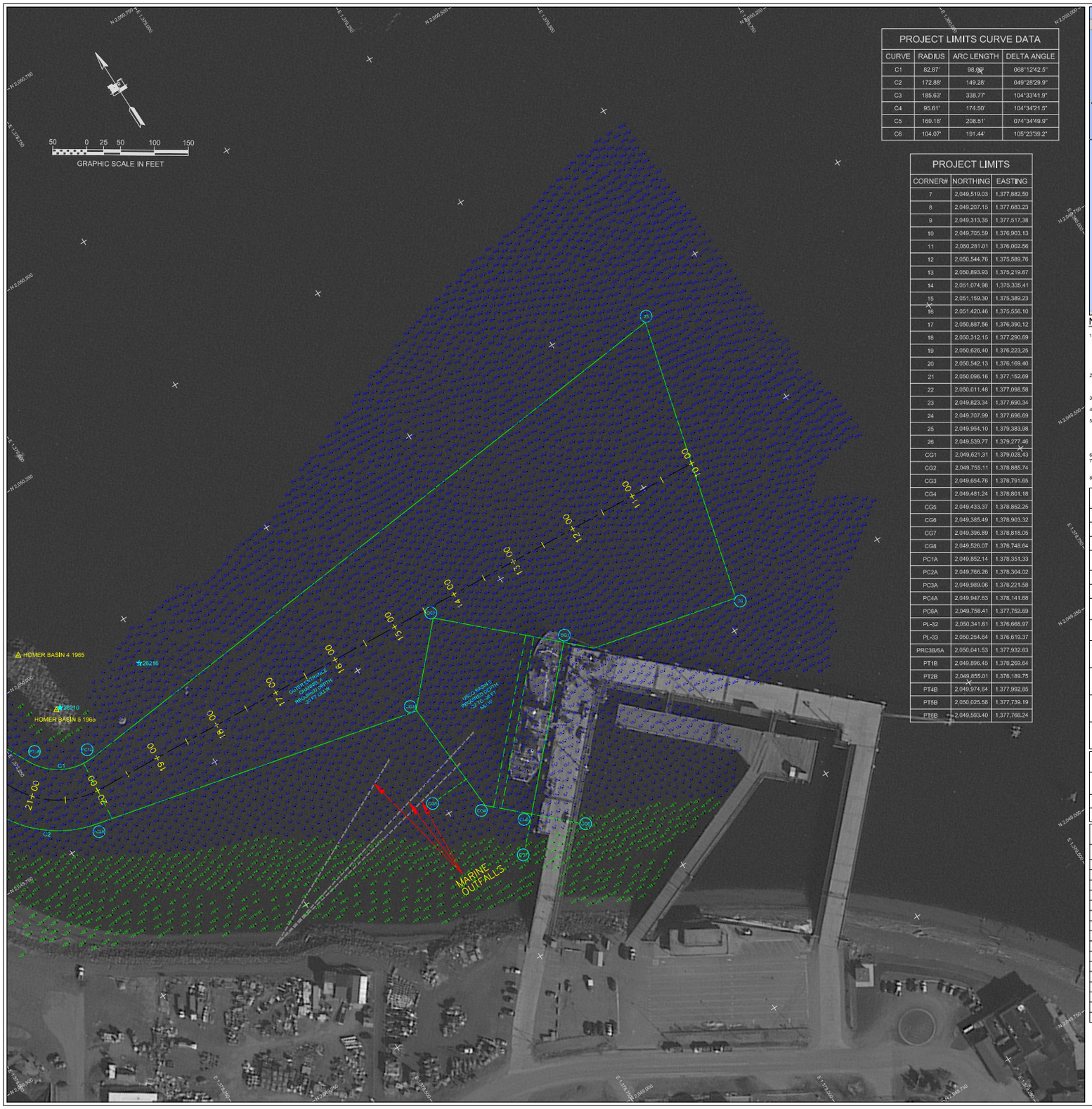
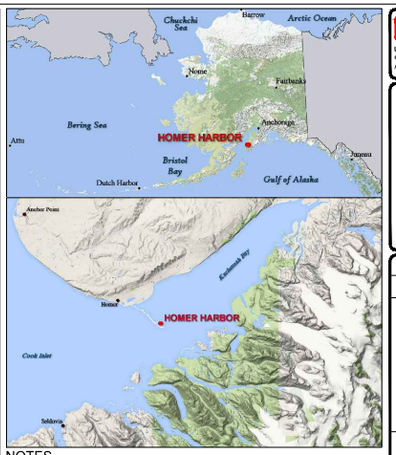



## PROJECT LIMITS CURVE DATA

| CURVE | RADIUS | ARC LENGTH | DELTA ANGLE |
|---|---|---|---|
| C1 | 82.87' | 98.00' | 068°12'42.5" |
| C2 | 172.88' | 149.28' | 049°28'29.9" |
| C3 | 185.63' | 338.77' | 104°33'41.9" |
| C4 | 95.61' | 174.50' | 104°34'21.5" |
| C5 | 160.18' | 208.51' | 074°34'49.9" |
| C6 | 104.07' | 191.44' | 105°23'39.2" |

## PROJECT LIMITS

| CORNER# | NORTHING | EASTING |
|---|---|---|
| 7 | 2,049,519.03 | 1,377,882.50 |
| 8 | 2,049,207.15 | 1,377,683.23 |
| 9 | 2,049,313.35 | 1,377,517.38 |
| 10 | 2,049,705.59 | 1,376,903.13 |
| 11 | 2,050,281.01 | 1,376,002.56 |
| 12 | 2,050,544.76 | 1,375,589.76 |
| 13 | 2,050,893.93 | 1,375,219.87 |
| 14 | 2,051,074.96 | 1,375,335.41 |
| 15 | 2,051,159.30 | 1,375,389.23 |
| 16 | 2,051,420.46 | 1,375,556.10 |
| 17 | 2,050,887.56 | 1,376,390.12 |
| 18 | 2,050,312.15 | 1,377,290.69 |
| 19 | 2,050,626.40 | 1,376,223.25 |
| 20 | 2,050,542.13 | 1,376,169.40 |
| 21 | 2,050,096.16 | 1,377,152.69 |
| 22 | 2,050,011.48 | 1,377,098.58 |
| 23 | 2,049,823.34 | 1,377,690.34 |
| 24 | 2,049,707.99 | 1,377,696.69 |
| 25 | 2,049,954.10 | 1,379,383.98 |
| 26 | 2,049,539.77 | 1,379,277.46 |
| CG1 | 2,049,621.31 | 1,379,028.43 |
| CG2 | 2,049,755.11 | 1,378,885.74 |
| CG3 | 2,049,654.76 | 1,378,791.65 |
| CG4 | 2,049,481.24 | 1,378,801.18 |
| CG5 | 2,049,433.37 | 1,378,852.25 |
| CG6 | 2,049,385.49 | 1,378,903.32 |
| CG7 | 2,049,396.89 | 1,378,818.05 |
| CG8 | 2,049,526.07 | 1,378,748.64 |
| PC1A | 2,049,852.14 | 1,378,351.33 |
| PC2A | 2,049,766.26 | 1,378,304.02 |
| PC3A | 2,049,989.06 | 1,378,221.58 |
| PC4A | 2,049,947.63 | 1,378,141.68 |
| PC6A | 2,049,758.41 | 1,377,752.69 |
| PL-32 | 2,050,341.61 | 1,376,668.97 |
| PL-33 | 2,050,254.64 | 1,376,619.37 |
| PRC3B/5A | 2,050,041.53 | 1,377,932.63 |
| PT1B | 2,049,896.45 | 1,378,269.64 |
| PT2B | 2,049,855.01 | 1,378,189.75 |
| PT4B | 2,049,974.84 | 1,377,992.85 |
| PT5B | 2,050,025.58 | 1,377,739.19 |
| PT6B | 2,049,593.40 | 1,377,766.24 |




## NOTES

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2. VERTICAL CONTROL IS MEAN LOWER LOW WATER (MLLW=0.0'), BASED ON THE NOAA/NOS TIDAL BENCH MARK LIST FOR STATION "945 5567, HOMER, ALASKA" PUBLISHED 08/11/2003. THIS TIDAL DATUM IS BASED ON THE 1983-2001 TIDAL EPOCH AND IS REFERENCED BY HOLDING SBC "BL-2-A" AS 32.49'.
3. SOUNDINGS ARE IN FEET AND ARE NEGATIVE UNLESS OTHERWISE INDICATED.
4. THIS DRAWING IS INDICATIVE OF CONDITIONS AT THE TIME OF SURVEY.
5. BATHYMETRY WAS COLLECTED SEPTEMBER 12, 2015. SOUNDINGS WERE COLLECTED USING A "R2SONIC 2022" MULTIBEAM SOUNDER AT 120°. SOUND VELOCITY THROUGH THE WATER COLUMN WAS DETERMINED WITH AN ODOM DIGIBAR PRO SOUND VELOCITY PROBE. POSITIONING AND VESSEL ATTITUDE WERE MEASURED USING AN "APPLANIX POS MV" SYSTEM. RTK CORRECTIONS WERE BROADCAST FROM A LOCAL BASE STATION OCCUPYING HOMER "BL-2-A". DATA WAS COLLECTED AND FIELD PROCESSED USING "HYPACK 2015" SOFTWARE. TIDE ELEVATIONS WERE MEASURED USING A "TRIMBLE R8 RTK" SYSTEM.
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8. MAP SOUNDINGS ARE SORTED AT 12 FEET FROM A 1 FOOT CELL CENTER, SHOAL BIASED BIN. VOLUME SOUNDINGS ARE BINNED AT 3 FEET AND ARE ACTUAL XY LOCATION WHERE POSSIBLE, AVERAGE VALUES.

## SURVEY CONTROL DATA

| STATION | NORTHING | EASTING | MLLW | DESCRIPTION |
|---|---|---|---|---|
| AUDREY | 2,051,507.88 | 1,375,406.60 | 33.31 | 1-1/2 IN ALUMINUM CAP (FOUND) |
| BL-2-A 1989 | 2,049,793.81 | 1,378,015.52 | 32.49 | USACE SBC (FOUND) |
| BM NO 6 1965 | | | 27.28 | USC&GC SBC (NOT FOUND) |
| BOLL 1996 | 2,050,682.88 | 1,375,195.75 | 35.48 | 3-1/4 IN FLAT BRASS CAP (FOUND) |
| C 103 1965 | | | 26.95 | USC&GC SBC (NOT FOUND) |
| HB-08 2009 | 2,050,150.78 | 1,377,830.73 | 31.92 | 3-1/4 IN DOMED ALUMINUM CAP (FOUND) |
| HB-09 2009 | 2,051,199.61 | 1,375,120.24 | 32.01 | 3-1/4 IN DOMED ALUMINUM CAP (FOUND) |
| HOMER BASIN 4 1965 | 2,050,038.11 | 1,378,340.09 | 31.28 | USACE SBC (NOT SEARCH) |
| HOMER BASIN 5 1965 | 2,049,940.32 | 1,378,344.30 | 30.87 | USACE SBC (FOUND, NOT GPS SUITABLE) |
| HOMER BASIN 6 1965 | 2,049,887.28 | 1,378,073.96 | 31.21 | USACE SBC (FOUND) |
| HOMER BASIN 7 1965 | 2,049,712.22 | 1,377,964.36 | 31.46 | USACE SBC (FOUND) |

## NAVIGATION AIDS

| USCG NO. | NORTHING | EASTING | DESCRIPTION |
|---|---|---|---|
| 26210 | 2,049,940 | 1,378,351 | HOMER BREAKWATER LIGHT 2 |
| 26216 | 2,049,932 | 1,378,484 | SOUTH LIGHTED MOORING BUOY |

## VOLUME COMPUTATIONS

| AREA A: OUTER ENTRANCE CHANNEL | MLLW (FT) | CU. YD. |
|---|---|---|
| REMOVED TO DREDGE DEPTH (DD) | -20.0 | 44 |
| REMOVED BETWEEN DD AND MAX PAY DEPTH (MP) | -21.0 | 51 |
| REMOVED SIDE SLOPES (SS) AT 3:1 (H:V) & 25' WIDE | VARIES | 128 |
| AREA B: USCG BASIN AREA | | |
| REMOVED TO DD | -22 TO -26 | 142 |
| REMOVED BETWEEN DD AND MP | -23 TO -27 | 2 |
| REMOVED SS | VARIES | 1043 |
| AREA C: INNER CHANNEL AREA | | |
| REMOVED TO DD | -20.0 | 303 |
| REMOVED BETWEEN DD AND MP | -21.0 | 58 |
| REMOVED SS | VARIES | 1081 |
| AREA D: MANEUVERING AREA (NOT DREDGED) | | |
| AREA E: MANEUVERING AREA (NOT DREDGED) | | |
| AREA F: MANEUVERING AREA (NOT DREDGED) | | |
| TOTAL MAXIMUM VOLUME REMOVED (MP + SS) | | 2,852 |
| DREDGED AREA OVERDREDGE (AREA A,B,&C) | -20 TO -26 | 311 |

US Army Corps of Engineers - ALASKA DISTRICT

CONTRACT NO. W912EP-15-C-0005
CONTRACTOR: ALASKA MARINE EXPLORATION
CITY: ANCHORAGE
STATE: ALASKA
REQUIRED BY: PRE CONSTRUCTION
REVISED: POST CONSTRUCTION
DATE:

| REVISION | DATE | DESCRIPTION | BY | APVD | REVISION | DATE | DESCRIPTION | BY | APVD |
|---|---|---|---|---|---|---|---|---|---|

U.S. ARMY CORPS OF ENGINEERS
ALASKA DISTRICT
CEPOA-EP-C
JBER, ALASKA 99506-0898

HUGHES & ASSOCIATES
3070 CUTTLE LOOP
WASILLA, ALASKA

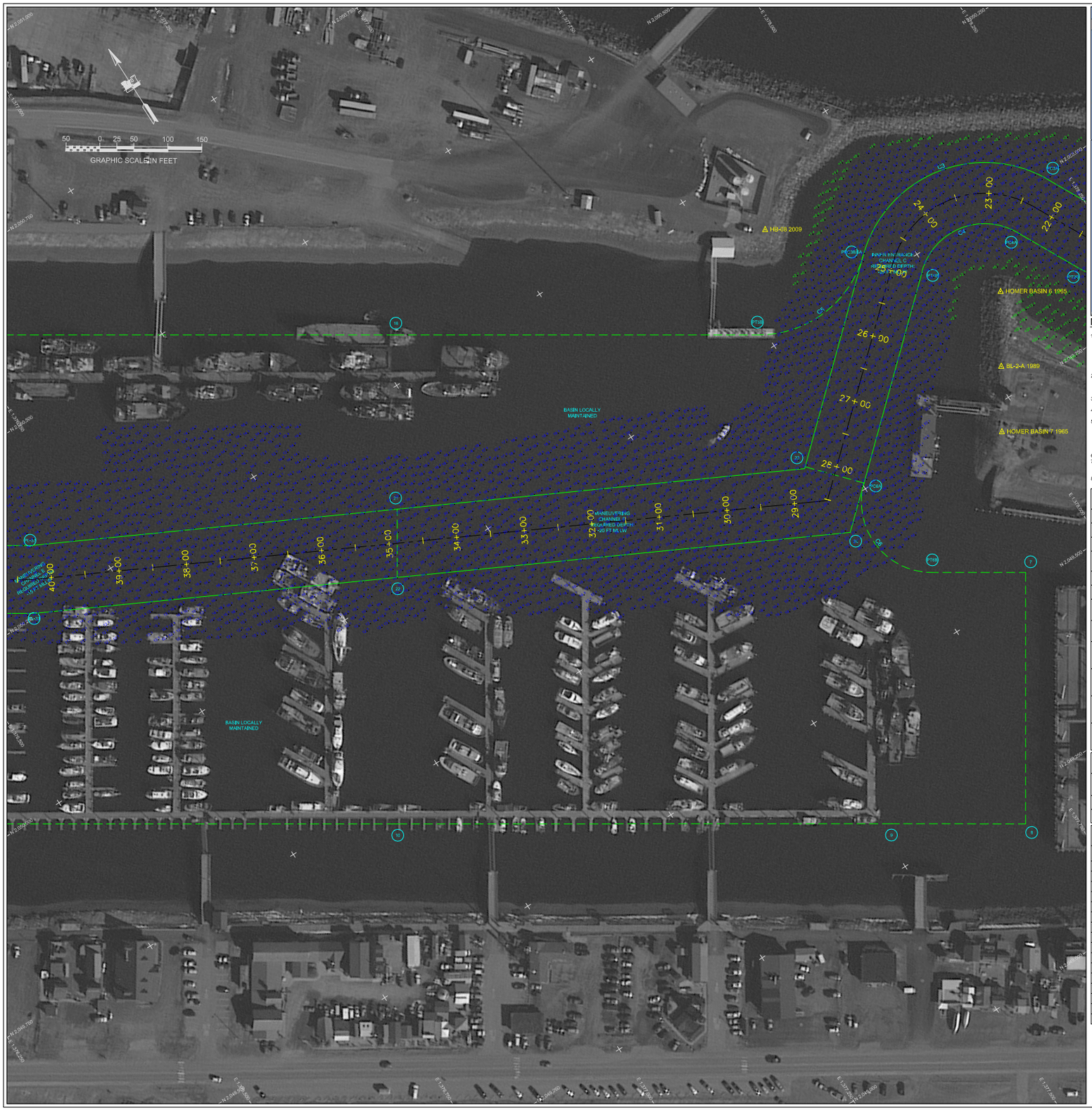
SURVEY DATE: September 2015
DRAWN BY: LAPCHIN
CHECKED BY: CHR
APPROVED BY: Andrew Sam
S.A.D. NO. 3.1.10
PLOT DATE: 12/4/2015
PLOT NAME: 2015-HOMER-PRE-DREDGE_FINAL.DWG

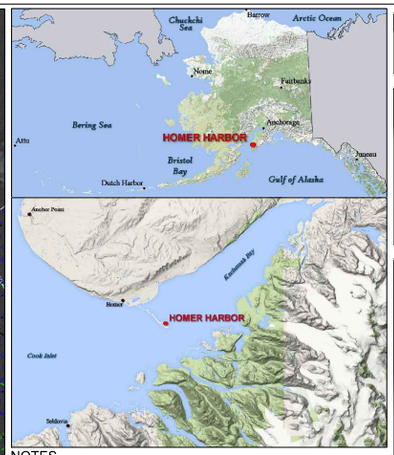
# HOMER, ALASKA
# HOMER HARBOR
# POST DREDGE SURVEY
# SEPTEMBER 12, 2015

SHEET IDENTIFICATION

V-101

Sheet 1 of 3




## NOTES

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## SURVEY CONTROL DATA

| STATION | NORTHING | EASTING | MLLW | DESCRIPTION |
|---|---|---|---|---|
| AUDREY | 2,051,507.88 | 1,375,406.60 | 33.31 | 1-1/2 IN ALUMINUM CAP (FOUND) |
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| BM NO 6 1965 | | | 27.28 | USC&GC SBC (NOT FOUND) |
| BOLL 1996 | 2,050,682.88 | 1,375,195.75 | 35.48 | 3-1/4 IN FLAT BRASS CAP (FOUND) |
| C 103 1965 | | | 26.95 | USC&GC SBC (NOT FOUND) |
| HB-08 2009 | 2,050,150.78 | 1,377,830.73 | 31.92 | 3-1/4 IN DOMED ALUMINUM CAP (FOUND) |
| HB-09 2009 | 2,051,199.61 | 1,375,120.24 | 32.01 | 3-1/4 IN DOMED ALUMINUM CAP (FOUND) |
| HOMER BASIN 4 1965 | 2,050,038.11 | 1,378,340.09 | 31.28 | USACE SBC (NOT SEARCH) |
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| HOMER BASIN 6 1965 | 2,049,887.28 | 1,378,073.96 | 31.21 | USACE SBC (FOUND) |
| HOMER BASIN 7 1965 | 2,049,712.22 | 1,377,964.36 | 31.46 | USACE SBC (FOUND) |

## NAVIGATION AIDS

| USCG NO. | NORTHING | EASTING | DESCRIPTION |
|---|---|---|---|
| 26210 | 2,049,940 | 1,378,351 | HOMER BREAKWATER LIGHT 2 |
| 26216 | 2,049,932 | 1,378,484 | SOUTH LIGHTED MOORING BUOY |

## VOLUME COMPUTATIONS

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| REMOVED BETWEEN DD AND MAX PAY DEPTH (MP) | -21.0 | 51 |
| REMOVED SIDE SLOPES (SS) AT 3:1 (H:V) & 25' WIDE | VARIES | 128 |
| AREA B: USCG BASIN AREA | | |
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| REMOVED BETWEEN DD AND MP | -23 TO -27 | 2 |
| REMOVED SS | VARIES | 1043 |
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| REMOVED TO DD | -20.0 | 303 |
| REMOVED BETWEEN DD AND MP | -21.0 | 58 |
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| TOTAL MAXIMUM VOLUME REMOVED (MP + SS) | | 2,852 |
| DREDGED AREA OVERDREDGE (AREA A,B,&C) | -20 TO -26 | 311 |

US Army Corps of Engineers - ALASKA DISTRICT

CONTRACT NO. W912DQ-13-C-0005
CONTRACTOR: ALASKA MARINE EXPLORATION
CITY: #ACKNOWLEDGMENT
STATE: ALASKA
REQUIREMENT: TIDE CONTROL SURVEY
APPROVED: TIDE CONTROL SURVEY
DATE:

| REVISION | DATE | DESCRIPTION | BY | APVD | REVISION | DATE | DESCRIPTION | BY | APVD |
|---|---|---|---|---|---|---|---|---|---|

U.S. ARMY CORPS OF ENGINEERS
ALASKA DISTRICT
CONTRACT NO.
JBER, ALASKA 99506-0898

HUGHES & ASSOCIATES
2070 CUTTLE LOOP
WASILLA, ALASKA

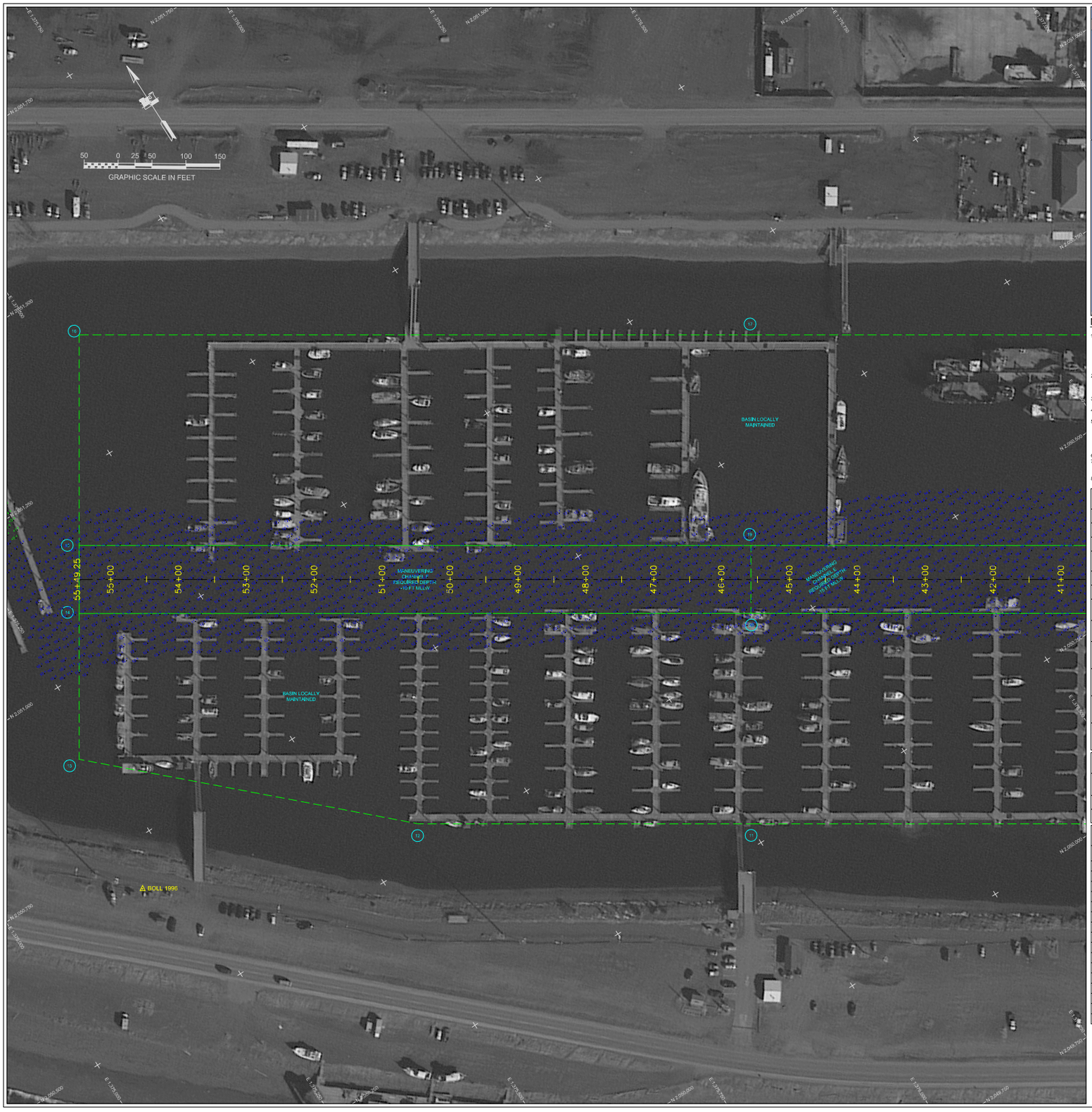
DATE/TIME: 09/15/2015 10:00 AM
DRAWN BY: LAYCO
CHECKED BY: LAYCO
APPROVED BY: CONTRACT NO. W912DQ-13-C-0005
PLOT DATE: 9/14/2015
PLOT NAME: 2015-09-15 HOMER TIDE CONTROL SURVEY.DWG
SCALE: 1" = 50'
SHEET: 2 OF 3

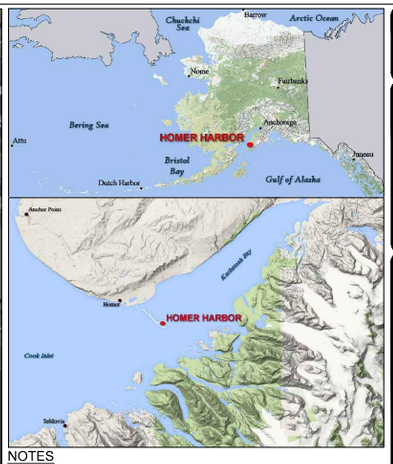
# HOMER, ALASKA
# HOMER HARBOR
# POST DREDGE SURVEY
# SEPTEMBER 12, 2015

SHEET IDENTIFICATION

V-102

Sheet 2 of 3

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## SURVEY CONTROL DATA

| STATION | NORTHING | EASTING | MLLW | DESCRIPTION |
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| HOMER BASIN 6 1965 | 2,049,887.28 | 1,378,073.96 | 31.21 | USACE SBC (FOUND) |
| HOMER BASIN 7 1965 | 2,049,712.22 | 1,377,964.36 | 31.46 | USACE SBC (FOUND) |

## NAVIGATION AIDS

| USCG NO. | NORTHING | EASTING | DESCRIPTION |
|---|---|---|---|
| 26210 | 2,049.940 | 1,378,351 | HOMER BREAKWATER LIGHT 2 |
| 26216 | 2,049.932 | 1,378,484 | SOUTH LIGHTED MOORING BUOY |

## VOLUME COMPUTATIONS

| AREA A: OUTER ENTRANCE CHANNEL | MLLW (FT) | CU. YD. |
|---|---|---|
| REMOVED TO DREDGE DEPTH (DD) | -20.0 | 44 |
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| REMOVED SIDE SLOPES (SS) AT 3:1 (H:V) & 25' WIDE | VARIES | 128 |
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US Army Corps of Engineers - ALASKA DISTRICT

CONTRACT NO. W912DQ-13-C-0005
CONTRACTOR ALASKA MARINE EXPLORATION
CITY #5000FT-PORT
DEPARTMENT
STATE ALASKA
APPROVED
TITLE
PRE CONSTRUCTION SURVEY

| REVISIONS | | | | | | | |
|---|---|---|---|---|---|---|---|
| DESCRIPTION | BY | APVD | DATE | DESCRIPTION | BY | APVD | DATE |

U.S. ARMY CORPS OF ENGINEERS
ALASKA DISTRICT
JBER, AK 99506-0898

HUGHES & ASSOCIATES
3070 COTTLE LOOP
WASILLA, ALASKA

DATUM: NAD83 US Survey feet
DRAWN BY: LRCB
CHECKED BY: LRCB
APPROVED BY: CONTRACT NO. W912DQ-13-C-0005
SCALE: 1:1000 (Plot scale is 1:1000)
PLOT DATE: 12/4/2015
PLOT NAME: 2015-0401-PORT DREDGE FINAL.DWG

# HOMER, ALASKA
# HOMER HARBOR
# POST DREDGE SURVEY
# SEPTEMBER 12, 2015

SHEET IDENTIFICATION

V-103

Sheet 3 of 3