US Army Corps
of Engineers
Alaska District

LAUNCH RAMP

NONDALTON, ALASKA

DQC, 12 APR, 2012
AKV291

INV. NO. W911KB-12-B-00XX

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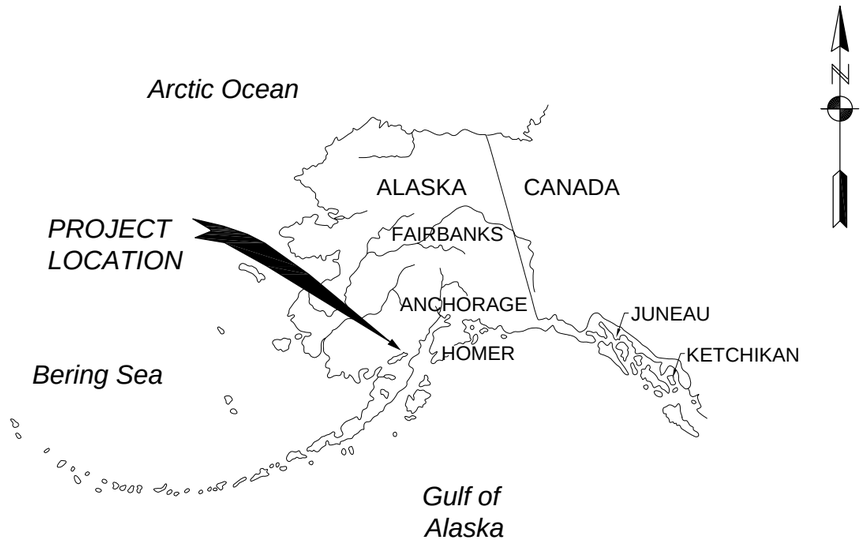


LOCATION MAP

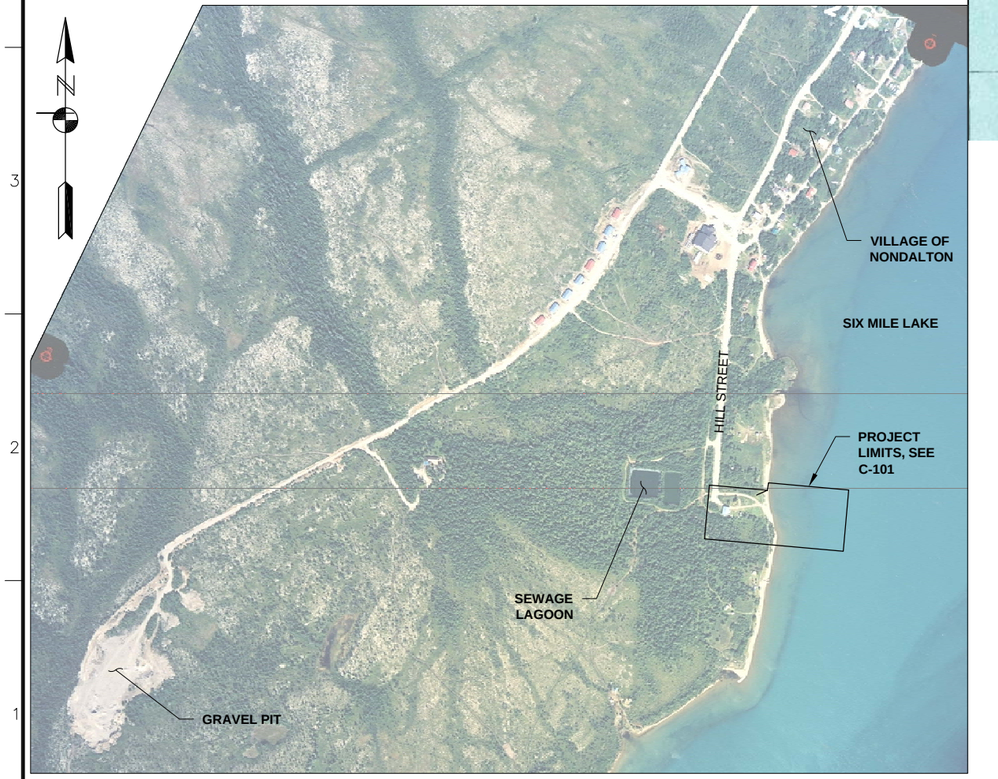
N.T.S.

SOURCE: USGS SEAMLESS QUADS: C59153a1.tif

VICINITY MAP

-1/2 0 1/2 1 1 1/2

APPROX SCALE IN MILES



-400 0 400 800 1200

APPROX SCALE IN FEET

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. _____ STATE _____
CONTRACTOR _____
CITY _____ Date: _____
Recommended: _____ Approved: _____
PRIME CONTRACTOR RESIDENT ENGINEER

Mark	Description	Date	Appvd
Sym.	Action		

Date: 12 APR, 2012
Dwg Scale: AS NOTED
Plot Scale: 1:2
File: V-101 LOCATION & VICINITY MAP
Drawing # 5-NON-750-87-01

Designed:	RCT		
Drawn:	RCT		
Reviewed:	K. Eisses		
Submitted:	C. Borgish	Chief, CEPOA-EN-CW	Branch

INV. NO. W911KB-12-B-00xx AKV291

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

NONDALTON, ALASKA
LAUNCH RAMP
SURVEY/MAPPING
PLANS
LOCATION & VICINITY MAP

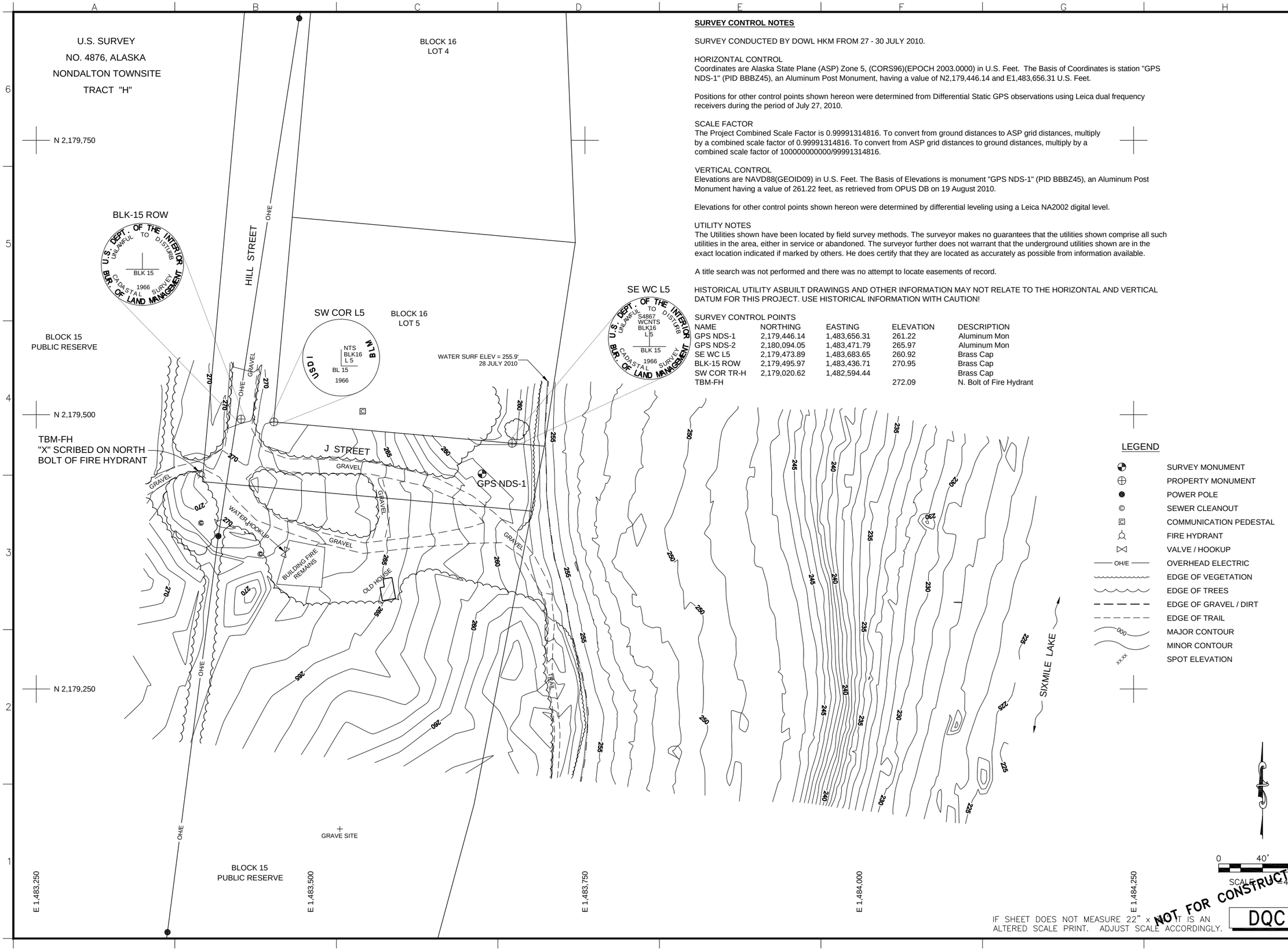
Reference number:
V-101
Sheet 2 of 16

NOT FOR CONSTRUCTION

DQC

IF SHEET DOES NOT MEASURE 22" x 34" IT IS AN ALTERED SCALE PRINT. ADJUST SCALE ACCORDINGLY.

Drawing X:\UNIFIED\EN-CW\Jobs\AKV291\Dwgs\V-101 LOCATION & VICINITY MAP.dwg last saved on 4/12/2012 1:29 PM was plotted by Tedrick, Robert C POA on 4/12/2012 1:50 PM



SURVEY CONTROL NOTES

SURVEY CONDUCTED BY DOWL HKM FROM 27 - 30 JULY 2010.

HORIZONTAL CONTROL
Coordinates are Alaska State Plane (ASP) Zone 5, (CORS96)(EPOCH 2003.0000) in U.S. Feet. The Basis of Coordinates is station "GPS NDS-1" (PID BBBZ45), an Aluminum Post Monument, having a value of N2,179,446.14 and E1,483,656.31 U.S. Feet.

Positions for other control points shown hereon were determined from Differential Static GPS observations using Leica dual frequency receivers during the period of July 27, 2010.

SCALE FACTOR
The Project Combined Scale Factor is 0.99991314816. To convert from ground distances to ASP grid distances, multiply by a combined scale factor of 0.99991314816. To convert from ASP grid distances to ground distances, multiply by a combined scale factor of 100000000000/99991314816.

VERTICAL CONTROL
Elevations are NAVD88(GEOID09) in U.S. Feet. The Basis of Elevations is monument "GPS NDS-1" (PID BBBZ45), an Aluminum Post Monument having a value of 261.22 feet, as retrieved from OPUS DB on 19 August 2010.

Elevations for other control points shown hereon were determined by differential leveling using a Leica NA2002 digital level.

UTILITY NOTES
The Utilities shown have been located by field survey methods. The surveyor makes no guarantees that the utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated if marked by others. He does certify that they are located as accurately as possible from information available.

A title search was not performed and there was no attempt to locate easements of record.

HISTORICAL UTILITY ASBUILT DRAWINGS AND OTHER INFORMATION MAY NOT RELATE TO THE HORIZONTAL AND VERTICAL DATUM FOR THIS PROJECT. USE HISTORICAL INFORMATION WITH CAUTION!

SURVEY CONTROL POINTS

NAME	NORTHING	EASTING	ELEVATION	DESCRIPTION
GPS NDS-1	2,179,446.14	1,483,656.31	261.22	Aluminum Mon
GPS NDS-2	2,180,094.05	1,483,471.79	265.97	Aluminum Mon
SE WC L5	2,179,473.89	1,483,683.65	260.92	Brass Cap
BLK-15 ROW	2,179,495.97	1,483,436.71	270.95	Brass Cap
SW COR TR-H	2,179,020.62	1,482,594.44		Brass Cap
TBM-FH			272.09	N. Bolt of Fire Hydrant

LEGEND

- SURVEY MONUMENT
- PROPERTY MONUMENT
- POWER POLE
- SEWER CLEANOUT
- COMMUNICATION PEDESTAL
- FIRE HYDRANT
- VALVE / HOOKUP
- OVERHEAD ELECTRIC
- EDGE OF VEGETATION
- EDGE OF TREES
- EDGE OF GRAVEL / DIRT
- EDGE OF TRAIL
- MAJOR CONTOUR
- MINOR CONTOUR
- SPOT ELEVATION

0 40' 80'
SCALE: 1" = 40'

IF SHEET DOES NOT MEASURE 22" x 36" IT IS AN ALTERED SCALE PRINT. ADJUST SCALE ACCORDINGLY.

NOT FOR CONSTRUCTION

DQC

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. ____ STATE ____
CONTRACTOR ____
CITY ____
Recommended: ____ Date: ____
PRIME CONTRACTOR
Approved: MISSION ENGINEER

Date	Description	Appvd
Serv. Action		

Date: 12 APR, 2012
Dwg Scale: AS NOTED
Plot Scale: 1:2
File: V-102 SITE PLAN & SURVEY CONTROL
Drawing # 5-NON-750-87-01

Designed:	RCT	Surveyed:	K. Ebbes
Drawn:	RCT	Checked:	C. Borough
Reviewed:	K. Ebbes	Submitted:	C. Borough

Chief, ___ Branch
Chief, EN-CW ___ Branch

W911KB-12-B-00xx
INV. NO.

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

AKV291

NONDALTON, ALASKA
LAUNCH RAMP
SURVEY/MAPPING
PLANS
SITE PLAN & SURVEY CONTROL

Reference number:
V-102
Sheet 3 of 16

Drawing X:\UNIFIED\EN-CW\Jobs\AKV291\Dwgs\V-102 SITE PLAN & SURVEY CONTROL.dwg last saved on 4/12/2012 1:29 PM was plotted by Tedrick, Robert C POA on 4/12/2012 1:50 PM

NOTES:

1. THIS SHEET REFLECTS THE BASE BID PROJECT - GRAVEL ACCESS ROAD, 100' x 100' GRAVEL PARKING AREA, AND 16' WIDE PRECAST CONCRETE BOAT LAUNCH RAMP.
2. OPTION 1 (SEE SHEET C-102) ADDS AN 8' WIDE x 200' LONG BOARDING FLOAT ALONG THE SOUTH SIDE OF THE LAUNCH RAMP.
3. PROJECT BASE LINE (STATIONING) IS BASED ON STA 11+00 AT A NORTHING OF 2179468.85 & EASTING OF 1483404.11 AND STA 16+00 AT A NORTHING OF 2179424.17 & EASTING OF 1483902.11.
4. CONTRACTOR SHALL CLEAR AND ESTABLISH A TRAIL AROUND THE NEW PARKING AREA AS SHOWN.
5. CONTRACTOR SHALL HAVE ALL UTILITIES FIELD-LOCATED PRIOR TO BEGINNING PROJECT SITE WORK.

APPROX EARTHWORK QUANTITIES (CUBIC YARDS)

MATERIAL	BASE BID	OPTION 1*
EXCAVATION ABOVE HIGH WATER LINE	310	0
ACCES ROAD/PARKING FILL	940	0
EXCAVATION BELOW HIGH WATER LINE	580	330
A-ROCK	45	0
B-ROCK	60	0
BASE COURSE	45	25

* QUANTITIES SHOWN FOR OPTION 1 ARE IN ADDITION TO BASE BID QUANTITY.

CONSTRUCTION BOUNDARY

POINT #	NORTHING	EASTING
1	2179446.14	1483656.31
2	2179471.25	1483713.08
3	2179510.87	1483719.09
4	2179472.90	1484142.39
5	2179149.20	1484113.35
6	2179214.87	1483381.32
7	2179498.73	1483406.79

PHOTO IMAGE WAS COMPILED FROM SCANNED IMAGE OF UNCONTROLLED 1"=800' NONDALTON PHOTOGRAPHY, FLIGHT LINE 2, PHOTO 2, DATED 8-17-2002. IMAGE IS FOR GENERAL REFERENCE PURPOSES ONLY AND SHALL NOT TAKE PRECEDENCE OVER SURVEY INFORMATION.

IF SHEET DOES NOT MEASURE 22" x 34" IT IS AN ALTERED SCALE PRINT. ADJUST SCALE ACCORDINGLY.

NOT FOR CONSTRUCTION

DQC

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. _____ CONTRACTOR _____ CITY _____ STATE _____
Recommended: _____ Date: _____
PRIME CONTRACTOR
Approved: _____
RESIDENT ENGINEER

No.	Description	Date	Appvd

Item/Action

Date: 12 APR, 2012
Dwg Scale: AS NOTED
Plot Scale: 1:2
File: TEMPLATE-CW
Drawing # 5-NON-750-87-01

Designed: RCT
Drawn: RCT
Reviewed: K. Ebbes
Submitted: C. Borgoh
Chief, ---

INV. NO. W911KB-12-B-00xx AKV291

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

NONDALTON, ALASKA
LAUNCH RAMP
CIVIL
PLANS
SITE PLAN - BASE BID

Reference number:
C-101
Sheet 4 of 16

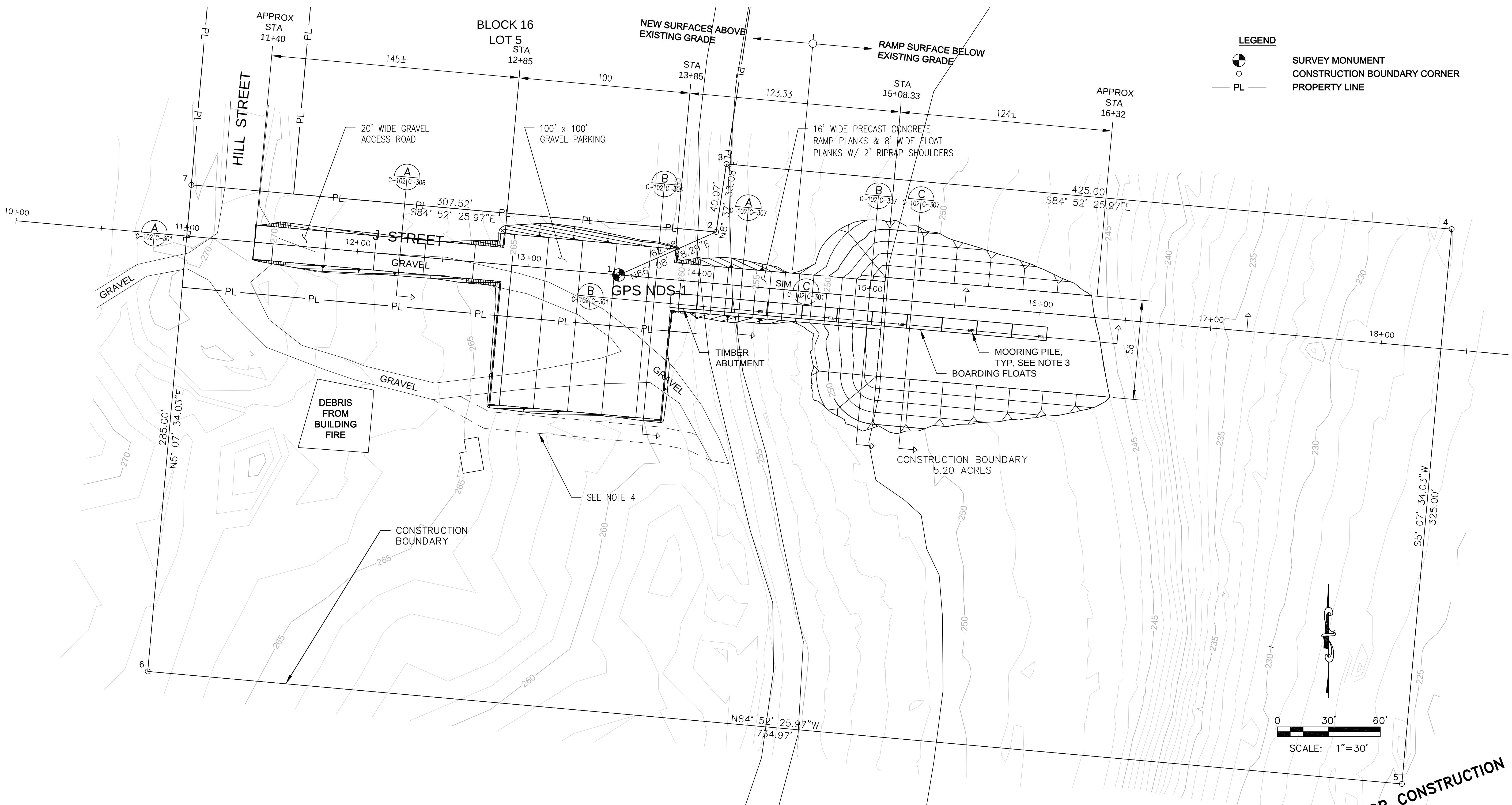
NOTES:

1. THIS SHEET REFLECTS THE BASE BID PROJECT WITH THE ADDITION OF OPTION 1 - GRAVEL ACCESS ROAD, 100' x 100' GRAVEL PARKING AREA, 16' WIDE PRECAST CONCRETE BOAT LAUNCH RAMP, AND 8' WIDE x 200' LONG BOARDING FLOATS WITH MOORING PILES ALONG THE SOUTH SIDE OF THE LAUNCH RAMP.
2. PROJECT BASE LINE (STATIONING) IS BASED ON STA 11+00 AT A NORTHING OF 2179468.85 & EASTING OF 1483404.11 AND STA 16+00 AT A NORTHING OF 2179424.17 & EASTING OF 1483902.11.
3. MOORING PILES SHALL BE LOCATED WITHIN THE BOARDING FLOAT FOOTPRINT (NOT OUTBOARD MOUNTED) AND SHALL BE POSITIONED ALONG THE SOUTH SIDE OF THE BOARDING FLOATS. POSITION SHALL BE COORDINATED WITH SPECIFICS OF CONTRACTOR PROVIDED BOARDING FLOAT DESIGN. SEE S-502 FOR BOARDING FLOAT REQUIREMENTS. NOTE THAT THE TWO SHOREWARD PILES PENETRATE THE FLOAT PLANKS. COORDINATE LOCATION AND PROVIDE 16" DIAMETER HOLES THROUGH THE RAMP PLANKS AS REQUIRED.
4. CONTRACTOR SHALL CLEAR AND ESTABLISH A TRAIL AROUND THE NEW PARKING AREA AS SHOWN.

APPROX EARTHWORK QUANTITIES (CUBIC YARDS)

MATERIAL	BASE BID	OPTION 1*
EXCAVATION ABOVE HIGH WATER LINE	310	0
ACCES ROAD/PARKING FILL	940	0
EXCAVATION BELOW HIGH WATER LINE	580	330
A-ROCK	45	0
B-ROCK	60	0
BASE COURSE	45	25

* QUANTITIES SHOWN FOR OPTION 1 ARE IN ADDITION TO BASE BID QUANTITY.



IF SHEET DOES NOT MEASURE 22" x 34" IT IS AN ALTERED SCALE PRINT. ADJUST SCALE ACCORDINGLY.

DQC

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. ____ CONTRACTOR ____ CITY ____ STATE ____
Recommended: PRIME CONTRACTOR | Approved: RESIDENT ENGINEER | Date:

Sym.	Action	Description	Date	Appvd

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

Designed: RCT
Drawn: RCT
Reviewed: K. Eisses
Chief, CEPOA-EN-CW-HH Section
Submitted: C. Borash
Chief, CEPOA-EN-CW Branch

Date: 12 APR, 2012
Dwg Scale: AS NOTED
Plot Scale: 1:2
File: TEMPLATE-CW
Drawing #: 5-NON-750-87-01

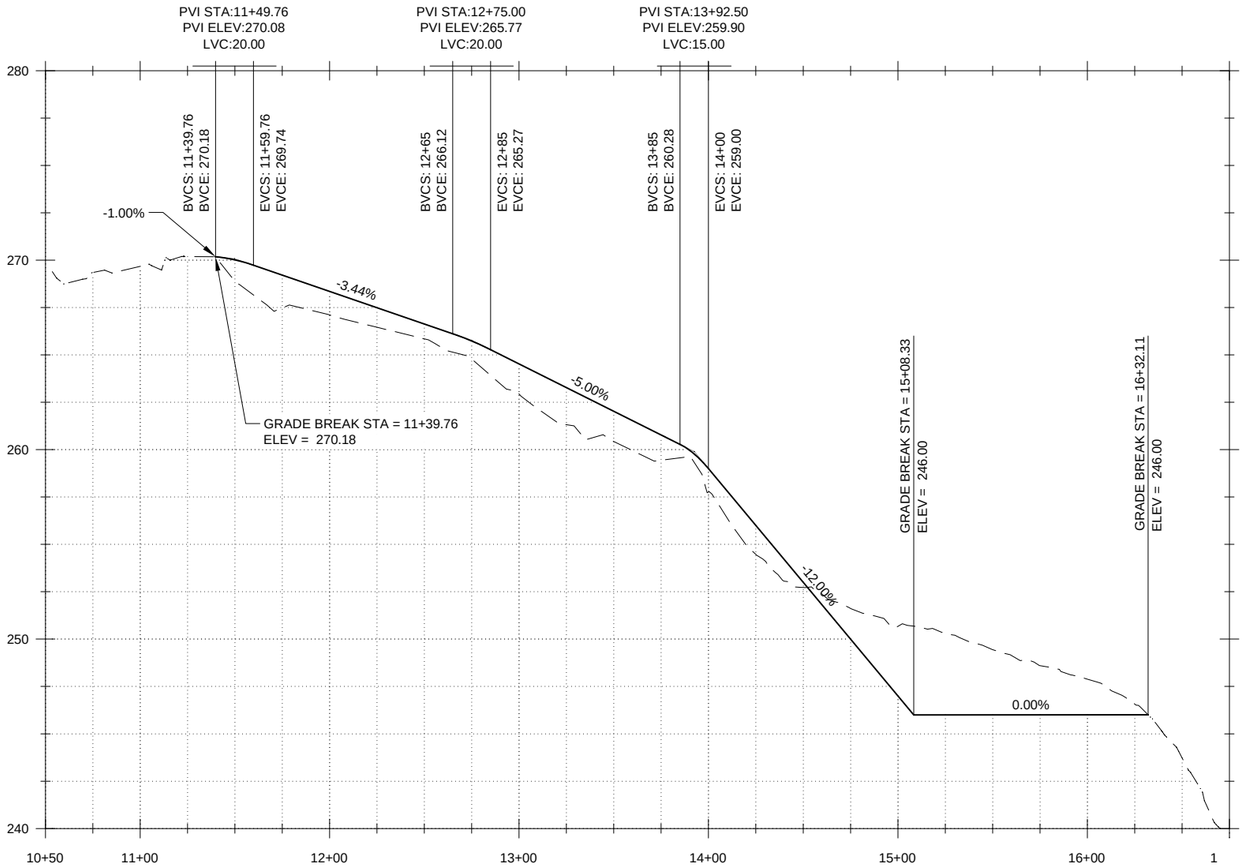
INV. NO. W911KB-12-B-00xx
AKV291

NONDALTON, ALASKA
LAUNCH RAMP
CIVIL
PLANS
SITE PLAN WITH OPTION 1

Reference number:
C-102

Sheet 5 of 16

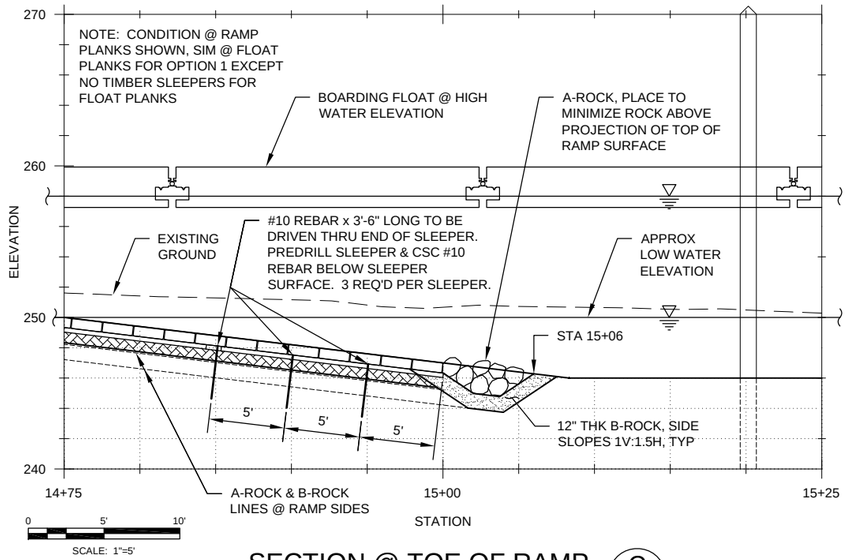
Drawing X:\UNIFIED\EN-CW\Jobs\AKV291\Dwgs\C-102 SITE PLAN WITH OPTION 1.dwg last saved on 4/12/2012 1:29 PM was plotted by Tedrick, Robert C POA on 4/12/2012 1:54 PM



CENTERLINE RAMP & J STREET PROFILE (A)

SCALE: HOR 1" = 40' & VERT 1" = 4'

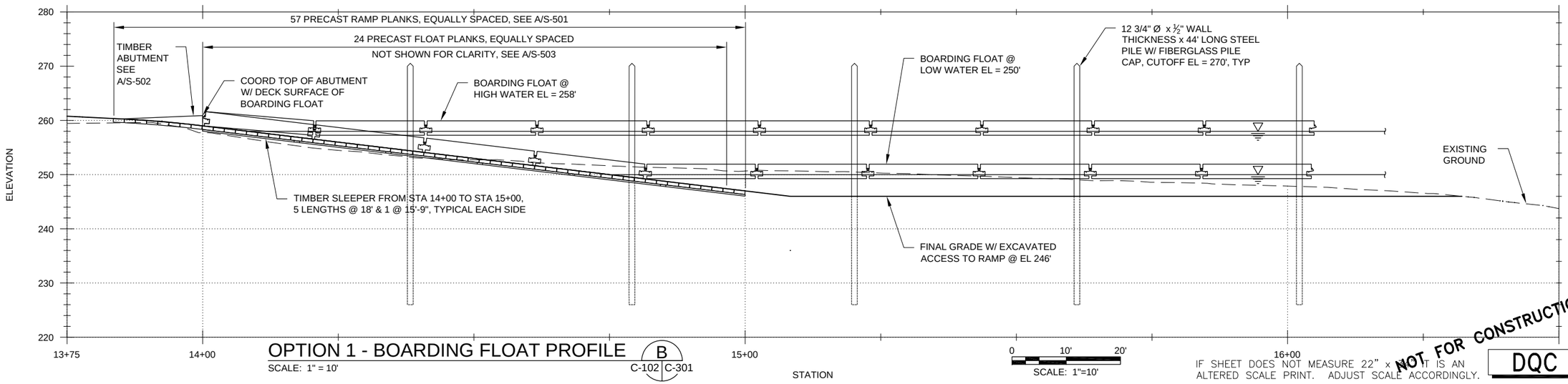
C-101 C-102 | C-301



SECTION @ TOE OF RAMP (C)

SCALE: 1" = 5'

C-101 C-102 | C-301



OPTION 1 - BOARDING FLOAT PROFILE (B)

SCALE: 1" = 10'

C-102 | C-301

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US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. _____ STATE _____
CONTRACTOR _____ Date: _____
CITY _____ Approved: RESIDENT ENGINEER
Recommended: PRIME CONTRACTOR

Sym	Action	Description	Date	Apprvd

Designed: RCT
Drawn: RCT
Checked: K. Eisses
Quantities: C. Bronson
Submitted: C. Bronson
Chief: CEPOA-EN-CW

Date: 12 APR, 2012
Dwg Scale: AS NOTED
Plot Scale: 1:2
File: TEMPLATE-CW
Drawing # 5-NON-750-87-01

INV. NO. W911KB-12-B-00xx AKV291

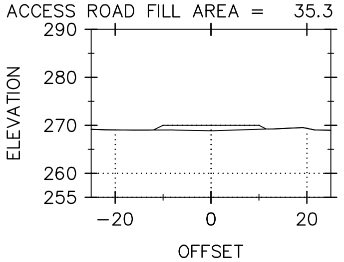
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

NONDALTON, ALASKA
LAUNCH RAMP
CIVIL
SECTIONS
RAMP & PARKING PROFILE

Reference number:
C-301

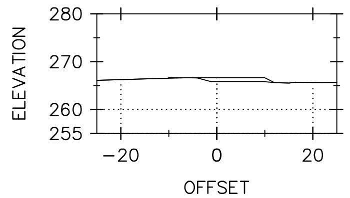
Sheet 6 of 16

GRUBBING CUT AREA = 13.3 SQ FT
ACCESS ROAD FILL AREA = 35.3 SQ FT



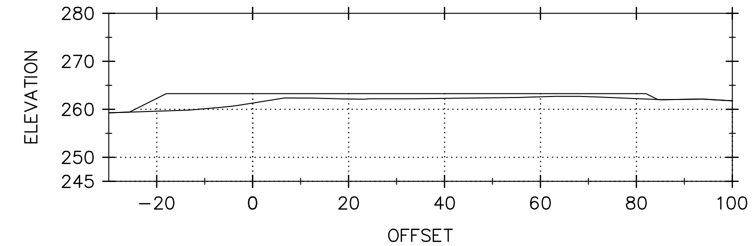
STA 11+50

GRUBBING CUT AREA = 13.3 SQ FT
ADT'L CUT AREA = 4.0 SQ FT
ACCESS ROAD FILL AREA = 28.5 SQ FT



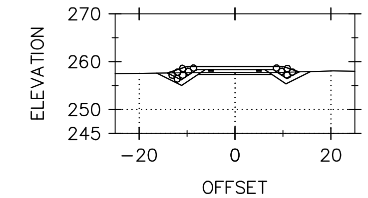
STA 12+50

GRUBBING CUT AREA = 56.7 SQ FT
ACCESS ROAD FILL AREA = 203 SQ FT



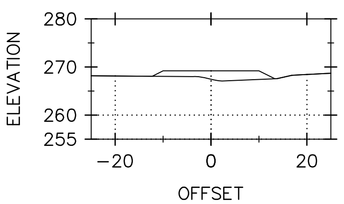
STA 13+25

BASE BID:
CUT AREA = 28.7 SQ FT
A-ROCK AREA = 16.0 SQ FT
B-ROCK AREA = 18.1 SQ FT
BASE COURSE AREA = 13.3 SQ FT



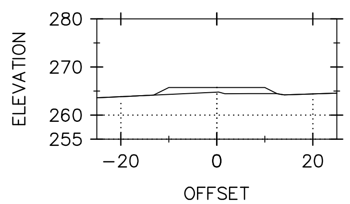
STA 14+00

GRUBBING CUT AREA = 14.4 SQ FT
ACCESS ROAD FILL AREA = 50.7 SQ FT



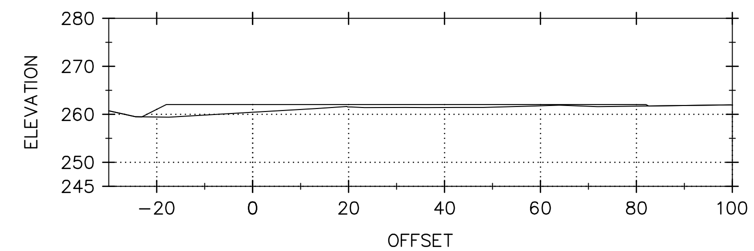
STA 11+75

GRUBBING CUT AREA = 14.7 SQ FT
ACCESS ROAD FILL AREA = 42.8 SQ FT



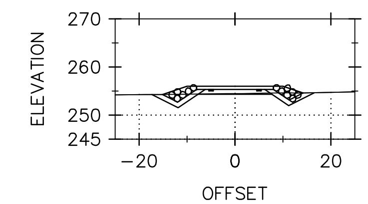
STA 12+75

GRUBBING CUT AREA = 54.4 SQ FT
ACCESS ROAD FILL AREA = 147 SQ FT



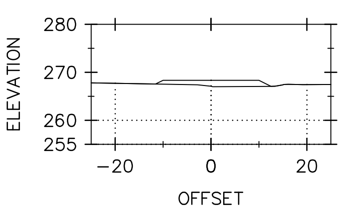
STA 13+50

BASE BID:
CUT AREA = 27.8 SQ FT
A-ROCK AREA = 20.5 SQ FT
B-ROCK AREA = 20.2 SQ FT
BASE COURSE AREA = 13.3 SQ FT



STA 14+25

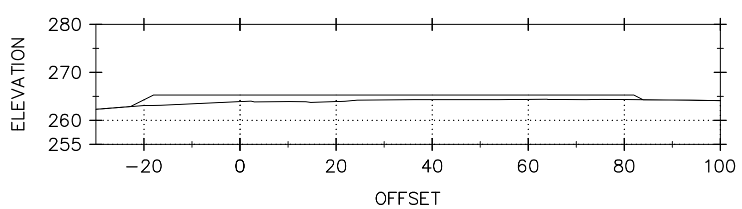
GRUBBING CUT AREA = 13.6 SQ FT
ACCESS ROAD FILL AREA = 38.3 SQ FT



STA 12+00

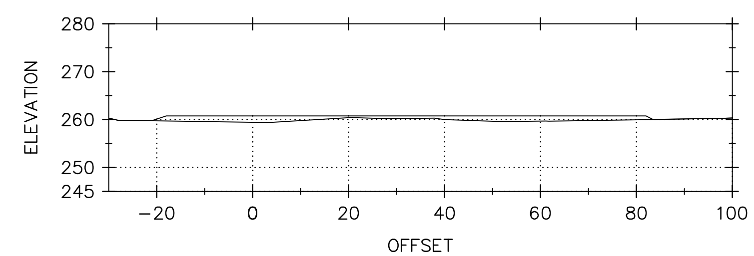
BACK STATION:
GRUBBING CUT AREA = 14.9 SQ FT
ACCESS ROAD FILL AREA = 50.2 SQ FT

FORWARD STATION:
GRUBBING CUT AREA = 55.0 SQ FT
ACCESS ROAD FILL AREA = 182 SQ FT



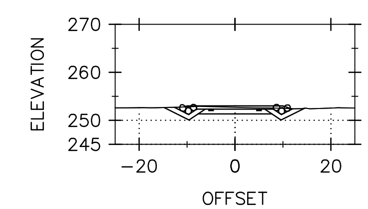
STA 12+85

GRUBBING CUT AREA = 54.0 SQ FT
ADT'L CUT AREA = 0.66 SQ FT
ACCESS ROAD FILL AREA = 148 SQ FT



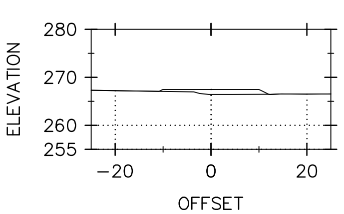
STA 13+75

BASE BID:
CUT AREA = 41.9 SQ FT
A-ROCK AREA = 8.68 SQ FT
B-ROCK AREA = 14.7 SQ FT
BASE COURSE AREA = 13.3 SQ FT



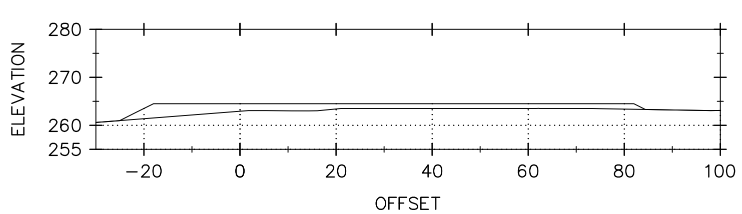
STA 14+50

GRUBBING CUT AREA = 13.2 SQ FT
ADT'L CUT AREA = 0.47 SQ FT
ACCESS ROAD FILL AREA = 31.2 SQ FT



STA 12+25

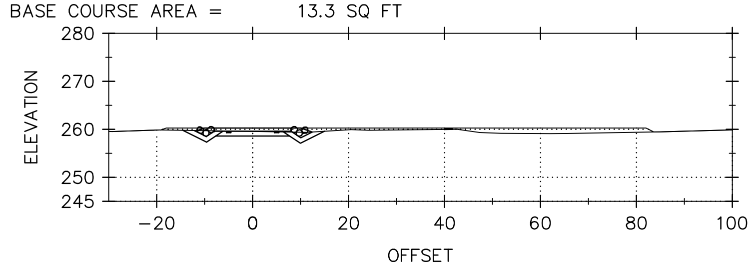
GRUBBING CUT AREA = 56.3 SQ FT
ACCESS ROAD FILL AREA = 201 SQ FT



STA 13+00

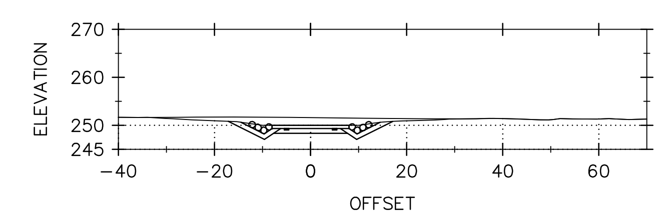
BACK STATION:
GRUBBING CUT AREA = 53.3 SQ FT
ADT'L CUT AREA = 3.84 SQ FT
ACCESS ROAD FILL AREA = 129.7 SQ FT

FORWARD STATION (BASE BID):
CUT AREA = 33.0 SQ FT
A-ROCK AREA = 9.34 SQ FT
B-ROCK AREA = 14.8 SQ FT
BASE COURSE AREA = 13.3 SQ FT



STA 13+85

BASE BID:
CUT AREA = 117 SQ FT
A-ROCK AREA = 12.4 SQ FT
B-ROCK AREA = 20.1 SQ FT
BASE COURSE AREA = 13.3 SQ FT



STA 14+75

0 20' 40'
SCALE: 1"=20'

IF SHEET DOES NOT MEASURE 22" x 34" IT IS AN ALTERED SCALE PRINT. ADJUST SCALE ACCORDINGLY.

NOT FOR CONSTRUCTION

DQC

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. ____
CONTRACTOR ____
CITY ____ STATE ____
Recommended: ____ PRIME CONTRACTOR
Approved: ____ RESIDENT ENGINEER
Date: ____

Sym.	Action	Description	Date	Appvd

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

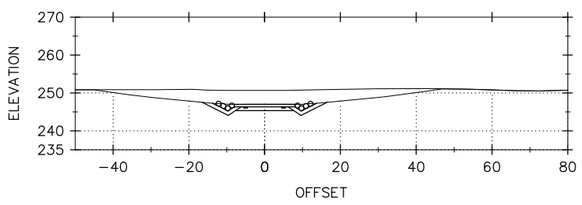
Designed: RCT
Drawn: RCT
Reviewed: K. Eisses
Chief, CEPOA-EN-CW-HH Section
Submitted: C. Borash
Chief, CEPOA-EN-CW Branch
Date: 12 APR, 2012
Dwg Scale: AS NOTED
Plot Scale: 1:2
File: TEMPLATE-CW
Drawing #: 5-NON-750-87-01
INV. NO. W911KB-12-B-00xx
AKV291

NONDALTON, ALASKA
LAUNCH RAMP
CIVIL
SECTIONS
RAMP & PARKING SECTIONS I

Reference number:
C-302
Sheet 7 of 16

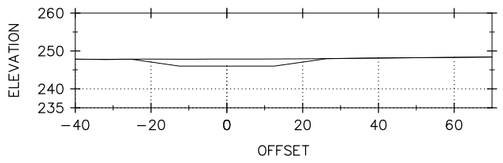
Drawing X:\UNIFIED\EN-CW\Jobs\AKV291\Dwgs\C-302 RAMP & PARKING SECTIONS I.dwg last saved on 4/12/2012 1:29 PM was plotted by Tedrick, Robert C POA on 4/12/2012 1:54 PM

BASE BID:
CUT AREA = 285 SQ FT
A–ROCK AREA = 11.5 SQ FT
B–ROCK AREA = 18.4 SQ FT
BASE COURSE AREA = 13.3 SQ FT



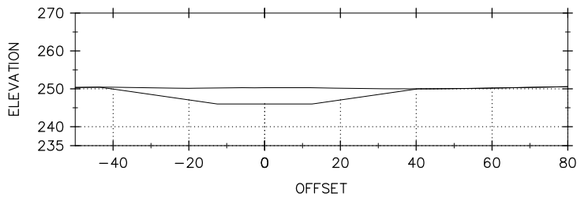
STA 15+00

BASE BID:
CUT AREA = 71.5 SQ FT



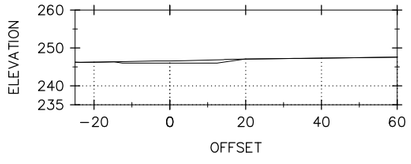
STA 16+00

BASE BID:
CUT AREA = 229 SQ FT



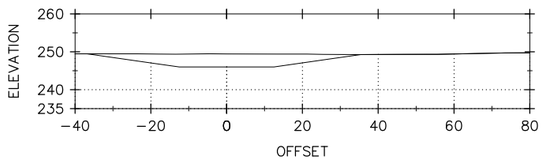
STA 15+25

BASE BID:
CUT AREA = 18.4 SQ FT



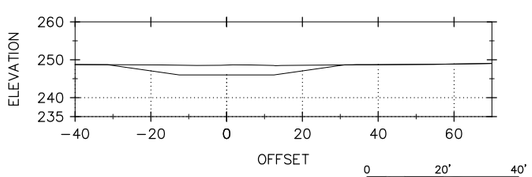
STA 16+25

BASE BID:
CUT AREA = 167 SQ FT

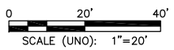


STA 15+50

BASE BID:
CUT AREA = 113 SQ FT



STA 15+75



IF SHEET DOES NOT MEASURE 22" x 34" THEN IT IS AN ALTERED SCALE PRINT. ADJUST SCALE ACCORDINGLY.

NOT FOR CONSTRUCTION

DQC

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. _____ STATE _____
CONTRACTOR _____
CITY _____
Recommended: _____ Date: _____
PRIME CONTRACTOR — RESIDENT ENGINEER
Approved: _____ Date: _____

Sym	Action	Description	Date	Apprvd

Date: 12 APR, 2012
Dwg Scale: AS NOTED
Plot Scale: 1:2
File: TEMPLATE—CW
Drawing # 5-NAN-759-87-01

Designed: RCT
Drawn: RCT
Reviewed: K. Esses
Checked: C. Boroth
Submitted: C. Boroth
Chief — CE/GIA-Eu-CW — Branch
Chief — CE/GIA-Eu-CW — Section

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

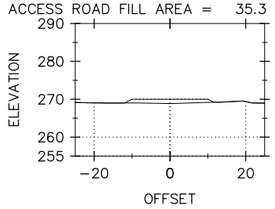
INV. NO. W911KB–12–B–00xx
AKV291

NONDALTON, ALASKA
LAUNCH RAMP
CIVIL
SECTIONS
RAMP & PARKING SECTIONS II

Reference number:
C–303
Sheet 8 of 16

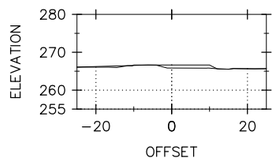
Drawing X:\UNIFIED\EN–CW\Jobs\AKV291\Dwgs\C–303 RAMP & PARKING SECTIONS II.dwg last saved on 4/12/2012 1:29 PM was plotted by Tedrick, Robert C POA on 4/12/2012 1:55 PM

GRUBBING CUT AREA = 13.3 SQ FT
ACCESS ROAD FILL AREA = 35.3 SQ FT



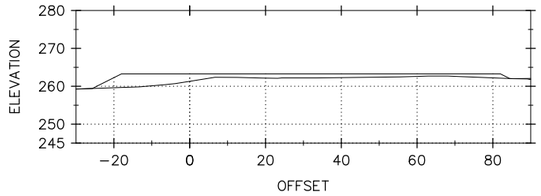
STA 11+50

GRUBBING CUT AREA = 13.3 SQ FT
ADT'L CUT AREA = 4.0 SQ FT
ACCESS ROAD FILL AREA = 28.5 SQ FT



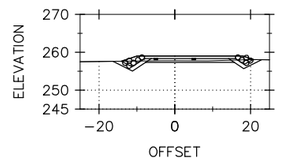
STA 12+50

GRUBBING CUT AREA = 56.7 SQ FT
ACCESS ROAD FILL AREA = 202.8 SQ FT



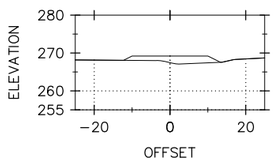
STA 13+25

OPTION 1 – BOARDING FLOATS:
CUT AREA = 31.7 SQ FT
A–ROCK AREA = 14.7 SQ FT
B–ROCK AREA = 17.2 SQ FT
BASE COURSE AREA = 21.3 SQ FT



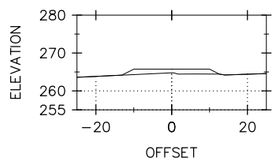
STA 14+00

GRUBBING CUT AREA = 14.4 SQ FT
ACCESS ROAD FILL AREA = 50.7 SQ FT



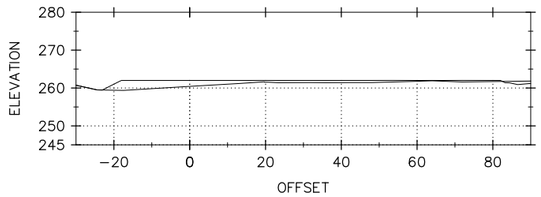
STA 11+75

GRUBBING CUT AREA = 14.7 SQ FT
ACCESS ROAD FILL AREA = 42.8 SQ FT



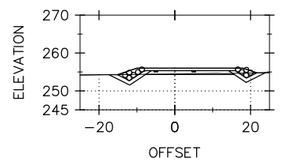
STA 12+75

GRUBBING CUT AREA = 54.4 SQ FT
ACCESS ROAD FILL AREA = 147.2 SQ FT



STA 13+50

OPTION 1 – BOARDING FLOATS:
CUT AREA = 28.7 SQ FT
A–ROCK AREA = 19.2 SQ FT
B–ROCK AREA = 19.6 SQ FT
BASE COURSE AREA = 21.3 SQ FT

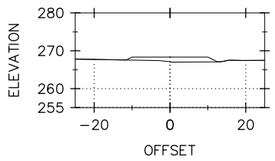


STA 14+25

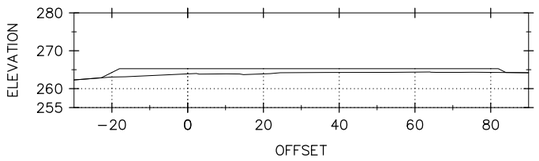
BACK STATION:
GRUBBING CUT AREA = 14.9 SQ FT
ACCESS ROAD FILL AREA = 50.2 SQ FT

FORWARD STATION:
GRUBBING CUT AREA = 55.0 SQ FT
ACCESS ROAD FILL AREA = 181.8 SQ FT

GRUBBING CUT AREA = 13.6 SQ FT
ACCESS ROAD FILL AREA = 38.3 SQ FT

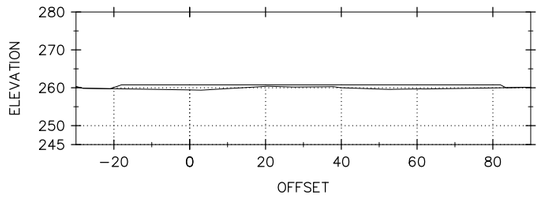


STA 12+00



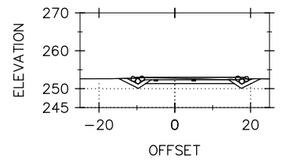
STA 12+85

GRUBBING CUT AREA = 54.0 SQ FT
ADT'L CUT AREA = 0.66 SQ FT
ACCESS ROAD FILL AREA = 148.3 SQ FT



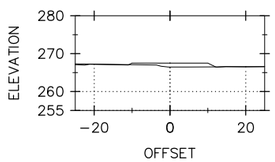
STA 13+75

OPTION 1 – BOARDING FLOATS:
CUT AREA = 51.4 SQ FT
A–ROCK AREA = 8.74 SQ FT
B–ROCK AREA = 15.1 SQ FT
BASE COURSE AREA = 21.3 SQ FT



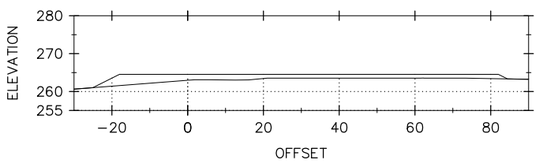
STA 14+50

GRUBBING CUT AREA = 13.2 SQ FT
ADT'L CUT AREA = 0.47 SQ FT
ACCESS ROAD FILL AREA = 31.2 SQ FT



STA 12+25

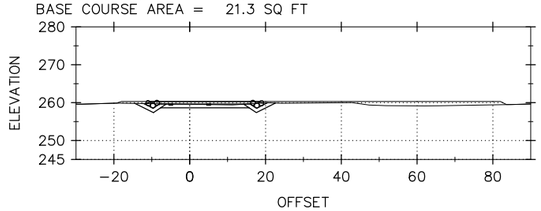
GRUBBING CUT AREA = 56.3 SQ FT
ACCESS ROAD FILL AREA = 201.1 SQ FT



STA 13+00

BACK STATION:
GRUBBING CUT AREA = 53.3 SQ FT
ADT'L CUT AREA = 3.84 SQ FT
ACCESS ROAD FILL AREA = 129.7 SQ FT

FORWARD STATION (OPTION 1 – FLOATS):
CUT AREA = 40.9 SQ FT
A–ROCK AREA = 8.52 SQ FT
B–ROCK AREA = 14.7 SQ FT
BASE COURSE AREA = 21.3 SQ FT



STA 13+85

0 20' 40'
SCALE: 1"=20'

NOT FOR CONSTRUCTION

IF SHEET DOES NOT MEASURE 22" x 34" IT IS AN ALTERED SCALE PRINT. ADJUST SCALE ACCORDINGLY.

DQC

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. ____ STATE ____
CONTRACTOR ____ CITY ____
Recommended: ____ Date: ____
PRIME CONTRACTOR
Approved: ____ Date: ____
RESIDENT ENGINEER

Description	Date	Apprvd
Sym	Action	

Designed: RCT
Drawn: RCT
Prepared: K. Ebbers — Plan Sheet — Section
Submitted: C. Boroski — Branch
Chief: — Division — Branch
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

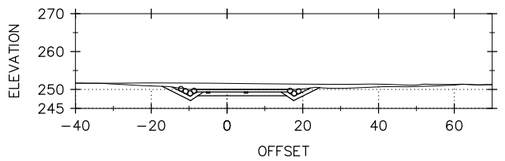
Date: 12 APR, 2012
Dwg Scale: AS NOTED
Plot Scale: 1:2
File: TEMPLATE—CW
Drawing # 5-NON-750-87-01
INV. NO. W911KB-12-B-00xx
AKV291

NONDALTON, ALASKA
LAUNCH RAMP
CIVIL
SECTIONS
OPTION 1 – RAMP & PARKING SECTIONS III

Reference number:
C-304
Sheet 9 of 16

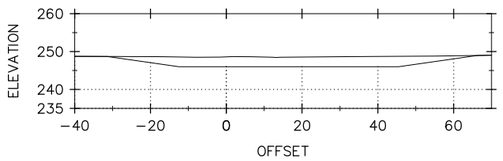
Drawing X:\UNIFIED\EN-CW\Jobs\AKV291\Dwgs\C-304 OPTION 1 – RAMP & PARKING SECTIONS III.dwg last saved on 4/12/2012 1:29 PM was plotted by Tedrick, Robert C POA on 4/12/2012 1:55 PM

OPTION 1 – BOARDING FLOATS:
CUT AREA = 171 SQ FT
A–ROCK AREA = 11.4 SQ FT
B–ROCK AREA = 18.3 SQ FT
BASE COURSE AREA = 21.3 SQ FT



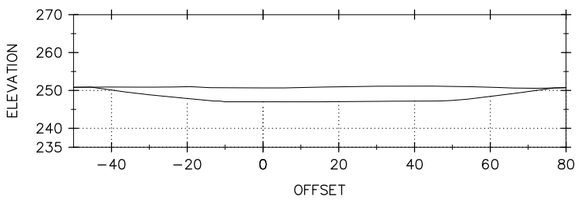
STA 14+75

OPTION 1 – BOARDING FLOATS:
CUT AREA = 211 SQ FT



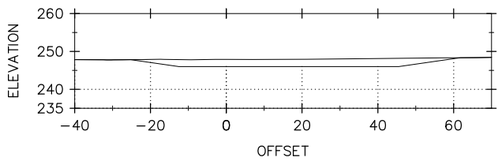
STA 15+75

OPTION 1 – BOARDING FLOATS:
CUT AREA = 421 SQ FT
A–ROCK AREA = 10.9 SQ FT
B–ROCK AREA = 17.5 SQ FT
BASE COURSE AREA = 21.3 SQ FT



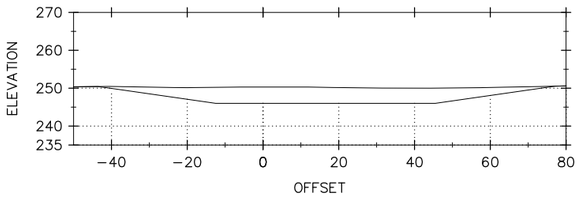
STA 15+00

OPTION 1 – BOARDING FLOATS:
CUT AREA = 148 SQ FT



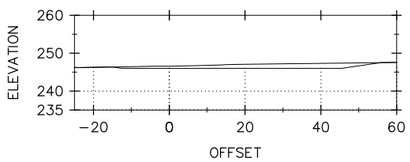
STA 16+00

OPTION 1 – BOARDING FLOATS:
CUT AREA = 368 SQ FT



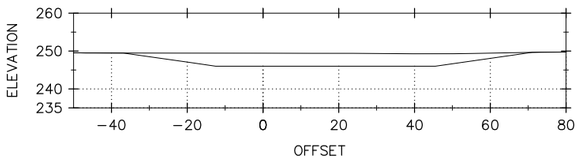
STA 15+25

OPTION 1 – BOARDING FLOATS:
CUT AREA = 63.8 SQ FT

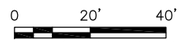


STA 16+25

OPTION 1 – BOARDING FLOATS:
CUT AREA = 279 SQ FT



STA 15+50



SCALE (UNO): 1"=20'

NOT FOR CONSTRUCTION

IF SHEET DOES NOT MEASURE 22" x 34" IT IS AN ALTERED SCALE PRINT. ADJUST SCALE ACCORDINGLY.

DQC

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. _____ STATE _____
CONTRACTOR _____
CITY _____
Recommended: _____ Date: _____
PRIME CONTRACTOR
Approved: _____ Date: _____
RESIDENT ENGINEER

Sym.	Action	Description	Date	Apprvd

Date: 12 APR, 2012
Dwg Scale: AS NOTED
Plot Scale: 1:2
File: TEMPLATE–CW
Drawing # 5–NAN–759–87–01

Designed: RCT
Drawn: RCT
Reviewed: K. Ebbers — Civil Engr. Group Chief — Section
Submitted: C. Boroski — Civil Engr. Br. Chief — Branch

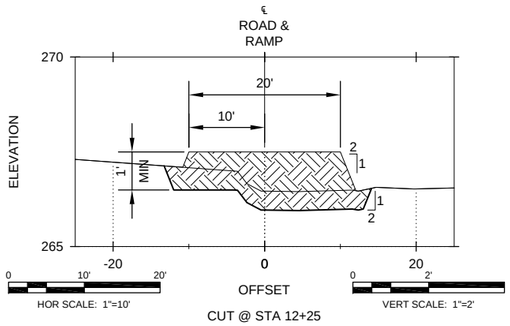
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

INV. NO. W911KB–12–B–00xx
AKV291

NONDALTON, ALASKA
LAUNCH RAMP
CIVIL
SECTIONS
OPTION 1 – RAMP & PARKING SECTIONS IV

Reference number:
C–305
Sheet 10 of 16

Drawing X:\UNIFIED\EN–CW\Jobs\AKV291\Dwgs\C–305 OPTION 1 – RAMP & PARKING SECTIONS IV.dwg last saved on 4/12/2012 1:29 PM was plotted by Tedrick, Robert C POA on 4/12/2012 1:55 PM

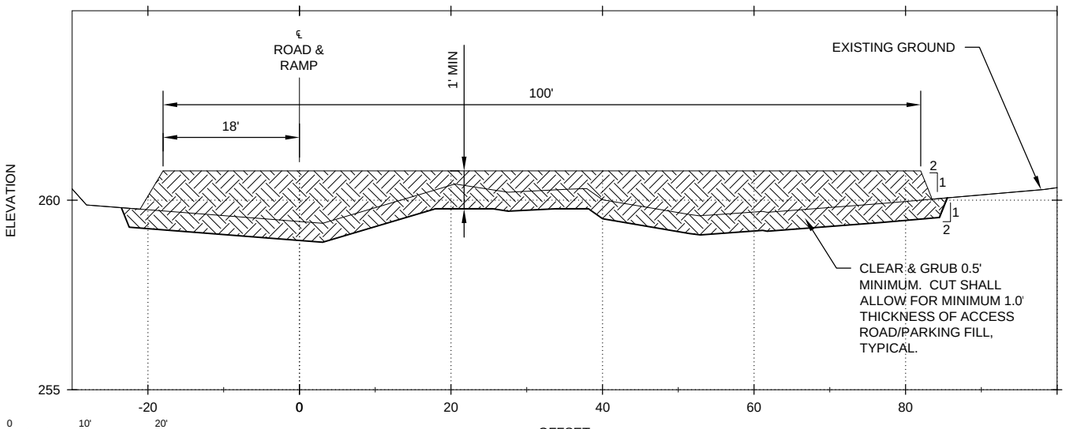


CUT @ STA 12+25

TYP ROAD X-SECTION BETWEEN APPROX STA 11+40 & 12+85 (A)

SCALE: HOR 1" = 10' & VERT 1" = 2'

C-101 C-102 C-306

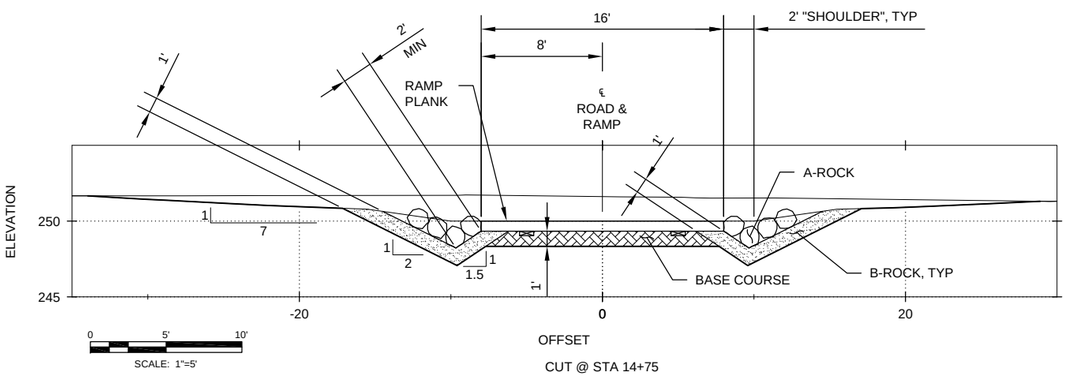


CUT @ STA 13+75

TYP PARKING X-SECTION BETWEEN STA 12+85 & 13+85 (B)

SCALE: HOR 1" = 10' & VERT 1" = 2"

C-101 C-102 C-306

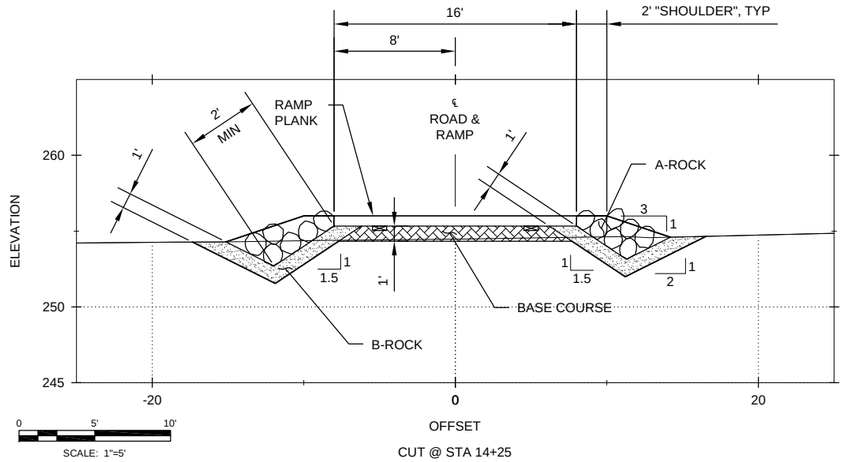


CUT @ STA 14+75

TYP RAMP X-SECTION BETWEEN APPROX STA 14+53 & STA 15+00 (D)

SCALE: 1" = 5'

C-101 C-306

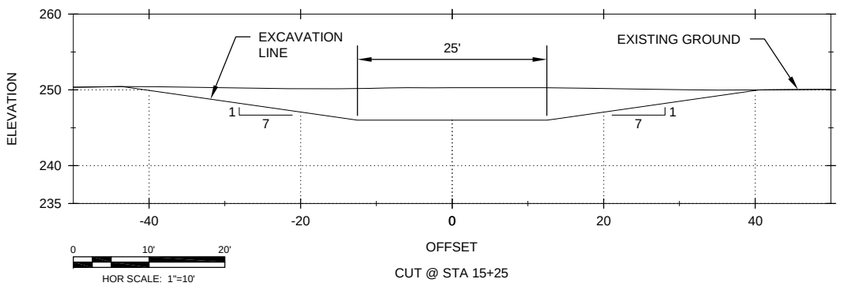


CUT @ STA 14+25

TYP RAMP X-SECTION BETWEEN STA 13+85 & APPROX STA 14+53 (C)

SCALE: 1" = 5'

C-101 C-306



CUT @ STA 15+25

TYP X-SECTION BETWEEN APPROX STA 15+08 & APPROX 16+36 (E)

SCALE: 1" = 10'

C-101 C-306

LEGEND

- ACCESS ROAD/PARKING FILL
- A-ROCK
- B-ROCK
- BASE COURSE

NOTE: CROSS SECTION FEATURES ARE SYMMETRICAL ABOUT CENTERLINE UNO

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. ____ CONTRACTOR ____ STATE ____
CITY ____
Recommended: ____ Approved: ____ Date: ____
PROJ. CONTRACTOR ____ RESIDENT ENGINEER ____

Sym	Action	Description	Date	Apprvd

Date: 12 APR, 2012
Dwg Scale: AS NOTED
Plot Scale: 1:2
File: TEMPLATE—CW
Drawing # 5-NON-750-87-01

Designed: RCT
Drawn: RCT
Reviewed: K. Ebbers — CW-Chief — Section
Submitted: C. Boroski — CW-Br — Branch
Chief, — Dsn&Const Br-CW — Branch

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

INV. NO. W911KB—12—B—00xx AKV291

NONDALTON, ALASKA
LAUNCH RAMP
CIVIL
SECTIONS
TYPICAL SECTIONS — BASE BID

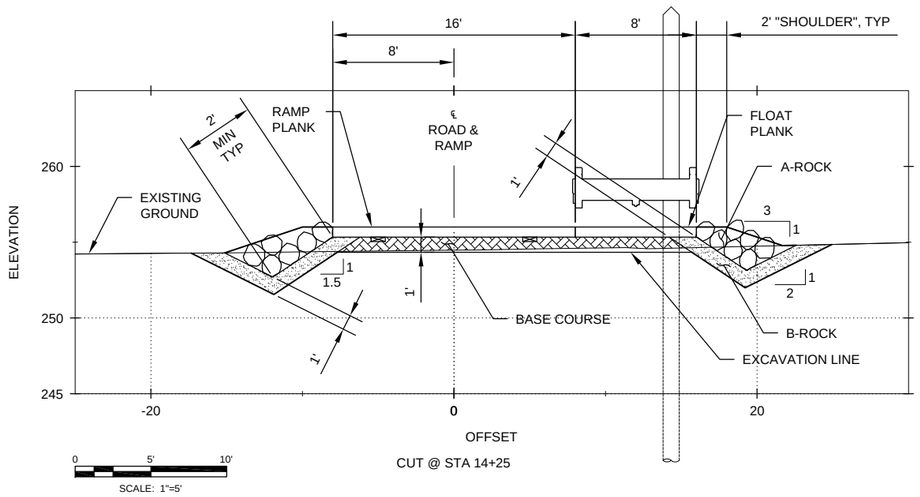
Reference number:
C-306
Sheet 11 of 16

NOT FOR CONSTRUCTION

DQC

IF SHEET DOES NOT MEASURE 22" x 34" IT IS AN ALTERED SCALE PRINT. ADJUST SCALE ACCORDINGLY.

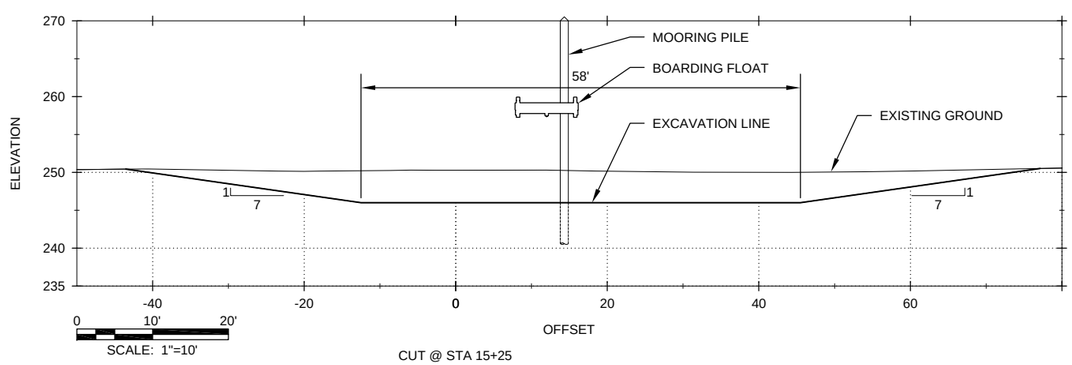
Drawing X:\UNIFIED\EN-CW\Jobs\AKV291\Dwgs\C-306 TYPICAL SECTIONS - BASE BID.dwg last saved on 4/12/2012 1:29 PM was plotted by Tedrick, Robert C POA on 4/12/2012 1:56 PM



TYP RAMP X-SECTION BETWEEN STA 13+85 & APPROX STA 14+54 (A)

SCALE: 1" = 5'

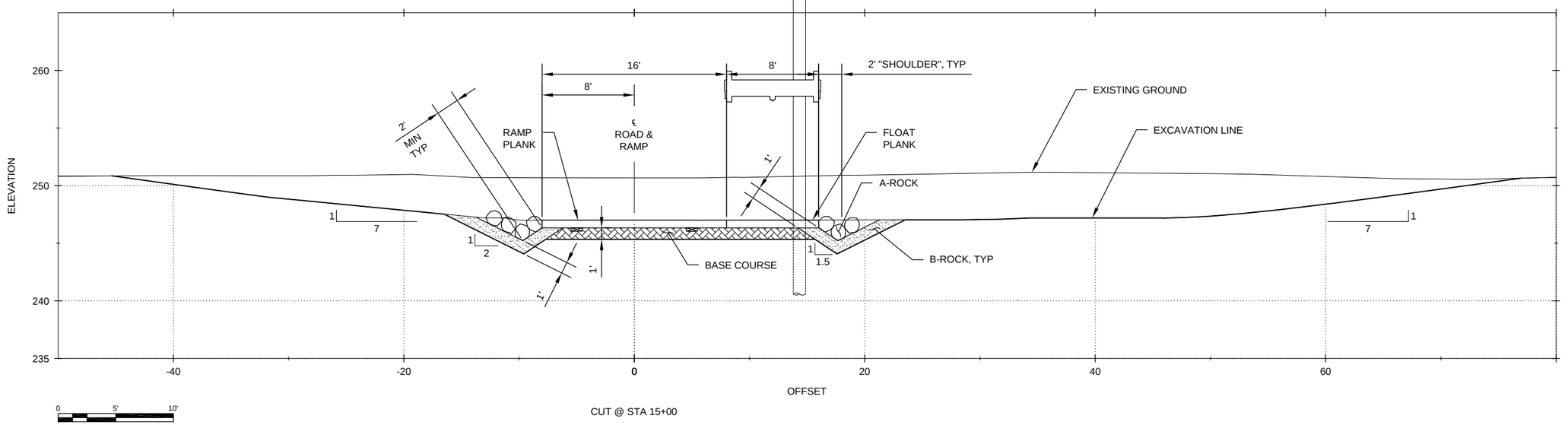
C-102 | C-307



TYP X-SECTION BETWEEN APPROX STA 15+08 & APPROX STA 16+45 (C)

SCALE: 1" = 10'

C-102 | C-307



TYP RAMP X-SECTION BETWEEN APPROX STA 14+54 & STA 15+00 (B)

SCALE: 1" = 5'

C-102 | C-307

LEGEND

- A-ROCK
- B-ROCK
- BASE COURSE

NOTE: CROSS SECTION FEATURES ARE SYMMETRICAL ABOUT CENTERLINE UNO

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. ____ CONTRACTOR ____ CITY ____ STATE ____
Recommended: ____ Approved: ____ Date: ____
PRIME CONTRACTOR ____ RESIDENT ENGINEER ____

Mark	Date	Apprvd	Description	Sym	Action

Date: 12 APR, 2012
Dwg Scale: AS NOTED
Plot Scale: 1:2
File: TEMPLATE-CW
Drawing # 5-NON-79-87-01
Designed: RCT
Drawn: RCT
Checked: K. Ebbes
Quality Check: ____
Submitted: C. Borash
Chief: ____
Section ____ Branch ____
INV. NO. W911KB-12-B-00xx
AKV291

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

NONDALTON, ALASKA
LAUNCH RAMP
CIVIL
SECTIONS
TYPICAL SECTIONS I WITH OPTION 1

Reference number:
C-307
Sheet 12 of 16

NOT FOR CONSTRUCTION

DQC

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Drawing X:\UNIFIED\EN-CW\Jobs\AKV291\Dwgs\C-307 TYPICAL SECTIONS I WITH OPTION 1.dwg last saved on 4/12/2012 1:29 PM was plotted by Tedrick, Robert C POA on 4/12/2012 1:56 PM

GENERAL NOTES AND STRUCTURAL DESIGN DATA

B. DESIGN CRITERIA

1. APPLICABLE CODES:
- AWS WELDING CODE D1.1 AND D1.4
- ACI 318M/318RM-08 AND 301
- AISC STEEL CONSTRUCTION MANUAL, LRFD 13RD EDITION

WHERE CONFLICTS EXIST, THESE DRAWINGS AND SPECIFICATIONS SHALL SUPERCEDE.

C. MATERIALS

1. ALL MATERIALS SHALL BE NEW AND PROVIDED BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

2. STRUCTURAL STEEL:
- ASTM A572 GRADE 50 OR ASTM A992 FOR WIDE FLANGE SHAPES
- ASTM A572 GRADE 50 FOR PIPE PILES
- ASTM A36 FOR PLATE, FLAT BAR, ROUND BAR, AND ANGLES
- ASTM A53, GRADE B FOR PIPE (EXCEPT PIPE PILES)

ALL STEEL FABRICATION AND ERECTION SHALL BE PER THE LATEST AWS D1.1 SPECIFICATIONS.

3. STRUCTURAL STEEL WELDING:
- PER LATEST AWS D1.1 BY WELDERS QUALIFIED PER AWS FOR THE TYPE AND POSITION OF THE WELDS. ALL FILLER METAL SHALL MEET CHARPY IMPACT CRITERIA OF 20 FT-LBS AT -20°F AND SHALL HAVE A MAXIMUM CARBON CONTENT OF 0.20%. SUBMIT WELDER QUALIFICATIONS AND WELDING PROCEDURES FOR APPROVAL.
- THE CONTRACTOR SHALL PROVIDE A CERTIFIED WELDING INSPECTOR TO INSPECT ALL SHOP & FIELD WELDS. ALL WELDS SHALL BE 100% VISUALLY INSPECTED. IN ADDITION, 10% OF ALL CJP SHOP & FIELD WELDS SHALL BE TESTED BY UT EXAMINATION, OR OTHER APPROVED METHOD, BY AN INDEPENDENT CERTIFIED WELDING INSPECTOR.
- ANY WELD FAILING INSPECTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, WHICH WILL INCLUDE THE COST FOR RETESTING. THE CONTRACTING OFFICER MAY PROVIDE ADDITIONAL INSPECTION OF SHOP AND FIELD WELDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS REQUIRED AS A RESULT OF ADDITIONAL CONTRACTING OFFICER INSPECTIONS.
- ACCEPTANCE CRITERIA FOR ALL WELD INSPECTIONS SHALL CONFORM TO AWS D1.1 CRITERIA FOR DYNAMICALLY LOADED STRUCTURES.

C. MATERIALS (CONTINUED)

4. GALVANIZING:
- ALL STEEL ITEMS (EXCEPT STAINLESS STEEL & PIPE PILES) SHALL BE HOT-DIPPED GALVANIZED, AFTER FABRICATION, PER ASTM A-123. STEEL HARDWARE INCLUDING BOLT NUTS AND WASHERS, SHALL BE GALVANIZED PER ASTM A-153. HARDWARE SHALL HAVE A COATING AS SPECIFIED IN ASTM A-153. COATINGS ON STEEL PRODUCTS SHALL HAVE A MINIMUM DRY COATING THICKNESS OF 6 MILS.
- GALVANIZING DAMAGED FROM SHIPPING, HANDLING, SHOP WELDING, SHOP CUTTING OR OTHER MEANS SHALL BE REPAIRED BY SPRAY METALIZING TO A MINIMUM DRY COATING THICKNESS OF 6 MILS, FOLLOWED BY A TOP COAT OF ZINC RICH PAINT. CONTRACTOR SHALL SUBMIT REPAIR MATERIAL AND METHOD OF REPAIRS FOR APPROVAL. SEE NOTE D.1. ON THIS SHEET FOR COATING FIELD REPAIRS.

5. SPRAY METALIZING - SPRAY METALIZING SHALL CONFORM TO SSPC, COATING GUIDE NO. "GUIDE FOR THERMAL SPRAY METALLIC COATING SYSTEM" AND TO AWS, C2.2. SURFACES SHALL BE DEGREASED AND THEN SANDBLASTED TO A SSPC SP-10, PROVIDING A PEAK TO VALLEY PROFILE OF 2 TO 4 MILS. FLAME-SPRAY OR ARC-SPRAY ZINC OR ZINC-ALUMINUM ALLOY COATING TO A MINIMUM DRY COATING THICKNESS OF 10 MILS. METALIZER SHALL SUBMIT THERMAL SPRAY JOB CONTROL RECORD (TSJCR) INCLUDING FINAL QUALITY CONTROL REPORTS FOR APPROVAL.

D. FIELD REPAIRS

1. GALVANIZED/METALIZED COATING FIELD REPAIR - FIELD REPAIR OF FIELD WELDS OR OTHER DAMAGED AREAS SHALL CONFORM TO ASTM A780, USING ZINC-BASE SOLDERS, SUCH AS "GALV-STICK" OR APPROVED EQUAL, FOLLOWED BY A TOP COAT OF ZINC RICH PAINT. REPAIR SHALL FOLLOW PROCEDURES INDICATED IN ASTM A780, ANNEX A1, AND IN CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

2. FIELD WELDING - PREHEAT STEEL TO A MINIMUM 50°F TO DRIVE OFF MOISTURE AND WI PER AWS D1.1.

ABBREVIATIONS - ALL DRAWINGS

@	AT
#	NUMBER
&	AND
2L	DOUBLE ANGLE
℄	CENTERLINE
Ø	DIAMETER, ROUND
AB	ANCHOR BOLT
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AKDOT	ALASKA DEPARTMENT OF TRANSPORTATION
APPROX	APPROXIMATELY
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
BJ	BAR JOIST
BLDG	BUILDING
BOTT	BOTTOM
BP	BASE PLATE
C	AMERICAN STANDARD CHANNELS
CHKR	CHECKER
CIP	CAST IN PLACE
CJP	COMPLETE JOINT PENETRATION
CL	CENTERLINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
CONN(S)	CONNECTION(S)
CONT	CONTINUOUS
COORD'S	COORDINATES
CP	COMPLETE PENETRATION
CSC	COUNTERSINK
DET(S)	DETAIL(S)
DICA	DRILL-IN-CONCRETE-ANCHOR
DIST	DISTANCE
DO	DITTO
DWG(S)	DRAWING(S)
(E)	EXISTING
EA	EACH
EF	EACH FACE
EL	ELEVATION, EARTHQUAKE LOAD
EW	EACH WAY
EXP	EXPANSION
f`c	COMPRESSIVE STRENGTH
FAB	FABRICATION
FBW	FLOATING BREAKWATER
FF	FINISH FLOOR
FIO	FOR INFORMATION ONLY
FLR	FLOOR
FRT	FIRE RETARDANT TREATED
FS	FAR SIDE
GALV	GALVANIZED
H	HIGH
HAS	HEADED ANCHOR STUD
HDG	HOT-DIPPED GALVANIZED
HGT	HEIGHT
HOR	HORIZONTAL
HS	HIGH-STRENGTH
HSB	HIGH-STRENGTH BOLT
HSS	HOLLOW STRUCTURAL SECTION
INT	INTERIOR
JT	JOINT
JST	JOIST
K-FT	KIP-FEET
KIP	1,000 POUNDS
kN	KILONEWTON(S)
L	ANGLE, LONG
LBS	POUNDS
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
LSL	LONG-SLOTTED HOLE
M	STEEL SHAPE FROM THE MISCELLANEOUS SECTION
MAX	MAXIMUM
MBR(S)	MEMBERS(S)
MILS	THOUSANDTHS OF AN INCH
MIN	MINIMUM
MISC	MISCELLANEOUS
MPa	MEGAPASCAL(S)
MPH	MILES PER HOUR
MT	STRUCTURAL TEE FROM THE M SERIES SECTION
N	NORTH
NIC	NOT IN CONTRACT
NO.	NUMBER
NOM	NOMINAL
NS	NEAR SIDE
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPP	OPPOSITE
OVS	OVERSIZED HOLES
PC	POINT OF CURVATURE
PJP	PARTIAL JOINT PENETRATION
PL	PLATE(S)
PLF	POUNDS PER LINEAR FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
R	RADIUS
RBW	RUBBLEMOUND BREAKWATER
REBAR	REINFORCING STEEL BAR(S)
REINF	REINFORCING, REINFORCEMENT,
REINFORCED REQD	REQUIRED
RO	ROUGH OPENING
RP	RADIUS POINT
S	AMERICAN STANDARD STEEL SHAPE, SOUTH SPACING
SCHED	SCHEDULE
SECT	SECTION
SHT	SHEET
SIM	SIMILAR
SLH	SHORT LEG HORIZONTAL
SLV	SHORT LEG VERTICAL
SOG	SLAB ON GRADE
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
SSL	SHORT-SLOTTED HOLE
ST	STRUCTURAL TEE FROM THE S SERIES SECTION
STD	STANDARD
STL	STEEL
SYM	SYMMETRICAL
T	TOP
T&B	TOP & BOTTOM
THK	THICK(NESS)
THRU	THROUGH
TOC	TOP OF CONCRETE
TRANS	TRANSVERSE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UHMW-PE	ULTRA HIGH MOLECULAR WEIGHT POLYETHYLENE
USACE	U.S. ARMY CORPS OF ENGINEERS
VERT	VERTICAL
W	W SERIES SECTION, WEST, WIDE
W/	WITH
W/O	WITHOUT
WL	WORK LINE
WP	WORK POINT
WT	WEIGHT, STRUCTURAL TEE FROM W SERIES SECTION
WWF	WELDED WIRE FABRIC
YD	YARD
YD^3	CUBIC YARD

NOT FOR CONSTRUCTION

DQC

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US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. _____ CONTRACTOR _____ CITY _____ STATE _____
Recommended: _____ Date: _____
PRIME CONTRACTOR
Approved: _____
RESIDENT ENGINEER

No.	Description	Date	Appvd

Spec. Action

Designed: RCT
Drawn: RCT
Reviewed: K. Eades
Project Manager: C. Boroth
Submitted: C. Boroth
Chief, ---- Branch
Date: 12 APR, 2012
Dwg Scale: AS NOTED
Plot Scale: 1:2
File: TEMPLATE_ST
Drawing # 5-NON-750-87-01

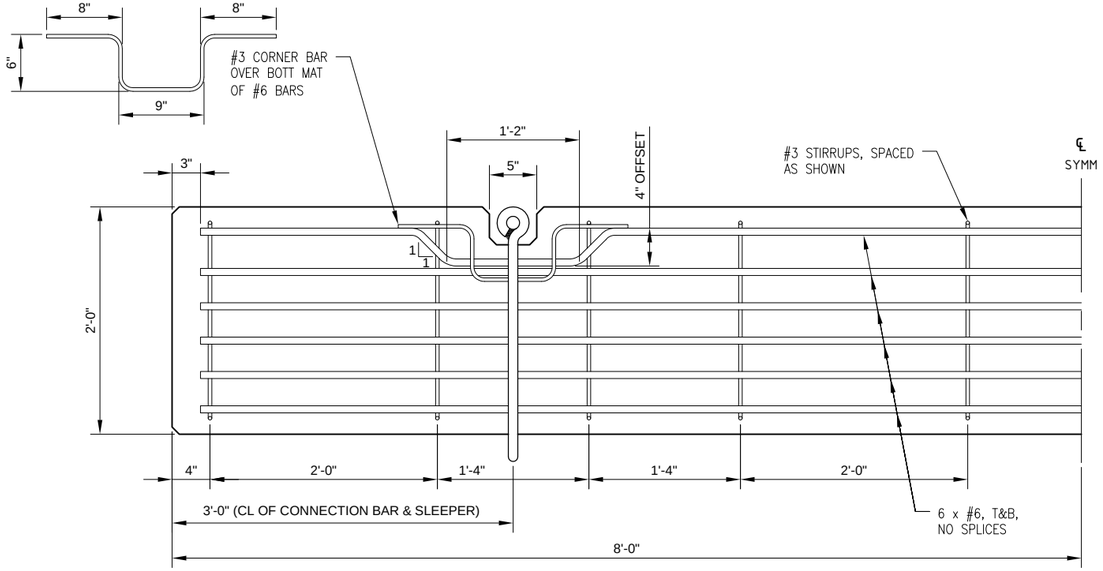
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

INV. NO. W911KB-12-B-00xx AKV291

NONDALTON, ALASKA
LAUNCH RAMP
STRUCTURAL
GENERAL
GENERAL NOTES & ABBREVIATIONS

Reference number:
S-001
Sheet 13 of 16

Drawing X:\UNIFIED\EN-CW\Jobs\AKV291\Dwgs\S-001 GENERAL NOTES & ABBREVIATIONS.dwg last saved on 4/12/2012 1:29 PM by Tedrick, Robert C POA on 4/12/2012 1:56 PM

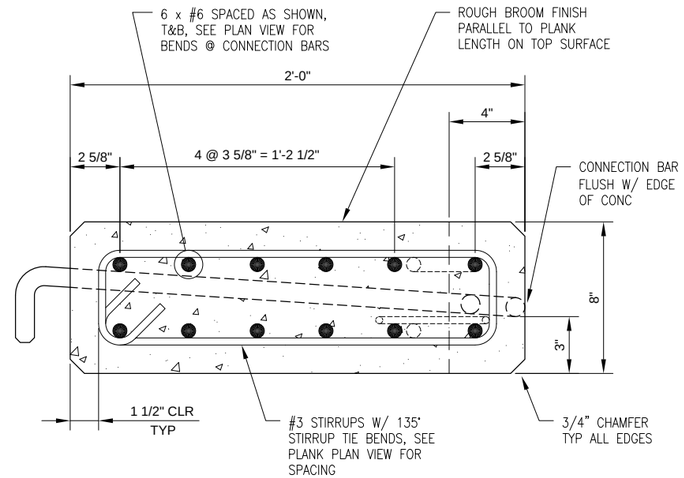


VIEW SHOWN IS A SECTION TAKEN BELOW THE TOP MAT OF BARS

CONC RAMP PLANK PLAN VIEW (A)

SCALE: 1 1/2" = 1'-0"

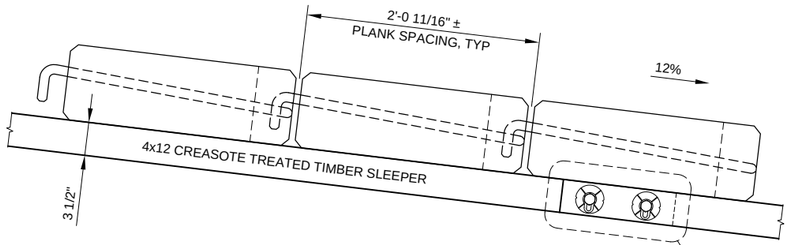
C-301 | S-501



PLANK SECTION (B)

SCALE: 3" = 1'-0"

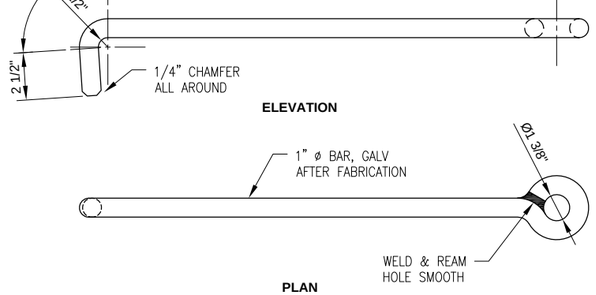
S-501 | S-501



TYPICAL PLANK ASSEMBLY (C)

SCALE: 1 1/2" = 1'-0"

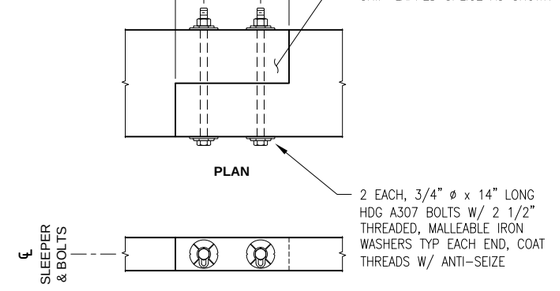
S-501 | S-501



CONNECTION BAR (D)

SCALE: 3" = 1'-0"

S-501 | S-501



SLEEPER SPLICE DETAILS (E)

SCALE: 1 1/2" = 1'-0"

S-501 | S-501

IF SHEET DOES NOT MEASURE 22" x 34" IT IS AN ALTERED SCALE PRINT. ADJUST SCALE ACCORDINGLY.

NOT FOR CONSTRUCTION

DQC

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. _____ STATE _____
CONTRACTOR _____ Date: _____
CITY _____ Approved: _____
Recommended: _____ RESIDENT ENGINEER
PRIME CONTRACTOR

Description	Date	Apprvd
Sam Action		

Date: 12 APR, 2012
Dwg Scale: AS NOTED
Plot Scale: 1:2
File: TEMPLATE_-ST
Drawing # 5-NON-750-87-01

Designed: RCT
Drawn: RCT
Reviewed: K. Ebbers
Checked: C. Boroth
Submitted: C. Boroth
Chief, ---CE/QA-Ec-CW--- Branch

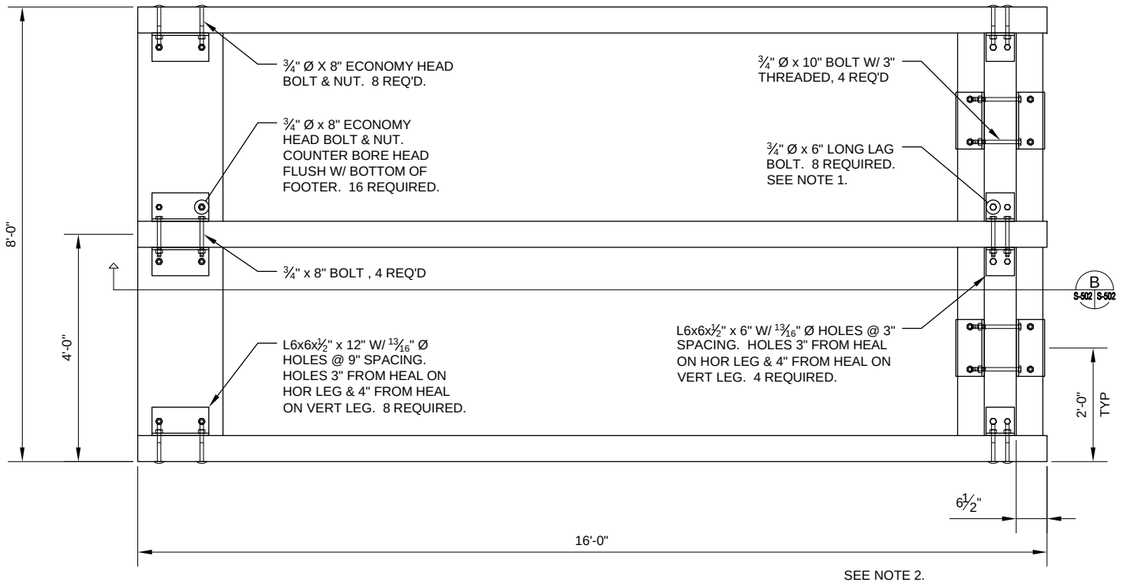
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

INV. NO. W911KB-12-B-00xx
AKV291

NONDALTON, ALASKA
LAUNCH RAMP
STRUCTURAL
DETAILS
RAMP PLANK DETAILS

Reference number:
S-501
Sheet 14 of 16

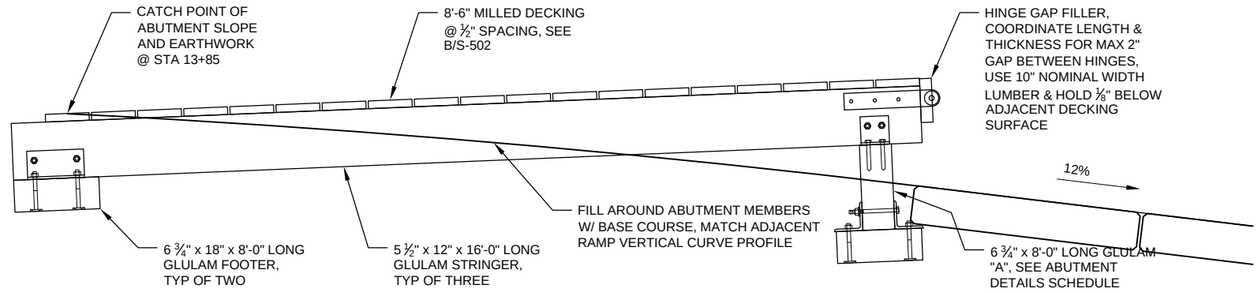
Drawing X:\UNIFIED\EN-CW\Jobs\AKV291\Dwgs\S-501 RAMP PLANK DETAILS.dwg last saved on 4/12/2012 1:29 PM was plotted by Tedrick, Robert C POA on 4/12/2012 1:56 PM



TIMBER ABUTMENT FRAMING PLAN

SCALE: 3/4" = 1'-0"

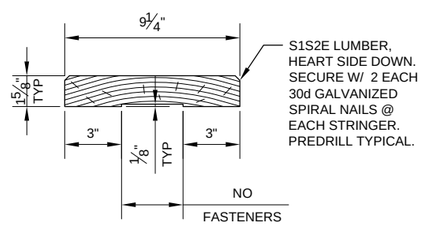
A C-301 S-502



TIMBER ABUTMENT SECTION

SCALE: 3/4" = 1'-0"

B S-502 S-502



MILLED DECKING DETAIL

SCALE: 3" = 1'-0"

B S-502 S-502

ABUTMENT DETAILS SCHEDULE		
FLOAT SKID TO DECK HGT	ABUTMENT SLOPE	GLULAM "A" HGT
2'-0"	4.72 %	19 1/2"
2'-6"	8.09 %	25 1/2"
3'-0"	11.44 %	31 1/2"
3'-6"	14.79 %	37 1/2"

NOTES:

1. LEAD HOLES FOR LAG SCREWS SHALL BE BORED AS FOLLOWS:
   a. THE CLEARANCE HOLE FOR THE SHANK SHALL HAVE THE SAME DIAMETER AS THE SHANK, AND THE SAME DEPTH OF PENETRATION AS THE LENGTH OF THE UNTHREADED SHANK.
   b. THE LEAD HOLE FOR THE THREADED PORTION SHALL HAVE A DIAMETER OF 7/16" AND A LENGTH EQUAL TO AT LEAST THE LENGTH OF THE THREADED PORTION.
   c. SOAP SHALL BE USED TO LUBRICATE THE LAG SCREWS AND/OR LEAD HOLES TO FACILITATE INSERTION AND TO PREVENT DAMAGE TO THE LAG SCREWS.
   d. THE THREADED PORTION OF THE LAG SCREW SHALL BE INSERTED IN ITS LEAD HOLE BY TURNING, NOT BY DRIVING.
2. BOLT HOLES IN TIMBER MEMBERS SHALL BE SIZED ⅛" LARGER THAN THE BOLT DIAMETER UNLESS NOTED OTHERWISE.
3. BOARDING FLOATS SHALL BE MANUFACTURED BY A COMPANY REGULARLY ENGAGED IN THE DESIGN AND MANUFACTURE OF BOARDING FLOATS SIMILAR IN SCOPE AND MAGNITUDE TO THOSE REQUIRED FOR THIS PROJECTS. SPECIFIC REQUIREMENTS ARE AS FOLLOWS:
   a. NOMINAL DIMENSION OF 8' WIDTH x 200' LENGTH WITH A MINIMUM OF 5 SEPARATE FLOAT MODULES (NOTE THAT DRAWINGS ARE SCHEMATIC AND SHOW 10 MODULES).
   b. MODULES SHALL HAVE INTEGRAL, INBOARD PILE SLEEVES THAT ALLOW MODULES TO BE DETACHED FROM THE MOORING PILES WITHOUT THE USE OF LIFTING EQUIPMENT. A HINGED OR GATED PILE SLEEVE AT THE END OF THE MODULES IS ADEQUATE FOR THIS PURPOSE. PILE SLEEVE ROLLERS SHALL BE UHMW PE WITH BLACK ULTRA-VIOLET LIGHT INHIBITOR ADDED.
   c. MODULES SHALL BE DESIGNED TO SURVIVE A 4' WAVE WITH 3.5 SECOND PERIOD WITHOUT SUSTAINING IRREPARABLE DAMAGE. DAMAGE FROM THIS MAGNITUDE EVENT SHOULD BE LIMITED TO REPLACEABLE COMPONENTS. MODULES SHALL BE DESIGNED TO REMAIN IN SERVICE WITH WAVES UP TO 2' WITH 2.5 SECOND PERIOD. LIGHT DUTY "RESIDENTIAL" FLOAT SYSTEMS SHALL NOT BE ACCEPTABLE.
   d. FLOATS SHALL BE PROVIDED WITH SKIDS WHICH PROTECT THE FLOATS WHEN RESTING ON THE GROUND, BOTH DURING WINTER STORAGE AND DURING PERIODS OF LOW WATER.
   e. FLOATS SHALL BE PROVIDED WITH SLOTS TO ACCOMMODATE LIFTING WITH A FORKLIFT.
   f. FLOATS SHALL CARRY A 40 PSF LIVE LOAD AND MAINTAIN 8" OF FREEBOARD.
   g. MODULES SHALL BE A CUSTOM PRODUCT OF GATOR DOCK/CRANE MATERIALS INTERNATIONAL, OR ENGINEER APPROVED EQUAL.
   h. SUBMIT PRODUCT DATA AND SHOP DRAWINGS FOR ENGINEER APPROVAL.

NOT FOR CONSTRUCTION

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DQC

US ARMY CORPS OF ENGINEERS ALASKA DISTRICT

CONTRACT NO. _____ CONTRACTOR _____ CITY _____ STATE _____
Recommended: _____ Date: _____ PRIME CONTRACTOR
Approved: _____ RESIDENT ENGINEER

Sym	Action	Description	Date	Apprvd

Date: 12 APR, 2012
Dwg Scale: AS NOTED
Plot Scale: 1:2
File: TEMPLATE_ST
Drawing # 5-NON-750-87-01

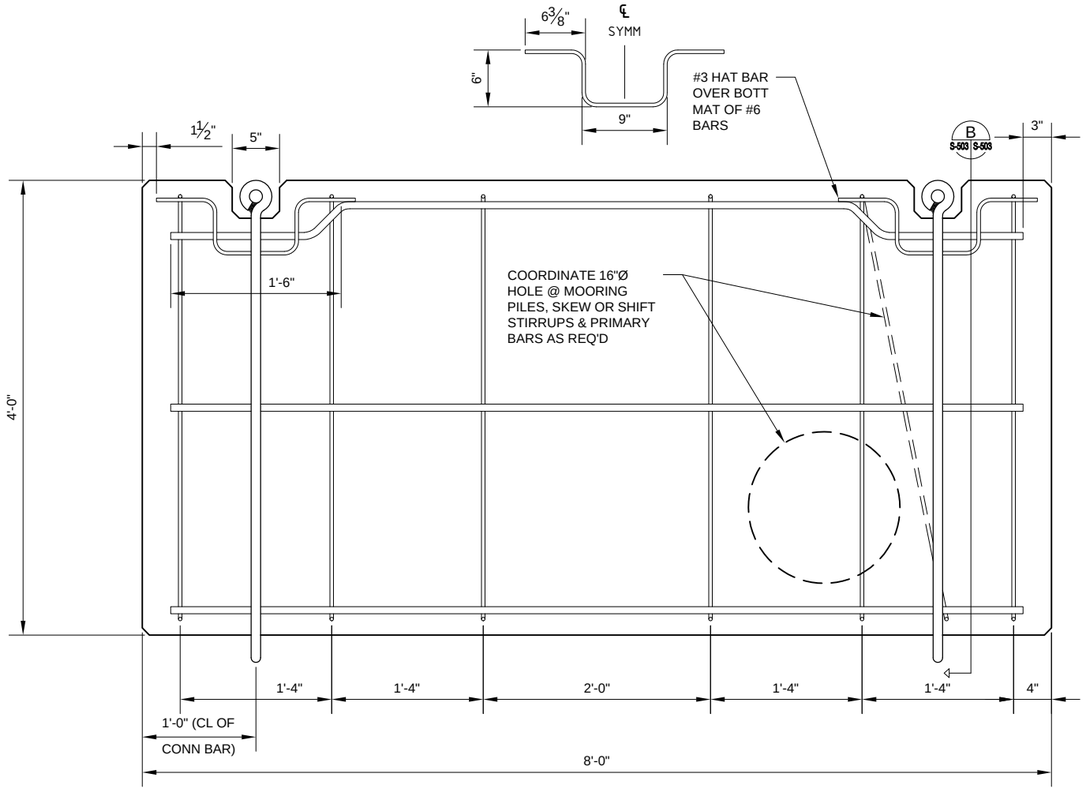
Designed: RCT
Drawn: RCT
Reviewed: K. Ebbes
Quality Assurance: C. Borgish
Submitted: C. Borgish
Chief: CEPOA-EN-CW

INV. NO. W911KB-12-B-00xx
AKV291

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

NONDALTON, ALASKA
LAUNCH RAMP
STRUCTURAL
DETAILS
OPTION 1 BOARDING FLOAT DETAILS

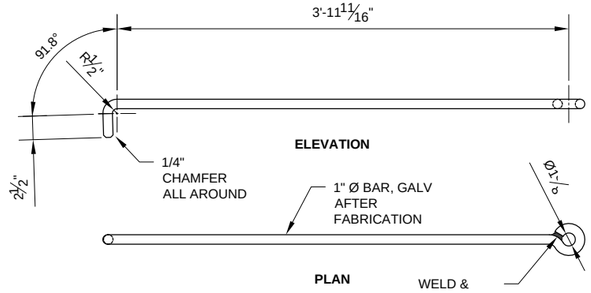
Reference number:
S-502
Sheet 15 of 16



CONC FLOAT PLANK PLAN VIEW (A)

SCALE: 1 1/2" = 1'-0"

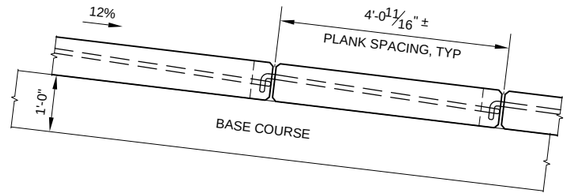
C-301 | S-503



CONNECTION BAR (C)

SCALE: 1 1/2" = 1'-0"

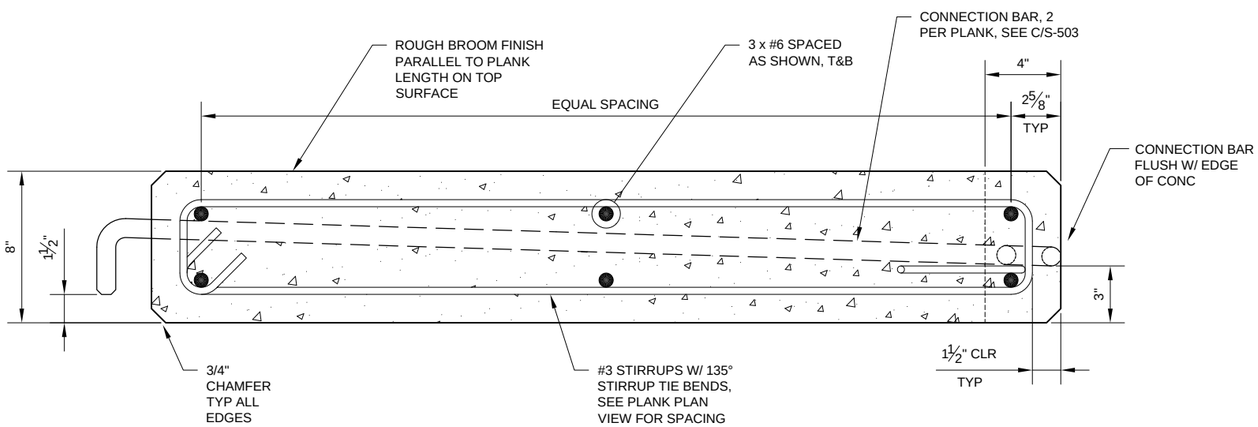
S-503 | S-503



TYPICAL PLANK ASSEMBLY (D)

SCALE: 3/4" = 1'-0"

S-503 | S-503



PLANK SECTION (B)

SCALE: 3" = 1'-0"

S-503 | S-503

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. _____ STATE _____
CONTRACTOR _____ Date: _____
CITY _____ Approved: _____
Recommended: _____ RESIDENT ENGINEER
Final CONTRACTOR

Date	Description	Apprvd
Sym	Action	

Date: 12 APR, 2012
Dwg Scale: AS NOTED
Plot Scale: 1:2
File: TEMPLATE_ST
Drawing # 5-NON-750-87-01

Designed: RCT
Drawn: RCT
Reviewed: K. Esmas
Checked: C. Boroth
Submitted: C. Boroth
Chief, CEPOA-EC-CW

"As-Built" Section
Branch
Branch

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

INV. NO. W911KB-12-B-00xx
AKV291

NONDALTON, ALASKA
LAUNCH RAMP
STRUCTURAL
DETAILS
OPTION 1 FLOAT PLANK DETAILS

Reference number:
S-503
Sheet 16 of 16

NOT FOR CONSTRUCTION

DQC

IF SHEET DOES NOT MEASURE 22" x 34" IT IS AN ALTERED SCALE PRINT. ADJUST SCALE ACCORDINGLY.

Drawing X:\UNIFIED\EN-CW\Jobs\AKV291\Dwgs\S-503 OPTION 1 FLOAT PLANK DETAILS.dwg last saved on 4/12/2012 1:29 PM was plotted by Tedrick, Robert C POA on 4/12/2012 1:57 PM