

Memo



DATE: July 29, 2026

TO: Sam Meng

CC: Scott Hooton, Brett Ozolin

FROM: Mark Rettmann

SUBJECT: Outfall Shoreline Impact & Mitigation Memo – Arkema Interim Cleanup Action

The Arkema Interim Action Project (Project) proposes construction associated with a north stormwater outfall and a south stormwater outfall. This memo summarizes the change in rip rap (rock) and concrete/structure surfaces from existing conditions to the proposed conditions associated with the two outfalls.

North Outfall Footprint Summary (Attachment A):

The north outfall has a footprint (rock & structure) increase of 330 SF. See Attachment A for more details.

South Outfall Footprint Summary (Attachment B):

The south outfall has a footprint decrease of -21 SF. See Attachment B for more details.

Overall Project Footprint Change:

The exiting footprint will be relocated to the proposed location as shown on the drawings (Attachment A & B). The overall Project footprint (rock & structure) change is ~309 SF.

Proposed Mitigation:

The Port of Tacoma (Port) proposes the following mitigation to compensate for the increased footprint (309 SF) of the Project outfalls. Mitigation includes direct onsite removal of up to 200 SF of concrete, debris, and trash over a 49,900 SF shoreline area as well as in-kind mitigation by conducting the Arkema Interim Cleanup Action including an environmental cap and a stormwater treatment system; together ensure no-net loss of ecological functions. A location map and representative photos are provided in Attachment C.

1. On-site Concrete Removal
 - a. Removal of nine concrete ecology blocks (~60 SF) as identified on the topographic survey (Sheet SV1.7).
 - b. Removal of concrete pipe debris (~40 SF) identified on the topographic survey (Sheet SV1.7) as "Top of 36" Conc. Pipe Continues Into Water".
2. On-site Trash & Debris Removal along the entire project frontage
 - a. A cleanup of the entire shoreline area (49,900 SF) fronting the Former Arkema Manufacturing Area will be conducted to remove trash and surface debris. The amount of trash and debris to be removed is more variable and dependent on the amount of material present at the time of the cleanup. The Port estimates 50-100 SF of trash and debris will be removed. The area is depicted in green on the location map included in Attachment C.

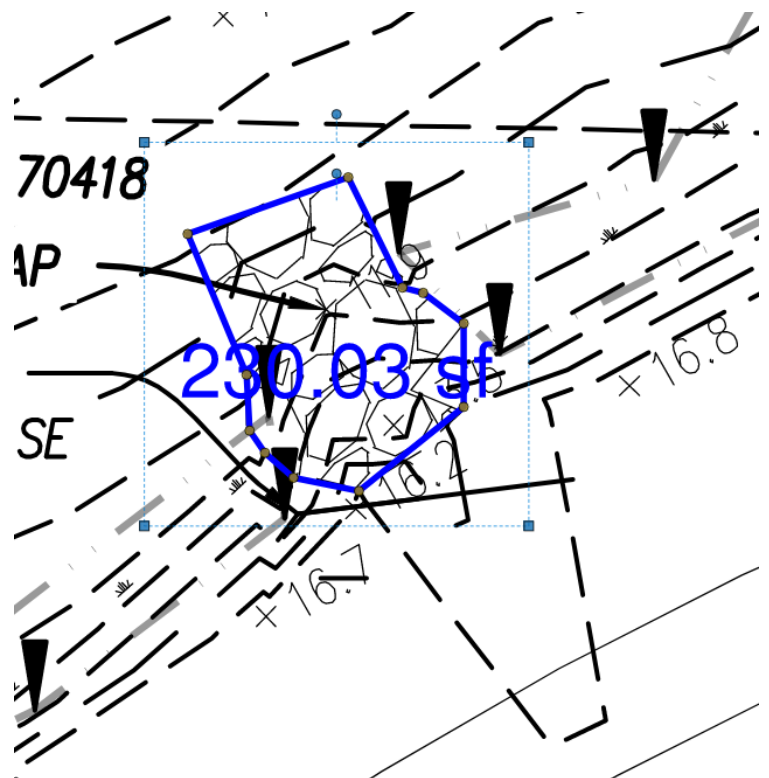
3. Conduct the Arkema Interim Cleanup Action Project (in-kind/innovative mitigation)
The Project includes capping contamination and isolating and treating stormwater before discharge to the Hylebos Waterway. In addition to preventing migration of on-site contamination, the Project will install a stormwater collection and treatment system where there currently is none for the ~45-acre site. This Project will provide a substantial environmental benefit to prevent contamination migrating through the shoreline to the waterway.

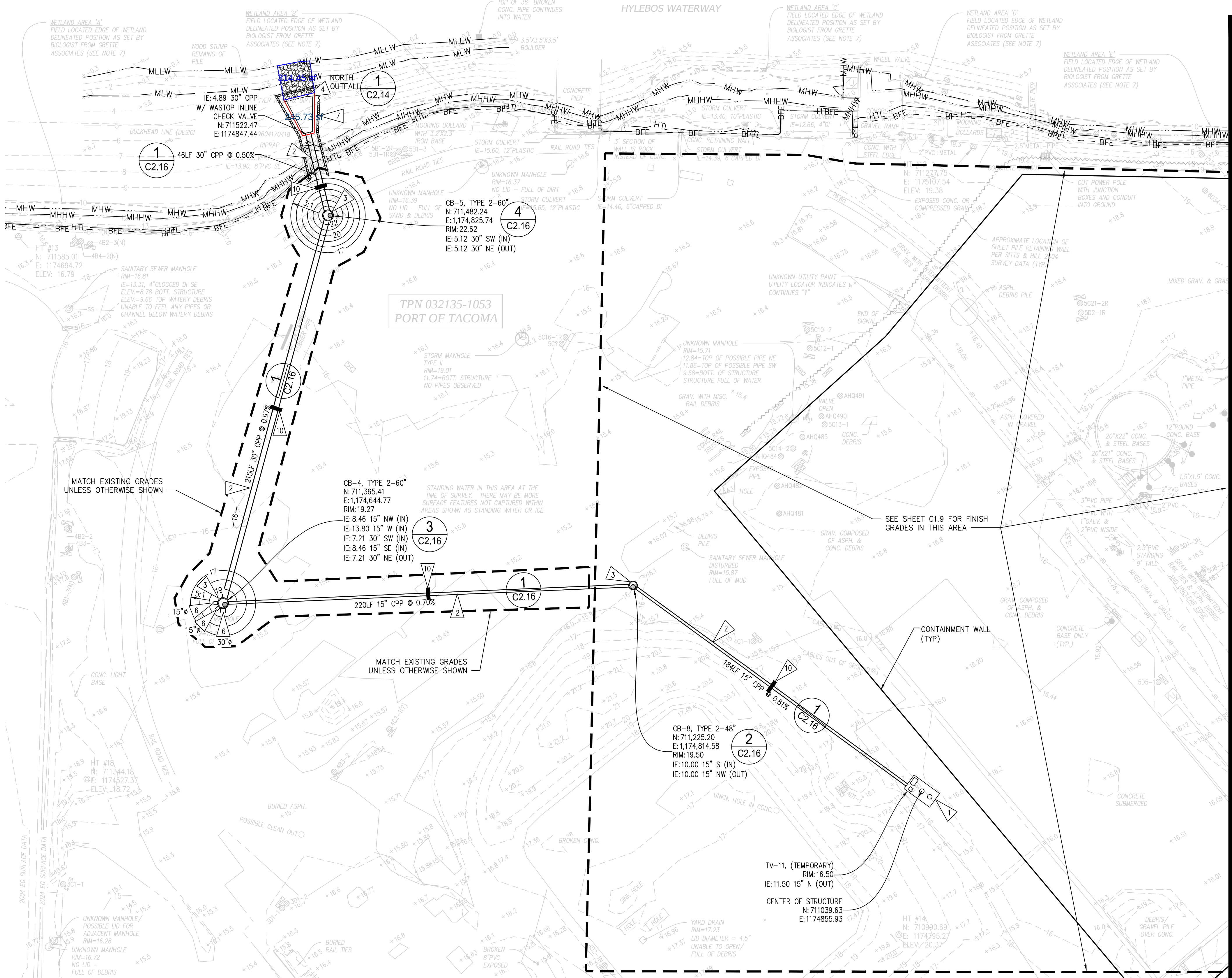
Based on the proposed mitigation, the Project will ensure no-net loss of ecological functions.

Attachment A:

North Outfall

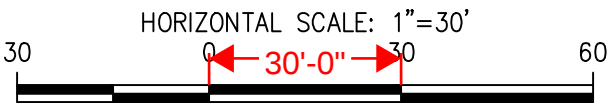
Existing & Proposed Conditions

[illegible]



GRADING AND DRAINAGE PLAN - AREA 7

SCALE: 1" = 30'



LEGEND

PROPOSED FEATURES-

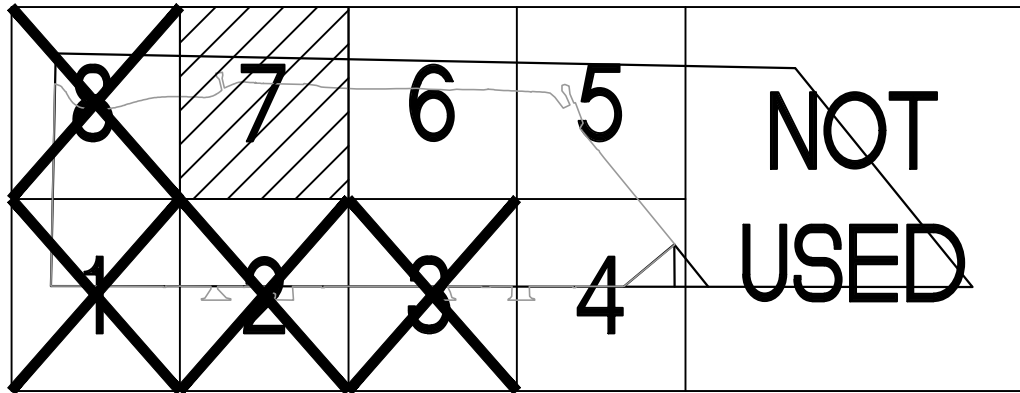
- STORM DRAIN PIPE
- TYPE 2 CATCH BASIN
- TREATMENT VAULT (16'x8')
- CONTOUR MAJOR
- CONTOUR MINOR
- RIDGE LINE
- HTL HIGH TIDE LINE = ELEVATION 13.5
- MHHW MEAN HIGHER HIGH WATER = ELEVATION 11.80
- MHW MEAN HIGH WATER = ELEVATION 10.92
- MLW MEAN LOW WATER = ELEVATION 2.85
- MLLW MEAN LOWER LOW WATER = ELEVATION 0.00
- BFE FEMA BASE FLOOD ELEVATION = 14.5±
- GRADING LIMITS
- QUARRY SPALL APRON PAD
- TRENCH DAM

GENERAL NOTES

- THE BURIED UTILITIES ON THIS PROJECT ARE SHOWN IN THEIR APPROXIMATE LOCATION WHERE KNOWN BASED ON FIELD SURVEY PERFORMED BY SITTS & HILL. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES AND HAVE THEIR LOCATION MARKED ON THE GROUND PRIOR TO CONSTRUCTION. THE CONTRACTOR WILL PROTECT, OR IMMEDIATELY REPAIR, ANY DAMAGED UTILITY "DISCOVERED" ON THIS PROJECT WITHOUT ADDITIONAL COSTS.
- BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN ON THE SITE WAS PREPARED AND PROVIDED BY SITTS & HILL ENGINEERS, INC. SEE SHEET SV1.0 FOR HORIZONTAL AND VERTICAL DATUM.
- SEE SHEETS C2.9-C2.16, C2.19 AND C2.25 FOR STORM DRAINAGE DETAILS AND NOTES, AND STORM DRAIN PROFILES.
- ALL CATCH BASIN COVERS/LIDS TO BE BOLT-DOWN. THE CONTRACTOR SHALL SET RINGS AS NECESSARY TO MATCH FUTURE FINISHED GRADE AS NOTED.
- CONTRACTOR AND/OR SURVEYOR SHALL CALCULATE PIPE SLOPES BASED ON THE INVERT ELEVATIONS SHOWN ON THE PLANS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO FIELD STAKING AND CONSTRUCTION.
- THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR MAINTAINING ALL STORM SYSTEMS (EXISTING AND PROPOSED) AND TESC FACILITIES THROUGH THE CONSTRUCTION AND PROJECT COMPLETION.
- REFER TO STORM DRAINAGE SYSTEM NOTES ON SHEET C2.9 AND THE SPECIFICATIONS FOR THE STORM SYSTEM ELEMENTS.
- REFER TO SHEET C2.0 FOR OVERALL STORM DRAINAGE SYSTEM IN PHASE 1.
- THE CONTRACTOR SHALL NOT UTILIZE EITHER THE TREATMENT VAULT OR CONVEYANCE PIPELINE INSTALLATIONS FOR CONSTRUCTION STORMWATER DISCHARGES. PROVIDE TEMPORARY PLUGS UPON THEIR RESPECTIVE INSTALLATIONS TO PROTECT AND PREVENT THEIR USE.
- SEE U.S. ARMY CORPS OF ENGINEERS REFERENCE NUMBER NWS-287-WRD FOR ALL SHORELINE WORK PERMITTED UP TO ORDINARY HIGH WATER MARK (OHW, 13.50' MLLW).

KEY NOTES

- INSTALL STORM TREATMENT VAULT PER DETAILS ON SHEETS C2.10 AND C2.11. PROVIDE STRUCTURE SUPPORT PER DETAIL 2/C2.9.
- INSTALL STORM DRAINAGE PIPE. PIPE SIZE, MATERIAL AND SLOPE PER CALLOUT. REFER TO STORM DRAINAGE SYSTEM NOTES ON C2.9 FOR SPECIFICATIONS. PIPE BEDDING PER DETAIL 1/C2.9.
- INSTALL CATCH BASIN TYPE 2. STRUCTURE SIZE AND COVER LOCATION PER PLAN. SEE SHEET C2.25 FOR CATCH BASIN DETAILS. PROVIDE STRUCTURE SUPPORT PER DETAIL 2/C2.9. REFER TO STORM DRAINAGE SYSTEM NOTES ON C2.9 FOR SPECIFICATIONS.
- INSTALL OUTFALL PER SECTIONS ON SHEET C2.12 AND DETAILS ON SHEETS C2.14 AND C2.15
- CUT 32" Ø HOLE IN EXISTING STEEL SHEET PILE WALL. PROVIDE TRENCH DAM ON WEST SIDE OF EXISTING SHEET PILE WALL
- INSTALL 5-FT LONG CPP PIPE STUB WITH TEMPORARY CAP FOR FUTURE PIPE EXTENSION, PIPE SIZE AND DIRECTION AS SHOWN IN PLAN VIEW. PROVIDE COR-N-SEAL ADAPTER PER DETAIL 1/C2.25
- PROVIDE TEMPORARY SHEET PILE WALL COFFER DAM FOR OUTFALL CONSTRUCTION. SEE SPECIFICATIONS FOR SHEET PILE WALL DESIGN, CONSTRUCTION, DEWATERING DESIGN AND EXECUTION REQUIREMENTS.
- PROVIDE (1) TEMPORARY 6" DIAMETER PUMP DISCHARGE PIPELINE. CONTRACTOR TO PROVIDE ALL PIPE, FITTINGS AND ALIGNMENT. THE ALIGNMENT SHOWN IS ABOVE GROUND ALONG THE EXISTING FENCE LINE EXCEPT AT THE ACCESS CROSSING. THE ACCESS CROSSING IS BURIED WITH A SLEEVE. THE TEMPORARY DISCHARGE PIPELINE SHALL BE INSTALLED ABOVE GROUND OVER THE WETLAND AND TERMINATE AT THE PERMANENT QUARRY SPALL APRON PAD. THE PERMANENT QUARRY SPALL APRON PAD SHALL BE INSTALLED PRIOR TO TEMPORARY PUMP SYSTEM WORK, PERMANENT OUTFALL AND OUTFALL PIPELINE WORK.
- PROVIDE A TEMPORARY PUMP SYSTEM THAT CONFORMS TO SPECIFICATION REQUIREMENTS.
- PROVIDE TRENCH DAM PER DETAIL 3/C2.9



KEY PLAN

SCALE: NTS



6697

C2.7

SH # 34 OF 44

CONTRACTOR: PA00000403

M. ID: 101585.01

PHASE: 100%

ARKEMA INTERIM ACTION - PHASE 1

CONTAINMENT WALL

GRADING AND DRAINAGE PLAN - AREA 7

TOWNSHIP: 21 NORTH

RANGE: 3 EAST

SECTION: 36

DAT-HRZ: WA8372011

VERT: MLLW 15.73' @ POT MON #178

PARCEL: 0321351053

DRAWING SCALE: AS NOTED

APPROVED:

CH 05/12/26

CHECKED BY: DATE

PROJ. ENGR. DATE

PRINTED BY: sreob May 13, 2026

PORT ADDRESS: ONE SITCUM PLAZA

TACOMA, WA 98401-1837

DATE:

APPR:

BY:

REVISION:

MARK:

PRELIMINARY

Attachment B:

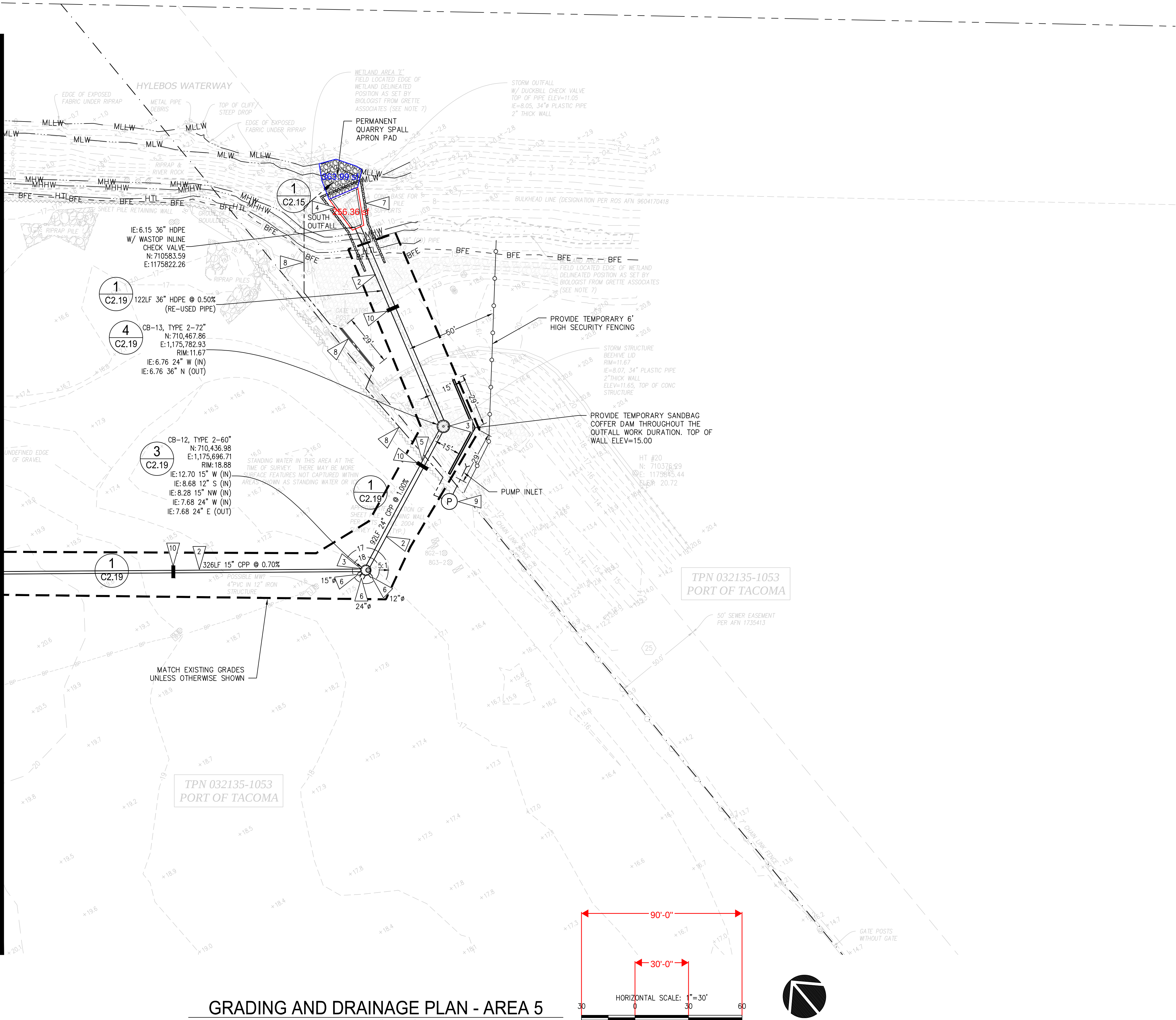
South Outfall

Existing & Proposed Conditions

BINDING EDGE

MATCHLINE SEE SHEET C2.6

PORT OF TACOMA FILE: N:\20300\2034\Drawings\PHASE 1 Drawings\101585-C2.X



LEGEND

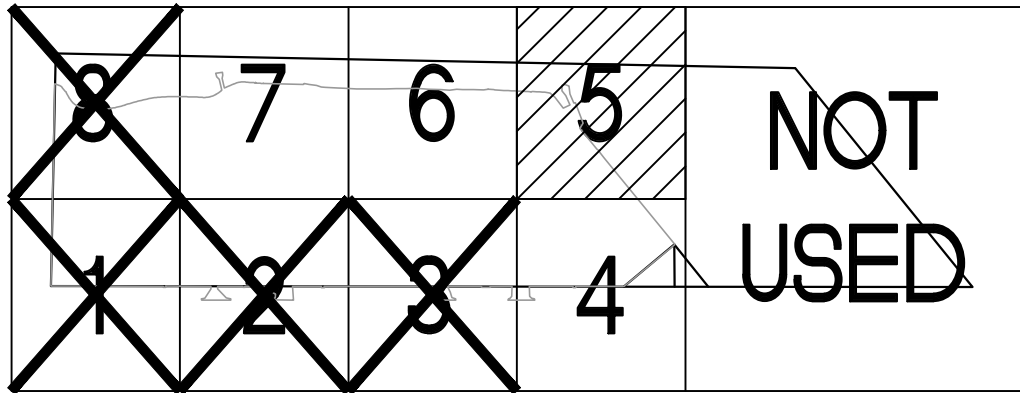
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KEY PLAN
SCALE: NTS



6697

C2.5

SH # 32 OF 44

ARKEMA INTERIM ACTION - PHASE 1
CONTAINMENT WALL
GRADING AND DRAINAGE PLAN - AREA 5

CONT/CONS: PA00000403
M. ID: 101585.01
PHASE: 100%

TOWNSHIP: 21 NORTH
RANGE: 3 EAST
SECTION: 36
DAT-HRZ: WA83/2011
PARCEL: 0321351033

PORT ADDRESS: ONE SITCUM PLAZA
TACOMA, WA 98401-1837

APPROVED: RCH 05/12/26
CHECKED BY: DATE
RCH 05/12/26
DIRECTOR ENG. DATE
PRINTED BY: sreprob May 13, 2026
PROJ. ENGR DATE

DATE: 05/12/26
APPR: 05/12/26
BY: 05/12/26
REVISION: 05/12/26
MARK: 05/12/26

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (206) 388-5441

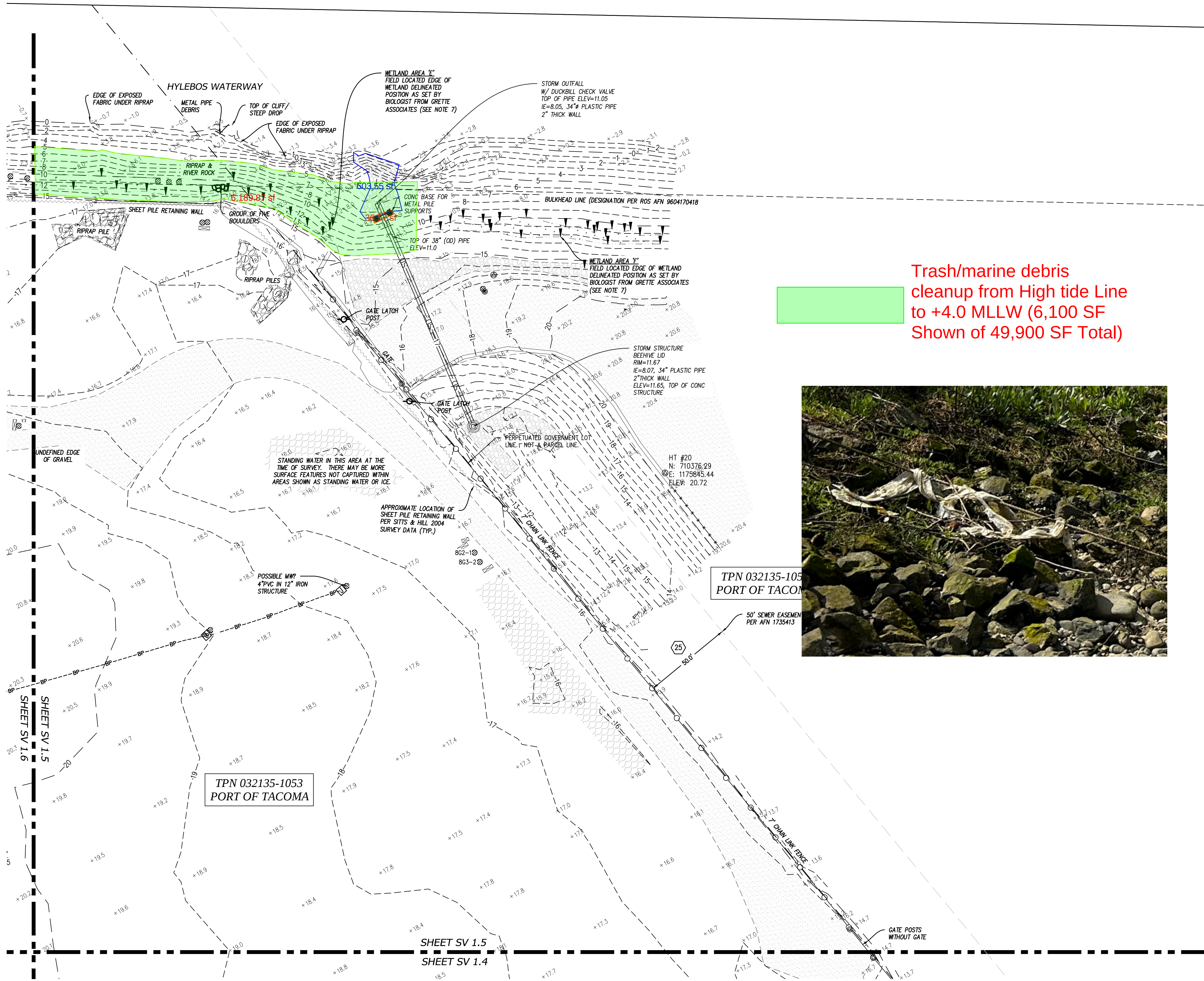
sitts & hill
CIVIL & STRUCTURAL ARCHITECTURAL & SURVEY
1015 1ST AVE. SUITE 100
TACOMA, WA 98401
PHONE (253) 424-4444 FAX (253) 424-4445
WWW.SITTSANDHILL.COM

PRELIMINARY
RICHARD C. HANDY
WASHINGTON
REGISTERED PROFESSIONAL
NO. 10000

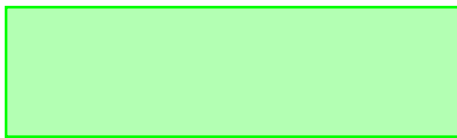
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Attachment C:

Proposed On-site Mitigation

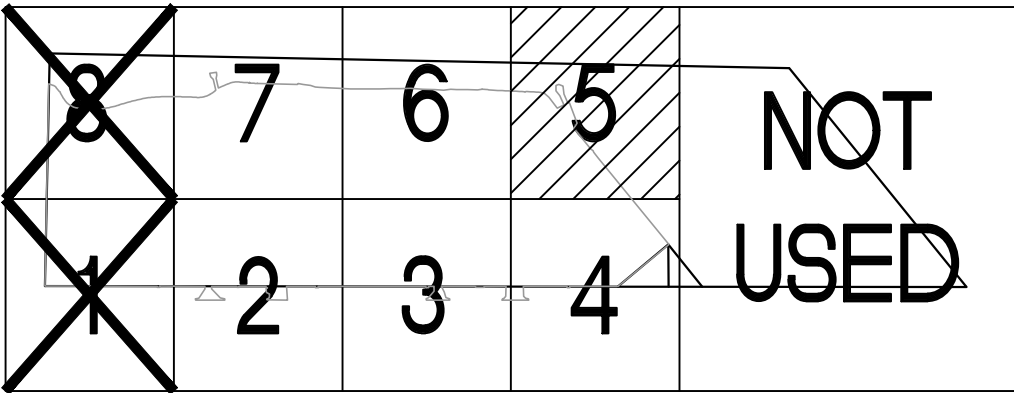
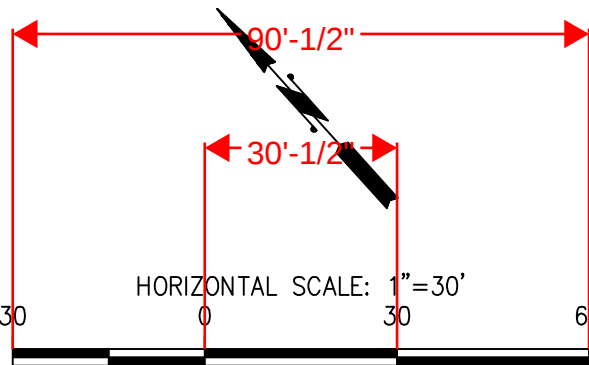


Trash/marine debris
cleanup from High tide Line
to +4.0 MLLW (6,100 SF
Shown of 49,900 SF Total)



LEGEND

- FOUND MONUMENT/ REBAR AS NOTED
- SURVEY CONTROL POINT
- SANITARY SEWER MANHOLE
- UTILITY CLEAN OUT
- STORM MANHOLE
- STORM CATCH BASIN
- STORM CULVERT
- WATER MANHOLE
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- IRRIGATION CONTROL VALVE
- GAS VALVE
- GAS RISER
- POWER METER
- POWER CABINET
- UTILITY POLE
- UTILITY POLE WITH DROP(S)
- GUY ANCHOR
- JUNCTION BOX
- POWER VAULT
- LIGHT POLE
- TELECOM RISER
- TELECOM VAULT
- TELECOM JUNCTION BOX
- UTILITY VAULT
- UTILITY MANHOLE
- UNKNOWN STAND PIPE
- UNKNOWN VALVE
- UNKNOWN RISER
- COLUMN
- BOLLARD
- SIGN
- MAILBOX
- ECOLOGY BLOCK
- RAILROAD SWITCH
- MONITORING WELL
- PILE
- WETLAND FLAG
- TPN TAX PARCEL NUMBER
- XX'N.E. DISTANCE AND DIRECTION OF NOTED OBJECT FROM PROPERTY LINE
- SCHED. B EXCEPTION NUMBER
- PARCEL LINE
- ROAD CENTERLINE
- RIGHT OF WAY LINE
- EASEMENT LINE
- SD STORM DRAIN LINE
- SD-R RECORD STORM LINE
- SS SANITARY SEWER LINE
- SS-R RECORD SANITARY LINE
- W BURIED WATER LINE
- W-R RECORD WATER LINE
- NGAS BURIED GAS LINE
- NGAS-R RECORD GAS LINE
- BP BURIED POWER LINE
- BP-R RECORD BURIED POWER
- AP OVERHEAD POWER LINE
- BT BURIED TELECOM LINE
- BT-R RECORD TELECOM LINE
- CHAIN LINK FENCE
- RAILROAD TRACKS
- WETLAND DELINEATION
- ASPHALT SURFACE
- CONCRETE SURFACE
- GRAVEL SURFACE
- RIP-RAP SURFACE
- AREA OF STANDING WATER/ ICE AT TIME OF SURVEY
- WETLAND AREA



KEY PLAN
SCALE: NTS

TOPOGRAPHIC SURVEY - AREA 5
SCALE: 1" = 30'

6697

SV1.5

SH # 7 OF 44

CONT/CONS: PA00000403

M. ID: 101585.01

PHASE: 90%

ARKEMA INTERIM ACTION - PHASE 1

CONTAINMENT WALL

TOPOGRAPHIC SURVEY - AREA 5

TOWNSHIP: 21 NORTH

RANGE: 3 EAST

SECTION: 36

DAT-HRZ: WA83/2011

VERT: MLLW 15.73' @ POT MON #178

PARCEL: 0321351053

DRAWING SCALE: AS NOTED

Port of Tacoma

P.O. BOX 1837 TACOMA, WA 98401 (206) 383-5441

sh

sitts & hill

CIVIL & STRUCTURAL ARCHITECTURAL & SURVEY

PHONE (206) 244-4444 FAX (206) 244-4445

http://www.shsitts.com

PRELIMINARY

SCHILLING

REGISTERED PROFESSIONAL LAND SURVEYOR

NO. 10000

WASHINGTON

APPROVED:

DS 04/09/26

CHECKED BY: DATE

DIRECTOR ENG. DATE

PROJ. ENGR DATE

PRINTED BY: Kreischer, Apr 24, 2026

PORT ADDRESS: ONE SITCUM PLAZA

TACOMA, WA 98401-1837

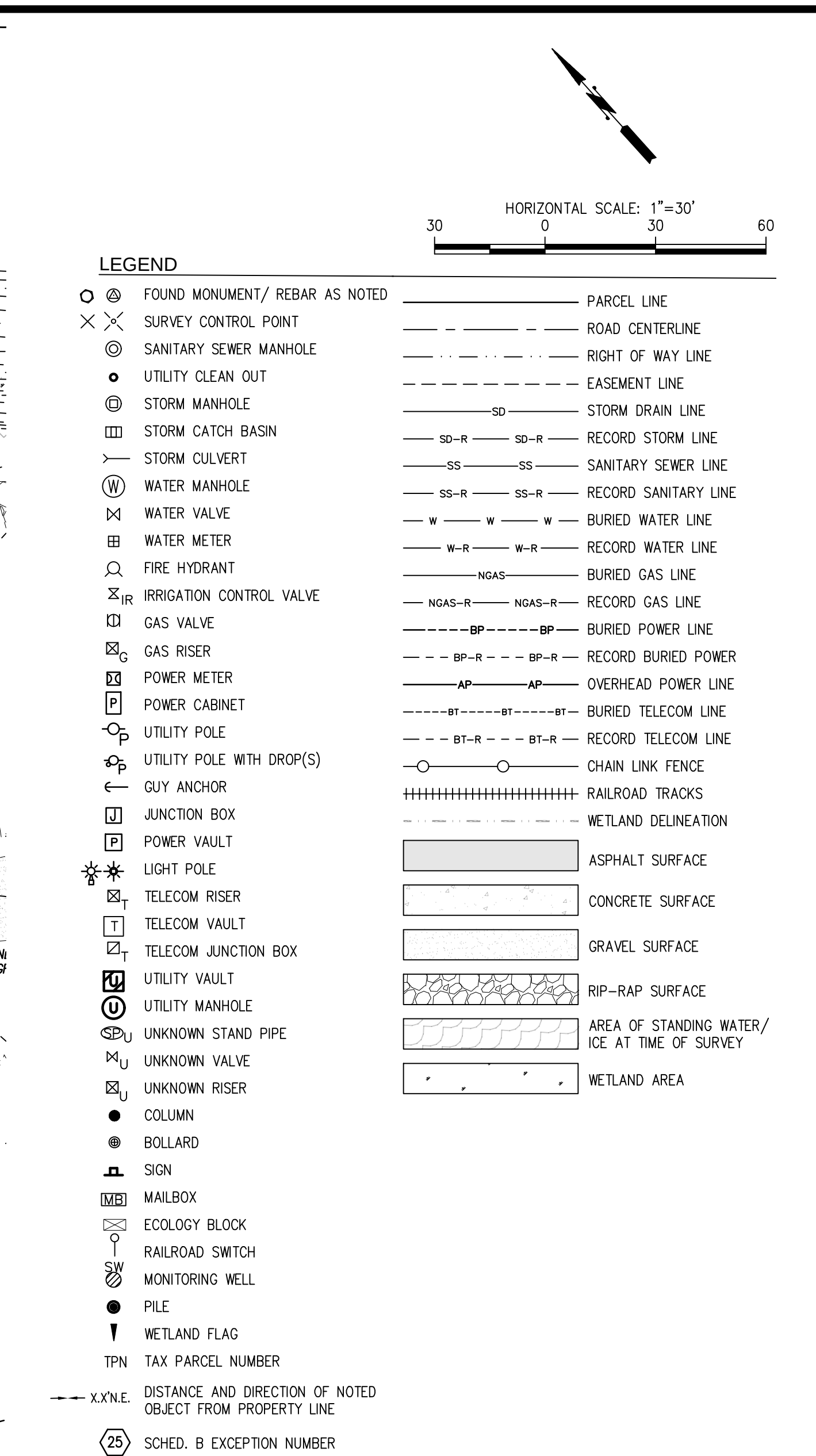
MARK:

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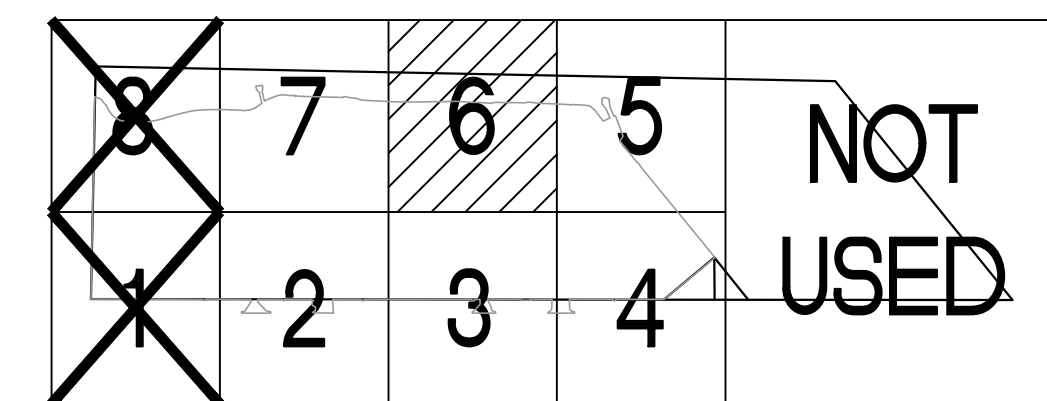
BY:

DATE:

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Trash/marine debris
cleanup from High tide Line
to +4.0 MLLW (16,200 SF
Shown of 49,900 SF Total)



KEY PLAN
SCALE: NTS



