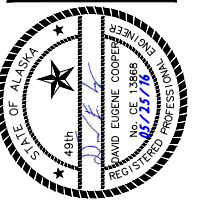


KAKE BULK FUEL UPGRADES

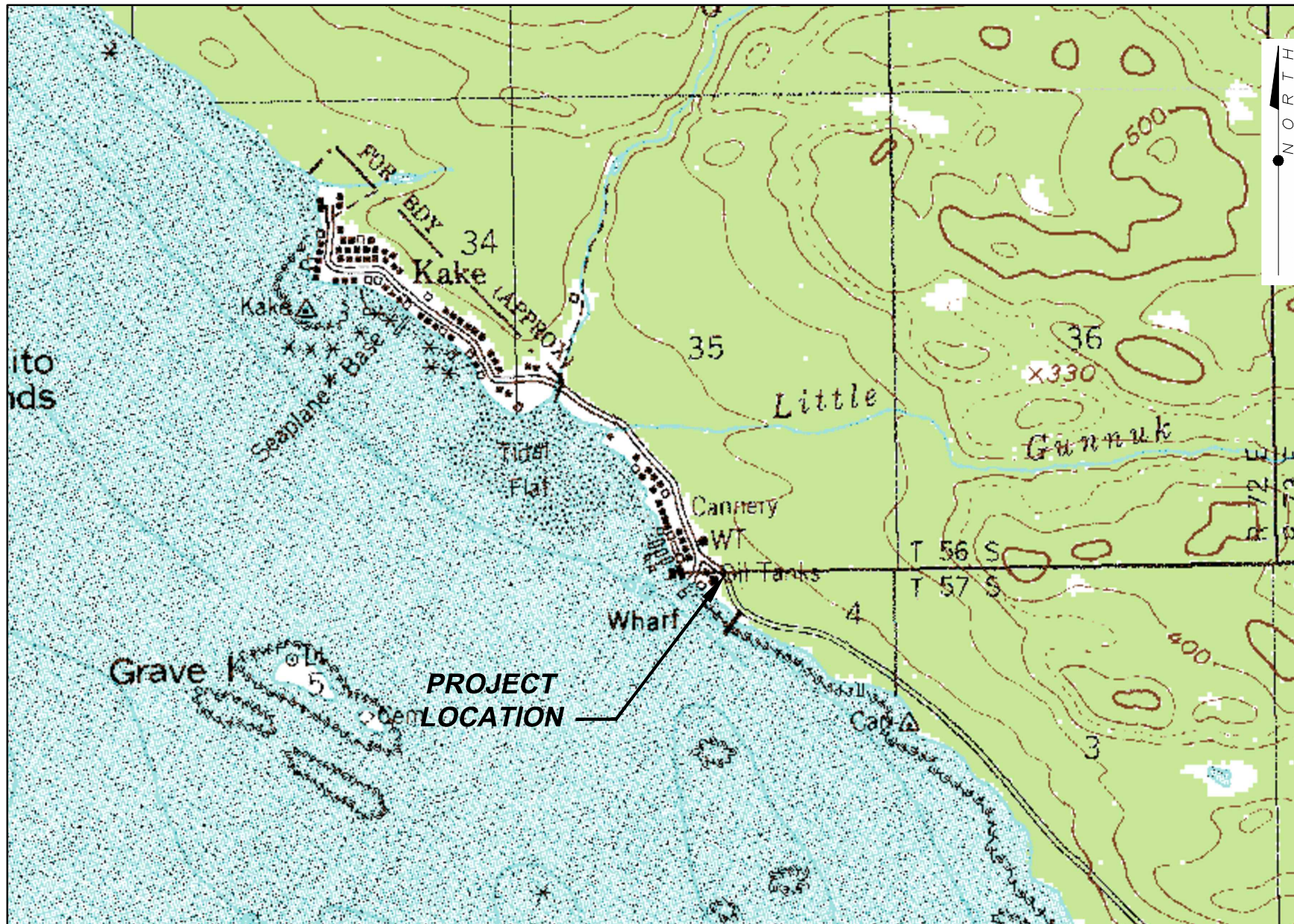
CONSTRUCTION DRAWINGS

KAKE, ALASKA

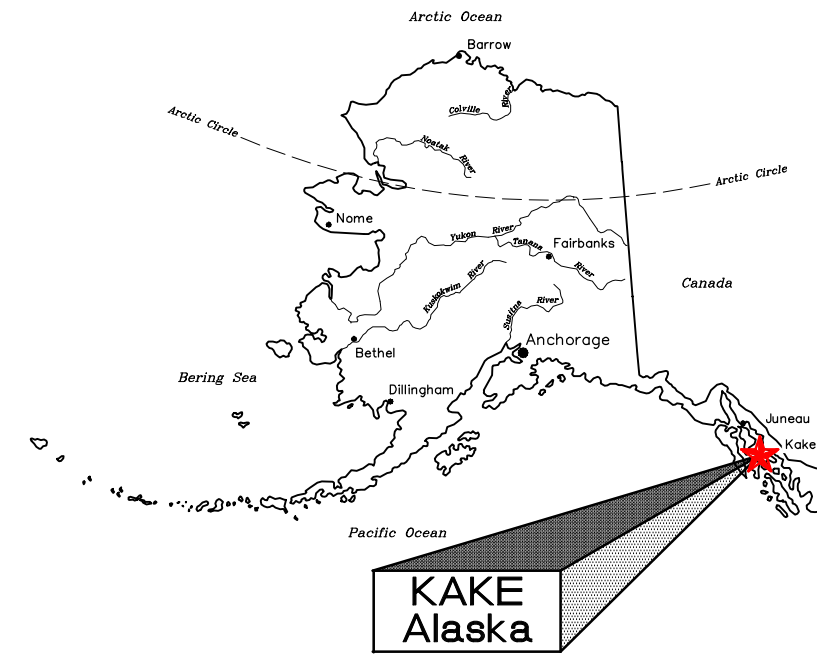
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VICINITY MAP



LOCATION MAP

SCHEDULE A

CONSTRUCTION DRAWINGS

ALASKA ENERGY AUTHORITY
 KAKE, ALASKA

COVER SHEET AND LOCATION MAP

SHEET: G1.01

DRAWN BY: HDL CHECKED BY: MRS
 DATE: 05/25/16 SCALE: NONE
 JOB NUMBER: 13-040

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 LAYOUT: G1.01 - COVER SHEET
 VIEW: G101_H_PDF
 XREF: 13040-00_B01-BK

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SHEET TITLE
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SHEET
G1.02

DRAWN BY: **RSB** CHECKED BY: **MRS**

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 VIEW: G103_HL.PDF, G103_HL.PDF, G103_HL.PDF, G103_HL.PDF
 XREF: 13040_00_B01-BK

GENERAL NOTES

- ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THESE PLANS AND THE BIDDING AND CONTRACT DOCUMENTS TITLED "KAKE BULK FUEL AND RURAL POWER SYSTEM UPGRADE", DATED MAY 25, 2016.
- THESE PLANS ARE BASED ON A FIELD SURVEY PROVIDED BY HATTENBURG, DILLEY, AND LINNELL LLC (HDL) ON JANUARY 27, 2016. SURVEY CONTROL IS SHOWN ON SHEET G1.06 OF THIS PLAN SET.
- VERIFY SITE CONDITIONS, DIMENSIONS, AND DETAILS PRIOR TO THE START OF CONSTRUCTION. IF ANY DISCREPANCIES AND/OR UNKNOWN CONDITIONS WHICH AFFECT THE PROJECT ARE FOUND, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE MINOR LAYOUT CHANGES IN THE FIELD, SUBJECT TO APPROVAL BY THE ENGINEER.
- NOT ALL UTILITIES MAY BE SHOWN ON THE PLANS. CONTACT LOCAL UTILITIES TO LOCATE ALL EXISTING UNDERGROUND UTILITIES IN THE VICINITY PRIOR TO BEGINNING EXCAVATION. CONTRACTOR SHALL PROTECT UTILITIES AT ALL TIMES DURING CONSTRUCTION, AND REPAIR DAMAGES IN ACCORDANCE WITH THE RESPECTIVE UTILITY COMPANIES REQUIREMENTS.
- PROVIDE AND MAINTAIN ALL SIGNS, BARRICADES, WARNING LIGHTS, AND OTHER PROTECTIVE DEVICES NECESSARY FOR SAFETY.
- COMPLY WITH THE REQUIREMENTS OF ASME B31.4, THE INTERNATIONAL BUILDING CODE (IBC), INTERNATIONAL FIRE CODE (IFC), STATE AND FEDERAL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATIONS (OSHA), US ENVIRONMENTAL PROTECTION AGENCY, ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION AND ALL OTHER STATE, FEDERAL, AND LOCAL LAWS AND REGULATIONS PERTAINING TO THIS PROJECT. ANY WORK PERFORMED BY THE CONTRACTOR CONTRARY TO SUCH LAWS OR REGULATIONS SHALL BE AT THE CONTRACTORS SOLE RISK AND EXPENSE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WORK WITH OTHER CONTRACTORS, HIS SUBCONTRACTORS, THE OWNER, AND STATE AND FEDERAL AUTHORITIES.
- PROVIDE TANK FARM SIGNAGE PER INTERNATIONAL FIRE CODE AND AS SHOWN ON THE DRAWINGS.
- INSTALL FIRE EXTINGUISHERS WHERE SHOWN ON DRAWINGS. FIRE EXTINGUISHERS SHALL HAVE A MINIMUM RATING OF 2-A, 20-B.C.
- ALL ITEMS SHOWN ARE IN THIS CONTRACT UNLESS SPECIFICALLY INDICATED AS EXISTING. INSTALL ALL MATERIAL AND EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, INSTRUCTIONS, AND INSTALLATION DRAWINGS, UNLESS INDICATED OTHERWISE.
- WORK SHALL BE PERFORMED WITH SKILLED CRAFTSMEN SPECIALIZING IN THE REQUIRED WORK. INSTALL ALL MATERIALS IN A NEAT, ORDERLY, AND SECURE FASHION, AS REQUIRED BY THE CONTRACT DOCUMENTS AND COMMONLY RECOGNIZED STANDARDS OF GOOD WORKMANSHIP.
- GEOTECHNICAL INFORMATION AND FOUNDATION RECOMMENDATIONS FOR THIS PROJECT WERE TAKEN FROM HDL'S MAY 2, 2016 REPORT TITLED "GEOTECHNICAL REPORT FOR KAKE RURAL POWER SYSTEM AND BULK FUEL UPGRADE, KAKE, ALASKA".
- PROTECT ALL ITEMS NOT SCHEDULED FOR DEMOLITION DURING CONSTRUCTION. DISTURBED AREAS SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITION.
- EARTHWORK SAFETY, EXCAVATION SLOPE STABILITY, AND DEWATERING WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND COSTS ARE INCIDENTAL TO THE CONTRACT UNLESS SPECIFIED OTHERWISE.
- CAREFULLY LAY OUT WORK TO MINIMIZE DISRUPTION AND DAMAGE TO EXISTING STRUCTURES.
- ALL STEEL FABRICATIONS NOT SHOWN AS PAINTED SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER SPECIFICATION 09800.
- ALL STEEL FABRICATION SHALL BE SEAL WELDED.
- ALL HARDWARE SHALL BE HOT-DIPPED GALVANIZED OR 316 SS, UNLESS SPECIFIED OTHERWISE.
- ALL WORK SHOWN IN PLAN SET SHALL BE SCHEDULE A, UNLESS NOTED OTHERWISE.

TESTING, START-UP, AND COMMISSIONING

TANK FARM:

- PERFORM SYSTEM TESTING, STARTUP, AND COMMISSIONING IN ACCORDANCE WITH THE FOLLOWING PROCEDURES.
 - PRESSURE TEST ALL PIPING IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. DELIVER ORIGINAL TEST RESULTS TO PROJECT MANAGER AND GIVE A COPY TO THE ENGINEER.
 - UPON FILLING OF TANKS VERIFY PRODUCT LEVEL WITH GAUGING STICK AND CALIBRATE ALL TANK GAUGES.
 - CHECK ALL PUMPS FOR PROPER ROTATION. PRIOR TO OPERATING CENTRIFUGAL PUMPS, PRIME THE PUMP CAVITY WITH FUEL. ON INITIAL STARTUP, WARM PUMP BODY IF AMBIENT TEMPERATURE IS BELOW 40°F.
 - CHECK ALL CONTROL AND ALARM FUNCTIONS. MANIPULATE FLOATS TO SIMULATE LOW AND HIGH LEVEL CONDITIONS. SET TIMING RELAYS FOR 30 SECONDS AND VERIFY TIME-OUT FUNCTION. RE-SET TIMERS TO VALUES INDICATED. VERIFY LATCHING AND RESET FUNCTIONS, EMERGENCY STOP FUNCTION, AND OPERATION OF ALL SIGNAL LAMPS AND HORNS. OBSERVE OPERATION OF ACTUATED VALVES. CHECK AREA LIGHTING AND VERIFY OPERATION OF PHOTOCCELL CONTROLS.
 - FILL AND DISPENSING TANKS. REMOVE AND CLEAN STRAINER SCREENS UPON COMPLETION OF INITIAL FILLING OF TANKS. REPLACE FILTER AT DISPENSER AFTER FIRST 100 GALLONS OF PRODUCT HAS BEEN PUMPED THROUGH DISPENSER.
 - TEST ALL FUEL TRANSFER FUNCTIONS.
 - VERIFY ALL SIGNS, PLACARDS, AND VALVE TAGS ARE PROPERLY LOCATED. VERIFY PROPER COLOR CODE AND LABELING FOR ALL PRODUCTS.

LEGEND

- -- EXISTING PROPERTY LINE
- -- LEASE LOT BOUNDARY
- -- EXISTING EASEMENT
- -- EXISTING EASEMENT
- -- ROAD/TRAIL CENTERLINE
- -- EXISTING EDGE OF ROAD
- -- EXISTING WATER LINE
- -- EXISTING ELECTRIC
- -- FILL
- -- EXISTING FILL
- -- GRADE BREAK
- -- EXISTING TREE LINE
- -- CLEARING LIMITS
- -- VERTICAL PIPE TRANSITION
- -- DISPENSER FUEL LINE BURIED
- -- POWER LINE
- -- SEWER LINE
- -- FM FORCE MAIN
- -- 19 --- -- CONTOURS MINOR
- -- 20 --- -- CONTOURS MAJOR
- -- DRAINAGE DITCH
- -- FENCE
- -- HDL TEST PIT
- -- POINT NUMBER

- BUILDING EXISTING
- CONCRETE
- STRUCTURAL FILL
- CRUSHED AGGREGATE SURFACE COURSE
- TRENCH BEDDING/SURFACING
- TANK FARM DRAIN ROCK
- EROSION CONTROL AGGREGATE

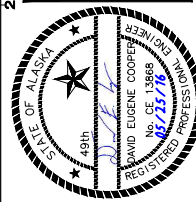
STATIONING LEGEND

- "D" DOCK PIPELINE
- "M" MARINE HEADER PIPELINE
- "DS" DISPENSER STATION

ABBREVIATIONS

- AAC ALASKA ADMINISTRATIVE CODE
- ACI AMERICAN CONCRETE INSTITUTE
- ADEC ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
- AFF ABOVE FINISH FLOOR
- ANC ALAKANUK NATIVE CORPORATION
- ANSI AMERICAN NATIONAL STANDARDS INSTITUTE
- API AMERICAN PETROLEUM INSTITUTE
- ASME AMERICAN SOCIETY MECHANICAL ENGINEERS
- ASTM AMERICAN SOCIETY FOR TESTING & MATERIALS
- AWPA AMERICAN WOOD PROTECTION ASSOCIATION
- AWS AMERICAN WELDING SOCIETY
- BTM BOTTOM
- BTU BRITISH THERMAL UNITS
- CASC CRUSHED AGGREGATE SURFACE COURSE
- CL CENTER LINE
- CLR CLEAR
- CONFIG CONFIGURE
- CONT'D CONTINUED
- CMP CORRUGATED METAL PIPE
- CY CUBIC YARD
- DBL DOUBLE
- DFT DRY FILM THICKNESS
- DIA, Ø DIAMETER
- DOT ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
- EG EXISTING GRADE
- EPA ENVIRONMENTAL PROTECTION AGENCY
- ELEV ELEVATION
- F FAHRENHEIT
- FG FINISH GRADE
- FO FACE OF
- FOR FUEL OIL RETURN
- FOS FUEL OIL SUPPLY
- FPT FEMALE PIPE THREAD
- FT FEET
- GA GAUGE
- GALV GALVANIZED
- GPM GALLONS PER MINUTE
- H HORIZONTAL
- HP HORSEPOWER
- HDL HATTENBURG, DILLEY, AND LINNELL LLC.
- HR HOUR
- IAW IN ACCORDANCE WITH
- IFC INTERNATIONAL FIRE CODE
- IN INSET
- INC INCORPORATED
- IPEC INSIDE PASSAGE ELECTRIC COOPERATIVE
- KTFC KAKE TRIBAL FUEL COMPANY
- L ANGLE IRON
- LB POUND
- LF LINEAR FEET
- LT LEFT
- MAX MAXIMUM
- MECH MECHANICAL
- MIL 0.001 INCH
- MIN MINIMUM
- N.C. NORMALLY CLOSED
- NFS NON-FROST SUSCEPTIBLE
- NFPA NATIONAL FIRE PROTECTION ASSOCIATION
- NHP NEW HEADER PIPE
- NIC NOT IN CONTRACT
- N.O. NORMALLY OPEN
- NTS NOT TO SCALE
- OC ON CENTER
- OD OUTSIDE DIAMETER
- OSHA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
- OZ OUNCE
- PC POINT OF CURVATURE
- PI POINT OF INTERSECTION
- PT POINT OF TANGENT
- PL STEEL PLATE - PLATE STEEL
- PRV PRESSURE RELIEF VALVE
- PSF POUND PER SQUARE FOOT
- PSI POUND PER SQUARE INCH
- PSIG POUND PER SQUARE INCH GAUGE
- PT PRESSURE TREATED
- R RADIUS
- REQ'D REQUIRED
- ROW RIGHT OF WAY
- RT RIGHT
- SCH SCHEDULE
- SI SQUARE INCH
- SIM SIMILAR
- SS STAINLESS STEEL
- SSPC STEEL STRUCTURES PAINTING COUNCIL
- STA STATION
- STD STANDARD
- STL STEEL
- SY SQUARE YARD
- TF TANK FARM
- TH THICKNESS
- TS TUBE STEEL
- TYP TYPICAL
- UL UNDERWRITERS LABORATORY
- V VERTICAL
- W/ WITH
- WP WORKING PRESSURE

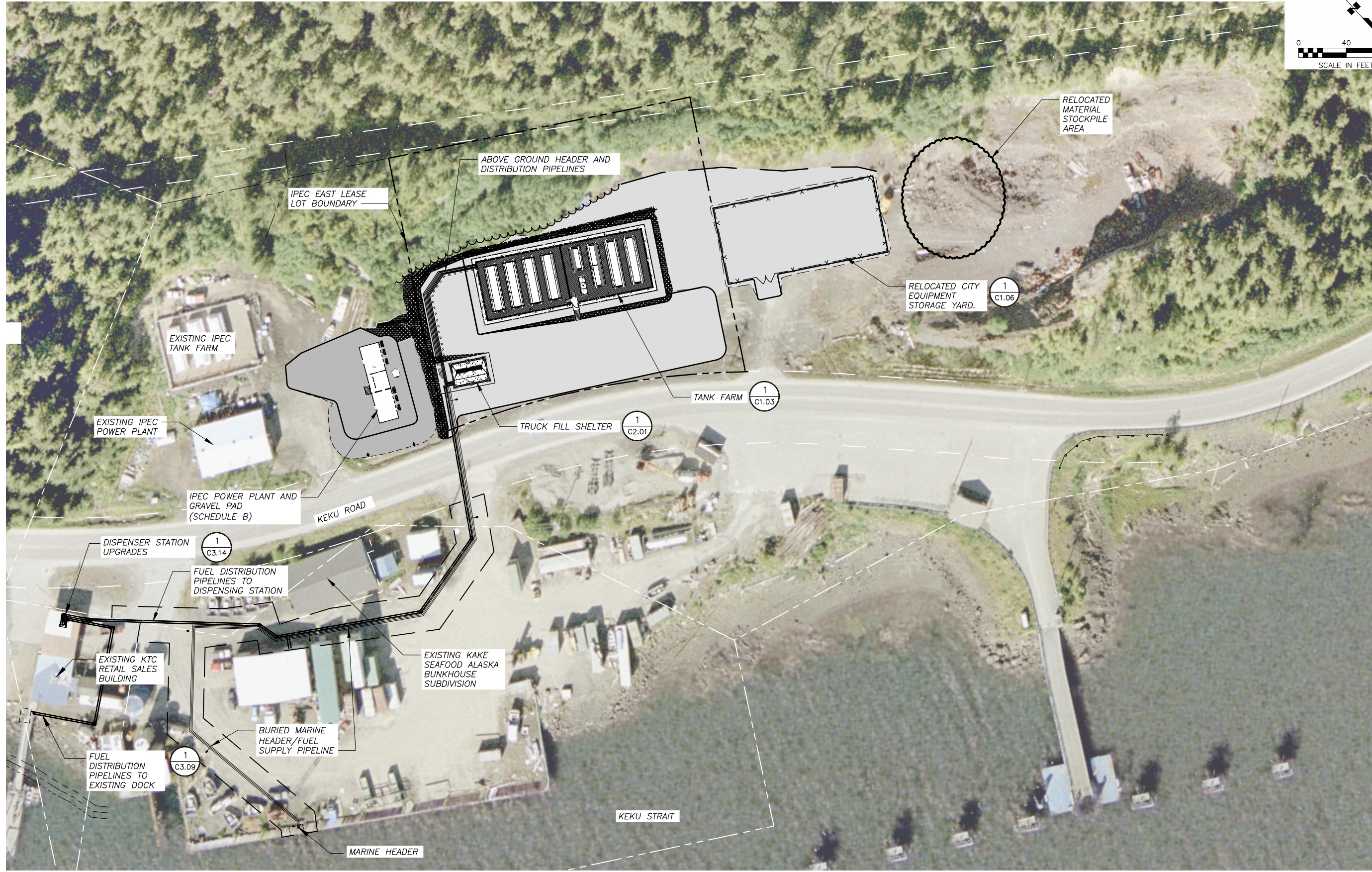
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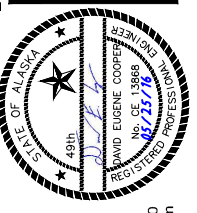
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 KAKE BULK FUEL UPGRADES
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 SHEET: G1.03
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 XREF: 13-039_40_KAKE-SURVEY-BASE, 13040-00_B01-BK, X-SITE-JOSH



1
G1.04 PROJECT LAYOUT PLAN
 SCALE: 1" = 40.0'

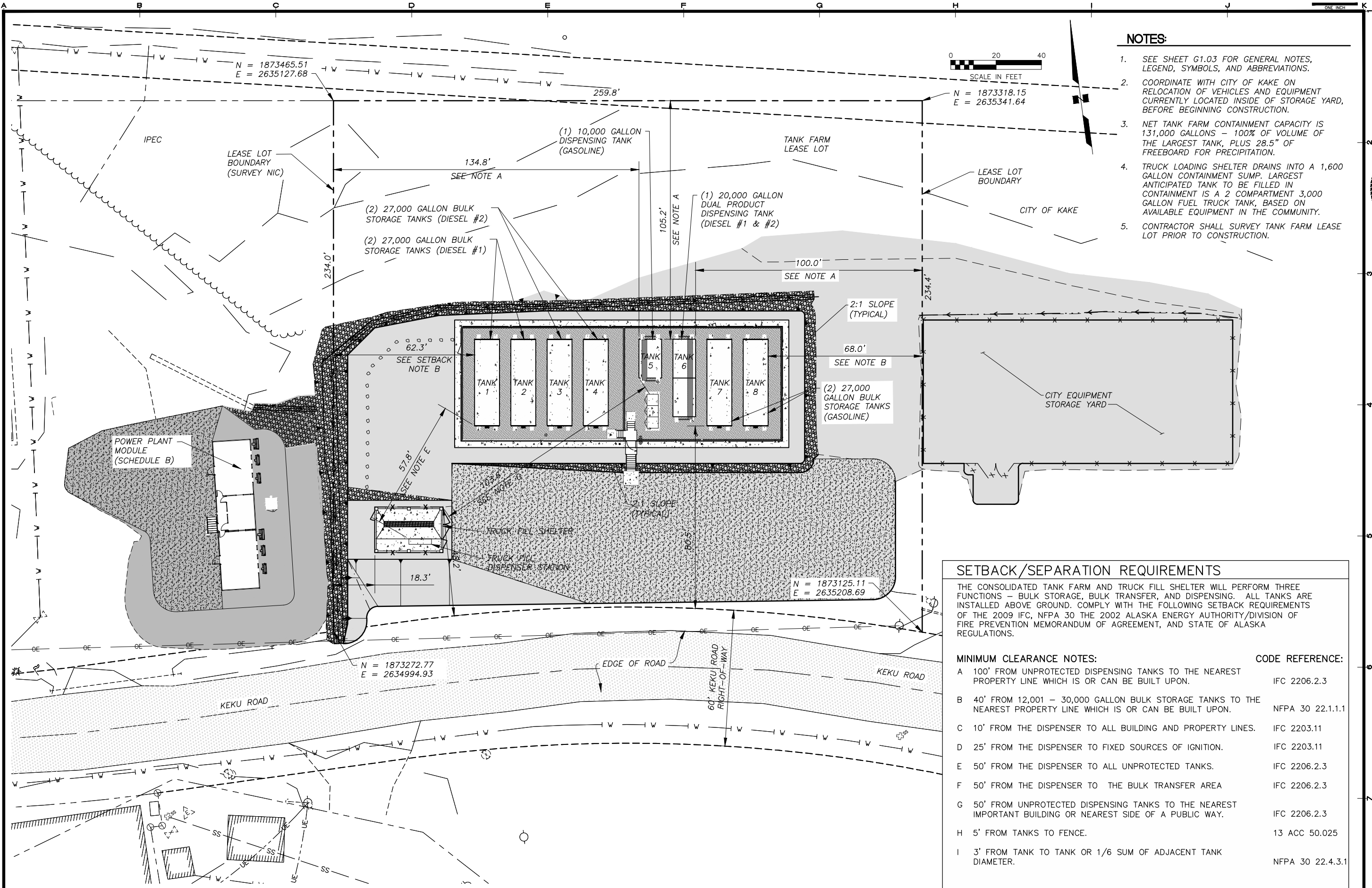
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 PROJECT LAYOUT PLAN
 SHEET G1.04
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 JOB NUMBER: 13-040

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 LAYOUT: G1.05 - SETBACK REQUIREMENTS
 XREF: 13-039_40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-TANK-FARM, 13040-00_B01-BK



- NOTES:**
- SEE SHEET G1.03 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
 - COORDINATE WITH CITY OF KAKE ON RELOCATION OF VEHICLES AND EQUIPMENT CURRENTLY LOCATED INSIDE OF STORAGE YARD, BEFORE BEGINNING CONSTRUCTION.
 - NET TANK FARM CONTAINMENT CAPACITY IS 131,000 GALLONS - 100% OF VOLUME OF THE LARGEST TANK, PLUS 28.5" OF FREEBOARD FOR PRECIPITATION.
 - TRUCK LOADING SHELTER DRAINS INTO A 1,600 GALLON CONTAINMENT SUMP. LARGEST ANTICIPATED TANK TO BE FILLED IN CONTAINMENT IS A 2 COMPARTMENT 3,000 GALLON FUEL TRUCK TANK, BASED ON AVAILABLE EQUIPMENT IN THE COMMUNITY.
 - CONTRACTOR SHALL SURVEY TANK FARM LEASE LOT PRIOR TO CONSTRUCTION.

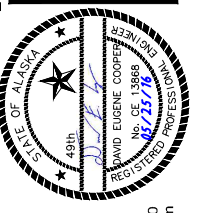
SETBACK/SEPARATION REQUIREMENTS

THE CONSOLIDATED TANK FARM AND TRUCK FILL SHELTER WILL PERFORM THREE FUNCTIONS - BULK STORAGE, BULK TRANSFER, AND DISPENSING. ALL TANKS ARE INSTALLED ABOVE GROUND. COMPLY WITH THE FOLLOWING SETBACK REQUIREMENTS OF THE 2009 IFC, NFPA 30 THE 2002 ALASKA ENERGY AUTHORITY/DIVISION OF FIRE PREVENTION MEMORANDUM OF AGREEMENT, AND STATE OF ALASKA REGULATIONS.

MINIMUM CLEARANCE NOTES:	CODE REFERENCE:
A 100' FROM UNPROTECTED DISPENSING TANKS TO THE NEAREST PROPERTY LINE WHICH IS OR CAN BE BUILT UPON.	IFC 2206.2.3
B 40' FROM 12,001 - 30,000 GALLON BULK STORAGE TANKS TO THE NEAREST PROPERTY LINE WHICH IS OR CAN BE BUILT UPON.	NFPA 30 22.1.1.1
C 10' FROM THE DISPENSER TO ALL BUILDING AND PROPERTY LINES.	IFC 2203.11
D 25' FROM THE DISPENSER TO FIXED SOURCES OF IGNITION.	IFC 2203.11
E 50' FROM THE DISPENSER TO ALL UNPROTECTED TANKS.	IFC 2206.2.3
F 50' FROM THE DISPENSER TO THE BULK TRANSFER AREA	IFC 2206.2.3
G 50' FROM UNPROTECTED DISPENSING TANKS TO THE NEAREST IMPORTANT BUILDING OR NEAREST SIDE OF A PUBLIC WAY.	IFC 2206.2.3
H 5' FROM TANKS TO FENCE.	13 ACC 50.025
I 3' FROM TANK TO TANK OR 1/6 SUM OF ADJACENT TANK DIAMETER.	NFPA 30 22.4.3.1

1 SETBACK PLAN - TANK FARM
 SCALE: 1" = 20'

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1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW



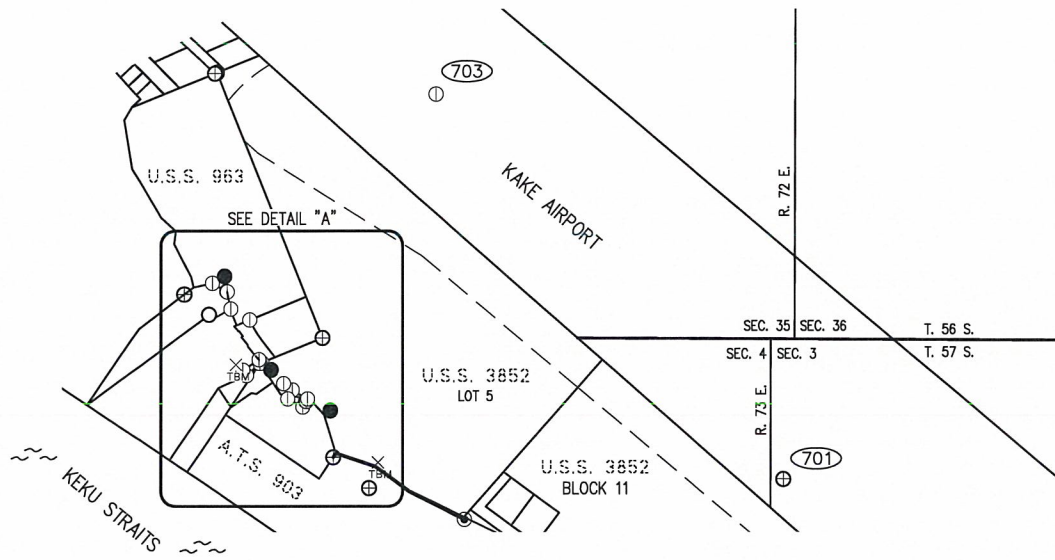
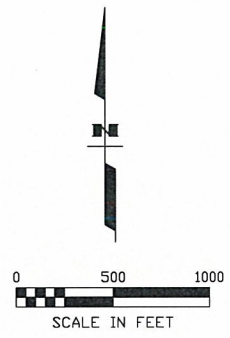
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 KAKE BULK FUEL UPGRADES
 TANK FARM - SETBACK PLAN
 SHEET: G1.05
 DRAWN BY: KK CHECKED BY: MRS
 DATE: 05/25/16 SCALE: AS SHOWN
 JOB NUMBER: 13-040

SURVEY CONTROL DIAGRAM

LOCATED WITHIN SECTION 35, T 56 S, R 72 E, AND SECTIONS 4 & 5, AND U.S.S. No 3852 & 963, T 57 S, R 73 E, COPPER RIVER MERIDIAN, KAKE, ALASKA, PETERSBURG RECORDING DISTRICT, 1ST JUDICIAL COURT

DETAIL "A"
1"=100'



LEGEND

- ⊕ FOUND BRASS MONUMENT
- ⊙ FOUND ALUMINUM MONUMENT
- FOUND REBAR
- SET REBAR WITH ALUMINUM CAP
- ⊗ TBM SET TEMPORARY BENCH MARK
- K.S.A.B. KAKE SEAFOOD ALASKA BUNKHOUSE
- SECTION LINE
- PROPERTY LINE
- - - EASEMENT LINE
- ⋯ LEASE LINE

NOTES

- ALL MEASUREMENTS ARE IN U.S. SURVEY FEET UNLESS OTHERWISE NOTED.
- FIELD SURVEY WAS PERFORMED BY HATTENBURG DILLEY & LINNELL LLC FROM MAY 7, 2015 THROUGH MAY 15, 2015.
- ADDITIONAL EASEMENTS, AGREEMENTS, & ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN HEREON.

VERTICAL CONTROL

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
601	1872928	2635262	23.74'	Set 10" Spike in Telephone Pole
602	1873435	2634511	16.41'	Set 10" Spike in Telephone Pole

HORIZONTAL CONTROL*

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	1873197.1116	2635010.8735	27.08'	Set Rebar With 2" Aluminum Cap
2	1873408.6972	2634696.1427	23.75'	Set Rebar With 2" Aluminum Cap
3	1873893.6886	2634450.3768	34.01'	Set Rebar With 2" Aluminum Cap
701	1872840.1191	2637372.1235	-	Found 3-1/2" Brass Cap Monument
702	1872794.6173	2635215.5268	21.30'	Found 2-1/2" Brass Cap Monument
703	1874838.1793	2635565.1328	-	Found 3-1/2" Aluminum Cap Monument
704	1872954.6013	2635026.4230	-	Found 2-1/2" Brass Cap Monument
705	1873215.9999	2634864.6328	-	Found 2" Aluminum Cap Monument
706	1873247.3737	2634879.4186	-	Found 2" Aluminum Cap Monument
707	1873244.9772	2634884.1174	-	Found 2" Aluminum Cap Monument
708	1873258.0663	2634890.6033	-	Found 2" Aluminum Cap Monument
709	1873304.7602	2634809.4561	-	Found 2" Aluminum Cap Monument
710	1873258.5970	2634785.4013	-	Found 2" Aluminum Cap Monument
711	1873337.6396	2634763.0307	-	Found 2" Aluminum Cap Monument
712	1873446.7091	2634647.4971	-	Found 1-1/2" Aluminum Cap Monument
713	1873442.5594	2634637.2799	-	Found 2" Aluminum Cap Monument
714	1873379.9742	2634566.8062	-	Found 2" Aluminum Cap Monument
715	1873407.1070	2634547.7782	-	Found 2" Aluminum Cap Monument
716	1873462.2256	2634632.3165	-	Found 2" Aluminum Cap Monument
717	1873668.1961	2634583.7530	-	Found 2" Aluminum Cap Monument
718	1873724.8047	2634483.9161	-	Found 2" Aluminum Cap Monument
719	1873816.2288	2634460.7775	-	Found 1-1/2" Aluminum Cap Monument
720	1873813.7558	2634465.1436	-	Found 2" Aluminum Cap Monument
721	1873695.3223	2634367.9916	-	Found 1/2" Rebar
722	1873800.2416	2634241.0633	-	Found 2" Brass Cap Monument
723	1873858.4220	2634385.9225	-	Found 2" Aluminum Cap Monument
724	1874949.9011	2634411.2145	-	Found 3-1/4" Brass Cap Monument
725	1874945.1140	2634399.8426	-	Found 3-1/4" Brass Cap Monument
726	1873574.4725	2634969.4731	-	Found 3-1/4" Brass Cap Monument

*ELEVATIONS MUST BE FIELD VERIFIED PRIOR TO USE

HORIZONTAL CONTROL STATEMENT

COORDINATE SYSTEM:
THIS PROJECT IS LOCATED ENTIRELY WITHIN THE NAD83 (2011) ALASKA STATE PLANE ZONE 1 U.S. SURVEY FOOT COORDINATE SYSTEM.

BASIS OF COORDINATES:
THE BASIS OF COORDINATES IS CONTROL POINT 702, A 2-1/2" BRASS CAP MONUMENT IN THE CONCRETE RETAINING WALL FOR THE ALASKA FERRY TERMINAL. SAID CONTROL POINT HAS NAD83 (2011) ALASKA STATE PLANE ZONE 1 COORDINATES OF 1872794.6173' NORTH, 2635215.5268' EAST.

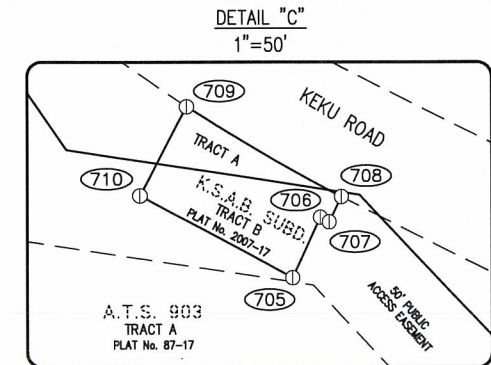
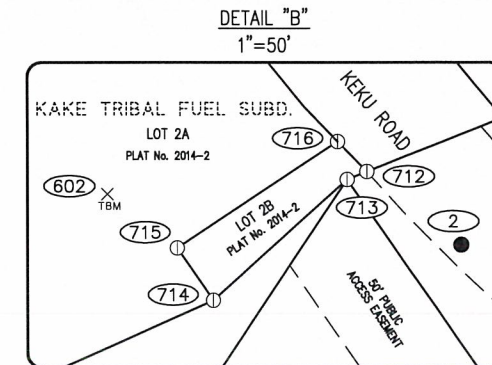
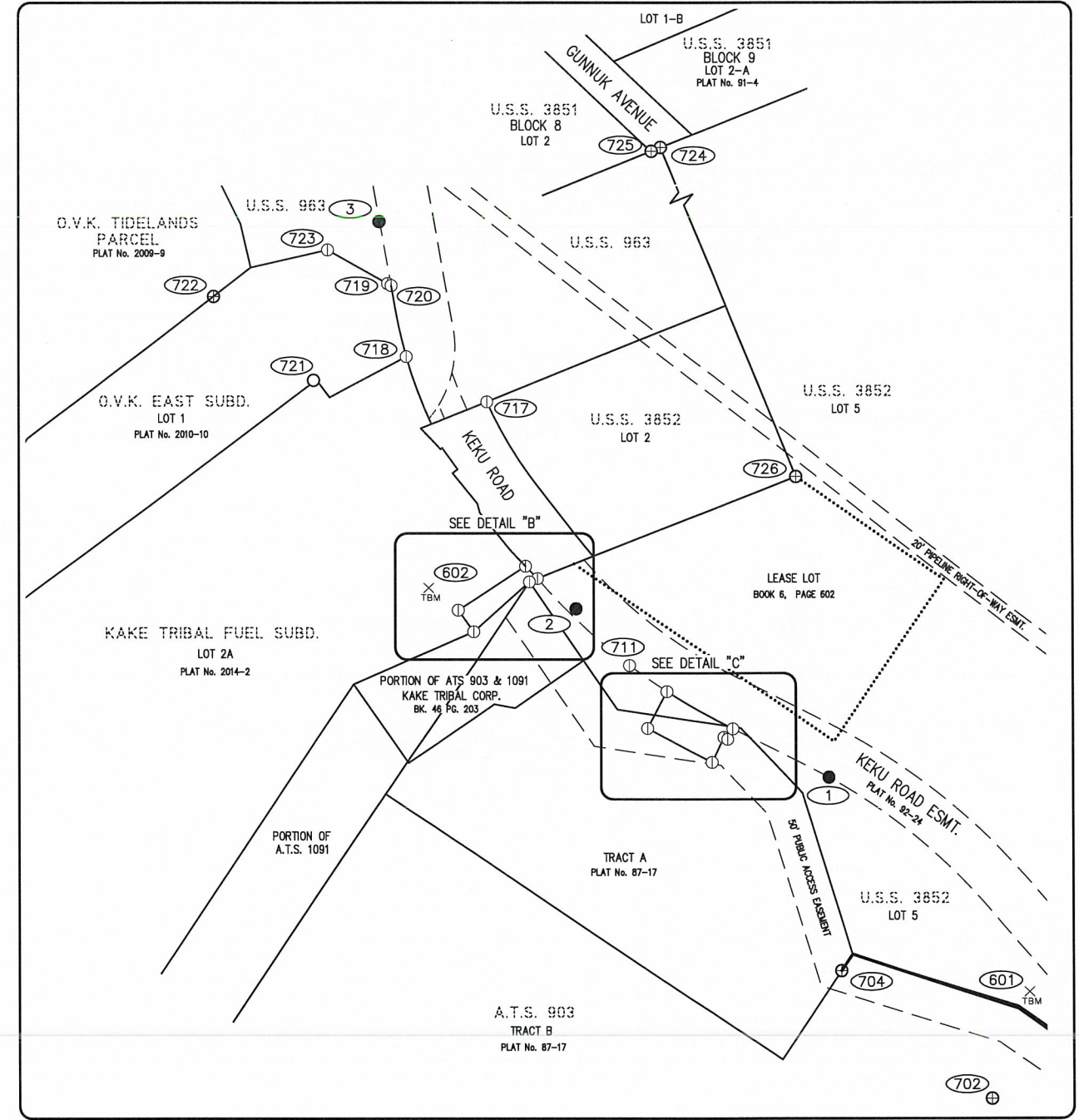
VERTICAL CONTROL STATEMENT

ELEVATIONS ARE BASED ON CONTROL POINT 1905 FROM THE ANTHC SURVEY CONTROL DIAGRAM FOR THE "WATER DISTRIBUTION SYSTEM UPGRADES PROJECT" DATED OCTOBER 20, 2014. A CLOSED DIFFERENTIAL LEVEL LOOP WAS THEN RUN FROM CONTROL POINT 1905 THROUGHOUT THE SET PROJECT CONTROL. ANTHC CONTROL POINT 1905, SHOWN HEREON AS HDL CONTROL POINT 702, HAS AN ELEVATION OF 21.30' PER THE AFOREMENTIONED ANTHC SURVEY CONTROL DIAGRAM.

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 DRAWING REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, AND THAT THE MONUMENTS SHOWN HEREON ACTUALLY EXIST AS DESCRIBED, AND THAT ALL DIMENSIONS AND OTHER DETAILS ARE CORRECT TO THE EXTENT SHOWN HEREON.

[Signature]
BRADFORD J. RINCKEY, PLS LS-11299 DATE 5-31-16



REVISIONS	DATE	DESCRIPTION



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KAKE BULK FUEL UPGRADES
ALASKA ENERGY AUTHORITY
KAKE, ALASKA

PROJECT TITLE
SURVEY CONTROL DIAGRAM

DATE 05/25/16 1" = 500

13-039

H:\jobs\13-040 Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_G201-PROCESS-FLOW, 1=1, 05-04-16 at 11:17 by jkk
 LAYOUT: G2.01-PROCESS FLOW DIAGRAM
 XREF: 05012-XPB, 13040-00_B01-BK

PUMP SCHEDULE			
TANK FARM			
TAG	TYPE	SIZE	PRODUCT
TP1	TRANSFER PUMP	2"	GAS
SP1	SUBMERSIBLE PUMP	2"	GAS
TP2	TRANSFER PUMP	2"	DIESEL NO. 2
SP2	SUBMERSIBLE PUMP	2"	DIESEL NO. 2
TP3	TRANSFER PUMP	2"	DIESEL NO. 1
SP3	SUBMERSIBLE PUMP	2"	DIESEL NO. 1

FILTER SCHEDULE			
TRUCK FILL			
TAG	TYPE	SIZE	PRODUCT
AF1	FUEL FILTER	2"	GAS
AF2	FUEL FILTER	2"	DIESEL NO. 2
AF3	FUEL FILTER	2"	DIESEL NO. 1

METER SCHEDULE			
TRUCK FILL			
TAG	TYPE	SIZE	PRODUCT
M1	CUSTODY METER	2"	DIESEL #2
M2	CUSTODY METER	2"	DIESEL #1

TANK SCHEDULE		
TANK ID	TANK DESCRIPTION	REFERENCE DRAWING
TANK 1	27,000 GALLON HORIZONTAL BULK TANK	C4.01
TANK 2	27,000 GALLON HORIZONTAL BULK TANK	C4.01
TANK 3	27,000 GALLON HORIZONTAL BULK TANK	C4.01
TANK 4	27,000 GALLON HORIZONTAL BULK TANK	C4.01
TANK 5	10,000 GALLON HORIZONTAL DISPENSING TANK	C4.03
TANK 6	20,000 GALLON DUAL PRODUCT HORIZONTAL DISPENSING TANK	C4.02
TANK 7	27,000 GALLON HORIZONTAL BULK TANK	C4.01
TANK 8	27,000 GALLON HORIZONTAL BULK TANK	C4.01

VALVE SCHEDULE GASOLINE		
MARINE HEADER		
TAG	TYPE	SIZE
101	CHECK (OUTSIDE LEVER AND WEIGHTED)	3"
102	BALL	3"
TANK FARM		
103	PRESSURE RELIEF	1"
104	CHECK	3"
105	BALL	3"
106	BALL	3"
107	PRESSURE RELIEF	1"
108	BALL	3"
109	BALL	2"
110	BALL W/MOTOR ACTUATOR	2"
111	BALL	2"
112	PRESSURE RELIEF	1"
TRUCK FILL		
113	BALL	2"
114	BALL	2"
115	PRESSURE RELIEF	1"
FUEL DOCK		
116	BALL W/MOTOR ACTUATOR	2"
117	BALL	2"
118	PRESSURE RELIEF	1"

VALVE SCHEDULE DIESEL NO. 2		
MARINE HEADER		
TAG	TYPE	SIZE
201	CHECK (OUTSIDE LEVER AND WEIGHTED)	3"
202	BALL	3"
TANK FARM		
203	PRESSURE RELIEF	1"
204	CHECK	3"
205	BALL	3"
206	BALL	3"
207	PRESSURE RELIEF	1"
208	BALL	3"
209	BALL	2"
210	BALL W/MOTOR ACTUATOR	2"
211	BALL	2"
212	PRESSURE RELIEF	1"
TRUCK FILL		
213	BALL	2"
214	BALL	2"
215	PRESSURE RELIEF	1"
219	BALL	1 1/2"
220	BALL W/MOTOR ACTUATOR	1 1/2"
221	PLUG	1 1/2"
FUEL DOCK		
216	BALL W/MOTOR ACTUATOR	2"
217	BALL	2"
218	PRESSURE RELIEF	1"

VALVE SCHEDULE DIESEL NO. 1		
MARINE HEADER		
TAG	TYPE	SIZE
301	CHECK (OUTSIDE LEVER AND WEIGHTED)	3"
302	BALL	3"
TANK FARM		
303	PRESSURE RELIEF	1"
304	CHECK	3"
305	BALL	3"
306	BALL	3"
307	PRESSURE RELIEF	1"
308	BALL	3"
309	BALL	2"
310	BALL W/MOTOR ACTUATOR	2"
311	BALL	2"
312	PRESSURE RELIEF	1"
TRUCK FILL		
313	BALL	2"
314	BALL	2"
315	PRESSURE RELIEF	1"
316	BALL	1"
317	BALL W/MOTOR ACTUATOR	1"
318	PLUG	1"
319	BALL	1 1/2"
320	BALL W/MOTOR ACTUATOR	1 1/2"
321	PLUG	1 1/2"

REVISIONS	DATE	DESCRIPTION
MARK	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW

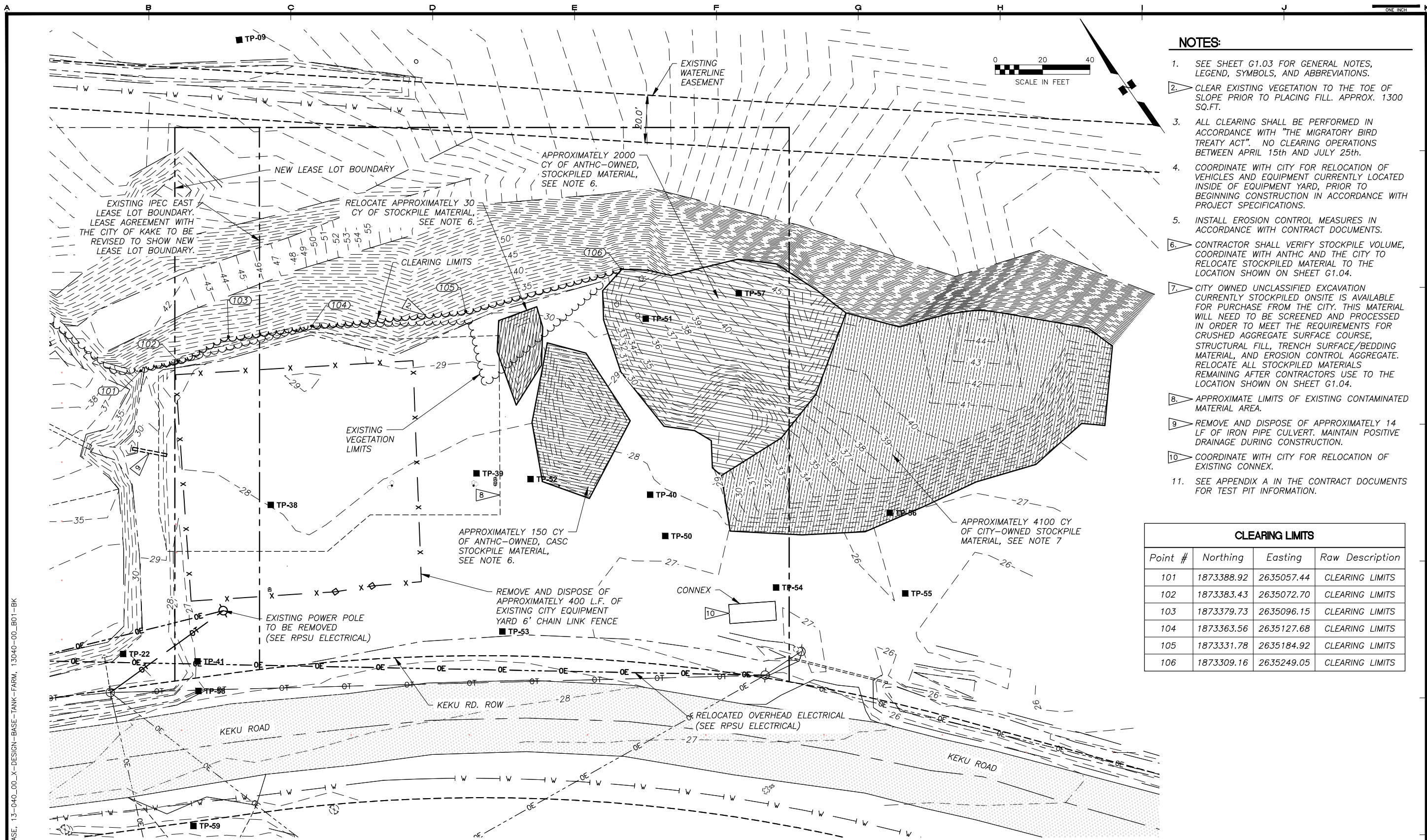


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 KAKE BULK FUEL UPGRADES
 KAKE, ALASKA

SHEET TITLE: TANK FARM-TANK, PUMP, AND VALVE SCHEDULE
 SHEET: G2.01
 DRAWN BY: HDL CHECKED BY: MRS
 DATE: 05/25/16 SCALE: AS SHOWN
 JOB NUMBER: 13-040

H:\Jobs\13-040 Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_C1.1-TF-DEMO, 1=1, 05-05-16 at 08:38 by jkk
 LAYOUT: C1.01
 XREF: 13-039_40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-TANK-FARM, 13040-00_B01-BK

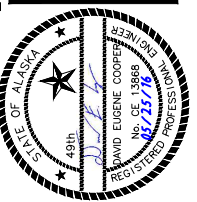


- NOTES:**
- SEE SHEET G1.03 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
 - CLEAR EXISTING VEGETATION TO THE TOE OF SLOPE PRIOR TO PLACING FILL. APPROX. 1300 SQ.FT.
 - ALL CLEARING SHALL BE PERFORMED IN ACCORDANCE WITH "THE MIGRATORY BIRD TREATY ACT". NO CLEARING OPERATIONS BETWEEN APRIL 15th AND JULY 25th.
 - COORDINATE WITH CITY FOR RELOCATION OF VEHICLES AND EQUIPMENT CURRENTLY LOCATED INSIDE OF EQUIPMENT YARD, PRIOR TO BEGINNING CONSTRUCTION IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
 - INSTALL EROSION CONTROL MEASURES IN ACCORDANCE WITH CONTRACT DOCUMENTS.
 - CONTRACTOR SHALL VERIFY STOCKPILE VOLUME, COORDINATE WITH ANTHC AND THE CITY TO RELOCATE STOCKPILED MATERIAL TO THE LOCATION SHOWN ON SHEET G1.04.
 - CITY OWNED UNCLASSIFIED EXCAVATION CURRENTLY STOCKPILED ONSITE IS AVAILABLE FOR PURCHASE FROM THE CITY. THIS MATERIAL WILL NEED TO BE SCREENED AND PROCESSED IN ORDER TO MEET THE REQUIREMENTS FOR CRUSHED AGGREGATE SURFACE COURSE, STRUCTURAL FILL, TRENCH SURFACE/BEDDING MATERIAL, AND EROSION CONTROL AGGREGATE. RELOCATE ALL STOCKPILED MATERIALS REMAINING AFTER CONTRACTORS USE TO THE LOCATION SHOWN ON SHEET G1.04.
 - APPROXIMATE LIMITS OF EXISTING CONTAMINATED MATERIAL AREA.
 - REMOVE AND DISPOSE OF APPROXIMATELY 14 LF OF IRON PIPE CULVERT. MAINTAIN POSITIVE DRAINAGE DURING CONSTRUCTION.
 - COORDINATE WITH CITY FOR RELOCATION OF EXISTING CONNEX.
 - SEE APPENDIX A IN THE CONTRACT DOCUMENTS FOR TEST PIT INFORMATION.

CLEARING LIMITS			
Point #	Northing	Easting	Raw Description
101	1873388.92	2635057.44	CLEARING LIMITS
102	1873383.43	2635072.70	CLEARING LIMITS
103	1873379.73	2635096.15	CLEARING LIMITS
104	1873363.56	2635127.68	CLEARING LIMITS
105	1873331.78	2635184.92	CLEARING LIMITS
106	1873309.16	2635249.05	CLEARING LIMITS

1 DEMOLITION PLAN : TANK FARM
 C1.01 SCALE: 1" = 20'

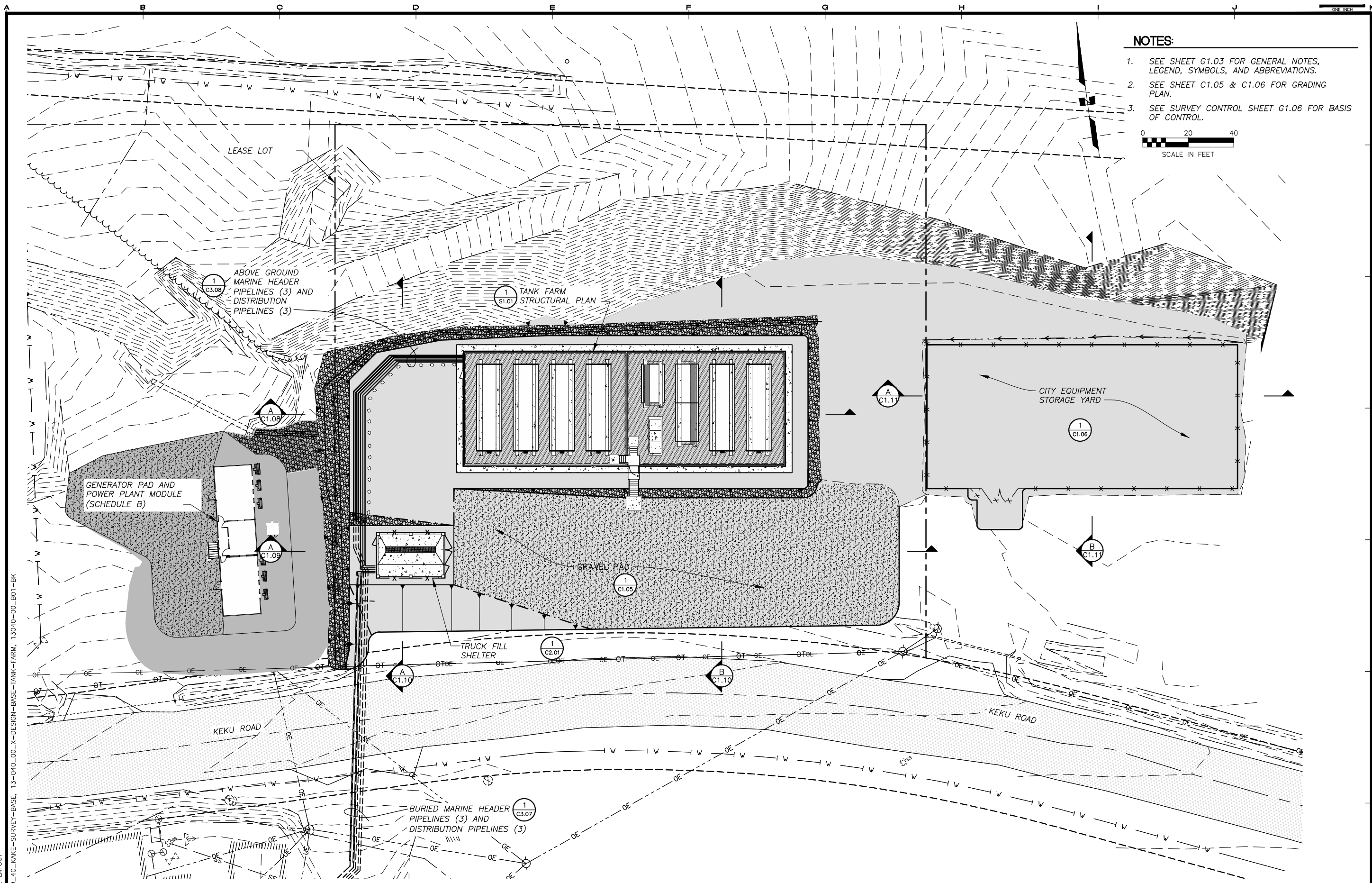
REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW



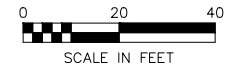
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ALASKA ENERGY AUTHORITY
 KAKE BULK FUEL UPGRADES
 TANK FARM - SITE SURVEY AND DEMOLITION PLAN
 SHEET C1.01
 DRAWN BY: KK CHECKED BY: MRS
 DATE: 05/25/16 SCALE: AS SHOWN
 JOB NUMBER: 13-040

H:\Jobs\13-040 Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_X-C1.2-C1.3-TF-LAYOUT, 1=1, 05-05-16 at 08:41 by jkk
 LAYOUT: C1.02 LAYOUT
 XREF: 13-039_40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-TANK-FARM, 13040-00_B01-BK



- NOTES:**
- SEE SHEET G1.03 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
 - SEE SHEET C1.05 & C1.06 FOR GRADING PLAN.
 - SEE SURVEY CONTROL SHEET G1.06 FOR BASIS OF CONTROL.



REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW



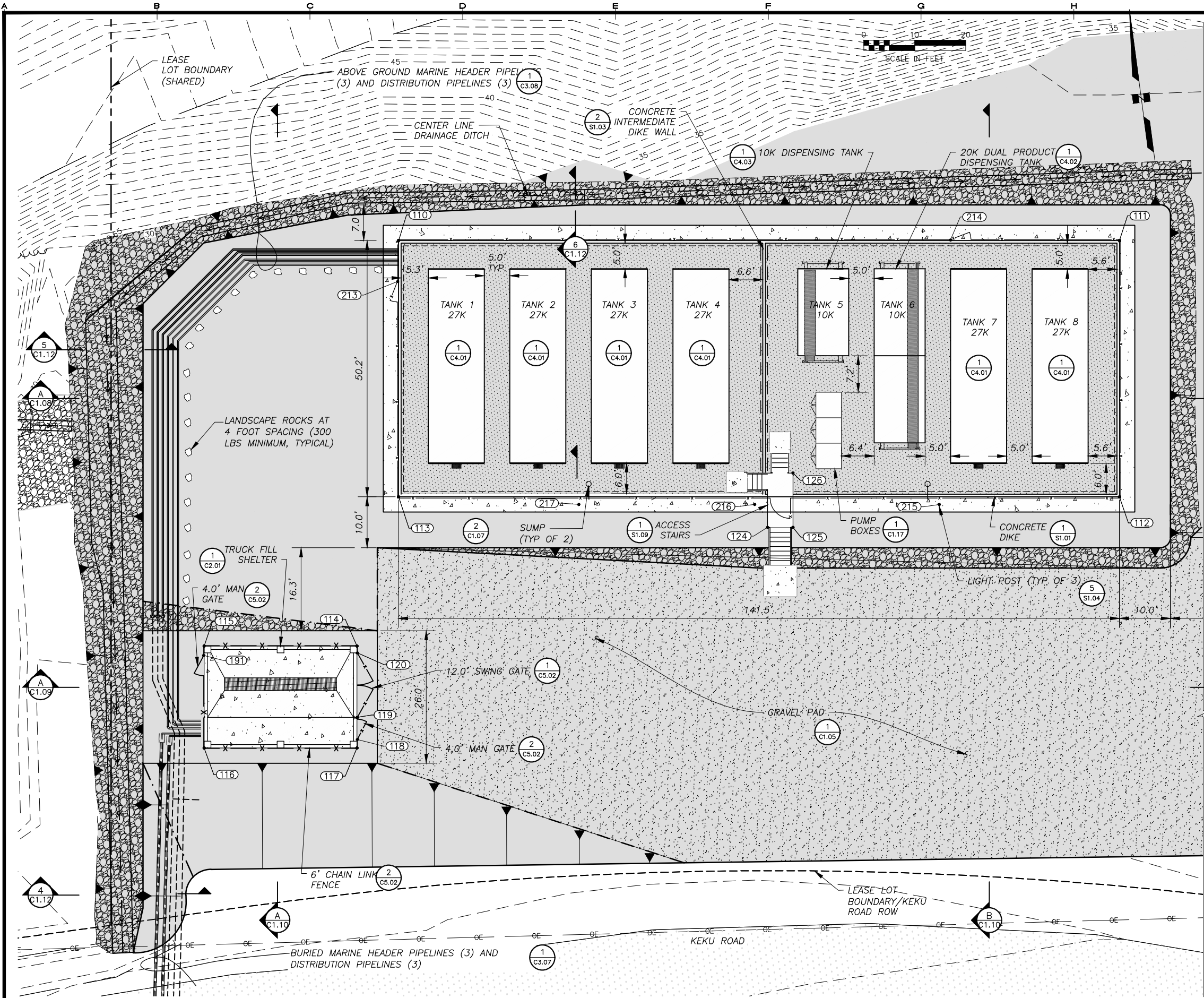
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 KAKE BULK FUEL UPGRADES
 KAKE, ALASKA

SHEET TITLE: TANK FARM - PROJECT LAYOUT PLAN
 SHEET: C1.02
 DRAWN BY: KK CHECKED BY: MRS
 DATE: 05/25/16 SCALE: AS SHOWN
 JOB NUMBER: 13-040

1 LAYOUT PLAN - TANK FARM
 SCALE: 1" = 20'

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 LAYOUT: C1.03 ENLARGE SITE
 XREF: 13-039_40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-TANK-FARM, 13040-00_B01-BK



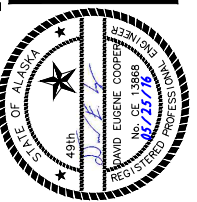
- NOTES:**
- SEE SHEET G1.03 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
 - INSTALL EROSION CONTROL MEASURES IN ACCORDANCE WITH PROJECT MANUAL.
 - SEE SURVEY CONTROL SHEET G1.06 FOR BASIS OF CONTROL.
 - ALL SIDESLOPES 2:1 UNLESS OTHERWISE NOTED.

SITE COORDINATE TABLE

Point #	Northing	Easting	Raw Description
110	1873351.36	2635117.60	EXTERIOR DIKE CORNER
111	1873271.10	2635234.14	EXTERIOR DIKE CORNER
112	1873229.72	2635205.63	EXTERIOR DIKE CORNER
113	1873309.98	2635089.10	EXTERIOR DIKE CORNER
114	1873290.50	2635065.76	CORNER TRUCK FILL FOUNDATION
115	1873307.51	2635041.05	CORNER TRUCK FILL FOUNDATION
116	1873291.04	2635029.71	CORNER TRUCK FILL FOUNDATION
117	1873274.02	2635054.42	CORNER TRUCK FILL FOUNDATION
118	1873275.35	2635055.43	TRUCK FILL MAN GATE POST
119	1873278.92	2635057.89	TRUCK FILL FENCE GATE POST
120	1873289.35	2635065.07	TRUCK FILL FENCE GATE POST
124	1873263.96	2635145.34	ACCESS STAIRS CORNER
125	1873261.13	2635149.45	ACCESS STAIRS CORNER
126	1873269.90	2635155.50	ACCESS STAIRS CORNER
191	1873306.05	2635039.95	TRUCK FILL MAN GATE POST
213	1873344.87	2635112.93	TANK FARM MAN GATE POST
214	1873290.01	2635206.90	TANK FARM MAN GATE POST
215	1873248.55	2635175.65	LIGHT POST
216	1873269.10	2635145.81	LIGHT POST
217	1873288.68	2635117.38	LIGHT POST

1 SITE PLAN - TANK FARM
 SCALE: 1" = 10'

REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW

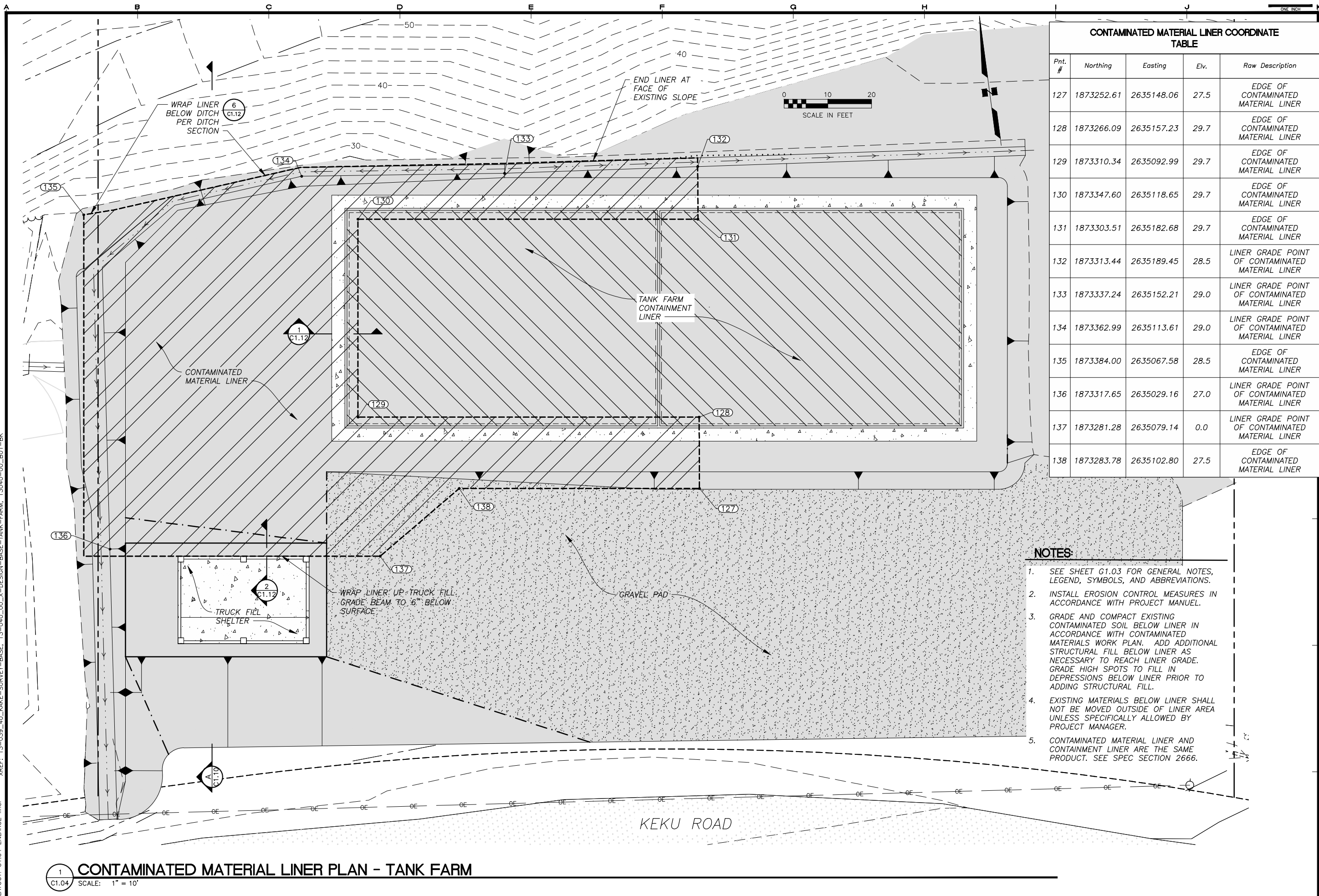


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 KAKE, ALASKA

SHEET TITLE TANK FARM - SITE PLAN	
SHEET C1.03	
DRAWN BY: KK	CHECKED BY: MRS
DATE: 05/25/16	SCALE: AS SHOWN
JOB NUMBER: 13-040	

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 LAYOUT: C1.04 ENLARGE.liner XREF: 13-039_40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-TANK-FARM, 13040-00_B01-BK

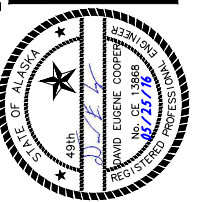


CONTAMINATED MATERIAL LINER COORDINATE TABLE				
Pnt. #	Northing	Easting	Elev.	Raw Description
127	1873252.61	2635148.06	27.5	EDGE OF CONTAMINATED MATERIAL LINER
128	1873266.09	2635157.23	29.7	EDGE OF CONTAMINATED MATERIAL LINER
129	1873310.34	2635092.99	29.7	EDGE OF CONTAMINATED MATERIAL LINER
130	1873347.60	2635118.65	29.7	EDGE OF CONTAMINATED MATERIAL LINER
131	1873303.51	2635182.68	29.7	EDGE OF CONTAMINATED MATERIAL LINER
132	1873313.44	2635189.45	28.5	LINER GRADE POINT OF CONTAMINATED MATERIAL LINER
133	1873337.24	2635152.21	29.0	LINER GRADE POINT OF CONTAMINATED MATERIAL LINER
134	1873362.99	2635113.61	29.0	LINER GRADE POINT OF CONTAMINATED MATERIAL LINER
135	1873384.00	2635067.58	28.5	EDGE OF CONTAMINATED MATERIAL LINER
136	1873317.65	2635029.16	27.0	LINER GRADE POINT OF CONTAMINATED MATERIAL LINER
137	1873281.28	2635079.14	0.0	LINER GRADE POINT OF CONTAMINATED MATERIAL LINER
138	1873283.78	2635102.80	27.5	EDGE OF CONTAMINATED MATERIAL LINER

- NOTES:**
- SEE SHEET G1.03 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
 - INSTALL EROSION CONTROL MEASURES IN ACCORDANCE WITH PROJECT MANUAL.
 - GRADE AND COMPACT EXISTING CONTAMINATED SOIL BELOW LINER IN ACCORDANCE WITH CONTAMINATED MATERIALS WORK PLAN. ADD ADDITIONAL STRUCTURAL FILL BELOW LINER AS NECESSARY TO REACH LINER GRADE. GRADE HIGH SPOTS TO FILL IN DEPRESSIONS BELOW LINER PRIOR TO ADDING STRUCTURAL FILL.
 - EXISTING MATERIALS BELOW LINER SHALL NOT BE MOVED OUTSIDE OF LINER AREA UNLESS SPECIFICALLY ALLOWED BY PROJECT MANAGER.
 - CONTAMINATED MATERIAL LINER AND CONTAINMENT LINER ARE THE SAME PRODUCT. SEE SPEC SECTION 2666.

1 CONTAMINATED MATERIAL LINER PLAN - TANK FARM
 SCALE: 1" = 10'

REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW

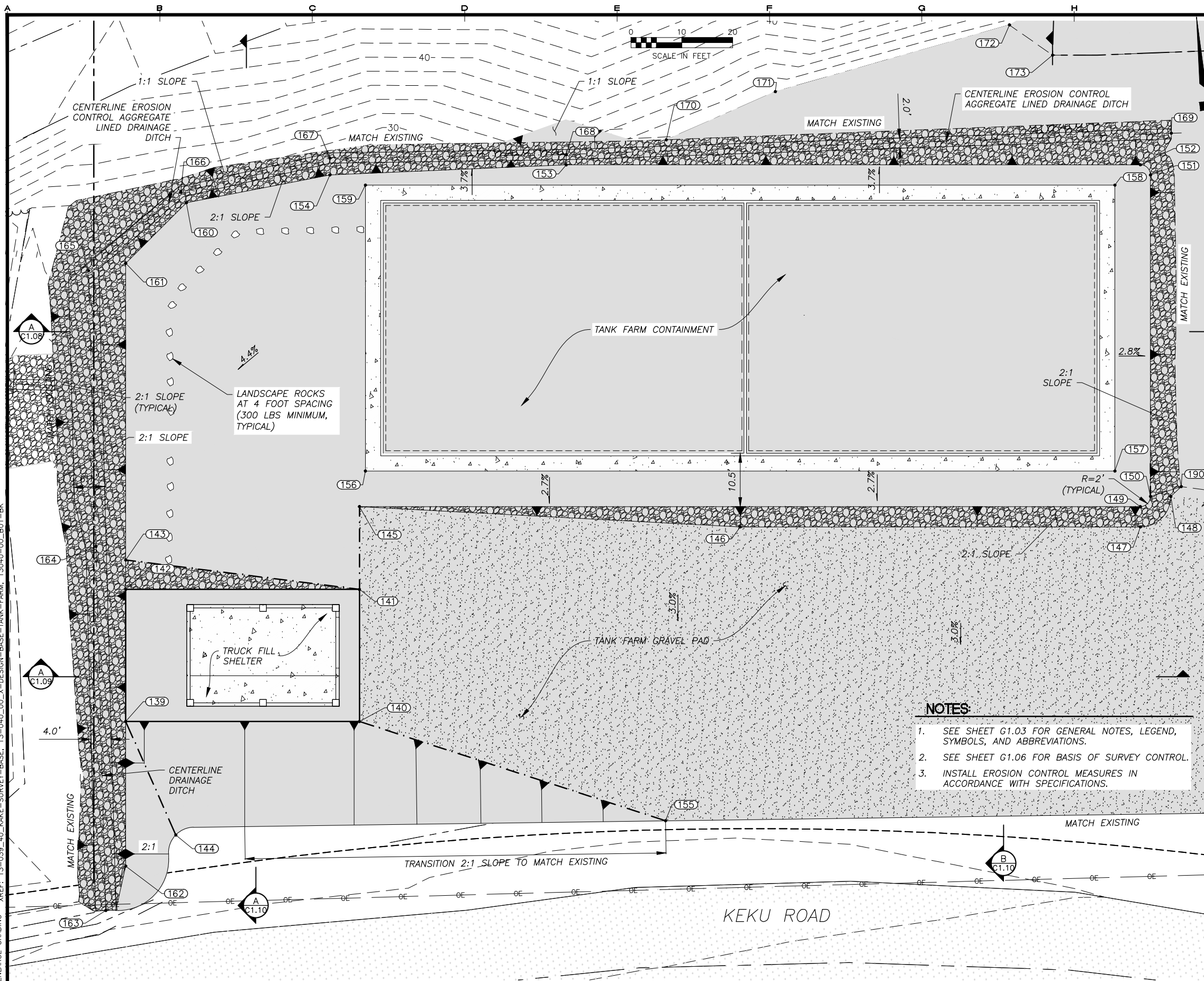


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 KAKE BULK FUEL UPGRADES
 KAKE, ALASKA

SHEET TITLE: TANK FARM - LINER PLAN
 SHEET: C1.04
 DRAWN BY: KK CHECKED BY: MRS
 DATE: 05/25/16 SCALE: AS SHOWN
 JOB NUMBER: 13-040

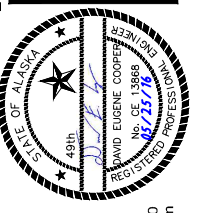
H:\Jobs\13-040 Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_C1.4-C1.06-TF-GRADING, I=1, 05-24-16 at 09:13 by CDB
 LAYOUT: C1.05 ENLARGE GRADING XREF: 13-039_40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-TANK-FARM, 13040-00_B01-BK



- NOTES:**
1. SEE SHEET G1.03 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
 2. SEE SHEET G1.06 FOR BASIS OF SURVEY CONTROL.
 3. INSTALL EROSION CONTROL MEASURES IN ACCORDANCE WITH SPECIFICATIONS.

TANK FARM GRADING COORDINATE TABLE				
Pnt. #	Northing	Easting	Elev.	Raw Description
139	1873295.38	2635018.12	31.0	TRUCK FILL PAD CORNER
140	1873269.28	2635056.01	31.0	TRUCK FILL PAD CORNER
141	1873290.70	2635070.76	31.0	TRUCK FILL PAD CORNER
142	1873316.79	2635032.87	31.0	TRUCK FILL PAD CORNER
143	1873321.55	2635036.15	28.6	GRADE BREAK
144	1873271.39	2635013.58	27.3	SLOPE / MATCH EXISTING
145	1873304.11	2635079.99	31.0	PAD TOE
146	1873258.32	2635139.43	29.0	PAD TOE
147	1873213.65	2635204.28	29.0	PAD TOE
148	1873215.19	2635212.63	29.0	PAD TOE
149	1873216.94	2635206.55	31.0	PAD CORNER PC
150	1873217.46	2635209.33	31.0	PAD CORNER PT
151	1873269.55	2635245.21	31.0	PAD CORNER PC
152	1873272.33	2635244.70	31.0	PAD CORNER PT
153	1873336.42	2635151.64	31.0	PAD ANGLE POINT
154	1873361.15	2635112.20	31.0	PAD CORNER
155	1873219.03	2635094.53	27.7	SLOPE / MATCH EXISTING
156	1873309.21	2635084.93	31.2	CORNER DIKE FOUNDATION
157	1873225.55	2635206.40	31.2	CORNER DIKE FOUNDATION
158	1873271.87	2635238.31	31.2	CORNER DIKE FOUNDATION
159	1873355.54	2635116.83	31.2	CORNER DIKE FOUNDATION
160	1873372.68	2635085.86	29.8	PAD CORNER
161	1873369.62	2635069.26	29.6	PAD CORNER
162	1873271.95	2635001.99	28.0	TOP OF BERM
163	1873266.98	2634993.80	±26.6	DESIGN CENTER OF DITCH END/MATCH EXISTING
164	1873327.07	2635032.85	27.6	CENTER OF DITCH
165	1873372.57	2635062.42	28.4	CENTER OF DITCH
166	1873375.02	2635086.15	29.0	CENTER OF DITCH
167	1873363.90	2635114.09	29.6	CENTER OF DITCH
168	1873338.05	2635152.80	30.5	BEGIN CENTERLINE DITCH
169	1873273.99	2635253.23	28.5	END CENTERLINE OF DITCH (MATCH EXISTING)
170	1873329.30	2635170.65	31.0	TOE OF SLOPE
171	1873324.93	2635193.70	31.0	TOE OF SLOPE
172	1873309.60	2635239.10	31.0	TOE OF SLOPE
173	1873299.89	2635242.71	31.0	TOE OF SLOPE
190	1873215.61	2635215.42	28.0	TOE OF PAD

REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW



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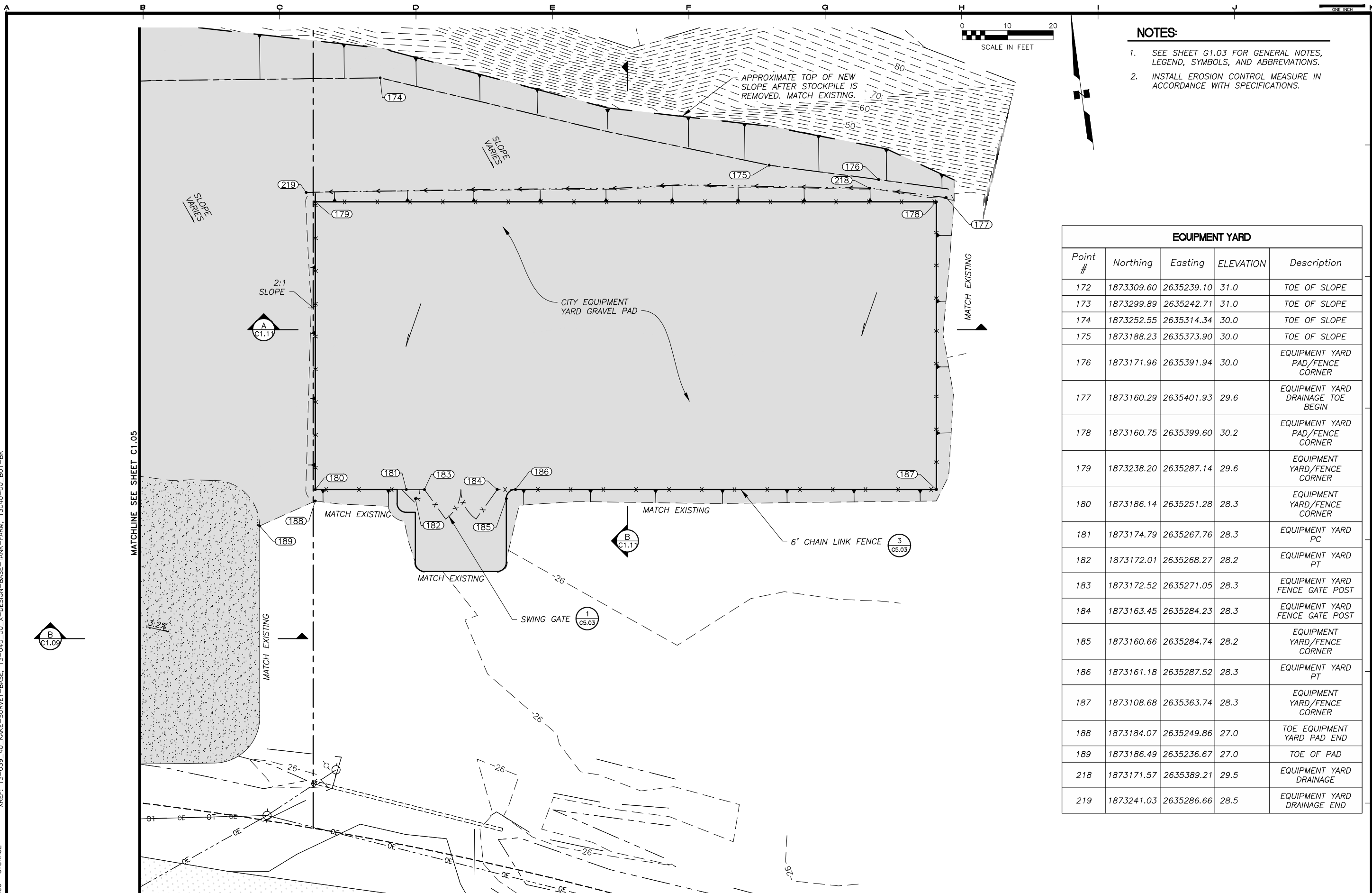
SHEET TITLE: TANK FARM - GRADING PLAN

SHEET: C1.05

DRAWN BY: KK CHECKED BY: MRS
 DATE: 05/25/16 SCALE: AS SHOWN
 JOB NUMBER: 13-040

1 GRADING PLAN - TANK FARM
 SCALE: 1" = 10'

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 LAYOUT: C1.06- STORAGE XREF: 13-039_40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-TANK-FARM, 13040-00_B01-BK

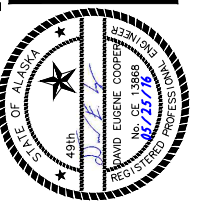


- NOTES:**
- SEE SHEET G1.03 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
 - INSTALL EROSION CONTROL MEASURE IN ACCORDANCE WITH SPECIFICATIONS.

EQUIPMENT YARD				
Point #	Northing	Easting	ELEVATION	Description
172	1873309.60	2635239.10	31.0	TOE OF SLOPE
173	1873299.89	2635242.71	31.0	TOE OF SLOPE
174	1873252.55	2635314.34	30.0	TOE OF SLOPE
175	1873188.23	2635373.90	30.0	TOE OF SLOPE
176	1873171.96	2635391.94	30.0	EQUIPMENT YARD PAD/FENCE CORNER
177	1873160.29	2635401.93	29.6	EQUIPMENT YARD DRAINAGE TOE BEGIN
178	1873160.75	2635399.60	30.2	EQUIPMENT YARD PAD/FENCE CORNER
179	1873238.20	2635287.14	29.6	EQUIPMENT YARD/FENCE CORNER
180	1873186.14	2635251.28	28.3	EQUIPMENT YARD/FENCE CORNER
181	1873174.79	2635267.76	28.3	EQUIPMENT YARD PC
182	1873172.01	2635268.27	28.2	EQUIPMENT YARD PT
183	1873172.52	2635271.05	28.3	EQUIPMENT YARD FENCE GATE POST
184	1873163.45	2635284.23	28.3	EQUIPMENT YARD FENCE GATE POST
185	1873160.66	2635284.74	28.2	EQUIPMENT YARD/FENCE CORNER
186	1873161.18	2635287.52	28.3	EQUIPMENT YARD PT
187	1873108.68	2635363.74	28.3	EQUIPMENT YARD/FENCE CORNER
188	1873184.07	2635249.86	27.0	TOE EQUIPMENT YARD PAD END
189	1873186.49	2635236.67	27.0	TOE OF PAD
218	1873171.57	2635389.21	29.5	EQUIPMENT YARD DRAINAGE
219	1873241.03	2635286.66	28.5	EQUIPMENT YARD DRAINAGE END

1 SITE AND GRADING PLAN - EQUIPMENT YARD STORAGE AREA
 SCALE: 1" = 10'

REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW

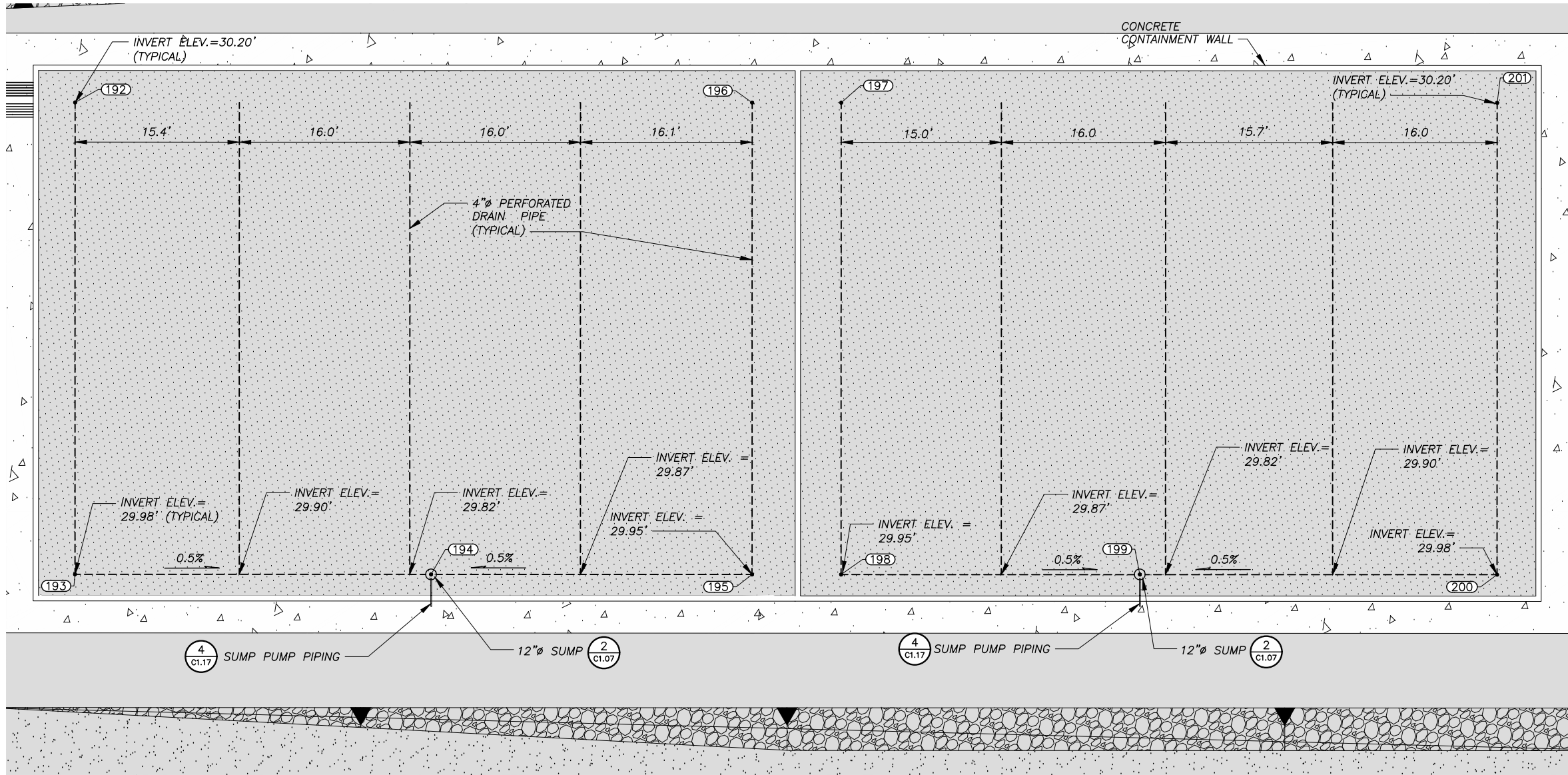


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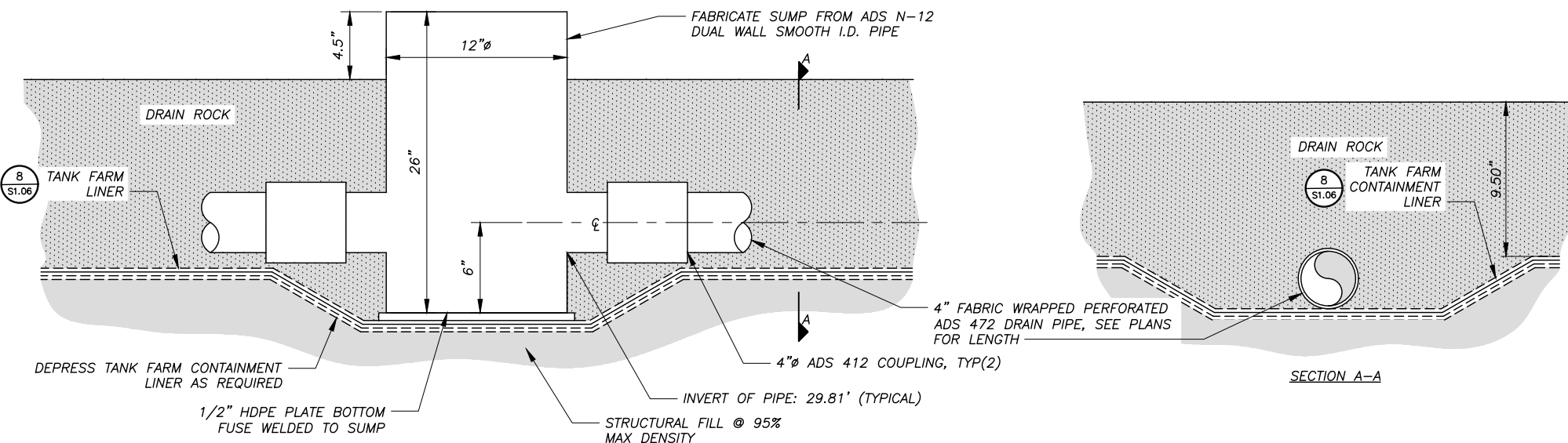
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SHEET TITLE EQUIPMENT YARD SITE AND GRADING PLAN	
SHEET C1.06	
DRAWN BY: KK	CHECKED BY: MRS
DATE: 05/25/16	SCALE: AS SHOWN
JOB NUMBER: 13-040	

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 LAYOUT: C1.7-SUMP
 XREF: 13-039_40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-TANK-FARM, 13040-00_B01-BK



1 SUMP DRAINAGE PIPING PLAN - TANK FARM
 SCALE: 1" = 6'



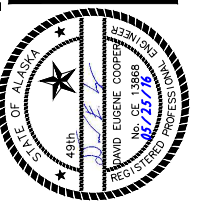
2 SUMP DRAINAGE PIPE INSTALLATION DETAIL
 SCALE: 1" = 5'

SUMP SYSTEM COORDINATES			
Point #	Northing	Easting	Raw Description
192	1873346.25	2635118.85	SUMP PIPE END
193	1873309.81	2635093.75	SUMP PIPE END
194	1873290.86	2635121.27	CENTER SUMP
195	1873273.78	2635146.07	SUMP PIPE END
196	1873310.22	2635171.17	SUMP PIPE END
197	1873305.48	2635178.05	SUMP PIPE END
198	1873269.03	2635152.95	SUMP PIPE END
199	1873253.15	2635176.04	CENTER SUMP
200	1873234.12	2635203.64	SUMP PIPE END
201	1873270.57	2635228.74	SUMP PIPE END

- NOTES:**
- SEE SHEET G1.03 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
 - DIKE DISCHARGE IS BY PORTABLE PUMP, LOCATED OUTSIDE OF DIKE WITH SUCTION AND DISCHARGE HOSE. SEE SHEET C1.17.



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SHEET TITLE: **TANK FARM - SUMP PIPING PLAN**

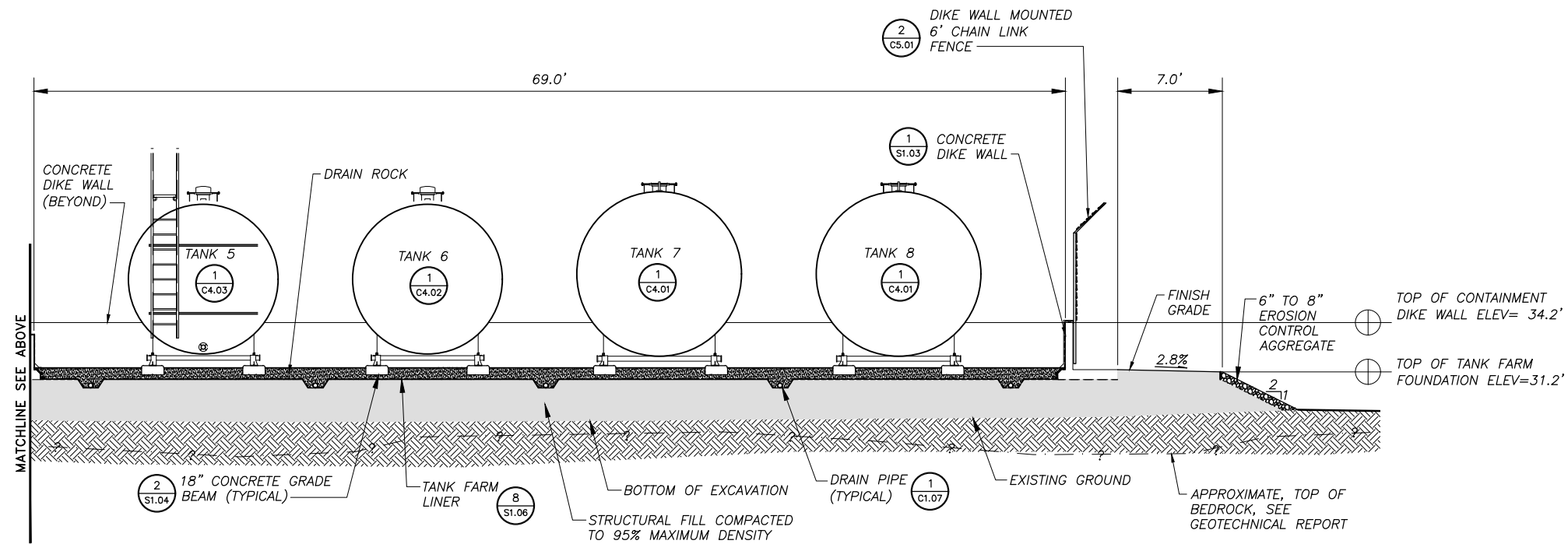
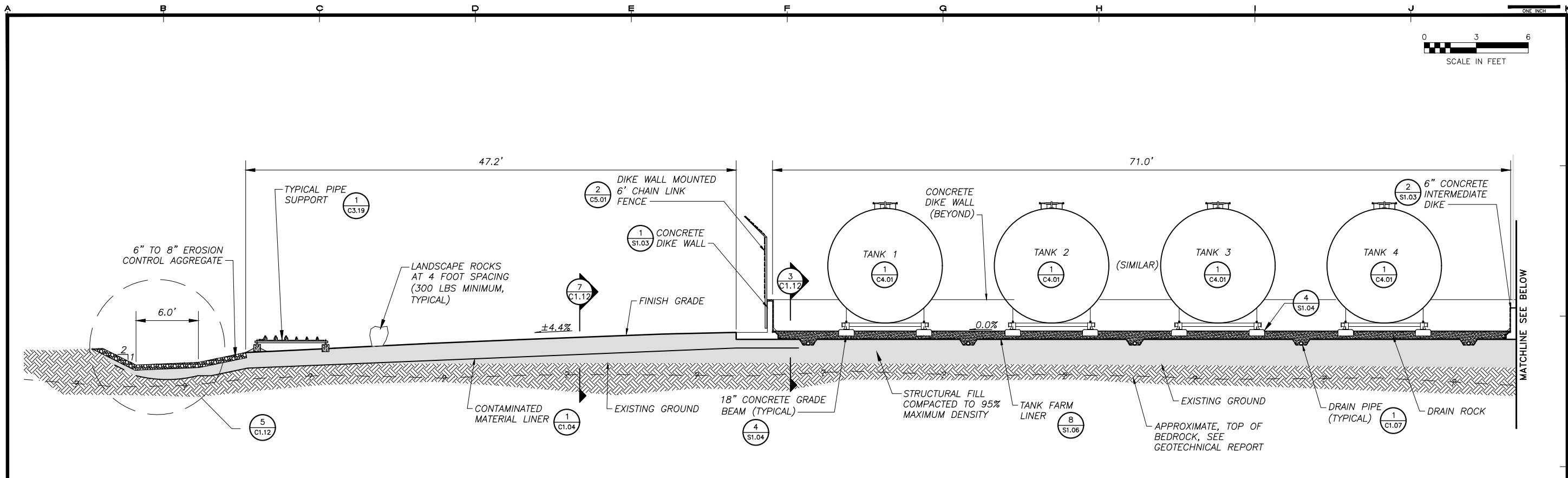
SHEET: **C1.07**

DRAWN BY: **KK** CHECKED BY: **MRS**

DATE: **05/25/16** SCALE: **AS SHOWN**

JOB NUMBER: **13-040**

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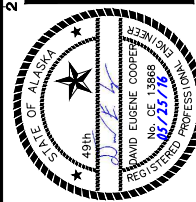


NOTES:

- SEE SHEET G1.03 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
- INSTALL EROSION CONTROL MEASURES ON ALL SIDESLOPES.



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SHEET TITLE
TANK FARM - SECTIONS

SHEET
C1.08

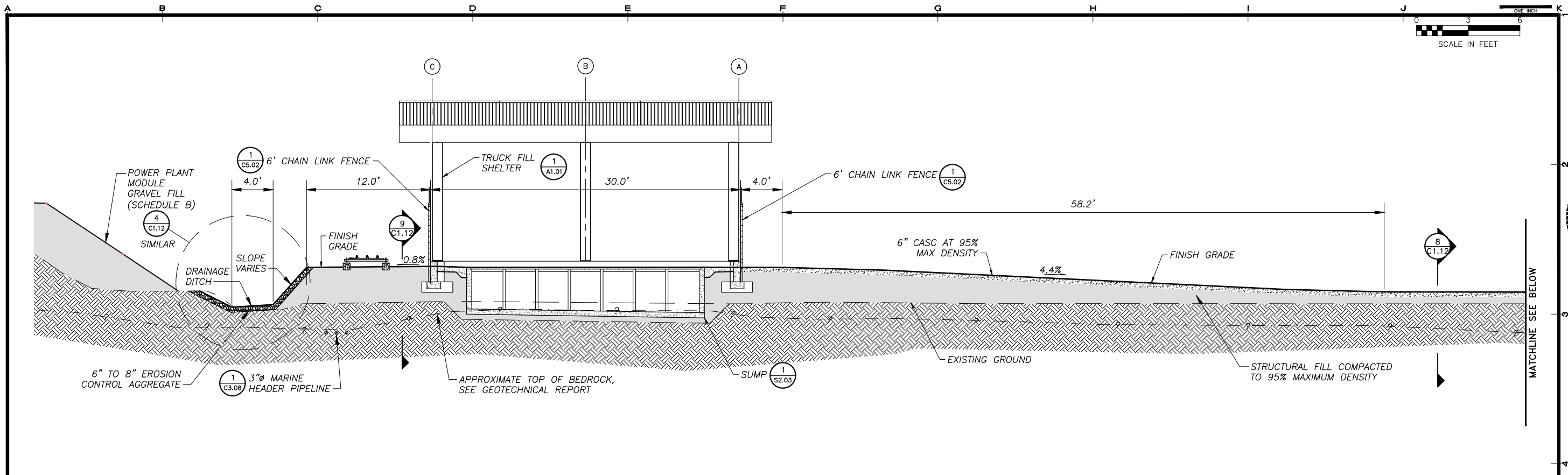
DRAWN BY: KK
 CHECKED BY: MRS

DATE: 05/25/16
 SCALE: AS SHOWN

JOB NUMBER:
 13-040

SECTION - TANK FARM
 SCALE: 1" = 5.0'

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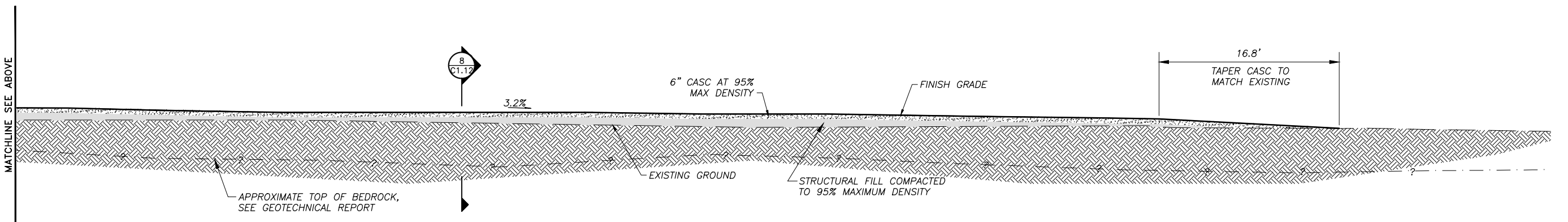


A SECTION - TANK FARM

C1.09 SCALE: 1" = 5.0'

NOTES:

1. SEE SHEET G1.03 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
2. INSTALL EROSION CONTROL MEASURES ON ALL SIDESLOPES.
3. ROCK EXCAVATION AND REMOVAL MAY BE REQUIRED FOR TRUCK FILL SUMP INSTALLATION.
4. ALL SIDESLOPES 2:1 UNLESS NOTED OTHERWISE.

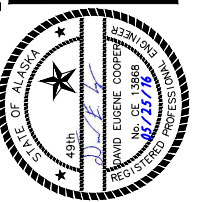


B SECTION - TANK FARM

C1.09 SCALE: 1" = 5.0'



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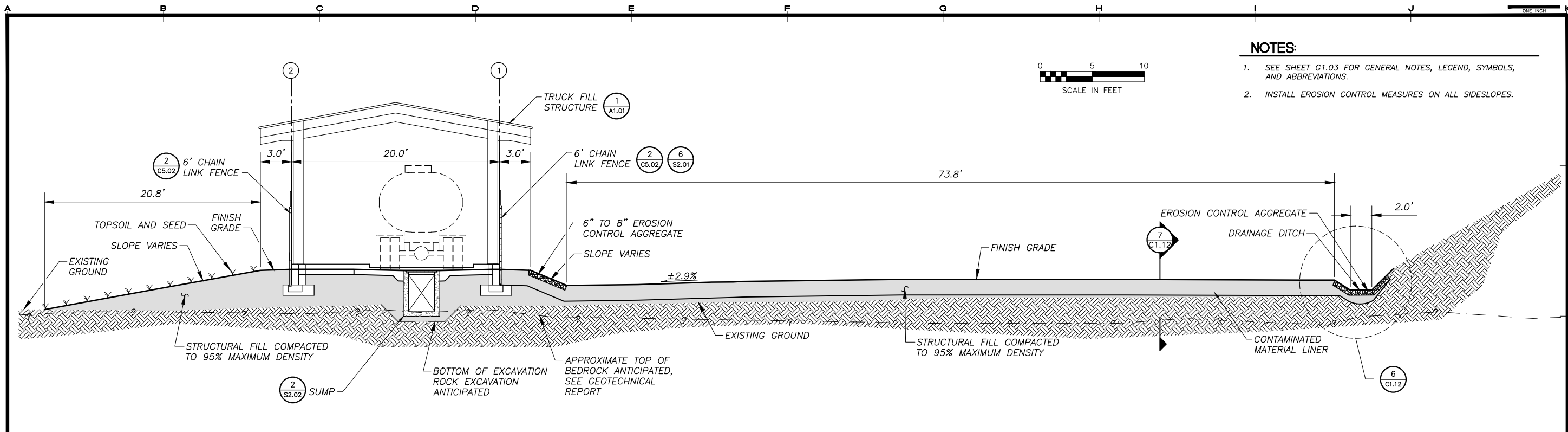


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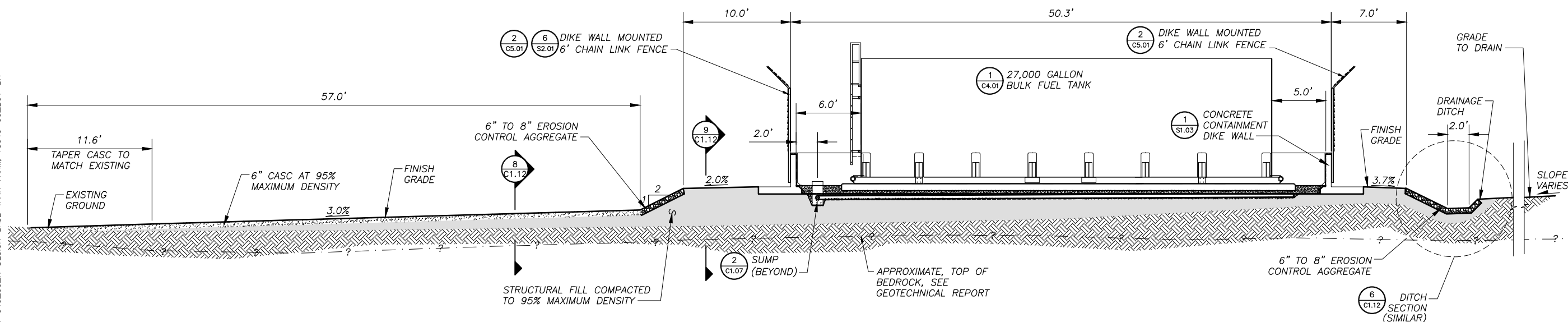
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SHEET TITLE: TANK FARM - SECTIONS
 SHEET: C1.09
 DRAWN BY: KK
 CHECKED BY: MRS
 DATE: 05/25/16
 SCALE: AS SHOWN
 JOB NUMBER: 13-040

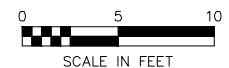
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 LAYOUT: C1.10 - SECTIONS
 XREF: 13-039_40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-TANK-FARM, 13040-00_B01-BK



A SECTION - TANK FARM
 SCALE: 1" = 5'



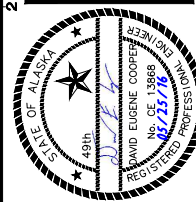
B SECTION - TANK FARM
 SCALE: 1" = 5'



NOTES:

1. SEE SHEET G1.03 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
2. INSTALL EROSION CONTROL MEASURES ON ALL SIDESLOPES.

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SHEET TITLE: **TANK FARM - SECTIONS**

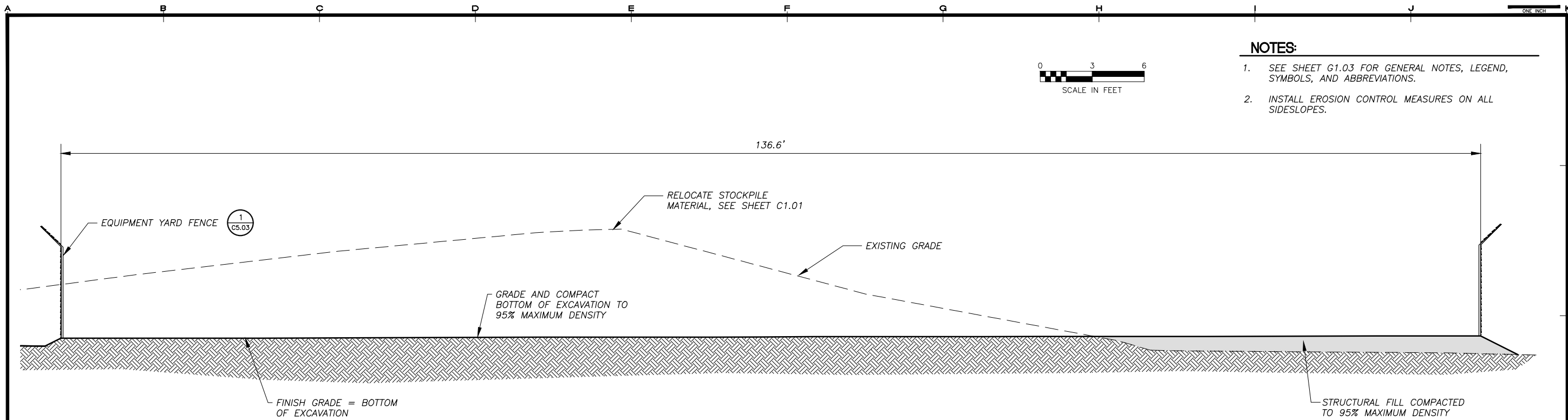
SHEET: **C1.10**

DRAWN BY: **KK** CHECKED BY: **MRS**

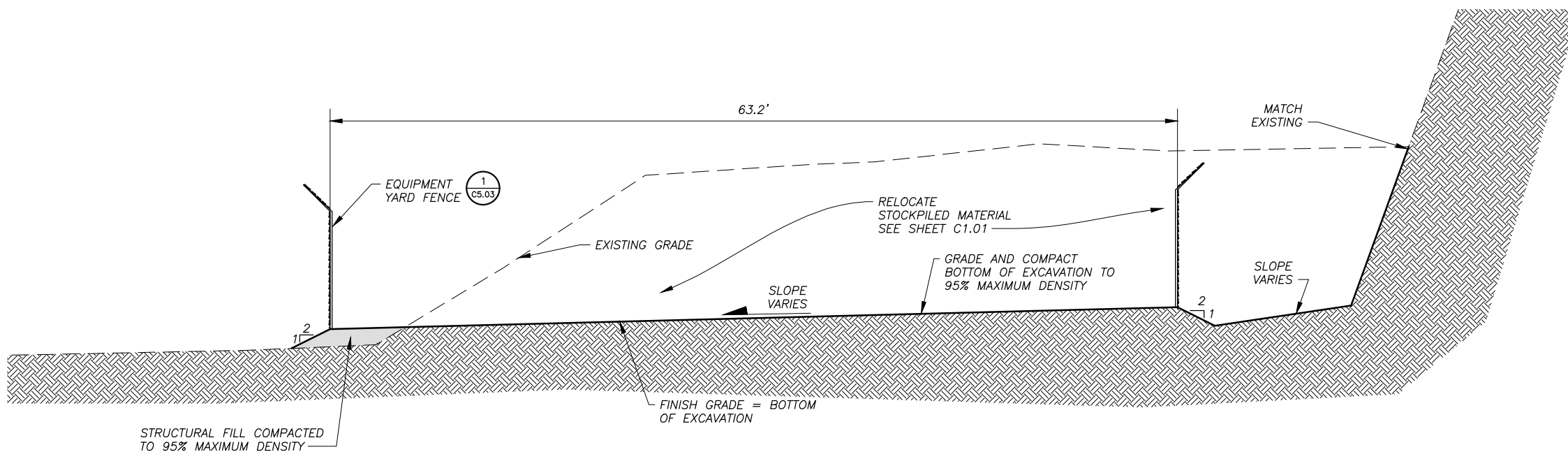
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JOB NUMBER: **13-040**

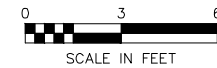
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 LAYOUT: C1.11 - SECTIONS
 XREF: 13-039_40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-TANK-FARM, 13040-00_B01-BK



A SECTION - EQUIPMENT YARD
 C1.11 SCALE: 1" = 5'



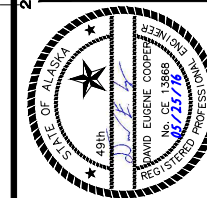
B SECTION - EQUIPMENT YARD
 C1.11 SCALE: 1" = 5'



NOTES:

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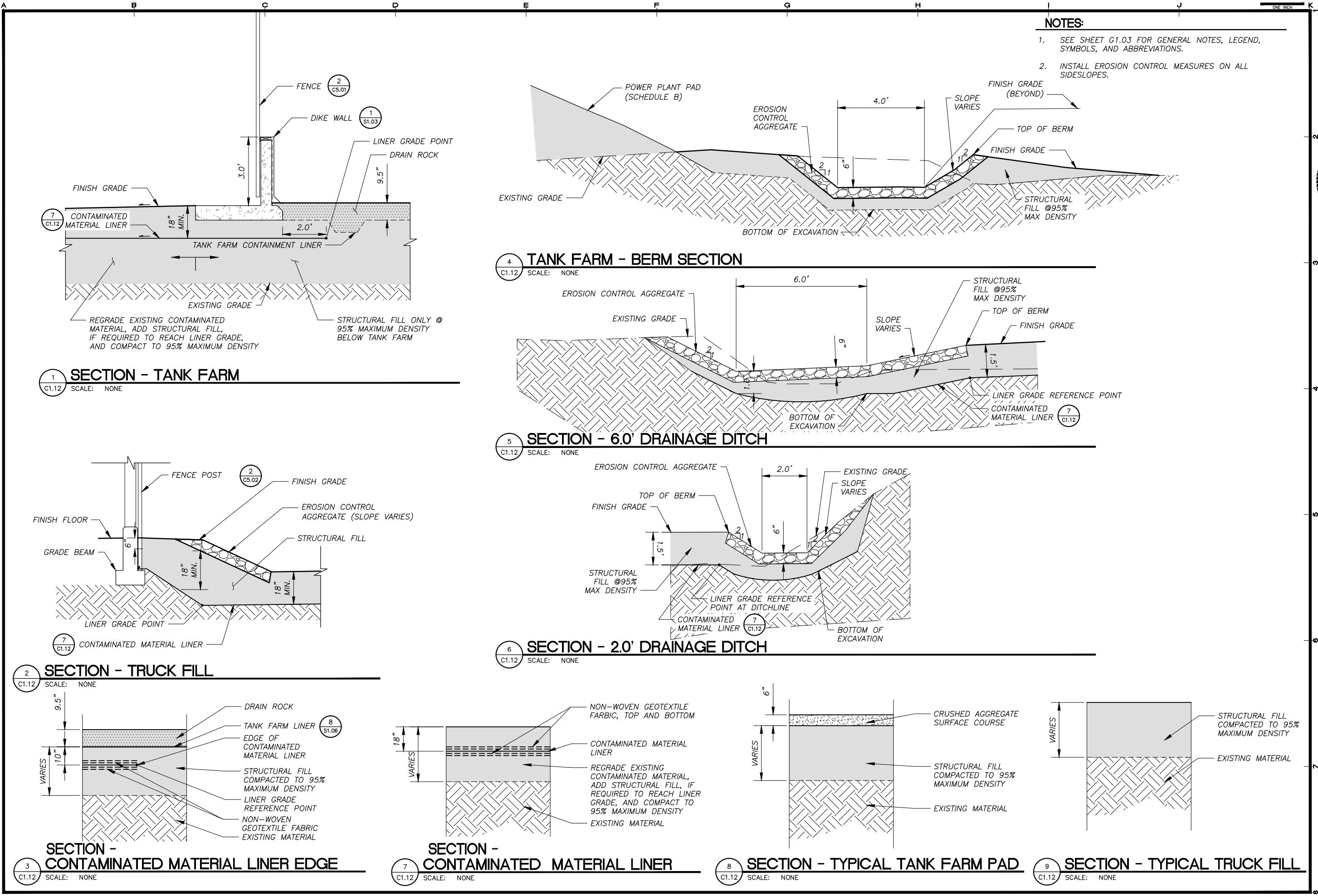


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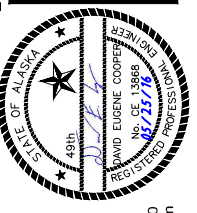
SHEET TITLE EQUIPMENT YARD - SECTIONS	
SHEET C1.11	
DRAWN BY: KK	CHECKED BY: MRS
DATE: 05/25/16	SCALE: AS SHOWN
JOB NUMBER: 13-040	

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 LAYOUT: C1.12 LINER SECTIONS
 XREF: 13-039_40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-TANK-FARM, 13040-00_B01-BK



- NOTES:**
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 - INSTALL EROSION CONTROL MEASURES ON ALL SIDESLOPES.

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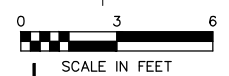
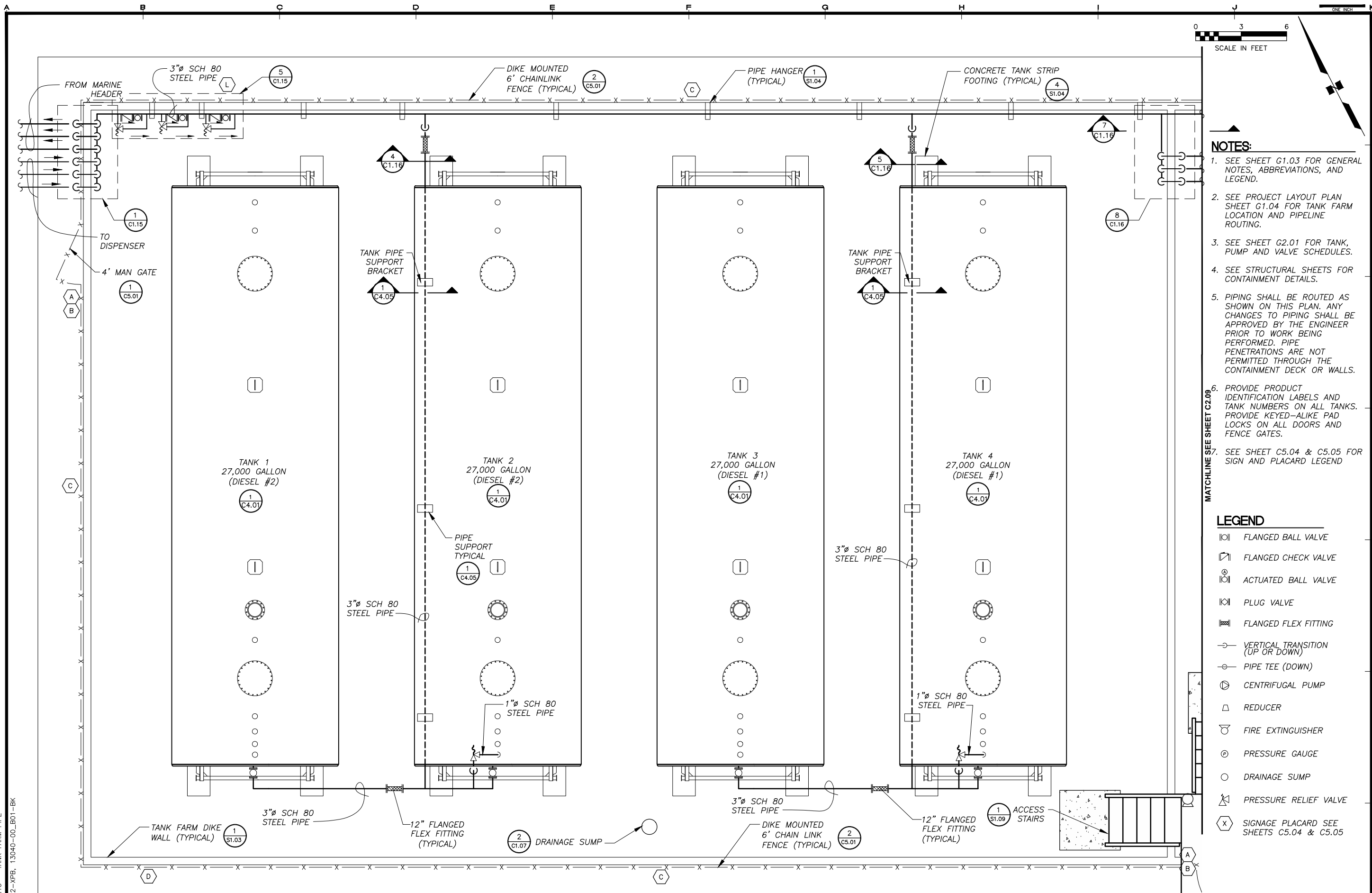


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SHEET TITLE: SECTIONS
 SHEET: C1.12
 DRAWN BY: KK CHECKED BY: MRS
 DATE: 05/25/16 SCALE: AS SHOWN
 JOB NUMBER: 13-040

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 LAYOUT: C1.13 - TANK FARM PIPE
 XREF: 05012-NPB, 13040-00_B01-BK



NOTES:

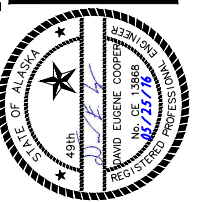
1. SEE SHEET G1.03 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.
2. SEE PROJECT LAYOUT PLAN SHEET G1.04 FOR TANK FARM LOCATION AND PIPELINE ROUTING.
3. SEE SHEET G2.01 FOR TANK, PUMP AND VALVE SCHEDULES.
4. SEE STRUCTURAL SHEETS FOR CONTAINMENT DETAILS.
5. PIPING SHALL BE ROUTED AS SHOWN ON THIS PLAN. ANY CHANGES TO PIPING SHALL BE APPROVED BY THE ENGINEER PRIOR TO WORK BEING PERFORMED. PIPE PENETRATIONS ARE NOT PERMITTED THROUGH THE CONTAINMENT DECK OR WALLS.
6. PROVIDE PRODUCT IDENTIFICATION LABELS AND TANK NUMBERS ON ALL TANKS. PROVIDE KEYED-ALIKE PAD LOCKS ON ALL DOORS AND FENCE GATES.
7. SEE SHEET C5.04 & C5.05 FOR SIGN AND PLACARD LEGEND

LEGEND

- ||| FLANGED BALL VALVE
- ∇ FLANGED CHECK VALVE
- ⊕ ACTUATED BALL VALVE
- ⊘ PLUG VALVE
- ≡ FLANGED FLEX FITTING
- ↕ VERTICAL TRANSITION (UP OR DOWN)
- ⊥ PIPE TEE (DOWN)
- ⊙ CENTRIFUGAL PUMP
- △ REDUCER
- ☒ FIRE EXTINGUISHER
- ⊙ PRESSURE GAUGE
- DRAINAGE SUMP
- ⚠ PRESSURE RELIEF VALVE
- ⊞ SIGNAGE PLACARD SEE SHEETS C5.04 & C5.05

MATCHLINE SEE SHEET C2.09

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KAKE BULK FUEL UPGRADES

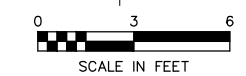
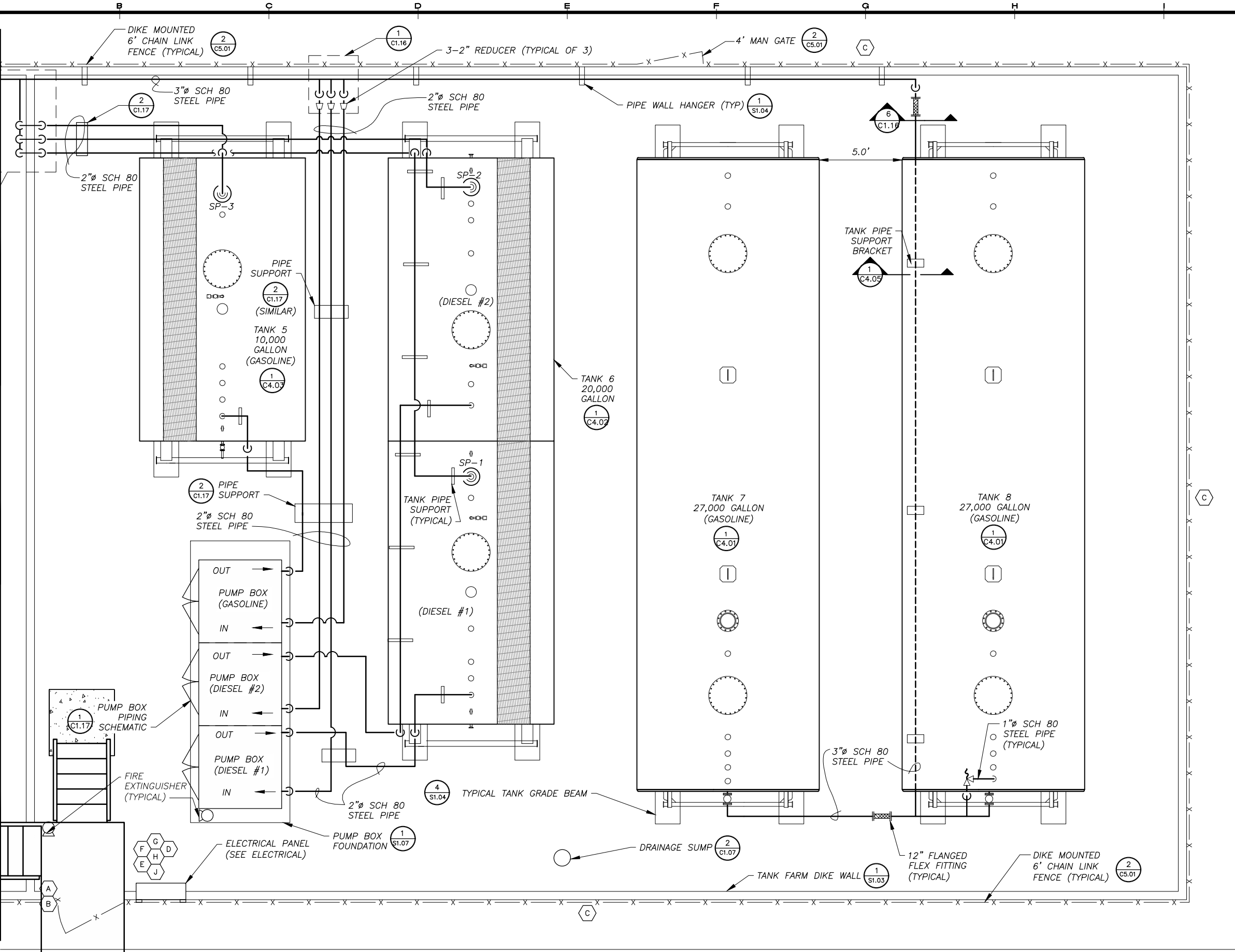
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 ENERGY AUTHORITY
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SHEET TITLE TANK FARM - PIPING PLAN	
SHEET C1.13	
DRAWN BY: KK	CHECKED BY: MRS
DATE: 05/25/16	SCALE: AS SHOWN
JOB NUMBER: 13-040	

1 TANK FARM LAYOUT AND PIPING PLAN
 SCALE: 1" = 3.0'

H:\jobs\13-040 Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_C1.13-C1.15-TF-PIPING, 1=1, 05-31-16 at 10:14 by jkk
 LAYOUT: C1.14 - TF PIPE
 XREF: 05012-XPB, 13040-00_B01-BK

MATCHLINE SEE SHEET C2.08



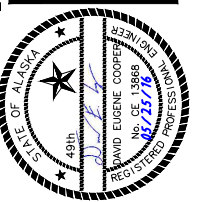
NOTES:

1. SEE SHEET G1.03 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.
2. SEE PROJECT LAYOUT PLAN SHEET G1.04 FOR TANK FARM LOCATION AND PIPELINE ROUTING.
3. SEE SHEET G2.01 FOR TANK, PUMP AND VALVE SCHEDULES.
4. SEE SHEET C5.04 AND C5.05 FOR SIGN AND PLACARD LEGEND.
5. SEE STRUCTURAL SHEETS FOR CONTAINMENT DETAILS.
6. PIPING SHALL BE ROUTED AS SHOWN ON THIS PLAN. ANY CHANGES TO PIPING SHALL BE APPROVED BY THE ENGINEER PRIOR TO WORK BEING PERFORMED. PIPE PENETRATIONS ARE NOT PERMITTED THROUGH THE CONTAINMENT DECK OR WALLS.

LEGEND

- ⊕ FLANGED BALL VALVE
- ⊔ FLANGED CHECK VALVE
- ⊕ ACTUATED BALL VALVE
- ⊕ PLUG VALVE
- ⊕ FLANGED FLEX FITTING
- ⊕ VERTICAL TRANSITION (UP OR DOWN)
- ⊕ PIPE TEE (DOWN)
- ⊕ CENTRIFUGAL PUMP
- ⊕ REDUCER
- ⊕ FIRE EXTINGUISHER
- ⊕ PRESSURE GAUGE
- ⊕ DRAINAGE SUMP
- ⊕ PRESSURE RELIEF VALVE
- ⊕ SIGNAGE PLACARD SEE SHEETS C5.04 & C5.05

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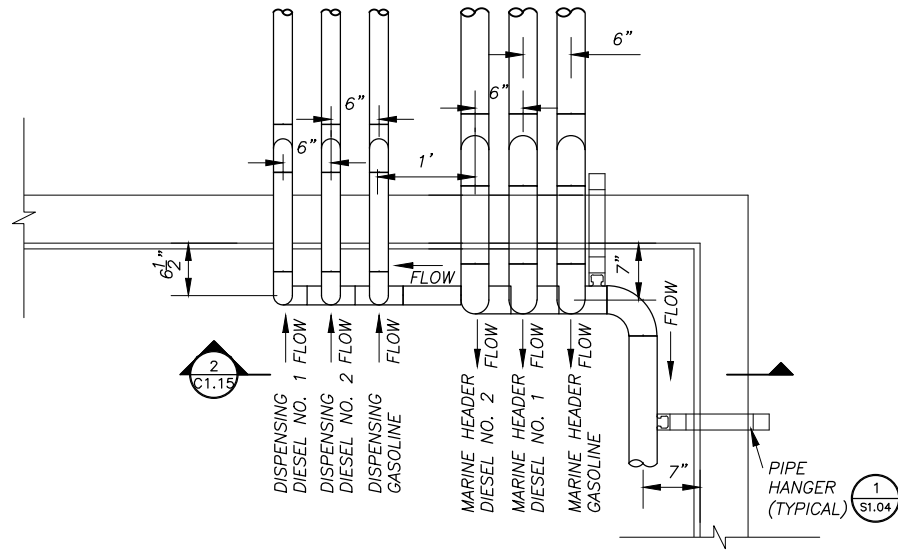
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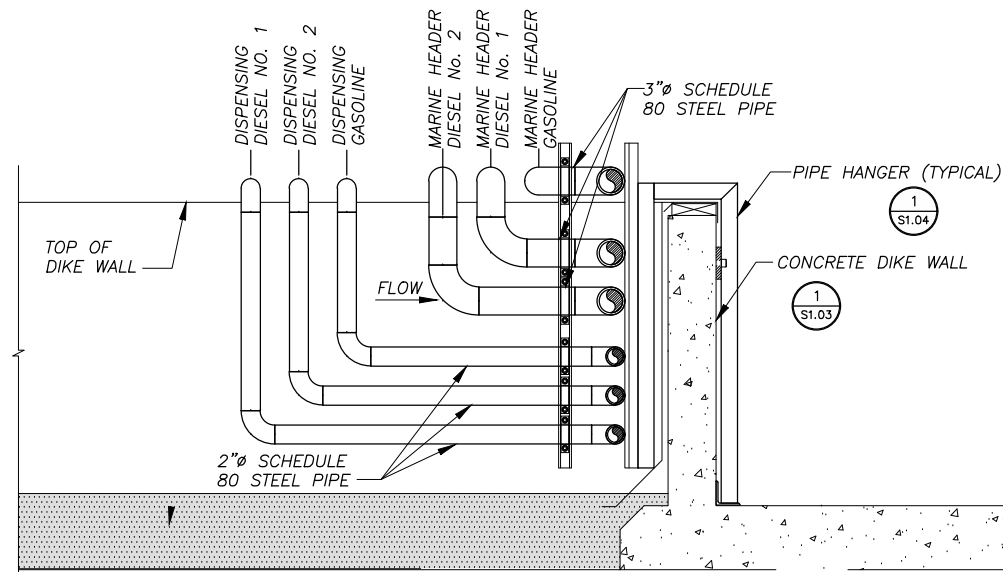
SHEET TITLE: TANK FARM - PIPING PLAN
 SHEET: C1.14
 DRAWN BY: KK CHECKED BY: MRS
 DATE: 05/25/16 AS SHOWN SCALE:
 JOB NUMBER: 13-040

1 TANK FARM LAYOUT AND PIPING PLAN
 C1.14 SCALE: 1" = 3.0'

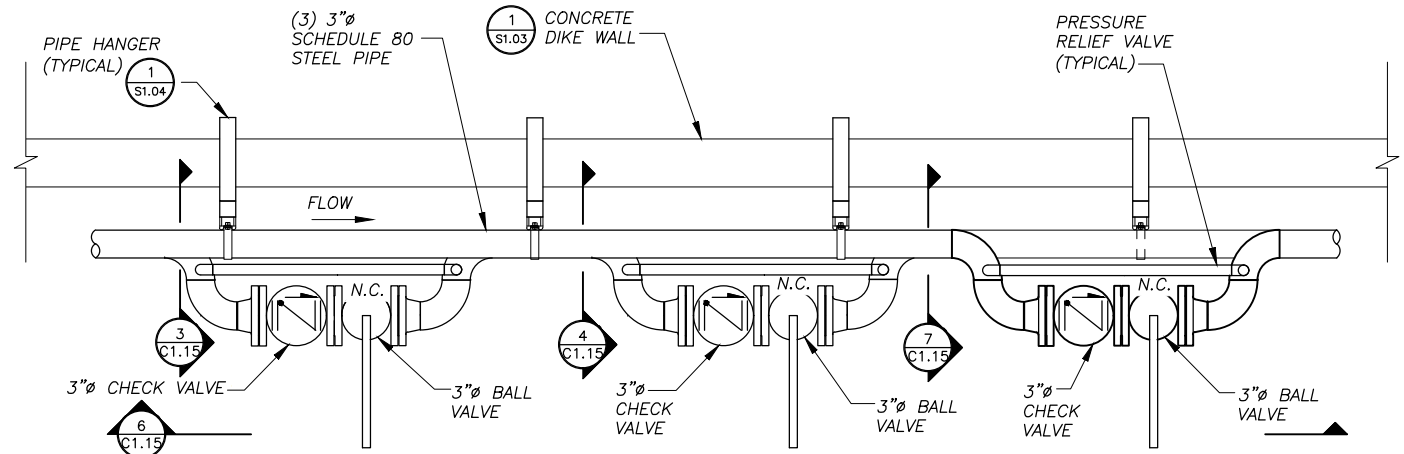
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 LAYOUT: C1.15 - PIPE DETAILS
 XREF: 13040-00_B01-BK



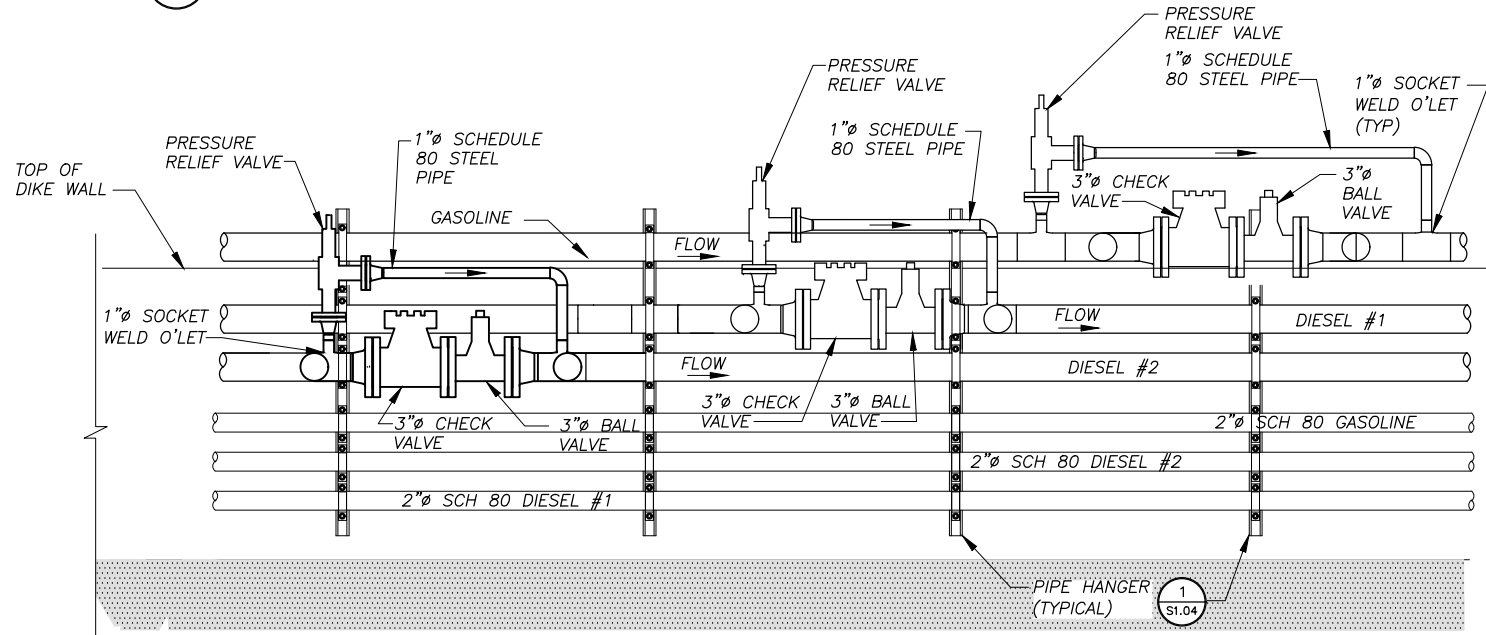
1 CONTAINMENT PIPE ENTRY PLAN
 C1.15 SCALE: 1"=1'-0"



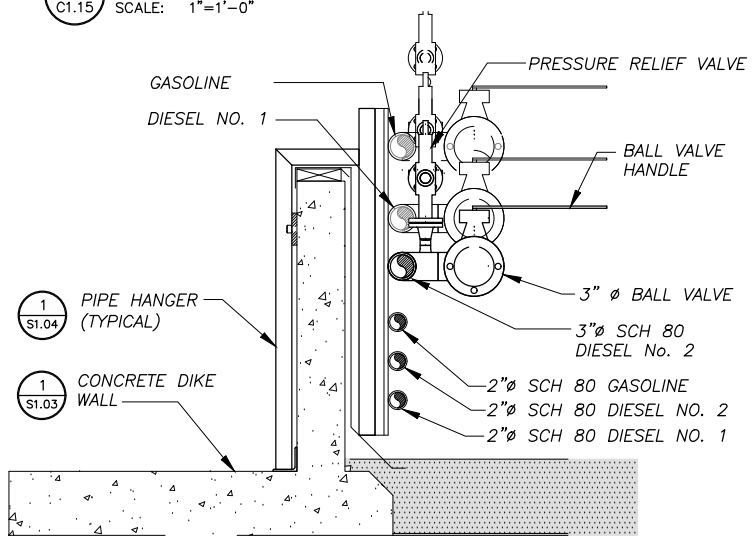
2 CONTAINMENT PIPE ENTRY ELEVATION
 C1.15 SCALE: 1"=1'-0"



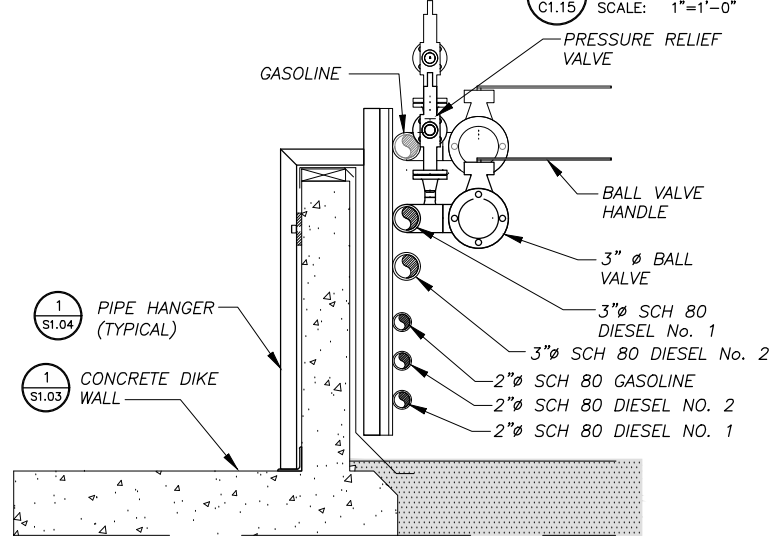
5 WALL VALVES PLAN
 C1.15 SCALE: 1"=1'-0"



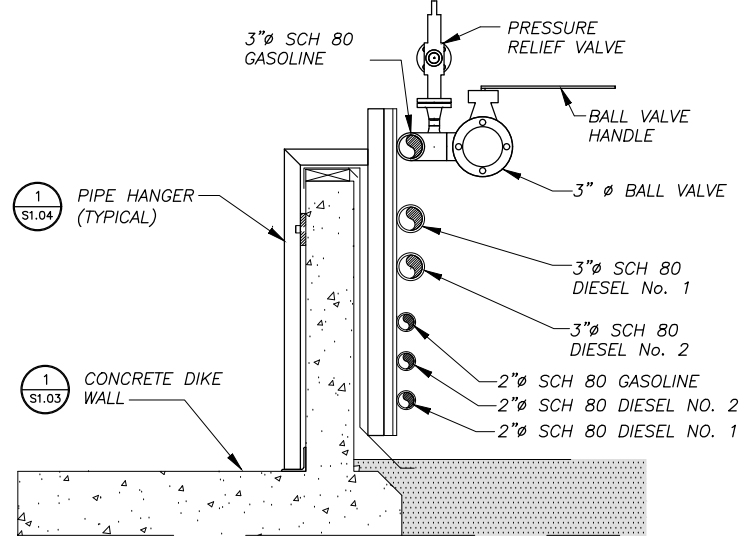
6 WALL VALVES ELEVATION
 C1.15 SCALE: 1"=1'-0"



3 WALL VALVES SECTION 1
 C1.15 SCALE: 1"=1'-0"

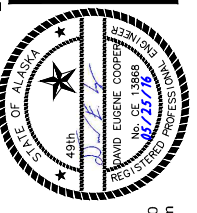


4 WALL VALVES SECTION 2
 C1.15 SCALE: 1"=1'-0"



7 WALL VALVES SECTION 3
 C1.15 SCALE: 1"=1'-0"

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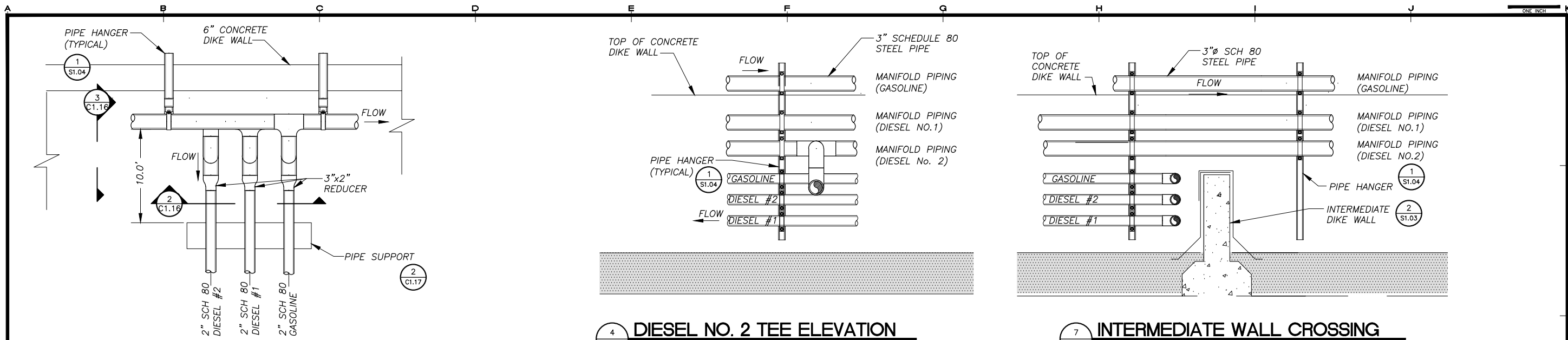
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KAKE BULK FUEL UPGRADES

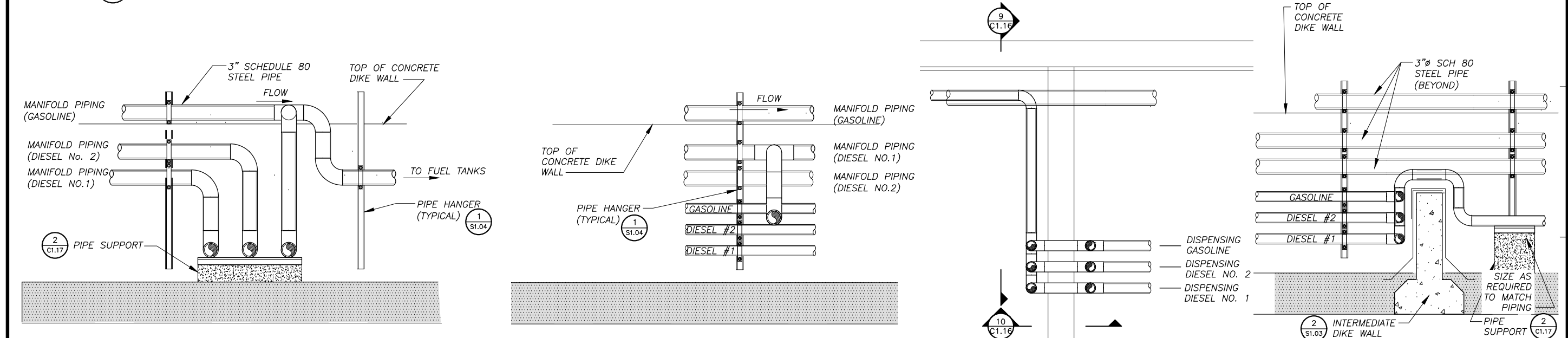
SHEET TITLE	
PIPE DETAILS	
SHEET C1.15	
DRAWN BY: KK	CHECKED BY: MRS
DATE: 05/25/16	SCALE: AS SHOWN
JOB NUMBER: 13-040	



1 PUMP BOX TEE PLAN
C1.16 SCALE: 1"=1'-0"

4 DIESEL NO. 2 TEE ELEVATION
C1.16 SCALE: 1"=1'-0"

7 INTERMEDIATE WALL CROSSING
C1.16 SCALE: 1"=1'-0"

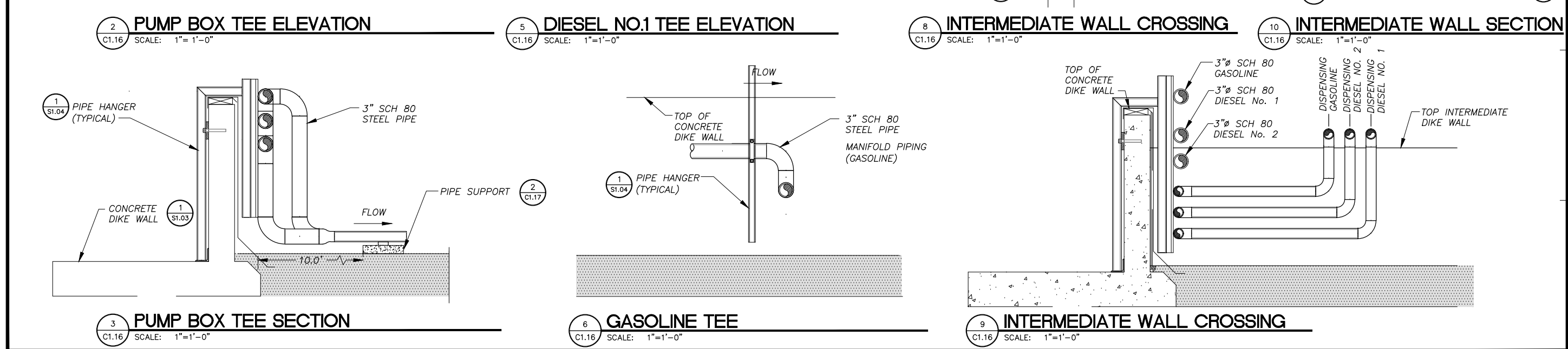


2 PUMP BOX TEE ELEVATION
C1.16 SCALE: 1"=1'-0"

5 DIESEL NO.1 TEE ELEVATION
C1.16 SCALE: 1"=1'-0"

8 INTERMEDIATE WALL CROSSING
C1.16 SCALE: 1"=1'-0"

10 INTERMEDIATE WALL SECTION
C1.16 SCALE: 1"=1'-0"

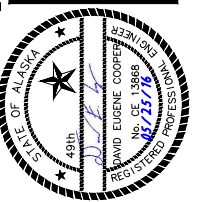


3 PUMP BOX TEE SECTION
C1.16 SCALE: 1"=1'-0"

6 GASOLINE TEE
C1.16 SCALE: 1"=1'-0"

9 INTERMEDIATE WALL CROSSING
C1.16 SCALE: 1"=1'-0"

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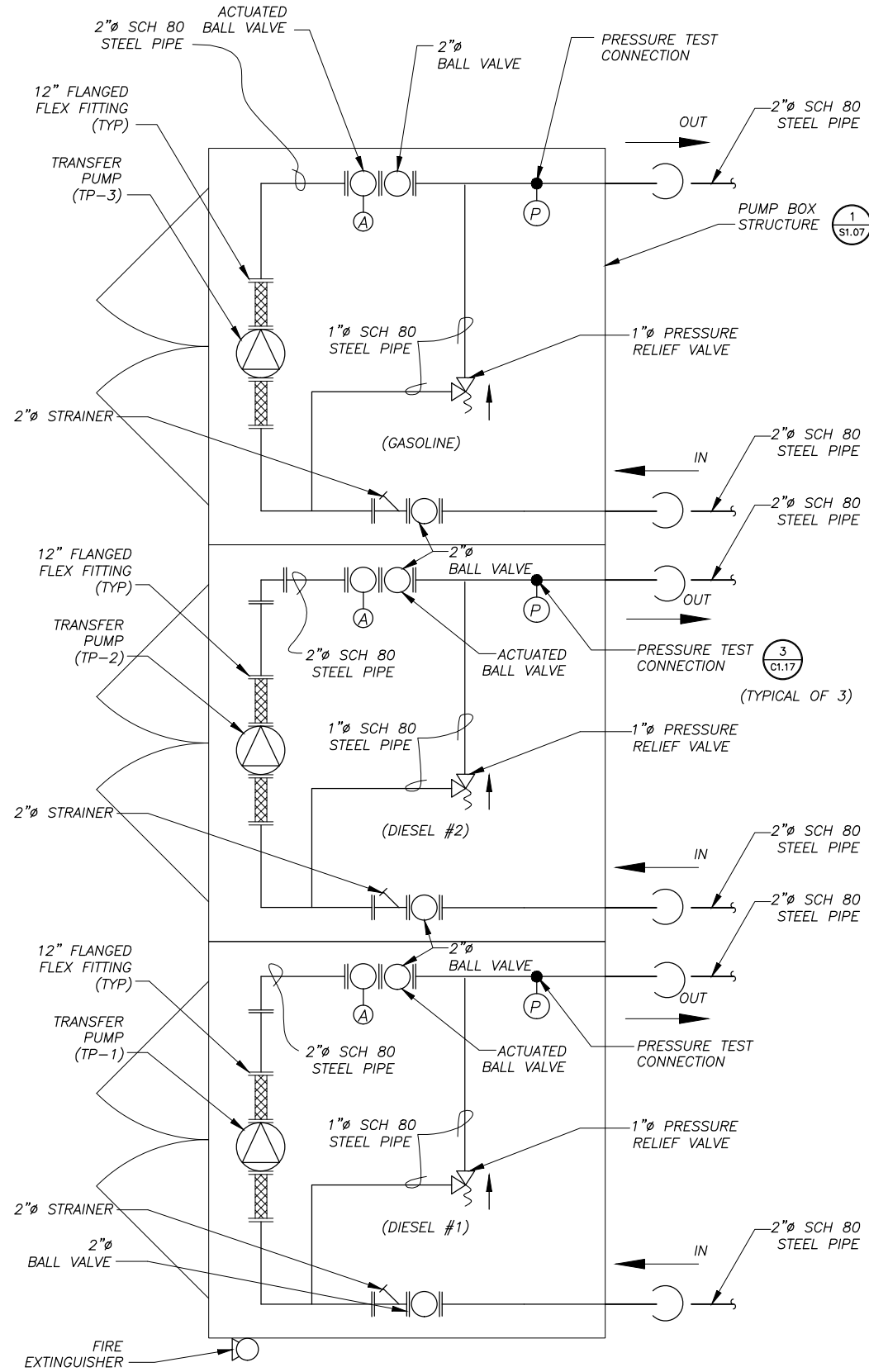


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KAKE BULK FUEL UPGRADES
KAKE, ALASKA

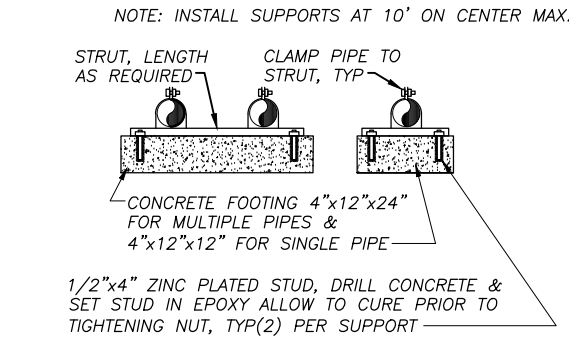
SHEET TITLE	
PIPE DETAILS	
SHEET C1.16	
DRAWN BY: KK	CHECKED BY: MRS
DATE: 05/25/16	SCALE: AS SHOWN
JOB NUMBER: 13-040	

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 LAYOUT: C1.17 - PUMP BOX
 XREF: 05012-XPB, 13040-00_B01-BK

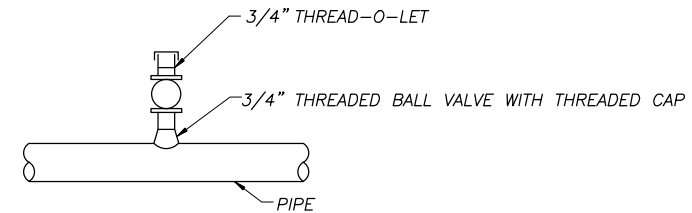
1 PUMP BOX PIPING SCHEMATIC
 SCALE: 1"=1'



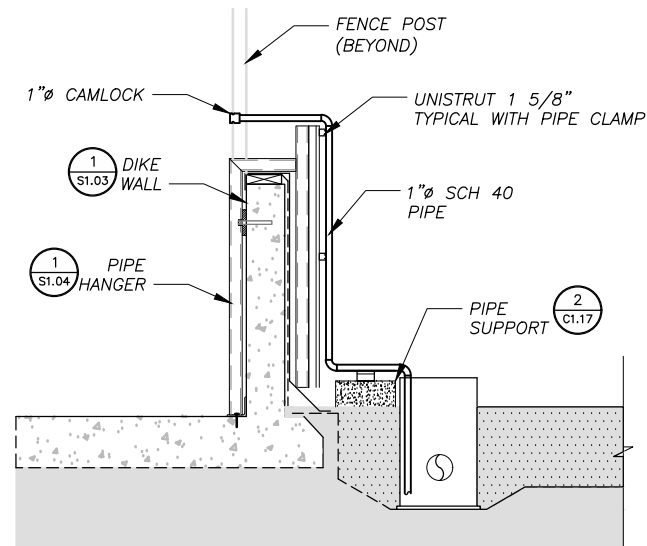
NOTES:
 1. SEE SHEET G1.03 FOR GENERAL NOTES, AND SPECIFICATIONS, LEGEND, AND ABBREVIATIONS.



2 PIPE SUPPORT
 SCALE: NONE

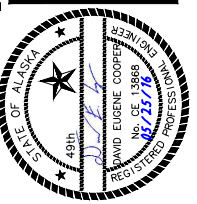


3 PRESSURE TEST CONNECTION
 SCALE: NONE



4 SUMP PUMP CONNECTION
 SCALE: NONE

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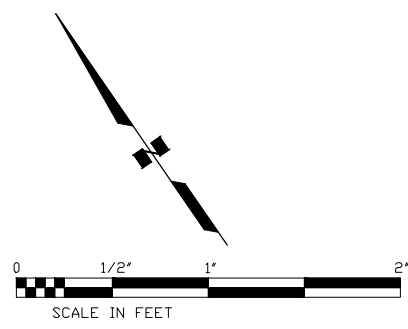
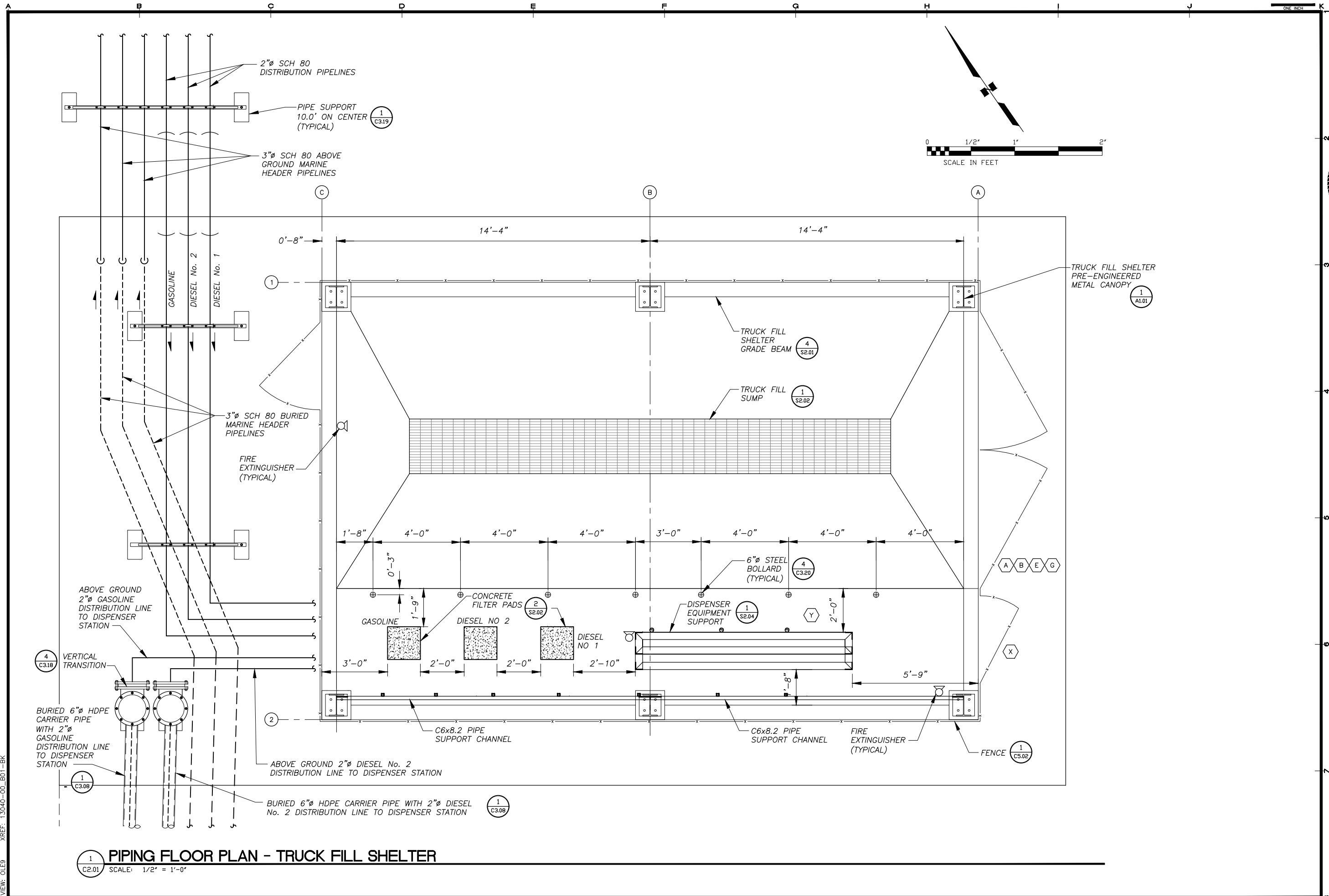


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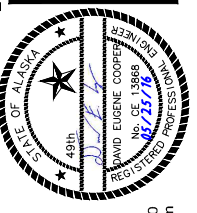
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 TANK FARM - PUMP BOX SCHEMATICS
 KAKE, ALASKA

SHEET	C1.17
DRAWN BY	HDL
CHECKED BY	MRS
DATE	05/25/16
SCALE	AS SHOWN
JOB NUMBER	13-040

H:\Jobs\13-040 Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_C2.02-C2.06-TRUCK-FILL-PIPING, 1=1, 05-26-16 at 11:46 by jkk
 LAYOUT: C2.01 - PIPING FLOOR PLAN
 VIEW: OLEG XREF: 13040-00_B01-BK



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KAKE BULK FUEL UPGRADES

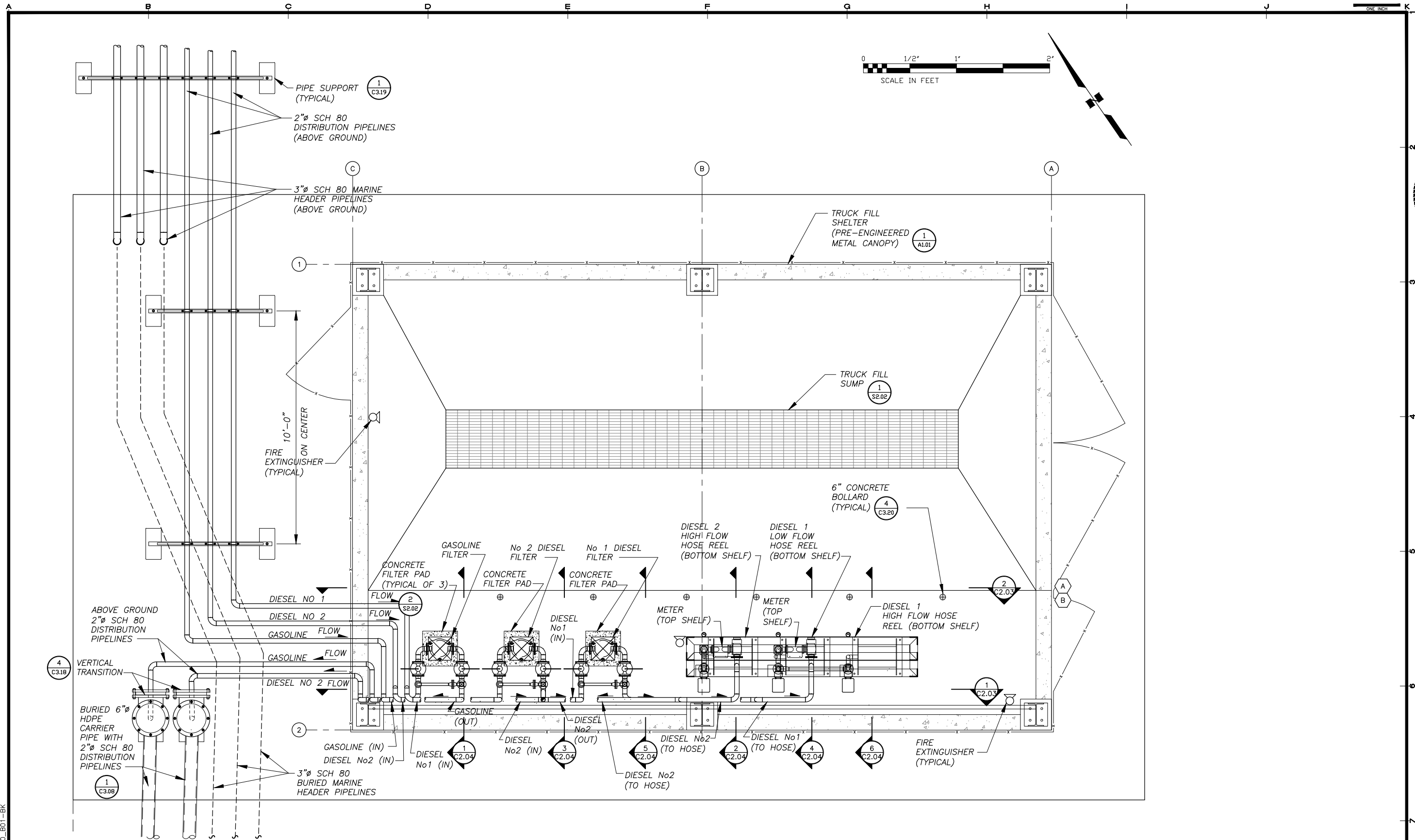
TRUCK FILL SHELTER PIPING AND FLOOR PLAN

SHEET C2.01

DRAWN BY: KK CHECKED BY: MRS
 DATE: 05/25/16 SCALE: NONE
 JOB NUMBER: 13-040

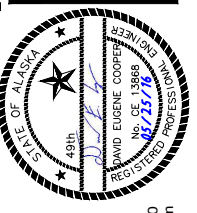
1 PIPING FLOOR PLAN - TRUCK FILL SHELTER
 SCALE: 1/2" = 1'-0"

H:\Jobs\13-040 Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_C2.02-C2.06-TRUCK-FILL-PIPING, 1=1, 05-26-16 at 11:46 by jkk
 LAYOUT: C2.02 - TRUCK FILL PIPING PLAN
 VIEW: OLE9 XREF: 1.3040-00_B01-BK



1 TRUCK FILL SHELTER - PIPING PLAN
 SCALE: 1/2" = 1'-0"

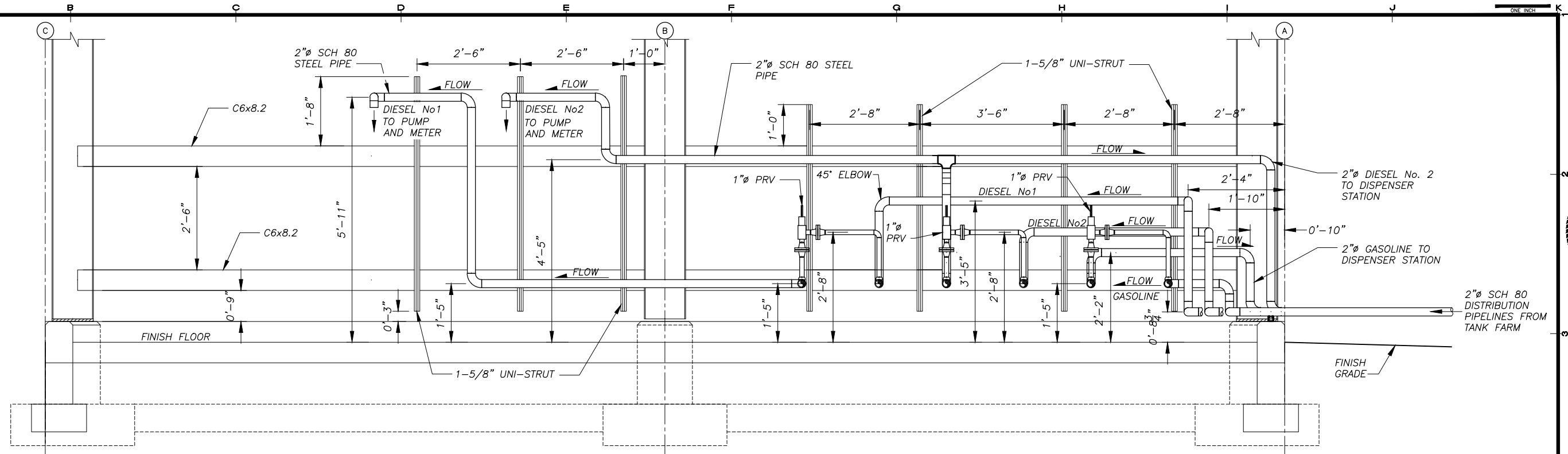
REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW



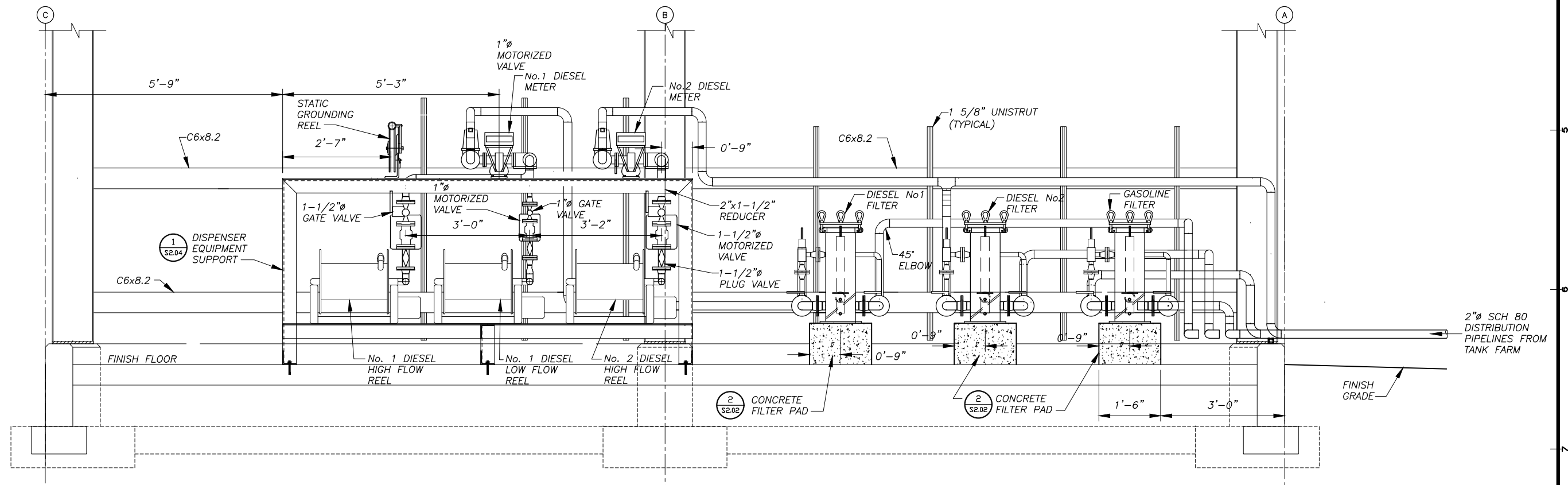
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 TRUCK FILL SHELTER PIPING PLAN
 SHEET C2.02
 DRAWN BY: KK CHECKED BY: MRS
 DATE: 05/25/16 SCALE: NONE
 JOB NUMBER: 13-040

H:\Jobs\13-040 Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_C2.02-C2.06-TRUCK-FILL-PIPING, 1=1, 05-26-16 at 11:46 by jkk
 LAYOUT: C2.03 - PIPING ELEVATIONS
 VIEW: OLE9 XREF: 13040-00_B01-BK

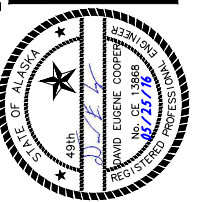


1 PIPING ELEVATION
 SCALE: 3/4" = 1'-0"



2 PIPING ELEVATION
 SCALE: 3/4" = 1'-0"

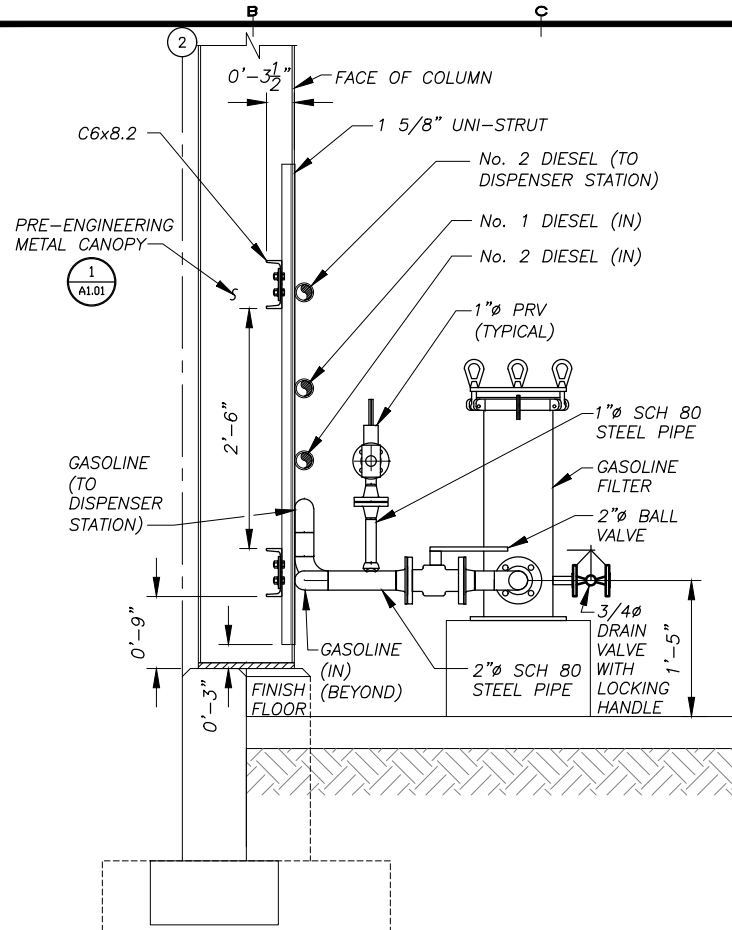
REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW



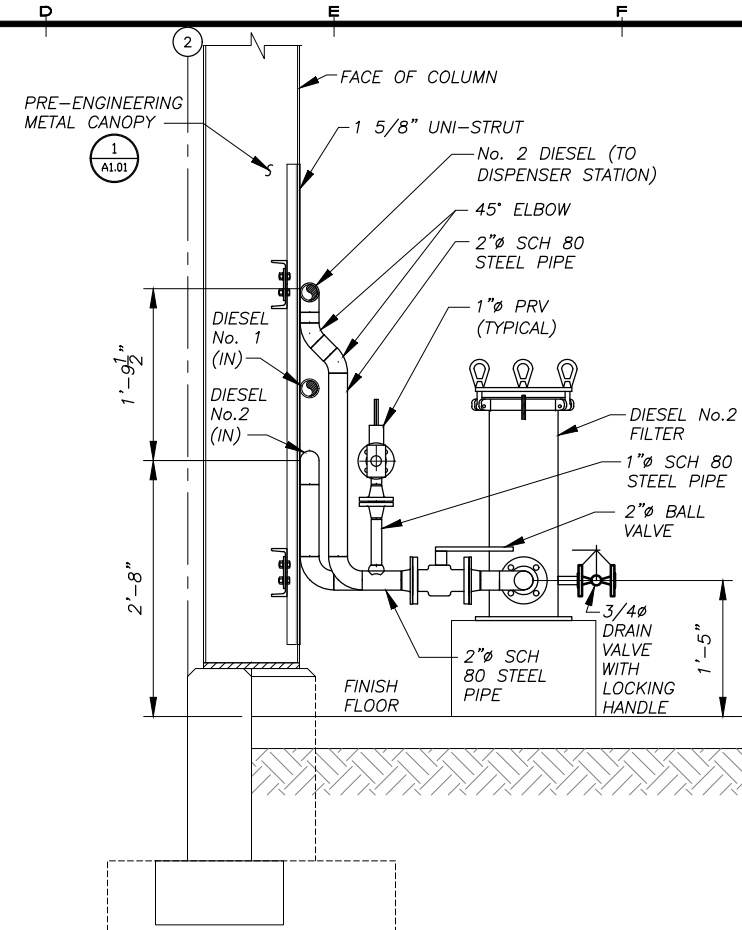
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 TRUCK FILL SHELTER PIPING ELEVATIONS
 SHEET C2.03
 DRAWN BY: KK CHECKED BY: MRS
 DATE: 05/25/16 SCALE: NONE
 JOB NUMBER: 13-040

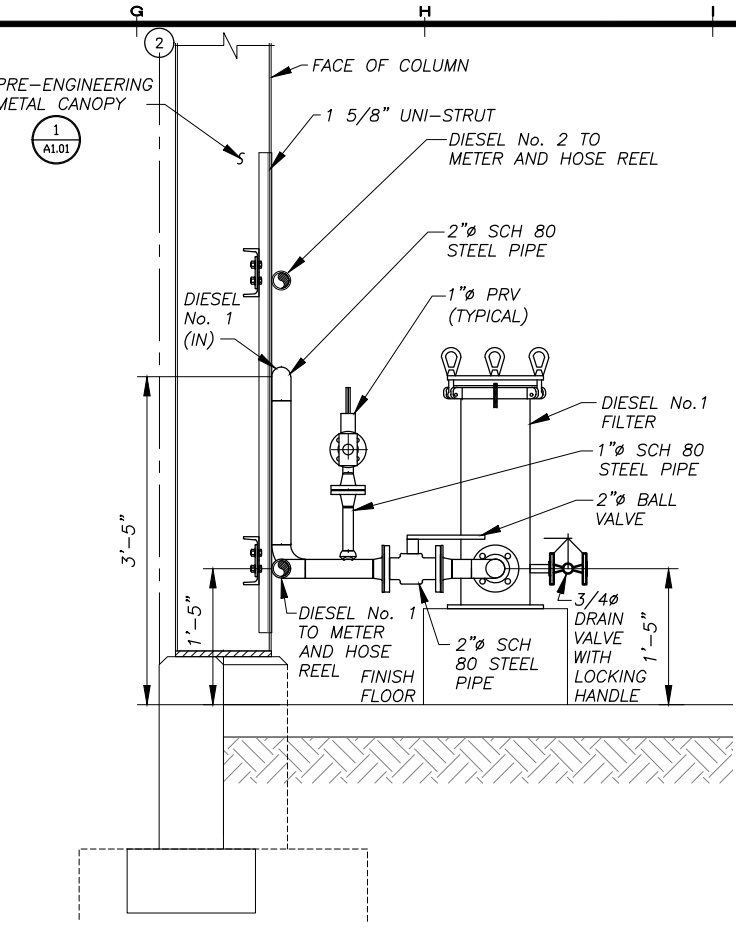
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 LAYOUT: C2.04 - TRUCK FILL SECTIONS
 VIEW: OLE9 XREF: 13040-00_B01-BK



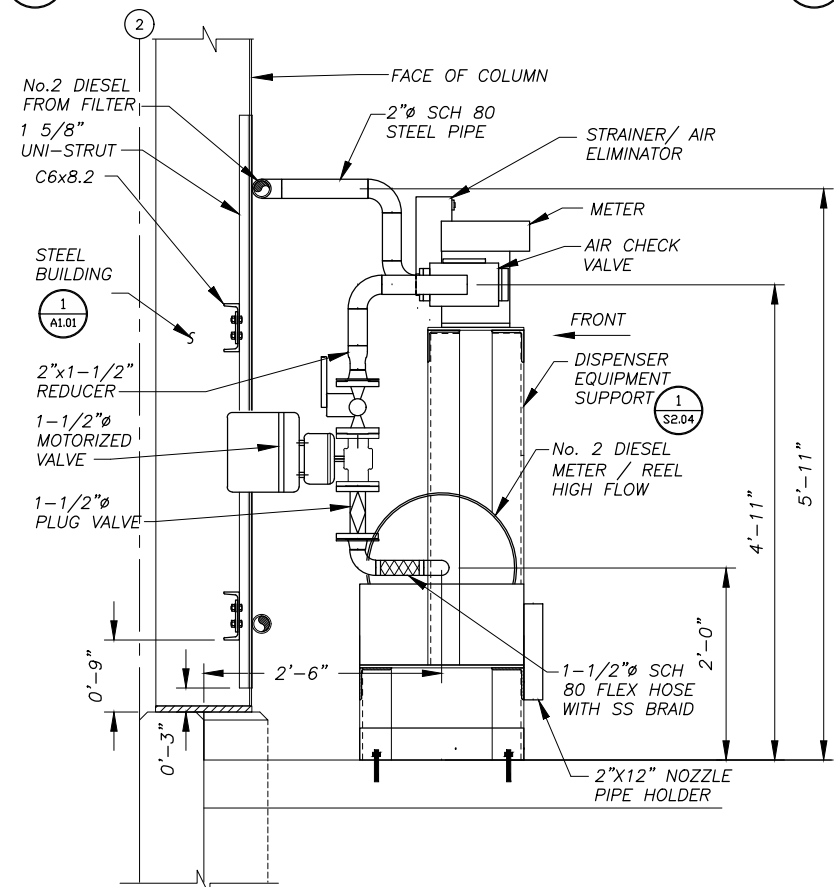
1 GASOLINE FILTER SECTION
 C2.04 SCALE: 1" = 1'-0"



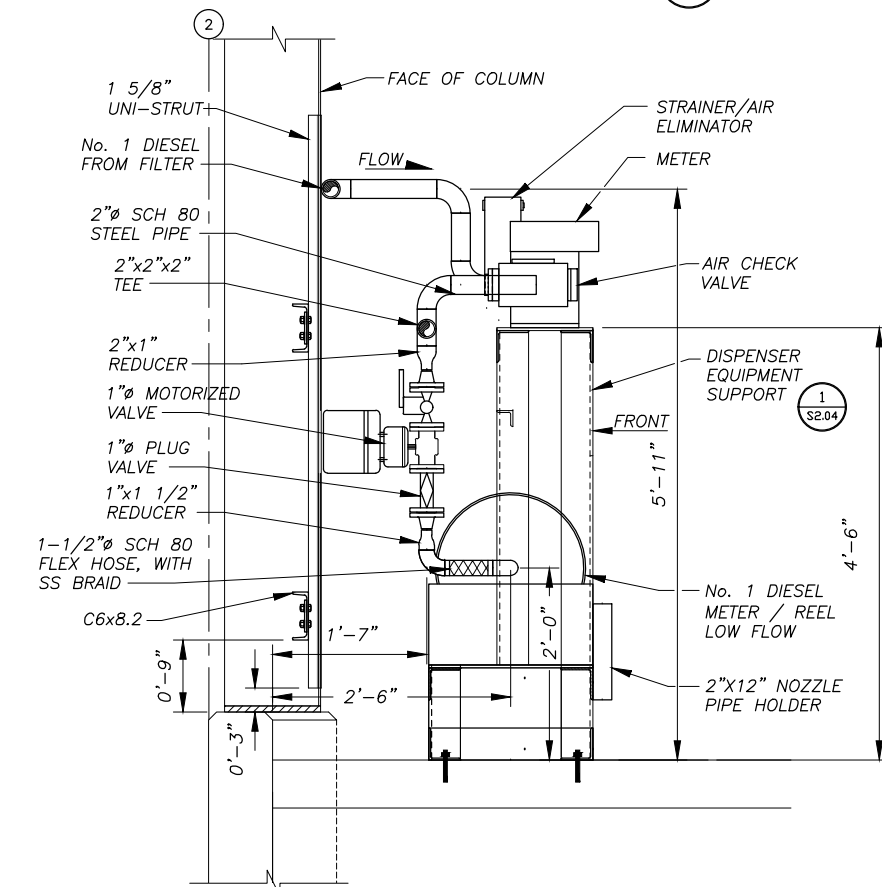
3 DIESEL No. 2 FILTER SECTION
 C2.04 SCALE: 1" = 1'-0"



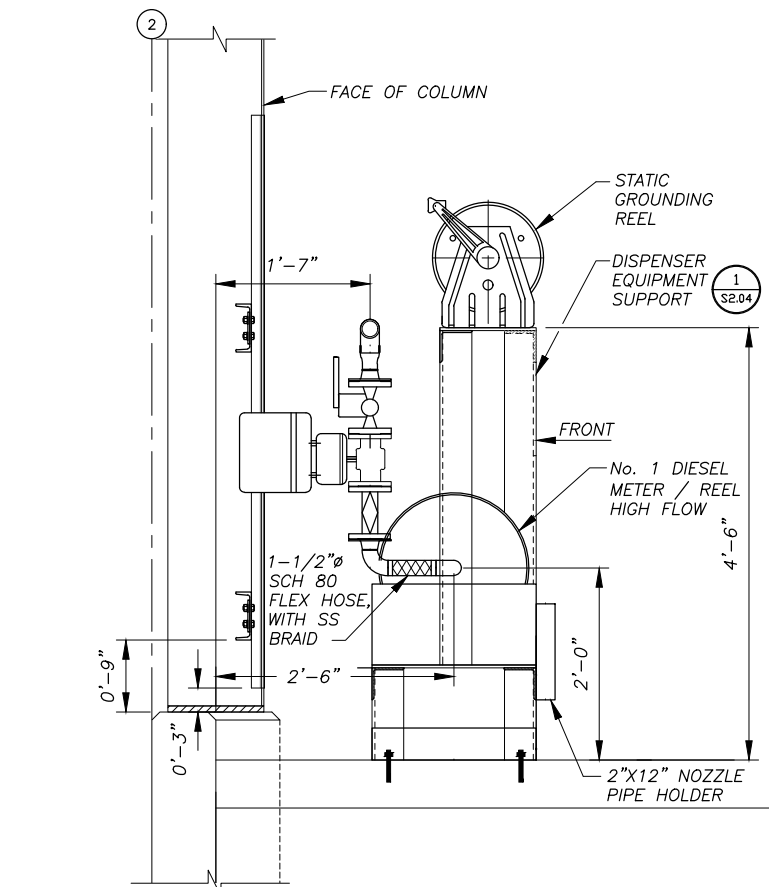
5 DIESEL No. 1 FILTER SECTION
 C2.04 SCALE: 1" = 1'-0"



2 HIGH FLOW REEL DIESEL No.2 SECTION
 C2.04 SCALE: 1" = 1'-0"

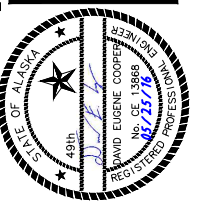


4 LOW FLOW REEL DIESEL No.1 SECTION
 C2.04 SCALE: 1" = 1'-0"



6 HIGH FLOW REEL DIESEL No.1 SECTION
 C2.04 SCALE: 1" = 1'-0"

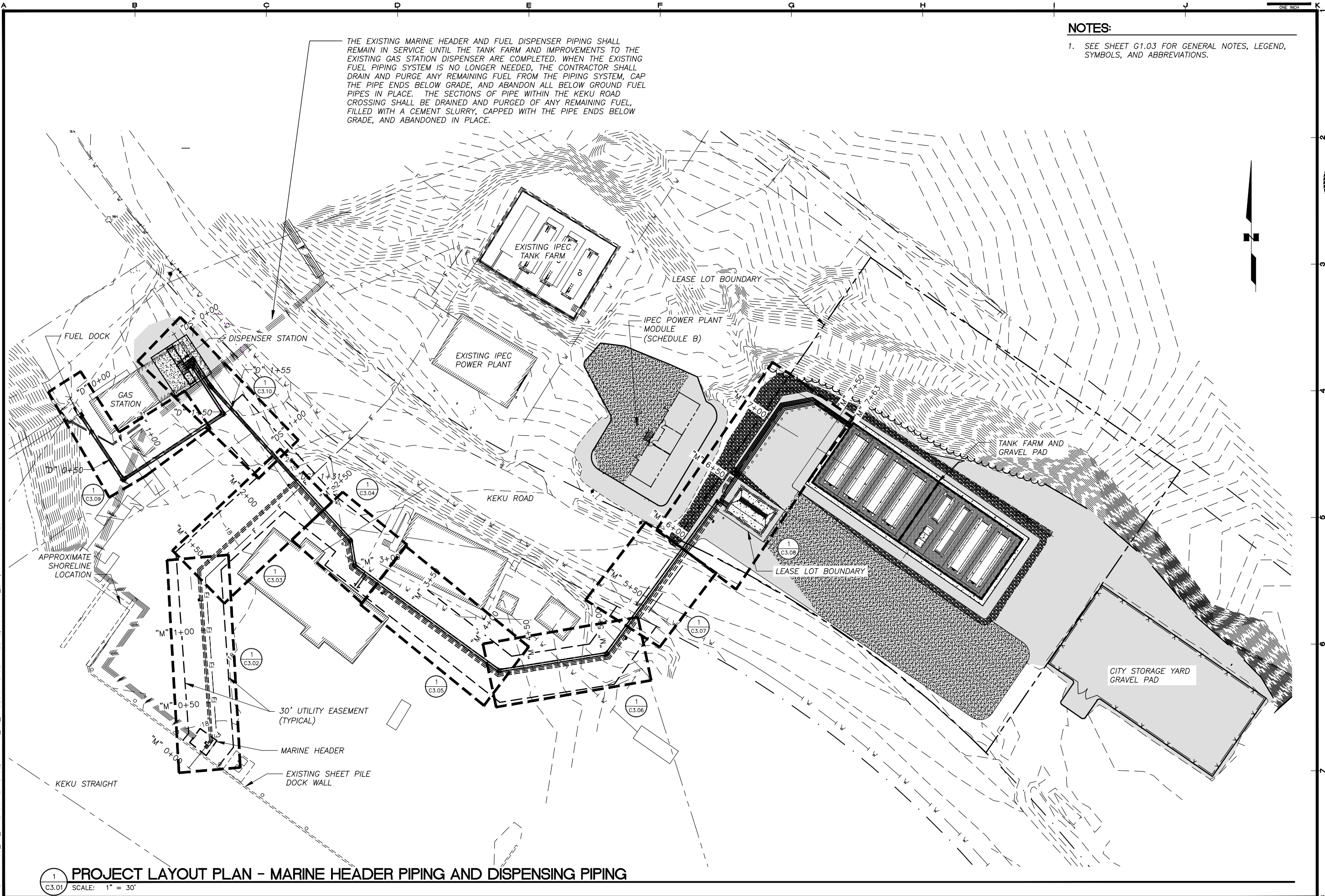
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 TRUCK FILL SHELTER PIPING SECTIONS AND DETAILS
 SHEET C2.04
 DRAWN BY: KK CHECKED BY: MRS
 DATE: 05/25/16 SCALE: NONE
 JOB NUMBER: 13-040

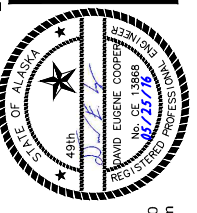
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 LAYOUT: C3.01 - MARINE HEADER OVERALL
 XREF: 13-039_40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-PIPELINE, 13040-00_B01, X-C301-FIXES



THE EXISTING MARINE HEADER AND FUEL DISPENSER PIPING SHALL REMAIN IN SERVICE UNTIL THE TANK FARM AND IMPROVEMENTS TO THE EXISTING GAS STATION DISPENSER ARE COMPLETED. WHEN THE EXISTING FUEL PIPING SYSTEM IS NO LONGER NEEDED, THE CONTRACTOR SHALL DRAIN AND PURGE ANY REMAINING FUEL FROM THE PIPING SYSTEM, CAP THE PIPE ENDS BELOW GRADE, AND ABANDON ALL BELOW GROUND FUEL PIPES IN PLACE. THE SECTIONS OF PIPE WITHIN THE KEKU ROAD CROSSING SHALL BE DRAINED AND PURGED OF ANY REMAINING FUEL, FILLED WITH A CEMENT SLURRY, CAPPED WITH THE PIPE ENDS BELOW GRADE, AND ABANDONED IN PLACE.

NOTES:
 1. SEE SHEET G1.03 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.

REVISIONS	DATE	DESCRIPTION
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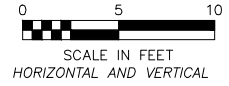
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SHEET TITLE: MARINE HEADER AND DISPENSING PIPELINE PROJECT LAYOUT PLAN
 SHEET: C3.01
 DRAWN BY: KK
 CHECKED BY: MRS
 DATE: 05/25/16
 SCALE: AS SHOWN
 JOB NUMBER: 13-040

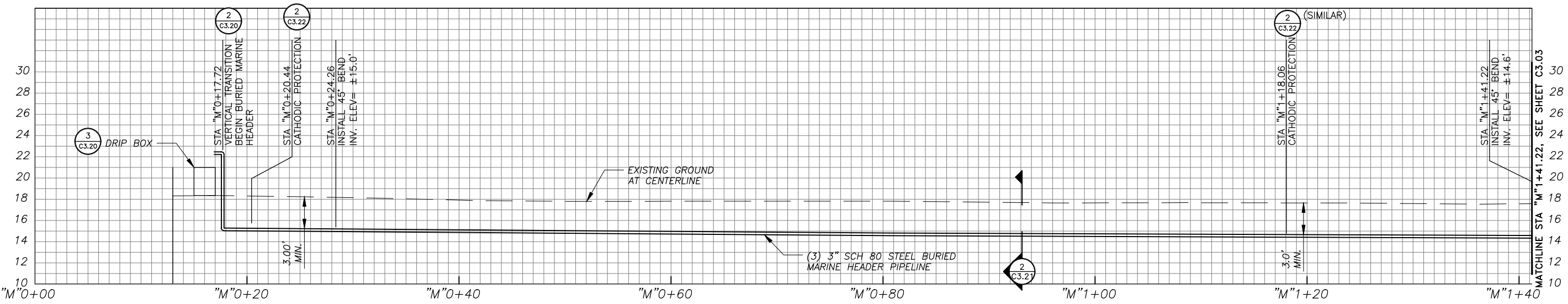
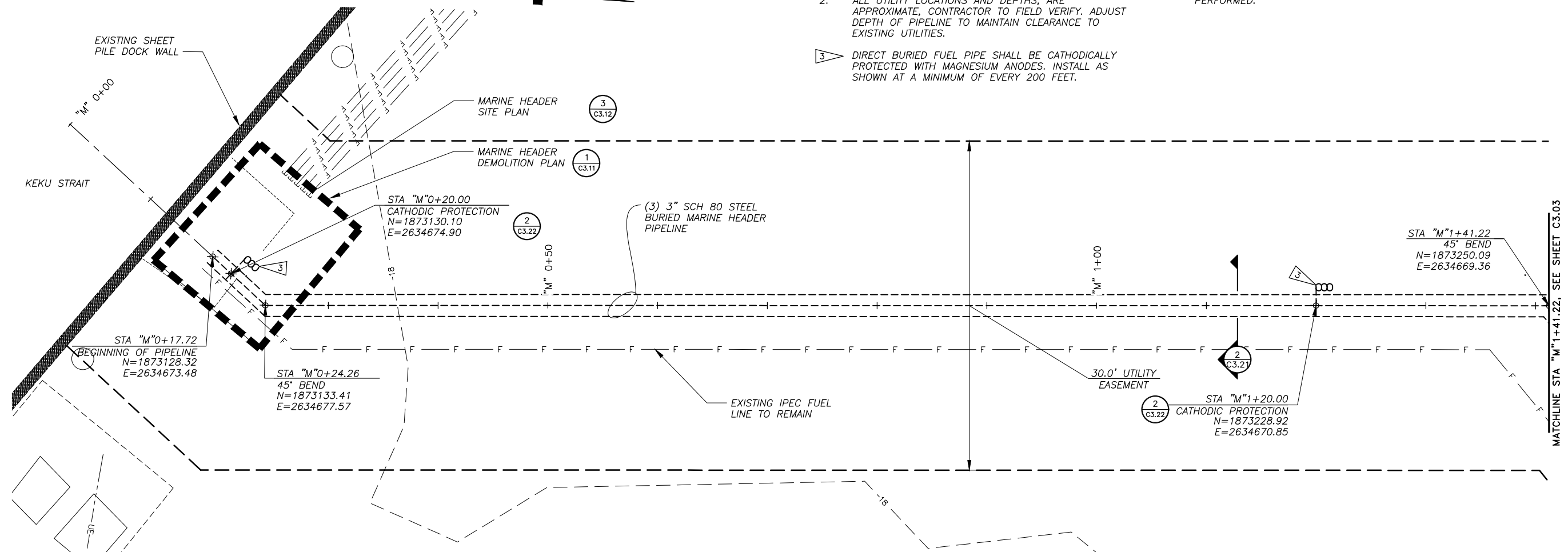
PROJECT LAYOUT PLAN - MARINE HEADER PIPING AND DISPENSING PIPING
 SCALE: 1" = 30'

H:\Jobs\13-040 Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_C3.01-C3.03-MARINE-PIPELINE, 1=1, 04-25-16 at 14:49 by WJB
 LAYOUT: C3.02 -XREFS\H:\040-KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-PIPELINE, 13040-00_B01, X-C301-FIXES

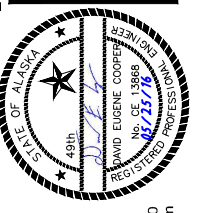


NOTES:

- SEE SHEET G1.03 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
- ALL UTILITY LOCATIONS AND DEPTHS, ARE APPROXIMATE, CONTRACTOR TO FIELD VERIFY. ADJUST DEPTH OF PIPELINE TO MAINTAIN CLEARANCE TO EXISTING UTILITIES.
- DIRECT BURIED FUEL PIPE SHALL BE CATHODICALLY PROTECTED WITH MAGNESIUM ANODES. INSTALL AS SHOWN AT A MINIMUM OF EVERY 200 FEET.
- PIPE SHALL BE ROUTED AS SHOWN ON THESE PLANS. ANY CHANGES TO THE PIPE ALIGNMENT MUST BE APPROVED BY THE ENGINEER PRIOR TO WORK BEING PERFORMED.



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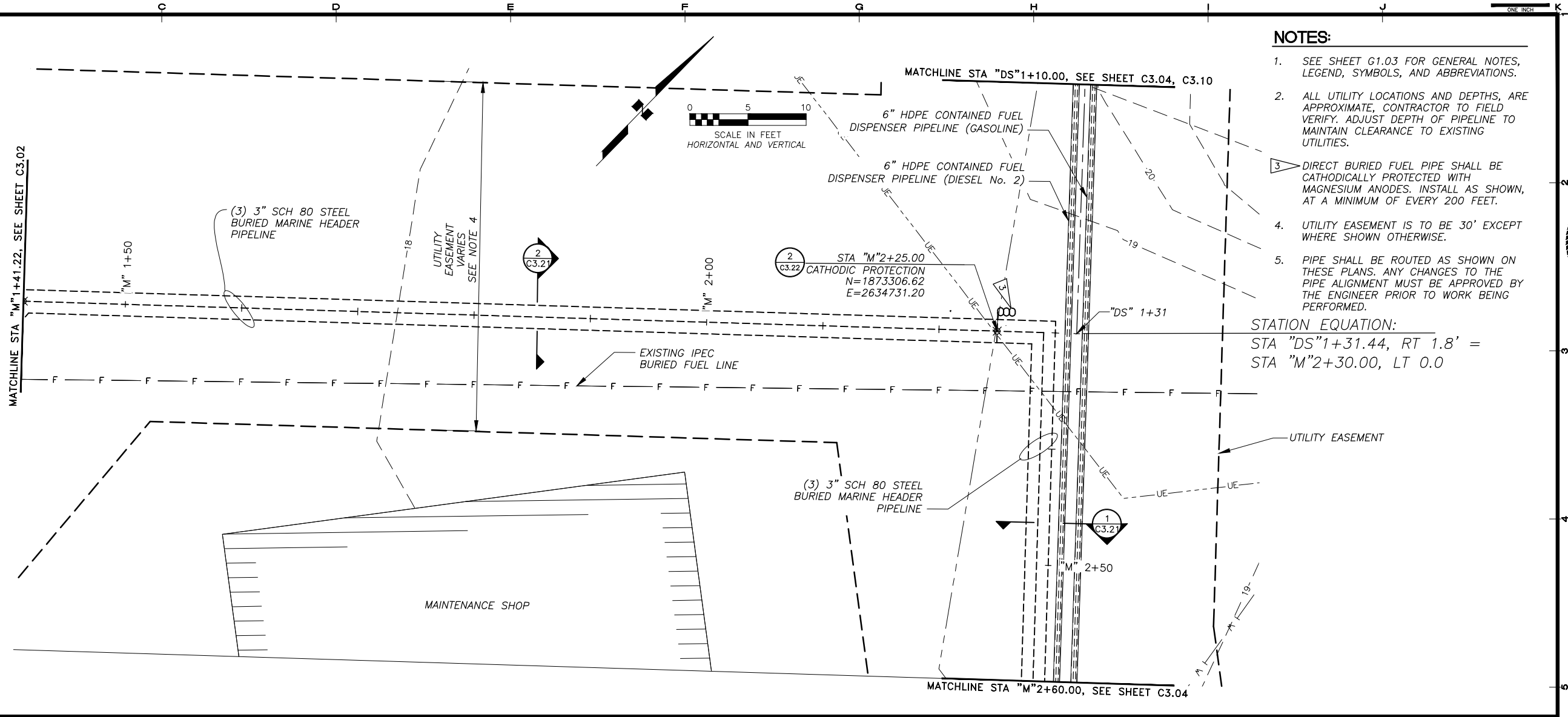
KAKE BULK FUEL UPGRADES

SHEET TITLE
MARINE HEADER AND DISPENSING PIPELINES PLAN AND PROFILE

SHEET
C3.02

DRAWN BY: KK CHECKED BY: MRS
 DATE: 05/25/16 SCALE: AS SHOWN
 JOB NUMBER: 13-040

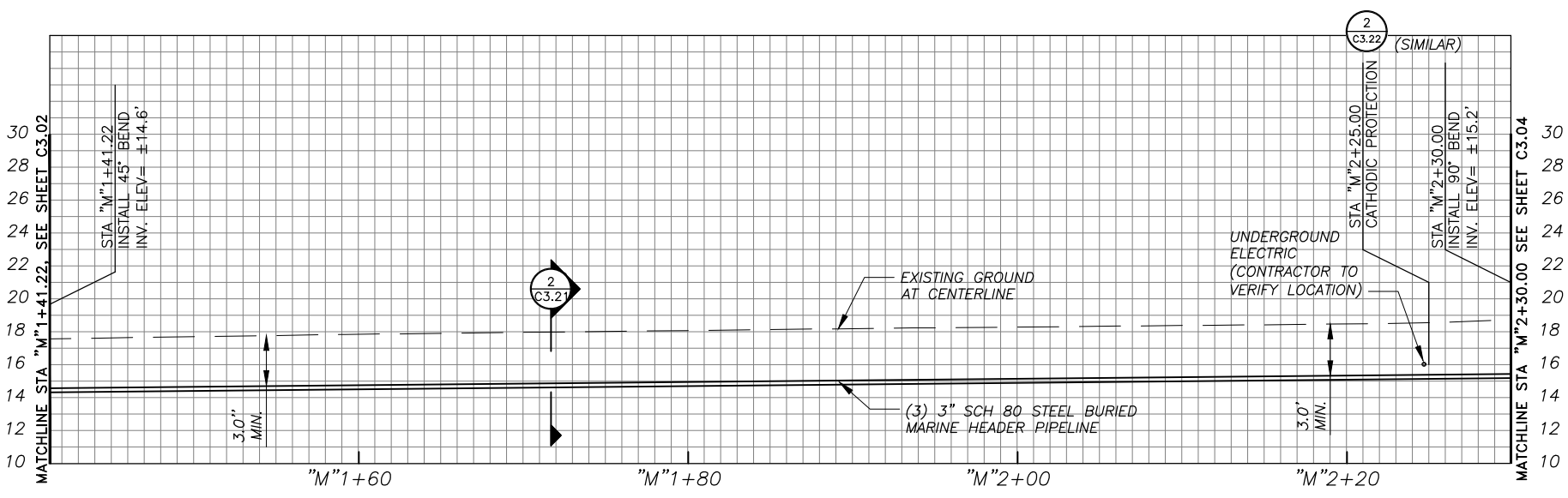
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 LAYOUT: C3.03 - MARINE HEADER P&P
 XREF: 13-039-40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-PIPELINE, 13040-00_B01, X-C3.01 FIXES



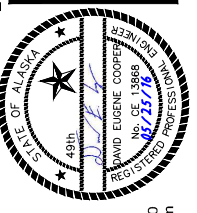
NOTES:

- SEE SHEET G1.03 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
- ALL UTILITY LOCATIONS AND DEPTHS, ARE APPROXIMATE, CONTRACTOR TO FIELD VERIFY. ADJUST DEPTH OF PIPELINE TO MAINTAIN CLEARANCE TO EXISTING UTILITIES.
- DIRECT BURIED FUEL PIPE SHALL BE CATHODICALLY PROTECTED WITH MAGNESIUM ANODES. INSTALL AS SHOWN, AT A MINIMUM OF EVERY 200 FEET.
- UTILITY EASEMENT IS TO BE 30' EXCEPT WHERE SHOWN OTHERWISE.
- PIPE SHALL BE ROUTED AS SHOWN ON THESE PLANS. ANY CHANGES TO THE PIPE ALIGNMENT MUST BE APPROVED BY THE ENGINEER PRIOR TO WORK BEING PERFORMED.

STATION EQUATION:
 STA "DS"1+31.44, RT 1.8' =
 STA "M"2+30.00, LT 0.0



REVISIONS	DATE	DESCRIPTION
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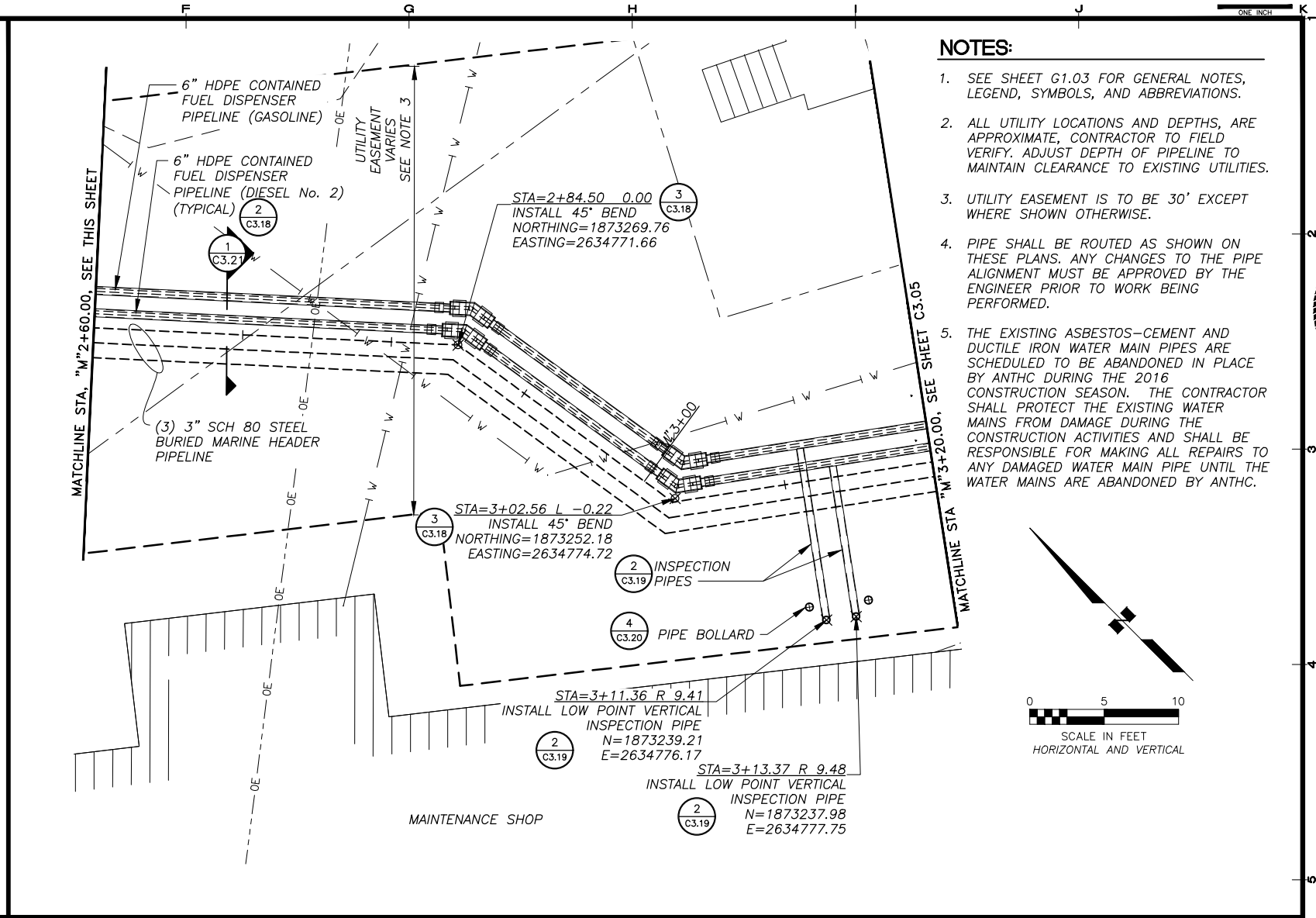
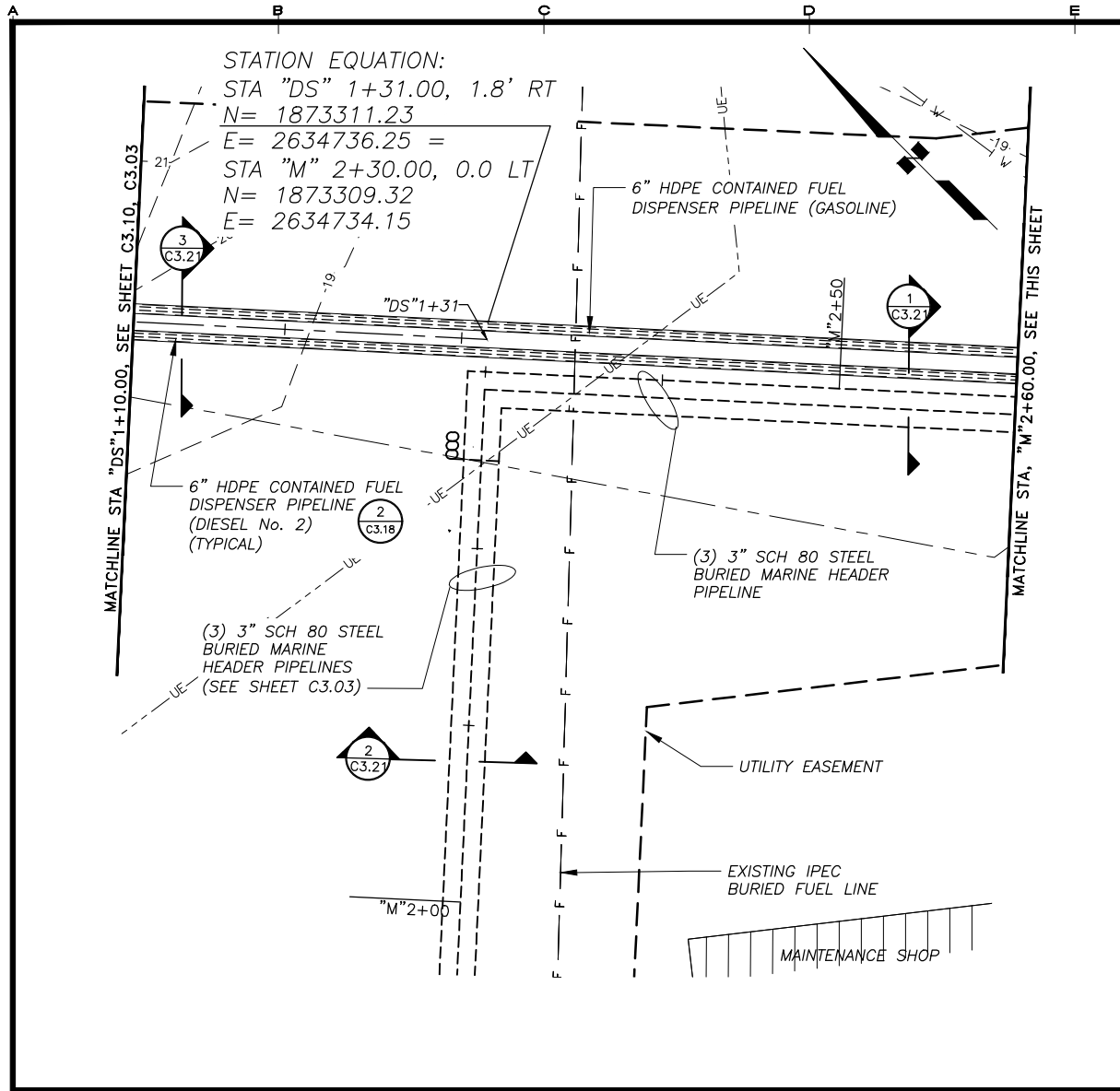
ALASKA ENERGY AUTHORITY
 KAKE BULK FUEL UPGRADES
 KAKE, ALASKA

SHEET TITLE
MARINE HEADER AND DISPENSING PIPELINES PLAN AND PROFILE

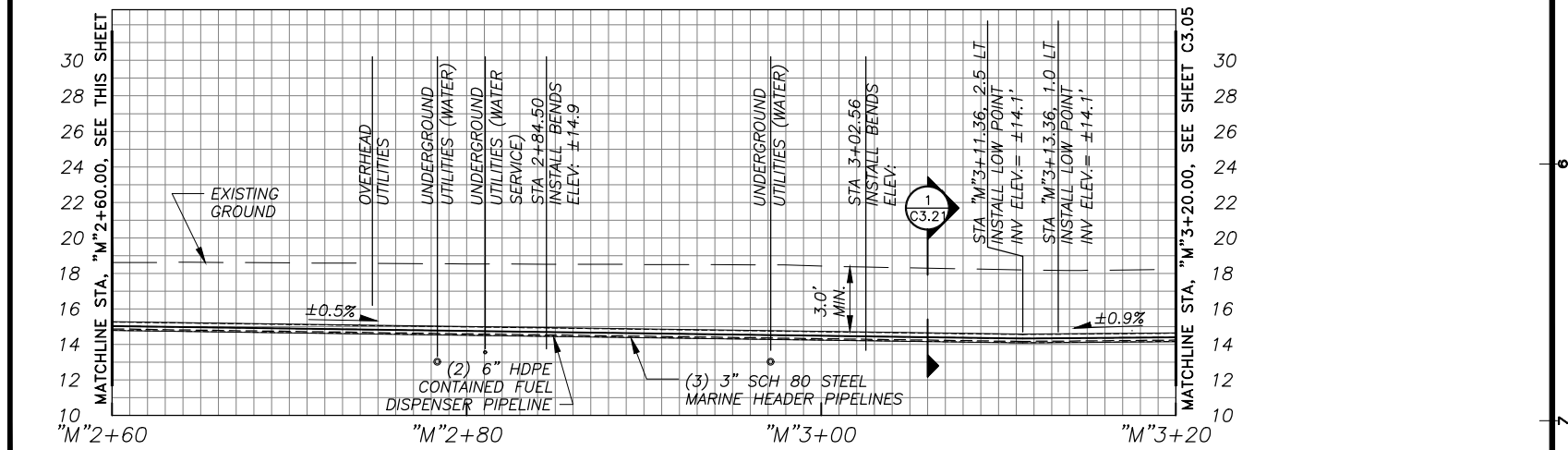
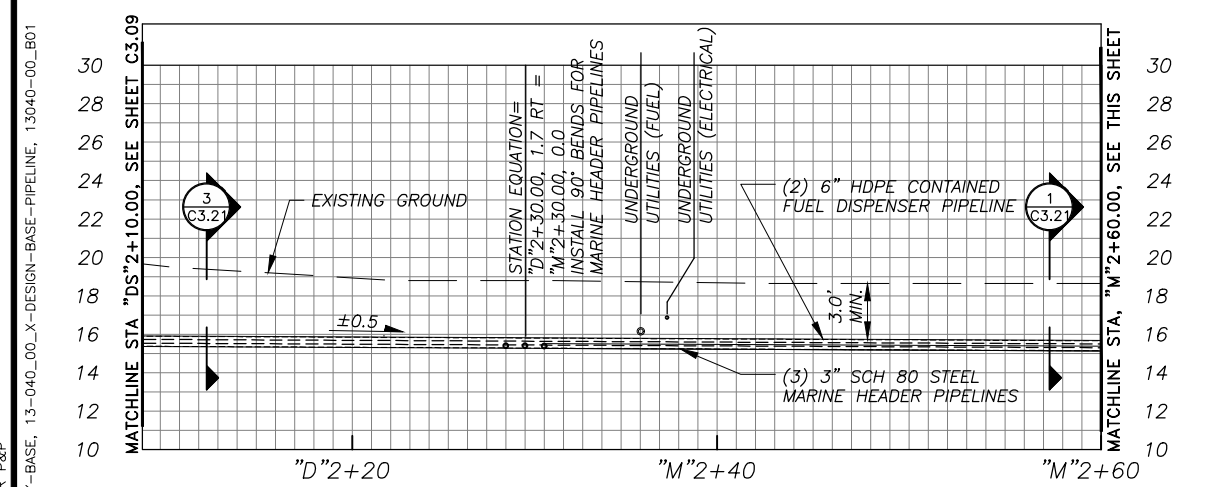
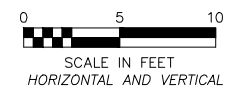
SHEET
C3.03

DRAWN BY: KK	CHECKED BY: MRS
DATE: 05/25/16	SCALE: AS SHOWN
JOB NUMBER: 13-040	

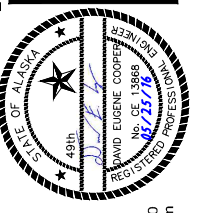
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 LAYOUT: C3.04 - MARINE HEADER P&P
 XREF: 13-039_40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-PIPELINE, 13040-00_B01



- NOTES:**
- SEE SHEET G1.03 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
 - ALL UTILITY LOCATIONS AND DEPTHS, ARE APPROXIMATE, CONTRACTOR TO FIELD VERIFY. ADJUST DEPTH OF PIPELINE TO MAINTAIN CLEARANCE TO EXISTING UTILITIES.
 - UTILITY EASEMENT IS TO BE 30' EXCEPT WHERE SHOWN OTHERWISE.
 - PIPE SHALL BE ROUTED AS SHOWN ON THESE PLANS. ANY CHANGES TO THE PIPE ALIGNMENT MUST BE APPROVED BY THE ENGINEER PRIOR TO WORK BEING PERFORMED.
 - THE EXISTING ASBESTOS-CEMENT AND DUCTILE IRON WATER MAIN PIPES ARE SCHEDULED TO BE ABANDONED IN PLACE BY ANTHC DURING THE 2016 CONSTRUCTION SEASON. THE CONTRACTOR SHALL PROTECT THE EXISTING WATER MAINS FROM DAMAGE DURING THE CONSTRUCTION ACTIVITIES AND SHALL BE RESPONSIBLE FOR MAKING ALL REPAIRS TO ANY DAMAGED WATER MAIN PIPE UNTIL THE WATER MAINS ARE ABANDONED BY ANTHC.



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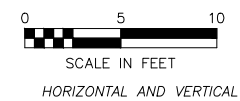
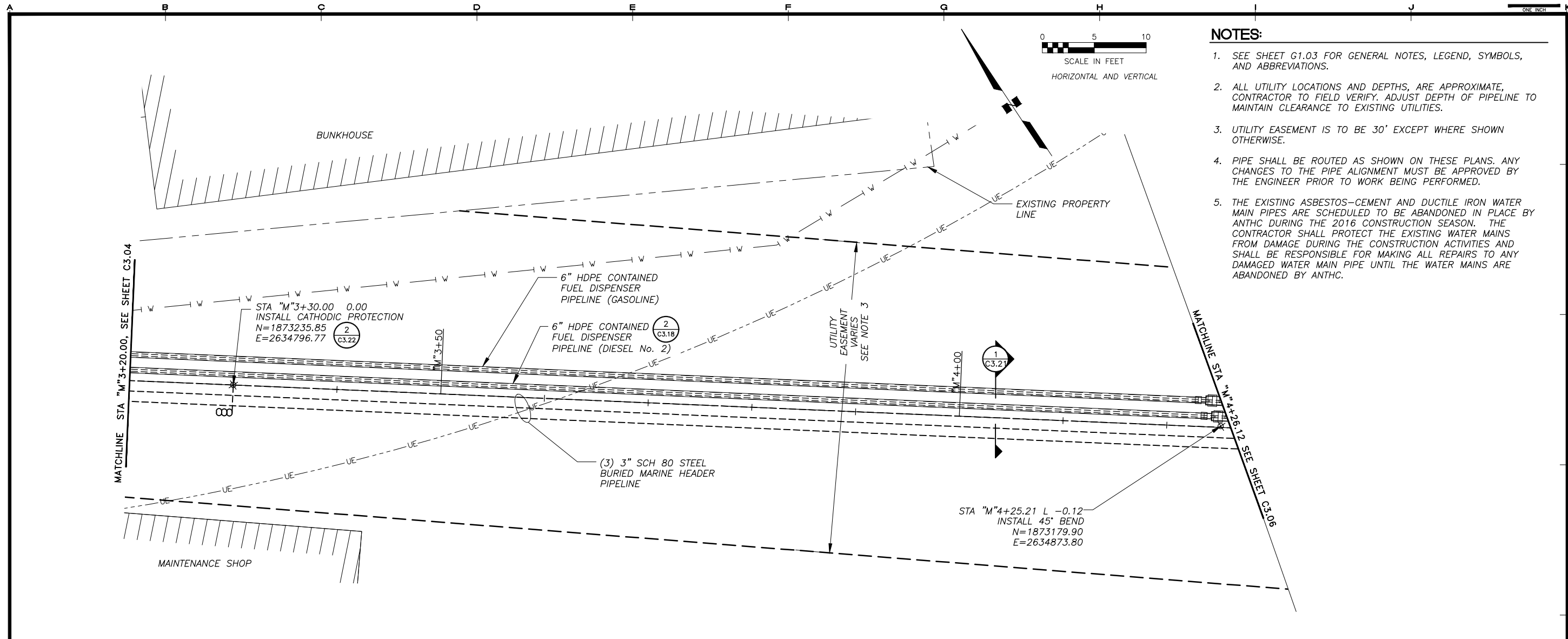
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SHEET TITLE MARINE HEADER AND DISPENSING PIPELINES PLAN AND PROFILE	
SHEET C3.04	
DRAWN BY: KK	CHECKED BY: MRS
DATE: 05/25/16	SCALE: AS SHOWN
JOB NUMBER: 13-040	

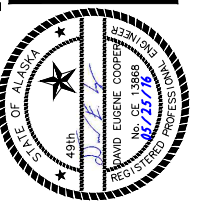
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 LAYOUT: C3.05 - MARINE HEADER P&P
 XREF: 13-039_40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-PIPELINE, 13040-00_B01



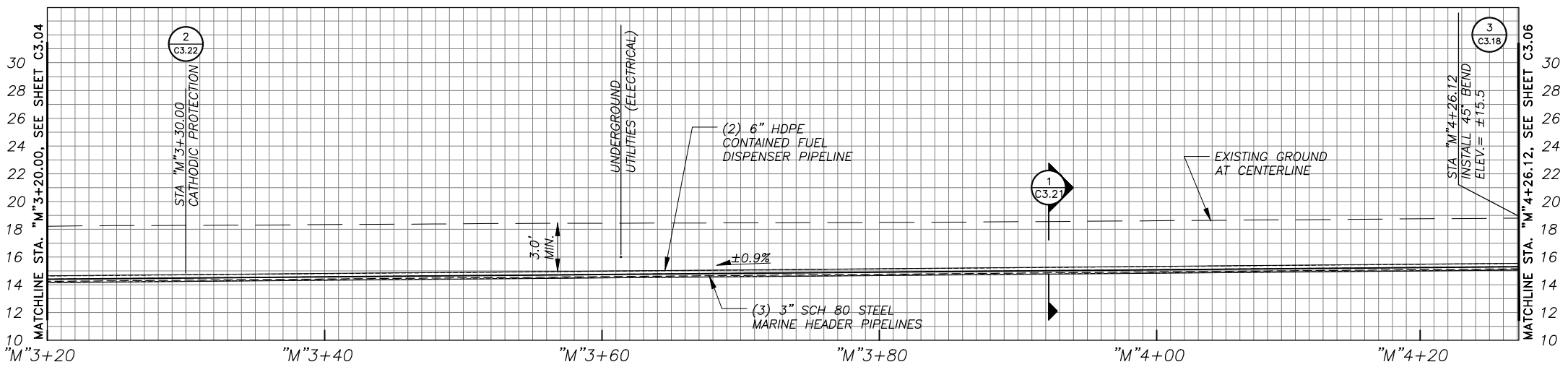
NOTES:

- SEE SHEET G1.03 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
- ALL UTILITY LOCATIONS AND DEPTHS, ARE APPROXIMATE, CONTRACTOR TO FIELD VERIFY, ADJUST DEPTH OF PIPELINE TO MAINTAIN CLEARANCE TO EXISTING UTILITIES.
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- PIPE SHALL BE ROUTED AS SHOWN ON THESE PLANS. ANY CHANGES TO THE PIPE ALIGNMENT MUST BE APPROVED BY THE ENGINEER PRIOR TO WORK BEING PERFORMED.
- THE EXISTING ASBESTOS-CEMENT AND DUCTILE IRON WATER MAIN PIPES ARE SCHEDULED TO BE ABANDONED IN PLACE BY ANTHC DURING THE 2016 CONSTRUCTION SEASON. THE CONTRACTOR SHALL PROTECT THE EXISTING WATER MAINS FROM DAMAGE DURING THE CONSTRUCTION ACTIVITIES AND SHALL BE RESPONSIBLE FOR MAKING ALL REPAIRS TO ANY DAMAGED WATER MAIN PIPE UNTIL THE WATER MAINS ARE ABANDONED BY ANTHC.

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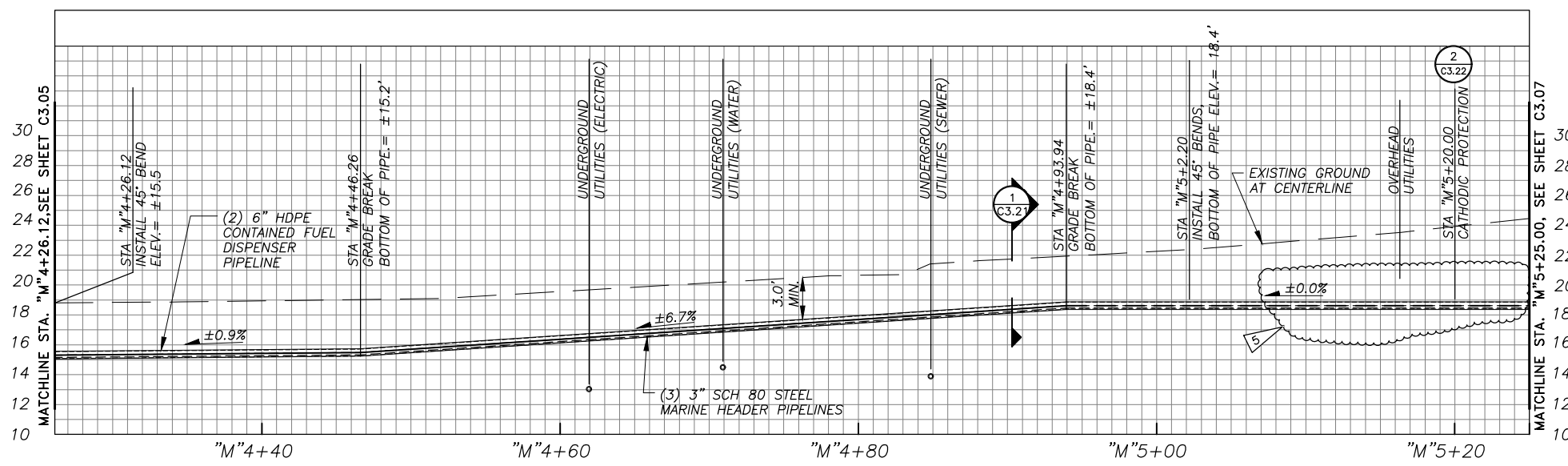
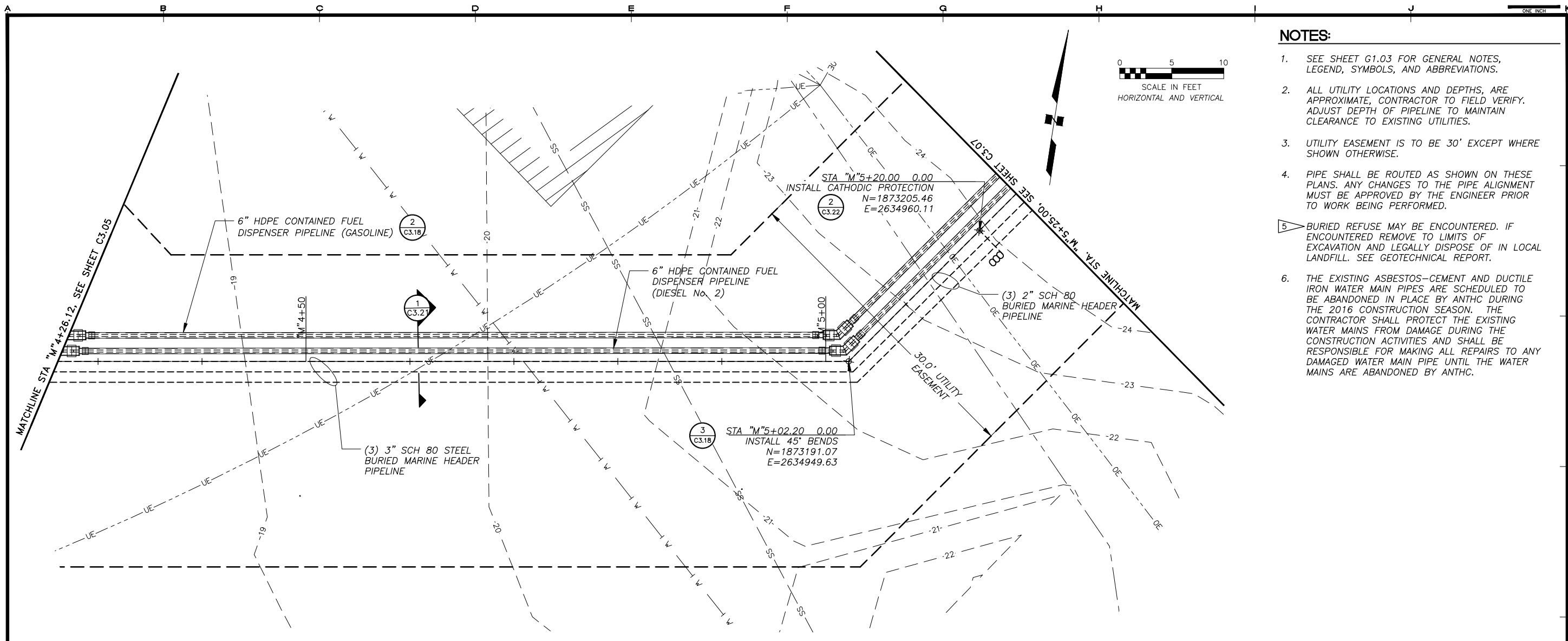
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SHEET TITLE
 MARINE HEADER AND DISPENSING PIPELINES PLAN AND PROFILE

SHEET
 C3.05

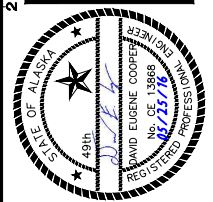
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JOB NUMBER: 13-040	

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 LAYOUT: C3.06 - MARINE HEADER P&P
 XREF: 13-039_40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-PIPELINE, 13040-00_B01



- NOTES:**
- SEE SHEET G1.03 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
 - ALL UTILITY LOCATIONS AND DEPTHS, ARE APPROXIMATE, CONTRACTOR TO FIELD VERIFY. ADJUST DEPTH OF PIPELINE TO MAINTAIN CLEARANCE TO EXISTING UTILITIES.
 - UTILITY EASEMENT IS TO BE 30' EXCEPT WHERE SHOWN OTHERWISE.
 - PIPE SHALL BE ROUTED AS SHOWN ON THESE PLANS. ANY CHANGES TO THE PIPE ALIGNMENT MUST BE APPROVED BY THE ENGINEER PRIOR TO WORK BEING PERFORMED.
 - BURIED REFUSE MAY BE ENCOUNTERED. IF ENCOUNTERED REMOVE TO LIMITS OF EXCAVATION AND LEGALLY DISPOSE OF IN LOCAL LANDFILL. SEE GEOTECHNICAL REPORT.
 - THE EXISTING ASBESTOS-CEMENT AND DUCTILE IRON WATER MAIN PIPES ARE SCHEDULED TO BE ABANDONED IN PLACE BY ANTHC DURING THE 2016 CONSTRUCTION SEASON. THE CONTRACTOR SHALL PROTECT THE EXISTING WATER MAINS FROM DAMAGE DURING THE CONSTRUCTION ACTIVITIES AND SHALL BE RESPONSIBLE FOR MAKING ALL REPAIRS TO ANY DAMAGED WATER MAIN PIPE UNTIL THE WATER MAINS ARE ABANDONED BY ANTHC.

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SHEET TITLE
MARINE HEADER AND DISPENSING PIPELINES PLAN AND PROFILE

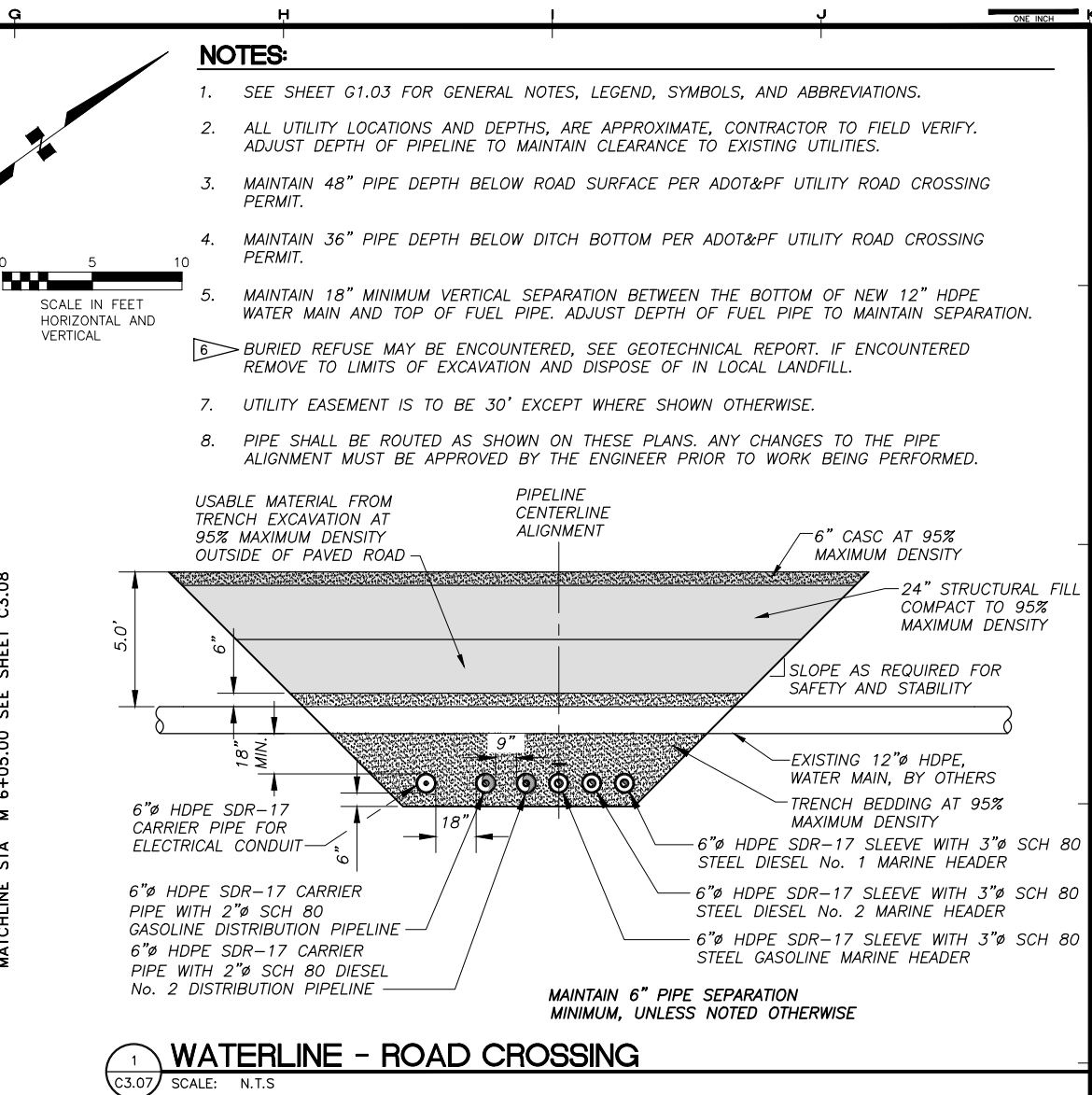
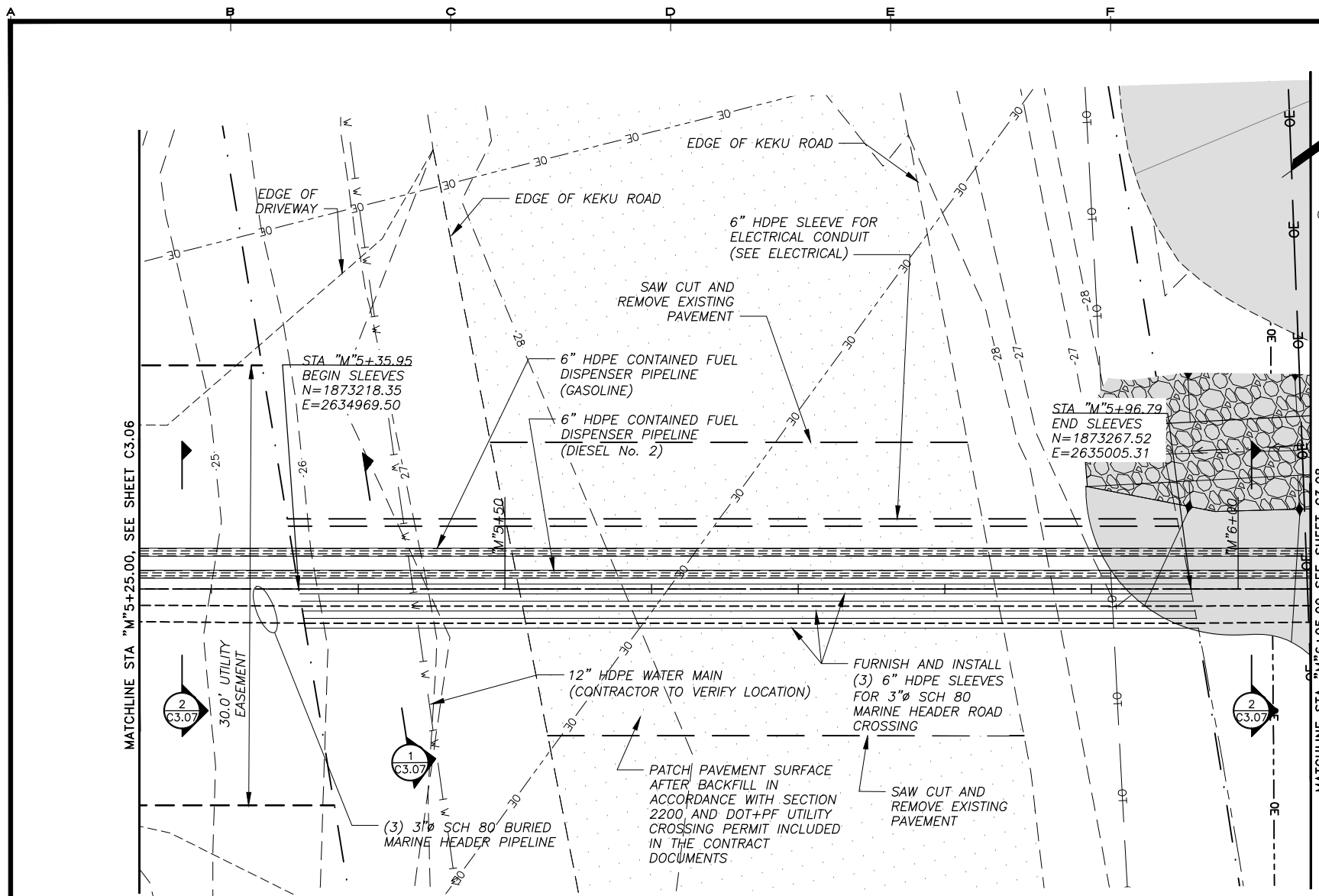
SHEET
C3.06

DRAWN BY: KK
 CHECKED BY: MRS

DATE: 05/25/16
 SCALE: AS SHOWN

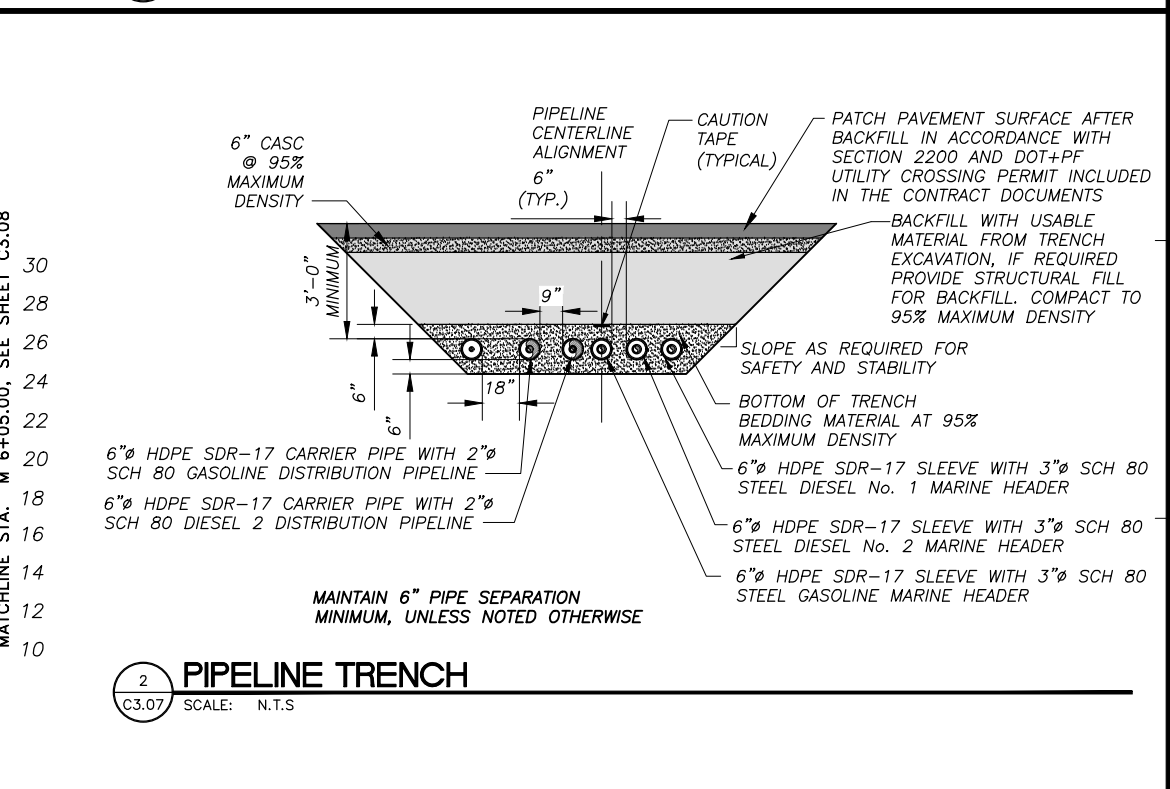
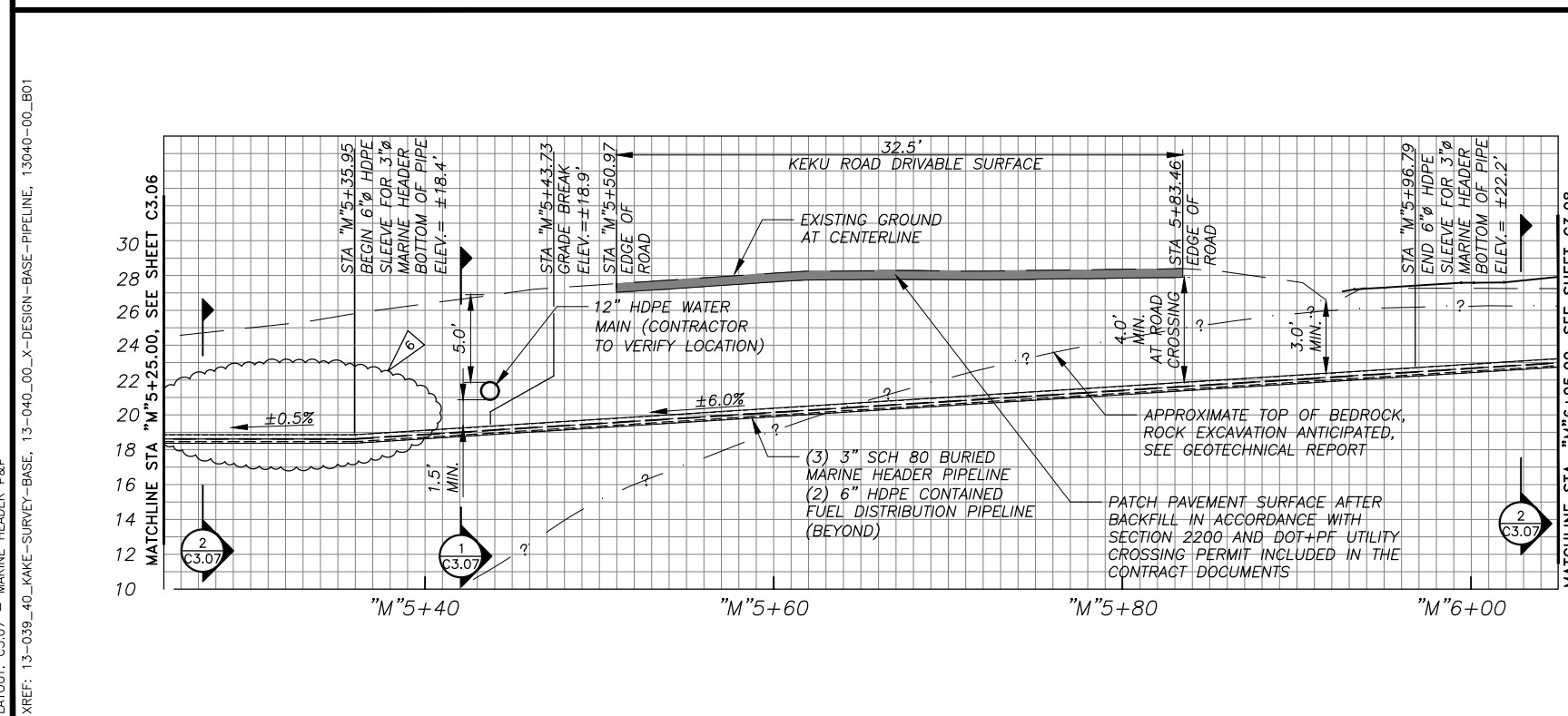
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 LAYOUT: C3.07 - MARINE HEADER P&P
 XREF: 13-039_40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-PIPELINE, 13040-00_B01



- NOTES:**
- SEE SHEET G1.03 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
 - ALL UTILITY LOCATIONS AND DEPTHS, ARE APPROXIMATE, CONTRACTOR TO FIELD VERIFY. ADJUST DEPTH OF PIPELINE TO MAINTAIN CLEARANCE TO EXISTING UTILITIES.
 - MAINTAIN 48" PIPE DEPTH BELOW ROAD SURFACE PER ADOT&PF UTILITY ROAD CROSSING PERMIT.
 - MAINTAIN 36" PIPE DEPTH BELOW DITCH BOTTOM PER ADOT&PF UTILITY ROAD CROSSING PERMIT.
 - MAINTAIN 18" MINIMUM VERTICAL SEPARATION BETWEEN THE BOTTOM OF NEW 12" HDPE WATER MAIN AND TOP OF FUEL PIPE. ADJUST DEPTH OF FUEL PIPE TO MAINTAIN SEPARATION.
 - BURIED REFUSE MAY BE ENCOUNTERED, SEE GEOTECHNICAL REPORT. IF ENCOUNTERED REMOVE TO LIMITS OF EXCAVATION AND DISPOSE OF IN LOCAL LANDFILL.
 - UTILITY EASEMENT IS TO BE 30' EXCEPT WHERE SHOWN OTHERWISE.
 - PIPE SHALL BE ROUTED AS SHOWN ON THESE PLANS. ANY CHANGES TO THE PIPE ALIGNMENT MUST BE APPROVED BY THE ENGINEER PRIOR TO WORK BEING PERFORMED.

1 WATERLINE - ROAD CROSSING
 SCALE: N.T.S.



2 PIPELINE TRENCH
 SCALE: N.T.S.

REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW

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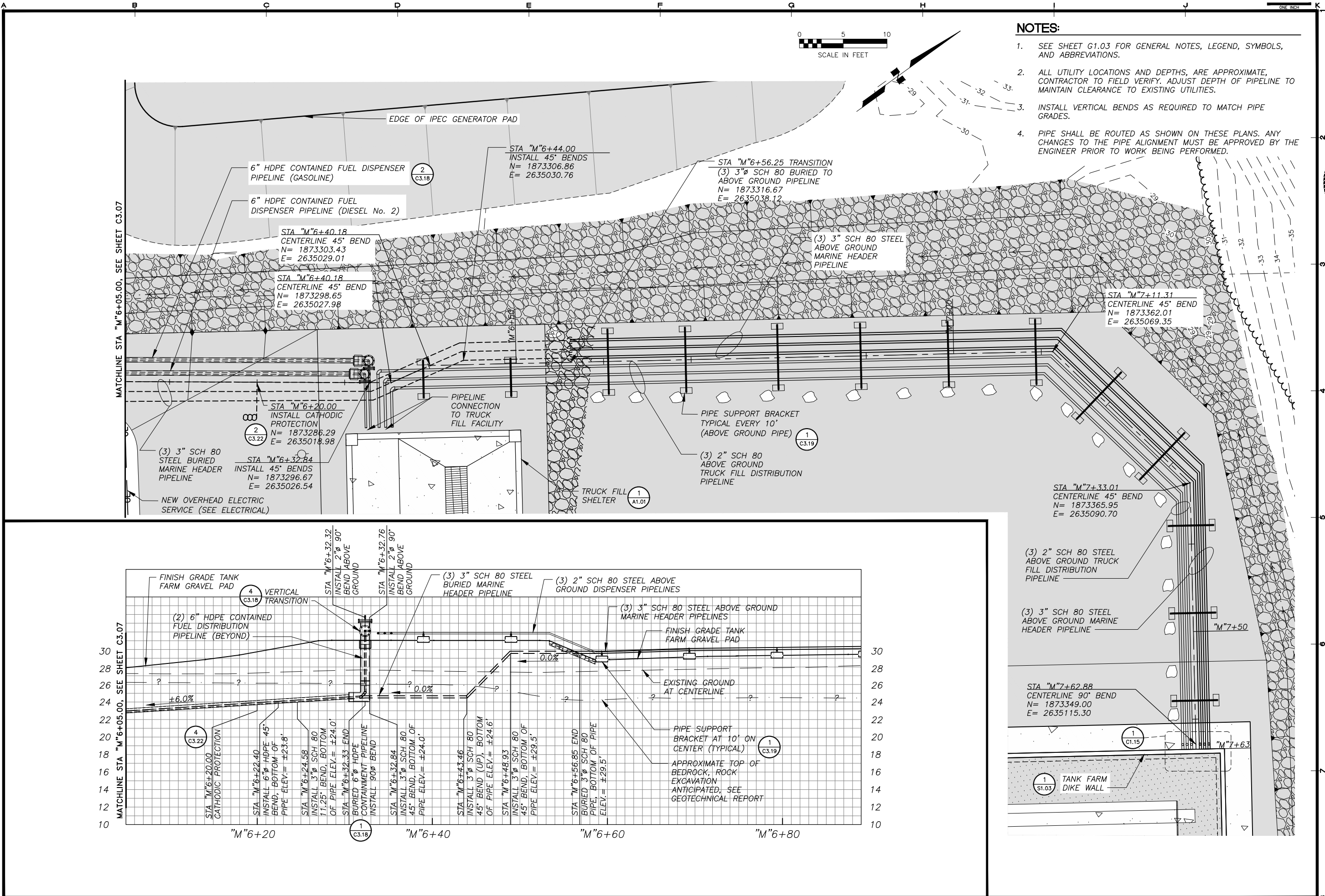
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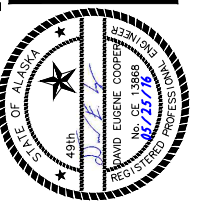
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 SHEET: C3.07
 DRAWN BY: KK
 CHECKED BY: MRS
 DATE: 05/25/16
 SCALE: AS SHOWN
 JOB NUMBER: 13-040

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 LAYOUT: C3.08 - MARINE HEADER PIPELINE
 XREF: 13-039_40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-PIPELINE, 13040-00_B01



- NOTES:**
- SEE SHEET G1.03 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
 - ALL UTILITY LOCATIONS AND DEPTHS, ARE APPROXIMATE, CONTRACTOR TO FIELD VERIFY. ADJUST DEPTH OF PIPELINE TO MAINTAIN CLEARANCE TO EXISTING UTILITIES.
 - INSTALL VERTICAL BENDS AS REQUIRED TO MATCH PIPE GRADES.
 - PIPE SHALL BE ROUTED AS SHOWN ON THESE PLANS. ANY CHANGES TO THE PIPE ALIGNMENT MUST BE APPROVED BY THE ENGINEER PRIOR TO WORK BEING PERFORMED.

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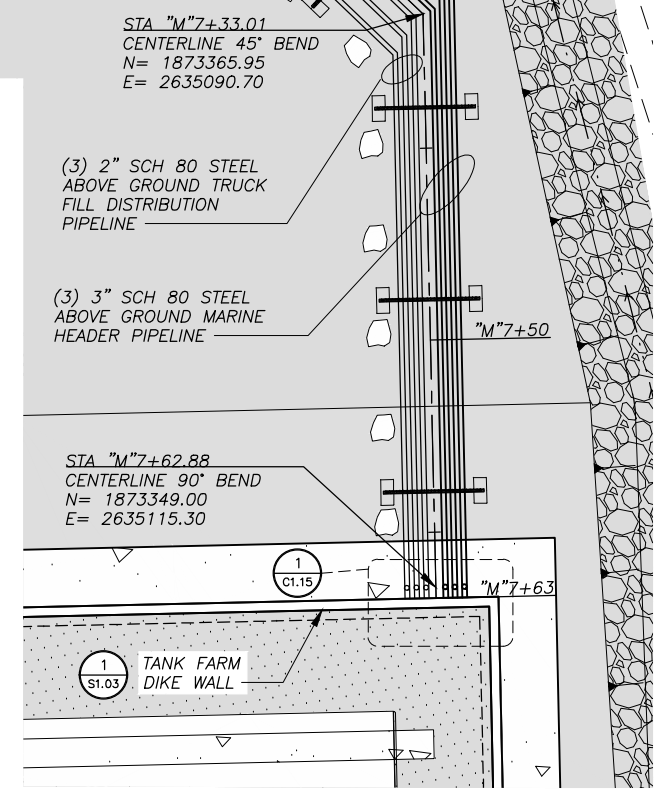
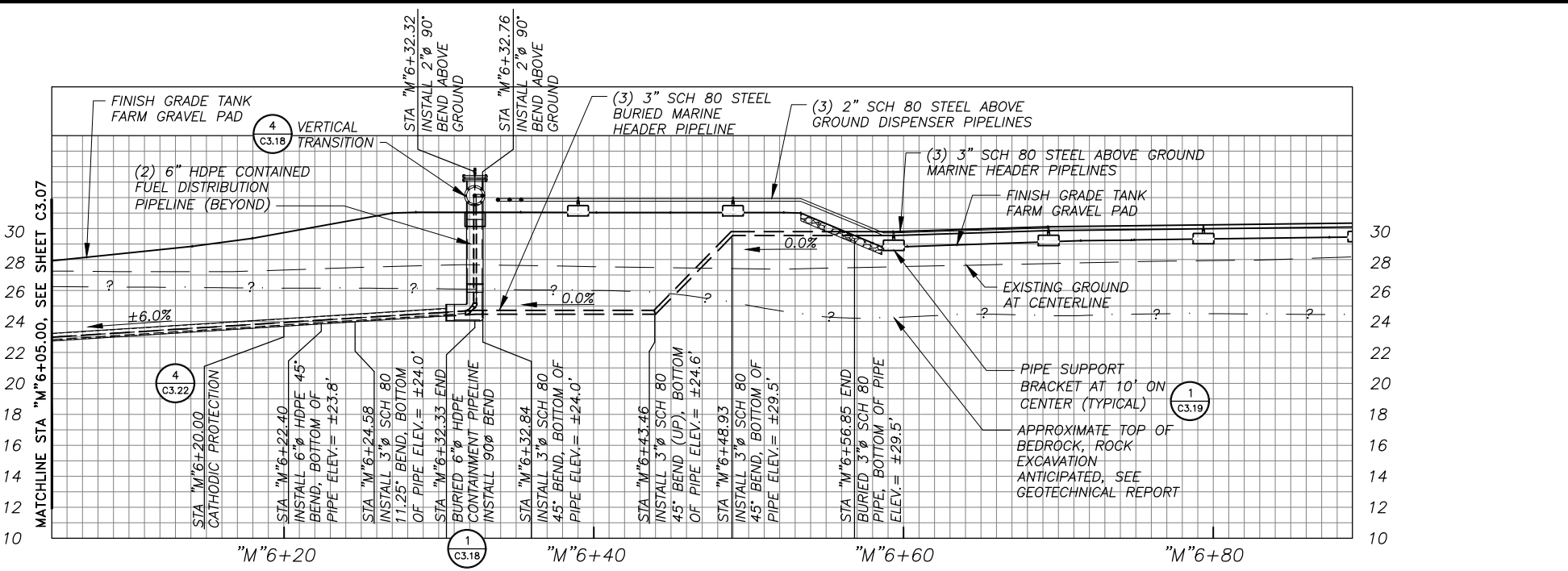
SHEET TITLE: **MARINE HEADER AND DISPENDING PIPELINES PLAN AND PROFILE**

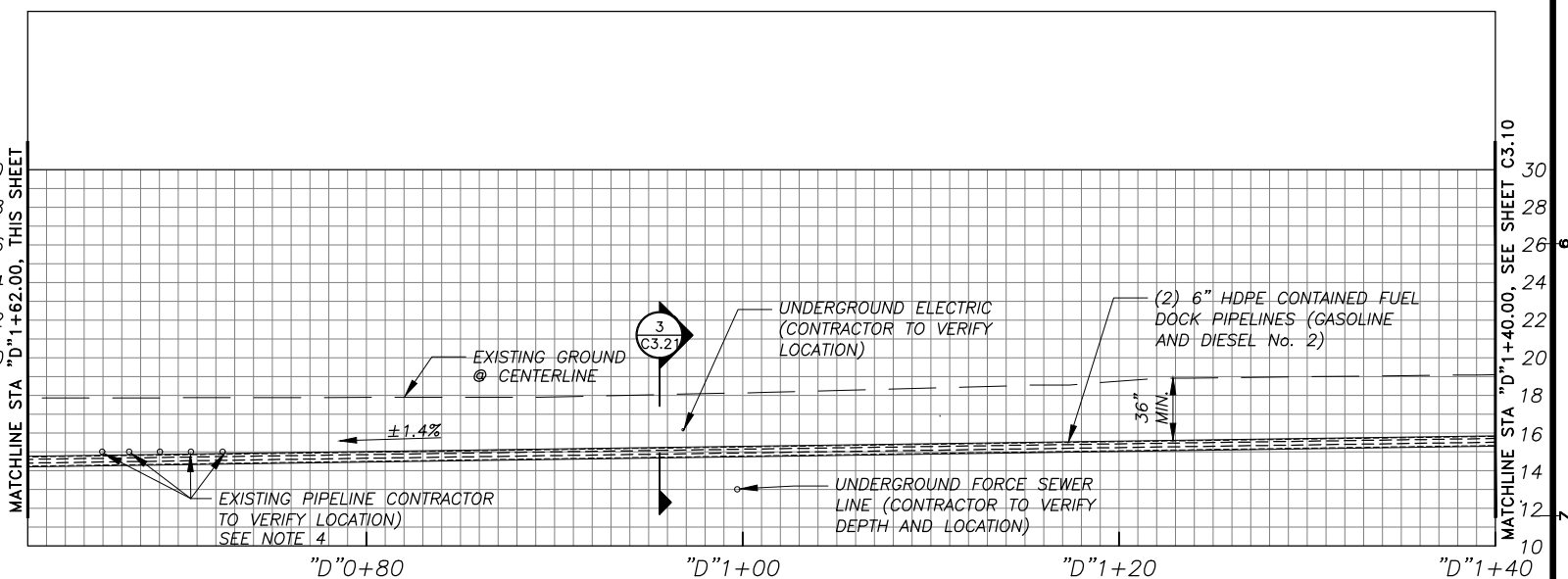
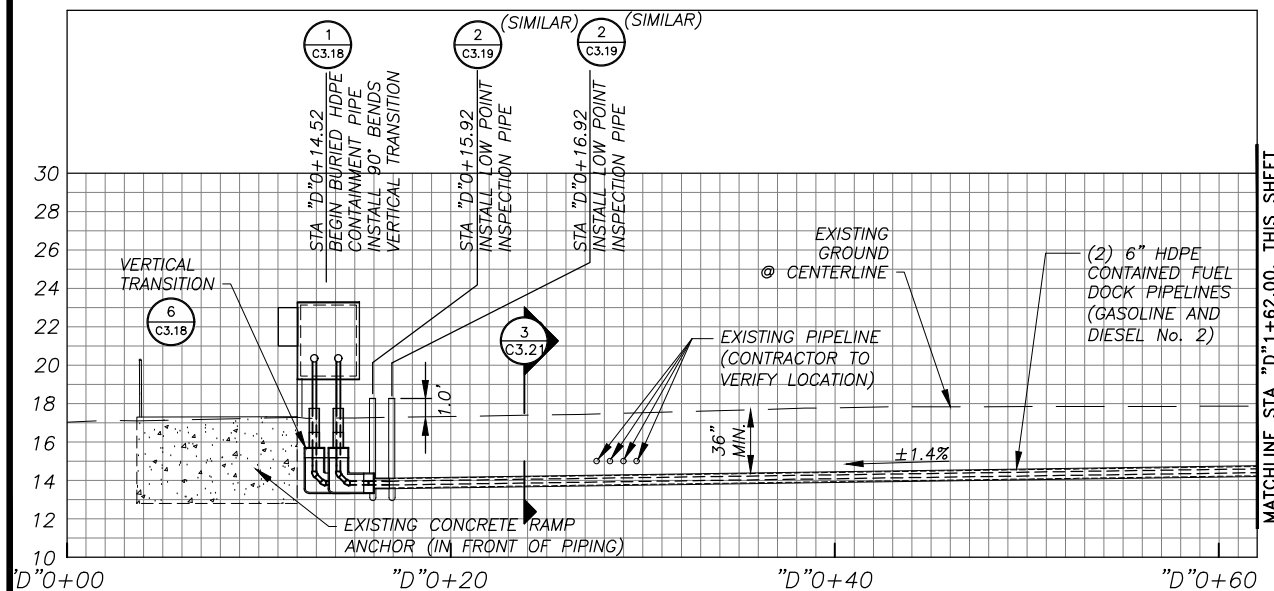
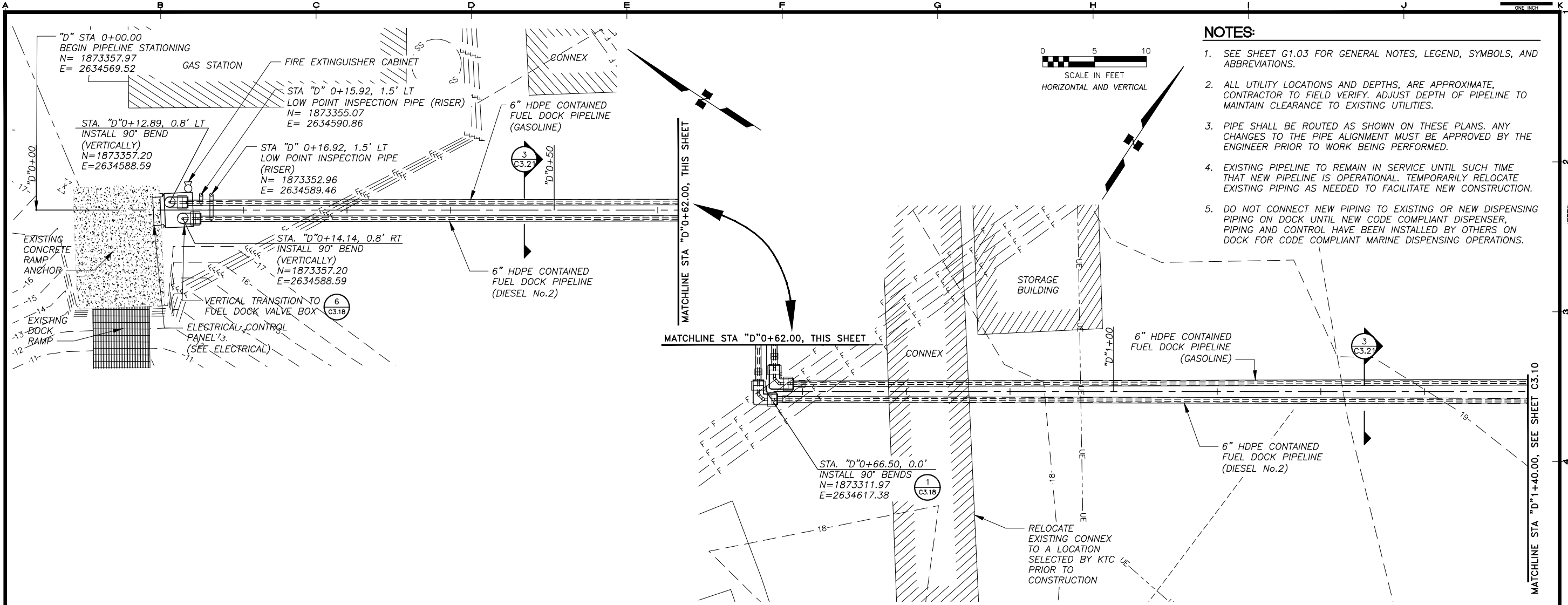
SHEET: **C3.08**

DRAWN BY: **KK** CHECKED BY: **MRS**

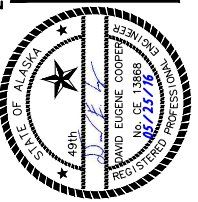
DATE: **05/25/16** SCALE: **AS SHOWN**

JOB NUMBER: **13-040**





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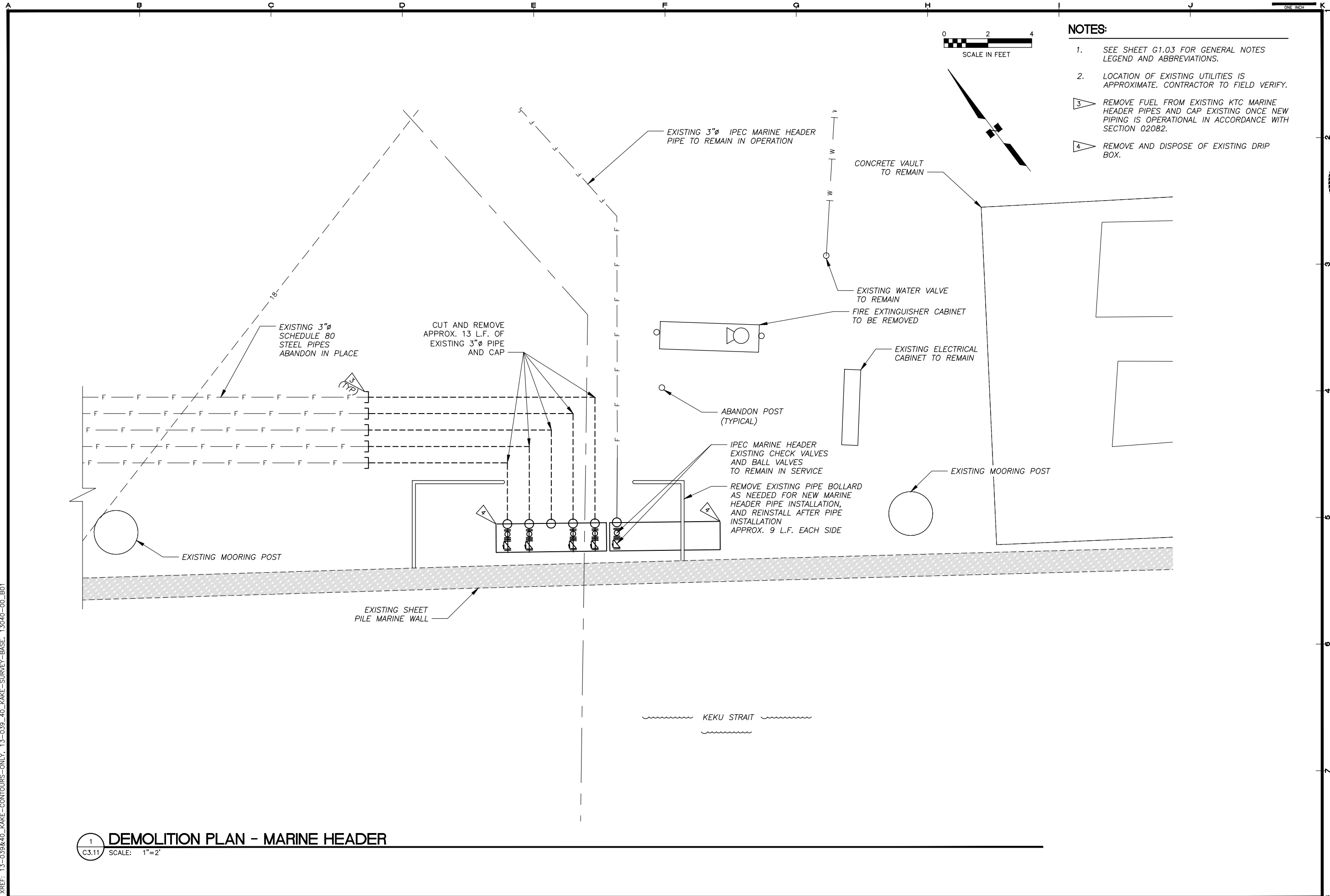
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KAKE, ALASKA

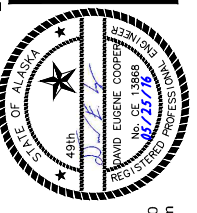
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MARINE HEADER AND DISPENSING PIPELINES PLAN AND PROFILE	
SHEET	
C3.09	
DRAWN BY:	CHECKED BY:
KK	MRS
DATE:	SCALE:
05/25/16	AS SHOWN
JOB NUMBER:	
13-040	

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 LAYOUT: C3.11 - MARINE HEADER DEMO
 XREF: 13-039&40_KAKE-CONTOURS-ONLY, 13-039_40_KAKE-SURVEY-BASE, 13040-00_B01



- NOTES:**
- SEE SHEET G1.03 FOR GENERAL NOTES LEGEND AND ABBREVIATIONS.
 - LOCATION OF EXISTING UTILITIES IS APPROXIMATE. CONTRACTOR TO FIELD VERIFY.
 - REMOVE FUEL FROM EXISTING KTC MARINE HEADER PIPES AND CAP EXISTING ONCE NEW PIPING IS OPERATIONAL IN ACCORDANCE WITH SECTION 02082.
 - REMOVE AND DISPOSE OF EXISTING DRIP BOX.

REVISIONS	MARK	DATE	DESCRIPTION



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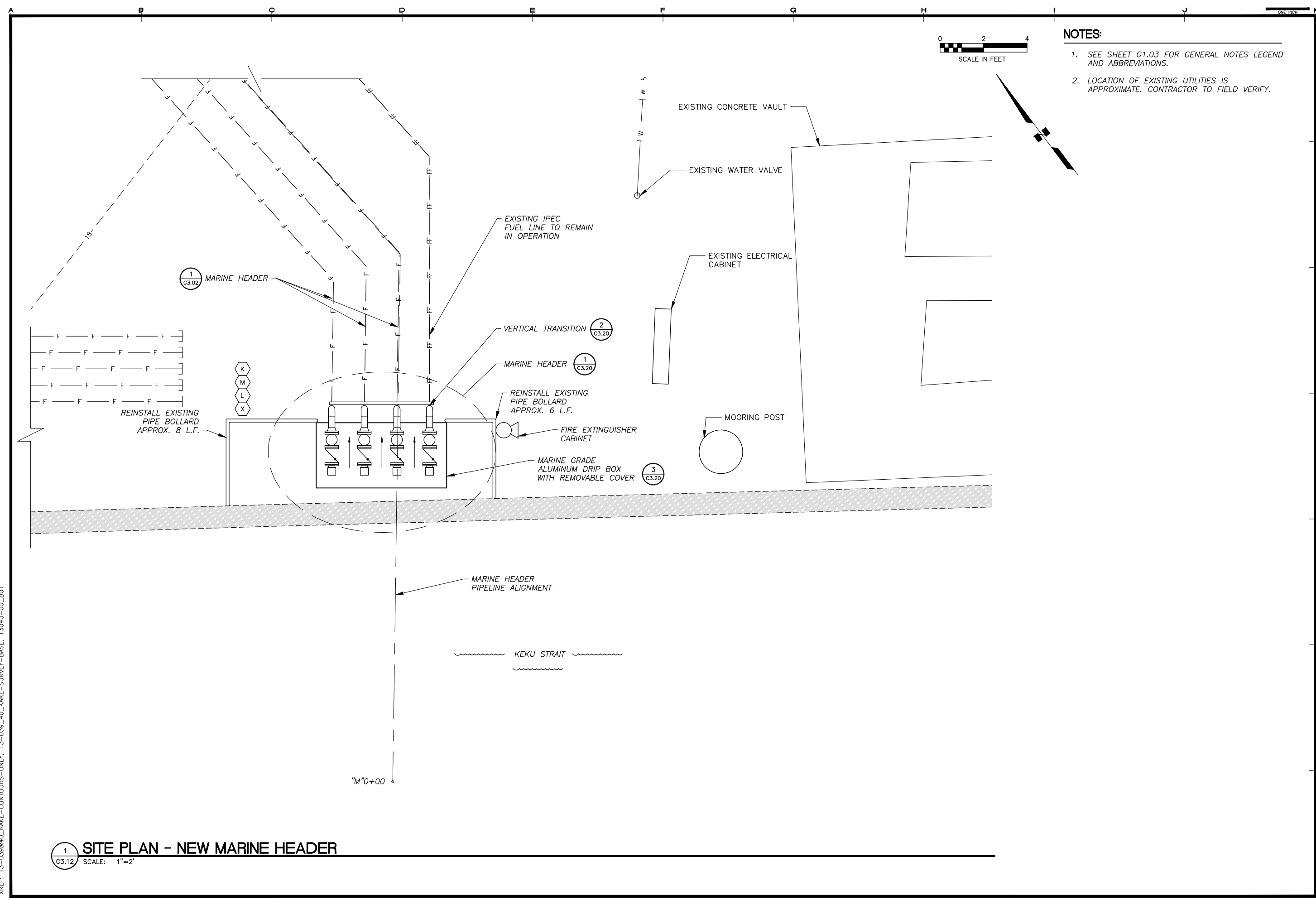
ALASKA ENERGY AUTHORITY
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1 DEMOLITION PLAN - MARINE HEADER

C3.11 SCALE: 1"=2'

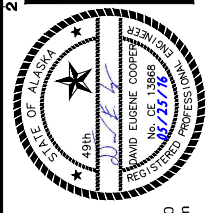
SHEET TITLE MARINE HEADER DEMOLITION PLAN	
SHEET C3.11	
DRAWN BY WJB	CHECKED BY MRS
DATE 05/25/16	SCALE AS SHOWN
JOB NUMBER: 13-040	

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 LAYOUT: C3.12 - MARINE HEADER LAYOUT
 XREF: 13-039&40_KAKE-CONTOURS-ONLY, 13-039_40_KAKE-SURVEY-BASE, 13040-00_B01



- NOTES:**
1. SEE SHEET G1.03 FOR GENERAL NOTES LEGEND AND ABBREVIATIONS.
 2. LOCATION OF EXISTING UTILITIES IS APPROXIMATE. CONTRACTOR TO FIELD VERIFY.

REVISIONS	MARK	DATE	DESCRIPTION



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KAKE BULK FUEL UPGRADES

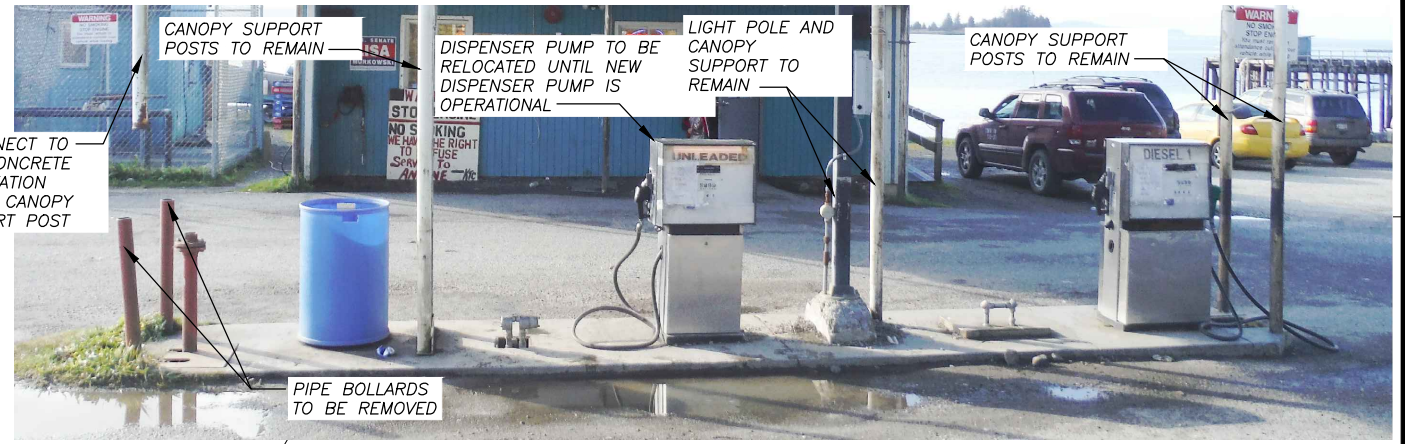
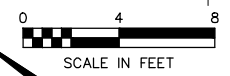
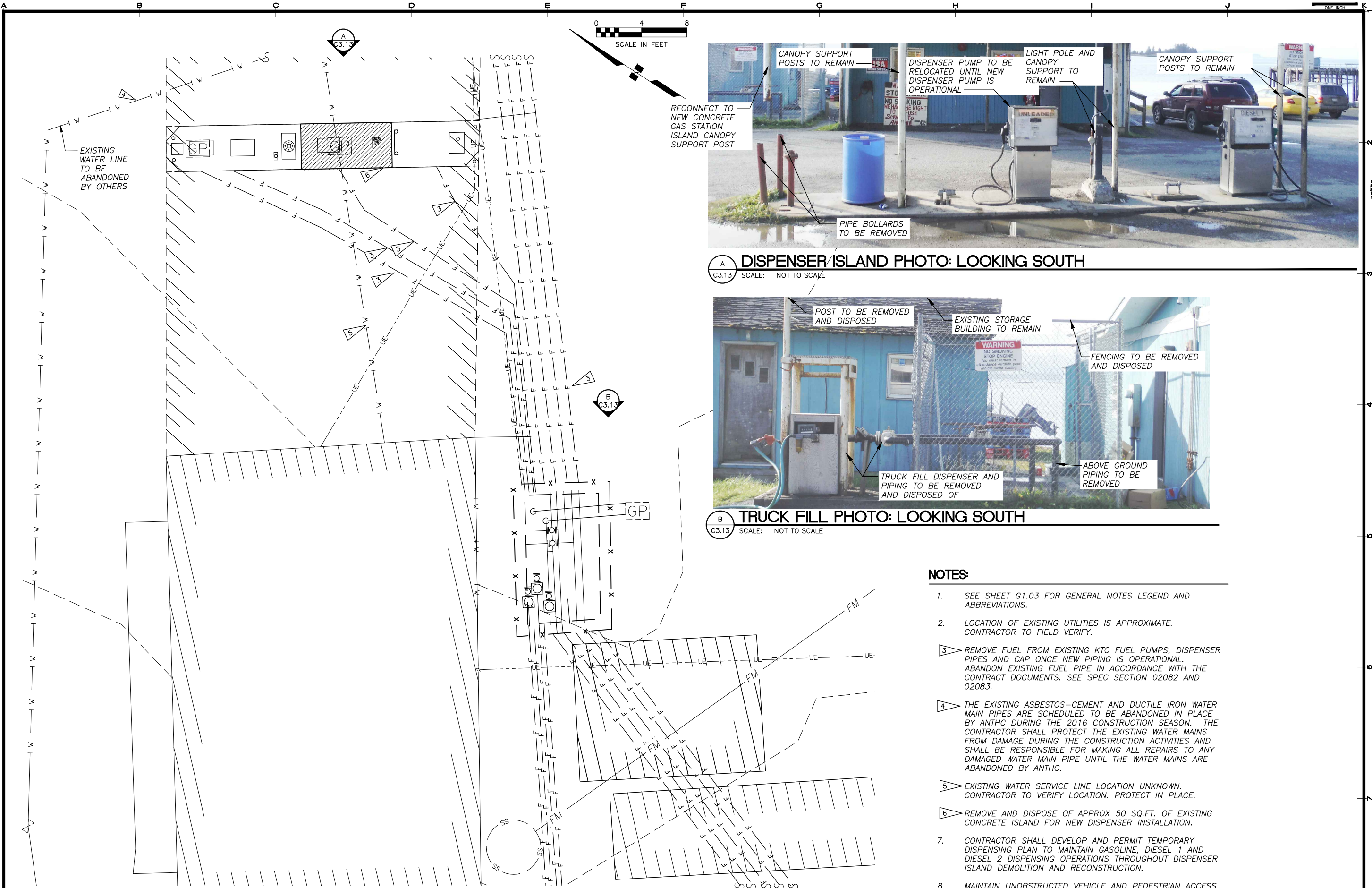
SHEET TITLE: MARINE HEADER SITE PLAN

SHEET: C3.12

DRAWN BY: WJB CHECKED BY: MRS
 DATE: 05/25/16 SCALE: AS SHOWN
 JOB NUMBER: 13-040

1 SITE PLAN - NEW MARINE HEADER
 SCALE: 1"=2'

H:\jobs\13-040 Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_C3.13_C3.14-C3.17-FUEL-ISLAND, 1=1, 05-26-16 at 16:30 by jkk
 LAYOUT: C3.13-FUEL ISLAND DEMO
 XREF: 13-039&40_KAKE-CONTOURS-ONLY, 13-039_40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-PIPELINE, 13040-00_B01



A DISPENSER ISLAND PHOTO: LOOKING SOUTH
 C3.13 SCALE: NOT TO SCALE



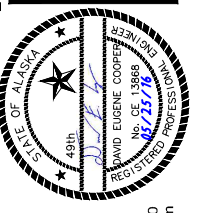
B TRUCK FILL PHOTO: LOOKING SOUTH
 C3.13 SCALE: NOT TO SCALE

NOTES:

1. SEE SHEET G1.03 FOR GENERAL NOTES LEGEND AND ABBREVIATIONS.
2. LOCATION OF EXISTING UTILITIES IS APPROXIMATE. CONTRACTOR TO FIELD VERIFY.
3. REMOVE FUEL FROM EXISTING KTC FUEL PUMPS, DISPENSER PIPES AND CAP ONCE NEW PIPING IS OPERATIONAL. ABANDON EXISTING FUEL PIPE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. SEE SPEC SECTION 02082 AND 02083.
4. THE EXISTING ASBESTOS-CEMENT AND DUCTILE IRON WATER MAIN PIPES ARE SCHEDULED TO BE ABANDONED IN PLACE BY ANTHC DURING THE 2016 CONSTRUCTION SEASON. THE CONTRACTOR SHALL PROTECT THE EXISTING WATER MAINS FROM DAMAGE DURING THE CONSTRUCTION ACTIVITIES AND SHALL BE RESPONSIBLE FOR MAKING ALL REPAIRS TO ANY DAMAGED WATER MAIN PIPE UNTIL THE WATER MAINS ARE ABANDONED BY ANTHC.
5. EXISTING WATER SERVICE LINE LOCATION UNKNOWN. CONTRACTOR TO VERIFY LOCATION. PROTECT IN PLACE.
6. REMOVE AND DISPOSE OF APPROX 50 SQ.FT. OF EXISTING CONCRETE ISLAND FOR NEW DISPENSER INSTALLATION.
7. CONTRACTOR SHALL DEVELOP AND PERMIT TEMPORARY DISPENSING PLAN TO MAINTAIN GASOLINE, DIESEL 1 AND DIESEL 2 DISPENSING OPERATIONS THROUGHOUT DISPENSER ISLAND DEMOLITION AND RECONSTRUCTION.
8. MAINTAIN UNOBSTRUCTED VEHICLE AND PEDESTRIAN ACCESS TO KAKE TRIBAL CORPORATION RETAILS SALES BUILDING THROUGHOUT CONSTRUCTION.

1 DEMOLITION PLAN - DISPENSER ISLAND
 C3.13 SCALE: 1"=4'

REVISIONS	MARK	DATE	DESCRIPTION



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KAKE BULK FUEL UPGRADES

ALASKA ENERGY AUTHORITY
 KAKE, ALASKA

SHEET TITLE: **DISPENSER ISLAND DEMOLITION PLAN**

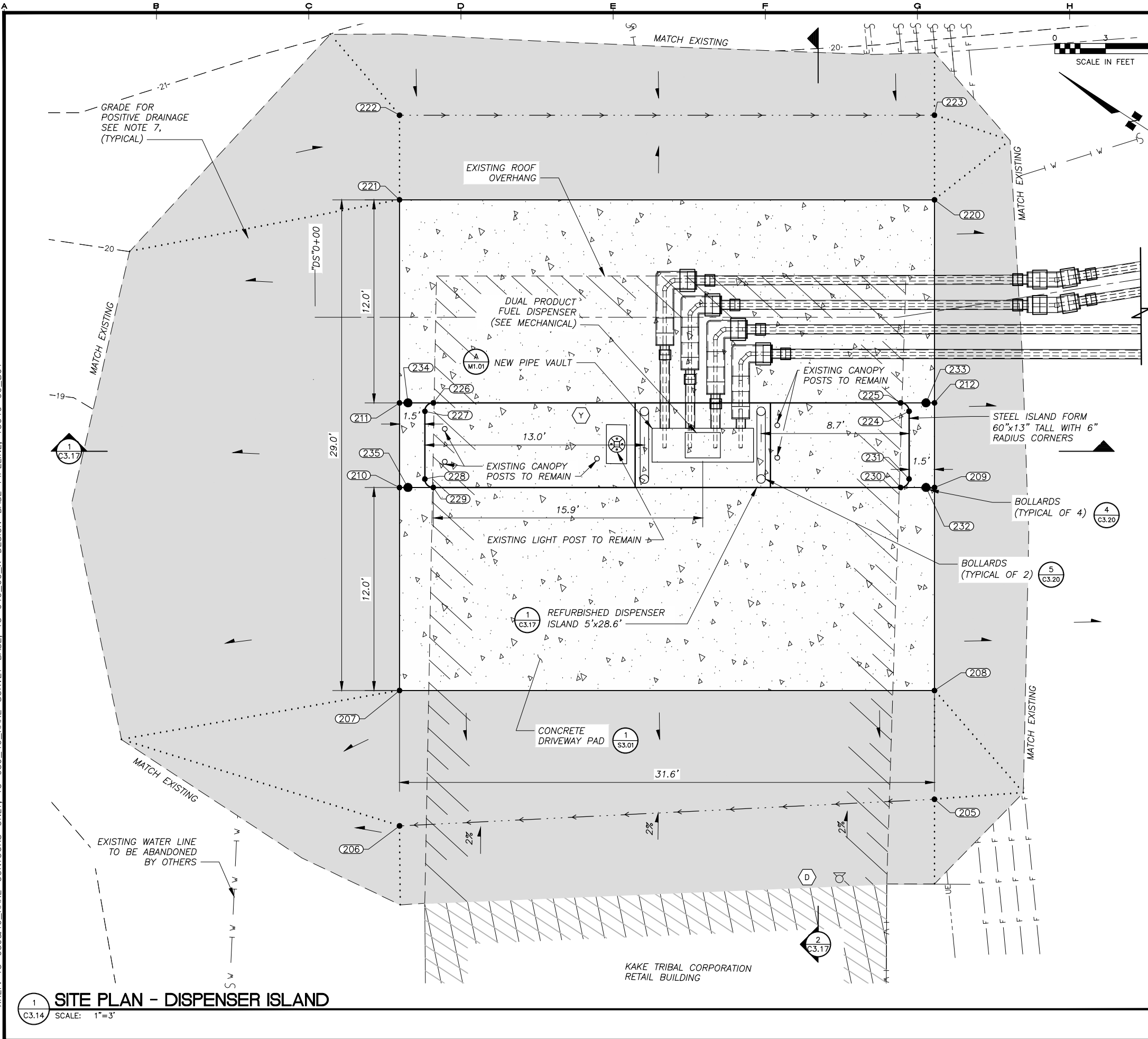
SHEET: **C3.13**

DRAWN BY: **WJB** CHECKED BY: **MRS**

DATE: **05/25/16** SCALE: **AS SHOWN**

JOB NUMBER: **13-040**

H:\jobs\13-040 Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_C3.13-C3.14-FUEL-ISLAND, 1=1, 05-26-16 at 16:30 by jkk
 LAYOUT: C3.14 - FUEL ISLAND LAYOUT
 XREF: 13-039&40_KAKE-CONTOURS-ONLY, 13-039_40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-PIPELINE, 13040-00_B01



NOTES:

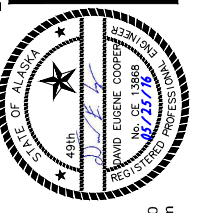
- SEE SHEET G1.03 FOR GENERAL NOTES LEGEND AND ABBREVIATIONS.
- LOCATION OF EXISTING UTILITIES IS APPROXIMATE. CONTRACTOR TO FIELD VERIFY.
- CONTRACTOR SHALL MAINTAIN CODE COMPLIANT TEMPORARY GASOLINE, AND DIESEL 2 DISPENSING OPERATIONS DURING DECOMMISSION OF EXISTING DISPENSER AND REFURBISHMENT OF DISPENSER ISLAND UNTIL NEW DISPENSER IS OPERATIONAL.
- MAINTAIN UNOBSTRUCTED PEDESTRIAN AND VEHICLE ACCESS TO KAKE TRIBAL COOPERATION RETAIL SALES BUILDING THROUGHOUT CONSTRUCTION.
- EDGES OF NEW CONCRETE PAD SHALL BE 1" HIGHER THAN SURROUNDING DRIVEWAY SURFACE.
- TAPER PERIMETER OF CONCRETE PAD WITH CRUSHED AGGREGATE SURFACE COURSE TO MATCH EXISTING.
- ALL SLOPES VARIES ON THIS SHEET, EXCEPT WHERE NOTED..

DISPENSER ISLAND GRADING

Point #	Northing	Easting	Elevation	Description
205	1873365.53	2634648.38	19.35	TOP OF GROUND
206	1873391.11	2634629.71	18.53	TOP OF GROUND
207	1873395.50	2634636.39	18.77	CORNER OF CONCRETE DRIVE
208	1873369.06	2634653.75	19.42	CORNER OF CONCRETE DRIVE
209	1873375.65	2634663.78	19.42	CORNER OF CONCRETE DRIVE
210	1873402.08	2634646.42	19.28	CORNER OF CONCRETE DRIVE
211	1873404.83	2634650.60	19.58	CORNER OF CONCRETE DRIVE
212	1873378.39	2634667.96	19.58	CORNER OF CONCRETE DRIVE
220	1873384.98	2634677.99	19.58	CORNER OF CONCRETE DRIVE
221	1873411.41	2634660.64	19.58	CORNER OF CONCRETE DRIVE
222	1873414.16	2634664.82	19.28	TOP OF GROUND
223	1873387.72	2634682.17	19.33	TOP OF GROUND
224	1873379.37	2634666.72	20.25	TOP OF DISPENSER ISLAND
225	1873380.06	2634666.86	20.25	TOP OF DISPENSER ISLAND
226	1873403.16	2634651.70	20.25	TOP OF DISPENSER ISLAND
227	1873403.30	2634651.01	20.25	TOP OF DISPENSER ISLAND
228	1873401.10	2634647.67	20.25	TOP OF DISPENSER ISLAND
229	1873400.41	2634647.52	20.25	TOP OF DISPENSER ISLAND
230	1873377.32	2634662.68	20.25	TOP OF DISPENSER ISLAND
231	1873377.17	2634663.38	20.25	TOP OF DISPENSER ISLAND
232	1873376.06	2634663.51		BOLLARD
233	1873378.81	2634667.69		BOLLARD
234	1873404.41	2634650.88		BOLLARD
235	1873401.67	2634646.70		BOLLARD

1 SITE PLAN - DISPENSER ISLAND
 SCALE: 1"=3'

REVISIONS	MARK	DATE	DESCRIPTION



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SHEET TITLE: **DISPENSER ISLAND SITE PLAN**

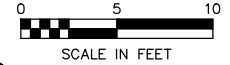
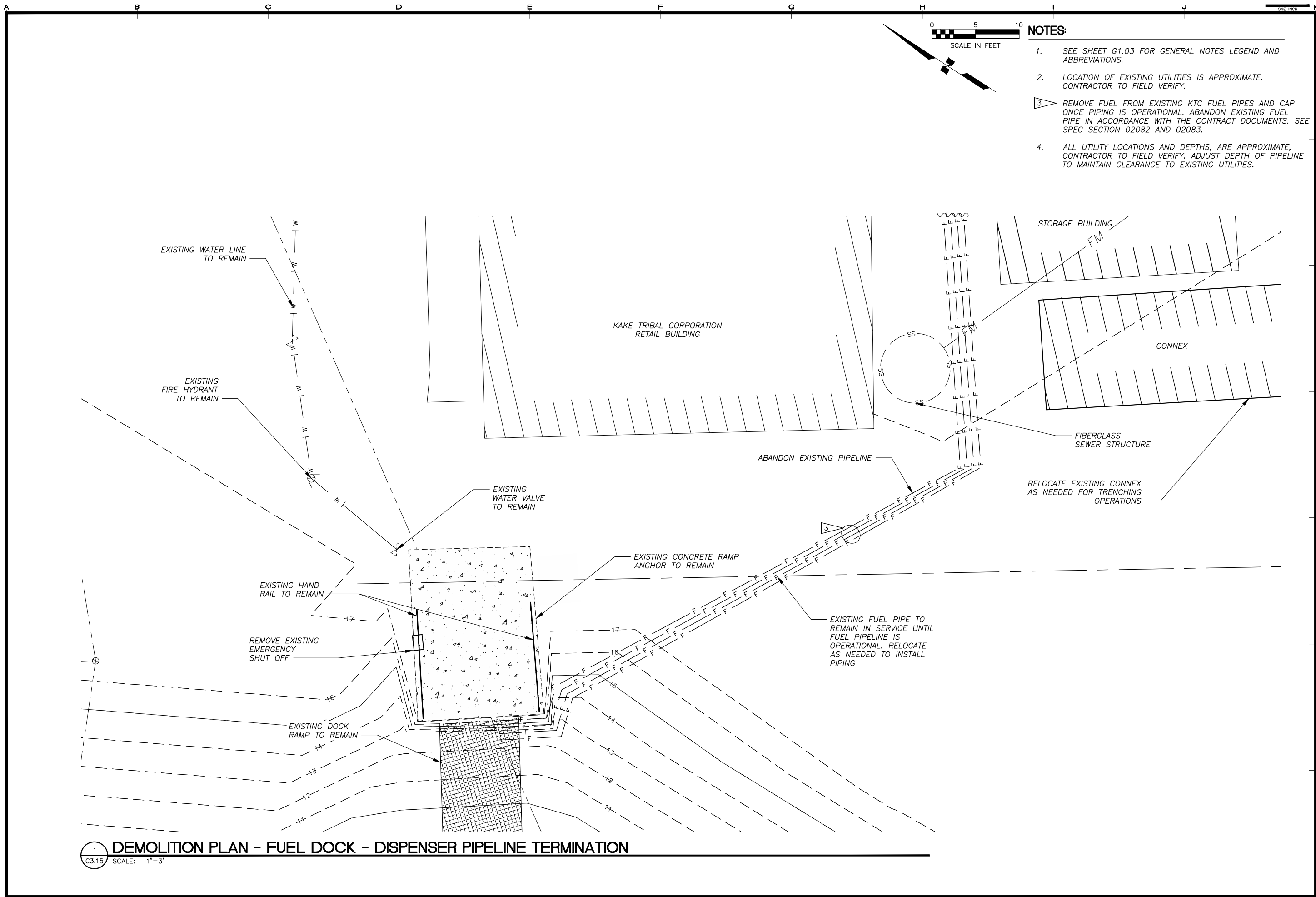
SHEET: **C3.14**

DRAWN BY: **WJB** CHECKED BY: **MRS**

DATE: **05/25/16** SCALE: **AS SHOWN**

JOB NUMBER: **13-040**

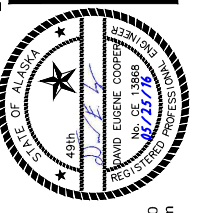
H:\Jobs\13-040 Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_C3.12_C3.16-FUEL-DOCK, 1=1, 04-26-16 at 14:30 by WJB
 LAYOUT: C3.15--FUEL DOCK DEMO
 XREF: 13-039&40_KAKE-CONTOURS-ONLY, 13-039_40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-PIPELINE, 13040-00_B01



NOTES:

1. SEE SHEET G1.03 FOR GENERAL NOTES LEGEND AND ABBREVIATIONS.
2. LOCATION OF EXISTING UTILITIES IS APPROXIMATE. CONTRACTOR TO FIELD VERIFY.
3. REMOVE FUEL FROM EXISTING KTC FUEL PIPES AND CAP ONCE PIPING IS OPERATIONAL. ABANDON EXISTING FUEL PIPE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. SEE SPEC SECTION 02082 AND 02083.
4. ALL UTILITY LOCATIONS AND DEPTHS, ARE APPROXIMATE, CONTRACTOR TO FIELD VERIFY. ADJUST DEPTH OF PIPELINE TO MAINTAIN CLEARANCE TO EXISTING UTILITIES.

REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW



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SHEET TITLE
FUEL DOCK DISPENSER PIPELINE TERMINATION DEMOLITION PLAN

SHEET
C3.15

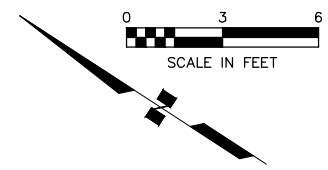
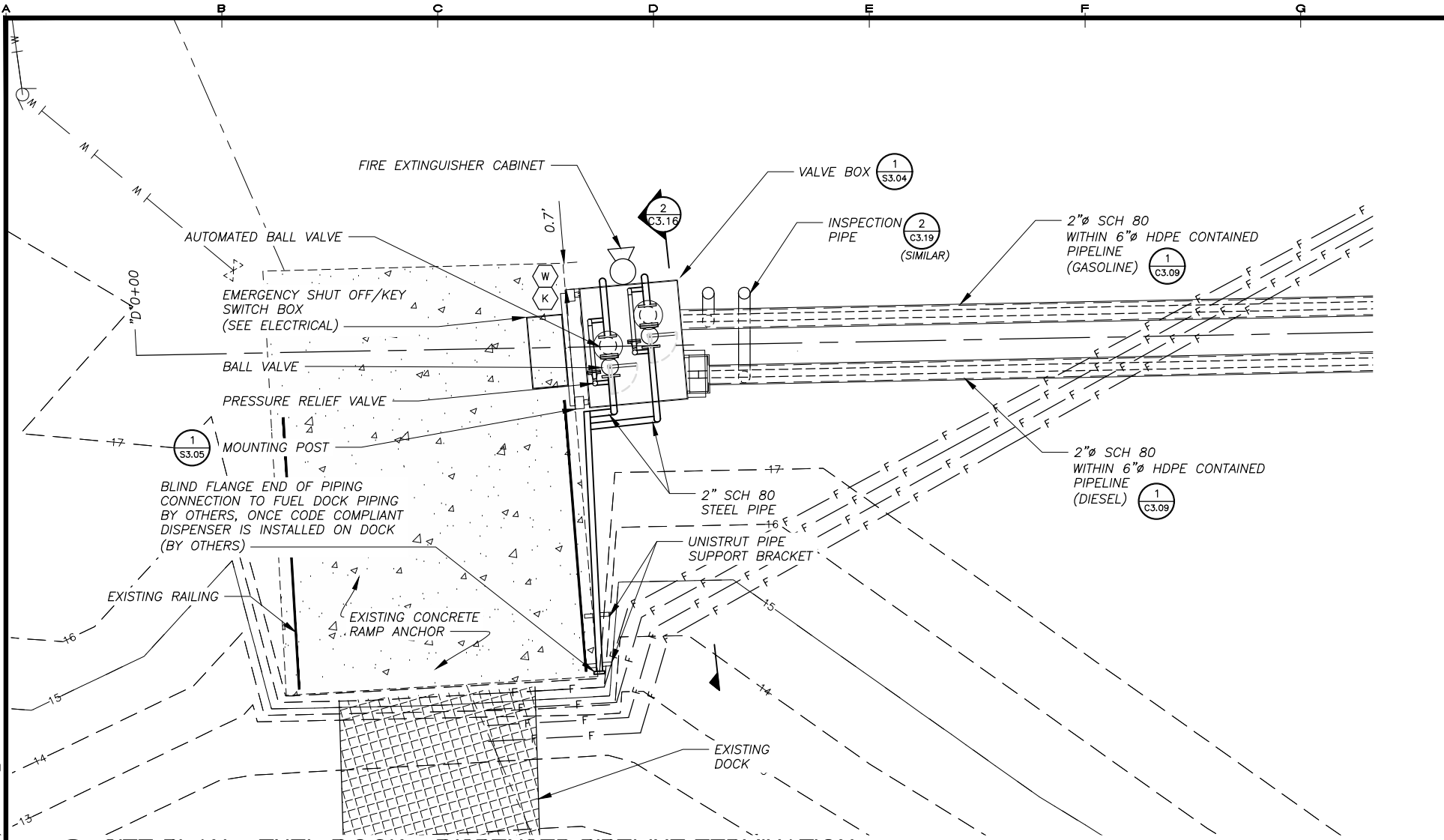
DRAWN BY: WJB
 CHECKED BY: MRS

DATE: 05/25/16
 SCALE: AS SHOWN

JOB NUMBER:
 13-040

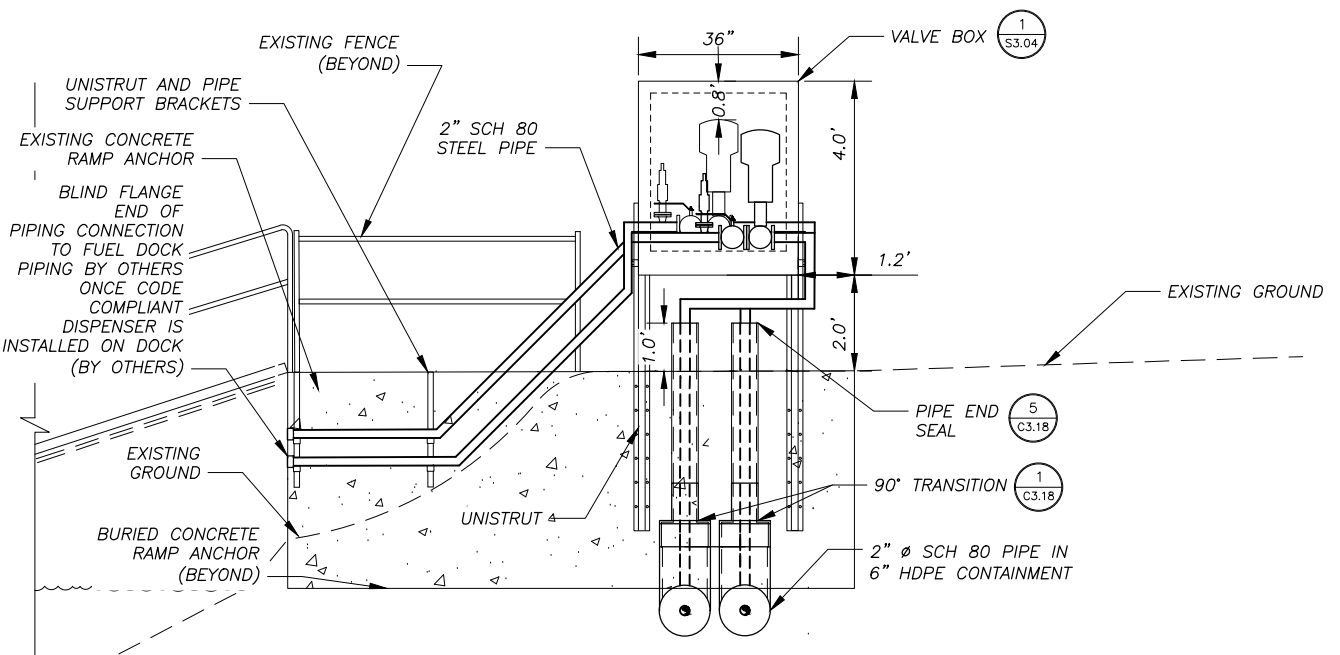
1 DEMOLITION PLAN - FUEL DOCK - DISPENSER PIPELINE TERMINATION
 C3.15 SCALE: 1"=3'

H:\jobs\13-040_Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_C3.12_C3.16-FUEL-DOCK, 1=1, 04-26-16 at 14:30 by WJB
 LAYOUT: C3.16-FUEL DOCK LAYOUT
 XREF: 13-039&40_KAKE-CONTOURS-ONLY, 13-039_40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-PIPELINE, 13040-00_B01



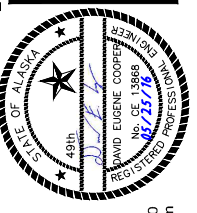
- NOTES:**
- SEE SHEET G1.03 FOR GENERAL NOTES LEGEND AND ABBREVIATIONS.
 - LOCATION OF EXISTING UTILITIES IS APPROXIMATE. CONTRACTOR TO FIELD VERIFY.
 - DO NOT CONNECT NEW PIPING TO EXISTING OR NEW DISPENSING PIPING ON DOCK UNTIL NEW CODE COMPLIANT DISPENSER, PIPING, AND CONTROL HAVE BEEN INSTALLED BY OTHERS ON DOCK FOR CODE COMPLIANT MARINE DISPENSING OPERATIONS.

1 SITE PLAN - FUEL DOCK - DISPENSER PIPELINE TERMINATION
 SCALE: 1"=3'



2 PIPE VALVE BOX - PROFILE
 SCALE: 1"=2'

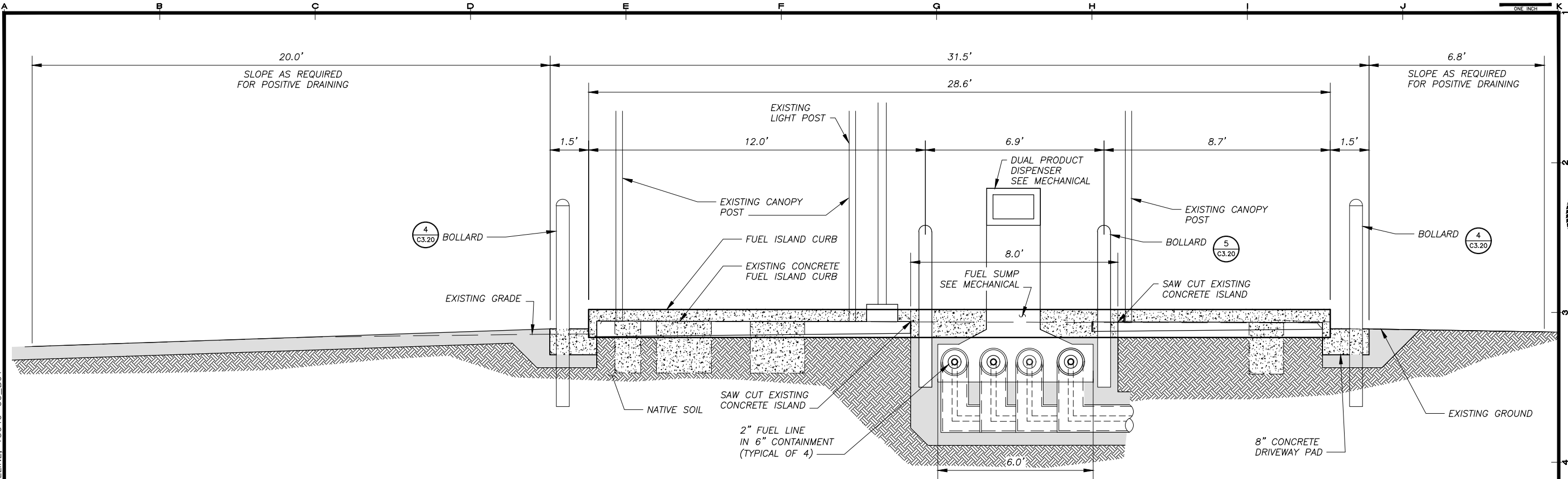
REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW



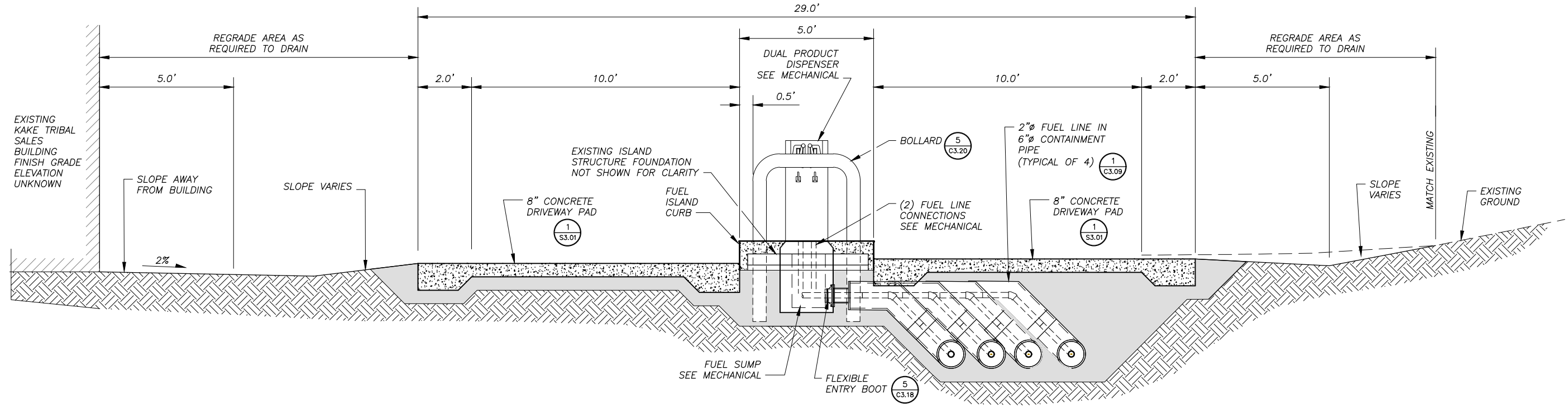
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 KAKE BULK FUEL UPGRADES
 FUEL DOCK DISPENSER PIPELINE TERMINATION SITE PLAN
 SHEET C3.16
 DRAWN BY: WJB CHECKED BY: MRS
 DATE: 05/25/16 SCALE: AS SHOWN
 JOB NUMBER: 13-040

H:\jobs\13-040 Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_C3.13-C3.14-C3.17-FUEL-ISLAND, 1=1, 05-26-16 at 16:30 by jkk
 LAYOUT: C3.17 - FUEL ISLAND DETAILS
 XREF: 13-039&40_KAKE-CONTOURS-ONLY, 13-039_40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-PIPELINE, 13040-00_B01

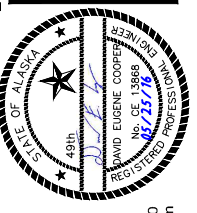


1 FUEL ISLAND DETAIL
 C3.17 SCALE: 1" = 2.0'



2 FUEL ISLAND DETAIL
 C3.17 SCALE: 1" = 2'

REVISIONS	MARK	DATE	DESCRIPTION



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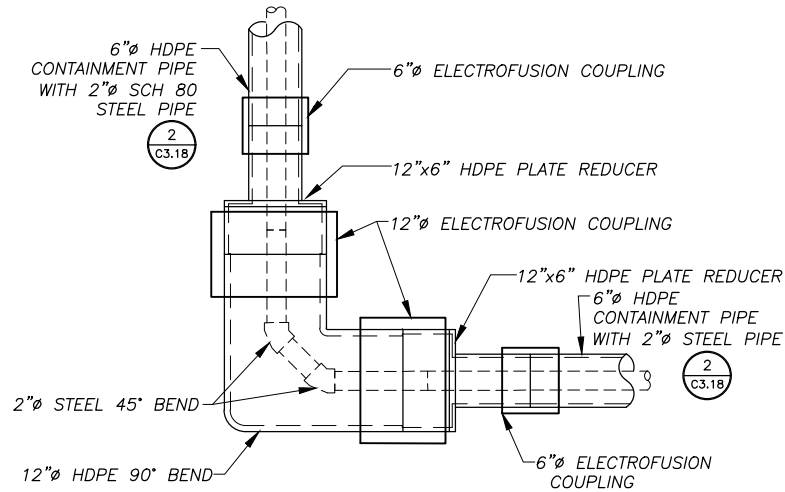
KAKE BULK FUEL UPGRADES

SHEET TITLE: **DISPENSER ISLAND DETAILS**

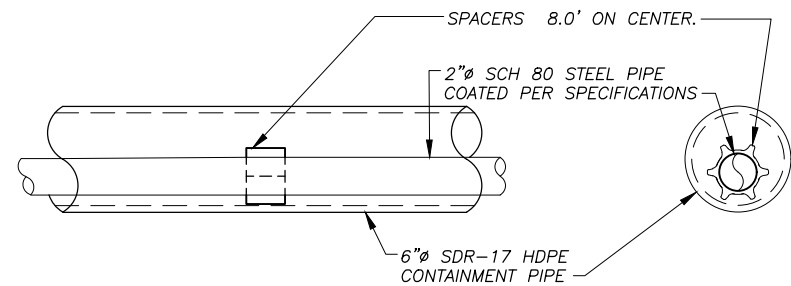
SHEET: **C3.17**

DRAWN BY: BM CHECKED BY: MRS
 DATE: 05/25/16 SCALE: AS SHOWN
 JOB NUMBER: 13-040

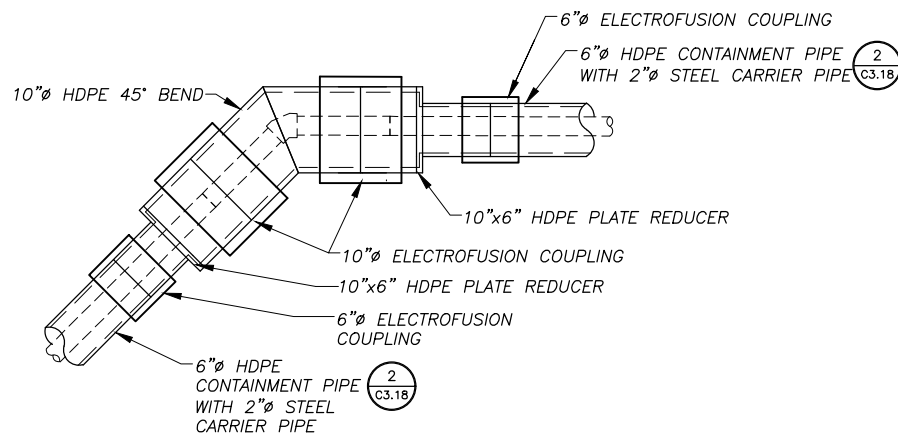
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 LAYOUT: C3.18 - CONTAINMENT PIPING
 VIEW: C405_H.PDF
 XREF: 13040-00_B01



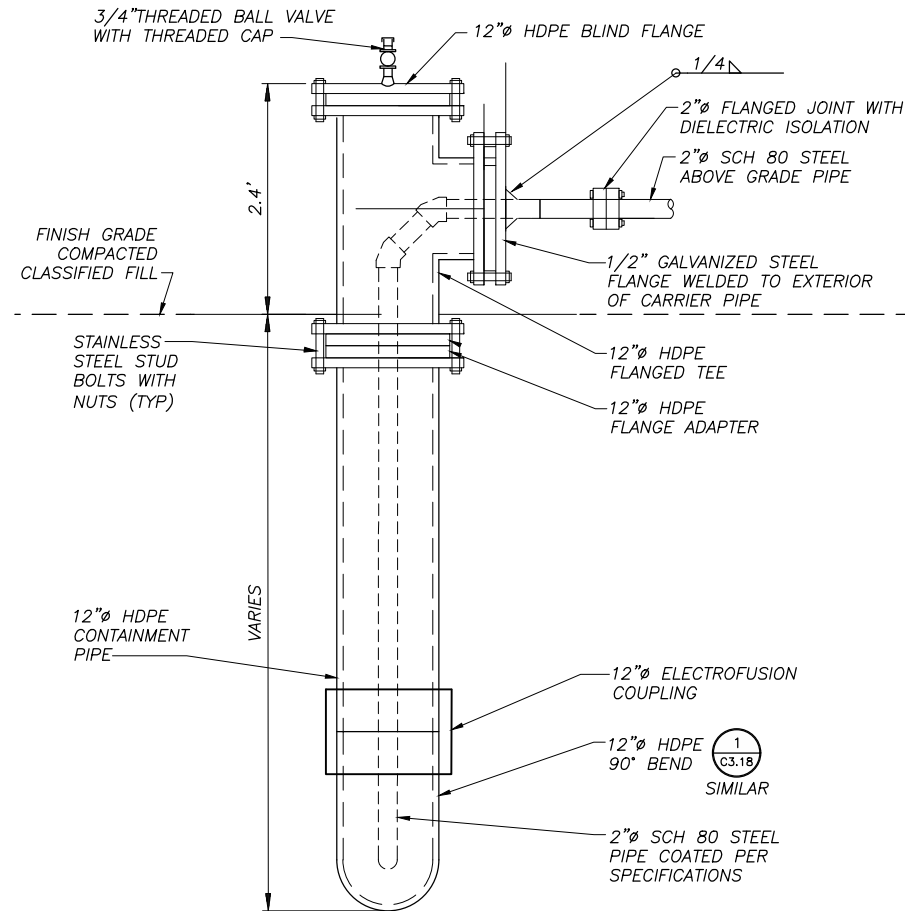
1 CONTAINMENT PIPE 90 DEGREE ANGLE DETAIL
 SCALE: NONE



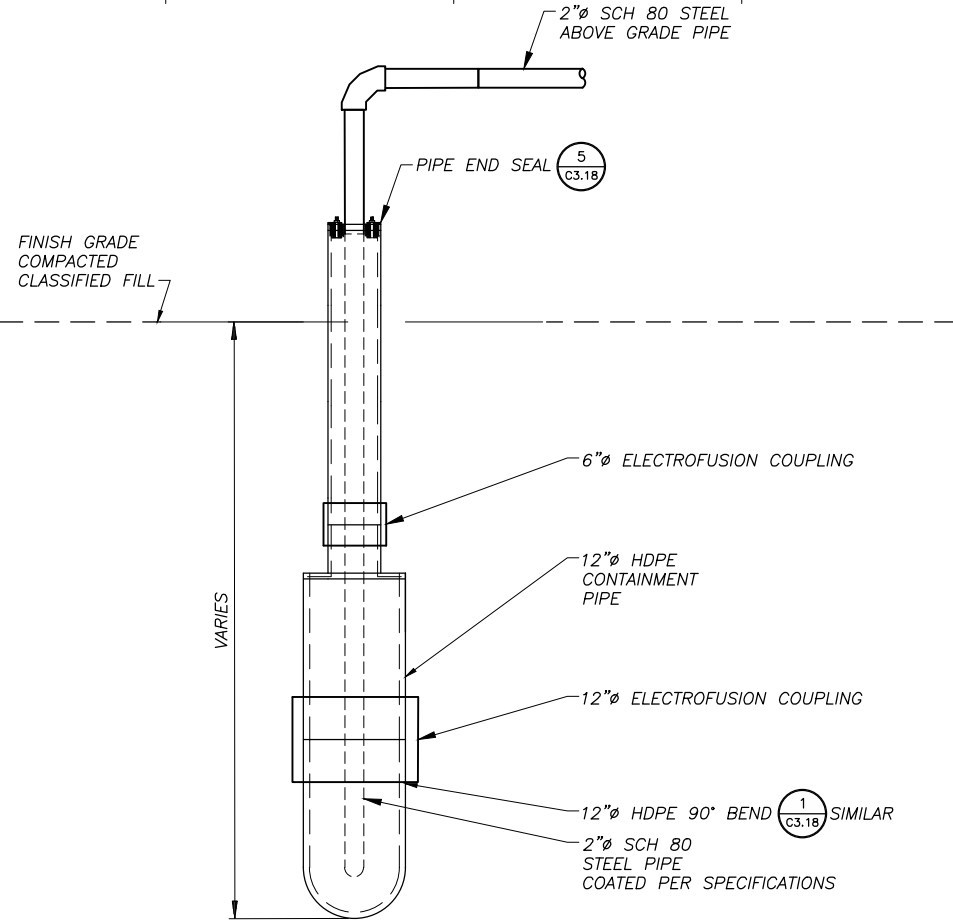
2 CONTAINMENT PIPE DETAIL
 SCALE: NONE



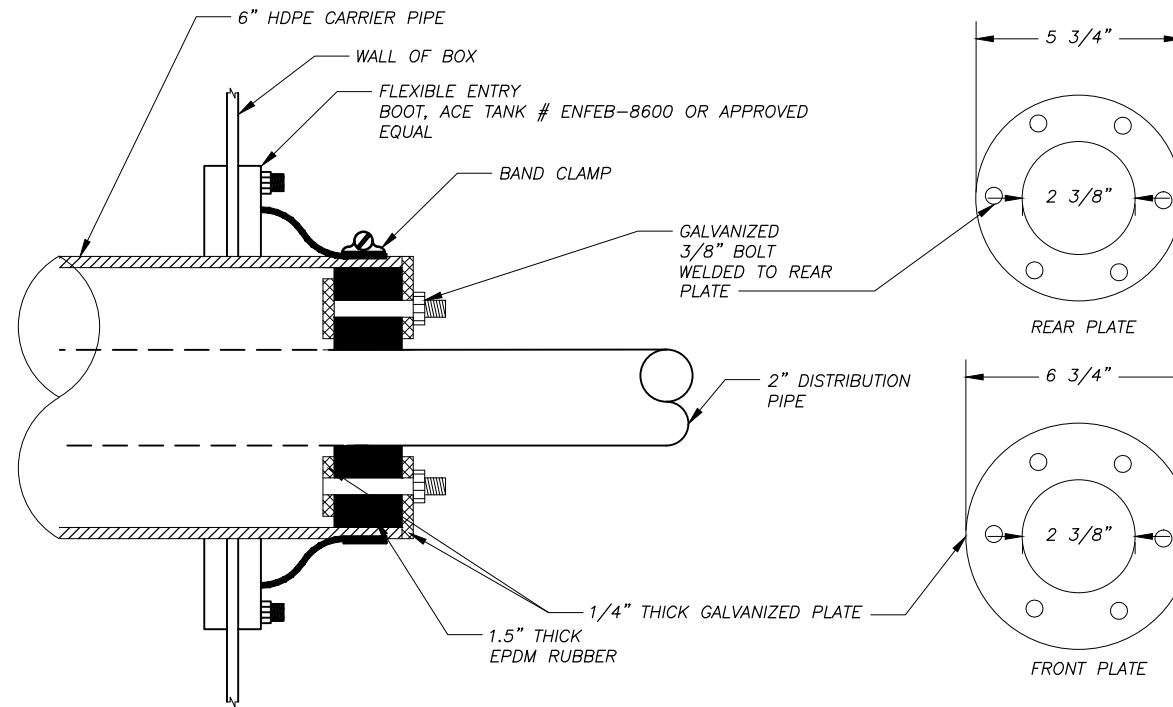
3 TYPICAL CONTAINMENT PIPE 45, 22 1/2, OR 11 DEGREE ANGLE DETAIL
 SCALE: NONE



4 CONTAINMENT PIPE VERTICAL TRANSITION DETAIL AT STATION 'M' 6+32.32
 SCALE: NONE



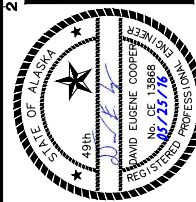
6 CONTAINMENT PIPE VERTICAL TRANSITION DETAIL AT STATION 'D' 0+12.89
 SCALE: NONE



5 CONTAINMENT PIPE DETAIL
 SCALE: NONE

- NOTES:**
- SEE SHEET G1.03 FOR GENERAL NOTES, LEGEND, ABBREVIATIONS, AND SPECIFICATIONS.
 - CARRIER PIPE SHALL BE 2-INCH SCHEDULE 80 BURIED STEEL PIPE SEE SHEET G1.05.
 - CONTAINMENT PIPE SHALL BE 6-INCH SDR-17 HDPE PIPE SEE SHEET G1.05.
 - RADIUS INSIDE EDGE OF CONTAINMENT PIPE END PRIOR TO INSERTING PIPE. USE CARE WHEN INSERTING PIPE INTO CONTAINMENT PIPE TO AVOID DAMAGING COATINGS.
 - ELECTROFUSION COUPLINGS SHALL BE CENTRAL PLASTICS, OR APPROVED EQUAL.
 - BURIED CONTAINMENT PIPE SHALL HAVE A MINIMUM GRADE OF -0.5% TO VERTICAL TRANSITION AT TRUCK FILL BUILDING, DEPTH OF PIPE VARIES.

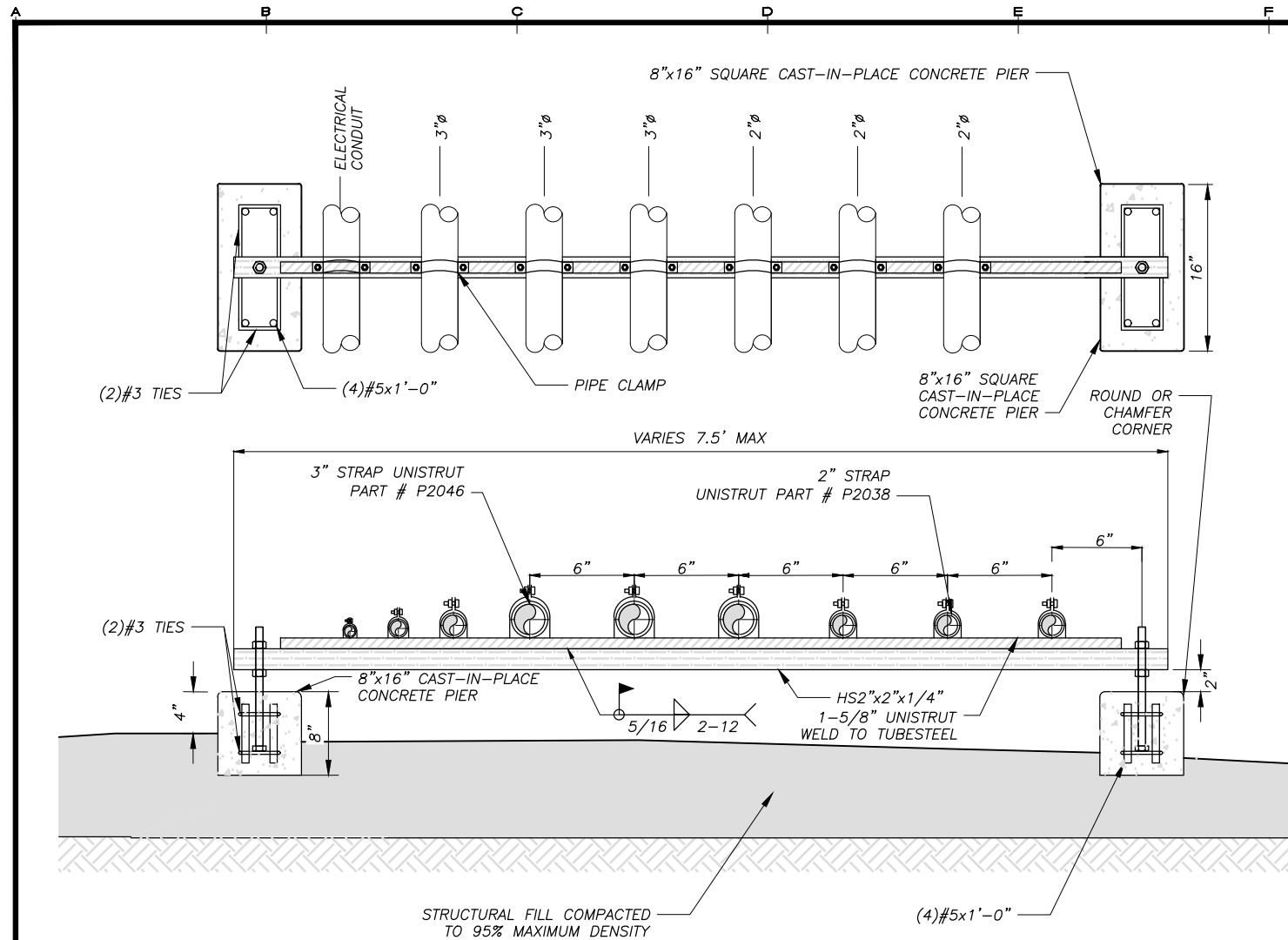
REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW



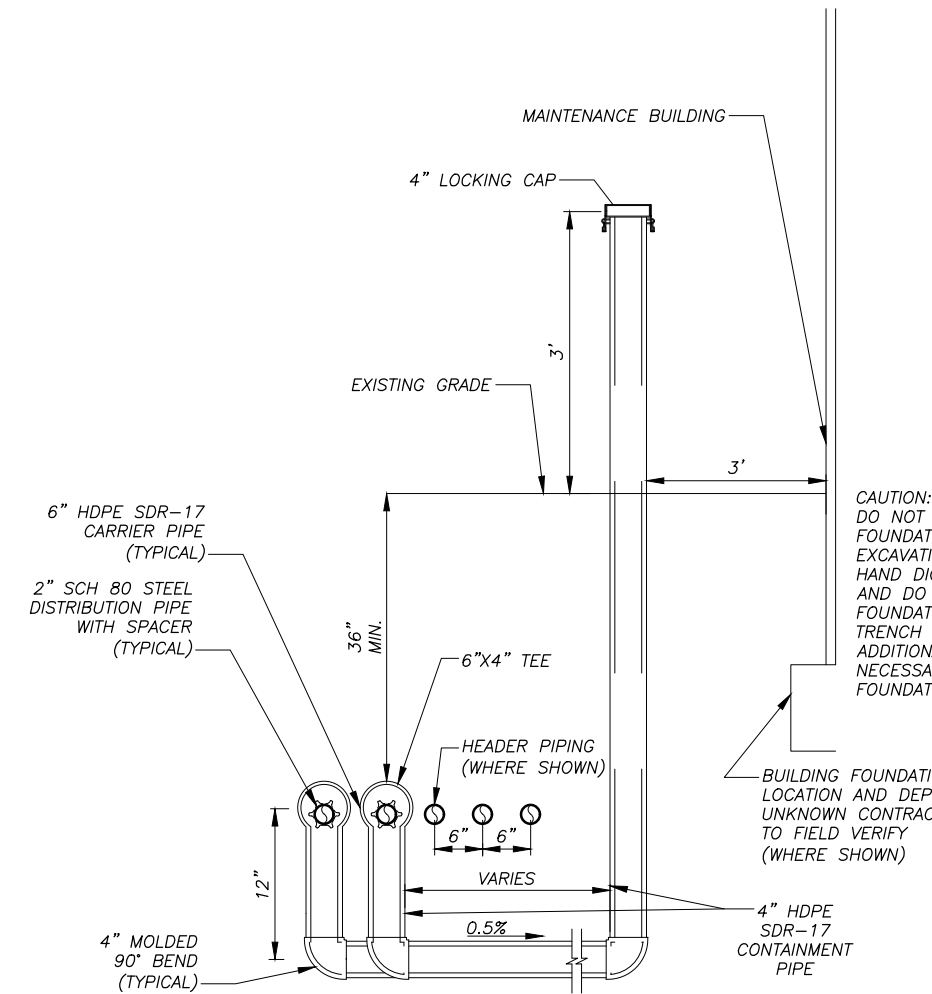
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 SHEET TITLE: CONTAINMENT PIPING DETAILS
 SHEET: C3.18
 DRAWN BY: WJB CHECKED BY: MRS
 DATE: 05/25/16 SCALE: AS SHOWN
 JOB NUMBER: 13-040

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 LAYOUT: C3.19 - PIPE SUPPORT
 XREF: 13040-00_B01

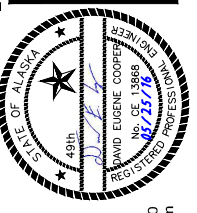


1 PIPE SUPPORT
 C3.19 SCALE: 1 1/2" = 1'-0"



2 INSPECTION PIPE
 C3.19 SCALE: NONE

REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW



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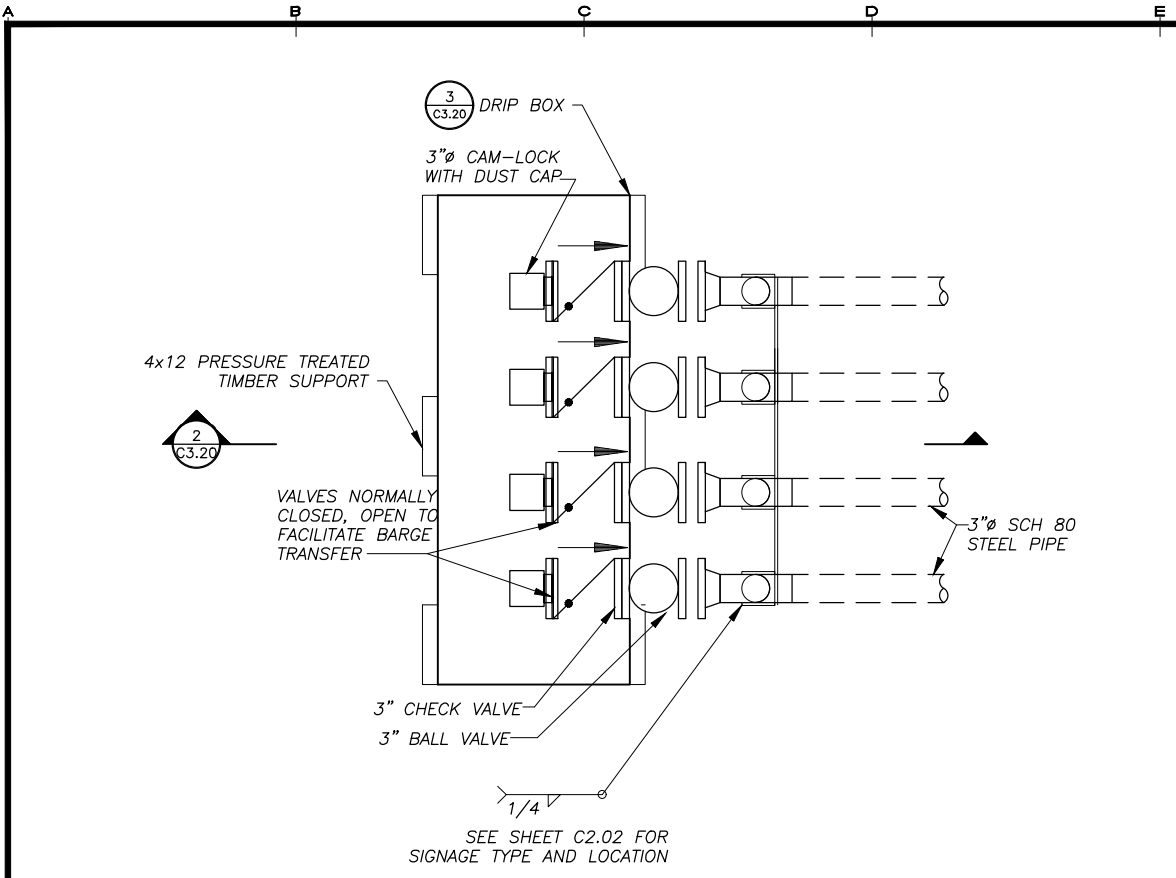
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ALASKA ENERGY AUTHORITY
 KAKE, ALASKA

SHEET TITLE
PIPE SUPPORT & INSPECTION PIPE DETAILS

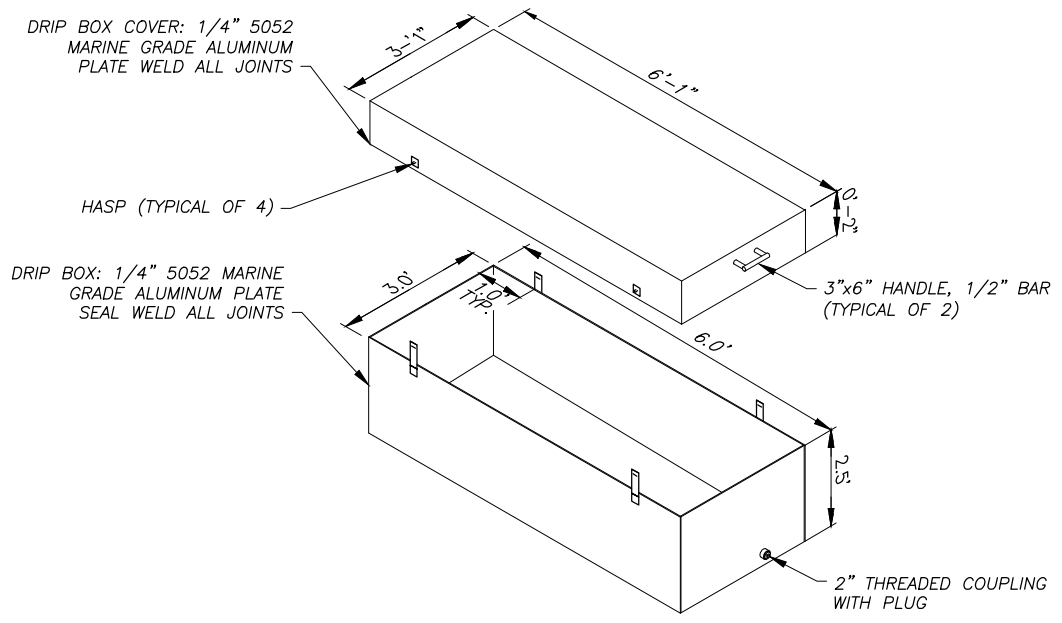
SHEET
C3.19

DRAWN BY: **KK** CHECKED BY: **DGT**
 DATE: **05/25/16** SCALE: **AS SHOWN**
 JOB NUMBER: **13-040**

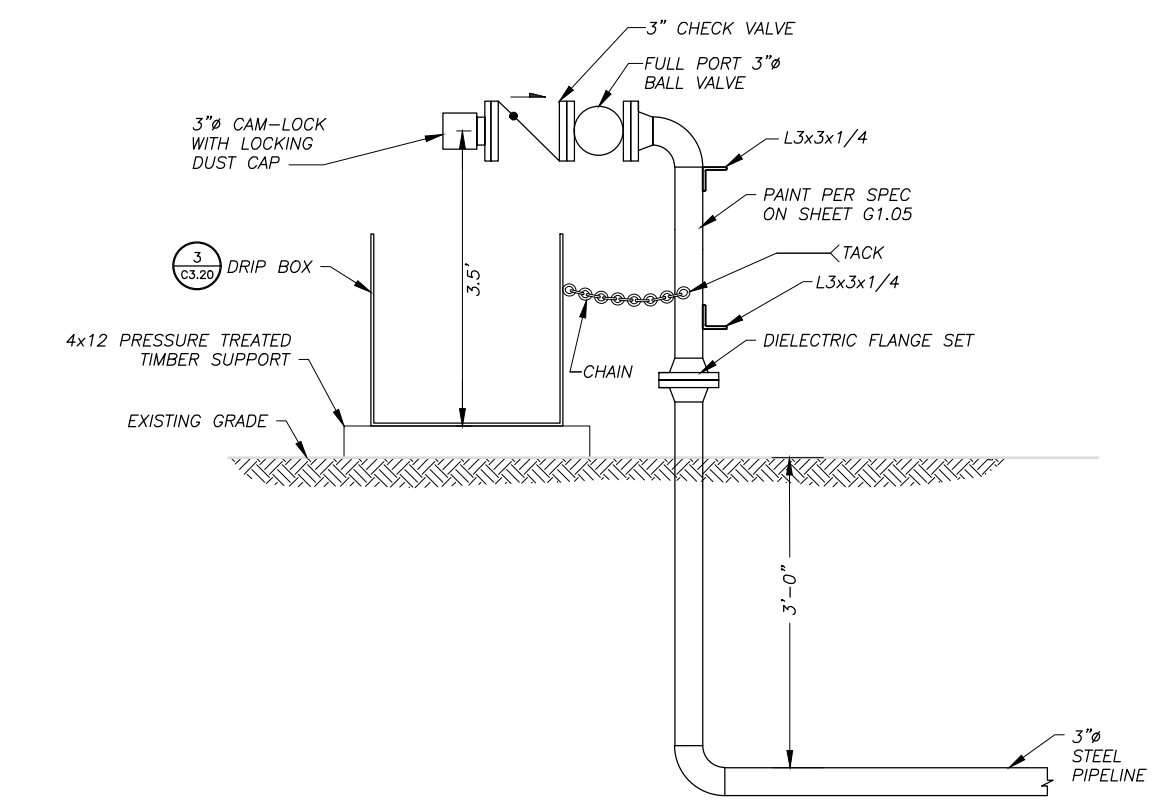
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 LAYOUT: C3.20 - MARINE HEADER DETAILS
 XREF: 15-028_00_B01



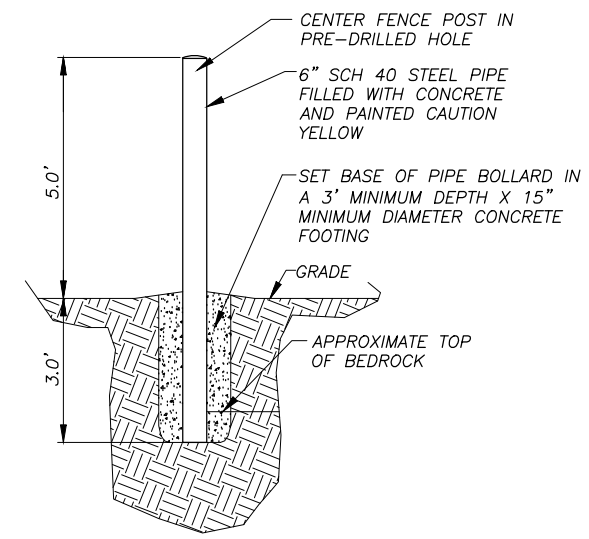
3 DRIP BOX
 SCALE: N.T.S.



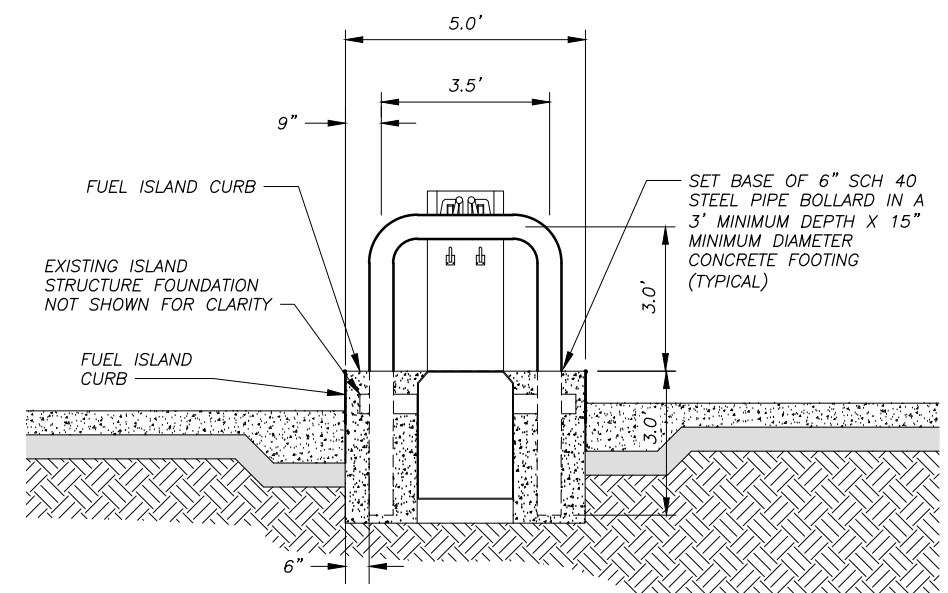
1 MARINE HEADER-PLAN
 SCALE: N.T.S.



2 MARINE HEADER AND VERTICAL TRANSITION-SECTION
 SCALE: N.T.S.

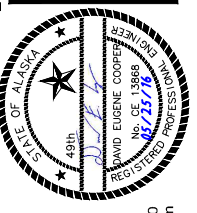


4 BOLLARD INSTALLATION
 SCALE: N.T.S.



5 FUEL ISLAND BOLLARD INSTALLATION
 SCALE: N.T.S.

REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW

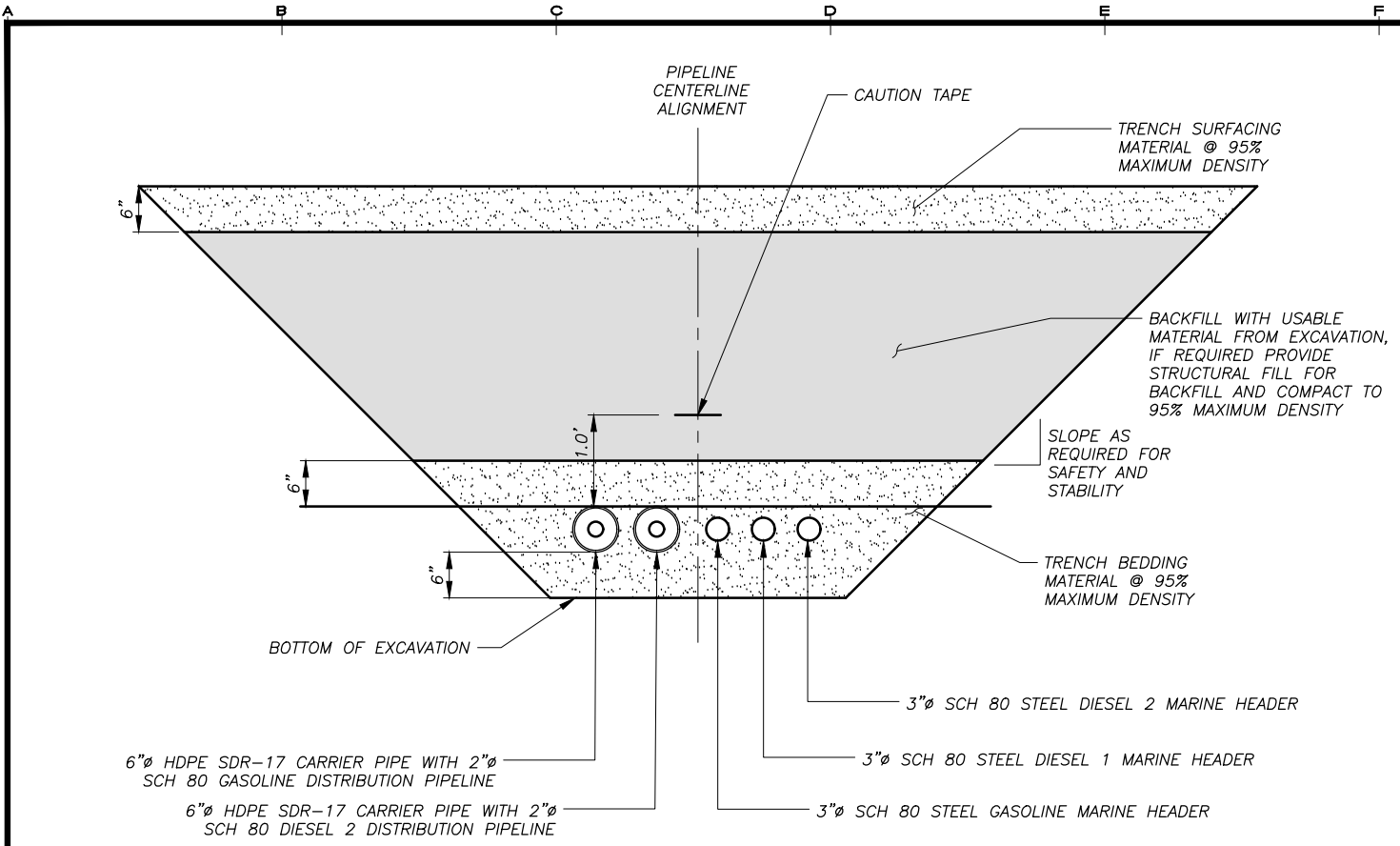


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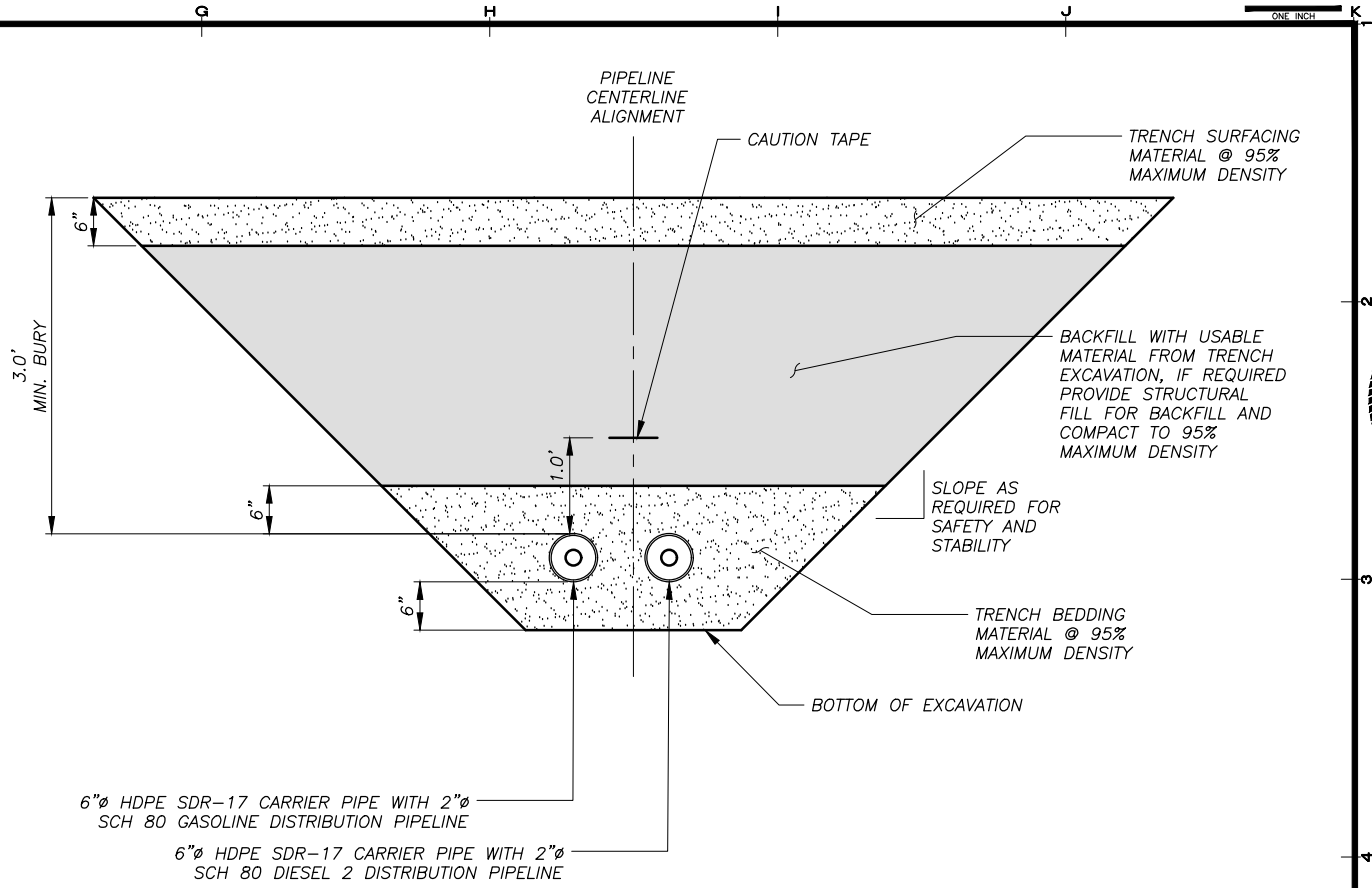
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SHEET TITLE	
MARINE HEADER DETAILS	
SHEET	
C3.20	
DRAWN BY	CHECKED BY
KK	MRS
DATE	SCALE
05/25/16	AS SHOWN
JOB NUMBER	
13-040	

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 LAYOUT: C3.21 - TRENCH SECTIONS
 XREF: 13-039_40_KAKE-SURVEY-BASE, 13040-00_B01, X-SITE-JOSH

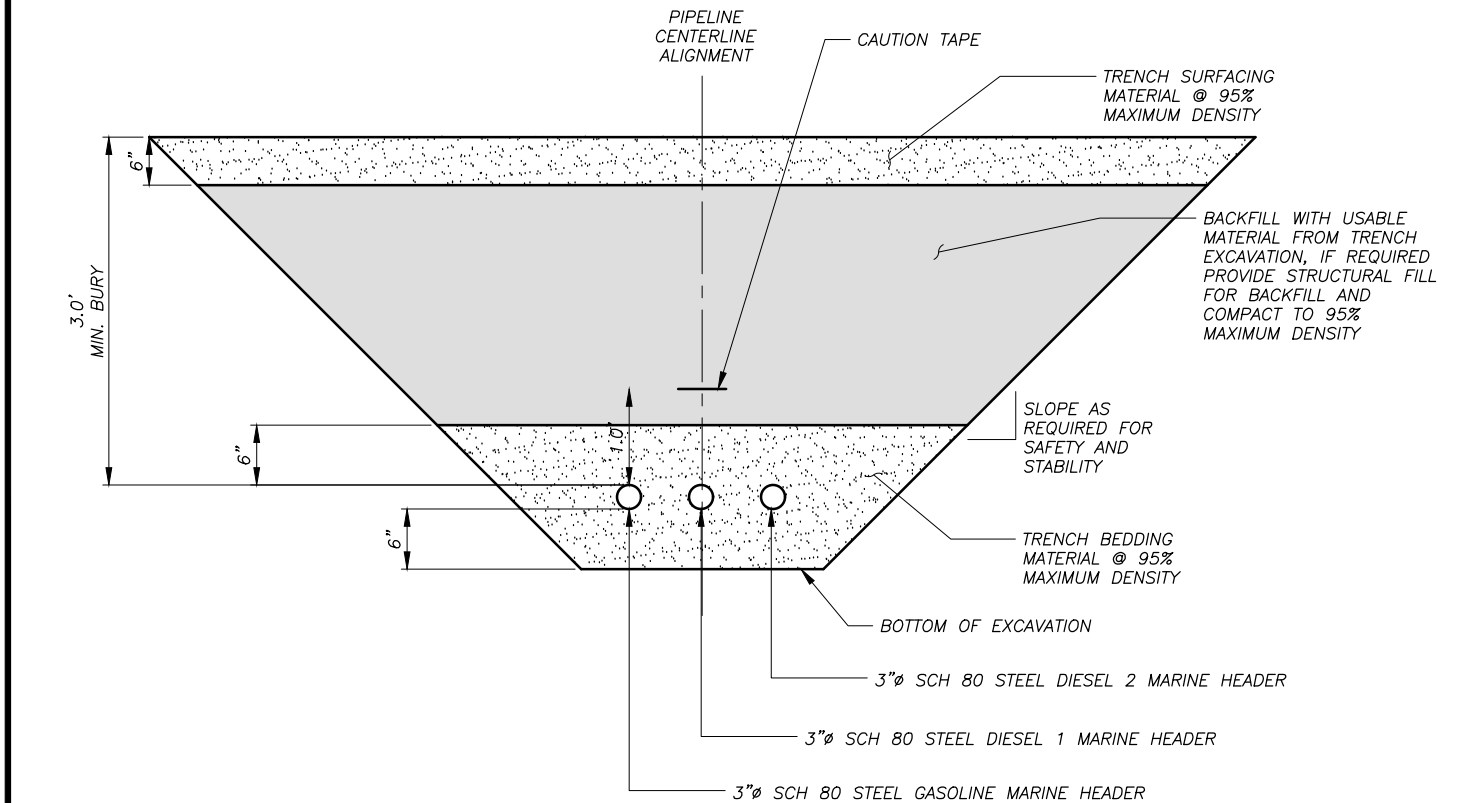


1 TRENCH SECTION
 C3.21 SCALE: N.T.S.



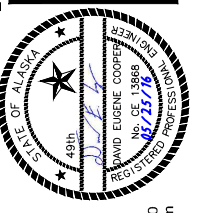
3 TRENCH SECTION
 C3.21 SCALE: 1" = 20'

NOTE:
 1. MINIMUM SEPERATION DISTANCE BETWEEN PIPES SHALL BE 6".



2 TRENCH SECTION
 C3.21 SCALE: 1" = 20'

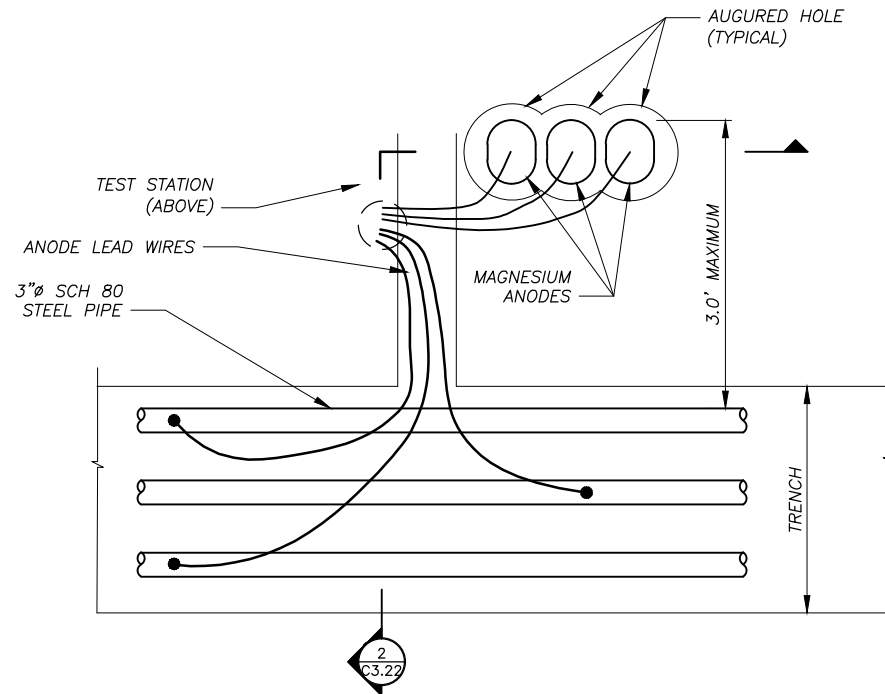
REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW



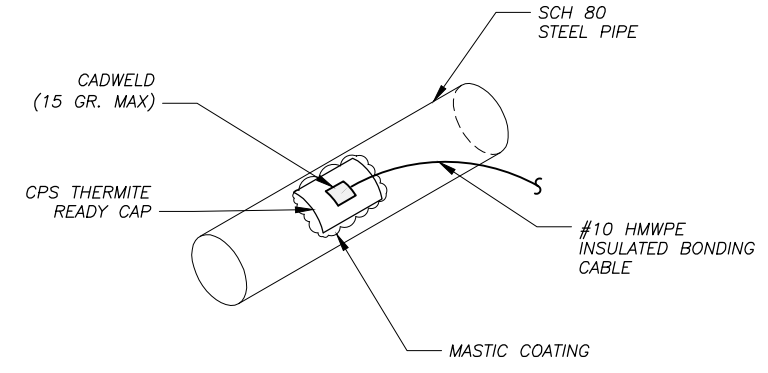
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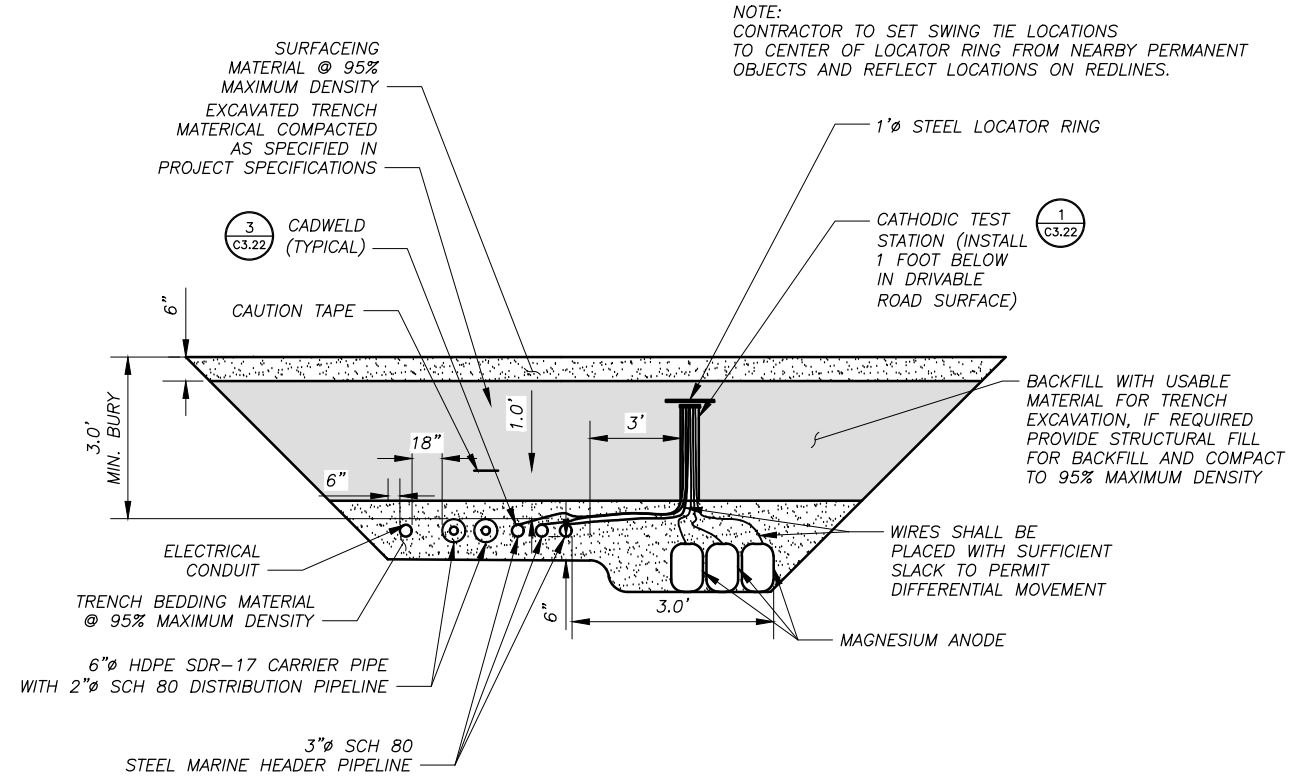
SHEET TITLE: SECTIONS AND DETAILS
 SHEET: C3.21
 DRAWN BY: KK CHECKED BY: MRS
 DATE: 05/25/16 SCALE: AS SHOWN
 JOB NUMBER: 13-040



1 CATHODIC PROTECTION
 C3.22 SCALE: N.T.S.

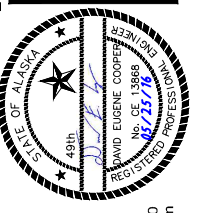


3 CADWELD
 C3.22 SCALE: N.T.S.



2 DIRECT BURIED PIPE CATHODIC PROTECTION
 C3.22 SCALE: N.T.S.

REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW



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KAKE BULK FUEL UPGRADES

ALASKA ENERGY AUTHORITY

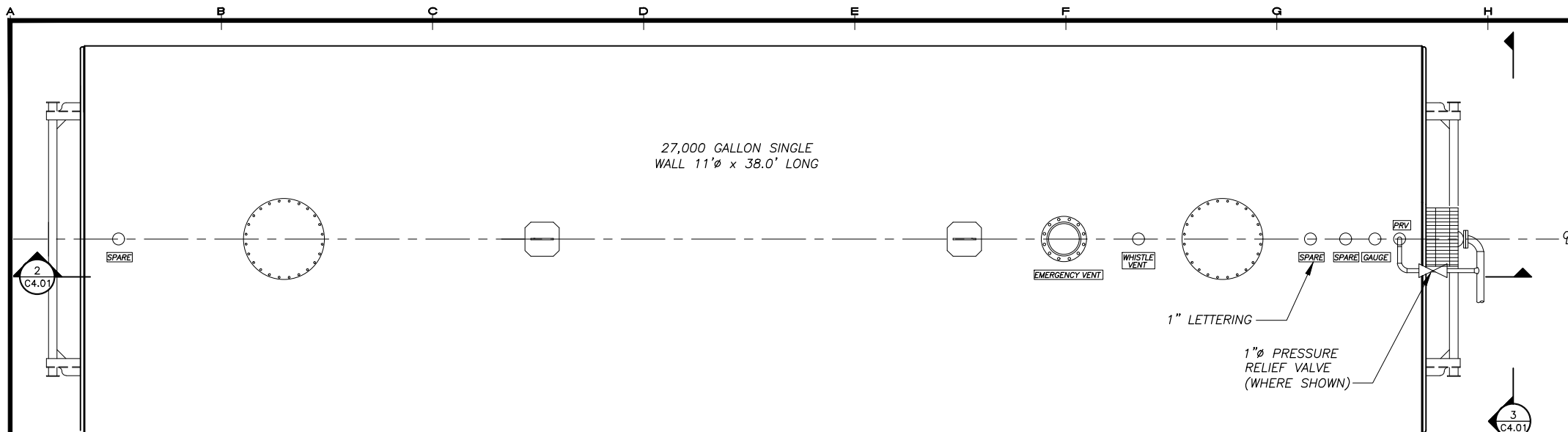
ALASKA ENERGY AUTHORITY
 KAKE, ALASKA

SHEET TITLE
CATHODIC PROTECTION AND CADWELD DETAIL

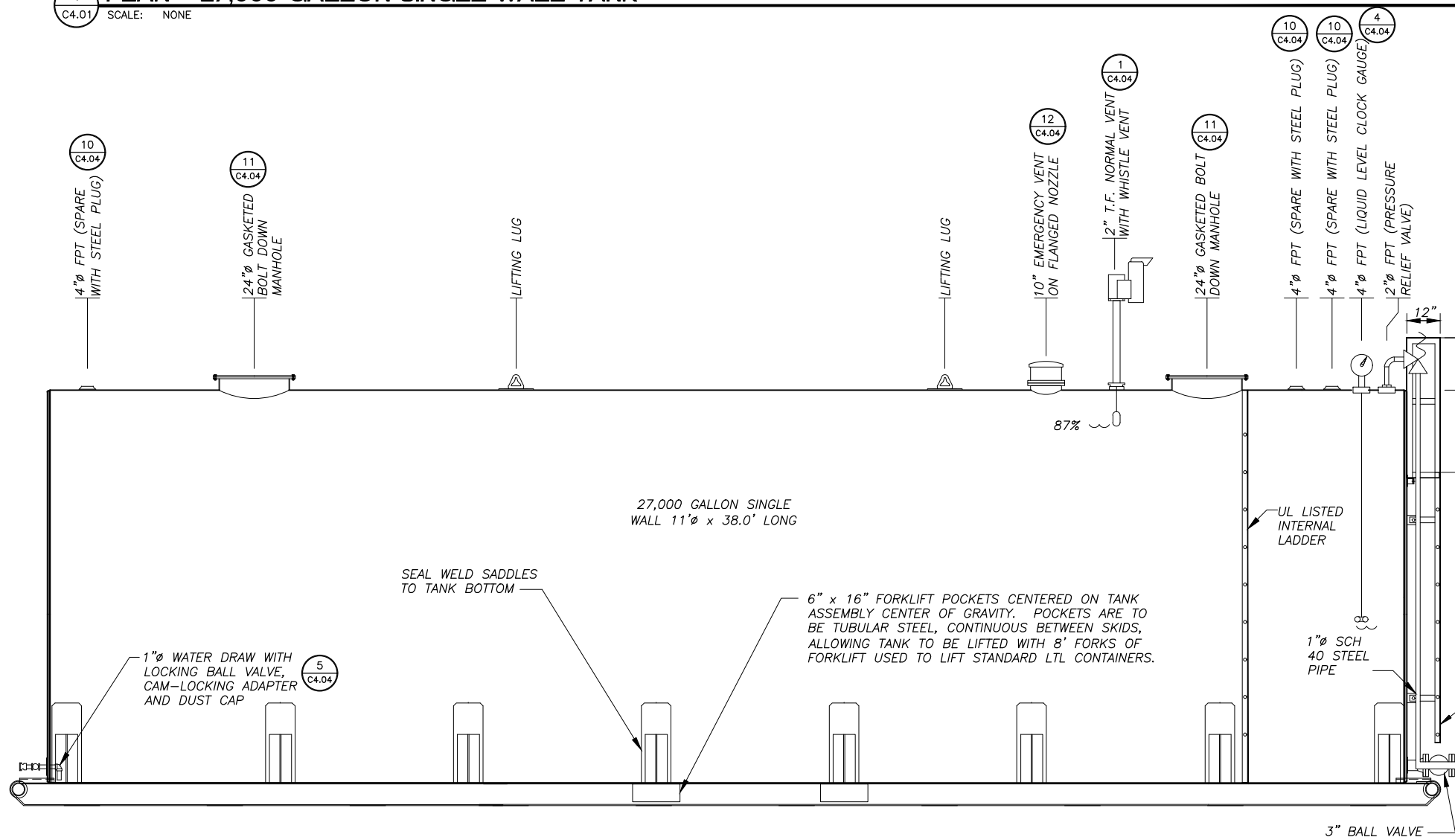
SHEET
C3.22

DRAWN BY: KK CHECKED BY: MRS
 DATE: 05/25/16 SCALE: AS SHOWN
 JOB NUMBER: 13-040

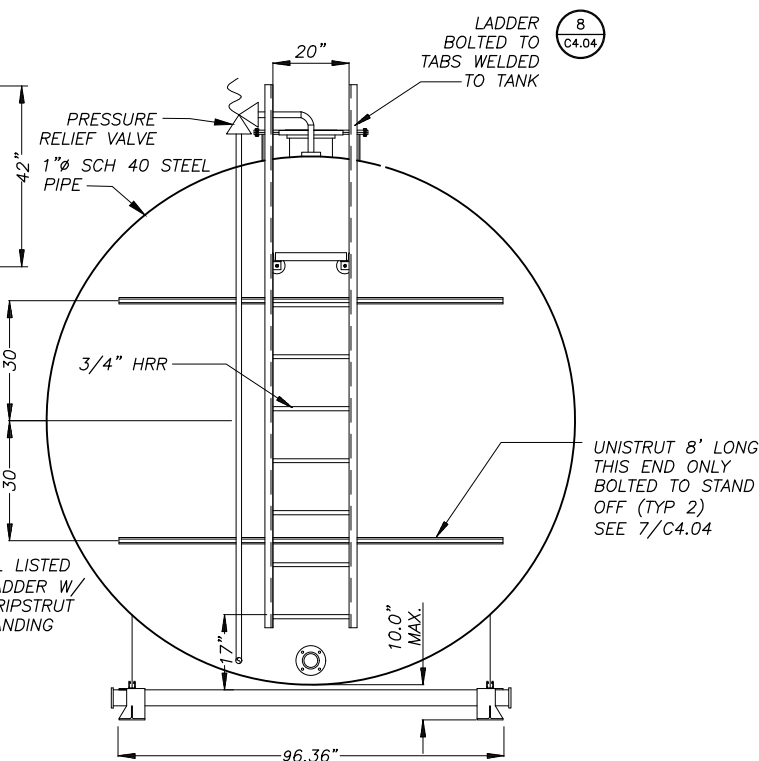
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 LAYOUT: C3.22 - CATHODIC PROTECTION
 XREF: 13-039_40_KAKE-SURVEY-BASE, 13040-00_B01, X-SITE-JOSH



1 PLAN - 27,000 GALLON SINGLE WALL TANK
SCALE: NONE



2 SECTION - 27,000 GALLON SINGLE WALL TANK
SCALE: NONE

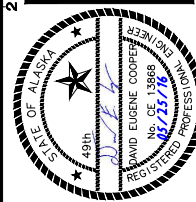


3 END VIEW
SCALE: NONE

NOTES:

- SEE SHEET G1.03 FOR GENERAL NOTES, LEGEND AND ABBREVIATIONS.
- TANKS SHALL BE UL142 LISTED AND LABELED.
- PROVIDE LABELING ON TANK IN ACCORDANCE WITH THE INTERNATIONAL FIRE CODE, INCLUDING BUT NOT LIMITED TO:
 - PRODUCT IDENTIFICATION
 - COMPARTMENT STORAGE CAPACITY
 - TARE WEIGHT
 - NFPA 704
 - INTERNATIONAL FIRE CODE CHAPTER 34.
- THIS DRAWING IS A PROTOTYPICAL TANK DRAWING. CONTRACTOR SHALL MODIFY BUNG LOCATIONS AS NECESSARY TO MATCH PIPING REQUIREMENTS. SUBMIT SHOP DRAWING WITH ANY PROPOSED REVISIONS HIGHLIGHTED FOR ENGINEER REVIEW.
- TANKS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE CURRENT VERSIONS OF UL142, STATE OF ALASKA FIRE AND LIFE SAFETY REGULATIONS (13 AAC50), ASME B 31.3, ASME B 31.4, AND ASME B 31.4A.
- LADDER, HANDRAILS, AND CATWALK MUST MEET ALL APPLICABLE OSHA STANDARDS. LADDERS, HANDRAILS AND CATWALK SHALL BE BOLT-ON UNITS. CONTRACTOR SHALL HOT DIP GALVANIZE EXISTING LADDERS, HANDRAILS AND AND CATWALK OR PROVIDE NEW GALVANIZED LADDERS, HANDRAILS AND CATWALK.
- NORMAL VENT MUST BE MINIMUM OF 12 FEET ABOVE ADJACENT FINISH GRADE.
- TANKS SADDLES AND SKIDS: PROVIDE TANK SADDLE AND SKID SYSTEMS DESIGNED IN ACCORDANCE WITH UL 142. TANK SADDLES AND SKIDS SHALL BE SUITABLE FOR SKIDDING EMPTY TANK INTO POSITION. PROVIDE A MINIMUM OF FOUR SADDLES PER TANK. SKIDS SHALL BE W8x35 OR APPROVED EQUAL.
- TANKS SHALL BE CONSTRUCTED OF ASTM A-36 PLATE AND STRUCTURAL STEEL AND PAINTED PER THE SPECIFICATIONS.

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1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW



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KAKE BULK FUEL UPGRADES

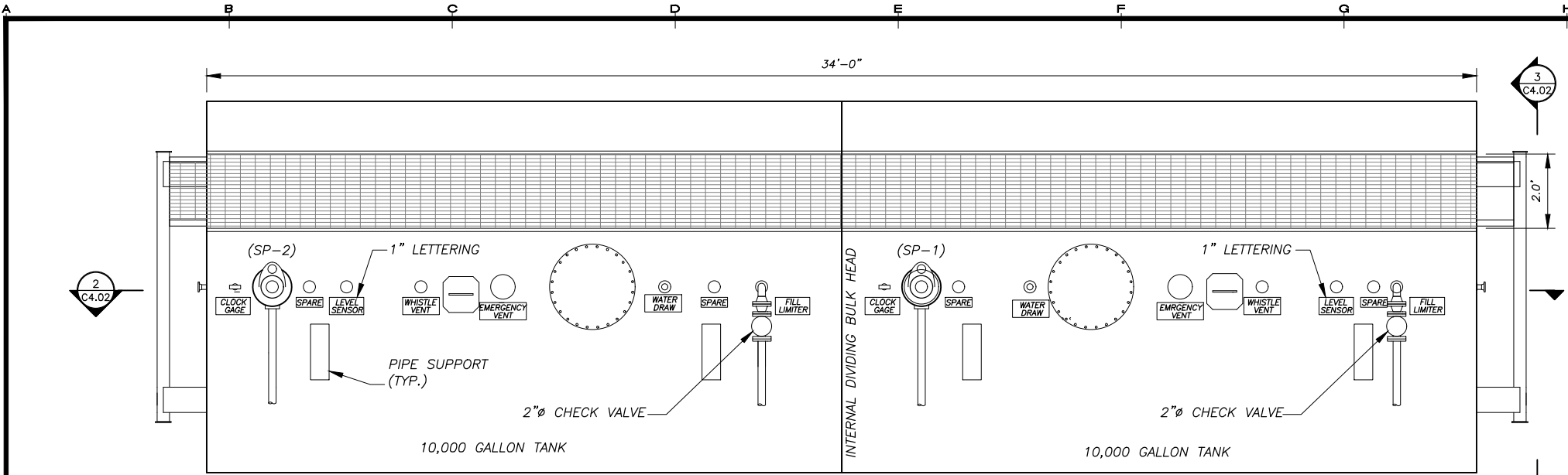
ALASKA ENERGY AUTHORITY

ALASKA ENERGY AUTHORITY

KAKE, ALASKA

SHEET TITLE	
27,000 GALLON SINGLE WALL BULK TANK	
SHEET	
C4.01	
DRAWN BY:	CHECKED BY:
KK	MRS
DATE:	SCALE:
05/25/16	NONE
JOB NUMBER:	
13-040	

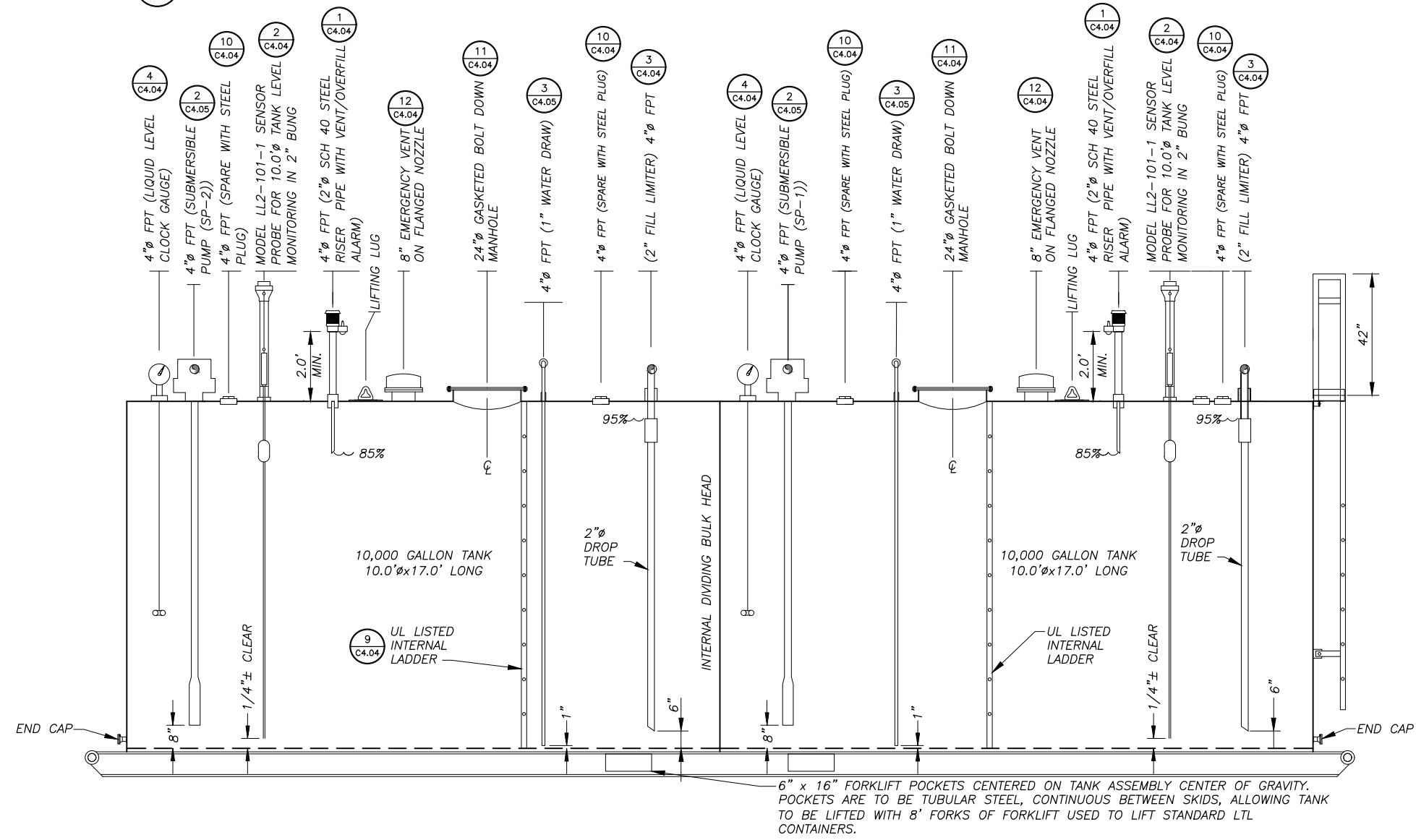
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LAYOUT: C4.01 - 27K TANK
XREF: 13040-00_B01-BK



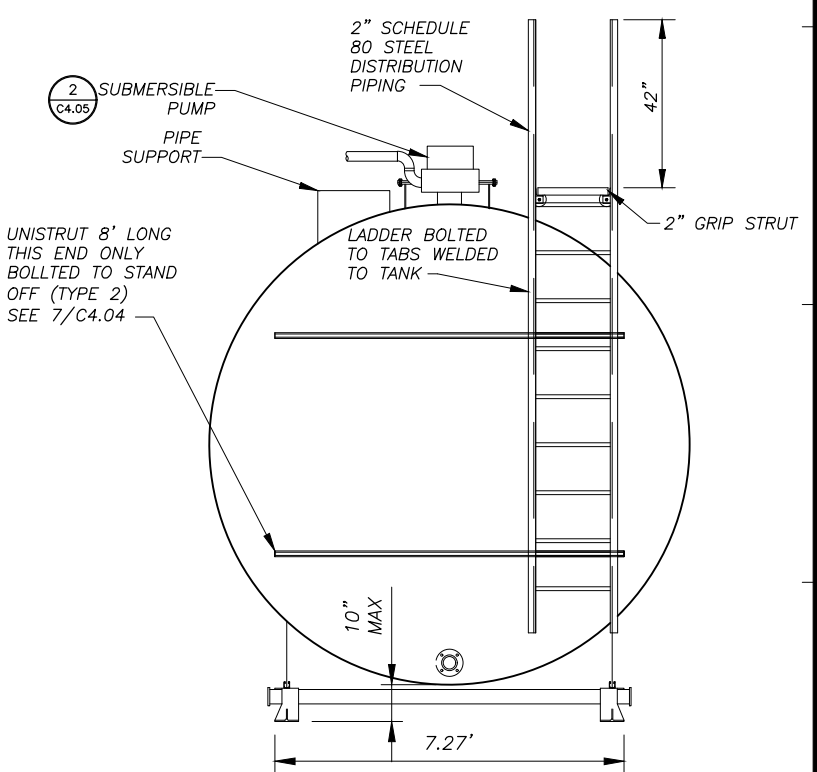
1 PLAN - 20,000 GALLON DUAL PRODUCT DISPENSING TANK
SCALE: NONE

NOTES:

- SEE SHEET G1.03 FOR GENERAL NOTES, LEGEND AND ABBREVIATIONS.
- TANKS SHALL BE UL142 LISTED AND LABELED.
- PROVIDE LABELING ON TANK IN ACCORDANCE WITH THE INTERNATIONAL FIRE CODE, INCLUDING BUT NOT LIMITED TO:
 - PRODUCT IDENTIFICATION
 - COMPARTMENT STORAGE CAPACITY
 - TARE WEIGHT
 - NFPA 704
 - INTERNATIONAL FIRE CODE CHAPTER 34.
- THIS DRAWING IS A PROTOTYPICAL TANK DRAWING. CONTRACTOR SHALL MODIFY BUNG LOCATIONS AS NECESSARY TO MATCH PIPING REQUIREMENTS. SUBMIT SHOP DRAWING WITH ANY PROPOSED REVISIONS HIGHLIGHTED FOR ENGINEER REVIEW.
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- TANKS SADDLES AND SKIDS: PROVIDE TANK SADDLE AND SKID SYSTEMS DESIGNED IN ACCORDANCE WITH UL 142. TANK SADDLES AND SKIDS SHALL BE SUITABLE FOR SKIDDING EMPTY TANK INTO POSITION. PROVIDE A MINIMUM OF FOUR SADDLES PER TANK. SKIDS SHALL BE W8x35 OR APPROVED EQUAL.
- TANKS SHALL BE CONSTRUCTED OF ASTM A-36 PLATE AND STRUCTURAL STEEL AND PAINTED PER THE SPECIFICATIONS.



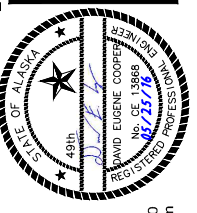
2 SECTION - 20,000 GALLON DUAL PRODUCT DISPENSING TANK
SCALE: NONE



3 END VIEW
SCALE: NONE

H:\pos\13-040 Kake Bulk Fuel Upgrades (AIEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_C4.02-20K-TANK_1=2, 04-19-16 at 15:22 by WJB
LAYOUT: C4.02
XREF: 13040-00_B01-BK

REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW



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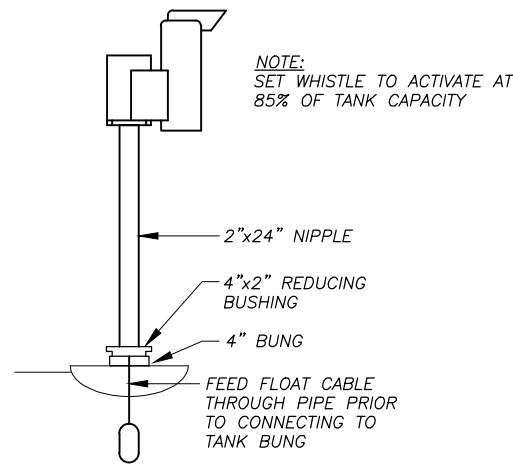
SHEET TITLE
20,000 GALLON DUAL PRODUCT DISPENSING TANK

SHEET
C4.02

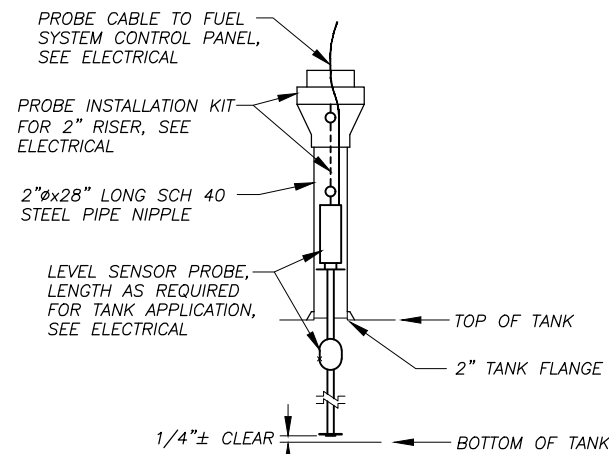
DRAWN BY: KK
CHECKED BY: MRS

DATE: 05/25/16
SCALE: AS NOTED

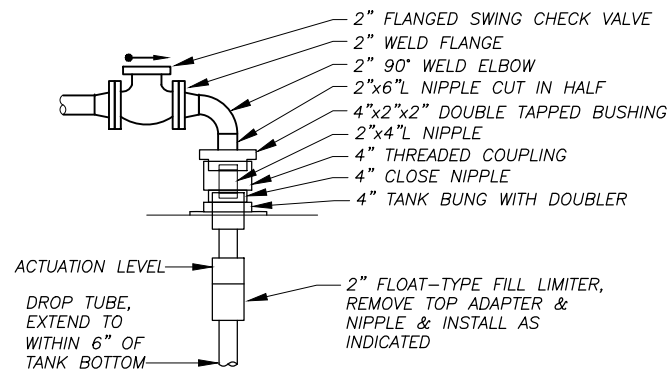
JOB NUMBER: 13-040



1 VENT/OVERFILL ALARM
C4.04 SCALE: NONE

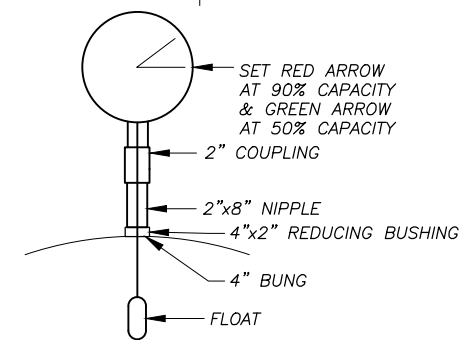


2 LEVEL SENSOR PROBE
C4.04 SCALE: NONE



NOTE: PIPING SIZED TO PROVIDE SHUT OFF WHEN ACTUATION LEVEL IS AT 95% CAPACITY. FIELD VERIFY SHUT OFF HEIGHT & ADJUST LINKAGE AS REQUIRED.

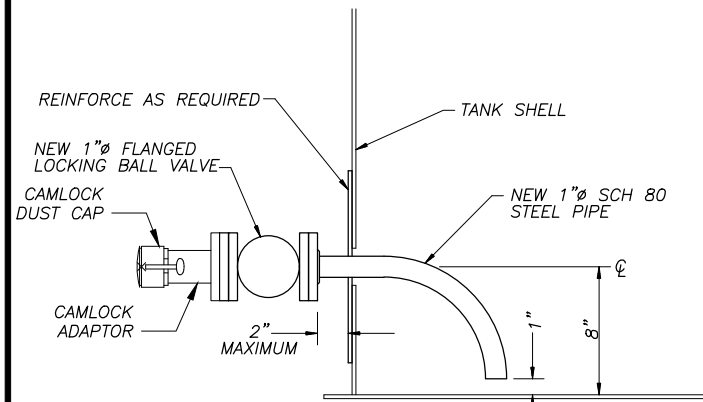
3 FILL LIMITER
C4.04 SCALE: NONE



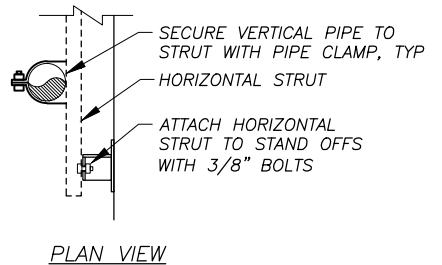
CLOCK GAUGE NOTES:

1. FEED FLOAT CABLE THROUGH NIPPLE PRIOR TO CONNECTING TO TANK.
2. GREASE FLOAT PRIOR TO INSTALLING IN TANK TO PREVENT FREEZING TO BOTTOM.
3. CALIBRATE GAUGE AFTER FILLING TANK AND VERIFY WITH MANUAL GAUGING ROD.
4. ENSURE THAT BACK COVER PLATE IS PROPERLY SEALED AFTER REASSEMBLY (ANY LOOSENESS OR RATTLING WHEN TAPPED INDICATES A POOR SEAL).

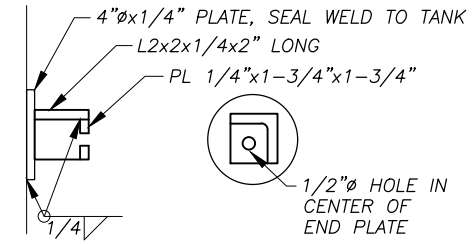
4 CLOCK GAUGE
C4.04 SCALE: NONE



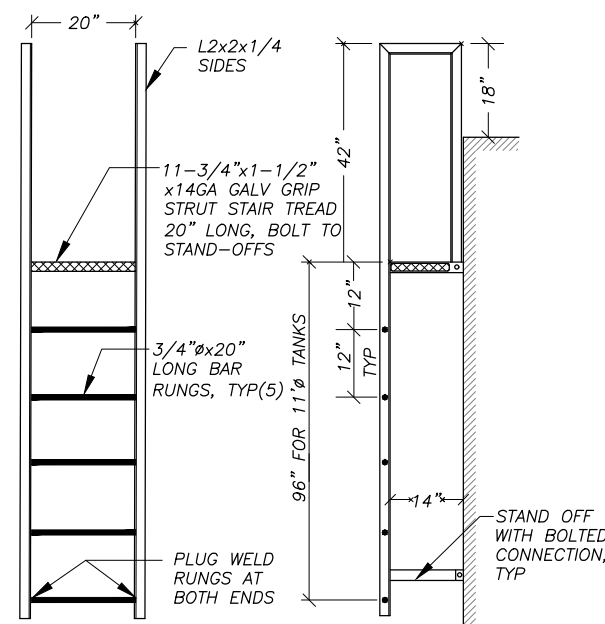
5 BULK FUEL WATER DRAW
C4.04 SCALE: NONE



6 TANK HEAD PIPE SUPPORT
C4.04 SCALE: NONE

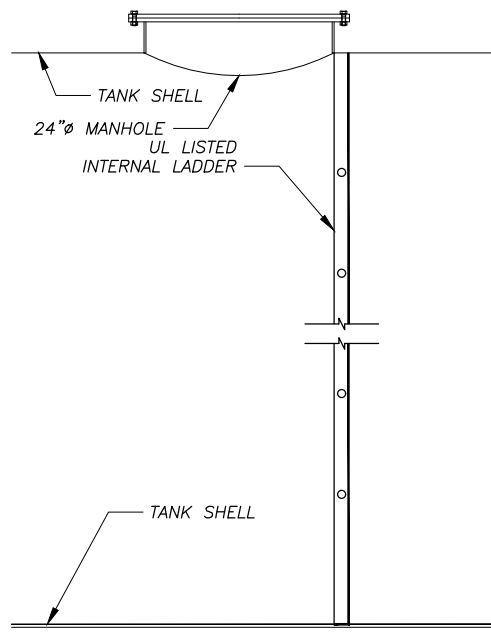


7 PIPE SUPPORT STAND OFF
C4.04 SCALE: NONE

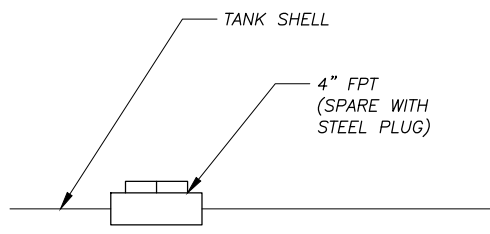


NOTE:
1. BULK FUEL TANK LADDER SHOWN
2. PROVIDE SIMILAR LADDER WITH CATWALK ON TOP OF TANK FOR 10,000 AND 20,000 GALLON PRODUCT DISPENSING TANKS.

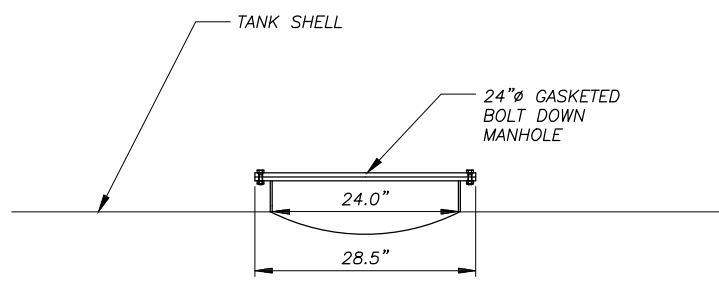
8 LADDER FABRICATION
C4.04 SCALE: NONE



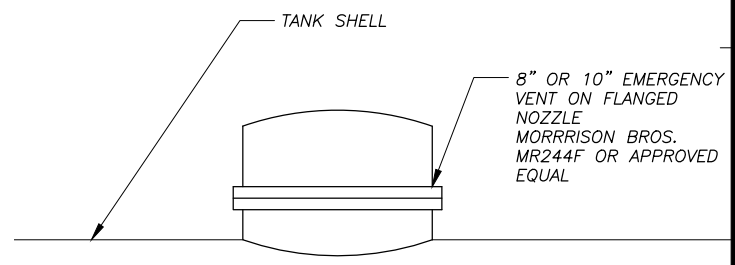
9 INTERIOR LADDER
C4.04 SCALE: NONE



10 SPARE
C4.04 SCALE: NONE



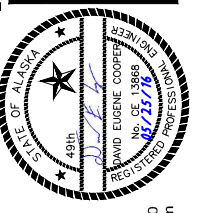
11 MANHOLE
C4.04 SCALE: NONE



12 EMERGENCY VENT
C4.04 SCALE: NONE

H:\jobs\13-040_Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_C4.04-C4.05_TANK_APP_1=1_04-27-16 at 23:05 by jkk LAYOUT: C4.04 TANK DETAILS XREF: 14025_00_B01

REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW

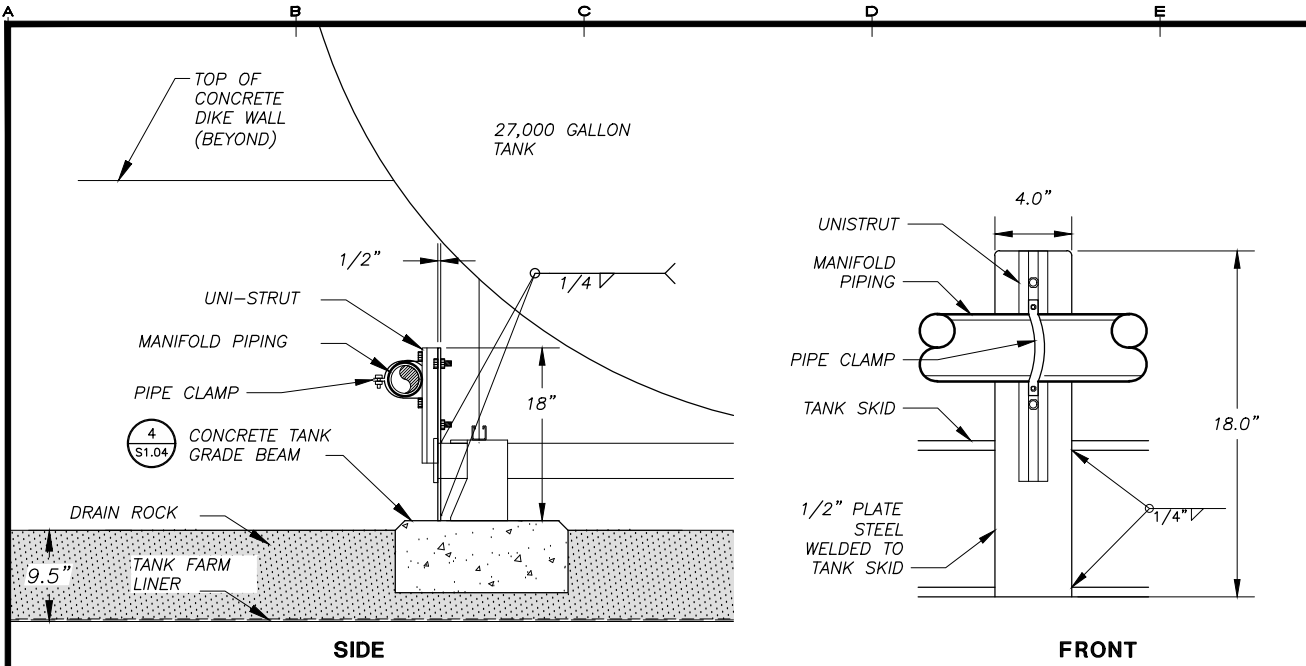


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KAKE, ALASKA

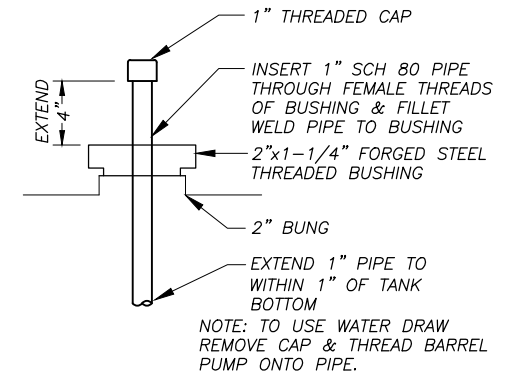
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SHEET: C4.04
DRAWN BY: KK CHECKED BY: MRS
DATE: 05/25/16 SCALE: AS SHOWN
JOB NUMBER: 13-040

H:\jobs\13-040_Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_C4.04-C4.05_TANK_APP, 1=1, 04-27-16 at 23:05 by jkk
 LAYOUT: C4.05 TANK DETAILS
 XREF: 14025_00_B01



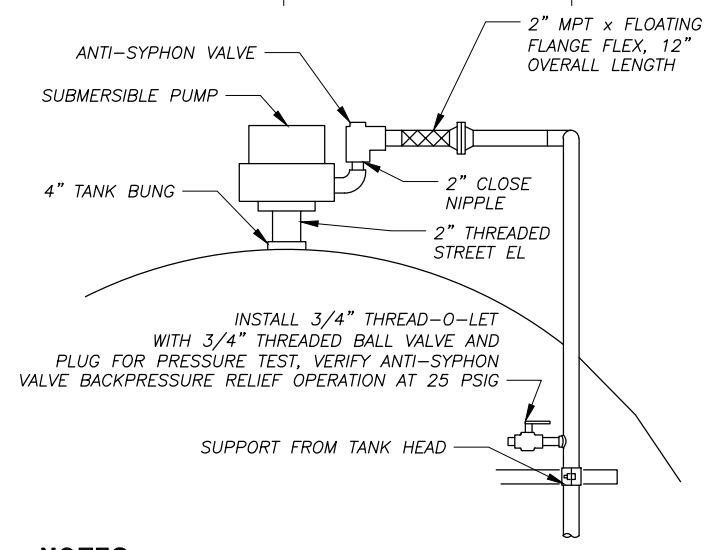
1 TANK PIPE SUPPORT BRACKET

C4.05 SCALE: NONE



3 PRODUCT DISPENSING TANK WATER DRAW

C4.05 SCALE: NONE



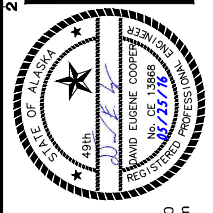
NOTES:

1. PRIOR TO PLACING PUMP IN TANK, INSTALL TRAPPER SCREEN AND SET PUMP LENGTH SO THAT INTAKE WILL BE 8" ABOVE TANK BOTTOM. SECURELY TIGHTEN AND LOCK ADJUSTING MECHANISM.
2. AFTER INSTALLATION REMOVE ALL BOLTS, PLUGS, AND FITTINGS ON TOP THOROUGHLY COAT THREADS WITH ANTI-SIEZE COMPOUND, REINSTALL, AND TIGHTEN SECURELY.

2 SUBMERSIBLE PUMP INSTALLATION

C4.05 SCALE: NONE

REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW

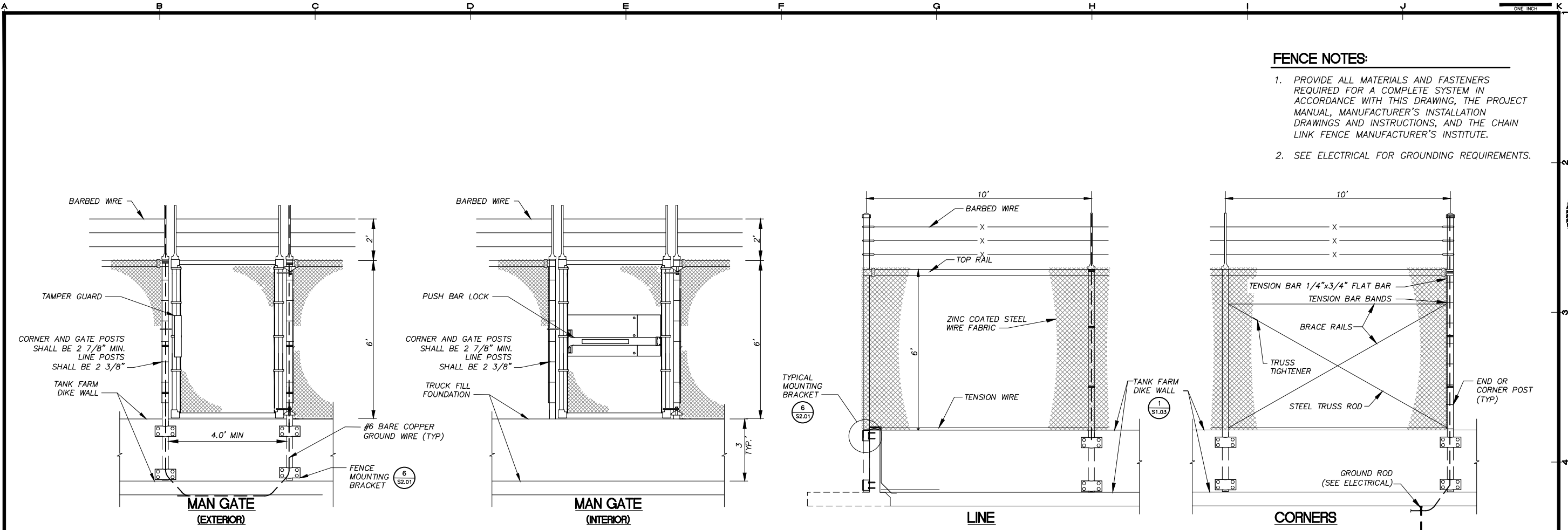


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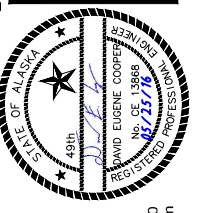
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 SHEET: C4.05
 DRAWN BY: KK CHECKED BY: MRS
 DATE: 05/25/16 SCALE: AS SHOWN
 JOB NUMBER: 13-040

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 LAYOUT: C5.01 - TF FENCING
 VIEW: C407_H_PDF
 XREF: 13040-00_B01-BK_SWENSON-SIG



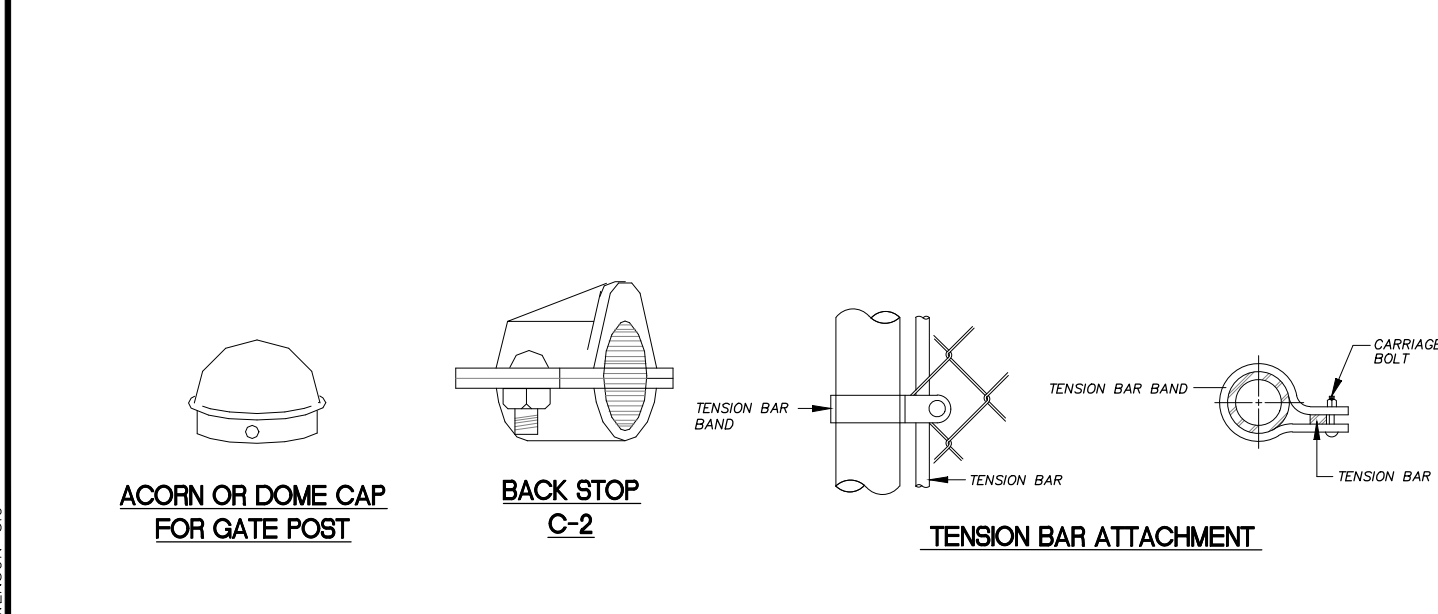
- FENCE NOTES:**
1. PROVIDE ALL MATERIALS AND FASTENERS REQUIRED FOR A COMPLETE SYSTEM IN ACCORDANCE WITH THIS DRAWING, THE PROJECT MANUAL, MANUFACTURER'S INSTALLATION DRAWINGS AND INSTRUCTIONS, AND THE CHAIN LINK FENCE MANUFACTURER'S INSTITUTE.
 2. SEE ELECTRICAL FOR GROUNDING REQUIREMENTS.

REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW



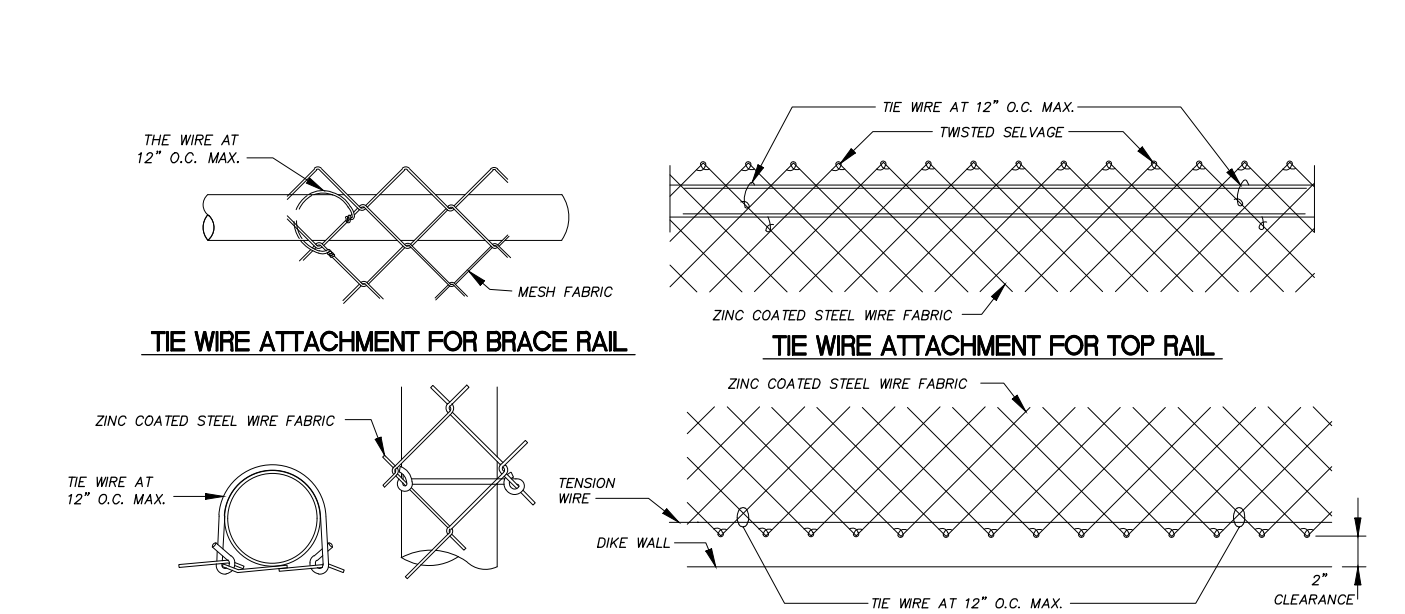
1 TANK FARM MAN GATE DETAILS
 C5.01 SCALE: NONE

2 TANK FARM FENCING DETAIL
 C5.01 SCALE: NONE



3 FENCE HARDWARE
 C5.01 SCALE: NONE

4 FENCE ATTACHMENT DETAILS
 C5.01 SCALE: NONE



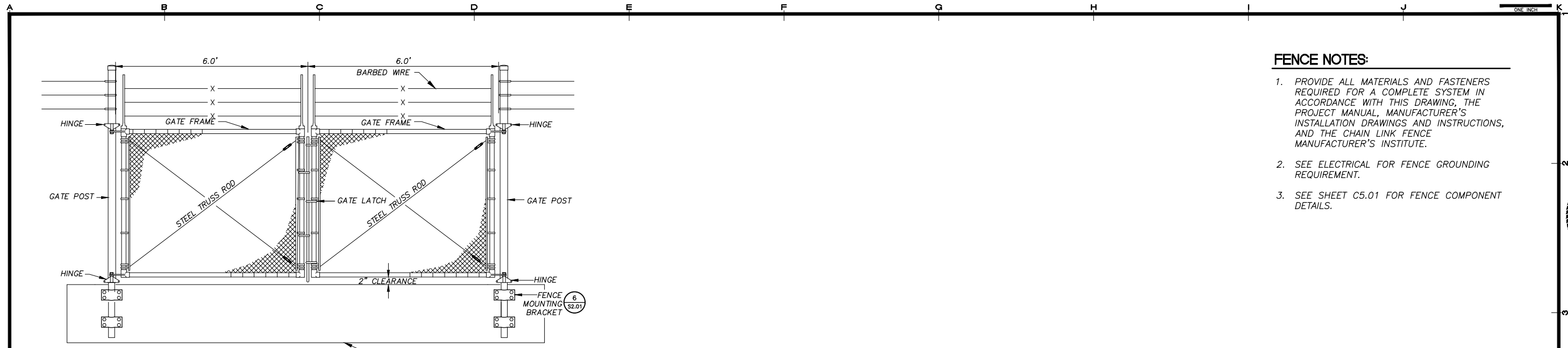
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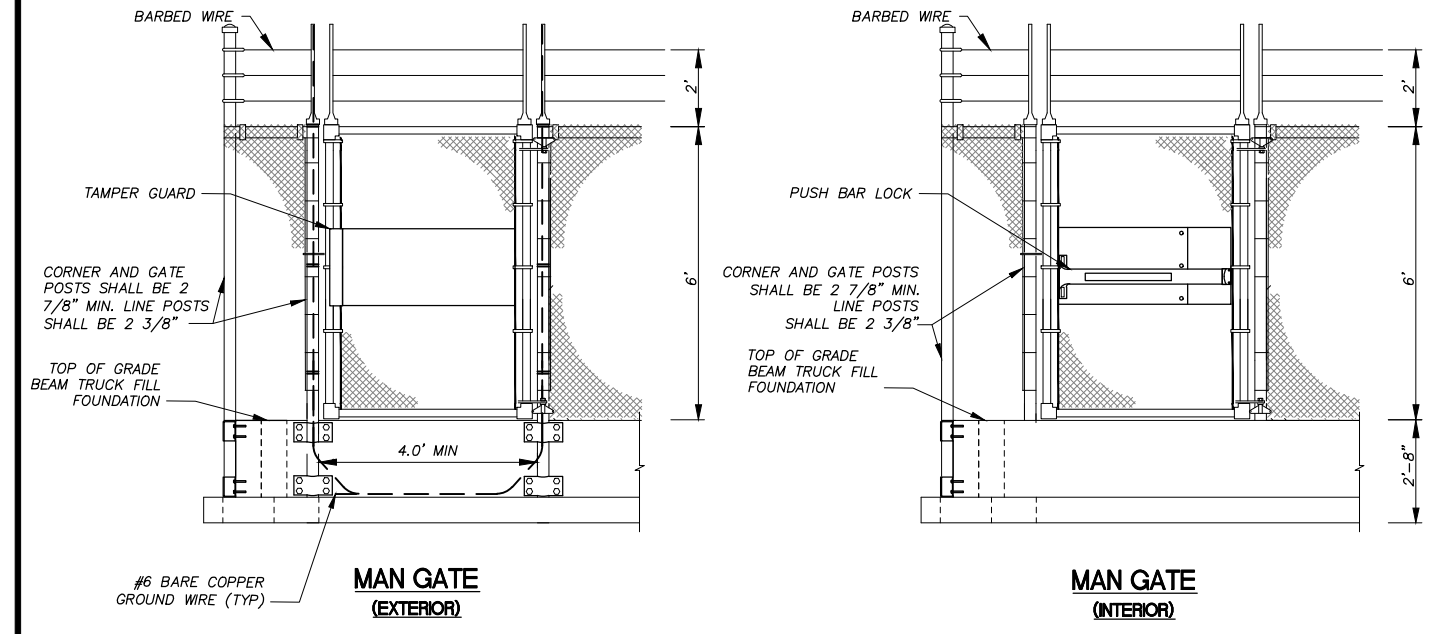
ALASKA ENERGY AUTHORITY
 KAKE BULK FUEL UPGRADES
 KAKE, ALASKA

SHEET TITLE: TANK FARM FENCING
 SHEET: C5.01
 DRAWN BY: DETAILS
 CHECKED BY: MRS
 DATE: 05/25/16
 SCALE: AS NOTED
 JOB NUMBER: 13-040

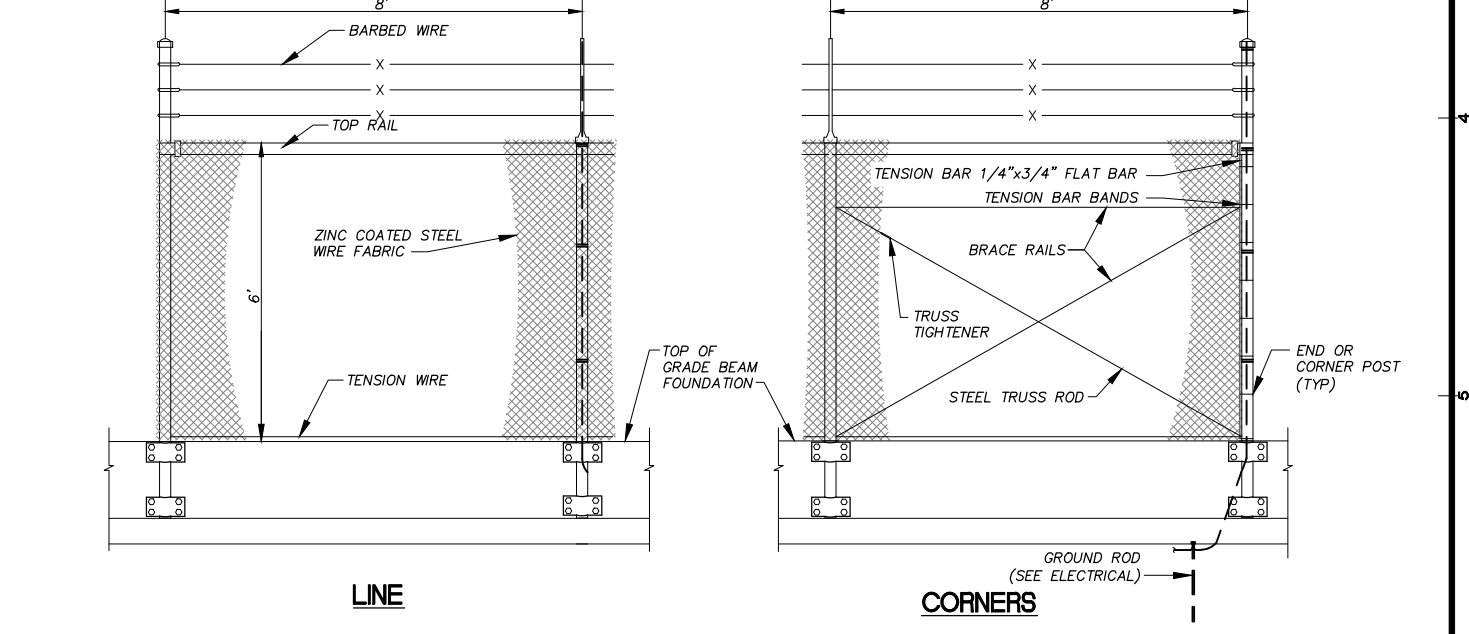
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 LAYOUT: C5.02 - TF FENCING
 VIEW: C407_H_PDF
 XREF: 13040-00_B01-BK. SWENSON-SIG



1 TRUCK FILL SHELTER SWING GATE DETAIL
 C5.02 SCALE: NONE



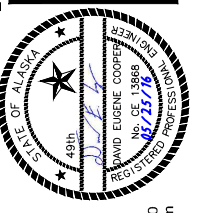
2 TRUCK FILL SHELTER MAN GATE DETAIL
 C5.02 SCALE: NONE



5 TRUCK FILL SHELTER FENCING DETAIL
 C5.02 SCALE: NONE

- FENCE NOTES:**
1. PROVIDE ALL MATERIALS AND FASTENERS REQUIRED FOR A COMPLETE SYSTEM IN ACCORDANCE WITH THIS DRAWING, THE PROJECT MANUAL, MANUFACTURER'S INSTALLATION DRAWINGS AND INSTRUCTIONS, AND THE CHAIN LINK FENCE MANUFACTURER'S INSTITUTE.
 2. SEE ELECTRICAL FOR FENCE GROUNDING REQUIREMENT.
 3. SEE SHEET C5.01 FOR FENCE COMPONENT DETAILS.

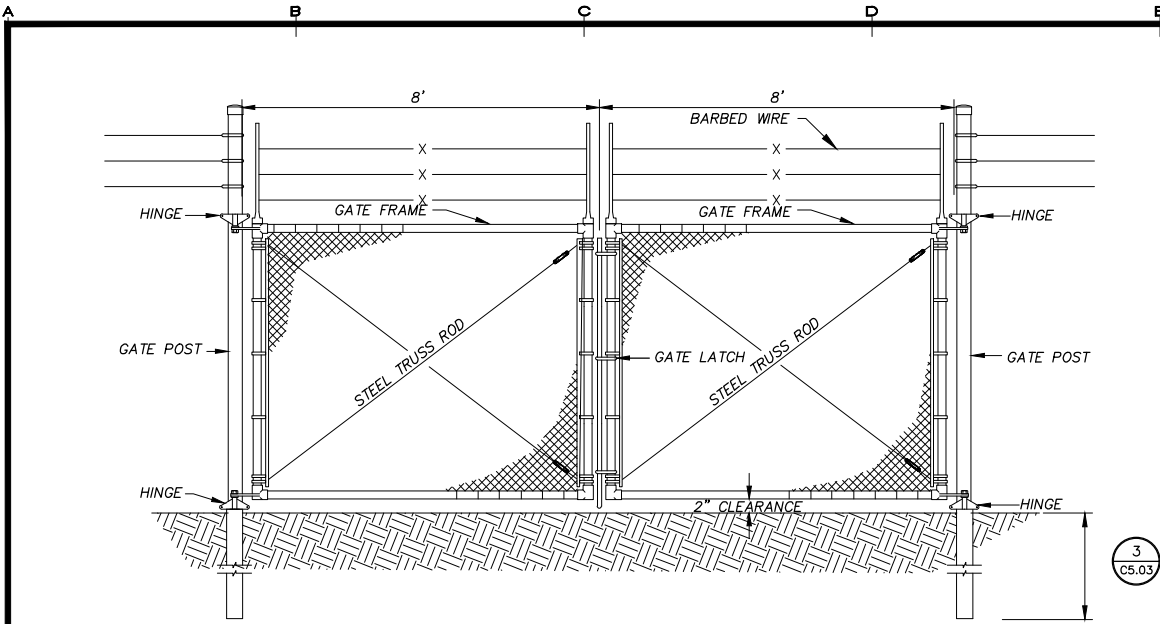
REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW



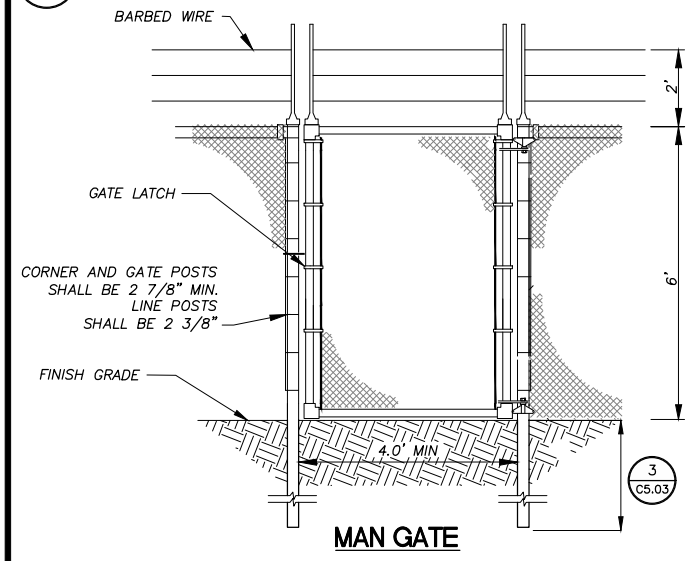
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 KAKE BULK FUEL UPGRADES
 TRUCK FILL SHELTER FENCING
 SHEET C5.02
 DRAWN BY: KK CHECKED BY: MRS
 DATE: 05/25/16 SCALE: AS NOTED
 JOB NUMBER: 13-040

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 VIEW: C407_H_PDF
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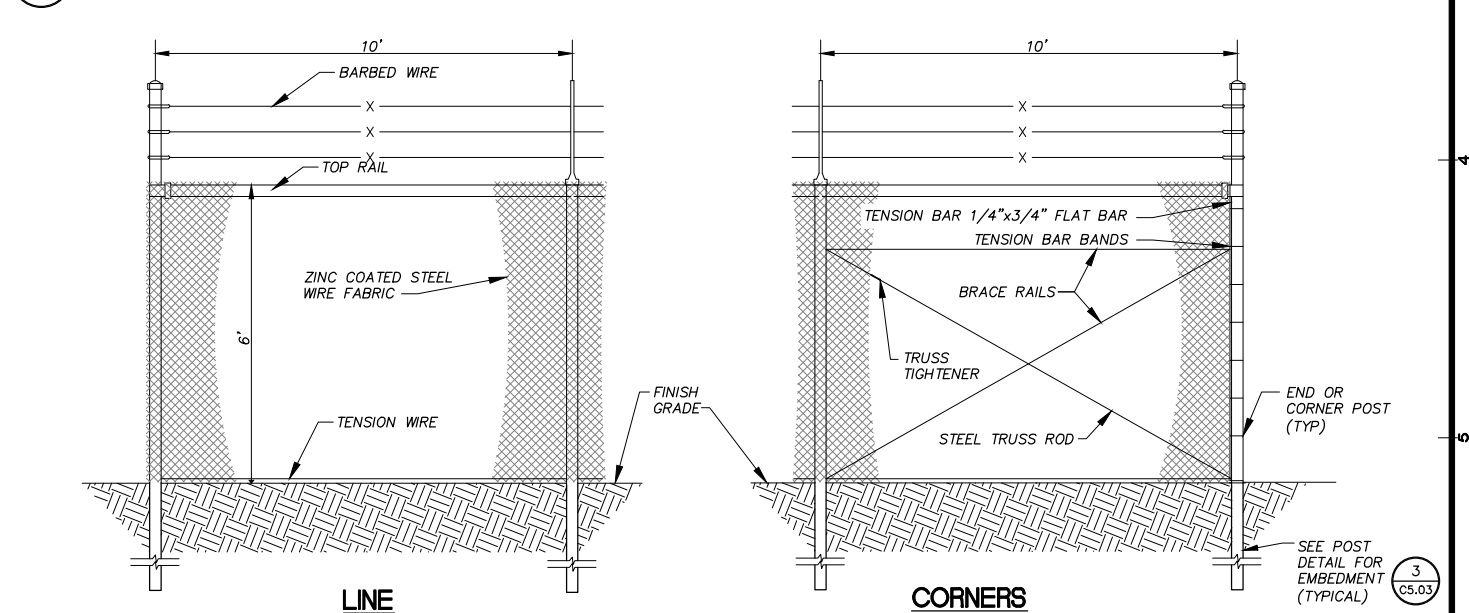


1 CITY EQUIPMENT YARD SWING GATE DETAIL
 C5.03 SCALE: NONE



2 CITY EQUIPMENT YARD GATE DETAIL
 C5.03 SCALE: NONE

3 CITY EQUIPMENT YARD FENCING POST DETAIL
 C5.03 SCALE: NONE

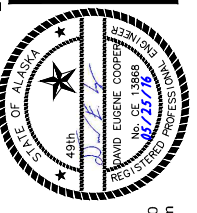


4 CITY EQUIPMENT YARD FENCING DETAIL
 C5.03 SCALE: NONE

FENCE NOTES

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2. SEE SHEET C5.01 FOR FENCE COMPONENT DETAILS.
3. IF BEDROCK IS ENCOUNTERED SET FENCE POST 2 FT MINIMUM INTO BEDROCK AND FILL FENCE POST HOLE WITH CONCRETE.

REVISIONS	DATE	DESCRIPTION
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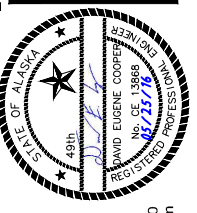
ALASKA ENERGY AUTHORITY
 KAKE BULK FUEL UPGRADES
 KAKE, ALASKA

SHEET TITLE: EQUIPMENT YARD FENCING
 SHEET: C5.03
 DRAWN BY: KK CHECKED BY: MRS
 DATE: 05/25/16 SCALE: AS NOTED
 JOB NUMBER: 13-040

H:\jobs\13-040_Koke Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_C1-C1_SIGNAGE_1-0_04-19-16 at 09:45 by WJB
 LAYOUT: C5.04_SIGNAGE
 VIEW: C601_H_PDF, C601_H_X7700, C602_H_PDF, C602_H_X7700
 XREF: 13040_00_B01-BK

- NOTES**
- SIGNS SHALL MEET THE REQUIREMENTS OF THE SPECIFICATIONS SECTION 02890.
 - SIGNS LETTERING AND BACKGROUNDS SHALL BE PER THE CONTRACT DOCUMENTS.
 - INSTALL SIGNS IN ACCORDANCE WITH THE INTERNATIONAL FIRE CODE REQUIREMENTS.

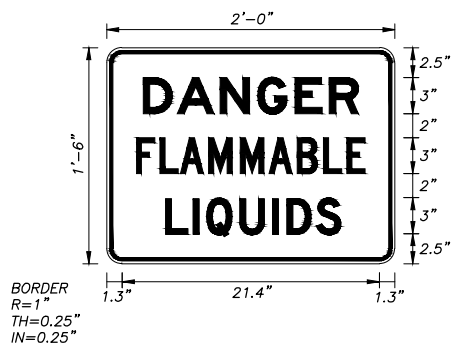
REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW



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 KAKE, ALASKA

SHEET TITLE: SIGNAGE
 SHEET: C5.04
 DRAWN BY: HDL
 CHECKED BY: MRS
 DATE: 05/25/16
 SCALE: NONE
 JOB NUMBER: 13-040



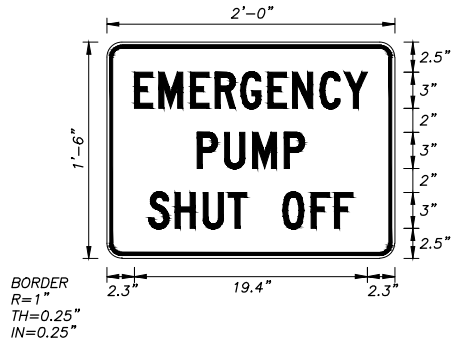
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WARNING SIGN



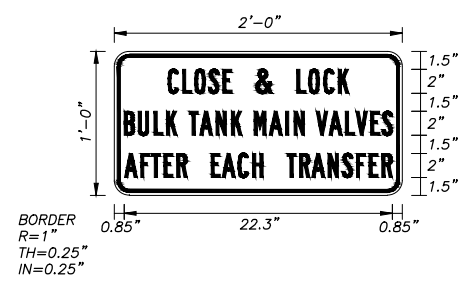
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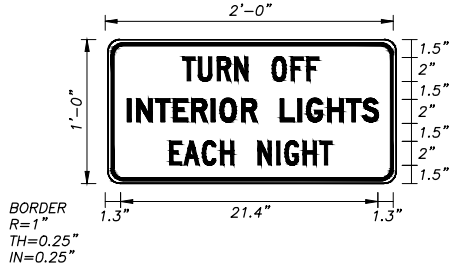
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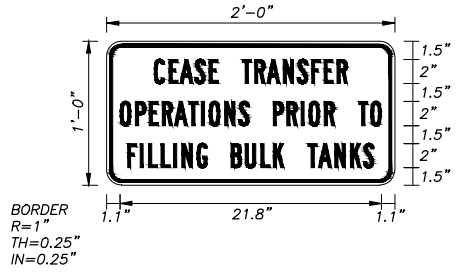
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INFORMATION SIGN



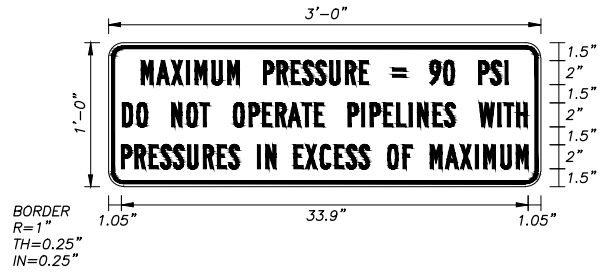
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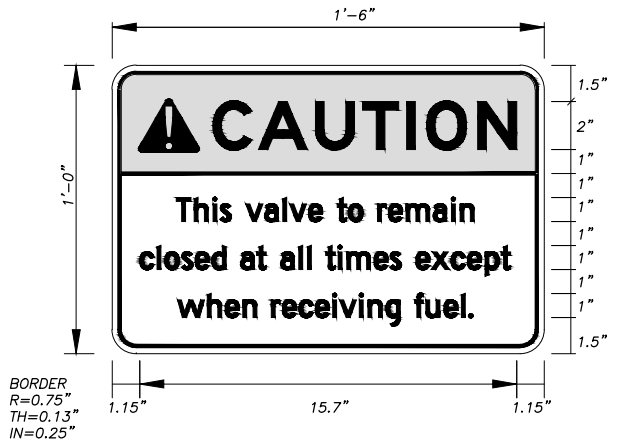
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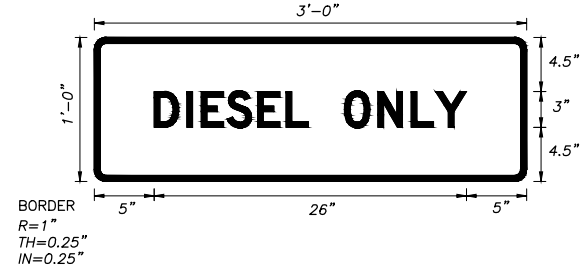
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INFORMATION SIGN



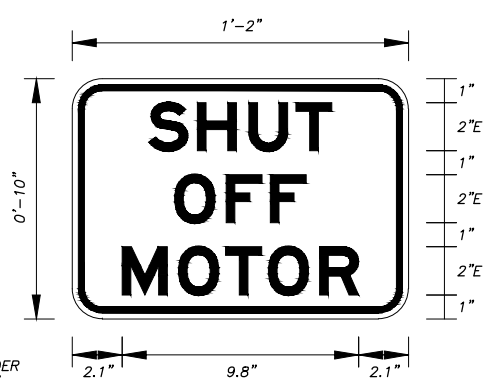
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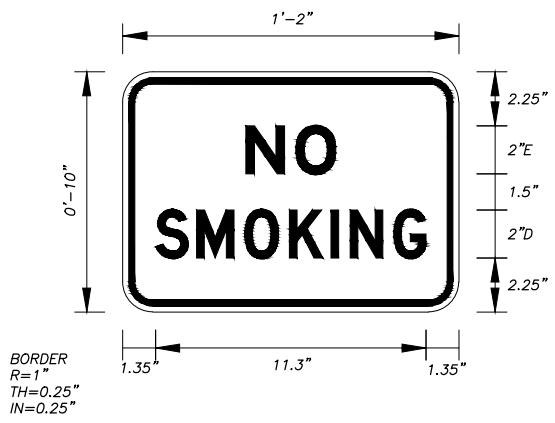
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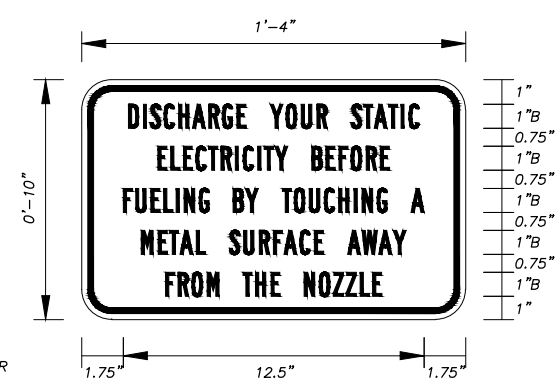
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 LAYOUT: C5.05_SIGNAGE
 VIEW: C601_H_PDF_C601_H_X7700_C602_H_PDF_C602_H_X7700
 XREF: 13040_00_B01-BK



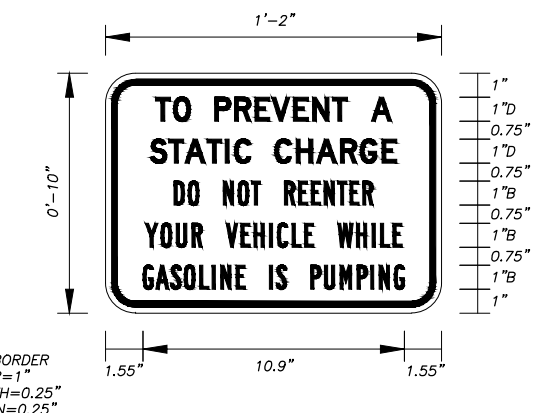
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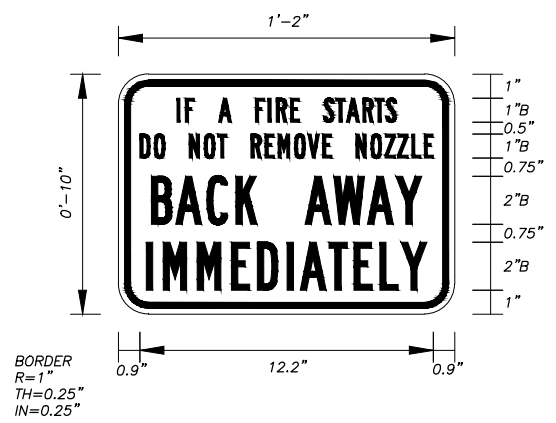
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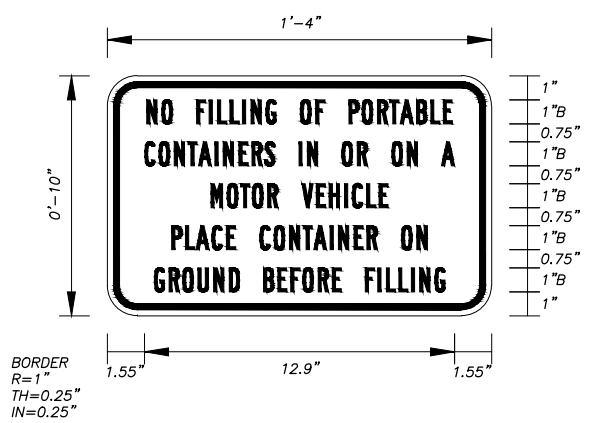
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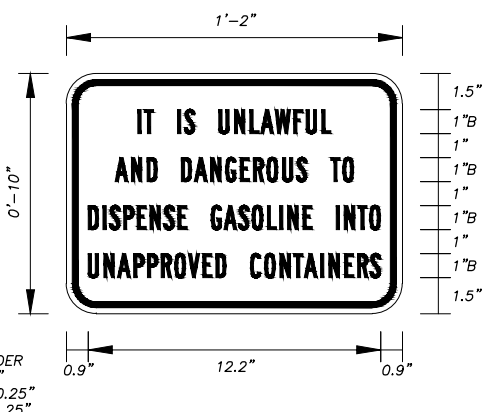
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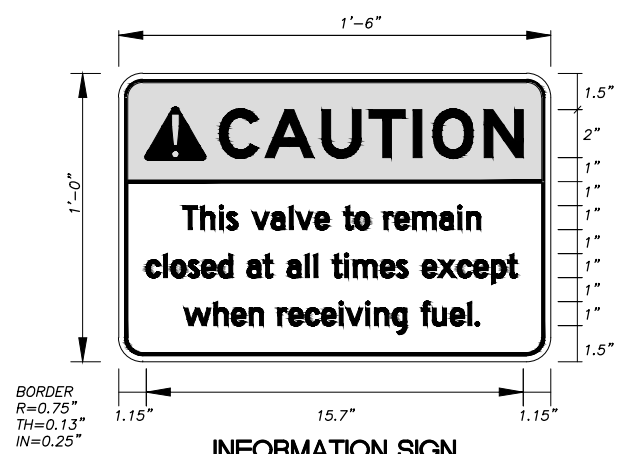
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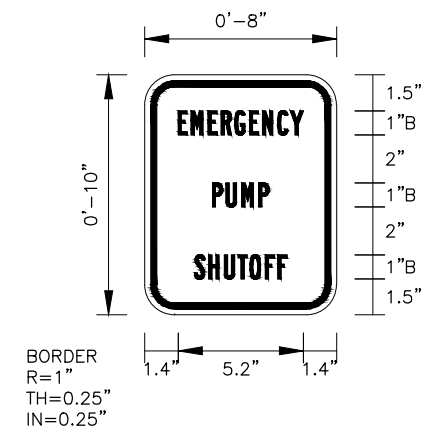
INFORMATION SIGN



INFORMATION SIGN



INFORMATION SIGN



BORDER
R=1"
TH=0.25"
IN=0.25"



BORDER
R=0.75"
TH=0.25"

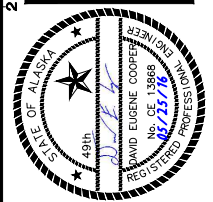
Panel Style: guide_con_street.ssi
M.U.T.C.D.: 2009 Edition



NOTES

- SIGNS SHALL MEET THE REQUIREMENTS OF THE SPECIFICATIONS SECTION 02890.
- SIGNS LETTERING AND BACKGROUND SHALL BE PER THE SPECIFICATIONS.
- INSTALL SIGNS IN ACCORDANCE WITH THE INTERNATIONAL FIRE CODE REQUIREMENTS.

REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW

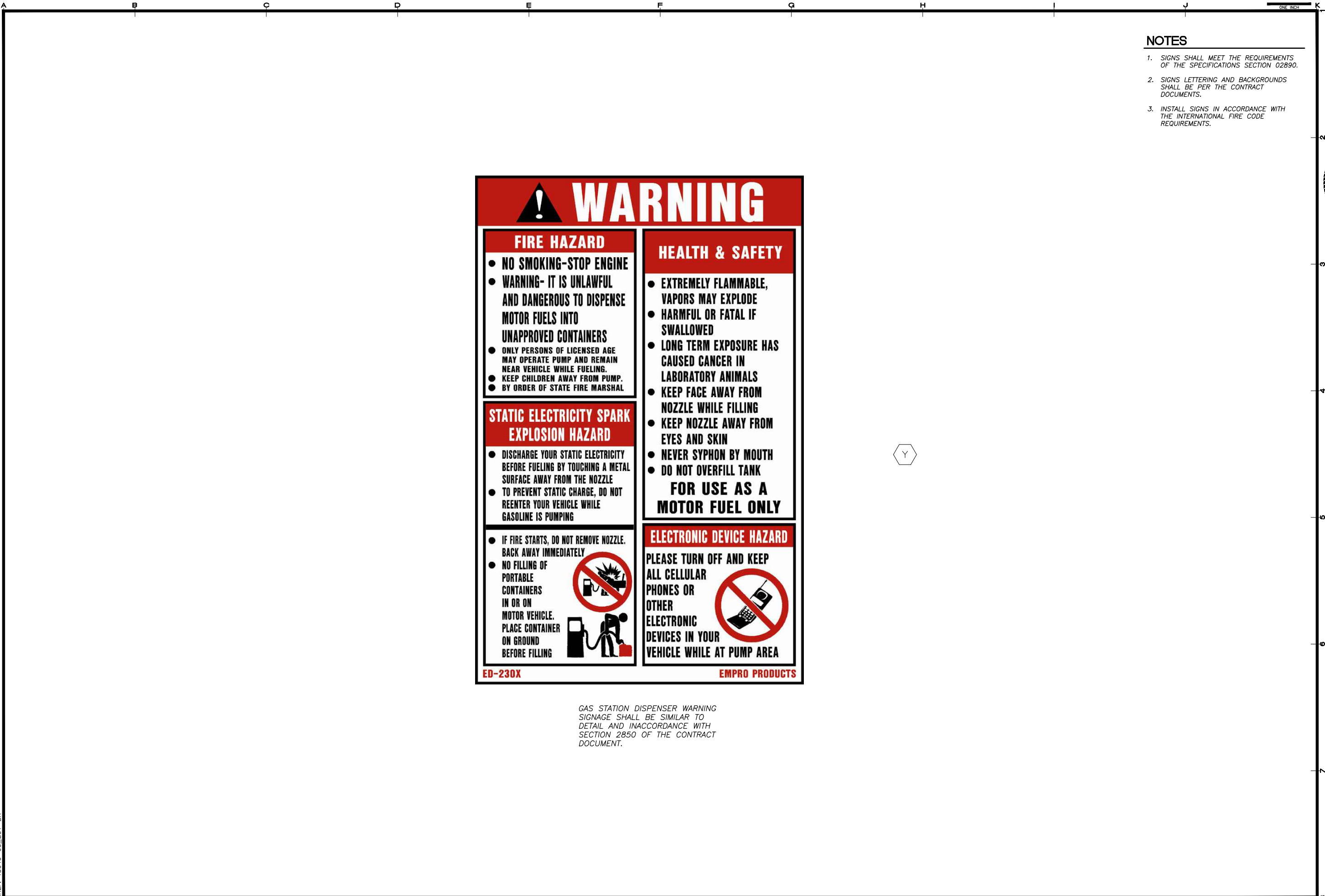


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 KAKE, ALASKA

SHEET TITLE: SIGNAGE
 SHEET: C5.05
 DRAWN BY: HDL CHECKED BY: MRS
 DATE: 05/25/16 SCALE: NONE
 JOB NUMBER: 13-040

H:\jobs\13-040_Koke Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_C1-C1_SIGNAGE_1=0, 04-19-16 at 09:45 by WJB
 LAYOUT: C5.04 - SIGNAGE
 VIEW: C601_H_PDF, C601_H_X7700, C602_H_PDF, C602_H_X7700
 XREF: 13040-00_B01-BK



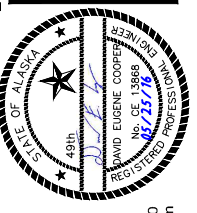
! WARNING

<div style="background-color: red; color: white; text-align: center; padding: 2px;">FIRE HAZARD</div> <ul style="list-style-type: none"> NO SMOKING-STOP ENGINE WARNING- IT IS UNLAWFUL AND DANGEROUS TO DISPENSE MOTOR FUELS INTO UNAPPROVED CONTAINERS ONLY PERSONS OF LICENSED AGE MAY OPERATE PUMP AND REMAIN NEAR VEHICLE WHILE FUELING. KEEP CHILDREN AWAY FROM PUMP. BY ORDER OF STATE FIRE MARSHAL 	<div style="background-color: red; color: white; text-align: center; padding: 2px;">HEALTH & SAFETY</div> <ul style="list-style-type: none"> EXTREMELY FLAMMABLE, VAPORS MAY EXPLODE HARMFUL OR FATAL IF SWALLOWED LONG TERM EXPOSURE HAS CAUSED CANCER IN LABORATORY ANIMALS KEEP FACE AWAY FROM NOZZLE WHILE FILLING KEEP NOZZLE AWAY FROM EYES AND SKIN NEVER SYPHON BY MOUTH DO NOT OVERFILL TANK
<div style="background-color: red; color: white; text-align: center; padding: 2px;">STATIC ELECTRICITY SPARK EXPLOSION HAZARD</div> <ul style="list-style-type: none"> DISCHARGE YOUR STATIC ELECTRICITY BEFORE FUELING BY TOUCHING A METAL SURFACE AWAY FROM THE NOZZLE TO PREVENT STATIC CHARGE, DO NOT REENTER YOUR VEHICLE WHILE GASOLINE IS PUMPING 	<div style="background-color: red; color: white; text-align: center; padding: 2px;">ELECTRONIC DEVICE HAZARD</div> <p>PLEASE TURN OFF AND KEEP ALL CELLULAR PHONES OR OTHER ELECTRONIC DEVICES IN YOUR VEHICLE WHILE AT PUMP AREA</p>
<ul style="list-style-type: none"> IF FIRE STARTS, DO NOT REMOVE NOZZLE. BACK AWAY IMMEDIATELY NO FILLING OF PORTABLE CONTAINERS IN OR ON MOTOR VEHICLE. PLACE CONTAINER ON GROUND BEFORE FILLING 	
ED-230X	EMPRO PRODUCTS

GAS STATION DISPENSER WARNING SIGNAGE SHALL BE SIMILAR TO DETAIL AND INACCORDANCE WITH SECTION 2850 OF THE CONTRACT DOCUMENT.

- NOTES**
- SIGNS SHALL MEET THE REQUIREMENTS OF THE SPECIFICATIONS SECTION 02890.
 - SIGNS LETTERING AND BACKGROUNDS SHALL BE PER THE CONTRACT DOCUMENTS.
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REVISIONS	DATE	DESCRIPTION
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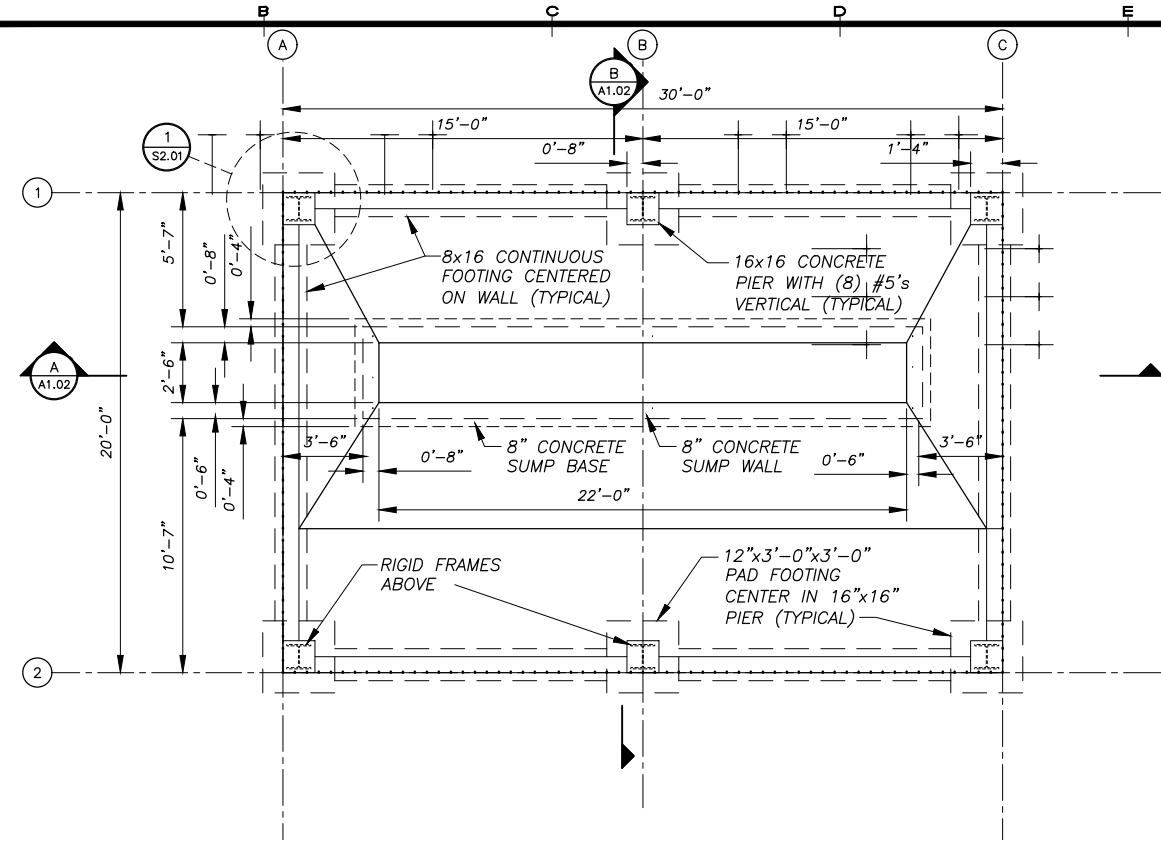
KAKE BULK FUEL UPGRADES

SHEET TITLE SIGNAGE	
SHEET C5.06	
DRAWN BY: HDL	CHECKED BY: MRS
DATE: 05/25/16	SCALE: NONE
JOB NUMBER: 13-040	

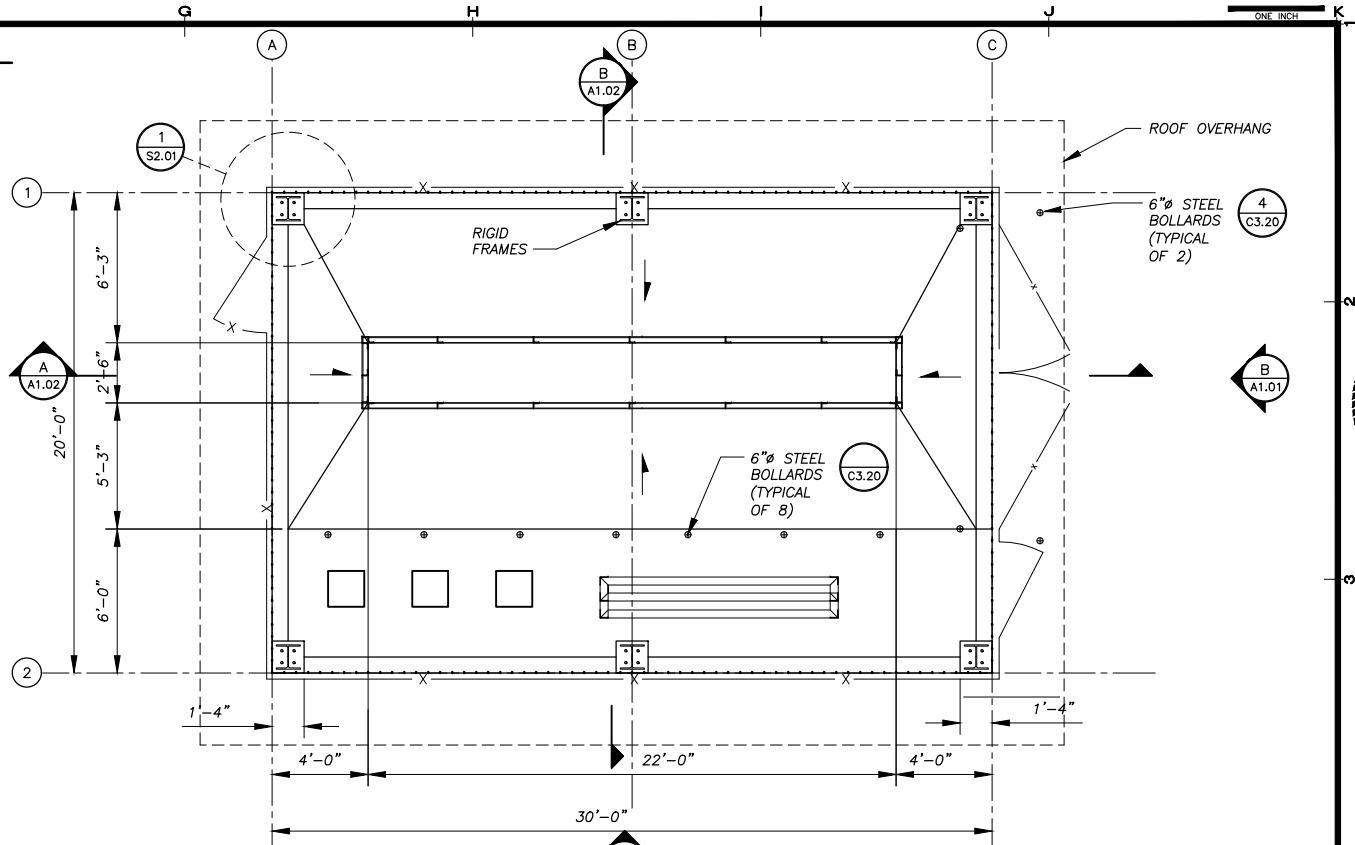
H:\Jobs\13-040 Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_A2.01-AS3...-TRUCK-FILL, 1=1, 05-24-16 at 10:36 by jkk
 LAYOUT: A1.01 - FLOOR PLAN & ELEVATIONS
 REF: 13040-00_B01-BK

NOTES

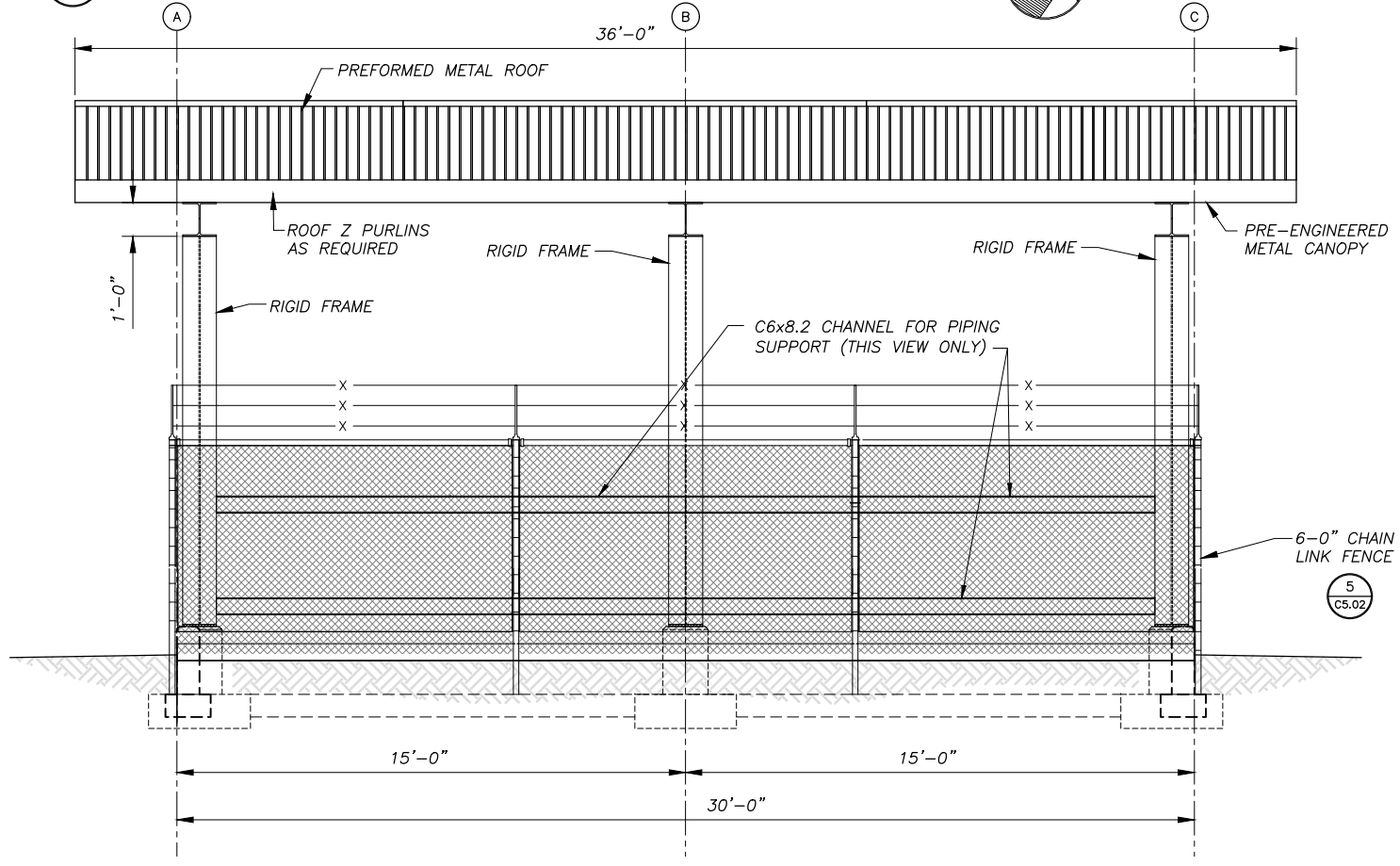
1. THIS DRAWING IS PROTOTYPICAL DRAWING FOR THE TRUCK FILL SHELTER. CONTRACTOR SHALL PROVIDE DESIGN, FURNISH AND INSTALL THE TRUCK FILL SHELTER MEETING THE MINIMUM REQUIREMENTS OF THESE PLANS AND THE PROJECT SPECIFICATIONS. BUILDING CONNECTION AND ELEMENTS SHOWN ARE ASSUMED AND WILL REQUIRE COORDINATION WITH TRUCK FILL SHELTER FABRICATOR.
2. CONTRACTOR SHALL DESIGN, FURNISH, AND INSTALL TRUCK FILL SHELTER TO ATTACH SEAMLESSLY TO THE TRUCK FILL SHELTER FOUNDATION.



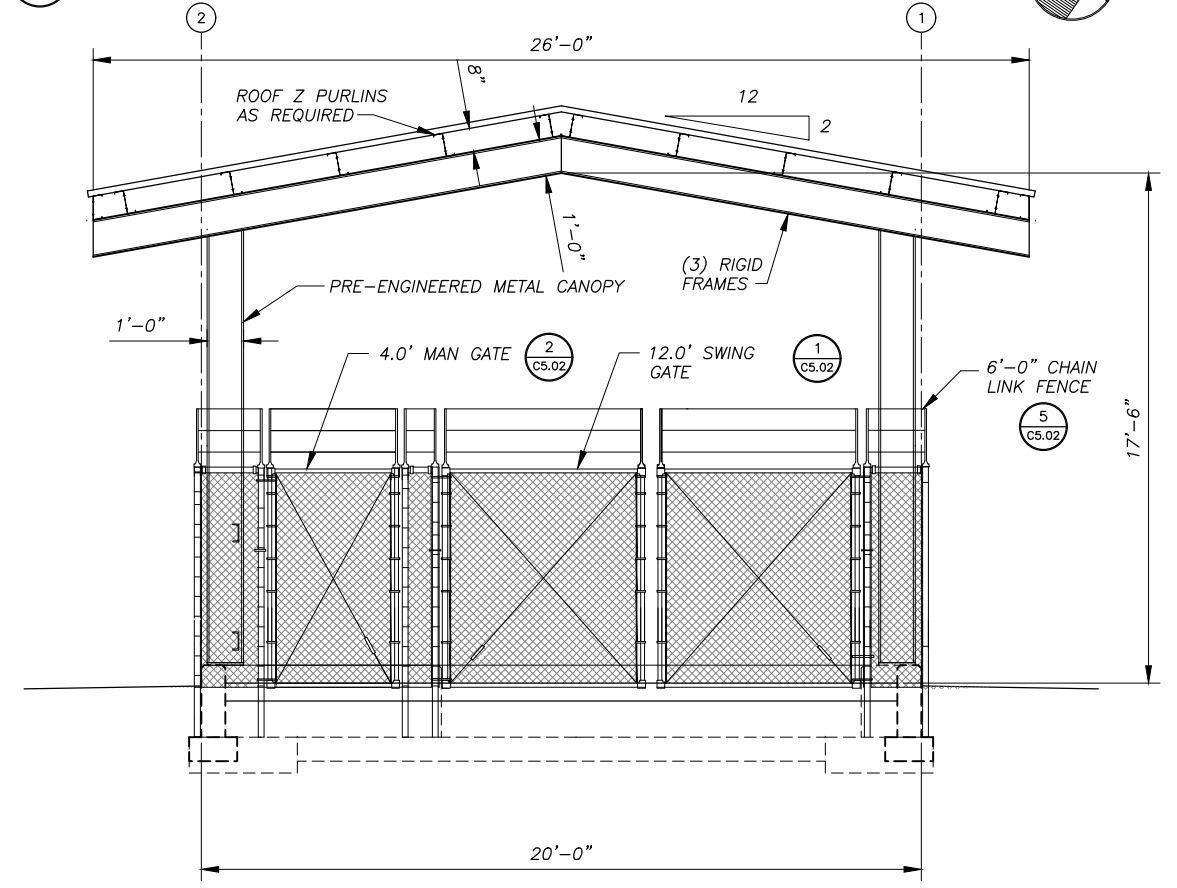
1 FOOTING PLAN - TRUCK FILL
 SCALE: 1/4" = 1'-0"



2 FLOOR PLAN - TRUCK FILL
 SCALE: 1/4" = 1'-0"

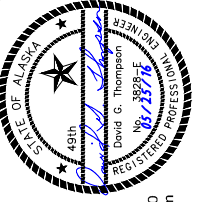


A ELEVATION - TRUCK FILL
 SCALE: 3/8" = 1'-0"



B ELEVATION - TRUCK FILL
 SCALE: 3/8" = 1'-0"

REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW

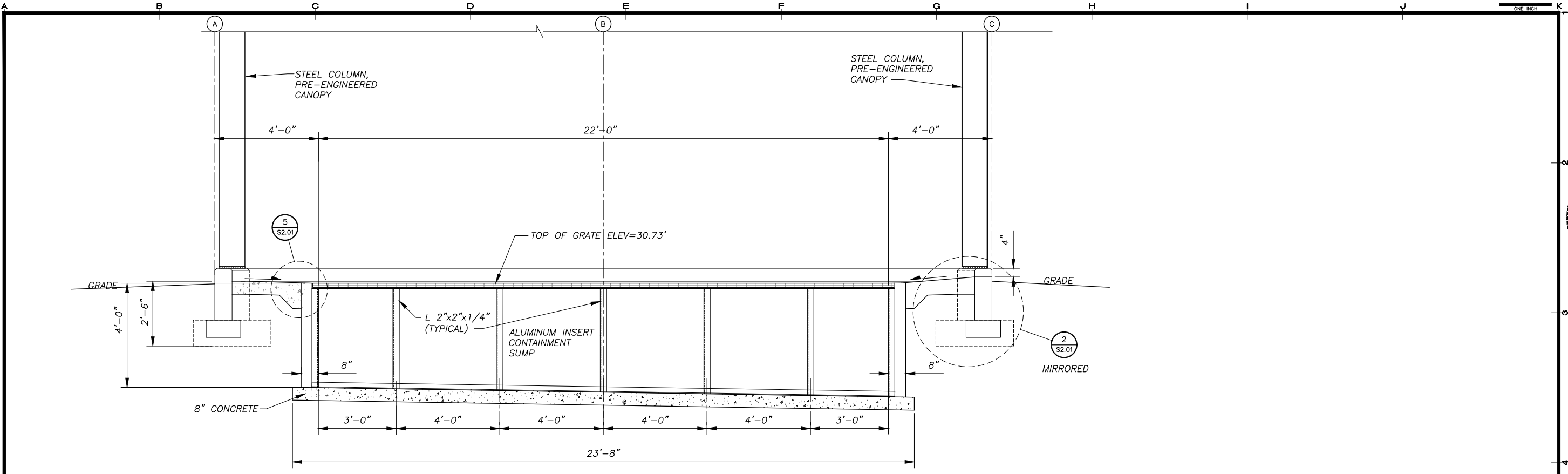


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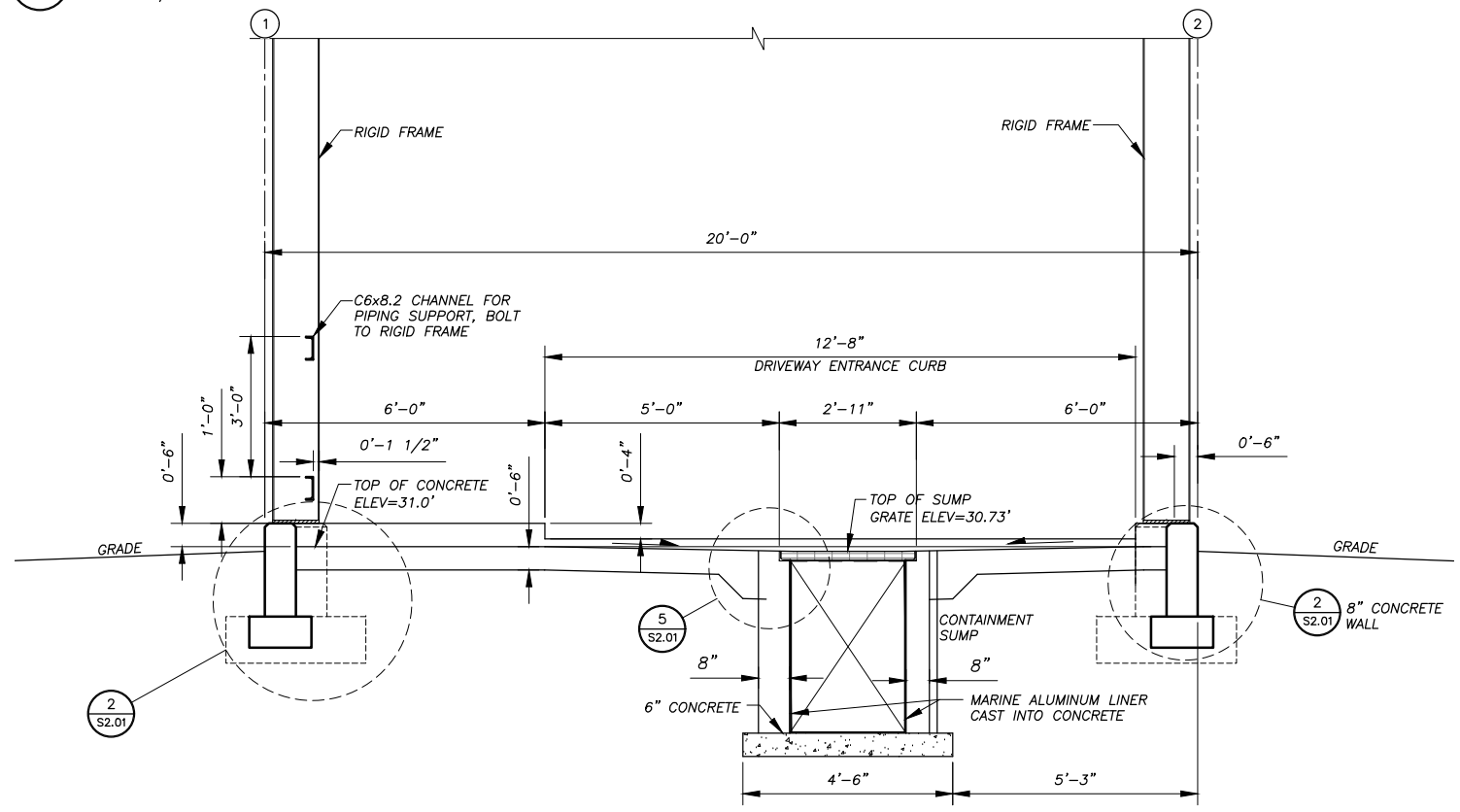
ALASKA ENERGY AUTHORITY
 KAKE BULK FUEL UPGRADES
 KAKE, ALASKA

SHEET TITLE: TRUCK FILL SHELTER PLAN AND ELEVATIONS
 SHEET: A1.01
 DRAWN BY: RB/KK CHECKED BY: MRS
 DATE: 05/25/16 SCALE: AS SHOWN
 JOB NUMBER: 13-040

H:\jobs\13-040 Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_A2.01-AS3-TRUCK-FILL, 1=1, 05-24-16 at 10:36 by jkk
 LAYOUT: A1.02 - SECTIONS
 XREF: 13040-00_B01-BK

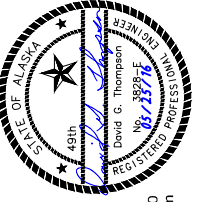


A SECTION - TRUCK FILL
 A1.02 SCALE: 1/2" = 1'-0"



B SECTION - TRUCK FILL
 A1.02 SCALE: 1/2" = 1'-0"

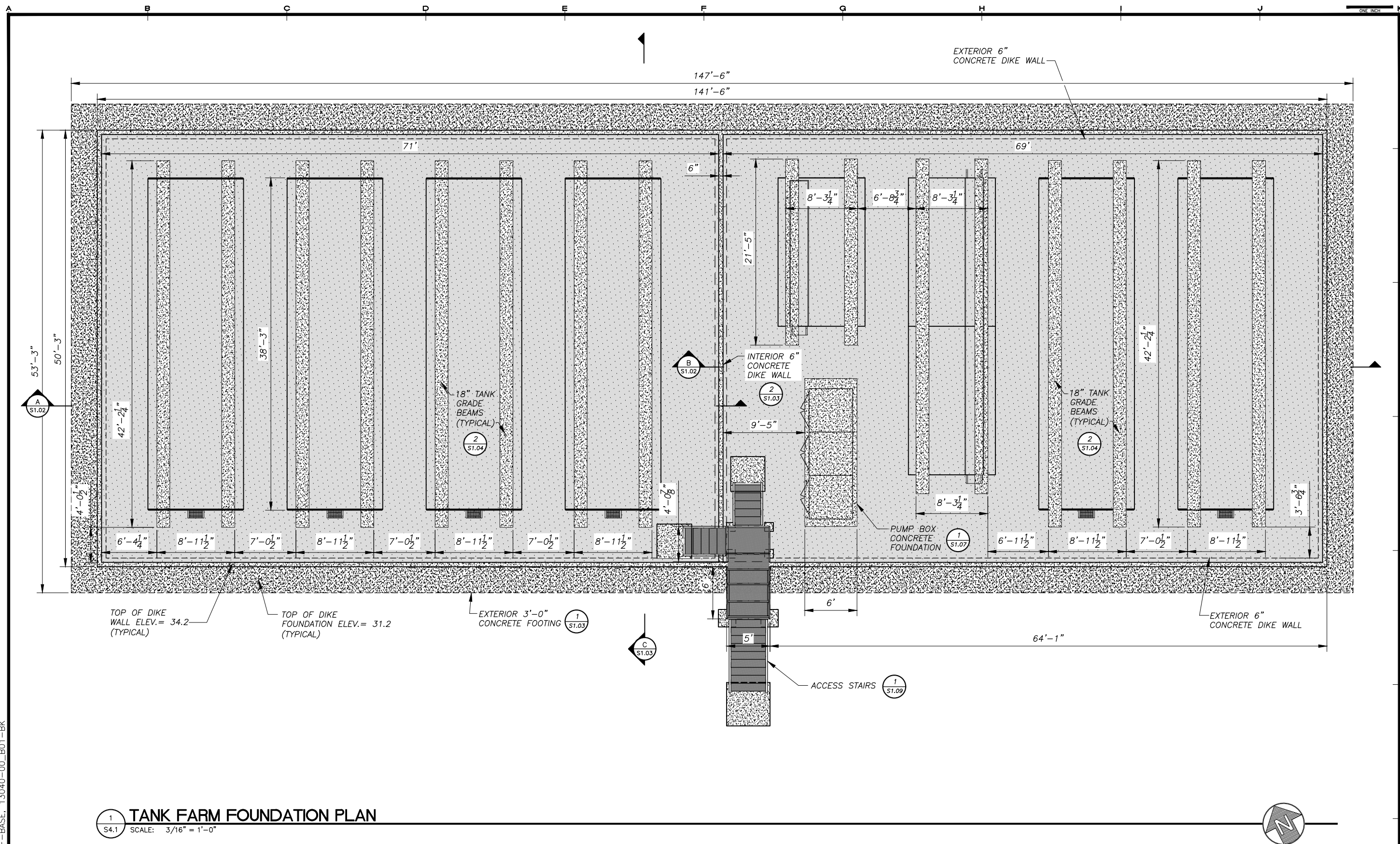
REVISIONS	DATE	DESCRIPTION
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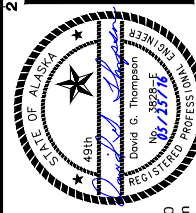
ALASKA ENERGY AUTHORITY
 KAKE BULK FUEL UPGRADES
 TRUCK FILL SHELTER
 PLAN AND ELEVATIONS
 SHEET A1.02
 DRAWN BY: RB/KK CHECKED BY: MRS
 DATE: 05/25/16 SCALE: AS SHOWN
 JOB NUMBER: 13-040

H:\jobs\13-040 Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_S1.01-S1.04-TF-FOUNDATION, 1=1, 04-28-16 at 13:29 by jkk
 LAYOUT: S1.01 - FOUNDATION PLAN
 XREF: 13-040_00_AS-TF-BASE, 13040-00_B01-BK



1 TANK FARM FOUNDATION PLAN
 S4.1 SCALE: 3/16" = 1'-0"

REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW

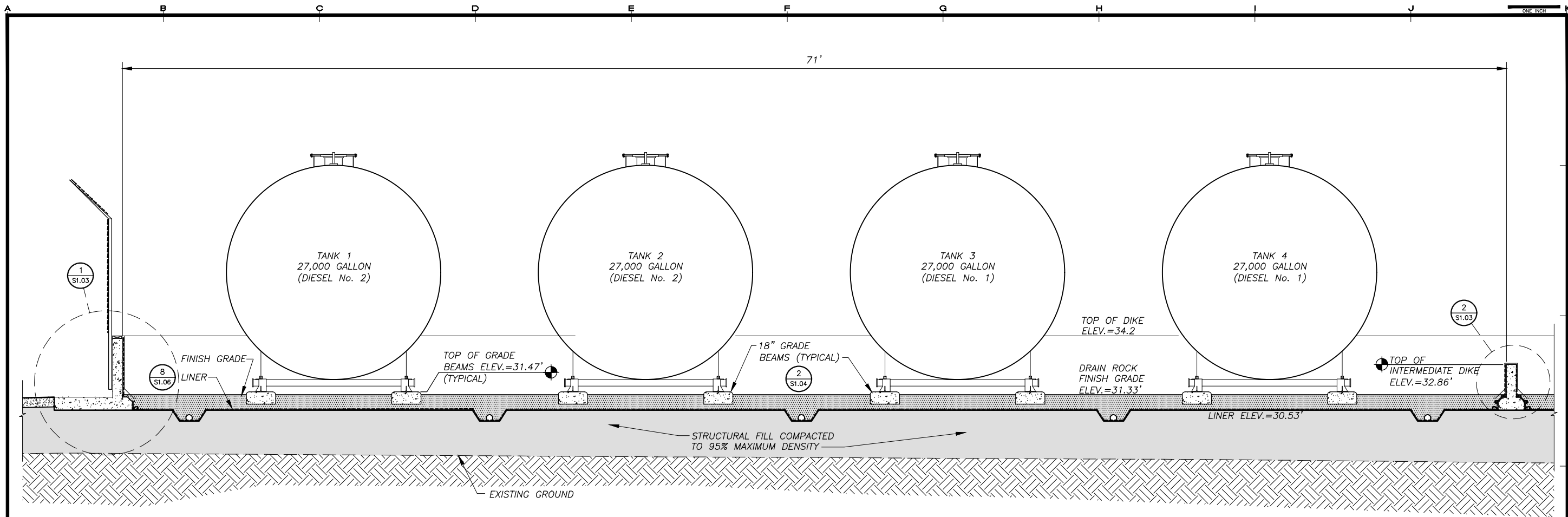


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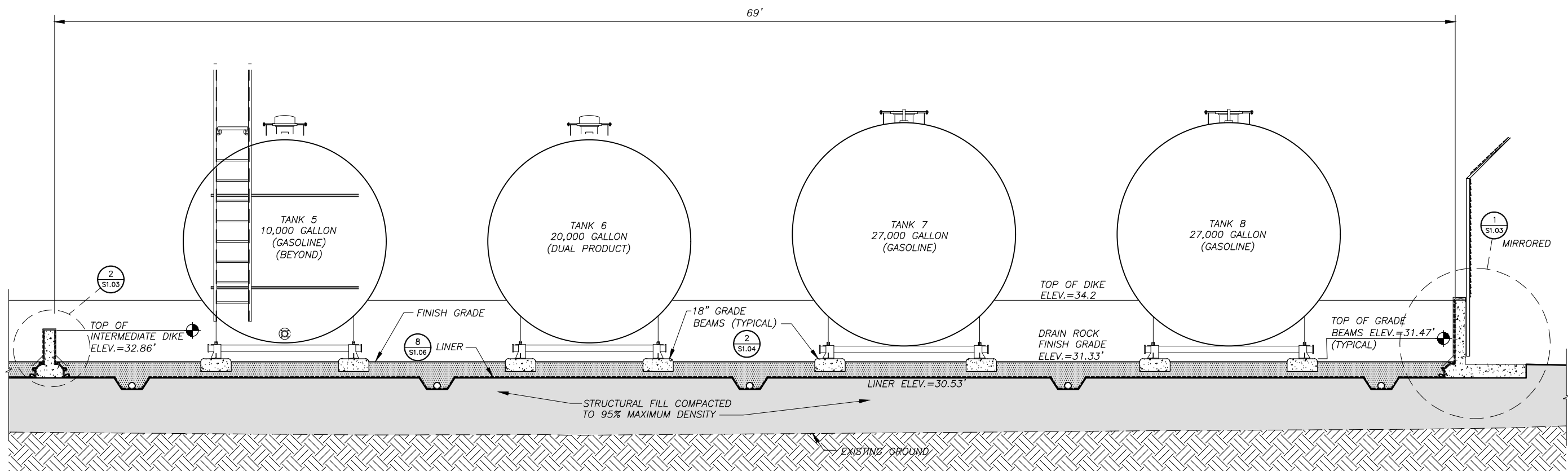
ALASKA ENERGY AUTHORITY
 KAKE BULK FUEL UPGRADES
 TANK FARM FOUNDATION PLAN
 KAKE, ALASKA

SHEET TITLE	
TANK FARM FOUNDATION PLAN	
SHEET	
S1.01	
DRAWN BY:	CHECKED BY:
KK	DGT
DATE:	SCALE:
05/25/16	AS SHOWN
JOB NUMBER:	
13-040	

H:\Jobs\13-040 Kake Bulk Fuel Upgrades (ADEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_S1.01-S1.04-TF-FOUNDATION, 1=1, 04-28-16 at 13:29 by jkk
 LAYOUT: S1.02 - SECTIONS
 XREF: 13-040_00_AS-TF-BASE, 13040-00_B01-BK



A SECTION
 S1.02 SCALE: 3/8" = 1'-0"



B SECTION
 S1.02 SCALE: 3/8" = 1'-0"

REVISIONS	DATE	DESCRIPTION
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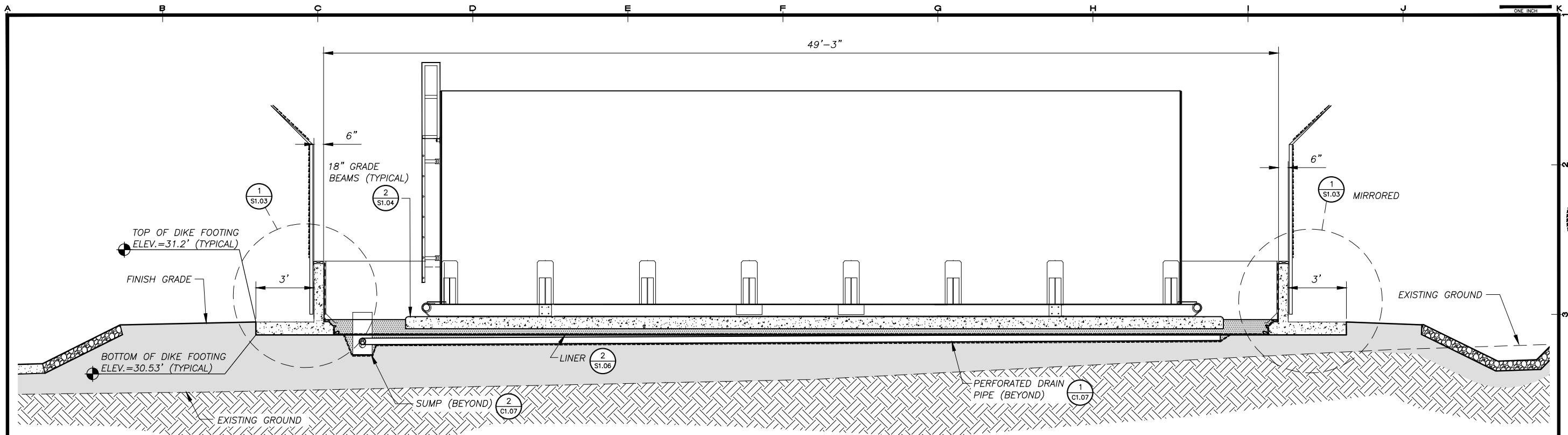
SHEET TITLE: **TANK FARM SECTIONS**

SHEET: **S1.02**

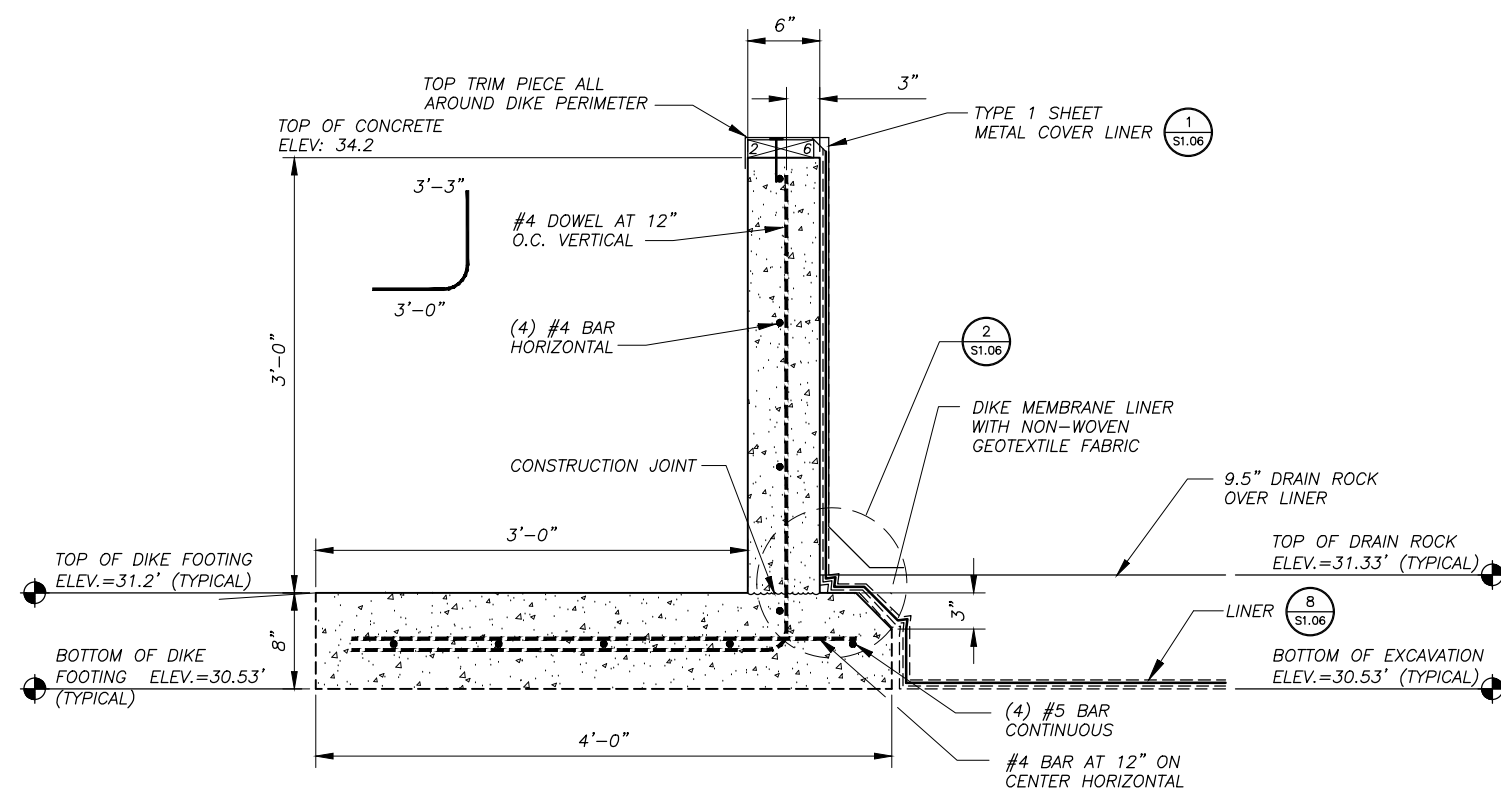
DRAWN BY: **KK** CHECKED BY: **DGT**

DATE: **05/25/16** SCALE: **AS SHOWN**

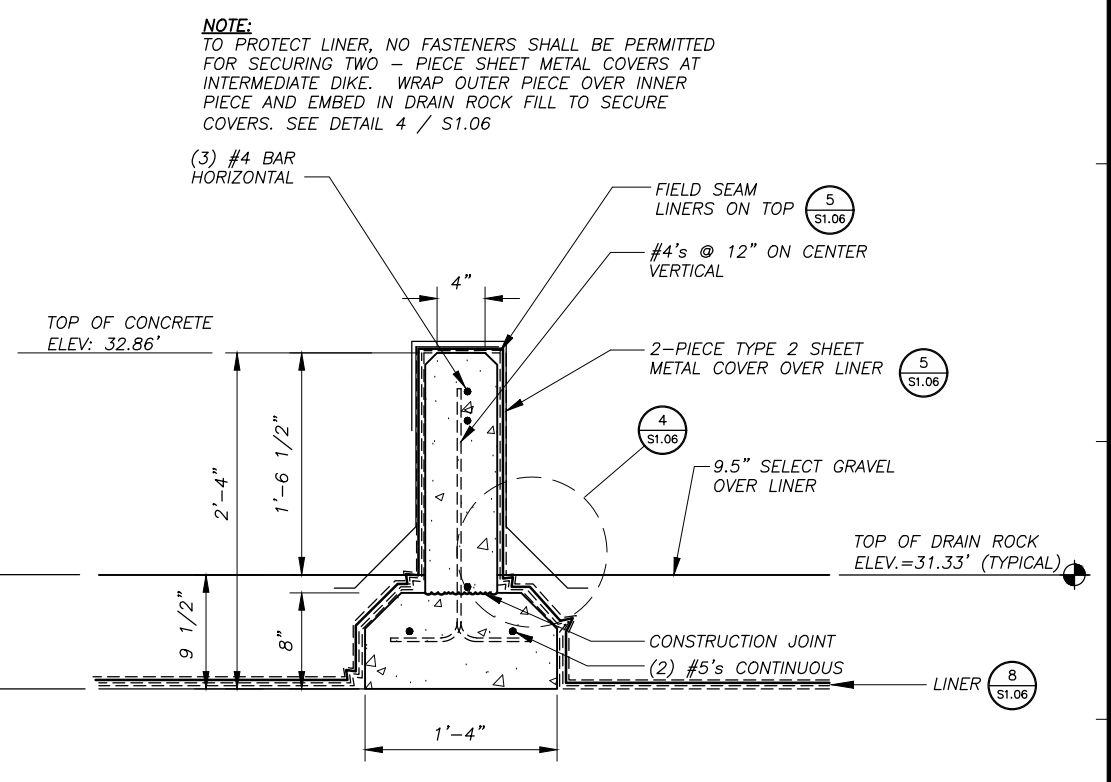
JOB NUMBER: **13-040**



C SECTION
S1.03 SCALE: 3/8" = 1'-0"



1 EXTERIOR FOOTING DETAIL
S1.03 SCALE: 1 1/2" = 1'-0"



2 INTERMEDIATE FOOTING DETAIL
S1.03 SCALE: 1 1/2" = 1'-0"

NOTE:
TO PROTECT LINER, NO FASTENERS SHALL BE PERMITTED FOR SECURING TWO - PIECE SHEET METAL COVERS AT INTERMEDIATE DIKE. WRAP OUTER PIECE OVER INNER PIECE AND EMBED IN DRAIN ROCK FILL TO SECURE COVERS. SEE DETAIL 4 / S1.06

H:\Jobs\13-040 Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_S1.01-S1.04-TF-FOUNDATION, 1=1, 04-28-16 at 13:29 by jkk
 LAYOUT: S1.03 - SECTIONS
 XREF: 13-040_00_AS-TF-BASE, 13040-00_B01-BK

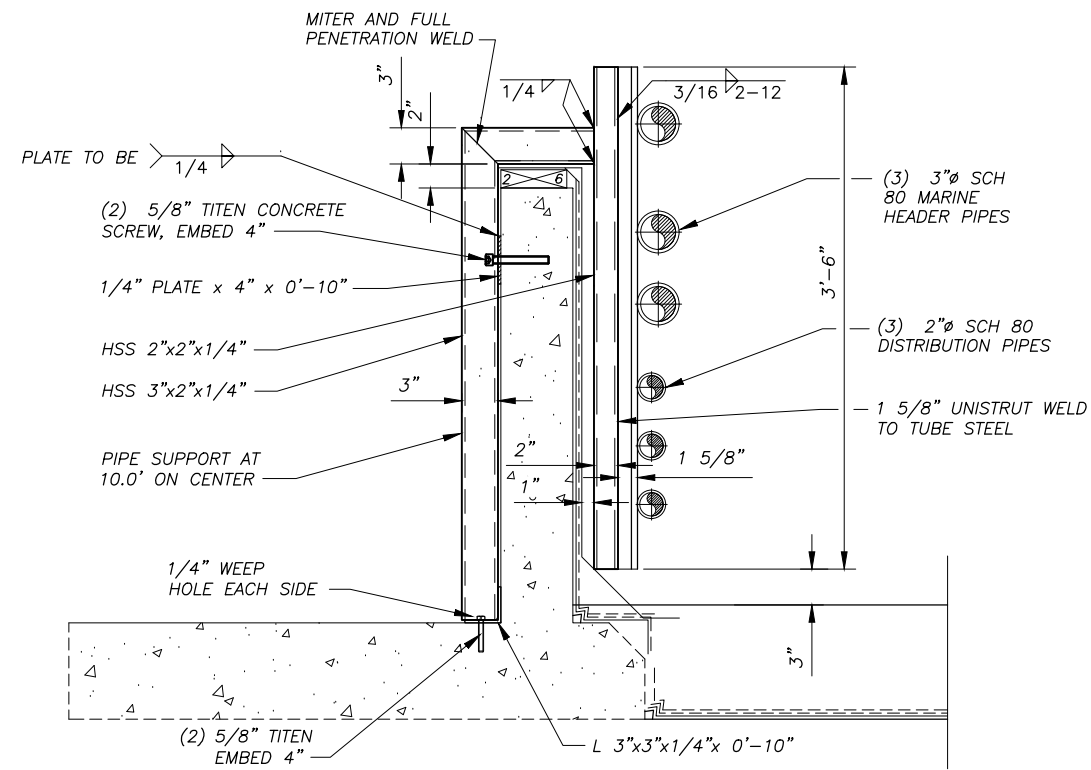
REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW



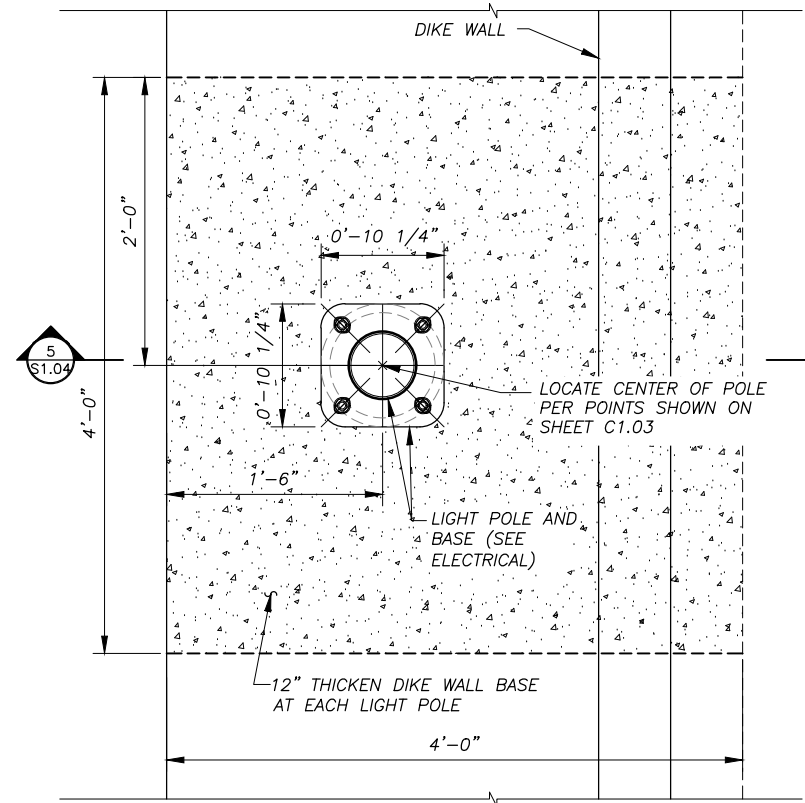
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ALASKA ENERGY AUTHORITY
 KAKE BULK FUEL UPGRADES
 TANK FARM SECTIONS AND DETAILS
 SHEET S1.03
 DRAWN BY: KK CHECKED BY: DGT
 DATE: 05/25/16 AS SHOWN
 JOB NUMBER: 13-040

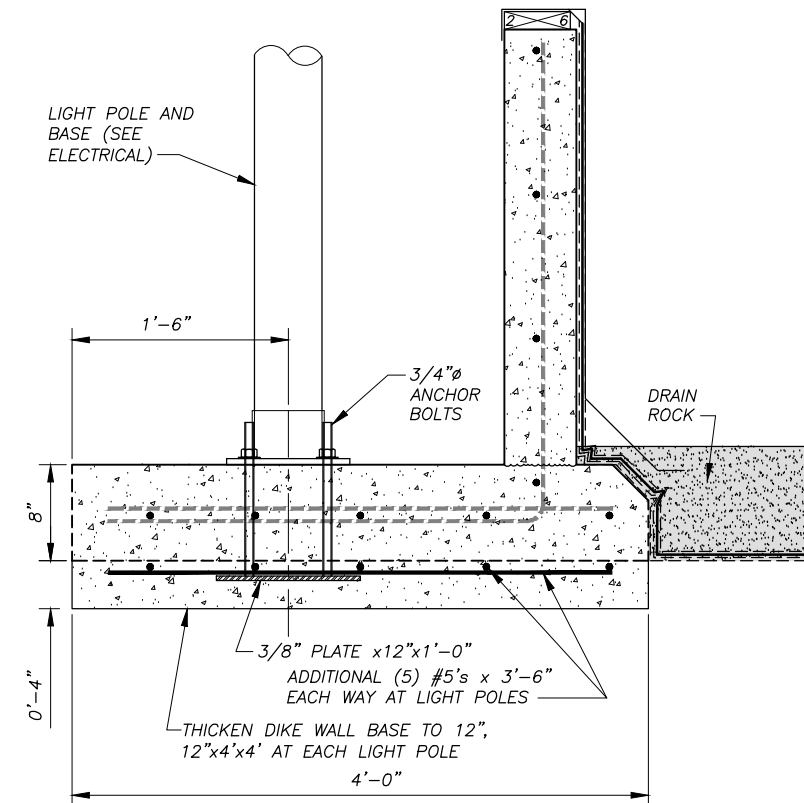
H:\jobs\13-040 Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_S1.01-S1.04-TF-FOUNDATION, 1=1, 04-28-16 at 13:29 by jkk
 LAYOUT: S1.04 - DETAILS
 XREF: 13-040_00_AS-TF-BASE, 13040-00_B01-BK



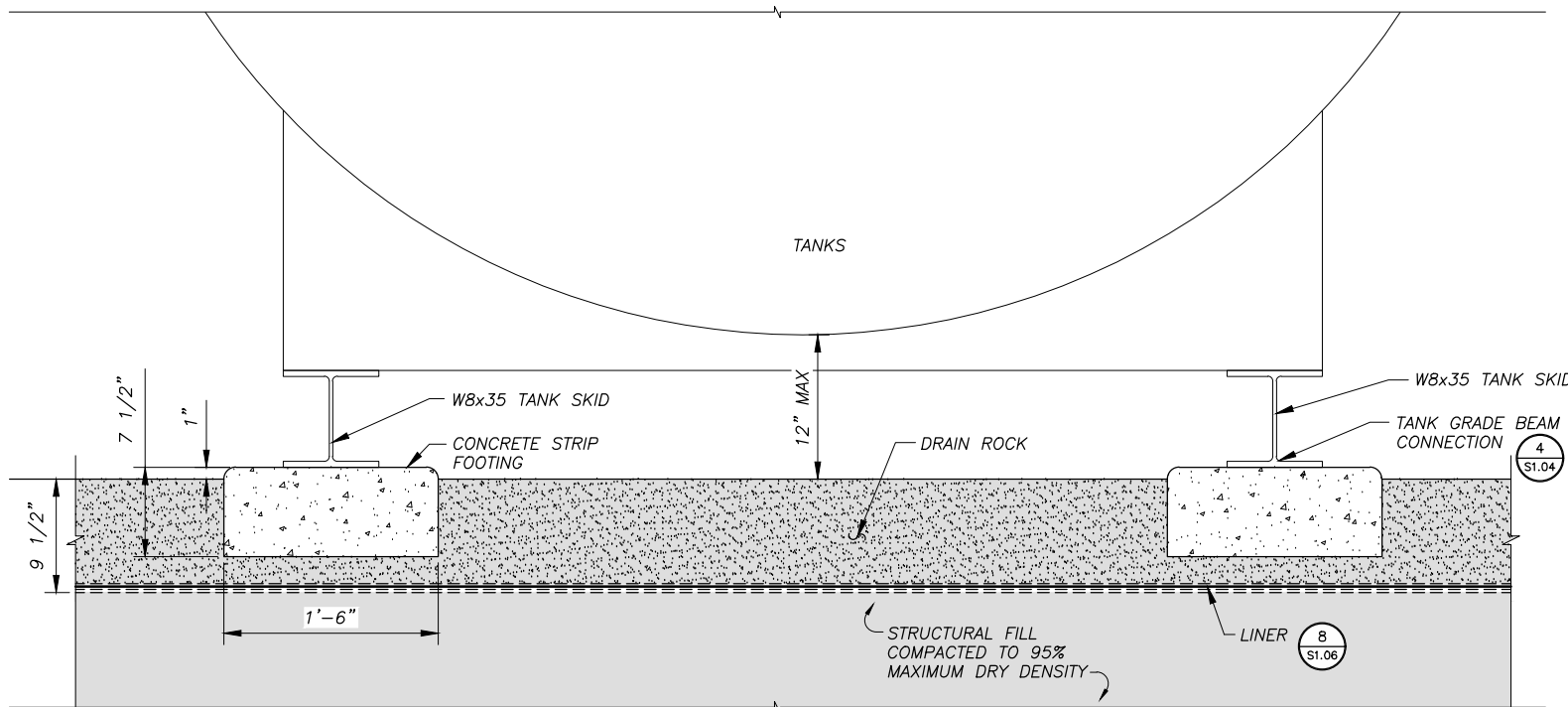
1 PIPE HANGER AT CONTAINMENT WALL
 S1.04 SCALE: 1 1/2" = 1'-0"



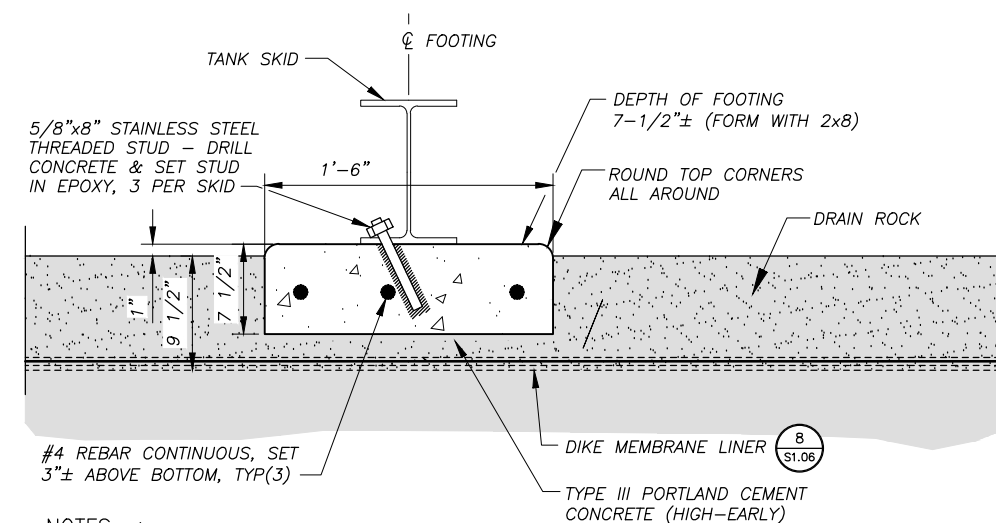
3 LIGHT POLE FOUNDATION
 S1.04 SCALE: 1 1/2" = 1'-0"



5 LIGHT POLE FOUNDATION SECTION
 S1.04 SCALE: 1 1/2" = 1'-0"



2 TANK GRADE BEAM
 S1.04 SCALE: 1 1/2" = 1'-0"



4 TANK GRADE BEAM CONNECTION
 S1.04 SCALE: 1 1/2" = 1'-0"

NOTES: 1) TAKE STEPS TO PROTECT LINER WHILE FORMING & POURING FOOTING. **DO NOT USE STAKES FOR SETTING FORMS.**
 2) SEE DIKE PLAN FOR FOOTING LENGTH & WIDTH.

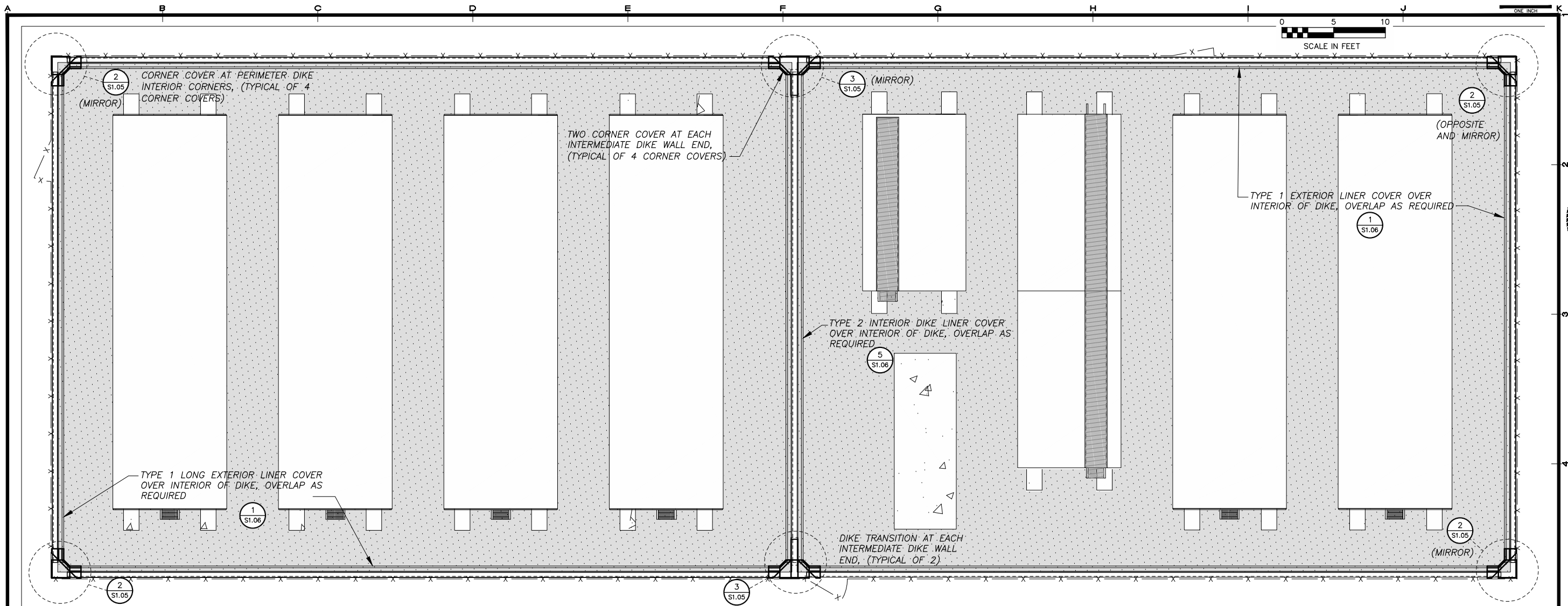
REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW



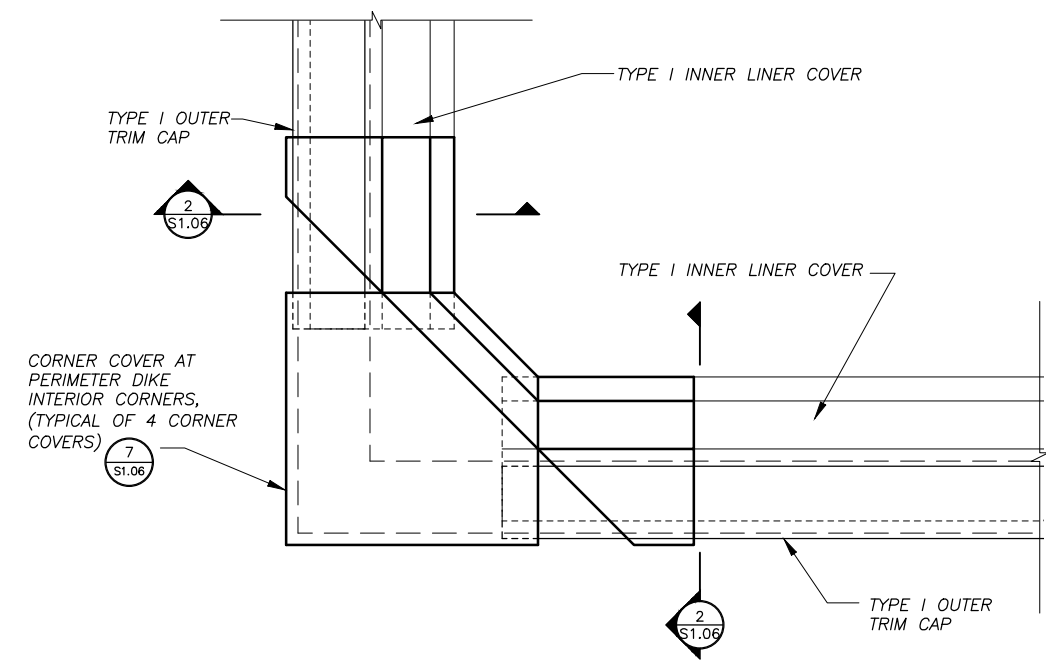
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 KAKE BULK FUEL UPGRADES
 TANK FARM DETAILS
 SHEET: **S1.04**
 DRAWN BY: KK CHECKED BY: DGT
 DATE: 05/25/16 AS SHOWN
 JOB NUMBER: 13-040

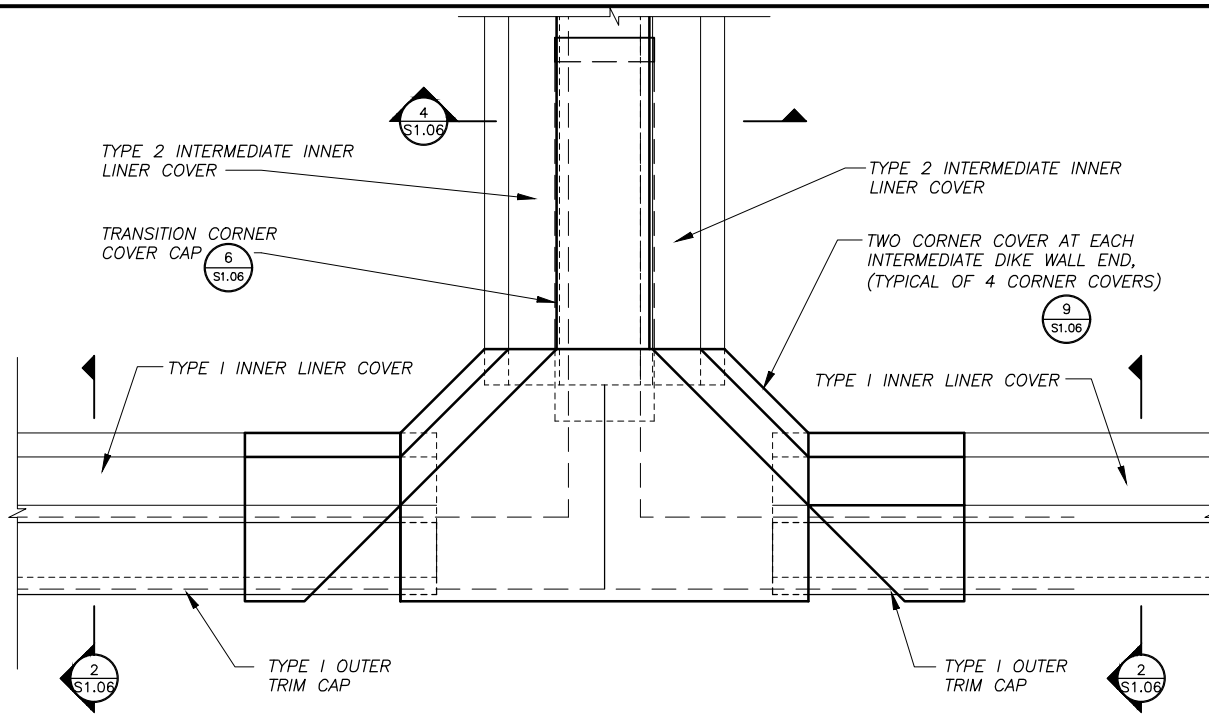
H:\Jobs\13-040 Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_S1.05-06-LINER, 1=1, 05-26-16 at 13:42 by jkk
 LAYOUT: S1.05 - LINER
 XREF: 13040-00_B01-BK



1 DIKE LINER SHEET METAL COVER PLAN
 S1.05 SCALE: 1" = 5'



2 CORNER COVER PLAN
 S1.05 SCALE: 1 1/2" = 1'-0"



3 INTERMEDIATE DIKE COVER PLAN
 S1.05 SCALE: 1 1/2" = 1'-0"

SHEET METAL LINER COVER NOTES:

1. FABRICATE FROM 20 GAUGE GALVANIZED SHEET METAL.
2. PROVIDE 1/2" HEM ON ALL EXTERIOR EDGES.
3. FABRICATE IN 8'-0" OR 10'-0" NOMINAL LENGTHS.
4. OVERLAP ENDS OF SECTIONS 2" MINIMUM.
5. PROVIDE CORNER COVERS AT ALL DIKE CORNERS TO ALLOW STRAIGHT SECTIONS TO TERMINATE 12" FROM CORNER. CORNER COVERS TO HAVE SAME CROSS SECTION AS STRAIGHT SECTIONS.

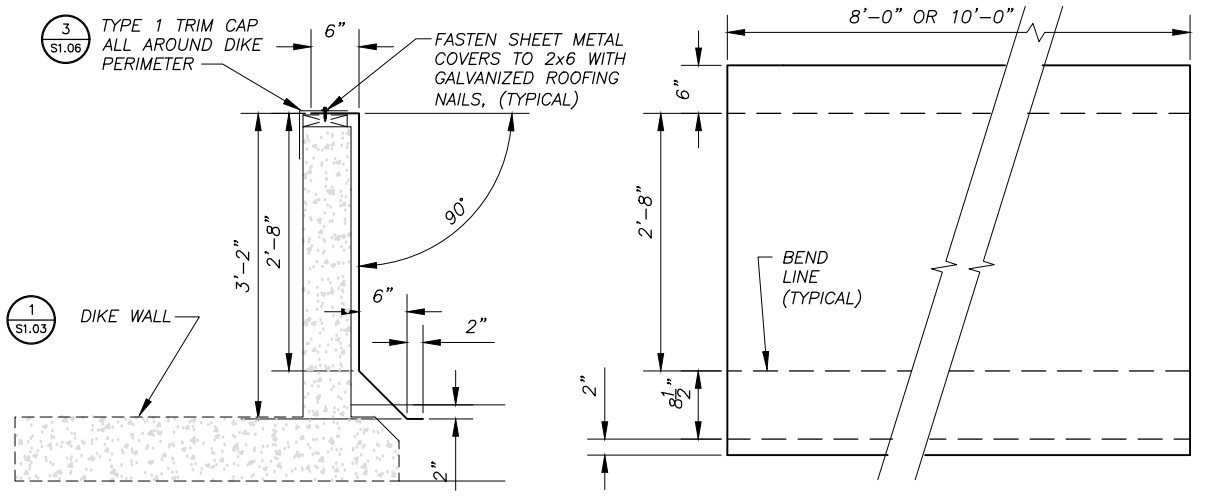
REVISIONS	MARK	DATE	DESCRIPTION



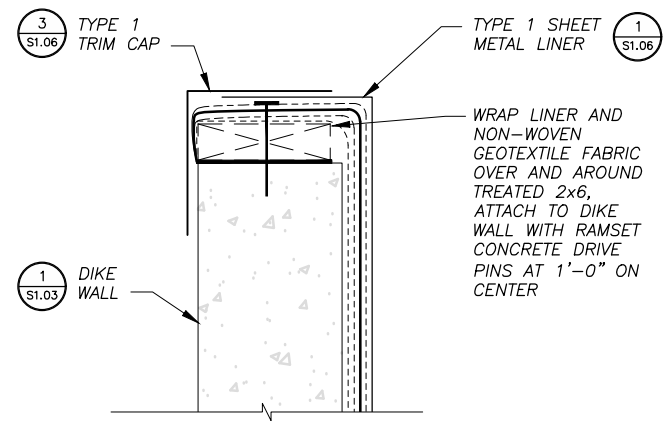
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 KAKE BULK FUEL UPGRADES
 TANK FARM - CONTAINMENT LINER METAL COVER
 SHEET: S1.05
 DRAWN BY: KK CHECKED BY: MRS
 DATE: 05/25/16 AS SHOWN
 JOB NUMBER: 13-040

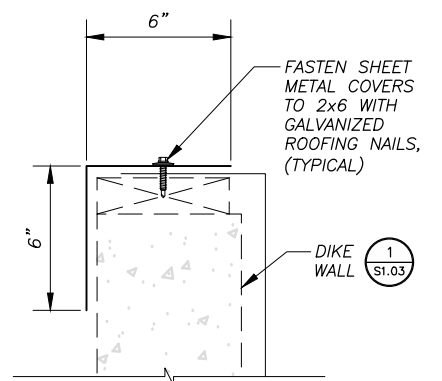
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 LAYOUT: S1.06 - LINER
 XREF: 13040-00_B01-BK



1 TYPE 1 DIKE SHEET METAL LINER
 S1.06 SCALE: 1" = 1'-0"

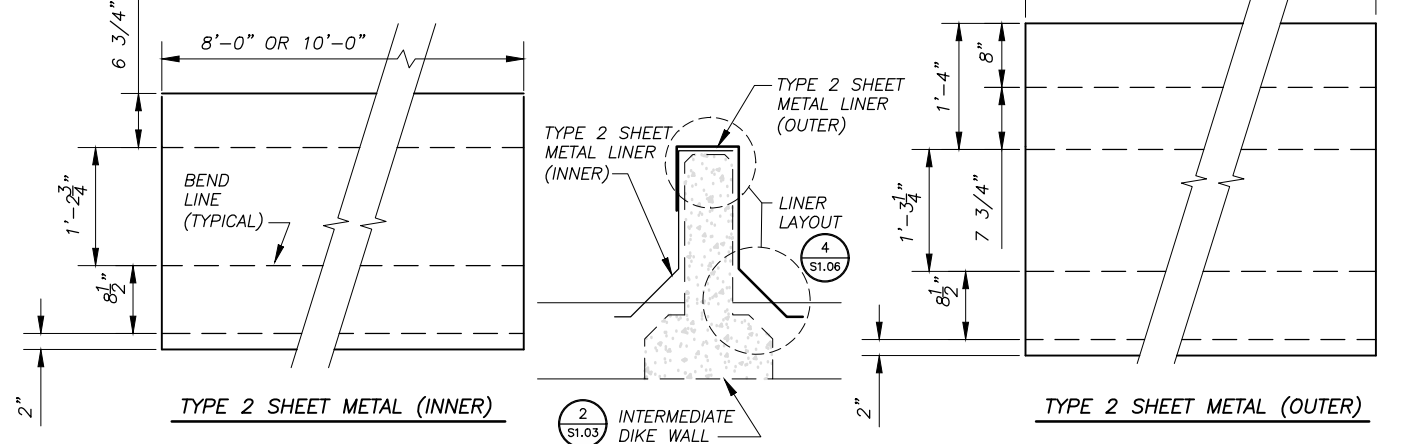


3 TYPE 1 TRIM CAP
 S1.06 SCALE: 3" = 1'-0"

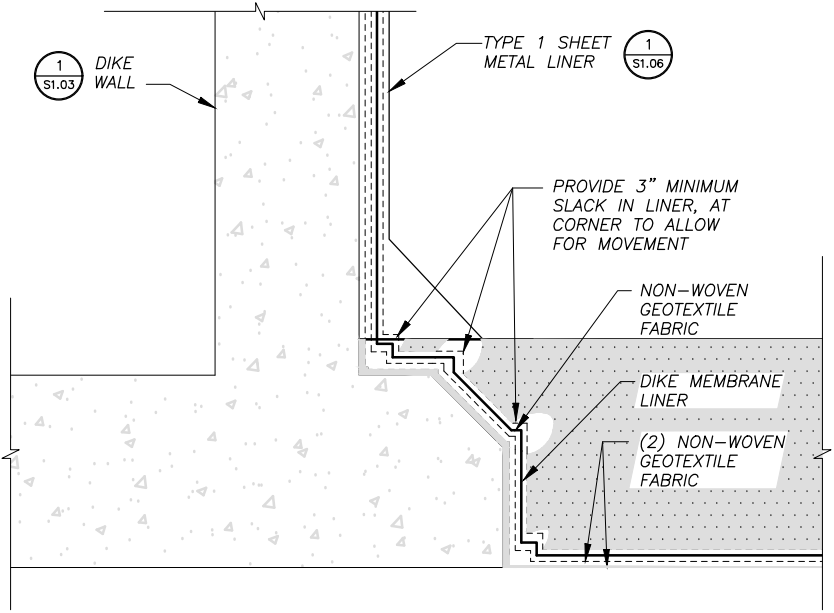


6 TRANSITION CAP
 S1.06 SCALE: 1" = 1'-0"

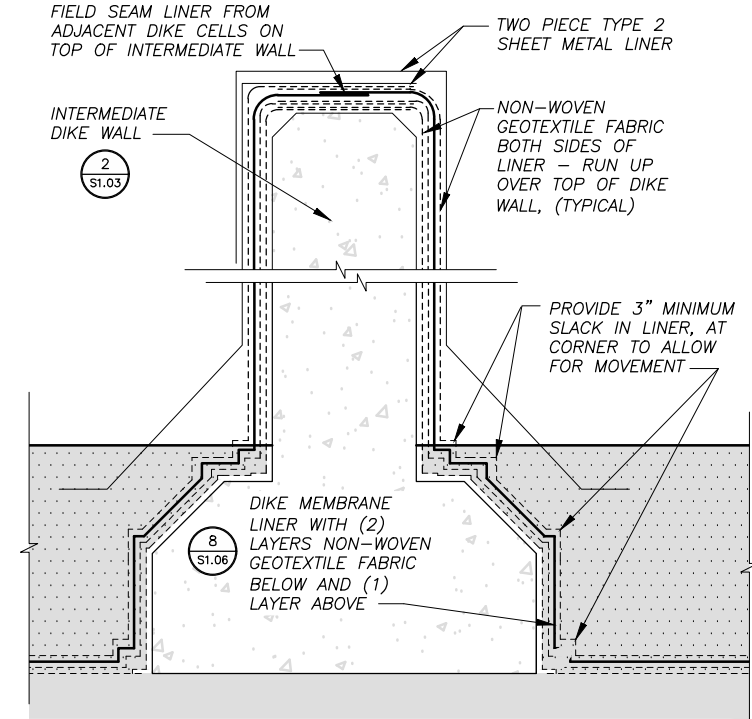
NOTE:
 TO PROTECT LINER NO FASTENERS ALLOWED FOR SECURING 2-PIECE SHEET METAL COVER AT INTERMEDIATE DIKE. WRAP OUTER PIECE OVER INNER PIECE AS SHOWN AND PLACE GRAVEL FILL AS SHOWN TO SECURE COVERS.



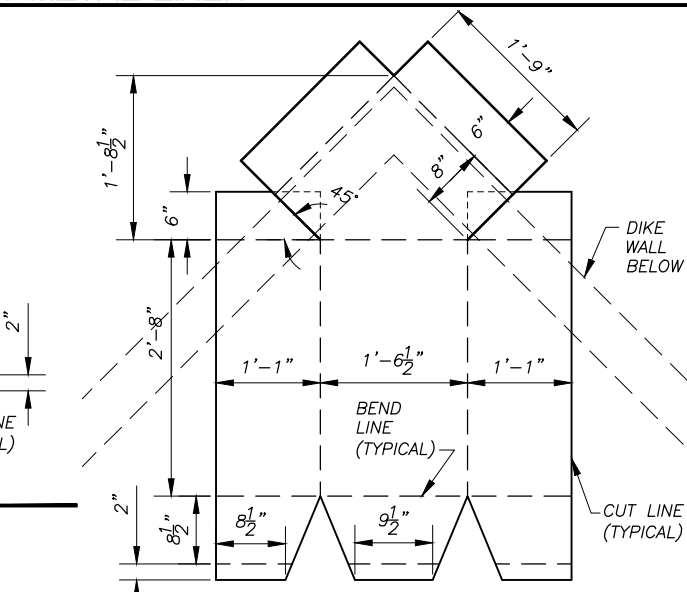
5 TYPE 2 SHEET METAL LINER
 S1.06 SCALE: 1" = 1'-0"



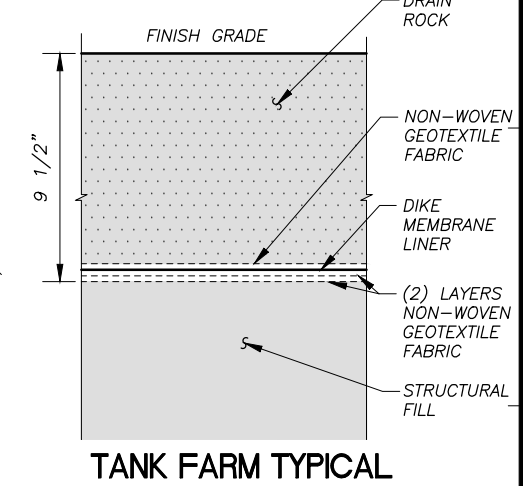
2 LINER DETAIL AT DIKE WALL
 S1.06 SCALE: NOT TO SCALE



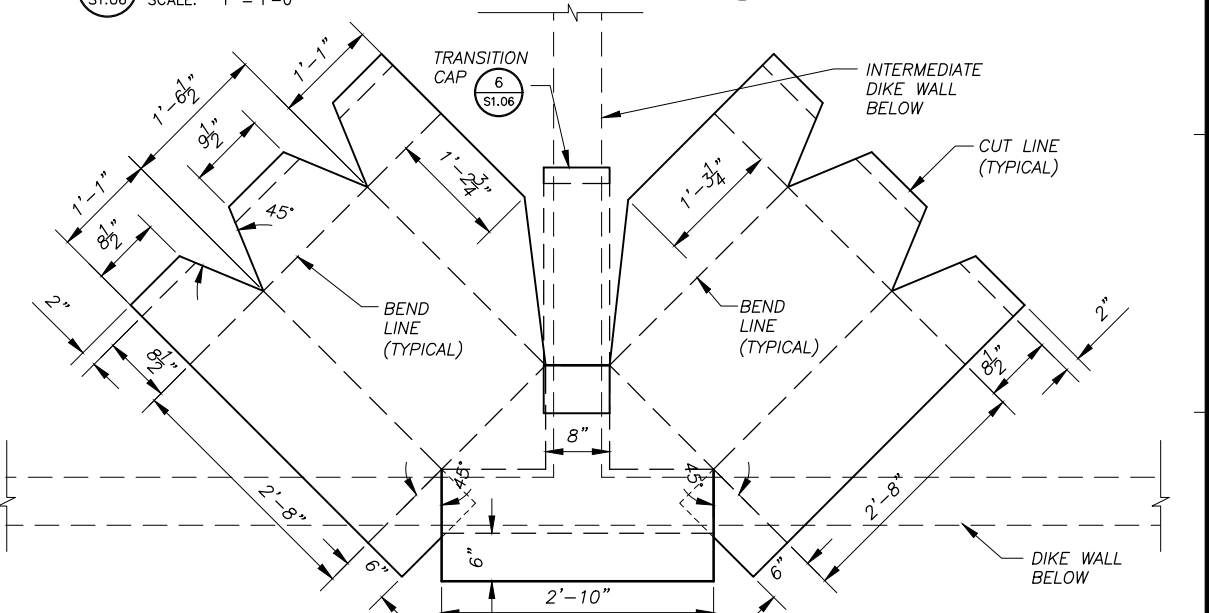
4 LINER DETAIL AT INTERMEDIATE WALL
 S1.06 SCALE: NOT TO SCALE



7 CORNER COVER CUT OUT
 S1.06 SCALE: 1" = 1'-0"

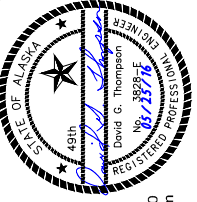


8 TANK FARM TYPICAL LINER INSTALLATION
 S1.06 SCALE: 1 1/2" = 1'-0"



9 DIKE TRANSITION CUT OUT
 S1.06 SCALE: 1" = 1'-0"

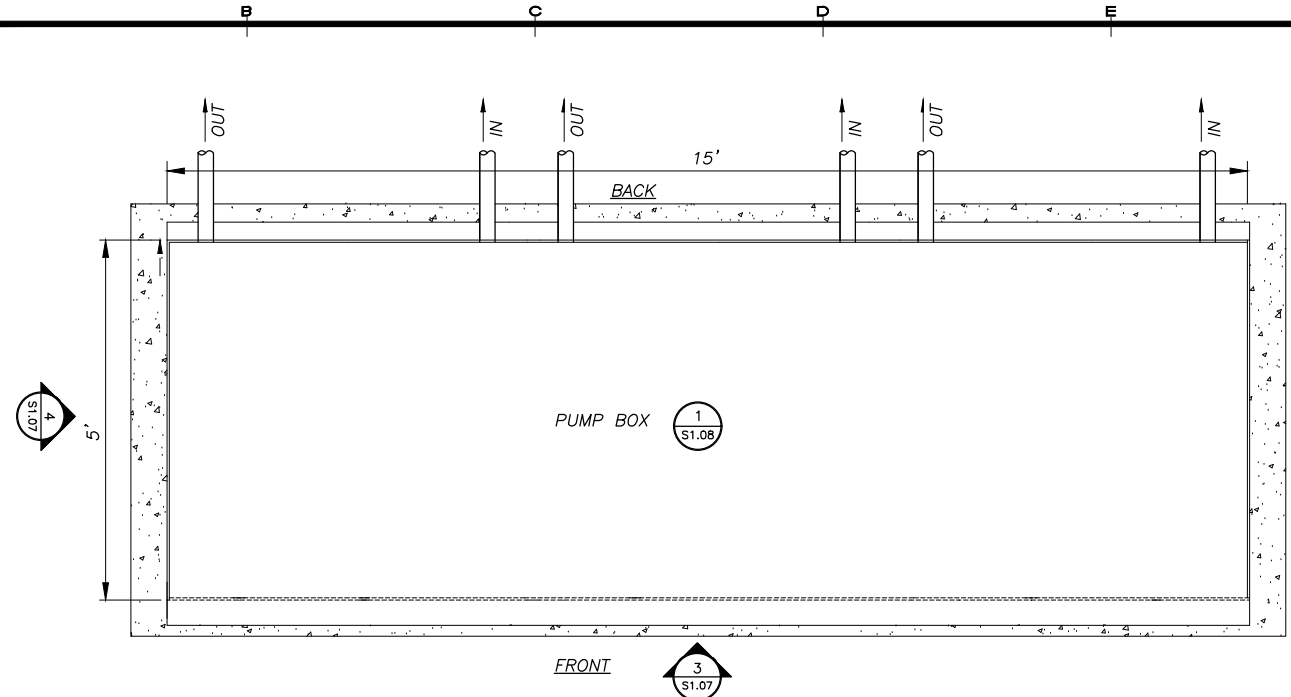
REVISIONS	DATE	DESCRIPTION



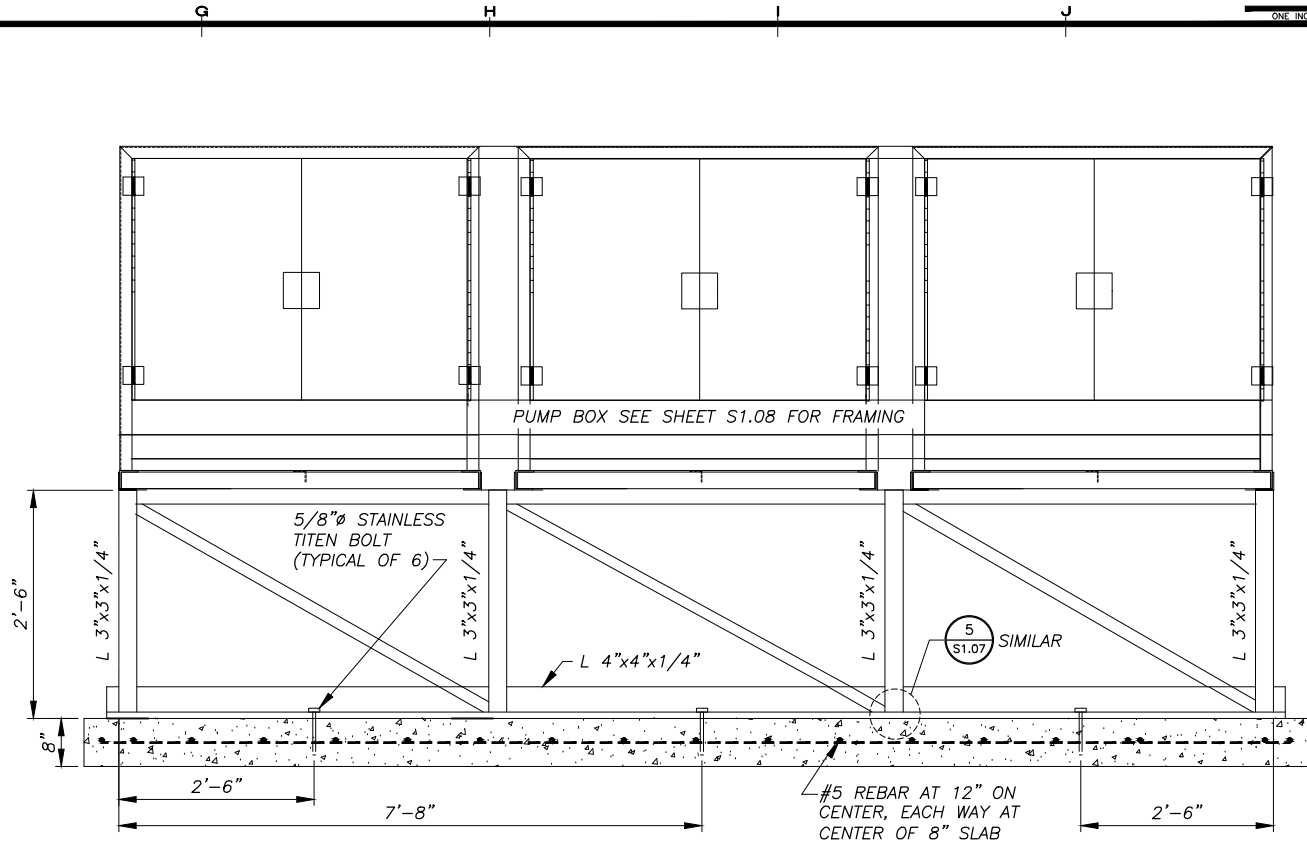
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 TANK FARM - CONTAINMENT LINER METAL COVER
 SHEET: S1.06
 DRAWN BY: KK CHECKED BY: MRS
 DATE: 05/25/16 SCALE: AS SHOWN
 JOB NUMBER: 13-040

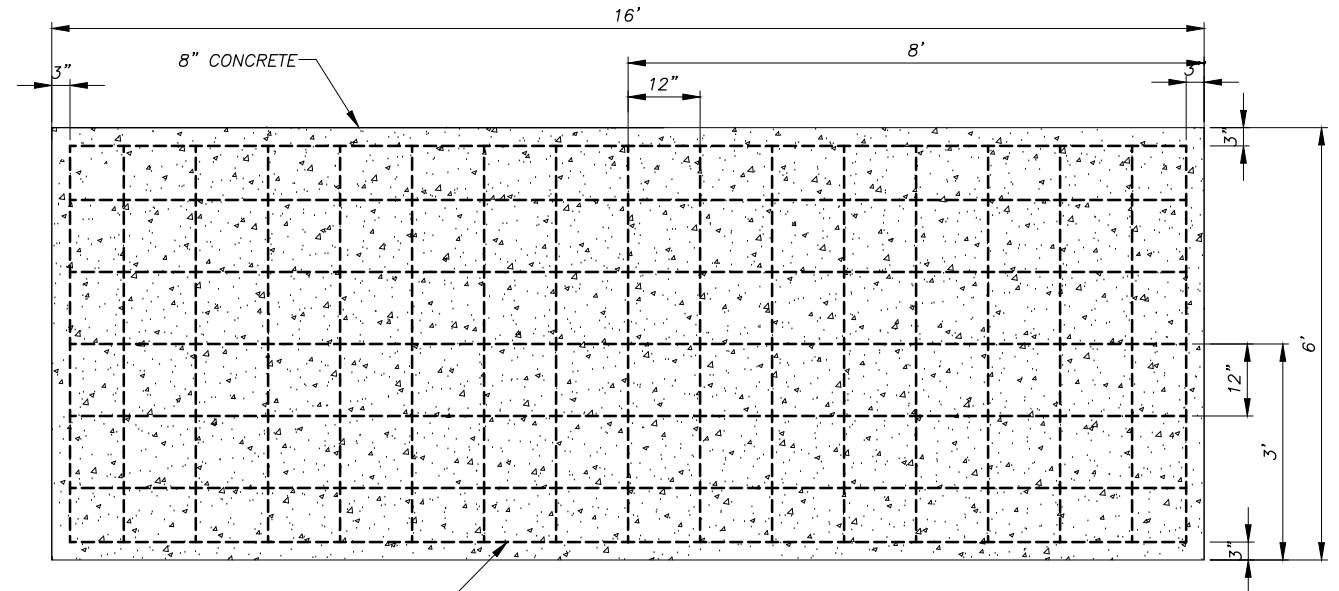
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 LAYOUT: S1.07 - PUMP BOX
 VIEW: C404_H_PDF XREF: 05012-XPB, 13040-00_B01-BK



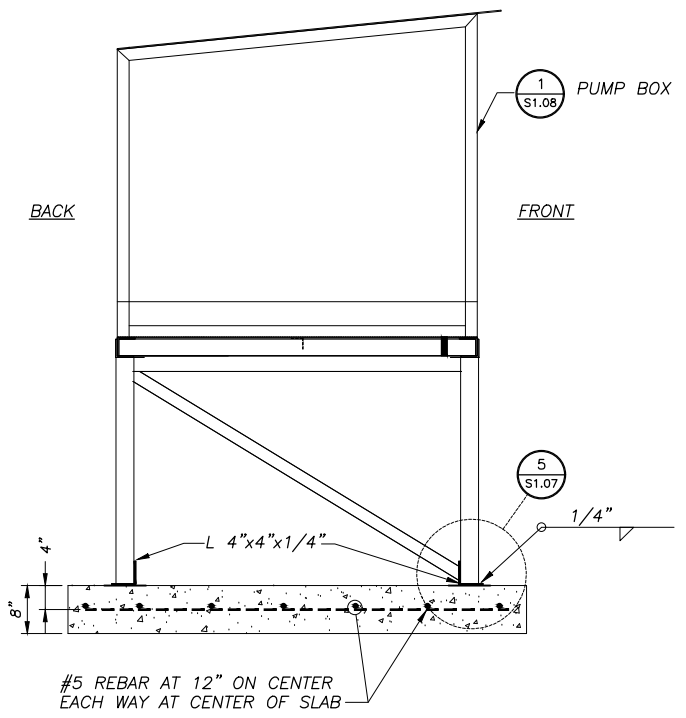
1 PUMP BOX PAD PLAN
 S1.07 SCALE: NONE



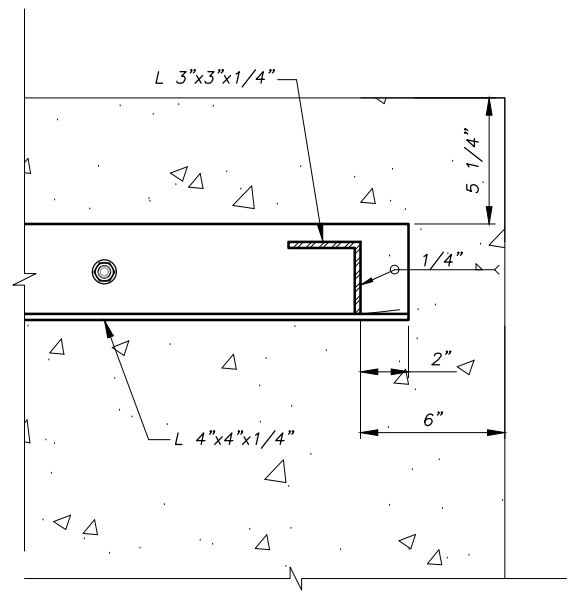
3 PUMP BOX PAD FRONT ELEVATION
 S1.07 SCALE: NONE



2 PUMP BOX FOUNDATION PLAN AND REBAR PLACEMENT
 S1.07 SCALE: 3/4"=1'-0"

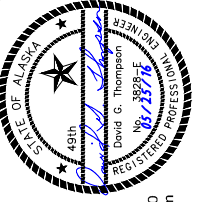


4 PUMP BOX PAD SIDE ELEVATION
 S1.07 SCALE: NONE



5 REINFORCING PLATE DETAIL
 S1.07 SCALE: 3"=1'-0"

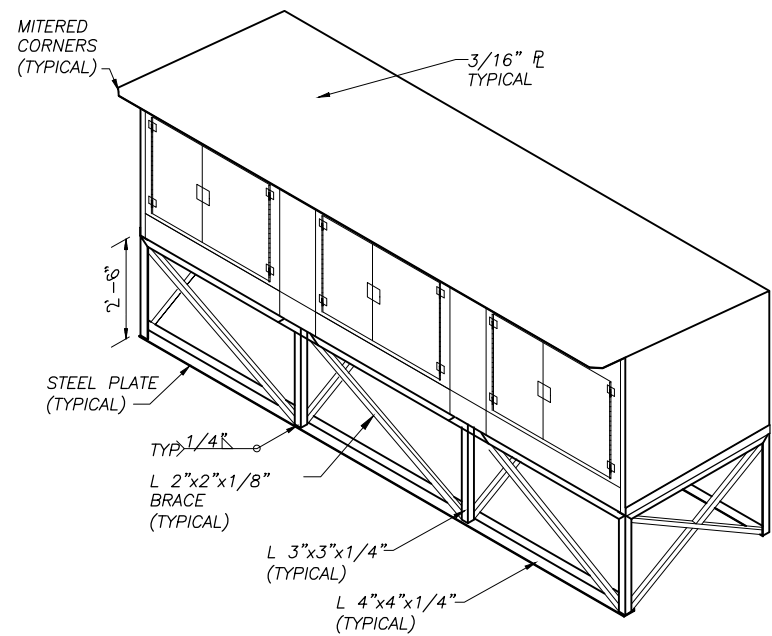
REVISIONS	DATE	DESCRIPTION
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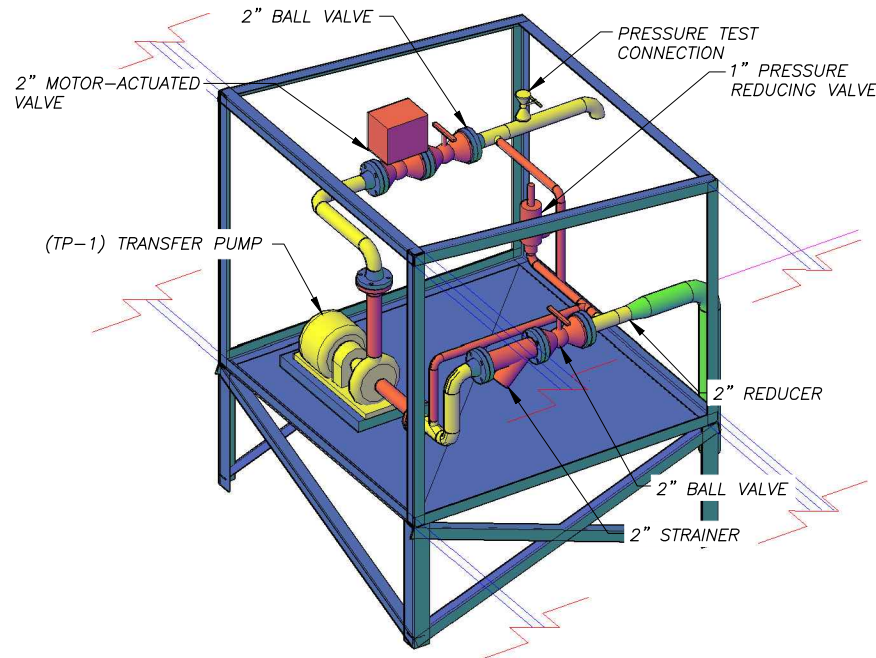
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 KAKE BULK FUEL UPGRADES
 TANK FARM PUMP BOX AND PAD DETAILS
 SHEET TITLE: TANK FARM PUMP BOX AND PAD DETAILS
 SHEET: S1.07
 DRAWN BY: KK CHECKED BY: MRS
 DATE: 05/25/16 SCALE: AS NOTED
 JOB NUMBER: 13-040

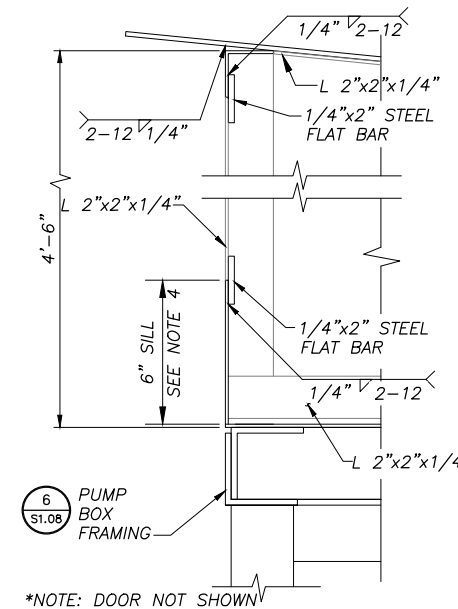
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 LAYOUT: S1.08 - PUMP BOX
 XREF: 05012-XPB, 13040-00_B01-BK



1 PUMP BOX BASE ISOMETRIC
 S1.08 SCALE: NONE

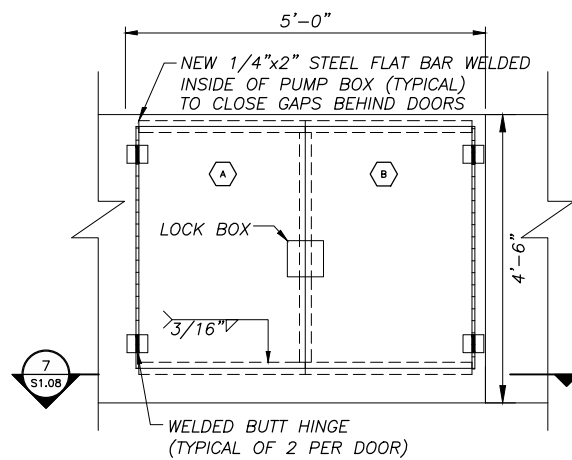


2 PUMP BOX PIPING DIAGRAM
 S1.08 SCALE: NONE *NOTE: PIPING SHOWN FOR VISUAL REPRESENTATION.

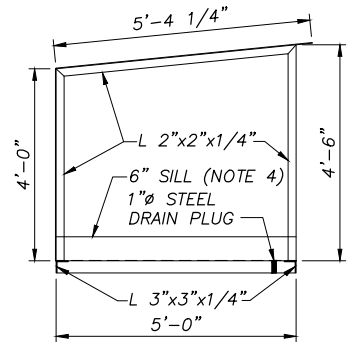


3 DOOR OPENING SECTION
 S1.08 SCALE: NONE
 *NOTE: DOOR NOT SHOWN

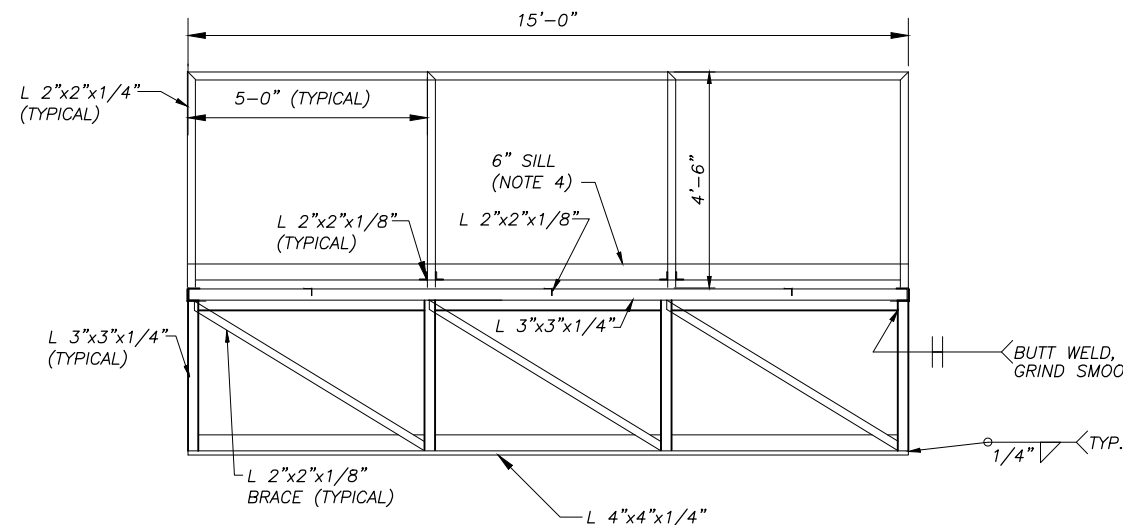
- NOTES**
- SEE SHEET G1.03 FOR GENERAL NOTES, AND SPECIFICATIONS, LEGEND, AND ABBREVIATIONS.
 - ALL CONNECTIONS SHALL BE CONTINUOUSLY WELDED UNLESS OTHERWISE NOTED.
 - PUMP BOX SHALL BE FROM A36 STEEL.
 - PUMP BOX SHALL HAVE A 6" SILL FOR SECONDARY CONTAINMENT AND SHALL BE DRAINED VIA A 1"Ø THREADED STEEL DRAIN PLUG.
 - PUMP BOX SHALL BE PAINTED PER SPECIFICATIONS.
 - MOUNT ALL EQUIPMENT AND PIPE SUPPORTS TO INVERTED CHANNELS WELDED TO THE BOTTOM OF ENCLOSURE. PROVIDE 6" MINIMUM CLEARANCE UNDERNEATH EQUIPMENT FOR ACCESS TO ALL MOUNTING BOLTS.
 - ELEVATE PIPING TO ALLOW STRAINER MAINTENANCE.



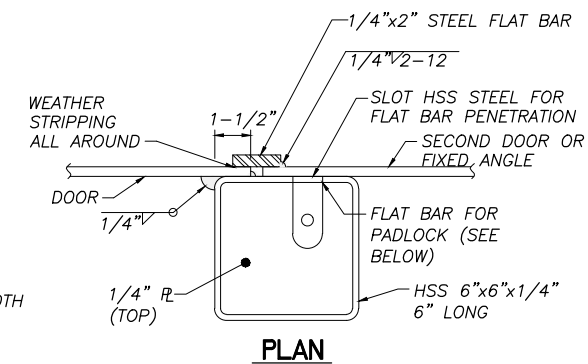
4 PUMP BOX ELEVATION
 S1.08 SCALE: NONE



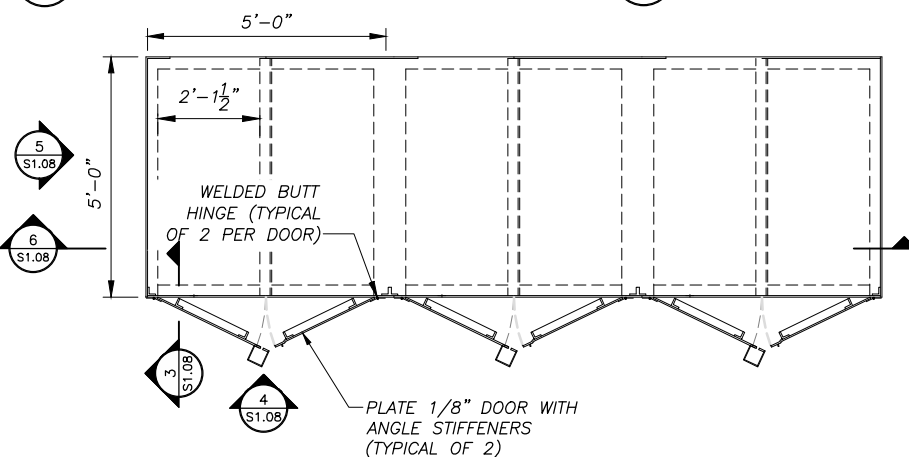
5 PUMP BOX SECTION
 S1.08 SCALE: NONE



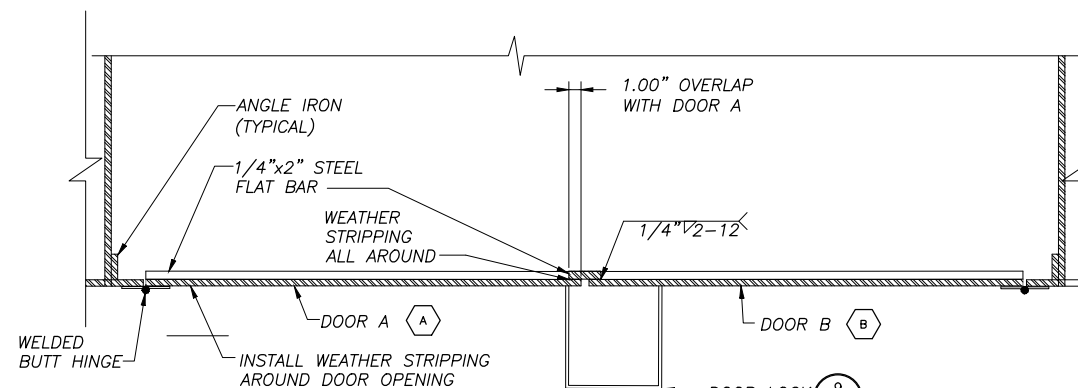
6 PUMP BOX FRAMING SECTION
 S1.08 SCALE: NONE



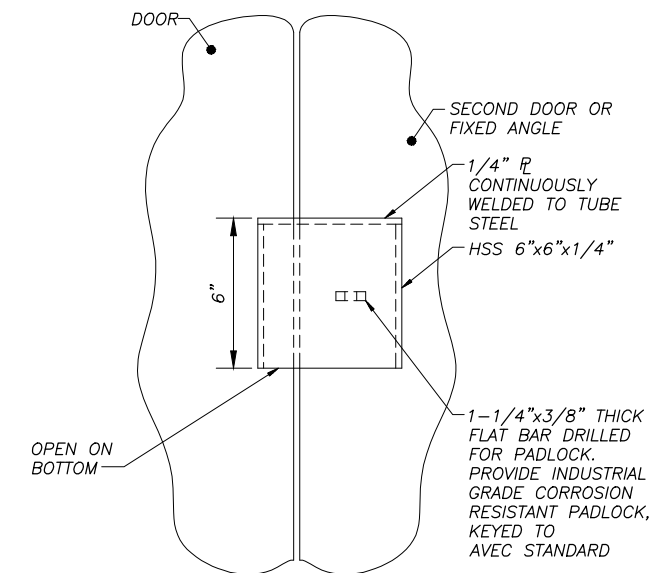
PLAN



7 PUMP BOX PLAN
 S1.08 SCALE: NONE

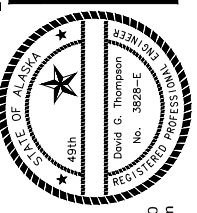


8 PUMP BOX SECTION
 S1.08 SCALE: NONE



9 DOOR LOCK
 S1.08 SCALE: NONE

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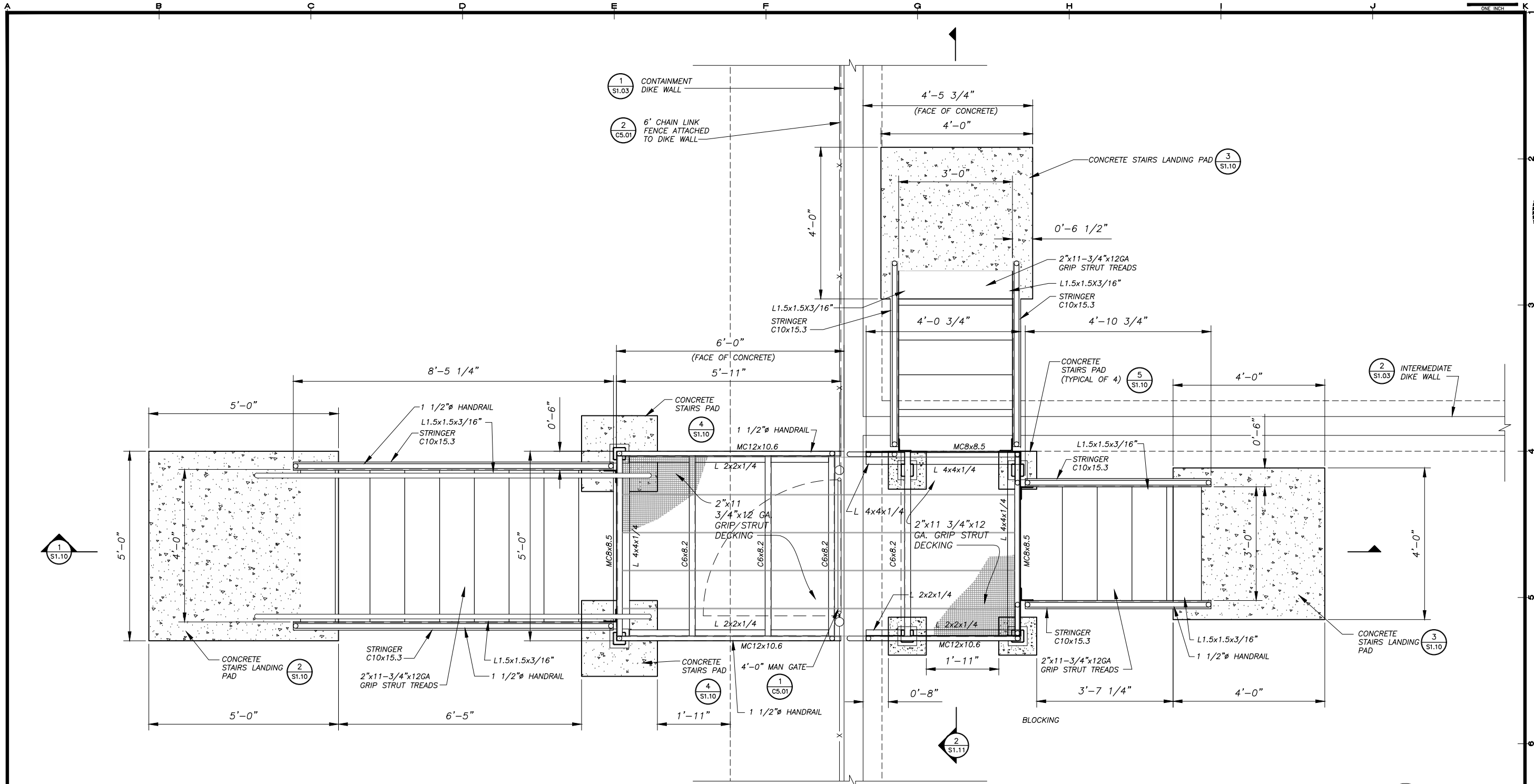
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SHEET TITLE
TANK FARM PUMP BOX DETAILS

SHEET
S1.08

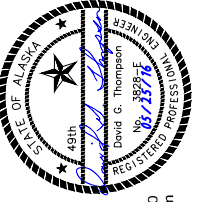
DRAWN BY: HDL CHECKED BY: MRS
 DATE: 05/25/16 SCALE: AS SHOWN
 JOB NUMBER: 13-040

H:\jobs\13-040 Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_S1.09-S1.10-S1.11-ACCESS STAIRS, 1=1, 05-26-16 at 13:24 by jkk
 LAYOUT: S1.09 - ACCESS STAIRS
 XREF: 13-040_00_AS-IF-BASE, 13040-00_B01-BK



1 TANK FARM ACCESS STAIRS PLAN
 S1.09 SCALE: 3/4" = 1'-0"

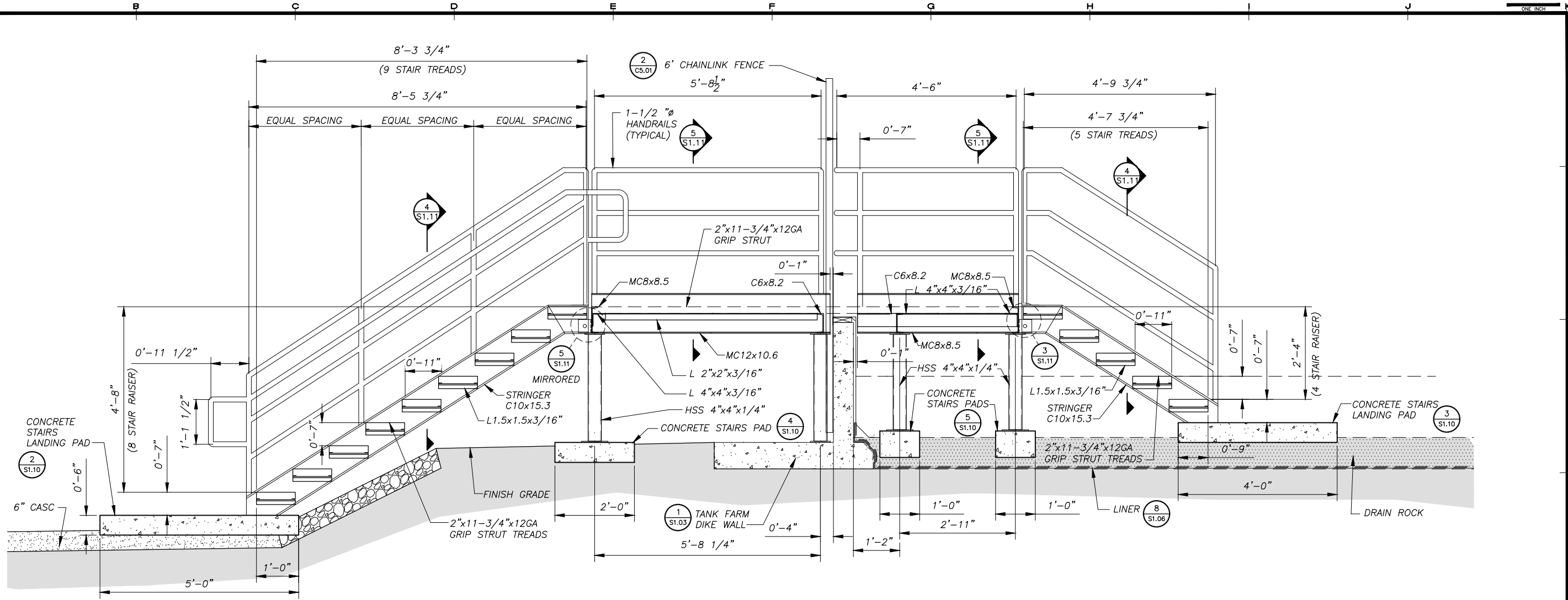
REVISIONS	DATE	DESCRIPTION
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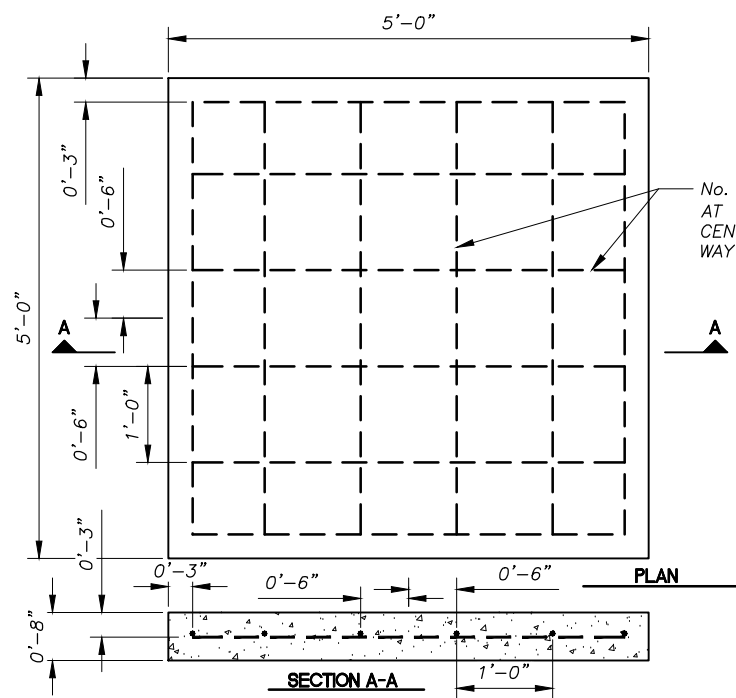
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 TANK FARM ACCESS STAIRS
 SHEET S1.09
 DRAWN BY: KK CHECKED BY: DGT
 DATE: 05/25/16 SCALE: AS SHOWN
 JOB NUMBER: 13-040

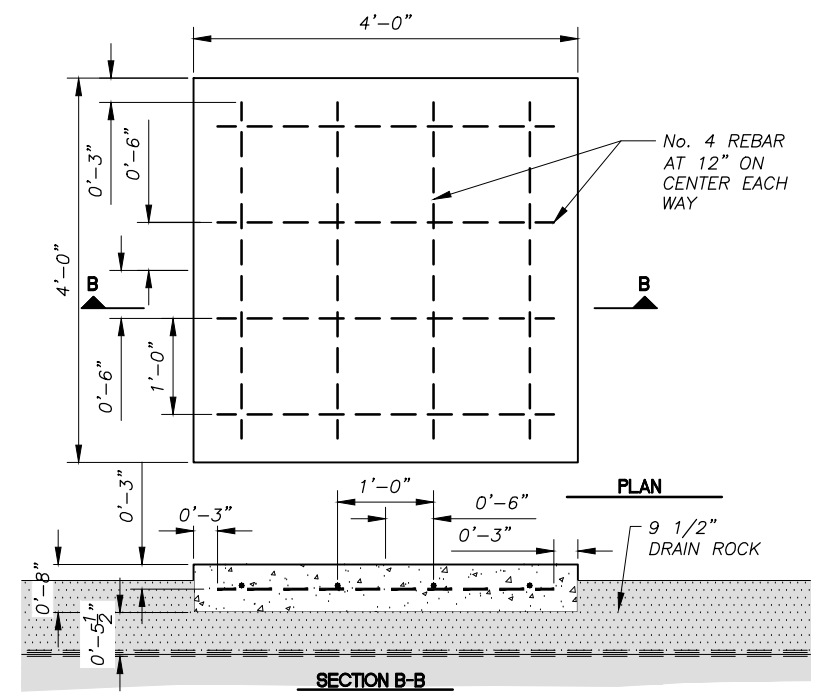
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 LAYOUT: S1.10 - ACCESS STAIRS
 XREF: 13-040_00_AS-IF-BASE, 13040-00_B01-BK



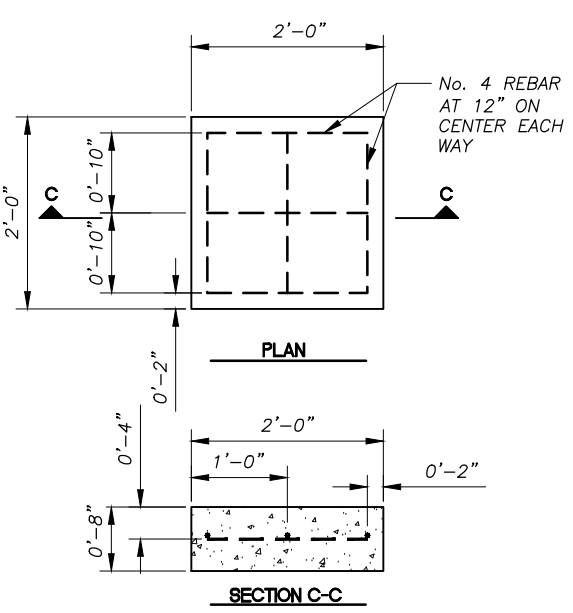
1 SECTION - ACCESS STAIRS
 SCALE: 3/4" = 1'-0"



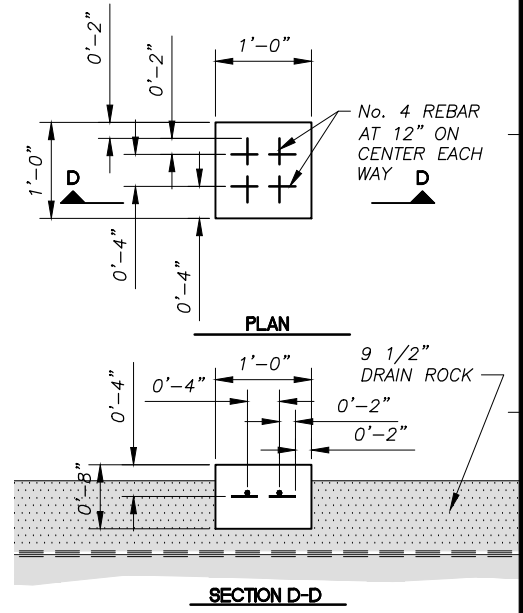
2 SECTION - STAIRS LANDING PAD
 SCALE: 1" = 1'-0"



3 SECTION - STAIRS LANDING PAD
 SCALE: 1" = 1'-0"

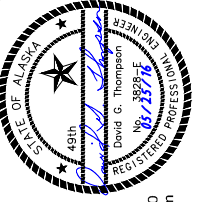


4 SECTION - STAIRS PAD
 SCALE: 1" = 1'-0"



5 SECTION - STAIRS PAD
 SCALE: 1" = 1'-0"

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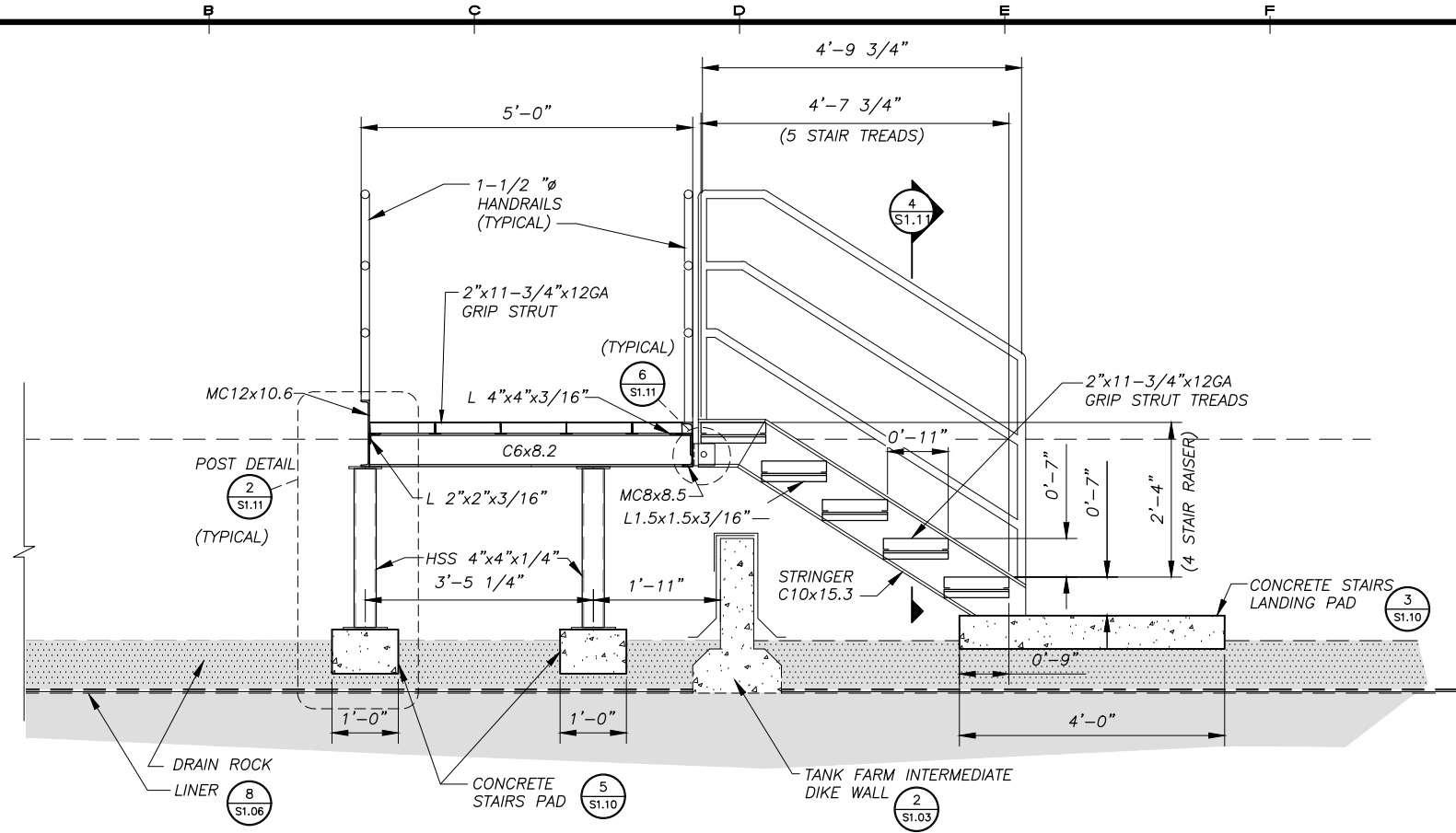
ALASKA ENERGY AUTHORITY
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SHEET TITLE
TANK FARM ACCESS STAIRS SECTIONS

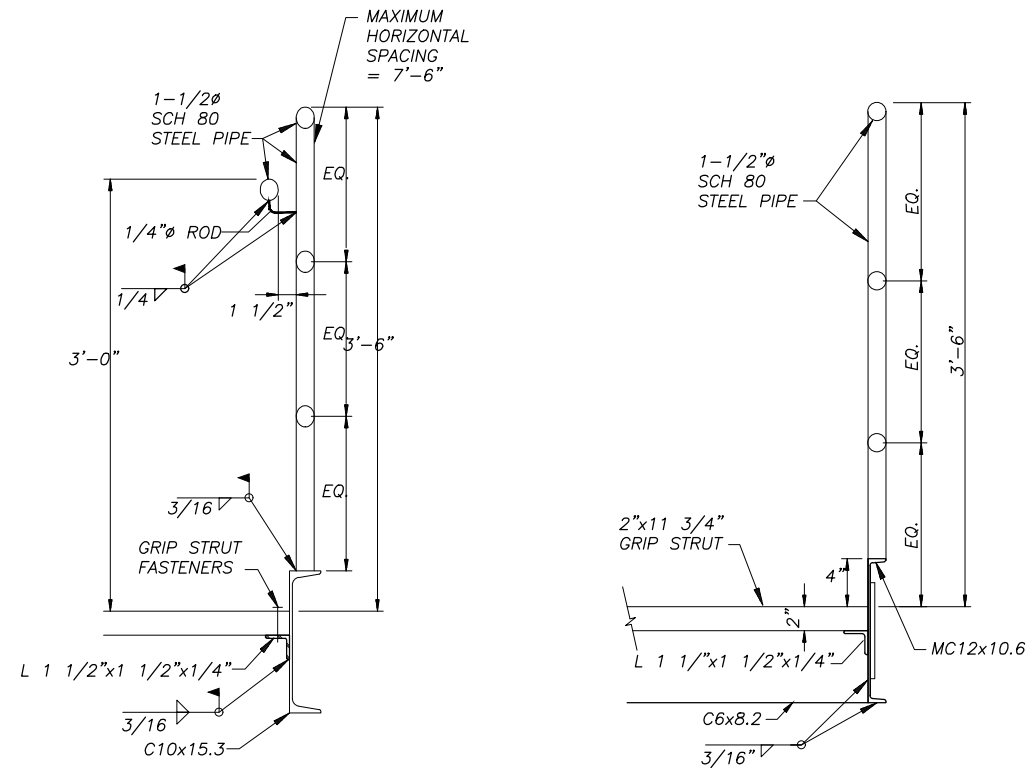
SHEET
S1.10

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 JOB NUMBER: 13-040

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 LAYOUT: S1.11 - ACCESS STAIRS
 XREF: 13-040_00_AS-IF-BASE, 13040-00_B01-BK

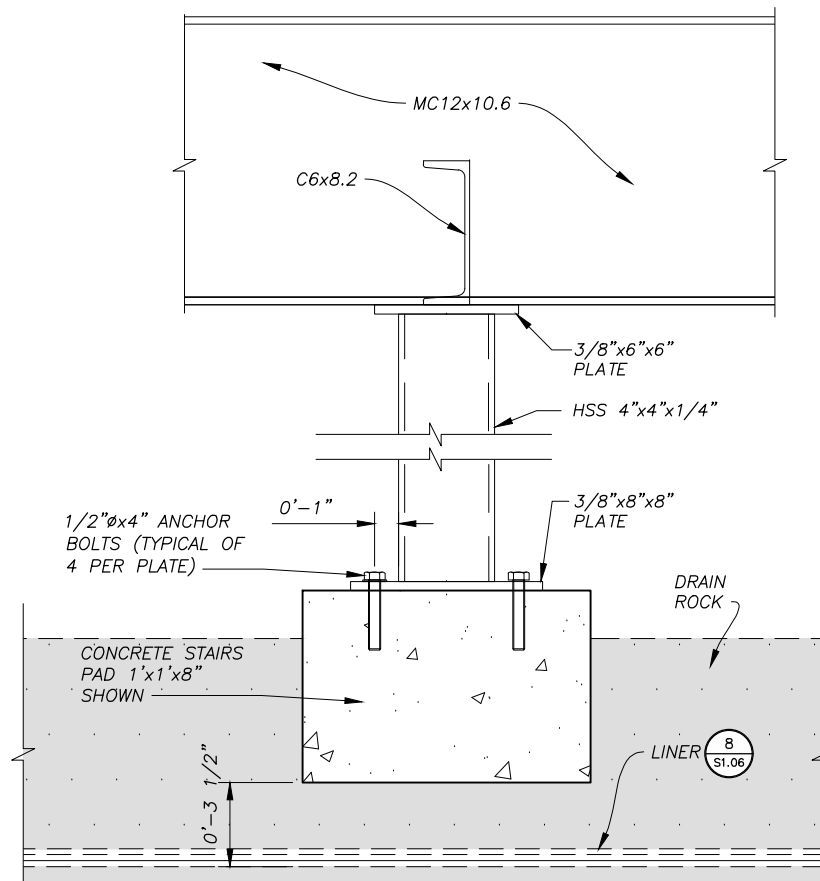


1 SECTION - ACCESS STAIRS
 S1.11 SCALE: 3/4" = 1'-0"

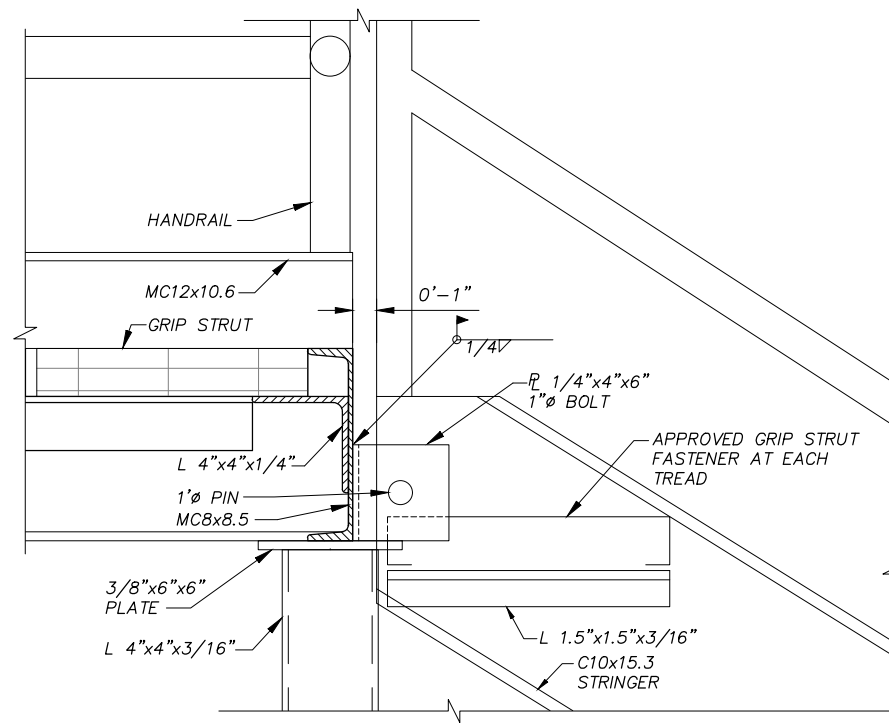


4 SECTION - ACCESS STAIRS
 S1.11 SCALE: 3/4" = 1'-0"

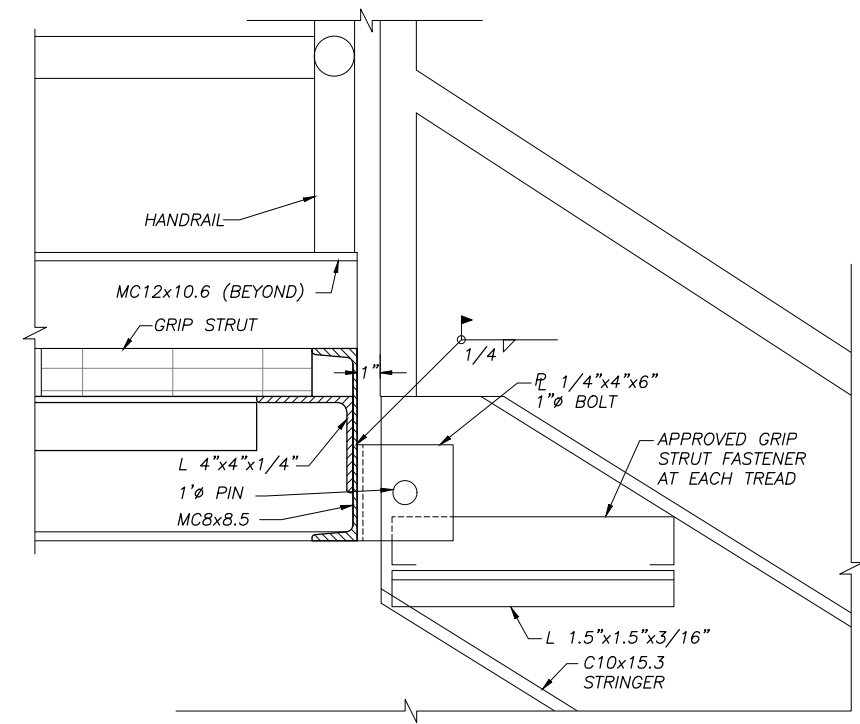
5 SECTION - ACCESS STAIRS
 S1.11 SCALE: 3/4" = 1'-0"



2 TYPICAL STAIR POST
 S1.11 SCALE: 3" = 1'-0"



3 SECTION - ACCESS STAIRS CONNECTION
 S1.11 SCALE: 1 1/2" = 1'-0"



6 SECTION - ACCESS STAIRS CONNECTION
 S1.11 SCALE: 3/4" = 1'-0"

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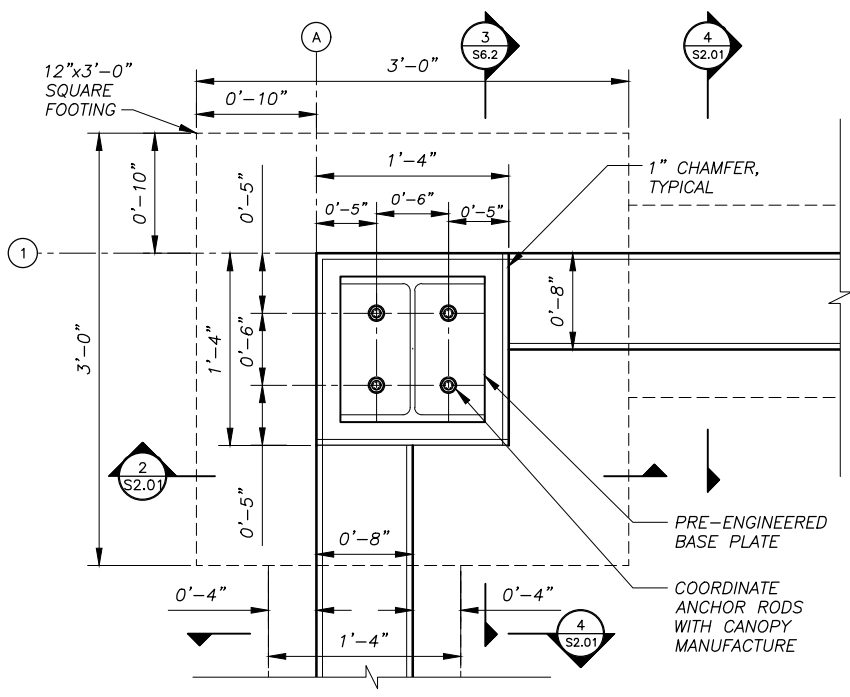
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ALASKA ENERGY AUTHORITY
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SHEET TITLE
TANK FARM ACCESS STAIRS SECTIONS

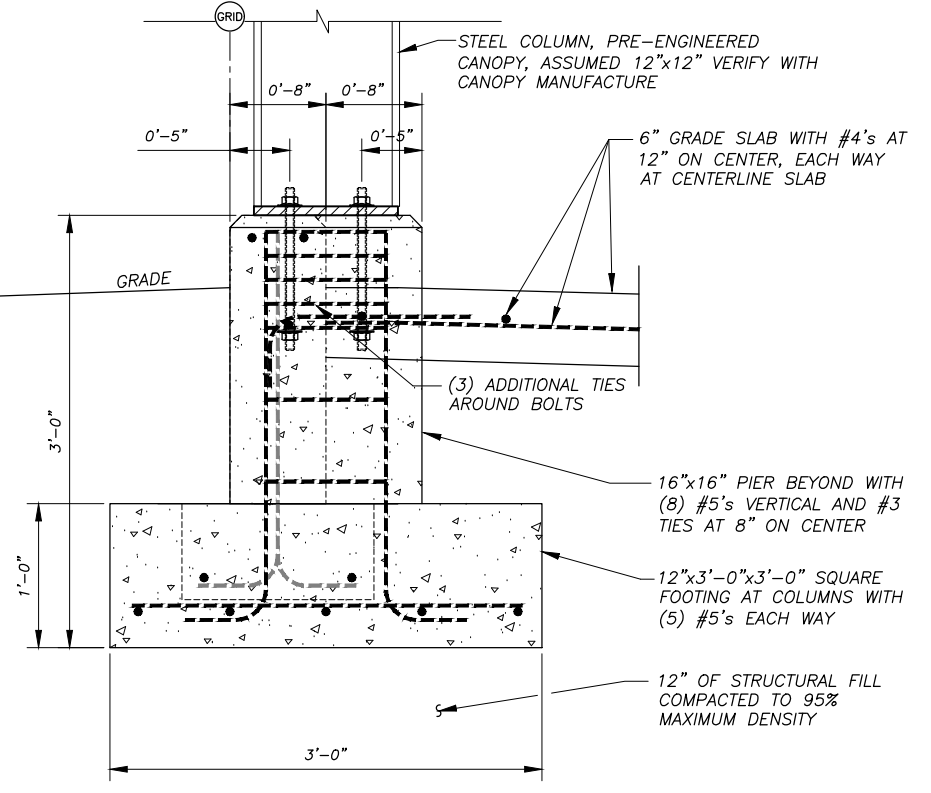
SHEET
S1.11

DRAWN BY: **KK** CHECKED BY: **DGT**
 DATE: **05/25/16** SCALE: **AS SHOWN**
 JOB NUMBER: **13-040**

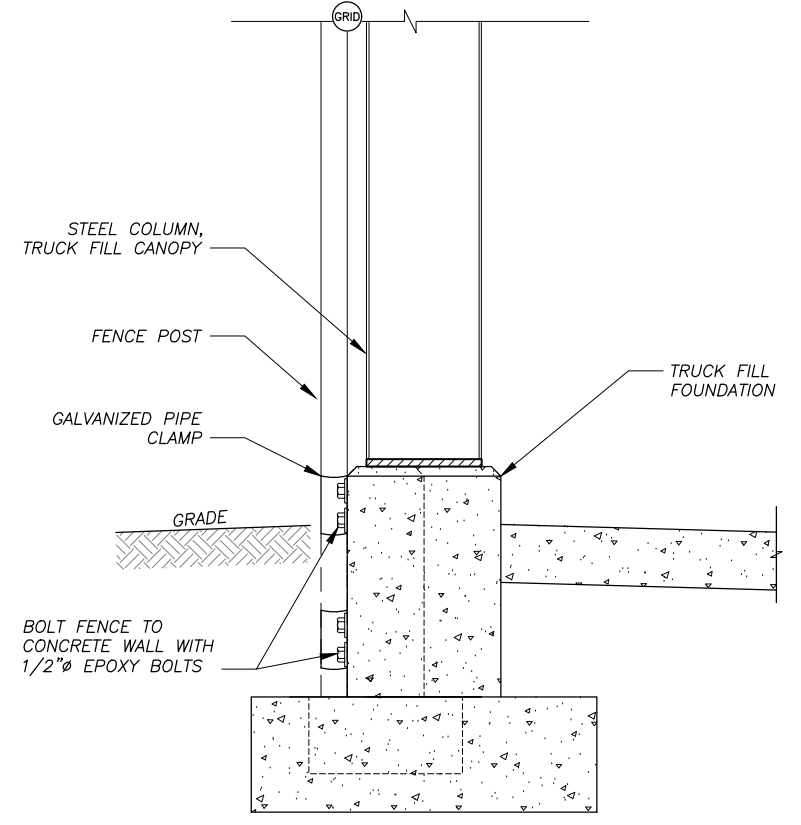
H:\jobs\13-040 Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_AZ.01-TRUCK-FILL, 1=1, 05-24-16 at 10:36 by jkk
 LAYOUT: S2.01 - TRUCK FILL FOUNDATION
 XREF: 13040-00_B01-BK



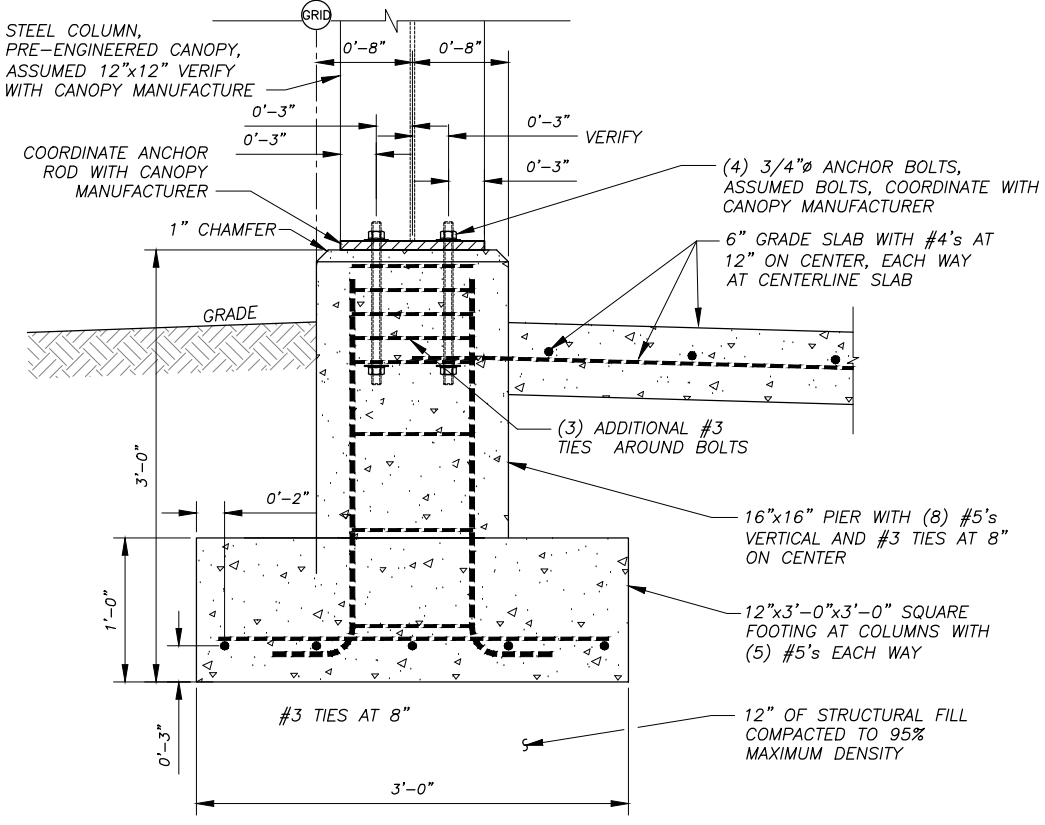
1 SECTION - TRUCK FILL
 S2.01 SCALE: 1 1/2" = 1'-0"



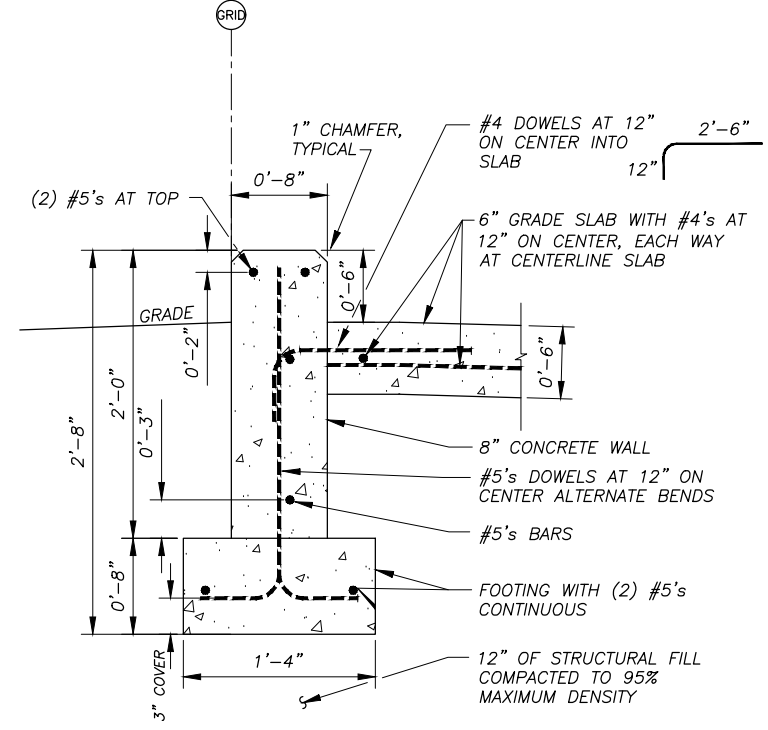
3 SECTION
 S2.01 SCALE: 1 1/2" = 1'-0"



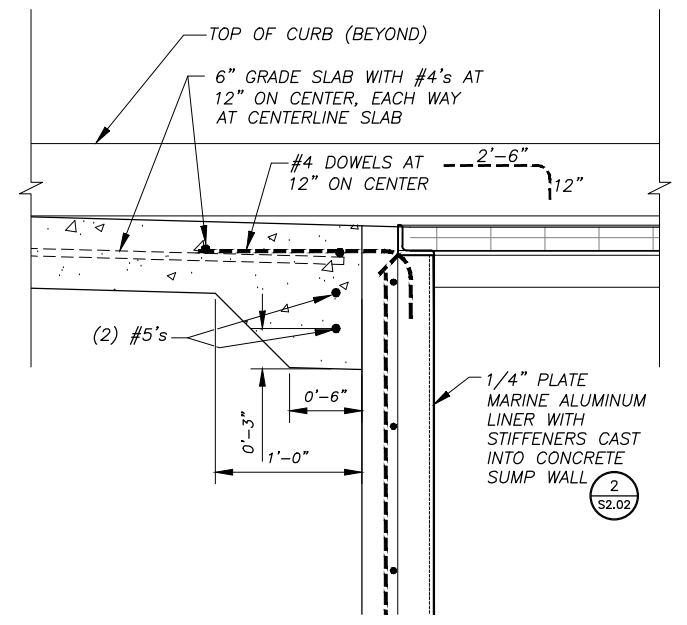
6 FENCE MOUNTING DETAIL
 S2.01 SCALE: NONE



2 SECTION
 S2.01 SCALE: 1 1/2" = 1'-0"

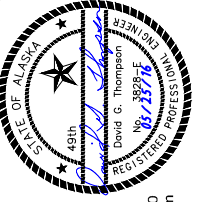


4 SECTION
 S2.01 SCALE: 1 1/2" = 1'-0"



5 DETAIL
 S2.01 SCALE: 1 1/2" = 1'-0"

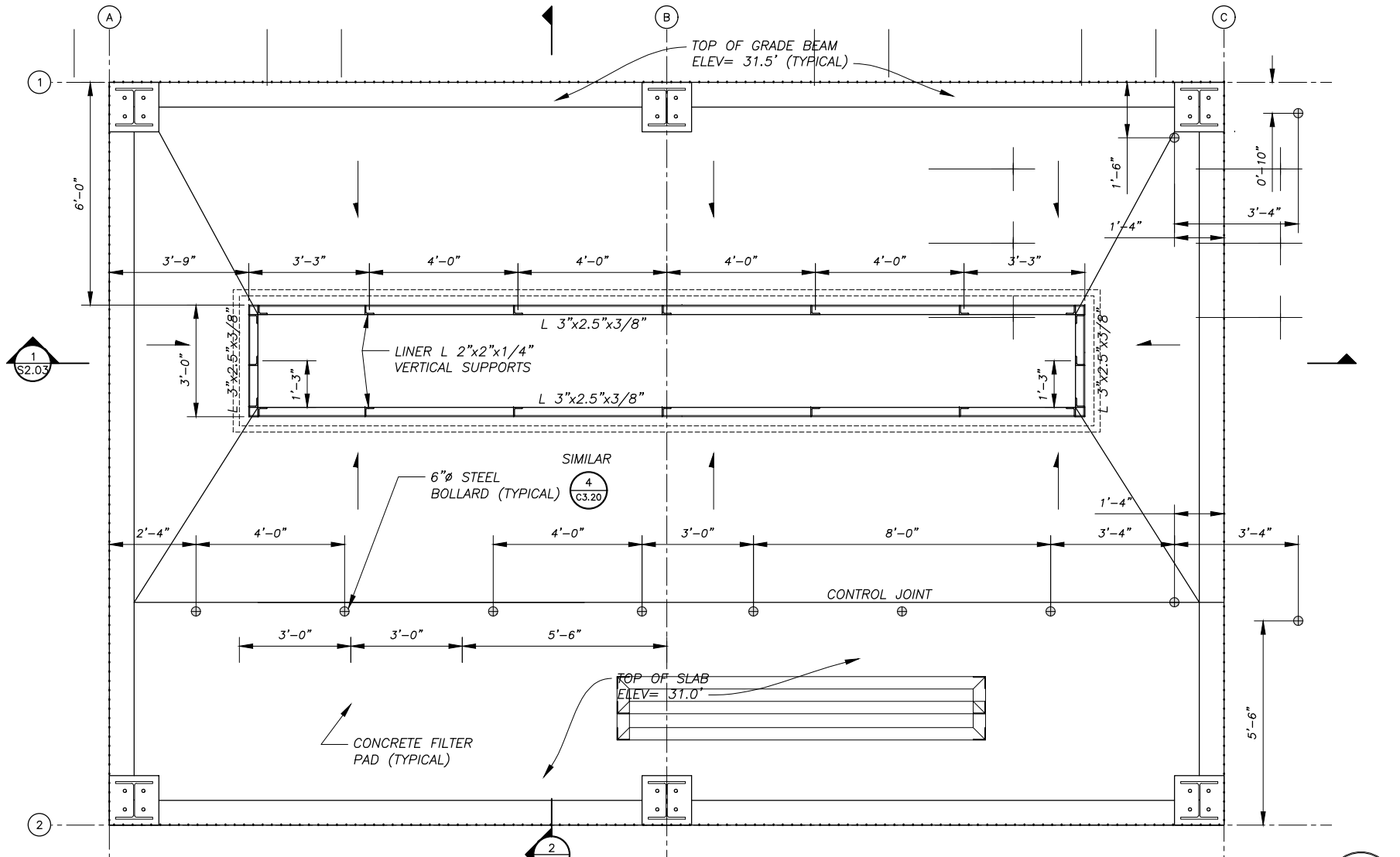
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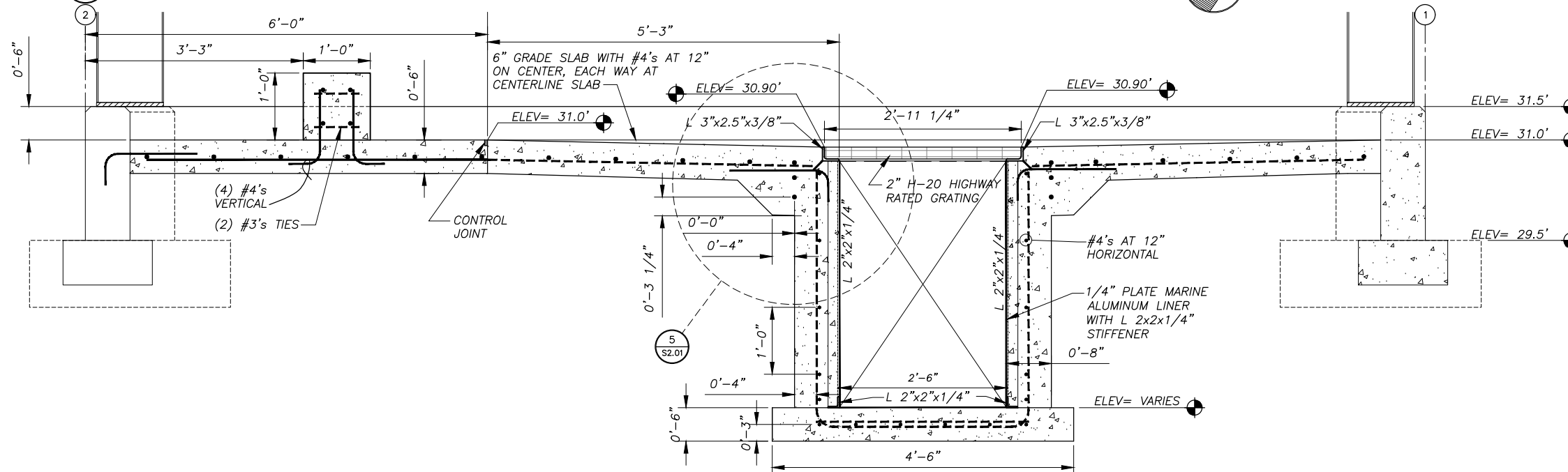
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 KAKE BULK FUEL UPGRADES
 TRUCK FILL SHELTER SECTIONS AND DETAILS
 SHEET S2.01
 DRAWN BY: RB/KK CHECKED BY: MRS
 DATE: 05/25/16 SCALE: AS SHOWN
 JOB NUMBER: 13-040

H:\jobs\13-040 Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_A2.01-AS3-TRUCK-FILL, 1=1, 05-24-16 at 10:36 by jkk
 LAYOUT: S2.02 TRUCK FILL SUMP
 XREF: 13040-00_B01-BK



SUMP PLAN VIEW

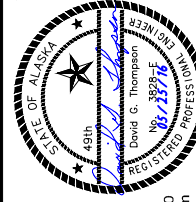
SCALE: 1/2" = 1'-0"



SECTION - SUMP

SCALE: 1" = 1'-0"

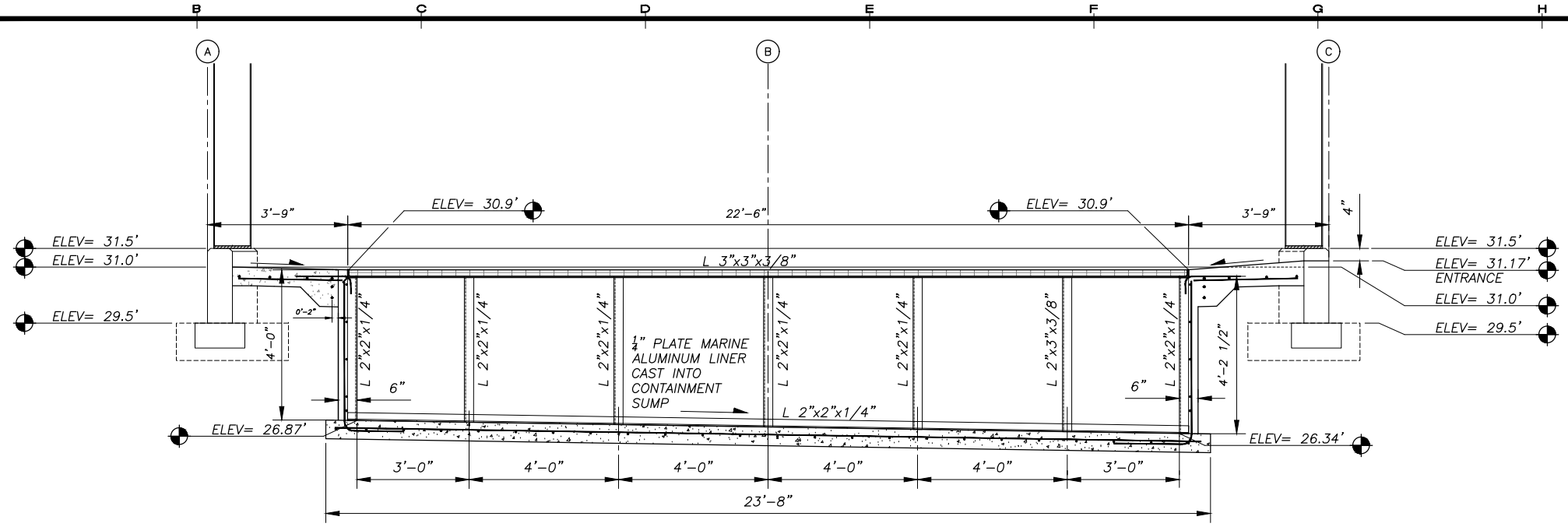
REVISIONS	DATE	DESCRIPTION
1	5/04/16	95% SUBMITTAL FOR AGENCY REVIEW



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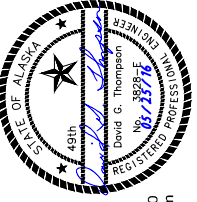
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 TRUCK FILL SHELTER CONTAINMENT SUMP DETAILS
 SHEET: S2.02
 DRAWN BY: RB/KK
 CHECKED BY: MRS
 DATE: 05/25/16
 SCALE: AS SHOWN
 JOB NUMBER: 13-040

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 LAYOUT: S2.03 - TRUCK FILL SUMP
 XREF: 13040-00_B01-BK



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

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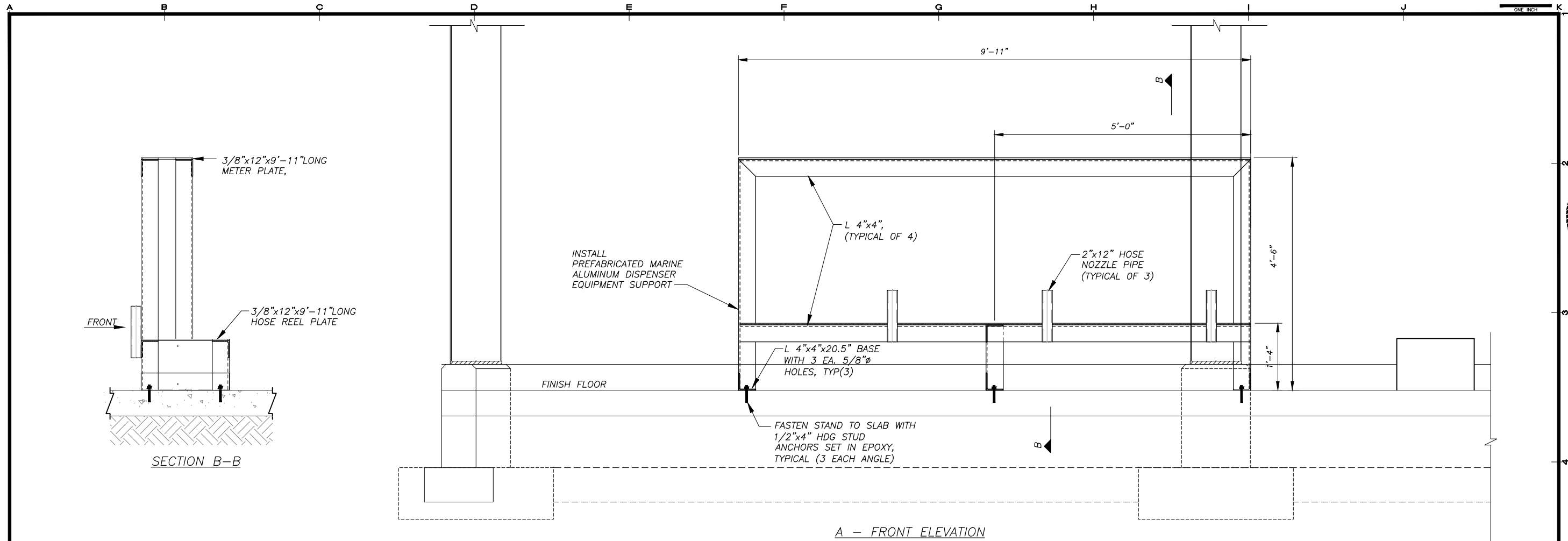
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TRUCK FILL SHELTER CONTAINMENT SUMP DETAILS

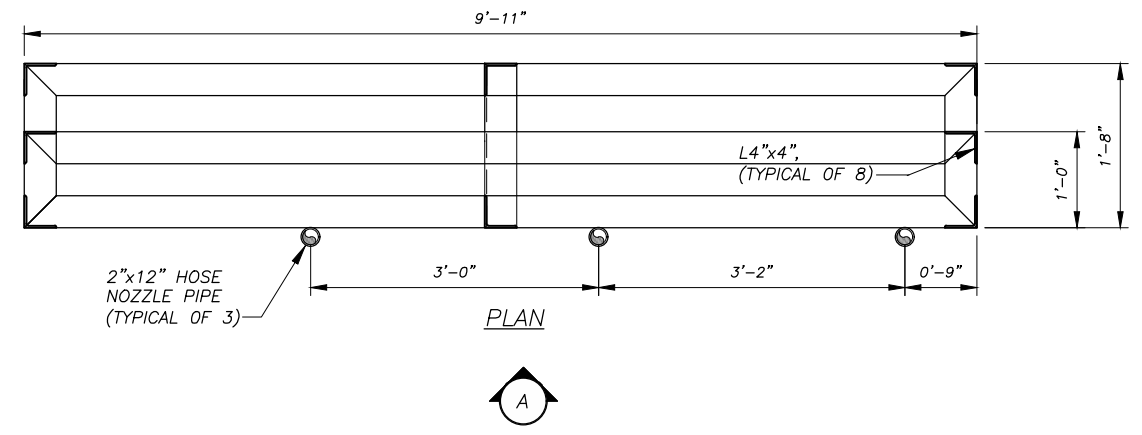
SHEET: S2.03

DATE: 05/25/16 SCALE: AS SHOWN
 JOB NUMBER: 13-040

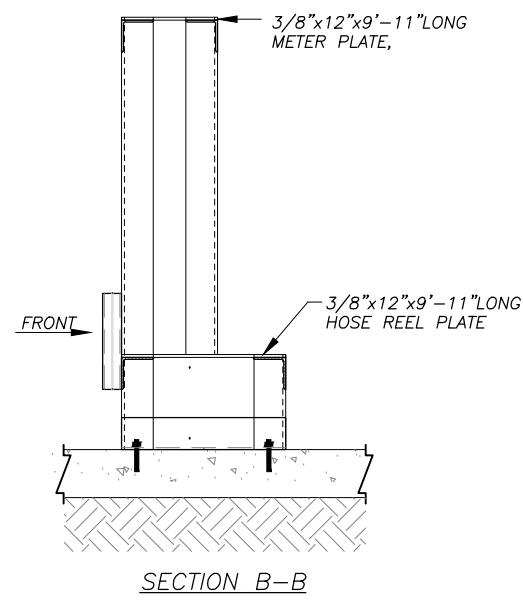
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 LAYOUT: S2.04 - STEEL RACK ELEVATIONS
 VIEW: OLE9 XREF: 13040-00_B01-BK



A - FRONT ELEVATION



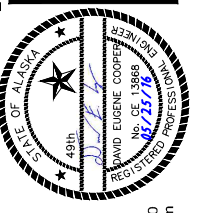
PLAN



SECTION B-B

1 DISPENSER EQUIPMENT SUPPORT
 SCALE: 1" = 1'-0"

REVISIONS	DATE	DESCRIPTION
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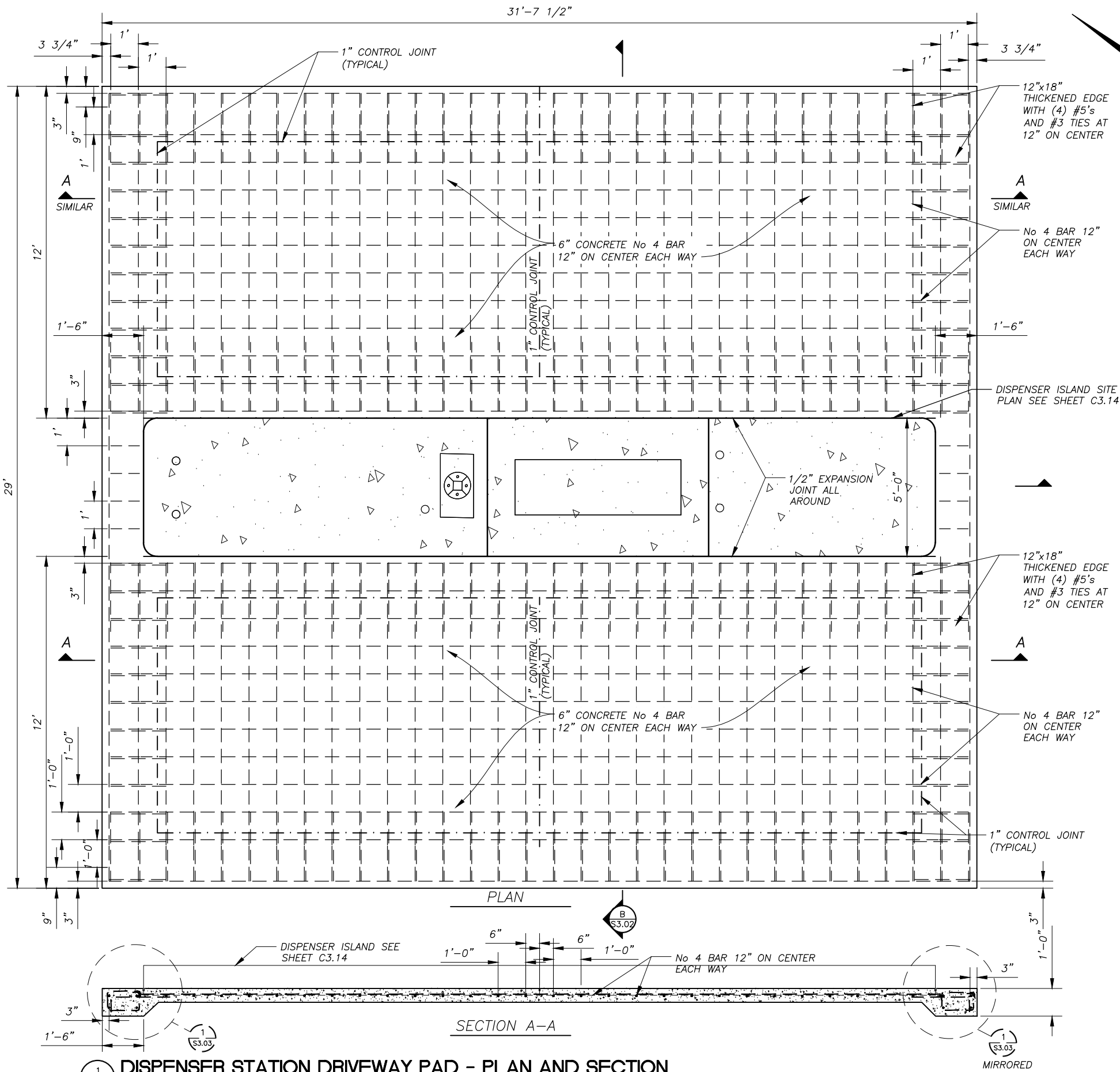
KAKE BULK FUEL UPGRADES

TRUCK FILL SHELTER DISPENSER EQUIPMENT SUPPORT

SHEET S2.04

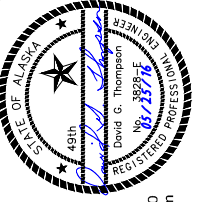
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 LAYOUT: S3.01 - DISPENSER PAD
 XREF: 13040-00_B01-BK



1 DISPENSER STATION DRIVEWAY PAD - PLAN AND SECTION
 SCALE: 1/2" = 1'-0"

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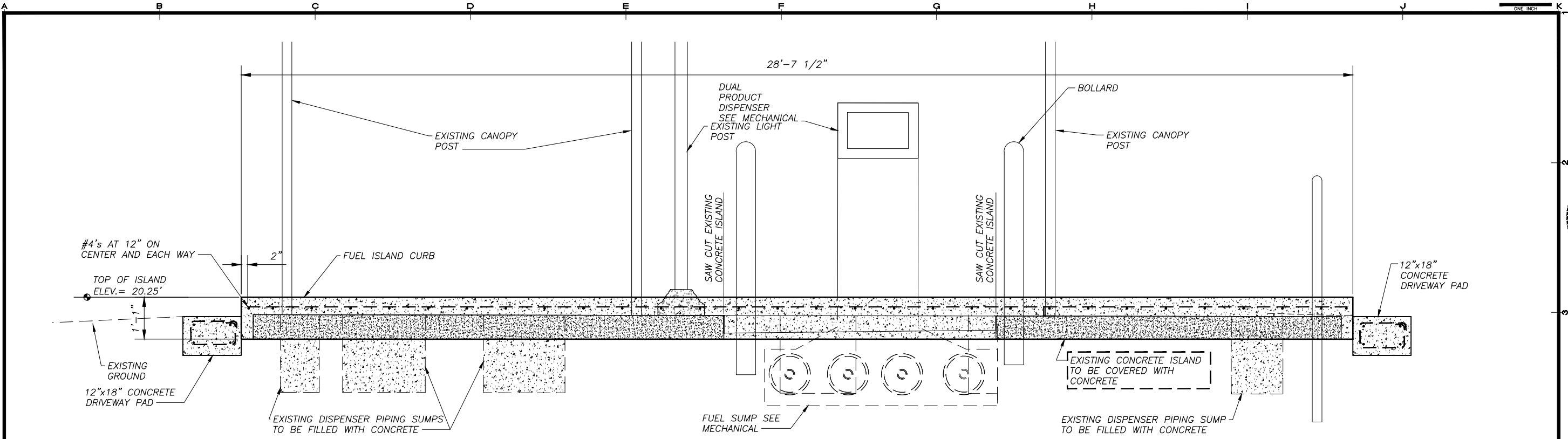
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SHEET TITLE
DISPENSER STATION DRIVEWAY PAD PLAN AND SECTION

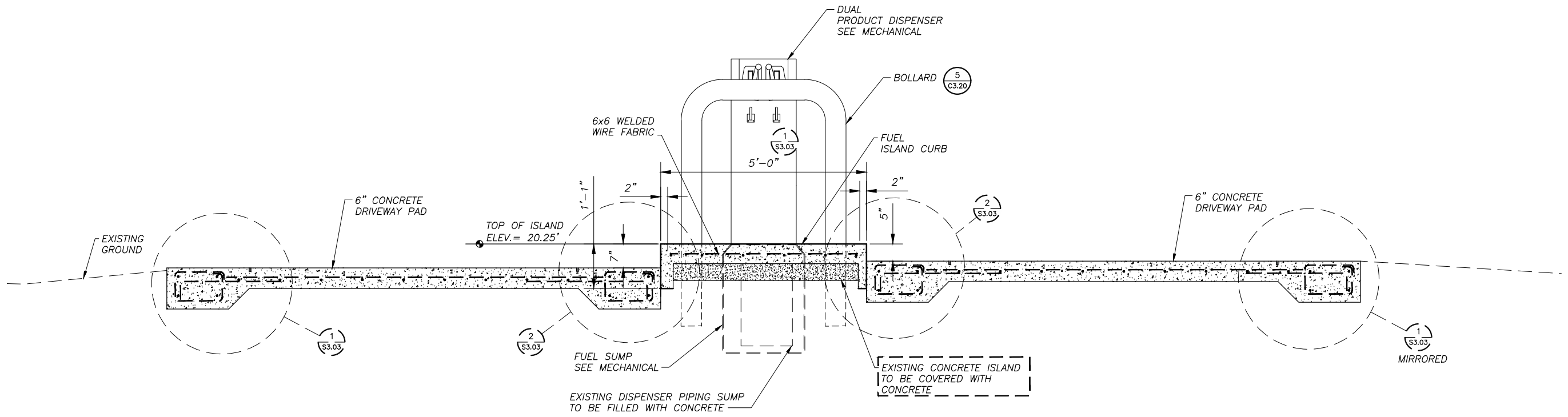
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S3.01

DRAWN BY: KK	CHECKED BY: DGT
DATE: 05/25/16	SCALE: AS SHOWN
JOB NUMBER: 13-040	

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 LAYOUT: S3.02 - DISPENSER PAD SECTIONS
 XREF: 13040-00_B01-BK

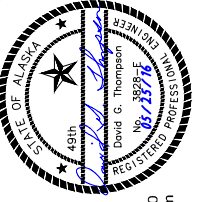


A
 S3.02 SCALE: 3/4" = 1'-0"
DISPENSER STATION ISLAND - SECTION



B
 S3.02 SCALE: 3/4" = 1'-0"
DISPENSER STATION ISLAND - SECTION

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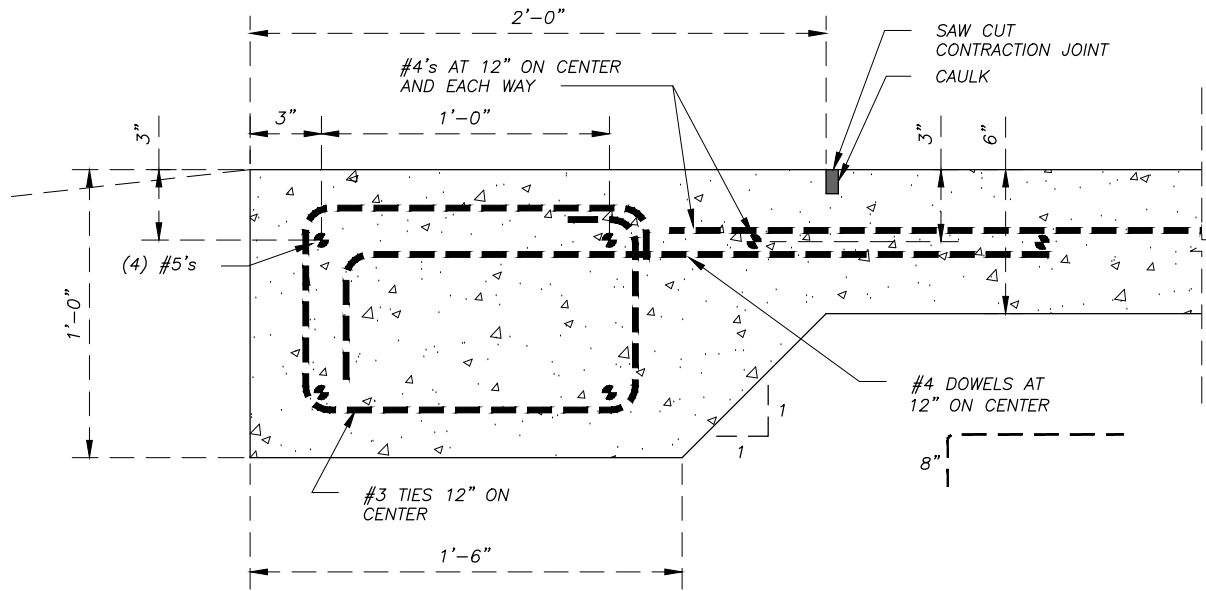
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SHEET TITLE
DISPENSER STATION DRIVEWAY PAD PLAN AND SECTION

SHEET
S3.02

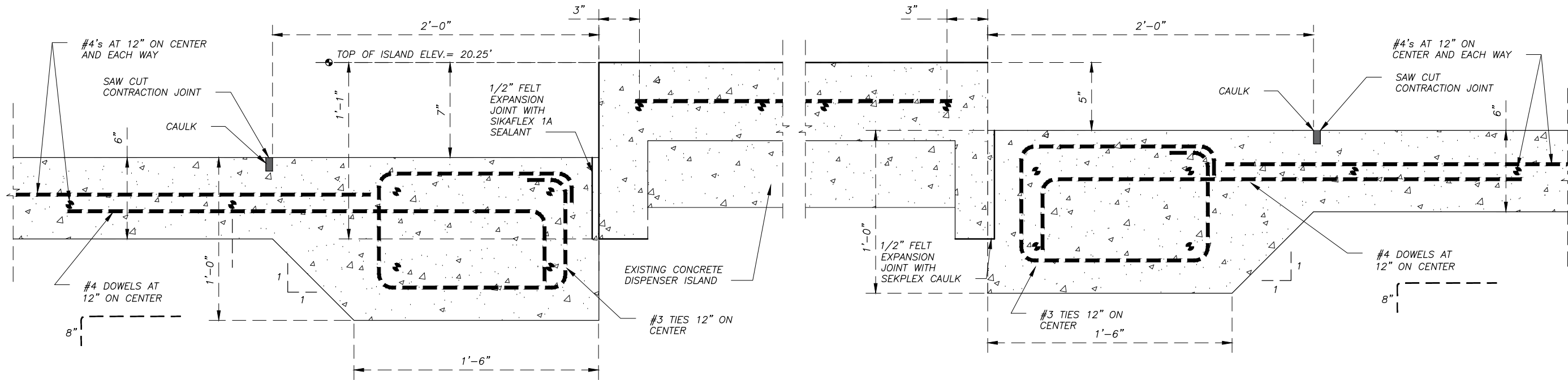
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 JOB NUMBER: **13-040**

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 LAYOUT: S3.03 - DISPENSER DETAILS
 XREF: 13040-00_B01-BK



1 DRIVEWAY SECTION

S3.03 SCALE: 3" = 1'-0"



2 DISPENSER ISLAND SECTION

S3.03 SCALE: 3" = 1'-0"

3 DRIVEWAY SECTION

S3.03 SCALE: 3" = 1'-0"

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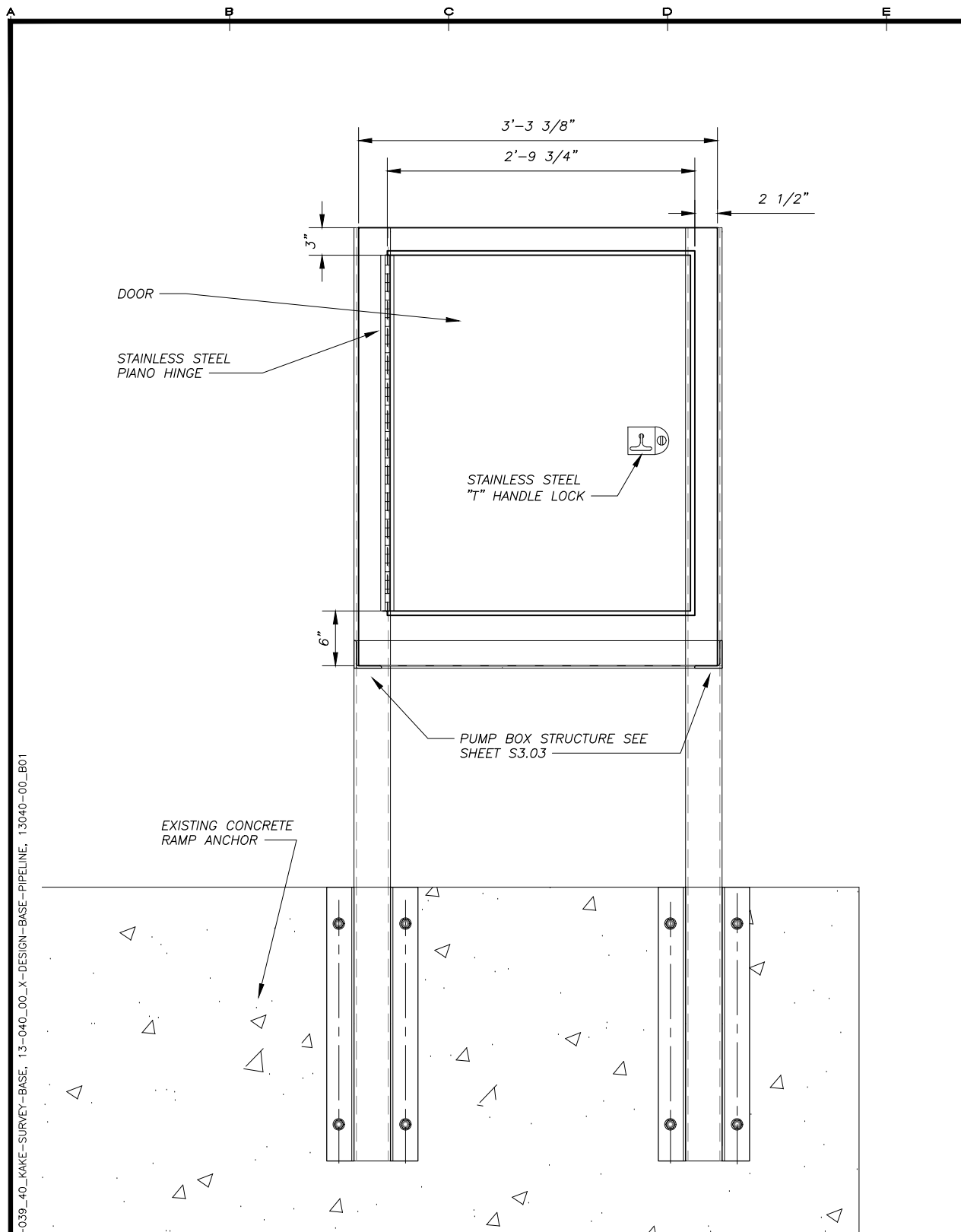
KAKE BULK FUEL UPGRADES

DISPENSER STATION DRIVEWAY PAD DETAILS

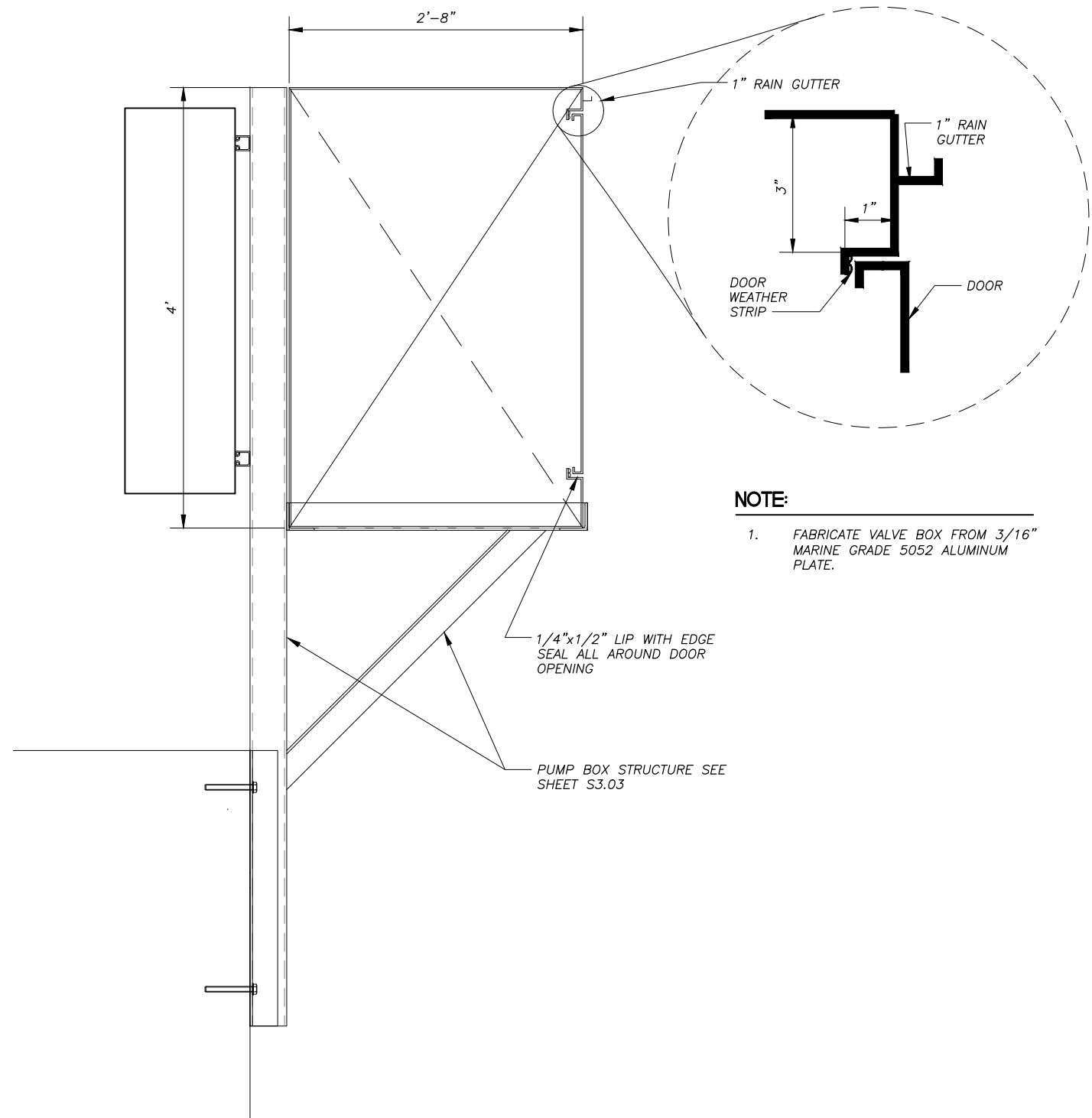
SHEET: S3.03

DRAWN BY: KK	CHECKED BY: DGT
DATE: 05/25/16	SCALE: AS SHOWN
JOB NUMBER: 13-040	

H:\Jobs\13-040 Kake Bulk Fuel Upgrades (AIDEA AEA-Term)\04 - CAD\Drawings Design\13-040_00_S3.04-FUEL DOCK BOX, 1=1, 05-31-16 at 08:40 by SRS
 LAYOUT: S3.04 - PUMP BOX DETAILS
 XREF: 13-039&40_KAKE-CONTOURS-ONLY, 13-039_40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-PIPELINE, 13040-00_B01



1 PIPE VALVE BOX (FRONT)
 S3.04 SCALE: 1-1/2" = 1'-0"



NOTE:
 1. FABRICATE VALVE BOX FROM 3/16" MARINE GRADE 5052 ALUMINUM PLATE.

2 SECTION PIPE VALVE BOX
 S3.04 SCALE: 1-1/2" = 1'-0"

REVISIONS	DATE	DESCRIPTION
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SHEET TITLE
FUEL DOCK VALVE BOX DETAILS

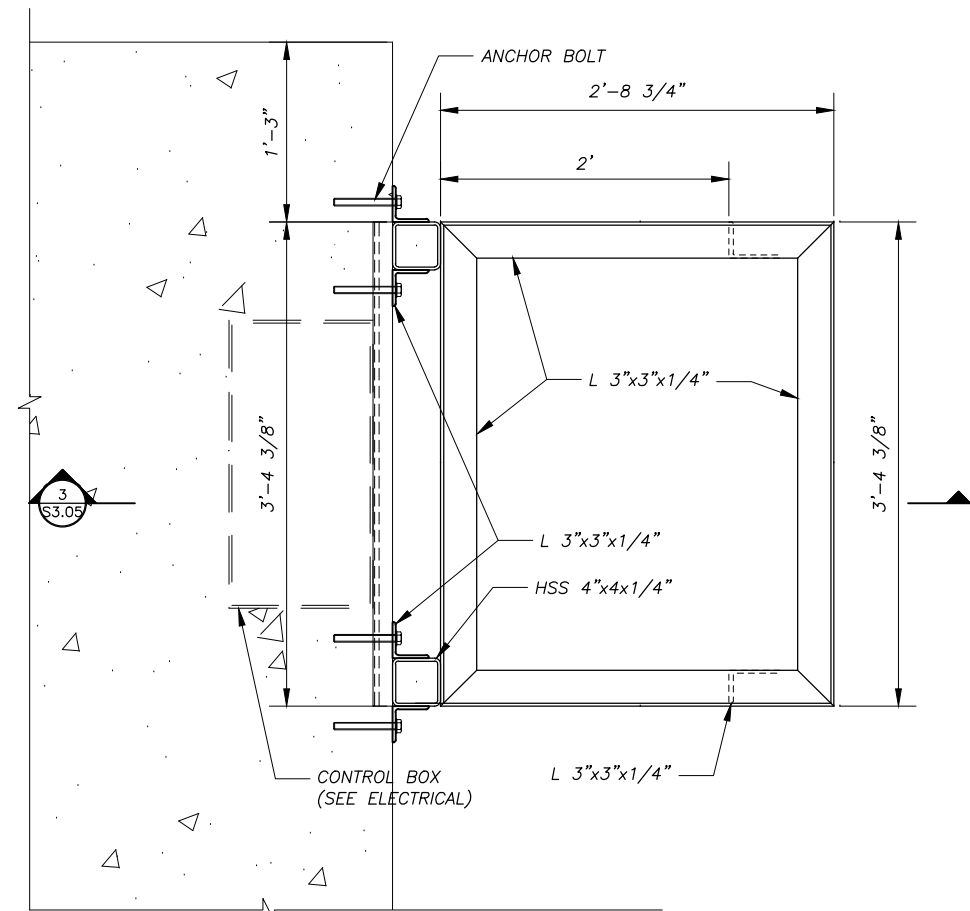
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S3.04

DRAWN BY: BM
 CHECKED BY: MRS

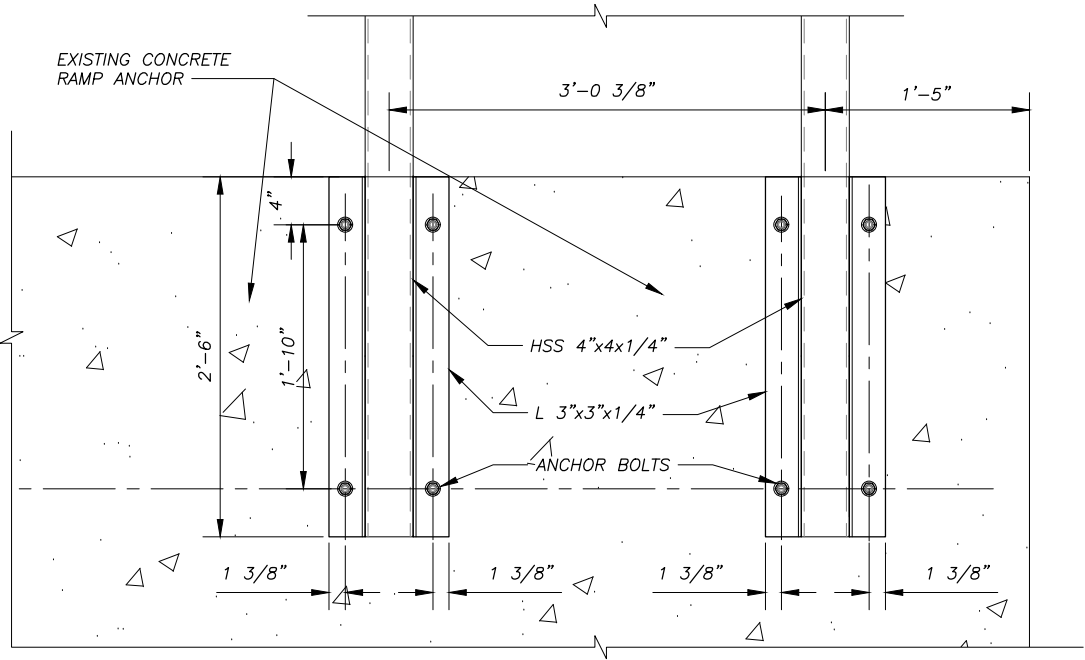
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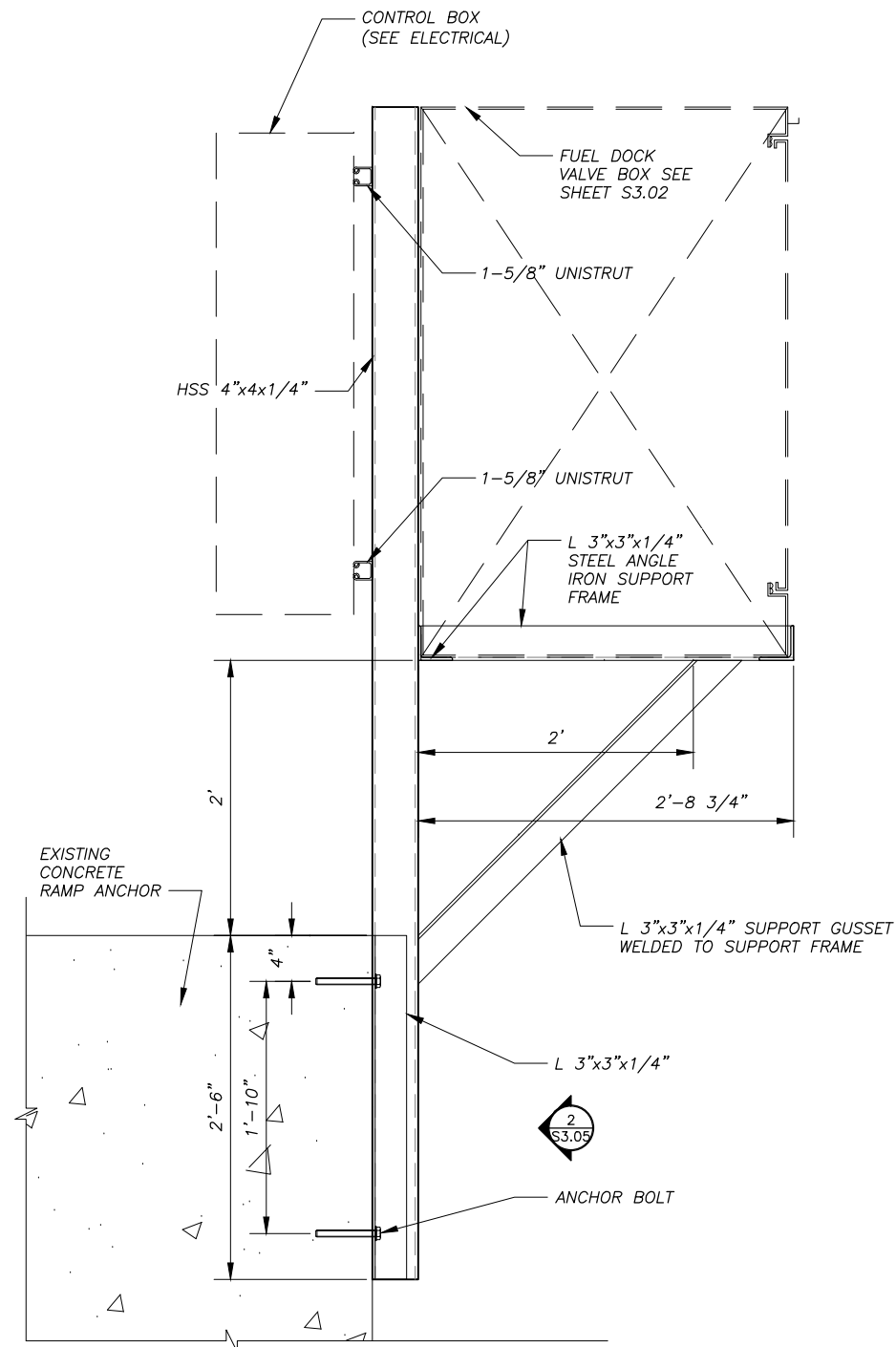
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 LAYOUT: S3.05 - PUMP BOX FRAME
 XREF: 13-039&40_KAKE-CONTOURS-ONLY, 13-039_40_KAKE-SURVEY-BASE, 13-040_00_X-DESIGN-BASE-PIPELINE, 13040-00_B01



1 PLAN - VALVE BOX FRAMING
 S3.05 SCALE: 1-1/2" = 1'-0"

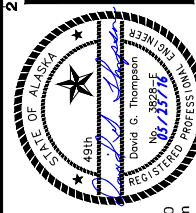


2 CONNECTION DETAIL
 S3.05 SCALE: 1-1/2" = 1'-0"



3 SECTION - VALVE BOX FRAMING
 S3.05 SCALE: 1-1/2" = 1'-0"

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SHEET TITLE	
FUEL DOCK VALVE BOX FRAMING DETAILS	
SHEET	
S3.05	
DRAWN BY:	CHECKED BY:
KK	DGT
DATE:	SCALE:
05/25/16	AS SHOWN
JOB NUMBER:	
13-040	

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
—	EXPOSED CONDUIT
-----	UNDERGROUND CONDUIT
⊕	3/4" X 10' COPPER CLAD STEEL GROUND ROD
—>—	CONDUIT RUN - CHANGE IN ELEVATION
⌒	LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT
⊕	JUNCTION BOX OR FITTING
—/—	MOLDED CASE CIRCUIT BREAKER, X = AMPERE RATING, Y = NO. OF POLES
—UE—	UNDERGROUND ELECTRIC
—OH/E—	OVERHEAD ELECTRIC
Ⓜ	KILOWATT-HOUR METER
Ⓣ	THERMOSTAT
\$	SINGLE POLE SWITCH (SPST), 120V, 20A
Ⓜ	PANELBOARD
Ⓢ	GROUND FAULT INTERRUPTING RECEPTACLE
Ⓢ	120V DUPLEX RECEPTACLE NEMA 5-20R
\$	SINGLE POLE SWITCH
\$ ₃	THREE-WAY SWITCH
\$ ₄	FOUR-WAY SWITCH
\$ _K	KEYED SWITCH
Ⓜ	MOTOR, 3-PHASE
Ⓜ	MOTOR, SINGLE PHASE
Ⓜ	COMBINATION MOTOR STARTER
Ⓜ	FUSED DISCONNECT SWITCH
Ⓜ	UNFUSED DISCONNECT SWITCH
Ⓜ	MOTORIZED VALVE
OTHER SYMBOLS ARE AS DEFINED BY NOTE.	

ABBREVIATIONS

3PDT	TRIPLE POLE, DOUBLE THROW
A	ANALOG SIGNAL, AMPERE
AFF	ABOVE FINISH FLOOR
AL	ALUMINUM
BCU	BARE COPPER
C	CONDUIT OR CONDUCTOR
CP	CONTROL PANEL
CU	COPPER
D	DIGITAL SIGNAL
DPDT	DOUBLE POLE, DOUBLE THROW
E	EMERGENCY
(E)	EXISTING
EXP	EXPLOSION PROOF (HAZARDOUS AREA)
FLA	FULL LOAD AMPERES
FS	FLOW SWITCH
G	GROUND CONDUCTOR
GFI	GROUND FAULT INTERRUPTING
GRC	GALVANIZED RIGID (STEEL) CONDUIT
HOA	HAND-OFF-AUTO
HL	HIGH LEVEL
HP	HORSEPOWER
IPEC	INSIDE PASSAGE ELECTRIC COOPERATIVE
KVA	KILO-VOLT-AMPERES
LTF	LIQUID TIGHT FLEXIBLE CONDUIT (METALLIC)
MCC	MOTOR CONTROL CENTER
(N)	NEW
N.I.C.	NOT IN CONTRACT
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
PH	PHASE
SIG	SIGNAL
SP	SPACE
SPST	SINGLE POLE, SINGLE THROW
STL	STEEL
TWSH	TWISTED WIRE SHIELDED
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
WP	WEATHERPROOF
XFMR	TRANSFORMER
ZS	LIMIT SWITCH

GENERAL NOTES

- ALL ELECTRICAL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE, STATE, MUNICIPAL, AND FEDERAL LAWS, AMENDMENTS AND/OR ORDINANCES GOVERNING THE PROJECT. IF DIRECT CONFLICT ARISES BETWEEN DESIGN DOCUMENTS AND GOVERNING CODES, LAWS, AND/OR ORDINANCES, THE CODES, LAWS, AND/OR ORDINANCES SHALL HAVE JURISDICTION AND THE WORK IN QUESTION SHALL BE INSTALLED ACCORDING TO THE CODES, LAWS, AND/OR ORDINANCES. ALL WORK SHALL BE PERFORMED UNDER THE SUPERVISION OF A CERTIFIED ELECTRICIAN.
- MATERIALS AND EQUIPMENT SHALL BE COMMERCIAL GRADE AND ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION AS SUITABLE FOR THE USE INTENDED. ALL ELECTRICAL EQUIPMENT SHALL INCLUDE THE SEAL OF A NATIONALLY RECOGNIZED TESTING LABORATORY FOR THE PURPOSE FOR WHICH IT IS INSTALLED. WHENEVER POSSIBLE, SIMILAR ITEMS SHALL BE SUPPLIED BY THE SAME MANUFACTURER THROUGHOUT THE PROJECT.
- COORDINATE AND PROVIDE THE EQUIPMENT WITH THE SHORT CIRCUIT CURRENT RATING (SCCR) FOR THE AVAILABLE FAULT CURRENT AT THE POINT OF THE SYSTEM WHERE INSTALLED. PROVIDE ARC FAULT WARNING LABELS ON ALL PANELBOARDS AND SIMILAR EQUIPMENT PER NEC REQUIREMENTS.
- DIMENSIONS OF EQUIPMENT ARE APPROXIMATE. INSTALLATION SHALL BE VERIFIED BASED ON ACTUAL MANUFACTURER'S DATA AND SHOP DRAWINGS.
- ALL SITE WORK AND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS. VERIFY ALL INSTALLATIONS PRIOR TO COMMENCEMENT OF WORK. COORDINATE ALL WORK WITH UTILITIES AS REQUIRED.
- ALL SINGLE PHASE BRANCH CIRCUITS SHALL BE 1/2" C, 3#12, AND ALL THREE PHASE BRANCH CIRCUITS SHALL BE 1/2" C, 4#12, UNLESS OTHERWISE NOTED. ALL CIRCUITS SHALL HAVE GROUND CONDUCTOR.
- CONTRACTOR SHALL SUBMIT REQUEST FOR SUBSTITUTION IN WRITING TO THE ENGINEER.
- PROVIDE SEISMIC SUPPORT AND DESIGN PER IBC REQUIREMENTS.
- WHERE EXISTING UNDERGROUND UTILITIES ARE SHOWN ON THE PLANS, MULTIPLE PARALLEL LINES MAY BE ENCOUNTERED IN THE SAME TRENCH OR GENERAL AREA. SINGLE LINES WERE SHOWN FOR CLARITY.

CONTROL PANEL COMPONENT SCHEDULE

ITEM	PROVIDE MATERIALS SPECIFIED (SUBSTITUTIONS NOT ALLOWED)
①	PILOT LIGHT, 120V, LED, NEMA 4X, ALLEN BRADLEY CAT #800HC-QRH10*, WHERE * = LENS TINT AS SHOWN.
②	120V RELAY, 3PDT, 11-PIN OCTAL SOCKET MOUNT WITH MECHANICAL ON/OFF INDICATOR, ALLEN BRADLEY CAT #700-HA33A1 AND #700-HN126 SOCKET BASE.
③	PILOT LIGHT, PUSH TO TEST, 120V, LED, NEMA 4X, ALLEN BRADLEY CAT #800HC-QRTH10*, WHERE * = LENS TINT AS SHOWN.
④	ALARM HORN, 120V, WEATHERPROOF, FEDERAL #350WB 120.
⑤	2-POLE, 600V, 23A, IEC, OPEN TYPE CONTACTOR WITH 120V COIL ALLEN BRADLEY CAT #100-C12D10 AND SOLID STATE, SINGLE PHASE, OVERLOAD RELAY ALLEN BRADLEY CAT #193-ES1BB. PROVIDE WITH ADDITIONAL AUXILIARY AND OVERLOAD CONTACTS, AND REMOTE OVERLOAD RESET ALLEN BRADLEY CAT #193-ER1D AS REQUIRED.
⑥	NORMALLY OPEN PUSHBUTTON, 120V, 10A, NEMA 4X, ALLEN BRADLEY CAT #800HC-AR2D1. PROVIDE ADDITIONAL CONTACT BLOCKS AS REQUIRED.
⑦	ALARM LIGHT, 120V, FEDERAL ELECTRA FLASH #141ST-120R W/ RED LEXAN DOME.
⑧	120V, 10A, N.C., NEMA 4X, MUSHROOM HEAD PUSHBUTTON W/ MAINTAINED PUSH-PULL OPERATION, ALLEN BRADLEY CAT#800HC-FRXT6. PROVIDE W/ RED 'EMERGENCY SHUTDOWN' LEGEND PLATE AND CONTACTS AS REQUIRED.
⑨	120V, PANEL HEATER W/ INTEGRAL THERMOSTAT WATTAGE AS REQUIRED, HOFFMAN SERIES #DAH.
⑩	120V, PANEL HEATER W/ INTEGRAL THERMOSTAT WATTAGE AS REQUIRED, HOFFMAN SERIES #DAH.
⑪	NORMALLY CLOSED PUSHBUTTON, 120V, 10A, NEMA 4X, ALLEN BRADLEY CAT #800HC-AR6D2. PROVIDE ADDITIONAL CONTACT BLOCKS AS REQUIRED.
⑫	DOOR MOUNTED DISCONNECT SWITCH, 240V, 60A, 3-POLE W/ PADLOCK PROVISION, ALLEN BRADLEY CAT#194RF-NN060R24E
⑬	2-POSITION SELECTOR SWITCH, 120V, NEMA 4X, ALLEN BRADLEY CAT #800HC-HR2A. PROVIDE CONTACTS BLOCKS AS REQUIRED.
⑭	NEMA 4X, NON-METALLIC ENCLOSURE WITH REMOVABLE STEEL BACK PANEL, INNER DEAD-FRONT HINGED DOOR AND OUTER DOOR. SIZE AS REQUIRED. PROVIDE SWING OUT PANEL KIT. HOFFMAN OR EQUAL.
⑮	MINIATURE CIRCUIT BREAKER, 240V, AMPERE RATING AND NUMBER OF POLES AS SHOWN, DIN RAIL MOUNTED W/BOX LUGS, SQUARE D MULTI 9 C60N CLASS 860 SERIES
⑯	ADJUSTABLE TIME DELAY RELAY, 1.0-100 MINUTE ON DELAY, 120V, DPDT, ALLEN BRADLEY CAT#700-HT12DU120. SET FOR 10 MINUTE TIME DELAY.
⑰	POWER DISTRIBUTION BLOCK, 600V, 335A, 3-POLE. ALLEN BRADLEY CAT#1492-PD3163.
⑱	SAFETY CONTROL RELAY, 1 N.O., 1 N.C., 120V, ALLEN BRADLEY CAT #700S-CF620DBC

CIRCUIT AND DEVICE LEGEND

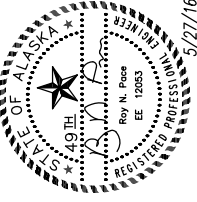
- PP-1,α GROUP OR EQUIPMENT IDENTIFICATION.
 "PP" DENOTES PANEL NAME
 "1" DENOTES CIRCUIT NUMBER
 "α" DENOTES SWITCH LEG AS INDICATED.
- \$3,α SWITCH IDENTIFICATION.
 "3" DENOTES SWITCH CONFIGURATION
 "α" DENOTES SWITCH LEG AS INDICATED.

FIXTURE SCHEDULE

TYPE	FIXTURE SYMBOL	LAMP SIZE	MOUNTING	DESCRIPTION
S1	●	134W LED	POLE MOUNT ⊙ 25'-0"	LED FLOOD LIGHT WITH PHOTOCCELL. PROVIDE ON 25' METAL POLE. CREE #FLDEDG-N6-AA-06-E-UL-700-40K LUMINAIRE WITH LITHONIA #RSA-25-6G POLE.
L1	⊙	15W LED	SURFACE CEILING MOUNT	ENCLOSED AND GASKETED, WET LOCATION, LED. LITHONIA #OLVTCM.
L2	⊙	107W LED	SURFACE CEILING MOUNT	CANOPY LUMINAIRE, WET LOCATION RATED, LED. LITHONIA #DSXSC LED-30C-1000-40K-T5M-120.

Drawing: P:\Projects\HDI\Kake Bulk Fuel Upgrades\Dwg\E1.01_ Legend, Abbreviations And Schedules.dwg DATE/TIME: 5/31/2016 10:22:18 AM Sheet Layout: E1.01 E1.01 LEGEND ABBREVIATIONS SCHEDULES

REVISIONS	MARK	DATE	DESCRIPTION
1			
2			
3			
4			
5			

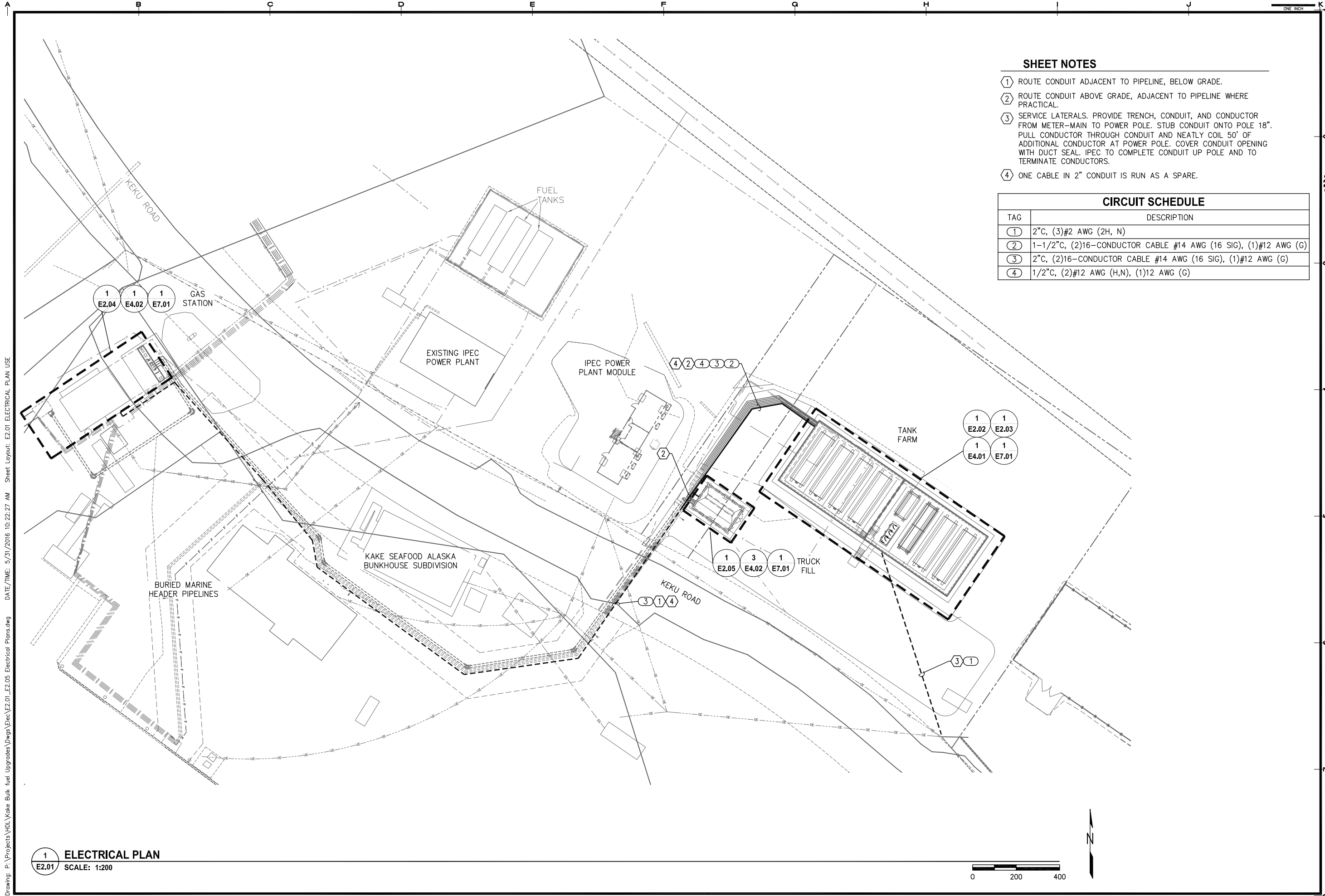


EDC, INC.
 213 W. FIREWEED LANE
 ANCHORAGE, AK 98503
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SHEET TITLE LEGEND, ABBREVIATIONS, AND SCHEDULES	
SHEET E1.01	
DRAWN BY: VI/OM	CHECKED BY: RP
DATE: 5/27/16	SCALE: AS NOTED
JOB NUMBER: 13-040	



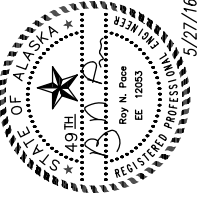
SHEET NOTES

- ① ROUTE CONDUIT ADJACENT TO PIPELINE, BELOW GRADE.
- ② ROUTE CONDUIT ABOVE GRADE, ADJACENT TO PIPELINE WHERE PRACTICAL.
- ③ SERVICE LATERALS. PROVIDE TRENCH, CONDUIT, AND CONDUCTOR FROM METER-MAIN TO POWER POLE. STUB CONDUIT ONTO POLE 18". PULL CONDUCTOR THROUGH CONDUIT AND NEATLY COIL 50' OF ADDITIONAL CONDUCTOR AT POWER POLE. COVER CONDUIT OPENING WITH DUCT SEAL. IPEC TO COMPLETE CONDUIT UP POLE AND TO TERMINATE CONDUCTORS.
- ④ ONE CABLE IN 2" CONDUIT IS RUN AS A SPARE.

CIRCUIT SCHEDULE

TAG	DESCRIPTION
①	2"C, (3)#2 AWG (2H, N)
②	1-1/2"C, (2)16-CONDUCTOR CABLE #14 AWG (16 SIG), (1)#12 AWG (G)
③	2"C, (2)16-CONDUCTOR CABLE #14 AWG (16 SIG), (1)#12 AWG (G)
④	1/2"C, (2)#12 AWG (H,N), (1)12 AWG (G)

REVISIONS	MARK	DATE	DESCRIPTION
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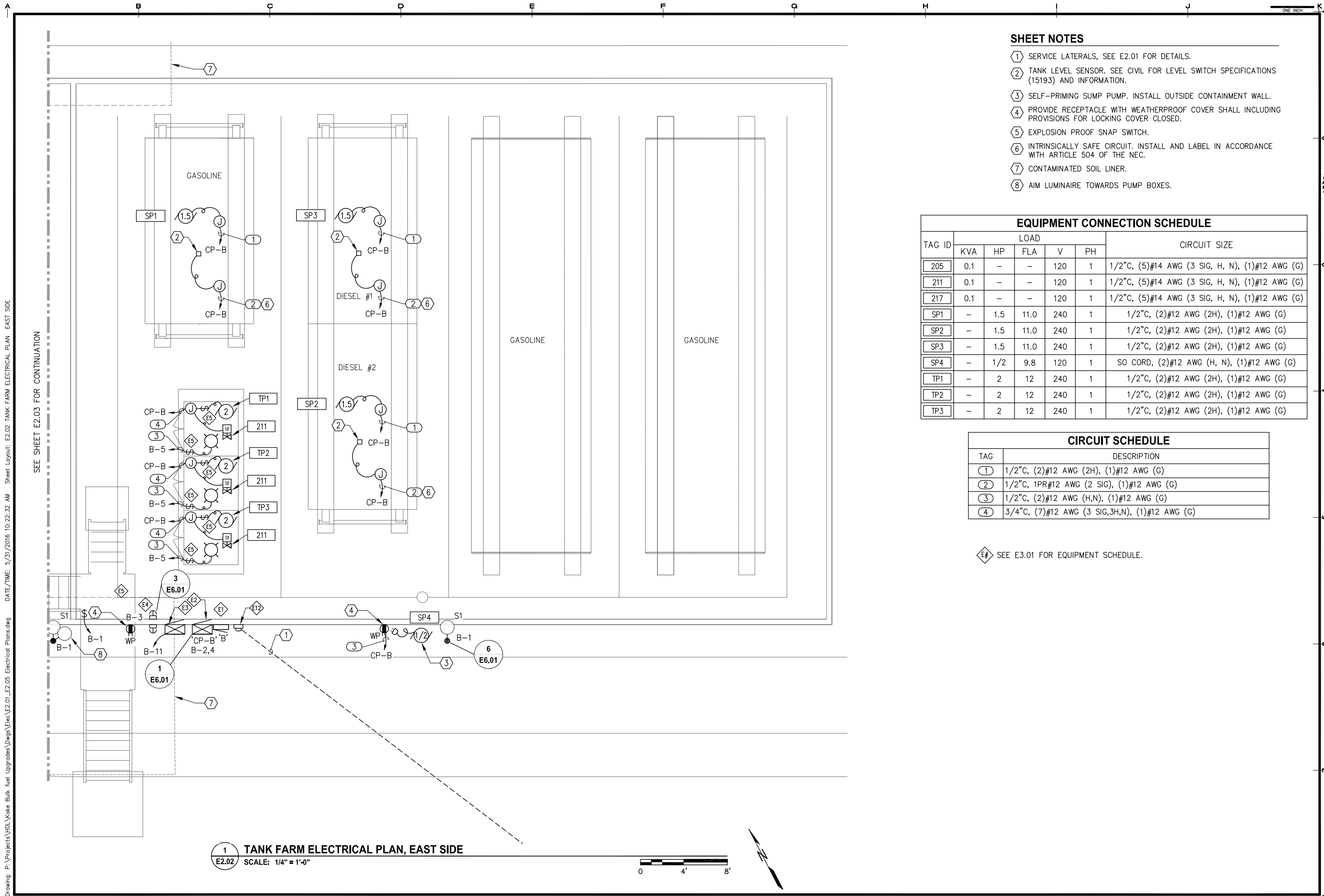
SHEET TITLE ELECTRICAL PLAN	
SHEET E2.01	
DRAWN BY: VI/OM	CHECKED BY: RP
DATE: 5/27/16	SCALE: AS NOTED
JOB NUMBER: 13-040	

Drawing: P:\Projects\HDI\Kake Bulk Fuel Upgrades\Dwgs\Elec\E2.01_E2.05 Electrical Plans.dwg DATE/TIME: 5/31/2016 10:22:27 AM Sheet Layout: E2.01 ELECTRICAL PLAN USE

1
E2.01 **ELECTRICAL PLAN**
 SCALE: 1:200



Drawing: P:\Projects\HDI\Kake Bulk Fuel Upgrades\Elec\E2.01_E2.05 Electrical Plans.dwg DATE/TIME: 5/31/2016 10:22:32 AM Sheet Layout: E2.02 TANK FARM ELECTRICAL PLAN EAST SIDE



SHEET NOTES

- ① SERVICE LATERALS, SEE E2.01 FOR DETAILS.
- ② TANK LEVEL SENSOR. SEE CIVIL FOR LEVEL SWITCH SPECIFICATIONS (15193) AND INFORMATION.
- ③ SELF-PRIMING SUMP PUMP. INSTALL OUTSIDE CONTAINMENT WALL.
- ④ PROVIDE RECEPTACLE WITH WEATHERPROOF COVER SHALL INCLUDING PROVISIONS FOR LOCKING COVER CLOSED.
- ⑤ EXPLOSION PROOF SNAP SWITCH.
- ⑥ INTRINSICALLY SAFE CIRCUIT. INSTALL AND LABEL IN ACCORDANCE WITH ARTICLE 504 OF THE NEC.
- ⑦ CONTAMINATED SOIL LINER.
- ⑧ AIM LUMINAIRE TOWARDS PUMP BOXES.

EQUIPMENT CONNECTION SCHEDULE

TAG ID	LOAD					CIRCUIT SIZE
	KVA	HP	FLA	V	PH	
205	0.1	-	-	120	1	1/2"C, (5)#14 AWG (3 SIG, H, N), (1)#12 AWG (G)
211	0.1	-	-	120	1	1/2"C, (5)#14 AWG (3 SIG, H, N), (1)#12 AWG (G)
217	0.1	-	-	120	1	1/2"C, (5)#14 AWG (3 SIG, H, N), (1)#12 AWG (G)
SP1	-	1.5	11.0	240	1	1/2"C, (2)#12 AWG (2H), (1)#12 AWG (G)
SP2	-	1.5	11.0	240	1	1/2"C, (2)#12 AWG (2H), (1)#12 AWG (G)
SP3	-	1.5	11.0	240	1	1/2"C, (2)#12 AWG (2H), (1)#12 AWG (G)
SP4	-	1/2	9.8	120	1	SO CORD, (2)#12 AWG (H, N), (1)#12 AWG (G)
TP1	-	2	12	240	1	1/2"C, (2)#12 AWG (2H), (1)#12 AWG (G)
TP2	-	2	12	240	1	1/2"C, (2)#12 AWG (2H), (1)#12 AWG (G)
TP3	-	2	12	240	1	1/2"C, (2)#12 AWG (2H), (1)#12 AWG (G)

CIRCUIT SCHEDULE

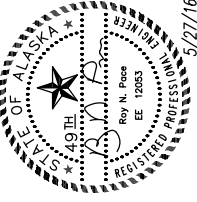
TAG	DESCRIPTION
①	1/2"C, (2)#12 AWG (2H), (1)#12 AWG (G)
②	1/2"C, 1PR#12 AWG (2 SIG), (1)#12 AWG (G)
③	1/2"C, (2)#12 AWG (H,N), (1)#12 AWG (G)
④	3/4"C, (7)#12 AWG (3 SIG,3H,N), (1)#12 AWG (G)

⬡ SEE E3.01 FOR EQUIPMENT SCHEDULE.

1 TANK FARM ELECTRICAL PLAN, EAST SIDE
E2.02 SCALE: 1/4" = 1'-0"



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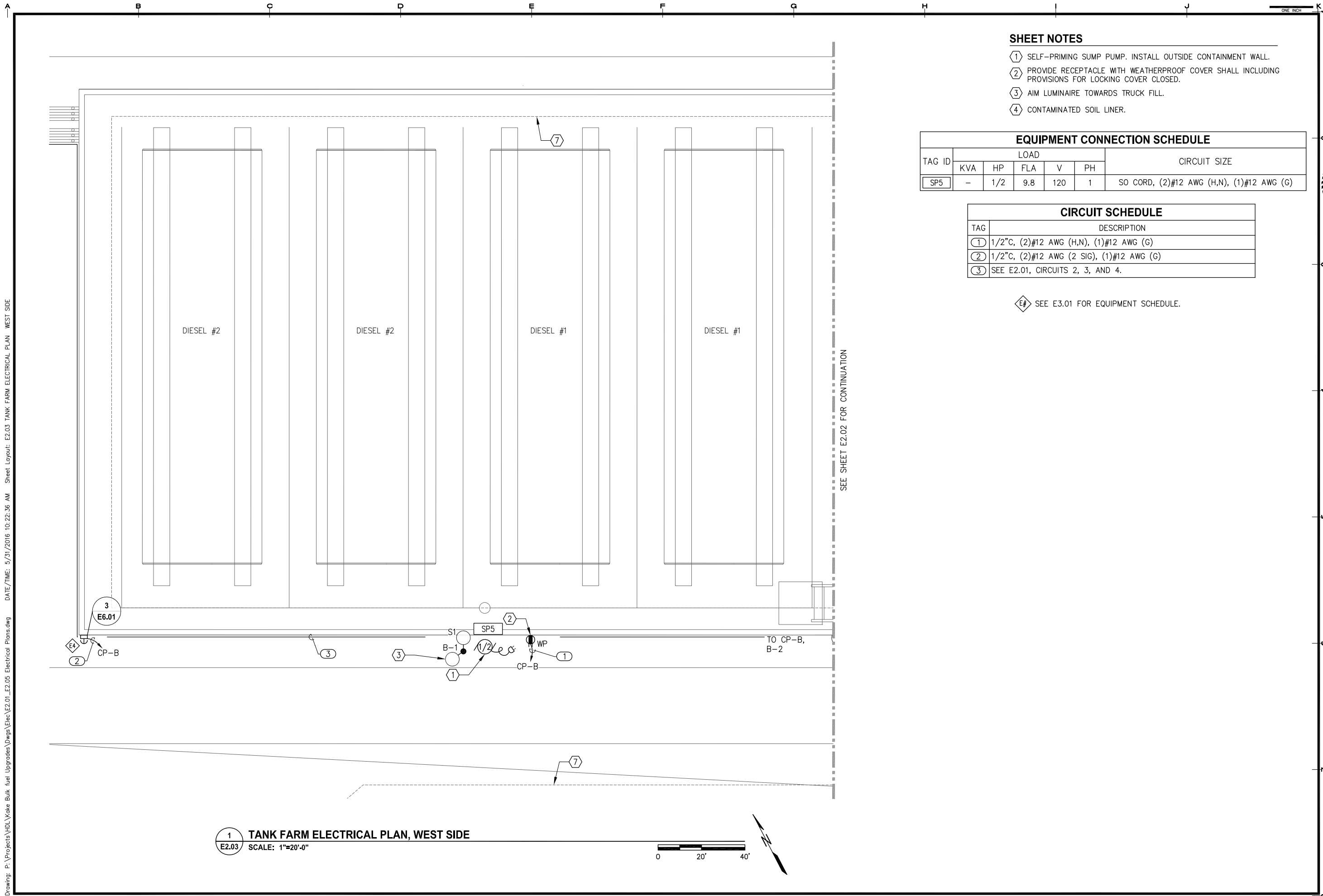
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SHEET TITLE TANK FARM ELECTRICAL PLAN, EAST SIDE	
SHEET E2.02	
DRAWN BY: VI/OM	CHECKED BY: RP
DATE: 5/27/16	SCALE: AS NOTED
JOB NUMBER: 13-040	

Drawing: P:\Projects\HDI_Kake Bulk Fuel Upgrades\Dwg\E2.01_E2.05 Electrical Plans.dwg DATE/TIME: 5/31/2016 10:22:36 AM Sheet Layout: E2.03 TANK FARM ELECTRICAL PLAN WEST SIDE



SHEET NOTES

- ① SELF-PRIMING SUMP PUMP. INSTALL OUTSIDE CONTAINMENT WALL.
- ② PROVIDE RECEPTACLE WITH WEATHERPROOF COVER SHALL INCLUDING PROVISIONS FOR LOCKING COVER CLOSED.
- ③ AIM LUMINAIRE TOWARDS TRUCK FILL.
- ④ CONTAMINATED SOIL LINER.

EQUIPMENT CONNECTION SCHEDULE

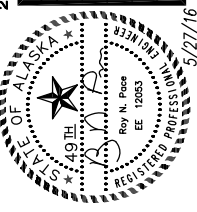
TAG ID	LOAD					CIRCUIT SIZE
	KVA	HP	FLA	V	PH	
SP5	-	1/2	9.8	120	1	SO CORD, (2)#12 AWG (H,N), (1)#12 AWG (G)

CIRCUIT SCHEDULE

TAG	DESCRIPTION
①	1/2"C, (2)#12 AWG (H,N), (1)#12 AWG (G)
②	1/2"C, (2)#12 AWG (2 SIG), (1)#12 AWG (G)
③	SEE E2.01, CIRCUITS 2, 3, AND 4.

⬡ SEE E3.01 FOR EQUIPMENT SCHEDULE.

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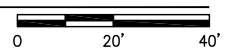


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1 TANK FARM ELECTRICAL PLAN, WEST SIDE
E2.03 SCALE: 1"=20'-0"



SHEET TITLE TANK FARM ELECTRICAL PLAN, WEST SIDE	
SHEET E2.03	
DRAWN BY: VI/OM	CHECKED BY: RP
DATE: 5/27/16	SCALE: AS NOTED
JOB NUMBER: 13-040	

TAG ID	LOAD					CIRCUIT SIZE	NOTE
	KVA	HP	FLA	V	PH		
603	0.1	-	-	120	1	1/2" C, (5)#14 AWG (3 SIG, H, N), (1)#12 AWG (G)	1
610	0.1	-	-	120	1	1/2" C, (5)#14 AWG (3 SIG, H, N), (1)#12 AWG (G)	1

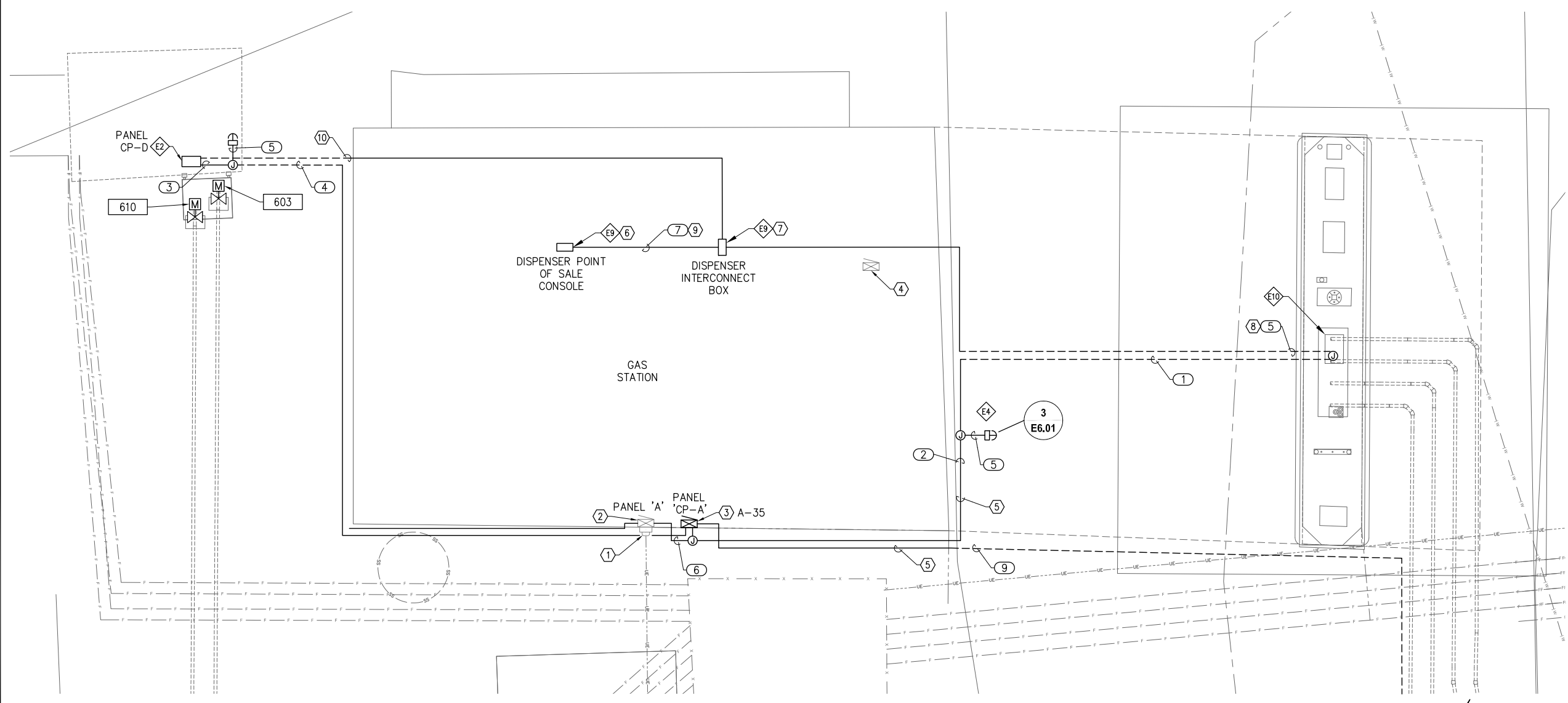
NOTE 1: ROUTE CONDUCTORS TO CP-D.

TAG	DESCRIPTION
①	1/2" C, (6)#12 (4 SIG,H,N), (1)#12 AWG (G)
②	3/4" C, (8)#12 (6 SIG,H,N), (1)#12 AWG (G)
③	1" C, (18)#12 (14 SIG,2H,2N), (1)#12 AWG (G)
④	1" C, (20)#12 (14 SIG,2H,2N), (1)#12 AWG (G)
⑤	1/2" C, (2)#14 (2 SIG), (1)#12 AWG (G)
⑥	1/2" C, (2)#12 (H,N), (1)#12 AWG (G)
⑦	1" C, (15)#14 AWG (14 SIG), (1)#12 AWG (G)
⑧	1" C, (8)#14 AWG (6 SIG,H,N), (1)#12 AWG (G)
⑨	SEE E2.01, CIRCUIT 3.

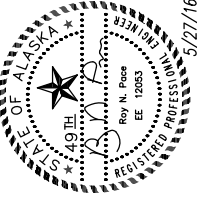
◆ E# SEE E3.01 FOR EQUIPMENT SCHEDULE.

SHEET NOTES

- ① (E) 280/120V, 3φ SERVICE METER/MAIN TO REMAIN
- ② (E) 208/120V, 3φ PANEL 'A' TO REMAIN
- ③ (N) 120V PANEL 'CP-A'
- ④ DEMOLISH (E) CONTROL PANEL, TURN OVER EQUIPMENT TO OWNER. DEMOLISH ALL ASSOCIATED CONDUIT, CABLE, AND DEVICES ASSOCIATED WITH THE CONTROL PANEL.
- ⑤ MOUNT CONDUIT TO WALL
- ⑥ SALVAGE (E) CONSOLE AND INSTALL (N) AT SAME LOCATION. REUSE (E) POWER CIRCUIT.
- ⑦ DEMOLISH (E) INTERCONNECT EQUIPMENT AND WIRING. INSTALL (N) INTERCONNECT BOX AT SAME LOCATION. REUSE (E) POWER CIRCUIT.
- ⑧ GILBARCO DATA CABLES.
- ⑨ MANUFACTURER FURNISHED CABLE.
- ⑩ SPARE 3/4" CONDUIT FOR FUTURE MARINE DISPENSER.



REVISIONS	MARK	DATE	DESCRIPTION
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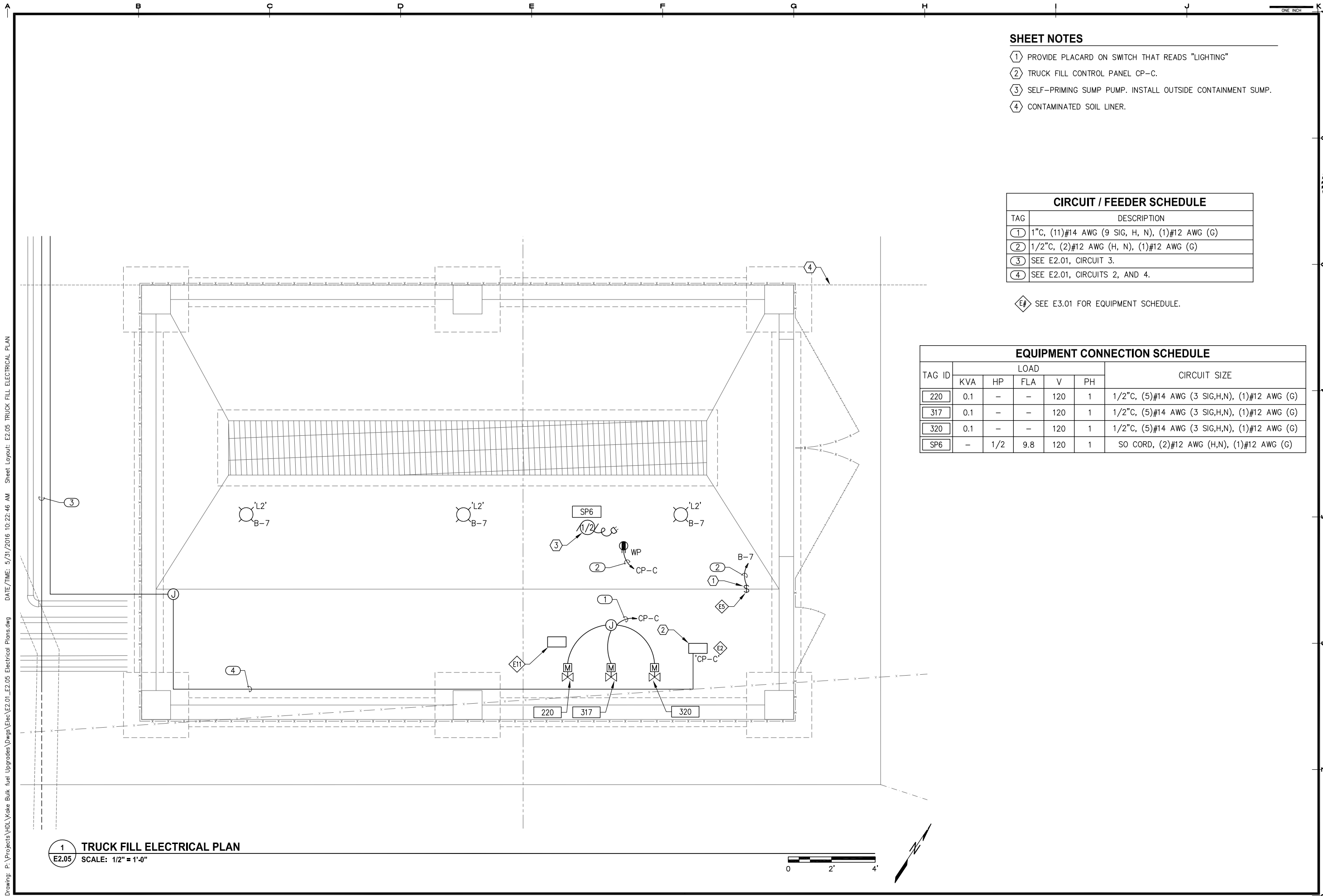
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ALASKA ENERGY AUTHORITY
KAKE, ALASKA

1
E2.04 GAS STATION ELECTRICAL PLAN
SCALE: 1/4" = 1'-0"



SHEET TITLE GAS STATION ELECTRICAL PLAN	
SHEET E2.04	
DRAWN BY: VI/OM	CHECKED BY: RP
DATE: 5/27/16	SCALE: AS NOTED
JOB NUMBER: 13-040	

Drawing: P:\Projects\HDI_Kake Bulk Fuel Upgrades\Dwgs\Elec\E2.01_E2.05 Electrical Plans.dwg DATE/TIME: 5/31/2016 10:22:41 AM Sheet Layout: E2.04 GAS STATION ELECTRICAL PLAN



SHEET NOTES

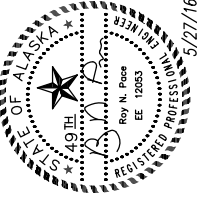
- ① PROVIDE PLACARD ON SWITCH THAT READS "LIGHTING"
- ② TRUCK FILL CONTROL PANEL CP-C.
- ③ SELF-PRIMING SUMP PUMP. INSTALL OUTSIDE CONTAINMENT SUMP.
- ④ CONTAMINATED SOIL LINER.

CIRCUIT / FEEDER SCHEDULE	
TAG	DESCRIPTION
①	1" C, (11)#14 AWG (9 SIG, H, N), (1)#12 AWG (G)
②	1/2" C, (2)#12 AWG (H, N), (1)#12 AWG (G)
③	SEE E2.01, CIRCUIT 3.
④	SEE E2.01, CIRCUITS 2, AND 4.

⬠ SEE E3.01 FOR EQUIPMENT SCHEDULE.

TAG ID	LOAD					CIRCUIT SIZE
	KVA	HP	FLA	V	PH	
220	0.1	-	-	120	1	1/2" C, (5)#14 AWG (3 SIG,H,N), (1)#12 AWG (G)
317	0.1	-	-	120	1	1/2" C, (5)#14 AWG (3 SIG,H,N), (1)#12 AWG (G)
320	0.1	-	-	120	1	1/2" C, (5)#14 AWG (3 SIG,H,N), (1)#12 AWG (G)
SP6	-	1/2	9.8	120	1	SO CORD, (2)#12 AWG (H,N), (1)#12 AWG (G)

REVISIONS	MARK	DATE	DESCRIPTION
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1 TRUCK FILL ELECTRICAL PLAN
E2.05 SCALE: 1/2" = 1'-0"

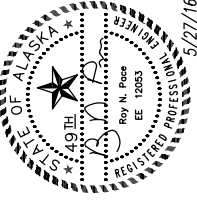
SHEET TITLE TRUCK FILL ELECTRICAL PLAN	
SHEET E2.05	
DRAWN BY: VI/OM	CHECKED BY: RP
DATE: 5/27/16	SCALE: AS NOTED
JOB NUMBER: 13-040	

Drawing: P:\Projects\HDI\Kake Bulk Fuel Upgrades\Dwg\E2.05 Electrical Plans.dwg DATE/TIME: 5/31/2016 10:22:46 AM Sheet Layout: E2.05 TRUCK FILL ELECTRICAL PLAN

SHEET NOTES

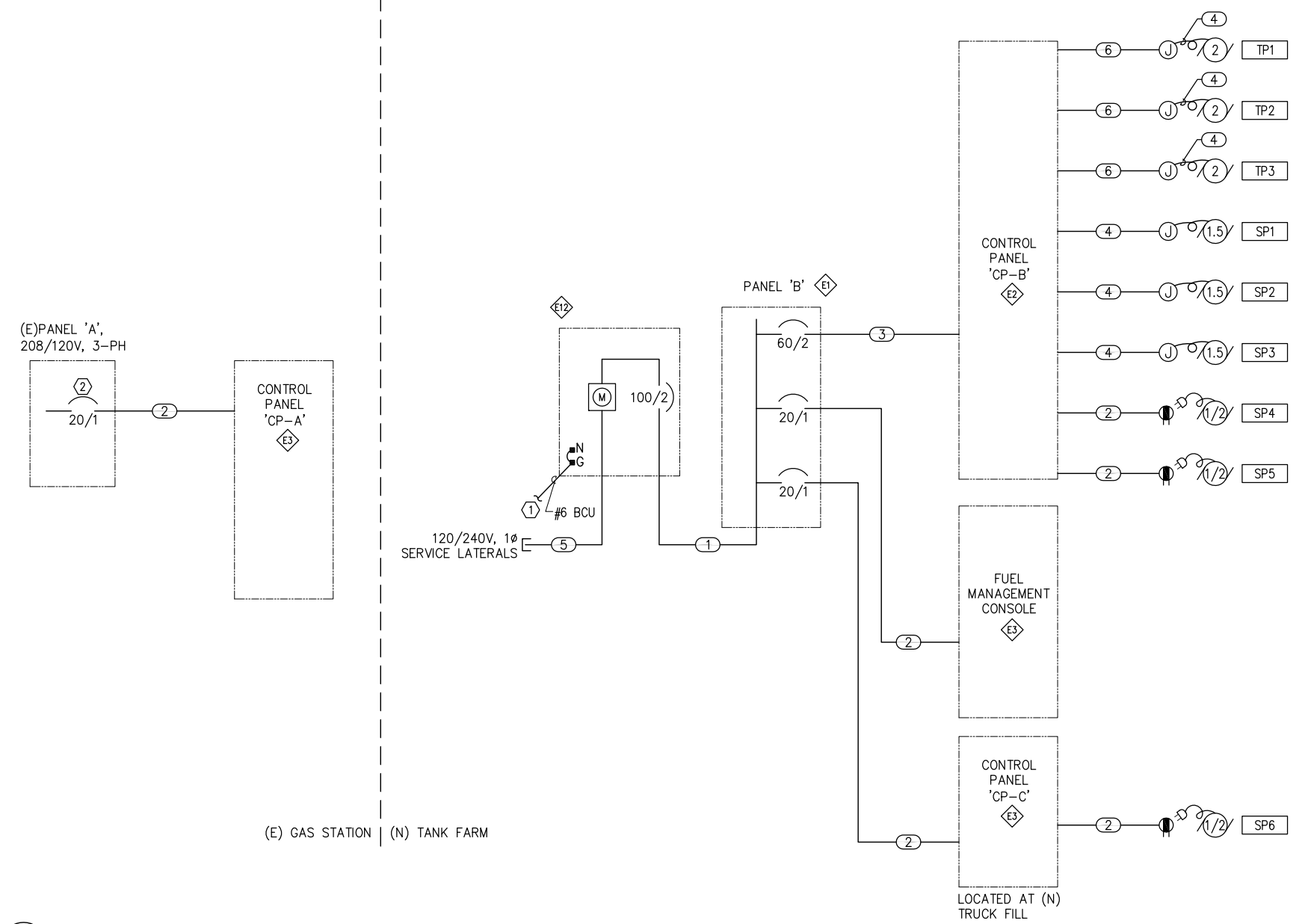
- ① PROVIDE CONNECTION TO GROUNDING ELECTRODE SYSTEM (GES). SEE GROUND PLAN ON E4.01.
- ② PROVIDE (N)CIRCUIT BREAKERS IN (E)208/120V, 3-PH PANEL. MATCH EXISTING EQUIPMENT MANUFACTURER.

REVISIONS	MARK	DATE	DESCRIPTION
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CIRCUIT SCHEDULE	
TAG	DESCRIPTION
①	2" C, (3)#2 AWG (2H, N), (1)#8 AWG (G)
②	1/2" C, (2)#12 AWG (H,N), (1)#12 AWG (G)
③	2" C, (3)#6 AWG (2H, N), (1)#10 AWG (G)
④	1/2" C, (2)#12 AWG (2H), (1)#12 AWG (G)
⑤	SEE SHEET E2.01 FOR DETAILS.
⑥	SEE SHEET E2.02 FOR DETAILS.

ELECTRICAL EQUIPMENT SCHEDULE		
ITEM NO.	DESCRIPTION	MANUFACTURER
E1	PANELBOARD 'B'. 100A, 120/240V, 1- ϕ , 18-SPACE, WITH MAIN LUGS ONLY.	SQUARE D #NQ18L1C
E2	CONTROL PANEL, SIZE AS REQUIRED. SEE E5.01 FOR CONTROL DIAGRAM, AND E5.02-E5.15 FOR LAYOUTS AND SCHEMATICS.	
E3	550 EVO FUEL MANAGEMENT CONSOLE WITHOUT PRINTER.	FRANKLIN #T550ED
E4	EMERGENCY SHUTDOWN PUSHBUTTON (ESD). PROVIDE WITH 'EMERGENCY SHUTDOWN' LABEL. MOUNT AS SHOWN.	
E5	120V, 20A, CLASS 1, DIV 1, FACTORY SEALED SNAP SWITCH.	CROUSE-HINDS #EDS2129
E6	120V, 20A RATED GFI RECEPTACLE IN CAST WEATHERPROOF ENCLOSURE.	
E7	120V, 20A RATED SNAP SWITCH WITH A FS TYPE CAST DEVICE BOX AND A GASKETED, RAIN-TIGHT COVER.	CROUSE-HINDS #DS185
E8	SEAL OFF FITTING, CLASS 1, DIV 1. PROVIDE AT ALL HAZARDOUS LOCATION BOUNDARIES AND AS REQUIRED BY NEC ARTICLE 501.	CROUSE-HINDS #EFDC218-T8
E9	DISPENSER CONTROLLER AND INTERCONNECT BOX.	TRIANGLE MICROSYSTEMS #MPC 8 HYBRID
E10	FUEL DISPENSER.	GILBARCO
E11	GROUNDING REEL, 50' CABLE, SPRING RETURN.	AMETEK #HS70050R
E12	100A, 120/240V, 1- ϕ , METER/MAIN.	



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SHEET TITLE POWER ONE-LINE	
SHEET E3.01	
DRAWN BY: VI/OM	CHECKED BY: RP
DATE: 5/27/16	SCALE: AS NOTED
JOB NUMBER: 13-040	

1 TANK FARM POWER ONE-LINE
E3.01 SCALE: NTS

SHEET NOTES

- ① (E) PANELBOARD
- ② ADD NEW CIRCUIT BREAKER AND CIRCUIT IN (E) PANELBOARD.

VOLTAGE: 208/120
 BUS: 225A
 MAIN: 200A MCB
(E) PANEL SCHEDULE A
 LOCATION: GAS STATION
 MIN. A.I.C. RATING: 10,000 AIC
 ENCLOSURE: NEMA 3R
 MOUNTING: SURFACE

CKT	AMP TRIP	LOAD DESCRIPTION	KVA	LOAD	A	B	C	LOAD	KVA	LOAD DESCRIPTION	AMP TRIP	CKT
1	20/1	LIGHTS OLD SECTION			0.0					OLD SECTION RECEPTACLE	20/1	2
3	20/1	EXTERIOR LIGHTS				0.0				OLD SECTION RECEPTACLE	20/1	4
5	20/1	GAS PANEL RELAY					0.0			FIRE ALARM	20/1	6
7	20/1	GAS PANEL			0.0					MIDDLE LIGHTS	20/1	8
9	20/1*	BATHROOM RECEPTACLE				0.0				GAS PANEL	20/1*	10
11	20/1*	GAS PANEL LIGHTS					0.0			GAS PANEL	20/1*	12
13	20/1*	EXTERIOR RECEPTACLE			0.0					GAS PANEL (DIESEL DISPENSER)	20/1*	14
15	20/1*	SPARE				0.0				GAS PANEL (UNLEAD DISPENSER)	20/1*	16
17							0.0					18
19	30/2	FLOAT LIGHT			0.0					SHED PANEL	50/2	20
21						0.0						22
23	30/2	HOT WATER HEATER					0.0			NEW SECTION LIGHTS	15/2	24
25					0.0					BATHROOM LIGHTS	20/2	26
27	30/2	FLOAT LIGHT								NEW SECTION RECEPTACLES	15/2	28
29	20/1	CONTROL PANEL 'CP-A'					0.0			NEW SECTION RECEPTACLES	15/2	30
31	20/1	CONTROL PANEL 'CP-D'			0.0					BIG COOLER FREEZER	30/2	32
33		SPARE				0.0						34
35		SPARE					0.0					36
37		SPARE			0.0							38
39		SPARE				0.0						40
41		SPARE					0.0					42

* = GFI BREAKER
 TOTAL KVA: 0.0
 AMPS: 0.0

SUMMARY BY LOAD TYPE	CONNECTED KVA			TOTAL KVA	NEC%	NEC TOTAL	NOTES:
	PH A	PH B	PH C				
L LIGHTING	0.0	0.0	0.0	0.0	1.25	0.0	
R RECEPTACLES	0.0	0.0	0.0	0.0	10K+50%	0.0	
M MOTORS	0.0	0.0	0.0	0.0	1.00	0.0	
LM LARGEST MOTOR	0.0	0.0	0.0	0.0	1.25	0.0	
C CONTINUOUS	0.0	0.0	0.0	0.0	1.25	0.0	
N NON-CONTINUOUS	0.0	0.0	0.0	0.0	1.00	0.0	
S SPARE	0.0	0.0	0.0	0.0	1.00	0.0	
X NON-COINCIDENT	0.0	0.0	0.0	0.0	0.00	0.0	
O OTHER	0.0	0.0	0.0	0.0	1.00	0.0	
F FEEDER	0.0	0.0	0.0				
TOTAL KVA (PHASE)	0.0	0.0	0.0	0.0		0.0	
TOTAL AMPERES	0.0	0.0	0.0	0.0		0.0	
PHASE BALANCE, ABC	A-B	B-C	C-A				
PERCENT							

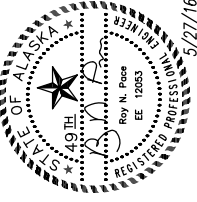
VOLTAGE: 240/120
 BUS: 100A
 MAIN: 100A MCB
PANEL SCHEDULE 'B'
 LOCATION:
 MIN. A.I.C. RATING: 10,000 AIC
 ENCLOSURE: NEMA 3R
 MOUNTING: SURFACE

CKT	AMP TRIP	LOAD DESCRIPTION	KVA	LOAD	A	B	LOAD	KVA	LOAD DESCRIPTION	AMP TRIP	CKT
1	20/1	TANK FARM LIGHTING	0.7	L	3.5		M	4.3	FUEL SYSTEM CONTROL PANEL 'CP-B'	60/2	2
3	20/1	TANK FARM RECEPTACLE	0.2	R		4.3	M	4.1		4	
5	20/1	TRANSFER PUMP BOX LTG	0.1	L	0.1						6
7	20/1	TRUCK FILL LIGHTING	0.4	L		0.4					8
9	20/1	TRUCK FILL CONTROL PANEL 'CP-C'	1.5	M	1.5						10
11	20/1	FUEL MANAGEMENT CONSOLE	0.1			0.1					12
13						0.0					14
15							0.0				16
17								0.0			18
					5.1	4.8					

TOTAL KVA: 9.9
 AMPS: 41.2

SUMMARY BY LOAD TYPE	CONNECTED KVA			TOTAL KVA	NEC%	NEC TOTAL	NOTES:
	PH A	PH B	FEED				
L LIGHTING	0.8	0.4		1.2	1.25	1.5	
R RECEPTACLES	0.0	0.2		0.2	10K+50%	0.2	
M MOTORS	5.8	4.1		9.9	1.00	9.9	
LM LARGEST MOTOR	0.0	0.0		0.0	1.25	0.0	
C CONTINUOUS	0.0	0.0		0.0	1.25	0.0	
N NON-CONTINUOUS	0.0	0.0		0.0	1.00	0.0	
S SPARE	0.0	0.0		0.0	1.00	0.0	
X NON-COINCIDENT	0.0	0.0		0.0	0.00	0.0	
O OTHER	0.0	0.0		0.0	1.00	0.0	
F FEEDER	0.0	0.0					
TOTAL KVA (PHASE)	6.6	4.7		11.3		11.5	
TOTAL AMPERES	54.8	39.0		31.2		32.0	
PHASE BALANCE, ABC	A-B	B-C					
PERCENT							

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 KAKE, ALASKA

SHEET TITLE PANEL SCHEDULES	
SHEET E3.02	
DRAWN BY: VI/OM	CHECKED BY: RP
DATE: 5/27/16	SCALE: AS NOTED
JOB NUMBER: 13-040	

A B C D E F G H I J K ONE INCH

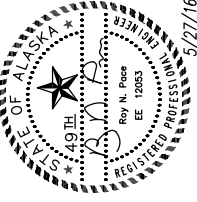
GENERAL SHEET NOTES

1. UNLESS OTHERWISE NOTED, ALL GROUNDING CONNECTIONS SHALL BE MADE USING EXOTHERMIC WELD.
2. BEDROCK IS PRESENT AT SHALLOW DEPTHS AT THE TANK FARM. CONTRACTOR TO BURY GROUND RODS HORIZONTALLY AT A DEPTH NOT LESS THAN 30".

SHEET NOTES

- ① BELOW GRADE GROUND RING. #1/0 BARE CU. BURIAL DEPT SHALL BE A MIN OF 30".
- ② CONTAINMENT WALL GROUNDING JUMPER. #6 BARE CU.
- ③ FENCE BONDING JUMPER. #6 BARE CU. SEE DETAIL 4, E6.01.
- ④ BOND TO TANK SKID PER MANUFACTURER'S RECOMMENDATIONS.
- ⑤ 3/4"X10' CU CLAD STEEL GROUND ROD.
- ⑥ BOND TO PUMP BOX METAL FRAME.
- ⑦ BOND TO STAIRWAY.
- ⑧ BOND TO PANEL B
- ⑨ CONTAMINATED SOIL LINER. RUN GROUND RING UNDER LINER.

REVISIONS	MARK	DATE	DESCRIPTION
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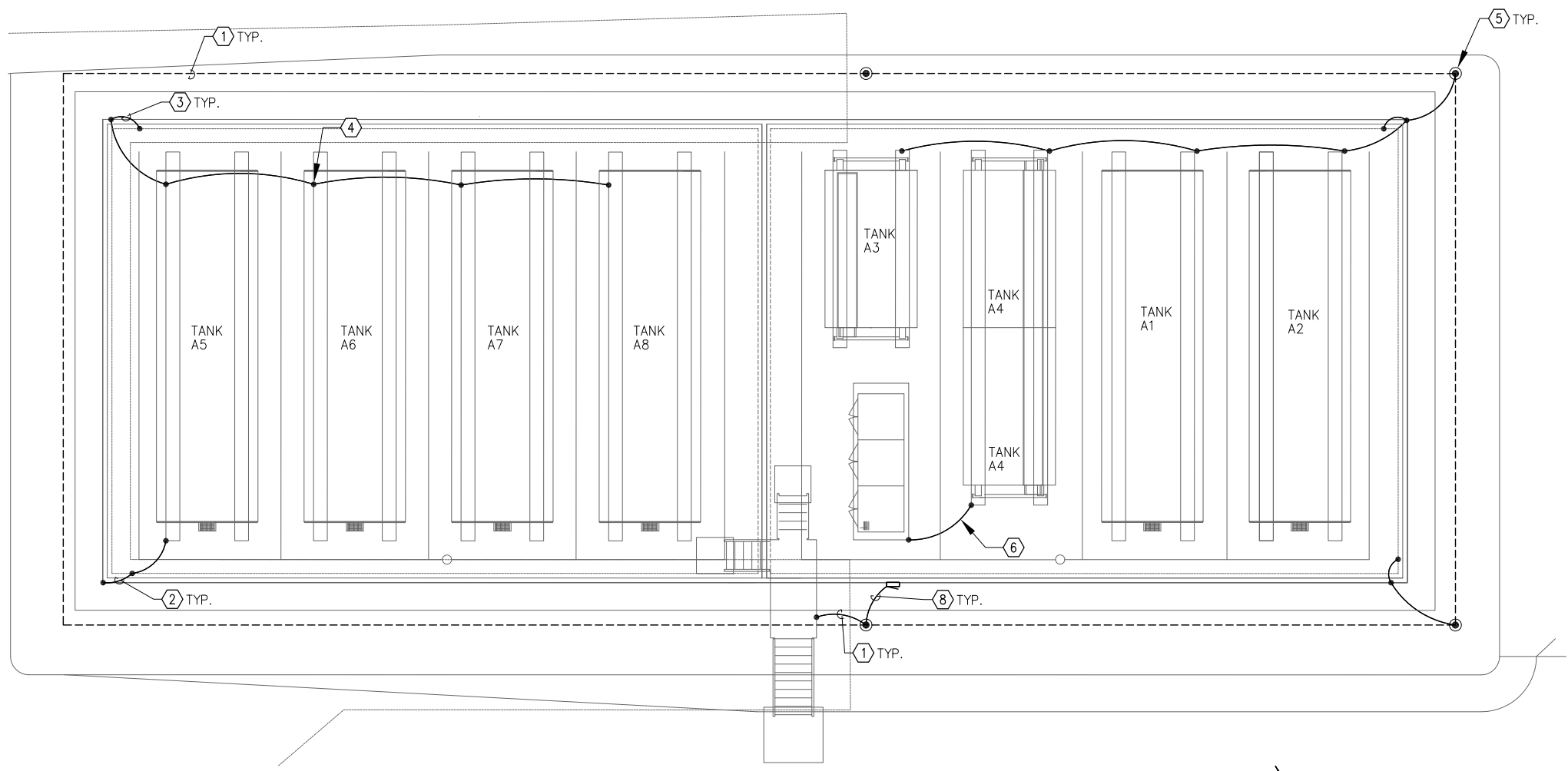


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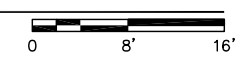


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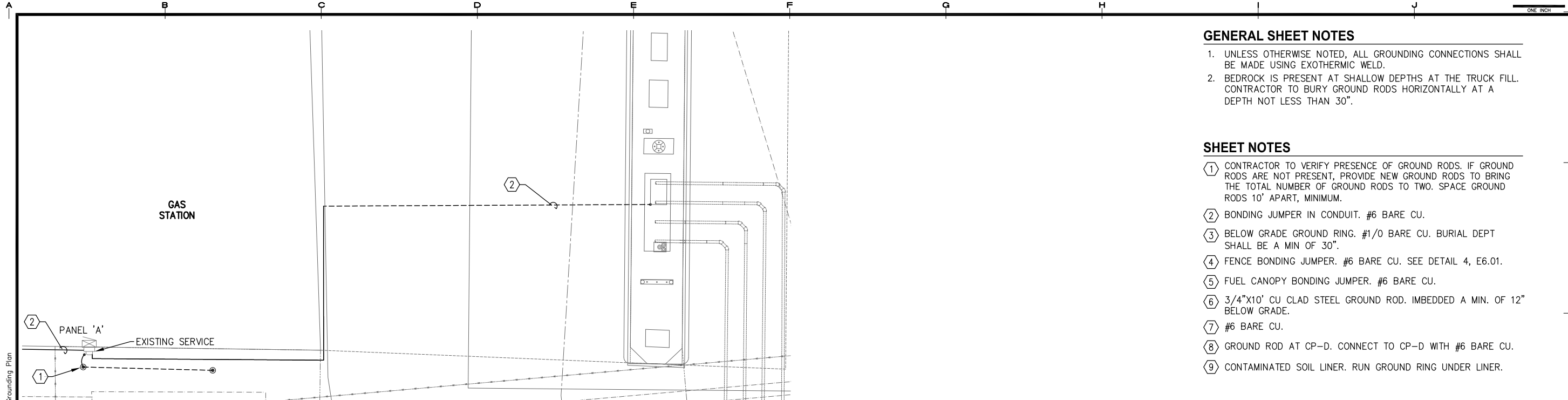
SHEET TITLE TANK FARM GROUNDING PLAN	
SHEET E4.01	
DRAWN BY: VI/OM	CHECKED BY: RP
DATE: 5/27/16	SCALE: AS NOTED
JOB NUMBER: 13-040	



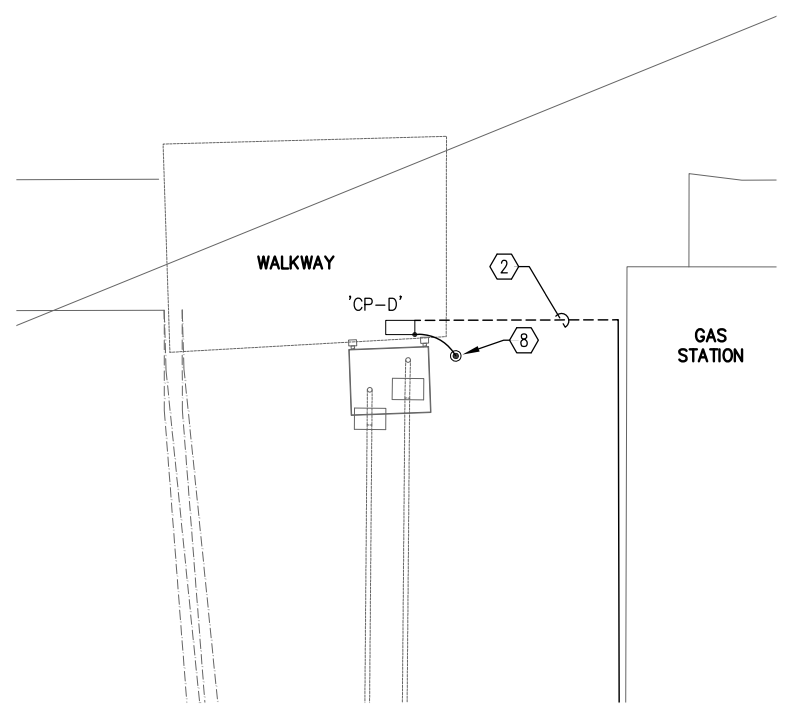
1 TANK FARM GROUNDING PLAN
E4.01 SCALE: 1/8" = 1'-0"



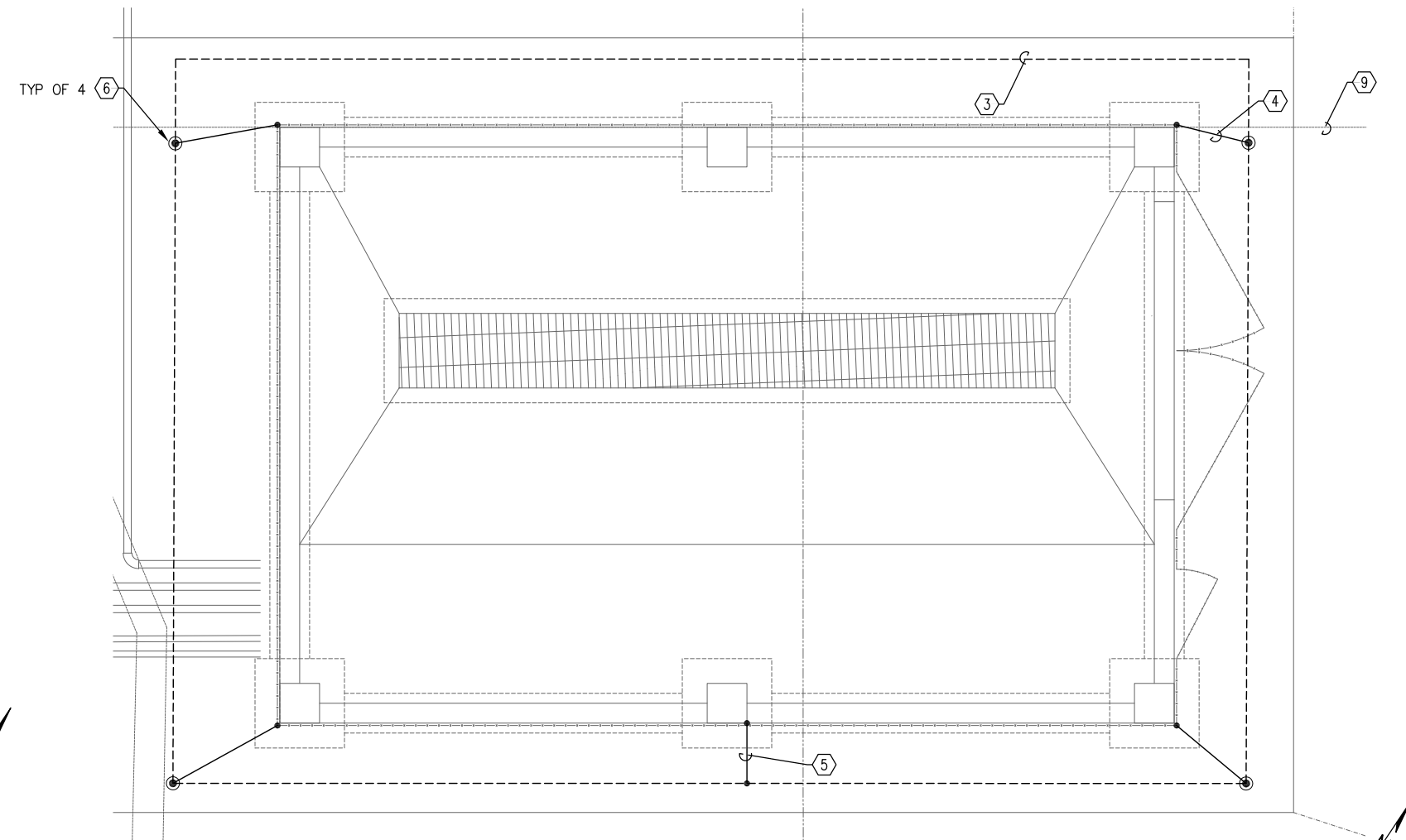
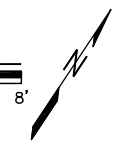
Drawing: P:\Projects\HDI\Kake Bulk Fuel Upgrades\Elec\E4.01_E4.02 Grounding Plans.dwg DATE/TIME: 5/31/2016 10:23:25 AM Sheet Layout: E4.01 Tank Farm Grounding Plan



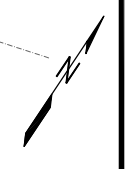
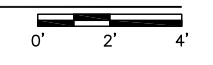
1 GAS STATION GROUNDING PLAN
 E4.02 SCALE: 1/4" = 1'-0"



2 MARINE DOCK GROUNDING PLAN
 E4.02 SCALE: 1/4" = 1'-0"



3 TRUCK FILL GROUNDING PLAN
 E4.02 SCALE: 3/8" = 1'-0"



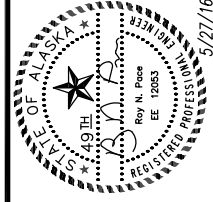
GENERAL SHEET NOTES

1. UNLESS OTHERWISE NOTED, ALL GROUNDING CONNECTIONS SHALL BE MADE USING EXOTHERMIC WELD.
2. BEDROCK IS PRESENT AT SHALLOW DEPTHS AT THE TRUCK FILL. CONTRACTOR TO BURY GROUND RODS HORIZONTALLY AT A DEPTH NOT LESS THAN 30".

SHEET NOTES

- ① CONTRACTOR TO VERIFY PRESENCE OF GROUND RODS. IF GROUND RODS ARE NOT PRESENT, PROVIDE NEW GROUND RODS TO BRING THE TOTAL NUMBER OF GROUND RODS TO TWO. SPACE GROUND RODS 10' APART, MINIMUM.
- ② BONDING JUMPER IN CONDUIT. #6 BARE CU.
- ③ BELOW GRADE GROUND RING. #1/0 BARE CU. BURIAL DEPT SHALL BE A MIN OF 30".
- ④ FENCE BONDING JUMPER. #6 BARE CU. SEE DETAIL 4, E6.01.
- ⑤ FUEL CANOPY BONDING JUMPER. #6 BARE CU.
- ⑥ 3/4"x10' CU CLAD STEEL GROUND ROD. IMBEDDED A MIN. OF 12" BELOW GRADE.
- ⑦ #6 BARE CU.
- ⑧ GROUND ROD AT CP-D. CONNECT TO CP-D WITH #6 BARE CU.
- ⑨ CONTAMINATED SOIL LINER. RUN GROUND RING UNDER LINER.

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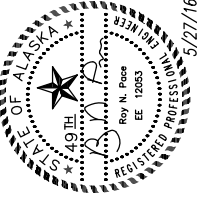
SHEET TITLE	
GAS STATION AND TRUCK FILL GROUNDING PLANS	
SHEET	
E4.02	
DRAWN BY:	CHECKED BY:
VI/OM	RP
DATE:	SCALE:
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JOB NUMBER:	
13-040	

Drawing: P:\Projects\HDI\Kake Bulk Fuel Upgrades\Elec\E4.01_E4.02_Grounding Plans.dwg DATE/TIME: 5/31/2016 10:23:30 AM Sheet Layout: E4.02 Gas Station And Truck Fill Grounding Plan

SHEET NOTES

① INTRINSICALLY SAFE CIRCUIT. INSTALL AND LABEL IN ACCORDANCE WITH ARTICLE 504 OF THE NEC.

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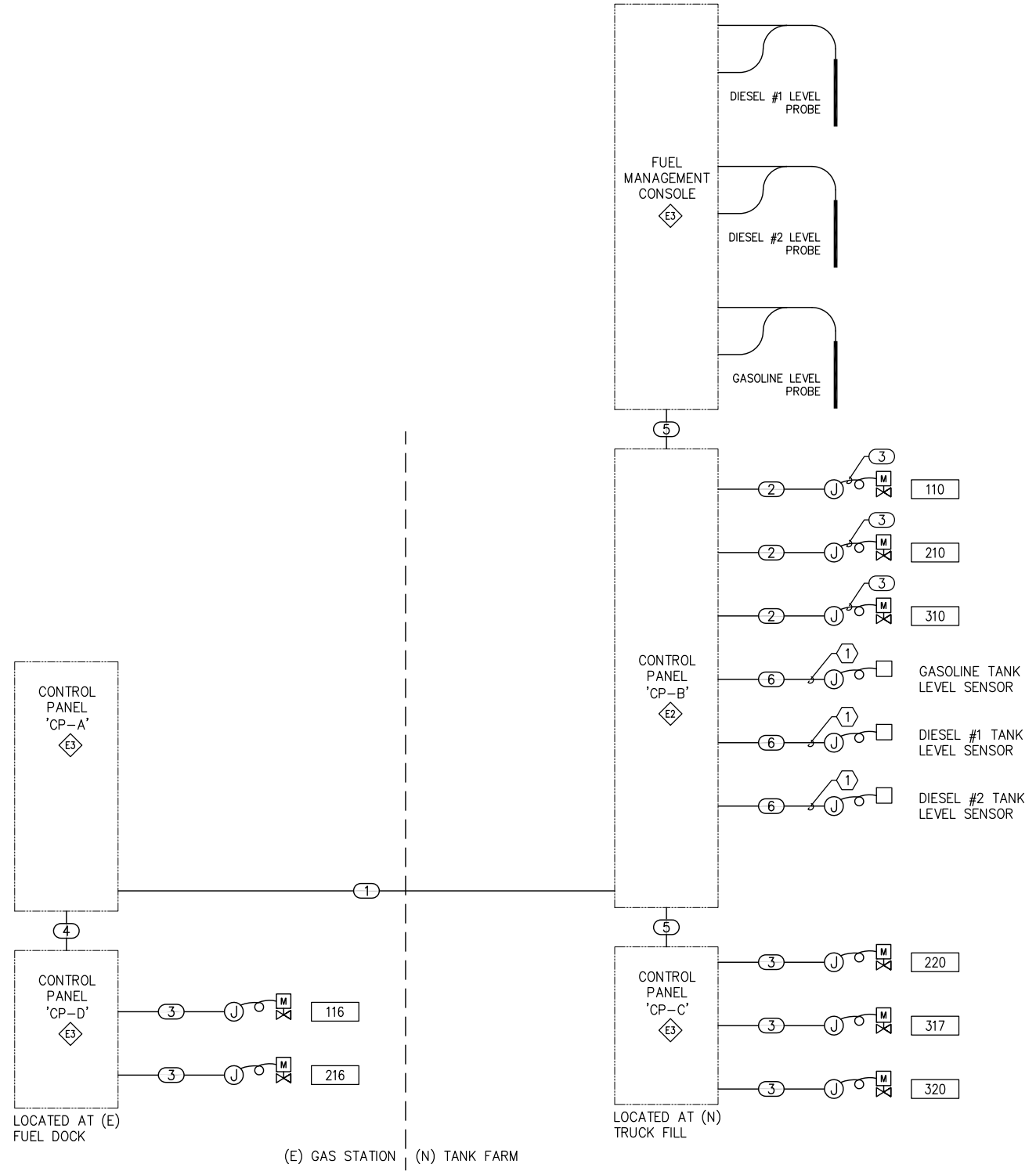


CIRCUIT SCHEDULE	
TAG	DESCRIPTION
①	2" C, 37-CONDUCTOR CABLE, (36)#14 AWG (36 SIG), (1)#14 AWG (G)
②	SEE SHEET E2.02 FOR DETAILS.
③	1/2" C, (5)#12 AWG (3 SIG, H, N), (1)#12 AWG (G)
④	SEE SHEET E2.02 FOR DETAILS.
⑤	SEE SHEET E2.04 FOR DETAILS.
⑥	1/2" C, 1PR#12 AWG (2 SIG), (1)#12 AWG (G)

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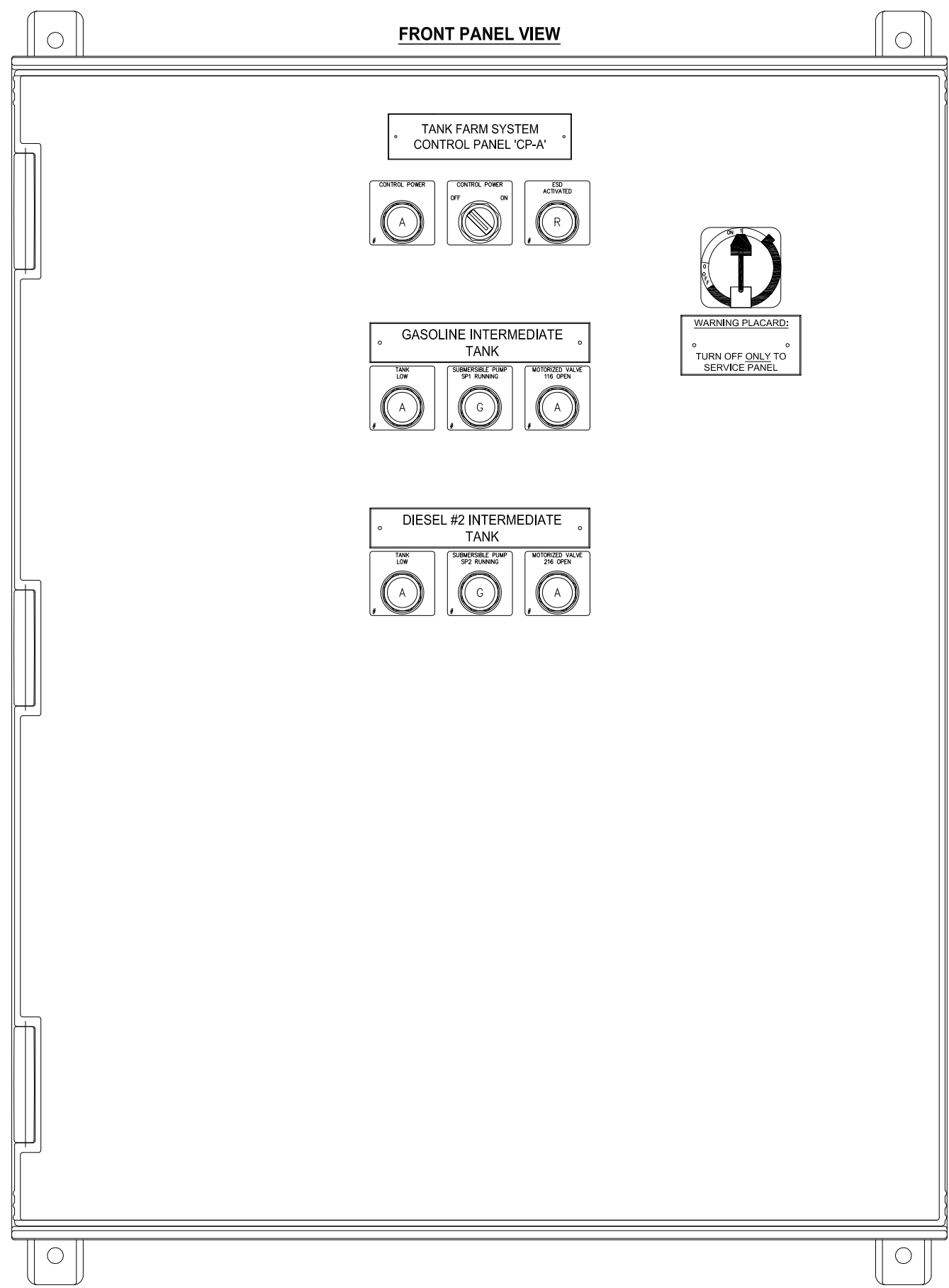
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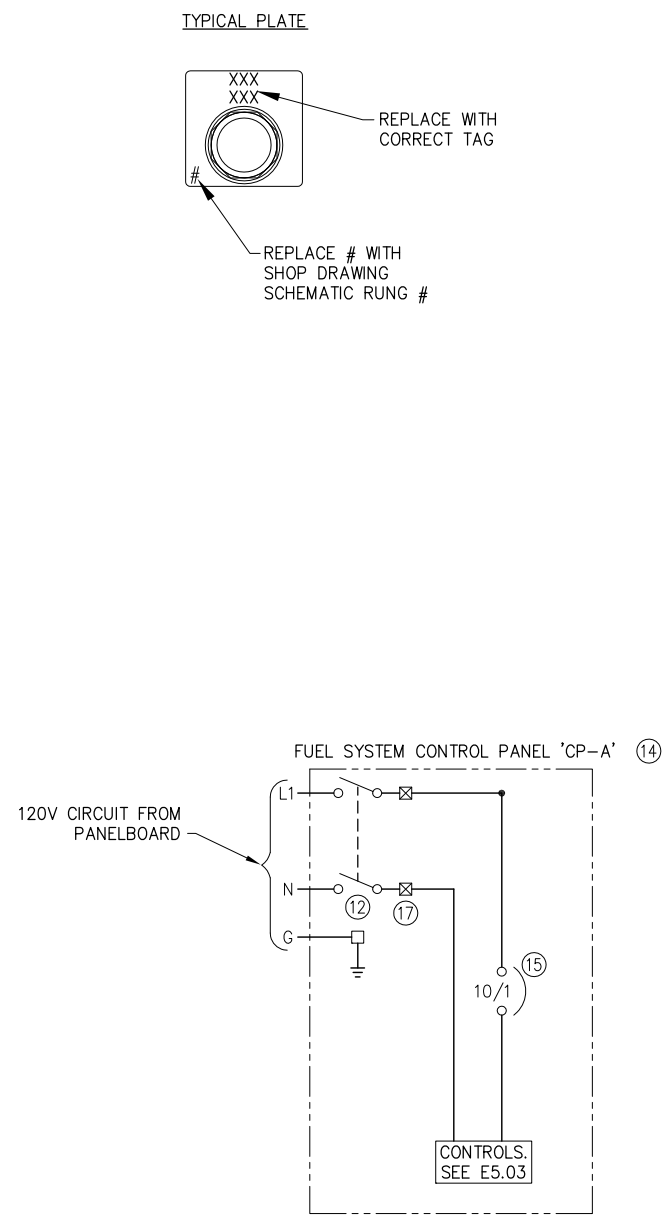
1 **CONTROL DIAGRAM**
E5.01 SCALE: NTS

SHEET TITLE CONTROL DIAGRAM	
SHEET E5.01	
DRAWN BY: VI/OM	CHECKED BY: RP
DATE: 5/27/16	SCALE: AS NOTED
JOB NUMBER: 13-040	

Drawing: P:\Projects\HDI\Kake Bulk Fuel Upgrades\Dwgs\Elec\E5.02 CONTROL PANEL CP-A LAYOUT.dwg DATE/TIME: 5/31/2016 10:23:44 AM Sheet Layout: E5.02 CONTROL PANEL CP-A LAYOUT



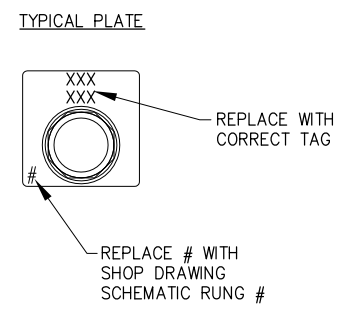
1 FUEL SYSTEM CONTROL PANEL 'CP-A' LAYOUT
E5.02 SCALE: NTS



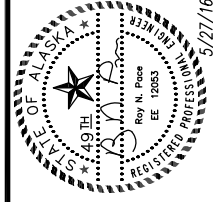
2 CONTROL PANEL CP-A POWER SCHEMATIC
E5.02 SCALE: NTS

FUNCTIONAL NARRATIVE

1. THIS PANEL PROVIDES INDICATION OF THE FUEL LEVEL IN INTERMEDIATE TANKS AT TANK FARM.
2. PANEL CONTROLS MOTORIZED VALVES AT THE DOCK (FUTURE).



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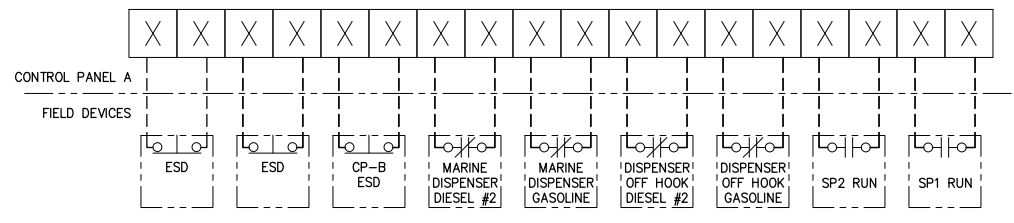
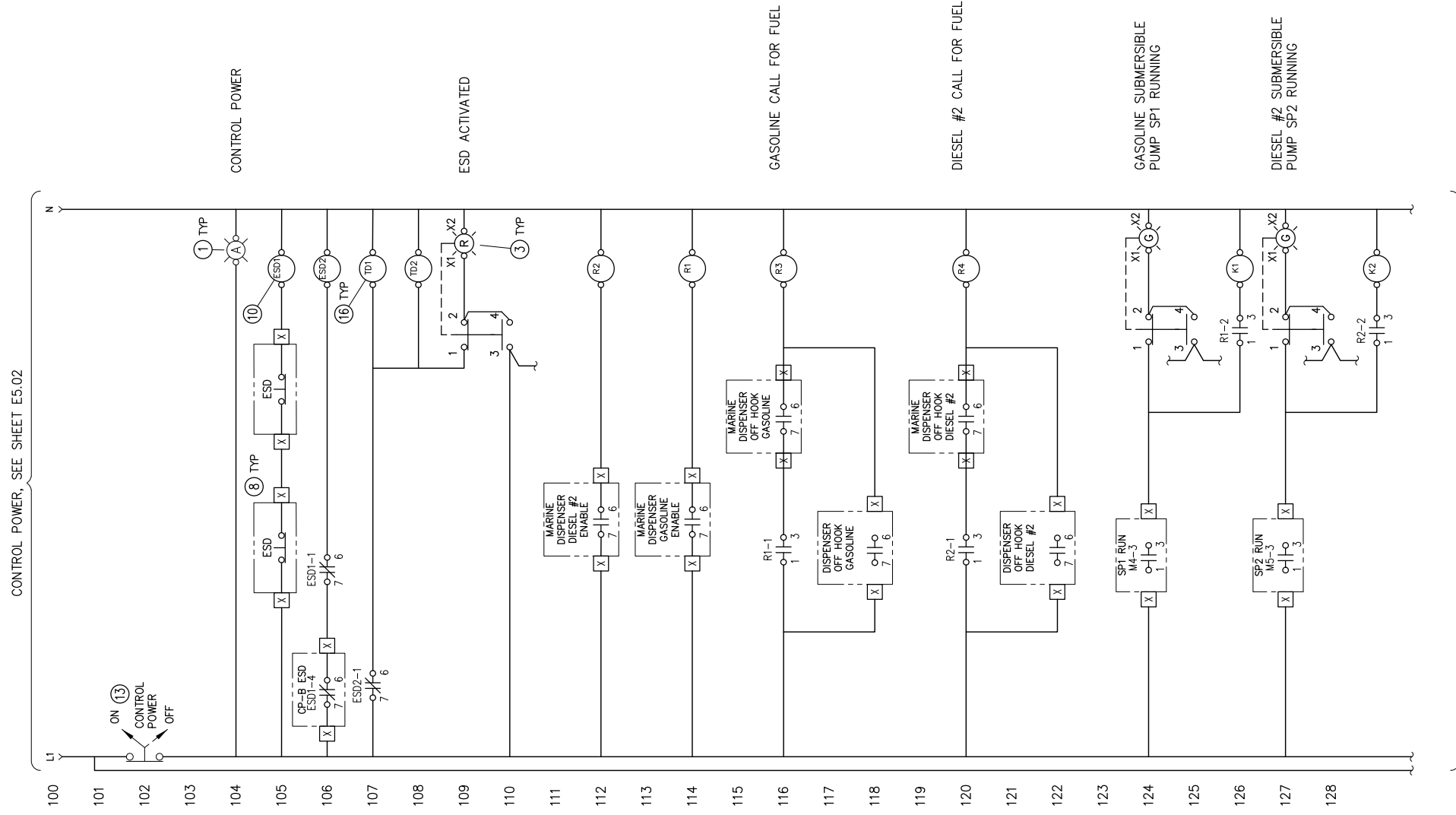


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SHEET TITLE CONTROL PANEL CP-A LAYOUT	
SHEET E5.02	
DRAWN BY: VI/OM	CHECKED BY: RP
DATE: 5/27/16	SCALE: AS NOTED
JOB NUMBER: 13-040	

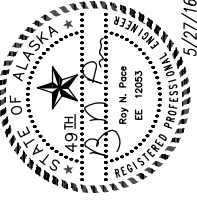
Ⓜ SEE SHEET E1.01 FOR COMPONENT SCHEDULE
XX-XX SEE SHEET E3.01 FOR EQUIPMENT SCHEDULE

1 FUEL SYSTEM CONTROL PANEL 'CP-A' LAYOUT
E5.03 SCALE: NTS



CONTINUED ON SHEET E5.04

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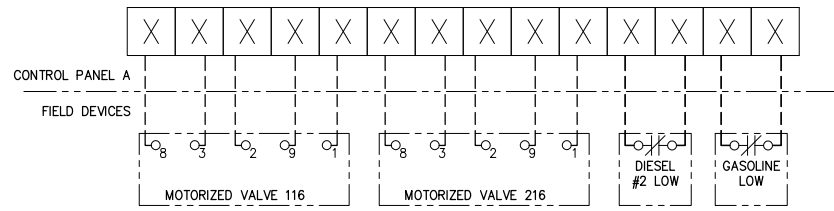
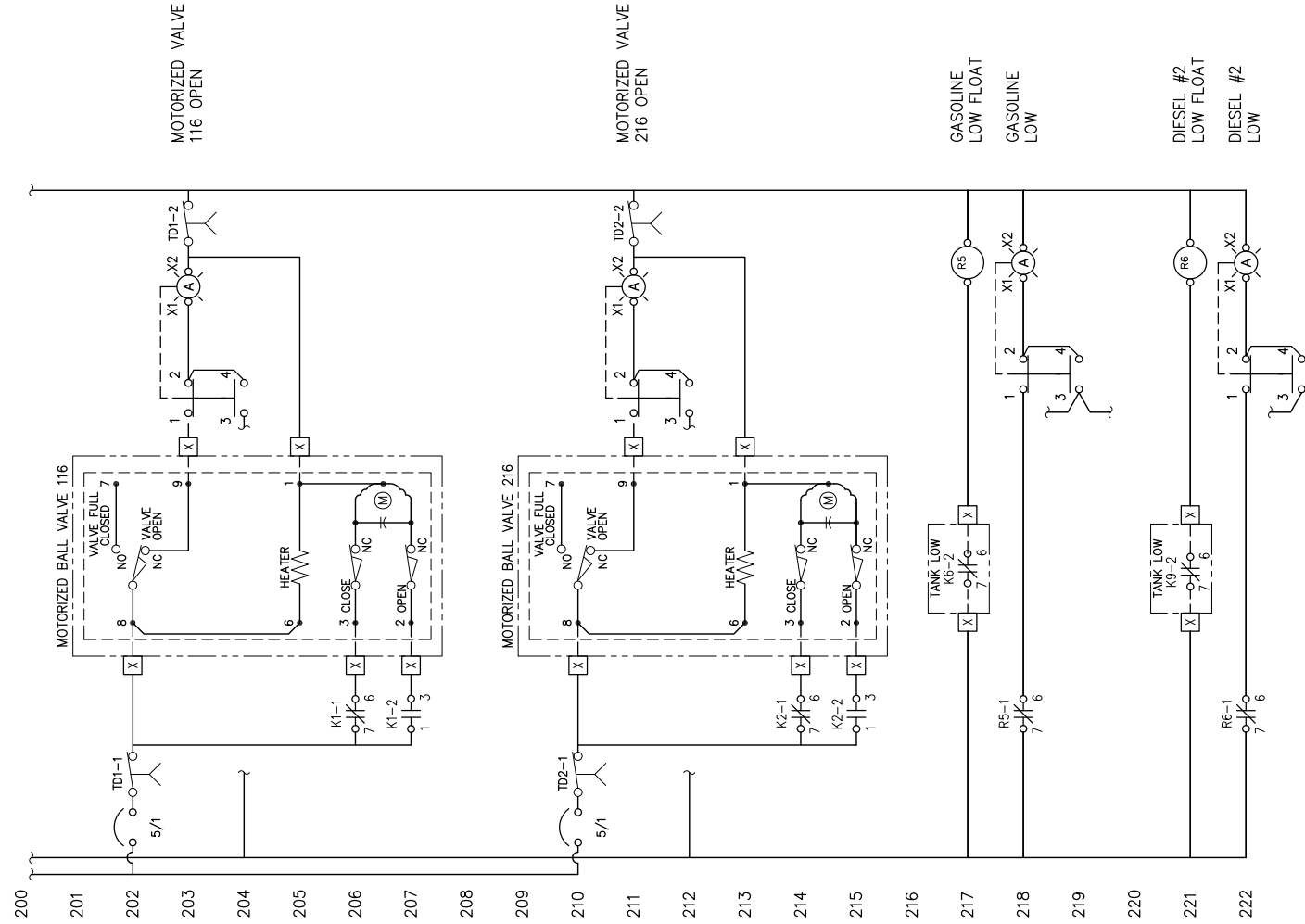
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SHEET TITLE CONTROL PANEL CP-A SCHEMATIC	
SHEET E5.03	
DRAWN BY: VI/OM	CHECKED BY: RP
DATE: 5/27/16	SCALE: AS NOTED
JOB NUMBER: 13-040	

SEE SHEET E1.01 FOR COMPONENT SCHEDULE

1 FUEL SYSTEM CONTROL PANEL 'CP-A' LAYOUT
E5.04 SCALE: NTS

CONTINUED FROM SHEET E5.03



SEE SHEET E1.01 FOR COMPONENT SCHEDULE

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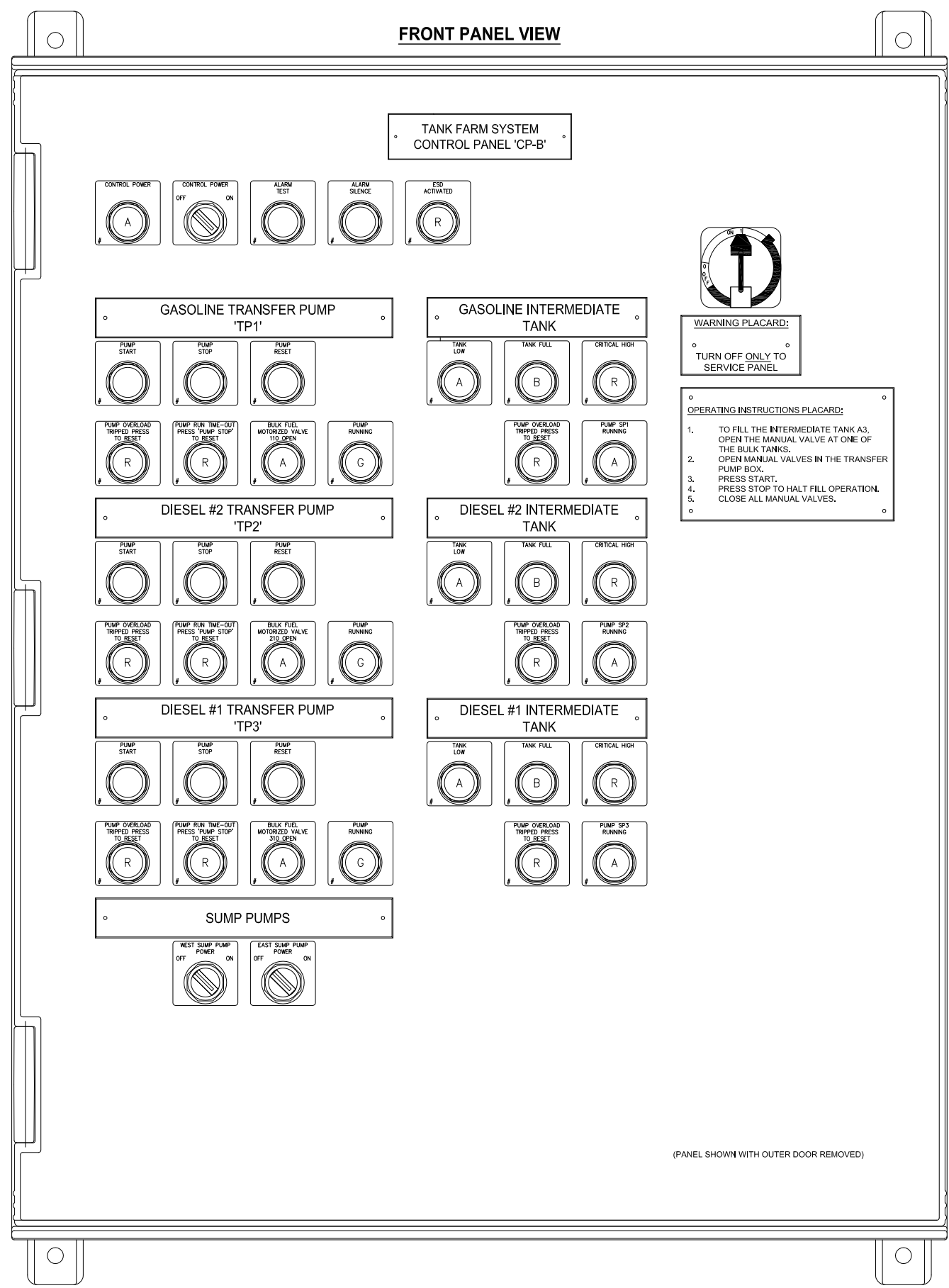
ALASKA ENERGY AUTHORITY
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KAKE BULK FUEL UPGRADES
 CONTROL PANEL CP-A SCHEMATIC

SHEET E5.04

DRAWN BY: VI/OM CHECKED BY: RP
 DATE: 5/27/16 SCALE: AS NOTED
 JOB NUMBER: 13-040

Drawing: P:\Projects\HDL\Kake Bulk Fuel Upgrades\Dwgs\Elec\E5.04_CP-B_Layout.dwg DATE/TIME: 5/31/2016 10:24:03 AM Sheet Layout: E5.05 CONTROL PANEL CP-B LAYOUT



WARNING PLACARD:
 TURN OFF ONLY TO SERVICE PANEL

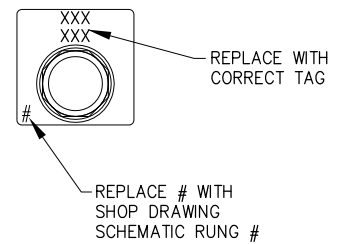
OPERATING INSTRUCTIONS PLACARD:

- TO FILL THE INTERMEDIATE TANK A3, OPEN THE MANUAL VALVE AT ONE OF THE BULK TANKS. OPEN MANUAL VALVES IN THE TRANSFER PUMP BOX.
- PRESS START.
- PRESS STOP TO HALT FILL OPERATION.
- CLOSE ALL MANUAL VALVES.

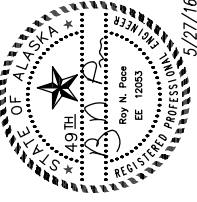
FUNCTIONAL NARRATIVE

- IF AN EMERGENCY SHUTDOWN (ESD) OCCURS, AN 'ESD ACTIVATED' ALARM WILL BE INDICATED ON THE PANEL. THE MOTORIZED VALVE AT THE BULK FUEL SITE WILL CLOSE AND TRANSFER AND SUBMERSIBLE PUMPS WILL STOP. THE PUMPS MAY NOT BE RE-STARTED AND THE INDICATING LIGHT WILL REMAIN ENERGIZED UNTIL THE CONDITION IS CLEARED. ALL POWER TO THE DISPENSING STATION WILL BE LOST WHEN THE ESD AT THE DISPENSER IS PRESSED.
- THE FUEL TRANSFER PUMPS, TP1, TP2 AND TP3, AND THE SUBMERSIBLE PUMPS SP1, SP2 AND SP3 ARE CONTROLLED BY THIS PANEL.
- TP1 SUPPLIES GASOLINE FUEL FROM THE BULK STORAGE TANKS A1-A2 TO THE 10,000 GALLON INTERMEDIATE TANK A3. TP1 IS CONTROLLED FROM THE START/STOP PUSHBUTTONS ON THE CONTROL PANEL. WHEN THE 'START' PUSHBUTTON IS PRESSED, THE MOTORIZED BALL VALVE 110 AT THE BULK FUEL SITE WILL OPEN, A MAXIMUM RUN TIMER WILL BEGIN TIMING AND TRANSFER PUMP TP1 WILL START. THE TRANSFER PUMP WILL RUN UNTIL THE 'TANK FULL' LEVEL IS REACHED AT TANK A3, THE 'STOP' PUSHBUTTON IS PRESSED, THE MAXIMUM RUN TIMER TIMES OUT OR THE ESD IS PRESSED, AT WHICH POINT THE PUMP STOPS AND THE MOTORIZED VALVE CLOSES.
- IF THE 'TANK FULL' SIGNAL FAILS AND THE TANK KEEPS FILLING, THE 'CRITICAL HIGH' LEVEL IN TANK A3 WILL BE REACHED. IF THIS OCCURS AN EXTERNAL HORN AND ALARM LIGHT WILL ENERGIZE, A 'CRITICAL HIGH' ALARM WILL BE INDICATED ON THE PANEL, THE MOTORIZED VALVE 110 AT THE BULK FUEL SITE WILL CLOSE AND THE TRANSFER PUMP WILL STOP. THE PUMP MAY NOT BE RE-STARTED UNTIL THE CONDITION IS CLEARED. THE EXTERNAL HORN AND ALARM LIGHT MAY BE DE-ENERGIZED BY SILENCING THE ALARM, BUT THE INDICATING LIGHT ON THE PANEL WILL NOT CLEAR UNTIL THE CRITICAL HIGH ALARM CONDITION IS CORRECTED.
- TP2 SUPPLIES DIESEL #2 FUEL FROM THE BULK STORAGE TANKS A5 AND A6 TO THE 10,000 GALLON SECTION OF 20,000 INTERMEDIATE TANK A4. ITS OPERATION IS IDENTICAL TO TRANSFER PUMP, TP1.
- TP3 SUPPLIES DIESEL #1 FUEL FROM THE BULK STORAGE TANKS A7 AND A8 TO THE 10,000 GALLON SECTION OF 20,000 INTERMEDIATE TANK A4. ITS OPERATION IS IDENTICAL TO TRANSFER PUMP, TP1.
- SP1 - SUBMERSIBLE PUMP SP1 SUPPLIES GASOLINE TO THE DISPENSING STATION AND DOCK (FUTURE). IT IS CONTROLLED BY SIGNALS RECEIVED FROM THE DISPENSER. WHEN THE CONTROL PANEL RECEIVES THE PUMP RUN SIGNAL FROM THE DISPENSER, SP1 STARTS. THE PUMP WILL RUN UNTIL THE CONTROL PANEL NO LONGER RECEIVES THE RUN SIGNAL FROM THE DISPENSER OR A LOW DIESEL #1 LEVEL SIGNAL IS RECEIVED, AT WHICH POINT THE PUMP STOPS. SP1 IS ALSO DISABLED WHENEVER TRANSFER PUMP, TP3 IS SUPPLYING FUEL TO THE DISPENSING TANK.
- SP2 - SUBMERSIBLE PUMP SP2 SUPPLIES DIESEL #2 FUEL TO THE DISPENSING STATION, TRUCK FILL AND DOCK (FUTURE). ITS OPERATION IS IDENTICAL TO SUBMERSIBLE PUMP, SP1 EXCEPT SP2 IS DISABLED WHENEVER TRANSFER PUMP, TP2 IS SUPPLYING FUEL TO THE DISPENSING TANK.
- SP3 - SUBMERSIBLE PUMP SP3 SUPPLIES DIESEL #1 FUEL TO THE TRUCK FILL. ITS OPERATION IS IDENTICAL TO SUBMERSIBLE PUMP, SP1 EXCEPT SP3 IS DISABLED WHENEVER TRANSFER PUMP, TP1 IS SUPPLYING FUEL TO THE DISPENSING TANK.
- SP4 - SUBMERSIBLE PUMP SP4 IS USED FOR DEWATERING THE EAST TANK FARM SUMP. MOVING THE SELECTOR SWITCH TO THE 'ON' POSITION WILL ENERGIZE THE RECEPTACLE PROVIDING POWER TO THE PUMP.
- SP5 - SUBMERSIBLE PUMP SP5 IS USED FOR DEWATERING THE WEST TANK FARM SUMP. MOVING THE SELECTOR SWITCH TO THE 'ON' POSITION WILL ENERGIZE THE RECEPTACLE PROVIDING POWER TO THE PUMP.

TYPICAL PLATE



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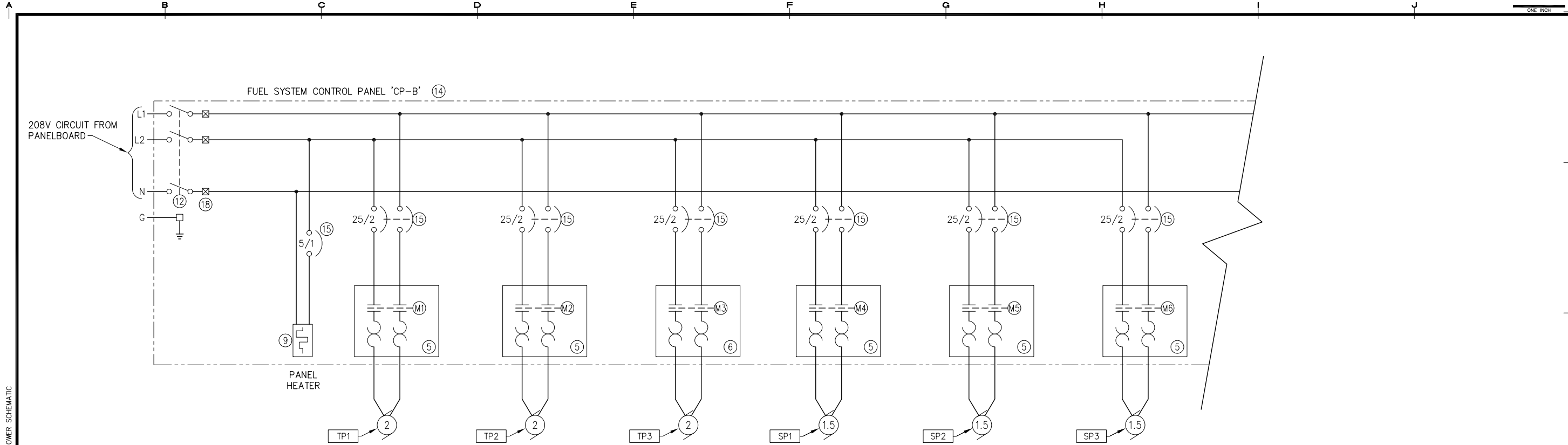
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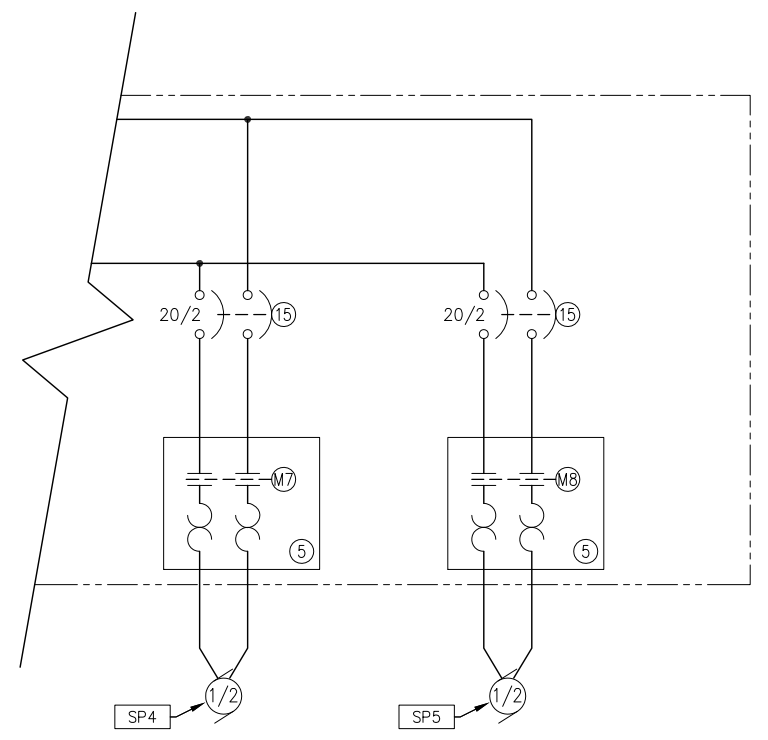
SHEET TITLE CONTROL PANEL CP-B LAYOUT	
SHEET E5.05	
DRAWN BY: VI/OM	CHECKED BY: RP
DATE: 5/27/16	SCALE: AS NOTED
JOB NUMBER: 13-040	

1 FUEL SYSTEM CONTROL PANEL 'CP-B' LAYOUT
 E5.01 SCALE: NTS



1 CONTROL PANEL CP-B POWER SCHEMATIC
 E5.02 SCALE: NTS

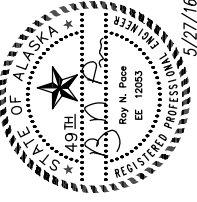
SEE SHEET E1.01 FOR COMPONENT SCHEDULE
 XX-XX SEE SHEET E3.01 FOR EQUIPMENT SCHEDULE



2 CONTROL PANEL CP-B POWER SCHEMATIC, CONT.
 E5.02 SCALE: NTS

Drawing: P:\Projects\HDL\Kake Bulk Fuel Upgrades\Dwgs\Elec\E5.05 CP-B Layout.dwg DATE/TIME: 5/31/2016 10:24:10 AM Sheet Layout: E5.06 CONTROL PANEL CP-B POWER SCHEMATIC

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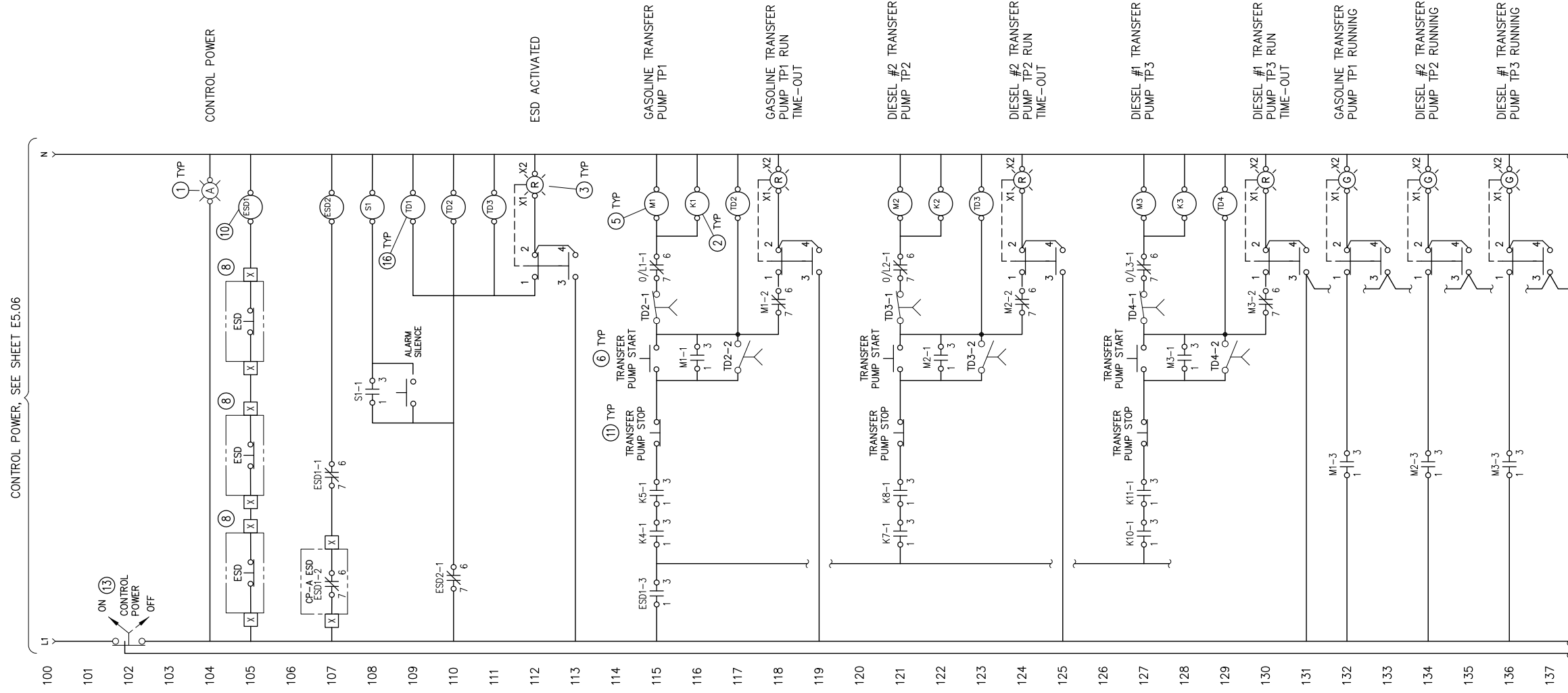


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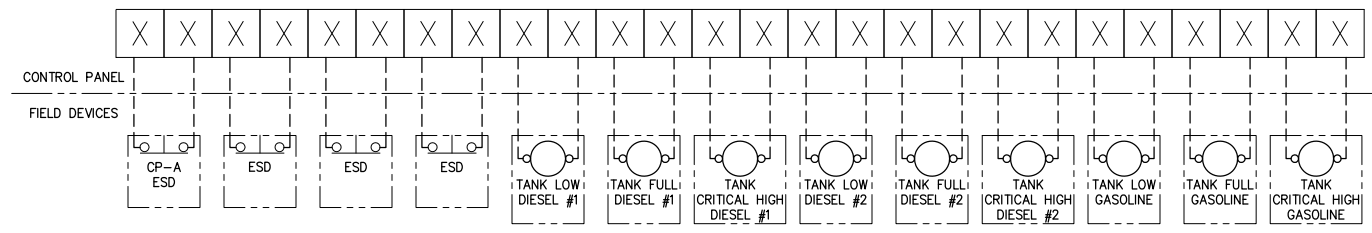
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SHEET TITLE	
CONTROL PANEL CP-B POWER SCHEMATIC	
SHEET	
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CONTROL POWER, SEE SHEET E5.06

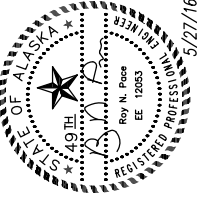
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1 FUEL SYSTEM CONTROL PANEL 'CP-B' LAYOUT
 E5.07 SCALE: NTS

SEE SHEET E1.01 FOR COMPONENT SCHEDULE

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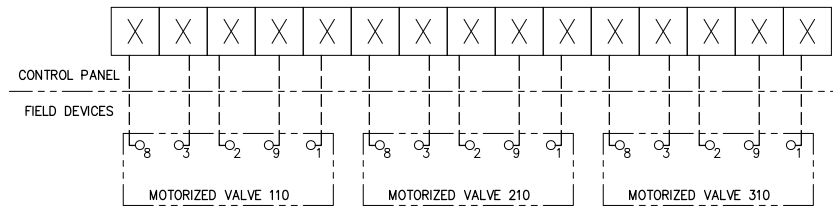
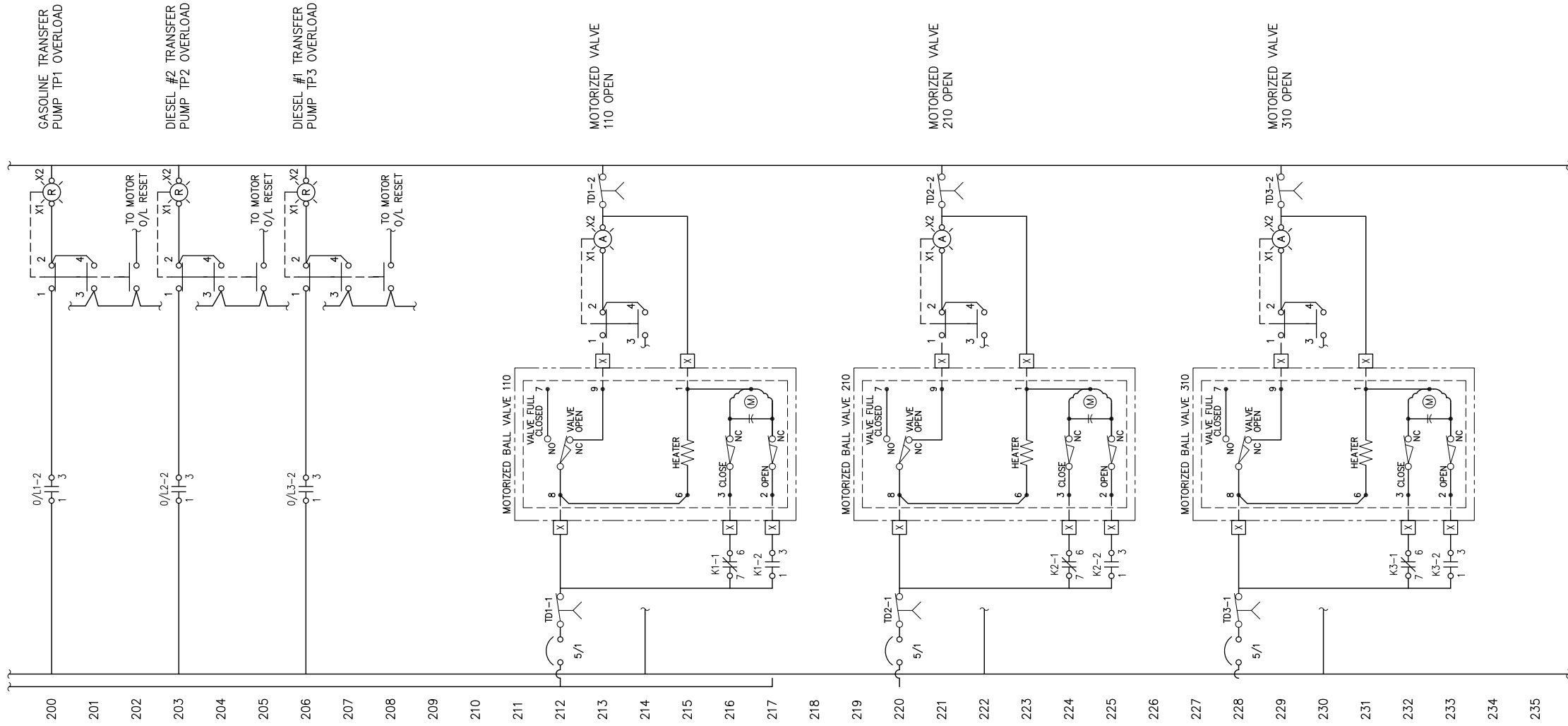
KAKE, ALASKA

SHEET TITLE CONTROL PANEL CP-B SCHEMATIC	
SHEET E5.07	
DRAWN BY: VI/OM	CHECKED BY: RP
DATE: 5/27/16	SCALE: AS NOTED
JOB NUMBER: 13-040	

1 FUEL SYSTEM CONTROL PANEL 'CP-B' LAYOUT
E5.08 SCALE: NTS

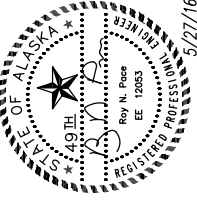
SEE SHEET E1.01 FOR COMPONENT SCHEDULE

CONTINUED FROM SHEET E5.07



CONTINUED ON SHEET E5.09

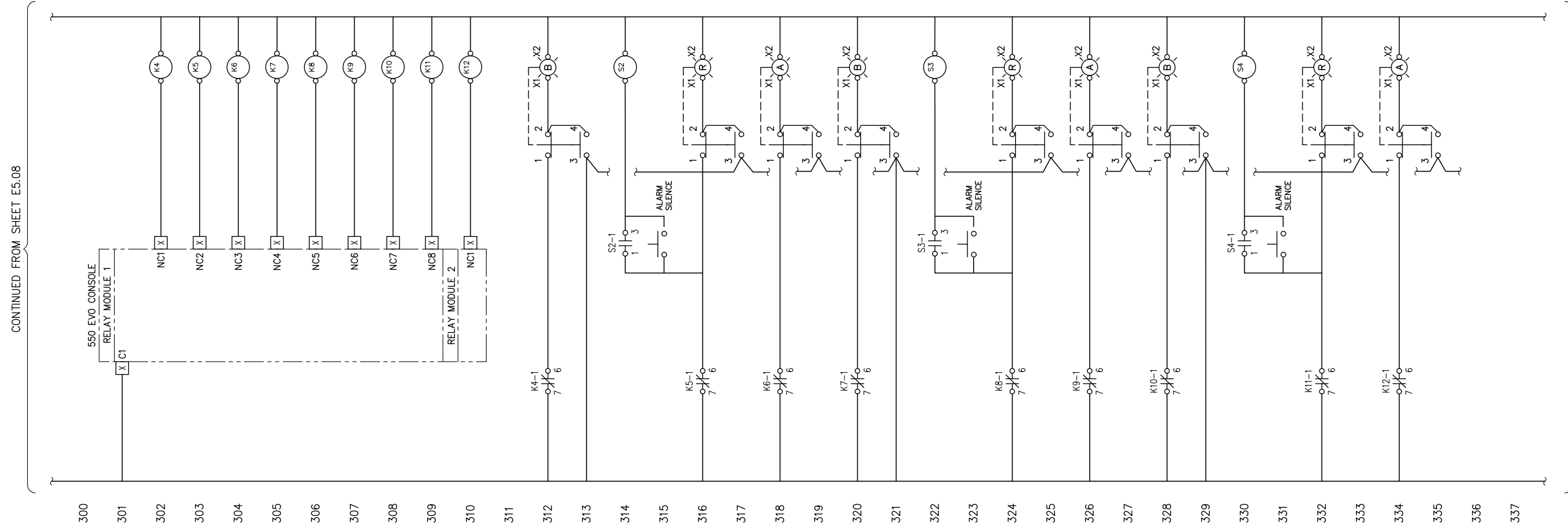
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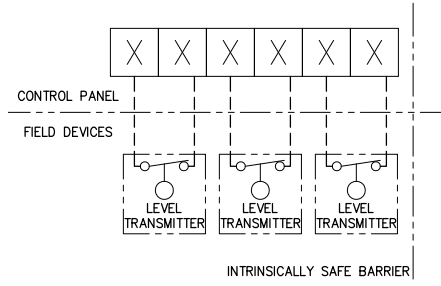
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SHEET TITLE CONTROL PANEL CP-B SCHEMATIC	
SHEET E5.08	
DRAWN BY: VI/OM	CHECKED BY: RP
DATE: 5/27/16	SCALE: AS NOTED
JOB NUMBER: 13-040	



CONTINUED FROM SHEET E5.08

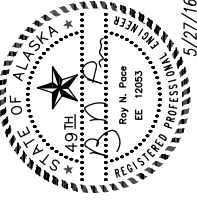
CONTINUED ON SHEET E5.10



1 FUEL SYSTEM CONTROL PANEL 'CP-B' LAYOUT
 E5.09 SCALE: NTS

SEE SHEET E1.01 FOR COMPONENT SCHEDULE

REVISIONS	MARK	DATE	DESCRIPTION
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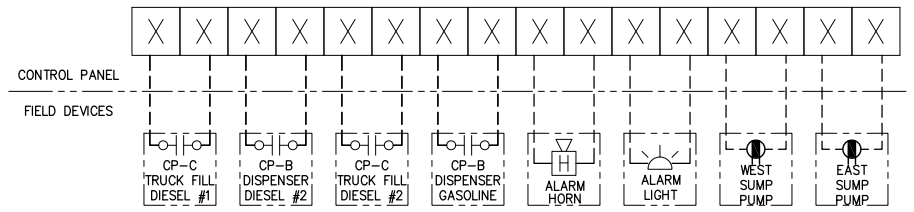
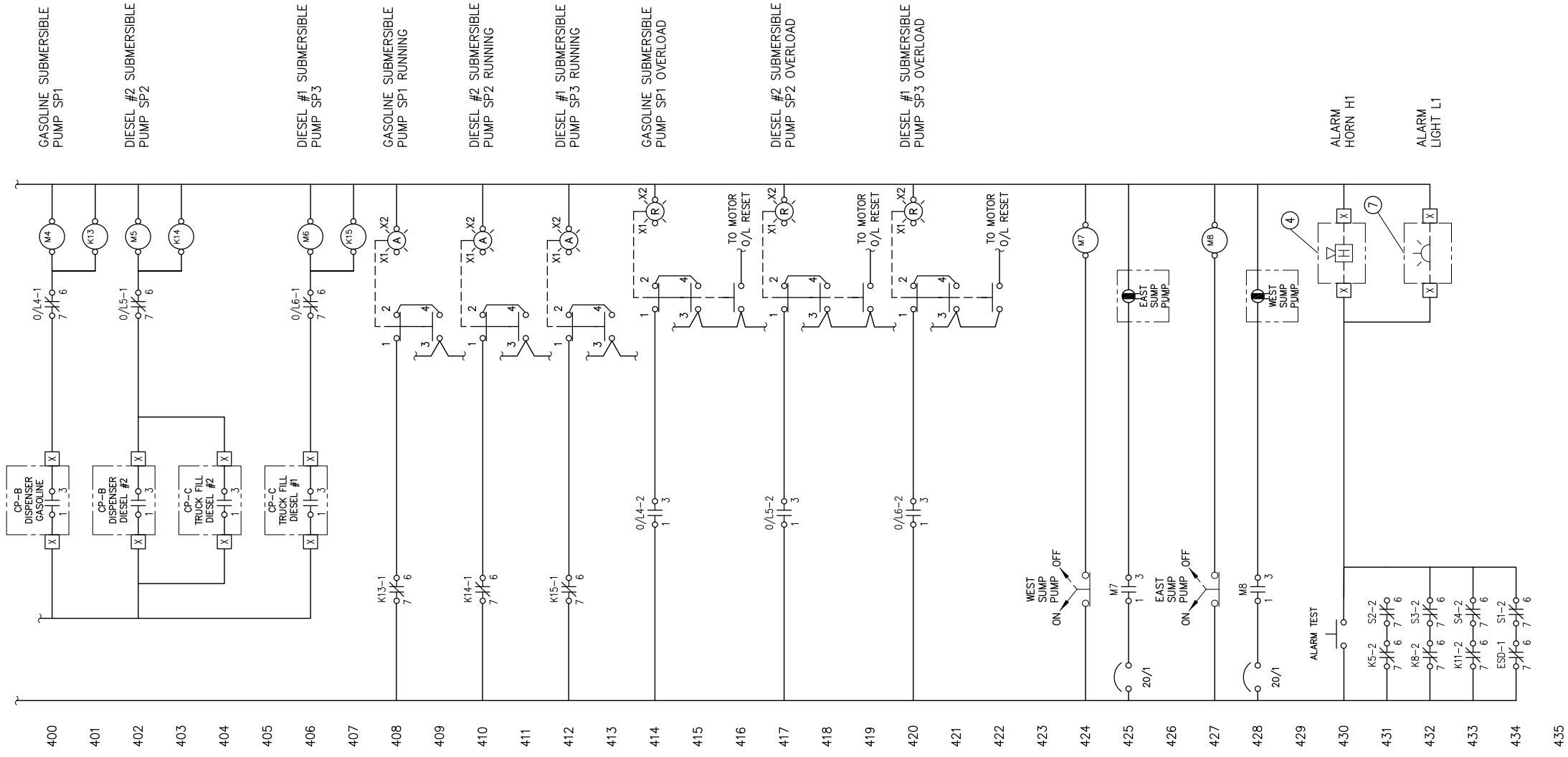


KAKE BULK FUEL UPGRADES

ALASKA ENERGY AUTHORITY
 KAKE, ALASKA

SHEET TITLE CONTROL PANEL CP-B SCHEMATIC	
SHEET E5.09	
DRAWN BY: VI/OM	CHECKED BY: RP
DATE: 5/27/16	SCALE: AS NOTED
JOB NUMBER: 13-040	

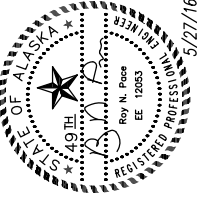
CONTINUED FROM SHEET E5.09



1 FUEL SYSTEM CONTROL PANEL 'CP-B' LAYOUT
E5.10 SCALE: NTS

SEE SHEET E1.01 FOR COMPONENT SCHEDULE

REVISIONS	MARK	DATE	DESCRIPTION
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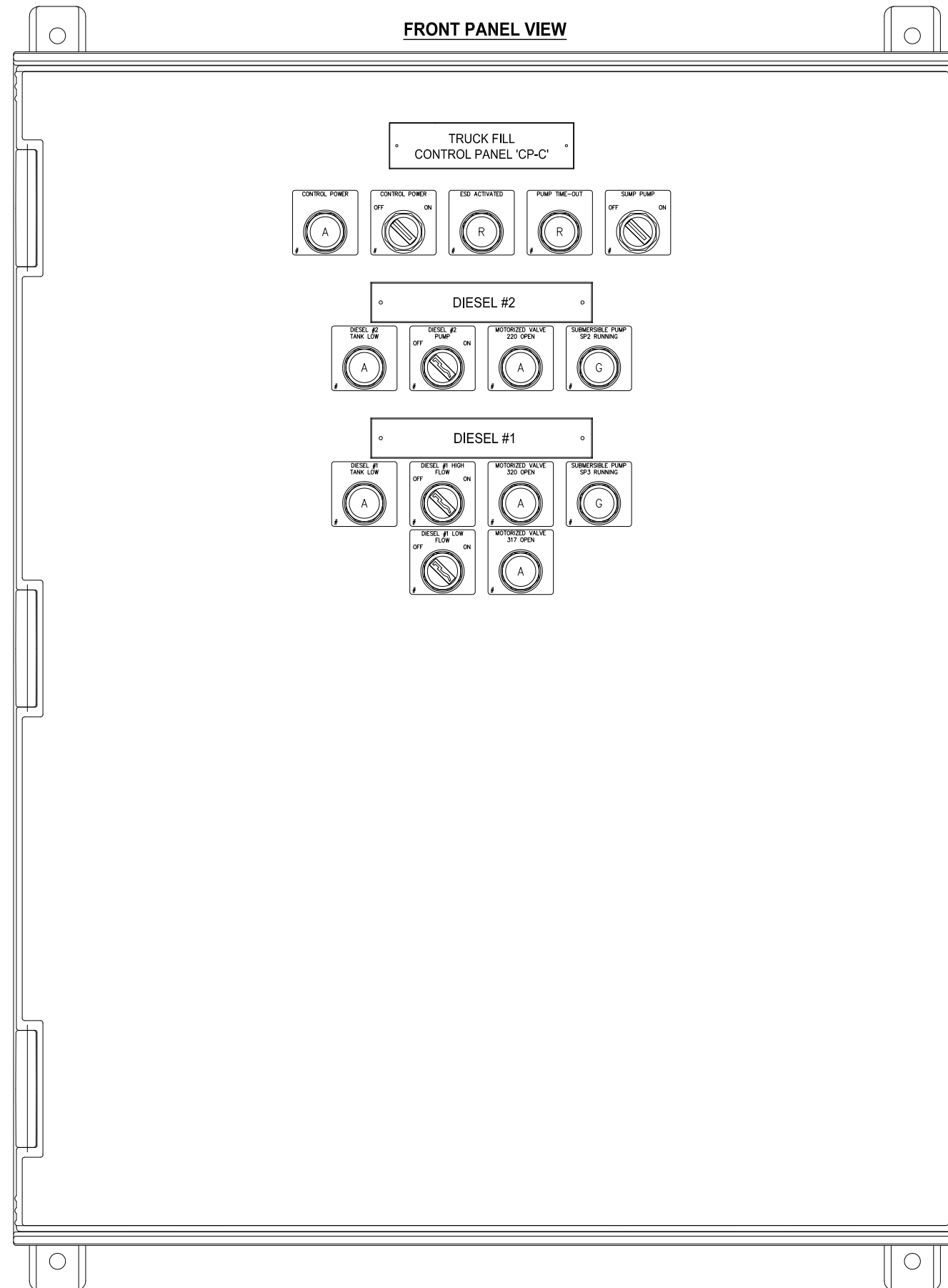
KAKE BULK FUEL UPGRADES

ALASKA ENERGY AUTHORITY

KAKE, ALASKA

SHEET TITLE CONTROL PANEL CP-B SCHEMATIC	
SHEET E5.10	
DRAWN BY: VI/OM	CHECKED BY: RP
DATE: 5/27/16	SCALE: AS NOTED
JOB NUMBER: 13-040	

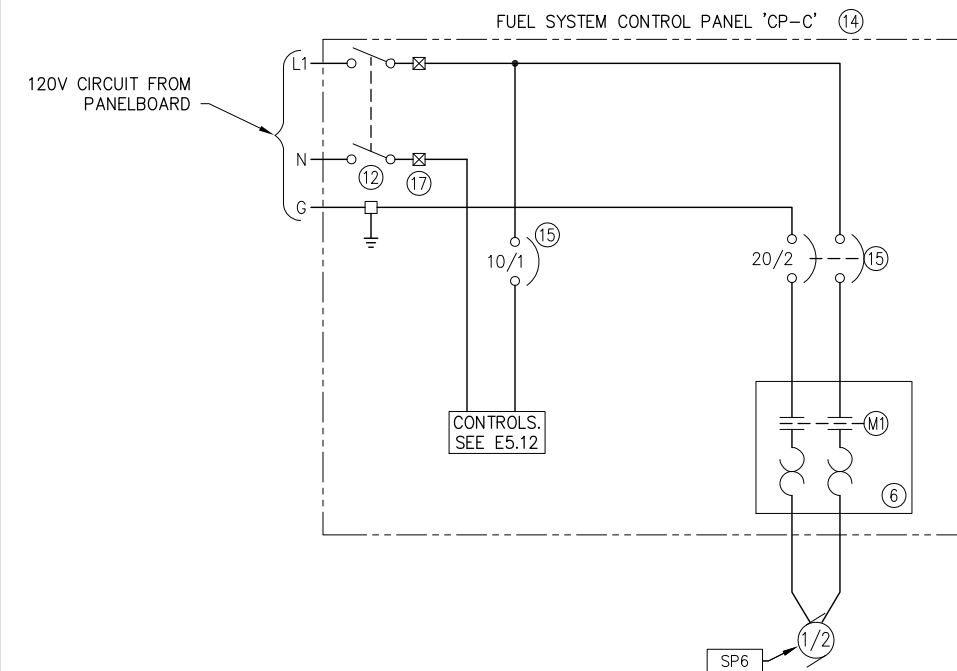
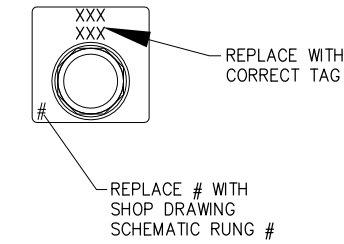
FRONT PANEL VIEW



FUNCTIONAL NARRATIVE

1. THIS PANEL ALLOWS THE OPERATOR TO DISPENSE FUEL USING EITHER THE HIGH FLOW OR LOW FLOW HOSE REELS FOR DIESEL #1 OR HIGH FLOW HOSE REEL FOR DIESEL #2. THIS PANEL ALSO PROVIDES ESD AND INTERMEDIATE TANK LOW INDICATIONS. FUEL PUMP SELECTOR SWITCHES WILL BE KEY-OPERATED.
2. IN THE EVENT THAT THE PUMP RUN TIME ELAPSES, THE PILOT LIGHT WILL BE ILLUMINATED AND PUMPING STOPPED. THE OPERATOR MUST MOVE THE SELECTOR SWITCH TO THE OFF POSITION AND BACK TO THE ON POSITION TO CONTINUE PUMPING FUEL. A PUMP RUN TIME OUT AT THIS PANEL WILL NOT AFFECT PUMPING OPERATIONS AT OTHER LOCATIONS.
3. SP2 - WHEN THE DIESEL #2 PUMP SELECTOR SWITCH IS MOVED TO THE ON POSITION, A START SIGNAL IS SENT TO PANEL B. ONCE SP2 STARTS, THE PILOT LIGHT WILL BE ILLUMINATED, 220 OPENS, AND FUEL BEGINS TO FLOW. IN THE EVENT THAT SP2 IS ALREADY RUNNING, 220 WILL OPEN AND FUEL BEGIN TO FLOW.
4. SP3 - SUBMERSIBLE PUMP SP3 SUPPLIES DIESEL #1 FUEL TO THE TRUCK FILL. ITS OPERATION IS IDENTICAL TO SUBMERSIBLE PUMP, SP2 EXCEPT SP3 IS SP3 MAY BE STARTED USING THE HIGH FLOW PUMP START OR LOW FLOW PUMP START BUTTONS.
5. SP6 - SUBMERSIBLE PUMP SP6 IS USED FOR DEWATERING THE TRUCK FILL SUMP. MOVING THE SELECTOR SWITCH TO THE 'ON' POSITION WILL ENERGIZE THE RECEPTACLE PROVIDING POWER TO THE PUMP.

TYPICAL PLATE



① SEE SHEET E1.01 FOR COMPONENT SCHEDULE
 XX-XX SEE SHEET E3.01 FOR EQUIPMENT SCHEDULE

1 TRUCK FILL CONTROL PANEL 'CP-C' LAYOUT
 E5.11 SCALE: NTS

2 CONTROL PANEL CP-C POWER SCHEMATIC
 E5.11 SCALE: NTS

REVISIONS	MARK	DATE	DESCRIPTION
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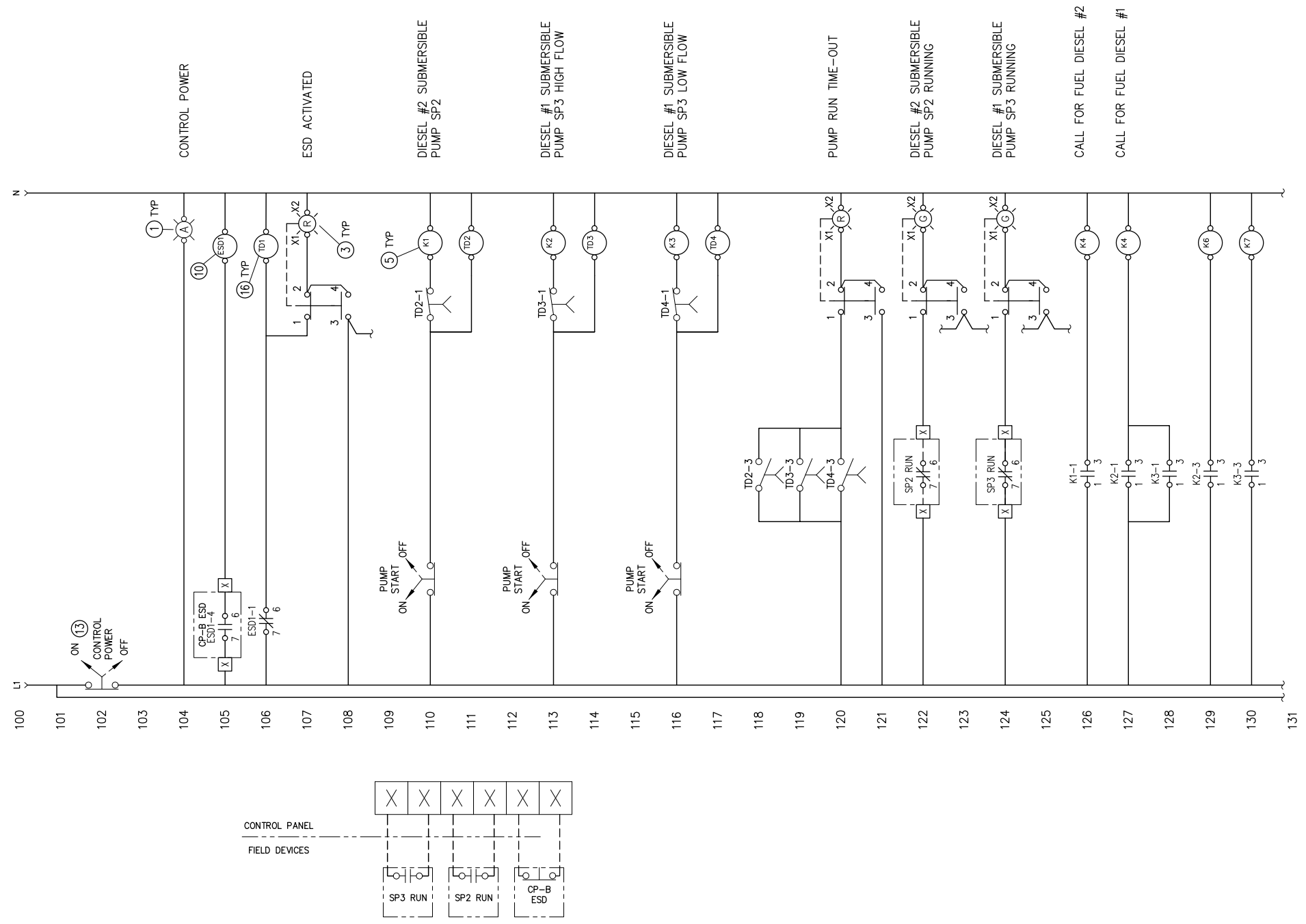
KAKE BULK FUEL UPGRADES

SHEET TITLE
 CONTROL PANEL CP-C LAYOUT

SHEET
 E5.11

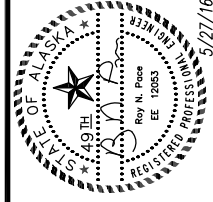
DRAWN BY: VI/OM
 CHECKED BY: RP
 DATE: 5/27/16
 SCALE: AS NOTED
 JOB NUMBER: 13-040

1 FUEL SYSTEM CONTROL PANEL 'CP-C' SCHEMATIC
E5.12 SCALE: NTS



CONTINUED ON SHEET E5.13

REVISIONS	MARK	DATE	DESCRIPTION
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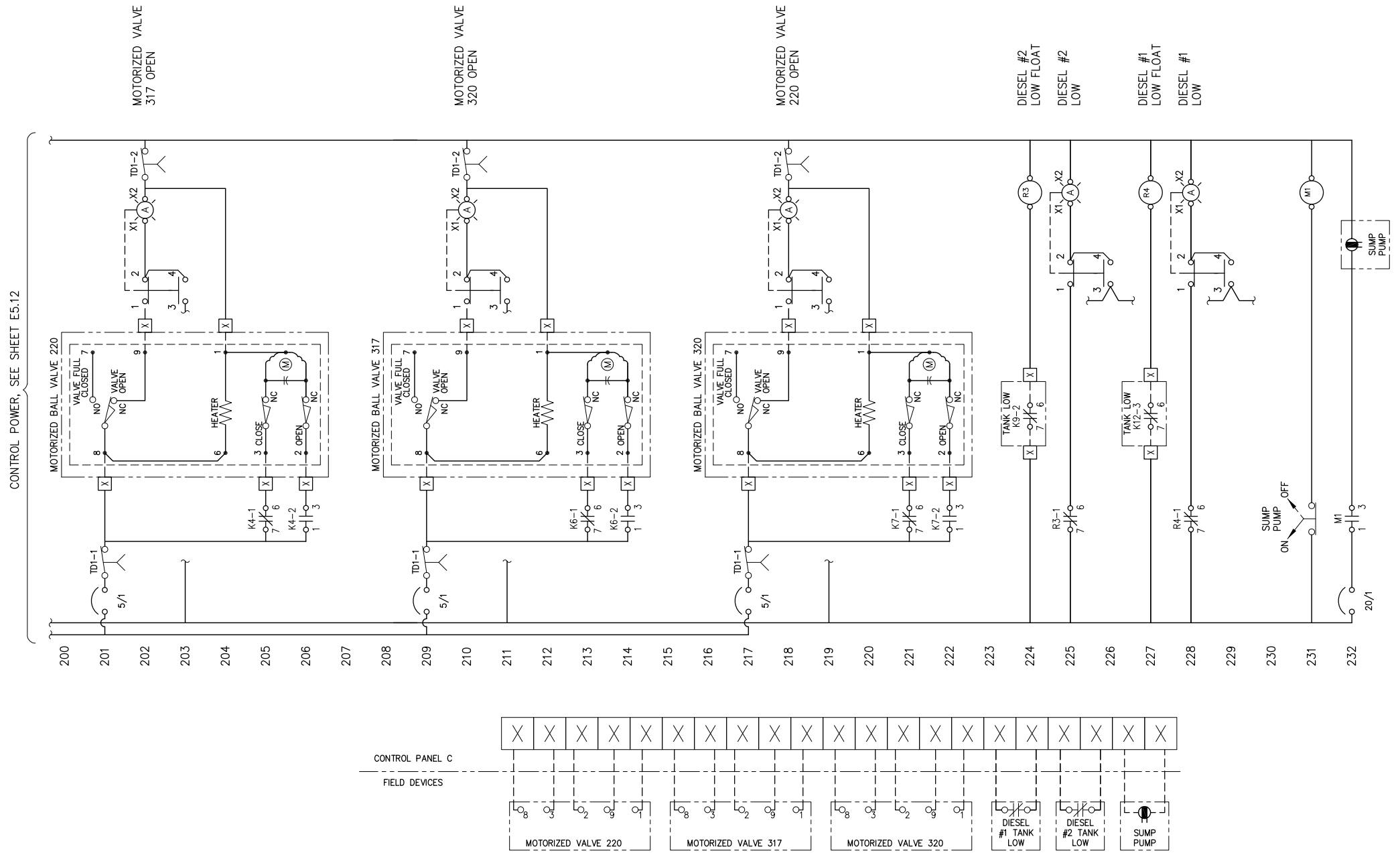
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KAKE BULK FUEL UPGRADES
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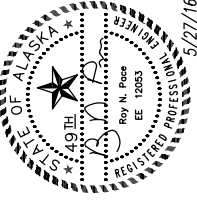
SHEET TITLE CONTROL PANEL CP-C SCHEMATIC	
SHEET E5.12	
DRAWN BY: VI/OM	CHECKED BY: RP
DATE: 5/27/16	SCALE: AS NOTED
JOB NUMBER: 13-040	

Drawing: P:\Projects\HDI\Kake Bulk Fuel Upgrades\Elec\Drawings\E5.02 CONTROL PANEL CP--A LAYOUT.dwg DATE/TIME: 5/31/2016 10:24:41 AM Sheet Layout: E5.13 CONTROL PANEL CP--C SCHEMATIC

1 FUEL SYSTEM CONTROL PANEL 'CP-C' SCHEMATIC
E5.13 SCALE: NTS



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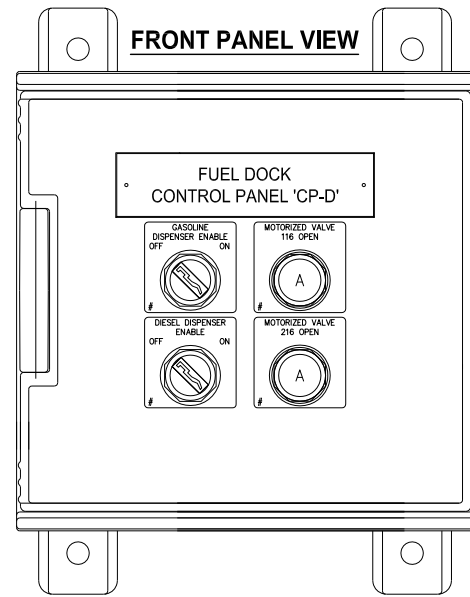


KAKE BULK FUEL UPGRADES
ALASKA ENERGY AUTHORITY
 KAKE, ALASKA

SHEET TITLE CONTROL PANEL CP--C SCHEMATIC	
SHEET E5.13	
DRAWN BY: VI/OM	CHECKED BY: RP
DATE: 5/27/16	SCALE: AS NOTED
JOB NUMBER: 13-040	

Drawing: P:\Projects\HDI\Kake Bulk Fuel Upgrades\Drawings\Elec\E5.02 CONTROL PANEL CP-A LAYOUT.dwg DATE/TIME: 5/31/2016 10:24:44 AM Sheet Layout: E5.14 CONTROL PANEL CP-D LAYOUT

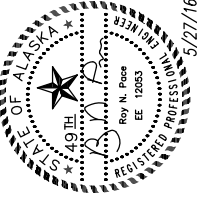
A B C D E F G H I J K ONE INCH



FUNCTIONAL NARRATIVE

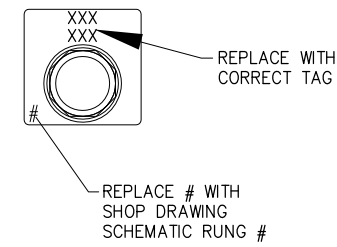
1. THIS PANEL ALLOWS THE OPERATOR TO DISPENSE FUEL TO THE FUEL DOCK (FUTURE). BOTH SELECTOR SWITCHES WILL BE KEY-OPERATED.
2. WHEN THE MOTORIZED VALVES AT THE FUEL DOCK (FUTURE) ARE OPEN, THE PILOT LIGHTS WILL BE ILLUMINATED.
3. PROVIDE SUFFICIENT CONTACT BLOCKS FOR THE FUTURE CIRCUITS PLUS AN ADDITIONAL 10%.

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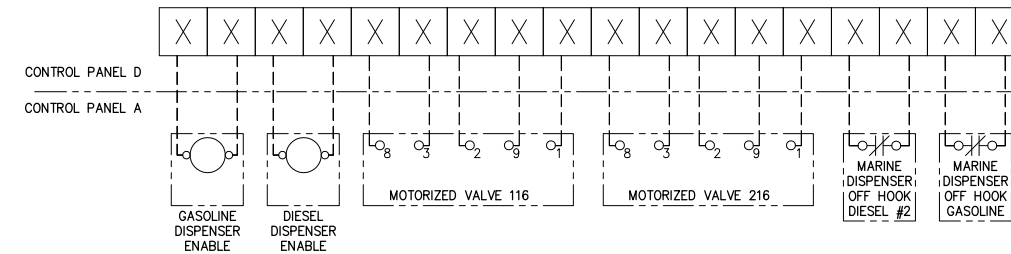


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TYPICAL PLATE



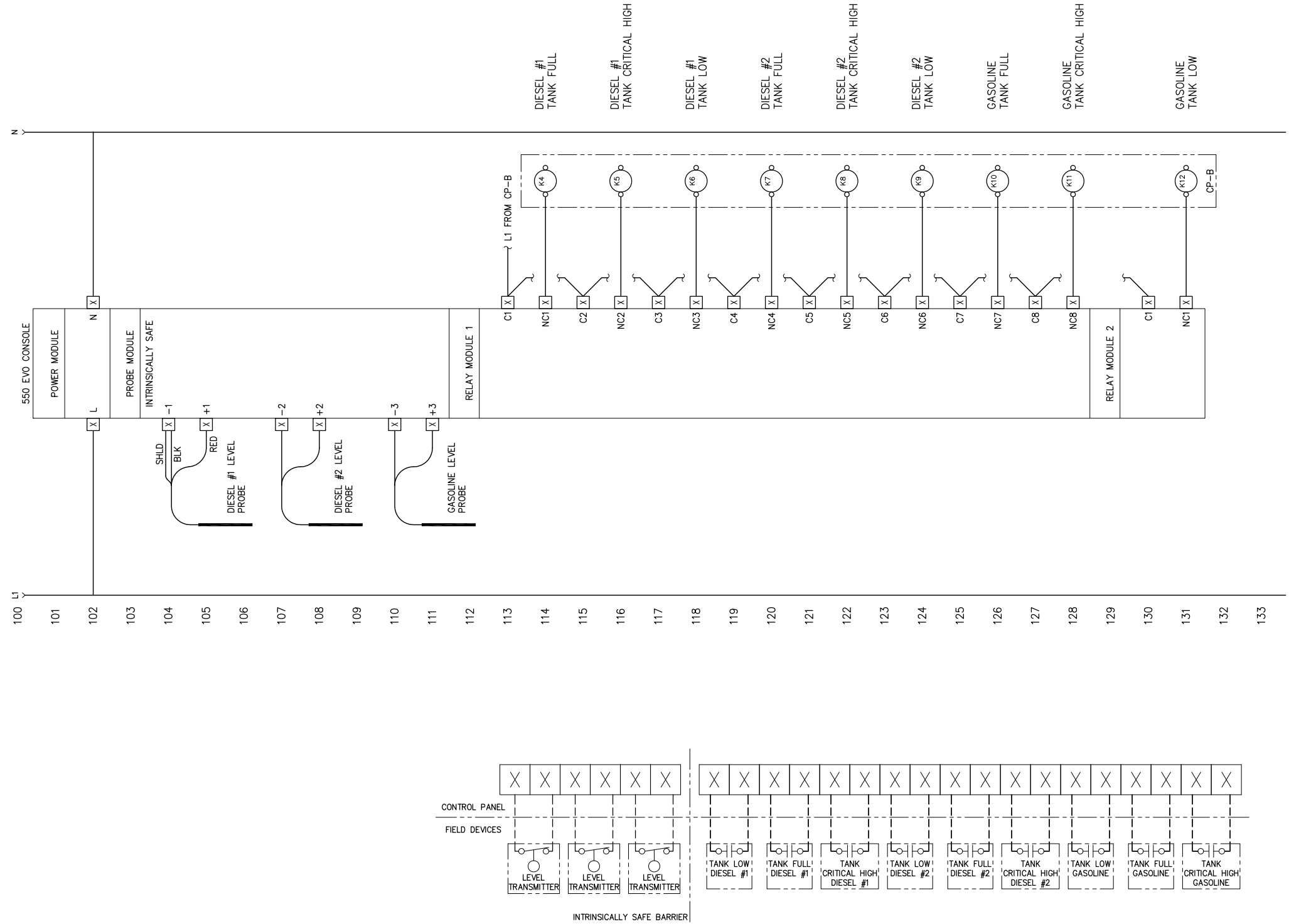
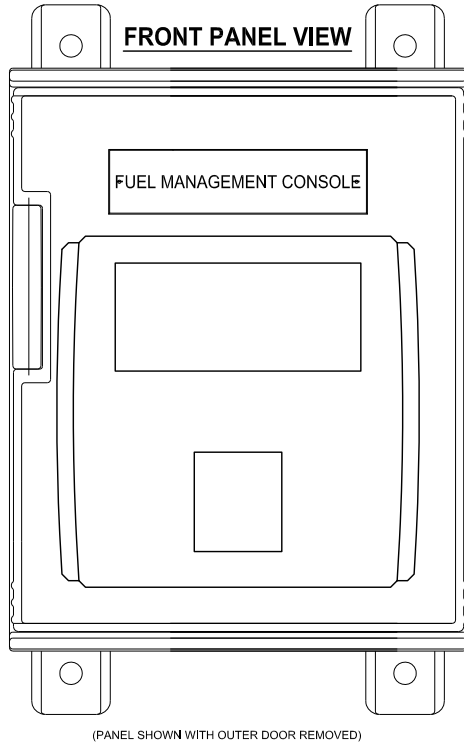
1 FUEL DOCK CONTROL PANEL 'CP-D' LAYOUT
 E5.14 SCALE: NTS



KAKE BULK FUEL UPGRADES

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SHEET TITLE CONTROL PANEL CP-D LAYOUT	
SHEET E5.14	
DRAWN BY: VI/OM	CHECKED BY: RP
DATE: 5/27/16	SCALE: AS NOTED
JOB NUMBER: 13-040	



FUNCTIONAL NARRATIVE

1. THIS PANEL CONTAINS THE THE FUEL MANAGEMENT CONSOLE. THE CONSOLE CAN ONLY BE ACCESSED BY OPENING THE PANEL DOOR.
2. THE CONSOLE INPUTS WILL BE CONNECTED TO THE INTERMEDIATE TANK LEVEL PROBES.

REVISIONS	MARK	DATE	DESCRIPTION
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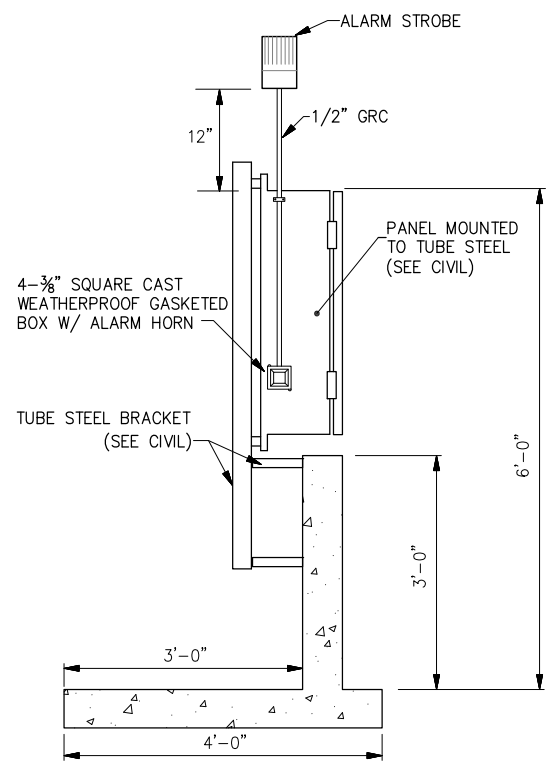


KAKE BULK FUEL UPGRADES

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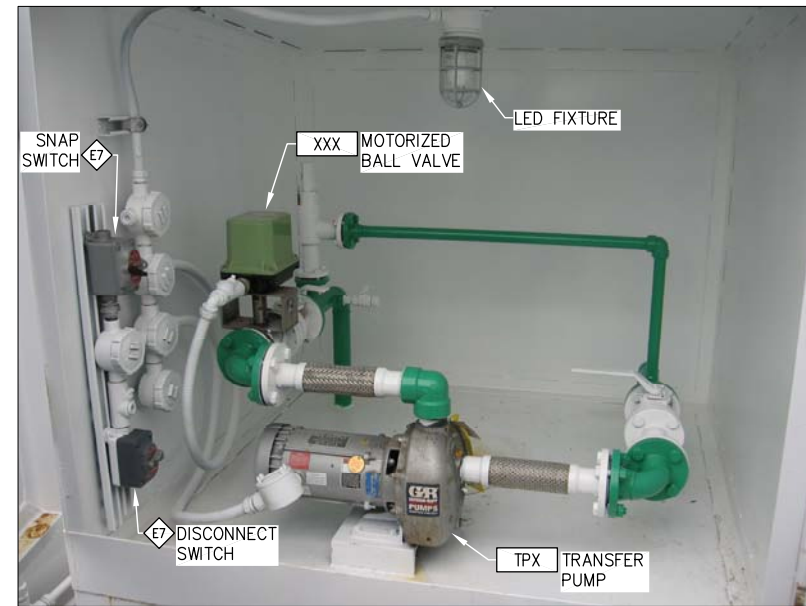
SHEET TITLE	
FUEL MANAGEMENT CONSOLE	
SHEET	
E5.15	
DRAWN BY:	CHECKED BY:
VJ/OM	RP
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5/22/16	AS NOTED
JOB NUMBER:	
13-040	



1 CONTROL PANEL 'CP-B' MOUNTING DETAIL
E6.01 SCALE: NTS



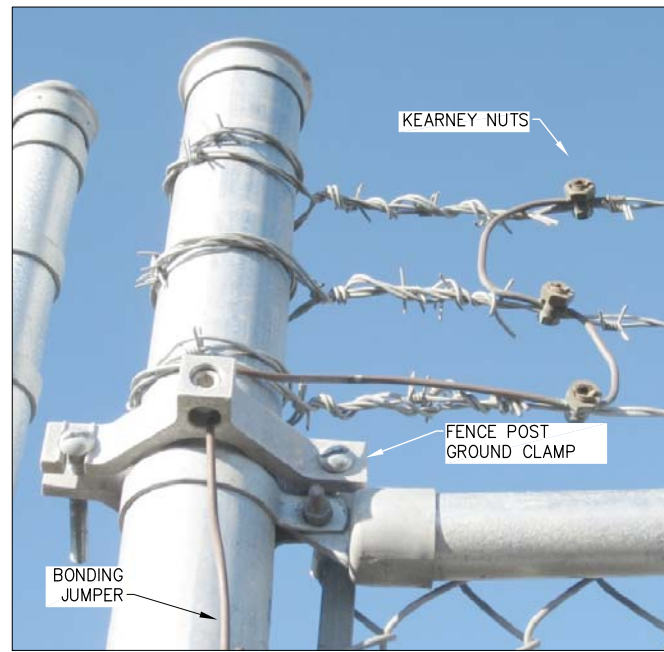
CONTAINMENT WALL



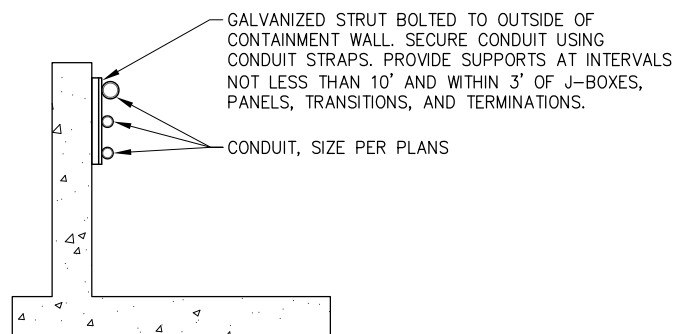
2 PUMP BOX DETAILS
E6.01 SCALE: NTS



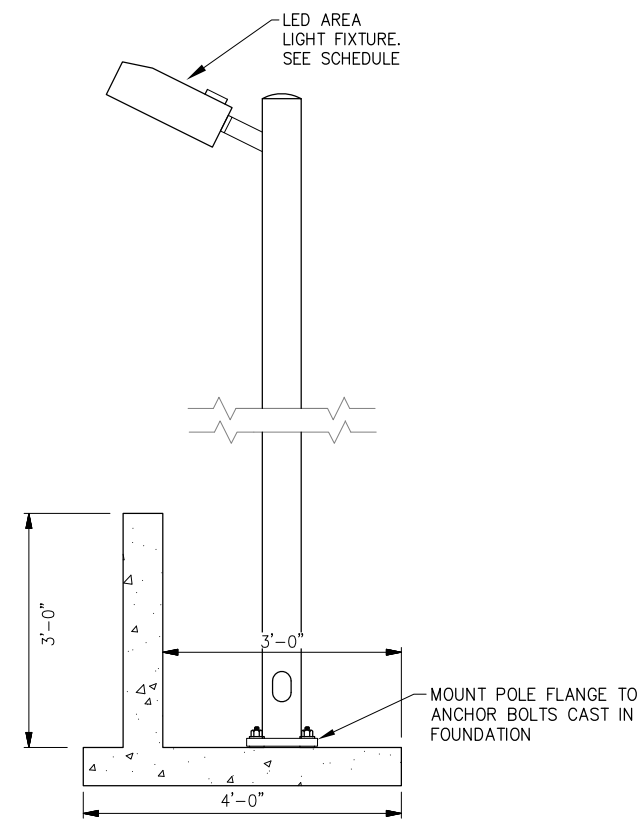
3 EMERGENCY STOP DISCONNECT (ESD)
E6.01 SCALE: NTS



4 FENCE GROUNDING DETAIL
E6.01 SCALE: NTS

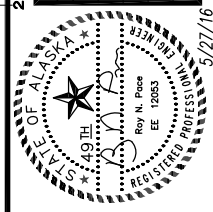


5 CONTAINMENT WALL CONDUIT ATTACHMENT DETAIL
E6.01 SCALE: NTS

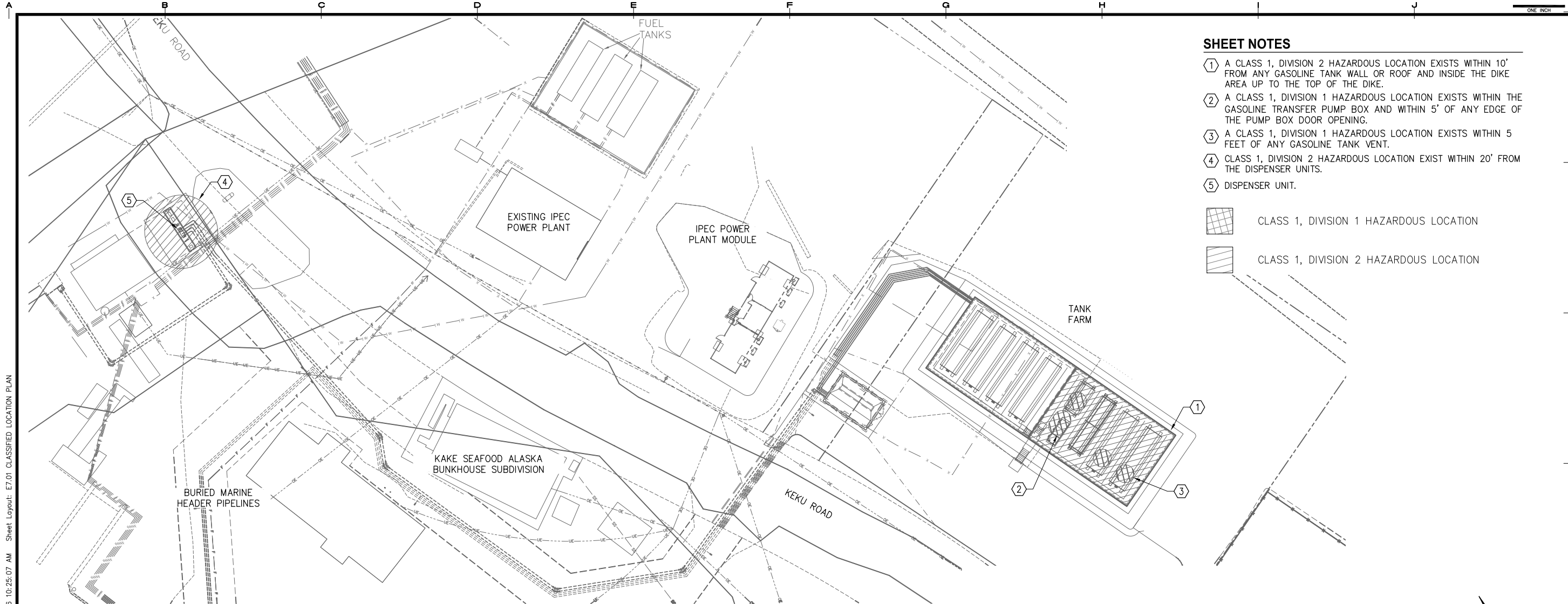


6 LIGHT POLE DETAIL
E6.01 SCALE: NTS

REVISIONS	MARK	DATE	DESCRIPTION
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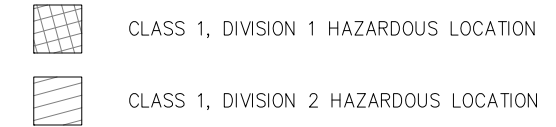


SHEET TITLE ELECTRICAL DETAILS	
SHEET E6.01	
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DATE: 5/27/16	SCALE: AS NOTED
JOB NUMBER: 13-040	

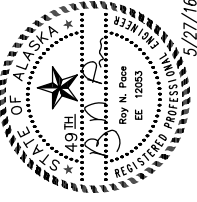


SHEET NOTES

- ① A CLASS 1, DIVISION 2 HAZARDOUS LOCATION EXISTS WITHIN 10' FROM ANY GASOLINE TANK WALL OR ROOF AND INSIDE THE DIKE AREA UP TO THE TOP OF THE DIKE.
- ② A CLASS 1, DIVISION 1 HAZARDOUS LOCATION EXISTS WITHIN THE GASOLINE TRANSFER PUMP BOX AND WITHIN 5' OF ANY EDGE OF THE PUMP BOX DOOR OPENING.
- ③ A CLASS 1, DIVISION 1 HAZARDOUS LOCATION EXISTS WITHIN 5 FEET OF ANY GASOLINE TANK VENT.
- ④ CLASS 1, DIVISION 2 HAZARDOUS LOCATION EXIST WITHIN 20' FROM THE DISPENSER UNITS.
- ⑤ DISPENSER UNIT.



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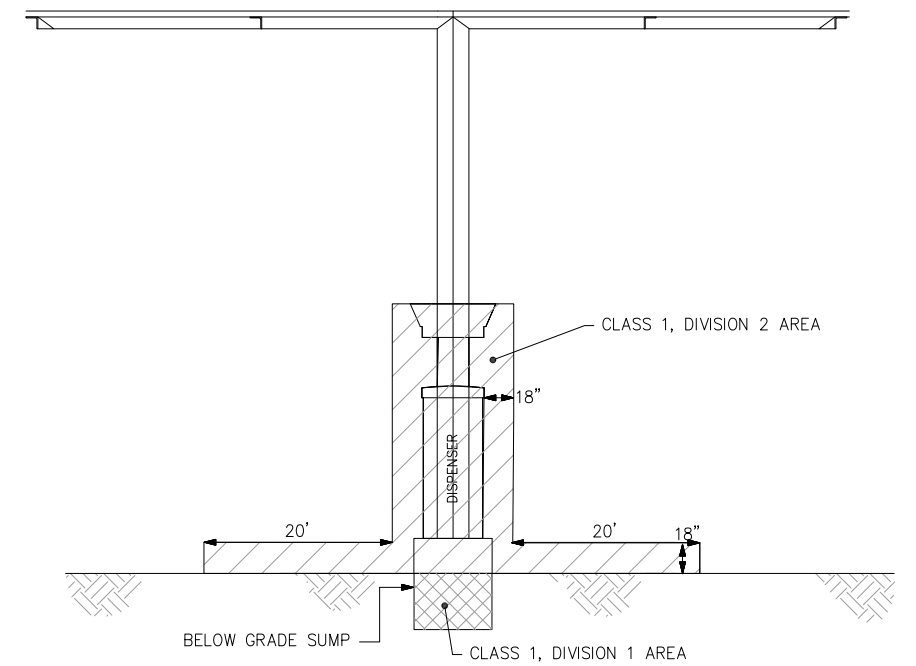
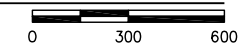


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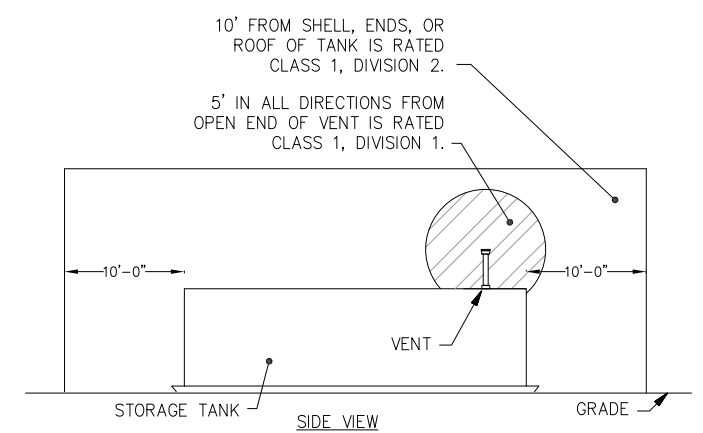


ALASKA ENERGY AUTHORITY
KAKE, ALASKA

1 CLASSIFIED LOCATION PLAN
E7.01 SCALE: 1:300



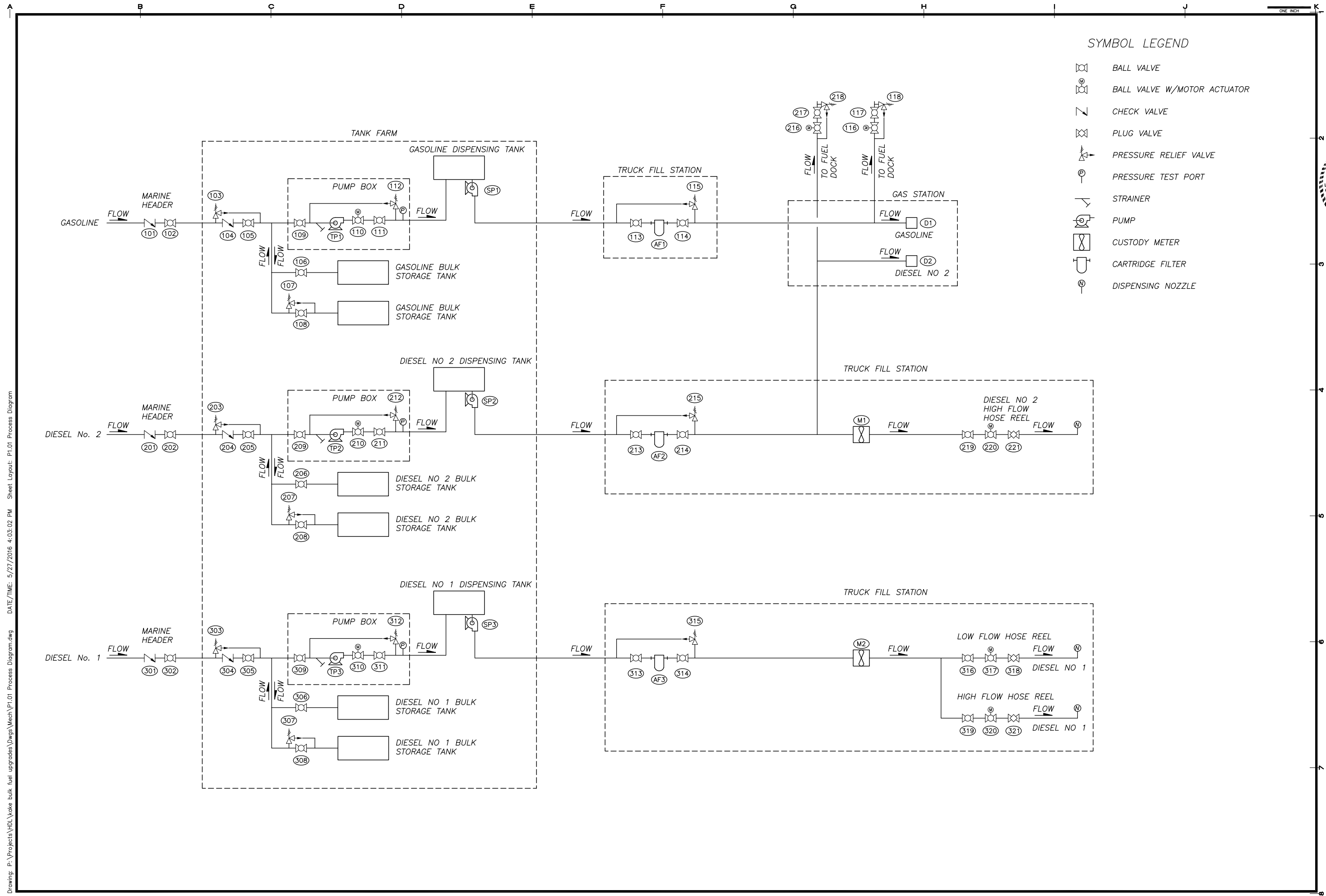
2 FUEL DISPENSER DETAIL
E7.01 SCALE: NTS



3 GASOLINE FUEL STORAGE TANK HAZARDOUS LOCATIONS
E7.01 SCALE: NTS

Drawing: P:\Projects\HDI\Kake Bulk Fuel Upgrades\Dwgs\Elec\E7.01_E7.02 Classified Location Plans.dwg DATE/TIME: 5/31/2016 10:25:07 AM Sheet Layout: E7.01 CLASSIFIED LOCATION PLAN

SHEET TITLE CLASSIFIED LOCATION PLAN	
SHEET E7.01	
DRAWN BY: VI/OM	CHECKED BY: RP
DATE: 5/27/16	SCALE: AS NOTED
JOB NUMBER: 13-040	



SYMBOL LEGEND

- BALL VALVE
- BALL VALVE W/MOTOR ACTUATOR
- CHECK VALVE
- PLUG VALVE
- PRESSURE RELIEF VALVE
- PRESSURE TEST PORT
- STRAINER
- PUMP
- CUSTODY METER
- CARTRIDGE FILTER
- DISPENSING NOZZLE

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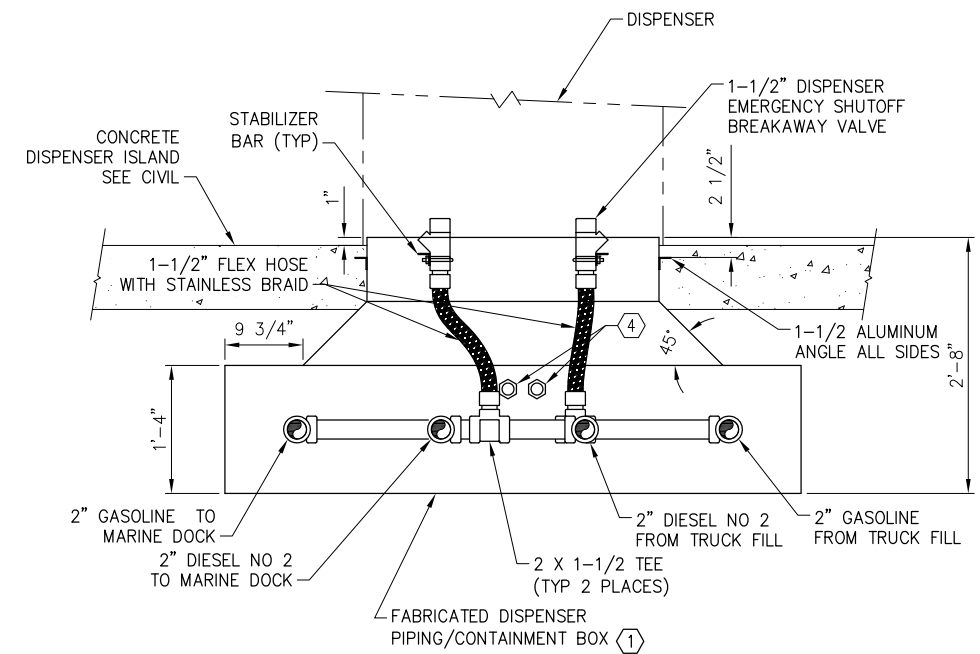
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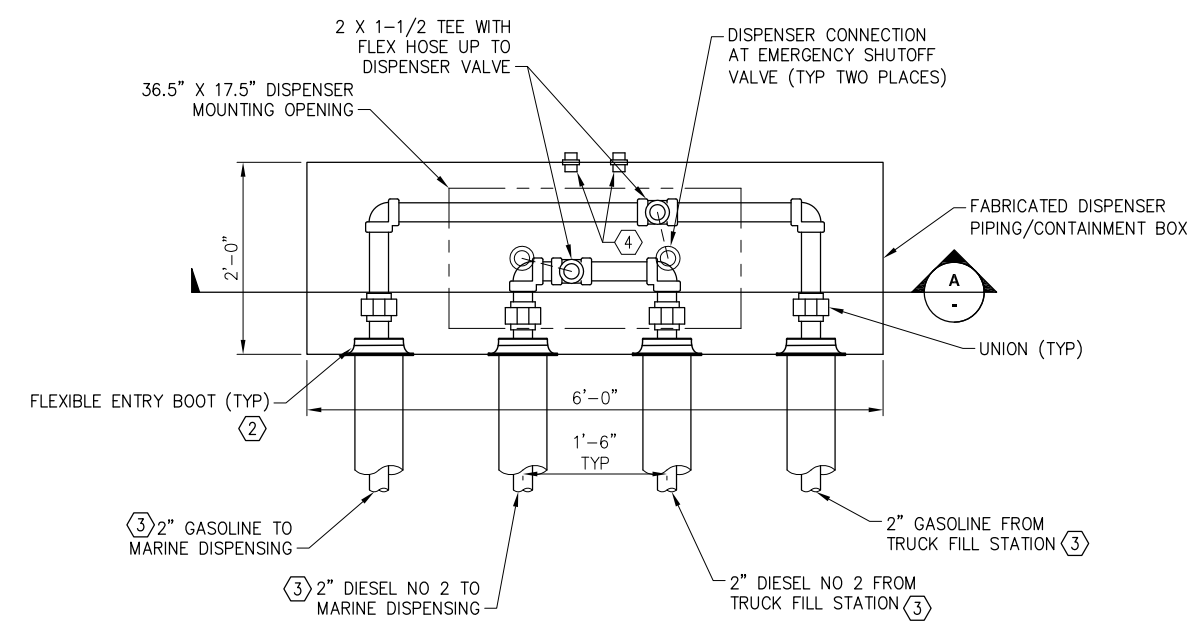
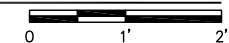
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SHEET TITLE PROCESS DIAGRAM	
SHEET P1.01	
DRAWN BY: KH	CHECKED BY: KH
DATE: 5/27/16	SCALE: AS NOTED
JOB NUMBER: 13-040	

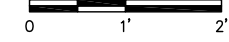
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A DISPENSER SUMP PIPING SECTION
SCALE: 1" = 1'-0"



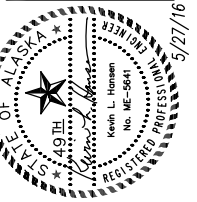
1 DISPENSER SUMP PIPING PLAN
M1.01 SCALE: 1" = 1'-0"



SHEET NOTES

- ① FABRICATE CONTAINMENT BOX TO DIMENSIONS SHOWN. CONSTRUCT OF 1/8" THICKNESS 5052 ALUMINUM PLATE WITH ALL SEAMS SEAL WELDED. COAT EXTERIOR OF BOX WITH BITUMINOUS COATING. CONSTRUCT TOP OF BOX WITH DIMENSIONS AND MOUNTING PROVISIONS TO MATCH THE DISPENSER FURNISHED.
- ② SIZE ENTRY HOLES TO MATCH CONTAINMENT PIPING AND BOOT.
- ③ SEE DRAWING C3.10 FOR CONTINUATION OF PIPELINES
- ④ PROVIDE BULKHEAD FITTING FOR CONDUIT ENTRY INTO BOX. SPACE AT LEAST 6" APART. COORDINATE SIZE WITH ELECTRICAL.

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SHEET TITLE DISPENSER PIPING DETAILS	
SHEET M1.01	
DRAWN BY: KH	CHECKED BY: KH
DATE: 5/27/16	SCALE: AS NOTED
JOB NUMBER: 13-040	