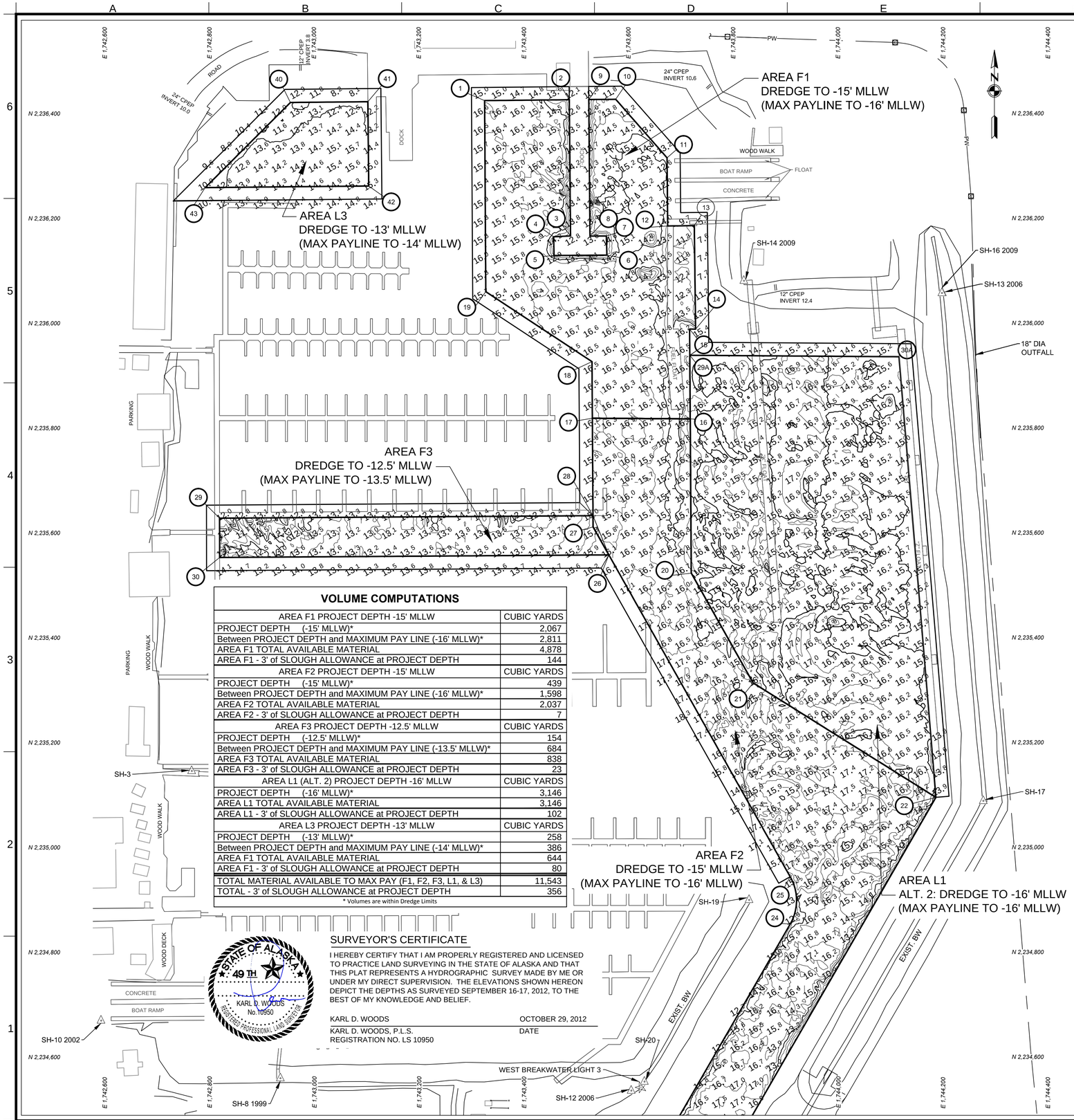


VOLUME COMPUTATIONS

AREA F1 PROJECT DEPTH -15' MLLW	CUBIC YARDS
PROJECT DEPTH (-15' MLLW)*	2,067
Between PROJECT DEPTH and MAXIMUM PAY LINE (-16' MLLW)*	2,811
AREA F1 TOTAL AVAILABLE MATERIAL	4,878
AREA F1 - 3' of SLOUGH ALLOWANCE at PROJECT DEPTH	144
AREA F2 PROJECT DEPTH -15' MLLW	CUBIC YARDS
PROJECT DEPTH (-15' MLLW)*	439
Between PROJECT DEPTH and MAXIMUM PAY LINE (-16' MLLW)*	1,598
AREA F2 TOTAL AVAILABLE MATERIAL	2,037
AREA F2 - 3' of SLOUGH ALLOWANCE at PROJECT DEPTH	7
AREA F3 PROJECT DEPTH -12.5' MLLW	CUBIC YARDS
PROJECT DEPTH (-12.5' MLLW)*	154
Between PROJECT DEPTH and MAXIMUM PAY LINE (-13.5' MLLW)*	684
AREA F3 TOTAL AVAILABLE MATERIAL	838
AREA F3 - 3' of SLOUGH ALLOWANCE at PROJECT DEPTH	23
AREA L1 (ALT. 2) PROJECT DEPTH -16' MLLW	CUBIC YARDS
PROJECT DEPTH (-16' MLLW)*	3,146
AREA L1 TOTAL AVAILABLE MATERIAL	3,146
AREA L1 - 3' of SLOUGH ALLOWANCE at PROJECT DEPTH	102
AREA L3 PROJECT DEPTH -13' MLLW	CUBIC YARDS
PROJECT DEPTH (-13' MLLW)*	258
Between PROJECT DEPTH and MAXIMUM PAY LINE (-14' MLLW)*	386
AREA F1 TOTAL AVAILABLE MATERIAL	644
AREA F1 - 3' of SLOUGH ALLOWANCE at PROJECT DEPTH	80
TOTAL MATERIAL AVAILABLE TO MAX PAY (F1, F2, F3, L1, & L3)	11,543
TOTAL - 3' of SLOUGH ALLOWANCE at PROJECT DEPTH	356

* Volumes are within Dredge Limits

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM PROPERLY REGISTERED AND LICENSED TO PRACTICE LAND SURVEYING IN THE STATE OF ALASKA AND THAT THIS PLAT REPRESENTS A HYDROGRAPHIC SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION. THE ELEVATIONS SHOWN HEREON DEPICT THE DEPTHS AS SURVEYED SEPTEMBER 16-17, 2012, TO THE BEST OF MY KNOWLEDGE AND BELIEF.

STATE OF ALASKA 49TH KARL D. WOODS No.10950 REGISTERED PROFESSIONAL LAND SURVEYOR

KARL D. WOODS — OCTOBER 29, 2012

KARL D. WOODS, P.L.S. — DATE

REGISTRATION NO. LS 10950

GENERAL NOTES

1. THIS SURVEY WAS CONDUCTED BY TERRASOND, LTD ON SEPTEMBER 16-17, 2012 FOR WEST CONSTRUCTION COMPANY UNDER CWIDT CONTRACT W911KB-07-D-0016, TASK ORDER 0008.
2. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83(CORS) IN U.S. SURVEY FEET AS PROVIDED AND DEFINED WITHIN THE PROJECT PLANS FOR CWIDT TASK ORDER W911KB-07-D-0016-0008 AND MORE SPECIFICALLY AS SHOWN ON SHEET 4 OF 10 (C-101), GENERAL PLAN AND SURVEY CONTROL. POSITIONING FOR THIS SURVEY IS BASED ON HOLDING CONTROL STATIONS "SH-12 2006" AS N 2,234,535.51' E 1,743,605.71' AND "SH-8 1999" N 2,234,559.23' E 1,742,936.09'.
3. VERTICAL CONTROL IS IN U.S. SURVEY FEET AND REFERS TO MEAN-LOWER-LOW-WATER DATUM (MLLW=0.0') AS PROVIDED AND DEFINED WITHIN THE PROJECT PLANS FOR CWIDT TASK ORDER W911KB-07-D-0016-0008 AND MORE SPECIFICALLY AS SHOWN ON SHEET 4 OF 10 (C-101), GENERAL PLAN AND SURVEY CONTROL. THE BASIS OF MLLW VALUES FOR THIS SURVEY WERE APPLIED HOLDING "SH-8 1999" AS 17.25'.
4. A HORIZONTAL CONTROL VERIFICATION SURVEY WAS CONDUCTED SEPTEMBER 15, 2012 PRIOR TO HYDROGRAPHIC DATA ACQUISITION. CONTROL INTEGRITY WAS VERIFIED UTILIZING TWO (2) LEICA 1200 SERIES GPS RECEIVERS AND REAL-TIME-KINEMATIC TECHNIQUES. OBSERVATIONS WERE LIMITED TO CONTROL STATIONS "SH-12 2006", "SH-8 1999", "SH-10 2002" AND SH-15 2009".
5. HYDROGRAPHIC DATA ACQUISITION WAS CONDUCTED SEPTEMBER 16-17, 2012 USING A RESON SEABAT 7101 MULTIBEAM ECHOSOUNDER (240KHZ WITH 511 BEAMS AT 1.5 DEGREES EACH). VESSEL POSITIONING, HEADING, ATTITUDE AND REAL-TIME TIDES WERE MEASURED AND APPLIED USING A CODA OCTOPUS F-180 MOTION REFERENCE SYSTEM OPERATING ON RTK CORRECTORS BROADCAST FROM A LOCAL GPS BASE SET AT CONTROL STATION "SH-12 2006". SOUND VELOCITY WAS MEASURED AT THE MULTI-BEAM HEAD USING AN A.M.L. SMARTPROBE AND MEASURED THROUGH THE WATER COLUMN USING AN ODOM DIGIBAR PRO SOUND VELOCITY PROFILER. VESSEL NAVIGATION AND DATA COLLECTION WERE PERFORMED USING HYPACK HYSWEEP INTEGRATED SOFTWARE (V2012). DATA PROCESSING AND FINAL DATA ANALYSIS WERE PERFORMED USING CARIS HIPS & SIPS SOFTWARE (V 7.1). REAL-TIME TIDE VALUES WERE CORRELATED TO MLLW BY DIRECT OBSERVATION FROM "SH-8 1999" AS INDICATED IN NOTE 3 ABOVE.
6. SOUNDINGS ARE SHOWN IN U.S. SURVEY FEET AND ARE MINUS UNLESS NOTED OTHERWISE.
7. THIS SURVEY IS INDICATIVE OF CONDITIONS ON THE DATES OF SURVEY.

DREDGING LIMITS

CORNER	NORTHING	EASTING	CORNER	NORTHING	EASTING
1	2,236,424.30	1,743,325.60	23 C	2,233,886.17	1,743,706.76
2	2,236,425.89	1,743,487.20	23 D	2,234,229.35	1,743,548.51
3	2,236,166.11	1,743,489.51	24	2,234,853.44	1,743,908.83
4	2,236,164.51	1,743,457.26	25	2,234,943.63	1,743,908.72
5	2,236,128.75	1,743,458.11	26	2,235,557.63	1,743,562.68
6	2,236,129.52	1,743,558.96	27	2,235,611.00	1,743,532.60
7	2,236,166.03	1,743,557.90	28	2,235,632.43	1,743,532.46
8	2,236,165.86	1,743,526.71	29	2,235,627.71	1,742,819.82
9	2,236,426.25	1,743,524.39	30	2,235,552.71	1,742,819.91
10	2,236,426.75	1,743,575.73	29 A	2,235,938.40	1,743,717.14
11	2,236,315.08	1,743,673.77	30 A	2,235,935.67	1,744,116.40
12	2,236,185.09	1,743,674.93	31	2,235,056.03	1,743,409.00
13	2,236,185.80	1,743,725.78	32	2,235,056.03	1,743,484.93
14	2,235,988.30	1,743,728.20	33	2,234,920.91	1,743,484.94
15	2,235,988.40	1,743,716.80	34	2,234,920.91	1,743,415.86
16	2,235,817.09	1,743,717.98	35	2,234,793.03	1,743,415.86
17	2,235,818.36	1,743,531.22	36	2,234,793.03	1,743,384.31
18	2,235,926.30	1,743,530.50	37	2,234,667.18	1,743,384.31
19	2,236,059.73	1,743,327.81	38	2,234,666.59	1,743,278.95
20	2,235,522.80	1,743,720.00	39	2,234,793.24	1,743,277.60
21	2,235,313.40	1,743,838.00	40	2,236,420.70	1,742,955.00
22	2,235,095.10	1,744,186.90	41	2,236,422.14	1,743,102.78
23	2,234,408.77	1,743,790.55	42	2,236,261.33	1,743,104.37
23 A	2,234,291.41	1,743,821.99	43	2,236,258.30	1,742,792.30
23 B	2,234,206.77	1,743,968.56			

NOTE: DREDGING LIMITS FOLLOW THE EXISTING BREAKWATER TOE BETWEEN POINTS 24 AND 25 (RADIUS IS APPROX. 90', AND POINTS 23 AND 23A (RADIUS IS APPROX. 85.9').

CONTROL DATA

STATION	NORTHING	EASTING	MLLW ELEV.	NAVD88 ELEV.	DESCRIPTION
SH-3	2,235,145.33	1,742,766.86	18.58	18.78	PK NAIL IN PIER
SH-8 1999	2,234,559.23	1,742,936.09	17.25	17.45	3 1/4" DBC IN CONC.
SH-10 2002	2,234,669.22	1,742,593.91	17.15	17.35	3 1/4" DBC IN ASPH.
SH-12 2006	2,234,535.51	1,743,605.71	20.65	20.85	3 1/4" DBC IN ROCK
SH-13 2006	2,236,056.67	1,744,199.94	20.58	20.78	3 1/4" DBC IN ROCK
SH-14 2009	2,236,080.45	1,743,820.69	16.27	16.47	SET 3 1/4" DBC IN ROCK
SH-15 2009	2,236,350.26	1,742,761.11	19.92	20.12	SET 3 1/4" DBC IN CONC.
SH-16 (UNMARKED)	2,236,057.07	1,744,198.55	20.52	20.72	FND 2 1/2" BC IN ROCK
SH-17 (UNMARKED)	2,235,088.26	1,744,277.61	19.51	19.71	FND 2 1/2" BC IN ROCK
SH-18 (UNMARKED)	2,234,558.18	1,743,974.82	20.69	20.89	FND 2 1/2" BC IN CONC.
SH-19 (UNMARKED)	2,234,898.90	1,743,830.72	20.51	20.71	FND 2 1/2" BC IN ROCK
SH-20 (UNMARKED)	2,234,552.71	1,743,630.82	20.41	20.61	FND 2 1/2" BC IN ROCK

AIDS TO NAVIGATION

DESCRIPTION	USCG No.	NORTHING	EASTING
SEWARD BOAT HARBOR LIGHT 1	26015	2,233,886.20	1,743,706.80
SEWARD EAST BREAKWATER LIGHT 2	26020	2,234,367.52	1,743,386.95
SEWARD WEST BREAKWATER LIGHT 3	26025	2,234,541.90	1,743,624.10

100 0 100 200 300
SCALE IN FEET

BATHYMETRY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: Approved: Date:
PRIME CONTRACTOR REPRESENTATIVE RESIDENT ENGINEER

Sym.	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1" = 100'
Plot Scale: 1:1
File: SEW015-C-101-104_bdock
Drawing #: 3-SEW-01-02
Designed: A.C.J.
Drawn: K.N.B / L.E.P.
Reviewed: D. Hardy
Project Mgr: B.R.CRAWFORD
Submitted: A. Churchill
Chief: Branch C.E.R.O.A.K.C.O.

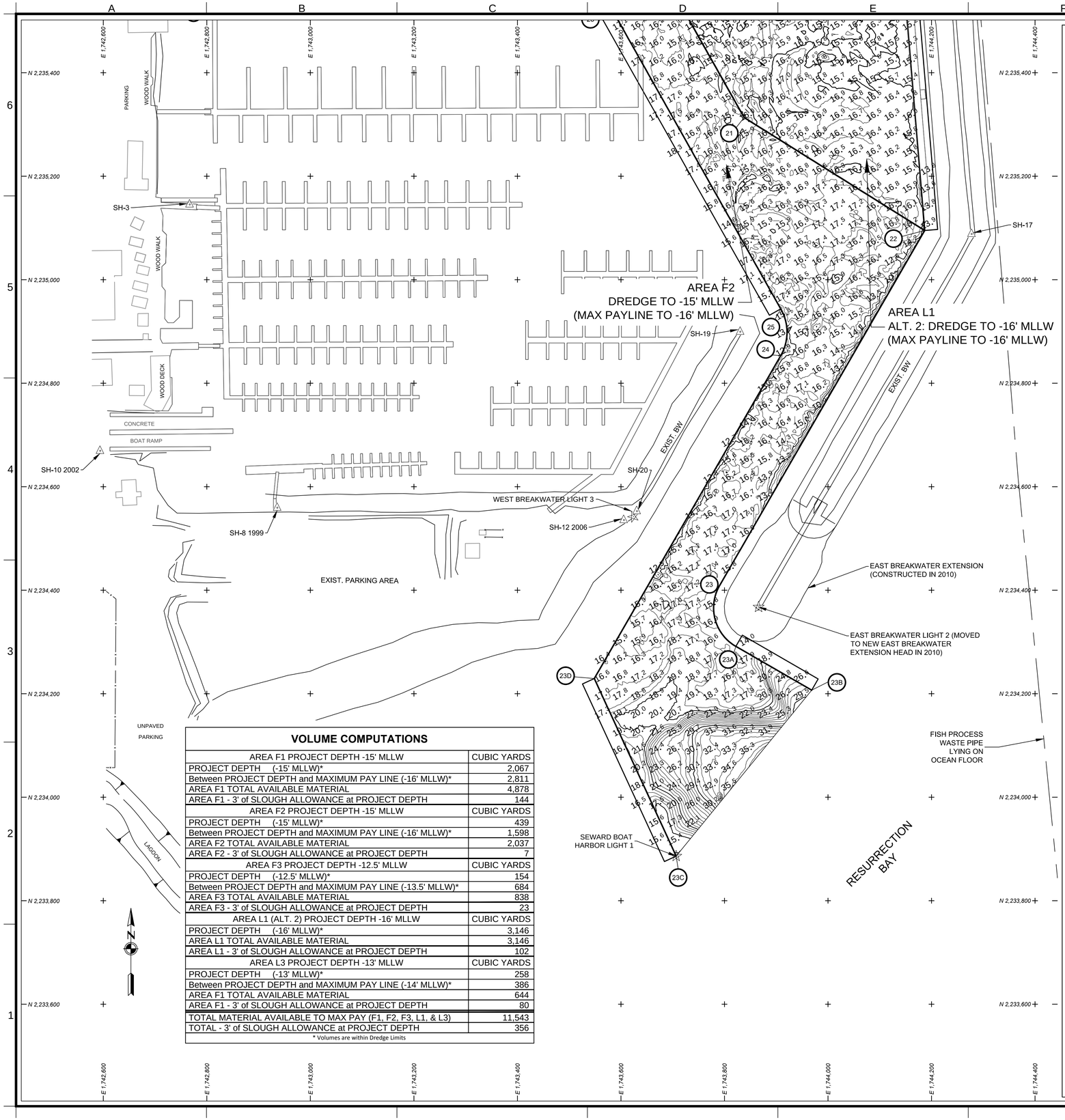
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER 0008

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE SURVEY
SEPTEMBER 16-17, 2012

Reference number:
C-101
Sheet 1 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015C-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----



VOLUME COMPUTATIONS

AREA F1 PROJECT DEPTH -15' MLLW	CUBIC YARDS
PROJECT DEPTH (-15' MLLW)*	2,067
Between PROJECT DEPTH and MAXIMUM PAY LINE (-16' MLLW)*	2,811
AREA F1 TOTAL AVAILABLE MATERIAL	4,878
AREA F1 - 3' of SLOUGH ALLOWANCE at PROJECT DEPTH	144
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PROJECT DEPTH (-15' MLLW)*	439
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PROJECT DEPTH (-12.5' MLLW)*	154
Between PROJECT DEPTH and MAXIMUM PAY LINE (-13.5' MLLW)*	684
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TOTAL MATERIAL AVAILABLE TO MAX PAY (F1, F2, F3, L1, & L3)	11,543
TOTAL - 3' of SLOUGH ALLOWANCE at PROJECT DEPTH	356

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9	2,236,426.25	1,743,524.39	30	2,235,552.71	1,742,819.91
10	2,236,426.75	1,743,575.73	29 A	2,235,938.40	1,743,717.14
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23 B	2,234,206.77	1,743,968.56			

NOTE: DREDGING LIMITS FOLLOW THE EXISTING BREAKWATER TOE BETWEEN POINTS 24 AND 25 (RADIUS IS APPROX. 90', AND POINTS 23 AND 23A (RADIUS IS APPROX. 85.9').

CONTROL DATA

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SH-16 (UNMARKED)	2,236,057.07	1,744,198.55	20.52	20.72	FND 2 1/2" BC IN ROCK
SH-17 (UNMARKED)	2,235,088.26	1,744,277.61	19.51	19.71	FND 2 1/2" BC IN ROCK
SH-18 (UNMARKED)	2,234,558.18	1,743,974.82	20.69	20.89	FND 2 1/2" BC IN CONC.
SH-19 (UNMARKED)	2,234,898.90	1,743,830.72	20.51	20.71	FND 2 1/2" BC IN ROCK
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AIDS TO NAVIGATION

DESCRIPTION	USCG No.	NORTHING	EASTING
SEWARD BOAT HARBOR LIGHT 1	26015	2,233,886.20	1,743,706.80
SEWARD EAST BREAKWATER LIGHT 2	26020	2,234,367.52	1,743,386.95
SEWARD WEST BREAKWATER LIGHT 3	26025	2,234,541.90	1,743,624.10

100 0 100 200 300
SCALE IN FEET

BATHYMETRY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: Approved: Date:
"REAL CONTRACTOR" RESIDENT ENGINEER

Sym.	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1" = 100'
Plot Scale: 1:1
File: SEW015-C-101-104_j-dock
Drawing #: 3-SEW-01-02
0008

Designed: A.C.J.
Drawn: K.N.B / L.E.P.
Reviewed: D. Hardy
Chief: Survey & Topo Branch
Submitted: A. Churchill
Chief: Survey & Topo Branch, CEPOA-EN-CG

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE SURVEY
SEPTEMBER 16-17, 2012

Reference number:
C-102
Sheet 2 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

ELEVATION LEGEND L1		
MINIMUM	MAXIMUM	COLOR
-15.0'	0.0'	
-16.0'	-15.0'	
-17.0'	-16.0'	
-40.0'	-17.0'	

ELEVATION LEGEND L3		
MINIMUM	MAXIMUM	COLOR
-12.0'	0.0'	
-13.0'	-12.0'	
-14.0'	-13.0'	
-15.0'	-14.0'	
-40.0'	-15.0'	

ELEVATION LEGEND F3		
MINIMUM	MAXIMUM	COLOR
-11.5'	0.0'	
-12.5'	-11.5'	
-13.5'	-12.5'	
-14.5'	-13.5'	
-40.0'	-14.5'	

ELEVATION LEGEND F1-F2		
MINIMUM	MAXIMUM	COLOR
-14.0'	0.0'	
-15.0'	-14.0'	
-16.0'	-15.0'	
-17.0'	-16.0'	
-40.0'	-17.0'	

VOLUME COMPUTATIONS

AREA F1 PROJECT DEPTH -15' MLLW	CUBIC YARDS
PROJECT DEPTH (-15' MLLW)*	2,067
Between PROJECT DEPTH and MAXIMUM PAY LINE (-16' MLLW)*	2,811
AREA F1 TOTAL AVAILABLE MATERIAL	4,878
AREA F1 - 3' of SLOUGH ALLOWANCE at PROJECT DEPTH	144
AREA F2 PROJECT DEPTH -15' MLLW	CUBIC YARDS
PROJECT DEPTH (-15' MLLW)*	439
Between PROJECT DEPTH and MAXIMUM PAY LINE (-16' MLLW)*	1,598
AREA F2 TOTAL AVAILABLE MATERIAL	2,037
AREA F2 - 3' of SLOUGH ALLOWANCE at PROJECT DEPTH	7
AREA F3 PROJECT DEPTH -12.5' MLLW	CUBIC YARDS
PROJECT DEPTH (-12.5' MLLW)*	154
Between PROJECT DEPTH and MAXIMUM PAY LINE (-13.5' MLLW)*	684
AREA F3 TOTAL AVAILABLE MATERIAL	838
AREA F3 - 3' of SLOUGH ALLOWANCE at PROJECT DEPTH	23
AREA L1 (ALT. 2) PROJECT DEPTH -16' MLLW	CUBIC YARDS
PROJECT DEPTH (-16' MLLW)*	3,146
AREA L1 TOTAL AVAILABLE MATERIAL	3,146
AREA L1 - 3' of SLOUGH ALLOWANCE at PROJECT DEPTH	102
AREA L3 PROJECT DEPTH -13' MLLW	CUBIC YARDS
PROJECT DEPTH (-13' MLLW)*	258
Between PROJECT DEPTH and MAXIMUM PAY LINE (-14' MLLW)*	386
AREA F1 TOTAL AVAILABLE MATERIAL	644
AREA F1 - 3' of SLOUGH ALLOWANCE at PROJECT DEPTH	80
TOTAL MATERIAL AVAILABLE TO MAX PAY (F1, F2, F3, L1, & L3)	11,543
TOTAL - 3' of SLOUGH ALLOWANCE at PROJECT DEPTH	356

* Volumes are within Dredge Limits

GENERAL NOTES

1. THIS SURVEY WAS CONDUCTED BY TERRASOND, LTD ON SEPTEMBER 16-17, 2012 FOR WEST CONSTRUCTION COMPANY UNDER CWIDT CONTRACT W911KB-07-D-0016, TASK ORDER 0008.
2. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83(CORS) IN U.S. SURVEY FEET AS PROVIDED AND DEFINED WITHIN THE PROJECT PLANS FOR CWIDT TASK ORDER W911KB-07-D-0016-0008 AND MORE SPECIFICALLY AS SHOWN ON SHEET 4 OF 10 (C-101), GENERAL PLAN AND SURVEY CONTROL. POSITIONING FOR THIS SURVEY IS BASED ON HOLDING CONTROL STATIONS "SH-12 2006" AS N 2,234,535.51' E 1,743,605.71' AND "SH-8 1999" N 2,234,559.23' E 1,742,936.09'.
3. VERTICAL CONTROL IS IN U.S. SURVEY FEET AND REFERS TO MEAN-LOWER-LOW-WATER DATUM (MLLW=0.0') AS PROVIDED AND DEFINED WITHIN THE PROJECT PLANS FOR CWIDT TASK ORDER W911KB-07-D-0016-0008 AND MORE SPECIFICALLY AS SHOWN ON SHEET 4 OF 10 (C-101), GENERAL PLAN AND SURVEY CONTROL. THE BASIS OF MLLW VALUES FOR THIS SURVEY WERE APPLIED HOLDING "SH-8 1999" AS 17.25'.
4. A HORIZONTAL CONTROL VERIFICATION SURVEY WAS CONDUCTED SEPTEMBER 15, 2012 PRIOR TO HYDROGRAPHIC DATA ACQUISITION. CONTROL INTEGRITY WAS VERIFIED UTILIZING TWO (2) LEICA 1200 SERIES GPS RECEIVERS AND REAL-TIME-KINEMATIC TECHNIQUES. OBSERVATIONS WERE LIMITED TO CONTROL STATIONS "SH-12 2006", "SH-8 1999", "SH-10 2002" AND SH-15 2009".
5. HYDROGRAPHIC DATA ACQUISITION WAS CONDUCTED SEPTEMBER 16-17, 2012 USING A RESON SEABAT 7101 MULTIBEAM ECHOSOUNDER (240KHZ WITH 511 BEAMS AT 1.5 DEGREES EACH). VESSEL POSITIONING, HEADING, ATTITUDE AND REAL-TIME TIDES WERE MEASURED AND APPLIED USING A CODA OCTOPUS F-180 MOTION REFERENCE SYSTEM OPERATING ON RTK CORRECTORS BROADCAST FROM A LOCAL GPS BASE SET AT CONTROL STATION "SH-12 2006". SOUND VELOCITY WAS MEASURED AT THE MULTI-BEAM HEAD USING AN A.M.L. SMARTPROBE AND MEASURED THROUGH THE WATER COLUMN USING AN ODOM DIGIBAR PRO SOUND VELOCITY PROFILER. VESSEL NAVIGATION AND DATA COLLECTION WERE PERFORMED USING HYPACK HYSWEEP INTEGRATED SOFTWARE (V2012). DATA PROCESSING AND FINAL DATA ANALYSIS WERE PERFORMED USING CARIS HIPS & SIPS SOFTWARE (V 7.1). REAL-TIME TIDE VALUES WERE CORRELATED TO MLLW BY DIRECT OBSERVATION FROM "SH-8 1999" AS INDICATED IN NOTE 3 ABOVE.
6. SOUNDINGS ARE SHOWN IN U.S. SURVEY FEET AND ARE MINUS UNLESS NOTED OTHERWISE.
7. THIS SURVEY IS INDICATIVE OF CONDITIONS ON THE DATES OF SURVEY.

DREDGING LIMITS

CORNER	NORTHING	EASTING	CORNER	NORTHING	EASTING
1	2,236,424.30	1,743,325.60	23 C	2,233,886.17	1,743,706.76
2	2,236,425.89	1,743,487.20	23 D	2,234,229.35	1,743,548.51
3	2,236,166.11	1,743,489.51	24	2,234,853.44	1,743,908.83
4	2,236,164.51	1,743,457.26	25	2,234,943.63	1,743,908.72
5	2,236,128.75	1,743,458.11	26	2,235,557.63	1,743,562.68
6	2,236,129.52	1,743,558.96	27	2,235,611.00	1,743,532.60
7	2,236,166.03	1,743,557.90	28	2,235,632.43	1,743,532.46
8	2,236,165.86	1,743,526.71	29	2,235,627.71	1,742,819.82
9	2,236,426.25	1,743,524.39	30	2,235,552.71	1,742,819.91
10	2,236,426.75	1,743,575.73	29 A	2,235,938.40	1,743,717.14
11	2,236,315.08	1,743,673.77	30 A	2,235,935.67	1,744,116.40
12	2,236,185.09	1,743,674.93	31	2,235,056.03	1,743,409.00
13	2,236,185.80	1,743,725.78	32	2,235,056.03	1,743,484.93
14	2,235,988.30	1,743,728.20	33	2,234,920.91	1,743,484.94
15	2,235,988.40	1,743,716.80	34	2,234,920.91	1,743,415.86
16	2,235,817.09	1,743,717.98	35	2,234,793.03	1,743,415.86
17	2,235,818.36	1,743,531.22	36	2,234,793.03	1,743,384.31
18	2,235,926.30	1,743,530.50	37	2,234,667.18	1,743,384.31
19	2,236,059.73	1,743,327.81	38	2,234,666.59	1,743,278.95
20	2,235,522.80	1,743,720.00	39	2,234,793.24	1,743,277.60
21	2,235,313.40	1,743,838.00	40	2,236,420.70	1,742,955.00
22	2,235,095.10	1,744,186.90	41	2,236,422.14	1,743,102.78
23	2,234,408.77	1,743,790.55	42	2,236,261.33	1,743,104.37
23 A	2,234,291.41	1,743,821.99	43	2,236,258.30	1,742,792.30
23 B	2,234,206.77	1,743,968.56			

NOTE: DREDGING LIMITS FOLLOW THE EXISTING BREAKWATER TOE BETWEEN POINTS 24 AND 25 (RADIUS IS APPROX. 90', AND POINTS 23 AND 23A (RADIUS IS APPROX. 85.9').

CONTROL DATA

STATION	NORTHING	EASTING	MLLW ELEV.	NAVD88 ELEV.	DESCRIPTION
SH-3	2,235,145.33	1,742,766.86	18.58	18.78	PK NAIL IN PIER
SH-8 1999	2,234,559.23	1,742,936.09	17.25	17.45	3 1/4" DBC IN CONC.
SH-10 2002	2,234,669.22	1,742,593.91	17.15	17.35	3 1/4" DBC IN ASPH.
SH-12 2006	2,234,535.51	1,743,605.71	20.65	20.85	3 1/4" DBC IN ROCK
SH-13 2006	2,236,056.67	1,744,199.94	20.58	20.78	3 1/4" DBC IN ROCK
SH-14 2009	2,236,080.45	1,743,820.69	16.27	16.47	SET 3 1/4" DBC IN ROCK
SH-15 2009	2,236,350.26	1,742,761.11	19.92	20.12	SET 3 1/4" DBC IN CONC.
SH-16 (UNMARKED)	2,236,057.07	1,744,198.55	20.52	20.72	FND 2 1/2" BC IN ROCK
SH-17 (UNMARKED)	2,235,088.26	1,744,277.61	19.51	19.71	FND 2 1/2" BC IN ROCK
SH-18 (UNMARKED)	2,234,558.18	1,743,974.82	20.69	20.89	FND 2 1/2" BC IN CONC.
SH-19 (UNMARKED)	2,234,898.90	1,743,830.72	20.51	20.71	FND 2 1/2" BC IN ROCK
SH-20 (UNMARKED)	2,234,552.71	1,743,630.82	20.41	20.61	FND 2 1/2" BC IN ROCK

AIDS TO NAVIGATION

DESCRIPTION	USCG No.	NORTHING	EASTING
SEWARD BOAT HARBOR LIGHT 1	26015	2,233,886.20	1,743,706.80
SEWARD EAST BREAKWATER LIGHT 2	26020	2,234,367.52	1,743,386.95
SEWARD WEST BREAKWATER LIGHT 3	26025	2,234,541.90	1,743,624.10

100 0 100 200 300
SCALE IN FEET

BATHYMETRY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: Approved: Date:
PROJ. CONTRACTOR RESIDENT ENGINEER

Sym	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1" = 100'
Plot Scale: 1:1
File: SEW015-C-101-104_j-dock
Drawing #: 3-SEW-01-02
0008

Designed: A.C.J.
Drawn: K.N.B / L.E.P.
Reviewed: D. Hardy
Chief: --
Submitted: A. Churchill
Branch: CEPOA-EN-CG-D

CWIDT TASK ORDER

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE SURVEY
SEPTEMBER 16-17, 2012

Reference number:
C-103
Sheet 3 of 37

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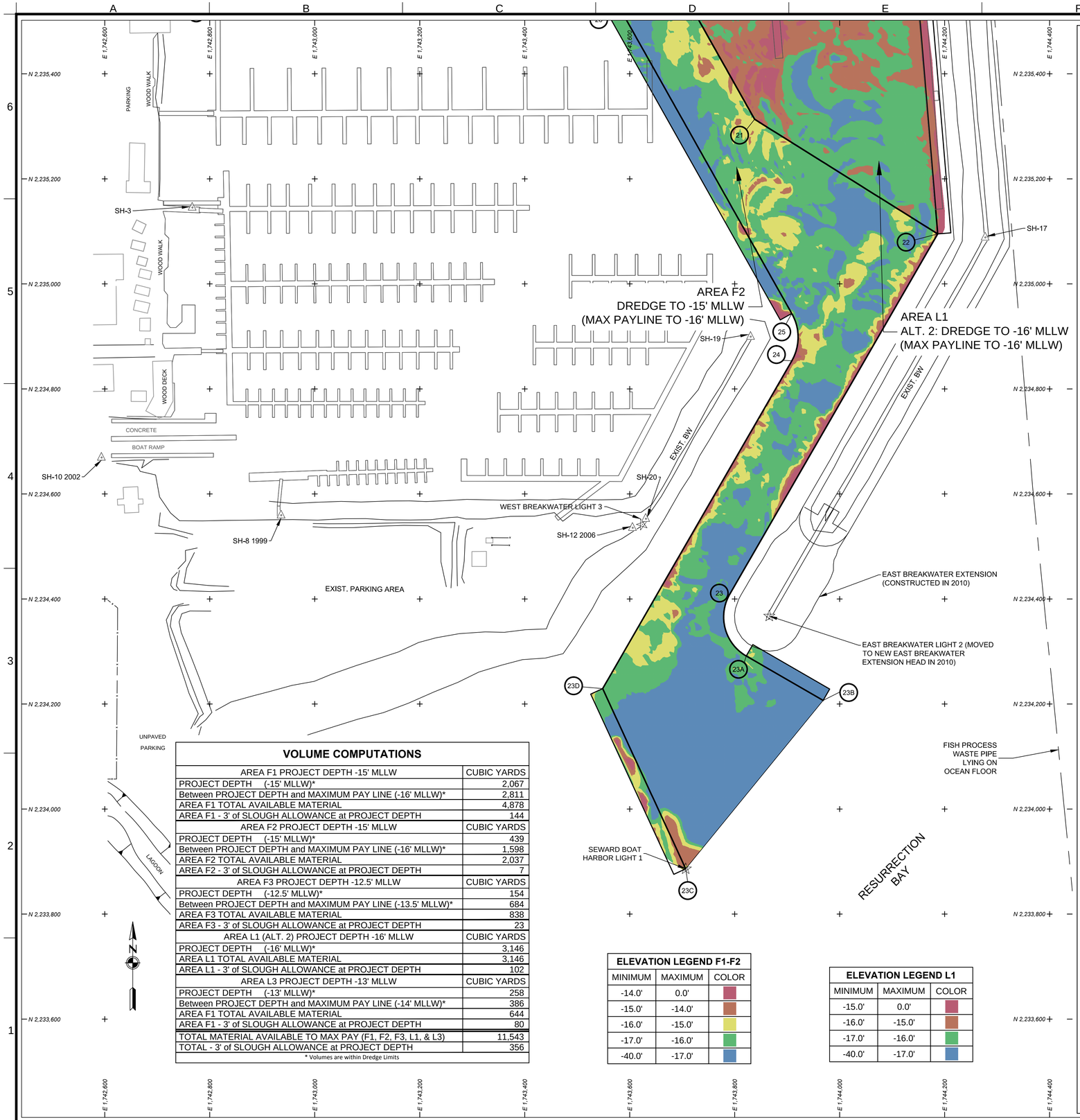

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SEWARD WEST BREAKWATER LIGHT 3	26025	2,234,541.90	1,743,624.10

VOLUME COMPUTATIONS

AREA F1 PROJECT DEPTH -15' MLLW	CUBIC YARDS
PROJECT DEPTH (-15' MLLW)*	2,067
Between PROJECT DEPTH and MAXIMUM PAY LINE (-16' MLLW)*	2,811
AREA F1 TOTAL AVAILABLE MATERIAL	4,878
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AREA F1 - 3' of SLOUGH ALLOWANCE at PROJECT DEPTH	80
TOTAL MATERIAL AVAILABLE TO MAX PAY (F1, F2, F3, L1, & L3)	11,543
TOTAL - 3' of SLOUGH ALLOWANCE at PROJECT DEPTH	356

* Volumes are within Dredge Limits

ELEVATION LEGEND F1-F2

MINIMUM	MAXIMUM	COLOR
-14.0'	0.0'	
-15.0'	-14.0'	
-16.0'	-15.0'	
-17.0'	-16.0'	
-40.0'	-17.0'	

ELEVATION LEGEND L1

MINIMUM	MAXIMUM	COLOR
-15.0'	0.0'	
-16.0'	-15.0'	
-17.0'	-16.0'	
-40.0'	-17.0'	

100 0 100 200 300
SCALE IN FEET

BATHYMETRY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: Approved: Date:
"Resident CONTRACTOR" RESIDENT ENGINEER

Sym.	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1" = 100'
Plot Scale: 1:1
File: SEW015-C-101-104_j-dock
Drawing #: 3-SEW-01-02
0008

Designed: A.C.J.
Drawn: K.N.B / L.E.P.
Reviewed: D. Hardy
Chief: Engineering Div.
Submitted: A. Churchill
Chief: Branch, CEPOA-EN-CD

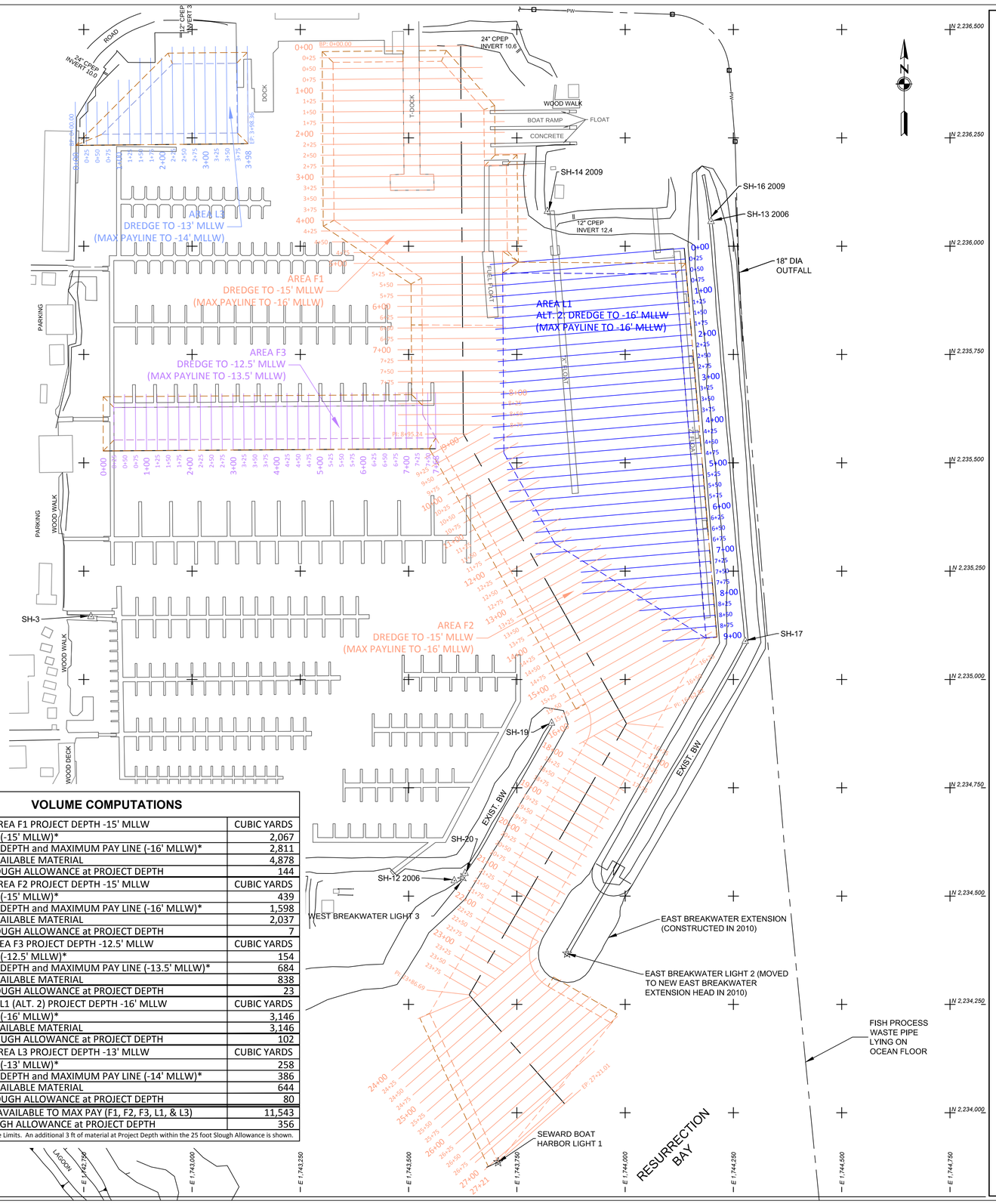
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE SURVEY
SEPTEMBER 16-17, 2012

Reference number:
C-104
Sheet 4 of 37

Drawing W:\PALMER2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----



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3. VERTICAL CONTROL IS IN U.S. SURVEY FEET AND REFERS TO MEAN-LOWER-LOW-WATER DATUM (MLLW=0.0') AS PROVIDED AND DEFINED WITHIN THE PROJECT PLANS FOR CWIDT TASK ORDER W911KB-07-D-0016-0008 AND MORE SPECIFICALLY AS SHOWN ON SHEET 4 OF 10 (C-101), GENERAL PLAN AND SURVEY CONTROL. THE BASIS OF MLLW VALUES FOR THIS SURVEY WERE APPLIED HOLDING "SH-8 1999" AS 17.25'.
4. A HORIZONTAL CONTROL VERIFICATION SURVEY WAS CONDUCTED SEPTEMBER 15, 2012 PRIOR TO HYDROGRAPHIC DATA ACQUISITION. CONTROL INTEGRITY WAS VERIFIED UTILIZING TWO (2) LEICA 1200 SERIES GPS RECEIVERS AND REAL-TIME-KINEMATIC TECHNIQUES. OBSERVATIONS WERE LIMITED TO CONTROL STATIONS "SH-12 2006", "SH-8 1999", "SH-10 2002" AND SH-15 2009".
5. HYDROGRAPHIC DATA ACQUISITION WAS CONDUCTED SEPTEMBER 16-17, 2012 USING A RESON SEABAT 7101 MULTIBEAM ECHOSOUNDER (240KHZ WITH 511 BEAMS AT 1.5 DEGREES EACH). VESSEL POSITIONING, HEADING, ATTITUDE AND REAL-TIME TIDES WERE MEASURED AND APPLIED USING A CODA OCTOPUS F-180 MOTION REFERENCE SYSTEM OPERATING ON RTK CORRECTORS BROADCAST FROM A LOCAL GPS BASE SET AT CONTROL STATION "SH-12 2006". SOUND VELOCITY WAS MEASURED AT THE MULTI-BEAM HEAD USING AN A.M.L. SMARTPROBE AND MEASURED THROUGH THE WATER COLUMN USING AN ODOM DIGIBAR PRO SOUND VELOCITY PROFILER. VESSEL NAVIGATION AND DATA COLLECTION WERE PERFORMED USING HYPACK HYSWEEP INTEGRATED SOFTWARE (V2012). DATA PROCESSING AND FINAL DATA ANALYSIS WERE PERFORMED USING CARIS HIPS & SIPS SOFTWARE (V 7.1). REAL-TIME TIDE VALUES WERE CORRELATED TO MLLW BY DIRECT OBSERVATION FROM "SH-8 1999" AS INDICATED IN NOTE 3 ABOVE.
6. SOUNDINGS ARE SHOWN IN U.S. SURVEY FEET AND ARE MINUS UNLESS NOTED OTHERWISE.
7. THIS SURVEY IS INDICATIVE OF CONDITIONS ON THE DATES OF SURVEY.

DREDGING LIMITS

CORNER	NORTHING	EASTING	CORNER	NORTHING	EASTING
1	2,236,424.30	1,743,325.60	23 C	2,233,886.17	1,743,706.76
2	2,236,425.89	1,743,487.20	23 D	2,234,229.35	1,743,548.51
3	2,236,166.11	1,743,489.51	24	2,234,853.44	1,743,908.83
4	2,236,164.51	1,743,457.26	25	2,234,943.63	1,743,908.72
5	2,236,128.75	1,743,458.11	26	2,235,557.63	1,743,562.68
6	2,236,129.52	1,743,558.96	27	2,235,611.00	1,743,532.60
7	2,236,166.03	1,743,557.90	28	2,235,632.43	1,743,532.46
8	2,236,165.86	1,743,526.71	29	2,235,627.71	1,742,819.82
9	2,236,426.25	1,743,524.39	30	2,235,552.71	1,742,819.91
10	2,236,426.75	1,743,575.73	29 A	2,235,938.40	1,743,717.14
11	2,236,315.08	1,743,673.77	30 A	2,235,935.67	1,744,116.40
12	2,236,185.09	1,743,674.93	31	2,235,056.03	1,743,409.00
13	2,236,185.80	1,743,725.78	32	2,235,056.03	1,743,484.93
14	2,235,988.30	1,743,728.20	33	2,234,920.91	1,743,484.94
15	2,235,988.40	1,743,716.80	34	2,234,920.91	1,743,415.86
16	2,235,817.09	1,743,717.98	35	2,234,793.03	1,743,415.86
17	2,235,818.36	1,743,531.22	36	2,234,793.03	1,743,384.31
18	2,235,926.30	1,743,530.50	37	2,234,667.18	1,743,384.31
19	2,236,059.73	1,743,327.81	38	2,234,666.59	1,743,278.95
20	2,235,522.80	1,743,720.00	39	2,234,793.24	1,743,277.60
21	2,235,313.40	1,743,838.00	40	2,236,420.70	1,742,955.00
22	2,235,095.10	1,744,186.90	41	2,236,422.14	1,743,102.78
23	2,234,408.77	1,743,790.55	42	2,236,261.33	1,743,104.37
23 A	2,234,291.41	1,743,821.99	43	2,236,258.30	1,742,792.30
23 B	2,234,206.77	1,743,968.56			

NOTE: DREDGING LIMITS FOLLOW THE EXISTING BREAKWATER TOE BETWEEN POINTS 24 AND 25 (RADIUS IS APPROX. 90', AND POINTS 23 AND 23A (RADIUS IS APPROX. 85.89').

CONTROL DATA

STATION	NORTHING	EASTING	MLLW ELEV.	NAVD88 ELEV.	DESCRIPTION
SH-3	2,235,145.33	1,742,766.86	18.58	18.78	PK NAIL IN PIER
SH-8 1999	2,234,559.23	1,742,936.09	17.25	17.45	3 1/4" DBC IN CONC.
SH-10 2002	2,234,669.22	1,742,593.91	17.15	17.35	3 1/4" DBC IN ASPH.
SH-12 2006	2,234,535.51	1,743,605.71	20.65	20.85	3 1/4" DBC IN ROCK
SH-13 2006	2,236,056.67	1,744,199.94	20.58	20.78	3 1/4" DBC IN ROCK
SH-14 2009	2,236,080.45	1,743,820.69	16.27	16.47	SET 3 1/4" DBC IN ROCK
SH-15 2009	2,236,350.26	1,742,761.11	19.92	20.12	SET 3 1/4" DBC IN CONC.
SH-16 (UNMARKED)	2,236,057.07	1,744,198.55	20.52	20.72	FND 2 1/2" BC IN ROCK
SH-17 (UNMARKED)	2,235,088.26	1,744,277.61	19.51	19.71	FND 2 1/2" BC IN ROCK
SH-18 (UNMARKED)	2,234,558.18	1,743,974.82	20.69	20.89	FND 2 1/2" BC IN CONC.
SH-19 (UNMARKED)	2,234,898.90	1,743,830.72	20.51	20.71	FND 2 1/2" BC IN ROCK
SH-20 (UNMARKED)	2,234,552.71	1,743,630.82	20.41	20.61	FND 2 1/2" BC IN ROCK

AIDS TO NAVIGATION

DESCRIPTION	USCG No.	NORTHING	EASTING
SEWARD BOAT HARBOR LIGHT 1	26015	2,233,886.20	1,743,706.80
SEWARD EAST BREAKWATER LIGHT 2	26020	2,234,367.52	1,743,386.95
SEWARD WEST BREAKWATER LIGHT 3	26025	2,234,541.90	1,743,624.10

VOLUME COMPUTATIONS

AREA F1 PROJECT DEPTH -15' MLLW	CUBIC YARDS
PROJECT DEPTH (-15' MLLW)*	2,067
Between PROJECT DEPTH and MAXIMUM PAY LINE (-16' MLLW)*	2,811
AREA F1 TOTAL AVAILABLE MATERIAL	4,878
AREA F1 - 3' of SLOUGH ALLOWANCE at PROJECT DEPTH	144
AREA F2 PROJECT DEPTH -15' MLLW	CUBIC YARDS
PROJECT DEPTH (-15' MLLW)*	439
Between PROJECT DEPTH and MAXIMUM PAY LINE (-16' MLLW)*	1,598
AREA F2 TOTAL AVAILABLE MATERIAL	2,037
AREA F2 - 3' of SLOUGH ALLOWANCE at PROJECT DEPTH	7
AREA F3 PROJECT DEPTH -12.5' MLLW	CUBIC YARDS
PROJECT DEPTH (-12.5' MLLW)*	154
Between PROJECT DEPTH and MAXIMUM PAY LINE (-13.5' MLLW)*	684
AREA F3 TOTAL AVAILABLE MATERIAL	838
AREA F3 - 3' of SLOUGH ALLOWANCE at PROJECT DEPTH	23
AREA L1 (ALT. 2) PROJECT DEPTH -16' MLLW	CUBIC YARDS
PROJECT DEPTH (-16' MLLW)*	3,146
AREA L1 TOTAL AVAILABLE MATERIAL	3,146
AREA L1 - 3' of SLOUGH ALLOWANCE at PROJECT DEPTH	102
AREA L3 PROJECT DEPTH -13' MLLW	CUBIC YARDS
PROJECT DEPTH (-13' MLLW)*	258
Between PROJECT DEPTH and MAXIMUM PAY LINE (-14' MLLW)*	386
AREA F1 TOTAL AVAILABLE MATERIAL	644
AREA F1 - 3' of SLOUGH ALLOWANCE at PROJECT DEPTH	80
TOTAL MATERIAL AVAILABLE TO MAX PAY (F1, F2, F3, L1, & L3)	11,543
TOTAL - 3' of SLOUGH ALLOWANCE at PROJECT DEPTH	356

* Volumes are within Dredge Limits. An additional 3 ft of material at Project Depth within the 25 foot Slough Allowance is shown.

100 0 100 200 300
SCALE IN FEET

CROSS SECTIONS

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: — PRIME CONTRACTOR
Approved: — RESIDENT ENGINEER
Date:

Sym	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: NOT TO SCALE
Plot Scale: 1:1
File: 2012WCC-SB-C05 w_sp_pre_dredge_survey
Drawing #: 3-SEW-01-02
0008

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Harley
Chief: — Section: TechCW-HR
Submitted: A. Churchill
Chief: — Branch: EE/EC/ECCS

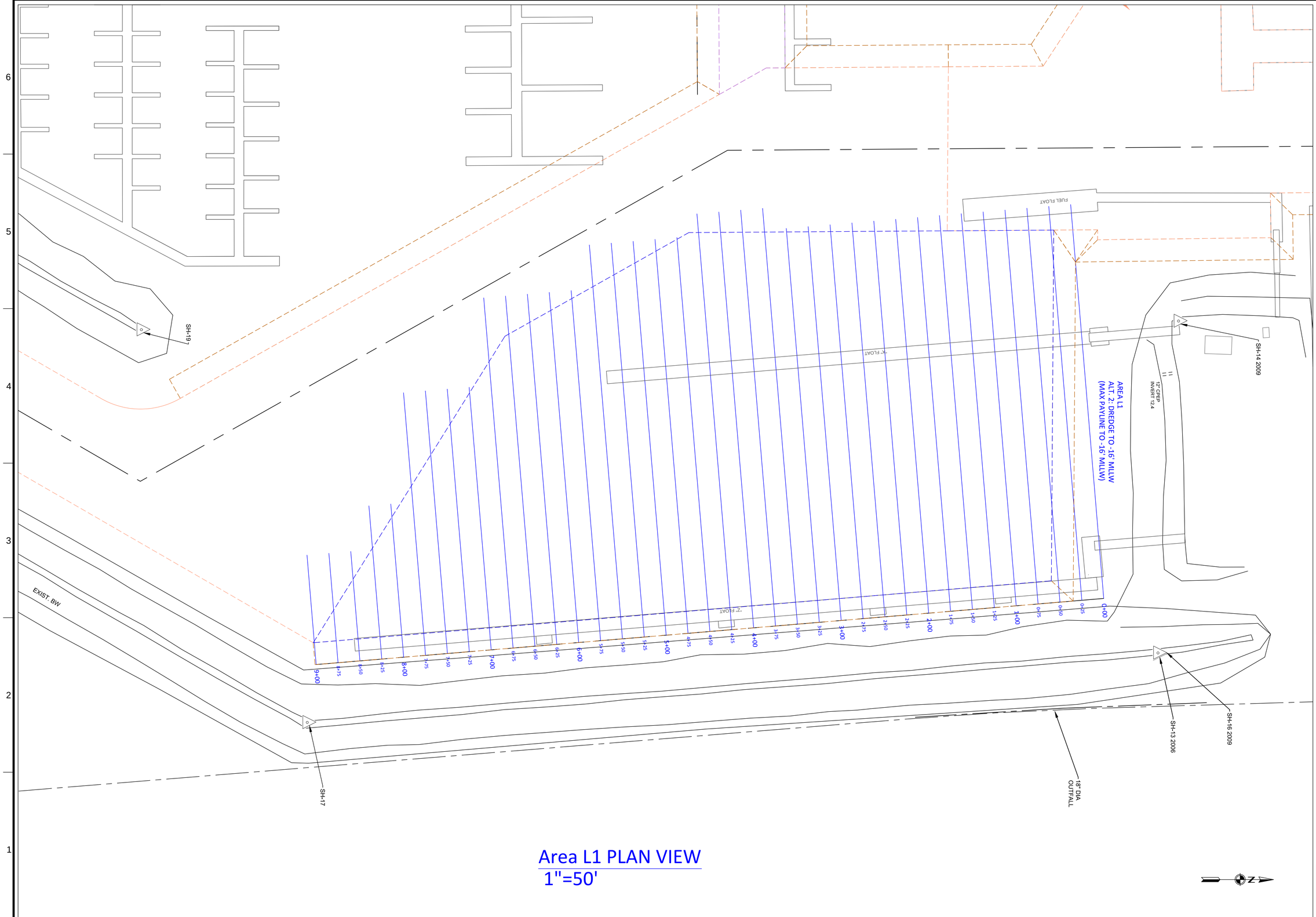
CWIDT TASK ORDER

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE SURVEY
SEPTEMBER 16-17, 2012

Reference number:
C-301
Sheet 5 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----



Area L1 PLAN VIEW
1"=50'

US ARMY CORPS
OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: PRIME CONTRACTOR
Approved: RESIDENT ENGINEER
Date:

Sym	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: S:\WCC-SB\Dwg\Civil\Dwg\
Drawing #: 3-SEW-91-01-02
0008

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: ZK/QK/HH
Submitted: A. Churchill
Chief: CE/KA/CN/CO

CWIDT TASK ORDER

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

Reference number:
C-302
Sheet 6 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

CROSS SECTION LEGEND

- PROJECT DEPTH
- MAX PAY
- SLOUGH ALLOWANCE MAX
- PRE DREDGE

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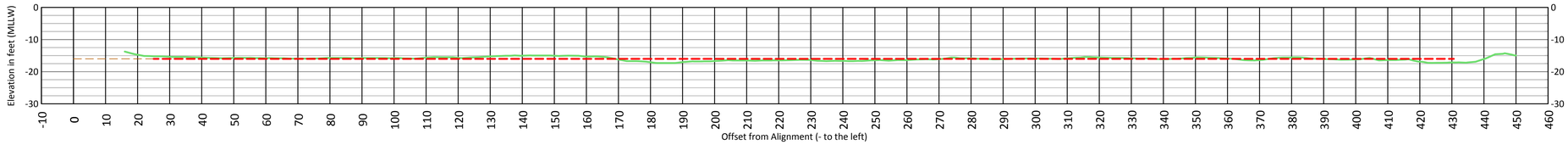

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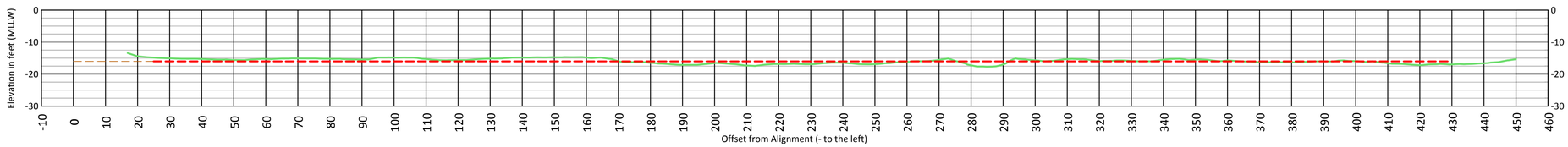

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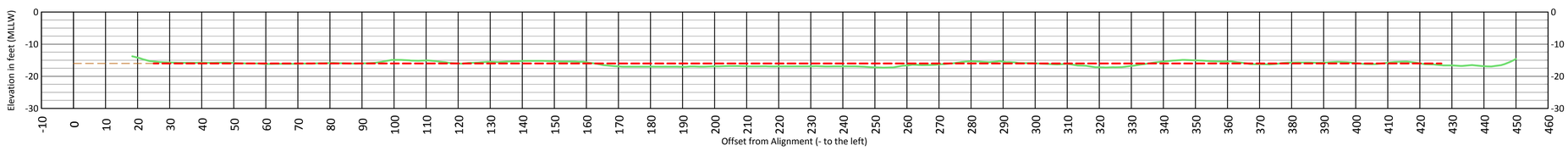

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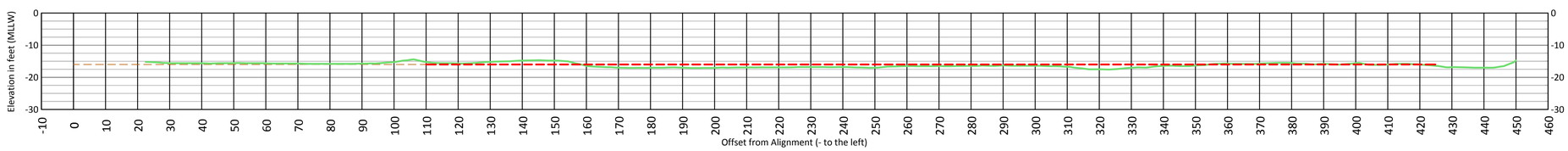

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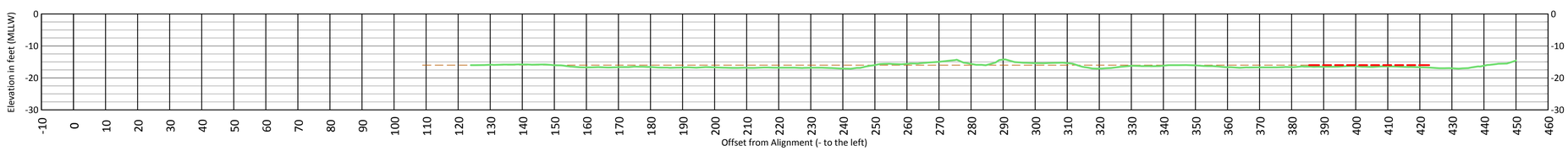

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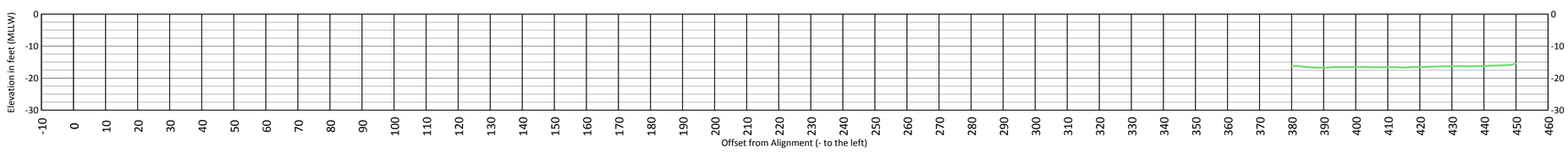

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: Approved: Date:
PRIME CONTRACTOR RESIDENT ENGINEER

Sym	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: 2012WCC-030.dwg
Drawing #: 3-SEW-01-02
0008

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: – – – – – – –
Submitted: A. Churchill
Chief: – – – – – – –

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

Reference number:
C-303
Sheet 7 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

CROSS SECTION LEGEND

- PROJECT DEPTH
- MAX PAY
- SLOUGH ALLOWANCE MAX
- PRE DREDGE

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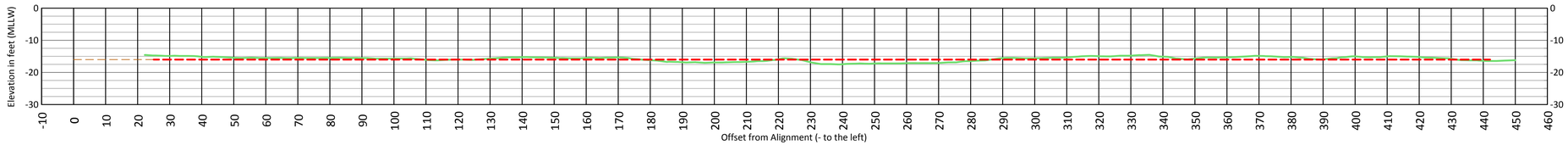

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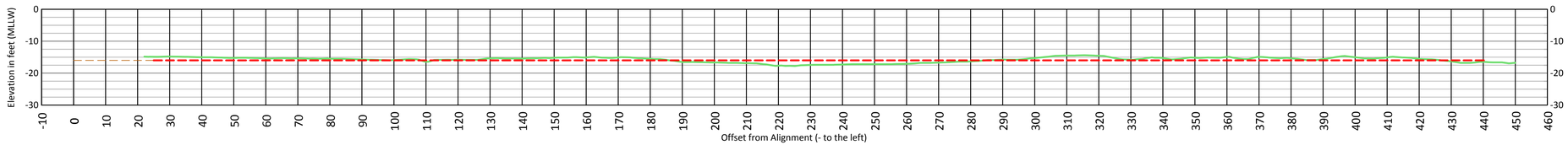

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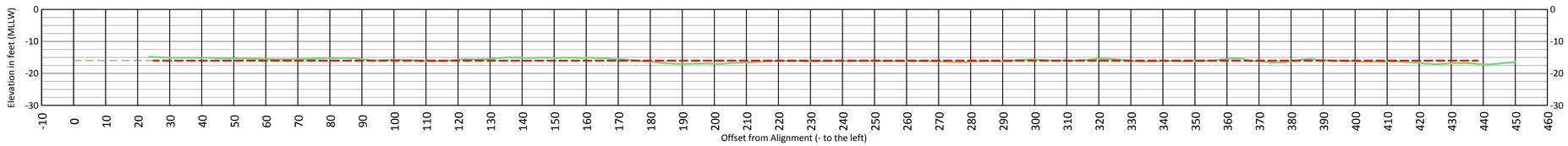

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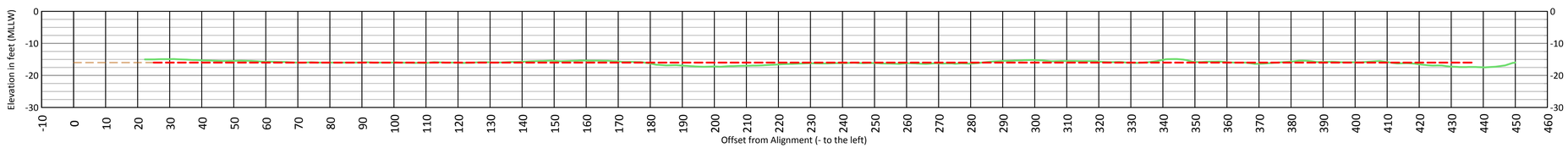

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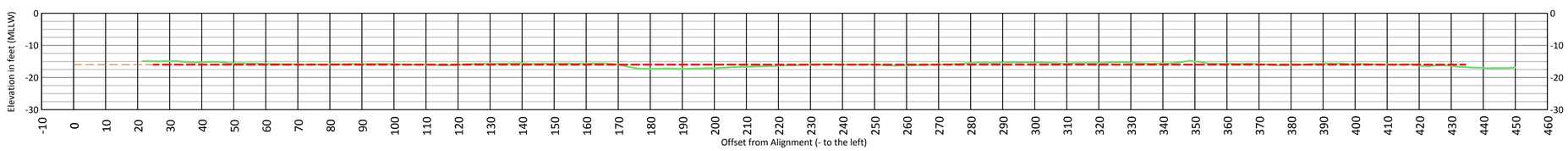

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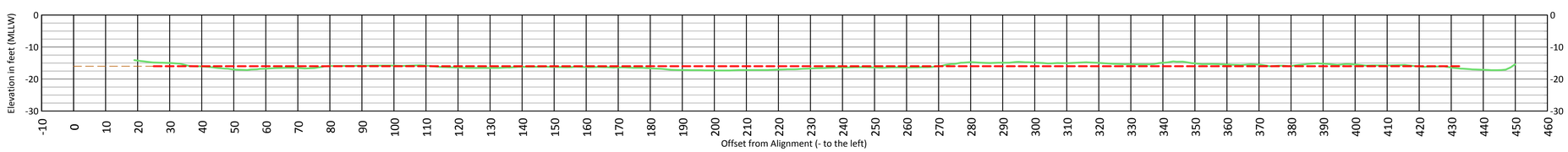


US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: Approved:
PRIME CONTRACTOR RESIDENT ENGINEER Date:

Sym	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: 20WCC-02-035_N_S_NAV_HAND_Sound
Drawing #: 3-SEW-01-02
0008

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: – – – – – – – – – – – – – – – – – –
Submitted: A. Churchill
Chief: – – – – – – – – – – – – – – – – – –

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

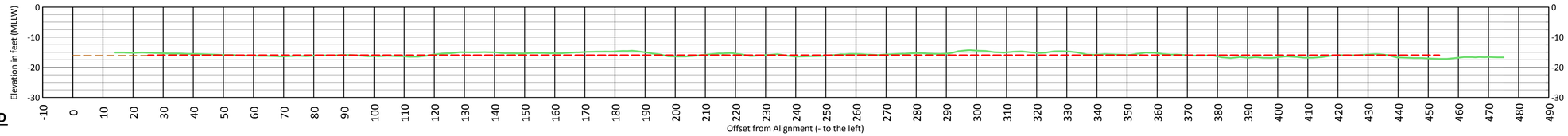
Reference number:
C-304
Sheet 8 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

CROSS SECTION LEGEND

- PROJECT DEPTH
- MAX PAY
- SLOUGH ALLOWANCE MAX
- PRE DREDGE

AREA L1 Alt 2 - 4+25



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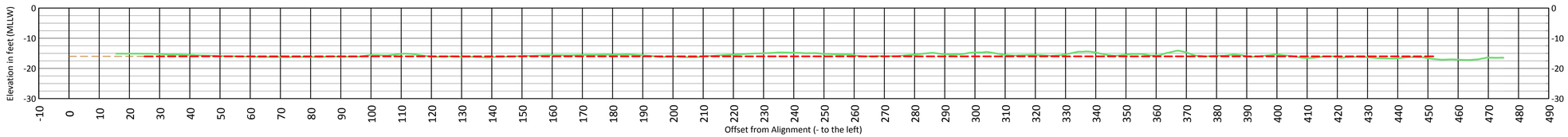

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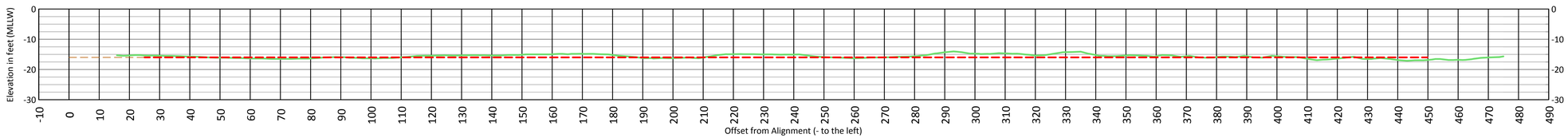

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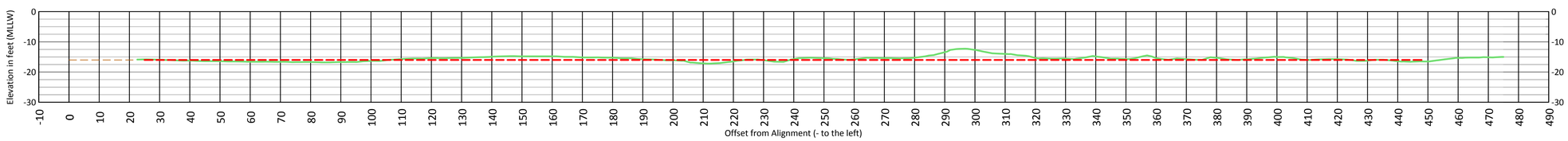

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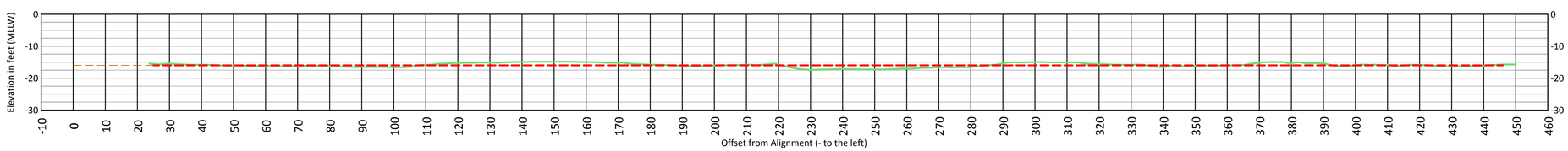

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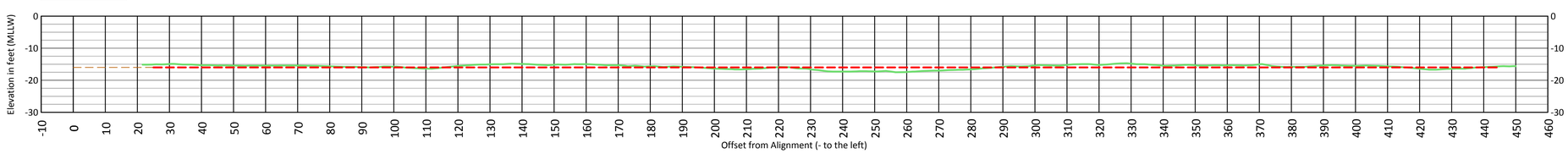

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: PRIME CONTRACTOR
Approved: RESIDENT ENGINEER
Date:

Sym	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: 2012WCC-SB-L3S_W_to_SE_HAM_Dwgs2
Drawing #: 3-SEW-01-02

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: – – – – – – – – – – – – – –
Submitted: A. Churchill
Chief: – – – – – – – – – – – – – –

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

0008

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

Reference number:
C-305

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

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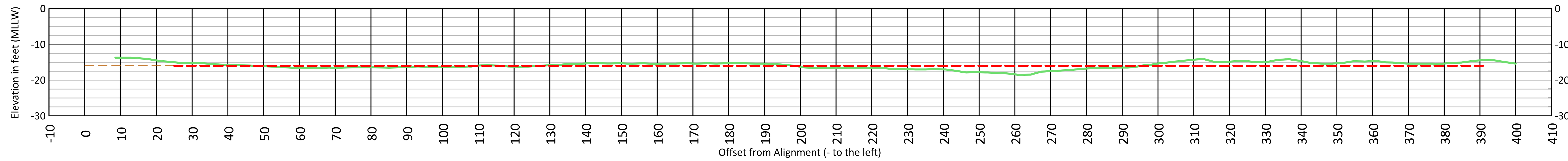
CROSS SECTION LEGEND

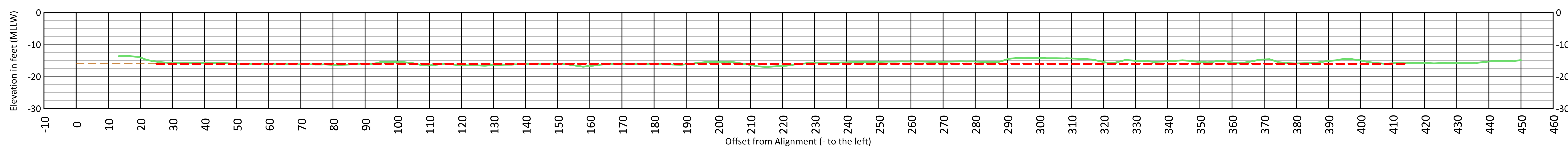
- PROJECT DEPTH
- MAX PAY
- SLOUGH ALLOWANCE MAX
- PRE DREDGE

AREA L1 Alt 2 - 5+75

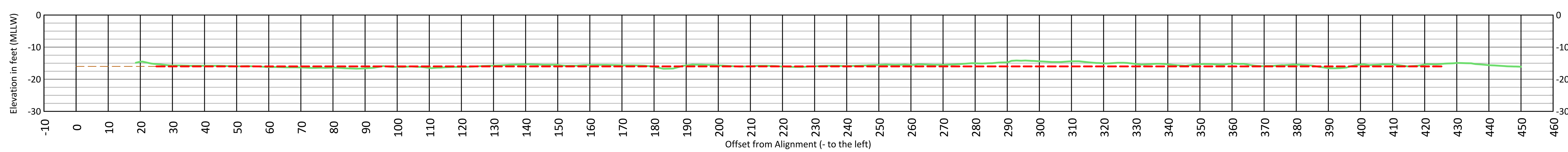


AREA L1 Alt 2 - 5+50

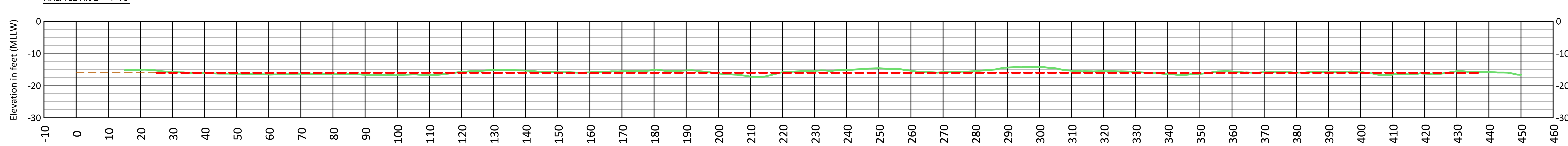
AREA L1 Alt 2 - 5+25



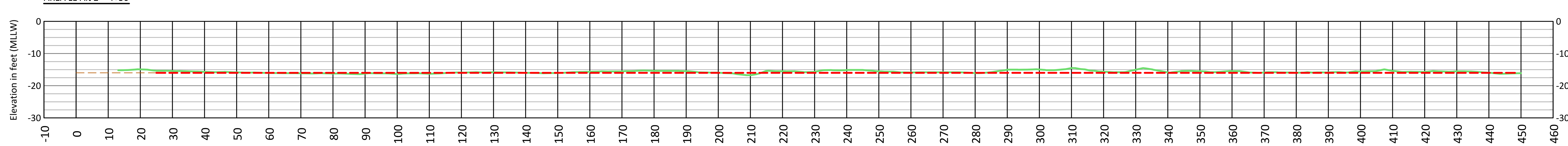
AREA L1 Alt 2 - 5+00



AREA L1 Alt 2 - 4+75



AREA L1 Alt 2 - 4+50



US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: PRIME CONTRACTOR
Approved: RESIDENT ENGINEER
Date:

Sym	Action	Description	Date	Appvd

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

Designed: A.C.J.
Drawn: L.E.P/K.N.B.
Reviewed: D. Hardy
Chief, Section EN-CW-HH
Submitted: A. Churchill
Chief, Branch CEPOA-EN-CO

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: SEW015-C-301-329_w_ss_and_t-dock_bound
Drawing #: 3-SEW-91-01-02

CWIDT TASK ORDER 0008

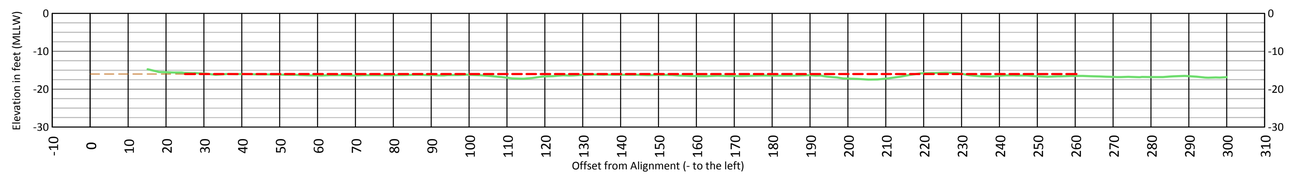
SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

Reference number:
C-306
Sheet 10 of 37

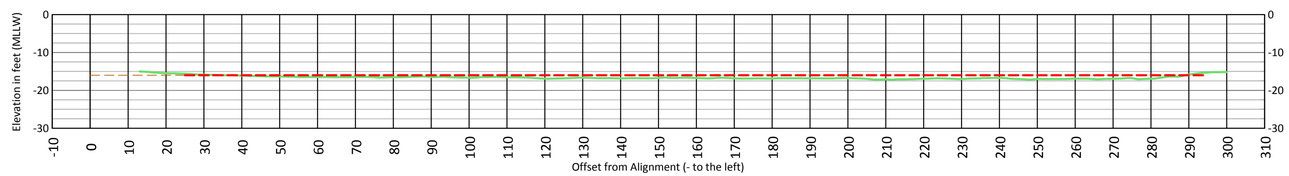
CROSS SECTION LEGEND

- PROJECT DEPTH
- MAX PAY
- SLOUGH ALLOWANCE MAX
- PRE DREDGE

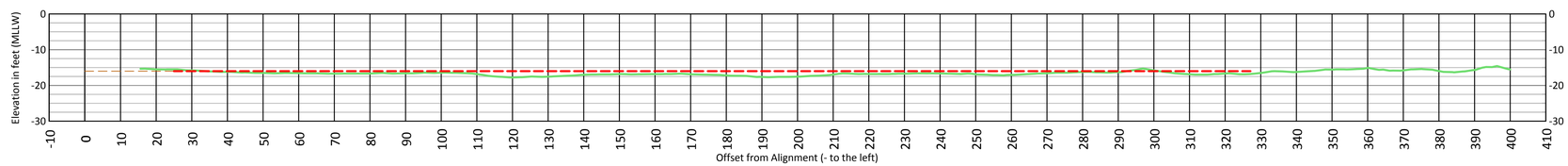
AREA L1 Alt 2 - 7+25



AREA L1 Alt 2 - 7+00

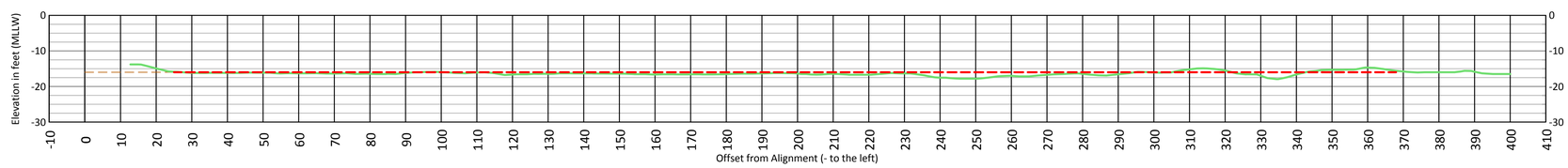


AREA L1 Alt 2 - 6+75

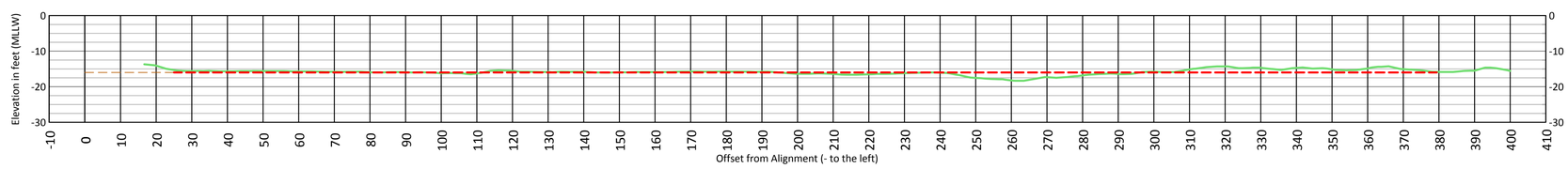


AREA L1 Alt 2 - 6+50

AREA L1 Alt 2 - 6+25



AREA L1 Alt 2 - 6+00



US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: Approved:
PRIME CONTRACTOR RESIDENT ENGINEER Date:

Sym	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: 20WCC-03-039_w_ip_def_v4a0_layout
Drawing #: 3-SEW-01-02

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: D. Hardy
Submitted: A. Churchill
Chief: Branch

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

0008

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

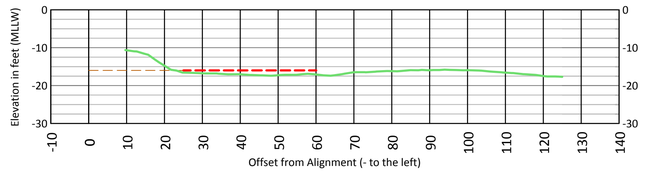
Reference number:
C-307
Sheet 11 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

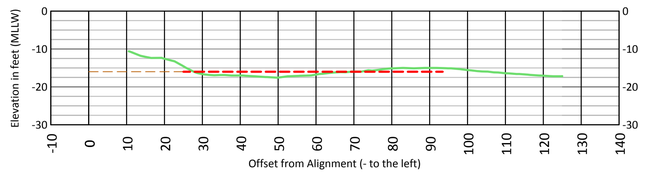
CROSS SECTION LEGEND

- PROJECT DEPTH
- MAX PAY
- SLOUGH ALLOWANCE MAX
- PRE DREDGE

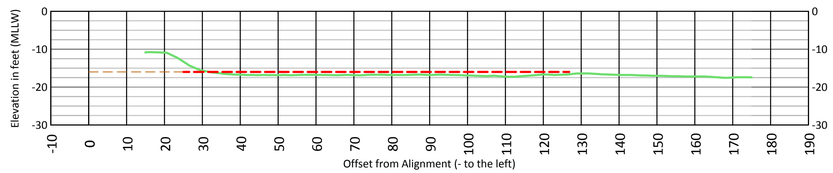
AREA L1 Alt 2 - 8+75



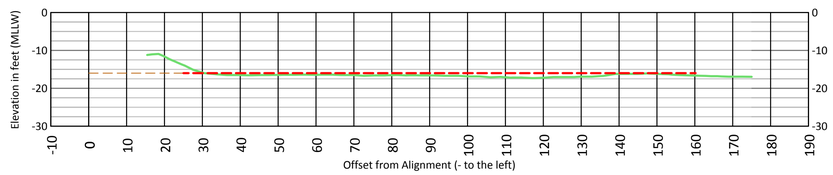
AREA L1 Alt 2 - 8+50



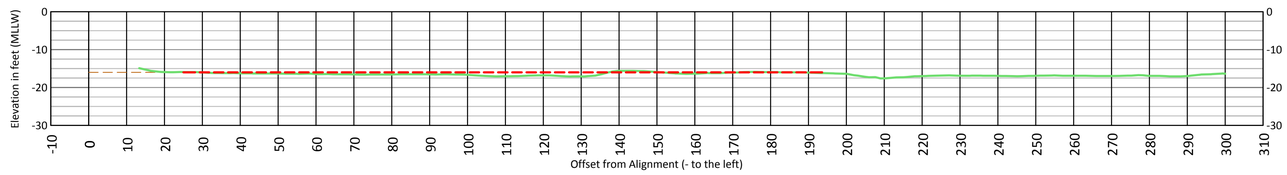
AREA L1 Alt 2 - 8+25



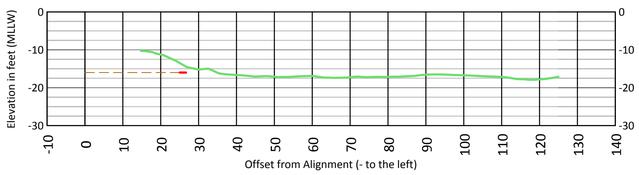
AREA L1 Alt 2 - 8+00



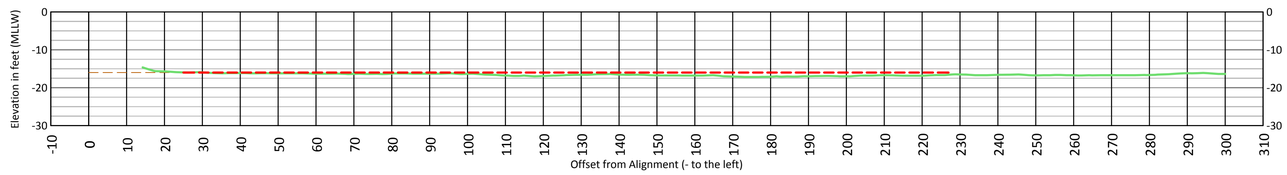
AREA L1 Alt 2 - 7+75



AREA L1 Alt 2 - 9+00



AREA L1 Alt 2 - 7+50



US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: Approved: Date:
PRIME CONTRACTOR RESIDENT ENGINEER

Sym	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: 20WCC-03-039_w_ap_cl_cl02_layout
Drawing #: 3-SEW-01-02
0008

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: ---
Submitted: A. Churchill
Chief: --- Branch: CEPOA-EC-CD

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

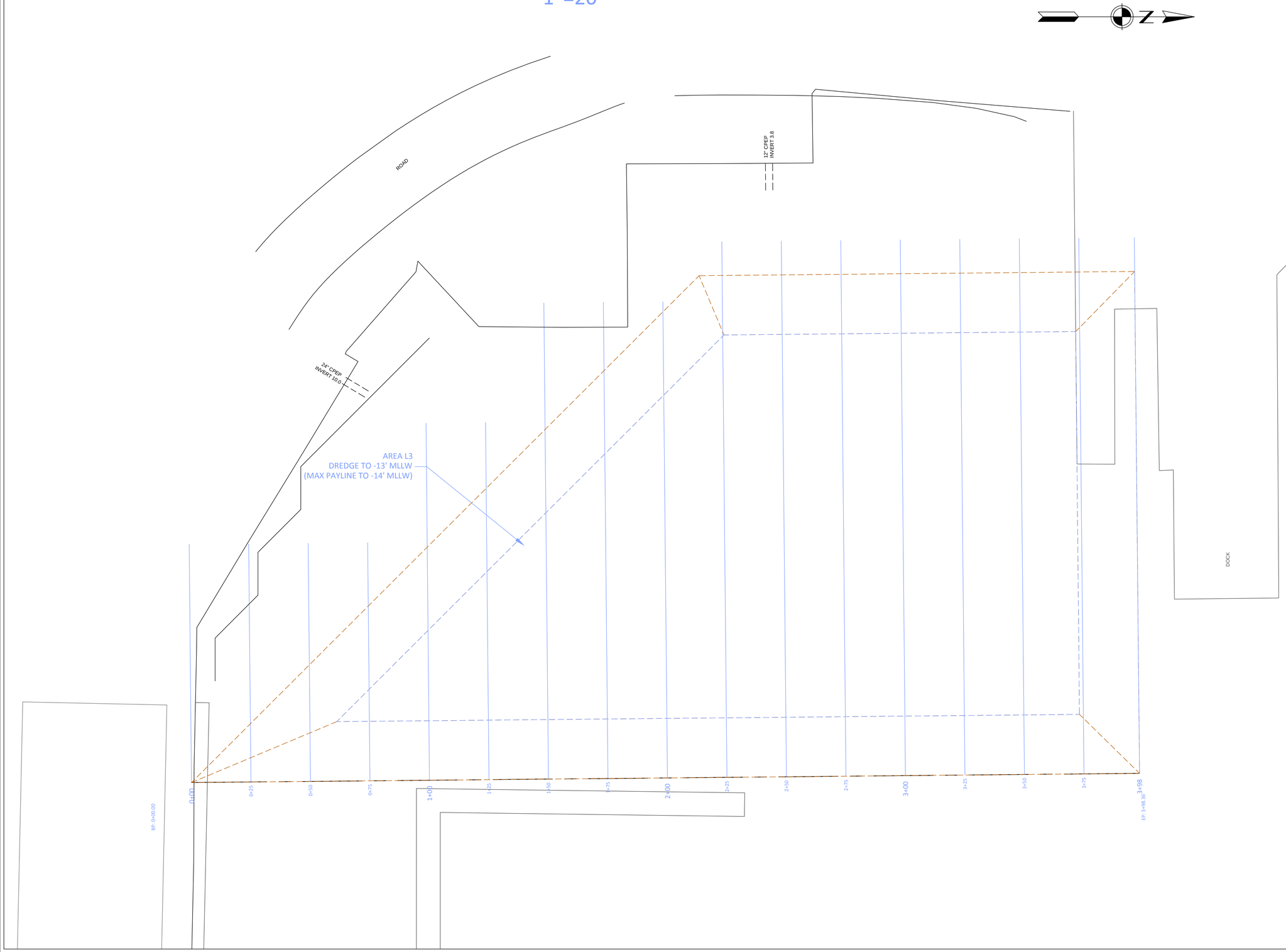
CWIDT TASK ORDER

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

Reference number:
C-308
Sheet 12 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

Area L3 PLAN VIEW
1"=20'



US ARMY CORPS
OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: Approved: Date:
PRIME CONTRACTOR RESIDENT ENGINEER

Sym	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: 2012\WCC-2012-048_W_B_SEW_HAM_Dwg\
Drawing #: 3-SEW-01-02
0008

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: ---
Submitted: A. Churchill
Chief: ---
Branch: CE/DA/36/CG

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

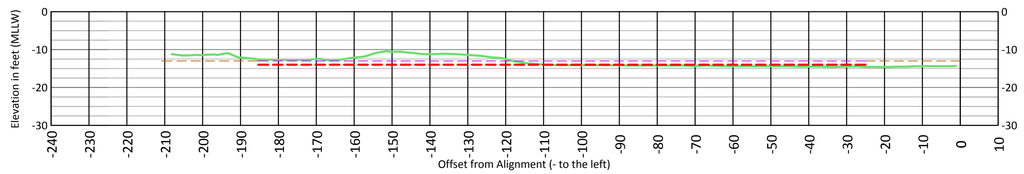
Reference number:
C-309
Sheet 13 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

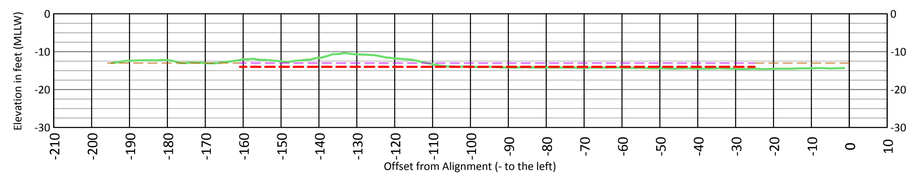
CROSS SECTION LEGEND

- PROJECT DEPTH
- MAX PAY
- SLOUGH ALLOWANCE MAX
- PRE DREDGE

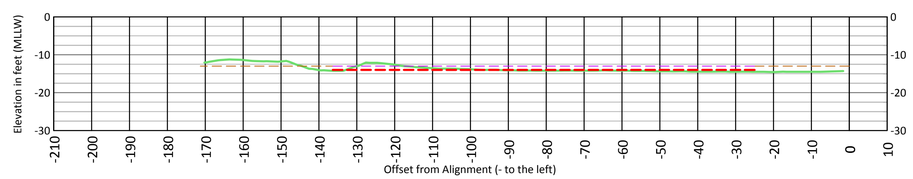
AREA L3 - 2+25



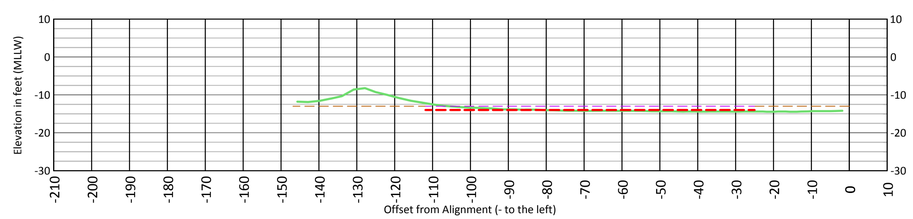
AREA L3 - 2+00



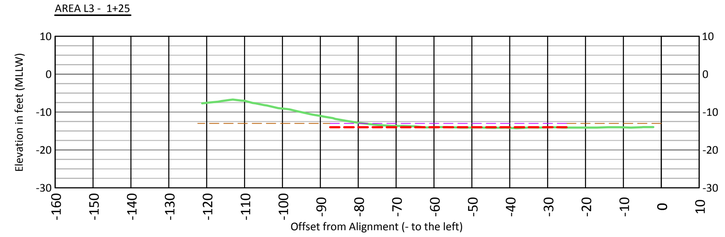
AREA L3 - 1+75



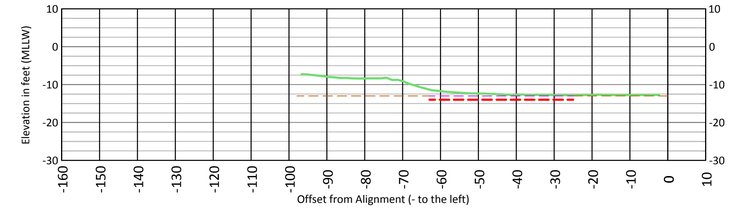
AREA L3 - 1+50



AREA L3 - 1+25

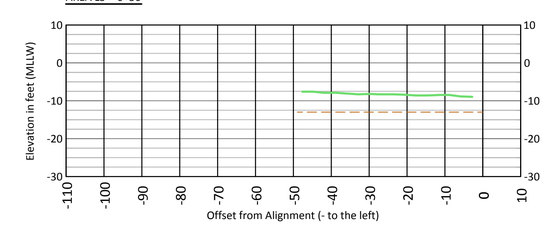


AREA L3 - 1+00

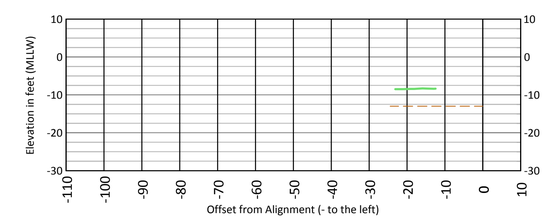


AREA L3 - 0+75

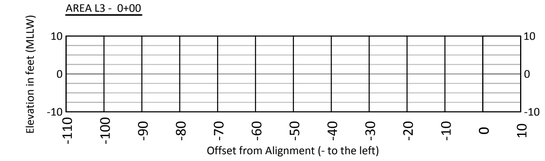
AREA L3 - 0+50



AREA L3 - 0+25



AREA L3 - 0+00



US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: Approved: Date:
PRIME CONTRACTOR RESIDENT ENGINEER

Sym	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: S:\NWS\C-310.dgn
Drawing #: 3-SEW-01-02
0008

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: N/A
Submitted: A. Churchill
Chief: Branch: CE/ACI/NCO

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

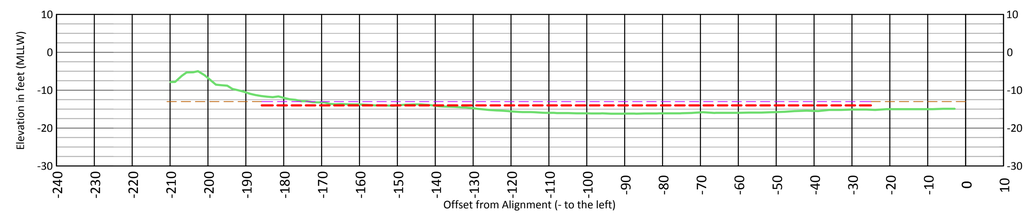
Reference number:
C-310
Sheet 14 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

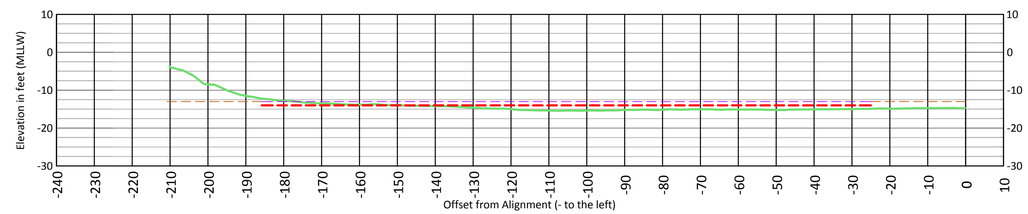
CROSS SECTION LEGEND

- PROJECT DEPTH
- MAX PAY
- SLOUGH ALLOWANCE MAX
- PRE DREDGE

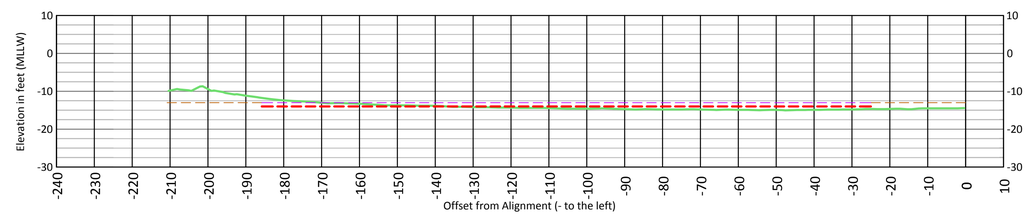
AREA L3 - 3+50



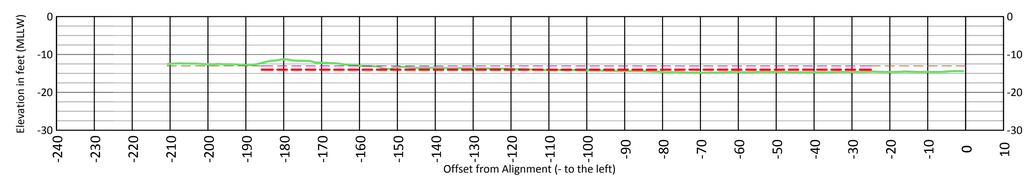
AREA L3 - 3+25



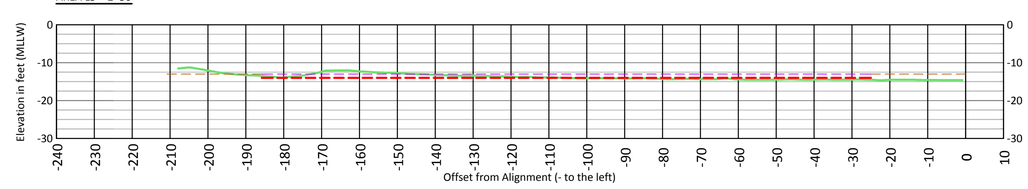
AREA L3 - 3+00



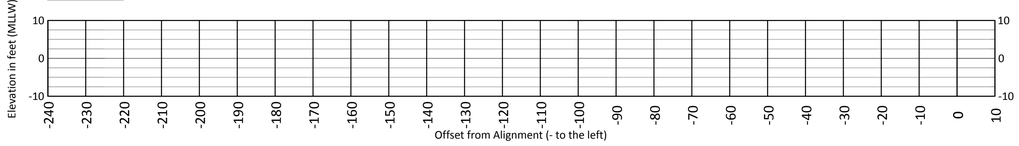
AREA L3 - 2+75



AREA L3 - 2+50



AREA L3 - 3+98



AREA L3 - 3+75

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: PRIME CONTRACTOR
Approved: RESIDENT ENGINEER
Date:

Sym.	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: S0WCC-C01-D0-W-B_MAP_HAND_Sound
Drawing #: 3-SEW-01-02

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: – – – – – – – – – – – – – –
Submitted: A. Churchill
Chief: – – – – – – – – – – – – – –

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

0008

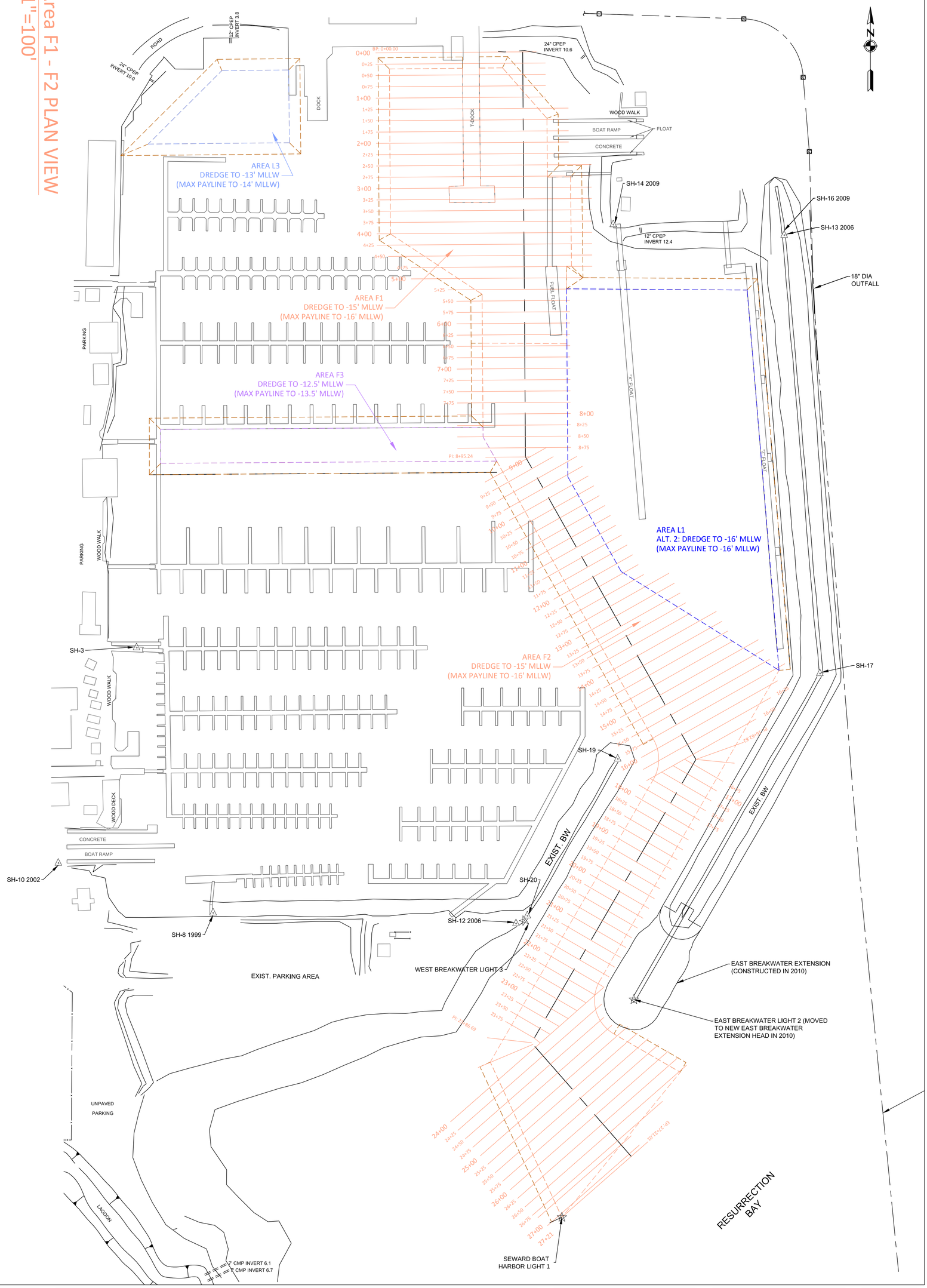
SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

Reference number:
C-311
Sheet 15 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

Area F1 - F2 PLAN VIEW
1"=100'



Reference number: C-312
Sheet 16 of 37

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

Designed: A.C.J.		Date: OCTOBER 26, 2012	
Drawn: L.E.P/K.N.B.		Dwg Scale: 1"=20' H/V	
Reviewed: D. Hardy		Plot Scale: 1:1	
Chief, Section: DN CW-HH		File: SEW015-C-301-320 w_sj_and_t-dock_bound	
Submitted: A. Churchill		Drawing #: 3-SEW-91-01-02	
Chief, Branch: CE-PA-EN-CO			

CWIDT TASK ORDER
0008

Sym	Action	Description	Date	Appvd

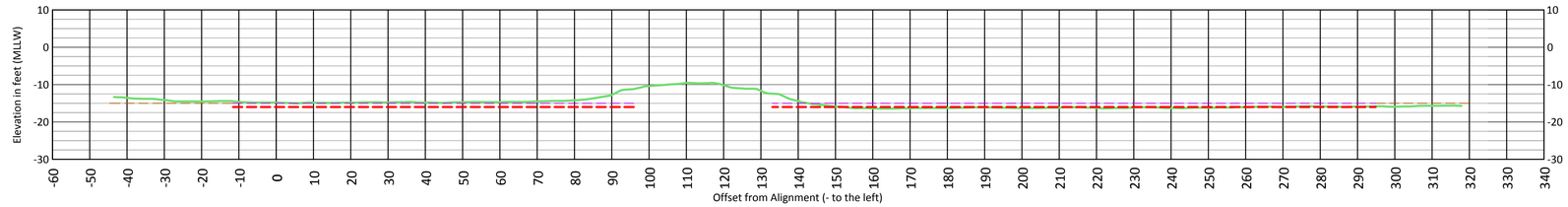
CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: PRIME CONTRACTOR
Approved: RESIDENT ENGINEER
Date:

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

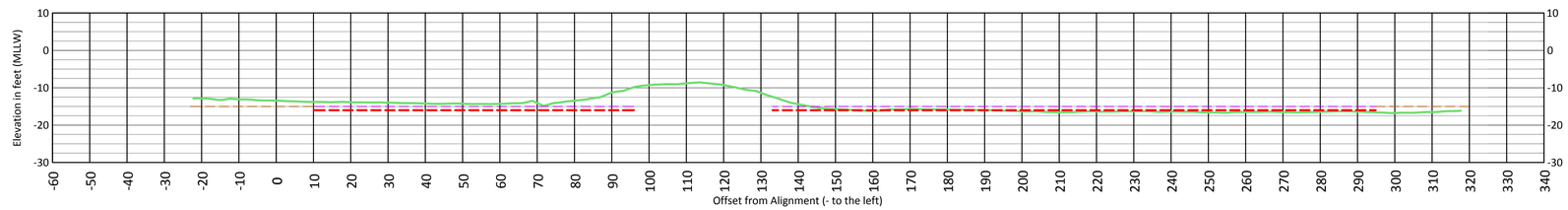
CROSS SECTION LEGEND

- PROJECT DEPTH
- MAX PAY
- SLOUGH ALLOWANCE MAX
- PRE DREDGE

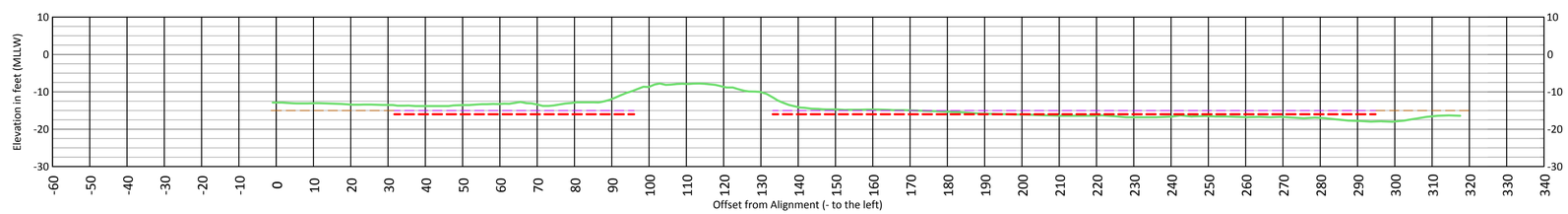
AREA F1 thru F2 - 1+00



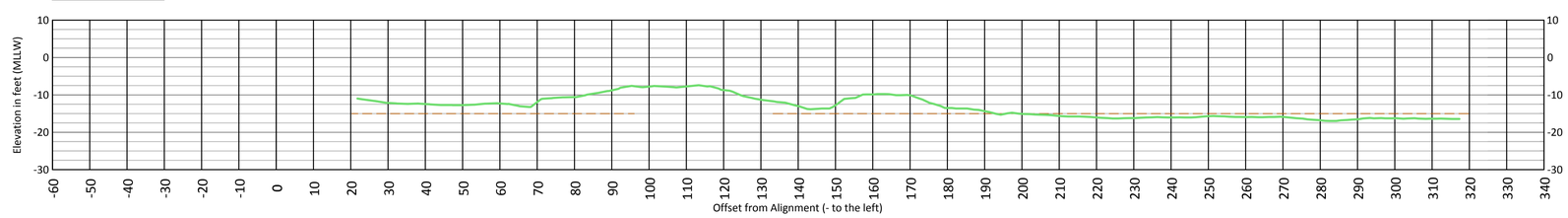
AREA F1 thru F2 - 0+75



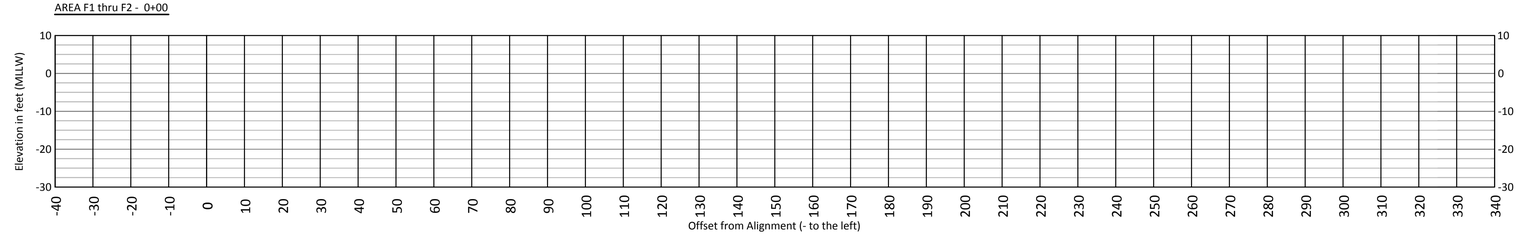
AREA F1 thru F2 - 0+50



AREA F1 thru F2 - 0+25



AREA F1 thru F2 - 0+00



US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: PRIME CONTRACTOR
Approved: RESIDENT ENGINEER
Date:

Sym	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: S2W015C-D0-D0_N_B_AF_F0A0_Quad
Drawing #: 3-SEW-01-02
0008

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: –
Submitted: A. Churchill
Chief: –

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

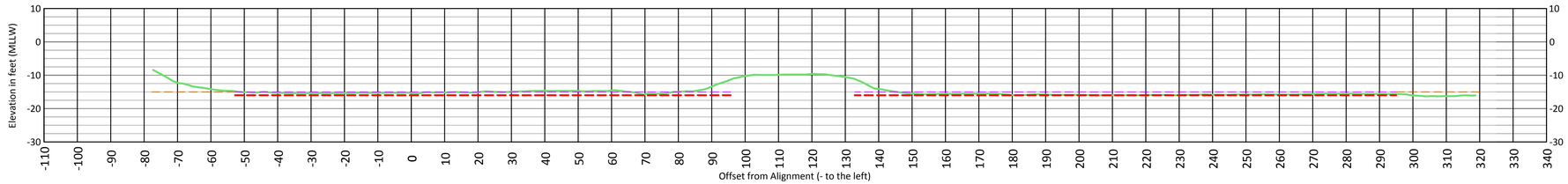
Reference number:
C-313
Sheet 17 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

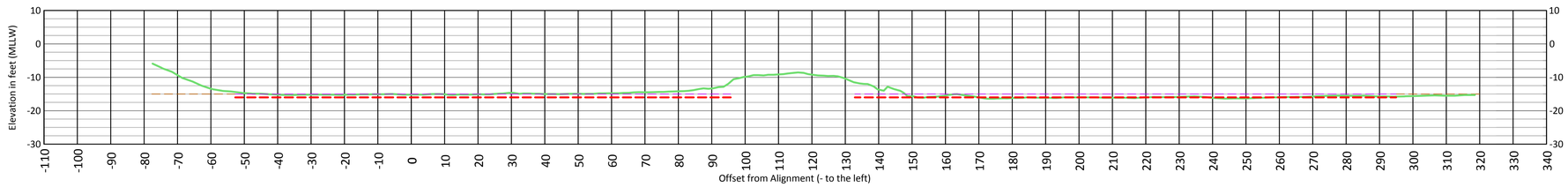
CROSS SECTION LEGEND

- PROJECT DEPTH
- MAX PAY
- SLOUGH ALLOWANCE MAX
- PRE DREDGE

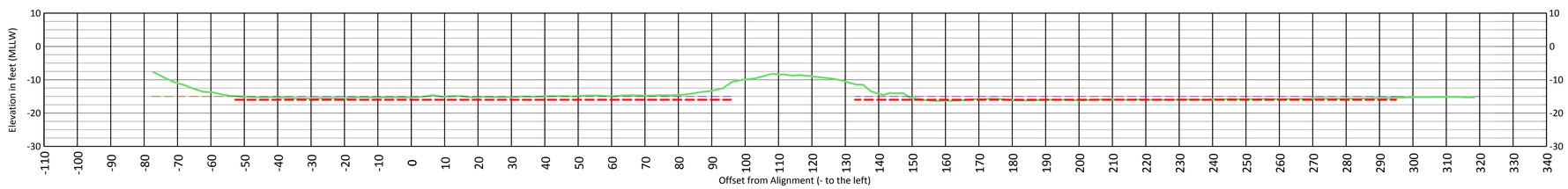
AREA F1 thru F2 - 2+25



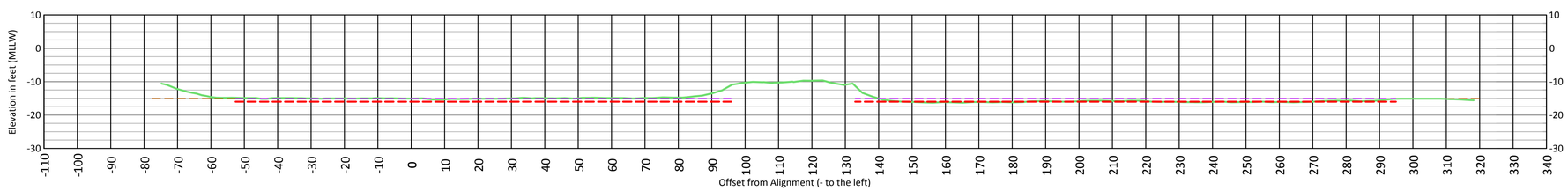
AREA F1 thru F2 - 2+00



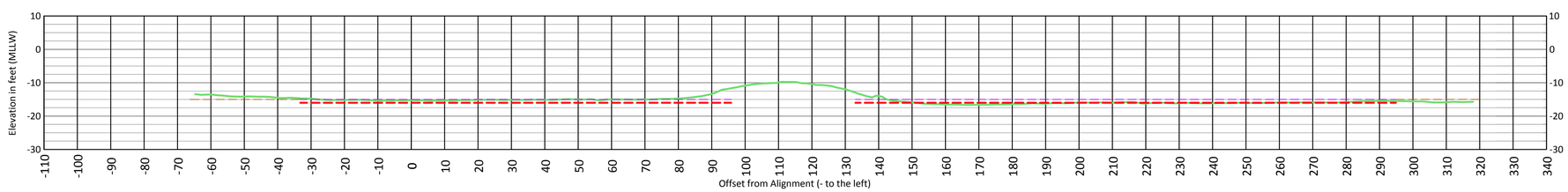
AREA F1 thru F2 - 1+75



AREA F1 thru F2 - 1+50



AREA F1 thru F2 - 1+25



US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: PRIME CONTRACTOR
Approved: RESIDENT ENGINEER
Date:

Sym	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: SWRDC-C03-C35_w_ip_def_rdxd_layout
Drawing #: 3-SEW-01-02

0008

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: – – –
Submitted: A. Churchill
Chief: – – –

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

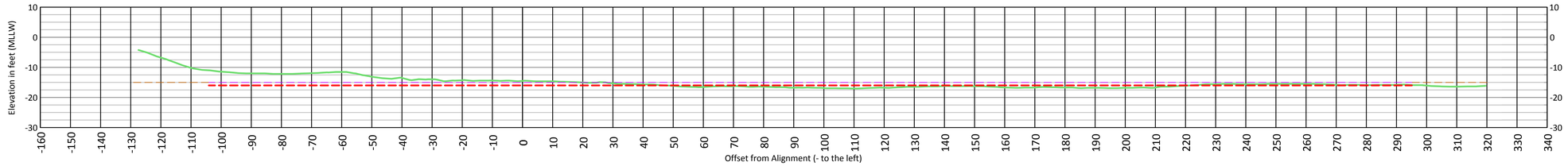
Reference number:
C-314
Sheet 18 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

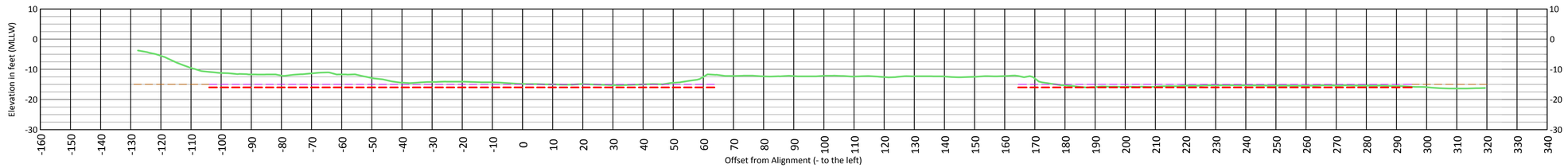
CROSS SECTION LEGEND

PROJECT DEPTH
MAX PAY
SLOUGH ALLOWANCE MAX
PRE DREDGE

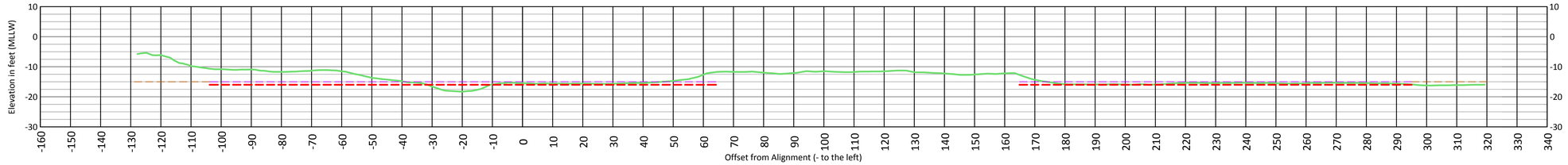
AREA F1 thru F2 - 3+50



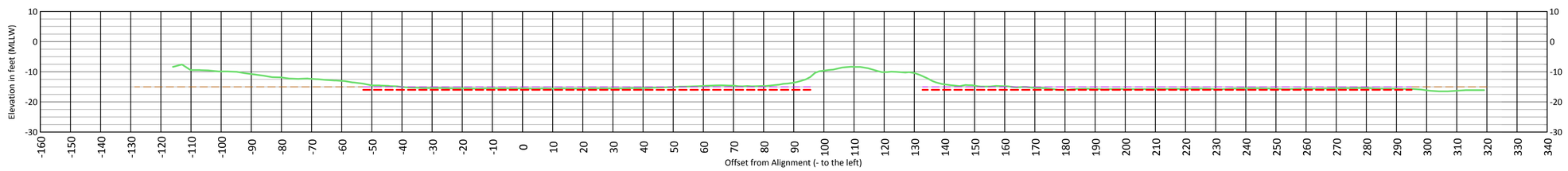
AREA F1 thru F2 - 3+25



AREA F1 thru F2 - 3+00



AREA F1 thru F2 - 2+75



AREA F1 thru F2 - 2+50

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: PRIME CONTRACTOR
Approved: RESIDENT ENGINEER
Date:

Sym.	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: S:\WPCC\C315.dgn, w.ip, pal, nbd, bsurd
Drawing #: 3-SEW-01-02

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: —
Submitted: A. Churchill
Chief: — Branch: CEPOA-EN-CD

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

0008

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

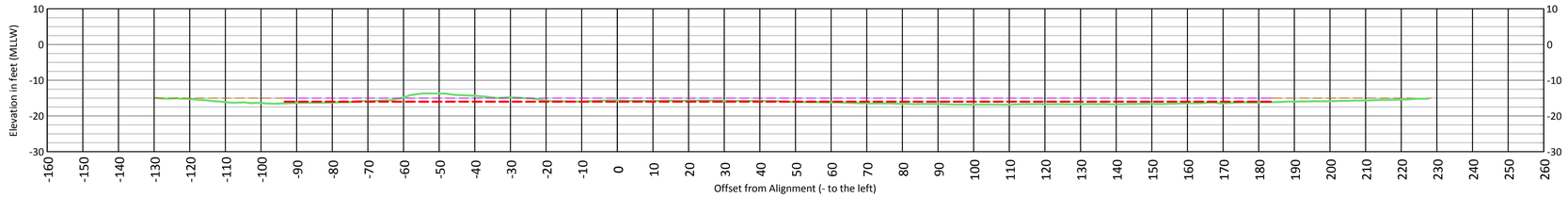
Reference number:
C-315
Sheet 19 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

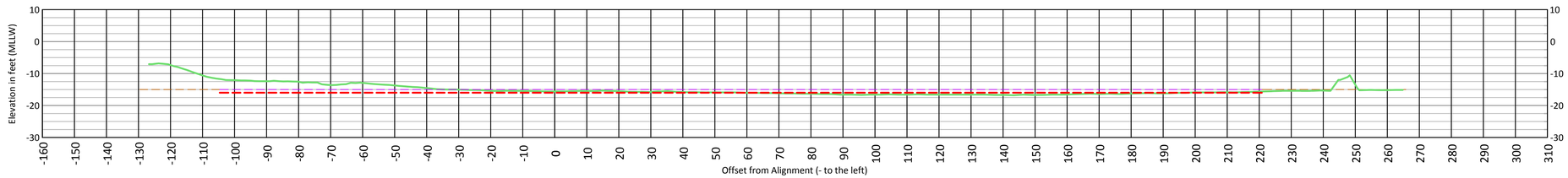
CROSS SECTION LEGEND

PROJECT DEPTH
MAX PAY
SLOUGH ALLOWANCE MAX
PRE DREDGE

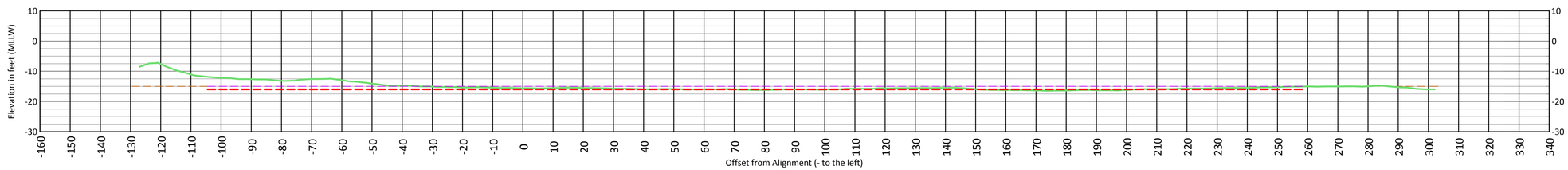
AREA F1 thru F2 - 4+75



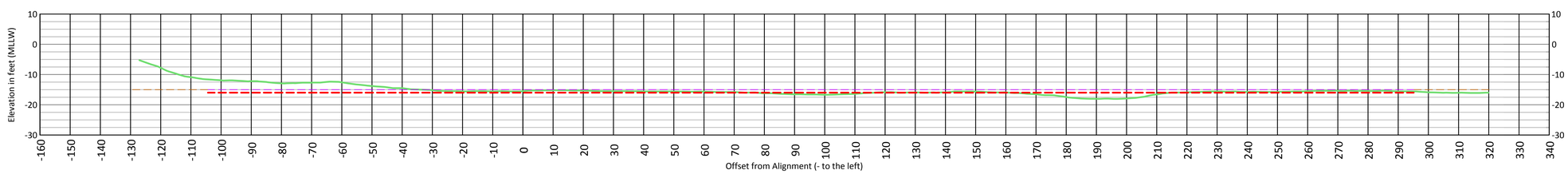
AREA F1 thru F2 - 4+50



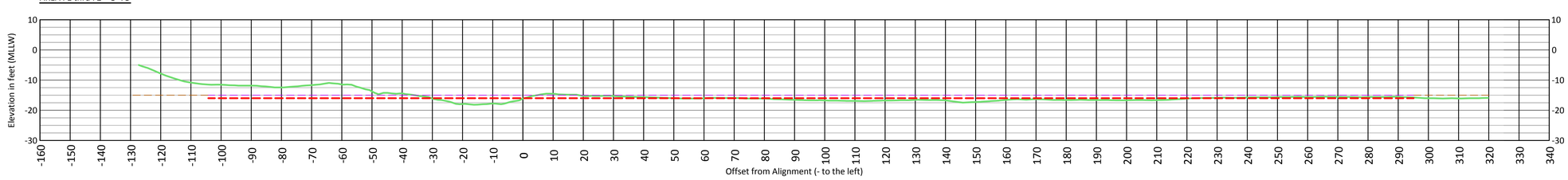
AREA F1 thru F2 - 4+25



AREA F1 thru F2 - 4+00



AREA F1 thru F2 - 3+75



US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: PRIME CONTRACTOR
Approved: RESIDENT ENGINEER
Date:

Sym.	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: S:\WRC\C-316.dgn
Drawing #: 3-SEW-01-02

0008

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: ZK/DR/AH
Submitted: A. Churchill
Chief: Branch: CE/KC/KN/CO

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

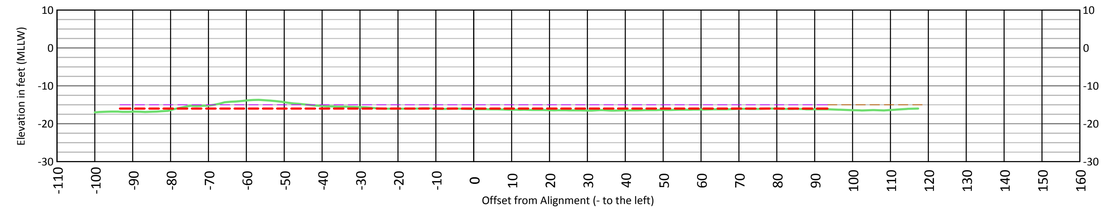
Reference number:
C-316
Sheet 20 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

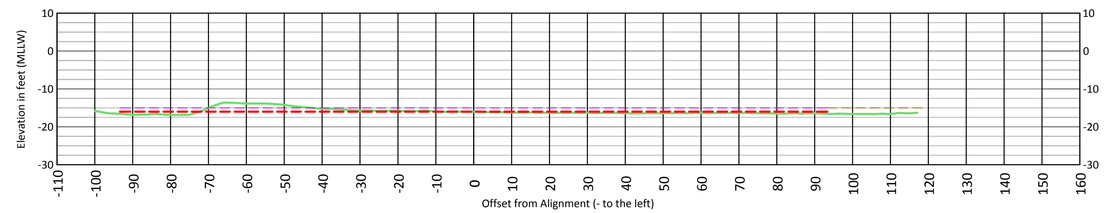
CROSS SECTION LEGEND

- PROJECT DEPTH
- MAX PAY
- SLOUGH ALLOWANCE MAX
- PRE DREDGE

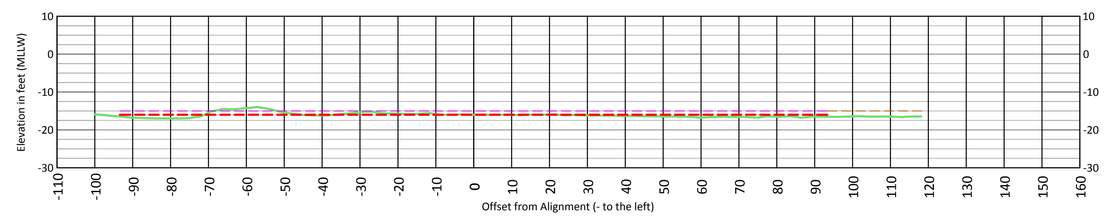
AREA F1 thru F2 - 6+00



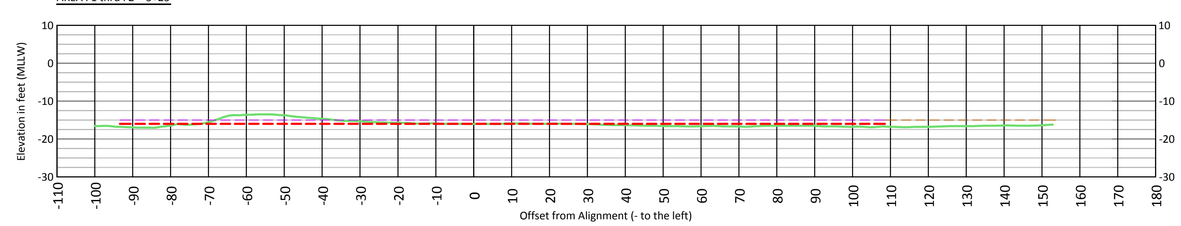
AREA F1 thru F2 - 5+75



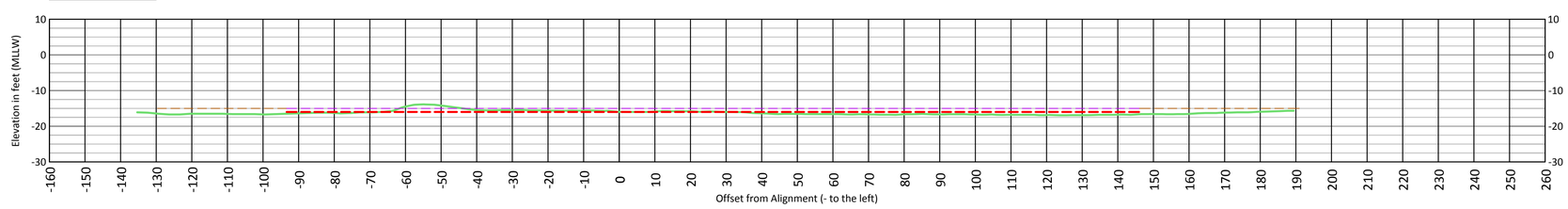
AREA F1 thru F2 - 5+50



AREA F1 thru F2 - 5+25



AREA F1 thru F2 - 5+00



US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: PRIME CONTRACTOR
Approved: RESIDENT ENGINEER
Date:

Sym.	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: S2W05C-C03-C05_W_to_W_HAA_Quad
Drawing #: 3-SEW-01-02
0008

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: – – –
Submitted: A. Churchill
Chief: – – –
Branch: CEPOA-CW-CO

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

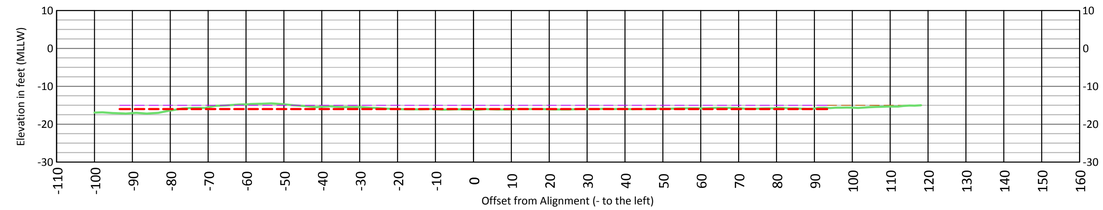
Reference number:
C-317
Sheet 21 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

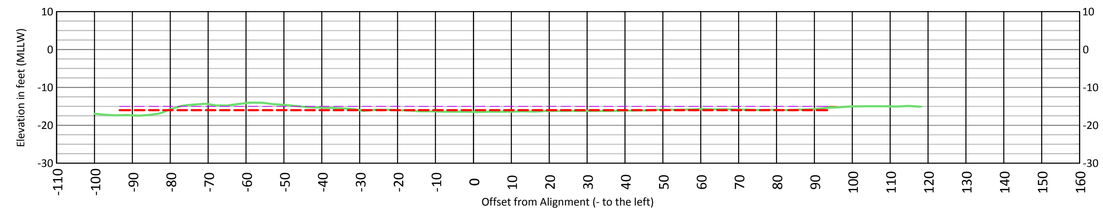
CROSS SECTION LEGEND

PROJECT DEPTH
MAX PAY
SLOUGH ALLOWANCE MAX
PRE DREDGE

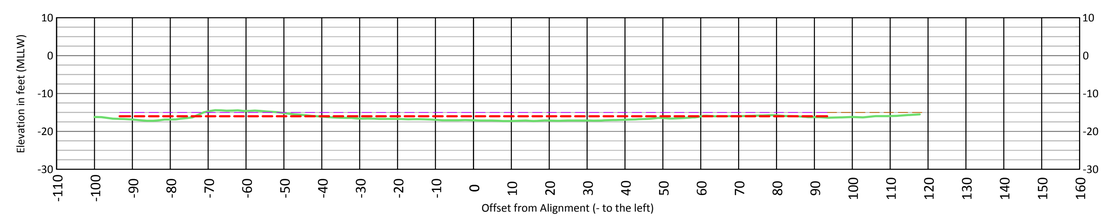
AREA F1 thru F2 - 7+25



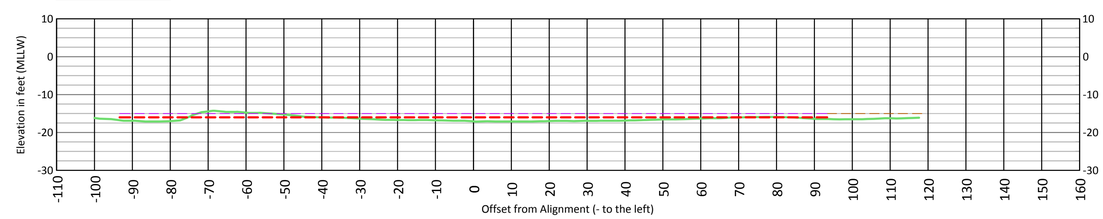
AREA F1 thru F2 - 7+00



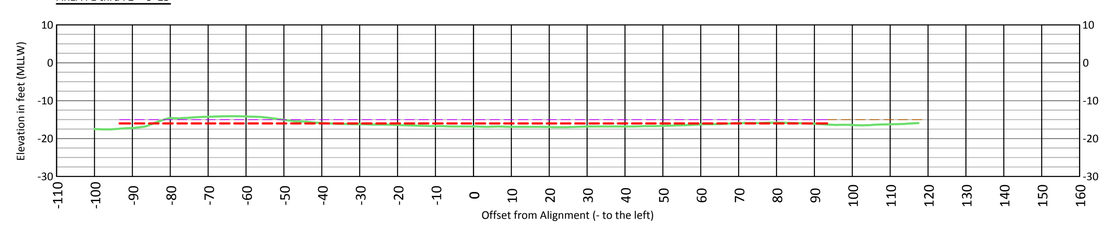
AREA F1 thru F2 - 6+75



AREA F1 thru F2 - 6+50



AREA F1 thru F2 - 6+25



US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: PRIME CONTRACTOR
Approved: RESIDENT ENGINEER
Date:

Sym.	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: SWBDC-CIS-135_w_ip_def_rdxd_bound
Drawing #: 3-SEW-01-02
0008

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: ZKZKFAH
Submitted: A. Churchill
Chief: Branch: CEPOA-EN-CD

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

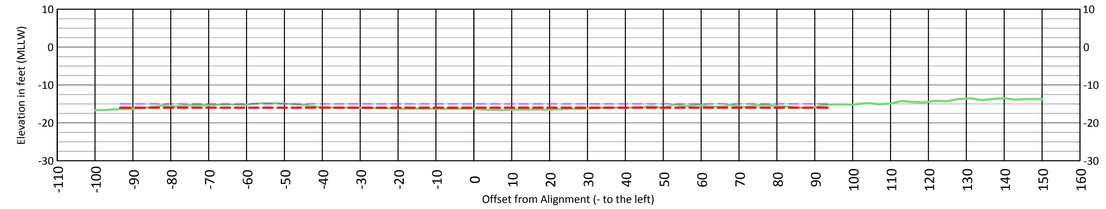
Reference number:
C-318
Sheet 22 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

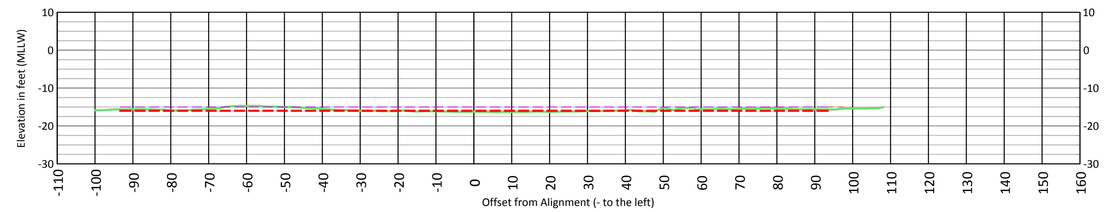
CROSS SECTION LEGEND

- PROJECT DEPTH
- MAX PAY
- SLOUGH ALLOWANCE MAX
- PRE DREDGE

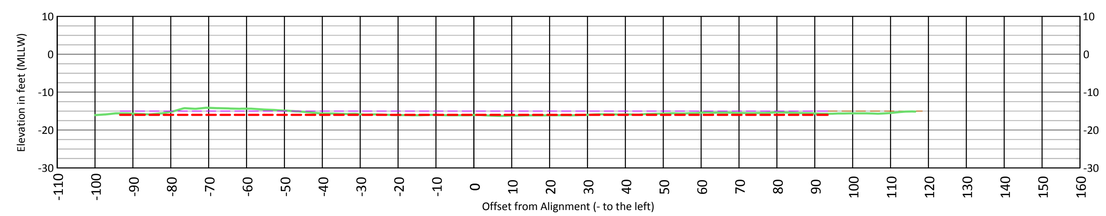
AREA F1 thru F2 - 8+50



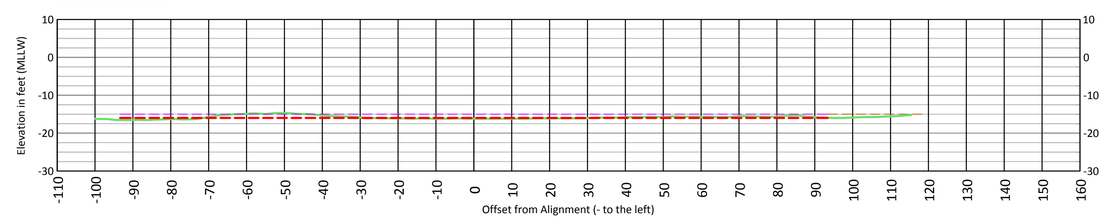
AREA F1 thru F2 - 8+25



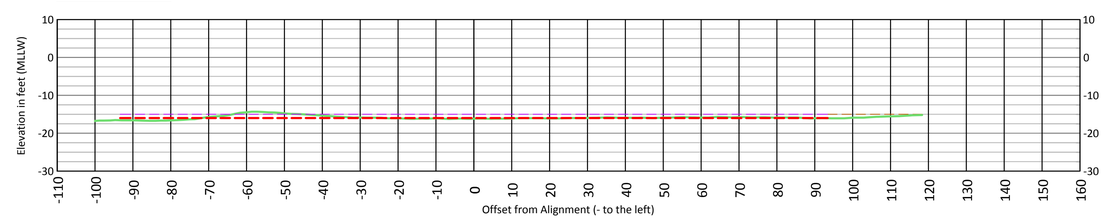
AREA F1 thru F2 - 8+00



AREA F1 thru F2 - 7+75



AREA F1 thru F2 - 7+50



US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: PRIME CONTRACTOR
Approved: RESIDENT ENGINEER
Date:

Sym.	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: S:\WCC-SEWARD\Dredging\Cross Sections\SEW015G-BSxxxx.dwg
Drawing #: 3-SEW-01-02

0008

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: – – –
Submitted: A. Churchill
Chief: – – –

CWIDT TASK ORDER

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

Reference number:
C-319
Sheet 23 of 37

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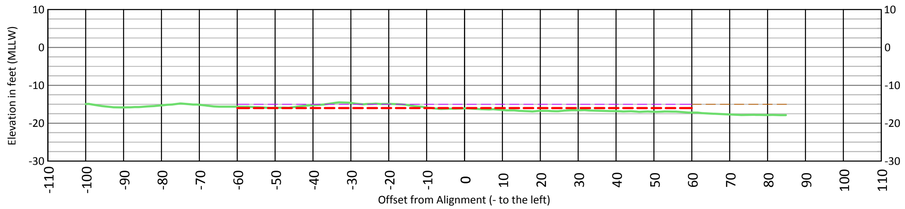
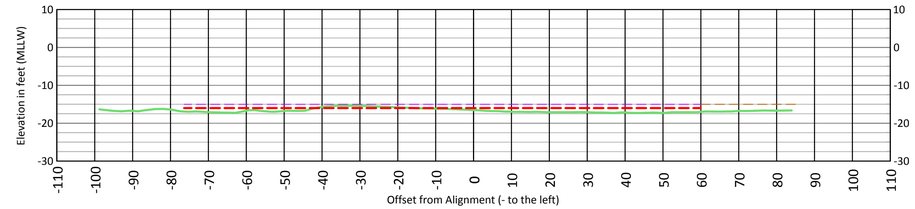
CROSS SECTION LEGEND

PROJECT DEPTH
MAX PAY
SLOUGH ALLOWANCE MAX
PRE DREDGE

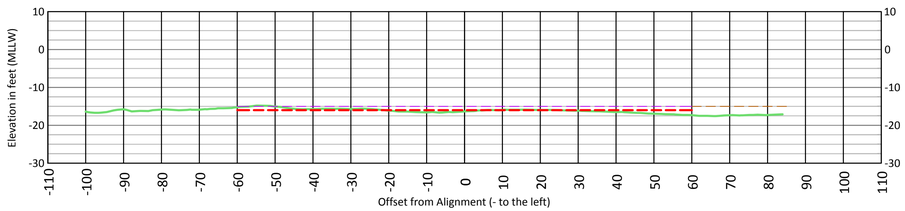
AREA F1 thru F2 - 10+75



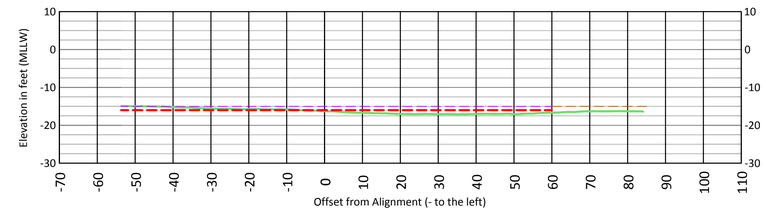
AREA F1 thru F2 - 9+50



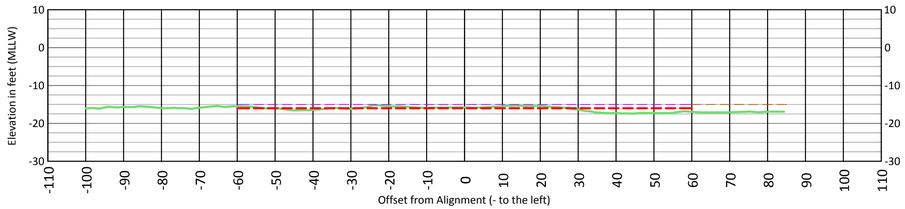
AREA F1 thru F2 - 10+50



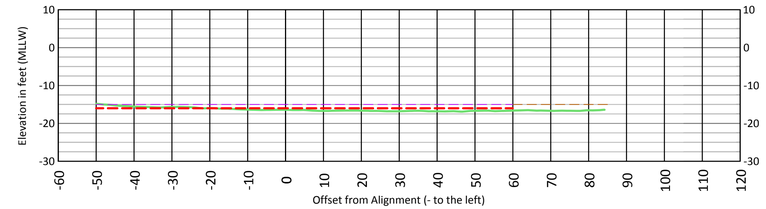
AREA F1 thru F2 - 9+25



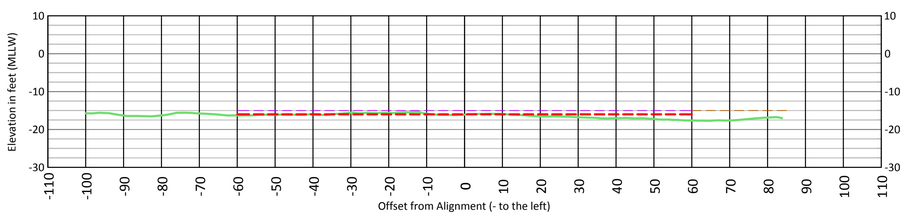
AREA F1 thru F2 - 10+25



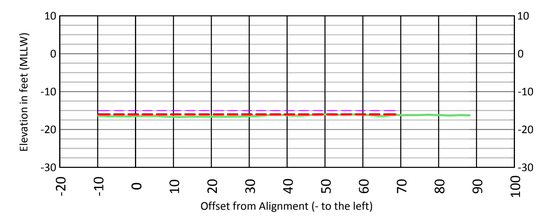
AREA F1 thru F2 - 9+00



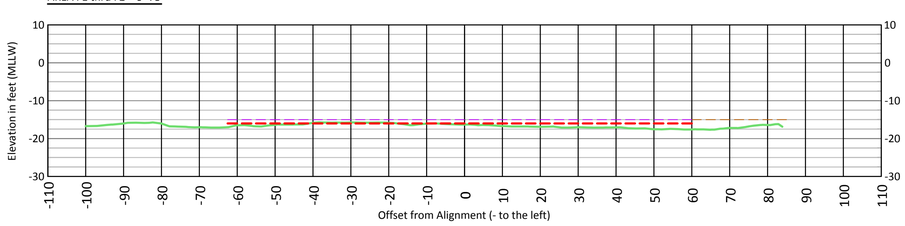
AREA F1 thru F2 - 10+00



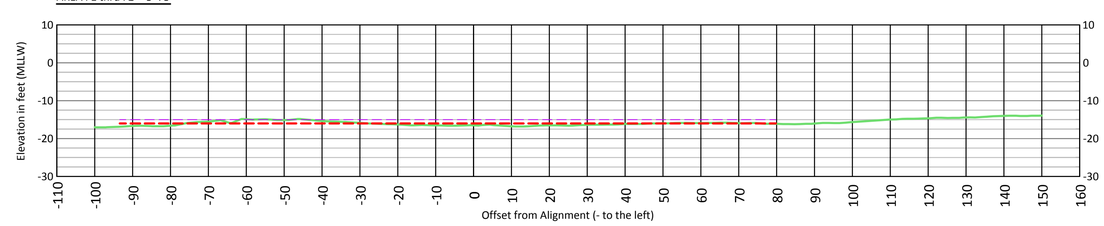
AREA F1 thru F2 - 8+95



AREA F1 thru F2 - 9+75



AREA F1 thru F2 - 8+75



US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: PRIME CONTRACTOR
Approved: RESIDENT ENGINEER
Date:

Sym.	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: S:\WPCC\C320_w_ip_pal_rdwd_layout
Drawing #: 3-SEW-01-02

0008

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Checked: —
Submitted: A. Churchill
Chief: — Branch: CEPOA-CN-CO

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

Reference number:
C-320
Sheet 24 of 37

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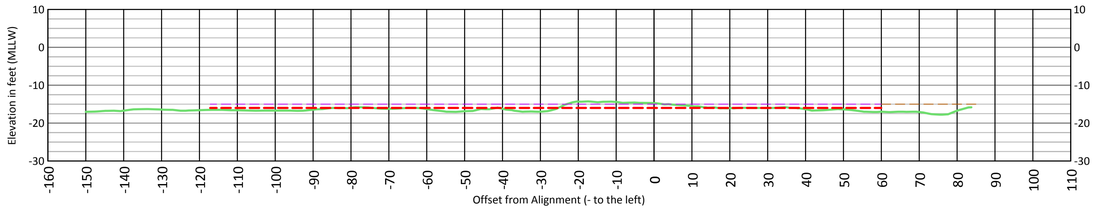
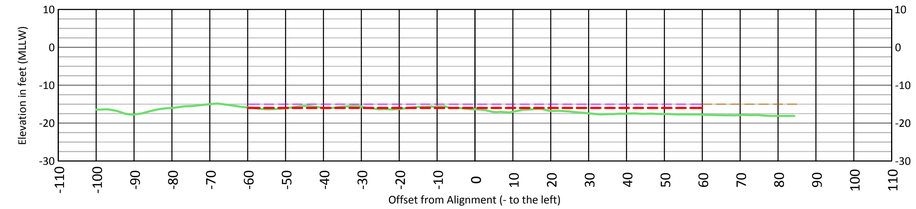
CROSS SECTION LEGEND

PROJECT DEPTH
MAX PAY
SLOUGH ALLOWANCE MAX
PRE DREDGE

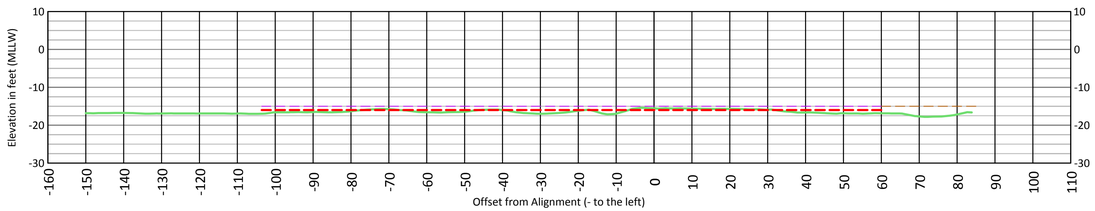
AREA F1 thru F2 - 13+25



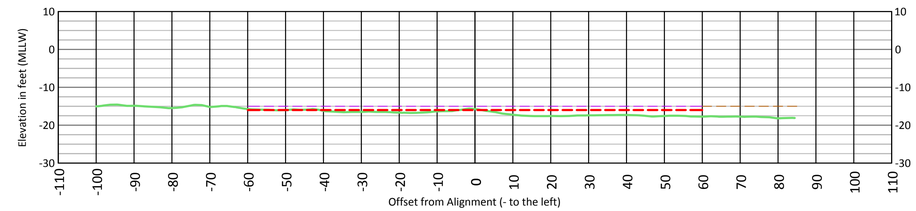
AREA F1 thru F2 - 12+00



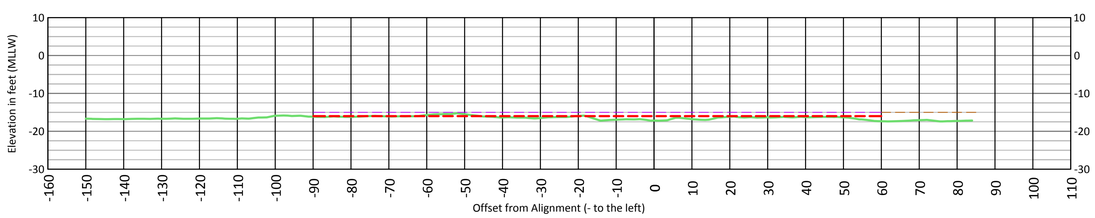
AREA F1 thru F2 - 13+00



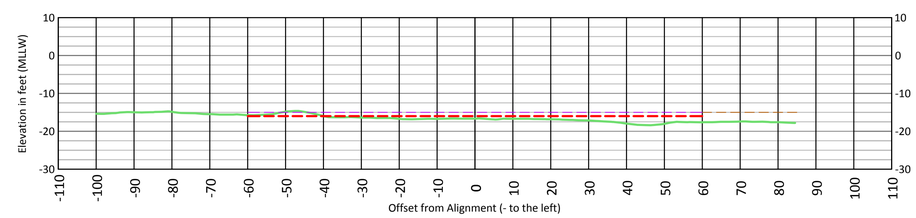
AREA F1 thru F2 - 11+75



AREA F1 thru F2 - 12+75



AREA F1 thru F2 - 11+50



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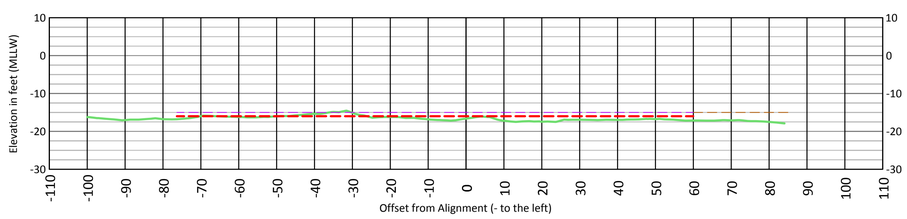
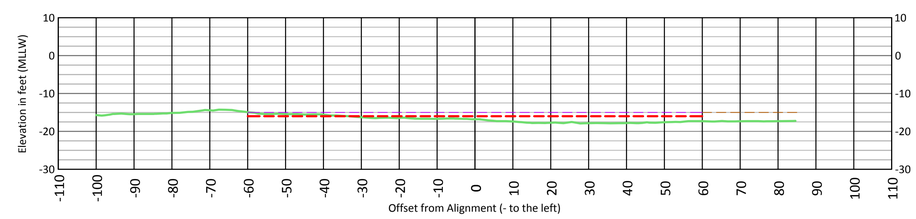
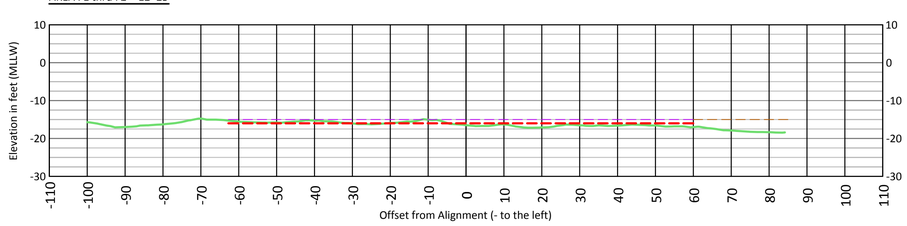


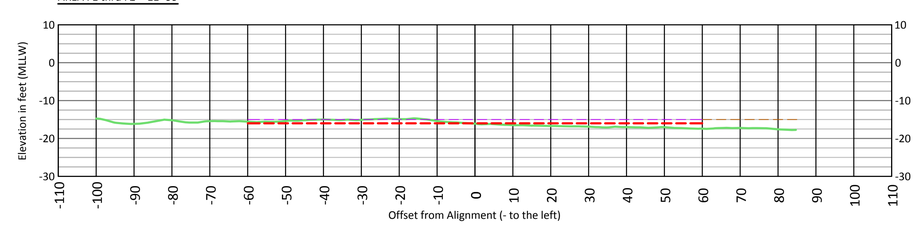
AREA F1 thru F2 - 11+25



AREA F1 thru F2 - 12+25



AREA F1 thru F2 - 11+00



US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: PRIME CONTRACTOR
Approved: RESIDENT ENGINEER
Date:

Sym	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: S2W05C-C02-C25_w_ip_pl_rdy0_layout
Drawing #: 3-SEW-01-02

0008

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Checked: ZK/ZK/AH
Submitted: A. Churchill
Chief: Branch: CE/KA/CN/CO

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

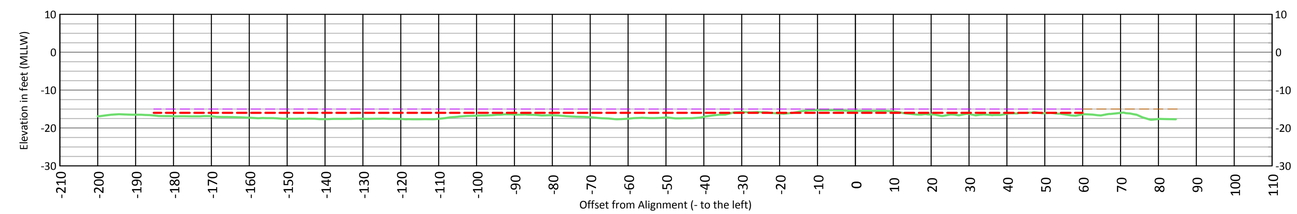
Reference number:
C-321
Sheet 25 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

CROSS SECTION LEGEND

PROJECT DEPTH
MAX PAY
SLOUGH ALLOWANCE MAX
PRE DREDGE

AREA F1 thru F2 - 14+50



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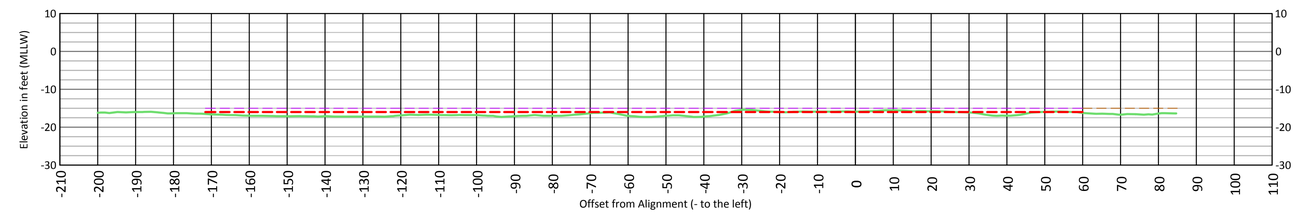
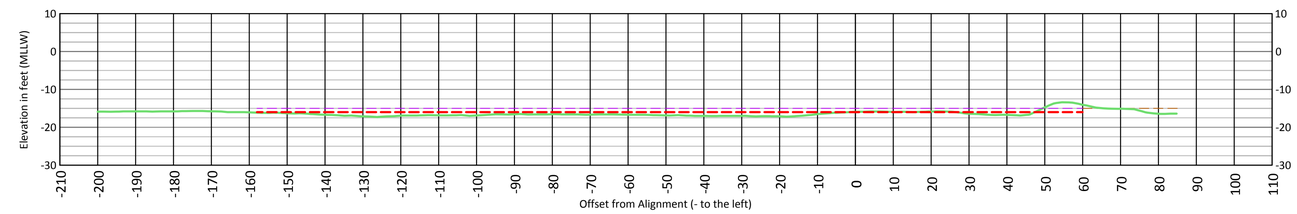
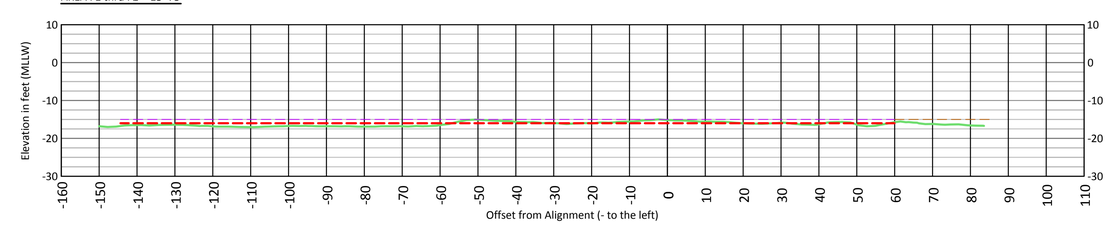


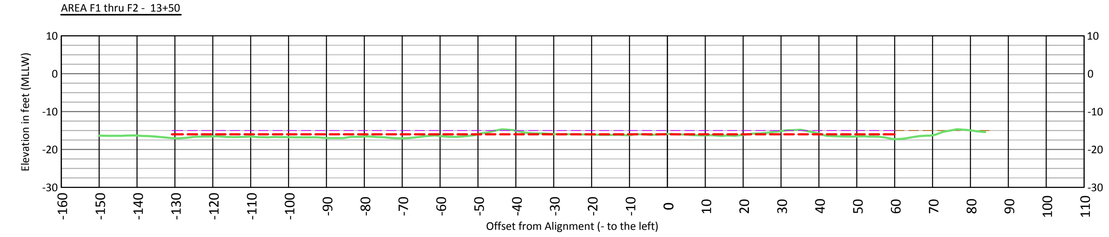
AREA F1 thru F2 - 14+00



AREA F1 thru F2 - 13+75



AREA F1 thru F2 - 13+50



US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: PRIME CONTRACTOR
Approved: RESIDENT ENGINEER
Date:

Sym.	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: SWRDC-C03-C26_w_ip_def_rdxd_layout
Drawing #: 3-SEW-01-02
0008

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Checked: ZK/QK/AN
Submitted: A. Churchill
Chief: Branch: CE/QA/CN/CO

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

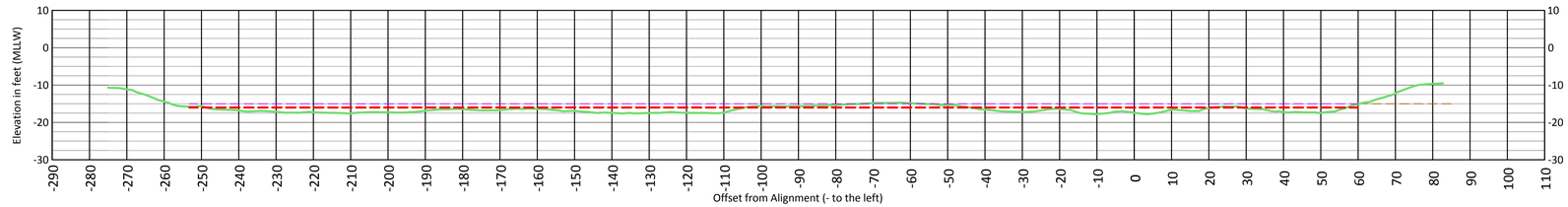
Reference number:
C-322
Sheet 26 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

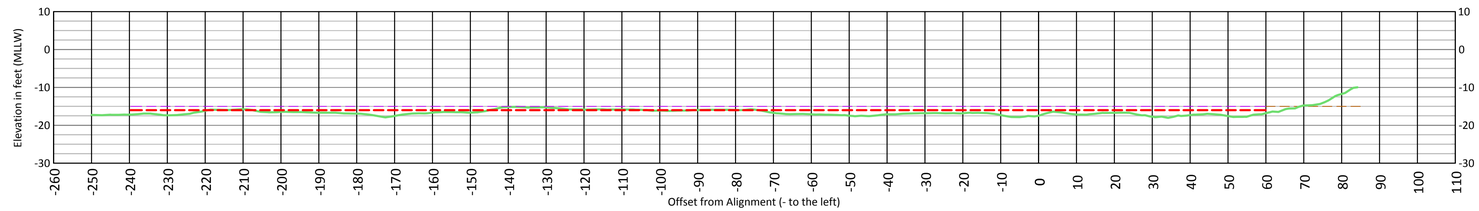
CROSS SECTION LEGEND

- PROJECT DEPTH
- MAX PAY
- SLOUGH ALLOWANCE MAX
- PRE DREDGE

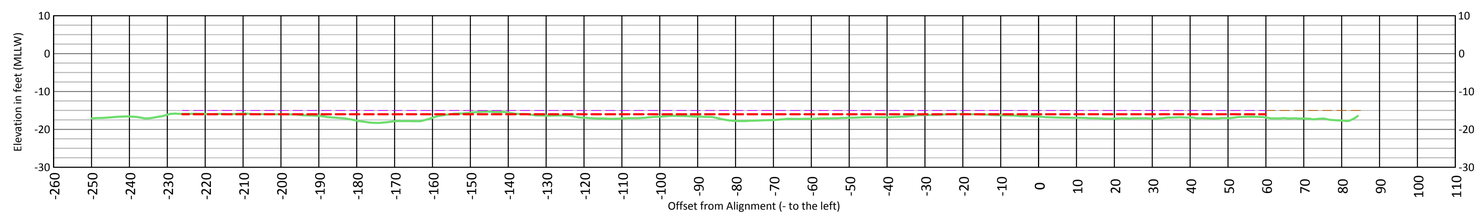
AREA F1 thru F2 - 15+75



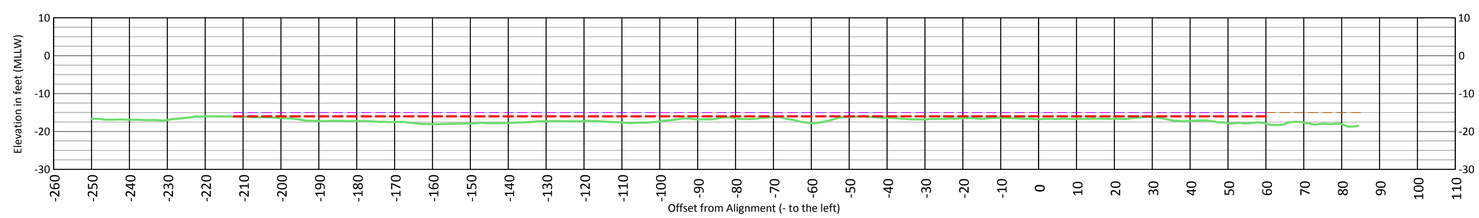
AREA F1 thru F2 - 15+50



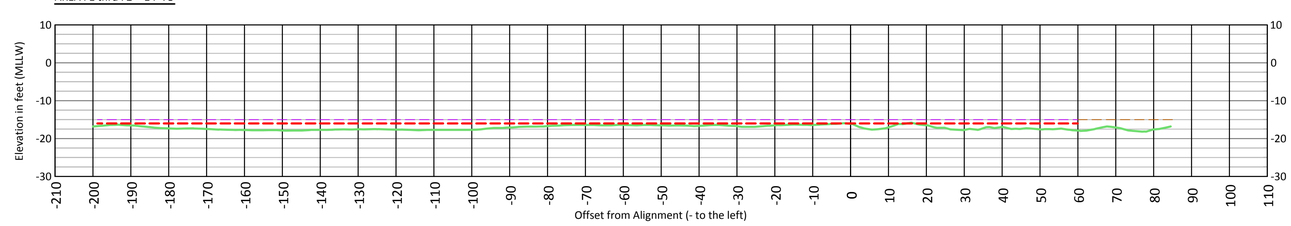
AREA F1 thru F2 - 15+25



AREA F1 thru F2 - 15+00



AREA F1 thru F2 - 14+75



US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: PRIME CONTRACTOR
Approved: RESIDENT ENGINEER
Date:

Sym.	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: S:\WCC-SEW\Dredging\Support\Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg
Drawing #: 3-SEW-01-02

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: ZK/ZK/AH
Submitted: A. Churchill
Chief: CE/KC/KC/CO
Branch:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

0008

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

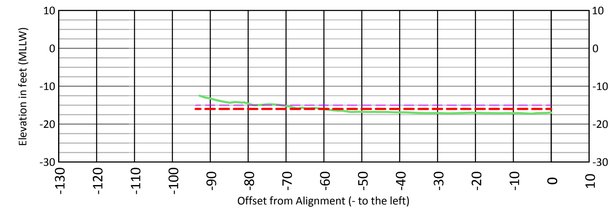
Reference number:
C-323
Sheet 27 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

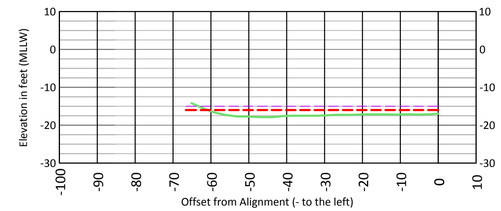
CROSS SECTION LEGEND

PROJECT DEPTH
MAX PAY
SLOUGH ALLOWANCE MAX
PRE DREDGE

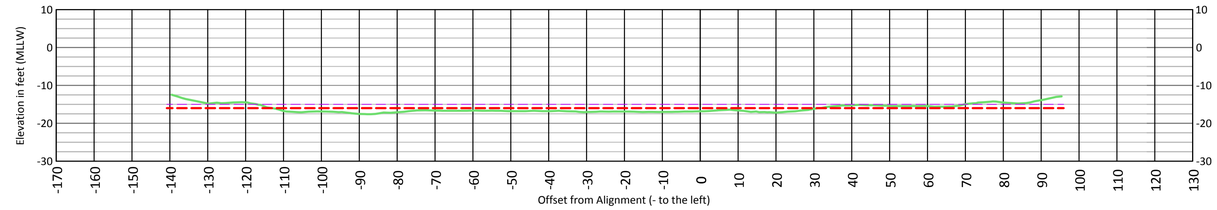
AREA F1 thru F2 - 16+63



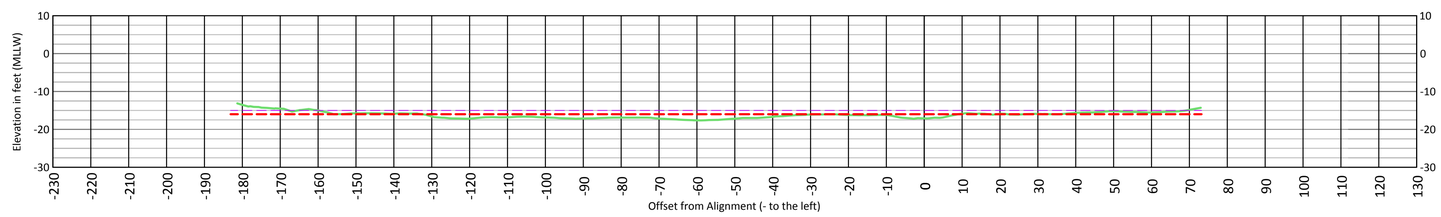
AREA F1 thru F2 - 16+63



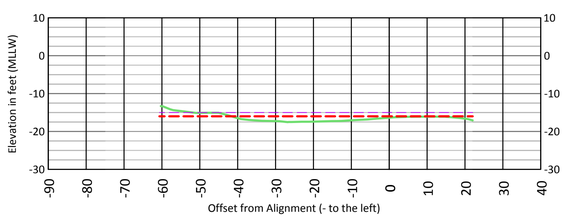
AREA F1 thru F2 - 16+50



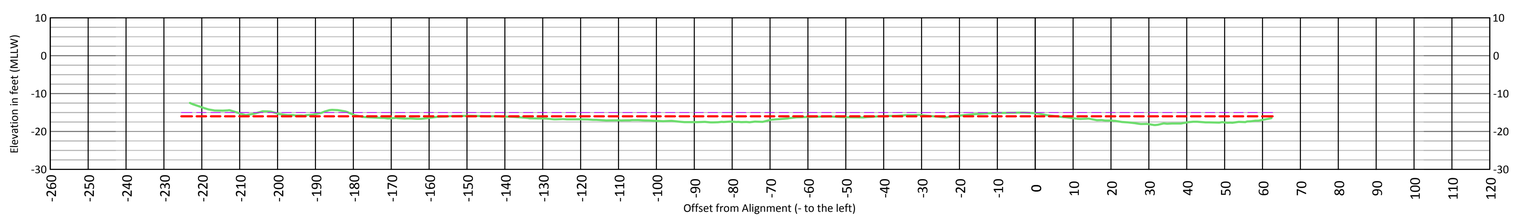
AREA F1 thru F2 - 16+25



AREA F1 thru F2 - 16+75



AREA F1 thru F2 - 16+00



US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: PRIME CONTRACTOR
Approved: RESIDENT ENGINEER
Date:

Sym.	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: S:\MISC\CBS\35_N_B_IMP_HAM_Island
Drawing #: 3-SEW-01-02

0008

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: ZKZKFJWI
Submitted: A. Churchill
Chief: CEPOA/CN/CO
Branch: CEPOA/CN/CO

CWIDT TASK ORDER

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

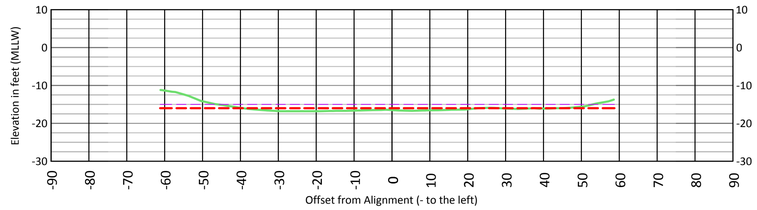
Reference number:
C-324
Sheet 28 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

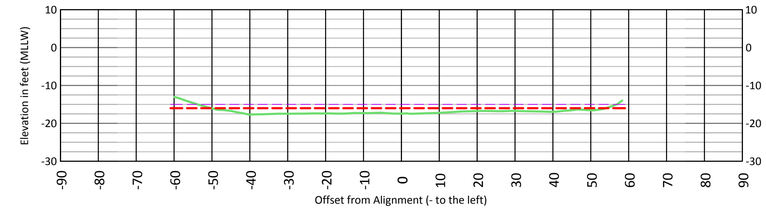
CROSS SECTION LEGEND

PROJECT DEPTH
MAX PAY
SLOUGH ALLOWANCE MAX
PRE DREDGE

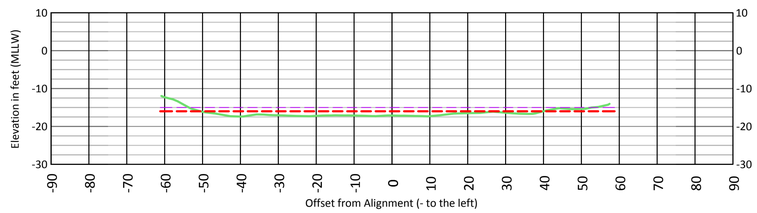
AREA F1 thru F2 - 19+25



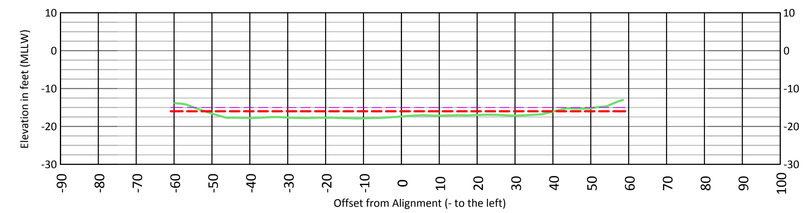
AREA F1 thru F2 - 18+00



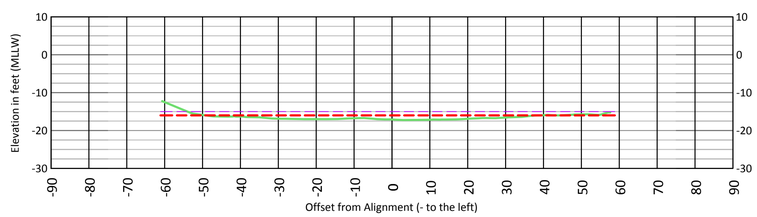
AREA F1 thru F2 - 19+00



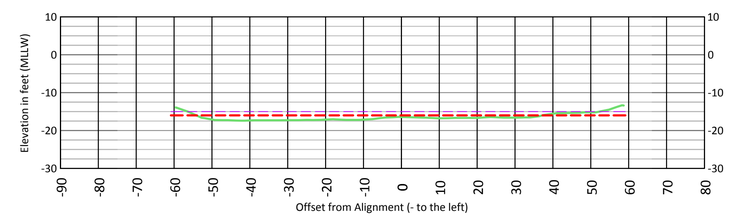
AREA F1 thru F2 - 17+75



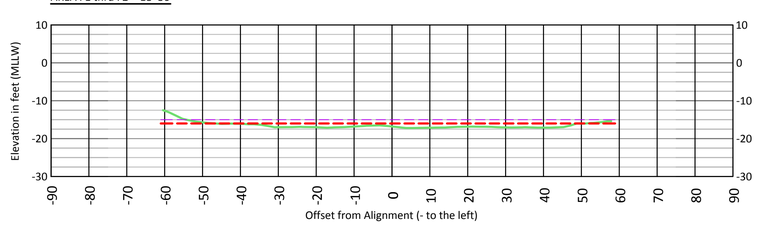
AREA F1 thru F2 - 18+75



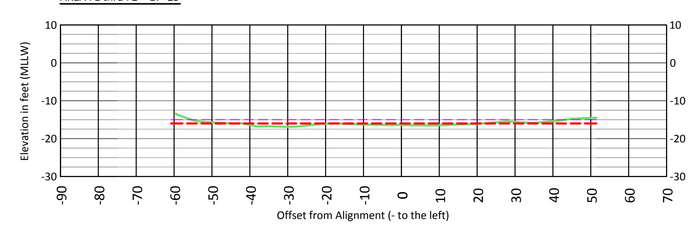
AREA F1 thru F2 - 17+50



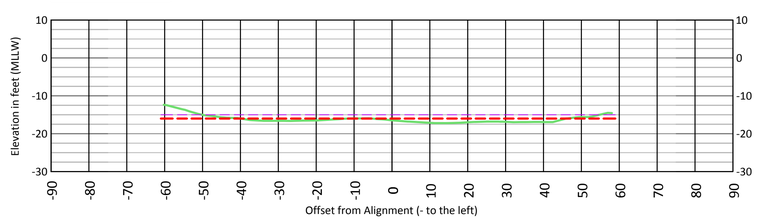
AREA F1 thru F2 - 18+50



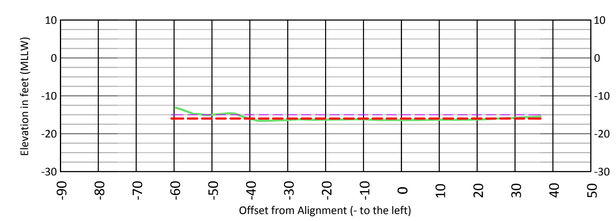
AREA F1 thru F2 - 17+25



AREA F1 thru F2 - 18+25



AREA F1 thru F2 - 17+00



US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: PRIME CONTRACTOR
Approved: RESIDENT ENGINEER
Date:

Sym	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: S2W05C-C02-325_w_ip_pf_rev2_layout
Drawing #: 3-SEW-01-02

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: ---
Submitted: A. Churchill
Chief: ---

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

0008

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

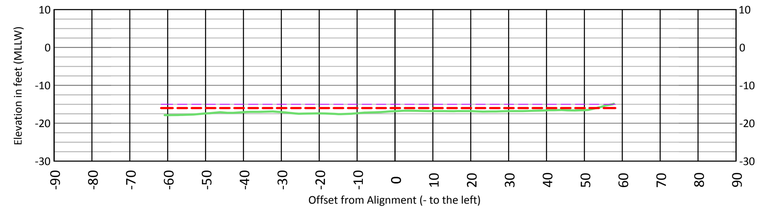
Reference number:
C-325
Sheet 29 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

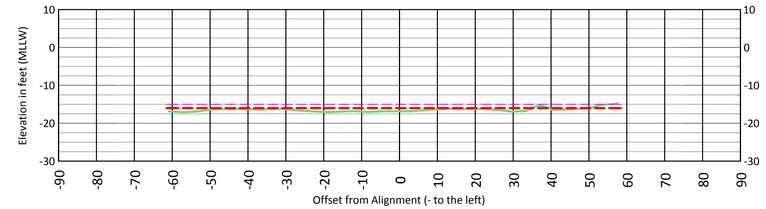
CROSS SECTION LEGEND

- PROJECT DEPTH
- MAX PAY
- SLOUGH ALLOWANCE MAX
- PRE DREDGE

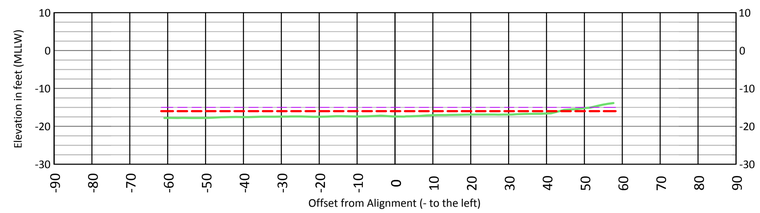
AREA F1 thru F2 - 21+75



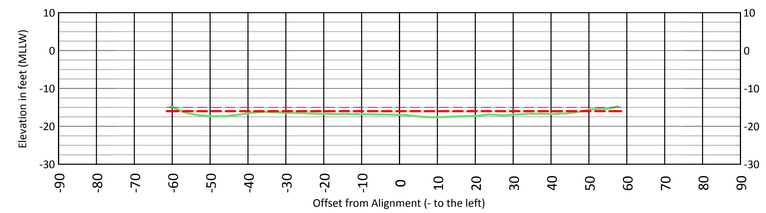
AREA F1 thru F2 - 20+50



AREA F1 thru F2 - 21+50



AREA F1 thru F2 - 20+25



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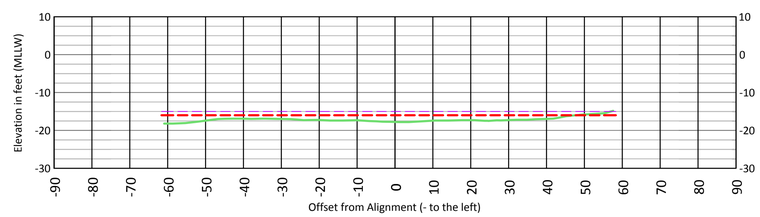
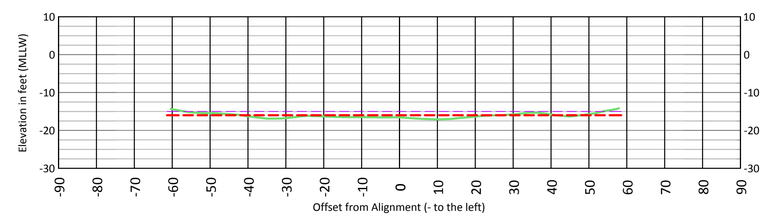
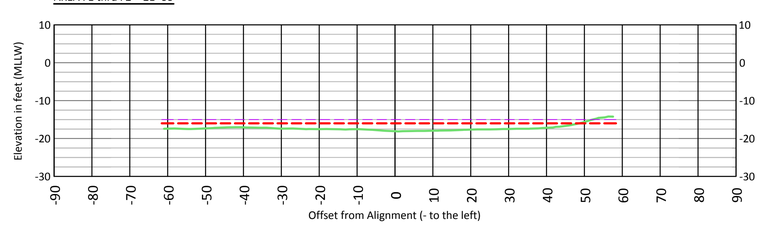


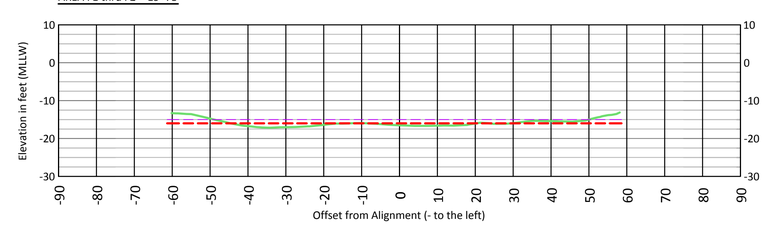
AREA F1 thru F2 - 20+00



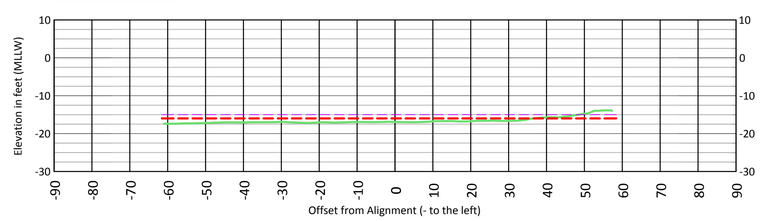
AREA F1 thru F2 - 21+00



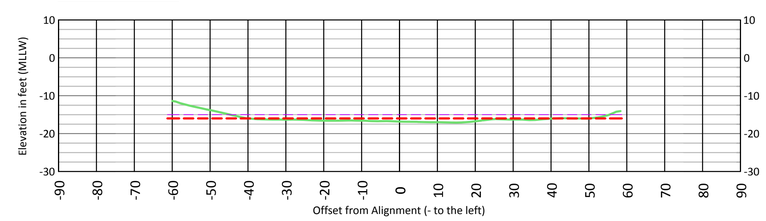
AREA F1 thru F2 - 19+75



AREA F1 thru F2 - 20+75



AREA F1 thru F2 - 19+50



US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: Approved:
PRIME CONTRACTOR RESIDENT ENGINEER Date:

Sym.	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: S:\WCC-SEW\Dredging\Support\Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg
Drawing #: 3-SEW-01-02

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: Design
Submitted: A. Churchill
Chief: Branch

CWIDT TASK ORDER

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

Reference number:
C-326
Sheet 30 of 37

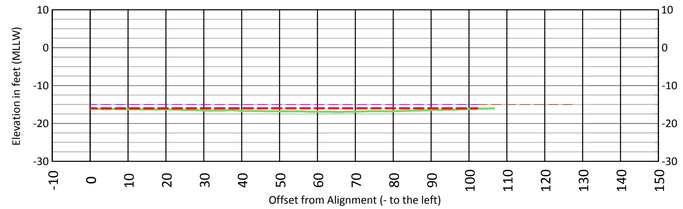
0008

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

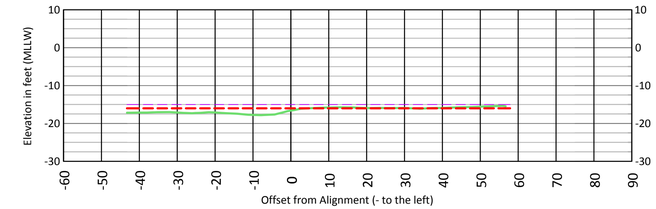
CROSS SECTION LEGEND

- PROJECT DEPTH
- MAX PAY
- SLOUGH ALLOWANCE MAX
- PRE DREDGE

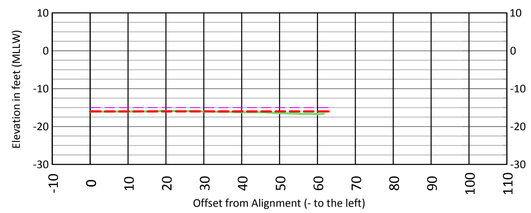
AREA F1 thru F2 - 23+92



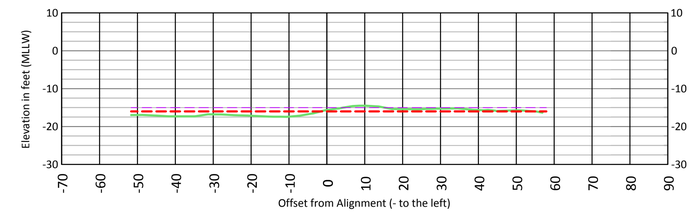
AREA F1 thru F2 - 23+00



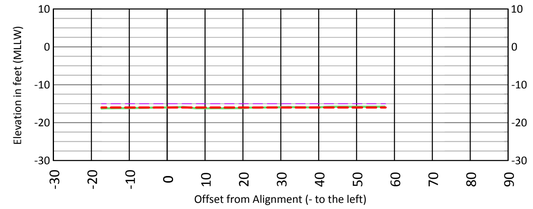
AREA F1 thru F2 - 23+87



AREA F1 thru F2 - 22+75



AREA F1 thru F2 - 23+75



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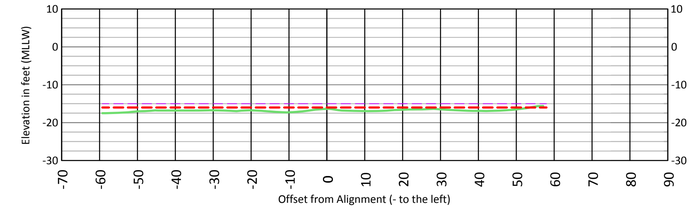
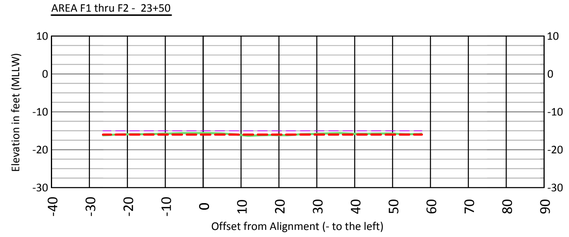
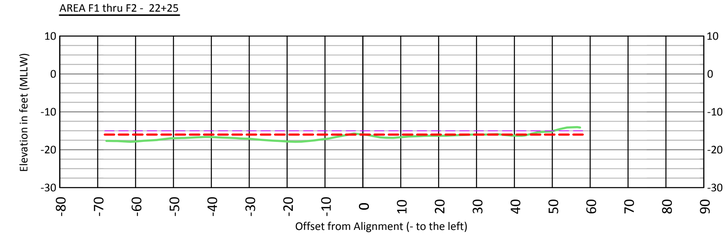


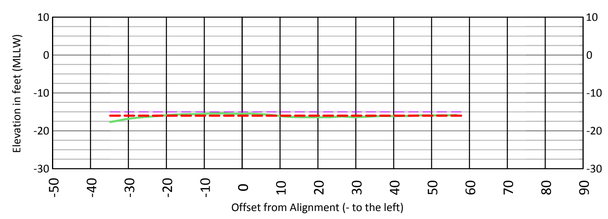
AREA F1 thru F2 - 23+50



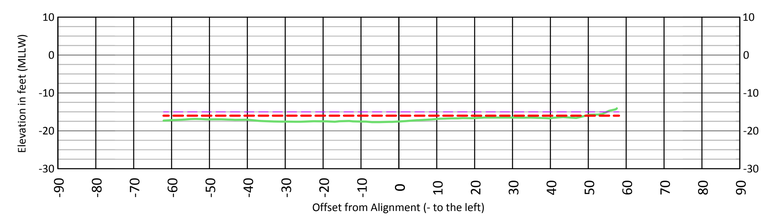
AREA F1 thru F2 - 22+25



AREA F1 thru F2 - 23+25



AREA F1 thru F2 - 22+00



US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: Approved: Date:
PRIME CONTRACTOR RESIDENT ENGINEER

Sym	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: S2W05C-C02-C35_w_ip_def_rev02_layout
Drawing #: 3-SEW-01-02
0008

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: — Section: ZKCW-HH
Submitted: A. Churchill
Chief: — Branch: CEPOA-CN-CO

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

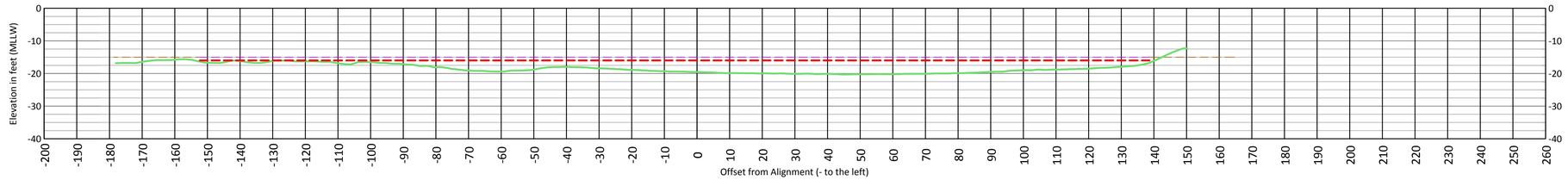
Reference number:
C-327
Sheet 31 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

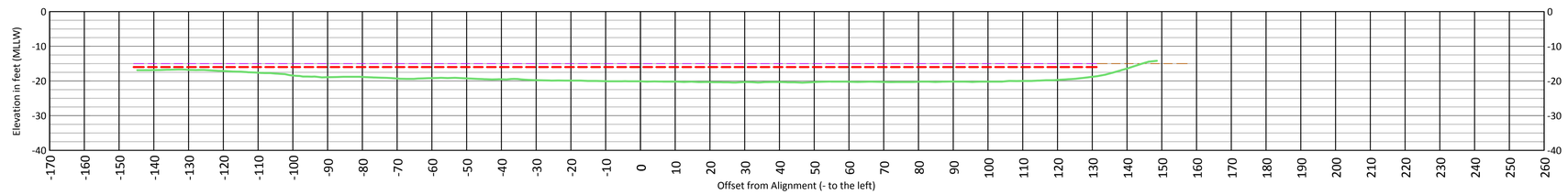
CROSS SECTION LEGEND

- PROJECT DEPTH
- MAX PAY
- SLOUGH ALLOWANCE MAX
- PRE DREDGE

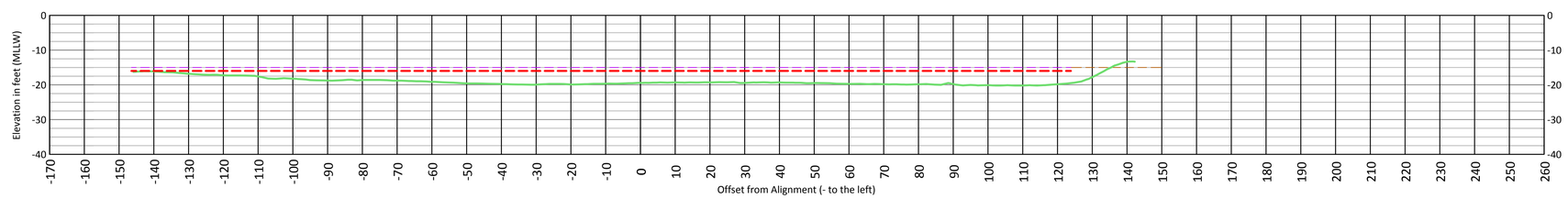
AREA F1 thru F2 - 25+00



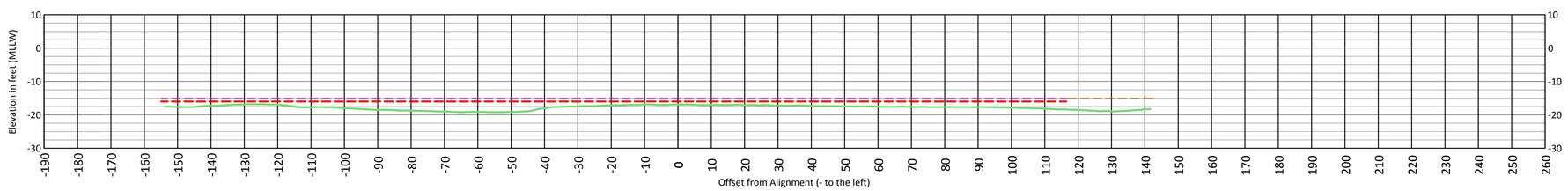
AREA F1 thru F2 - 24+75



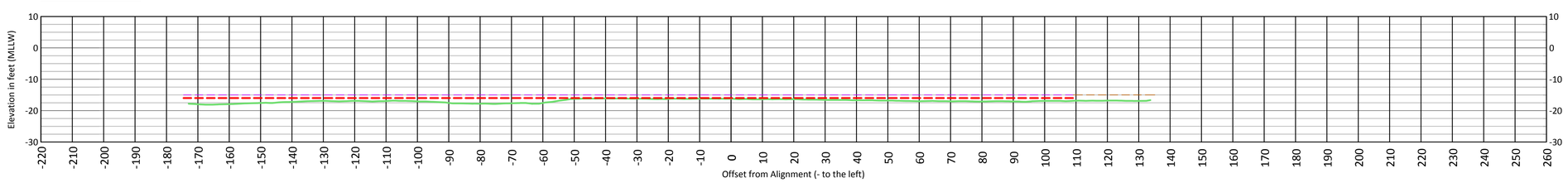
AREA F1 thru F2 - 24+50



AREA F1 thru F2 - 24+25



AREA F1 thru F2 - 24+00



US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: Approved:
PRIME CONTRACTOR RESIDENT ENGINEER Date:

Sym	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: S:\WCC-SEW\Dredging\Survey\Drawings\SEW015G-BSxxxx.dwg
Drawing #: 3-SEW-01-02
0008

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: Project Mgmt
Submitted: A. Churchill
Chief: Branch: CEPOA-EN-CW-CD

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

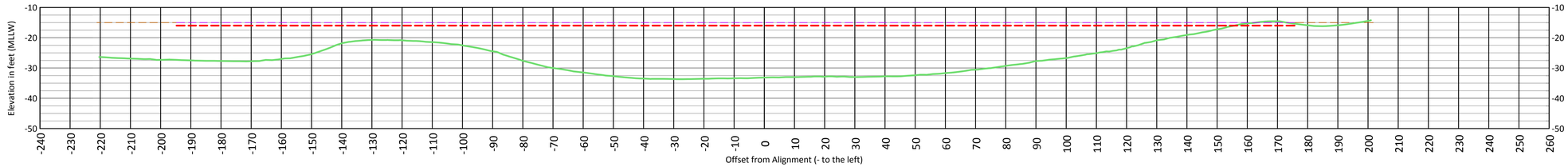
Reference number:
C-328
Sheet 32 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

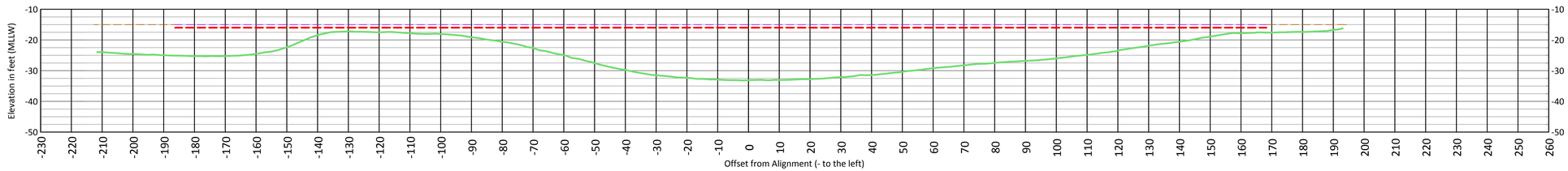
CROSS SECTION LEGEND

PROJECT DEPTH
MAX PAY
SLOUGH ALLOWANCE MAX
PRE DREDGE

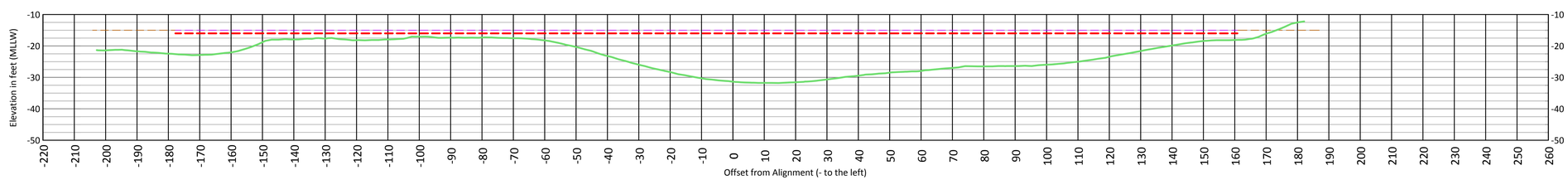
AREA F1 thru F2 - 26+25



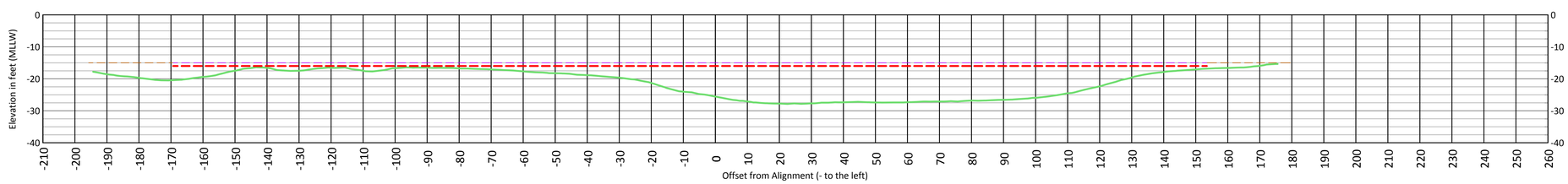
AREA F1 thru F2 - 26+00



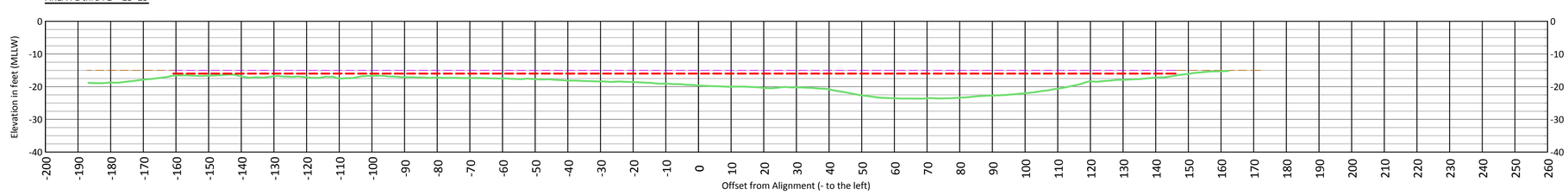
AREA F1 thru F2 - 25+75



AREA F1 thru F2 - 25+50



AREA F1 thru F2 - 25+25



US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: PRIME CONTRACTOR
Approved: RESIDENT ENGINEER
Date:

Sym	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: SWRDC-C03-329_w_ip_def_rdxd_layout
Drawing #: 3-SEW-01-02

0008

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: — — —
Submitted: A. Churchill
Chief: — — — Branch: "CEPOA-CN-CO"

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

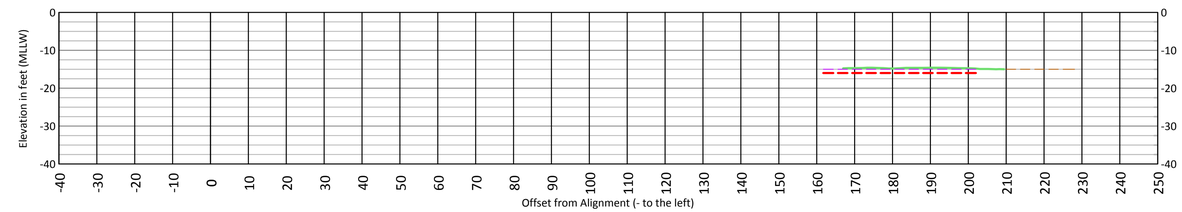
Reference number:
C-329
Sheet 33 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

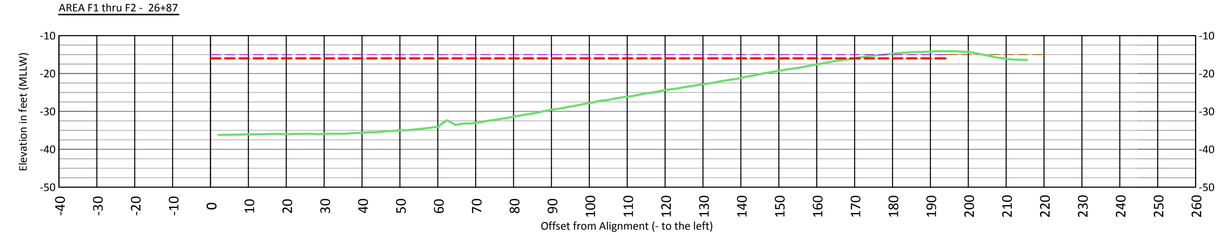
CROSS SECTION LEGEND

- PROJECT DEPTH
- MAX PAY
- SLOUGH ALLOWANCE MAX
- PRE DREDGE

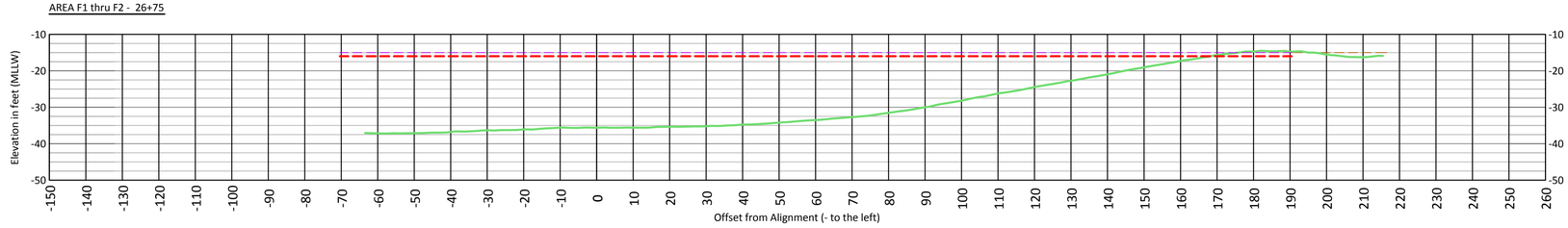
AREA F1 thru F2 - 27+14



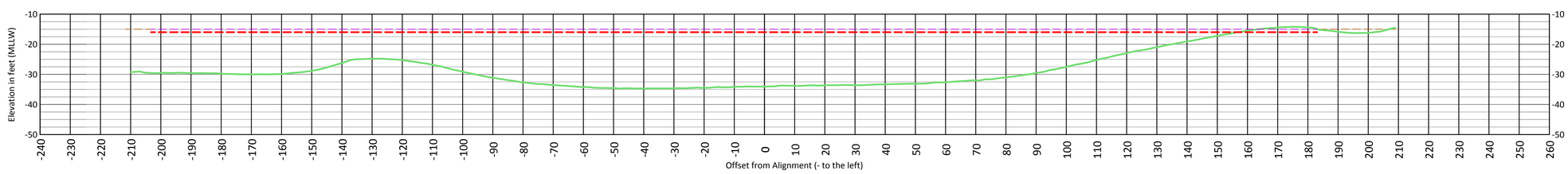
AREA F1 thru F2 - 26+87



AREA F1 thru F2 - 26+75



AREA F1 thru F2 - 26+50



US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: PRIME CONTRACTOR
Approved: RESIDENT ENGINEER
Date:

Sym.	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: S:\WCC-SEWARD\Dredging\Support\Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg
Drawing #: 3-SEW-01-02

0008

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

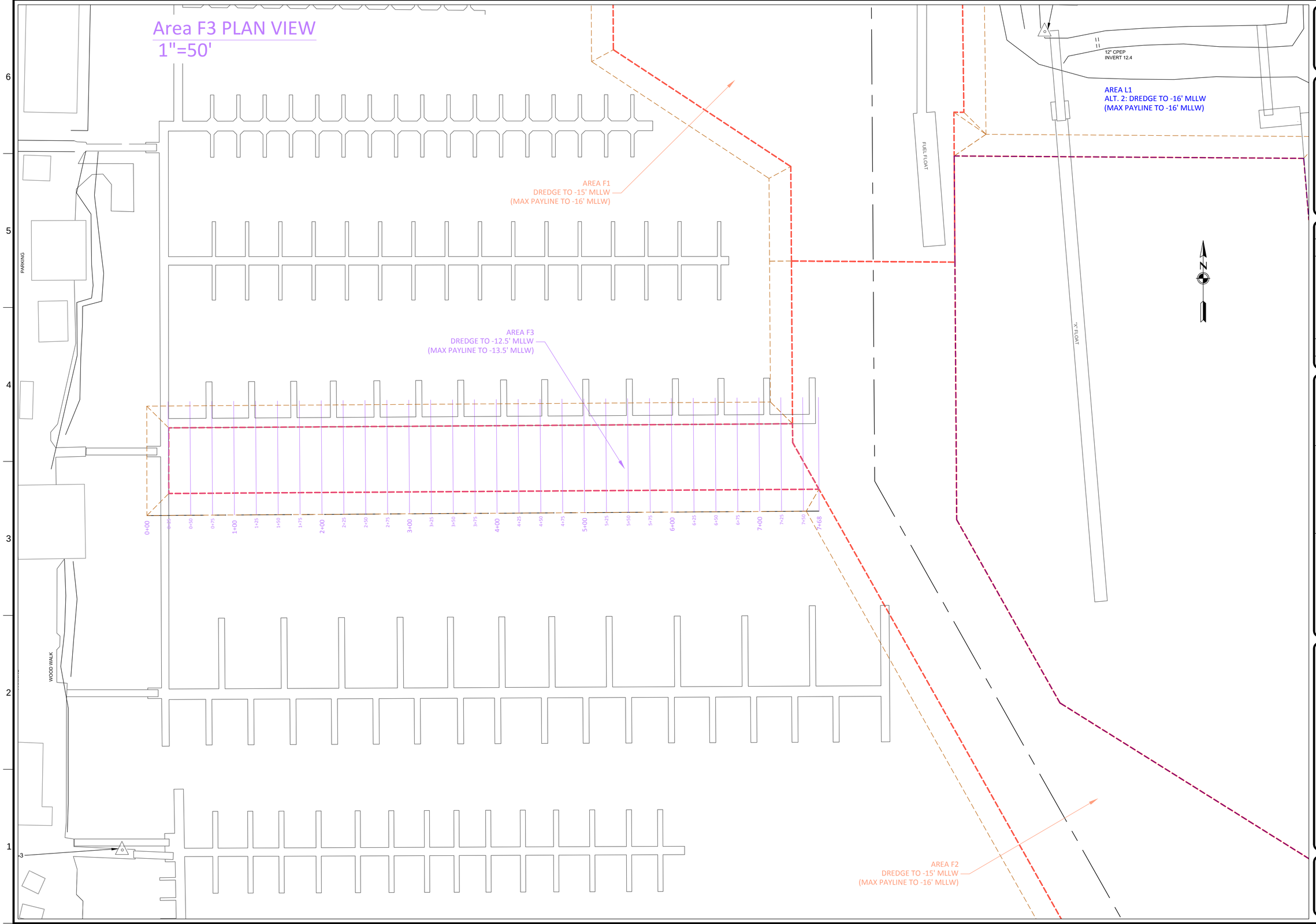
Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: Engineering: ZK/DR/AH
Submitted: A. Churchill
Chief: Branch: CE/KA/CN/CO

CWIDT TASK ORDER

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

Reference number:
C-330
Sheet 34 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----



US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: Approved: Date:
PRIME CONTRACTOR RESIDENT ENGINEER

Sym	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: 2012\C-331\S_W_D_MT_H0001_Sheet1
Drawing #: 3-SEW-01-02
0008

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: – – – – – – – –
Submitted: A. Churchill
Chief: – – – – – – – –
Branch: – – – – – – – –

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

Reference number:
C-331
Sheet 35 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----

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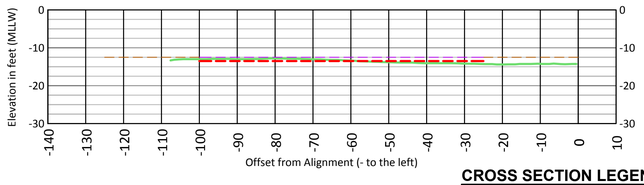
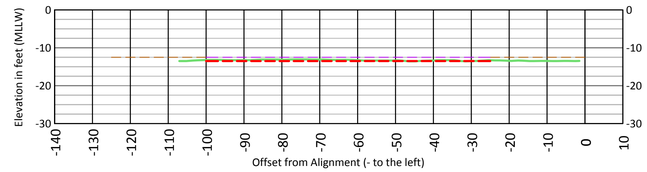
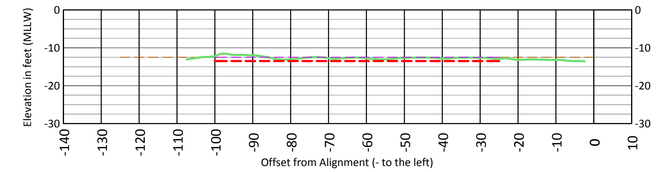
AREA F3 - 4+50



AREA F3 - 3+00



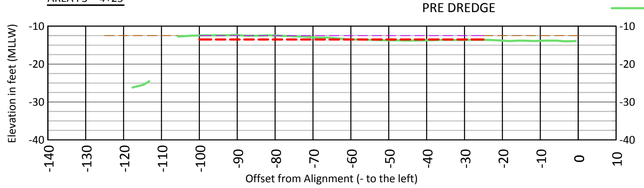
AREA F3 - 1+50



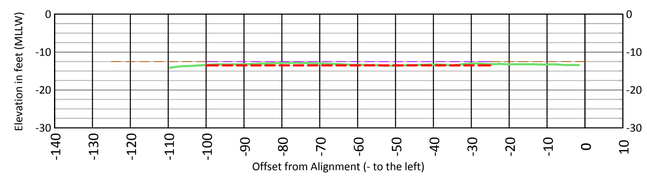
CROSS SECTION LEGEND

- PROJECT DEPTH
- MAX PAY
- SLOUGH ALLOWANCE MAX
- PRE DREDGE

AREA F3 - 4+25



AREA F3 - 2+75



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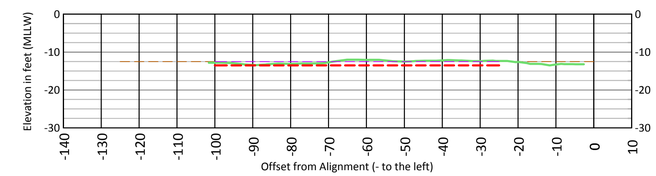

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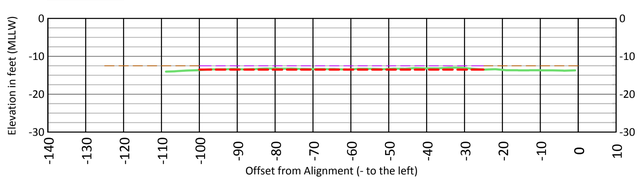

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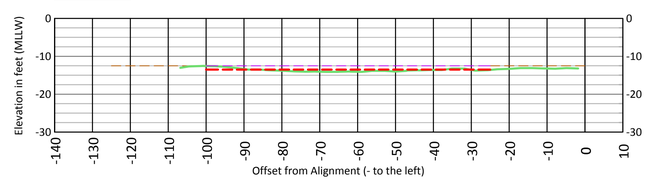
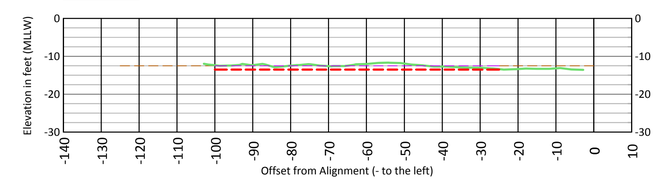
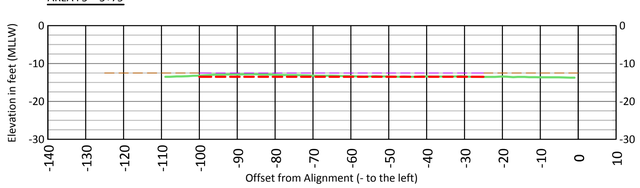


AREA F3 - 1+00



AREA F3 - 3+75



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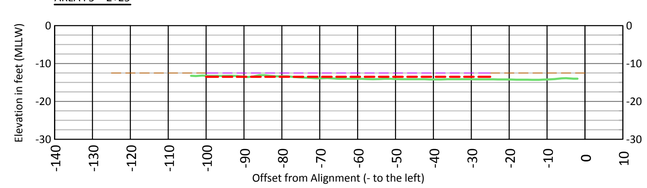
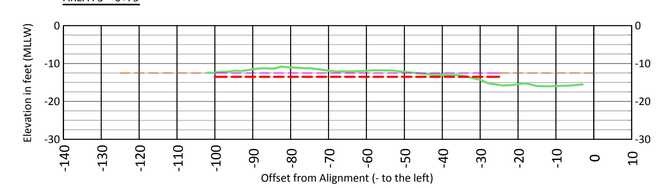
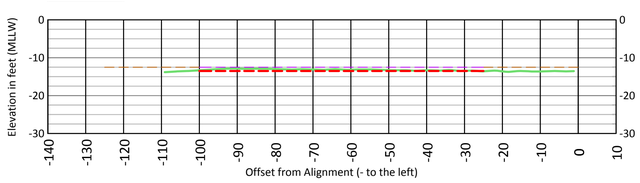


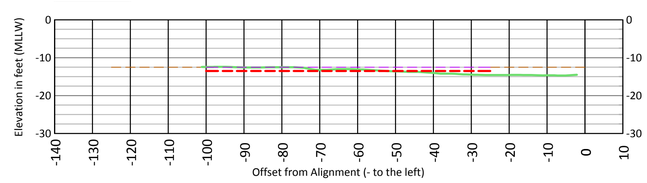
AREA F3 - 0+75



AREA F3 - 3+50



AREA F3 - 2+00



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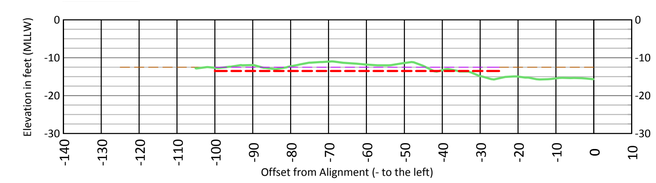

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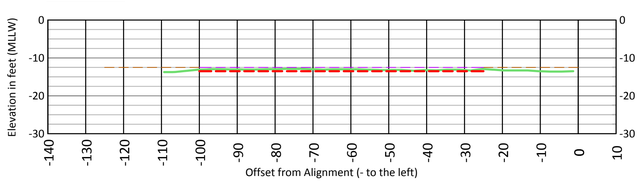
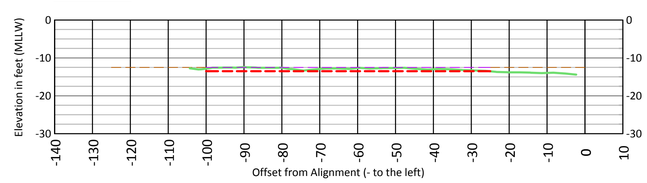
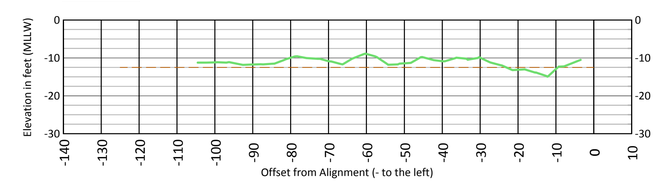


AREA F3 - 1+75



AREA F3 - 0+25



US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: Approved:
PRIME CONTRACTOR RESIDENT ENGINEER Date:

Sym	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: 2012-048_WCC_SEW015G-BSxxxx.dwg
Drawing #: 3-SEW-01-02

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: ---
Submitted: A. Churchill
Chief: --- Branch: CEPOA-EC-CD

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

0008

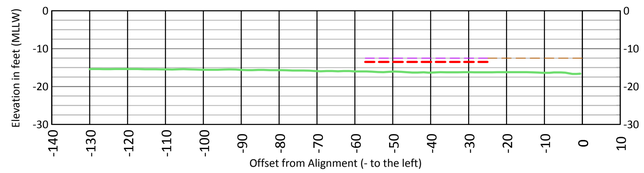
SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

Reference number:
C-332
Sheet 36 of 37

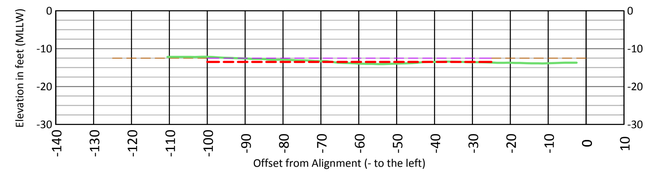
CROSS SECTION LEGEND

- PROJECT DEPTH
- MAX PAY
- SLOUGH ALLOWANCE MAX
- PRE DREDGE

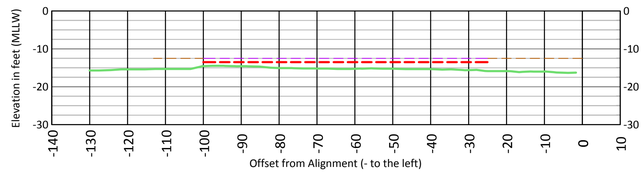
AREA F3 - 7+50



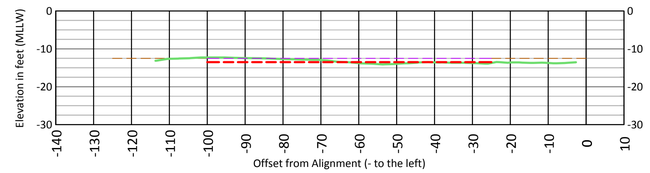
AREA F3 - 6+00



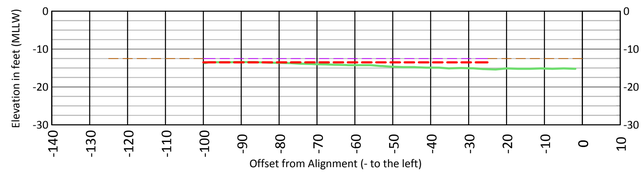
AREA F3 - 7+25



AREA F3 - 5+75



AREA F3 - 7+00



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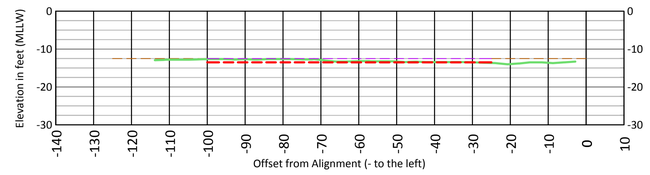
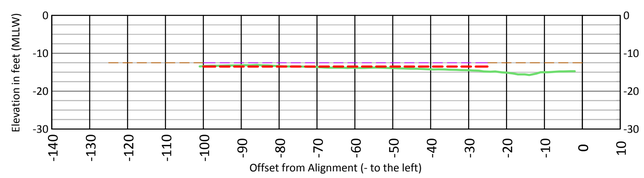
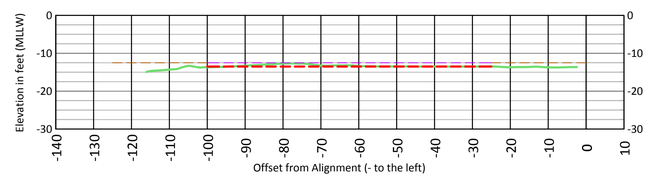


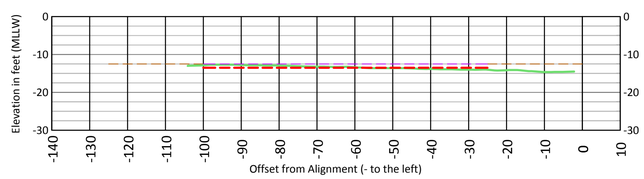
AREA F3 - 6+75



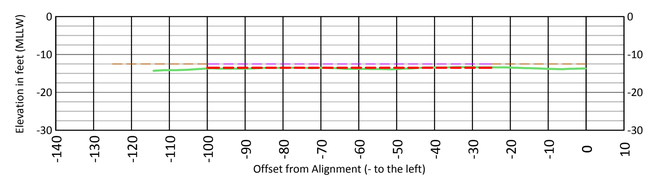
AREA F3 - 5+25



AREA F3 - 6+50

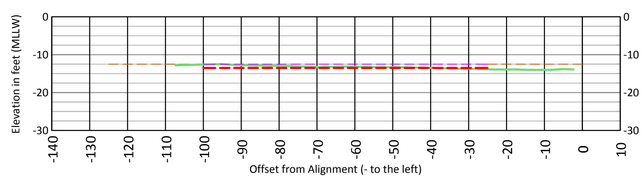


AREA F3 - 5+00

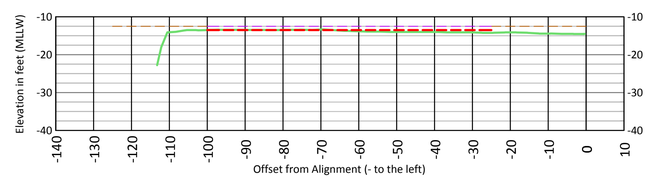


AREA F3 - 7+68

AREA F3 - 6+25



AREA F3 - 4+75



US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-07-D-0016
CONTRACTOR WEST CONSTRUCTION CO.
CITY ANCHORAGE STATE AK
Recommended: Approved:
PRIME CONTRACTOR RESIDENT ENGINEER Date:

Sym.	Action	Description	Date	Appvd

Date: OCTOBER 26, 2012
Dwg Scale: 1"=20' H/V
Plot Scale: 1:1
File: 2012-048-C-333.dwg
Drawing #: 3-SEW-01-02
0008

Designed: A.C.J.
Drawn: L.E.P./K.N.B.
Reviewed: D. Hardy
Chief: D. Hardy
Submitted: A. Churchill
Chief: Branch: CEPOA-EC-CD

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CWIDT TASK ORDER

SEWARD, ALASKA
MAINTENANCE DREDGING
CIVIL
PRE-DREDGE CROSS SECTION
SEPTEMBER 16-17, 2012

Reference number:
C-333
Sheet 37 of 37

Drawing W:\PALMER\2012-048_WCC_Seward_Dredging_Support_Surveys\02_Office_Work\06_Drawings\working\SEW015G-BSxxxx.dwg last saved on 9/17/2012 12:55 PM was plotted by Kyle Braun on ----