
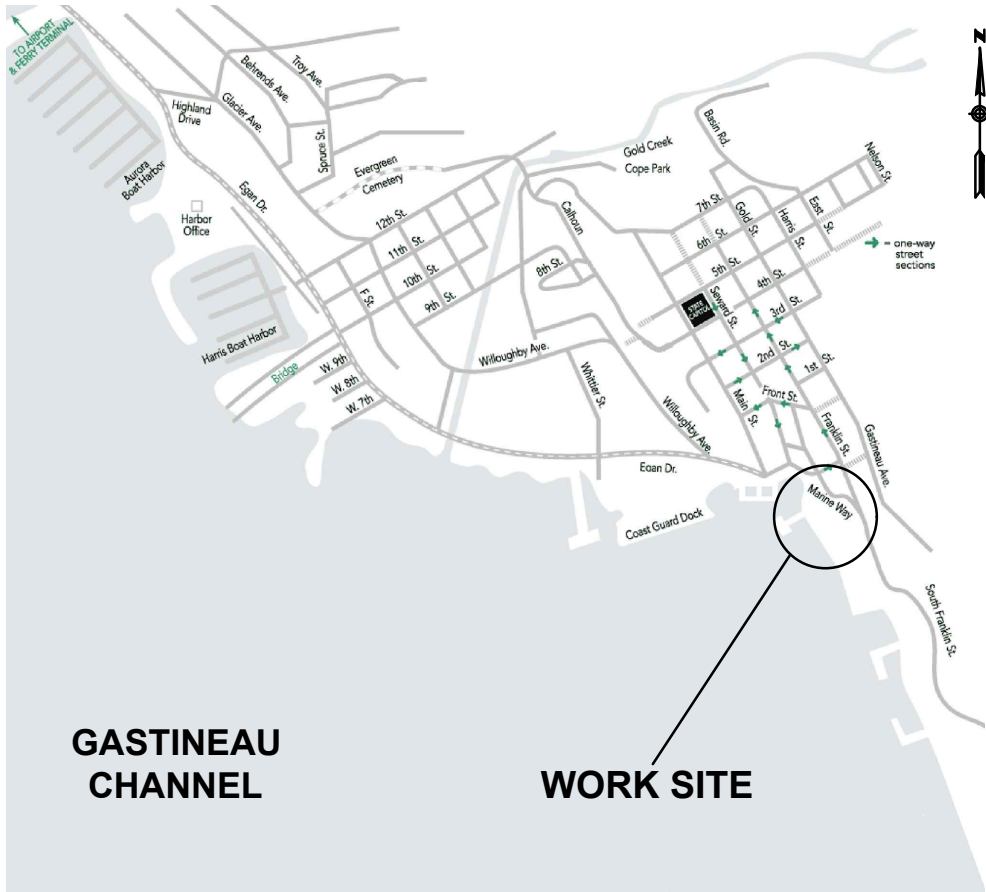





CITY & BOROUGH OF JUNEAU
DOWNTOWN WATERFRONT FACILITIES
CORROSION CONTROL PROJECT
CBJ Contract No. BE18-163

Juneau, Alaska

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DESCRIPTION	SHEET NO.	 <p>CANADA</p> <p>JUNEAU</p> <p>PACIFIC OCEAN</p>	 <p>GASTINEAU CHANNEL</p> <p>WORK SITE</p>
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		<div><p>DATE 03/16/2018</p><div><p>Tinnea & Associates, LLC</p><p>2018 East Union Street Seattle, WA 98122-2836 Phone: 206-328-7872 Fax: 206-328-7916 www.tinnea.net</p></div><div><p>CITY/BOROUGH OF JUNEAU ALASKA'S CAPITAL CITY DEPARTMENT OF ENGINEERING</p></div></div>	
		C001	

ABBREVIATIONS

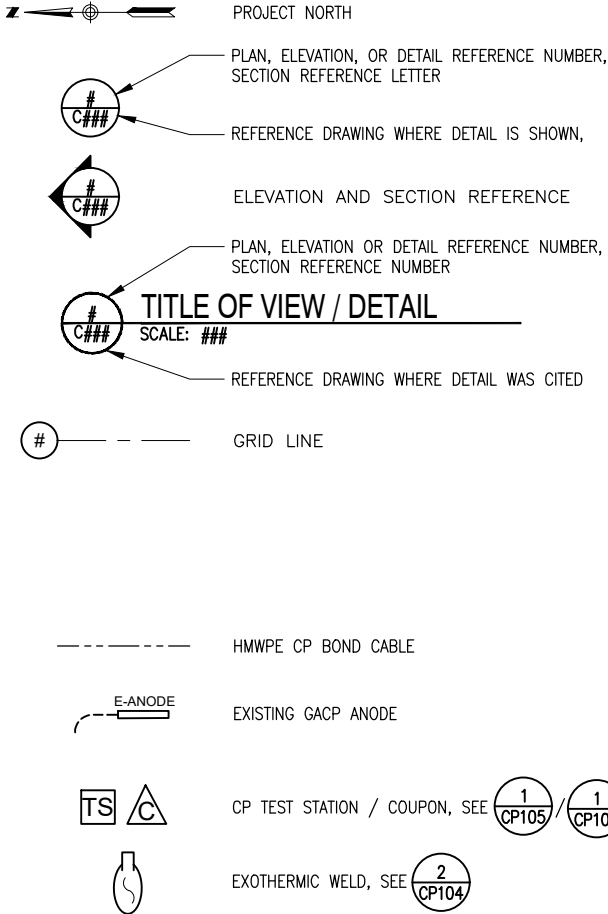
&	AND
∠	ANGLE
@	AT
CL	CENTERLINE
∅	DIAMETER
#	NUMBER
PL	PLATE
±	PLUS OR MINUS
AMP	AMPERE
ABV	ABOVE
AC	ALTERNATING CURRENT
AC	ARMORED CABLE
ADDL	ADDITIONAL
ADJ	ADJACENT
ALT	ALTERNATE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPD	APPROVED
APPROX	APPROXIMATE
APPX	APPENDIX
ASM	ASM INTERNATIONAL
ASTM	ASTM INTERNATIONAL
AUX	AUXILLARY
AVG	AVERAGE
AWS	AMERICAN WELDING SOCIETY
BAT	BATTERY
BDRY	BOUNDARY
BF	BOTH FACES
BITUM	BITUMINOUS
BKG	BACKING
BLT	BUILT
BM	BEAM
BOT	BOTTOM
BRCG	BRACING
CBJ	CITY AND BOROUGH OF JUNEAU
CD	CONSTRUCTION DOCUMENTS
CERT	CERTIFY
CHK	CHECK
CIRC	CIRCULAR
CL	CENTERLINE
CLL	CONTRACT LIMIT LINE
CLR	COLOR
CMP	CORRUGATED METAL PIPE
CNCL	CONCEALED
CND	CONDUIT
CNR	CORNER
COL	COLUMN
COM	COMMON
COMPL	COMPLETE
CONC	CONCRETE
COND	CONDITION
CONN	CONNECTION
CONSTR	CONSTRUCTION
CONSULT	CONSULTANT
CONT	CONTINUE / CONTINUOUS
CONTR	CONTRACTOR
CP	CATHODIC PROTECTION
CPLG	COUPLING
CSP	CONCRETE SEWER PIPE
CTD	COATED
CTG	COATING
CTR	CENTER
CU	COPPER
D&H	DOCKS AND HARBORS
DBL	DOUBLE
DC	DIRECT CURRENT
DEF	DEFINTION
DEG	DEGREE
DEG F	DEGREE FAHRENHEIT
DEL	DELETE
DEMO	DEMOLITION(S)
DEPT	DEPARTMENT
DET	DETAIL
DIA	DIAMETER
DIAG	DIAGONAL
DIFF	DIFFERENCE
DIM	DIMENSION
DIST	DISTANCE
DIV	DIVISION

DOC	DOCUMENT
DTR	DETOUR
DWVG	DRAWING
E	EAST
EA	EACH
EE	EACH END
EF	EACH FACE
EL, ELEV	ELEVATION
ELAST	ELASTIC / ELASTOMERIC
ELEC	ELECTRICAL
EMBD	EMBEDDED
ENCL	ENCLOSURE
ENGR	ENGINEER
EP	ELECTRICAL PANEL
EPA	ENVIRONMENTAL PROTECTION AGENCY
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EQ	EQUAL
EQL SP	EQUALLY SPACED
ES	EACH SIDE
EST	ESTIMATE(D)
ETC	AND SO FORTH, ET CETERA
EW	EACH WAY
EXH	EXHIBIT
EXIST	EXISTING
EXT	EXTERIOR
FAB	FABRICATION
FHWA	FEDERAL HIGHWAY ADMINISTRATION
FIL	FILLET
FLEX	FLEXIBLE
FLG	FLANGE
FRG	FIBERGLASS
FRP	FIBERGLASS REINFORCED PLASTIC
FS	FULL SCALE
FSTNR	FASTENER
FT	FOOT
FT-LB	FOOT-POUND
FWRK	FORMWORK
GA	GAGE
GACP	GALVANIC ANODE CP
GAL	GALLON
GALV	GALVANIZED
GEN COND	GENERAL CONDITIONS
GFCI	GROUND FAULT CURRENT INTERRUPTER
GOVT	GOVERNMENT
GRTG	GRATING
HAZ	HAZARD
HAZ MAT	HAZARDOUS MATERIALS
HEPA	HIGH EFFICIENCY PARTICULATE AIR (FILTER)
HEX	HEXAGON / HEXAGONAL
HD	HEAVY DUTY
HDPE	HIGH DENSITY POLYETHYLENE
HMWPE	HIGH MOLECULAR WEIGHT POLYETHYLENE
HORIZ	HORIZONTAL
HP	H-PILE
HVY	HEAVY
HZ	HERTZ
ICCP	IMPRESSED CURRENT CP
ID	INSIDE DIAMETER
ID NO	IDENTIFICATION NUMBER
IN	INCH
IN CU	CUBIC INCH
IN-LB	INCH-POUND
INCL	INCLUDED(ING)
INSTL	INSTALL
INT	INTERIOR
INV	INVERT
IRREG	IRREGULAR
IT	ISOLATION TRANSFORMER
J-BOX	JUNCTION BOX
JNT	JOINT
K	KILO (THOUSAND)
LAB	LABORATORY
LB	POUND (WEIGHT)
LF	LINEAR FEET (FOOT)
LIN	LINEAR
LOC	LOCATION
LONG	LONGITUNDIAL
LP	LIGHT POLE
LRG	LARGE
LS	LUMP SUM
mA	MILLIAMPERE
MAINT	MAINTENANCE
MATL	MATERIAL
MAX	MAXIMUM
MEAS	MEASURE(MENT)
MECH	MECHANICAL

MED	MEDIUM
MFD	MANUFACTURED
MFR	MANUFACTURER
MFR REC	MANUFACTURER'S
MGT	MANAGEMENT
MH	MANHOLE
MHHW	MEAN HIGH HIGH WATER
MHW	MEAN HIGH WATER
MID	MIDDLE
MIL	0.001 INCH
MIN	MINIMUM
MKR	MARKER
MLLW	MEAN LOW LOW WATER
MLW	MEAN LOW WATER
MOD	MODEL
ms	MILLISECOND
MSDS	MFR SAFETY DATA SHEET
MSL	MEAN SEA LEVEL
MTG	MEETING
MTL	MATERIAL
MULT	MULTIPLE
mV	MILLIVOLT
N	NORTH
NA	NOT APPLICABLE
NACE	NACE INTERNATIONAL
NEC	NATIONAL ELECTRIC CODE
NEG	NEGATIVE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NIC	NOT IN CONTRACT
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NM	NON-METALLIC
NO	NUMBER
NOM	NOMINAL
NORM	NORMAL
NP	NO PAINT
NPT	NATIONAL PIPE THREAD
NTP	NOTICE TO PROCEED
NTS	NOT TO SCALE
NUM	NUMERAL
OC	ON CENTER
OPNG	OPENING
OPP	OPPOSITE
ORD	ORDNANCE
ORIG	ORIGINAL
ORNT	ORIENTATE(ION)
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
OZ	OUNCE
PART	PARTIAL
PB	PANELBOARD
PB	PULL BOX
PCT	PERCENT
PED	PEDISTAL
PERM	PERMINATE
PERP	PERPENDICULAR
PL	PROPERTY LINE
PN	PART NUMBER
PNL	PANEL
PO	PURCHASE ORDER
POS	POSITIVE
POW LN	POWER LINE
PPM	PARTS PER MILLION
PPT	PARTS PER THOUSAND
PREFAB	PREFABRICATE
PRELIM	PRELIMINARY
PREP	PREPARE / PREPARTION
PREV	PREVIOUS
PRI	PRIMARY
PRIN	PRINCIPAL
PRKG	PARKING
PROJ	PROJECT
PROP	PROPERTY
PROV	PROVISIONAL
PSI	POUNDS PER SQUARE INCH
PU	POLYURETHANE
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
QA	QUALITY ASSURANCE
QC	QUALITY CONTROL
QCR	QUALITY CONTROL REVIEW
QM	QUALITY MANAGEMENT
QTR	QUARTER
QTY	QUANTITY
QUAL	QUALITY
R/C	REINFORCED CONCRETE
RBR	RUBBER
REBAR	REINFORCING STEEL BARS

REF	REFERENCE
REG	REGULATION
REINF	REINFORCED
REM	REMOVABLE
REP	REPAIR
REPL	REPLACE
REQ	REQUIRE
REQD	REQUIRED
REV	REVISION
RFI	REQUEST FOR INFORMATION
RFP	REQUEST FOR PROPOSAL
RND	ROUND
ROW	RIGHT-OF-WAY
RT	RIGHT
RTRC	REINF THERMOSET RESIN CONDUIT
S	SOUTH
SAMP	SAMPLE
SBSTR	SUBSTRATE
SCHED	SCHEDULE
SCHEM	SCHEMATIC
SD	SHOP DRAWINGS
SDBL	SANDBLAST (ABRASIVE BLAST)
SECT	SECTION
SEG	SEGMENT
SEP	SEPARATE
SF	SQUARE FOOT
SHT	SHEET
SIM	SIMILAR
SL	SEA LEVEL
SLNT	SEALANT
SM	SMALL
SNSR	SENSOR
SPC	SPACE(ING)
SPCL	SPECIAL
SPEC	SPECIFICATION
SQ	SQUARE
SQ-IN	SQUARE INCH
SQ-YD	SQUARE YARD
SS	SANITARY SEWER
SSPC	SOCIETY FOR PROTECTIVE COATINGS
STD	STANDARD
STA	STATION
STAG	STAGGERED
SSTL	STAINLESS STEEL
STL	STEEL
SUB	SUBSTITUTE
SURF	SURFACE
SUP	SUPPLEMENTARY
SUPVR	SUPERVISOR
SUSP	SUSPEND
SWR	SEWER
SYM	SYMETRICAL
SYS	SYSTEM
T/R	TRANSFORMER/RECTIFIER
TAB	TABULATE
TCP	TRAFFIC CONTROL PLAN
TEMP	TEMPERATURE
TEMP	TEMPORARY
THRU	THROUGH
TOC	TABLE OF CONTENTS
TEL	TELEPHONE
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
UV	ULTRAVIOLET
VERT	VERTICAL
V	VOLT
VAR	VARIES
VIC	VICINITY
VID	VIDEO
VIF	VERIFY IN FIELD
VOC	VOLITAL ORGANIC COMPOUND
VOL	VOLUME
VRFY	VERIFY
W	WEST
W/	WITH
W/O	WITHOUT
WARR	WARRANTY
WF	WIDE FLANGE
WL	WATER LINE
WLD	WELDED
WO	WORK ORDER
WP	WORK POINT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
YD	YARD
YR	YEAR
XFER	TRANSFER

SYMBOLS



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DATE 03/16/2018

WATERFRONT CORROSION CONTROL
PHASE II GACP ANODE INSTALLATION
JUNEAU, ALASKA

CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY

DEPARTMENT OF ENGINEERING

SHEET TITLE:	ABBREVIATIONS AND SYMBOLS
DATE:	03/16/2018
TAlle PROJ. No.:	1712402
CONTRACT No.:	BE18-163
SHEET	2 OF 11

C002

REVISIONS			
No.	DATE	DESCRIPTION	BY

CORROSION CONTROL NOTES

SCOPE OF WORK

THIS PROJECT INCLUDES ALL WORK NECESSARY TO INSTALL:

- A. A COMPLETE AND OPERATING GALVANIC CATHODIC PROTECTION SYSTEM ON H-PILES THAT SUPPORT THE DOWNTOWN PARKING GARAGE/LIBRARY.

THE GALVANIC CATHODIC PROTECTION INSTALLATIONS WILL INCLUDE FURNISHING AND INSTALLING ALUMINUM ALLOY GALVANIC ANODES UNDERWATER ON THE H-PILES. THE ANODES WILL BE ATTACHED BY WELDING TO THE RESPECTIVE H-PILE.

GENERAL

FIELD VERIFY EXISTING CONDITIONS PRIOR TO ORDERING MATERIALS. THIS INCLUDES THE NUMBER OF PILES, THE AREAS WHERE WORK WILL BE REQUIRED, THE PILES TO RECEIVE ANODES, AND THE WATER DEPTHS AT ALL THE LOCATIONS WERE WORK WILL OCCUR. THESE PLANS INCLUDE TABLES THAT PROVIDE ESTIMATES OF THE NUMBER OF PILING AND THE MINIMUM WEIGHT OF ALUMINUM THAT IS REQUIRED. THESE TABLES ARE BASED IN PART ON 'AS BUILT' DRAWINGS AND RECORD INFORMATION AND ACTUAL CONDITIONS MAY VARY. NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR VARIANCES PRIOR TO ORDERING MATERIALS.

THE FACILITY IS AN OPERATING PORT. ALL ON-SITE WORKERS MUST HAVE VALID TRANSPORTATION WORKER IDENTIFICATION (TWIC) CREDENTIALS AND BE ABLE TO SHOW THEM TO CBJ DOCKS AND HARBORS AND/OR COAST GUARD PERSONNEL WHEN REQUESTED. THERE WILL BE NO EXCEPTIONS TO THIS REQUIREMENT.

SUBMITTALS

SUBMITTALS ARE REQUIRED FOR THE FOLLOWING:

- A. A WORK PLAN AND SCHEDULE FOR INSTALLATION OF THE H-PILE GALVANIC ANODES, REMOVAL OF DAMAGED COATING, SURFACE PREPARATION, INSPECTIONS AND OTHER TASKS
- B. MANUFACTURER'S CERTIFICATION OF ANODE ALLOY CONFORMING TO REQUIREMENTS. LIST ALLOY COMPOSITION, ANODE CAPACITY, CORROSION POTENTIAL, CONSUMPTION RATE, DIMENSIONS, AND WEIGHTS OF ALUMINUM AND TOTAL WEIGHT OF ALL ANODES.
- C. COPIES OF TWIC CARDS FOR ALL EMPLOYEES WHO WILL BE ON SITE.
- D. CONTRACTOR'S CERTIFICATION THAT ALL DIVING OPERATIONS SHALL MEET THE REQUIREMENTS OUTLINED IN THE SPECIFICATIONS AND THAT ALL PERSONNEL INVOLVED IN DIVING OPERATIONS ARE CERTIFIED FOR THE LEVEL OF WORK PERFORMED.
- E. COMMERCIAL DIVING CERTIFICATION FOR ALL DIVERS FROM ADCI AND UNDERWATER WELDING CERTIFICATION FOR ALL WELDERS (AWS D3.6M:2010 OR EQUIVALENT).
- F. VIDEO OF EACH ANODE INSTALLED. ALL VIDEOS SHALL INCLUDE AUDIO OR VIDEO SUBTITLES THAT CLEARLY AND ACCURATELY DESCRIBE THE LOCATION OF EACH INSTALLED ITEM.
- G. COPIES OF INSURANCE CERTIFICATIONS INCLUDING GENERAL LIABILITY, WORKMAN'S COMPENSATION, US HARBOR AND LONGSHOREMAN'S ACT COVERAGE
- H. COPY OF CONSTRUCTION PERFORMANCE SURETY BOND

Material Storage

Secure indoor storage for aluminum bars, tools and equipment will be provided to the Contractor at the CBJ Thane Road Surplus warehouse. Contractor is responsible for separate storage of poisonous, toxic, flammable, corrosive, reactive, or explosive items. Two parking spaces will be provided for Contractor's job trailer and equipment trailer at the CBJ small vessel float lot and adjacent to the Marine Parking Garage for the duration of the work.

PRODUCTS

ALUMINUM ANODES

A. THE ALUMINUM ANODES SHALL HAVE THE FOLLOWING PROPERTIES:

- 1. A CONSUMPTION RATE OF 7.6 POUNDS PER AMP-YEAR.
- 2. A CAPACITY TO PROVIDE 1,150 AMP-HOURS PER POUND (MINIMUM).
- 3. AN OPEN CIRCUIT POTENTIAL TO A SATURATED CALOMEL ELECTRODE IN SEAWATER OF -1.080 V (OR MORE NEGATIVE).
- 4. THE ALUMINUM ANODES SHALL CONFORM TO NACE RP0387 AND HAVE THE COMPOSITION SPECIFIED IN THE FOLLOWING TABLE

ELEMENT	PERCENT BY WEIGHT
INDIUM	0.016 TO 0.025%
ZINC	4.75 TO 6.00%
SILICON	0.08 TO 0.15%
COPPER	0.003% MAX
IRON	0.12% MAX
CADMIUM	0.002 MAX
OTHERS, EACH	0.02% MAX
OTHERS, TOTAL	0.05% MAX
ALUMINUM	REMAINDER

B. THE ALUMINUM ANODES SHALL BE SUPPLIED IN WEIGHTS AS OUTLINED IN THE PLANS. THE WEIGHT REFERS TO THE WEIGHT OF THE ALUMINUM ALLOY EXCLUSIVE OF THE STEEL CORE.

ANODE INSTALLATION

A. INSTALLATION OF EACH ANODE:

- 1. INSTALLATION SHALL NOT PROCEED WITHOUT THE PRESENCE OF THE OWNER'S REPRESENTATIVE.
- 2. ANODES SHALL BE INSTALLED AT THE LOCATIONS SHOWN
- 3. THE LOCATIONS AND/OR ELEVATIONS MAY BE CHANGED TO AVOID OBSTACLES OR OBSTRUCTIONS WITH THE PRIOR APPROVAL OF THE OWNER'S REPRESENTATIVE.
- 4. PRIOR TO WELDING REMOVE COATING AND CLEAN H-PILE SURFACE WHERE WELDS WILL BE MADE.
- 5. AT EACH LOCATION, USE VIDEO OR PHOTOGRAPHS TO DOCUMENT SURFACE PREPARATION FOR EACH WELD AND IDENTIFY THE LOCATION.
- 6. INSTALL ANODE BY MEANS OF UNDERWATER WELDING.
- 7. AT EACH LOCATION, USE VIDEO OR PHOTOGRAPHS TO DOCUMENT ANODE WELDS AND IDENTIFY THE LOCATION.
- 8. REMOVE SLAG, AND COAT EXPOSED/PREPARED H-PILE SURFACE WITH UNDERWATER WET APPLIED EPOXY COATING.
- 9. AT EACH LOCATION, USE VIDEO OR PHOTOGRAPHS TO DOCUMENT COATING OF THE WELD, ADJACENT H-PILE SURFACE, AND IDENTIFIES THE LOCATION.

B. TEST STATION:

- 1. INSTALL THE TEST STATION AND COUPON/REFERENCE AT THE LOCATIONS SHOWN
- 2. ALL CONDUIT SHALL BE RTRC.
- 3. JUNCTION BOXES SHALL BE NEMA TYPE 4, FIBERGLASS REINFORCED CONSTRUCTION.

TIDES

A. TIDE AND OTHER SPECIAL CONDITIONS:

- 1. THIS WORK WILL BE PERFORMED AT A FACILITY THAT SEES HEAVY TOURIST ACTIVITY AND THE DOCKING OF LARGE CRUISE SHIP THROUGHOUT THE SUMMER
- 2. THE CONTRACTOR WILL NEED TO MINIMIZE AND/OR AVOID INTERFERING WITH THE OPERATIONS OF THE FACILITY AT ALL TIMES..
- 3. THE WORK WILL INVOLVE WORKING OVER WATER IN AN AREA WITH LARGE TIDE LEVEL CHANGES. FLOATING PLATFORMS OR SCAFFOLDING WILL BE REQUIRED. ACCESS RIGGING DESIGN MUST TAKE INTO ACCOUNT THESE LARGE TIDE CHANGES AND AVOID SUBJECTING THE FACILITY TO UPLIFT FORCES. ACCESS TO MANY AREAS IS RESTRICTED BY LIMITED ROOM BETWEEN PILING, FENDERS, AND WALLS

NOAA TIDE DATA (FEET)	
MHHW	16.30
MHW	15.34
MLS	8.56
MLW	1.60
MLLW	0.00

- 4. WORK IS TAKING PLACE IN AN ACTIVE PORT FACILITY REQUIRING THE FOLLOWING:
 - a. WORK OVER WATER REQUIRES THE USE OF A PERSONAL FLOTATION DEVICE (PFD)
 - b. WORK ON SCAFFOLDING REQUIRES THE USE OF HARNESSES AND LIFE LINES, AND ALL SCAFFOLD WORKERS MUST BE TRAINED IN FALL PROTECTION.
 - c. CONSTRUCTION WORK MAY BE TEMPORARILY HALTED ON SHORT NOTICE. CLOSE COORDINATION WITH CBJ DOCKS AND HARBORS IS REQUIRED.



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DATE 03/16/2018

WATERFRONT CORROSION CONTROL
PHASE II GACP ANODE INSTALLATION
JUNEAU, ALASKA



SHEET TITLE:
CORROSION
CONTROL
GENERAL NOTES

DATE:
03/16/2018

TAlle PROJ. No.:
1712402

CONTRACT No.:
BE18-163

SHEET 3 OF 11

C003

REVISIONS

No.	DATE	DESCRIPTION	BY

H-PILE ANODE SCHEDULES

PARKING GARAGE H-PILE ALUMINUM ANODES

PILE CAP LOCATION		ANODE MIN SIZE LBS ALUMINUM	NUMBER		HOW ANODE FASTENED
ROW	BENT		ANODES PER PILE OR ROD	PILES OR RODS PER PILE CAP	
A	9	200	2	6	WELDED
A	8	175	2	6	WELDED
A	ANCHOR RODS	10.0	3	2	MECHANICAL
B	9.7	200	2	2	WELDED
B	9	175	2	8	WELDED
B	8	150	2	8	WELDED
B	ANCHOR RODS	10	3	2	MECHANICAL
B.7	9.7	200	2	2	WELDED
B.7	9	175	2	4	WELDED
C	10	200	2	1	WELDED
C	9.7	200	2	2	WELDED
C	9	175	2	4	WELDED
C	8	150	2	6	WELDED
C.5	PILES 1-3	175	3	N/A	WELDED
C.5	PILE 4	200	2	N/A	WELDED
C.5	PILES 5-7	200	3	N/A	WELDED
D	PILES 1-3	200	2	N/A	WELDED
D	PILE 4	175	2	N/A	WELDED
D	PILES 5-7	200	2	N/A	WELDED

H-PILE ALUMINUM ANODES TOTALS

ANODE TYPE	ANODE MIN SIZE LBS ALUMINUM	QUANTITY
CONDENSER	10	12
PIPE THRU	150	28
PIPE THRU	175	55
PIPE THRU	200	49

REVISIONS


No.	DATE	DESCRIPTION	BY



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STATE OF ALASKA
49th
Kerri M. Howell
CE-9833
REGISTERED PROFESSIONAL ENGINEER

DATE 03/16/2018

WATERFRONT CORROSION CONTROL
PHASE II GACP ANODE INSTALLATION
JUNEAU, ALASKA



CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY

DEPARTMENT OF ENGINEERING

SHEET TITLE:
CORROSION
CONTROL
SCHEDULES

DATE:
03/16/2018

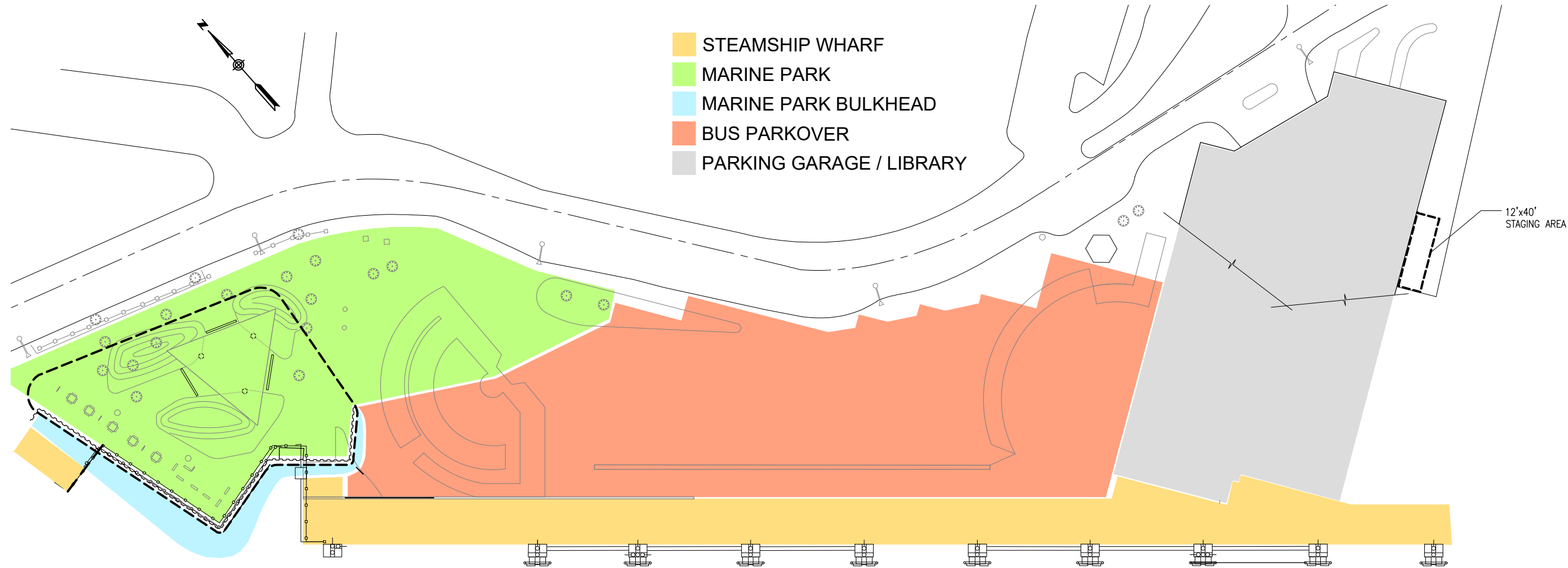
TAlc PROJ. No.:
1712402

CONTRACT No.:
BE18-163

SHEET 4 OF 11

100% SUBMITTAL - 03/16/18

C004



1 SITE PLAN - TRAFFIC & SAFETY PLAN
SCALE: 1" = 30'

LEGEND

- TREE
- BANNER POLE
- TABLE AND BENCH
- PARK LIGHT
- STREET LIGHT

REVISIONS

No.	DATE	DESCRIPTION	BY

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JUNEAU, ALASKA

CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY

DEPARTMENT OF ENGINEERING

SHEET TITLE:
TRAFFIC
CONTROL &
PHASING
REQUIREMENTS

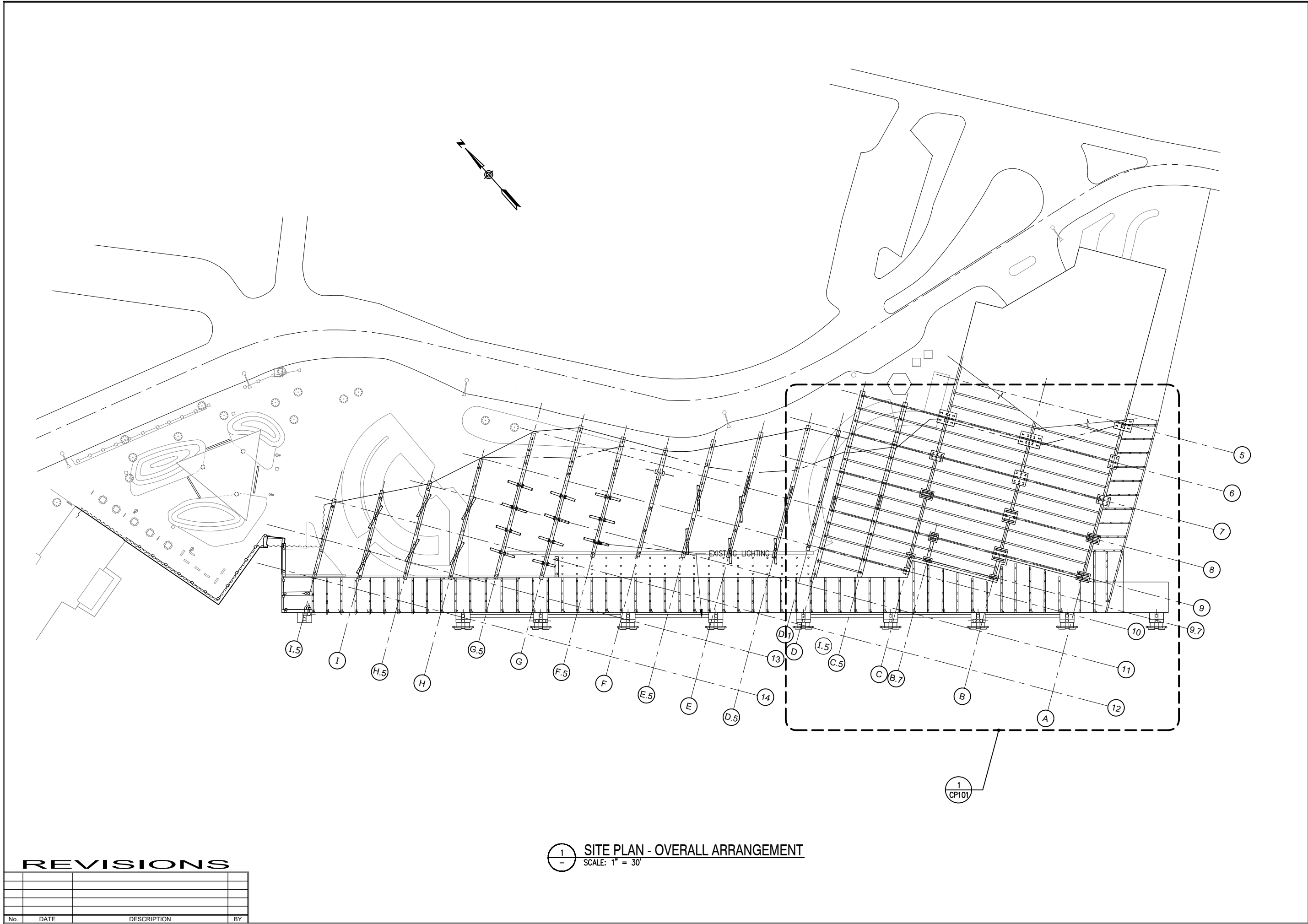
DATE:
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1712402

CONTRACT No.:
BE18-163

SHEET 5 OF 11

C101



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**WATERFRONT CORROSION CONTROL
PHASE II GACP ANODE INSTALLATION**
JUNEAU, ALASKA

CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
DEPARTMENT OF ENGINEERING

SHEET TITLE:
**OVERALL SITE
PLAN**

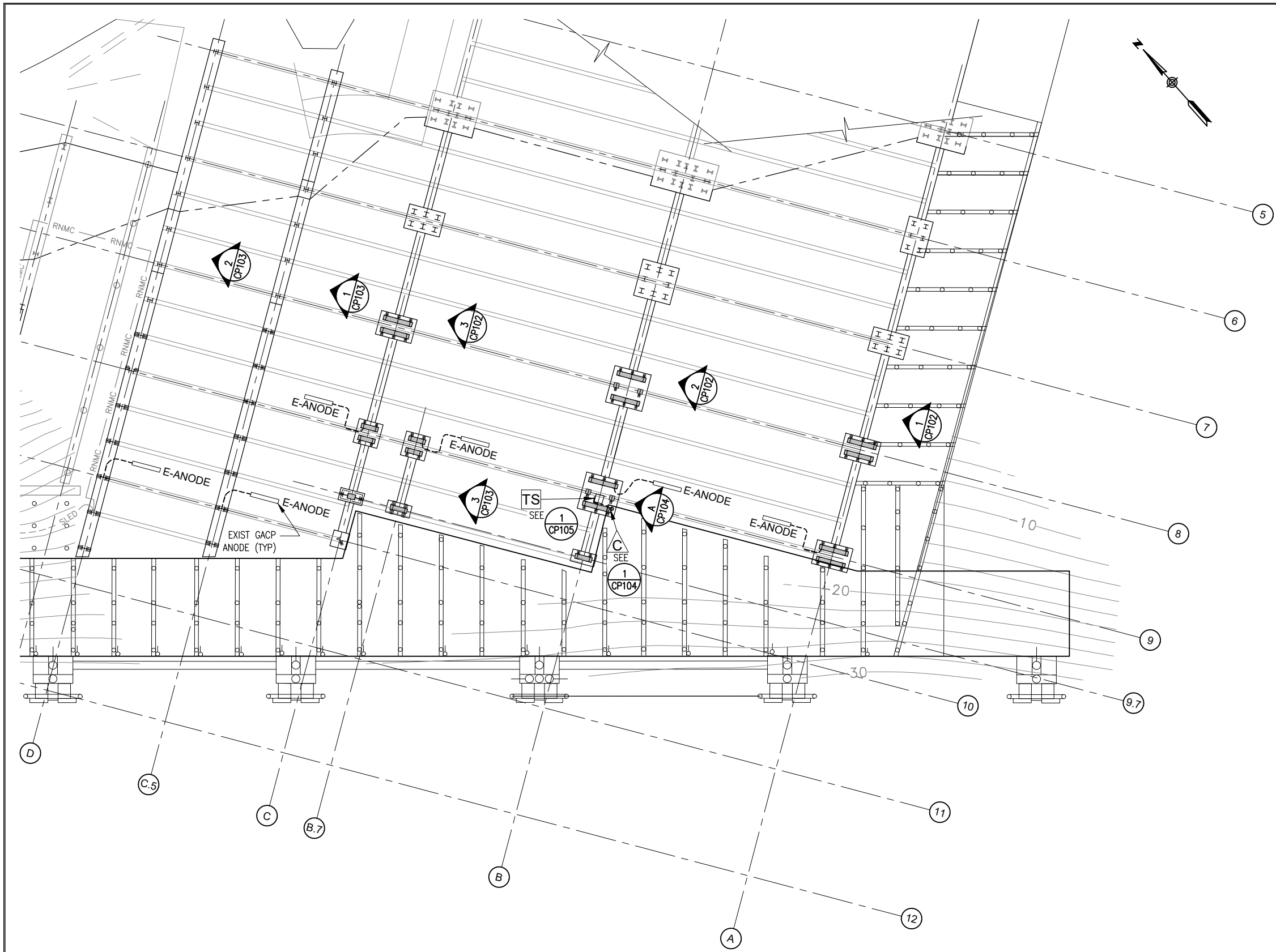
DATE:
03/16/2018

TITLE PROJ. No.:
1712402

CONTRACT No.:
BE18-163

SHEET 6 OF 11

C102



1 PARKING GARAGE PLAN VIEW
C102 SCALE: 1" = 13.3'

REVISIONS			
No.	DATE	DESCRIPTION	BY

NOTES

H-PILE GACP SYSTEM

- A. NEW ALUMINUM ANODES WILL BE INSTALLED AS PART OF THIS WORK.
- B. MOUNT TEST STATION ON NW CONCRETE COLUMN FACE WHERE SHOWN, 5' UP FROM FLOOR.
- C. LOCATIONS WHERE THE NEW ANODES ARE SHOWN IN THE ELEVATIONS

1-3 CP102 1-3 CP103

AND SCHEDULE SCHD C004

EXISTING GACP SYSTEMS

- A. THERE ARE EXISTING GACP ANODES PRESENT ON PILE CAPS AT A-9, B-9, B.7-9, C-9, PILE 2 OF THE C LINE AND PILE THREE OF THE D LINE.
- B. PRIOR TO INSTALLING ANODES OR JACKETS, THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF THE ANODES, CABLES, AND CONNECTING/MOUNTING HARDWARE.
- C. THE CONTRACTOR & CONTRACTOR'S SUBCONTRACTORS WILL BE RESPONSIBLE TO PROTECT THE EXISTING BUS PARKOVER GACP SYSTEM HARDWARE, CABLES, AND ANODE SLED FROM DAMAGE DURING ALL CONSTRUCTION ACTIVITIES.
- D. IF THE CONTRACTOR OR CONTRACTOR'S SUBCONTRACTORS DAMAGE EXISTING BUS PARKOVER GACP EQUIPMENT OR HARDWARE, THE CONTRACTOR WILL BE RESPONSIBLE TO REPAIR SUCH DAMAGE AT NO COST TO THE OWNER.

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DATE 03/16/2018

WATERFRONT CORROSION CONTROL

PHASE II GACP ANODE INSTALLATION

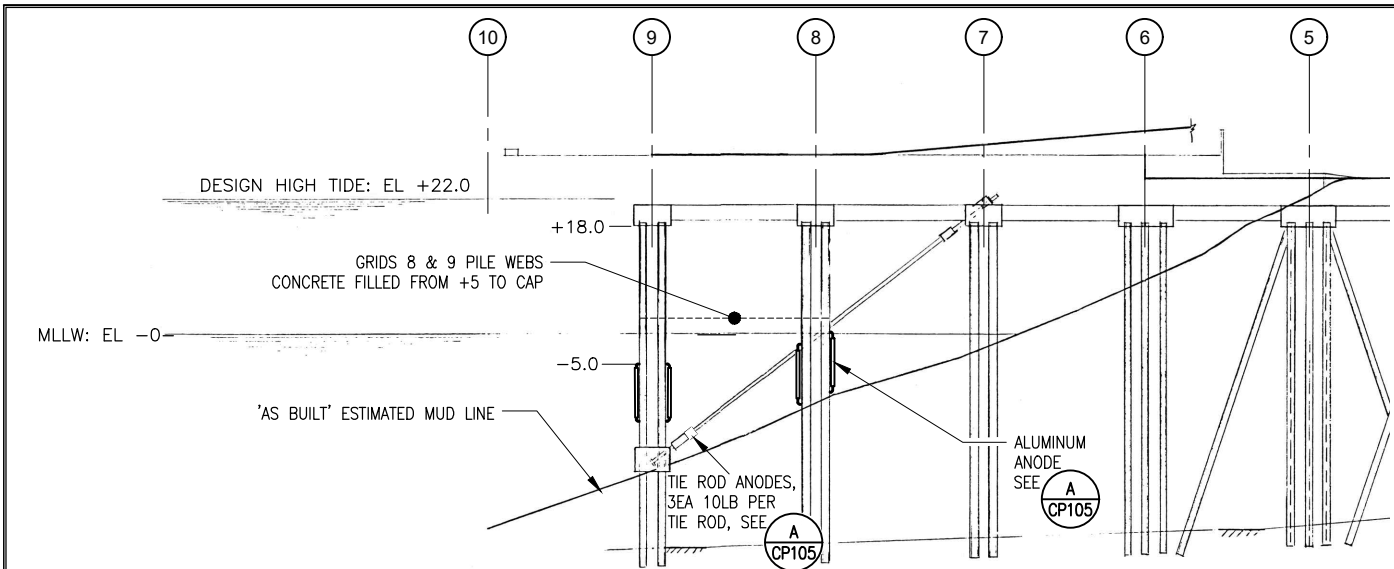
JUNEAU, ALASKA

CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY

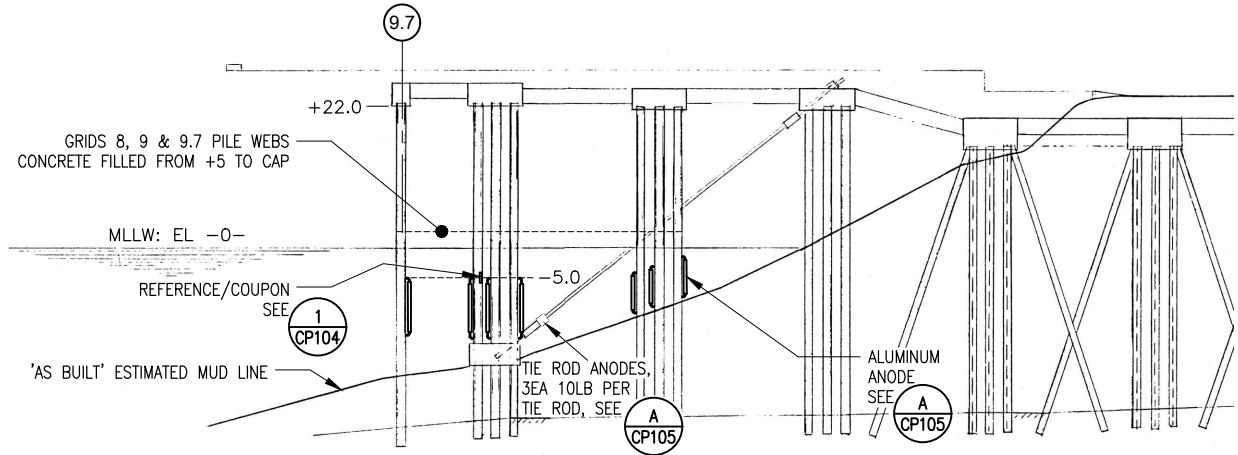
DEPARTMENT OF ENGINEERING

SHEET TITLE: CATHODIC PROTECTION PLAN VIEW	
DATE:	03/16/2018
TITLE PROJ. No.:	1712402
CONTRACT No.:	BE18-163
SHEET	7 OF 11

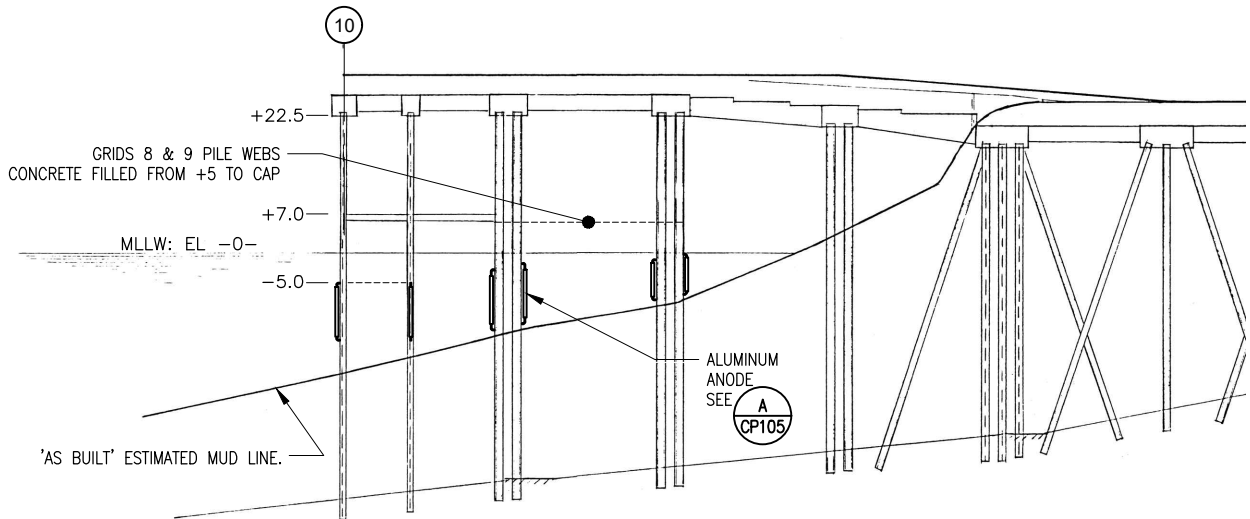
CP101



1 ELEVATION "A" LINE PILINGS
CP101 SCALE: NTS



2 ELEVATION "B" LINE PILINGS
CP101 SCALE: NTS



3 ELEVATION "C" LINE PILINGS
CP101 SCALE: NTS

REVISIONS

No.	DATE	DESCRIPTION	BY

NOTES

H-PILE GACP SYSTEM

- A. GALVANIC ANODE CATHODIC PROTECTION (GACP) ANODES WILL BE DIRECTLY WELDED TO THE H-PILES.
- B. THE ANODES SHALL BE AN ALUMINUM ALLOY THAT MEETS THE REQUIREMENTS CONTAINED IN THE PLANS AND SPECIFICATIONS
- C. THE SIZE AND NUMBER OF ANODES IS GIVEN IN TABLE BELOW..
- D. WELDED ANODE STANDOFF CONNECTIONS SHALL:
1. MEET THE REQUIREMENTS CONTAINED IN THE PLANS AND SPECIFICATIONS.
 2. THE TOP ANODE STANDOFF SHALL BE LOCATED AT -5' ELEVATION UNLESS SUCH PLACEMENT CAUSE THE BOTTOM ANODE STANDOFF TO BE LOCATED LESS THAN 6 INCHES FROM THE MUDLINE OR A-9 AND B-9 ANCHOR BLOCKS AND THEN IN SUCH CASE SET THE ANODES PER D.3 OF THESE NOTES.
 3. THE BOTTOM ANODE STANDOFF SHALL BE LOCATED BETWEEN 6 TO 12 INCHES FROM THE MUDLINE (OR ANCHOR BLOCKS FOR PILES AT A-9 AND B-9).

ANCHOR ROD GACP SYSTEM

- A. ON THE A AND B LINES THERE ARE TWO PAIRS OF ANCHOR CABLES.
- B. GACP ALUMINUM ALLOY ANODES WILL BE ATTACHED TO ALL UNBROKEN ANCHOR RODS.
- C. THE ANODES SHALL BE AN ALUMINUM ALLOY THAT MEETS THE REQUIREMENTS CONTAINED IN THE PLANS AND SPECIFICATIONS.
- D. THE ANODES SHALL BE LOCATED AS SHOWN IN THE DRAWINGS
- E. NO ROD GACP ANODE TO BE LOCATED ABOVE -5' ELEV.
- F. REMOVE THE MINIMUM AMOUNT OF GROUTED CORRUGATED SHEATHING NECESSARY TO EXPOSE THE UNDERLYING ROD.

EXISTING H-PILE GACP SYSTEM

- A. THE CONTRACTOR WILL BE RESPONSIBLE TO PROTECT THE EXISTING GACP SYSTEM HARDWARE, CABLES, AND ANODE SLEDS FROM DAMAGE DURING ALL CONSTRUCTION ACTIVITIES.
- B. IF EXISTING PILE BOND WIRES INTERFERE WITH PROPER CLOSING OF THE PILE JACKETS, THE CONTRACTOR SHALL REMOVE THE EXISTING BOND AND RELOCATE IT TO AN AREA THAT DOES NOT INTERFERE WITH THE JACKET (E.G., INSTALL A NEW BOND ON ONE OF THE STEEL HAUNCHES AT THE TOP OF THE H-PILE).
- C. IF THE CONTRACTOR DAMAGES EXISTING MARINE PARK GACP EQUIPMENT OR HARDWARE, THE CONTRACTOR WILL BE RESPONSIBLE TO REPAIR SUCH DAMAGE AT NO COST TO THE OWNER.

EXISTING H-PILE JACKET SYSTEM

- A. THE CONTRACTOR WILL BE RESPONSIBLE TO PROTECT THE EXISTING H-PILE JACKETS FROM DAMAGE DURING ALL CONSTRUCTION ACTIVITIES.
- B. IF THE CONTRACTOR DAMAGES EXISTING MARINE PARK PILE JACKET EQUIPMENT OR HARDWARE, THE CONTRACTOR WILL BE RESPONSIBLE TO REPAIR SUCH DAMAGE AT NO COST TO THE OWNER.

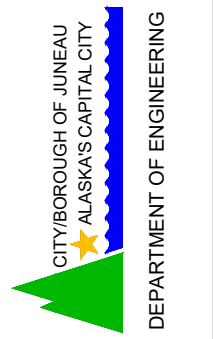
GACP ANODES

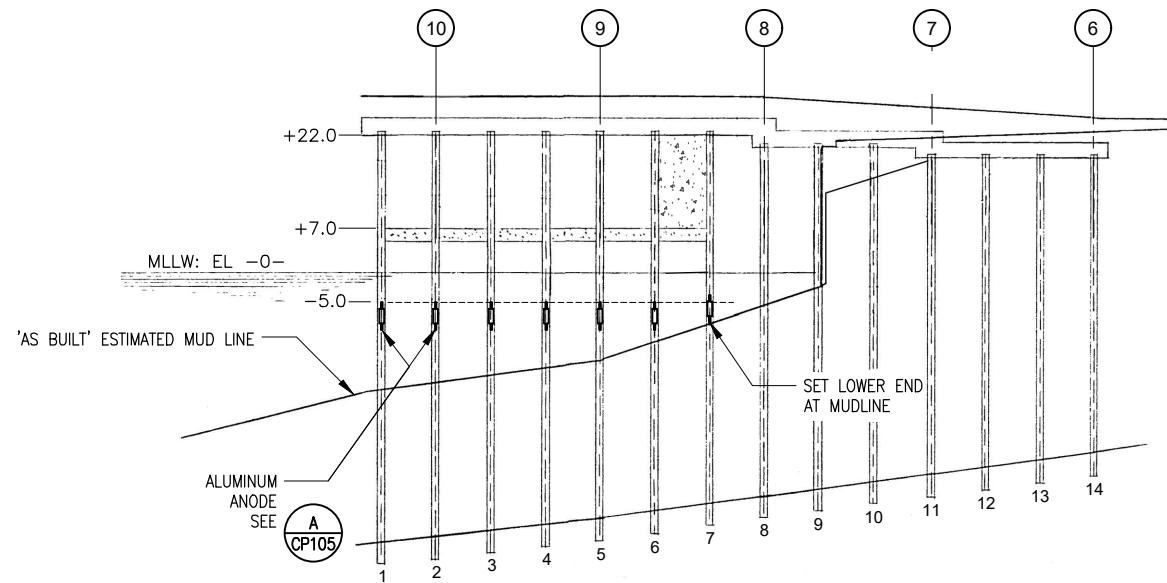
GRID	ANODE TYPE	ANODE MIN SIZE LBS ALUMINUM	QUANTITY	
			PER ROD/PILE	No. RODS/PILES
A-LINE RODS	CONDENSER	10	3	2
A-9	PIPE THRU	200	2	6
A-8	PIPE THRU	175	2	6
B-LINE RODS	CONDENSER	10	3	2
B-9.7	PIPE THRU	200	2	2
B-9	PIPE THRU	175	2	8
B-8	PIPE THRU	150	2	8
C-10	PIPE THRU	200	2	1
C-9.7	PIPE THRU	200	2	2
C-9	PIPE THRU	175	2	4
C-8	PIPE THRU	150	2	6



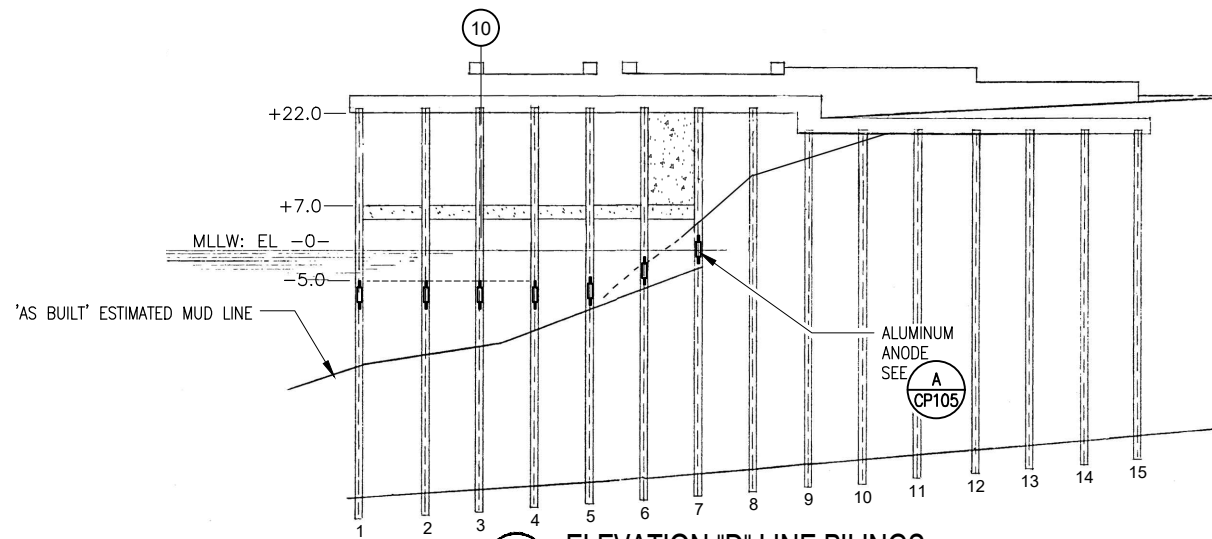
DATE 03/16/2018

WATERFRONT CORROSION CONTROL
PHASE II GACP ANODE INSTALLATION
JUNEAU, ALASKA

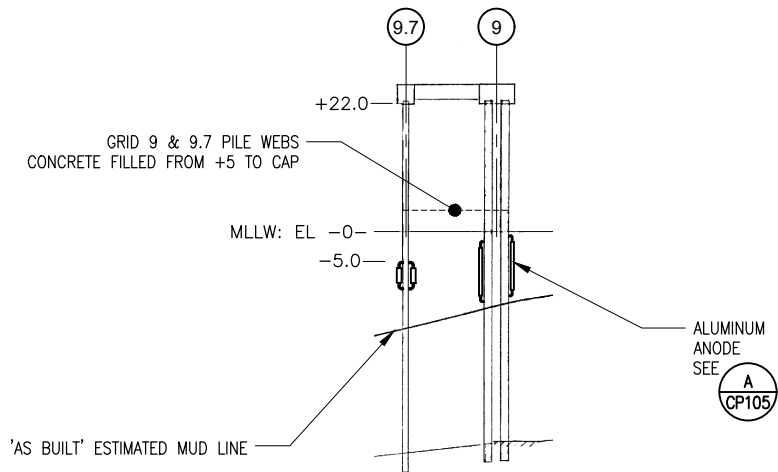




1 ELEVATION - "C.5" LINE PILINGS
CP101 SCALE: NTS



2 ELEVATION "D" LINE PILINGS
CP101 SCALE: NTS



3 ELEVATION "B.7" LINE PILINGS
CP101 SCALE: NTS

REVISIONS

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NOTES

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EXISTING H-PILE GACP SYSTEM

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- B. IF THE CONTRACTOR DAMAGES EXISTING MARINE PARK GACP EQUIPMENT OR HARDWARE, THE CONTRACTOR WILL BE RESPONSIBLE TO REPAIR SUCH DAMAGE AT NO COST TO THE OWNER.

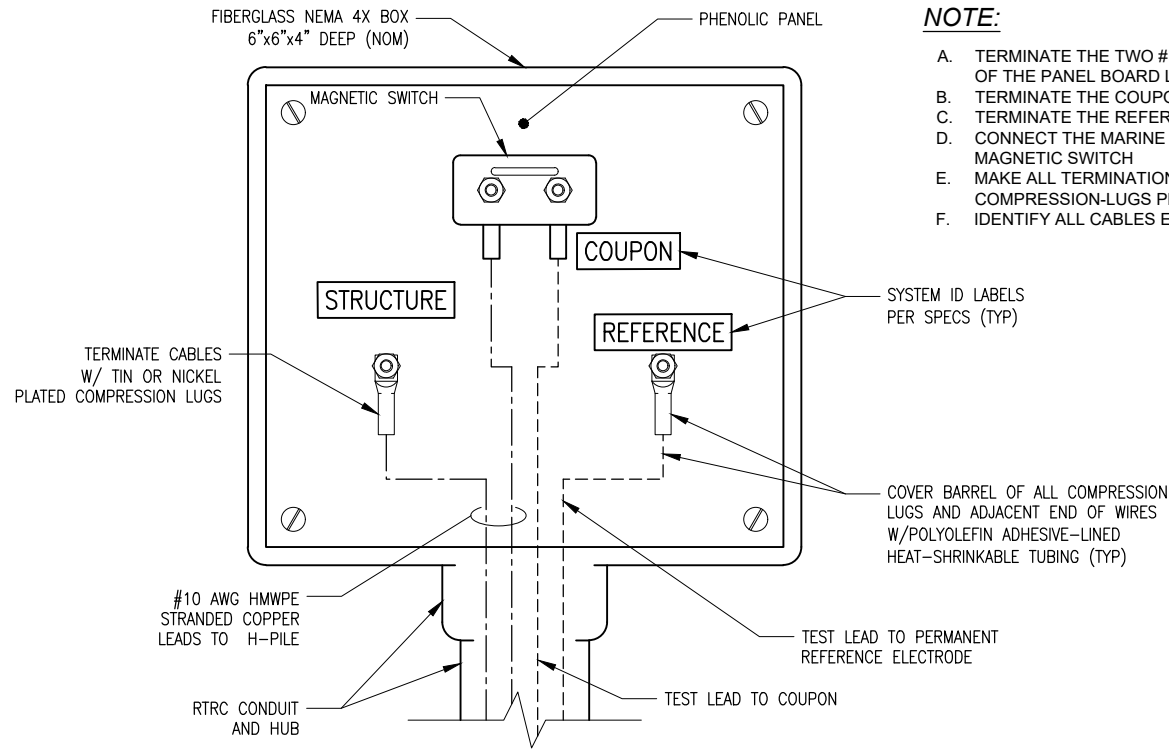
EXISTING H-PILE JACKET SYSTEM

- A. THE CONTRACTOR WILL BE RESPONSIBLE TO PROTECT THE EXISTING H-PILE JACKETS FROM DAMAGE DURING ALL CONSTRUCTION ACTIVITIES.
- B. IF THE CONTRACTOR DAMAGES EXISTING MARINE PARK PILE JACKET EQUIPMENT OR HARDWARE, THE CONTRACTOR WILL BE RESPONSIBLE TO REPAIR SUCH DAMAGE AT NO COST TO THE OWNER.

GACP ANODES

GRID	ANODE TYPE	ANODE MIN SIZE LBS ALUMINUM	QUANTITY	
			PER ROD/PILE	No. PILES
C.5-1	PIPE THRU	175	3	1
C.5-2	PIPE THRU	175	3	1
C.5-3	PIPE THRU	175	3	1
C.5-4	PIPE THRU	200	2	1
C.5-5	PIPE THRU	200	3	1
C.5-6	PIPE THRU	200	3	1
C.5-7	PIPE THRU	200	3	1
D-1	PIPE THRU	200	2	1
D-2	PIPE THRU	200	2	1
D-3	PIPE THRU	200	2	1
D-4	PIPE THRU	175	2	1
D-5	PIPE THRU	200	2	1
D-6	PIPE THRU	200	2	1
D-7	PIPE THRU	200	2	1
B.7-9.7	PIPE THRU	200	2	2
B.7-9	PIPE THRU	175	2	4

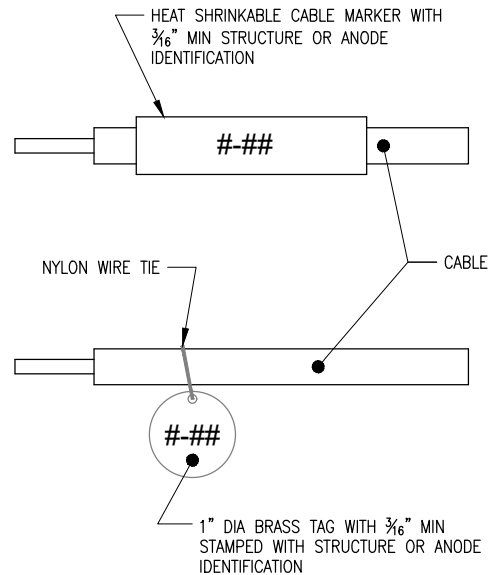
CP104



- NOTE:**
- A. TERMINATE THE TWO #10 AWG BOND CABLES TO THE TWO TERMINALS AT THE LEFT OF THE PANEL BOARD LABELED 'STRUCTURE'.
 - B. TERMINATE THE COUPON LEAD TO THE TERMINAL LABELED 'COUPON'.
 - C. TERMINATE THE REFERENCE LEAD TO THE TERMINAL(S) LABELED 'REFERENCE'.
 - D. CONNECT THE MARINE COUPON TO ONE STRUCTURE BOND USING THE SPECIFIED MAGNETIC SWITCH
 - E. MAKE ALL TERMINATIONS USING TIN OR NICKEL-PLATED COPPER COMPRESSION-LUGS PER THE SPECIFICATIONS.
 - F. IDENTIFY ALL CABLES ENTERING TEST STATION. SEE 2

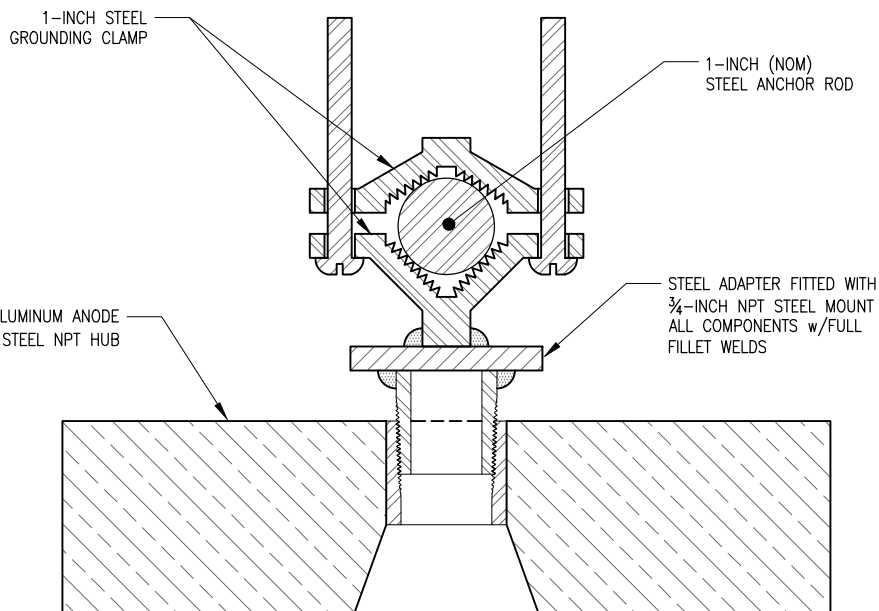
2

1
C002
DETAIL - TEST STATION
SCALE: NTS



NOTES: IDENTIFY ALL CABLES ENTERING J-BOXES WITH PERMANENT CABLE MARKERS. IDENTIFY EACH J-BOX WITH A UNIQUE IDENTIFICATION ON A 1/2" HIGH ENGRAVED PLASTIC ID PLAQUE

2
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DETAIL - CABLE IDENTIFICATION
SCALE: NTS



A
CP102
SECTION - ANCHOR ROD ANODE
SCALE: NTS

REVISIONS

No.	DATE	DESCRIPTION	BY