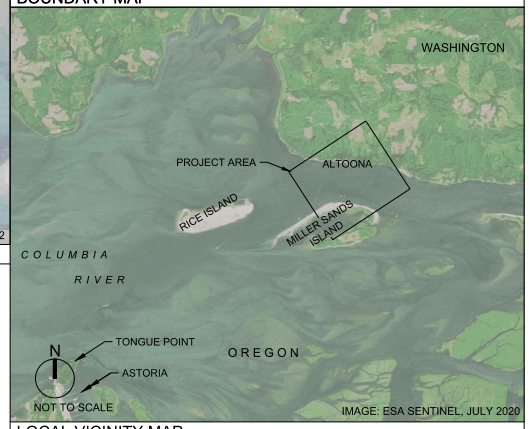
MILLER SANDS - RICE ISLANDS PILE DIKES

LOWER COLUMBIA RIVER, WASHINGTON & OREGON

SITE MAP

BOUNDARY MAP



LOCAL VICINITY MAP

THIS PROJECT WAS DESIGNED BY THE PORTLAND DISTRICT OF THE U.S. ARMY CORPS OF ENGINEERS. THE INITIALS OR SIGNATURES AND REGISTRATION DESIGNATIONS OF INDIVIDUALS APPEAR ON THESE PROJECT DOCUMENTS WITHIN THE SCOPE OF THEIR EMPLOYMENT AS RE□UIRED BY ER 1110-1-8152.

SOLICITATION NUMBER: W9127N-26-BA016

CONTRACT NUMBER:

ISSUE DATE: JULY 2026

SOUDERS.RYAN.D.1385465714 — Digitally signed by SOUDERS.RYAN.D.1385465714 Date: 2026.05.18 10:09:13 -07'00'

RYAN D. SOUDERS, PE
CHIEF, DESIGN BRANCH — DATE

DUYCK.PATRICK.L.1242841189 — Digitally signed by DUYCK.PATRICK.L.1242841189 Date: 2026.05.21 15:55:07 -07'00'

PATRICK L. DUYCK, PE
CHIEF, ENGINEERING & CONSTRUCTION DIVISION — DATE

CASWELL.LARRY.DALE.JR.1052433432 2026.06.14 18:57:56 -07'00'

LARRY D. CASWELL, PE, PMP
COLONEL, CORPS OF ENGINEERS DISTRICT COMMANDER — DATE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

DESIGNED BY: A. GULLETT
DRAWN BY: J. SEIDEL
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
DATE: 7-May-26
ANSI FULL BLEED D (34.00 X 22.00 INCHES)

ISSUE DATE: JULY 2026
SOLICITATION NO.: W9127N-26-BA016
CONTRACT NO.: +XXXXXX-XX-X-XXXX
PLOT DATE & PLOTTER: (2decimal places)

COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

COVER SHEET

SHEET ID
G-001

ADVERTISE

INDEX OF DRAWINGS

REVISION NO.	SHEET ID	DRAWING TITLE	ACTION CODE NO.
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	G-001	COVER SHEET	
	G-002	DRAWING INDEX, GENERAL NOTES, AND ABBREVIATIONS	
		SURVEY	
	V-101	EXISTING CONDITIONS, SURVEY CONTROL, AND NARRATIVE	
		CIVIL	
	CE701	REPRESENTATIVE PHOTOGRAPHS AND AS-BUILTS	
	CS101	OVERALL SITE PLAN AND HAZARD MARKER LOCATION SCHEDULE	
	CS102	SITE PLAN - PILE DIKE 24.63	
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	C-101	PILE DIKE 24.63 - PLAN AND PROFILE - 1	
	C-102	PILE DIKE 24.63 - PLAN AND PROFILE - 2	
	C-103	PILE DIKE 23.81 - PLAN AND PROFILE	
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	C-306	PILE DIKE 24.63 - SECTIONS 12+25 TO 13+25	
	C-307	PILE DIKE 23.81 - SECTIONS 12+00 TO 12+75	
	C-308	PILE DIKE 23.81 - SECTIONS 13+00 TO 14+25	
	C-309	PILE DIKE 23.81 - SECTIONS 14+50 TO 15+75	
	C-310	PILE DIKE 23.81 - SECTIONS 16+00 TO 17+25	
	C-311	PILE DIKE 23.81 - SECTIONS 17+50 TO 18+75	
	C-312	PILE DIKE 23.81 - SECTIONS 19+00 TO 20+25	
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	C-316	PILE DIKE 23.71 TO 23.81 CONNECTOR - SECTIONS 10+75 TO 11+75	
	C-317	PILE DIKE 23.71 - SECTIONS 0+50 TO 2+00	
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	C-319	PILE DIKE 23.71 - SECTIONS 3+75 TO 5+00	
	C-320	PILE DIKE 23.71 - SECTIONS 5+25 TO 6+25	
	C-321	PILE DIKE 23.71 - SECTIONS 6+50 TO 7+75	
	C-322	PILE DIKE 23.71 - SECTION 8+00	
	C-501	AIDS TO NAVIGATION - SECTION AND DETAILS	
	C-502	SCOUR APRON - TYPICAL SECTION	

GENERAL NOTES:

1. FOLLOW ALL LOCAL, STATE, AND FEDERAL REGULATIONS WHEN UTILIZING ROAD AND HIGHWAYS AS HAUL ROUTES. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ROADWAY USE AND OBTAINING ANY REQUIRED PERMITS FROM STATE AND LOCAL AUTHORITIES.
2. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND COORDINATING USE OF FACILITIES NEEDED FOR MATERIALS, EQUIPMENT, AND PERSONNEL TO ACCESS THE PROJECT WORK AREA. NO LAND-BASED STAGING AREAS ARE PROVIDED.
3. NO LAND BASED OR IN-WATER WORK MAY OCCUR OUTSIDE OF THE WORK WINDOWS PROVIDED. REFER TO INCIDENTAL HARASSMENT AUTHORIZATION (IHA) AND SECTION 01 10 10.00 25 CONTRACTOR'S OPERATIONS AND REQUIREMENTS.
4. THE CONTRACTOR MUST FOLLOW ALL ENVIRONMENTAL REQUIREMENTS AND CONSTRAINTS AS DEFINED IN SECTION 01 57 19.00 25 TEMPORARY ENVIRONMENTAL CONTROLS.
5. CONTRACTOR MUST PROTECT IN PLACE AND NOT DAMAGE EXISTING USCG AIDS TO NAVIGATION (LATERAL MARKERS, RANGE MARKERS, AND BUOYS) AND USACE HAZARD MARKERS.
6. BATHYMETRY SHOWN REPRESENTS THE CONDITIONS AT THE TIME OF SURVEY. CONDITIONS ARE SUBJECT TO CHANGE. SEE SPEC 31 00 02.00 99 FOR RECONSTRUCTION SURVEY REQUIREMENTS.
7. OREGON DEPARTMENT OF TRANSPORTATION (ODOT) CLASS 1500 RIPRAP IS TO BE USED FOR THE ENHANCED ENROCKMENT STONE AND SCOUR APRON STONE. SEE SPEC 35 31 19.00 99 FOR STONE GRADATION REQUIREMENTS..

ACTION CODE KEY:

1. SHEET ACTION NUMBER IDENTIFICATION KEY SHALL BE AS SHOWN BELOW:
   - 1 DENOTES FIO DRAWING IS OBSOLETE AT THE COMPLETION OF THIS CONTRACT
   - 2 DENOTES DRAWINGS SHALL BE UPDATED AT THE COMPLETION OF THIS CONTRACT
   - 3 DENOTES FIO DRAWING WILL BE SUPERCEDED BY THE FOLLOWING DRAWINGS AT THE COMPLETION OF THIS CONTRACT
   - 4 DENOTES FIO DRAWING WAS REFERENCED BY THE FOLLOWING CONTRACT DRAWINGS
   - 5 DENOTES FIO DRAWING IS FOR REFERENCE ONLY
2. FIO DENOTES "FOR INFORMATION ONLY"

ABBREVIATIONS:

APPX	APPROXIMATE
ATON	FEDERAL AIDS TO NAVIGATION
B/W	BETWEEN
C	CENTERLINE
COR	CONTRACTING OFFICER REPRESENTATIVE
CO	CONTRACTING OFFICER
E	EASTING
EL	ELEVATION
ELEV	ELEVATION
EX	EXISTING
FIO	FOR INFORMATION ONLY
FNC	FEDERAL NAVIGATION CHANNEL
FT	FEET
GQAR	GOVERNMENT QUALITY ASSURANCE REPRESENTATIVE
H	HORIZONTAL
HWY	HIGHWAY
LOG	LIMITS OF GRADING
MHHW	MEAN HIGHER HIGH WATER
MHW	MEAN HIGH WATER
MIN	MINIMUM
MLLW	MEAN LOWER LOW WATER
MLW	MEAN LOW WATER
MOF	MATERIAL OFFLOADING FACILITY
MSL	MEAN SEA LEVEL
N	NORTHING
NA	NOT AVAILABLE
NAD83	NORTH AMERICAN DATUM OF 1983
NAVD88	NORTH AMERICAN VERTICAL DATUM OF 1988
NAIP	NATIONAL AGRICULTURE IMAGERY PROGRAM
NOAA	NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
PCF	POUNDS PER CUBIC FOOT
PD	PILE DIKE
PI	POINT OF INTERSECTION
PID	NATIONAL GEODETIC SURVEY BENCHMARK PERMANENT IDENTIFIER
PROP	PROPOSED
PVI	POINT OF VERTICAL INTERSECTION
REQ'D	REQUIRED
RM	RIVER MILE
STA	STATION
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
USACE	US ARMY CORPS OF ENGINEERS
USCG	US COAST GUARD
USDA	US DEPARTMENT OF AGRICULTURE
V	VERTICAL
W/	WITH
W	DESIGN UNIT WEIGHT

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

DESIGNED BY: A. GULLEY
DRAWN BY: J. SEEDEY
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
DATE: 7-May-26
ANSI FULL BLEED D (34.00 X 22.00 INCHES)

ISSUE DATE: 7-May-2026
SOLICITATION NO.: W912ZN-26-B4016
CONTRACT NO.: W912ZN-XX-X-XXXX
PLOT DATE & PLOTTER: (specifies)

COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - PRICE
PILE DIKE REPAIR

DRAWING INDEX, GENERAL NOTES, AND ABBREVIATIONS

SHEET ID
G-002

ADVERTISE

NOTE

1. BATHYMETRIC SURVEY DATA:

   THE MILLER RICE PILE DIKES HYDROSURVEY WAS CONDUCTED ON DECEMBER 2-3, 2024, BY THE PORTLAND DISTRICT SURVEY CREW TO ASSESS THE UNDERWATER STRUCTURE AND GEOSPATIAL POSITIONING OF THE PILE DIKES ALONG THE MILLER RICE WATERWAY. THESE STRUCTURES ARE CRITICAL FOR SEDIMENT CONTROL, SHORELINE PROTECTION, AND MAINTAINING NAVIGABLE WATERWAYS. THE SURVEY FOCUSED EXCLUSIVELY ON HYDROGRAPHIC DATA COLLECTION TO SUPPORT MAINTENANCE AND PLANNING EFFORTS.

   THE SURVEY UTILIZED HIGH-RESOLUTION MULTIBEAM SONAR SYSTEMS, SPECIFICALLY THE R2SONIC 2024 MULTIBEAM ECHOSOUNDER, PAIRED WITH AN APPLANIX POS MVFOR PRECISE POSITIONING AND MOTION COMPENSATION. THE SONAR PROVIDED DETAILED BATHYMETRIC DATA, CAPTURING THE UNDERWATER PROFILE OF THE PILE DIKES WITH EXCEPTIONAL ACCURACY. TIDE CORRECTIONS WERE APPLIED USING THE G2012B-CONUS GEOID MODELAND KTD FILES, ENSURING RELIABLE VERTICAL REFERENCING.

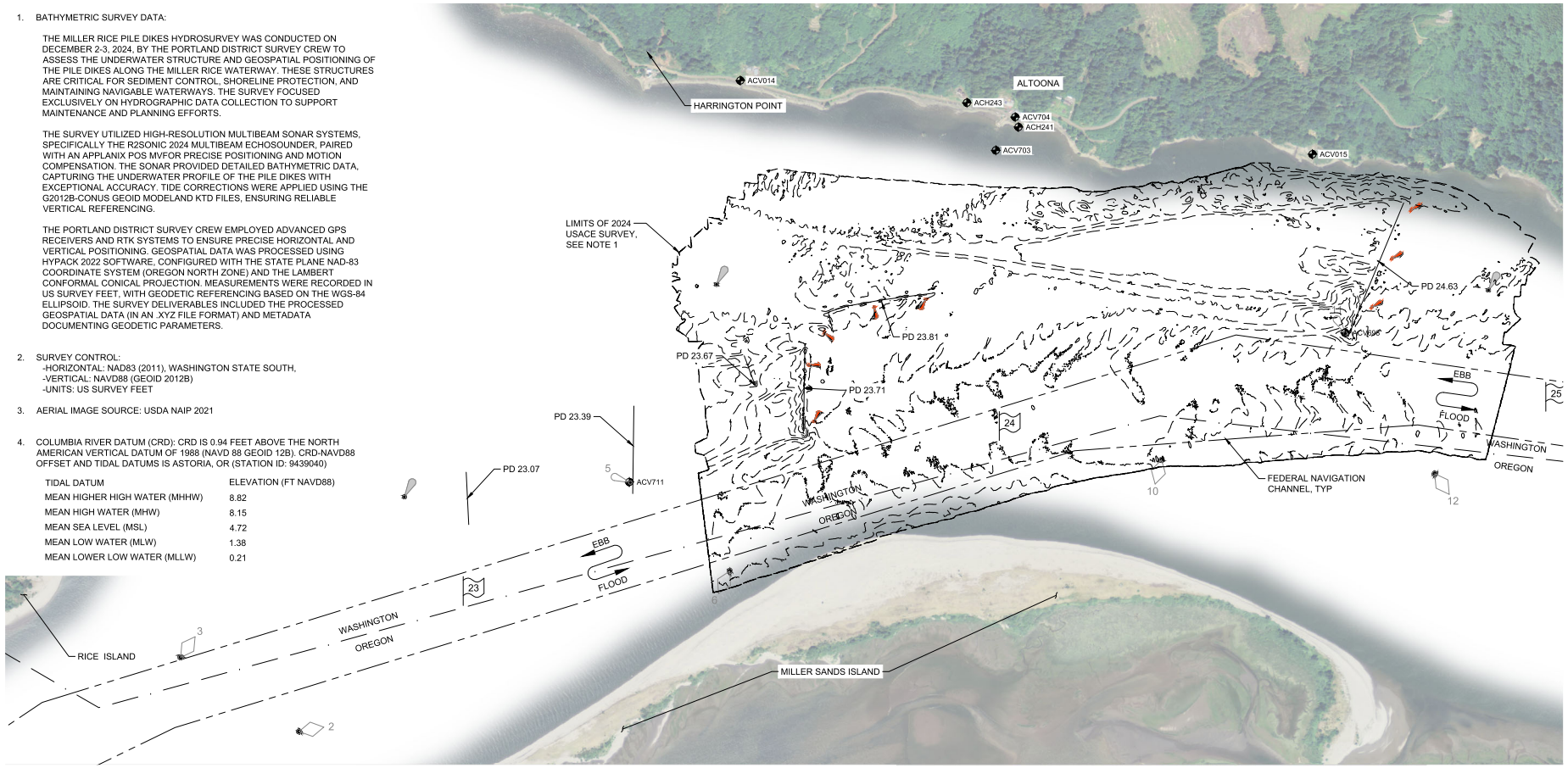
   THE PORTLAND DISTRICT SURVEY CREW EMPLOYED ADVANCED GPS RECEIVERS AND RTK SYSTEMS TO ENSURE PRECISE HORIZONTAL AND VERTICAL POSITIONING. GEOSPATIAL DATA WAS PROCESSED USING HYPACK 2022 SOFTWARE, CONFIGURED WITH THE STATE PLANE NAD-83 COORDINATE SYSTEM (OREGON NORTH ZONE) AND THE LAMBERT CONFORMAL CONICAL PROJECTION. MEASUREMENTS WERE RECORDED IN US SURVEY FEET, WITH GEODETIC REFERENCING BASED ON THE WGS-84 ELLIPSOID. THE SURVEY DELIVERABLES INCLUDED THE PROCESSED GEOSPATIAL DATA (IN AN .XYZ FILE FORMAT) AND METADATA DOCUMENTING GEODETIC PARAMETERS.

2. SURVEY CONTROL:
   -HORIZONTAL: NAD83 (2011), WASHINGTON STATE SOUTH,
   -VERTICAL: NAVD88 (GEOID 2012B)
   -UNITS: US SURVEY FEET

3. AERIAL IMAGE SOURCE: USDA NAIP 2021

4. COLUMBIA RIVER DATUM (CRD): CRD IS 0.94 FEET ABOVE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88 GEOID 12B). CRD-NAVD88 OFFSET AND TIDAL DATUMS IS ASTORIA, OR (STATION ID: 9439040)

TIDAL DATUM	ELEVATION (FT NAVD88)
MEAN HIGHER HIGH WATER (MHHW)	8.82
MEAN HIGH WATER (MHW)	8.15
MEAN SEA LEVEL (MSL)	4.72
MEAN LOW WATER (MLW)	1.38
MEAN LOWER LOW WATER (MLLW)	0.21



SITE PLAN
SCALE: 1"=500'

LEGEND:

- RIVER MILE MARKER
- EX PILE DIKE
- WASHINGTON - OREGON BORDER
- FEDERAL NAVIGATION CHANNEL
- EX CONTOURS (5FT INTERVAL)
- USACE BENCHMARK
- EX RANGE MARKER
- EX FIXED LIGHT
- EX BUOY
- NEW HAZARD MARKER PILE

SURVEY CONTROL POINTS TABLE

DESIGNATION	NAME	NORTHING	EASTING	LATITUDE	LONGITUDE	NAVD88
ACH241	TIDAL 4	356121.75	842839.04	41.214843	-147.699417	12.97
ACV015	6-18-04	355863.74	845629.88	41.216700	-147.689555	5.46
ACV703	ALTOONA STAFF	355901.06	842623.27	41.214077	-147.699891	0.74
ACV014	HARRINGTON RM 1 RESET	356563.36	840198.33	41.213595	-147.708985	17.02
ACV704	9440 571 A	356217.05	842808.17	41.215061	-147.699637	15.33
ACH243	C 317	356353.00	842349.58	41.214998	-147.701369	27.24
ACV698	MILLER SANDS LT 11 STAFF	354167.90	845939.52	41.212597	-147.686464	0.76
ACV711	MILLER SANDS LT 5 STAFF	352750.89	839145.73	41.202789	-147.708019	0.71

500' 0' 500' 1000'
SCALE: 1"=500'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: A. GULLETT
DRAWN BY: J. SEDEV
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
DATE: ----
ANSI FULL BLEED D (34.00 X 22.00 INCHES)

ISSUE DATE: ----
SOLICITATION NO.: W912TN-26-B4016
CONTRACT NO.: W912TN-XX-C-XXXX
PLOT DATE & PLOTTER: 7-May-26 gdecdins

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

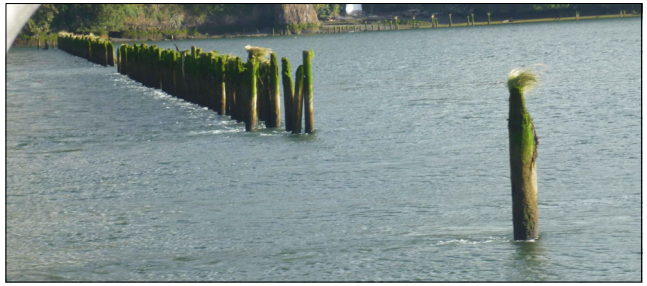
COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

SURVEY CONTROL AND NARRATIVE

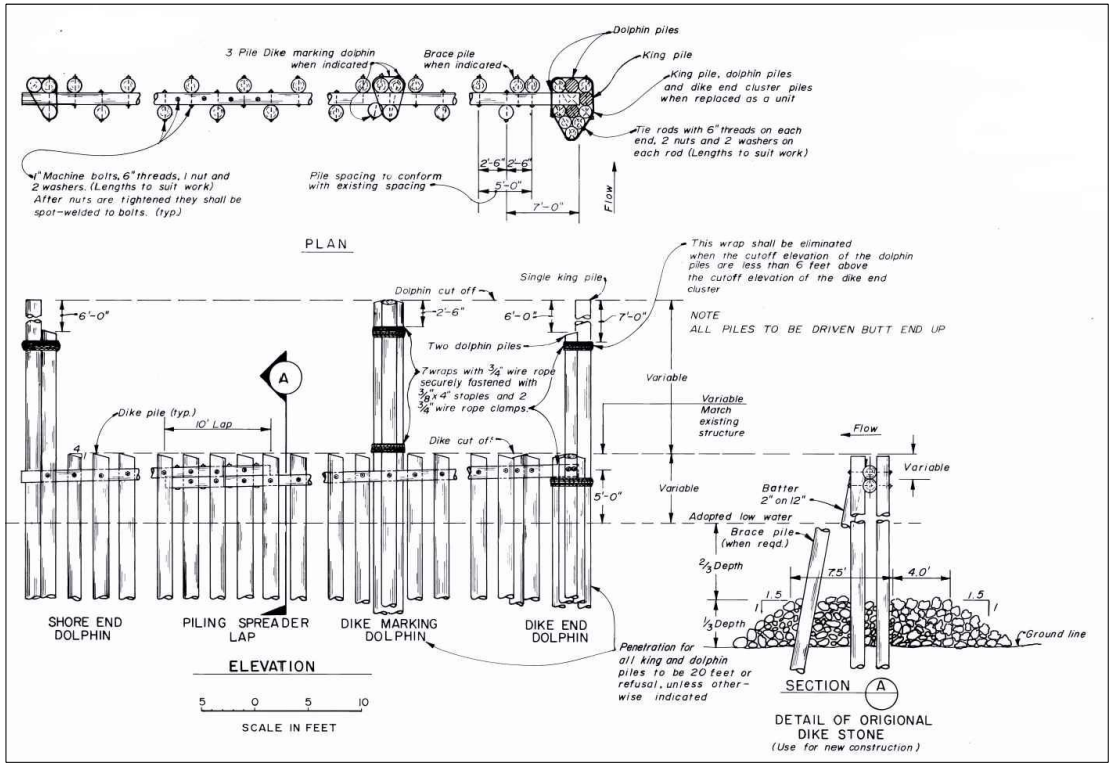
SHEET ID
V-101

ADVERTISE

VIEW OF 24.63 DURING NOV 2019 AT HIGH TIDE



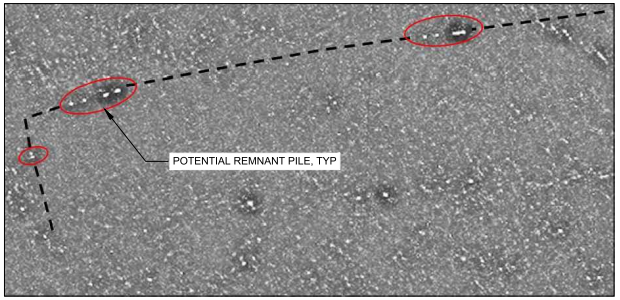
VIEW OF INTACT PILE AT 24.63 DURING SEPT 2024



STANDARD PILE DIKE REPAIR DETAILS

USACE DRAWING: CLD-91-1/3

SITE PHOTO OF 23.81 DURING SEPT 2019



SATELLITE VIEW OF 23.81 DURING AUG 2021

MAXAR WORLDVIEW 2 AUG 2021, ESRI WAYBACK

NOTES:

1. AERIAL IMAGERY FROM MARCH 30, 2016 AND LATER INSPECTION IN SEPTEMBER 2024 BOTH CONFIRMED NO VISIBLE TIMBER PILES REMAINING IN THE ORIGINAL LOCATION OF PILE DIKE 23.71.
2. FOR PILE DIKE 23.81, NO PILES WERE VISIBLE OR OBSERVED PRESENT DURING SEPTEMBER 2024 INSPECTION, WHICH IS SHOWN ABOVE WATER SURFACE DURING SEPTEMBER 2019 CONDITION INSPECTION.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. GULLETT
DRAWN BY: J. SEIDEL
REVIEWED BY: A. GRANADOS
SUBMITTED BY: A. JONES
DATE: 7-May-26
ANSI FULL BLEED D (34.00 X 22.00 INCHES)

ISSUE DATE: JULY 2026
SOLICITATION NO.: W912PN-26-BA016
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U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

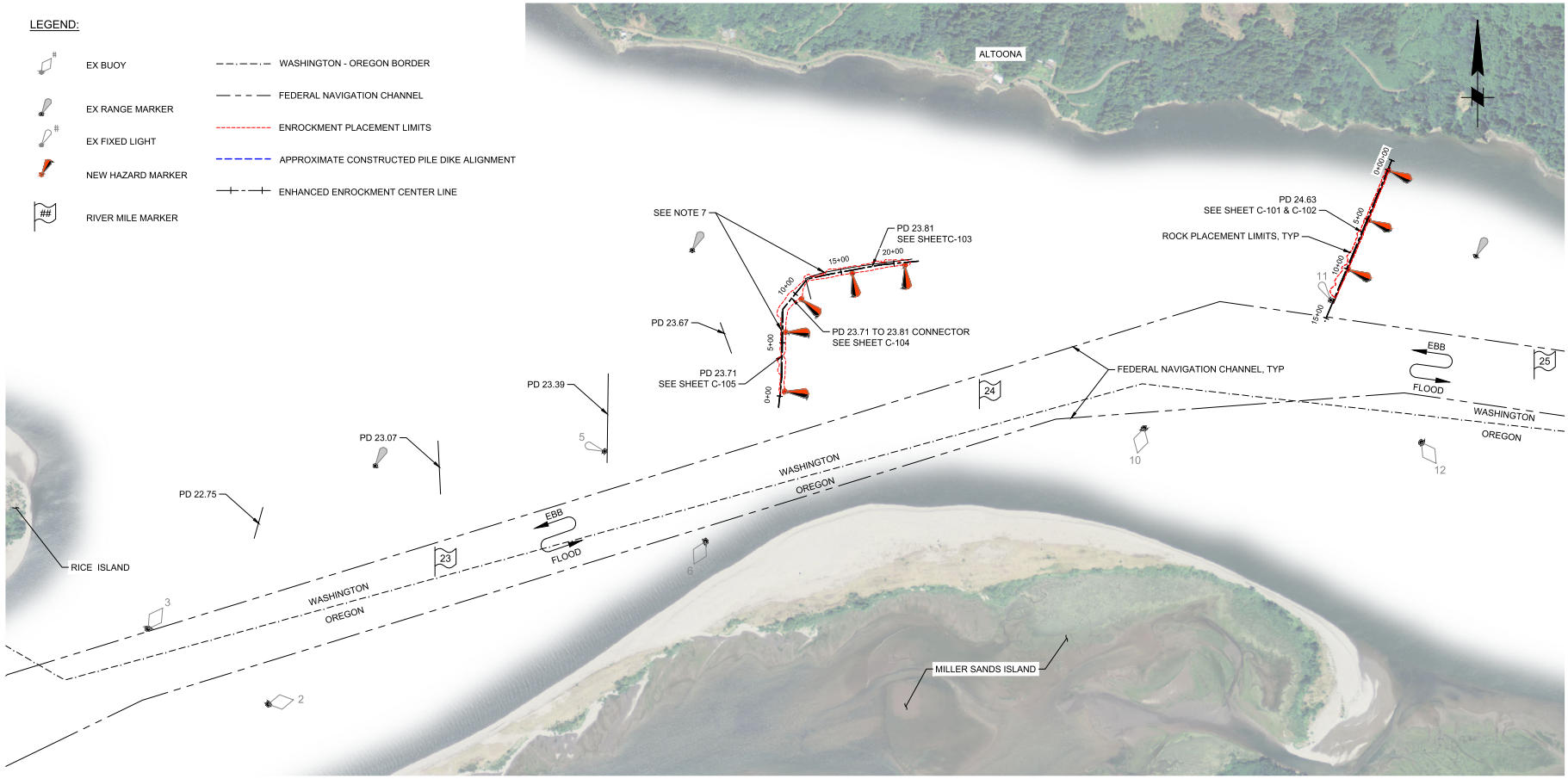
PHOTOS AND AS-BUILTS

SHEET ID
CE701

ADVERTISE

LEGEND:

- EX BUOY
- EX RANGE MARKER
- EX FIXED LIGHT
- NEW HAZARD MARKER
- RIVER MILE MARKER
- WASHINGTON - OREGON BORDER
- FEDERAL NAVIGATION CHANNEL
- ENROCKMENT PLACEMENT LIMITS
- APPROXIMATE CONSTRUCTED PILE DIKE ALIGNMENT
- ENHANCED ENROCKMENT CENTER LINE



OVERALL SITE PLAN

SCALE: 1"=500'

500' 0' 500' 1000'

SCALE: 1"=500'

NOTES:

1. AERIAL IMAGE SOURCE: USDA NAIP 2021.
2. LOCATIONS OF EXISTING ATONS ARE APPROXIMATIONS FROM USCG NAVIGATION CHART.
3. PROPOSED HAZARD MARKER COORDINATES ARE BASED ON WASHINGTON SOUTH STATE PLANE NAD83 (2011).
4. PILE DIKE 24.63 ARE MANDATORY ITEMS UNDER CLIN 1, CLIN 2, AND CLIN 3. REFER TO SPEC 01 22 00.00 25 - MEASUREMENT AND PAYMENT.
5. PILE DIKE 23.81 WORK ARE OPTIONAL ITEMS UNDER CLIN 4. REFER TO SPEC 01 22 00.00 25 - MEASUREMENT AND PAYMENT. NEW MARKER PILES FOR PILE DIKE 23.81 ARE NOT OPTIONAL.
6. PILE DIKE 23.71 WORK ARE OPTIONAL ITEMS UNDER CLIN 5. REFER TO SPEC 01 22 00.00 25 - MEASUREMENT AND PAYMENT. NEW MARKER PILES FOR PILE DIKE 23.71 ARE NOT OPTIONAL.
7. ANY PILE OR SPREADER REMOVAL SEEMED NECESSARY BY THE CONTRACTOR TO PERFORM WORK ON OPTIONAL ITEMS 4 AND 5 MUST BE COORDINATED WITH THE COR PRIOR TO REMOVAL. SEE SPEC SECTION 02 41 00.00 99 - DEMOLITION.
8. NO CONTRACTOR ACCESS OR STAGING WILL BE ALLOWED ON RICE ISLAND OR MILLER SANDS ISLAND.
9. WOOD PILES AND SPREADERS AT PILE DIKE 24.63 ARE NOT TO BE REMOVED.

NEW HAZARD MARKER LOCATIONS

PILE DIKE MARKED	APPX DIKE STATION	NORTHING	EASTING	+/- 3' MUDLINE EL. (FT NAVD88)	CUT-OFF ELEVATION (FT NAVD88)	MINIMUM EMBEDMENT LENGTH (FT)	PILE SIZE (IN)
PD 23.71	0+50	353310.0104	840824.4726	-33	20	35	24" DIA 3/4" WALL
PD 23.71	6+00	353861.6143	840846.1224	-28	20	32	24" DIA 3/4" WALL
PD 23.71 TO PD 23.81 CONNECTOR	10+00	354170.2013	840994.7319	-34	20	29	24" DIA 3/4" WALL
PD 23.81	16+00	354413.9470	841469.3616	-27	20	30	24" DIA 3/4" WALL
PD 23.81	21+00	354488.4936	841961.8446	-33	20	30	24" DIA 3/4" WALL
PD 24.63	0+00	355371.9124	846485.6300	-17	20	31	24" DIA 3/4" WALL
PD 24.63	5+00	354908.1383	846299.0404	-14	20	31	24" DIA 3/4" WALL
PD 24.63	10+00	354446.3122	846107.0839	-22	20	28	24" DIA 3/4" WALL

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. GULLETT
DRAWN BY: J. SEIDEL
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
DATE: 7-May-26
ANSI FULL BLEED D (34.00 X 22.00 INCHES)

ISSUE DATE: JULY 2026
SOLICITATION NO.: W912PN-26-B-0016
CONTRACT NO.: W912PN-XX-C-XXXX
DACW57-XX-X-XXXX
PLOT DATE & PLOTTER: ----
SCALE: ----
FILE: ----

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

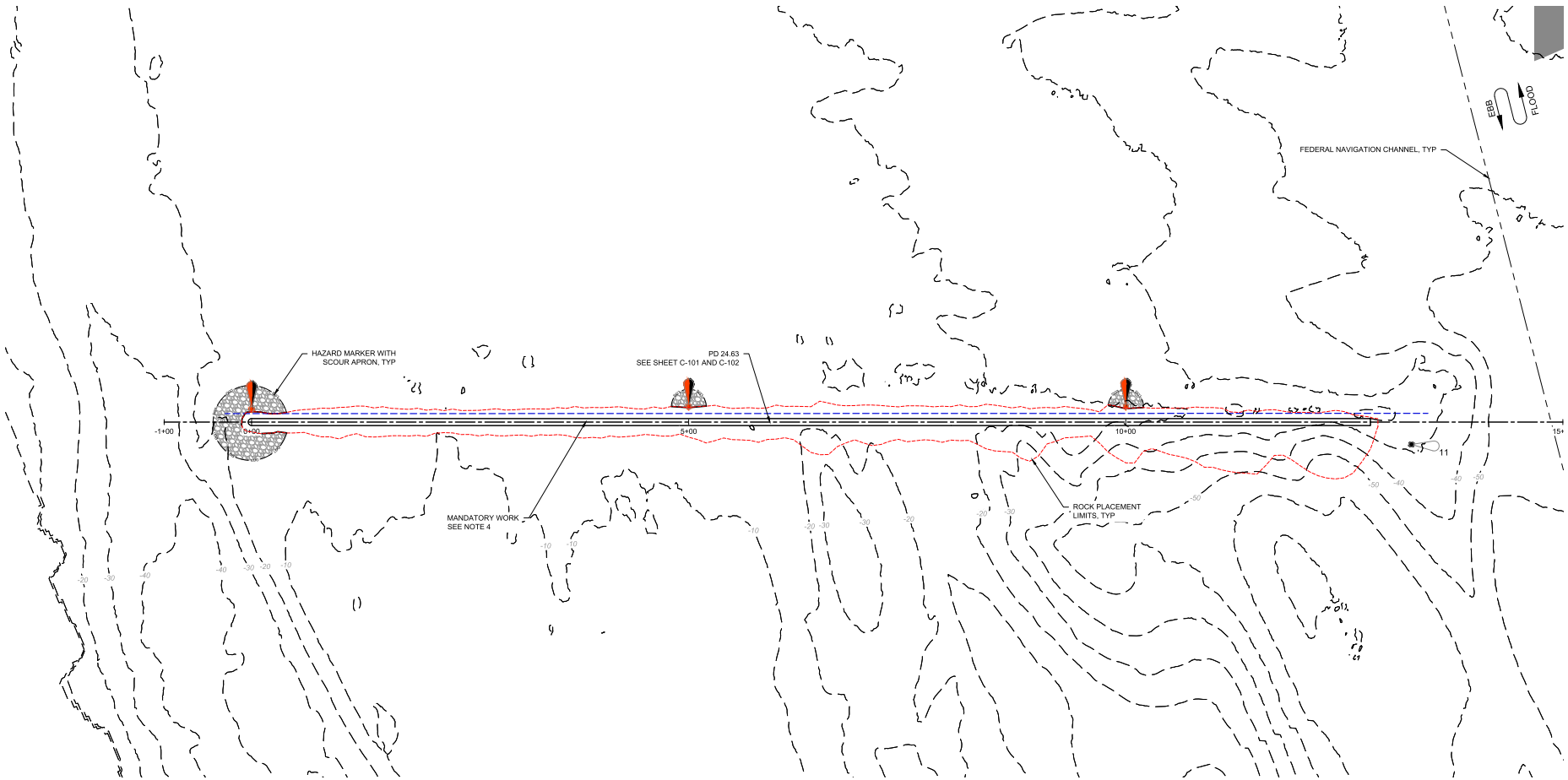
COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

OVERALL SITE PLAN
AND HAZARD MARKER LOCATION SCHEDULE

SHEET ID

CS101

ADVERTISE



LEGEND:

- EX BUOY
- EX RANGE MARKER
- RIVER MILE MARKER
- SCOUR APRON
- EX FIXED LIGHT
- NEW HAZARD MARKER
- FEDERAL NAVIGATION CHANNEL
- APPROX CONSTRUCTED PILE DIKE ALIGNMENT
- ENROCKMENT PLACEMENT LIMITS
- EX CONTOURS (10FT INTERVAL)
- ENHANCED ENROCKMENT CENTER LINE

PD 24.63 - ENLARGED SITE PLAN

SCALE: 1"=60'

NOTES:

1. AERIAL IMAGE SOURCE: USDA NAIP 2021.
2. BASED ON CONTRACTOR PRE-CONSTRUCTION SURVEY, REMOVE SUBMERGED DEBRIS WITHIN THE ROCK PLACEMENT LIMITS. SEE SPEC 02 41 00.00 99 - DEMOLITION.
3. CONSTRUCT ENHANCED ENROCKMENT STARTING ON SHORE-SIDE (NORTH) AND WORKING OUTWARD TOWARDS FEDERAL NAVIGATION CHANNEL.
4. PILE DIKE 24.63 ARE MANDATORY ITEMS UNDER CLIN 2. REFER TO SPEC 01 22 00.00 25 - MEASUREMENT AND PAYMENT.
5. ALL ENROCKMENT AND SCOUR ROCK SLOPES ARE 1.5:1.

0 60' 120'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

DESIGNED BY: J. ULLETT
DRAWN BY: J. SEIDEL
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
SIZE: ANSI FULL BLEED D (34.00 X 22.00 INCHES)
ISSUE DATE: 7-May-26
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PLOT DATE & PLOTTER: (pkedins)

COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

PILE DIKE 24.63
SITE PLAN

SHEET ID
CS102

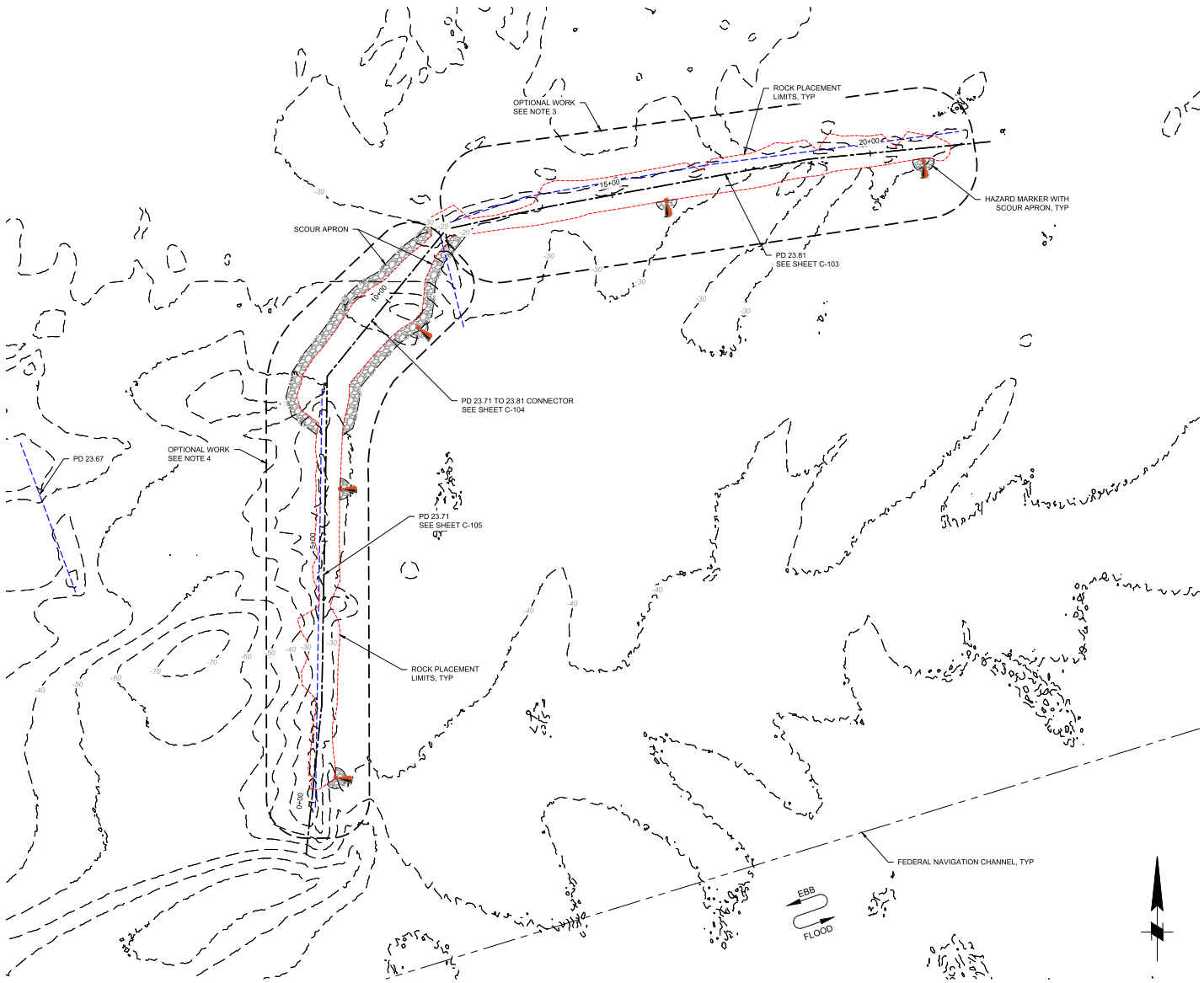
ADVERTISE

LEGEND:

- RIVER MILE MARKER
- NEW HAZARD MARKER
- FEDERAL NAVIGATION CHANNEL
- APPROXIMATE CONSTRUCTED PILE DIKE ALIGNMENT, SEE NOTE 2
- ENROCKMENT PLACEMENT LIMITS
- EX CONTOURS (10FT INTERVALS)
- ENHANCED ENROCKMENT CENTER LINE
- SCOUR APRON

NOTES:

1. BASED ON CONTRACTOR PRE-CONSTRUCTION SURVEY, REMOVE SUBMERGED DEBRIS WITHIN THE ROCK PLACEMENT LIMITS. SEE SPEC 02 41 00.00 99 - DEMOLITION.
2. ORIGINAL CONSTRUCTED PILE ALIGNMENTS SHOWN. NO VISIBLE REMAINING PILE AT 23.71. LIMITED REMNANT PILE VISIBLE AT 23.81 IN TWO LOCATIONS. SEE SHEET C-305.
3. PILE DIKE 23.81 WORK ARE OPTIONAL ITEMS UNDER CLIN 4.
4. PILE DIKE 23.71 AND CONNECTOR WORK ARE OPTIONAL ITEMS UNDER CLIN 5.
5. ALL ENROCKMENT AND SCOUR ROCK SLOPE ARE 1.5:1.



PD 23.17, CONNECTOR, AND PD 23.81
SCALE: 1"=100'

SCALE: 1"=100'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: G. LUETT
DRAWN BY: J. SEIDEL
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
DATE: ANSI FULL BLEED D (34.00 X 22.00 INCHES)
ISSUE DATE: JULY 2026
SOLICITATION NO.: W912ZN-26-B-0016
CONTRACT NO.: +XXXXXXX-XX-X-XXXX
PLOT DATE & PLOTTER: 7-May-26 gdecdins

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

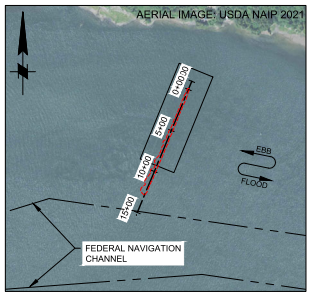
COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

PILE DIKE 23.81, CONNECTOR, AND PILE DIKE 23.71
SITE PLAN
OPTIONAL

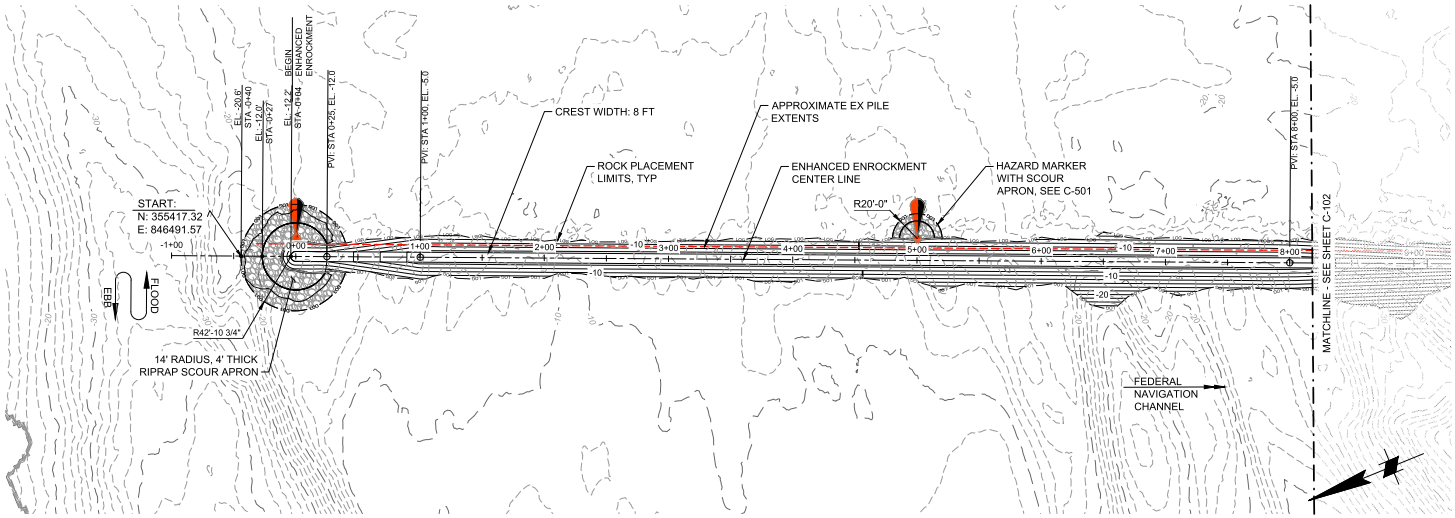
SHEET ID

CS103

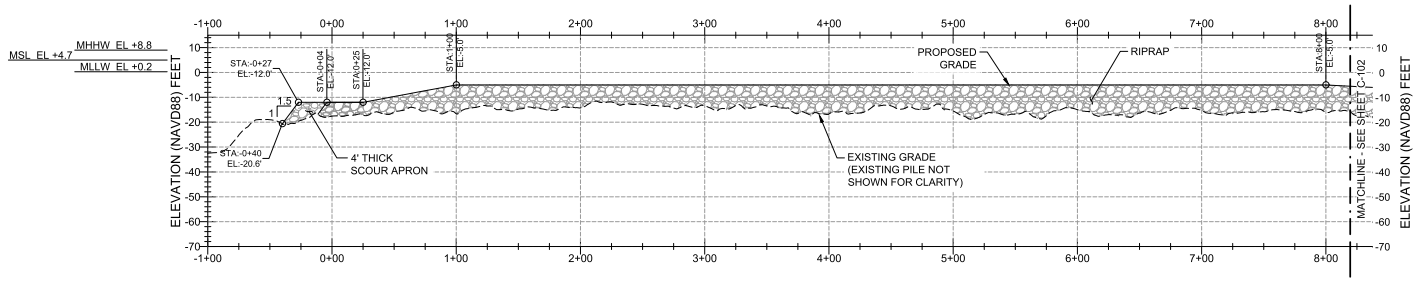
ADVERTISE



KEY
NTS



PILE DIKE RM 24.63 PLAN
SCALE: 1"=50'



PILE DIKE RM 24.63 PROFILE
SCALE: H = 1"=50' V = 1"=25'

LEGEND

- INSTALL RIPRAP/SCOUR APRON
- CREST
- ROCK PLACEMENT LIMITS
- EX CONTOURS (2FT INTERVALS)
- PROP CONTOURS (2FT INTERVALS)
- APPROXIMATE EXISTING PILE EXTENTS
- ENHANCED ENROCKMENT CONTROL LINE
- NEW HAZARD MARKER

NOTES:

1. CONSTRUCT ENHANCED ENROCKMENT STARTING ON SHORE-SIDE (NORTH) AND WORKING OUTWARD TOWARDS FEDERAL NAVIGATION CHANNEL.
2. CONSTRUCT ENHANCED ENROCKMENT IN LIFTS WITH A MAXIMUM THICKNESS OF 6FT.
3. MOBILIZATION AND DEMOBILIZATION, PILE DIKE 24.63 WORK, MARKER PILE INSTALLATION WORK ARE MANDATORY ITEMS UNDER CLIN 1, CLIN 2, AND CLIN 3.
4. SEE SHEET CS101 FOR PILE SCHEDULE AND C-501 FOR SIGN REQUIREMENTS.
5. EXISTING PILE DIKE PILES NOT SHOWN IN PROFILE VIEW FOR CLARITY. THE APPROXIMATE ALIGNMENT AND EXTENTS OF THE EXISTING PILES IS SHOWN IN PLAN VIEW ABOVE BY RED DASHED LINE.

ENHANCED ENROCKMENT CONTROL POINTS

STATION	NORTHING	EASTING	ELEVATION
-0+40	355417.32	846491.57	-20.6
-0+27	355402.41	846485.39	-12.0
-0+04	355380.24	846476.20	-12.0
0+25	355353.52	846465.09	-12.0
1+00	355284.14	846436.25	-5.0
8+00	354637.88	846167.62	-5.0

25' 0' 25' 50'
VERTICAL SCALE: 1"=25'

50' 0' 50' 100'
HORIZONTAL SCALE: 1"=50'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: A. GULLETT
DRAWN BY: J. SEIDEL
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
DATE: 7-May-26
ISSUE DATE: 7-May-2026
SOLICITATION NO.: W912PN-26-B-0016
CONTRACT NO.: W912PN-XX-C-XXXX
PLOT DATE & PLOTTER: XXXXXX-XX-X-XXXX
ANSI FULL BLEED D (34.00 X 22.00 INCHES)

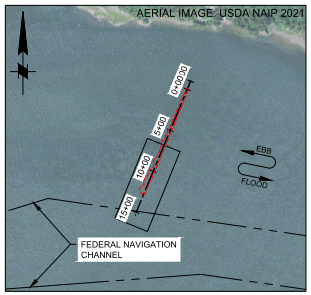
U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE - REPAIR

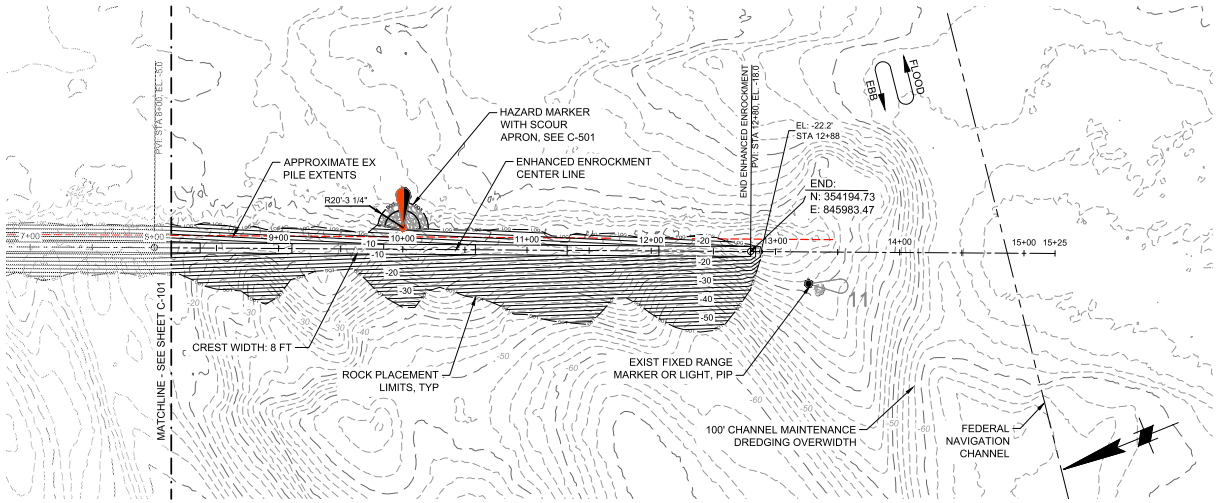
PILE DIKE 24.63
PLAN AND PROFILE1

SHEET ID
C-101

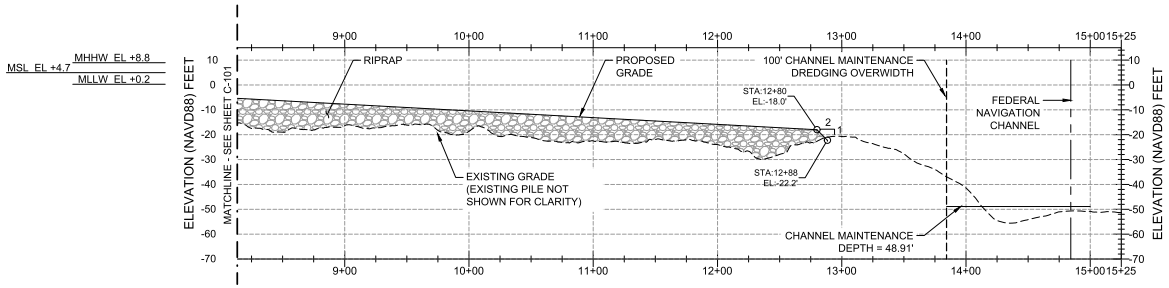
ADVERTISE



KEY
NTS



PILE DIKE RM 24.63 PLAN
SCALE: 1"=50'



PILE DIKE RM 24.63 PROFILE
SCALE: H = 1"=50' V = 1"=25'

LEGEND

- INSTALL RIPRAP/SCOUR APRON
- CREST
- ROCK PLACEMENT LIMITS
- EX CONTOURS (2FT INTERVALS)
- PROP CONTOURS (2FT INTERVALS)
- APPROXIMATE EXISTING PILE EXTENTS
- ENHANCED ENROCKMENT CONTROL LINE
- NEW HAZARD MARKER

NOTES:

1. CONSTRUCT ENHANCED ENROCKMENT STARTING ON SHORE-SIDE (NORTH) AND WORKING OUTWARD TOWARDS FEDERAL NAVIGATION CHANNEL.
2. CONSTRUCT ENHANCED ENROCKMENT IN LIFTS WITH A MAXIMUM THICKNESS OF 6FT.
3. MOBILIZATION AND DEMOBILIZATION, PILE DIKE 24.63 WORK, MARKER PILE INSTALLATION WORK ARE MANDATORY ITEMS UNDER CLIN 1, CLIN 2, AND CLIN 3.
4. SEE SHEET CS101 FOR PILE SCHEDULE AND C-501 FOR SIGN REQUIREMENTS.
5. EXISTING PILE DIKE PILES NOT SHOWN IN PROFILE VIEW FOR CLARITY. THE APPROXIMATE ALIGNMENT AND EXTENTS OF THE EXISTING PILES IS SHOWN IN PLAN VIEW ABOVE BY RED DASHED LINE.

ENHANCED ENROCKMENT CONTROL POINTS

STATION	NORTHING	EASTING	ELEVATION
12+80	354194.65	845983.38	-18.0
12+88	354186.94	845980.18	-22.2

VERTICAL SCALE: 1"=25'

HORIZONTAL SCALE: 1"=50'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. GILLETT
DRAWN BY: J. SEDLEY
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
SIZE: ANSI FULL
ISSUE DATE: JULY 2026
SOLICITATION NO.: W9127N-26-B-0016
CONTRACT NO.: +XXXXXX-XX-X-XXXX
PLOT DATE & PLOTTER: 7-May-26 gdecdms
BLEED D (34.00 X 22.00 INCHES)

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

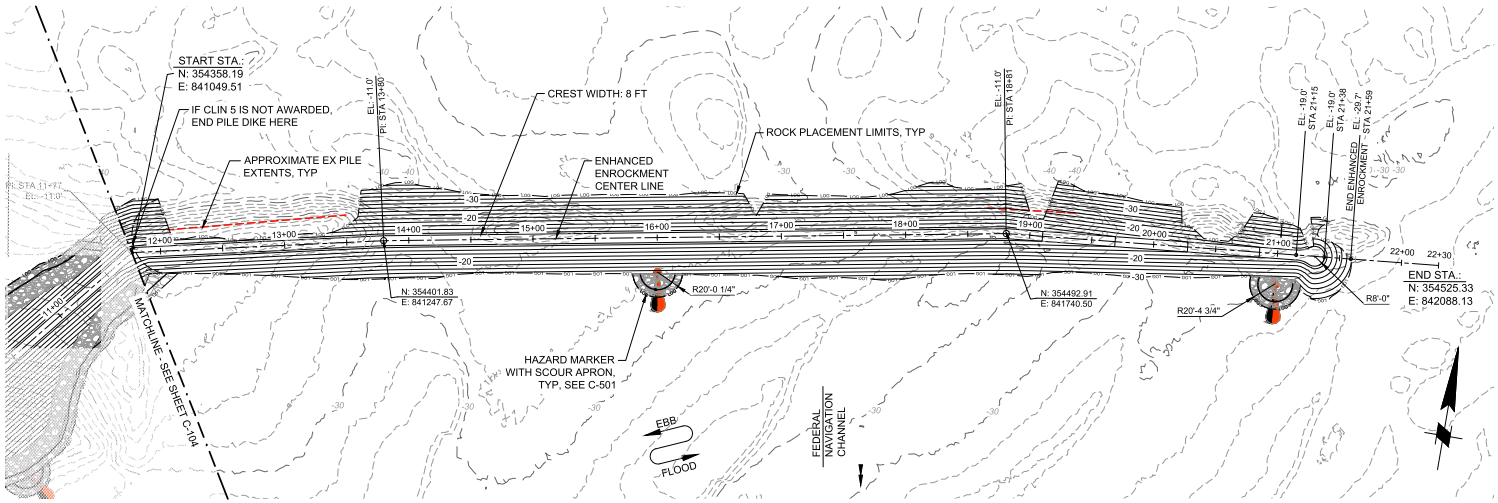
COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE - REPAIR

PILE DIKE 24.63
PLAN AND PROFILE 2

SHEET ID

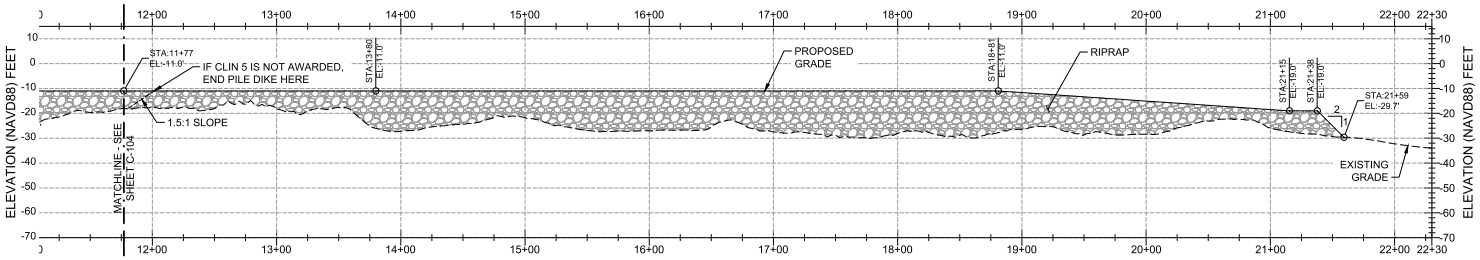
C-102

ADVERTISE



PILE DIKE RM 23.81 PLAN

SCALE: 1"=50'

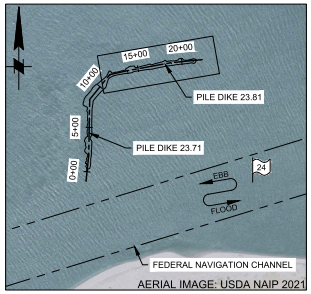


PILE DIKE RM 23.81 PROFILE

SCALE: H = 1"=50' V = 1"=25'

LEGEND

- INSTALL RIPRAP/SCOUR APRON
- CREST
- ROCK PLACEMENT LIMITS
- EX CONTOURS (2FT INTERVALS)
- PROP CONTOURS (2FT INTERVALS)
- APPROXIMATE EXISTING PILE EXTENTS, SEE NOTE 2
- ENHANCED ENROCKMENT CONTROL LINE
- NEW HAZARD MARKER



KEY

NTS

NOTES:

1. CONSTRUCT ENHANCED ENROCKMENT IN LIFTS WITH A MAXIMUM THICKNESS OF 6FT.
2. ANY REMAINING PILE IN THE EXTENTS SHOWN ARE SPARSE AND OUTSIDE THE CONSTRUCTION FOOTPRINT.
3. PILE DIKE 23.81 WORK IS AN OPTIONAL ITEM UNDER CLIN 4.
4. SEE SHEET CS101 FOR PILE SCHEDULE AND C-501 FOR SIGN REQUIREMENTS.
5. EXISTING PILE DIKE PILES NOT SHOWN IN PROFILE VIEW FOR CLARITY. THE APPROXIMATE ALIGNMENT AND EXTENTS OF THE EXISTING PILES IS SHOWN IN PLAN VIEW ABOVE BY RED DASHED LINE.

ENHANCED ENROCKMENT CONTROL POINTS

STATION	NORTHING	EASTING	ELEVATION
11+77	354358.19	841049.51	-11.0
13+80	354401.83	841247.67	-11.0
18+81	354492.91	841740.50	-11.0
21+15	354516.08	841974.01	-19.0
21+38	354516.54	841996.63	-19.0
21+59	354519.69	842029.38	-29.7

25' 0' 25' 50'
VERTICAL SCALE: 1"=25'

50' 0' 50' 100'
HORIZONTAL SCALE: 1"=50'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: A. LUCAS
DRAWN BY: J. SEIDEL
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
SIZE: ANSI FULL
ISSUE DATE: JULY 2026
SOLICITATION NO.: W912PN-26-BA0016
CONTRACT NO.: +XXXXXXX-XX-X-XXXX
PLOT DATE & PLOTTER: 7-May-26 (decimal)
BLEED D (34.00 X 22.00 INCHES)

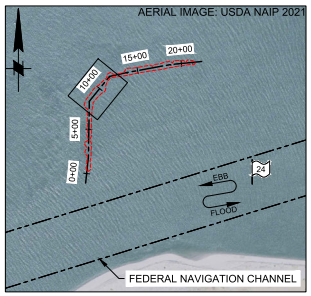
U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - PRICE
PILE DIKE REPAIR

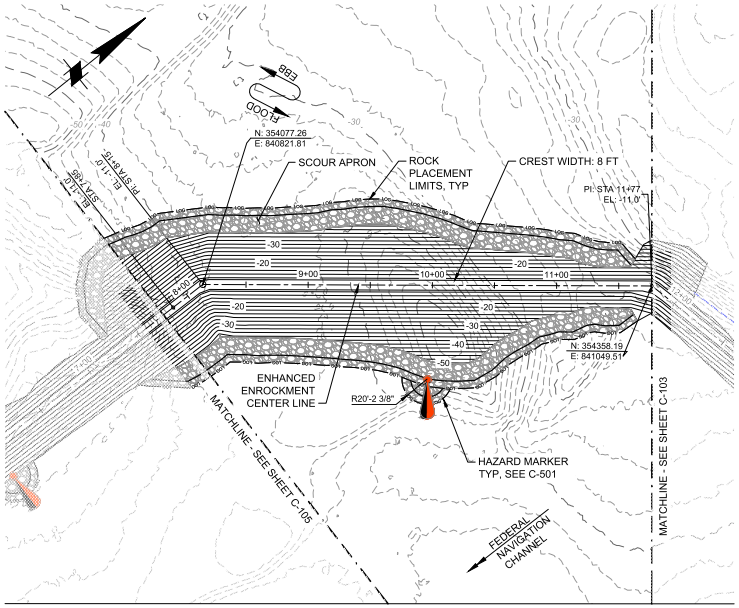
PILE DIKE 23.81
PLAN AND PROFILE

SHEET ID
C-103

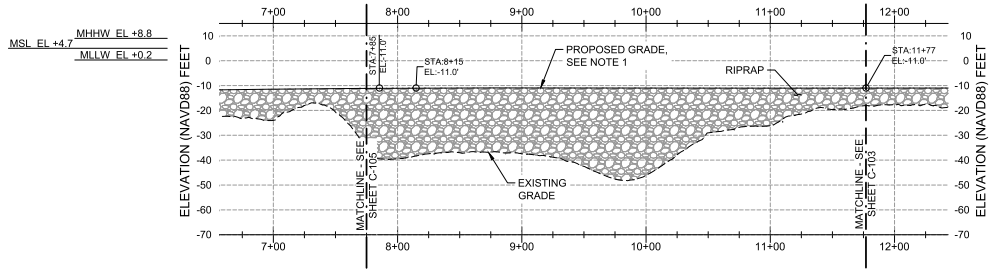
ADVERTISE



KEY
NTS



PILE DIKE RM 23.71 TO 23.81 CONNECTOR PLAN
SCALE: 1"=50'



PILE DIKE RM 23.71 TO 23.81 CONNECTOR PROFILE
SCALE: H = 1"=50' V = 1"=25'

LEGEND

- INSTALL RIPRAP/SCOUR APRON
- CREST
- ROCK PLACEMENT LIMITS
- EX CONTOURS (2FT INTERVALS)
- PROP CONTOURS (2FT INTERVALS)
- ENHANCED ENROCKMENT CONTROL LINE
- NEW HAZARD MARKER

NOTES:

1. CONSTRUCT ENHANCED ENROCKMENT IN LIFTS WITH A MAXIMUM THICKNESS OF 10FT.
2. SEE SHEET CS101 FOR PILE SCHEDULE AND C-501 FOR SIGN REQUIREMENTS.
3. CONNECTOR WORK IS AN OPTIONAL ITEM UNDER CLIN 5.

ENHANCED ENROCKMENT CONTROL POINTS			
STATION	NORTHING	EASTING	ELEVATION
7+85	354047.05	840821.31	-11.0
8+15	354077.26	840821.81	-11.0
11+77	354358.19	841049.51	-11.0

25' 0' 25' 50'
VERTICAL SCALE: 1"=25'

50' 0' 50' 100'
HORIZONTAL SCALE: 1"=50'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: J. BULLETT
DRAWN BY: J. SEIDEL
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
SIZE: ANSI FULL
ISSUE DATE: JULY 2026
SOLICITATION NO.: W9127N-26-B4016
CONTRACT NO.: W9XXXX-XX-X-XXXX
PLOT DATE & PLOTTER: 7-May-26 gdecdjns
BLEED D (34.00 X 22.00 INCHES)

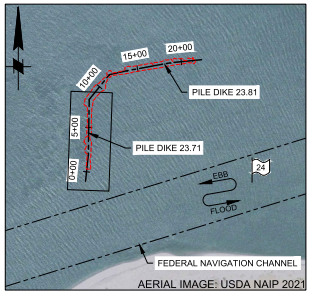
U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

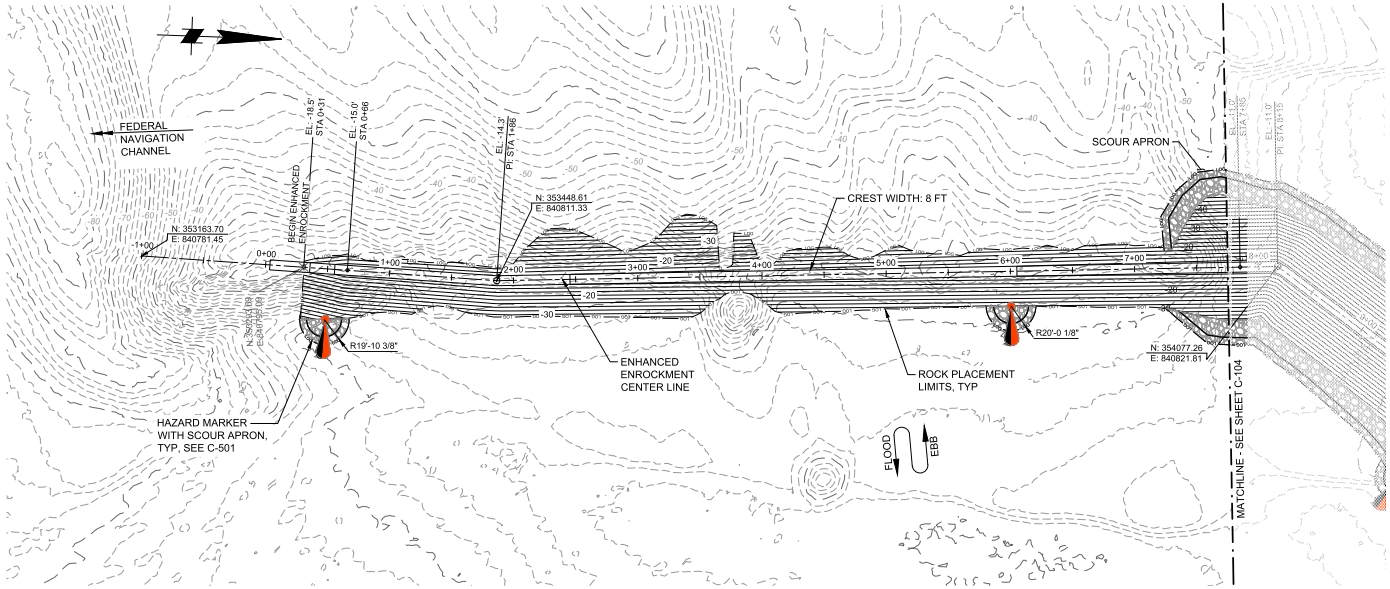
CONNECTOR - PD 23.71 TO PD 23.81
PLAN AND PROFILE

SHEET ID
C-104

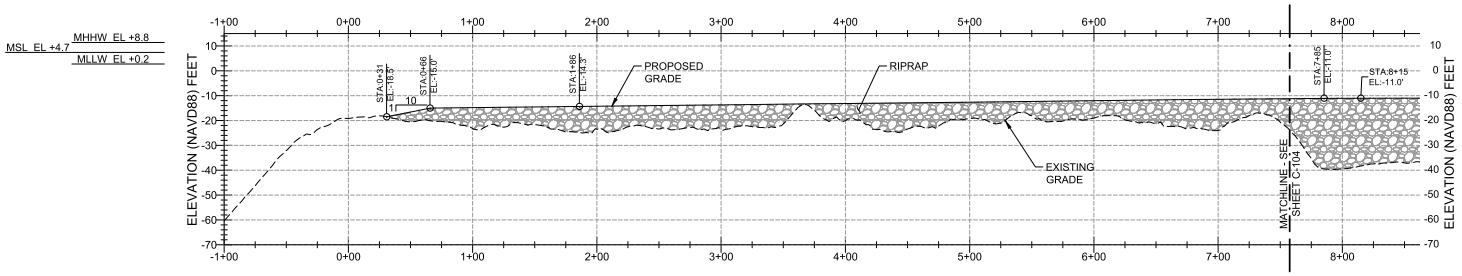
ADVERTISE



KEY
NTS



PILE DIKE RM 23.71 PLAN
SCALE: 1"=50'



PILE DIKE RM 23.71 PROFILE
SCALE: H = 1"=50' V = 1"=25'

LEGEND

- INSTALL RIPRAP/SCOUR APRON
- CREST
- ROCK PLACEMENT LIMITS
- EX CONTOURS (2FT INTERVALS)
- PROP CONTOURS (2FT INTERVALS)
- ENHANCED ENROCKMENT CONTROL LINE
- NEW HAZARD MARKER

NOTES:

1. CONSTRUCT ENHANCED ENROCKMENT IN LIFTS WITH A MAXIMUM THICKNESS OF 6FT.
2. NO VISIBLE PILE REMAIN AT 23.71.
3. PILE DIKE 23.71 WORK IS AN OPTIONAL ITEM UNDER CLIN 5.
4. SEE SHEET CS101 FOR PILE SCHEDULE AND C-501 FOR SIGN REQUIREMENTS.

ENHANCED ENROCKMENT CONTROL POINTS

STATION	NORTHING	EASTING	ELEVATION
0+31	353285.98	840794.28	-18.5
0+66	353328.80	840798.77	-15.0
1+86	353448.61	840811.33	-14.3
7+85	354047.05	840821.31	-11.0
8+15	354077.26	840821.81	-11.0

25' 0' 25' 50'
VERTICAL SCALE: 1"=25'
50' 0' 50' 100'
HORIZONTAL SCALE: 1"=50'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: A. GULLETT
DRAWN BY: J. SEIDEL
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
DATE: ANSI FULL BLEED D (34.00 X 22.00 INCHES)
ISSUE DATE: 07-May-2021
SOLICITATION NO.: W912PN-26-B-0016
CONTRACT NO.: +XXXXXXX-XX-X-XXXX
PLOT DATE & PLOTTER: 7-May-26 (decimal)

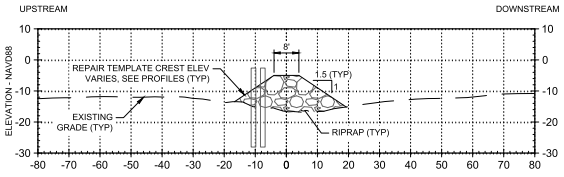
U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE - REPAIR

PILE DIKE 23.71
PLAN AND PROFILE

SHEET ID
C-105

ADVERTISE



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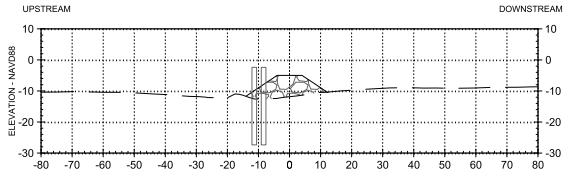
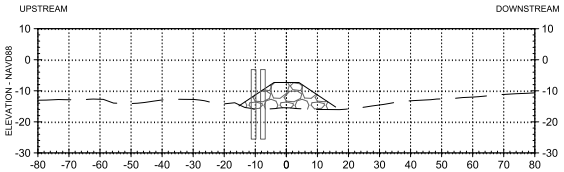


2+25



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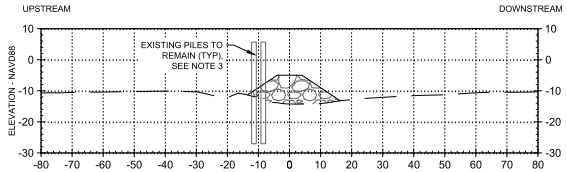

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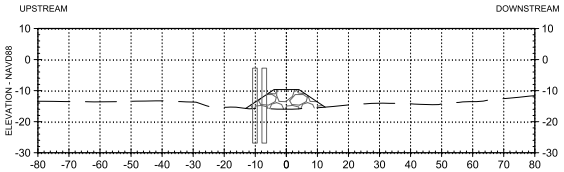

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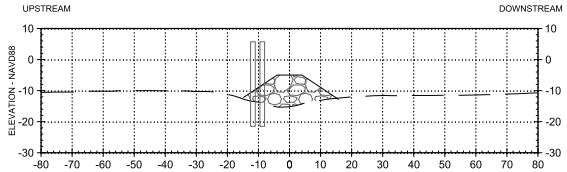

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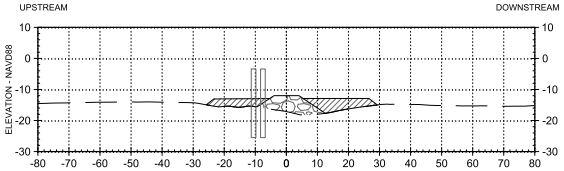

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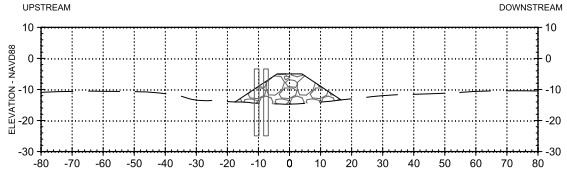

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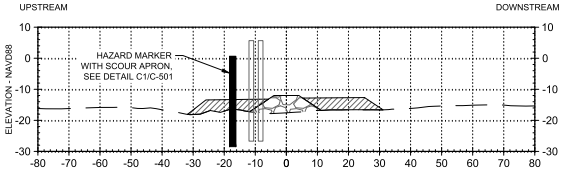

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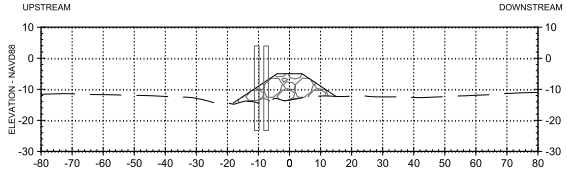


1+25

NOTE

1. CROSS SECTIONS LOOKING UPSTATION.
2. CONSTRUCT ENHANCED ENROCKMENT IN LIFTS WITH A MAXIMUM THICKNESS OF 6FT.
3. EXISTING TIMBER PILES ALONG STA 0+00 TO 11+00 FOR PD 24.63 ARE NOT TO BE DAMAGED DURING THE CONTRACTOR'S PLACEMENT OF NEW ENROCKMENT MATERIAL, DURING INSTALLATION OF NEW MARKER PILES, OR DURING OTHER CONTRACTOR'S ACTIVITIES DURING THIS CONTRACT.
4. PILE DIKE 24.63 WORK ARE MANDATORY ITEMS UNDER CLIN 2.
5. EXISTING PILE DIKE PILE LENGTHS, LOCATIONS, AND ELEVATIONS ARE APPROXIMATE.

LEGEND

INSTALL RIPRAP

INSTALL SCOUR APRON

20' 0' 20' 40'

SCALE: 1"=20'

A PILE DIKE 24.63 - SECTIONS 0+00 TO 2+25

SCALE: 1" = 20'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: A. GILLETT
DRAWN BY: J. SEDEY
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
SIZE: ANSI EXPAND D (22.00 X 34.00 INCHES)

ISSUE DATE: JUL 1, 2026
SOLICITATION NO.: W912PN-26-B-0016
CONTRACT NO.: +XXXXXX-XX-X-XXXX
PLOT DATE & PLOTTER: 7-May-26 pdescribe

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

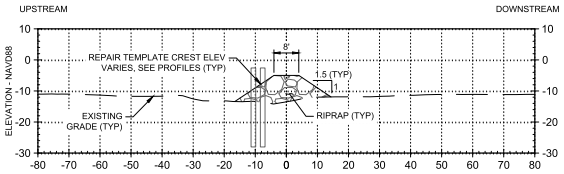
COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

PILE DIKE 24.63
SECTIONS 0+00 TO 2+25

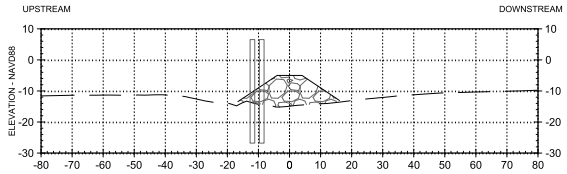
SHEET ID

C-301

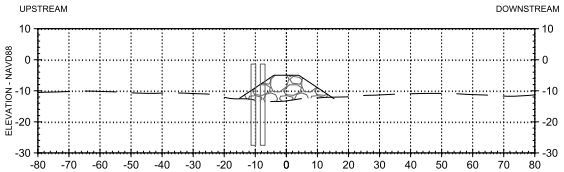
ADVERTISE



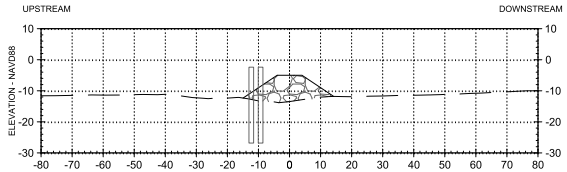
3+50



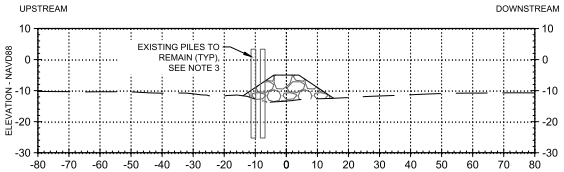
4+75



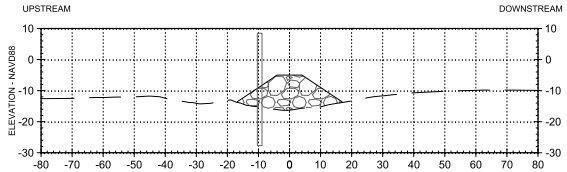
3+25



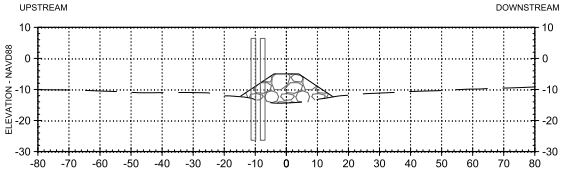
4+50



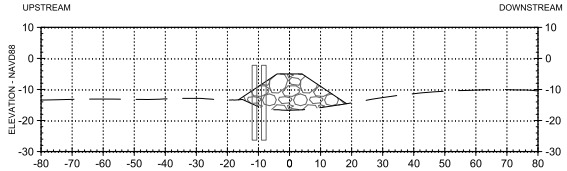
3+00



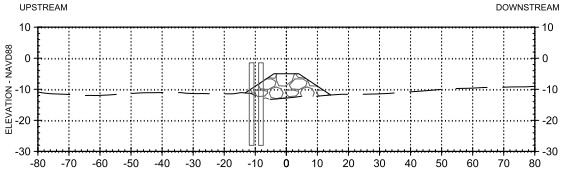
4+25



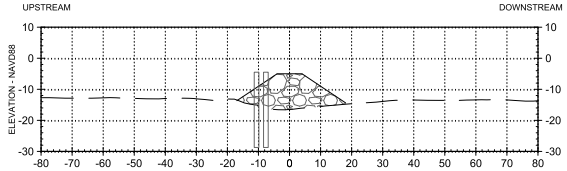
2+75



4+00



2+50



3+75

NOTE

1. CROSS SECTIONS LOOKING UPSTATION.
2. CONSTRUCT ENHANCED ENROCKMENT IN LIFTS WITH A MAXIMUM THICKNESS OF 6FT.
3. EXISTING TIMBER PILES ALONG STA 0+00 TO 11+00 FOR PD 24.63 ARE NOT TO BE DAMAGED DURING THE CONTRACTOR'S PLACEMENT OF NEW ENROCKMENT MATERIAL, DURING INSTALLATION OF NEW MARKER PILES, OR DURING OTHER CONTRACTOR'S ACTIVITIES DURING THIS CONTRACT.
4. PILE DIKE 24.63 WORK ARE MANDATORY ITEMS UNDER CLIN 2.
5. EXISTING PILE DIKE PILE LENGTHS, LOCATIONS, AND ELEVATIONS ARE APPROXIMATE.

LEGEND

INSTALL RIPRAP

INSTALL SCOUR APRON

20' 0' 20' 40'

SCALE: 1"=20'

A PILE DIKE 24.63 - SECTIONS 2+50 TO 4+75

SCALE: 1" = 20'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: A. GILLETT
DRAWN BY: J. SEDEY
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
SIZE: ANSI EXPAND D (22.00 X 34.00 INCHES)

ISSUE DATE: JULY 2026
SOLICITATION NO.: W9127N-26-B-0016
CONTRACT NO.: +XXXXXX-XX-X-XXXX
PLOT DATE & PLOTTER: 7-May-26 pjdescins

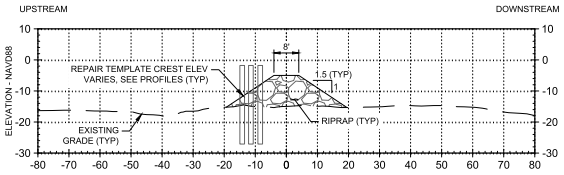
U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

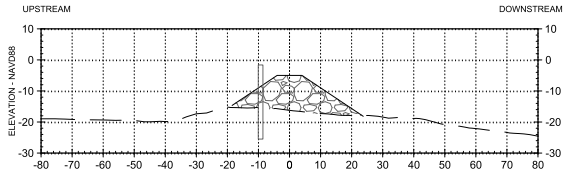
PILE DIKE 24.63
SECTIONS 2+50 TO 4+75

SHEET ID
C-302

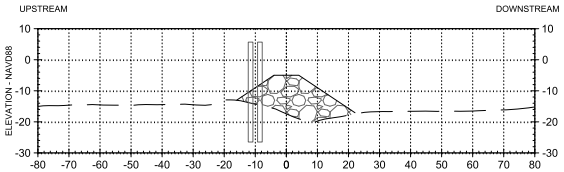
ADVERTISE



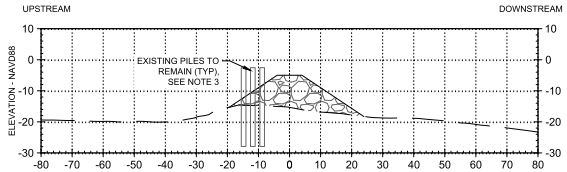
6+00



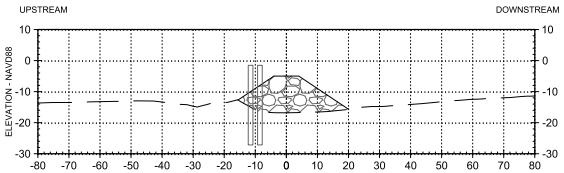
7+25



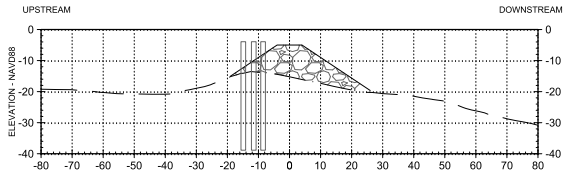
5+75



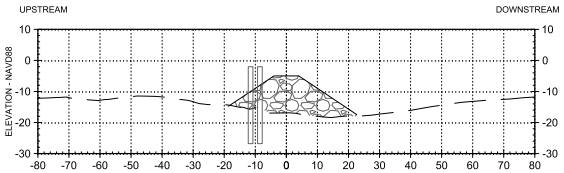
7+00



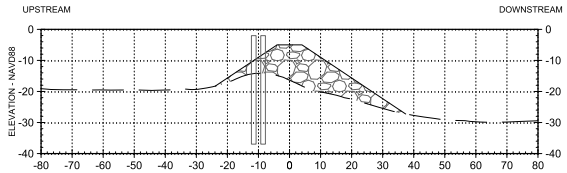
5+50



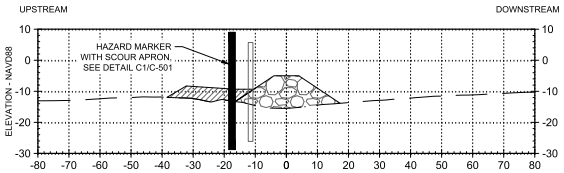
6+75



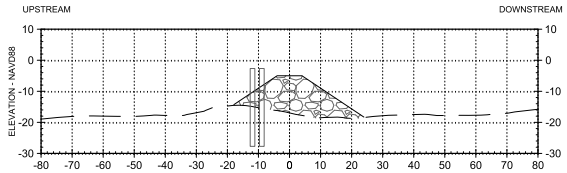
5+25



6+50



5+00



6+25

NOTE

1. CROSS SECTIONS LOOKING UPSTATION.
2. CONSTRUCT ENHANCED ENROCKMENT IN LIFTS WITH A MAXIMUM THICKNESS OF 6FT.
3. EXISTING TIMBER PILES ALONG STA 0+00 TO 11+00 FOR PD 24.63 ARE NOT TO BE DAMAGED DURING THE CONTRACTOR'S PLACEMENT OF NEW ENROCKMENT MATERIAL, DURING INSTALLATION OF NEW MARKER PILES, OR DURING OTHER CONTRACTOR'S ACTIVITIES DURING THIS CONTRACT.
4. PILE DIKE 24.63 WORK ARE MANDATORY ITEMS UNDER CLIN 2.
5. EXISTING PILE DIKE PILE LENGTHS, LOCATIONS, AND ELEVATIONS ARE APPROXIMATE.

LEGEND

INSTALL RIPRAP

INSTALL SCOUR APRON

20' 0' 20' 40'

SCALE: 1"=20'

A PILE DIKE 24.63 - SECTIONS 5+00 TO 7+25

SCALE: 1" = 20'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: A. GILLETT
DRAWN BY: J. SEDEY
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
SIZE: ANSI EXPAND D (22.00 X 34.00 INCHES)

ISSUE DATE: JUL 2026
SOLICITATION NO.: W912PN-26-B-0016
CONTRACT NO.: +XXXXXX-XX-X-XXXX
PLOT DATE & PLOTTER: 7-May-26 pjdescjhns

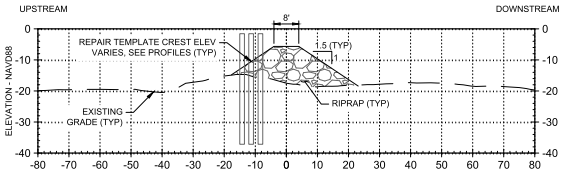
U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

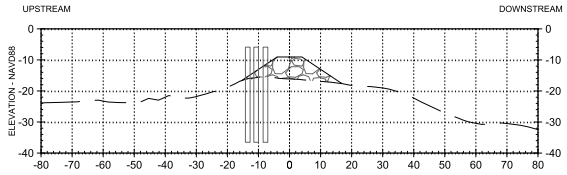
PILE DIKE 24.63
SECTIONS 5+00 TO 7+25

SHEET ID
C-303

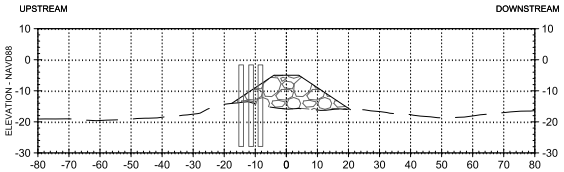
ADVERTISE



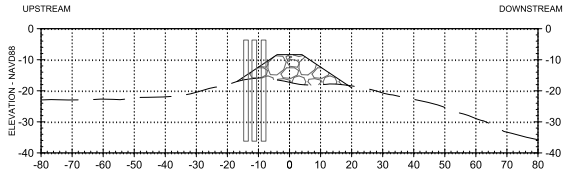
8+25



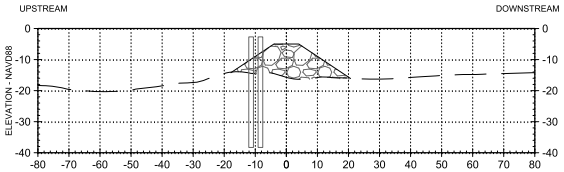
9+50



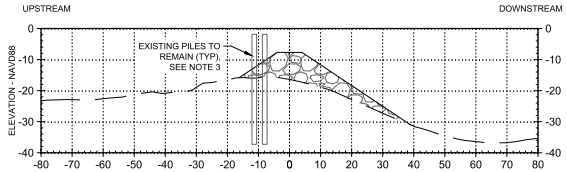
8+00



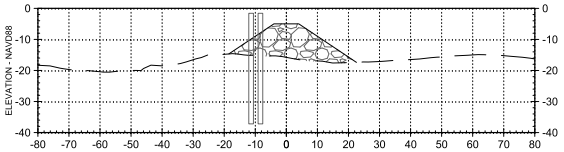
9+25



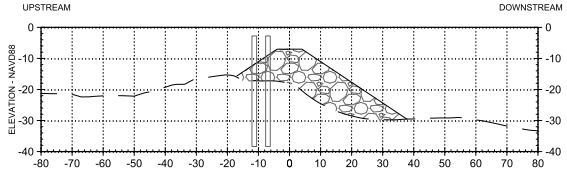
7+75



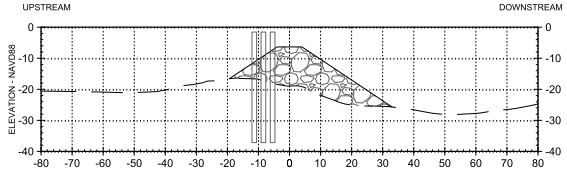
9+00



7+50



8+75



8+50

NOTE

1. CROSS SECTIONS LOOKING UPSTATION.
2. CONSTRUCT ENHANCED ENROCKMENT IN LIFTS WITH A MAXIMUM THICKNESS OF 6FT.
3. EXISTING TIMBER PILES ALONG STA 0+00 TO 11+00 FOR PD 24.63 ARE NOT TO BE DAMAGED DURING THE CONTRACTOR'S PLACEMENT OF NEW ENROCKMENT MATERIAL, DURING INSTALLATION OF NEW MARKER PILES, OR DURING OTHER CONTRACTOR'S ACTIVITIES DURING THIS CONTRACT.
4. PILE DIKE 24.63 WORK ARE MANDATORY ITEMS UNDER CLIN 2.
5. EXISTING PILE DIKE PILE LENGTHS, LOCATIONS, AND ELEVATIONS ARE APPROXIMATE.

LEGEND

INSTALL RIPRAP

INSTALL SCOUR APRON

20' 0' 20' 40'

SCALE: 1"=20'

A PILE DIKE 24.63 - SECTIONS 7+50 TO 9+50

SCALE: 1" = 20'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: A. GILLETT
DRAWN BY: J. SEDEY
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
SIZE: ANSI EXPAND D (22.00 X 34.00 INCHES)
ISSUE DATE: 14 MAY 2026
SOLICITATION NO.: W912PN-26-B-A016
CONTRACT NO.: W912PN-XX-C-XXXX
PLOT DATE & PLOTTER: 7-May-26 pjdescjhns

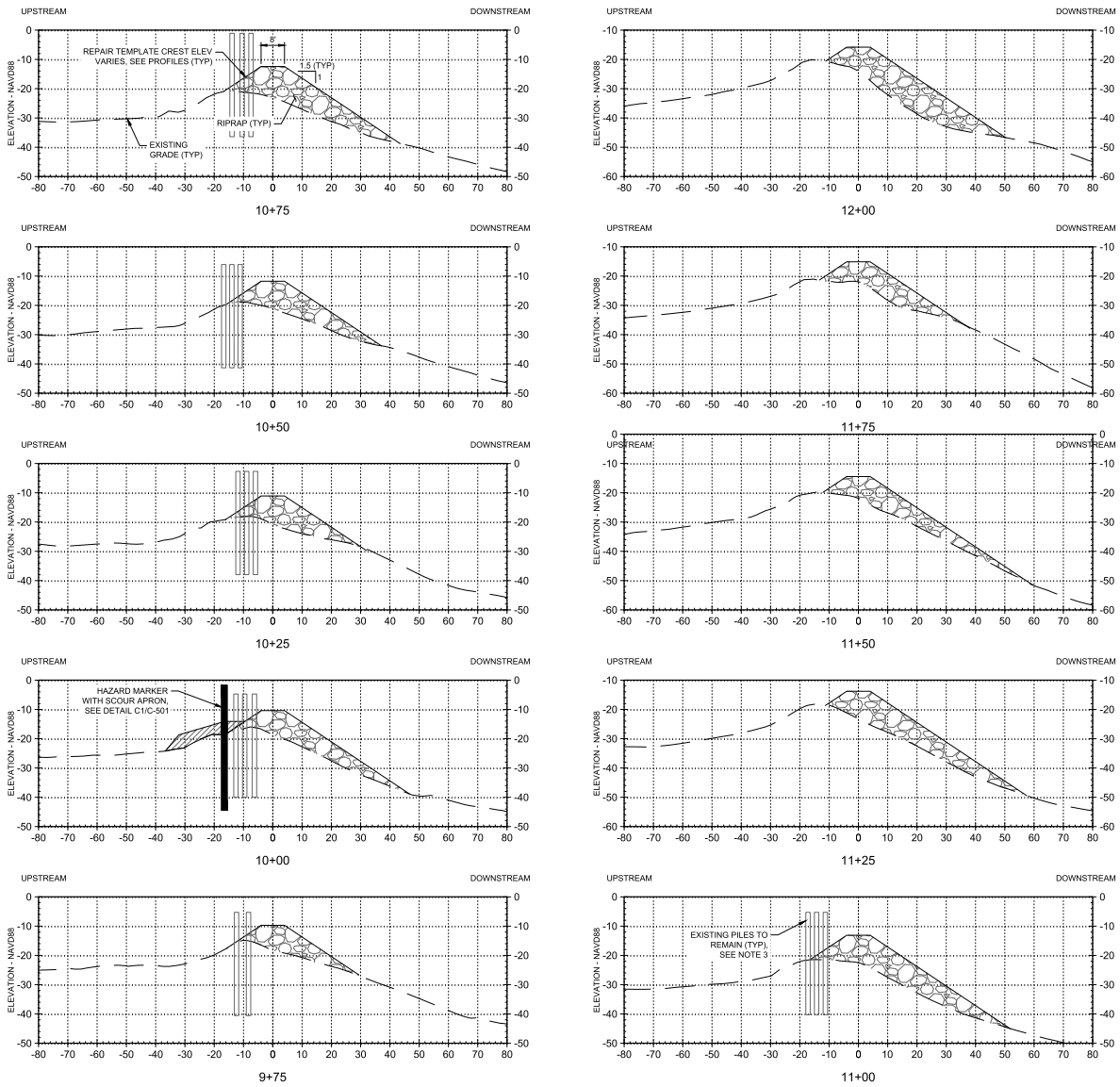
U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

PILE DIKE 24.63
SECTIONS 7+50 TO 9+50

SHEET ID
C-304

ADVERTISE



NOTE

1. CROSS SECTIONS LOOKING UPSTATION.
2. CONSTRUCT ENHANCED ENROCKMENT IN LIFTS WITH A MAXIMUM THICKNESS OF 6FT.
3. EXISTING TIMBER PILES ALONG STA 0+00 TO 11+00 FOR PD 24.63 ARE NOT TO BE DAMAGED DURING THE CONTRACTOR'S PLACEMENT OF NEW ENROCKMENT MATERIAL, DURING INSTALLATION OF NEW MARKER PILES, OR DURING OTHER CONTRACTOR'S ACTIVITIES DURING THIS CONTRACT.
4. PILE DIKE 24.63 WORK ARE MANDATORY ITEMS UNDER CLIN 2.
5. EXISTING PILE DIKE PILE LENGTHS, LOCATIONS, AND ELEVATIONS ARE APPROXIMATE.

LEGEND

INSTALL RIPRAP

INSTALL SCOUR APRON

20' 0' 20' 40'

SCALE: 1"=20'

A PILE DIKE 24.63 - SECTIONS 9+75 TO 12+00

SCALE: 1" = 20'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

DESIGNED BY: A. GILLETT
DRAWN BY: J. SEDEY
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
SIZE: ANSI EXPAND D (22.00 X 34.00 INCHES)

ISSUE DATE: JULY 2026
SOLICITATION NO.: W912PN-26-B-0016
CONTRACT NO.: +XXXXXX-XX-X-XXXX
PLOT DATE & PLOTTER: 7-May-26 pjdescins

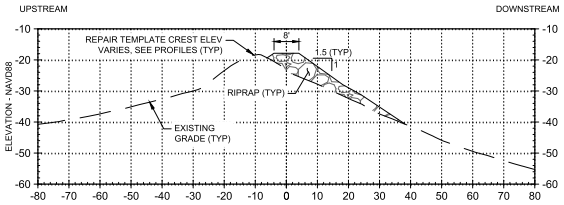
COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

PILE DIKE 24.63
SECTIONS 9+75 TO 12+00

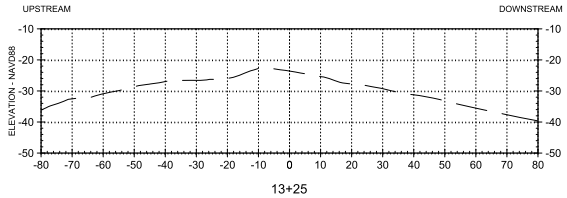
SHEET ID

C-305

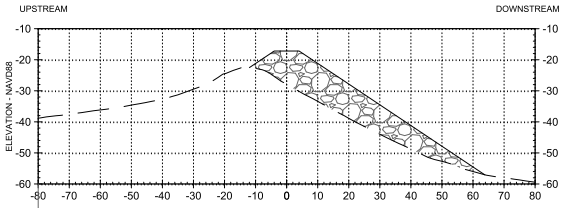
ADVERTISE



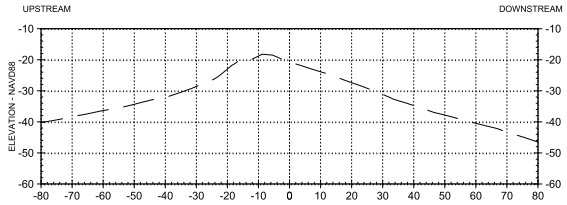
12+75



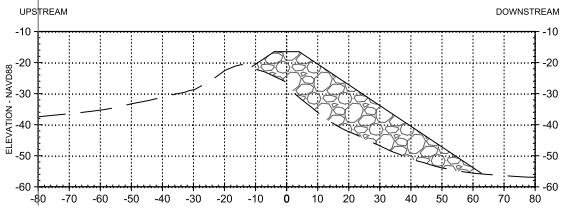
13+25



12+50



13+00



12+25

NOTE

1. CROSS SECTIONS LOOKING UPSTATION.
2. CONSTRUCT ENHANCED ENROCKMENT IN LIFTS WITH A MAXIMUM THICKNESS OF 6FT.
3. EXISTING TIMBER PILES ALONG STA 0+00 TO 11+00 FOR PD 24.63 ARE NOT TO BE DAMAGED DURING THE CONTRACTOR'S PLACEMENT OF NEW ENROCKMENT MATERIAL, DURING INSTALLATION OF NEW MARKER PILES, OR DURING OTHER CONTRACTOR'S ACTIVITIES DURING THIS CONTRACT.
4. PILE DIKE 24.63 WORK ARE MANDATORY ITEMS UNDER CLIN 2.
5. EXISTING PILE DIKE PILE LENGTHS, LOCATIONS, AND ELEVATIONS ARE APPROXIMATE.

LEGEND

INSTALL RIPRAP

INSTALL SCOUR APRON

20' 0' 20' 40'

SCALE: 1"=20'

A PILE DIKE 24.63 - SECTIONS 12+25 TO 13+25

SCALE: 1" = 20'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

DESIGNED BY: A. GILLETT
DRAWN BY: J. SEDEY
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
SIZE: ANSI EXPAND D (22.00 X 34.00 INCHES)

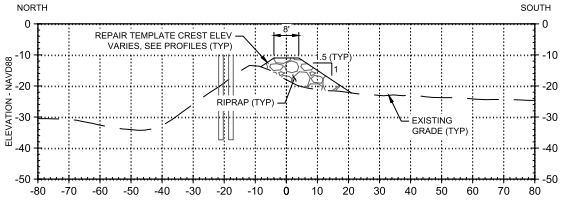
ISSUE DATE: JULY 2008
SOLICITATION NO.: W912PN-26-B-0016
CONTRACT NO.: +XXXXXX-XX-X-XXXX
PLOT DATE & PLOTTER: 7-May-26 pdescribe

COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

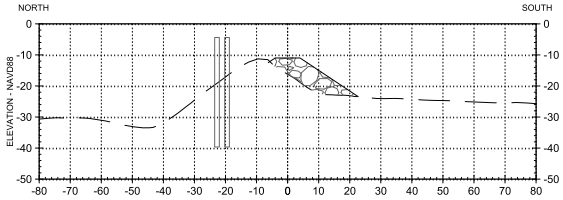
PILE DIKE 24.63
SECTIONS 12+25 TO 13+25

SHEET ID
C-306

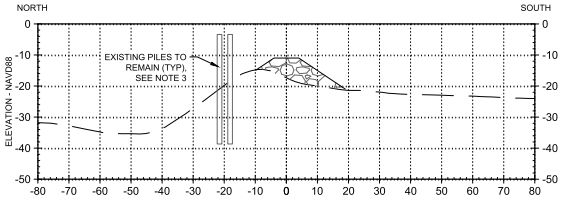
ADVERTISE



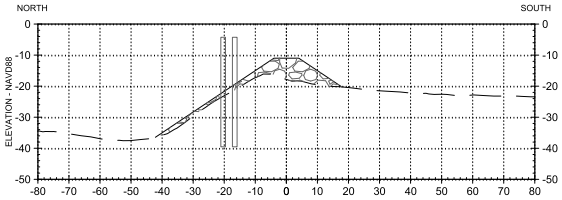
12+50



12+75



12+25



12+00

NOTE

1. CROSS SECTIONS LOOKING UPSTATION.
2. CONSTRUCT ENHANCED ENROCKMENT IN LIFTS WITH A MAXIMUM THICKNESS OF 6FT.
3. REMNANT PILE AT 23.81 ARE SPARSE, PILE SHOWN IS APPROXIMATE.
4. PILE DIKE 23.81 WORK ARE OPTIONAL ITEMS UNDER CLIN 4. REFER TO SPEC 01 22 00.00 25 - MEASUREMENT AND PAYMENT.
5. EXISTING PILE DIKE PILE LENGTHS, LOCATIONS, AND ELEVATIONS ARE APPROXIMATE.

LEGEND

INSTALL RIPRAP

INSTALL SCOUR APRON

20' 0' 20' 40'

SCALE: 1"=20'

A PILE DIKE 23.81 - SECTIONS 12+00 TO 12+75

SCALE: 1" = 20'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

DESIGNED BY: A. GILLETT
DRAWN BY: J. SEDEY
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
SIZE: ANSI EXPAND D (22.00 X 34.00 INCHES)

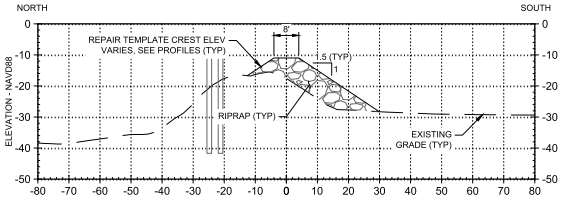
ISSUE DATE: 11-14-2008
SOLICITATION NO.: W9127N-26-B-0016
CONTRACT NO.: +XXXXXX-XX-X-XXXX
PLOT DATE & PLOTTER: 7-May-26 pdescitins

COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

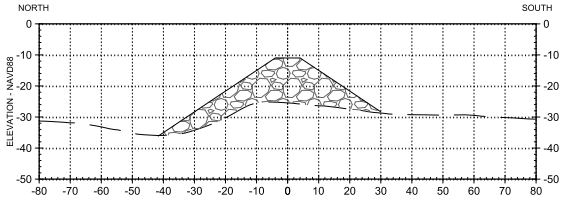
PILE DIKE 23.81
SECTIONS 12+00 TO 12+75

SHEET ID
C-307

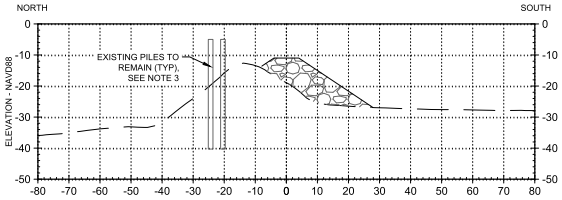
ADVERTISE



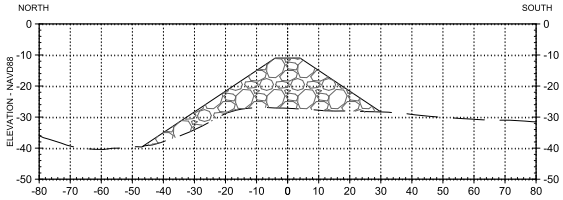
13+50



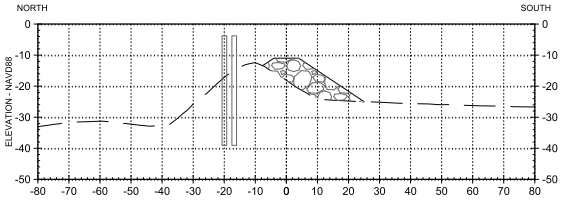
14+25



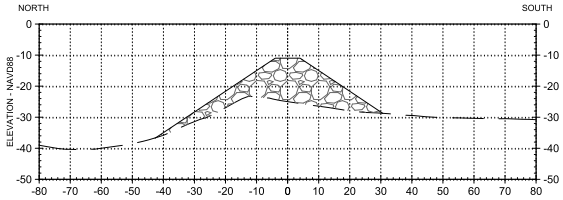
13+25



14+00



13+00



13+75

NOTE

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5. EXISTING PILE DIKE PILE LENGTHS, LOCATIONS, AND ELEVATIONS ARE APPROXIMATE.

LEGEND

INSTALL RIPRAP

INSTALL SCOUR APRON

20' 0' 20' 40'

SCALE: 1"=20'

A PILE DIKE 23.81 - SECTIONS 13+00 TO 14+25

SCALE: 1" = 20'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: A. GILLETT
DRAWN BY: J. SEDEY
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
SIZE: ANSI EXPAND D (22.00 X 34.00 INCHES)

ISSUE DATE: JULY 2026
SOLICITATION NO.: W912PN-26-B-0016
CONTRACT NO.: +XXXXXX-XX-X-XXXX
PLOT DATE & PLOTTER: 7-May-26 gdescins

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

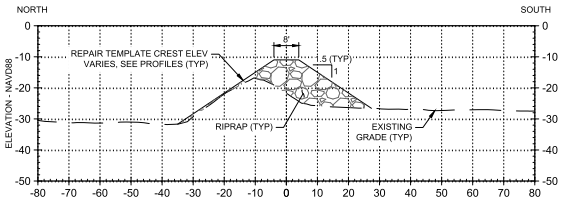
COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

PILE DIKE 23.81
SECTIONS 13+00 TO 14+25

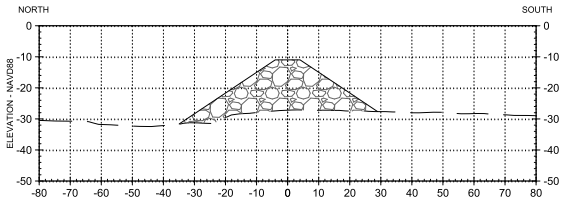
SHEET ID

C-308

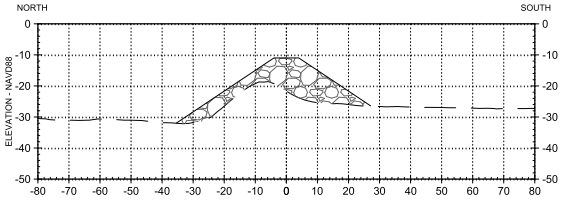
ADVERTISE



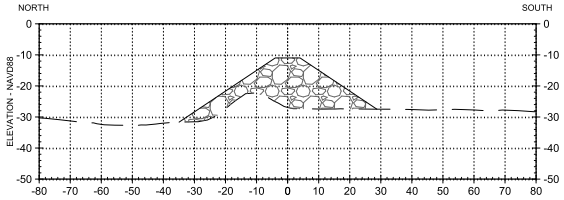
15+00



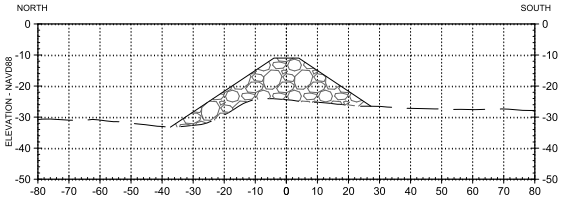
15+75



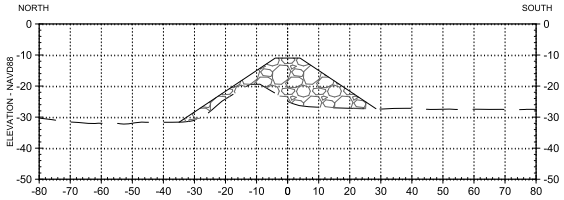
14+75



15+50



14+50



15+25

NOTE

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4. PILE DIKE 23.81 WORK ARE OPTIONAL ITEMS UNDER CLIN 4. REFER TO SPEC 01 22 00.00 25 - MEASUREMENT AND PAYMENT.

LEGEND

INSTALL RIPRAP

INSTALL SCOUR APRON

20' 0' 20' 40'

SCALE: 1"=20'

A PILE DIKE 23.81 - SECTIONS 14+50 TO 15+75

SCALE: 1" = 20'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

DESIGNED BY: A. GILLETT	ISSUE DATE: JULY 2026
DRAWN BY: J. SEDEY	SOLICITATION NO.: W912PN-26-B-0016
CHECKED BY: A. GRANADOS	CONTRACT NO.: +XXXXXX-XX-X-XXXX
SUBMITTED BY: A. JONES	PLOT DATE & PLOTTER: 7-May-26 pjones
SIZE: ANSI EXPAND D (22.00 X 34.00 INCHES)	

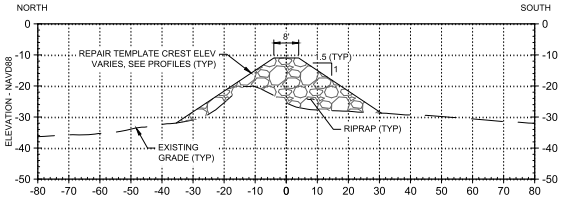
COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

PILE DIKE 23.81
SECTIONS 14+50 TO 15+75

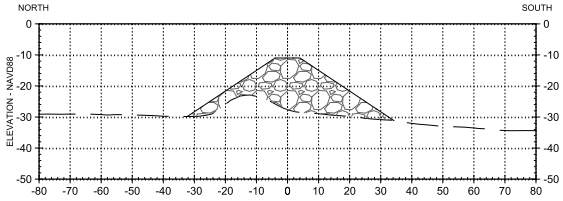
SHEET ID

C-309

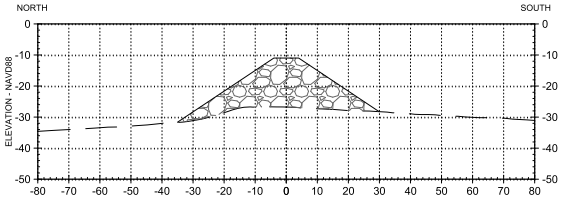
ADVERTISE



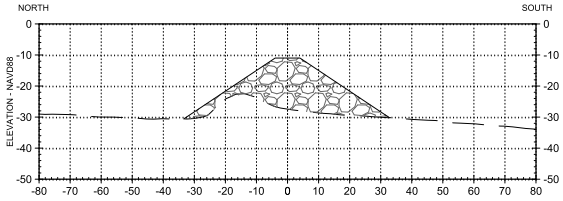
16+50



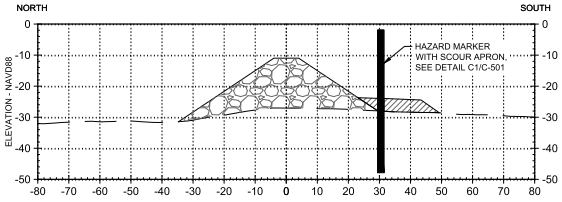
17+25



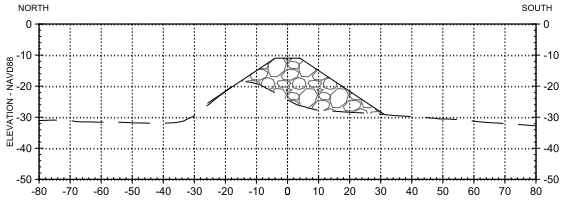
16+25



17+00



16+00



16+75

NOTE

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LEGEND

INSTALL RIPRAP

INSTALL SCOUR APRON

20' 0' 20' 40'

SCALE: 1"=20'

A PILE DIKE 23.81 - SECTIONS 16+00 TO 17+25

SCALE: 1" = 20'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: A. GILLETT
DRAWN BY: J. SEDEY
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
SIZE: ANSI EXPAND D (22.00 X 34.00 INCHES)
ISSUE DATE: JULY 2026
SOLICITATION NO.: W912PN-26-B-0016
CONTRACT NO.: +XXXXXX-XX-X-XXXX
PLOT DATE & PLOTTER: 7-May-26 gdescins

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

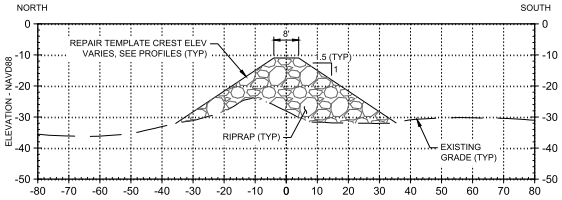
COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

PILE DIKE 23.81
SECTIONS 16+00 TO 17+25

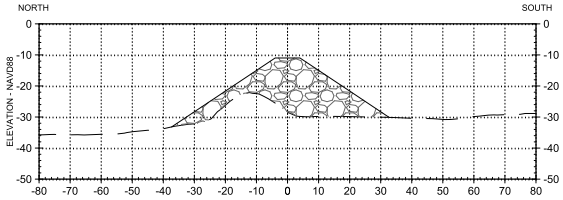
SHEET ID

C-310

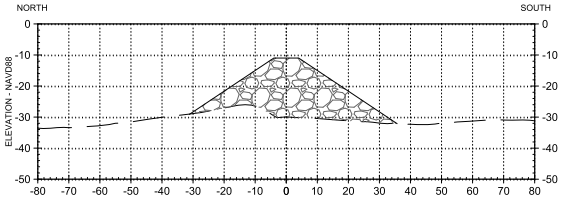
ADVERTISE



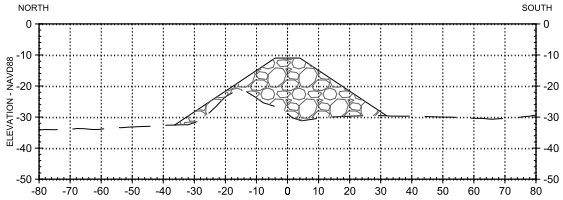
18+00



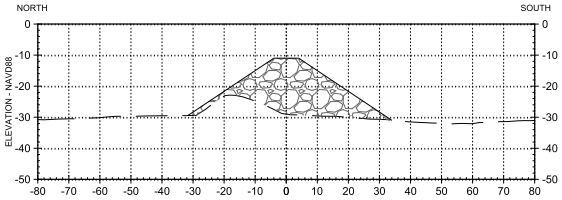
18+75



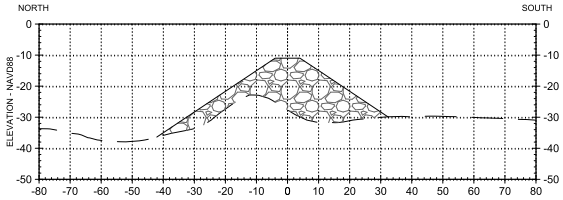
17+75



18+50



17+50



18+25

NOTE

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LEGEND

INSTALL RIPRAP

INSTALL SCOUR APRON

20' 0' 20' 40'

SCALE: 1"=20'

A PILE DIKE 23.81 - SECTIONS 17+50 TO 18+75

SCALE: 1" = 20'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

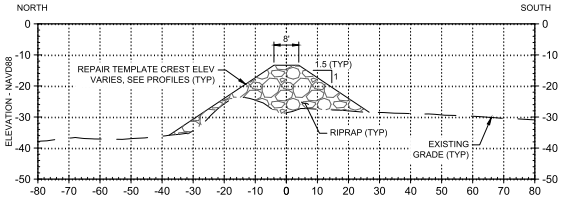
DESIGNED BY: A. GILLETT
DRAWN BY: J. SEDEY
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
SIZE: ANSI EXPAND D (22.00 X 34.00 INCHES)
ISSUE DATE: JULY 2026
SOLICITATION NO.: W912PN-26-B-0016
CONTRACT NO.: +XXXXXX-XX-X-XXXX
PLOT DATE & PLOTTER: 7-May-26 gdescjms

COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

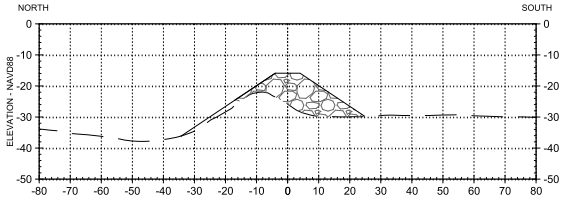
PILE DIKE 23.81
SECTION 17+50 TO 18+75

SHEET ID
C-311

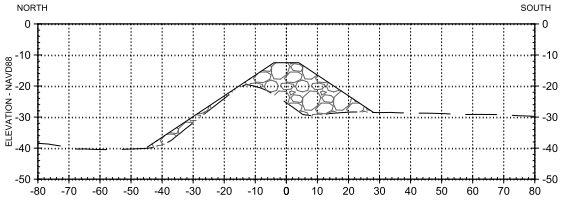
ADVERTISE



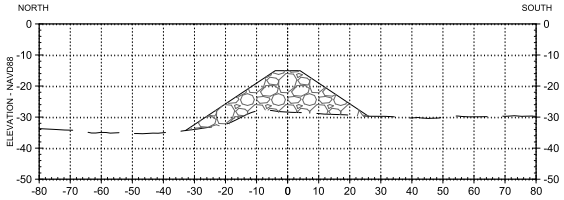
19+50



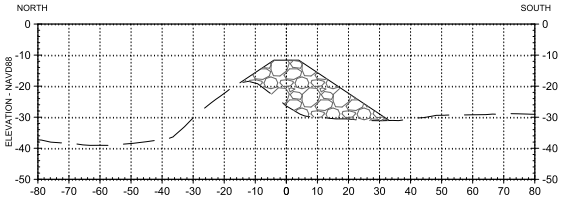
20+25



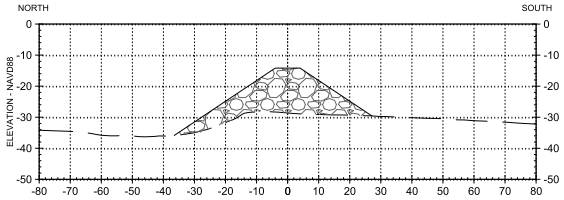
19+25



20+00



19+00



19+75

NOTE

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LEGEND

INSTALL RIPRAP

INSTALL SCOUR APRON

20' 0' 20' 40'

SCALE: 1"=20'

A PILE DIKE 23.81 - SECTIONS 19+00 TO 20+25

SCALE: 1" = 20'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: A. GILLETT
DRAWN BY: J. SEDEY
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
SIZE: ANSI EXPAND D (22.00 X 34.00 INCHES)
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U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

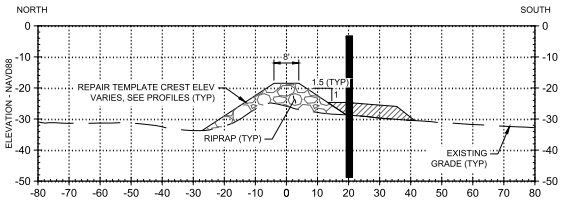
COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

PILE DIKE 23.81
SECTIONS 19+00 TO 20+25

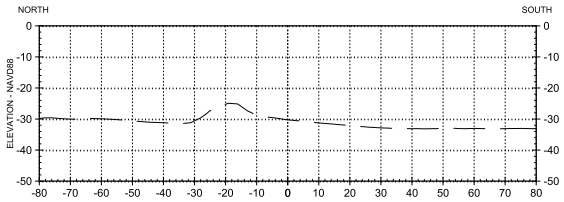
SHEET ID

C-312

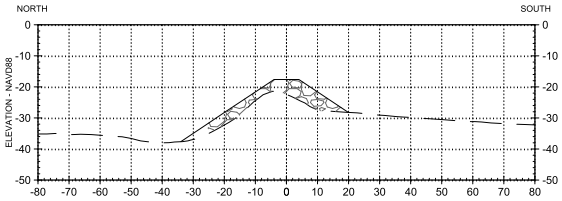
ADVERTISE



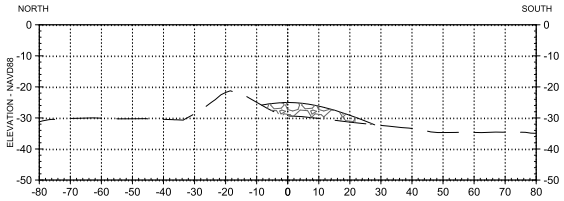
21+00



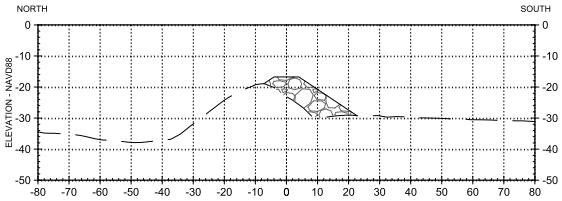
21+75



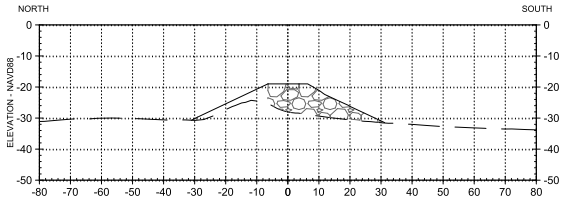
20+75



21+50



20+50



21+25

NOTE

1. CROSS SECTIONS LOOKING UPSTATION.
2. CONSTRUCT ENHANCED ENROCKMENT IN LIFTS WITH A MAXIMUM THICKNESS OF 6FT.
3. REMNANT PILE AT 23.81 ARE SPARSE, PILE SHOWN IS APPROXIMATE.
4. PILE DIKE 23.81 WORK ARE OPTIONAL ITEMS UNDER CLIN 4. REFER TO SPEC 01 22 00.00 25 - MEASUREMENT AND PAYMENT.

LEGEND

INSTALL RIPRAP

INSTALL SCOUR APRON

20' 0' 20' 40'

SCALE: 1"=20'

A PILE DIKE 23.81 - SECTIONS 20+50 TO 21+75

SCALE: 1" = 20'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

DESIGNED BY: A. GILLETT	ISSUE DATE: JULY 2008
DRAWN BY: J. SEDEY	SOLICITATION NO.: W912ZN-26-B-0016
CHECKED BY: K. GRIFFITH	CONTRACT NO.: W912ZN-XX-C-XXXX
REVIEWED BY: A. GRANADOS	PLOT DATE & PLOTTER: +XXXXXX-XX-X-XXXX
SUBMITTED BY: A. JONES	PLOT SCALE: 1:Alloy-268 pdesigns
SIZE: ANSI EXPAND D	SIZE: (22.00 X 34.00 INCHES)

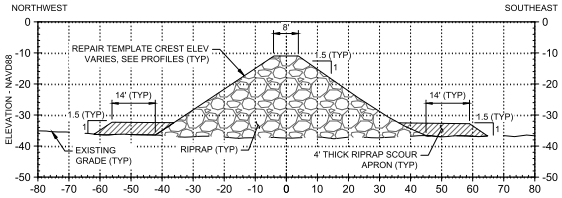
COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

PILE DIKE 23.81
SECTION 20+50 TO 21+75

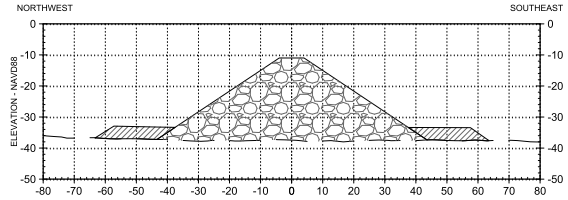
SHEET ID

C-313

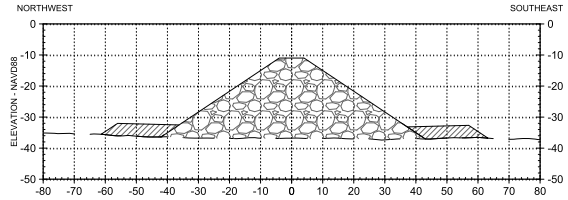
ADVERTISE



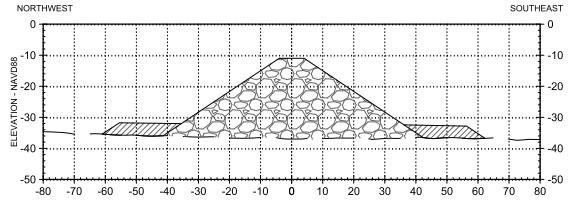
8+25



9+00



8+75



8+50

NOTE

1. CROSS SECTIONS LOOKING UPSTATION.
2. CONSTRUCT ENHANCED ENROCKMENT IN LIFTS WITH A MAXIMUM THICKNESS OF 6FT.
3. PILE DIKE 23.71 AND CONNECTOR WORK ARE OPTIONAL ITEMS UNDER CLIN 5. REFER TO SPEC 01 22 00.00 25 - MEASUREMENT AND PAYMENT.

LEGEND

INSTALL RIPRAP

INSTALL SCOUR APRON

20' 0' 20' 40'

SCALE: 1"=20'

A PILE DIKE 23.71 TO 23.81 CONNECTOR - SECTIONS 8+25 TO 9+00

SCALE: 1" = 20'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: A. GULLETT
DRAWN BY: J. SEDEY
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
SIZE: ANSI EXPAND D (22.00 X 34.00 INCHES)
ISSUE DATE: JULY 2026
SOLICITATION NO.: W912PN-26-B-0016
CONTRACT NO.: +XXXXXX-XX-X-XXXX
PLOT DATE & PLOTTER: 7-May-26 pdescitra

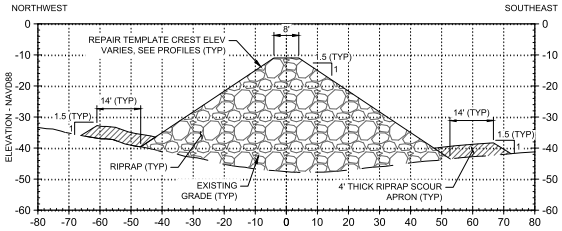
U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

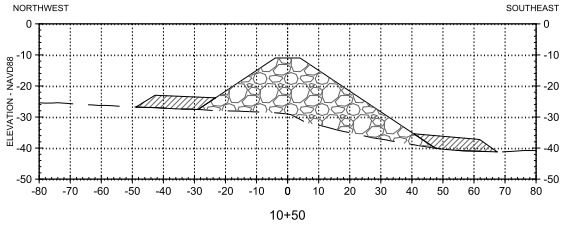
PILE DIKE 23.71 TO 23.81 CONNECTOR
SECTIOSN 8+25 TO 9+00

SHEET ID
C-314

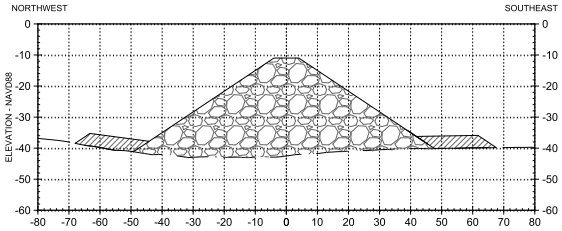
ADVERTISE



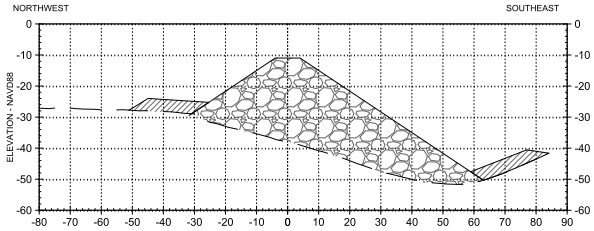
9+75



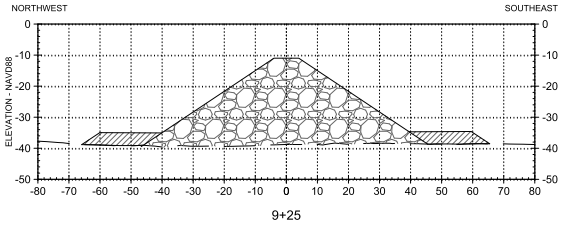
10+50



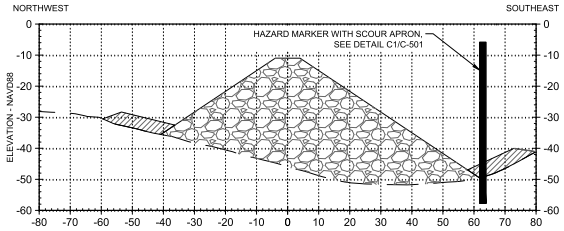
9+50



10+25



9+25



10+00

NOTE

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2. CONSTRUCT ENHANCED ENROCKMENT IN LIFTS WITH A MAXIMUM THICKNESS OF 6FT.
3. PILE DIKE 23.71 AND CONNECTOR WORK ARE OPTIONAL ITEMS UNDER CLIN 5. REFER TO SPEC 01 22 00.00 25 - MEASUREMENT AND PAYMENT.

LEGEND

INSTALL RIPRAP

INSTALL SCOUR APRON

20' 0' 20' 40'

SCALE: 1"=20'

A PILE DIKE 23.71 TO 23.81 CONNECTOR - SECTIONS 9+25 TO 10+50

SCALE: 1" = 20'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

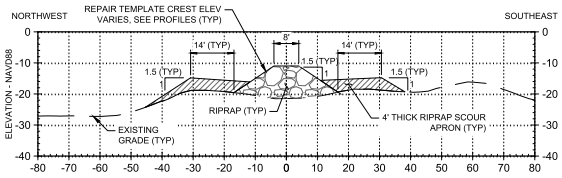
DESIGNED BY: A. GILLETT
DRAWN BY: J. SEDEY
REVIEWED BY: A. GRANADOS
SUBMITTED BY: A. JONES
SIZE: ANSI E
ISSUE DATE: JULY 2026
SOLICITATION NO.: W912ZN-26-B-0016
CONTRACT NO.: W912ZN-XX-C-XXXX
PLOT DATE & PLOTTER: 7-May-26 gdescjms

COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

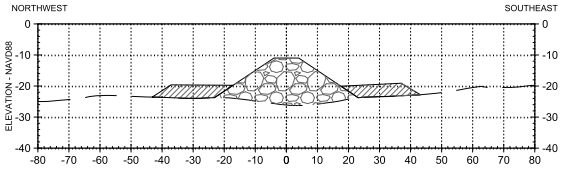
PILE DIKE 23.71 TO 23.81 CONNECTOR
SECTIONS 9+25 TO 10+50

SHEET ID
C-315

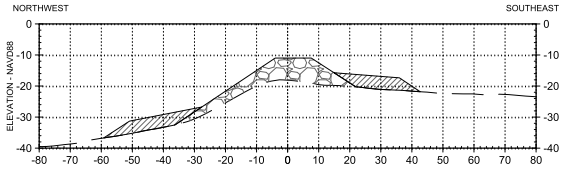
ADVERTISE



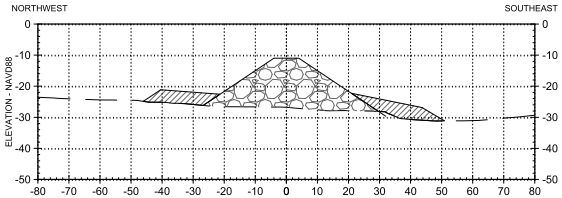
11+25



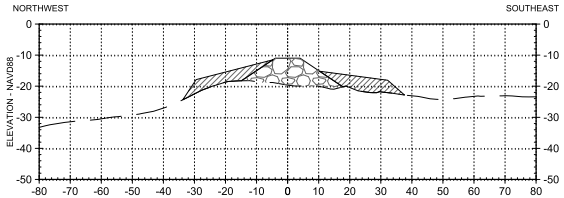
11+00



11+75



10+75



11+50

NOTE

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2. CONSTRUCT ENHANCED ENROCKMENT IN LIFTS WITH A MAXIMUM THICKNESS OF 6FT.
3. PILE DIKE 23.71 AND CONNECTOR WORK ARE OPTIONAL ITEMS UNDER CLIN 5. REFER TO SPEC 01 22 00.00 25 - MEASUREMENT AND PAYMENT.

LEGEND

INSTALL RIPRAP

INSTALL SCOUR APRON

20' 0' 20' 40'

SCALE: 1"=20'

A PILE DIKE 23.71 TO 23.81 CONNECTOR - SECTIONS 10+75 TO 11+75

SCALE: 1" = 20'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

DESIGNED BY: A. GILLETT
DRAWN BY: J. SEDDEY
CHECKED BY: K. GRANADOS
SUBMITTED BY: A. JONES
SIZE: ANSI EXPAND D (22.00 X 34.00 INCHES)

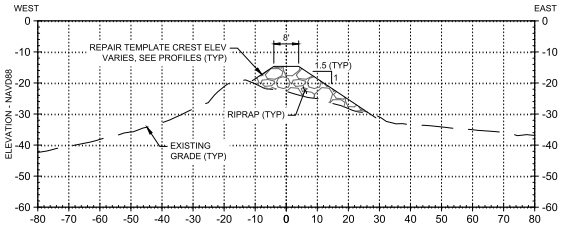
ISSUE DATE: JULY 2026
SOLICITATION NO.: W91277K-26-B/016
CONTRACT NO.: +XXXXXX-XX-X-XXXX
PLOT DATE & PLOTTER: 7-May-26 gdescins

COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

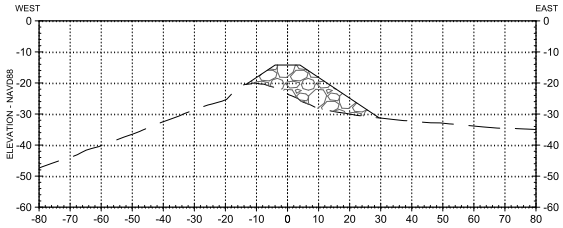
PILE DIKE 23.71 TO 23.81 CONNECTOR
SECTIONS 10+75 TO 11+75

SHEET ID
C-316

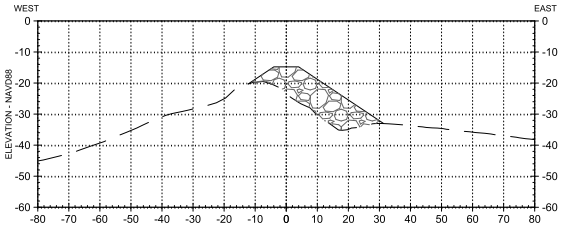
ADVERTISE



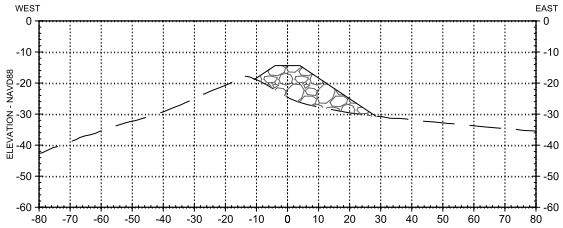
1+25



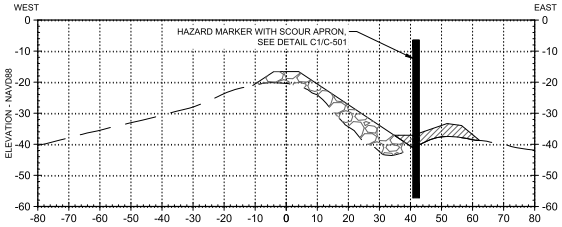
2+00



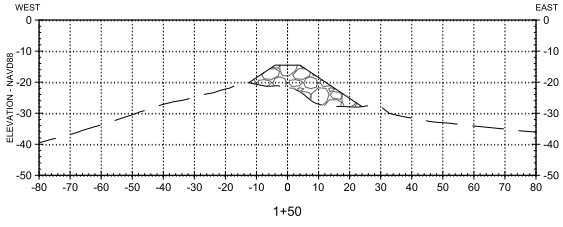
1+00



1+75



0+50



1+50

NOTE

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3. PILE DIKE 23.71 AND CONNECTOR WORK ARE OPTIONAL ITEMS UNDER CLIN 5. REFER TO SPEC 01 22 00.00 25 - MEASUREMENT AND PAYMENT.

LEGEND

INSTALL RIPRAP

INSTALL SCOUR APRON

20' 0' 20' 40'

SCALE: 1"=20'

A PILE DIKE 23.71 - SECTIONS 0+50 TO 2+00

SCALE: 1" = 20'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

DESIGNED BY: A. GILLETT
DRAWN BY: J. SEDEY
REVIEWED BY: A. GRANADOS
SUBMITTED BY: A. JONES
SIZE: ANSI EXPAND D (22.00 X 34.00 INCHES)

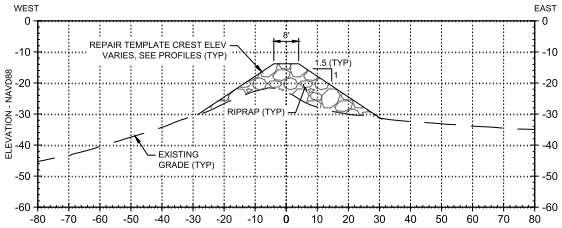
ISSUE DATE: JULY 2026
SOLICITATION NO.: W912PN-26-B-0016
CONTRACT NO.: W912PN-XX-C-XXXX
PLOT DATE & PLOTTER: 7-May-26 gdescins

COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

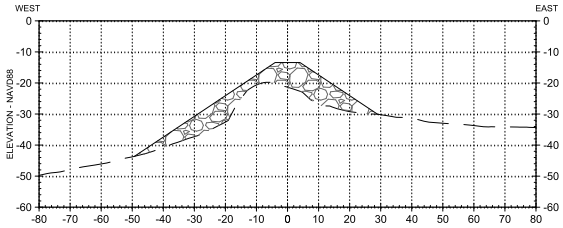
PILE DIKE 23.71
SECTIONS 0+50 TO 2+00

SHEET ID
C-317

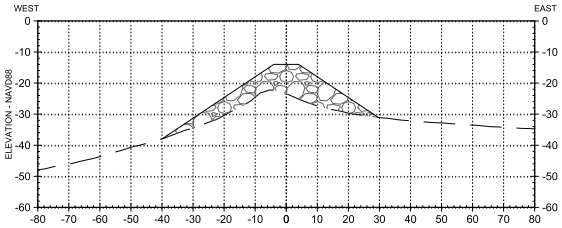
ADVERTISE



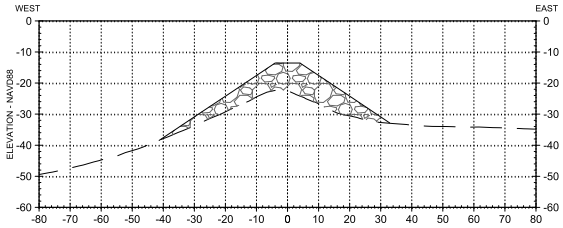
2+75



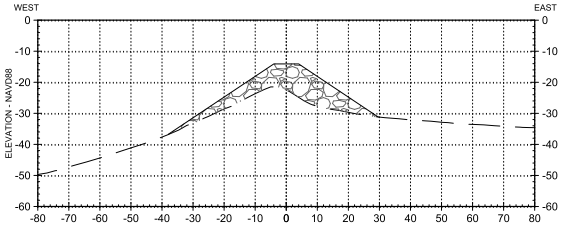
3+50



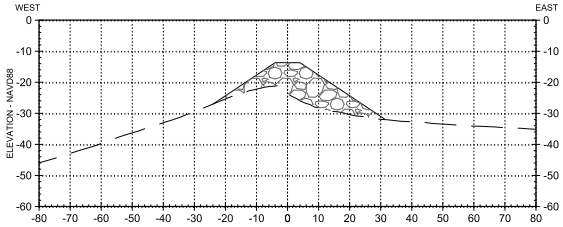
2+50



3+25



2+25



3+00

NOTE

1. CROSS SECTIONS LOOKING UPSTATION.
2. CONSTRUCT ENHANCED ENROCKMENT IN LIFTS WITH A MAXIMUM THICKNESS OF 6FT.
3. PILE DIKE 23.71 AND CONNECTOR WORK ARE OPTIONAL ITEMS UNDER CLIN 5. REFER TO SPEC 01 22 00.00 25 - MEASUREMENT AND PAYMENT.

LEGEND

INSTALL RIPRAP

INSTALL SCOUR APRON

20' 0' 20' 40'

SCALE: 1"=20'

A PILE DIKE 23.71 - SECTIONS 2+25 TO 3+50

SCALE: 1" = 20'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

DESIGNED BY: A. GILLETT
DRAWN BY: J. SEDEY
REVIEWED BY: A. GRANADOS
SUBMITTED BY: A. JONES
SIZE: ANSI EXPAND D (22.00 X 34.00 INCHES)

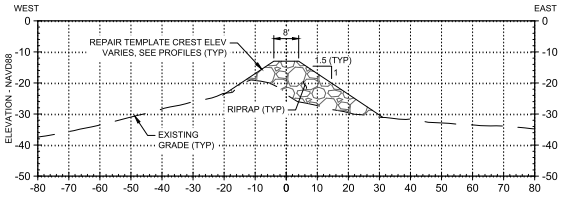
ISSUE DATE: JULY 2026
SOLICITATION NO.: W912PN-26-B-0016
CONTRACT NO.: +XXXXXX-XX-X-XXXX
PLOT DATE & PLOTTER: 7-May-26 gdescins

COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

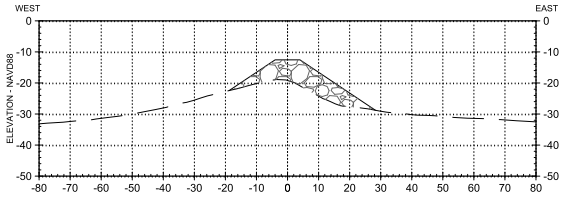
PILE DIKE 23.71
SECTIONS 2+25 TO 3+50

SHEET ID
C-318

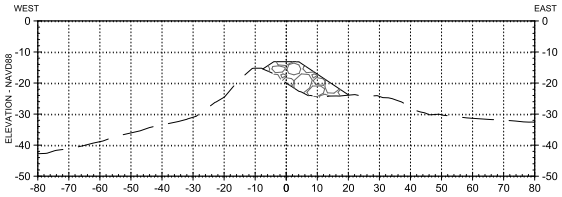
ADVERTISE



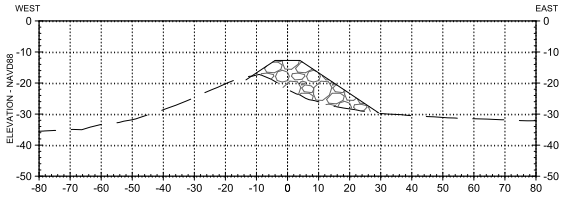
4+25



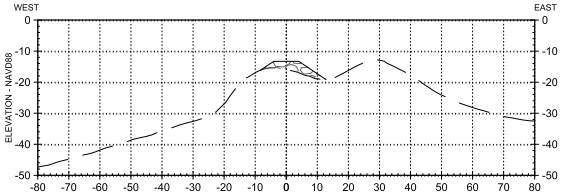
5+00



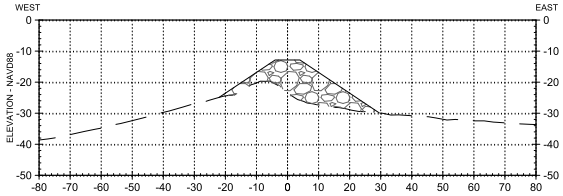
4+00



4+75



3+75



4+50

NOTE

1. CROSS SECTIONS LOOKING UPSTATION.
2. CONSTRUCT ENHANCED ENROCKMENT IN LIFTS WITH A MAXIMUM THICKNESS OF 6FT.
3. PILE DIKE 23.71 AND CONNECTOR WORK ARE OPTIONAL ITEMS UNDER CLIN 5. REFER TO SPEC 01 22 00.00 25 - MEASUREMENT AND PAYMENT.

LEGEND

INSTALL RIPRAP

INSTALL SCOUR APRON

20' 0' 20' 40'

SCALE: 1"=20'

A PILE DIKE 23.71 - SECTIONS 3+75 TO 5+00

SCALE: 1" = 20'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

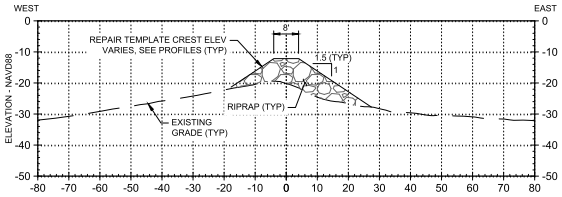
DESIGNED BY: A. GILLETT
DRAWN BY: J. SEDEY
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
SIZE: ANSI EXPAND D (22.00 X 34.00 INCHES)
ISSUE DATE: JULY 2026
SOLICITATION NO.: W912PN-26-B-0016
CONTRACT NO.: +XXXXXX-XX-X-XXXX
PLOT DATE & PLOTTER: 7-May-26 gdescins

COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

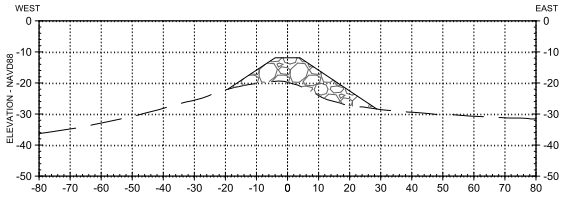
PILE DIKE 23.71
SECTIONS 3+75 TO 5+00

SHEET ID
C-319

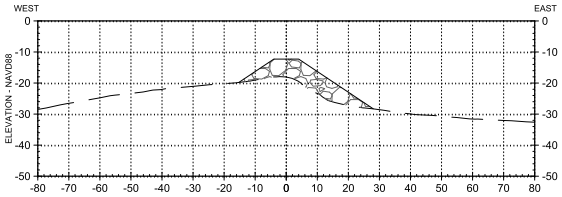
ADVERTISE



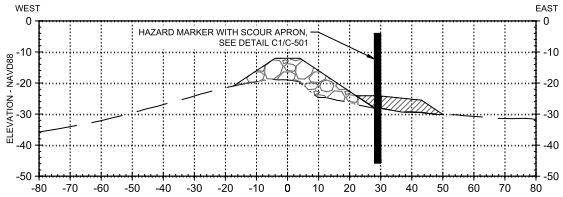
5+75



6+25



5+50



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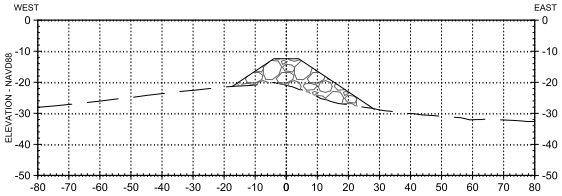


5+25

NOTE

1. CROSS SECTIONS LOOKING UPSTATION.
2. CONSTRUCT ENHANCED ENROCKMENT IN LIFTS WITH A MAXIMUM THICKNESS OF 6FT.
3. PILE DIKE 23.71 AND CONNECTOR WORK ARE OPTIONAL ITEMS UNDER CLIN 5. REFER TO SPEC 01 22 00.00 25 - MEASUREMENT AND PAYMENT.

LEGEND

INSTALL RIPRAP

INSTALL SCOUR APRON

20' 0' 20' 40'

SCALE: 1"=20'

A PILE DIKE 23.71 - SECTIONS 5+25 TO 6+25

SCALE: 1" = 20'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

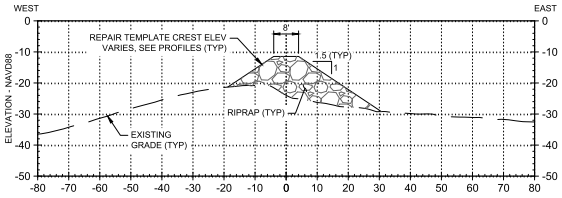
DESIGNED BY: A. GILLETT
DRAWN BY: J. SEDEY
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
SIZE: ANSI EXPAND D (22.00 X 34.00 INCHES)
ISSUE DATE: JULY 2026
SOLICITATION NO.: W912PN-26-B-0016
CONTRACT NO.: +XXXXXX-XX-X-XXXX
PLOT DATE & PLOTTER: 7-May-26 gdescins

COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

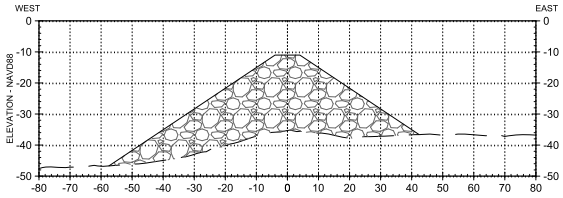
PILE DIKE 23.71
SECTIONS 5+25 TO 6+25

SHEET ID
C-320

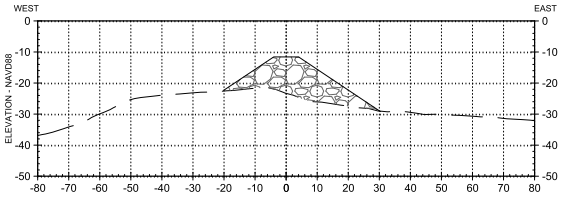
ADVERTISE



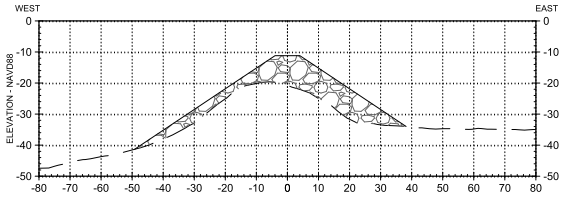
7+00



7+75



6+75



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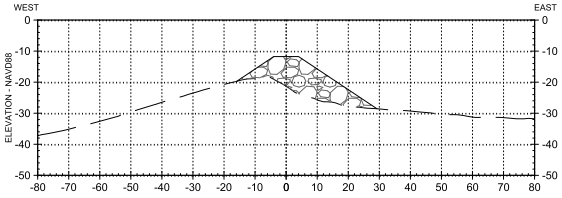
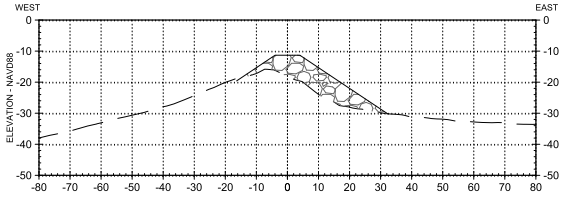


6+50



7+25

NOTE

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LEGEND

INSTALL RIPRAP

INSTALL SCOUR APRON

20' 0' 20' 40'

SCALE: 1"=20'

A PILE DIKE 23.71 - SECTIONS 6+50 TO 7+75

SCALE: 1" = 20'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

DESIGNED BY: A. GILLETT
DRAWN BY: J. SEDEY
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
SIZE: ANSI EXPAND D (22.00 X 34.00 INCHES)

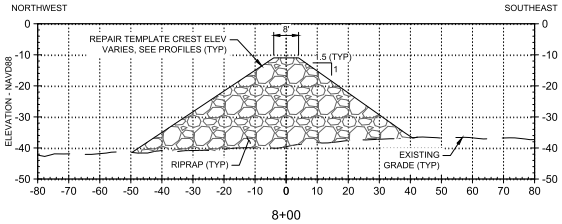
ISSUE DATE: JULY 2026
SOLICITATION NO.: W9127N-26-B-0016
CONTRACT NO.: +XXXXXX-XX-X-XXXX
PLOT DATE & PLOTTER: 7-May-26 pdescribe

COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

PILE DIKE 23.71
SECTIONS 6+50 TO 7+75

SHEET ID
C-321

ADVERTISE



NOTE

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3. PILE DIKE 23.71 AND CONNECTOR WORK ARE OPTIONAL ITEMS UNDER CLIN 5. REFER TO SPEC 01 22 00.00 25 - MEASUREMENT AND PAYMENT.

LEGEND

INSTALL RIPRAP

INSTALL SCOUR APRON

20' 0' 20' 40'

SCALE: 1"=20'

A PILE DIKE 23.71 - SECTION 8+00

SCALE: 1" = 20'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: A. GILLETT
DRAWN BY: J. SEDEY
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
SIZE: ANSI EXPAND D (22.00 X 34.00 INCHES)
ISSUE DATE: JULY 2008
SOLICITATION NO.: W912PN-26-B-0016
CONTRACT NO.: +XXXXXX-XX-X-XXXX
PLOT DATE & PLOTTER: 7-May-26 pdescitra

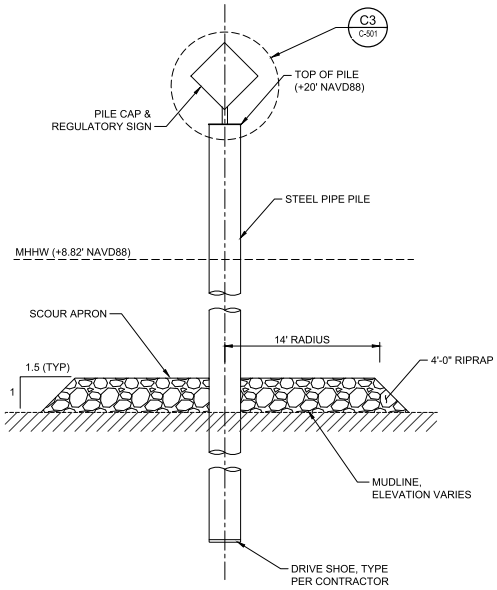
U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

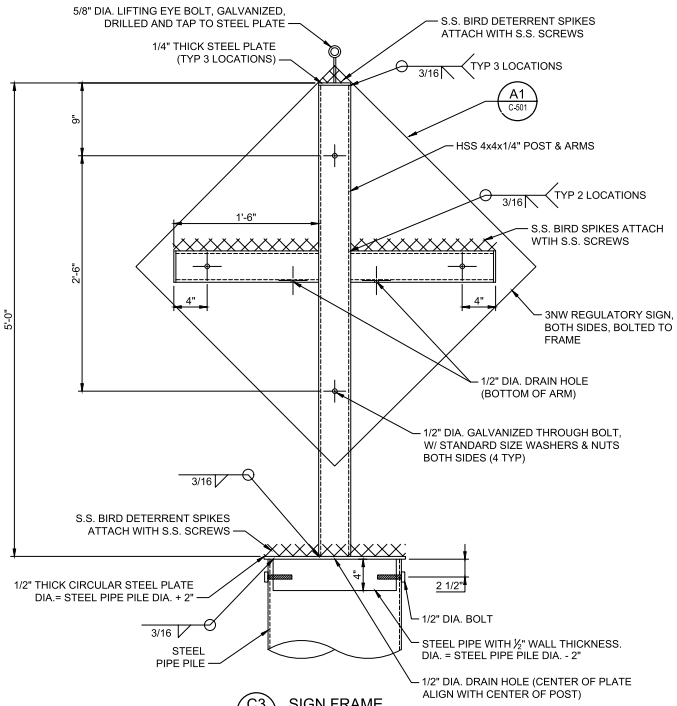
PILE DIKE 23.71
SECTION 8+00

SHEET ID
C-322

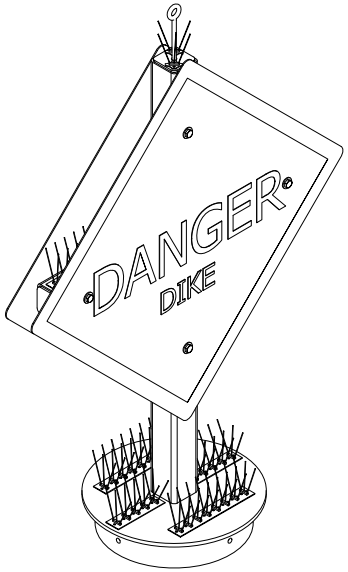
ADVERTISE

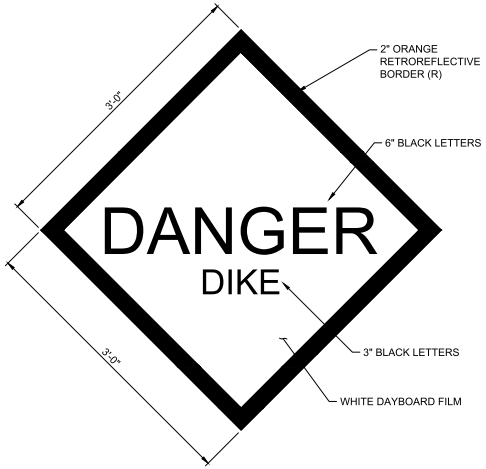


C1 C-501 TYPICAL HAZARD MARKER - SECTION
SCALE: NTS

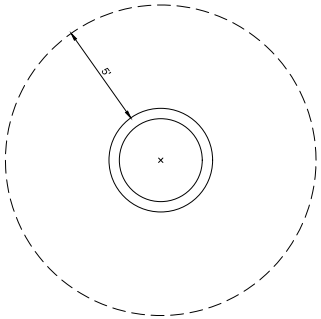


C3 C-501 SIGN FRAME
SCALE: NTS

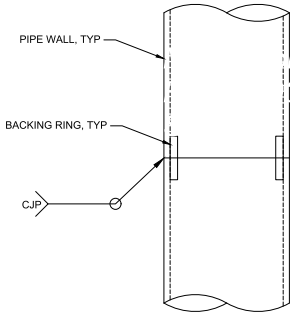




A1 C-501 HAZARD MARKER 3NW REGULATORY SIGN
SCALE: NTS



A3 C-501 MARKER PILE PLACEMENT TOLERANCE DETAIL
SCALE: NTS



A4 C-501 TYPICAL PILE SPLICE DETAIL
SCALE: NTS

NOTES:

1. POSITION SIGN FRAME SO THAT SIGNS ARE ORIENTED PERPENDICULAR TO FEDERAL NAVIGATION CHANNEL.
2. ATTACH SIGN FRAME TO PIPE PILE. DRILL 5/8" DIA. HOLES IN PIPE AT 90 DEGREES. DRILL AND TAP CORRESPONDING HOLE IN PILE CAP.
3. ATTACH PILE CAP TO PILE WITH (4) 1/2" DIA. x 4" LONG BOLTS WITH STANDARD SIZE WASHERS SPACED EQUAL DISTANCE AROUND PERIMETER OF PILE.
4. SIGN FRAME AND PILE CAP TO BE HOT DIP GALVANIZED.
5. POSITION VERTICAL POST IN CENTER OF PLATE.
6. CONTRACTOR TO ARRANGE BIRD DETERRENT SPIKES SO THAT NO MORE THAN 6" GAP BETWEEN SPIKES IS PRESENT.
7. ALL PILES TO BE OPEN ENDED.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: A. GULLETT
DRAWN BY: J. SEIDEL
CHECKED BY: A. GRANADOS
SUBMITTED BY: A. JONES
DATE: ----
ANSI FULL BLEED D (34.00 X 22.00 INCHES)

ISSUE DATE: JULY 2008
SOLICITATION NO.: W912PN-08-B-0016
CONTRACT NO.: W912XXX-XX-X-XXXX
PLOT DATE & PLOTTER: 7-May-26 gdecdnhs

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

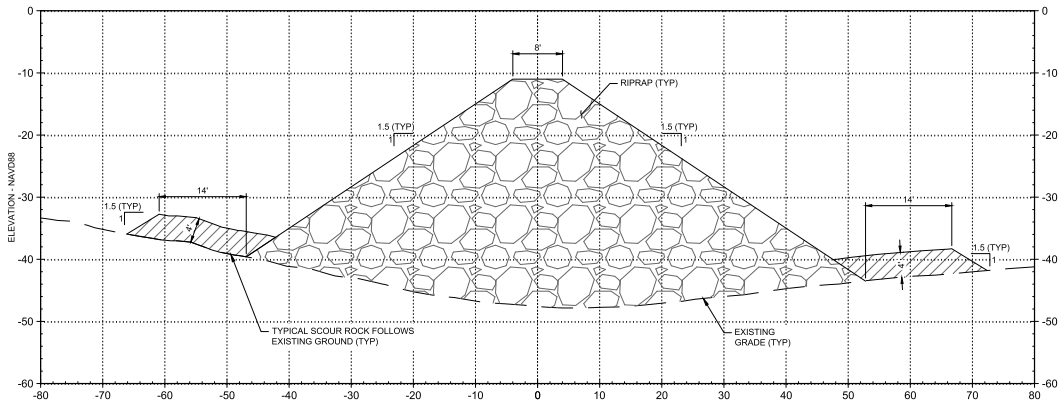
COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - PRICE
PILE DIKE REPAIR

AIDS TO NAVIGATION
SECTION AND DETAILS

SHEET ID

C-501

ADVERTISE



A TYPICAL SECTION OF SCOUR APRON

SCALE: 1" = 20'

20' 0' 20' 40'

LEGEND

INSTALL RIPRAP

INSTALL SCOUR APRON

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

DESIGNED BY: A. GILLETT
DRAWN BY: J. SEDEY
CHECKED BY: A. GRANADOS
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PLOT DATE & PLOTTER: 7-May-26 pdescines

COLUMBIA RIVER AND LOWER WILLAMETTE RIVER
MILLER - RICE
PILE DIKE REPAIR

TYPICAL SECTION OF SCOUR ROCK

SHEET ID
C-502

ADVERTISE