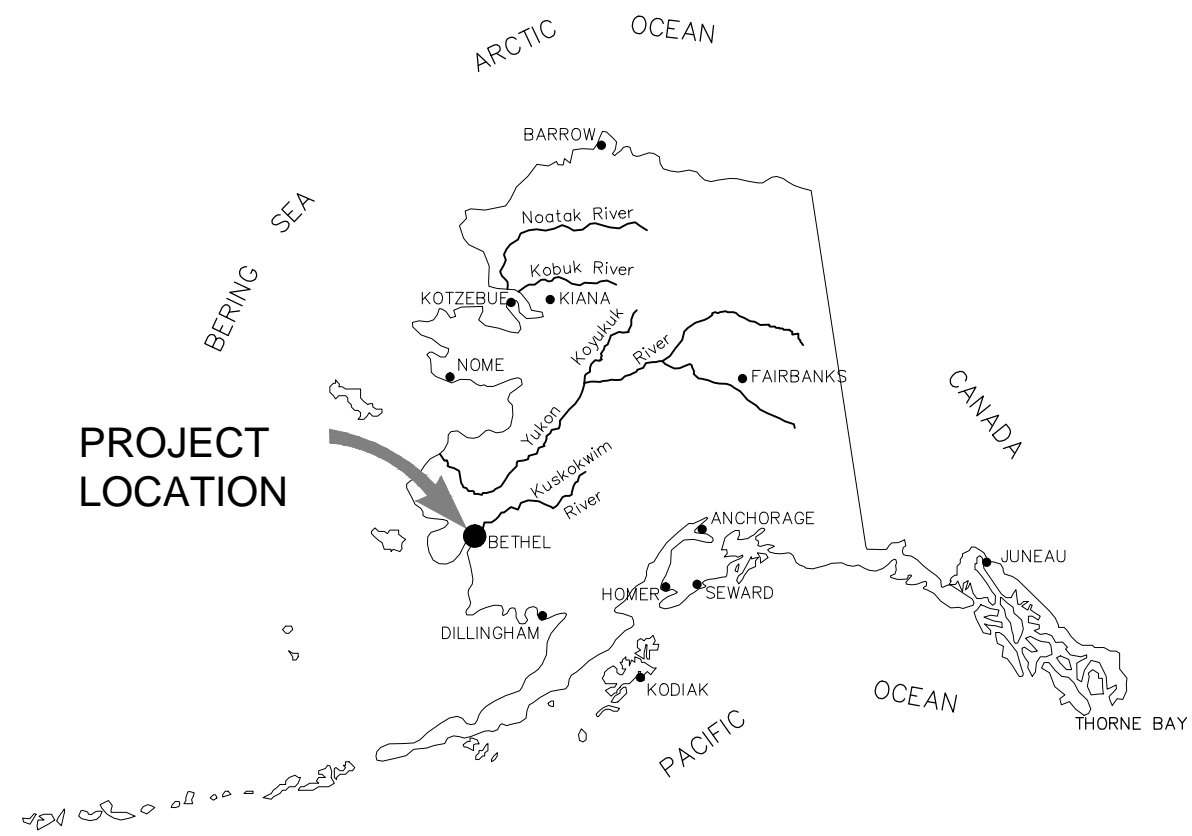


0"
1"
2"
3"



YUKON KUSKOKWIM CORRECTIONAL CENTER & BETHEL YOUTH FACILITY WATER SERVICES BETHEL, ALASKA

PREPARED FOR:

DEPARTMENT OF CORRECTIONS
DEPARTMENT OF HEALTH & HUMAN SERVICES



PREPARED BY:

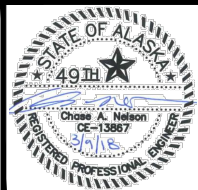
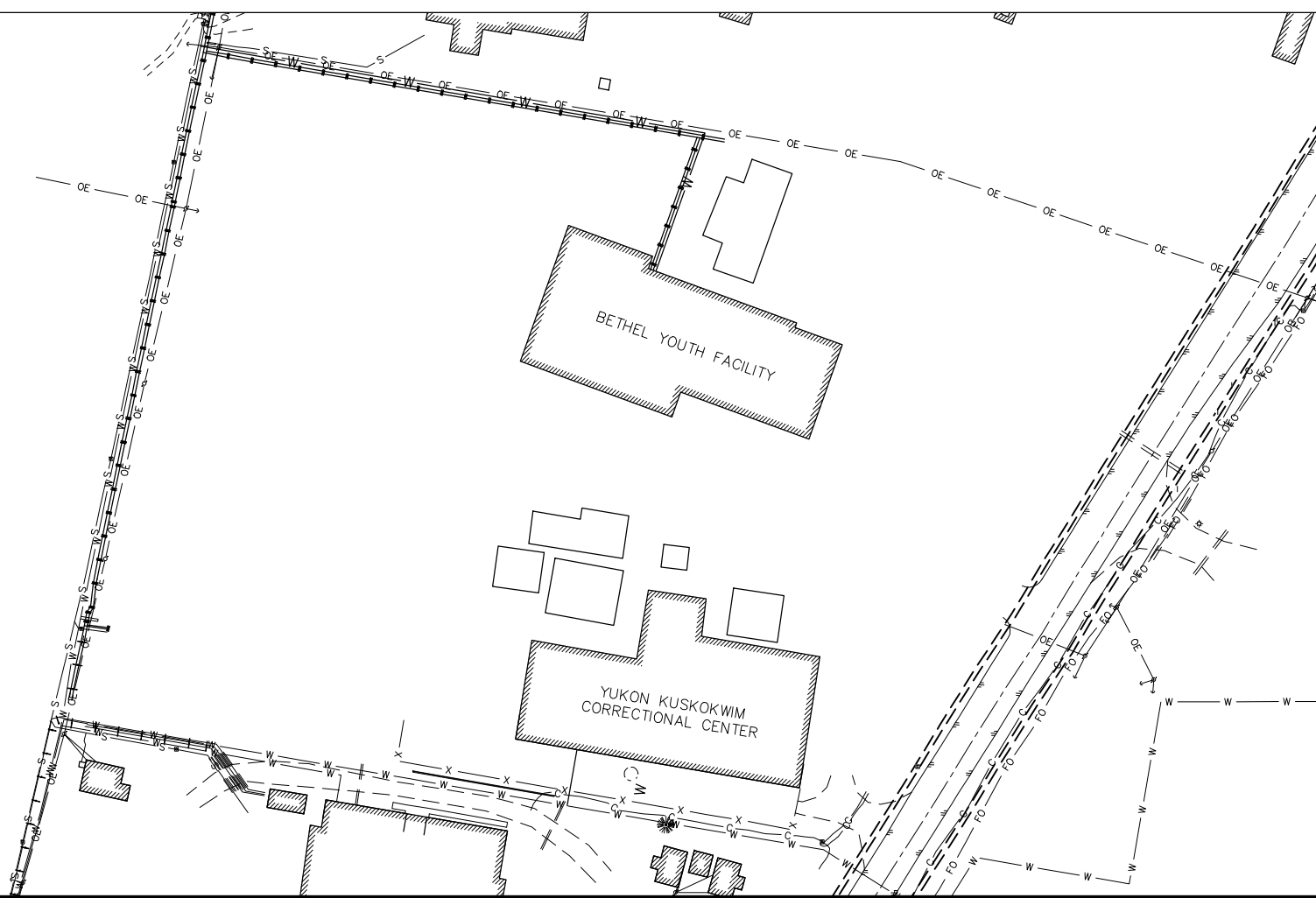


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STATE OF ALASKA
YKCC & BYF WATER SERVICES
1000 Chief Eddie Hoffman; Bethel, Alaska 99559
Civil Upgrades

REVISIONS:

DRAWN BY: SAH
CHECKED BY: CAN
DATE: 03/09/2018
JOB NUMBER: 50115
DWG FILE: 50115_C SERIES

DRAWING TITLE:
COVER SHEET

SHEET:
C0.0

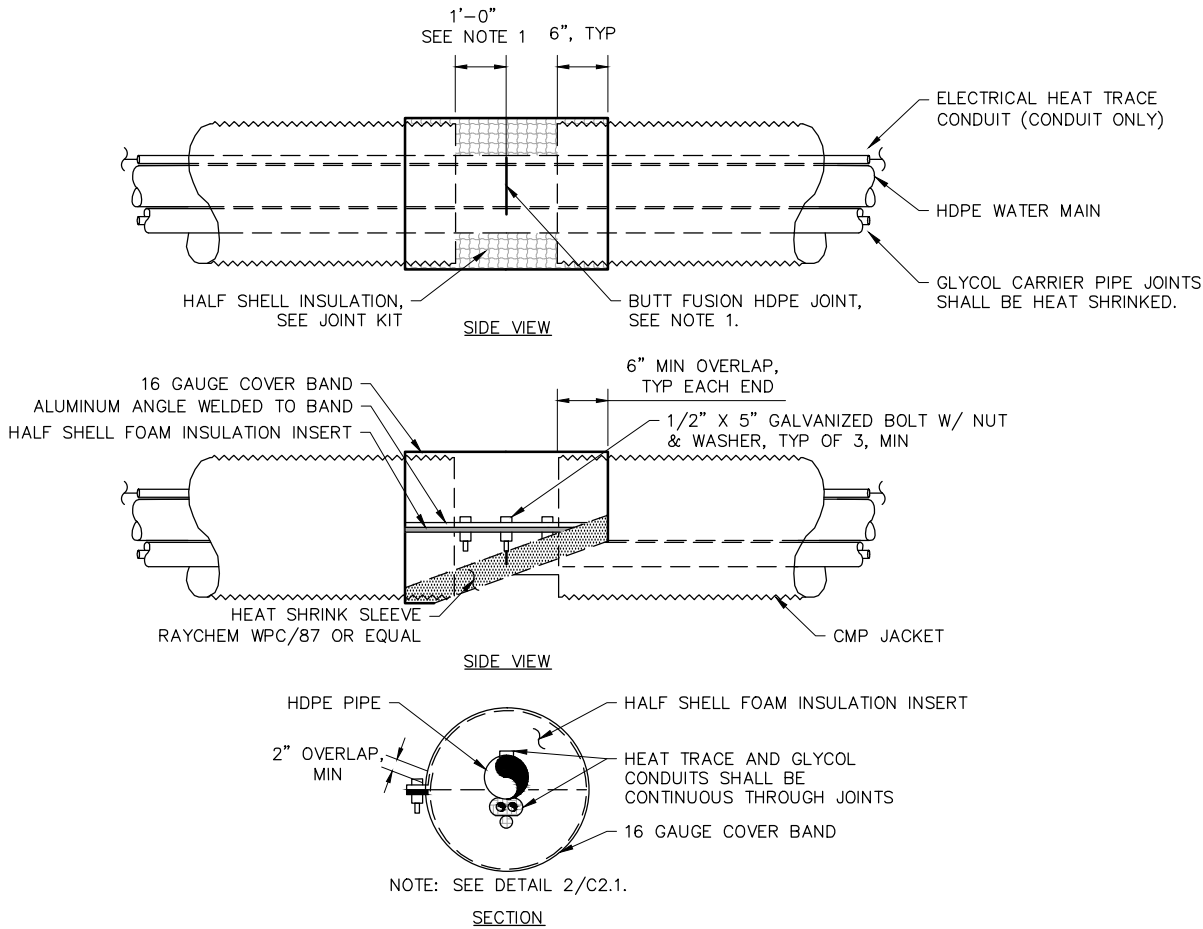


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DWG FILE:	50115_C SERIES

DRAWING TITLE:
DETAILS

SHEET:
C2.0



NOTES:

1. PROVIDE 12" MINIMUM HDPE PIPE EXTENSION BEYOND EACH ARCTIC PIPE SECTION FOR BUTT FUSION OR ELECTROFUSION JOINT, TYP, EACH END OF ARCTIC PIPE SECTION. ELECTROFUSION COUPLINGS SHALL ONLY BE ALLOWED ON A CASE BY CASE BASIS, UPON APPROVAL BY ENGINEER.
2. REMOVE BEAD AT FUSE JOINT PRIOR TO PLACEMENT OF HALF SHELLS.

1
C2.0
TYPICAL JOINT KIT (HALF SHELL) DETAIL
NTS

CIVIL SPECIFICATIONS

GENERAL:

THE SCOPE OF THIS PROJECT INCLUDES CONSTRUCTION OF TWO WATER SERVICES, ONE TO THE YKCC AND ONE TO THE BYF. THE WATER SERVICES SHALL BOTH BE CONNECTED TO 4" GATE VALVES FOR THE SUPPLY AND 1" CORPORATION STOPS FOR THE RETURN IN THE SERVICE UTILITY BOXES INSTALLED ON THE CITY WATER MAIN.

THE CONTRACTOR SHALL TAKE PRE-CONSTRUCTION PHOTOS AND POST-CONSTRUCTION PHOTOS TO DOCUMENT THAT THE PROJECT AREA HAS BEEN RESTORED TO PRE-CONSTRUCTION CONDITIONS.

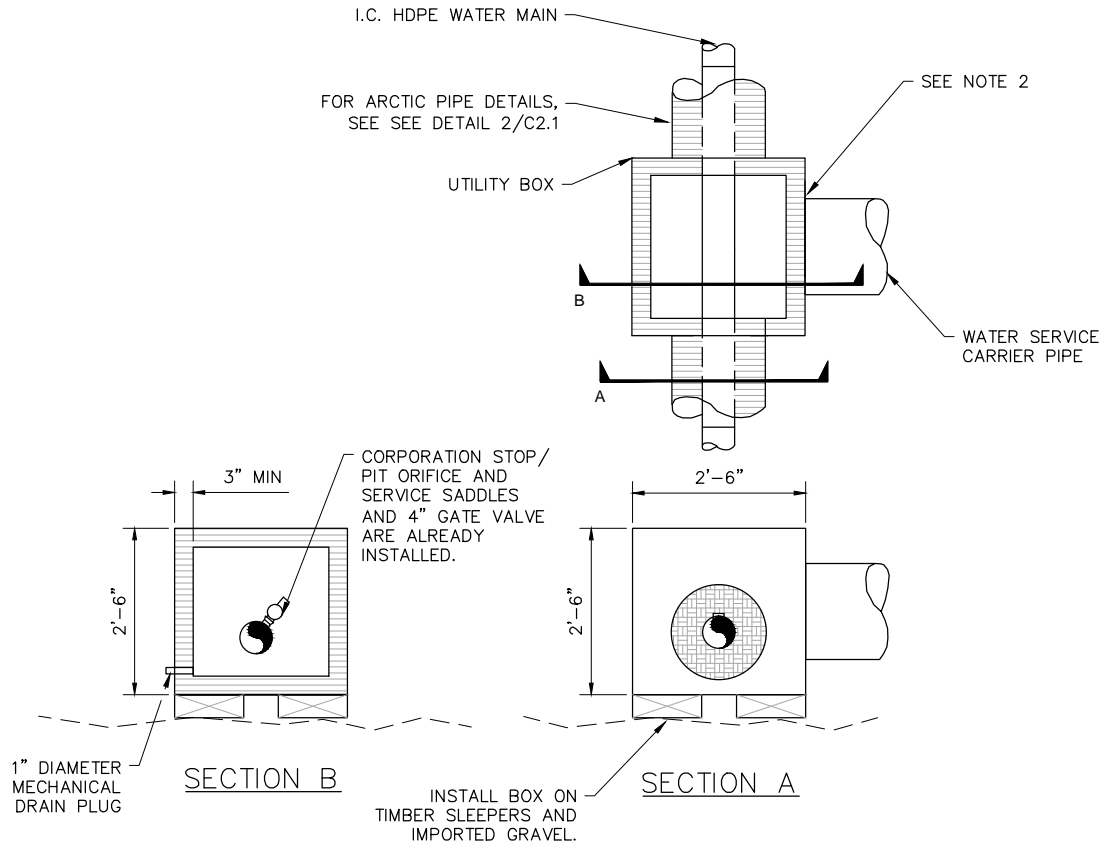
PRIOR TO FURNISHING AND INSTALLING ANY PRODUCTS, CONTRACTOR SHALL SUBMIT PRODUCT INFORMATION TO THE ENGINEER FOR REVIEW AND APPROVAL. CONTRACTOR SHALL ALSO SUBMIT A DRAFT SCHEDULE OF VALUES.

CLEARING, GRUBBING, EROSION AND SEDIMENT CONTROL, SURVEYING AND ALL OTHER WORK NOT EXPLICITLY CALLED OUT IN THE PLANS OR DETAILS IS INCIDENTAL TO THIS WORK.

CONTRACTOR SHALL SUBMIT A SET OF CLEAN RECORD DRAWINGS BEFORE FINAL PAYMENT FOR WORK WILL BE RELEASED.

THIS WORK SHALL BE SUBSTANTIALLY COMPLETE BY DECEMBER 31, 2018, AND FINAL COMPLETION SHALL BE BY JANUARY 31, 2019. CONTRACTOR CAN ASSUME THE INSTITUTIONAL CORRIDOR MAIN WILL BE COMPLETE BY AUGUST 31, 2018.

CONTRACTOR SHALL COORDINATE ALL SERVICE WORK WITH FACILITY MANAGEMENT, AND WORK ON THE SERVICE UTILITY BOXES WITH THE CITY AND THE CITY I.C. MAIN CONTRACT (BETHEL BUILDERS, LLC).



NOTES:

1. THE SERVICE LINE STUB-OUT BOXES WILL BE INSTALLED AS PART OF THE IC WATER CONTRACT. THESE DETAILS ARE SHOWN FOR REFERENCE ONLY.
2. I.C. CONTRACT SCOPE OF WORK INCLUDES SERVICE STUB-OUT BOX AND UTILITY BOX PENETRATION, NOT THE SERVICE PIPE.
3. CITY OWNED GLYCOL SUPPLY AND RETURN MAIN WILL INCLUDE BALL VALVES FOR EACH SERVICE. CONTRACTOR SHALL CONNECT SERVICE GLYCOL SUPPLY AND RETURN TO BALL VALVES. CONTRACTOR SHALL COORDINATE WITH CITY, BUT BE RESPONSIBLE FOR FILLING GLYCOL SUPPLY AND RETURN. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REMOVING ALL AIR FROM GLYCOL SERVICE LINES, AND STARTING CIRCULATION PUMPS. BYF WILL HAVE 3/4" BALL VALVES, AND YKCC WILL HAVE 1/2" BALL VALVES IN SERVICE BOX FOR GLYCOL HEAT TRACE CONNECTION.

2
C2.0
SERVICE LINE STUBOUT BOX
NTS

ARCTIC PIPE:

ALL CORE PIPE SHALL BE MADE OF HIGH-DENSITY POLYETHYLENE (HDPE) THAT CONFORMS TO ALL APPLICABLE PROVISIONS AND REQUIREMENTS OF THE LATEST REVISION OF AWWA C901 AND AWWA C906 AND, BY INCLUSION, ALL APPROPRIATE STANDARDS REFERENCED THEREIN.

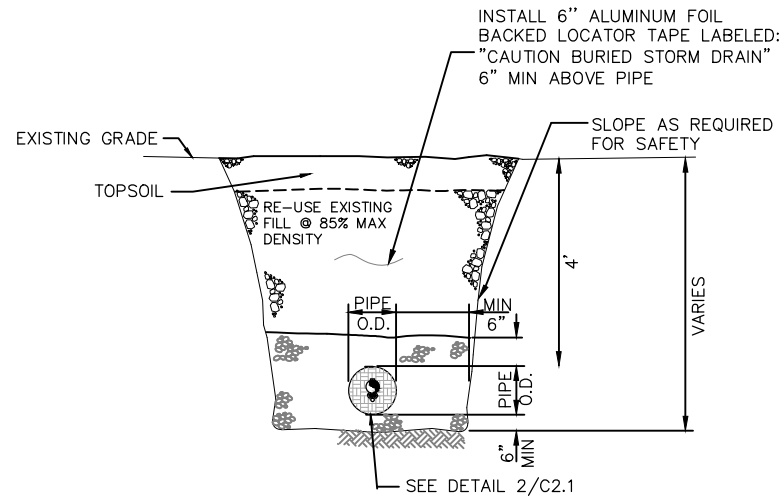
METAL OUTER JACKETS FOR PIPE AND FITTINGS SHALL BE CONSTRUCTED OF 16-GAUGE INTERNAL HELICAL LOCK- SEAM CORRUGATED ALUMINUM PIPE WITH A NOMINAL THICKNESS AS SHOWN ON THE DRAWINGS. IT SHALL BE APPLIED CLOSED-CELL URETHANE INSULATION WITH A NOMINAL THICKNESS AS SHOWN ON THE DRAWINGS. IT SHALL BE APPLIED AND CURED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND GOOD COMMERCIAL PRACTICES SUCH THAT THE RESULTING INSULATION COMPLETELY FILLS THE ANNULAR SPACE BETWEEN CORE PIPE AND OUTER JACKET AND IS FREE OF DEFECTS AFFECTING ITS INTENDED PURPOSE. URETHANE INSULATION SHALL EXHIBIT THE FOLLOWING PROPERTIES AND CHARACTERISTICS SPECIFIED BY THE REFERENCED ASTM TESTS BELOW:

- ASTM C518 OR C177 MAXIMUM K-FACTOR: 0.15 BTU-IN/HR-FT2-°F
- ASTM D1622 CORE DENSITY RANGE: 2.0 TO 4.0 LBS/FT3

ALL JOINTS SHALL BE BUTT WELDED BY A QUALIFIED INSTALLER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

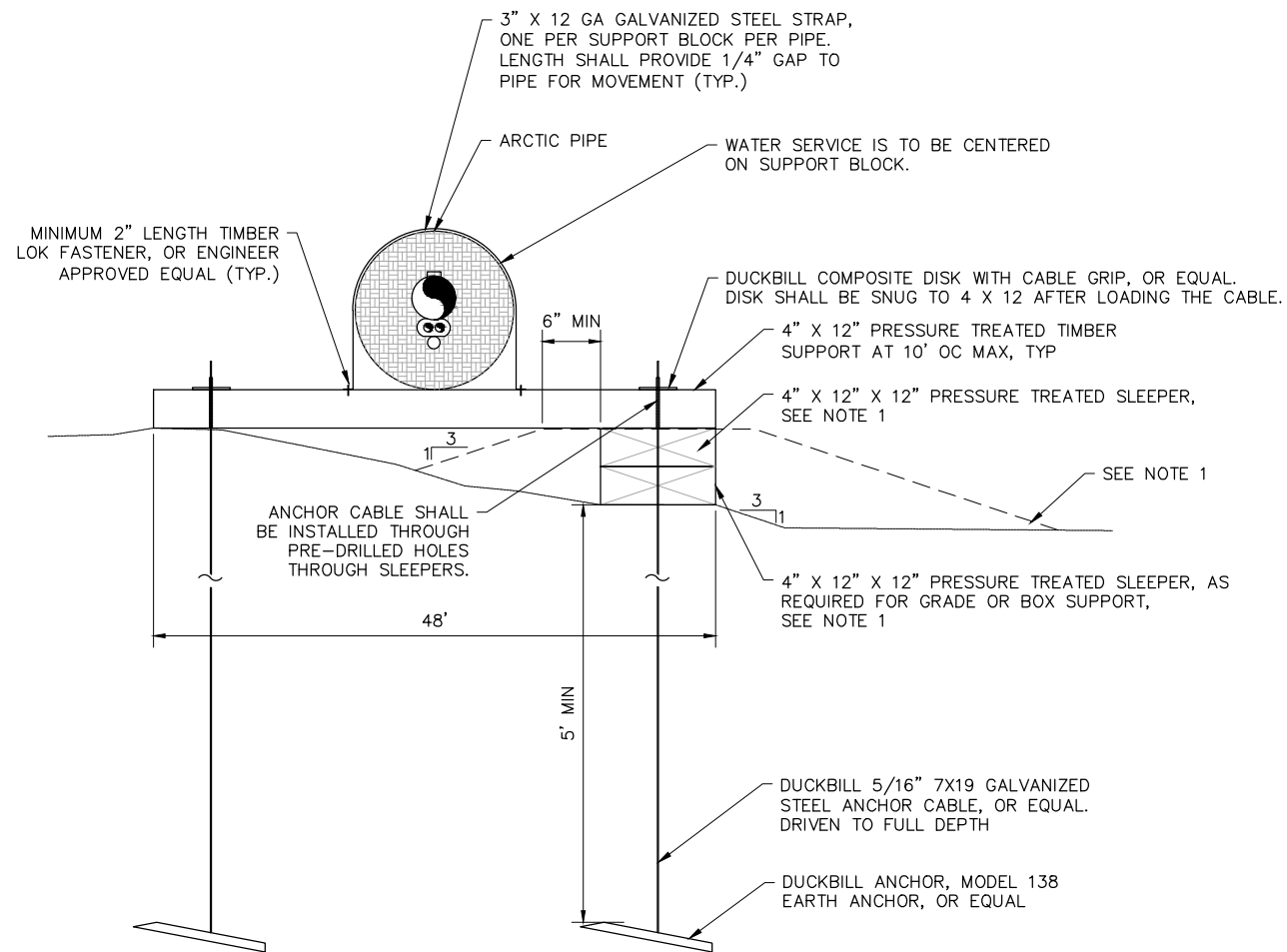
ALL SERVICES SHALL BE TESTED TO 120 PSI FOR A PERIOD OF FOUR HOURS. A PRESSURE DROP OF GREATER THAN 2 PSI WILL NOT BE ALLOWED, EXCEPT AT DISCRETION OF ENGINEER.

ALL WORK IS SUBJECT TO THE OWNER'S REPRESENTATIVE REVIEW AND APPROVAL.

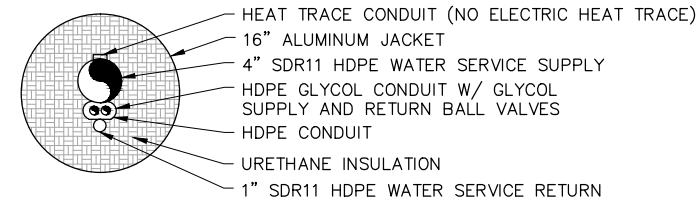


- NOTES:
1. UNDER ROADS AND WITHIN 10' OF BUILDINGS, BACKFILL WITH CLASSIFIED MATERIAL, COMPACTED TO 95% MAXIMUM DRY DENSITY.
 2. FOR YKCC WATER SERVICE, THE SERVICE UTILITY BOX IS ABOVE GROUND ON THE I.C. MAIN. CONTRACTOR SHALL TRANSITION WATER SERVICE TO BELOW GRADE BEFORE GOING UNDER FENCE.

1
C2.1
TRENCH DETAIL
NTS



3
C2.1
SUPPORT BLOCK DETAILS
NTS



- NOTES:
1. YKCC WATER SERVICE SHALL BE ACCOMPANIED BY 1/2" GLYCOL SUPPLY AND RETURNS. BYF WATER SERVICE SHALL BE ACCOMPANIED BY 3/4" GLYCOL SUPPLY AND RETURNS.

2
C2.1
ARCTIC PIPE SECTIONS
NTS

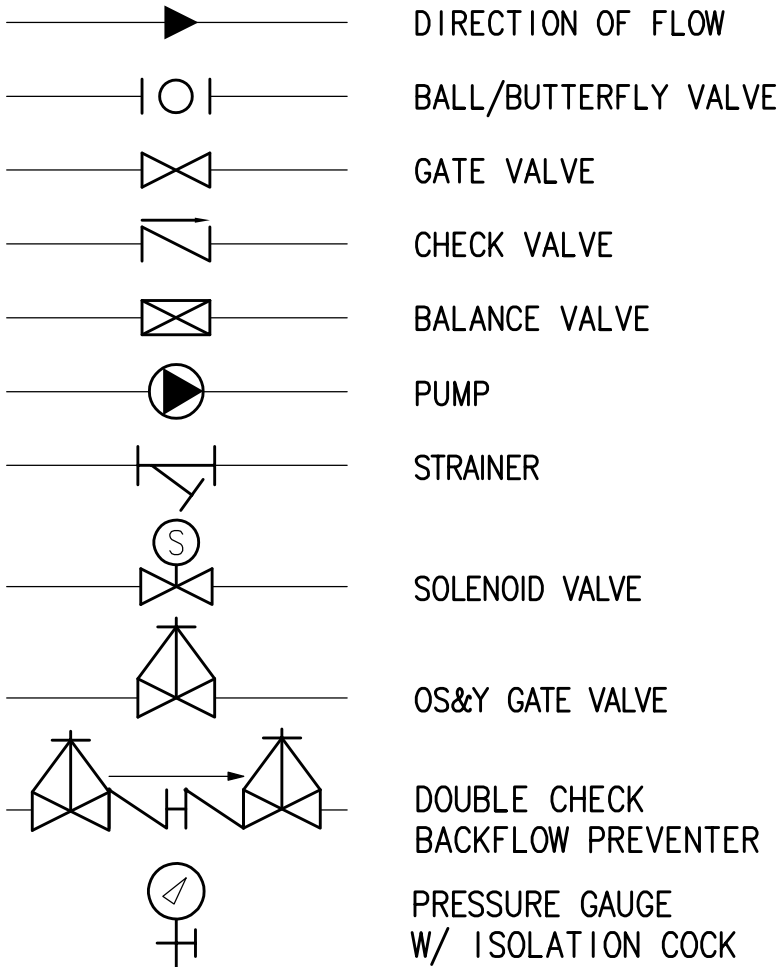
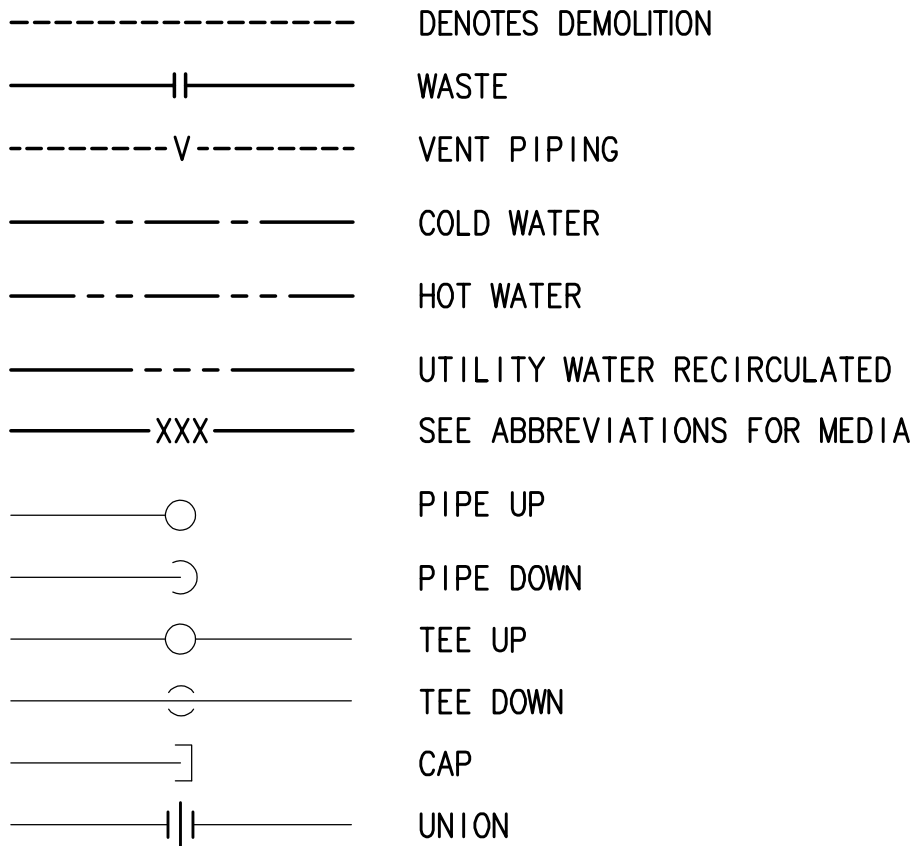
SUPPORT BLOCK NOTES

1. AT THE CONTRACTOR'S OPTION, THE TOP 4"x12" PRESSURE TREATED TIMBER MAY BE PLACED ON IMPORTED GRAVEL COMPACTED TO 95% MAX DRY DENSITY WITH A 3:1 SLOPE ON GEOTEXTILE FABRIC, IN LIEU OF ADDITIONAL PRESSURE TREATED TIMBER SLEEPERS. PRESSURE TREATED TIMBER SLEEPERS MUST BE SECURED WITH AN ANCHOR AS SHOWN.
2. INSTALL SUPPORTS BLOCKS EVERY 10 FEET.
3. ALL METAL PARTS AND FASTENERS SHALL BE HOT DIPPED GALVANIZED. FIELD CUTS SHALL BE FIELD-TREATED WITH AN APPROVED COLD GALVANIZED PRODUCT.
4. SUPPORT BLOCKS SHALL BE PLACED BENEATH EACH BEND.

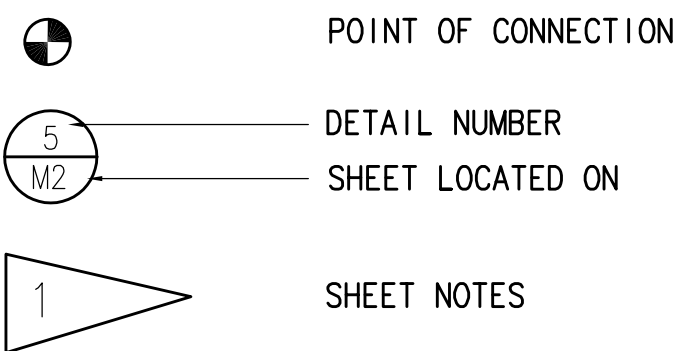


0
1"
2"
3"

PIPING LEGEND



LOGIC



ABBREVIATIONS

ARCH	ARCHITECTURAL	MFGR	MANUFACTURER
BLDG	BUILDING	NTS	NOT TO SCALE
BTUH	BRITISH THERMAL UNIT/HOUR	PG	PROPYLENE GLYCOL
BYM-X	BETHEL YOUTH FACILITY METER DESIGNATOR	PH	PHASE
BYP-X	BETHEL YOUTH FACILITY PUMP DESIGNATOR	RCW	RECIRCULATED WATER
BYF	BETHEL YOUTH FACILITY	TYP	TYPICAL
CAP	CAPACITY	UPC	UNIFORM PLUMBING CODE
CFM	CUBIC FEET PER MINUTE	V	VENT
CONT	CONTINUED	VEL	VELOCITY
CW	COLD WATER	W	WASTE
DN	DOWN	WHR	HOT WATER RETURN
DWG	DRAWING	WHS	HOT WATER SUPPLY
(E)	EXISTING	W/	WITH
ESP	EXTERNAL STATIC PRESSURE	W/O	WITHOUT
FDC	FIRE DEPARTMENT CONNECTION	YCO	YARD CLEAN OUT
FSW	FIRE SERVICE WATER	YKCC	YUKON KUSKOKWIM CORRECTIONAL CENTER
GPM	GALLONS PER MINUTE	YKP-X	YKCC PUMP DESIGNATOR
HD	HEAD	YKM-X	YKCC METER DESIGNATOR
HXP-1	WASTE HEAT PUMP DESIGNATOR		
HW	HOT WATER		
HP	HORSEPOWER		
IN	INCHES		
MBH	THOUSAND BTUH		

PUMP SCHEDULE

				PUMPED	FLOW	HEAD	MOTOR DATA		REMARKS
SYMBOL	MANUFACTURER	MODEL	FUNCTION	MEDIUM	GPM	FEET	HP	VOLTS/PH	
BYP-1	GRUNDFOS	UPS 26-150	BYF WATER SERVICE RCW PUMP	WATER	0.5	28	1/2	120/1	INLINE PUMP, SET TO SPEED 1, NSF-61 CONSTRUCTION FOR USE WITH POTABLE WATER.
BYP-2	GRUNDFOS	CR 1S-3	BYF HEAT TRACE PUMP	50% PG	3.0	62	1/3	120/1	INLINE PUMP.
YKP-1	GRUNDFOS	UPS 15-55	YKCC WATER SERVICE RCW PUMP	WATER	0.5	8	1/12	120/1	INLINE PUMP, SET TO SPEED 1, NSF-61 CONSTRUCTION FOR USE WITH POTABLE WATER.
YKP-2	GRUNDFOS	UPS 15-55	YKCC HEAT TRACE PUMP	50% PG	0.5	14	1/10	120/1	INLINE PUMP, SET TO SPEED 2.
HXP-1	GOULDS	6SH4J45A0	YKCC WASTE HEAT PUMP	WATER	280	30	5	208/1	BASE MOUNTED PUMP, PROVIDE WITH VIBRATION ISOLATORS.

WATER METER SCHEDULE

						FLOW RANGE	PRESSURE DROP AT FLOW				REMARKS
SYMBOL	MANUFACTURER	MODEL	FUNCTION	MEDIUM	SIZE	GPM	PSI	GPM	MATERIAL	LISTINGS	
BYM-1	BADGER METER	M170	WATER SERVICE	POTABLE WATER	2"	2.5-310	3.3	100	BRONZE	NSF-61	ENGINEERED POLYMER DISC ROTOR, LEAD-FREE BRONZE HOUSING, BOLTED FLANGE CONNECTIONS, PROVIDE WITH TRANSMITTER REGISTER AND REMOTE ELECTRONIC DISPLAY.
YKM-1	BADGER METER	3" COMPOUND	WATER SERVICE	POTABLE WATER	3"	0.5-450	6.0	400	BRONZE	NSF-61	COMPOUND METER WITH SEPARATE HIGH AND LOW FLOW REGISTERS, THERMOPLASTIC TURBINE ROTOR, LEAD-FREE BRONZE HOUSING, BOLTED FLANGE CONNECTIONS, PROVIDE WITH TRANSMITTER REGISTER AND REMOTE ELECTRONIC DISPLAY.

MECHANICAL SPECIFICATIONS

FRONT END ADMINISTRATIVE

THE INFORMATION SHOWN ON THESE PLANS FOR EXISTING CONDITIONS IS TAKEN FROM AS-BUILT DRAWINGS AND A NON-DESTRUCTIVE INVESTIGATION OF THE FACILITY. THE INFORMATION SHOWN FOR EXISTING CONDITIONS MAY OR MAY NOT BE ACCURATE OR COMPLETE. THE CONTRACTOR SHALL FIELD VERIFY ALL ITEMS SCHEDULED FOR DEMOLITION PRIOR TO START OF WORK.

DRAWINGS - THE DRAWINGS ARE DIAGRAMMATIC, NOT NECESSARILY SHOWING ALL OFFSETS OR EXACT LOCATIONS OF FIXTURES, EQUIPMENT, ETC. UNLESS SPECIFICALLY DIMENSIONED. REVIEW THE DRAWINGS AND SPECIFICATIONS FOR EQUIPMENT FURNISHED BY OTHER CRAFTS BUT INSTALLED IN ACCORDANCE WITH THIS SECTION. BRING QUESTIONABLE OR OBSCURE ITEMS, APPARENT CONFLICTS BETWEEN PLANS AND SPECIFICATIONS, GOVERNING CODES OR UTILITY REGULATIONS TO THE ATTENTION OF THE DOC PROJECT MANAGER. CODES, ORDINANCES, REGULATIONS, MANUFACTURER'S INSTRUCTIONS OR STANDARDS TAKE PRECEDENCE WHEN THEY ARE MORE STRINGENT OR CONFLICT WITH THE DRAWINGS AND SPECIFICATIONS.

COMPLETE PROJECT - THE INTENT OF THIS PROJECT IS TO LET ONE CONTRACT WHICH INCLUDES ALL WORK REQUIRED FOR A COMPLETE JOB.

PERMITS - THE CONTRACTOR SHALL SECURE AND PAY FOR ALL NECESSARY PERMITS AND FEES.

STANDARDS, CODES AND REGULATIONS - ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE INTERNATIONAL BUILDING CODE (IBC), INTERNATIONAL MECHANICAL CODE (IMC), UNIFORM PLUMBING CODE (UPC), INTERNATIONAL FIRE CODE (IFC) AND NATIONAL ELECTRICAL CODE (NEC) AS AMENDED BY THE STATE OF ALASKA. SHEET METAL WORK SHALL BE DONE IN ACCORDANCE WITH SMACNA STANDARDS.

EQUIPMENT SUBSTITUTIONS - ALL EQUIPMENT LISTED IS REPRESENTATIVE OF THE STANDARD OF QUALITY AND PERFORMANCE REQUIRED. "OR EQUAL" SUBSTITUTIONS WILL BE CONSIDERED IF THE SUBSTITUTE CATALOG CUTS ARE SUBMITTED AND ARE SHOWN TO BE OF EQUAL OR BETTER QUALITY, INCLUDING EFFICIENCY OF PERFORMANCE, SIZE AND WEIGHT.

INSURANCE - CONTRACTOR MUST PROVIDE BUILDER'S ALL RISK INSURANCE, WORKER'S COMPENSATION INSURANCE, AND GENERAL LIABILITY INSURANCE AT ALL TIMES WHILE WORKING ON THIS PROJECT.

WARRANTY - ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM ACCEPTANCE. ANY FAULTY MATERIALS OR WORKMANSHIP SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE DOC PROJECT MANAGER DURING THE GUARANTEE PERIOD.

ELECTRICAL WORK - ALL ELECTRICAL WORK IS TO BE PERFORMED BY A LICENSED ELECTRICIAN, IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC).

MATERIALS - ALL MATERIALS OTHER THAN DOC PROJECT MANAGER SUPPLIED SHALL BE NEW AND UNUSED, INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND IN THE BEST PRACTICE OF THE CRAFT. OBTAIN DOC PROJECT MANAGER'S APPROVAL OF ALL PRODUCTS PRIOR TO ORDERING OR INSTALLING ANY PART OF ANY SYSTEM.

OPERATION AND MAINTENANCE MANUALS - PRIOR TO SUBSTANTIAL COMPLETION PROVIDE OPERATION AND MAINTENANCE MANUALS FOR TRAINING OF THE DOC PROJECT MANAGER'S PERSONNEL, IN BOOKLET FORMAT AND IN ELECTRONIC PDF FORMAT. DESCRIBE THE PROCEDURES NECESSARY TO OPERATE THE SYSTEM INCLUDING START-UP, OPERATION, EMERGENCY OPERATION AND SHUTDOWN. PROVIDE INSTRUCTIONS AND A SCHEDULE OF PREVENTIVE MAINTENANCE IN TABULAR FORM FOR ALL ROUTINE CLEANING, INSPECTION AND LUBRICATION WITH RECOMMENDED LUBRICANTS. PROVIDE INSTRUCTIONS FOR MINOR REPAIR OR ADJUSTMENTS REQUIRED FOR PREVENTIVE MAINTENANCE ROUTINES. PROVIDE MANUFACTURER'S DESCRIPTIVE LITERATURE INCLUDING APPROVED SHOP DRAWINGS COVERING DEVICES USED IN ANY CONTRACTOR-PROVIDED EQUIPMENT OR SYSTEMS WITH ILLUSTRATION, EXPLODED VIEWS, ETC.

SUBMITTALS - SUBMITTALS SHALL BE IN ELECTRONIC FORMAT. THE DATA SHALL BE ARRANGED AND INDEXED UNDER BASIC CATEGORIES. SUBMIT PUMPS, WATER METERS, CONTROLS, CONTROLLERS, VALVES, PIPING, UNIONS, PIPING SUPPORTS AND ANCHORS, AND INSULATION.

WORKMANSHIP - INSTALLATION OF ALL WORK SHALL BE MADE SO THAT ITS SEVERAL COMPONENT PARTS SHALL FUNCTION AS A WORKABLE SYSTEM COMPLETE WITH ALL ACCESSORIES NECESSARY FOR ITS OPERATION. ALL MATERIAL AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, INSTRUCTIONS AND/OR INSTALLATION DRAWINGS. MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL CONFORM WITH APPLICABLE INDUSTRY STANDARDS, AND THIRD PARTY LISTINGS WHERE APPLICABLE.

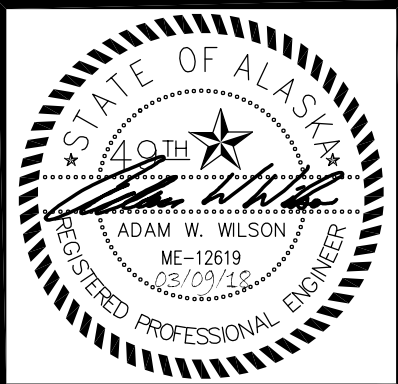
TEST AND START-UP - TEST ALL PLUMBING AND PIPING SYSTEMS WITH 60 PSIG FOR ONE HOUR BEFORE FILLING AND IN ACCORDANCE WITH THE UNIFORM PLUMBING CODE (UPC). FILL ALL HEATING PIPING WITH TRISODIUM PHOSPHATE SOLUTION AND OPERATE FOR SEVERAL HOURS AT NORMAL OPERATING TEMPERATURE BEFORE FLUSHING AND FILLING WITH GLYCOL SOLUTION.

EQUIPMENT INSTALLATION AND ACCESS - INSTALL ALL EQUIPMENT WHERE NOTED ON THE DRAWINGS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. PROVIDE MISCELLANEOUS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS INCLUDING ACCESSORIES, SUPPORTS AND CONTROL CONNECTIONS REQUIRED FOR COMPLETE AND OPERATING SYSTEMS. MAINTAIN MANUFACTURER'S RECOMMENDED SERVICE CLEARANCES AND PROVIDE WORKABLE ACCESS TO ALL SERVICEABLE AND/OR OPERABLE EQUIPMENT.

BALANCE - THE CONTRACTOR SHALL BALANCE THE HYDRONIC SYSTEMS ACCORDING TO NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB) RECOMMENDED PROCEDURES AND CONTRACT DOCUMENTS, AND TO THE SATISFACTION OF THE DOC PROJECT MANAGER.

DEMOLITION - DEMOLITION DRAWINGS ARE BASED ON AS-BUILT DRAWINGS AND A NON-DESTRUCTIVE WALK THROUGH OF THE FACILITY. REPORT DISCREPANCIES TO DOC PROJECT MANAGER BEFORE DISTURBING THE EXISTING INSTALLATION. DISABLE SYSTEMS ONLY TO MAKE SWITCH OVERS AND CONNECTIONS. OBTAIN PERMISSION FROM DOC PROJECT MANAGER AT LEAST 72 HOURS BEFORE PARTIALLY OR COMPLETELY DISABLING SYSTEM. MINIMIZE OUTAGE DURATION AND MAKE TEMPORARY CONNECTIONS TO MAINTAIN SERVICE IN AREAS ADJACENT TO WORK AREA. WHEN WORK MUST BE PERFORMED ON ENERGIZED EQUIPMENT OR CIRCUITS, USE PERSONNEL EXPERIENCED IN SUCH OPERATIONS. REMOVE, RELOCATE AND EXTEND EXISTING INSTALLATIONS TO ACCOMMODATE NEW CONSTRUCTION. REMOVE ABANDONED WIRING TO SOURCE OF SUPPLY. REMOVE EXPOSED ABANDONED PIPING, DUCTWORK, INSULATION, HANGERS AND SUPPORTS, CONTROLS AND CONTROL WIRING, AND OTHER ABANDONED MECHANICAL EQUIPMENT. THIS INCLUDES ABANDONED EQUIPMENT ABOVE ACCESSIBLE CEILING FINISHES. WHERE ABANDONED PIPE ENTERS EXISTING SURFACES TO REMAIN, CUT PIPE FLUSH WITH WALLS, AND FLOORS, CAP/PLUG PIPE AND PATCH SURFACES. REPAIR ADJACENT CONSTRUCTION AND FINISHES DAMAGED DURING DEMOLITION AND EXTENSION WORK. MAINTAIN ACCESS TO EXISTING MECHANICAL INSTALLATIONS WHICH REMAIN ACTIVE.

RECORD DRAWINGS - PROVIDE ACCURATE PROJECT RECORD DRAWINGS, SHOWN IN RED INK ON A CLEAN SET OF PRINTS, SHOWING ALL CHANGES FROM THE ORIGINAL PLANS MADE DURING INSTALLATION OF THE WORK. SHOW THE DIMENSIONED LOCATION AND ROUTING OF ALL MECHANICAL WORK THAT IS PERMANENTLY CONCEALED. SHOW ROUTING OF WORK IN PERMANENTLY CONCEALED BLIND SPACES WITHIN THE BUILDING. SHOW COMPLETE ROUTING AND SIZING OF ANY SIGNIFICANT REVISIONS TO THE SYSTEMS SHOWN. SUBMIT ORIGINAL COPY TO DOC PROJECT MANAGER AT THE COMPLETION OF WORK AND PRIOR TO SUBSTANTIAL COMPLETION INSPECTION.



ISSUED FOR
CONSTRUCTION

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STATE OF ALASKA
UTILITY WATER CONNECTIONS
1000 Chief Eddie Hoffman; Bethel, Alaska 99559
Mechanical Upgrades

REVISIONS:

DRAWN BY: CAA
CHECKED BY: AWWWWLW
DATE: 03-08-2018
JOB NUMBER: L8004
DWG FILE: L8004-MSERIES

DRAWING TITLE:
LEGENDS, SCHEDULES,
ABBREVIATIONS

SHEET:
M0.1

MECHANICAL SPECIFICATIONS (CONTINUED)

INSULATION AND IDENTIFICATION

PIPING INSULATION – 1” GLASS FIBER, RIGID, MOLDED, NON–COMBUSTIBLE INSULATION; ANSI/ASTM C547; ‘K’ VALUE OF 0.24 AT 75 DEG F, RATED TO 850 DEG F, VAPOR RETARDER JACKET OF KRAFT PAPER BONDED TO ALUMINUM FOIL; JOHNS MANVILLE “MICRO–LOK” OR EQUAL.

IDENTIFICATION – LABEL ALL EQUIPMENT WITH HEAT RESISTANT LAMINATED PLASTIC LABELS HAVING ENGRAVED LETTERING 1/2” HIGH. IF ITEMS ARE NOT SPECIFICALLY LISTED ON THE SCHEDULES, CONSULT THE ENGINEER CONCERNING DESIGNATION TO USE. SETON ENGRAVED SETON–PLY NAMEPLATES OR EQUAL. IDENTIFY PIPING TO INDICATE CONTENTS AND FLOW DIRECTION OF EACH PIPE EXPOSED TO VIEW BY A LABELED SLEEVE (OR ADHESIVE PIPE MARKERS) IN LETTERS READABLE FROM FLOOR AT LEAST ONCE IN EACH ROOM AND AT INTERVALS OF NOT MORE THAT 20’ APART AND ON EACH SIDE OF PARTITION PENETRATIONS. COLORING SCHEME IN ACCORDANCE WITH ANSI A13.1–1981, SETON OPTI–CODE OR EQUAL.

PIPING

WASTE PIPING, ABOVE GRADE (GRAVITY WASTE):

- CAST IRON PIPE: CISPI 301, HUBLESS, SERVICE WEIGHT. FITTINGS: CAST IRON. JOINTS: CISPI 310, NEOPRENE GASKETS AND STAINLESS STEEL CLAMP–AND–SHIELD ASSEMBLIES.
- COPPER PIPE: ASTM B306, DWV. FITTINGS: ASME B16.3, CAST BRONZE, OR ASME B16.29, WROUGHT COPPER (DWV). JOINTS: ANSI/ASTM B32, SOLDER: GRADE 95TA; FLUX: ASTM B813.

DOMESTIC WATER PIPING, ABOVE GRADE:

- COPPER TUBING: ASTM B88, TYPE L, HARD DRAWN. FITTINGS: ASME B16.18 CAST BRONZE OR ASME B16.22 WROUGHT COPPER. JOINTS: ASTM B32, LEAD FREE SOLDER, WATER SOLUBLE FLUX OR LISTED PRESS–FIT SYSTEM.

HEATING WATER AND GLYCOL PIPING, ABOVE GROUND – COPPER TUBING: ASTM B88, TYPE L, HARD DRAWN. FITTINGS: ANSI/ASME B16.18 CAST BRONZE OR ANSI/ASME B16.22 WROUGHT COPPER. JOINTS: ASTM B32, SOLDER, GRADE 95TA OR ANSI/AWS A5.8, BCUP SILVER BRAZE, ASTM B813 FLUX OR LISTED PRESS–FIT SYSTEM.

HEAT TRACE PIPING:

- PEX TUBING: TUBING SHALL BE CROSS–LINKED HIGH–DENSITY POLYETHYLENE. TUBING SHALL BE PRODUCED USING SILANE METHOD OF CROSS–LINKING AND SHALL MEET THE DIMENSION AND PERFORMANCE SPECIFICATIONS OF ASTM F876/F877 AND CSA B137.5. TUBING SHALL ALSO COMPLY WITH ANSI/NSF 61 AS SUITABLE FOR USE WITH POTABLE WATER. TEMPERATURE AND PRESSURE RATINGS SHALL BE 160 PSI AT 73 DEGREES F, 100 PSI AT 180 DEGREES F, AND 80 PSI AT 200 DEGREES F. FITTINGS AND VALVES SHALL BE MANUFACTURED OF BRASS AND SHALL BE SUPPLIED BY THE TUBING MANUFACTURER AS PART OF A PROVEN CATALOGED SYSTEM.

FIRE SPRINKLER – SCHEDULE 40 BLACK STEEL WITH THREADED CONNECTIONS OR GROOVED CONNECTIONS, LISTED FOR THE INTENDED SERVICE BY “UL” OR “FM”.

VALVES, UNIONS, ETC.

BALL VALVES – UP TO 2 INCHES: CLASS 150, BRONZE TWO PIECE BODY, FULL PORT, FORGED BRASS, CHROME PLATED BALL, TEFLON SEATS AND STUFFING BOX RING, BLOW–OUT PROOF STEM, LEVER HANDLE, SOLDER OR THREADED ENDS. OVER 2 INCHES: CAST STEEL, TWO PIECE BODY, FULL PORT CHROME PLATED STEEL BALL, TEFLON SEAT AND STUFFING BOX SEALS, LEVER HANDLE, FLANGED ENDS.

SWING CHECK VALVES – CLASS 125, BRONZE SWING DISC, SOLDER OR SCREWED ENDS.

SPRING LOADED CHECK VALVES – IRON BODY, BRONZE TRIM, STAINLESS STEEL SPRING, RENEWABLE COMPOSITION DISC, SCREWED, WAFER OR FLANGED ENDS.

FLANGES, UNIONS, AND COUPLINGS: PIPE SIZE 2 INCHES AND UNDER: 150 PSIG MALLEABLE IRON UNIONS FOR THREADED FERROUS PIPING; BRONZE UNIONS FOR COPPER PIPE, SOLDERED JOINTS. PIPE SIZE OVER 2 INCHES: 150 PSIG FORGED STEEL SLIP–ON FLANGES FOR FERROUS PIPING; BRONZE FLANGES FOR COPPER PIPING.

BUTTERFLY VALVES (HYDRONIC HEATING ONLY): 4 INCHES – IRON BODY, BRONZE DISC, RESILIENT REPLACEABLE SEAT FOR SERVICE TO 250 DEG. F, LUG ENDS, EXTENDED NECK, 10 POSITION LEVER HANDLE.

DIELECTRIC WATERWAY FITTINGS – THREADED STEEL PIPE WITH POLYPROPYLENE INNER LINING THAT ESTABLISHES AN EFFECTIVE DIELECTRIC WATERWAY. DESIGNED TO MEET THE REQUIREMENTS OF ASTM F1545 FOR CONTINUOUS USE AT TEMPERATURES UP TO 225 DEG F (–/+5 DEG F) AND FOR PRESSURES UP TO 300 PSI, WILL ACHIEVE A DIELECTRIC WATERWAY IN ALL POTABLE WATER AND APPROPRIATE HVAC APPLICATIONS. NSF–61 LISTED FOR USE WITH POTABLE WATER. ELSTER PERFECTION MODEL CLEARFLOW OR APPROVED EQUAL.

VALVES, UNIONS, ETC. (CONTINUED)

FLEXIBLE CONNECTION PIPING – CORRUGATED BRONZE HOSE WITH BRONZE BRAID COVERING. PIPING SHALL BE CAPABLE OF COMPENSATING FOR LATERAL MOVEMENT AND VIBRATION. PROVIDE INLET/OUTLET CONNECTIONS AS REQUIRED FOR CONNECTION TO PIPING. FOR FLAMMABLE LIQUID OR GAS SERVICE UP TO 4 INCHES, FLEXIBLE HOSE CONNECTOR SHALL BE CSA/AGA CERTIFIED. WORKING PRESSURE AT 70 DEG F OF 334 PSI FOR 1” PIPE AND 109 PSI FOR 4” PIPE. OPERATING PRESSURE SHALL BE BASED ON BURST PRESSURE WITH A 4 TO 1 SAFETY FACTOR. WETTED SURFACE OF PRODUCT CONTACTED BY CONSUMABLE WATER SHALL CONTAIN LESS THAN ONE QUARTER OF ONE PERCENT (0.25%) OF LEAD PER NSF 372 REQUIREMENTS.

WATER METERS AND EQUIPMENT

WATER METERS:

- DISC METERS – AWWA C700, COMPLIANT WITH NSF/ANSI STANDARDS 61 AND 372; NSF–61 MARK ON THE HOUSING. CONSTRUCTION CONSISTS OF THREE BASIC COMPONENTS: METER HOUSING, MEASURING CHAMBER, AND PERMANENTLY SEALED REGISTER OR ENCODER. HOUSING OF LEAD–FREE BRASS ALLOY. MEASURING CHAMBER OF CORROSION–RESISTANT ENGINEERED POLYMER. DIRECT MAGNETIC DRIVE, REGISTER COUPLING FOR STRAIGHT–READING OR ELECTRONIC METER READING OPTIONS. FACTORY–INSTALLED TAMPER–PROOF KEYED SEAL SCREW. REGISTER, MEASURING CHAMBER, AND STRAINER CAN BE REPLACED WITHOUT REMOVING THE METER HOUSING FROM THE INSTALLATION. NO CHANGE GEARS REQUIRED FOR ACCURACY CALIBRATION. BRONZE FLANGES. BADGER METER RECORDALL OR APPROVED EQUAL.

- COMPOUND METERS – AWWA C700, COMPLIANT WITH NSF/ANSI STANDARDS 61 AND 372; NSF–61 MARK ON THE HOUSING. POSITIVE DISPLACEMENT CHAMBER TO MEASURE LOW FLOW AND TURBINE CHAMBER TO MEASURE HIGH FLOW. FACTORY–INSTALLED TAMPER–PROOF KEYED SEAL SCREW. MEETS OR EXCEEDS REGISTRATION FOR LOW, NORMAL OPERATING, MAXIMUM CONTINUOUS OPERATION, AND CHANGEOVER FLOW RATES AS SPECIFIED IN AWWA STANDARD C702. CONSTRUCTION CONSISTS OF THREE BASIC COMPONENTS: METER HOUSING, INTERCHANGEABLE MEASURING ELEMENTS, AND SEALED DIRECT READING REGISTERS. THE MEASURING ELEMENT CONSISTS OF THE DISC MEASURING CHAMBER, TURBINE HEAD ASSEMBLY, AND HIGH FLOW VALVE VELOCITY. REGISTERS AND MEASURING ELEMENTS CAN BE REMOVED WITHOUT REMOVING THE METER HOUSING FROM THE LINE. BADGER METER RECORDALL OR EQUAL.

REGISTERS:

- TRANSMITTER REGISTERS – FOR USE WITH DISC, TURBO, AND COMPOUND METERS. DIGITAL OUTPUT WITH RESOLUTION OF 1/10TH OF THE REGISTER TEST CIRCLE. BAYONET MOUNT COMPATIBLE WITH METERS. SEAL SCREW TO ALLOW POSITIONING OF THE REGISTER AND TO SECURE REGISTER TO THE METER BODY. REMOVABLE FROM METER WITHOUT DISRUPTING WATER SERVICE. DIRECT DRIVE HIGH STRENGTH MAGNETIC COUPLING THROUGH THE METER BODY TO THE WETTED MAGNET. SIX–DIGIT STRAIGHT–READING MECHANICAL ODOMETER TOTALIZER, 360 DEG. TEST CIRCLE WITH SWEEP HAND, FLOW FINDER TO DETECT LEAKS. SELF–LUBRICATING THERMOPLASTIC GEARING. LEAK RATE OF THE SEAL LESS THAN 10–6 CC/SEC AS TESTED BY A HELIUM MASS SPECTROMETER. CONSTRUCTED OF A STRENGTHENED GLASS LENS TOP AND A CORROSION–RESISTANT METAL BOTTOM. INTERNAL CONSTRUCTION MATERIALS ARE THERMOPLASTICS. SHROUD ASSEMBLY IS THERMOPLASTIC. OPERATING RANGE IS –40°F – 120°F. MUST BE WATER RESISTANT PER AWWA C707. TAMPER PROOF SEAL SCREW. PROVIDE FACTORY PRE–WIRED ASSEMBLY. PIEZOELECTRIC SWITCHBOARD COMPLETELY SEALED AGAINST MOISTURE. ELECTRONIC CIRCUITRY DESIGNED TO PROVIDE IMMUNITY TO ELECTRICAL SURGES AND TRANSIENTS PER IEC801–2, IEC801–4. BADGER METER RECORDALL OR EQUAL.

- REMOTE ELECTRONIC DISPLAYS – AWWA STANDARD C706 FOR DIRECT–READING REMOTE REGISTRATION SYSTEMS. ANTI–TAMPER INDICATOR. VISUAL ALARM ON DISPLAY WHEN CONNECTION IS INTERRUPTED. TAMPER RESISTANT SEAL SCREW. OPERATING TEMPERATURE –13°F TO 140°F. POWERED BY ONE AA CELL BATTERY. CONSTRUCTION OF HIGH IMPACT THERMOPLASTIC, WEATHER, AND UV RESISTANT. PROVIDE WITH BELDIN 8451 WIRE INTENDED FOR LONG WIRE RUNS FOR CONNECTION FROM METER REGISTER TO DISPLAY. BADGER METER REMOTE ELECTRONIC DISPLAY (RED) OR APPROVED EQUAL.

INSTRUMENTATION / CONTROLS

THE YKCC AND BYF EACH HAVE EXISTING DIRECT DIGITAL CONTROL (DDC) SYSTEMS THAT SHALL BE MODIFIED AS PART OF THIS CONTRACT TO ADD THE NECESSARY DEVICES, PROGRAMMING AND GRAPHICS TO CONTROL AND MONITOR THE NEW EQUIPMENT. THE CONTRACTOR SHALL COORDINATE WITH THE DOC PROJECT MANAGER TO DETERMINE EXTENT OF EQUIPMENT TO BE PROVIDED BY OWNER AND EXTENT OF EQUIPMENT TO BE PROVIDED BY CONTRACTOR. ANY EQUIPMENT NOT PROVIDED BY OWNER SHALL BE PROVIDED BY CONTRACTOR AS NECESSARY TO ACCOMPLISH THE SEQUENCE OF OPERATIONS. INSTALL ALL WIRING IN ACCORDANCE WITH THE NEC. TEST ALL SYSTEMS, VERIFY ALL SYSTEMS OPERATE AS SPECIFIED IN SEQUENCE OF OPERATIONS, AND RECORD INITIAL SETTINGS AND OPERATING SETPOINTS IN O&M MANUALS. PROVIDE CONTROL SYSTEMS DEMONSTRATIONS TO DOC PROJECT MANAGER PRIOR TO SUBSTANTIAL COMPLETION. THE CONTROL SYSTEM SHALL BE DESIGNED, FURNISHED, INSTALLED, TESTED, AND PLACED INTO SERVICE BY A CONTROL CONTRACTOR WHO IS REGULARLY ENGAGED IN THE INSTALLATION OF CONTROL SYSTEMS IN ALASKA. THE CONTROL CONTRACTOR SHALL MAINTAIN AN OFFICE IN ALASKA WITH PARTS AND MAINTENANCE PERSONNEL TO ENSURE PROMPT RESPONSE (24 HOUR MAXIMUM) TO AN EMERGENCY CALL DURING THE ONE YEAR CORRECTION PERIOD. CONTROL CONTRACTOR SHALL PROVIDE (11X17) SCHEMATIC CONTROL DIAGRAMS IN AUTOCAD FORMAT. CLEARLY INDICATE WIRE AND TERMINAL LABELS, SET POINTS, RESET SCHEDULES, SWITCH OVER POINTS, SIGNAL RANGES, AND OTHER POINTS REQUIRED TO COMPLETELY DESCRIBE THE SYSTEM. DEPICT CIRCUITRY ON SCHEMATIC CONTROL DIAGRAMS TO ALLOW CIRCUITS TO BE TRACED FROM CONNECTION TO CONNECTION. THE FOLLOWING CONTRACTORS SHALL BE SOLE–SOURCED TO PERFORM THIS WORK FOR THE BUILDINGS IN THIS PROJECT DUE TO THEIR EXISTING SYSTEMS ALREADY IN PLACE, NO SUBSTITUTIONS SHALL BE ALLOWED:

- YUKON KUSKOKWIM CORRECTIONAL FACILITY: SIEMENS INDUSTRIES, INC.

- BETHEL YOUTH FACILITY: ATS ALASKA.

PRESSURE GAUGES – SOFT SOLDERED PHOSPHOR BRONZE BOURDON TUBE AND BRASS SOCKET. BLACK FINISH STEEL CASE, PLASTIC FACE, DUAL SCALE RANGES IN BOTH PSI AND KPA, 1/4 NPT CONNECTION, MODEL UA AS MANUFACTURED BY WEKSLER.

FIRE SPRINKLER PROTECTION

CONTRACTOR TO PROVIDE NEW PIPING TO CONNECT WATER FROM THE NEW CITY UTILITY TO THE EXISTING FIRE SPRINKLER SYSTEMS IN THE YOKON KUSKOKWIM CORRECTIONAL CENTER (YKCC) AND THE BETHEL YOUTH FACILITY (BYF). THE EXISTING BUILDINGS ARE CURRENTLY SUPPLIED WITH WATER FROM WATER STORAGE TANKS AND A FIRE PUMP LOCATED IN THE YKCC. THE YKCC WILL REQUIRE A NEW BACKFLOW PREVENTION ASSEMBLY. THE BYF HAS A BACKFLOW PREVENTION ASSEMBLY THAT WILL REMAIN IN USE. THE FIRE SPRINKLER CONTRACTOR SHALL PROVIDE FLOW DATA AND HYDRAULIC CALCULATIONS AS REQUIRED BY NFPA 13 TO CONFIRM THE PERFORMANCE OF THE WATER SUPPLY AT EACH BUILDING. NO MODIFICATIONS ARE EXPECTED FOR THE LAYOUT OF THE EXISTING FIRE SPRINKLER SYSTEM OTHER THAN THE NEW WATER SERVICE CONNECTIONS. THE FIRE PROTECTION SYSTEM SHALL BE IN COMPLIANCE WITH NFPA 13, CONTRACT DOCUMENTS, APPLICABLE CODES AND STANDARDS, AS WELL AS THE AUTHORITY HAVING JURISDICTION AS DEFINED IN NFPA 13. SUBMIT SHOP DRAWINGS TO THE STATE FIRE MARSHAL AND DOC PROJECT MANAGER FOR REVIEW AND APPROVAL PRIOR TO WORK.

SEISMIC RESTRAINT

SEISMIC RESTRAINT – ALL EQUIPMENT INSTALLED UNDER THIS PROJECT SHALL BE BRACED FOR A SEISMIC EVENT AS PER ASCE 7. CONTRACTOR TO PROVIDE SEISMIC RESTRAINT CALCULATIONS AND SHOP DRAWINGS, INCLUDING STRUCTURAL ENGINEERS STAMP AND SIGNATURE TO MUNICIPALITY OF ANCHORAGE PLAN REVIEW DEPARTMENT FOR REVIEW.

SEQUENCE OF OPERATION

YUKON KUSKOKWIM CORRECTIONAL CENTER WATER SERVICE ENTRANCE

- ALARMS:
- YKP–1/YKP–2 PUMP FAIL
 - YKP–1/YKP–2 LOW FLUID TEMPERATURE

- MONITORING/CONTROL (ALL PUMPS);
- H–O–A CONTROL
 - ON/OFF INDICATION
 - YKP–1/YKP–2 FLUID TEMPERATURE INDICATION
 - YKP–1 FLUID LOW TEMP ALARM (35 DEG F, ADJUSTABLE)
 - YKP–2 FLUID LOW TEMP ALARM (100 DEG F, ADJUSTABLE)
 - ALARM SETPOINTS

WHEN THE OUTDOOR AIR TEMPERATURE DROPS TO 35 DEG F (ADJUSTABLE) PUMPS YKP–1 AND YKP–2 WILL RUN. WHEN THE OUTDOOR TEMPERATURE RISES TO 45 DEG F (ADJUSTABLE) THE PUMPS WILL TURN OFF.

YUKON KUSKOKWIM CORRECTIONAL CENTER DOMESTIC HOT WATER BACK UP PUMP

- ALARMS:
- HXP–1 PUMP FAIL
 - HXP–1 LOW FLUID TEMPERATURE

- MONITORING/CONTROL (ALL PUMPS);
- H–O–A CONTROL
 - ON/OFF INDICATION
 - HXP–1 FLUID LOW TEMP ALARM (120 DEG F, ADJUSTABLE)
 - ALARM SETPOINTS

TO PROVIDE HEATING WATER TO THE DOMESTIC HOT WATER GENERATORS USING THE BUILDING HEATING PLANT:

- CLOSE THE ISOLATION VALVES FOR THE UTILITY HEATING WATER SUPPLY AND RETURN PIPES.
- OPEN THE UTILITY HEATING WATER BYPASS VALVE.
- TURN ON BACK–UP PUMP HXP–1.

BETHEL YOUTH FACILITY WATER SERVICE ENTRANCE

- ALARMS:
- BYP–1/BYP–2 PUMP FAIL
 - BYP–1/BYP–2 LOW FLUID TEMPERATURE

- MONITORING/CONTROL (ALL PUMPS);
- H–O–A CONTROL
 - ON/OFF INDICATION
 - BYP–1/BYP–2 FLUID TEMPERATURE INDICATION
 - BYP–1 FLUID LOW TEMP ALARM (35 DEG F, ADJUSTABLE)
 - BYP–2 FLUID LOW TEMP ALARM (100 DEG F, ADJUSTABLE)
 - ALARM SETPOINTS

WHEN THE OUTDOOR AIR TEMPERATURE DROPS TO 35 DEG F (ADJUSTABLE) PUMPS BYP–1 AND BYP–2 WILL RUN. WHEN THE OUTDOOR TEMPERATURE RISES TO 45 DEG F (ADJUSTABLE) THE PUMPS WILL TURN OFF.



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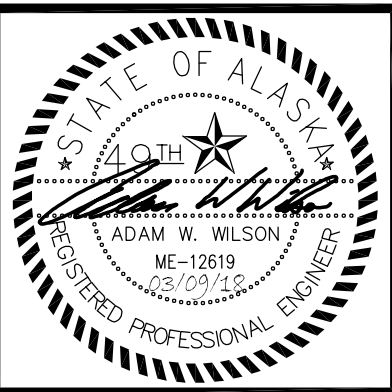
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UTILITY WATER CONNECTIONS
1000 Chief Eddie Hoffman; Bethel, Alaska 99559
Mechanical Upgrades

REVISIONS:

DRAWN BY: CAA
CHECKED BY: AWWW/LW
DATE: 03-08-2018
JOB NUMBER: L8004
DWG FILE: L8004-MSERIES

DRAWING TITLE:
MECHANICAL
SPECIFICATIONS

SHEET:
M0.2



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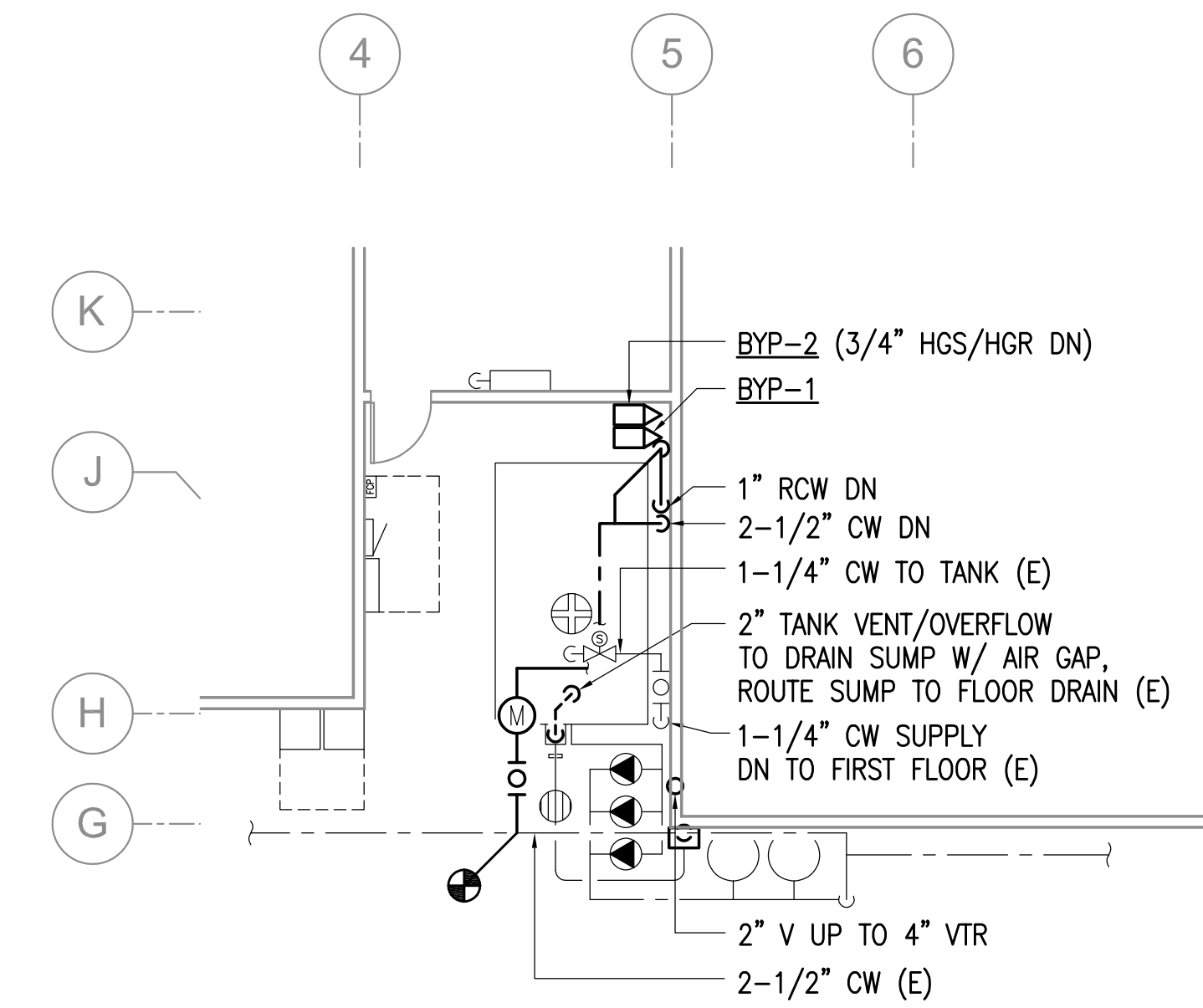
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DATE: 03-08-2018
JOB NUMBER: L8004
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DRAWING TITLE:
BETHEL YOUTH FACILITY
PIPING PLANS AND
SCHEMATICS

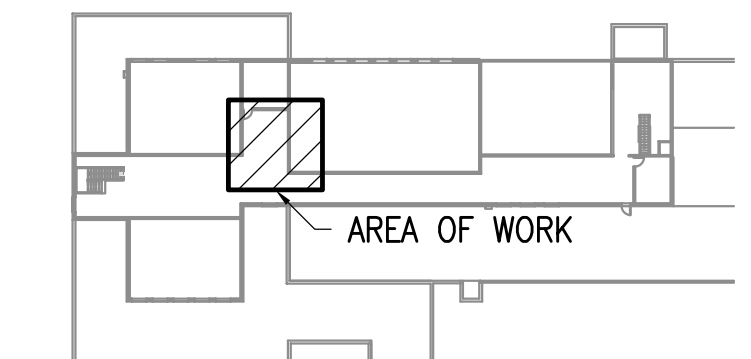
SHEET:
M1.1



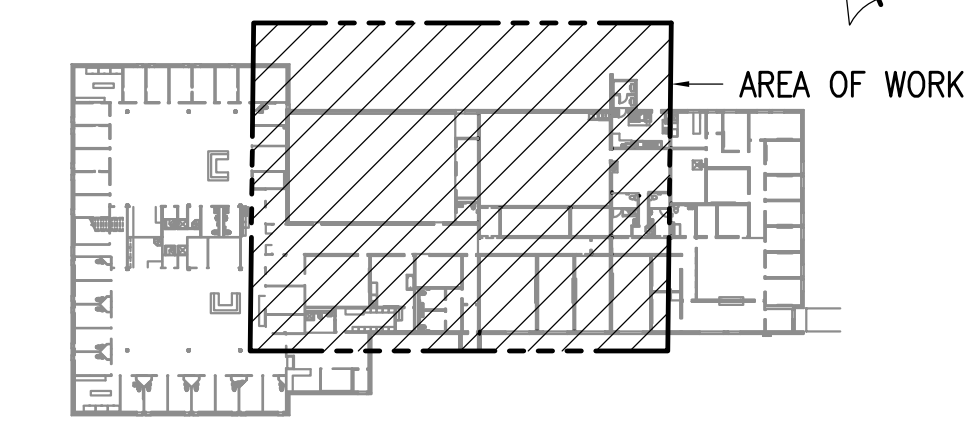
2 MEZZANINE WATER PIPING PLAN - BETHEL YOUTH FACILITY
NO SCALE

SHEET NOTES:

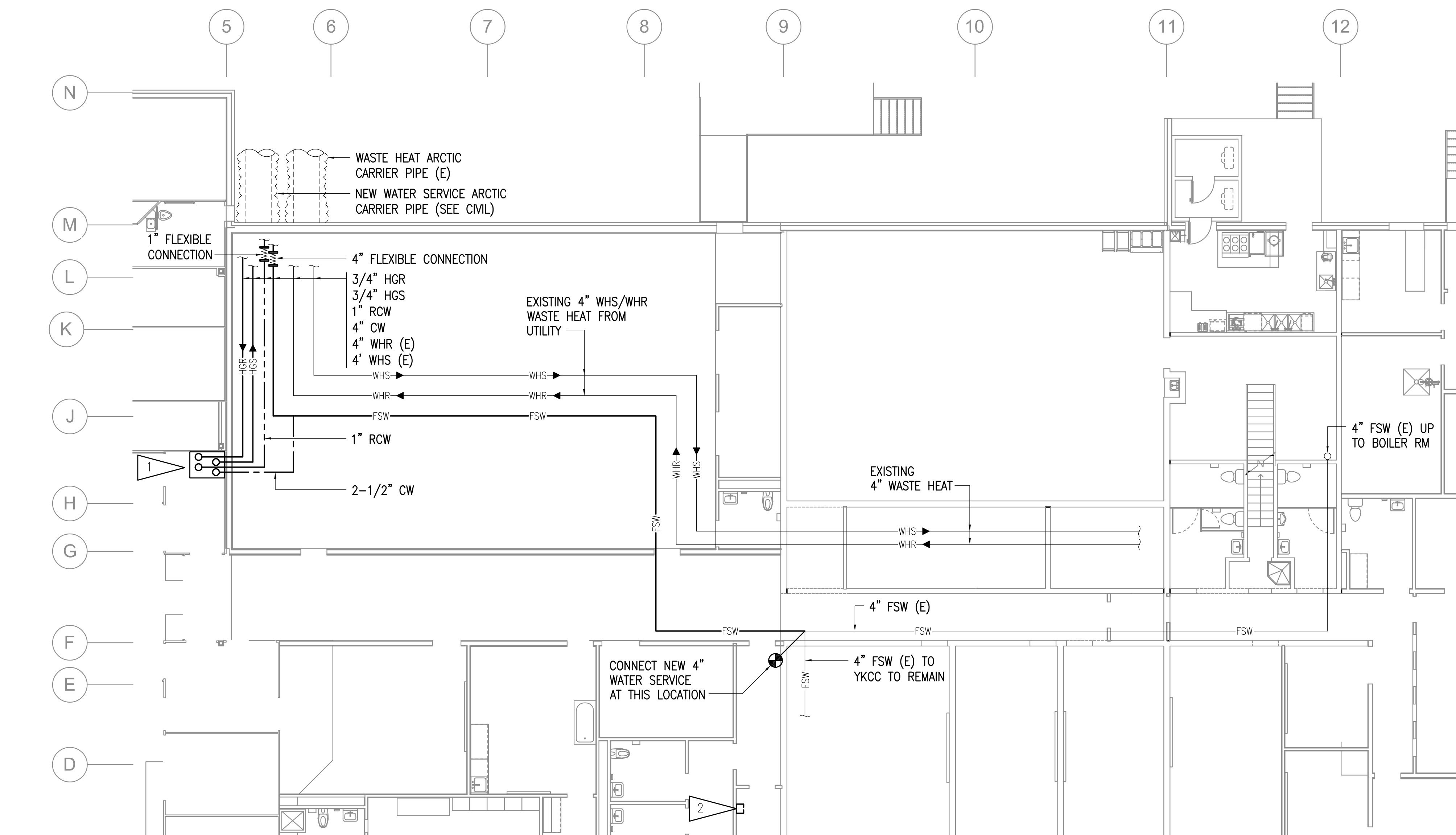
- 1 ROUTE WATER PIPING AND HEAT TRACE PIPING UP TO MECHANICAL MEZZANINE THROUGH FIRST FLOOR SALLY PORT. INSTALL SHEET METAL SOFFIT IN CORNER OF SALLY PORT TO COVER AND PROTECT PIPES. PRIME AND PAINT SOFFIT TO MATCH EXISTING.
- 2 DEMOLISH EXISTING METER REMOTE READOUT AT BYF SOUTH ENTRY AND INSTALL NEW READOUT FOR NEW METER IN SAME LOCATION.



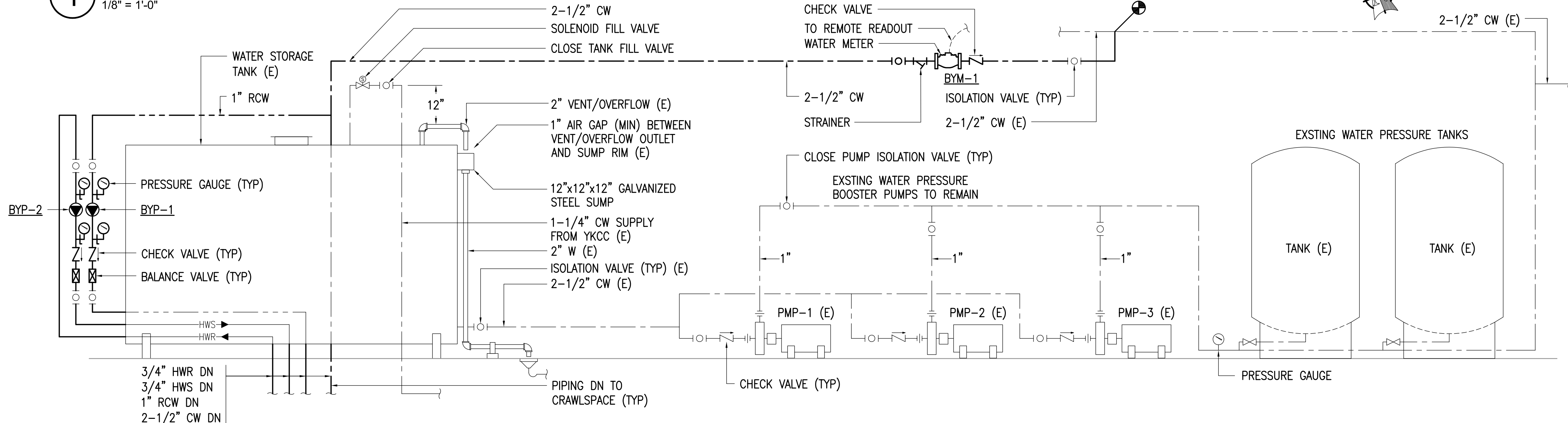
KEY PLAN - MEZZANINE



KEY PLAN - FIRST FLOOR

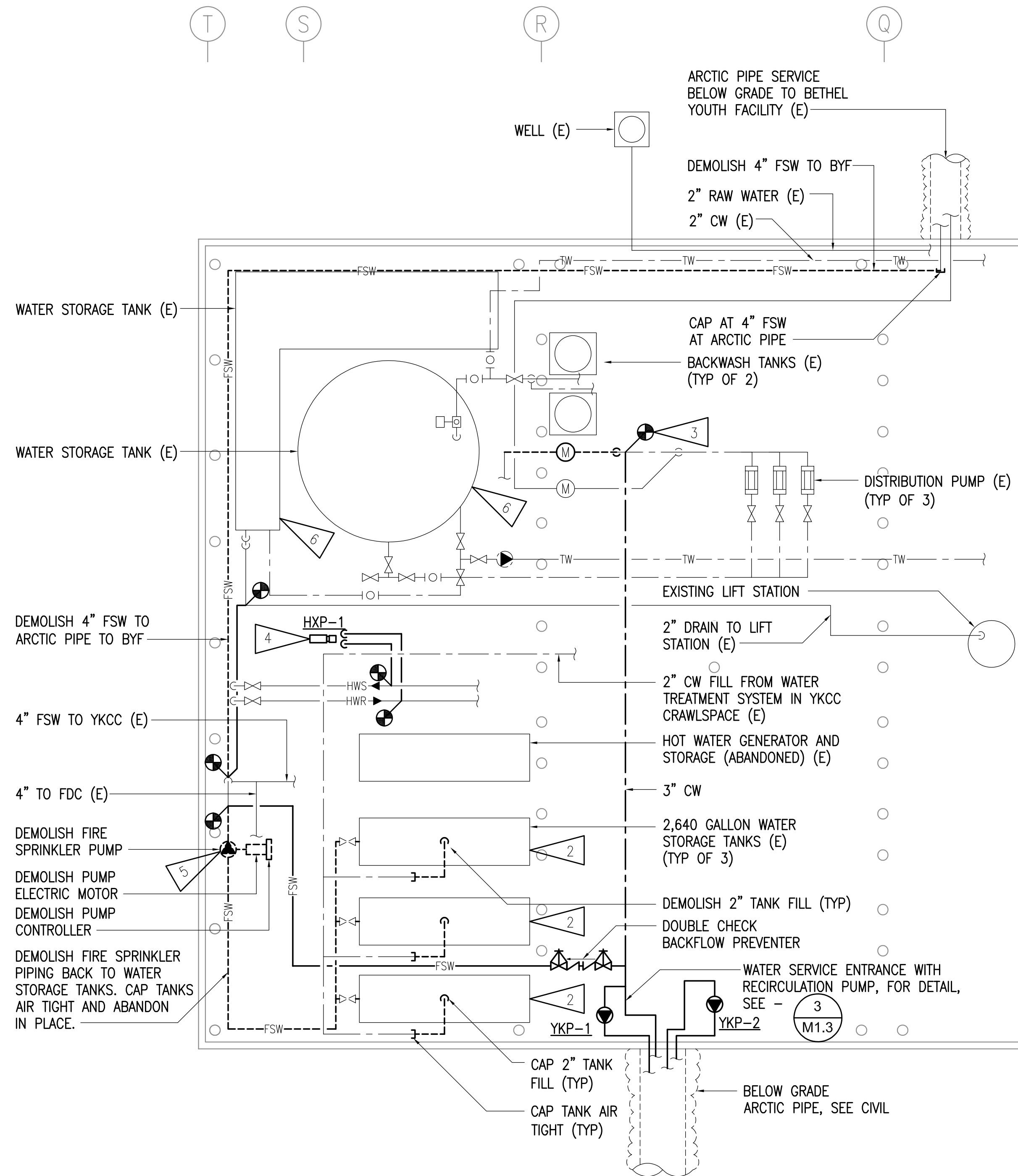


1 FIRST FLOOR BELOW FLOOR WATER PIPING PLAN - BETHEL YOUTH FACILITY
1/8" = 1'-0"

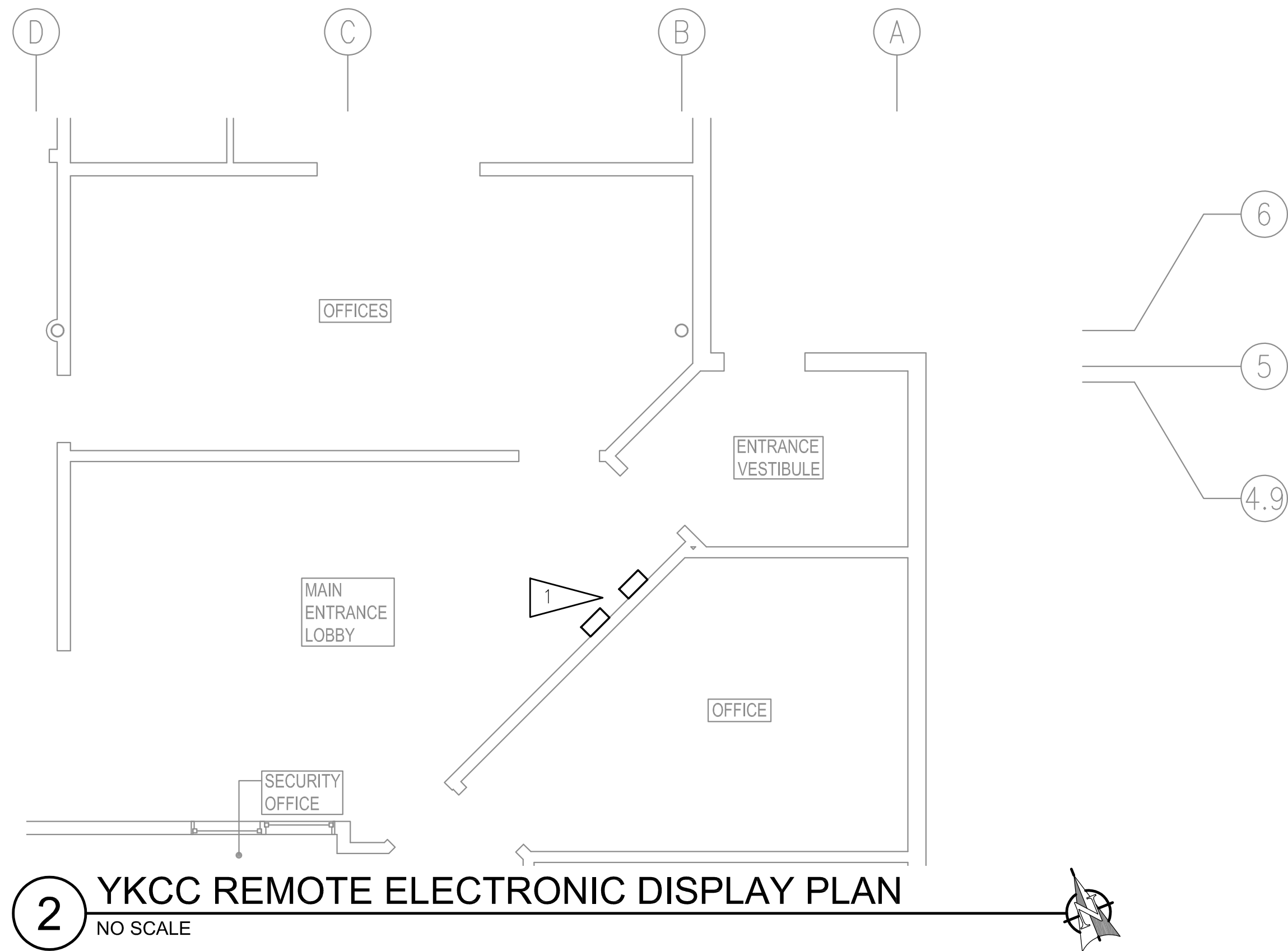


3 WATER PRESSURE SYSTEM SCHEMATIC - BETHEL YOUTH FACILITY
NO SCALE

8
7
6
5
4.9
4
3.1
3
2
1

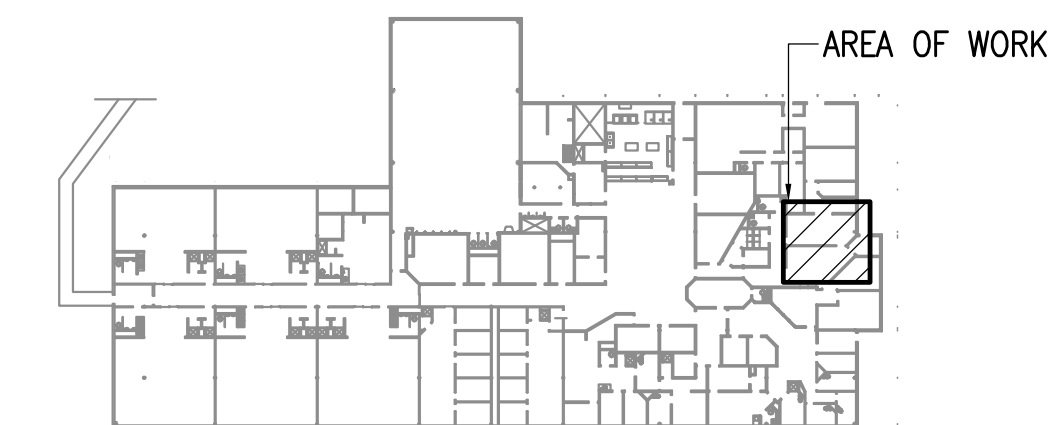


1 CRAWLSPACE PIPING PLAN - YKCC
1/8" = 1'-0"

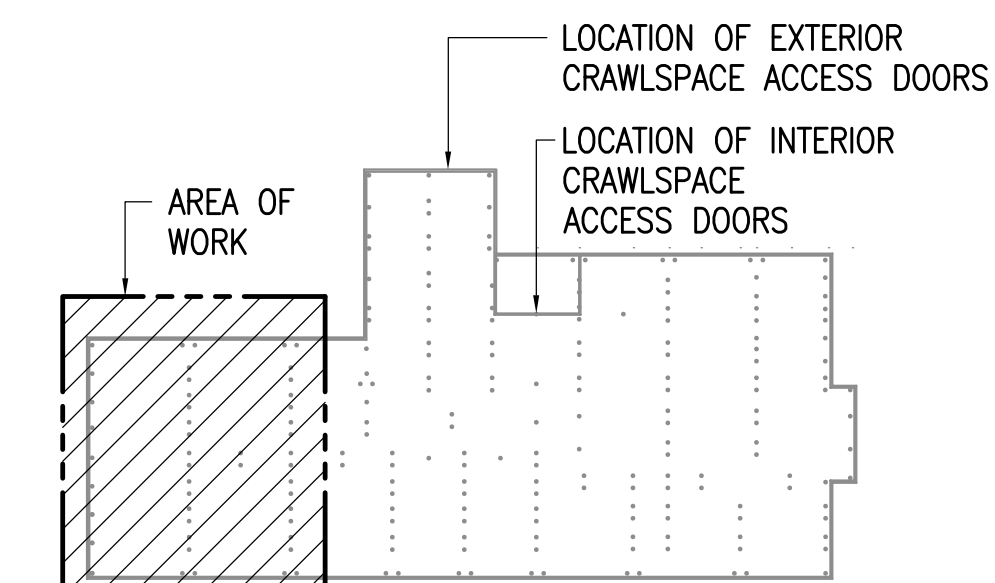


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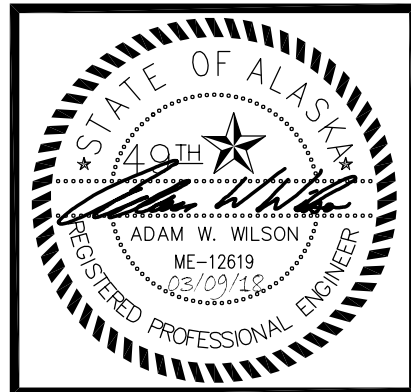
- 1 INSTALL WATER METER REMOTE ELECTRONIC DISPLAYS IN MAIN ENTRANCE LOBBY FOR ACCESS BY CITY WATER UTILITY. COORDINATE FINAL LOCATION WITH DOC PROJECT MANAGER. TWO REMOTE DISPLAYS TO BE INSTALLED, ONE FOR EACH REGISTER ON THE COMPOUND WATER METER. PROVIDE SIGNS INDICATING WHICH IS LOW FLOW AND WHICH IS HIGH FLOW.
- 2 DRAIN FIRE SPRINKLER WATER STORAGE TANKS. CAP INLET AND OUTLET CONNECTIONS AIR TIGHT. ABANDON TANKS IN PLACE.
- 3 CONNECT NEW 3" CW SERVICE PIPE TO EXISTING 3" WATER DISTRIBUTION PIPE WHERE SHOWN. DEMOLISH EXISTING 3" PIPE, VALVES AND METER AND PROVIDE NEW PIPING, VALVES, AND METER. FOR DETAIL, SEE - 4 M1.3
- 4 CONNECT NEW PUMP HXP-1 TO EXISTING 4" FLANGED CONNECTIONS AT 6" WASTE HEAT PIPING NEAR ABANDONED HOT WATER GENERATOR. FOR DETAIL SEE - 5 M1.3
- 5 DEMOLISH EXISTING FIRE SPRINKLER PUMP, JOCKEY PUMP, CONTROLS, PIPING VALVES, TRIM, AND EXISTING RISER. INSTALL NEW RISER W/ NEW DEVICES CONNECTED TO NEW WATER SERVICE. FOR DEMOLITION SCHEMATIC, SEE - 1 M1.3
FOR REMODEL SCHEMATIC, SEE - 2 M1.3
- 6 DRAIN WATER FROM WATER STORAGE TANK. CLOSE VALVES TO TANK AND ABANDON IN PLACE.



KEY PLAN - FIRST FLOOR



KEY PLAN - CRAWLSPACE



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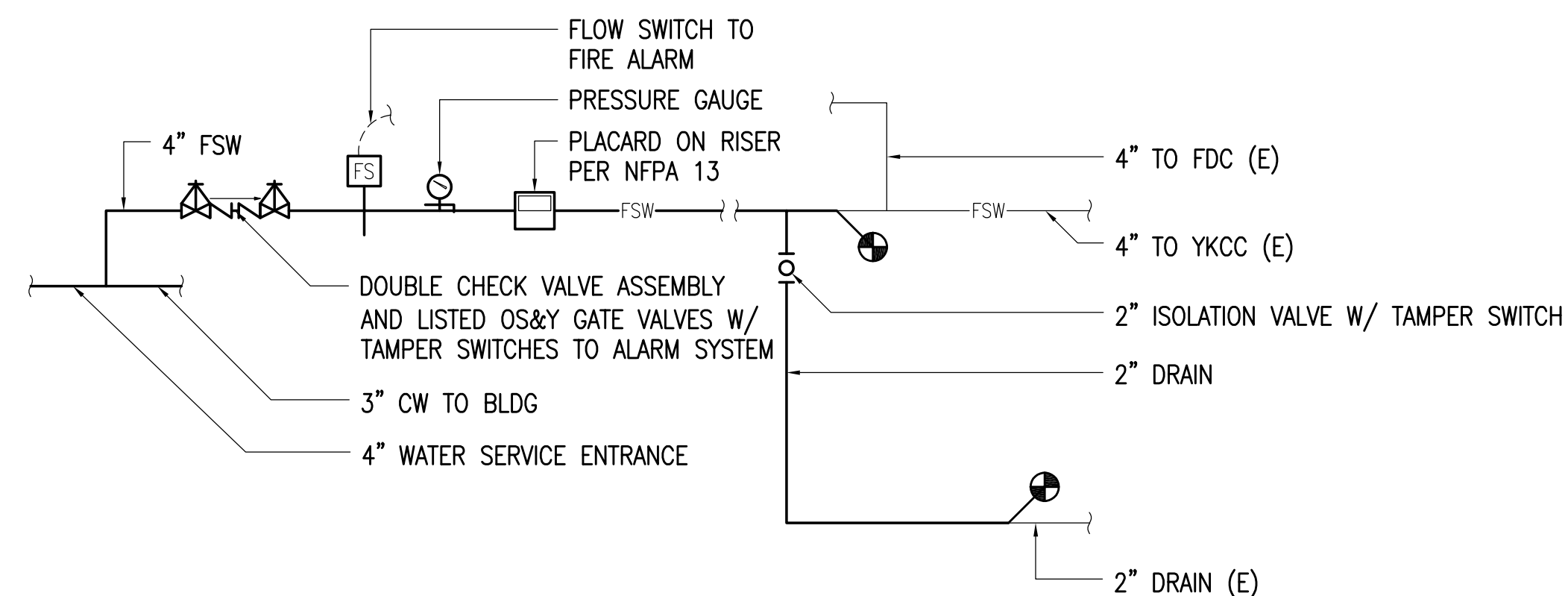
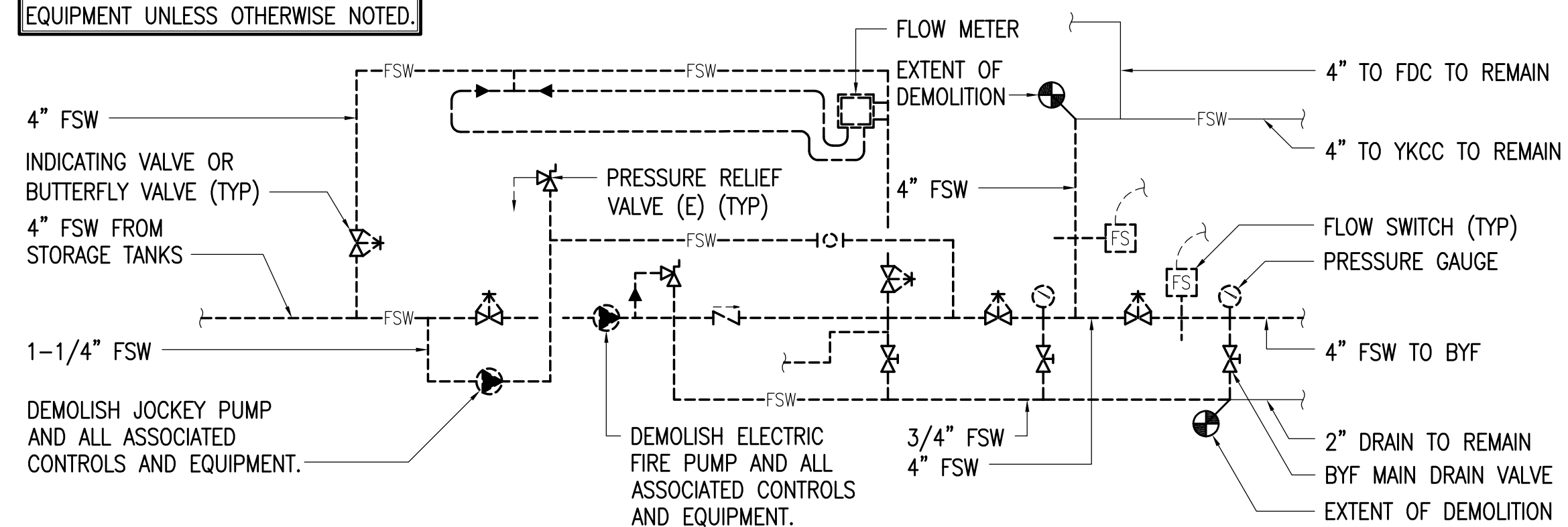
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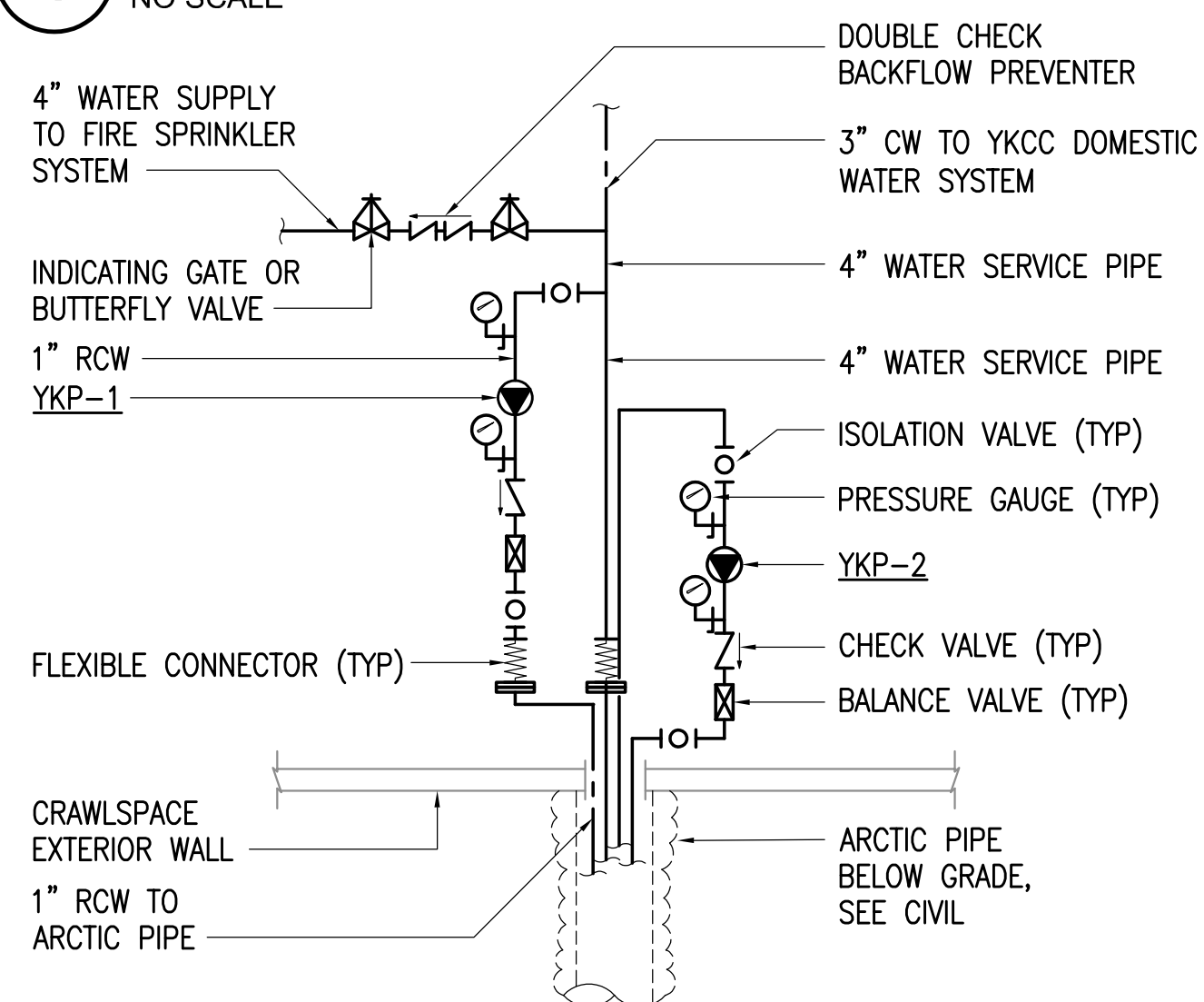
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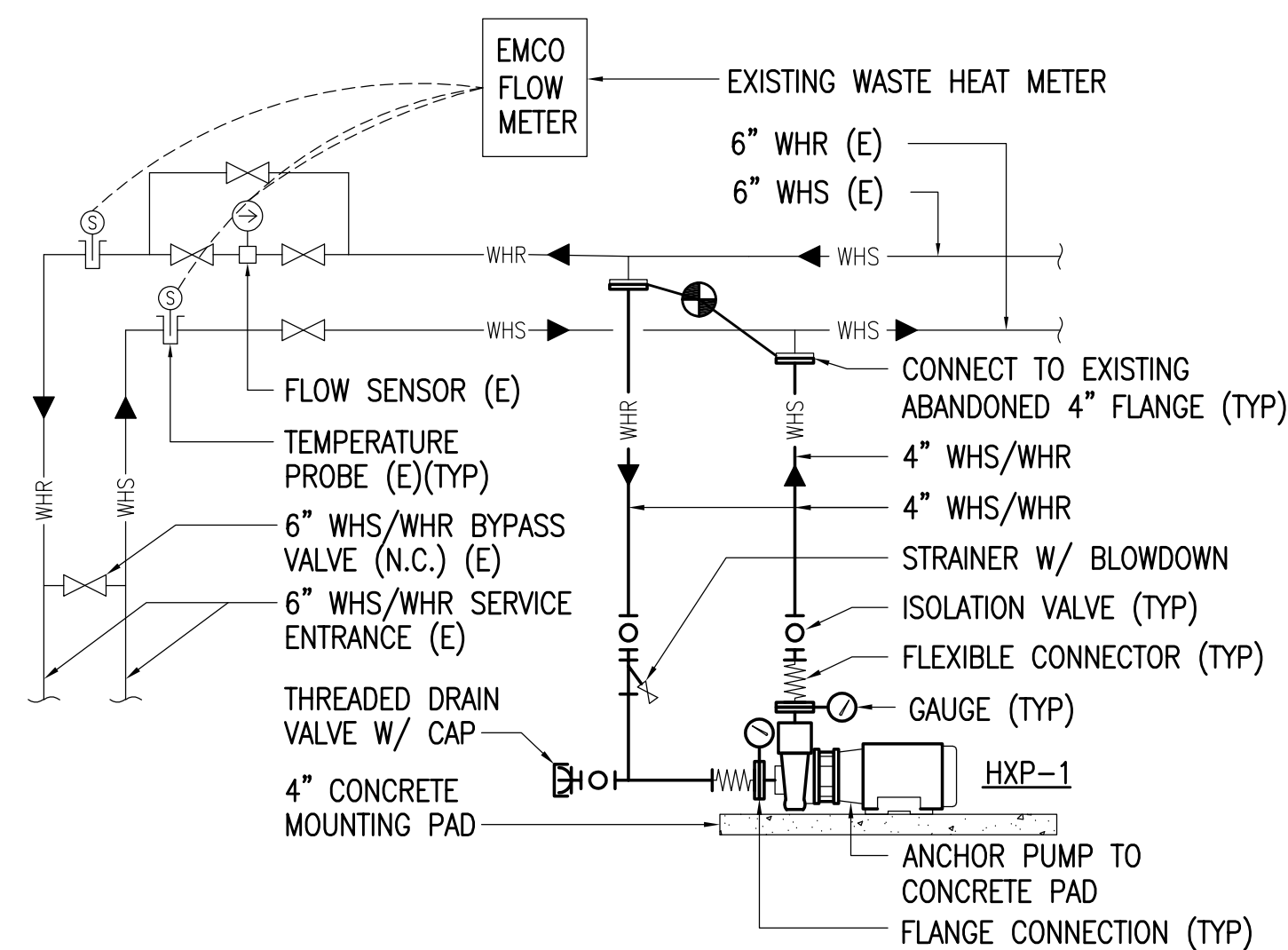
SHEET:
M1.2



1 FIRE SYSTEM DEMOLITION SCHEMATIC - YKCC
NO SCALE

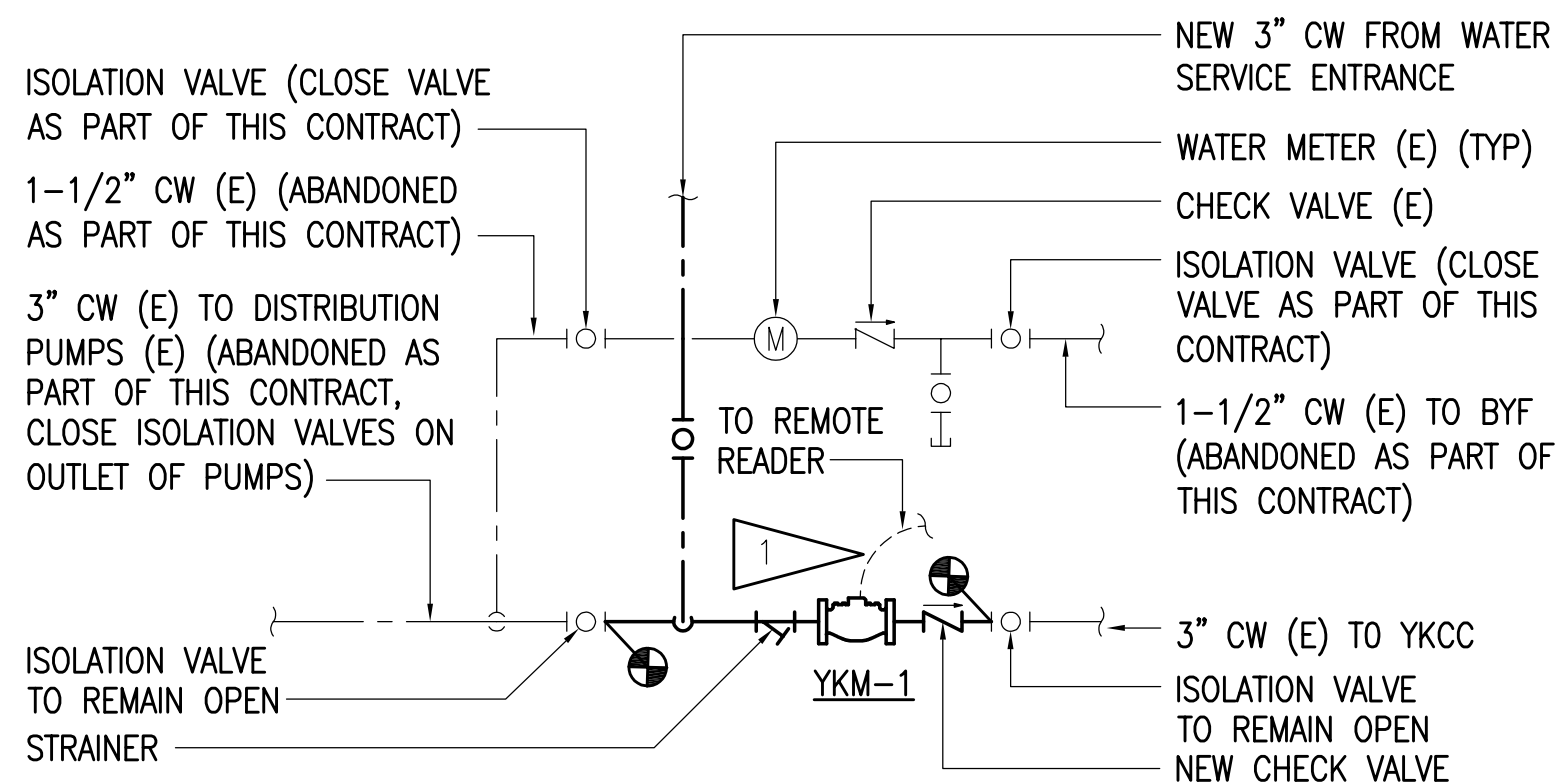


3 WATER SERVICE ENTRANCE DETAIL - YKCC



5 PUMP SCHEMATIC - YKCC
NO SCALE

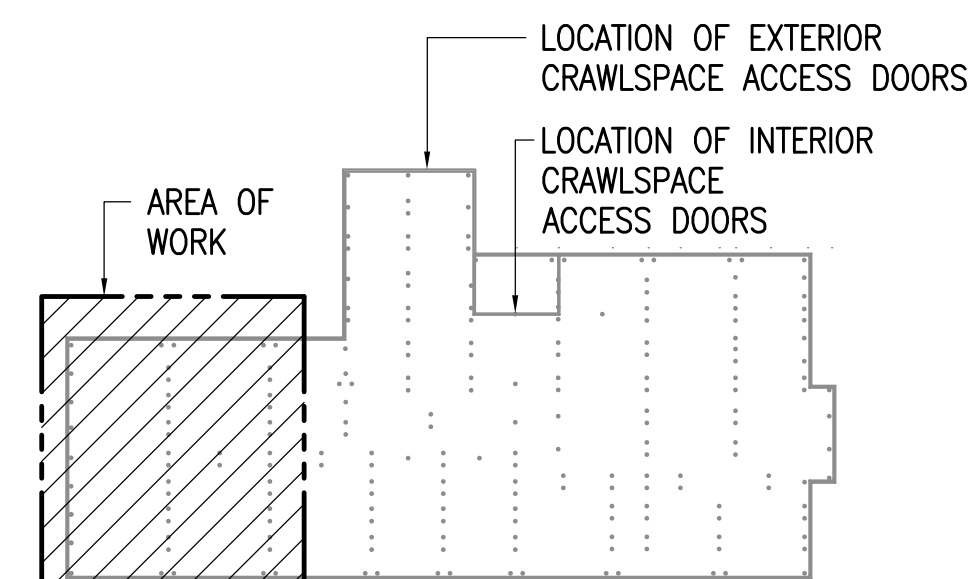
2 FIRE SYSTEM REMODEL SCHEMATIC - YKCC
NO SCALE



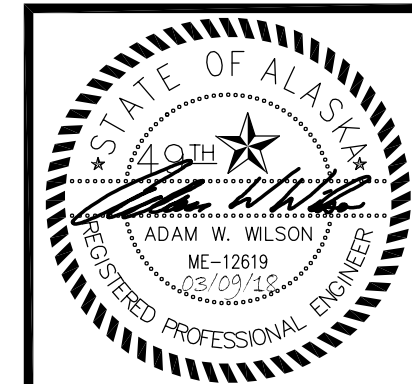
SHEET NOTES:

1 DEMOLISH EXISTING YKCC WATER METER, PIPING AND VALVES BETWEEN EXISTING ISOLATION VALVES. INSTALL NEW METER, PIPING AND VALVES AS SHOWN.

4 DOMESTIC WATER PIPING SCHEMATIC - YKCC
NO SCALE



KEY PLAN - CRAWLSPACE



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PIPING DETAILS AND
SCHEMATICS

SHEET

M1.3

ELECTRICAL SPECIFICATIONS

26 05 00 – COMMON WORK RESULTS FOR ELECTRICAL

- A. SCOPE OF WORK: FURNISH AND INSTALL ALL MATERIAL AND EQUIPMENT FOR AN EXTENSION TO THE EXISTING ELECTRICAL SYSTEM AS INDICATED ON THE DRAWINGS AND IN THESE SPECIFICATIONS.
- B. STANDARDS, CODES AND REGULATIONS: COMPLY WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE, INTERNATIONAL BUILDING CODE, AND INTERNATIONAL FIRE CODE INCLUDING ALL STATE AND LOCAL AMENDMENTS TO THESE CODES. COMPLY WITH THE LATEST PUBLISHED VERSION OF THE NECA STANDARD OF INSTALLATION.
- C. DRAWINGS: THE DRAWINGS ARE DIAGRAMMATIC, NOT NECESSARILY SHOWING ALL OFFSETS OR EXACT LOCATIONS OF FIXTURES, EQUIPMENT, ETC. UNLESS SPECIFICALLY DIMENSIONED. REVIEW THE DRAWINGS AND SPECIFICATIONS FOR EQUIPMENT FURNISHED BY OTHER CRAFTS BUT INSTALLED IN ACCORDANCE WITH THIS SECTION. BRING QUESTIONABLE OR OBSCURE ITEMS, APPARENT CONFLICTS BETWEEN PLANS AND SPECIFICATIONS, GOVERNING CODES OR UTILITIES REGULATIONS TO THE ATTENTION OF THE OWNER. CODES, ORDINANCES, REGULATIONS, MANUFACTURER’S INSTRUCTIONS OR STANDARDS TAKE PRECEDENCE WHEN THEY ARE MORE STRINGENT OR CONFLICT WITH THE DRAWINGS AND SPECIFICATIONS.
- D. RECORD DRAWINGS: MARK UP A CLEAN SET OF DRAWINGS AS THE WORK PROGRESSES TO SHOW THE DIMENSIONED LOCATION AND ROUTING OF ALL ELECTRICAL WORK WHICH WILL BECOME PERMANENTLY CONCEALED. SHOW ROUTING OF WORK IN PERMANENTLY CONCEALED BLIND SPACES WITHIN THE BUILDING. SHOW COMPLETE ROUTING AND SIZING OF ANY SIGNIFICANT REVISIONS TO THE SYSTEMS SHOWN.
- E. WORKMANSHIP: INSTALLATION OF ALL WORK SHALL BE MADE SO THAT ITS SEVERAL COMPONENT PARTS SHALL FUNCTION AS A WORKABLE SYSTEM COMPLETE WITH ALL ACCESSORIES NECESSARY FOR ITS OPERATION. ALL MATERIAL AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER’S RECOMMENDATIONS, INSTRUCTIONS AND/OR INSTALLATION DRAWINGS AND IN ACCORDANCE WITH NECA STANDARDS. MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL CONFORM WITH APPLICABLE INDUSTRY STANDARDS, NEMA STANDARDS AND UNDERWRITERS LABORATORIES STANDARDS WHERE APPLICABLE.
- F. SUBMITTALS: PROVIDE MATERIAL AND EQUIPMENT SUBMITTALS CONTAINING A COMPLETE LISTING OF MATERIAL AND EQUIPMENT SHOWN ON THE DRAWINGS. INCLUDE CATALOG NUMBERS, WIRING DIAGRAMS, ROUGH-IN DIMENSIONS AND PERFORMANCE DATA FOR ALL MATERIAL AND EQUIPMENT. SUBMITTALS SHALL BE IN ELECTRONIC .PDF FORMAT, SEPARATE FROM WORK FURNISHED UNDER OTHER DIVISIONS. INDEX AND CLEARLY IDENTIFY ALL MATERIAL AND EQUIPMENT BY ITEM, NAME OR DESIGNATION USED ON THE DRAWINGS. SUBMITTAL REVIEW IS FOR GENERAL DESIGN AND ARRANGEMENT ONLY AND DOES NOT RELIEVE THE CONTRACTOR FROM ANY REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE SUBMITTALS ARE NOT CHECKED FOR QUANTITY, DIMENSION, OR FOR PROPER OPERATION. WHERE DEVIATIONS OF A SUBSTITUTE PRODUCT OR SYSTEM PERFORMANCE HAVE NOT BEEN SPECIFICALLY NOTED IN THE SUBMITTAL BY THE CONTRACTOR, PROVISIONS OF A COMPLETE AND SATISFACTORY WORKING INSTALLATION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- G. OPERATION AND MAINTENANCE MANUALS: PROVIDE OPERATION AND MAINTENANCE MANUALS FOR TRAINING OF THE OWNER’S PERSONNEL. DESCRIBE THE PROCEDURES NECESSARY TO OPERATE THE SYSTEM INCLUDING START–UP, OPERATION, EMERGENCY OPERATION AND SHUTDOWN. PROVIDE INSTRUCTIONS AND A SCHEDULE OF PREVENTIVE MAINTENANCE IN TABULAR FORM FOR ALL ROUTINE CLEANING, INSPECTION AND LUBRICATION WITH RECOMMENDED LUBRICANTS. PROVIDE INSTRUCTIONS FOR MINOR REPAIR OR ADJUSTMENTS REQUIRED FOR PREVENTIVE MAINTENANCE ROUTINES. PROVIDE MANUFACTURER’S DESCRIPTIVE LITERATURE INCLUDING APPROVED SHOP DRAWINGS COVERING DEVICES USED IN ANY CONTRACTOR–PROVIDED EQUIPMENT OR SYSTEMS WITH ILLUSTRATION, EXPLODED VIEWS, ETC.
- H. WARRANTY: THE CONTRACTOR SHALL GUARANTEE ALL WORK EXECUTED UNDER THIS CONTRACT TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM BENEFICIAL OCCUPANCY. ANY FAULTY MATERIALS OR WORKMANSHIP SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER DURING THE GUARANTEE PERIOD.
- I. PERMITS: SECURE AND PAY FOR ALL FEES, PERMITS, ETC. REQUIRED BY LOCAL AND STATE AGENCIES.
- J. REFERENCE SYMBOLS: THE ELECTRICAL “LEGEND” ON THE DRAWINGS IS A STANDARDIZED VERSION, AND ALL SYMBOLS SHOWN MAY NOT BE USED. USE THE “LEGEND” AS A REFERENCE FOR THE SYMBOLS USED ON THE DRAWINGS.
- K. PENETRATION OF FIRE BARRIERS: ALL ELECTRICAL PENETRATIONS THROUGH FIRE RATED BARRIERS SHALL BE SEALED IN ACCORDANCE WITH NEC ARTICLE 300.21 AND THE FOLLOWING:
1. ALL HOLES OR VOIDS CREATED TO EXTEND ELECTRICAL SYSTEMS THROUGH FIRE RATED FLOORS, WALLS OR CEILING SHALL BE SEALED WITH AN ASBESTOS–FREE INTUMESCENT FIRE STOPPING MATERIAL CAPABLE OF EXPANDING 8 TO 10 TIMES WHEN EXPOSED TO TEMPERATURES 250 DEGREES F OR HIGHER.
 2. MATERIALS SHALL BE SUITABLE FOR THE FIRE STOPPING OF PENETRATIONS MADE BY STEEL, GLASS, PLASTIC AND SHALL BE CAPABLE OF MAINTAINING AN EFFECTIVE BARRIER AGAINST FLAME, SMOKE AND GASES IN COMPLIANCE WITH THE REQUIREMENTS OF ASTM E814, UL 1479 AND THE UL FIRE RESISTANCE DIRECTORY REQUIREMENTS FOR THROUGH–PENETRATION FIRESTOP DEVICES (XHCR).
 3. THE RATING OF THE FIRE STOPS SHALL BE THE SAME AS THE TIME–RATED FLOOR, WALL OR CEILING ASSEMBLY.
 4. INSTALL FIRE STOPPING MATERIALS IN ACCORDANCE WITH THE MANUFACTURER’S INSTRUCTIONS.

26 05 19 – WIRE AND CABLE

- A. SUBMITTALS: NONE REQUIRED FOR THIS SECTION.
- B. MATERIALS:
1. ALL CONDUCTORS SHALL BE COPPER WITH TYPE XHHW, THWN, THW OR THHN INSULATION. MINIMUM BRANCH CIRCUIT CONDUCTOR SIZE SHALL BE #12 AWG. MINIMUM CONTROL CIRCUIT CONDUCTOR SIZE SHALL BE #18 AWG.
 2. CONTROL CIRCUITS SHALL BE COPPER, STRANDED CONDUCTOR, 600V INSULATION, THHN/THWN, MINIMUM SIZE #18 AWG.
 3. TYPE MC CABLE: SOLID COPPER CONDUCTOR, 600 VOLT THERMOPLASTIC INSULATION, RATED 90° C, INSULATED GREEN GROUNDING CONDUCTOR, AND GALVANIZED STEEL ARMOR OVER MYLAR.
- C. INSTALLATION:
1. COLOR CODE WIRES BY LINE OR PHASE. COLOR CODE THE 120/208V CONDUCTORS BLACK, RED, BLUE, AND WHITE.
 2. DO NOT SHARE NEUTRAL CONDUCTORS. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH BRANCH CIRCUIT THAT REQUIRES A NEUTRAL.
 3. USE PROPERLY SIZED INSULATED SPRING WIRE CONNECTORS WITH PLASTIC CAPS FOR ALL CONDUCTORS #8 AWG AND SMALLER.
 4. INSTALLATION SCHEDULE: BUILDING WIRE IN CONDUIT AT ALL LOCATIONS UNLESS OTHERWISE NOTED.

26 05 26 – GROUNDING AND BONDING

- A. SUBMITTALS: NONE REQUIRED FOR THIS SECTION.
- B. INSTALLATION:
1. PROVIDE A SEPARATE, INSULATED EQUIPMENT GROUNDING CONDUCTOR IN ALL NEW BRANCH CIRCUITS. TERMINATE EACH END ON A GROUNDING LUG, BUS, OR BUSHING.
 2. MECHANICAL CONNECTORS: NON–REVERSIBLE CRIMP TYPE LUGS ONLY. USE FACTORY MADE COMPRESSION LUG FOR ALL TERMINATIONS. CRIMP TYPE ONE HOLE FOR CONDUCTORS SMALLER THAN #6 AWG.
 3. BOND TOGETHER EXPOSED NON–CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT, METAL RACEWAY SYSTEMS, GROUNDING CONDUCTOR IN RACEWAYS AND CABLES, AND PLUMBING SYSTEMS.

26 05 29 – HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

- A. SUBMITTALS: NONE REQUIRED FOR THIS SECTION.
- B. MATERIAL: SUPPORT CHANNEL SHALL BE GALVANIZED OR PAINTED STEEL. HARDWARE SHALL BE CORROSION RESISTANT.
- C. INSTALLATION: EQUIPMENT WEIGHING MORE THAN 50 POUNDS SHALL BE ADEQUATELY ANCHORED TO THE BUILDING STRUCTURE TO RESIST LATERAL EARTHQUAKE FORCES.

26 05 33 – RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS



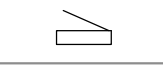



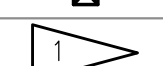
- A. SUBMITTALS: NONE REQUIRED FOR THIS SECTION.
- B. MATERIALS:
1. ELECTRICAL METALLIC TUBING CONDUIT (EMT): ANSI C80.3. GALVANIZED TUBING. FITTINGS AND CONDUIT BODIES: ANSI/NEMA FB 1; STEEL OR MALLEABLE IRON, COMPRESSION TYPE OR SET SCREW FITTINGS WITH INSULATED THROAT BUSHINGS. DIE–CAST FITTINGS ARE NOT ACCEPTABLE. [MAXIMUM SIZE SHALL BE 2”.] PROVIDE FACTORY ELBOWS ON SIZES 1–1/2” AND LARGER.
 2. FLEXIBLE METAL CONDUIT: FS WW–C–566; STEEL, FULL WALL OR REDUCED WALL THICKNESS. FITTINGS AND CONDUIT BODIES: ANSI/NEMA FB 1; STEEL OR MALLEABLE IRON WITH INSULATED THROAT BUSHINGS. DIE CAST FITTINGS ARE NOT ACCEPTABLE.
 3. LIQUIDTIGHT FLEXIBLE CONDUIT: FLEXIBLE METAL CONDUIT WITH PVC JACKET. FITTINGS AND CONDUIT BODIES: ANSI/NEMA FB 1; STEEL OR MALLEABLE IRON WITH INSULATED THROAT BUSHINGS. DIE CAST FITTINGS ARE NOT ACCEPTABLE.
 4. PROVIDE GALVANIZED OR CADMIUM PLATED, ONE PIECE PRESSED STEEL OUTLET BOXES 4 INCH SQUARE OR OCTAGONAL, 1–1/2 INCHES DEEP MINIMUM SIZE FOR USE IN INTERIOR AREAS.
 5. PROVIDE CAST ALUMINUM OR FERALLOY TYPE BOXES WITH GASKETED COVER, THREADED HUBS AND NEMA 3R RATING FOR USE IN EXTERIOR OR WET LOCATIONS.
- C. INSTALLATION:
1. INSTALL CONDUIT FOR ALL SYSTEMS UNLESS OTHERWISE NOTED, 1/2 INCH MINIMUM SIZE.
 2. EXPOSED DRY INTERIOR LOCATIONS SHALL BE RIGID STEEL CONDUIT OR INTERMEDIATE METAL CONDUIT. ELECTRICAL METALLIC TUBING MAY BE USED EXPOSED WHEN INSTALLED ON THE CEILING, A MINIMUM OF TEN FEET ABOVE THE FLOOR OR WHERE NOT SUBJECT TO PHYSICAL DAMAGE. EMT MAY ALSO BE USED FOR CONCEALED, DRY, INTERIOR LOCATIONS.
 3. MOTOR AND EQUIPMENT CONNECTIONS SHALL BE SHORT EXTENSIONS OF FLEXIBLE METAL CONDUIT TO ALLOW FOR VIBRATION. LIQUIDTIGHT FLEXIBLE CONDUIT AND FITTINGS SHALL BE USED FOR THESE CONNECTIONS IN DAMP OR WET LOCATIONS.
 4. PAINT ALL EXPOSED CONDUIT TO MATCH SURFACE TO WHICH IT IS ATTACHED OR CROSSES. CLEAN GREASY OR DIRTY CONDUIT PRIOR TO PAINTING IN ACCORDANCE WITH PAINT MANUFACTURER’S INSTRUCTIONS.
 5. PROVIDE OUTLET BOXES AS SHOWN ON THE DRAWINGS, AND AS REQUIRED FOR SPLICES, TAPS, WIRE PULLING, EQUIPMENT CONNECTIONS, DEVICE INSTALLATION AND CODE COMPLIANCE.
 6. DO NOT INSTALL BOXES BACK–TO–BACK IN WALLS. PROVIDE A MINIMUM 6 INCH SEPARATION FOR MINIMUM SOUND TRANSMISSION.
 7. SUPPORT BOXES INDEPENDENTLY OF CONDUIT.

26 05 53 – IDENTIFICATION FOR ELECTRICAL SYSTEMS

- A. SUBMITTALS: NONE REQUIRED FOR THIS SECTION.
- B. MATERIALS:
1. TAPE LABELS: ADHESIVE TAPE LABELS, WITH 3/16 INCH BOLD BLACK LETTERS ON CLEAR BACKGROUND MADE USING DYMO RHINO SERIES OR EQUAL LABEL PRINTER.
 2. WIRE AND CABLE MARKERS: CLOTH MARKERS, SPLIT SLEEVE OR TUBING TYPE.
- C. INSTALLATION:
1. CONDUITS: MARK ALL CONDUITS ENTERING OR LEAVING PANELBOARDS WITH INDELIBLE BLACK MAGIC MARKER WITH THE CIRCUIT NUMBERS OF THE CIRCUITS CONTAINED INSIDE. LABEL FEEDER CONDUITS AND SPARE CONDUITS AT EACH END WITH SOURCE AND TERMINATION POINT.
 2. JUNCTION BOXES: MARK ALL CIRCUIT NUMBERS OF WIRING ON ALL JUNCTION BOXES WITH SHEET STEEL COVERS. MARK WITH INDELIBLE BLACK MARKER. ON EXPOSED JUNCTION BOXES IN PUBLIC AREAS, MARK ON INSIDE OF COVER. MARK ALL FIRE ALARM SYSTEM JUNCTION BOXES WITH SHEET STEEL COVERS WITH “FA.” MARK WITH INDELIBLE RED MARKER. MARK ALL OTHER SPECIAL SYSTEM JUNCTION BOXES WITH SHEET STEEL COVERS.
 3. WIRE IDENTIFICATION: PROVIDE WIRE MARKERS ON EACH CONDUCTOR IN PANELBOARD GUTTERS, PULL BOXES, OUTLET AND JUNCTION BOXES, AND AT LOAD CONNECTION. MARKERS SHALL BE LOCATED WITHIN ONE INCH OF EACH CABLE END, EXCEPT AT PANELBOARDS, WHERE MARKERS FOR BRANCH CIRCUIT CONDUCTORS SHALL BE VISIBLE WITHOUT REMOVING PANEL DEADFRONT.
 4. DEVICE PLATES: LABEL EACH RECEPACLE DEVICE PLATE OR POINT OF CONNECTION DENOTING THE PANELBOARD NAME AND CIRCUIT NUMBER. INSTALL LABEL ON THE TOP OF EACH PLATE.

26 24 16 – PANELBOARDS

- A. SUBMITTALS: NONE REQUIRED FOR THIS SECTION.
- B. MATERIAL:
1. MANUFACTURERS: SQUARE D AND EATON.
 2. NEW BREAKERS IN EXISTING PANELS: NEMA AB 1; UL LISTED FOR USE IN THE PANEL, AMPERE RATING AND NUMBER OF POLES AS INDICATED ON PLANS. AIC RATING SHALL MATCH THE LOWEST RATED DEVICE IN THE PANEL.
- C. INSTALLATION:
1. INSTALL NEW BREAKER(S) IN EXISTING PANEL(S) AND TEST FOR PROPER OPERATION. UPDATE CIRCUIT DIRECTORY TO REFLECT ALL CHANGES.

LEGEND	
	NUMBER AND SIZE OF WIRES (NO MARKS = 3 #12)
	HOMERUN TO PANEL (PANEL AND CIRCUIT No.)
	EXISTING PANELBOARD
	MOTOR (SIZED AS NOTED)
	FRACTIONAL MOTOR STARTER
	MOTOR STARTER/DISCONNECT
	NOTE TAG (No. INDICATES NOTE)
BYF	BETHEL YOUTH FACILITY
C	CONDUIT
NEC	NATIONAL ELECTRICAL CODE
YKCC	YUKON KUSKOKWIM CORRECTIONAL CENTER

26 29 13 – ENCLOSED CONTROLLERS

- A. SUBMITTALS: SUBMIT PRODUCT DATA FOR APPROVAL.
- B. MATERIALS:
1. MANUFACTURERS: SQUARE D, OR EATON.
 2. MANUAL AND FRACTIONAL MOTOR STARTERS: NEMA ICS 2, AC GENERAL PURPOSE CLASS A, MANUALLY OPERATED UNIT WITH NUMBER OF POLES AS REQUIRED BY THE LOAD SERVED, FULL–VOLTAGE CONTROLLER FOR FRACTIONAL HORSEPOWER INDUCTION MOTORS, WITH THERMAL OVERLOAD UNIT, RED PILOT LIGHT, AND TOGGLE OPERATOR.
 3. MAGNETIC MOTOR STARTERS: NEMA ICS 2; AC GENERAL–PURPOSE CLASS A, FULL VOLTAGE STARTING, NON–REVERSING TYPE MAGNETIC CONTROLLER FOR INDUCTION MOTORS RATED IN HORSEPOWER. PROVIDE BI–METAL THERMAL OVERLOAD RELAY. COMBINE MOTOR STARTERS IN COMMON ENCLOSURE WITH NON–FUSED DISCONNECT. INCLUDE TWO FIELD CONVERTIBLE CONTACTS IN ADDITION TO SEAL–IN CONTACT, RED LED LIGHT, AND HAND/OFF/AUTO SELECTOR SWITCH IN FRONT COVER. INCLUDE A THREE PHASE POWER MONITOR IN EACH MAGNETIC STARTER CONNECTED TO SHUT DOWN THE MOTOR ON LOSS OF ANY PHASE, PHASE REVERSAL, OR LOW VOLTAGE ON ANY PHASE. POWER MONITOR SHALL AUTOMATICALLY RESET AND RESTART MOTOR WHEN PHASE AND VOLTAGE CONDITIONS RETURN TO NORMAL. PROVIDE OVERSIZE STARTER ENCLOSURES AS REQUIRED TO INSTALL POWER MONITOR.
- C. INSTALLATION
1. SELECT AND INSTALL HEATER ELEMENTS IN MOTOR STARTERS TO MATCH INSTALLED MOTOR CHARACTERISTICS.
 2. AFTER FINAL CONNECTIONS ARE MADE, CHECK AND CORRECT THE ROTATION OF ALL MOTORS.
 3. MOTOR STARTING EQUIPMENT SHALL BE LISTED FOR USE AND PROPERLY SIZED FOR OPERATION WITH THE MOTORS SPECIFIED BY MECHANICAL.



ISSUED FOR
CONSTRUCTION

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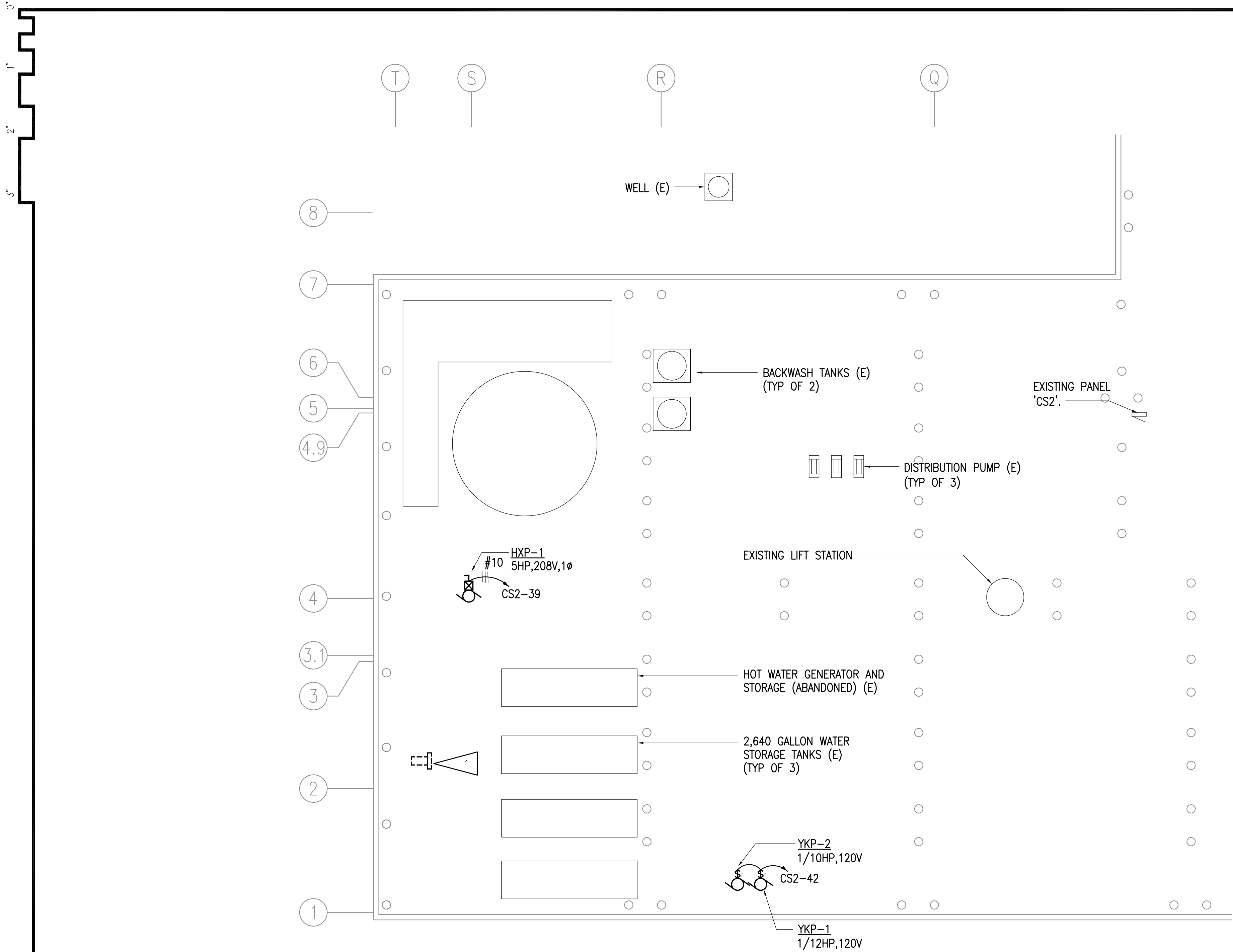
STATE OF ALASKA
UTILITY WATER CONNECTIONS
1000 Chief Eddie Hoffman; Bethel, Alaska 99559
Mechanical Upgrades

REVISIONS:

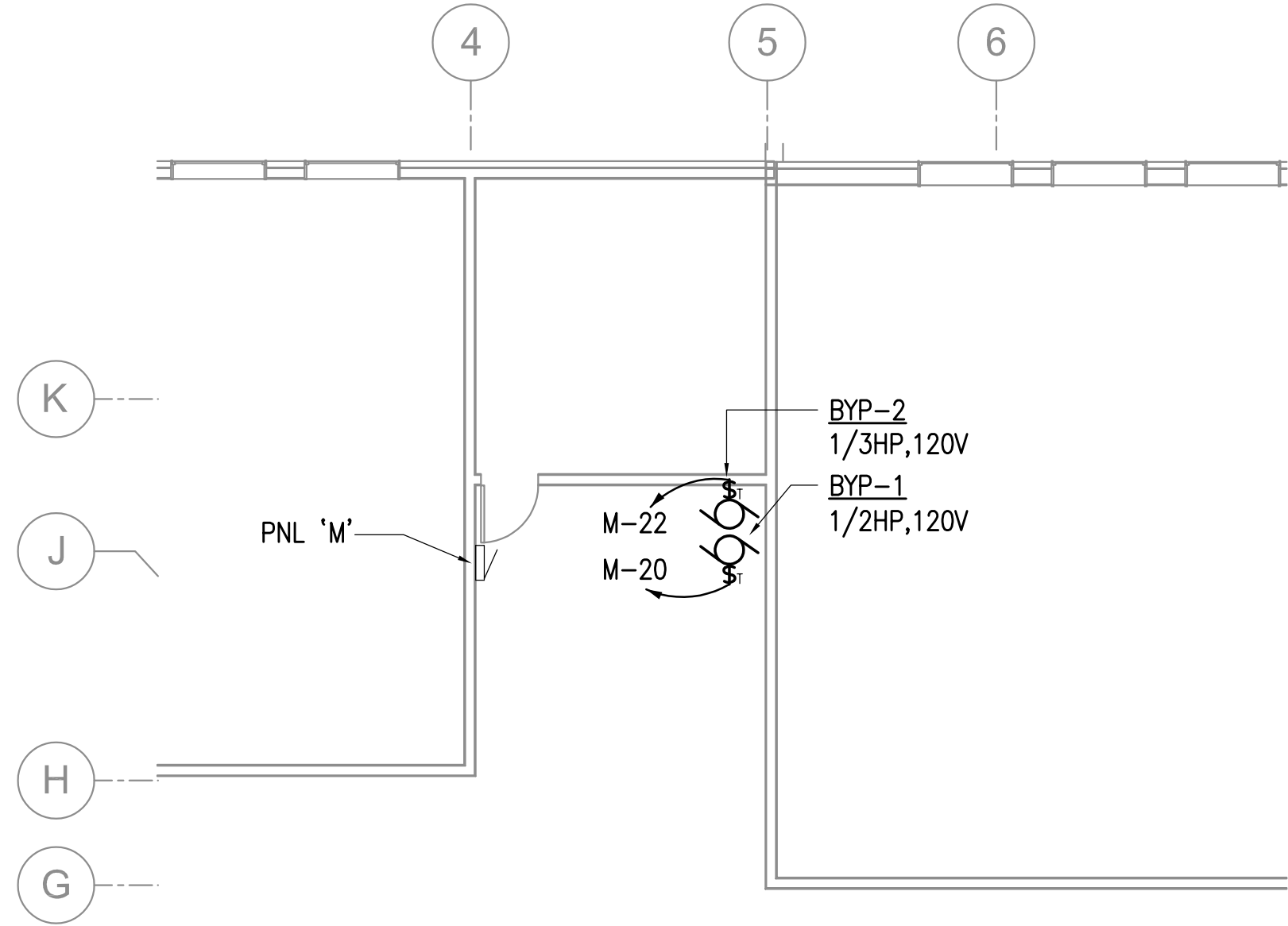
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CHECKED BY: JAM
DATE: 03-08-2018
JOB NUMBER: L8004
DWG FILE: L8004_ESERIES

DRAWING TITLE:
ELECTRICAL LEGEND &
SPECIFICATIONS

SHEET:
E0.1



1 CRAWLSPACE ELECTRICAL PLAN - YKCC
1/8" = 1'-0"



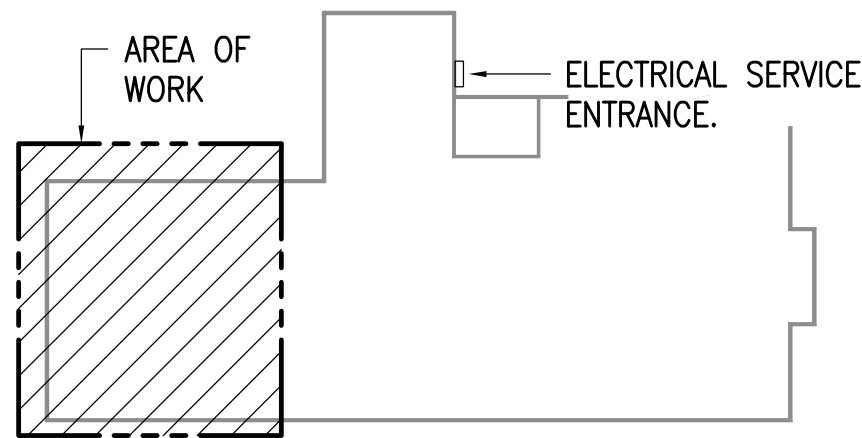
2 MEZZANINE WATER PIPING PLAN - BYF
1/8" = 1'-0"

GENERAL NOTES:

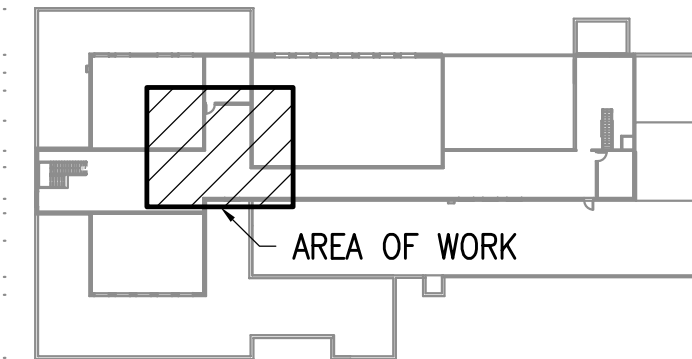
- THE INFORMATION SHOWN ON THIS DRAWING IS TAKEN FROM AS-BUILT DRAWINGS AND A NON-DESTRUCTIVE WALK THROUGH OF THE FACILITY. THERE IS NO WARRANTY OR GUARANTEE AS TO THE ACCURACY OF THE INFORMATION SHOWN HERE-IN. THE CONTRACTOR SHALL FIELD VERIFY ALL ITEMS SCHEDULED FOR DEMOLITION PRIOR TO START OF WORK.
- THE OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL SALVAGEABLE MATERIALS. THE CONTRACTOR SHALL DELIVER SALVAGED MATERIALS TO A WAREHOUSE AS DIRECTED BY THE OWNER. THE CONTRACTOR SHALL DISPOSE OF, OFF SITE, ALL UNWANTED MATERIALS.
- COORDINATE WITH MECHANICAL FOR EXACT LOCATION OF MECHANICAL EQUIPMENT.
- MAINTAIN 36" WORKING CLEARANCE IN FRONT OF 120/208V ELECTRICAL PANELS PER REQUIREMENTS OF NEC 110.26.

SHEET NOTES:

- 1** DEMOLISH FIRE PUMP AND CONTROLLER BACK TO SERVICE ENTRANCE. REPROGRAM EXISTING FIRE ALARM CONTROL PANEL TO REMOVE MONITORED POINTS INCLUDING REMOVED SWITCHES. EXISTING FIRE ALARM CONTROL PANEL IS AN EST 10-500.



KEY PLAN - YKCC
1/64" = 1'-0"



KEY PLAN - MEZZANINE - BYF
1/64" = 1'-0"



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