

Lower Duwamish Waterway Upper Reach Remedial Action

Contract KC001065

Volume 3 of 3

Contract Drawings

January 2024



King County

Department of Natural Resources and Parks
Wastewater Treatment Division

100% DESIGN SUBMITTAL

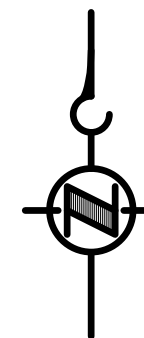
LOWER DUWAMISH WATERWAY UPPER REACH

LOWER DUWAMISH WATERWAY GROUP



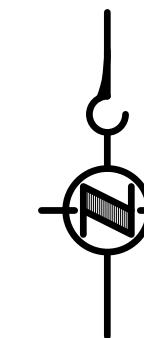
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VICINITY MAP
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SOURCE: AERIAL PHOTOGRAPH FROM ©MICROSOFT, BING MAPS

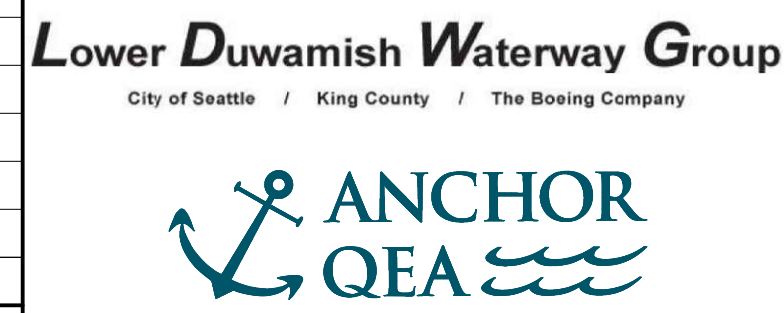
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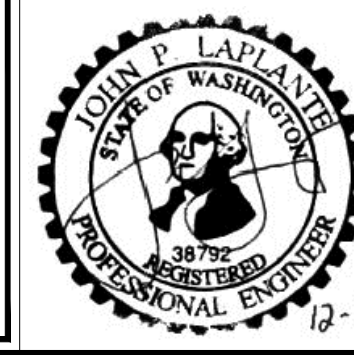
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PLOTTED: Jan 12, 2024 10:09:03am By jigsby

NO	REVISION DESCRIPTION	BY	APVD	DATE



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DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA
PROJECT ENGINEER: J. LAPLANTE
DESIGN APPROVAL: J. ABDALKHANI
PROJECT ACCEPTANCE: G. STEINER
CHECKED: K. GROSS
SCALE: AS NOTED
PROJECT FILE NO: E00559E18
CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION
COVER SHEET

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REV NO: **0**

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0 REFERENCE 1"

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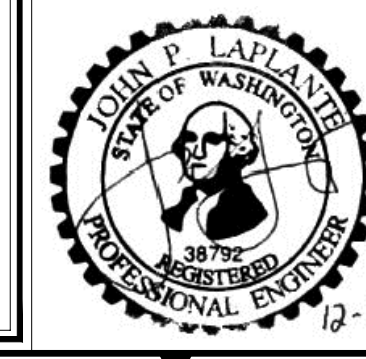
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38	C107	DREDGE PLAN (RM 3.85 TO 3.99)
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NO	REVISION DESCRIPTION	BY	APVD	DATE



FINAL ISSUE DRAWING
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 DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

DRAWING SHEET INDEX

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REV NO:	0

1" REFERENCE

GENERAL NOTES:

- FOR DRAWINGS THAT INCLUDE AERIAL PHOTOGRAPHS, THE PHOTOGRAPH REPRESENTS CONDITIONS AT THE TIME IT WAS TAKEN. THE CONTRACTOR SHALL FIELD VERIFY SITE CONDITIONS BEFORE CONSTRUCTION.
- IN LIEU OF COORDINATE CONTROL TABLES, CONTRACTOR WILL BE PROVIDED ELECTRONIC CAD FILES OF THE DRAWINGS.

HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET.

VERTICAL DATUM: MEAN LOWER LOW WATER (MLLW) EPOCH: 1983-2001. THE CONVERSION BETWEEN NAVD88 AND MLLW WAS DETERMINED USING NOAA/NOS VDATUM 3.9. THE VDATUM CALCULATED SEPARATION BETWEEN NAVD88 AND MLLW AT THE NOAA/NOS TIDE STATION 9447130 (SEATTLE) IS 2.34 FEET. (EXAMPLE: 10.00 FT NAVD88 = 12.34 FT MLLW).

GENERAL SURVEY NOTES:

- TOPOGRAPHIC AND BATHYMETRIC SURVEY DATA WERE MERGED BY ANCHOR QEA TO PROVIDE A CONTINUOUS ELEVATION DATA SET. DATA SET INCLUDE 2019/2020 BATHYMETRY DATA, 2021/2022 TOPOGRAPHY DATA, 2016 LIDAR DATA, AND VARIOUS INTERPOLATED PATCHES.

BATHYMETRIC SURVEY NOTES:

- THE BATHYMETRIC HYDROGRAPHIC SURVEY WAS COMPLETED BY NORTHWEST HYDRO INC.
- SURVEY DATA COLLECTED APRIL 18-MAY 15, 2019 WITH ADDITIONAL SURVEY JUNE 2020.
- ALL HORIZONTAL POSITIONING AND VESSEL ALTITUDE WAS PROVIDED IN REAL TIME USING AN APPLANIX POS/MV RTK GPS AIDED INERTIAL SENSOR. REAL TIME RTK CORRECTIONS FROM THE WSRN GNSS NETWORK WERE UTILIZED DURING ALL FIELDWORK FOR THIS PROJECT.
- SOUNDINGS WERE COLLECTED USING A R2SONIC 2022 MULTIBEAM SONAR OPERATING AT 400 KHz. DATA PROCESSING WAS COMPLETED USING HYPACK HYSWEEP SOFTWARE.
- THE BATHYMETRIC SURVEY IS REPRESENTATIVE OF THE GENERAL CONDITION OF THE WATERWAY BED AT THE TIME OF THE SURVEY. THE CONDITION OF THE BOTTOM MAY CHANGE AT ANY TIME AFTER THE DATE OF THE SURVEY.
- ALL BATHYMETRIC DATA WERE COLLECTED IN ACCORDANCE WITH THE U.S ARMY CORPS OF ENGINEERS HYDROGRAPHIC SURVEY MANUAL EM-112-02-1003 (NOVEMBER 2013). SURVEY CLASSIFICATION: NAVIGATION AND DREDGING SUPPORT SURVEYS, BOTTOM CLASSIFICATION OF SOFT.

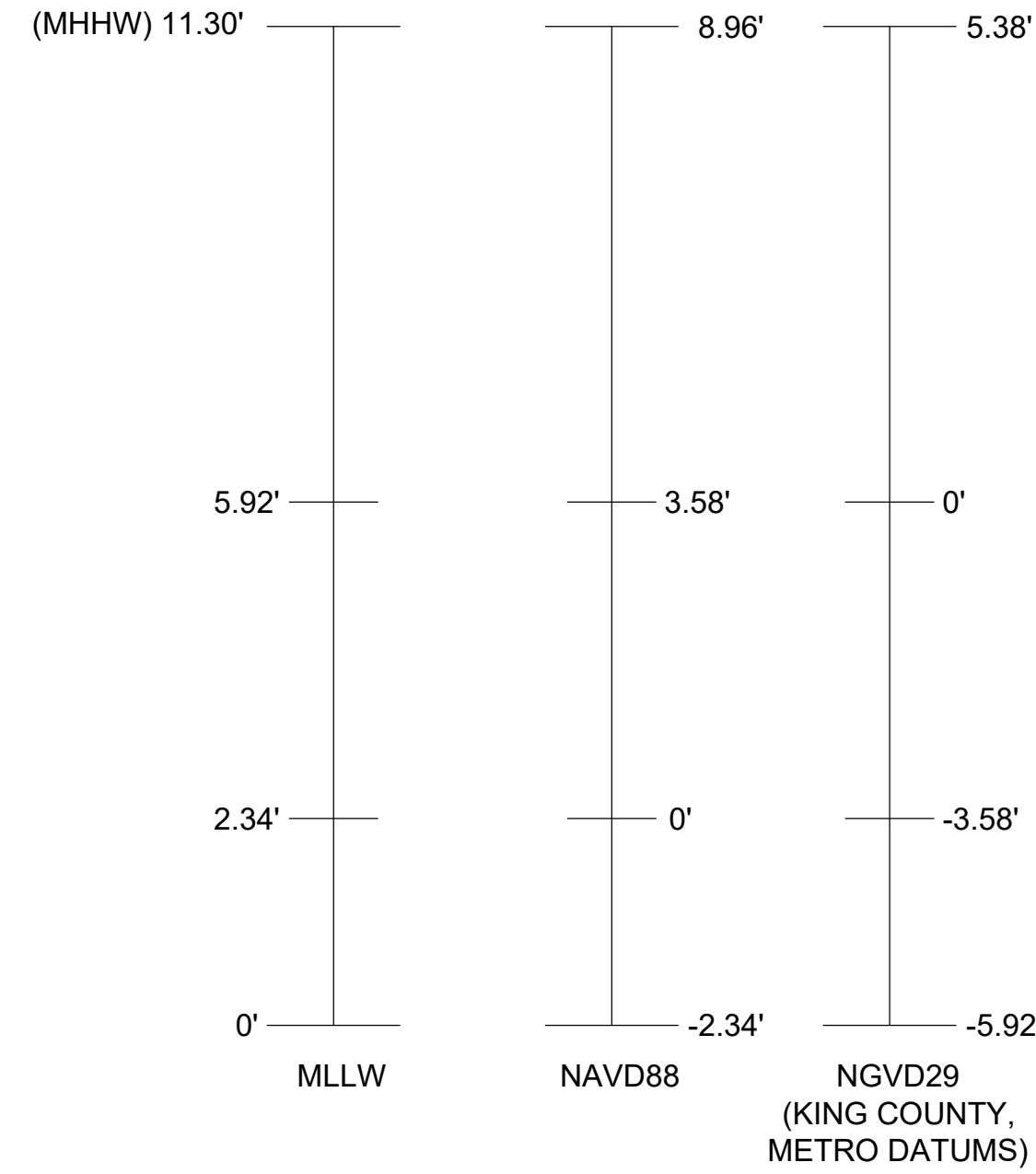
TOPOGRAPHIC SURVEY NOTES:

- THE UPLAND TOPOGRAPHIC SURVEY WAS COMPLETED BY TRUE NORTH LAND SURVEYING, INC. DATE OF SURVEY: JULY 1-AUGUST 10, 2021 AND OCTOBER 5-7, 2022.
- HORIZONTAL DATUM CONTROL: WSDOT MON GP17005-176 & GP17005-181
- VERTICAL BENCHMARK: COS BM 3765-4302 2" BRASS DISK SET AT 8TH AVE S & S PORTLAND ST IN CENTER OF CONC WALK. EL: 13.322 (NAVD88) CONVERTED EL: 15.662 (MLLW)
- COS BM SNV-5411 2" BASS DISK STAMPED COS TOP OF CURB AROUND US BANK SIGN, AT SOUTHEAST CORNER, EAST MARGINAL WAY S & S MICHIGAN ST. EL: 16.866 (NAVD88) CONVERTED EL: 19.226 (MLLW)
- EQUIPMENT USED: LEICA TS 16 AND GS 16.

DATUM INFORMATION:

- IN-WATER ELEVATIONS ARE IN FEET MLLW, BASED ON THE NOAA/NOS TIDE STATION 9447130 (SEATTLE).
- TO CONVERT ELEVATIONS FROM NAVD88 TO MLLW, ADD +2.34 FEET TO NAVD88 ELEVATIONS (EXAMPLE: 10.00 FEET NAVD88 = 12.34 FEET MLLW).
- MHHW IS EQUAL TO 11.30 FEET BASED ON MLLW DATUM (8.96 FEET BASED ON NAVD88 DATUM).

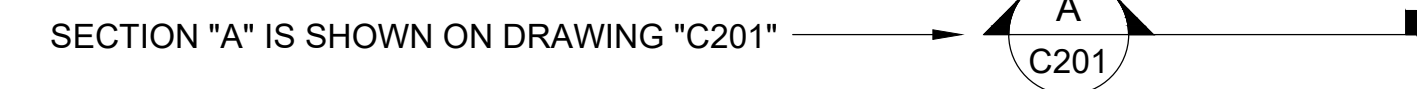
DATUM CONVERSION:



ABBREVIATIONS:

BLDG	BUILDING
BMP	BEST MANAGEMENT PRACTICE
CONC	CONCRETE
CONT	CONTINUED OR CONTINUOUS
CMP	CORRUGATED METAL PIPE
CP	CONTROL POINT
CY	CUBIC YARD
DI	DUCTILE IRON
DIA	DIAMETER
DWG	DRAWING
E	EAST
EAA	EARLY ACTION AREA
EL, ELEV	ELEVATION
ENR	ENHANCED NATURAL RECOVERY
EX	EXISTING
FT	FOOT OR FEET
IE	INVERT ELEVATION
IN	INCH OR INCHES
KCIW	KING COUNTY INDUSTRIAL WASTE DIVISION
LDW	LOWER DUWAMISH WATERWAY
LIDAR	LIGHT DETECTION AND RANGING
MAX	MAXIMUM
MH	MANHOLE
MHHW	MEAN HIGHER HIGH WATER
MIN	MINIMUM
MLLW	MEAN LOWER LOW WATER
MW	MONITORING WELL
N	NORTH
NAD83	NORTH AMERICAN DATUM OF 1983
NAVD88	NORTH AMERICAN VERTICAL DATUM OF 1988
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
OD	OVERDREDGE
PVC	POLYVINYL CHLORIDE
RAA	REMEDIAL ACTION AREA
RCP	REINFORCED CONCRETE PIPE
RMC	RESIDUALS MANAGEMENT COVER
ROW	RIGHT OF WAY
S	SOUTH
SD	STORM DRAIN
SF	SQUARE FOOT OR SQUARE FEET
SHT	SHEET
SMA	SEDIMENT MANAGEMENT AREA
SPEC	SPECIFICATION
STA	STATION
STD	STANDARD
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
TYP	TYPICAL
W	WEST
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

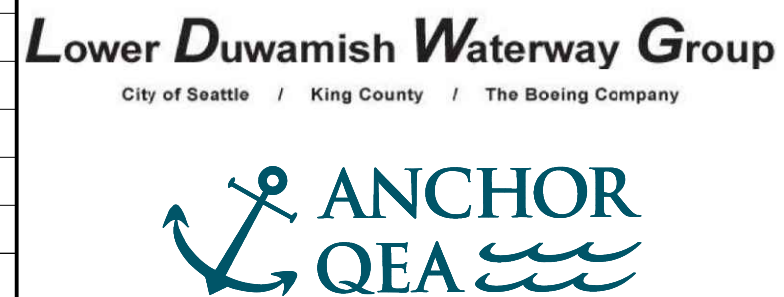
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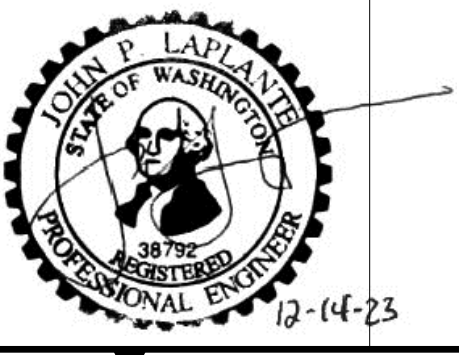
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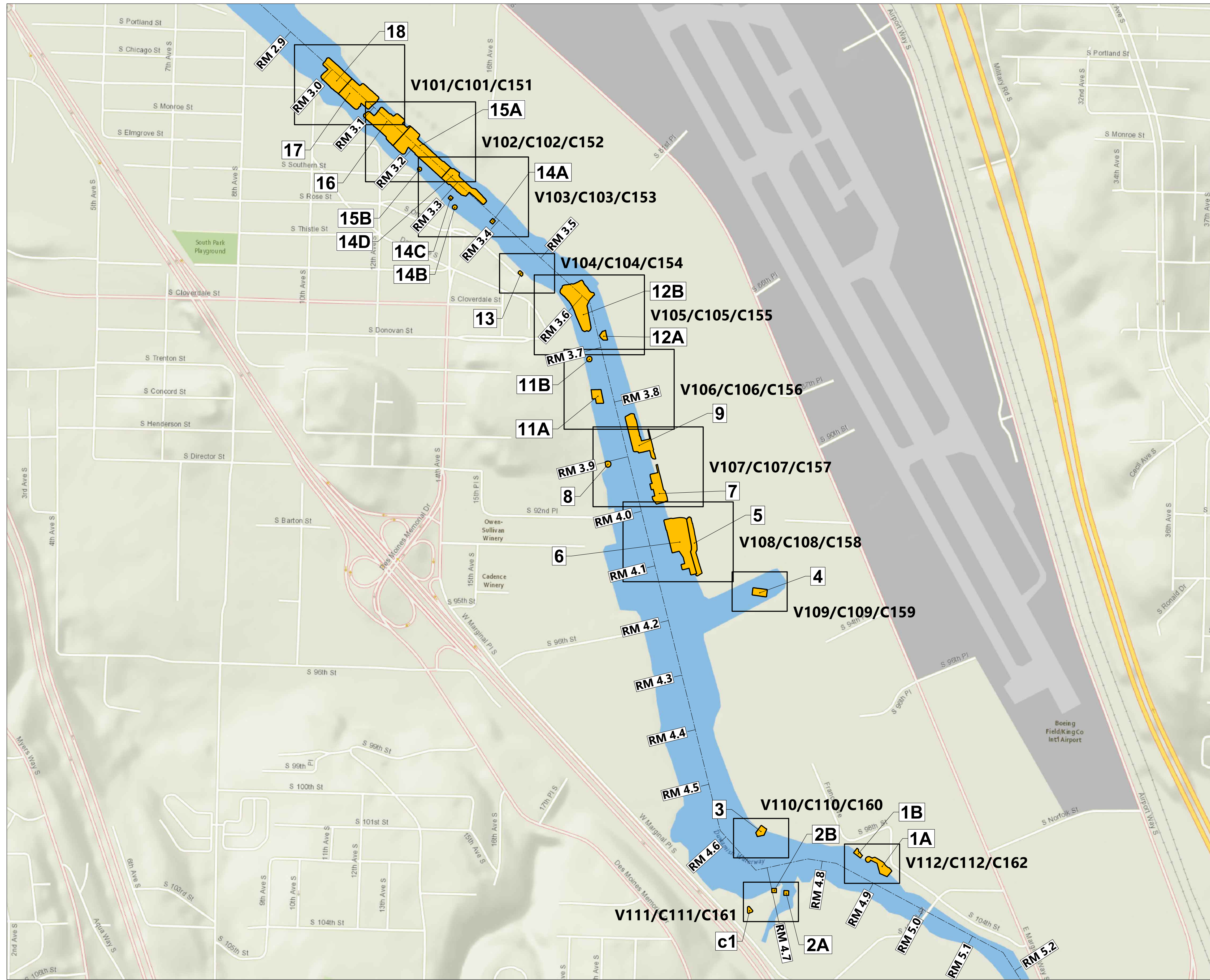
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PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



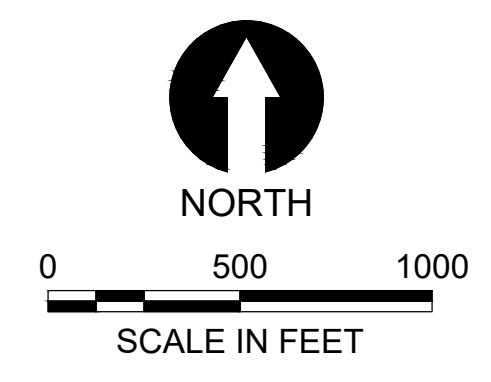
DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION
GENERAL NOTES & ABBREVIATIONS

DATE: DECEMBER 2023
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SHT NO / TOTAL 3 / 91
REV NO: 0

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- LEGEND:
- EXTENT OF SEDIMENT MANAGEMENT AREAS
 - C108 SHEET EXTENTS AND DRAWING NUMBER
 - 14 SEDIMENT MANAGEMENT AREA NUMBER



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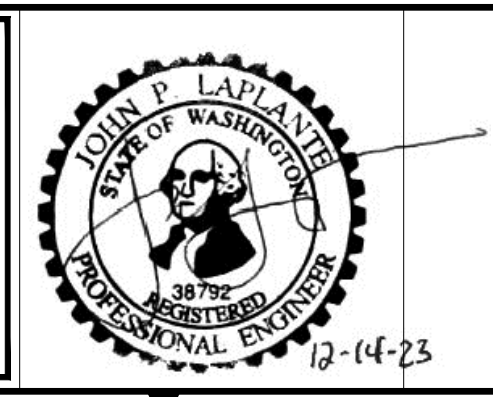
Lower Duwamish Waterway Group
 City of Seattle / King County / The Boeing Company

ANCHOR QEA

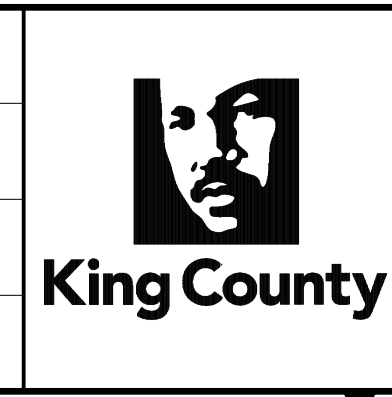
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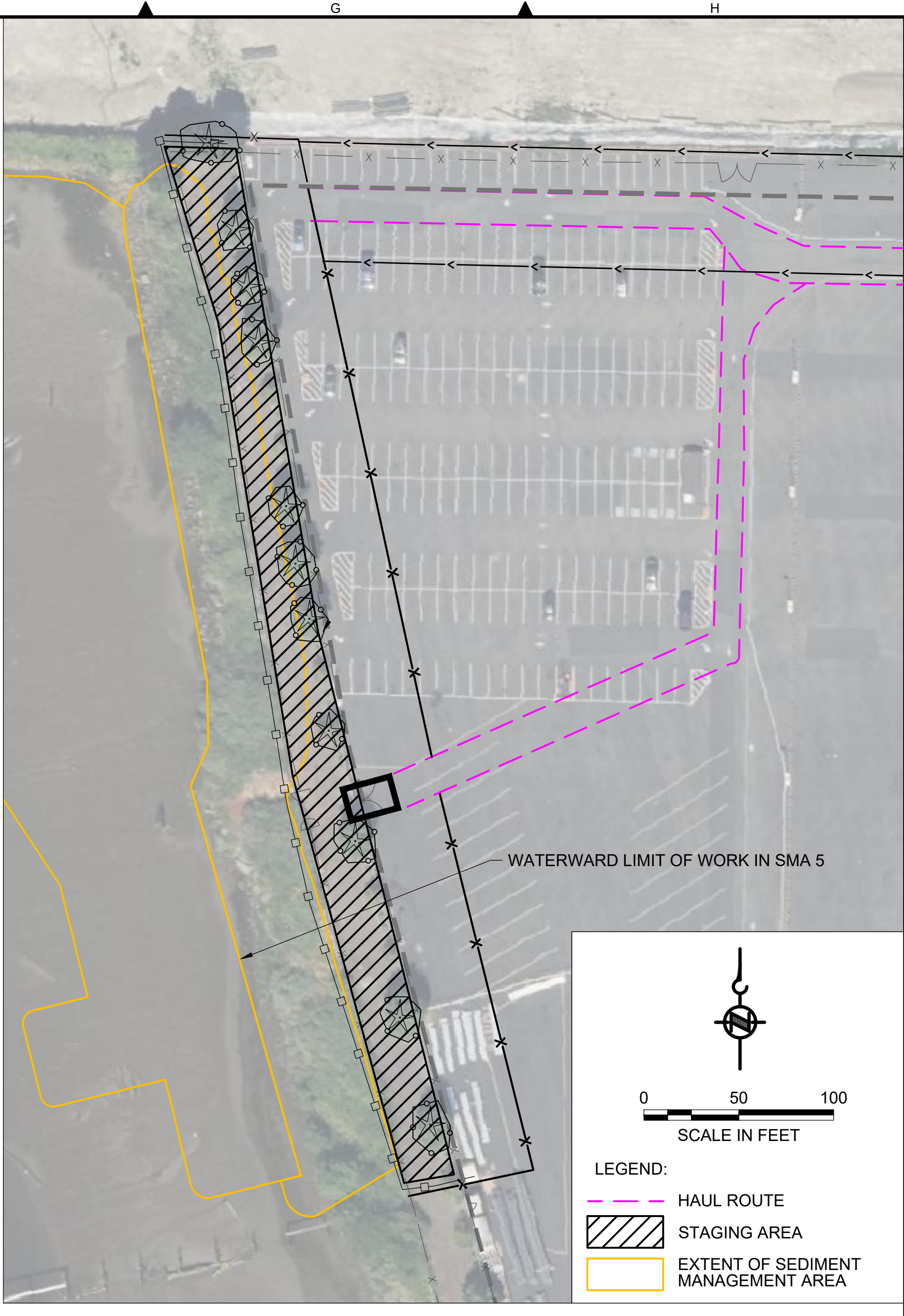
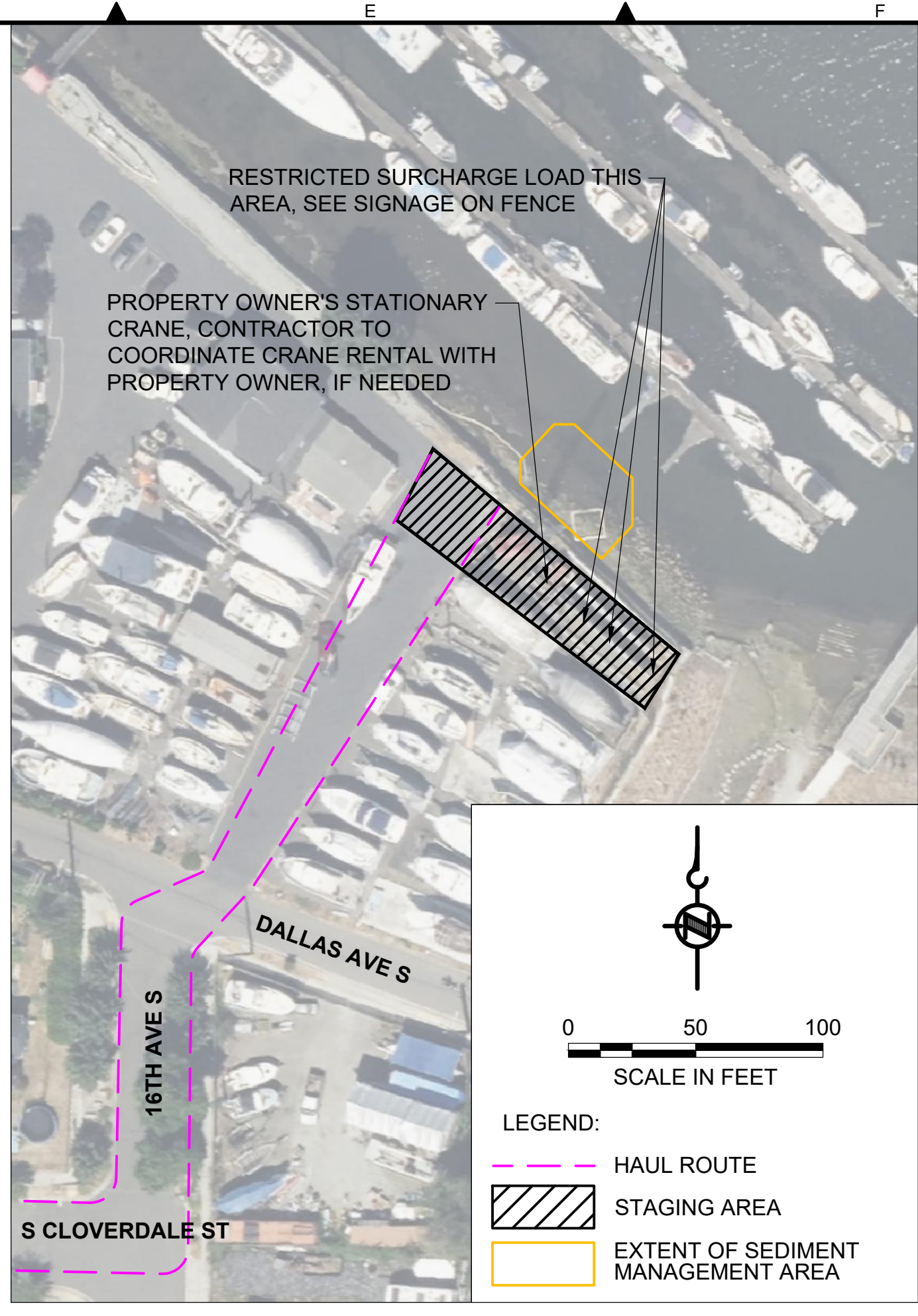
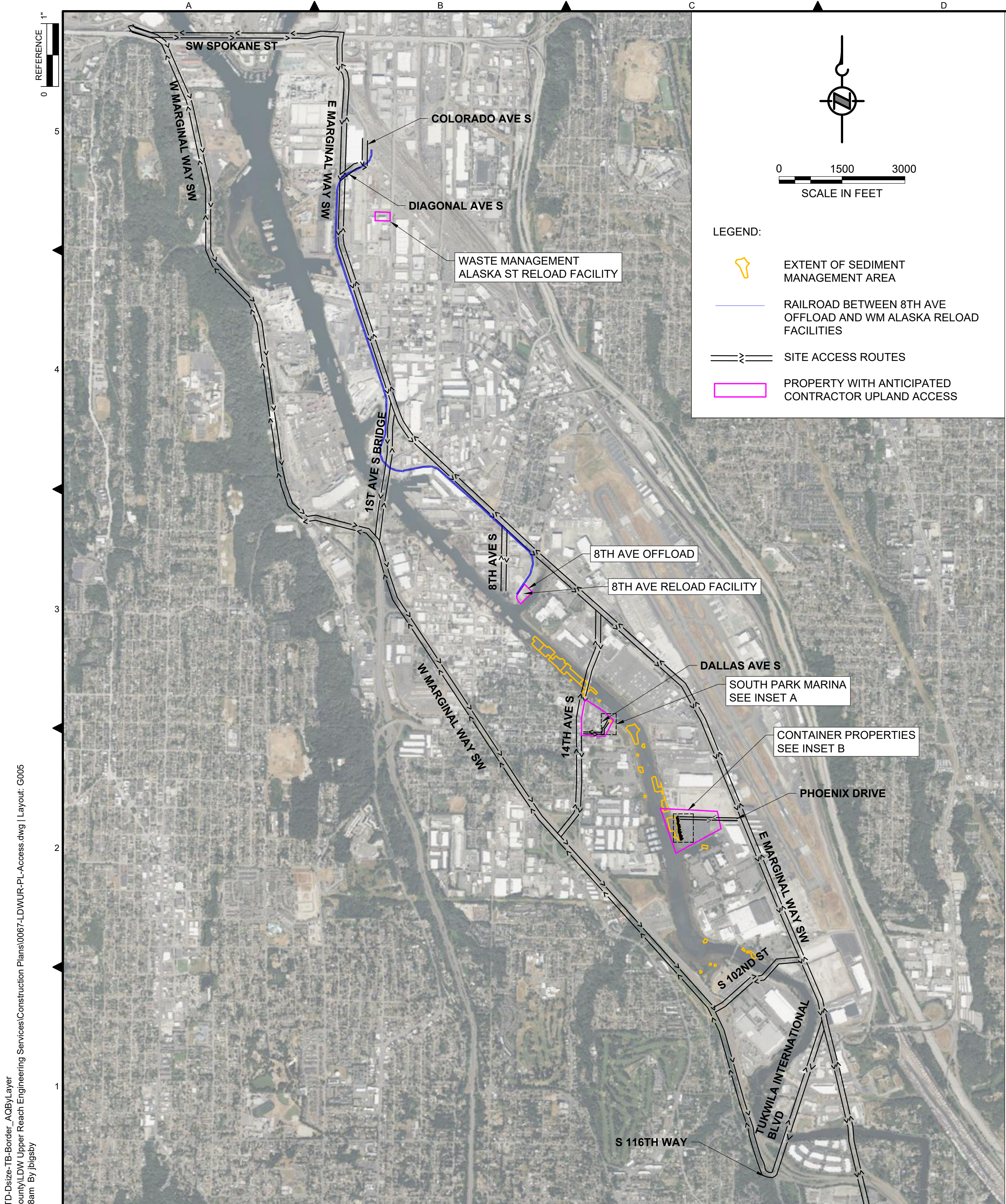
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DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

OVERVIEW MAP

DATE: DECEMBER 2023	SHT NO / TOTAL 4 / 91
DRAWING NO: G004	REV NO: 0

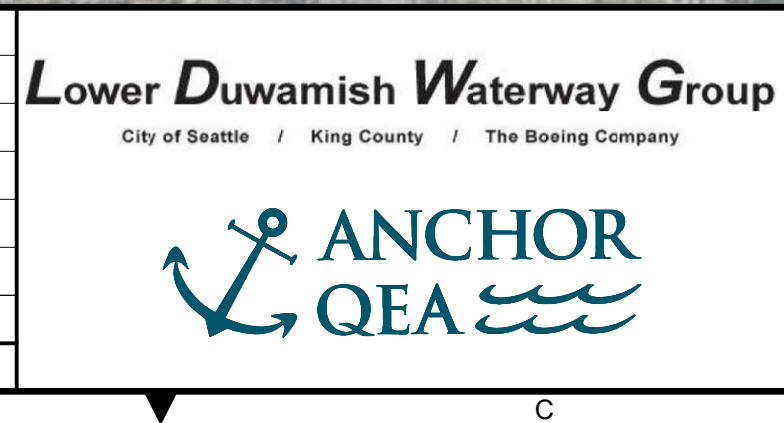


- GENERAL NOTES:
- HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 - AERIAL SOURCE: BING MAPS
 - CONTAINER PROPERTIES ACCESS FOR WORK IN SMA 5 ONLY.

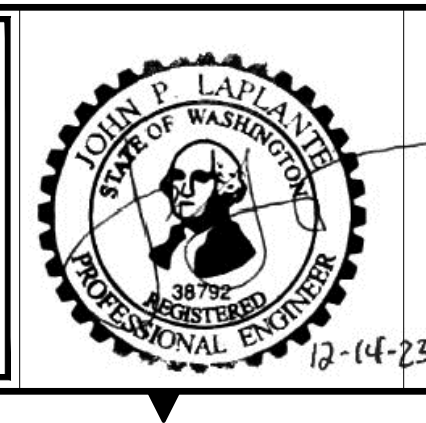
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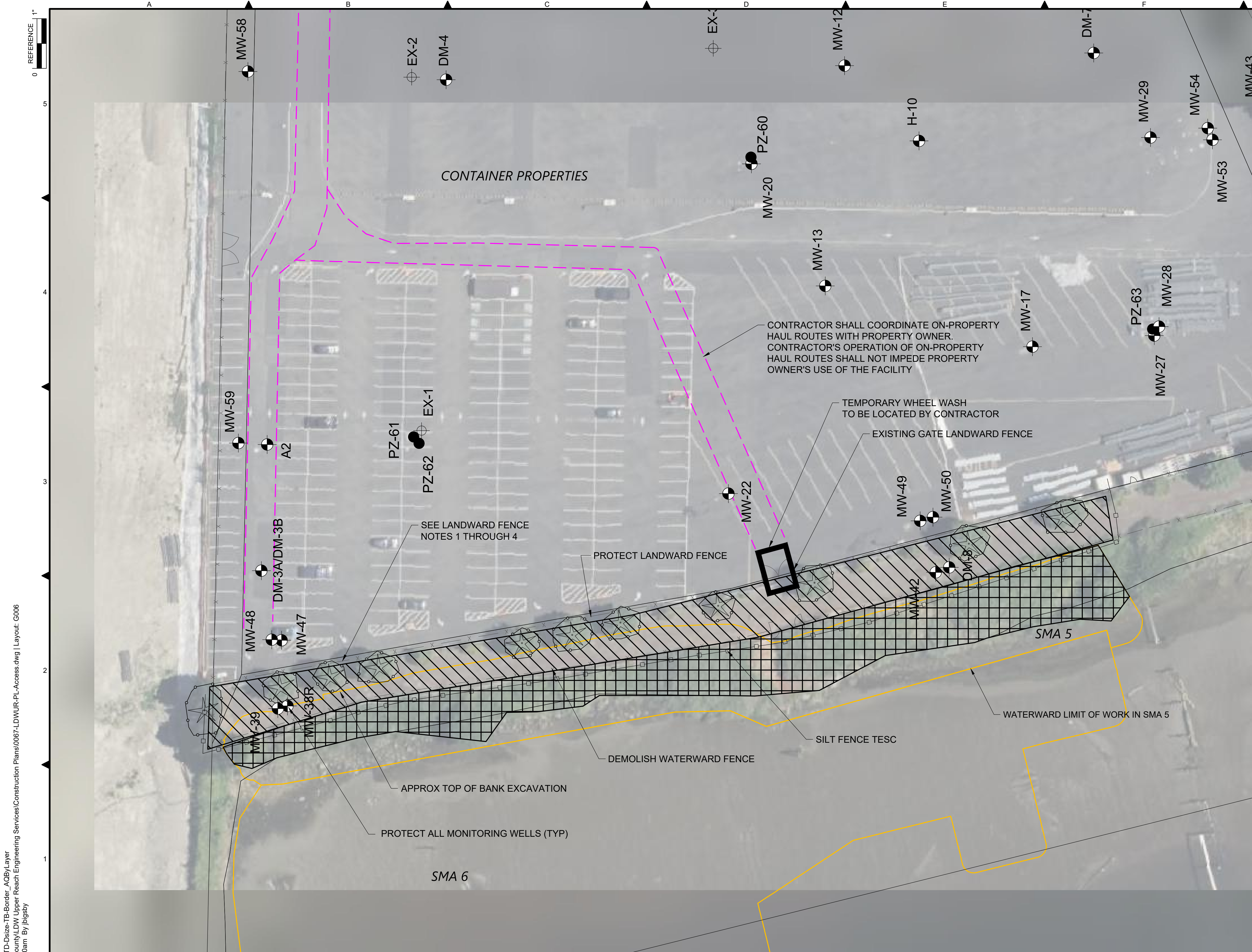


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DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION
**PRE-APPROVED WORK SITE
 ACCESS AND STAGING PLAN**

DATE: DECEMBER 2023
DRAWING NO: G005
SHT NO / TOTAL 5 / 91
REV NO: 0

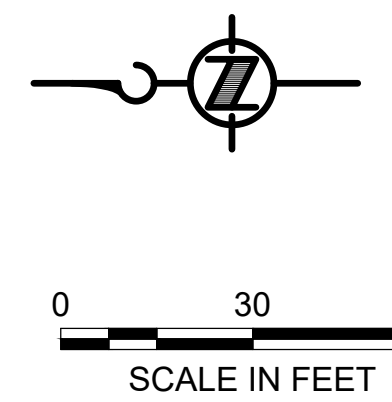


- LEGEND:**
- EXTENT OF SEDIMENT MANAGEMENT AREA
 - HAUL ROUTE
 - CLEAR AND GRUB LIMITS
 - UPLAND STAGING AREA
 - TEMPORARY TREE PROTECTION

- GENERAL NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. AERIAL SOURCE: BING MAPS
 3. CONTAINER PROPERTIES ACCESS FOR WORK IN SMA 5 ONLY.

- LANDWARD FENCE NOTES:**
- CONTRACTOR MAY PROPOSE ADDITIONAL ACCESS GATE IN LANDWARD FENCE TO FACILITATE SHORELINE ACCESS.
1. ALL MODIFICATIONS REQUIRED FOR ACCESS SHALL BE COORDINATED WITH THE PROPERTY OWNER.
 2. MODIFICATIONS, SUCH AS ADDITIONAL ACCESS GATES, SHALL BE CONSTRUCTED USING THE SAME FENCE GAUGE, FENCE MATERIAL, FENCE HEIGHT, AND FENCE APPURTENANCES (E.G. BARBED WIRE) AS EXISTING FENCE.
 3. CONTRACTOR SHALL MAINTAIN SECURE SITE AT ALL TIMES AND PREVENT UNAUTHORIZED ACCESS TO CONTAINER PROPERTIES.
 4. CONTRACTOR SHALL CONDUCT LANDWARD FENCE MODIFICATIONS USING METHODS THAT PROTECT ALL TREES AND UTILITIES ALONG FENCE LINE.

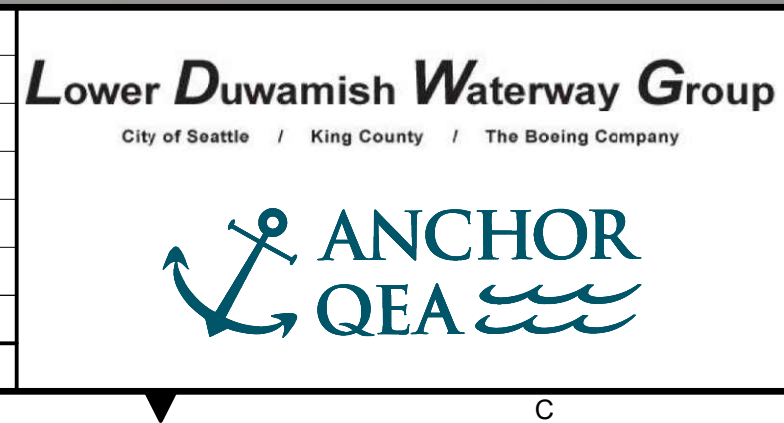
- TEMPORARY TREE PROTECTION NOTES:**
1. PROTECT EXISTING NATIVE TREES WITHIN AND DIRECTLY ADJACENT TO SMA 5 WORK.
 2. INSTALL TEMPORARY TREE PROTECTION FENCING AT DRIPLINE OF TREES. NO WORK SHALL OCCUR WITHIN DRIPLINE WITH THE EXCEPTION OF HAND REMOVAL OF INVASIVE VEGETATION.
 3. TEMPORARY TREE PROTECTION FENCING AREAS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC AND SHALL BE CONFIRMED IN FIELD.



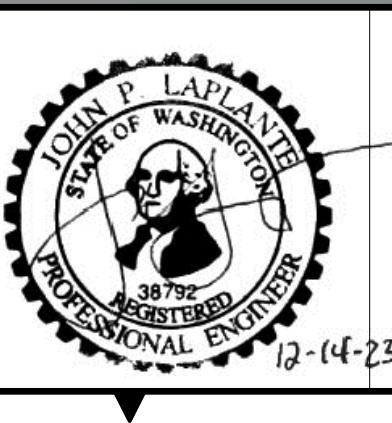
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 \gial\CAD\Projects\0067-King County\LDW\Upper Reach Engineering Services\Construction Plans\0067-LDWUR-PL-Access.dwg | Layout: G006
 PLOTTED: Jan 12, 2024 10:10:10am By jfigsby

NO	REVISION DESCRIPTION	BY	APVD	DATE



FINAL ISSUE DRAWING
INFORMATION ONLY
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 DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065

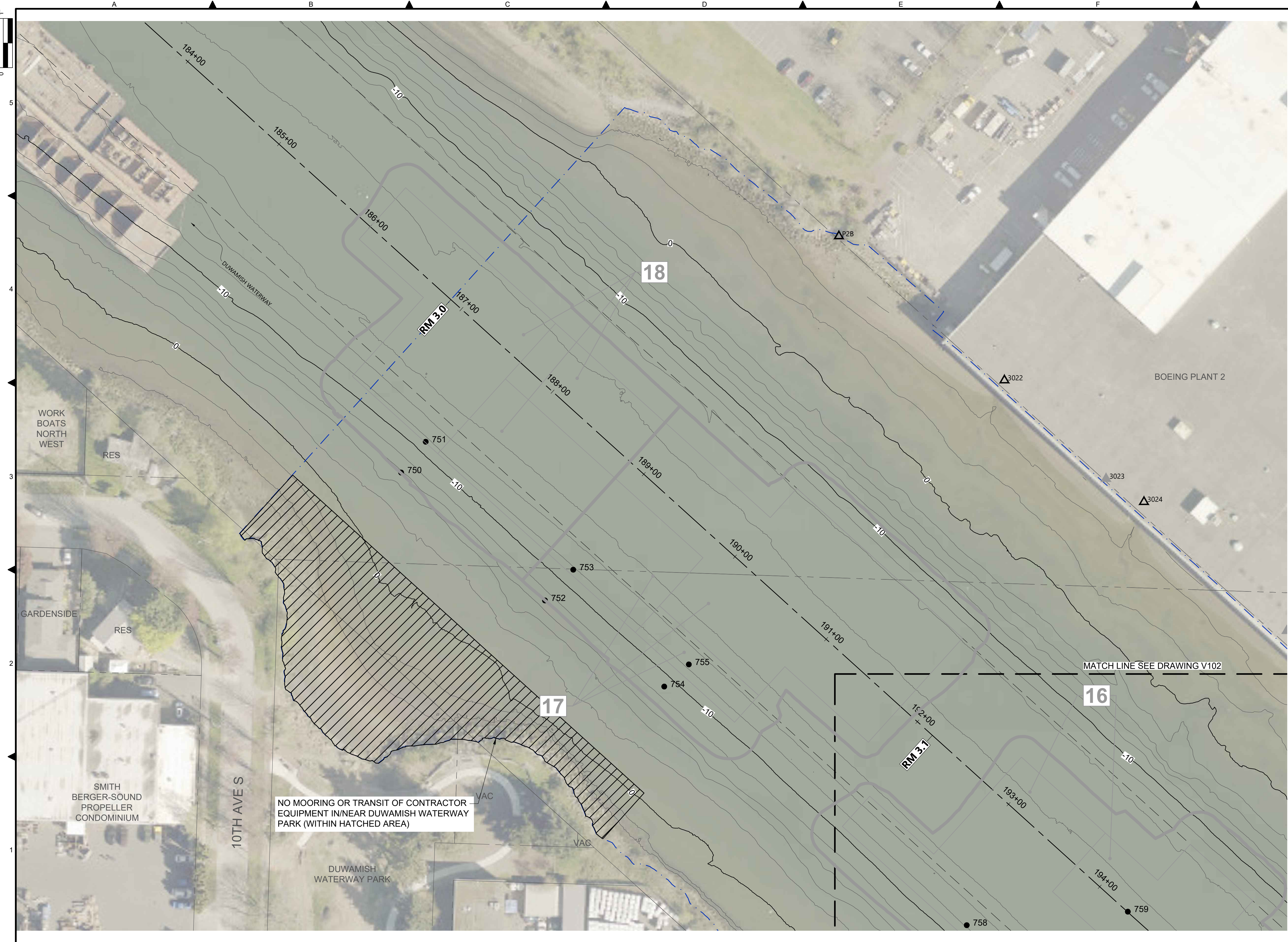


DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

SMA 5 DETAILED ACCESS PLAN

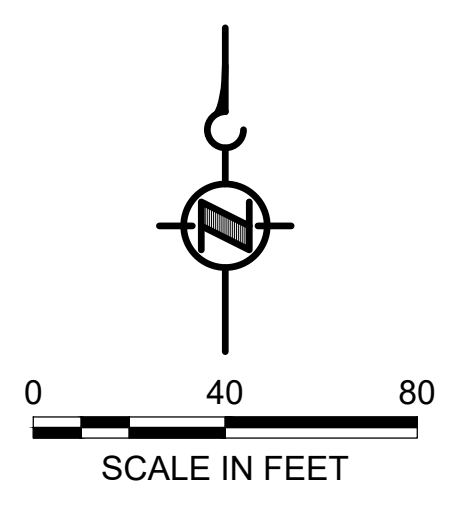
DATE: DECEMBER 2023
DRAWING NO: G006
SHT NO / TOTAL 6 / 91
REV NO: 0

BORDER FILE EDITION: x:\KOVTD\Size-TB-Border_ACB\Layer
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 PLOTTED: Jan 12, 2024 10:12:06am By jigsby



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - KING COUNTY PARCEL
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - VERTICAL DELINEATION CORE LOCATION
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER

- NOTES:**
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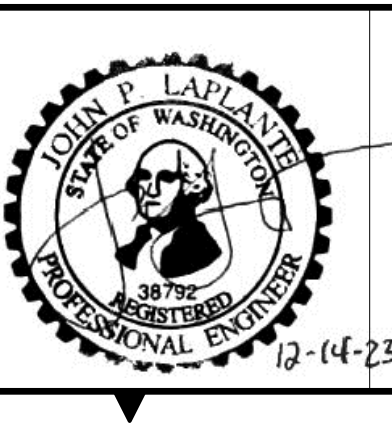


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Lower Duwamish Waterway Group
 City of Seattle / King County / The Boeing Company

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 DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065

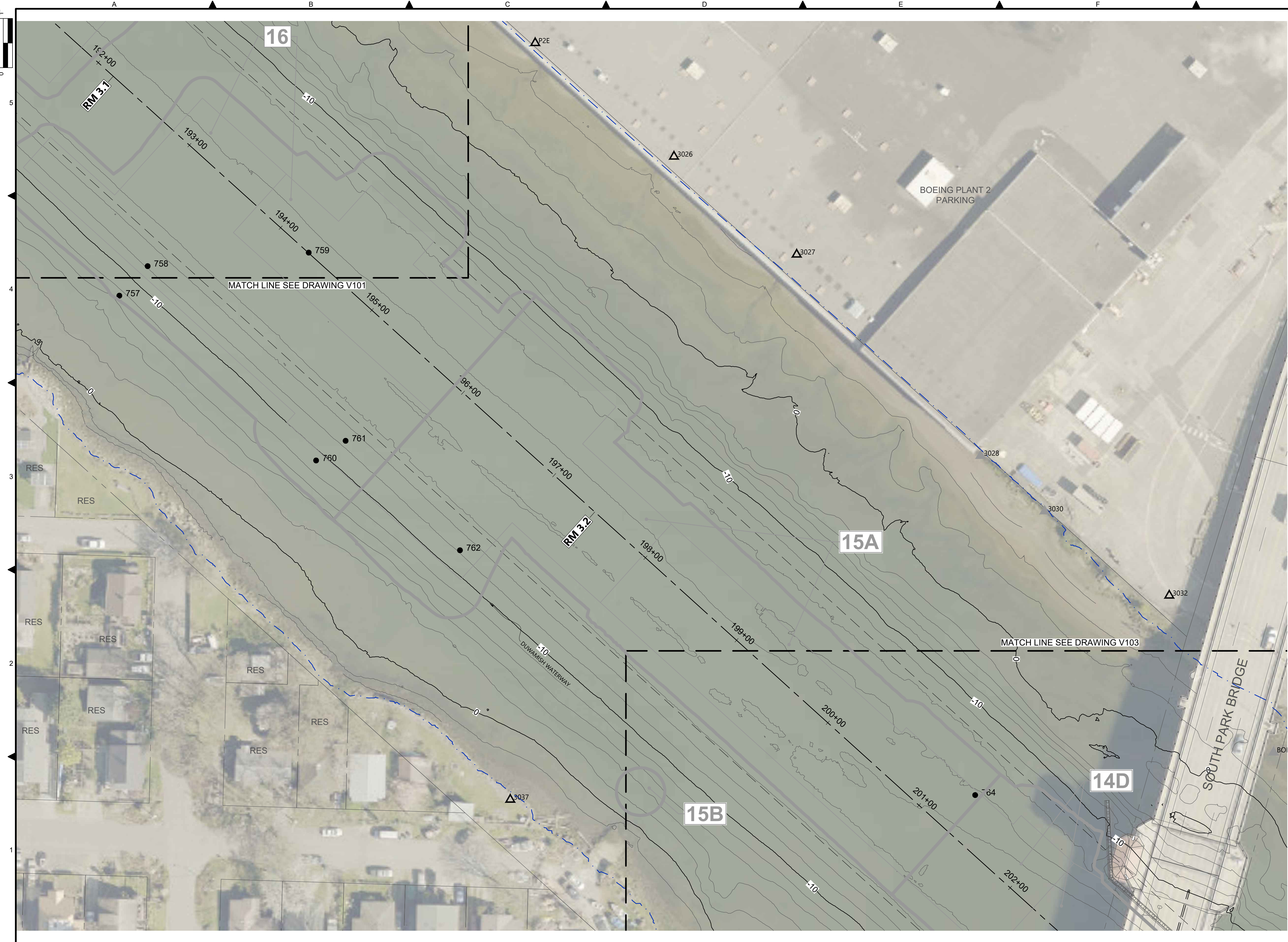


DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

EXISTING CONDITIONS
(RM 2.93 TO 3.15)

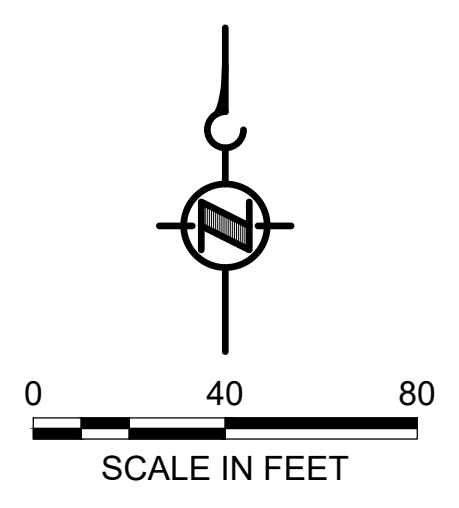
DATE: DECEMBER 2023
DRAWING NO: V101
SHT NO / TOTAL 7 / 91
REV NO: 0

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 PLOTTED: Jan 12, 2024 10:12:52am By jigsby



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - KING COUNTY PARCEL
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
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 - VERTICAL DELINEATION CORE LOCATION
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER

- NOTES:**
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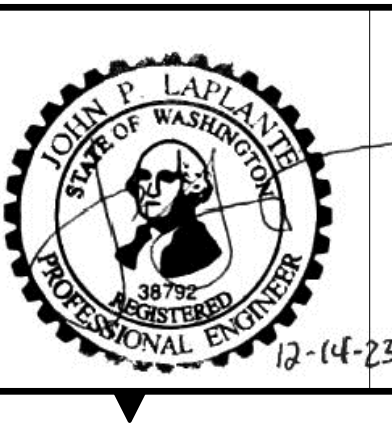


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Lower Duwamish Waterway Group
 City of Seattle / King County / The Boeing Company

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 DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065

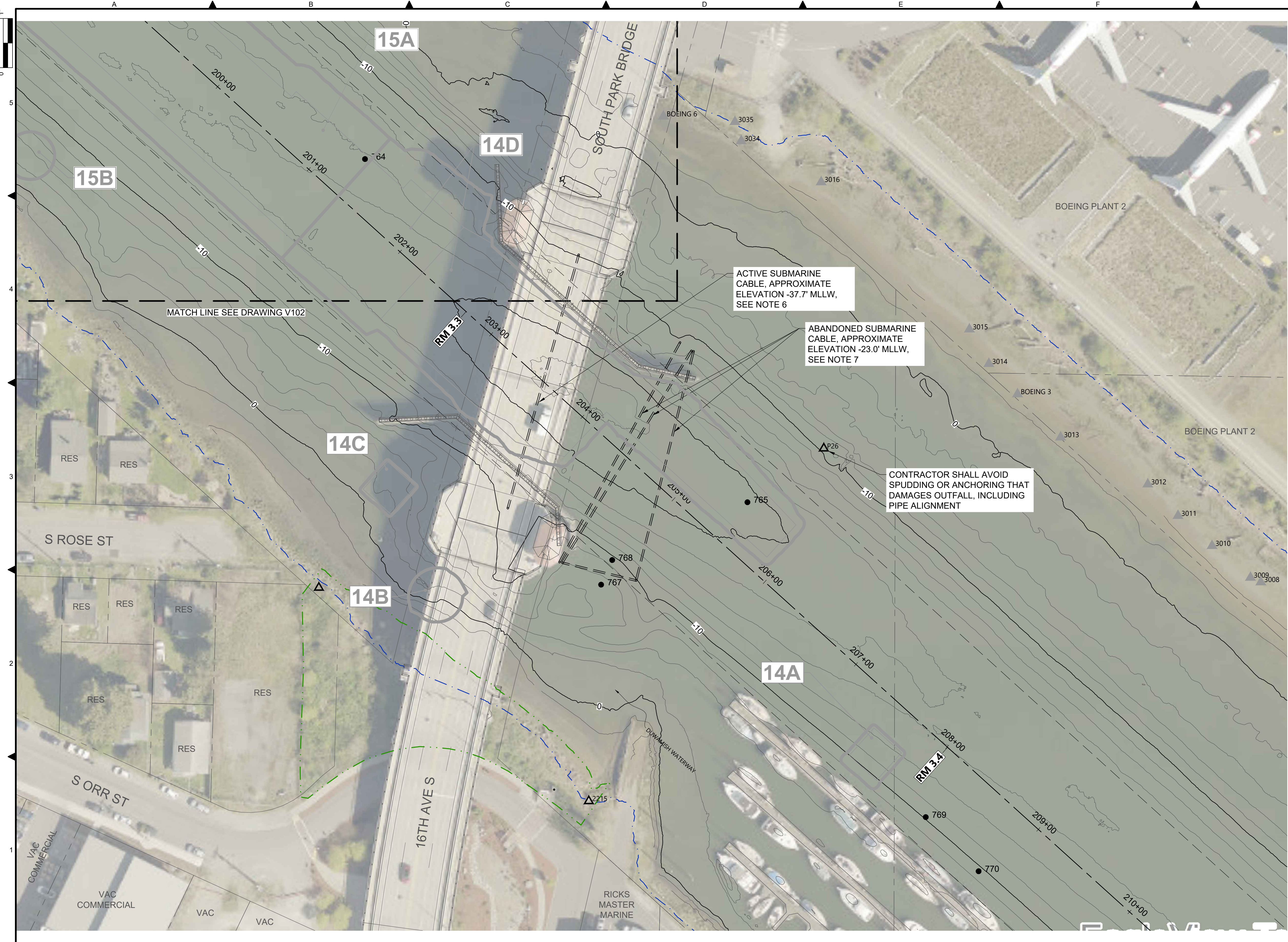


DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

EXISTING CONDITIONS
(RM 3.09 TO 3.29)

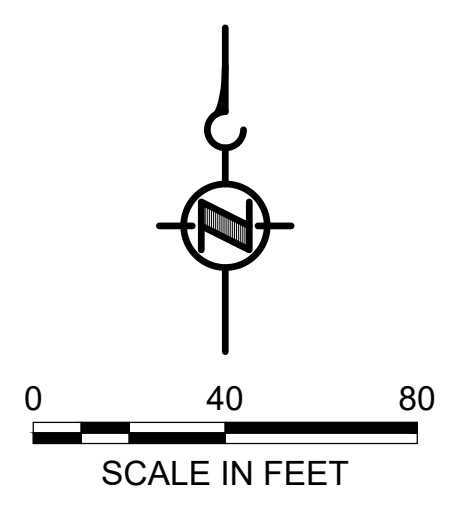
DATE: DECEMBER 2023
DRAWING NO: V102
SHT NO / TOTAL 8 / 91
REV NO: 0

BORDER FILE EDITION: x:\KOVTD\size-TB-Border_ACBM\layer
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 PLOTTED: Jan 12, 2024 10:13:37am By jigsby



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - KING COUNTY PARCEL
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - VERTICAL DELINEATION CORE LOCATION
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER
 - SUBMARINE CABLE
 - HABITAT AREA (CONTRACTOR TO PROTECT)

- NOTES:**
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 6. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.
 7. THE CONTRACTOR SHALL TAKE EXTREME CARE WHILE WORKING NEAR THE ACTIVE SUBMARINE CABLE. SEE SPECIFICATION SECTION 35 20 23 FOR RESTRICTIONS ON SPUDDING IN THIS AREA.
 8. THE ABANDONED SUBMARINE CABLE SHALL BE REMOVED IF ENCOUNTERED.

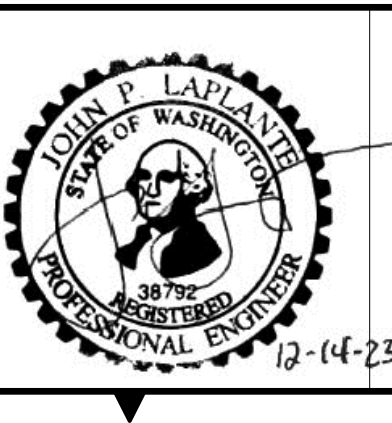


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Lower Duwamish Waterway Group
 City of Seattle / King County / The Boeing Company

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PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065

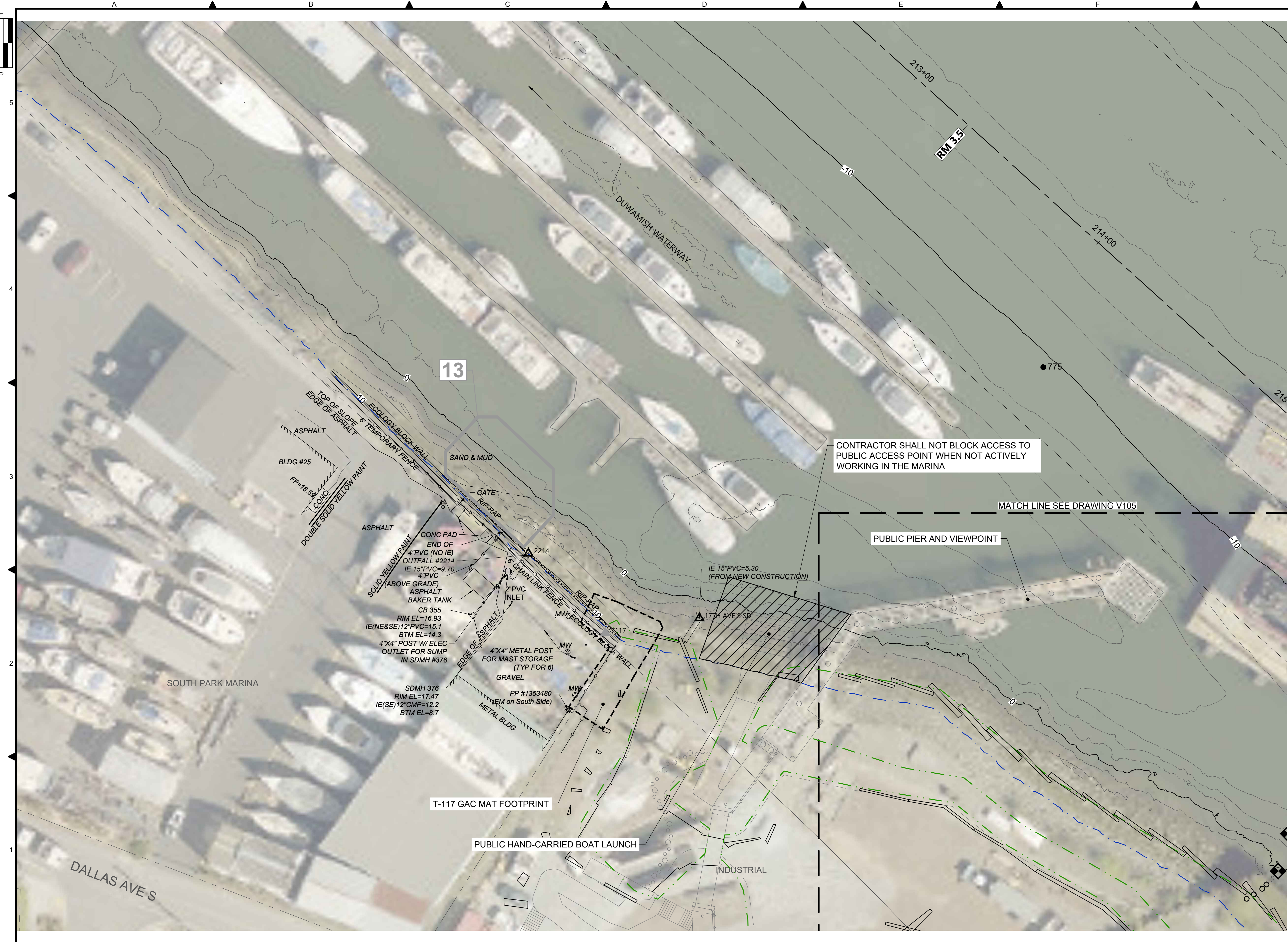


DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

EXISTING CONDITIONS
(RM 3.23 TO 3.44)

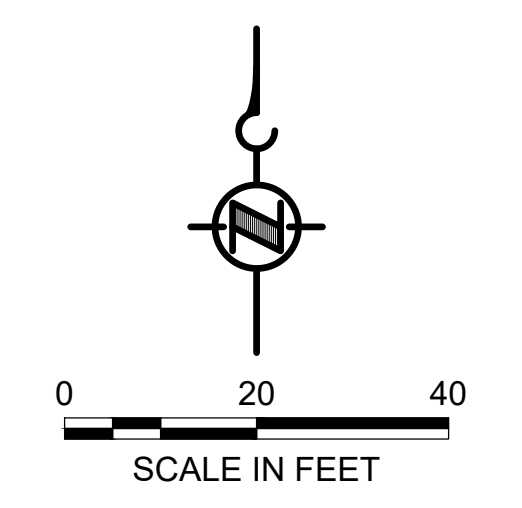
DATE: DECEMBER 2023
DRAWING NO: V103
SHT NO / TOTAL 9 / 91
REV NO: 0

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 PLOTTED: Jan 12, 2024 10:14:23am By jigsby



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - KING COUNTY PARCEL
 - LDW UPPER REACH APPROXIMATE BOUNDARY
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 - ▲** OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
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 - VERTICAL DELINEATION CORE LOCATION
 - 14** SEDIMENT MANAGEMENT AREA BOUNDARY
 - SEDIMENT MANAGEMENT AREA NUMBER
 - HABITAT AREA (CONTRACTOR TO PROTECT)

- NOTES:**
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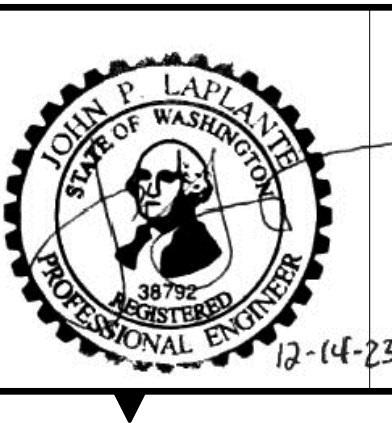


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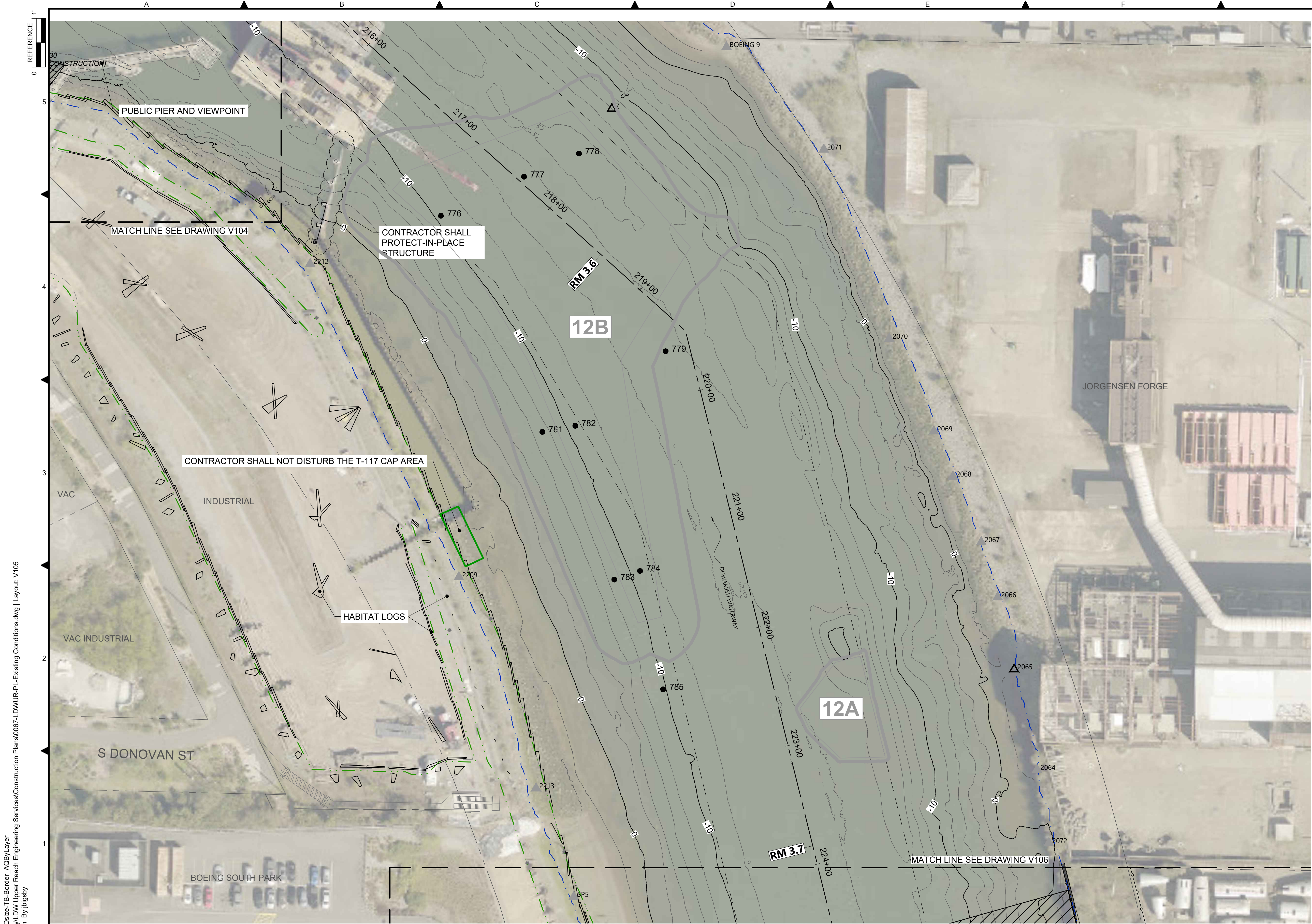
DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

EXISTING CONDITIONS
(RM 3.49 TO 3.56)

DATE: DECEMBER 2023
DRAWING NO: V104
SHT NO / TOTAL 10 / 91
REV NO: 0

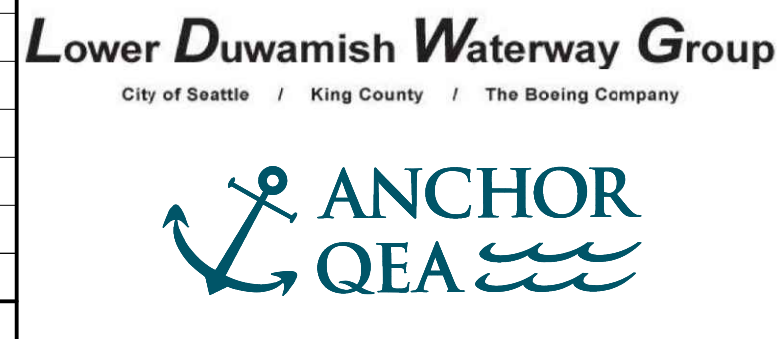


- LEGEND:**
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 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - KING COUNTY PARCEL
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 - DOLPHIN
 - VERTICAL DELINEATION CORE LOCATION
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER
 - T-117 CAP AREA
 - HABITAT AREA (CONTRACTOR TO PROTECT)

- NOTES:**
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 PLOTTED: Jan 12, 2024 10:15:10am By jlgbsy

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 DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
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PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION
EXISTING CONDITIONS
(RM 3.54 TO 3.71)

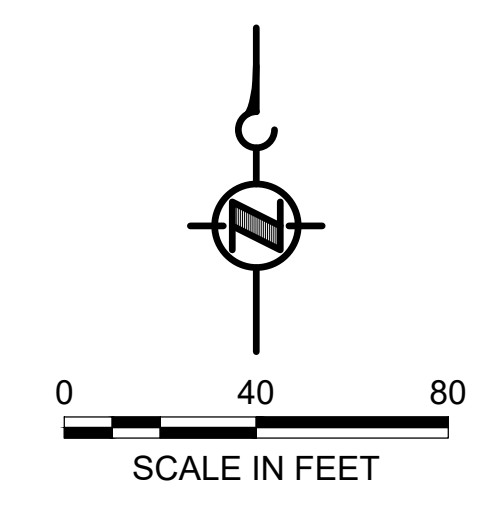
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 DRAWING NO: **V105**
 SHT NO / TOTAL: 11 / 91
 REV NO: **0**



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
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 - 14** SEDIMENT MANAGEMENT AREA NUMBER
 - ENR/AC PILOT PLOTS
 - HABITAT AREA (CONTRACTOR TO PROTECT)

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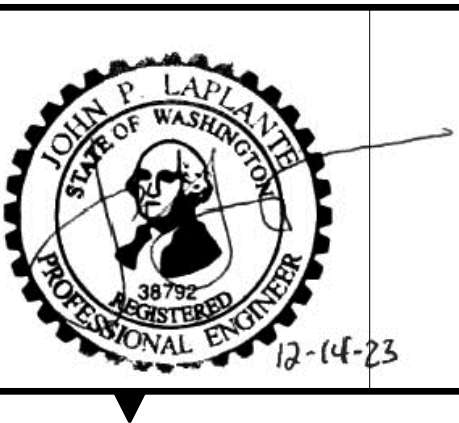
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 PLOTTED: Jan 12, 2024 10:16:01am By jlgbsby

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Lower Duwamish Waterway Group
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 DECEMBER 2023



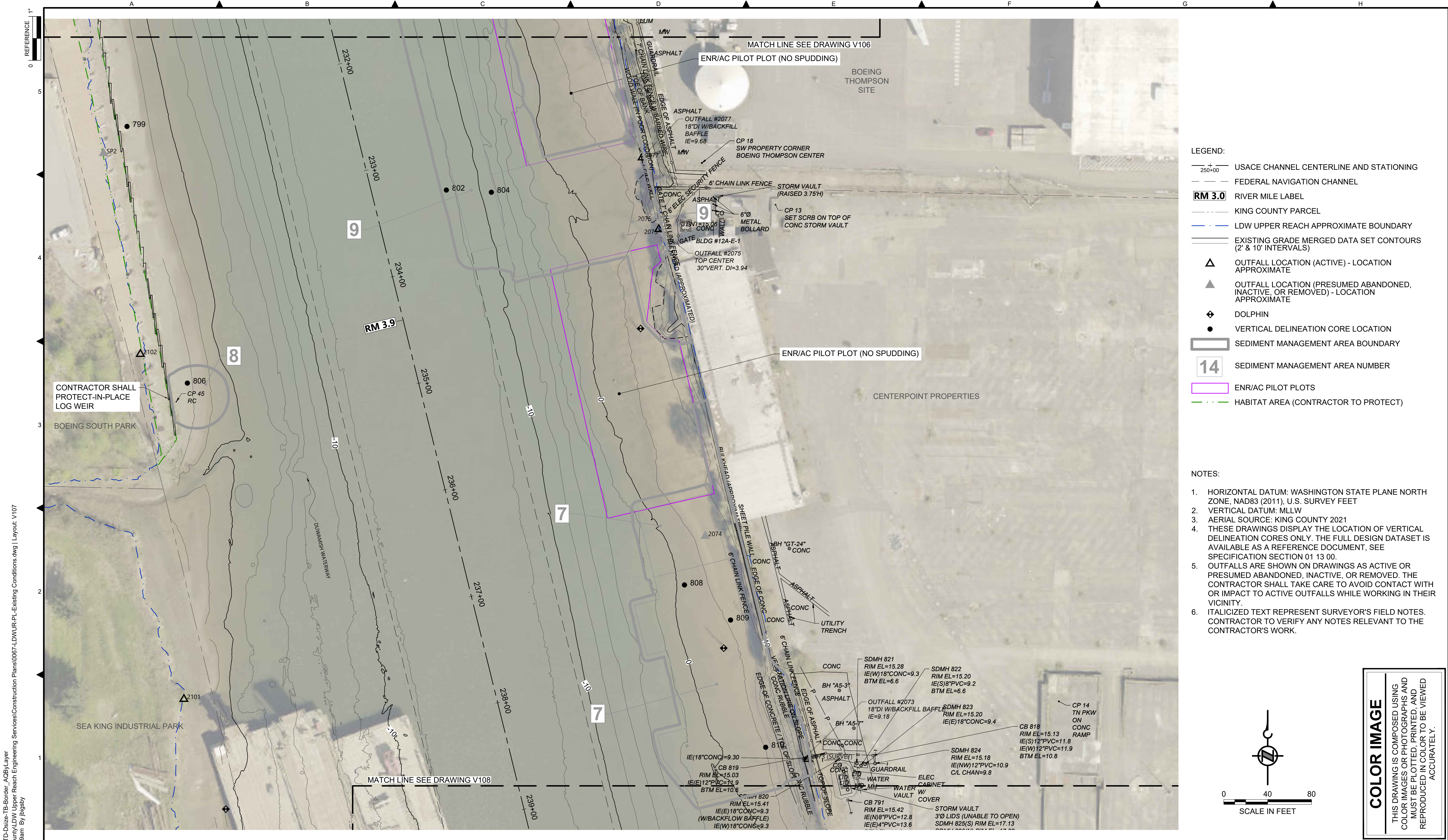
DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

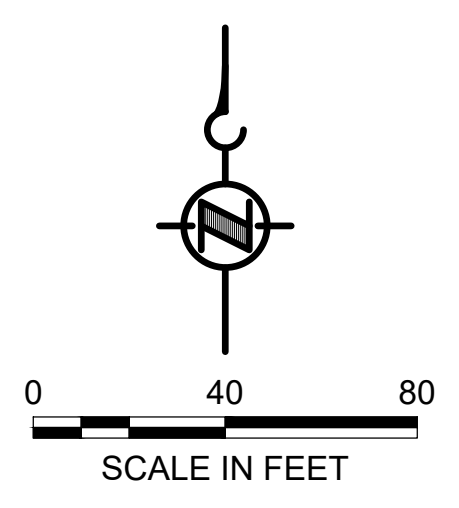
EXISTING CONDITIONS
(RM 3.73 TO 3.84)

DATE: DECEMBER 2023
DRAWING NO: V106
SHT NO / TOTAL 12 / 91
REV NO: 0



- LEGEND:**
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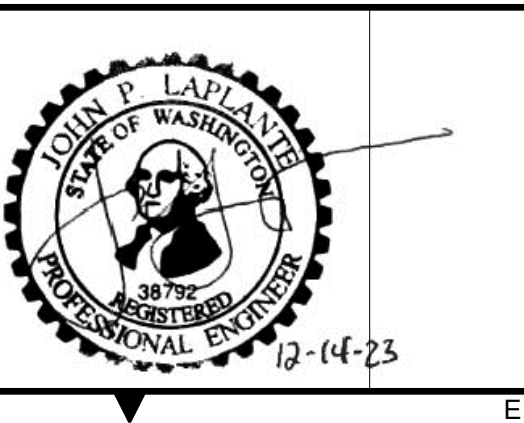
COLOR IMAGE
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 PLOTTED: Jan 12, 2024 10:16:49am By bigsby

NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
 City of Seattle / King County / The Boeing Company

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INFORMATION ONLY
BID DOCUMENTS
 DECEMBER 2023



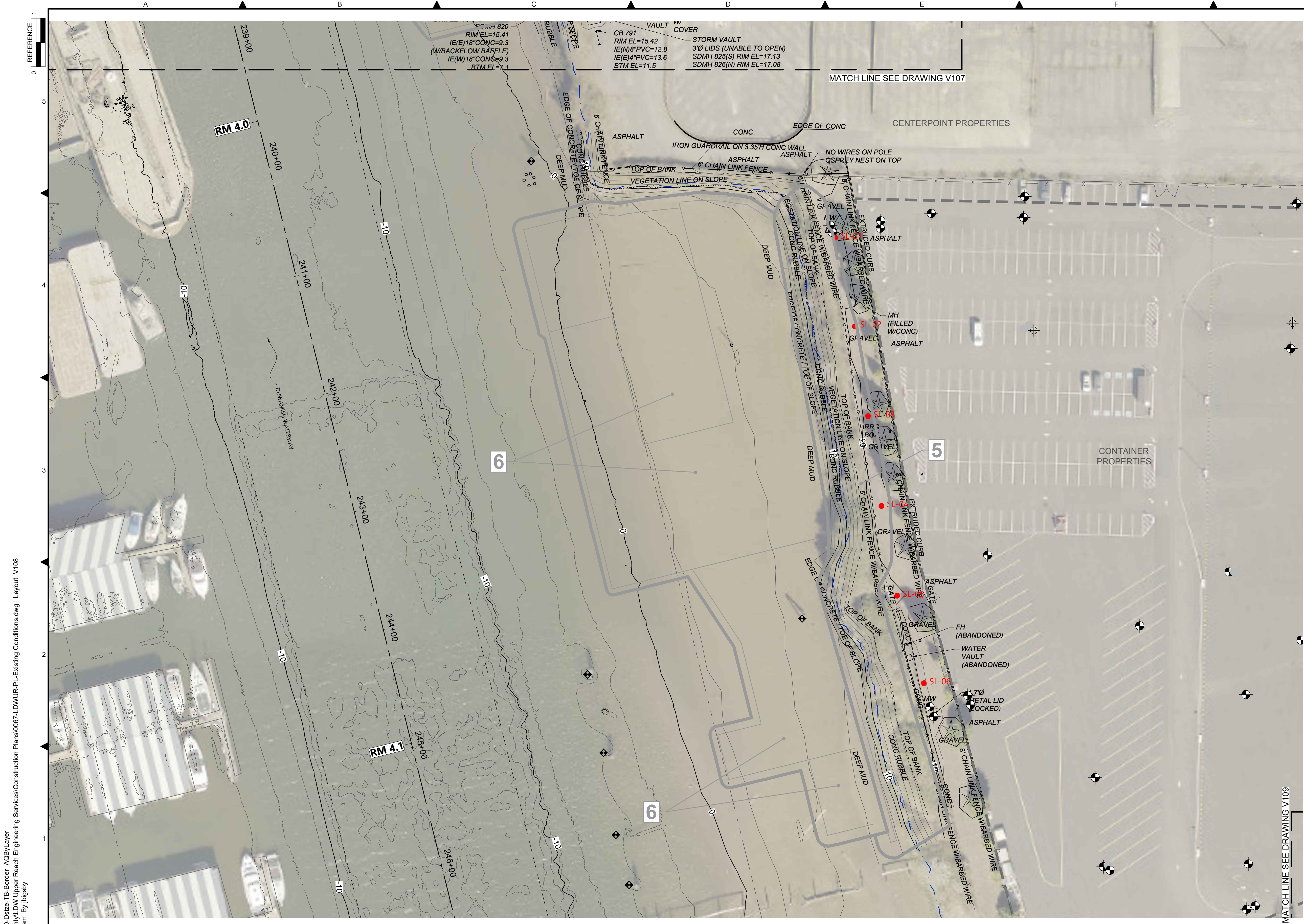
DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

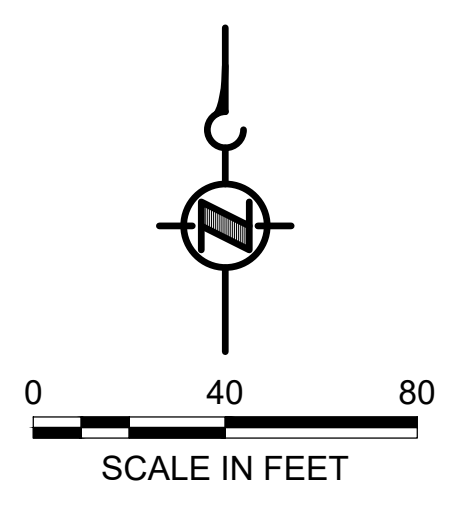
EXISTING CONDITIONS
(RM 3.85 TO 3.99)

DATE: DECEMBER 2023
DRAWING NO: V107
SHT NO / TOTAL 13 / 91
REV NO: 0



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - KING COUNTY PARCEL
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - DOLPHIN
 - PILE
 - VERTICAL DELINEATION CORE LOCATION
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER
 - MONITORING WELL
 - UPLAND SOIL SAMPLE LOCATIONS
 - TREE

- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 3. AERIAL SOURCE: KING COUNTY 2021
 4. THESE DRAWINGS DISPLAY THE LOCATION OF VERTICAL DELINEATION CORES ONLY. THE FULL DESIGN DATASET IS AVAILABLE AS A REFERENCE DOCUMENT, SEE SPECIFICATION SECTION 01 13 00.
 5. OUTFALLS ARE SHOWN ON DRAWINGS AS ACTIVE OR PRESUMED ABANDONED, INACTIVE, OR REMOVED. THE CONTRACTOR SHALL TAKE CARE TO AVOID CONTACT WITH OR IMPACT TO ACTIVE OUTFALLS WHILE WORKING IN THEIR VICINITY.
 6. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.



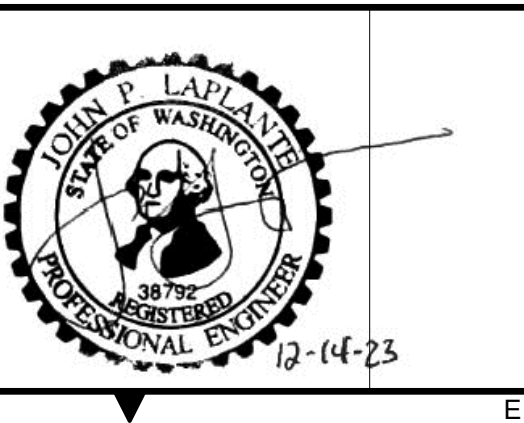
COLOR IMAGE
 THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

BORDER FILE EDITION: x:\KOVTD\size-TB-Border_ACBM_Layer
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 PLOTTED: Jan 12, 2024 10:17:35am By jbiggsby

NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
 City of Seattle / King County / The Boeing Company

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BID DOCUMENTS
 DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

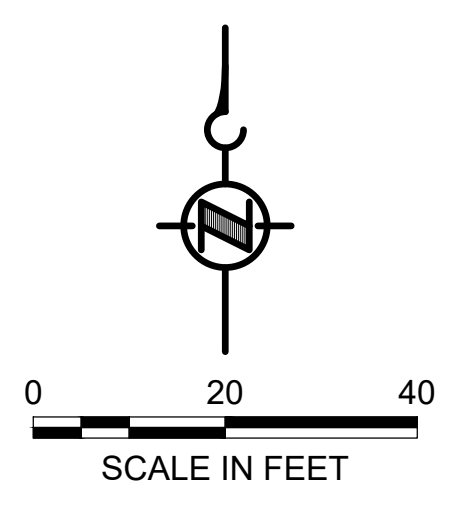
EXISTING CONDITIONS
(RM 3.98 TO 4.13)

DATE: DECEMBER 2023
DRAWING NO: V108
SHT NO / TOTAL 14 / 91
REV NO: 0



- LEGEND:**
- KING COUNTY PARCEL
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - △** OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - ▲** OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - VERTICAL DELINEATION CORE LOCATION
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER

- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 3. AERIAL SOURCE: KING COUNTY 2021
 4. THESE DRAWINGS DISPLAY THE LOCATION OF VERTICAL DELINEATION CORES ONLY. THE FULL DESIGN DATASET IS AVAILABLE AS A REFERENCE DOCUMENT, SEE SPECIFICATION SECTION 01 13 00.
 5. OUTFALLS ARE SHOWN ON DRAWINGS AS ACTIVE OR PRESUMED ABANDONED, INACTIVE, OR REMOVED. THE CONTRACTOR SHALL TAKE CARE TO AVOID CONTACT WITH OR IMPACT TO ACTIVE OUTFALLS WHILE WORKING IN THEIR VICINITY.
 6. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.



COLOR IMAGE
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BORDER FILE EDITION: x:\KOVTD\size-TB-Border_ACBM\layer
 \gala\ca\Projects\067-King County\LDW Upper Reach Engineering Services\Construction Plans\0067-LDWUR-PL-Existing Conditions.dwg | Layout: V109
 PLOTTED: Jan 12, 2024 10:18:26am By jigsby

NO	REVISION DESCRIPTION	BY	APVD	DATE



FINAL ISSUE DRAWING
INFORMATION ONLY
BID DOCUMENTS
 DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA
 PROJECT ENGINEER: J. LAPLANTE
 DESIGN APPROVAL: J. ABDALKHANI
 PROJECT ACCEPTANCE: G. STEINER
 CHECKED: K. GROSS
 SCALE: AS NOTED
 PROJECT FILE NO: E00559E18
 CONTRACT NO: KC001065



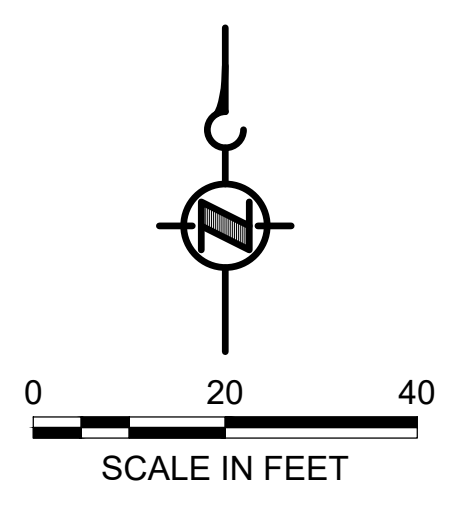
DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION
EXISTING CONDITIONS
(RM 4.14 TO 4.23)

DATE: DECEMBER 2023
 DRAWING NO: **V109**
 SHT NO / TOTAL: 15 / 91
 REV NO: **0**



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - KING COUNTY PARCEL
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - PILE
 - VERTICAL DELINEATION CORE LOCATION
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER

- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 3. AERIAL SOURCE: KING COUNTY 2021
 4. THESE DRAWINGS DISPLAY THE LOCATION OF VERTICAL DELINEATION CORES ONLY. THE FULL DESIGN DATASET IS AVAILABLE AS A REFERENCE DOCUMENT, SEE SPECIFICATION SECTION 01 13 00.
 5. OUTFALLS ARE SHOWN ON DRAWINGS AS ACTIVE OR PRESUMED ABANDONED, INACTIVE, OR REMOVED. THE CONTRACTOR SHALL TAKE CARE TO AVOID CONTACT WITH OR IMPACT TO ACTIVE OUTFALLS WHILE WORKING IN THEIR VICINITY.
 6. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.



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BORDER FILE EDITION: x:\KOVTD\Size-TB-Border_ACB\Layer \gala\ca\Projects\067-King County\LDW Upper Reach Engineering Services\Construction Plans\0067-LDWUR-PL-Existing Conditions.dwg | Layout: V110
 PLOTTED: Jan 12, 2024 10:19:20am By jigsby

NO	REVISION DESCRIPTION	BY	APVD	DATE



FINAL ISSUE DRAWING
INFORMATION ONLY
BID DOCUMENTS
 DECEMBER 2023

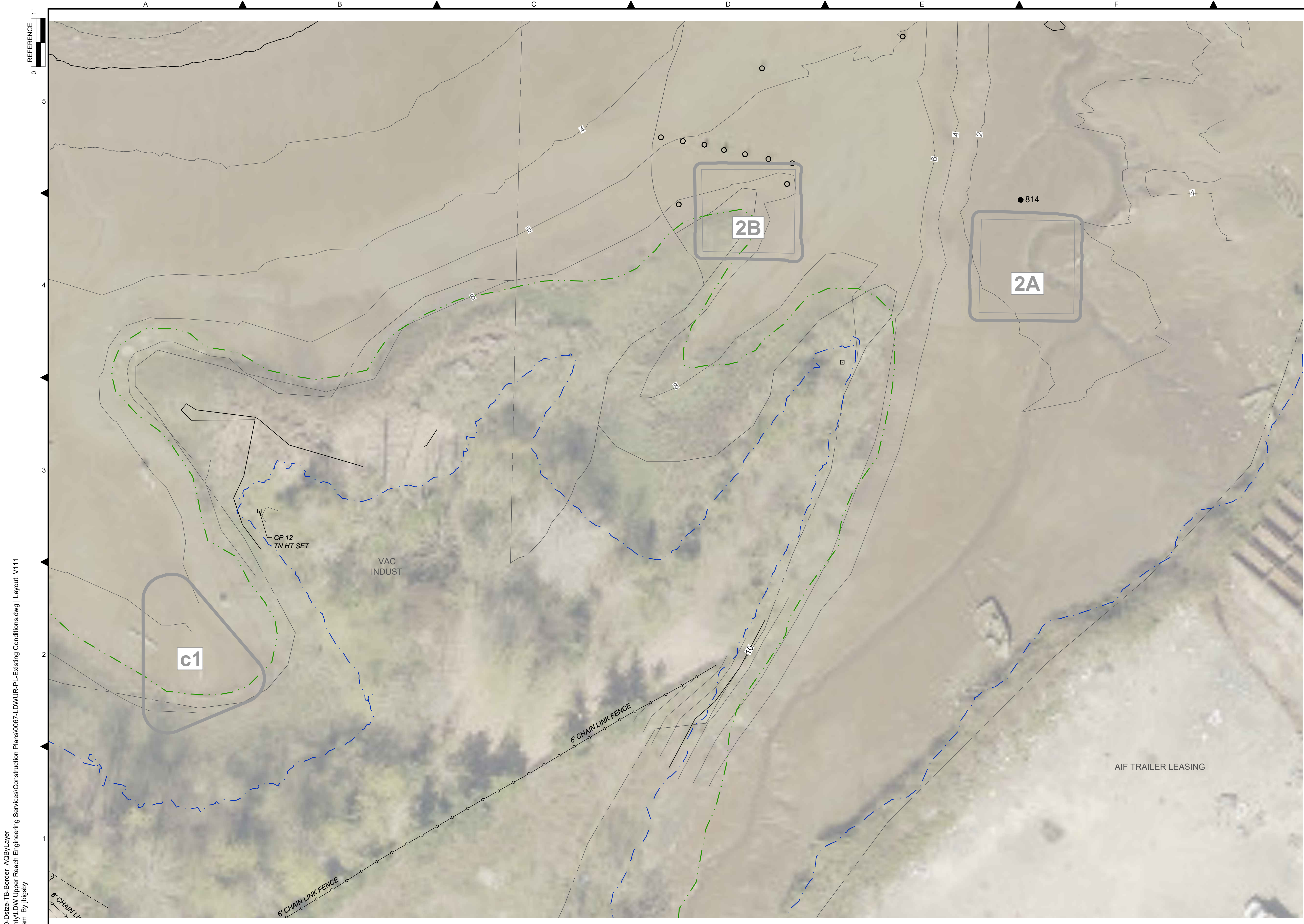


DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



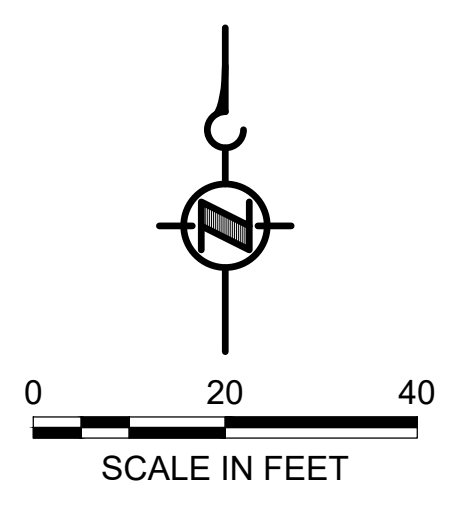
DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION
EXISTING CONDITIONS
(RM 4.57 TO 4.66)

DATE: DECEMBER 2023
DRAWING NO: V110
SHT NO / TOTAL 16 / 91
REV NO: 0



- LEGEND:**
- KING COUNTY PARCEL
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - PILE
 - VERTICAL DELINEATION CORE LOCATION
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - SEDIMENT MANAGEMENT AREA NUMBER
 - ESTIMATED LIMITS OF HABITAT AREA (CONTRACTOR TO PROTECT)

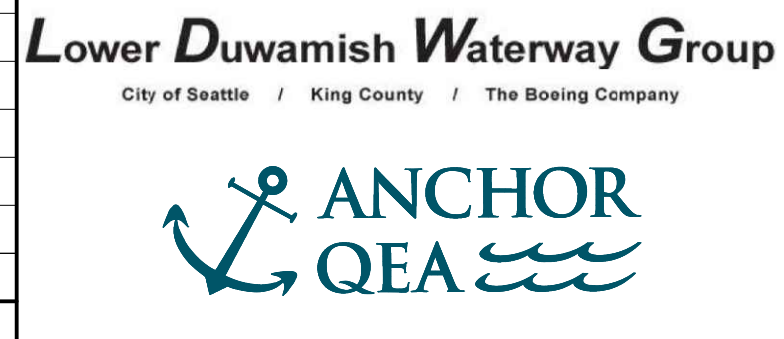
- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 3. AERIAL SOURCE: KING COUNTY 2021
 4. THESE DRAWINGS DISPLAY THE LOCATION OF VERTICAL DELINEATION CORES ONLY. THE FULL DESIGN DATASET IS AVAILABLE AS A REFERENCE DOCUMENT, SEE SPECIFICATION SECTION 01 13 00.
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BORDER FILE EDITION: x:\KOVTD-Size-TB-Border_ACB\Layer_V\gala\ca\Projects\067-King County\LDW Upper Reach Engineering Services\Construction Plans\0067-LDWUR-PL-Existing Conditions.dwg | Layout: V111
 PLOTTED: Jan 12, 2024 10:20:09am By jlgaby

NO	REVISION DESCRIPTION	BY	APVD	DATE



FINAL ISSUE DRAWING
INFORMATION ONLY
BID DOCUMENTS
 DECEMBER 2023

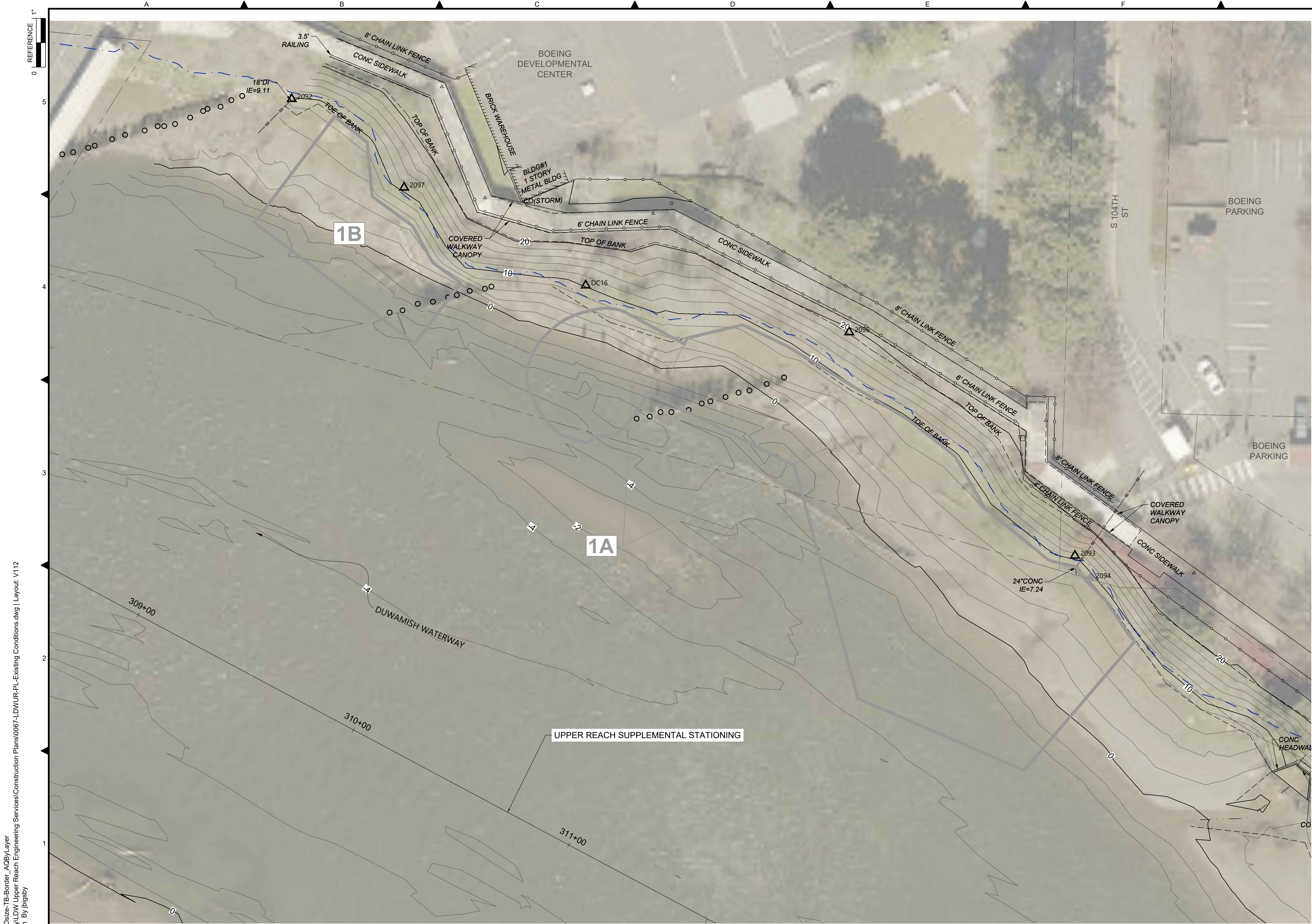


DESIGNED/DRAWN: K. GROSS	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



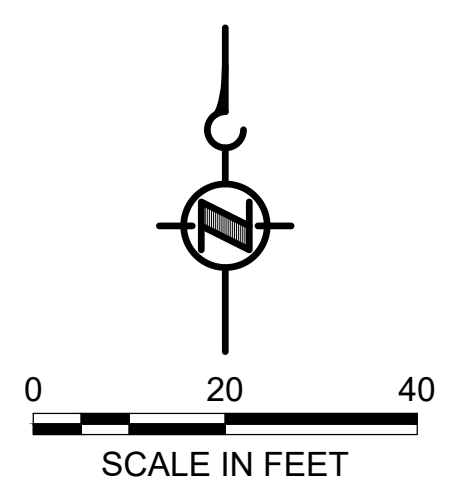
DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION
EXISTING CONDITIONS
(RM 4.64 TO 4.76)

DATE: DECEMBER 2023
DRAWING NO: V111
SHT NO / TOTAL 17 / 91
REV NO: 0



- LEGEND:**
- KING COUNTY PARCEL
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - PILE
 - VERTICAL DELINEATION CORE LOCATION
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER

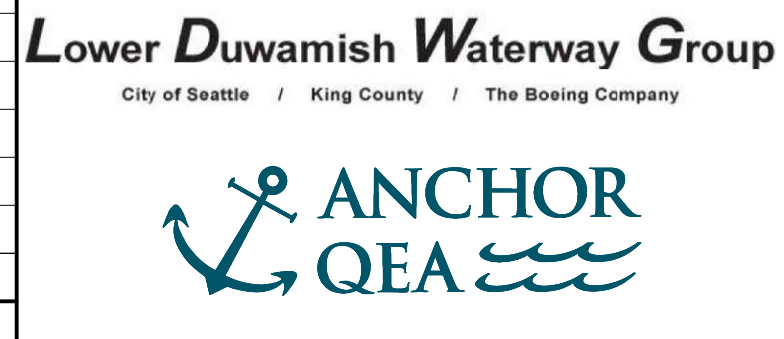
- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 3. AERIAL SOURCE: KING COUNTY 2021
 4. THESE DRAWINGS DISPLAY THE LOCATION OF VERTICAL DELINEATION CORES ONLY. THE FULL DESIGN DATASET IS AVAILABLE AS A REFERENCE DOCUMENT, SEE SPECIFICATION SECTION 01 13 00.
 5. OUTFALLS ARE SHOWN ON DRAWINGS AS ACTIVE OR PRESUMED ABANDONED, INACTIVE, OR REMOVED. THE CONTRACTOR SHALL TAKE CARE TO AVOID CONTACT WITH OR IMPACT TO ACTIVE OUTFALLS WHILE WORKING IN THEIR VICINITY.
 6. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.



COLOR IMAGE
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 PLOTTED: Jan 12, 2024 10:20:59am By jigsby

NO	REVISION DESCRIPTION	BY	APVD	DATE

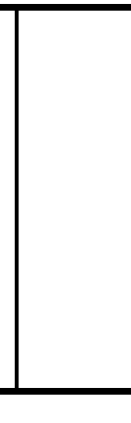


FINAL ISSUE DRAWING
INFORMATION ONLY
BID DOCUMENTS
 DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA
 PROJECT ENGINEER: J. LAPLANTE
 DESIGN APPROVAL: J. ABDALKHANI
 PROJECT ACCEPTANCE: G. STEINER

CHECKED: K. GROSS
 SCALE: AS NOTED
 PROJECT FILE NO: E00559E18
 CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION
EXISTING CONDITIONS
(RM 4.84 TO 4.95)

DATE: DECEMBER 2023
 DRAWING NO: **V112**
 SHT NO / TOTAL: 18 / 91
 REV NO: **0**

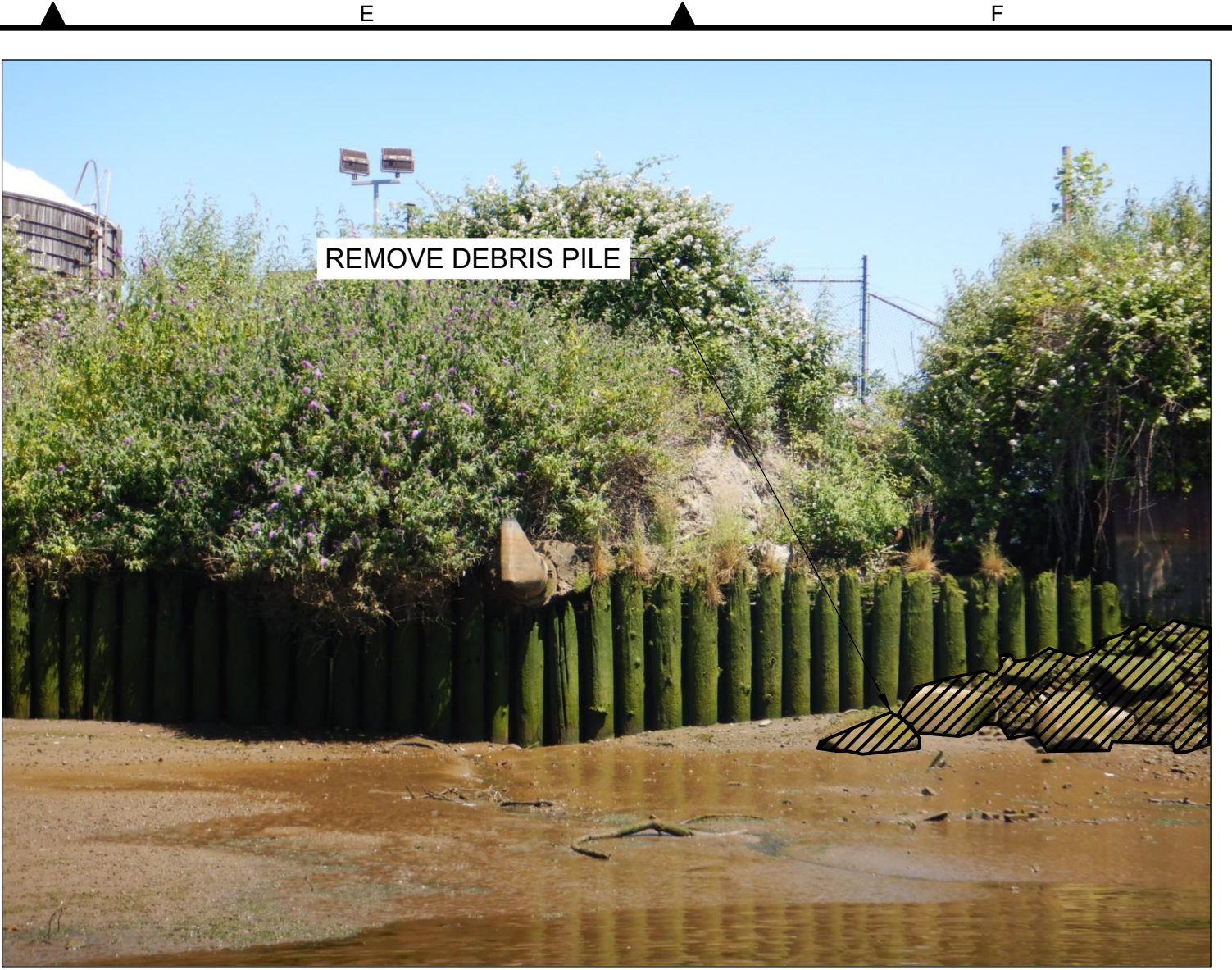
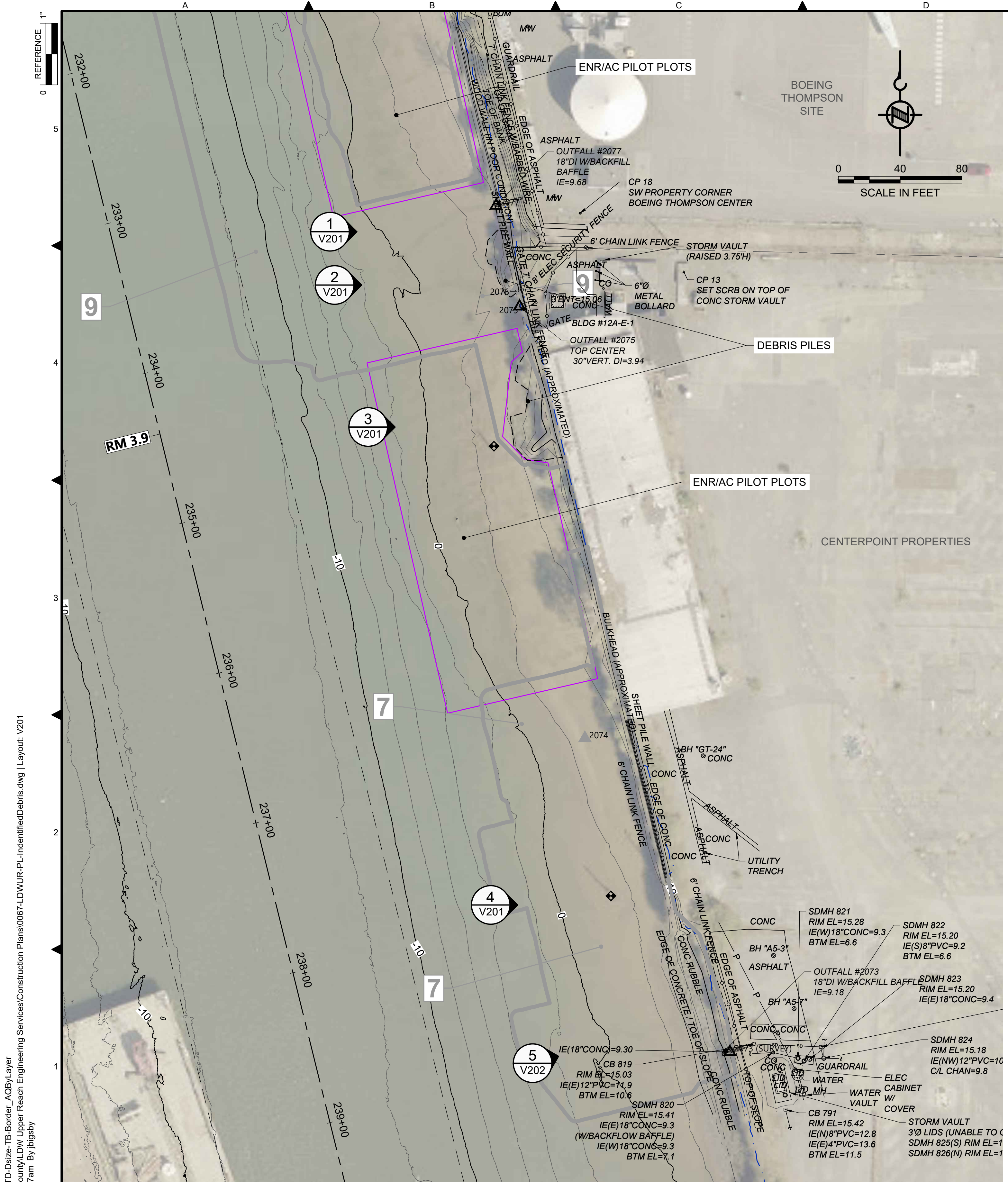


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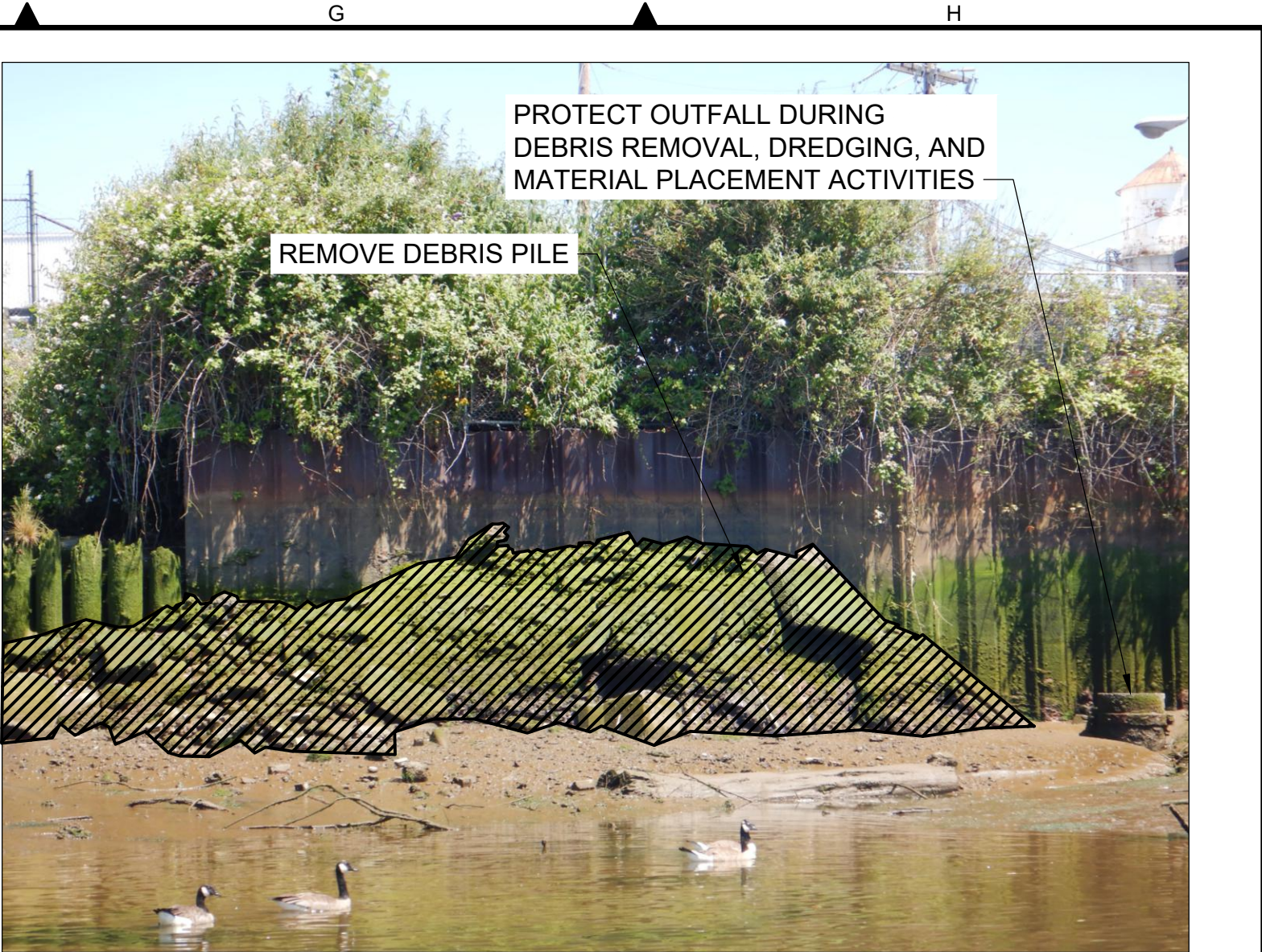


PHOTO ID 840
SCALE: NONE



PHOTO ID 837
SCALE: NONE



PHOTO ID 829
SCALE: NONE

- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RIVER MILE LABEL
 - KING COUNTY PARCEL
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - DOLPHINS
 - PILES
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - SEDIMENT MANAGEMENT AREA NUMBER
 - REMOVAL OF IDENTIFIED DEBRIS
 - REMOVAL OF PILING
 - ENR/AC PILOT PLOTS

- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 3. AERIAL SOURCE: KING COUNTY 2021
 4. CONTRACTOR SHALL REMOVE PILING AS SHOWN ON THE PLANS AND AS INDICATED IN THE PHOTOGRAPHS (36 PILINGs ESTIMATED FOR REMOVAL). IF ADDITIONAL PILINGs ARE ENCOUNTERED IN THE DREDGE PRISM, CONTRACTOR SHALL COORDINATE WITH THE PROJECT REPRESENTATIVE PRIOR TO REMOVAL.
 5. PHOTOGRAPH POINT LOCATIONS AND INDICATION OF DIRECTION ARE APPROXIMATE.
 6. THE CONTRACTOR SHALL TAKE CARE TO AVOID CONTACT WITH THE OUTFALL STRUCTURE WHILE DREDGING NEAR ACTIVE OUTFALL 2075. IDENTIFIED DEBRIS REMOVAL, DREDGING, AND MATERIAL PLACEMENT SHALL BE CONDUCTED SUCH THAT NO MATERIAL ENTERS THE OUTFALL STRUCTURE.
 7. IF ABANDONED OUTFALL 2076 IS ENCOUNTERED DURING REMOVAL OF IDENTIFIED DEBRIS OR DREDGING, THE PIPE SHALL BE CUT AT THE FACE OF THE WALL AND PLUGGED (SEE STRUCTURAL DRAWINGS).
 8. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.

COLOR IMAGE
THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

BORDER FILE EDITION: x:\KOVTD\size-TB-Border_ACBM_layer
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PLOTTED: Jan 12, 2024 10:22:37am By jlgbsby

NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company

FINAL ISSUE DRAWING
INFORMATION ONLY

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DECEMBER 2023

DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION

LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION

**LOCATION OF IDENTIFIED
DEBRIS AND PILING FOR
REMOVAL (1 OF 5)**

DATE: DECEMBER 2023
DRAWING NO: V201
SHT NO / TOTAL 19 / 91
REV NO: 0

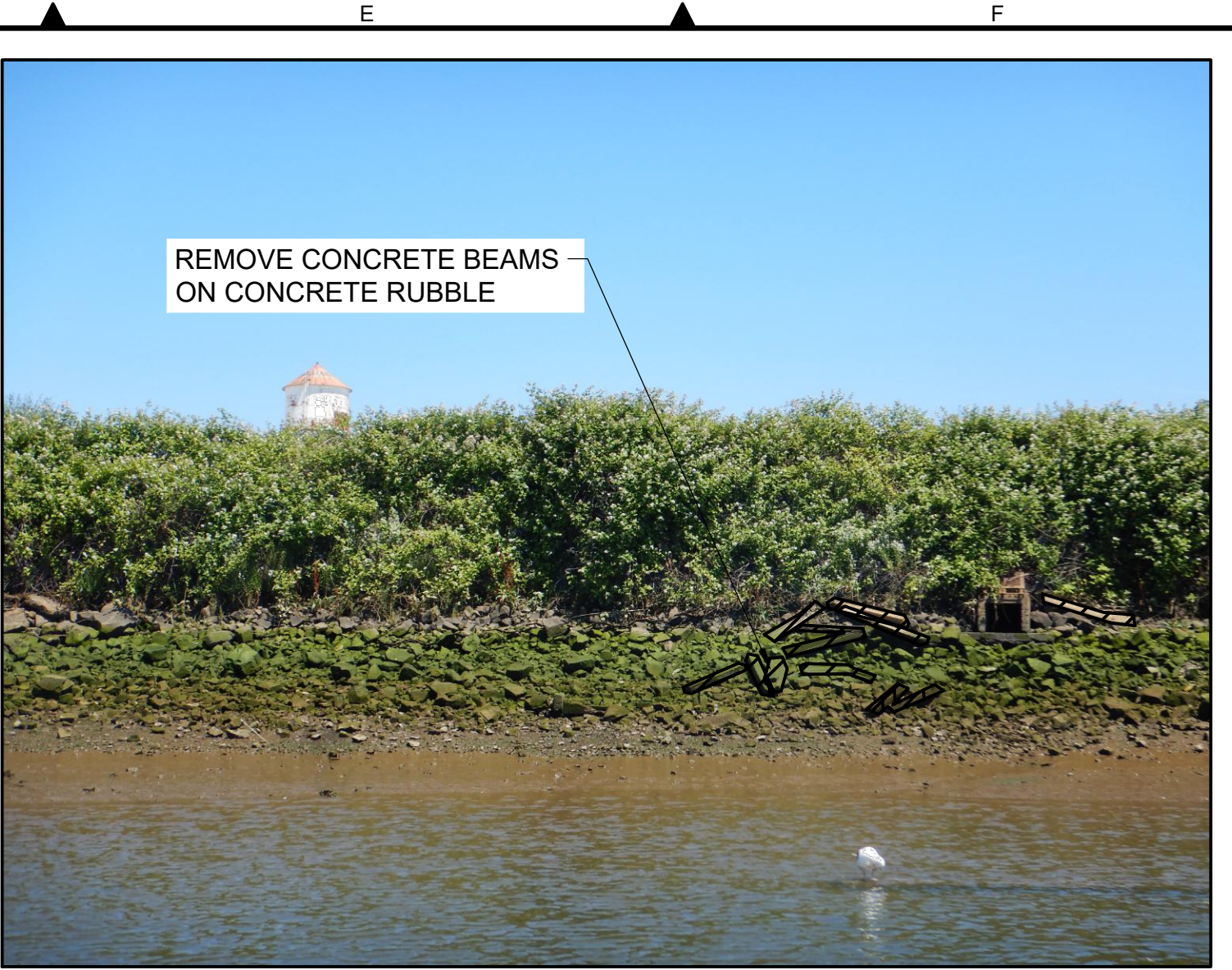
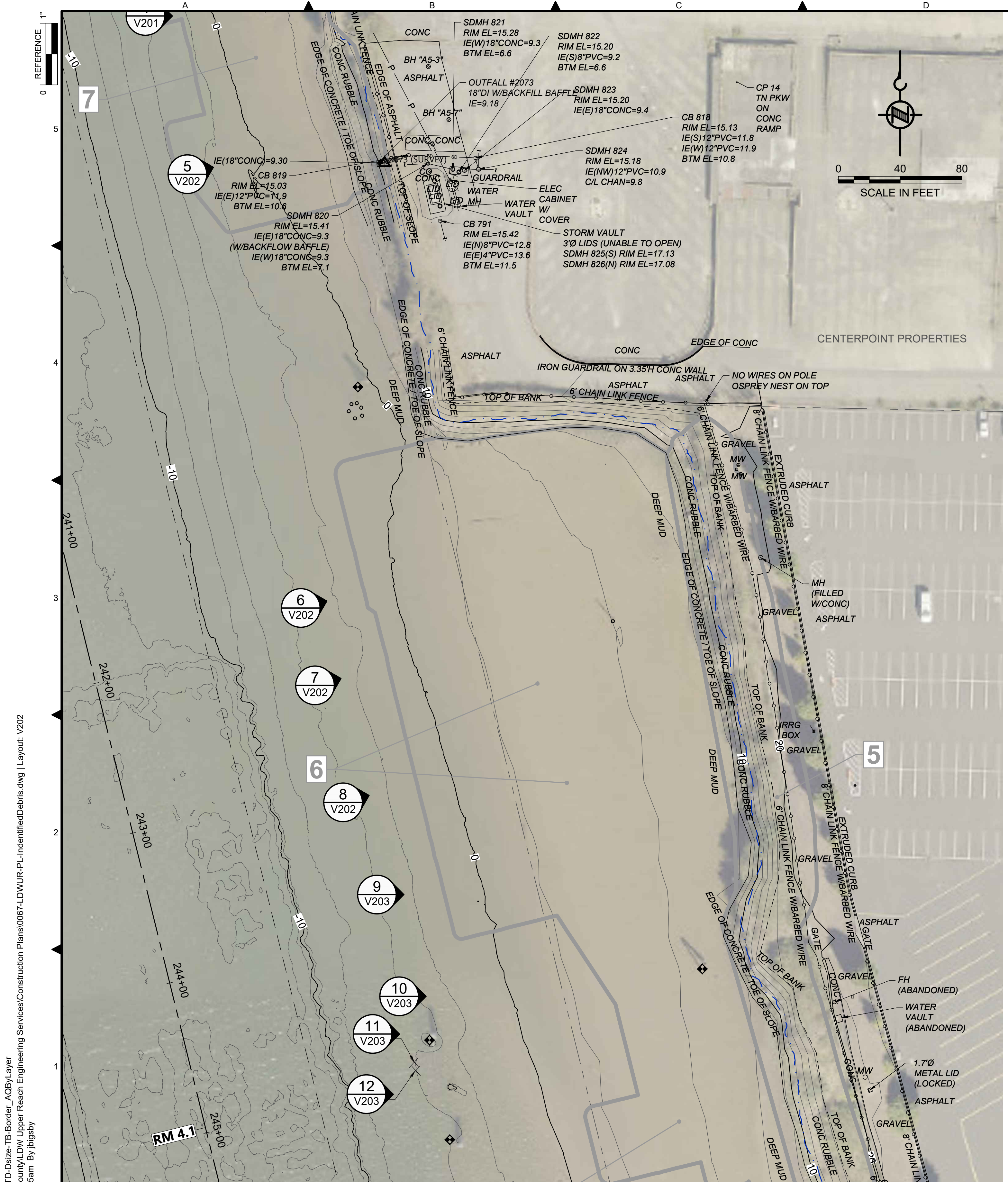


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PHOTO ID 821
SCALE: NONE



PHOTO ID 820
SCALE: NONE



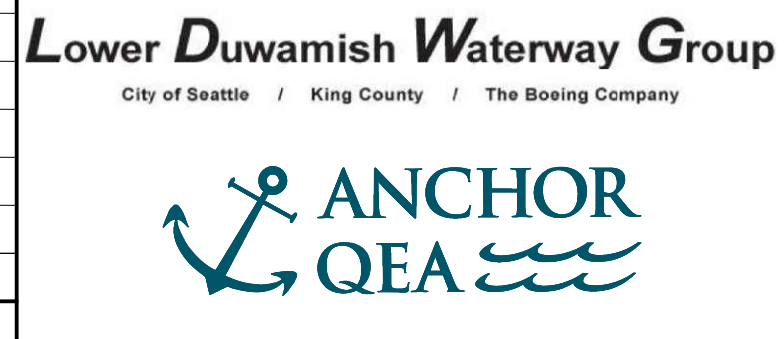
PHOTO ID 819
SCALE: NONE

- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RIVER MILE LABEL
 - KING COUNTY PARCEL
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - DOLPHINS
 - PILES
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - SEDIMENT MANAGEMENT AREA NUMBER
 - REMOVAL OF IDENTIFIED DEBRIS
 - REMOVAL OF PILING

- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 3. AERIAL SOURCE: KING COUNTY 2021
 4. CONTRACTOR SHALL REMOVE PILING AS SHOWN ON THE PLANS AND AS INDICATED IN THE PHOTOGRAPHS (36 PILINGS ESTIMATED FOR REMOVAL). IF ADDITIONAL PILINGS ARE ENCOUNTERED IN THE DREDGE PRISM, CONTRACTOR SHALL COORDINATE WITH THE PROJECT REPRESENTATIVE PRIOR TO REMOVAL.
 5. PHOTOGRAPH POINT LOCATIONS AND INDICATION OF DIRECTION ARE APPROXIMATE.
 6. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.

COLOR IMAGE
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BORDER FILE EDITION: x:\KOVTD\size-TB-Border_ACBM_layer\g:\a\c\p\projects\0067-King County\LDW Upper Reach Engineering Services\Construction\Plans\0067-LDWUR-PL-IdentifiedDebris.dwg | Layout: V202
PLOTTED: Jan 12, 2024 10:23:25am By jlgbsy



FINAL ISSUE DRAWING
INFORMATION ONLY
BID DOCUMENTS
DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA
PROJECT ENGINEER: J. LAPLANTE
DESIGN APPROVAL: J. ABDALKHANI
PROJECT ACCEPTANCE: G. STEINER

CHECKED: K. GROSS
SCALE: AS NOTED
PROJECT FILE NO: E00559E18
CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION
LOCATION OF IDENTIFIED DEBRIS AND PILING FOR REMOVAL (2 OF 5)

DATE: DECEMBER 2023
DRAWING NO: **V202**
SHT NO / TOTAL: 20 / 91
REV NO: **0**

NO	REVISION DESCRIPTION	BY	APVD	DATE

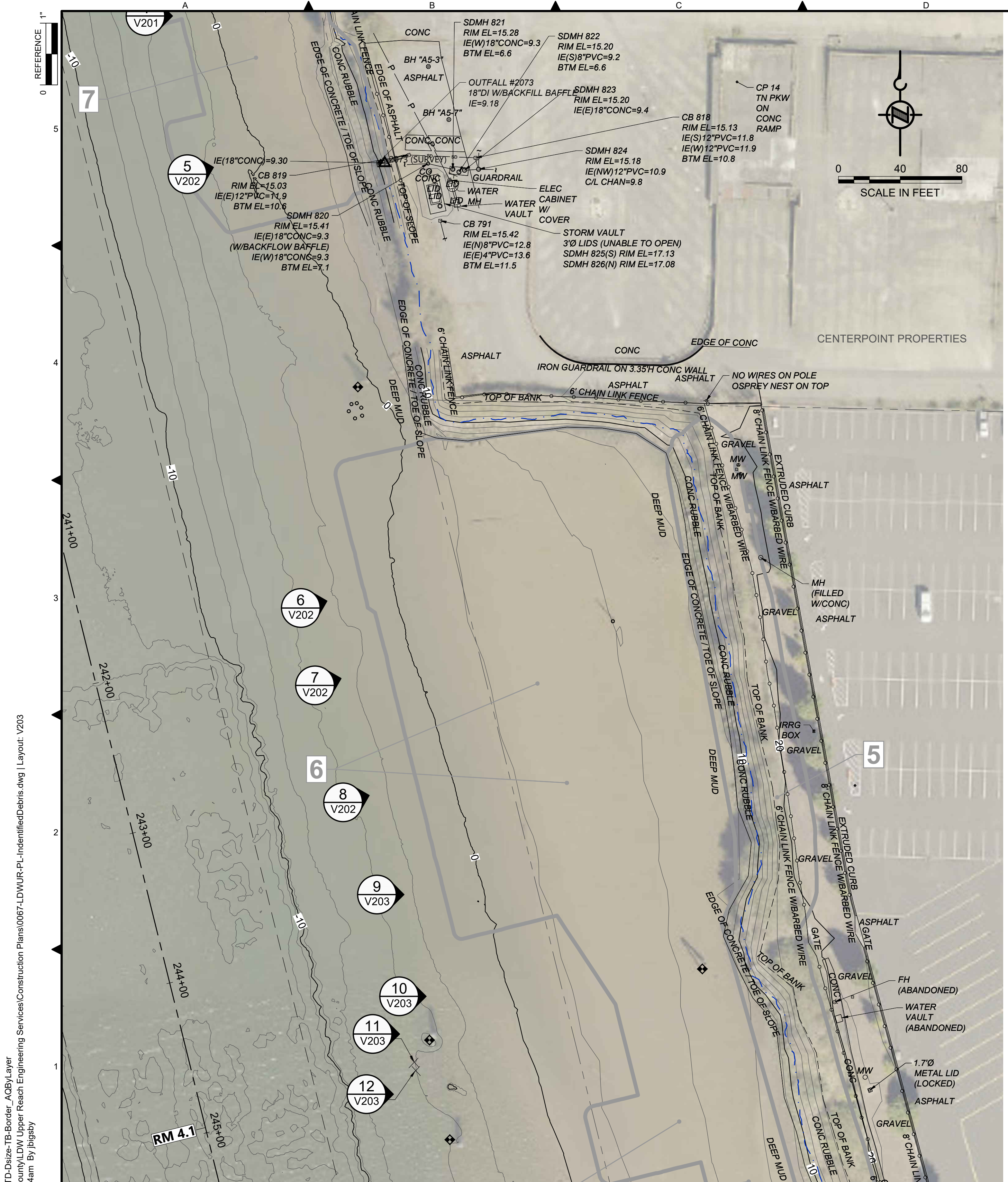


PHOTO ID 818
SCALE: NONE

9
V203

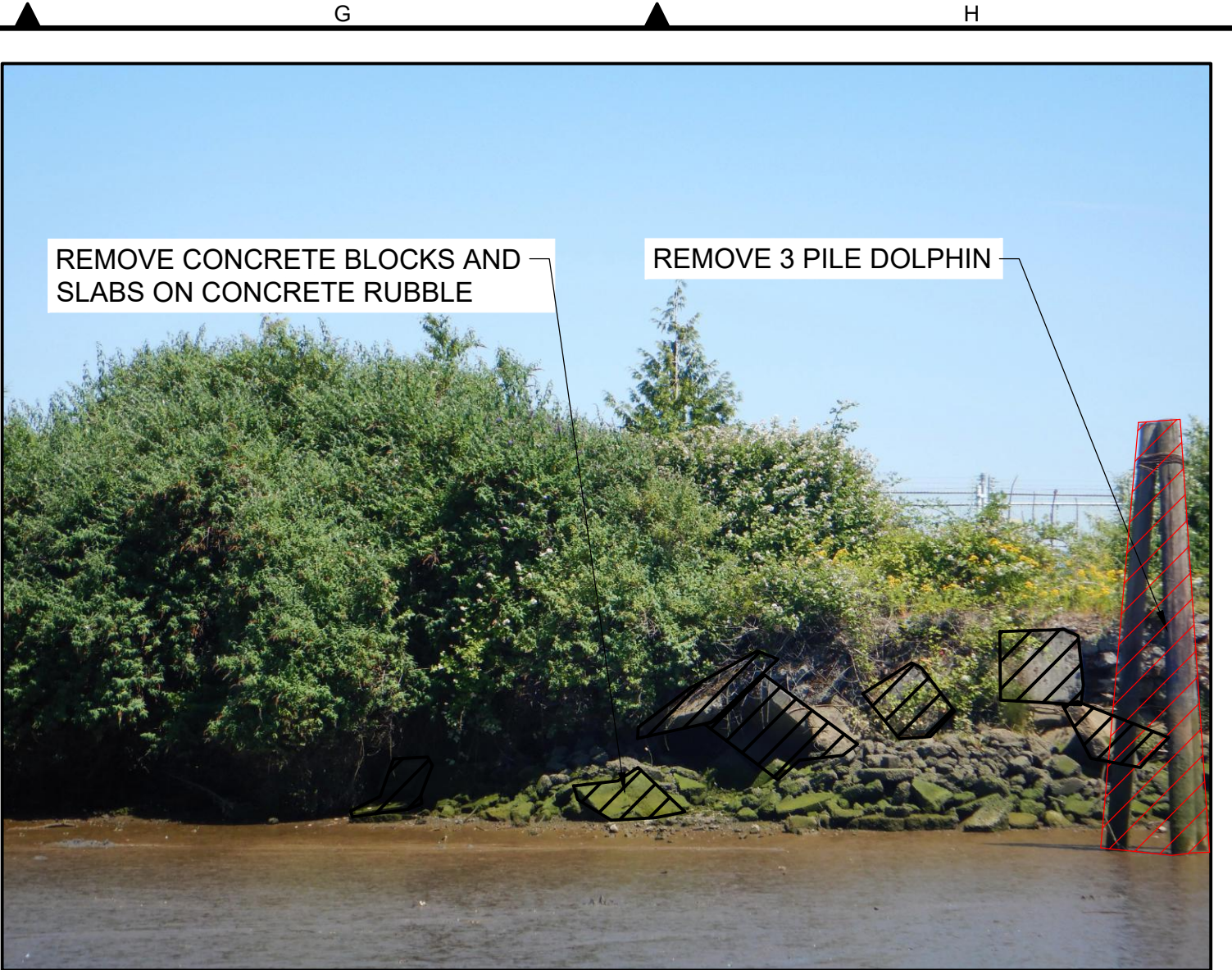


PHOTO ID 817
SCALE: NONE

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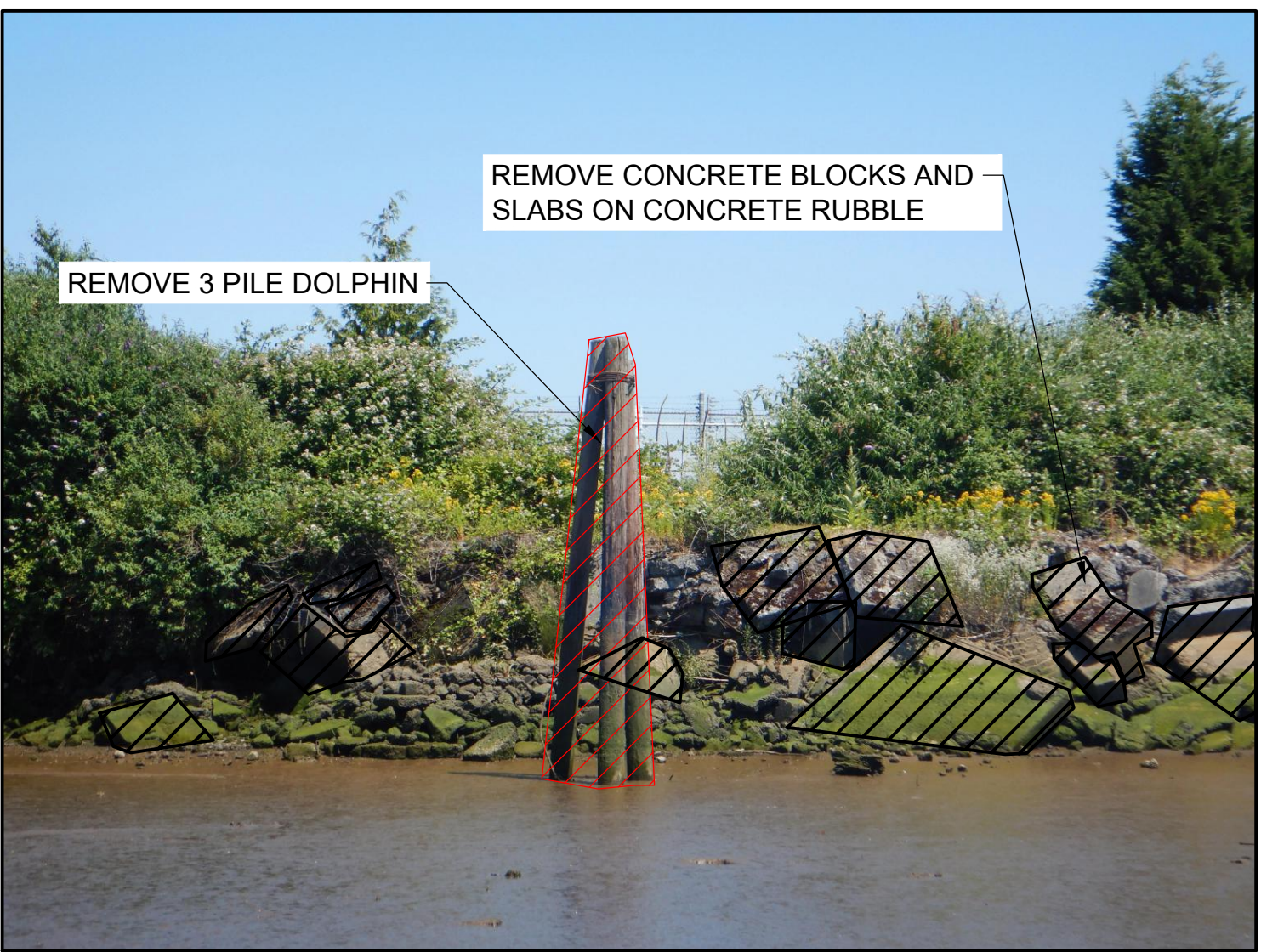


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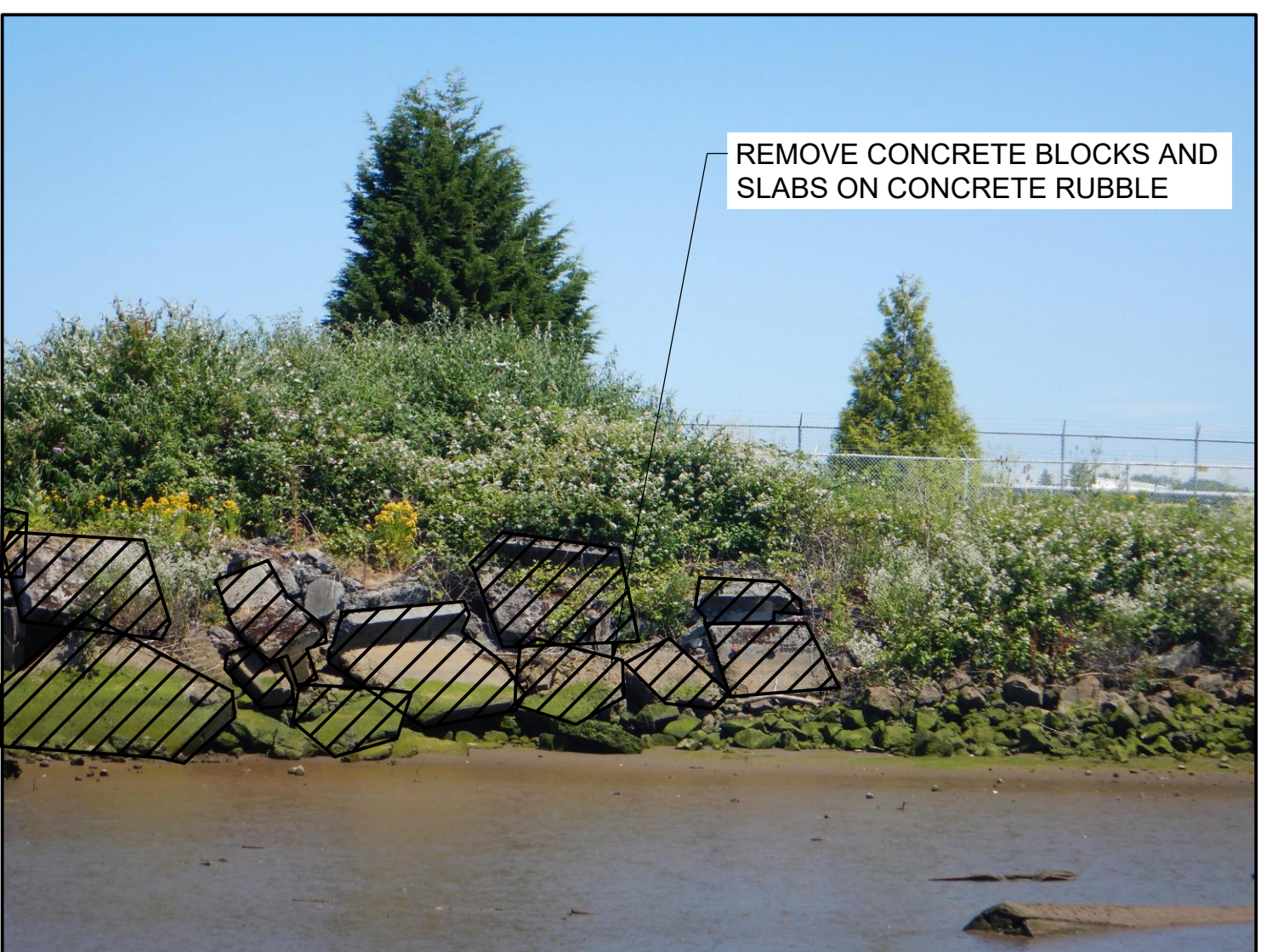


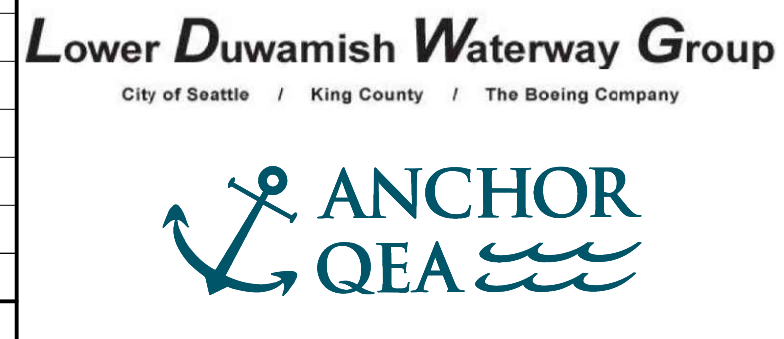
PHOTO ID 815
SCALE: NONE

12
V203

- NOTES:**
- HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 - VERTICAL DATUM: MLLW
 - AERIAL SOURCE: KING COUNTY 2021
 - CONTRACTOR SHALL REMOVE PILING AS SHOWN ON THE PLANS AND AS INDICATED IN THE PHOTOGRAPHS (36 PILINGS ESTIMATED FOR REMOVAL). IF ADDITIONAL PILINGS ARE ENCOUNTERED IN THE DREDGE PRISM, CONTRACTOR SHALL COORDINATE WITH THE PROJECT REPRESENTATIVE PRIOR TO REMOVAL.
 - PHOTOGRAPH POINT LOCATIONS AND INDICATION OF DIRECTION ARE APPROXIMATE.
 - ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.

COLOR IMAGE
THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

BORDER FILE EDITION: x:\KOV\TD\size-TB-Border_ACBM\layer\g:\a\c\ad\Projects\0067-King County\LDW Upper Reach Engineering Services\Construction Plans\0067-LDWUR-PL-IdentifiedDebris.dwg | Layout: V203
PLOTTED: Jan 12, 2024 10:24:14am By jhgaby



FINAL ISSUE DRAWING
INFORMATION ONLY
BID DOCUMENTS
DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA
PROJECT ENGINEER: J. LAPLANTE
DESIGN APPROVAL: J. ABDALKHANI
PROJECT ACCEPTANCE: G. STEINER

CHECKED: K. GROSS
SCALE: AS NOTED
PROJECT FILE NO: E00559E18
CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION
LOCATION OF IDENTIFIED DEBRIS AND PILING FOR REMOVAL (3 OF 5)

DATE: DECEMBER 2023
DRAWING NO: **V203**
SHT NO / TOTAL: 21 / 91
REV NO: **0**

NO	REVISION DESCRIPTION	BY	APVD	DATE

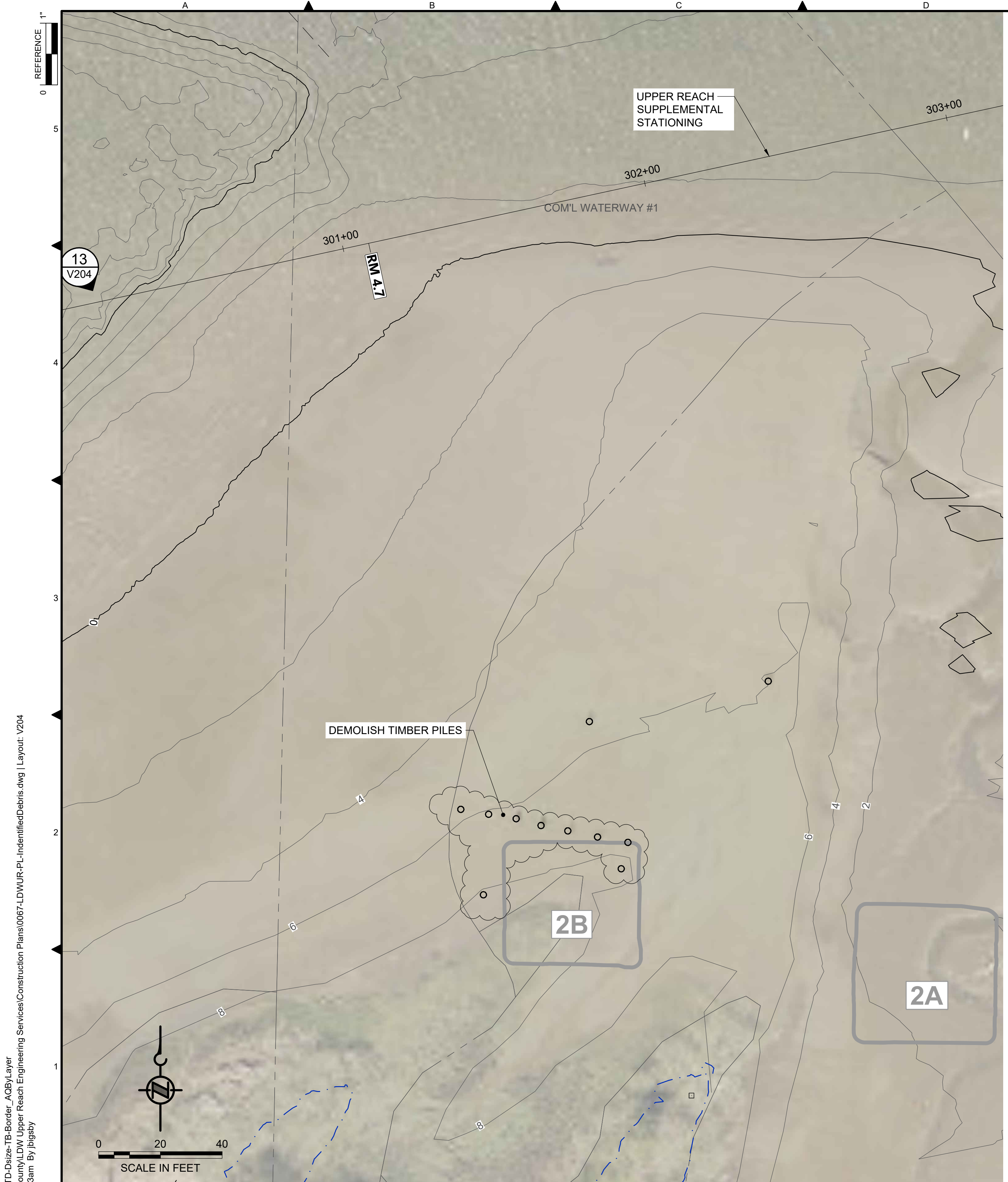
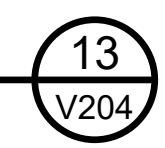


PHOTO ID 852
SCALE: NONE



LEGEND:

- USACE CHANNEL CENTERLINE AND STATIONING
- FEDERAL NAVIGATION CHANNEL
- RIVER MILE LABEL
- KING COUNTY PARCEL
- LDW UPPER REACH APPROXIMATE BOUNDARY
- EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
- OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
- OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
- DOLPHINS
- PILES
- SEDIMENT MANAGEMENT AREA BOUNDARY
- SEDIMENT MANAGEMENT AREA NUMBER
- REMOVAL OF IDENTIFIED DEBRIS
- REMOVAL OF PILING

NOTES:

1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
2. VERTICAL DATUM: MLLW
3. AERIAL SOURCE: KING COUNTY 2021
4. CONTRACTOR SHALL REMOVE PILING AS SHOWN ON THE PLANS AND AS INDICATED IN THE PHOTOGRAPHS (36 PILING ESTIMATED FOR REMOVAL). IF ADDITIONAL PILING ARE ENCOUNTERED IN THE DREDGE PRISM, CONTRACTOR SHALL COORDINATE WITH THE PROJECT REPRESENTATIVE PRIOR TO REMOVAL.
5. PHOTOGRAPH POINT LOCATIONS AND INDICATION OF DIRECTION ARE APPROXIMATE.
6. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.

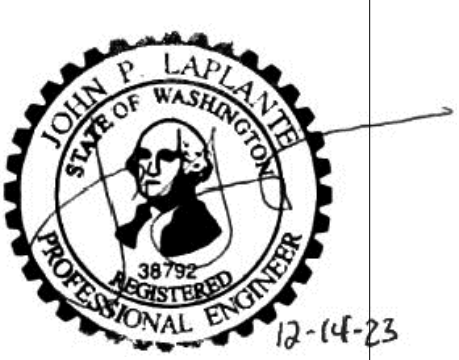
COLOR IMAGE
THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

BORDER FILE EDITION: x:\KOVTD\size-TB-Border_ACBM\Layer_V204\CAD\Projects\0067-King County\LDW Upper Reach Engineering Services\Construction Plans\0067-LDWUR-PL-IdentifiedDebris.dwg | Layout: V204 PLOTTED: Jan 12, 2024 10:25:03am By jigsby

NO	REVISION DESCRIPTION	BY	APVD	DATE



FINAL ISSUE DRAWING
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BID DOCUMENTS
DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION
**LOCATION OF IDENTIFIED
DEBRIS AND PILING FOR
REMOVAL (4 OF 5)**

DATE: DECEMBER 2023
DRAWING NO: V204
SHT NO / TOTAL 22 / 91
REV NO: 0

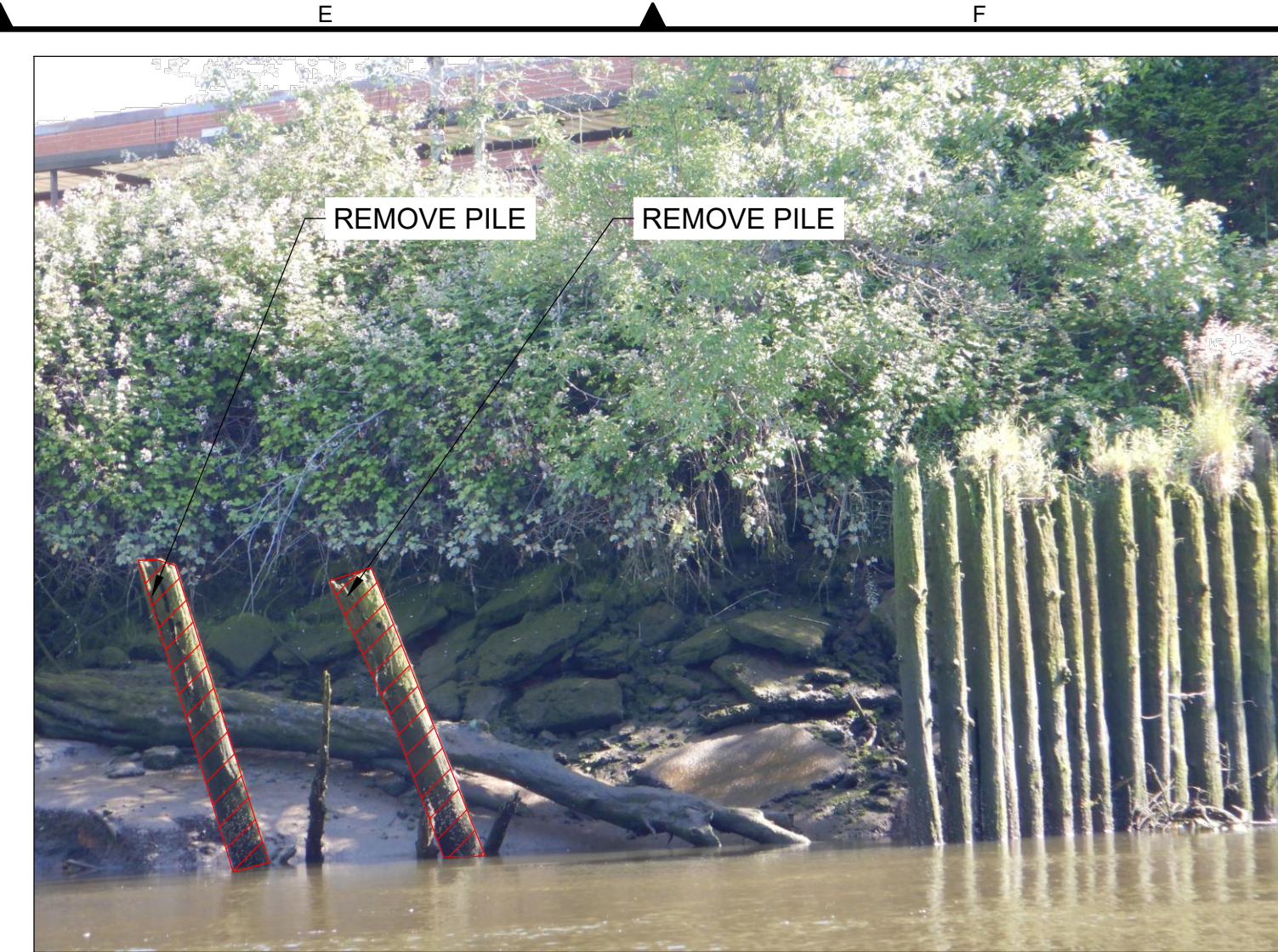
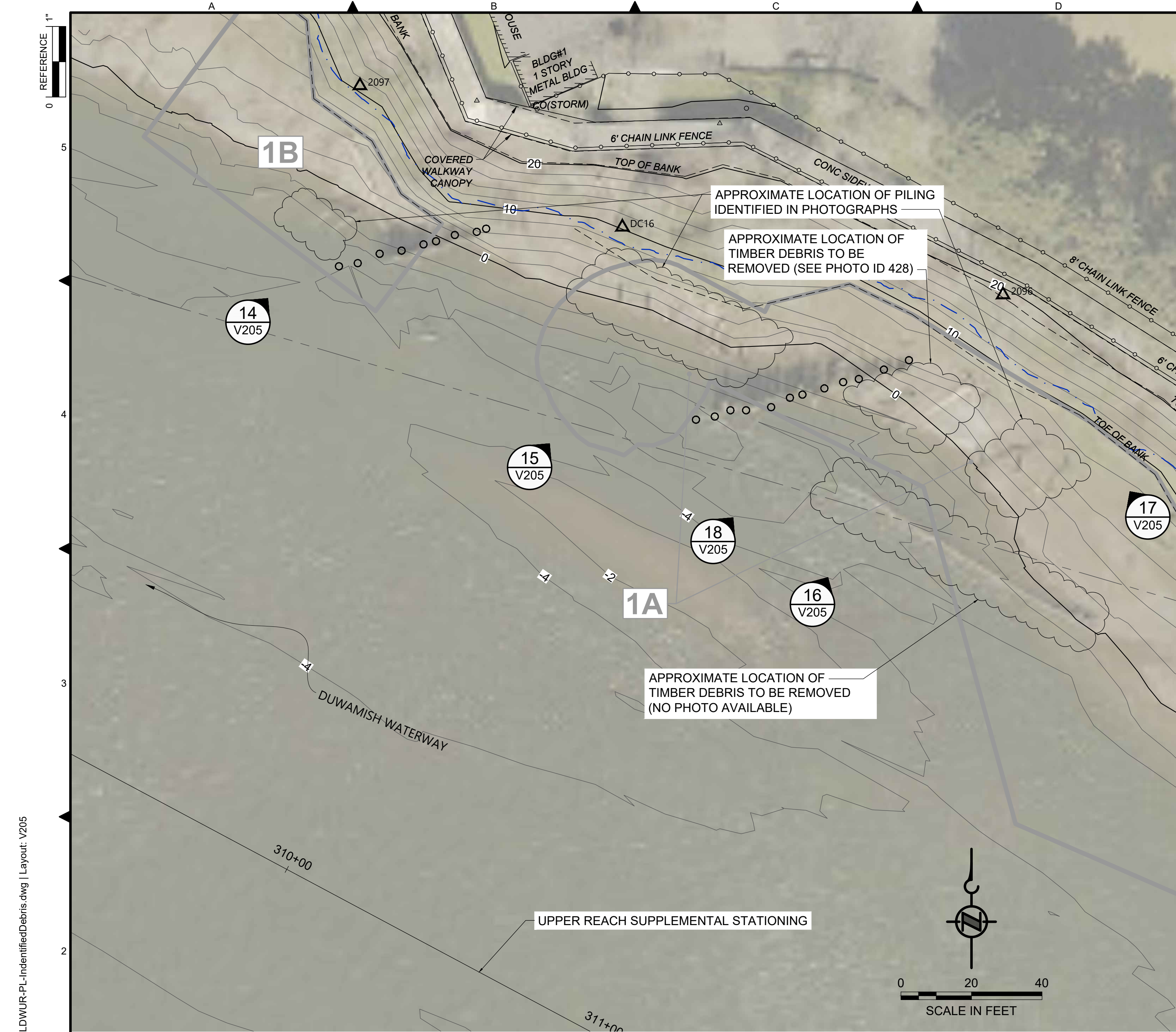


PHOTO ID 433
SCALE: NONE
14
V205

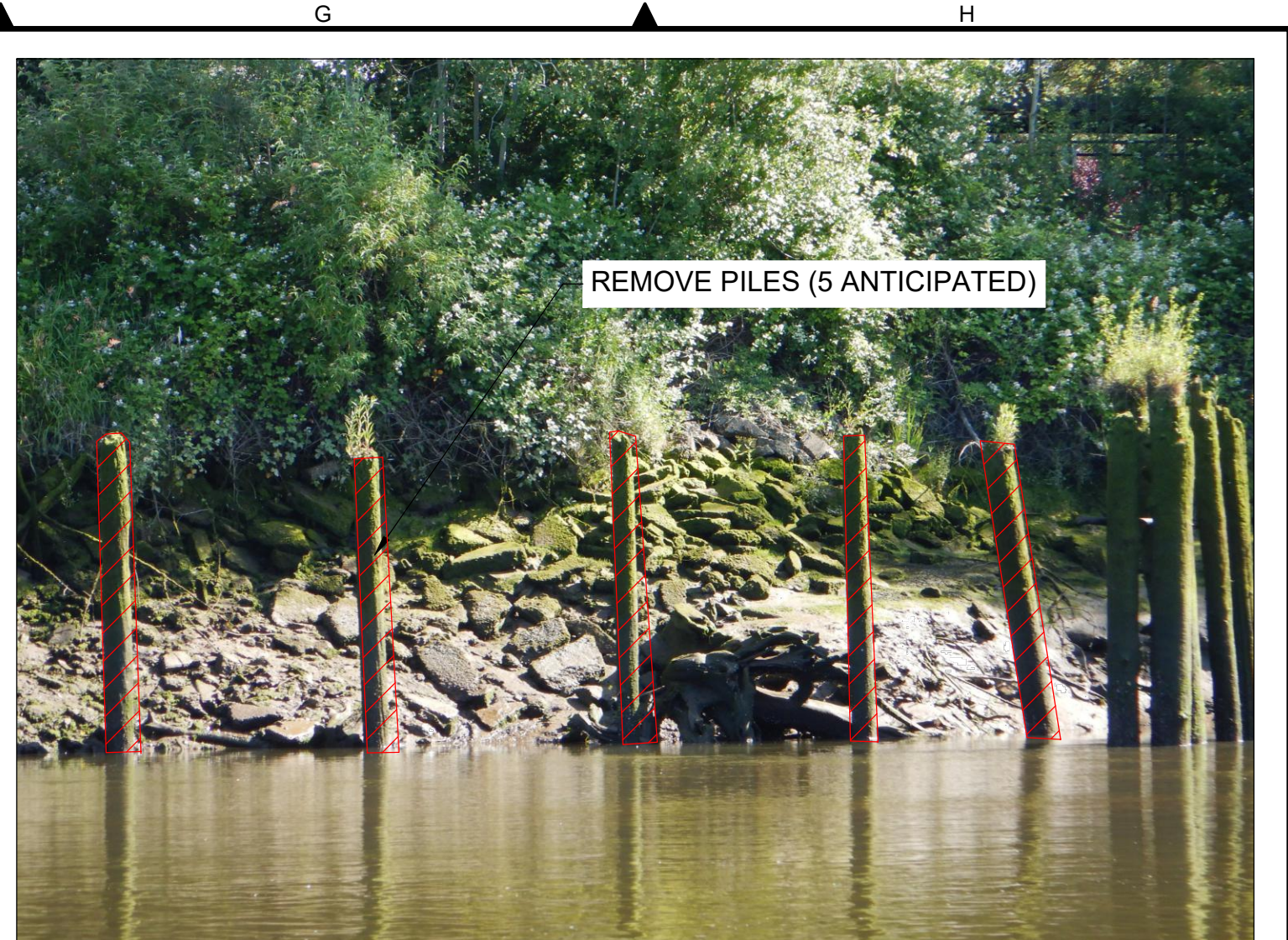


PHOTO ID 430
SCALE: NONE
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V205



PHOTO ID 427
SCALE: NONE
16
V205



PHOTO ID 233
SCALE: NONE
17
V205



PHOTO ID 428
SCALE: NONE
18
V205

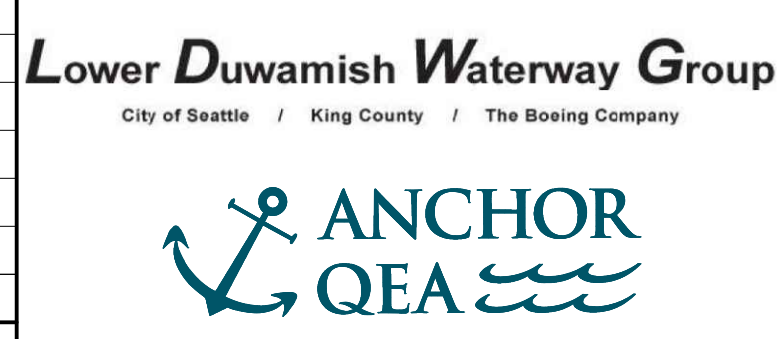
- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RIVER MILE LABEL
 - KING COUNTY PARCEL
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - △ OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - ▲ OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - ◆ DOLPHINS
 - PILES

- SEDIMENT MANAGEMENT AREA BOUNDARY
- 14 SEDIMENT MANAGEMENT AREA NUMBER
- REMOVAL OF IDENTIFIED DEBRIS
- REMOVAL OF PILING

- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 3. AERIAL SOURCE: KING COUNTY 2021
 4. CONTRACTOR SHALL REMOVE PILING AS SHOWN ON THE PLANS AND AS INDICATED IN THE PHOTOGRAPHS (36 PILING ESTIMATED FOR REMOVAL). IF ADDITIONAL PILING ARE ENCOUNTERED IN THE DREDGE PRISM, CONTRACTOR SHALL COORDINATE WITH THE PROJECT REPRESENTATIVE PRIOR TO REMOVAL.
 5. PHOTOGRAPH POINT LOCATIONS AND INDICATION OF DIRECTION ARE APPROXIMATE.
 6. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.

BORDER FILE EDITION: x:\KOV\TD-Size-TB-Border_ACBM\layer\gial\CAD\Projects\0067-King County\LDW Upper Reach Engineering Services\Construction\Plans\0067-LDWUR-PL-IdentifiedDebris.dwg | Layout: V205 PLOTTED: Jan 12, 2024 10:25:49am By jlgbsby

NO	REVISION DESCRIPTION	BY	APVD	DATE



FINAL ISSUE DRAWING
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DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA
PROJECT ENGINEER: J. LAPLANTE
DESIGN APPROVAL: J. ABDALKHANI
PROJECT ACCEPTANCE: G. STEINER

CHECKED: K. GROSS
SCALE: AS NOTED
PROJECT FILE NO: E00559E18
CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION
**LOCATION OF IDENTIFIED
DEBRIS AND PILING FOR
REMOVAL (5 OF 5)**

COLOR IMAGE
THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

DATE: DECEMBER 2023
DRAWING NO: **V205**
SHT NO / TOTAL: 23 / 91
REV NO: **0**

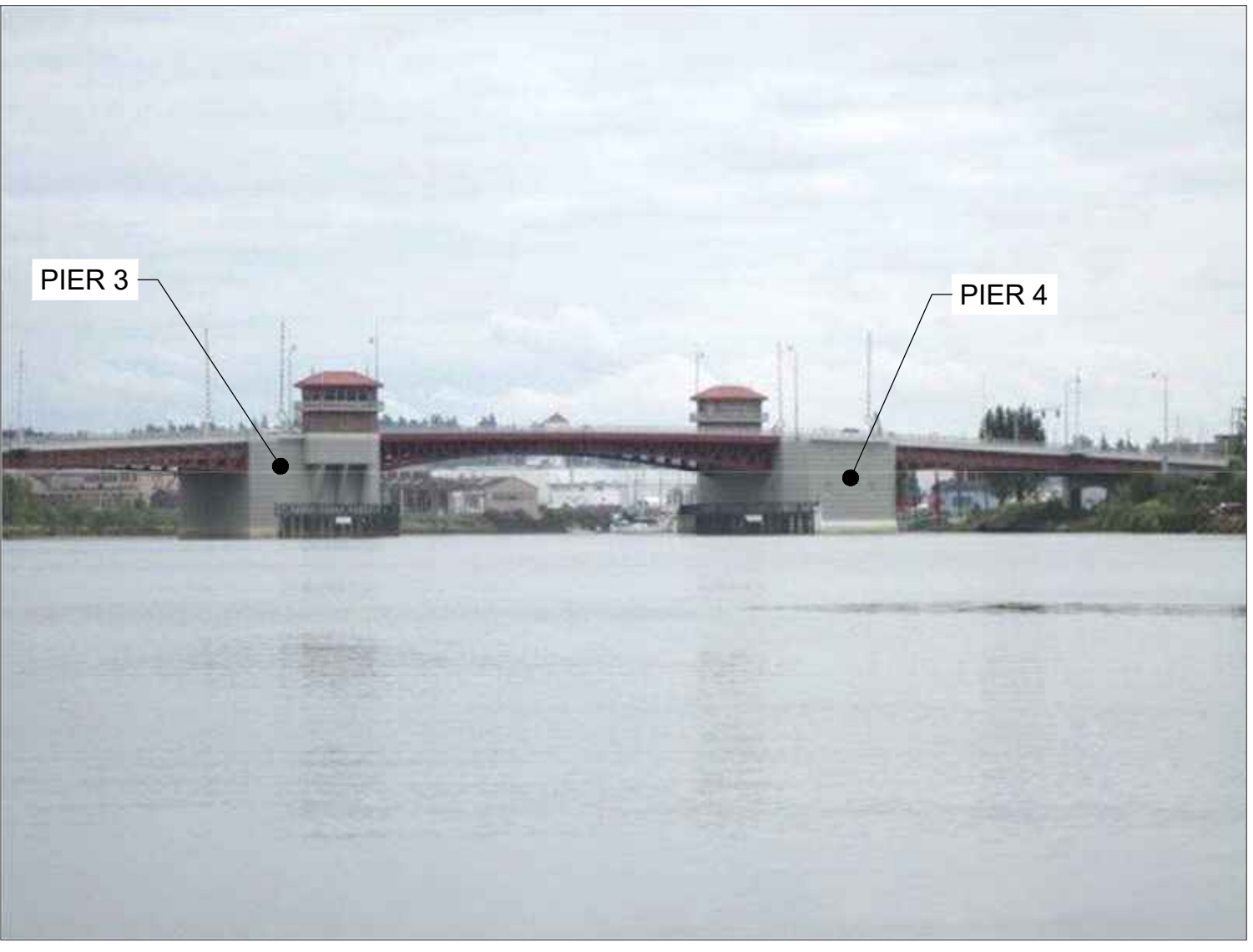
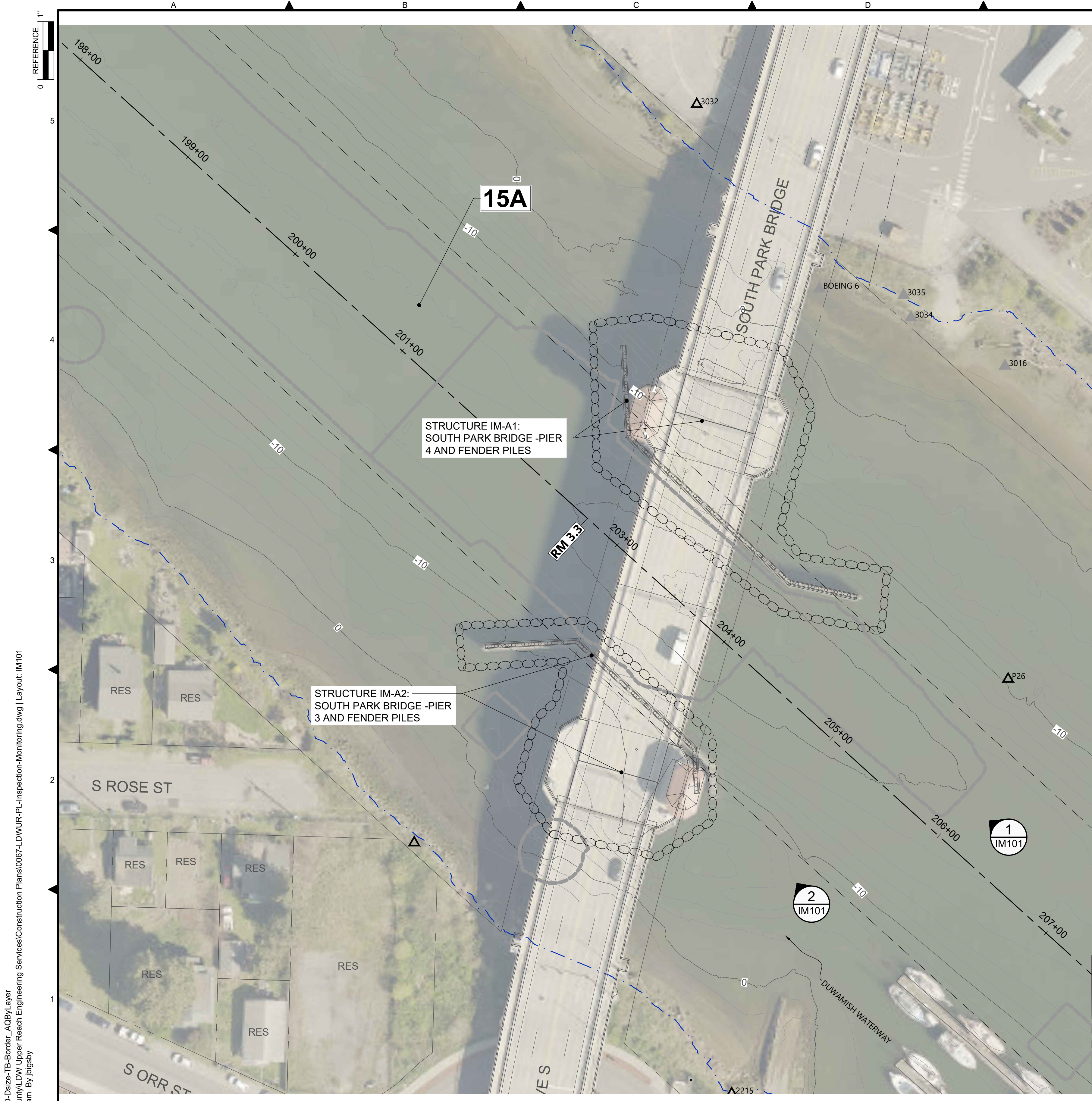


PHOTO
SCALE: NONE

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IM101

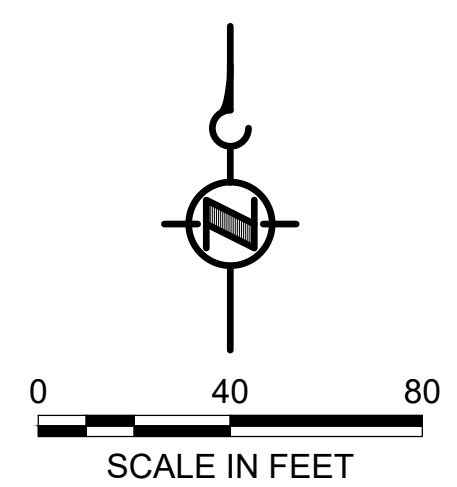


PHOTO
SCALE: NONE

2
IM101

- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - KING COUNTY PARCEL (GIS)
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - STRUCTURE DESIGNATED FOR PRE-CONSTRUCTION AND POST-CONSTRUCTION STRUCTURAL CONDITION INSPECTIONS
 - MONITORING POINT (STRUCTURE)
 - SEDIMENT MANAGEMENT AREA BOUNDARY

- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 3. AERIAL SOURCE: KING COUNTY 2021
 4. PERFORM PRE-CONSTRUCTION AND POST-CONSTRUCTION STRUCTURAL CONDITION INSPECTIONS OF IDENTIFIED STRUCTURES IM-A1 AND IM-A2 IN ACCORDANCE WITH THE SPECIFICATIONS.
 5. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.

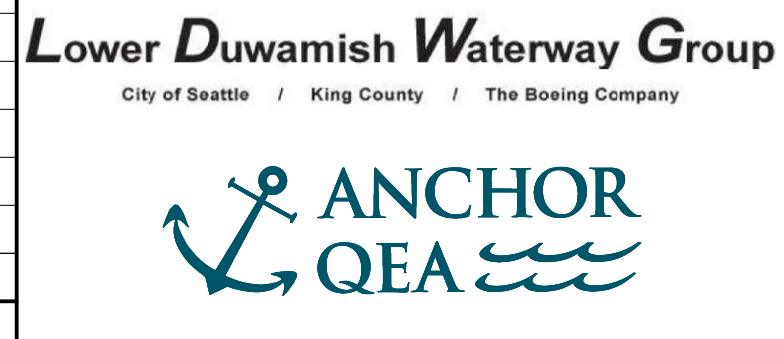


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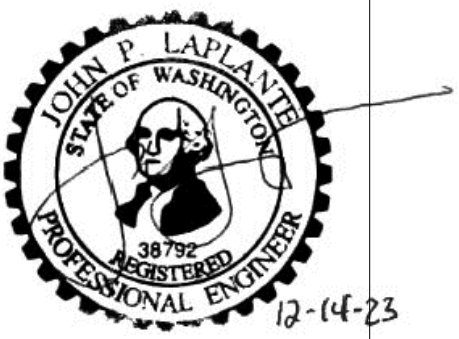
THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

BORDER FILE EDITION: x:\KOVTD\size-TB-Border_ACBM_Layer
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 PLOTTED: Jan 12, 2024 10:27:33am By jigsby

NO	REVISION DESCRIPTION	BY	APVD	DATE



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BID DOCUMENTS
 DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA
 PROJECT ENGINEER: J. LAPLANTE
 DESIGN APPROVAL: J. ABDALKHANI
 PROJECT ACCEPTANCE: G. STEINER

CHECKED: K. GROSS
 SCALE: AS NOTED
 PROJECT FILE NO: E00559E18
 CONTRACT NO: KC001065

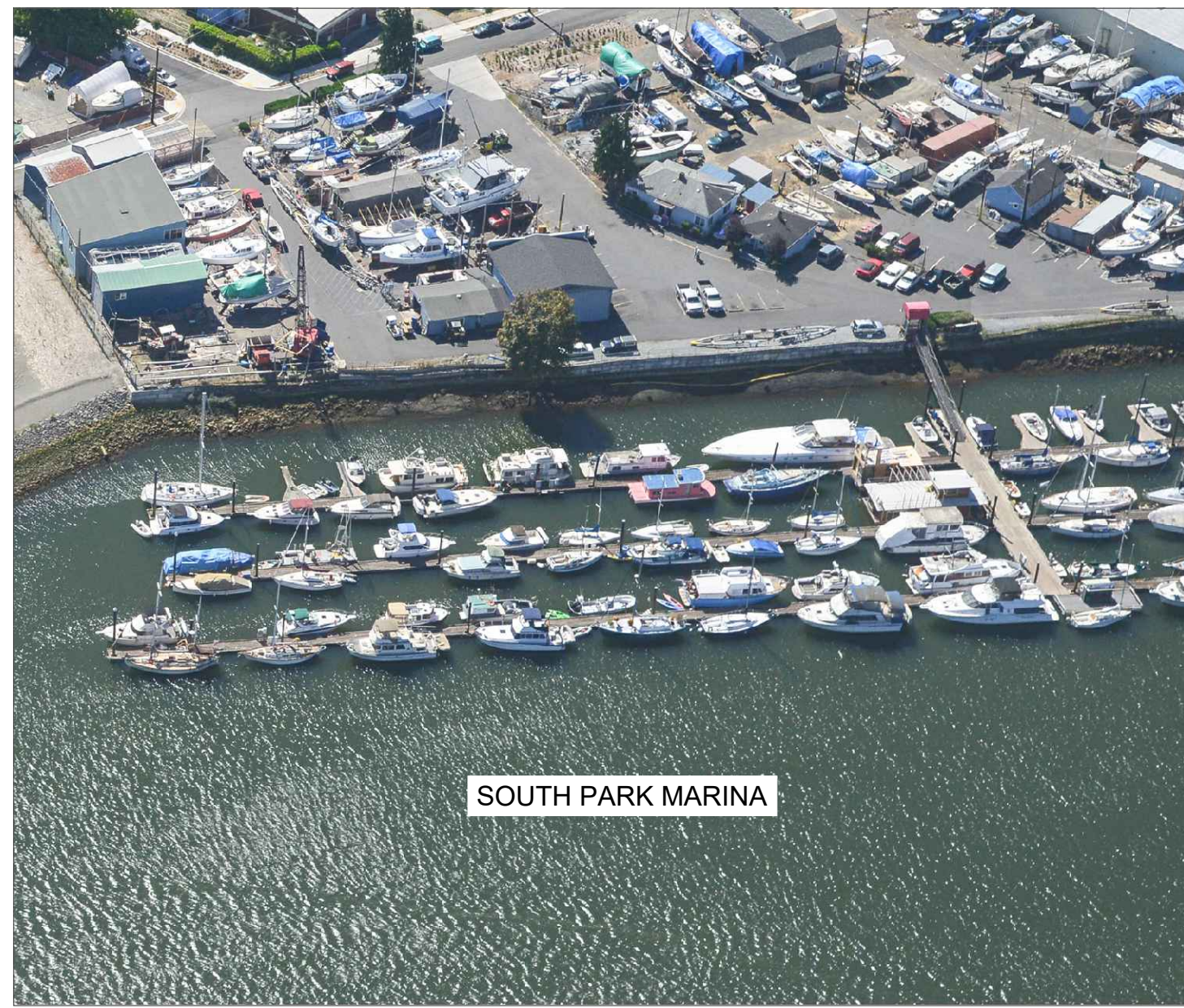


DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

INSPECTION AND MONITORING
(RM 3.23 TO 3.44)

DATE: DECEMBER 2023
 DRAWING NO: **IM101**
 SHT NO / TOTAL: 24 / 91
 REV NO: **0**

1" REFERENCE



SOUTH PARK MARINA

PHOTO
SCALE: NONE

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IM102



PUBLIC PIER AND VIEWPOINT

PHOTO
SCALE: NONE

2
IM102

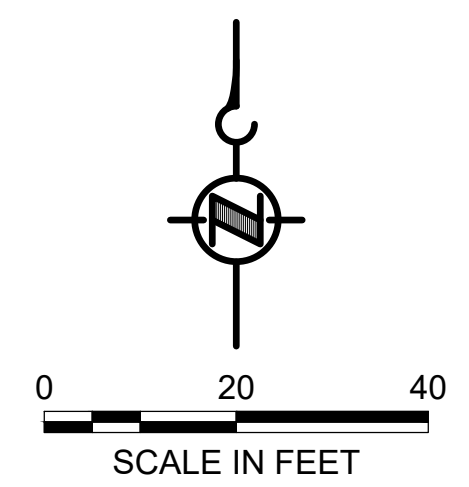


LEGEND:

- USACE CHANNEL CENTERLINE AND STATIONING
- FEDERAL NAVIGATION CHANNEL
- RM 3.0** RIVER MILE LABEL
- KING COUNTY PARCEL (GIS)
- LDW UPPER REACH APPROXIMATE BOUNDARY
- EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
- OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
- OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
- STRUCTURE DESIGNATED FOR PRE-CONSTRUCTION AND POST-CONSTRUCTION STRUCTURAL CONDITION INSPECTIONS
- MONITORING POINT (STRUCTURE)
- SEDIMENT MANAGEMENT AREA BOUNDARY
- DOLPHINS
- PILES

NOTES:

1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
2. VERTICAL DATUM: MLLW
3. AERIAL SOURCE: KING COUNTY 2021
4. PERFORM PRE-CONSTRUCTION AND POST-CONSTRUCTION STRUCTURAL CONDITION INSPECTIONS OF IDENTIFIED PORTION OF STRUCTURES IM-B, IM-C, AND IM-D IN ACCORDANCE WITH THE SPECIFICATIONS.
5. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.

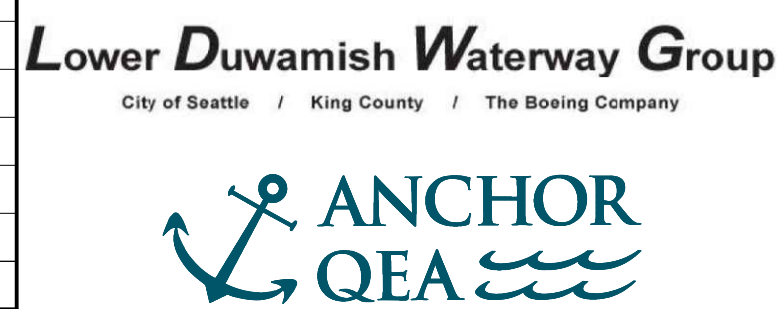


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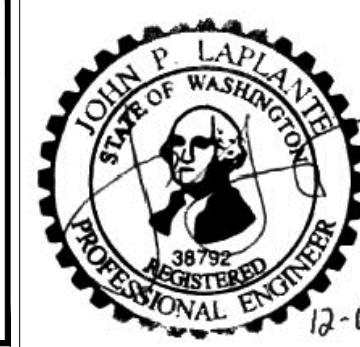
THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

BORDER FILE EDITION: x:\KOVTD\size-TB-Border_AQB\Layer\giala\CAD\Projects\0067-King County\LDW Upper Reach Engineering Services\Construction\Plans\0067-LDWUR-PL-Inspection-Monitoring.dwg | Layout: IM102
PLOTTED: Jan 12, 2024 - 10:28:23am By jigsby

NO	REVISION DESCRIPTION	BY	APVD	DATE



FINAL ISSUE DRAWING
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BID DOCUMENTS
DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION

INSPECTION AND MONITORING
(RM 3.49 TO 3.56)

DATE: DECEMBER 2023
DRAWING NO: **IM102**
SHT NO / TOTAL: 25 / 91
REV NO: **0**

0 REFERENCE 1"

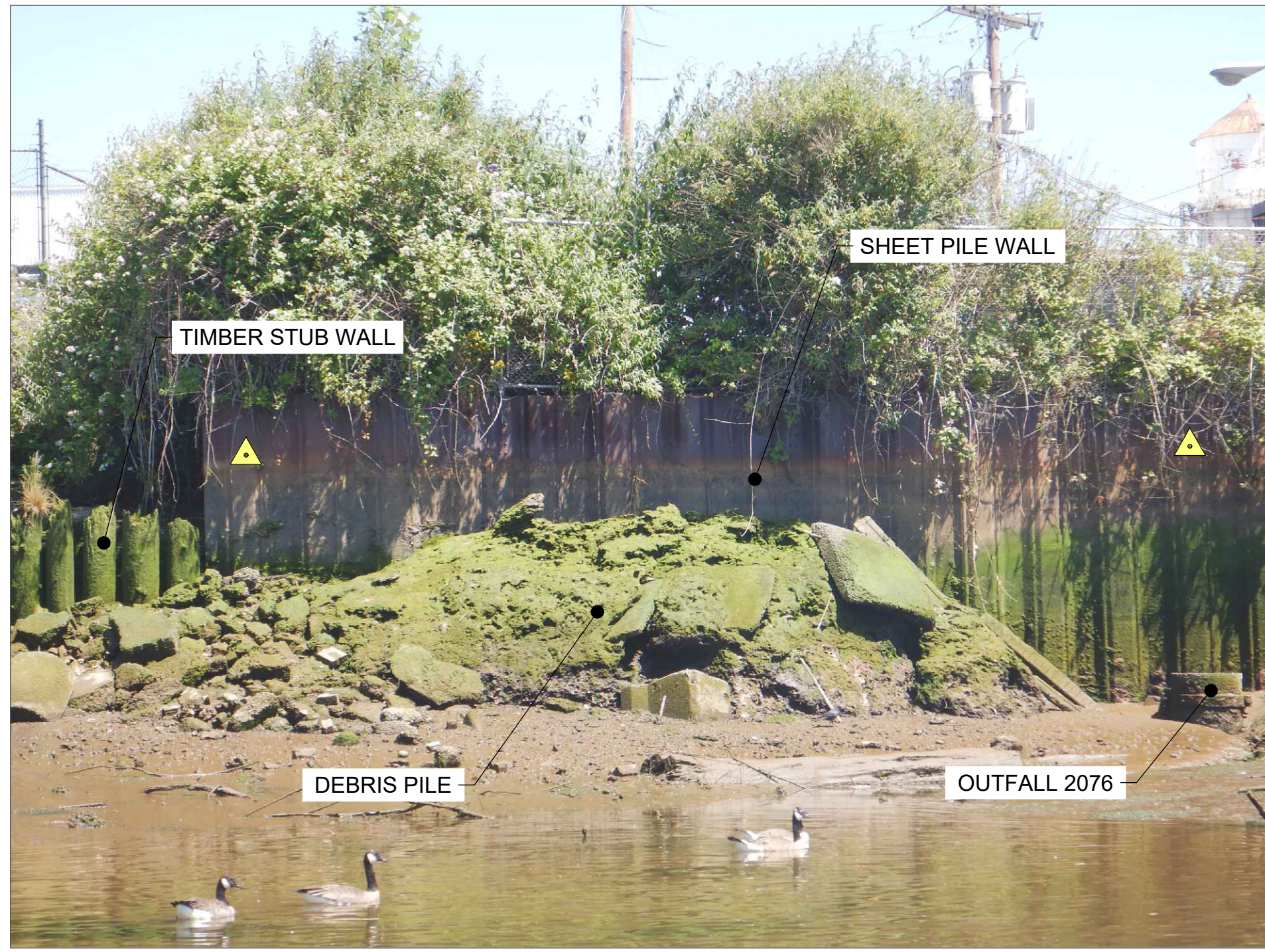
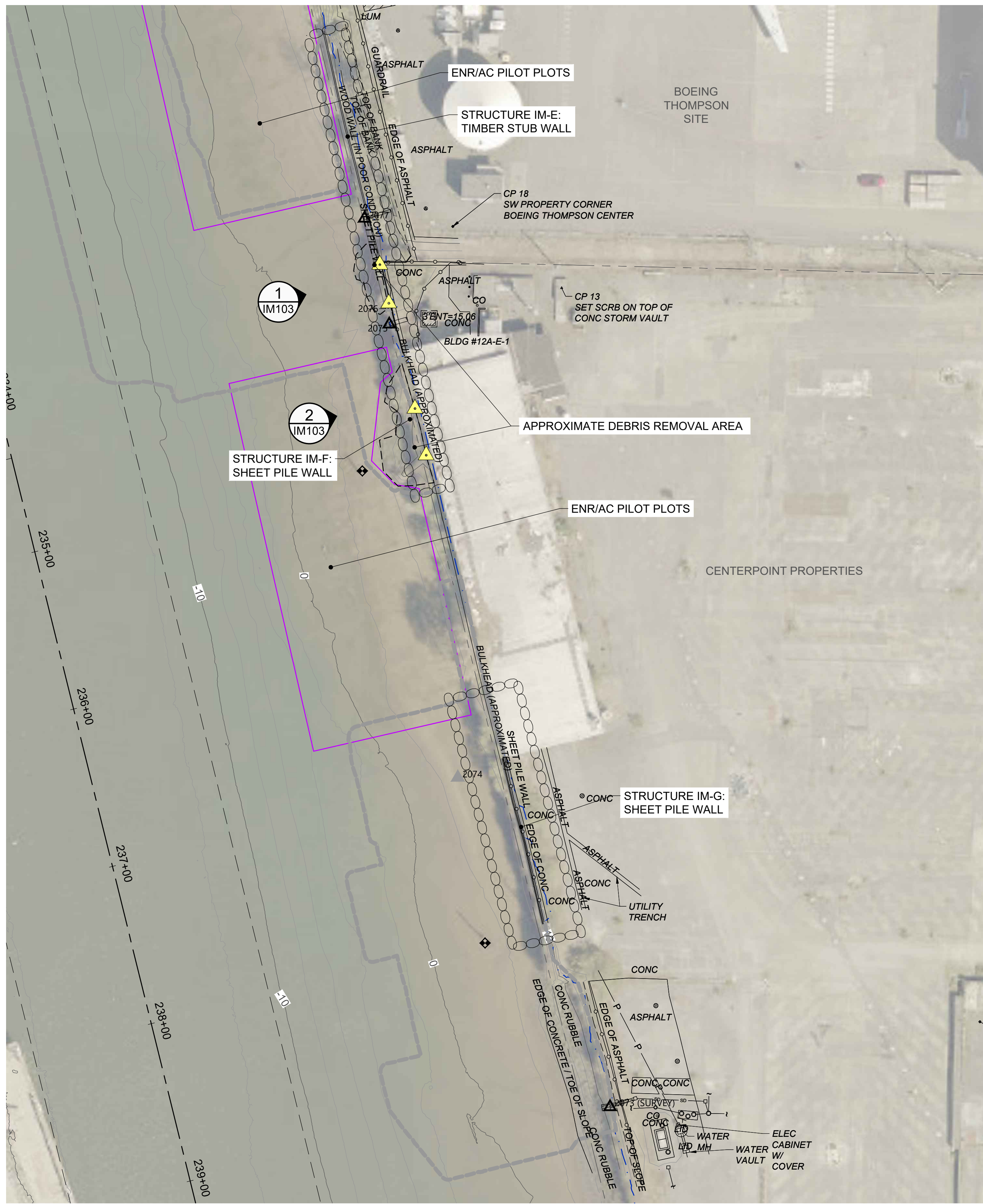


PHOTO 1 IM103 SCALE: NONE

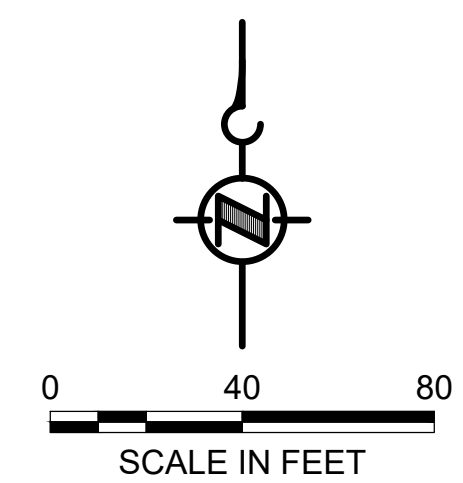


PHOTO 2 IM103 SCALE: NONE



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - KING COUNTY PARCEL (GIS)
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - STRUCTURE DESIGNATED FOR PRE-CONSTRUCTION AND POST-CONSTRUCTION STRUCTURAL CONDITION INSPECTIONS
 - MONITORING POINT (STRUCTURE)
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - DOLPHINS
 - ENRIAC PILOT PLOT
 - PILES

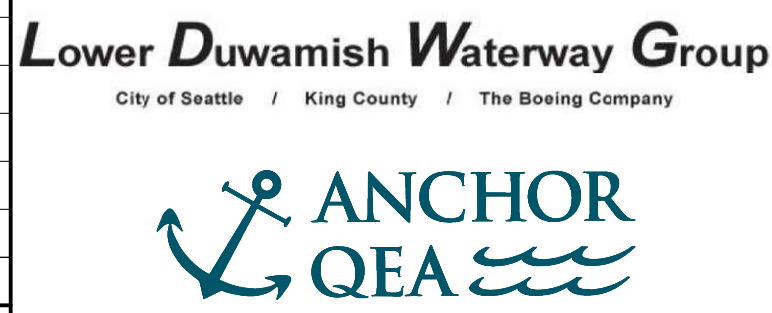
- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 3. AERIAL SOURCE: KING COUNTY 2021
 4. MONITORING POINT LAYOUT DEPICTED REPRESENTS THE MINIMUM REQUIRED. INSTALL AND SURVEY IN ACCORDANCE WITH THE SPECIFICATIONS.
 5. PERFORM PRE-CONSTRUCTION AND POST-CONSTRUCTION STRUCTURAL CONDITION INSPECTIONS OF IDENTIFIED STRUCTURES IM-E, IM-F, AND IM-G, AS WELL AS OUTFALLS 2075 AND 2077, IN ACCORDANCE WITH THE SPECIFICATIONS.
 6. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.



COLOR IMAGE
THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

BORDER FILE EDITION: x:\KOVTD\size-TB-Border_ACBM_Layer_Vgial\CAD\Projects\0067-King County\LDW Upper Reach Engineering Services\Construction Plans\0067-LDWUR-PL-Inspection-Monitoring.dwg | Layout: IM103 PLOTTED: Jan 12, 2024 10:29:17am By jlgbsby

NO	REVISION DESCRIPTION	BY	APVD	DATE



FINAL ISSUE DRAWING
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DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION
INSPECTION AND MONITORING
(RM 3.85 TO 3.99)

DATE: DECEMBER 2023
DRAWING NO: IM103
SHT NO / TOTAL 26 / 91
REV NO: 0

BORDER FILE EDITION: x:\KOVTD\size-TB-Border_AQB\layer
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 PLOTTED: Jan 12, 2024 10:30:05am By jigsby



PHOTO
 SCALE: NONE
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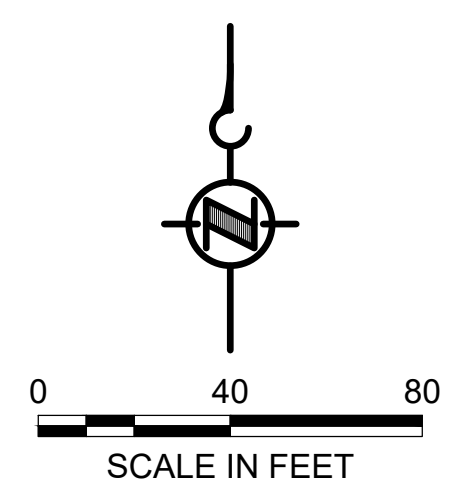


PHOTO
 SCALE: NONE
 2
 IM104



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - KING COUNTY PARCEL (GIS)
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - STRUCTURE DESIGNATED FOR PRE-CONSTRUCTION AND POST-CONSTRUCTION STRUCTURAL CONDITION INSPECTIONS
 - MONITORING POINT (STRUCTURE)
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - DOLPHINS
 - PILES

- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 3. AERIAL SOURCE: KING COUNTY 2021
 4. PERFORM PRE-CONSTRUCTION AND POST-CONSTRUCTION STRUCTURAL CONDITION INSPECTIONS OF IDENTIFIED STRUCTURE IM-H IN ACCORDANCE WITH THE SPECIFICATIONS.
 5. PROVIDE SINGULAR PRE-CONSTRUCTION AND POST-CONSTRUCTION REPORTS FOR THE TIMBER AND DOLPHIN PILES IDENTIFIED AS STRUCTURE IM-I.
 6. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.



COLOR IMAGE
 THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

NO	REVISION DESCRIPTION	BY	APVD	DATE



FINAL ISSUE DRAWING
INFORMATION ONLY
BID DOCUMENTS
 DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA
 PROJECT ENGINEER: J. LAPLANTE
 DESIGN APPROVAL: J. ABDALKHANI
 PROJECT ACCEPTANCE: G. STEINER

CHECKED: K. GROSS
 SCALE: AS NOTED
 PROJECT FILE NO: E00559E18
 CONTRACT NO: KC001065

DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION
INSPECTION AND MONITORING
 (RM 3.98 TO 4.13)

DATE: DECEMBER 2023
 DRAWING NO: **IM104**
 SHT NO / TOTAL: 27 / 91
 REV NO: **0**

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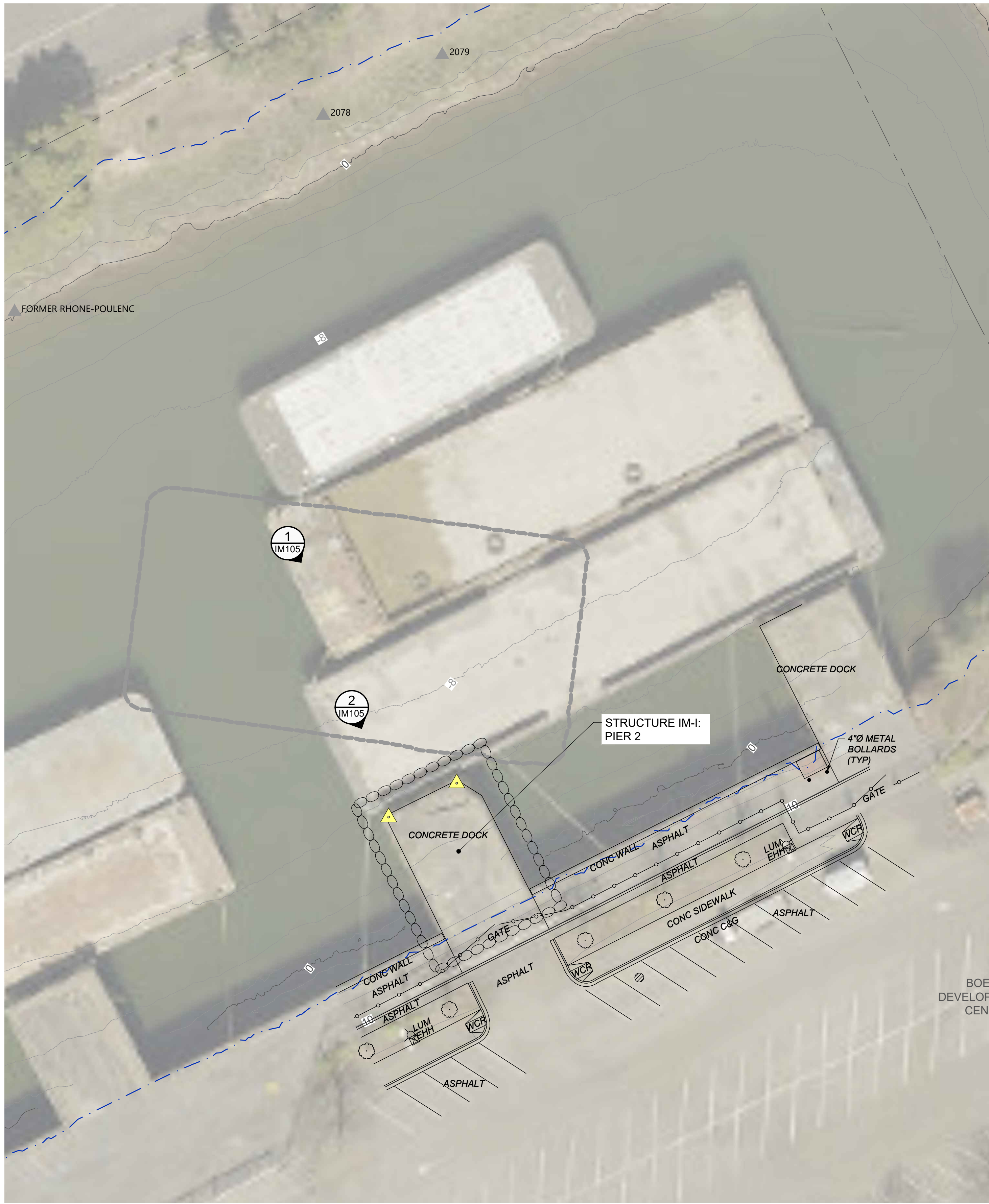
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PHOTO
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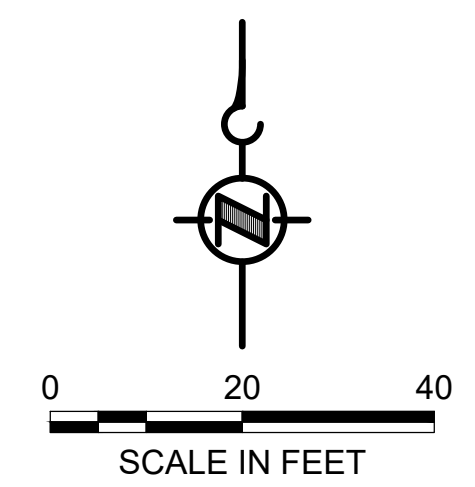


LEGEND:

- 250+00 USACE CHANNEL CENTERLINE AND STATIONING
- FEDERAL NAVIGATION CHANNEL
- RM 3.0** RIVER MILE LABEL
- KING COUNTY PARCEL (GIS)
- LDW UPPER REACH APPROXIMATE BOUNDARY
- EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
- Δ OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
- ▲ OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
- STRUCTURE DESIGNATED FOR PRE-CONSTRUCTION AND POST-CONSTRUCTION STRUCTURAL CONDITION INSPECTIONS
- Δ MONITORING POINT (STRUCTURE)
- SEDIMENT MANAGEMENT AREA BOUNDARY

NOTES:

1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
2. VERTICAL DATUM: MLLW
3. AERIAL SOURCE: KING COUNTY 2021
4. MONITORING POINT LAYOUT DEPICTED REPRESENTS THE MINIMUM REQUIRED. INSTALL AND SURVEY IN ACCORDANCE WITH THE SPECIFICATIONS.
5. PERFORM PRE-CONSTRUCTION AND POST-CONSTRUCTION STRUCTURAL INSPECTIONS OF IDENTIFIED STRUCTURE IM-I IN ACCORDANCE WITH THE SPECIFICATIONS.
6. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.

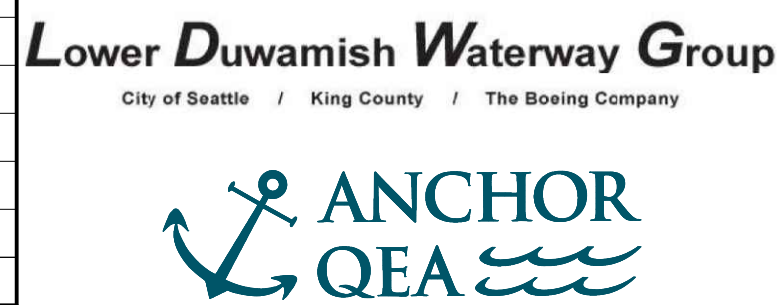


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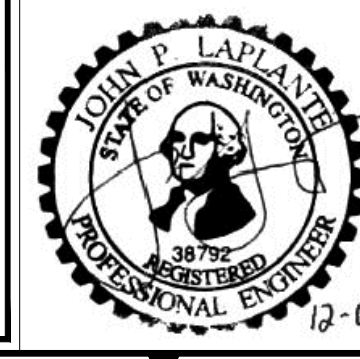
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PLOTTED: Jan 12, 2024 10:30:54am By jigsby

NO	REVISION DESCRIPTION	BY	APVD	DATE



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INFORMATION ONLY
BID DOCUMENTS
DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION
INSPECTION AND MONITORING
(RM 4.14 TO 4.23)

DATE: DECEMBER 2023
DRAWING NO: **IM105**
SHT NO / TOTAL: 28 / 91
REV NO: **0**

1" REFERENCE



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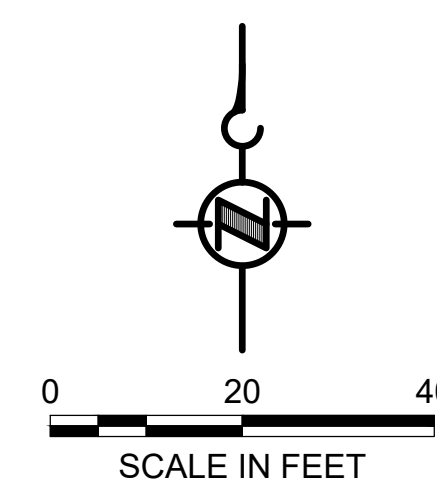


PHOTO SCALE: NONE 2 IM106



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - KING COUNTY PARCEL (GIS)
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - STRUCTURE DESIGNATED FOR PRE-CONSTRUCTION AND POST-CONSTRUCTION STRUCTURAL CONDITION INSPECTIONS
 - MONITORING POINT (STRUCTURE)
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - PILES

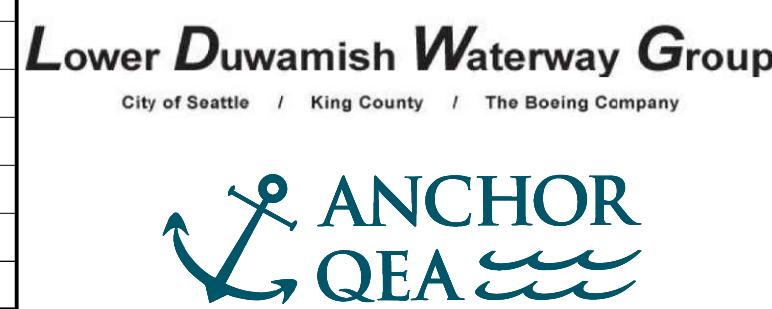
- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 3. AERIAL SOURCE: KING COUNTY 2021
 4. PERFORM PRE-CONSTRUCTION AND POST-CONSTRUCTION STRUCTURAL INSPECTIONS OF IDENTIFIED STRUCTURE IM-J IN ACCORDANCE WITH THE SPECIFICATIONS.
 5. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.



COLOR IMAGE
THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

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NO	REVISION DESCRIPTION	BY	APVD	DATE



FINAL ISSUE DRAWING
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BID DOCUMENTS
DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION

INSPECTION AND MONITORING
(RM 4.57 TO 4.66)

DATE: DECEMBER 2023
DRAWING NO: **IM106**
SHT NO / TOTAL: 29 / 91
REV NO: **0**

BORDER FILE EDITION: x:\KOVTD\Size-TB-Border_ACBM_Layer
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 PLOTTED: Jan 12, 2024 - 10:32:34am By jlgaby



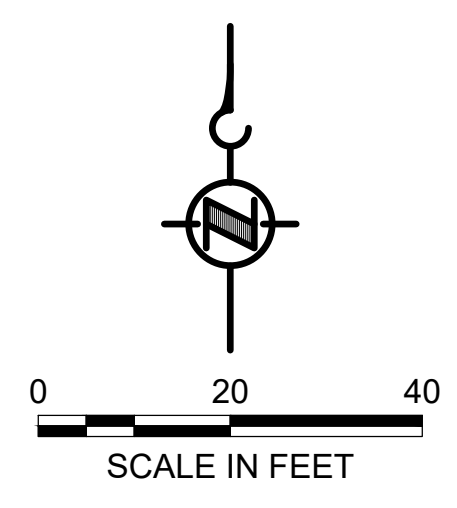
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 IM107



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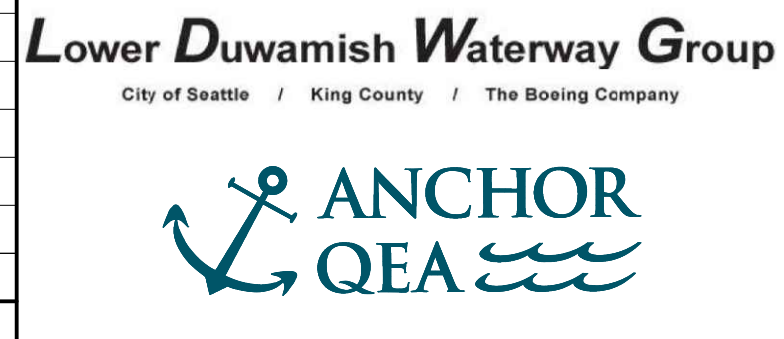
- LEGEND:**
- 250+00 USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - KING COUNTY PARCEL (GIS)
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - △** OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - ▲** OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - STRUCTURE DESIGNATED FOR PRE-CONSTRUCTION AND POST-CONSTRUCTION STRUCTURAL CONDITION INSPECTIONS
 - ▲** MONITORING POINT (STRUCTURE)
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - PILES

- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 3. AERIAL SOURCE: KING COUNTY 2021
 4. PERFORM PRE-CONSTRUCTION AND POST-CONSTRUCTION STRUCTURAL CONDITION INSPECTIONS OF IDENTIFIED STRUCTURES IM-K, IM-L AND IM-M, IN ACCORDANCE WITH THE SPECIFICATIONS.
 5. PROVIDE SEPARATE PRE-CONSTRUCTION AND POST-CONSTRUCTION REPORTS FOR THE IDENTIFIED STRUCTURES AND OUTFALLS.
 6. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.



COLOR IMAGE
 THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

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INFORMATION ONLY
BID DOCUMENTS
 DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA
 PROJECT ENGINEER: J. LAPLANTE
 DESIGN APPROVAL: J. ABDALKHANI
 PROJECT ACCEPTANCE: G. STEINER

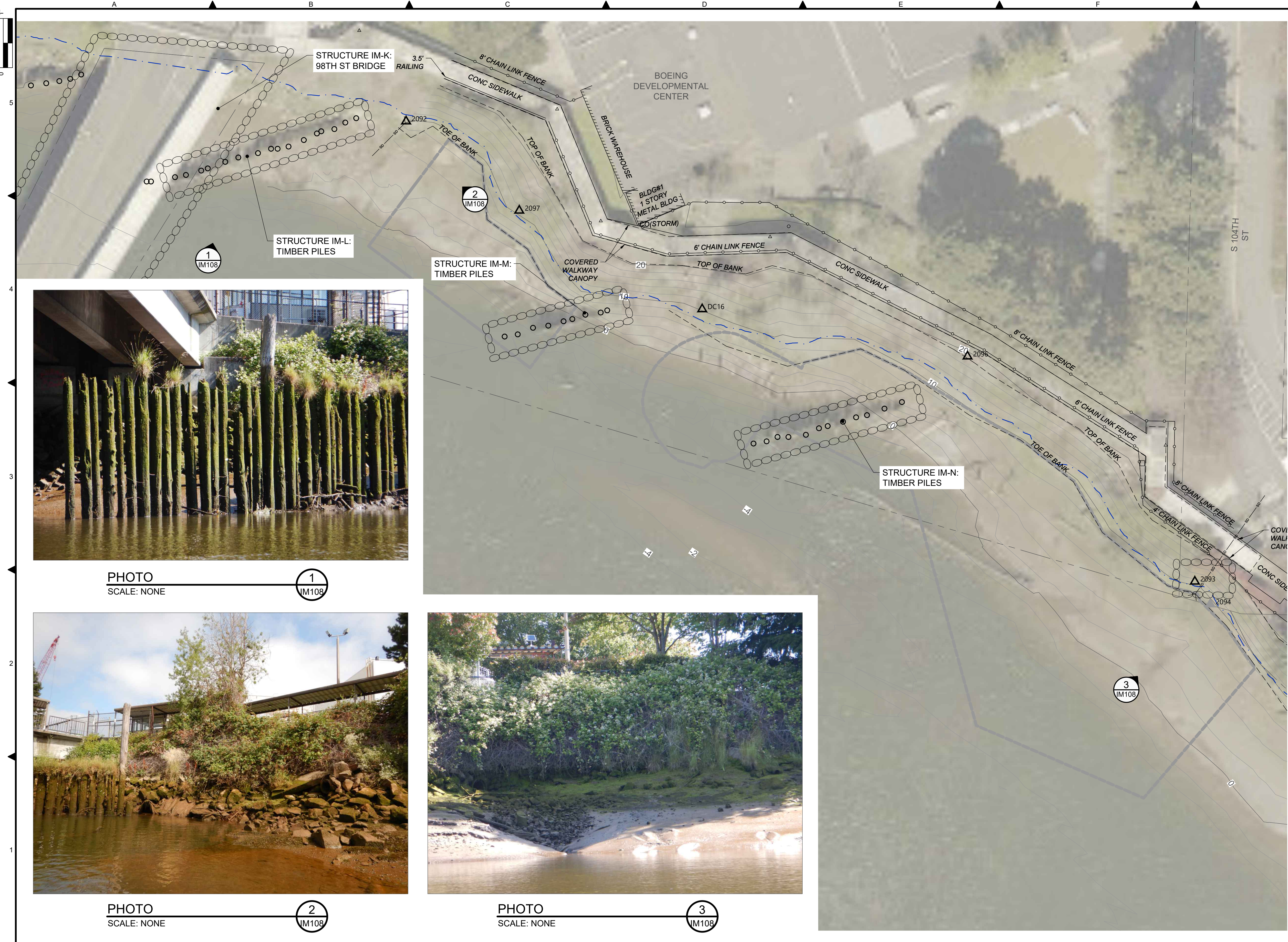
CHECKED: K. GROSS
 SCALE: AS NOTED
 PROJECT FILE NO: E00559E18
 CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION
INSPECTION AND MONITORING
 (RM 4.77 TO 4.87)

DATE: DECEMBER 2023
 DRAWING NO: **IM107**
 SHT NO / TOTAL: 30 / 91
 REV NO: **0**

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 PLOTTED: Jan 12, 2024 - 10:33:24am By jigsby



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - KING COUNTY PARCEL (GIS)
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - STRUCTURE DESIGNATED FOR PRE-CONSTRUCTION AND POST-CONSTRUCTION STRUCTURAL CONDITION INSPECTIONS
 - MONITORING POINT (STRUCTURE)
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - PILES

- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 3. AERIAL SOURCE: KING COUNTY 2021
 4. PERFORM PRE-CONSTRUCTION AND POST-CONSTRUCTION STRUCTURAL CONDITION INSPECTIONS OF IDENTIFIED STRUCTURES IM-K, IM-L, IM-M, AND IM-N, AS WELL AS OUTFALL 2093, IN ACCORDANCE WITH THE SPECIFICATIONS.
 5. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.

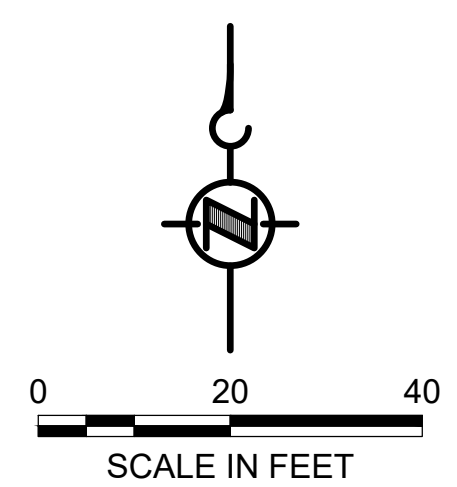


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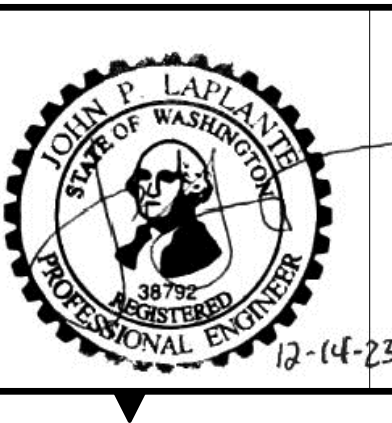


PHOTO
SCALE: NONE

NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
 City of Seattle / King County / The Boeing Company

FINAL ISSUE DRAWING
INFORMATION ONLY
BID DOCUMENTS
 DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065

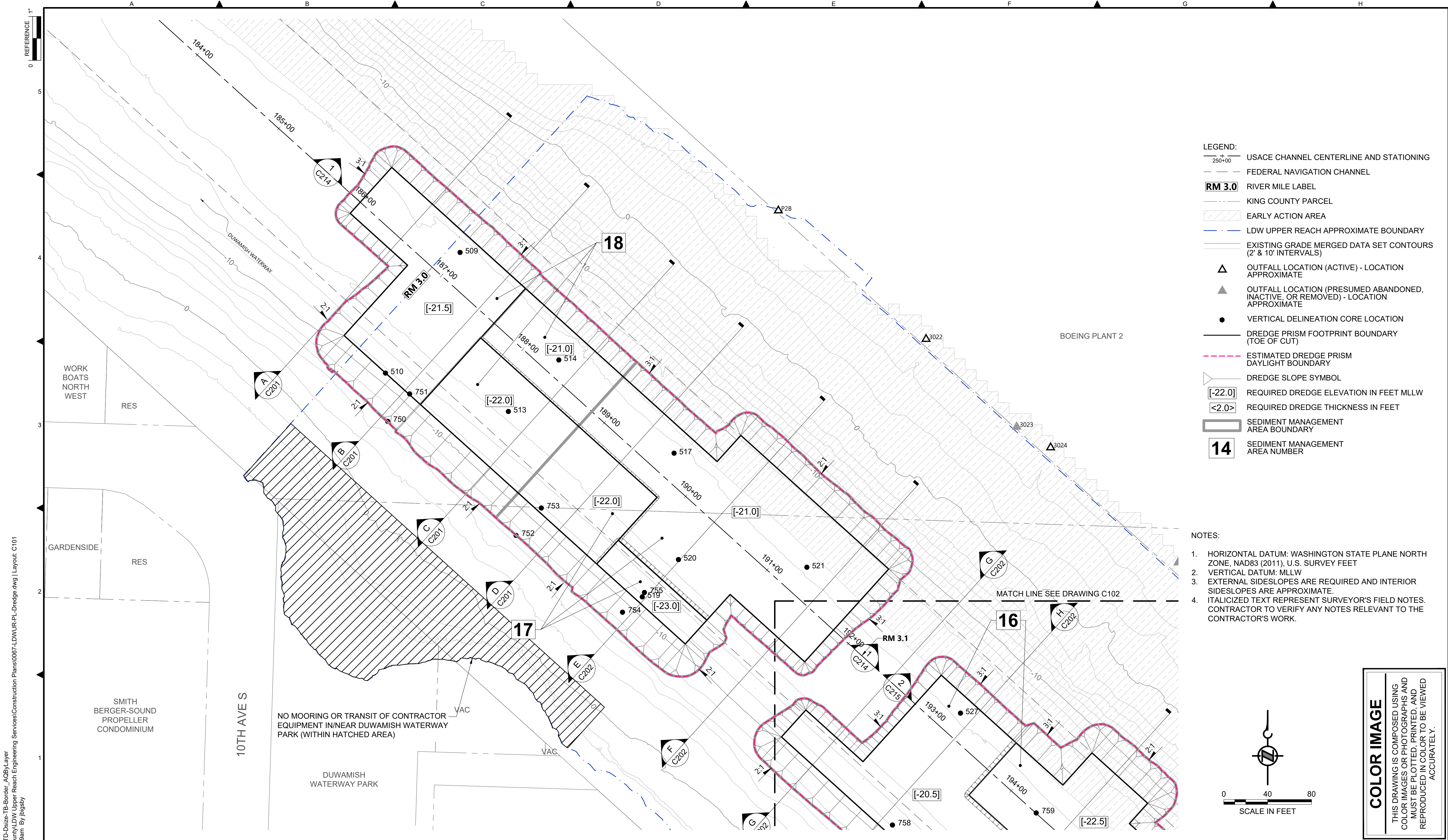


DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

INSPECTION AND MONITORING
(RM 4.84 TO 4.95)

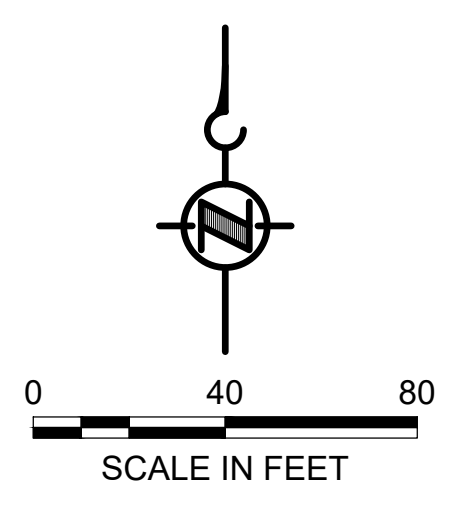
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 ACCURATELY.

DATE: DECEMBER 2023
 DRAWING NO: **IM108**
 SHT NO / TOTAL: 31 / 91
 REV NO: **0**



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - KING COUNTY PARCEL
 - EARLY ACTION AREA
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - VERTICAL DELINEATION CORE LOCATION
 - DREDGE PRISM FOOTPRINT BOUNDARY (TOE OF CUT)
 - ESTIMATED DREDGE PRISM DAYLIGHT BOUNDARY
 - DREDGE SLOPE SYMBOL
 - [-22.0]** REQUIRED DREDGE ELEVATION IN FEET MLLW
 - <2.0>** REQUIRED DREDGE THICKNESS IN FEET
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER

- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 3. EXTERNAL SIDESLOPES ARE REQUIRED AND INTERIOR SIDESLOPES ARE APPROXIMATE.
 4. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.



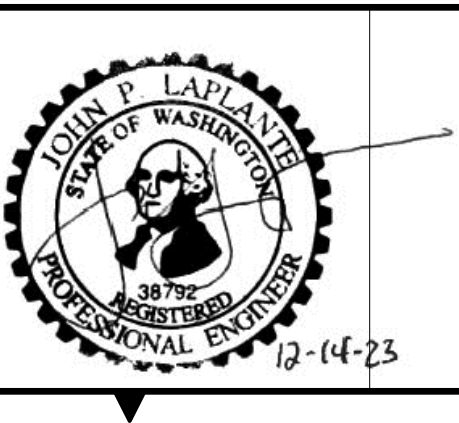
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 THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

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 PLOTTED: Jan 12, 2024 10:35:49am By jlgbsby

NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
 City of Seattle / King County / The Boeing Company

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 DECEMBER 2023



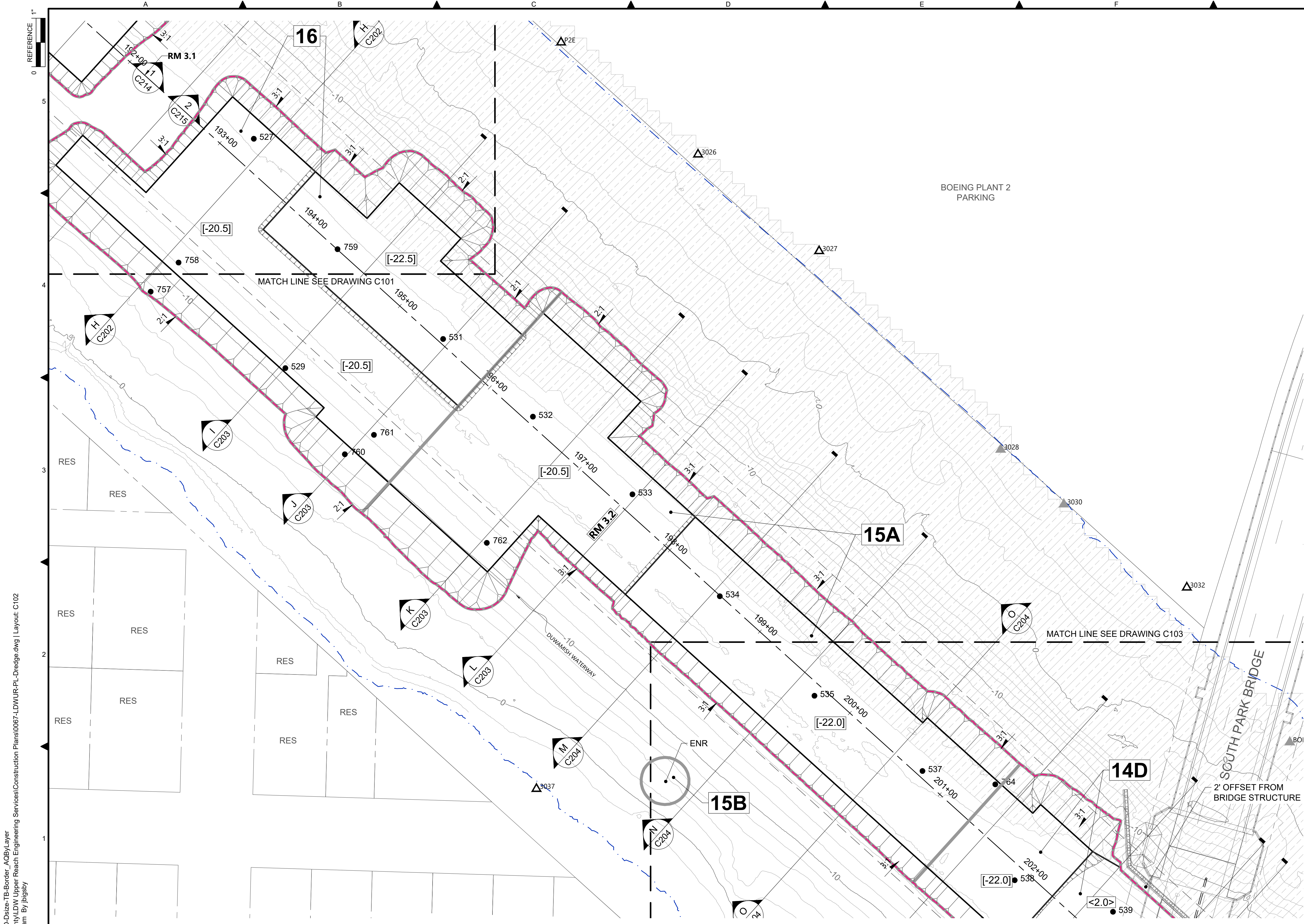
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PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

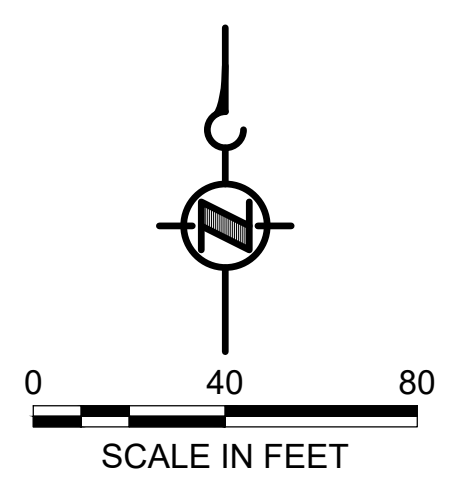
DREDGE PLAN (RM 2.93 TO 3.15)

DATE: DECEMBER 2023
DRAWING NO: C101
SHT NO / TOTAL 32 / 91
REV NO: 0



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - KING COUNTY PARCEL
 - EARLY ACTION AREA
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - VERTICAL DELINEATION CORE LOCATION
 - DREDGE PRISM FOOTPRINT BOUNDARY (TOE OF CUT)
 - ESTIMATED DREDGE PRISM DAYLIGHT BOUNDARY
 - DREDGE SLOPE SYMBOL
 - REQUIRED DREDGE ELEVATION IN FEET MLLW
 - REQUIRED DREDGE THICKNESS IN FEET
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER

- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 3. EXTERNAL SIDESLOPES ARE REQUIRED AND INTERIOR SIDESLOPES ARE APPROXIMATE.
 4. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.



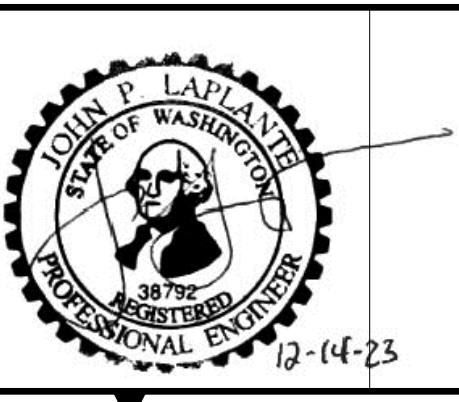
COLOR IMAGE
 THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

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 PLOTTED: Jan 12, 2024 10:36:42am By jlgbsby

NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
 City of Seattle / King County / The Boeing Company

FINAL ISSUE DRAWING
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 DECEMBER 2023



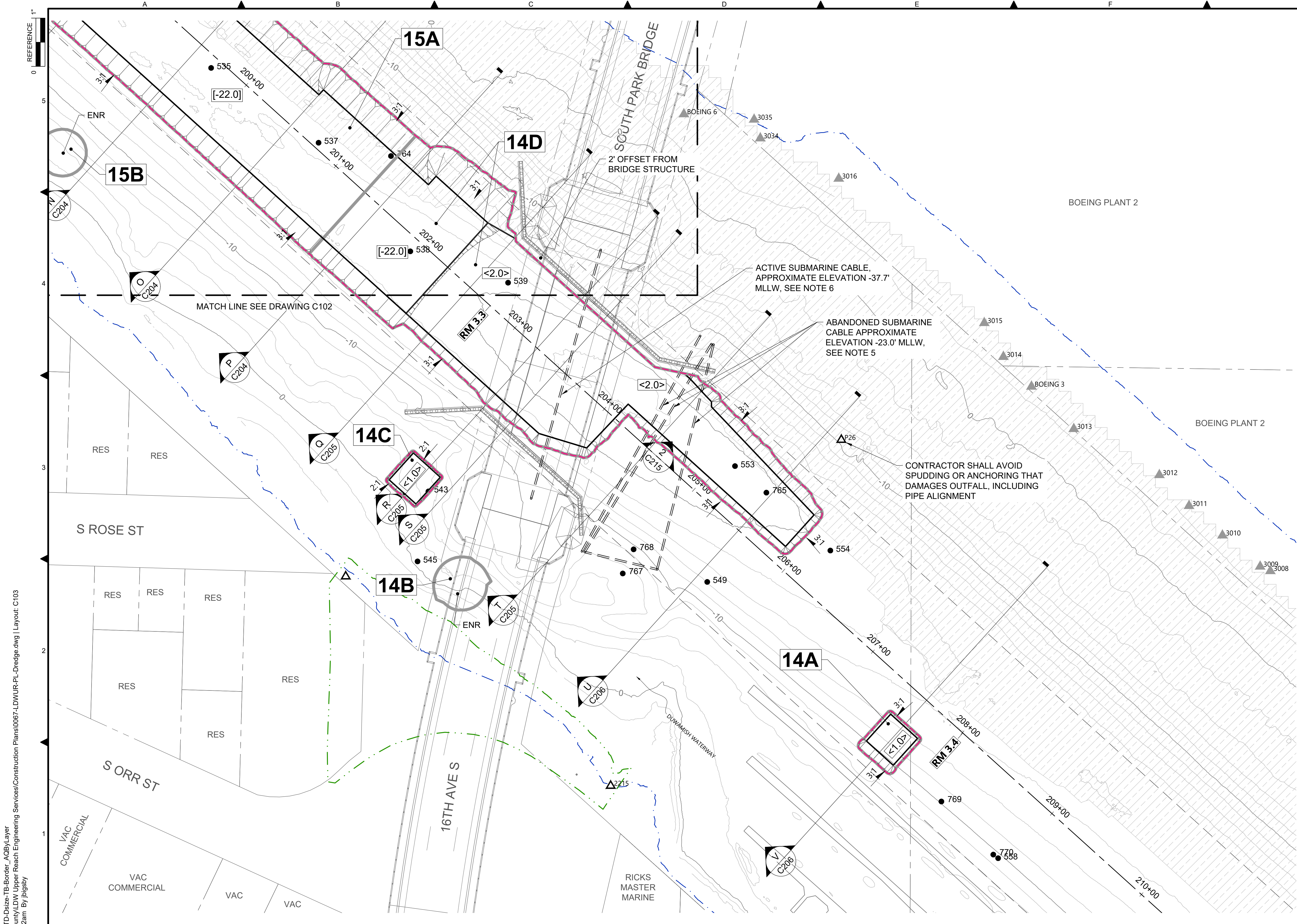
DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

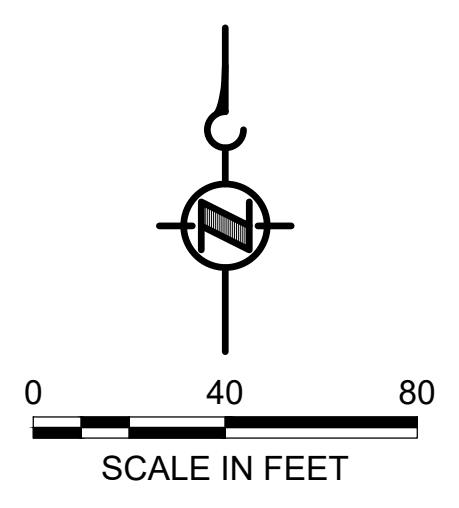
DREDGE PLAN (RM 3.09 TO 3.29)

DATE: DECEMBER 2023
DRAWING NO: C102
SHT NO / TOTAL 33 / 91
REV NO: 0



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - KING COUNTY PARCEL
 - EARLY ACTION AREA
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - VERTICAL DELINEATION CORE LOCATION
 - DREDGE PRISM FOOTPRINT BOUNDARY (TOE OF CUT)
 - ESTIMATED DREDGE PRISM DAYLIGHT BOUNDARY
 - DREDGE SLOPE SYMBOL
 - REQUIRED DREDGE ELEVATION IN FEET MLLW
 - REQUIRED DREDGE THICKNESS IN FEET
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER
 - HABITAT AREA (CONTRACTOR TO PROTECT)
 - SUBMARINE CABLE

- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 3. EXTERNAL SIDESLOPES ARE REQUIRED AND INTERIOR SIDESLOPES ARE APPROXIMATE.
 4. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.
 5. IF ENCOUNTERED, CONTRACTOR SHALL REMOVE AND DISPOSE OF ABANDONED SUBMARINE CABLES AS INCIDENTAL DREDGE DEBRIS.
 6. THE CONTRACTOR MUST TAKE EXTREME CARE WHILE WORKING NEAR THE ACTIVE SUBMARINE CABLE. SEE SPECIFICATION SECTION 35 20 23 FOR RESTRICTIONS ON SPUDDING IN THIS AREA.



COLOR IMAGE
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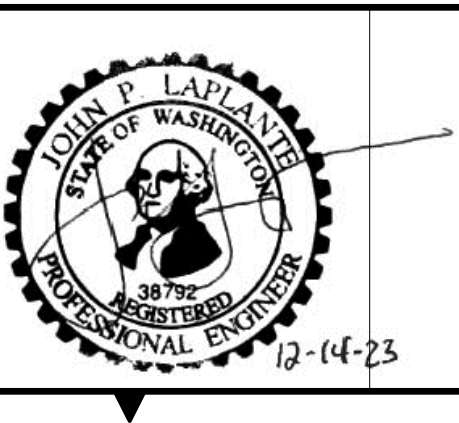
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 PLOTTED: Jan 12, 2024 10:37:32am By jbigby

NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
 City of Seattle / King County / The Boeing Company

ANCHOR QEA

FINAL ISSUE DRAWING
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 DECEMBER 2023



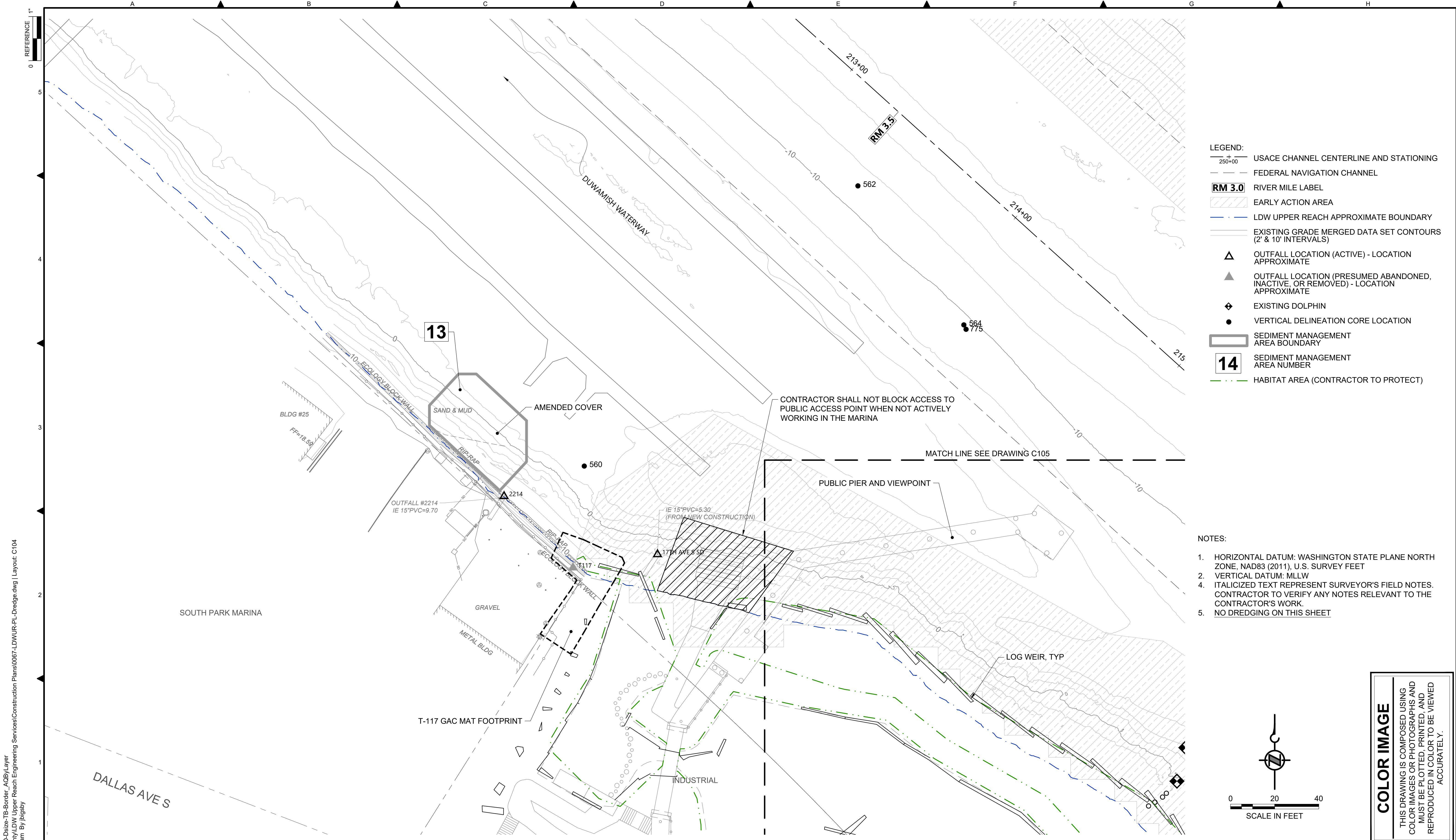
DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

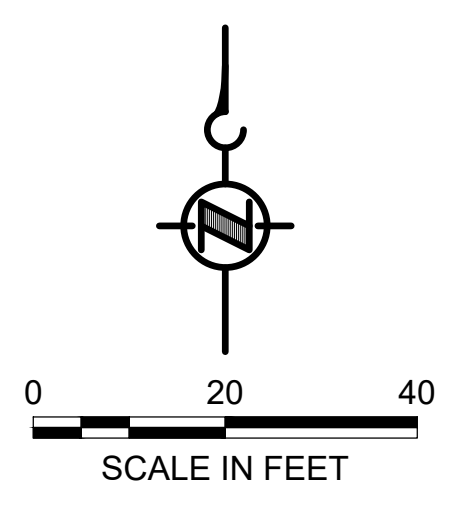
DREDGE PLAN (RM 3.23 TO 3.44)

DATE: DECEMBER 2023
DRAWING NO: C103
SHT NO / TOTAL 34 / 91
REV NO: 0



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RIVER MILE LABEL
 - EARLY ACTION AREA
 - LDW UPPER REACH APPROXIMATE BOUNDARY
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 - OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - EXISTING DOLPHIN
 - VERTICAL DELINEATION CORE LOCATION
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - SEDIMENT MANAGEMENT AREA NUMBER
 - HABITAT AREA (CONTRACTOR TO PROTECT)

- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 4. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.
 5. NO DREDGING ON THIS SHEET



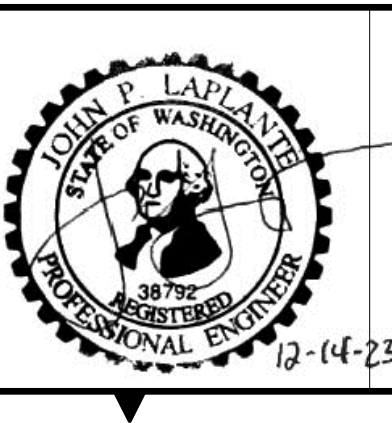
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 \gala\ca\Projects\067-King County\LDW Upper Reach Engineering Services\Construction Plans\0067-LDWUR-PL-Dredge.dwg | Layout: C104
 PLOTTED: Jan 12, 2024 10:38:24am By jlgbsby

NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
 City of Seattle / King County / The Boeing Company

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INFORMATION ONLY
BID DOCUMENTS
 DECEMBER 2023



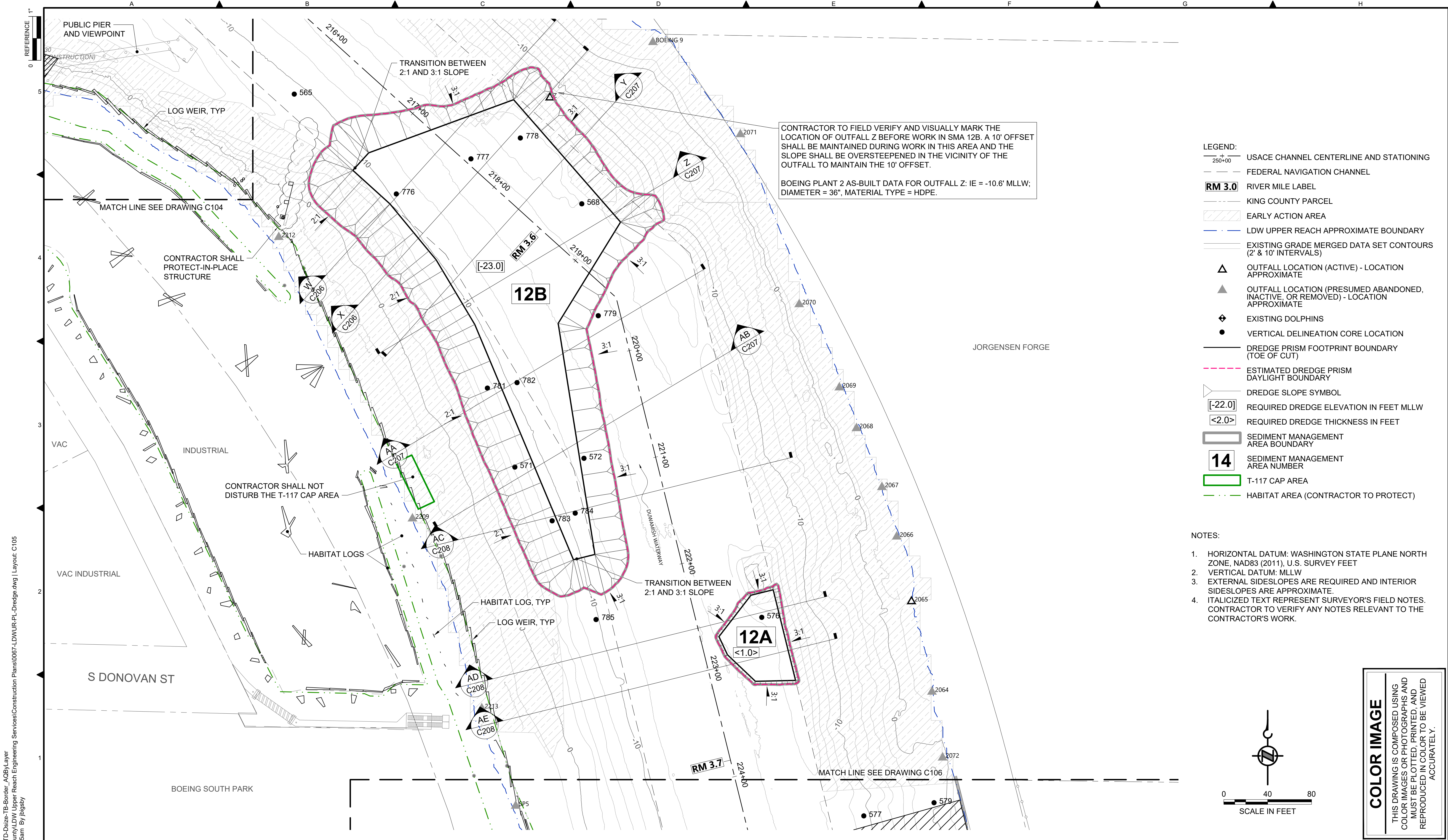
DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

DREDGE PLAN (RM 3.49 TO 3.56)

DATE: DECEMBER 2023
DRAWING NO: C104
SHT NO / TOTAL 35 / 91
REV NO: 0



CONTRACTOR TO FIELD VERIFY AND VISUALLY MARK THE LOCATION OF OUTFALL Z BEFORE WORK IN SMA 12B. A 10' OFFSET SHALL BE MAINTAINED DURING WORK IN THIS AREA AND THE SLOPE SHALL BE OVERSTEEPENED IN THE VICINITY OF THE OUTFALL TO MAINTAIN THE 10' OFFSET.

BOEING PLANT 2 AS-BUILT DATA FOR OUTFALL Z: IE = -10.6' MLLW; DIAMETER = 36", MATERIAL TYPE = HDPE.

- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - KING COUNTY PARCEL
 - EARLY ACTION AREA
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - EXISTING DOLPHINS
 - VERTICAL DELINEATION CORE LOCATION
 - DREDGE PRISM FOOTPRINT BOUNDARY (TOE OF CUT)
 - ESTIMATED DREDGE PRISM DAYLIGHT BOUNDARY
 - DREDGE SLOPE SYMBOL
 - [-22.0]** REQUIRED DREDGE ELEVATION IN FEET MLLW
 - <2.0>** REQUIRED DREDGE THICKNESS IN FEET
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER
 - T-117 CAP AREA
 - HABITAT AREA (CONTRACTOR TO PROTECT)

- NOTES:**
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COLOR IMAGE
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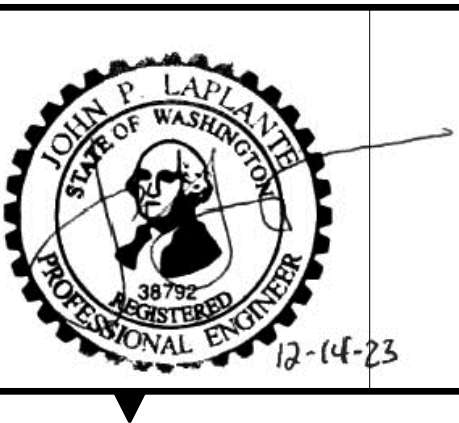
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 PLOTTED: Jan 12, 2024 10:39:15am By jlgbsby

NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
 City of Seattle / King County / The Boeing Company

ANCHOR QEA

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 DECEMBER 2023



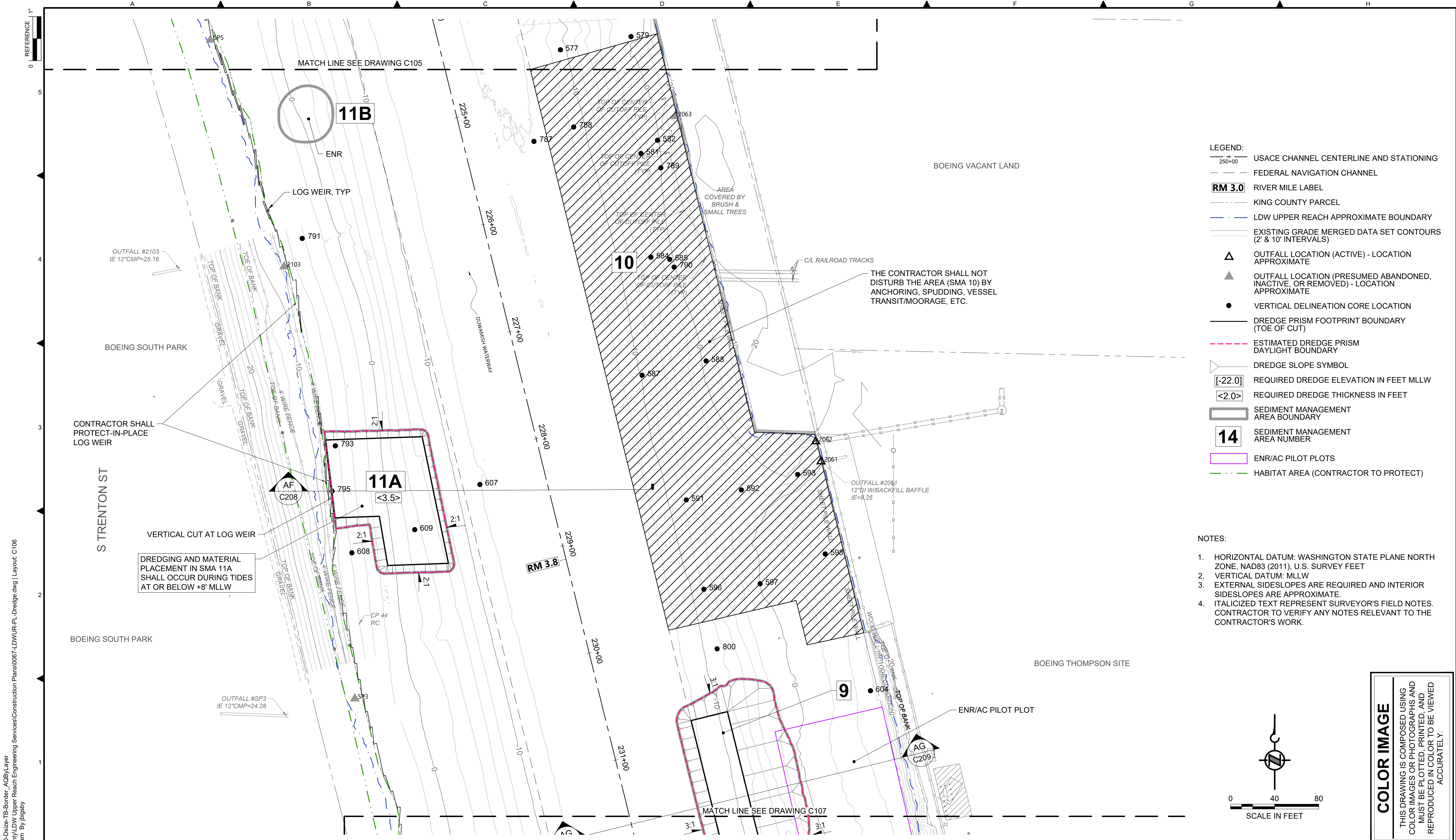
DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

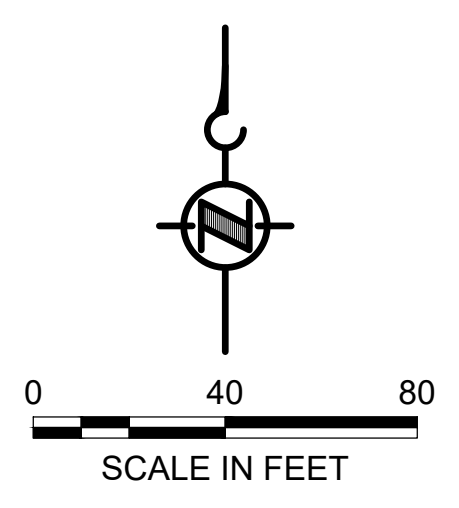
DREDGE PLAN (RM 3.54 TO 3.71)

DATE: DECEMBER 2023
DRAWING NO: C105
SHT NO / TOTAL 36 / 91
REV NO: 0



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - KING COUNTY PARCEL
 - LDW UPPER REACH APPROXIMATE BOUNDARY
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 - VERTICAL DELINEATION CORE LOCATION
 - DREDGE PRISM FOOTPRINT BOUNDARY (TOE OF CUT)
 - ESTIMATED DREDGE PRISM DAYLIGHT BOUNDARY
 - DREDGE SLOPE SYMBOL
 - REQUIRED DREDGE ELEVATION IN FEET MLLW
 - REQUIRED DREDGE THICKNESS IN FEET
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER
 - ENR/AC PILOT PLOTS
 - HABITAT AREA (CONTRACTOR TO PROTECT)

- NOTES:**
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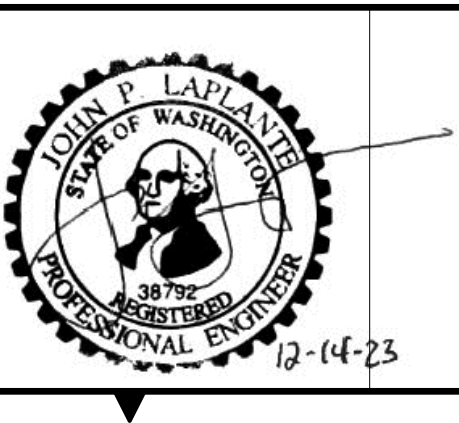
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 PLOTTED: Jan 12, 2024 10:40:05am By jigsby

NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
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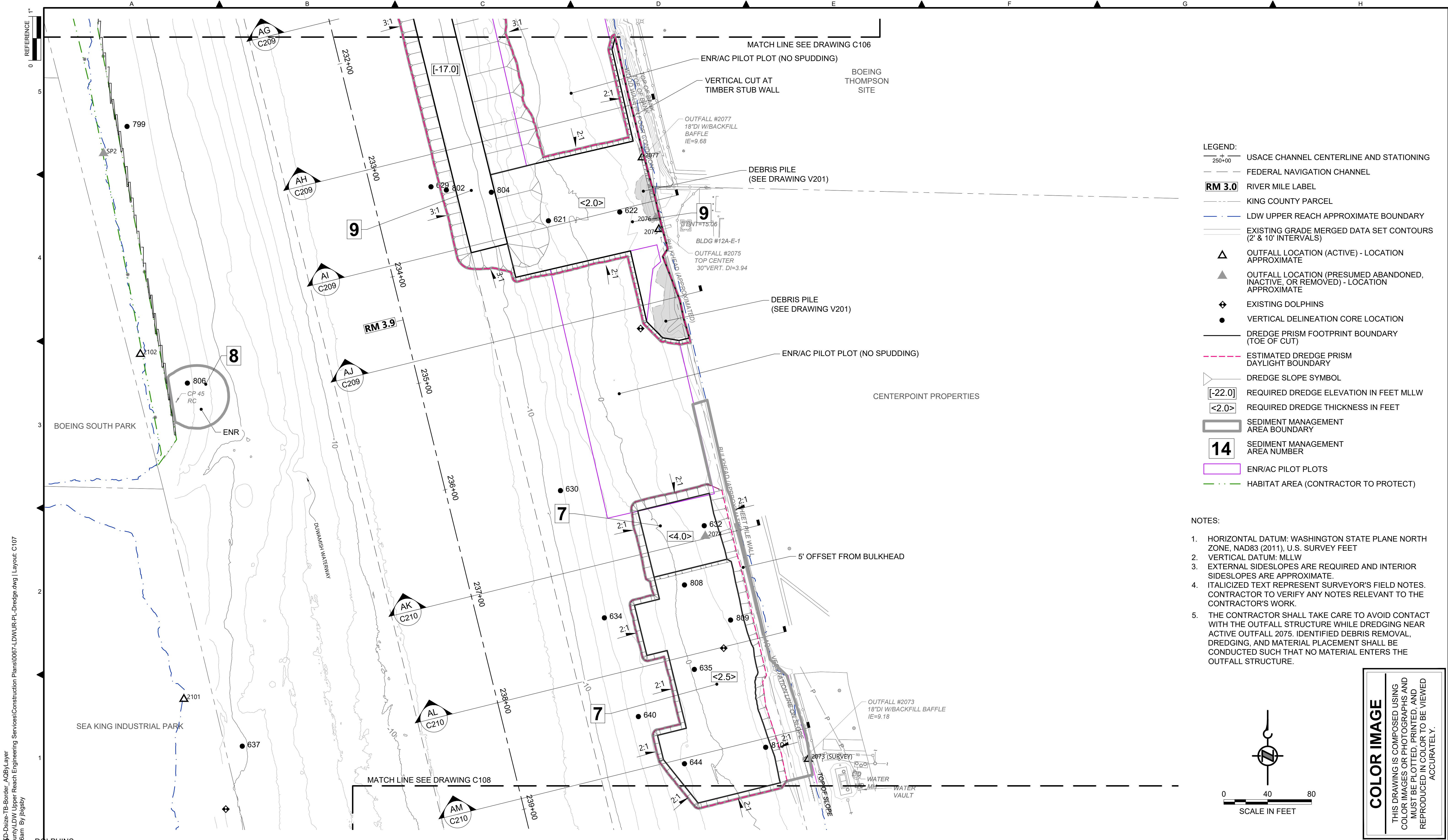
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PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

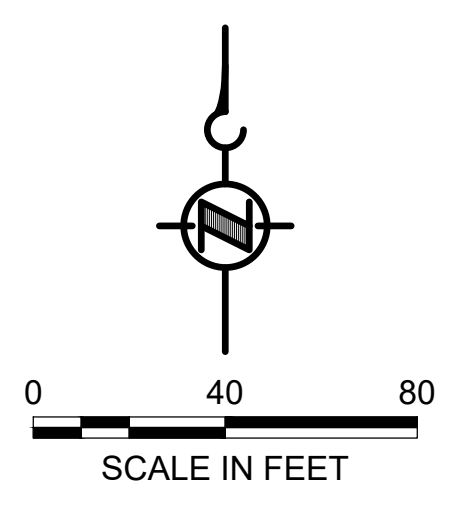
DREDGE PLAN (RM 3.73 TO 3.84)

DATE: DECEMBER 2023
DRAWING NO: C106
SHT NO / TOTAL 37 / 91
REV NO: 0



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - KING COUNTY PARCEL
 - LDW UPPER REACH APPROXIMATE BOUNDARY
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 - ESTIMATED DREDGE PRISM DAYLIGHT BOUNDARY
 - DREDGE SLOPE SYMBOL
 - [-22.0]** REQUIRED DREDGE ELEVATION IN FEET MLLW
 - <2.0>** REQUIRED DREDGE THICKNESS IN FEET
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER
 - ENR/AC PILOT PLOTS
 - HABITAT AREA (CONTRACTOR TO PROTECT)

- NOTES:**
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 5. THE CONTRACTOR SHALL TAKE CARE TO AVOID CONTACT WITH THE OUTFALL STRUCTURE WHILE DREDGING NEAR ACTIVE OUTFALL 2075. IDENTIFIED DEBRIS REMOVAL, DREDGING, AND MATERIAL PLACEMENT SHALL BE CONDUCTED SUCH THAT NO MATERIAL ENTERS THE OUTFALL STRUCTURE.



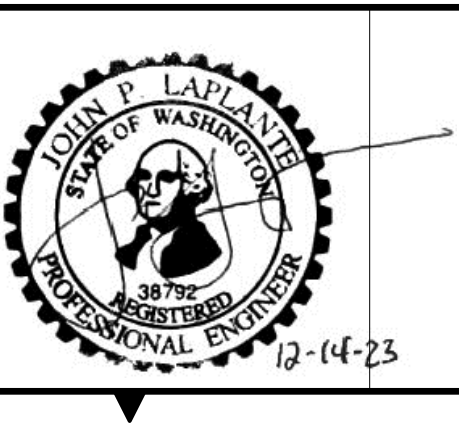
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 PLOTTED: Jan 12, 2024 10:40:56am By jbiggsby

NO	REVISION DESCRIPTION	BY	APVD	DATE

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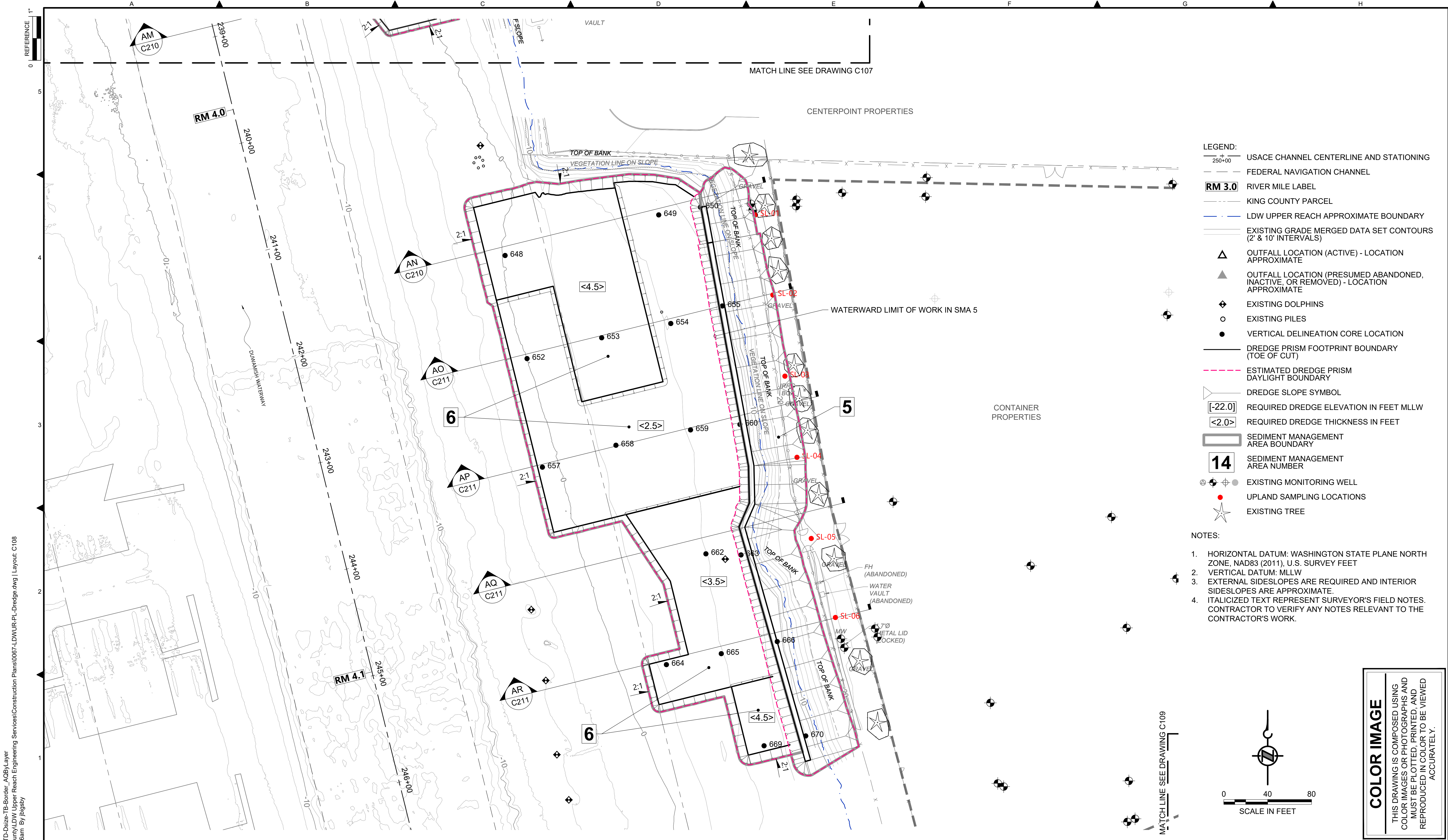
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PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

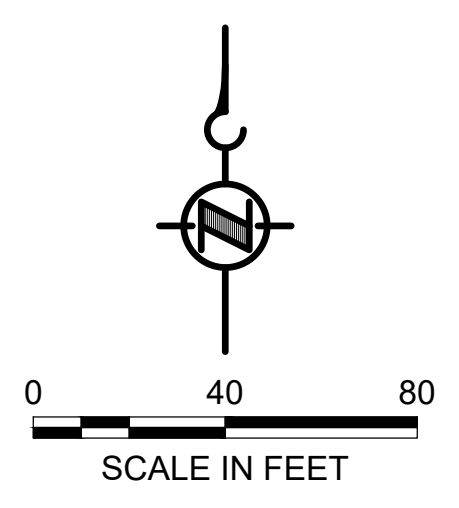
DREDGE PLAN (RM 3.85 TO 3.99)

DATE: DECEMBER 2023
DRAWING NO: C107
SHT NO / TOTAL 38 / 91
REV NO: 0



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - KING COUNTY PARCEL
 - LDW UPPER REACH APPROXIMATE BOUNDARY
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 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - EXISTING DOLPHINS
 - EXISTING PILES
 - VERTICAL DELINEATION CORE LOCATION
 - DREDGE PRISM FOOTPRINT BOUNDARY (TOE OF CUT)
 - ESTIMATED DREDGE PRISM DAYLIGHT BOUNDARY
 - DREDGE SLOPE SYMBOL
 - [-22.0]** REQUIRED DREDGE ELEVATION IN FEET MLLW
 - <2.0>** REQUIRED DREDGE THICKNESS IN FEET
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER
 - EXISTING MONITORING WELL
 - UPLAND SAMPLING LOCATIONS
 - EXISTING TREE

- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
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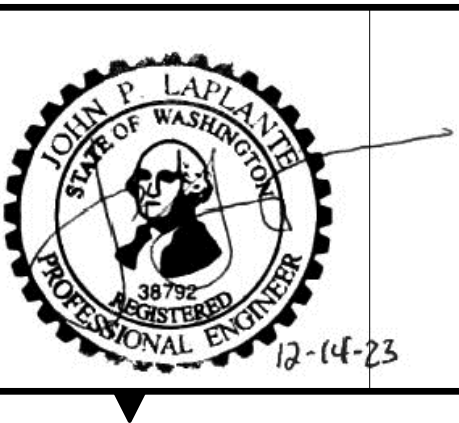
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 PLOTTED: Jan 12, 2024 10:41:46am By jigsby

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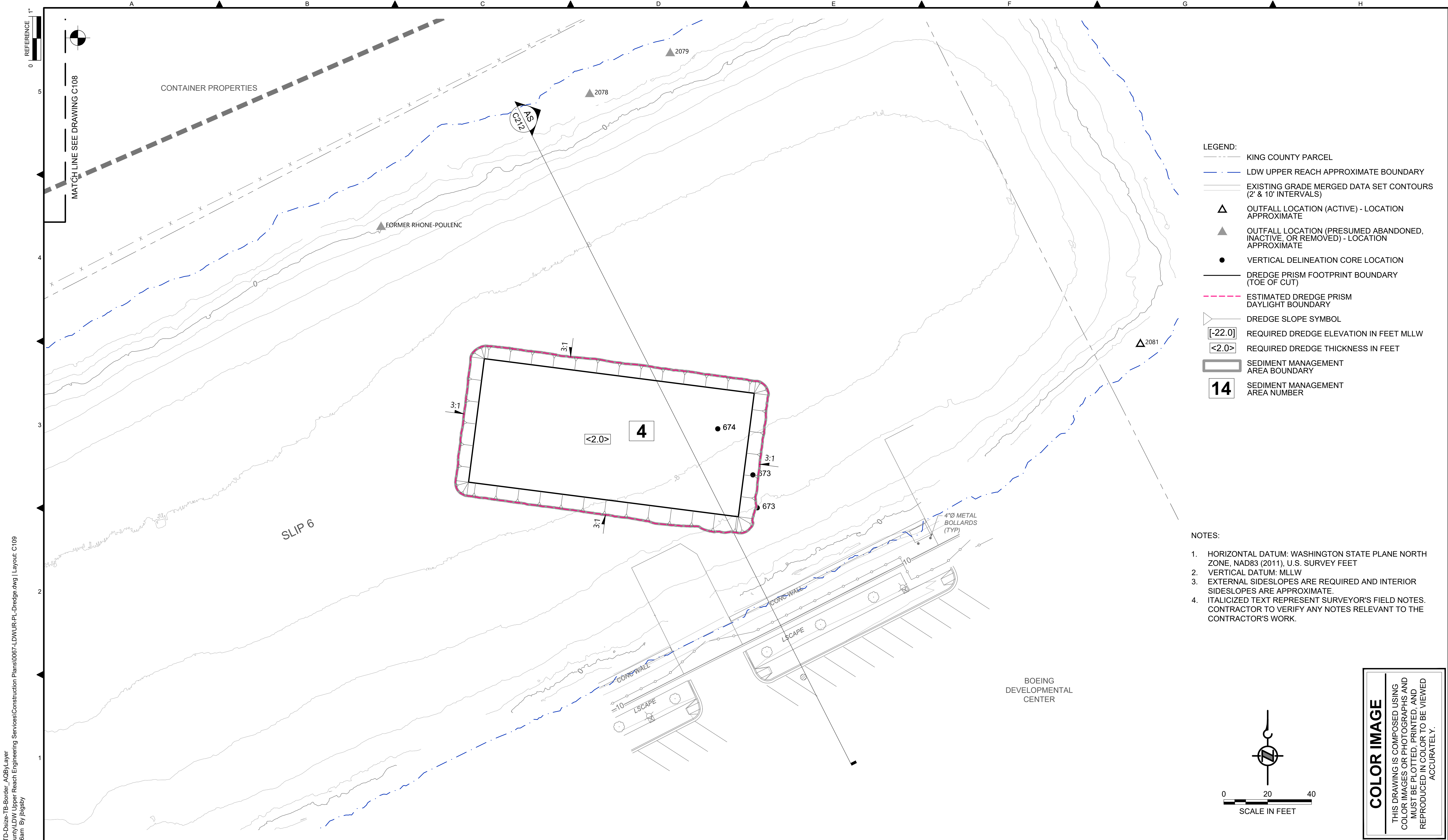
DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

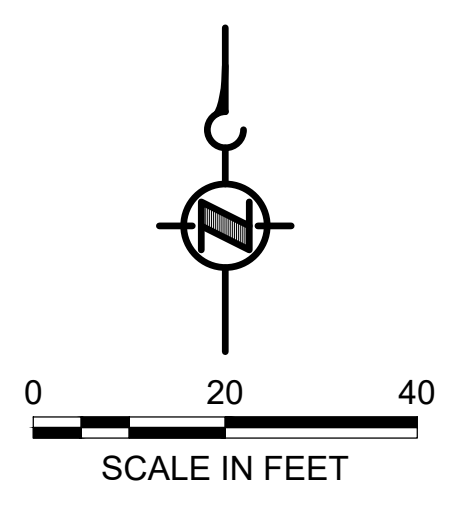
DREDGE PLAN (RM 3.98 TO 4.13)

DATE: DECEMBER 2023
DRAWING NO: C108
SHT NO / TOTAL 39 / 91
REV NO: 0



- LEGEND:**
- KING COUNTY PARCEL
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
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 - DREDGE SLOPE SYMBOL
 - REQUIRED DREDGE ELEVATION IN FEET MLLW
 - REQUIRED DREDGE THICKNESS IN FEET
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - SEDIMENT MANAGEMENT AREA NUMBER

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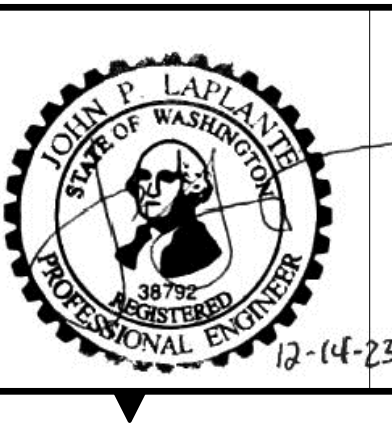
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 DECEMBER 2023



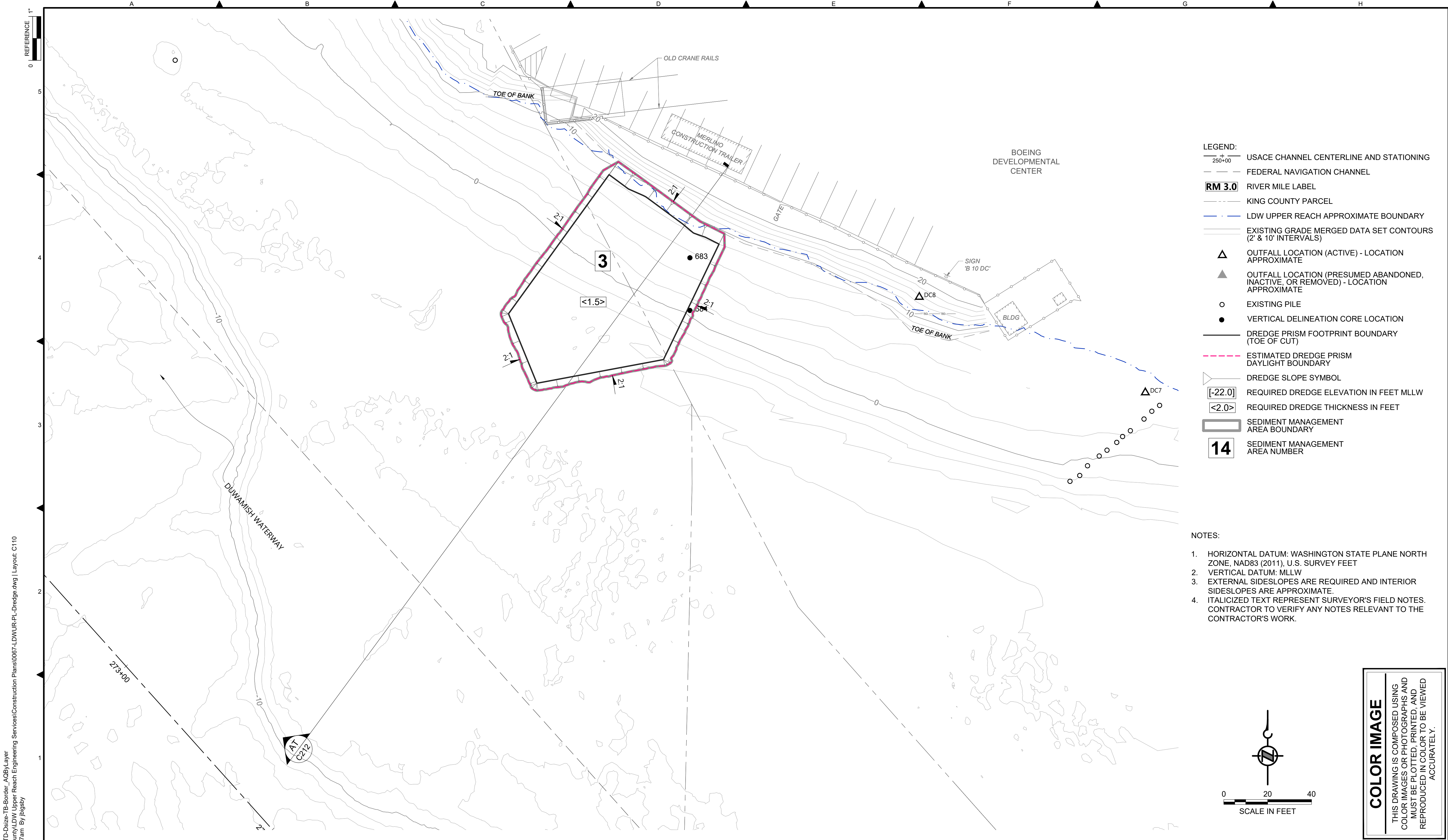
DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

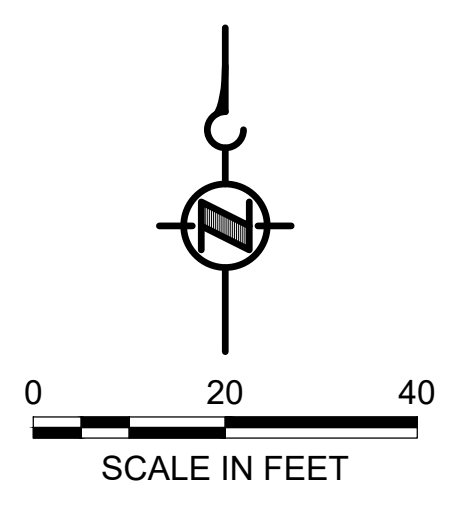
DREDGE PLAN (RM 4.14 TO 4.23)

DATE: DECEMBER 2023
DRAWING NO: C109
SHT NO / TOTAL 40 / 91
REV NO: 0



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - KING COUNTY PARCEL
 - LDW UPPER REACH APPROXIMATE BOUNDARY
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 - VERTICAL DELINEATION CORE LOCATION
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 - DREDGE SLOPE SYMBOL
 - REQUIRED DREDGE ELEVATION IN FEET MLLW
 - REQUIRED DREDGE THICKNESS IN FEET
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER

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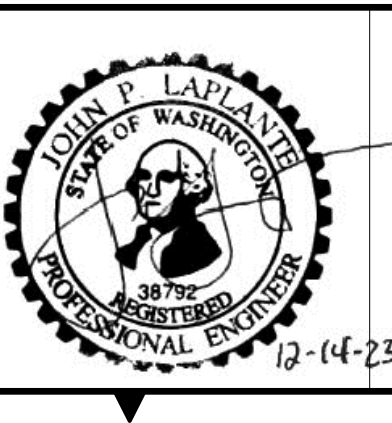
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 PLOTTED: Jan 12, 2024 10:43:27am By jigsby

NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
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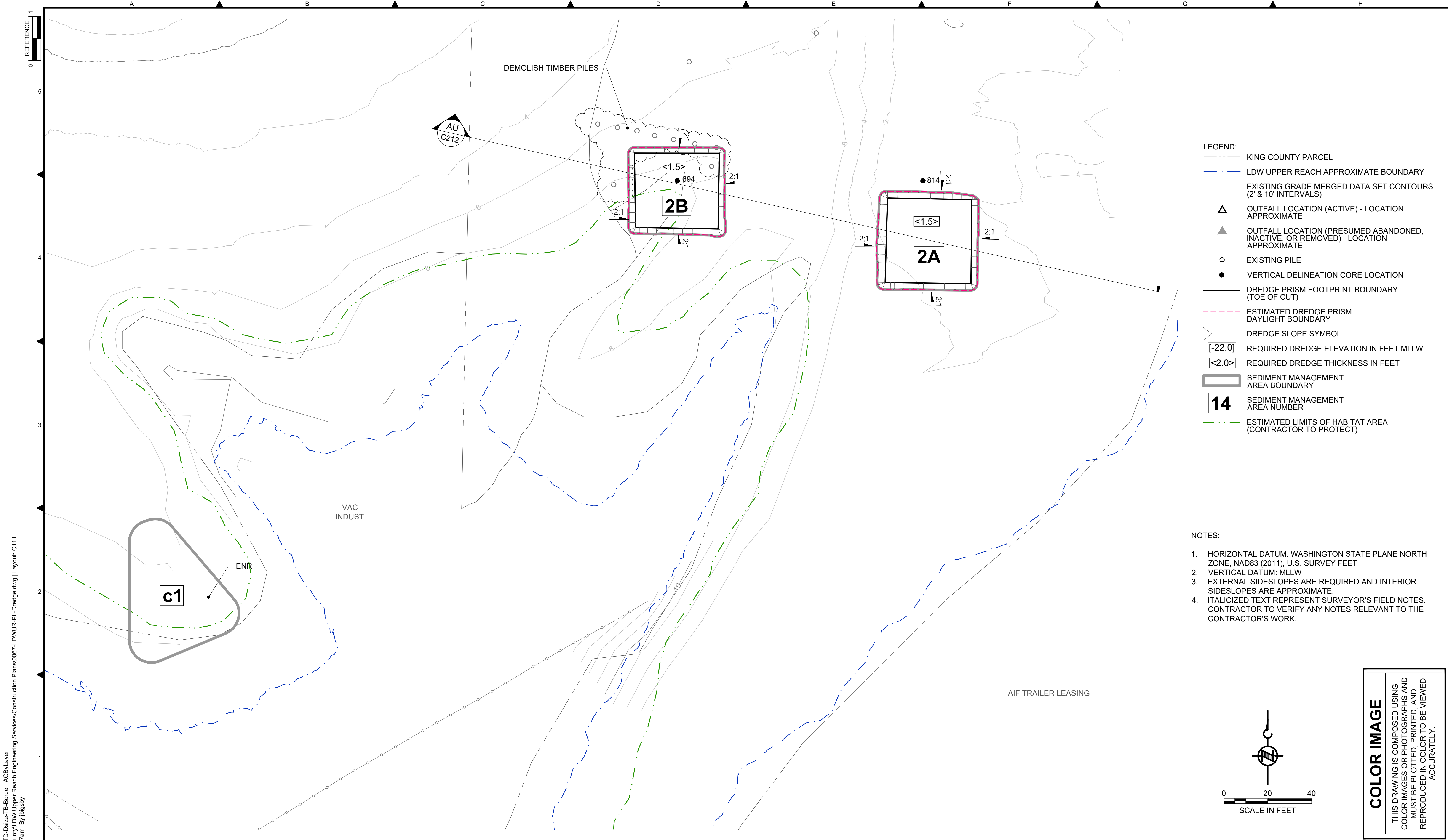
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PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
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PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

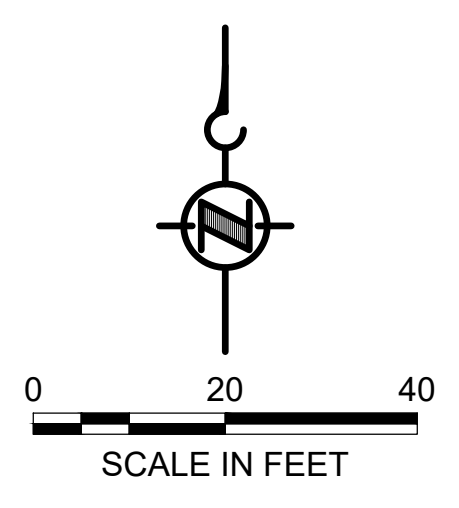
DREDGE PLAN (RM 4.57 TO 4.66)

DATE: DECEMBER 2023
DRAWING NO: C110
SHT NO / TOTAL 41 / 91
REV NO: 0



- LEGEND:**
- KING COUNTY PARCEL
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
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 - VERTICAL DELINEATION CORE LOCATION
 - DREDGE PRISM FOOTPRINT BOUNDARY (TOE OF CUT)
 - ESTIMATED DREDGE PRISM DAYLIGHT BOUNDARY
 - DREDGE SLOPE SYMBOL
 - REQUIRED DREDGE ELEVATION IN FEET MLLW
 - REQUIRED DREDGE THICKNESS IN FEET
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - SEDIMENT MANAGEMENT AREA NUMBER
 - ESTIMATED LIMITS OF HABITAT AREA (CONTRACTOR TO PROTECT)

- NOTES:**
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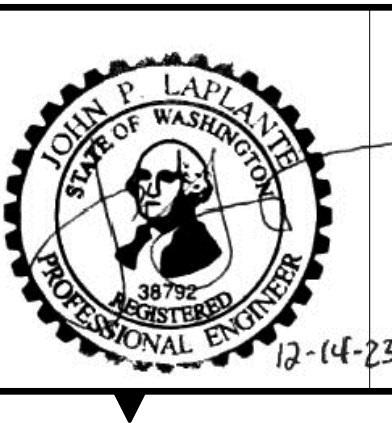
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Lower Duwamish Waterway Group
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DECEMBER 2023



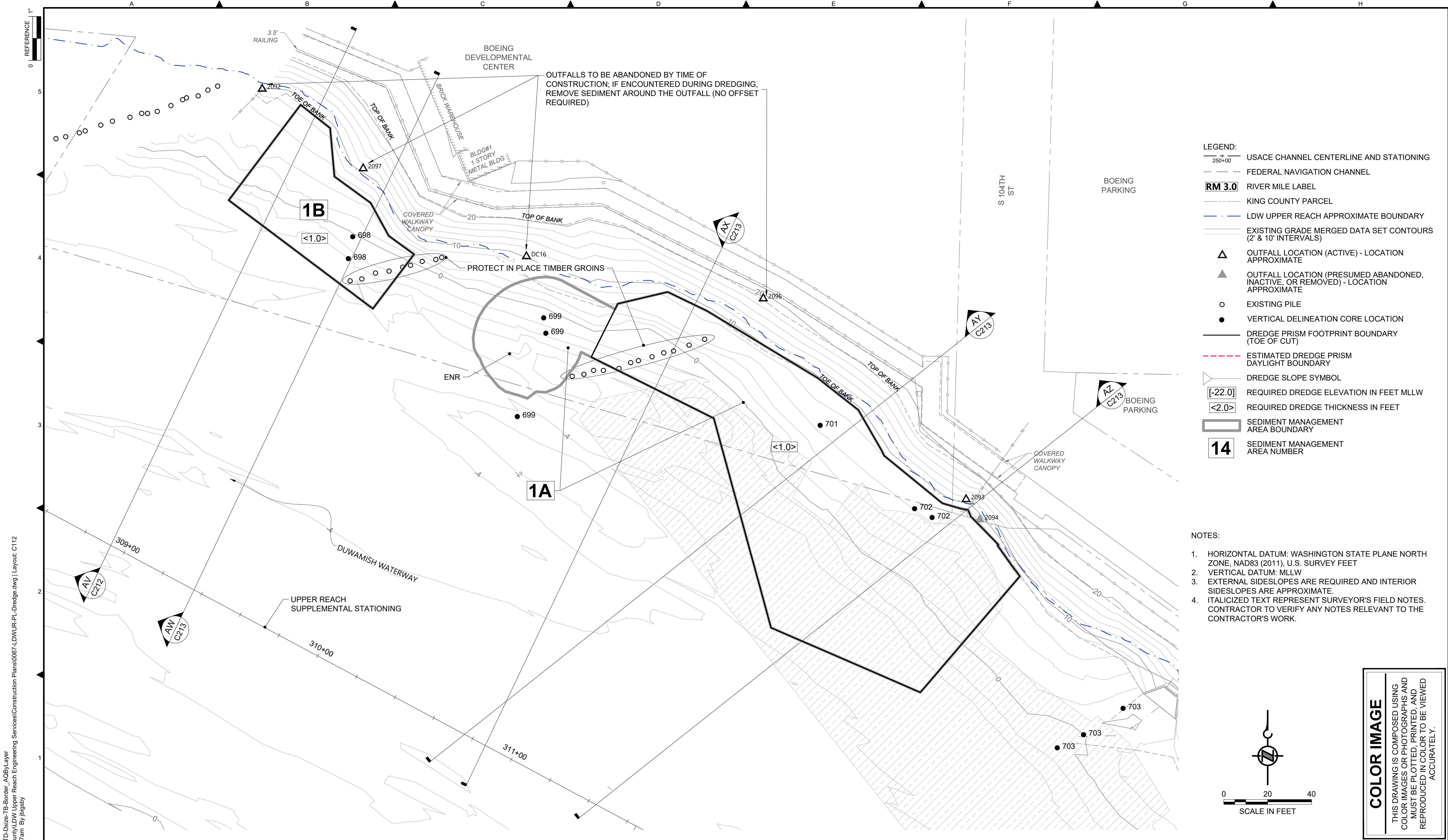
DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION

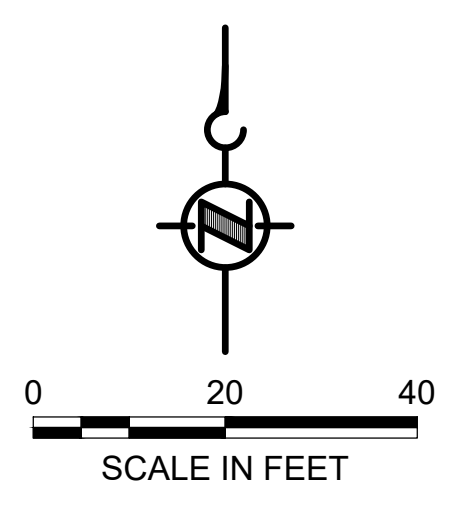
DREDGE PLAN (RM 4.64 TO 4.76)

DATE: DECEMBER 2023
DRAWING NO: C111
SHT NO / TOTAL 42 / 91
REV NO: 0



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - KING COUNTY PARCEL
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - EXISTING PILE
 - VERTICAL DELINEATION CORE LOCATION
 - DREDGE PRISM FOOTPRINT BOUNDARY (TOE OF CUT)
 - ESTIMATED DREDGE PRISM DAYLIGHT BOUNDARY
 - DREDGE SLOPE SYMBOL
 - REQUIRED DREDGE ELEVATION IN FEET MLLW
 - REQUIRED DREDGE THICKNESS IN FEET
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER

- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 3. EXTERNAL SIDESLOPES ARE REQUIRED AND INTERIOR SIDESLOPES ARE APPROXIMATE.
 4. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.



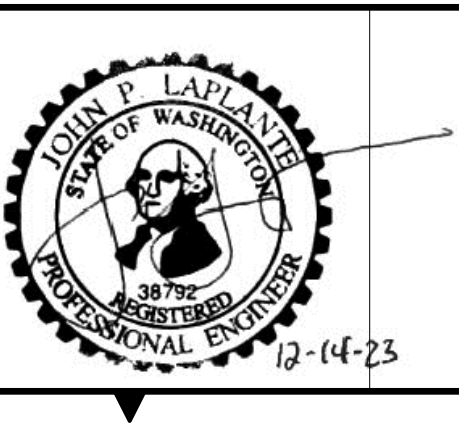
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 PLOTTED: Jan 12, 2024 10:45:07am By jigsby

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Lower Duwamish Waterway Group
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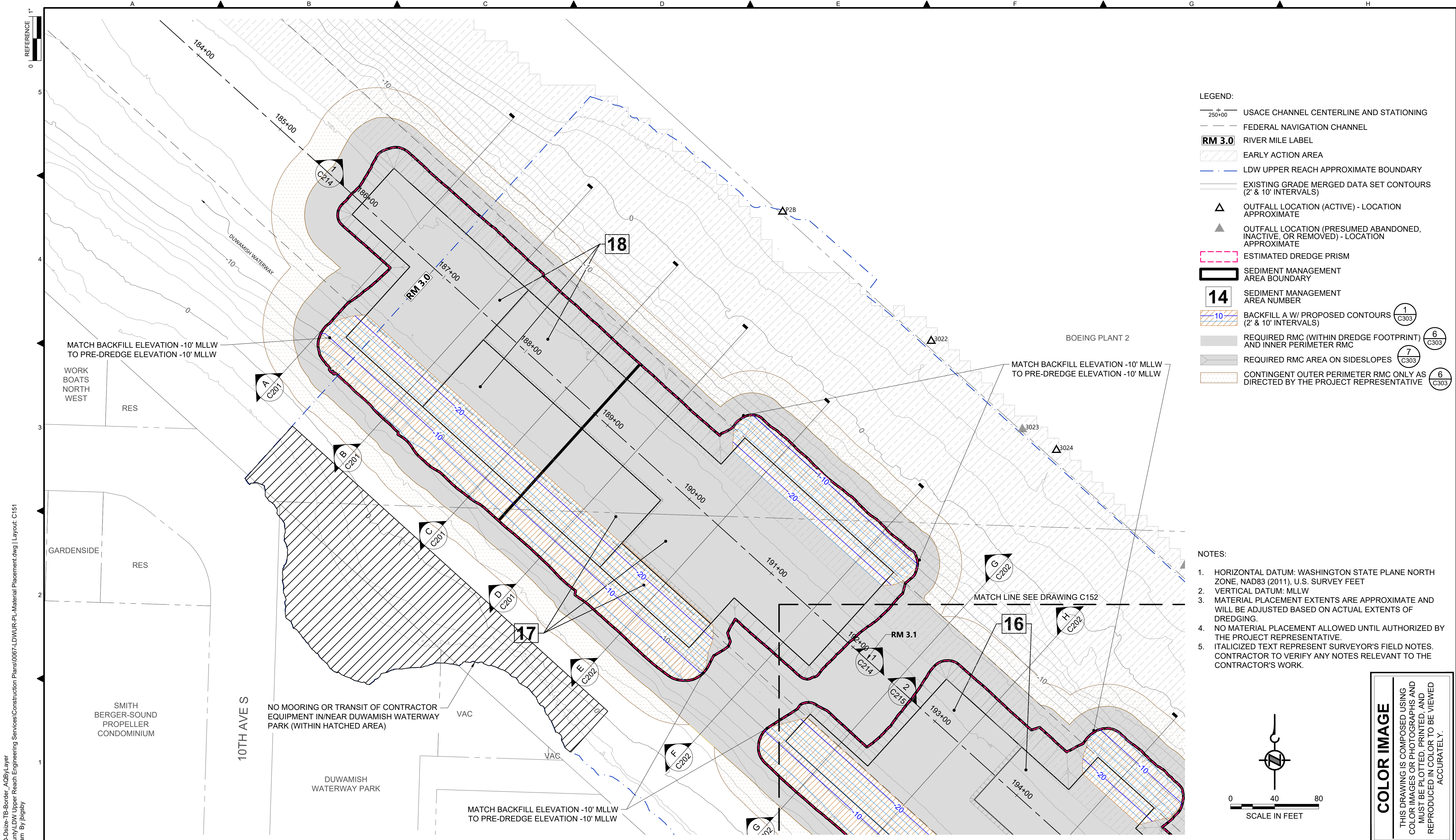
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PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
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DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

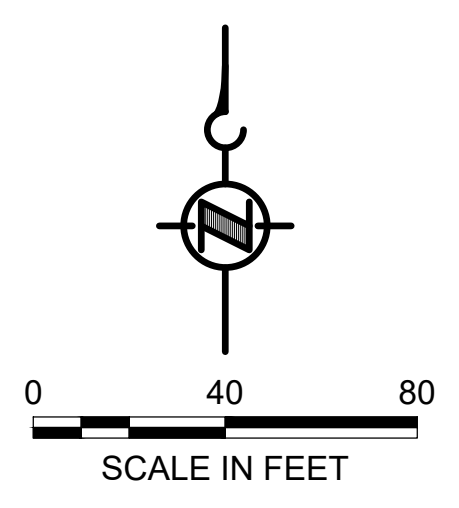
DREDGE PLAN (RM 4.84 TO 4.95)

DATE: DECEMBER 2023
DRAWING NO: C112
SHT NO / TOTAL 43 / 91
REV NO: 0



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - EARLY ACTION AREA
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - ESTIMATED DREDGE PRISM
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER
 - BACKFILL A W/ PROPOSED CONTOURS (2' & 10' INTERVALS) 1 C303
 - REQUIRED RMC (WITHIN DREDGE FOOTPRINT) AND INNER PERIMETER RMC 6 C303
 - REQUIRED RMC AREA ON SIDESLOPES 7 C303
 - CONTINGENT OUTER PERIMETER RMC ONLY AS DIRECTED BY THE PROJECT REPRESENTATIVE 6 C303

- NOTES:**
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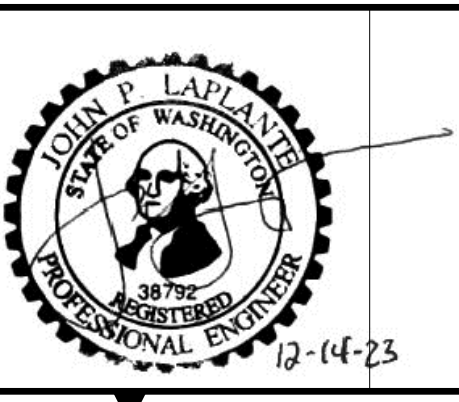
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PLOTTED: Jan 12, 2024 10:47:01am By jhgaby

NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
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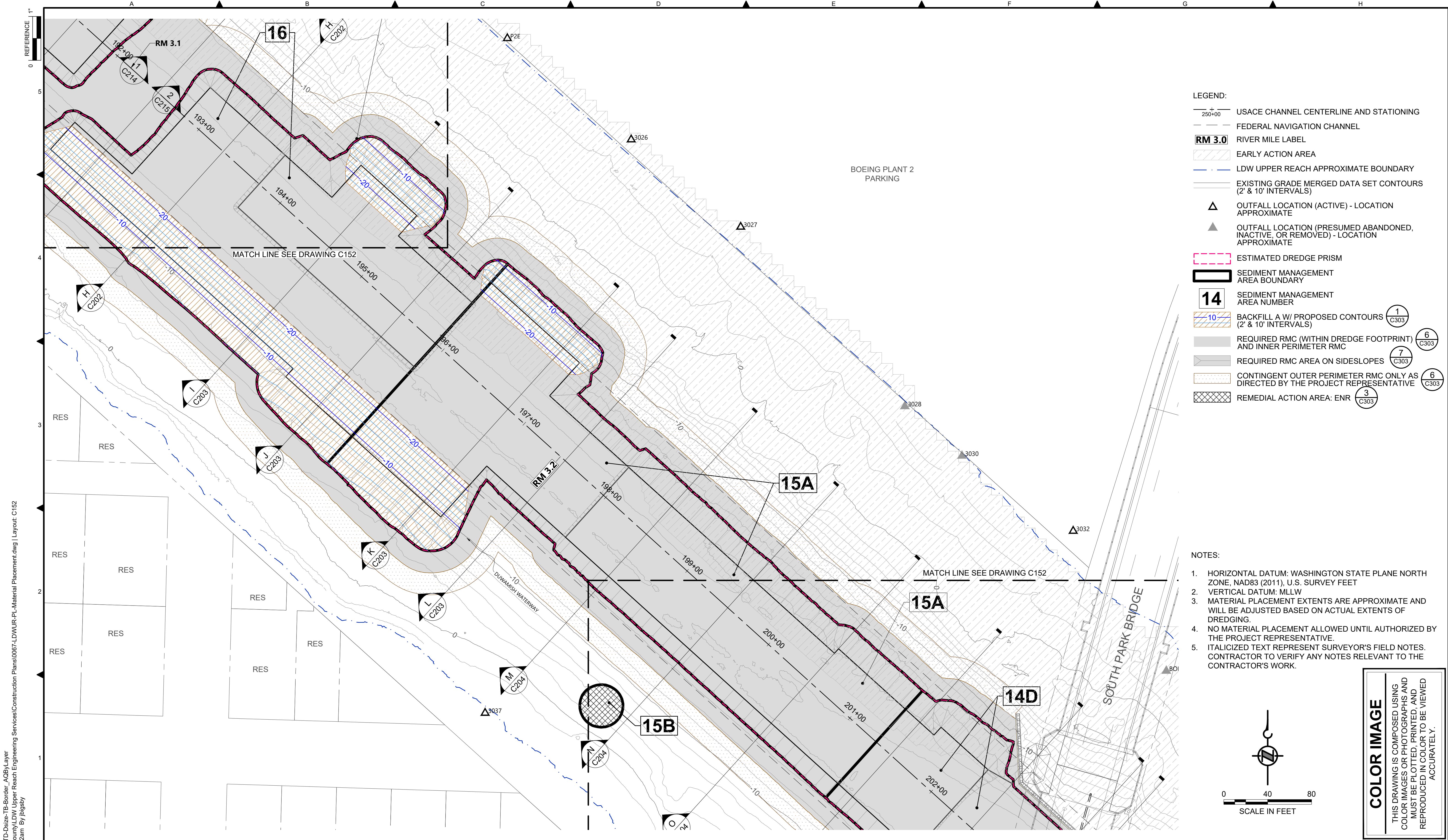
DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION

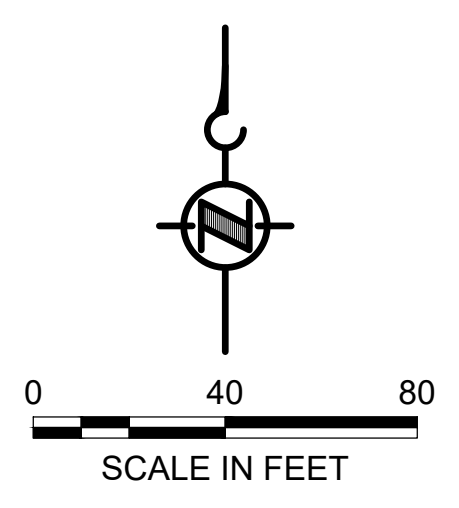
MATERIAL PLACEMENT PLAN
(RM 2.93 TO 3.15)

DATE: DECEMBER 2023
DRAWING NO: C151
SHT NO / TOTAL 44 / 91
REV NO: 0



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RIVER MILE LABEL
 - EARLY ACTION AREA
 - LDW UPPER REACH APPROXIMATE BOUNDARY
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 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - SEDIMENT MANAGEMENT AREA NUMBER
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 - REQUIRED RMC (WITHIN DREDGE FOOTPRINT) AND INNER PERIMETER RMC 6 C303
 - REQUIRED RMC AREA ON SIDESLOPES 7 C303
 - CONTINGENT OUTER PERIMETER RMC ONLY AS DIRECTED BY THE PROJECT REPRESENTATIVE 6 C303
 - REMEDIAL ACTION AREA: ENR 3 C303

- NOTES:**
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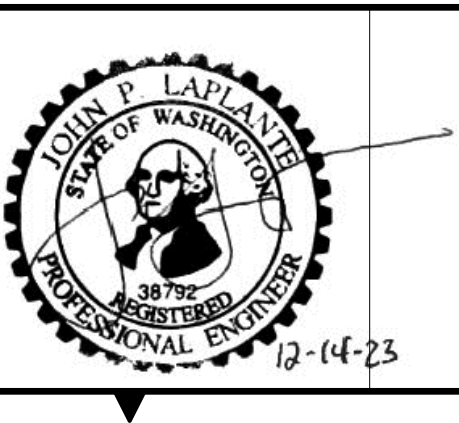
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BORDER FILE EDITION: x:\KOVTD\Size-TB-Border_AQB\Layer_Vgial\CAD\Projects\0067-King County\LDW Upper Reach Engineering Services\Construction Plans\0067-LDWUR-PL-Material Placement.dwg | Layout: C152
 PLOTTED: Jan 12, 2024 10:47:52am By jlgaby

NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
 City of Seattle / King County / The Boeing Company

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 DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA
 PROJECT ENGINEER: J. LAPLANTE
 DESIGN APPROVAL: J. ABDALKHANI
 PROJECT ACCEPTANCE: G. STEINER

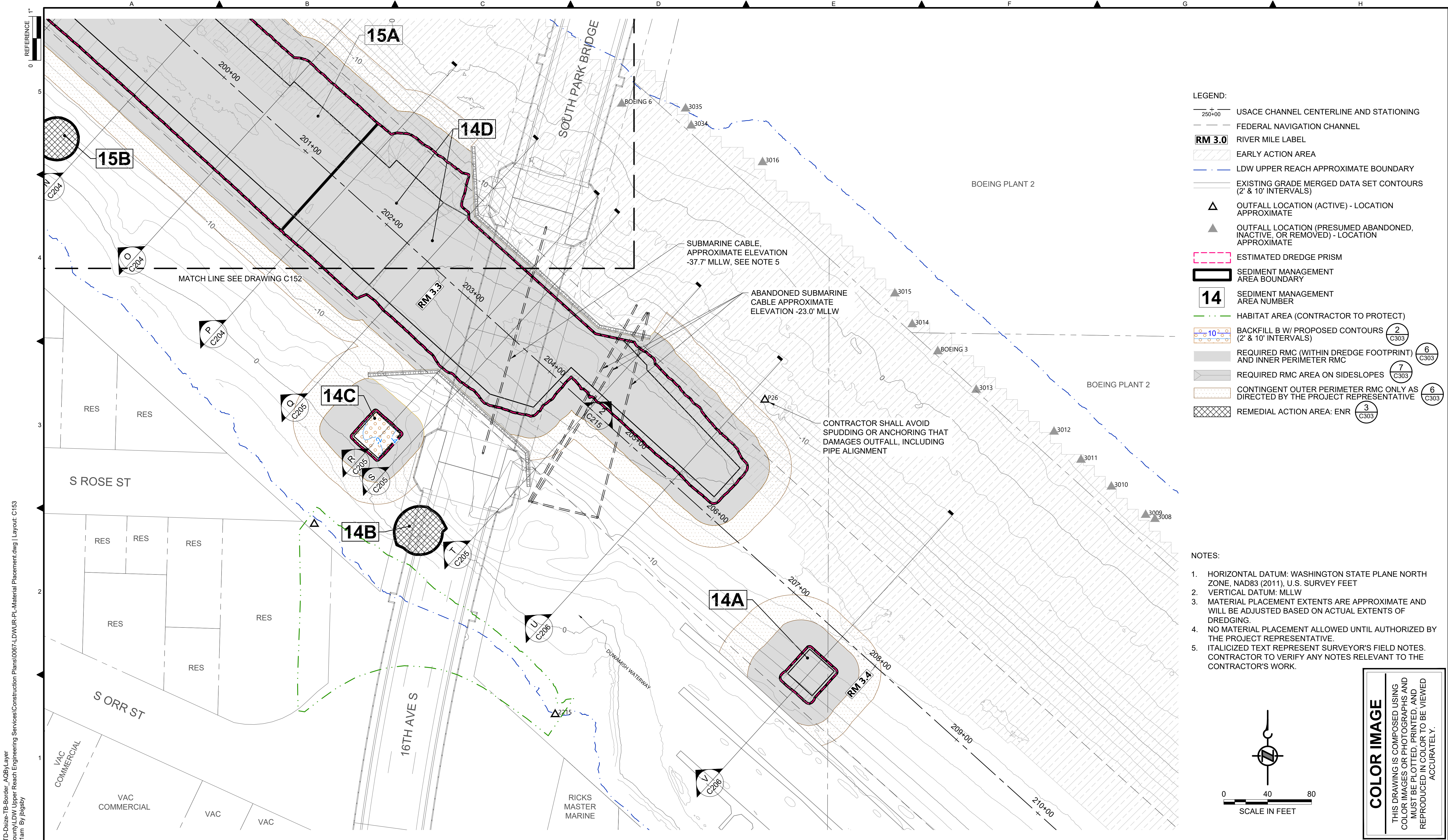
CHECKED: K. GROSS
 SCALE: AS NOTED
 PROJECT FILE NO: E00559E18
 CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

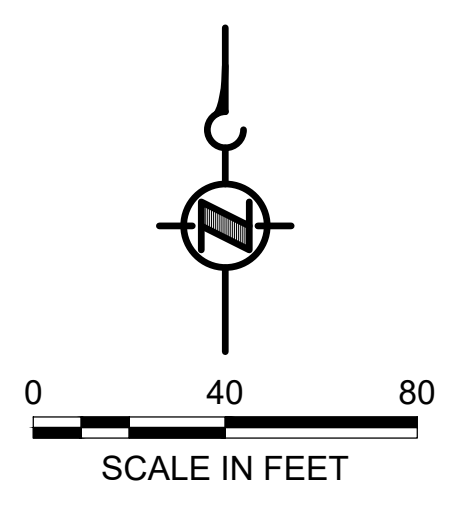
MATERIAL PLACEMENT PLAN
(RM 3.09 TO 3.29)

DATE: DECEMBER 2023
 DRAWING NO: **C152**
 SHT NO / TOTAL: 45 / 91
 REV NO: **0**



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RIVER MILE LABEL
 - EARLY ACTION AREA
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - ESTIMATED DREDGE PRISM
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - SEDIMENT MANAGEMENT AREA NUMBER
 - HABITAT AREA (CONTRACTOR TO PROTECT)
 - BACKFILL B W/ PROPOSED CONTOURS (2' & 10' INTERVALS)
 - REQUIRED RMC (WITHIN DREDGE FOOTPRINT) AND INNER PERIMETER RMC
 - REQUIRED RMC AREA ON SIDESLOPES
 - CONTINGENT OUTER PERIMETER RMC ONLY AS DIRECTED BY THE PROJECT REPRESENTATIVE
 - REMEDIAL ACTION AREA: ENR

- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
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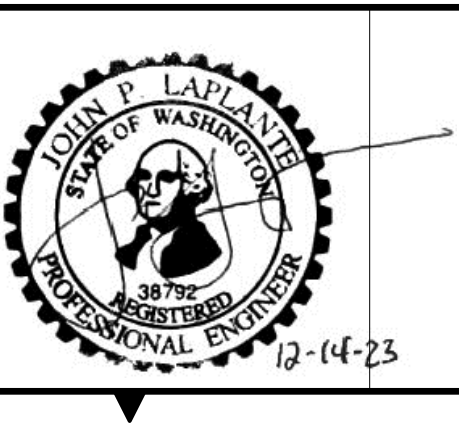
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BORDER FILE EDITION: x:\KOVTD\size-TB-Border_AQB\Layer_Vgial\CAD\Projects\0067-King County\LDW Upper Reach Engineering Services\Construction Plans\0067-LDWUR-PL-Material Placement.dwg | Layout: C153
 PLOTTED: Jan 12, 2024 10:48:41am By jigsby

NO	REVISION DESCRIPTION	BY	APVD	DATE

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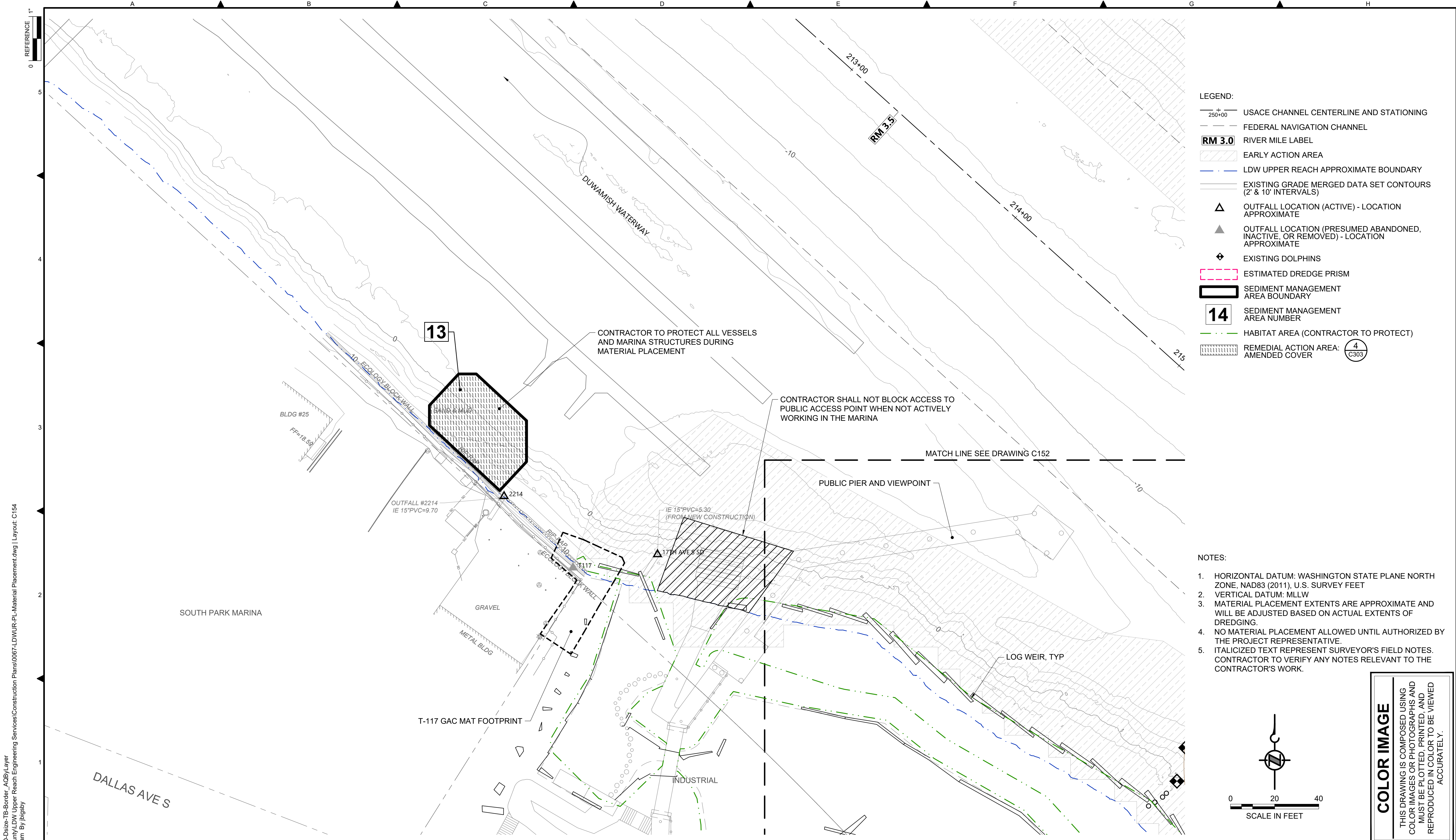
DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

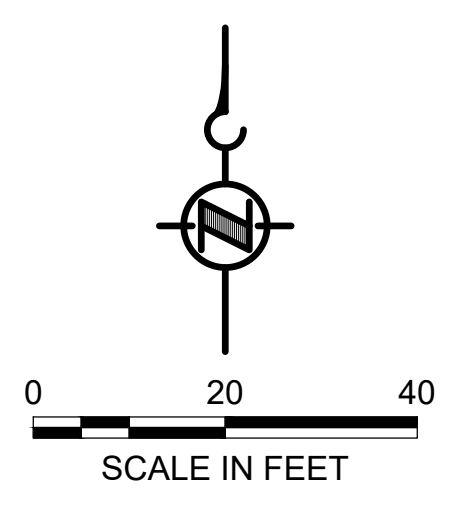
MATERIAL PLACEMENT PLAN
(RM 3.23 TO 3.44)

DATE: DECEMBER 2023
DRAWING NO: C153
SHT NO / TOTAL 46 / 91
REV NO: 0



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RIVER MILE LABEL
 - EARLY ACTION AREA
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - EXISTING DOLPHINS
 - ESTIMATED DREDGE PRISM
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - SEDIMENT MANAGEMENT AREA NUMBER
 - HABITAT AREA (CONTRACTOR TO PROTECT)
 - REMEDIAL ACTION AREA: **4** C303

- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 3. MATERIAL PLACEMENT EXTENTS ARE APPROXIMATE AND WILL BE ADJUSTED BASED ON ACTUAL EXTENTS OF DREDGING.
 4. NO MATERIAL PLACEMENT ALLOWED UNTIL AUTHORIZED BY THE PROJECT REPRESENTATIVE.
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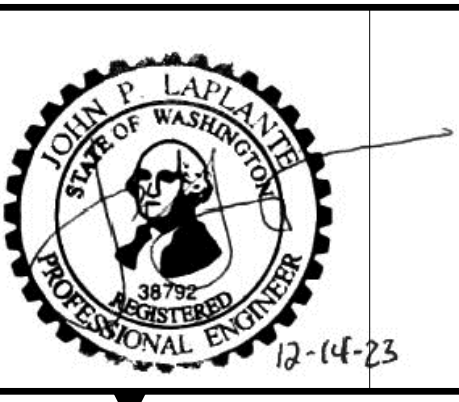
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 PLOTTED: Jan 12, 2024 10:49:32am By jlgaby

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 City of Seattle / King County / The Boeing Company

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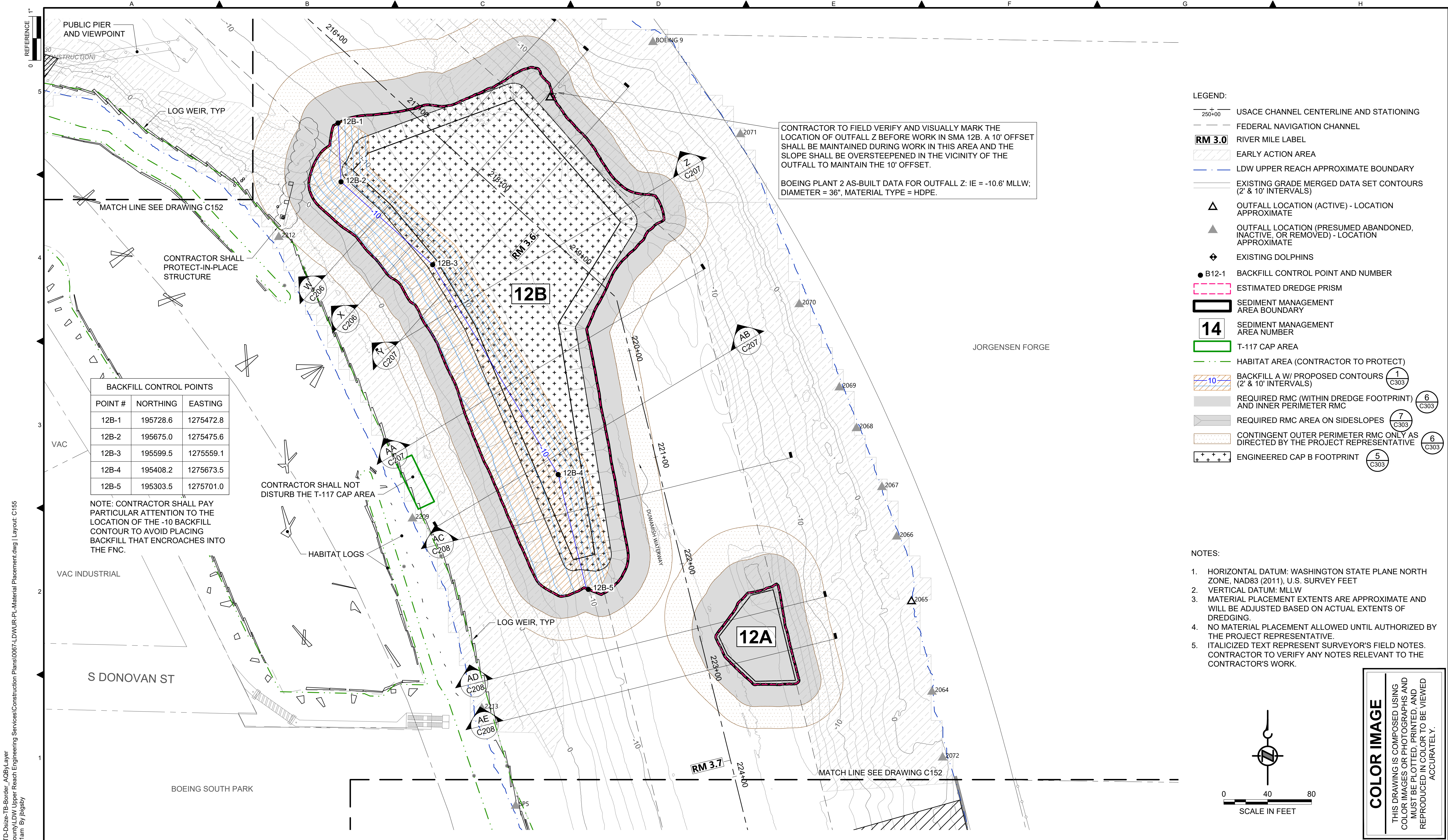
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PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

MATERIAL PLACEMENT PLAN
(RM 3.49 TO 3.56)

DATE: DECEMBER 2023
DRAWING NO: C154
SHT NO / TOTAL 47 / 91
REV NO: 0



CONTRACTOR TO FIELD VERIFY AND VISUALLY MARK THE LOCATION OF OUTFALL Z BEFORE WORK IN SMA 12B. A 10' OFFSET SHALL BE MAINTAINED DURING WORK IN THIS AREA AND THE SLOPE SHALL BE OVERSTEEPENED IN THE VICINITY OF THE OUTFALL TO MAINTAIN THE 10' OFFSET.

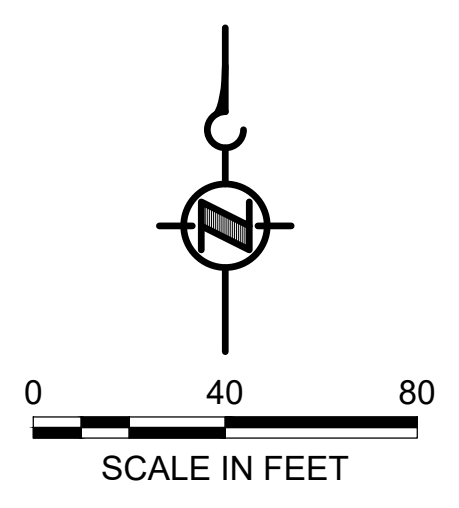
BOEING PLANT 2 AS-BUILT DATA FOR OUTFALL Z: IE = -10.6' MLLW; DIAMETER = 36", MATERIAL TYPE = HDPE.

BACKFILL CONTROL POINTS		
POINT #	NORTHING	EASTING
12B-1	195728.6	1275472.8
12B-2	195675.0	1275475.6
12B-3	195599.5	1275559.1
12B-4	195408.2	1275673.5
12B-5	195303.5	1275701.0

NOTE: CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO THE LOCATION OF THE -10 BACKFILL CONTOUR TO AVOID PLACING BACKFILL THAT ENCLOSES INTO THE FNC.

- LEGEND:**
- +—+—+— USACE CHANNEL CENTERLINE AND STATIONING
 - - - - - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - ▨ EARLY ACTION AREA
 - - - - - LDW UPPER REACH APPROXIMATE BOUNDARY
 - - - - - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - ▲ OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - ▲ OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - ◆ EXISTING DOLPHINS
 - B12-1 BACKFILL CONTROL POINT AND NUMBER
 - ▭ ESTIMATED DREDGE PRISM
 - ▭ SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER
 - ▭ T-117 CAP AREA
 - - - - - HABITAT AREA (CONTRACTOR TO PROTECT)
 - ▨ BACKFILL A W/ PROPOSED CONTOURS (2' & 10' INTERVALS) (1 C303)
 - ▨ REQUIRED RMC (WITHIN DREDGE FOOTPRINT) AND INNER PERIMETER RMC (6 C303)
 - ▨ REQUIRED RMC AREA ON SIDESLOPES (7 C303)
 - ▨ CONTINGENT OUTER PERIMETER RMC ONLY AS DIRECTED BY THE PROJECT REPRESENTATIVE (6 C303)
 - ▨ ENGINEERED CAP B FOOTPRINT (5 C303)

- NOTES:**
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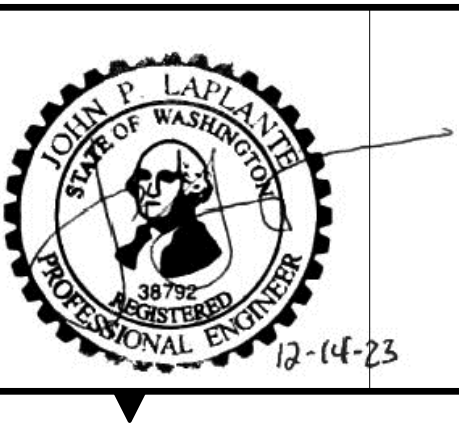
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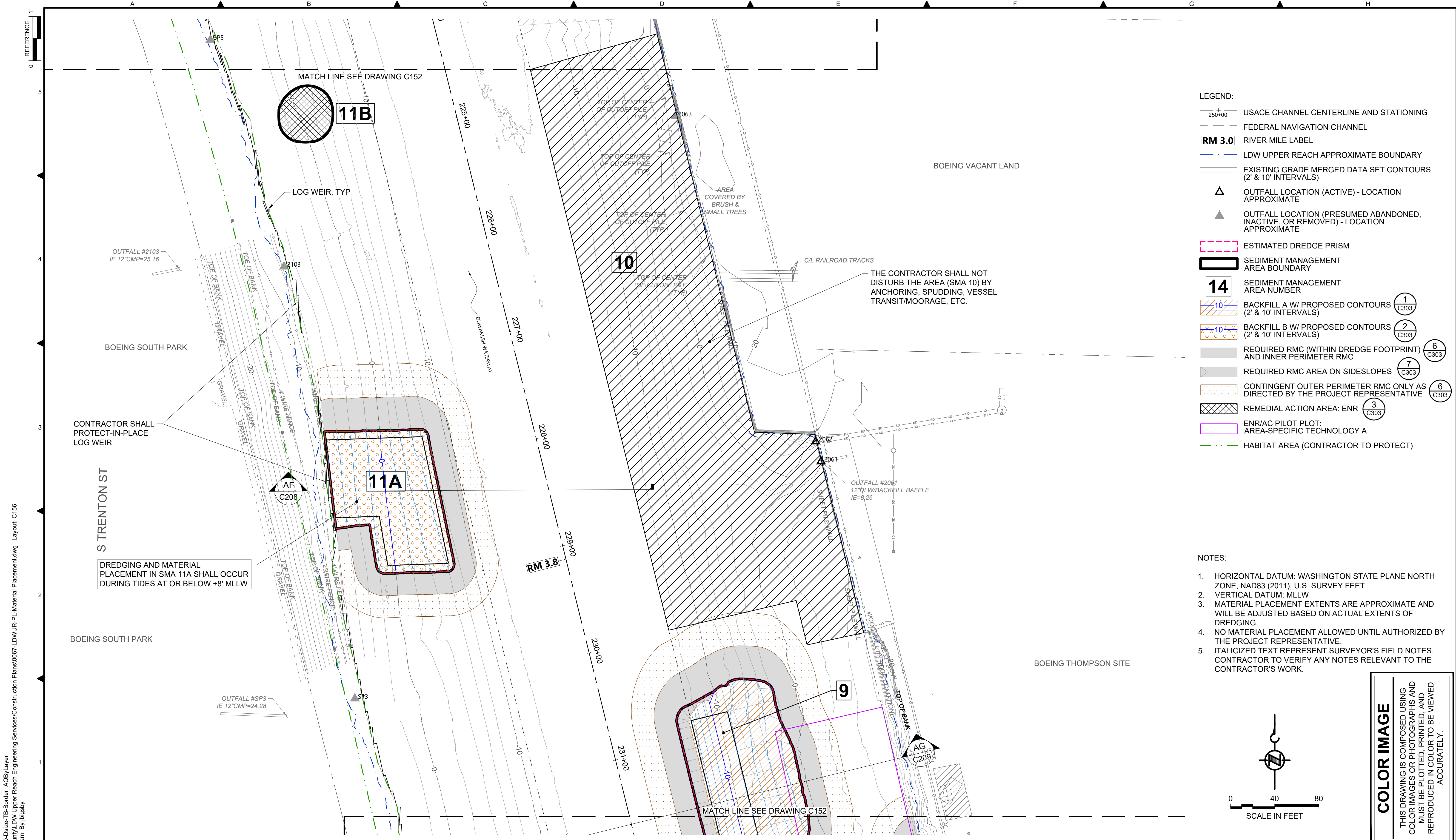
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DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION

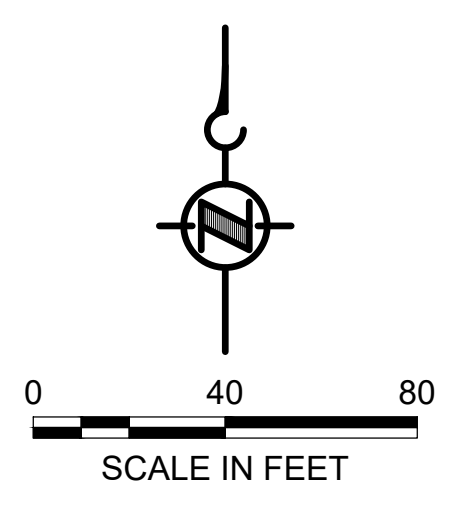
MATERIAL PLACEMENT PLAN
(RM 3.54 TO 3.71)

DATE: DECEMBER 2023
DRAWING NO: C155
SHT NO / TOTAL 48 / 91
REV NO: 0



- LEGEND:**
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 - SEDIMENT MANAGEMENT AREA NUMBER
 - BACKFILL A W/ PROPOSED CONTOURS (2' & 10' INTERVALS)
 - BACKFILL B W/ PROPOSED CONTOURS (2' & 10' INTERVALS)
 - REQUIRED RMC (WITHIN DREDGE FOOTPRINT) AND INNER PERIMETER RMC
 - REQUIRED RMC AREA ON SIDESLOPES
 - CONTINGENT OUTER PERIMETER RMC ONLY AS DIRECTED BY THE PROJECT REPRESENTATIVE
 - REMEDIAL ACTION AREA: ENR
 - ENR/AC PILOT PLOT: AREA-SPECIFIC TECHNOLOGY A
 - HABITAT AREA (CONTRACTOR TO PROTECT)

- NOTES:**
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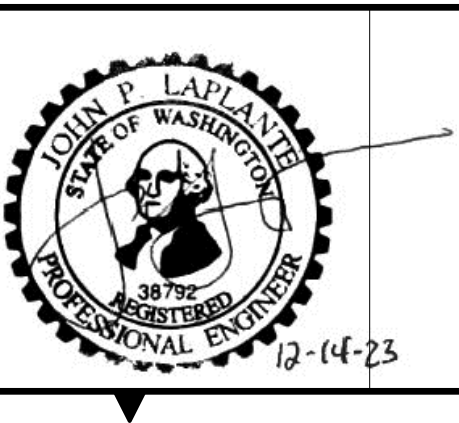
COLOR IMAGE
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 PLOTTED: Jan 12, 2024 10:51:10am By jigsby

NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
 City of Seattle / King County / The Boeing Company

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INFORMATION ONLY
BID DOCUMENTS
 DECEMBER 2023



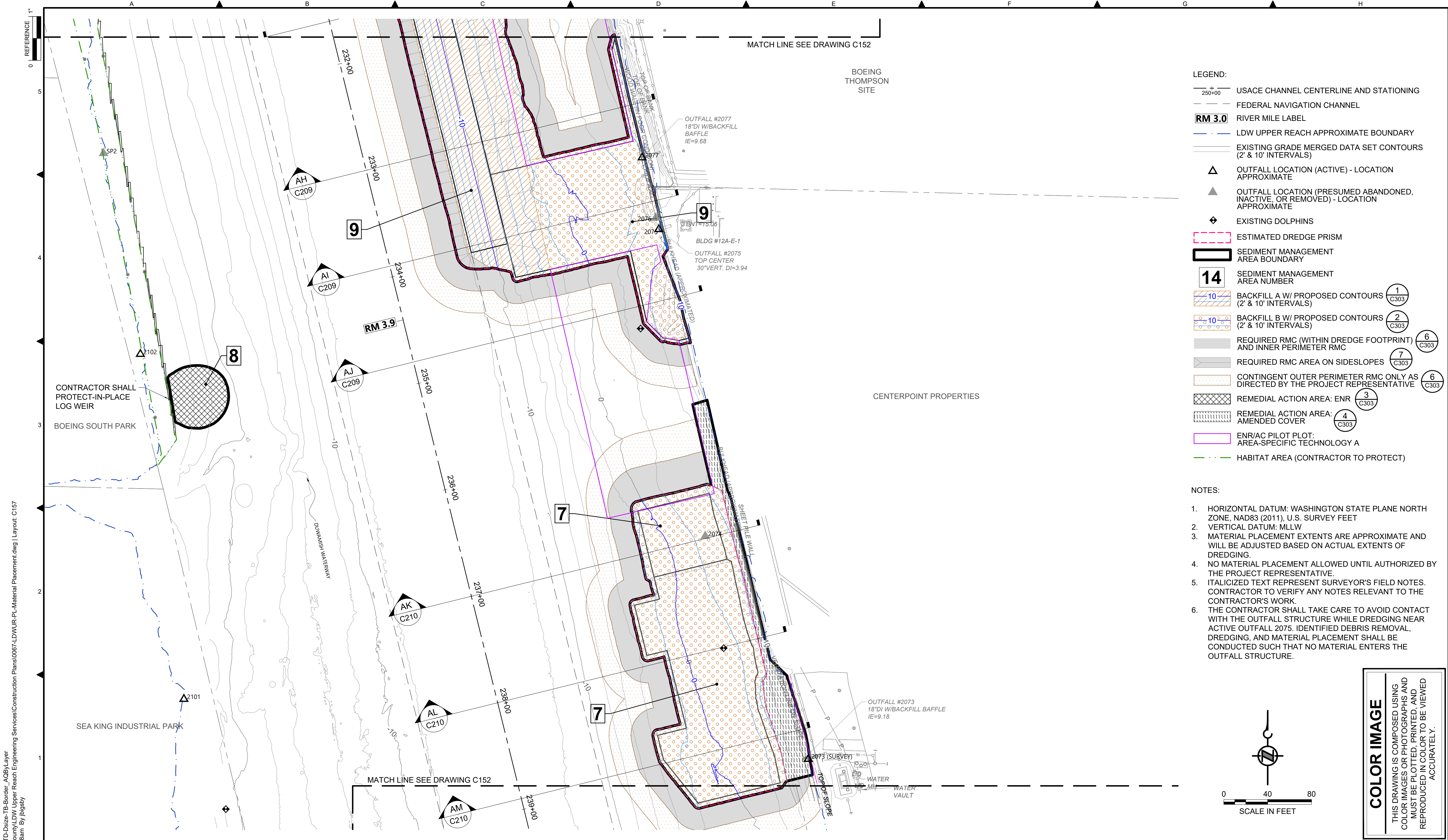
DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

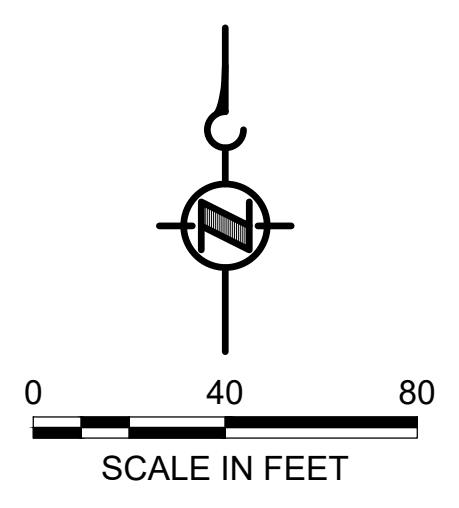
MATERIAL PLACEMENT PLAN
 (RM 3.73 TO 3.84)

DATE: DECEMBER 2023
DRAWING NO: C156
SHT NO / TOTAL 49 / 91
REV NO: 0



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - EXISTING DOLPHINS
 - ESTIMATED DREDGE PRISM
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER
 - BACKFILL A W/ PROPOSED CONTOURS (2' & 10' INTERVALS) ①
C303
 - BACKFILL B W/ PROPOSED CONTOURS (2' & 10' INTERVALS) ②
C303
 - REQUIRED RMC (WITHIN DREDGE FOOTPRINT) AND INNER PERIMETER RMC ③
C303
 - REQUIRED RMC AREA ON SIDESLOPES ④
C303
 - CONTINGENT OUTER PERIMETER RMC ONLY AS DIRECTED BY THE PROJECT REPRESENTATIVE ⑤
C303
 - REMEDIAL ACTION AREA: ENR ⑥
C303
 - REMEDIAL ACTION AREA: AMENDED COVER ⑦
C303
 - ENR/AC PILOT PLOT: AREA-SPECIFIC TECHNOLOGY A
 - HABITAT AREA (CONTRACTOR TO PROTECT)

- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 3. MATERIAL PLACEMENT EXTENTS ARE APPROXIMATE AND WILL BE ADJUSTED BASED ON ACTUAL EXTENTS OF DREDGING.
 4. NO MATERIAL PLACEMENT ALLOWED UNTIL AUTHORIZED BY THE PROJECT REPRESENTATIVE.
 5. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.
 6. THE CONTRACTOR SHALL TAKE CARE TO AVOID CONTACT WITH THE OUTFALL STRUCTURE WHILE DREDGING NEAR ACTIVE OUTFALL 2075. IDENTIFIED DEBRIS REMOVAL, DREDGING, AND MATERIAL PLACEMENT SHALL BE CONDUCTED SUCH THAT NO MATERIAL ENTERS THE OUTFALL STRUCTURE.



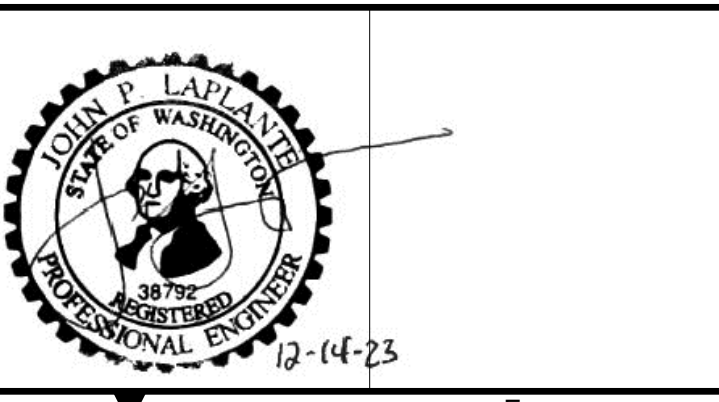
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PLOTTED: Jan 12, 2024 10:51:58am By jlgbsby

NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company

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DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA
PROJECT ENGINEER: J. LAPLANTE
DESIGN APPROVAL: J. ABDALKHANI
PROJECT ACCEPTANCE: G. STEINER

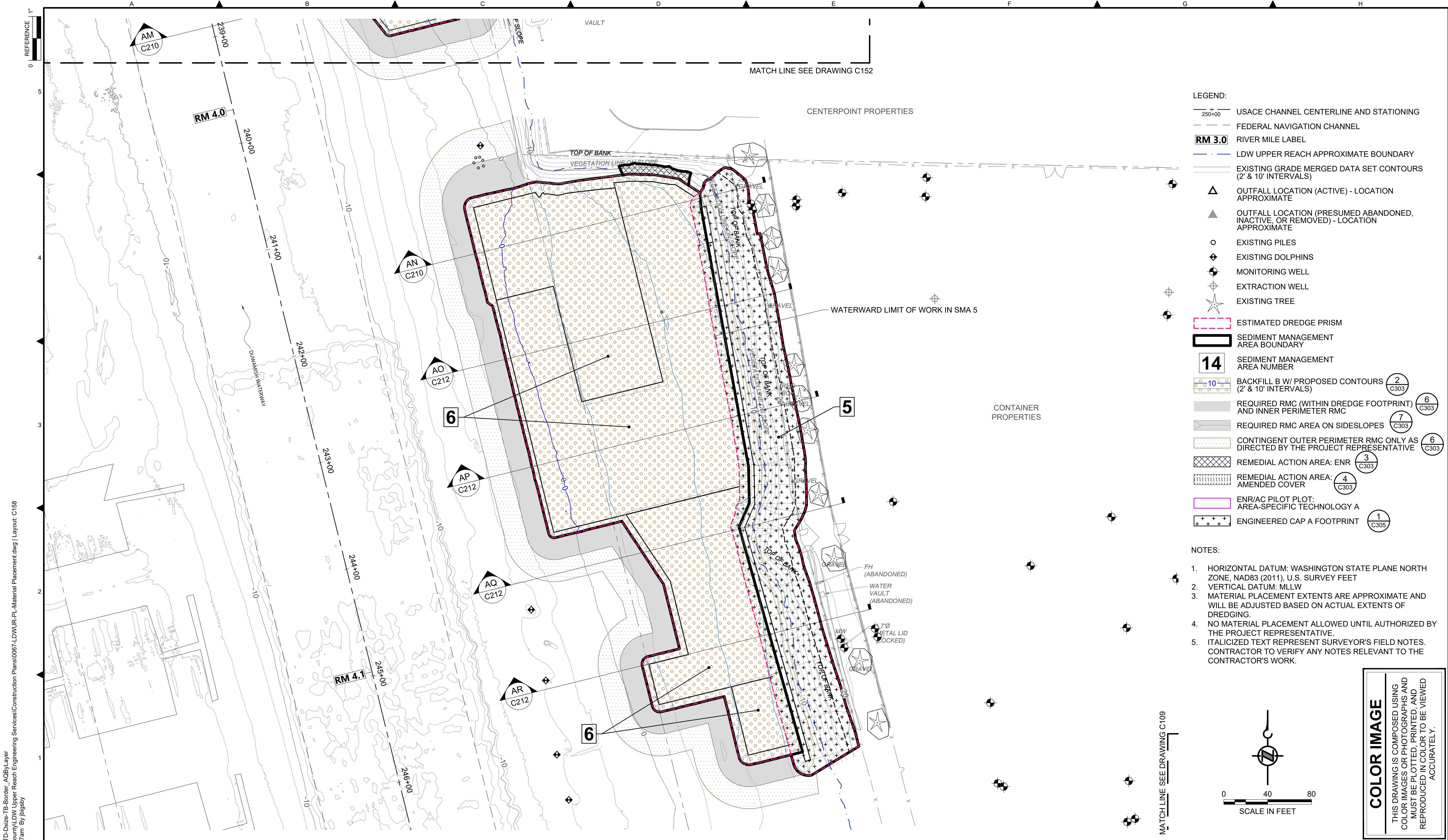
CHECKED: K. GROSS
SCALE: AS NOTED
PROJECT FILE NO: E00559E18
CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION

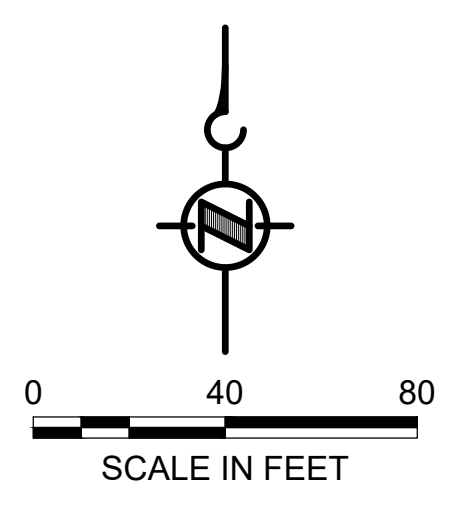
MATERIAL PLACEMENT PLAN
(RM 3.85 TO 3.99)

DATE: DECEMBER 2023
DRAWING NO: **C157**
SHT NO / TOTAL: 50 / 91
REV NO: **0**



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - △** OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - ▲** OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - EXISTING PILES
 - ◆ EXISTING DOLPHINS
 - ⊕ MONITORING WELL
 - ⊕ EXTRACTION WELL
 - ★ EXISTING TREE
 - ESTIMATED DREDGE PRISM
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER
 - BACKFILL B W/ PROPOSED CONTOURS (2' & 10' INTERVALS) (2) C303
 - REQUIRED RMC (WITHIN DREDGE FOOTPRINT) AND INNER PERIMETER RMC (6) C303
 - REQUIRED RMC AREA ON SIDESLOPES (7) C303
 - CONTINGENT OUTER PERIMETER RMC ONLY AS DIRECTED BY THE PROJECT REPRESENTATIVE (6) C303
 - REMEDIAL ACTION AREA: ENR (3) C303
 - REMEDIAL ACTION AREA: AMENDED COVER (4) C303
 - ENR/AC PILOT PLOT: AREA-SPECIFIC TECHNOLOGY A
 - ENGINEERED CAP A FOOTPRINT (1) C305

- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 3. MATERIAL PLACEMENT EXTENTS ARE APPROXIMATE AND WILL BE ADJUSTED BASED ON ACTUAL EXTENTS OF DREDGING.
 4. NO MATERIAL PLACEMENT ALLOWED UNTIL AUTHORIZED BY THE PROJECT REPRESENTATIVE.
 5. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.



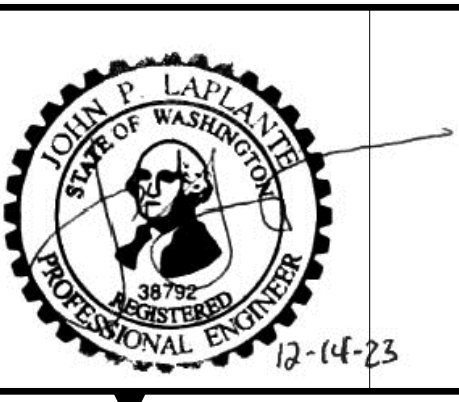
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 PLOTTED: Jan 12, 2024 10:52:47am By jlgbsby

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 DECEMBER 2023



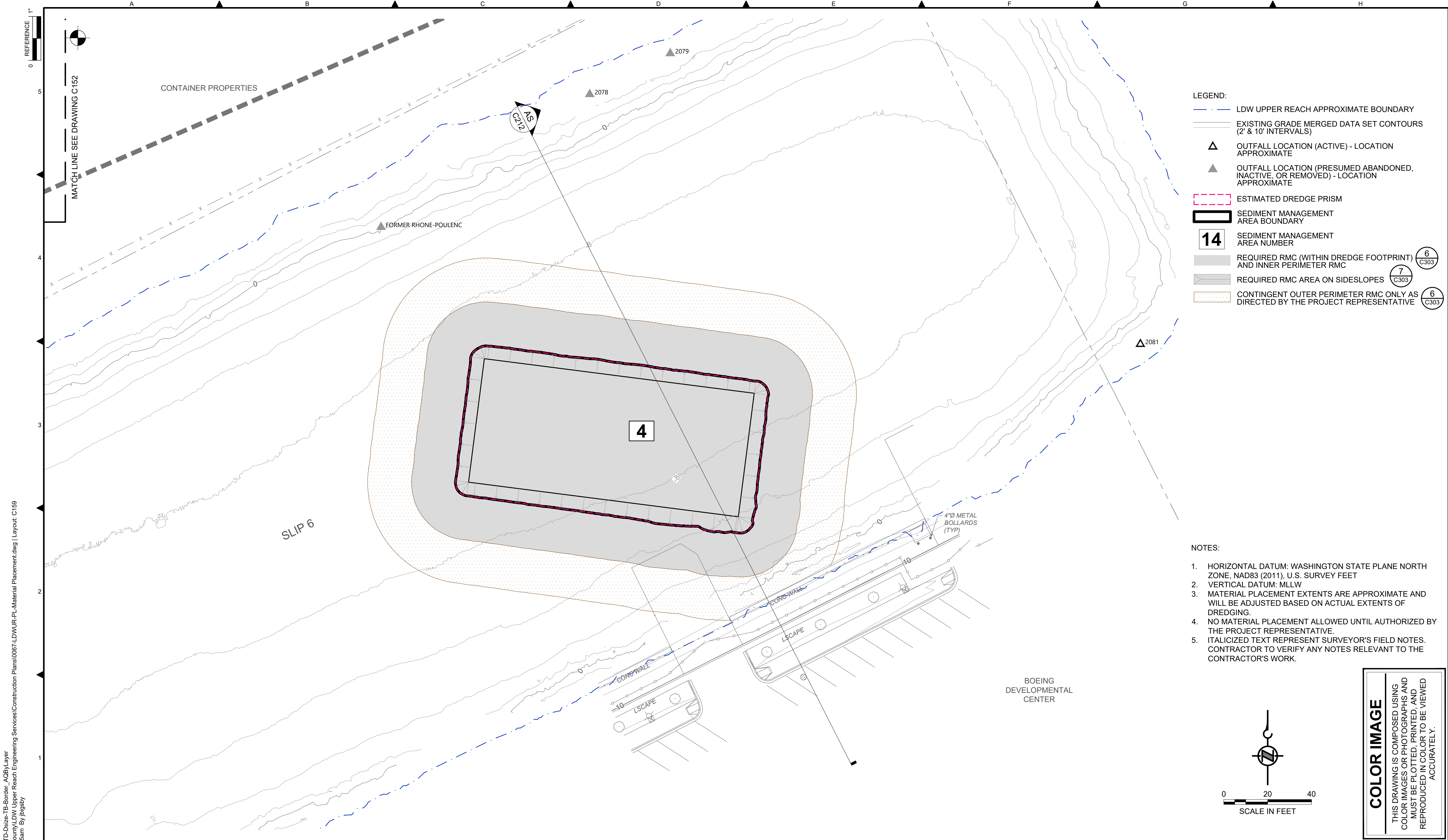
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PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

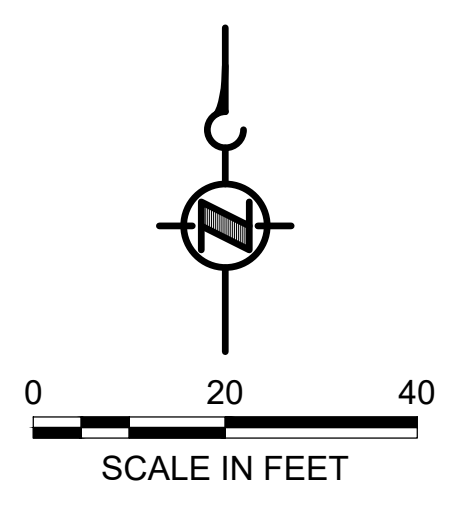
MATERIAL PLACEMENT PLAN
(RM 3.98 TO 4.13)

DATE: DECEMBER 2023
DRAWING NO: C158
SHT NO / TOTAL 51 / 91
REV NO: 0



- LEGEND:**
- LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - ESTIMATED DREDGE PRISM
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER
 - REQUIRED RMC (WITHIN DREDGE FOOTPRINT) AND INNER PERIMETER RMC
 - REQUIRED RMC AREA ON SIDESLOPES
 - CONTINGENT OUTER PERIMETER RMC ONLY AS DIRECTED BY THE PROJECT REPRESENTATIVE

- NOTES:**
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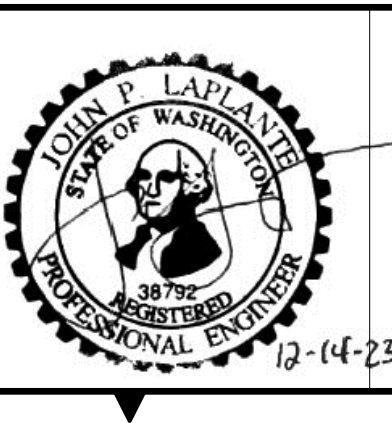
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 PLOTTED: Jan 12, 2024 - 10:53:35am By jigsby

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Lower Duwamish Waterway Group
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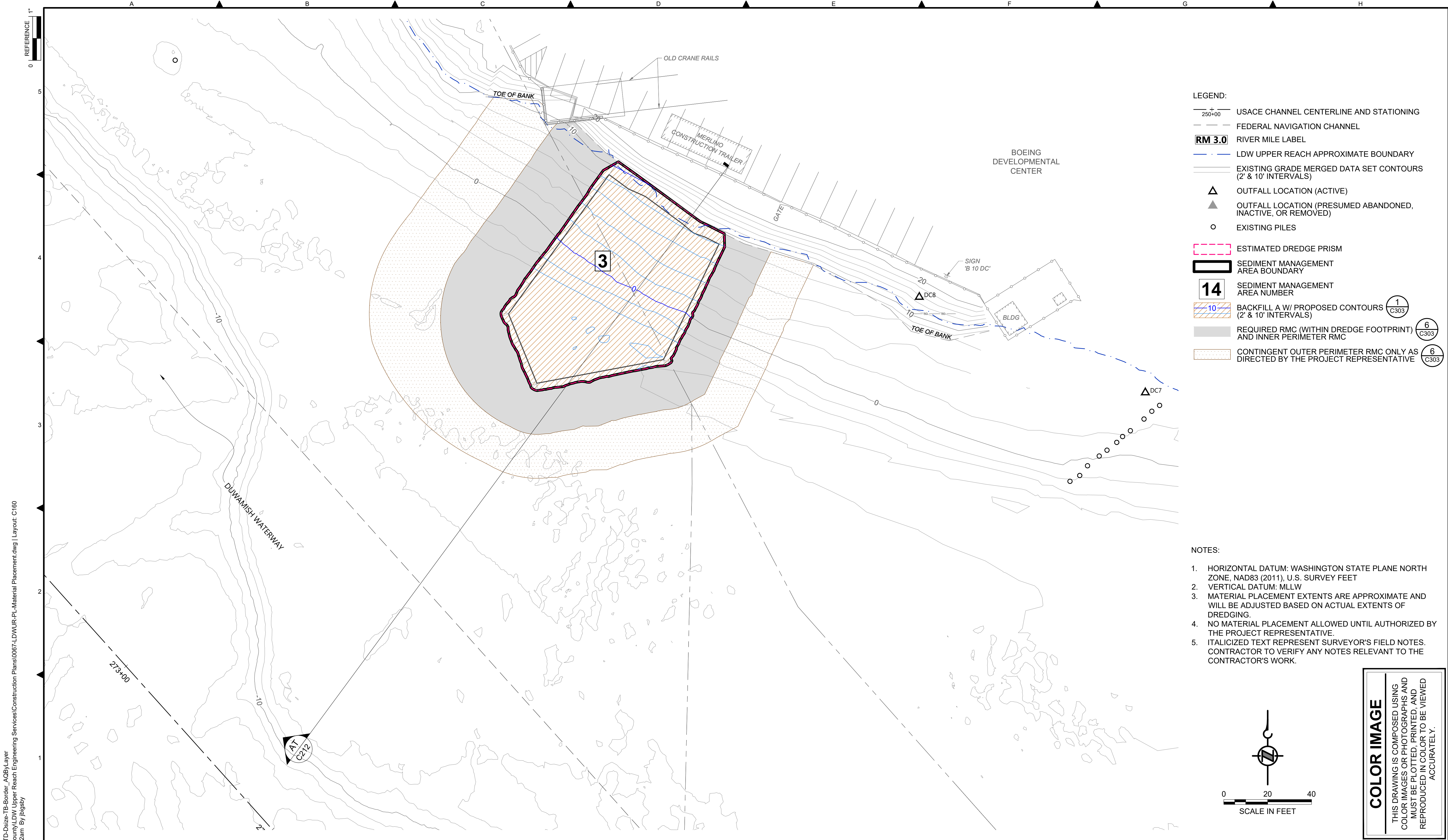
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PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

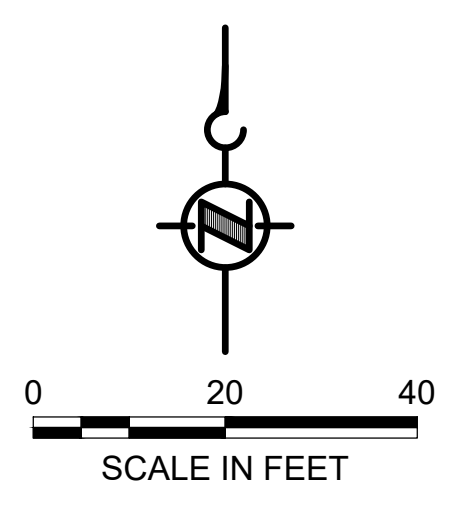
MATERIAL PLACEMENT PLAN
(RM 4.14 TO 4.23)

DATE: DECEMBER 2023
DRAWING NO: C159
SHT NO / TOTAL 52 / 91
REV NO: 0



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - △** OUTFALL LOCATION (ACTIVE)
 - ▲** OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED)
 - EXISTING PILES
 - ESTIMATED DREDGE PRISM
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER
 - BACKFILL A W/ PROPOSED CONTOURS (2' & 10' INTERVALS) 1 C303
 - REQUIRED RMC (WITHIN DREDGE FOOTPRINT) AND INNER PERIMETER RMC 6 C303
 - CONTINGENT OUTER PERIMETER RMC ONLY AS DIRECTED BY THE PROJECT REPRESENTATIVE 6 C303

- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
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COLOR IMAGE

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PLOTTED: Jan 12, 2024 10:54:22am By jbiggsby

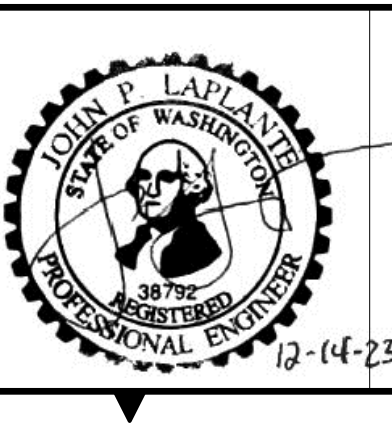
NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company

FINAL ISSUE DRAWING
INFORMATION ONLY

BID DOCUMENTS

DECEMBER 2023



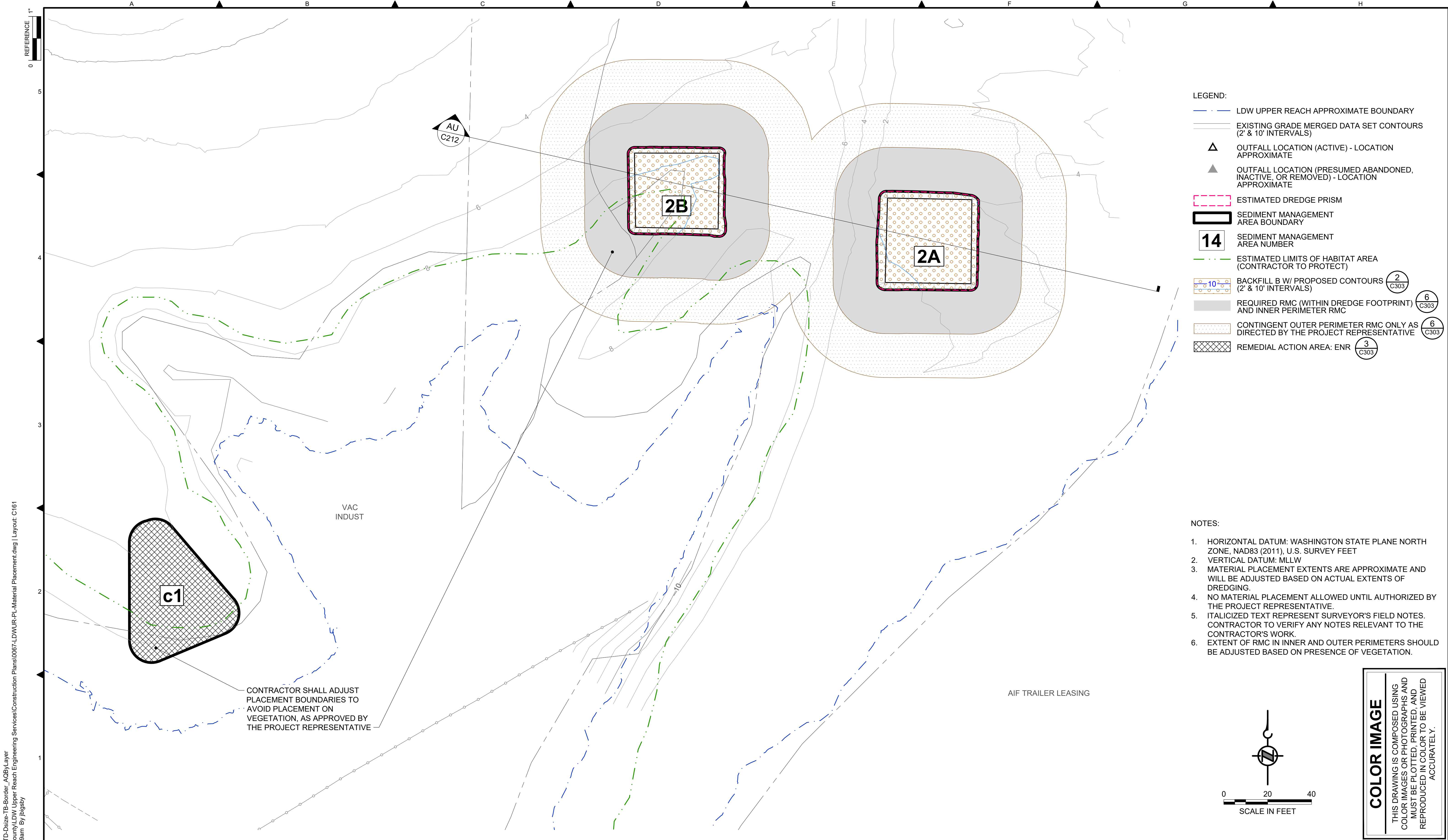
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PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION

MATERIAL PLACEMENT PLAN
(RM 4.57 TO 4.66)

DATE: DECEMBER 2023
DRAWING NO: C160
SHT NO / TOTAL 53 / 91
REV NO: 0



- LEGEND:**
- LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - △ OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - ▲ OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - ESTIMATED DREDGE PRISM
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER
 - ESTIMATED LIMITS OF HABITAT AREA (CONTRACTOR TO PROTECT)
 - BACKFILL B W/ PROPOSED CONTOURS (2' & 10' INTERVALS) 2 C303
 - REQUIRED RMC (WITHIN DREDGE FOOTPRINT) AND INNER PERIMETER RMC 6 C303
 - CONTINGENT OUTER PERIMETER RMC ONLY AS DIRECTED BY THE PROJECT REPRESENTATIVE 6 C303
 - REMEDIAL ACTION AREA: ENR 3 C303

- NOTES:**
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 3. MATERIAL PLACEMENT EXTENTS ARE APPROXIMATE AND WILL BE ADJUSTED BASED ON ACTUAL EXTENTS OF DREDGING.
 4. NO MATERIAL PLACEMENT ALLOWED UNTIL AUTHORIZED BY THE PROJECT REPRESENTATIVE.
 5. ITALICIZED TEXT REPRESENT SURVEYOR'S FIELD NOTES. CONTRACTOR TO VERIFY ANY NOTES RELEVANT TO THE CONTRACTOR'S WORK.
 6. EXTENT OF RMC IN INNER AND OUTER PERIMETERS SHOULD BE ADJUSTED BASED ON PRESENCE OF VEGETATION.

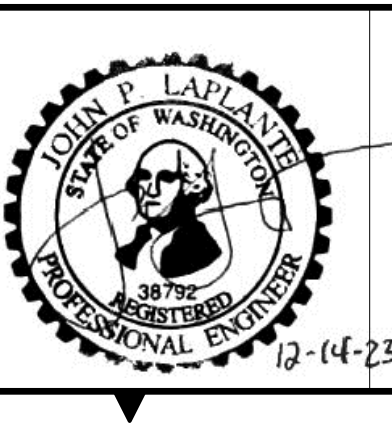
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PLOTTED: Jan 12, 2024 10:55:09am By jbigby

NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company

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INFORMATION ONLY
BID DOCUMENTS
DECEMBER 2023



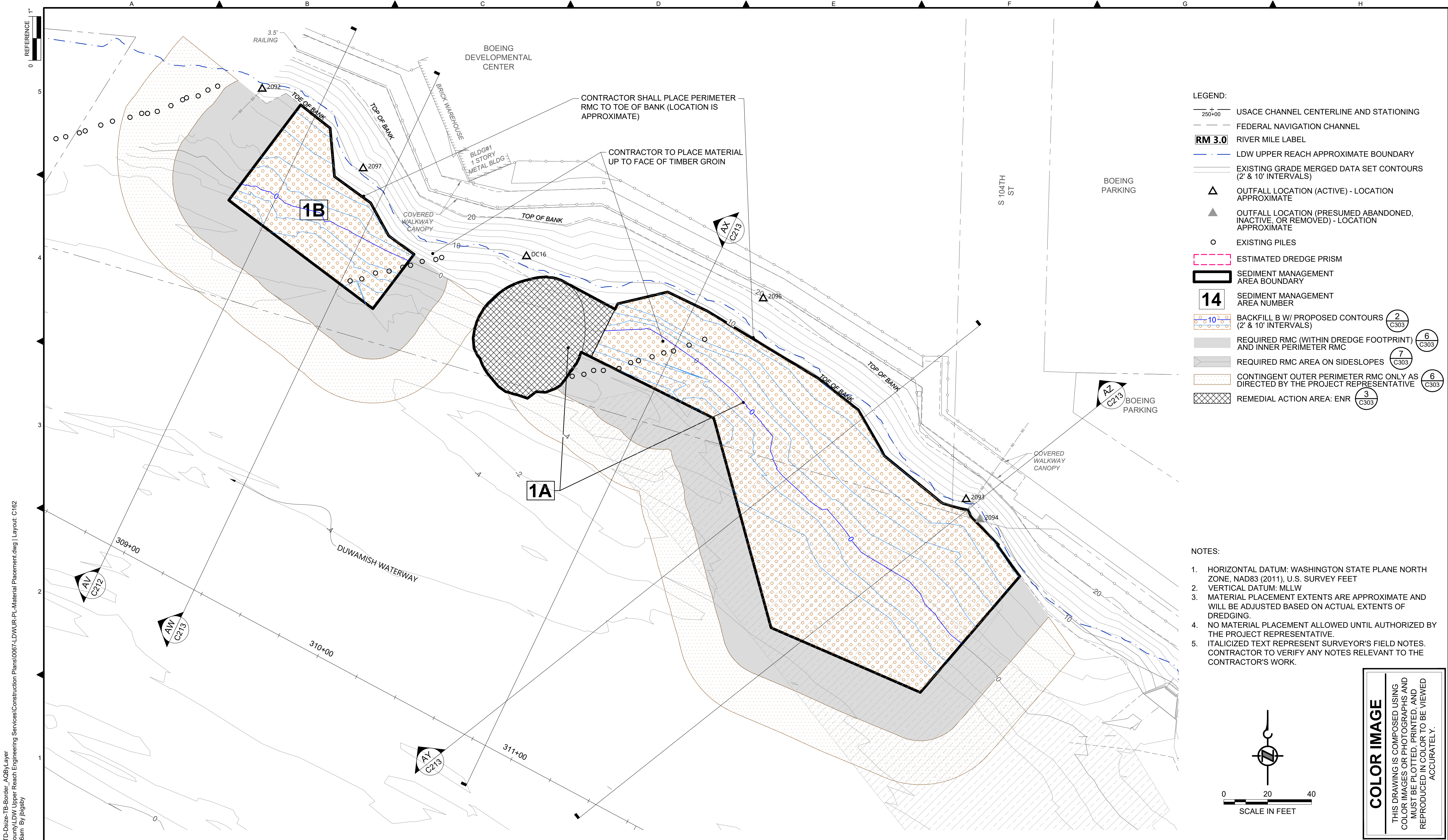
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PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION

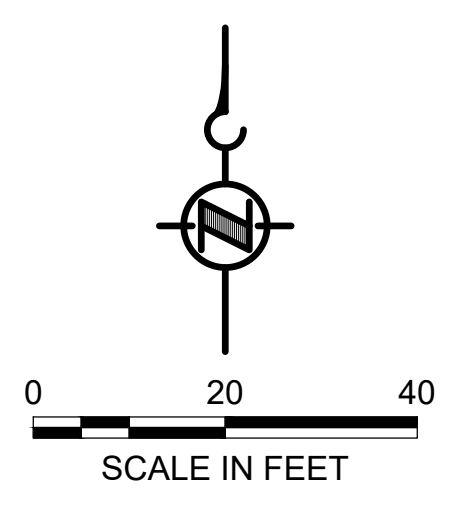
MATERIAL PLACEMENT PLAN
(RM 4.64 TO 4.76)

DATE: DECEMBER 2023
DRAWING NO: C161
SHT NO / TOTAL 54 / 91
REV NO: 0



- LEGEND:**
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)
 - Δ** OUTFALL LOCATION (ACTIVE) - LOCATION APPROXIMATE
 - ▲** OUTFALL LOCATION (PRESUMED ABANDONED, INACTIVE, OR REMOVED) - LOCATION APPROXIMATE
 - EXISTING PILES
 - ESTIMATED DREDGE PRISM
 - SEDIMENT MANAGEMENT AREA BOUNDARY
 - 14** SEDIMENT MANAGEMENT AREA NUMBER
 - BACKFILL B W/ PROPOSED CONTOURS (2' & 10' INTERVALS) **2**
C303
 - REQUIRED RMC (WITHIN DREDGE FOOTPRINT) AND INNER PERIMETER RMC **6**
C303
 - REQUIRED RMC AREA ON SIDESLOPES **7**
C303
 - CONTINGENT OUTER PERIMETER RMC ONLY AS DIRECTED BY THE PROJECT REPRESENTATIVE **6**
C303
 - REMEDIAL ACTION AREA: ENR **3**
C303

- NOTES:**
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PLOTTED: Jan 12, 2024 10:55:56am By jlgaby

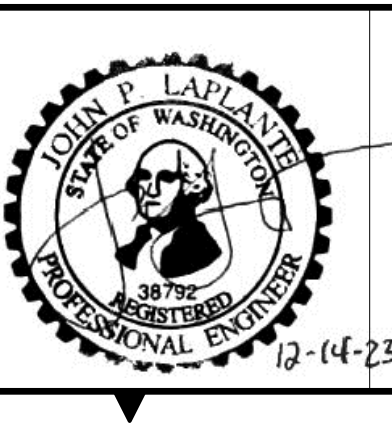
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Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company

FINAL ISSUE DRAWING
INFORMATION ONLY

BID DOCUMENTS

DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065

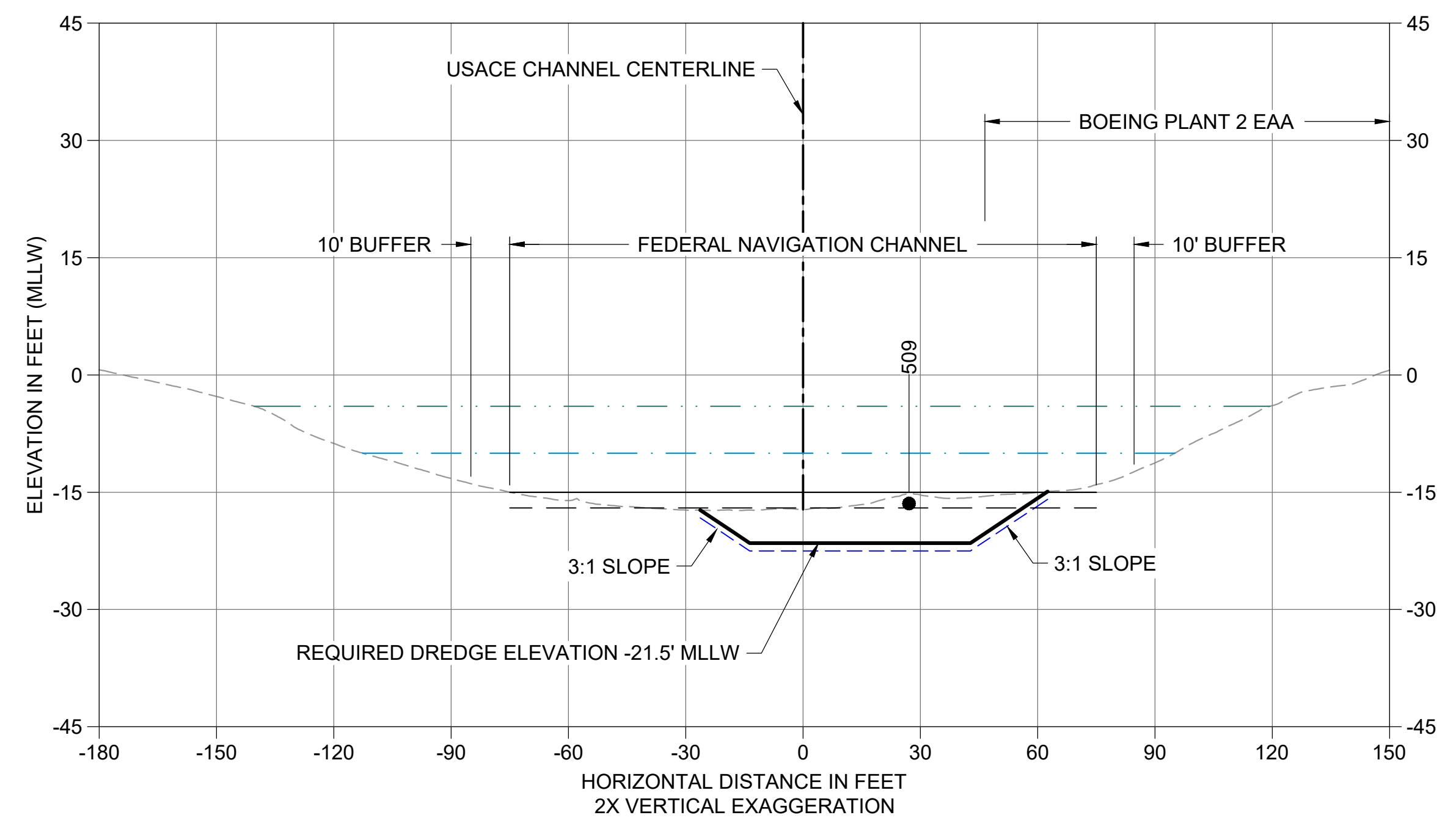


DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION

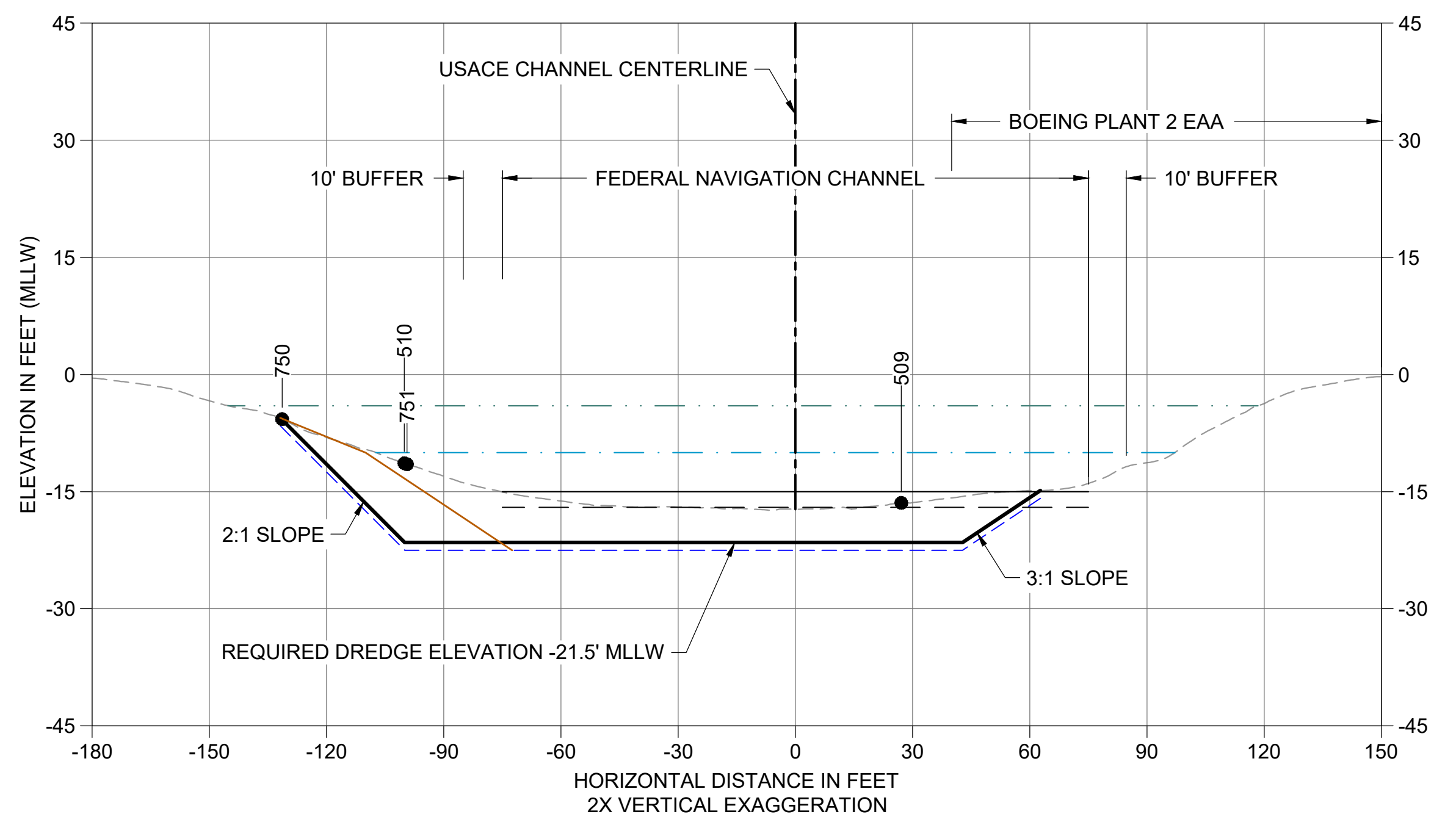
MATERIAL PLACEMENT PLAN
(RM 4.84 TO 4.95)

DATE: DECEMBER 2023
DRAWING NO: C162
SHT NO / TOTAL 55 / 91
REV NO: 0

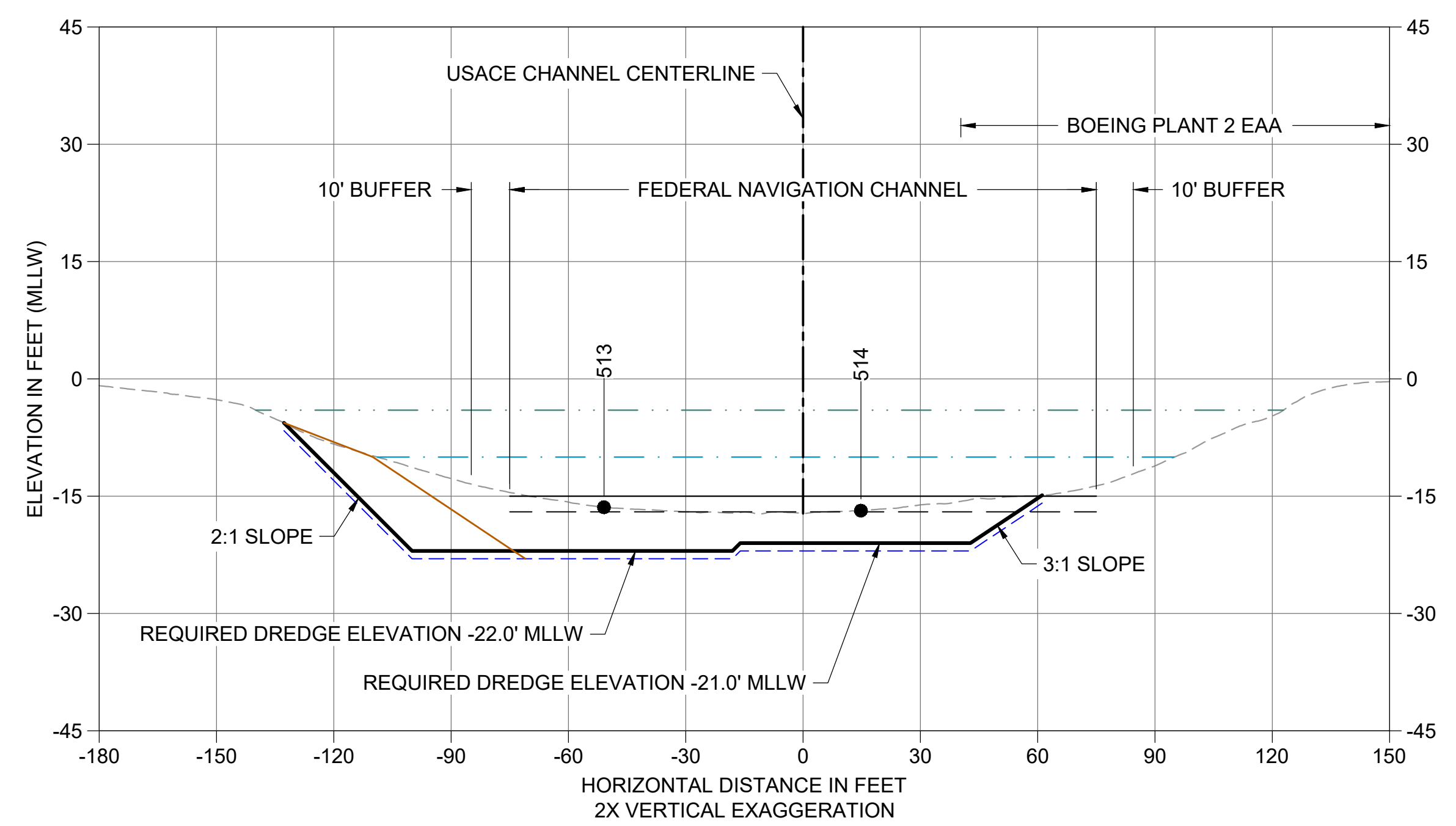
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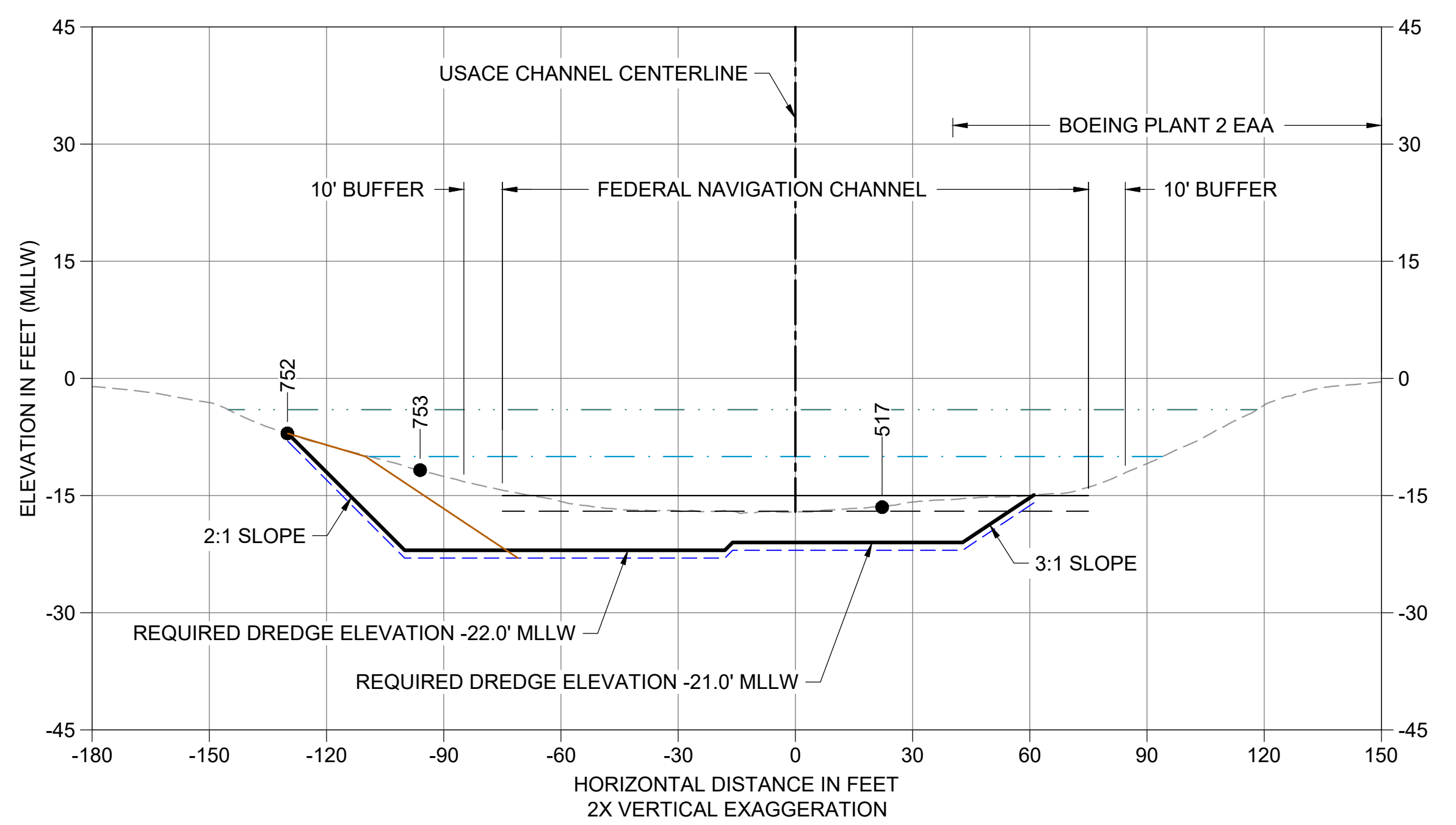
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 VERTICAL SCALE: 1" = 15'



B CROSS SECTION STA 187+45
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C CROSS SECTION STA 188+50
 C101 HORIZONTAL SCALE: 1" = 30'
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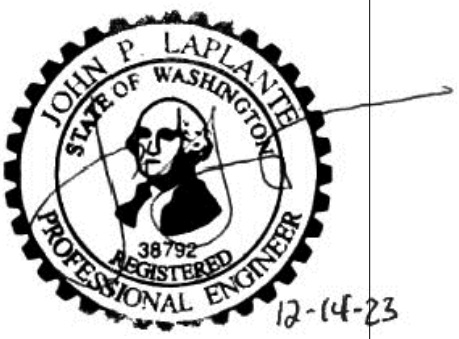
- LEGEND:**
- EXISTING GRADE MERGED DATA
 - USACE AUTHORIZED CHANNEL ELEVATION (-15' MLLW)
 - - - USACE MAINTENANCE ELEVATION (-17' MLLW)
 - · - · - INTERTIDAL/SUBTIDAL TRANSITION (-4' MLLW)
 - LOWEST HABITAT AREA ELEVATION (-10' MLLW)
 - VERTICAL SAMPLE LOCATION
 - REQUIRED DREDGING SURFACE
 - PAYABLE OVERDREDGE ALLOWANCE
 - BACKFILL TARGETED PLACEMENT SURFACE
- NOTES:**
1. VERTICAL DATUM: MLLW
 2. ENR, RMC, AND AMENDED COVER PLACEMENT NOT SHOWN ON CROSS SECTIONS. SEE DETAILS 1 AND 3/C304.

COLOR IMAGE
 THIS DRAWING IS COMPOSED USING
 COLOR IMAGES OR PHOTOGRAPHS AND
 MUST BE PLOTTED, PRINTED, AND
 REPRODUCED IN COLOR TO BE VIEWED
 ACCURATELY.

NO	REVISION DESCRIPTION	BY	APVD	DATE

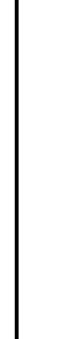


FINAL ISSUE DRAWING
INFORMATION ONLY
BID DOCUMENTS
 DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA
 PROJECT ENGINEER: J. LAPLANTE
 DESIGN APPROVAL: J. ABDALKHANI
 PROJECT ACCEPTANCE: G. STEINER

CHECKED: K. GROSS
 SCALE: AS NOTED
 PROJECT FILE NO: E00559E18
 CONTRACT NO: KC001065

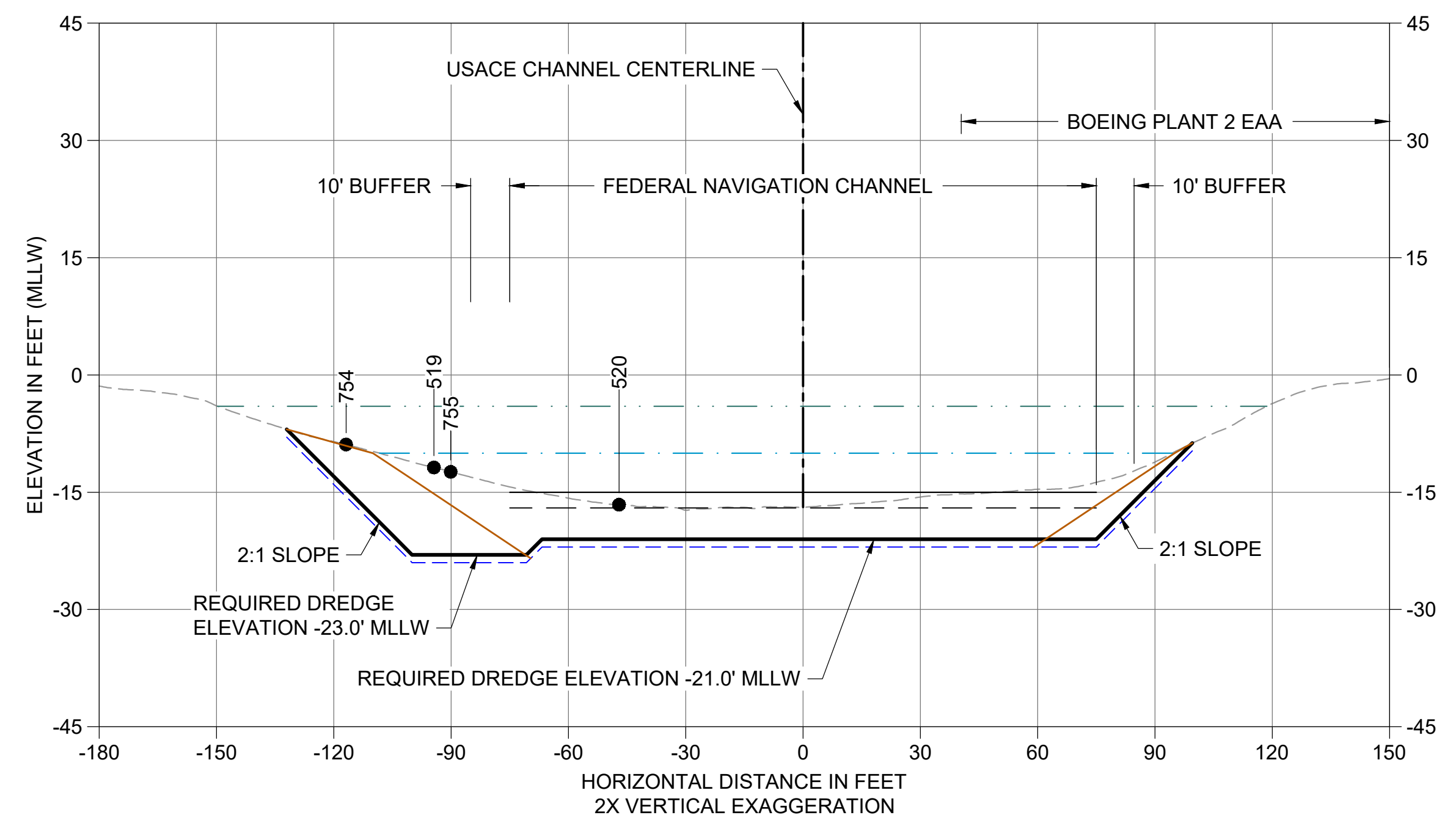


DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

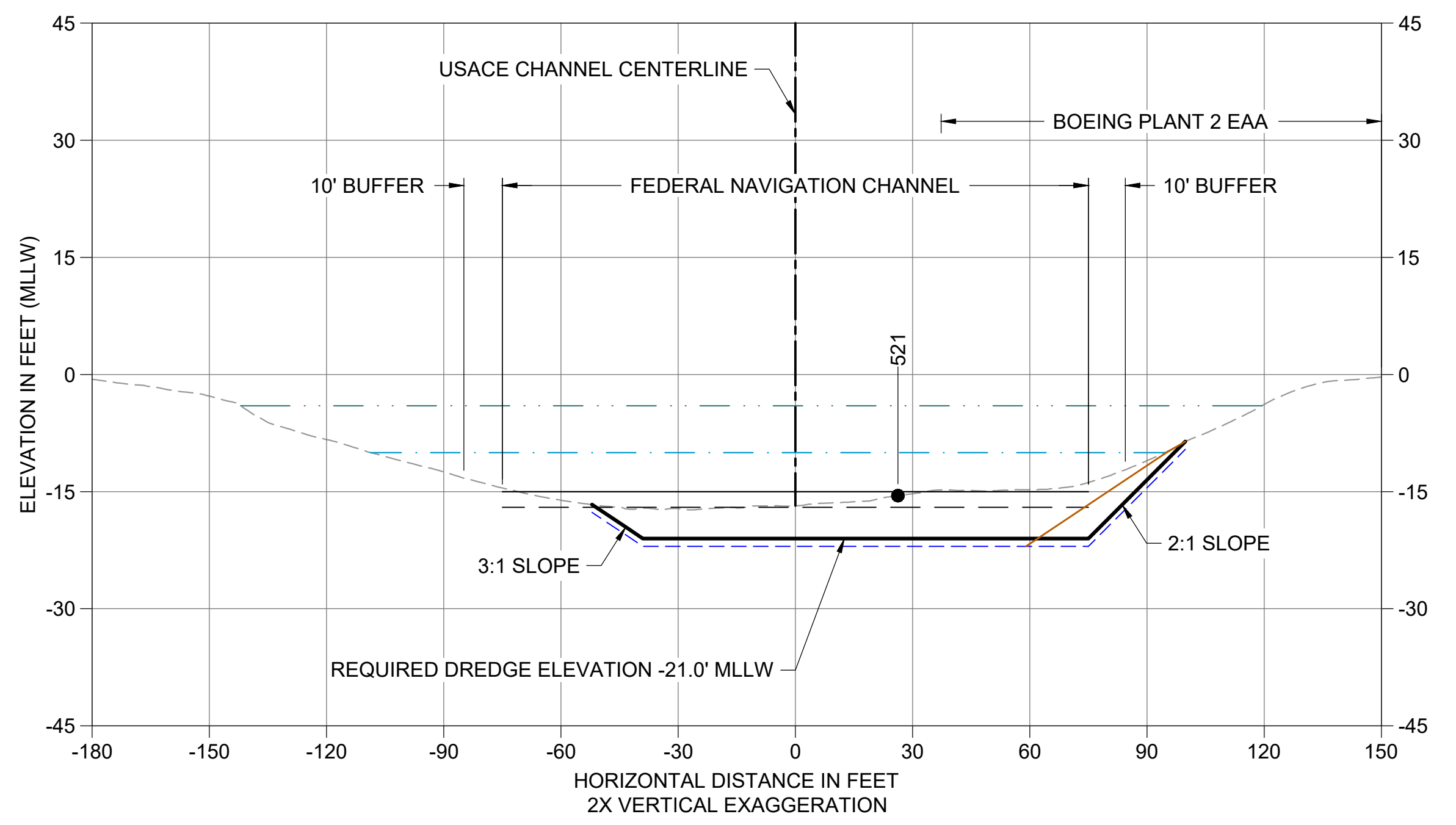
CROSS SECTIONS (1 OF 15)

DATE: DECEMBER 2023
 DRAWING NO: **C201**
 SHT NO / TOTAL: 56 / 91
 REV NO: **0**

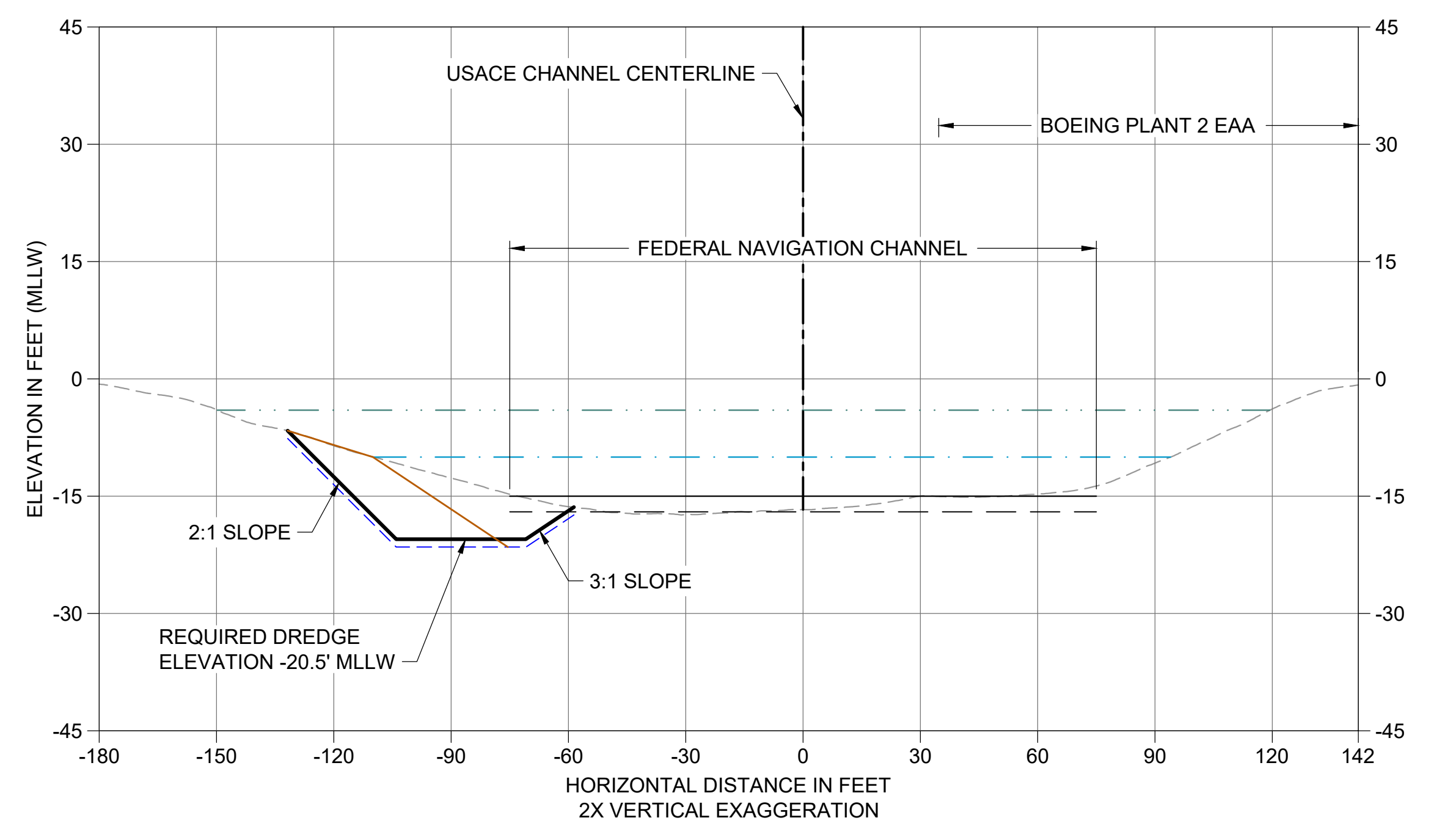
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 PLOTTED: Jan 12, 2024 10:57:55am By jigsby



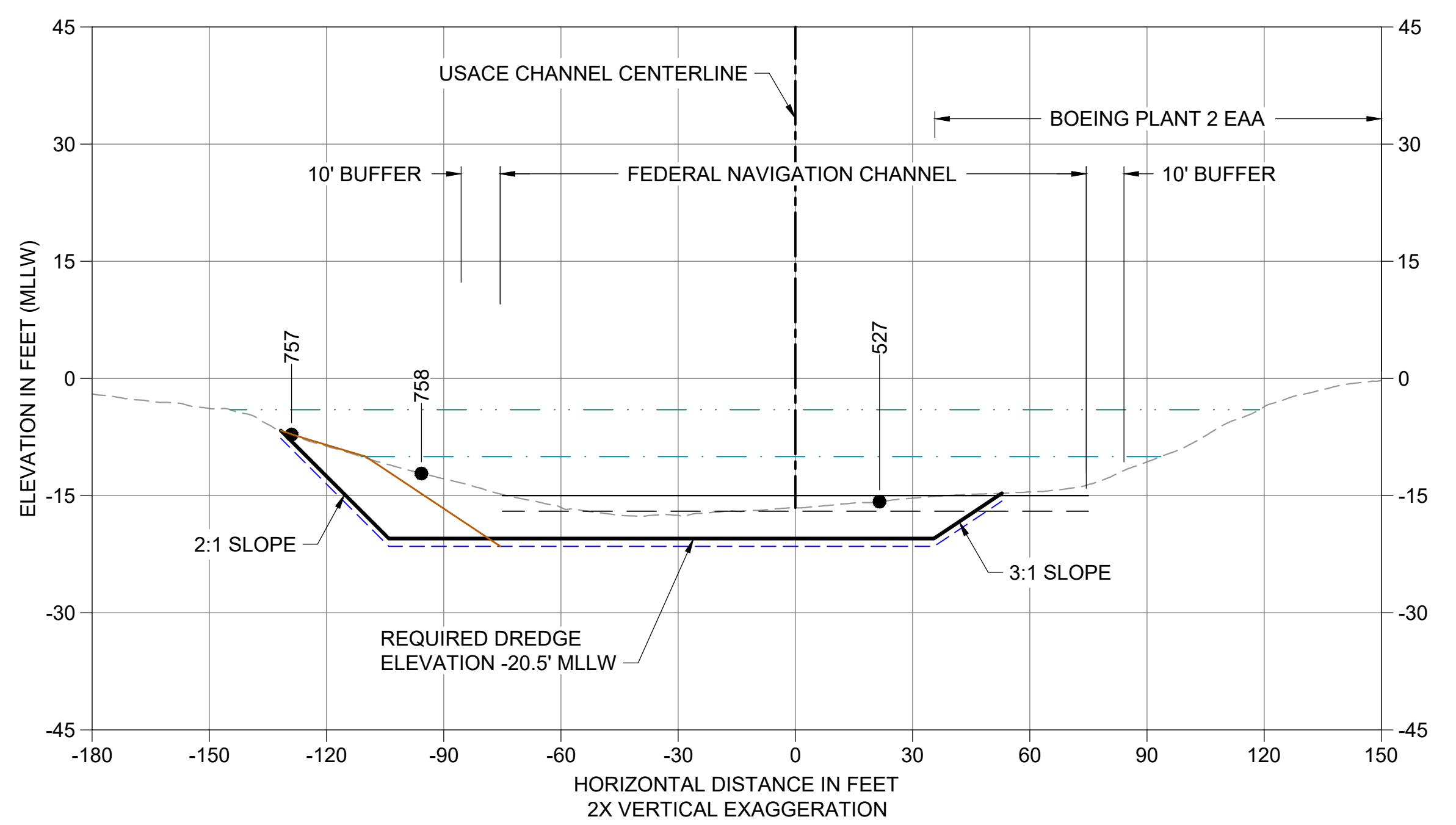
E CROSS SECTION STA 190+35
 C101 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



F CROSS SECTION STA 191+50
 C101 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



G CROSS SECTION STA 192+50
 C101 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'

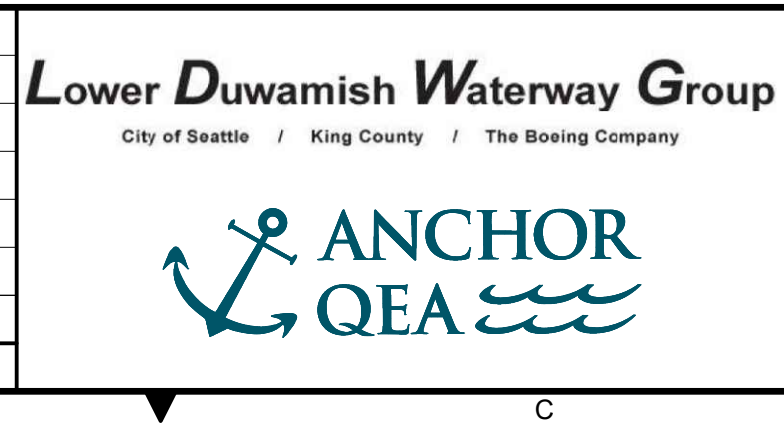


H CROSS SECTION STA 193+30
 C102 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'

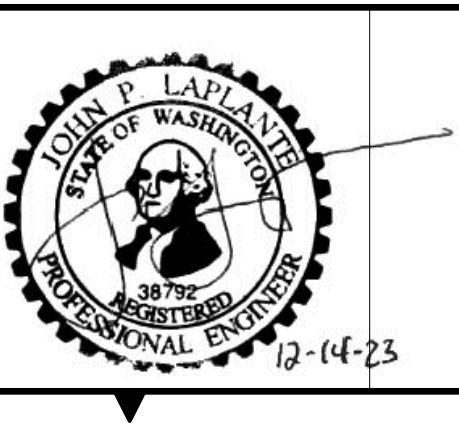
- LEGEND:**
- EXISTING GRADE MERGED DATA
 - USACE AUTHORIZED CHANNEL ELEVATION (-15' MLLW)
 - - - USACE MAINTENANCE ELEVATION (-17' MLLW)
 - · - · - INTERTIDAL/SUBTIDAL TRANSITION (-4' MLLW)
 - LOWEST HABITAT AREA ELEVATION (-10' MLLW)
 - VERTICAL SAMPLE LOCATION
 - REQUIRED DREDGING SURFACE
 - - - PAYABLE OVERDREDGE ALLOWANCE
 - BACKFILL TARGETED PLACEMENT SURFACE
- NOTES:**
- VERTICAL DATUM: MLLW
 - ENR, RMC, AND AMENDED COVER PLACEMENT NOT SHOWN ON CROSS SECTIONS. SEE DETAILS 1 AND 3/C304.

COLOR IMAGE
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 ACCURATELY.

NO	REVISION DESCRIPTION	BY	APVD	DATE



FINAL ISSUE DRAWING
INFORMATION ONLY
BID DOCUMENTS
 DECEMBER 2023



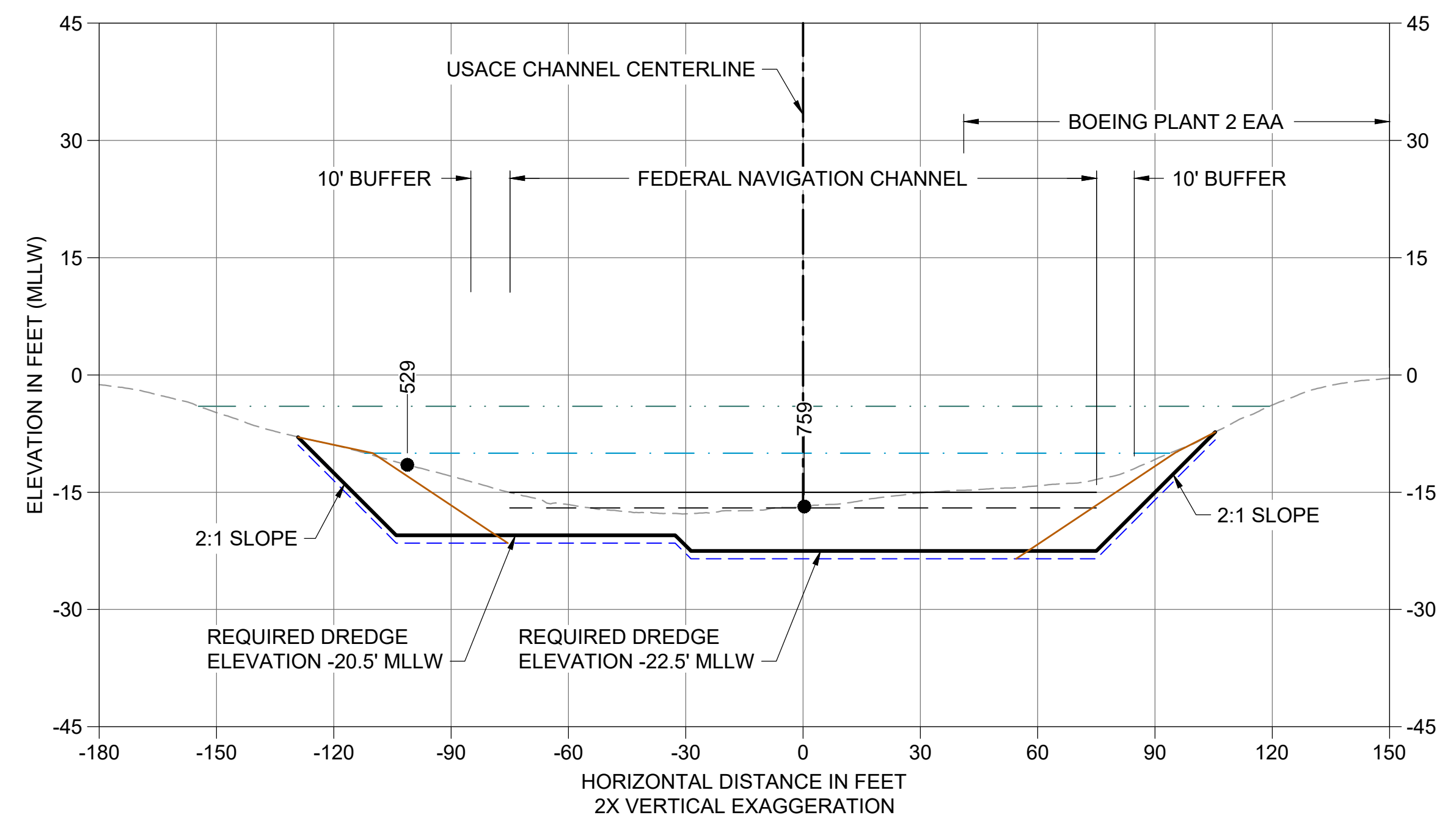
DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



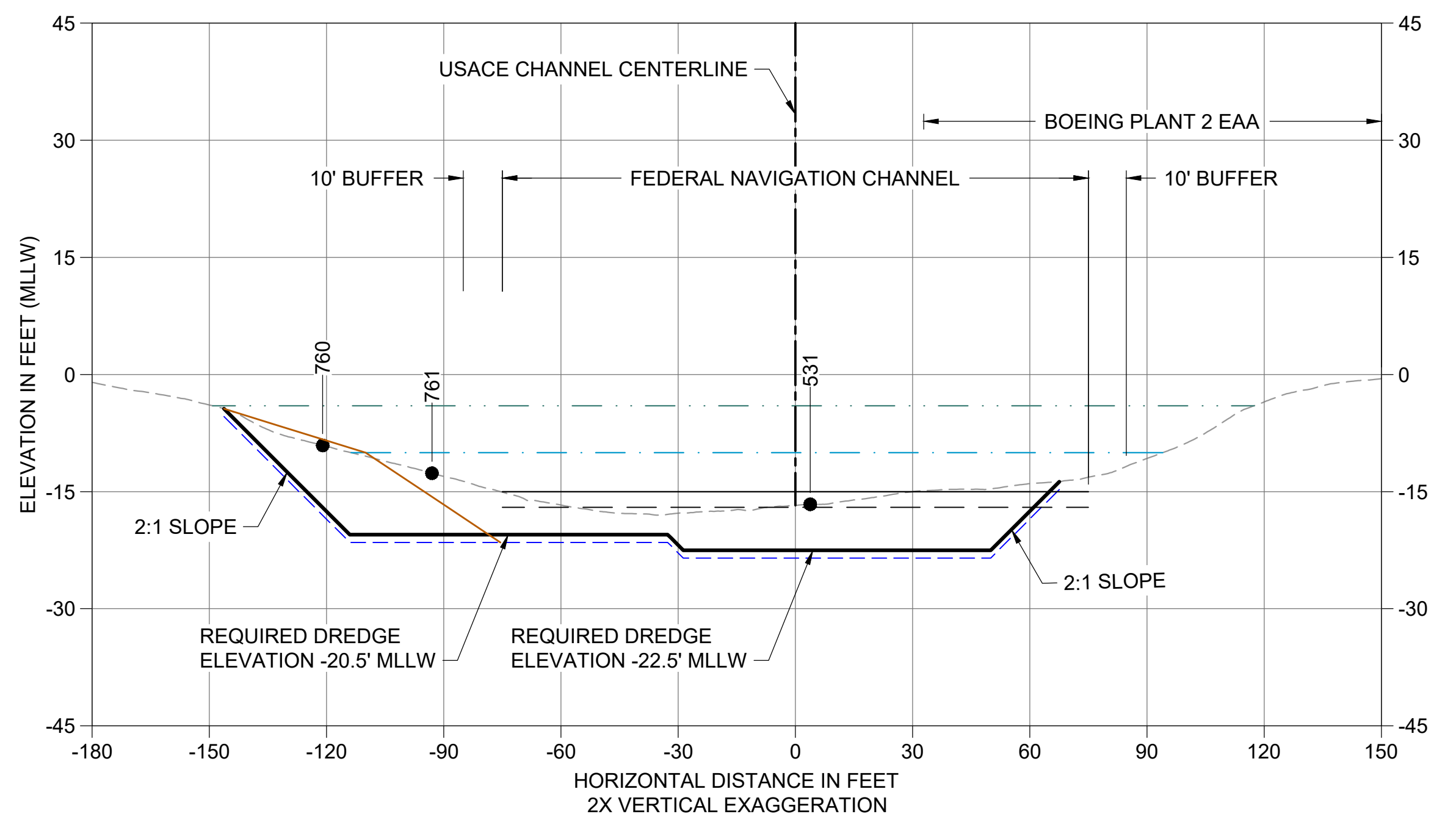
DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION
CROSS SECTIONS (2 OF 15)

DATE: DECEMBER 2023
 DRAWING NO: **C202**
 SHT NO / TOTAL: 57 / 91
 REV NO: **0**

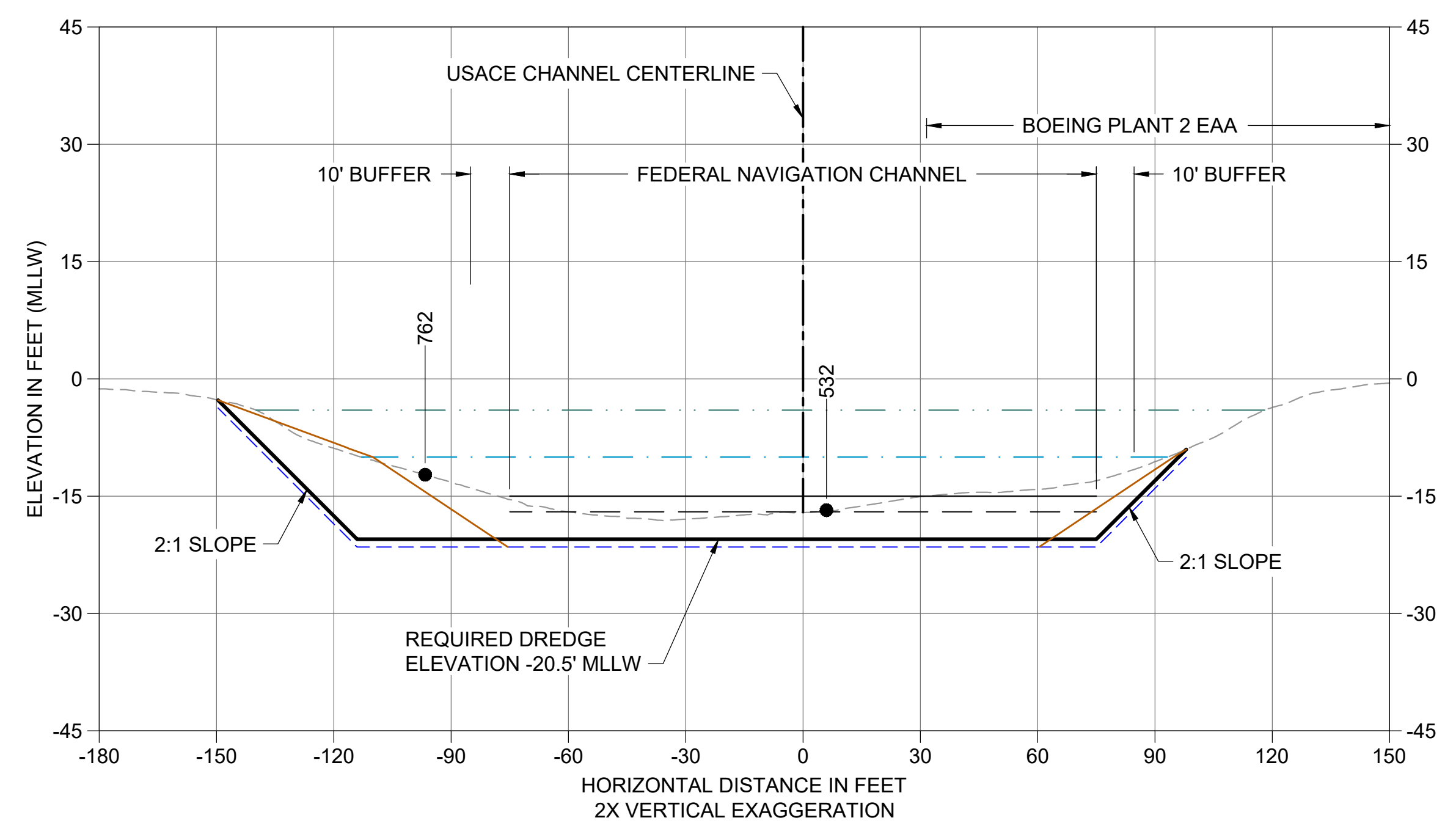
BORDER FILE EDITION: \\KOV\TD-Size-TB-Border_ACBM.dwg
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 PLOTTED: Jan 12, 2024 10:58:20am By jlgaby



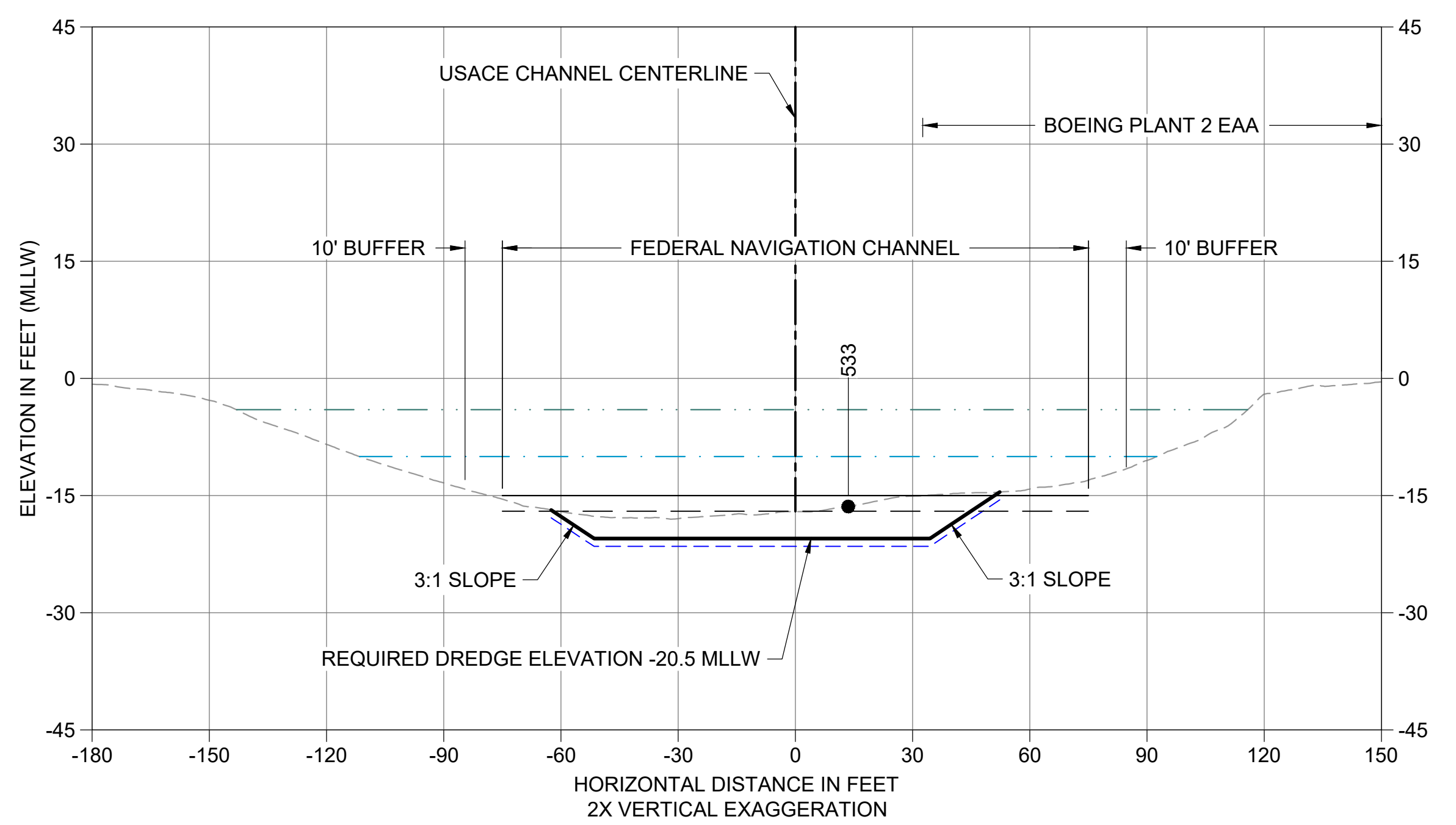
I CROSS SECTION STA 194+60
 C102 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



J CROSS SECTION STA 195+50
 C102 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



K CROSS SECTION & STA 196+80
 C102 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



L CROSS SECTION STA 197+50
 C102 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'

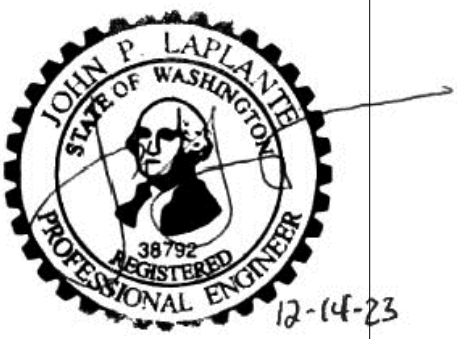
- LEGEND:**
- EXISTING GRADE MERGED DATA
 - USACE AUTHORIZED CHANNEL ELEVATION (-15' MLLW)
 - - - USACE MAINTENANCE ELEVATION (-17' MLLW)
 - · - · - INTERTIDAL/SUBTIDAL TRANSITION (-4' MLLW)
 - LOWEST HABITAT AREA ELEVATION (-10' MLLW)
 - VERTICAL SAMPLE LOCATION
 - REQUIRED DREDGING SURFACE
 - - - PAYABLE OVERDREDGE ALLOWANCE
 - BACKFILL TARGETED PLACEMENT SURFACE
- NOTES:**
- VERTICAL DATUM: MLLW
 - ENR, RMC, AND AMENDED COVER PLACEMENT NOT SHOWN ON CROSS SECTIONS. SEE DETAILS 1 AND 3/C304.

COLOR IMAGE
 THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

NO	REVISION DESCRIPTION	BY	APVD	DATE



FINAL ISSUE DRAWING
INFORMATION ONLY
BID DOCUMENTS
 DECEMBER 2023



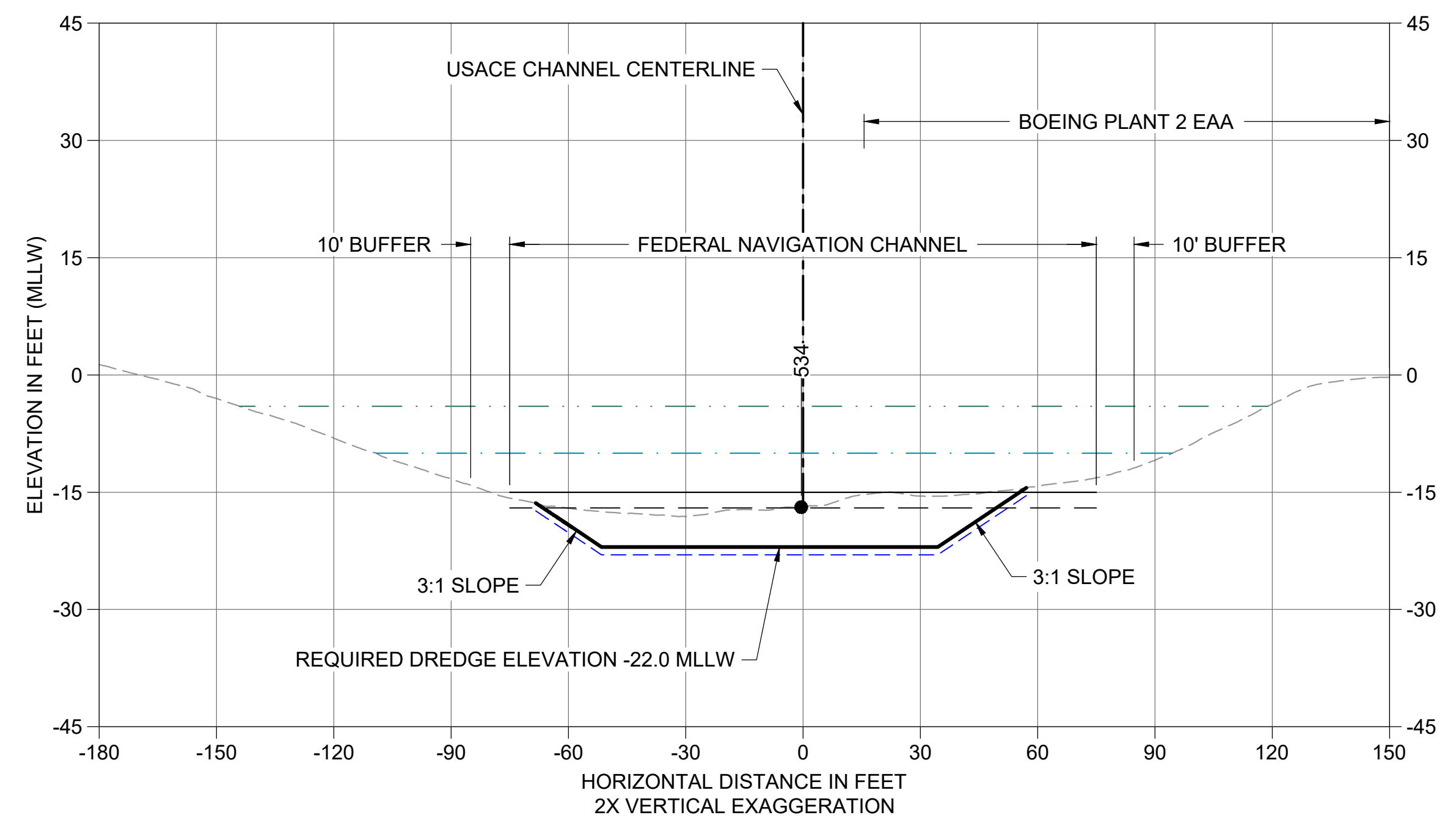
DESIGNED/DRAWN: BIGSBY/GRIGA
 PROJECT ENGINEER: J. LAPLANTE
 DESIGN APPROVAL: J. ABDALKHANI
 PROJECT ACCEPTANCE: G. STEINER
 CHECKED: K. GROSS
 SCALE: AS NOTED
 PROJECT FILE NO: E00559E18
 CONTRACT NO: KC001065



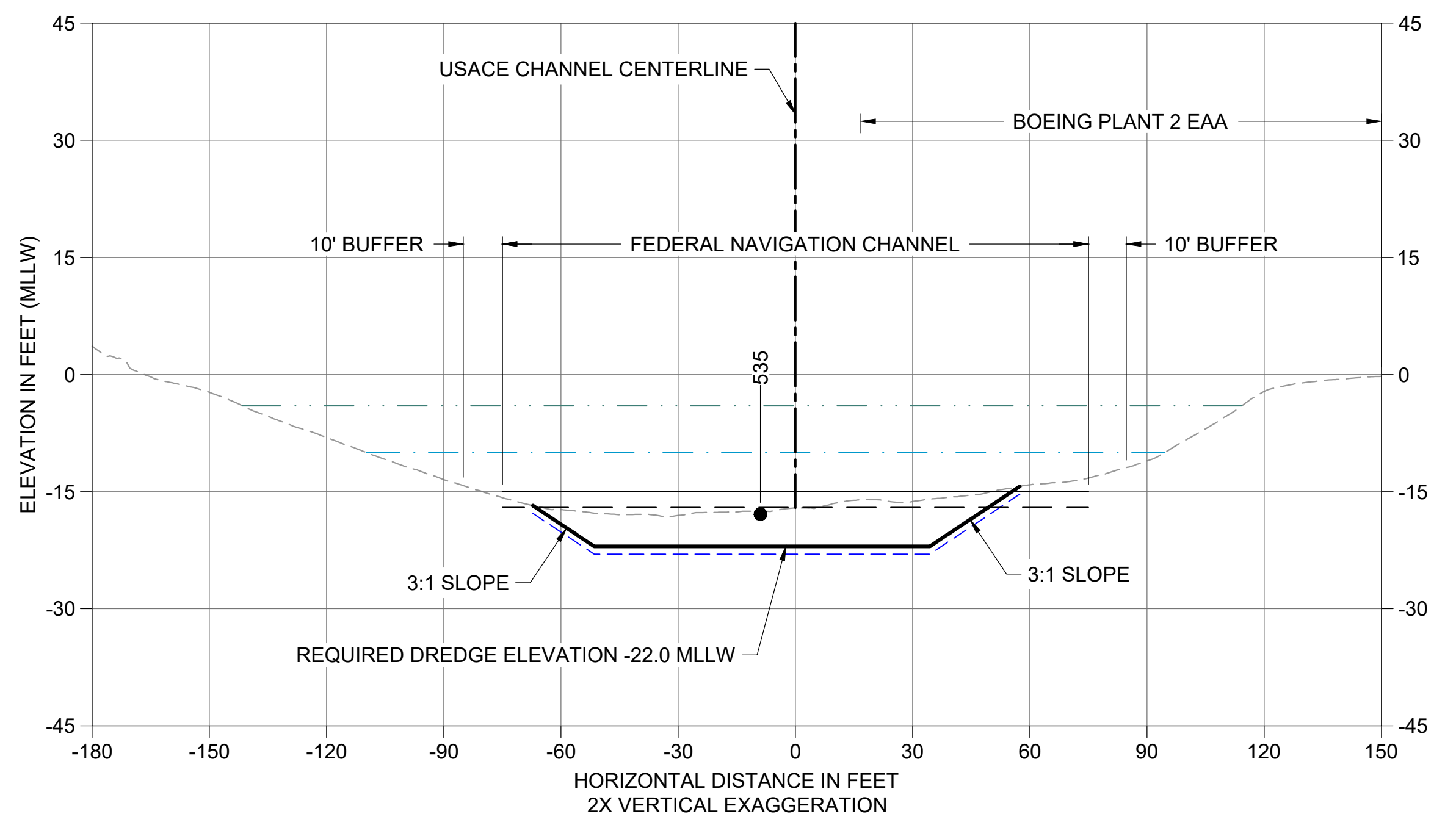
DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION
CROSS SECTIONS (3 OF 15)

DATE: DECEMBER 2023
 DRAWING NO: **C203**
 SHT NO / TOTAL: 58 / 91
 REV NO: **0**

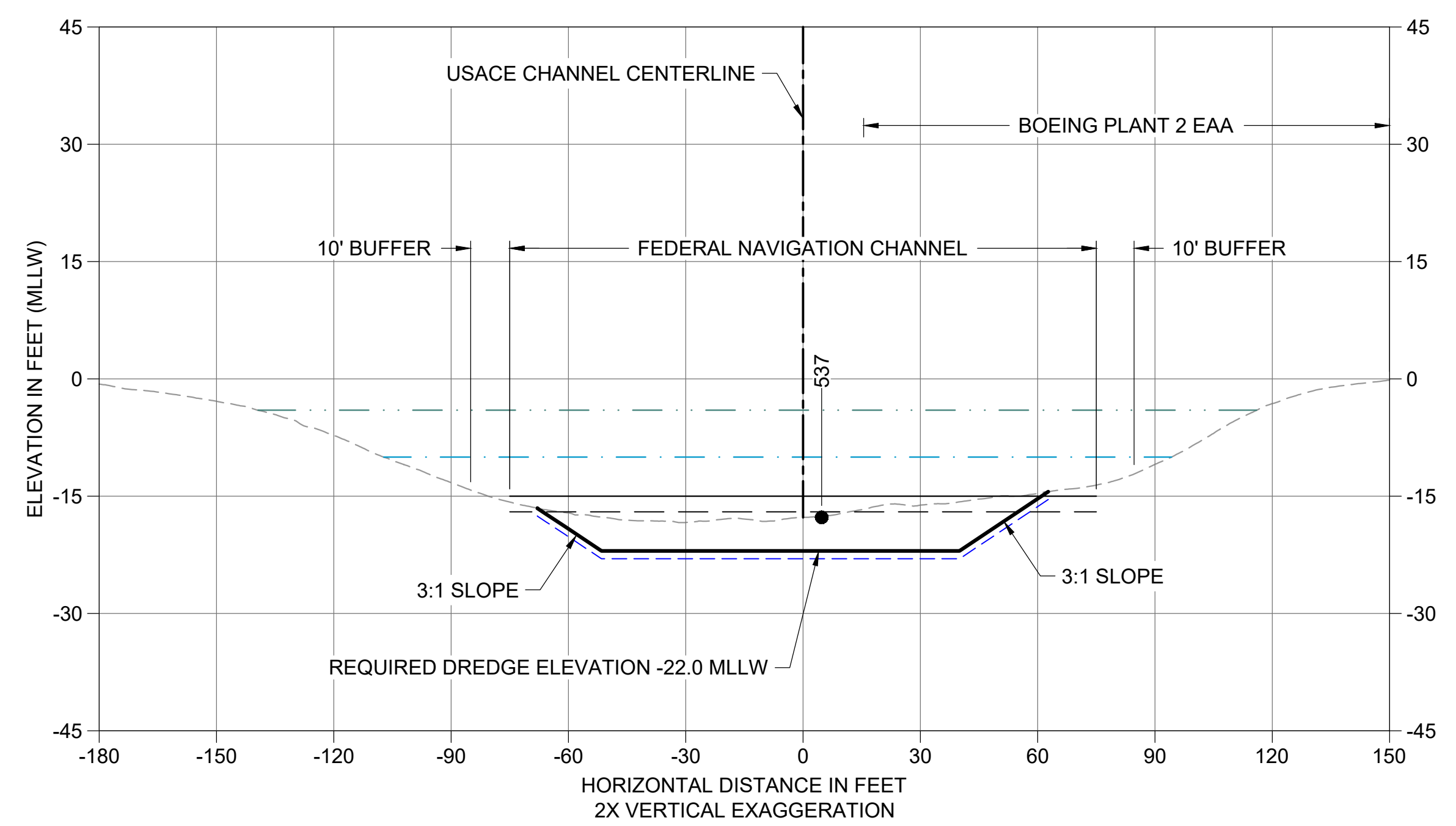
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 PLOTTED: Jan 12, 2024 10:58:46am By jigsby



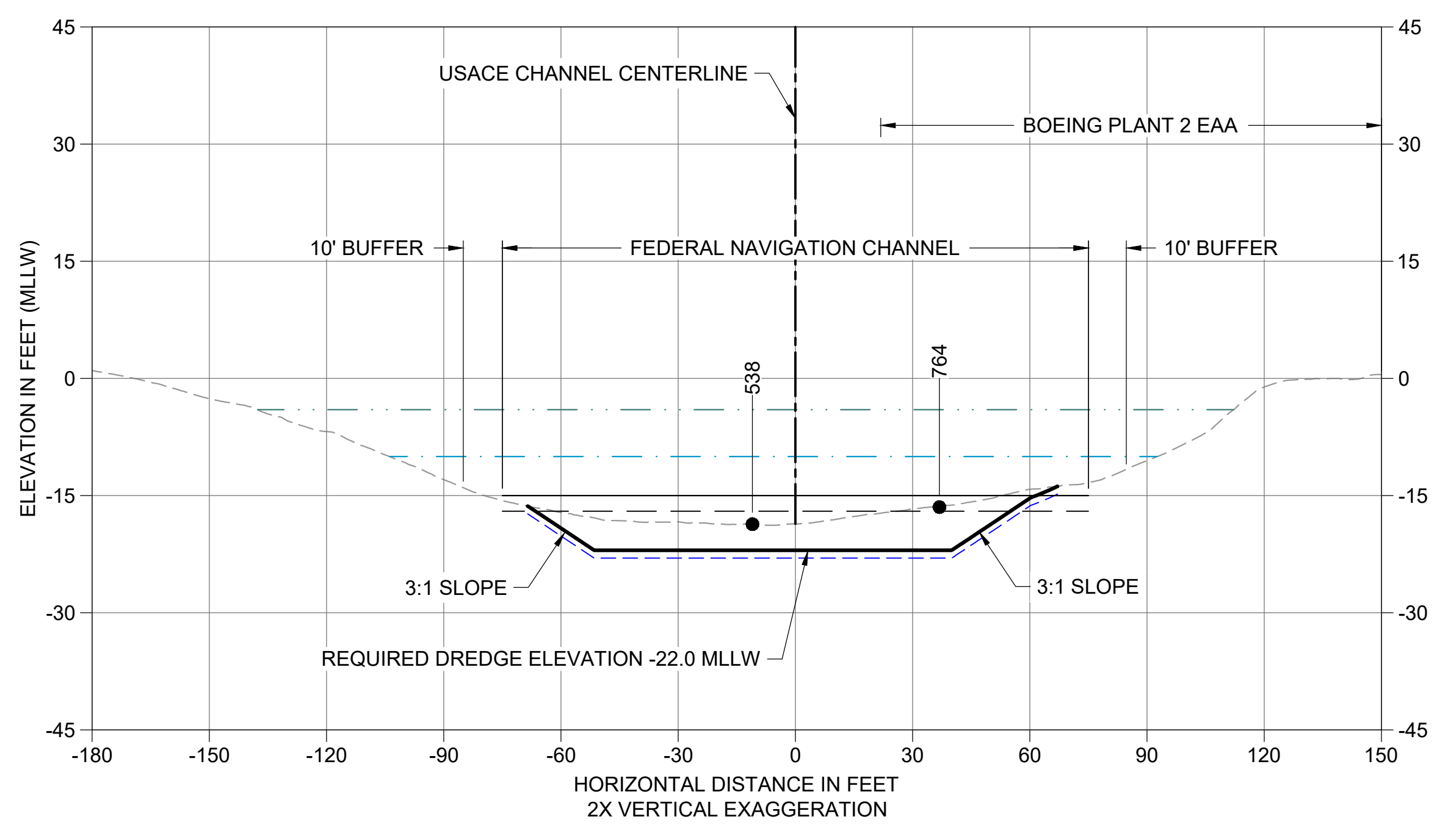
M CROSS SECTION STA 198+50
 C102 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



N CROSS SECTION STA 199+50
 C102 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



O CROSS SECTION STA 200+50
 C102 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



P CROSS SECTION STA 201+50
 C103 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'

- LEGEND:**
- EXISTING GRADE MERGED DATA
 - USACE AUTHORIZED CHANNEL ELEVATION (-15' MLLW)
 - - - USACE MAINTENANCE ELEVATION (-17' MLLW)
 - · - · - INTERTIDAL/SUBTIDAL TRANSITION (-4' MLLW)
 - LOWEST HABITAT AREA ELEVATION (-10' MLLW)
 - VERTICAL SAMPLE LOCATION
 - REQUIRED DREDGING SURFACE
 - PAYABLE OVERDREDGE ALLOWANCE
 - BACKFILL TARGETED PLACEMENT SURFACE
- NOTES:**
1. VERTICAL DATUM: MLLW
 2. ENR, RMC, AND AMENDED COVER PLACEMENT NOT SHOWN ON CROSS SECTIONS. SEE DETAILS 1 AND 3/C304.

COLOR IMAGE
 THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

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FINAL ISSUE DRAWING
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 DECEMBER 2023



DESIGNED/DRAWN: BIGSY/GRIGA
 PROJECT ENGINEER: J. LAPLANTE
 DESIGN APPROVAL: J. ABDALKHANI
 PROJECT ACCEPTANCE: G. STEINER

CHECKED: K. GROSS
 SCALE: AS NOTED
 PROJECT FILE NO: E00559E18
 CONTRACT NO: KC001065

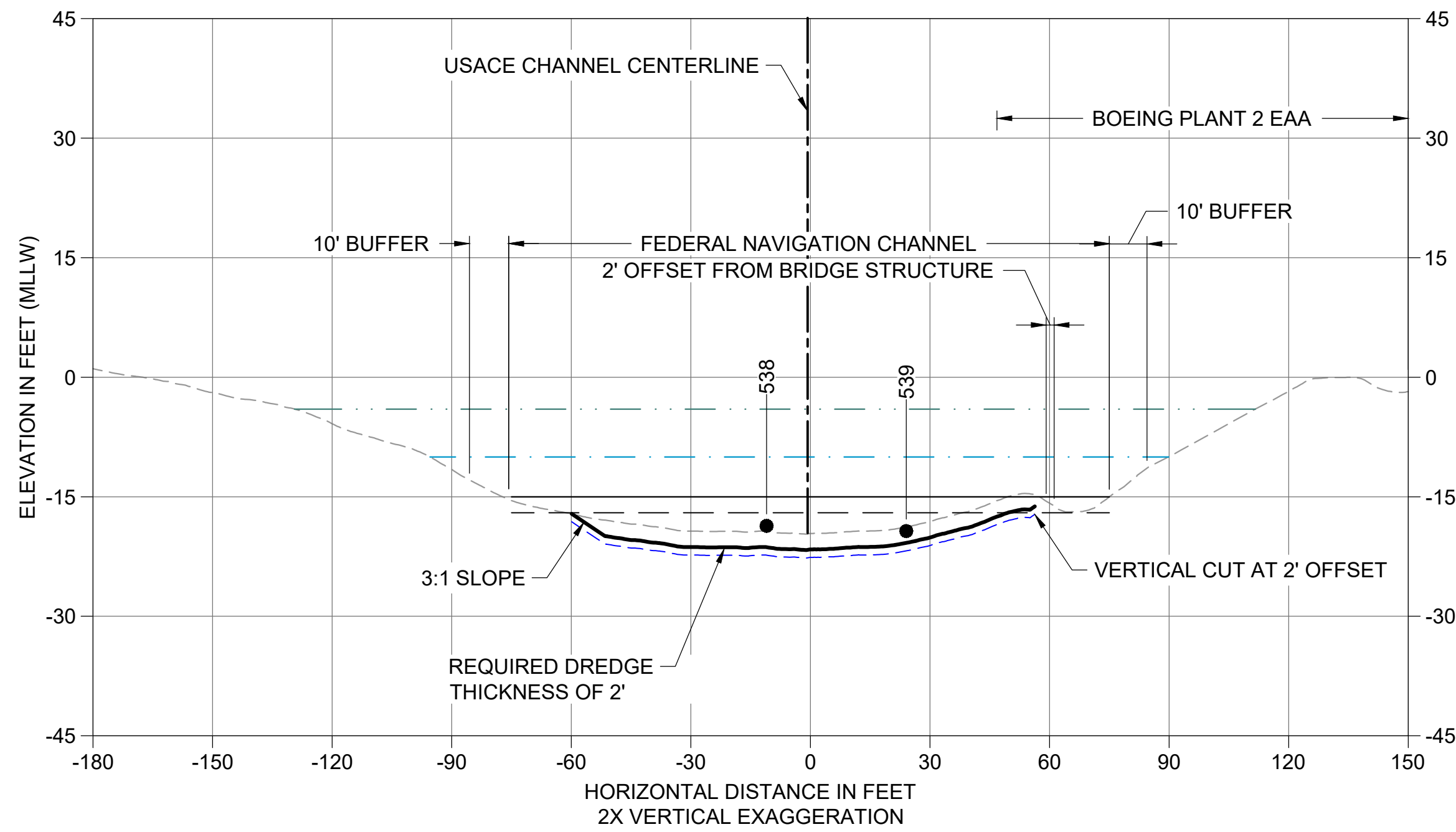


DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

CROSS SECTIONS (4 OF 15)

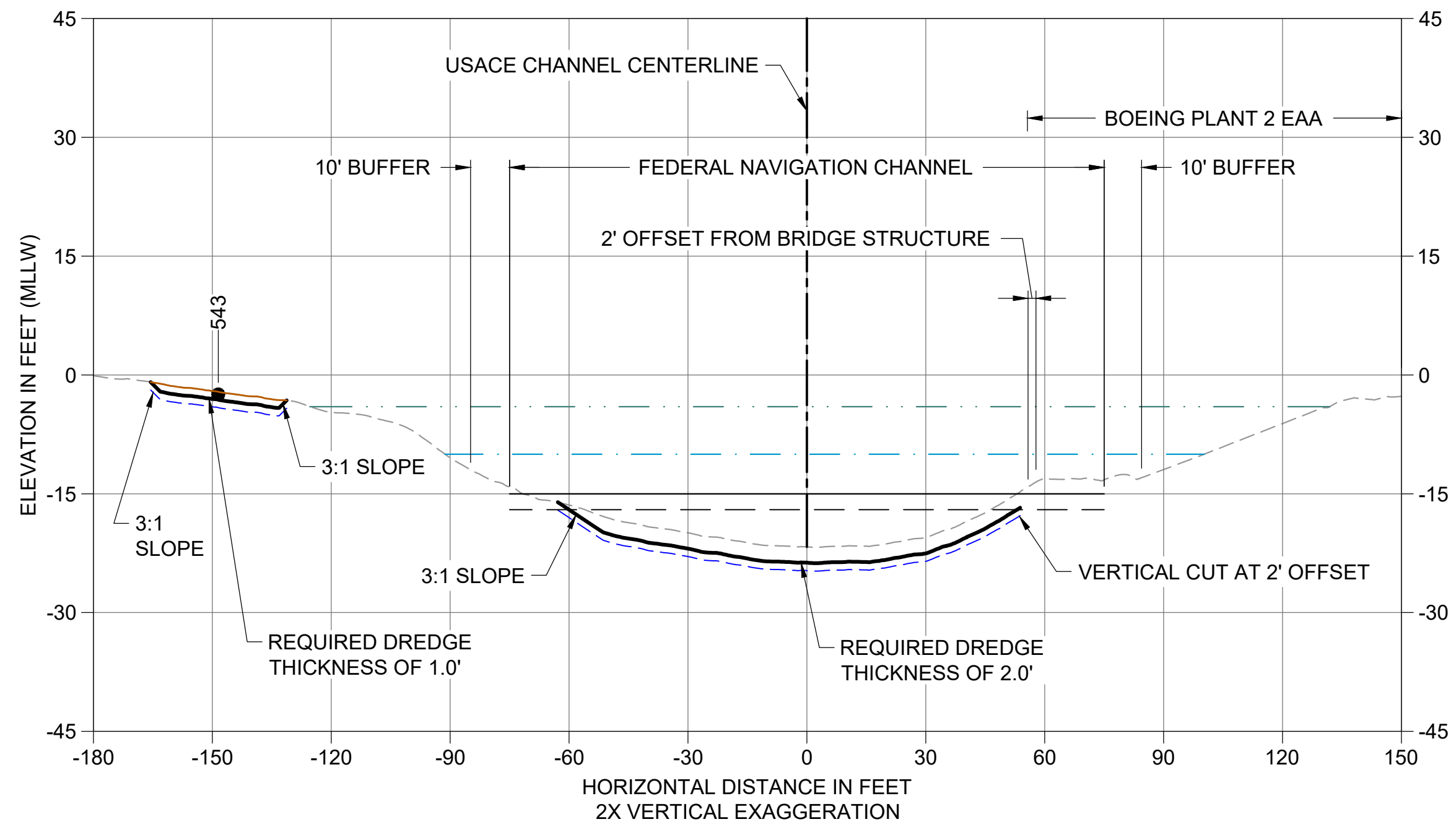
DATE: DECEMBER 2023
 DRAWING NO: **C204**
 SHT NO / TOTAL: 59 / 91
 REV NO: **0**

1" REFERENCE



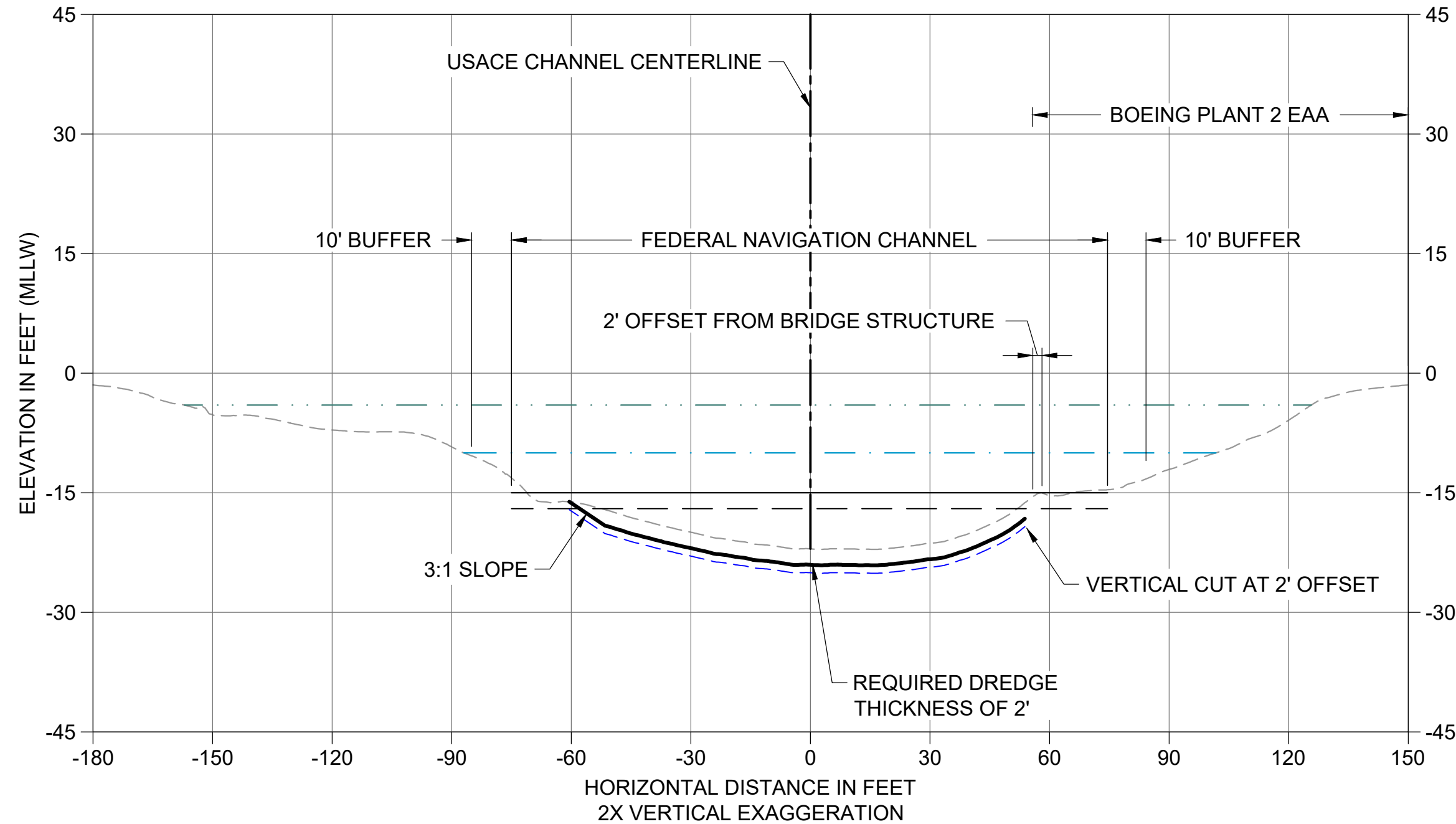
Q CROSS SECTION STA 202+50

C103 HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 15'



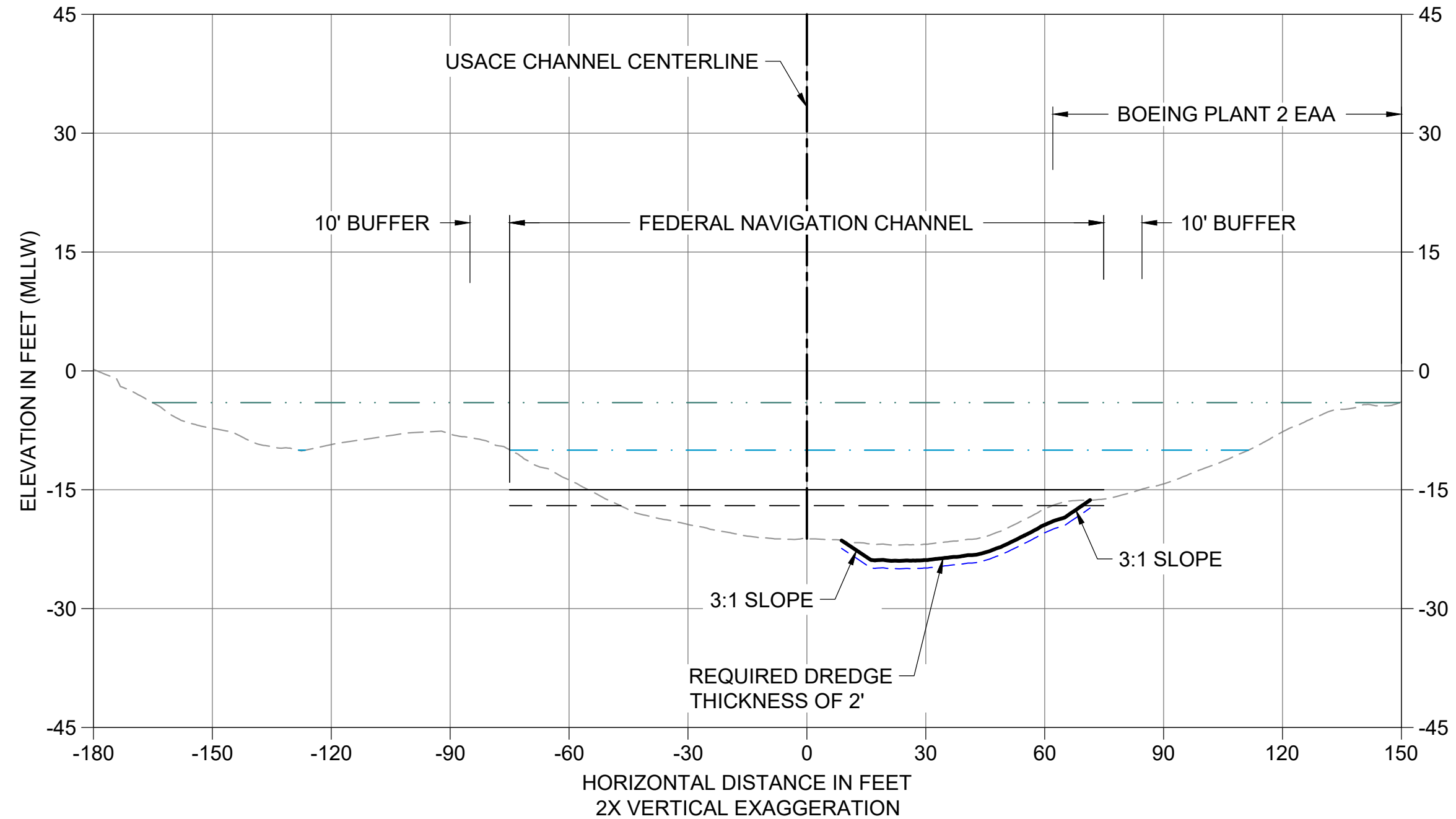
R CROSS SECTION STA 203+25

C103 HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 15'



S CROSS SECTION STA 203+50

C103 HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 15'



T CROSS SECTION STA 204+50

C103 HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 15'

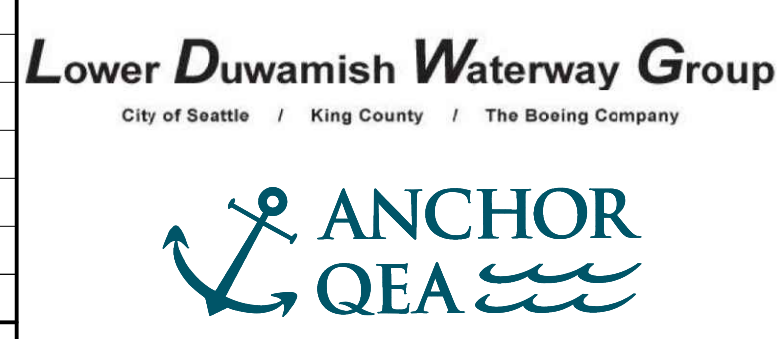
- LEGEND:**
- - - - - EXISTING GRADE MERGED DATA
 - USACE AUTHORIZED CHANNEL ELEVATION (-15' MLLW)
 - - - - - USACE MAINTENANCE ELEVATION (-17' MLLW)
 - - - - - INTERTIDAL/SUBTIDAL TRANSITION (-4' MLLW)
 - - - - - LOWEST HABITAT AREA ELEVATION (-10' MLLW)
 - VERTICAL SAMPLE LOCATION
 - REQUIRED DREDGING SURFACE
 - - - - - PAYABLE OVERDREDGE ALLOWANCE
 - BACKFILL TARGETED PLACEMENT SURFACE

- NOTES:**
1. VERTICAL DATUM: MLLW
 2. ENR, RMC, AND AMENDED COVER PLACEMENT NOT SHOWN ON CROSS SECTIONS. SEE DETAILS 1 AND 3/C304.

COLOR IMAGE
THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

BORDER FILE EDITION: x:\KOV\TD-Size-TB-Border_ACBM_Layer
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PLOTTED: Jan 12, 2024 10:59:13am By jlgbsby

NO	REVISION DESCRIPTION	BY	APVD	DATE



FINAL ISSUE DRAWING
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BID DOCUMENTS
DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA
PROJECT ENGINEER: J. LAPLANTE
DESIGN APPROVAL: J. ABDALKHANI
PROJECT ACCEPTANCE: G. STEINER
CHECKED: K. GROSS
SCALE: AS NOTED
PROJECT FILE NO: E00559E18
CONTRACT NO: KC001065

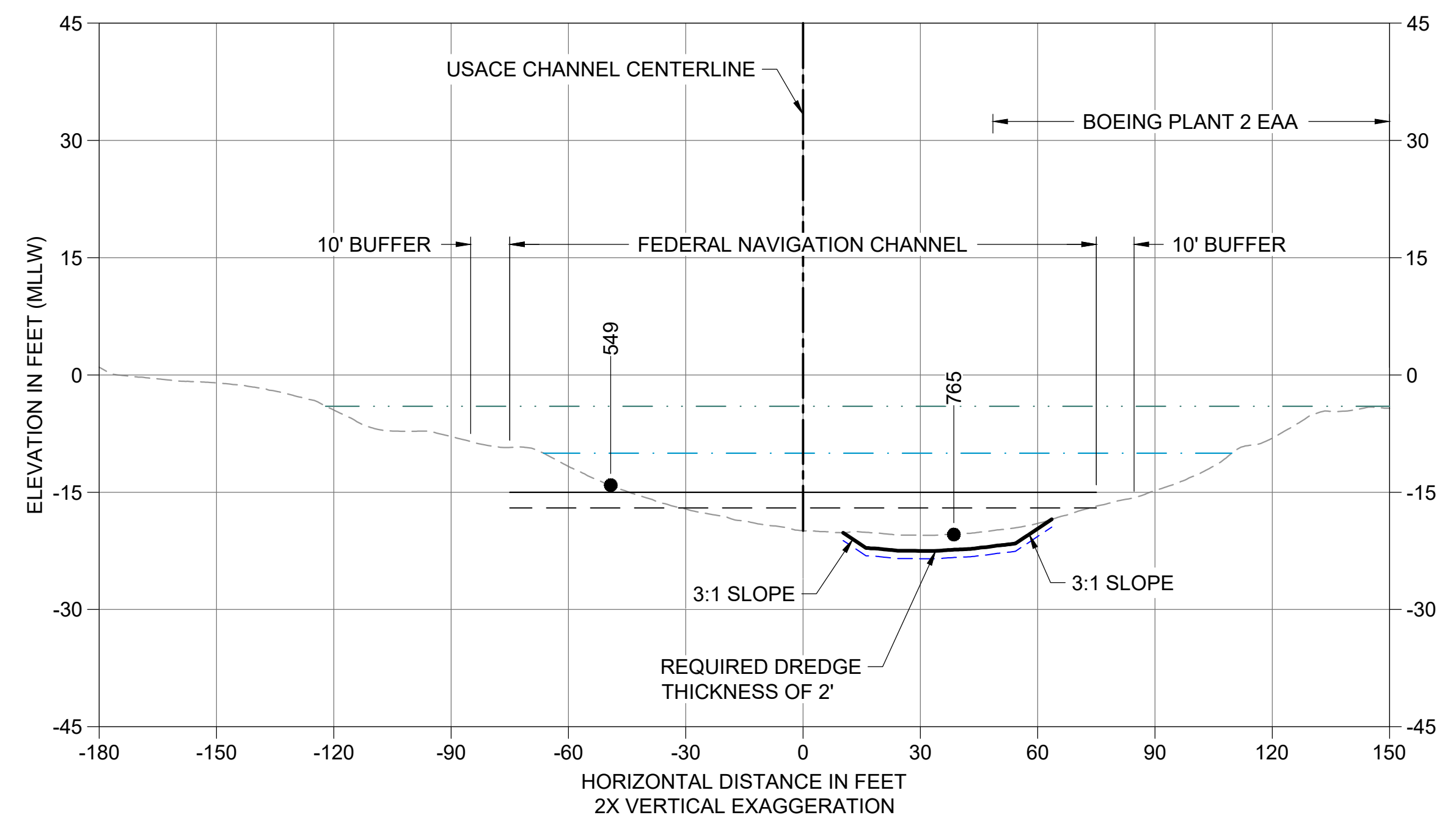


DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION

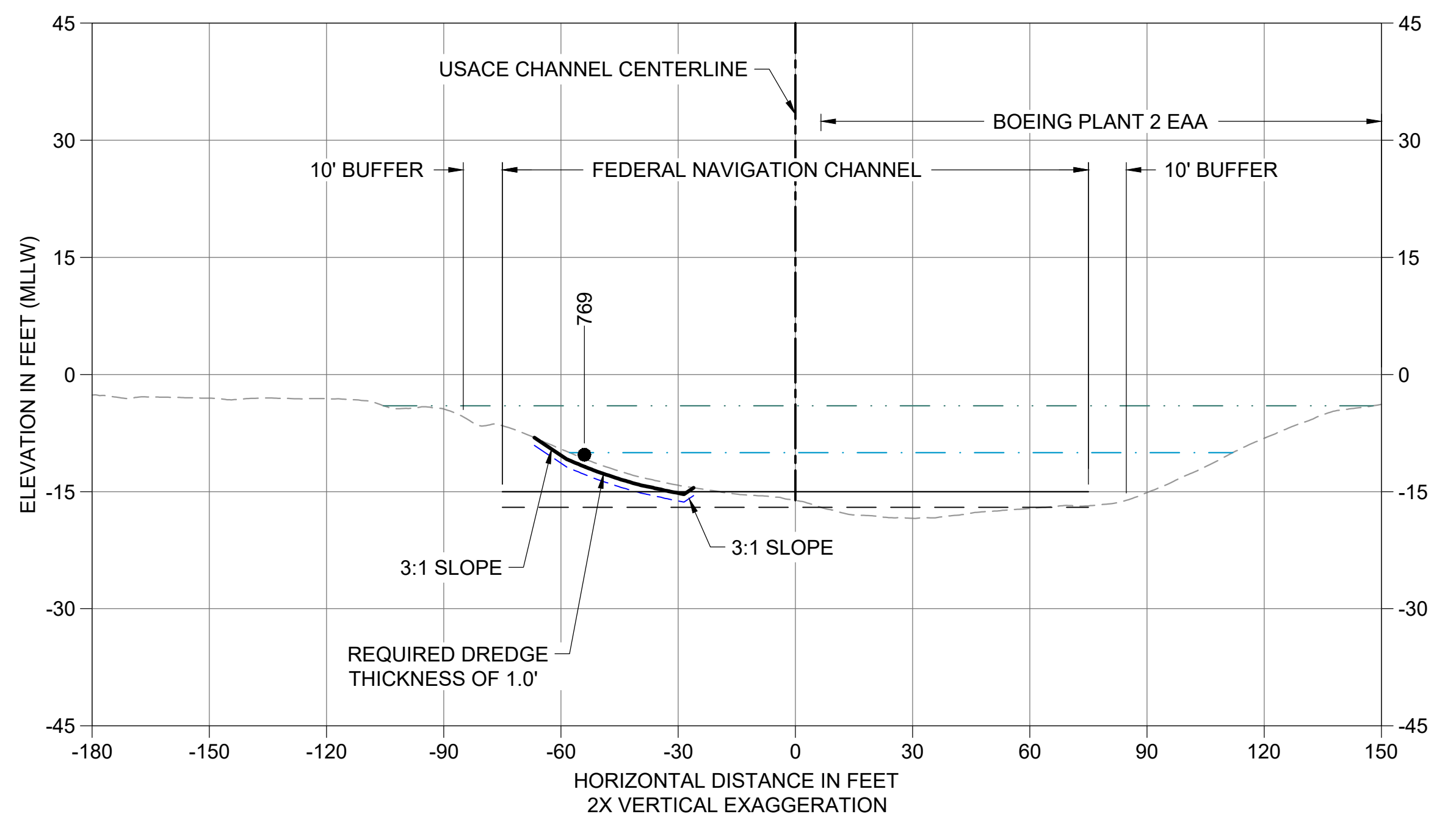
CROSS SECTIONS (5 OF 15)

DATE: DECEMBER 2023
DRAWING NO: **C205**
SHT NO / TOTAL: 60 / 91
REV NO: **0**

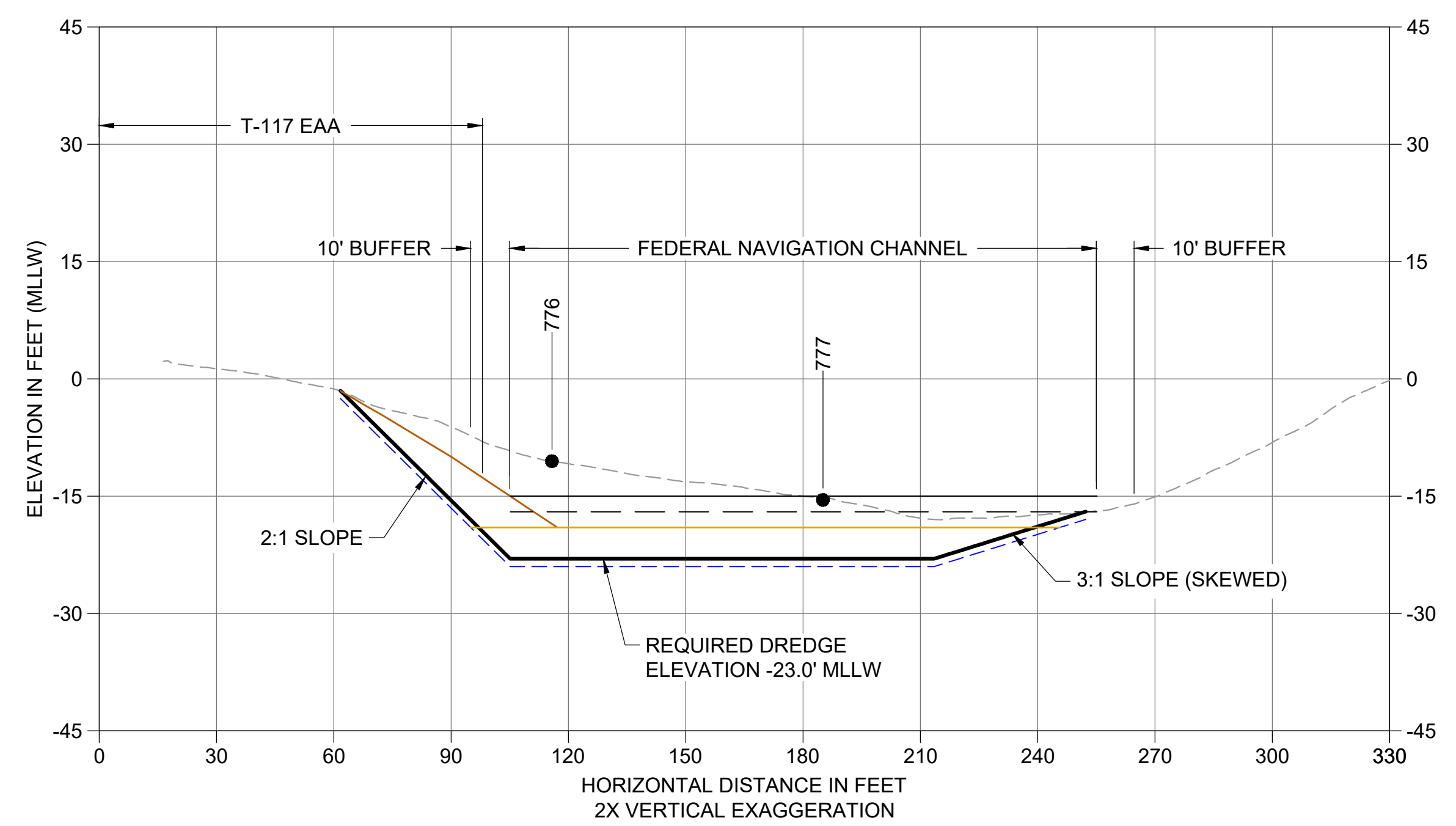
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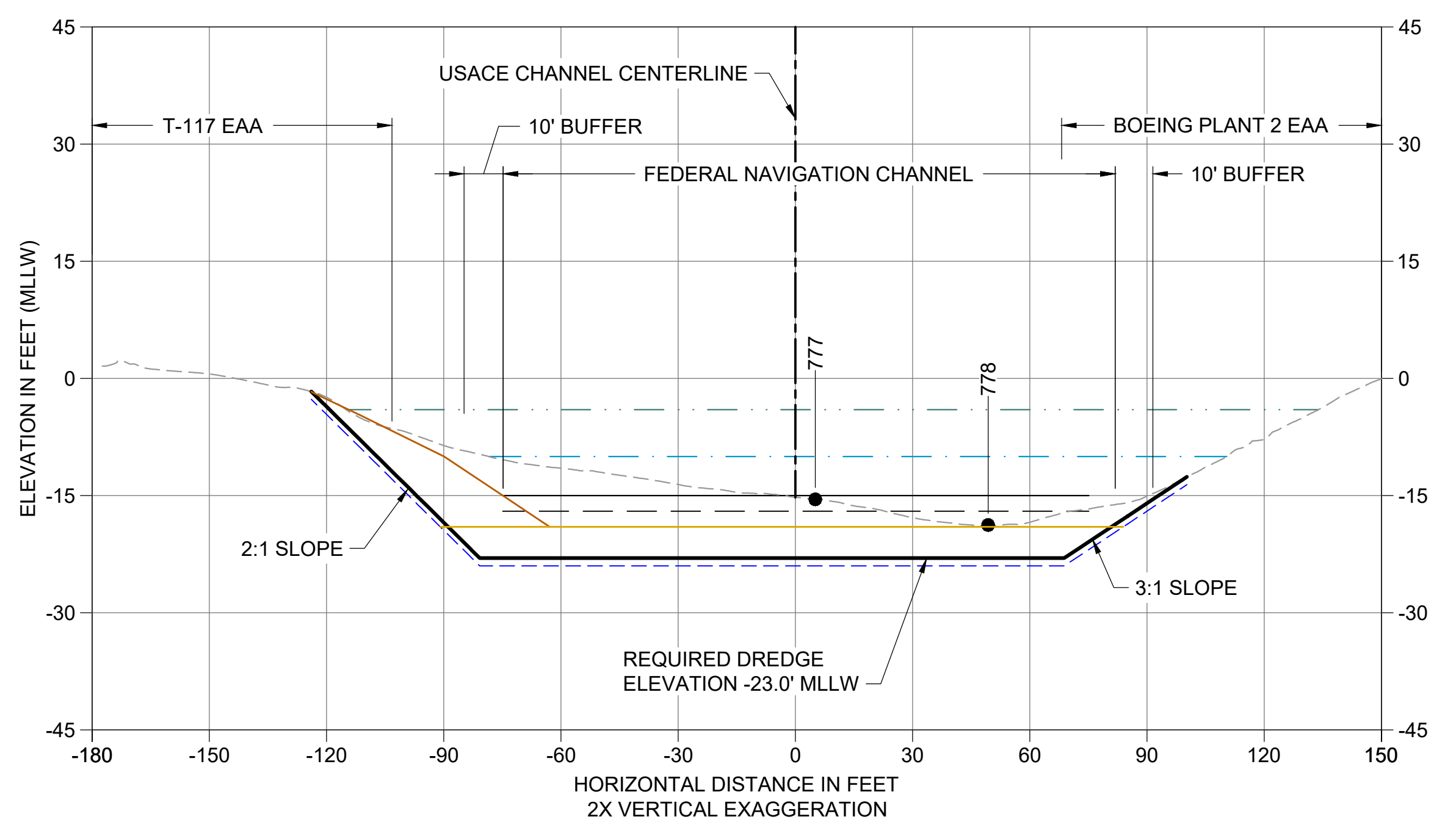
U CROSS SECTION STA 205+50
 C103 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



V CROSS SECTION STA 207+60
 C103 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



W CROSS SECTION STA 217+40
 C105 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



X CROSS SECTION STA 217+80
 C105 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'

- LEGEND:**
- - - - - EXISTING GRADE MERGED DATA
 - USACE AUTHORIZED CHANNEL ELEVATION (-15' MLLW)
 - - - - - USACE MAINTENANCE ELEVATION (-17' MLLW)
 - - - - - INTERTIDAL/SUBTIDAL TRANSITION (-4' MLLW)
 - - - - - LOWEST HABITAT AREA ELEVATION (-10' MLLW)
 - VERTICAL SAMPLE LOCATION
 - REQUIRED DREDGING SURFACE
 - - - - - PAYABLE OVERDREDGE ALLOWANCE
 - BACKFILL TARGETED PLACEMENT SURFACE
 - ENGINEERED CAP B SURFACE (5 C303)
- NOTES:**
1. VERTICAL DATUM: MLLW
 2. ENR, RMC, AND AMENDED COVER PLACEMENT NOT SHOWN ON CROSS SECTIONS. SEE DETAILS 1 AND 3/C304.
 3. THE TOP OF CAP SHALL BE AT OR BELOW -19' MLLW

COLOR IMAGE
 THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

NO	REVISION DESCRIPTION	BY	APVD	DATE



FINAL ISSUE DRAWING
INFORMATION ONLY
BID DOCUMENTS
 DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA
 PROJECT ENGINEER: J. LAPLANTE
 DESIGN APPROVAL: J. ABDALKHANI
 PROJECT ACCEPTANCE: G. STEINER

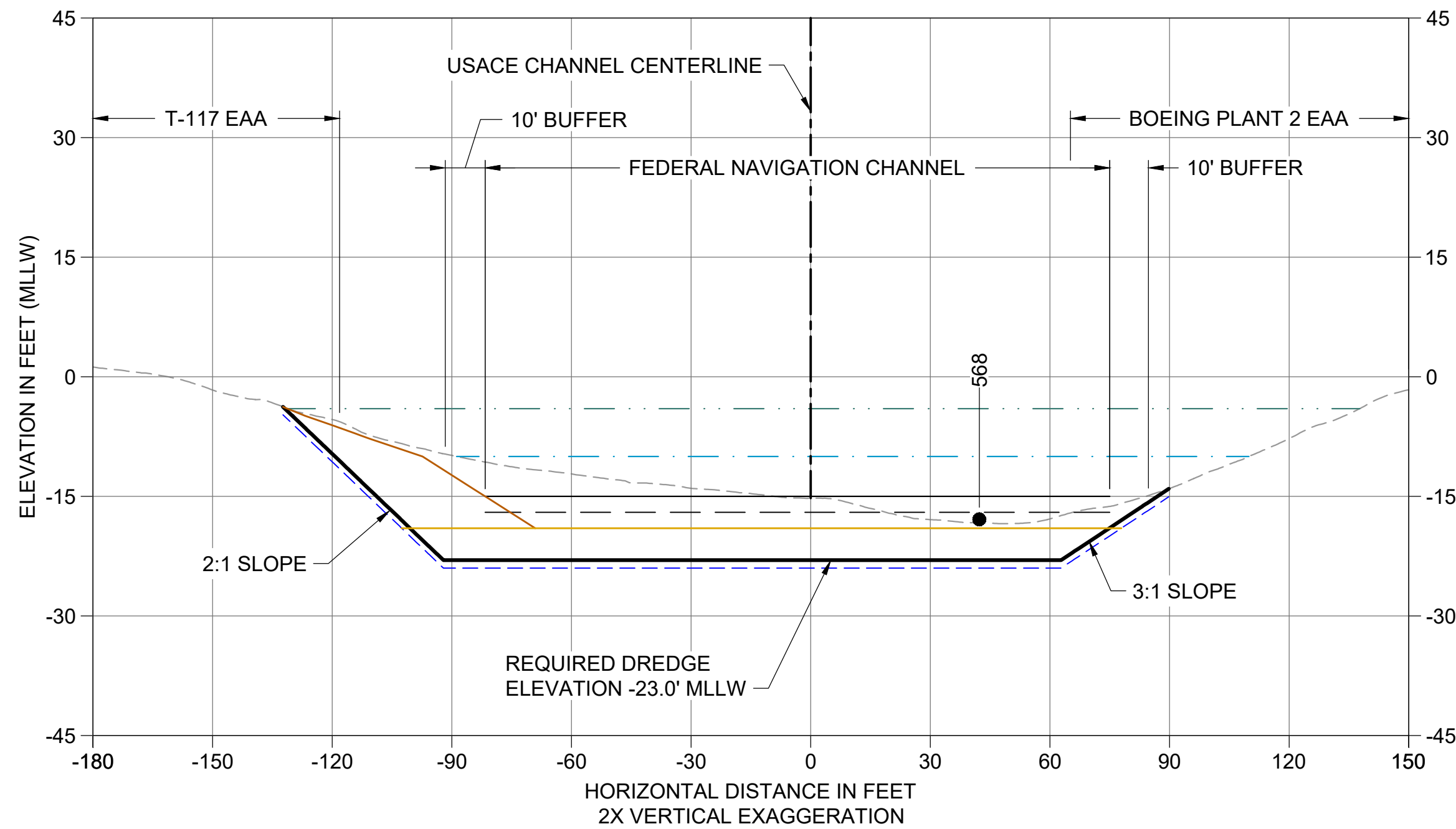
CHECKED: K. GROSS
 SCALE: AS NOTED
 PROJECT FILE NO: E00559E18
 CONTRACT NO: KC001065



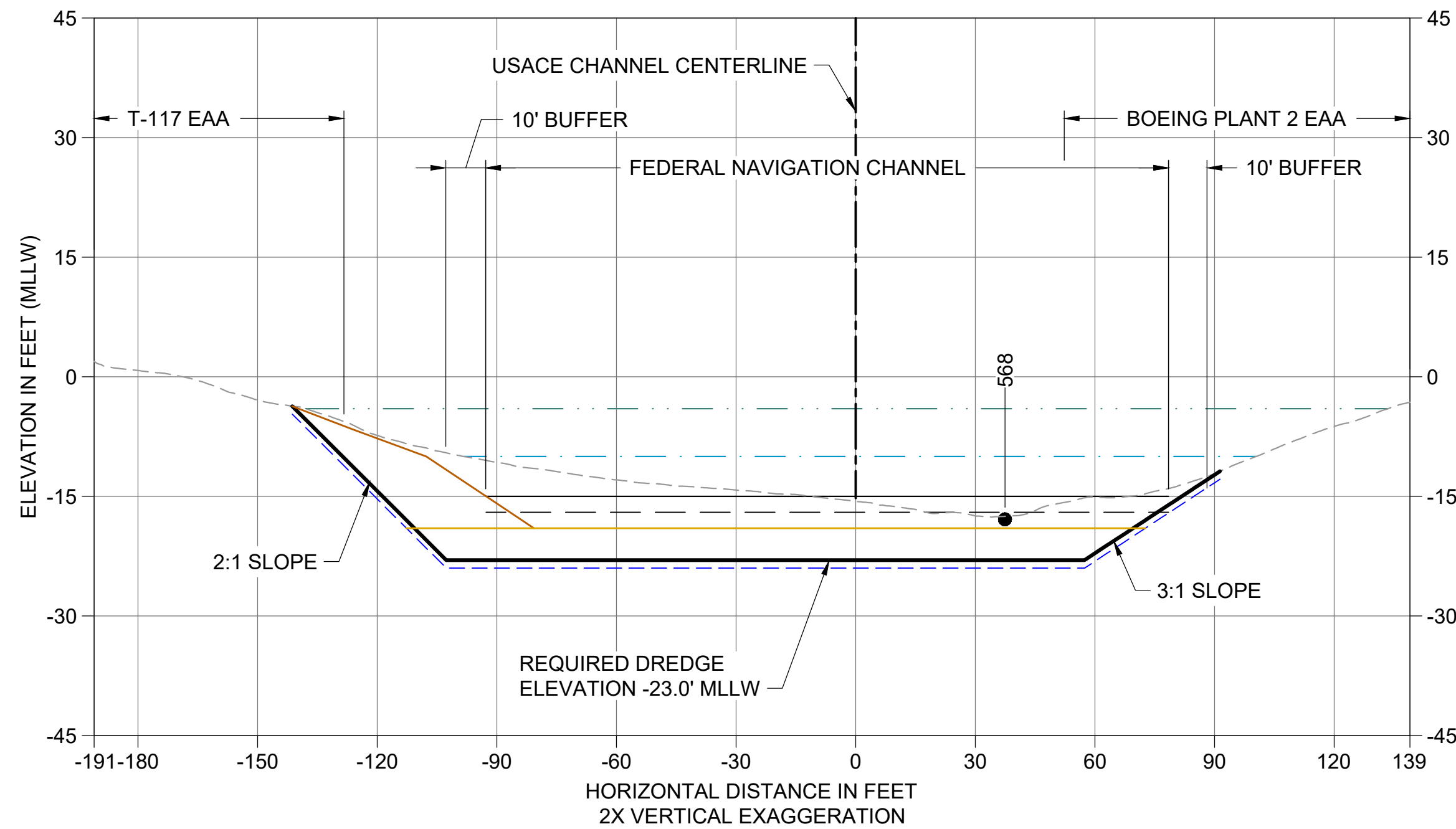
DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION
CROSS SECTIONS (6 OF 15)

DATE: DECEMBER 2023
 DRAWING NO: **C206**
 SHT NO / TOTAL: 61 / 91
 REV NO: **0**

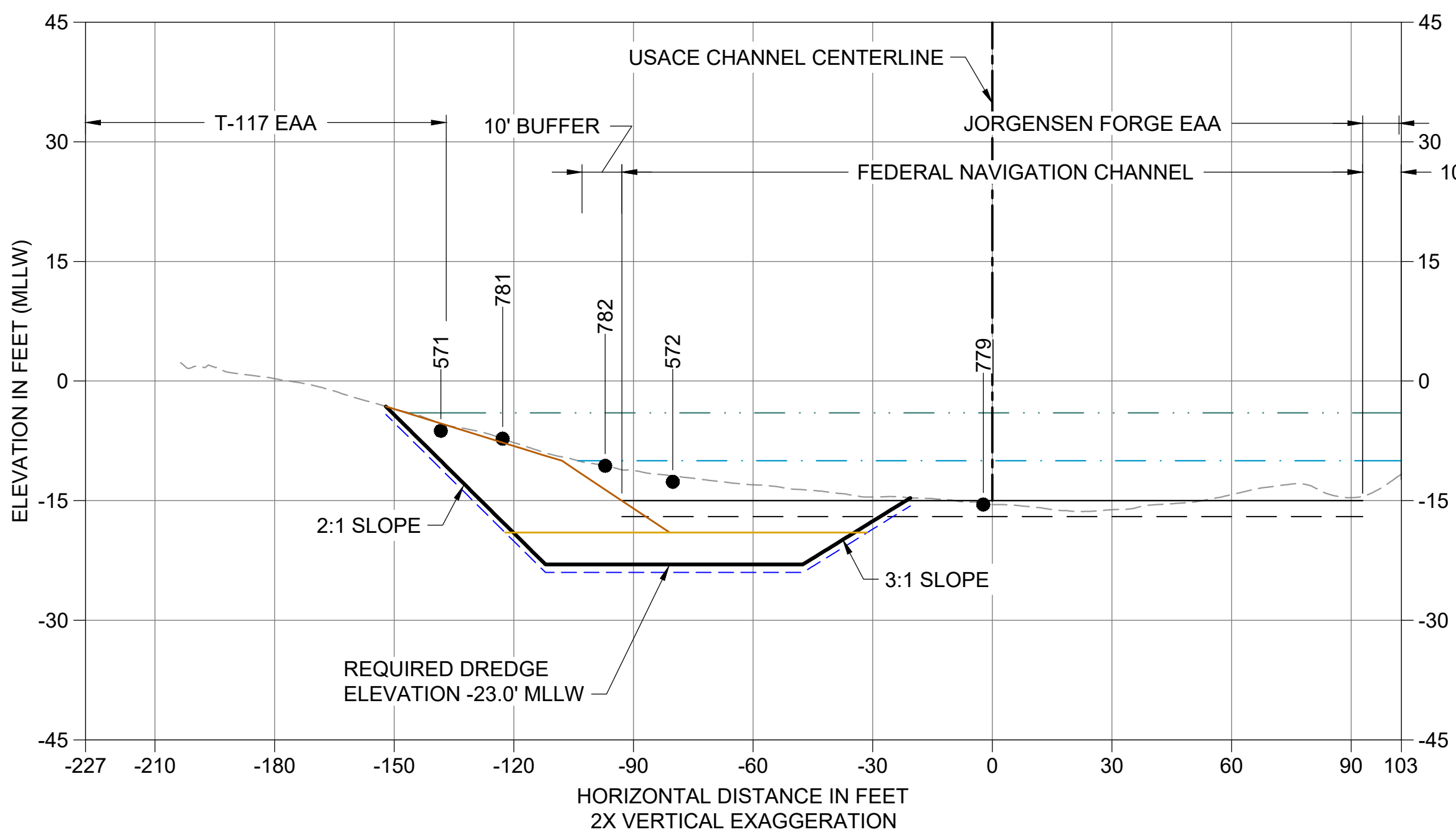
1" REFERENCE



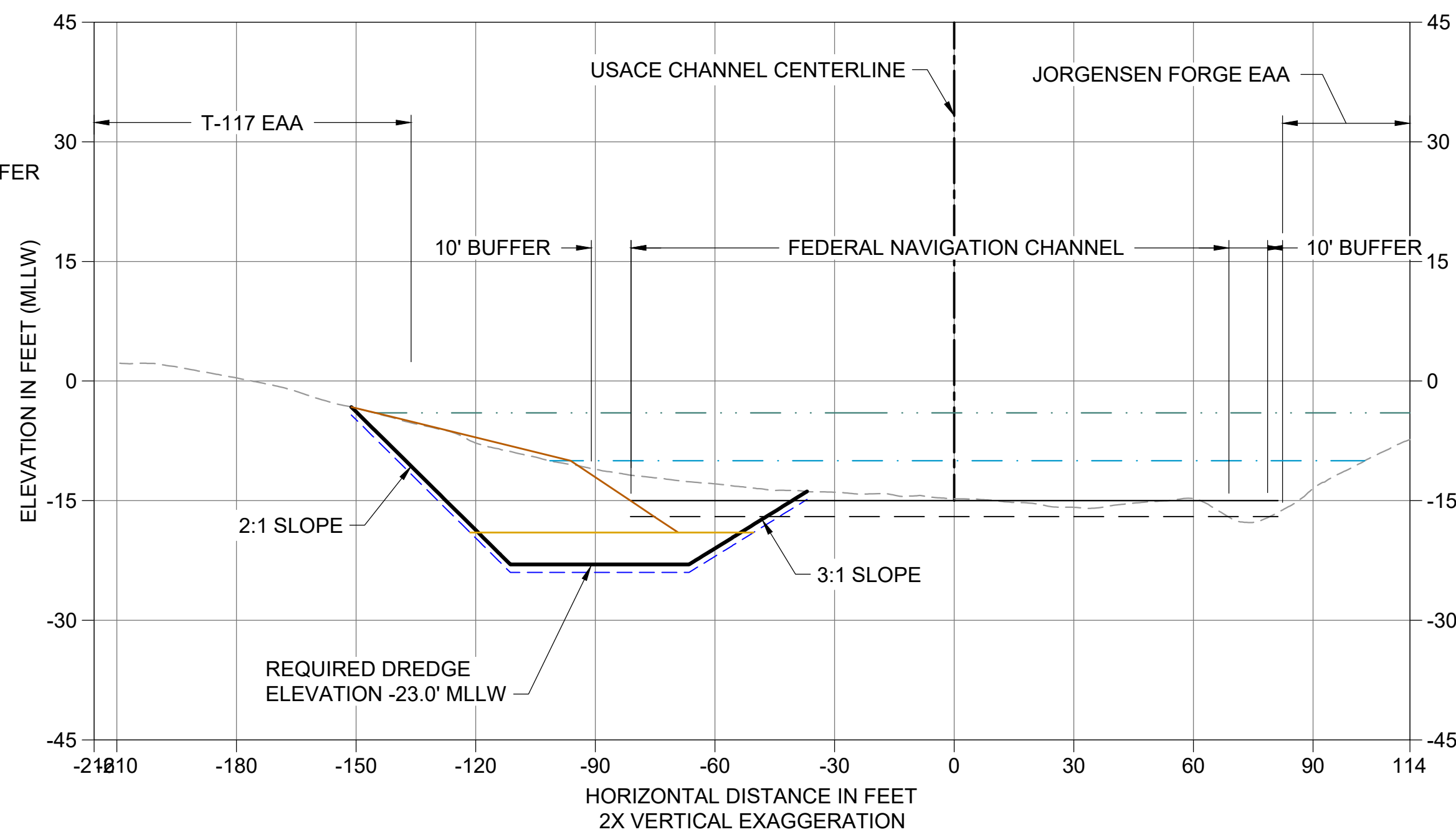
Y CROSS SECTION STA 218+30
 C105 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



Z CROSS SECTION STA 218+80
 C105 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



AA CROSS SECTION STA 219+70
 C105 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



AB CROSS SECTION STA 220+50
 C105 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'

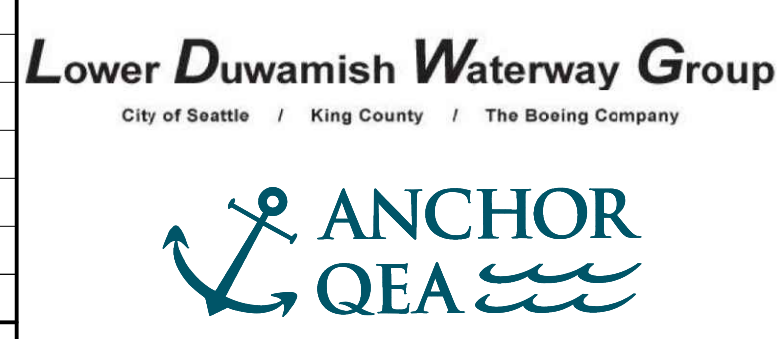
- LEGEND:**
- EXISTING GRADE MERGED DATA
 - USACE AUTHORIZED CHANNEL ELEVATION (-15' MLLW)
 - - - USACE MAINTENANCE ELEVATION (-17' MLLW)
 - · - · - INTERTIDAL/SUBTIDAL TRANSITION (-4' MLLW)
 - LOWEST HABITAT AREA ELEVATION (-10' MLLW)
 - VERTICAL SAMPLE LOCATION
 - REQUIRED DREDGING SURFACE
 - - - PAYABLE OVERDREDGE ALLOWANCE
 - BACKFILL TARGETED PLACEMENT SURFACE
 - ENGINEERED CAP B SURFACE (5/C303)

- NOTES:**
1. VERTICAL DATUM: MLLW
 2. ENR, RMC, AND AMENDED COVER PLACEMENT NOT SHOWN ON CROSS SECTIONS. SEE DETAILS 1 AND 3/C304.
 3. THE TOP OF CAP SHALL BE AT OR BELOW -19' MLLW

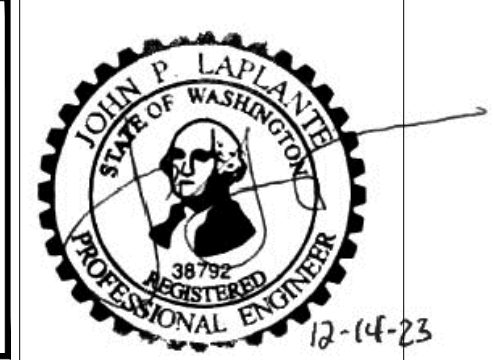
COLOR IMAGE
 THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

BORDER FILE EDITION: x:\KOV\TD-Size-TB-Border_ACBM\Layer\gala\caal\Projects\067-King County\LDW_Upper Reach_Engineering Services\Construction Plans\0067-LDWUR-PL-Dredge-Sections.dwg | Layout: C207
 PLOTTED: Jan 12, 2024 11:00:03am By jigsby

NO	REVISION DESCRIPTION	BY	APVD	DATE



FINAL ISSUE DRAWING
INFORMATION ONLY
BID DOCUMENTS
 DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA
 PROJECT ENGINEER: J. LAPLANTE
 DESIGN APPROVAL: J. ABDALKHANI
 PROJECT ACCEPTANCE: G. STEINER

CHECKED: K. GROSS
 SCALE: AS NOTED
 PROJECT FILE NO: E00559E18
 CONTRACT NO: KC001065

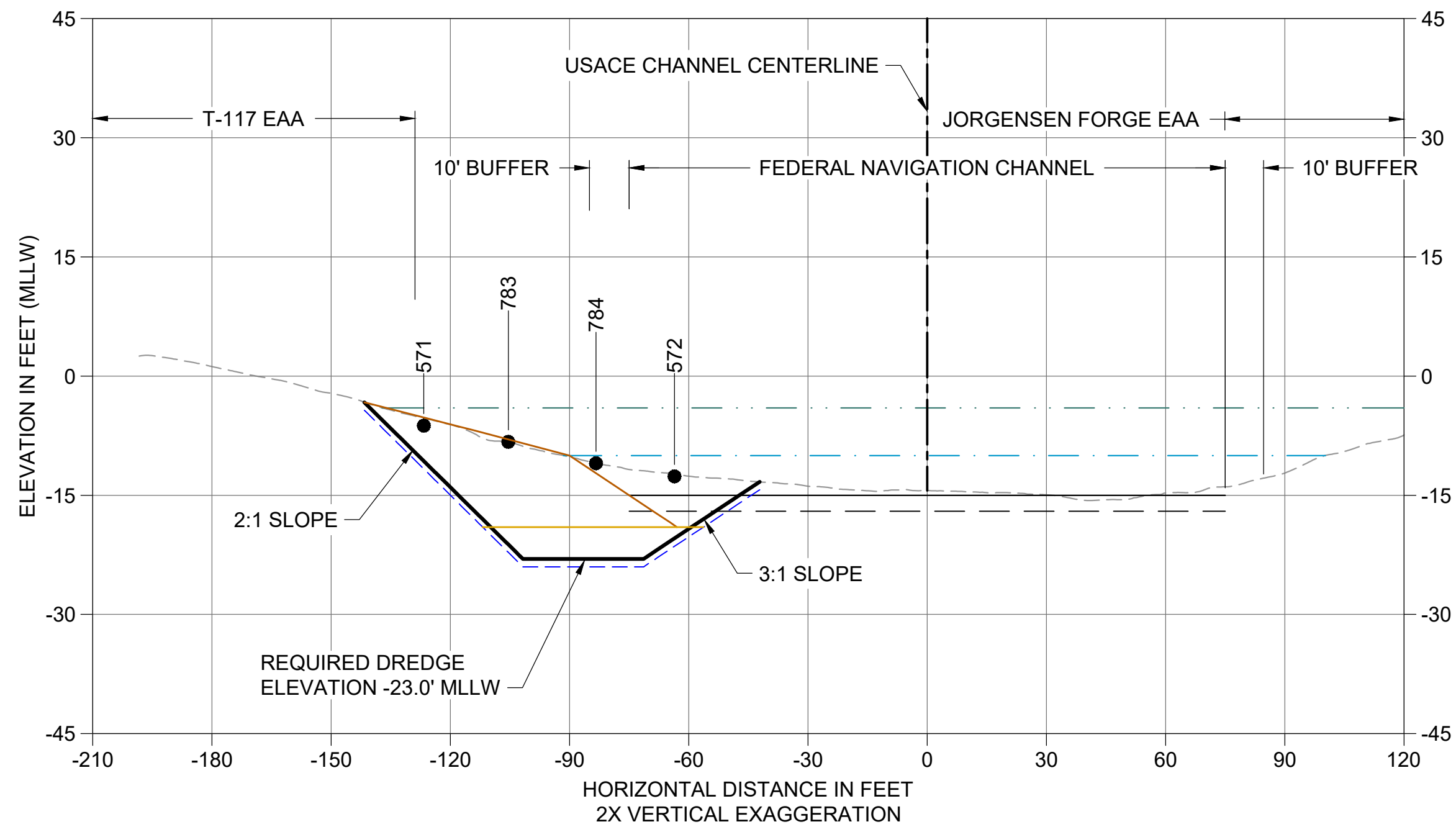
DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

King County

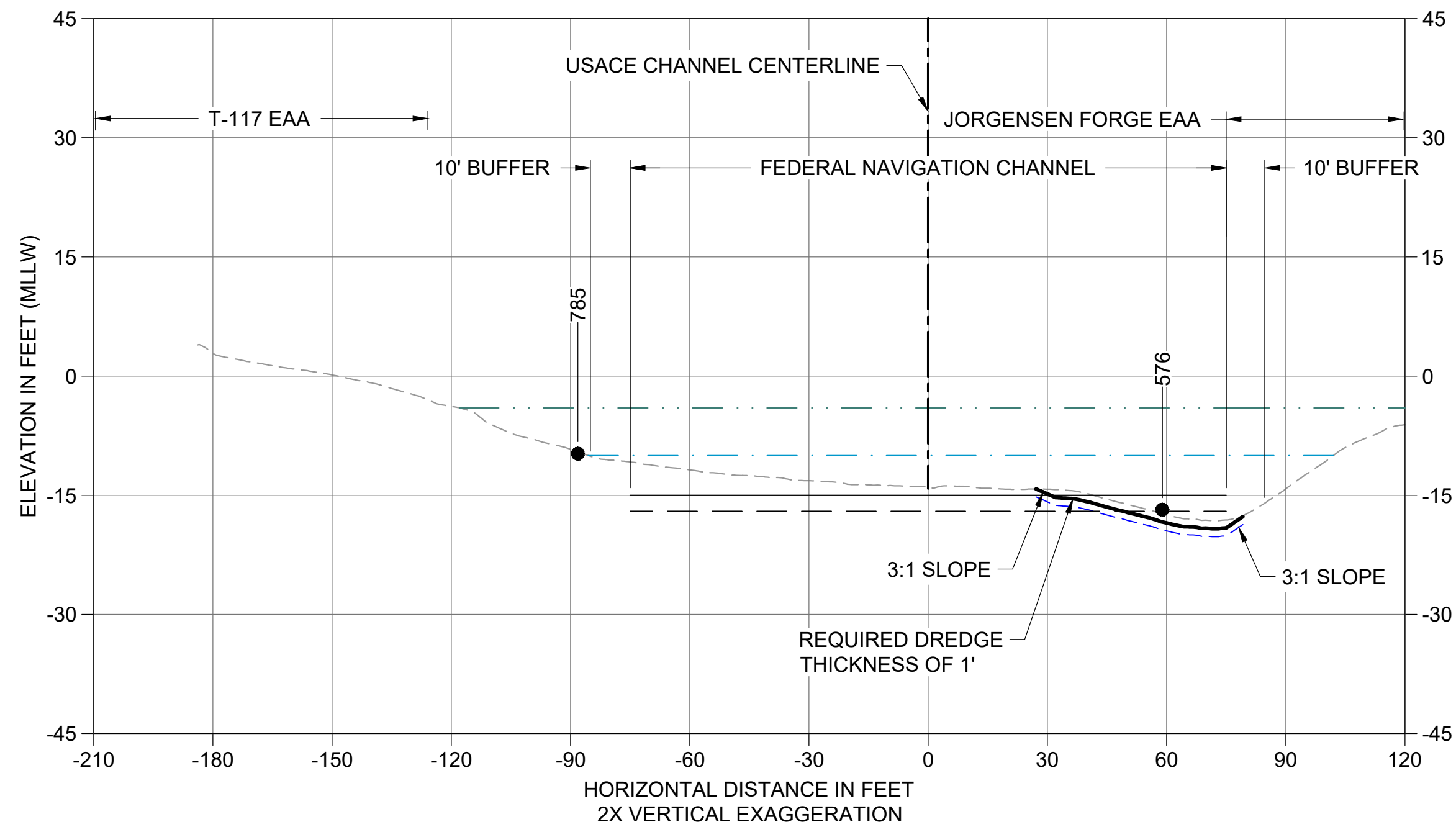
CROSS SECTIONS (7 OF 15)

DATE: DECEMBER 2023
 DRAWING NO: **C207**
 SHT NO / TOTAL: 62 / 91
 REV NO: **0**

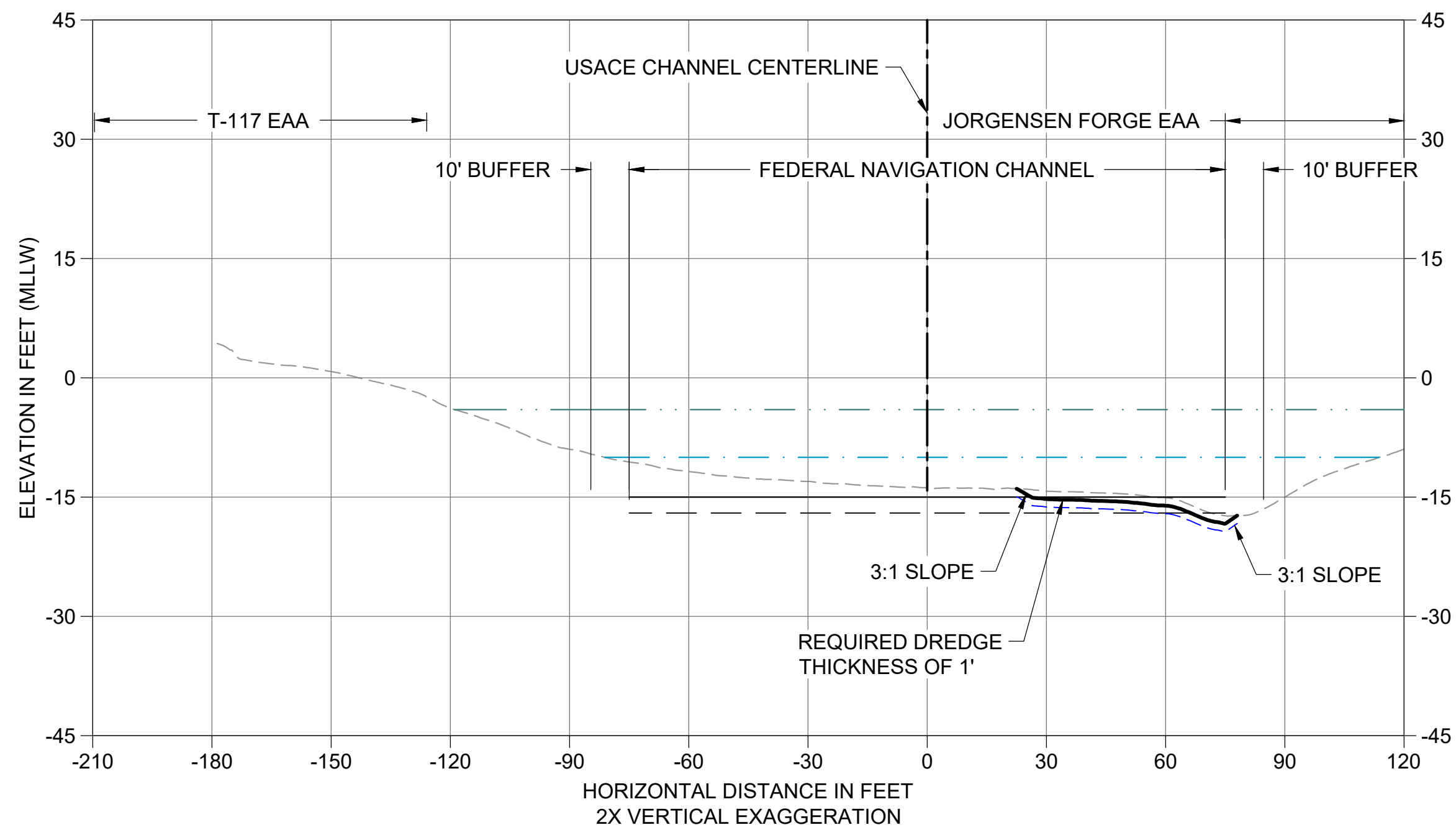
0 1" REFERENCE 1"



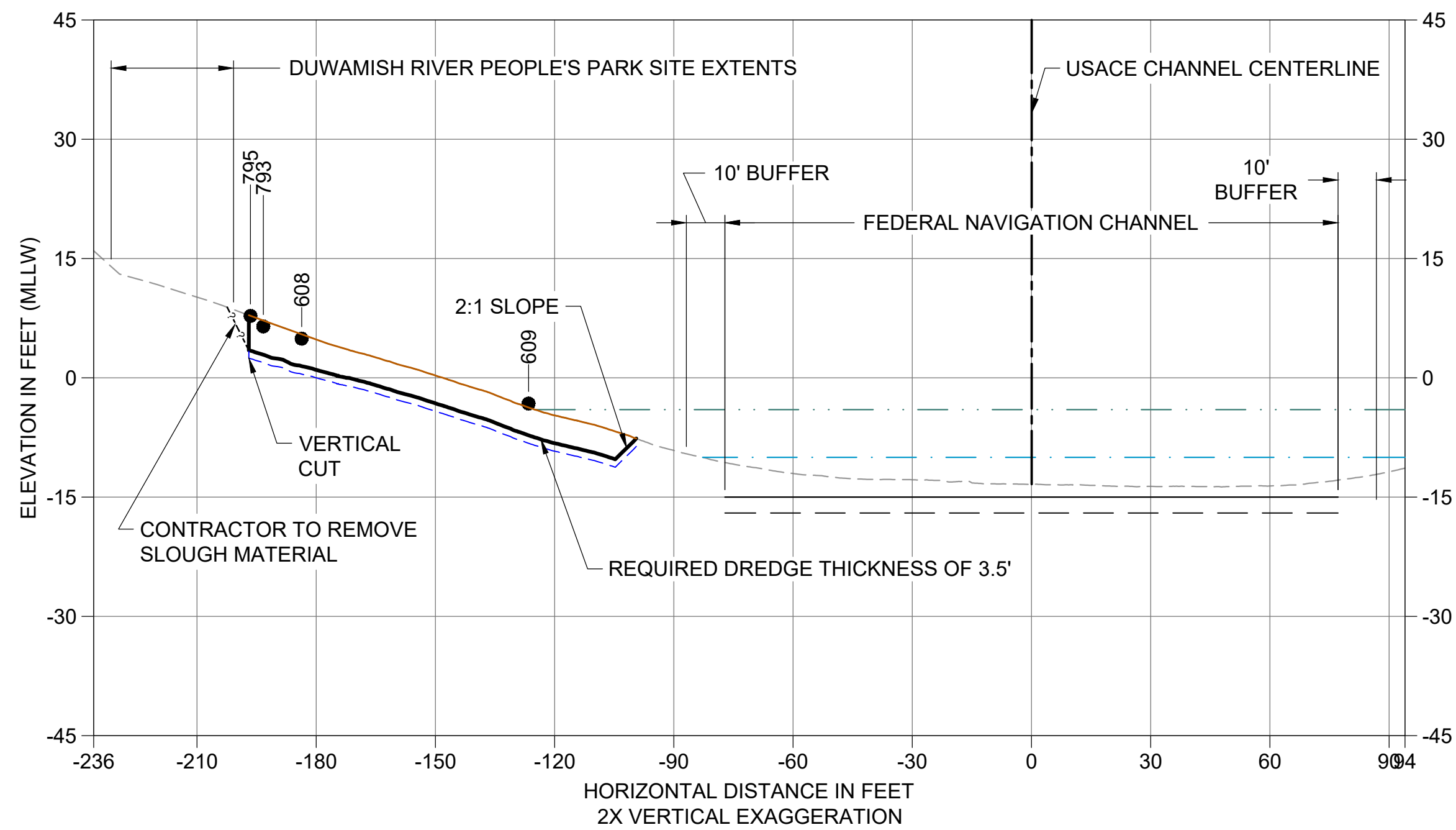
AC CROSS SECTION STA 221+30
 C105 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



AD CROSS SECTION STA 222+70
 C105 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



AE CROSS SECTION STA 223+00
 C105 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



AF CROSS SECTION STA 228+48
 C106 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'

- LEGEND:**
- EXISTING GRADE MERGED DATA
 - USACE AUTHORIZED CHANNEL ELEVATION (-15' MLLW)
 - - - USACE MAINTENANCE ELEVATION (-17' MLLW)
 - · - · - INTERTIDAL/SUBTIDAL TRANSITION (-4' MLLW)
 - LOWEST HABITAT AREA ELEVATION (-10' MLLW)
 - VERTICAL SAMPLE LOCATION
 - REQUIRED DREDGING SURFACE
 - - - PAYABLE OVERDREDGE ALLOWANCE
 - BACKFILL TARGETED PLACEMENT SURFACE
 - ENGINEERED CAP B SURFACE
- NOTES:**
1. VERTICAL DATUM: MLLW
 2. ENR, RMC, AND AMENDED COVER PLACEMENT NOT SHOWN ON CROSS SECTIONS. SEE DETAILS 1 AND 3/C304.
 3. THE TOP OF CAP SHALL BE AT OR BELOW -19' MLLW

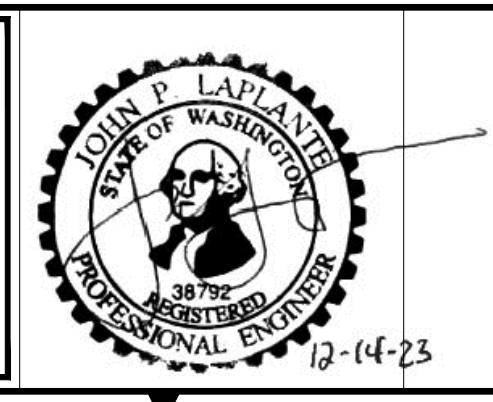
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 \gala\caal\Projects\067-King County\LDW Upper Reach\Engineering Services\Construction Plans\067-LDWUR-PL-Dredge-Sections.dwg | Layout: C208
 PLOTTED: Jan 12, 2024 11:00:28am By jigsby

NO	REVISION DESCRIPTION	BY	APVD	DATE



FINAL ISSUE DRAWING
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 DECEMBER 2023



DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065

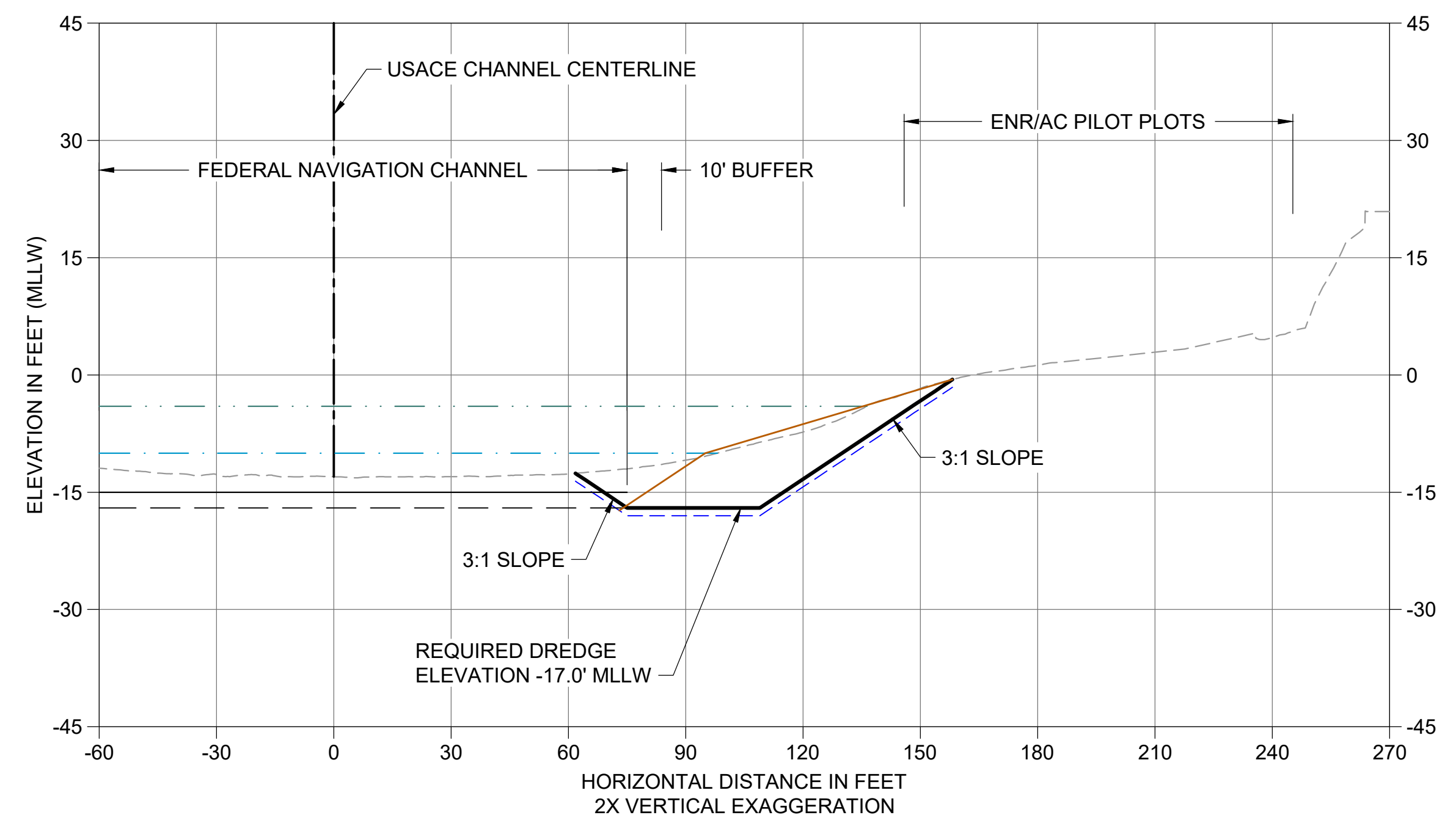


DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

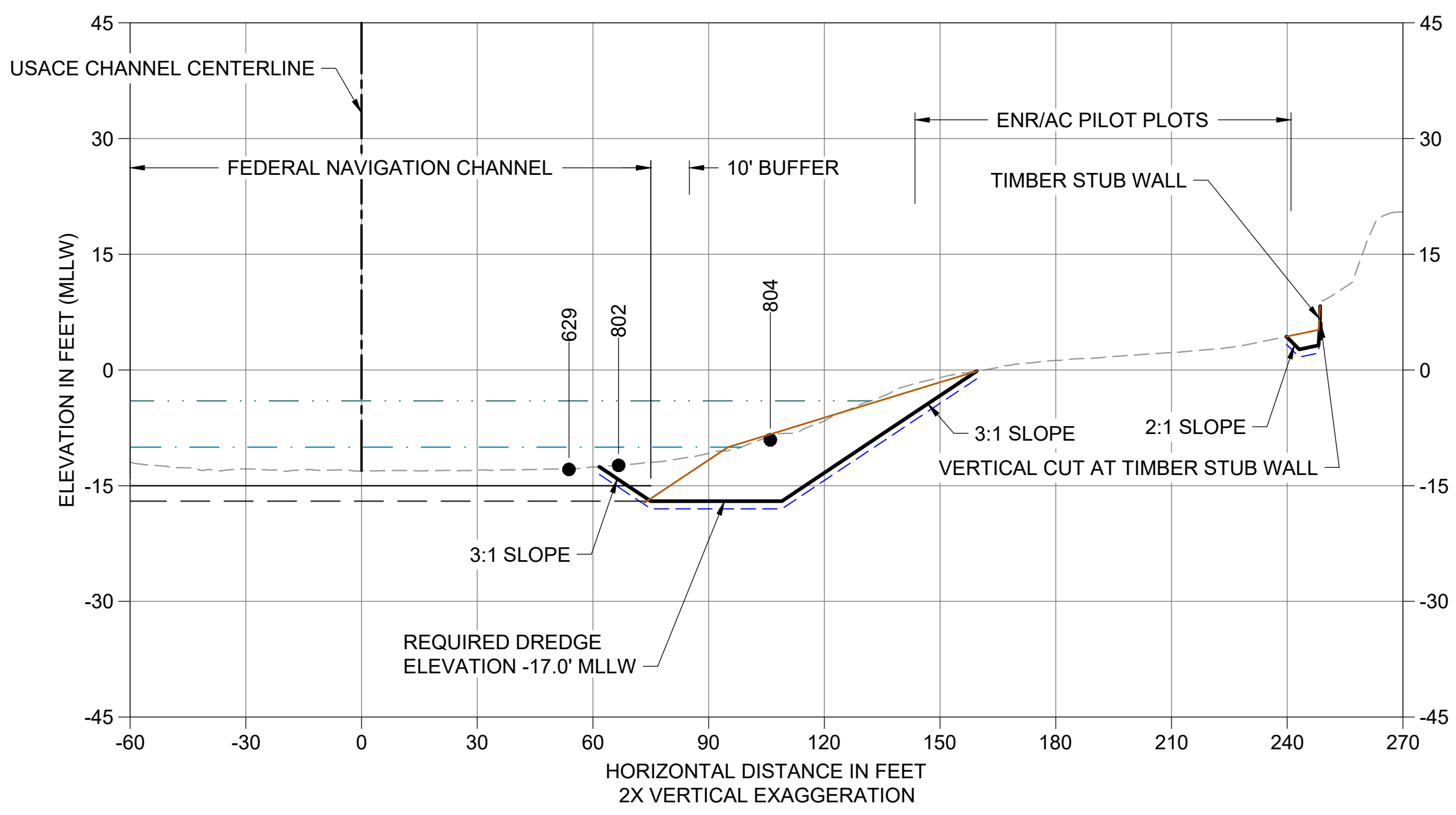
CROSS SECTIONS (8 OF 15)

DATE: DECEMBER 2023
DRAWING NO: C208
SHT NO / TOTAL 63 / 91
REV NO: 0

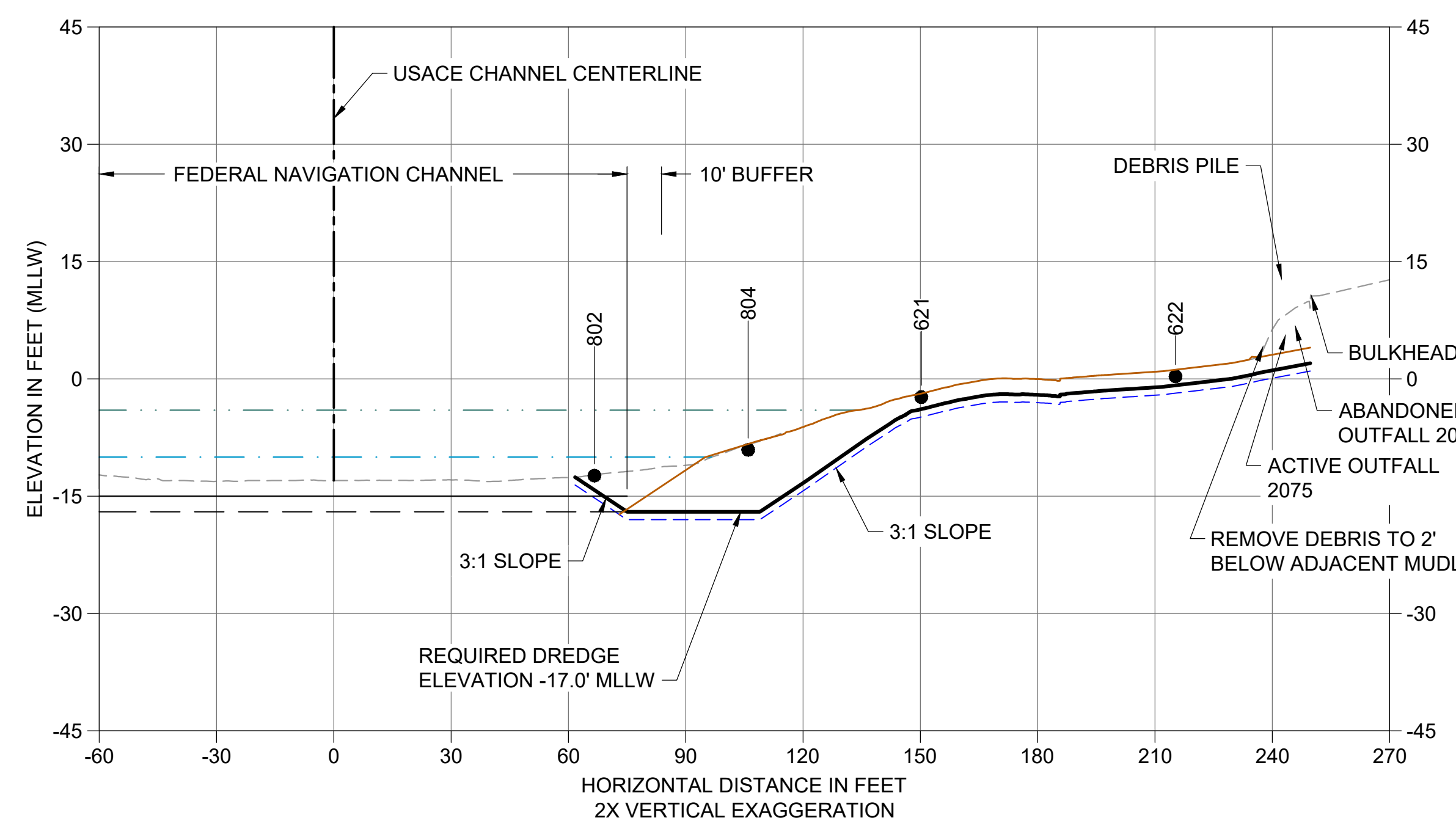
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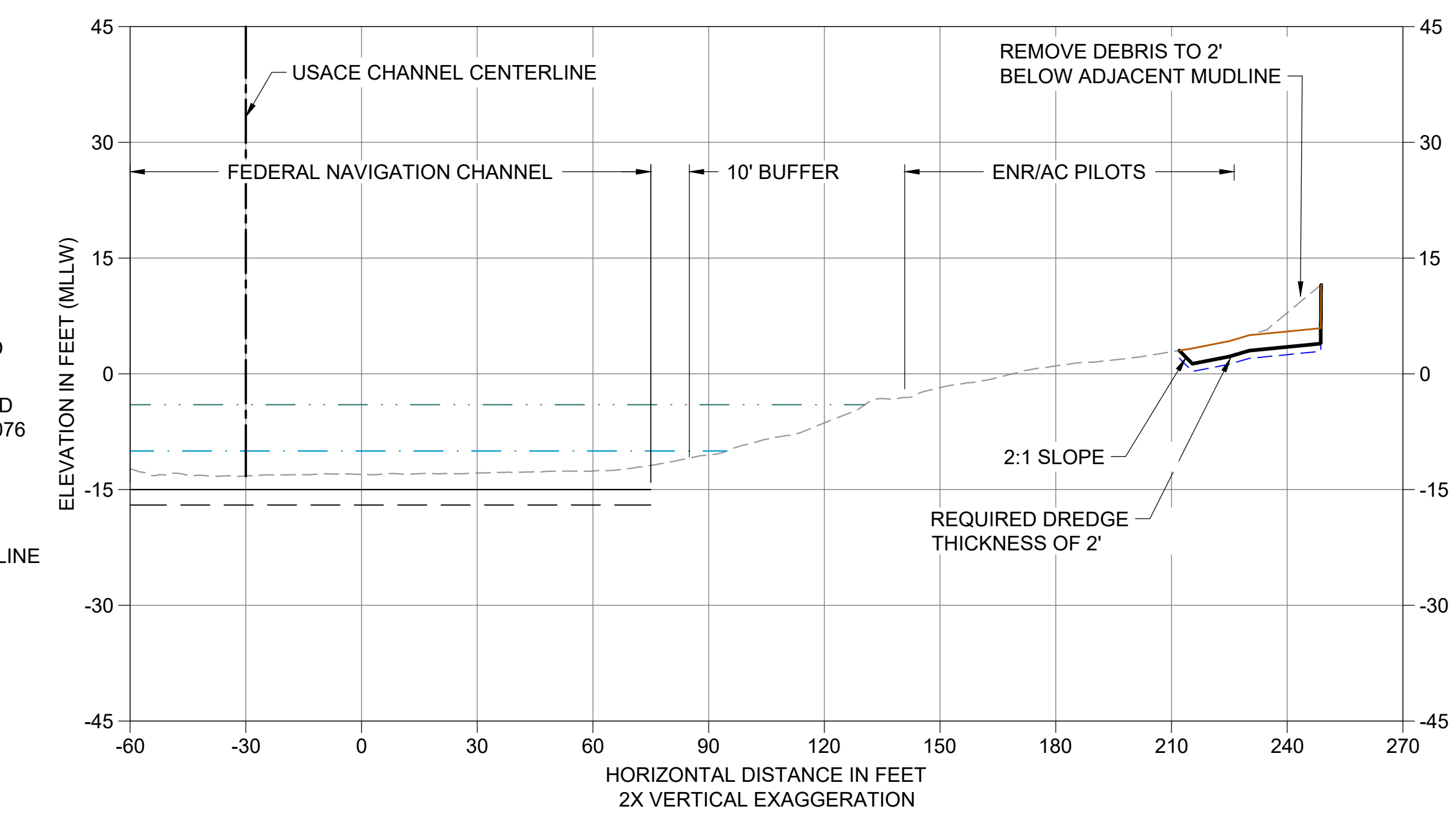
AG CROSS SECTION STA 231+60
 C106 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



AH CROSS SECTION STA 233+00
 C107 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



AI CROSS SECTION STA 233+90
 C107 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



AJ CROSS SECTION STA 234+80
 C107 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'

- LEGEND:**
- EXISTING GRADE MERGED DATA
 - USACE AUTHORIZED CHANNEL ELEVATION (-15' MLLW)
 - - - USACE MAINTENANCE ELEVATION (-17' MLLW)
 - · - · - INTERTIDAL/SUBTIDAL TRANSITION (-4' MLLW)
 - LOWEST HABITAT AREA ELEVATION (-10' MLLW)
 - VERTICAL SAMPLE LOCATION
 - REQUIRED DREDGING SURFACE
 - · - · - PAYABLE OVERDREDGE ALLOWANCE
 - BACKFILL TARGETED PLACEMENT SURFACE
- NOTES:**
- VERTICAL DATUM: MLLW
 - ENR, RMC, AND AMENDED COVER PLACEMENT NOT SHOWN ON CROSS SECTIONS. SEE DETAILS 1 AND 3/C304.

COLOR IMAGE
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 DECEMBER 2023



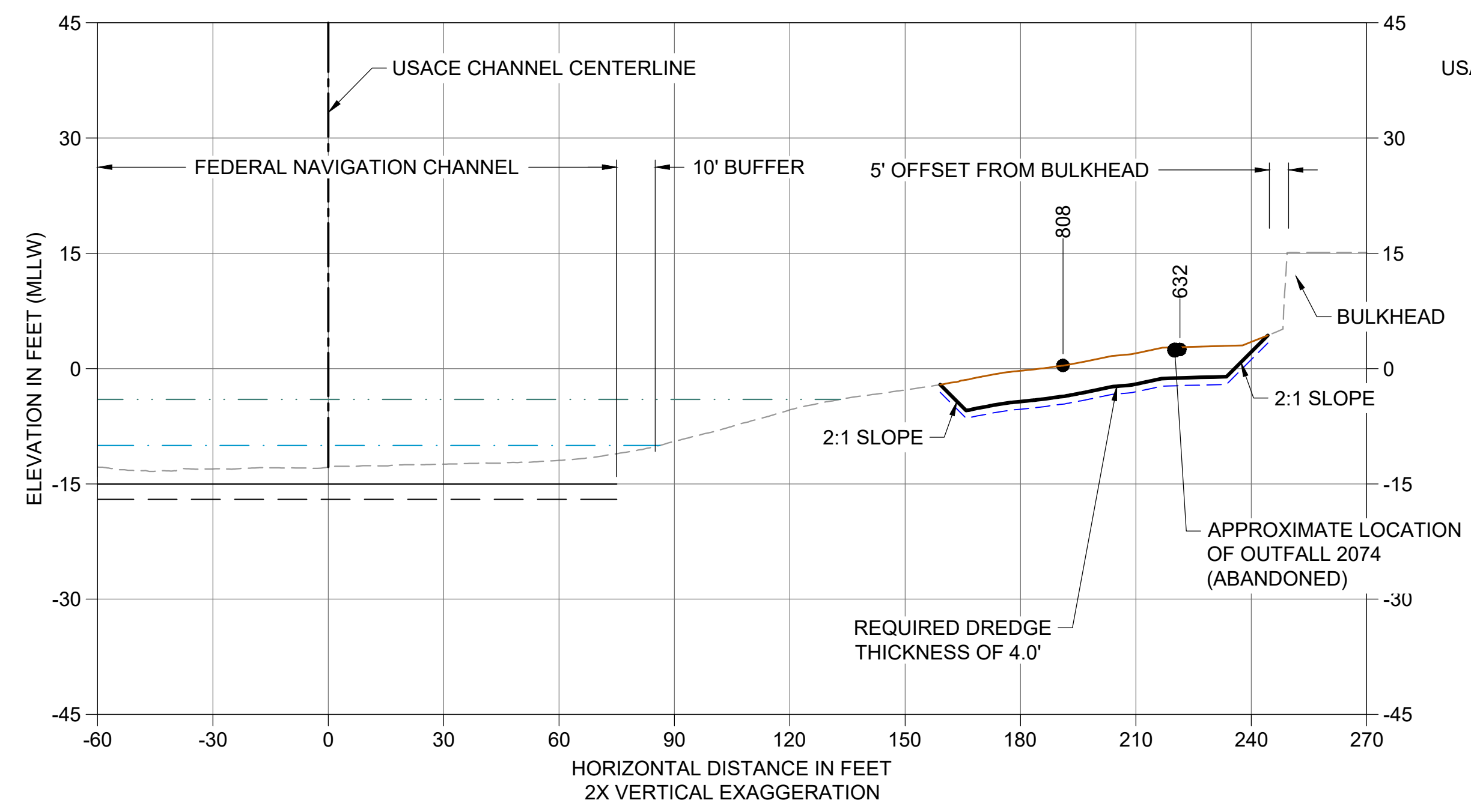
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 PROJECT ENGINEER: J. LAPLANTE
 DESIGN APPROVAL: J. ABDALKHANI
 PROJECT ACCEPTANCE: G. STEINER
 CHECKED: K. GROSS
 SCALE: AS NOTED
 PROJECT FILE NO: E00559E18
 CONTRACT NO: KC001065



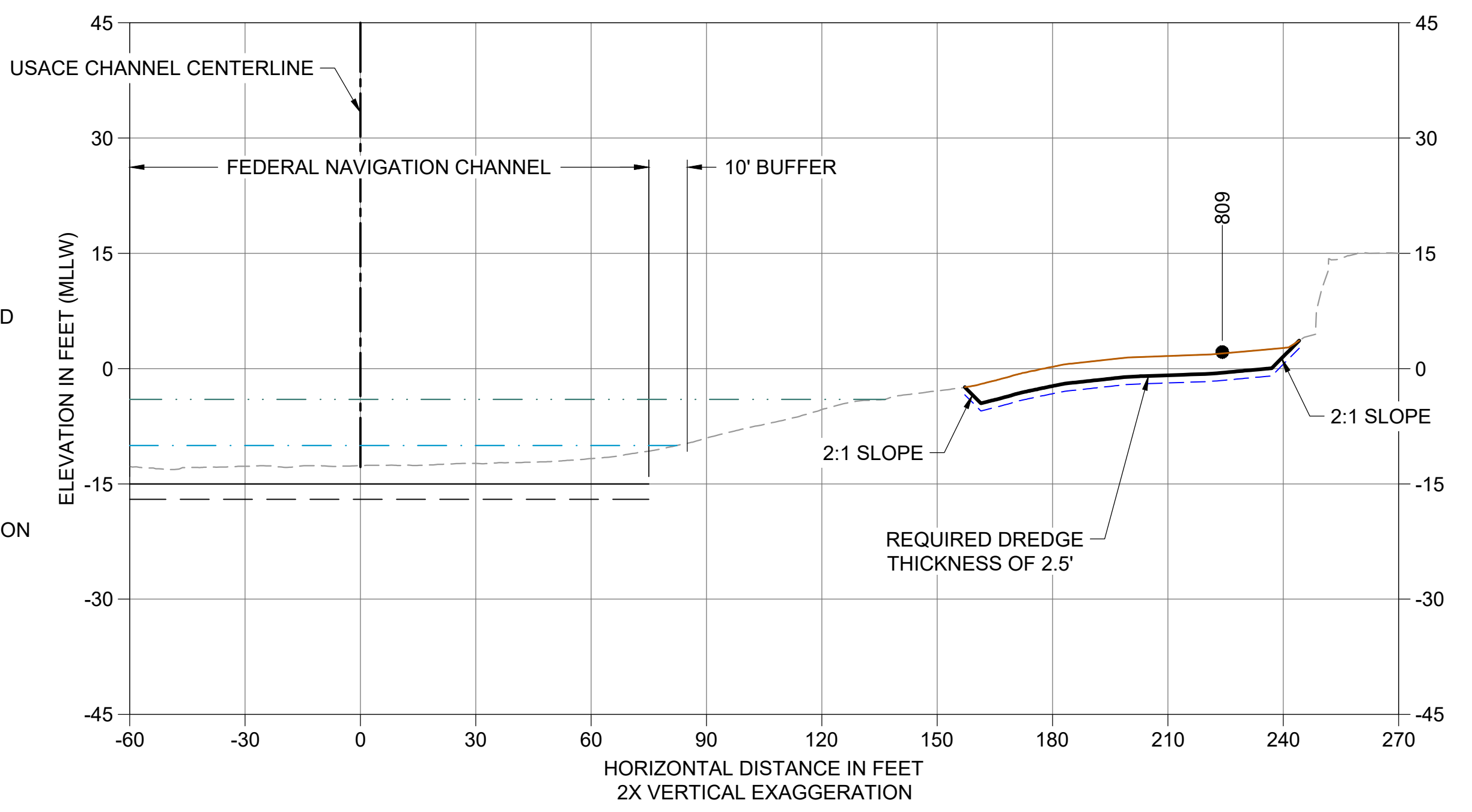
DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION
CROSS SECTIONS (9 OF 15)

DATE: DECEMBER 2023
 DRAWING NO: **C209**
 SHT NO / TOTAL: 64 / 91
 REV NO: **0**

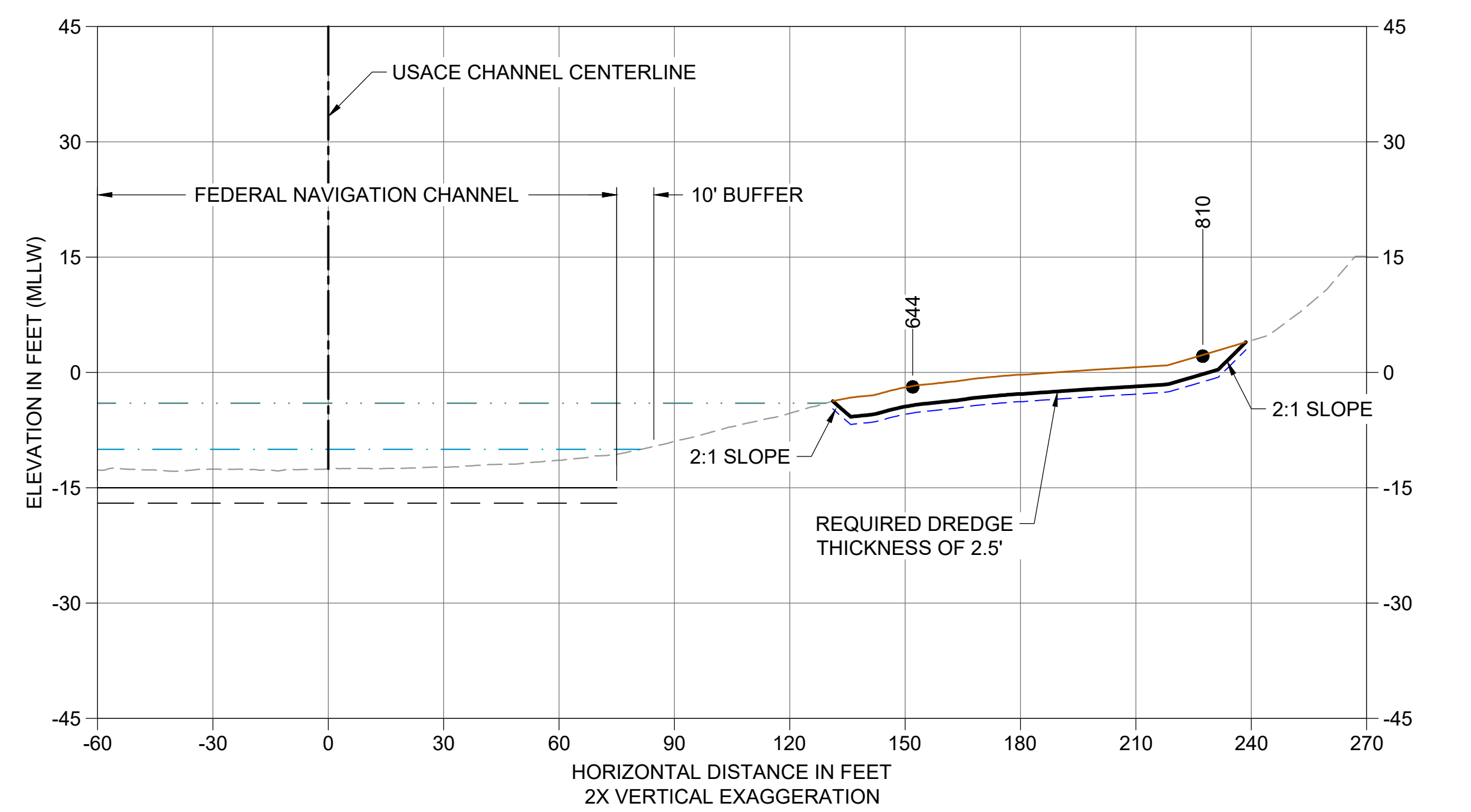
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 PLOTTED: Jan 12, 2024 11:01:17am By jlgaby



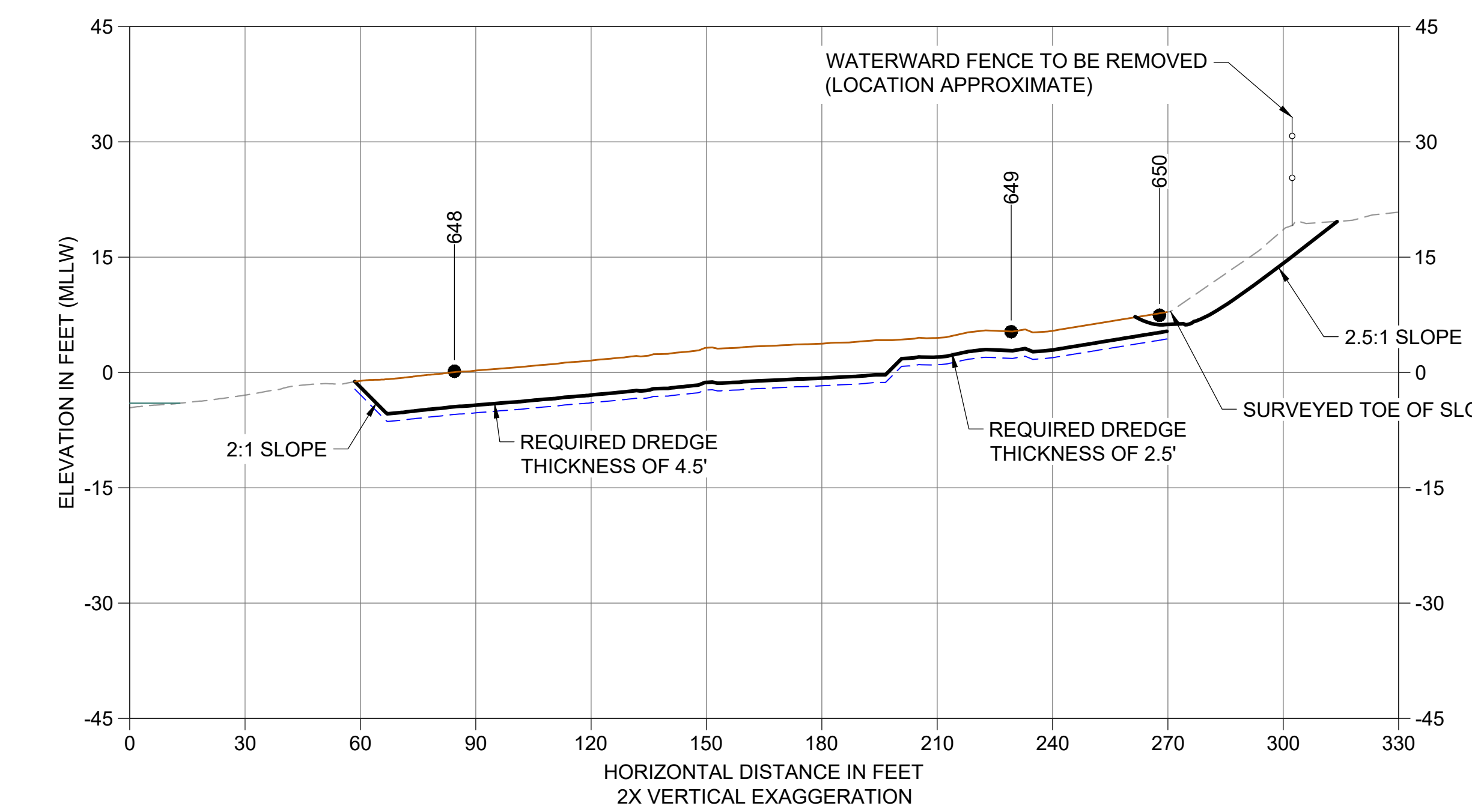
AK CROSS SECTION STA 237+00
 C107 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



AL CROSS SECTION STA 238+00
 C107 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



AM CROSS SECTION STA 238+90
 C107 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



AN CROSS SECTION STA 241+50
 C108 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'

- LEGEND:**
- EXISTING GRADE MERGED DATA
 - USACE AUTHORIZED CHANNEL ELEVATION (-15' MLLW)
 - - - USACE MAINTENANCE ELEVATION (-17' MLLW)
 - · - · - INTERTIDAL/SUBTIDAL TRANSITION (-4' MLLW)
 - · - · - LOWEST HABITAT AREA ELEVATION (-10' MLLW)
 - VERTICAL SAMPLE LOCATION
 - REQUIRED DREDGING SURFACE
 - - - PAYABLE OVERDREDGE ALLOWANCE
 - BACKFILL TARGETED PLACEMENT SURFACE
 - ENGINEERED CAP A SURFACE
- NOTES:**
- VERTICAL DATUM: MLLW
 - ENR, RMC, AND AMENDED COVER PLACEMENT NOT SHOWN ON CROSS SECTIONS. SEE DETAILS 1 AND 3/C304.

COLOR IMAGE
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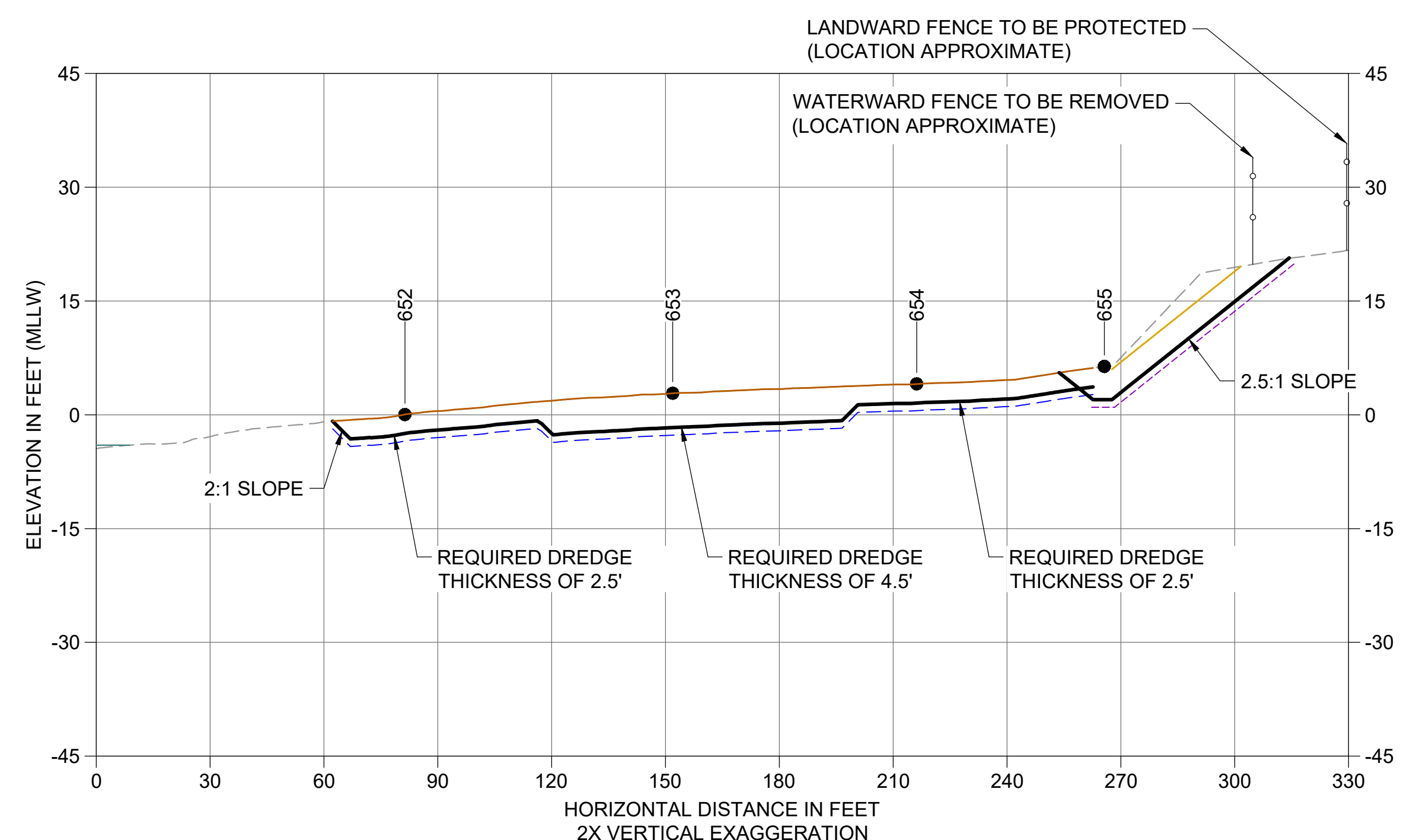
DESIGNED/DRAWN: BIGSBY/GRIGA
 PROJECT ENGINEER: J. LAPLANTE
 DESIGN APPROVAL: J. ABDALKHANI
 PROJECT ACCEPTANCE: G. STEINER
 CHECKED: K. GROSS
 SCALE: AS NOTED
 PROJECT FILE NO: E00559E18
 CONTRACT NO: KC001065



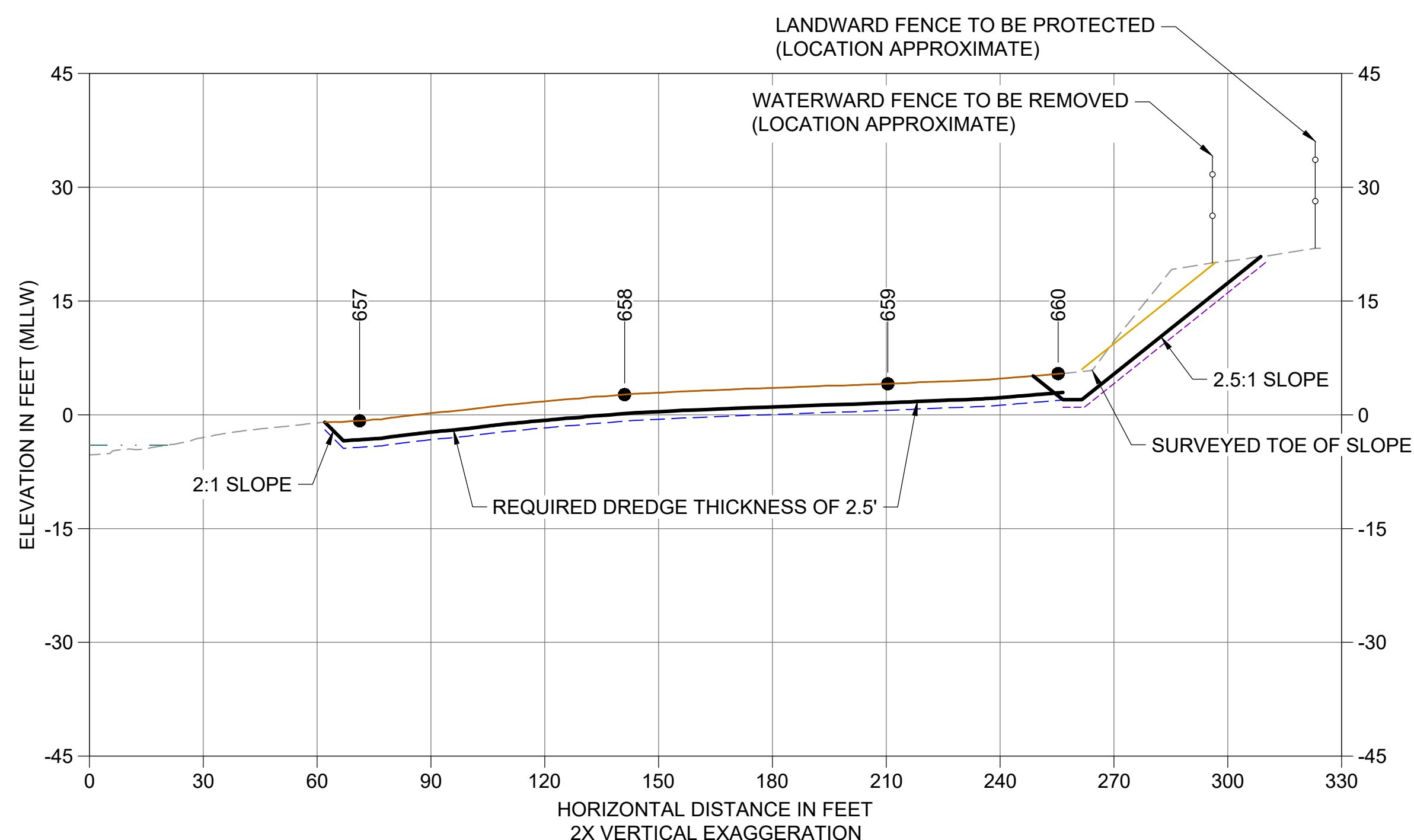
DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION
CROSS SECTIONS (10 OF 15)

DATE: DECEMBER 2023
 DRAWING NO: **C210**
 SHT NO / TOTAL: 65 / 91
 REV NO: **0**

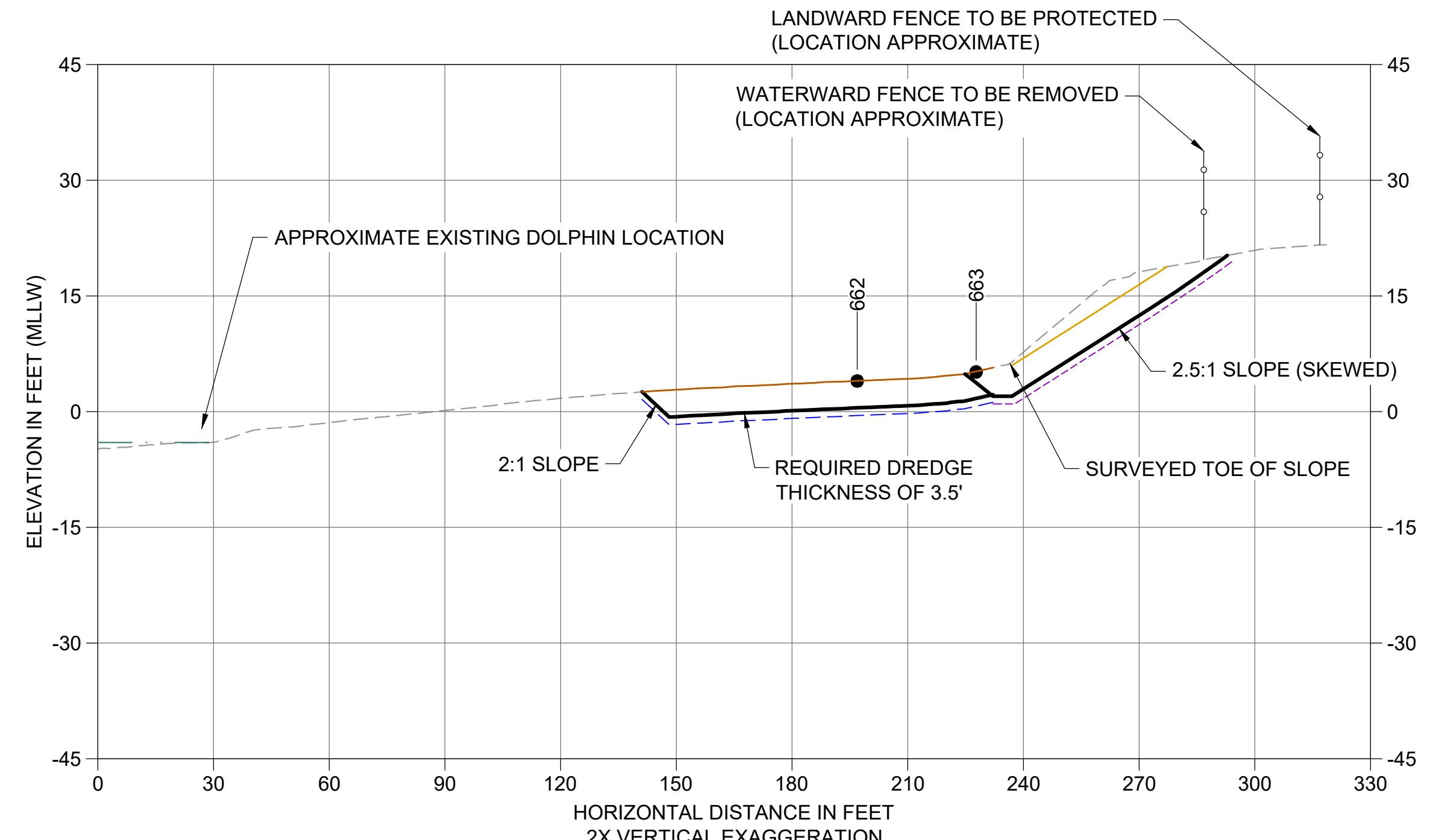
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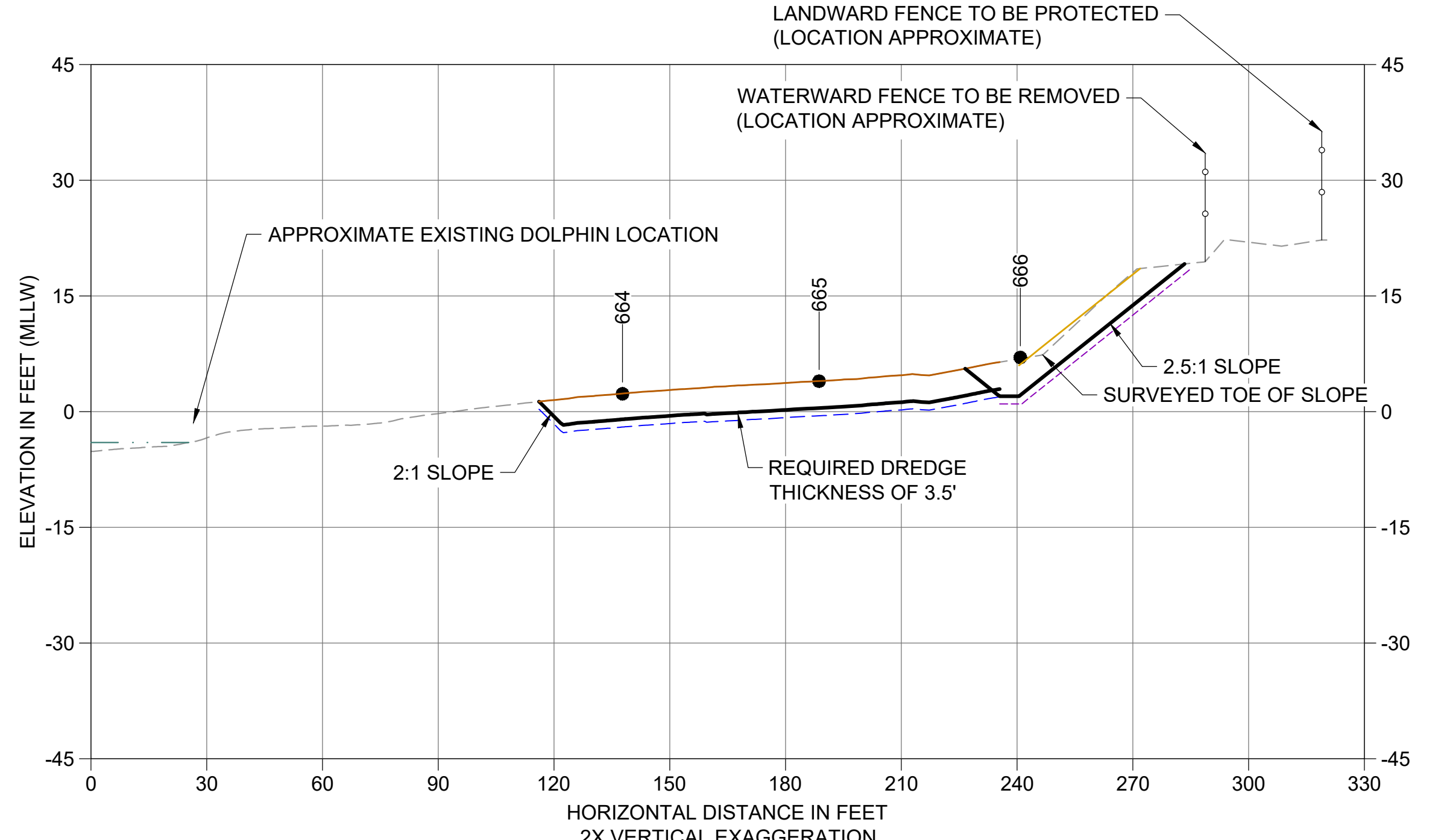
AO CROSS SECTION STA 242+50
 C108 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



AP CROSS SECTION STA 243+50
 C108 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



AQ CROSS SECTION STA 244+50
 C108 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



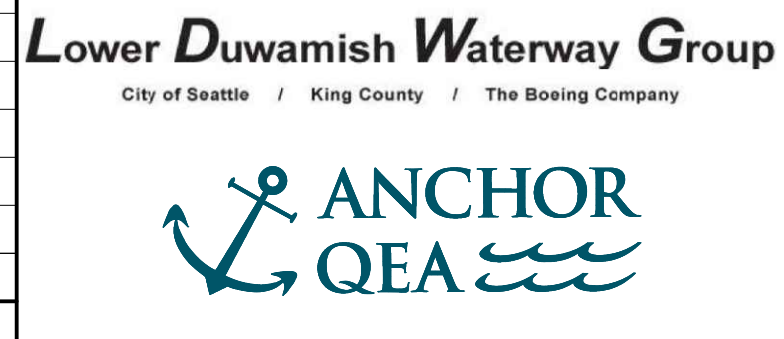
AR CROSS SECTION STA 245+50
 C108 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'

- LEGEND:**
- EXISTING GRADE MERGED DATA
 - USACE AUTHORIZED CHANNEL ELEVATION (-15' MLLW)
 - - - USACE MAINTENANCE ELEVATION (-17' MLLW)
 - · - · - INTERTIDAL/SUBTIDAL TRANSITION (-4' MLLW)
 - LOWEST HABITAT AREA ELEVATION (-10' MLLW)
 - VERTICAL SAMPLE LOCATION
 - REQUIRED DREDGING SURFACE
 - PAYABLE OVERDREDGE ALLOWANCE
 - NON-PAYABLE OVEREXCAVATION ALLOWANCE
 - BACKFILL TARGETED PLACEMENT SURFACE
 - ENGINEERED CAP A SURFACE (C305)

- NOTES:**
- VERTICAL DATUM: MLLW
 - ENR, RMC, AND AMENDED COVER PLACEMENT NOT SHOWN ON CROSS SECTIONS. SEE DETAILS 1 AND 3/C304.

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 DECEMBER 2023



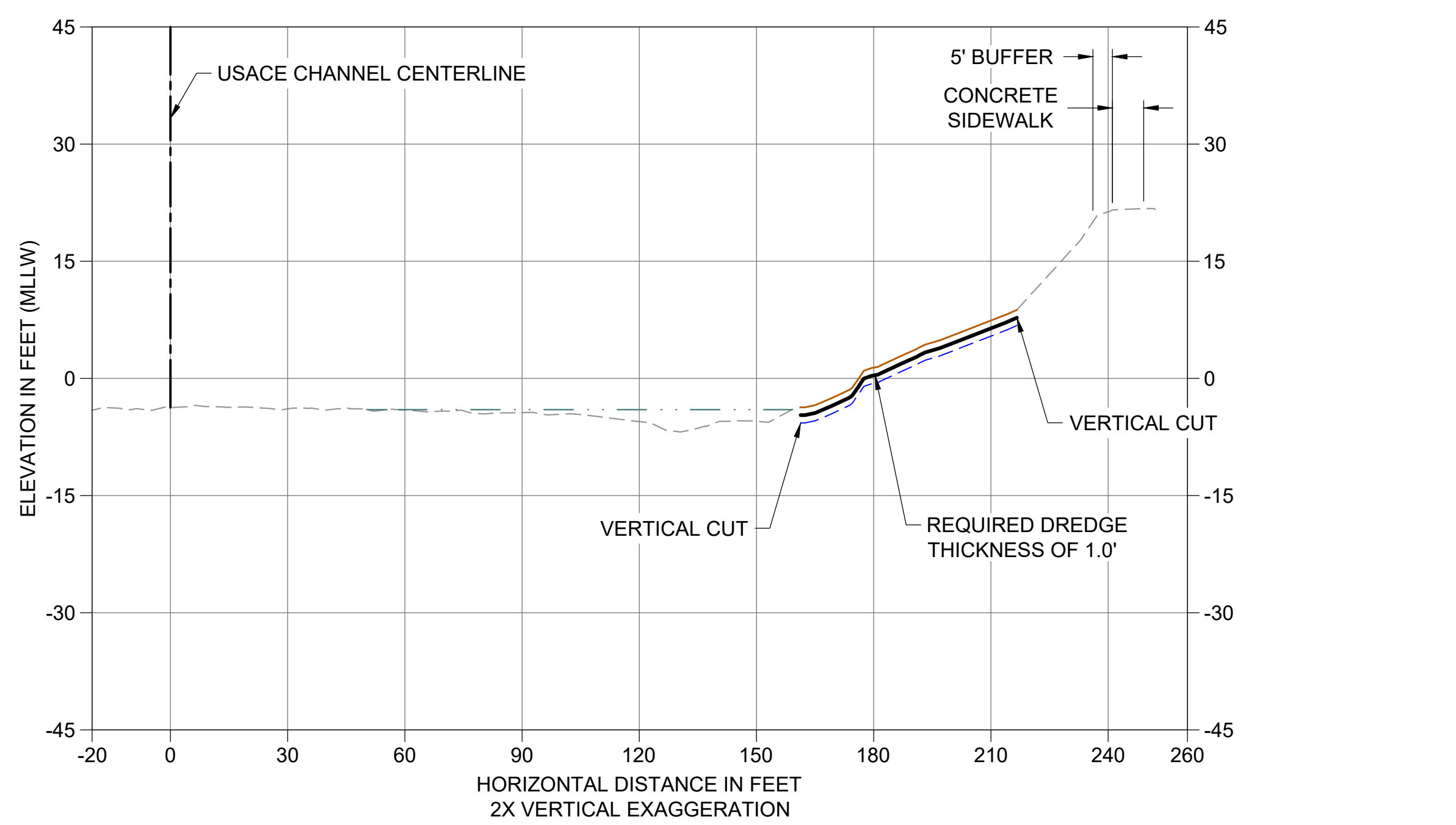
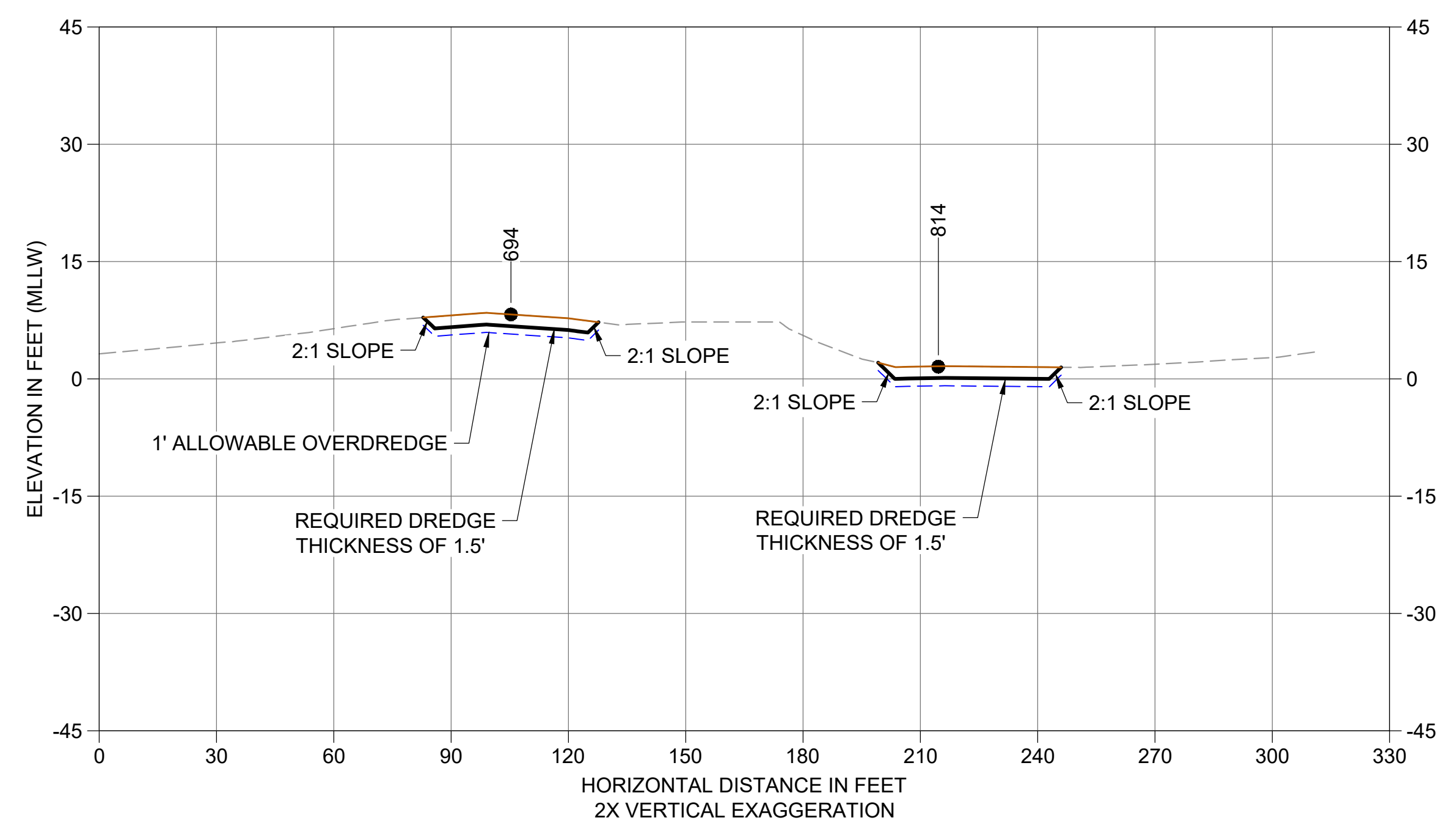
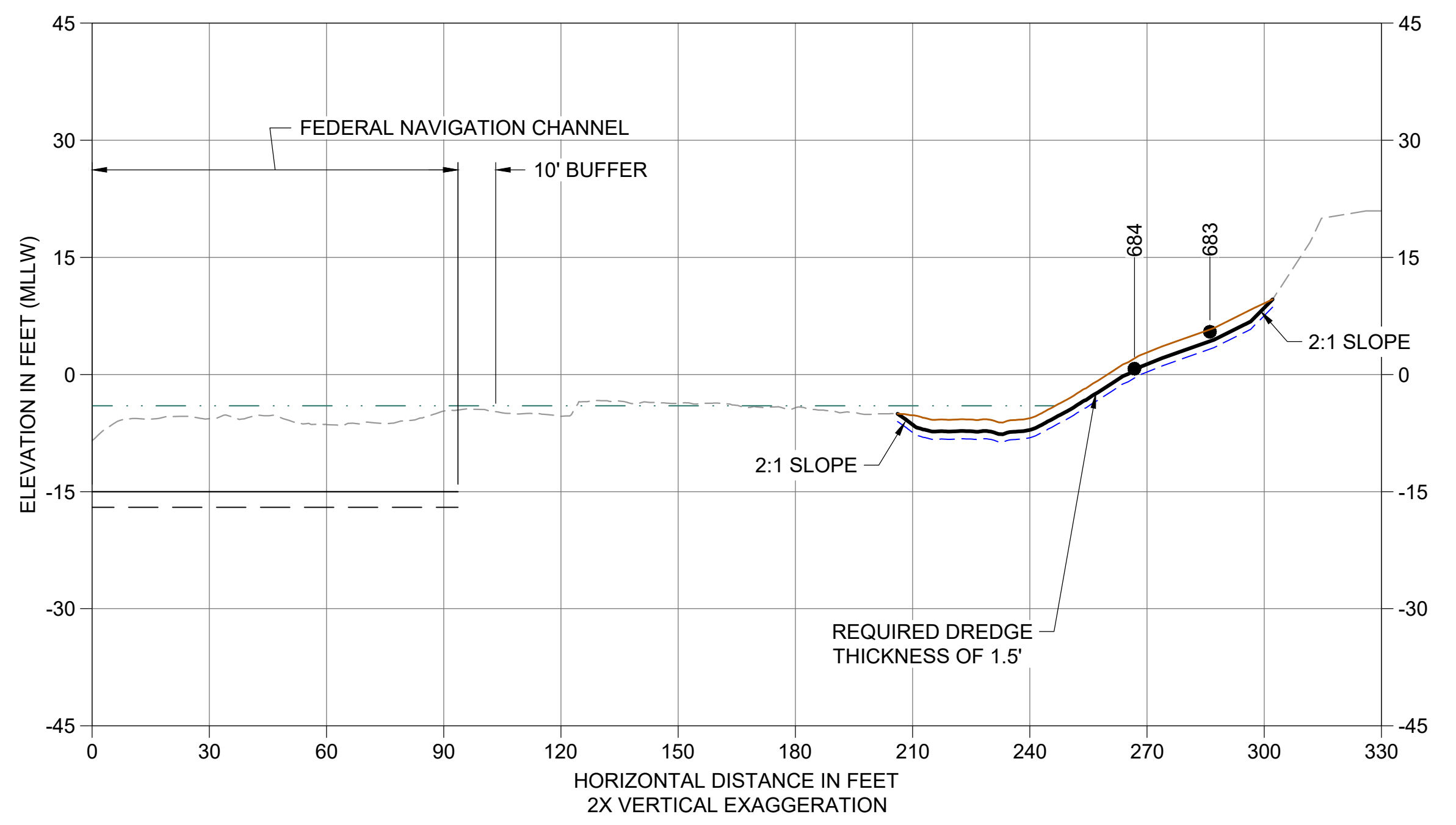
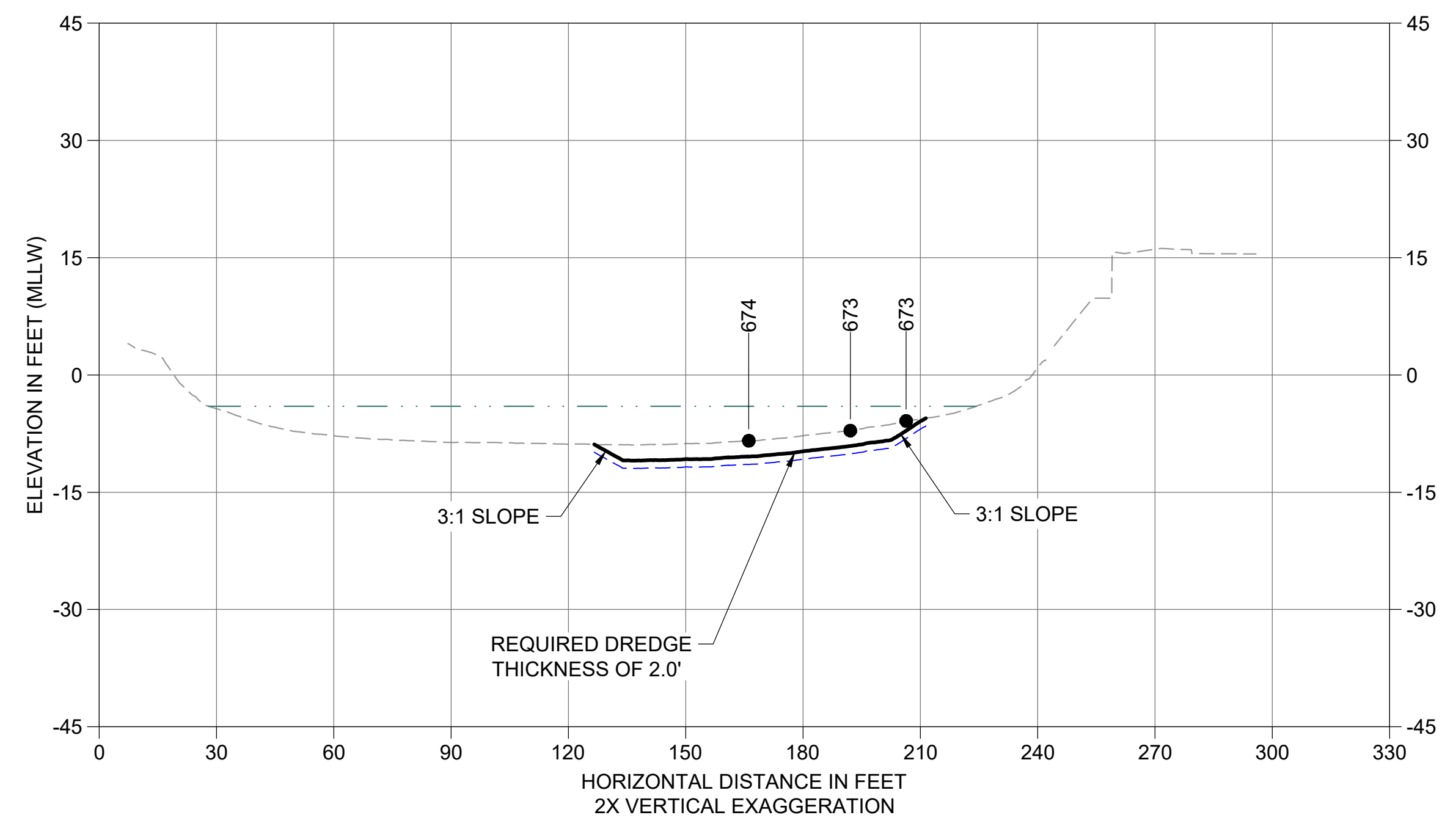
DESIGNED/DRAWN: BIGSBY/GRIGA
 PROJECT ENGINEER: J. LAPLANTE
 DESIGN APPROVAL: J. ABDALKHANI
 PROJECT ACCEPTANCE: G. STEINER
 CHECKED: K. GROSS
 SCALE: AS NOTED
 PROJECT FILE NO: E00559E18
 CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION
CROSS SECTIONS (11 OF 15)

DATE: DECEMBER 2023
 DRAWING NO: **C211**
 SHT NO / TOTAL: 66 / 91
 REV NO: **0**

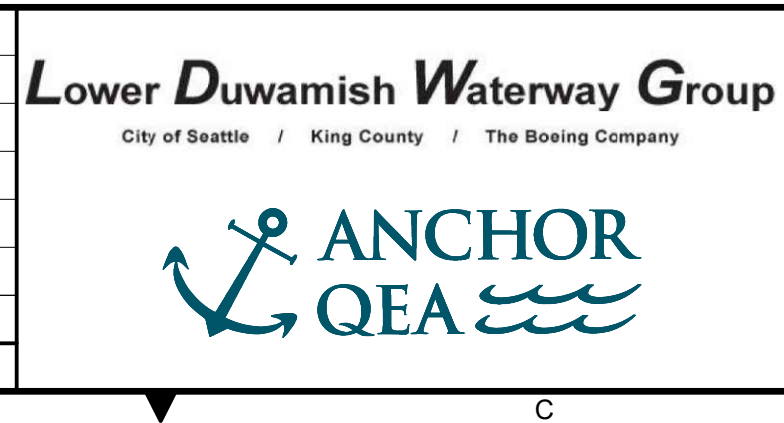
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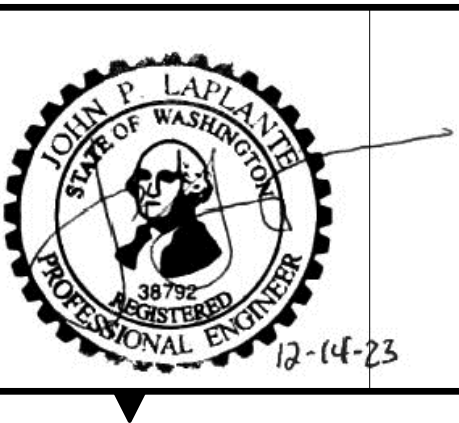
- LEGEND:**
- EXISTING GRADE MERGED DATA
 - USACE AUTHORIZED CHANNEL ELEVATION (-15' MLLW)
 - - - USACE MAINTENANCE ELEVATION (-17' MLLW)
 - · - · - INTERTIDAL/SUBTIDAL TRANSITION (-4' MLLW)
 - LOWEST HABITAT AREA ELEVATION (-10' MLLW)
 - VERTICAL SAMPLE LOCATION
 - REQUIRED DREDGING SURFACE
 - · - · - PAYABLE OVERDREDGE ALLOWANCE
 - BACKFILL TARGETED PLACEMENT SURFACE
- NOTES:**
- VERTICAL DATUM: MLLW
 - ENR, RMC, AND AMENDED COVER PLACEMENT NOT SHOWN ON CROSS SECTIONS. SEE DETAILS 1 AND 3/C304.

COLOR IMAGE
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 DECEMBER 2023



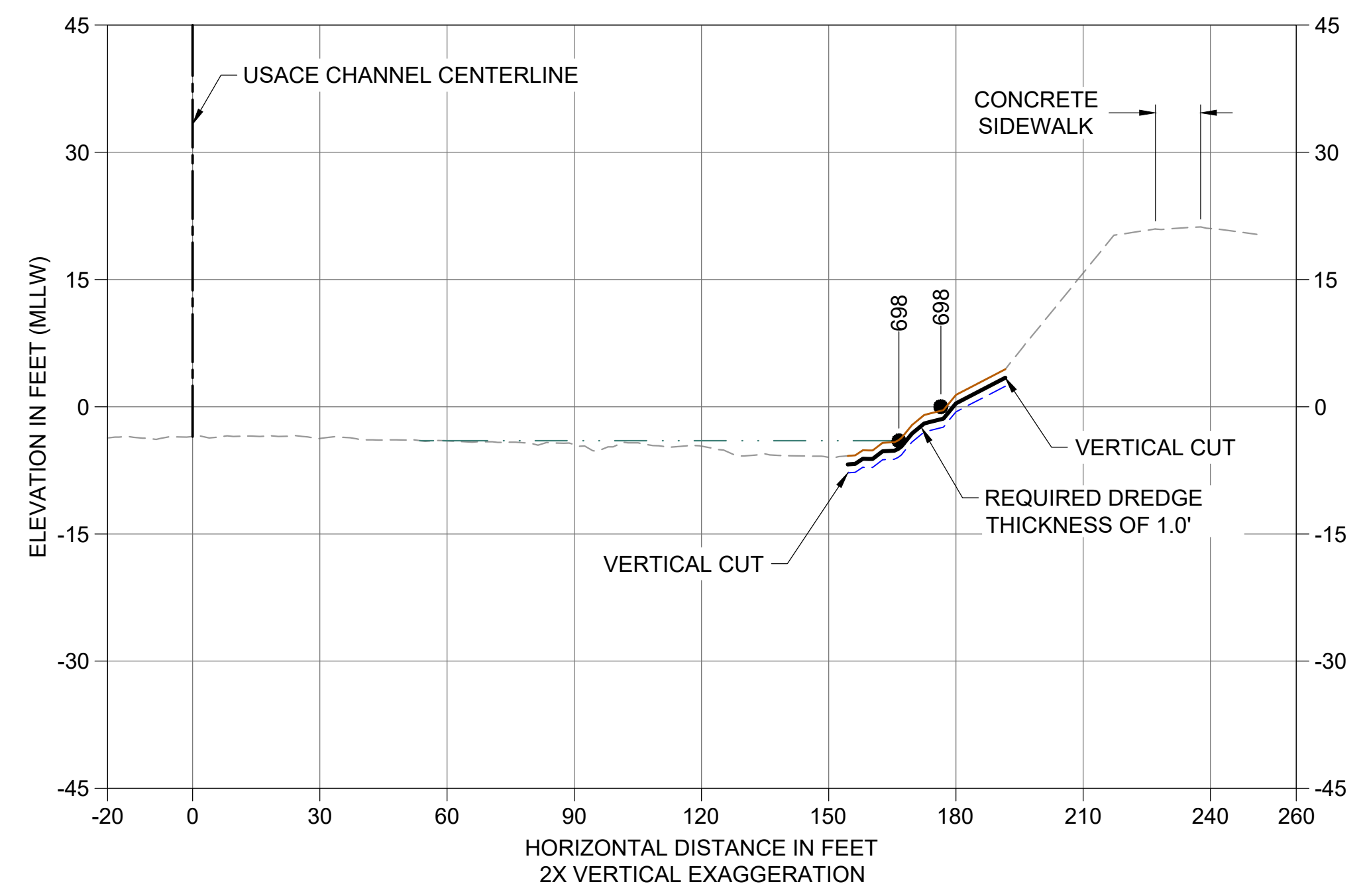
DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



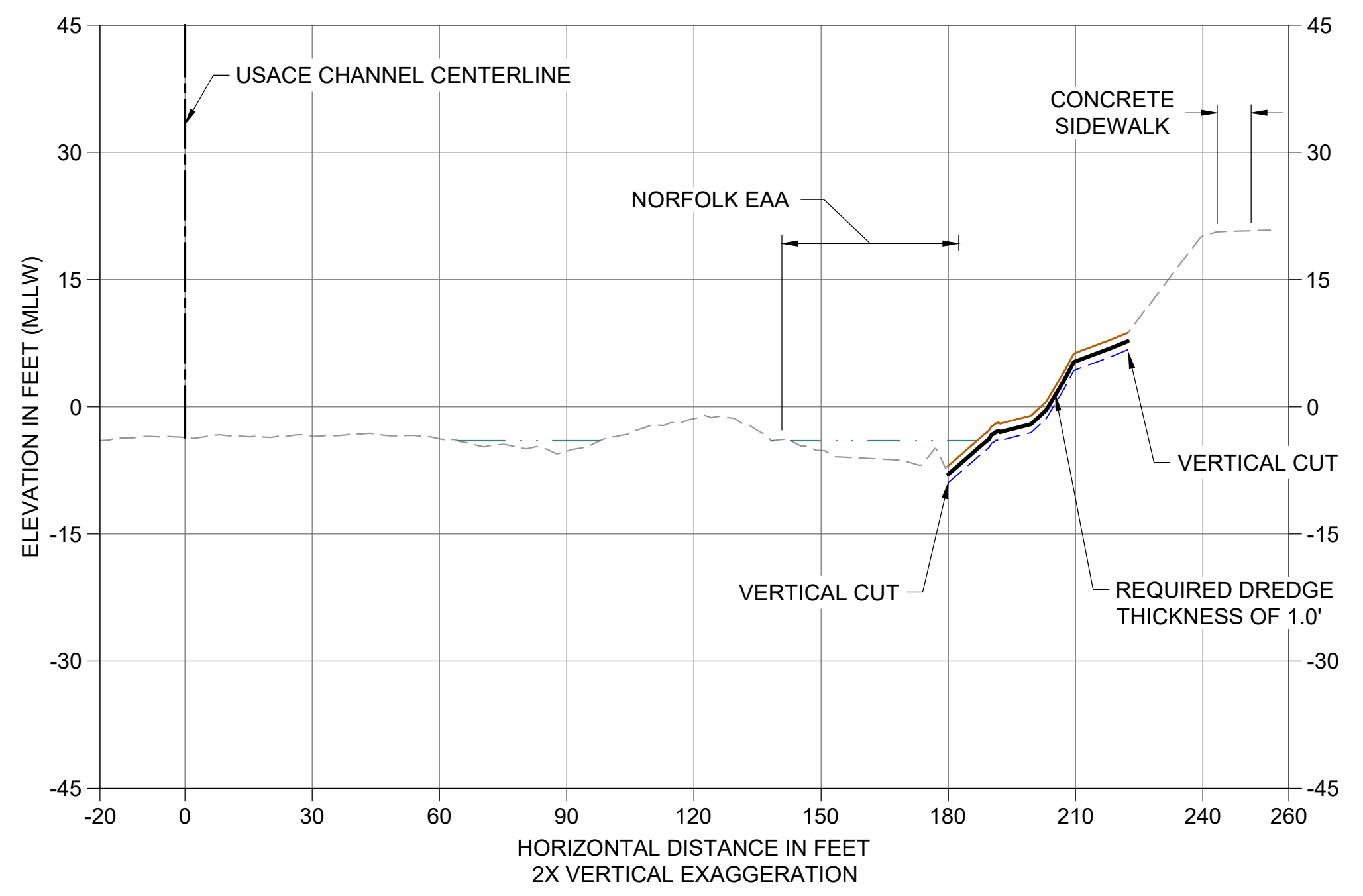
DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION
CROSS SECTIONS (12 OF 15)

DATE: DECEMBER 2023
 DRAWING NO: **C212**
 SHT NO / TOTAL: 67 / 91
 REV NO: **0**

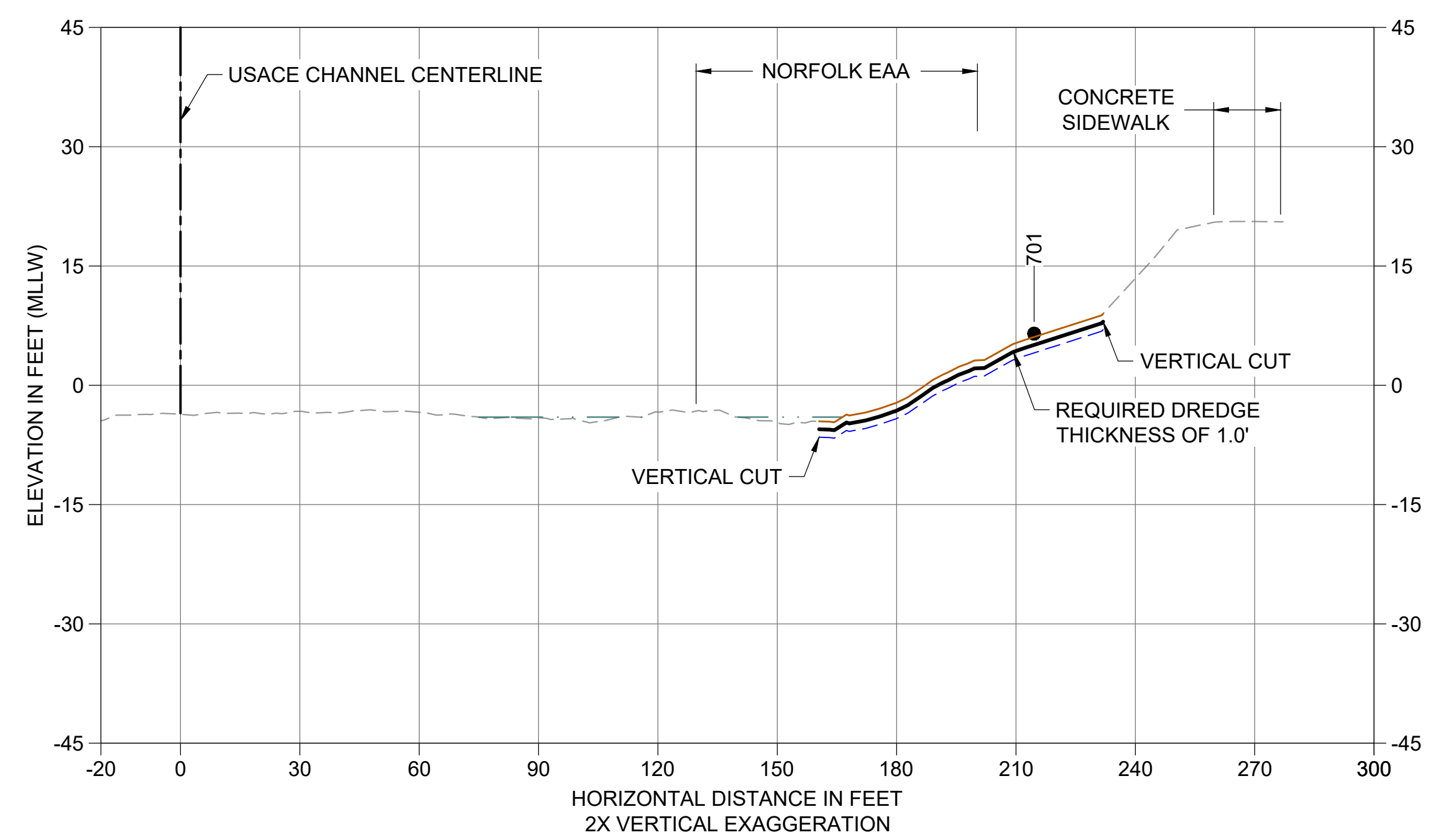
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 PLOTTED: Jan 12, 2024 11:02:22am By jlgaby



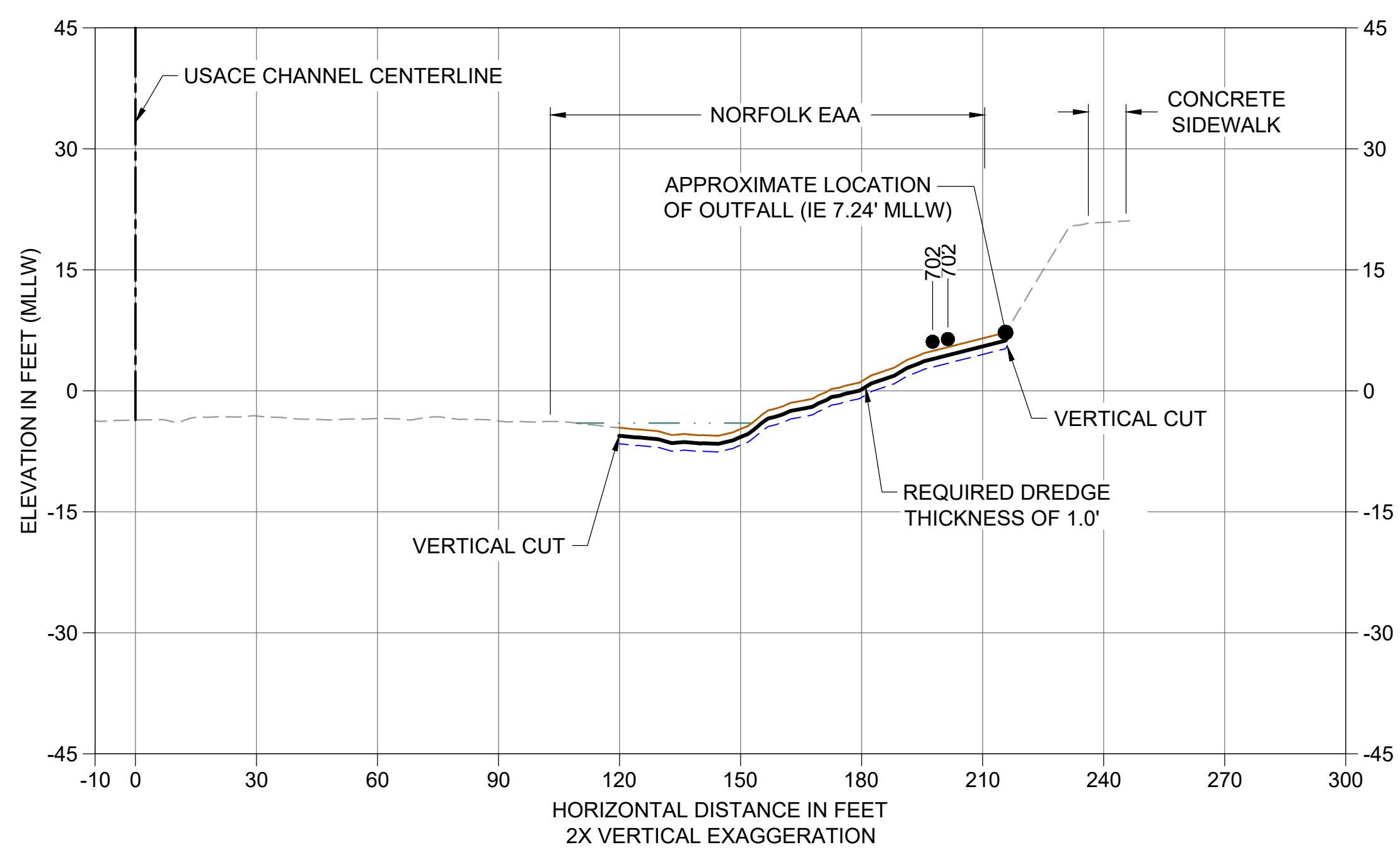
AW CROSS SECTION SMA 1B
 C112 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



AX CROSS SECTION SMA 1A
 C112 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



AY CROSS SECTION SMA 1A
 C112 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'



AZ CROSS SECTION SMA 1A
 C112 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'

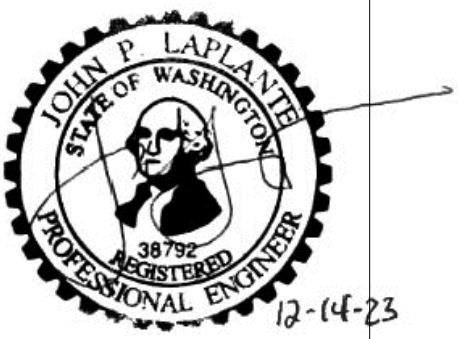
- LEGEND:**
- EXISTING GRADE MERGED DATA
 - USACE AUTHORIZED CHANNEL ELEVATION (-15' MLLW)
 - - - USACE MAINTENANCE ELEVATION (-17' MLLW)
 - · - · - INTERTIDAL/SUBTIDAL TRANSITION (-4' MLLW)
 - LOWEST HABITAT AREA ELEVATION (-10' MLLW)
 - VERTICAL SAMPLE LOCATION
 - REQUIRED DREDGING SURFACE
 - - - PAYABLE OVERDREDGE ALLOWANCE
 - BACKFILL TARGETED PLACEMENT SURFACE
- NOTES:**
1. VERTICAL DATUM: MLLW
 2. ENR, RMC, AND AMENDED COVER PLACEMENT NOT SHOWN ON CROSS SECTIONS. SEE DETAILS 1 AND 3/C304.

COLOR IMAGE
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INFORMATION ONLY
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 DECEMBER 2023



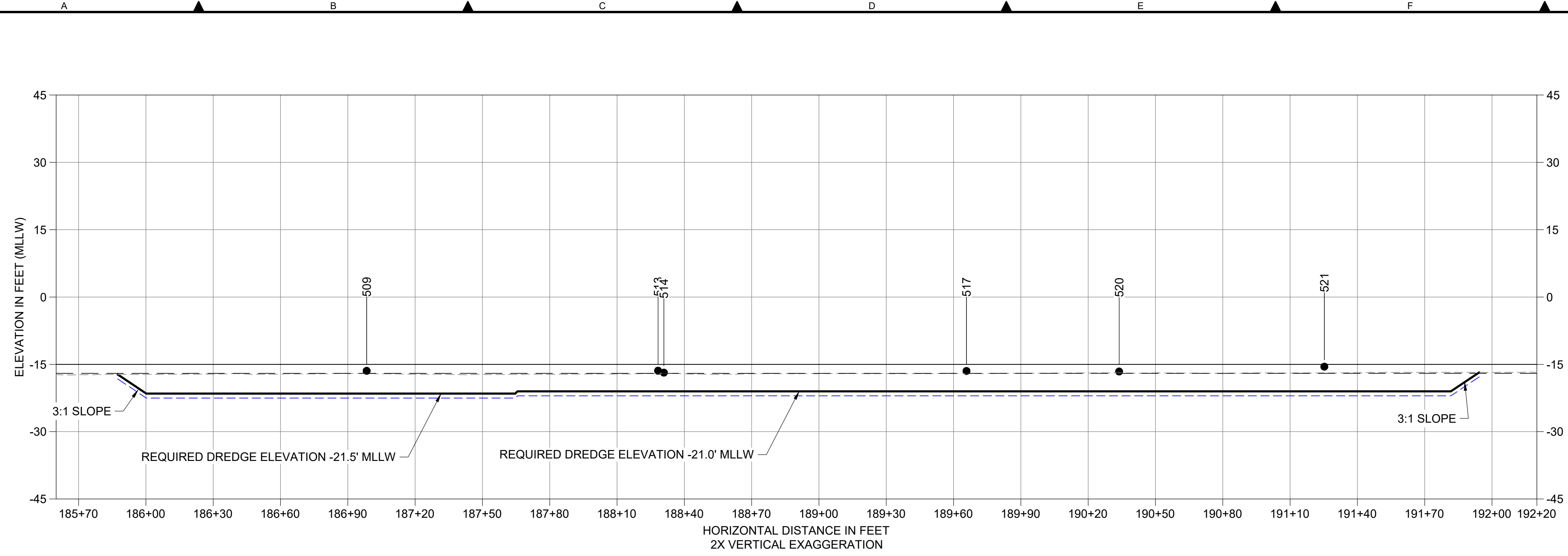
DESIGNED/DRAWN: BIGSBY/GRIGA
 PROJECT ENGINEER: J. LAPLANTE
 DESIGN APPROVAL: J. ABDALKHANI
 PROJECT ACCEPTANCE: G. STEINER
 CHECKED: K. GROSS
 SCALE: AS NOTED
 PROJECT FILE NO: E00559E18
 CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION
CROSS SECTIONS (13 OF 15)

DATE: DECEMBER 2023
 DRAWING NO: **C213**
 SHT NO / TOTAL: 68 / 91
 REV NO: **0**

BORDER FILE EDITION: x:\KOV\TD-Size-TB-Border_ACB\Layer
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 PLOTTED: Jan 12, 2024 11:03:08am By jigsby



1 SMA 18 AND 17 LONGITUDINAL SECTION
 C101 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'

- LEGEND:
- EXISTING GRADE MERGED DATA
 - USACE AUTHORIZED CHANNEL ELEVATION (-15' MLLW)
 - USACE MAINTENANCE ELEVATION (-17' MLLW)
 - INTERTIDAL/SUBTIDAL TRANSITION (-4' MLLW)
 - · - · - · - LOWEST HABITAT AREA ELEVATION (-10' MLLW)
 - VERTICAL SAMPLE LOCATION
 - REQUIRED DREDGING SURFACE
 - PAYABLE OVERDREDGE ALLOWANCE
- NOTES:
1. VERTICAL DATUM: MLLW
 2. ENR, RMC, AND AMENDED COVER PLACEMENT NOT SHOWN ON CROSS SECTIONS. SEE DETAILS 1 AND 3/C304.

COLOR IMAGE
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FINAL ISSUE DRAWING
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 DECEMBER 2023



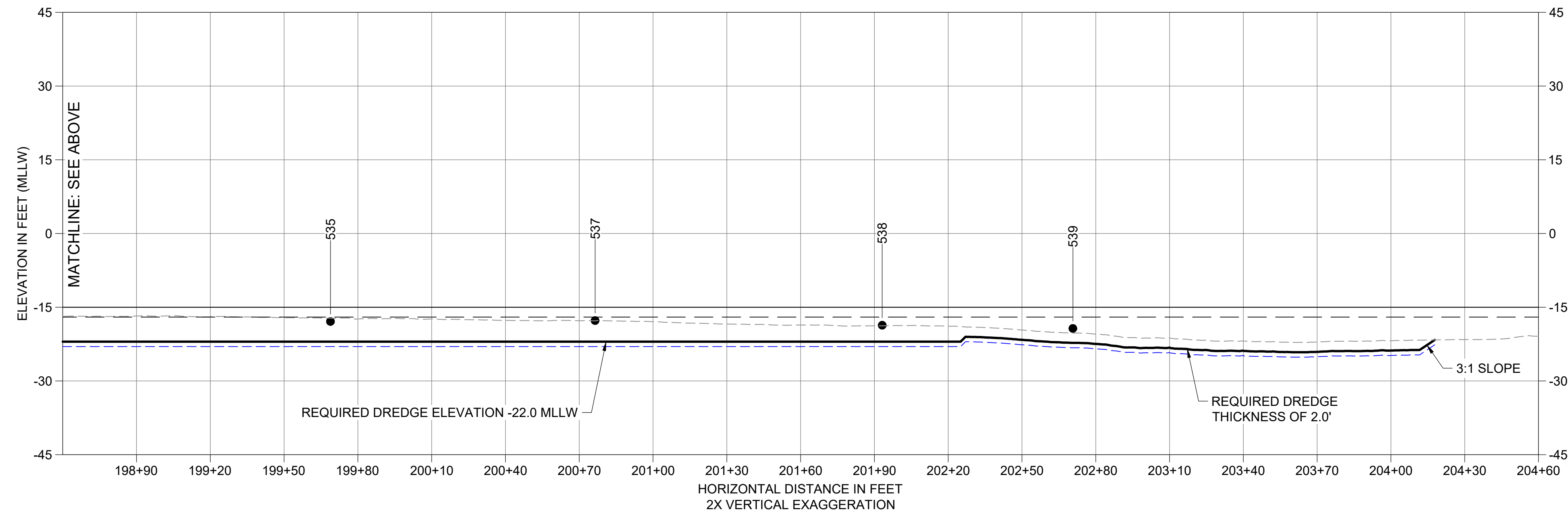
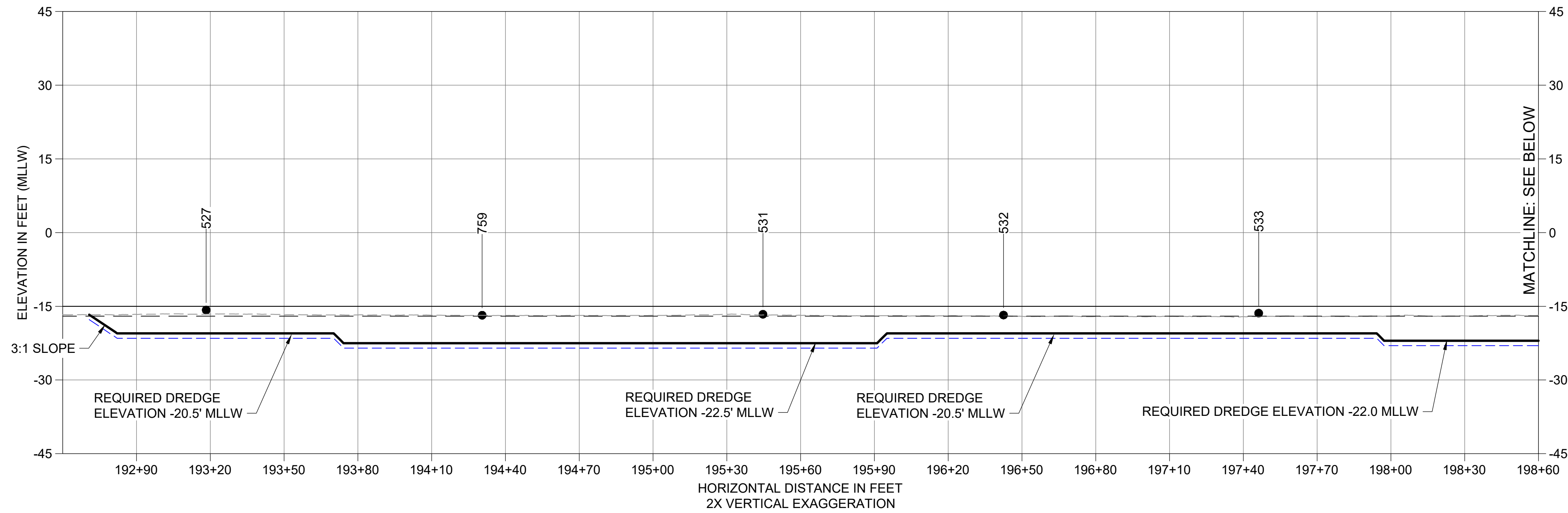
DESIGNED/DRAWN: BIGSBY/GRIGA	CHECKED: K. GROSS
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

CROSS SECTIONS (14 OF 15)

DATE: DECEMBER 2023
DRAWING NO: C214
SHT NO / TOTAL 69 / 91
REV NO: 0



- LEGEND:**
- EXISTING GRADE MERGED DATA
 - USACE AUTHORIZED CHANNEL ELEVATION (-15' MLLW)
 - - - USACE MAINTENANCE ELEVATION (-17' MLLW)
 - · - · - INTERTIDAL/SUBTIDAL TRANSITION (-4' MLLW)
 - LOWEST HABITAT AREA ELEVATION (-10' MLLW)
 - VERTICAL SAMPLE LOCATION
 - REQUIRED DREDGING SURFACE
 - - - PAYABLE OVERDREDGE ALLOWANCE

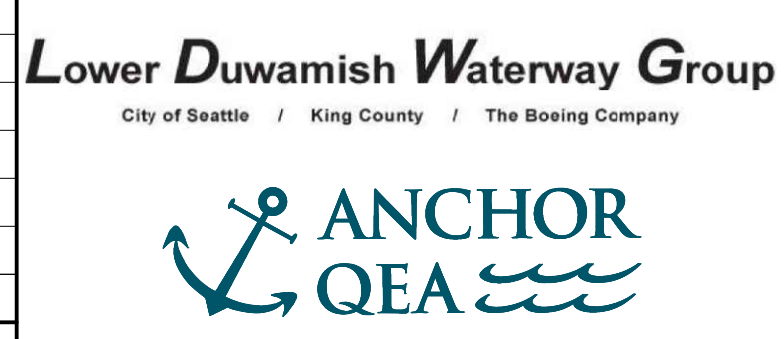
- NOTES:**
1. VERTICAL DATUM: MLLW
 2. ENR, RMC, AND AMENDED COVER PLACEMENT NOT SHOWN ON CROSS SECTIONS. SEE DETAILS 1 AND 3/C304.

2 SMA 16,15, AND 14D LONGITUDINAL SECTION
 C102 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 15'

COLOR IMAGE
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 PLOTTED: Jan 12, 2024 11:05:07am By jigsby

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DESIGNED/DRAWN: BIGSBY/GRIGA
 PROJECT ENGINEER: J. LAPLANTE
 DESIGN APPROVAL: J. ABDALKHANI
 PROJECT ACCEPTANCE: G. STEINER

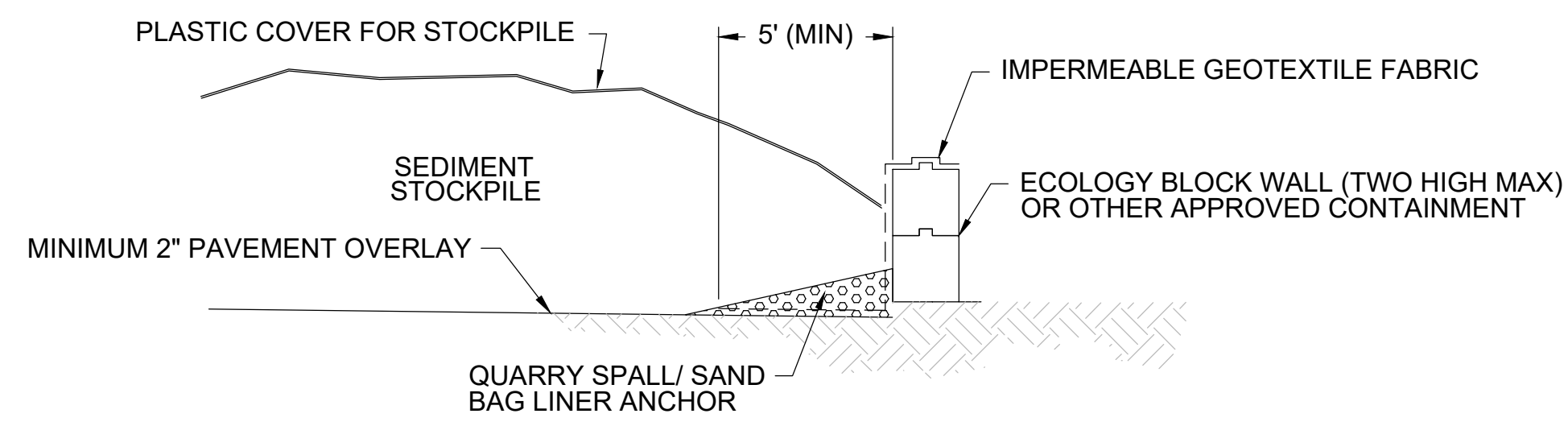
CHECKED: K. GROSS
 SCALE: AS NOTED
 PROJECT FILE NO: E00559E18
 CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

CROSS SECTIONS (15 OF 15)

DATE: DECEMBER 2023
 DRAWING NO: **C215**
 SHT NO / TOTAL: 70 / 91
 REV NO: **0**



STOCKPILE CONTAINMENT

DETAIL 1
SCALE: NONE

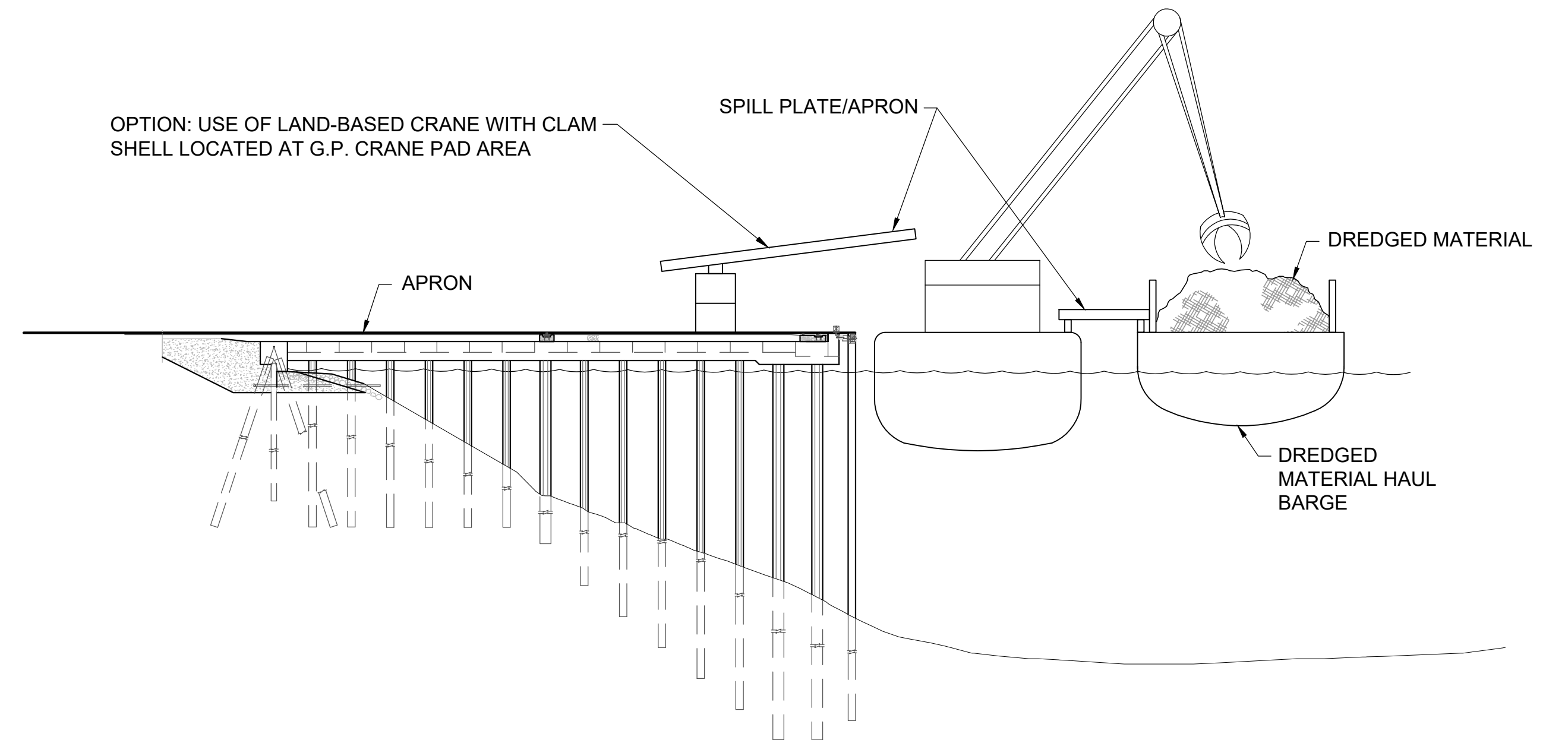
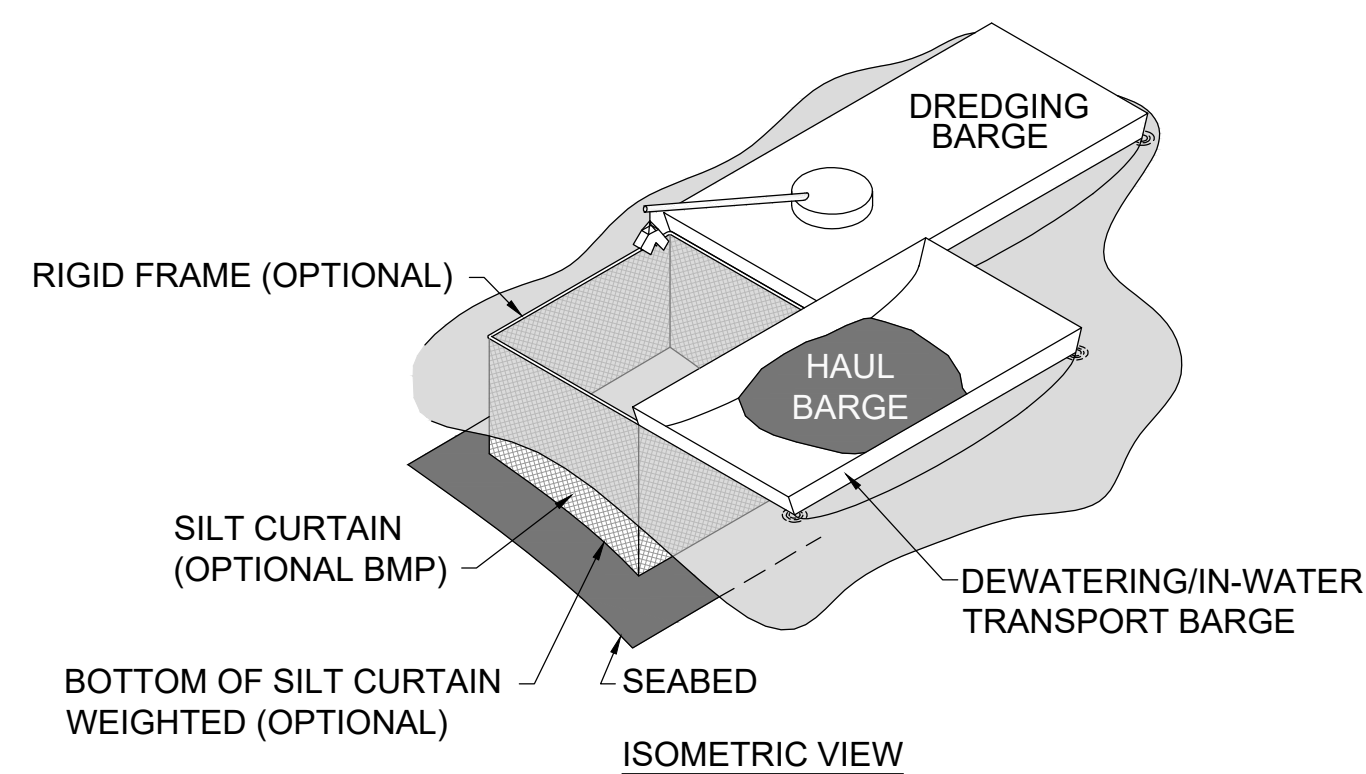


PHOTO 1: EXAMPLE OF OFFLOADING OPERATIONAL CONTROLS



PHOTO 2: EXAMPLE OF OFFLOADING OPERATIONAL CONTROLS



CONCEPTUAL WATER QUALITY PROTECTION BARRIER ARRANGEMENTS

DETAIL 2
SCALE: NONE

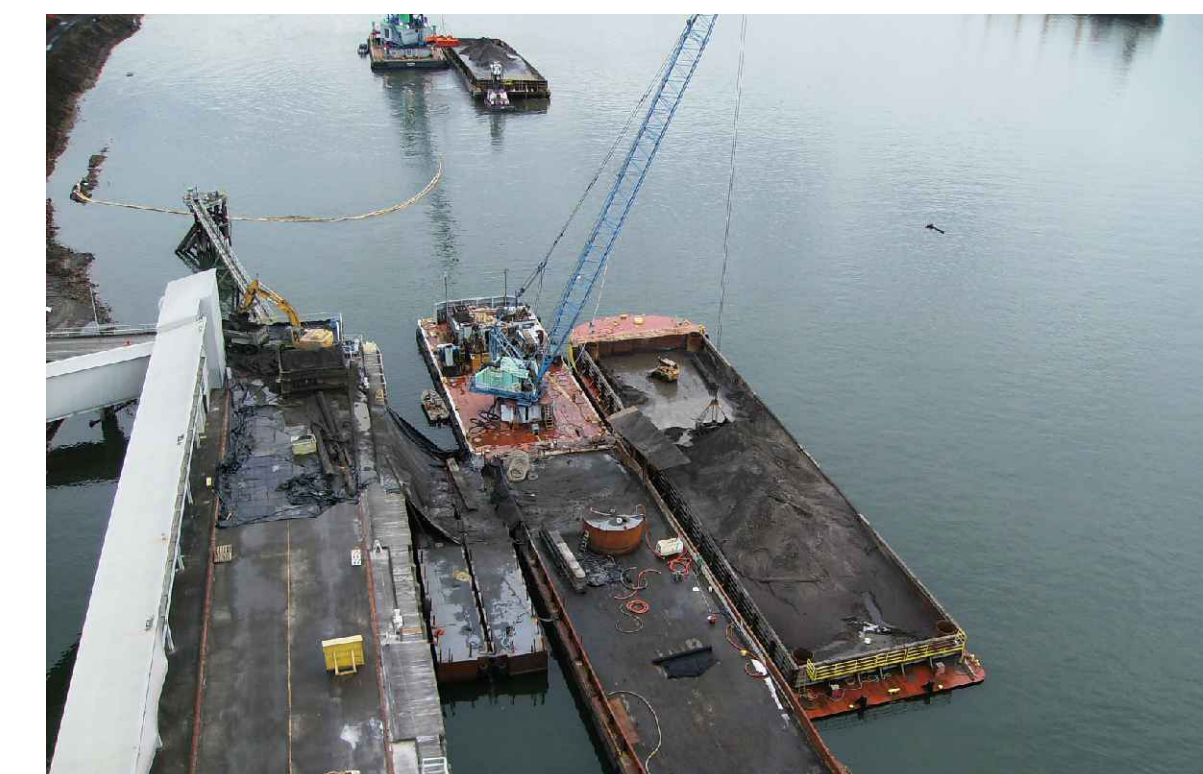


PHOTO 3: EXAMPLE OF OFFLOADING TO TRUCKS OPERATIONAL CONTROLS

OFFLOAD FROM HAUL BARGE

DETAIL 3
SCALE: NONE

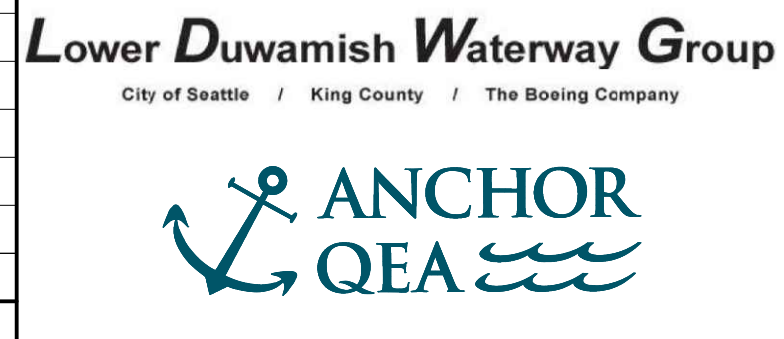
NOTE:

1. THIS SHEET SHOWS EXAMPLES OF BMP CONTROLS FOR STAGING AND STOCKPILING, OFFLOADING, AND WATER QUALITY MANAGEMENT. THE CONTRACTOR SHALL PROVIDE PROPOSED BMP'S IN THE REMEDIAL ACTION WORK PLAN.

COLOR IMAGE
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PLOTTED: Jan 12, 2024 11:05:20am By jlgaby

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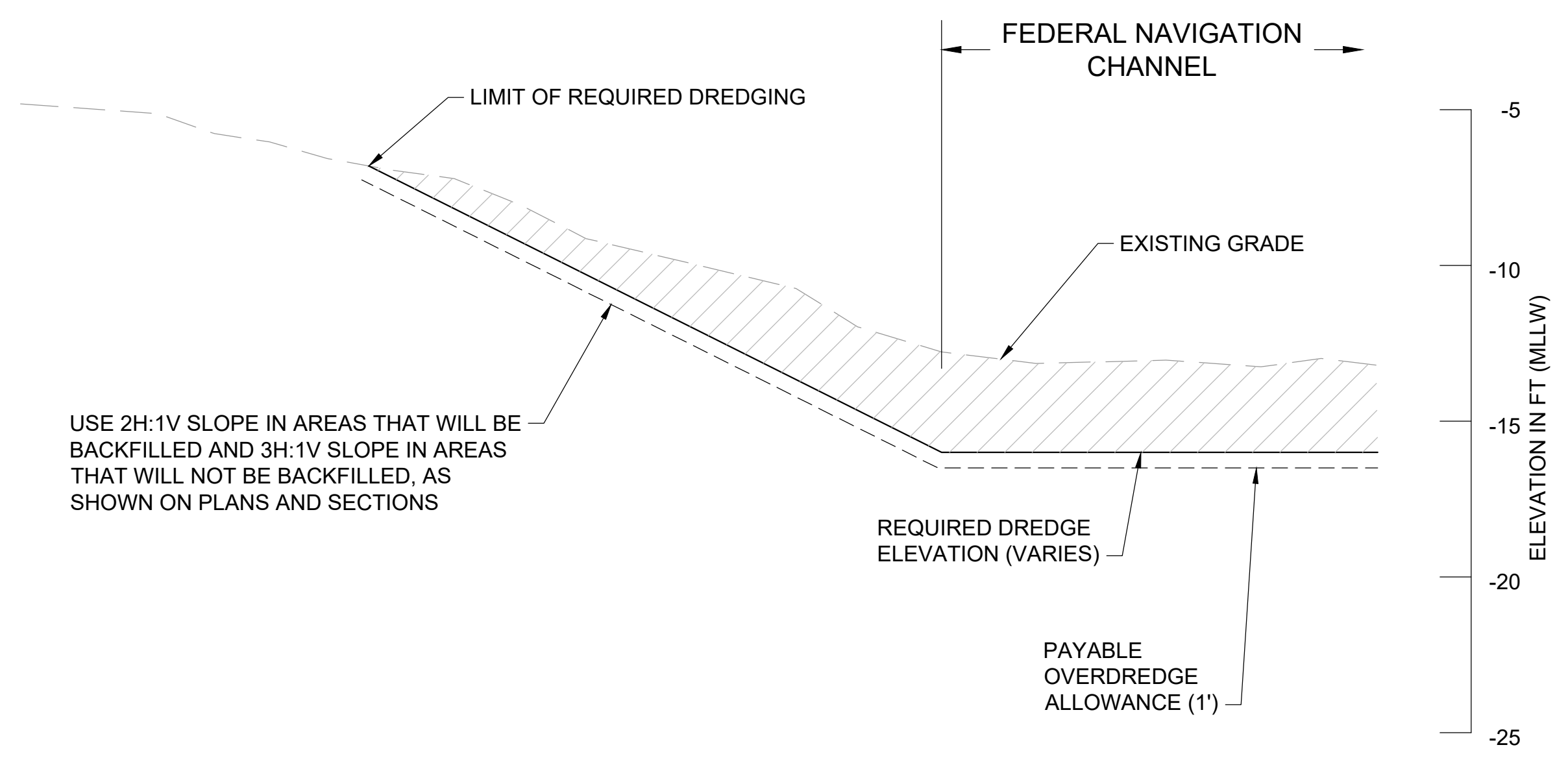
DESIGNED/DRAWN: BIGSBY/GRIGA
PROJECT ENGINEER: J. LAPLANTE
DESIGN APPROVAL: J. ABDALKHANI
PROJECT ACCEPTANCE: G. STEINER
CHECKED: K. GROSS
SCALE: AS NOTED
PROJECT FILE NO: E00559E18
CONTRACT NO: KC001065



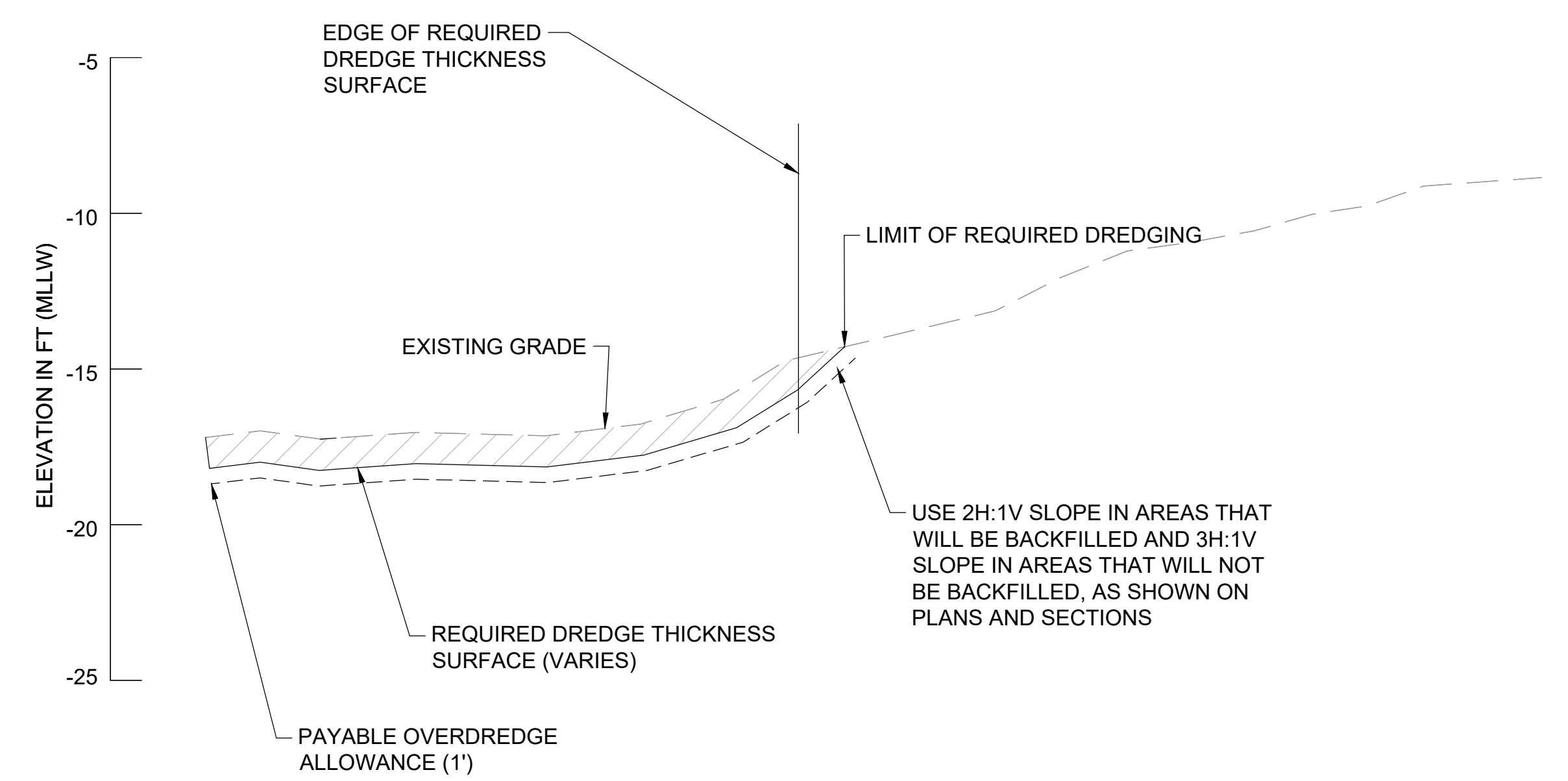
DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION
**OFFLOADING, STOCKPILING,
AND BMPs**

DATE: DECEMBER 2023
DRAWING NO: **C301**
SHT NO / TOTAL: 71 / 91
REV NO: **0**

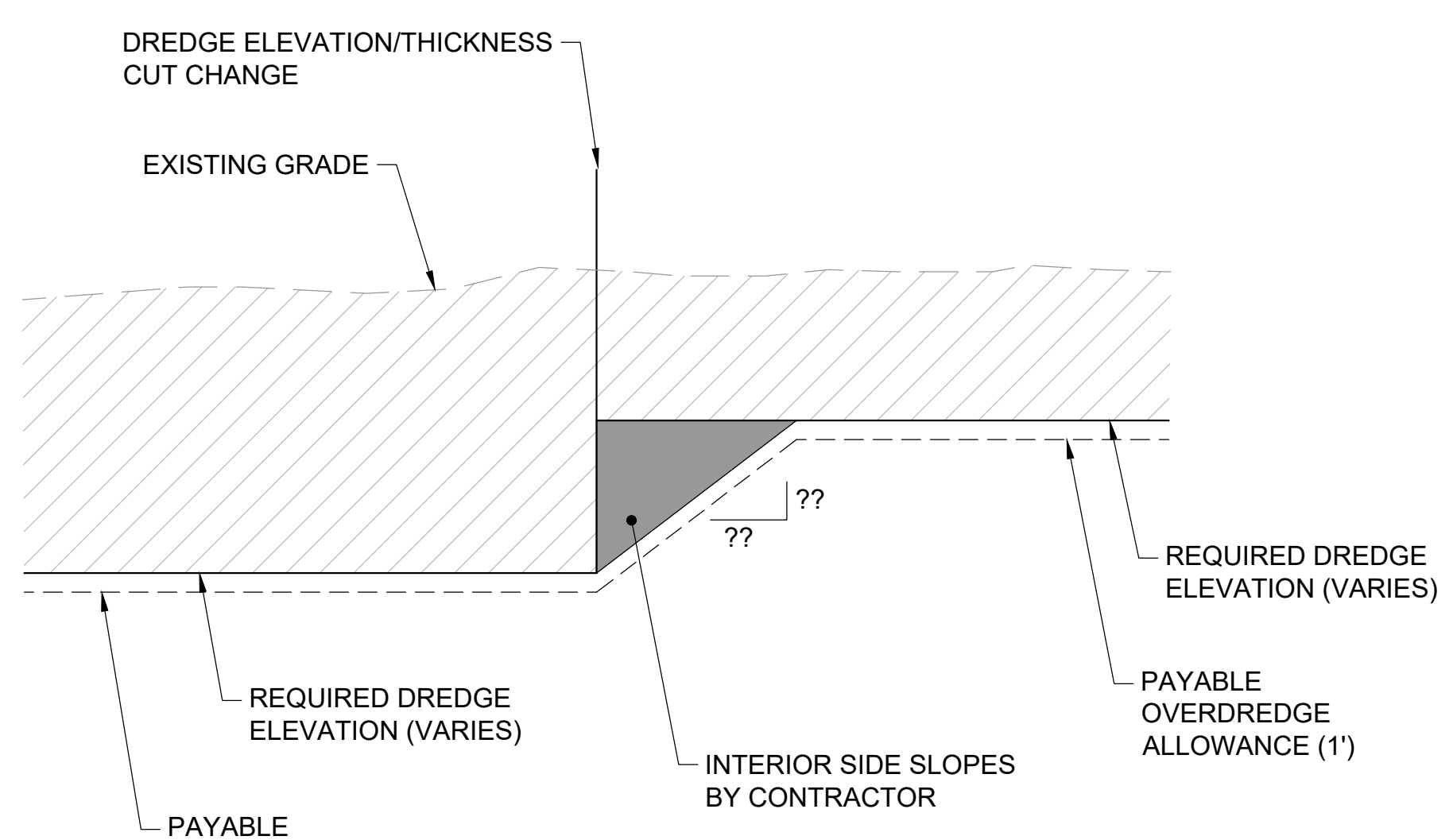
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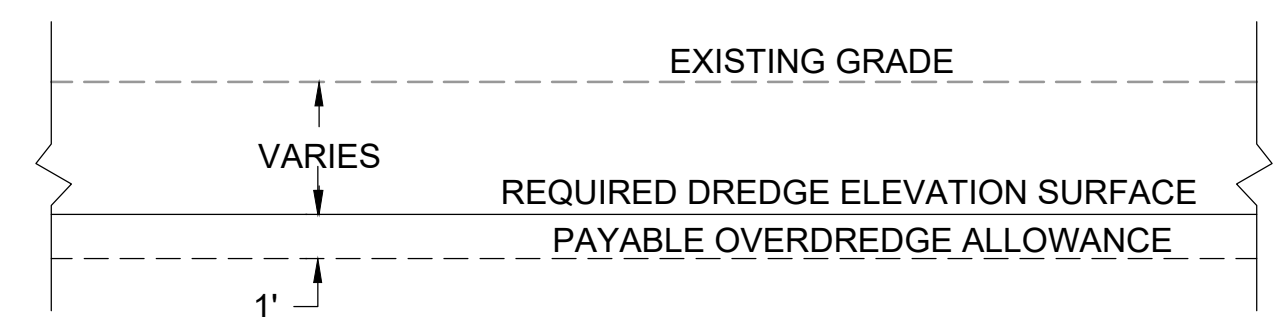
**TYPICAL DREDGING
 (REQUIRED DREDGE ELEVATION)**
 DETAIL 1
 SCALE: NONE



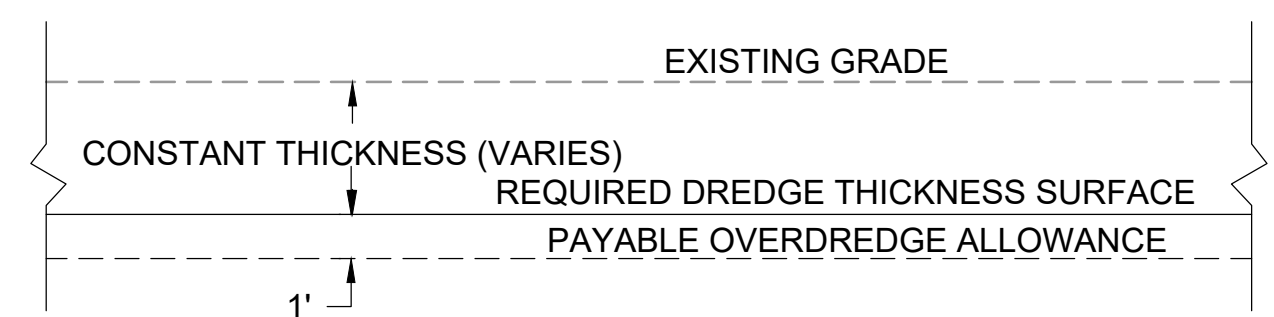
**TYPICAL DREDGING
 (REQUIRED DREDGE THICKNESS)**
 DETAIL 2
 SCALE: NONE



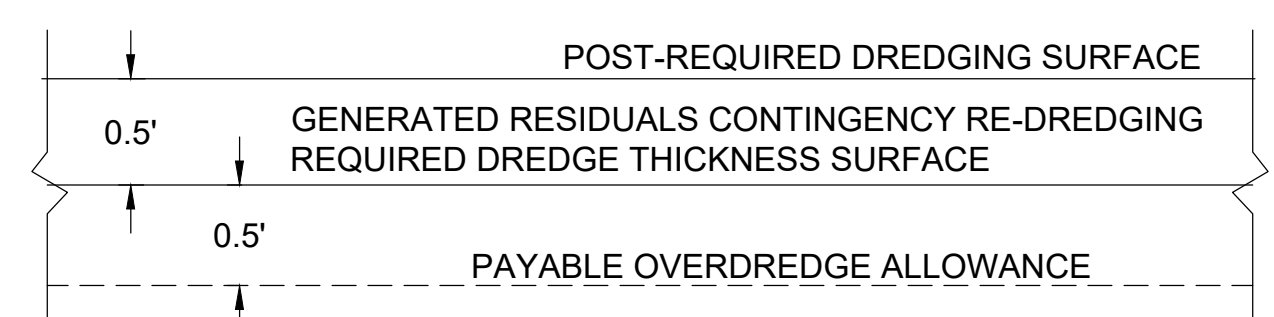
**TYPICAL DREDGING
 (INTERIOR SIDE SLOPES)**
 DETAIL 3
 SCALE: NONE



**REQUIRED DREDGING
 (REQUIRED DREDGE ELEVATION)**
 DETAIL 4
 SCALE: NONE

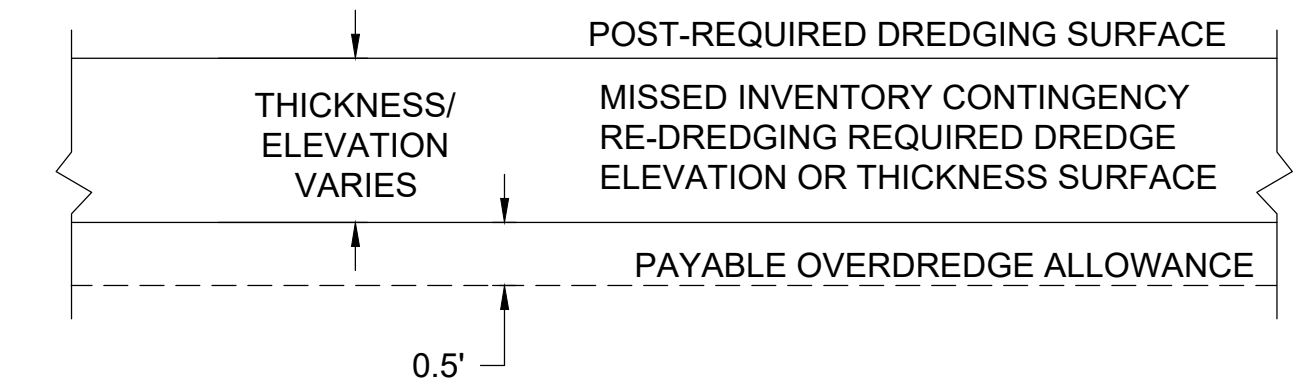


**REQUIRED DREDGING
 (REQUIRED DREDGE THICKNESS)**
 DETAIL 5
 SCALE: NONE



NOTE:
 1. GENERATED RESIDUALS CONTINGENCY RE-DREDGING LOCATIONS WILL BE DIRECTED BY THE PROJECT REPRESENTATIVE BASED ON POST-DREDGE CONSTRUCTION SEDIMENT SAMPLING TEST RESULTS.

**GENERATED RESIDUALS
 CONTINGENCY RE-DREDGING**
 DETAIL 6
 SCALE: NONE

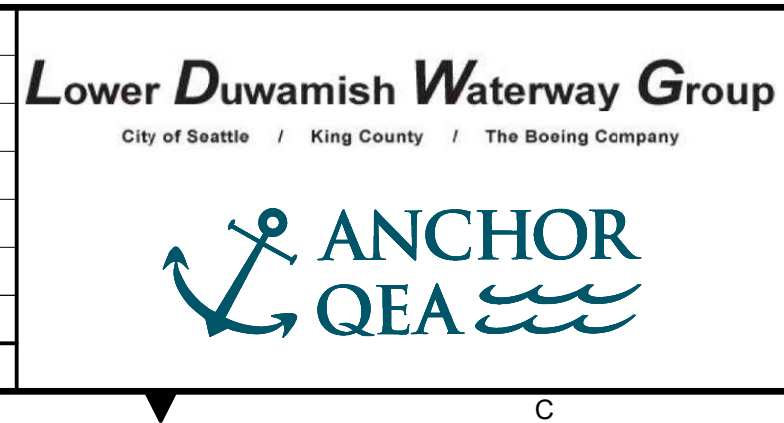


NOTE:
 1. MISSED INVENTORY CONTINGENCY RE-DREDGING LOCATIONS AND THICKNESS OR ELEVATION WILL BE DIRECTED BY THE PROJECT REPRESENTATIVE BASED ON POST-DREDGE CONSTRUCTION SEDIMENT SAMPLING TEST RESULTS.

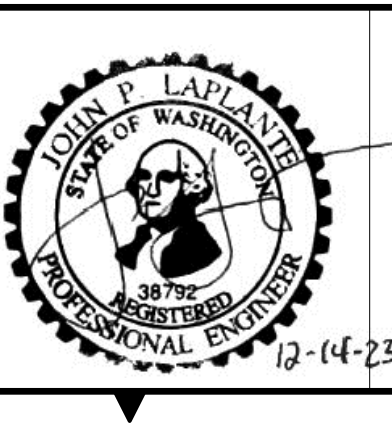
**MISSED INVENTORY
 CONTINGENCY RE-DREDGING**
 DETAIL 7
 SCALE: NONE

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 PROJECT ENGINEER: J. LAPLANTE
 DESIGN APPROVAL: J. ABDALKHANI
 PROJECT ACCEPTANCE: G. STEINER

CHECKED: K. GROSS
 SCALE: AS NOTED
 PROJECT FILE NO: E00559E18
 CONTRACT NO: KC001065

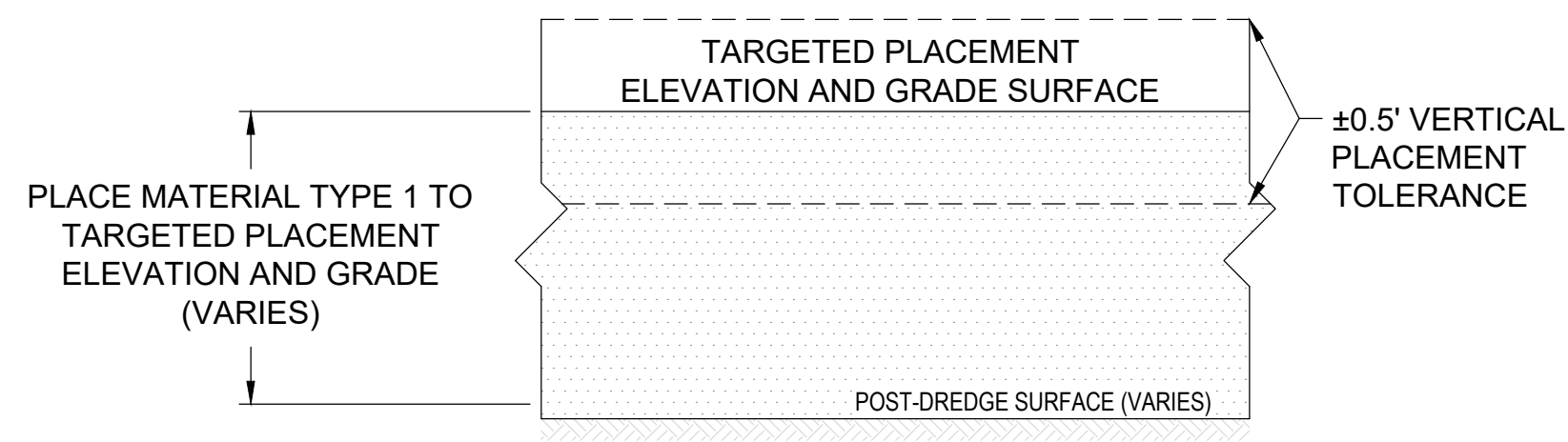


DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

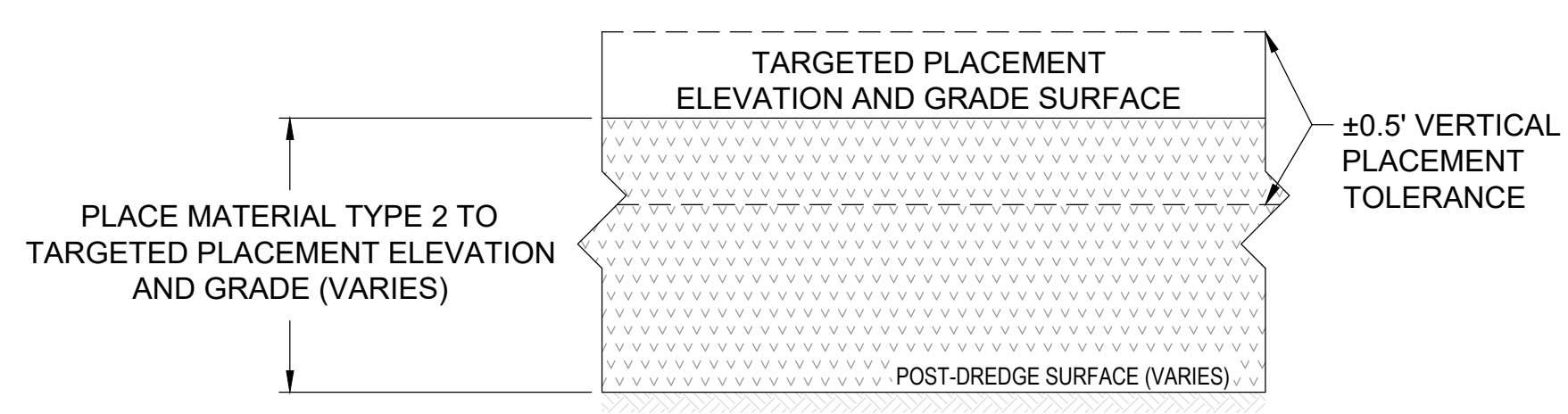
DREDGING DETAILS

DATE: DECEMBER 2023
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 SHT NO / TOTAL: 72 / 91
 REV NO: 0

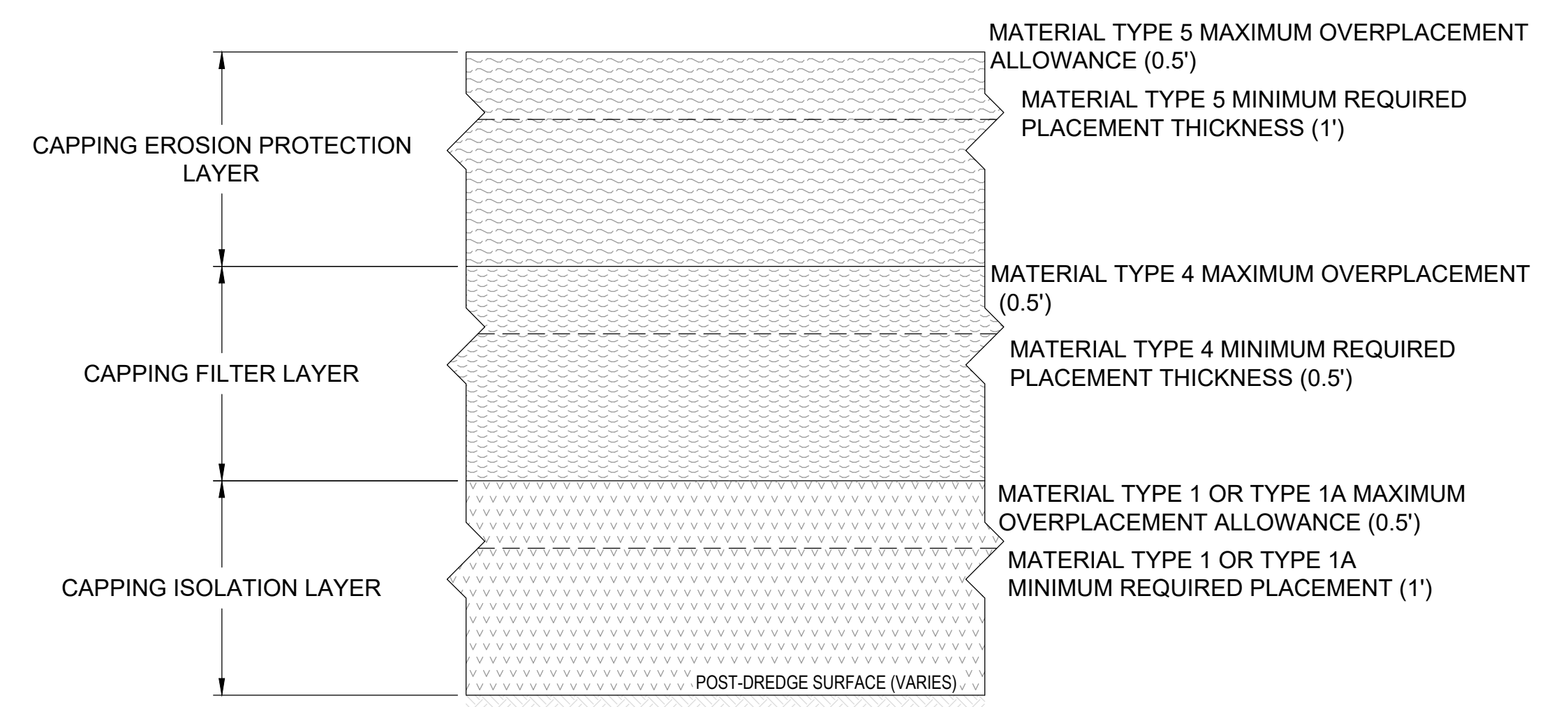
0 1" REFERENCE



BACKFILL A
DETAIL 1
 SCALE: NONE

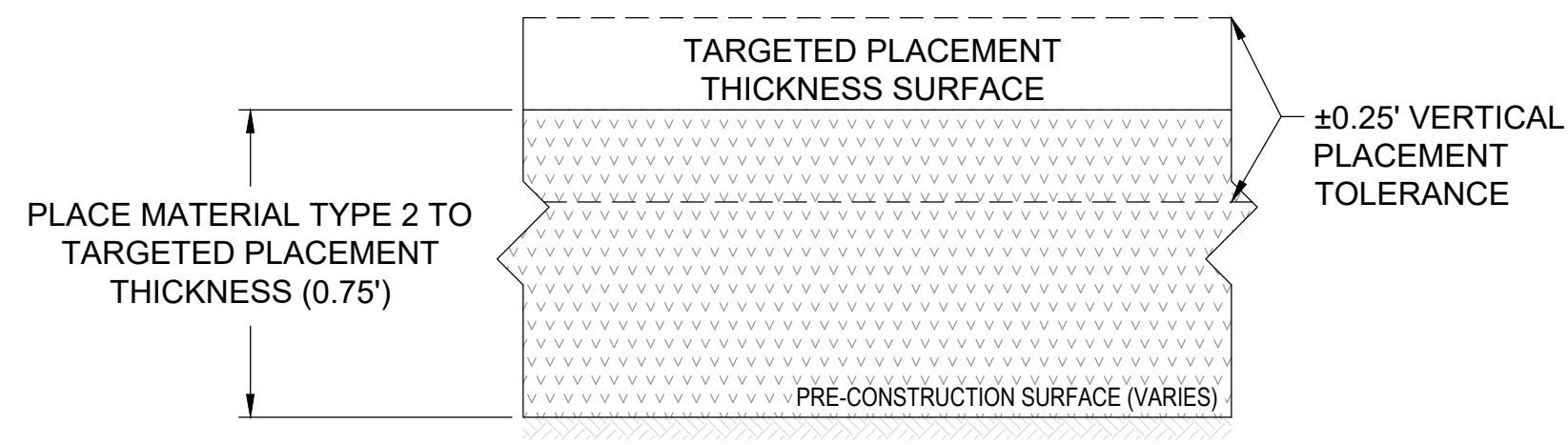


BACKFILL B
DETAIL 2
 SCALE: NONE

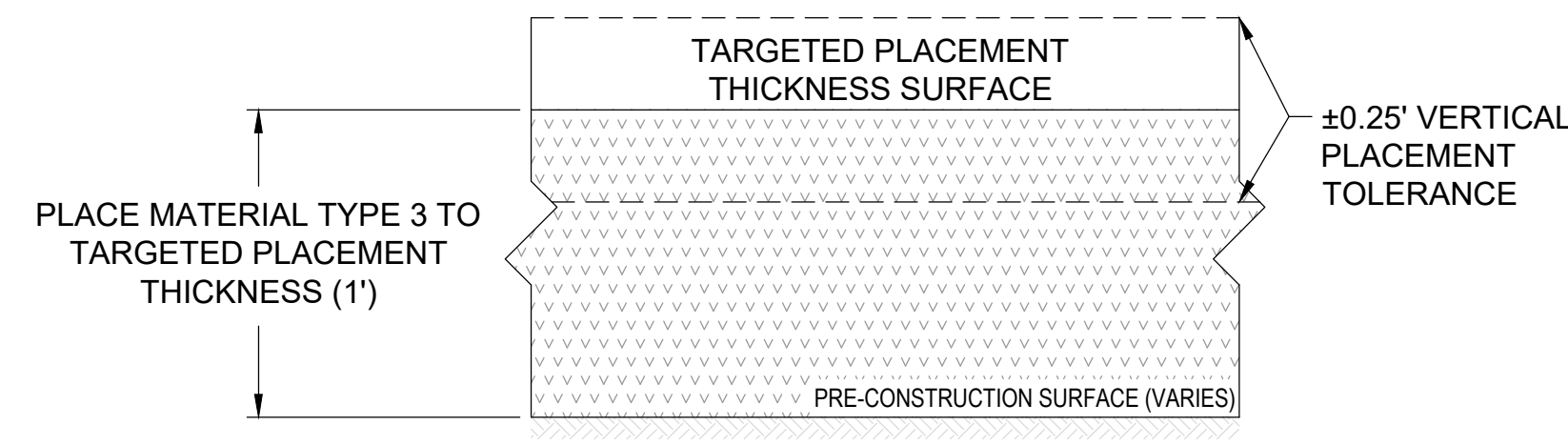


- NOTES:
- TOTAL ENGINEERED CAP PLACEMENT THICKNESS MAY VARY BETWEEN A MINIMUM THICKNESS OF 2.5' AND UP TO 4.0'.
 - THE MAXIMUM OVERPLACEMENT ALLOWANCE FOR EACH LAYER WILL BE PAYABLE.
 - ADDITIONAL PLACEMENT ABOVE 4.0' WILL BE CONSIDERED EXCESSIVE OVERPLACEMENT AND WILL NOT BE PAID.
 - TOP OF ENGINEERED CAP IN SMA 12B SHALL NOT BE ABOVE -19' MLLW.
 - PROJECT REPRESENTATIVE MAY DIRECT THE CONTRACTOR TO REMOVE EXCESSIVE OVERPLACEMENT AT NO EXTRA COST TO THE COUNTY.

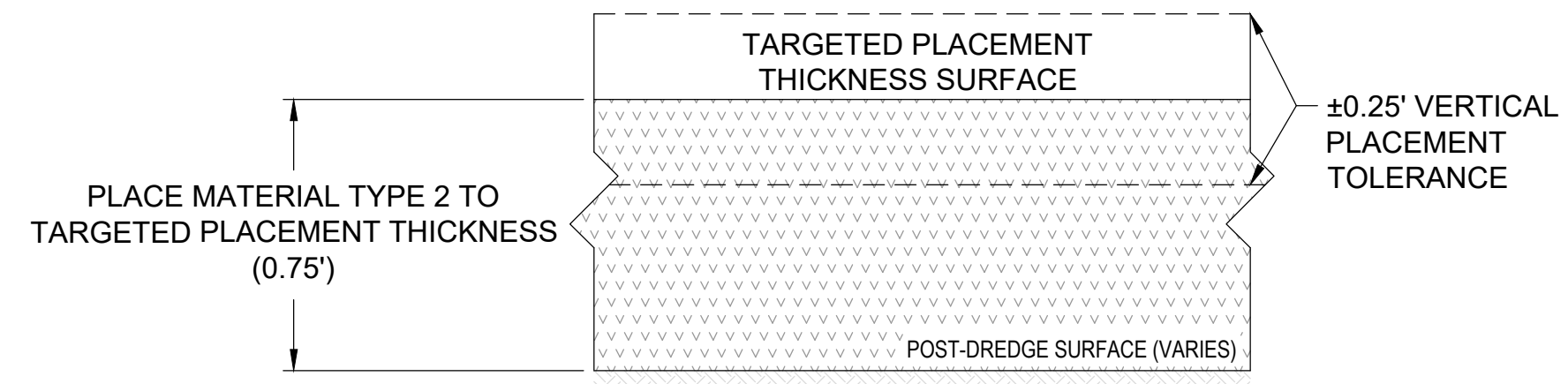
ENGINEERED CAP B
DETAIL 5
 SCALE: NONE



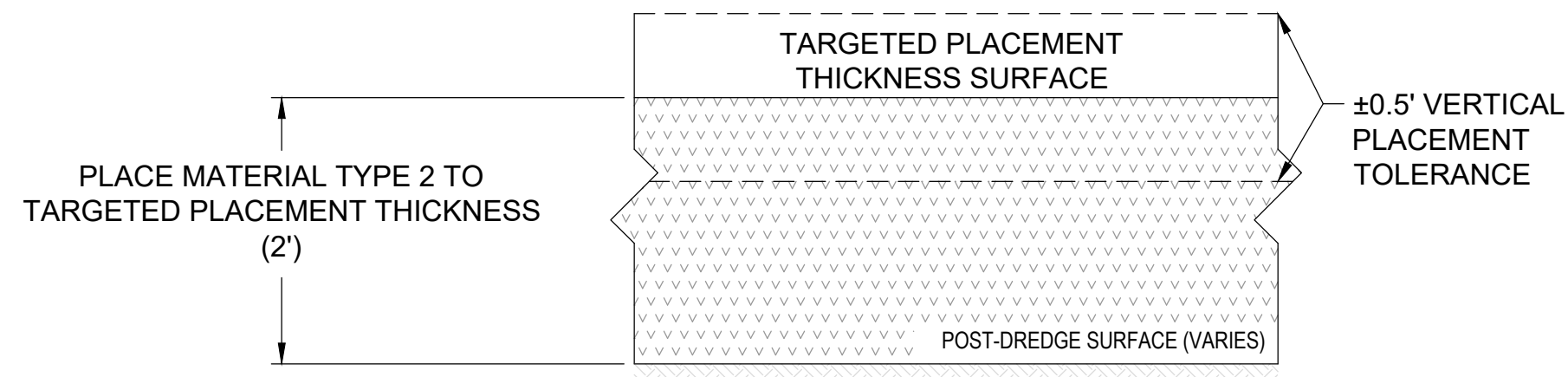
ENR
DETAIL 3
 SCALE: NONE



AMENDED COVER
DETAIL 4
 SCALE: NONE



REQUIRED RMC (WITHIN DREDGE FOOTPRINT), INNER PERIMETER RMC, AND CONTINGENT OUTER PERIMETER RMC
DETAIL 6
 SCALE: NONE



REQUIRED RMC ON SIDE SLOPES
DETAIL 7
 SCALE: NONE

COLOR IMAGE
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 PLOTTED: Jan 12, 2024 11:05:24am By jlgaby

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 PROJECT ENGINEER: J. LAPLANTE
 DESIGN APPROVAL: J. ABDALKHANI
 PROJECT ACCEPTANCE: G. STEINER

CHECKED: K. GROSS
 SCALE: AS NOTED
 PROJECT FILE NO: E00559E18
 CONTRACT NO: KC001065

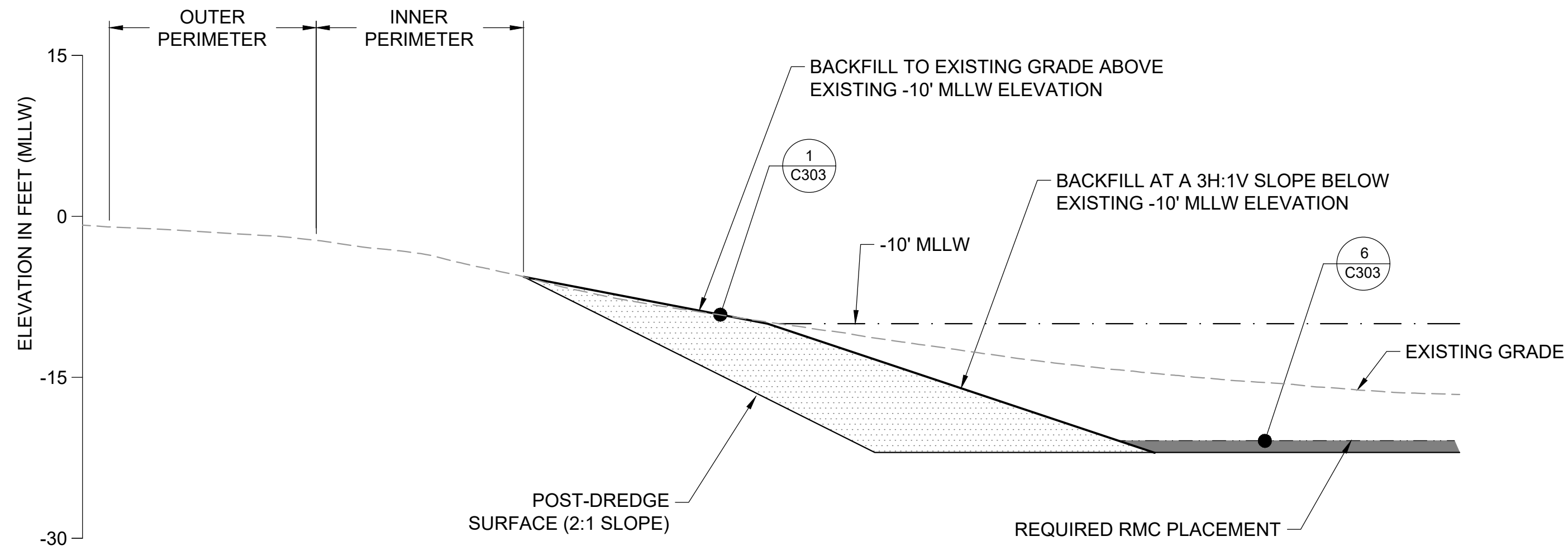


DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

MATERIAL PLACEMENT DETAILS
(1 OF 3)

DATE: DECEMBER 2023
 DRAWING NO: **C303**
 SHT NO / TOTAL: 73 / 91
 REV NO: **0**

1" REFERENCE

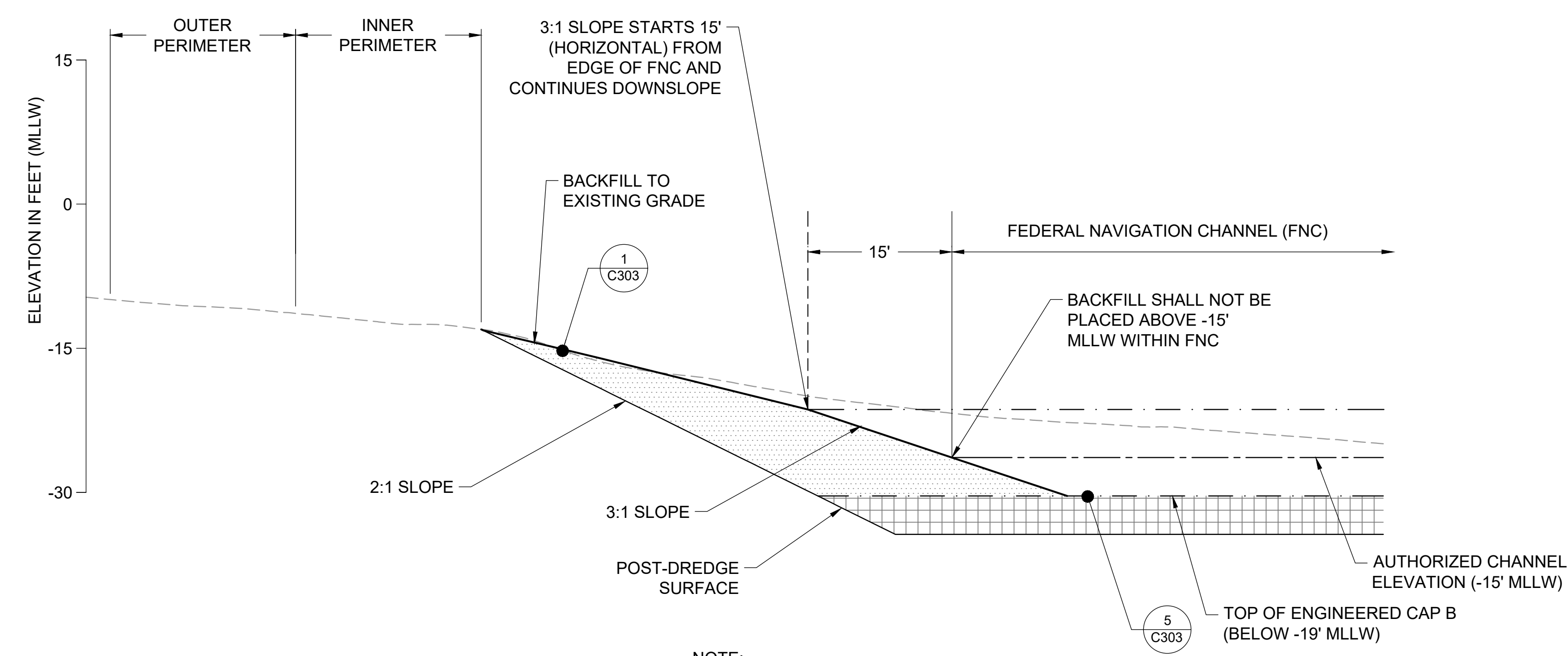


- LEGEND:
- EXISTING GRADE
 - POST DREDGE SURFACE
 - █ REQUIRED RMC PLACEMENT
 - ▨ BACKFILL
 - ||||| ENGINEERED CAP

BACKFILL A PLACEMENT ABOVE AND BELOW EXISTING -10' MLLW ELEVATION AND TRANSITION TO REQUIRED RMC PLACEMENT

NOTE:
1. PLACE BACKFILL BEFORE PLACING REQUIRED RMC.

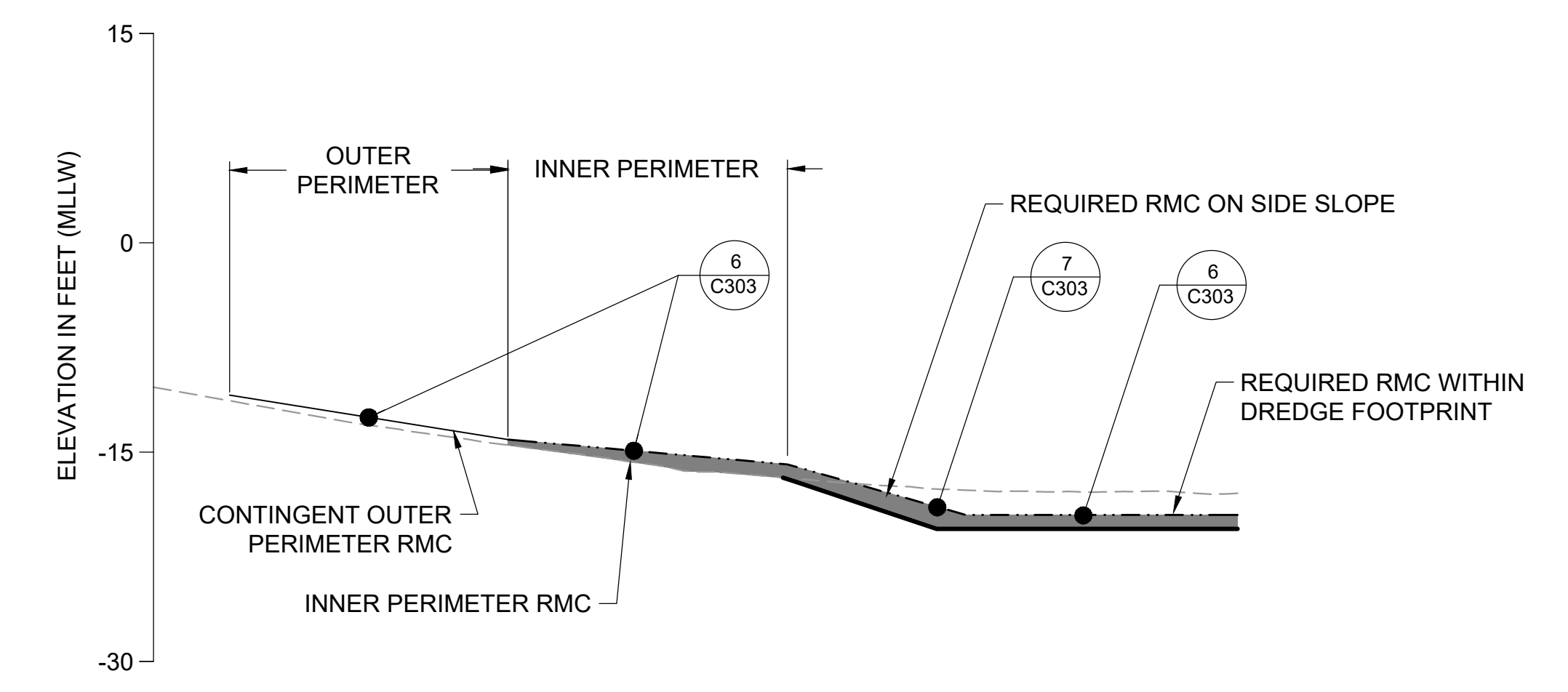
DETAIL 1
SCALE: NONE



NOTE:
1. PLACE ENGINEERED CAP BEFORE PLACING BACKFILL

BACKFILL DETAIL FOR SMA 12B

DETAIL 2
SCALE: NONE



NOTE:
1. INNER PERIMETER RMC AND CONTINGENT OUTER PERIMETER RMC PLACEMENT ARE SHOWN ON DRAWINGS C151 THROUGH 162.

REQUIRED RMC PLACEMENT AND INNER AND OUTER PERIMETERS

DETAIL 3
SCALE: NONE

COLOR IMAGE
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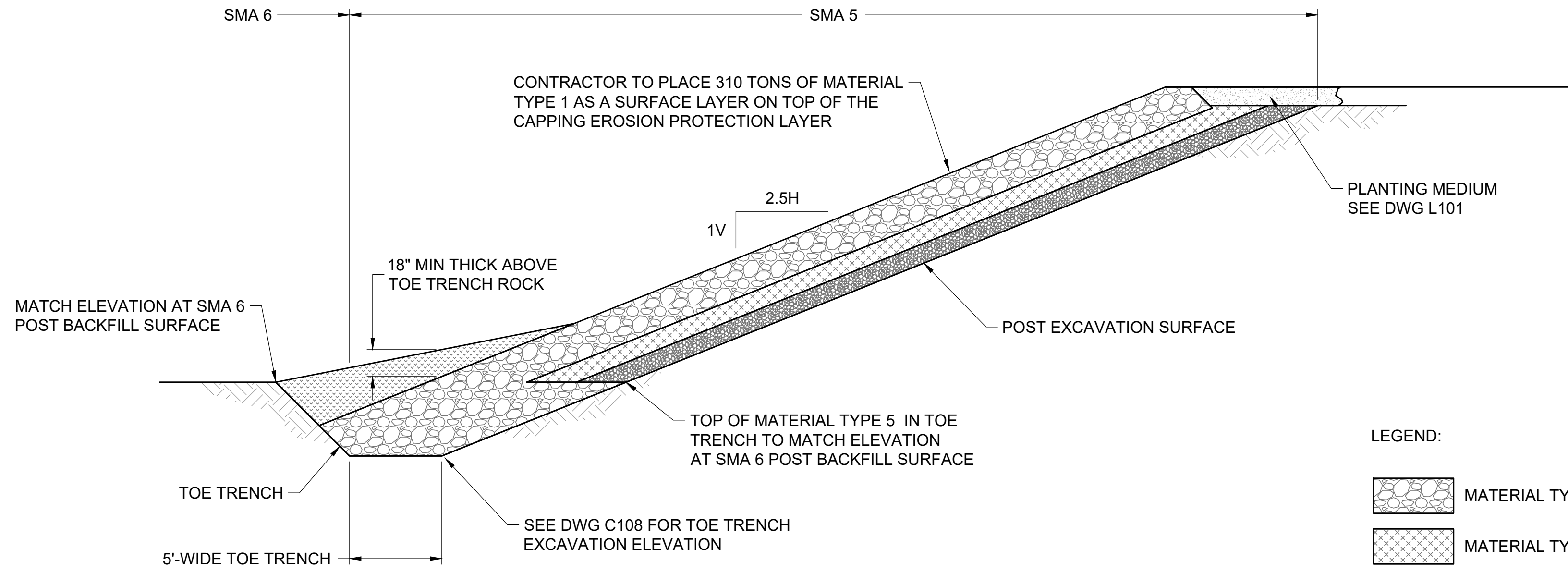
DESIGNED/DRAWN: BIGSBY/GRIGA
PROJECT ENGINEER: J. LAPLANTE
DESIGN APPROVAL: J. ABDALKHANI
PROJECT ACCEPTANCE: G. STEINER





CHECKED: K. GROSS
SCALE: AS NOTED
PROJECT FILE NO: E00559E18
CONTRACT NO: KC001065

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION
MATERIAL PLACEMENT DETAILS
(2 OF 3)

DATE: DECEMBER 2023
DRAWING NO: **C304**
SHT NO / TOTAL: 74 / 91
REV NO: **0**

0 1" REFERENCE



- LEGEND:
-  MATERIAL TYPE 5 (12" MIN THICKNESS)
 -  MATERIAL TYPE 4 (6" MIN THICKNESS)
 -  MATERIAL TYPE 1A (12" MIN THICKNESS)
 -  MATERIAL TYPE 2 (18" MIN THICKNESS)

ENGINEERED CAP A (SMA 5 REVETMENT)

DETAIL 1
SCALE: NOT TO SCALE

MATERIAL TYPE 1	
U.S. STANDARD SIEVE SIZE	PERCENT BY DRY WEIGHT, PASSING
1-1/2 INCHES	100
3/4 INCH	73 TO 83
5/8 INCH	60 TO 70
1/2 INCH	56 TO 66
1/4 INCH	54 TO 64
U.S. NO. 4	48 TO 58
U.S. NO. 10	27 TO 37
U.S. NO. 40	8 TO 18
U.S. NO. 200	0 TO 5

MATERIAL TYPE 1A	
U.S. STANDARD SIEVE SIZE	PERCENT BY DRY WEIGHT, PASSING
1-1/4 INCHES	99 TO 100
1 INCH	80 TO 100
5/8 INCH	50 TO 80
U.S. NO. 4	25 TO 45
U.S. NO. 40	3 TO 18
U.S. NO. 200	0 TO 5

MATERIAL TYPE 2	
U.S. STANDARD SIEVE SIZE	PERCENT BY DRY WEIGHT, PASSING
3/8 INCH	100
U.S. NO. 4	99
U.S. NO. 8	75 TO 82
U.S. NO. 16	44 TO 59
U.S. NO. 30	19 TO 37
U.S. NO. 50	4 TO 16
U.S. NO. 100	1 TO 5
U.S. NO. 200	0 TO 2

MATERIAL TYPE 4	
U.S. STANDARD SIEVE SIZE	PERCENT BY DRY WEIGHT, PASSING
2-1/2 INCHES	100
2 INCHES	65 TO 100
3/4 INCH	40 TO 80
U.S. NO. 4	0 TO 5
U.S. NO. 200	0 TO 1

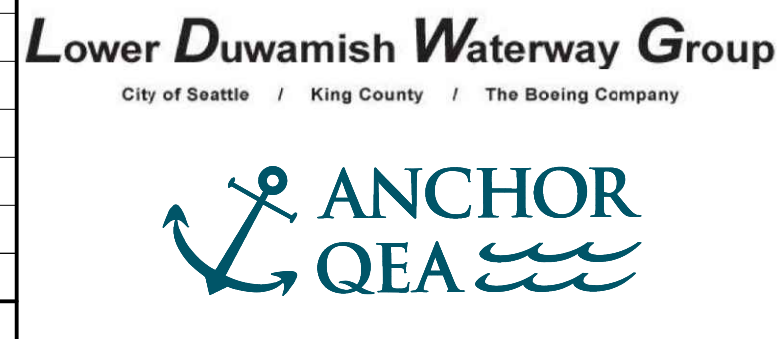
MATERIAL TYPE 5	
U.S. STANDARD SIEVE SIZE	PERCENT BY DRY WEIGHT, PASSING
8 INCHES	100
3 INCHES	40 MAX
3/4 INCH	10 MAX

MATERIAL TYPE 3:
MATERIAL TYPE 3 SHALL BE MATERIAL TYPE 1 BLENDED WITH GAC MATERIAL AT THE DOSAGE REQUIRED AND PROCEDURES DESCRIBED SECTION 35 37 10 - MATERIAL PLACEMENT

COLOR IMAGE
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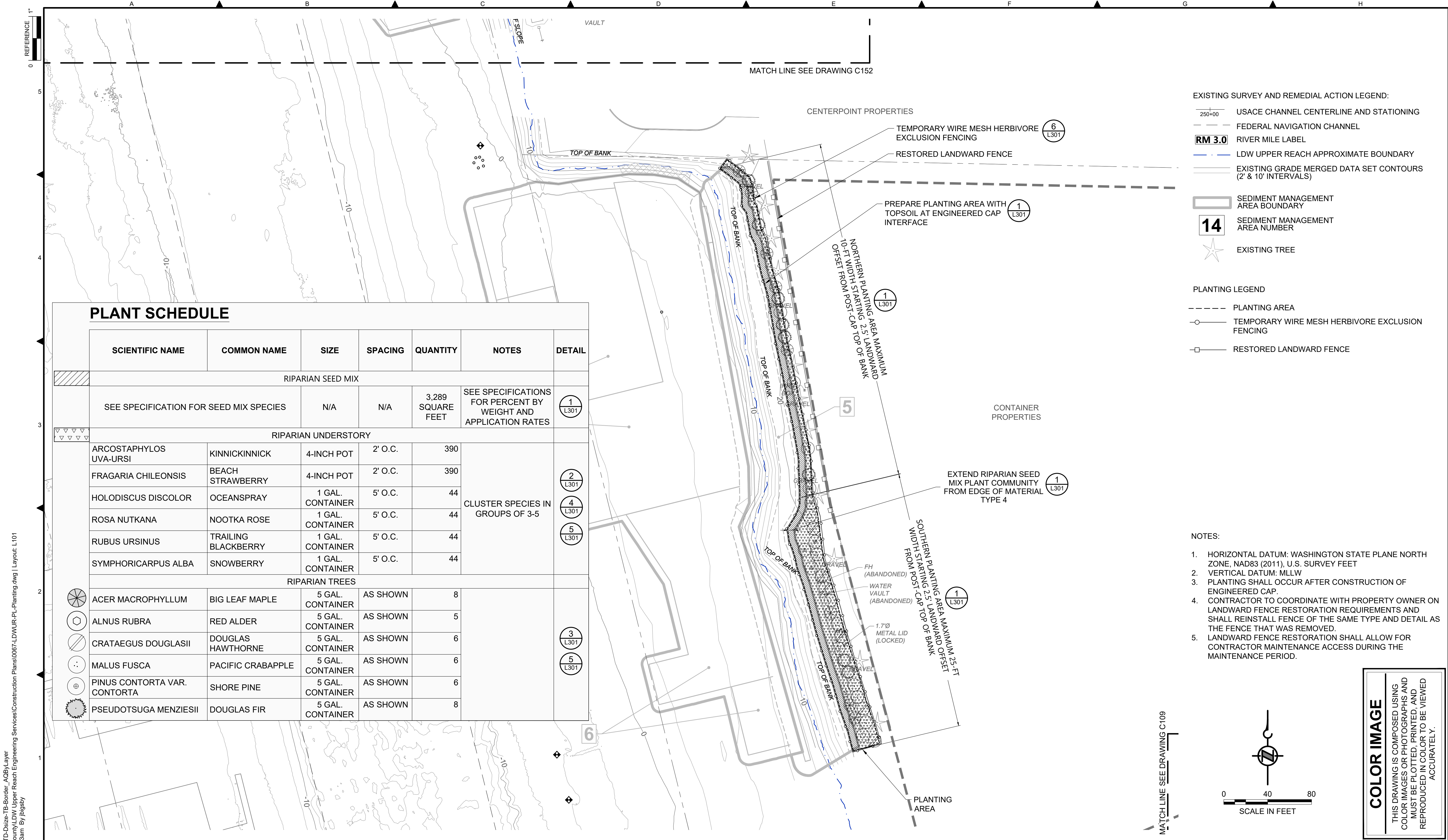
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PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIATION ACTION

MATERIAL PLACEMENT DETAILS
(3 OF 3)

DATE: DECEMBER 2023
DRAWING NO: C305
SHT NO / TOTAL 75 / 91
REV NO: 0



- EXISTING SURVEY AND REMEDIAL ACTION LEGEND:
- USACE CHANNEL CENTERLINE AND STATIONING
 - FEDERAL NAVIGATION CHANNEL
 - RM 3.0** RIVER MILE LABEL
 - LDW UPPER REACH APPROXIMATE BOUNDARY
 - EXISTING GRADE MERGED DATA SET CONTOURS (2' & 10' INTERVALS)

- SEDIMENT MANAGEMENT AREA BOUNDARY
- 14** SEDIMENT MANAGEMENT AREA NUMBER
- EXISTING TREE

- PLANTING LEGEND
- PLANTING AREA
 - TEMPORARY WIRE MESH HERBIVORE EXCLUSION FENCING
 - RESTORED LANDWARD FENCE

PLANT SCHEDULE

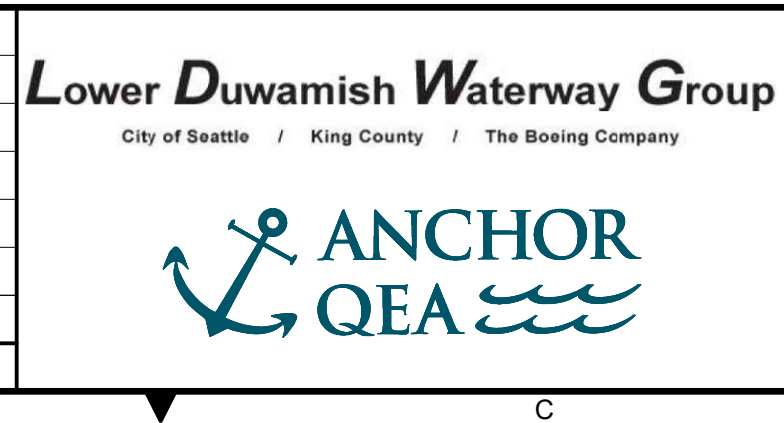
SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	QUANTITY	NOTES	DETAIL
RIPARIAN SEED MIX						
SEE SPECIFICATION FOR SEED MIX SPECIES		N/A	N/A	3,289 SQUARE FEET	SEE SPECIFICATIONS FOR PERCENT BY WEIGHT AND APPLICATION RATES	1 L301
RIPARIAN UNDERSTORY						
ARCOSTAPHYLOS UVA-URSI	KINNICKINNICK	4-INCH POT	2' O.C.	390	CLUSTER SPECIES IN GROUPS OF 3-5	2 L301 4 L301 5 L301
FRAGARIA CHILEONSIS	BEACH STRAWBERRY	4-INCH POT	2' O.C.	390		
HOLODISCUS DISCOLOR	OCEANSPRAY	1 GAL. CONTAINER	5' O.C.	44		
ROSA NUTKANA	NOOTKA ROSE	1 GAL. CONTAINER	5' O.C.	44		
RUBUS URSINUS	TRAILING BLACKBERRY	1 GAL. CONTAINER	5' O.C.	44		
SYMPHORICARPUS ALBA	SNOWBERRY	1 GAL. CONTAINER	5' O.C.	44		
RIPARIAN TREES						
ACER MACROPHYLLUM	BIG LEAF MAPLE	5 GAL. CONTAINER	AS SHOWN	8		
ALNUS RUBRA	RED ALDER	5 GAL. CONTAINER	AS SHOWN	5		
CRATAEGUS DOUGLASII	DOUGLAS HAWTHORNE	5 GAL. CONTAINER	AS SHOWN	6		3 L301
MALUS FUSCA	PACIFIC CRABAPPLE	5 GAL. CONTAINER	AS SHOWN	6		5 L301
PINUS CONTORTA VAR. CONTORTA	SHORE PINE	5 GAL. CONTAINER	AS SHOWN	6		
PSEUDOTSUGA MENZIESII	DOUGLAS FIR	5 GAL. CONTAINER	AS SHOWN	8		

- NOTES:
- HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 - VERTICAL DATUM: MLLW
 - PLANTING SHALL OCCUR AFTER CONSTRUCTION OF ENGINEERED CAP.
 - CONTRACTOR TO COORDINATE WITH PROPERTY OWNER ON LANDWARD FENCE RESTORATION REQUIREMENTS AND SHALL REINSTALL FENCE OF THE SAME TYPE AND DETAIL AS THE FENCE THAT WAS REMOVED.
 - LANDWARD FENCE RESTORATION SHALL ALLOW FOR CONTRACTOR MAINTENANCE ACCESS DURING THE MAINTENANCE PERIOD.

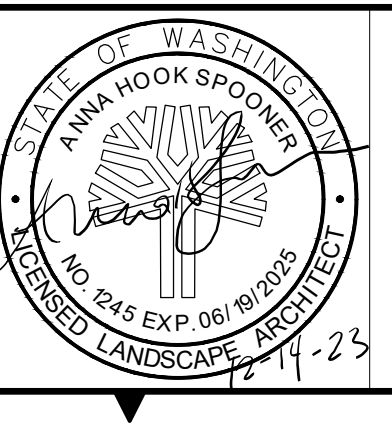
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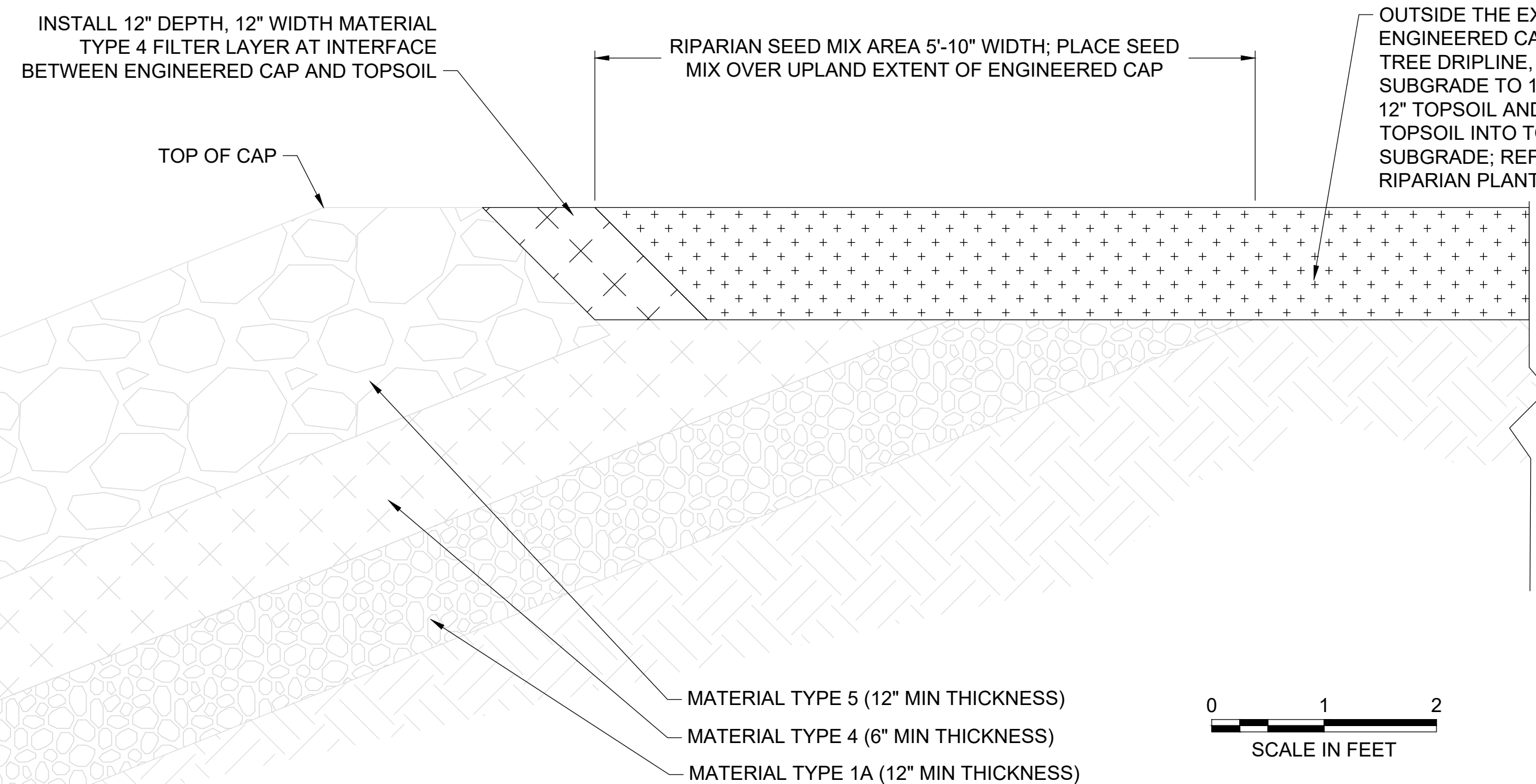
DESIGNED/DRAWN: R. FARNSWORTH	CHECKED: A. SPOONER
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
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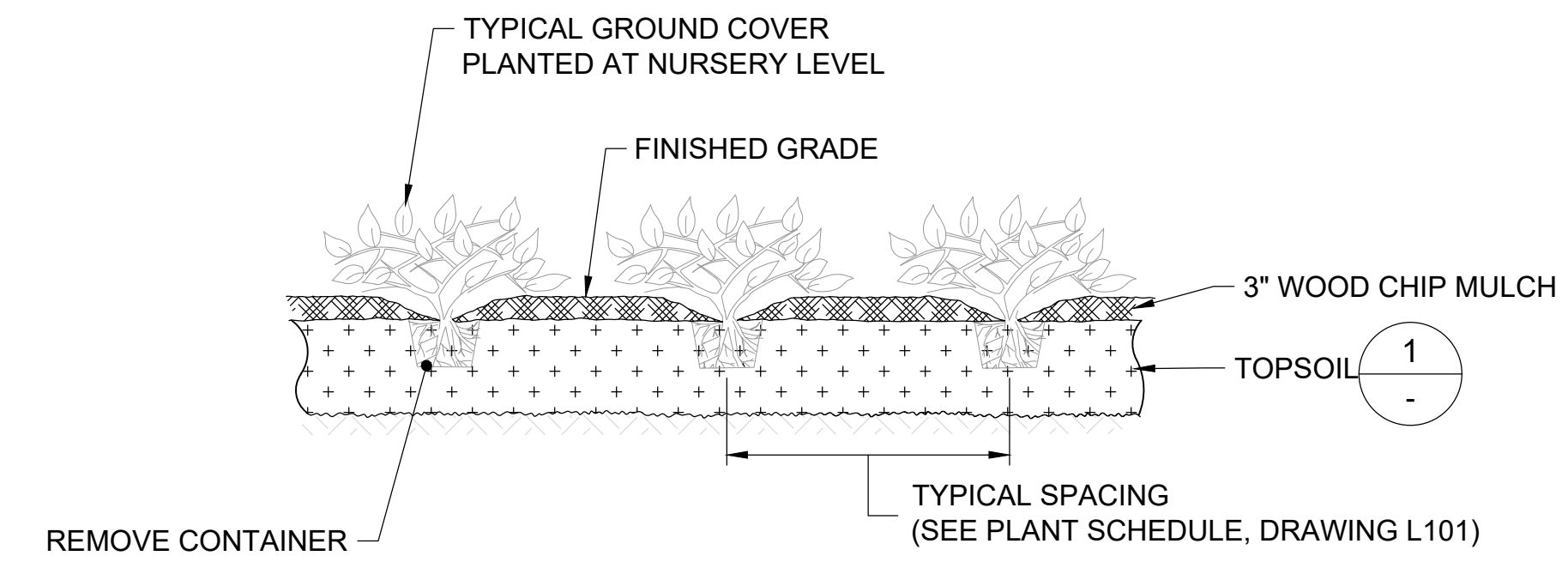
DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION
**PLANTING AND RESTORATION
PLAN (RM 3.98 TO 4.13)**

DATE: DECEMBER 2023
DRAWING NO: L101
SHT NO / TOTAL 76 / 91
REV NO: 0

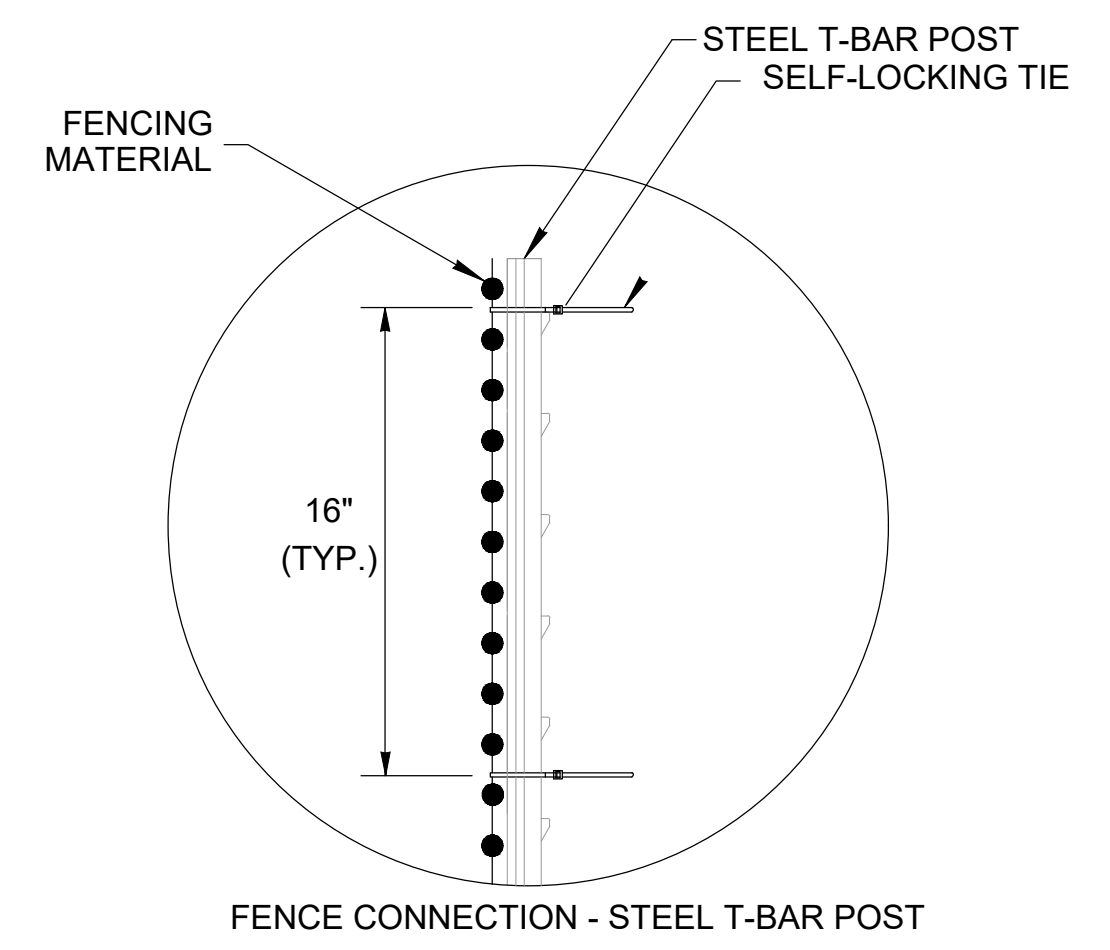
0 1" REFERENCE



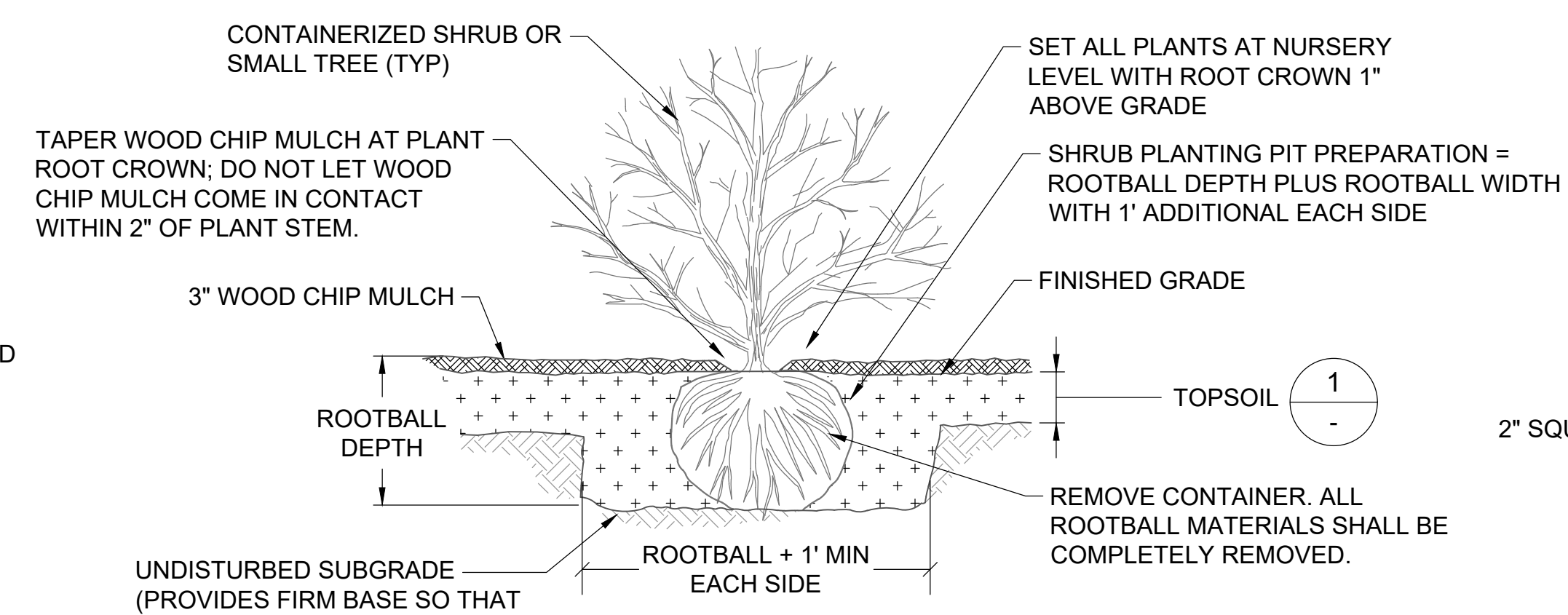
1 ENGINEERED CAP AND TOPSOIL INTERFACE
L01 SCALE: 1" = 1'



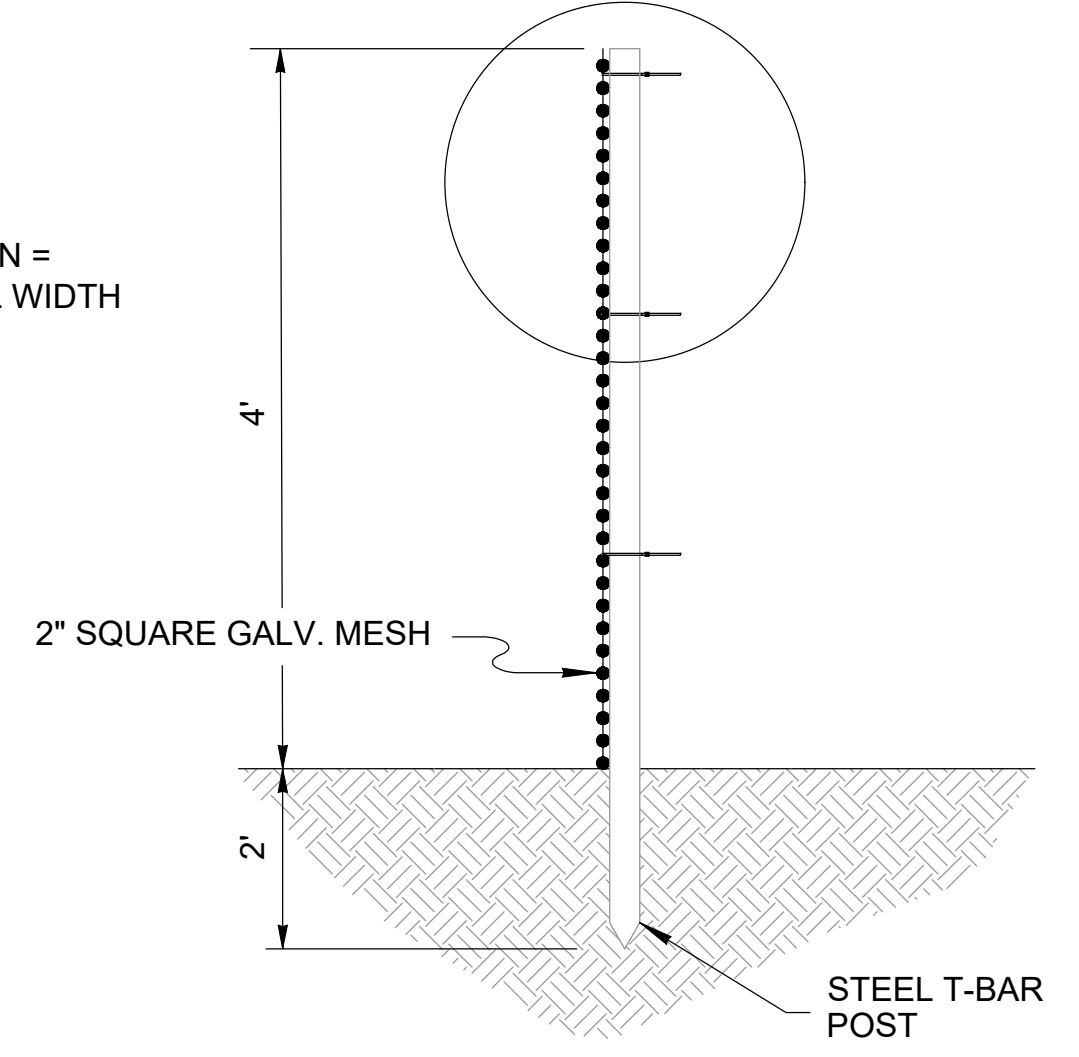
2 TYPICAL GROUND COVER PLANTING
L01 SCALE: NOT TO SCALE



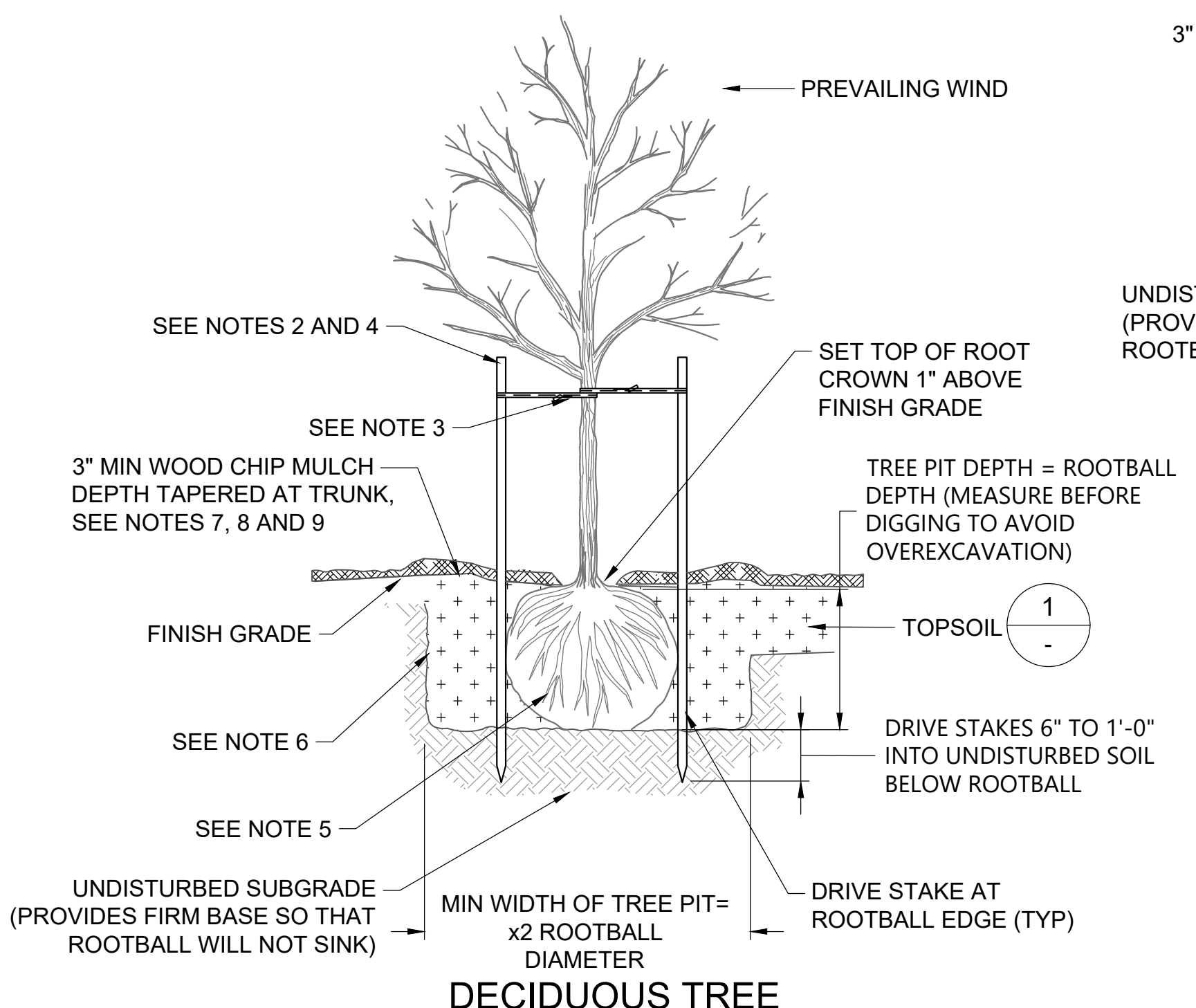
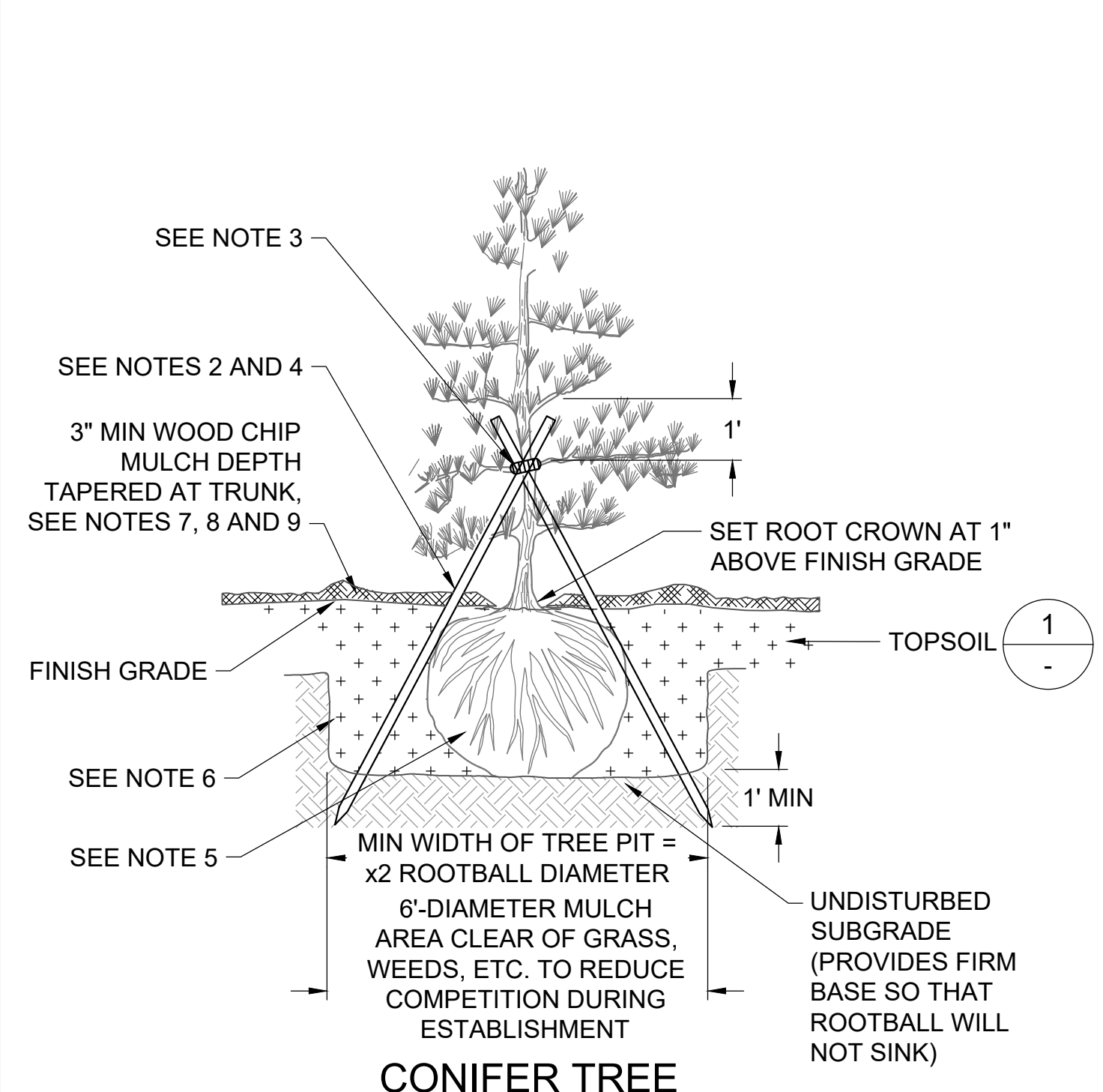
FENCE CONNECTION - STEEL T-BAR POST



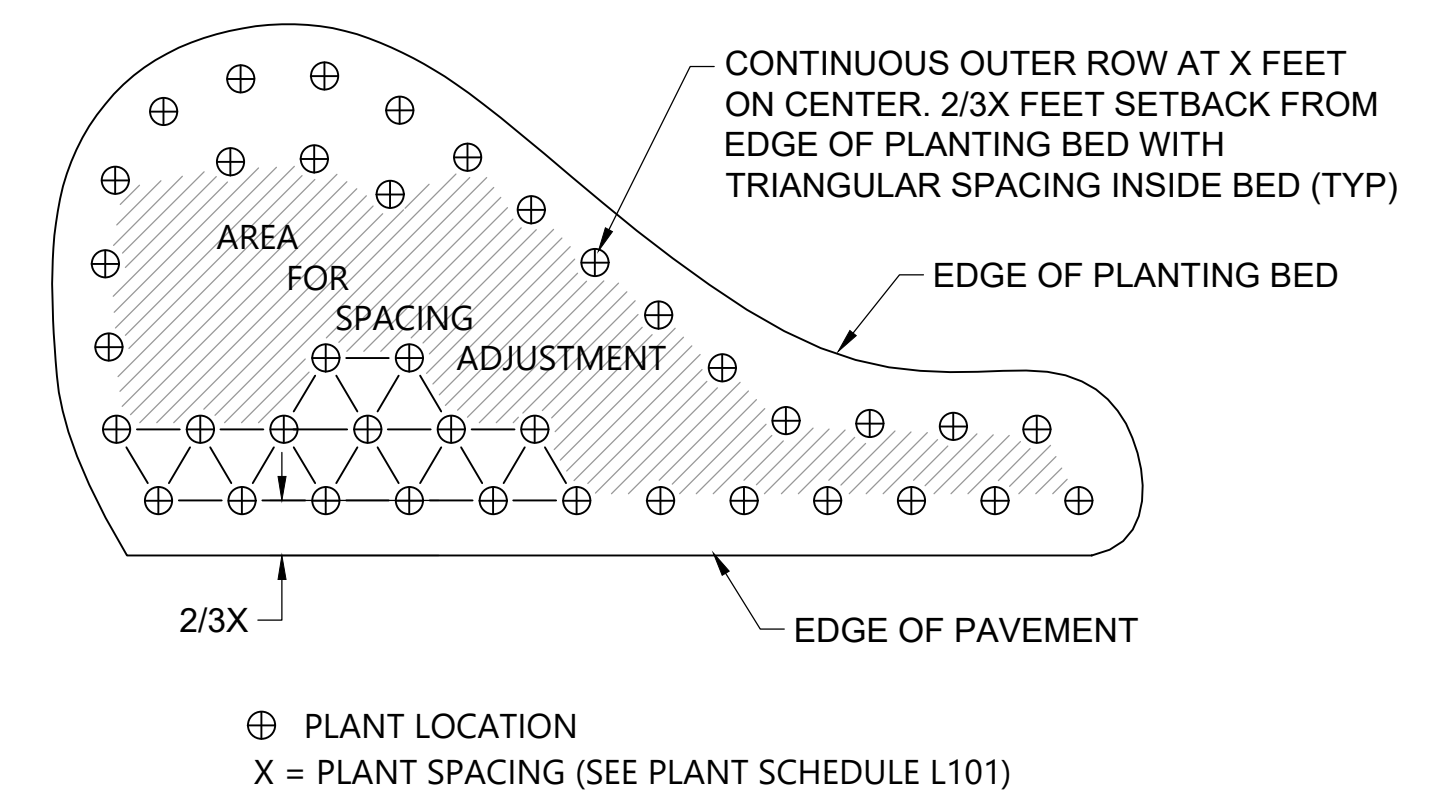
4 SMALL TREE OR SHRUB PLANTING - SECTION
L01 SCALE: NOT TO SCALE



6 TEMPORARY WIRE MESH HERBIVORE EXCLUSION FENCING
L01 SCALE: NOT TO SCALE



3 TREE PLANTING AND STAKING
L01 SCALE: NOT TO SCALE



5 SHRUB AND GROUND COVER PLANTING LAYOUT - PLAN
L01 SCALE: NOT TO SCALE

CONIFER TREE
TREE PLANTING NOTES:
1. REFER TO SPECIFICATION 32 93 00 FOR TREE STAKING REQUIREMENTS.
2. STAKE TREES WITH (2) 2\"/>

BORDER FILE EDITION: x:\KOV\TD-Size-TB-Border_ACBM\layer
\\gala\csl\Projects\067-King County\LDW_Upper Reach Engineering Services\Construction Plans\067-LDWUR-PL-Planting.dwg | Layout: L301
PLOTTED: Jan 12, 2024 11:08:56am By jlgbsby

COLOR IMAGE
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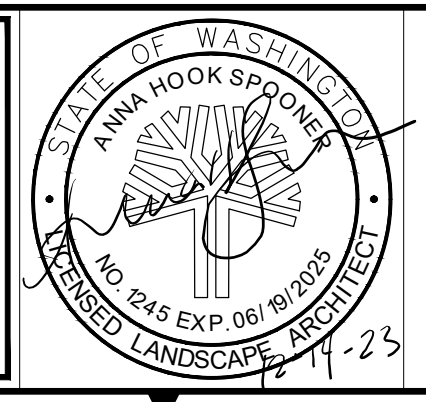
Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company

ANCHOR QEA

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INFORMATION ONLY

BID DOCUMENTS

DECEMBER 2023



DESIGNED/DRAWN: R. FARNSWORTH	CHECKED: A. SPOONER
PROJECT ENGINEER: J. LAPLANTE	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: G. STEINER	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION

PLANTING DETAILS

DATE: DECEMBER 2023
DRAWING NO: L301
SHT NO / TOTAL 77 / 91
REV NO: 0

ABBREVIATIONS

#	NUMBER, POUNDS	MAX	MAXIMUM
&	AND	MHHW	MEAN HIGH HIGH WATER
@	AT	MIN	MINIMUM
AB	ANCHOR BOLT	MISC	MISCELLANEOUS
AP	ANGLE POINT	MLLW	MEAN LOW LOW WATER
APPROX	APPROXIMATE	MLW	MEAN LOW WATER
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	MSL	MEAN SEA LEVEL
BLDG	BUILDING	N	NEUTRAL, NORTH, NORTHING
BOT	BOTTOM	N/A	NOT APPLICABLE
BTWN	BETWEEN	NF	NEAR FACE
		NO	NUMBER
		NTS	NOT TO SCALE
CDF	CONTROLLED DENSITY FILL	OC	ON CENTER, CENTERS
CIP	CAST-IN-PLACE	OD	OUTSIDE DIAMETER
CJ	CONSTRUCTION JOINT	OF	OUTSIDE FACE
CL	CENTER LINE	OH	OVERHEAD
CLR	CLEAR	OPNG	OPENING
CONC	CONCRETE	OPP	OPPOSITE
CONN	CONNECTION		
CONT	CONTINUOUS	PL	PROPERTY LINE OR PLATE
COORD	COORDINATE	PSE	PUGET SOUND ENERGY
COS	CITY OF SEATTLE	PSF	POUNDS PER SQUARE FOOT
		PSI	POUNDS PER SQUARE INCH
		PT	POINT, POINT OF TANGENCY, PRESSURE TREATED
DI	DUCTILE IRON	PVC	POLYVINYL CHLORIDE
DIA	DIAMETER		
DICA	DRILLED IN CONCRETE ANCHOR	R, RAD	RADIUS, RISER
DIM	DIMENSION	RCP	REINFORCED CONCRETE PIPE
DIP	DUCTILE IRON PIPE	REBAR	REINFORCEMENT BAR
DP	DEPTH, DEEP	REF	REFER TO / REFERENCE
DWG	DRAWING	REINF	REINFORCEMENT OR REINFORCING
		REQD	REQUIRED
		ROW, R/W	RIGHT-OF-WAY
E	EAST, EASTING	SCH	SCHEDULE
EA	EACH	SCL	SEATTLE CITY LIGHT
EF	EACH FACE	SECT	SECTION
EG	EXISTING GRADE	SF	SQUARE FOOT
EJ	EXPANSION JOINT	SHT	SHEET
EL	ELEVATION	SIM	SIMILAR
EMBD	EMBEDDED	SPCG	SPACING
EQ	EQUAL	SPEC(S)	SPECIFICATION(S)
ES	EACH SIDE	SPU	SEATTLE PUBLIC UTILITIES
EW	EACH WAY	SS	STAINLESS STEEL
EXIST	EXISTING	STA	STATION
EXP	EXPANSION	STD	STANDARD
		STL	STEEL
FDN	FOUNDATION	STRUC	STRUCTURAL
FF	FAR FACE OR FINISHED FLOOR	SUPT	SUPPORT
FG	FINISHED GRADE	SYM	SYMMETRICAL
FIN	FINISHED		
FT	FEET OR FOOT	TEMP	TEMPORARY
FTG	FOOTING	T&B	TOP AND BOTTOM
		TOC	TOP OF CONCRETE
		TOF	TOP OF FOOTING
		TOS	TOP OF STEEL
		TOW	TOP OF WALL
		TRANS	TRANSVERSE
		TYP	TYPICAL
GA	GAUGE, GAGE	UNO	UNLESS NOTED OTHERWISE
GALV	GALVANIZED	VERT	VERTICAL
HDPE	HIGH-DENSITY POLYETHYLENE	w/	WITH
HORIZ	HORIZONTAL	w/o	WITHOUT
HP	HIGH POINT	WP	WORK POINT
IBC	INTERNATIONAL BUILDING CODE		
ID	INSIDE DIAMETER		
IE	INVERT ELEVATION		
IF	INSIDE FACE		
IN	INCH		
INFO	INFORMATION		
JT	JOINT		
K	KIPS (1,000 POUNDS)		
KC	KING COUNTY		
KCDNR	KING COUNTY DEPARTMENT OF NATURAL RESOURCES		
KIP(S)	THOUSAND POUNDS		
KSF	KIPS PER SQUARE FOOT		
KSI	KIPS PER SQUARE INCH		
L	LENGTH OR ANGLE		
LB	POUND		
LF	LINEAR FEET		
LOC	LOCATION		
LONGIT	LONGITUDINAL		
LP	LOW POINT		
LVL	LEVEL		

LEGEND

ELEVATION NUMBER IDENTIFIER

DESCRIPTION
ELEVATION
SCALE: 1/4"=1'-0"

PHOTOGRAPH NUMBER IDENTIFIER

DESCRIPTION
PHOTO
SCALE: NONE

SITE PLAN
SCALE: 1/8"=1'-0"

SECTION LETTER IDENTIFIER

DESCRIPTION
SECTION
SCALE: 1/4"=1'-0"

DETAIL NUMBER IDENTIFIER

DESCRIPTION
DETAIL
SCALE: 1"=1'-0"

GENERAL NOTES:

- FIRST NOTE
- SECOND NOTE

KEY NOTES:

① FIRST NOTE

② SECOND NOTE

① ① → KEY NOTE INDICATORS

↗ NORTH ARROW

0 20 40 60
1" = 20'
ENGINEERING GRAPHIC SCALE (FOR 20 SCALE)

SEDIMENT MANAGEMENT AREA NUMBER

STRUCTURAL LEGEND:

	CONCRETE
	EARTH
	BACKFILL
	EXISTING STRUCTURE TO BE REMOVED
	EXISTING STRUCTURE ABANDON IN PLACE
	STEEL
	GABION

BORDER FILE EDITION: x:\KCV\T\Drawings\TB-Border_ACB\Layer T:\V22\Series - Anchor\QEA\252.01 Eng Svcs for Sediment Cleanup of Upper Reach of Lower Duwamish Waterway E00559E\B\Drawings\Structural\SCAD-LDWUR_s-001.dwg | Layout: S001 | PLOTTED: Jan 15, 2024 04:58:06am By SLor

NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company

BRIGHT ENGINEERING, INC.
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FINAL ISSUE DRAWING
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BID DOCUMENTS
DECEMBER 2023

DESIGNED/DRAWN: S. LOR	CHECKED: I. IKEDA
PROJECT ENGINEER: A. BRIGHT	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: PRJCT MNGR	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION

**STRUCTURAL ABBREVIATIONS
AND SYMBOLS**

DATE: DECEMBER 2023
DRAWING NO: S001
SHT NO / TOTAL REV NO: 78 / 91 0

STRUCTURAL GENERAL NOTES

DESIGN CRITERIA

APPLICABLE BUILDING NOTES AND CODES
 CITY OF SEATTLE BUILDING CODE, SBC 2018 EDITION
 INTERNATIONAL BUILDING CODE, IBC 2018 EDITION, EXCEPT WHERE OTHER CODES ARE MORE RESTRICTIVE.

OUTFALLS AND STRUCTURE PROTECTION

ALL OUTFALLS OR STRUCTURES NEAR DREDGING OR EXCAVATION SHALL BE PROTECTED PRIOR TO START OF WORK.

FOUNDATION PILING

CONSULT SOILS REPORT BY ANCHOR QEA, DATED AUGUST 2022 FOR FOUNDATION DREDGING AND BACKFILL INFORMATION

STRUCTURAL STEEL PILES

STEEL PIPE PILES - 12" DIA WITH 1/2" MINIMUM WALL THICKNESS PER ASTM A252, GRADE 3, fy= 45 ksi OR API 5Lx42 OR API 5Lx52.

SHEET PILES

INTERLOCKING STEEL SHEET PILES SHALL BE NEW, CONFORMING TO ASTM A572, GRADE 50.
 MINIMUM WEB OR FLANGE THICKNESS = 0.50 INCHES
 MINIMUM ELASTIC SECTION MODULUS = 88.0 IN³/FT

STRUCTURAL STEEL

PLATES AND BARS SHALL BE NEW AND CONFORM TO ASTM A572, GRADE 50.

WELDING

ALL WELDING SHALL CONFORM TO AWS D1.1 WELDING CODE. MINIMUM SIZE WELDS 3/16" CONTINUOUS FILLET. WELDING ELECTRODES SHALL BE 70XX SERIES CONFORMING TO ANSI/AWS D1.1 TABLE 3.1 AND ELECTRODE SPECIFICATION AWS A5. WELDING SHALL BE CONDUCTED BY WABO CERTIFIED WELDER.

PAINTING

STRUCTURAL STEEL SHALL BE COATED IN CONFORMANCE WITH SPECIFICATIONS

CONCRETE

ALL DETAILING, FABRICATION, AND ERECTION OF REINFORCING BARS, UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES ACI 315, LATEST EDITION. CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318 BUILDING CODE, LATEST EDITION.

DESIGN STRENGTH

UNDERWATER CEMENT GROUT SHALL CONFORM TO ASTM C1107 AND CRD-C-621
 fc= 5000 psi AT 28 DAYS

REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A615, GRADE 60.

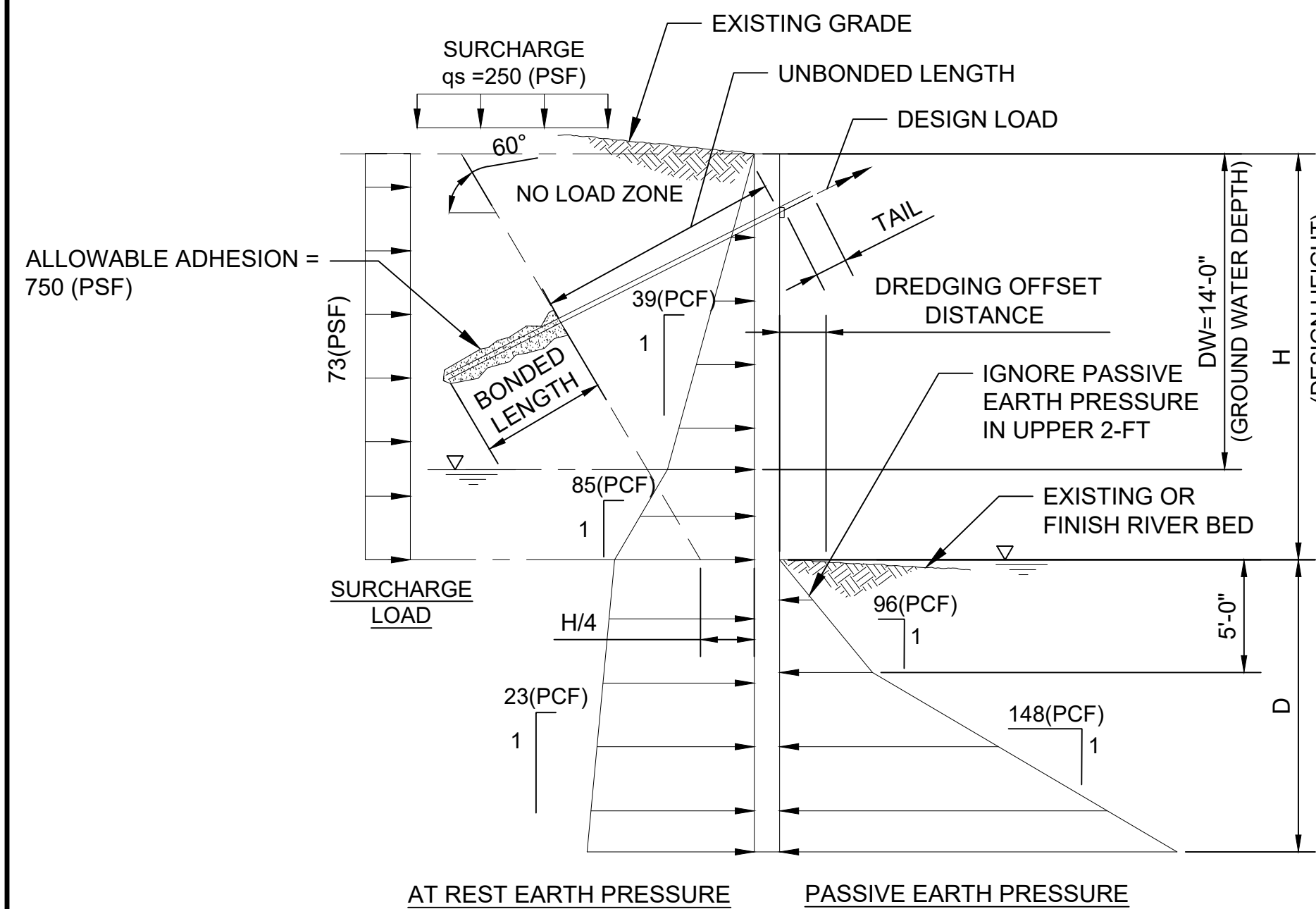
MISCELLANEOUS

SUBMIT ALL REQUIRED SHOP DRAWINGS AND RECEIVE THEIR SATISFACTORY REVIEW FROM THE PROJECT REPRESENTATIVE PRIOR TO FABRICATION.

COORDINATE AND VERIFY ALL DIMENSIONS WITH GENERAL AND CIVIL DRAWINGS AND CONDITIONS AT THE PROJECT SITE PRIOR TO STARTING WORK AND NOTIFY THE PROJECT REPRESENTATIVE IMMEDIATELY OF ANY DISCREPANCIES.

PROVIDE TEMPORARY ERECTION BRACING AND SHORING AS REQUIRED FOR STABILITY OF THE STRUCTURE AND ADJACENT STRUCTURES, DURING ALL PHASES OF CONSTRUCTION. REFER TO PROJECT SPECIFICATIONS FOR INFORMATION NOT CONTAINED IN THESE GENERAL NOTES.

SOIL PRESSURE DIAGRAM



PASSIVE EARTH PRESSURE REDUCTION FACTORS			
OFFSET DISTANCE	REDUCTION FACTOR		
	2H:1V	1.5H:1V	1H:1V
0	0.75	0.56	0.38
2	0.85	0.66	0.48
4	0.95	0.76	0.58

L-PILE MODELING PARAMETERS						
LAYERS	EFFECTIVE UNIT WEIGHT γ'(PCF)	FRICTION ANGLE Φ (DEG)	UNDRAINED SHEAR STRENGTH Cu (KSF)	P.Y CURVE MODEL	SPRING CONSTANT:K (Es=Kx) K (PCI)	STRAIN FACTOR; @50% MAX E ε50
RECENT SEDIMENT	36	27	0.08	SOFT CLAY (MATLOCK)	-	0.020
ALLUVIUM	61	32	-	SAND (REESE)	20	-

NOTES:

1. DIAGRAM APPLIES TO DRILLED SOLDIER PILE WALLS WITH TIMBER LAGGING AND SHEET PILE WALLS DESIGNED AS A CANTILEVERED WALL OR WITH A SINGLE ROW OF TIEBACK.
2. ALL PRESSURES EXPRESSED AS AN EQUIVALENT FLUID UNIT WEIGHT.
3. ACTIVE EARTH AND SURCHARGE PRESSURES ACT OVER THE PILE SPACING WITHIN RETAINED WALL HEIGHT AND OVER PILE WIDTH OR SHAFT DIAMETER BELOW BOTTOM OF EXCAVATION, WHICHEVER IS LESSER.
4. PASSIVE EARTH PRESSURE ACTS OVER 2 TIMES SHAFT DIAMETER OR PILE WIDTH; OR PILE SPACING, WHICHEVER IS LESSER
5. 50% OF ACTIVE AND SURCHARGE PRESSURES ACT ON ALL LAGGING BETWEEN SOLDIER PILES.
6. PASSIVE RESISTANCE ARE ULTIMATE VALUES. DIVIDE WITH A SAFETY FACTOR OF 1.5 FOR ALLOWABLE VALUE.

SOLDIER PILE OR SHEET PILE CANTILEVERED OR WITH A SINGLE ROW TIEBACK

PRESSURE DIAGRAM

SCALE: NTS

BORDER FILE EDITION: xKCVTD-Size-TB-Border: AQB\Layer T:\252 Series - Anchor QEA\252.01 Eng Svcs for Sediment Cleanup of Upper Reach of Lower Duwamish Waterway E00559E18\Drawings\Structural\SCAD-LDWUR_s-002.dwg | Layout: S002 PLOTTED: Jan 15, 2024 05:00:19am By SLor

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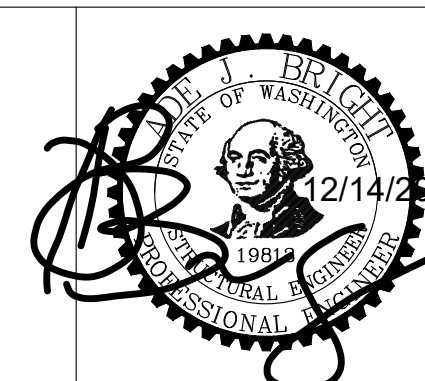
Lower Duwamish Waterway Group
 City of Seattle / King County / The Boeing Company

6 BRIGHT ENGINEERING, INC.
 STRUCTURAL & CIVIL ENGINEERING
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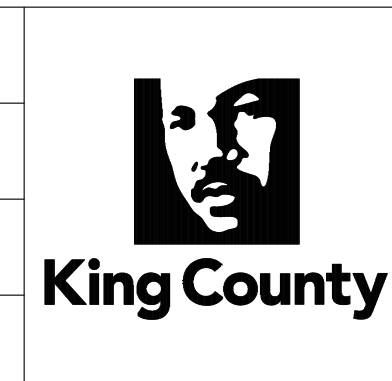
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DESIGNED/DRAWN: S. LOR	CHECKED: I. IKEDA
PROJECT ENGINEER: A. BRIGHT	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: PRJCT MNGR	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

**STRUCTURAL GENERAL NOTES
AND SOIL PRESSURE DIAGRAM**

DATE: DECEMBER 2023
DRAWING NO: S002
SHT NO / TOTAL 79 / 91
REV NO: 0

STATEMENT OF SPECIAL INSPECTIONS AND TESTING

**TABLE 1
REQUIRED SPECIAL INSPECTIONS - STRUCTURAL SYSTEMS**

SYSTEM OR MATERIAL	REQUIRED INSPECTION	FREQUENCY OF INSPECTION		REMARKS
		CONTINUOUS	PERIODIC	
SOILS	DREDGING AND IN-WATER WORK		X	31 09 00 (GEOTECHNICAL INSTRUMENTATION AND CONDITION INSPECTION)
	IDENTIFIED DEBRIS REMOVAL		X	31 09 00 (GEOTECHNICAL INSTRUMENTATION AND CONDITION INSPECTION)
CONCRETE	TREMIE CEMENT GROUT PLACEMENT		X	
STRUCTURAL STEEL	FABRICATION OF STRUCTURAL ELEMENTS		X	FABRICATOR SHALL BE APPROVED IN ACCORDANCE WITH IBC, CHAPTER 17 TO PERFORM WORK WITHOUT SPECIAL INSPECTION
	VERIFY MATERIAL FOR STRUCTURAL STEEL SHAPES, PLATES, BARS, ETC.		X	CONTRACTOR TO SUBMIT CERTIFIED MILL TEST REPORTS
	VERIFY MATERIALS FOR WELD FILLER MATERIALS		X	
	VERIFY WELDER QUALIFICATIONS		X	CONTRACTOR TO SUBMIT WELDERS CERTIFICATES
	VERIFY USE OF PROPER WELDING PROCEDURES		X	
	INSPECT COMPLETE AND PARTIAL-PENETRATION GROOVE WELDS, MULTI-PASS FILLET WELDS, AND SINGLE-PASS FILLET WELDS GREATER THAN 5/16"	X		

**TABLE 2
REQUIRED TESTING FOR SPECIAL INSPECTIONS**

SYSTEM OF MATERIAL	TESTING		REMARKS
	CODE OF STANDARD REFERENCE	FREQUENCY	
GEOTECHNICAL			
CONCRETE			
CONCRETE SLUMP	ASTM C143	WHENEVER CYLINDERS ARE CAST	
CEMENTITIOUS AND EPOXY GROUT COMPRESSIVE STRENGTH	ASTM C942 (CEMENTITIOUS) ASTM C579 (EPOXY)		TEST 2" CUBES FOR EACH GROUT SHIPMENT TO THE FIELD
STEEL			

QUALITY ASSURANCE NOTES

1. THE QUALITY OF WORKMANSHIP AND THE QUALITY OF THE MATERIALS OF CONSTRUCTION ARE GOVERNED BY THE SEATTLE BUILDING CODE, 2018 EDITION (SBC).
2. TO ASSURE THE QUALITY OF THE CONSTRUCTION OF THIS PROJECT, STRUCTURAL TESTS, SPECIAL INSPECTION AND STRUCTURAL OBSERVATION WILL BE PERFORMED IN ACCORDANCE WITH SBC, CHAPTER 17.
3. WHERE FREQUENCY OF INSPECTION IS SPECIFIED TO BE CONTINUOUS, THE SPECIAL INSPECTOR IS EXPECTED TO BE PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED AND PROVIDING FULL-TIME OBSERVATION OF THE WORK REQUIRING SPECIAL INSPECTION.
4. WHERE FREQUENCY OF INSPECTION IS SPECIFIED TO BE PERIODIC, THE SPECIAL INSPECTOR IS EXPECTED TO BE PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF THE WORK(PRIOR TO THE NEXT CONSTRUCTION TASK).
5. SPECIAL INSPECTIONS ARE IN ADDITION TO INSPECTIONS BY THE BUILDING OFFICIALS. CONSTRUCTION IS SUBJECT TO INSPECTION BY THE BUILDING OFFICIAL. COORDINATE WITH BUILDING DEPARTMENT TO DETERMINE REQUIRED INSPECTIONS.
6. CONTRACTOR SHALL PROVIDE ACCESS TO THE WORK FOR REQUIRED INSPECTIONS. CONTRACTOR SHALL PROVIDE NOTIFICATION IN ADVANCE OF REQUIRED INSPECTIONS, TESTING AND STRUCTURAL OBSERVATIONS.

BORDER FILE EDITION: x:\KOVTD\size-TB-Border_AQB\Layer
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PLOTTED: Jan 15, 2024 05:02:16am By SLor

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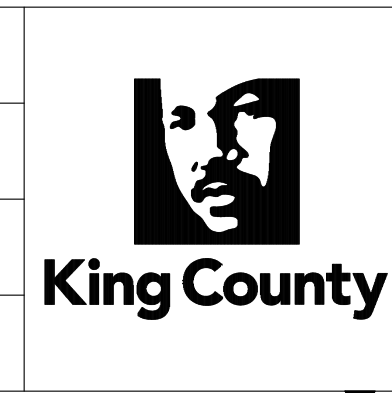
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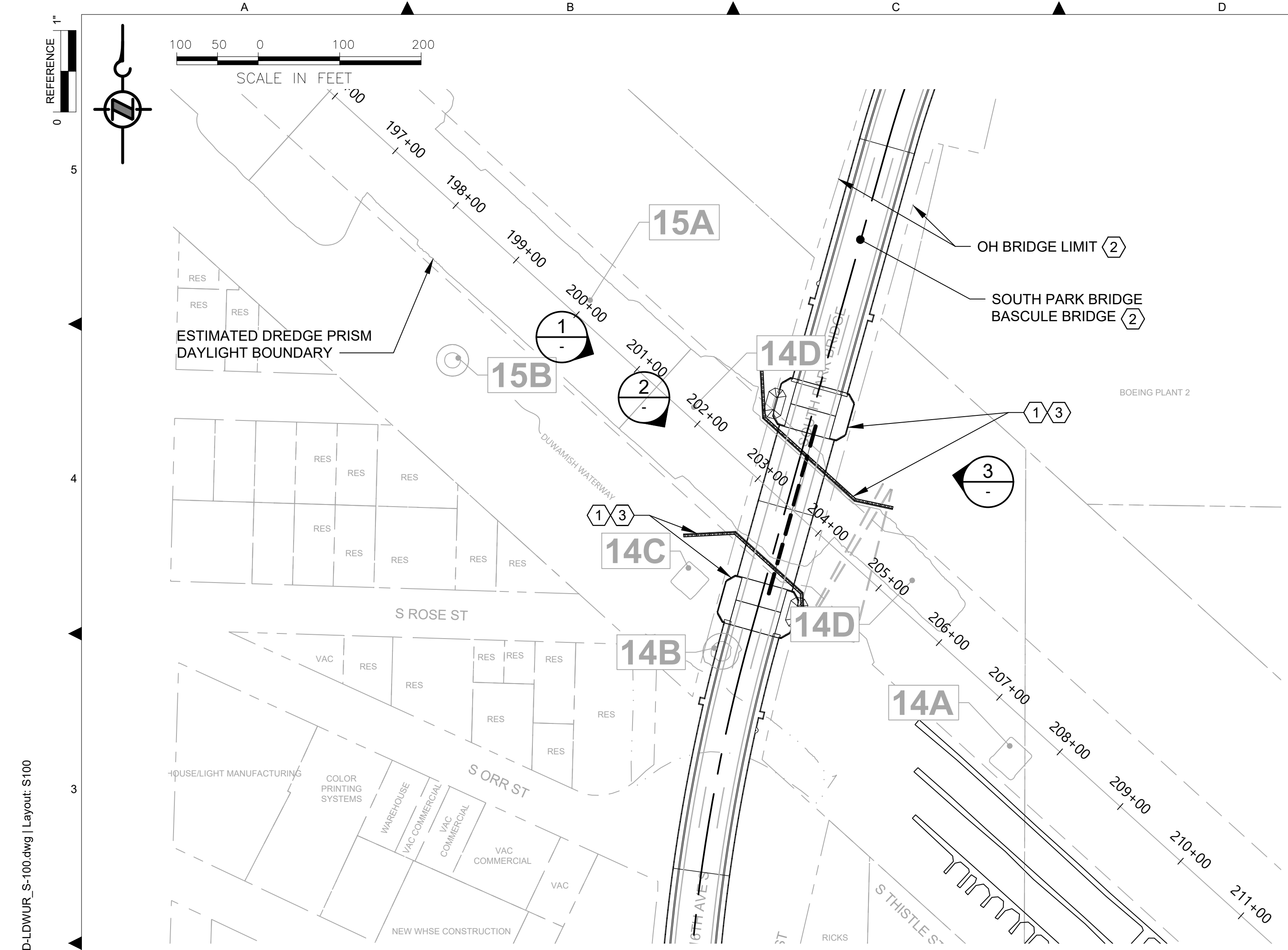
DESIGNED/DRAWN: S. LOR	CHECKED: I. IKEDA
PROJECT ENGINEER: A. BRIGHT	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: PRJCT MNGR	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION

**STATEMENT OF SPECIAL
INSPECTIONS AND TESTING**

DATE: DECEMBER 2023
DRAWING NO: S003
SHT NO / TOTAL REV NO: 80 / 91 0



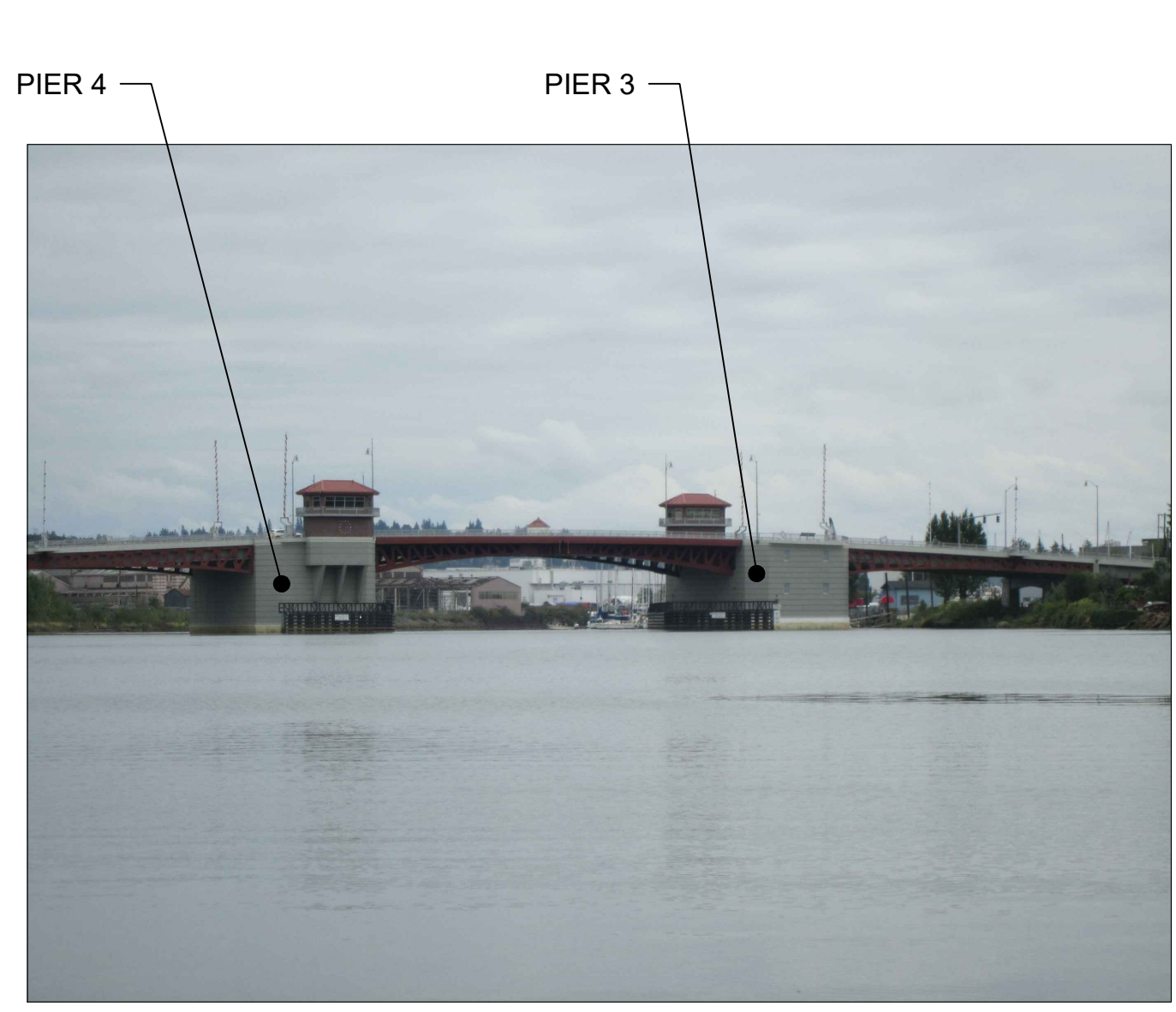
PARTIAL SITE PLAN
SCALE: 1:100

GENERAL NOTES:

- EXISTING TOPOGRAPHY, STRUCTURES, AND SITE FEATURES ARE SHOWN SCREENED AND/OR LIGHT-LINED AND ARE INTENDED FOR REFERENCE ONLY. NEW GRADES FOR THIS CONTRACT, STRUCTURES, AND SITE FEATURES ARE SHOWN HEAVY-LINED EXCEPT WHERE NOTED OTHERWISE ON THE DRAWING.
- FOR BRIDGE DIMENSIONS AND LATEST AVAILABLE INFORMATION, SEE:
SOUTH PARK BRIDGE 300197
REFERENCE RECORD DRAWING BG04

KEY NOTES:

- FOR DREDGING OFFSET AND LIMITS, CUT SLOPE AND RESTORATION, SEE CIVIL DRAWINGS.
- DO NOT MOOR OR OTHERWISE IMPOSE LATERAL LOADS TO KING COUNTY STRUCTURES.
- PROTECT-IN-PLACE BRIDGE FENDERING SYSTEM.
- VERTICAL OH CLEARANCE WITHIN FEDERAL NAVIGATION CHANNEL PER RULER. 125'-0" HORIZONTAL CLEARANCE. SEE NOAA 18450 CHART. CONTRACTOR TO VERIFY CLEARANCE FOR ALL WORK UNDER THE BRIDGE.



BASCULE BRIDGE (LOOKING UPSTREAM)

PHOTO 1
SCALE: NONE



FENDERS (LOOKING UPSTREAM)

PHOTO 2
SCALE: NONE



GOOGLE MAP VIEW
SCALE: NONE



FENDER (LOOKING DOWNSTREAM)

PHOTO 3
SCALE: NONE

COLOR IMAGE
THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

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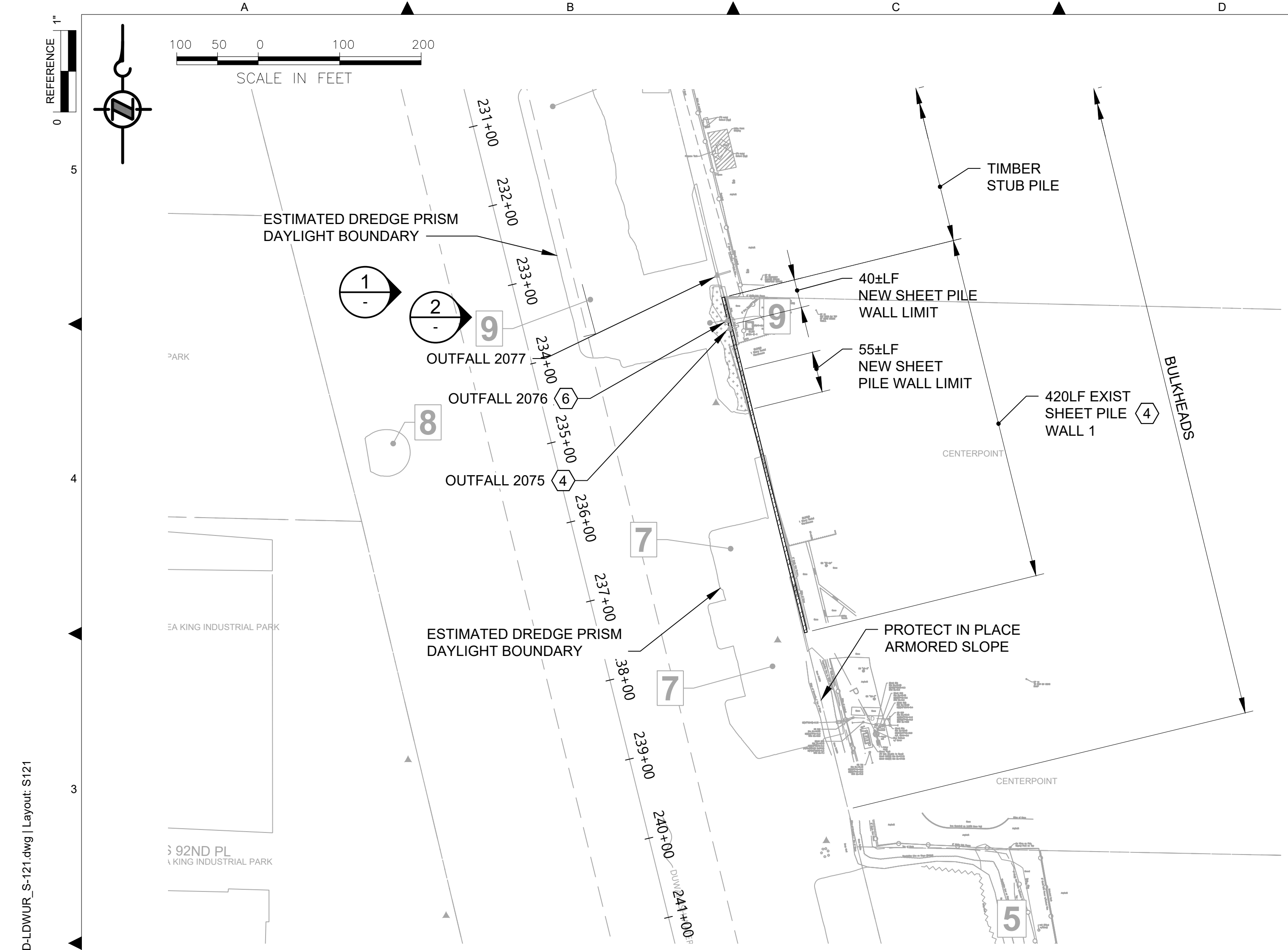
DESIGNED/DRAWN: S. LOR	CHECKED: I. IKEDA
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DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION

**SOUTH PARK BRIDGE
PLAN AND PHOTOS**

DATE: DECEMBER 2023
DRAWING NO: S100
SHT NO / TOTAL 81 / 91
REV NO: 0



PARTIAL SITE PLAN
SCALE: 1 : 100

GENERAL NOTES:

- EXISTING TOPOGRAPHY, STRUCTURES, AND SITE FEATURES ARE SHOWN SCREENED AND/OR LIGHT-LINED AND ARE INTENDED FOR REFERENCE ONLY. NEW GRADES FOR THIS CONTRACT, STRUCTURES, AND SITE FEATURES ARE SHOWN HEAVY-LINED EXCEPT WHERE NOTED OTHERWISE ON THE DRAWING.

KEY NOTES:

- FOR DREDGING OFFSET AND LIMITS, CUT SLOPE, AND RESTORATION, SEE CIVIL DRAWINGS.
- DO NOT MOOR OR OTHERWISE IMPOSE LATERAL LOADS ON THE BULKHEADS.
- NO WALL DESIGN INFORMATION OR PILE EMBEDMENT DEPTH IS AVAILABLE THEREFORE MAINTAIN THE MINIMUM OFFSETS INDICATED ON THE PLANS.
- PRIOR TO STARTING WORK LOCATE DEPTH, HORIZONTAL POSITION, AND ALIGNMENT OF OUTFALL 2075. CLEARLY MARK THE ALIGNMENT RELATIVE TO THE OUTFALL RISER ON THE EXISTING SHEET PILE WALL.
- PROTECT OUTFALL AND DUCKBILL VALVE FROM DAMAGE AS REQUIRED. MAINTAIN 3'-0" CONSTRUCTION EQUIPMENT OFFSET FROM ACTIVE OUTFALLS.
- IF ABANDONED OUTFALL 2076 IS ENCOUNTERED DURING REMOVAL OF DEBRIS OR DREDGING, THE PIPE SHALL BE CUT AT THE FACE OF THE WALL AND PLUGGED WITH 2FT OF UNDERWATER CEMENT GROUT.

REFERENCE DRAWINGS:

- S125 WALL 1: PLAN AND PROFILE
- S131 WALL 1: SECTIONS AND DETAILS
- S200 AND S201 OUTFALLS: PLANS AND PHOTOS
- S202 AND S203 OUTFALLS: ENERGY DISSIPATION - PLANS, ELEVATIONS, AND SECTIONS
- V201 TO V205 LOCATION OF IDENTIFIED DEBRIS AND PILING FOR REMOVAL



GOOGLE MAP VIEW
SCALE: NONE



PHOTO
SCALE: NONE



PHOTO
SCALE: NONE

COLOR IMAGE
THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

BORDER FILE EDITION: x:\KOWTD\size-TB-Border_ACBM\Layer T:\V22 Series - Anchor QEA\252.01 Eng Svcs for Sediment Cleanup of Upper Reach of Lower Duwamish Waterway E00559E18\Drawings\Structural\SCAD-LDWUR_s-121.dwg | Layout: S121 PLOTTED: Jan 15, 2024 05:07:02am By SLor

NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company

6 BRIGHT ENGINEERING, INC.
STRUCTURAL & CIVIL ENGINEERING
1809 7TH AVENUE
SUITE 1100
SEATTLE, WA 98101
P: (206) 625-3777
F: (206) 625-1851

FINAL ISSUE DRAWING
INFORMATION ONLY
BID DOCUMENTS
DECEMBER 2023



DESIGNED/DRAWN: S. LOR	CHECKED: I. IKEDA
PROJECT ENGINEER: A. BRIGHT	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: PRJCT MNGR	CONTRACT NO: KC001065

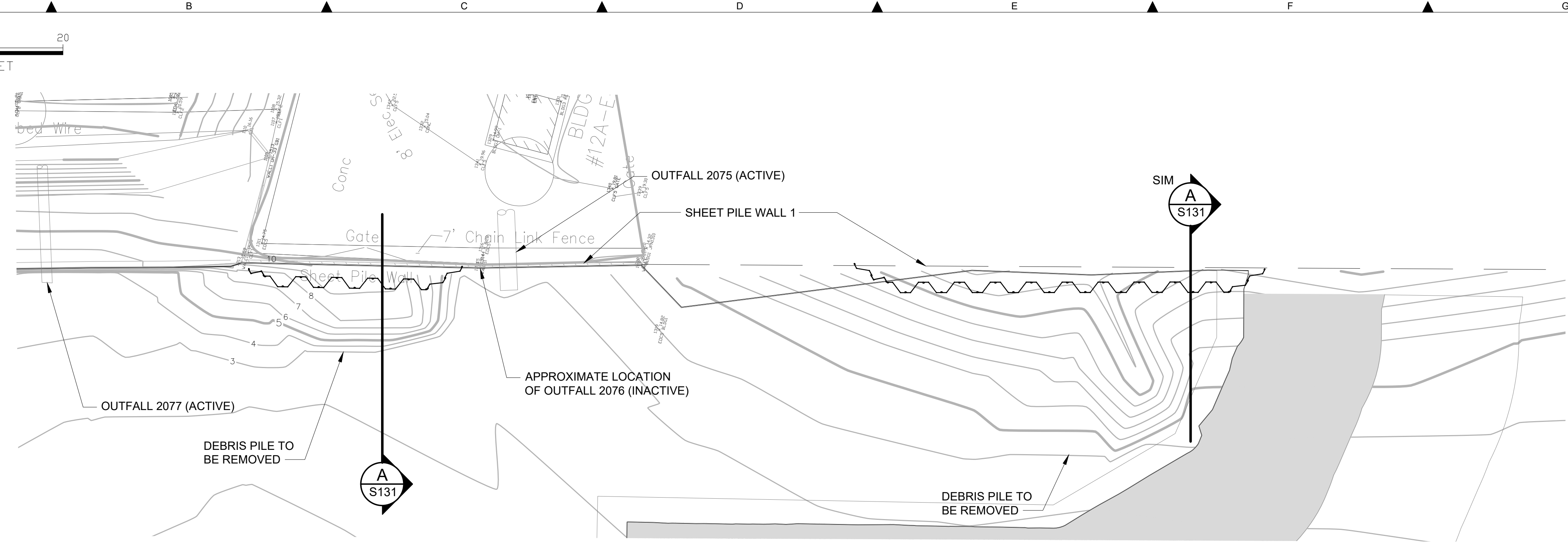
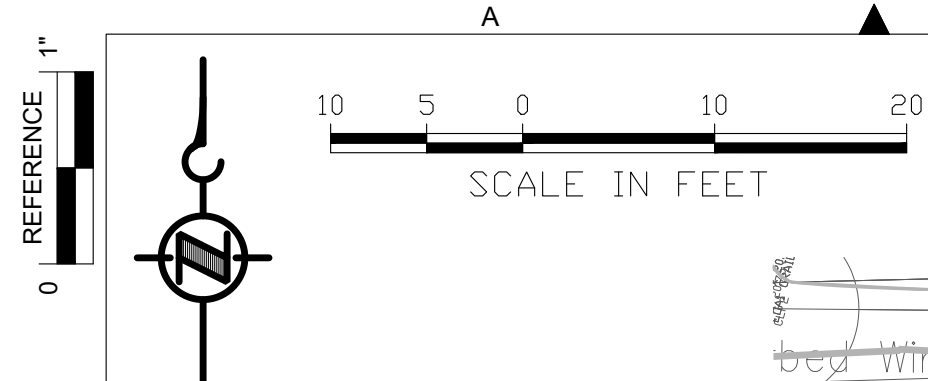


DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION

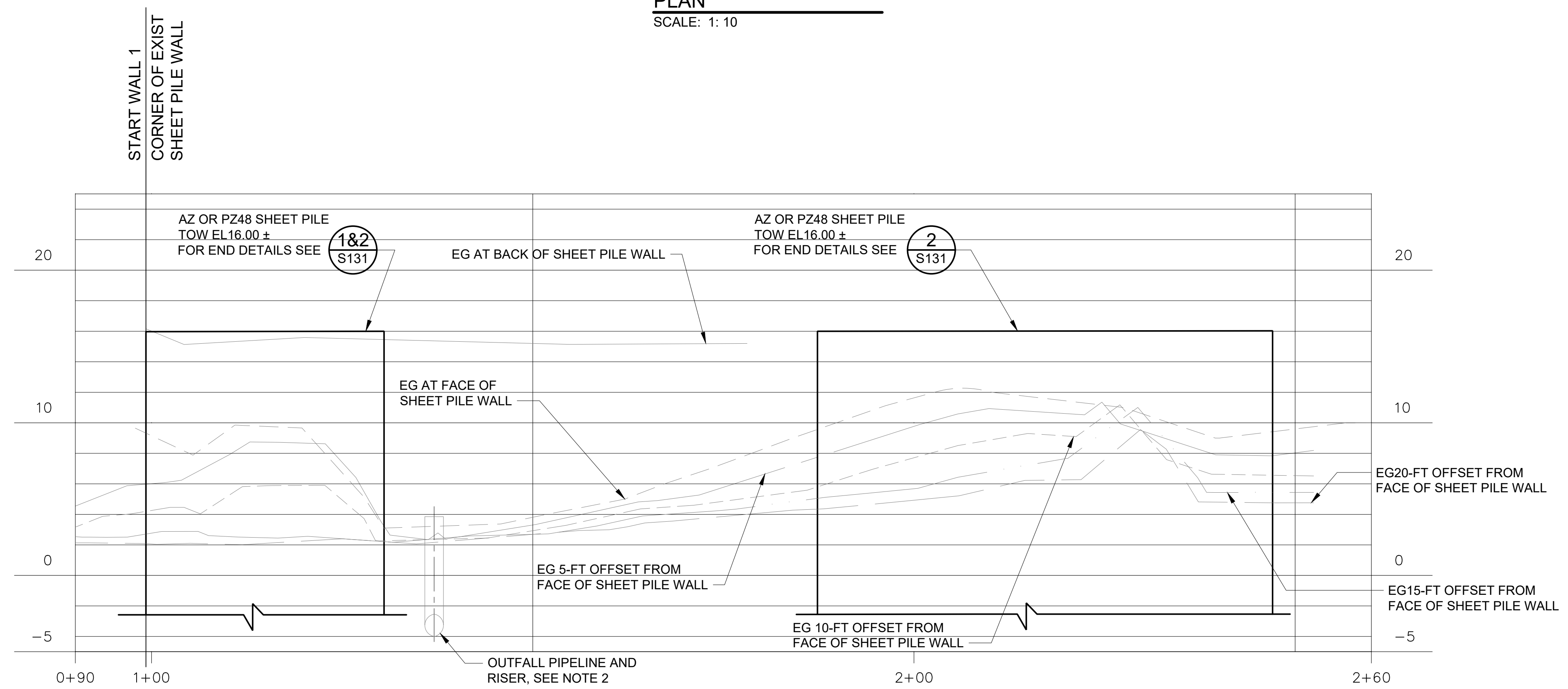
**BULKHEAD WALL 1
PLAN AND PHOTOS**

DATE: DECEMBER 2023
DRAWING NO: S121
SHT NO / TOTAL 82 / 91
REV NO: 0

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 PLOTTED: Jan 15, 2024 05:08:58am By SLor



PLAN
SCALE: 1: 10



PROFILE
SCALE: 1:5 VERT, 1:10 HOR

GENERAL NOTES:

1. EXISTING TOPOGRAPHY, STRUCTURES, AND SITE FEATURES ARE SHOWN SCREENED AND/OR LIGHT-LINED AND ARE INTENDED FOR REFERENCE ONLY. NEW GRADES FOR THIS CONTRACT, STRUCTURES, AND SITE FEATURES ARE SHOWN HEAVY-LINED EXCEPT WHERE NOTED OTHERWISE ON THE DRAWING.
2. PRIOR TO STARTING WORK LOCATE DEPTH, HORIZONTAL POSITION, AND ALIGNMENT OF OUTFALL 2075. CLEARLY MARK THE ALIGNMENT RELATIVE TO THE OUTFALL RISER ON THE EXISTING SHEET PILE WALL.
3. PROTECT STORMWATER RISER PIPE IN PILE.
4. IF ABANDONED OUTFALL 2076 IS ENCOUNTERED DURING REMOVAL OF DEBRIS OR DREDGING, THE PIPE SHALL BE CUT AT THE FACE OF THE WALL AND PLUGGED WITH 2FT OF UNDERWATER CEMENT GROUT.

REFERENCE DRAWINGS:

- | | |
|---------------|--|
| S200 AND S201 | OUTFALLS: PLANS AND PHOTOS |
| S202 AND S203 | OUTFALLS: ENERGY DISSIPATION - PLANS, ELEVATIONS, AND SECTIONS |
| V201 TO V205 | LOCATION OF IDENTIFIED DEBRIS AND PILING FOR REMOVAL |

NO	REVISION DESCRIPTION	BY	APVD	DATE

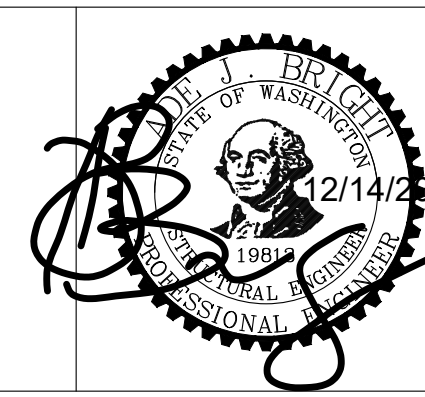
Lower Duwamish Waterway Group
 City of Seattle / King County / The Boeing Company

6 BRIGHT ENGINEERING, INC.
 STRUCTURAL & CIVIL ENGINEERING
 1809 7TH AVENUE
 SUITE 1100
 SEATTLE, WA 98101
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 F: (206) 625-1851

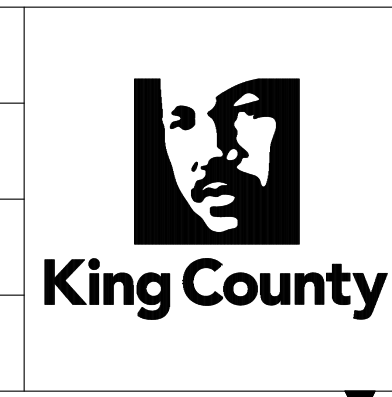
FINAL ISSUE DRAWING
INFORMATION ONLY

BID DOCUMENTS

DECEMBER 2023



DESIGNED/DRAWN: S. LOR	CHECKED: I. IKEDA
PROJECT ENGINEER: A. BRIGHT	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: PRJCT MNGR	CONTRACT NO: KC001065

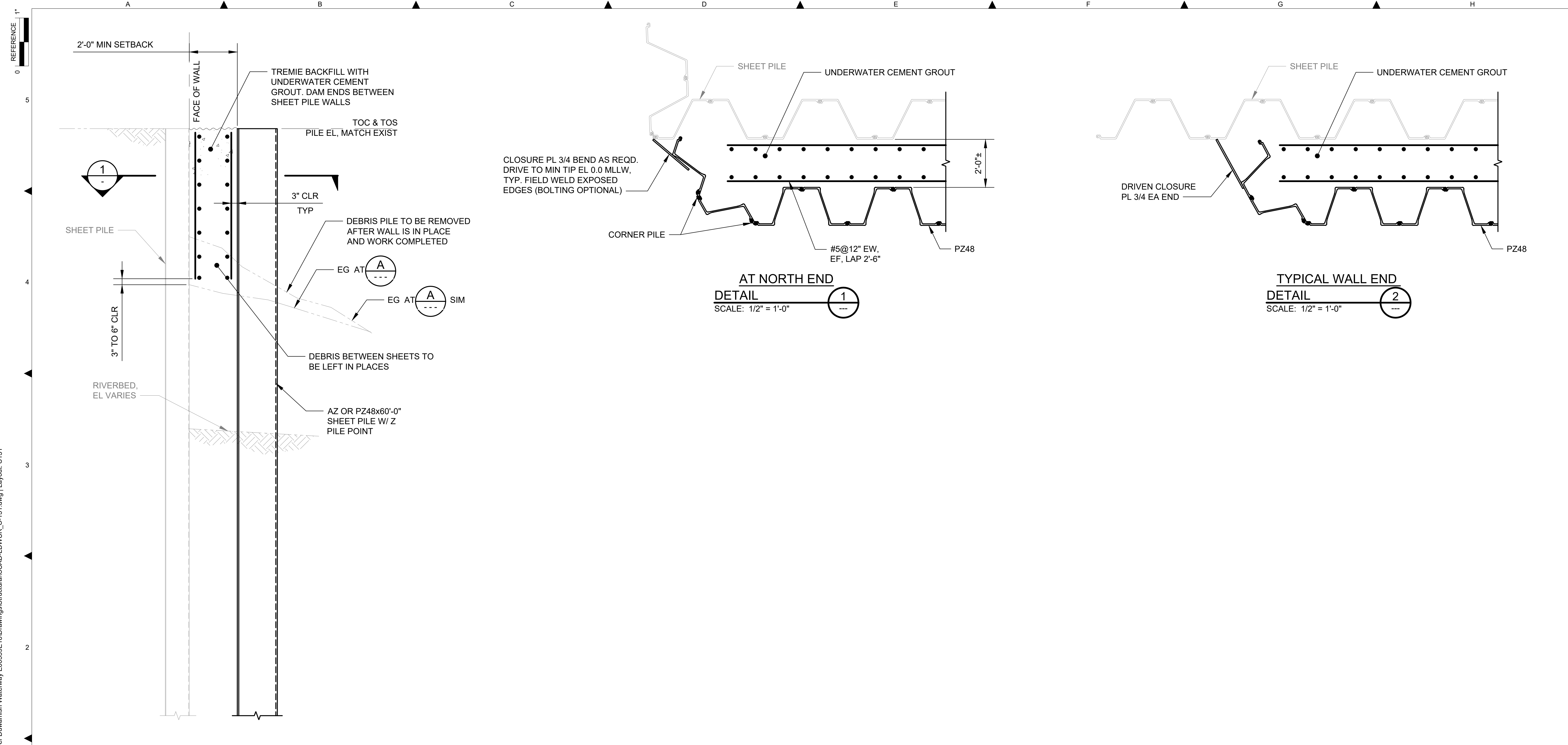


DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

**BULKHEAD WALL 1
 PLAN AND PROFILE**

DATE: DECEMBER 2023
DRAWING NO: S125
SHT NO / TOTAL REV NO: 83 / 91 0

BORDER FILE EDITION: x:\KCVT\Drawings\Structural\SCAD-LDWUR_s-131.dwg | Layout: S131
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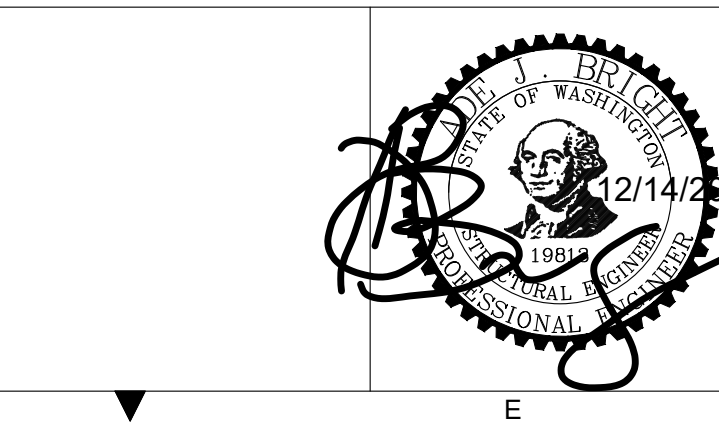


NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
 City of Seattle / King County / The Boeing Company

6 BRIGHT ENGINEERING, INC.
 STRUCTURAL & CIVIL ENGINEERING
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FINAL ISSUE DRAWING
INFORMATION ONLY
BID DOCUMENTS
 DECEMBER 2023



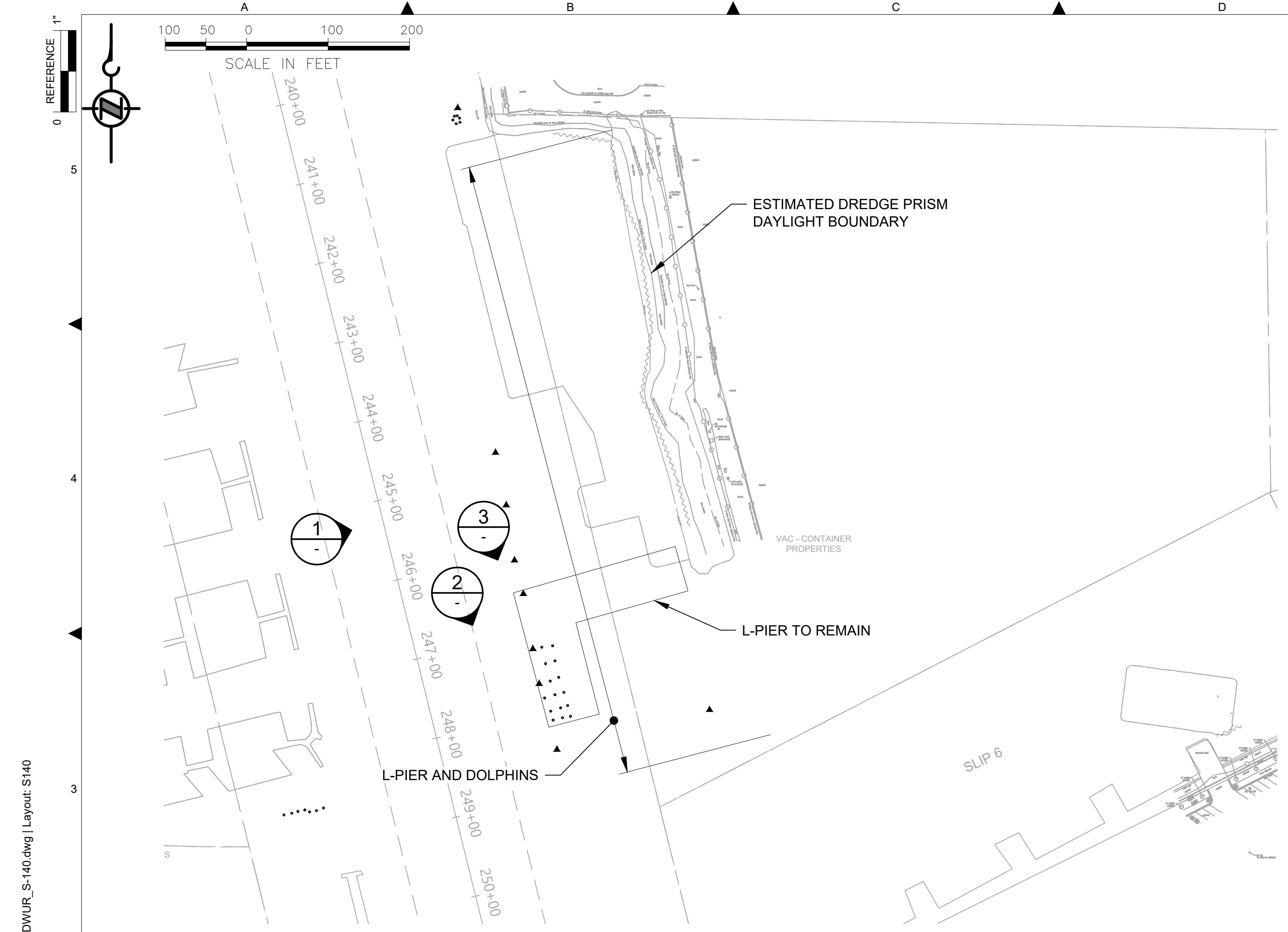
DESIGNED/DRAWN: S. LOR	CHECKED: I. IKEDA
PROJECT ENGINEER: A. BRIGHT	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: PRJCT MNGR	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

BULKHEAD WALL 1
SECTIONS AND DETAILS

DATE: DECEMBER 2023
DRAWING NO: S131
SHT NO / TOTAL REV NO: 84 / 91 0



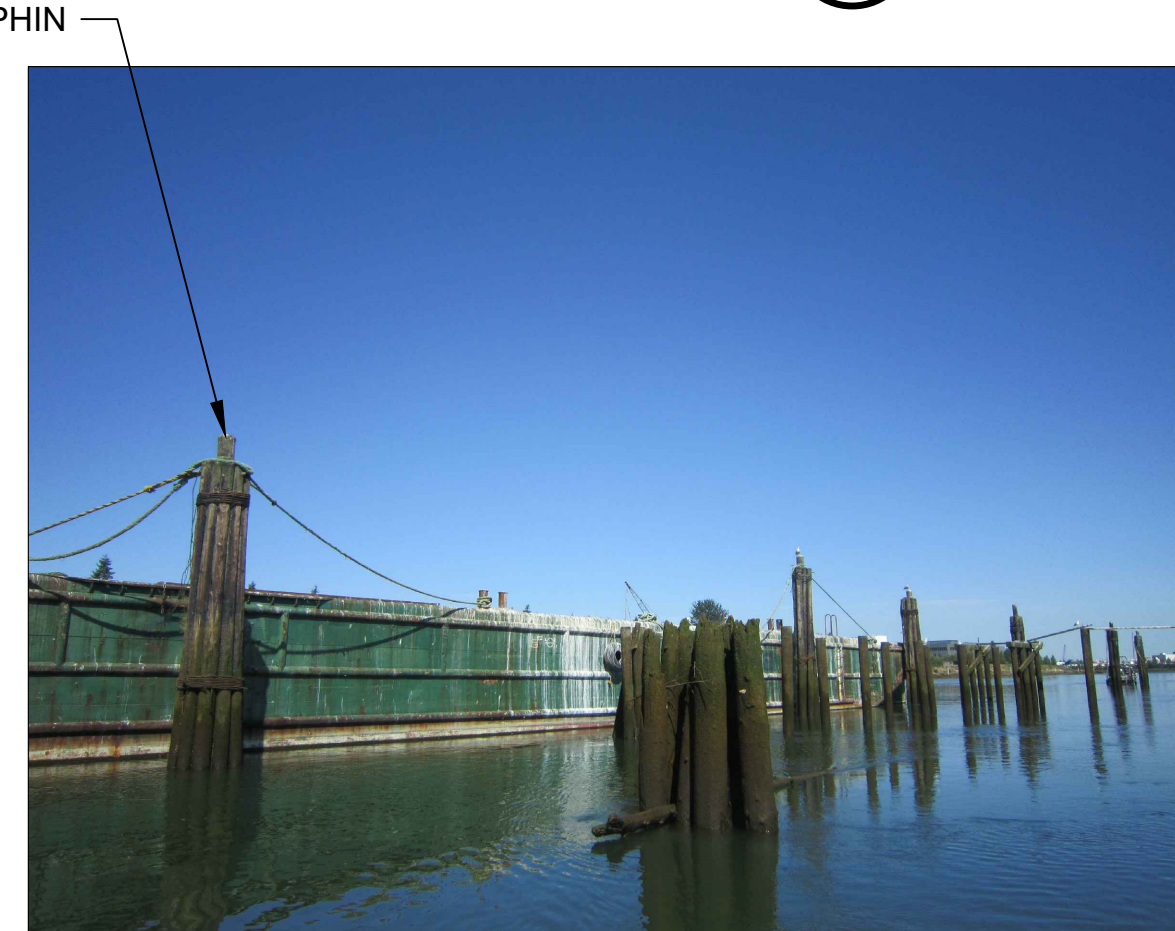
PARTIAL SITE PLAN
SCALE: 1 : 100



AERIAL VIEW
SCALE: NONE



TIMBER PILE
PHOTO
SCALE: NONE



DOLPHINS
PHOTO
SCALE: NONE



DILAPIDATED L-SHAPED PIER BENT
PHOTO
SCALE: NONE

GENERAL NOTES:

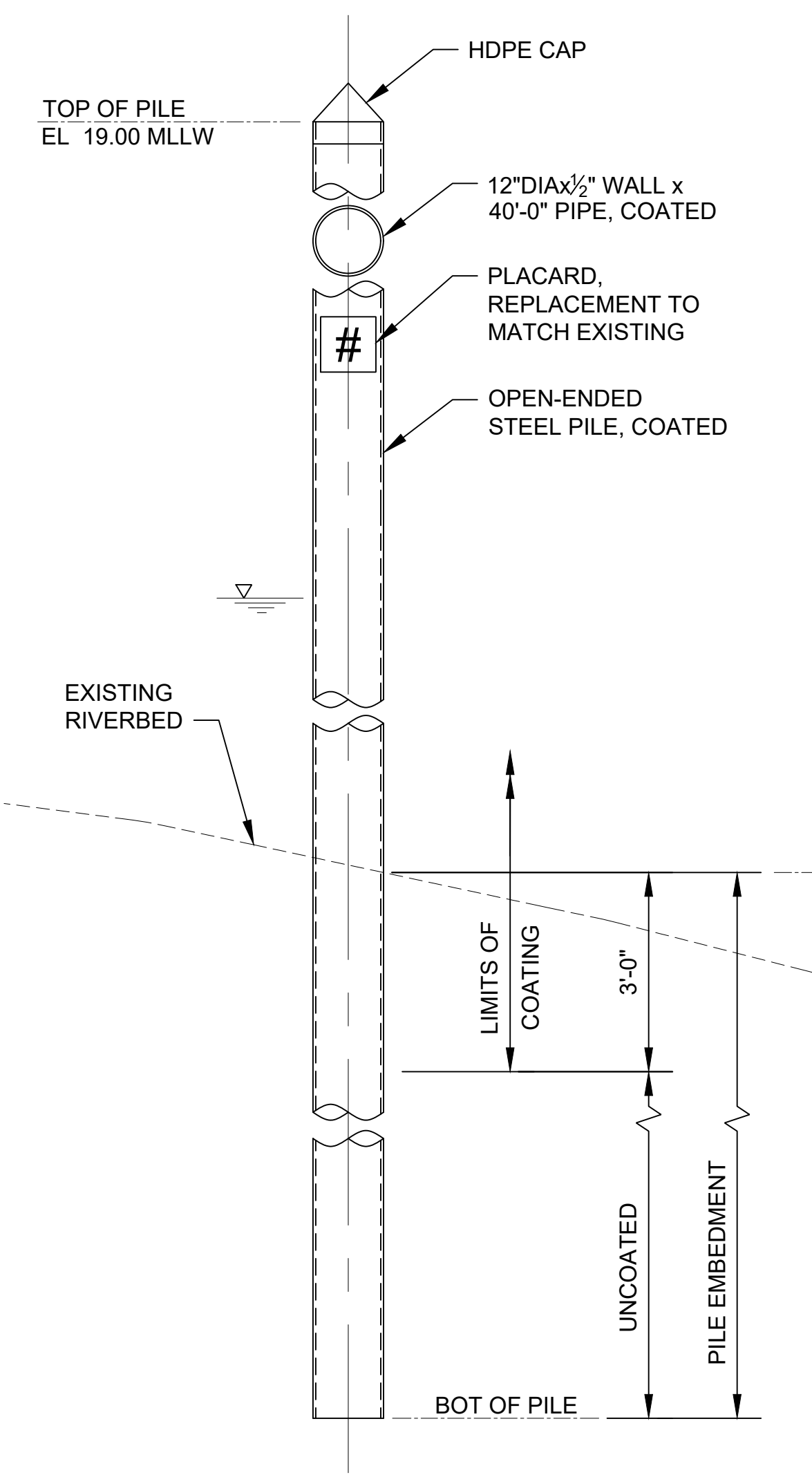
- EXISTING TOPOGRAPHY, STRUCTURES, AND SITE FEATURES ARE SHOWN SCREENED AND/OR LIGHT-LINED AND ARE INTENDED FOR REFERENCE ONLY.. NEW GRADES FOR THIS CONTRACT, STRUCTURES, AND SITE FEATURES ARE SHOWN HEAVY-LINED EXCEPT WHERE NOTED OTHERWISE ON THE DRAWING.

KEY NOTES:

- FOR DREDGING OFFSET AND LIMITS, CUT SLOPE AND RESTORATION, SEE CIVIL DRAWINGS.
- REMOVE AND REPLACE (1) TIMBER PILE WITH COATED STEEL PIPE PILE.
- HANDLE AND DISPOSE CREOSOTE TIMBER PILES IN CONFORMANCE TO THE SPECIFICATIONS AND PERMITS.

REFERENCE DRAWINGS:

V201 TO V205 LOCATION OF IDENTIFIED DEBRIS AND PILING FOR REMOVAL



FISHING POLE PILE SECTION
DETAIL
SCALE: 1/4" = 1'-0"

COLOR IMAGE
THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

BORDER FILE EDITION: x:\KCVTD\size-TB-Border_ACB\Layer T:\V22 Series - Anchor_QEA\252.01 Eng Svcs for Sediment_Cleanup of Upper Reach of Lower Duwamish Waterway E00559E18\Drawings\Structural\SCAD-LDWUR_S-140.dwg [Layout: S140] PLOTTED: Jan 15, 2024 05:13:11am By SLor

NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company

6 BRIGHT ENGINEERING, INC.
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SEATTLE, WA 98101
P: (206) 625-3777
F: (206) 625-1851

FINAL ISSUE DRAWING
INFORMATION ONLY
BID DOCUMENTS
DECEMBER 2023

DESIGNED/DRAWN: S. LOR
PROJECT ENGINEER: A. BRIGHT
DESIGN APPROVAL: J. ABDALKHANI
PROJECT ACCEPTANCE: PRJCT MNGR

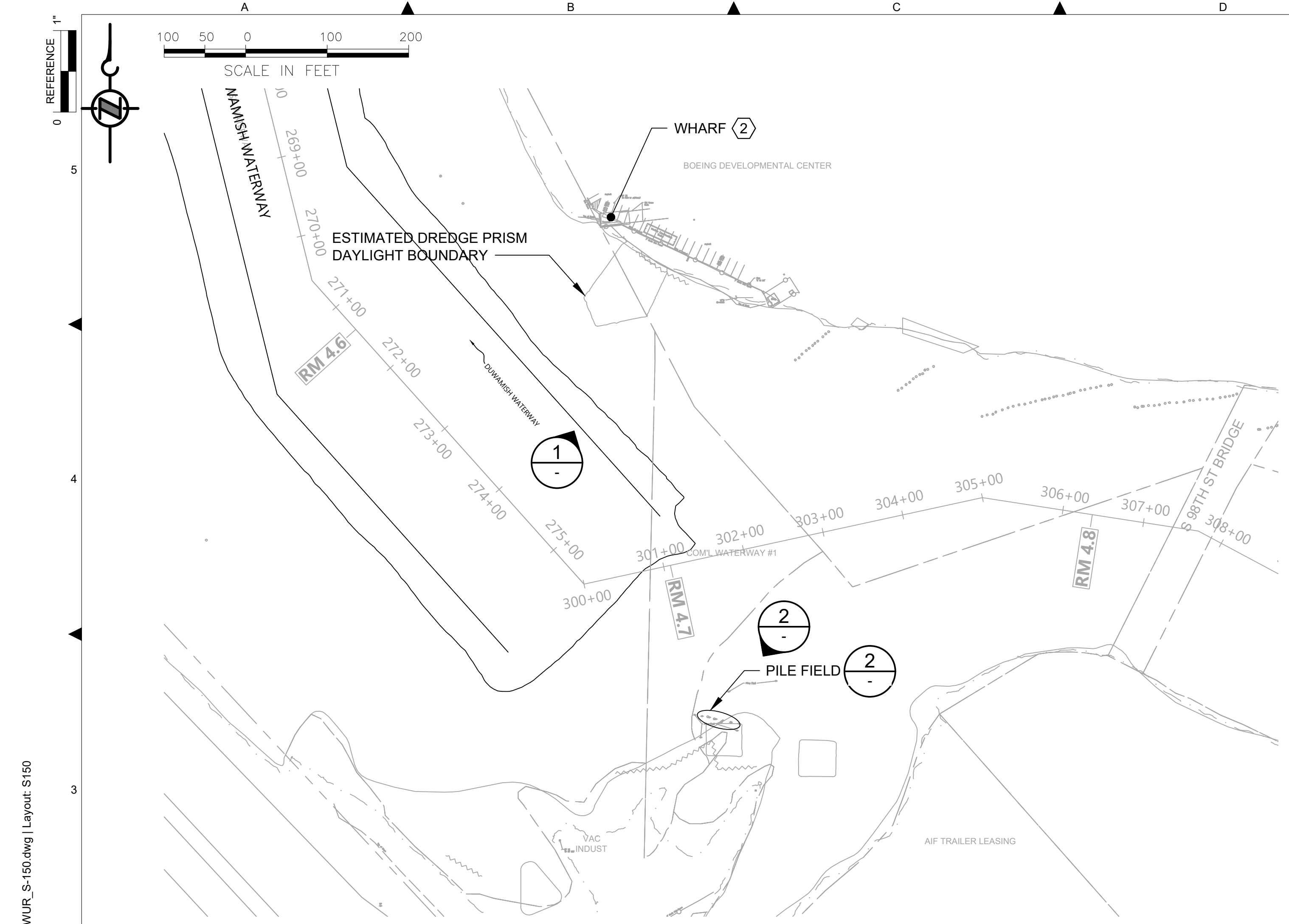
CHECKED: I. IKEDA
SCALE: AS NOTED
PROJECT FILE NO: E00559E18
CONTRACT NO: KC001065

12/14/2023

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION

L-SHAPE PIER & DOLPHINS
PLAN, PHOTOS,
AND PILE DETAILS

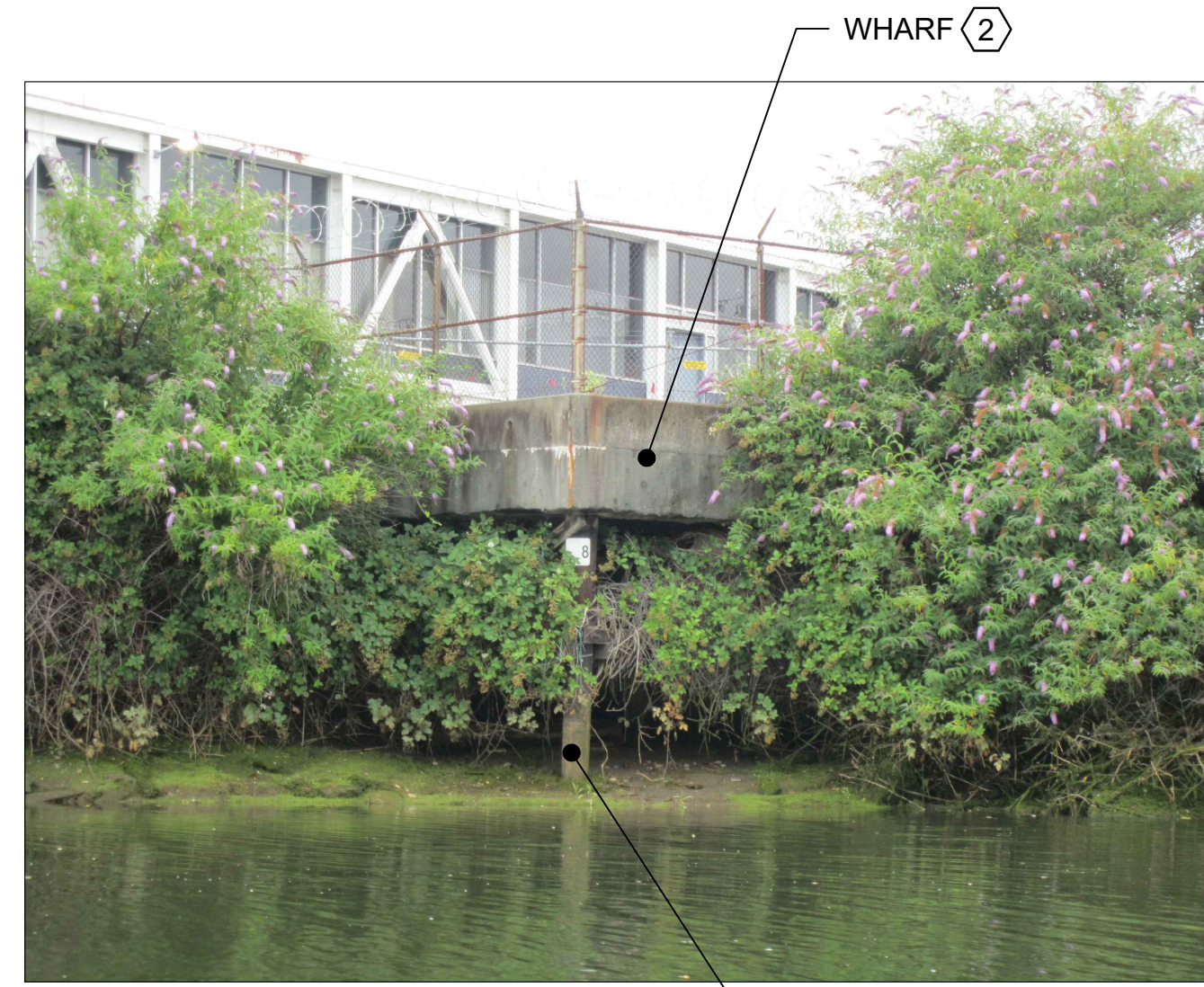
DATE: DECEMBER 2023
DRAWING NO: **S140**
SHT NO / TOTAL REV NO: 85 / 91 0



PARTIAL SITE PLAN
SCALE: 1 : 100



AERIAL VIEW
SCALE: NONE



WHARF PHOTO
SCALE: NONE



PILE FIELD PHOTO
SCALE: NONE

GENERAL NOTES:

- EXISTING TOPOGRAPHY, STRUCTURES, AND SITE FEATURES ARE SHOWN SCREENED AND/OR LIGHT-LINED AND ARE INTENDED FOR REFERENCE ONLY. NEW GRADES FOR THIS CONTRACT, STRUCTURES, AND SITE FEATURES ARE SHOWN HEAVY-LINED EXCEPT WHERE NOTED OTHERWISE ON THE DRAWING.

KEY NOTES:

- FOR DREDGING OFFSET AND LIMITS, CUT SLOPE AND RESTORATION, SEE CIVIL DRAWINGS.
- PROTECT AND DO NOT MOOR ON OR OTHERWISE IMPOSE LATERAL LOADS ON THE WHARF STRUCTURE.
- NO PILE DESIGN INFORMATION OR PILE EMBEDMENT DEPTH IS AVAILABLE THEREFORE MAINTAIN THE MINIMUM OFFSETS INDICATED ON THE PLANS.
- ESTIMATED BRIDGE VERTICAL CLEARANCE NEAR MID SPAN: APPROXIMATELY 12'-0" ABOVE TIDE AT 1:55PM, JULY 17, 2020. CONTRACTOR TO VERIFY CLEARANCES.

REFERENCE DRAWINGS:

- V201 to V205 LOCATION OF IDENTIFIED DEBRIS AND PILING FOR REMOVAL

COLOR IMAGE
THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

BORDER FILE EDITION: x:\KOVTD\size-TB-Border_ACB\Layer T:\V22 Series - Anchor QEA\252.01 Eng Svcs for Sediment Cleanup of Upper Reach of Lower Duwamish Waterway E00559E18\Drawings\Structural\SCAD-LDWUR_s-150.dwg | Layout: S150 PLOTTED: Jan 15, 2024 05:16:05am By SLor

NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company

6 BRIGHT ENGINEERING, INC.
STRUCTURAL & CIVIL ENGINEERING
1809 7TH AVENUE SUITE 1100
SEATTLE, WA 98101
P: (206) 625-3777
F: (206) 625-1851

FINAL ISSUE DRAWING
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DECEMBER 2023



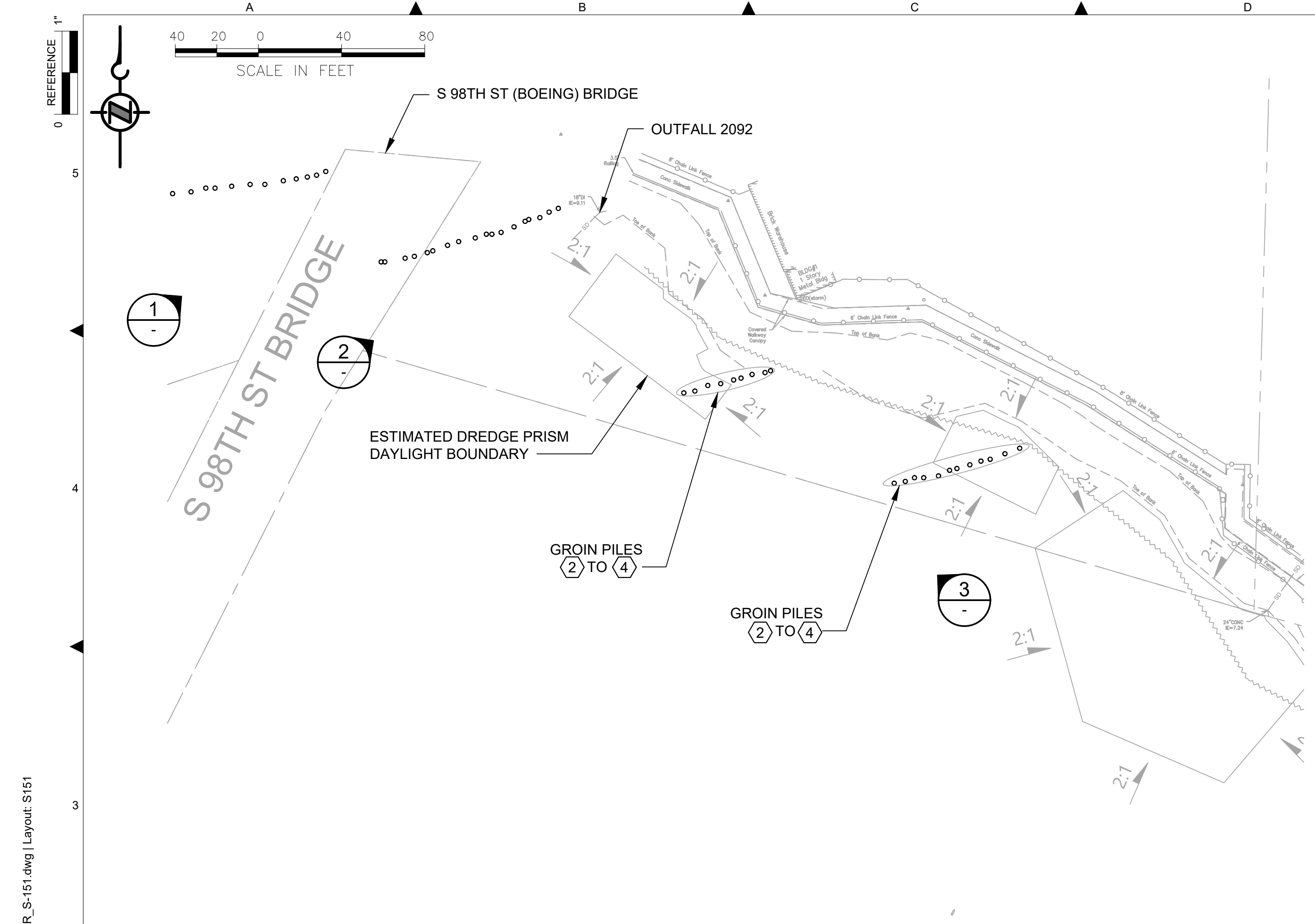
DESIGNED/DRAWN: S. LOR	CHECKED: I. IKEDA
PROJECT ENGINEER: A. BRIGHT	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: PRJCT MNGR	CONTRACT NO: KC001065



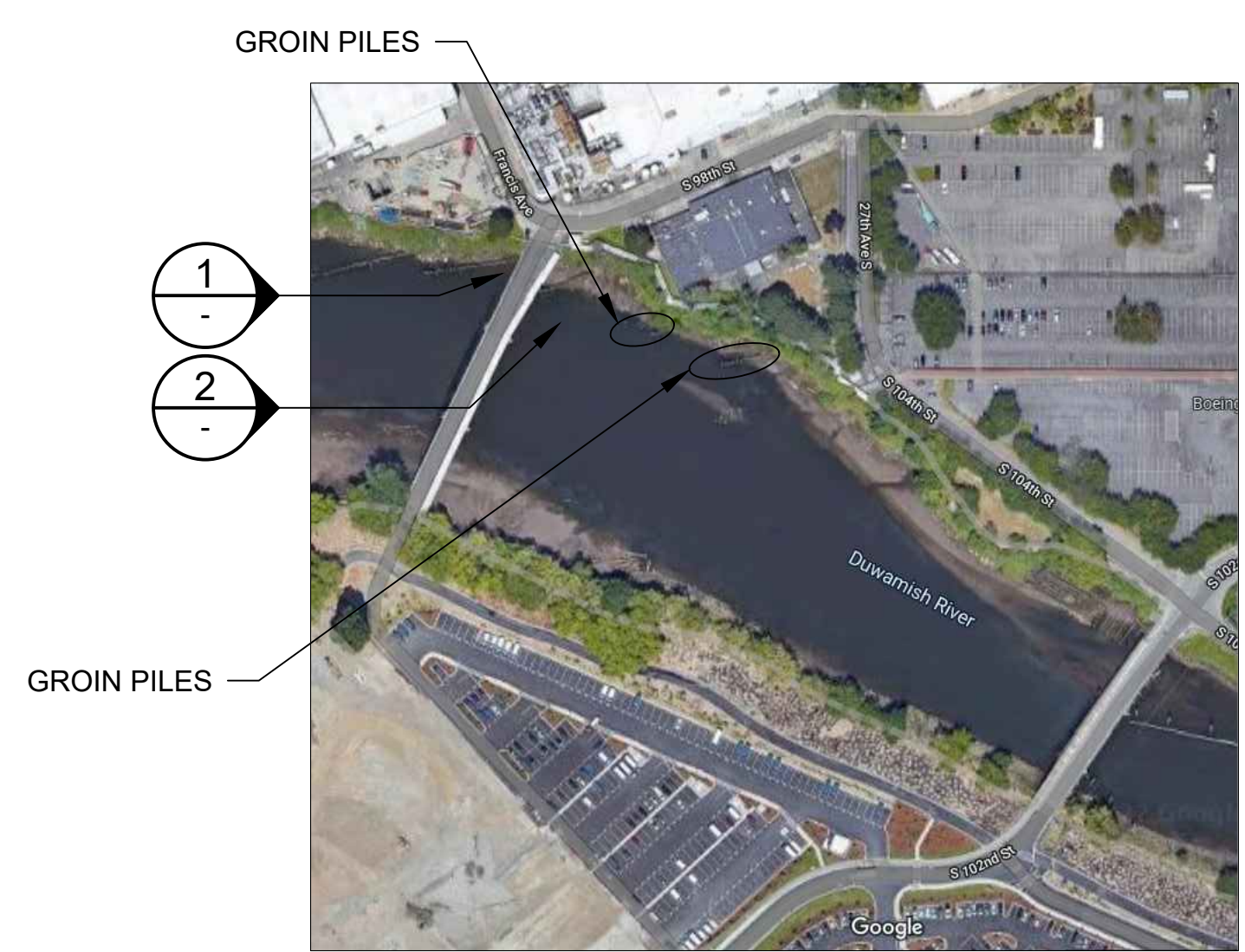
DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION

**WHARF & PILE FIELD
PLAN AND PHOTOS**

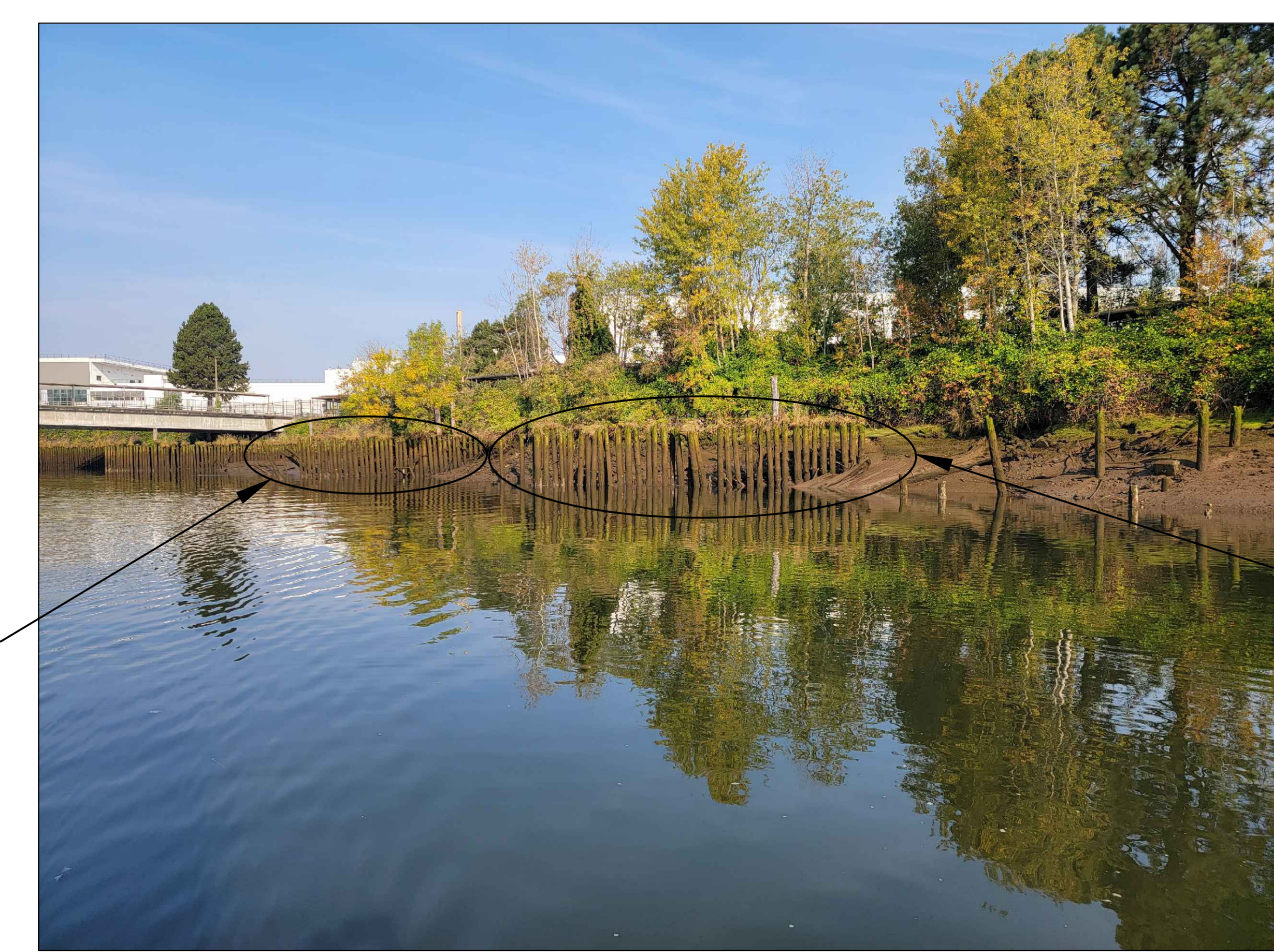
DATE: DECEMBER 2023
DRAWING NO: S150
SHT NO / TOTAL 86 / 91
REV NO: 0



PARTIAL SITE PLAN
SCALE: 1 : 40



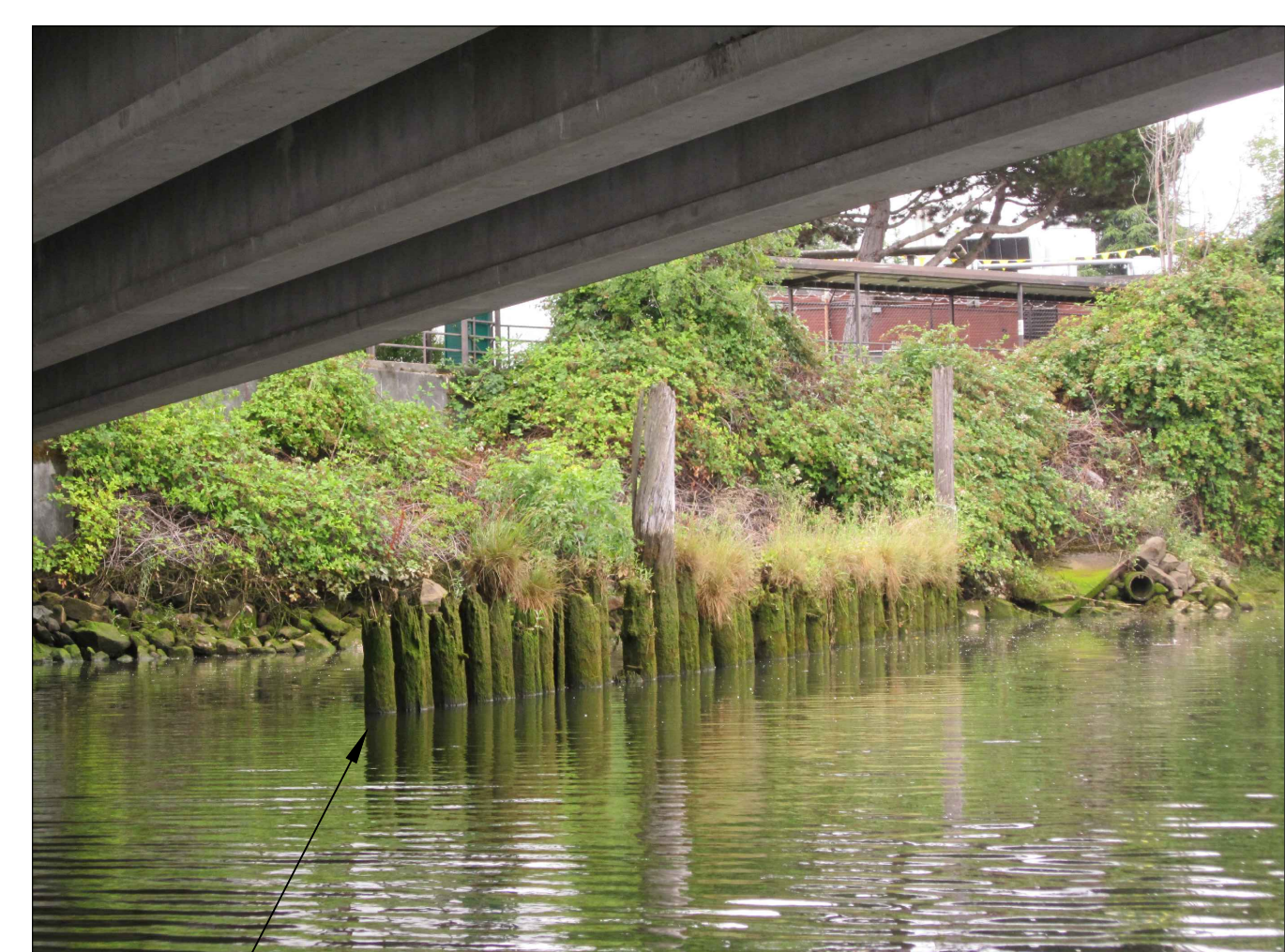
AERIAL VIEW
SCALE: NONE



GROIN PILES (LOOKING EAST)
PHOTO
SCALE: NONE



GROIN PILES TO REMAIN
PHOTO
SCALE: NONE



GROIN PILES TO REMAIN
PHOTO
SCALE: NONE

GENERAL NOTES:

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KEY NOTES:

- FOR DREDGING OFFSET AND LIMITS, CUT SLOPE AND RESTORATION, SEE CIVIL DRAWINGS.
- DO NOT MOOR OR OTHERWISE IMPOSE LATERAL LOADS ON THE PILE STRUCTURES.
- NO PILE DESIGN INFORMATION OR PILE EMBEDMENT DEPTH IS AVAILABLE THEREFORE MAINTAIN THE MINIMUM OFFSETS INDICATED ON THE PLANS.
- CONTRACTOR IS RESPONSIBLE FOR PROTECTING AND PREVENTING ANY DAMAGE TO EXISTING PILE STRUCTURES.
- ESTIMATED BRIDGE VERTICAL CLEARANCE NEAR MID SPAN: APPROXIMATELY 12'-0" ABOVE TIDE AT 1:55PM, JULY 17, 2020. CONTRACTOR TO VERIFY CLEARANCES.

REFERENCE DRAWINGS:

V201 TO V205 LOCATION OF IDENTIFIED DEBRIS AND PILING FOR REMOVAL

COLOR IMAGE
THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

BORDER FILE EDITION: x:\KOVTD\size-TB-Border_AQB\Layer
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PLOTTED: Jan 15, 2024 05:18:39am By SLor

NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company

6 BRIGHT ENGINEERING, INC.
STRUCTURAL & CIVIL ENGINEERING
1809 7TH AVENUE
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SEATTLE, WA 98101
P: (206) 625-3777
F: (206) 625-1851

FINAL ISSUE DRAWING
INFORMATION ONLY
BID DOCUMENTS
DECEMBER 2023

DESIGNED/DRAWN: S. LOR
PROJECT ENGINEER: A. BRIGHT
DESIGN APPROVAL: J. ABDALKHANI
PROJECT ACCEPTANCE: PRJCT MNGR

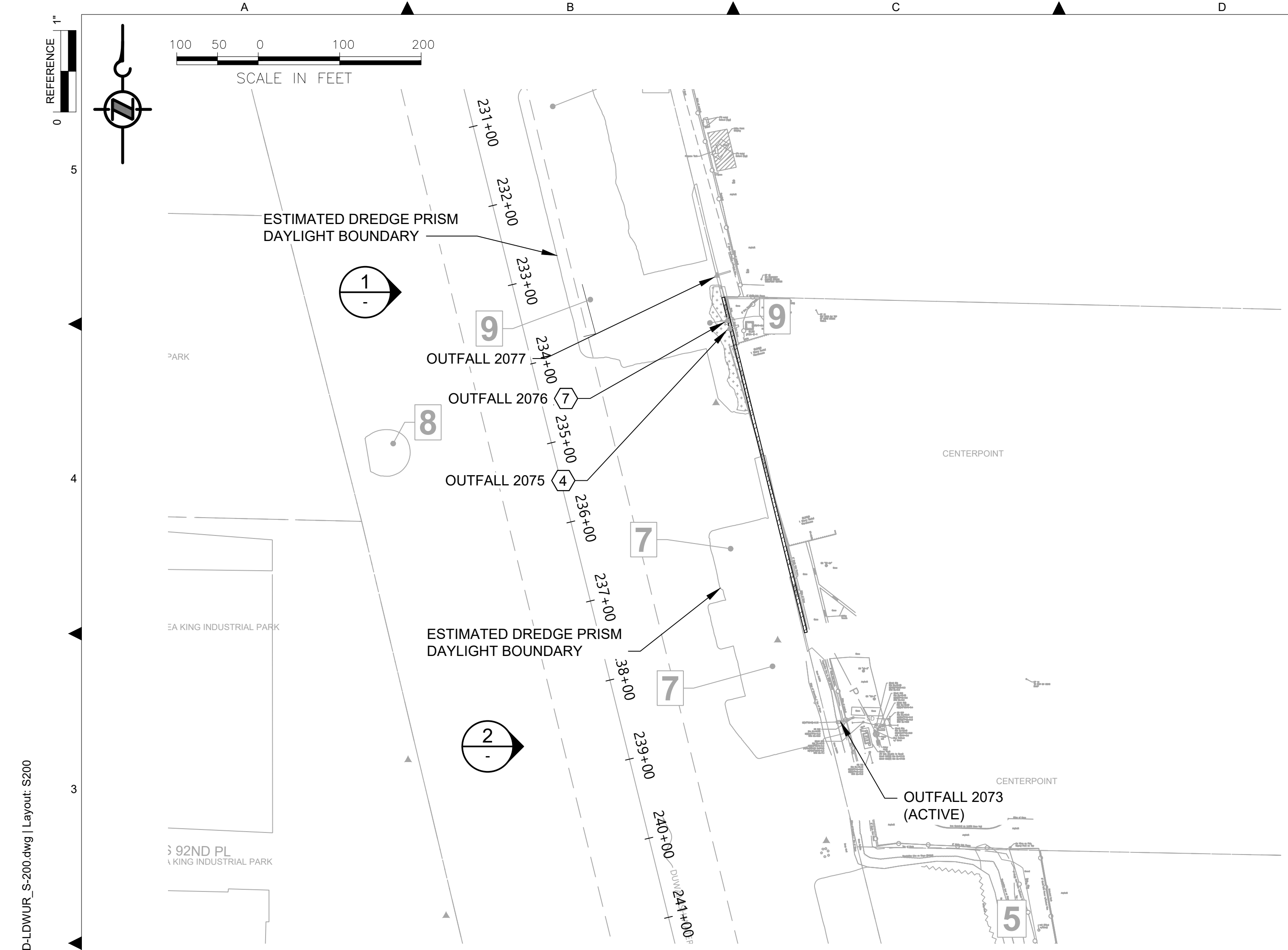
CHECKED: I. IKEDA
SCALE: AS NOTED
PROJECT FILE NO: E00559E18
CONTRACT NO: KC001065

12/14/2023

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIATION ACTION

GROIN PILES
PLAN AND PHOTOS

DATE: DECEMBER 2023
DRAWING NO: **S151**
SHT NO / TOTAL REV NO: 87 / 91 0



PARTIAL SITE PLAN
SCALE: 1 : 100



GOOGLE MAP VIEW
SCALE: NONE



PHOTO 1
SCALE: NONE
OUTFALL 2075
32" DIA STEEL RISER (4)
OUTFALL 2075
REMOVE SLAG DEBRIS PILE
SHEET PILE BULKHEAD BEHIND (2) (3)



PHOTO 2
SCALE: NONE
OUTFALL 2073
18" DIA CONCRETE PIPE (5)
3-SIDED CONCRETE BOX AND CONC SPLASH PAD TO REMAIN IN PLACE. LOCAL BANK PROTECTION TO BE ADJUSTED AS REQD TO INSTALL ENERGY DISSIPATION STRUCTURE (5) (6)

GENERAL NOTES:

- EXISTING TOPOGRAPHY, STRUCTURES, AND SITE FEATURES ARE SHOWN SCREENED AND/OR LIGHT-LINED AND ARE INTENDED FOR REFERENCE ONLY. NEW GRADES FOR THIS CONTRACT, STRUCTURES, AND SITE FEATURES ARE SHOWN HEAVY-LINED EXCEPT WHERE NOTED OTHERWISE ON THE DRAWING.
- PROTECT AND MAINTAIN 3'-0" CONSTRUCTION EQUIPMENT OFFSET FROM ACTIVE OUTFALLS, UNLESS INDICATED OTHERWISE.
- WORK AROUND OR DEMOLISH INACTIVE OUTFALLS THAT MAY BE ENCOUNTERED.

KEY NOTES:

- FOR CUT DREDGING OFFSET AND SLOPE AND RESTORATION, SEE CIVIL DRAWINGS.
- NO WALL DESIGN INFORMATION OR PILE EMBEDMENT DEPTH IS AVAILABLE, THEREFORE MAINTAIN THE MINIMUM OFFSETS INDICATED ON THE PLANS.
- DO NOT MOOR OR OTHERWISE IMPOSE LATERAL LOADS THE BULKHEADS.
- PROTECT STORMWATER RISER PIPE IN PLACE. PRIOR TO STARTING WORK LOCATE DEPTH, HORIZONTAL POSITION, AND ALIGNMENT OF OUTFALL 2075. CLEARLY MARK THE ALIGNMENT RELATIVE TO THE OUTFALL RISER ON THE EXISTING SHEET PILE WALL.
- PROTECT OUTFALL PIPE IN PLACE.
- CONSTRUCT ENERGY DISSIPATION STRUCTURE CONSISTING OF GABION MATTRESS FOUNDATION.
- IF ABANDONED OUTFALL 2076 IS ENCOUNTERED DURING REMOVAL OF DEBRIS OR DREDGING, THE PIPE SHALL BE CUT AT THE FACE OF THE WALL AND PLUGGED WITH 2FT OF UNDERWATER CEMENT GROUT.

REFERENCE DRAWINGS:

- S202 AND S203 OUTFALLS: ENERGY DISSIPATION - PLANS, ELEVATIONS, AND SECTIONS
- V201 TO V205 LOCATION OF IDENTIFIED DEBRIS AND PILING FOR REMOVAL

COLOR IMAGE
THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

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PLOTTED: Jan 15, 2024 05:22:33am By SLor

NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company

BRIGHT ENGINEERING, INC.
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1809 7th AVENUE
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SEATTLE, WA 98101
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FINAL ISSUE DRAWING
INFORMATION ONLY
BID DOCUMENTS
DECEMBER 2023

DESIGNED/DRAWN: S. LOR
PROJECT ENGINEER: A. BRIGHT
DESIGN APPROVAL: J. ABDALKHANI
PROJECT ACCEPTANCE: PRJCT MNGR

CHECKED: I. IKEDA
SCALE: AS NOTED
PROJECT FILE NO: E00559E18
CONTRACT NO: KC001065

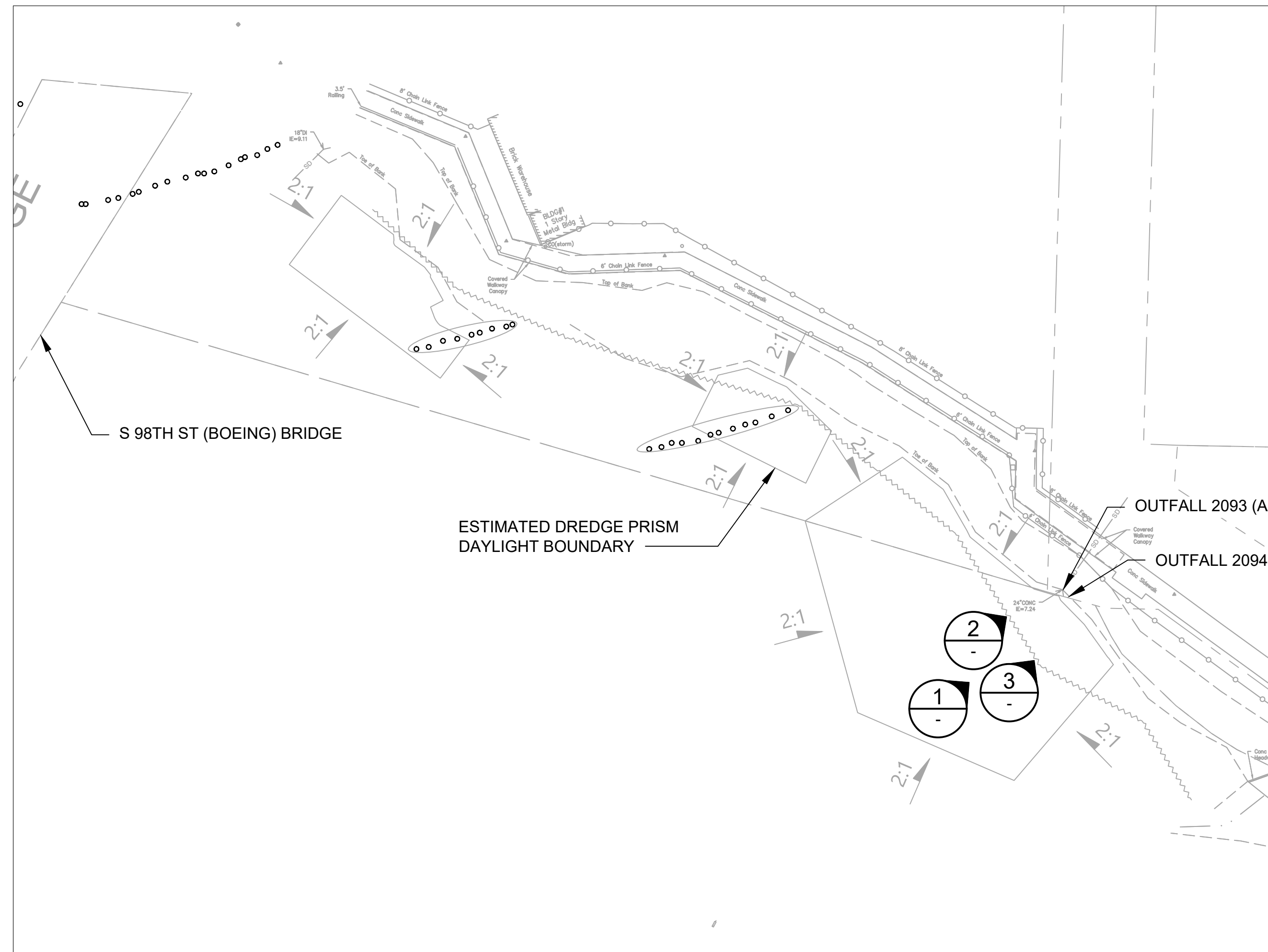
12/14/2023

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION

OUTFALLS 2075 & 2073
PLAN AND PHOTOS

DATE: DECEMBER 2023
DRAWING NO: **S200**
SHT NO / TOTAL: 88 / 91
REV NO: **0**

BORDER FILE EDITION: x:\KOVTD\size-TB-Border_ACB\Layer
 T:\V22_Series - Anchor_QEA\252.01 Eng Svcs for Sediment Cleanup of Upper Reach of Lower Duwamish Waterway E00559E18\Drawings\Structural\SCAD-LDWUR_S-201.dwg | Layout: S201
 PLOTTED: Jan 15, 2024 05:25:24am By SLor



PARTIAL SITE PLAN
SCALE: 1 : 40



AERIAL VIEW
SCALE: NONE

GENERAL NOTES:

- EXISTING TOPOGRAPHY, STRUCTURES, AND SITE FEATURES ARE SHOWN SCREENED AND/OR LIGHT-LINED AND ARE INTENDED FOR REFERENCE ONLY. NEW GRADES FOR THIS CONTRACT, STRUCTURES, AND SITE FEATURES ARE SHOWN HEAVY-LINED EXCEPT WHERE NOTED OTHERWISE ON THE DRAWING.

KEY NOTES:

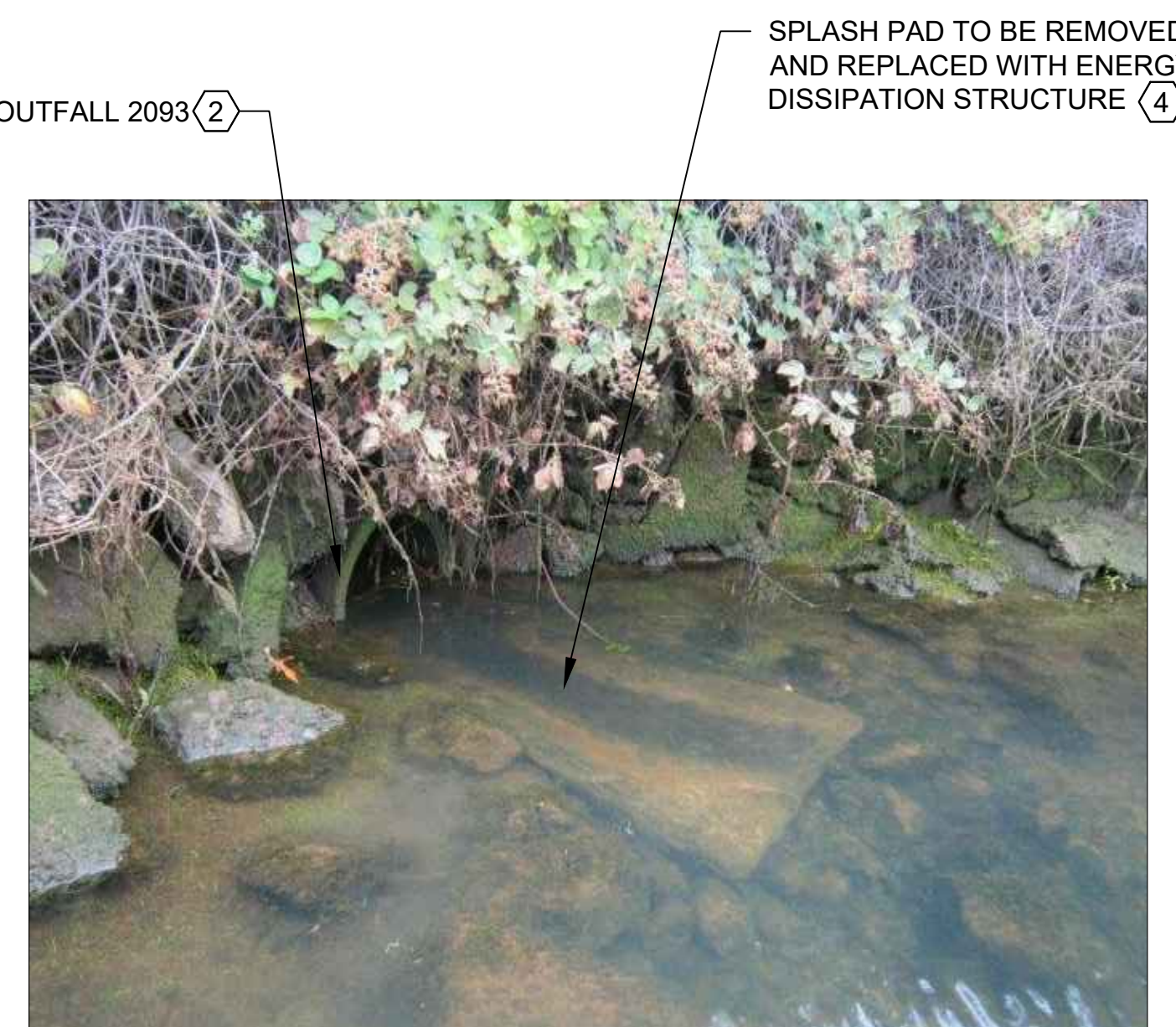
- FOR DREDGING OFFSET AND LIMITS, CUT SLOPE AND RESTORATION, SEE CIVIL DRAWINGS.
- PROTECT OUTFALL PIPE IN PLACE.
- PROTECT AND MAINTAIN 3'-0" CONSTRUCTION EQUIPMENT OFFSET FROM ACTIVE OUTFALLS UNLESS INDICATED OTHERWISE.
- CONSTRUCT ENERGY DISSIPATION STRUCTURE CONSISTING OF GABION MATTRESS FOUNDATION.

REFERENCE DRAWINGS:

S202 AND S203 OUTFALLS: ENERGY DISSIPATION - PLANS, ELEVATIONS, AND SECTIONS



OUTFALLS
PHOTO 1
SCALE: NONE



OUTFALL 2093
PHOTO 2
SCALE: NONE



OUTFALL 2094
PHOTO 3
SCALE: NONE

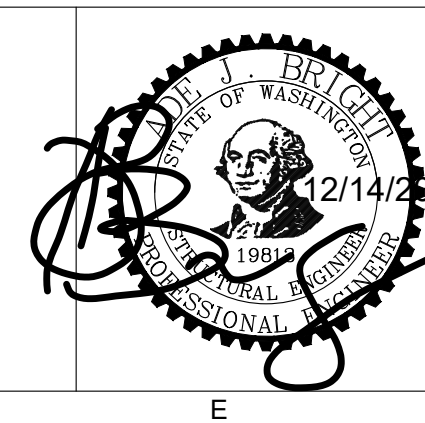
COLOR IMAGE
THIS DRAWING IS COMPOSED USING COLOR IMAGES OR PHOTOGRAPHS AND MUST BE PLOTTED, PRINTED, AND REPRODUCED IN COLOR TO BE VIEWED ACCURATELY.

NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company

6 BRIGHT ENGINEERING, INC.
STRUCTURAL & CIVIL ENGINEERING
1809 7TH AVENUE SUITE 1100
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FINAL ISSUE DRAWING
INFORMATION ONLY
BID DOCUMENTS
DECEMBER 2023



DESIGNED/DRAWN: S. LOR	CHECKED: I. IKEDA
PROJECT ENGINEER: A. BRIGHT	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: PRJCT MNGR	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIATION ACTION

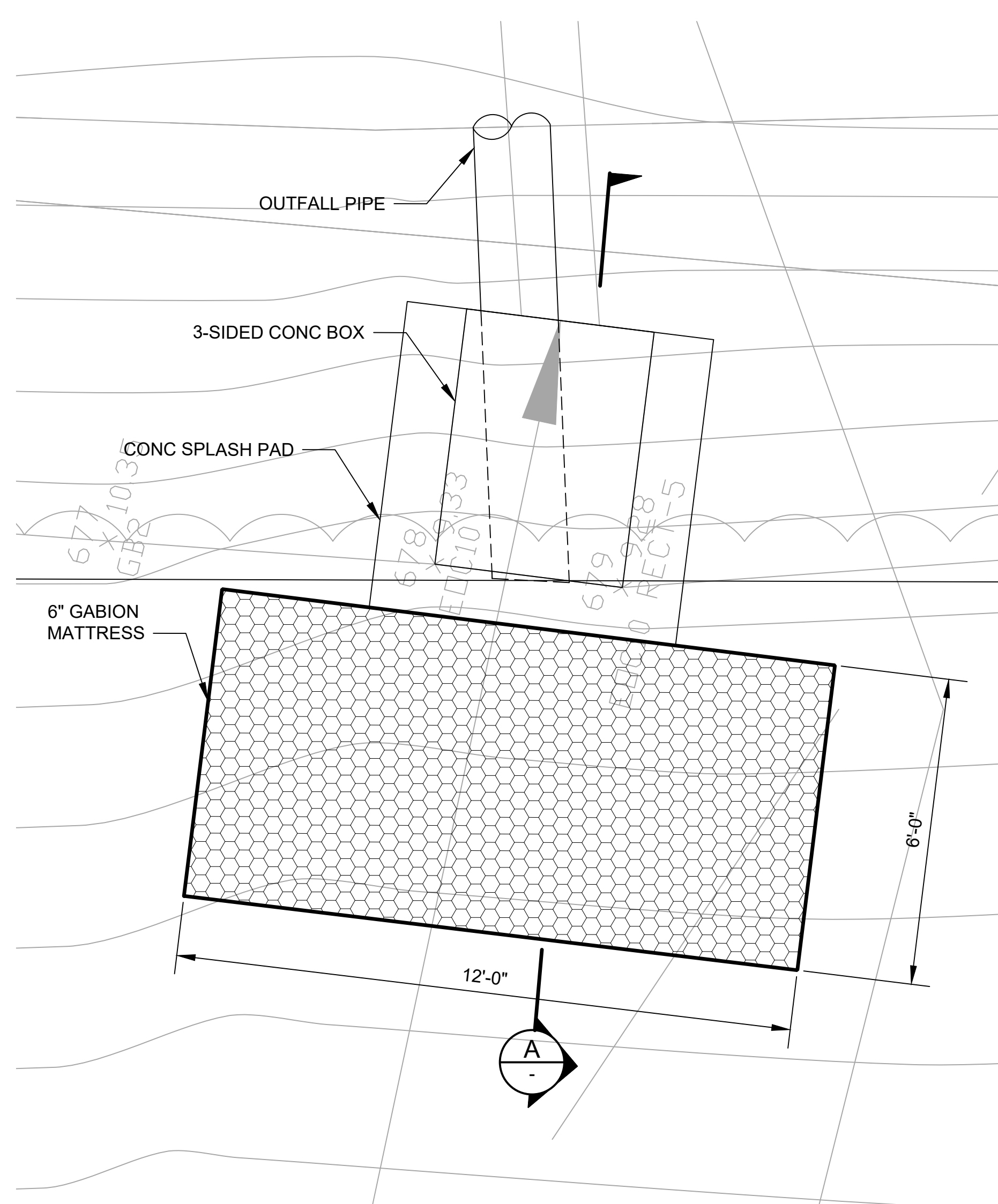
**OUTFALLS 2094 & 2093
PLAN AND PHOTOS**

DATE: DECEMBER 2023
DRAWING NO: S201
SHT NO / TOTAL 89 / 91
REV NO: 0

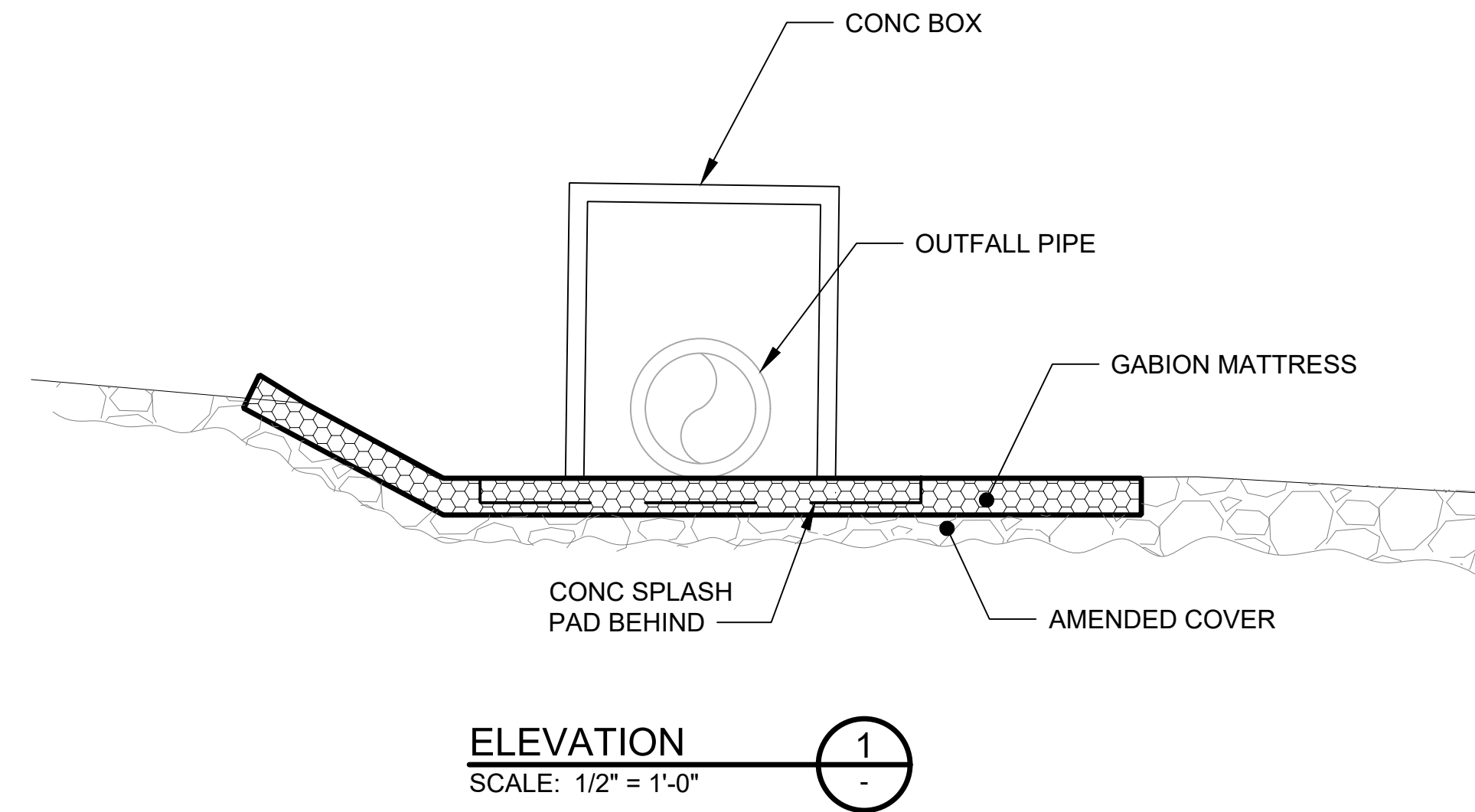
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GENERAL NOTES:

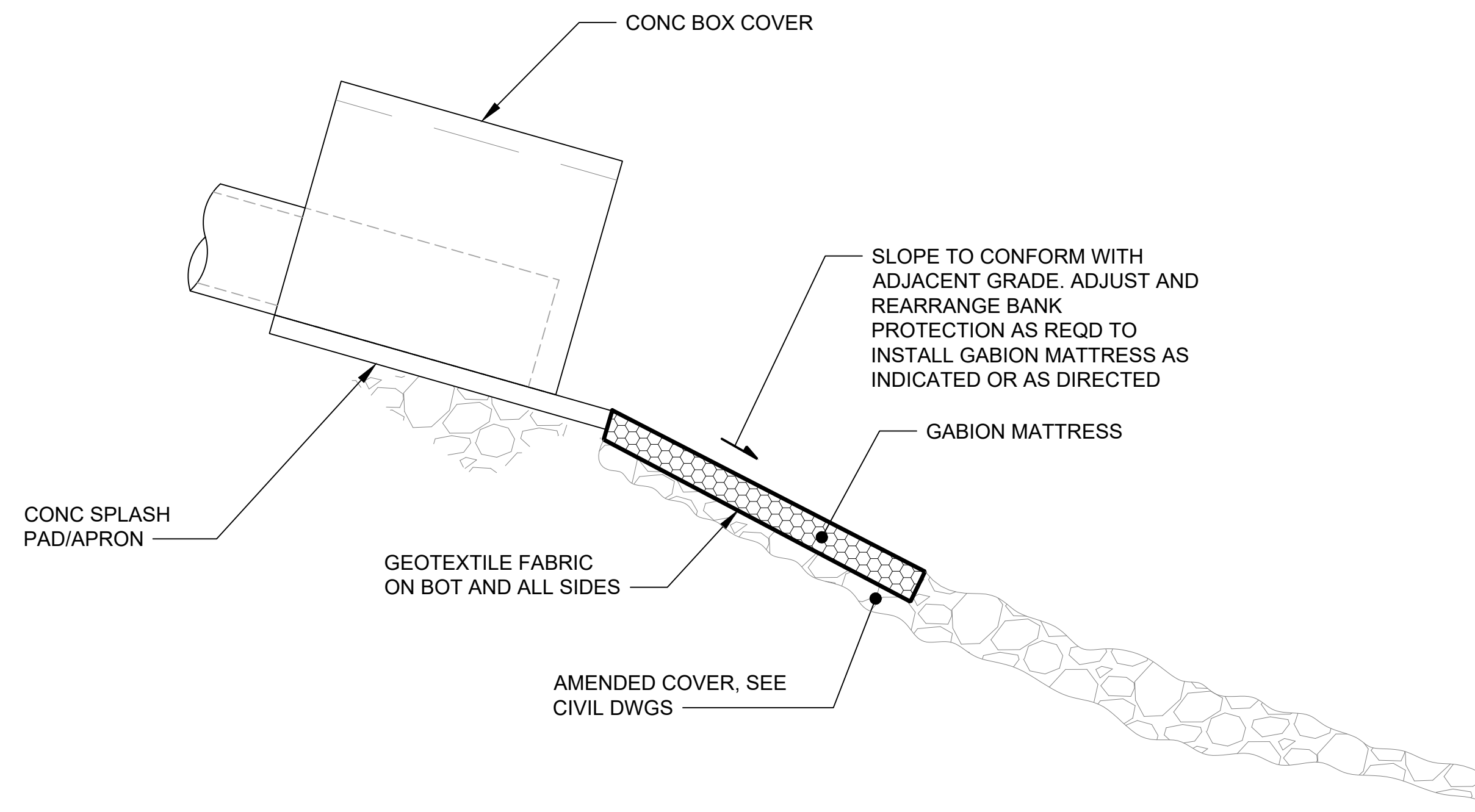
- EXISTING TOPOGRAPHY, STRUCTURES, AND SITE FEATURES ARE SHOWN SCREENED AND/OR LIGHT-LINED AND ARE INTENDED FOR REFERENCE ONLY. NEW GRADES FOR THIS CONTRACT, STRUCTURES, AND SITE FEATURES ARE SHOWN HEAVY-LINED EXCEPT WHERE NOTED OTHERWISE ON THE DRAWING.



OUTFALL 2073
PARTIAL PLAN
SCALE: 1/2" = 1'-0"



ELEVATION
SCALE: 1/2" = 1'-0" (1)



SECTION
SCALE: 1/2" = 1'-0" (A)

NO	REVISION DESCRIPTION	BY	APVD	DATE

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DECEMBER 2023

DESIGNED/DRAWN: S. LOR	CHECKED: I. IKEDA
PROJECT ENGINEER: A. BRIGHT	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: PRJCT MNGR	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
LOWER DUWAMISH WATERWAY UPPER REACH
REMEDIAL ACTION

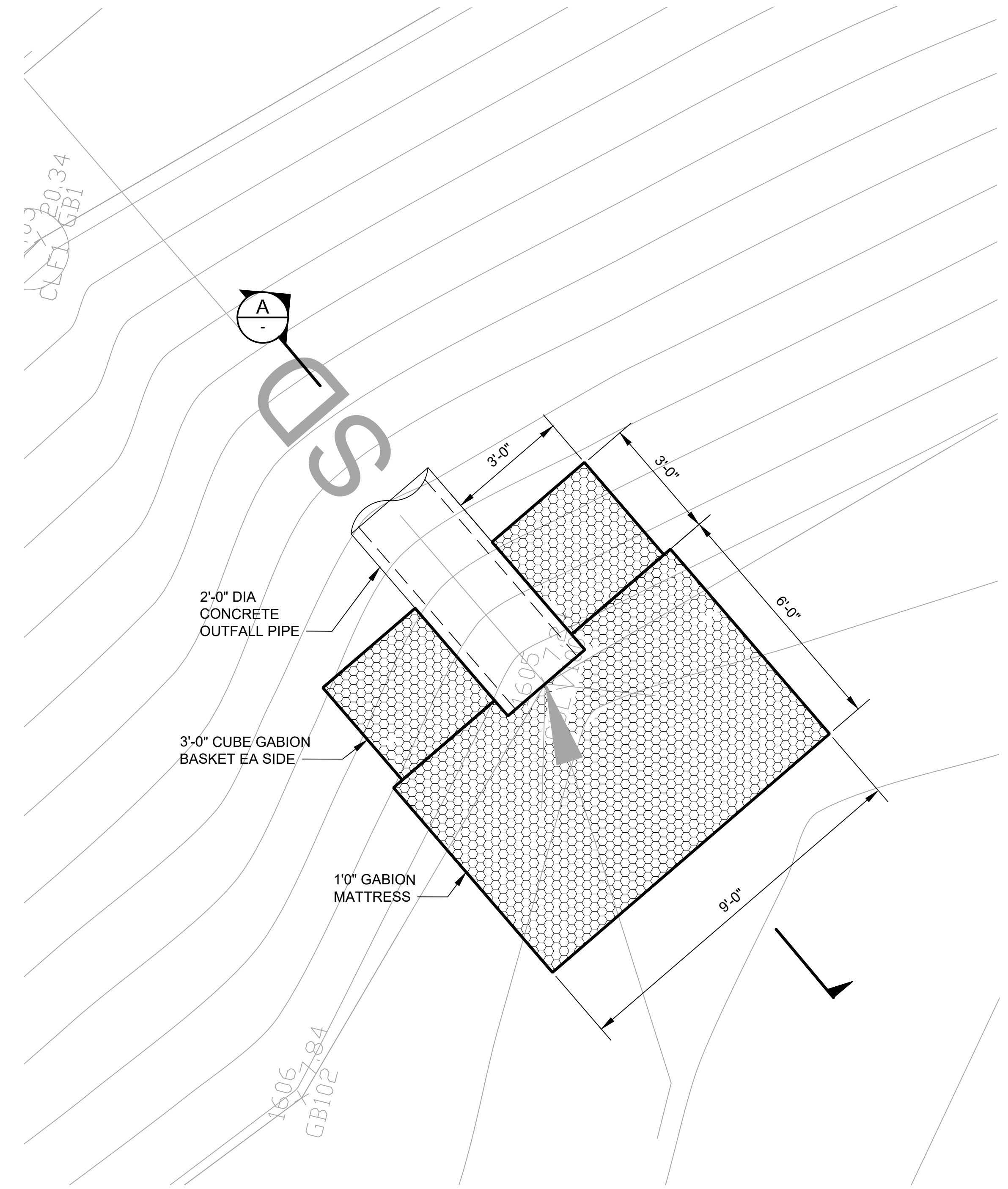
**OUTFALLS ENERGY DISSIPATION
PLANS, ELEVATIONS AND
SECTION 1 OF 2**

DATE: DECEMBER 2023
DRAWING NO: S202
SHT NO / TOTAL 90 / 91
REV NO: 0

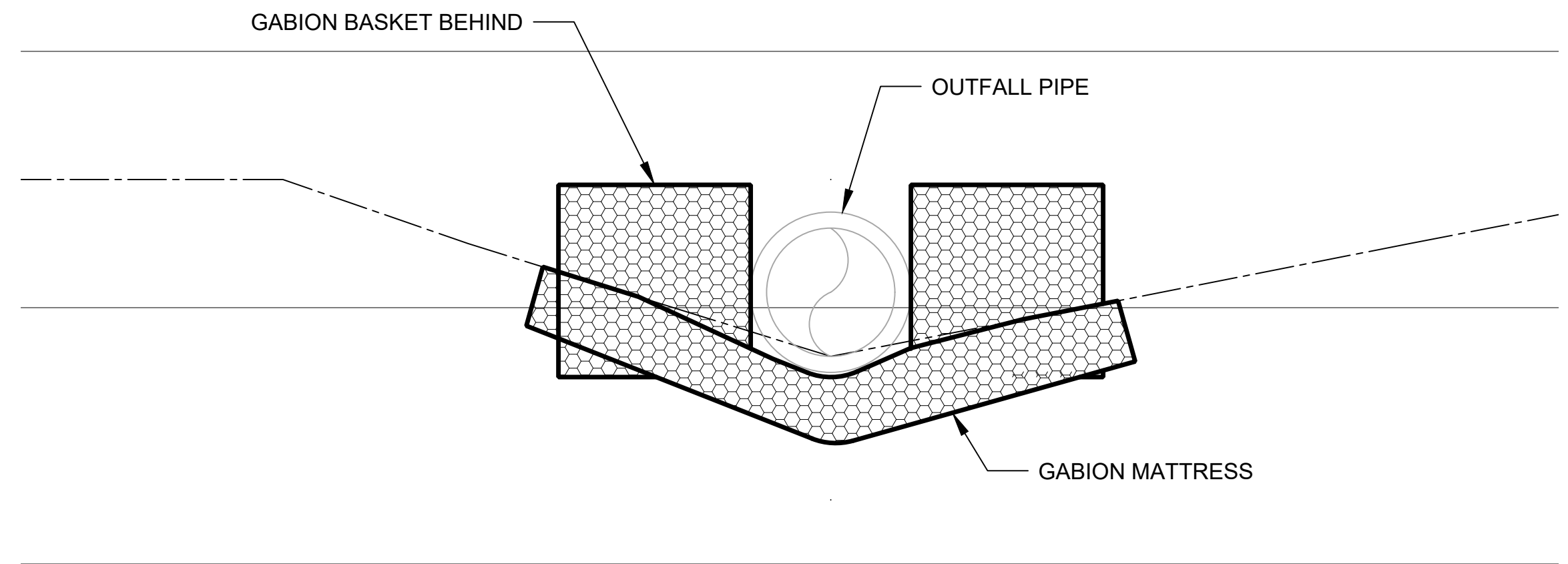
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GENERAL NOTES:

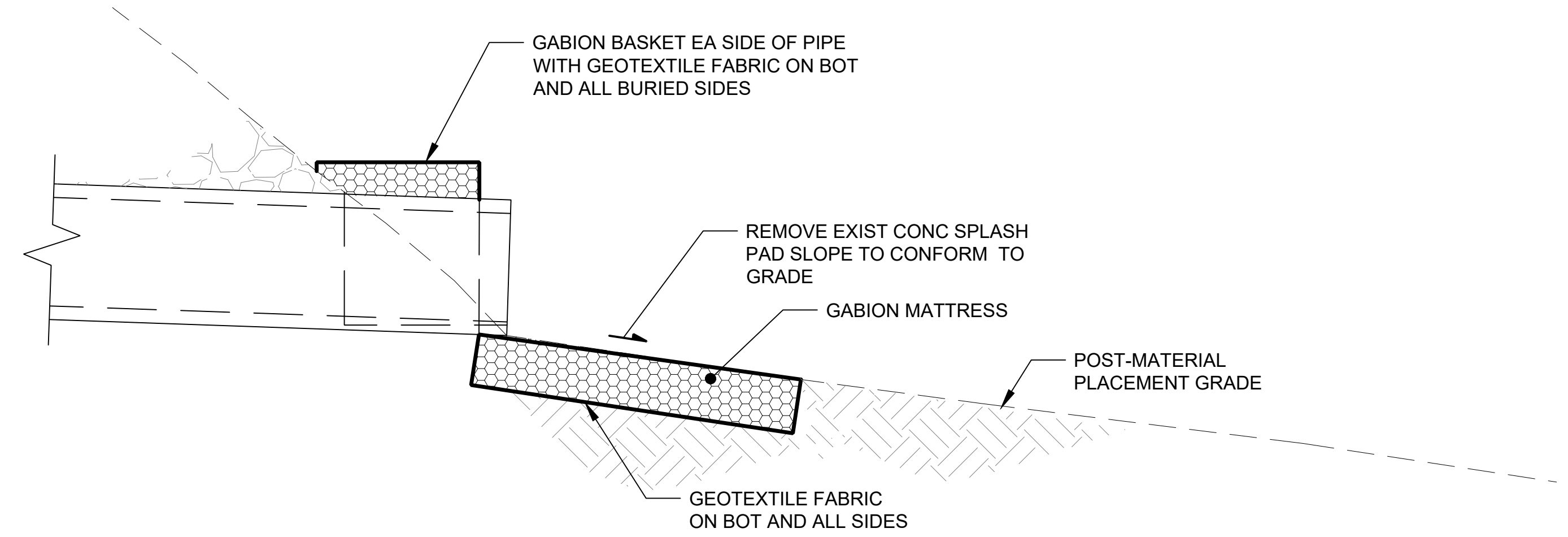
- EXISTING TOPOGRAPHY, STRUCTURES, AND SITE FEATURES ARE SHOWN SCREENED AND/OR LIGHT-LINED AND ARE INTENDED FOR REFERENCE ONLY. NEW GRADES FOR THIS CONTRACT, STRUCTURES, AND SITE FEATURES ARE SHOWN HEAVY-LINED EXCEPT WHERE NOTED OTHERWISE ON THE DRAWING.



OUTFALL 2093
PARTIAL PLAN
 SCALE: 1/2" = 1'-0"



ELEVATION
 SCALE: 1/2" = 1'-0"



SECTION
 SCALE: 1/2" = 1'-0"

NO	REVISION DESCRIPTION	BY	APVD	DATE

Lower Duwamish Waterway Group
 City of Seattle / King County / The Boeing Company

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FINAL ISSUE DRAWING
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 DECEMBER 2023



DESIGNED/DRAWN: S. LOR	CHECKED: I. IKEDA
PROJECT ENGINEER: A. BRIGHT	SCALE: AS NOTED
DESIGN APPROVAL: J. ABDALKHANI	PROJECT FILE NO: E00559E18
PROJECT ACCEPTANCE: PRJCT MNGR	CONTRACT NO: KC001065



DEPARTMENT OF NATURAL RESOURCES & PARKS
 WASTEWATER TREATMENT DIVISION
 LOWER DUWAMISH WATERWAY UPPER REACH
 REMEDIAL ACTION

**OUTFALLS ENERGY DISSIPATION
 PLANS, ELEVATIONS AND
 SECTIONS 2 OF 2**

DATE: DECEMBER 2023
DRAWING NO: S203
SHT NO / TOTAL 91 / 91
REV NO: 0