°11'24"W | 15.67' | L28 | N77°20'35"W | 2.38' | L53 | N86°30'08"W | 3.45' |
| L4 | S80°26'41"W | 12.20' | L29 | N71°10'22"W | 2.91' | L54 | S70°28'20"W | 2.58' |
| L5 | N10°47'52"W | 9.79' | L30 | N72°44'01"W | 12.48' | L55 | S64°29'00"W | 1.12' |
| L6 | N38°27'26"E | 10.62' | L31 | N73°41'22"W | 9.34' | L56 | S64°29'00"W | 0.95' |
| L7 | N33°50'51"W | 5.79' | L32 | N69°38'16"W | 9.37' | L57 | S87°46'32"W | 3.78' |
| L8 | N59°05'27"W | 5.42' | L33 | S81°02'50"W | 12.88' | L58 | N79°05'33"W | 2.42' |
| L9 | N06°14'49"W | 71.72' | L34 | N82°11'26"W | 17.86' | L59 | N75°02'15"W | 7.30' |
| L10 | N05°19'38"W | 91.66' | L35 | N81°34'51"W | 18.54' | L60 | S84°24'32"W | 4.04' |
| L11 | N04°08'23"W | 51.75' | L36 | N51°47'02"W | 7.20' | L61 | N85°56'18"W | 1.74' |
| L12 | N10°06'07"W | 20.88' | L37 | N63°17'41"W | 6.01' | L62 | N64°41'44"W | 4.75' |
| L13 | N01°40'02"W | 10.10' | L38 | N12°38'25"W | 5.16' | L63 | S83°33'01"W | 1.07' |
| L14 | N06°34'23"W | 29.15' | L39 | N87°21'59"W | 16.14' | L64 | N82°36'51"W | 3.49' |
| L15 | N03°19'22"W | 23.99' | L40 | N85°02'40"W | 12.26' | L65 | S89°36'13"W | 4.96' |
| L16 | N71°09'53"W | 8.60' | L41 | N69°49'09"W | 5.37' | L66 | N66°27'05"W | 4.69' |
| L17 | S71°01'35"W | 3.80' | L42 | N88°21'34"W | 12.21' | L67 | N07°24'37"W | 8.18' |
| L18 | S89°52'32"W | 3.03' | L43 | S83°47'26"W | 0.22' | L68 | N87°46'15"W | 17.17' |
| L19 | N42°23'03"W | 3.64' | L44 | N88°20'45"W | 27.17' | L69 | N87°49'22"W | 14.66' |
| L20 | N65°16'15"W | 21.66' | L45 | N89°15'50"W | 21.56' | L70 | N26°10'27"W | 4.74' |
| L21 | N52°54'49"W | 15.94' | L46 | S89°00'20"W | 33.15' | L71 | N70°21'12"W | 6.62' |
| L22 | N36°50'47"W | 10.59' | L47 | S74°07'22"W | 4.66' | L72 | S86°39'01"W | 7.90' |
| L23 | N47°17'52"W | 21.35' | L48 | N88°41'37"W | 25.44' | L73 | S79°16'39"W | 12.53' |
| L24 | N67°50'51"W | 0.84' | L49 | S87°07'49"W | 12.29' | L74 | N86°58'29"W | 11.49' |
| L25 | S79°55'39"W | 1.05' | L50 | S29°39'08"W | 9.21' | L75 | N75°05'08"W | 13.50' |

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| | | | |
|--|--|--|-----------------------------------|
| SCALE: HORIZONTAL 1"=100' | | For: SEATTLE YARD 2 | JOB NUMBER 21670 |
|  BARCHAUSEN CONSULTING ENGINEERS, INC. 18215 72ND AVENUE SOUTH KENT, WA 98032 425.251.6222 BARCHAUSEN.COM | | | SHEET 8 of 11 |
| DRAWN MWD/DMS | | Title: COMPREHENSIVE REMEDIATION AREA EXHIBIT | |
| | | DATE 06-24-2021 | |

| LINE TABLE | | | LINE TABLE | | | LINE TABLE | | | MARK DUFFNER Date/Time: 8/24/2021 12:54 PM File: C:\Users\mduffner\Desktop\WMD PROJECTS\21670 - Lockheed Yard\21670-EXH01-PROJECT BOUNDARY2.dwg |
|------------|-------------|--------|------------|-------------|-------|------------|-------------|--------|---|
| LINE | BEARING | DIST | LINE | BEARING | DIST | LINE | BEARING | DIST | |
| L76 | N79°31'14"W | 12.39' | L101 | N86°19'16"W | 9.49' | L126 | N50°08'05"W | 0.17' | |
| L77 | N68°47'31"W | 8.84' | L102 | S66°31'54"W | 3.06' | L127 | S76°12'17"W | 2.94' | |
| L78 | N83°59'58"W | 8.73' | L103 | S71°50'08"W | 0.67' | L128 | S37°05'09"E | 0.34' | |
| L79 | S76°16'41"W | 9.38' | L104 | S89°14'58"W | 3.48' | L129 | S88°57'47"W | 1.83' | |
| L80 | S83°16'52"W | 12.66' | L105 | S85°55'45"W | 4.29' | L130 | N63°25'15"W | 3.92' | |
| L81 | S89°38'26"W | 27.09' | L106 | S82°16'04"W | 4.35' | L131 | N40°54'23"W | 1.14' | |
| L82 | S83°41'32"W | 16.08' | L107 | N85°49'27"W | 3.66' | L132 | N48°17'21"W | 3.29' | |
| L83 | N81°46'47"W | 10.37' | L108 | S46°50'16"W | 0.61' | L133 | N50°27'10"W | 6.40' | |
| L84 | N84°14'36"W | 15.13' | L109 | N85°15'01"W | 1.98' | L134 | N69°19'13"W | 2.29' | |
| L85 | S87°32'15"W | 11.99' | L110 | N80°54'47"W | 0.83' | L135 | N78°51'00"W | 3.33' | |
| L86 | S75°17'17"W | 6.86' | L111 | S89°02'33"W | 5.10' | L136 | S77°08'43"W | 1.77' | |
| L87 | S86°59'27"W | 10.48' | L112 | S70°13'03"W | 0.06' | L137 | S76°53'51"W | 6.19' | |
| L88 | S66°01'09"W | 11.07' | L113 | S79°35'19"W | 0.02' | L138 | S80°56'03"W | 3.66' | |
| L89 | S75°10'15"W | 4.08' | L114 | S85°13'44"W | 6.36' | L139 | S73°54'44"W | 1.39' | |
| L90 | S89°21'14"W | 5.23' | L115 | S86°55'10"W | 1.64' | L140 | S82°14'18"W | 4.80' | |
| L91 | N75°13'37"W | 4.56' | L116 | N78°54'12"W | 4.37' | L141 | S75°03'24"W | 21.24' | |
| L92 | S85°43'31"W | 9.16' | L117 | S76°05'34"W | 0.84' | L142 | S89°56'44"W | 4.75' | |
| L93 | N82°27'36"W | 7.94' | L118 | S44°20'07"W | 2.41' | L143 | S81°39'17"W | 19.40' | |
| L94 | S78°10'14"W | 0.95' | L119 | S33°54'27"W | 1.34' | L144 | S04°46'58"W | 23.31' | |
| L95 | N78°01'07"W | 4.27' | L120 | S74°42'13"W | 2.31' | L145 | S00°08'30"E | 16.44' | |
| L96 | N71°08'58"W | 2.65' | L121 | N50°50'56"W | 0.46' | L146 | N89°19'05"W | 99.57' | |
| L97 | N50°36'12"W | 5.06' | L122 | N75°18'12"W | 3.56' | L147 | N00°52'18"E | 16.73' | |
| L98 | N36°26'44"W | 3.78' | L123 | S67°55'28"W | 3.17' | L148 | N00°36'43"W | 22.26' | |
| L99 | N61°28'07"W | 14.65' | L124 | S37°19'14"E | 1.48' | L149 | N01°04'46"E | 63.47' | |
| L100 | N68°47'48"W | 6.47' | L125 | S64°52'40"W | 3.31' | L150 | N00°43'44"E | 40.71' | |

SCALE:
HORIZONTAL 1"=100'



BARGHAUSEN
CONSULTING ENGINEERS, INC.
18215 72ND AVENUE SOUTH
KENT, WA 98032
425.251.6222 BARGHAUSEN.COM

For:
SEATTLE YARD 2

Title:
COMPREHENSIVE
REMEDATION AREA
EXHIBIT

JOB NUMBER
21670

SHEET
9 of 11

DRAWN MWD/DMS

DATE 06-24-2021

| LINE TABLE | | | LINE TABLE | | | LINE TABLE | | |
|------------|-------------|---------|------------|-------------|--------|------------|-------------|----------|
| LINE | BEARING | DIST | LINE | BEARING | DIST | LINE | BEARING | DIST |
| L151 | N01°46'05"W | 17.74' | L176 | N56°18'36"E | 19.07' | L201 | N74°50'45"E | 65.74' |
| L152 | N03°26'40"W | 0.00' | L177 | N60°56'43"E | 27.22' | L202 | N60°38'32"E | 24.27' |
| L153 | N02°42'29"W | 1.89' | L178 | N74°03'17"E | 28.87' | L203 | N34°59'31"E | 16.14' |
| L154 | N05°04'35"W | 0.64' | L179 | N78°06'41"E | 25.67' | L204 | N29°21'28"E | 24.27' |
| L155 | N00°37'21"W | 15.89' | L180 | S90°00'00"E | 29.08' | L205 | N75°05'35"E | 13.44' |
| L156 | N06°25'19"E | 16.05' | L181 | S73°18'03"E | 27.60' | L206 | N45°07'38"E | 58.29' |
| L157 | N01°13'55"E | 56.23' | L182 | N78°41'24"E | 13.48' | L207 | N61°23'22"E | 63.49' |
| L158 | N60°37'14"W | 21.42' | L183 | N48°21'59"E | 15.92' | L208 | N55°29'29"E | 49.19' |
| L159 | N08°42'57"E | 55.05' | L184 | N70°20'46"E | 19.65' | L209 | N65°28'24"E | 36.14' |
| L160 | N08°26'43"E | 120.77' | L185 | N63°26'06"E | 32.52' | L210 | N55°18'17"E | 35.94' |
| L161 | N09°34'48"E | 37.79' | L186 | N58°23'33"E | 20.18' | L211 | N68°11'55"E | 36.72' |
| L162 | N34°58'02"E | 348.69' | L187 | S90°00'00"E | 15.86' | L212 | N81°40'28"E | 31.39' |
| L163 | N06°15'08"E | 119.53' | L188 | S80°32'16"E | 24.12' | L213 | N56°58'34"E | 18.07' |
| L164 | N02°20'57"E | 70.48' | L189 | S72°28'28"E | 26.34' | L214 | N75°22'45"E | 18.01' |
| L165 | N29°27'39"E | 3.03' | L190 | S50°11'40"E | 10.33' | L215 | N24°06'08"E | 31.54' |
| L166 | N75°15'23"E | 25.97' | L191 | S90°00'00"E | 15.86' | L216 | N61°49'17"E | 24.07' |
| L167 | S85°36'05"E | 34.47' | L192 | N75°57'50"E | 10.90' | L217 | N68°14'51"E | 29.65' |
| L168 | N79°52'31"E | 37.60' | L193 | N51°20'25"E | 8.47' | L218 | S01°08'22"W | 1564.35' |
| L169 | N67°37'12"E | 24.31' | L194 | N26°33'54"E | 8.87' | L219 | S89°45'41"W | 67.70' |
| L170 | N65°22'35"E | 34.90' | L195 | N00°00'00"E | 15.86' | L220 | S00°53'24"W | 313.14' |
| L171 | N62°06'10"E | 25.43' | L196 | N52°07'30"E | 15.07' | L221 | S00°59'54"W | 230.80' |
| L172 | N77°11'45"E | 29.83' | L197 | S78°06'41"E | 25.67' | L222 | S31°35'40"W | 332.77' |
| L173 | S90°00'00"E | 14.54' | L198 | S82°52'30"E | 21.32' | L223 | N89°52'50"W | 117.63' |
| L174 | N68°11'55"E | 14.24' | L199 | N75°57'50"E | 32.71' | L224 | N04°47'40"E | 0.75' |
| L175 | N85°14'11"E | 15.92' | L200 | S78°41'24"E | 20.22' | L225 | N74°07'58"E | 5.13' |

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 SCALE:
 HORIZONTAL 1"=100'

 BARGHAUSEN
 CONSULTING ENGINEERS, INC.
 18215 72ND AVENUE SOUTH
 KENT, WA 98032
 425.251.6222 BARGHAUSEN.COM

For:

SEATTLE YARD 2

JOB NUMBER

21670

Title:

 COMPREHENSIVE
 REMEDIATION AREA
 EXHIBIT

SHEET

10 of 11

DRAWN MWD/DMS

DATE 06-24-2021

| LINE TABLE | | | LINE TABLE | | |
|------------|-------------|--------|------------|-------------|---------|
| LINE | BEARING | DIST | LINE | BEARING | DIST |
| L226 | N32°17'03"W | 7.26' | L251 | N35°13'31"E | 4.27' |
| L227 | N00°31'57"E | 18.15' | L252 | N00°23'32"W | 12.09' |
| L228 | N09°15'15"W | 5.63' | L253 | N04°31'49"W | 19.86' |
| L229 | N10°54'11"E | 3.29' | L254 | N16°00'01"E | 6.18' |
| L230 | N01°24'52"W | 18.14' | L255 | N05°44'41"E | 18.84' |
| L231 | N01°19'20"E | 8.12' | L256 | N02°58'00"E | 8.41' |
| L232 | N05°02'20"W | 24.22' | L257 | N00°20'28"W | 22.38' |
| L233 | N02°35'10"W | 18.96' | L258 | N25°08'29"E | 3.16' |
| L234 | N10°43'19"W | 6.46' | L259 | N19°55'38"E | 3.56' |
| L235 | N01°23'57"E | 0.97' | L260 | N01°57'28"E | 13.79' |
| L236 | N11°36'40"E | 12.39' | L261 | N21°26'40"E | 7.00' |
| L237 | N06°30'16"E | 15.15' | L262 | N24°10'30"E | 17.99' |
| L238 | N13°15'41"W | 20.60' | L263 | N34°06'22"E | 8.31' |
| L239 | N31°58'35"W | 4.29' | L264 | N58°36'42"E | 13.17' |
| L240 | N53°56'21"W | 15.43' | L265 | N04°26'41"E | 3.47' |
| L241 | N41°54'26"W | 4.75' | L266 | N01°09'33"E | 10.01' |
| L242 | N64°04'07"W | 20.48' | L267 | N71°36'05"W | 7.14' |
| L243 | N04°37'20"E | 13.62' | L268 | N01°08'22"E | 128.44' |
| L244 | N14°28'18"E | 7.08' | | | |
| L245 | N01°25'36"W | 18.08' | | | |
| L246 | N52°57'35"W | 6.36' | | | |
| L247 | N01°49'04"W | 11.92' | | | |
| L248 | N02°07'08"E | 27.73' | | | |
| L249 | N06°51'40"W | 5.47' | | | |
| L250 | N00°32'18"E | 19.31' | | | |

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| | | |
|---|---|---|
| SCALE: HORIZONTAL 1"=100' | For: <div style="text-align: center; font-size: 1.2em;">SEATTLE YARD 2</div> | JOB NUMBER <div style="text-align: center; font-size: 1.2em;">21670</div> |
| <div style="display: flex; align-items: center;"> <div> BARGHAUSEN CONSULTING ENGINEERS, INC. 18215 72ND AVENUE SOUTH KENT, WA 98032 425.251.6222 BARGHAUSEN.COM </div> </div> | Title: <div style="text-align: center;"> COMPREHENSIVE REMEDIAATION AREA EXHIBIT </div> | SHEET <div style="text-align: center; font-size: 1.2em;"> 11 of 11 </div> |
| DRAWN MWD/DMS | | DATE 06-24-2021 |

Exhibit B

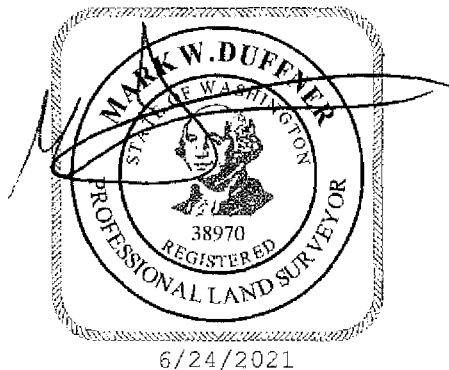
LEGAL DESCRIPTION AND ILLUSTRATION OF PROPERTY

LEGAL DESCRIPTION
TPN 7666705206 AREA "C"

THAT PORTION OF THE NORTHEAST QUARTER OF SECTION 12, TOWNSHIP 24 NORTH, RANGE 3 EAST, WILLAMETTE MERIDIAN, CITY OF SEATTLE, KING COUNTY, WASHINGTON, SPECIFICALLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE NORTHERLY MARGIN OF VACATED SOUTHWEST FLORIDA STREET AND THE EAST MARGIN OF VACATED 26TH AVENUE;
THENCE NORTH 01°08'22" EAST, ALONG SAID EAST MARGIN, 863.79 FEET TO THE INNER HARBOR LINE AS ILLUSTRATED ON THE WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES 1991 SUPPLEMENTAL MAP OF SEATTLE HARBOR AND THE **POINT OF BEGINNING**;
THENCE SOUTH 66°42'34" WEST, ALONG SAID INNER HARBOR LINE, 274.58 FEET TO THE WEST MARGIN OF SAID VACATED 26TH AVENUE;
THENCE NORTH 01°08'22" EAST, ALONG THE NORTHERLY EXTENSION OF SAID WEST MARGIN, 582.15 FEET;
THENCE NORTH 06°15'08" EAST, 80.42 FEET TO THE OUTER HARBOR LINE;
THENCE NORTH 66°42'34" EAST, ALONG SAID OUTER HARBOR LINE, 266.71 FEET TO THE INTERSECTION WITH THE NORTHERLY EXTENSION OF THE EASTERLY MARGIN OF SAID VACATED 26TH AVENUE;
THENCE SOUTH 01°08'22" WEST, ALONG SAID NORTHERLY EXTENSION, 659.00 FEET TO THE **POINT OF BEGINNING**.

CONTAINS 164,475± SQUARE FEET, 3.78± ACRES.



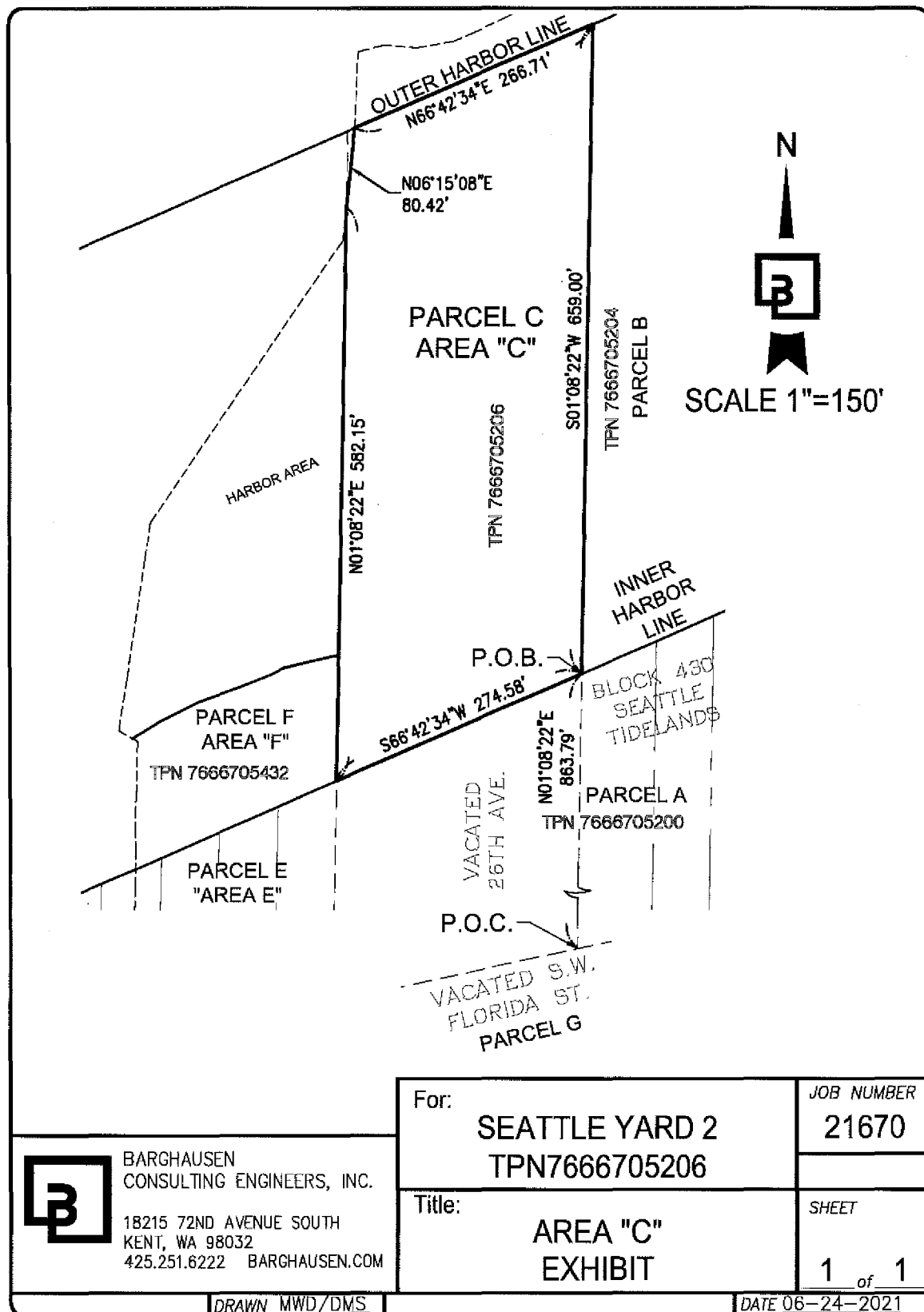


Exhibit C

**LIST REMEDIAL ACTION LEVELS (RALs), WHICH ARE THE CONCENTRATIONS OF COCs THAT
WERE TO BE MET AT THE POST-DREDGING SEDIMENT SURFACE**

TABLE 2

REMEDIAL ACTION LEVELS TO BE ACHIEVED AT SEDIMENT SURFACE FOLLOWING EXCAVATION AND DREDGING

| COC | Risk Driver? | Compliance Zone ¹ | RAL | Units | Source |
|-----------------------------|--------------|------------------------------|----------------|----------|-------------|
| Total PCBs | Yes | 0 to 10 cm | 12 | mg/kg-OC | SQS |
| | | | 180 | µg/kg dw | |
| cPAHs | Yes | | Not applicable | | |
| Arsenic | Yes | 0 to 10 cm | 57 | mg/kg-dw | SQS |
| Lead | Yes | 0 to 10 cm | 530 | mg/kg-dw | CSL |
| Tributyltin | Yes | | Not applicable | | |
| Copper | Yes | 0 to 10 cm | 390 | mg/kg-dw | SQS and CSL |
| Mercury | Yes | 0 to 10 cm | 0.41 | mg/kg-dw | SQS |
| Dioxins/Furans | Yes | | Not applicable | | |
| Chromium | No | 0 to 10 cm | 260 | mg/kg-dw | SQS |
| Cobalt | No | 0 to 10 cm | 10 | mg/kg-dw | LAET/SL |
| Nickel | No | 0 to 10 cm | 140 | mg/kg-dw | LAET/SL |
| Selenium | No | 0 to 10 cm | 1 | mg/kg-dw | LAET/SL |
| Vanadium | No | 0 to 10 cm | 57 | mg/kg-dw | LAET/SL |
| Zinc | No | 0 to 10 cm | 410 | mg/kg-dw | SQS |
| Pentachlorophenol | No | 0 to 10 cm | 360 | mg/kg-dw | SQS |
| Bis(2-ethylhexyl) phthalate | No | 0 to 10 cm | 47 | mg/kg-OC | SQS |
| | | | 710 | µg/kg dw | |
| Acenaphthene | No | 0 to 10 cm | 16 | mg/kg-OC | SQS |
| | | | 240 | µg/kg dw | |
| Benzo(a)anthracene | No | 0 to 10 cm | 110 | mg/kg-OC | SQS |
| | | | 1,700 | µg/kg dw | |
| Benzo(a)pyrene | No | 0 to 10 cm | 99 | mg/kg-OC | SQS |
| | | | 1,500 | µg/kg dw | |
| Benzo(g,h,i)perylene | No | 0 to 10 cm | 31 | mg/kg-OC | SQS |
| | | | 470 | µg/kg dw | |
| Total Benzofluoranthenes | No | 0 to 10 cm | 230 | mg/kg-OC | SQS |
| | | | 1,800 | µg/kg dw | |
| Chrysene | No | 0 to 10 cm | 110 | mg/kg-OC | SQS |
| | | | 1,700 | µg/kg dw | |
| Dibenz(a,h)anthracene | No | 0 to 10 cm | 12 | mg/kg-OC | SQS |
| | | | 160 | µg/kg dw | |
| Fluoranthene | No | 0 to 10 cm | 160 | mg/kg-OC | SQS |
| | | | 2,400 | µg/kg dw | |
| Indeno(1,2,3-cd)pyrene | No | 0 to 10 cm | 34 | mg/kg-OC | SQS |
| | | | 510 | µg/kg dw | |

TABLE 2

REMEDIAL ACTION LEVELS TO BE ACHIEVED AT SEDIMENT SURFACE FOLLOWING EXCAVATION AND DREDGING

| COC | Risk Driver? | Compliance Zone ¹ | RAL | Units | Source |
|---|--------------|------------------------------|----------------|----------|-------------|
| Phenanthrene | No | 0 to 10 cm | 100 | mg/kg-OC | SQS |
| | | | 1,500 | µg/kg dw | |
| Total HPAH | No | 0 to 10 cm | 960 | mg/kg-OC | SQS |
| | | | 14,000 | µg/kg dw | |
| Remedial Action Levels for Dry Docks (Area 4) and Localized Subareas (Area 5) | | | | | |
| Total PCBs | Yes | 0 to 10 cm | 65 | mg/kg-OC | CSL |
| | | | 960 | µg/kg dw | |
| cPAHs | Yes | | Not applicable | | |
| Arsenic | Yes | 0 to 10 cm | 93 | mg/kg-dw | CSL |
| Lead | Yes | 0 to 10 cm | 530 | mg/kg-dw | CSL |
| Tributyltin | Yes | | Not applicable | | |
| Copper | Yes | 0 to 10 cm | 390 | mg/kg-dw | SQS and CSL |
| Mercury | Yes | 0 to 10 cm | 0.59 | mg/kg-dw | CSL |
| Dioxins/Furans | Yes | | Not applicable | | |
| Chromium | No | 0 to 10 cm | 270 | mg/kg-dw | CSL |
| Cobalt | No | 0 to 10 cm | n/a | mg/kg-dw | |
| Nickel | No | 0 to 10 cm | n/a | mg/kg-dw | |
| Selenium | No | 0 to 10 cm | n/a | mg/kg-dw | |
| Vanadium | No | 0 to 10 cm | n/a | mg/kg-dw | |
| Zinc | No | 0 to 10 cm | 960 | mg/kg-dw | CSL |
| Pentachlorophenol | No | 0 to 10 cm | 690 | mg/kg-dw | CSL |
| Bis(2-ethylhexyl) phthalate | No | 0 to 10 cm | 78 | mg/kg-OC | CSL |
| | | | 1,200 | µg/kg dw | |
| Acenaphthene | No | 0 to 10 cm | 57 | mg/kg-OC | CSL |
| | | | 880 | µg/kg dw | |
| Benzo(a)anthracene | No | 0 to 10 cm | 270 | mg/kg-OC | CSL |
| | | | 4,100 | µg/kg dw | |
| Benzo(a)pyrene | No | 0 to 10 cm | 210 | mg/kg-OC | CSL |
| | | | 3,200 | µg/kg dw | |
| Benzo(g,h,i)perylene | No | 0 to 10 cm | 78 | mg/kg-OC | CSL |
| | | | 1,200 | µg/kg dw | |
| Total Benzofluoranthenes | No | 0 to 10 cm | 450 | mg/kg-OC | CSL |
| | | | 6,800 | µg/kg dw | |
| Chrysene | No | 0 to 10 cm | 460 | mg/kg-OC | CSL |
| | | | 6,900 | µg/kg dw | |

TABLE 2

REMEDIAL ACTION LEVELS TO BE ACHIEVED AT SEDIMENT SURFACE FOLLOWING EXCAVATION AND DREDGING

| COC | Risk Driver? | Compliance Zone ¹ | RAL | Units | Source |
|------------------------|--------------|------------------------------|--------|----------|--------|
| Dibenz(a,h)anthracene | No | 0 to 10 cm | 33 | mg/kg-OC | CSL |
| | | | 500 | µg/kg dw | |
| Fluoranthene | No | 0 to 10 cm | 1,200 | mg/kg-OC | CSL |
| | | | 18,000 | µg/kg dw | |
| Indeno(1,2,3-cd)pyrene | No | 0 to 10 cm | 88 | mg/kg-OC | CSL |
| | | | 1,300 | µg/kg dw | |
| Phenanthrene | No | 0 to 10 cm | 480 | mg/kg-OC | CSL |
| | | | 7,200 | µg/kg dw | |
| Total HPAH | No | 0 to 10 cm | 5,300 | mg/kg-OC | CSL |
| | | | 79,500 | µg/kg dw | |

Note(s)

1. The Compliance Basis is Subtidal Surface Sediment (point), and is the same for all COCs.

Abbreviation(s)

COC = contaminant of concern
cm = centimeter(s)
cPAH = carcinogenic polycyclic aromatic hydrocarbon
CSL = cleanup screening level
dw = dry weight
HPAH = high-molecular-weight polycyclic aromatic hydrocarbon
LAET = lowest-apparent-affect threshold
mg/kg-dw = milligrams per kilogram dry weight

n/a = compounds do not present a risk for the RAO scenario
mg/kg-OC = milligram(s) per kilogram, organic-carbon-normalized value
PCB = polychlorinated biphenyl
RAL = remedial action level
SL = screening level
SQS = sediment quality standards
µg/kg dw = microgram(s) per kilogram dry weight

Exhibit D

**LIST CLEANUP LEVELS THAT HAD TO BE (AND WERE) MET AT THE SEDIMENT SURFACE
FOLLOWING PLACEMENT OF COVER MATERIAL**

TABLE 1
SUMMARY OF CLEANUP LEVELS FOR CONTAMINANTS OF CONCERN IN SEDIMENT

| COC | Risk Driver? | Units ¹ | Spatial Scale of Exposure ² | RAO 1 | RAO 2 | RAO 3 | RAO 4 |
|-----------------|--------------|--------------------|--|--|---|--|---|
| | | | | Human Seafood Consumption ³ (0 to 10 cm) | Human Direct Contact ³ (0 to 45 cm) | Benthic Organisms ⁴ (0 to 10 cm) | Ecological ⁵ (0 to 10 cm) |
| Total PCBs | Yes | µg/kg dw | Subtidal | 2 (nat. bkgd) | n/a | n/a | 100 (RBTC – fish) |
| | | | Intertidal | 2 (nat. bkgd) | n/a | n/a | n/a |
| | | | Point | n/a | n/a | 12 mg/kg-OC/180 (SQS) | n/a |
| cPAHs | Yes | µg TEQ/kg dw | Subtidal | 9 (nat. bkgd) | 550 (RBTC) ⁶ | n/a | n/a |
| | | | Intertidal | 9 (nat. bkgd) | 15 (RBTC) ⁷ | n/a | n/a |
| | | | Point | n/a | n/a | n/a | n/a |
| Arsenic | Yes | mg/kg dw | Subtidal | 7 (nat. bkgd) | 7 (nat. bkgd) | n/a | n/a |
| | | | Intertidal | 7 (nat. bkgd) | 7 (nat. bkgd) | n/a | n/a |
| | | | Point | n/a | n/a | 57 (SQS) | n/a |
| Lead | Yes | mg/kg dw | Subtidal | 11 (nat. bkgd) | n/a | n/a | n/a |
| | | | Intertidal | 11 (nat. bkgd) | n/a | n/a | 50 (RBTC – sandpiper) |
| | | | Point | n/a | n/a | n/a | n/a |
| Tributyltin | Yes | µg/kg dw | Subtidal | 430 (RBTC – child) | n/a | n/a | 150 |
| | | | Intertidal | 2,000 (RBTC – child) ⁸ | n/a | n/a | n/a |
| | | | Point | n/a | n/a | n/a | n/a |
| Copper | Yes | mg/kg dw | Subtidal | 400 (RBTC – child) | n/a | n/a | 114 (RBTC – fish) |
| | | | Intertidal | 400 (RBTC – child) ⁹ | n/a | n/a | 420 (RBTC – sandpiper) |
| | | | Point | n/a | n/a | 390 (SQS/CSL) | n/a |
| Mercury | Yes | mg/kg dw | Subtidal | 0.41 (RBTC – child) | n/a | n/a | n/a |
| | | | Intertidal | 0.17 (RBTC – child) | n/a | n/a | n/a |
| | | | Point | n/a | n/a | 0.41 (SQS) | n/a |
| Dioxins/ Furans | Yes | ng TEQ/kg dw | Subtidal | 2 (nat. bkgd) | 37 (RBTC) ¹⁰ | n/a | n/a |
| | | | Intertidal | 2 (nat. bkgd) | 13 (RBTC) ¹¹ | n/a | n/a |
| | | | Point | n/a | n/a | n/a | n/a |
| Antimony | No | mg/kg dw | Subtidal | n/a | n/a | n/a | n/a |
| | | | Intertidal | n/a | n/a | n/a | n/a |
| | | | Point | n/a | n/a | 150 (LAET/SL) | n/a |
| Cadmium | No | mg/kg dw | Subtidal | 0.398 (nat. bkgd) | n/a | n/a | n/a |
| | | | Intertidal | 0.398 (nat. bkgd) | n/a | n/a | n/a |
| | | | Point | n/a | n/a | n/a | n/a |
| Chromium | No | mg/kg dw | Subtidal | n/a | n/a | n/a | n/a |
| | | | Intertidal | n/a | n/a | n/a | n/a |
| | | | Point | n/a | n/a | 260 (SQS) | n/a |

TABLE 1
SUMMARY OF CLEANUP LEVELS FOR CONTAMINANTS OF CONCERN IN SEDIMENT

| COC | Risk Driver? | Units ¹ | Spatial Scale of Exposure ² | RAO 1 | RAO 2 | RAO 3 | RAO 4 |
|-----------------------------|--------------|--------------------|--|--|---|--|---|
| | | | | Human Seafood Consumption ³ (0 to 10 cm) | Human Direct Contact ³ (0 to 45 cm) | Benthic Organisms ⁴ (0 to 10 cm) | Ecological ⁵ (0 to 10 cm) |
| Cobalt | No | mg/kg dw | Subtidal | n/a | n/a | n/a | n/a |
| | | | Intertidal | n/a | n/a | n/a | n/a |
| | | | Point | n/a | n/a | 10 (LAET/SL) | n/a |
| Nickel | No | mg/kg dw | Subtidal | n/a | n/a | n/a | n/a |
| | | | Intertidal | n/a | n/a | n/a | n/a |
| | | | Point | n/a | n/a | 140 (LAET/SL) | n/a |
| Selenium | No | mg/kg dw | Subtidal | n/a | n/a | n/a | n/a |
| | | | Intertidal | n/a | n/a | n/a | n/a |
| | | | Point | n/a | n/a | 1 (LAET/SL) | n/a |
| Vanadium | No | mg/kg dw | Subtidal | n/a | n/a | n/a | n/a |
| | | | Intertidal | n/a | n/a | n/a | n/a |
| | | | Point | n/a | n/a | 57 (LAET/SL) | n/a |
| Zinc | No | mg/kg dw | Subtidal | n/a | n/a | n/a | n/a |
| | | | Intertidal | n/a | n/a | n/a | n/a |
| | | | Point | n/a | n/a | 410 (SQS) | n/a |
| Pentachloro-phenol | No | µg/kg dw | Subtidal | n/a | n/a | n/a | n/a |
| | | | Intertidal | n/a | n/a | n/a | n/a |
| | | | Point | n/a | n/a | 360 (SQS) | n/a |
| Bis(2-ethylhexyl) phthalate | No | µg/kg dw | Subtidal | n/a | n/a | n/a | n/a |
| | | | Intertidal | n/a | n/a | n/a | n/a |
| | | | Point | n/a | n/a | 47 mg/kg-OC/ 710 (SQS) | n/a |
| Acenaphthene | No | µg/kg dw | Subtidal | n/a | n/a | n/a | n/a |
| | | | Intertidal | n/a | n/a | n/a | n/a |
| | | | Point | n/a | n/a | 16 mg/kg-OC/ 240 (SQS) | n/a |
| Benzo(a)-anthracene | No | µg/kg dw | Subtidal | n/a | n/a | n/a | n/a |
| | | | Intertidal | n/a | n/a | n/a | n/a |
| | | | Point | n/a | n/a | 110 mg/kg-OC/ 1,700 | n/a |
| Benzo(a)pyrene | No | µg/kg dw | Subtidal | n/a | n/a | n/a | n/a |
| | | | Intertidal | n/a | n/a | n/a | n/a |
| | | | Point | n/a | n/a | 99 mg/kg-OC/ 1,500 (SQS) | n/a |
| Benzo(g,h,i)-perylene | No | µg/kg dw | Subtidal | n/a | n/a | n/a | n/a |
| | | | Intertidal | n/a | n/a | n/a | n/a |
| | | | Point | n/a | n/a | 31 mg/kg-OC/ 470 (SQS) | n/a |

TABLE 1
SUMMARY OF CLEANUP LEVELS FOR CONTAMINANTS OF CONCERN IN SEDIMENT

| COC | Risk Driver? | Units ¹ | Spatial Scale of Exposure ² | RAO 1 | RAO 2 | RAO 3 | RAO 4 |
|---------------------------|--------------|--------------------|--|--|---|--|---|
| | | | | Human Seafood Consumption ³ (0 to 10 cm) | Human Direct Contact ³ (0 to 45 cm) | Benthic Organisms ⁴ (0 to 10 cm) | Ecological ⁵ (0 to 10 cm) |
| Total Benzofluor-anthenes | No | µg/kg dw | Subtidal | n/a | n/a | n/a | n/a |
| | | | Intertidal | n/a | n/a | n/a | n/a |
| | | | Point | n/a | n/a | 230 mg/kg-OC/ 1,800 | n/a |
| Chrysene | No | µg/kg dw | Subtidal | n/a | n/a | n/a | n/a |
| | | | Intertidal | n/a | n/a | n/a | n/a |
| | | | Point | n/a | n/a | 110 mg/kg-OC/ 1,700 | n/a |
| Dibenz(a,h)-anthracene | No | µg/kg dw | Subtidal | n/a | n/a | n/a | n/a |
| | | | Intertidal | n/a | n/a | n/a | n/a |
| | | | Point | n/a | n/a | 12 mg/kg-OC/ 180 (SQS) | n/a |
| Fluor-anthene | No | µg/kg dw | Subtidal | n/a | n/a | n/a | n/a |
| | | | Intertidal | n/a | n/a | n/a | n/a |
| | | | Point | n/a | n/a | 180 mg/kg-OC/ 2,400 | n/a |
| Indeno(1,2,3-cd)pyrene | No | µg/kg dw | Subtidal | n/a | n/a | n/a | n/a |
| | | | Intertidal | n/a | n/a | n/a | n/a |
| | | | Point | n/a | n/a | 34 mg/kg-OC/ 510 (SQS) | n/a |
| Phenan-threne | No | µg/kg dw | Subtidal | n/a | n/a | n/a | n/a |
| | | | Intertidal | n/a | n/a | n/a | n/a |
| | | | Point | n/a | n/a | 100 mg/kg-OC/ 1,500 | n/a |
| Total HPAH | No | µg/kg dw | Subtidal | n/a | n/a | n/a | n/a |
| | | | Intertidal | n/a | n/a | n/a | n/a |
| | | | Point | n/a | n/a | 960 mg/kg-OC/ 14,400 | n/a |

Note(s)

1. Unless noted differently in RAO-specific values.
2. The spatial scale of exposure is measured as subtidal SWAC, Intertidal sediments SWAC, and point measurements at single locations throughout the site (i.e., all subtidal and intertidal sediment locations) or at single locations in intertidal sediment only. The spatial scale is RAO-specific, with site-wide exposures applicable to human seafood consumption, human direct contact, and exposures of fish and crab. Intertidal-only exposures are applicable to human consumption of clams from intertidal areas and exposures of sandpiper. Point exposures are applicable to benthic organisms, which are evaluated at single station locations. The statistical metric for site-wide and intertidal evaluation of alternatives and compliance monitoring is the upper confidence limit on the mean, whereas point exposures are evaluated with concentration data at single locations.
3. Cleanup levels are based on 10⁻⁶ cancer risk for carcinogens (e.g., PCBs, cPAHs, arsenic) or on a child exposure hazard quotient of 1 for noncarcinogens (lead, tributyltin, copper). Where cleanup levels are based on carcinogenic risks below background, the background concentration is selected; where no background values are available (chlordanes and DDT), the method detection limit (MDL) is selected.

TABLE 1
SUMMARY OF CLEANUP LEVELS FOR CONTAMINANTS OF CONCERN IN SEDIMENT

| COC | Risk Driver? | Units ¹ | Spatial Scale of Exposure ² | RAO 1 | RAO 2 | RAO 3 | RAO 4 |
|-----|--------------|--------------------|--|--|---|--|---|
| | | | | Human Seafood Consumption ³ (0 to 10 cm) | Human Direct Contact ³ (0 to 45 cm) | Benthic Organisms ⁴ (0 to 10 cm) | Ecological ⁵ (0 to 10 cm) |

4. Applicable on a point exposure only. Two values for PCBs and PAHs (except total benzo(a)fluoranthenes). The first is the organic carbon-normalized SQS value (mg/kg-OC. The second is the dry-weight equivalent based on an average sediment total organic carbon content of 1.5%. For all other compounds, values are dry weight. Under the SMS, sediment cleanup standards are established on a site-specific basis within an allowable range. The SQS and CSL define this range. For chemicals without SMS, LAET and 2LAET values or the SL and ML of the DMMP define this range.

5. Cleanup levels for site-wide exposure are the lowest for either fish or crab; cleanup levels for intertidal exposure are for sandpiper.

6. The cleanup level for site-wide direct contact is based on netfishing.

7. The cleanup level for intertidal direct contact is based on the lowest for either Tribal clamming or child beach play exposures.

8. The cleanup level for intertidal seafood consumption is based on consumption of clams from the intertidal sediment.

Abbreviation(s)

COC = contaminant of concern

cm = centimeter(s)

cPAH = carcinogenic polycyclic aromatic hydrocarbon

CSL = cleanup screening level

DMMP = dredged material management program

dw = dry weight

HPAH = high-molecular-weight polycyclic aromatic hydrocarbon

LAET = lowest-apparent-effect threshold

ML = maximum level

mg/kg-dw = milligram(s) per kilogram dry weight

mg/kg-OC = milligram(s) per kilogram, organic-carbon-normalized value

n/a = compounds do not present a risk for the RAO scenario

Nat. Bkgd = natural background

ng TEQ/kg-dw = nanograms toxicity equivalents per kilogram dry weight

PCB = polychlorinated biphenyl

RAO = remedial action objective

RBTC = risk-based threshold concentrations

SL = screening level

SMS = Sediment Management Standards

SQS = sediment quality standards

SWAC = surface-weighted average concentration

µg/kg dw = microgram(s) per kilogram dry weight

µg TEQ/kg dw = microgram(s) toxicity equivalents per kilogram dry weight