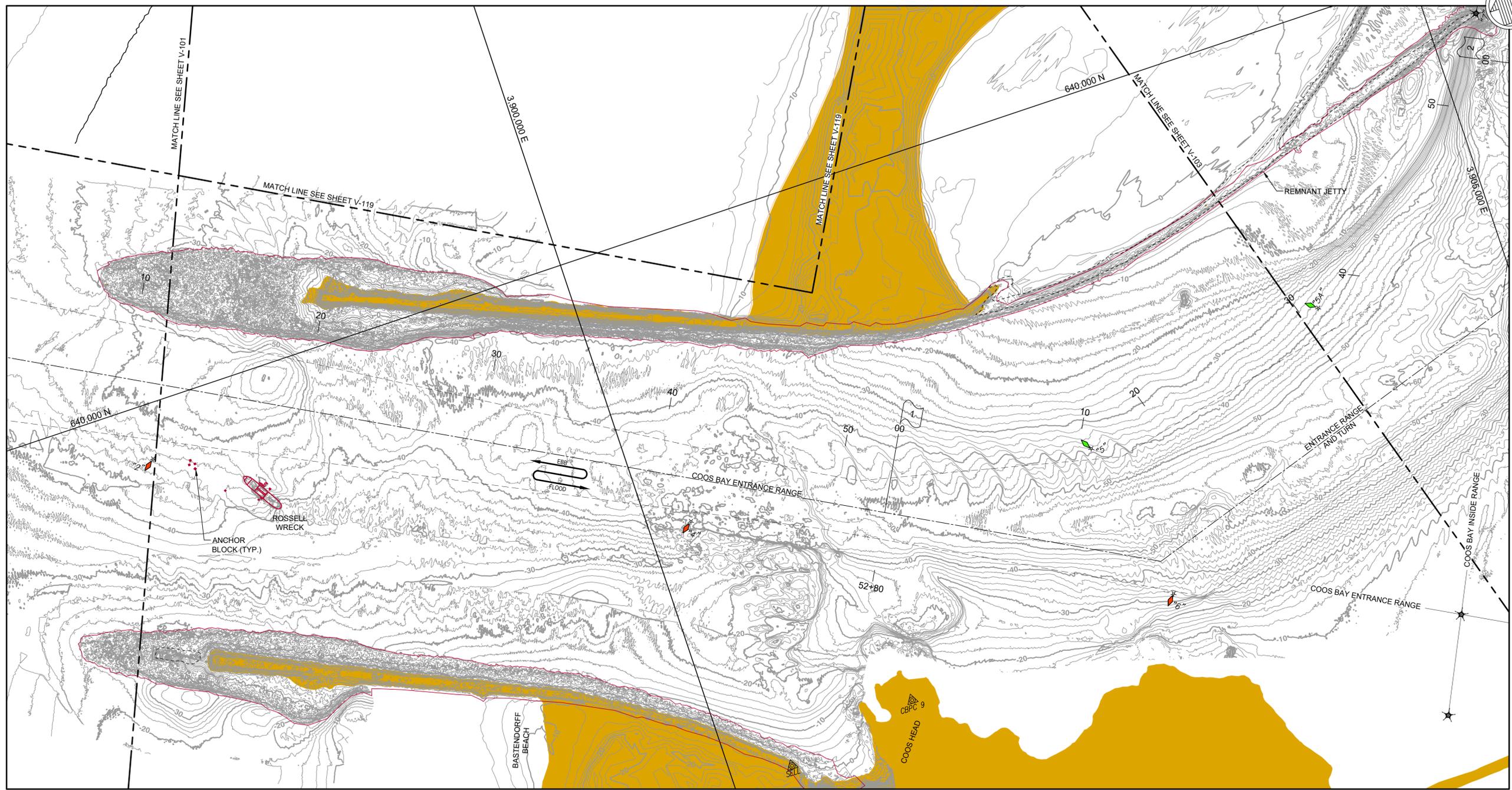
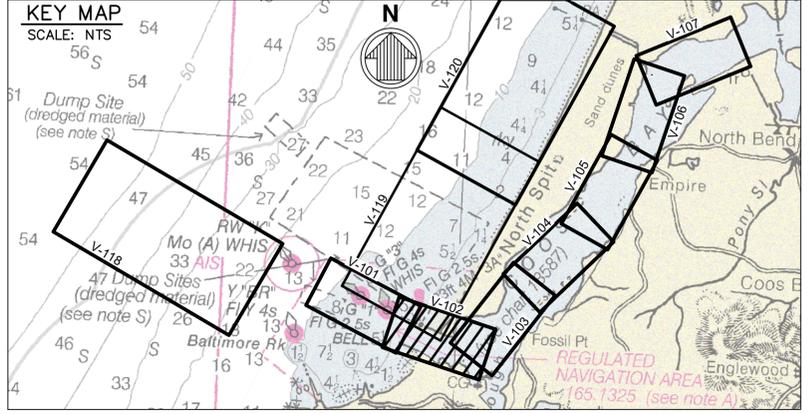
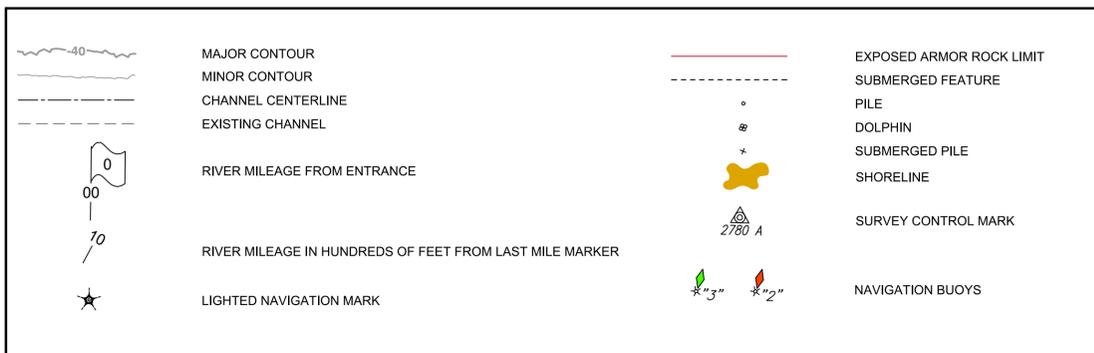


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NOTES:

- THIS DRAWING REPRESENTS THE 60% DESIGN DIGITAL TERRAIN MODEL (DTM) VERSION 4.0 WHICH IS A COMPOSITE OF MULTIPLE EXISTING DATA SETS COLLECTED BETWEEN 2007 AND 2016. THE DTM WAS MODELED AND GENERATED IN TRIMBLE TERRAMODEL V10.61. THE DATA SETS USED WERE FROM THE HIGHEST RESOLUTION DATA SETS AVAILABLE AT THE TIME, USING VARIOUS DATA ACQUISITION METHODS OF MULTIBEAM AND SINGLE-BEAM SONAR, AERIAL PHOTOGRAMMETRY AND LIDAR TECHNOLOGY.
- HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (NAD83) WITH THE HIGH PRECISION NETWORK (HPGN) STATE PLANE COORDINATE SYSTEM (SPCS) OREGON SOUTH ZONE.
- UNITS: INTERNATIONAL FEET.
- CONTOUR INTERVAL: 2 FOOT
- THE DATA WAS MODELED AT A 3.3 FOOT RESOLUTION.
- VERTICAL DATUM: MEAN LOWER LOW WATER (MLLW) USING NATIONAL TIDAL EPOCH 1983-2001. BASED ON NATIONAL OCEAN SERVICE VERTICAL DATUM MODEL.
- FOR DETAILED INFORMATION ON THE VARIOUS SOURCES USED IN PRODUCING THESE CONTOURS REFER TO "COOS BAY 60% DESIGN DTM V4.0 METADATA FINAL REPORT".
- CONTOUR ARTIFACTS ARE EVIDENT AT SOME DATA JUNCTIONS.



DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING



MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: INS/IGPB	DATE: 2019-4-9	CHECKED BY: INS/IGPB	SOLICITATION NO.:
DRAWN BY: K. DAVIS		SUBMITTED BY: JLD/IGPB	CONTRACT NO.:
PLOT SCALE: NTS		DRAWING NUMBER:	
AS NOTED 2019-04-09		FILE NAME:	
SIZE:		22x34	



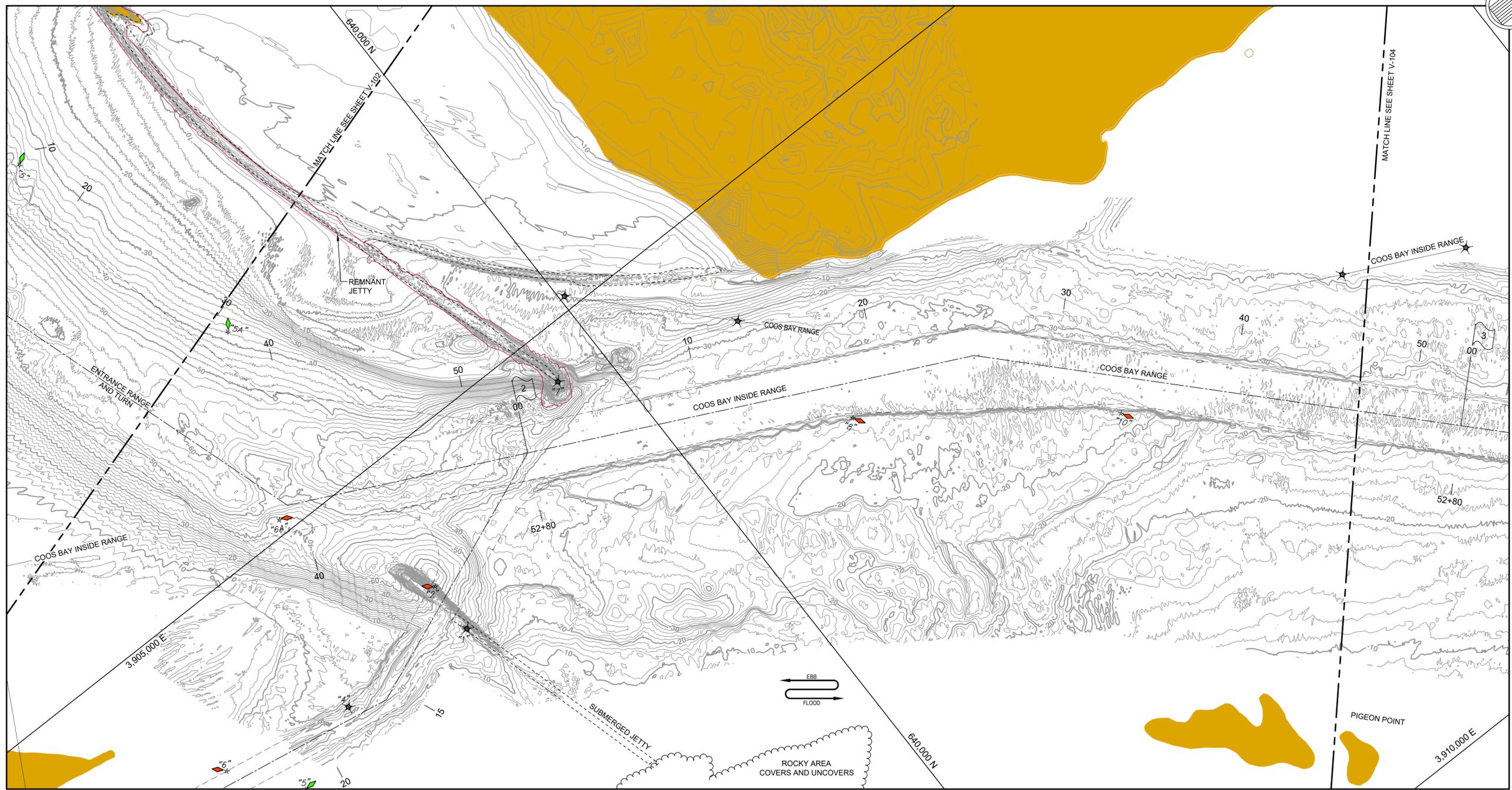
DAVID EVANS AND ASSOCIATES, INC.
MARINE SERVICES
2801 Southeast Columbia Way, Suite 130
Vancouver, Washington 98661
Phone: 360.314.3200

COOS BAY OREGON
COOS BAY CHANNEL
MODIFICATION
EXISTING SITE CONDITIONS AND
BATHYMETRY

90% SUBMITTAL

SHEET IDENTIFICATION
V-102
INDEX 9 OF 77

File: S:\SURVEY\COLFILES\WORKSHARE\DMAA00000001\0400CAD\DWG\716314V-101-107; Plotted: 4/9/2019 1:30 PM by KYLE MCNAUGHT-DAVIS

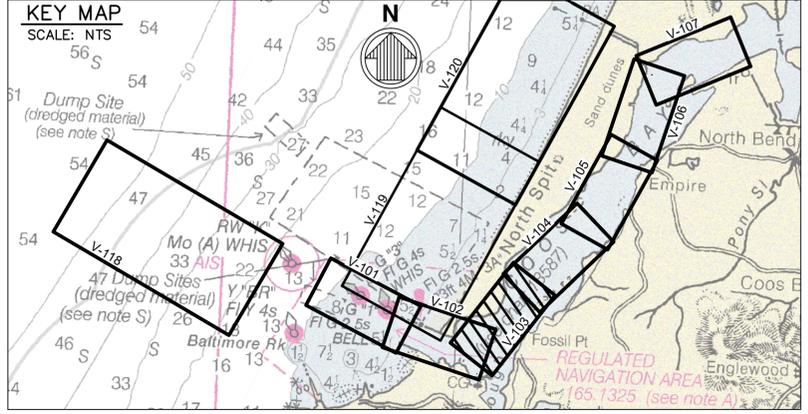


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7. FOR DETAILED INFORMATION ON THE VARIOUS SOURCES USED IN PRODUCING THESE CONTOURS REFER TO: "COOS BAY 60% DESIGN DTM V4.0 METADATA FINAL REPORT".
8. CONTOUR ARTIFACTS ARE EVIDENT AT SOME DATA JUNCTIONS.

LEGEND

	MAJOR CONTOUR		EXPOSED ARMOR ROCK LIMIT
	MINOR CONTOUR		SUBMERGED FEATURE
	CHANNEL CENTERLINE		PILE
	EXISTING CHANNEL		DOLPHIN
	RIVER MILEAGE FROM ENTRANCE		SUBMERGED PILE
	RIVER MILEAGE IN HUNDREDS OF FEET FROM LAST MILE MARKER		SHORELINE
	LIGHTED NAVIGATION MARK		SURVEY CONTROL MARK
			NAVIGATION BUOYS



MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: NSL/GPB	DATE: 2019-4-9
DESIGNED BY: K. DAVIS	SUBMITTED BY: JLD/GPB
DESIGNED BY: NSL/GPB	FILE NAME: 22-34
DESIGNED BY: K. DAVIS	AS NOTED 2019-04-09
DESIGNED BY: NSL/GPB	CONTRACT NO.:
DESIGNED BY: K. DAVIS	DRAWING NUMBER:
DESIGNED BY: NSL/GPB	AS NOTED 2019-04-09

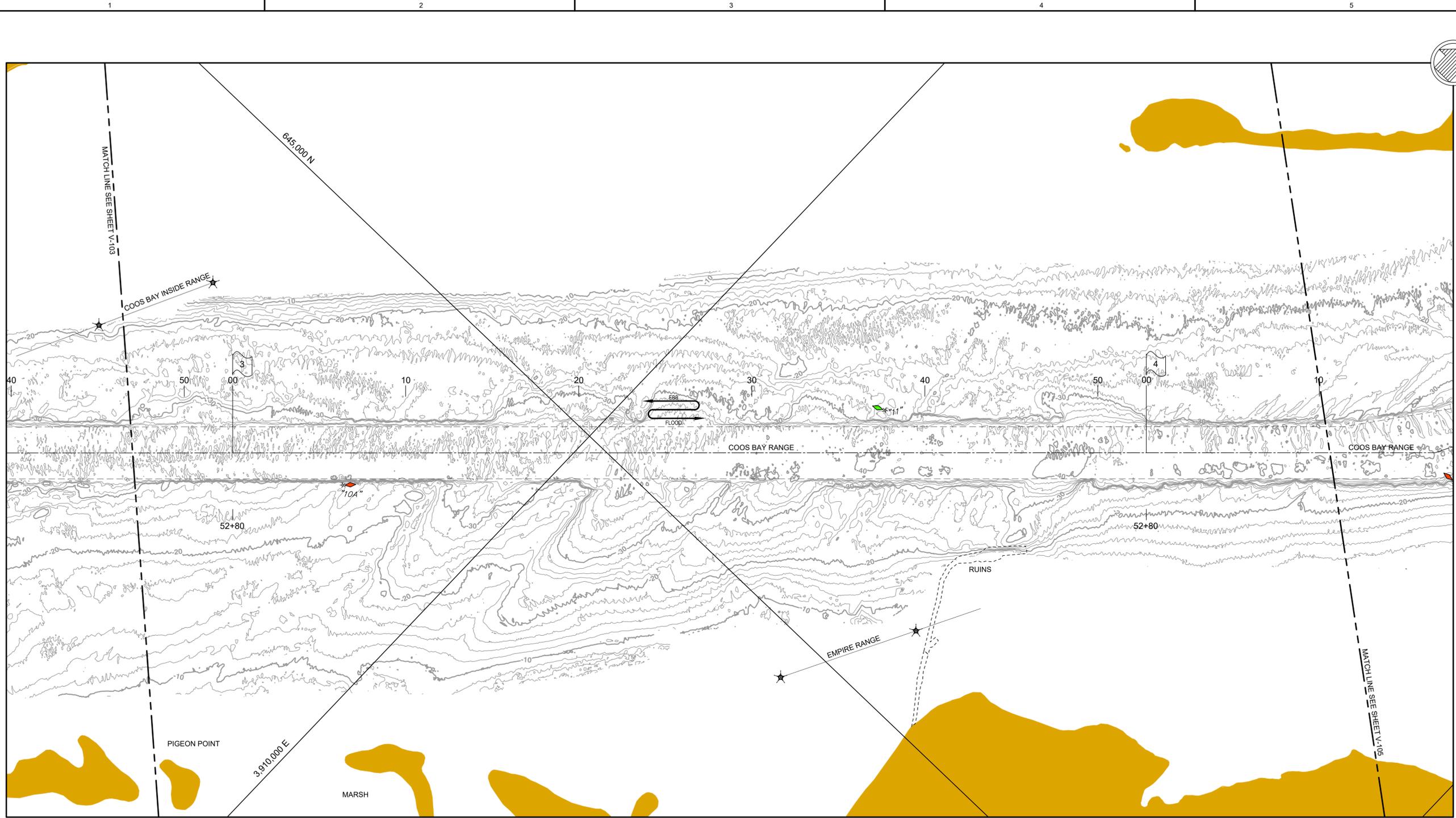
DAVID EVANS AND ASSOCIATES INC.
MARINE SERVICES
 2801 Southeast Columbia Way Suite 130
 Vancouver, Washington 98661
 Phone: 360.314.3200

COOS BAY OREGON
COOS BAY CHANNEL
MODIFICATION
EXISTING SITE CONDITIONS AND
BATHYMETRY

SHEET IDENTIFICATION
V-103
 INDEX 10 OF 77

90% SUBMITTAL

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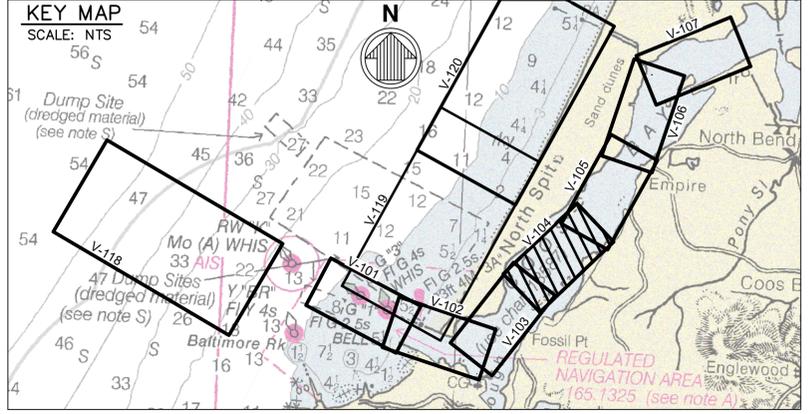


NOTES:

1. THIS DRAWING REPRESENTS THE 60% DESIGN DIGITAL TERRAIN MODEL (DTM) VERSION 4.0 WHICH IS A COMPOSITE OF MULTIPLE EXISTING DATA SETS COLLECTED BETWEEN 2007 AND 2016. THE DTM WAS MODELED AND GENERATED IN TRIMBLE TERRAMODEL V10.61. THE DATA SETS USED WERE FROM THE HIGHEST RESOLUTION DATA SETS AVAILABLE AT THE TIME, USING VARIOUS DATA ACQUISITION METHODS OF MULTIBEAM AND SINGLE-BEAM SONAR, AERIAL PHOTOGRAMMETRY AND LIDAR TECHNOLOGY.
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8. CONTOUR ARTIFACTS ARE EVIDENT AT SOME DATA JUNCTIONS.

LEGEND

	MAJOR CONTOUR		EXPOSED ARMOR ROCK LIMIT
	MINOR CONTOUR		SUBMERGED FEATURE
	CHANNEL CENTERLINE		DOLPHIN
	EXISTING CHANNEL		SUBMERGED PILE
	RIVER MILEAGE FROM ENTRANCE		SHORELINE
	RIVER MILEAGE IN HUNDREDS OF FEET FROM LAST MILE MARKER		SURVEY CONTROL MARK
	LIGHTED NAVIGATION MARK		NAVIGATION BUOYS



DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

DESIGNED BY	NSL/GPB	DATE	2019-4-9
DESIGNED BY	NSL/GPB	SOLICITATION NO.	
DRAWN BY	K. DAVIS	CONTRACT NO.	
SUBMITTED BY	JLD/GPB	DRAWING NUMBER	
PLOT SCALE	AS NOTED	FILE NAME	22x34
FILE NAME	22x34	DESCRIPTION	
MARK		DATE	
		APPR.	

90% SUBMITTAL

COOS BAY OREGON

COOS BAY CHANNEL

MODIFICATION

EXISTING SITE CONDITIONS AND

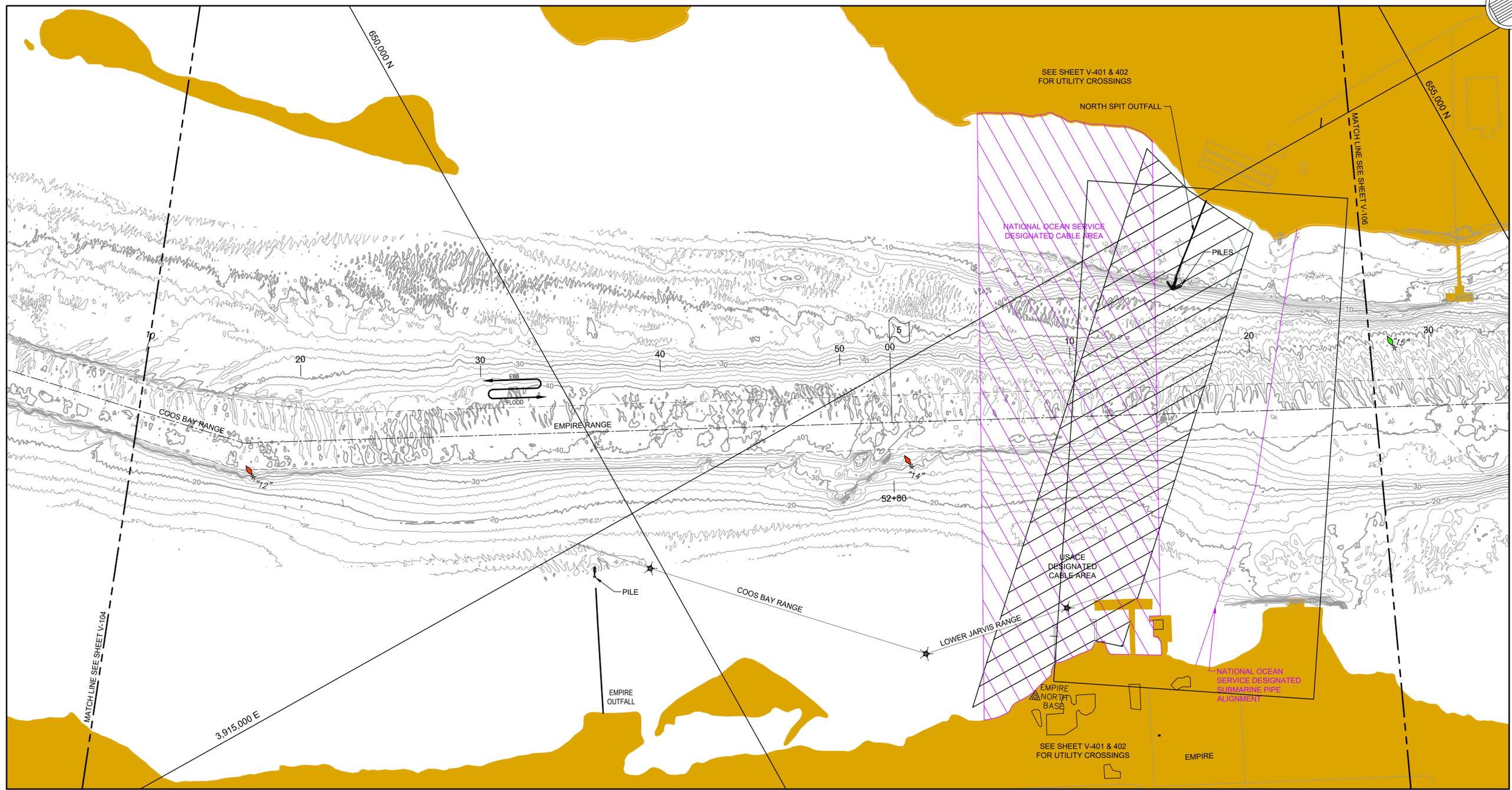
BATHYMETRY

SHEET IDENTIFICATION

V-104

INDEX 11 OF 77

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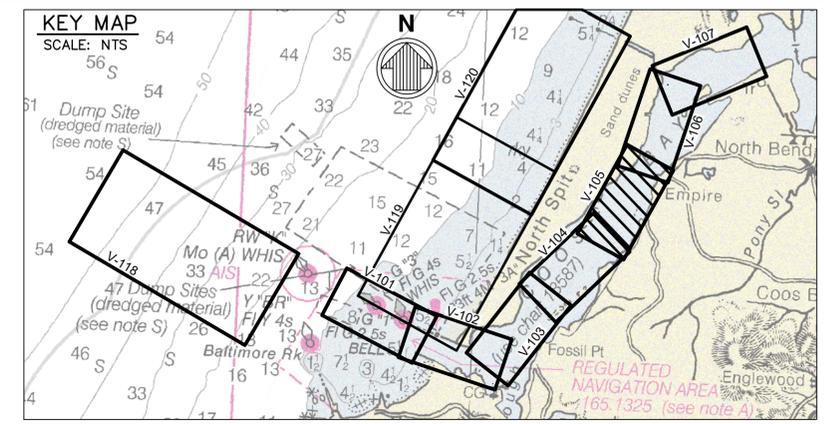


NOTES:

1. THIS DRAWING REPRESENTS THE 60% DESIGN DIGITAL TERRAIN MODEL (DTM) VERSION 4.0 WHICH IS A COMPOSITE OF MULTIPLE EXISTING DATA SETS COLLECTED BETWEEN 2007 AND 2016. THE DTM WAS MODELED AND GENERATED IN TRIMBLE TERRAMODEL V10.61. THE DATA SETS USED WERE FROM THE HIGHEST RESOLUTION DATA SETS AVAILABLE AT THE TIME, USING VARIOUS DATA ACQUISITION METHODS OF MULTIBEAM AND SINGLE-BEAM SONAR, AERIAL PHOTOGRAMMETRY AND LIDAR TECHNOLOGY.
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8. CONTOUR ARTIFACTS ARE EVIDENT AT SOME DATA JUNCTIONS.

LEGEND

	MAJOR CONTOUR		EXPOSED ARMOR ROCK LIMIT
	MINOR CONTOUR		SUBMERGED FEATURE
	CHANNEL CENTERLINE		PILE
	EXISTING CHANNEL		DOLPHIN
	RIVER MILEAGE FROM ENTRANCE		SUBMERGED PILE
	RIVER MILEAGE IN HUNDREDS OF FEET FROM LAST MILE MARKER		SHORELINE
	LIGHTED NAVIGATION MARK		SURVEY CONTROL MARK
			NAVIGATION BUOYS

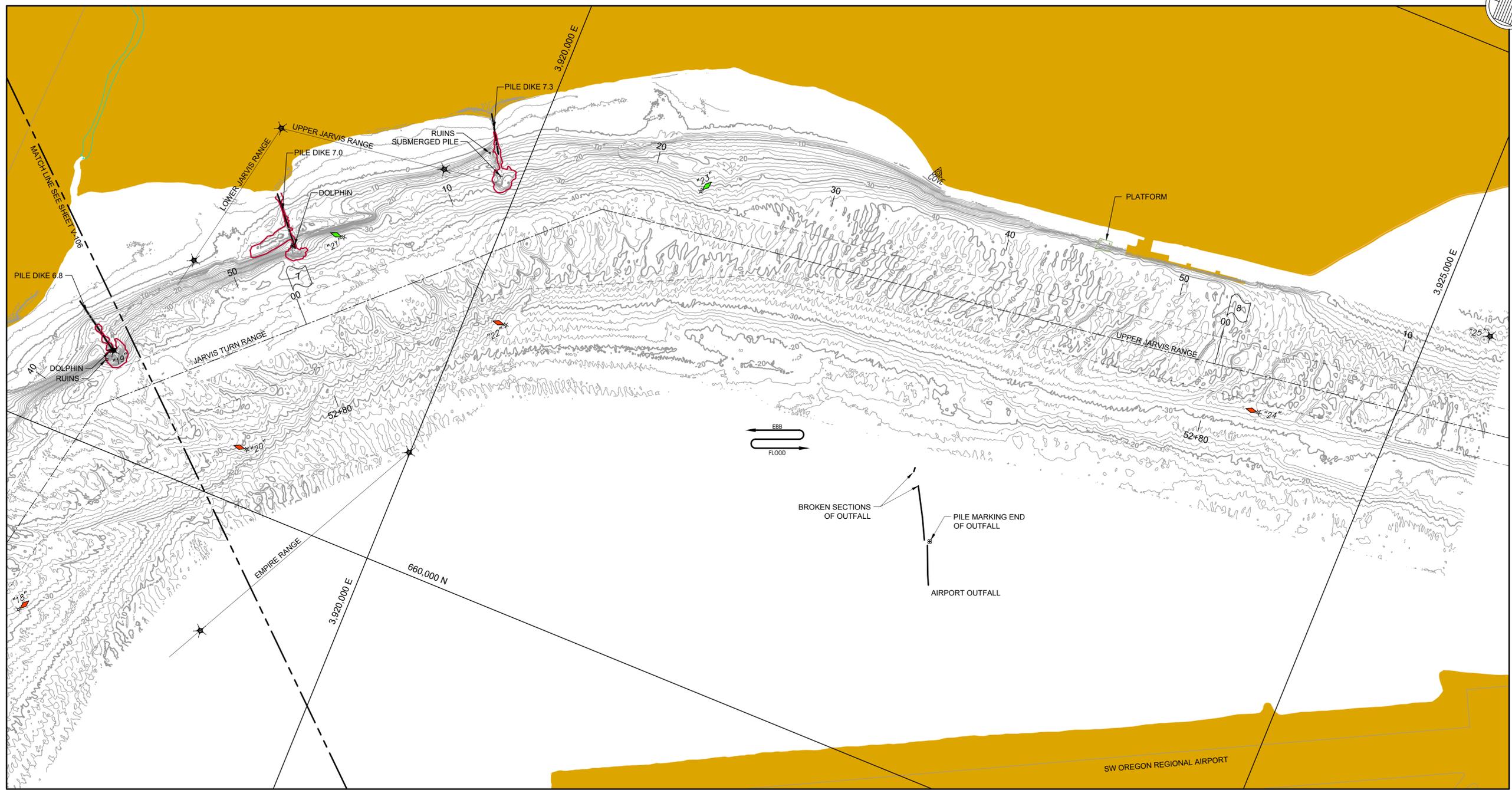


DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

<p>90% SUBMITTAL</p> <p>COOS BAY OREGON COOS BAY CHANNEL MODIFICATION EXISTING SITE CONDITIONS AND BATHYMETRY</p>	<p>SHEET IDENTIFICATION V-105</p> <p>INDEX 12 OF 77</p>
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DESIGNED BY NSL/GPB	DATE 2019-4-9	CHECKED BY NSL/GPB	SOLICITATION NO.
DESIGNED BY K. DAVIS		CONTRACT NO.	
SUBMITTED BY JLD/GPB	DATE 2019-04-09	DRAWING NUMBER	
AS NOTED	FILE NAME 22-334	MARK	

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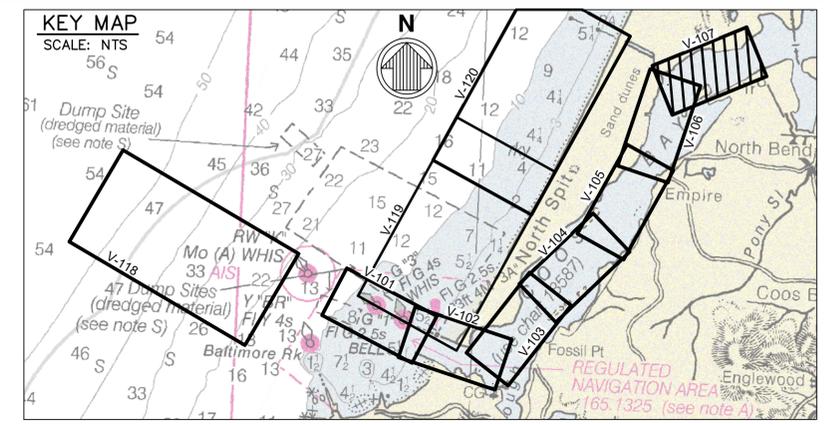
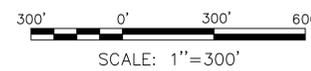


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3. UNITS: INTERNATIONAL FEET.
4. CONTOUR INTERVAL: 2 FOOT
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8. CONTOUR ARTIFACTS ARE EVIDENT AT SOME DATA JUNCTIONS.

LEGEND

	MAJOR CONTOUR		EXPOSED ARMOR ROCK LIMIT
	MINOR CONTOUR		SUBMERGED FEATURE
	CHANNEL CENTERLINE		PILE
	EXISTING CHANNEL		SUBMERGED PILE
	RIVER MILEAGE FROM ENTRANCE		SHORELINE
	RIVER MILEAGE IN HUNDREDS OF FEET FROM LAST MILE MARKER		SURVEY CONTROL MARK
	LIGHTED NAVIGATION MARK		NAVIGATION BUOYS



DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

	DATE: 2019-4-9
	DESIGNED BY: NSL/GPB
	CHECKED BY: NSL/GPB
	DESIGNED BY: K. DAVIS
	SUBMITTED BY: JLD/GPB
	PLOT SCALE: AS NOTED
	PLOT DATE: 2019-04-09
	DRAWING NUMBER: 22-34
	FILE NAME: 22-34

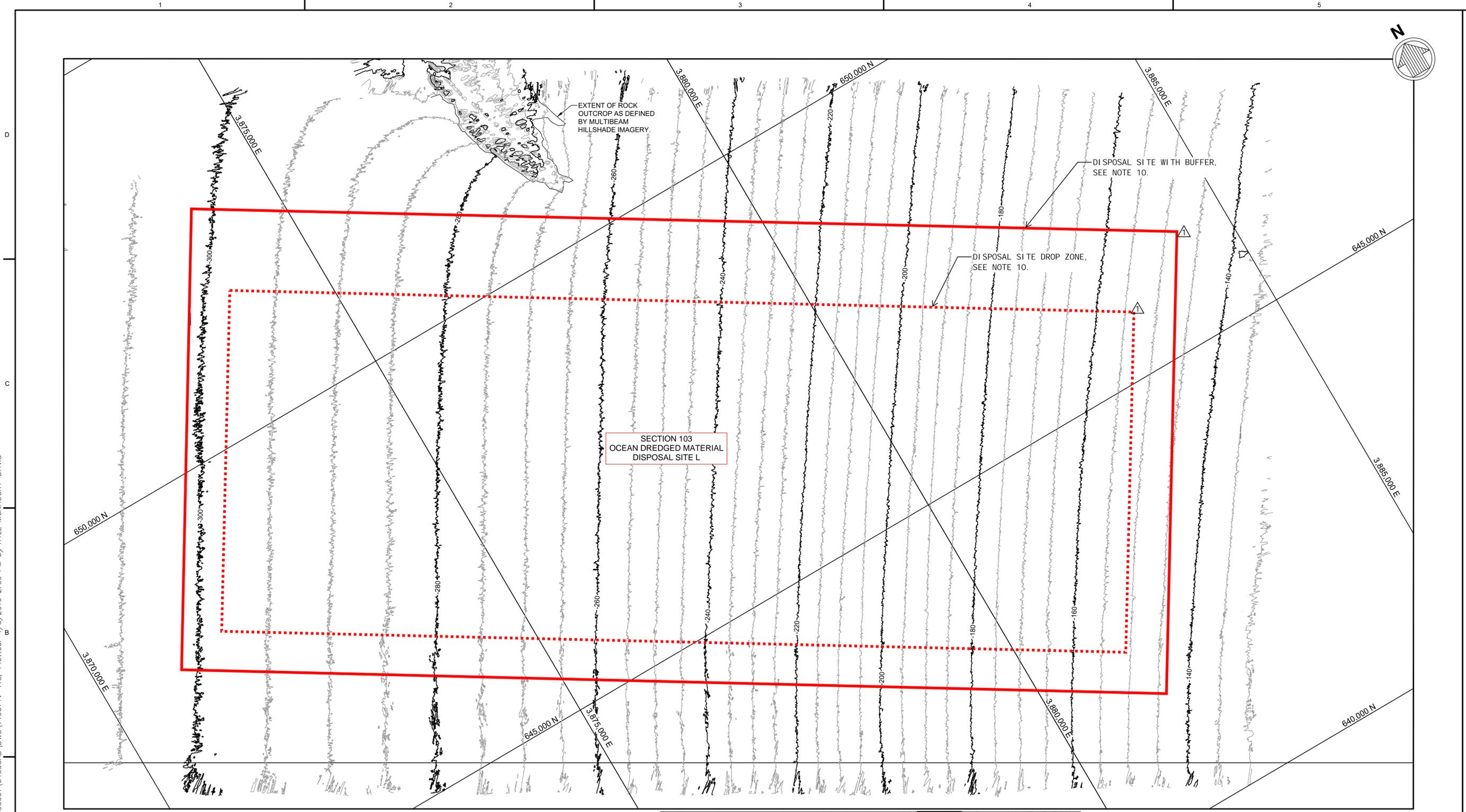
DAVID EVANS AND ASSOCIATES INC.
MARINE SERVICES
2801 Southeast Columbia Way Suite 130
Vancouver, Washington 98661
Phone: 360.314.3200

90% SUBMITTAL

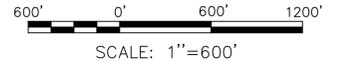
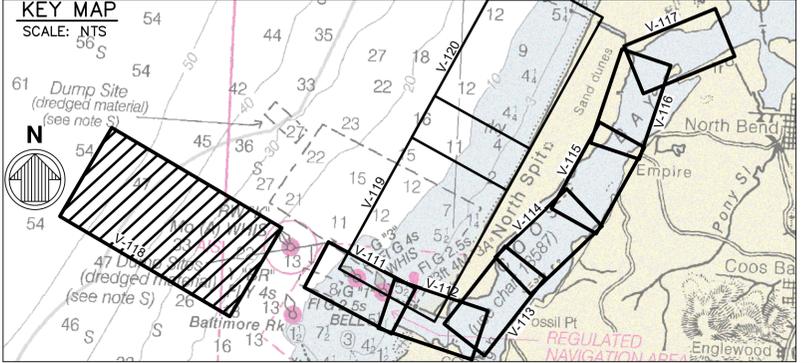
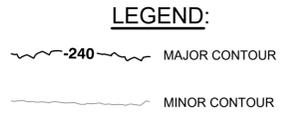
COOS BAY OREGON
COOS BAY CHANNEL
MODIFICATION
EXISTING SITE CONDITIONS AND
BATHYMETRY

SHEET IDENTIFICATION V-107	INDEX 14 OF 77
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- NOTES:**
- THIS DRAWING REPRESENTS A MULTIBEAM BATHYMETRIC SURVEY CONDUCTED BY THE MARINE SERVICES DIVISION OF DAVID EVANS AND ASSOCIATES, INC.
 - DATE OF SURVEY: AUGUST 2014
 - HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (NAD83), WITH THE HIGH PRECISION GEODETIC NETWORK (HPGN), STATE PLANE COORDINATE SYSTEM (SPCS) OREGON SOUTH ZONE.
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 - UNITS: INTERNATIONAL FEET.
 - CONTOUR INTERVAL: 5 FOOT
 - BATHYMETRIC DATA WAS COLLECTED USING A RESON 7125 MULTIBEAM SONAR, AN APPLANIX POS/MV COMBINED KINEMATIC GPS AND INERTIAL POSITIONING AND MOTION REFERENCE SYSTEM FOR POSITION, HEAVE, PITCH, ROLL AND HEADING MEASUREMENTS. SURF ZONE DATA COLLECTED WITH AN ODOM ECHOTRAC SINGLE-BEAM SONAR FROM A JET SKI AT A NOMINAL LINE SPACING OF 2500 FEET PERPENDICULAR TO THE SHORELINE.
 - THE DATA WAS THINNED TO A 25-FOOT GRID FOR MULTI-BEAM AND 100-FOOT GRID FOR SINGLE-BEAM.
 - THIS HYDROGRAPHIC SURVEY MEETS THE ACCURACY STANDARDS AS STATED IN THE U.S. ARMY CORPS OF ENGINEERS (USACE) HYDROGRAPHIC SURVEYING MANUAL EM11110-2-1003.
 - APPROXIMATE LIMITS OF SITE L. SEE SHEET C-401 FOR SITE CONTROL POINTS.



DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING



MARK	DESCRIPTION	DATE	APPR
▲	NEW SITE LIMITS ADDED BY MOFFATT & NICHOL	07/16/24	KCL

DESIGNED BY NSL/GBP	DATE 2019-4-9
DESIGNED BY K. DAVIS	SOLICITATION NO.
SUBMITTED BY JLD/GBP	CONTRACT NO.
PLOT SCALE AS NOTED	PLOT DATE 2019-04-09
FILE NAME 22-34	DRAWING NUMBER

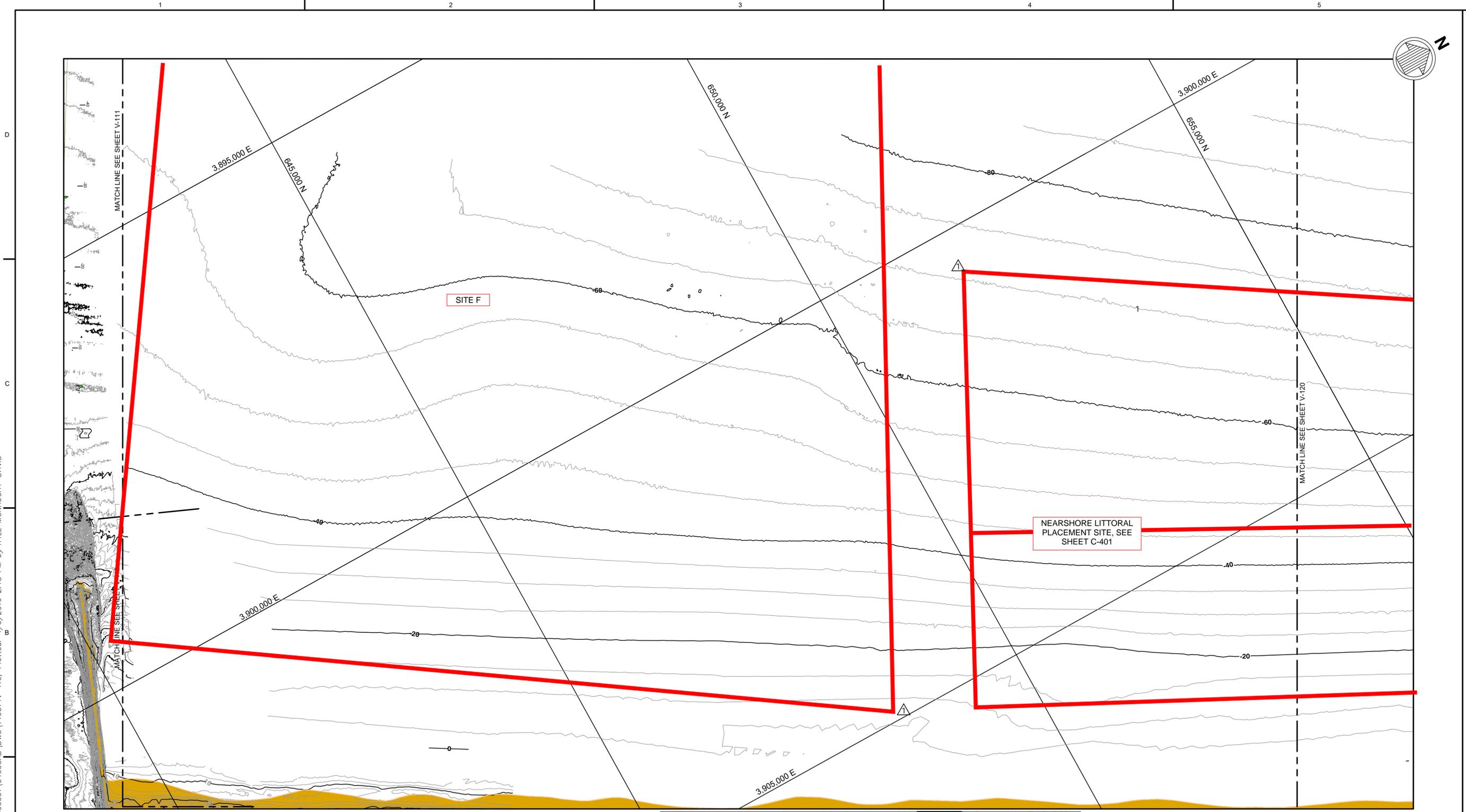
DAVID EVANS AND ASSOCIATES INC.
MARINE SERVICES
2801 Southeast Columbia Way Suite 130
Vancouver, Washington 98661
Phone: 360.314.3200

COOS BAY OREGON
COOS BAY CHANNEL
MODIFICATION
DISPOSAL SITE L
BATHYMETRY CONTOURS

90% SUBMITTAL

SHEET IDENTIFICATION
V-118
INDEX 22 OF 77

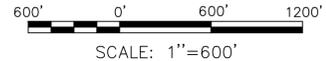
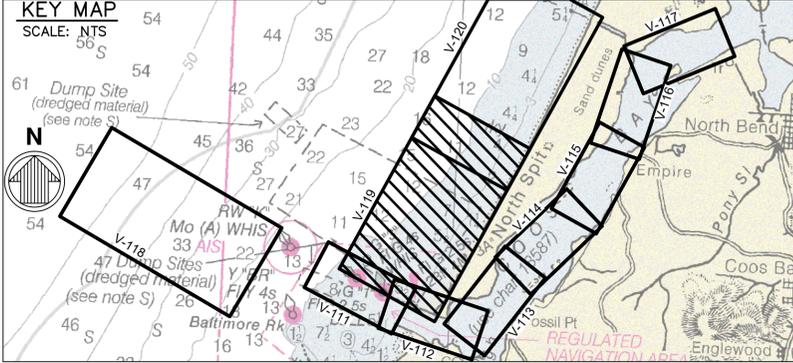
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- NOTES:**
- THIS DRAWING REPRESENTS A MULTIBEAM BATHYMETRIC SURVEY CONDUCTED BY THE MARINE SERVICES DIVISION OF DAVID EVANS AND ASSOCIATES, INC.
 - DATE OF SURVEY: AUGUST 2014
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 - THIS HYDROGRAPHIC SURVEY MEETS THE ACCURACY STANDARDS AS STATED IN THE U.S. ARMY CORPS OF ENGINEERS (USACE) HYDROGRAPHIC SURVEYING MANUAL EM11110-2-1003.

LEGEND:

-20 MAJOR CONTOUR
 MINOR CONTOUR



DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING



DESIGNED BY: NSL/GPB	DATE: 2019-4-9
DESIGNED BY: K. DAVIS	DESIGNED BY: SOLICITATION NO.:
SUBMITTED BY: JLD/GPB	CONTRACT NO.:
PLOT SCALE: AS NOTED	DRAWING NUMBER:
FILE NAME: 22x34	MARK
DATE: 07/16/24	APPR:
SITE LIMITS ADDED BY MOFFATT & NICHOL	DESCRIPTION:

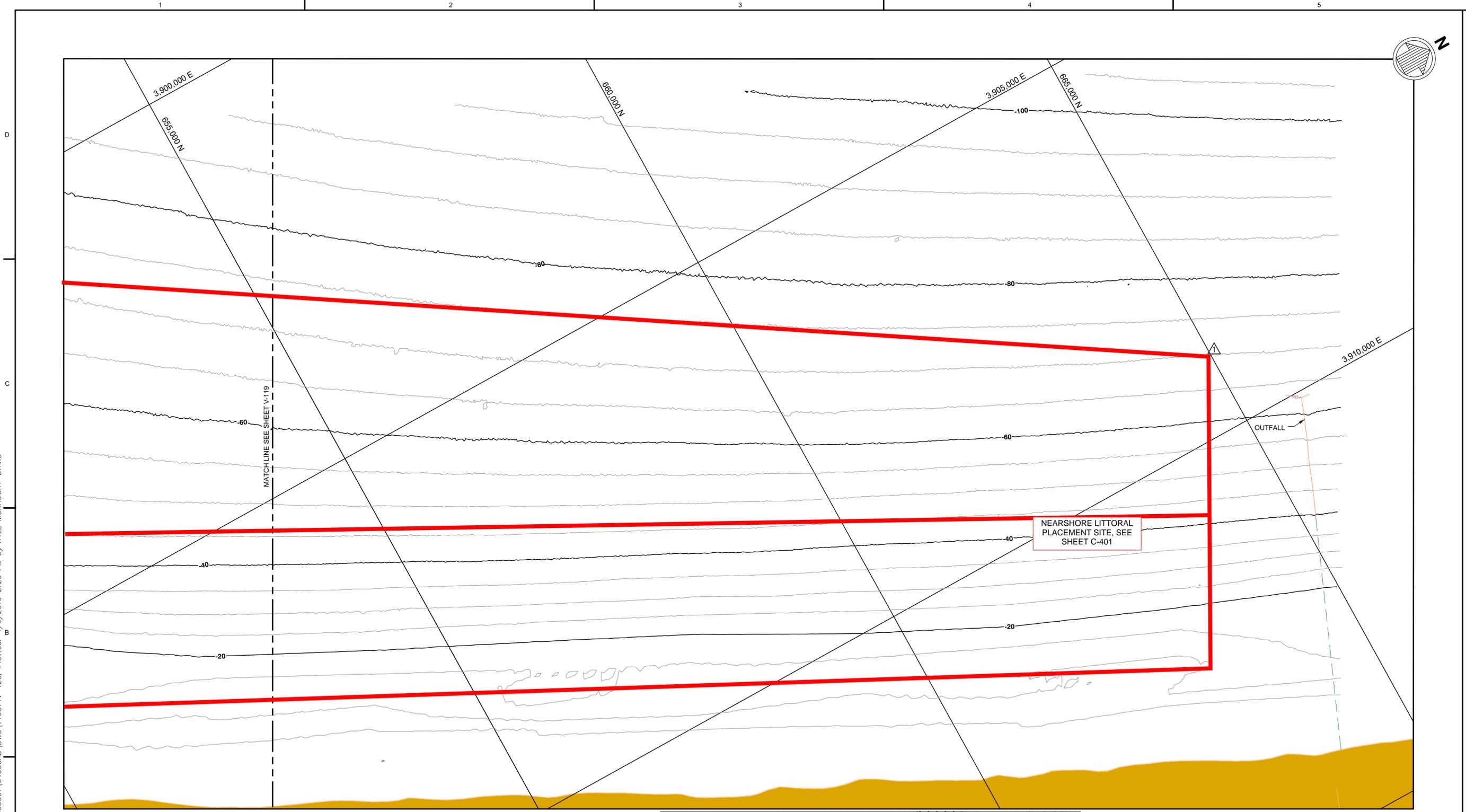
DAVID EVANS AND ASSOCIATES, INC.
MARINE SERVICES
 2801 Southeast Columbia Way Suite 130
 Vancouver, Washington 98661
 Phone: 360.314.3200

COOS BAY OREGON
COOS BAY CHANNEL MODIFICATION
LITTORAL SITE BATHYMETRY CONTOURS

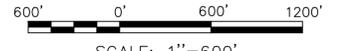
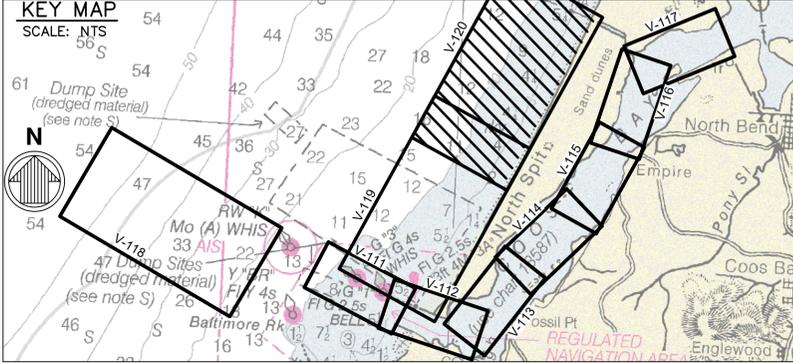
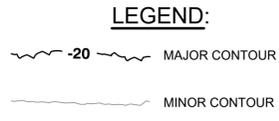
SHEET IDENTIFICATION
V-119
 INDEX 23 OF 77

90% SUBMITTAL

File: S:\SURVEY\COLFILES\WORKSHARE\DMAA00000001\0400CAD\DWG\716314V-120; Plotted: 4/9/2019 2:26 PM by KYLE MCNAUGHT-DAVIS



- NOTES:**
- THIS DRAWING REPRESENTS A MULTIBEAM BATHYMETRIC SURVEY CONDUCTED BY THE MARINE SERVICES DIVISION OF DAVID EVANS AND ASSOCIATES, INC.
 - DATE OF SURVEY: AUGUST 2014
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 - UNITS: INTERNATIONAL FEET.
 - CONTOUR INTERVAL: 5 FOOT
 - BATHYMETRIC DATA WAS COLLECTED USING A RESON 7125 MULTIBEAM SONAR, AN APPLANIX POS/MV COMBINED KINEMATIC GPS AND INERTIAL POSITIONING AND MOTION REFERENCE SYSTEM FOR POSITION, HEAVE, PITCH, ROLL AND HEADING MEASUREMENTS. SURF ZONE DATA COLLECTED WITH AN ODOM ECHOTRAC SINGLE-BEAM SONAR FROM A JET SKI AT A NOMINAL LINE SPACING OF 2500 FEET PERPENDICULAR TO THE SHORELINE.
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 - THIS HYDROGRAPHIC SURVEY MEETS THE ACCURACY STANDARDS AS STATED IN THE U.S. ARMY CORPS OF ENGINEERS (USACE) HYDROGRAPHIC SURVEYING MANUAL EM1110-2-1003.



SCALE: 1"=600'
DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING



DESIGNED BY: NSL/GPB	CHECKED BY: NSL/GPB	DATE: 2019-4-9	SOLICITATION NO.:
DRAWN BY: K. DAVIS	APPROVED BY: K. DAVIS	CONTRACT NO.:	
SUBMITTED BY: JLD/GPB	FILE NAME: 22x34	DRAWING NUMBER: AS NOTED 2019-04-09	MARK
SITE LIMITS ADDED BY MOFFATT & NICHOL			DESCRIPTION
DATE: 07/16/24			DATE
			APPR

90% SUBMITTAL

COOS BAY OREGON

COOS BAY CHANNEL

MODIFICATION

LITTORAL SITE

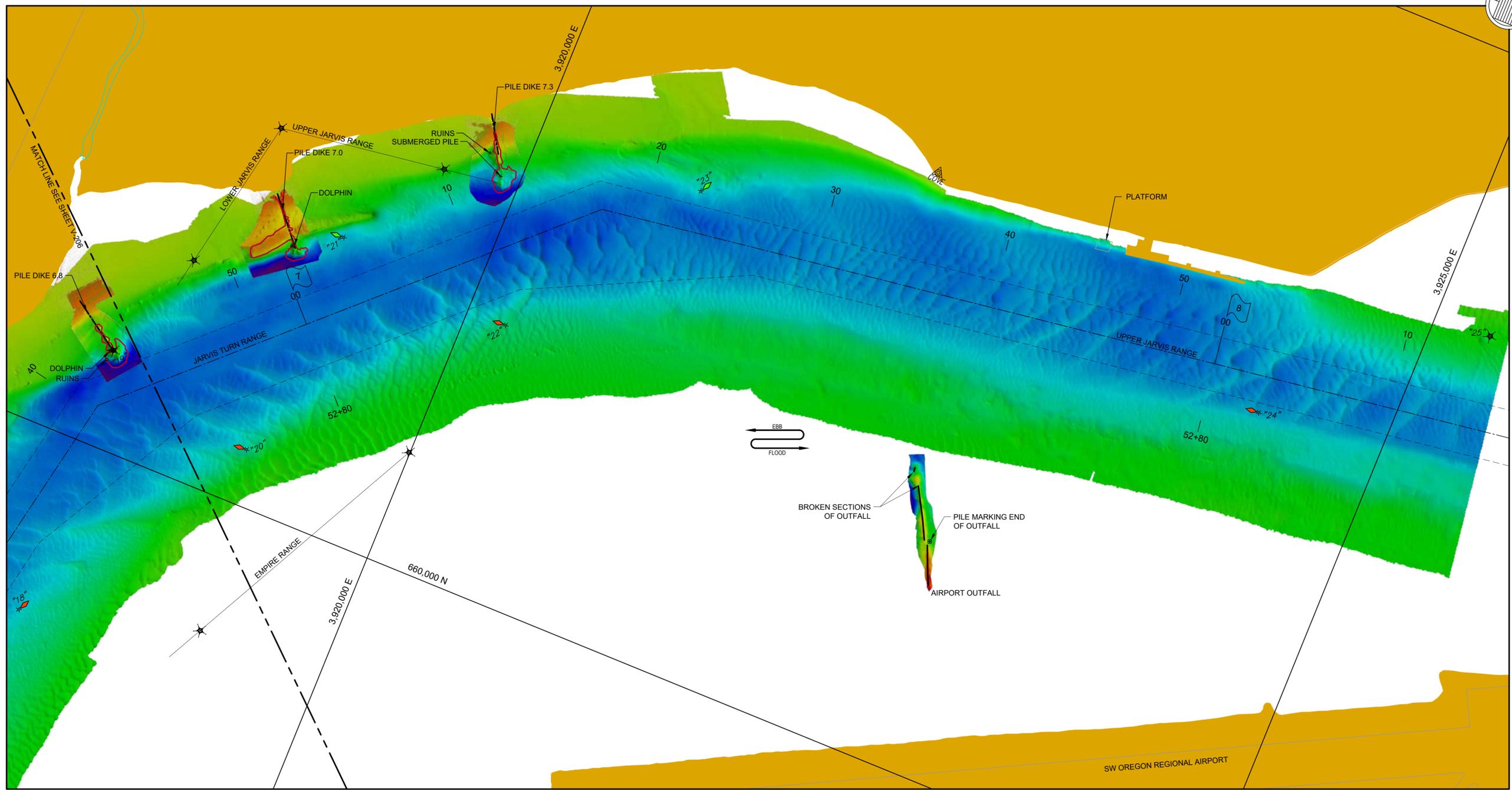
BATHYMETRY CONTOURS

SHEET IDENTIFICATION

V-120

INDEX 24 OF 77

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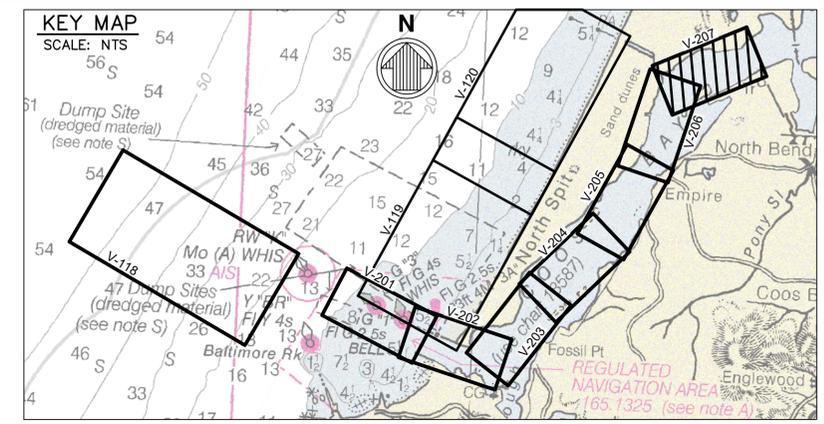
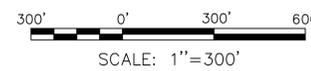


NOTES:

1. THIS DRAWING REPRESENTS A COMPOSITE OF 13 COLOR HILLSHADES AT VARIOUS RESOLUTIONS AND THE 60% DESIGN DIGITAL TERRAIN MODEL (DTM) VERSION 4.0 WHICH IS A COMPOSITE OF MULTIPLE EXISTING DATA SETS COLLECTED BETWEEN 2007 AND 2016. THE DATA SETS USED WERE FROM THE HIGHEST RESOLUTION DATA SETS AVAILABLE AT THE TIME, USING VARIOUS DATA ACQUISITION METHODS OF MULTIBEAM AND SINGLE-BEAM SONAR, AERIAL PHOTOGRAMMETRY AND LIDAR TECHNOLOGY.
2. HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (NAD83) WITH THE HIGH PRECISION GEODETIC NETWORK (HPGN) STATE PLANE COORDINATE SYSTEM (SPCS) OREGON SOUTH ZONE.
3. UNITS: INTERNATIONAL FEET.
4. FOR DETAILED INFORMATION ON THE VARIOUS SOURCES USED IN PRODUCING THE 60% DESIGN DTM VERSION 4.0, REFER TO: "COOS BAY 60% DESIGN DTM V4.0 METADATA FINAL REPORT".

LEGEND

	CHANNEL CENTERLINE		EXPOSED ARMOR ROCK LIMIT
	EXISTING CHANNEL		SUBMERGED FEATURE
	RIVER MILEAGE FROM ENTRANCE		DOLPHIN
	RIVER MILEAGE IN HUNDREDS OF FEET FROM LAST MILE MARKER		SUBMERGED PILE
			SHORELINE
			SURVEY CONTROL MARK
			NAVIGATION BUOYS



DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING



DESIGNED BY	NSL/GPB	DATE	2019-4-9
DRAWN BY	NSL/GPB	SUBMITTED BY	JLD/GPB
CHECKED BY	K.DAVIS	FILE NAME	22x34
APPROVED BY		DESCRIPTION	
		MARK	
		DATE	
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DRAWN BY	NSL/GPB	SUBMITTED BY	JLD/GPB
CHECKED BY	K.DAVIS	FILE NAME	22x34
APPROVED BY		DESCRIPTION	
		MARK	
		DATE	
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 Phone: 360.314.3200

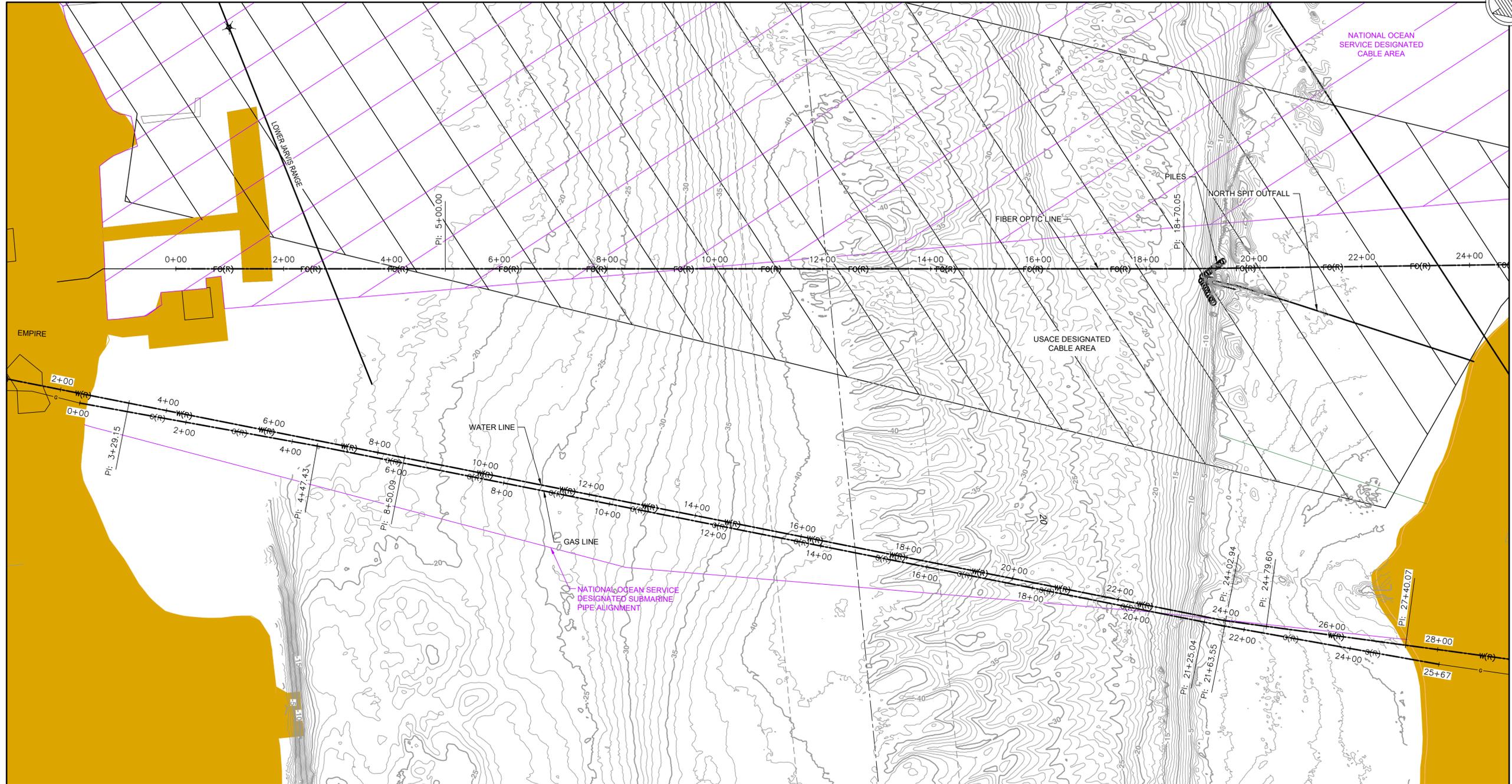
90% SUBMITTAL

OREGON COOS BAY CHANNEL MODIFICATION

COLOR HILLSHADE COMPOSITE

SHEET IDENTIFICATION
V-207
INDEX 31 OF 77

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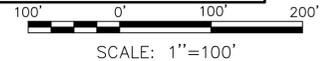


UTILITY NOTES:

1. THE NW NATURAL GAS PIPELINE CROSSING COOS BAY, (C-GAS-ASBUILT LAYER) IS BASED FROM THE ASBUILT MAP PROVIDED TO DEA BY NW NATURAL GAS. COORDINATES SHOWN ON THE ASBUILT MAP WERE CONVERTED TO NAD83(2011) AND PROJECTED TO THE OREGON STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, INTERNATIONAL FEET. THE CENTERLINE OF THE 40' EASEMENT SHOWN ON THE ASBUILT WAS HELD FOR ALIGNMENT (THE ACTUAL EASEMENT ALIGNMENT IS DIFFERENT). THE POSITION OF THE ANGLE POINT AT STATION 25+31.22 WAS HELD FOR STATIONING. 3D POINTS WERE CREATED AT STATIONS AND DEPTHS SHOWN ON THE "BAY CROSSING PROFILE" PORTION OF THE ASBUILT MAP FROM WHICH A 3D POLYLINE WAS CREATED ALONG THE CENTERLINE. THE OUTER ENDS OF THE LINE WERE MODIFIED TO BEST FIT THE UNDERGROUND LOCATE POSITIONS COLLECTED. 62 FEET MLLW WAS HELD AS THE BASIS OF DEPTH, THEN CONVERTED TO NAVD88 (0.65' LOWER IN THIS VICINITY). THE HORIZONTAL POSITIONING OF THE GAS PIPELINE SHOULD NOT BE CONSIDERED ACCURATE. DEPTHS ARE BASED FROM THE PROFILE MAP PROVIDED BY NW NATURAL AND DO NOT REPRESENT ACTUAL ASBUILT LOCATION.
2. THE WATER PIPELINE CROSSING COOS BAY, (C-WATER-PIPE-ASBUILT LAYER) IS BASED FROM THE ASBUILT MAP PROVIDED TO DEA BY THE COOS BAY - NORTH BEND WATER BOARD. COORDINATES SHOWN ON THE ASBUILT MAP WERE CONVERTED TO NAD83(2011) AND PROJECTED TO THE OREGON STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, INTERNATIONAL FEET. A 10' OFFSET (SOUTHERLY) FROM THE CENTERLINE OF THE 40' EASEMENT SHOWN ON THE ASBUILT WAS HELD FOR ALIGNMENT (THE ACTUAL EASEMENT ALIGNMENT IS DIFFERENT). THE POSITION OF THE ANGLE POINT AT STATION 25+31.22 WAS HELD FOR STATIONING. 3D POINTS WERE CREATED AT STATIONS AND DEPTHS SHOWN ON THE "BAY CROSSING PROFILE" PORTION OF THE ASBUILT MAP FROM WHICH A 3D POLYLINE WAS CREATED ALONG THE CENTERLINE. THE OUTER ENDS OF THE LINE WERE MODIFIED TO BEST FIT THE UNDERGROUND LOCATE POSITIONS COLLECTED. 90 FEET MLLW WAS HELD AS THE BASIS OF DEPTH, THEN CONVERTED TO NAVD88 (0.65' LOWER IN THIS VICINITY). DEPTHS ARE ROUNDED TO THE NEAREST FOOT. THE HORIZONTAL POSITIONING OF THE WATER PIPELINE SHOULD NOT BE CONSIDERED ACCURATE. DEPTHS ARE BASED FROM THE PROFILE MAP PROVIDED BY COOS BAY - NORTH BEND WATER BOARD AND DO NOT REPRESENT ACTUAL ASBUILT LOCATION.
3. THE SEWER PIPELINE CROSSING COOS BAY, (C-FIBER OPTIC-ASBUILT LAYER) IS BASED FROM THE ASBUILT MAP PROVIDED TO DEA BY THE CITY OF COOS BAY PUBLIC WORKS DEPARTMENT. THE CITY OF COOS BAY ALSO PROVIDED AN AUTOCAD ASBUILT DRAWING WHICH WAS ALREADY PROJECTED TO THE OREGON STATE PLANE COORDINATE SYSTEM, SOUTH ZONE. 3D POINTS WERE CREATED AT STATIONS AND DEPTHS SHOWN ON THE "BAY CROSSING - HDD SEWER LINE PROJECT" PLAN AND PROFILE MAP FROM WHICH A 3D POLYLINE WAS CREATED. THE POLYLINE WAS HELD AT PLAN STATION 0+00 ON THE WEST SIDE OF THE BAY AND ROTATED TO BEST FIT THE HORIZONTAL UNDERGROUND LOCATE POSITIONS ON THE EAST SIDE OF THE BAY. BURIAL DEPTHS OBSERVED DURING UTILITY LOCATION ON THE EAST SIDE ARE IN THE RANGE OF -24' WHICH IS NOT CONSISTENT WITH THE ASBUILT INFORMATION. THE OUTER ENDS OF THE LINE WERE THEN MODIFIED TO BEST FIT THE UNDERGROUND LOCATE POSITIONS COLLECTED ON BOTH SIDE OF THE BAY. 71.67 FEET NAVD88 WAS HELD AS THE BASIS OF DEPTH, (0.65' LOWER THAN MLLW IN THIS VICINITY). DEPTHS ARE ROUNDED TO THE NEAREST FOOT. THE HORIZONTAL POSITIONING OF THE SEWER PIPELINE SHOULD NOT BE CONSIDERED ACCURATE. DEPTHS ARE BASED FROM THE PROFILE MAP PROVIDED BY THE CITY OF COOS BAY PUBLIC WORKS DEPARTMENT AND DO NOT REPRESENT ACTUAL ASBUILT LOCATION.

LEGEND

C	C-GAS PROJECTED ALIGNMENT
G(R)	C-GAS-ASBUILT
W	C-WATER-PIPE PROJECTED ALIGNMENT
W(R)	C-WATER-PIPE-ASBUILT
FO	C-FIBER OPTIC PROJECTED ALIGNMENT
FO(R)	C-FIBER OPTIC-ASBUILT (ABANDONED SEWER LINE)
R	RIVER MILEAGE IN HUNDREDS OF FEET FROM LAST MILE MARKER
*	LIGHTED NAVIGATION MARK
o	PILE



DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

DATE	DESCRIPTION	MARK	APPR.

DESIGNED BY: NSL/GPB	DATE: 2019-4-9
DESIGNED BY: NSL/GPB	SUBMITTED BY: K. DAVIS
DESIGNED BY: NSL/GPB	CONTRACT NO.:
DESIGNED BY: NSL/GPB	DRAWING NUMBER:
DESIGNED BY: NSL/GPB	FILE NAME: 22-34

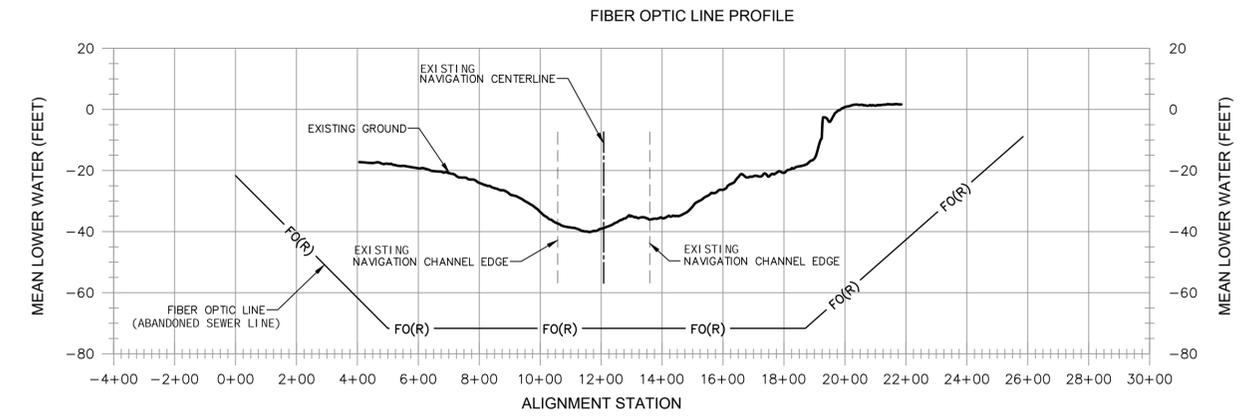
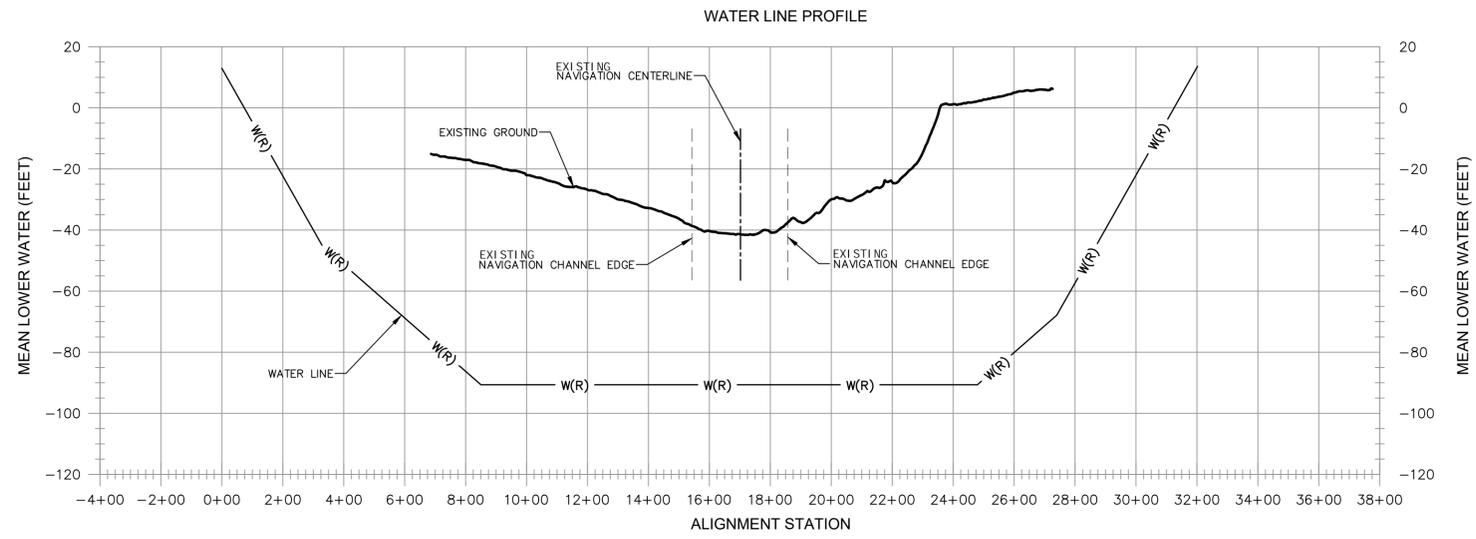
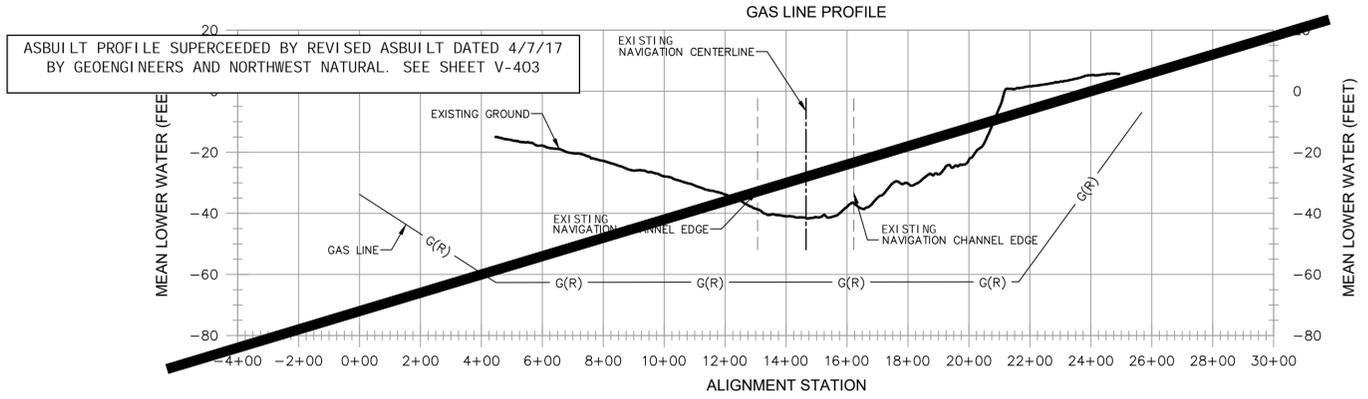
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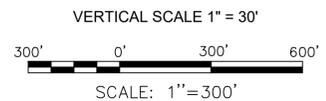
COOS BAY OREGON
COOS BAY CHANNEL
MODIFICATION
EXISTING UTILITY CROSSINGS

SHEET IDENTIFICATION
V-401
INDEX 32 OF 77

File: S:\SURVEY\COLFILES\WORKSHARE\DMAA00000001\0400CAD\DWG\716314V-PROFILES; Plotted: 4/19/2019 2:32 PM by KYLE MCNAUGHT-DAVIS



NOTE:
BURIAL DEPTHS ARE FROM AS-BUILT DRAWINGS AND ARE NOT SURVEYED DEPTHS.



DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING



DATE							
MARK							
DESCRIPTION							

DESIGNED BY: NSL/GPB
 DRAWN BY: NSL/GPB
 CHECKED BY: K. DAVIS
 SUBMITTED BY: JLD/GPB

DATE: 2019-4-9
 SOLICITATION NO.:
 CONTRACT NO.:
 DRAWING NUMBER:
 AS NOTED 2019-04-09
 FILE NAME: 22-34



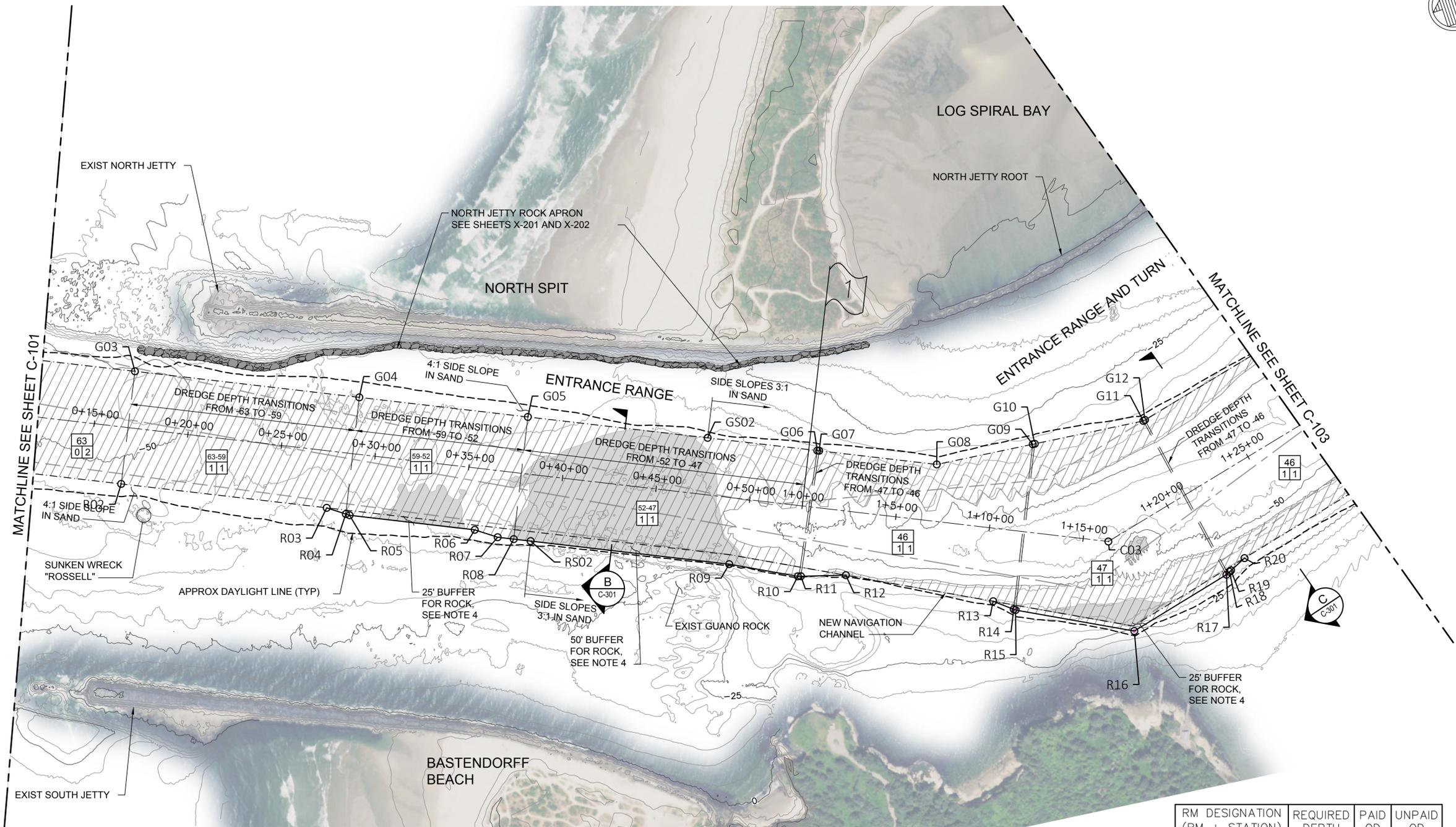
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COOS BAY OREGON
COOS BAY CHANNEL MODIFICATION
EXISTING UTILITY CROSSINGS

SHEET IDENTIFICATION
V-402
 INDEX 33 OF 77

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DREDGING PLAN - SHEET 2 OF 7
SCALE: 1"=300'



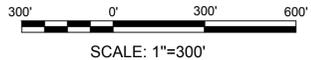
NOTES:

- ELEVATIONS SHOWN BASED ON MLLW VERTICAL DATUM.
- AERIAL IMAGE: USDA NAIP, 2016.
- ROCK BUFFER DREDGING REQUIRED OUTSIDE OF CHANNEL NAVIGATION LIMITS WHERE SHOWN. IF ROCK IS ENCOUNTERED AT THE NAVIGATION CHANNEL LIMIT, IT SHALL BE DREDGE 25' BEYOND THE CHANNEL LIMIT REGARDLESS OF WHETHER ROCK BUFFER WIDTH IS SHOWN. DO NOT DREDGE A ROCK BUFFER AT BERTHS OR TURNING BASINS.

LEGEND

- NEW RIVER MILE MARKER
- EXISTING BATHYMETRY MAJOR CONTOURS (25' INTERVAL)
- EXISTING BATHYMETRY MINOR CONTOURS (5' INTERVAL)
- EXISTING NAVIGATION CHANNEL
- EXISTING CHANNEL CENTERLINE
- NEW GRADE BREAK
- NEW DAYLIGHT LINE
- NEW CHANNEL CENTERLINE
- NEW DREDGE TOE
- NEW NAVIGATION CHANNEL
- ROCK DREDGE AREA
- SEDIMENT DREDGE AREA
- CONTROL POINT
- DREDGE DEPTH CALLOUT, SEE G-002

RM DESIGNATION (RM + STATION)	REQUIRED DEPTH	PAID OD	UNPAID OD
-1+03+54 to 0+16+78	63	0	2
0+16+78 to 0+28+80	63 TO 59	0	2
0+28+80 to 0+37+80	59 TO 52	0	2
0+37+80 to 1+00+36	52 TO 47	1	1
1+00+36 to 1+14+05	46	1	1
1+14+05 to 1+18+94	47	1	1
1+18+94 to 1+45+50	46	1	1



FOR USACE REVIEW
ISSUED: 2024-07-19
NOT TO BE USED FOR CONSTRUCTION

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING



DATE	DESCRIPTION	MARK	APPR.

DESIGNED BY: K. LANDON	DATE: 2024-07-19
DRAWN BY: CHEWED BY: WUG	SOLICITATION NO.:
SUBMITTED BY: J. SHILDEN	CONTRACT NO.:
PLOT SCALE: AS NOTED	FILE NAME: 22x34
DATE: 2024-07-22	DRAWING NUMBER:

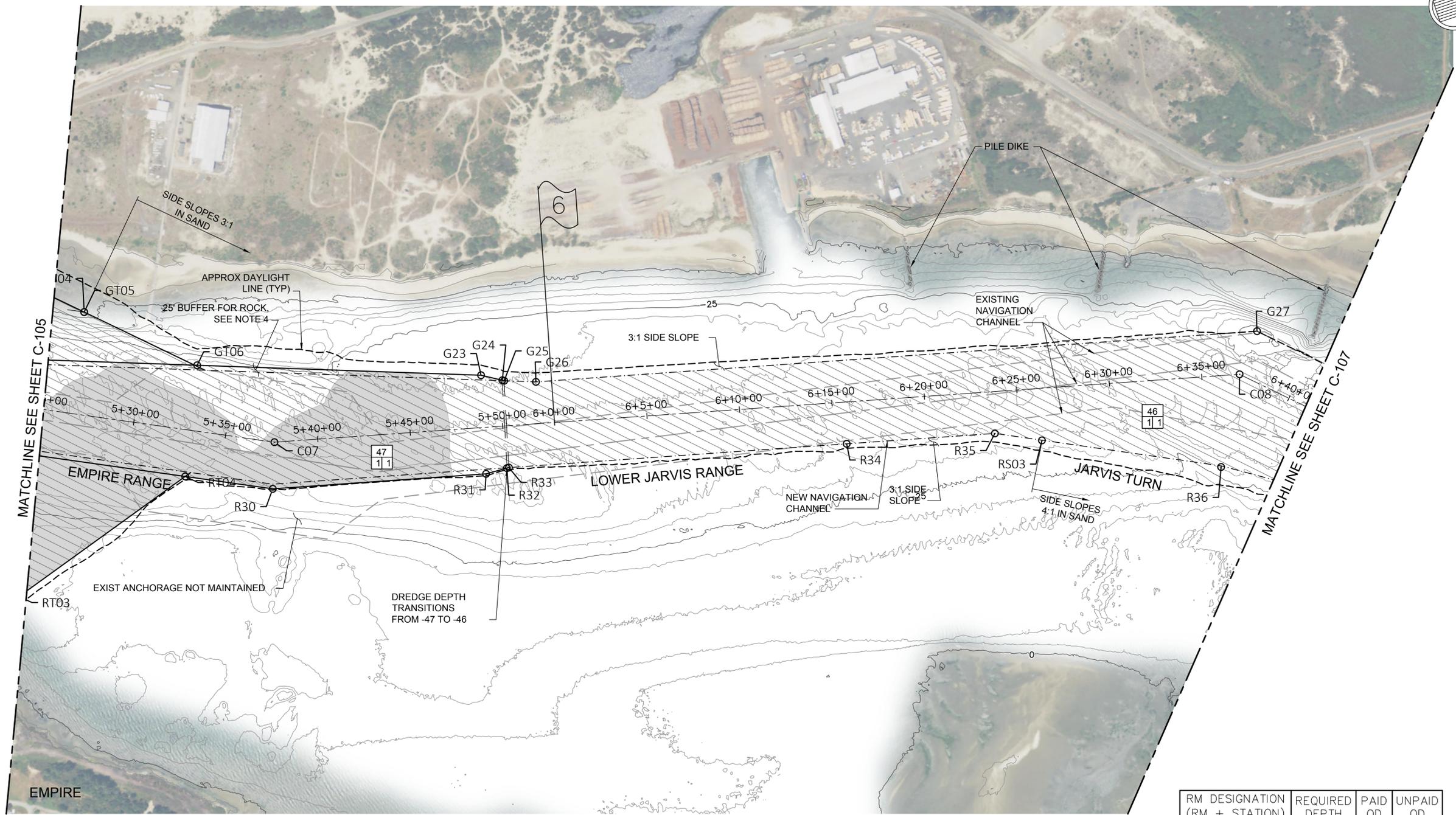
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SEATTLE, WA 98101
(206) 622-0222

COOS BAY OREGON
SECTION 204(f) CHANNEL MODIFICATION PROJECT
DREDGING PLAN - SHEET 2 OF 7

SHEET IDENTIFICATION
C-102
INDEX 43 OF 77

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DREDGING PLAN - SHEET 6 OF 7
SCALE: 1"=300'



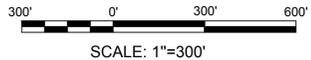
NOTES:

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- AERIAL IMAGE: USDA NAIP, 2016.
- ROCK BUFFER DREDGING REQUIRED OUTSIDE OF CHANNEL NAVIGATION LIMITS WHERE SHOWN. IF ROCK IS ENCOUNTERED AT THE NAVIGATION CHANNEL LIMIT, IT SHALL BE DREDGE 25' BEYOND THE CHANNEL LIMIT REGARDLESS OF WHETHER ROCK BUFFER WIDTH IS SHOWN. DO NOT DREDGE A ROCK BUFFER AT BERTHS OR TURNING BASINS.

LEGEND

- NEW RIVER MILE MARKER
- EXISTING BATHYMETRY MAJOR CONTOURS (25' INTERVAL)
- EXISTING BATHYMETRY MINOR CONTOURS (5' INTERVAL)
- EXISTING NAVIGATION CHANNEL
- EXISTING CHANNEL CENTERLINE
- NEW GRADE BREAK
- NEW DAYLIGHT LINE
- NEW CHANNEL CENTERLINE
- NEW DREDGE TOE
- NEW NAVIGATION CHANNEL
- ROCK DREDGE AREA
- SEDIMENT DREDGE AREA
- CONTROL POINT
- DREDGE DEPTH CALLOUT, SEE G-002

RM DESIGNATION (RM + STATION)	REQUIRED DEPTH	PAID OD	UNPAID OD
1+45+50 to 5+50+11	47	1	1
5+50+11 to 8+14+51	46	1	1



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DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING



MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: K. LANDON	DATE: 2024-07-19
DRAWN BY: CUS	SOLICITATION NO.:
SUBMITTED BY: WJG	CONTRACT NO.:
PLotted BY: J. SHILDEN	DRAWING NUMBER:
AS NOTED 2024-07-22	FILE NAME: 22x34
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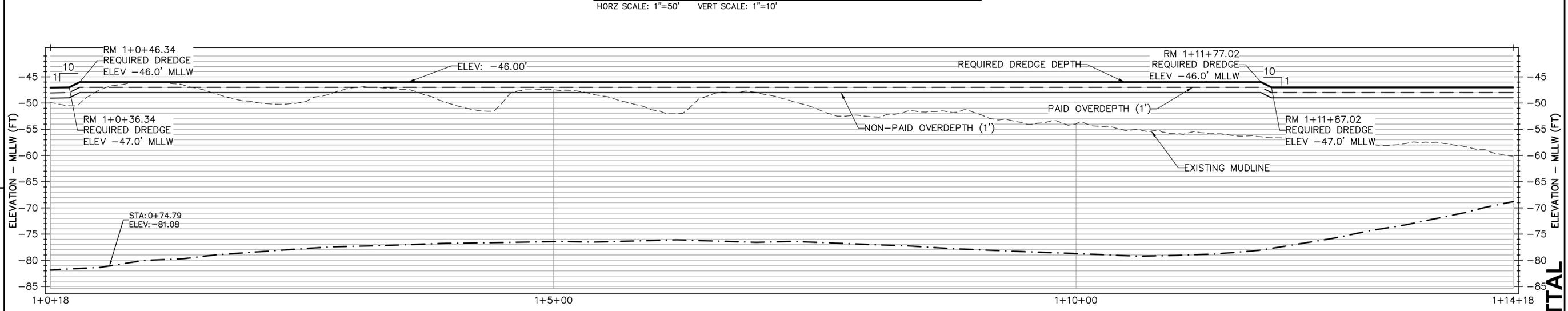
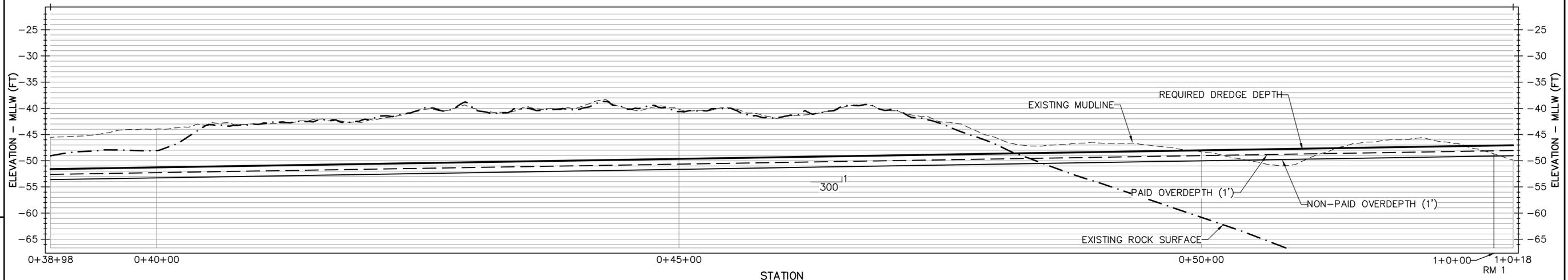
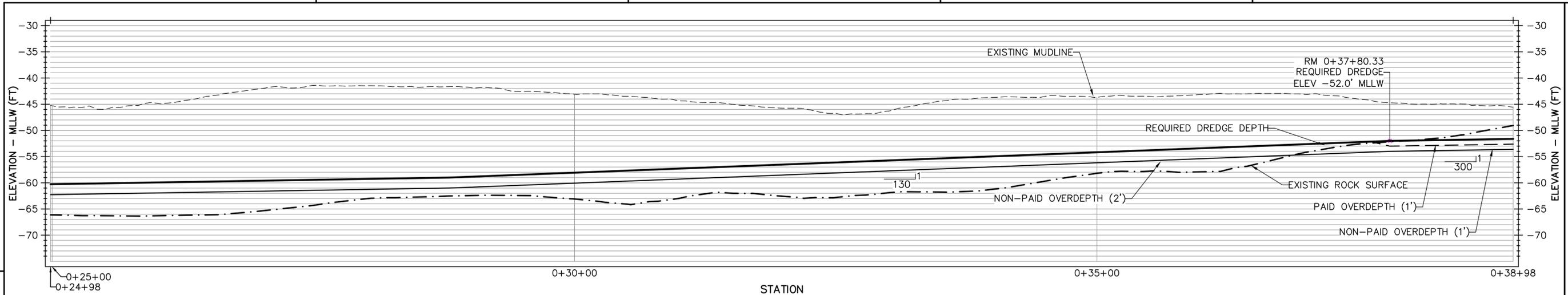
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SECTION 204(f) CHANNEL MODIFICATION PROJECT
DREDGING PLAN - SHEET 6 OF 7

SHEET IDENTIFICATION
C-106
INDEX 47 OF 77

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NOTES

1. EXISTING MUDLINE IS A COMPOSITE OF MULTIPLE DATA SETS COLLECTED BETWEEN 2007 AND 2016.

LEGEND

- EXISTING MUDLINE
- .-.- EXISTING ROCK SURFACE
- REQUIRED DREDGE DEPTH
- - - PAID OVERDEPTH
- NON-PAID ALLOWABLE OVERDEPTH



FOR USACE REVIEW
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DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING



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DESIGNED BY	K. LANDON	DRAWN BY	CUG	MARK	
CHECKED BY	WUG	CONTRACT NO.		DATE	
SUBMITTED BY	J. SHILDEN	DRAWING NUMBER		DESCRIPTION	
PLOT SCALE	AS NOTED	FILE NAME	22x34		



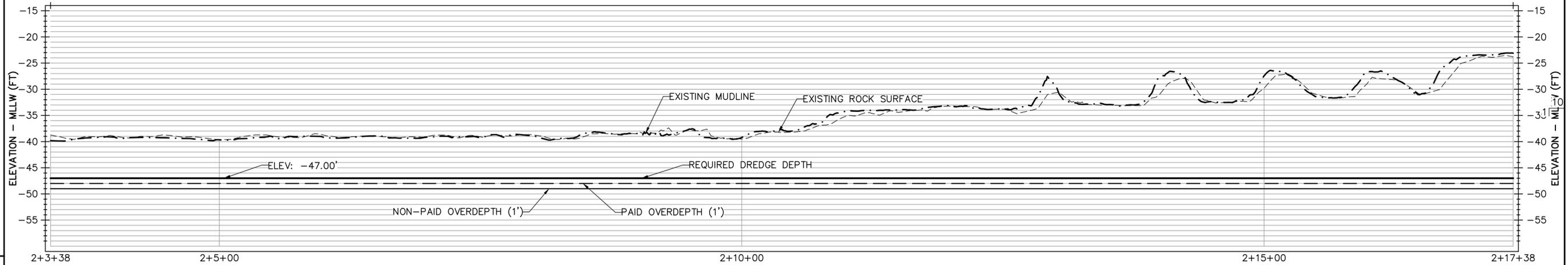
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COOS BAY OREGON
SECTION 204(f) CHANNEL
MODIFICATION PROJECT
CHANNEL CENTERLINE PROFILE
SHEET 3 OF 12

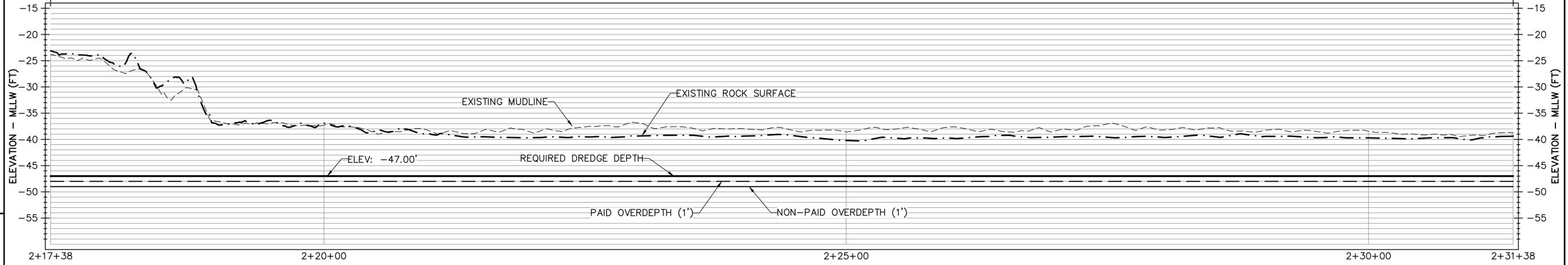
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SHEET IDENTIFICATION
C-203
INDEX 52 OF 77

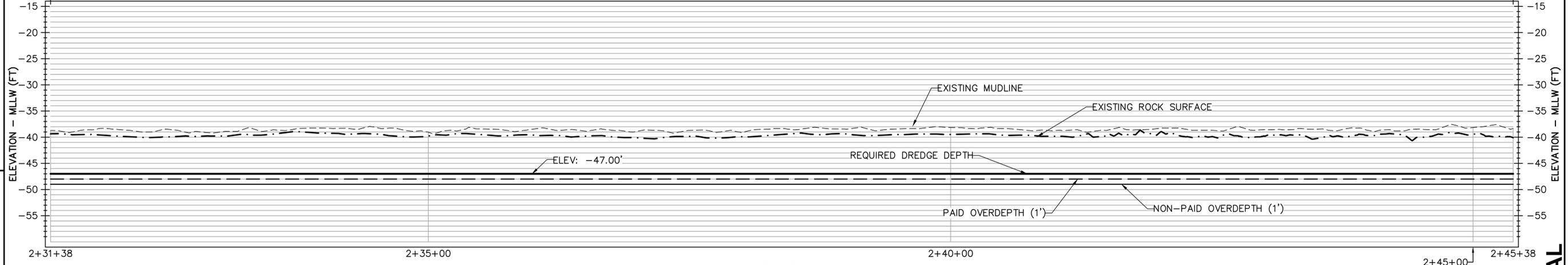
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CHANNEL CENTERLINE PROFILE - RM 2+3+38 TO RM 2+17+38
 HORZ SCALE: 1"=50' VERT SCALE: 1"=10'



CHANNEL CENTERLINE PROFILE - RM 2+17+38 TO RM 2+31+38
 HORZ SCALE: 1"=50' VERT SCALE: 1"=10'



CHANNEL CENTERLINE PROFILE - RM 3+20+58 TO RM 3+3+58
 HORZ SCALE: 1"=50' VERT SCALE: 1"=10'

NOTES
 1. EXISTING MUDLINE IS A COMPOSITE OF MULTIPLE DATA SETS COLLECTED BETWEEN 2007 AND 2016.

LEGEND

---	EXISTING MUDLINE
- . - . -	EXISTING ROCK SURFACE
---	REQUIRED DREDGE DEPTH
---	PAID OVERDEPTH
---	NON-PAID ALLOWABLE OVERDEPTH



FOR USACE REVIEW
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SUBMITTED BY: J. SHELDEN	CONTRACT NO.:
PLOT SCALE: AS NOTED	PLOT DATE: 2024-07-22
FILE NAME: 22x34	DRAWING NUMBER:

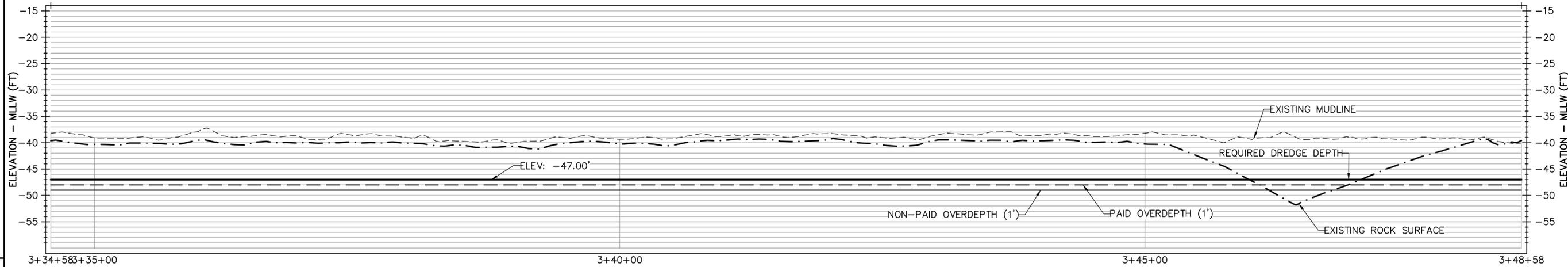
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 600 UNIVERSITY STREET
 SEATTLE, WA 98101
 (206) 622-0222

COOS BAY OREGON
SECTION 204(f) CHANNEL MODIFICATION PROJECT
CHANNEL CENTERLINE PROFILE
 SHEET 5 OF 12

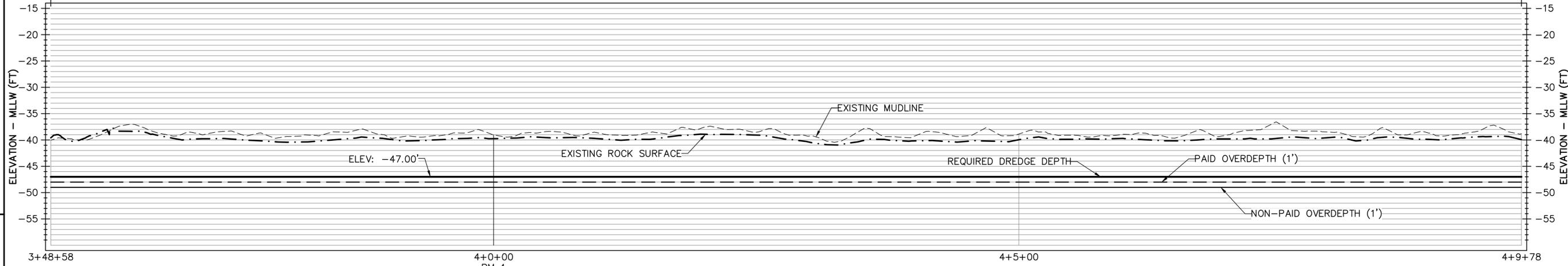
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C-205
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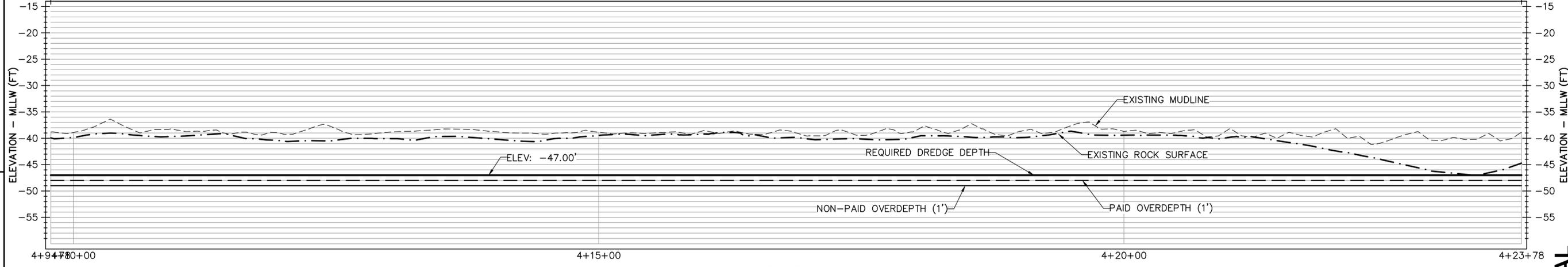
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STATION
CHANNEL CENTERLINE PROFILE - RM 3+34+58 TO RM 3+48+58
 HORZ SCALE: 1"=50' VERT SCALE: 1"=10'



STATION
CHANNEL CENTERLINE PROFILE - RM 3+48+58 TO RM 4+9+78
 HORZ SCALE: 1"=50' VERT SCALE: 1"=10'

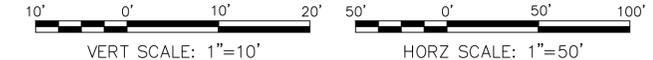


STATION
CHANNEL CENTERLINE PROFILE - RM 4+9+78 TO RM 4+23+78
 HORZ SCALE: 1"=50' VERT SCALE: 1"=10'

NOTES
 1. EXISTING MUDLINE IS A COMPOSITE OF MULTIPLE DATA SETS COLLECTED BETWEEN 2007 AND 2016.

LEGEND

---	EXISTING MUDLINE
- . - . -	EXISTING ROCK SURFACE
---	REQUIRED DREDGE DEPTH
---	PAID OVERDEPTH
---	NON-PAID ALLOWABLE OVERDEPTH



FOR USACE REVIEW
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DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING



DATE	DESCRIPTION	MARK	APPR.

DESIGNED BY: K. LANDON	DATE: 2024-07-19
DRAWN BY: CUS	SOLICITATION NO.:
SUBMITTED BY: J. SHILDEN	CONTRACT NO.:
PLOT SCALE: AS NOTED	PLOT DATE: 2024-07-22
FILE NAME: 22x34	DRAWING NUMBER:

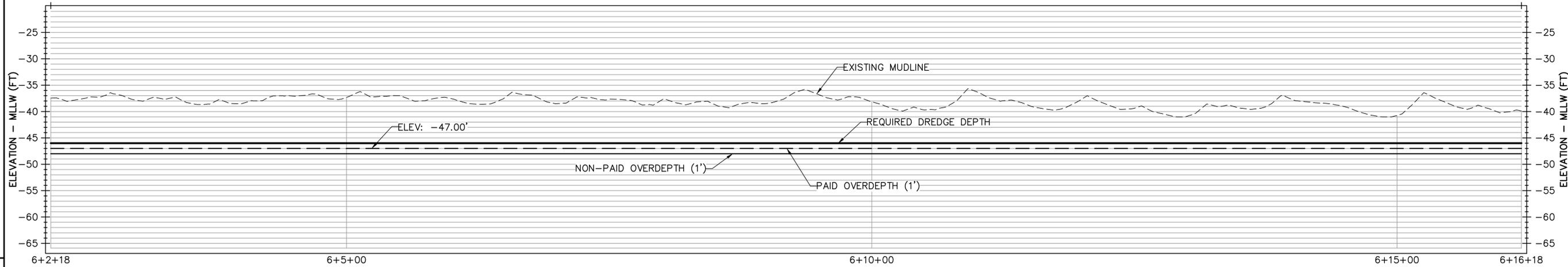
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 SEATTLE, WA 98101
 (206) 622-0222

COOS BAY OREGON
SECTION 204(f) CHANNEL MODIFICATION PROJECT
CHANNEL CENTERLINE PROFILE
SHEET 7 OF 12

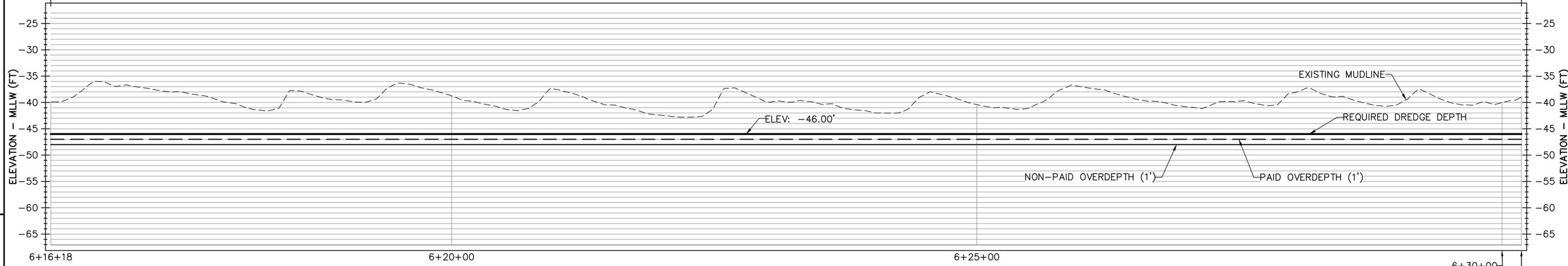
SHEET IDENTIFICATION
C-207
 INDEX 56 OF 77

90% SUBMITTAL

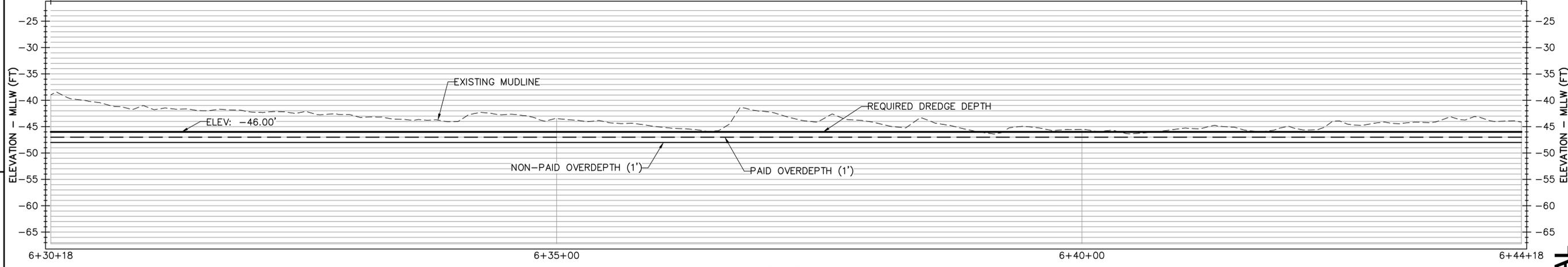
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STATION
CHANNEL ALIGNMENT PROFILE - RM 6+2+18 TO RM 6+16+18
 HORZ SCALE: 1"=50' VERT SCALE: 1"=10'



STATION
CHANNEL ALIGNMENT PROFILE - RM 6+16+18 TO RM 6+30+18
 HORZ SCALE: 1"=50' VERT SCALE: 1"=10'

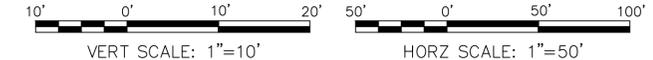


STATION
CHANNEL ALIGNMENT PROFILE - RM 6+30+18 TO RM 6+44+18
 HORZ SCALE: 1"=50' VERT SCALE: 1"=10'

NOTES
 1. EXISTING MUDLINE IS A COMPOSITE OF MULTIPLE DATA SETS COLLECTED BETWEEN 2007 AND 2016.

LEGEND

----	EXISTING MUDLINE
- · - · -	EXISTING ROCK SURFACE
————	REQUIRED DREDGE DEPTH
----	PAID OVERDEPTH
----	NON-PAID ALLOWABLE OVERDEPTH



FOR USAGE REVIEW
 ISSUED: 2024-07-19
 NOT TO BE USED FOR CONSTRUCTION

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING



DATE	DESCRIPTION	MARK	APPR.

DESIGNED BY: K. LANDON	DATE: 2024-07-19
DRAWN BY: CUS	CHECKED BY: WJG
SUBMITTED BY: J. SHILDEN	CONTRACT NO.:
PLOT SCALE: AS NOTED	PLOT DATE: 2024-07-22
FILE NAME: 22x34	DRAWING NUMBER:

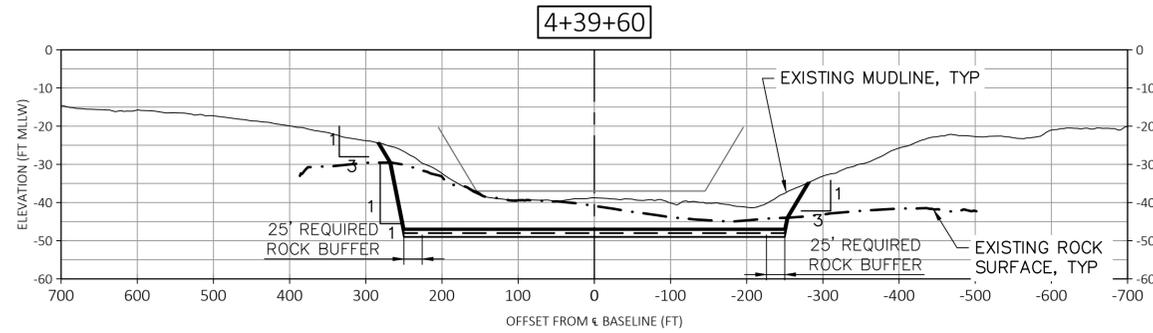
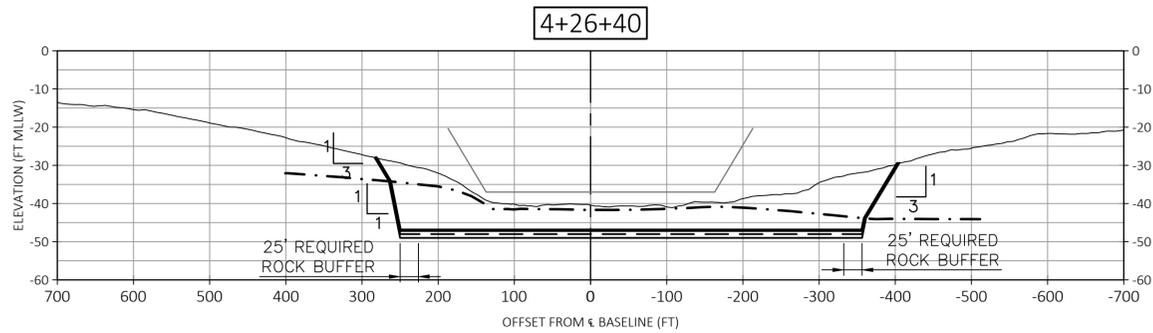
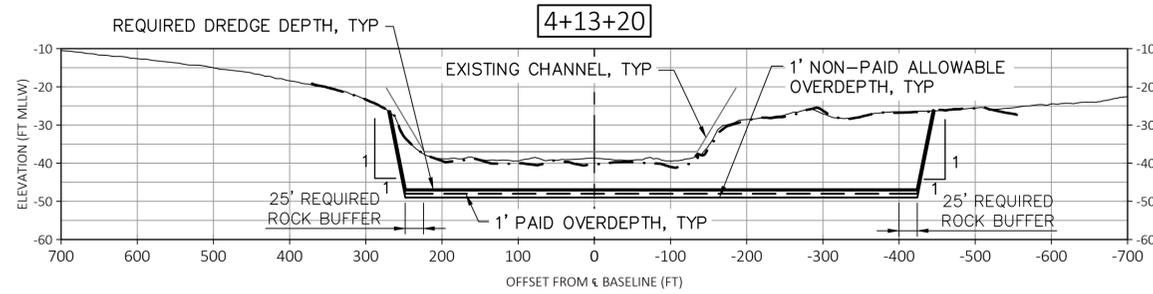
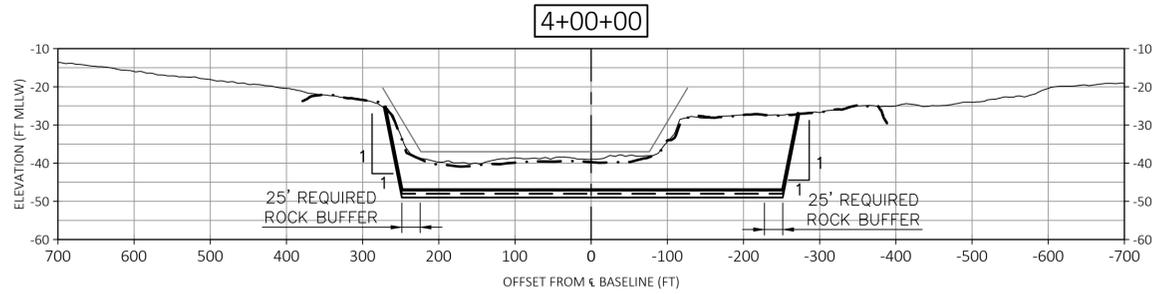
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 (206) 622-0222

COOS BAY OREGON
SECTION 204(f) CHANNEL
MODIFICATION PROJECT
CHANNEL CENTERLINE PROFILE
SHEET 10 OF 12

SHEET IDENTIFICATION
C-210
 INDEX 59 OF 77

90% SUBMITTAL

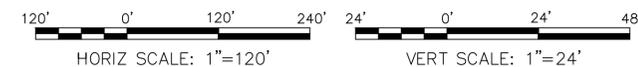
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LEGEND

-----	EXISTING MUDLINE
- . - . -	EXISTING ROCK SURFACE
-----	EXISTING CHANNEL (NAVIGATION DEPTH)
-----	REQUIRED DREDGE DEPTH
-----	PAID OVERDEPTH
-----	NON-PAID ALLOWABLE OVERDEPTH

- NOTES:**
- CROSS SECTIONS ARE SHOWN LOOKING TOWARDS DECREASING STATIONS (DOWNRIVER) AND PERPENDICULAR TO THE NEW CHANNEL CENTERLINE.
 - STATIONS REFERENCE ALIGNMENT OF NEW NAVIGATION CHANNEL.



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DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING



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SUBMITTED BY: J. SHILDEN	CONTRACT NO.:	CONTRACT NO.:	CONTRACT NO.:
PLOT SCALE: AS NOTED	PLOT DATE: 2024-07-22	DRAWING NUMBER:	DRAWING NUMBER:
SIZE: 22x34	FILE NAME:	FILE NAME:	FILE NAME:



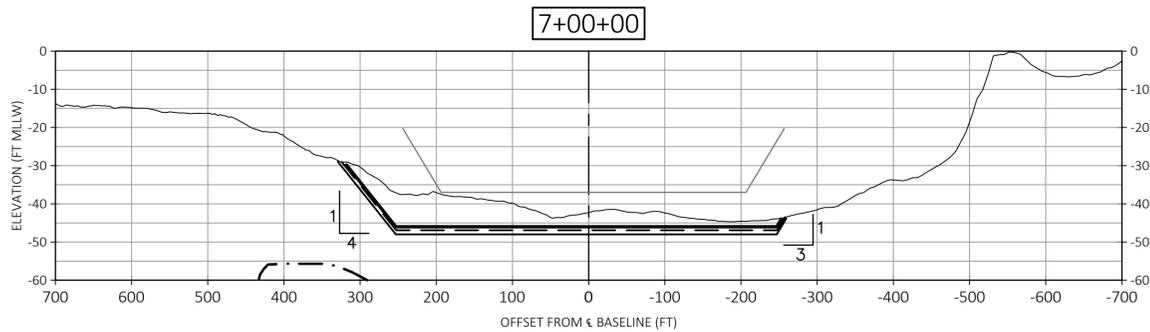
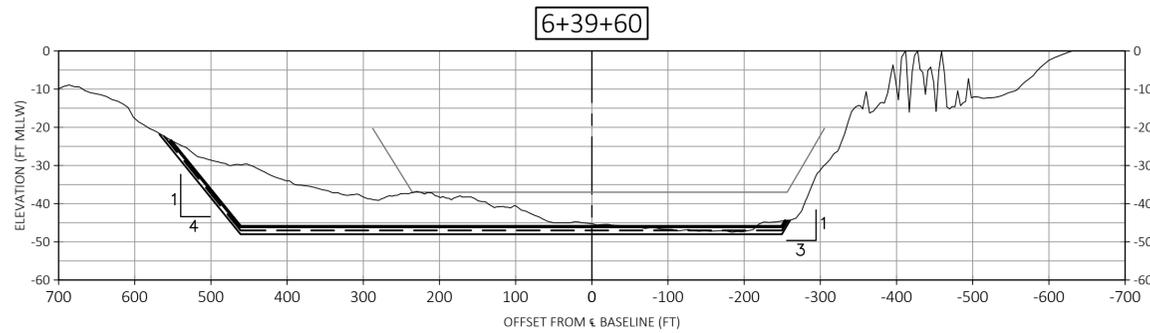
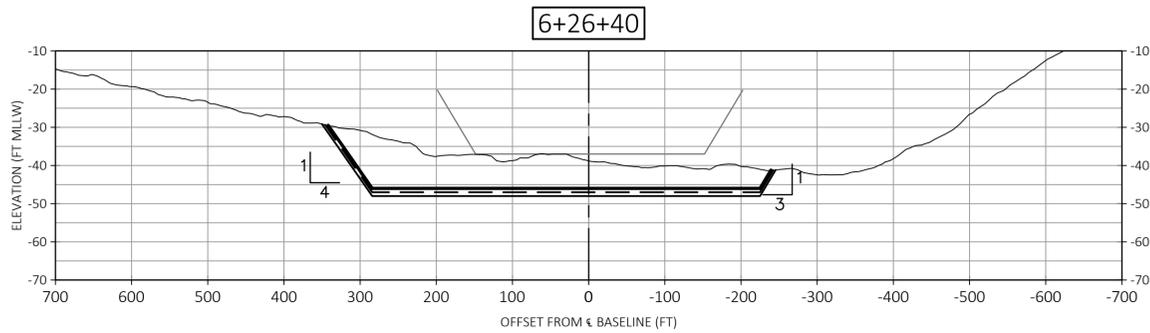
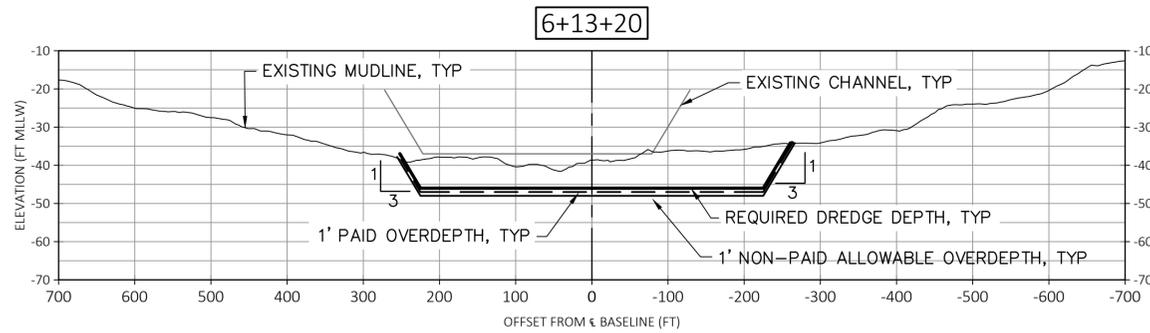
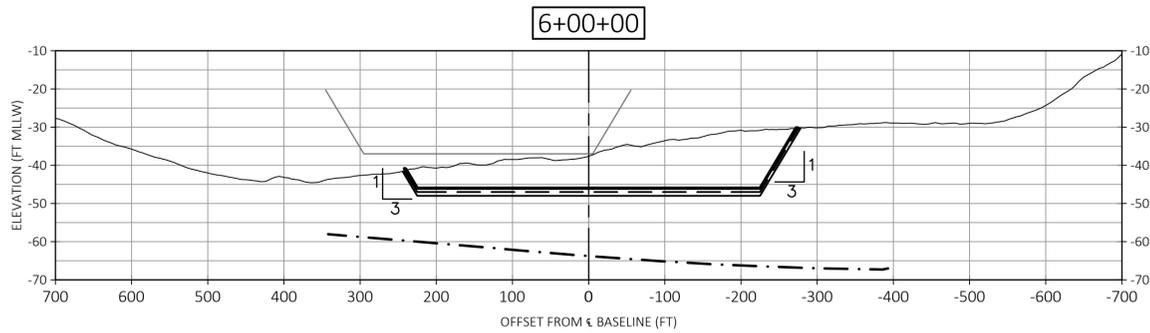
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COOS BAY OREGON
SECTION 204(f) CHANNEL
MODIFICATION PROJECT
DREDGING SECTIONS - SHEET 4 OF 7

90% SUBMITTAL

SHEET IDENTIFICATION
C-306
INDEX 67 OF 77

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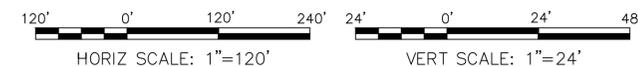


LEGEND

- EXISTING MUDLINE
- . - . - . EXISTING ROCK SURFACE
- EXISTING CHANNEL (NAVIGATION DEPTH)
- ===== REQUIRED DREDGE DEPTH
- PAID OVERDEPTH
- NON-PAID ALLOWABLE OVERDEPTH

NOTES:

1. CROSS SECTIONS ARE SHOWN LOOKING TOWARDS DECREASING STATIONS (DOWNRIVER) AND PERPENDICULAR TO THE NEW CHANNEL CENTERLINE.
2. STATIONS REFERENCE ALIGNMENT OF NEW NAVIGATION CHANNEL.



FOR USAGE REVIEW
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DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING



											DATE
											APPR.

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SUBMITTED BY: J. SHILDEN	CONTRACT NO.:
PLOT SCALE: AS NOTED	PLOT DATE: 2024-07-22
SIZE: 22x34	FILE NAME:



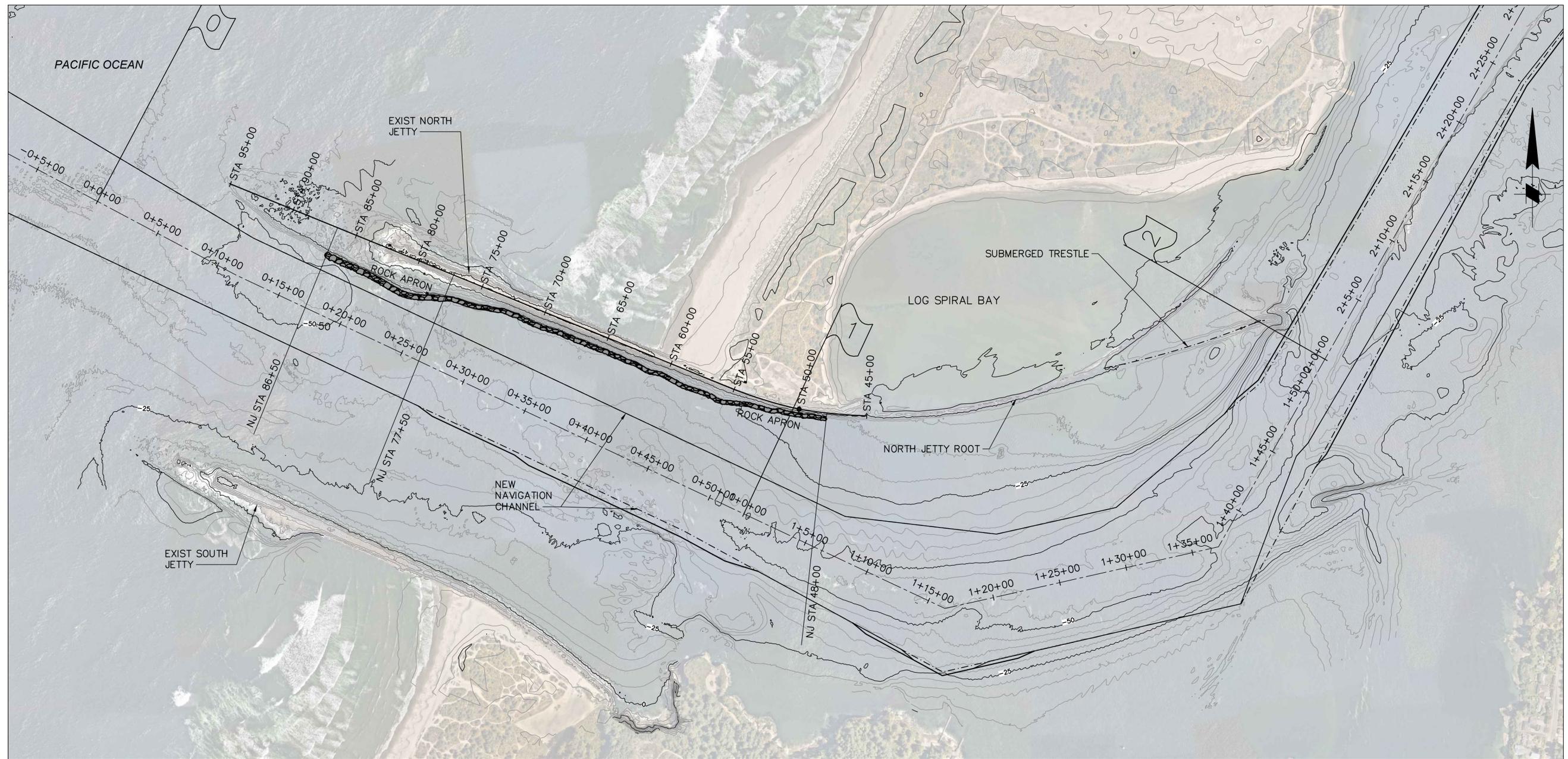
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COOS BAY OREGON
SECTION 204(f) CHANNEL
MODIFICATION PROJECT
DREDGING SECTIONS - SHEET 6 OF 7

90% SUBMITTAL

SHEET IDENTIFICATION
C-308
INDEX 69 OF 77

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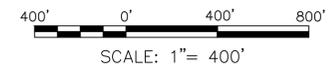
NORTH JETTY ROCK APRON – OVERALL SITE PLAN
SCALE: 1"=400'

LEGEND

-  NEW RIVER MILE MARKER
-  NORTH JETTY CENTERLINE
-  NEW CHANNEL CENTERLINE
-  NEW DREDGE TOE
-  NEW NAVIGATION CHANNEL
-  MAJOR CONTOURS
-  MINOR CONTOURS

NOTES:

1. ELEVATIONS ARE IN FEET RELATIVE TO MLLW, UNLESS NOTED OTHERWISE.
2. HORIZONTAL DIMENSIONS ARE IN FEET.
3. SATELLITE IMAGE SOURCE: NEARMAP, JUNE 2023



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DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING



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DRAWING NUMBER:	

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COOS BAY OREGON
SECTION 204(f) CHANNEL
MODIFICATION PROJECT
NORTH JETTY ROCK APRON
OVERALL SITE PLAN

SHEET IDENTIFICATION
X-101
INDEX 72 OF 77

90% SUBMITTAL

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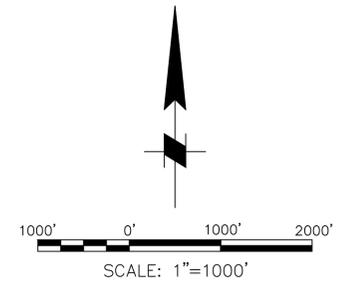


LEGEND

- # EXIST BUOY TO REMAIN
- # NEW BUOY
- # RELOCATED BUOY
- NEW/RELOCATED ATON NO.
- NEW RANGE LINE
- NEW NAVIGATION CHANNEL
- # EXIST FIXED RANGE MARKER OR LIGHT TO REMAIN
- # NEW FIXED RANGE MARKER OR LIGHT
- # RELOCATED FIXED RANGE MARKER
- # ATON TO BE MOVED OR DEMOLISHED (# CORRESPONDS TO RELOCATED ATON NO.)

NOTES:

1. SATELLITE IMAGE SOURCE: USGS LANDSAT, 2015.
2. LOCATIONS OF EXISTING ATON TO BE RELOCATED ARE APPROXIMATIONS FROM USCG NAVIGATION CHART.
3. SEE SHEET S-103 FOR NEW LOCATIONS.
4. ATON DEMOLITION/INSTALLATION PHASING PLAN TO BE APPROVED BY PORT AND USCG PRIOR TO CONSTRUCTION, PER THE SPECIFICATIONS.
5. FOR NEW BUOYS SEE USCG DATA SHEET 2.K.8 FOR SPECIFICATIONS AND USCG DATA SHEET 2.M.5 FOR THE 8,500 LB CONCRETE SINKER DESIGN SPECIFICATION.



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ISSUED: 2024-07-19
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DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING

											
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 <p>600 UNIVERSITY STREET SEATTLE, WA 98101 (206) 622-0222</p>											
<p>COOS BAY OREGON SECTION 204(f) CHANNEL MODIFICATION PROJECT AIDS TO NAVIGATION PLAN SHEET 2 OF 2</p>											
<p>90% SUBMITTAL</p>											
<p>SHEET IDENTIFICATION S-102 INDEX 76 OF 77</p>											

