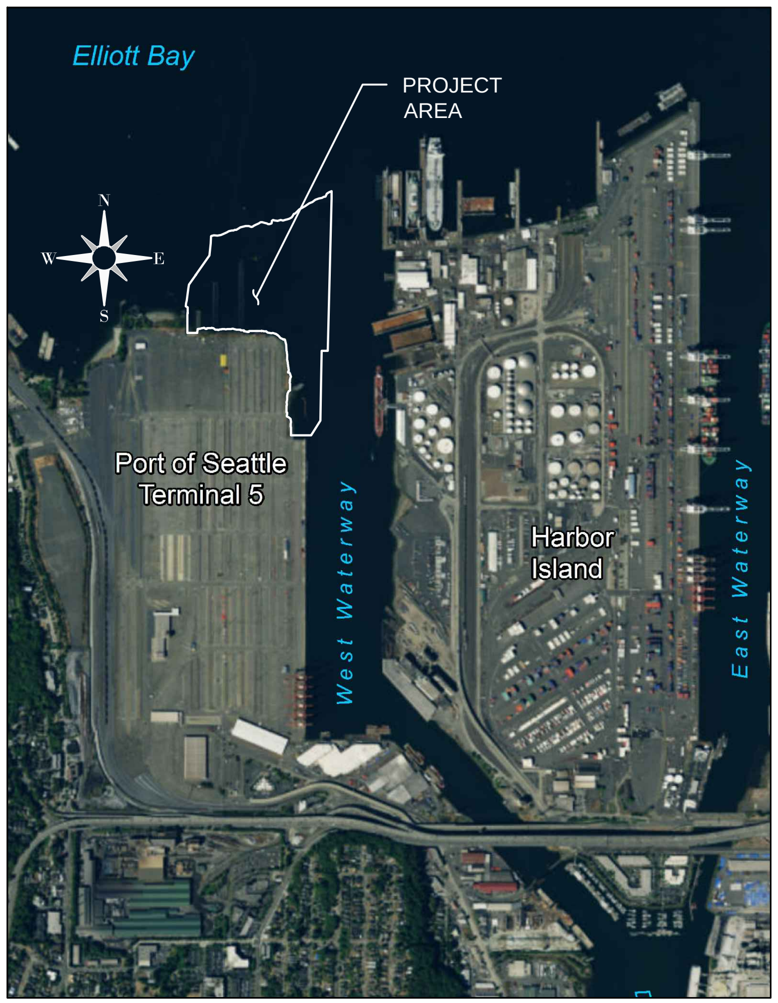
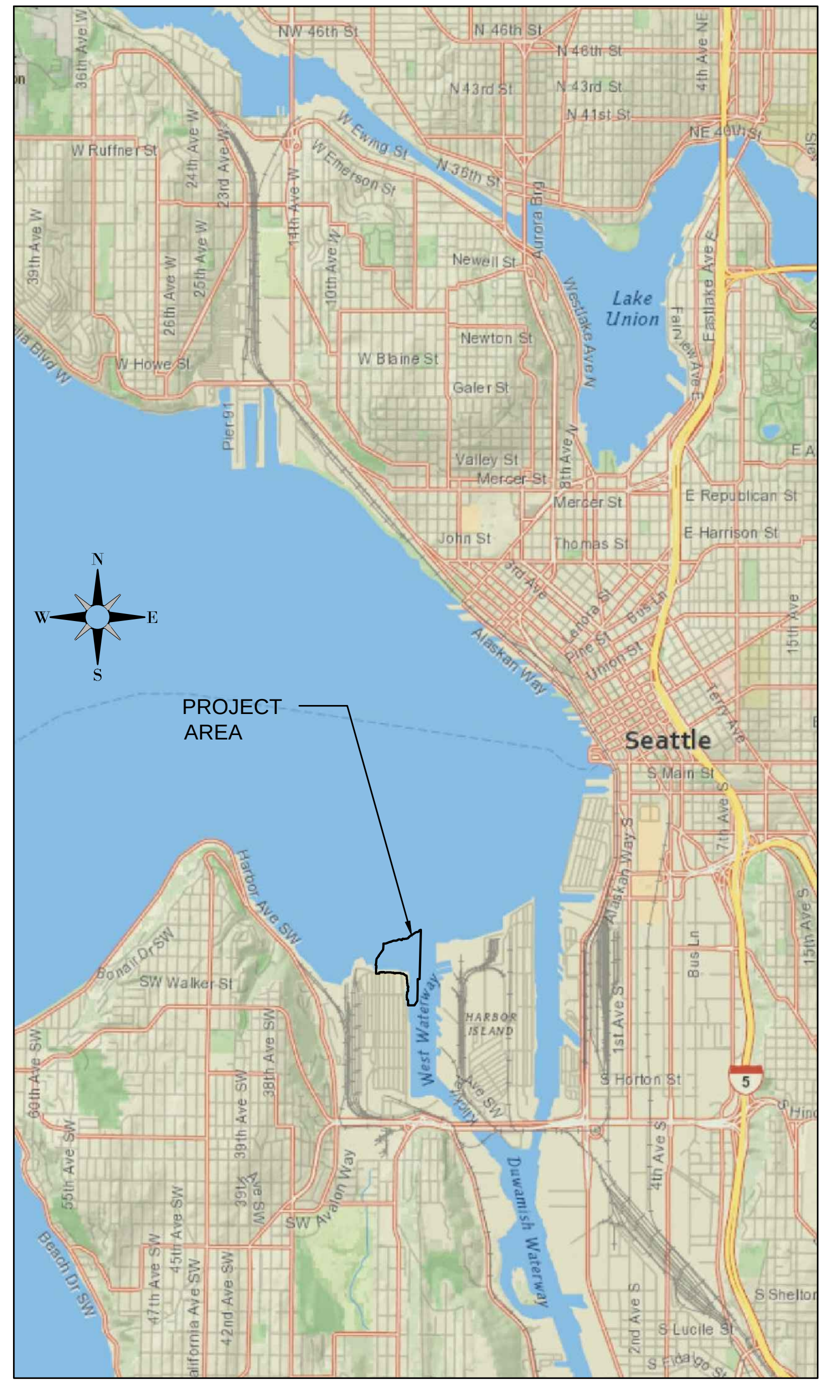
LOCKHEED WEST SEATTLE SUPERFUND SITE REMEDIATION INTERMEDIATE (60 PERCENT) DESIGN

LOCKHEED MARTIN



VICINITY MAP
SCALE: NTS



LOCATION MAP
SCALE: NTS

DRAWING INDEX	
DWG #	TITLE
	GENERAL
G-01	COVER SHEET
G-02	GENERAL NOTES
	CIVIL
C-01	EXISTING CONDITIONS - MANAGEMENT AND OWNERSHIP MAP
C-02	EXISTING CONDITIONS - OVERVIEW
C-03	REMEDIATION OVERVIEW
C-04	ACCESS AND STAGING PLAN (TBD)
C-11	TEMPORARY EROSION CONTROL PLAN (TBD)
C-12 - C-14	DEBRIS HANDLING PLAN - SHORELINES
C-15 - C-17	DEBRIS HANDLING PLAN - DREDGE AREAS
C-18	FORMER SHIPWAY - EXISTING CONDITIONS
C-19	FORMER SHIPWAY - PILE REMOVAL PLAN
C-20	DREDGE PLAN OVERVIEW
C-21 - C-23	DREDGE PLAN - SOUTH BEACH
C-24 - C-40	DREDGE PLAN - DRY DOCKS
C-41 - C-42	DREDGE PLAN - PIER 23
C-43	DREDGE PLAN - PIER 24, 25
C-44 - C-46	DREDGE PLAN - FORMER SHIPWAY
C-50	SHORELINE STABILIZATION
C-60 - C-61	INTERTIDAL BACKFILL
C-65	ENHANCED NATURAL RECOVERY PLAN

TBD = TO BE DEVELOPED AT 90 PERCENT DESIGN

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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

COVER SHEET

DWG. NO.: G-01

CREATED: 09/27/16

SHEET: 1 OF 44

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\ SHEET FILES\COVER SHEET, NOTES.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:38 AM

DATA SOURCE NOTES:

- INNER AND OUTER HARBOR LINE DATA WERE DOWNLOADED FROM WASHINGTON DEPARTMENT OF NATURAL RESOURCES GIS DEPARTMENT.
- REGULATED NAVIGATION AREA BOUNDARY IS DEFINED IN FEDERAL REGISTER RULES AND REGULATIONS. VOL. 77, NO. 69. APRIL 10, 2012.
- COMBINED EXISTING TOPOGRAPHY AND BATHYMETRY UTILIZED IN DESIGN INTEGRATES THE FOLLOWING DATA SOURCES:
  - -- TOPOGRAPHIC SURVEY, JANUARY 2017 (PORT OF SEATTLE)
  - -- BATHYMETRIC SURVEY, DECEMBER 2015 (TETRA TECH)
  - -- NORTH PILE TOPOGRAPY, JANUARY 2017 (PORT OF SEATTLE)
  - -- UPLAND TOPOGRAPHIC SURVEY, APRIL 2007 (PACIFIC GEOMETRIC SERVICES)
  - -- LIDAR SURVEY, SEPTEMBER 2002 (PUGET SOUND LIDAR CONSORTIUM)
  - -- IMAGERY SOURCE: KING COUNTY 2012

ABBREVIATIONS & ACRONYMS:

APPROX	APPROXIMATELY
BMP	BEST MANAGEMENT PRACTICE
CSL	CLEANUP SCREENING LEVEL
CY	CUBIC YARD
DIA	DIAMETER
DWG	DRAWING
EL	ELEVATION
EOC	ELEVATION OF CONTAMINATION
ENR	ENHANCED NATURAL RECOVERY
EPA	ENVIRONMENTAL PROTECTION AGENCY
EXIST	EXISTING
FT	FEET
GPS	GLOBAL POSITIONING SYSTEM
IE	INVERT ELEVATION
IN	INCH
LAT	LATITUDE
L.I.	LOWER INTERTIDAL
LONG	LONGITUDE
MAX	MAXIMUM
MH	MANHOLE
MHHW	MEAN HIGHER HIGH WATER
MHW	MEAN HIGH WATER
MIL	MILLIMETER
MIN.	MINIMUM
MLLW	MEAN LOWER LOW WATER
MLW	MEAN LOW WATER
MSL	MEAN SEA LEVEL
ME	MUDLINE ELEVATION
N/A, NA	NOT APPLICABLE
NAD	NORTH AMERICAN DATUM
NAVD	NORTH AMERICAN VERTICAL DATUM
NGS	NATIONAL GEODETIC SURVEY
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NO	NUMBER
NOAA	NATIONAL OCEANIC AND ATMOSPHERIC ASSOCIATION
NTS	NOT TO SCALE
PSR	PACIFIC SOUND RESOURCES
RML	RESIDUAL MANAGEMENT LAYER
RTK	REAL TIME KINEMATIC
SF	SQUARE FOOT
SQS	SEDIMENT QUALITY STANDARD
STA	STATION
TEMP	TEMPORARY
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
TYP	TYPICAL
US	UNITED STATES
USACE	US ARMY CORP OF ENGINEERS
USGS	US GEOLOGICAL SURVEY
USEPA	US ENVIRONMENTAL PROTECTION AGENCY
WA DNR	WASHINGTON DEPARTMENT OF NATURAL RESOURCES
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
VERT	VERTICAL

LEGEND:

PROJECT BOUNDARY
TERMINAL 5 FENCE LINE
HARBOR LINES
HARBOR LINES
ROCK TOE
INTERTIDAL ZONE BOUNDARY
SHEET PILE WALL
USACE FEDERAL NAVIGATION CHANNEL (WEST WATERWAY)

SECTION NOTATION:

A / C-100 — SECTION NAME / SECTION DRAWING

A / C-005 — SECTION NAME / PLAN DRAWING

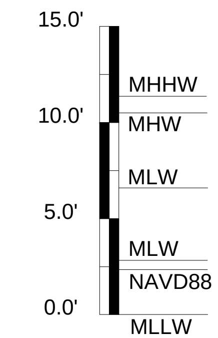
DETAIL NOTATION:

1 / C-005 — DETAIL NUMBER / DETAIL ON DRAWING

GENERAL NOTES:

1. THE HORIZONTAL COORDINATE SYSTEM FOR THE PROJECT IS BASED ON NAD83 WASHINGTON STATE PLANES, NORTH ZONE, US FOOT.
2. THE VERTICAL DATUM OF THE PROJECT IS BASED ON MLLW (EPOCH 1983-2001); REFERENCED TO NOAA TIDE STATION NUMBER 9447130, SEATTLE, WASHINGTON. (HTTP://TIDESANDCURRENTS.NOAA.GOV/DATUMS.HTML?ID=9447130)
3. TIDAL DATUMS FOR THE SITE REFERENCED TO VARIOUS VERTICAL DATUMS ARE PROVIDED IN THE FOLLOWING TABLE BY NOAA:

TIDAL DATUMS - ELEVATIONS IN FEET (REFERENCED TO MLLW)	
MHHW	11.36
MHW	10.49
MSL	6.60
MLW	2.83
NAVD88	2.34
MLLW	0.00



VERTICAL DATUM CONVERSION EXAMPLE:

NAVD88 TO MLLW:
NAVD88 = MLLW - 2.34FT

MLLW TO NAVD88:
MLLW = NAVD88 + 2.34FT

4. BENCHMARK NOTES:
   - NORTHING: 220,964.604'
   - EASTING: 1,256,980.623'
   - ELEVATION: 17.195 '
   - DESCRIPTION: WSDOT GEOGRAPHIC SERVICES - CONCRETE MONUMENT #6242. USED AS CONTROL POINT FOR UPLAND TOPOGRAPHIC SURVEY, APRIL 2007
5. CROSS SECTION STATIONING IS TYPICALLY BASED UPON INNER OR OUTER HARBOR LINES. DESIGN CONTROL POINTS WILL BE ADDED AT 90 PERCENT OF THE DESIGN.

CONSTRUCTION NOTES:

1. IN-WATER WORK PERIOD IS AUGUST 1 TO FEBRUARY 14 FOR ALL IN-WATER WORK UNLESS OTHERWISE APPROVED BY THE REGULATORY AGENCIES. ALL IN-WATER WORK ACTIVITIES MUST BE COMPLETED WITHIN THE PERMITTED TIMEFRAME.
2. PROVIDE AND MAINTAIN PROTECTION NECESSARY TO PREVENT DAMAGE TO EXISTING UTILITIES STORM DRAIN OUTFALLS, FENCES, STRUCTURES OR BUILDINGS. CONTRACTOR SHALL REPAIR ANY DAMAGED FACILITY.
3. REFER TO PORT OF SEATTLE TERMINAL 5 PILE REMOVAL AND DISPOSAL PROJECT PLANS FOR INFORMATION OF PILES REMOVAL IN FORMER SHIPWAY AND PIER DEMOLITION TO BE PERFORMED BY THE PORT OF SEATTLE.
4. CONTRACTOR SHALL FOLLOW PROJECT SPECIFICATIONS AT ALL TIMES. ALL PERSONNEL SHALL BE FAMILIAR WITH THE CONTRACTOR'S PLANS.
5. DREDGING WILL CONTINUE TO REACH NEATLINE DESIGN DEPTHS. VERIFICATION OF DESIGN DREDGE LIMITS AND CONFIRMATION SAMPLING ARE REQUIRED AT COMPLETION OF PROJECT.
6. DESIGN DREDGE LIMITS SHOWN ON SECTIONS DO NOT INCLUDE OVERDREDGE OR RESIDUAL MANAGEMENT SAND LAYER PLACEMENT.

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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

		PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")			
REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

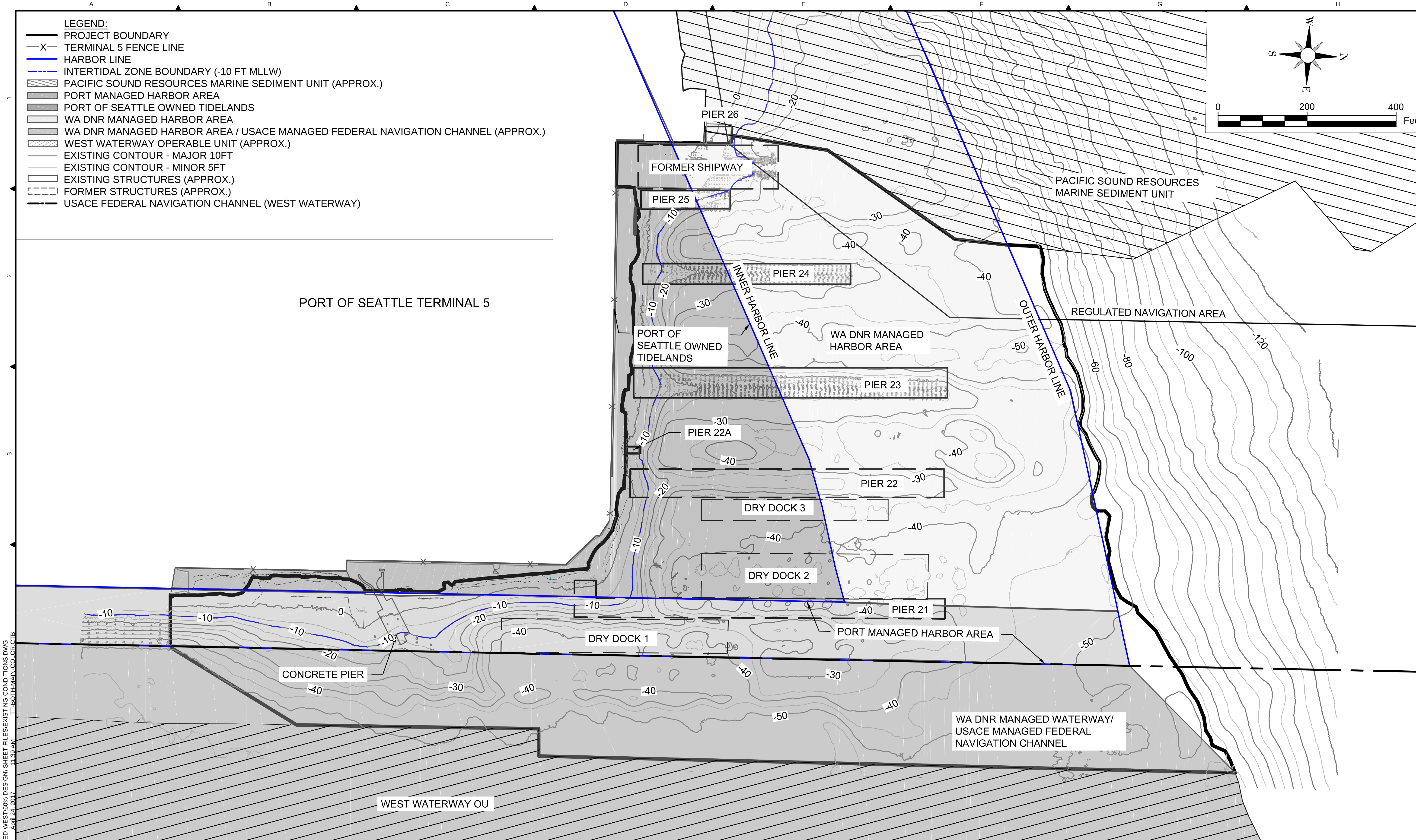
LOCKHEED WEST SEATTLE SITE REMEDIATION

GENERAL NOTES

DWG. NO.: G-02

CREATED: 09/27/16

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\.SHEET FILES\COVER SHEET, NOTES.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:38 AM ----



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PLOT DETAILS: MATHIS, TOM April 24, 2017 11:39 AM TT-BOTH-MAIN-COLOR.CTB

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LOCKHEED WEST SEATTLE SUPERFUND SITE

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A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

EXISTING CONDITIONS

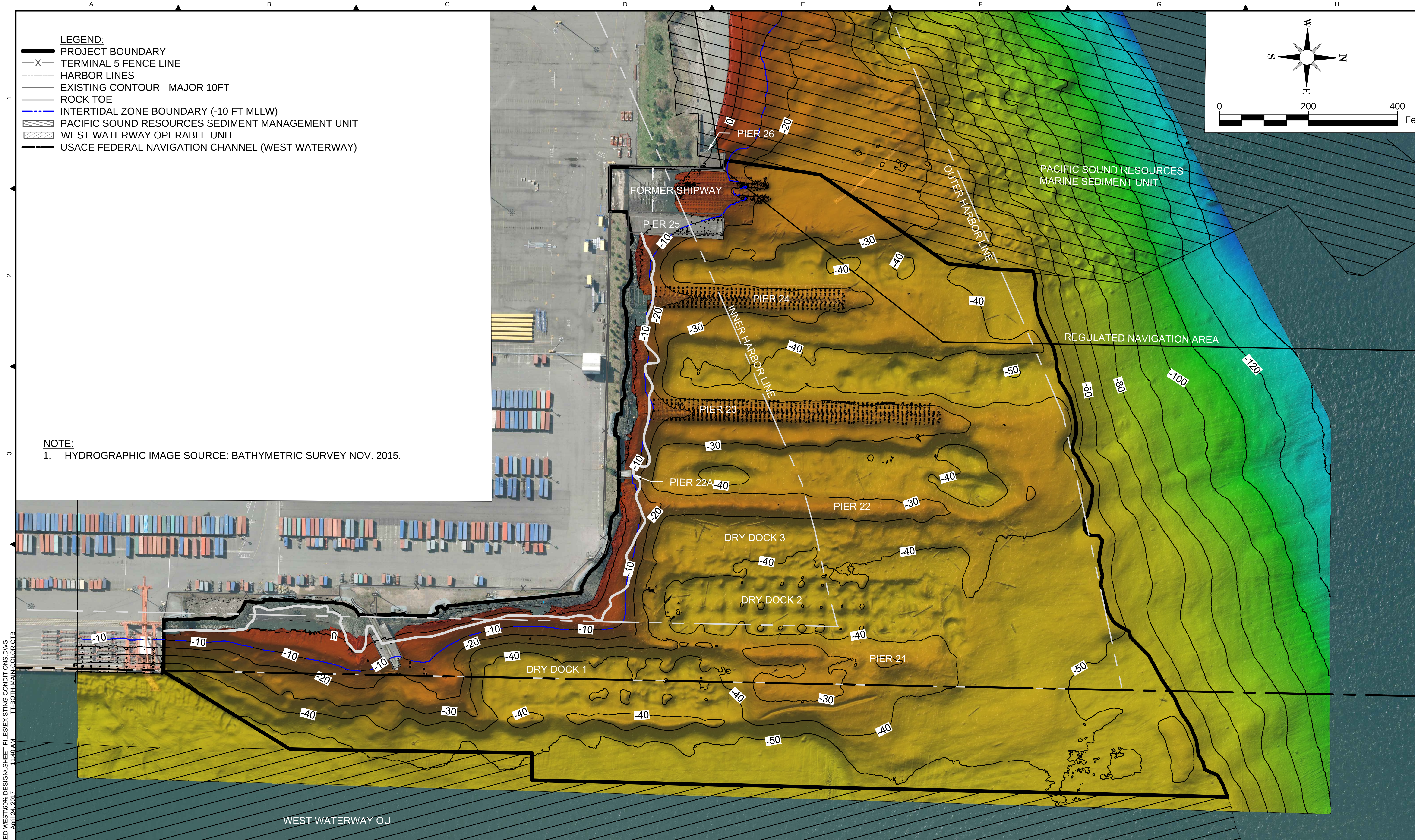
MANAGEMENT AND OWNERSHIP MAP

DWG. NO.: C-01

CREATED: 09/27/16

LEGEND:
- PROJECT BOUNDARY
- TERMINAL 5 FENCE LINE
- HARBOR LINES
- EXISTING CONTOUR - MAJOR 10FT
- ROCK TOE
- INTERTIDAL ZONE BOUNDARY (-10 FT MLLW)
- PACIFIC SOUND RESOURCES SEDIMENT MANAGEMENT UNIT
- WEST WATERWAY OPERABLE UNIT
- USACE FEDERAL NAVIGATION CHANNEL (WEST WATERWAY)

NOTE:
1. HYDROGRAPHIC IMAGE SOURCE: BATHYMETRIC SURVEY NOV. 2015.



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C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

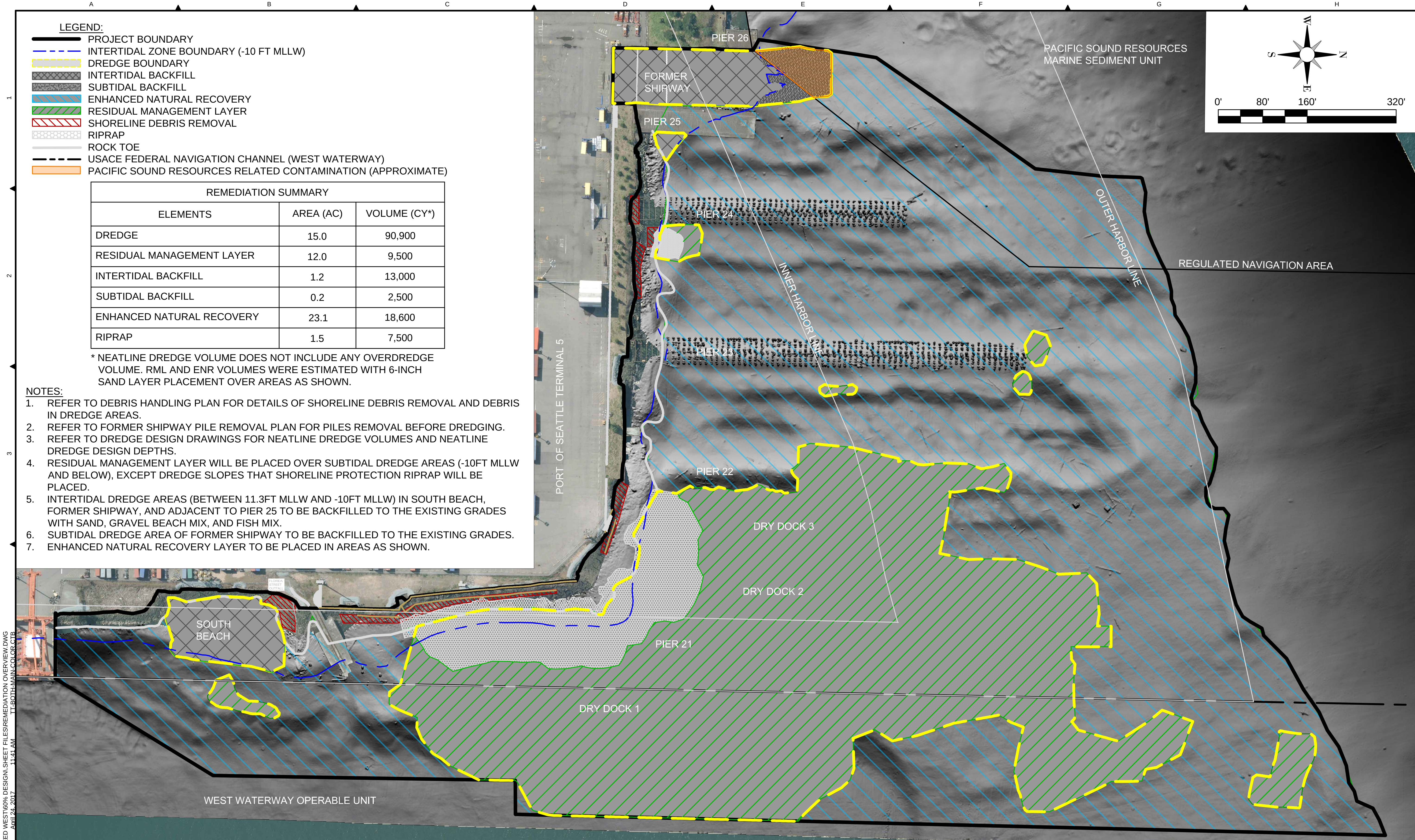
LOCKHEED WEST SEATTLE SITE REMEDIATION

EXISTING CONDITIONS
OVERVIEW

DWG. NO.: C-02

CREATED: 09/27/16

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\EXISTING CONDITIONS.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:40 AM TT-BOTH-MAIN-COLOR.CTB



LEGEND:

- PROJECT BOUNDARY
- INTERTIDAL ZONE BOUNDARY (-10 FT MLLW)
- DREDGE BOUNDARY
- INTERTIDAL BACKFILL
- SUBTIDAL BACKFILL
- ENHANCED NATURAL RECOVERY
- RESIDUAL MANAGEMENT LAYER
- SHORELINE DEBRIS REMOVAL
- RIPRAP
- ROCK TOE
- USACE FEDERAL NAVIGATION CHANNEL (WEST WATERWAY)
- PACIFIC SOUND RESOURCES RELATED CONTAMINATION (APPROXIMATE)

REMEDIATION SUMMARY

ELEMENTS	AREA (AC)	VOLUME (CY*)
DREDGE	15.0	90,900
RESIDUAL MANAGEMENT LAYER	12.0	9,500
INTERTIDAL BACKFILL	1.2	13,000
SUBTIDAL BACKFILL	0.2	2,500
ENHANCED NATURAL RECOVERY	23.1	18,600
RIPRAP	1.5	7,500

* NEATLINE DREDGE VOLUME DOES NOT INCLUDE ANY OVERDREDGE VOLUME. RML AND ENR VOLUMES WERE ESTIMATED WITH 6-INCH SAND LAYER PLACEMENT OVER AREAS AS SHOWN.

NOTES:

1. REFER TO DEBRIS HANDLING PLAN FOR DETAILS OF SHORELINE DEBRIS REMOVAL AND DEBRIS IN DREDGE AREAS.
2. REFER TO FORMER SHIPWAY PILE REMOVAL PLAN FOR PILES REMOVAL BEFORE DREDGING.
3. REFER TO DREDGE DESIGN DRAWINGS FOR NEATLINE DREDGE VOLUMES AND NEATLINE DREDGE DESIGN DEPTHS.
4. RESIDUAL MANAGEMENT LAYER WILL BE PLACED OVER SUBTIDAL DREDGE AREAS (-10FT MLLW AND BELOW), EXCEPT DREDGE SLOPES THAT SHORELINE PROTECTION RIPRAP WILL BE PLACED.
5. INTERTIDAL DREDGE AREAS (BETWEEN 11.3FT MLLW AND -10FT MLLW) IN SOUTH BEACH, FORMER SHIPWAY, AND ADJACENT TO PIER 25 TO BE BACKFILLED TO THE EXISTING GRADES WITH SAND, GRAVEL BEACH MIX, AND FISH MIX.
6. SUBTIDAL DREDGE AREA OF FORMER SHIPWAY TO BE BACKFILLED TO THE EXISTING GRADES.
7. ENHANCED NATURAL RECOVERY LAYER TO BE PLACED IN AREAS AS SHOWN.

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\REMEDIATION OVERVIEW.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:41 AM TT-BOTH-MAIN-COLOR.CTB

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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

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A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

REMEDIATION OVERVIEW

DWG. NO.: C-03

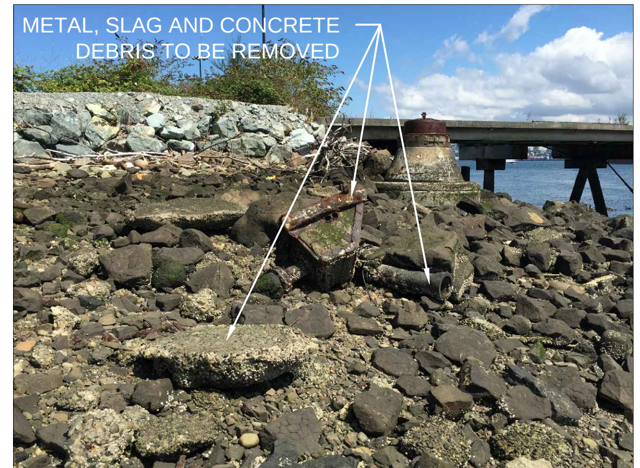
CREATED: 09/27/16

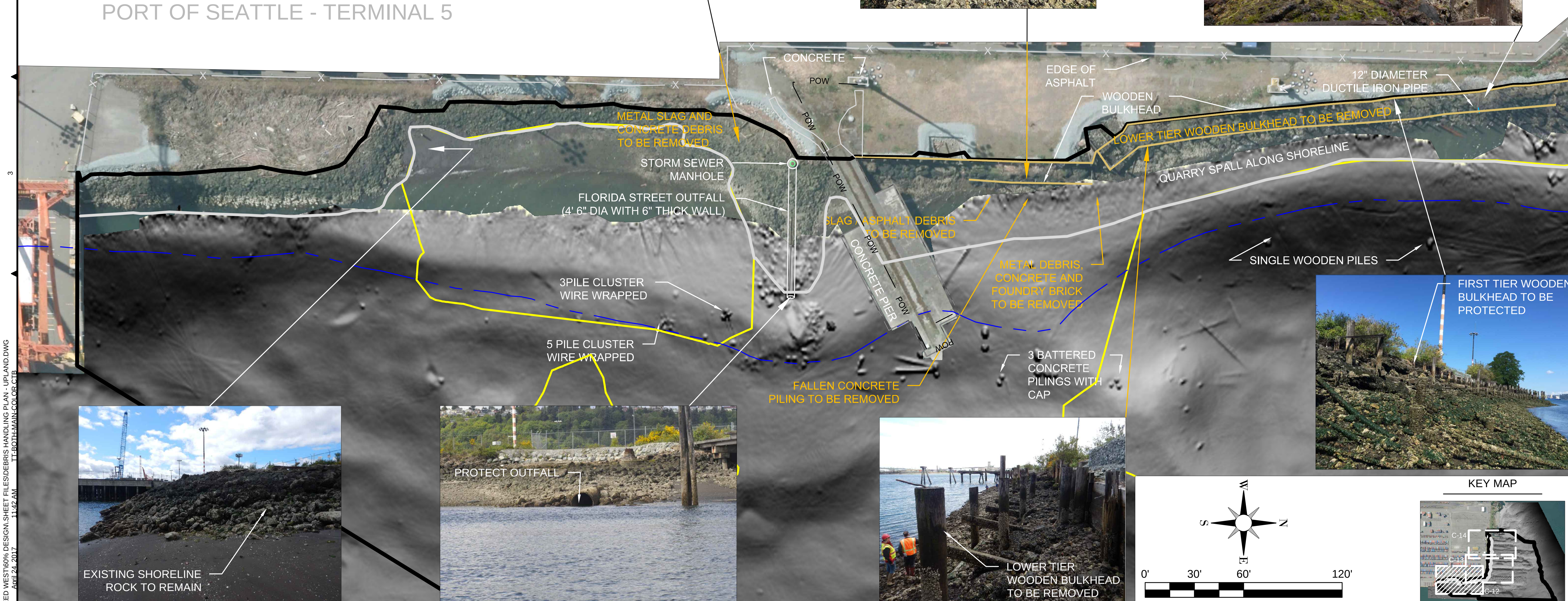
LEGEND:
- PROJECT BOUNDARY
- -X- TERMINAL 5 FENCE LINE
- INTERTIDAL ZONE BOUNDARY (-10 FT MLLW)
- ROCK TOE
- SHEET PILE WALL
- SLAG DEBRIS TO BE REMOVED
- DREDGE BOUNDARY

NOTES:

1. IDENTIFIED DEBRIS TO BE REMOVED. OTHER FEATURES AND DEBRIS ARE SHOWN FOR INFORMATION PURPOSE. DEBRIS SHOWN TO BE FIELD VERIFIED.
2. AFTER DEBRIS REMOVAL AT IDENTIFIED LOCATIONS, RIPRAP OR QUARRY SPALL TO BE PLACED IN VOID AREAS TO KEEP INTEGRITY OF EXISTING SHORELINE PROTECTION.
3. REFER TO FORMER SHIPWAY PILE REMOVAL PLAN (C-19) FOR DEBRIS REMOVAL IN FORMER SHIPWAY AREA.
4. REFER TO PORT OF SEATTLE TERMINAL 5 PILE REMOVAL AND DISPOSAL PROJECT PLANS FOR INFORMATION OF DEMOLITION TO BE PERFORMED BY THE PORT OF SEATTLE.

PORT OF SEATTLE - TERMINAL 5





PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")						
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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

LOCKHEED WEST SEATTLE SITE REMEDIATION

DEBRIS HANDLING PLAN

SHORELINES

DWG. NO.: C-12

CREATED: 09/27/16

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\.SHEET FILES\DEBRIS HANDLING PLAN - UPLAND.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:42 AM TT-BOTH-MAIN-COLOR.CTB

LEGEND:
PROJECT BOUNDARY
TERMINAL 5 FENCE LINE
INTERTIDAL ZONE BOUNDARY (-10 FT MLLW)
ROCK TOE
SHEET PILE WALL
SLAG DEBRIS TO BE REMOVED
DREDGE BOUNDARY

NOTES:

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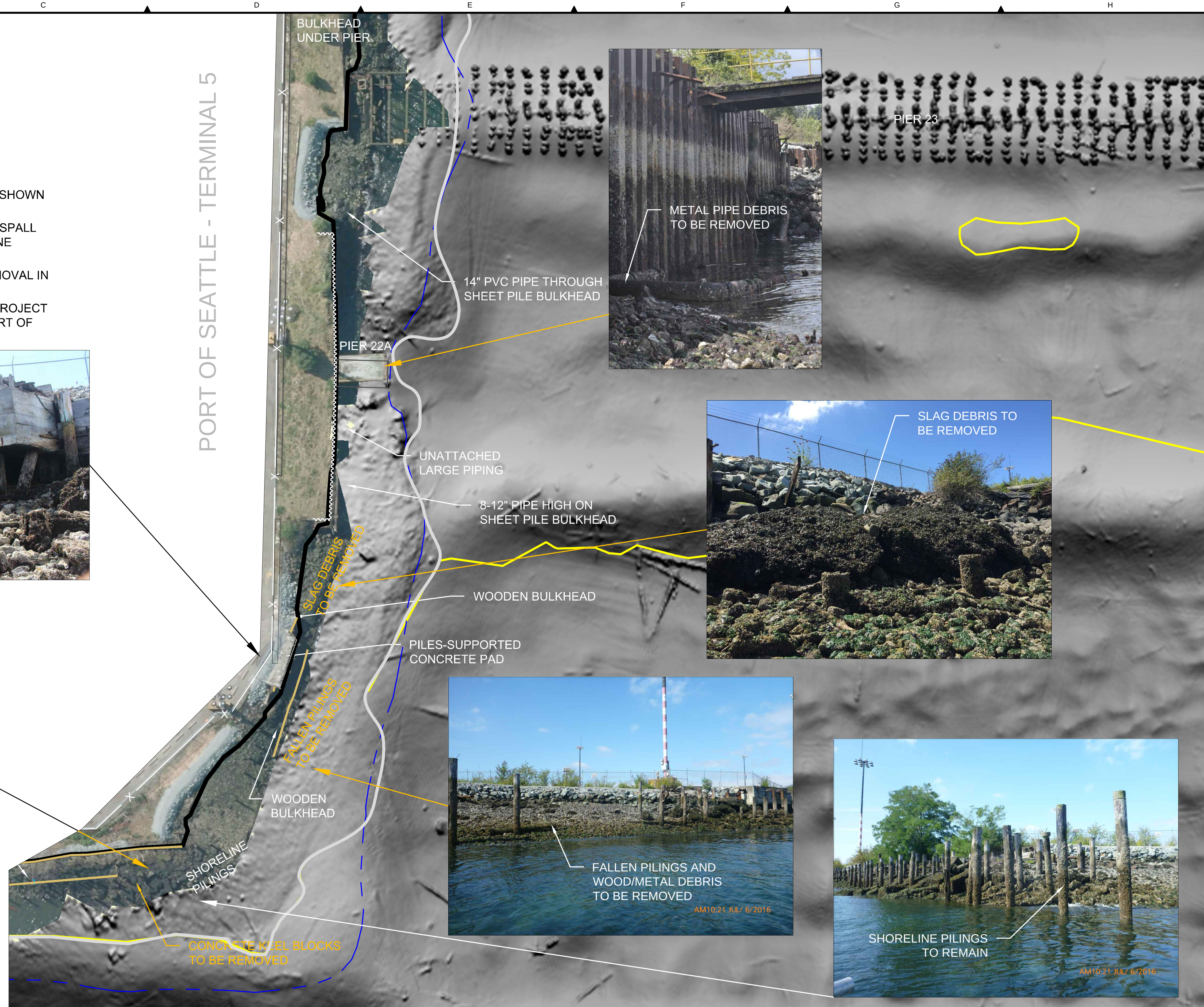
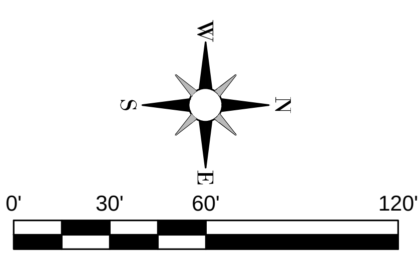
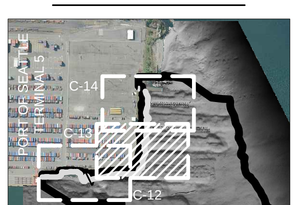




KEY MAP



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B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

DEBRIS HANDLING PLAN

SHORELINES

DWG. NO.: C-13

CREATED: 09/27/16

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DEBRIS HANDLING PLAN - UPLAND.DWG
April 24, 2017 11:42 AM
PLOT DETAILS: MATHIS, TOM TT-BOTH-MAIN-COLOR.CTB

LEGEND:
- PROJECT BOUNDARY
- TERMINAL 5 FENCE LINE
- INTERTIDAL ZONE BOUNDARY (-10 FT MLLW)
- ROCK TOE
- SHEET PILE WALL
- SLAG — DEBRIS TO BE REMOVED
- DREDGE BOUNDARY

NOTES:
1. IDENTIFIED DEBRIS TO BE REMOVED. OTHER FEATURES AND DEBRIS ARE SHOWN FOR INFORMATION PURPOSE. DEBRIS SHOWN TO BE FIELD VERIFIED.
2. AFTER DEBRIS REMOVAL AT IDENTIFIED LOCATIONS, RIPRAP OR QUARRY SPALL TO BE PLACED IN VOID AREAS TO KEEP INTEGRITY OF EXISTING SHORELINE PROTECTION.
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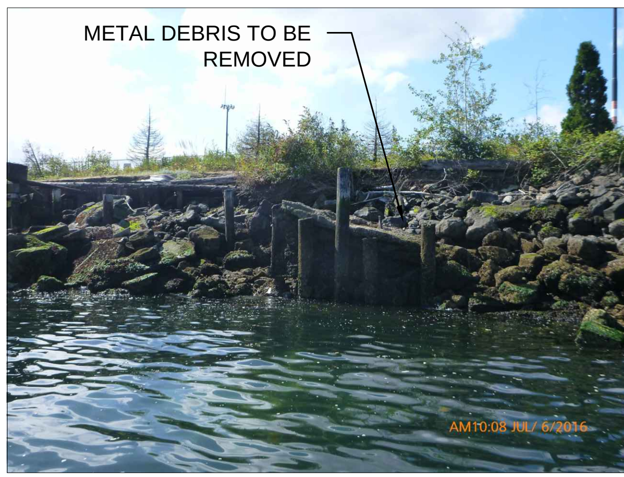
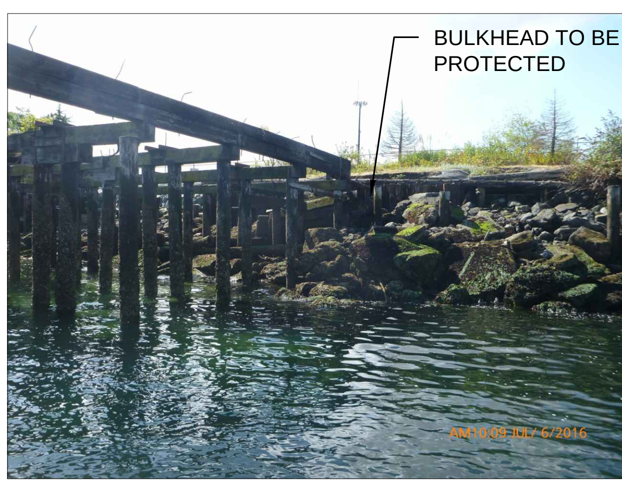
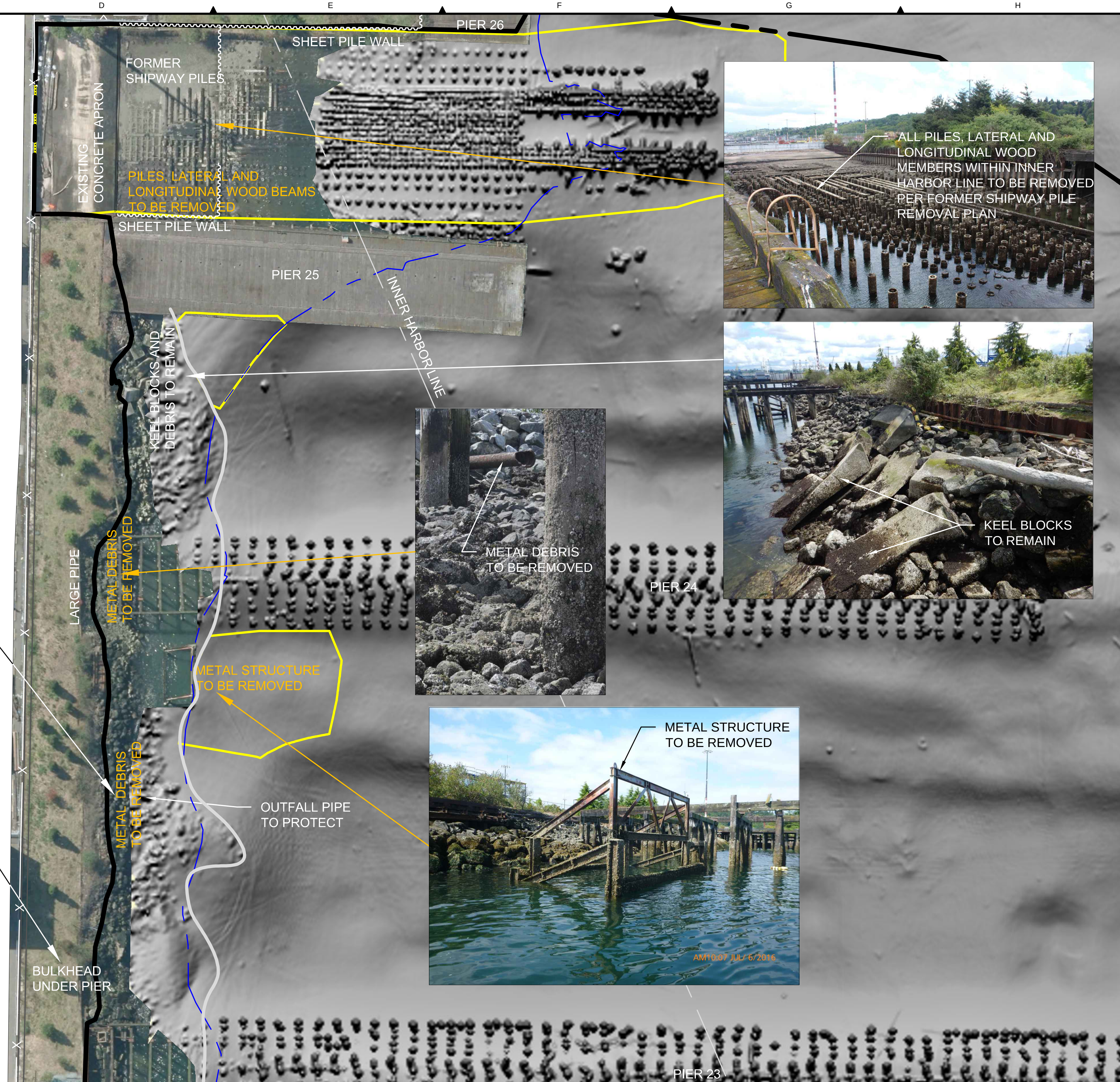


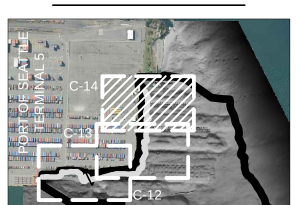




W S N E

0' 30' 60' 120'

KEY MAP



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Phone: 425-482-7600 Fax: 425-482-7652

LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

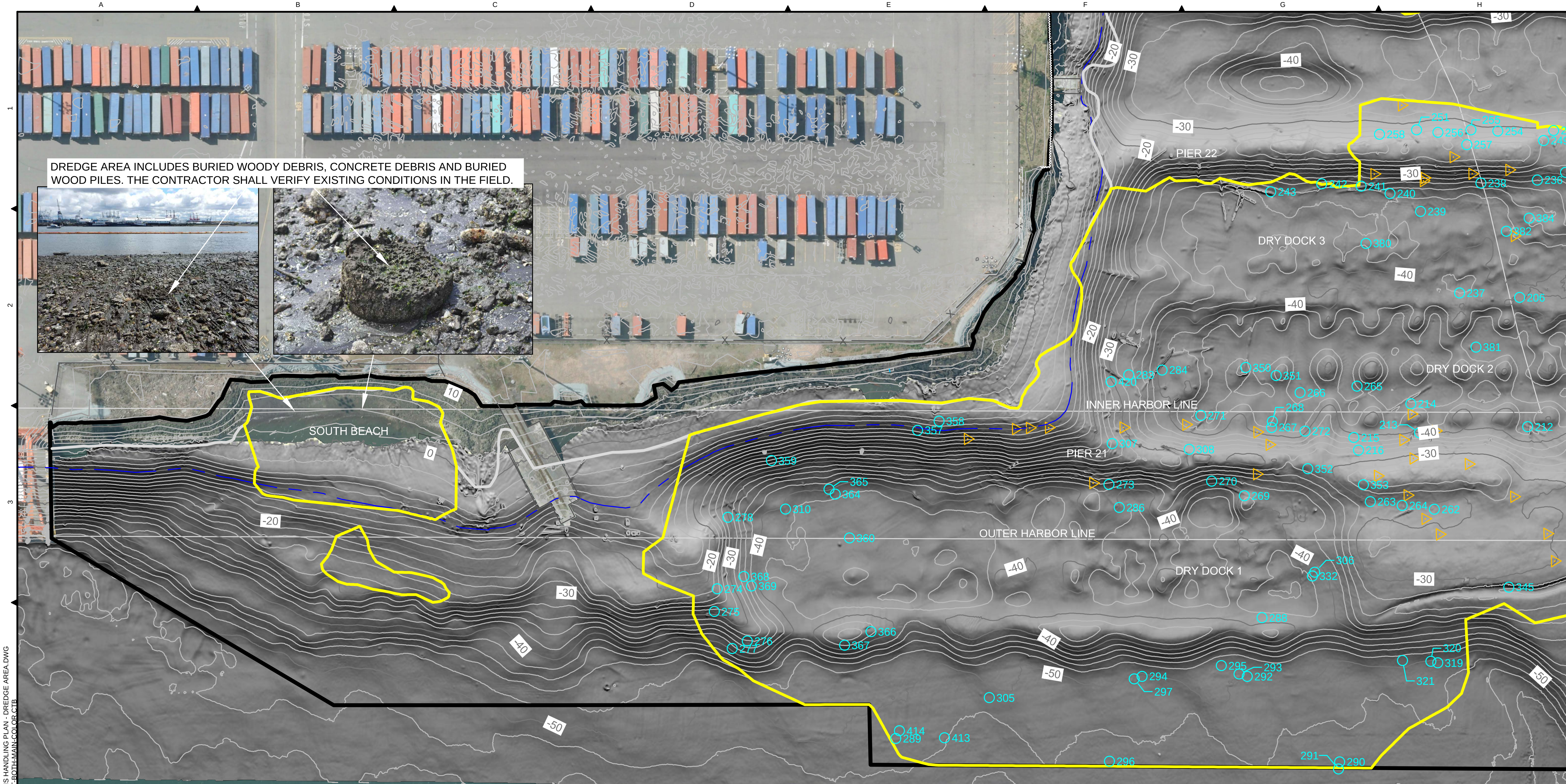
REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

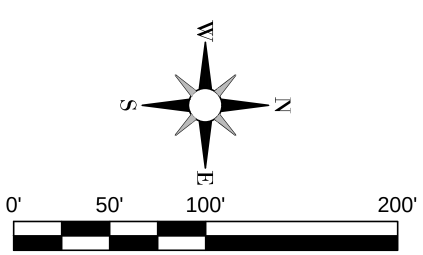
LOCKHEED WEST SEATTLE SITE REMEDIATION

DEBRIS HANDLING PLAN
SHORELINES

DWG. NO.: C-14
CREATED: 09/27/16
SHEET: 8 OF 44

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DEBRIS HANDLING PLAN - UPLAND.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:42 AM TT-BOTH-MAIN-COLOR.CTB





NOTES:

1. ESTIMATED DEBRIS QUANTITY IN DREDGE AREAS: 845 CY (700 TON) NON-METAL DEBRIS AND 265 CY (1,800 TON) METAL DEBRIS.
2. DEBRIS IN SOUTH BEACH DREDGE AREA TO BE FIELD VERIFIED. ANY BURIED PILES WILL BE REMOVED OR CUT AT DREDGE ELEVATION.
3. REFER TO PRE-REMEDIAL DESIGN FIELD SAMPLING DATA REPORT (TETRA TECH, 2016) FOR FURTHER DETAILS ABOUT INDIVIDUAL DEBRIS.

LEGEND:

- PROJECT BOUNDARY
- HARBOR LINE
- EXISTING CONTOUR - MAJOR 10FT
- EXISTING CONTOUR - MINOR 2FT
- ROCK TOE
- INTERTIDAL ZONE BOUNDARY (-10 FT MLLW)
- DREDGE BOUNDARY
- DEBRIS - OTHER
- DEBRIS - METAL
- SHEET PILE WALL

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A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

DEBRIS HANDLING PLAN

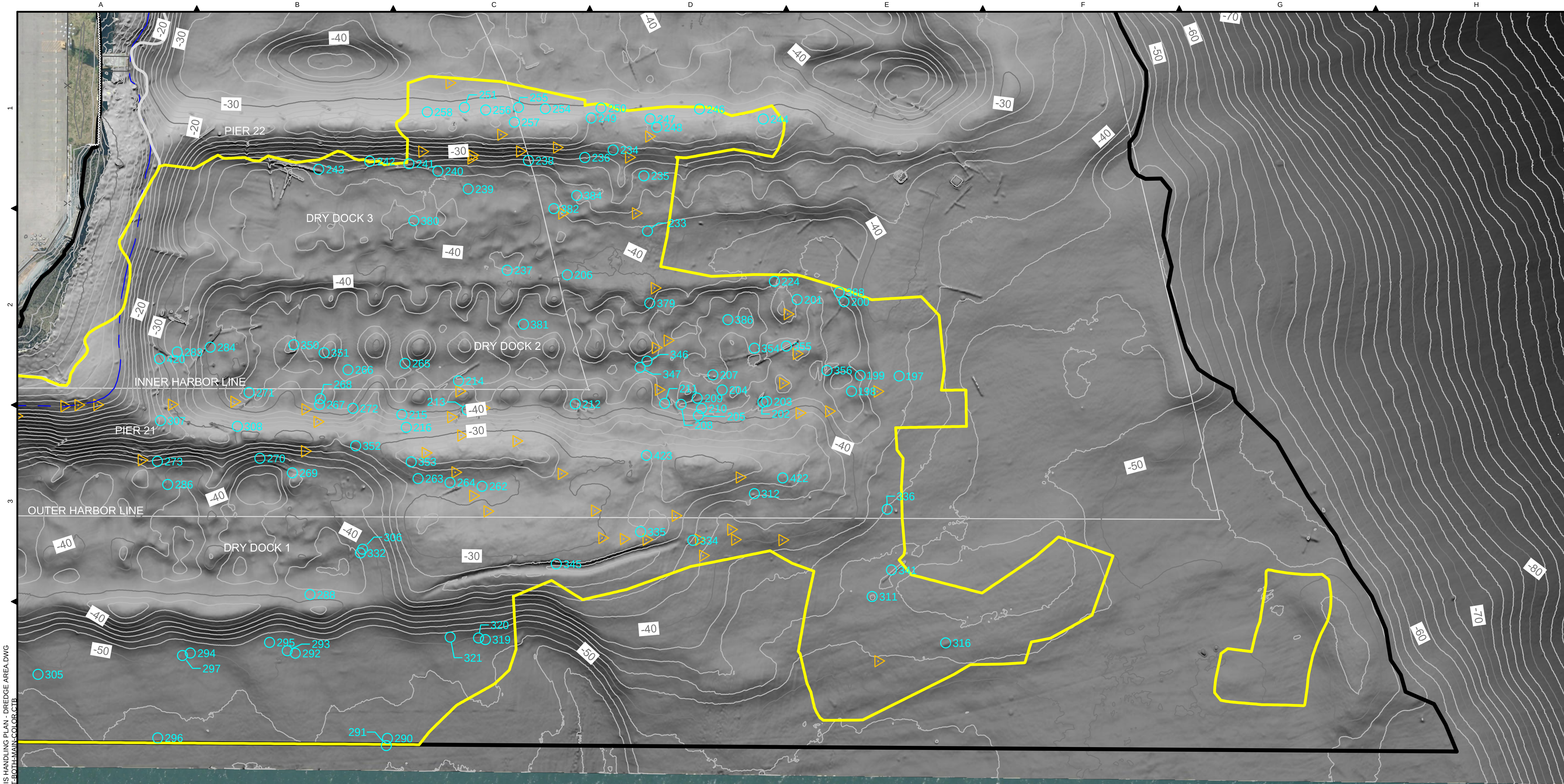
DREDGE AREAS

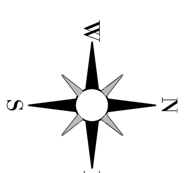
DWG. NO.: C-15

CREATED: 09/27/16

SHEET: 9 OF 44

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\ SHEET FILES\DEBRIS HANDLING PLAN - DREDGE AREA.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:43 AM TT-BOTH-MAIN-COLOR.CTB





0' 50' 100' 200'

NOTES:

1. ESTIMATED DEBRIS QUANTITY IN DREDGE AREAS: 845 CY (700 TON) NON-METAL DEBRIS AND 265 CY (1,800 TON) METAL DEBRIS.
2. REFER TO PRE-REMEDIAL DESIGN FIELD SAMPLING DATA REPORT (TETRA TECH, 2016) FOR FURTHER DETAILS ABOUT INDIVIDUAL DEBRIS.

LEGEND:

- PROJECT BOUNDARY
- HARBOR LINE
- EXISTING CONTOUR - MAJOR 10FT
- EXISTING CONTOUR - MINOR 2FT
- ROCK TOE
- INTERTIDAL ZONE BOUNDARY (-10 FT MLLW)
- DREDGE BOUNDARY
- DEBRIS - OTHER
- DEBRIS - METAL
- SHEET PILE WALL

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LOCKHEED WEST SEATTLE SUPERFUND SITE

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REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
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C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
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A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

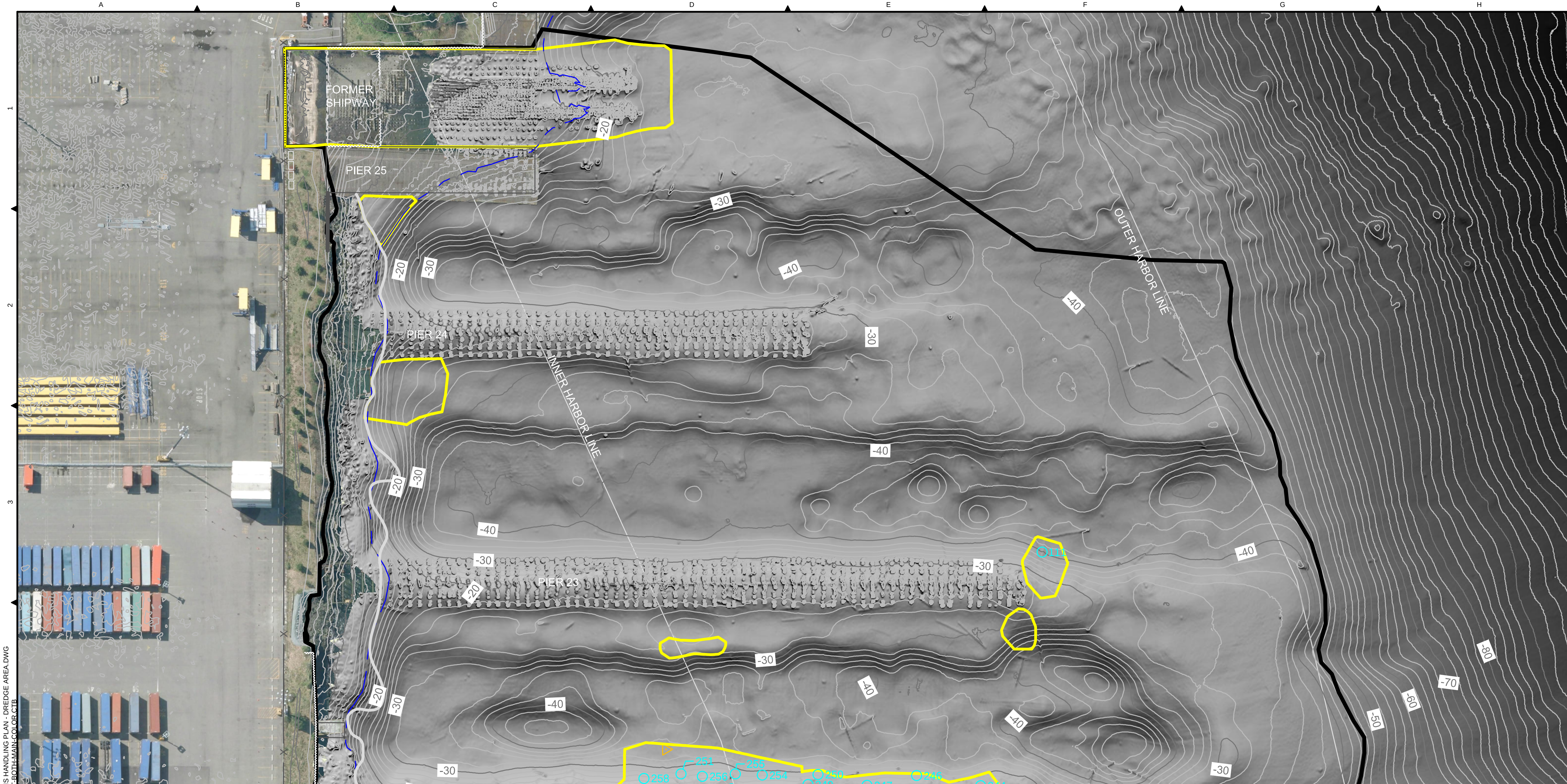
DEBRIS HANDLING PLAN

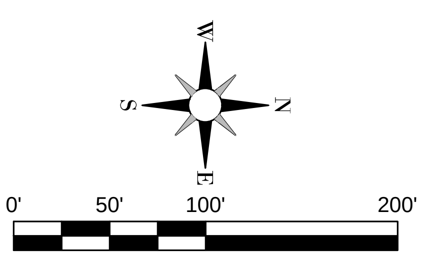
DREDGE AREAS

DWG. NO.: C-16

CREATED: 09/27/16

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DEBRIS HANDLING PLAN - DREDGE AREA.DWG April 24, 2017 11:44 AM
PLOT DETAILS: MATHIS, TOM TT-BOTH-MAIN-COLOR.CTB





NOTES:

1. ESTIMATED DEBRIS QUANTITY IN DREDGE AREAS: 845 CY (700 TON) NON-METAL DEBRIS AND 265 CY (1,800 TON) METAL DEBRIS.
2. REFER TO PRE-REMEDIAL DESIGN FIELD SAMPLING DATA REPORT (TETRA TECH, 2016) FOR FURTHER DETAILS ABOUT INDIVIDUAL DEBRIS.
3. REFER TO FORMER SHIPWAY PILE REMOVAL PLAN FOR DEBRIS REMOVAL IN FORMER SHIPWAY AREA.

LEGEND:

- PROJECT BOUNDARY
- HARBOR LINE
- EXISTING CONTOUR - MAJOR 10FT
- EXISTING CONTOUR - MINOR 2FT
- ROCK TOE
- INTERTIDAL ZONE BOUNDARY (-10 FT MLLW)
- DREDGE BOUNDARY
- DEBRIS - OTHER
- DEBRIS - METAL
- SHEET PILE WALL

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REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
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A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

DEBRIS HANDLING PLAN

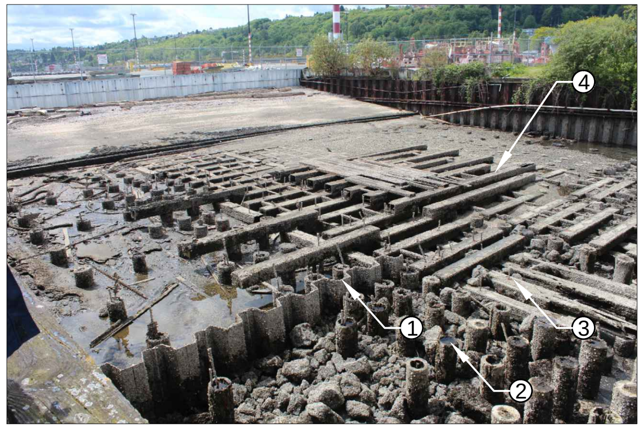
DREDGE AREAS

DWG. NO.: C-17

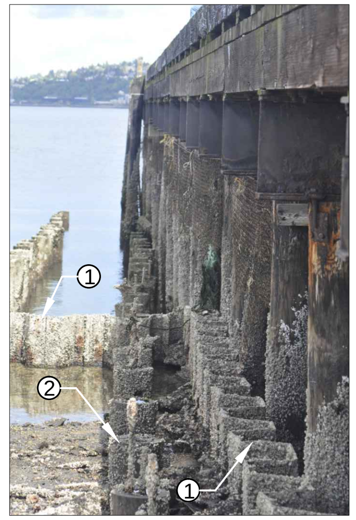
CREATED: 09/27/16

SHEET: 11 OF 44

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DEBRIS HANDLING PLAN - DREDGE AREA.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:44 AM TT-BOTH-MAIN-COLOR.CTB



VIEW 1



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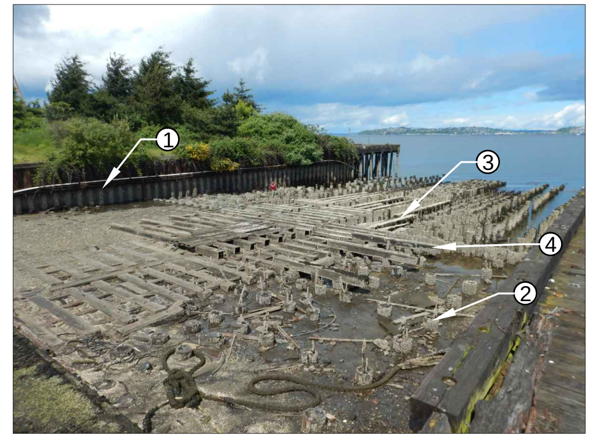

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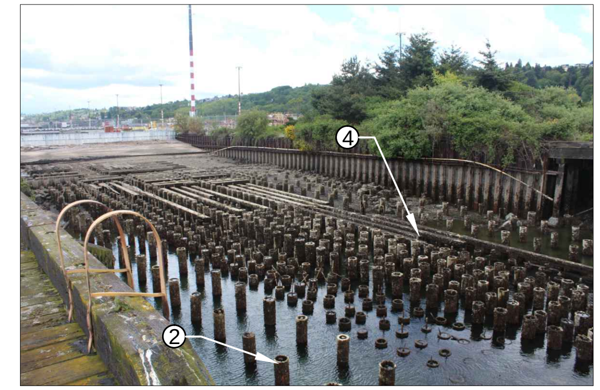

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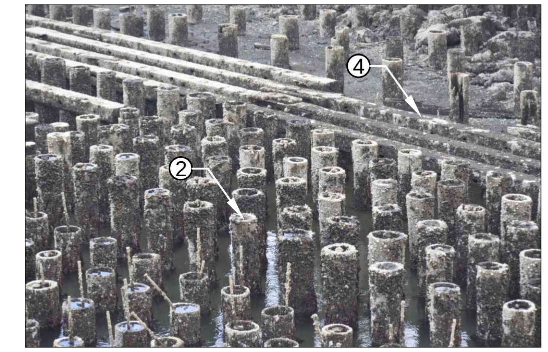
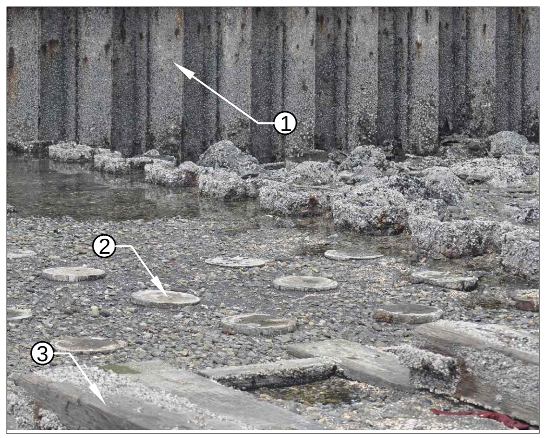
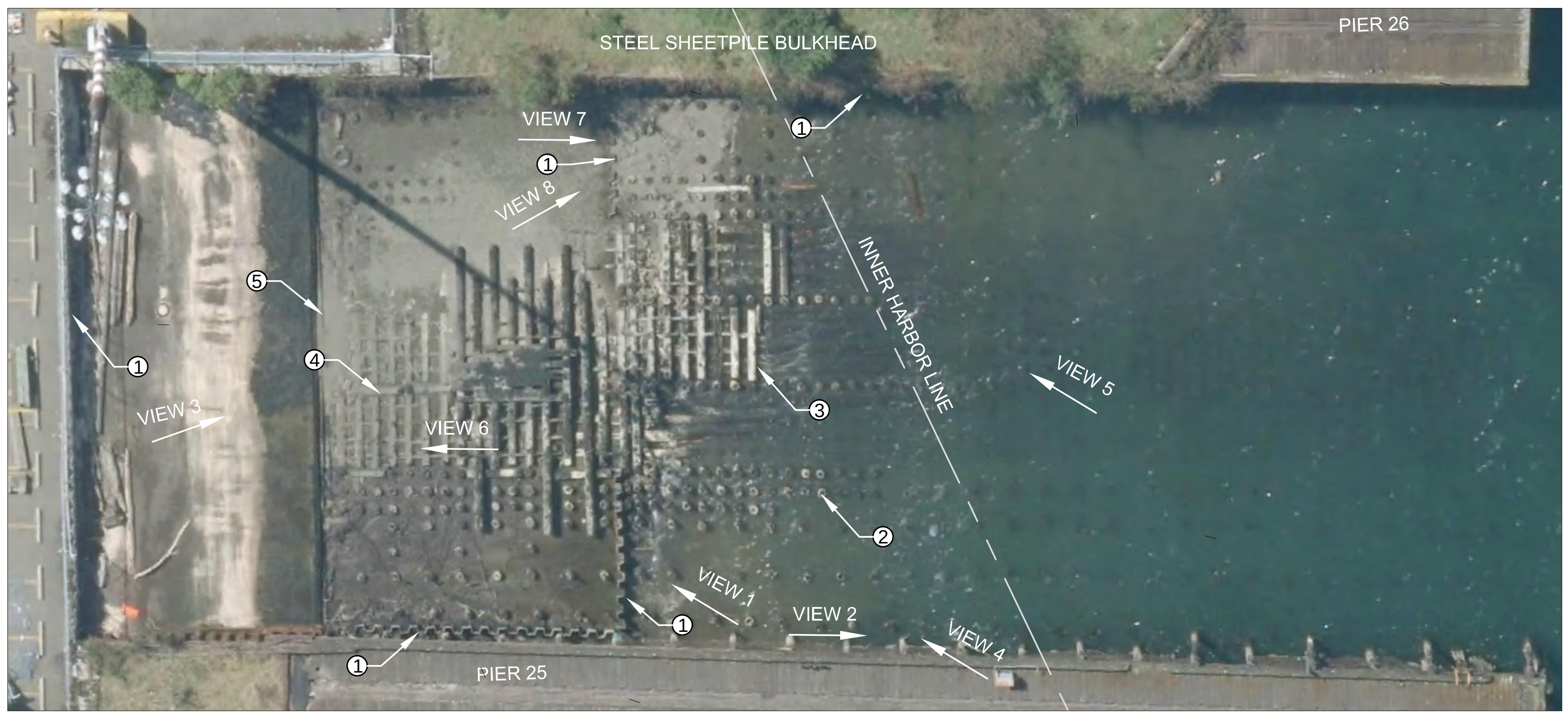


VIEW 5

VIEW 6

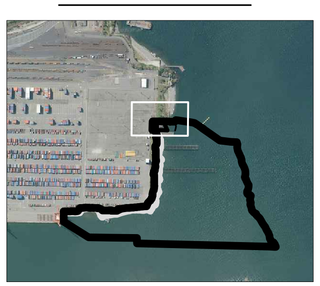


VIEW 8



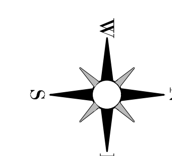
VIEW 7

KEY MAP



NOTE:
1. PHYSICAL FEATURES SHOWN MAY NOT DEPICT THE CURRENT CONDITIONS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN THE FIELD.

CALLOUTS:
1. SHEET PILE WALL.
2. VERTICAL WOOD PILES. 15 INCH DIAMETER - DEPTH UNKNOWN.
3. LATERAL WOOD BEAMS. 15 INCH X 15 INCH X VARIED LENGTH.
4. LONGITUDINAL WOOD BEAMS. 15 INCH X 15 INCH X VARIED LENGTH.
5. CONCRETE BULKHEAD WALL.



0' 15' 30' 60'

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B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

FORMER SHIPWAY

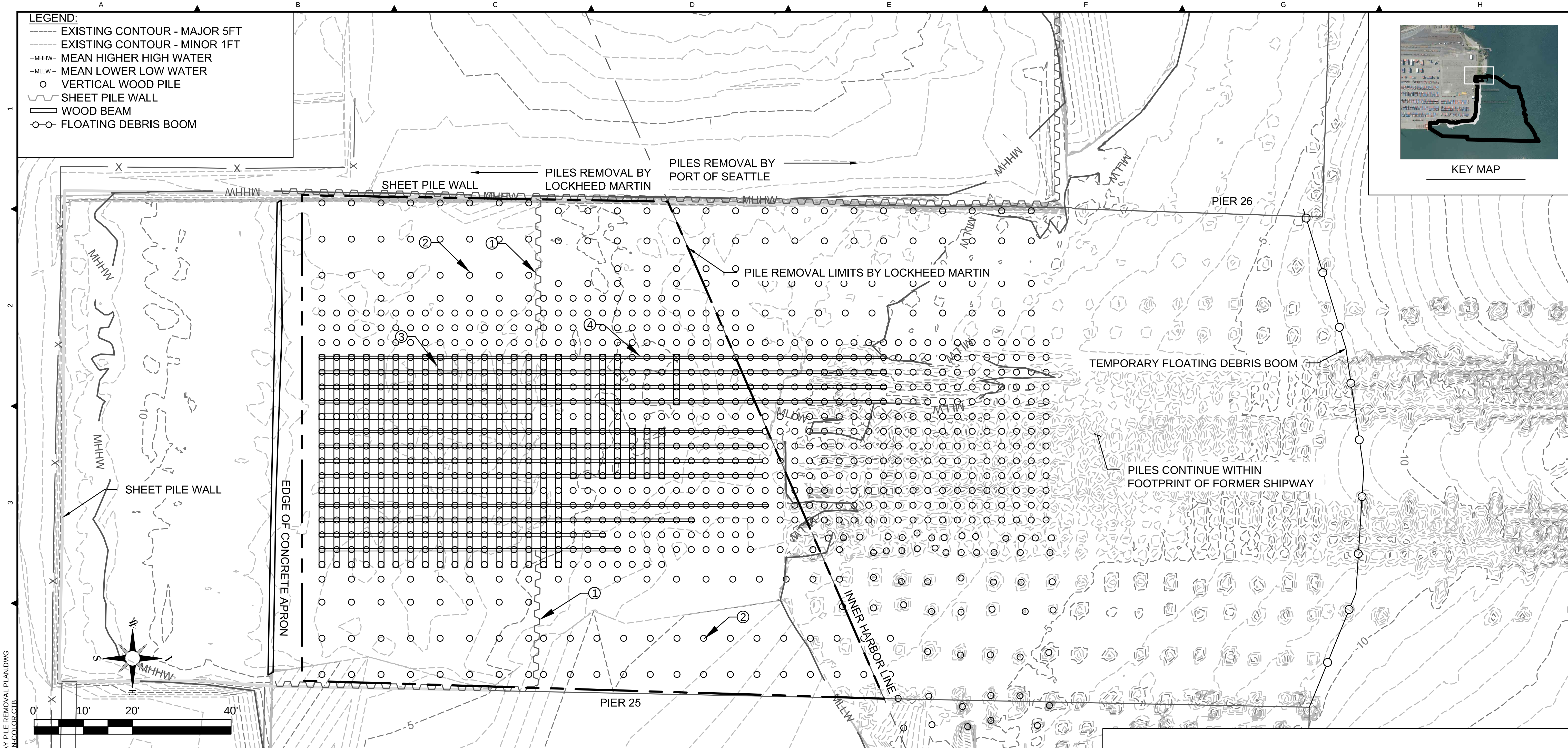
EXISTING CONDITIONS

DWG. NO.: C-18

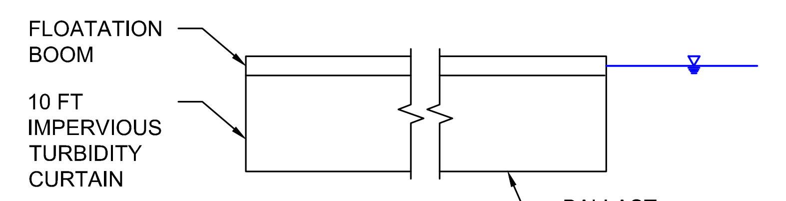
CREATED: 09/27/16

SHEET: 12 OF 44

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\FORMER SHIPWAY PILE REMOVAL PLAN.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:45 AM TT-BOTH-MAIN-COLOR.CTB



NOTES:
1. PHYSICAL FEATURES SHOWN MAY NOT DEPICT CURRENT CONDITIONS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND TOTAL QUANTITY OF MATERIALS TO BE REMOVED IN THE FIELD.
2. NO DEMOLITION DEBRIS SHALL BE ALLOWED TO ENTER THE BAY. CONTRACTOR WILL REMOVE ALL FLOATING DEBRIS FROM THE WATER AT THE END OF EACH WORK DAY.
3. LOCATION OF FLOATING DEBRIS BOOM MAY NEED TO BE ADJUSTED. PROVIDE ANCHORING AS REQUIRED TO PREVENT BOOM FROM DRIFTING OUTSIDE OF PROJECT WORK AREA LIMITS. FLOATING DEBRIS BOOM TIE OFF LOCATIONS TO BE DETERMINED BY THE CONTRACTOR. SEE DETAIL ON THIS SHEET.
4. REMOVAL INCLUDES DEBRIS, REMNANTS OF SHEET PILE WALL LATERAL AS IDENTIFIED 1, VERTICAL PILINGS 2, AND LATERAL WOOD BEAMS 3, AND LONGITUDINAL WOOD BEAMS 4.
5. REFER TO PORT OF SEATTLE TERMINAL 5 PILE REMOVAL AND DISPOSAL DESIGN DRAWINGS FOR INFORMATION OF SHIPWAY AND PIER DEMOLITION BY THE PORT OF SEATTLE.
6. PILE REMOVAL SHALL FOLLOW THE FOLLOWING GUIDANCE DOCUMENTS: WASHINGTON DEPARTMENT OF NATURAL RESOURCES DERELICT CREOSOTE PILING REMOVAL BEST MANAGEMENT PRACTICES FOR PILE REMOVAL & DISPOSAL, MARCH 19, 2013; EPA REGION 10 BEST MANAGEMENT PRACTICES FOR PILING REMOVAL AND PLACEMENT IN WASHINGTON STATE, FEBRUARY 18, 2016.



NOTE:
1. CONTRACTOR TO COORDINATE ANCHOR POINT LOCATIONS AND HARDWARE FOR ATTACHING BOOM TO GUIDE PILING.

FLOATING DEBRIS BOOM DETAIL
NTS

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A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

FORMER SHIPWAY

PILE REMOVAL PLAN

DWG. NO.: C-19

CREATED: 09/27/16

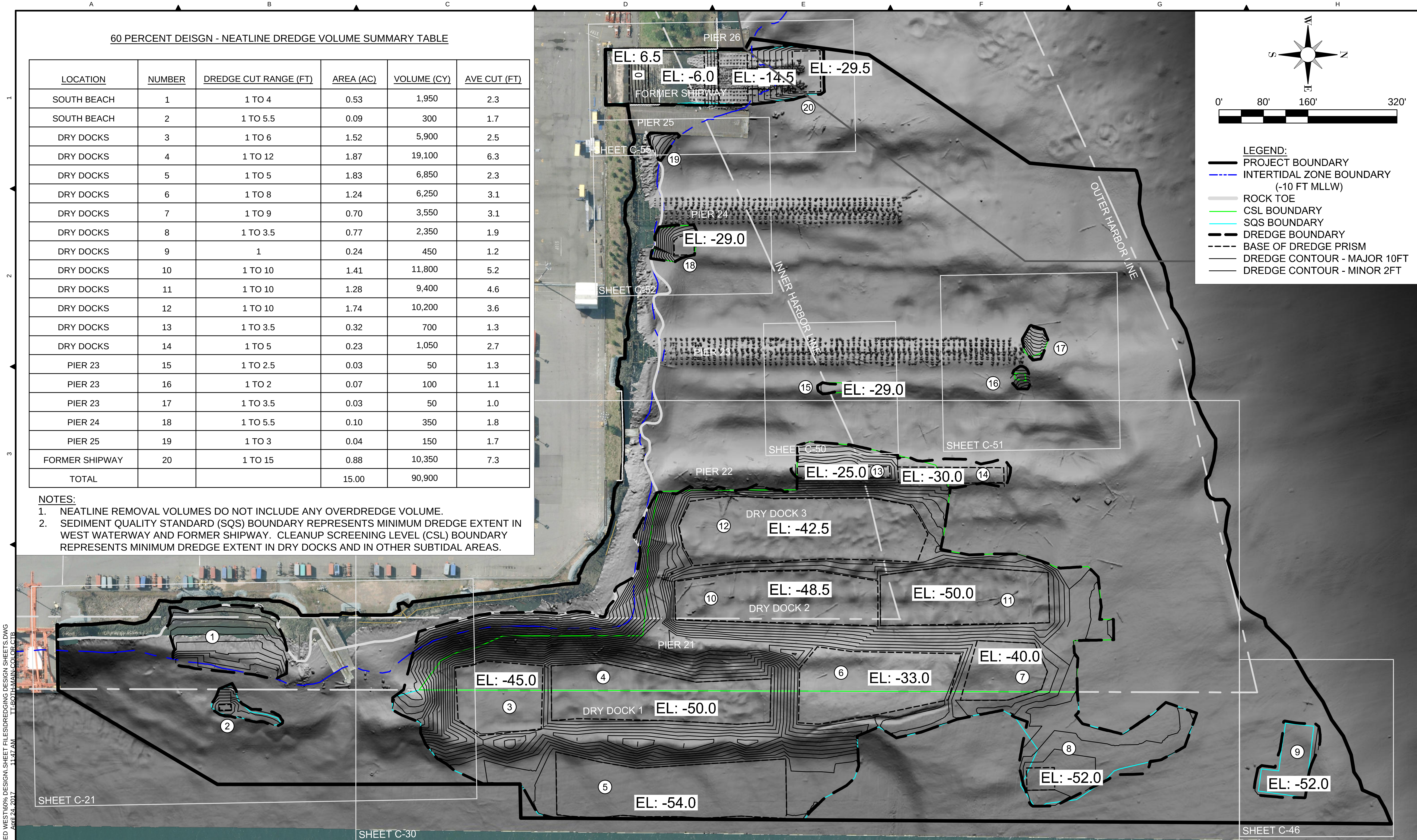
SHEET: 13 OF 44

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\FORMER SHIPWAY PILE REMOVAL PLAN.DWG
April 24, 2017 11:45 AM TT-BOTH-MAIN-COLOR.CTB
PLOT DETAILS: MATHIS, TOM

60 PERCENT DEISGN - NEATLINE DREDGE VOLUME SUMMARY TABLE

LOCATION	NUMBER	DREDGE CUT RANGE (FT)	AREA (AC)	VOLUME (CY)	AVE CUT (FT)
SOUTH BEACH	1	1 TO 4	0.53	1,950	2.3
SOUTH BEACH	2	1 TO 5.5	0.09	300	1.7
DRY DOCKS	3	1 TO 6	1.52	5,900	2.5
DRY DOCKS	4	1 TO 12	1.87	19,100	6.3
DRY DOCKS	5	1 TO 5	1.83	6,850	2.3
DRY DOCKS	6	1 TO 8	1.24	6,250	3.1
DRY DOCKS	7	1 TO 9	0.70	3,550	3.1
DRY DOCKS	8	1 TO 3.5	0.77	2,350	1.9
DRY DOCKS	9	1	0.24	450	1.2
DRY DOCKS	10	1 TO 10	1.41	11,800	5.2
DRY DOCKS	11	1 TO 10	1.28	9,400	4.6
DRY DOCKS	12	1 TO 10	1.74	10,200	3.6
DRY DOCKS	13	1 TO 3.5	0.32	700	1.3
DRY DOCKS	14	1 TO 5	0.23	1,050	2.7
PIER 23	15	1 TO 2.5	0.03	50	1.3
PIER 23	16	1 TO 2	0.07	100	1.1
PIER 23	17	1 TO 3.5	0.03	50	1.0
PIER 24	18	1 TO 5.5	0.10	350	1.8
PIER 25	19	1 TO 3	0.04	150	1.7
FORMER SHIPWAY	20	1 TO 15	0.88	10,350	7.3
TOTAL			15.00	90,900	

NOTES:
1. NEATLINE REMOVAL VOLUMES DO NOT INCLUDE ANY OVERDREDGE VOLUME.
2. SEDIMENT QUALITY STANDARD (SQS) BOUNDARY REPRESENTS MINIMUM DREDGE EXTENT IN WEST WATERWAY AND FORMER SHIPWAY. CLEANUP SCREENING LEVEL (CSL) BOUNDARY REPRESENTS MINIMUM DREDGE EXTENT IN DRY DOCKS AND IN OTHER SUBTIDAL AREAS.



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A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

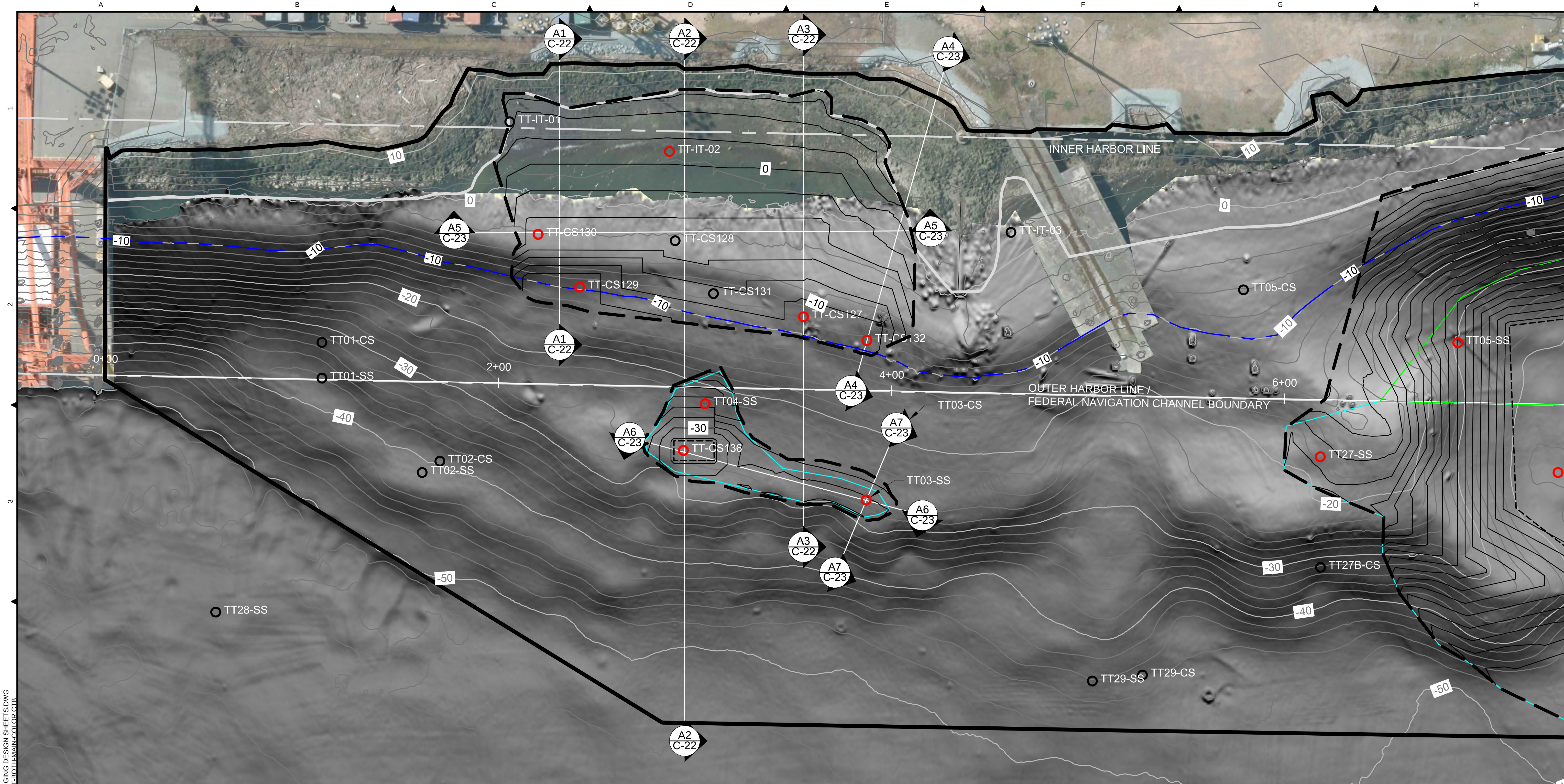
DREDGE PLAN

OVERVIEW

DWG. NO.: C-20

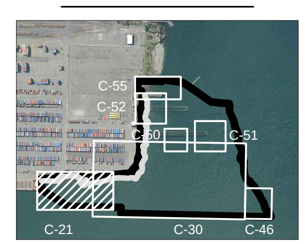
CREATED: 09/27/16

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DREDGING DESIGN SHEETS.DWG
April 24, 2017 11:47 AM TT-BOTH-MAIN-COLOR.CTB
PLOT DETAILS: MATHIS, TOM



NOTE:
1. REFER TO DEBRIS HANDLING PLAN (C-15 TO C-17) FOR EXISTING DEBRIS IN DREDGE AREAS.

KEY MAP



0' 25' 50' 100'

LEGEND:
- PROJECT BOUNDARY
- INTERTIDAL ZONE BOUNDARY (-10 FT MLLW)
- ROCK TOE
- CSL BOUNDARY
- SQS BOUNDARY
- DREDGE BOUNDARY
- BASE OF DREDGE PRISM
- DREDGE CONTOUR - MAJOR 10FT
- DREDGE CONTOUR - MINOR 2FT
- SEDIMENT SAMPLE < SQS
- SEDIMENT SAMPLE ≥ SQS OR CSL
- EXISTING CONTOUR - MAJOR 10FT
- EXISTING CONTOUR - MINOR 2FT

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WEST SEATTLE
SUPERFUND SITE

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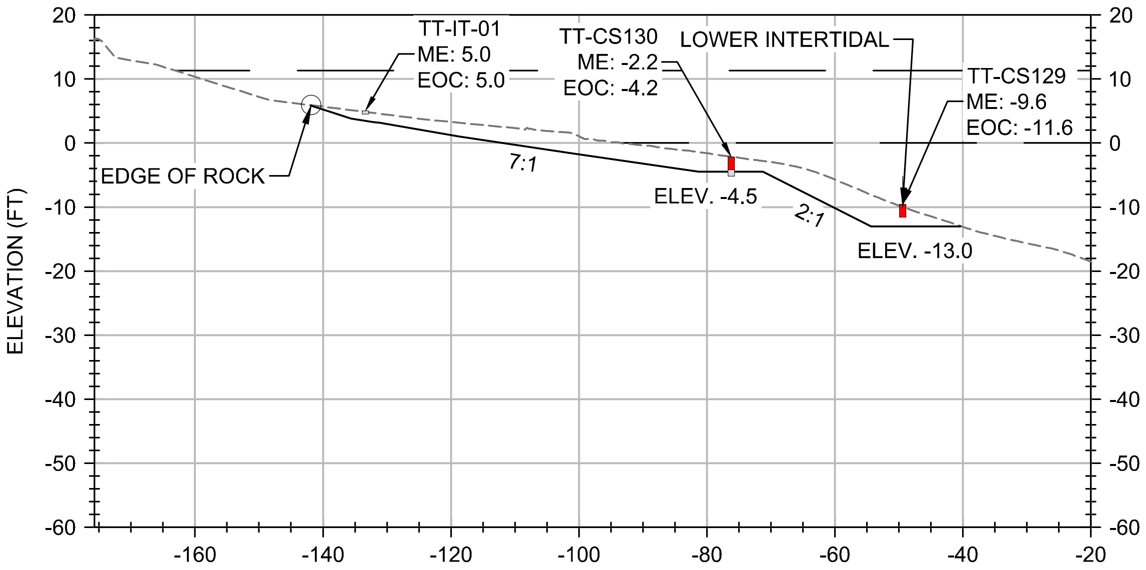
LOCKHEED WEST SEATTLE
SITE REMEDIATION

DREDGE PLAN
SOUTH BEACH
PLAN VIEW

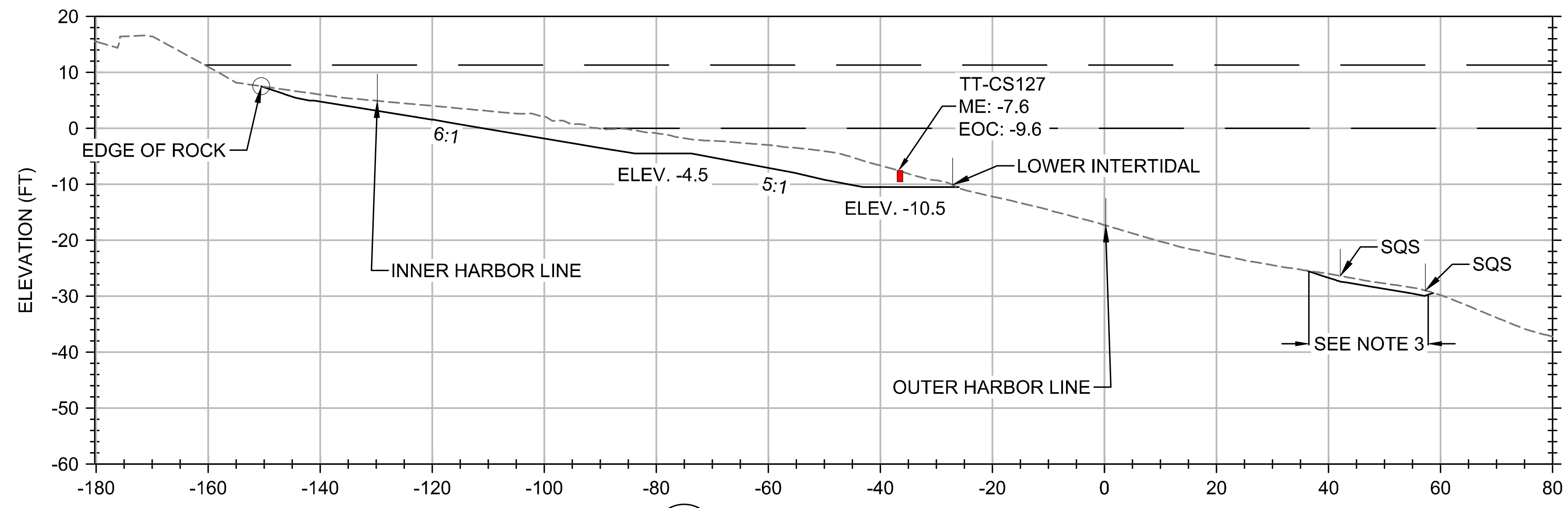
DWG. NO.: C-21

CREATED: 09/27/16

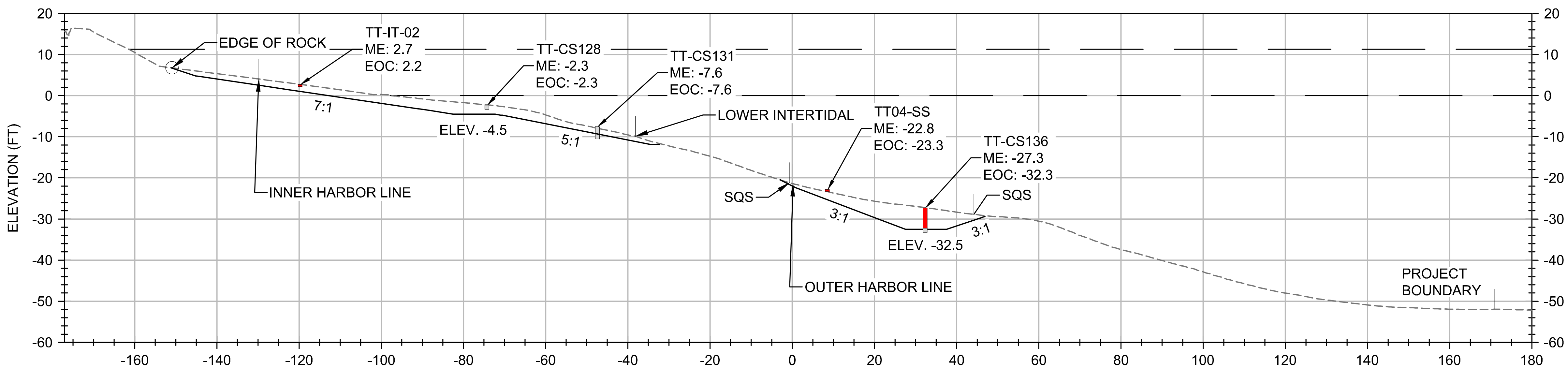
Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DREDGING DESIGN SHEETS.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:47 AM
TT-BOTH-MAIN-COLOR.CTB



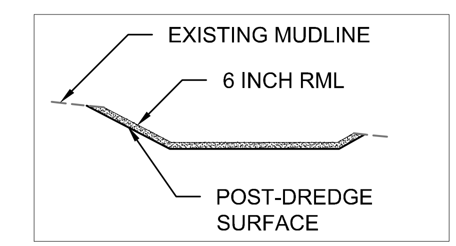
A1 / C-21 SCALE 1" = 30', 1H:1V



A3 / C-21 SCALE 1" = 30', 1H:1V

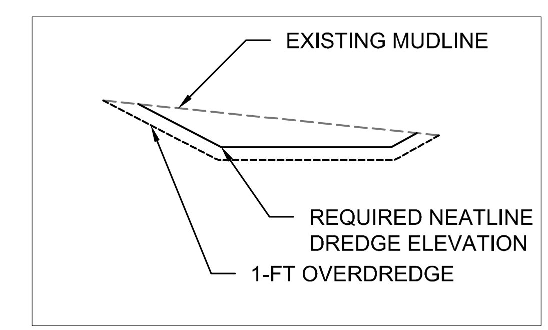


A2 / C-21 SCALE 1" = 30', 1H:1V



RESIDUAL MANAGEMENT LAYER DETAIL

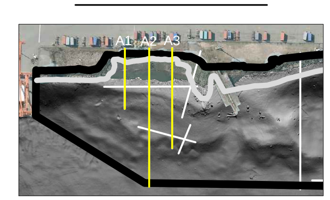
NTS



OVERDREDGE DETAIL

NTS

KEY MAP



NOTE:

1. EXCAVATED AREAS IN INTERTIDAL ZONE (FROM 11.3FT MLLW TO -10FT MLLW) TO BE BACKFILLED TO EXISTING GRADE AFTER REMOVAL. REFER TO SOUTH BEACH INTERTIDAL BACKFILL DRAWING (C-60).
2. RESIDUAL MANAGEMENT LAYER WILL BE PLACED OVER SUBTIDAL DREDGED AREAS BELOW -10FT MLLW.
3. MAINTAIN 1 FOOT DREDGE CUT.
4. TOP OF SOME CORES MAY NOT COINCIDE WITH THE EXISTING MUDLINE DUE TO SAMPLE LOCATION OFFSET FROM THE CROSS SECTION.

LEGEND:

- EXISTING BATHYMETRY
- SEDIMENT SAMPLE ≥ SQS OR CSL
- SEDIMENT SAMPLE < SQS
- MHHW (11.3FT) & MLLW (0.0FT)
- DREDGE NEATLINE

TETRA TECH
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19803 North Creek Parkway
Bothell, Washington 98011
Phone: 425-482-7600 Fax: 425-482-7652

LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

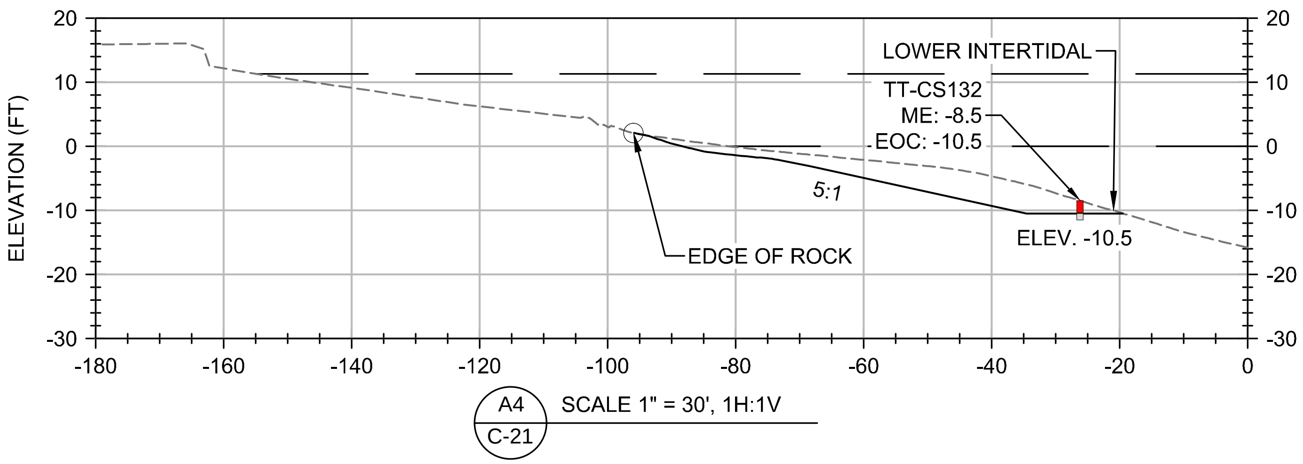
DREDGE PLAN

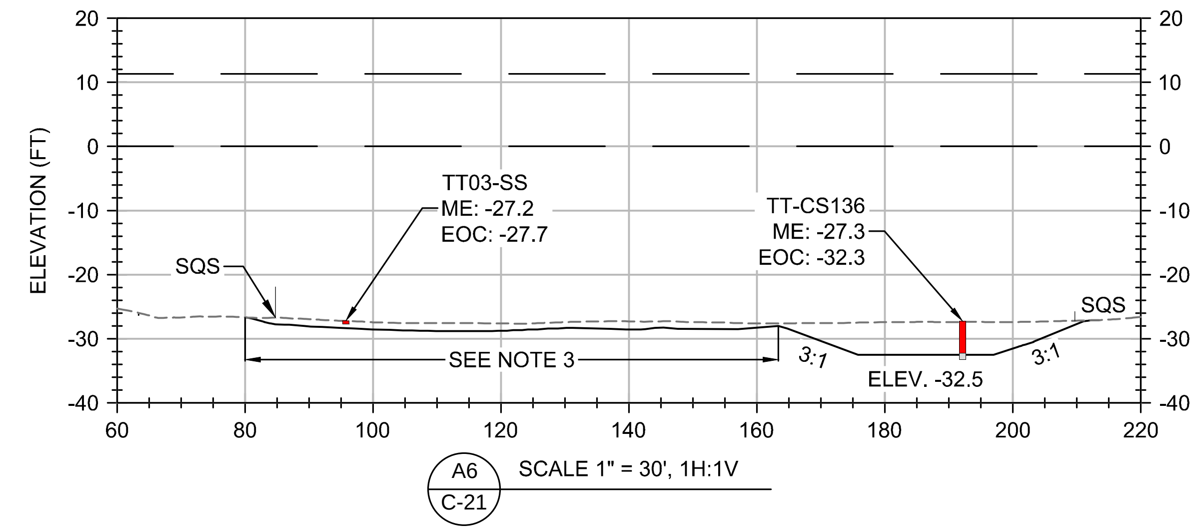
SOUTH BEACH CROSS SECTIONS

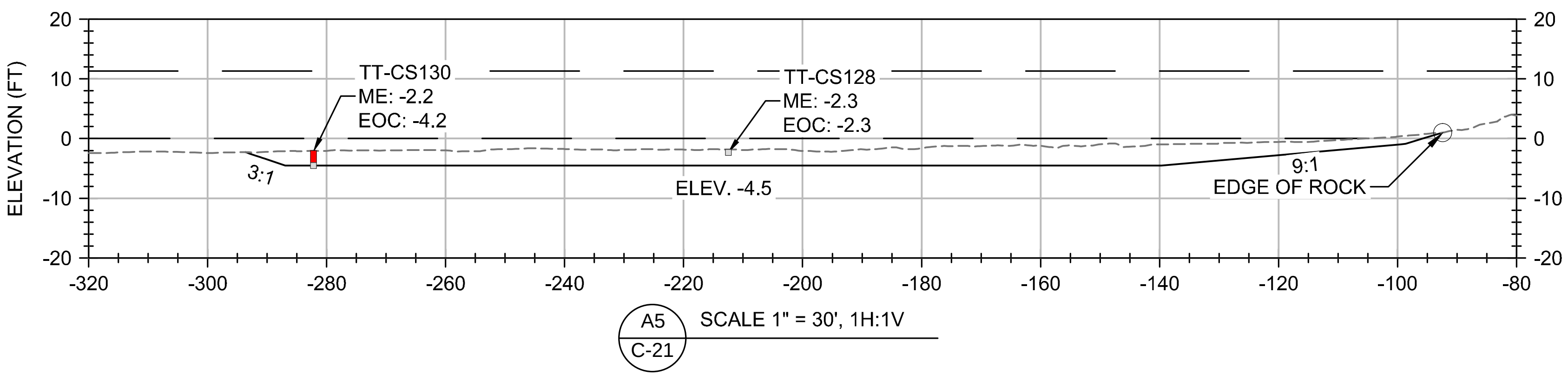
DWG. NO.: C-22

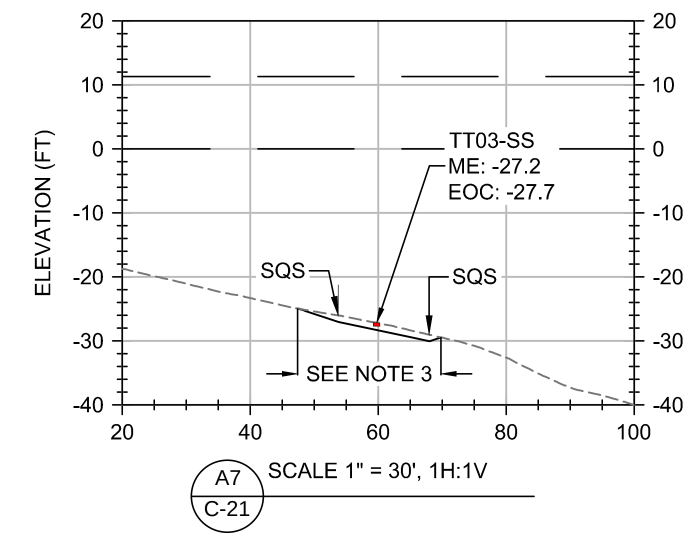
CREATED: 09/27/16

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DREDGING DESIGN SHEETS.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 3:01 PM

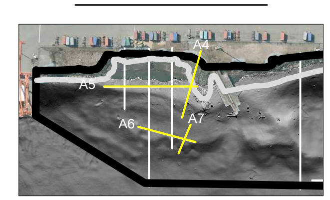








KEY MAP



NOTE:
1. EXCAVATED AREAS IN INTERTIDAL ZONE (FROM 11.3FT MLLW TO -10FT MLLW) TO BE BACKFILLED TO EXISTING GRADE AFTER REMOVAL. REFER TO SOUTH BEACH INTERTIDAL BACKFILL DRAWING (C-60).
2. RESIDUAL MANAGEMENT LAYER WILL BE PLACED OVER SUBTIDAL DREDGED AREAS BELOW -10FT MLLW.
3. MAINTAIN 1 FOOT DREDGE CUT.

LEGEND:
- EXISTING BATHYMETRY
- SEDIMENT SAMPLE ≥ SQS OR CSL
- SEDIMENT SAMPLE < SQS
- MHHW (11.3FT) & MLLW (0.0FT)
- DREDGE NEATLINE

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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

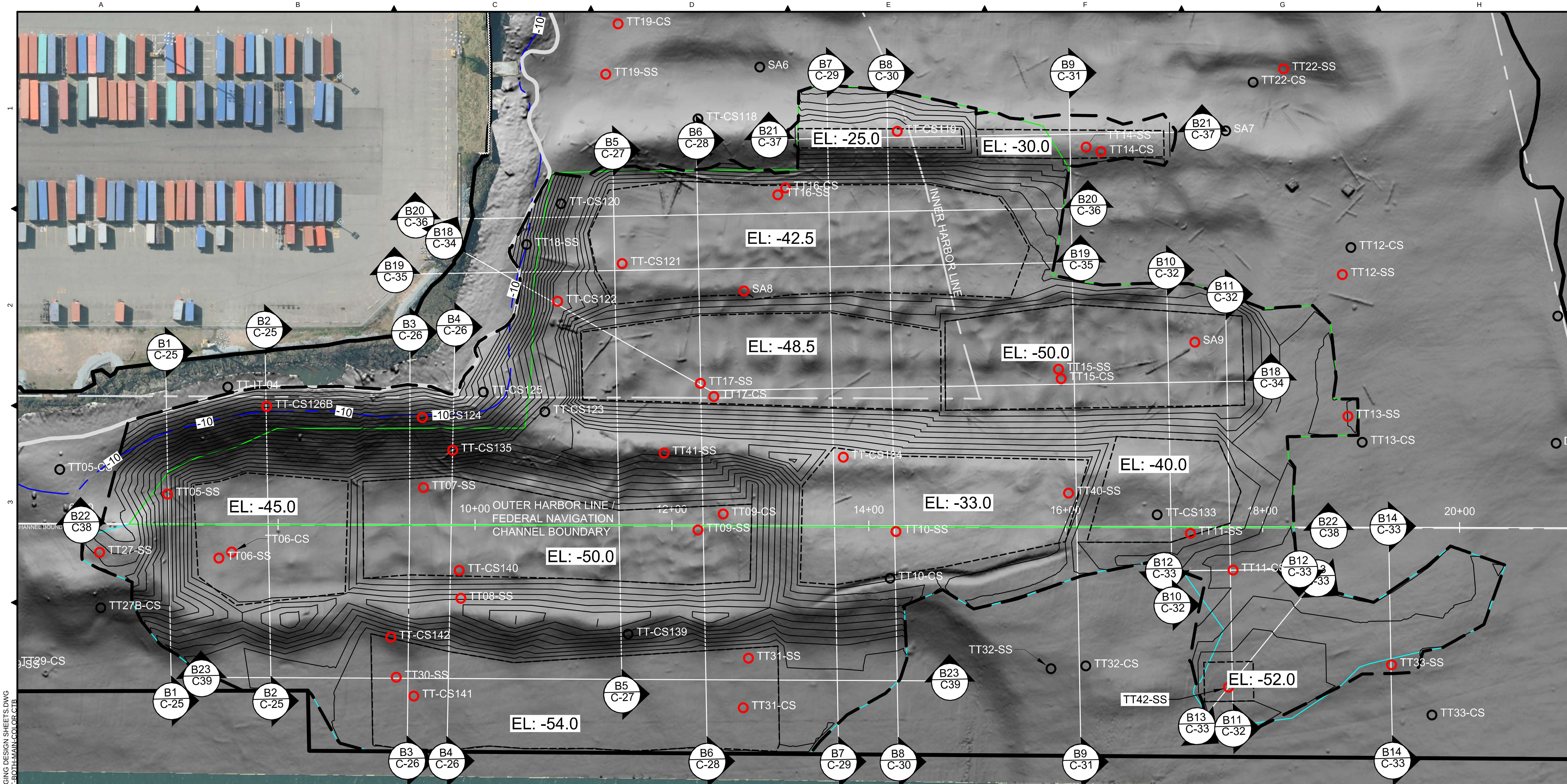
REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

DREDGE PLAN
SOUTH BEACH
CROSS SECTIONS

DWG. NO.: C-23
CREATED: 09/27/16

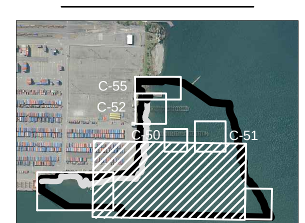
Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DREDGING DESIGN SHEETS.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:48 AM TT-BOTH-MAIN-COLOR.CTB



NOTE:

1. REFER TO DEBRIS HANDLING PLAN (C-15 TO C-17) FOR EXISTING DEBRIS IN DREDGE AREAS.

KEY MAP



0' 50' 100' 200'

LEGEND:

- PROJECT BOUNDARY
- INTERTIDAL ZONE BOUNDARY (-10 FT MLLW)
- ROCK TOE
- CSL BOUNDARY
- SQS BOUNDARY
- DREDGE BOUNDARY
- BASE OF DREDGE PRISM
- DREDGE CONTOUR - MAJOR 10FT
- DREDGE CONTOUR - MINOR 2FT
- SEDIMENT SAMPLE < SQS
- SEDIMENT SAMPLE ≥ SQS OR CSL
- EXISTING CONTOUR - MAJOR 10FT
- EXISTING CONTOUR - MINOR 2FT

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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

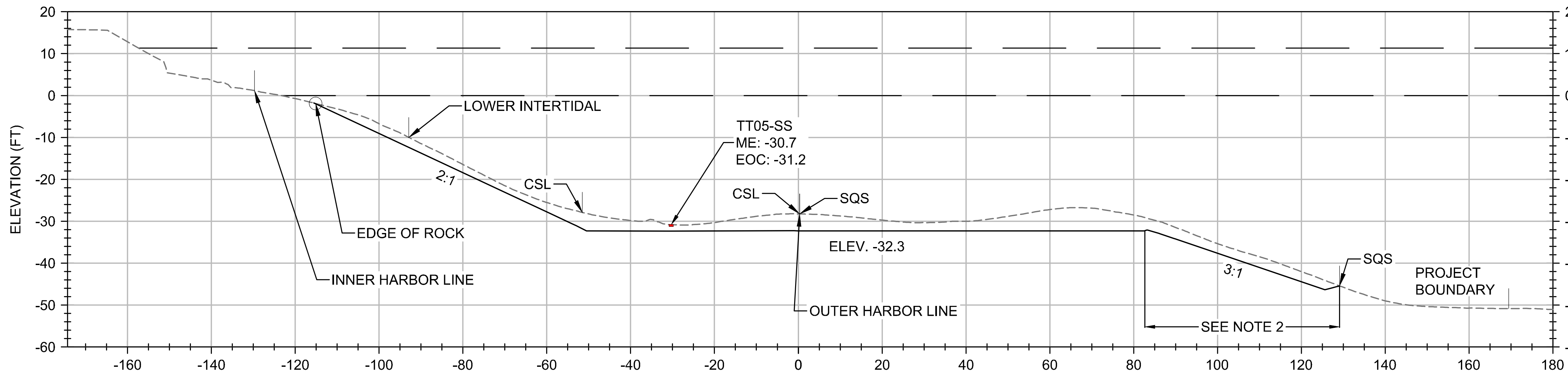
DREDGE PLAN

DRY DOCKS 1, 2, & 3
PLAN VIEW

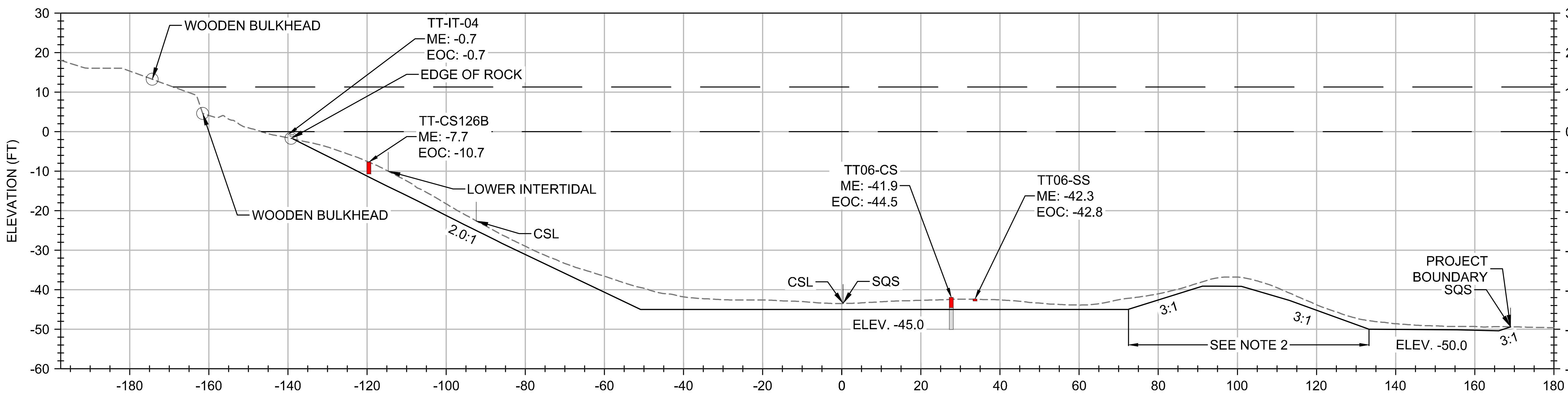
DWG. NO.: C-24

CREATED: 09/27/16

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DREDGING DESIGN SHEETS.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:48 AM TT-BOTH-MAIN-COLOR.CTB



B1
C-24
SCALE 1" = 30', 1H:1V

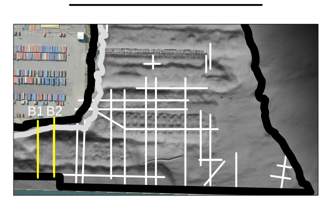


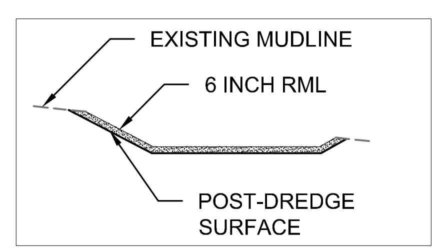
B2
C-24
SCALE 1" = 30', 1H:1V

NOTE:

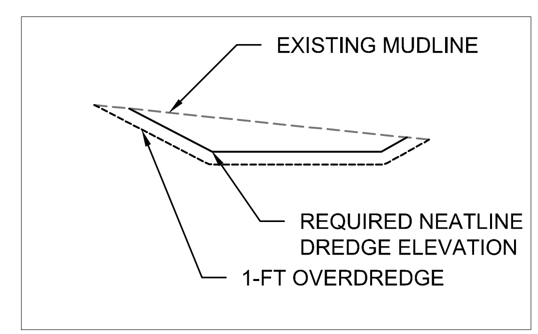
1. SHORELINE STABILIZATION RIPRAP WILL BE PLACED OVER SHORELINE DRY DOCKS DREDGE SLOPES. REFER TO C-50. RESIDUAL MANAGEMENT LAYER WILL BE PLACED OVER THE REST OF DREDGED AREAS.
2. MAINTAIN 1 FOOT DREDGE CUT.
3. TOP OF SOME CORES MAY NOT COINCIDE WITH THE EXISTING MUDLINE DUE TO SAMPLE LOCATION OFFSET FROM THE CROSS SECTION.

KEY MAP





RESIDUAL MANAGEMENT LAYER DETAIL
NTS



OVERDREDGE DETAIL
NTS

LEGEND:
- EXISTING BATHYMETRY
- SEDIMENT SAMPLE ≥ SQS OR CSL
- SEDIMENT SAMPLE < SQS
- MHHW (11.3FT) & MLLW (0.0FT)
- DREDGE NEATLINE

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LOCKHEED MARTIN

LOCKHEED
WEST SEATTLE
SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE
SITE REMEDIATION

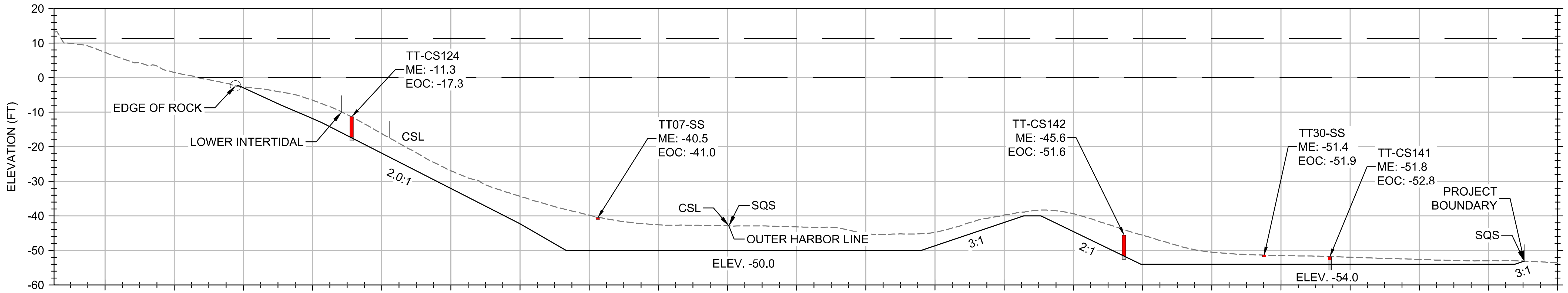
DREDGE PLAN

DRY DOCKS 1, 2, & 3
CROSS SECTIONS

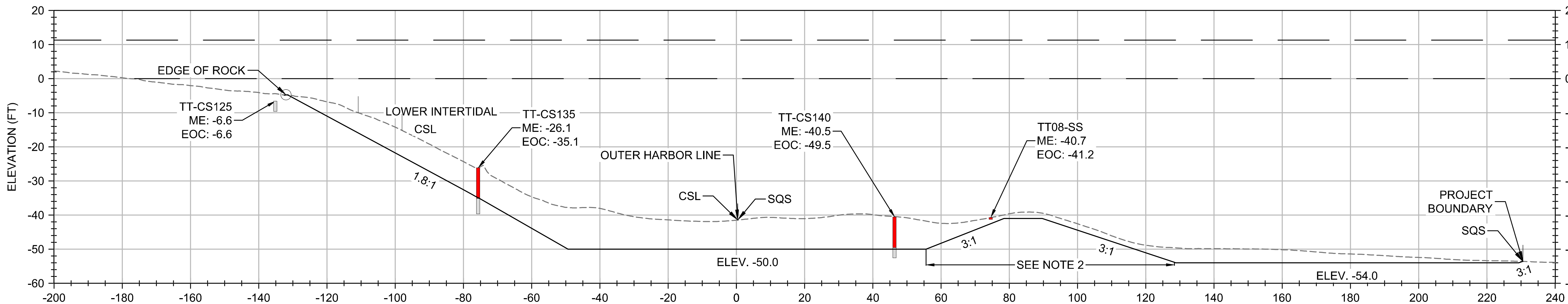
DWG. NO.: C-25

CREATED: 09/27/16

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DREDGING DESIGN SHEETS.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:49 AM TT-BOTH-MAIN-COLOR.CTB



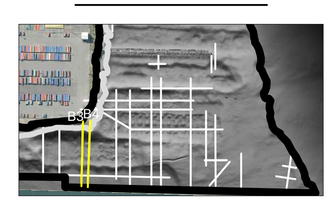
B3 / C-30 SCALE 1" = 30', 1H:1V



B4 / C-30 SCALE 1" = 30', 1H:1V

NOTE:
1. SHORELINE STABILIZATION RIPRAP WILL BE PLACED OVER SHORELINE DRY DOCK DREDGE SLOPES. REFER TO C-50. RESIDUAL MANAGEMENT LAYER WILL BE PLACED OVER THE REST OF DREDGED AREAS.
2. MAINTAIN 1 FOOT DREDGE CUT.

KEY MAP



LEGEND:
- EXISTING BATHYMETRY
- SEDIMENT SAMPLE ≥ SQS OR CSL
- SEDIMENT SAMPLE < SQS
- MHHW (11.3FT) & MLLW (0.0FT)
- DREDGE NEATLINE

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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

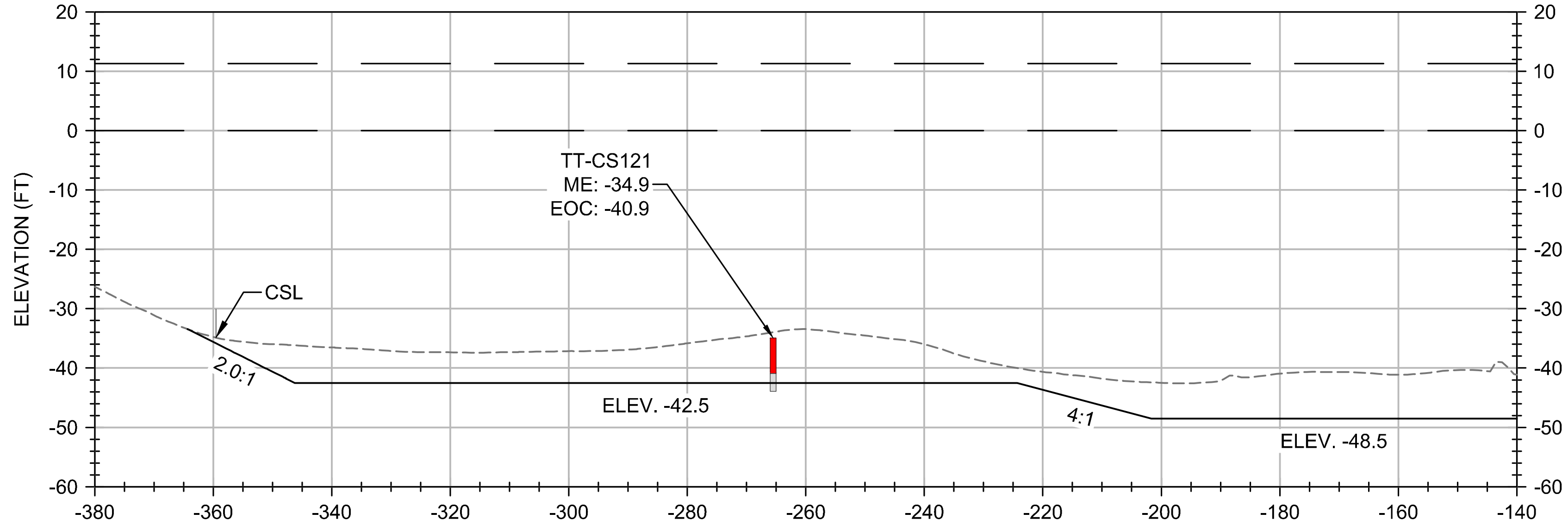
DREDGE PLAN

DRY DOCKS 1, 2, & 3 CROSS SECTIONS

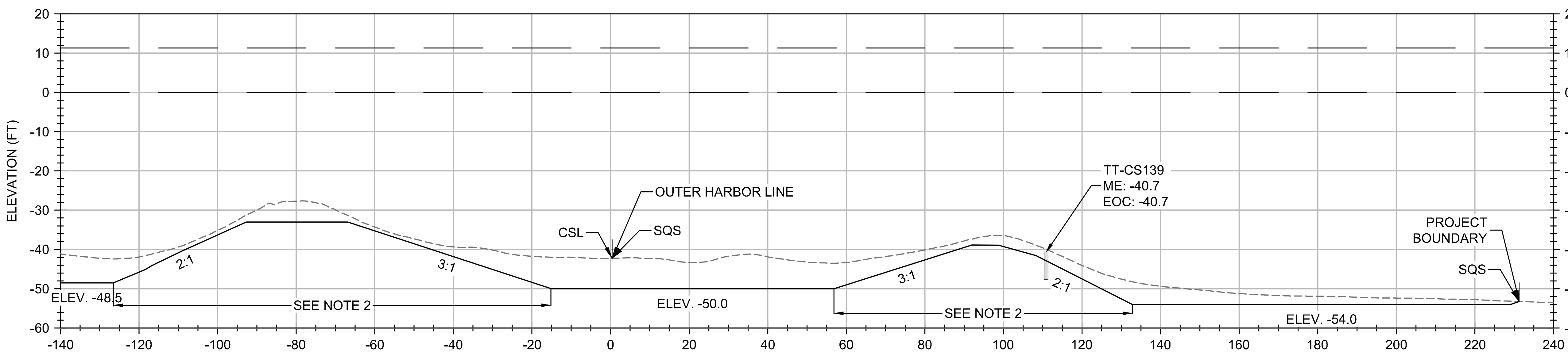
DWG. NO.: C-26

CREATED: 09/27/16

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DREDGING DESIGN SHEETS.DWG April 24, 2017 11:49 AM
PLOT DETAILS: MATHIS, TOM TT-BOTH-MAIN-COLOR.CTB



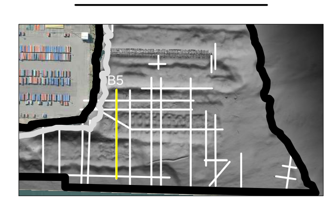
B5 / C-30 SCALE 1" = 30', 1H:1V



B5 / C-30 SCALE 1" = 30', 1H:1V

NOTE:
1. RESIDUAL MANAGEMENT LAYER WILL BE PLACED OVER THE DREDGED AREAS.
2. MAINTAIN 1 FOOT DREDGE CUT.

KEY MAP



LEGEND:
- EXISTING BATHYMETRY
- SEDIMENT SAMPLE ≥ SQS OR CSL
- SEDIMENT SAMPLE < SQS
- MHHW (11.3FT) & MLLW (0.0FT)
- DREDGE NEATLINE

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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

DREDGE PLAN

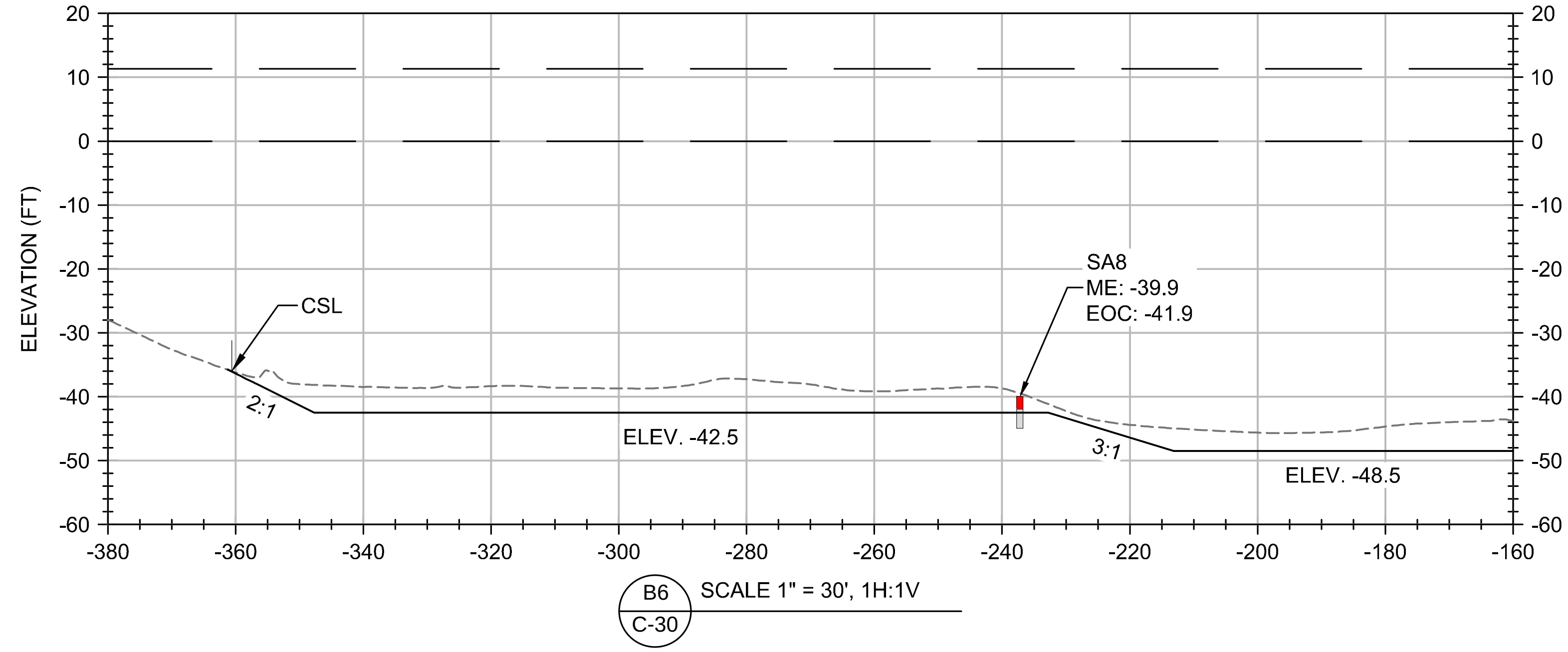
DRY DOCKS 1, 2, & 3 CROSS SECTIONS

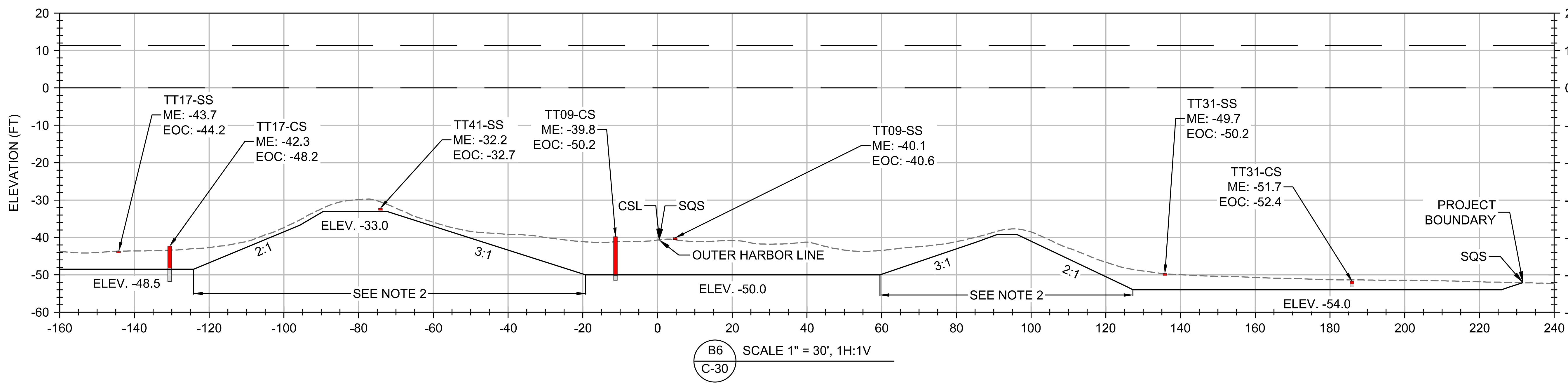
DWG. NO.: C-27

CREATED: 09/27/16

SHEET: 21 OF 44

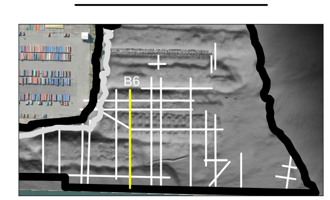
Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DREDGING DESIGN SHEETS.DWG April 24, 2017 11:49 AM
PLOT DETAILS: MATHIS, TOM TT-BOTH-MAIN-COLOR.CTB





NOTE:
1. RESIDUAL MANAGEMENT LAYER WILL BE PLACED OVER THE DREDGED AREAS.
2. MAINTAIN 1 FOOT DREDGE CUT.

KEY MAP



LEGEND:
- EXISTING BATHYMETRY
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- DREDGE NEATLINE

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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

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REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

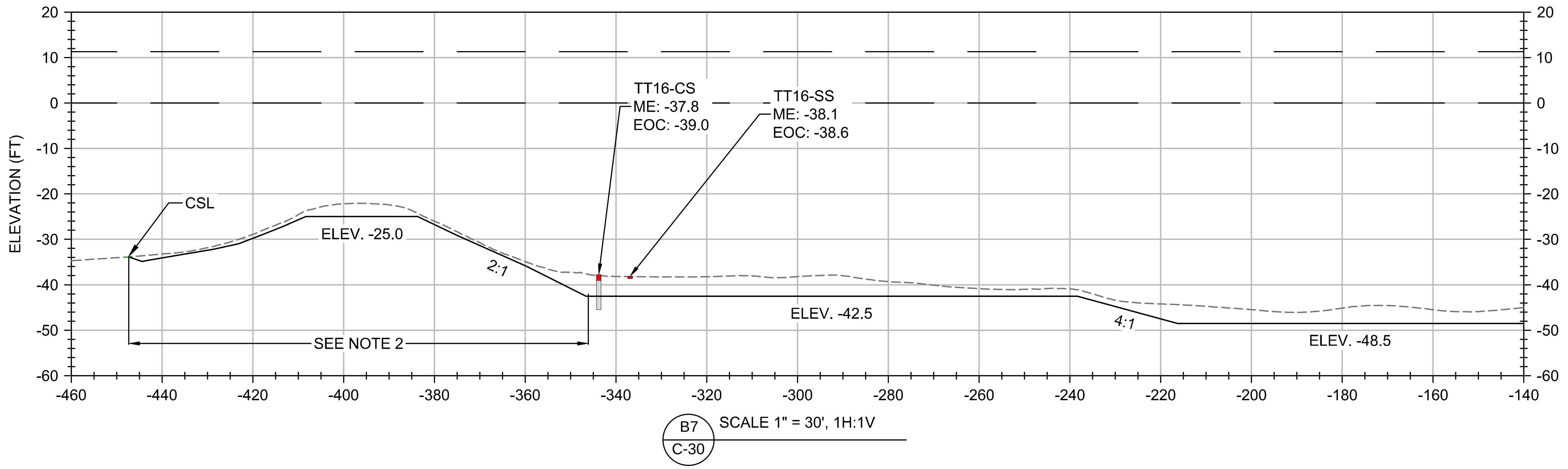
LOCKHEED WEST SEATTLE
SITE REMEDIATION

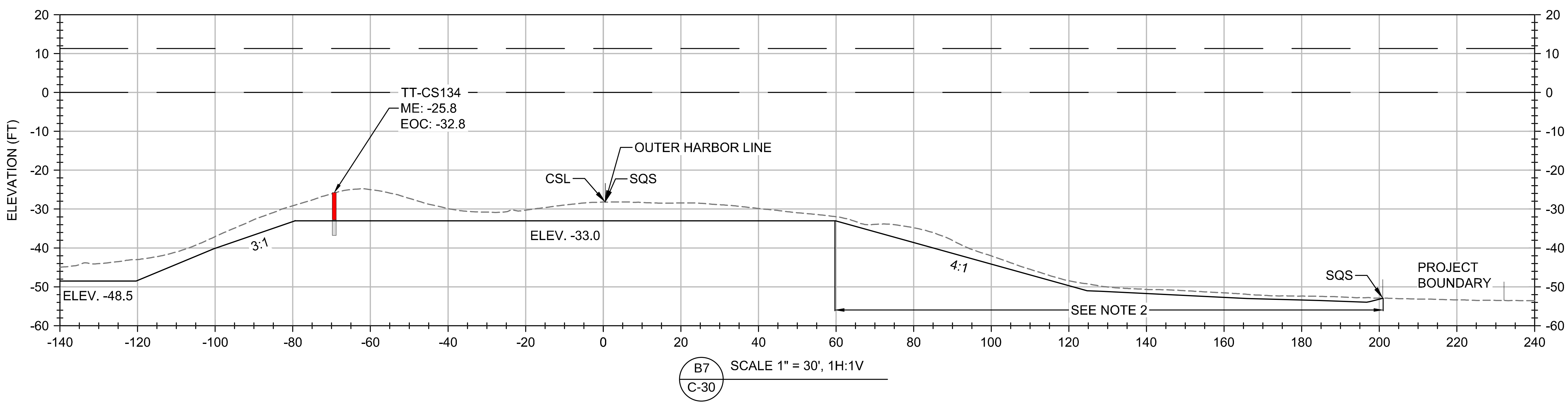
DREDGE PLAN

DRY DOCKS 1, 2, & 3
CROSS SECTIONS

DWG. NO.: C-28
CREATED: 09/27/16

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\.SHEET FILES\DREDGING DESIGN SHEETS.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:50 AM TT-BOTH-MAIN-COLOR.CTB

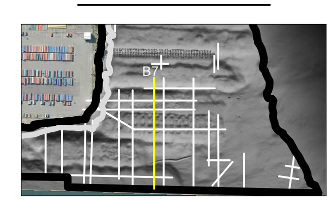




NOTE:

1. RESIDUAL MANAGEMENT LAYER WILL BE PLACED OVER THE DREDGED AREAS.
2. MAINTAIN 1 FOOT DREDGE CUT.

KEY MAP



LEGEND:

- EXISTING BATHYMETRY
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- SEDIMENT SAMPLE < SQS
- MHHW (11.3FT) & MLLW (0.0FT)
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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
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A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

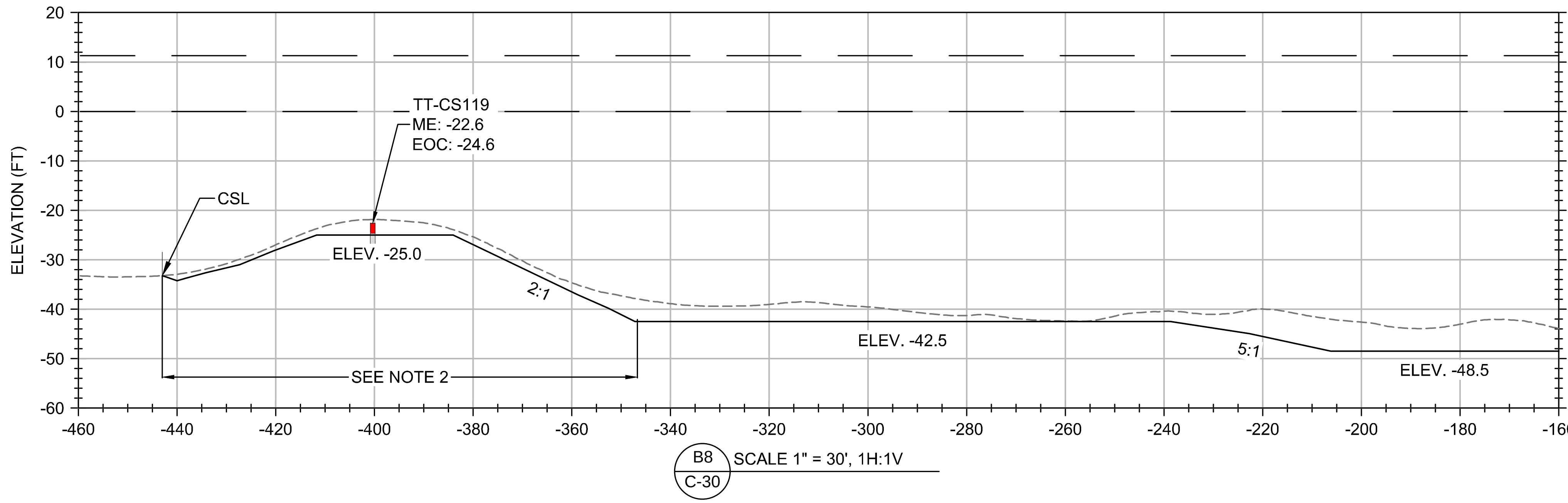
DREDGE PLAN

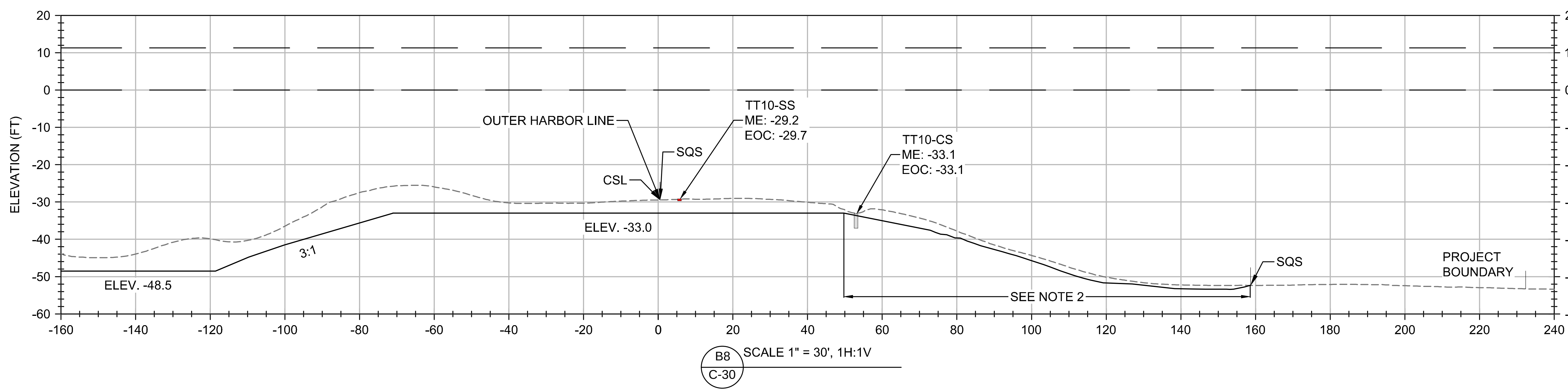
DRY DOCKS 1, 2, & 3
CROSS SECTIONS

DWG. NO.: C-29

CREATED: 09/27/16

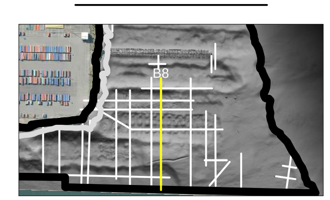
Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DREDGING DESIGN SHEETS.DWG April 24, 2017 11:50 AM
PLOT DETAILS: MATHIS, TOM TT-BOTH-MAIN-COLOR.CTB





NOTE:
1. RESIDUAL MANAGEMENT LAYER WILL BE PLACED OVER THE DREDGED AREAS.
2. MAINTAIN 1 FOOT DREDGE CUT.

KEY MAP



LEGEND:
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- SEDIMENT SAMPLE < SQS
- MHHW (11.3FT) & MLLW (0.0FT)
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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
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B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

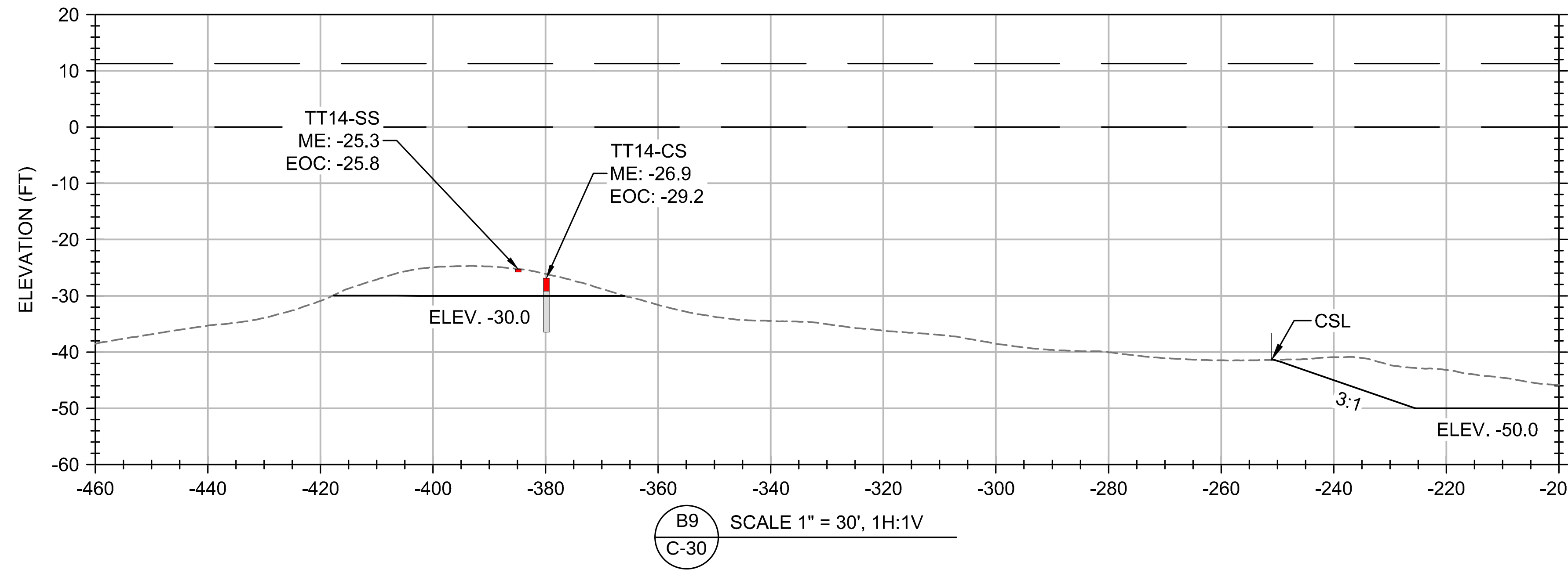
DREDGE PLAN

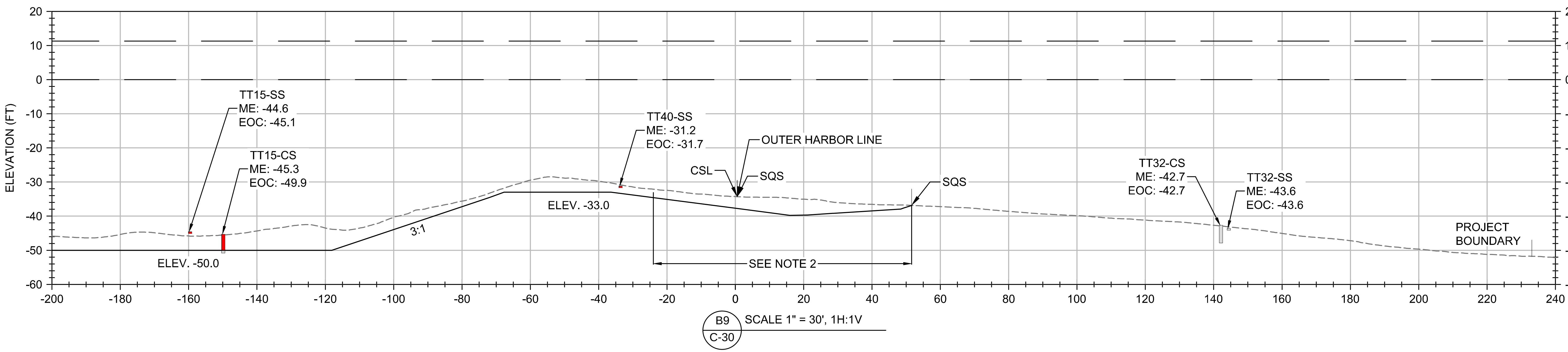
DRY DOCKS 1, 2, & 3 CROSS SECTIONS

DWG. NO.: C-30

CREATED: 09/27/16

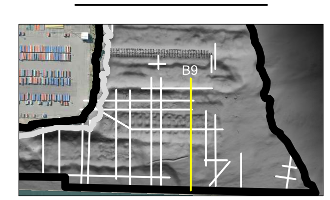
Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DREDGING DESIGN SHEETS.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:50 AM TT-BOTH-MAIN-COLOR.CTB





NOTE:
1. RESIDUAL MANAGEMENT LAYER WILL BE PLACED OVER THE DREDGED AREAS.
2. MAINTAIN 1 FOOT DREDGE CUT.

KEY MAP



LEGEND:
- EXISTING BATHYMETRY
- SEDIMENT SAMPLE ≥ SQS OR CSL
- SEDIMENT SAMPLE < SQS
- MHHW (11.3FT) & MLLW (0.0FT)
- DREDGE NEATLINE

TETRA TECH
www.tetratech.com
19803 North Creek Parkway
Bothell, Washington 98011
Phone: 425-482-7600 Fax: 425-482-7652

LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

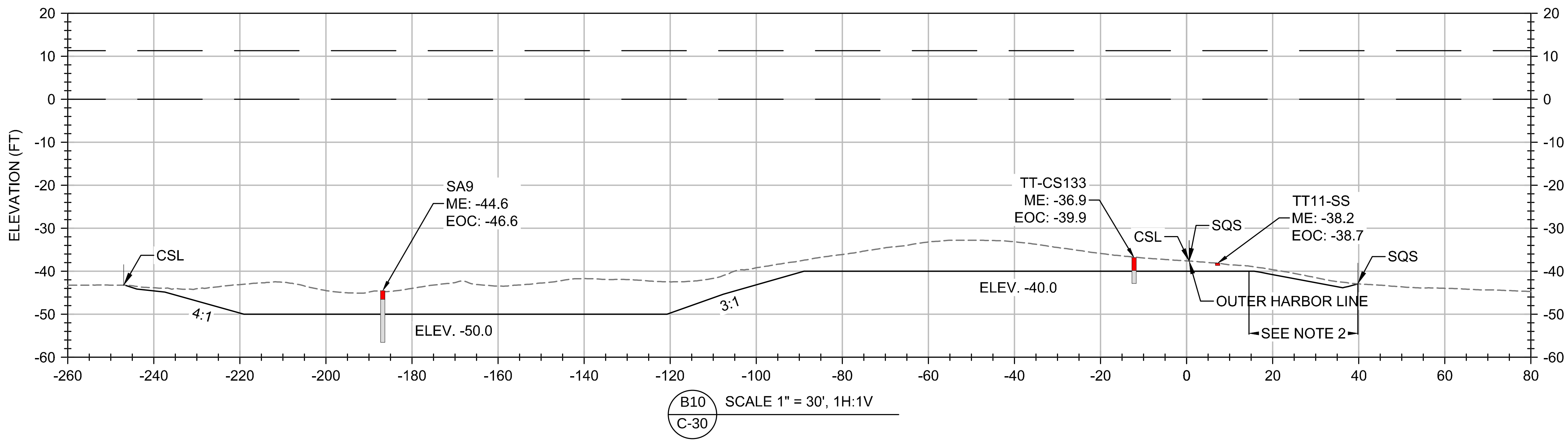
DREDGE PLAN

DRY DOCKS 1, 2, & 3 CROSS SECTIONS

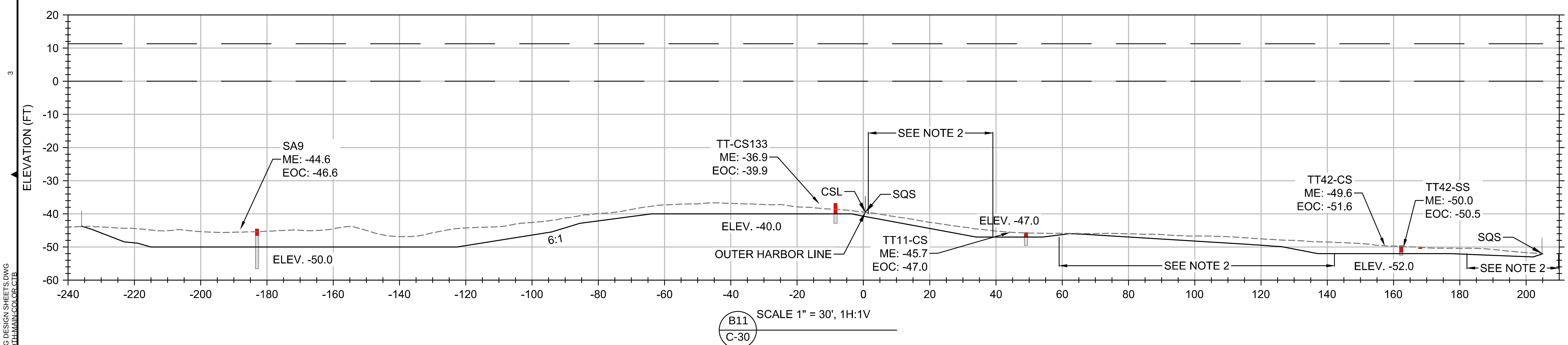
DWG. NO.: C-31

CREATED: 09/27/16

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DREDGING DESIGN SHEETS.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:51 AM TT-BOTH-MAIN-COLOR.CTB



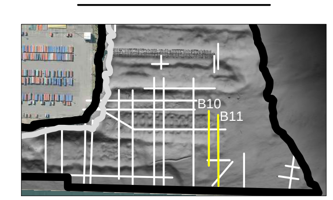
B10 / C-30 SCALE 1" = 30', 1H:1V



B11 / C-30 SCALE 1" = 30', 1H:1V

NOTE:
1. RESIDUAL MANAGEMENT LAYER WILL BE PLACED OVER THE DREDGED AREAS.
2. MAINTAIN 1 FOOT DREDGE CUT.
3. TOP OF SOME CORES MAY NOT COINCIDE WITH THE EXISTING MUDLINE DUE TO SAMPLE LOCATION OFFSET FROM THE CROSS SECTION.

KEY MAP



LEGEND:
- EXISTING BATHYMETRY
- SEDIMENT SAMPLE ≥ SQS OR CSL
- SEDIMENT SAMPLE < SQS
- MHHW (11.3FT) & MLLW (0.0FT)
- DREDGE NEATLINE

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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

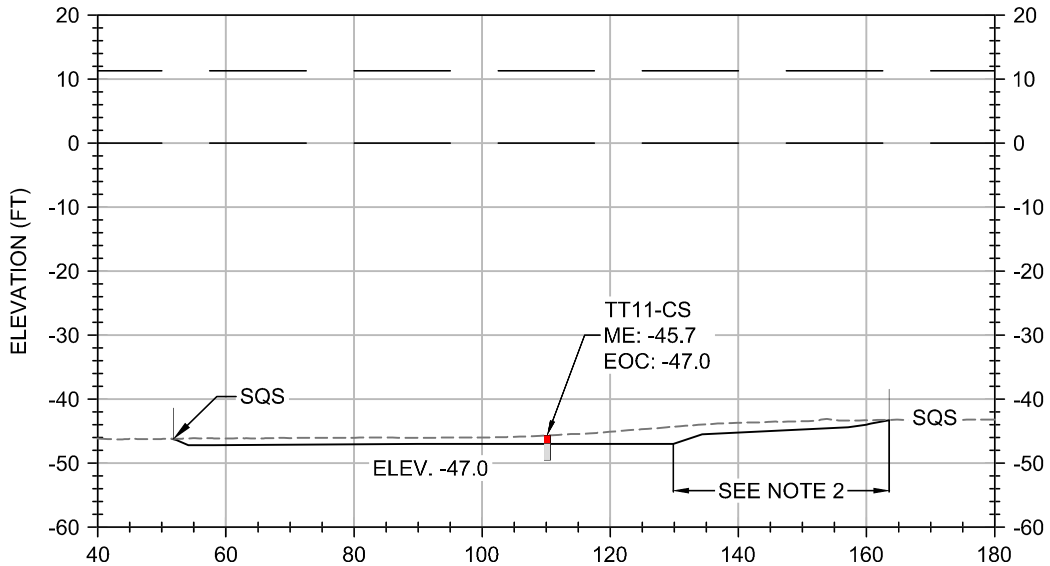
LOCKHEED WEST SEATTLE SITE REMEDIATION

DREDGE PLAN

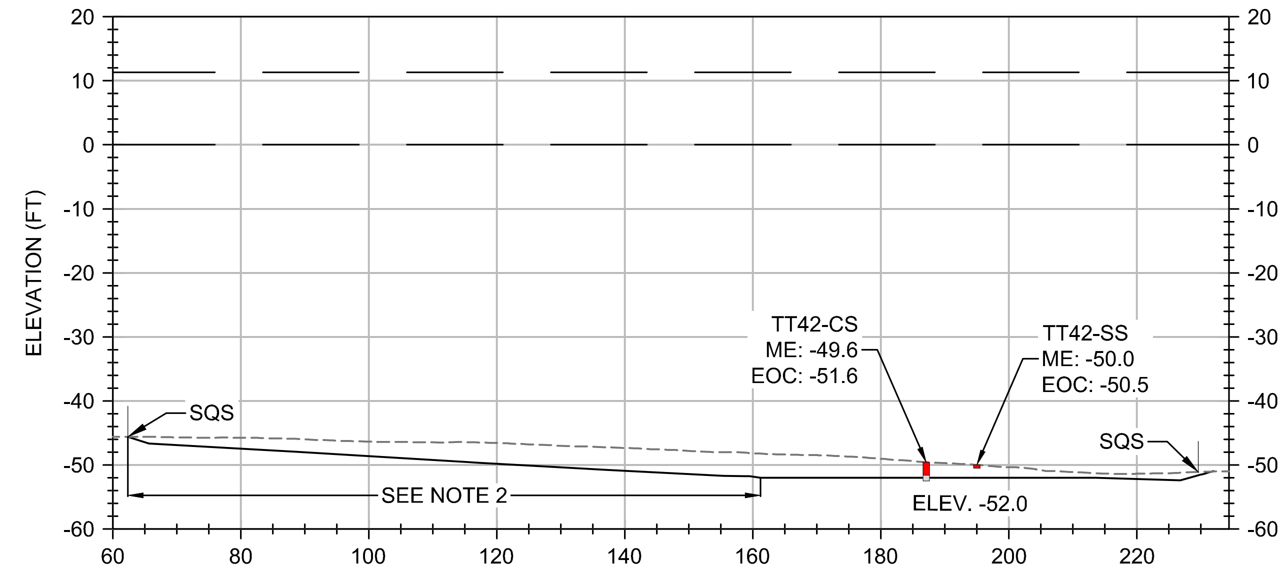
DRY DOCKS 1, 2, & 3
CROSS SECTIONS

DWG. NO.: C-32
CREATED: 09/27/16
SHEET: 26 OF 44

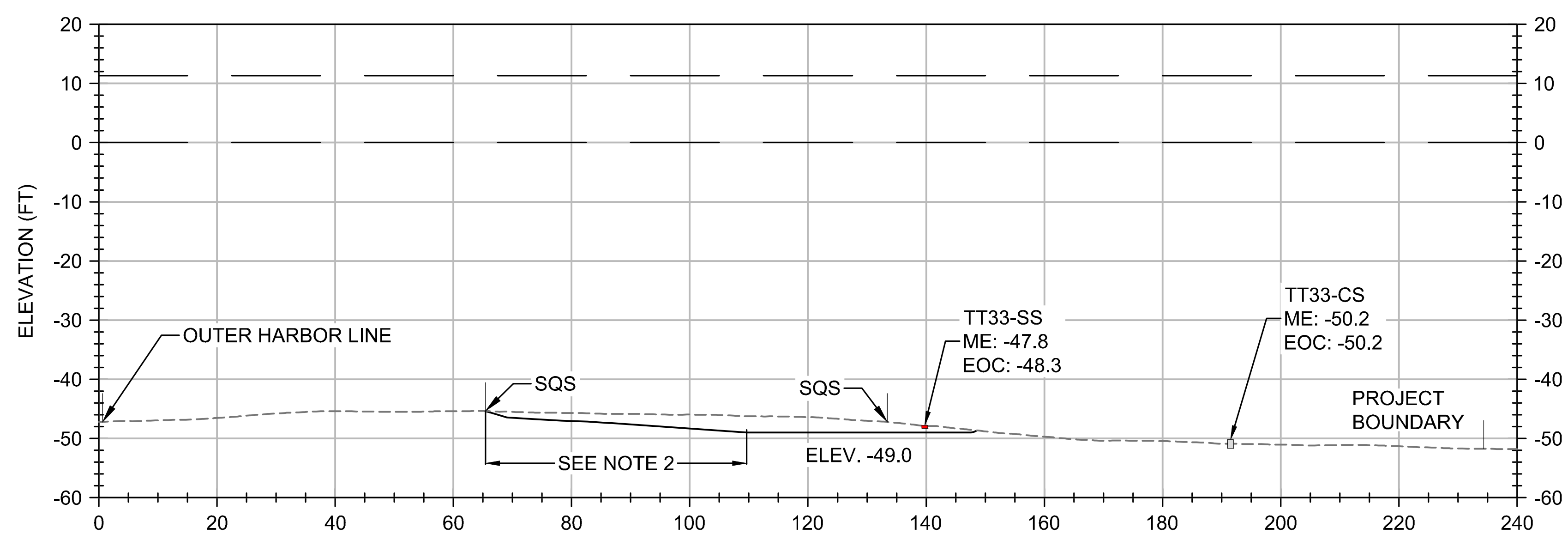
Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DREDGING DESIGN SHEETS.DWG April 24, 2017 11:51 AM
PLOT DETAILS: MATHIS, TOM TT-BOTH-MAIN-COLOR.CTB



B12 / C-30 SCALE 1" = 30', 1H:1V



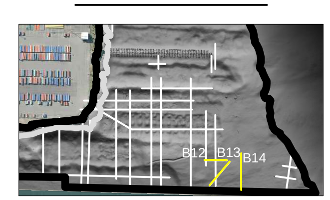
B13 / C-30 SCALE 1" = 30', 1H:1V



B14 / C-30 SCALE 1" = 30', 1H:1V

NOTE:
1. RESIDUAL MANAGEMENT LAYER WILL BE PLACED OVER THE DREDGED AREAS.
2. MAINTAIN 1 FOOT DREDGE CUT.

KEY MAP



LEGEND:
- EXISTING BATHYMETRY
- SEDIMENT SAMPLE ≥ SQS OR CSL
- SEDIMENT SAMPLE < SQS
- MHHW (11.3FT) & MLLW (0.0FT)
- DREDGE NEATLINE

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DREDGING DESIGN SHEETS.DWG
April 24, 2017 11:51 AM
PLOT DETAILS: MATHIS, TOM TT-BOTH-MAIN-COLOR.CTB

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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

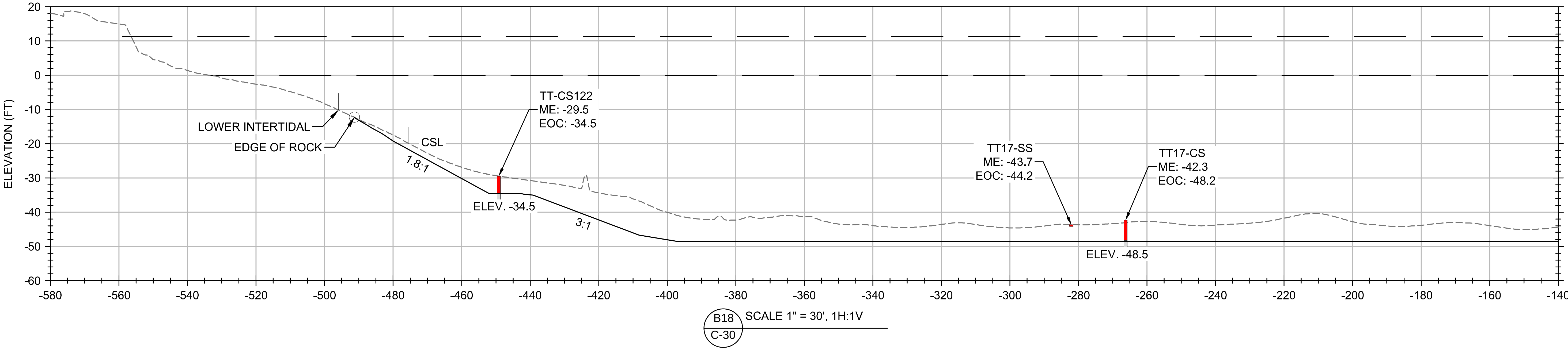
LOCKHEED WEST SEATTLE SITE REMEDIATION

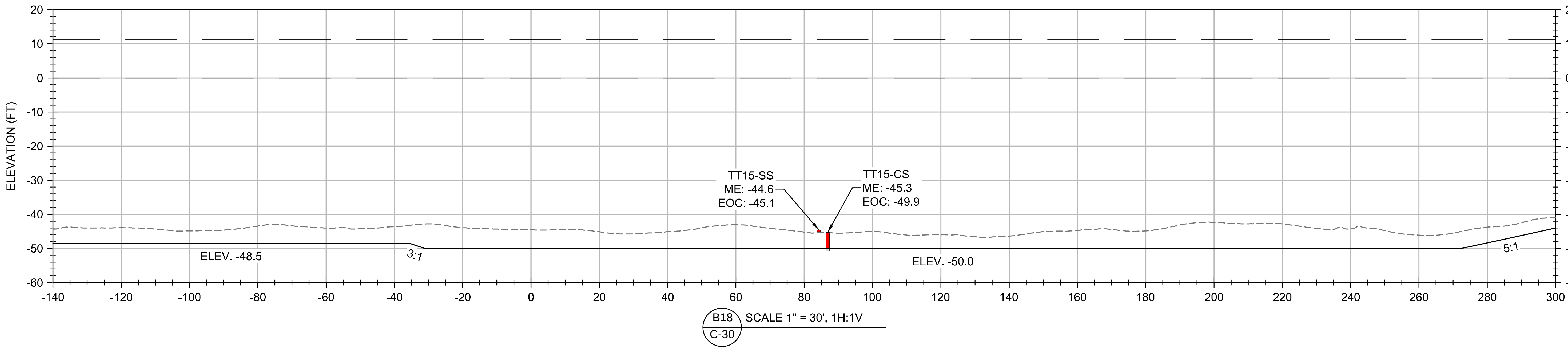
DREDGE PLAN

DRY DOCKS 1, 2, & 3 CROSS SECTIONS

DWG. NO.: C-33

CREATED: 09/27/16

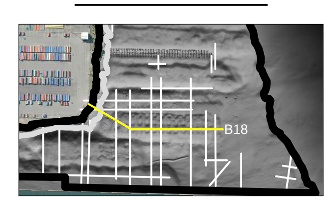




NOTE:

1. SHORELINE STABILIZATION RIPRAP WILL BE PLACED OVER SHORELINE DRY DOCK DREDGE SLOPES. REFER TO C-50. RESIDUAL MANAGEMENT LAYER WILL BE PLACED OVER THE REST OF THE DREDGED AREAS.

KEY MAP



LEGEND:

- EXISTING BATHYMETRY
- SEDIMENT SAMPLE ≥ SQS OR CSL
- SEDIMENT SAMPLE < SQS
- MHHW (11.3FT) & MLLW (0.0FT)
- DREDGE NEATLINE

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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

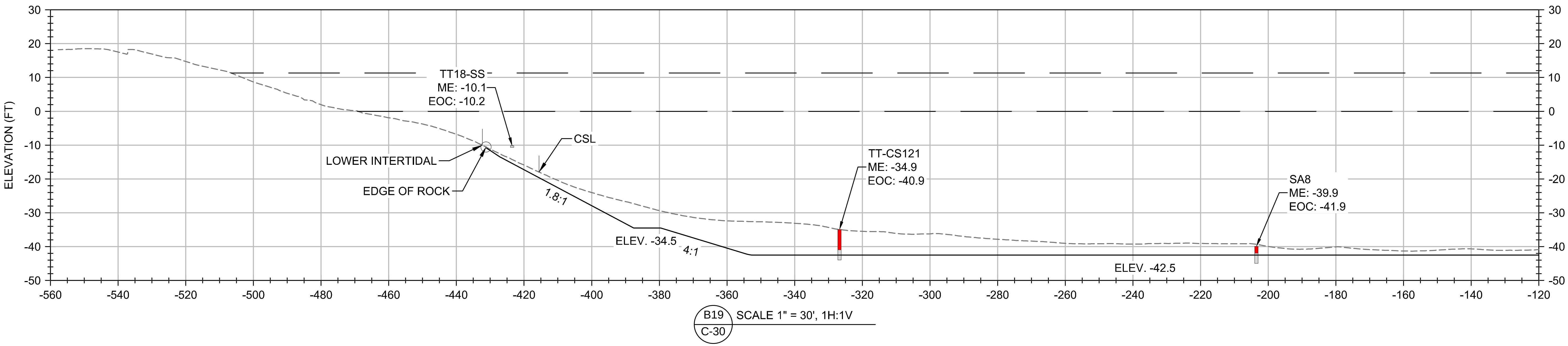
DREDGE PLAN

DRY DOCKS 1, 2, & 3 CROSS SECTIONS

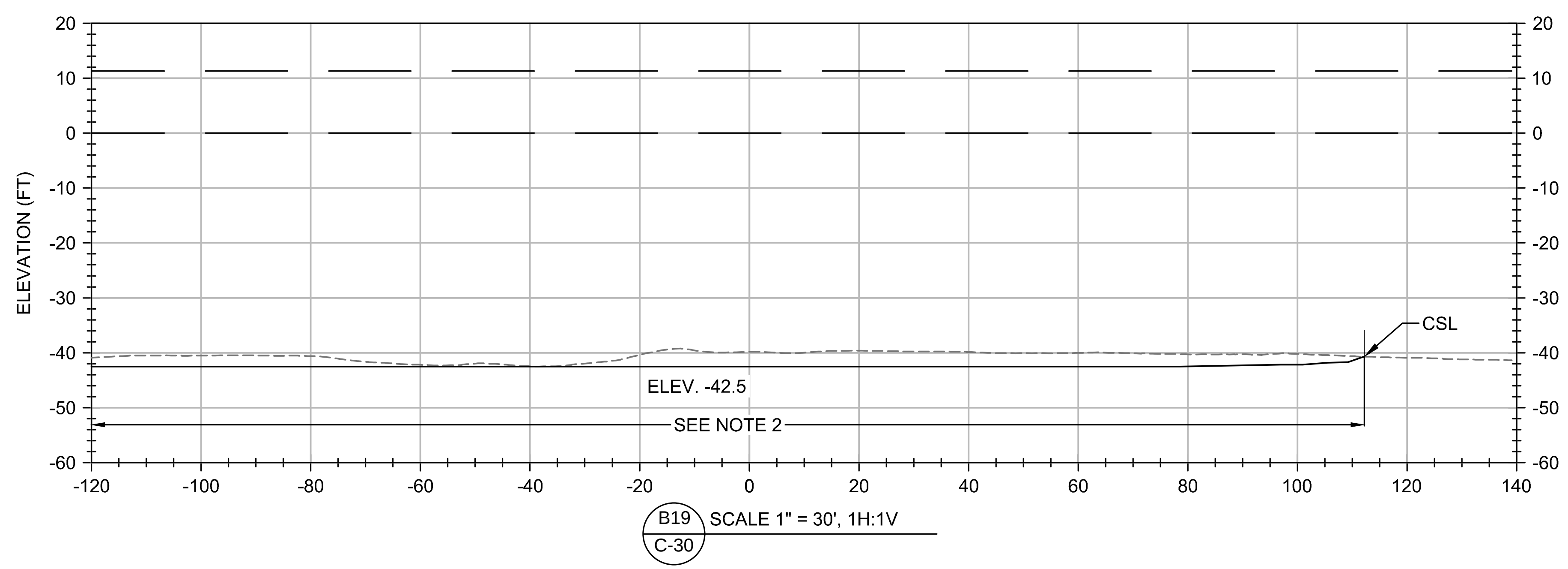
DWG. NO.: C-34

CREATED: 09/27/16

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DREDGING DESIGN SHEETS.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:51 AM TT-BOTH-MAIN-COLOR.CTB



B19 / C-30 SCALE 1" = 30', 1H:1V

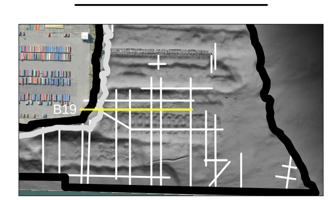


B19 / C-30 SCALE 1" = 30', 1H:1V

NOTE:

1. SHORELINE STABILIZATION RIPRAP WILL BE PLACED OVER SHORELINE DRY DOCK DREDGE SLOPES. REFER TO C-50. RESIDUAL MANAGEMENT LAYER WILL BE PLACED OVER REST OF THE DREDGED AREAS.
2. MAINTAIN 1 FOOT DREDGE CUT.

KEY MAP



LEGEND:

- EXISTING BATHYMETRY
- SEDIMENT SAMPLE ≥ SQS OR CSL
- SEDIMENT SAMPLE < SQS
- MHHW (11.3FT) & MLLW (0.0FT)
- DREDGE NEATLINE

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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

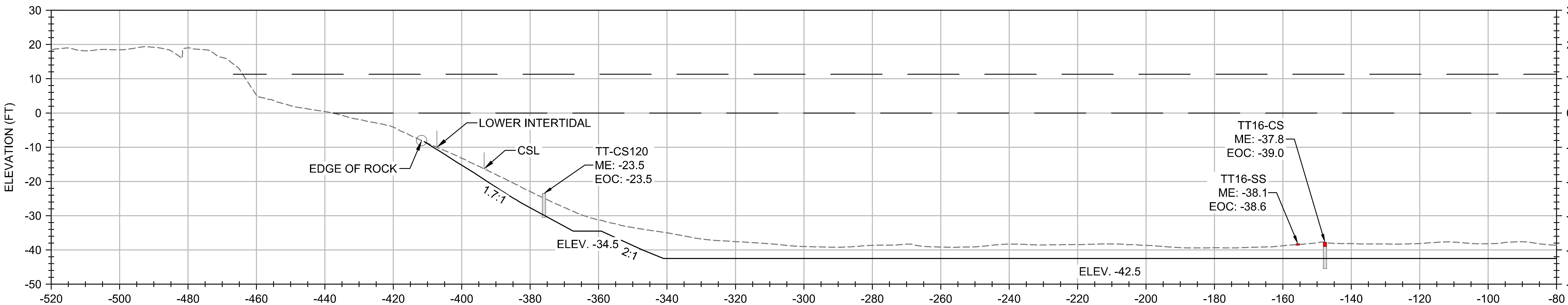
DREDGE PLAN

DRY DOCKS 1, 2, & 3 CROSS SECTIONS

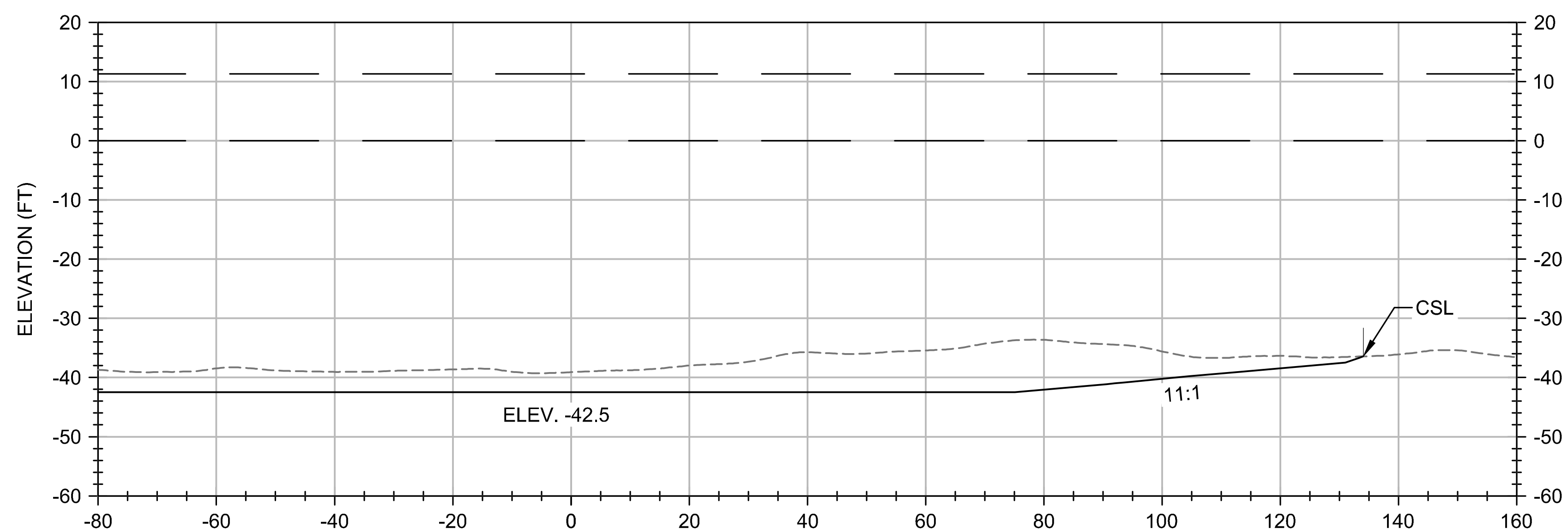
DWG. NO.: C-35

CREATED: 09/27/16

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN_SHEET FILES\DREDGING DESIGN SHEETS.DWG 11:52 AM April 24, 2017
PLOT DETAILS: MATHIS, TOM TT-BOTH-MAIN-COLOR.CTB



B20 / C-30 SCALE 1" = 30', 1H:1V

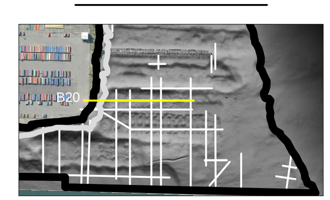


B20 / C-30 SCALE 1" = 30', 1H:1V

NOTE:

1. SHORELINE STABILIZATION RIPRAP WILL BE PLACED OVER SHORELINE DRY DOCK DREDGE SLOPES. REFER TO C-50. RESIDUAL MANAGEMENT LAYER WILL BE PLACED OVER REST OF THE DREDGED AREAS.

KEY MAP



LEGEND:
- EXISTING BATHYMETRY
- SEDIMENT SAMPLE ≥ SQS OR CSL
- SEDIMENT SAMPLE < SQS
- MHHW (11.3FT) & MLLW (0.0FT)
- DREDGE NEATLINE

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Phone: 425-482-7600 Fax: 425-482-7652

LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

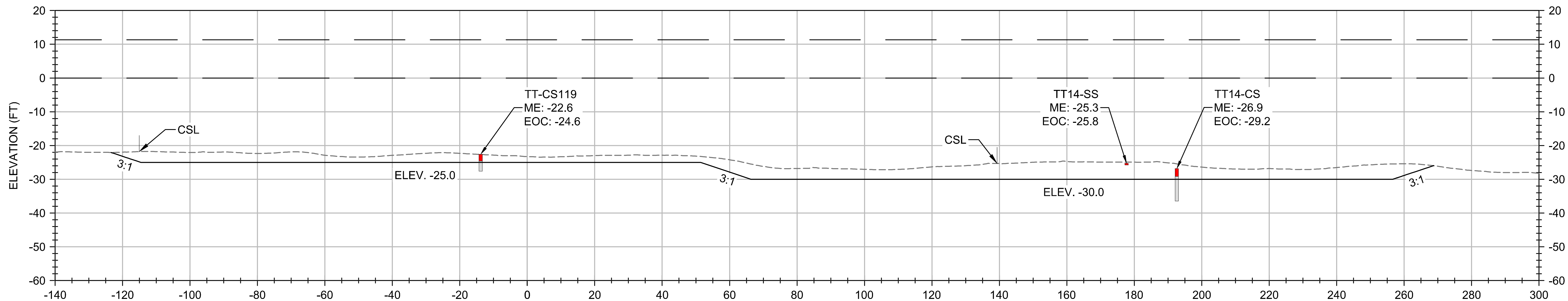
DREDGE PLAN

DRY DOCKS 1, 2, & 3 CROSS SECTIONS

DWG. NO.: C-36

CREATED: 09/27/16

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DREDGING DESIGN SHEETS.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:52 AM TT-BOTH-MAIN-COLOR.CTB

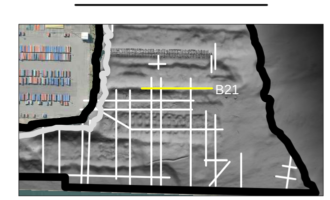


B21 / C-30 SCALE 1" = 30', 1H:1V

NOTE:

1. RESIDUAL MANAGEMENT LAYER WILL BE PLACED OVER THE DREDGED AREAS.

KEY MAP



LEGEND:

- EXISTING BATHYMETRY
- SEDIMENT SAMPLE ≥ SQS OR CSL
- SEDIMENT SAMPLE < SQS
- MHHW (11.3FT) & MLLW (0.0FT)
- DREDGE NEATLINE

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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

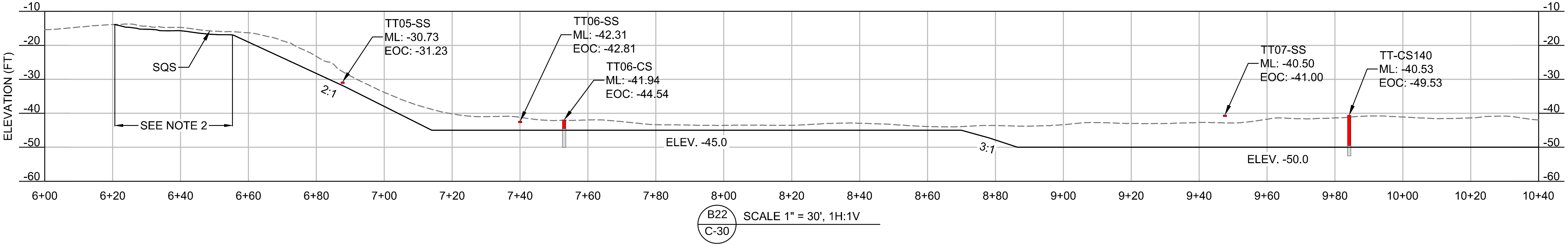
DREDGE PLAN

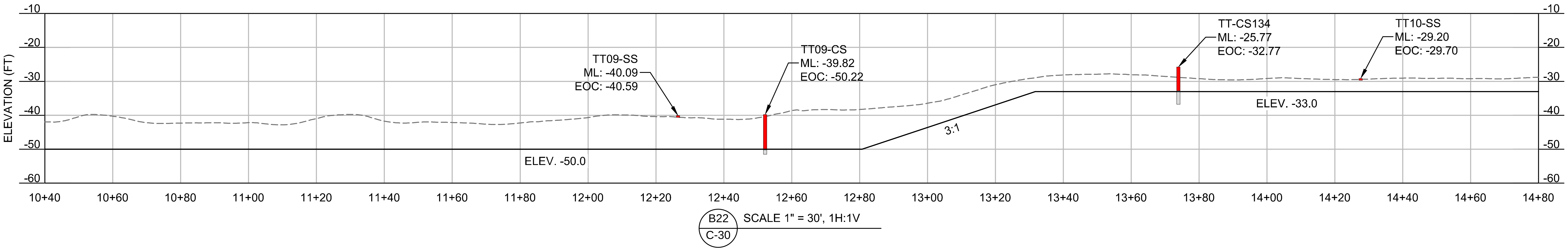
DRY DOCKS 1, 2, & 3 CROSS SECTIONS

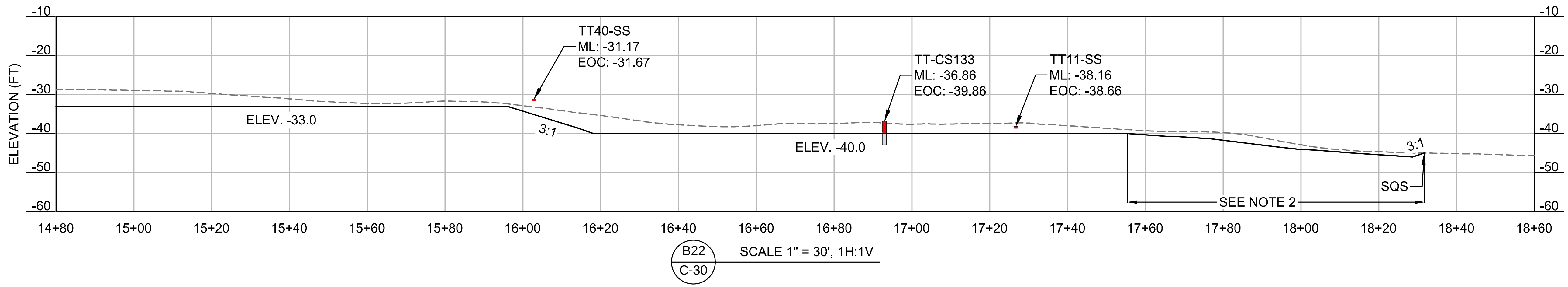
DWG. NO.: C-37

CREATED: 09/27/16

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DREDGING DESIGN SHEETS.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:52 AM TT-BOTH-MAIN-COLOR.CTB

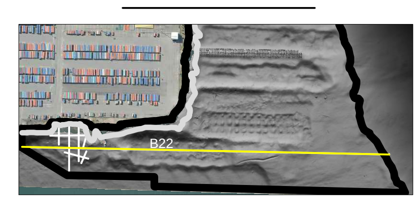






NOTE:
1. RESIDUAL MANAGEMENT LAYER WILL BE PLACED OVER THE DREDGED AREAS.
2. MAINTAIN 1 FOOT DREDGE CUT.
3. TOP OF SOME CORES MAY NOT COINCIDE WITH THE EXISTING MUDLINE DUE TO SAMPLE LOCATION OFFSET FROM THE CROSS SECTION.

KEY MAP



LEGEND:
- EXISTING BATHYMETRY
- SEDIMENT SAMPLE ≥ SQS OR CSL
- SEDIMENT SAMPLE < SQS
- MHHW (11.3FT) & MLLW (0.0FT)
- DREDGE NEATLINE

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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

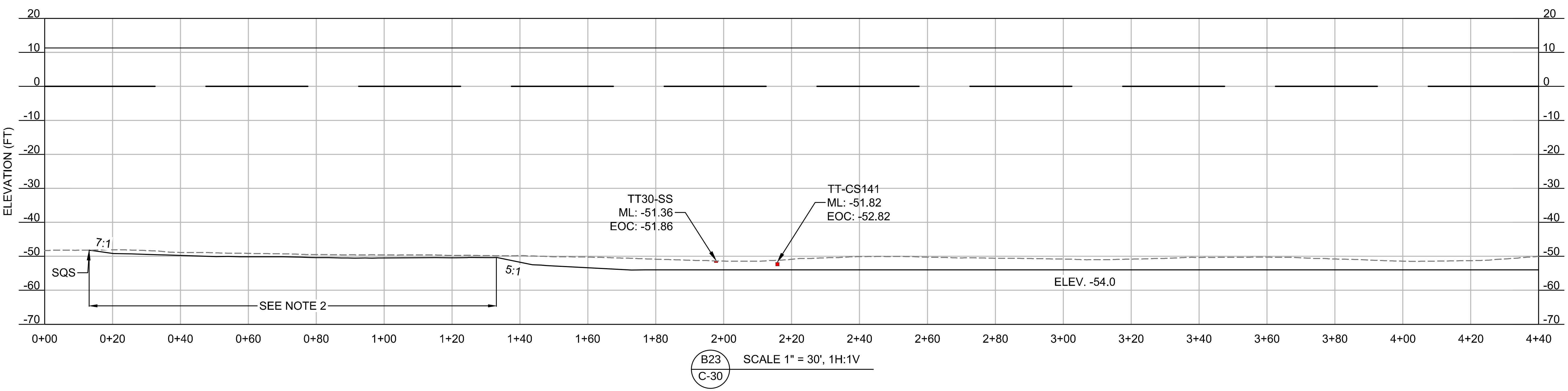
LOCKHEED WEST SEATTLE SITE REMEDIATION

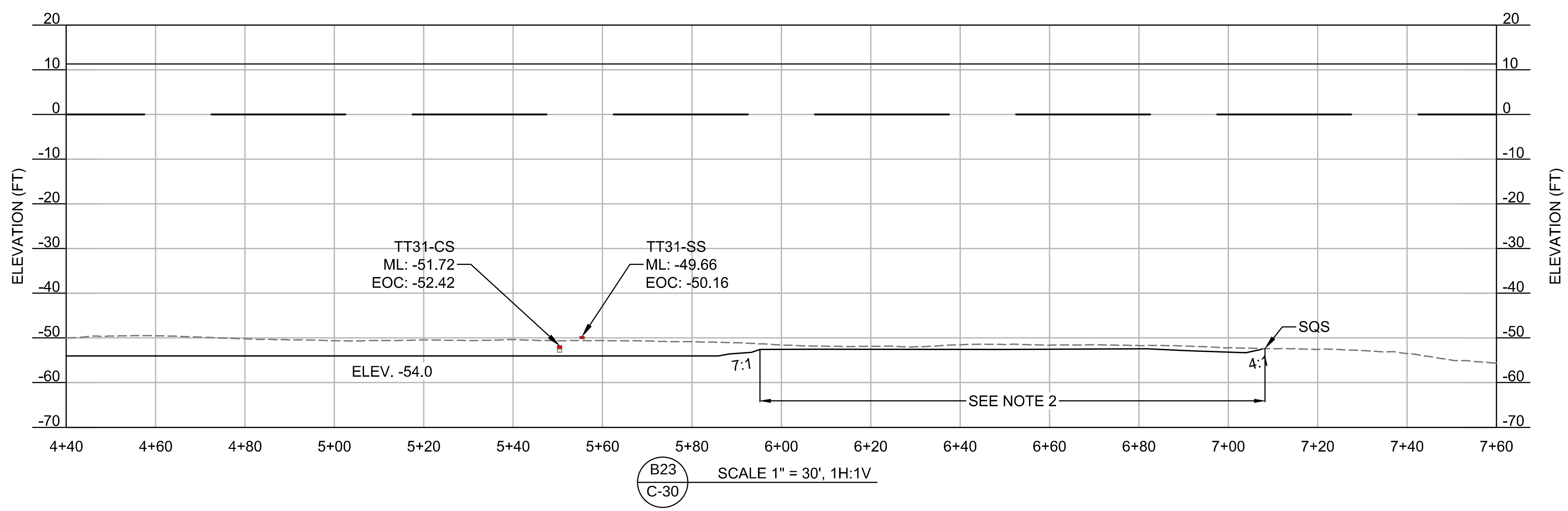
DREDGE PLAN

DRY DOCKS 1, 2, & 3
CROSS SECTIONS

DWG. NO.: C-38
CREATED: 09/27/16
SHEET: 32 OF 44

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DREDGING DESIGN SHEETS.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:52 AM TT-BOTH-MAIN-COLOR.CTB

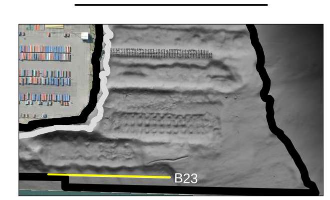




NOTE:

1. RESIDUAL MANAGEMENT LAYER WILL BE PLACED OVER THE DREDGED AREAS.
2. MAINTAIN 1 FOOT DREDGE CUT.

KEY MAP



LEGEND:

- EXISTING BATHYMETRY
- SEDIMENT SAMPLE ≥ SQS OR CSL
- SEDIMENT SAMPLE < SQS
- MHHW (11.3FT) & MLLW (0.0FT)
- DREDGE NEATLINE

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PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

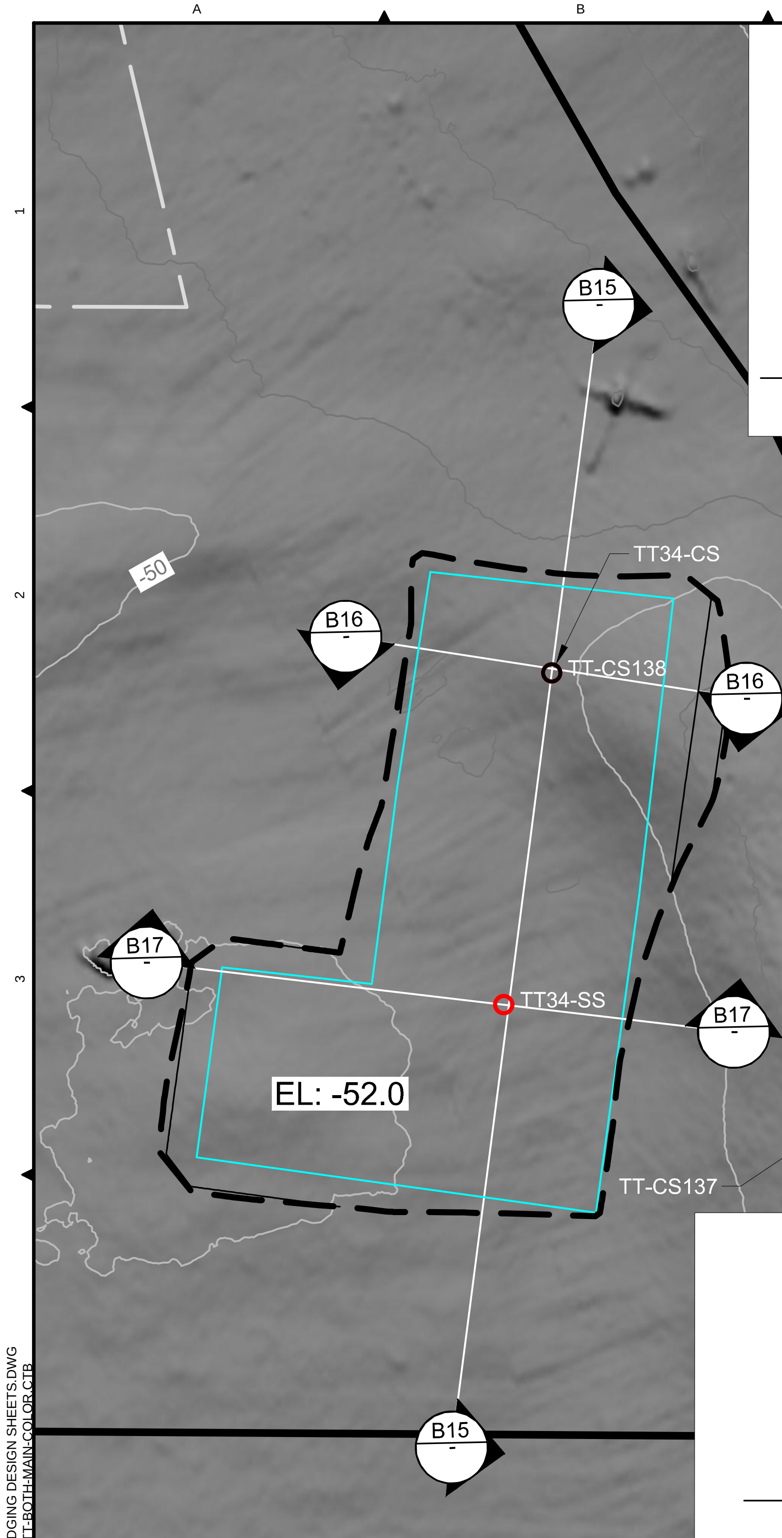
DREDGE PLAN

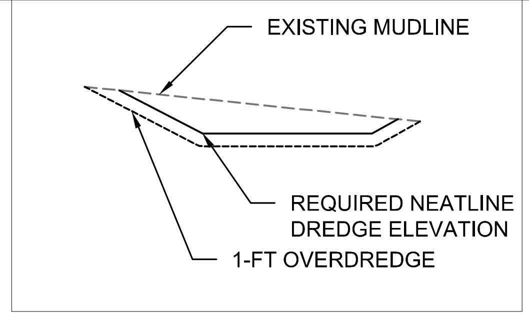
DRY DOCKS 1, 2, & 3 CROSS SECTIONS

DWG. NO.: C-39

CREATED: 09/27/16

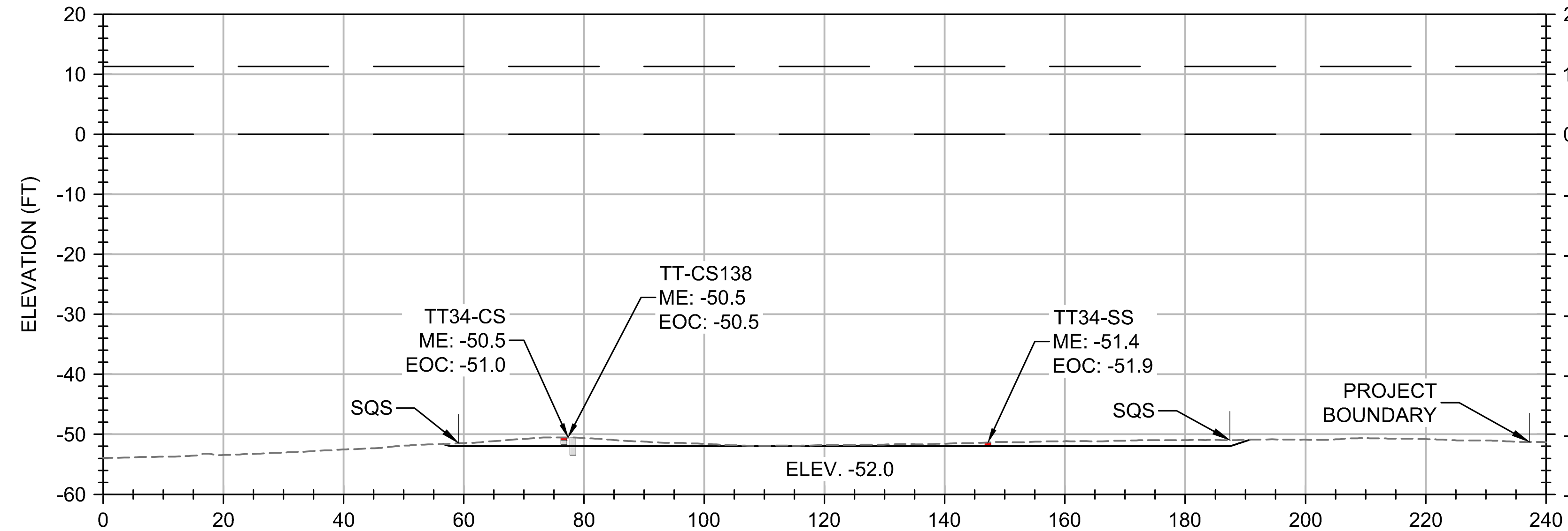
Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DREDGING DESIGN SHEETS.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:53 AM TT-BOTH-MAIN-COLOR.CTB



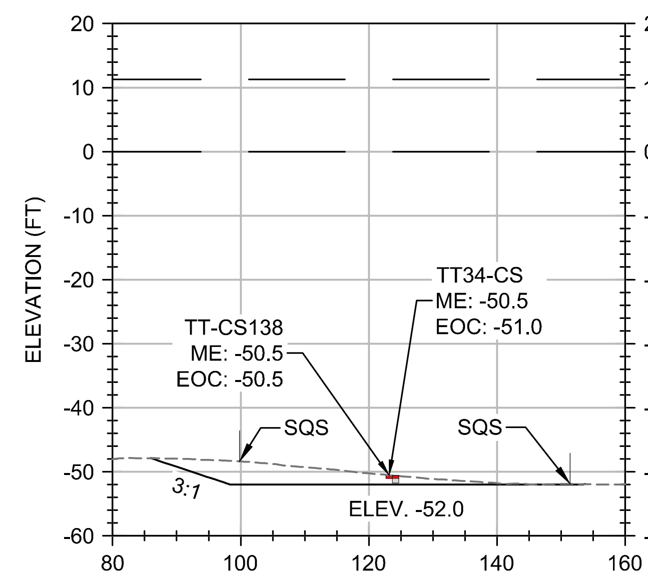


OVERDREDGE DETAIL

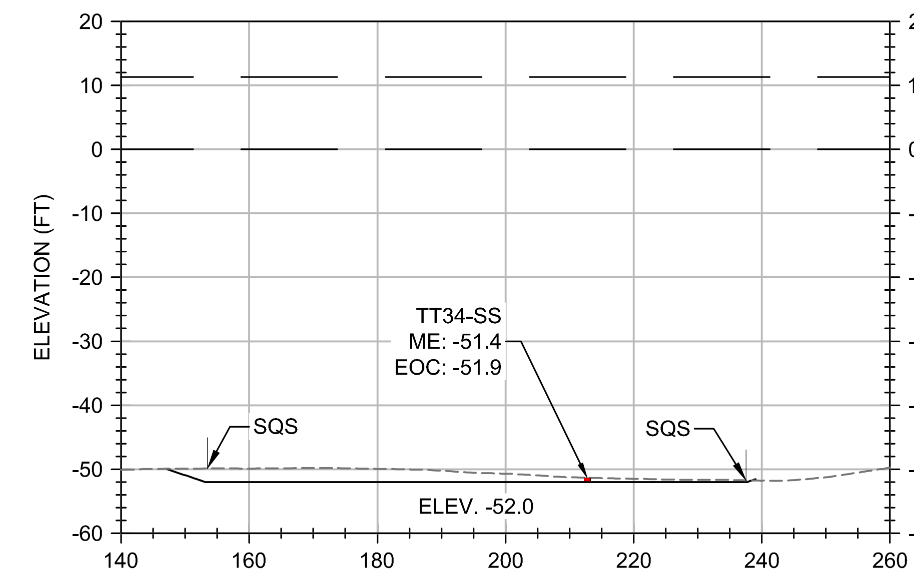
NTS



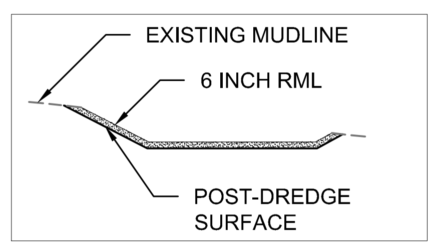
B15 SCALE 1" = 30', 1H:1V



B16 SCALE 1" = 30', 1H:1V

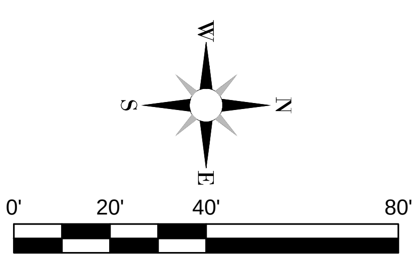


B17 SCALE 1" = 30', 1H:1V



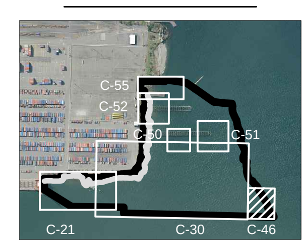
RESIDUAL MANAGEMENT LAYER DETAIL

NTS



NOTES:
1. RESIDUAL MANAGEMENT LAYER WILL BE PLACED OVER DREDGED AREAS.
2. REFER TO DEBRIS HANDLING PLAN FOR EXISTING DEBRIS OVER DREDGE AREAS.
3. TOP OF SOME CORES MAY NOT COINCIDE WITH THE EXISTING MUDLINE DUE TO SAMPLE LOCATION OFFSET FROM THE CROSS SECTION.

KEY MAP



LEGEND:
- PROJECT BOUNDARY
- INTERTIDAL ZONE BOUNDARY (-10 FT MLLW)
- ROCK TOE
- CSL BOUNDARY
- SQS BOUNDARY
- DREDGE BOUNDARY
- BASE OF DREDGE PRISM
- DREDGE CONTOUR - MAJOR 10FT
- DREDGE CONTOUR - MINOR 2FT
- SEDIMENT SAMPLE < SQS
- SEDIMENT SAMPLE ≥ SQS OR CSL
- EXISTING CONTOUR - MAJOR 10FT
- EXISTING CONTOUR - MINOR 2FT
- MHHW (11.3FT) & MLLW (0.0FT)

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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

DREDGE PLAN

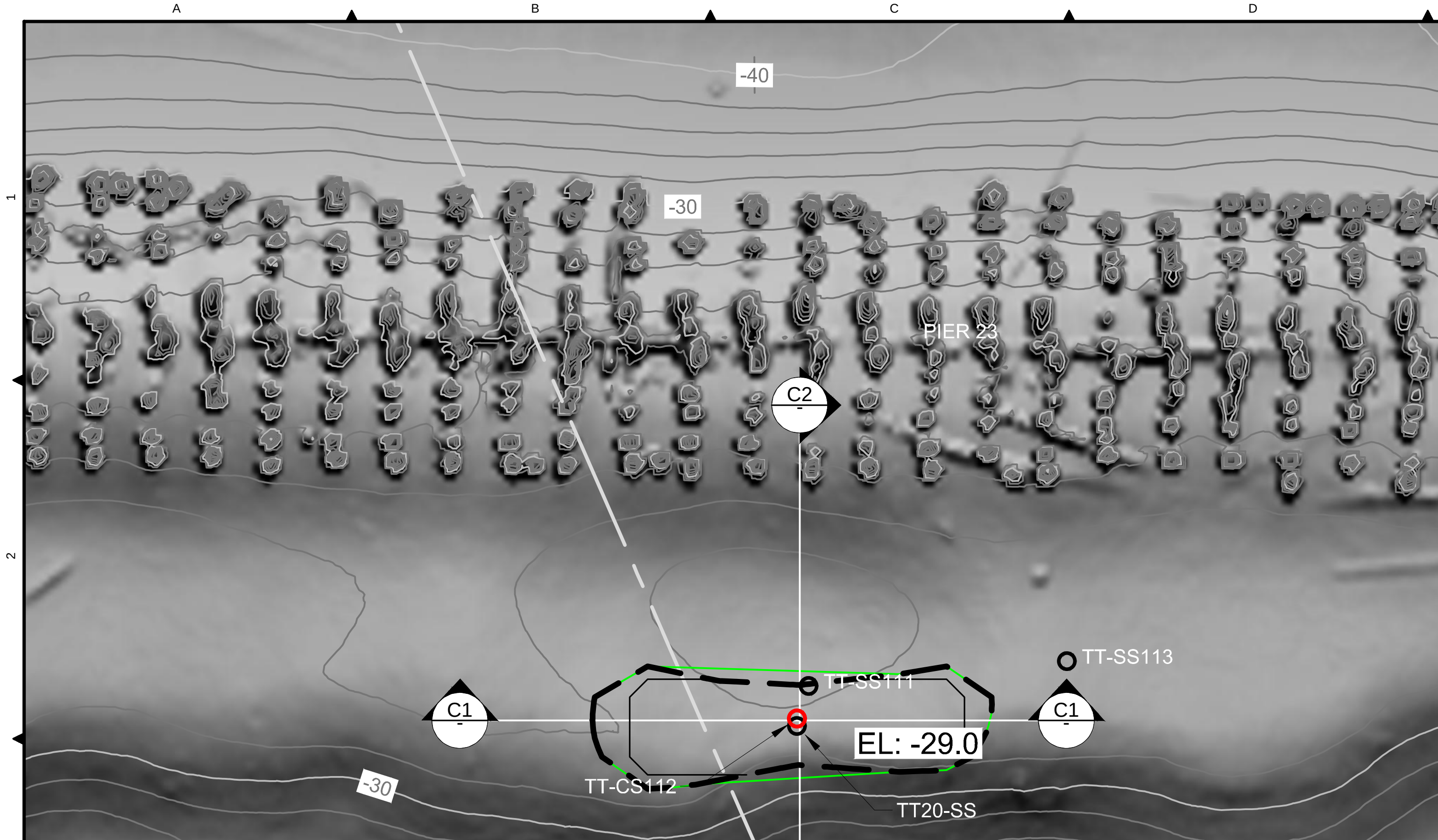
DRY DOCKS 1, 2, & 3
PLAN VIEW

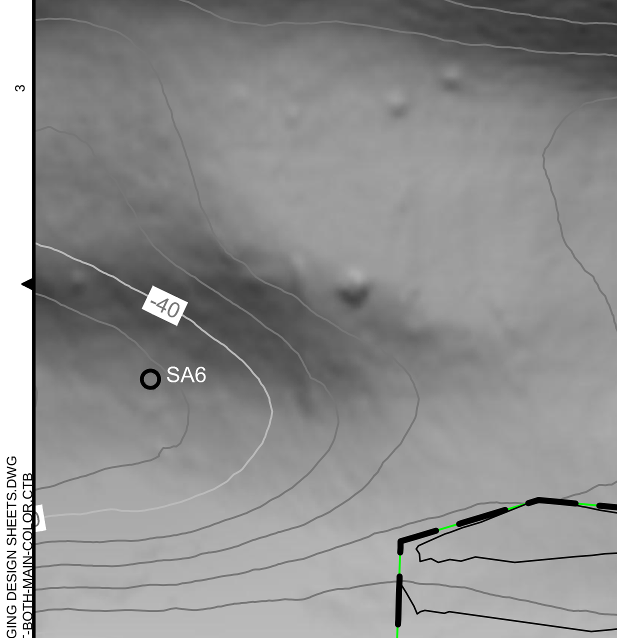
DWG. NO.: C-40

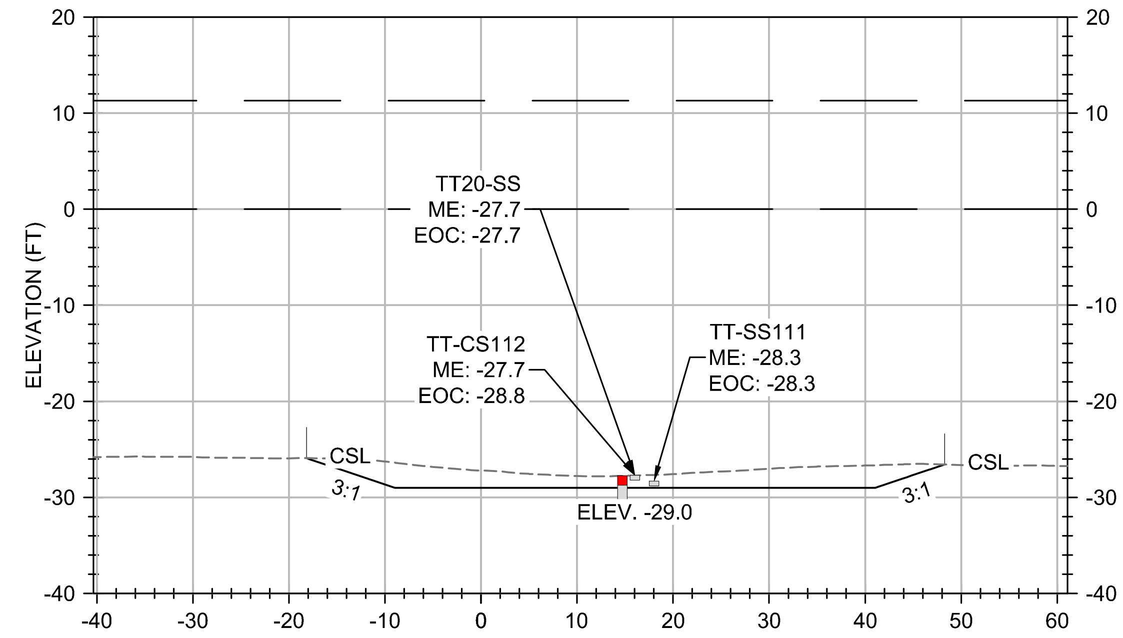
CREATED: 09/27/16

SHEET: 34 OF 44

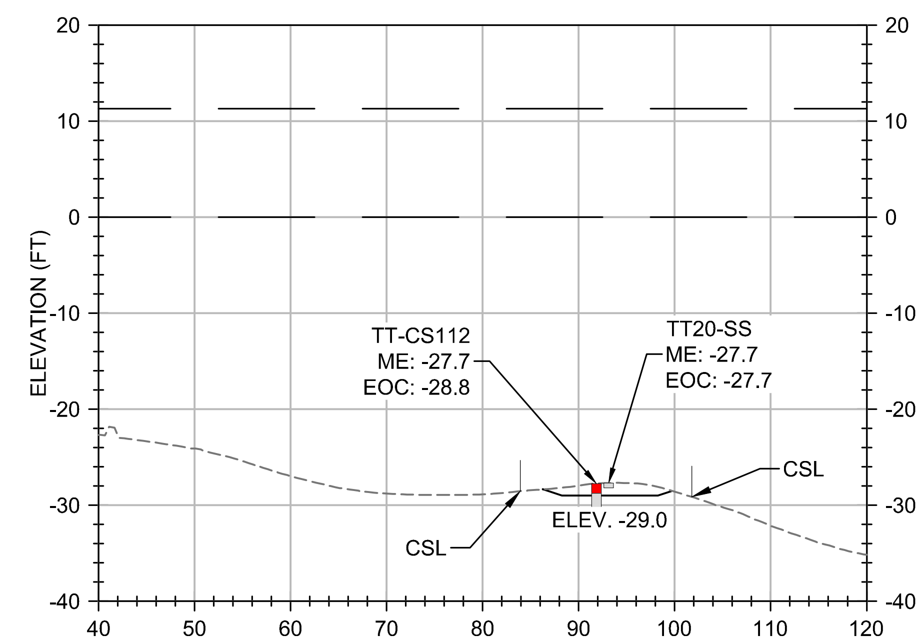
Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN_SHEET FILES\DREDGING DESIGN SHEETS.DWG April 24, 2017 11:53 AM
PLOT DETAILS: MATHIS, TOM TT-BOTH-MAIN-COLOR.CTB



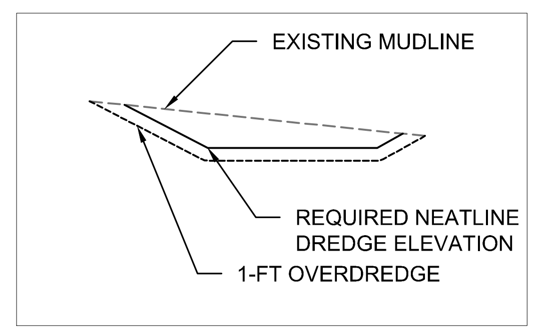




C1 SCALE 1" = 20', 1H:1V

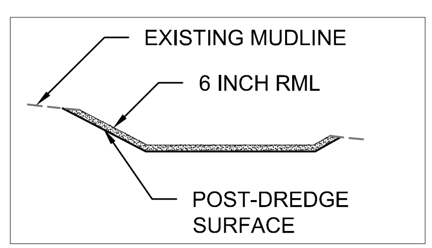


C2 SCALE 1" = 20', 1H:1V



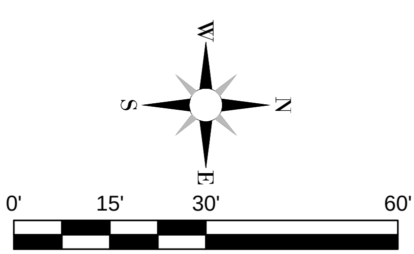
OVERDREDGE DETAIL

NTS



RESIDUAL MANAGEMENT LAYER DETAIL

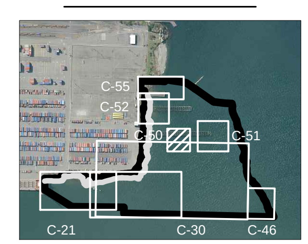
NTS



NOTES:

1. RESIDUAL MANAGEMENT LAYER WILL BE PLACED OVER THE DREDGED AREAS.
2. TOP OF SOME CORES MAY NOT COINCIDE WITH THE EXISTING MUDLINE DUE TO SAMPLE LOCATION OFFSET FROM THE CROSS SECTION.

KEY MAP



LEGEND:

- PROJECT BOUNDARY
- INTERTIDAL ZONE BOUNDARY (-10 FT MLLW)
- ROCK TOE
- CSL BOUNDARY
- SQS BOUNDARY
- DREDGE BOUNDARY
- BASE OF DREDGE PRISM
- DREDGE CONTOUR - MAJOR 10FT
- DREDGE CONTOUR - MINOR 2FT
- SEDIMENT SAMPLE < SQS
- SEDIMENT SAMPLE ≥ SQS OR CSL
- EXISTING CONTOUR - MAJOR 10FT
- EXISTING CONTOUR - MINOR 2FT
- MHHW (11.3FT) & MLLW (0.0FT)

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\ SHEET FILES\DREDGING DESIGN SHEETS.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:54 AM TT-BOTH-MAIN-COLOR.CTB

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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

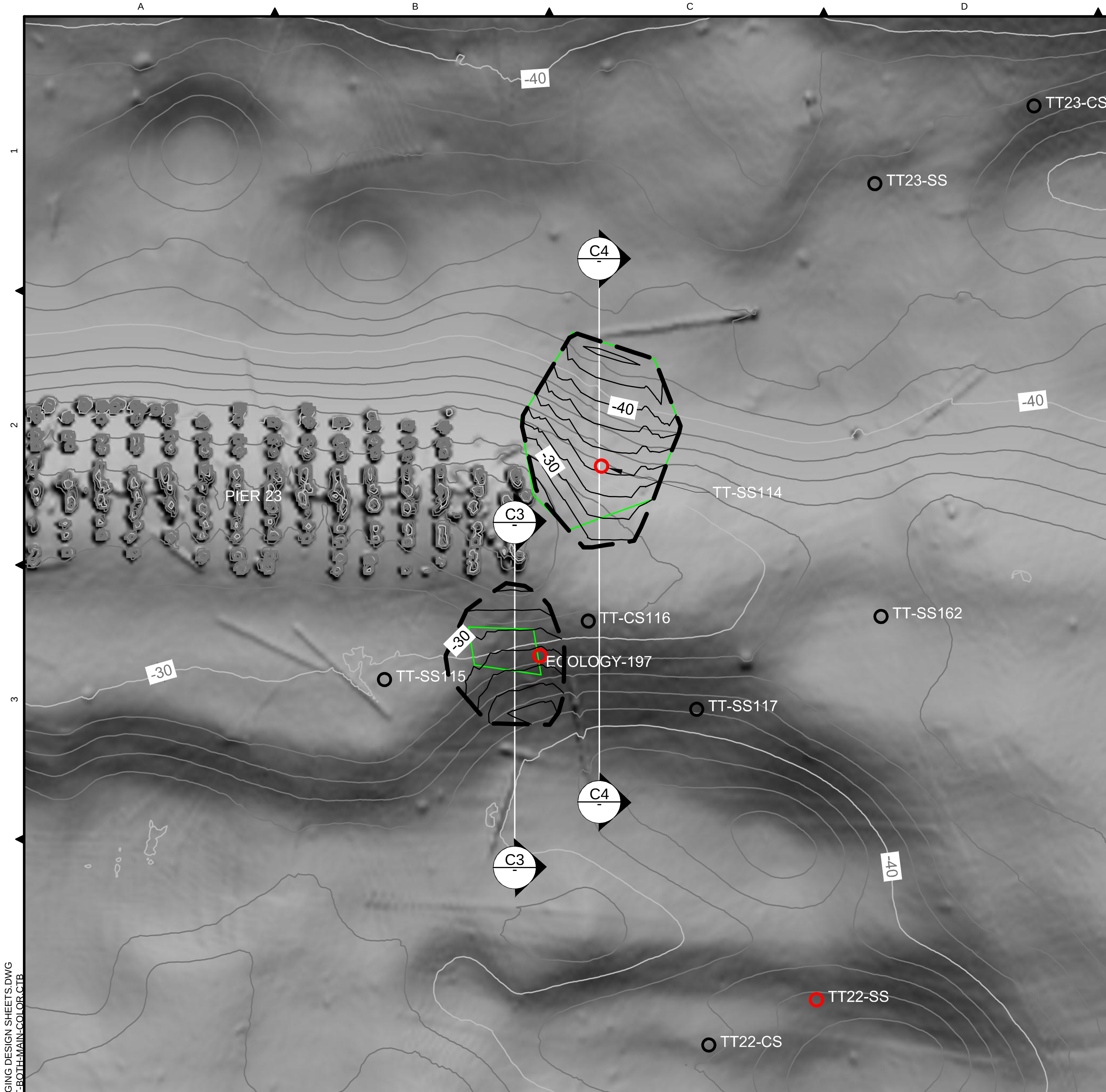
DREDGE PLAN

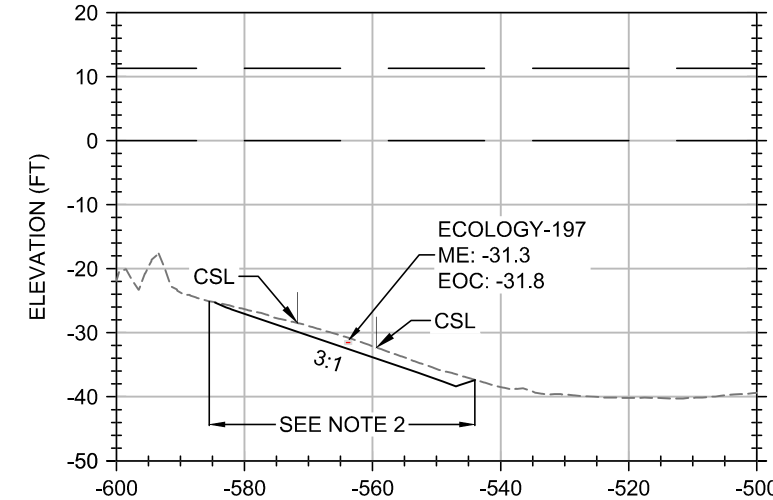
PIER 23
PLAN VIEW AND CROSS SECTIONS

DWG. NO.: C-41

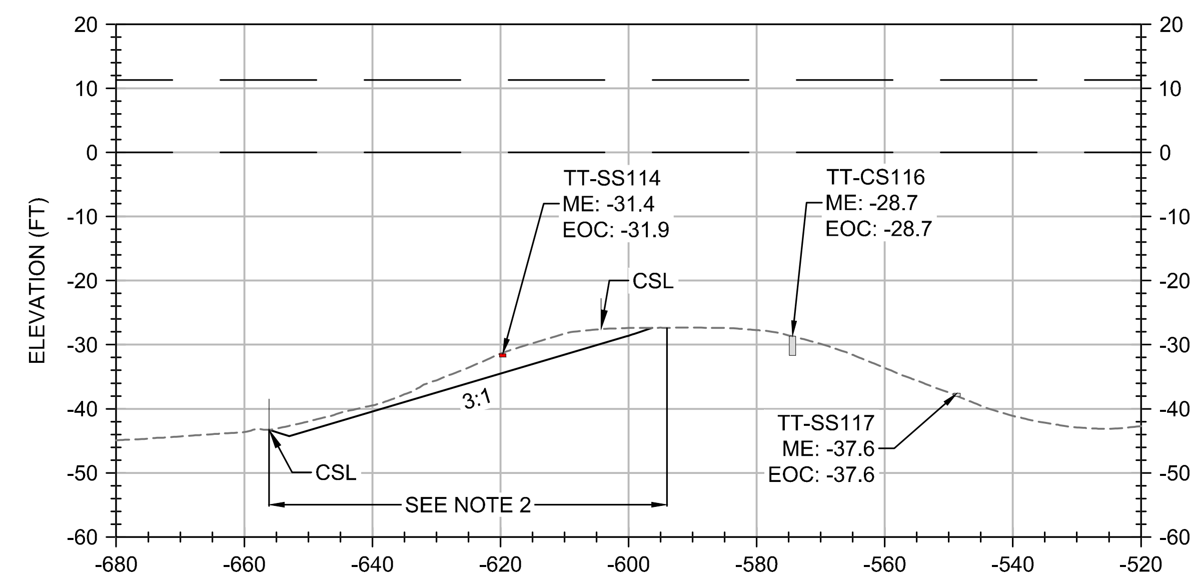
CREATED: 09/27/16

SHEET: 35 OF 44

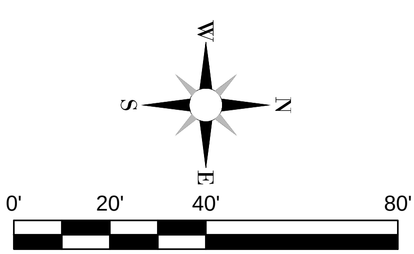




C3 SCALE 1" = 30', 1H:1V

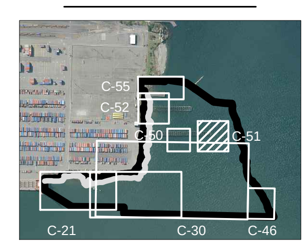


C4 SCALE 1" = 30', 1H:1V



NOTES:
1. RESIDUAL MANAGEMENT LAYER WILL BE PLACED OVER THE DREDGED AREAS.
2. MAINTAIN 1 FOOT DREDGE CUT.

KEY MAP



LEGEND:
- PROJECT BOUNDARY
- INTERTIDAL ZONE BOUNDARY (-10 FT MLLW)
- ROCK TOE
- CSL BOUNDARY
- SQS BOUNDARY
- DREDGE BOUNDARY
- BASE OF DREDGE PRISM
- DREDGE CONTOUR - MAJOR 10FT
- DREDGE CONTOUR - MINOR 2FT
- SEDIMENT SAMPLE < SQS
- SEDIMENT SAMPLE ≥ SQS OR CSL
- EXISTING CONTOUR - MAJOR 10FT
- EXISTING CONTOUR - MINOR 2FT
- MHHW (11.3FT) & MLLW (0.0FT)

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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

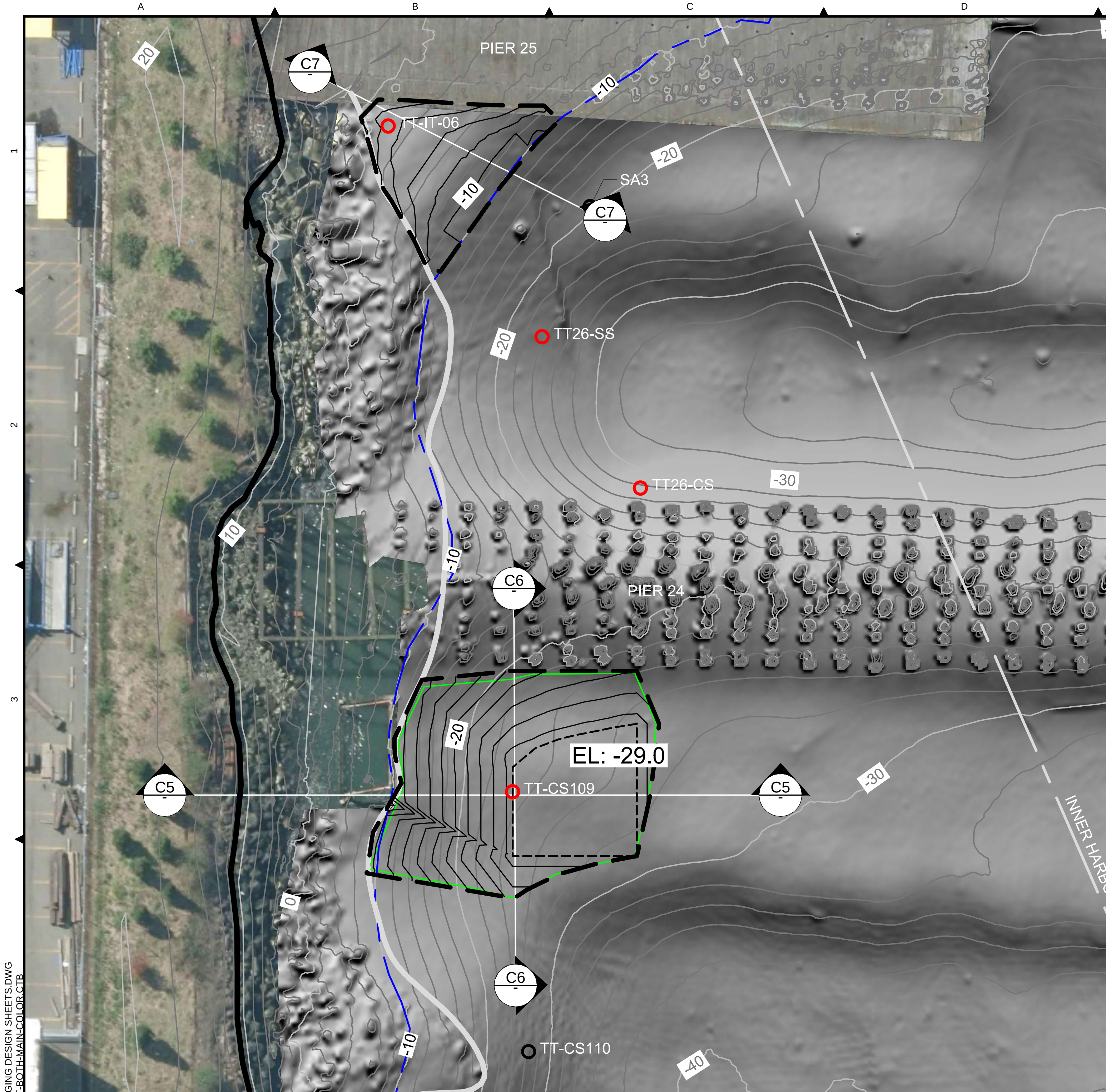
REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

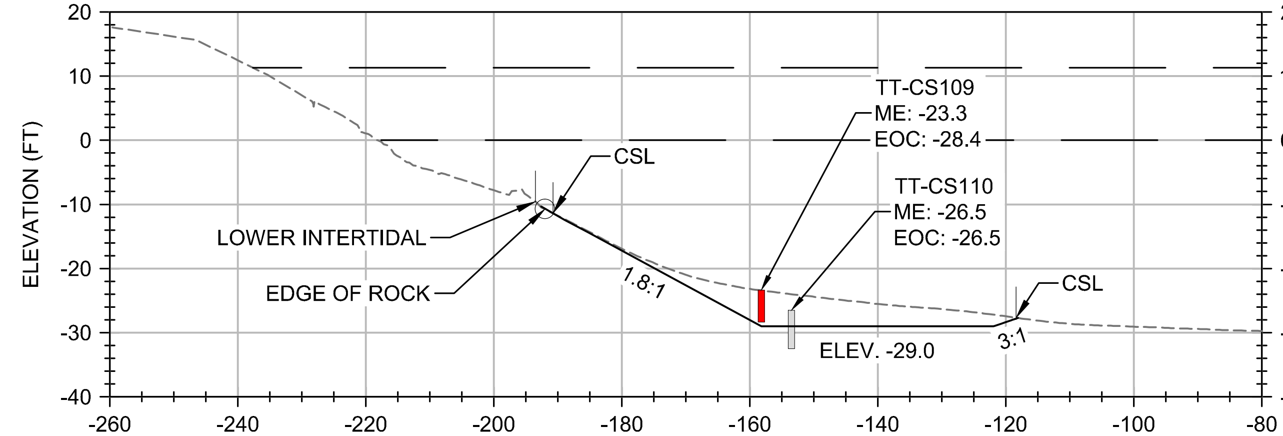
LOCKHEED WEST SEATTLE SITE REMEDIATION

DREDGE PLAN
PIER 23
PLAN VIEW AND CROSS SECTIONS

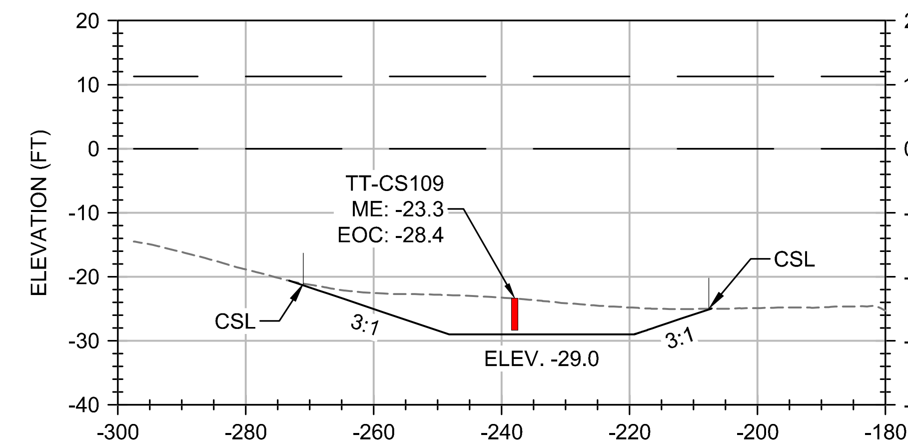
DWG. NO.: C-42
CREATED: 09/27/16
SHEET: 36 OF 44

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DREDGING DESIGN SHEETS.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:54 AM TT-BOTH-MAIN-COLOR.CTB

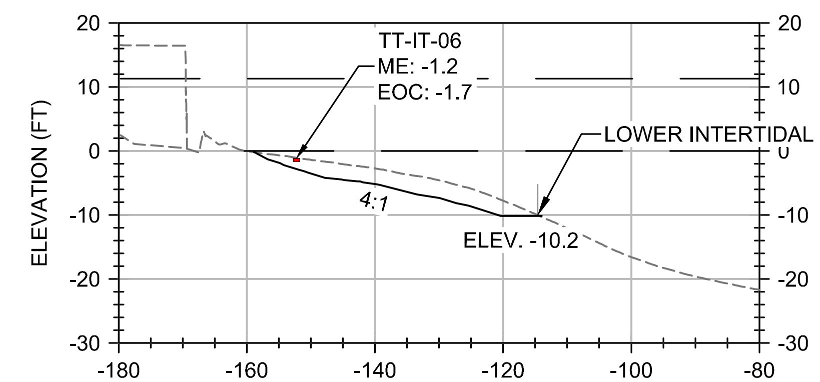




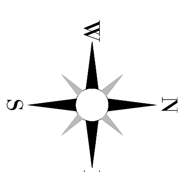
C5 SCALE 1" = 30', 1H:1V



C6 SCALE 1" = 30', 1H:1V



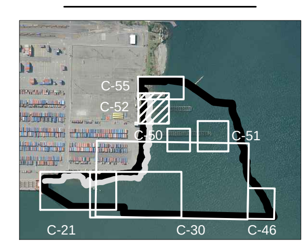
C7 SCALE 1" = 30', 1H:1V



0' 20' 40' 80'

NOTES:
1. PIER 25 DREDGE AREA WILL BE BACKFILLED TO THE EXISTING GRADES. REFER TO C-60.
2. PIER 24 DREDGE AREA WILL HAVE RIPRAP ALONG THE SHORELINE SLOPES. REFER TO C-50. RESIDUAL MANAGEMENT LAYER WILL BE PLACED OVER THE REST OF THE PIER 24 DREDGE AREA.
3. REFER TO DEBRIS HANDLING PLAN FOR EXISTING DEBRIS OVER DREDGE AREAS.
4. TOP OF SOME CORES MAY NOT COINCIDE WITH THE EXISTING MUDLINE DUE TO SAMPLE LOCATION OFFSET FROM THE CROSS SECTION.

KEY MAP



LEGEND:
- PROJECT BOUNDARY
- INTERTIDAL ZONE BOUNDARY (-10 FT MLLW)
- ROCK TOE
- CSL BOUNDARY
- SQS BOUNDARY
- DREDGE BOUNDARY
- BASE OF DREDGE PRISM
- DREDGE CONTOUR - MAJOR 10FT
- DREDGE CONTOUR - MINOR 2FT
- SEDIMENT SAMPLE < SQS
- SEDIMENT SAMPLE ≥ SQS OR CSL
- EXISTING CONTOUR - MAJOR 10FT
- EXISTING CONTOUR - MINOR 2FT
- MHHW (11.3FT) & MLLW (0.0FT)

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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

DREDGE PLAN

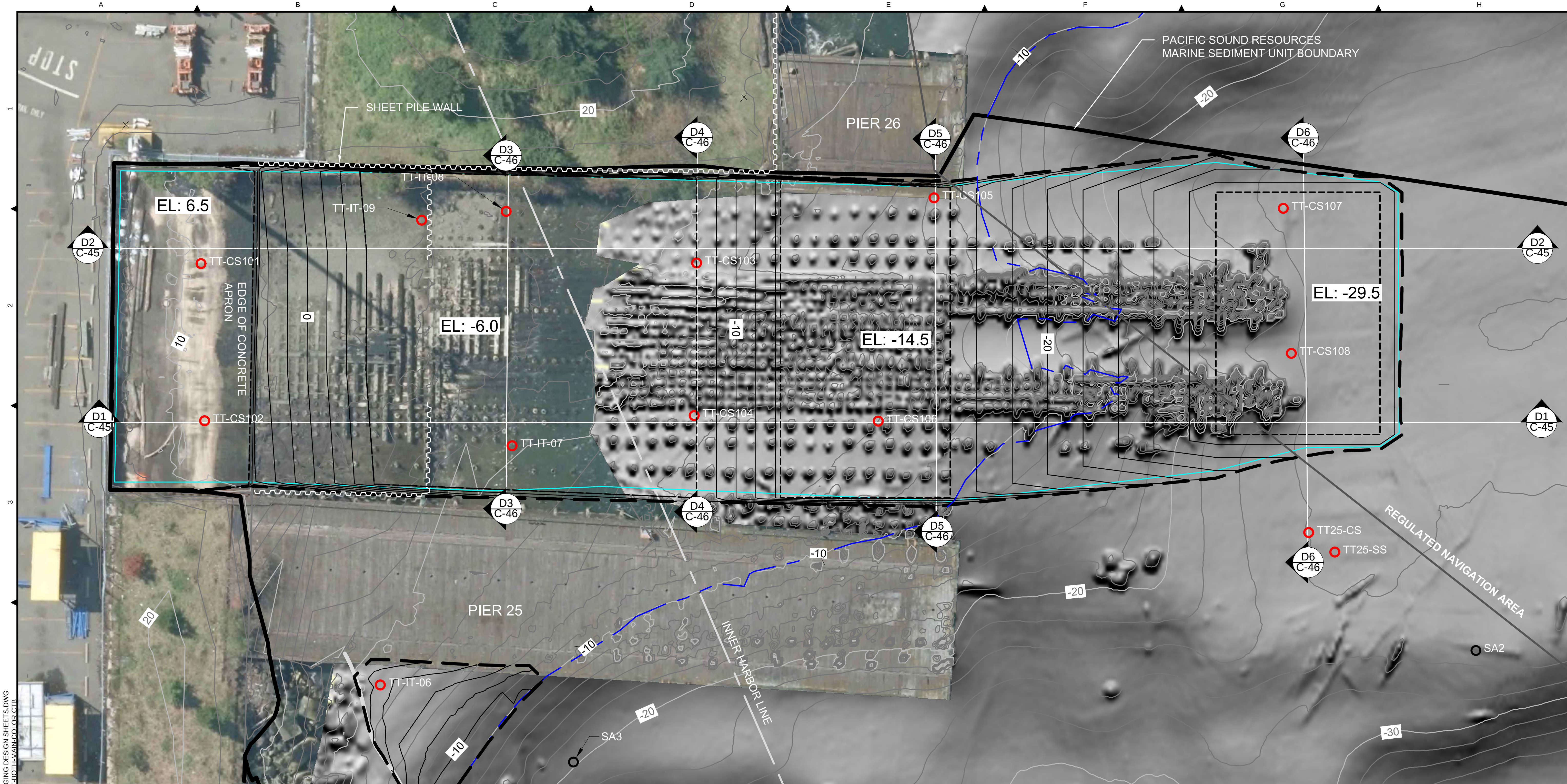
PIER 24, 25
PLAN VIEW

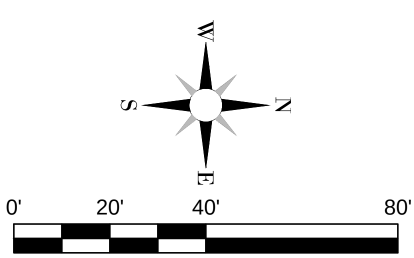
DWG. NO.: C-43

CREATED: 09/27/16

SHEET: 37 OF 44

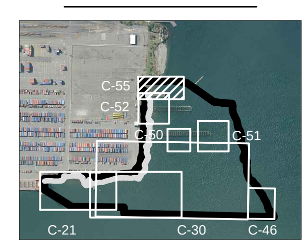
Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\ SHEET FILES\DREDGING DESIGN SHEETS.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:55 AM TT-BOTH-MAIN-COLOR.CTB





NOTES:
1. REFER TO FORMER SHIPWAY PILE REMOVAL PLAN FOR DEBRIS HANDLING BEFORE DREDGING.
2. BACKGROUND IMAGE IS SHOWN FOR INFORMATIONAL PURPOSE. DESIGN IS BASED ON EXISTING BATHYMETRY AND TOPOGRAPHIC DATA.

KEY MAP



LEGEND:
- PROJECT BOUNDARY
- INTERTIDAL ZONE BOUNDARY (-10 FT MLLW)
- ROCK TOE
- CSL BOUNDARY
- SQS BOUNDARY
- DREDGE BOUNDARY
- BASE OF DREDGE PRISM
- DREDGE CONTOUR - MAJOR 10FT
- SEDIMENT SAMPLE < SQS
- SEDIMENT SAMPLE ≥ SQS OR CSL
- EXISTING CONTOUR - MAJOR 10FT
- EXISTING CONTOUR - MINOR 2FT

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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

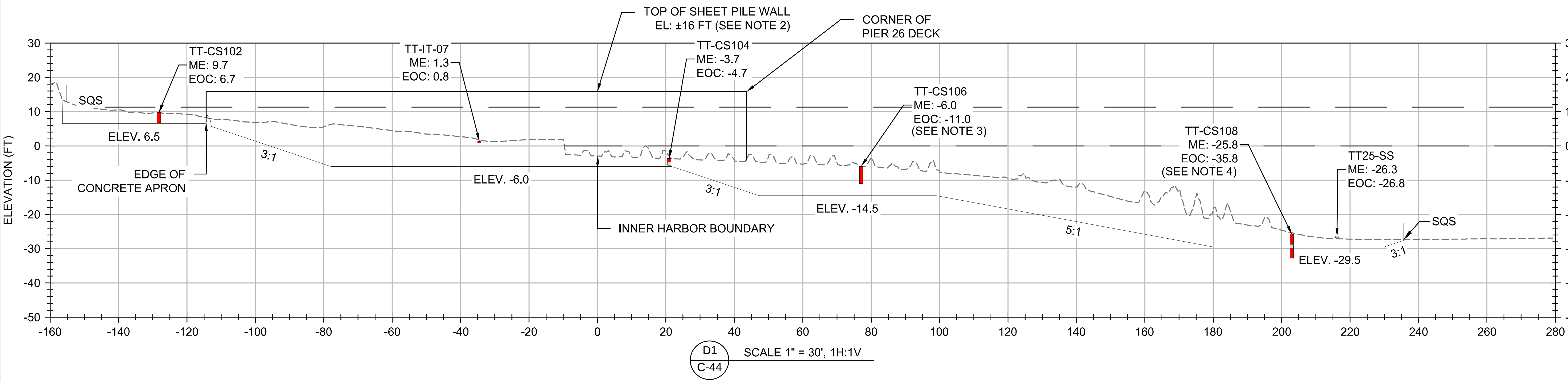
LOCKHEED WEST SEATTLE SITE REMEDIATION

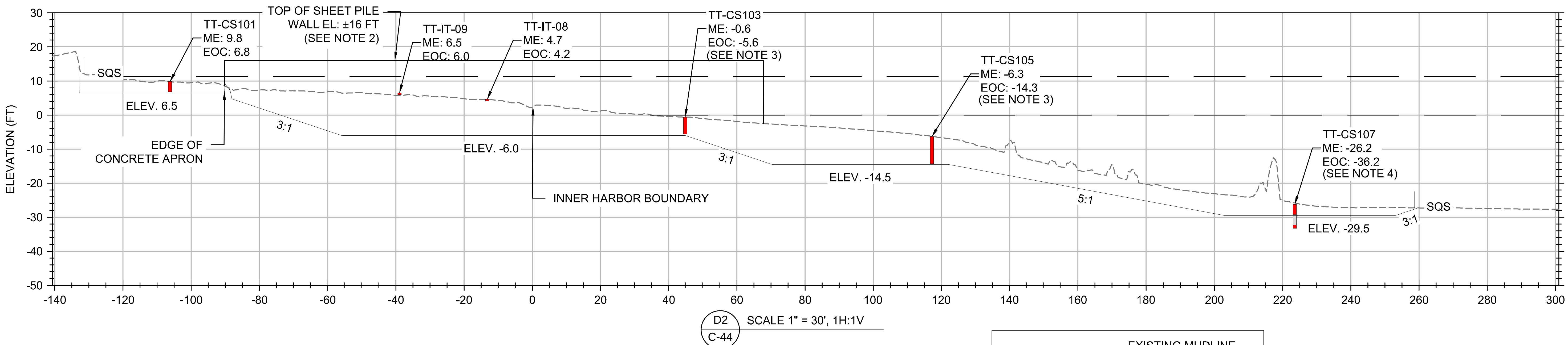
DREDGE PLAN

FORMER SHIPWAY PLAN VIEW

DWG. NO.: C-44
CREATED: 09/27/16
SHEET: 38 OF 44

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DREDGING DESIGN SHEETS.DWG April 24, 2017 11:55 AM
PLOT DETAILS: MATHIS, TOM TT-BOTH-MAIN-COLOR.CTB

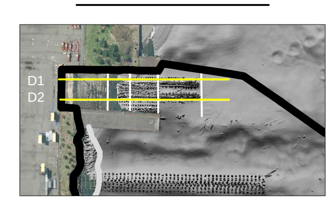


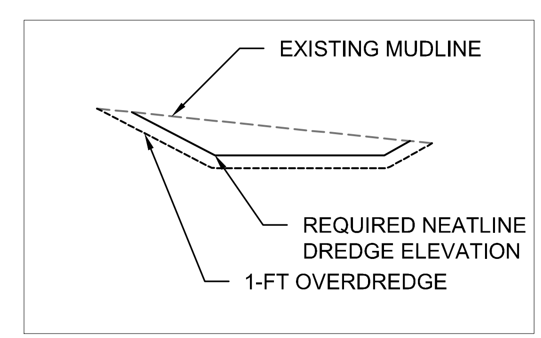


NOTES:

1. FORMER SHIPWAY TO BE BACKFILLED TO EXISTING GRADES AFTER REMOVAL. REFER TO INTERTIDAL BACKFILL DRAWINGS.
2. PORT OF SEATTLE WILL DEMOLISH PART OF SHEET PILE WALL. REFER TO PORT OF SEATTLE TERMINAL 5 PILE REMOVAL AND DISPOSAL DESIGN DRAWINGS FOR ADDITIONAL DETAILS.
3. ELEVATION OF CONTAMINATION (EOC) AT TT-CS-103, TT-CS-105, AND TT-CS-106 WAS DETERMINED WITH THE ASSUMPTION THAT THE DEPTH OF CONTAMINATION EXTENDS ANOTHER 3 FEET BELOW THE DEPTH OF CORE REFUSAL.
4. CONTAMINATION AT TT-CS-107 AND TT-CS-108 REPRESENTS PSR RELATED CONTAMINATION WHERE DREDGE DEPTH WAS SET AT TOP OF CLEAN INTERVAL.

KEY MAP





OVERDREDGE DETAIL
NTS

LEGEND:
- EXISTING BATHYMETRY
- SEDIMENT SAMPLE ≥ SQS OR CSL
- SEDIMENT SAMPLE < SQS
- MHHW (11.3FT) & MLLW (0.0FT)
- DREDGE NEATLINE

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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

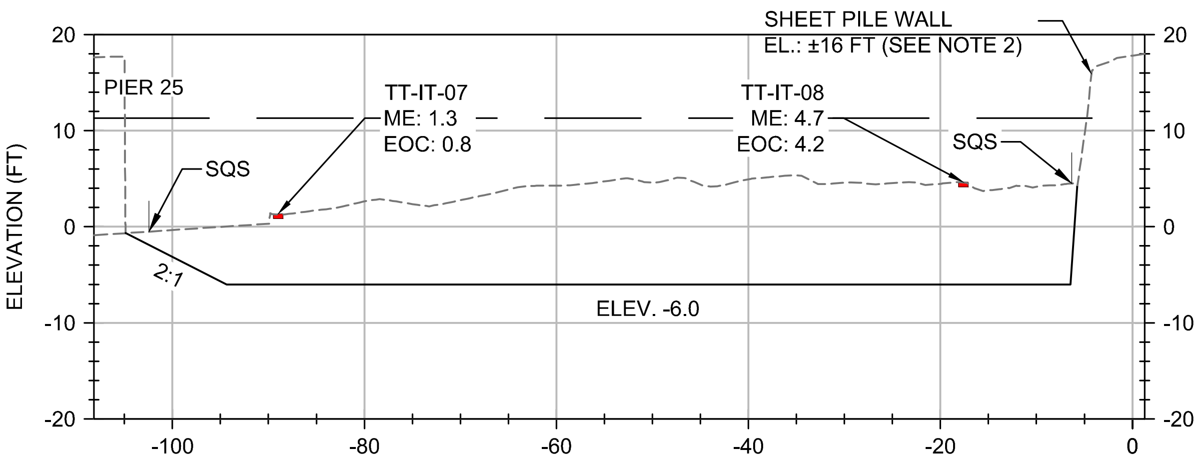
REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

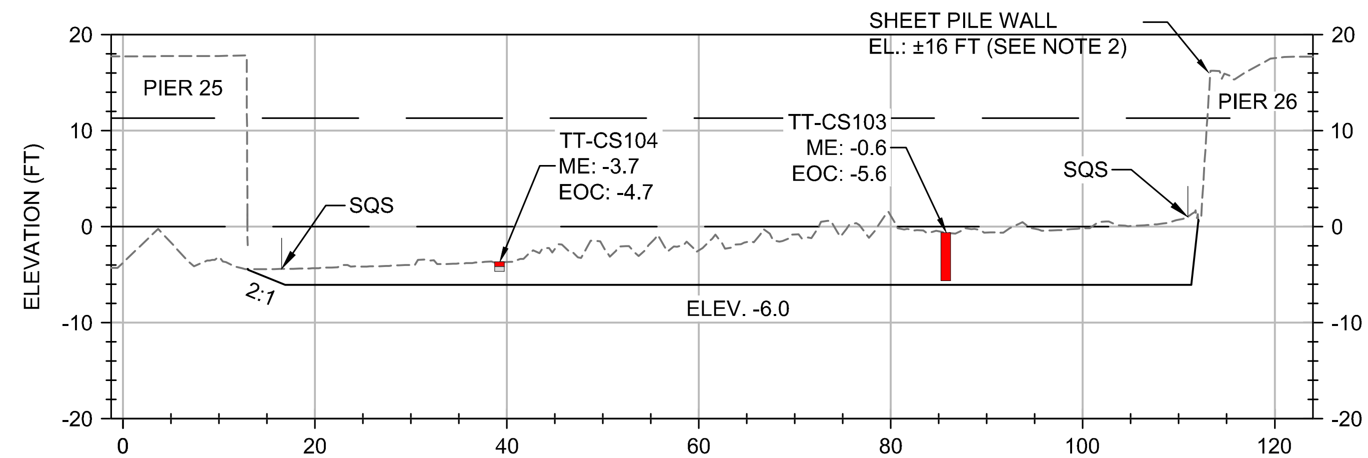
DREDGE PLAN
FORMER SHIPWAY CROSS SECTIONS

DWG. NO.: C-45
CREATED: 09/27/16

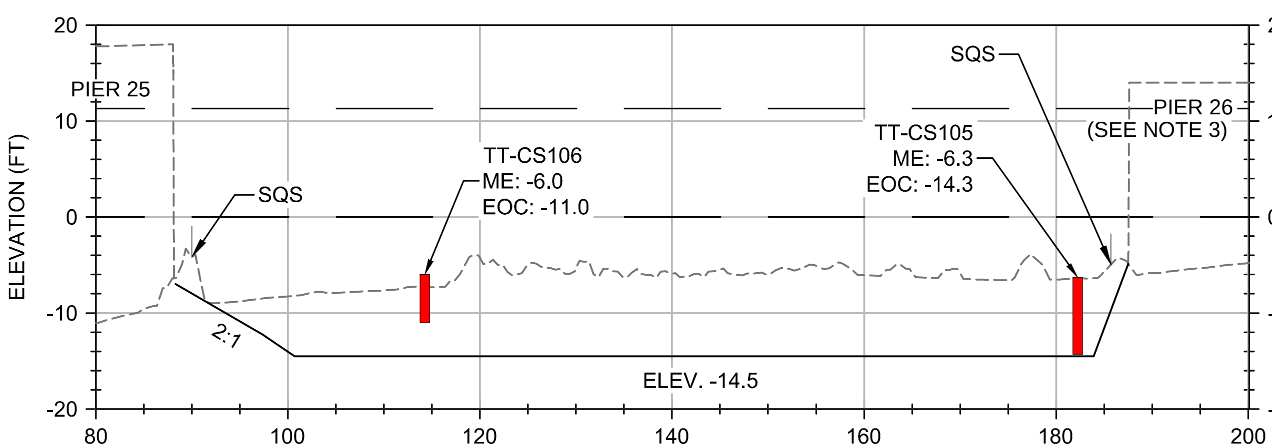
Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DREDGING DESIGN SHEETS.DWG
April 24, 2017 11:55 AM
PLOT DETAILS: MATHIS, TOM TT-BOTH-MAIN-COLOR.CTB



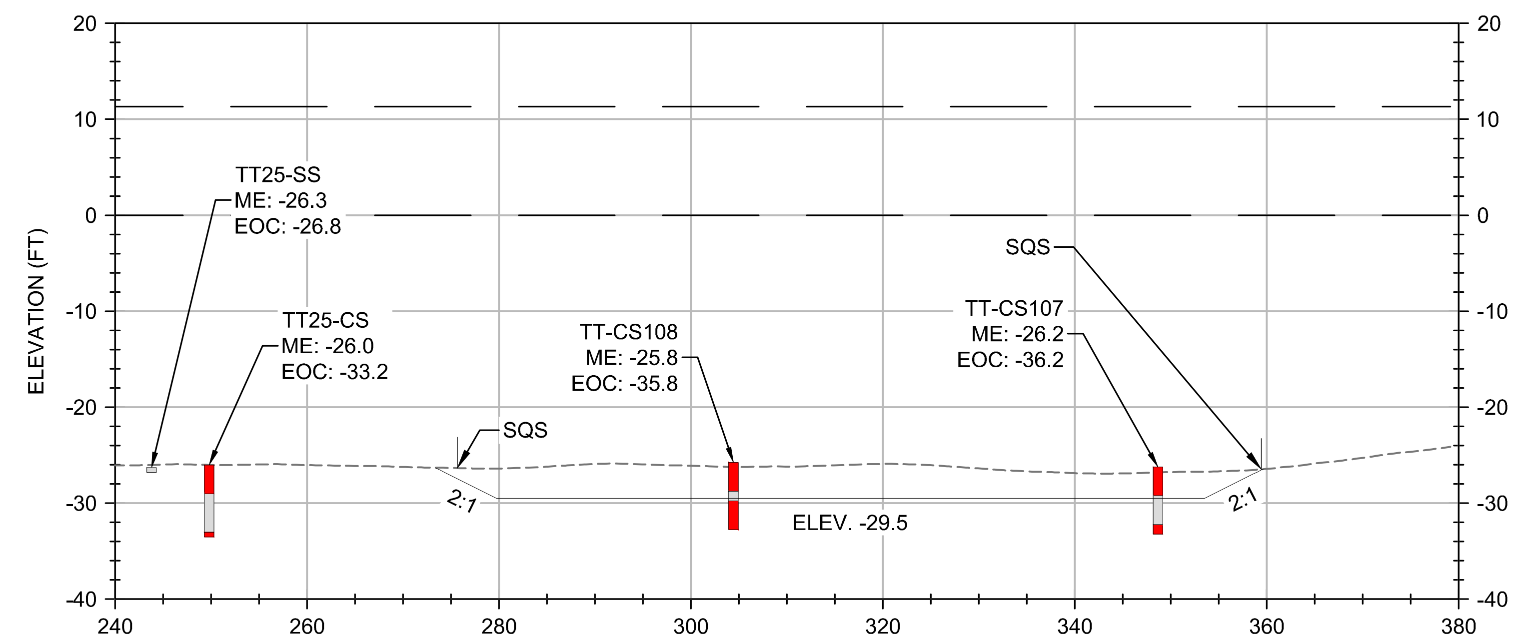
D3
C-46
SCALE 1" = 20', 1H:1V



D4
C-46
SCALE 1" = 20', 1H:1V



D5
C-46
SCALE 1" = 20', 1H:1V

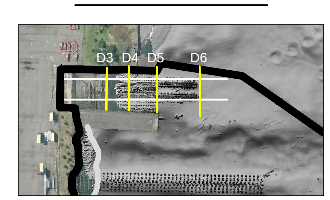


D6
C-46
SCALE 1" = 20', 1H:1V

NOTES:

1. FORMER SHIPWAY TO BE BACKFILLED TO EXISTING GRADE AFTER REMOVAL. REFER TO INTERTIDAL BACKFILL DRAWINGS.
2. PORT OF SEATTLE WILL DEMOLISH PART OF SHEET PILE WALL AND PIER 26. REFER TO PORT OF SEATTLE TERMINAL 5 PILE REMOVAL AND DISPOSAL DESIGN DRAWINGS FOR ADDITIONAL DETAILS.

KEY MAP



LEGEND:

- EXISTING BATHYMETRY
- SEDIMENT SAMPLE ≥ SQS OR CSL
- SEDIMENT SAMPLE < SQS
- MHHW (11.3FT) & MLLW (0.0FT)
- DREDGE NEATLINE

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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

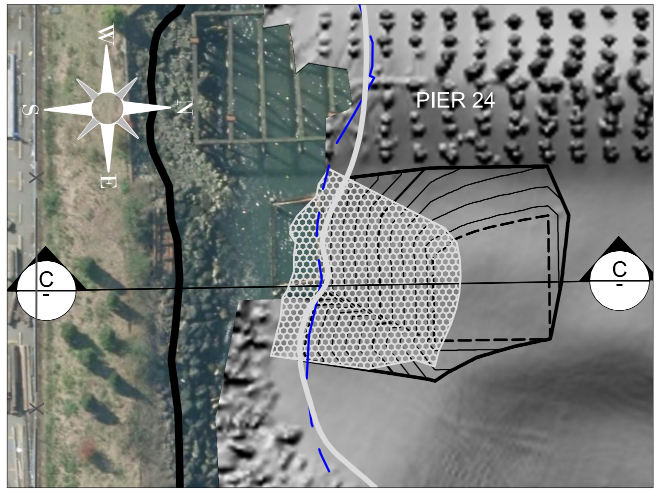
REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE
SITE REMEDIATION

DREDGE PLAN
FORMER SHIPWAY
CROSS SECTIONS

DWG. NO.: C-46
CREATED: 09/27/16
SHEET: 40 OF 44

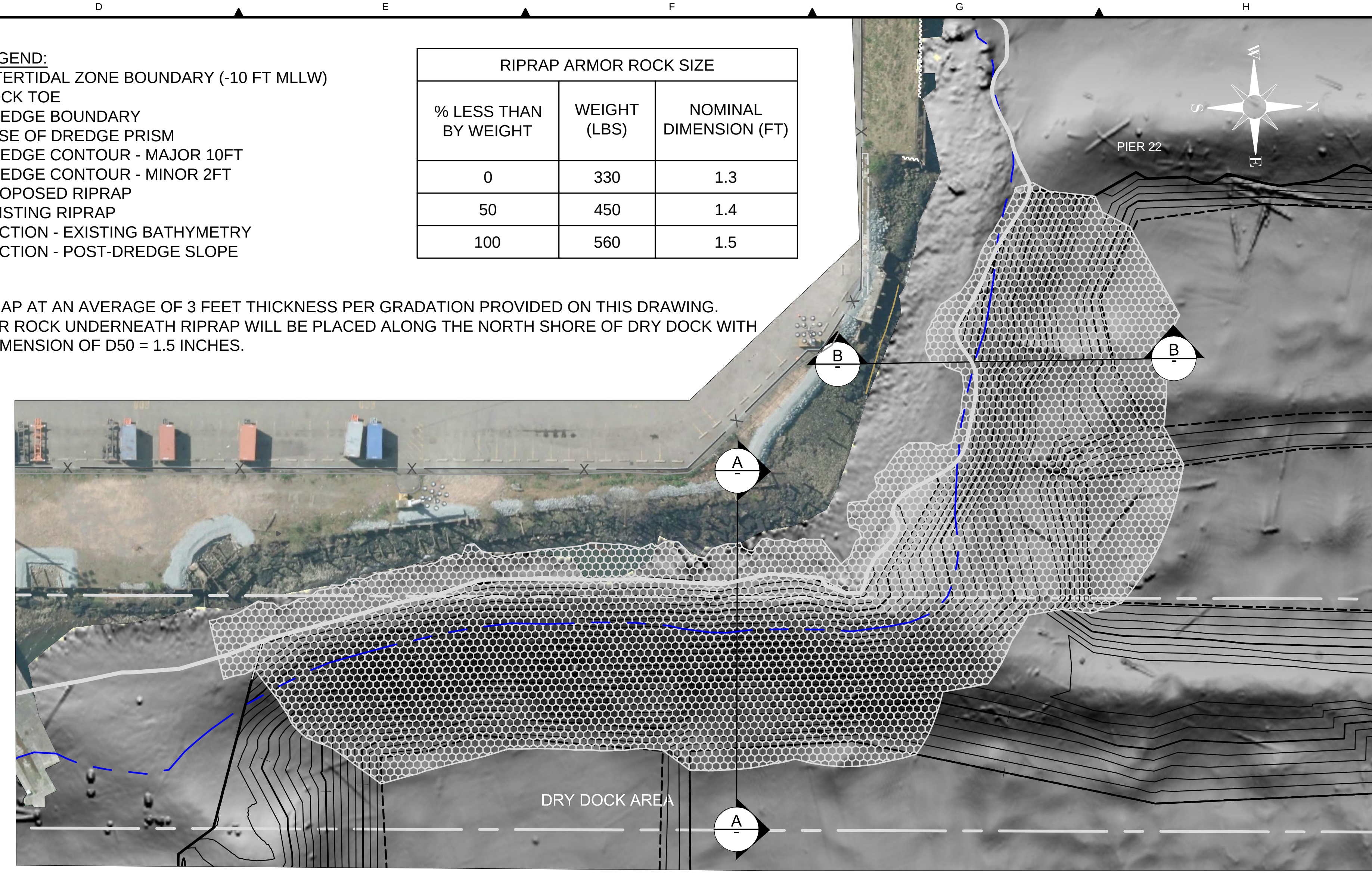
Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\DREDGING DESIGN SHEETS.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:56 AM TT-BOTH-MAIN-COLOR.CTB

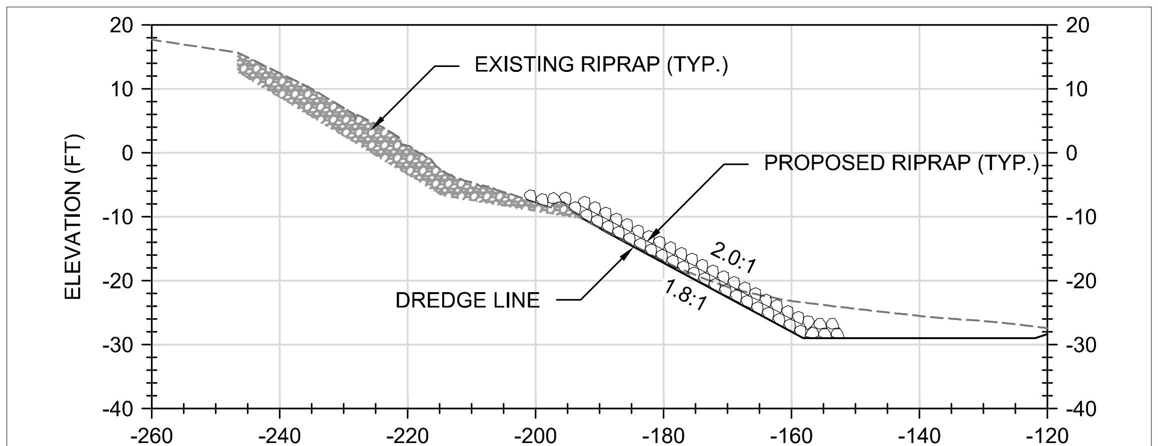


LEGEND:
- INTERTIDAL ZONE BOUNDARY (-10 FT MLLW)
- ROCK TOE
- DREDGE BOUNDARY
- BASE OF DREDGE PRISM
- DREDGE CONTOUR - MAJOR 10FT
- DREDGE CONTOUR - MINOR 2FT
- PROPOSED RIPRAP
- EXISTING RIPRAP
- SECTION - EXISTING BATHYMETRY
- SECTION - POST-DREDGE SLOPE

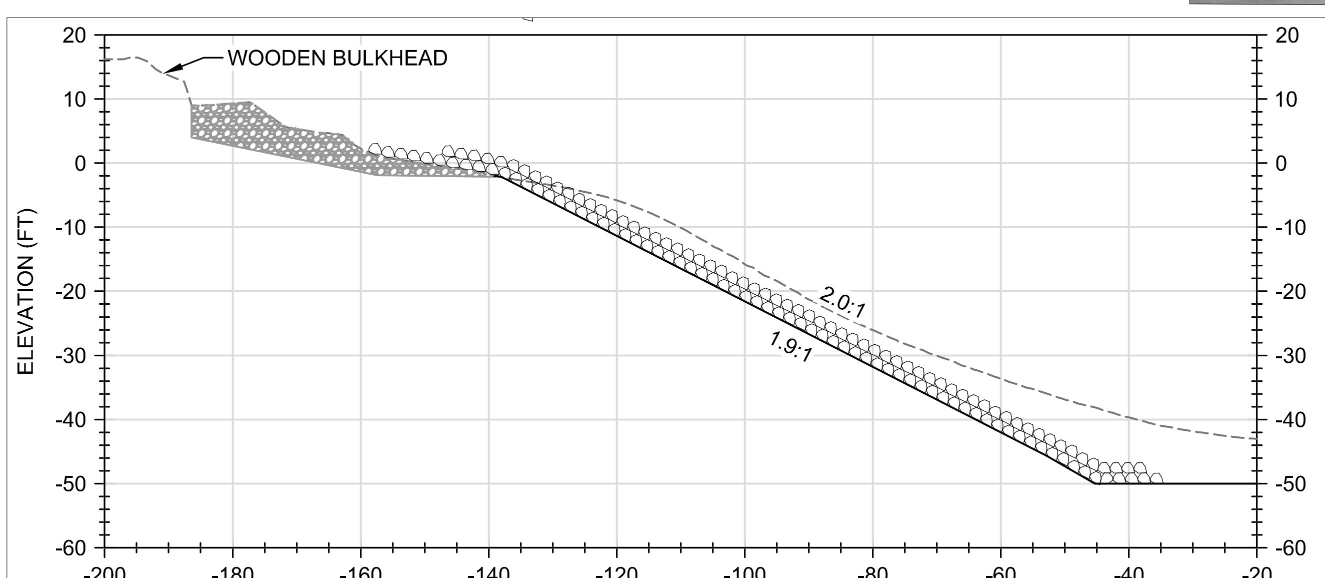
RIPRAP ARMOR ROCK SIZE		
% LESS THAN BY WEIGHT	WEIGHT (LBS)	NOMINAL DIMENSION (FT)
0	330	1.3
50	450	1.4
100	560	1.5

NOTE:
1. PLACE RIPRAP AT AN AVERAGE OF 3 FEET THICKNESS PER GRADATION PROVIDED ON THIS DRAWING.
2. CORE LAYER ROCK UNDERNEATH RIPRAP WILL BE PLACED ALONG THE NORTH SHORE OF DRY DOCK WITH NOMINAL DIMENSION OF D50 = 1.5 INCHES.

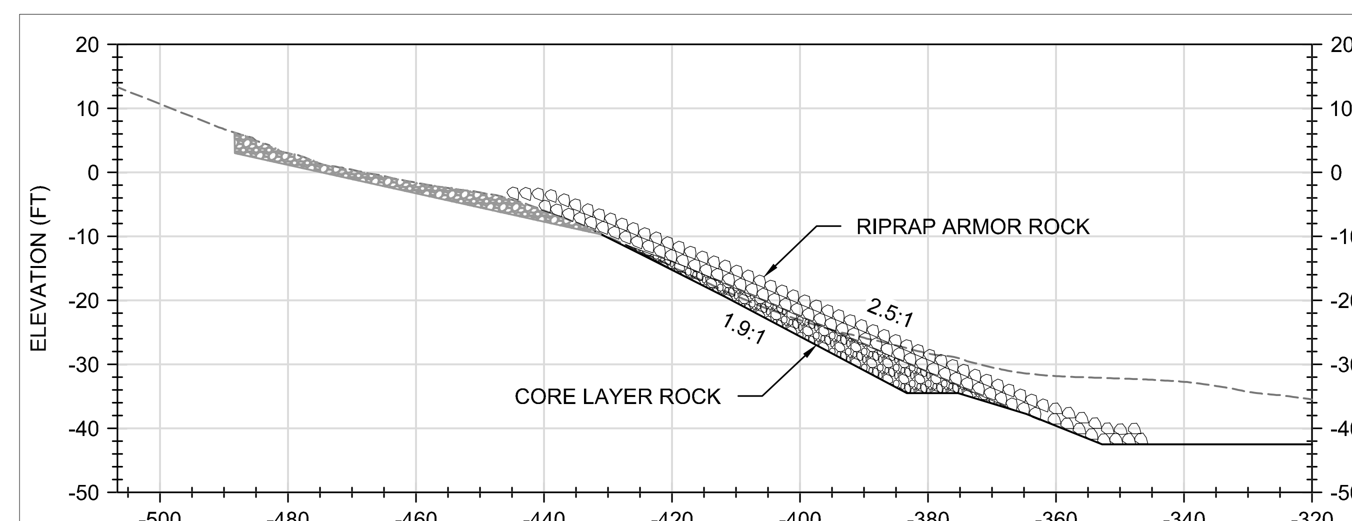




C
SCALE 1" = 30', 1H:1V



A
SCALE 1" = 30', 1H:1V



B
SCALE 1" = 30', 1H:1V

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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	APP
D	05/01/17	INTERMEDIATE (60%) DESIGN - DRAFT	TJM	ATS	SO
C	03/28/17	INTERMEDIATE (60%) DESIGN - INTERNAL DRAFT	KE	ATS	SO
B	10/28/16	PRELIMINARY (30%) DESIGN - DRAFT	ATS	NV	SO
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

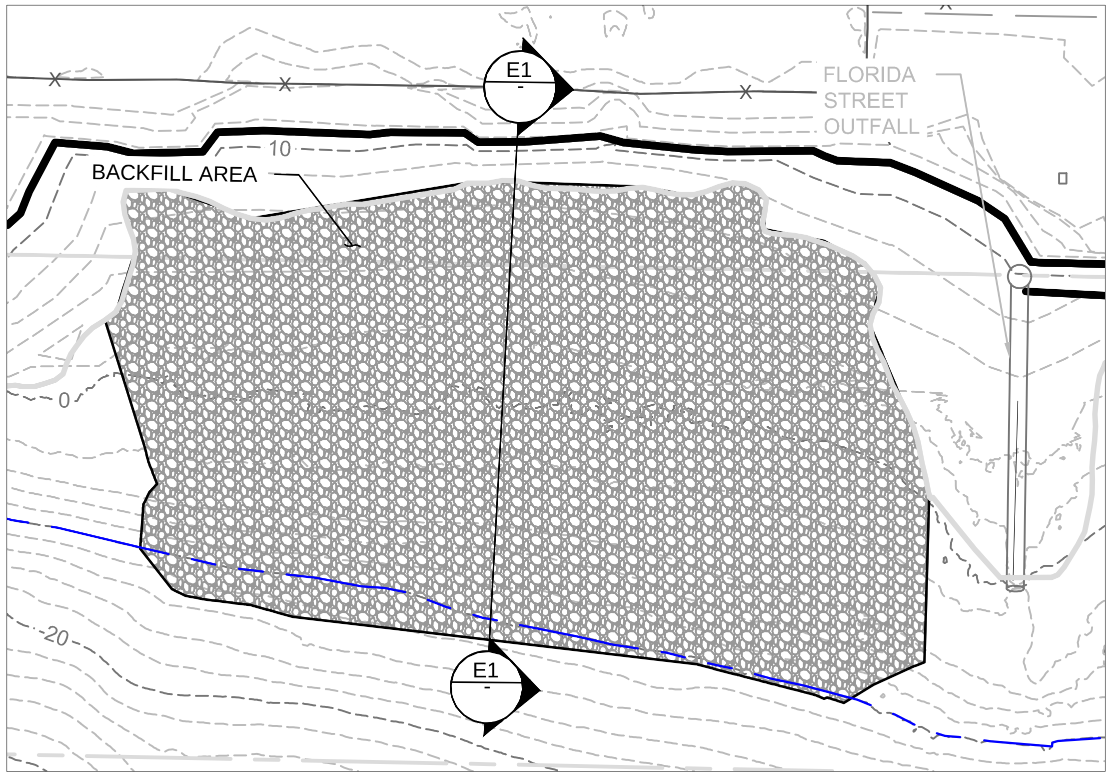
LOCKHEED WEST SEATTLE SITE REMEDIATION

SHORELINE STABILIZATION
PLAN VIEW AND SECTIONS

DWG. NO.: C-50
CREATED: 10/28/16

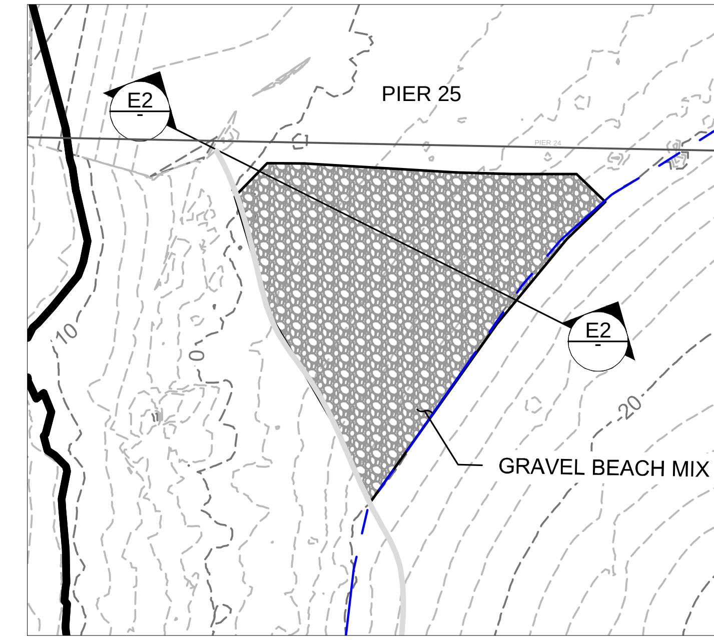
Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\SHORELINE STABILIZATION.DWG
April 24, 2017 11:58 AM
PLOT DETAILS: MATHIS, TOM TT-BOTH-MAIN-COLOR.CTB

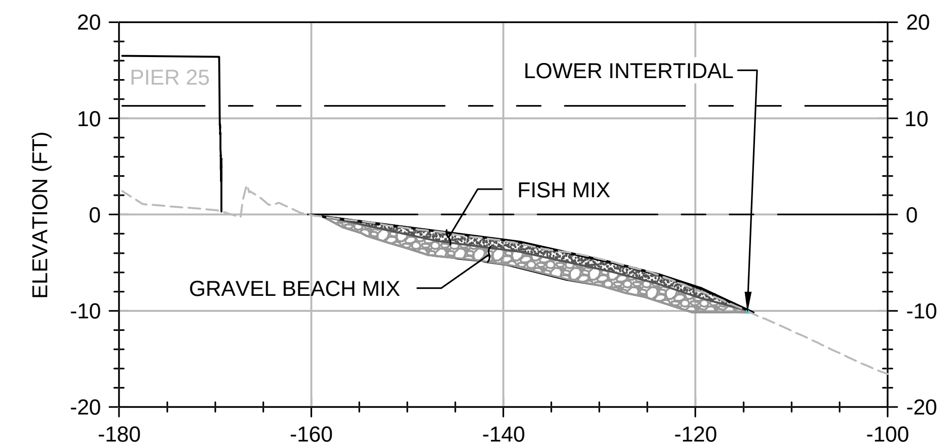
0' 25' 50' 100'



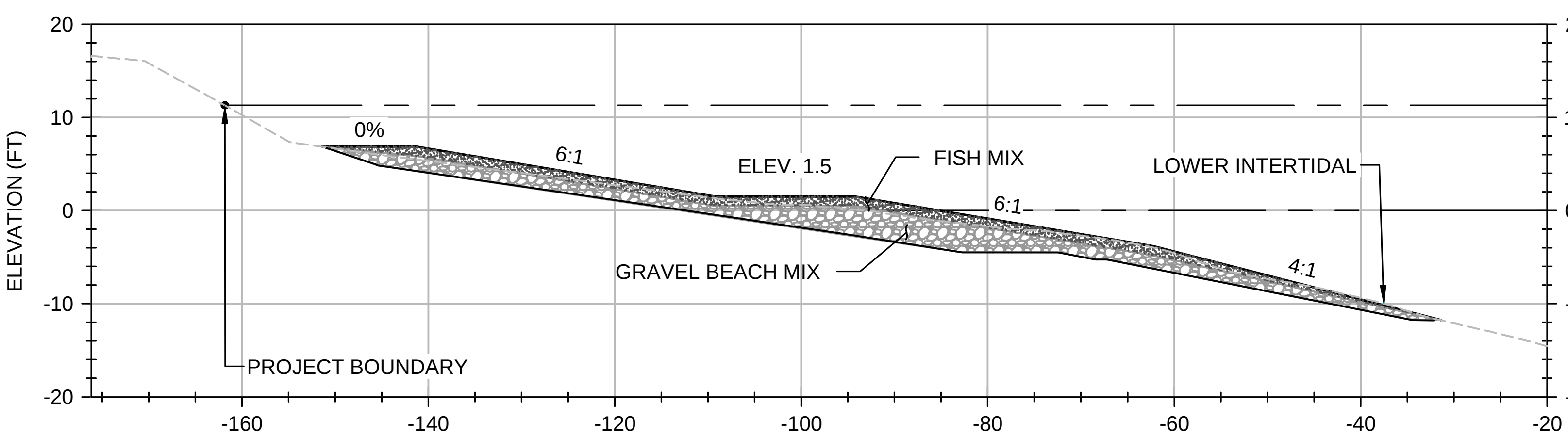
NOTES:
1. INTERTIDAL DREDGE AREA TO BE BACKFILLED TO THE EXISTING GRADES WITH GRAVEL BEACH MIX, AND FISH MIX.
2. BACKFILL CONSISTS OF AVERAGE 2 FOOT DEPTH GRAVEL BEACH MIX (D50 = 1.5 INCH ROCK) AND 6 INCH DEPTH FISH MIX OVER DREDGED SURFACE.

0' 15' 30' 60'



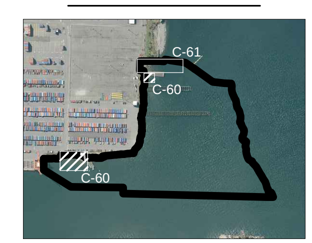


E2 PIER 25 BACKFILL - TYPICAL CROSS SECTION
SCALE 1" = 20', 1H: 1V



E1 SOUTH BEACH BACKFILL - TYPICAL CROSS SECTION
SCALE 1" = 20', 1H: 1V

KEY MAP



LEGEND:
- PROJECT BOUNDARY
- EXISTING CONTOUR - MAJOR 10FT
- EXISTING CONTOUR - MINOR 2FT
- INTERTIDAL ZONE BOUNDARY (-10 FT MLLW)
- ROCK TOE
- DREDGE BOUNDARY
- SECTION - EXISTING GRADE
- SECTION - DREDGE NEATLINE
- MHHW (11.3FT) & MLLW (0.0FT)

Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\INTERTIDAL BACKFILL.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:59 AM TT-BOTH-MAIN-COLOR.CTB

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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

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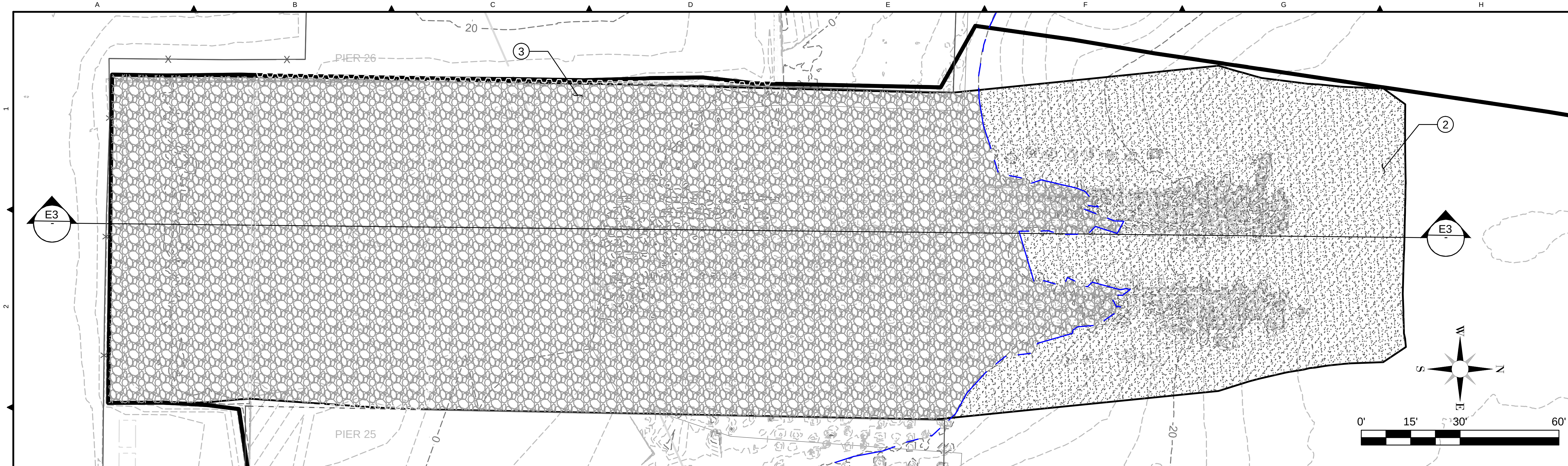
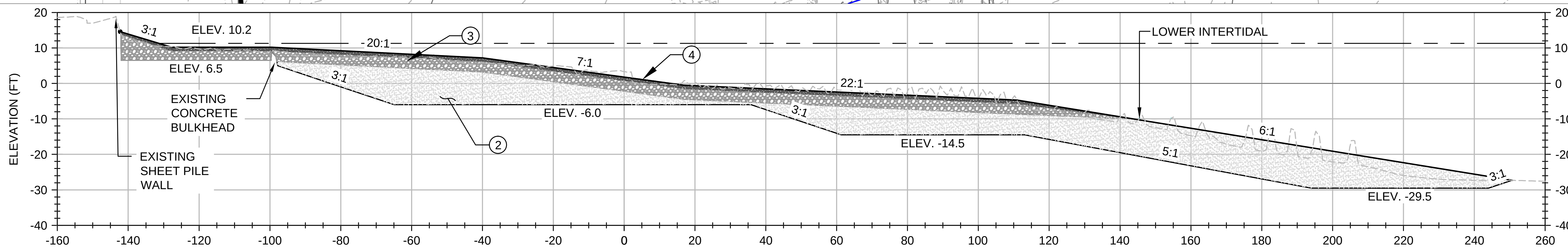
A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION
INTERTIDAL BACKFILL
SOUTH BEACH, PIER 25
PLAN AND SECTION VIEW

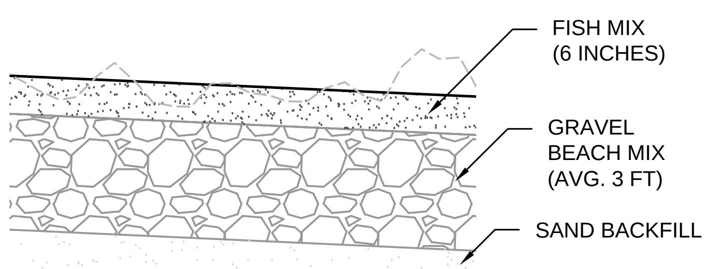
DWG. NO.: C-60
CREATED: 09/27/16
SHEET: 42 OF 44





E3 FORMER SHIPWAY - TYPICAL CROSS SECTION

SCALE 1" = 30', 1H: 1V



E4 FORMER SHIPWAY - TYPICAL DETAIL

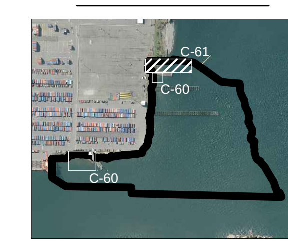
NTS

NOTES:

1. FORMER SHIPWAY INTERTIDAL AREAS (BETWEEN 11.3FT MLLW AND -10FT MLLW) TO BE BACKFILLED TO THE EXISTING GRADES WITH SAND, GRAVEL BEACH MIX, AND FISH MIX. DREDGED AREAS BELOW -10 FT MLLW TO BE BACKFILLED WITH SAND.
2. AREAS TO BE BACKFILLED WITH SAND.
3. PLACE AN AVERAGE OF 3 FEET DEPTH GRAVEL BEACH MIX (D50 = 1.5-INCH ROCK) OVER SAND FILL.
4. PLACE 6 INCH DEPTH FISH MIX OVER GRAVEL BEACH MIX.

LEGEND:
- PROJECT BOUNDARY
- EXISTING CONTOUR - MAJOR 10FT
- EXISTING CONTOUR - MINOR 2FT
- INTERTIDAL ZONE BOUNDARY (-10 FT MLLW)
- ROCK TOE
- DREDGE BOUNDARY
- SECTION - EXISTING GRADE
- SECTION - DREDGE NEATLINE
- MHHW (11.3FT) & MLLW (0.0FT)

KEY MAP



Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\INTERTIDAL BACKFILL.DWG
PLOT DETAILS: MATHIS, TOM April 24, 2017 11:59 AM TT-BOTH-MAIN-COLOR.CTB

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LOCKHEED MARTIN

LOCKHEED WEST SEATTLE SUPERFUND SITE

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A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE
SITE REMEDIATION
INTERTIDAL BACKFILL
FORMER SHIPWAY
PLAN AND SECTION VIEW

DWG. NO.: C-61

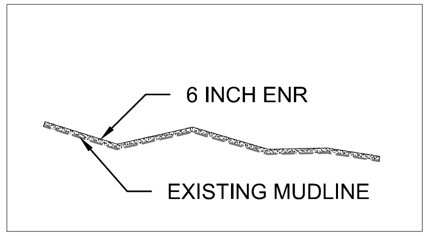
CREATED: 09/27/16

LEGEND:

- PROJECT BOUNDARY
- ENHANCED NATURAL RECOVERY (ENR) LAYER
- DREDGE BOUNDARY
- ROCK TOE
- INTERTIDAL ZONE BOUNDARY (-10 FT MLLW)
- POST - DREDGE CONTOUR - MAJOR 20 FT
- POST - DREDGE CONTOUR - MINOR 4 FT
- EL : ## BOTTOM DREDGE ELEVATION
- USACE FEDERAL NAVIGATION CHANNEL (WEST WATERWAY)

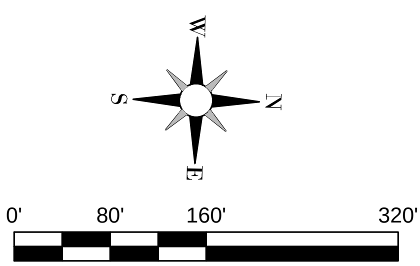
NOTES:

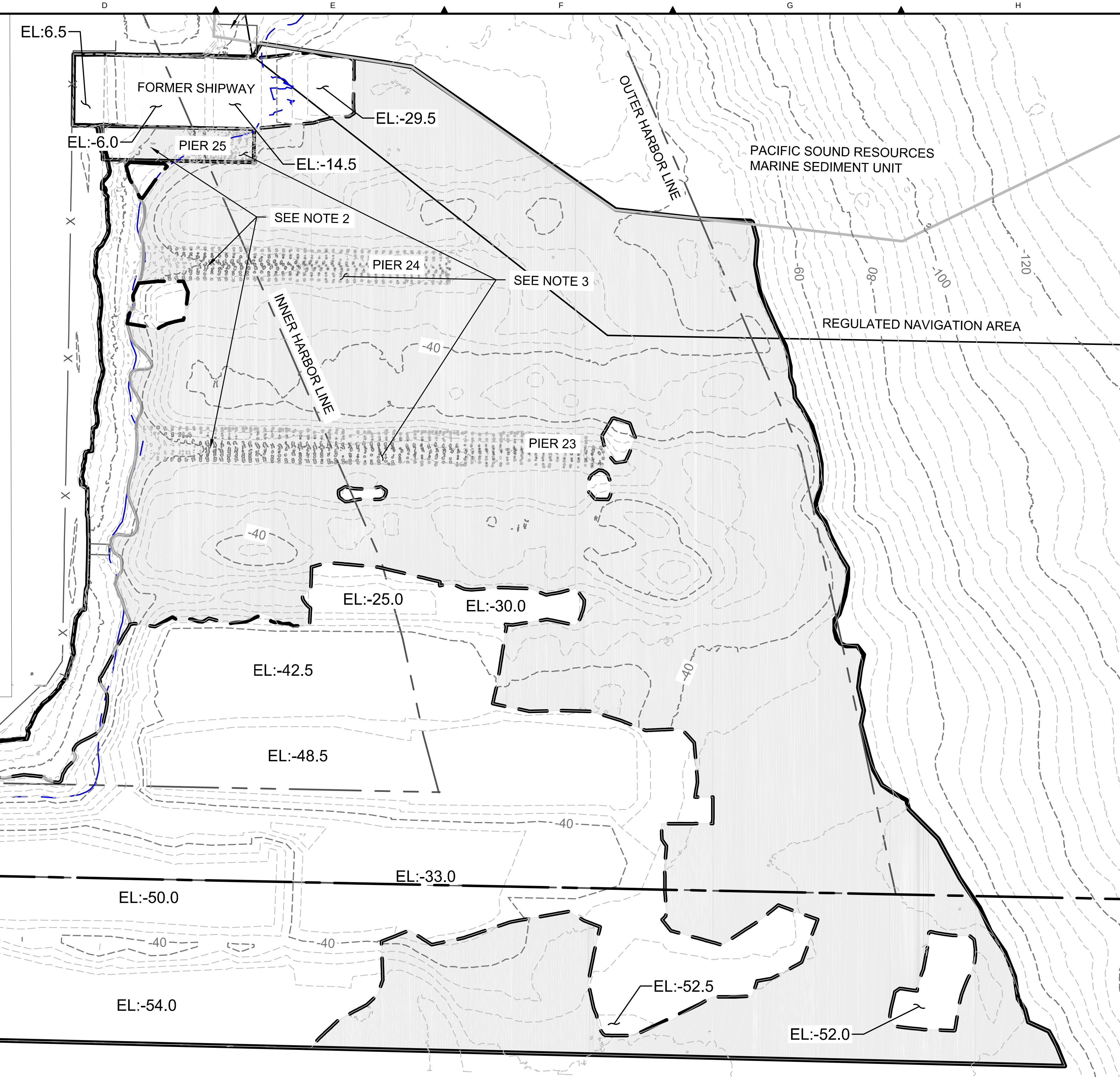
1. ENHANCED NATURAL RECOVERY (ENR) LAYER WILL BE PLACED IN AREAS AS SHOWN (SUBTIDAL AREAS BETWEEN -10FT MLLW OR EXISTING TOE OF SHORELINE ROCK AND THE PROJECT BOUNDARY EXCEPT DREDGE, RESIDUAL MANAGEMENT LAYER PLACEMENT AND BACKFILL AREAS).
2. CONTRACTOR WILL USE SPECIAL EQUIPMENT TO PLACE ENR LAYER UNDER THE EXISTING PIERS AND BETWEEN REMNANT PILES.
3. PORT OF SEATTLE WILL REMOVE PORTIONS OF PIER 23, PIER 24, PIER 25 BETWEEN THE INNER AND OUTER HARBOR LINES, REFER TO PORT OF SEATTLE TERMINAL 5 PILE REMOVAL AND DISPOSAL DESIGN DRAWINGS FOR ADDITIONAL DETAILS.

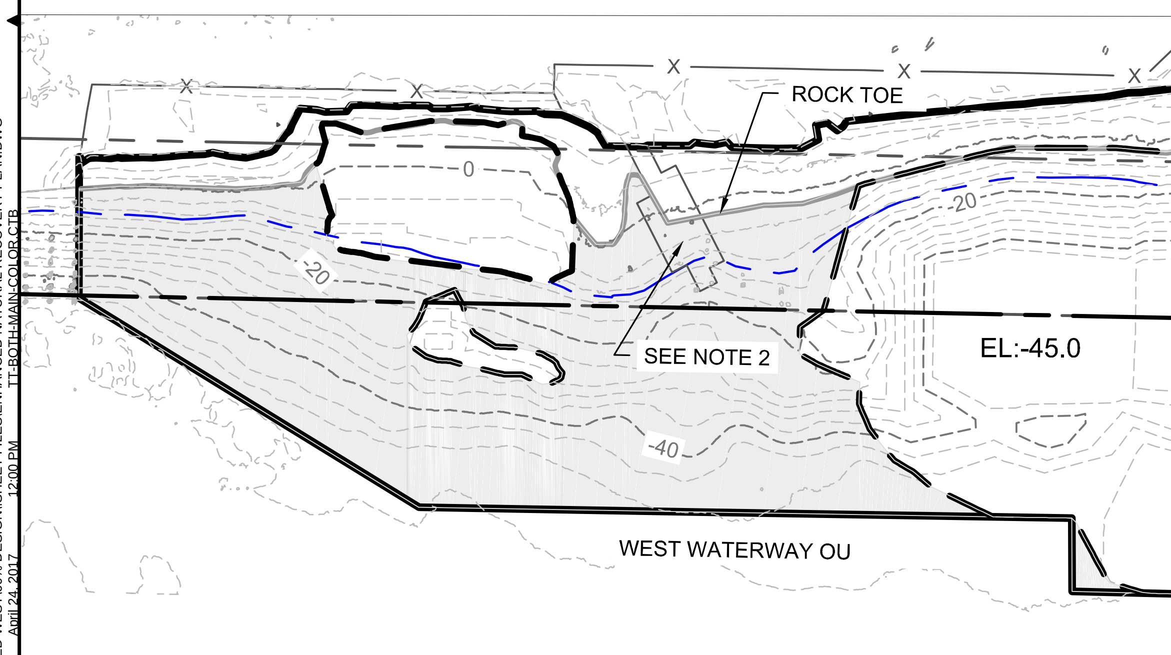


ENHANCED NATURAL RECOVERY DETAIL

NTS







Z:\PROJECTS\194-8650 LOCKHEED WEST\60% DESIGN\SHEET FILES\ENHANCED NATURAL RECOVERY PLAN.DWG TT-BOTH-MAIN-COLOR.CTB
PLOT DETAILS: MATHIS, TOM April 24, 2017 12:00 PM

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A	09/27/16	PRELIMINARY (30%) DESIGN - INTERNAL DRAFT	ATS	NV	SO

LOCKHEED WEST SEATTLE SITE REMEDIATION

ENHANCED NATURAL RECOVERY PLAN

DWG. NO.: C-65

CREATED: 09/27/16

SHEET: 44 OF 44