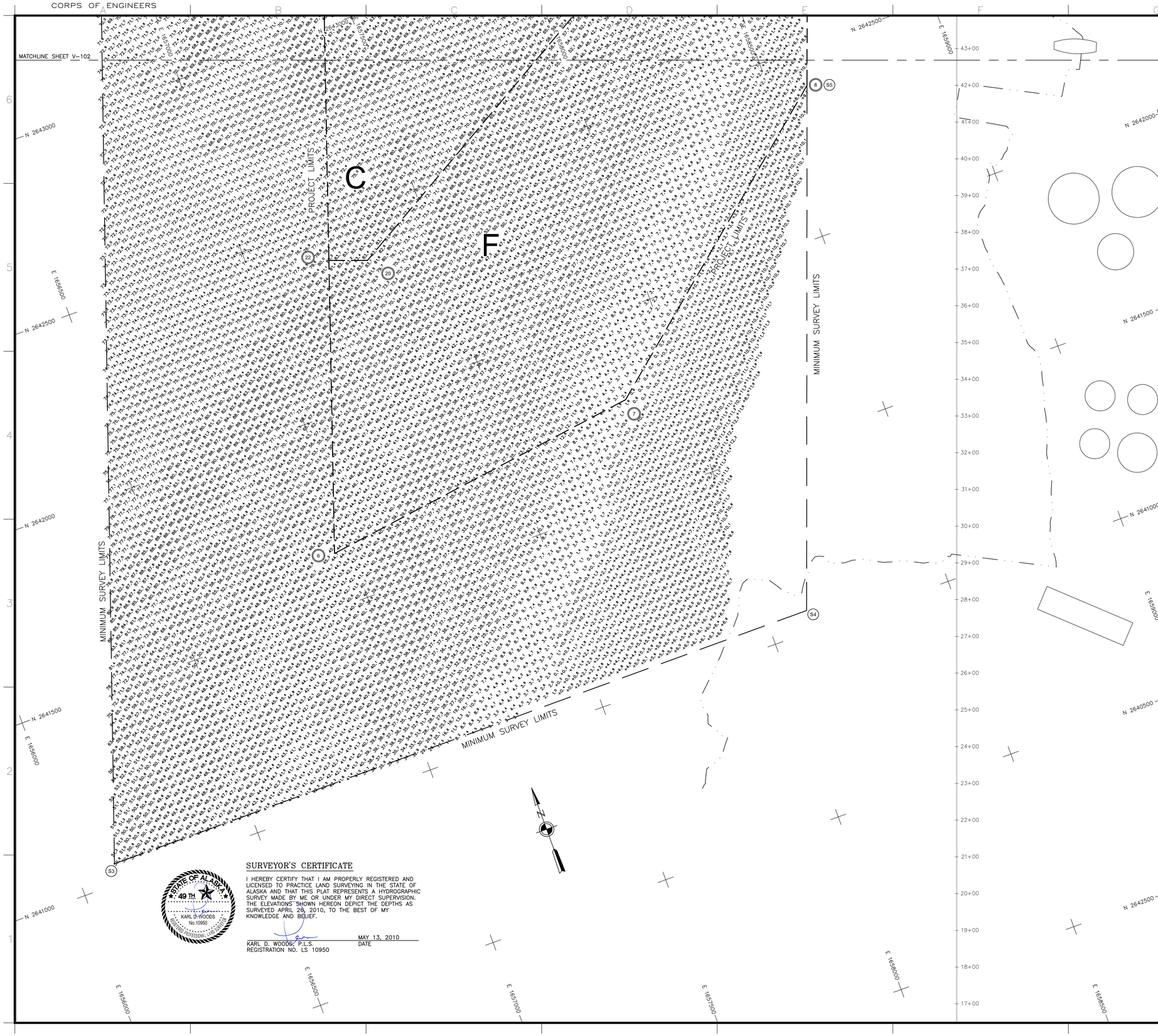
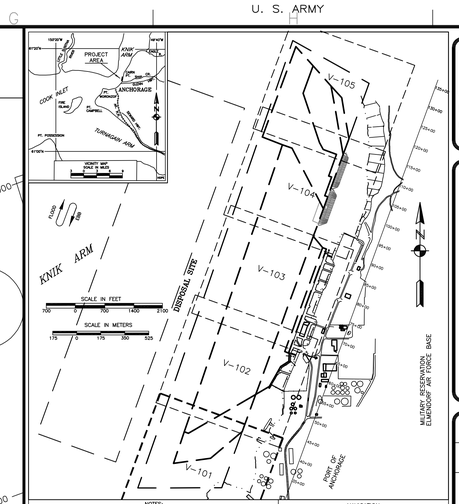
CORPS OF ENGINEERS

U. S. ARMY





NOTES:

1. THIS LOCALITY IS SHOWN ON USC & GS CHARTS NO. 16664, 16660, 16013 AND 550.
2. DEPTHS ARE IN FEET REFERENCED TO MEAN LOWER LOW WATER (MLLW=0.0').

NAVIGATION

ANCHORAGE HARBOR ALASKA

REVISED 2009

NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD 83, IN US SURVEY FEET, HOLDING USACE SBC "N END 1978" AS N 2,646,652.19', E 1,660,582.43' AND USACE SBC "S END 1978" AS N 2,644,298.25', E 1,659,725.47'.
2. VERTICAL CONTROL IS IN FEET, REFERRING TO MEAN LOWER LOW WATER (MLLW=0.0), BASED ON NOAA/NOS 1983–2001 TIDAL EPOCH BENCH MARK LIST, "9455920 ANCHORAGE, KNIK ARM, COOK INLET, ALASKA" PUBLISHED 4/21/2003, HOLDING USCGS SBC "TIDAL 16 1966" AS 40.53', USCGS SBC "B 75 1964" AS 36.82'.
3. THIS SURVEY WAS PERFORMED BY TERRASOND, LTD. ON APRIL 26, 2010. SOUNDINGS WERE COLLECTED USING A RESON SEABAT 7101 MULTIBEAM ECHOSOUNDER WITH A 240kHz, 150–DEGREE SWATH–WIDTH TRANSDUCER (511 BEAMS). BEAM STEERING WAS ACCOMPLISHED USING AN APPLIED MICROSYSTEMS LABORATORIES (AML) SMART–PROBE, SOUND VELOCITY PROFILER LOCATED AT THE SONAR HEAD. SOUND VELOCITY THROUGH THE WATER COLUMN WAS MEASURED AND APPLIED USING AN ODOM DIGI–BAR PRO SOUND VELOCITY PROFILER DEPLOYED DURING THE SURVEY. VESSEL ATTITUDE, HEADING, POSITIONING AND REAL–TIME TIDES WERE PROVIDED USING A CODA OCTOPUS F185 INERTIAL MOTION UNIT OPERATING ON KINEMATIC GPS CORRECTIONS BROADCAST FROM A TRIMBLE NET–RS GPS RECEIVER SET AT CONTROL STATION, "TERRA–10 2008", LOCATED ATOP THE PORT OFFICE BUILDING. REAL–TIME–KINEMATIC HEIGHT VALUES WERE CALIBRATED TO DIRECT MANUAL TIDE OBSERVATIONS HOLDING USCGS SBC "TIDAL 16 1966", LOCATED AT NOAA/NOS TIDE STATION "9455920" AT THE PORT OF ANCHORAGE. SURVEY NAVIGATION AND DATA COLLECTION WERE PERFORMED USING HYPACK "HYSWEEP 2010" INTEGRATED SOFTWARE (V2010). DATA PROCESSING WAS PERFORMED USING CARIS HIPS SOFTWARE (V7.0).
4. SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
5. THIS SURVEY IS INDICATIVE OF GENERAL CONDITIONS ON THE DATES OF SURVEY.
6. THERE WERE NO NEW MONUMENTS ESTABLISHED DURING THIS SURVEY.
7. SEE SHEET 6 OF 6 FOR VOLUME COMPUTATION TABLE.

MINIMUM SURVEY LIMITS

CORNER	NORTHING	EASTING
S1	2,650,729.24	1,661,635.08
S2	2,651,749.00	1,659,812.00
S3	2,641,054.00	1,656,105.00
S4	2,641,057.43	1,658,111.18
S5	2,642,400.31	1,658,601.12
S6	2,643,288.83	1,658,924.76
S7	2,643,482.52	1,659,251.58
S8	2,643,954.33	1,659,521.86
S9	2,644,084.66	1,659,718.78
S10	2,644,273.75	1,659,727.11
S11	2,644,280.74	1,659,707.85
S12	2,646,765.84	1,660,612.59
S13	2,646,800.54	1,660,524.08
S14	2,647,069.90	1,660,302.09
S15	2,647,729.40	1,660,542.33

NOTES:

1. SURVEY LIMIT ALONG THE DOCK IS 5 FT OFF THE FINISHED DOCK FACE.
2. THE SURVEY LIMIT IS THE MINIMUM AREA OF SURVEY COVERAGE.
3. SURVEY LIMIT WILL CHANGE AS PORT EXPANSION PROGRESSES FOR THE NORTH AND SOUTH REPLACEMENT ALONG THE NEW DOCK FACE.

PROJECT AREA LIMITS

CORNER	NORTHING	EASTING
1	2,649,026.93	1,661,014.98
2	2,649,402.77	1,661,151.89
3	2,650,385.00	1,660,978.96
4	2,650,663.76	1,660,726.81
5	2,651,607.70	1,659,883.00
6	2,641,642.87	1,656,956.67
7	2,641,765.13	1,657,844.43
8	2,642,400.31	1,658,601.12
9	2,643,288.83	1,658,924.76
10	2,643,482.52	1,659,251.58
11	2,643,954.33	1,659,521.86
12	2,644,084.66	1,659,718.78
13	2,644,273.75	1,659,727.11
14	2,644,280.74	1,659,707.85
15	2,646,765.84	1,660,612.59
16	2,646,800.54	1,660,524.08
17	2,647,069.90	1,660,302.09
18	2,647,729.40	1,660,542.33
19	2,649,176.89	1,659,790.12
20	2,642,361.63	1,657,313.58
21	2,649,259.02	1,659,564.37
22	2,642,397.50	1,657,215.10
23	2,644,317.95	1,659,620.25
24	2,649,433.17	1,659,083.75
30	2,651,145.14	1,660,296.58
31	2,650,489.95	1,660,057.92
32	2,649,310.49	1,660,447.77
33	2,649,145.25	1,660,536.58
34	2,649,028.88	1,660,856.04
35	2,648,512.11	1,660,667.80
36	2,648,486.44	1,660,738.28
37	2,648,040.13	1,660,575.70
38	2,648,014.48	1,660,646.18

DISPOSAL SITE LIMITS

CORNER	NORTHING	EASTING
DS1	2,642,356.04	1,653,697.24
DS2	2,650,812.98	1,656,776.26
DS3	2,650,128.76	1,658,655.55
DS4	2,641,671.82	1,655,576.56

CONTROL DATA

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
N. END 1978	2,646,652.19	1,660,582.43	41.39	USACE SBC 1978 (STA 88+73.09)
S. END 1978	2,644,298.25	1,659,725.47	40.47	USACE SBC 1978 (STA 63+67.98)
DJ–1	2,650,309.04	1,661,821.57	181.47	–
NEW	2,652,477.41	1,653,265.13	46.47	–
EQ–1	2,629,995.41	1,643,787.75	83.07	–
SP–1	2,632,165.12	1,650,395.14	36.47	–
SANDBAG	2,646,634.30	1,662,476.29	206.82	USC & GS SBC
CLIFF	2,648,978.03	1,662,106.44	250.99	–
C 1/4 COR	2,642,005.73	1,660,981.81	128.25	–
ZZ–1	2,644,301.39	1,660,846.61	38.70	–

100 0 100 200 300

SCALE IN FEET

HORIZONTAL SCALE: 1"=100'

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 APRIL 26, 2010, TO THE BEST OF MY KNOWLEDGE AND BELIEF.

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

KARL D. WOODS, P.L.S.
REGISTRATION NO. LS 10950

MAY 13, 2010
DATE

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB–09–R–0001
CONTRACTOR MANSON CONSTRUCTION CO.
CITY SEATTLE STATE WASHINGTON
Recommended: Approved: Date:
TRIAL CONTRACTOR RESIDENT ENGINEER

Sym	Action	Description	Date	Approv

Date: 04/26/10
Dwg Scale: AS NOTED
Plot Scale:
File:
Drawing #:
Section:
Branch:
Designed: JEA
Drawn: LEP/KNB
Reviewed: KDW
Chief: A. CHURCHILL
Chief Hydro:
Chief Survey:
USACE Survey No:

2732-10

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

SURVEY 01

ANCHORAGE, ALASKA
PORT OF ANCHORAGE
2009–2011
TRANSITIONAL AND MAINTENANCE DREDGING
2010 PREDREDGE SURVEY
APRIL 26, 2010

BATHYMETRY

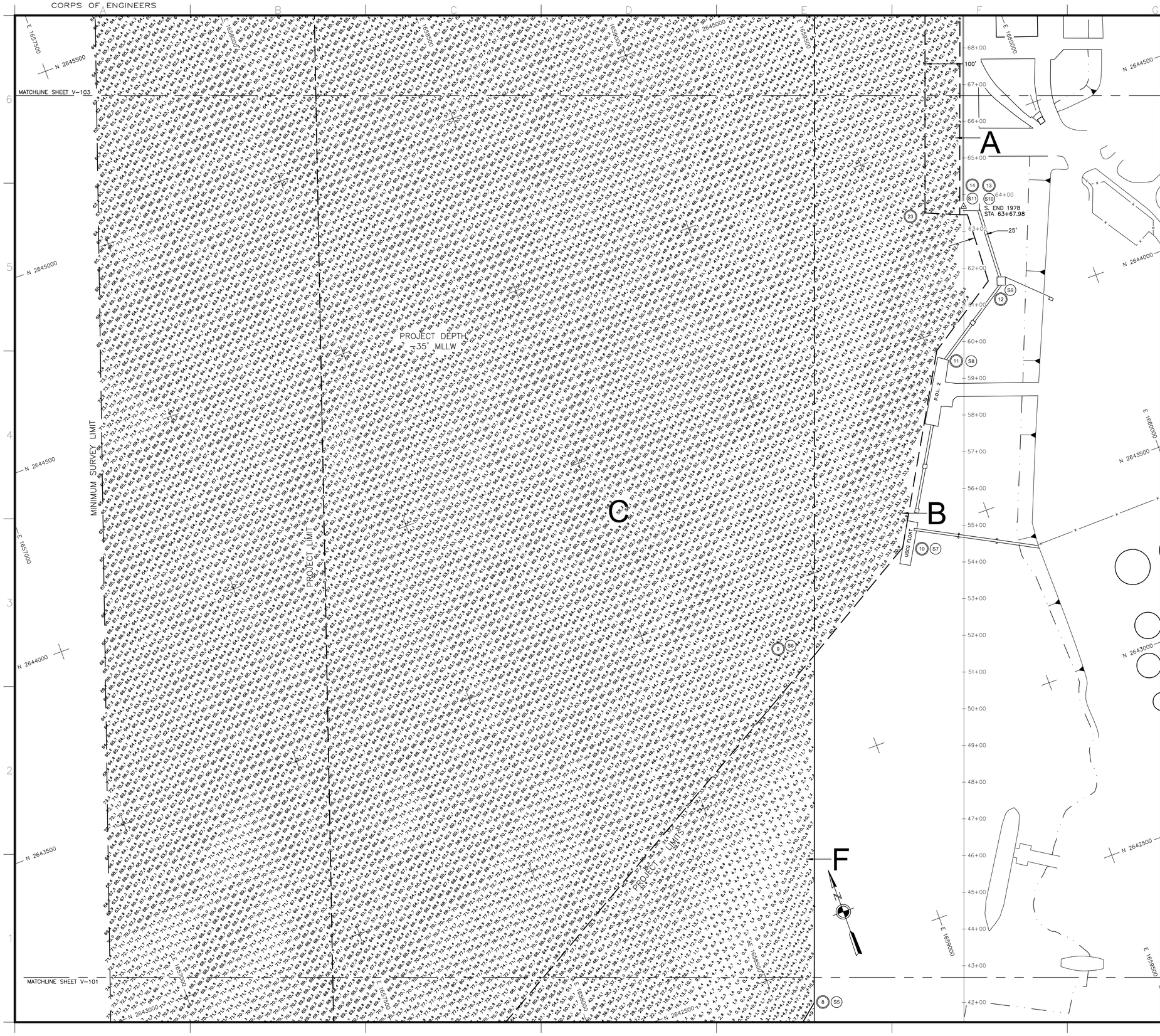
Reference number:

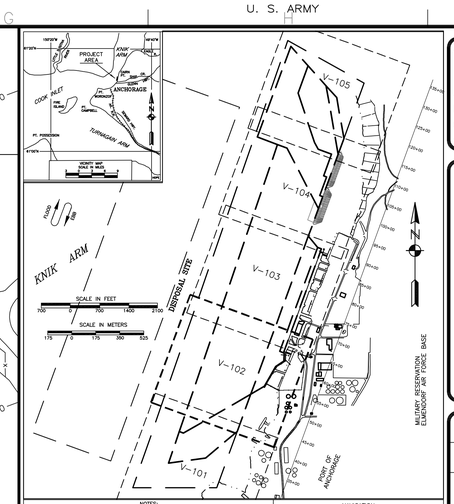
V-101

Sheet 1 of 6

CORPS OF ENGINEERS

U. S. ARMY





NOTES:

1. THIS LOCALITY IS SHOWN ON USC & GS CHARTS NO. 16664, 16660, 16013 AND 500.
2. DEPTHS ARE IN FEET REFERENCED TO MEAN LOWER LOW WATER (MLLW=0.0').

NAVIGATION

ANCHORAGE HARBOR ALASKA

REVISED 2009

NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD 83, IN US SURVEY FEET, HOLDING USACE SBC "N END 1978" AS N 2,646,652.19', E 1,660,582.43' AND USACE SBC "S END 1978" AS N 2,644,298.25', E 1,659,725.47'.
2. VERTICAL CONTROL IS IN FEET, REFERRING TO MEAN LOWER LOW WATER (MLLW=0.0), BASED ON NOAA/NOS 1983–2001 TIDAL EPOCH BENCH MARK LIST, "9455920 ANCHORAGE, KNIK ARM, COOK INLET, ALASKA" PUBLISHED 4/21/2003, HOLDING USCGS SBC "TIDAL 16 1966" AS 40.53', USCGS SBC "B 75 1964" AS 36.82'.
3. THIS SURVEY WAS PERFORMED BY TERRASOND, LTD. ON APRIL 26, 2010. SOUNDINGS WERE COLLECTED USING A RESON SEABAT 7101 MULTIBEAM ECHOSOUNDER WITH A 240kHz, 150–DEGREE SWATH–WIDTH TRANSDUCER (511 BEAMS). BEAM STEERING WAS ACCOMPLISHED USING AN APPLIED MICROSYSTEMS LABORATORIES (AML) SMART–PROBE, SOUND VELOCITY PROFILER LOCATED AT THE SONAR HEAD. SOUND VELOCITY THROUGH THE WATER COLUMN WAS MEASURED AND APPLIED USING AN ODOM DIGI–BAR PRO SOUND VELOCITY PROFILER DEPLOYED DURING THE SURVEY. VESSEL ATTITUDE, HEADING, POSITIONING AND REAL–TIME TIDES WERE PROVIDED USING A CODA OCTOPUS F185 INERTIAL MOTION UNIT OPERATING ON KINEMATIC GPS CORRECTIONS BROADCAST FROM A TRIMBLE NET–RS GPS RECEIVER SET AT CONTROL STATION, "TERRA–10 2008", LOCATED ATOP THE PORT OFFICE BUILDING. REAL–TIME–KINEMATIC HEIGHT VALUES WERE CALIBRATED TO DIRECT MANUAL TIDE OBSERVATIONS HOLDING USCGS SBC "TIDAL 16 1966", LOCATED AT NOAA/NOS TIDE STATION "9455920" AT THE PORT OF ANCHORAGE. SURVEY NAVIGATION AND DATA COLLECTION WERE PERFORMED USING HYPACK "HYSWEEP 2010" INTEGRATED SOFTWARE (V2010). DATA PROCESSING WAS PERFORMED USING CARIS HIPS SOFTWARE (V7.0).
4. SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
5. THIS SURVEY IS INDICATIVE OF GENERAL CONDITIONS ON THE DATES OF SURVEY.
6. THERE WERE NO NEW MONUMENTS ESTABLISHED DURING THIS SURVEY.
7. SEE SHEET 6 OF 6 FOR VOLUME COMPUTATION TABLE.

MINIMUM SURVEY LIMITS

CORNER	NORTHING	EASTING
S1	2,650,729.24	1,661,635.08
S2	2,651,749.00	1,659,812.00
S3	2,641,054.00	1,656,105.00
S4	2,641,057.43	1,658,111.18
S5	2,642,400.31	1,658,601.12
S6	2,643,288.83	1,658,924.76
S7	2,643,482.52	1,659,251.58
S8	2,643,954.33	1,659,521.86
S9	2,644,084.66	1,659,718.78
S10	2,644,273.75	1,659,727.11
S11	2,644,280.74	1,659,707.85
S12	2,646,765.84	1,660,612.59
S13	2,646,800.54	1,660,524.08
S14	2,647,069.90	1,660,302.09
S15	2,647,729.40	1,660,542.33

NOTES:

1. SURVEY LIMIT ALONG THE DOCK IS 5 FT OFF THE FINISHED DOCK FACE.
2. THE SURVEY LIMIT IS THE MINIMUM AREA OF SURVEY COVERAGE.
3. SURVEY LIMIT WILL CHANGE AS PORT EXPANSION PROGRESSES FOR THE NORTH AND SOUTH REPLACEMENT ALONG THE NEW DOCK FACE.

PROJECT AREA LIMITS

CORNER	NORTHING	EASTING
1	2,649,026.93	1,661,014.98
2	2,649,402.77	1,661,151.89
3	2,650,385.00	1,660,978.96
4	2,650,663.76	1,660,726.81
5	2,651,607.70	1,659,883.00
6	2,641,642.87	1,656,956.67
7	2,641,765.13	1,657,844.43
8	2,642,400.31	1,658,601.12
9	2,643,288.83	1,658,924.76
10	2,643,482.52	1,659,251.58
11	2,643,954.33	1,659,521.86
12	2,644,084.66	1,659,718.78
13	2,644,273.75	1,659,727.11
14	2,644,280.74	1,659,707.85
15	2,646,765.84	1,660,612.59
16	2,646,800.54	1,660,524.08
17	2,647,069.90	1,660,302.09
18	2,647,729.40	1,660,542.33
19	2,649,176.89	1,659,790.12
20	2,642,361.63	1,657,313.58
21	2,649,259.02	1,659,564.37
22	2,642,397.50	1,657,215.10
23	2,644,317.95	1,659,620.25
24	2,649,433.17	1,659,083.75
30	2,651,145.14	1,660,296.58
31	2,650,489.95	1,660,057.92
32	2,649,310.49	1,660,447.77
33	2,649,145.25	1,660,536.58
34	2,649,028.88	1,660,856.04
35	2,648,512.11	1,660,667.80
36	2,648,486.44	1,660,738.28
37	2,648,040.13	1,660,575.70
38	2,648,014.48	1,660,646.18

DISPOSAL SITE LIMITS

CORNER	NORTHING	EASTING
DS1	2,642,356.04	1,653,697.24
DS2	2,650,812.98	1,656,776.26
DS3	2,650,128.76	1,658,655.55
DS4	2,641,671.82	1,655,576.56

CONTROL DATA

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
N. END 1978	2,646,652.19	1,660,582.43	41.39	USACE SBC 1978 (STA 88+73.09)
S. END 1978	2,644,298.25	1,659,725.47	40.47	USACE SBC 1978 (STA 63+67.98)
DJ–1	2,650,309.04	1,661,821.57	181.47	–
NEW	2,652,477.41	1,653,265.13	46.47	–
EQ–1	2,629,995.41	1,643,787.75	83.07	–
SP–1	2,632,165.12	1,650,395.14	36.47	–
SANDBAG	2,646,634.30	1,662,476.29	206.82	USC & GS SBC
CLIFF	2,648,978.03	1,662,106.44	250.99	–
C 1/4 COR	2,642,005.73	1,660,981.81	128.25	–
ZZ–1	2,644,301.39	1,660,846.61	38.70	–

100 0 100 200 300

SCALE IN FEET

HORIZONTAL SCALE: 1"=100'

BATHYMETRY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB–09–R–0001
CONTRACTOR MANSON CONSTRUCTION CO.
CITY SEATTLE STATE WASHINGTON
Recommended: Approved: Date:
PRIME CONTRACTOR RESIDENT ENGINEER

Sym	Action	Description	Date	Approval

Date: 04/26/10
Dwg Scale: AS NOTED
Plot Scale:
File:
Drawing #:
Section:
Branch:
USACE Survey No.: 2732-10

Designed: JEA
Drawn: LEP/KNB
Reviewed: KDW
Chief A. CHURCHILL
Certified:
Certified:

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

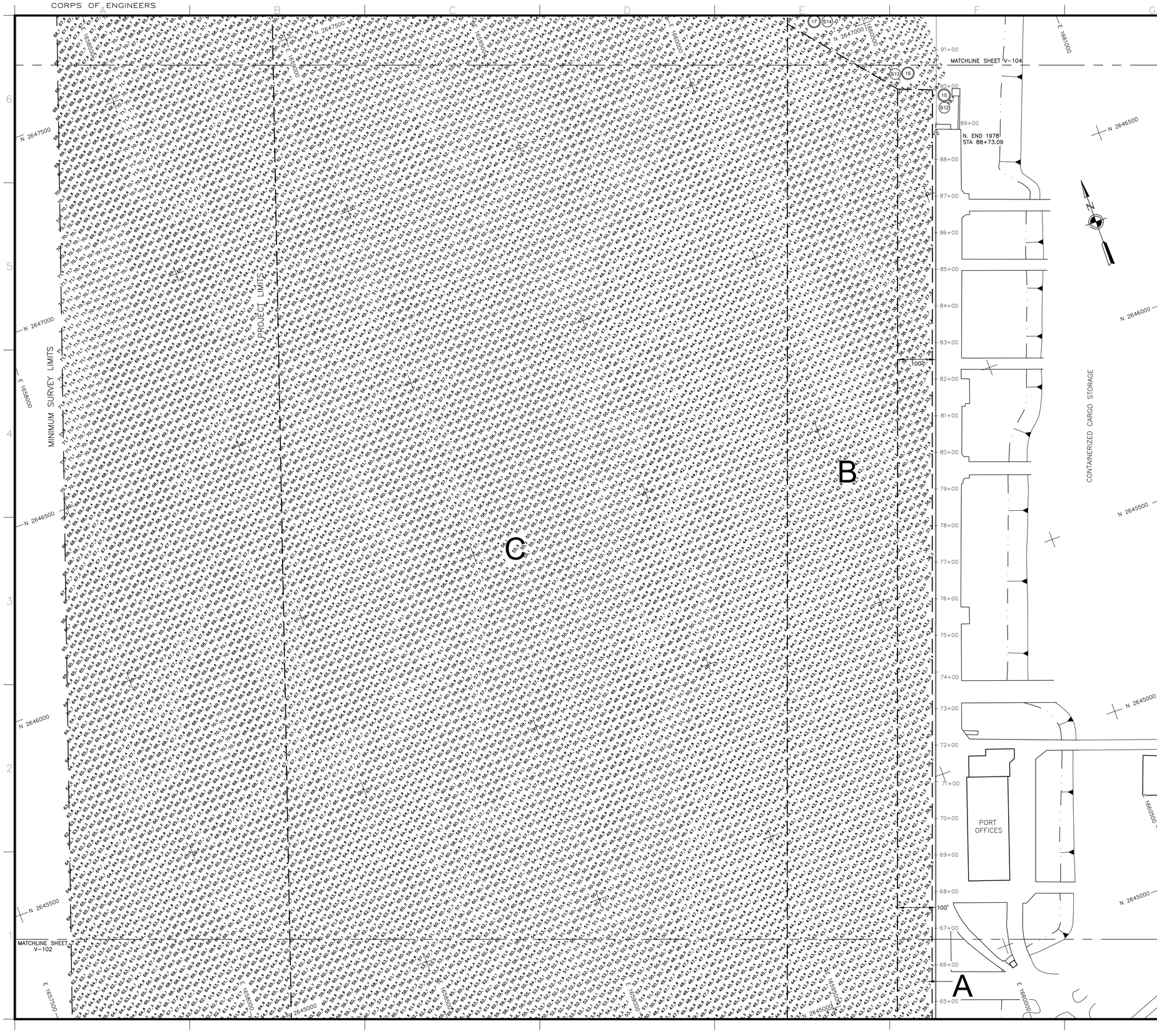
SURVEY 01

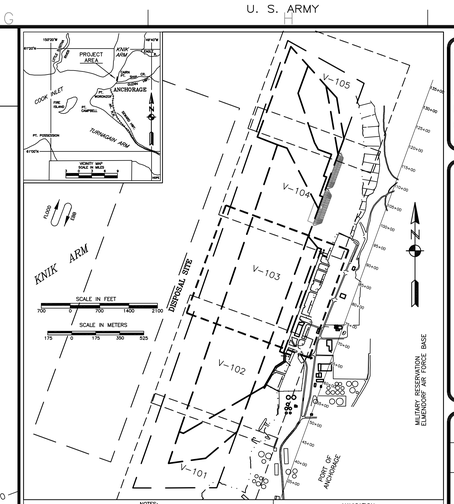
ANCHORAGE, ALASKA
PORT OF ANCHORAGE
2009–2011
TRANSITIONAL AND MAINTENANCE DREDGING
2010 PREDREDGE SURVEY
APRIL 26, 2010

Reference number:
V-102
Sheet 2 of 6

CORPS OF ENGINEERS

U. S. ARMY





NOTES:

1. THIS LOCALITY IS SHOWN ON USC & GS CHARTS NO. 16664, 16660, 16013 AND 500.
2. DEPTHS ARE IN FEET REFERENCED TO MEAN LOWER LOW WATER (MLLW=0.0').

NAVIGATION

ANCHORAGE HARBOR ALASKA

REVISED 2009

NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD 83, IN US SURVEY FEET, HOLDING USACE SBC "N END 1978" AS N 2,646,652.19', E 1,660,582.43' AND USACE SBC "S END 1978" AS N 2,644,298.25', E 1,659,725.47'.
2. VERTICAL CONTROL IS IN FEET, REFERRING TO MEAN LOWER LOW WATER (MLLW=0.0), BASED ON NOAA/NOS 1983–2001 TIDAL EPOCH BENCH MARK LIST, "9455920 ANCHORAGE, KNIK ARM, COOK INLET, ALASKA" PUBLISHED 4/21/2003, HOLDING USCGS SBC "TIDAL 16 1966" AS 40.53', USCGS SBC "B 75 1964" AS 36.82'.
3. THIS SURVEY WAS PERFORMED BY TERRASOND, LTD. ON APRIL 26, 2010. SOUNDINGS WERE COLLECTED USING A RESON SEABAT 7101 MULTIBEAM ECHOSOUNDER WITH A 240kHz, 150–DEGREE SWATH–WIDTH TRANSDUCER (511 BEAMS). BEAM STEERING WAS ACCOMPLISHED USING AN APPLIED MICROSYSTEMS LABORATORIES (AML) SMART–PROBE, SOUND VELOCITY PROFILER LOCATED AT THE SONAR HEAD. SOUND VELOCITY THROUGH THE WATER COLUMN WAS MEASURED AND APPLIED USING AN ODOM DIGI–BAR PRO SOUND VELOCITY PROFILER DEPLOYED DURING THE SURVEY. VESSEL ATTITUDE, HEADING, POSITIONING AND REAL–TIME TIDES WERE PROVIDED USING A CODA OCTOPUS F185 INERTIAL MOTION UNIT OPERATING ON KINEMATIC GPS CORRECTIONS BROADCAST FROM A TRIMBLE NET–RS GPS RECEIVER SET AT CONTROL STATION, "TERRA–10 2008", LOCATED ATOP THE PORT OFFICE BUILDING. REAL–TIME–KINEMATIC HEIGHT VALUES WERE CALIBRATED TO DIRECT MANUAL TIDE OBSERVATIONS HOLDING USCGS SBC "TIDAL 16 1966", LOCATED AT NOAA/NOS TIDE STATION "9455920" AT THE PORT OF ANCHORAGE. SURVEY NAVIGATION AND DATA COLLECTION WERE PERFORMED USING HYPACK "HYSWEEP 2010" INTEGRATED SOFTWARE (V2010). DATA PROCESSING WAS PERFORMED USING CARIS HIPS SOFTWARE (V7.0).
4. SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
5. THIS SURVEY IS INDICATIVE OF GENERAL CONDITIONS ON THE DATES OF SURVEY.
6. THERE WERE NO NEW MONUMENTS ESTABLISHED DURING THIS SURVEY.
7. SEE SHEET 6 OF 6 FOR VOLUME COMPUTATION TABLE.

MINIMUM SURVEY LIMITS

CORNER	NORTHING	EASTING
S1	2,650,729.24	1,661,635.08
S2	2,651,749.00	1,659,812.00
S3	2,641,054.00	1,656,105.00
S4	2,641,057.43	1,658,111.18
S5	2,642,400.31	1,658,601.12
S6	2,643,288.83	1,658,924.76
S7	2,643,482.52	1,659,251.58
S8	2,643,954.33	1,659,521.86
S9	2,644,084.66	1,659,718.78
S10	2,644,273.75	1,659,727.11
S11	2,644,280.74	1,659,707.85
S12	2,646,765.84	1,660,612.59
S13	2,646,800.54	1,660,524.08
S14	2,647,069.90	1,660,302.09
S15	2,647,729.40	1,660,542.33

NOTES:

1. SURVEY LIMIT ALONG THE DOCK IS 5 FT OFF THE FINISHED DOCK FACE.
2. THE SURVEY LIMIT IS THE MINIMUM AREA OF SURVEY COVERAGE.
3. SURVEY LIMIT WILL CHANGE AS PORT EXPANSION PROGRESSES FOR THE NORTH AND SOUTH REPLACEMENT ALONG THE NEW DOCK FACE.

DISPOSAL SITE LIMITS

CORNER	NORTHING	EASTING
DS1	2,642,356.04	1,653,697.24
DS2	2,650,812.98	1,656,776.26
DS3	2,650,128.76	1,658,655.55
DS4	2,641,671.82	1,655,576.56

PROJECT AREA LIMITS

CORNER	NORTHING	EASTING
1	2,649,026.93	1,661,014.98
2	2,649,402.77	1,661,151.89
3	2,650,385.00	1,660,978.96
4	2,650,663.76	1,660,726.81
5	2,651,607.70	1,659,883.00
6	2,641,642.87	1,656,956.67
7	2,641,765.13	1,657,844.43
8	2,642,400.31	1,658,601.12
9	2,643,288.83	1,658,924.76
10	2,643,482.52	1,659,251.58
11	2,643,954.33	1,659,521.86
12	2,644,084.66	1,659,718.78
13	2,644,273.75	1,659,727.11
14	2,644,280.74	1,659,707.85
15	2,646,765.84	1,660,612.59
16	2,646,800.54	1,660,524.08
17	2,647,069.90	1,660,302.09
18	2,647,729.40	1,660,542.33
19	2,649,176.89	1,659,790.12
20	2,642,361.63	1,657,313.58
21	2,649,259.02	1,659,564.37
22	2,642,397.50	1,657,215.10
23	2,644,317.95	1,659,620.25
24	2,649,433.17	1,659,083.75
30	2,651,145.14	1,660,296.58
31	2,650,489.95	1,660,057.92
32	2,649,310.49	1,660,447.77
33	2,649,145.25	1,660,536.58
34	2,649,028.88	1,660,856.04
35	2,648,512.11	1,660,667.80
36	2,648,486.44	1,660,738.28
37	2,648,040.13	1,660,575.70
38	2,648,014.48	1,660,646.18

CONTROL DATA

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
N. END 1978	2,646,652.19	1,660,582.43	41.39	USACE SBC 1978 (STA 88+73.09)
S. END 1978	2,644,298.25	1,659,725.47	40.47	USACE SBC 1978 (STA 63+67.98)
DJ–1	2,650,309.04	1,661,821.57	181.47	–
NEW	2,652,477.41	1,653,265.13	46.47	–
EQ–1	2,629,995.41	1,643,787.75	83.07	–
SP–1	2,632,165.12	1,650,395.14	36.47	–
SANDBAG	2,646,634.30	1,662,476.29	206.82	USC & GS SBC
CLIFF	2,648,978.03	1,662,106.44	250.99	–
C 1/4 COR	2,642,005.73	1,660,981.81	128.25	–
ZZ–1	2,644,301.39	1,660,846.61	38.70	–

100 0 100 200 300

SCALE IN FEET

HORIZONTAL SCALE: 1"=100'

BATHYMETRY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB–09–R–0001
CONTRACTOR MANSON CONSTRUCTION CO.
CITY SEATTLE STATE WASHINGTON
Recommended: Approved: Date:
TRIAL CONTRACTOR RESIDENT ENGINEER

Sym	Action	Description	Date	Approv

Date: 04/26/10
Dwg Scale: AS NOTED
Plot Scale:
File:
Drawing #: 2732-10

Designed: JEA
Drawn: LEP/KNB
Reviewed: KDW
Chief, A. CHURCHILL Section
Chief, Branch Branch
USACE Survey No.: SURVEY 01

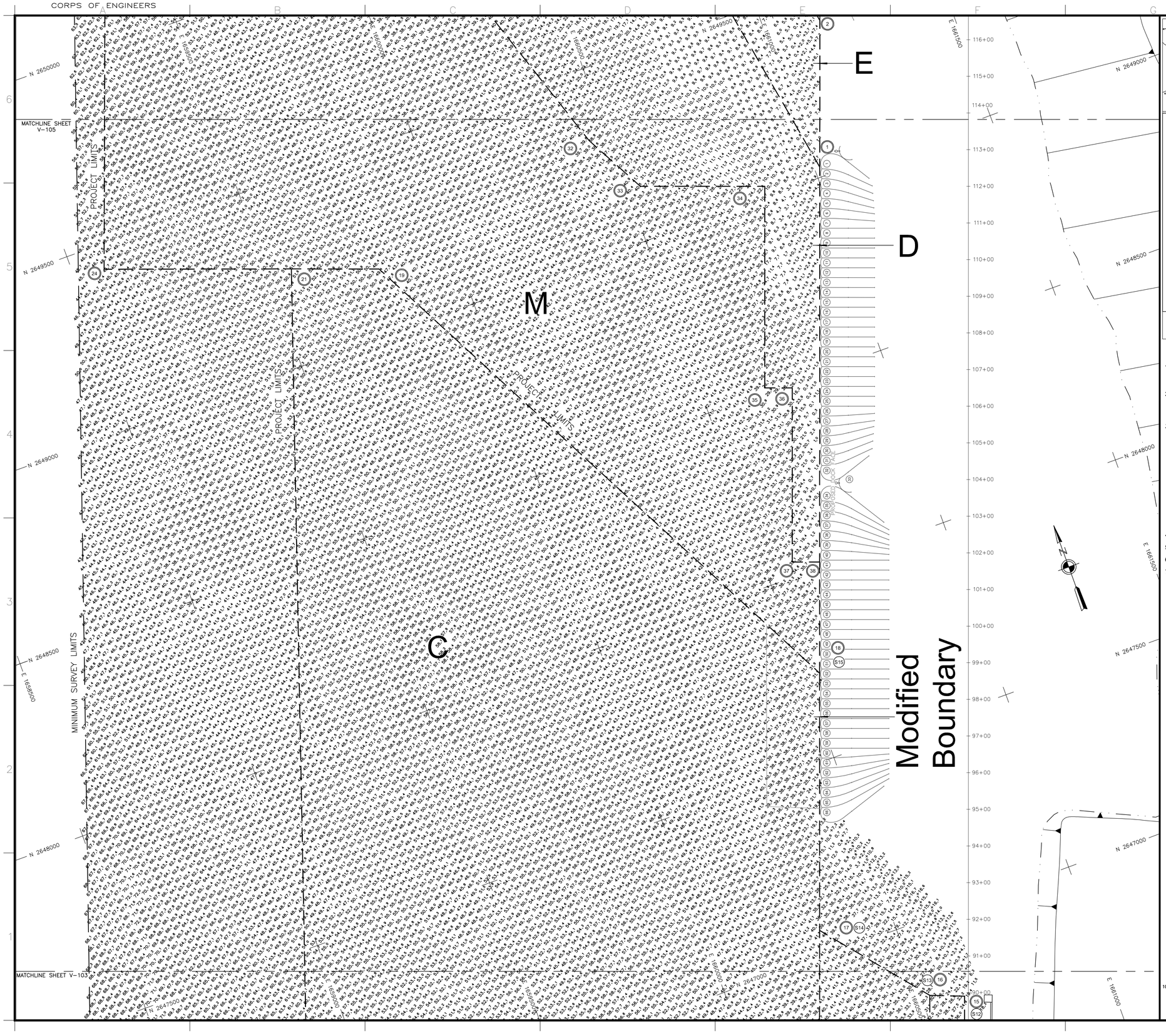
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

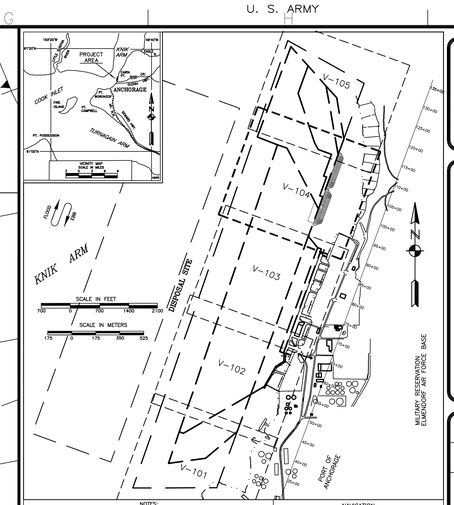
ANCHORAGE, ALASKA
PORT OF ANCHORAGE
2009–2011
TRANSITIONAL AND MAINTENANCE DREDGING
2010 PREDREDGE SURVEY
APRIL 26, 2010

Reference number:
V-103
Sheet 3 of 6

CORPS OF ENGINEERS

U. S. ARMY





NOTES:

1. THIS LOCALITY IS SHOWN ON USC & GS CHARTS NO. 16664, 16660, 16013 AND 550.
2. DEPTHS ARE IN FEET REFERENCED TO MEAN LOWER LOW WATER (MLLW=0.0').

NAVIGATION

ANCHORAGE HARBOR ALASKA

REVISED 2009

NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD 83, IN US SURVEY FEET, HOLDING USACE SBC "N END 1978" AS N 2,646,652.19', E 1,660,582.43' AND USACE SBC "S END 1978" AS N 2,644,298.25', E 1,659,725.47'.
2. VERTICAL CONTROL IS IN FEET, REFERRING TO MEAN LOWER LOW WATER (MLLW=0.0), BASED ON NOAA/NOS 1983–2001 TIDAL EPOCH BENCH MARK LIST, "9455920 ANCHORAGE, KNIK ARM, COOK INLET, ALASKA" PUBLISHED 4/21/2003, HOLDING USCGS SBC "TIDAL 16 1966" AS 40.53', USCGS SBC "B 75 1964" AS 36.82'.
3. THIS SURVEY WAS PERFORMED BY TERRASOND, LTD. ON APRIL 26, 2010. SOUNDINGS WERE COLLECTED USING A RESON SEABAT 7101 MULTIBEAM ECHOSOUNDER WITH A 240kHz, 150–DEGREE SWATH–WIDTH TRANSDUCER (511 BEAMS). BEAM STEERING WAS ACCOMPLISHED USING AN APPLIED MICROSYSTEMS LABORATORIES (AML) SMART–PROBE, SOUND VELOCITY PROFILER LOCATED AT THE SONAR HEAD. SOUND VELOCITY THROUGH THE WATER COLUMN WAS MEASURED AND APPLIED USING AN ODOM DIGI–BAR PRO SOUND VELOCITY PROFILER DEPLOYED DURING THE SURVEY. VESSEL ATTITUDE, HEADING, POSITIONING AND REAL–TIME TIDES WERE PROVIDED USING A CODA OCTOPUS F185 INERTIAL MOTION UNIT OPERATING ON KINEMATIC GPS CORRECTIONS BROADCAST FROM A TRIMBLE NET–RS GPS RECEIVER SET AT CONTROL STATION, "TERRA–10 2008", LOCATED ATOP THE PORT OFFICE BUILDING. REAL–TIME–KINEMATIC HEIGHT VALUES WERE CALIBRATED TO DIRECT MANUAL TIDE OBSERVATIONS HOLDING USCGS SBC "TIDAL 16 1966", LOCATED AT NOAA/NOS TIDE STATION "9455920" AT THE PORT OF ANCHORAGE. SURVEY NAVIGATION AND DATA COLLECTION WERE PERFORMED USING HYPACK "HYSWEEP 2010" INTEGRATED SOFTWARE (V2010). DATA PROCESSING WAS PERFORMED USING CARIS HIPS SOFTWARE (V7.0).
4. SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
5. THIS SURVEY IS INDICATIVE OF GENERAL CONDITIONS ON THE DATES OF SURVEY.
6. THERE WERE NO NEW MONUMENTS ESTABLISHED DURING THIS SURVEY.
7. SEE SHEET 6 OF 6 FOR VOLUME COMPUTATION TABLE.

MINIMUM SURVEY LIMITS

CORNER	NORTHING	EASTING
S1	2,650,729.24	1,661,635.08
S2	2,651,749.00	1,659,812.00
S3	2,641,054.00	1,656,105.00
S4	2,641,057.43	1,658,111.18
S5	2,642,400.31	1,658,601.12
S6	2,643,288.83	1,658,924.76
S7	2,643,482.52	1,659,251.58
S8	2,643,954.33	1,659,521.86
S9	2,644,084.66	1,659,718.78
S10	2,644,273.75	1,659,727.11
S11	2,644,280.74	1,659,707.85
S12	2,646,765.84	1,660,612.59
S13	2,646,800.54	1,660,524.08
S14	2,647,069.90	1,660,302.09
S15	2,647,729.40	1,660,542.33

NOTES:

1. SURVEY LIMIT ALONG THE DOCK IS 5 FT OFF THE FINISHED DOCK FACE.
2. THE SURVEY LIMIT IS THE MINIMUM AREA OF SURVEY COVERAGE.
3. SURVEY LIMIT WILL CHANGE AS PORT EXPANSION PROGRESSES FOR THE NORTH AND SOUTH REPLACEMENT ALONG THE NEW DOCK FACE.

DISPOSAL SITE LIMITS

CORNER	NORTHING	EASTING
DS1	2,642,356.04	1,653,697.24
DS2	2,650,812.98	1,656,776.26
DS3	2,650,128.76	1,658,655.55
DS4	2,641,671.82	1,655,576.56

PROJECT AREA LIMITS

CORNER	NORTHING	EASTING
1	2,649,026.93	1,661,014.98
2	2,649,402.77	1,661,151.89
3	2,650,385.00	1,660,978.96
4	2,650,663.76	1,660,726.81
5	2,651,607.70	1,659,883.00
6	2,641,642.87	1,656,956.67
7	2,641,765.13	1,657,844.43
8	2,642,400.31	1,658,601.12
9	2,643,288.83	1,658,924.76
10	2,643,482.52	1,659,251.58
11	2,643,954.33	1,659,521.86
12	2,644,084.66	1,659,718.78
13	2,644,273.75	1,659,727.11
14	2,644,280.74	1,659,707.85
15	2,646,765.84	1,660,612.59
16	2,646,800.54	1,660,524.08
17	2,647,069.90	1,660,302.09
18	2,647,729.40	1,660,542.33
19	2,649,176.89	1,659,790.12
20	2,642,361.63	1,657,313.58
21	2,649,259.02	1,659,584.37
22	2,642,397.50	1,657,215.10
23	2,644,317.95	1,659,620.25
24	2,649,433.17	1,659,083.75
30	2,651,145.14	1,660,296.58
31	2,650,489.95	1,660,057.92
32	2,649,310.49	1,660,447.77
33	2,649,145.25	1,660,536.58
34	2,649,028.88	1,660,856.04
35	2,648,512.11	1,660,667.80
36	2,648,486.44	1,660,738.28
37	2,648,040.13	1,660,575.70
38	2,648,014.48	1,660,646.18

CONTROL DATA

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
N. END 1978	2,646,652.19	1,660,582.43	41.39	USACE SBC 1978 (STA 88+73.09)
S. END 1978	2,644,298.25	1,659,725.47	40.47	USACE SBC 1978 (STA 63+67.98)
DJ–1	2,650,309.04	1,661,821.57	181.47	–
NEW	2,652,477.41	1,653,265.13	46.47	–
EQ–1	2,629,995.41	1,643,787.75	83.07	–
SP–1	2,632,165.12	1,650,395.14	36.47	–
SANDBAG	2,646,634.30	1,662,476.29	206.82	USC & GS SBC
CLIFF	2,648,978.03	1,662,106.44	250.99	–
C 1/4 COR	2,642,005.73	1,660,981.81	128.25	–
ZZ–1	2,644,301.39	1,660,846.61	38.70	–

100 0 100 200 300

SCALE IN FEET

HORIZONTAL SCALE: 1"=100'

BATHYMETRY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB–09–R–0001
CONTRACTOR MANSON CONSTRUCTION CO.
CITY SEATTLE STATE WASHINGTON
Recommended: Approved: Date:
TRIAL CONTRACTOR RESIDENT ENGINEER

Sym	Action	Description	Date	Approv

Date: 04/26/10
Dwg Scale: AS NOTED
Plot Scale:
File:
Drawing #:
Section
Branch
Designed: JEA
Drawn: LEP/KNB
Reviewed: KDW
Staff: A. CHURCHILL
Project Mgr:
Chief, Tech Div:
USACE Survey No.: 2732-10

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

SURVEY 01

ANCHORAGE ALASKA
PORT OF ANCHORAGE
2009–2011
TRANSITIONAL AND MAINTENANCE DREDGING
2010 PREDREDGE SURVEY
APRIL 26, 2010

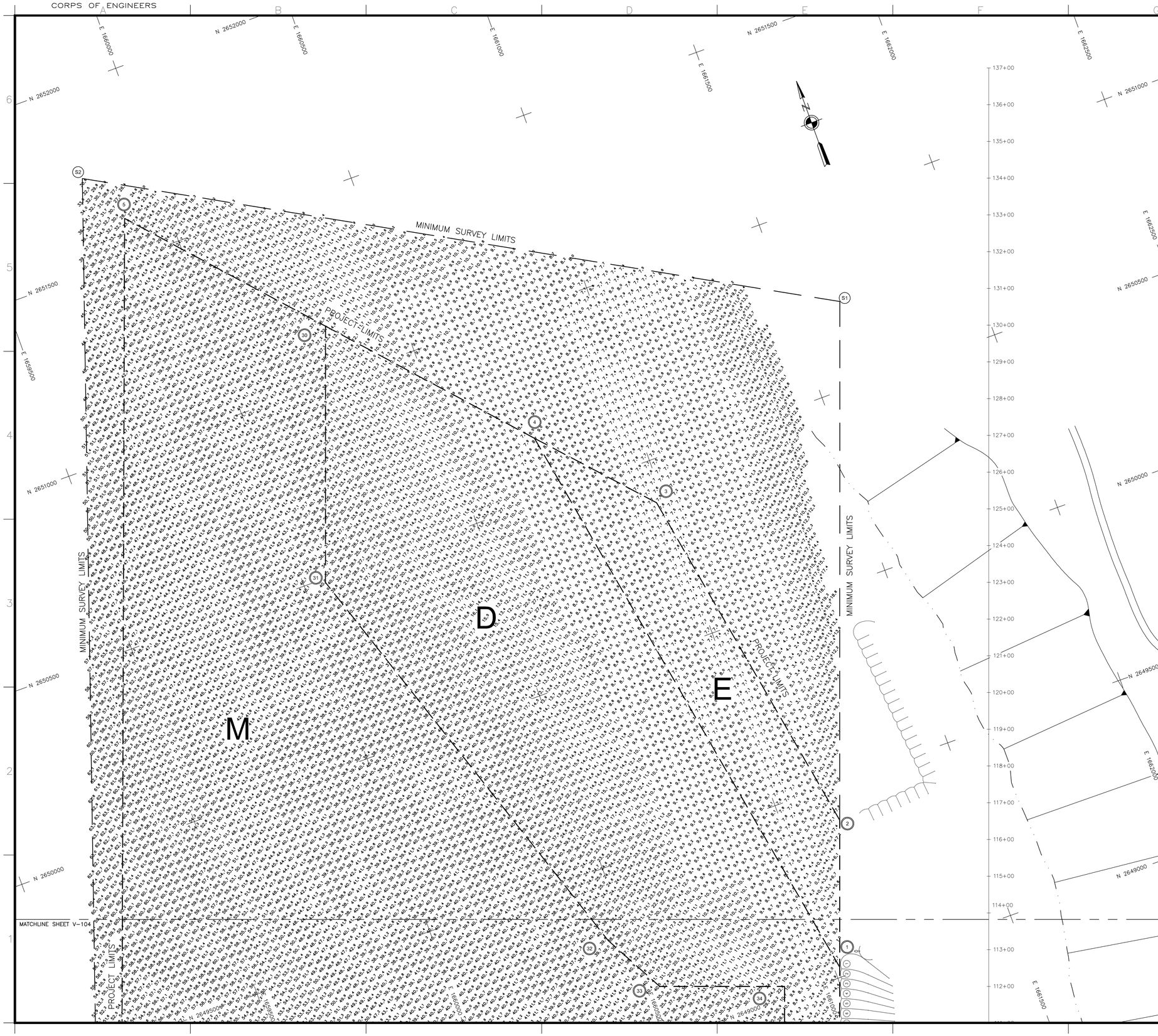
Reference number:

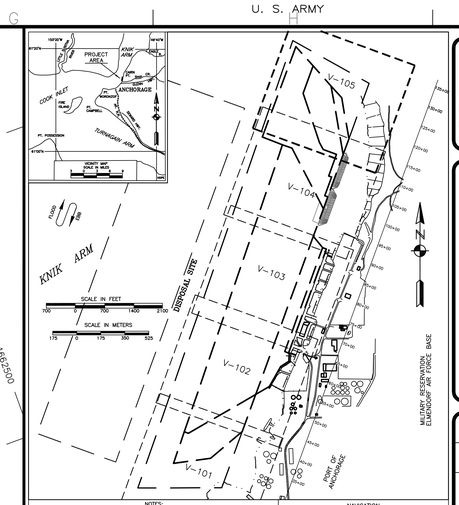
V-104

Sheet 4 of 6

CORPS OF ENGINEERS

U. S. ARMY





NOTES:

1. THIS LOCALITY IS SHOWN ON USC & GS CHARTS NO. 16664, 16660, 16013 AND 500.
2. DEPTHS ARE IN FEET REFERENCED TO MEAN LOWER LOW WATER (MLLW=0.0').

NAVIGATION

ANCHORAGE HARBOR ALASKA

REVISED 2009

NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD 83, IN US SURVEY FEET, HOLDING USACE SBC "N END 1978" AS N 2,646,652.19', E 1,660,582.43' AND USACE SBC "S END 1978" AS N 2,644,298.25', E 1,659,725.47'.
2. VERTICAL CONTROL IS IN FEET, REFERRING TO MEAN LOWER LOW WATER (MLLW=0.0), BASED ON NOAA/NOS 1983–2001 TIDAL EPOCH BENCH MARK LIST, "9455920 ANCHORAGE, KNIK ARM, COOK INLET, ALASKA" PUBLISHED 4/21/2003, HOLDING USCGS SBC "TIDAL 16 1966" AS 40.53', USCGS SBC "B 75 1964" AS 36.82'.
3. THIS SURVEY WAS PERFORMED BY TERRASOND, LTD. ON APRIL 26, 2010. SOUNDINGS WERE COLLECTED USING A RESON SEABAT 7101 MULTIBEAM ECHOSOUNDER WITH A 240kHz, 150–DEGREE SWATH–WIDTH TRANSDUCER (511 BEAMS). BEAM STEERING WAS ACCOMPLISHED USING AN APPLIED MICROSYSTEMS LABORATORIES (AML) SMART–PROBE, SOUND VELOCITY PROFILER LOCATED AT THE SONAR HEAD. SOUND VELOCITY THROUGH THE WATER COLUMN WAS MEASURED AND APPLIED USING AN ODOM DIGI–BAR PRO SOUND VELOCITY PROFILER DEPLOYED DURING THE SURVEY. VESSEL ATTITUDE, HEADING, POSITIONING AND REAL–TIME TIDES WERE PROVIDED USING A CODA OCTOPUS F185 INERTIAL MOTION UNIT OPERATING ON KINEMATIC GPS CORRECTIONS BROADCAST FROM A TRIMBLE NET–RS GPS RECEIVER SET AT CONTROL STATION, "TERRA–10 2008", LOCATED ATOP THE PORT OFFICE BUILDING. REAL–TIME–KINEMATIC HEIGHT VALUES WERE CALIBRATED TO DIRECT MANUAL TIDE OBSERVATIONS HOLDING USCGS SBC "TIDAL 16 1966", LOCATED AT NOAA/NOS TIDE STATION "9455920" AT THE PORT OF ANCHORAGE. SURVEY NAVIGATION AND DATA COLLECTION WERE PERFORMED USING HYPACK "HYSWEEP 2010" INTEGRATED SOFTWARE (V2010). DATA PROCESSING WAS PERFORMED USING CARIS HIPS SOFTWARE (V7.0).
4. SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
5. THIS SURVEY IS INDICATIVE OF GENERAL CONDITIONS ON THE DATES OF SURVEY.
6. THERE WERE NO NEW MONUMENTS ESTABLISHED DURING THIS SURVEY.
7. SEE SHEET 6 OF 6 FOR VOLUME COMPUTATION TABLE.

MINIMUM SURVEY LIMITS

CORNER	NORTHING	EASTING
S1	2,650,729.24	1,661,635.08
S2	2,651,749.00	1,659,812.00
S3	2,641,054.00	1,656,105.00
S4	2,641,057.43	1,658,111.18
S5	2,642,400.31	1,658,601.12
S6	2,643,288.83	1,658,924.76
S7	2,643,482.52	1,659,251.58
S8	2,643,954.33	1,659,521.86
S9	2,644,084.66	1,659,718.78
S10	2,644,273.75	1,659,727.11
S11	2,644,280.74	1,659,707.85
S12	2,646,765.84	1,660,612.59
S13	2,646,800.54	1,660,524.08
S14	2,647,069.90	1,660,302.09
S15	2,647,729.40	1,660,542.33

NOTES:

1. SURVEY LIMIT ALONG THE DOCK IS 5 FT OFF THE FINISHED DOCK FACE.
2. THE SURVEY LIMIT IS THE MINIMUM AREA OF SURVEY COVERAGE.
3. SURVEY LIMIT WILL CHANGE AS PORT EXPANSION PROGRESSES FOR THE NORTH AND SOUTH REPLACEMENT ALONG THE NEW DOCK FACE.

DISPOSAL SITE LIMITS

CORNER	NORTHING	EASTING
DS1	2,642,356.04	1,653,697.24
DS2	2,650,812.98	1,656,776.26
DS3	2,650,128.76	1,658,655.55
DS4	2,641,671.82	1,655,576.56

PROJECT AREA LIMITS

CORNER	NORTHING	EASTING
1	2,649,026.93	1,661,014.98
2	2,649,402.77	1,661,151.89
3	2,650,385.00	1,660,978.96
4	2,650,663.76	1,660,726.81
5	2,651,607.70	1,659,883.00
6	2,641,642.87	1,656,956.67
7	2,641,765.13	1,657,844.43
8	2,642,400.31	1,658,601.12
9	2,643,288.83	1,658,924.76
10	2,643,482.52	1,659,251.58
11	2,643,954.33	1,659,521.86
12	2,644,084.66	1,659,718.78
13	2,644,273.75	1,659,727.11
14	2,644,280.74	1,659,707.85
15	2,646,765.84	1,660,612.59
16	2,646,800.54	1,660,524.08
17	2,647,069.90	1,660,302.09
18	2,647,729.40	1,660,542.33
19	2,649,176.89	1,659,790.12
20	2,642,361.63	1,657,313.58
21	2,649,259.02	1,659,564.37
22	2,642,397.50	1,657,215.10
23	2,644,317.95	1,659,620.25
24	2,649,433.17	1,659,083.75
30	2,651,145.14	1,660,296.58
31	2,650,489.95	1,660,057.92
32	2,649,310.49	1,660,447.77
33	2,649,145.25	1,660,536.58
34	2,649,028.88	1,660,856.04
35	2,648,512.11	1,660,667.80
36	2,648,486.44	1,660,738.28
37	2,648,040.13	1,660,575.70
38	2,648,014.48	1,660,646.18

CONTROL DATA

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
N. END 1978	2,646,652.19	1,660,582.43	41.39	USACE SBC 1978 (STA 88+73.09)
S. END 1978	2,644,298.25	1,659,725.47	40.47	USACE SBC 1978 (STA 63+67.98)
DJ–1	2,650,309.04	1,661,821.57	181.47	–
NEW	2,652,477.41	1,653,265.13	46.47	–
EQ–1	2,629,995.41	1,643,787.75	83.07	–
SP–1	2,632,165.12	1,650,395.14	36.47	–
SANDBAG	2,646,634.30	1,662,476.29	206.82	USC & GS SBC
CLIFF	2,648,978.03	1,662,106.44	250.99	–
C 1/4 COR	2,642,005.73	1,660,981.81	128.25	–
ZZ–1	2,644,301.39	1,660,846.61	38.70	–

100 0 100 200 300

SCALE IN FEET

HORIZONTAL SCALE: 1"=100'

BATHYMETRY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB–09–R–0001
CONTRACTOR MANSON CONSTRUCTION CO.
CITY SEATTLE STATE WASHINGTON
Recommended: Approved: Date:
TRIBE CONTRACTOR RESIDENT ENGINEER

Symbol	Description	Date	Approv

Date 04/26/10
Dwg Scale: AS NOTED
Plot Scale:
File:
Drawing #:
Section:
Branch:
2732-10

Designed: JEA
Drawn: LEP/KNB
Reviewed: KDW
Chief A. CHURCHILL
Coordinate:
Datum:
USACE Survey No.:

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

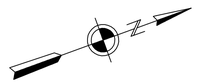
SURVEY 01

ANCHORAGE, ALASKA
PORT OF ANCHORAGE
2009–2011
TRANSITIONAL AND MAINTENANCE DREDGING
2010 PREDREDGE SURVEY
APRIL 26, 2010

Reference number:
V-105
Sheet 5 of 6

VOLUME COMPUTATIONS	
AREA A Project Depth –35' MLLW	CUBIC YARDS
PROJECT DEPTH (–35' MLLW)	3,398
Between PROJECT DEPTH and REQUIRED DEPTH (–37" MLLW)	3,273
Between REQUIRED DEPTH and MAXIMUM PAY (–38' MLLW)	2,325
AREA A TOTAL AVAILABLE MATERIAL	8,996
AREA B Project Depth –35' MLLW	CUBIC YARDS
PROJECT DEPTH (–35' MLLW)	5,135
Between PROJECT DEPTH and REQUIRED DEPTH (–38' MLLW)	12,916
Between REQUIRED DEPTH and MAXIMUM PAY (–39' MLLW)	7,614
AREA B TOTAL AVAILABLE MATERIAL	25,665
AREA C Project Depth –35' MLLW	CUBIC YARDS
PROJECT DEPTH (–35' MLLW)	9,293
Between PROJECT DEPTH and REQUIRED DEPTH (–38' MLLW)	5,945
Between REQUIRED DEPTH and MAXIMUM PAY (–39' MLLW)	3,374
AREA C TOTAL AVAILABLE MATERIAL	18,612
AREA M Project Depth –35' MLLW	CUBIC YARDS
PROJECT DEPTH (–35' MLLW)	10,939
Between PROJECT DEPTH and REQUIRED DEPTH (–38' MLLW)	14,997
Between REQUIRED DEPTH and MAXIMUM PAY (–39' MLLW)	11,842
AREA M TOTAL AVAILABLE MATERIAL	37,779
AREA D Project Depth –35' MLLW	CUBIC YARDS
PROJECT DEPTH (–35' MLLW)	814,802
Between PROJECT DEPTH and REQUIRED DEPTH (–38' MLLW)	121,930
Between REQUIRED DEPTH and MAXIMUM PAY (–40' MLLW)	84,036
AREA D TOTAL AVAILABLE MATERIAL	1,020,768
AREA E Project Depth 25' MLLW	CUBIC YARDS
PROJECT DEPTH (–25' MLLW)	179,261
Between PROJECT DEPTH and REQUIRED DEPTH (–28' MLLW)	29,527
Between REQUIRED DEPTH and MAXIMUM PAY (–30' MLLW)	19,684
AREA E TOTAL AVAILABLE MATERIAL	228,472
AREA F Project Depth –35' MLLW	CUBIC YARDS
PROJECT DEPTH (–35' MLLW)	583,244
Between PROJECT DEPTH and REQUIRED DEPTH (–38' MLLW)	86,935
Between REQUIRED DEPTH and MAXIMUM PAY (–40' MLLW)	62,179
AREA F TOTAL AVAILABLE MATERIAL	732,358
TOTAL MATERIAL AVAILABLE TO MAX PAY (A, B, C, M, D, E & F)	2,072,649

Volumes are within Project Limits, there are no SIDE SLOPES in this contract.



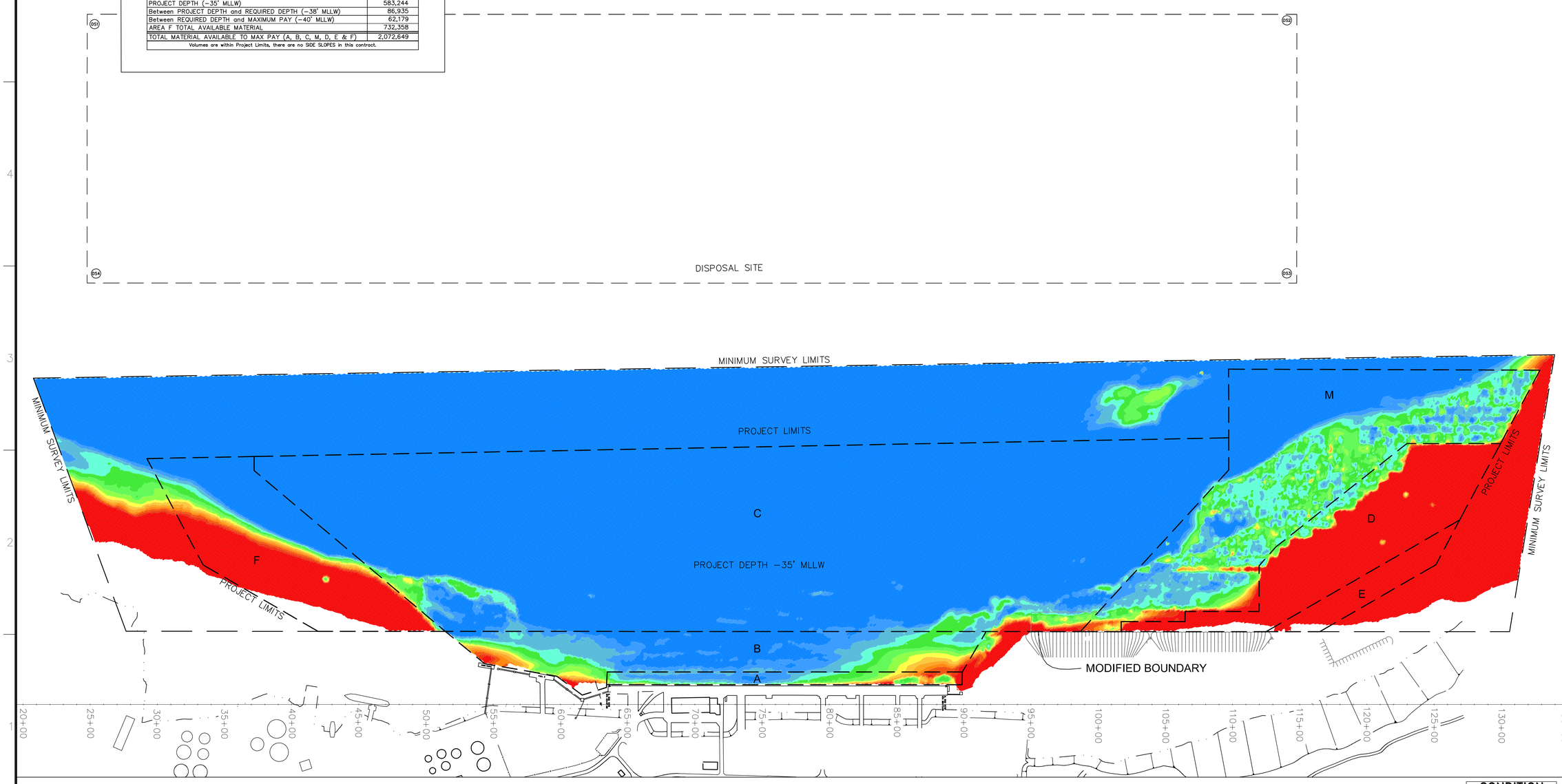
300 0 300 600 900 1200

SCALE IN FEET

NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD 83, IN US SURVEY FEET, HOLDING USACE SBC "N END 1978" AS N 2,646,652.19', E 1,660,582.43' AND USACE SBC "S END 1978" AS N 2,644,298.25', E 1,659,725.47'.
2. VERTICAL CONTROL IS IN FEET, REFERRING TO MEAN LOWER LOW WATER (MLLW=0.0), BASED ON NOAA/NOS 1983–2001 TIDAL EPOCH BENCH MARK LIST, "9455920 ANCHORAGE, KNIK ARM, COOK INLET, ALASKA" PUBLISHED 4/21/2003, HOLDING USCGS SBC "TIDAL 16 1966" AS 40.53', USCGS SBC "B 75 1984" AS 36.82'.
3. THIS SURVEY WAS PERFORMED BY TERRASOND, LTD. ON APRIL 26, 2010. SOUNDINGS WERE COLLECTED USING A RESON SEABAT 7101 MULTIBEAM ECHOSOUNDER WITH A 240kHz, 150–DEGREE SWATH–WIDTH TRANSDUCER (511 BEAMS). BEAM STEERING WAS ACCOMPLISHED USING AN APPLIED MICROSYSTEMS LABORATORIES (AML) SMART–PROBE, SOUND VELOCITY PROFILER LOCATED AT THE SONAR HEAD. SOUND VELOCITY THROUGH THE WATER COLUMN WAS MEASURED AND APPLIED USING AN ODDM DIGI–BAR PRO SOUND VELOCITY PROFILER DEPLOYED DURING THE SURVEY. VESSEL ATTITUDE, HEADING, POSITIONING AND REAL–TIME TIDES WERE PROVIDED USING A CODA OCTOPUS F185 INERTIAL MOTION UNIT OPERATING ON KINEMATIC GPS CORRECTIONS BROADCAST FROM A TRIMBLE NET–RS GPS RECEIVER SET AT CONTROL STATION, "TERRA–10 2008", LOCATED ATOP THE PORT OFFICE BUILDING. REAL–TIME–KINEMATIC HEIGHT VALUES WERE CALIBRATED TO DIRECT MANUAL TIDE OBSERVATIONS HOLDING USCGS SBC "TIDAL 16 1966", LOCATED AT NOAA/NOS TIDE STATION "9455920" AT THE PORT OF ANCHORAGE. SURVEY NAVIGATION AND DATA COLLECTION WERE PERFORMED USING HYPACK "HYSWEEP 2010" INTEGRATED SOFTWARE (V2010). DATA PROCESSING WAS PERFORMED USING CARIS HIPS SOFTWARE (V7.0).
4. SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
5. THIS SURVEY IS INDICATIVE OF GENERAL CONDITIONS ON THE DATES OF SURVEY.
6. THERE WERE NO NEW MONUMENTS ESTABLISHED DURING THIS SURVEY.
7. SEE SHEET 6 OF 6 FOR VOLUME COMPUTATION TABLE.

ELEVATIONS TABLE				
NUMBER	MINIMUM ELEVATION	MAXIMUM ELEVATION	COLOR NUMBER	COLOR
1	-44 & BELOW	-43	0,127,254	
2	-43	-42	46,150,255	
3	-42	-41	79,184,216	
4	-41	-40	92,255,214	
5	-40	-39	53,232,44	
6	-39	-38	89,249,78	
7	-38	-37	187,255,61	
8	-37	-36	255,255,61	
9	-36	-35	251,197,50	
10	-35	-34	253,161,23	
11	-34	-33	255,128,0	
12	-33	-32	242,74,2	
13	-32	-31	235,43,0	
14	-31	0	244,0,0	



CONDITION SURVEY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB–09–R–0001
CONTRACTOR MANSON CONSTRUCTION CO.
CITY SEATTLE STATE WASHINGTON
Recommended: PRIME CONTRACTOR
Approved: RESIDENT ENGINEER
Date:

Sym	Action	Description	Date	Approd

Date: 04/26/10
Dwg Scale: AS NOTED
Plot Scale:
File:
Drawing #: 2732-10

Designed: JEA
Drawn: LEP/KNB
Reviewed: KDW
Chief, A. CHURCHILL Section
Submitted:
Chief, Branch
USACE Survey No.:

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

SURVEY 01

ANCHORAGE, ALASKA
PORT OF ANCHORAGE
2009–2011
TRANSITIONAL AND MAINTENANCE DREDGING
2010 PREDREDGE SURVEY
APRIL 26, 2010

Reference number:
V–106
Sheet 6 of 6