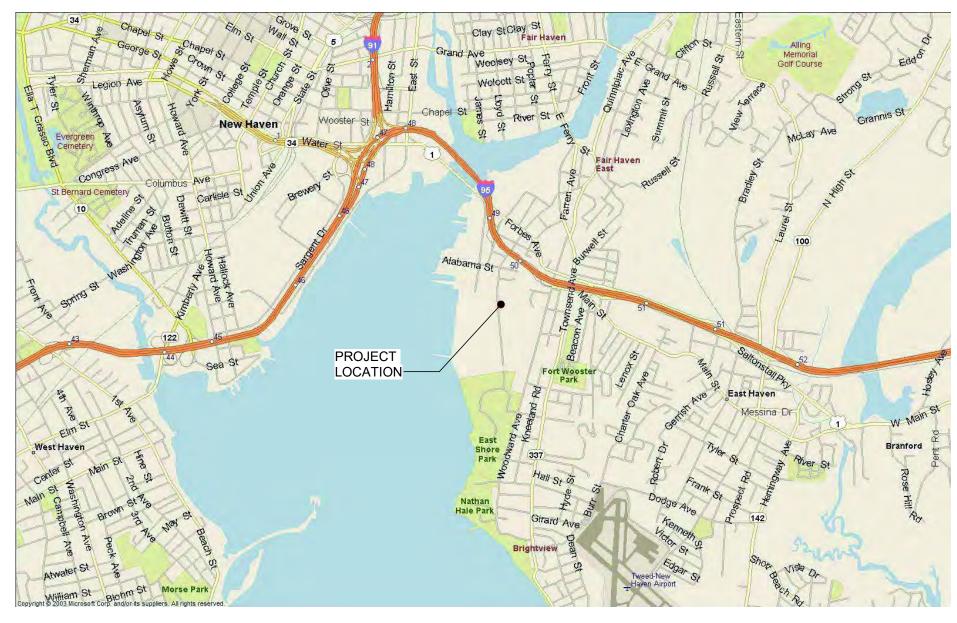
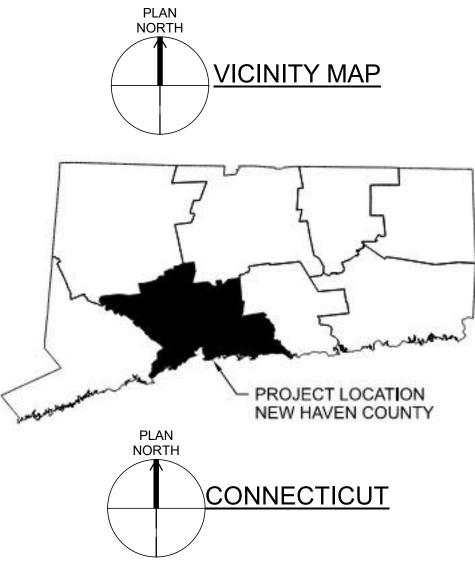
IMPROVING FATS OIL AND GREASE RECEIVINGS GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY NEW HAVEN, CONNECTICUT





FOR INFORMATION REGARDING THIS PROJECT:

CONTACT STEPHEN CLARK, PE sclark@brwncald.com 860-241-5532

and

Engineering@gnhwpca.com

BID DOCUMENTS NOVEMBER, 2025

PROJECT NUMBER: SF2020-03

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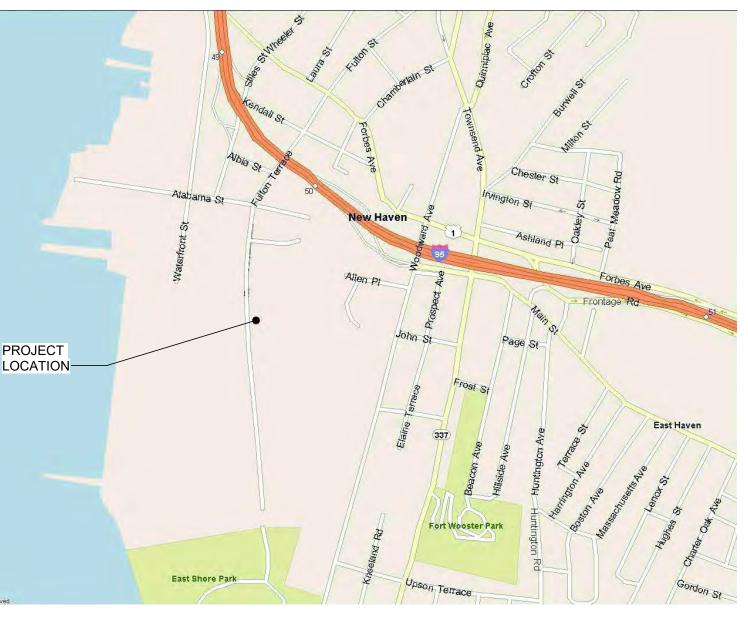
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IEL STORAGE TANK FOUNDATION PLAN	E-00-601	CONTROL
IEL STORAGE TANK SECTIONS	E-00-602	CONTROL
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		ROOF LEV
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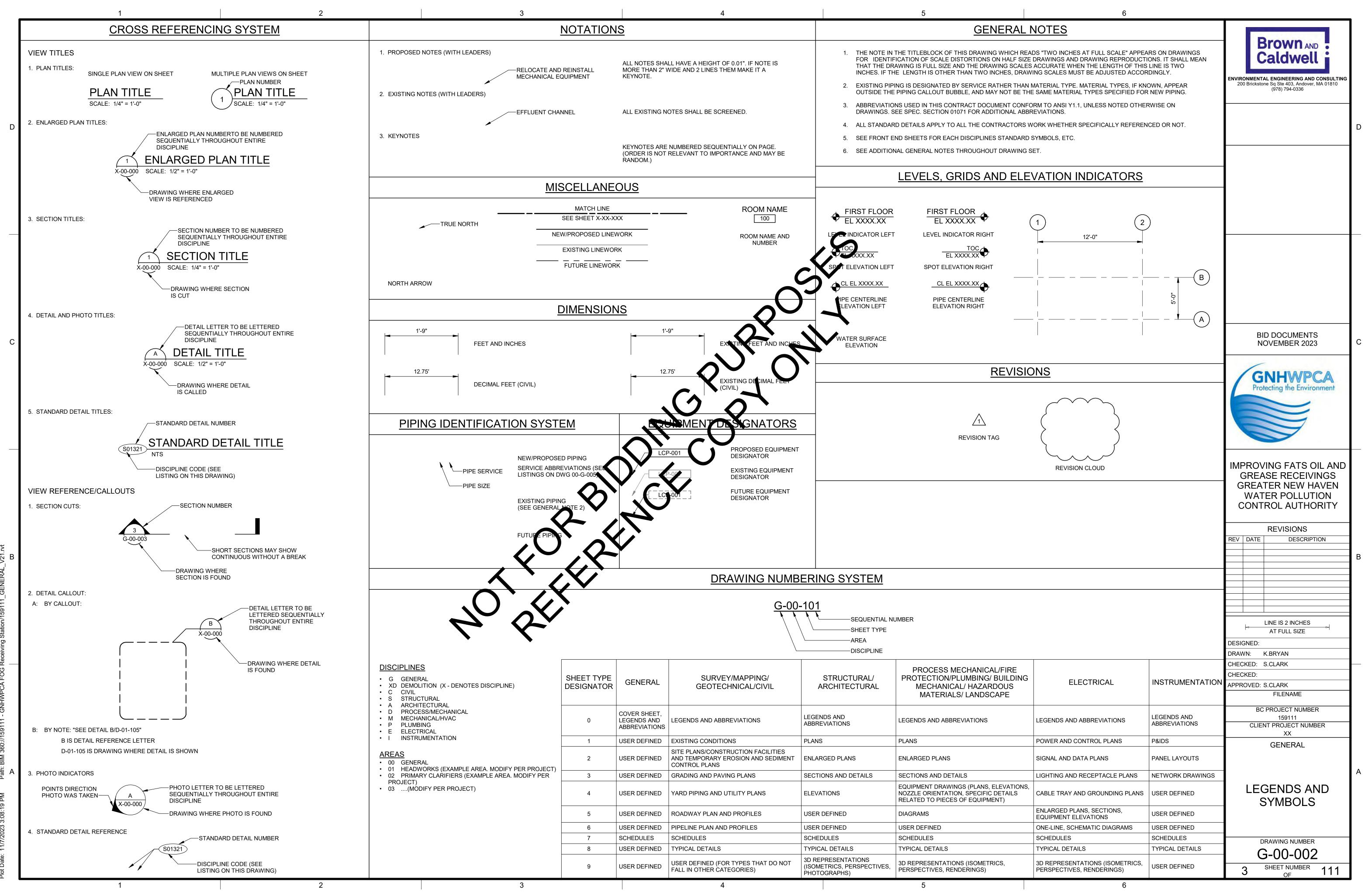
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NOTES, SYMBOLS, AND LEGENDS

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Brown AND Caldwell Environmental Engineering and consulting 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	
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GNHWPCA Protecting the Environment	
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<u>А</u>	AMPERE, AERATION, AERATOR, AERATION AIR	CDU	
AA	ATOMIC ABSORPTION UNIT, AGITATION AIR	CE	CONSTRUCTION EASEMENT
AB	ANCHOR BOLT, AGGREGATE BASE	CED	CEILING EXHAUST DIFFUSER
ABAND	ABANDONED	CEM	CEMENT
ABBR	ABBREVIATION	CEN	CENTRATE
A/C	AIR CONDITIONING	CER	CEILING EXHAUST REGISTER, CERAMIC
AC	ASPHALT CONCRETE, ALTERNATING CURRENT, AIR CONDITIONER, ABOVE CEILING	CF CFH	CUBIC FEET, CENTRIFUGE FEED CUBIC FEET PER HOUR
ACA	ACETIC ACID	CFM	CUBIC FEET PER MINUTE
ACC	AREA CONTROL CENTER, AIR COOLED CONDENSER	CFR	CODE OF FEDERAL REGULATIONS, CHEMICAL FEEDER
ACOU	ACOUSTIC	CFS	CUBIC FEET PER SECOND
ACT	ACOUSTIC CEILING TILE	C&G	CURB AND GUTTER
ACU	AIR CONDITIONING UNIT	CH	CHANNEL
ACV	AIR CONTROL VALVE	CHG	CHANGE
AD	AREA DRAIN, AIR DRYER	CHKR	CHECKER
ADA	AMERICANS W/DISABILITIES ACT	CHR	CHILLER
ADD	ADDITION, ADDITIONAL	CHS	CHEMICAL SOLUTION
ADF	AVERAGE DESIGN FLOW	CHWR	CHILLED WATER RETURN
ADJ	ADJUSTABLE, ADJACENT	CHWS	CHILLED WATER SUPPLY
ADMIN	ADMINISTRATION	CI	CAST IRON
ADPT	ADAPTER	CIP	CAST IRON PIPE, CLEAN IN PLACE
AF	AIR FILTER	CIPP	CURED IN PLACE PIPE
AFD	ADJUSTABLE FREQUENCY DRIVE	CIPW	CLEAN IN PLACE WASTE
AFE	AIR FLOTATION EFFLUENT	CIRC	CIRCUMFERENCE
AFF	ABOVE FINISHED FLOOR	CIT	CITRIC ACID
AFG	ABOVE FINISHED GRADE	CJ	CONSTRUCTION JOINT
AFS	AIR FLOW STATION	CKPL	CHECKER PLATE
AGGR	AGGREGATE	СКТ	CIRCUIT
ahap	AS HIGH AS POSSIBLE	CKV	CHECK VALVE
Ahu	AIR HANDLING UNIT	CL	CENTER LINE, CLASS, CONDENSATE LOW PRESSURE
AI	ANALOG INPUT	CLF	CHAIN LINK FENCE
AIC	AMPS INTERRUPTING CURRENT	CLG	CEILING, COOLING, CHLORINE GAS
AL	ALUMINUM, ALUM	CLO	CLOSET
ALM	ALARM	CLL	CHLORINE LIQUID
ALT	ALTERNATE	CLR	CLEAR, CLEARANCE
amb	AMBIENT	CLS	CHLORINE SOLUTION
Amd	AIR MONITORING DEVICE	CLSM	CONTROLLED LOW STRENGTH MATERIAL
AMP	AMPERE (S)	CLV	CHLORINE VACUUM
ANC	ANCHOR	CM	CENTIMETERS, CONDENSATE MEDIUM PRESSURE
ANOD	ANODIZE(D)	CMP	CORRUGATED METAL PIPE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	CMU	CONCRETE MASONRY UNIT
AO	ANALOG OUTPUT	CND	CONDENSATE DRAIN
APD	AIR PRESSURE DROP	CO	CLEANOUT, CONDUIT ONLY
APPROX	APPROXIMATE(LY)	CO2	CARBON DIOXIDE
APVD	APPROVED	COD	CHEMICAL OXYGEN DEMAND
ARCH		COF	COOLING AIR
AS ASC	AIR SUPPLY, ABOVE SLAB	COL	COLUMN, COLLECTOR
ASD	ADJUSTABLE SPEED CONTROL	COM	COMMINUTOR, COMPACTOR
	ADJUSTABLE SPEED DRIVE	COMB	COMBINED
ASPH	ASPHALT	CON	CONVEYOR
ASSY	ASSEMBLY	CONC	CONCRETE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	COND	CONDUCTIVITY, CONDENSATE, CONDUCTOR
ATM	ATMOSPHERED	CONN	CONNECTION
ATS	AUTOMATIC TRANSFER SWITCH	CONT	CONTINUED, CONTINUOUS
AUTO	AUTOMATIC	CONST	CONSTRUCTION
AUX	AUXILIARY	COORD	COORDINATE
AVE	AVENUE	CP	COMPRESSOR, CIRCULATION PUMP, COMPUTED POINT
AVG	AVERAGE	CPLG	COUPLING
AW	APPLIED WATER	CPP	CORRUGATED PLASTIC PIPE
AWG	AMERICAN WIRE GAUGE	CPT	CONTROL POWER TRANSFORMER, CARPET
	AMERICAN WIRE GAUGE	CPVC	CHLORINATED POLYVINYL CHLORIDE
B		CR CREJ	CARD READER CORRUGATED RUBBER EXPANSION JOINT
B	BOILER, BOTTOM, BLOWER, BRINE	CRN	CRANE
B/	BOTTOM OF	CRU	COMPUTER ROOM UNIT
BA	BACKWASH AIR	CS	CIRCULATED SLUDGE, COMBINED SEWER, ALUMINUM CHANNEI
BC	BEGINNING OF CURVE, BARE COPPER, BOLT CIRCLE,	CSD	CEILING SUPPLY DIFFUSER
	BOTTOM OF CURB, BACK OF CURB, BIOFILTER CIRCULATION	CSO	CAUSTIC SODA (SODIUM HYDROXIDE), COMBINED SEWER OVER
BCR	BEGINNING OF CURVE RETURN	CSP	CORRUGATED STEEL PIPE
BCTL	BOILER CHEMICAL TREATMENT, LOW PRESSURE	CT	CURRENT TRANSFORMER, CERAMIC TILE
BCTM	BOILER CHEMICAL TREATMENT, MEDIUM PRESSURE	CTF	CENTRIFUGE
BD	BLOW DOWN, BOARD	CTR	CONTRACTOR, CENTER
BDD	BACKDRAFT DAMPER	CTRL	CONTROL
BDL	BOILER BLOWDOWN, LOW PRESSURE	CU	CONTROL UNIT, COPPER, CUBIC, CONDENSING UNIT
BDM	BOILER BLOWDOWN, MEDIUM PRESSURE	CULV	CULVERT
BE	BOILER EXHASUT	CV	CONTROL VALVE, CHECK VALVE
BF	BLIND FLANGE	CVT	CHEMICAL VENT
BFE	BIOFILTER EFFLUENT	CW	COLD WATER
BFL	BIOFILTER FEEDWATER, LOW PRESSURE	CWR	CHILLED WATER RETURN
BFM	BIOFILTER FEEDWATER, MEDIUM PRESSURE	CWS	CHILLED WATER SUPPLY
BFP BFV	BACKFLOW PREVENTER, BELT FILTER PRESS BUTTERFLY VALVE	CY	CUBIC YARD
BFW	BOILER FEED WATER	D	_
BG BITUM	BELOW GRADE BITUMIN(OUS)	D	DRAIN, DEGREE, DEEP
BK	BACK Ó	DB	DUCT BANK, DIRECT BURIAL, DRY BULB TEMPERATURE
BLDG	BUILDING	DBL	DOUBLE
BLK	BLOCK, BLACK	DC	DIRECT CURRENT, DATA CABLE
BLKG		DCU	DISTRIBUTED CONTROL UNIT
BLR	BLOCKING BOILER	DEMO	DEMOLITION
BM	BEAM, BENCHMARK	DEPT	DEPARTMENT
BMP	BEST MANAGEMENT PRACTICES	DF	DRINKING FOUNTAIN
BMS	BUILDING MANAGEMENT SYSTEM	DFD	DUCT FIRE DAMPER
BO	BLOW OFF	DG	DIGESTER GAS
BRDG	BRIDGING	DI	DUCTILE IRON, DIGITAL INPUT, DROP INLET
BRG	BEARING	DIA	DIAMETER
BRK	BRICK	DIAG	DIAGRAM, DIAGONAL
BRZ	BRONZE	DIF	DIFFUSER
BS	BELOW SLAB		DIFFERENTIAL
BSN	BAR SCREEN	DIM	DIMENSION
BT	BOLT	DIP	DUCTILE IRON PIPE
BTU	BRITISH THERMAL UNIT	DIR	DIRECTION
BV	BALL VALVE	DISC	DISCONNECT
BVC	BEGINNING OF VERTICAL CURVE	DISCH	DISCHARGE
BW	BACKWASH, BOTTOM OF WALL, BACKWASH WATER	DISP	DISPENSER
BWR	BACKWASH RETURN	DIST	DISTANCE
BWS	BACKWASH SUPPLY	DIW	DEIONIZED WATER
BWW	BACKWASH WASTE	DL DM	DEAD LOAD DAMPER MOTOR
<u>C</u>		DN DO	DOWN DIGITAL OUTPUT
C CA	CONDUIT, CONDUCTOR, CELSIUS, CIRCUMFERENCE, CHANNEL, COIL COMPRESSED AIR	DPR	DAMPER
CAF	COMBUSTION AIR FAN	DR DRG	DRAIN ROCK, DRAINAGE, DRIVE, DOOR DEGRATING
CAP	CAPACITY	DS	DIGESTER SLUDGE, DISCONNECT SWITCH, DOWNSPOUT
CARV	COMBINATION AIR RELEASE VALVE	DSF	DIESEL FUEL
CAV CB	CONSTANT AIR VALVE CATCH BASIN, CIRCUIT BREAKER	DSS	SCREENED DIGESTED SLUDGE
CC	COOLING SOIL	DT DTL	DOUBLE TEE, DRAIN TRAP, DRIP TRAP DETAIL
C-C	CENTER TO CENTER	DU	DRIVE UNIT
CCP	CONCRETE CYLINDER PIPE	DW	DISTILLED WATER
CCSP CCW	CONCRETE LINED AND COATED STEEL PIPE CONDENSER COOLING WATER	DWCB	DOUBLEWING CATCHBASIN
CD	CEILING DIFFUSER, CHEMICAL DRAIN	DWG DWH	DRAWING DOMESTIC WATER HEATER
CDF	CONTROL DENSITY FILL	DWL(S)	DOWEL, DOWELS
	CONDENSER WATER RETURN	DWS	DEWATERED SLUDGE
CDR CDS			

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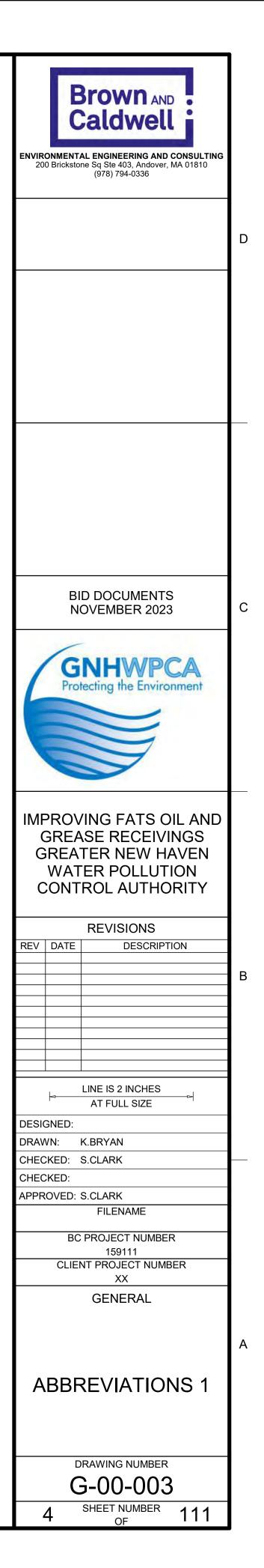
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	E EA	EAST, ENGINE EXHAUST AIR, EACH	GEC GEF	GROUND ELECTRODE CONDUCTOR GENERAL EXHAUST FAN	KKIP KCMIL
	EAT EB	ENTERING AIR TEMPERATURE EXPANSION BOLT OR ANCHOR, ENGINE BLOWER UNIT	GEN GF	GENERAL, GENERATOR GROUND FAULT	KG KL
	EC ECC	END OF CURVE, EVAPORATIVE COOLER, EMPTY CONDUIT ECCENTRIC	GFEP GFI	GROUND FAULT EQUIPMENT PROTECTION GROUND FAULT INTERRUPTER	KO KV
	ECP ED	EQUIPMENT CONTROL PANEL EXTRACTOR DAMPER, EQUIPMENT DRAIN	GFRC GFRG	GLASS FIBER REINFORCED CONCRETE GLASS FIBER REINFORCED GYPSUM	KVA KVAR
	EDB EDH	ELECTRICAL DUCTBANK ELECTRIC DUCT HEATER	GFRP GI	GLASS FIBER REINFORCED PLASTIC GALVANIZED IRON	KW KWH
	EE EEW	EACH END, ENGINE EXHAUST EMERGENCY EYE WASH	GL GLDI	GLASS GLASS LINED DUCTILE IRON	I
	EF EFF	EACH FACE, EXHAUST FAN EFFLUENT	GLV GM	GLOBE VALVE GAS METER	<u> </u>
	EG EHH	EXHAUST GRILLE, ENGINE GENERATOR SET, EXISTING GRADE ELECTRICAL HAND HOLE	GND GOX	GROUND GASEOUS OXYGEN	L LAM LAT
	EIFS EJ	EXTERIOR INSULATION & FINISH SYSTEM EXPANSION JOINT	GP GPD	GATE POST, GUARD POST GALLONS PER DAY	LAT LAV LB(S)
	EL ELEC	ELEVATION ELECTRIC(AL)	GPM GR	GALLONS PER MINUTE GRADE, GROUND, GRIT	LC LCP
	ELEV	ELEVATOR ELBOW	GRD GRS	GRINDER GALVANIZED RIGID STEEL	LCS LED
	EMBD EMH	EMBEDDED ELECTRICAL MANHOLE	GRT GRTG	GROUT GRATING	LF LG
	EMER ENCL	EMERGENCY ENCLOSURE/ENCLOSED	GS GSKT	GALVANIZED STEEL, GROUND SPOT GASKET	LHH LL
	ENT	ENTRANCE EDGE OF SLAB	GSP GV	GALVANIZED STEEL PLATE GATE VALVE	LLH LLV
	EP	EDGE OF PAVEMENT, ELECTRIC/PNEUMATIC CONVERTER, ELECTRICAL PULLBOX	GWB GWT	GYPSUM WALL BOARD GROUND WATER TABLE	LMH LO
	EPB EPDM	ELECTRICAL PULLBOX ETHYLENE PROPYLENE DIENE MONOMER	GYP	GYPSUM	LOC LONG
	EPR EQ	EVAPORATOR EQUAL	<u>H</u>	- ()	LOR
	EQUIP EQUIV	EQUIPMENT EQUIVALENT	H HA	HICH, HON ZON AL	LOTO LOW
	ES ESCAL	EXISTING SURFACE, ELECTRICAL SERVICE, EQUALIZED SLUDGE ESCALATOR	HB HC	HUCZ BIB NEATING COIL, HANDICAP, HOLLOW CORE	LP LPEL
	ESMT ET	EASEMENT EXPANSION TANK	HD HDG	HEAVY DUTY HOT-DIPPED GALVANIZED	LSG LSIG
	ETM EUH	ELAPSED TIME METER ELECTRIC UNIT HEATER	HDC	HEAVY DUTY OIL TIGHT HIGH DENST TO LYETHYLENE	LT LTG
	EVAP EVC	EVAPORATE END OF VERTICAL CURVE	NDR HDVR	HEADER HARDWARE	LV LVG
	EW EWEF	EACH WAY EACH WAY EACH FACE	HEX HG	HEAT EX HANGER, HEXAGONAL HIGH GRADY MERCURY	LVL LVR
	EW T&B EX	EACH WAY TOP AND BOTTOM EXTRA, EXAMPLE, EXISTING	HGR HH	HXNDHOLE	LWR
	EXG EXH	EXHAUST GRILLE EXHAUST	HHWY HHWY	HEATING HOT WATER RETURN HEATING HOT WATER SUPPLY	<u>M</u>
	EX-HY EXP	EXTRA HEAVY EXPANSION	нір Нмі	HIGH INTENSITY DISCHARGE HUMAN MACHINE INTERFACE	M MA
	EXT	EXTERIOR	HOA LOH	HAND-OFF-AUTO HIGH PRESSURE HYDRAULIC OIL	MAINT MAL
	<u>F</u>	$() \land$	HOR	HYDRAULIC OPERATOR HORIZONTAL	MAN MAX
	F FA	FAHRENHEIT, FACE, FUSE(D), FAN, FLOAT FOUL AIR	HP HPA	HIGH PRESSURE, HIGH POINT, HEAT PUMP, HORSEPOWER HIGH PRESSURE AIR	MBH MBS
	FAB FAE	FABRICATE(D)(TION) FOUL AIR EXHAUST	HPEL HPS	HIGH POINT ELEVATION HIGH PRESSURE SODIUM	MCA MCC
	FAI FB	FRESH AIR INTAKE FLAT BAR, FLOOR BEAK	HPU HR	HYDRAULIC POWER UNIT HANDRAIL, HEAT RESERVOIR, HOUR, HYDRAULIC OIL RETURN	MCP MD
	FBW FC	FILTER BACKWASH FAIL CLOSED, FEBARC SHLERINE	HRR HRS	HEAT RESERVOIR RETURN HEAT RESERVOIR SUPPLY	MECH MEE
	FCO FCU	FLOOR CLEANOUT FAN COIL UNIT	HRW HS	RECIRCULATING POTABLE HOT WATER HYDRAULIC OIL SUPPLY	MEMB MEZZ
N	FCV FD	FLOW CONTROL VALVE FLOOR DEAN, FIRE DAMPER, FROMDANON DRAIN	HSG HSS	HIGH PRESSURE SLUDGE GAS HOLLOW STRUCTURE SECTION	MFR MFRD
	FDR FE	FEEDER FLOWMENER, FMAL EFFLUEN FIRE EKTINGUISHER	HST HT	HOIST HEIGHT	MG MGD
	FEC FHC	FIRE EXTINNUMER CABINET IRE HOSE CABINET FLOALINDICATING TRANSMITTER	HTR HTT HV	HEATER HEAT TRACER TAPE HOSE VALVE, HEATING AND VENTILATING UNIT, HIGH VOLTAGE,	MG/L MGR
	FIT FIXT FF	FLOWEINDICATING I KAR MITTER FATURE FAR FACE, FINISH FLOOR, FLAT FACE	HUM	HAND OPERATED VALVE HUMIDITY	MH MHHW MI
	FFE	FINISHED FLOOR VEVATION	HVAC HW	HEATING, VENTILATING, AND AIR CONDITIONING POTABLE HOT WATER	MIC MILS
	FIG	FLAP GATE FILISHUR DE FIGURE FIRE HYDRINT	HWR HWS	LOW TEMPERATURE HEATING RETURN LOW TEMPERATURE HEATING SUPPLY	MIN MIS
		FINE HED FUEL LCAD AMPS	HWTR HYD	HIGH WATER HYDRAULIC, HYDRANT	MISC MJ
	FLC FLEX		HYDT HZ	HYDRANT HERTZ	ML MLW
	FLG FLR	CANGE(D), FLOORING	1		MLLW
	FL	FILTER, FILTRATE ORCE MAIN	·	– INTEGRAL CONTROL	MME MMH
	FI B FI H	FILTER MIXING BOX FLEXIBLE METAL HOSE	IA ICOM	INTERCOM	MO MOCP
	FND Q	FOUNDATION FAIL OPEN, FIBER OPTIC	ID IF	INSIDE DIAMETER INSIDE FACE	MOD MOP
	FOC FOW	FACE OF CONCRETE, FACE OF CURB FACE OF WALL	IL IMC	INDICATING LAMP, INSTRUMENT LOOP, INTAKE LOUVER INTERMEDIATE METAL CONDUIT	MON MOV
	FP FPB	FIRE PROTECTION, FILTER PRESS FAN POWERED BOX	IN INC	INCH INCORPORATION	MPC MPH
	FPC FPI	FLEXIBLE PIPE COUPLING FINS PER INCH	INCAND INF	INCANDESCENT INFLUENT	MS MSDS
	FPM FPS	FEET PER MINUTE FEET PER SECOND	INFO INJ	INFORMATION INJECTOR	MSG MSP
	FRS FPU	FREEZESTAT FLUID POWER UNIT	INS INST	INSULATE(D)(ION) INSTANTANEOUS	MSS MTD
	FR FRP	FRAME FIBERGLASS REINFORCED PIPE / PLASTIC	INSTR INSUL	INSTRUMENTATION INSULATION	MTG MTL
	FRT FS	FIRE RETARDANT TREATED FAR SIDE, FINE SCREENINGS, FINISHED SURFACE,	INT INTER	INTERIOR INTERMEDIATE	MTS MTWR
	FSE	FLOTATION SLUDGE FINE SCREEN EFFLUENT	INTLK INV	INTERLOCK INVERT	MTWS MUL/DIV
	FT FTG	FEET, FOOT FOOTING	I/O IPB	INPUT/OUTPUT INSTRUMENT PULLBOX	MUX MV
	FTGS FUR	FITTINGS FURNACE	IRRIG IT	IRRIGATION INSTRUMENT TAP	MVD MVMC
	FUT FW	FUTURE FILTERED WATER	<u>J</u>		MW MX
	<u>G</u>		JAN	JANITOR	MZ
	G	GUTTER, GATE, GAS	JB JCT	JUNCTION BOX JUNCTION	
	GA GAL	GAUGE GALLON GALVANIZED	JST JT	JOIST JOINT	
	GALV GAS	GALVANIZED GASOLINE GAS VAROR RETURN	JWR JWS	JACKET WATER RETURN JACKET WATER SUPPLY	
	GAV GB	GAS VAPOR RETURN GRADE BREAK GENERAL CONTRACTOR GAS CIRCUI ATION			
	GC GD GDR	GENERAL CONTRACTOR, GAS CIRCULATION GUARD GRINDER, GROUNDING RESISTOR			
	GUR	GANNULIA, GAOUNUNING RESISTOR			

3

(1000 POUNDS) 1000 CIRCULAR MIL KILOGRAM KILOLITER KNOCK OUT KILOVOLT KILOVOLT AMPERE KILOVAR, KILOVOLT AMPERE REACTIVE KILOWATT KILOWATT HOUR

LENGTH, LONG, ANGLE LAMINATED LEAVING AIR TEMPERATURE, LATERAL, LATITUDE LAVATORY POUND(S) LIGHTING CONTRACTOR LOCAL CONTROL PANEL LOCAL CONTROL STATION LIGHT EMITTING DIODE LIGHT FIXTURE, LINEAR FEET LONG, LARGE LOW VOLTAGE HANDHOLE LIQUID LIME, LIVE LOAD LONG LEG HORIZONTAL LONG LEG VERTICAL LOW VOLTAGE MANHOLE LUBRICATING OIL LOCATION LONGITUDINAL LUBE OIL RETURN LOCKOUT STOP, LUBE OIL SUPLY TO LOCKOUT TAG OUT LUBE OILD WASTE LOW PRESSURE, LIGHTING PANEL, LOW POINT LOW POINT ELEVATION LOW PRESSURE SLUDGE GAS LONG TIME SHORT TIME INSTANTANEOUS GROUND FAULT LONG TIME, LEFT LIGHTING LOW VOLTAGE LEAVING LEVEL LOUVER LOWER

METER, MOTOR MILLIAMPERE MAINTENANCE MALLEABLE MANUAL(LY) MAXIMUŃ THOUSAND BTU'S PER HOUR MANUAL BYPASS SWITCH MINIMUM CIRCUIT AMPS MOTOR CONTROL CENTER MOTOR CIRCUIT PROTECTOR MOTORIZED DAMPER MECHANICAL MISCELLANEOUS ELECTRICAL EQUIPMENT MEMBRANE MEZZANINE MANUFACTURE(R) MANUFACTURED MILLION GALLONS, MIXED GAS MILLION GALLONS PER DAY MILLIGRAMS PER LITER MANAGER MANHOLE, METAL HALIDE MEAN HIGH HIGH WATER MALLEABLE IRON MICROPHONE 1/1000 OF AN INCH MINIMUM, MINUTE MANAGEMENT INFORMATION STATION MISCELLANEOUS MECHANICAL JOINT MILLILITER, MIXED LIQUOR MEAN LOW WATER MEAN LOWER LOW WATER MILLIMETER MISCELLANEOUS MECHANICAL EQUIPMENT MEDIUM VOLTAGE MANHOLE MASONARY OPENING, MOTOR OPERATOR MAXIUMUM OVERCURRENT PROTECTION MODULUS, MODIFICATIONS MOTOR OPERATOR MONUMENT MOTOR OPERATED VALVES MINI POWER CENTER MILES PER HOUR MIXED SLUDGE MATERIAL SAFETY DATA SHEET MEDIUM PRESSURE SLUDGE GAS MOTOR STARTER PANEL MANUFACTURERS STANDARDIZATION SOCIETY MOUNTED MOUNTING METAL, MATERIAL MANUAL TRANSFER SWITCH MEDIUM TEMPERATURE HEATING RETURN MEDIUM TEMPERATURE HEATING SUPPLY L/DIV MULTIPLY/DIVIDE MULTIPLEXER MEDIUM VOLTAGE MOTORIZED VOLUME DAMPER MEDIUM VOLTAGE MOTOR CONTROL MONITORING WELL MIXER MULTIZONE UNIT



				2
	N		Р	
	<u></u>	—	•	—
	Ν	NEUTRAL, NORTH	PT	POTENTIAL TRANSFORMER, PRESSURE TREATED,
	NA	NONAUTOMATIC, NOT APPLICABLE		POINT OF TANGENCY
	NBS	NATIONAL BUREAU OF STANDARDS	PTD	PAINTED
	NC	NORMALLY CLOSED, NOISE CRITERIA	PV	PLUG VALVE, PROCESS VARIABLE
	ND	NOMINAL DIAMETER	P-VAC	VACUUM PUMP
	NE	NORTHEAST	PVC	
	NEG		PVI	POINT OF VERTICAL INTERSECTION
	NF NG	NONFUSED, NEAR FACE NATURAL GAS	PVL PVT	PRESSURE VESSEL PAVEMENT
	NIC	NOT IN CONTRACT	PW	POTABLE WATER
	NL	NAIL	PWR	POWER
	NO	NORMALLY OPEN, NUMBER		
D	NOM	NOMINAL	Q	
	NP	NAMEPLATE		
	NPS	NOMINAL PIPE SIZE	Q	RATE OF FLOW
	NPSH	NET POSITIVE SUCTION HEAD	QCPLG	QUICK COUPLING
	NPT		QSB	
	NPW NRC	NON-POTABLE WATER NOISE REDUCTION COEFFICIENT	QTY	QUANTITY
	NRS	NORSE REDUCTION COEFFICIENT	R	
	NS	NEAR SIDE	<u>IX</u>	—
	NTS	NOT TO SCALE	R	RADIUS, RISER
	NW	NORTHWEST	RA	RETURNAIR
			RAF	ROLL TYPE AIR FILTER
	<u>0</u>		RAS	RETURN ACTIVATED SLUDGE
	04		RB	RESILIENT BASE
	OA OAI	OUTSIDE AIR, OVERALL OUTSIDE AIR INTAKE	RC RCA	REINFORCED CONCRETE RECIRCULATED AIR
	OB	OPPOSED BLADE	RCP	REINFORCED CONCRETE PIPE, REFLECTED CEILING PLAN
	OBD	OPPOSED BLADE DAMPER	RD	ROOF DRAIN, ROUND
	OC	ON CENTER	RDWY	ROADWAY
	000	ODOR CONTROL CONDENSATE, OPERATION CONTROL CENTER	REC	RECEIVER, RECYCLE
	OCEW	ON CENTER EACH WAY	RECD	RECEIVED
	OD		RECIRC	RECIRCULATION
	OF		RECP	RECEPTACLE
	OFC OFE	OVERFLOW CHEMICAL OWNER FURNISHED EQUIPMENT	RED REF	REDUCE(R) REFERENCE, REFER
	OH	OVERHEAD, OPPOSITE HAND	REG	REGULATOR
	OIS	OPERATOR INTERFACE STATION	REINF	REINFORCE(D), REINFORCING
	OL	OVERLOAD	REM	REMOVE, REMOVABLE
	OLP	OXYGEN LOW PRESSURE	REQD	REQUIRED
	O/O	OUT TO OUT	RES	RESISTOR
	OPNG	OPENING	RESIL	RESILIENT
	OPP		RE-STL	REINFORCING STEEL
С	O/R		RET	
•	ORD ORF	OVERFLOW ROOF DRAIN ODOR REMOVAL FILTER	REV RF	REVISED, REVISION
	ORP	OXIDATION REDUCTION POTENTIAL	RG	RAISED FACE, RETURN FAN, ROOF RETURN GRILLE
	ORT	ODOR REMOVAL TOWER	RGS	RIGID GALVANIZED STEEL
	ORU	ODOR REDUCTION UNIT	RH	RELATIVE HUMIDTY
	O/S	OFFSET	RHC	REHEAT COIL
	OS	OVERFLOW SCUPPER	RL	REDUCED LEVEL
	OSA	OUTSIDE AIR	RLA	RELIEF AIR
	OT	OIL TIGHT	RM	ROOM
	OUT		RMS	ROOT MEAN SQUARE
	OWS	OPERATOR WORKSTATION	RND RO	ROUND ROUGH OPENING
	Р		RP	REDUCED PRESSURE BACKFLOW PREVENTER, RADIUS POINT
	<u>•</u>	-	RPT	RECTIFIED PORCELAIN TILE
	Р	PUMP, PHASE, PROCESS, POLE	RPM	REVOLUTIONS PER MINUTE
	P&ID	PROCESS AND INSTRUMENTATION DIAGRAM	RR	RAILROAD
	PAR	PARALLEL, PARAGRAPH	RS	RAW SEWAGE, ROOF SCUPPER
	PART	PARTITION	RT	RIGHT, RECTANGULAR TUBE
	PB	PUSHBUTTON PANELBOARD	RTD RTU	RESISTANCE TEMPERATURE DETECTOR
	PBD PBE	PANELBOARD PLAIN BOTH ENDS	RVSS	REMOTE TERMINAL UNIT REDUCED VOLTAGE SOLID STATE STARTER
	PC	PLAIN CONCRETE, PIPE COUPLING, PRECAST,	R/W	RIGHT OF WAY
	10	POINT OF CURVATURE, PERSONAL COMPUTER	RW	RAW WATER
	PCC	PLANT CONTROL CENTER, PORTLAND CEMENT CONCRETE	RWP	RAINWATER PIPE
	PCF	POUNDS PER CUBIC FOOT	RWR	RECLAIMED WATER
	PCHV	PINCH VALVE		
	PCP	PLAIN CONCRETE PIPE, PROCESS CONTROL PANEL	<u>S</u>	
	PCS PC-T	PIECES PIPE COUPLING TO TAKE TENSION	6	
	PD	PUMPED DRAINAGE, PROCESS/PLANT DRAIN, PRESSURE DROP	S SA	SOUTH, SILENCER SERVICE AIR, SUPPLY AIR, SURGE ARRESTOR
	PDR	PROCESS/PLANT DRAIN RECYCLE	SAN	SANITARY SEWER
V21.rvt B	P/E	PNEUMATIC/ELECTRICAL CONVERTER	SB	SIGNAL BOX
21. B	PE	PLAIN END, PRIMARY EFFLUENT, POLYETHYLENE,	SCD	SCUPPER DRAIN
≍ [□]		PHOTO-ELECTRIC CELL	SCF	STANDARD CUBIC FEET PER MINUTE
لم'	PEN	PENETRATION(S)	SCH	SCHEDULE
Ц. Ц	PERF	PERFORATED POWER FACTOR, PRESSURIZED FLOW	SCN	SCREEN (BAR, ETC.)
GENERAL	PF PG	PRESSURE GAUGE	SCR	SCRUBBER, SILICON CONTROLLED RECTIFIER, STEAM CLEAN RINSE
۳. B	PH	PHASE	SCR'D	SCREWED
	PJF	PREMOLDED JOINT FILLER	SCS	STEAM CLEAN SUPPLY
911	PI	POINT OF INTERSECTION, PRIMARY INFLUENT	SD	SANITARY DRAIN, SPLITTER DAMPER, SMOKE DETECTOR
Receiving Station/159111 	PIVC	POINT OF INTERSECTION ON VERTICAL CURVE	SDG	SULFUR DIXIDE GAS
u	PL PLAM	PROPERTY LINE, PIPELINE, PLATE PLASTIC LAMINATE	SDL	SULFUR DIOXIDE LIQUID
tati	PLAM PLAS	PLASTIC LAMINATE PLASTER, PLASTIC	SDS SDV	SULFUR DIOXIDE SOLUTION, SAFETY DATA SHEET
S	PLBG	PLUMBING	SE	SOUTHEAST, SECONDARY EFFLUENT
vin	PLC	PROGRAMMABLE LOGIC CONTROLLER	SEC	SECONDARY
Ceiv	PLCS	PLACES	SECT	SECTION
Zer Zer	PLE	PLAIN LARGE END	SEL	SELECTOR
	PLW	PLANT WATER	SEP	SEPARATOR, SEPTAGE
Õ	PLY PMM	PLYWOOD POWER METERING MODULE	SF	SQUARE FOOT(FEET), SUPPLY FILTER, SUPPLY FAN,
AF	PNE	POWER METERING MODULE PNEUMATIC CONVEYANCE	SG	SILT FENCE SUPPLY GRILLE, SLUICE GATE-MANUAL
С С	PNL	PANEL, PANELBOARD	SGS	SCREENINGS
\geq	POC	POINT OF CURVE, POINT OF CONNECTION	SHC	SODIUM HYPOCHLORITE
⊥ Z	POL	POLYMER (NEAT), POLISHED	SHH	SIGNAL HANDHOLE
- GNHWPCA FOG	POLS	POLYMER SOLUTION	SHT	SHEET
	POP	PNEUMATIC OPERATOR	SI	SPEED INCREASER
91	PP DDE		SIM	SIMILAR
15	PPE PPM	PERSONAL PROTECTIVE EQUIPMENT PARTS PER MILLION	SL SLG	SLOPE SLUDGE
//:0	PPM PR	PARTS PER MILLION PAIR	SLG SLR	SLUDGE SILENCER
36	PRCT	PRECAST	SLR	SIGNAL MANHOLE
Path: BIM 360://159111 V	PRD	PRESSURE RELIEF DAMPER	SMP	SAMPLE, SAMPLER
ā	PREFIN	PREFINISHED	SN	SCREEN, SUPERNATANT
A ath:	PRES	PRESSURE	SO	SLIP-ON
₽.	PRI	PRIMARY	SO2	SULFUR DIOXIDE
	PRM	PERMEATE	SOE	
Σ	PRS	PRESSURE REDUCING STATION	SOV	SOLENOID VALVE
ር በ	PRV	PRESSURE REGULATING (REDUCING) VALVE, PRESSURE RELIEF VALVE	SP SPCS	SPACE, SPACING, SET POINT, STATIC PRESSURE, STEEL PIPE SPACES
3:08:20	PS	PRIMARY SLUDGE	SPCS	SPACES SUMP PUMP DISCHARGE, SURGE PROTECTION DEVICE
80:	PSC	PRIMARY SCUM	SPEC	SPECIFICATION(S)
	PSE	PLAIN SMALL END	SPF	SCREW PRESS FEED
326	PSF	POUNDS PER SQUARE FOOT	SPG	SPACING
7/2(PSI	POUNDS PER SQUARE INCH	SPI	
11/7/2023	PSIA	POUNDS PER SQUARE INCH ABSOLUTE	SPKLR	FIRE SPRINKLER SYSTEM
	PSIG	POUNDS PER SQUARE INCH GAGE PIPE SLEEVE	SPKR SPL	SPEAKER SPLICE
<u></u>	DCI		1771	
ate	PSL PSV			STATIC PRESSURE STATION
ot Date:	PSL PSV	POP SAFETY VALVE	SPS SQ	STATIC PRESSURE STATION SQUARE
Plot Date:			SPS	

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<u>S</u>	_	<u>v</u>	
SR	SPEED REDUCER	V	VALVE, VENT, VOLT, VERTICAL, VAULT
SRT SRV	SOLIDS RETENTION TIME SAFETY RELIEF VALVE	VA VAC	VOLTAMPERE VACUUM, VOLTS ALTERNATING CURRENT
SS	SAFETT RELIEF VALVE STAINLESS STEEL, SPEED SELECTRO, SUSPENDED SOLIDS,	VAC	VACOUM, VOLTS ALTERNATING CORRENT VARIES, VARIABLE, VOLTAMPERE REACTIVE
	SAND SEPARATOR, SECONDARY SLUDGE	VAV	VARIABLE AIR VOLUME
SSC	SECONDARY SCUM	VBX	
SSK SSMH	SERVICE SINK SANITARY SEWER MAN HOLE	VC VCP	VERTICAL CURVE, VACUUM CONTACTOR, CHEMICAL VENT VENDOR CONTROL PANEL
ST	SHORT TIME, STEAM TRAP	VCT	VINYL COMPOSITE TILE
STA	STATION, STARTING AIR	VD	VOLUME DAMPER
STD STIFF	STANDARD, STORM DRAIN STIFFENER	VDC VEL	VOLTS DIRECT CURRENT VELOCITY
STL	STEEL	VERT	VERTICAL
STML	STEAM, LOW PRESSURE	VFD	VARIABLE FREQUENCY DRIVE
STMM	STEAM, MEDIUM PRESSURE	VFT	
STOR STP	STORAGE SHIELDED TWISTED PAIR	VIB VIF	VIBRATIONS VERIFY IN FIELD
STRG	STRONG	VLT	VAULT
STRUCT	STRUCTURE, STRUCTURAL	VND	VENDOR
SUB SUPT	SUBSTITUTE, SUBSTATION SUPPORT	VOL VP	VOLUME VAPOR PRESSURE, VACUUM PUMP, PETROLEUM VENT
SURF	SURFACE	VPI	VERTICAL POINT OF INTERSECTION
SUSP	SUSPEND(ED)	VSC	VARIABLE SPEED COUPLING
SV SVI	SOLENOID VALVE, SAFETY VALVE, SHEET VINYL SLUDGE VOLUME INDEX	VSL VSM	STEAM VENT, LOW PRESSURE STEAM VENT, MEDIUM PRESSURE
SW	SOUTHWEST, SOCKETWELD, SEAL WATER, SWITCH	VSIVI	VINYL TILE
SWBD	SWITCHBOARD	VTC	VEHICLE TRACKING CONTROL
SWGR		VTR	
SWR SY	SCRUBBER WATER RETURN SQUARE YARD	VWC	VINYL WALL COVERING
SYM SYS	SYMMETRICAL SYSTEM	<u>w</u>	-
т		W W/	WEST, WIDTH, WOMENS WATER, WASTE, WATT, WIRE WITH
	—	WAS	WASTE ACTIVATED SLUDGE
T T/	TOP, TANGENT, TREAD, TANK, TRAP	WCO	
T/ TA	TOP OF TRANSFER AIR	WCS WD	WASTE CLEANING SOLUTION WOOD
TAB	TEST AND BALANCE	WE	WATER ELEVATION
T&B		WEG	
T/B TB	TOP OF BANK TERMINAL BOX	WER WF	WALLEXHAUSTERZEISTER
TBE	THREADED BOTH ENDS	WG	WIDEFLAGE WHITER GAUGE, WITH GROUND
TBN	TURBINE	WH	WATER SATER
T/C TCE	TOP OF CURB, TOP OF CONCRETE TEMPORARY CONSTRUCTION EASEMENT	WHP	WATTER SÕURCE HEAL PUNP VROUGHT IRON
TCL	TOTALLY CLOSED		W TER LINE
тсом	TELECOMMUNICATIONS	WN	WATER METER, WATER MAIN
TCP	TEMPERATURE CONTROL PANEL	ML	WASTE MIKED LIGION
TD TE	TANK DRAIN, TEMPERATURE DIFFERENCE, TIME DELAY TOTALLY ENCLOSED, THICKENER EFFLUENT	W D	WITHOUT WELDOLET
TEC	THICKENDED EDGE CONCRETE	WP	WONKING POINT, WEATHERPROOF, WATER PROOFING
TEL		J	WEAKENED PLANE JOINT
TEMP TFR	TEMPERED, TEMPORARY, TEMPERATURE	WR WS	WASHROOM WATER SURFACE
T&G	TONGUE & GROOVE	WSR	NALL SUPPLY REGISTER, WATER SOFTENER UNIT
THK	THICK	WSP	WELDED STEEL PIPE
THD THRESH	THREAD (ED) THRESHOLD		WATERSTOP WATERTIGHT, WEIGHT
THRU	THROUGH		WATER VALVE
THS	THICKENED SLUDGE		WIREWAY
TI TMR	TEMPERATURE INDICATOR TIMER	WF	WELDED WIRE FABRIC, WET WEATHER FLOW
TO		X	
тос	TOP OF CONCRETE, TOP OF CURB		
TOE	THREADED ONE END	XFMR	TRANSFORMER
TOF TOG	TOP OF FOOTING TOP OF GRATING	XMTR XP	TRANSMITTER EXPLOSION PROOF
TOM	TOP OF MASONARI	XPS	EXFLUSION FROOF EXTRUDED POLYSTYRENE BOARD (INSULATION)
TON	TONS OF REFRIGERATION		
TOP TOS	TOP OF PIPE TOP OF STZEL	<u>Y</u>	<u> </u>
TOS		YCO	YARD CLEANOUT
TP	TANGENT PUNT, TRAVERSE, OINT	YD	YARD
TPD	TONS PERIDAL TO PING	YR	YEAR
TPG TPLX		z	
TR	STAIR THEAD, TIMING REPAIL	-	—
TRANS	RANSFER	Z	IMPEDANCE, ZERO
TRI TS	TRIAD TEMPERATURE SWITCH TUBE STEEL, TOTAL SOLIDS,	ZN ZRC	ZINC ZINC RICH COATING
$\mathbf{\Lambda}$	TRANSFER SLUDGE	2110	
TSC	THICKEN D SOUM	1	
TSE	THRE DED MALL END TOTAL STATE PRESSURE	1\//	
тя	TOTAL SUSPENDED SOLIDS	1W 1WS	POTABLE WATER (CITY WATER) POTABLE SOFT WATER
STAT	HENMOSTAT		
TV TVSS	TULEVISION	2	
TW TW	TEMPERED WATER	2W	NONPOTABLE CITY WATER
TWAS	VICKENED WASTE ACTIVATED SLUDGE	2WHP	NO. 2 WATER HIGH PRESSURE
TYP	TYPICAL	2WL	LANDSCAPE IRRIGATION
U		2WS	SOFTENED NONPOTABLE CITY WATER
	—	3	
UBX		-	
UG UH	UNDERGROUND UNIT HEADER	3W 3WHP	NO. 3 WATER (SECONDARY EFFLUENT) NO. 3 WATER HIGH PRESSURE
UL	ULTIMATE LOAD, UNDERWRITERS LABORATORY	3WHP 3WLC	NO. 3 WATER HIGH PRESSURE NO. 3 WATER LOW PRESSURE CHLORINATED
UN	UNION	3WLP	NO. 3 WATER HIGH PRESSURE
UON UP	UNLESS OTHERWISE NOTED UTILITY POLE	3WS	NO. 3 SPRAY WATER
UPS	UNINTERRUPTABLE POWER SUPPLY		
U/S	UNDERSIDE		
US			
USS UTIL	UNIT SUBSTATION UTILITIES		

4

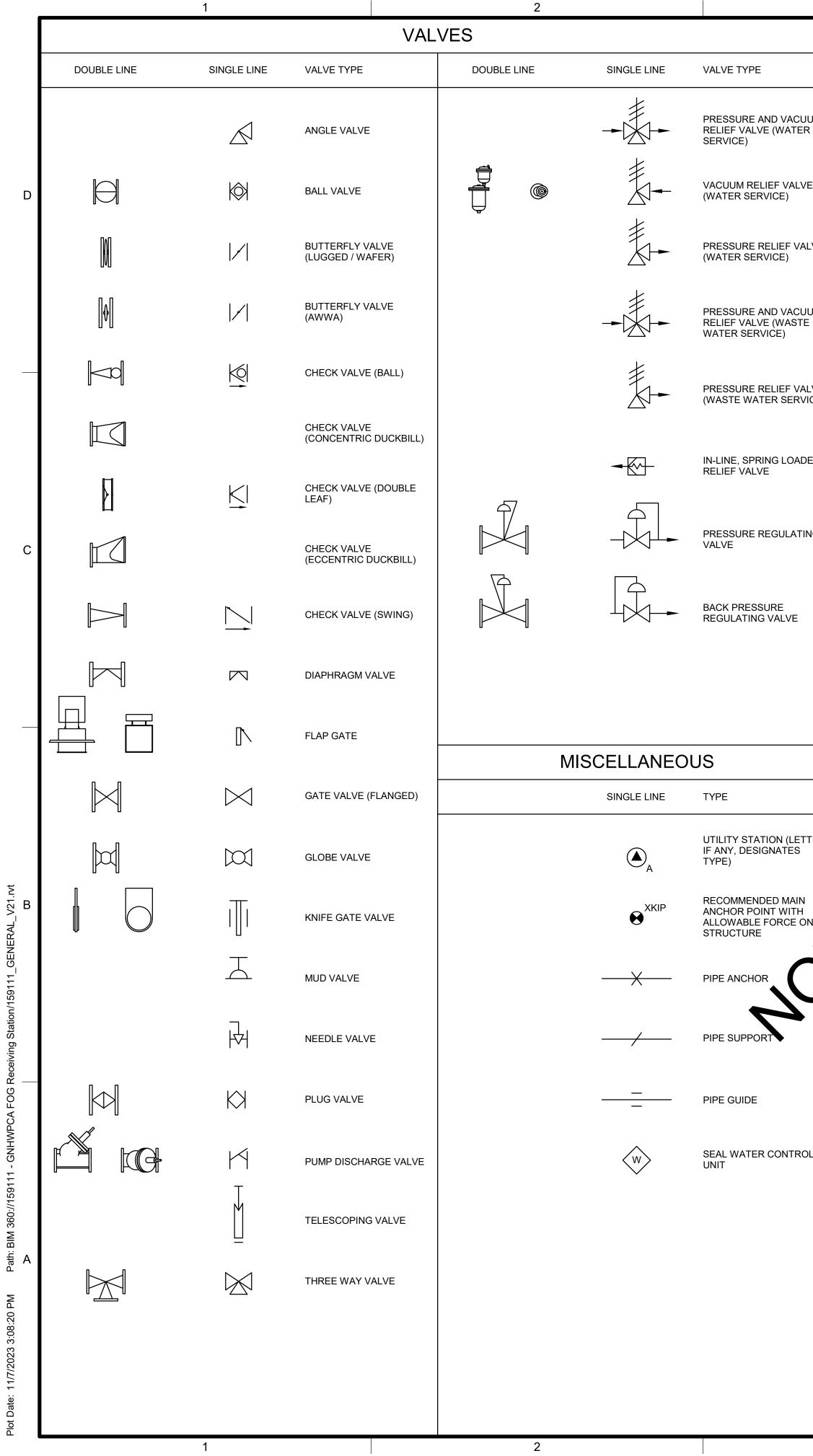
- UTILITY STATION UNIT SUBSTATION UTILITIES

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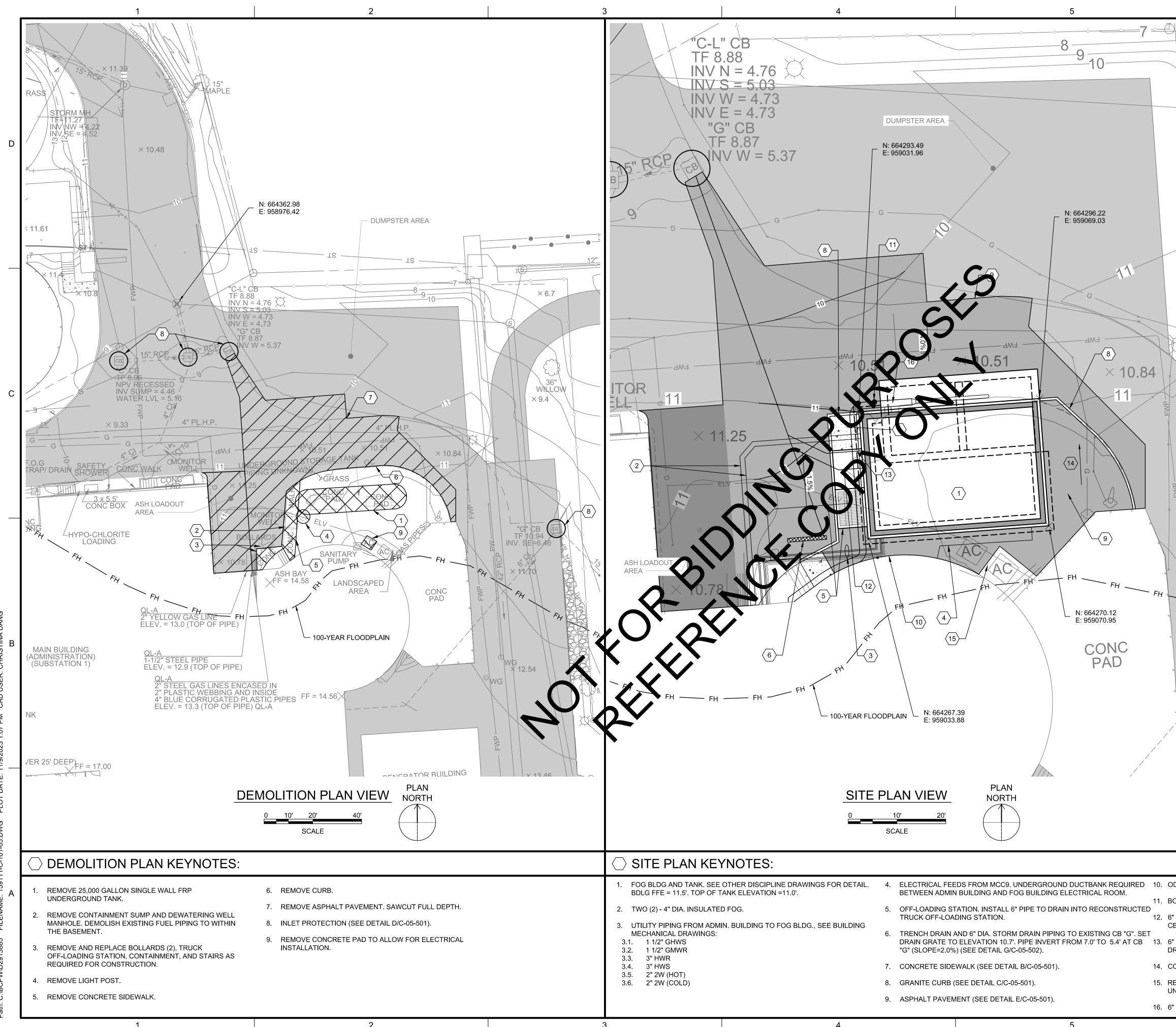
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	Brown AND Caldwell O Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	
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1	GNHWPCA Protecting the Environment	
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		MECHANICAL PIF	E AND FITTING	GS			A	CTUATOR	S	
DOUBLE LINE	SINGLE LINE	FITTING TYPE	DOUBLE LINE	SINGLE LINE	FITTING TYPE	DOUBLE I		SINGLE LINE	ACTUATOR TYPE	Brown AND Caldwell
		FLANGED JOINT			ELBOW (PLAN)			s X	SOLENOID VALVE	ENVIRONMENTAL ENGINEERING AND CONS 200 Brickstone Sq Ste 403, Andover, MA 01 (978) 794-0336
	——————————————————————————————————————	PLAIN OR GROOVED END MECHANICAL COUPLING PUSH ON OR BALL AND		∣ ⊙ ∔	ELBOW UP			$\widehat{\top}$	DIAPHRAGM OPERATED VALVE	
	<u> </u>	SOCKET JOINT		C+	ELBOW DOWN			φ	PRESSURE BALANCE OPERATED VALVE	
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_		GROOVED END ADAPTER FLANGE x FLANGE		+0+	TEE UP			M	MOTOR OPERATED VALVE LOW TORQUE	
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		RESTRAINED FLANGED COUPLING ADAPTER			CONCENTRIC REDUCER				HANDLE (TEE)	NOVEMBER 2023
		ELASTOMER AND ABRIC EXPANSION JOINT			ECCENTRIC REDUCER		\bigcirc		HANDLE (WHEEL)	GNHWPC/ Protecting the Environme
		EXPLINSION JOINT (SEF SIECTEOR TYPE)			BLIND FLANGE OR CAP				GEAR BOX (HANDLE)	
		EQUIPMENT CONNECTION		$\xrightarrow{\times} \vdash$	TRUE WYE				GEAR BOX (CHAIN WHEEL)	IMPROVING FATS OIL
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	GENERAL NOTES:	Brown AND .	
+	 CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AS REQUIRED FOR CONSTRUCTION PRIOR TO MAKING SUBMITTALS. NO PROJECT SPECIFIC SURVEY WAS CONDUCTED DURING DESIGN. 	Caldwell ENVIRONMENTAL ENGINEERING AND CONSULTING	
	 OWNER PROVIDED DRAWINGS AS SOURCE FOR EXISTING INFORMATION. HORIZONTAL DATUM: CONNECTICUT COORDINATE SYSTEM NAD 83. VERTICAL DATUM: NAVD 88. 	200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	
,	3. PROTECT EXISTING UTILITIES DURING CONSTRUCTION.		D
	4. SEE SPECIFICATIONS FOR ALL NEW PIPE MATERIAL AND REQUIREMENTS.		
	 FOUR (4) POINTS PROVIDED AT THE FOG BUILDING STRUCTURE. POINTS DENOTE THE AT GRADE, OUTSIDE CORNERS OF THE CONCRETE FOUNDATION. MEASURED 37'-2" x 26'-2". 		
\sim	 ALL MATERIALS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, GNHWPCA STANDARD SPECIFICATIONS AND THE CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS. 		
	7. CONTRACTOR TO MAINTAIN ACCESS TO THE ASH LOADOUT AREA AT ALL TIMES UNLESS AN IMPEDIMENT IS FORMALLY REQUESTED AND APPROVED.		
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	CONTROL DUCTWORK.		
	RDS (4) (F/C-05-502).		A
B "G".		FOG BUILDING DEMOLITION AND	
RAINI	BURIED ROOF DRAIN CONNECTED TO STORM DRAIN PIPING ING TO CB "G".	SITE PLAN	
	RACTOR TO SLOPE PAVEMENT AWAY FROM BUILDING. ORE EXISTING LANDSCAPE STONE AREA AROUND ELEVATED AC	DRAWING NUMBER	
" FOG	QUICK CONNECT.	7 SHEET NUMBER 111	



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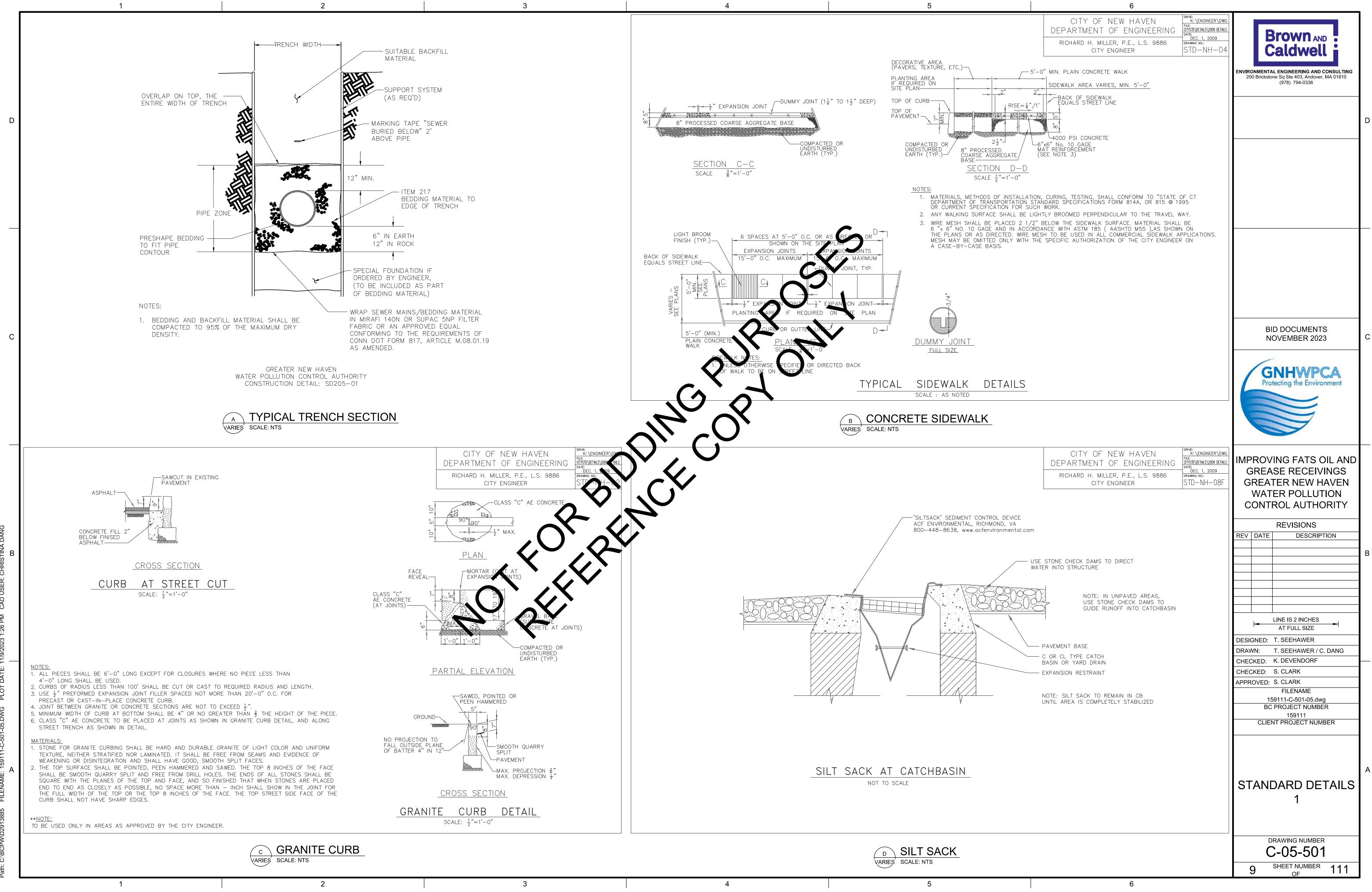
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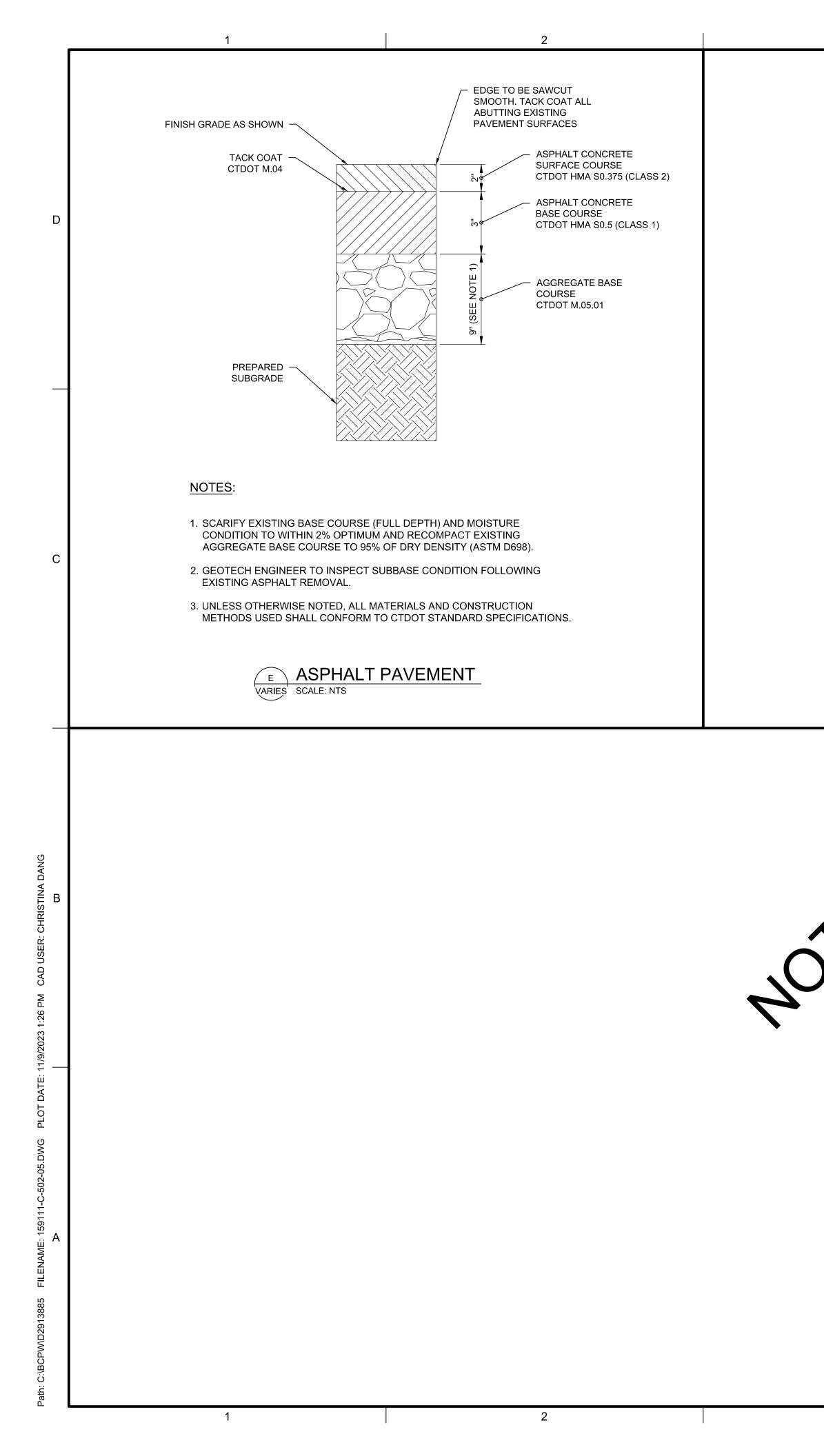
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GENERAL NOTES:

- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AS REQUIRED FOR CONSTRUCTION PRIOR TO MAKING SUBMITTALS. NO PROJECT SPECIFIC SURVEY WAS CONDUCTED DURING DESIGN.
- 2. OWNER PROVIDED DRAWINGS AS SOURCE FOR EXISTING INFORMATION. 2.1. HORIZONTAL DATUM: CONNECTICUT COORDINATE
- SYSTEM NAD 83. 2.2. VERTICAL DATUM: NAVD 88.
- 3. PROTECT EXISTING UTILITIES DURING CONSTRUCTION.
- 4. SEE SPECIFICATIONS FOR ALL NEW PIPE MATERIAL AND REQUIREMENTS.
- 5. FOUR (4) POINTS PROVIDED AT THE TANK SLAB STRUCTURE. POINTS DENOTE THE AT GRADE, OUTSIDE CORNERS OF THE CONCRETE SLAB. MEASURED 15' x 45'.
- ALL MATERIALS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, GNHWPCA STANDARD SPECIFICATIONS AND THE CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.







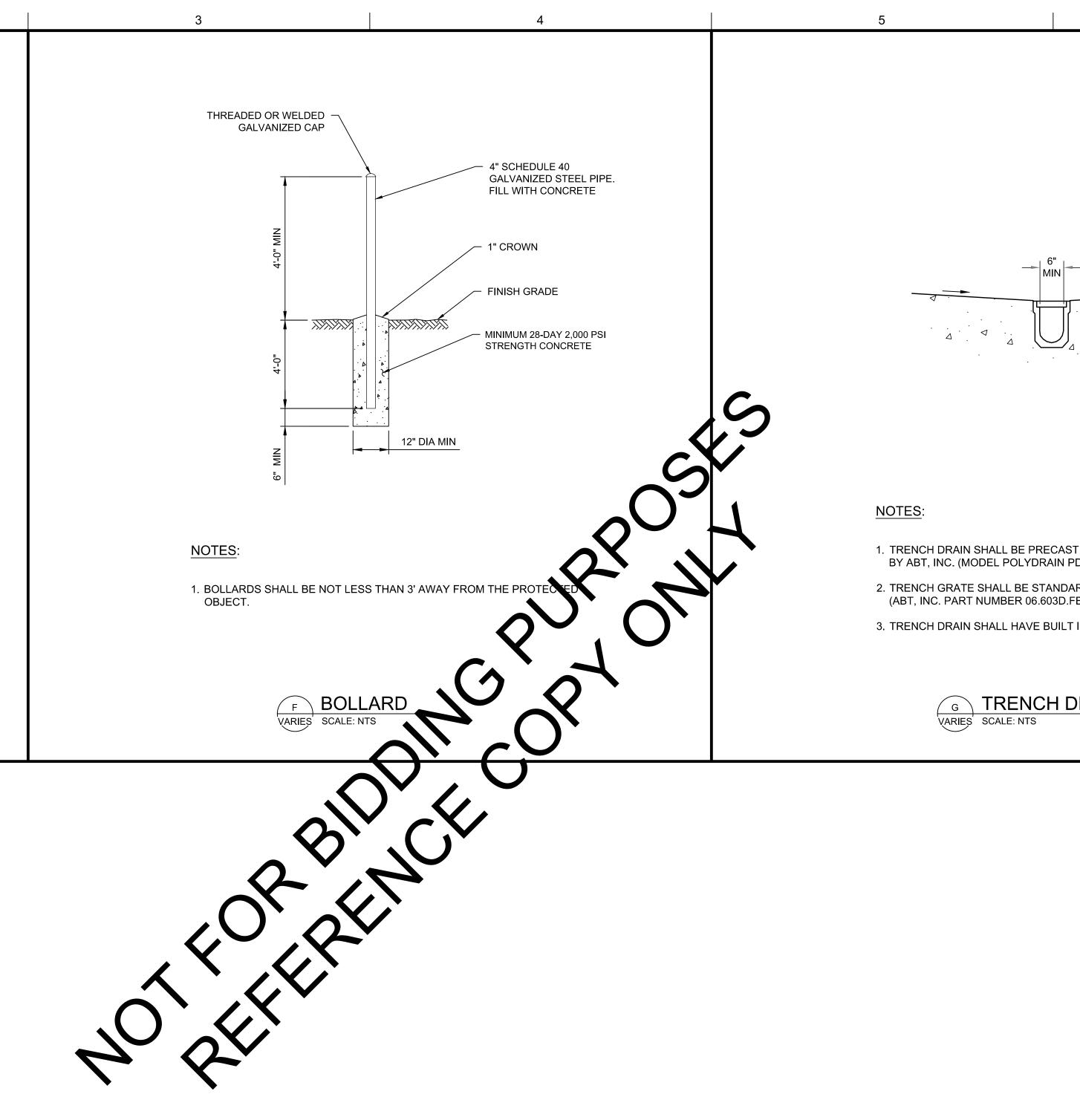


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T CONCRETE DRAINAGE CHANNEL AS DX) OR EQUAL. RD SLOTTED TRAFFIC BEARING GRATE B) OR EQUAL. IN SLOPE OF 0.5% MIN.	BID DOCUMENTS NOVEMBER 2023 C
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	C-05-502 10 SHEET NUMBER 111

1	2 3	4	5
GENERAL	FOUNDATION	GROUT	ALUMINUM
G 1 SCOPE THE GENERAL NOTES AND STANDARD DETAILS ARE GENERAL AND APPLY TO THE EN PROJECT EXCEPT WHERE THERE ARE SPECIFIC INDICATIONS TO THE CONTRARY.	RECEIVING STATION & FUEL STORAGE TANK RELOCATION EAST SHORE WATER	GR 1 PRECISION NON-SHRINK CEMENT GROUT FOR STRUCTURAL STEEL COLUMNS AND TRUSS BEARING BASE PLATES: MASTERFLOW 928 GROUT OR EQUAL APPROVED BY OWNER.	A 1 APPLICABLE CODE ALUMINUM C DESIGN MAN
G 2 PRECEDENCE IF THERE IS A CONFLICT BETWEEN PROJECT SPECIFICATIONS AND STRUCTURAL DRAWINGS, INCLUDING STRUCTURAL NOTES, CONTACT THE STRUCTURAL ENGINEER		GR 2 EQUIPMENT GROUTING SEE MECHANICAL SPECIFICATIONS AND SPECIFICATION SECTION 03 60 00, GROUT.	A 2 MATERIAL 1. ALUMIN 2. ALUMIN
RECORD FOR CLARIFICATION. SPECIFIC NOTES AND DETAILS ON DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. G 3 DIMENSIONS	RECOMMENDATIONS FOR RESOLUTION. F 2 GROUNDWATER AND FLOOD DESIGN ELEVATIONS HIGH GROUNDWATER EL12 FT.	GR 3 EPOXY ADHESIVE GROUT AT ANCHORS INTO CONCRETE: HILTI HIT-RE 500v3 EPOXY ADHESIVE ANCHOR SYSTEM BY HILTI INC. OR EQUAL APPROVED BY ENGINEER OF RECORD. INSTALLERS OF HORIZONTAL OR UPWARDLY INCLINED ADHESIVE ANCHORS SHALL BE CERTIFIED IN ACCORDANCE WITH THE ACI / CRSI ADHESIVE ANCHOR	3. ALUMIN 4. ALUMIN TREAD
STRUCTURAL DIMENSIONS CONTROLLED BY OR RELATED TO THE MECHANICAL OR ELECTRICAL EQUIPMENT AND DIMENSIONS RELATED TO EXISTING FACILITIES SHALL E VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CONSTRUCTION DIMENSIONS AND NOTIFYING CONSTRUCTION MANAGER OF DISCREPANCIES IN A TIMELY FASHION.	ALL NEW FOUNDATIONS AND SLAB ON GRADE FLOORS SHALL BE SUPPORTED ON	INSTALLER CERTIFICATION PROGRAM. GR 4 MASONRY ADHESIVE ANCHORS: HILTI HIT-HY 270.	A 3 DISSIMILAR MATERI WHERE ALUM SURFACE SH PAINT.
G 4 PROVISIONS FOR EQUIPMENT MECHANICAL AND ELECTRICAL EQUIPMENT SUPPORTS, ANCHORAGES, OPENINGS, RECESSES AND EMBEDMENTS NOT SPECIFIED ON THE STRUCTURAL DRAWINGS, BUT SPECIFIED ON OTHER CONTRACT DRAWINGS, SHALL BE PROVIDED PRIOR TO CASTIN CONCRETE.		DOWELS DL 1 LOCATE HOLES IN EXISTING CONCRETE TO MISS MAIN REINFORCING BARS, STIRRUPS, AND EMBEDMENTS. THIS MAY INVOLVE RELOCATING DOWELS FROM POSITIONS SHOWN. NOTIFY THE OWNER OF ANY DOWEL RELOCATIONS. PRIOR TO DRILLING HOLES, FIELD VERIFY AND MARK THE LOCATION OF NEARBY EXISTING REINFORCING BARS, STIRRUPS AND EMBEDMENTS USING A PACHOMETER. IF THEY ARE HIT DURING DRILLING, NOTIFY THE OWNER.	ALUMINUM GRATING AG 1 UNLESS OTHERWIS AG 2 ALUMINUM GRATIN SEE STANDARD DE
G 5 MEANS, METHODS & CONSTRUCTION LOADS CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE CONTRACTOR IS RESPONSIBLE FOR MEANS, METHODS AND SEQUENCE OF CONSTRUCTION. AND SHALL MAKE ADEQUATE PROVISION TO MAINTAIN THE INTEGRI	PROVIDE ALL CRIBBING, SHORING, AND BRACING REQUIRED FOR SAFETY AND TO ALLOW	DL 2 CLEAN AND PREPARE HOLES IN ACCORDANCE WITH THE EPOXY MANUFACTURER'S RECOMMENDATIONS. AS A MINIMUM, BLOW COMPRESSED OIL-FREE AIR FROM THE BOTTOM OF HOLE TOWARDS THE SURFACE. DRY AND CLEAN HOLE OF CONTAMINANTS.	DRAWINGS. THE M STAIR LANDINGS A AG 3 ALUMINUM GRATIN SELF-TAPPING STA
OF ALL STRUCTURES AT ALL STAGES OF CONSTRUCTION. DETERMINATION OF AND PROVISIONS FOR CONSTRUCTION LOADING SHALL BE PROVIDED BY THE CONTRACTO G 6 SAFETY		DL 3 PRESSURE GROUT ALL HOLES DEEPER THAN TWO FEET. SUBMIT PROCEDURE AND TECHNIQUE FOR PRESSURE GROUTING TO OWNER FOR APPROVAL PRIOR TO PLACING EPOXY.	ENGAGING TWO M DISTANCE BETWEE
CONTRACTOR SHALL TAKE ADEQUATE PRECAUTIONS TO ENSURE THE SAFETY OF WORKERS AND VISITORS TO THE SITE, INCLUDING BUT NOT LIMITED TO SHORING, BRACING AND ACCESS RESTRICTION. COMPLY WITH ALL FEDERAL, STATE AND LOCA SAFETY CODES AND STANDARDS.	ADDITIONALLY, BACKFILL SHALL BE BROUGHT UP UNIFORMLY ON BOTH SIDES OF FOUNDATION WALLS. SEE SPECIFICATION 31 23 00 FOR ADDITIONAL INFORMATION.	DL 4 FILL EACH HOLE WITH A SUFFICIENT AMOUNT OF EPOXY TO COMPLETELY URROUND THE DOWEL. INSERT THE DOWEL AFTER THE EPOXY IS PLACED IN THE HOLE. REINFORCED CONCRETE MASONRY	AG 4 ALL GRATING, INCL NOTED OTHERWISI ANCHORS
G 7 DRAINAGE SURFACES SLOPE DRAINAGE SURFACES UNIFORMLY TO DRAIN. SLOPE SHALL BE 1/8" TO 1/4" PE FOOT EXCEPT WHERE NOTED OTHERWISE ON THE PLANS.		MA 1 CONCRETE MASONRY UNITS (CMU) SHALL BE HOLLOV LOAD BEARING UNITS CONFORMING TO ASTM C90, MEDIUM WEIGHT.	AN 1 CAST-IN-PLACE DO ITEMS SUCH AS ST AN 2 DOWELS, ANCHOR
G 8 OPENINGS OPENINGS THROUGH NEW AND EXISTING WALLS AND SLABS FOR PIPES, DUCTS, CONDUITS, ETC., ARE NOT ALL SHOWN ON THE STRUCTURAL DRAWINGS. THE	C 1 APPLICABLE CODES CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 301-10 "SPECIFICATIONS FOR STRUCTURAL CONCRETE", AND THE FOLLOWING CODES: ACI 318-14 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" ACI 350-06 (FOR LIQUID CONTAINING STRUCTURES) - "CODE REQUIREMENTS FOR	 MA 2 SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE LASONRY (fm) = 2,000 PSI. MA 3 CMU WALLS SHALL BE SOLID GROUTED. MA 4 MORTAR SHALL BE TYPE S CONFORMINE TO ASTM C270. 	AN 3 POST-INSTALLED A A. MECHANICAL
CONTRACTOR SHALL COORDINATE WITH OTHER DISCIPLINES AND PROVIDE THESE OPENINGS IN ACCORDANCE WITH THE OTHER CONTRACT DOCUMENTS.	C 2 REINFORCING STEEL DETAILS ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, UNLESS	MA 4 MORTAR SHALL BE THE S CONFORMINGED AS IN 6210. MA 5 CMU AND MORTAR AT WEATHER ENCLOSURE WALLS ON AT ALECTRICAL CONTROL ROOMS IN HIGH MOISTURE ENVIRONMENT, SHALL CONTAIN "DRY BLOCK PMIXTURE" AS MANUFACTURED BY W.R. GRASE CO., AMOUNT PENDATIONUE, STURER'S RECOMMENDATION.	AS MFD BY H CONCRETE A B. MECHANICAI
DESIGN CRITERIA D 1 GOVERNING BUILDING CODE	OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH ACI DETAILING MANUAL (ACI SP-66), LATEST EDITION. C 3 DESIGN STRENGTH	MA 6 GROUT SHALL BE f'c = 2,019 PSI CONFORMING TO ACTIVE 476. MA 7 REINFORCING STEEL SHALL BE ASTM A615, GRADE 60 DEFORMED BARS.	HILTI, INC (O NOTED ON T C. EPOXY ADHE
CONSTRUCTION AND DESIGN SHALL BE IN ACCORDANCE WITH 2018 INTERNATIONAL BUILDING CODE. THIS CODE SHALL GOVERN EXCEPT WHERE OTHER APPLICABLE CO OR CONTRACT PROVISIONS ARE MORE RESTRICTIVE.	1. STRUCTURAL CAST-IN-PLACE CONCRETE EXCEPT AS NOTED IN ITEM 2	MA 7 REINFORCEMENT SHALL BE LAD FER OR TRUSS TYPE WIRE REINFORCING WITH 9 GAUGE SIDE AND CRUSS WIRES CONFORMING TO ASTM A951 AND A1064, AND HOT-DIP GALVANIZED PER ASTI I A153 ALASS B-2.	HILTI, INC (C DRAWINGS INSTALLATI ANCHOR TY
D 2 LIVE LOADS 1. TANKS	GRADE 60 DEFORMED BARS UNLESS OTHERWISE NOTED C 4 CONCRETE COVER CONCRETE COVER FOR REINFORCING BARS SHALL CONFORM TO ACI 350 AND AS FOLLOWS WITH MINIMUM COVER OF ONE BAR DIAMETER: 1. CONCRETE CAST AGAINST EARTH	MA 9 RUNNING BOND SHALL BE USED THROUGHOUT. MA 10 THE YOU'R USH MORTAX JUNITS THROUGHOUT, TOOLED CONCAVE.	- REINF - THRE HARDENED ASTM A36 U EXPOSED T CONDITION
D 3 SNOW LOADS GROUND SNOW LOAD	 CONCRETE CAST AGAINST EARTH	ST 1 ILL STRUCTULAL STEEL WORK SHALL BE IN ACCORDANCE WITH THE AISC SPECIFICATION FOR S RUCTURAL STEEL BUILDINGS" (AISC 360) AND AISC "CODE OF	- IF NO THIS SECTIO THE ANCHO
THERMAL FACTOR	C 5 BAR DEVELOPMENT AND LAP SPLICE LENGTH SEE TABLE AT THE END OF THESE STRUCTURAL NOTES. IN SLABS, BEAMS, GIRDERS AND HORIZONTAL REINFORCING AT WALLS, SPLICES OF ADJACENT REINFORCING STATES BARS	STANDARD PRACING, FOR STEEL BUILDINGS AND BRIDGES" (AISC 303). IN SEISMIC DESIGN CATEGORIES D, E AND F, THE PROVISIONS OF AISC 341, "SEISMIC PROVISIONS FOR STRECTURAL STEEL BUILDINGS", SHALL ALSO APPLY. ST 2, MATERIA S	AN 4 LOCATE HOLES IN EMBEDMENTS. TH CONSTRUCTION M MARK LOCATION (
D 4 WIND BASIC WIND SPEED (ULTIMATE)	SHALL BE STAGGERED AT LEAST ONE SPLICE LENGTH, UNLESS OTHERWISE SECIFIC C 6 WELDING REINFORCING BARS ALL REINFORCING TO BE WELDED SHALL CONFORM TO ASTM A706. REPAIL WELDING	STEEL WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992. OTHER STEEL SHAPES AND PLATES SHALL CONFORM TO ASTM A36. STRUCTURAL STEEL PIPE SHALL CONFORM TO ASTM A53 TYPES E OR S, GRADE B. STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM A500 GRADE B	PACHOMETER OR AN 5 CLEAN AND PREP. RECOMMENDATIC OF HOLE TOWARE
TOPOGRAPHIC FACTOR	SHALL BE IN ACCORDANCE WITH AWS D1.4. C 7 STANDARD HOOKS BARS ENDING IN RIGHT ANGLE BENDS OR HOOKS SHALL CONFORM TO THE DESCRIPTION OF ACLASS 11, DESCRIPTION OF ACLASS AND ADD WORK FOR A LEAD AND A DESCRIPTION OF A LEAD A DESCRIPTION OF A LEAD AND A DESCRIPTION A DESCRIPTION OF A LEAD AND A DESCRIPTION AND A DESCRIPTION OF A LEAD AND A DESCRIPTION A DESCRIPTION A DESCRIPTION AND A DESCRIPTION A DESCRIPTIO	 (Fy = 46 KSI). 3. ALL STAINLESS STEEL SHALL BE TYPE 316 MEETING ASTM A276 FOR BARS AND SHAPES, AND ASTM A240 FOR PLATES, UNLESS OTHERWISE SPECIFIED. ALL STAINLESS STEEL SHALL BE PASSIVATED PER ASTM A380. 	AN 6 FILL HOLE WITH S DOWEL / ANCHOR
MCE ACCELERATION, 1-SEC PERIOD	AT WALL OR SLAB EDGES / INTERSECTIONS THAT PROVID: LESS THAN THE SPECIFIED DEVELOPMENT LENGTH.	ST 3 WELDING 1. WELDING SHALL CONFORM TO AWS D1.1-1 AND AISC 341. 2. ELECTRODES FOR SHOP AND FIELD WELDS SHALL CONFORM TO AWS A5.1 OR A5.5,	
DESIGN ACCEL, 1-SEC PERIODSD1 = 0.086 (RISK CATEGORYRISK CATEGORYIIISEISMIC IMPORTANCE FACTORIIIEXCEPT FOR FIRE PROTECTION SYSTEM, EGRESS STAIRWAYS,AND COMPONIENTS CONTAINING LIAZADDOLISAND COMPONIENTS CONTAINING LIAZADDOLIS	EXCEPT AS OTHERWISE REQUIRED, EXPOSED CONCRETE CORNERS AND EDGES SHALL HAVE 3/4" CHAMFERS. RE-ENTRANT CORNERS SHALL NOT HAVE FILLETS.	 CLASS E70XX. 3. STAINLESS STEEL WELDING SHALL CONFORM TO AWS D1.6 WITH A5.4 OR A5.9 ELECTRODES. 	MINI-CAISSON (MIN MP-1 MINIPILES SHAI
AND COMPONENTS CONTAINING HAZARDOUS MATERIALS IP = 1.50 SEISMIC DESIGN CATEGORY	C 9 INSERTS PROVIDE ANCHORAGE INSERTS ON CONCRETE VALLS AND CONCRETE VEILINGS IN GALLERIES, PIPE CHASES, TUNNELS AS REQUIRED BY MECHANICAL AND ELECTRICAL INSTALLATIONS. USE UNISTRUT P320 SERVES NOT DIP GATIVANCED ON EQUAL UNLESS OTHERWISE SPECIFIED. C 10 COMPATIBLE FINISHES	ST 4 BOLTS STRUCTURAL BOLTS AT STEEL FRAMING SHALL BE GALVANIZED AND CONFORM TO ASTM A325N (TYPE 1) FOR CONNECTION OF GALVANIZED OR PAINTED FRAMING. HIGH STRENGTH BOLTS SHALL BE FULLY TENSIONED UNLESS CONNECTING HSS SHAPES OR OTHERWISE NOTED. STAINLESS STEEL TYPE 316 BOLTS SHALL BE USED FOR CONNECTION OF STAINLESS STEEL AND ALUMINUM FRAMING.	MP-2 LATERAL LOAD SPECIFICATION MP-3 LATERAL LOAD MP-4 PERFORM EAC
	CURING COMPOUNDS AND OTHER SURFACE TREATMENTS, CONCRETE ADMIXTURES AND SUB-SLAB DRAINAGE SHALL BE REVIEWED BY CONTRACTOR AND CERTIFIED COMPATIBLE WITH FINISHES TO BE APPLIED LATER IN THE CONSTRUCTION SEQUENCE.	ST 5 PAINTING STRUCTURAL STEEL SHALL BE PAINTED IN ACCORDANCE WITH SPECIFICATION. SHOP PRIMER SHALL BE COMPATIBLE WITH FINISH COATINGS. MONORAIL CAPACITIES SHALL BE PAINTED ON THE SIDE OF MONORAIL BEAMS.	MP-5 ALL LATERAL L PRODUCTION F MP-6 MONITOR EXIS
	C 11 VAPOR BARRIER BELOW SLAB ON GRADE VAPOR BARRIER, WHERE NOTED ON THE DRAWINGS, SHALL BE 10 MIL MINIMUM CLASS A OR B PLASTIC WATER VAPOR RETARDER PER ASTM E1745. INSTALL PER ASTM E1643. LAP JOINTS 6" AND SEAL WITH MANUFACTURER'S RECOMMENDED TAPE OR ADHESIVE.	METAL DECK	INFRASTRUCT MINIPILES, WIT SUBMIT TO EN ALLOWABLE M
	C 12 EXPOSED ENDS OF REINFORCING BARS AT SAWCUT OPENINGS IN EXISTING CONCRETE REMOVE REINFORCING BARS 1 1/2 INCHES BACK FROM FACE OF OPENING BY FLAME GOUGING. FILL HOLE AND REPAIR SURFACE WITH CONCRETE REPAIR MORTAR.	MD-1 COMPOSITE METAL FLOOR DECK DIAPHRAGMS SHALL COMPLY WITH CONNETICUT STATE BUILDING CODE AND THE STEEL DECK INSTITUTE'S "THIRD EDITION OF THE DIAPHRAGM DESIGN MANUAL."	0.5 INCH. REPA NO ADDITIONA
		MD-2 DECK PANELS AND ACCESSORIES SHALL BE INSTALLED ACCORDING TO THE SDI "MANUAL OF CONSTRUCTION WITH STEEL DECK", PLACEMENT PLANS, AND THE CONTRACT DRAWINGS.	
		MD-3 SHEET STEEL FOR DECK AND ACCESSORIES SHALL CONORM TO ASTM A653 STRUCTURAL QUALITY WITH A MINIMUM YIELD STRENGTH OF 33 KSI. METAL DECK SHALL BE GALVANIZED WITH A MINIMUM COATING CLASS OF G60.	
		MD-4 METAL DECK SHALL BE TYPE 1.5VLI WITH A MINIMUM 18 GAGE (0.0474") THICKNESS. MD-5 WELDING OF METAL DECK SHALL BE PERFORMED PER AWS D1.3 SPECIFICATIONS.	
		MD-6 METAL DECK SHALL BE FASTENED WITH 5/8" PUDDLE WELDS AS FOLLOWS: - END LAPS AND EDGE SUPPORTS: 36/4 PATTERN - INTERMEDIATE SUPPORTS: 36/4 PATTERN - SIDE LAPS: 24" OC MAX, MINIMUM 3 PER DECK SPAN	
		MD-7 METAL DECK ENDS OVER SUPPORTS SHALL BE INSTALLED WITH A MINIMUM END BEARING OF 1-1/2".	
		MD-8 CONCRETE FOR COMPOSITE METAL DECK DIAPHRAGMS SHALL BE NORMAL WEIGHT AND COMPLY WITH SECTION 03300 OF THE SPECIFICATIONS.	
		MD-9 WHERE NOT SPECIFICALLY SHOWN ON THESE DRAWINGS, METAL DECK SHALL BE DETAILED ACCORDING TO MANUFACTURER'S PUBLISHED SPECIFICATIONS.	

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	B	Brown AND
NSTRUCTION SHALL CONFORM TO THE 2015 EDITION OF THE ALUMINUM AL OF THE ALUMINUM ASSOCIATION.	C	aldwell
JM STRUCTURAL SHAPES SHALL BE ALLOY 6061-T6 PER ASTM B308. JM PIPE AND TUBING SHALL BE ALLOY 6061-T6 PER ASTM B241. JM PLATE SHALL BE ALLOY 6061-T6 PER ASTM B209. JM RAISED PATTERN (CHECKERED PLATE) PLATE SHALL BE ALLOY 6061-T6 LATE PER ASTM B632.		AL ENGINEERING AND CONSULTING ne Sq Ste 403, Andover, MA 01810 (978) 794-0336
LS NUM IS IN CONTACT WITH CONCRETE OR MASONRY SURFACES, CONTACT LL BE COATED WITH A HEAVY COAT OF ALKALI-RESISTANT BITUMINOUS		
NOTED, ALL GRATING AND GRATING STAIR TREADS SHALL BE ALUMINUM.		
AND TREADS SHALL BE OF ALLOY 6061-T6 CONFORMING TO ASTM B221. AIL FOR GRATING THICKNESS UNLESS NOTED OTHERWISE ON THE IMUM BEARING BAR WIDTH SHALL BE 3/16". PROVIDE ABRASIVE NOSING AT D TREADS (CHECKERED PLATE NOSING IS NOT ALLOWED).		
SHALL BE ANCHORED TO SUPPORT FRAMING WITH 1/4" DIAMETER LESS STEEL SCREWS PLACED THROUGH STAINLESS STEEL U-CLIPS N BEARING BARS. MINIMUM FOUR CLIPS PER GRATING PANEL. MAXIMUM CLIPS SHALL BE THREE FEET.		
DING STAIR TREADS, SHALL BE SERRATED FOR SLIP RESISTENCE UNLESS		
ELS, STEEL COLUMN ANCHOR RODS AND MISCELLANEOUS EMBEDDED DS OR HEADED ANCHORS SHALL BE AS SHOWN ON THE DRAWINGS.		
OLTS, PIPES AND OTHER EMBEDDED ITEMS SHALL BE OSITION WHILE CONCRETE IS BEING POURED.		
CHORS: TAINLESS STEEL (TYPE 316) KWIK BOLT-TZ WEDGE EXPANSION ANCHOR TI, INC (OR APPD EQ) WITH ANCHOR DIAMETER AND EMBEDMENT IN NOTED ON THE DRAWINGS.	BI	D DOCUMENTS
TAINLESS STEEL (TYPE 316) HUS-HR/CR SCREW ANCHOR AS MFD BY APPD EQ) WITH ANCHOR DIAMETER AND EMBEDMENT IN CONCRETE AS E DRAWINGS.		OVEMBER 2023
VE ANCHORING SYSTEM HIT-RE-500V3+HAS ROD AS MFD BY APPD EQ), TYPE AND EMBEDMENT AS SHOWN ON THE NCHOR INSTALLATION SHALL FOLLOW MANUFACTURERS PRODUCT INSTRUCTIONS. S INCLUDE: RCING STEEL (GRADE 60) ASTM A615 ED RODS: PROVIDE THREADED RODS WITH HEAVY HEX NUTS AND ASHERS. FOR INTERIOR AND DRY LOCATIONS, RODS SHALL CONFORM TO N. FOR EXTERIOR, BURIED, SUBMERGED LOCATIONS, OR WHERE VASTEWATER, RODS SHALL BE TYPE 316 STAINLESS STEEL, AND COMPLY WITH ASTM F593. IBEDMENT DEPTH IS SHOWN FOR ANY OF THE ANCHORS LISTED UNDER USE THE LARGEST MINIMUM DEPTH RECOMMENDED BY THE MFR FOR DIAMETER AND TYPE SPECIFIED	GProt	NHWPCA recting the Environment
ANAMETER AND TYPE SPECIFIED AND AND TYPE SPECIFIED MAY INVOLVE RELOCATING FROM POSITIONS SHOWN. NOTIFY THE IAGER OF RELOCATIONS PRIOR TO DRILLING HOLES. FIELD VERIFY AND NEARBY REINFORCING BARS, STIRRUPS AND EMBEDMENTS USING A MILAR DEVICE.	GREA GREA	ING FATS OIL AND SE RECEIVINGS TER NEW HAVEN ER POLLUTION
E HOLES IN ACCORDANCE WITH ADHESIVE MANUFACTURER'S . AS A MINIMUM, BLOW COMPRESSED OIL-FREE AIR FROM THE BOTTOM THE SURFACE. BRUSH AND BLOW CLEAN WITH COMPRESSED AIR A		ROL AUTHORITY
FICIENT AMOUNT OF ADHESIVE TO COMPLETELY SURROUND THE LOWLY ROTATE DOWEL / ANCHOR INTO ADHESIVE.	REV DATE	REVISIONS
ILE) NOTES		
BE INSTALLED IN ACCORDANCE WITH PROJECT SPECIFICATIONS 31 09 16.20.		
ESTS SHALL BE PERFORMED IN ACCORDANCE WITH PROJECT 31 09 16.20.		
STS SHALL BE PERFORMED AT FINAL CUT-OFF ELEVATION OF THE PILES.		
EST BY JACKING APART TWO MINIPILES.	4	
D TESTS SHALL BE PERFORMED SUCCESSFULLY PRIOR TO START OF E INSTALLATION.	DESIGNED:	AT FULL SIZE '
G STRUCTURES, UTILITIES, ROADWAYS, PAVEMENTS AND OTHER		R.BLUMENSHINE
E FOR MOVEMENT DURING INSTALLATION OF ALL TEST AND PRODUCTION I 30 FEET OF EACH MINIPILE. PREPARE MOVEMENT MONITORING PLAN AND	CHECKED:	J.MINADEO
IEER FOR REVIEW AND APPROVAL PRIOR TO EXECUTION. MAXIMUM EMENT OF ANY EXISTING STRUCTURE, UTILITY, ROADWAY AND PAVEMENT IS	CHECKED:	
ANY DAMAGE RESULTING FROM MOVEMENT OR MINIPILE INSTALLATION AT OST TO THE OWNER.	APPROVED:	J.MINADEO FILENAME
	RC	PROJECT NUMBER

ronment OIL AND VINGS HAVEN JTION IORITY PTION В ----> 159111 CLIENT PROJECT NUMBER XX STRUCTURAL А STRUCTURAL NOTES 1 DRAWING NUMBER S-00-001

SHEET NUMBER 111

11

D

	SPECIAL INSPECTIONS	
	SI 1 AN INDEPENDENT TESTING COMPANY RETAINED BY THE OWNER AND APPROVED BY THE BUILDING OFFICIAL SHALL INSPECT THE FOLLOWING (SEE EXPANDED LIST ON DRAWINGS S-00-003 AND S-00-004, SPECIFICATIONS AND GOVERNING CODE):	
	 SOIL COMPACTION AT FOUNDATIONS. REINFORCING BAR, CONCRETE PLACEMENT AND TAKING OF CONCRETE TEST SPECIMENS. ANCHOR BOLTS. FIELD WELDING OF STRUCTURAL STEEL AND ALUMINUM. SHOP WELDING OF STRUCTURAL STEEL EXCEPT WHERE WELDING IS DONE IN AN APPROVED 	
D	FABRICATOR'S SHOP IN ACCORDANCE WITH THE PROVISIONS OF THE GOVERNING BUILDING	
	SI 2 CONTRACTOR SHALL NOTIFY THE TESTING COMPANY FOR ALL INSPECTIONS.	
	STRUCTURAL OBSERVATIONS SO 1 THE OWNER SHALL RETAIN A REGISTERED DESIGN PROFESSIONAL TO PERFORM STRUCTURAL OBSERVATIONS. THE CONTRACTOR SHALL NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE AT LEAST 48 HOURS BEFORE A DESIGNATED WORK IS TO BE COVERED.	
	SO 2 REQUIRED STRUCTURAL OBSERVATIONS INCLUDE: 1. STRUCTURAL FILL. 2. FOUNDATIONS PREPARED FOR CONCRETE PLACEMENT.	
С	 COMPLETION OF BEARING WALLS PRIOR TO COVER-UP WITH NON-STRUCTURAL ELEMENTS. PRIOR TO GROUTING FIRST LIFT OF CONCRETE MASONRY CONSTRUCTION. COMPLETION OF LATERAL FORCE RESISTING ELEMENTS INCLUDING MOMENT CONNECTIONS, BRACING, DIAPHRAGMS, AND OTHER ELEMENTS. 	
	STRUCTURAL DEFERRED SUBMITTALS	
	SDS 1 THE CONTRACTOR SHALL SUBMIT DRAWINGS AND CALCULATIONS BEARING THE SEAL OF A	
	 PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW YORK TO THE ENGINEER FOR REVIEW. STRUCTURAL DEFERRED SUBMITTALS INCLUDE: ANCHOR BOLTS FOR ALL EQUIPMENT ANCHORAGE. GUARDRAILS AND HANDRAILS. FLOOR AND ROOF ACCESS HATCHES. ALTERNATE ROOF DECK FASTENING (IF USED). CONSTRUCTION SHORING. 	
B		
MC 60.01.		

TENSION DEVELOPMENT AND LAP SPLICE LENGTHS (

			I ENSION D	EVELOPMENT AND	LAP SP					
		CO	NCRETE CO	OVER = 1.50 IN.	СО	CONCRETE COVER = 2.00 IN.			NCRETE CO	OVER = 3.00 IN.
BAR SIZE	APPLICATION	TOP	OTHER	MIN C/C SPACING	TOP	OTHER	MIN C/C SPACING	ТОР	OTHER	MIN C/C SPACING
#3	DEVELOPMENT LAP	12	12	3.50	12	12	4.50	12	12	6.50
	SPLICE	16	16	3.75	16	16	4.75	16	16	6.75
#4	DEVELOPMENT LAP	15	12	3.50	15	12	4.50	15	12	6.50
	SPLICE	20	16	4.00	20	16	5.00	20	16	7.00
#5	DEVELOPMENT LAP	19	15	3.75	19	15	4.75	19	15	6.75
	SPLICE	24	19	4.25	24	19	5.25	24	19	7.25
#6	DEVELOPMENT LAP	22	17	3.75	22	17	4.75	22	17	6.75
	SPLICE	29	22	4.50	29	22	5.50	29	22	7.50
#7	DEVELOPMENT LAP	37	28	4.00	33	25	5.00	33	25	7.00
	SPLICE	48	37	4.75	42	33	5.75	42	33	7.75
#8	DEVELOPMENT LAP	47	36	4.00	37	29	5.00	37	29	7.00
	SPLICE	60	47	5.00	48	37	6.00	48	37	8.00
#9	DEVELOPMENT LAP	57	44	3.25	46	36	5.25	42	32	7.25
	SPLICE	74	57	4.25	60	46	6.25	55	42	8.25
#10	DEVELOPMENT LAP SPLICE	70 91	54 70	4.25 5.50	57 74	44 57		47 61	36 47	7.25 8.50
NOTEO.										

NOTES: 1. TABULATED VALUES ARE BASED ON UNCOATED GRADE 60 REINFORCING BARS AND NORMAL-WEIGHT CONCRETE MINIMUM f/c = 4,000 PSI. 2. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 IN. OF FRESH CONCRETE CAST BELOW THE BARS. 3. LAP SPLICE LENGTHS ARE LAP CLASS B = 1.3 Id. 4. TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPLICE LENGTHS ARE OLICIDATED PER ACIB18, SECTIONS 12.2.3 AND 12.15, RESPECTIVELY. 5. LENGTHS ABOVE THE HEAVY LINE DO NOT CHANGE BASE ON COVERTIFICINESS. LENGTHS BELOW THE HEAVY LINE ARE DIFFERENT AT EACH COVER THICKNESS.

В	ANCHOR BOLT		FINICH	LLV	LONG LEG VERTICAL	S	SOUTH
BBR	ABBREVIATION	FABR	FABRICATION, FABRICATE,	LOC	LOCATION	SCH	SCHEDULE
D	AREA DRAIN			LONG		SECT	SECTION
DJ DD'L	ADJUSTABLE ADDITIONAL	FB FBC	FLAT EAR, FLOOR BEAM FLORIDA BUILDING CODE	LT	LEFT	SF SHT	SQUARE FOOT/FEET SHEET
FF	ABOVE FINISH FLOOR	FD FD	FLOOR DRAIN	MAN	MANUAL	SIM	SHEET SIMILAR
	Above Finish Floor		FINISHED FLOOR	MAN	MAXIMUM	SIM	SLOPE
L, ALUM NSI	AMERICAN NATIONAL MANDADS	F TO .	FACE TO FACE	MECH	MECHANICAL	SP	STEEL PIPE, SPACING
	INSTITUTE	FG	FINISHED GRADE	MEMB	MEMBRANE	SPECS	SPECIFICATIONS
P	ANGLE POINT	FIG	FIGURE	MFR	MANUFACTURER	SQ	SQUARE
PVD	APPROVED		FINISHED	MFRD	MANUFACTURED	SST	STAINLESS STEEL
PPROX	APPROXIMATE	€L	FLOOR	MILS	1/1000 OF AN INCH	STA	STATION
SSY	ASSEMPLY	FLEX	FLEXIBLE	MIN	MINIMUM	STD	STANDARD
STM	AMERICAN SOCIETY FOR TESTING	FLG	FLANGE, FLOORING	MISC	MISCELLANEOUS	STL	STEEL
	AND MATERIALS	FLGD	FLANGED	MOD	MODIFICATIONS	STRUC	
		FLR	FLOOR	MPH	MILES PER HOUR	SY	SQUARE YARD
С	BOL CIRVE, BETWEEN CHATERS	FND	FOUNDATION	MSDS	MATERIAL SAFETY DATA SHEET	SYM	SYMMETRICAL, SYMBOL
LDG		FOC	FACE OF CONCRETE	MSS	MANUFACTURERS	SYS	SYSTEM
lk 🔨	DLANK, BLOCK	FOW	FACE OF WALL		STANDARDIZATION SOCIETY		
LKG		FPS	FEET PER SECOND	MTD	MOUNTED	Т	TANGENT, TOP, TREAD
М	AM, BENCH MARK	FR	FRAME	MTG	MOUNTING	T&B	TOP AND BOTTOM
0		FRP	FIBERGLASS REINFORCED	MTL	MATERIAL, METAL	TBE	THREAD BOTH ENDS
PIM	BOTTOM		PLASTIC			TEMP	TEMPERATURE, TEMPORARY
T T	BOLT	FRPM	FIBER REINFORCED POLYMER	N	NORTH	T&G	TONGUE AND GROOVE
	BAG, WARH, BOYTOM WALL		MORTAR	NA	NOT APPLICABLE	THK	THICK OR THICKNESS
•		FS	FINISHED SURFACE	NBS	NATIONAL BUREAU OF	THRD	THREADED
	CIRCUMPERENCE, CHANNEL	FT	FEET OR FOOT		STANDARDS	TK	
		FTG	FOOTING	ND	NOMINAL DIAMETER	TOC	
C	ENTER TO CENTER	FUT	FUTURE	NF		TOE	THREAD ONE END
	CMENT CHANGE	C A		NIC	NOT IN CONTRACT	TOF	TOP OF FOOTING
	CHANGE HECKERED PLATE	GA	GAGE, GAUGE GALVANIZED	NL	NAIL NUMBER	TOG	TOP OF GRATING
	CHECKERED PLATE	GALV		NO NOM	NOMBER	TOM	TOP OF MASONRY
	CONSTRUCTION JOINT	GEN GENSET	GENERAL GENERATOR	NOM	NOMINAL NEAR SIDE	TOS TOW	TOP OF STEEL TOP OF WALL
J I	CENTER LINE	GENSET	GENERATOR GLASS FIBER REINFORCED	NTS	NOT TO SCALE	TYP	TYPICAL
R	CLEAR	GERE	POLYMERS	NTS	NOT TO SCALE	ITE	TTFICAL
LSM	CONTROLLED LOW STRENGTH	GP	GATE POST, GUARD POST	OC	ON CENTER	UNO	UNLESS NOTED OTHERWISE
	MATERIAL	GRD	GRADE, GROUND	OCEW	ON CENTER EACH WAY		
OL	COLUMN	GRTG	GRATING	OD	OUTSIDE DIAMETER	V	VOLUME
ONC	CONCRETE, CONCENTRIC	GS	GALVANIZED STEEL	ŌF	OVERFLOW, OUTSIDE FACE	VAR	VARIES, VARIABLE
ONN	CONNECTION			OPNG	OPENING	VERT	VERTICAL
ONSTR	CONSTRUCTION, CONSTRUCT	Н	HEIGHT, HORIZONTAL	OPP	OPPOSITE	VIB	VIBRATIONS
ONT	CONTINUED, CONTINUOUS	H2E	HOOKED TWO ENDS	O/S	OFFSET		
ONTR	CONTRACTOR	HC	HOLLOW CORE			W	WEST, WIDE FLANGE, WIDE
S	ALUMINUM CHANNEL	HDPE	HIGH DENSITY POLYETHYLENE	PART	PARTITION	W/	WITH
TR	CENTER	HDW	HARDWARE	PAVMT	PAVEMENT	W/O	WITHOUT
Y	CUBIC YARD	HEX	HEXAGONAL	PCC	PORTLAND CEMENT CONCRETE	WP	WATER PROOFING, WEATHER PROOF
		HGR	HANGER	PE	POLYETHYLENE	WS	WATER SURFACE, WATERSTOP
ET	DETAIL	HGT	HEIGHT	PEN	PENETRATION(S)	WT	WEIGHT
EPT	DEPARTMENT	HORIZ	HORIZONTAL	PERF	PERFORATED	WWM	WELDED WIRE MESH
IA	DIAMETER	HP	HIGH POINT	PL	PLATE		VADD
IAG	DIAGONAL	HSS	HOLLOW STRUCTURAL SECTION	PLAS	PLASTER, PLASTIC	YD	YARD
ISCH	DISCHARGE	15		PRCT	PRECAST	YR	YEAR
N		ID IF		PREFAB		7	ZERO
R WG				PSI	POUND PER SQUARE INCH PAINT	Z	ZERO ZINC
WG WL	DRAWING DOWEL	IN INC	INCH INCORPORATION	PT PVC	PAINT POLYVINYL CHLORIDE	ZN ZRC	ZINC ZINC RICH COATING
v v L	DOWEL	INC		FVG		ZRU	
	EAST	INSL	INSULATION, INSULATED	QTY	QUANTITY		
Ą	EACH	INT	INVERT	QIT	QUANTIT	&	AND
3	EACH EXPANSION BOLT OR ANCHOR	IINV		R	RADIUS, RISER		DELTA, ANGLE OF DEFLECTION
Б F	EACH FACE	JB	JUNCTION BOX	RC	REINFORCED CONCRETE		CENTER LINE
G	EACH FACE EXISTING GRADE	JT	JOINT	RD	ROUND		DEGREE
L	ELEVATION	01		REF	REFERENCE, REFER		
	ELECTRICAL, ELECTRONIC	KG	KILOGRAM	REINF	REINFORCE, REINFORCED		DIAMETER, ROUND
NCL	ELECTRICAL, ELECTRONIC ENCLOSURE	KG KL	KILOLITER	REQ'D	REQUIRED		
NT	ENTRANCE			REV	REVISION		NUMBER
Q	EQUAL	I	LENGTH, ANGLE	RF	ROOF		PLUS OR MINUS
a W	EQUAL EACH WAY	LAT	LATERAL	RM	ROOF		PERCENT
X-HY	EXTRA HEAVY	LB(S)	POUND(S)	RO	ROUGH OPENING		
XIST	EXISTING	LD(3) LP	LOW POINT	RT	RIGHT		
	EXPANSION JOINT	LEV	LEVEL	1.11		(-)	NEGATIVE VALUE
XT	EXTERIOR, EXTENSION	LEV	LINEAR FEET				
XTR	EXTRUDED	LG	LENGTH, LONG				
		LLH	LONG LEG HORIZONTAL				



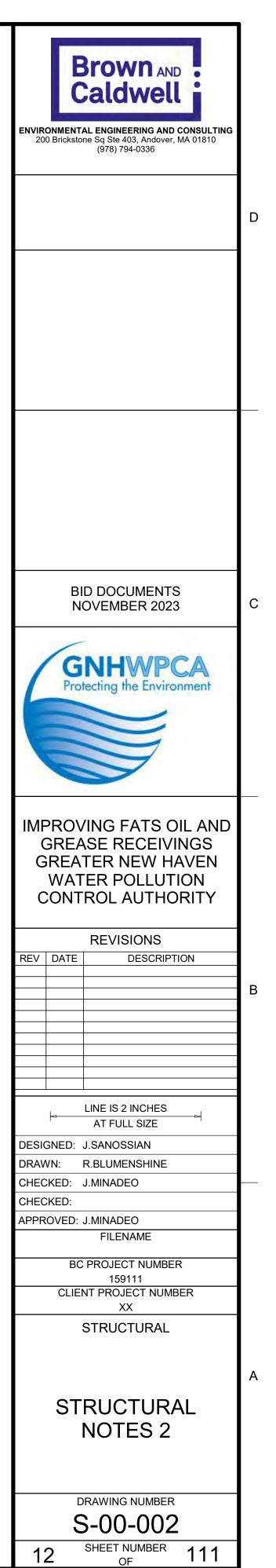
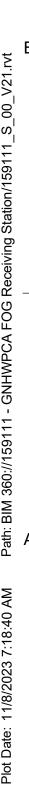


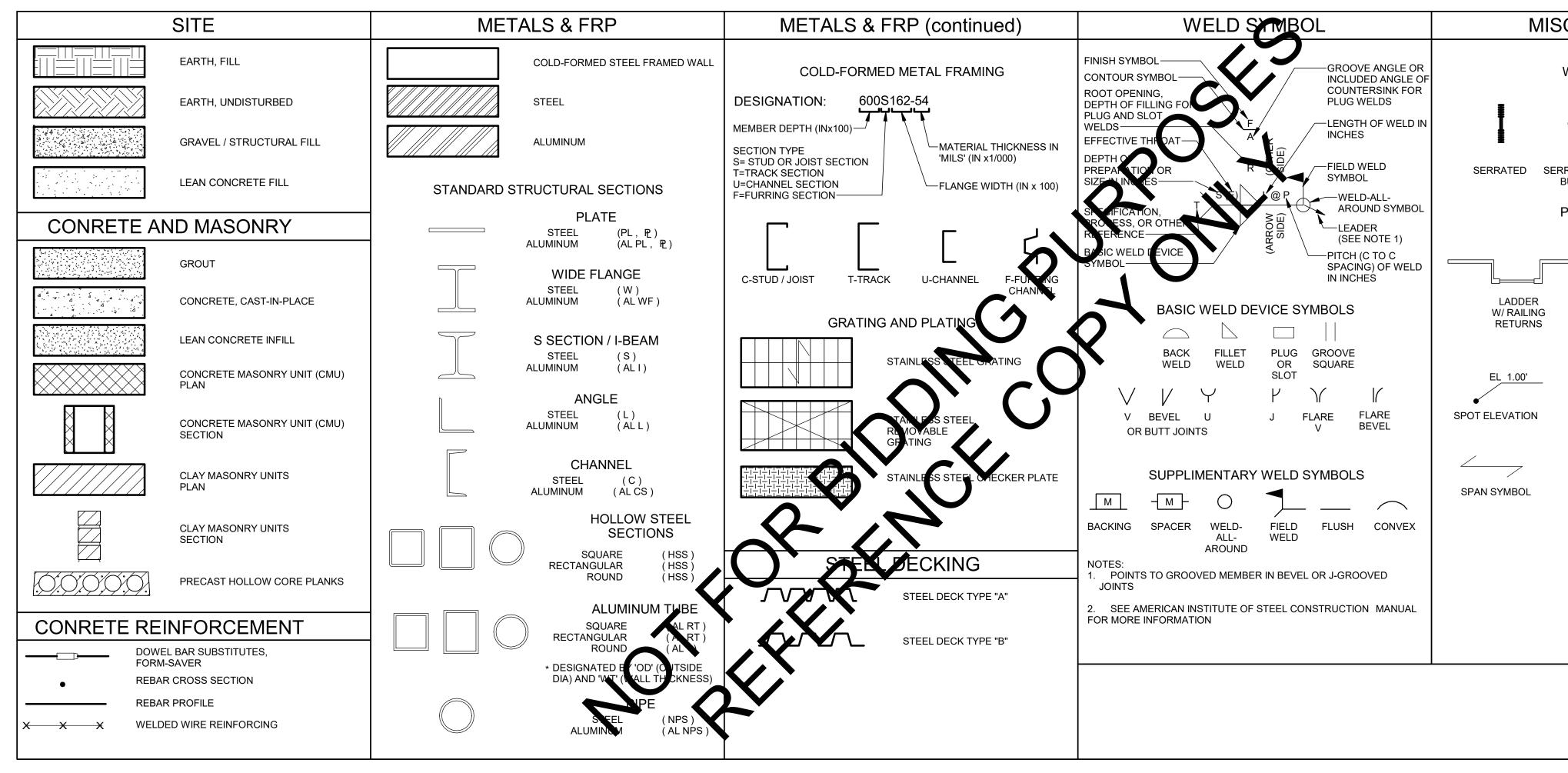
		TABLE 1			TA	BLE 1		
	REQUIRED SPECIAL INSPE	ECTIONS - STRUCTURA	AL SYSTEMS		REQUIRED SPECIAL INSPECT	TIONS - STRUCTURAL SYST	EMS	Brown AND .
YSTEM OR MATERIAL	REQUIRED INSPECTION	FREQUENCY OF INSPECTION	REMARKS	SYSTEM OR MATERIAL	REQUIRED INSPECTION	FREQUENCY OF INSPECTION	REMARKS	Caldwell
		CONTINUOUS	PERIODIC			CONTINUOUS PERIODIC		ENVIRONMENTAL ENGINEERING AND CONSUL 200 Brickstone Sq Ste 403, Andover, MA 0187 (978) 794-0336
	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X		VERIFY PROTECTION PROVISIONS FOR COLD AND HOT WEATHER MASONRY CONSTRUCTION	x		
	VERIFY SOIL MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE DESIGN BEARING CAPACITY		X		PLACEMENT OF MASONRY UNITS AND CONSTRUCTION OF MORTAR JOINTS	×		
	PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY		x		REINFORCING STEEL PLACEMENT	X		
	PERFORM CLASSIFICATION AND TESTING OF		SEE TABLE 3			X		
	CONTROLLED FILL MATERIALS VERIFY USE OF PROPER MATERIALS, DENSITIES AND		SEE TABLE 3		VERIFY PROPORTIONS OF GROUT; USE OF REQUIRED GROUT MIX DESIGN OBSERVE GROUT PLACEMENT	X		
	LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL	X			OBSERVE GROUT PLACEMENT OBSERVE PREPARATION OF ANY GROUT OR MORTAR	X	CONTINUOUS DURING PREPARATION	
	VERIFY USE OF DRAIN ROCK BEHIND RETAINING WALLS		X		SPECIMENS AND/OR PRISMS	Х	OF SAMPLES	
	PROOF ROLLING OF SOILS DISTURBED BY GROUND IMPROVEMENTS		X	STRUCTURAL STEEL AND	FABRICATION OF STRUCTURAL EVAMENTS		FABRICATOR SHALL BE APPROVED IN	
	OBSERVE STONE COLUMN INSTALLATION, AND MAINTAIN ACCURATE RECORDS FOR AREAS OF SITE WHERE SOIL IS BEING CONSOLIDATED	x		ALUMINUM			ACCORDANCE WITH IBC, CHAPTER 17 TO PERFORM WORK WITHOUT SPECIAL INSPECTION	
	VERIFY STONE COLUMN HOLE SPACING, DIAMETER, PROBE PENETRATION, STONE MATERIAL AND VOLUME OF STONE PLACED	x			VERIFY MATERIAL OF ANCHOR ROLTS AND THREADED RODS	x	CONTRACTOR TO SUBMIT MANUFACTURER'S CERTIFIED TEST REPORTS	
	PERMANENT SHEET PILING INSTALLATION, INCLUDING VERIFYING TIP AND CUTOFF ELEVATIONS	x			VERIFY MATERIAL OF HIGH-STRENGTH BOLTS, NUTS		CONTRACTOR TO SUBMIT MANUFACTURER'S CERTIFIED TEST	
	SHORING SYSTEM WELDING	x				X	REPORTS	
	GROUND ANCHOR INSTALLATION, VERIFICATION OF MATERIALS, INCLUDING GROUT	X			VERIFY MATERIAL FOR STRUCTURAL STEEL AND ALUMINUM SHAPES, PLOTES BARS, ETC. VERIFY MATERIALS, S.C. WILD FILLER MATERIALS	X	CONTRACTOR TO SUBMIT CERTIFIED MILL TEST REPORTS	BID DOCUMENTS NOVEMBER 2023
	OBSERVE CAISSON SINKING	×			VERIFY WELDER QUILIFICATIONS	x x	CONTRACTOR TO SUBMIT WELDERS CERTIFICATES	
E	INSPECT FORMWORK FOR LOCATION AND DIMENSIONS OF MEMBER BEING FORMED		X		VERIFY USE OF PROPER WELDING PROCEDURES	X		GNHWPCA Protecting the Environment
	VERIFY MATERIAL FOR REINFORCEMENT		CONTRACTOR TO SUBMIT CERTIFIED		INSPECT COMPLETE AND PARTIAL-PENETRATION GROOVE WELDS, MULTI-PASS FILLET WELDS, AND	×		
	REINFORCING STEEL PLACEMENT		X MILL TEST REPORTS		NGLE-PASS FILLET WELDS GREATER THAN 5/16"	^	VISUALLY INSPECT ALL WELDS	
	INSPECT ANCHORS TO BE CAST IN CONCRETE		A PRIOR TO AND DURING CONCRETE X PLACEMENT		EQUAL TO 5/16"	X		
	INSPECT POST-INSTALLED CONCRETE ANCHORS: - HORIZONTAL AND UPWARDLY INCLINED		INSPECTION TO CONFORM TO IBC AND TO ANCHOR MANUFACTURER'S		INSPECT HIGH-STRENGTH BEARING-TTPE BOLTED CONNECTIONS INSPECT HIGH-STRENGTH SLIP CRITICAL-TYPE BOLTED	X		
	ADHESIVE ANCHORS - OTHER ANCHORS UNLESS ICC REPORT REQUIRED	X	RECOMMENDATIONS AND ICC REPORTS		CONNECTIONS VERIFY TYPE, DEPTH AND GAGE OF DECKING AND	X		IMPROVING FATS OIL A GREASE RECEIVING
	CONTINUOUS INSPECTION		X		GRATING INSPECT INSTALLATION (ATTACHMENT) OF DECKING	X		GREATER NEW HAVE WATER POLLUTION
	VERIFY USE OF REQUIRED CONCRETE MIX DESIGN(S)		X		AND GRATING INSPECT WELDING OF HEADED STUDS IN COMPOSITE	X		CONTROL AUTHORIT
	AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND	x	CONTINUOUS DURING PREPARATION OF SAMPLES		STRUCTURAL SLABS INSPECT FRAME AND TRUSSES TO VERIFY THAT	X		REVISIONS
					BRACING, STIFFENERS, MEMBER LOCATIONS AND JOINT DETAILS COMPLY WITH APPROVED CONSTRUCTION DRAWINGS	X		
	CONCRETE PLACEMENT	X	VERIFY AF ROPRIATE CURING					
	PROCEDURES AND TEMPERATURE		X VERIFY ANROPRIATE CORING METHOD HAS BEEN IMPLEMENTED AFTER EACH PLUR		URANCE NOTES			
	VERIFY IN-SITU CONCRETE STRENGTH PRIOR TO REMOVAL OF SHORES AND FORMS FROM STRUCTURAL			2. ALL NEW STRUCTURES WATER TREATMENT FA	VORKMANSHIP AND THE QUALITY OF THE MATERIALS OF CONSTRUCTI S AND MODIFICATIONS TO EXISTING STRUCTURES TO BE CONSTRUCT ACILITY, IN ACCORDANCE WITH THE IBC. THE STRUCTURES ARE CLASS	ED AS A PART OF THIS PROJECT ARE CLASSIFIED AS (SIFIED AS SEISMIC DESIGN CATEGORY B.	DCCUPANT CATEGORY III, WASTE	
	SLABS AND BEAMS CEMENTITIOUS GROUTING OF BASE PLATES AND			ACCORDANCE WITH IB 4. WHERE FREQUENCY O	F INSPECTION IS SPECIFIED TO BE CONTINUOUS, THE SPECIAL INSPEC	CTOR IS EXPECTED TO BE PRESENT IN THE AREA WHI		LINE IS 2 INCHES
	EPOXY GROUTING FOR EQUIPMENT MOUNTING	X		5. WHERE FREQUENCY O PERFORMED AND AT T	VIDING FULL-TIME OBSERVATION OF THE WORK REQUIRING SPECIAL I F INSPECTION IS SPECIFIED TO BE PERIODIC, THE SPECIAL INSPECTO HE COMPLETION OF THE WORK (PRIOR TO THE NEXT CONSTRUCT	OR IS EXPECTED TO BE PRESENT IN THE AREA WHERE FION TASK).		DESIGNED: J.SANOSSIAN
Y	VERIFY PROPORTIONS OF SITE -PREPARED MORTAR		AT START OF MASONRY	BUILDING DEPARTMEN 7. CONTRACTOR SHALL F	ARE IN ADDITION TO INSPECTIONS BY THE BUILDING OFFICIALS. CONS T TO DETERMINE REQUIRED INSPECTIONS. PROVIDE ACCESS TO THE WORK FOR REQUIRED INSPECTIONS. CONTR			DRAWN: R.BLUMENSHINE CHECKED: J.MINADEO
	AND GROUT VERIFY SPECIFIED TYPE, GRADE AND SIZE OF		X CONSTRUCTION CONTRACTOR TO SUBMIT CERTIFIED	TESTING AND STRUCT				CHECKED: APPROVED: J.MINADEO
	REINFORCEMENT VERIFY MATERIALS FOR MASONRY UNITS, MORTAR,		X MILL TEST REPORTS CONTRACTOR TO SUBMIT					FILENAME
	GROUT, ANCHORS, TIES AND ACCESSORIES		X MANUFACTURER'S CERTIFIED COMPLIANCE REPORTS					BC PROJECT NUMBER 159111 CLIENT PROJECT NUMBER
	VERIFY TYPE, SIZE, LOCATION AND INSTALLATION OF EMBEDDED CONNECTORS AND ANCHORS		X					XX
	VERIFY SIZE AND LOCATION OF STRUCTURAL ELEMENTS		X					STRUCTURAL
	VERIFY TYPE, SIZE AND LOCATION OF ANCHORAGE OF MASONRY TO OTHER CONSTRUCTION		X					
								SPECIAL INSPECTION NOT 1
								DRAWING NUMBER S-00-003
								12 SHEET NUMBER 1

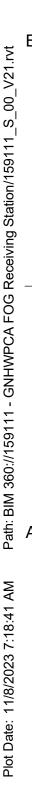
	TABLE REQUIRED SPECIAL INSPECTIONS		SVSTEMS		REQUIRED TESTI	TABLE 2 ING FOR SPECIA	 L
		FREQUENCY OF		_	T	ESTING	
SYSTEM OR MATERIAL	REQUIRED INSPECTION	CONTINUOUS	PERIODIC	SYSTEM OR MATERIAL	CODE OR STANDARD REFERENCE	FREQUENCY	
RCHITECTURAL	INSPECT WELDING OF GUARD AND HANDRAIL SYSTEMS		X			GEOTECHNICAL	
	EXTERIOR WALL PANELS AND THEIR ANCHORAGE		X	PREPARED SUBGRADE DENSITY	ASTM D6938	EACH 300 SF OF PREPARED SUBGRADE	1
	SUSPENDED CEILINGS AND THEIR ANCHORAGE		x	FILL IN-PLACE DENSITY	ASTM D6938	EACH 300 SF OF EACH LIFT PLACED EACH DAY	
ECHANICAL	INSPECT ANCHORAGE OF FIRE SPRINKLER SYSTEM		X			CONCRETE	
	INSPECT ANCHORAGE OF ALL MECHANICAL SYSTEMS (INCLUDING EQUIPMENT PIPING, DUCT WORK, ETC.) REQUIRING STANDBY POWER		x				
	CERTIFICATE OF COMPLIANCE FOR ALL MECHANICAL EQUIPMENT REQUIRING STANDBY POWER		EQUIPMENT MANUFACTURER SHALL PROVIDE CERTIFICATE OF COMPLIANCE	CONCRETE COMPRESSIVE STRENGTH	ASTM C31,ASTM C39,ASTM C172	SEE SPECIFICATION 03300	
ECTRICAL	INSPECT ANCHORAGE OF ELECTRICAL EQUIPMENT FOR STANDBY POWER		x	CONCRETE SLUMP		WHENEVER CYLINDERS ARE CAST	
	INSPECT ANCHORAGE OF ALL OTHER ELECTRICAL EQUIPMENT REQUIRING STANDBY POWER		x	CONCRETE AIR CONTENT		WHENEVER CYLINDERS ARE CAST	
	CERTIFICATE OF COMPLIANCE FOR ALL ELECTRICAL			CONCRETE TEMPERATURE		WHENEVER CYLINDERS ARE CAST	
	EQUIPMENT FOR STANDBY POWER AND ALL ELECTRICAL EQUIPMENT REQUIRING STANDBY POWER		PROVIDE CERTIFICATE OF COMPLIANCE	CEMENTITIOUS AND ERON GROUT COMPRESSIVE STRENGTH	ASTM C942 (CEMENTITIOUS) ASTM C579 (EPOXY)		
	EMERGENCY LIGHTING		X		ASTM C579 (EPOXY)	MASONRY	
				COMPRESSIVE STRENCHALT 1			
				MASONECINIT STRENGTH	ASTM C140	(12) UNITS PER EACH 50000 UNITS	
			1	GROUTETRENGTH	ASTM C1019		
				\sim		EACH 5000 SF OF WALL	
				RISM STRENGTH OF MASONRY ASSEMBLY	ASTM C1314	(3) PRISMS FOR EACH 5000 SF OF WALL	
						(3) PRISMS FOR EACH 5000 SF OF WALL STEEL	
				ASSEMBLY MAGNETIC PARTICLE (MT) AND ULTRASONIC (UT) TESTING OF WELDS	ASTM C1314 MT - AWS D1.1 6.14.4 UT - AWS D1.1 6.13 & 6.14.3	(3) PRISMS FOR EACH 5000 SF OF WALL	
				ASSEMBLY MAGNETIC PARTICLE (MT) AND ULTRASONIC (UT) TESTING OF	MT - AWS D1.1 6.14.4 UT - AWS D1.1 6.13 &	(3) PRISMS FOR EACH 5000 SF OF WALL STEEL AT ALL PARTIAL AND FULL PENETRATION	



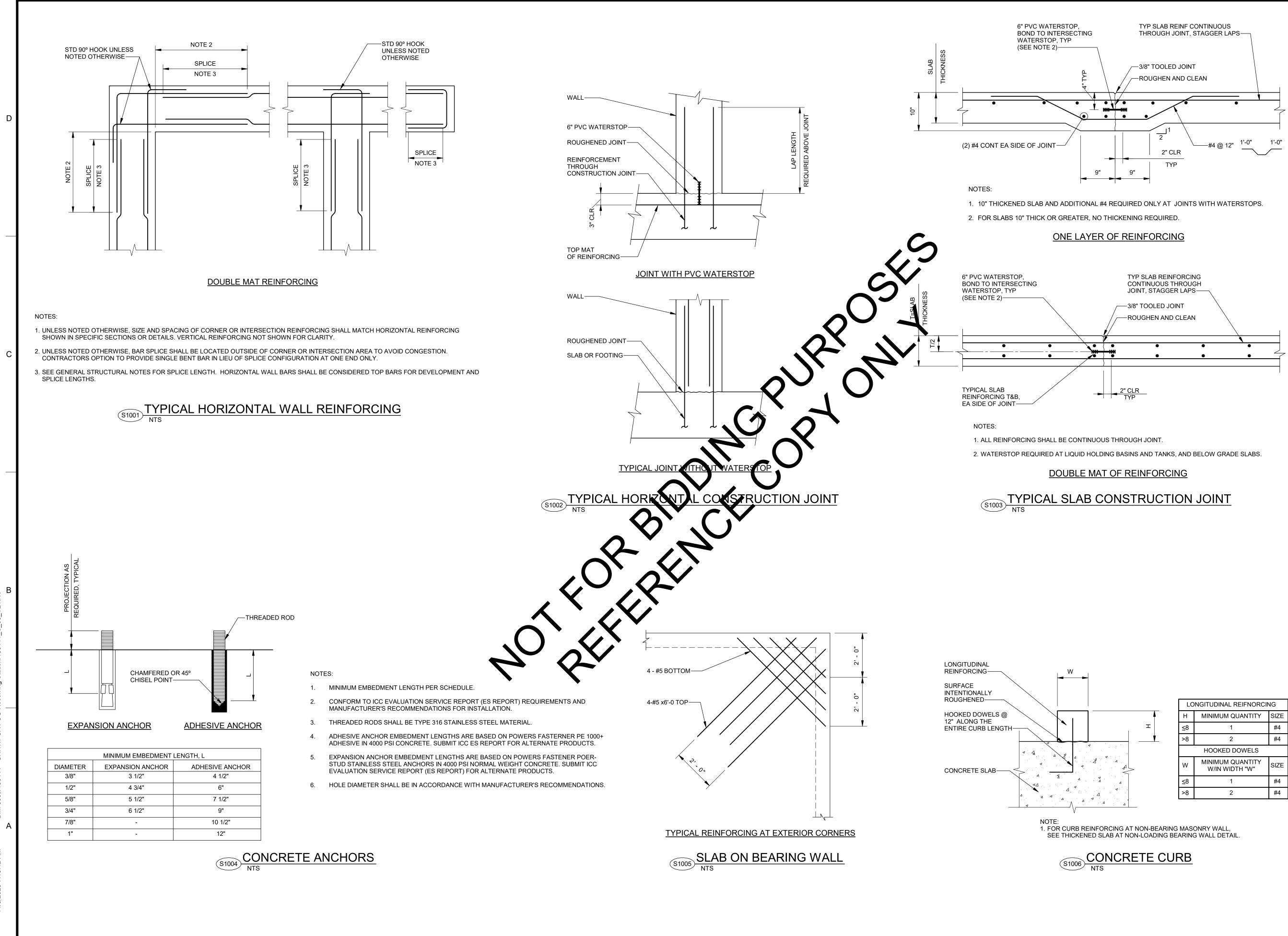
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			E	Brown AND .	
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	PER GEOTECHNICAL REPORT				D
	PER GEOTECHNICAL REPORT				
	TEST 2" CUBES FOR EACH GROUT SHIPMENT TO				
		\vdash		D DOCUMENTS OVEMBER 2023	С
	PRIOR TO START OF MASONRY CONSTRUCTION, CONTRACTOR SHALL SUBMIT VERIFICATION OF COMPRESSIVE STRENGTH FOR EACH TYPE OF MASONRY ASSEMBLY. PRISM TEST METHOD SHALL BE USED.		/	NHWPCA tecting the Environment	
	CONTRACTOR TO SUBMIT MANUFACTURER'S CERTIFIED TEST REPORTS FOR EACH TYPE OF MASONRY UNIT	6	Pro	tecting the Environment	
	COMPRESSIVE STRENGTH, AIR CONTENT, SLUMP, TEMPERATURE OF FILL FOR MASONRY ASSEMBLIES SHALL BE TESTED PER CONCRETE REQUIREMENTS ABOVE.		F		
	A SET OF TESTS IS REQUIRED FOR EACH TYPE OF MASONRY ASSEMBLY	(G	GREA BREA WAT	/ING FATS OIL AND ASE RECEIVINGS TER NEW HAVEN TER POLLUTION TROL AUTHORITY	
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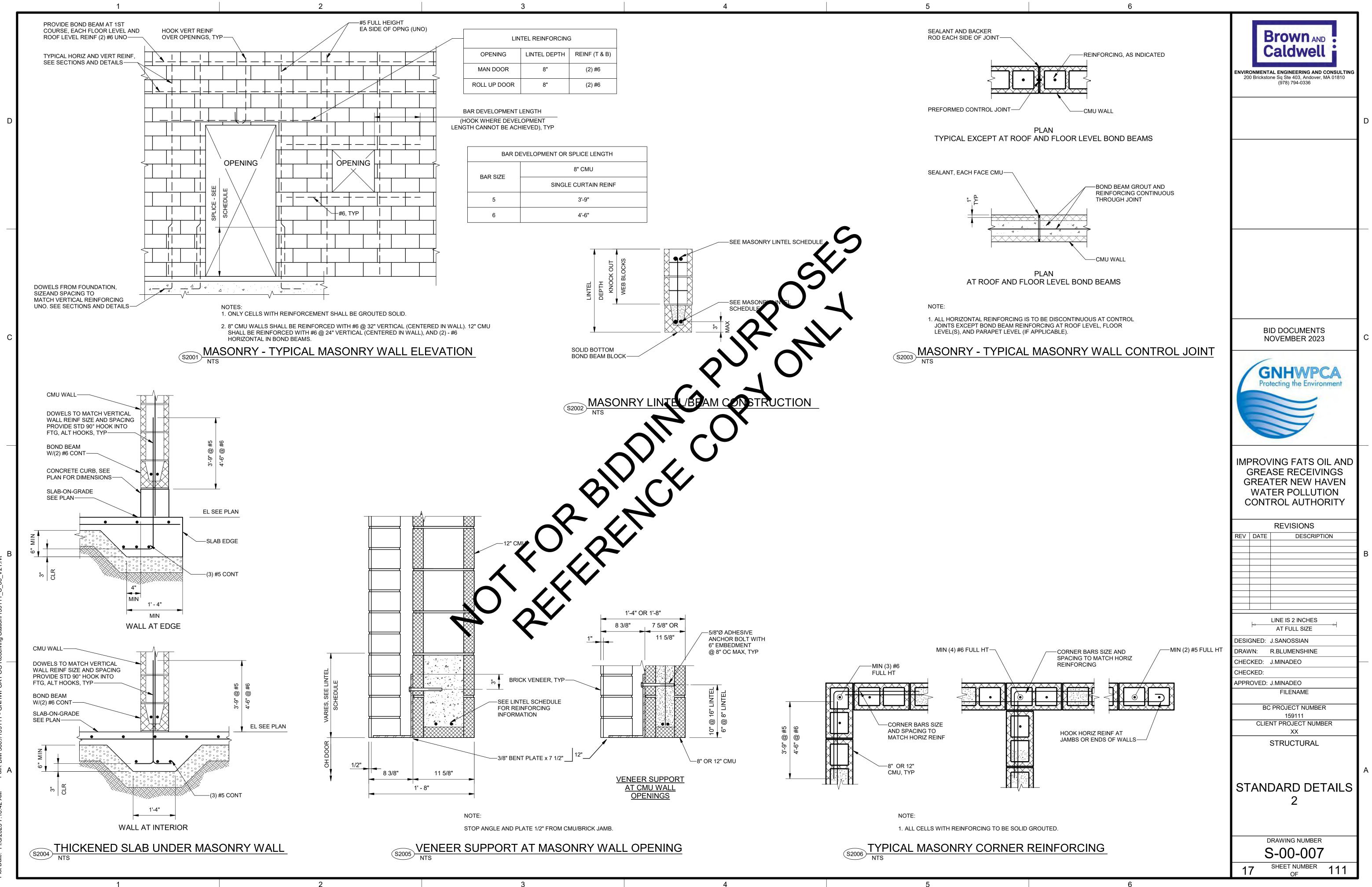


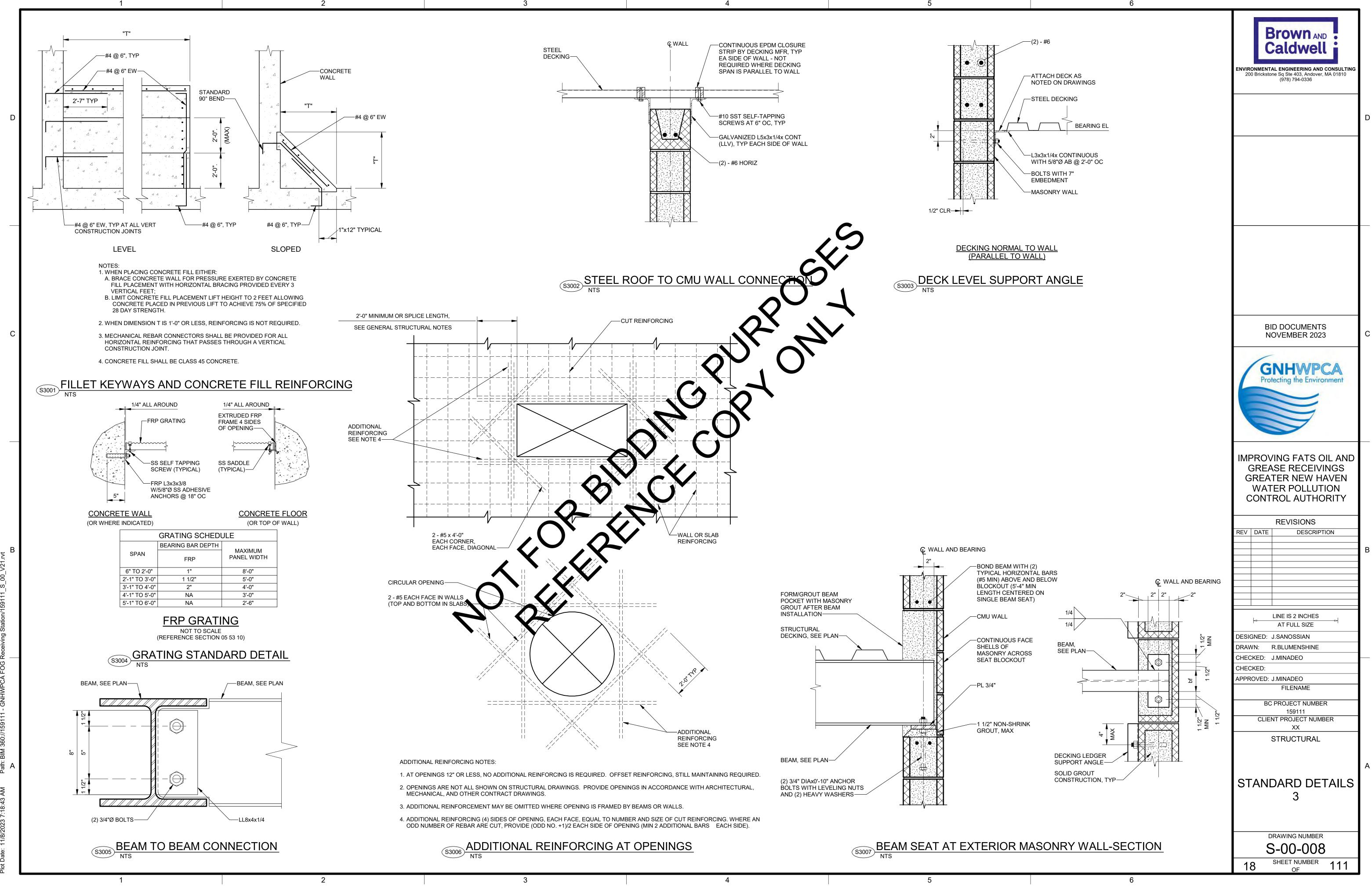
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	D
CELLANEOUS	
WATERSTOPS	
RRATED / RETROFIT HYDROPHILIC BULB TEE / L	
PLAN SYMBOLS EQUIPMENT	BID DOCUMENTS NOVEMBER 2023 C
LADDER FACE-MOUNTED	GNHWPCA Protecting the Environment
SLOPE 1:1	
SLOPE SLOPE (PLAN) (ELEVATION AND SECTION) STAIR RUN SPAN SYMBOL SYMBOL	IMPROVING FATS OIL AND GREASE RECEIVINGS GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY
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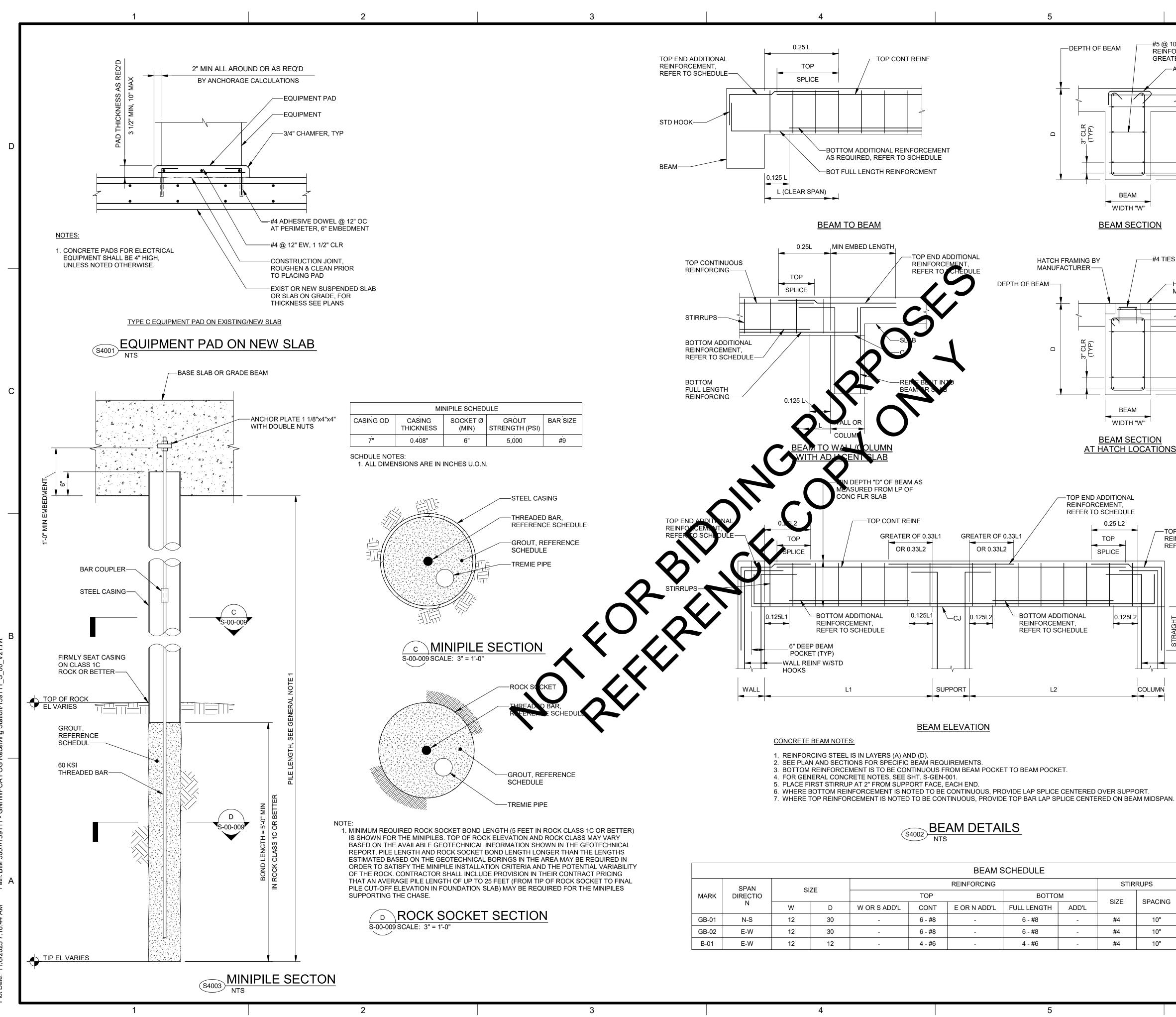


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Н	MINIMUM QUANTITY	SIZE				
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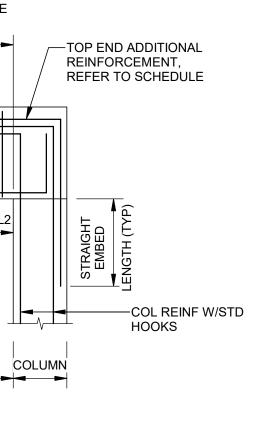


- 6. WHERE BOTTOM REINFORCEMENT IS NOTED TO BE CONTINUOUS, PROVIDE LAP SPLICE CENTERED OVER SUPPORT.
- 7. WHERE TOP REINFORCEMENT IS NOTED TO BE CONTINUOUS, PROVIDE TOP BAR LAP SPLICE CENTERED ON BEAM MIDSPAN.

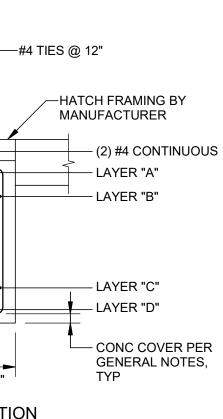
BEAM S	CHEDULE
REINFORCING	
ТОР	BOTTOM

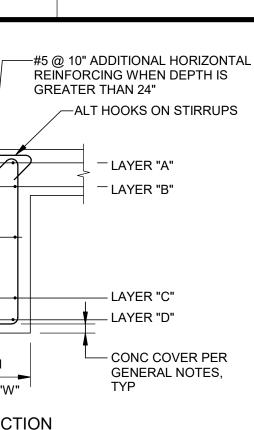
						BEAM S	SCHEDULE				
	SPAN SIZE			SPAN SIZE REINFORCING STIRRUPS		RUPS					
MARK	DIRECTIO	SIZE		ТОР			вотто	M	SIZE	SPACING	REMARKS
	N	W	D	W OR S ADD'L	CONT	E OR N ADD'L	FULL LENGTH	ADD'L	SIZE	SPACING	
GB-01	N-S	12	30	-	6 - #8	-	6 - #8	-	#4	10"	-
GB-02	E-W	12	30	-	6 - #8	-	6 - #8	-	#4	10"	-
B-01	E-W	12	12	-	4 - #6	-	4 - #6	-	#4	10"	-
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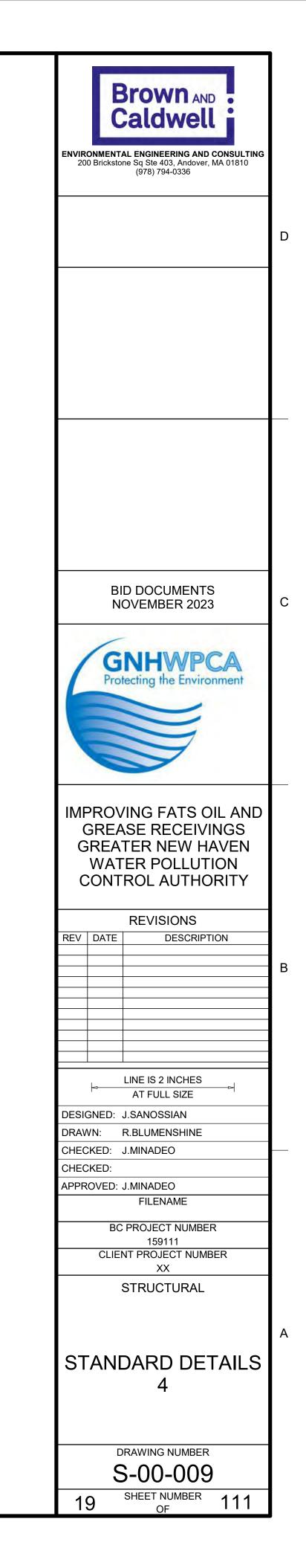


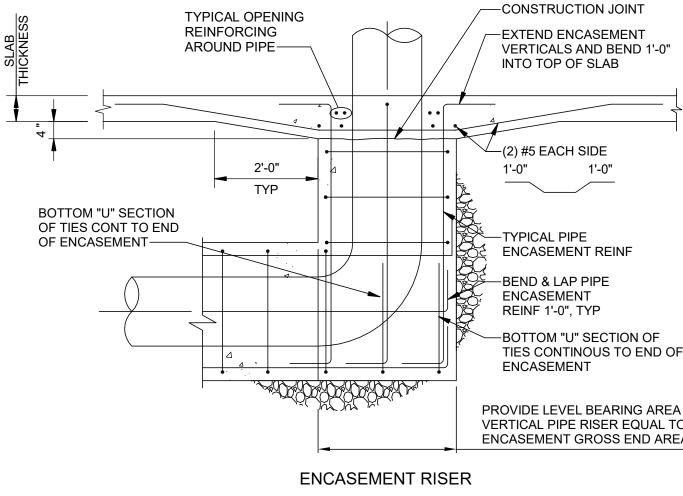


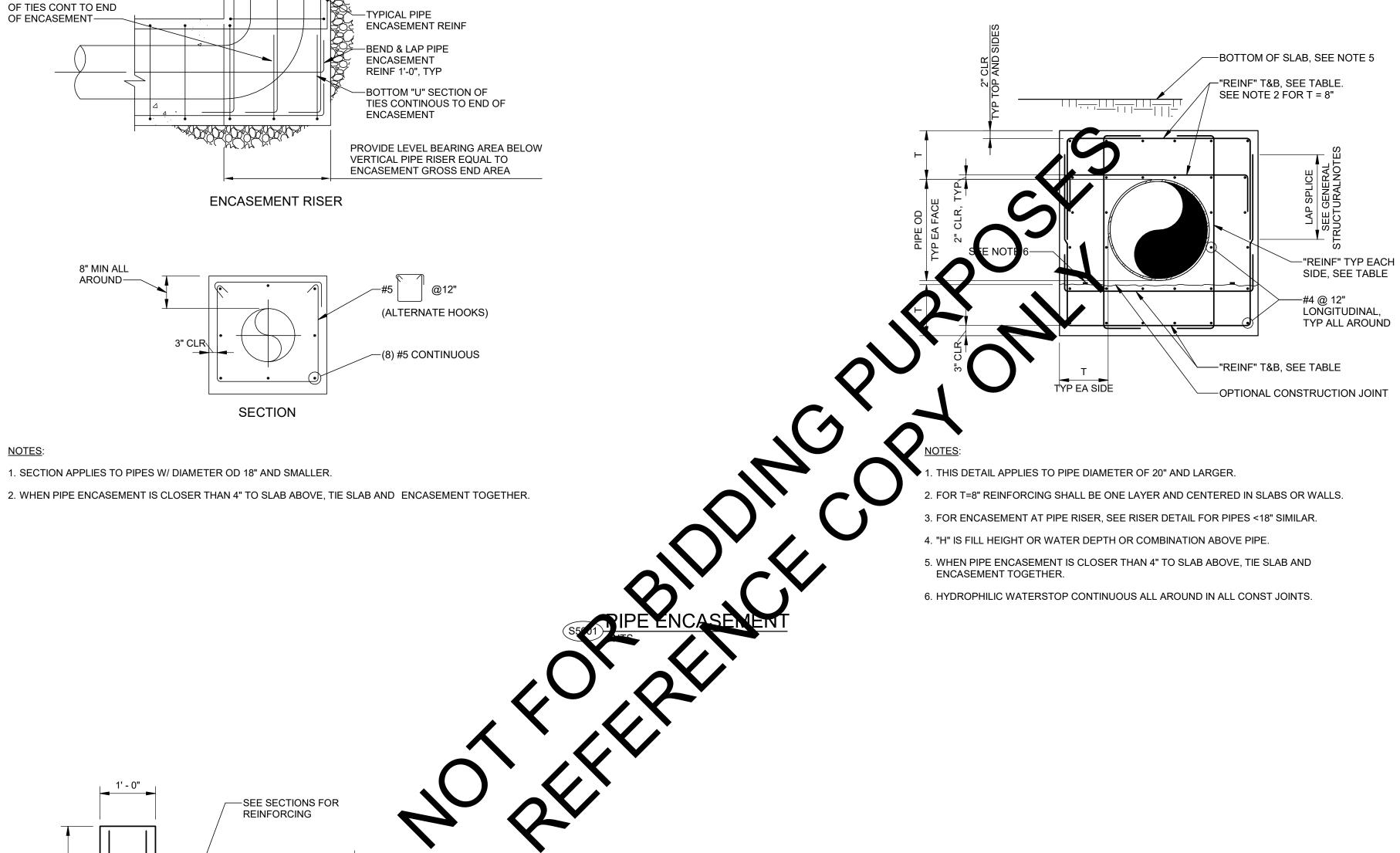






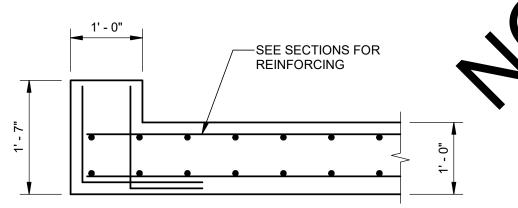






NOTES:

1. SECTION APPLIES TO PIPES W/ DIAMETER OD 18" AND SMALLER.



S5002 CONCRETE WALLS AT DOOR JAMBS

1

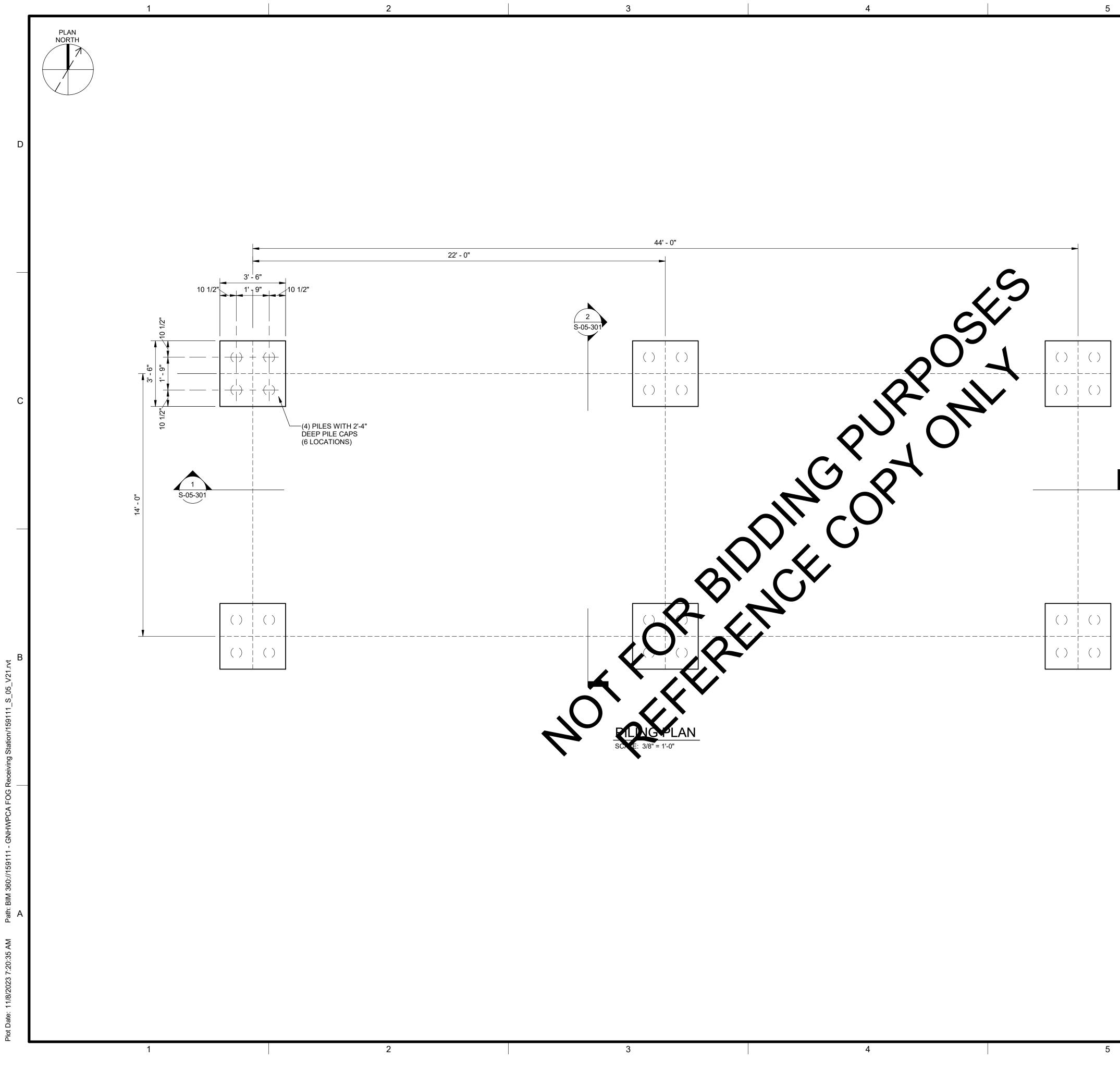
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PIPE DIA	H ≤ 10 FEET		10 < H ≤ 20 FEET		20 < H ≤	30 FEET	30 < H ≤ 40 FE	
(in)	T (in)	REINF	T (in)	REINF	T (in)	REINF	T (in)	REI
20 THRU 30	8	#5@12"	10	#5@12"	10	#5@12"	10	#6@
36 THRU 42	10	#5@12"	10	#6@12"	10	#7@12"	10	#6@
48 THRU 54	10	#6@12"	10	#7@12"	10	#7@6"	12	#7@
60	10	#6@12"	10	#7@8"	14	#7@6"	14	#7@
UP TO 90	12	#7@12"	14	#8@12"	18	#8@12"	24	#8@

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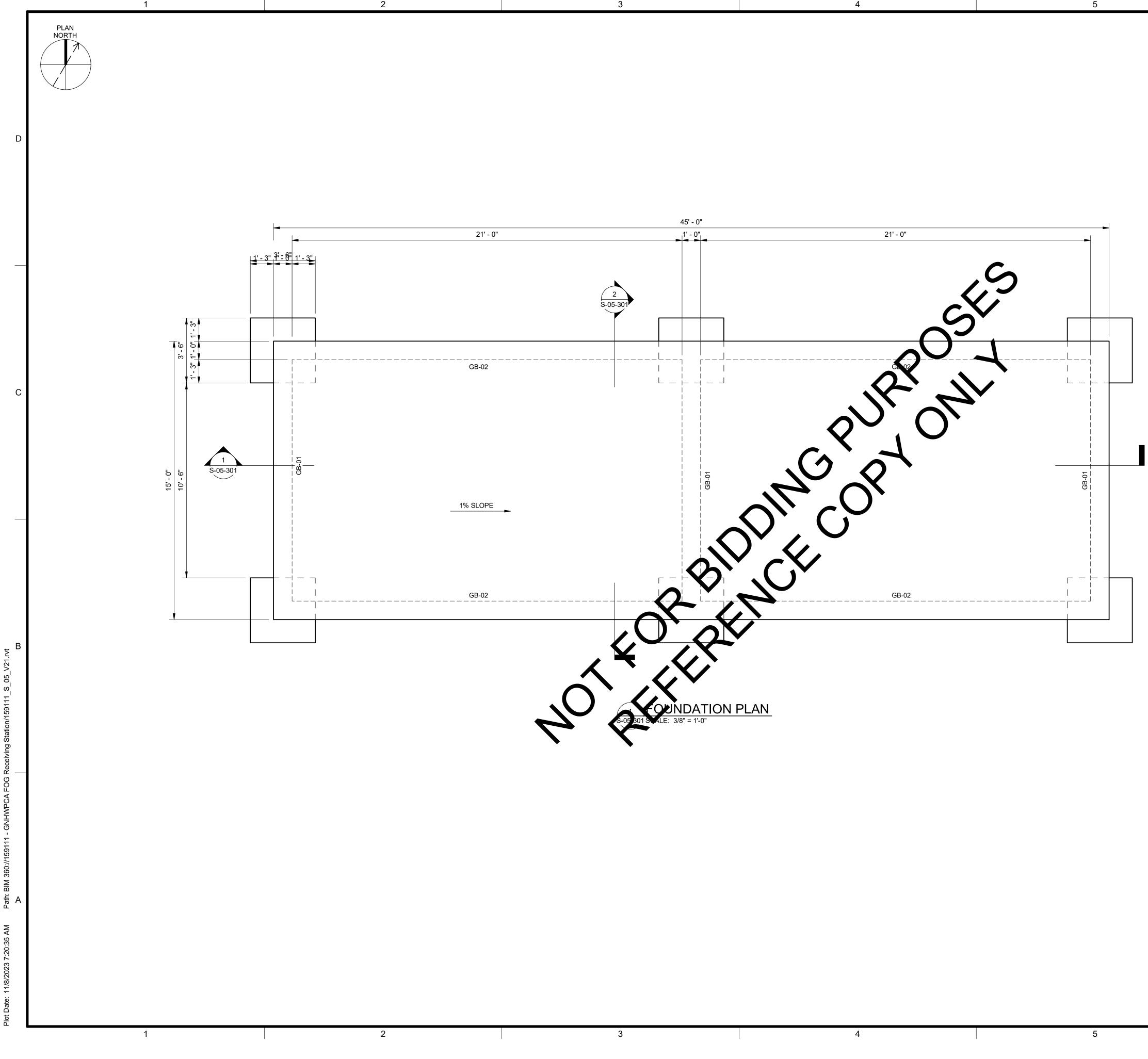
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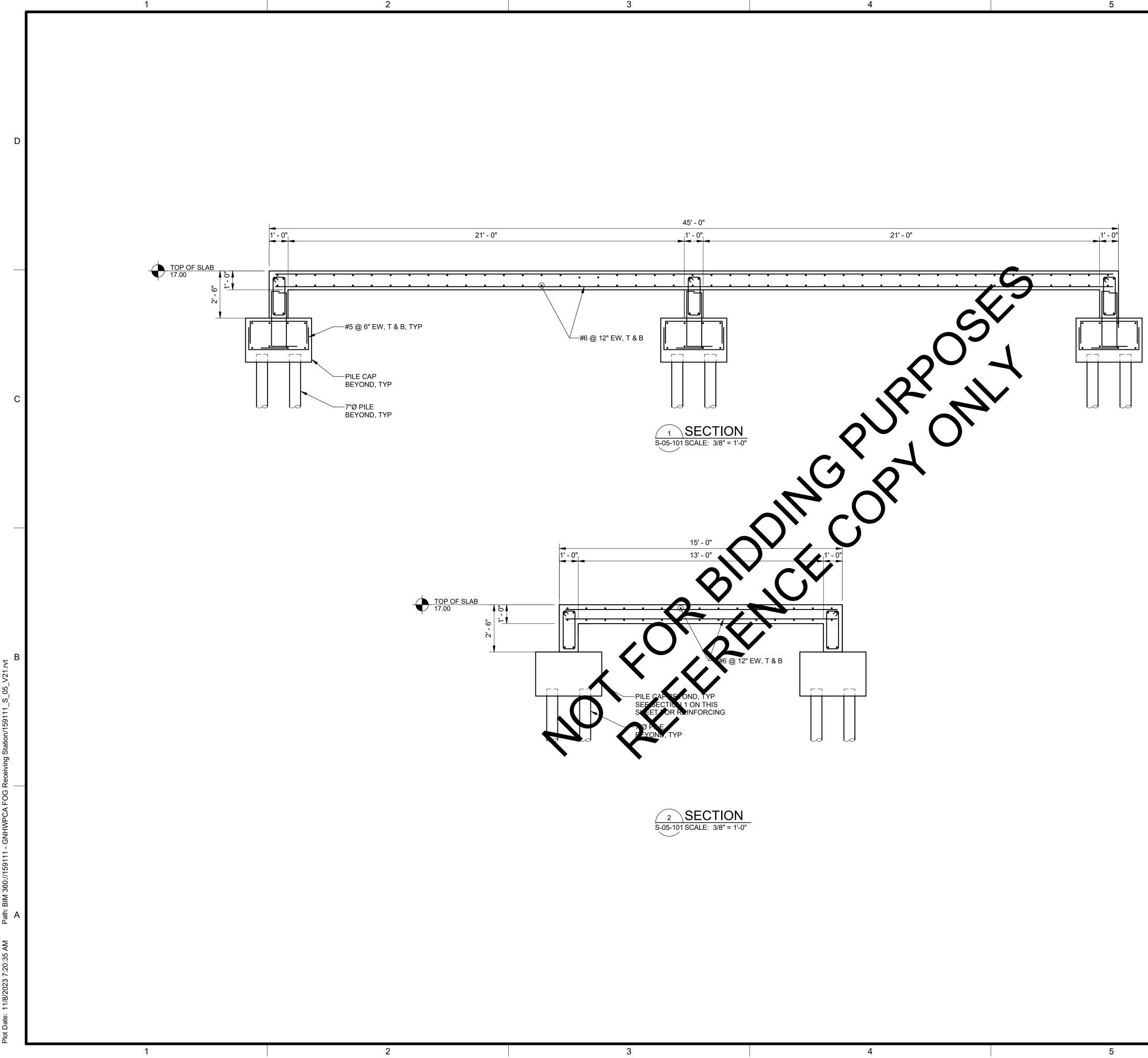
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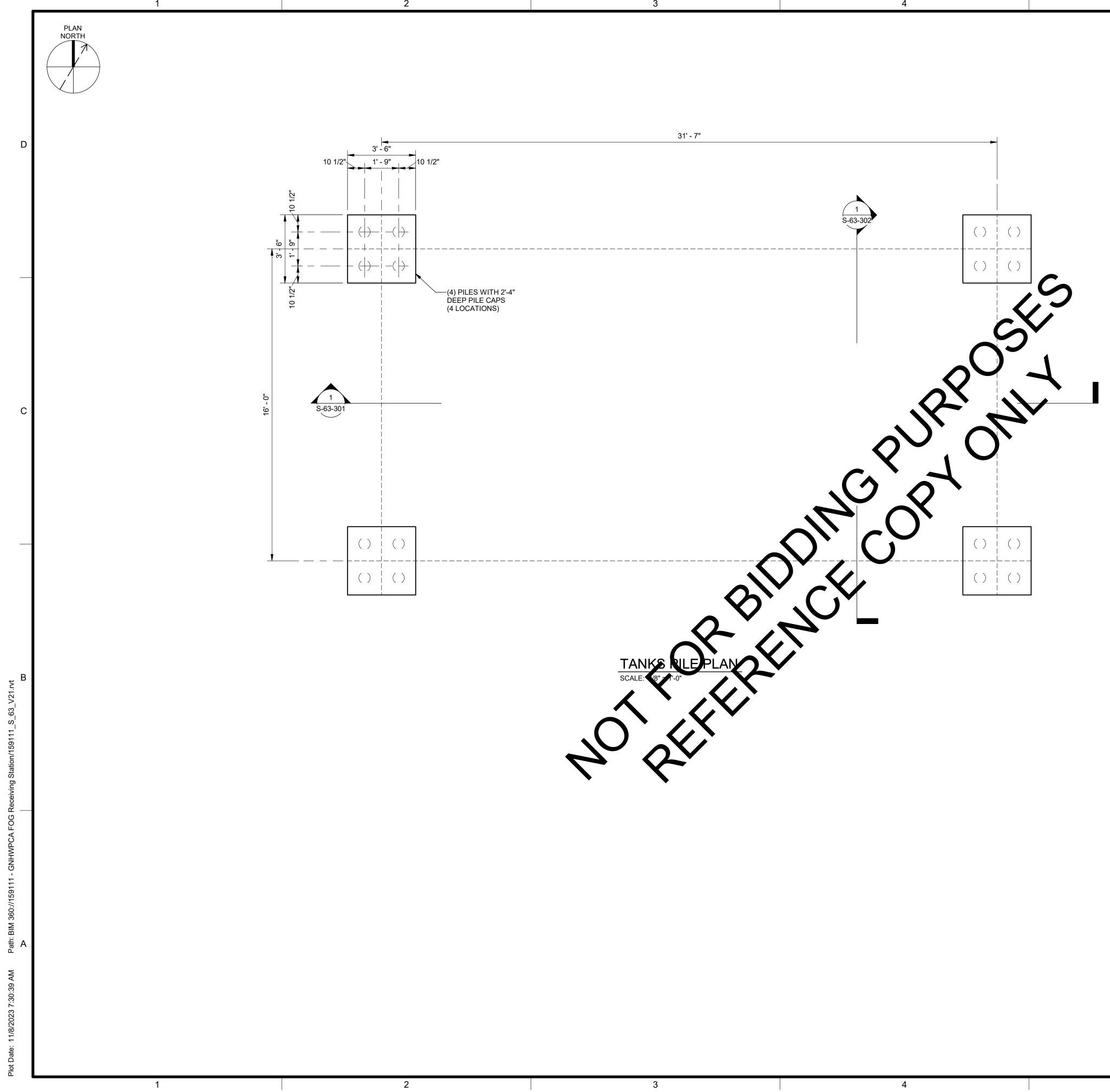
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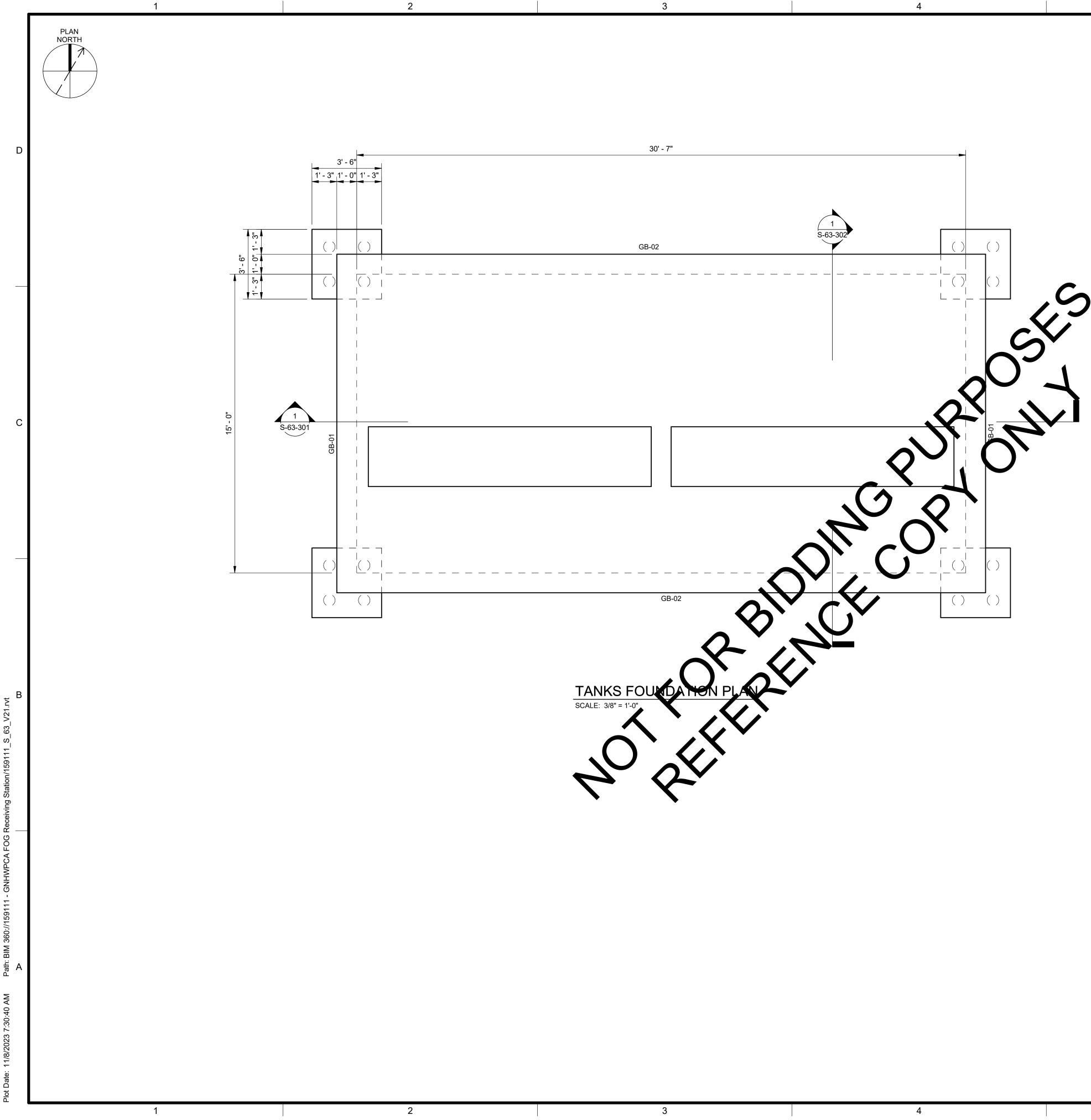
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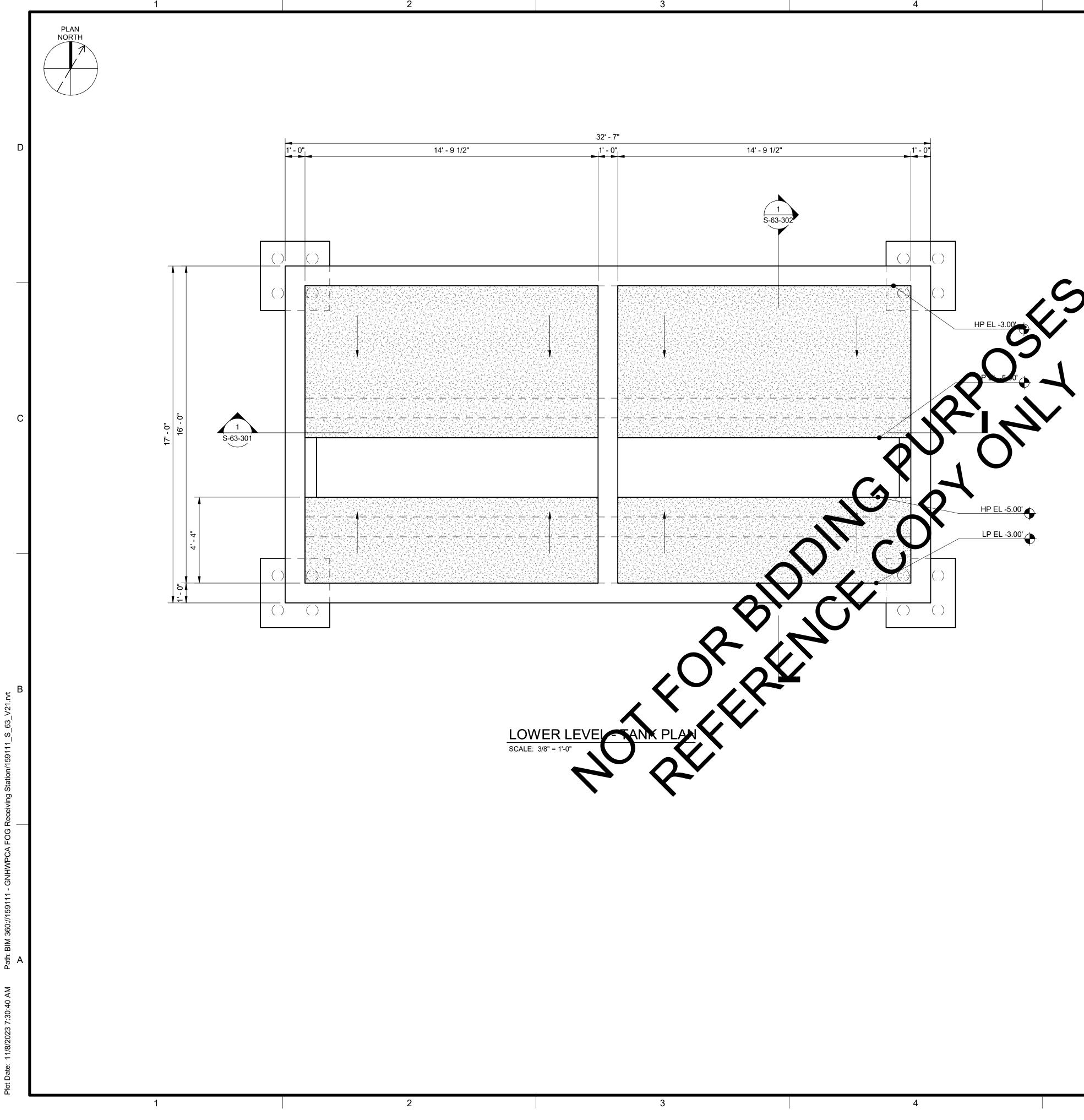
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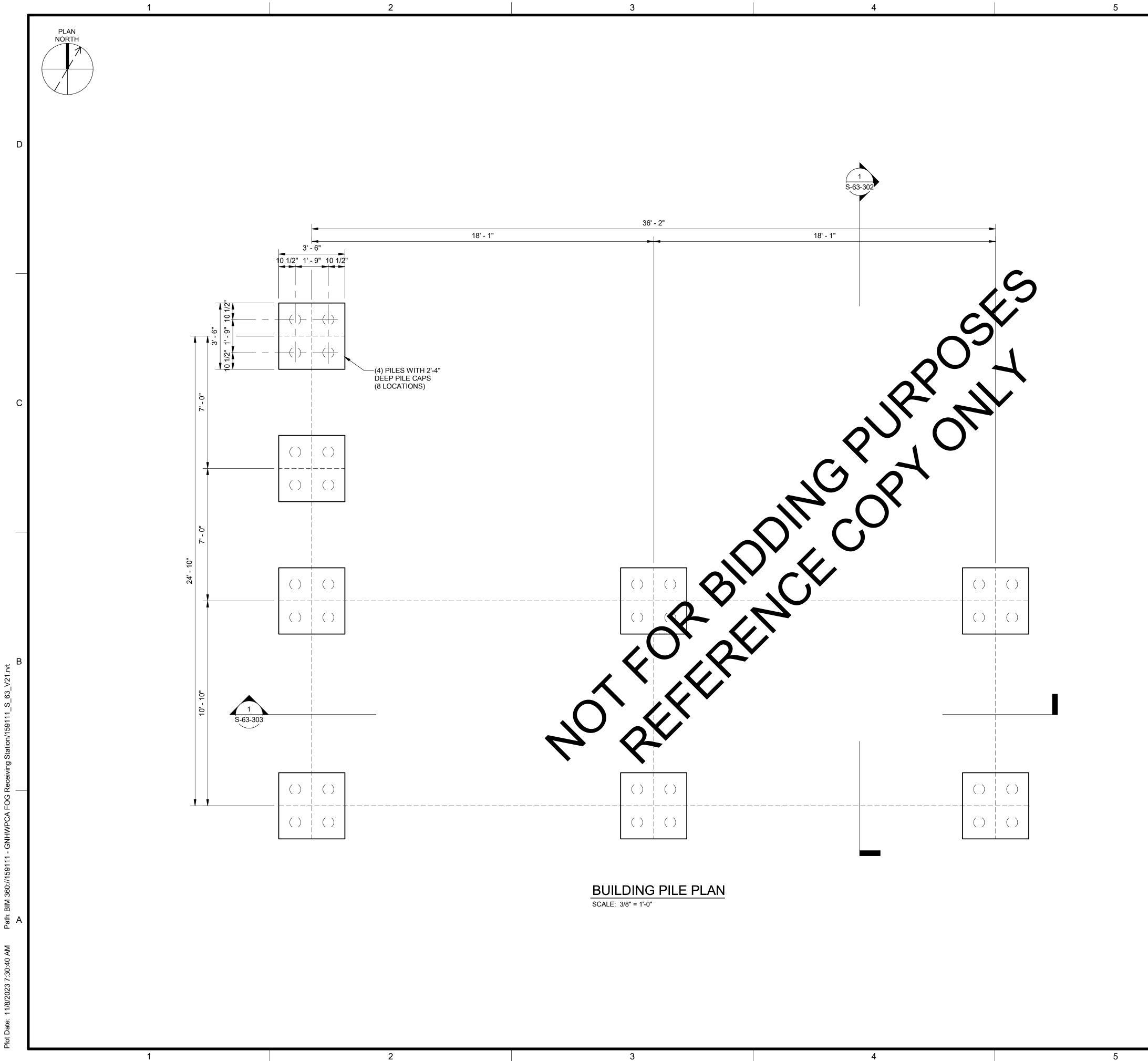
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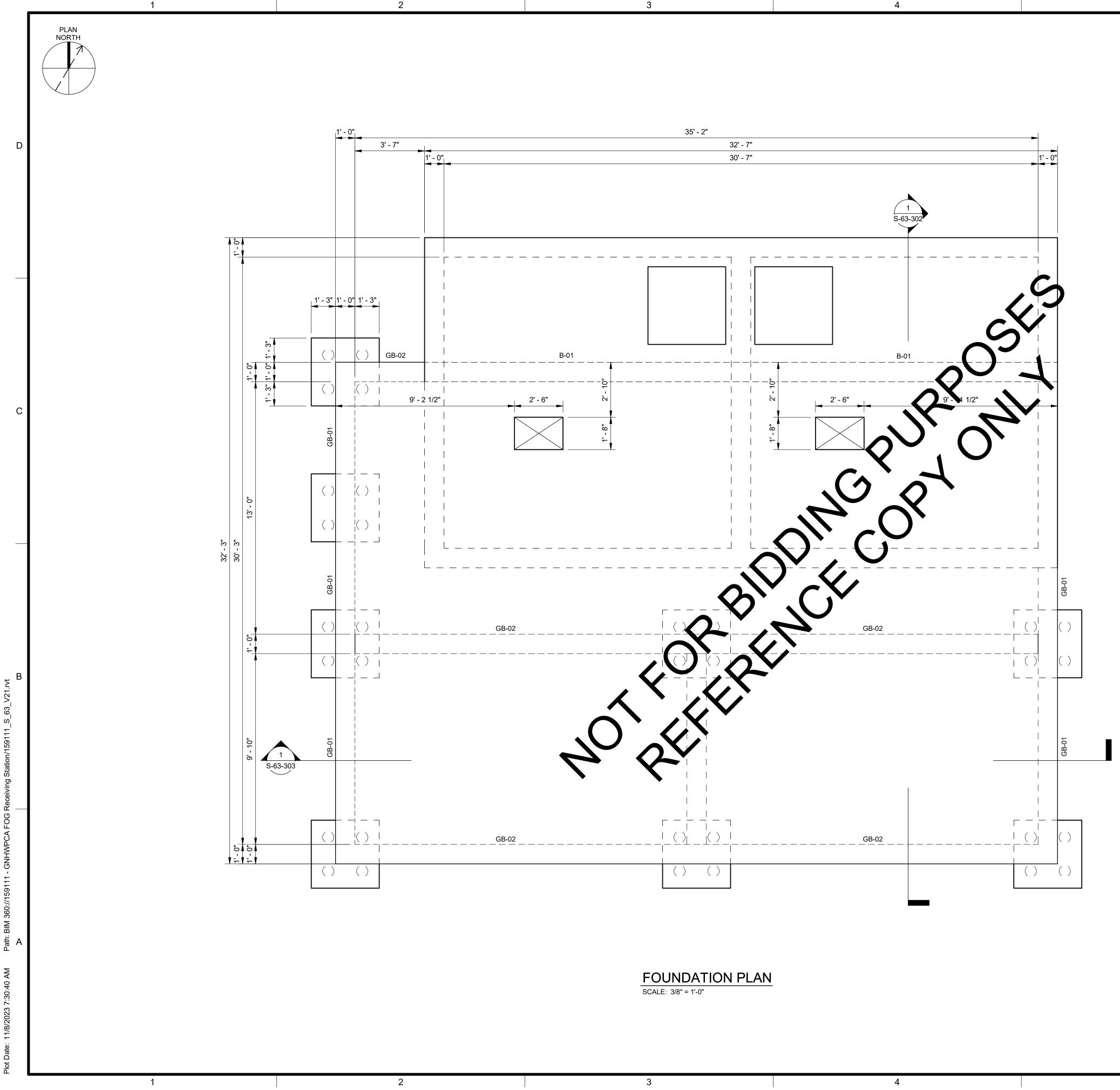
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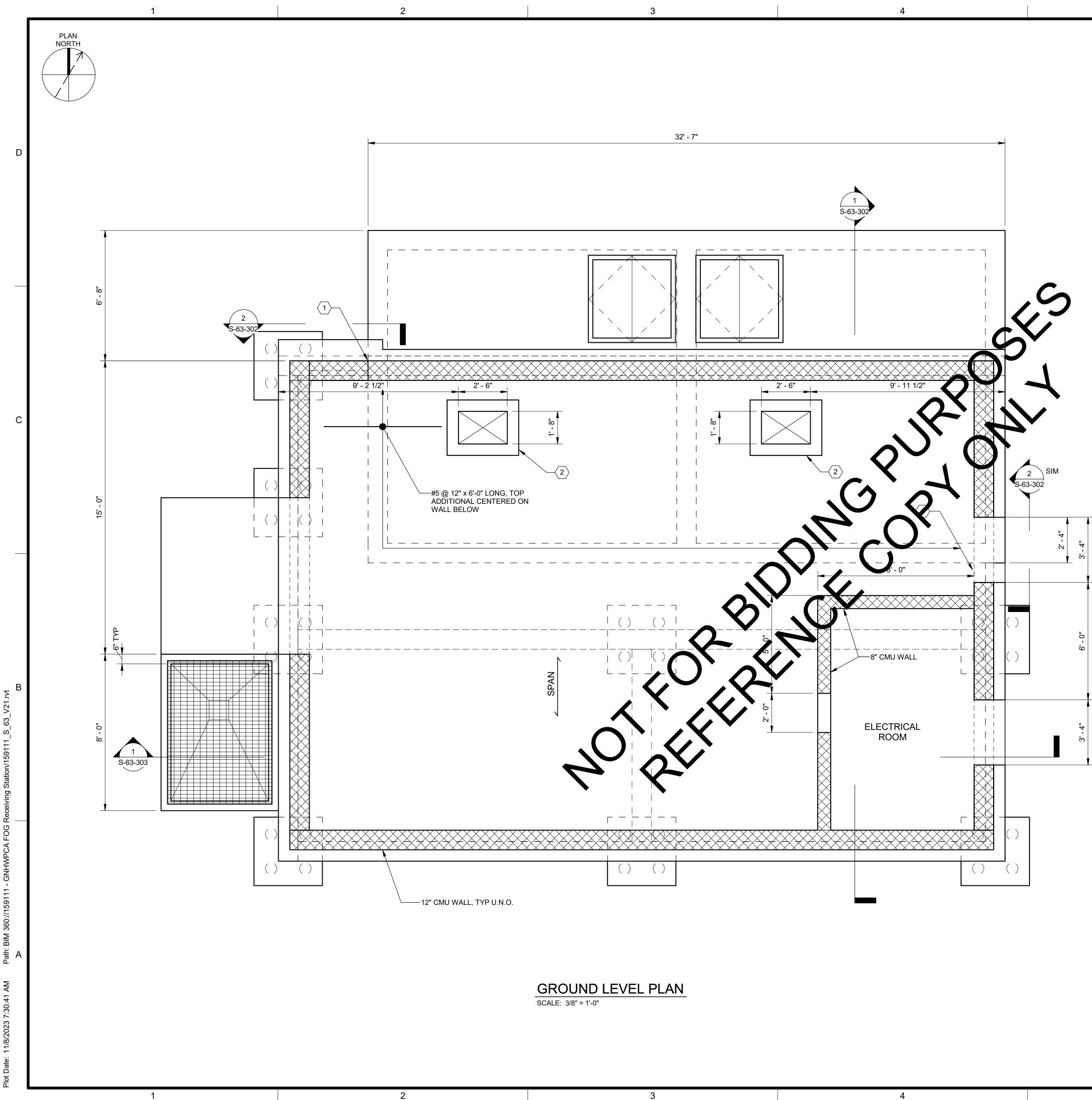
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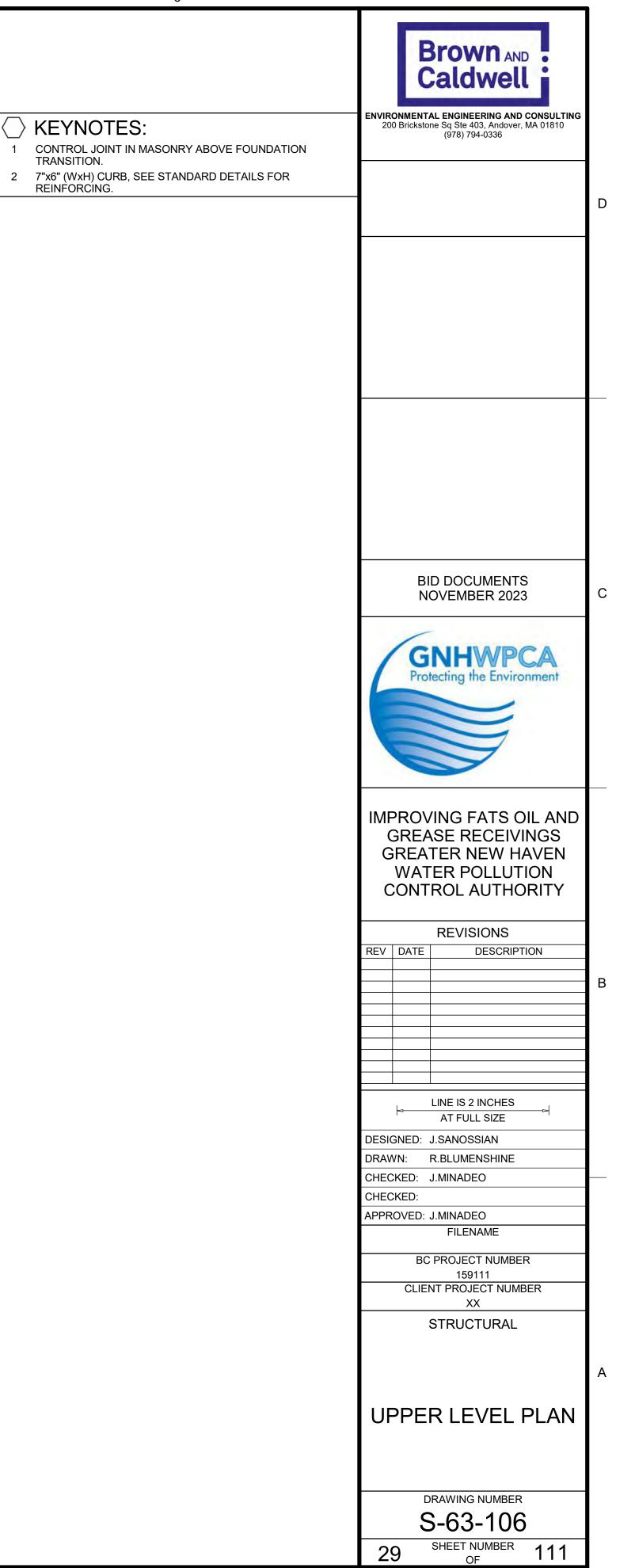


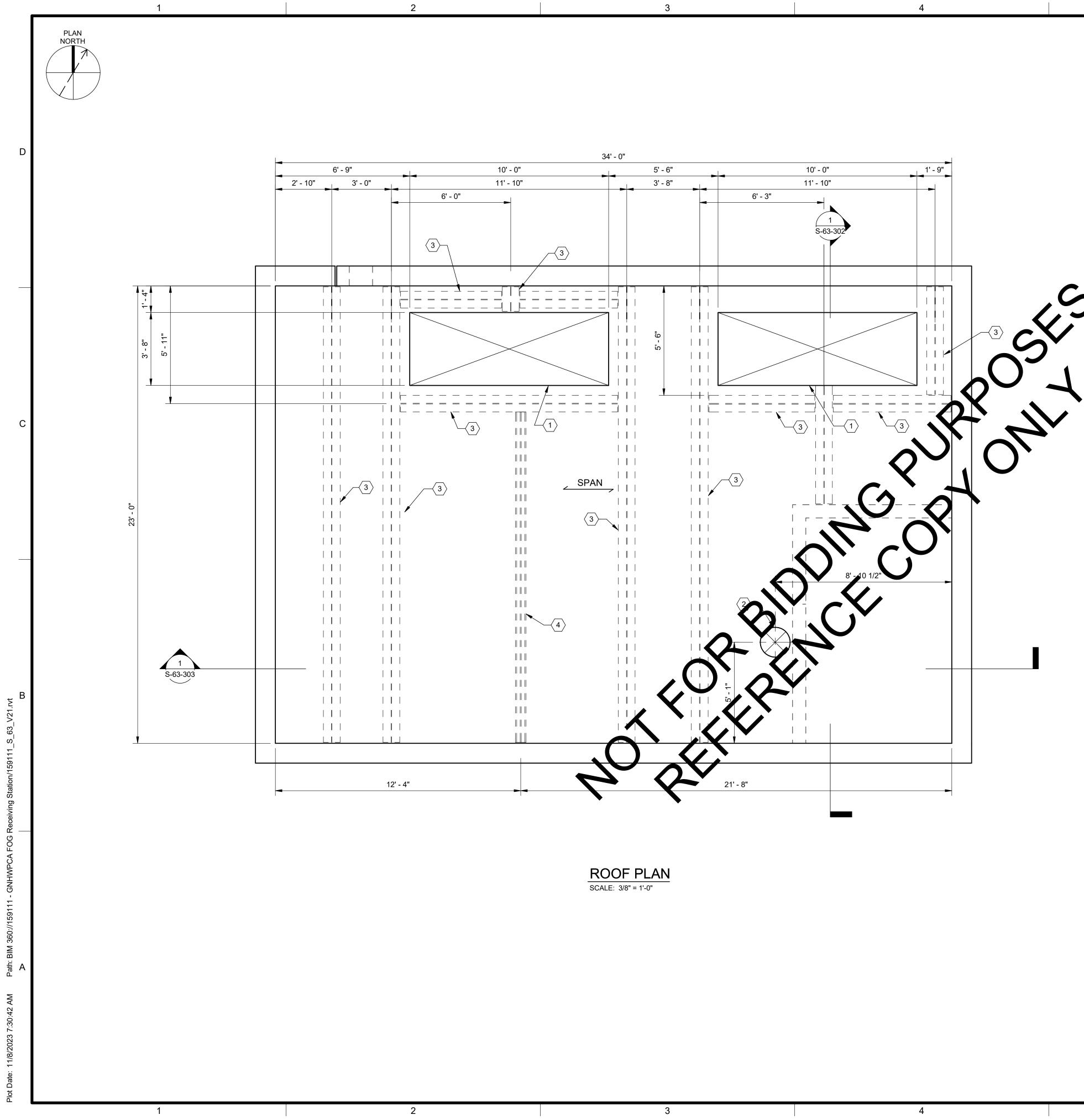
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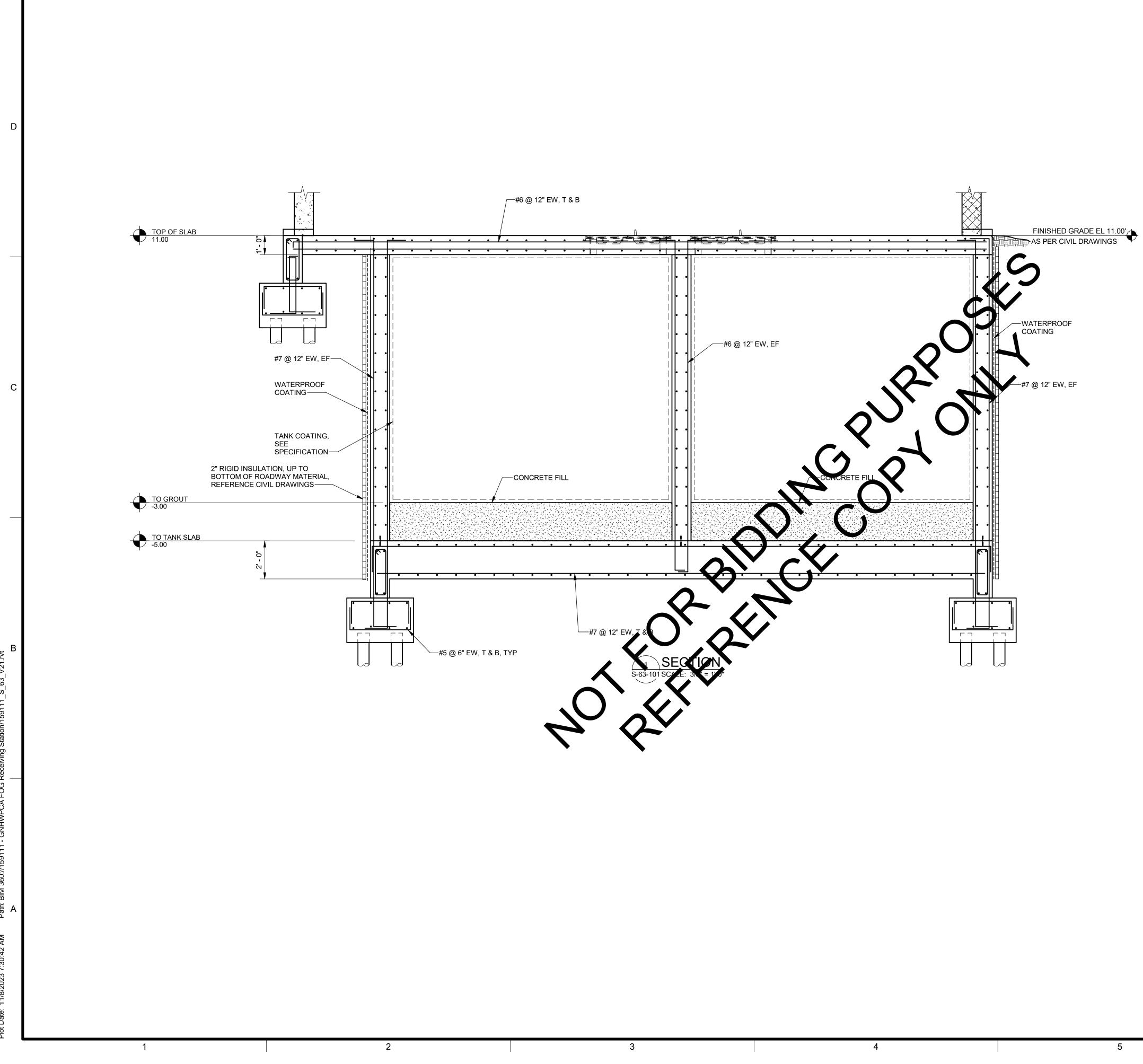
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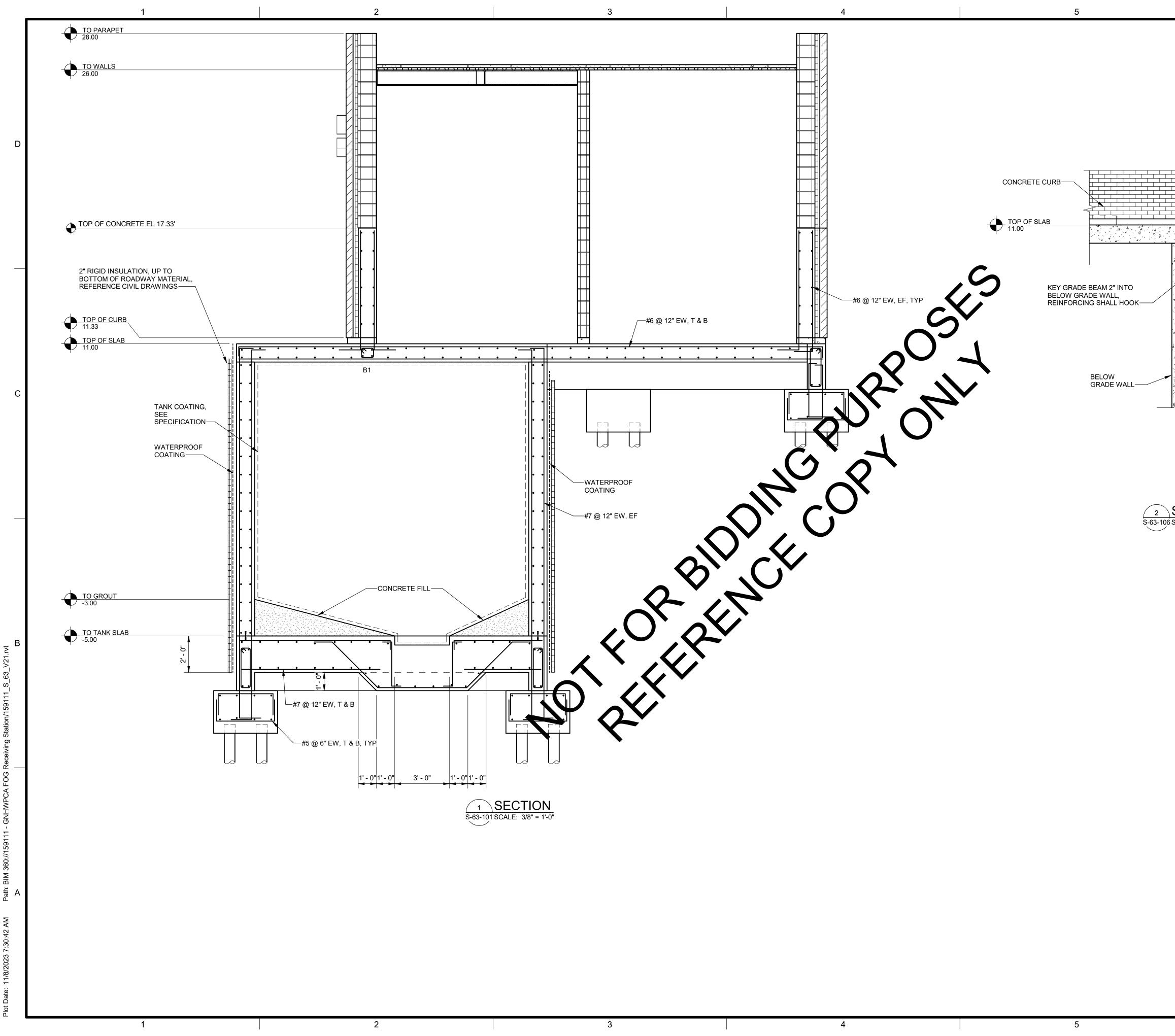




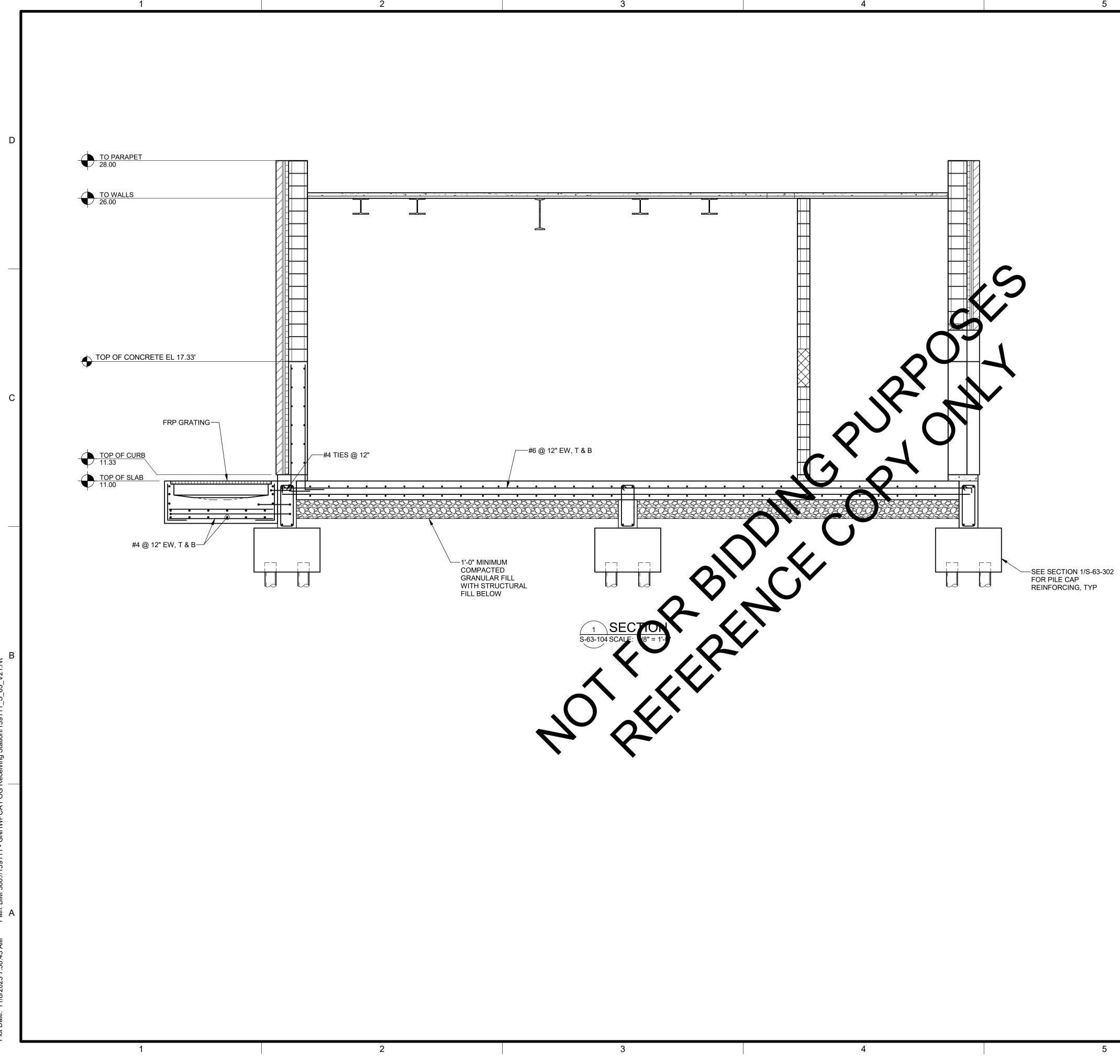
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CO	MPOSITE STEEL	FLOOR				
DEC	CK NOTES:				Brown AND .	
1.		T MANUFACTURING COMPANY				
	1.5VLI COMPOSITE DECK PRO GALVANIZED (G-60), OR APPP				Caldwell	
	A. TOPPING THICKNESS B. TOTAL DECK THICKNE	= 2"			AL ENGINEERING AND CONSULTING	
	C. I _p = 0.272 IN 4/FT				one Sq Ste 403, Andover, MA 01810 (978) 794-0336	
	D. $S_p = 0.311 \text{ IN } 4/\text{FT}$ E. $I_n = 0.295 \text{ IN } 4/\text{FT}$					
	F. S _n = 0.324 IN 4/FT G. Fy = 50 KSI					
2.	COMPOSITE DECK SHALL BE	ATTACHED TO ALL SUPPORTS AS				D
	INDICATED BELOW, BUT MOR	RE ATTACHMENTS SHALL BE MADE IANUFACTURER TO DEVELOP THE				
	MINIMUM SHEAR CAPACITY L					
3.		ON OF DECK SPAN.				
	MINIMUM SHEAR CAPACITY	4350 LBS/FT				
	SUPPORT PERPENDICULAR TO DECK SPAN	MIN 7-3/4" PUDDLE WELDS PER 36" WIDE PANEL				
	SUPPORTS PARALLEL TO DECK SPAN	MIN 3/4" PUDDLE WELDS WELDS @ 12" MAX SPACING				
	DECK SEAMS PARALLEL TO	MIN 3/4" PUDDLE WELDS				
	DECK SPAN	WELDS @ 12" MAX SPACING				
\bigcirc	KEYNOTES:					
	10'-0" x 3'-8" OPENING IN ME	TAL DECK.				
2	18"Ø OPENING IN METAL DE	CK.				
3	W10x60 BEAM. 3-TON MONORAIL BEAM, S20	0x75 BELOW				
L						
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	GENERAL NOTES:			Brown AND	
	1. SEE TYPICAL DETAILS FOR MASONRY WALLS REINFORCING.		Ċ	aldwell	
		ENVIR 20	CONMENT 00 Bricksto	AL ENGINEERING AND CONSULTING one Sq Ste 403, Andover, MA 01810 (978) 794-0336	
		╞			
	CONTROL JOINT IN MASONRY ABOVE FOUNDATION TRANSITION				D
A A A A A A	WATERPROOF				
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BC PROJECT NUMBER 159111 CLIENT PROJECT NUMBER XX STRUCTURAL SECTIONS 3 DRAWING NUMBER S-63-303	CHECKED:		

ABBREVIATIONS

2

MFR

MAT'L

MAX

MECH

MTL

MEZZ

MOD

MIN

Ν

NA

NR

NTS

NO OC OPNG OPP OD OCD

OH OSD

PEMB

PART Р PEMB

PL

PVC PVF

PCP

PSF

PS QUAN QT

RAD R REF

REINF REQ'D RD

SECT SHT SMS

STD STA STOR

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STRUC SUSP TER TC THKNS TO T/O TOC TOS TOW TSM

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D	ACOUS ADMIN AFF AL & A @ B & B BSMT BM BLK BD BOT BC BLDG CAB CIP CLG C/S CLO COL CONC COL CONC CB CONT CJ
С	CTSK CU CL DETS DIA DIM DO DR DN DOW DWG DF EA EWC ELEC EL ENGR EQUIP EXIST EJ EXT FRP FWP FIN FIN FL FD GA GALV
В	GL GL GSFT GR GCFFB GCFFAB GYP HDN HDW HVAC HDCT HT HP HM HORIZ INFO ID INSUL

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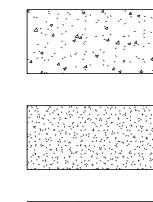
JT LAB

LAV LP LVR

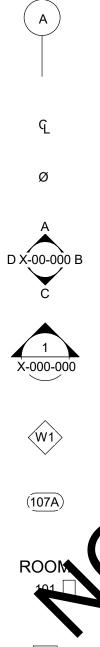
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ACOUSTICAL	
ABOVE FINISH FLOOR ALUMINUM	
AND	
ARCHITECTURAL	
AT BALLED AND BURLAPPED	
BASEMENT	
BEAM	
BLOCK	
BOARD BOTTOM	
BRICK COURSES	
BUILDING	
CABINET CAST-IN-PLACE	
CEILING	
CIVIL SANITARY	
CLOSET COLUMN	
CONCRETE	
CONCRETE BLOCK	
CONTROL JOINT COUNTERSINK	
CUBIC	
DETAILS DIAMETER	
DIMENSION	
DOOR OPENING	
DOOR DOWN	
DOWEL	
DRINKING FOUNTAIN EACH	
EAST	
ELECTRIC WATER COOLER	
ELECTRICAL ELEVATION	
ENGINEER	
EQUAL	
EQUIPMENT EXISTING	
EXPANSION	
EXPANSION JOINT	
EXTERIOR FIBER REINFORCED PLASTIC	
FIBROUS WOOD PANEL	
FINISH	
FINISH FLOOR FIRE EXTINGUISHER	
FLOOR	
FLOOR DRAIN	
GAUGE GALVANIZED	
GLASS	
GLAZED STRUCTURAL FACE TILE	
GRADE GROUND AND CEMENTITIOUS FILLED FACE CONCRETE	
GROUND AND CEMENTITIOUS FILLED FACE-SLOTTED	
ACOUSTICAL BLOCK	
GYPSUM HARDENER	
HARDWARE	
HEATING, VENTILATING AND AIR CONDITIONING	
HEAVY DUTY CONCRETE TOPPING HEIGHT	
HIGH POINT	
HOLLOW METAL	
HORIZONTAL INFORMATION	
INSIDE DIMENSION	
INSULATION	
INTERIOR JANITOR'S CLOSET	
JOINT	
LABORATORY	
LAVATORY LOW POINT	
LOUVER	

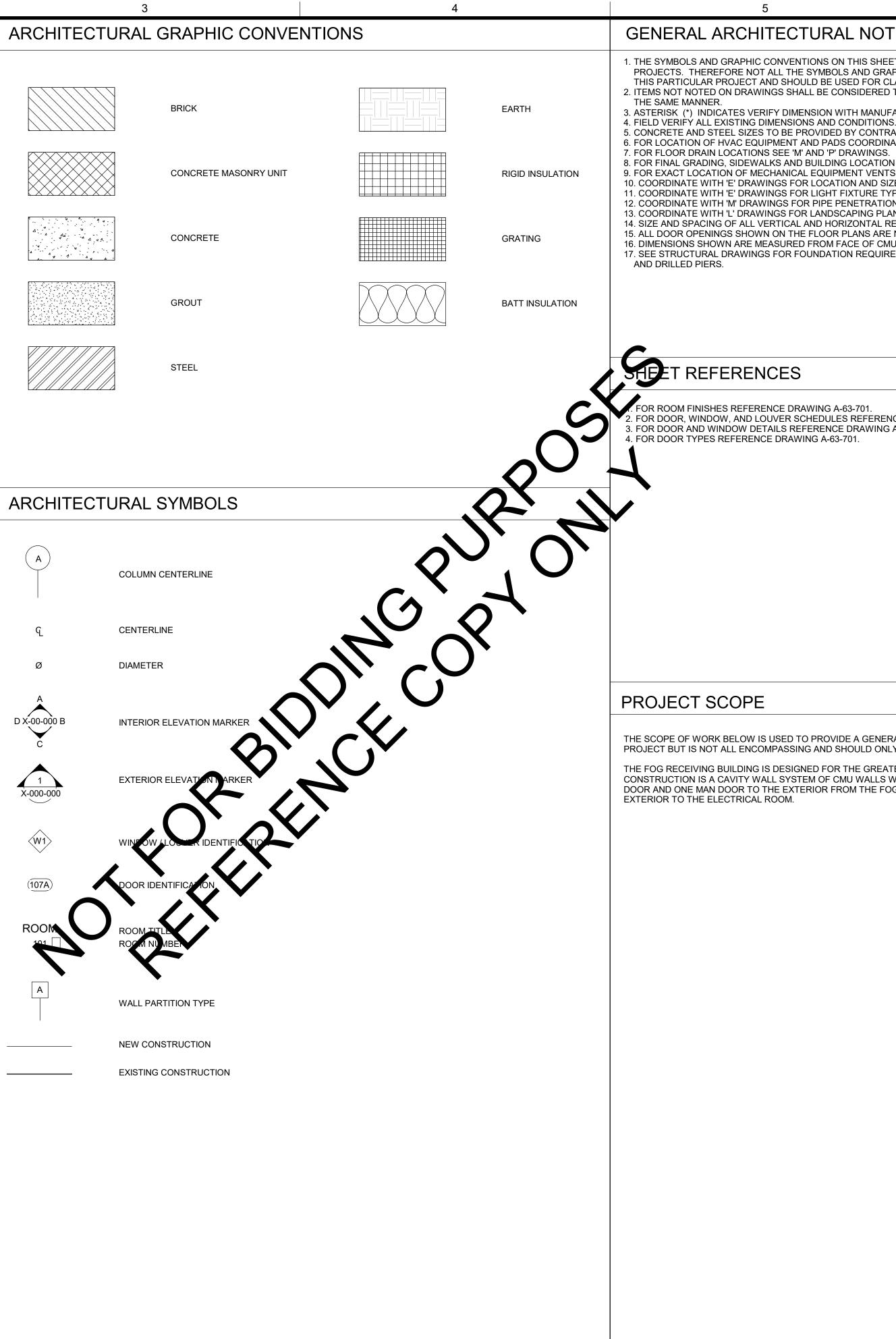
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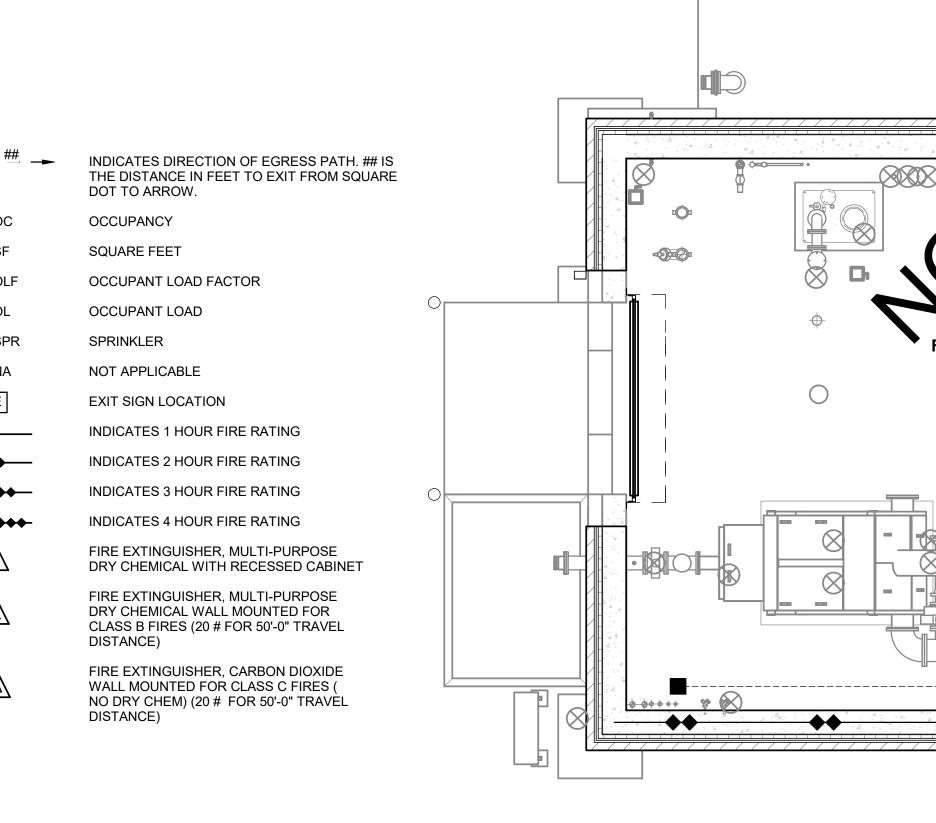


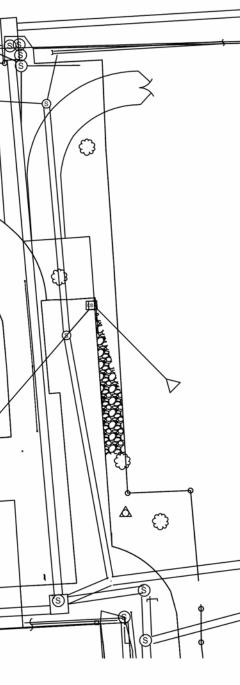
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FES			
PHIC	E A STANDARD GUIDE INTENDED FOR GENERAL USE ON ALL CONVENTIONS CONTAINED IN THIS LIST ARE NECESSARILY USED ON CATION ONLY. SAME AS NOTED ITEMS WHICH ARE GRAPHICALLY REPRESENTED IN	Brown AND Caldwell	
S. ACTO	RER OF EQUIPMENT SUPPLIED. R OR PEMB MANUFACTURER. /ITH 'M' DRAWINGS.	ENVIRONMENTAL ENGINEERING AND CONSULTING 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	
S COC ZE OF	'C' DRAWINGS. DRDINATE WITH 'M' DRAWINGS. RECESSED ELECTRICAL DEVICES IN WALLS. ND LOCATIONS.		D
NS AI EINFC NOM U WAI	ND DETAILS. ORCING BARS TO BE PROVIDED BY PEMB MANUFACTURER NAL DIMENSIONS. LL TO FACE OF CMU WALL. TYP ALL PLAN AND ELEVATION DRAWINGS. TS INCLUDING STRUCTURAL CONCRETE FLOOR SLAB, GRADE BEAMS,		
ICE DI A-00-	RAWING A-63-701. 502.		
		BID DOCUMENTS NOVEMBER 2023	С
		GNHWPCA Protecting the Environment	
Y BE FER N WITH I	NDERSTANDING OF THE ARCHITECTURAL ELEMENTS OF THIS USED AS A REFERENCE. EW HAVEN WATER POLLUTION CONTROL AUTHORITY. THE BRICK EXTERIOR. THE BUILDING HAS ONE OVERHEAD COILING	IMPROVING FATS OIL AND GREASE RECEIVINGS GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY	
IG SCI	REENING AND PUMP ROOM, AND ONE MAN DOOR FROM THE	REVISIONS REV DATE DESCRIPTION	
			В
		LINE IS 2 INCHES	
		DESIGNED: S.GRAMKOW DRAWN: S.GRAMKOW CHECKED: D.WALDROP	
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		BC PROJECT NUMBER 159111 CLIENT PROJECT NUMBER	
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		GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS	A
		DRAWING NUMBER	
		34 SHEET NUMBER 111	

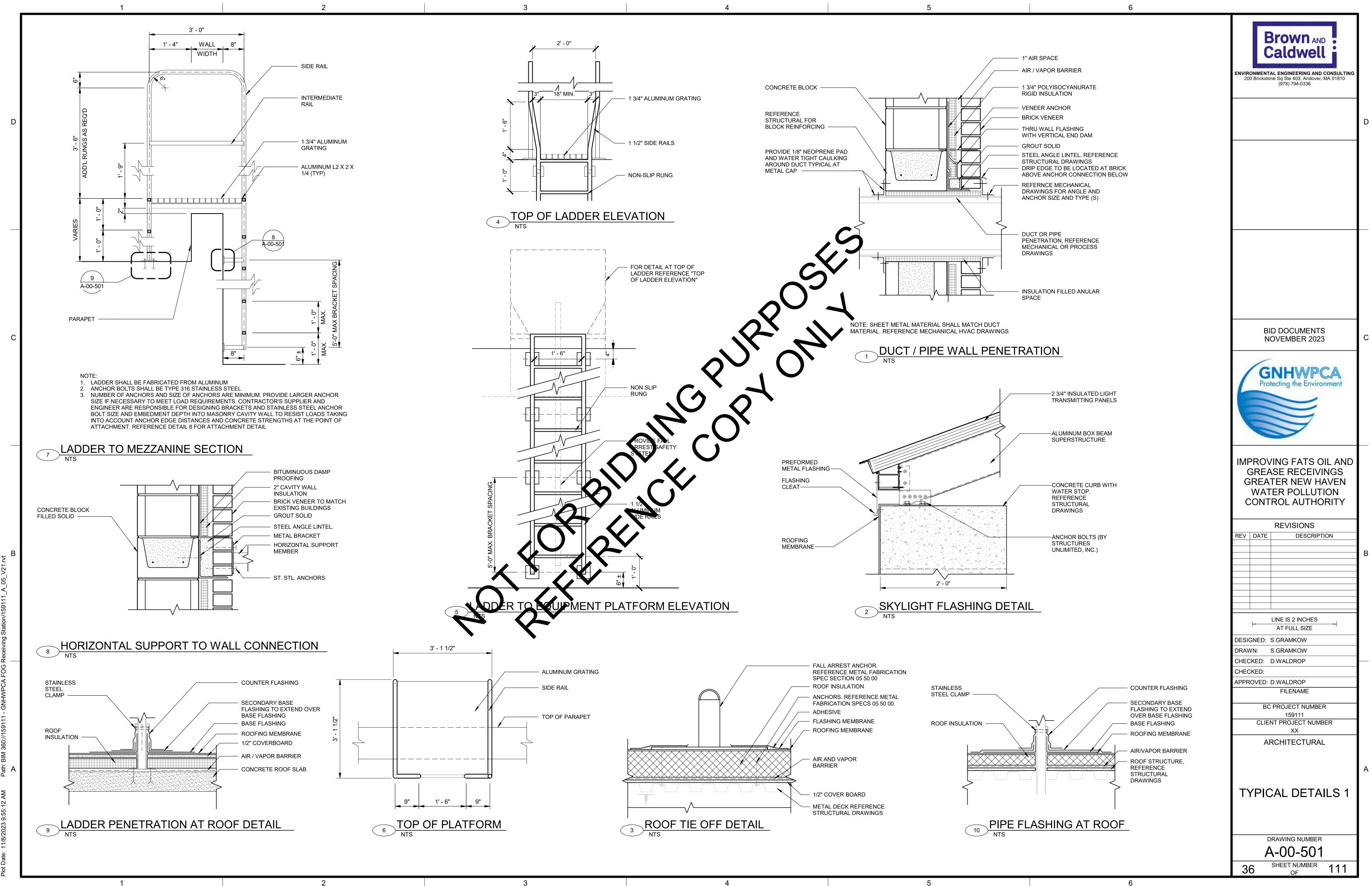
GENERAL C	CODE CRITERIA	2021 INTERN	ATIONAL ENERGY CONSERVA	TION CODE	2021 INTE	ERNATIONAL BUILDING	GCODE
BUILDING CODE	2021 INTERNATIONAL BUILDING CODE (IBC)				OCCUPANCY OF BUILDING	FOG RECEIVING F-1	
FIRE CODE 2018 CONNEC	CTICUT FIRE SAFETY CODE / 2015 INTERNATIONAL FIRE CODE		ZONE 5A		ROOM SEPARATION CONSTRUCTION TYPE	2 HF	
PLUMBING CODE	2021 INTERNATIONAL PLUMBING CODE (IPC)		BUILDING ENVELOPE REQUIREMENTS (TABLE	BUILDING ENVELOPE DESIGN	NUMBER OF STORIES	II B ALLOWABLE	ACTUAL
MECHANICAL CODE	2021 INTERNATIONAL MECHANICAL CODE (IMC)	INSULATION ENTIRELY ABOVE DECK	ROOFS R-30ci	R-30ci	BUILDING HEIGHT (FT)	2 ALLOWABLE	1 ACTUAL
ELECTRICAL CODE	NATIONAL ELECTRIC CODE 2020 (NEC) (NFPA 70)	METAL BUILDING	R-19 + R-11 LS	N/A	ALLOWABLE FLOOR AREA	55' ALLOWABLE AREA	XX ACTUAL
ENERGY CODE 2021 II	NTERNATIONAL ENERGY CONSERVATION CODE (IECC)	ATTIC AND OTHER	R-38 WALLS BELOW GRADE	N/A		15,500	973
ACCESSIBILITY	ICC A117.1-2017	BELOW-GRADE WALL	R-7.5 ci	N/A	FIRE SEPARATION DISTANCE	SEPARATION RATINGS REQUIRED	PROVIDED
		MASS	WALLS ABOVE GRADE	R-11.4ci	DISTANCE LESS THAN 5' DISTANCE BETWEEN 5' & 10'	2 HR 1 HR	2 HR 0 HR
		MASS METAL BUILDING	R-11.4ci R-13 + R-13ci	N/A	DISTANCE BETWEEN 10' & 30' DISTANCE MORE THAN 30'	0 HR 0 HR	0 HR 0 HR
		METAL FRAMED WOOD-FRAMED AND OTHER	R-13 + R-7.5ci R-13 + R-3.8 ci OR R-20	N/A N/A		FIRE RESISTANCE RATINGS	
			FLOORS		STRUCTURAL FRAME	0 HR	PROVIDED 0HR
		MASS	R-10ci	R-10ci	BEARING WALLS -EXTERIOR BEARING WALLS - INTERIOR	0 HR 0 HR	0HR / 2HR 0HR
		JOIST / FRAMING	R-30 OPAQUE DOORS (50% GLASS)	N/A	NON BEARING WALLS AND PARTITIONS - INTERIOR	0 HR	2HR
		NON-SWINGING	R-4.75	R-4.75	FLOOR CONSTRUCTION	0 HR	0HR
		SWINGING	R-2.70 SLAB-ON-GRADE FLOORS	R-2.70	ROOF CONSTRUCTION	0 HR INTERIOR FINISHES	0HR
		UNHEATED	R-10 FOR 24" BELOW	R-10 FOR 24" BELOW	VERTICAL EXITS AND EXIT	REQUIRED	PROVIDED
		HEATED	R-15 FOR 36" BELOW + R-5 FULL SLAB BUILDING ENVELOPE REQUIREMENTS (TABLE C402.4)	N/A	PASSAGEWAYS	CLASS B	N/A
			VERTICAL FENESTRATION: U-FACTOR		EXIT ACCESS CORRIDORS AND OTHER EXIT WAYS	CLASS C	N/A
		FIXED FENESTRATION OPERABLE FENESTRATION	0.38	N/A N/A	ROOMS AND ENCLOSED SPACES	CLASS C FIRE PROTECTION SYSTEMS	CLASS C
		ENTRANCE DOORS	0.77	NA NA	AUTOMATIC SPRINKLERS	REQUIRED NO	PROVIDED NO
		SHGC: PF < 0.2	VERTICAL FENESTRATION: SHGC 0.38		ALT. AUTOMATIC FIRE EXTINGUISHING		
		SHGC: 0.25 < PF < 0.5	0.38	0.46	SYSTEMS STANDPIPE SYSTEM	NO NO	NO NO
		SHGC: PF > 0.5	0.61	0.61	PORTABLE FIRE EXTINGUISHERS FIRE ALARM AND DETECTION SYSTEMS	YES NO	YES NO
		U-FACTOR	SKYLIGHTS (3% MIN.) 0.50	0.50	OCCUPANT LOAD FACTORS (SF /	MEANS OF EGRESS	
		SHGC	0.40	p40	PERSON)		
			\mathbf{O}		OCCUPANT LOAD CHART EGRESS WIDTH PER OCCUPANT	REFERENCE CODE CODE CODE CODE CODE CODE CODE CO	36"
					SPACES WITH ONE MEANS OF EGRESS MAX. EXIT ACCESS TRAVEL DISTANCE	ALLOWED 200ft	PROVIDED
			. (^		EXIT ACCESS TRAVEL DISTANCE CORRIDOR FIRE RESISTANCE RATING	REFERENCE CODE C	OMPLIANCE PLAN N/A
				V	BUILDINGS WITH ONE EXIT	ALLOWED	PROVIDED
					CONSTRUCTION SITES	ACCESSIBILITY EXEM	
					EQUIPMENT SPACES ACCESSIBILITY ROUTE/ENTRY	EXEM EXEM	
					PARKING SIGNAGE	EXEM	
					NOTES:		
						103.2, "GENERAL EXCEPTIONS" AND SECT	ION 1103.2.9 "EQUIPMENT SPACES"
					OF CHAPTER 11 OF THE 2021 INTERNAT	TIONAL BUILDING CODE AND THE 2010 AD	A STANDARDS FOR ACCESSIBILITY.
				/			
			トマ	×			
				<u> </u>			
□	TH. ## IS			$\overline{\}$			
THE DISTANCE IN FEET TO EXIT FROM DOT TO ARROW.							
OC OCCUPANCY							
SF SQUARE FEET							
OLF OCCUPANT LOAD FACTOR					3		
OL OCCUPANT LOAD		でくく					
SPR SPRINKLER	ψ	FOG SCREENING AND					
NA NOT APPLICABLE		PUMPING ROOM	43'-10"		43'-6"		
E EXIT SIGN LOCATION		101)					
↓ INDICATES 1 HOUR FIRE RATING		OC: F-1 SF: 702					
→→ INDICATES 2 HOUR FIRE RATING		OLF: 300 OL: 3					
◆◆◆ INDICATES 3 HOUR FIRE RATING		SPR: NO			EXISTING MAIN BUILDING \square		
◆◆◆◆ INDICATES 4 HOUR FIRE RATING			OC: F-1 SF: 68 OL F: 200		FOG RECEIVING BUILDING		
▲ FIRE EXTINGUISHER, MULTI-PURPOSE			OLF: 300 OL: 1				
DRY CHEMICAL WITH RECESSED CABI			SPR: NO E 7'-0"				
FIRE EXTINGUISHER, MULTI-PURPOSE DRY CHEMICAL WALL MOUNTED FOR							
CLASS B FIRES (20 # FOR 50'-0" TRAVE DISTANCE)							
FIRE EXTINGUISHER, CARBON DIOXIDE					HL_{-}		
WALL MOUNTED FOR CLASS C FIRES (NO DRY CHEM) (20 # FOR 50'-0" TRAVE							
DISTANCE)							
						46	Ŧ
		CODE COMPLIANCE PL	_AN		SITE PLAN		
		SCALE: 1/4" = 1'-0"			SCALE: 1" = 40'-0"		





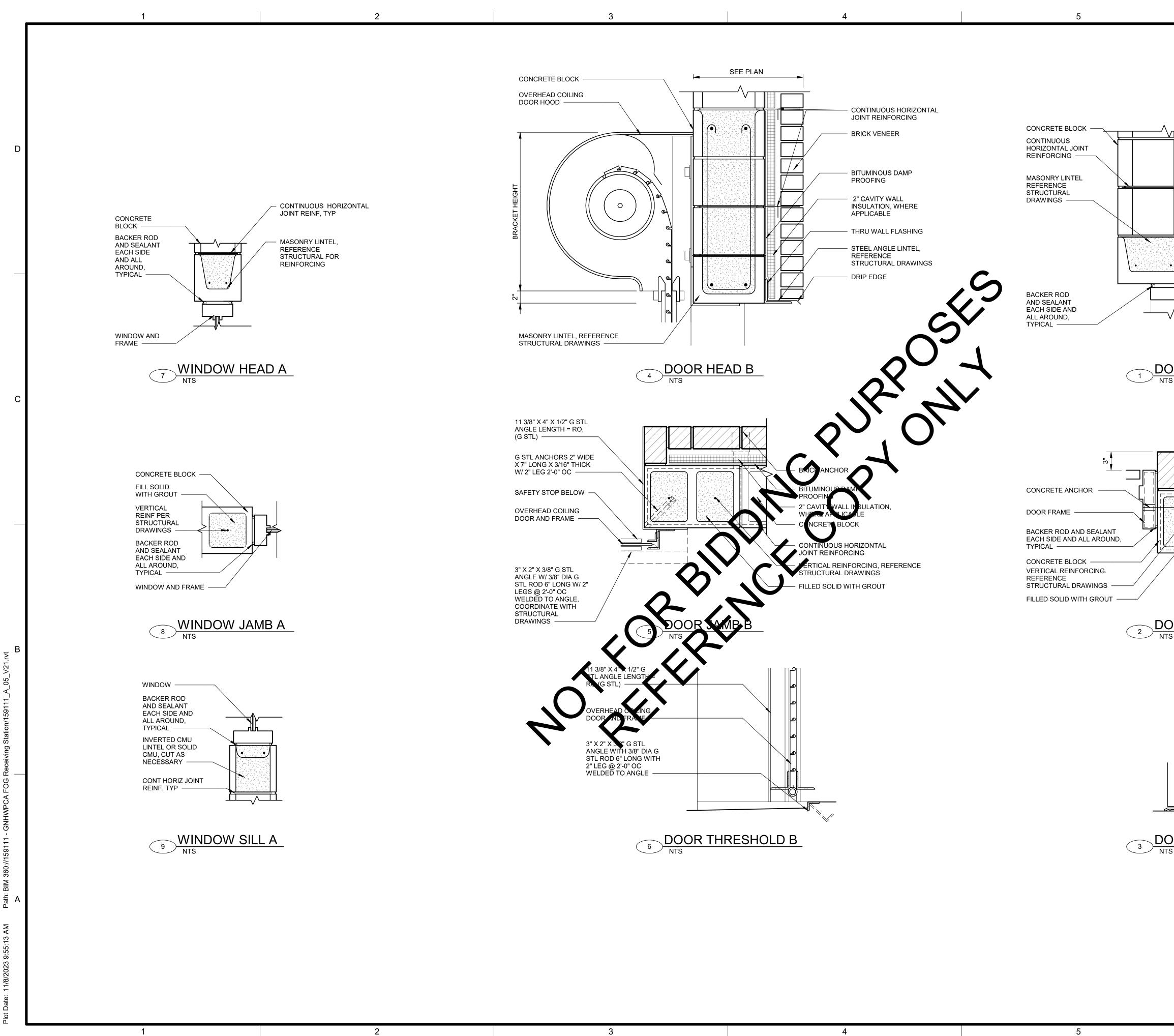
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	CCOE AF	D.WALDROP D.WALDROP FILENAME PROJECT NUMBER 159111 NT PROJECT NUMBER XX RCHITECTURAL DE ANALYSIS ND CODE PLIANCE PLAN RAWING NUMBER A-00-002	A			

35 SHEET NUMBER 111

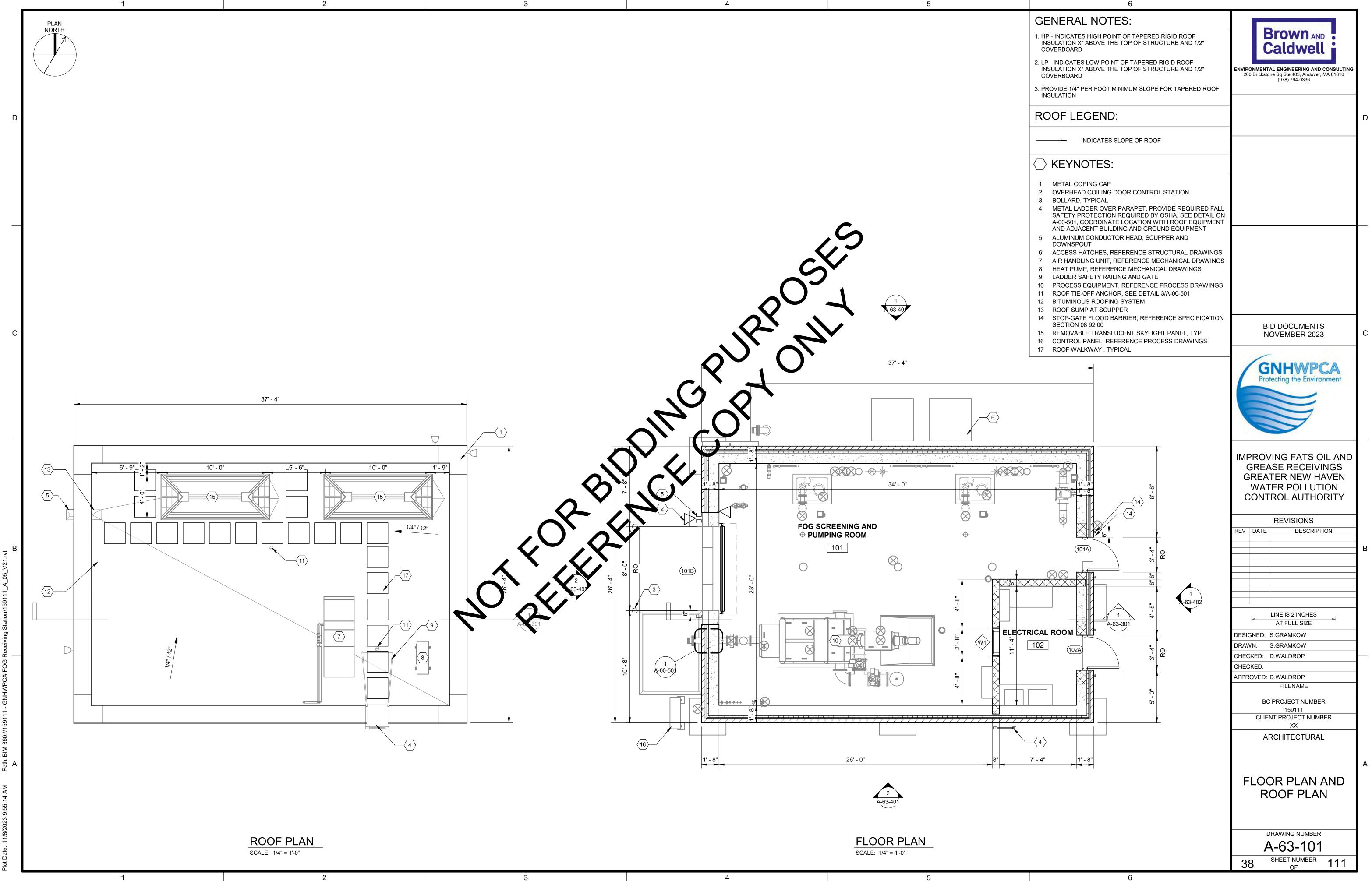


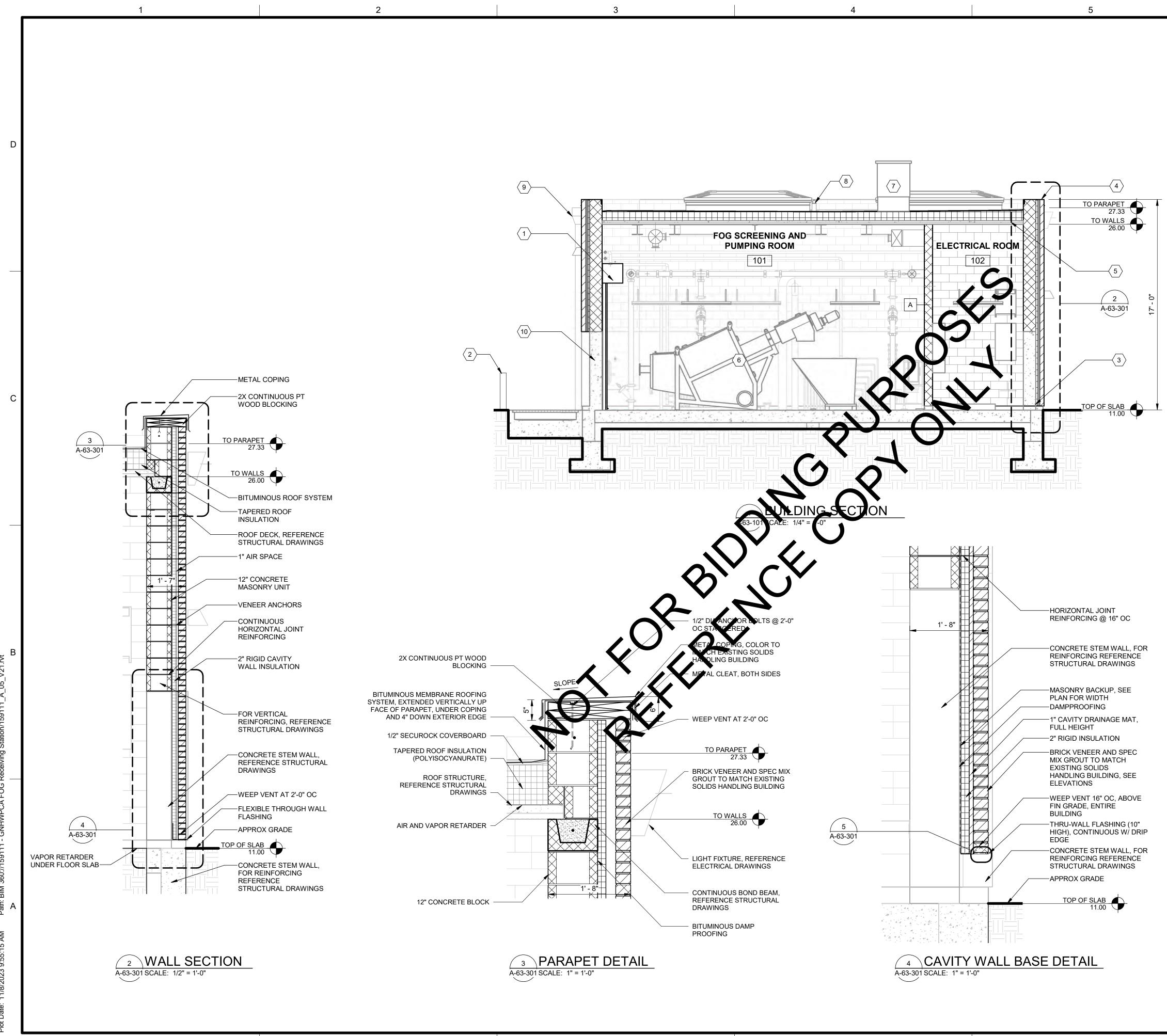






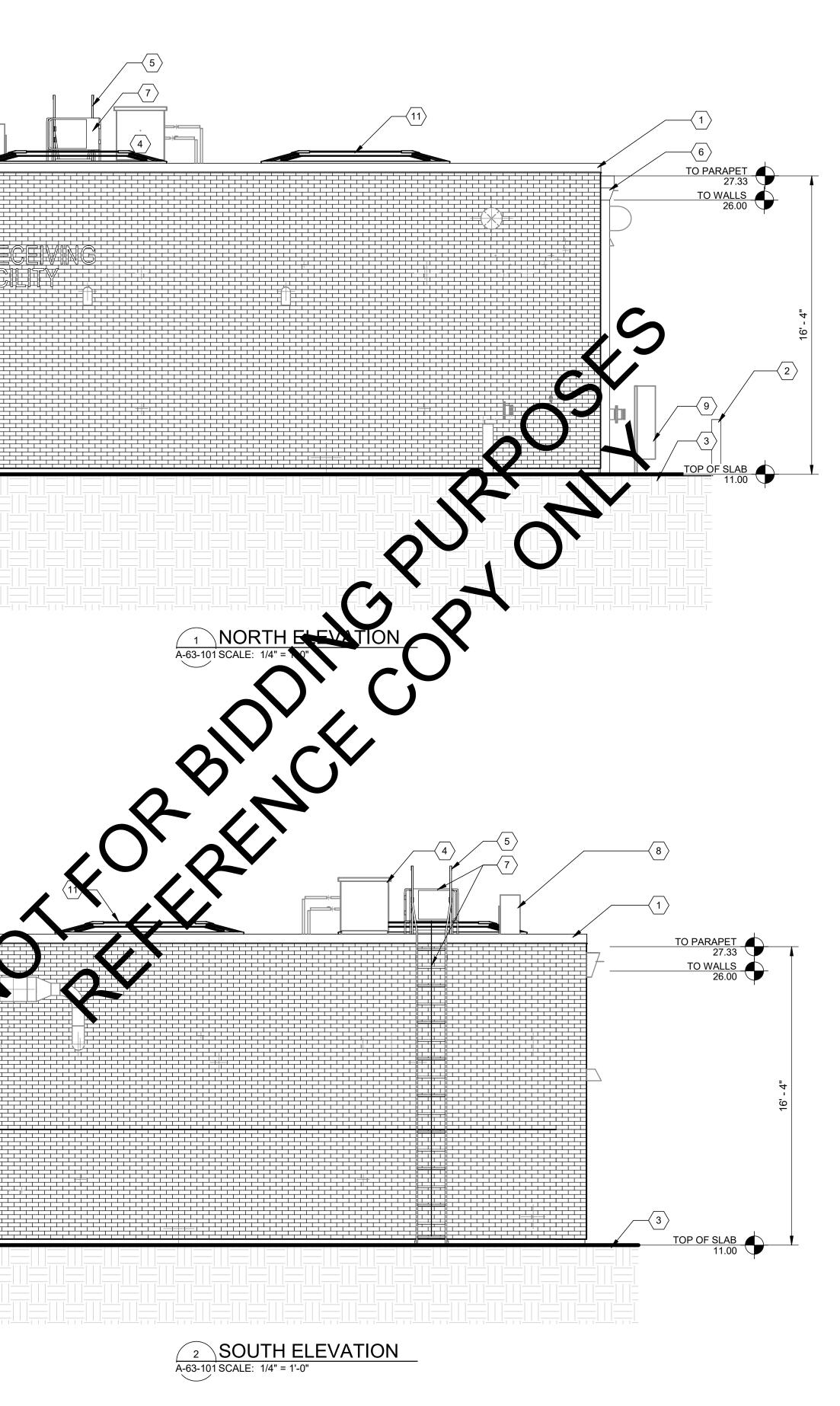
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	Brown AND Caldwell ENVIRONMENTAL ENGINEERING AND CONSULTING 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	
BRICK VENEER BITUMINOUS DAMPPROOFING 2" CAVITY WALL INSULATION, WHERE APPLICABLE THRU WALL FLASHING		D
ALIGN WITH		
OOR HEAD A		
BRICK VENEER BRICK ANCHOR BITUMINOUS DAMP PROOFING 2" CAVITY WALL INSULATION WHERE	BID DOCUMENTS NOVEMBER 2023	C
CONTINUOUS HORIZONTAL JOINT REINFORCING	IMPROVING FATS OIL AND GREASE RECEIVINGS GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY REVISIONS REV DATE	
DOOR AND	LINE IS 2 INCHES AT FULL SIZE	В
FRAME THRESHOLD IN A FULL BED OF MASTIC	DRAWN: S.GRAMKOW CHECKED: D.WALDROP CHECKED: APPROVED: D.WALDROP FILENAME BC PROJECT NUMBER 159111	
S	CLIENT PROJECT NUMBER XX ARCHITECTURAL DOORS AND WINDOWS DETAILS	A
	DRAWING NUMBER A-00-502 37 SHEET NUMBER OF 111	





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1 2 3 4 5 6 7 8 9 10	KEYNOTES: CORROSION RESISTANT OVERHEAD COILING DOOR BOLLARD, TYPICAL CONCRETE CURB REFERENCE STRUCTURAL DRAWINGS METAL COPING ROOF STRUCTURE, REFERENCE STRUCTURAL DRAWINGS PROCESS EQUIPMENT, REFERENCE PROCESS DRAWINGS AIR HANDLING UNIT, REFERENCE MECHANICAL DRAWINGS ROOF TIE-OFF ANCHOR, SEE DETAIL 3/A-00-501 ALUMINUM CONDUCTOR HEAD, SCUPPER AND DOWNSPOUT CONCRETE STEM WALL, REFERENCE STRUCTURAL DRAWINGS			A ENGINEERING AND CONSULTING ng Sg Ste 403, Andover, MA 01810 (978) 794-0336	D
			N	D DOCUMENTS OVEMBER 2023	С
		Ċ		VING FATS OIL AND ASE RECEIVINGS TER NEW HAVEN ER POLLUTION ROL AUTHORITY REVISIONS DESCRIPTION	В
		DRAV CHEC CHEC	GNED: WN: CKED: CKED: ROVED: BC CLIEI	LINE IS 2 INCHES AT FULL SIZE S.GRAMKOW S.GRAMKOW D.WALDROP FILENAME PROJECT NUMBER 159111 NT PROJECT NUMBER 2011 XX RCHITECTURAL	
A-C	5 BASE FLASHING DETAIL 33-301 SCALE: 1 : 6	3	□ ▲	DETAILS DRAWING NUMBER A-63-301 SHEET NUMBER OF 111	

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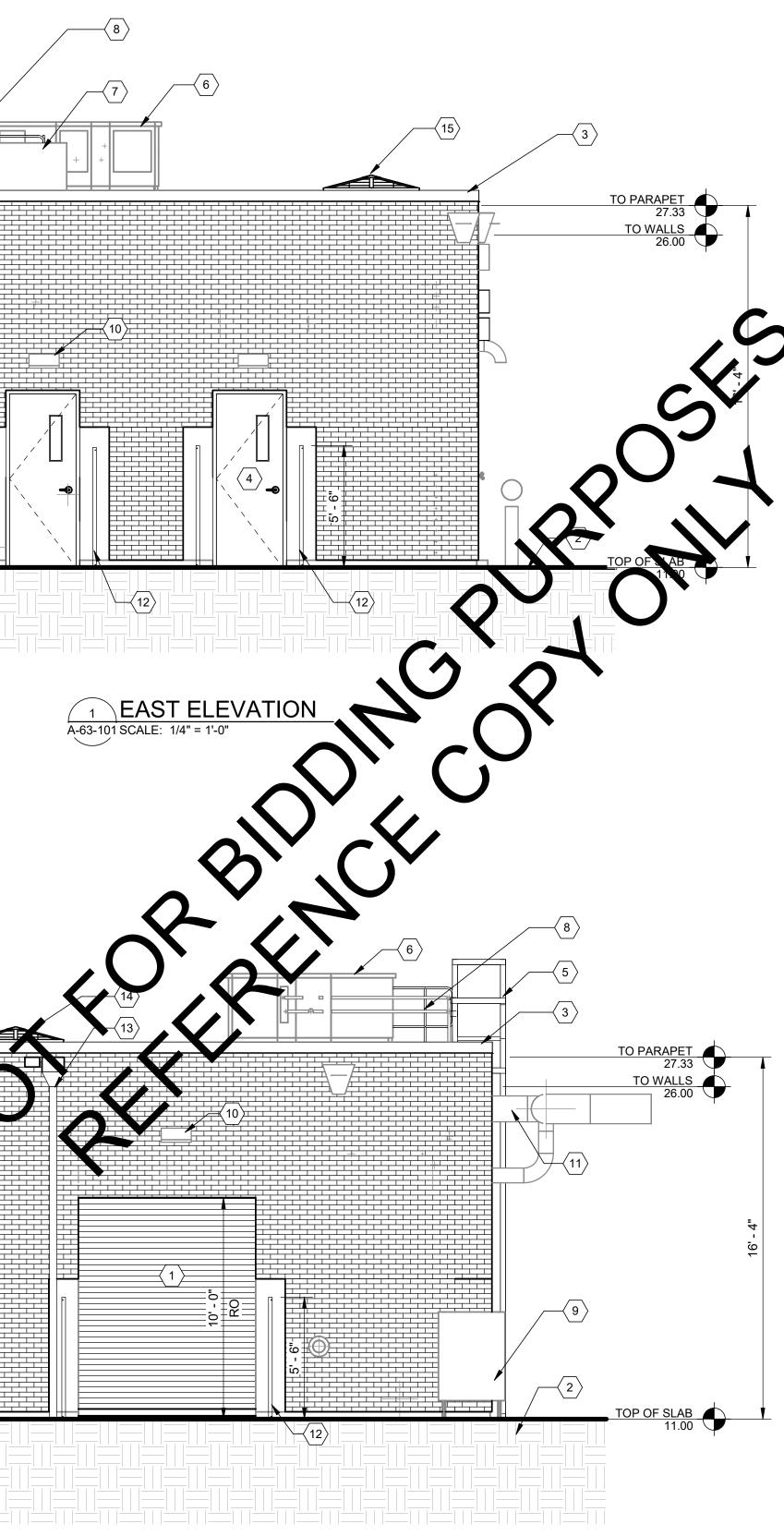
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○ KEYNOTES:

- 1 METAL COPING
- 2 BOLLARD, TYPICAL
- 3 APPROX GRADE
- 4 AIR HANDLING UNIT, REFERENCE MECHANICAL DRAWINGS
 5 METAL LADDER OVER PARAPET, PROVIDE REQUIRED FALL SAFETY PROTECTION REQUIRED BY OSHA. SEE DETAIL ON A-00-501, COORDINATE LOCATION WITH ROOF EQUIPMENT AND ADJACENT BUILDING AND GROUND EQUIPMENT
- 6 ALUMINUM CONDUCTOR HEAD, SCUPPER AND DOWNSPOUT
- 7 LADDER SAFETY RAILING AND GATE
- 8 HEAT PUMP, REFERENCE MECHANICAL DRAWINGS
- 9 CONTROL PANEL, REFERENCE PROCESS DRAWINGS
- 10 DUCTWORK, REFERENCE PROCESS DRAWINGS
- 11 REMOVABLE TRANSLUCENT SKYLIGHT PANEL, TYP
- 12 ROOF WALKWAY , TYPICAL



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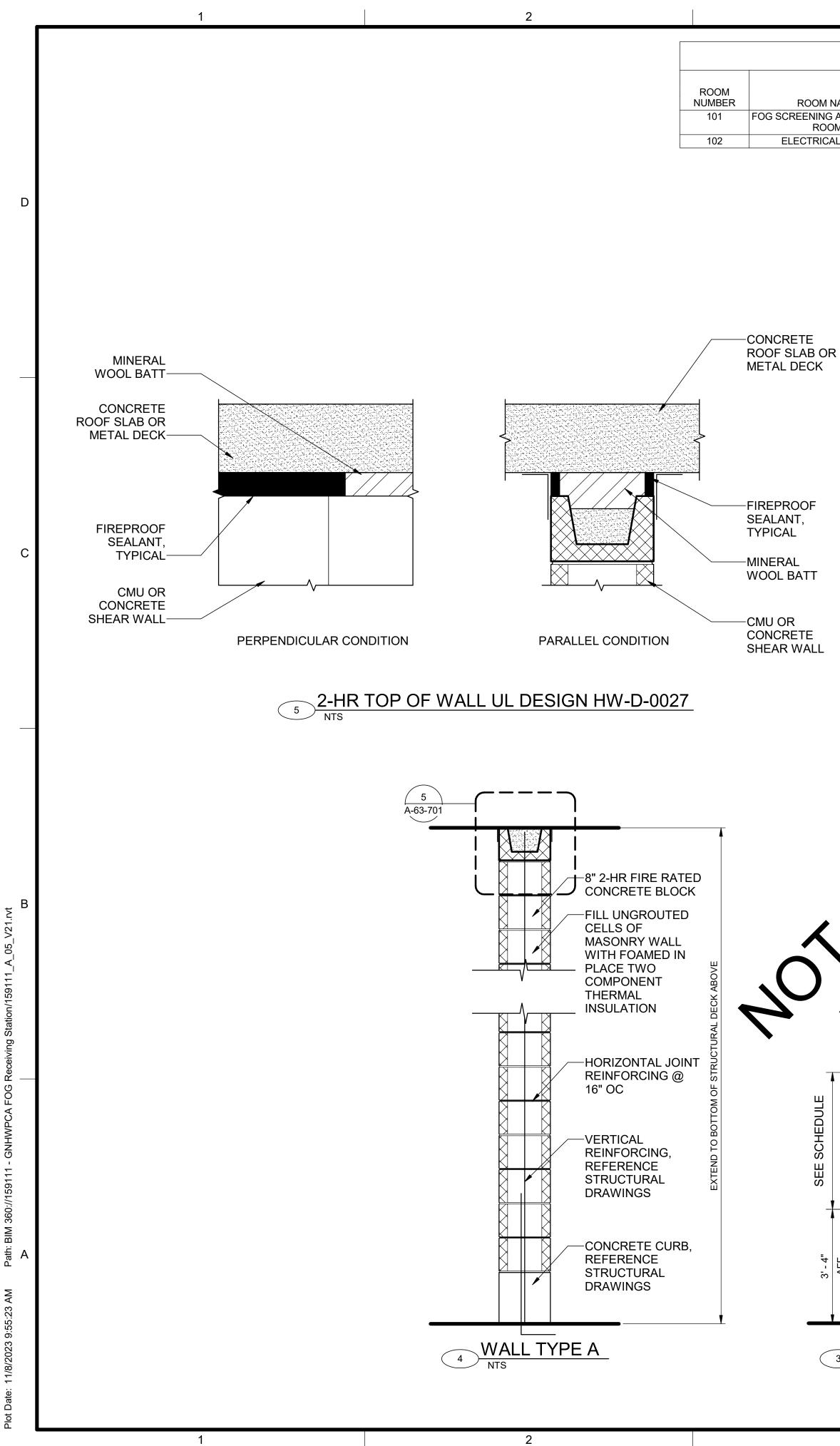
2 WEST ELEVATION A-63-101 SCALE: 1/4" = 1'-0"

3

KEYNOTES:

- 1 CORROSION RESISTANT OVERHEAD COILING DOOR
- 2 APPROX GRADE
- 3 METAL COPING
- FIBERGLASS DOOR AND FRAME
 METAL LADDER OVER PARAPET, PROVIDE REQUIRED FALL SAFETY PROTECTION REQUIRED BY OSHA. SEE DETAIL ON A-00-501, COORDINATE LOCATION WITH ROOF EQUIPMENT AND ADJACENT BUILDING AND GROUND EQUIPMENT
- 6 AIR HANDLING UNIT, REFERENCE MECHANICAL DRAWINGS7 HEAT PUMP, REFERENCE MECHANICAL DRAWINGS
- 8 LADDER SAFETY RAILING AND GATE
- 9 CONTROL PANEL, REFERENCE PROCESS DRAWINGS
- 10 LIGHT FIXTURE, REFERENCE ELECTRICAL DRAWINGS
- 11 DUCTWORK, REFERENCE PROCESS DRAWINGS
- 12 STOP-GATE FLOOD BARRIER, REFERENCE SPECIFICATION SECTION 08 92 00
- 13 ALUMINUM CONDUCTOR HEAD, SCUPPER AND DOWNSPOUT
- 14 OVERFLOW SCUPPER
- 15 REMOVABLE TRANSLUCENT SKYLIGHT PANEL, TYP





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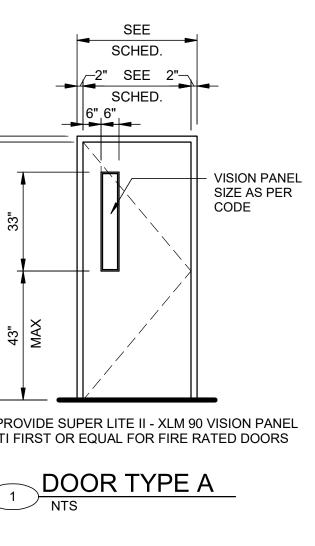
		ROOM FINISH SCHEDULE															
				WALLS								CEILING					
	FLOOR	BASE		Ν			S			Е			W				
ROOM NAME	MATERIAL	MATERIAL	MAT'L	FIN	CLR	MAT'L	FIN	CLR	MAT'L	FIN	CLR	MAT'L	FIN	CLR	MAT'L	FIN	CLR
REENING AND PUMPING ROOM	A	F	С	P1	5	С	P1	5	С	P1	5	С	P1	5	J	FF	4
LECTRICAL ROOM	A	F	С	P1	5	С	P1	5	C	P1	5	C	P1	5	J	FF	4

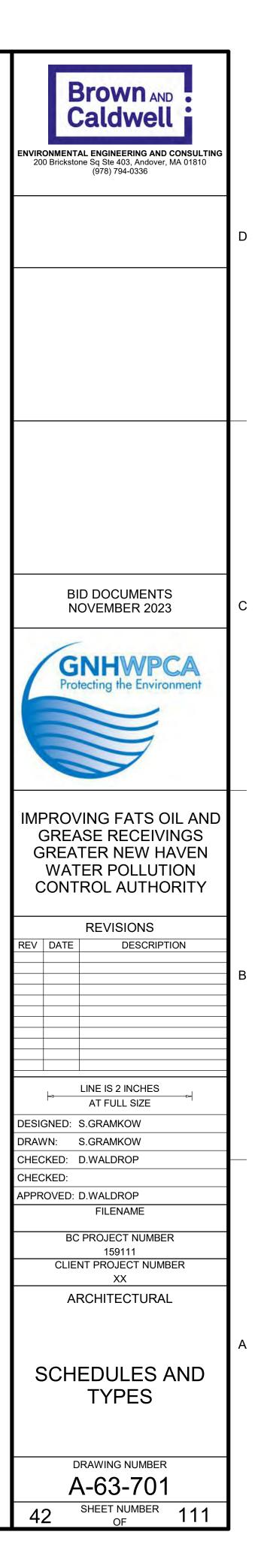
		-		
	FINISH KEY			COLOR KEY
E	EXISTING - NO WORK]	1	GRAY
P1	PAINTED - SEMI GLOSS		2	TAN
P2	PAINTED - FLAT		3	WHITE
N	NO ADDITONAL FINISH	1	4	NO COLOR
FF	FACTORY FINISH		5	SHALL BE SELECTED AFTER AWAR CONTRACT

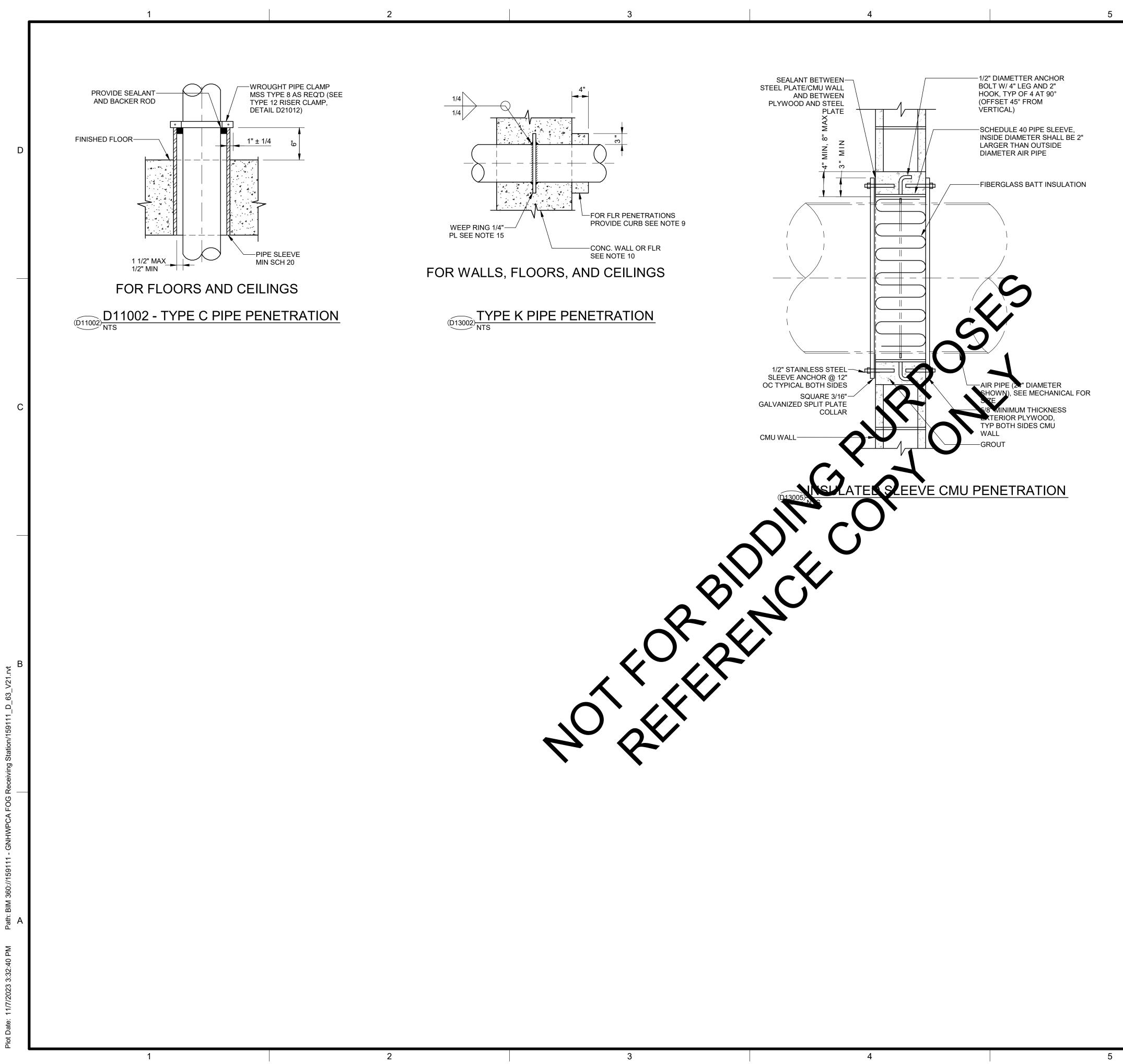
			OR S	SCHED						
DOOR NUMBER WIDTH 101A 3' - 0" 101B 8' - 0" 102A 3' - 0"	DOORHEIGHTTYPEMAT'LGLAZING7' - 2"AFRP10' - 0"BOCDNON7' - 2"AFRPP	WIDTH HEIGHT MAT'I 3' 4" 7' - 4" FRP 8' - 0" 10' - 0 OCD 3' - 4" 7' - 4" FRP	р — Д Э — Е	AD JAMB A A B B A A	AILS THRESHOLD A B A	FIRE RATING LABEL NONE NONE			R	EMARKS
DOOR GENERAL NOTES 1. FOR DOOR HAND RE 2. PROVIDE ALL EXTER INSULATION FLOAT (3. ALL DOORS TO BE IN 4. DOOR COLOR TO MA	S: FERENCE ARCHITECTURAL PLAN SHEETS. IOR AND INTEROR WINDOWS AND DOORS I GLASS UNITS 1" THICK INLESS OTHERWISE SULATED AS PERFERENCE ODDE REQUILIEN TCH EXISTING DOOPS ON SITE	WITH GLEAR, TEMPERED, E NOTED. MENTI.					HL VP	HALF-LI VISION	GLASS REINF	R LEGEND FORCED PLASTIC DOOR AND
								ALUMIN		
					WINDO	N SCI	HEDU	LE		
\mathbf{O}		NUMBER	TYPE	QUANITITY	FRAME			ETAILS		COMMENTS
\sim			A	1	AL 4'-0"	T WIDTH 2'-8"	HEAD A		SILL A	2-HOUR FIRE RATED
\sim	COORDINATE WITH MANUFACTURER SEE SCHEI		ACTURE	щ					SEE	4
SEE SCHEDULE	WITH MANUFACTURER SEE SCHEL	DULE WITH MANUF	ACTURE	COORD W/ MANUF				2"	SCHED. SEE 2"- SCHED.	
\sim	WITH MANUFACTURER SEE SCHEL	DULE WITH MANUF	ACTURE	MANUF		SCHEDULE 2"	33"	► (^{-2"}	SCHED. SEE 2"- SCHED.	VISION PANEL SIZE AS PER CODE
\sim	WITH MANUFACTURER SEE SCHEL	DULE WITH MANUF		CHEDULE COORD W/ MANUF		SEE SCHEDULE SEE SCHEDULE	PROVIDE	SUPER LI	SCHED.	SIZE AS PER

NOTES HEIGHT 15' - 0" 15' - 0"

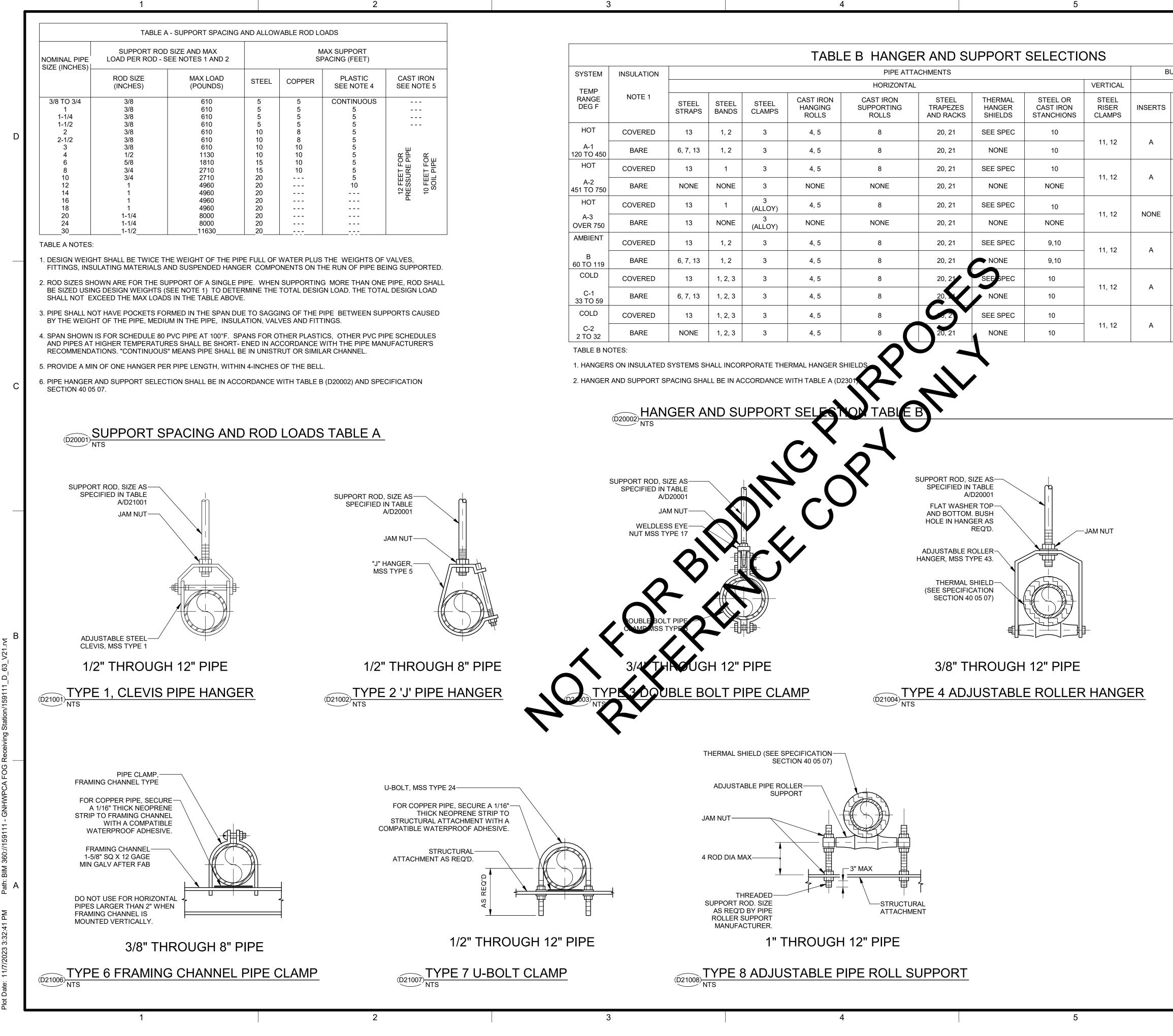
		MATERIAL KEY
	A	CONCRETE FLOOR HARDENER
	В	CONCRETE COLUMN
	С	CONCRETE BLOCK
	D	PAINTED GYPSUM WALL BOARD
ARD OF	E	RUBBER COVE BASE
	F	CONCRETE WALL
	G	CONCRETE STRUCTURAL T'S
	Н	STRUCTURAL GLAZED TILE
	I	2'-0" x 2'-0" ACOUSTICAL TILE CEILING
	J	METAL DECK
	K	GIRTS
	L	METAL WALL PANEL
	М	HOLLOW CORE PLANK
	Х	EXISTING





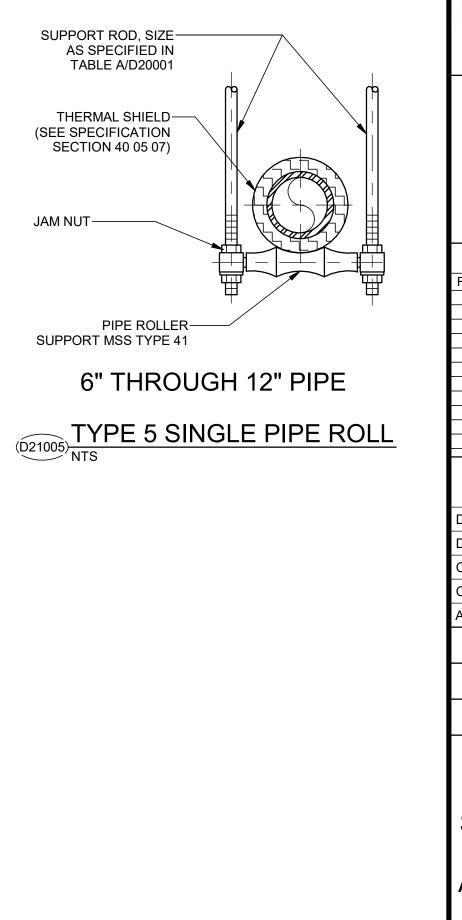


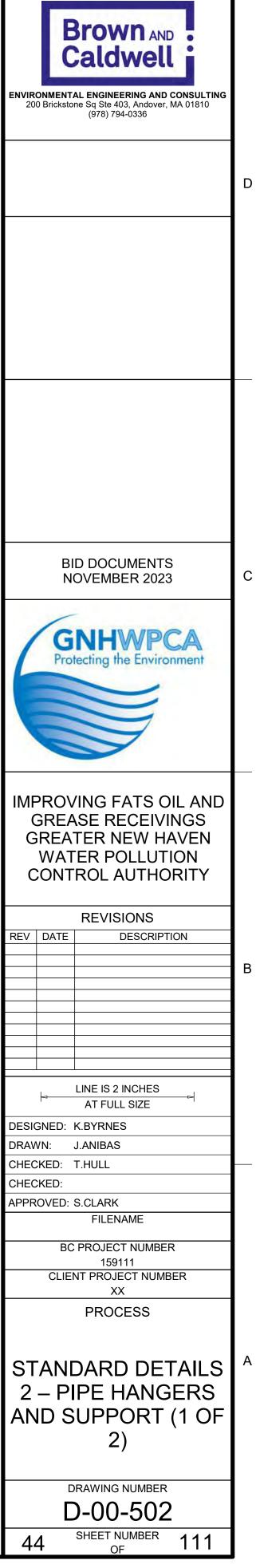
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		AT FULL SIZE ' K.BYRNES	
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	D	RAWING NUMBER	
	C	0-00-501	
4	3	SHEET NUMBER 111	1

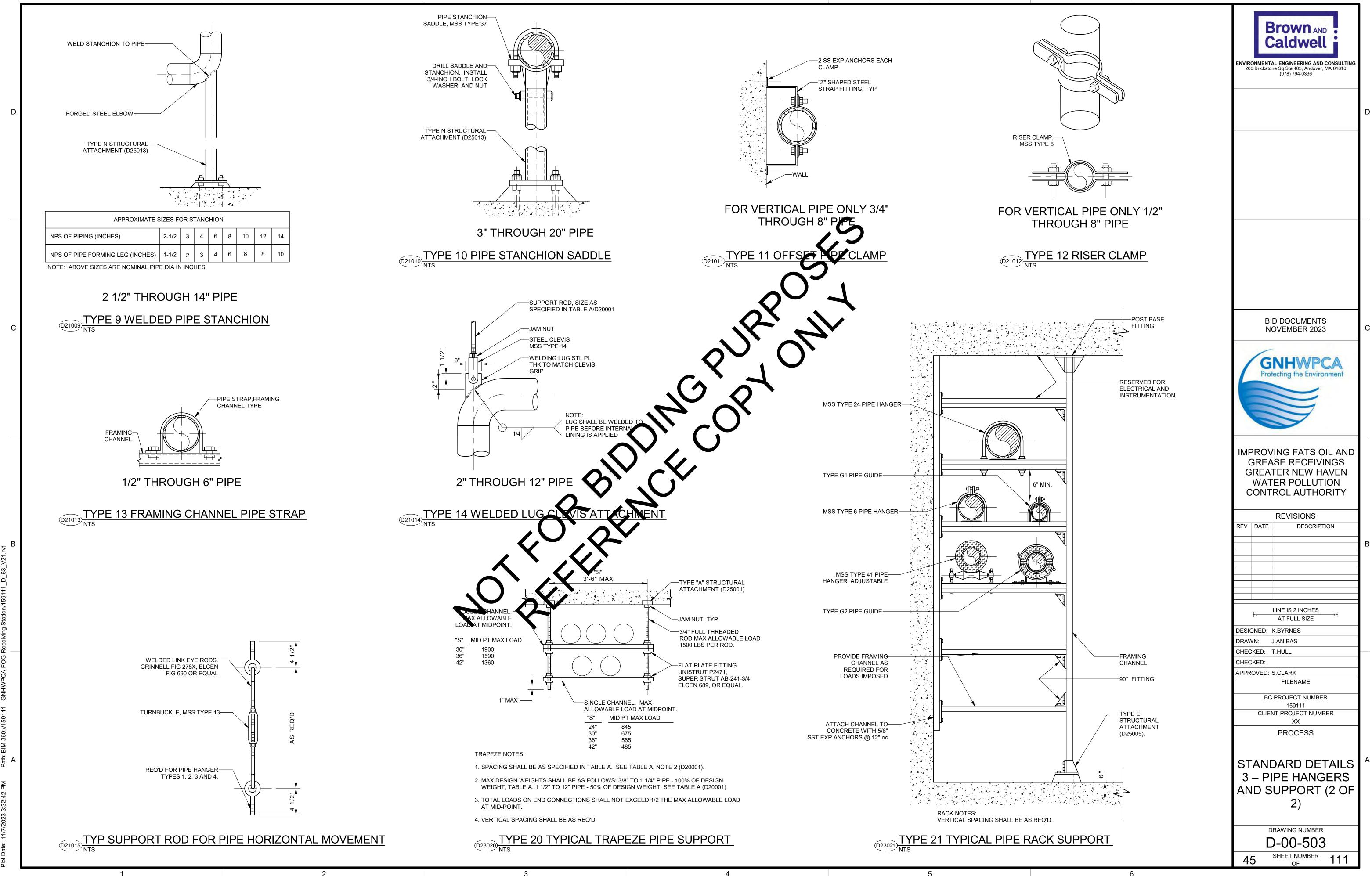


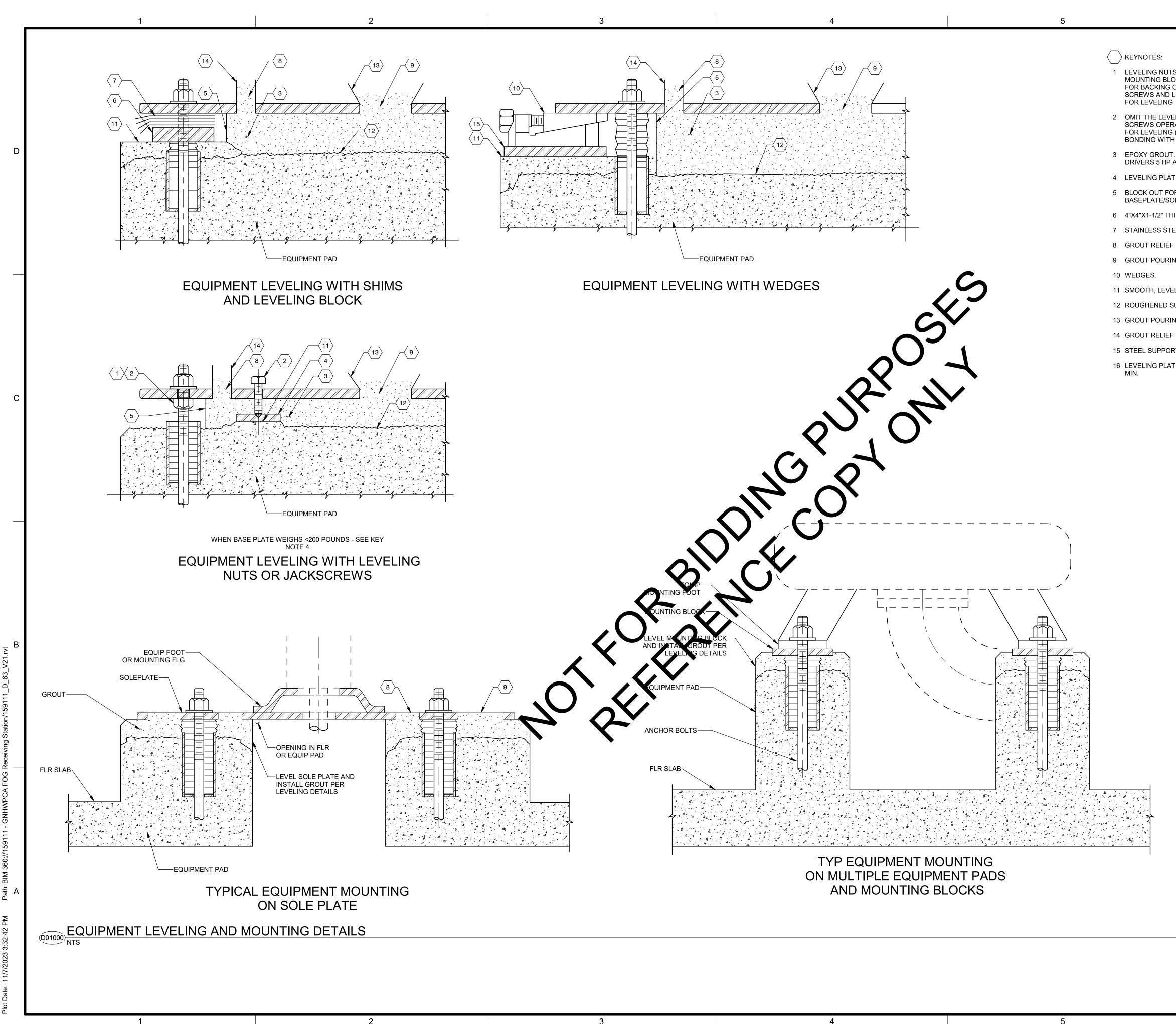


3	BUILDING STRUCTURAL ATTACHMENTS								
	STEEL AND/OR MALL. IRON								
	BEAM CLAMPS	WELDED AND BOLTED ATTACHMENTS	BRACKETS						
	C, D	F, J, M	B, G, H, K, L						
	C, D	F, J, M	B, G, H, K, L						
	C, D	F, J, M	B, G, H, K, L						
	C, D	F, J, M	B, G, H, K, L						
	C, D	F, J, M	B, G, H, K, L						
	C, D	F, J, M	B, G, H, K, L						









1 LEVELING NUTS MAY BE USED FOR LEVELING BASE PLATES, SOLEPLATES AND MOUNTING BLOCKS WEIGHING LESS THAN 200 POUNDS. PROVIDE BLOCK OUT FOR BACKING OFF LEVELING NUT AFTER GROUT HAS CURED. OMIT JACK SCREWS AND LEVELING PLATE (KEY NOTE 4) IF LEVELING NUTS ARE USED

2 OMIT THE LEVELING NUTS (SEE KEY NOTE 1) AND PROVIDE VERTICAL JACKING SCREWS OPERATING AGAINST LEVELING PLATES IF JACK SCREWS ARE USED FOR LEVELING (SEE KEY NOTE 4). GREASE JACKSCREW TO PREVENT BONDING WITH GROUT. BACK OFF AFTER GROUT HAS SET.

3 EPOXY GROUT. CEMENTITIOUS GROUT MAY BE USED FOR EQUIPMENT WITH DRIVERS 5 HP AND LESS IF EQUIPMENT WEIGHS LESS THAN 1000 POUNDS.

4 LEVELING PLATE FOR JACK SCREW, SEE DETAIL THIS SHEET.

5 BLOCK OUT FOR ACCESS TO LEVELING EQUIPMENT AFTER GROUTING BASEPLATE/SOLEPLATE.

6 4"X4"X1-1/2" THICK STAINLESS STEEL SLOTTED LEVELING BLOCK.

7 STAINLESS STEEL SHIMS, 5 MAX.

8 GROUT RELIEF HOLE, TYP FOR BASE PLATES AND SOLE PLATES.

9 GROUT POURING HOLE, TYP FOR BASE PLATES AND SOLE PLATES.

11 SMOOTH, LEVEL CONCRETE SURFACE AT LEVELING POSITIONS.

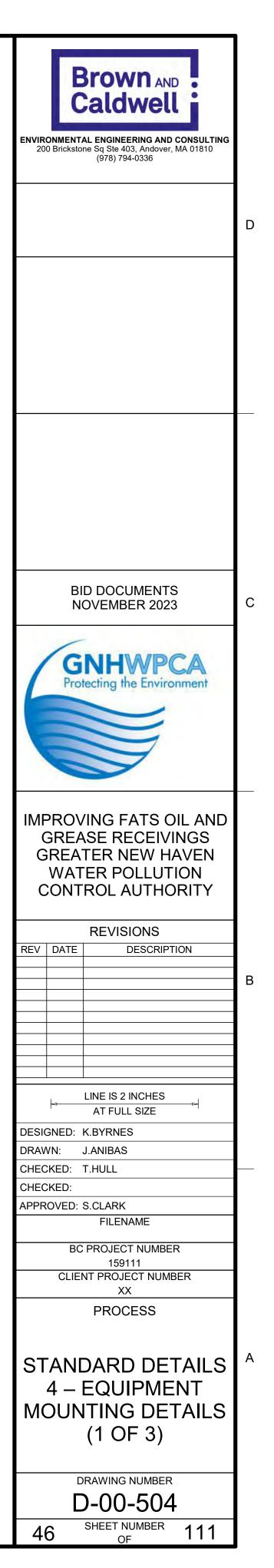
12 ROUGHENED SURFACE OF CONCRETE FOR GROUT BOND.

13 GROUT POURING FUNNEL

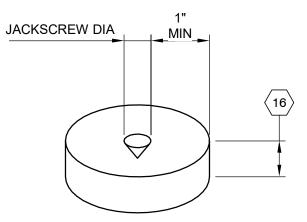
14 GROUT RELIEF STANDPIPE.

15 STEEL SUPPORT PLATE

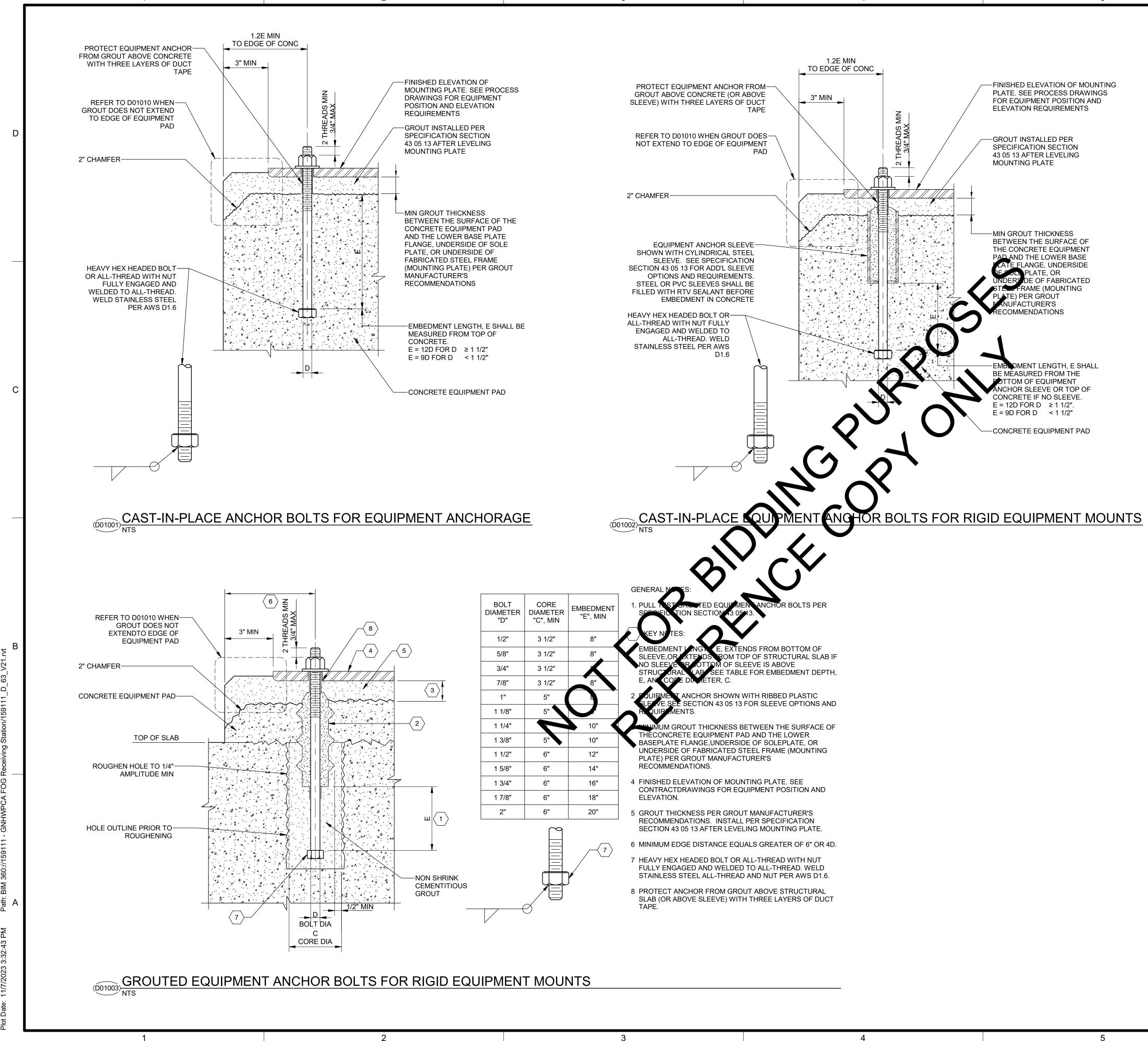
16 LEVELING PLATE THICKNESS SHALL NOT BE LESS THAN JACK SCREW DIA, 1/2"



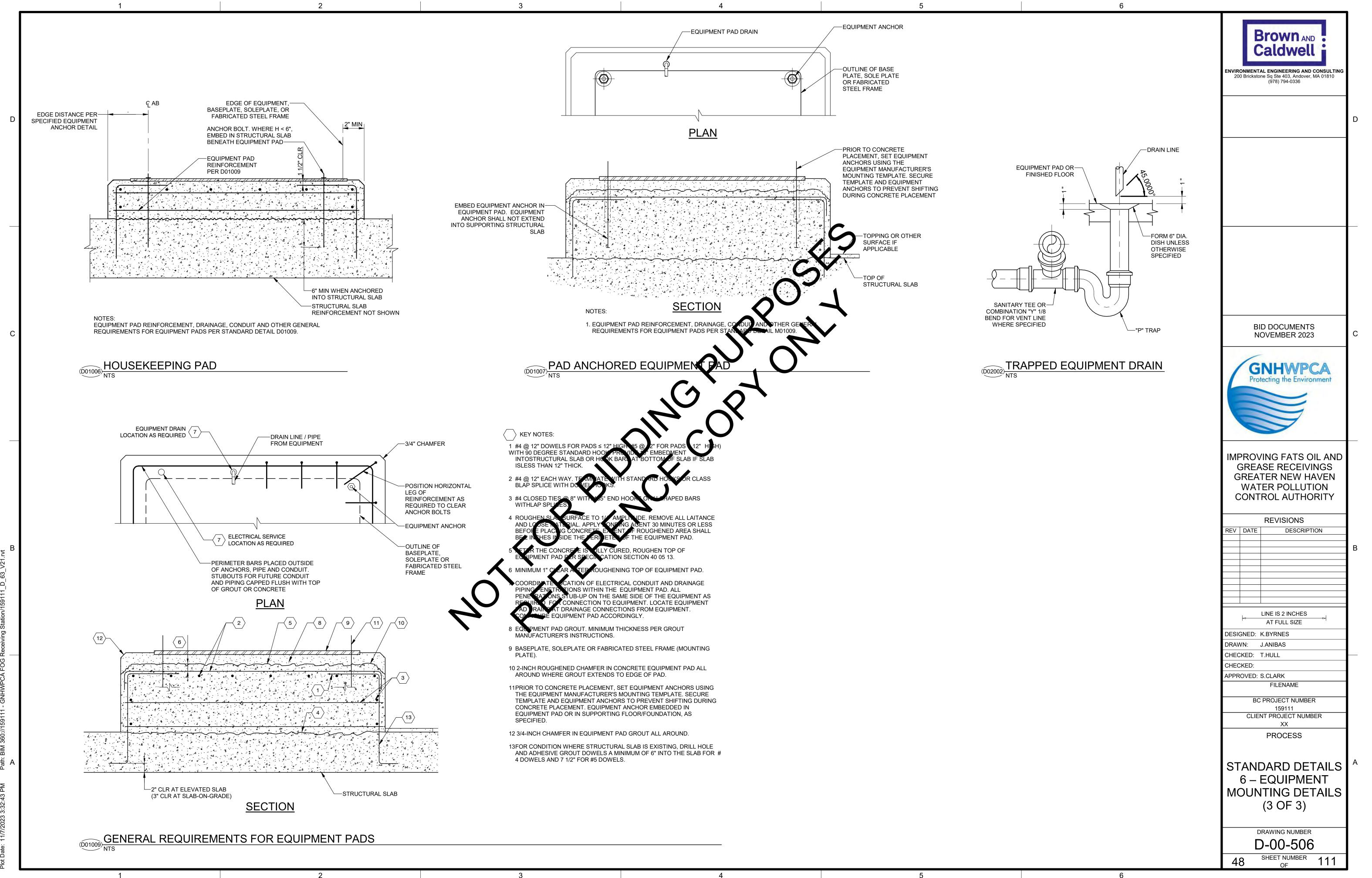
LEVELING BLOCK (SEE KEY NOTE 6)



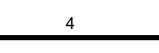
LEVELING PLATE FOR JACKSCREW

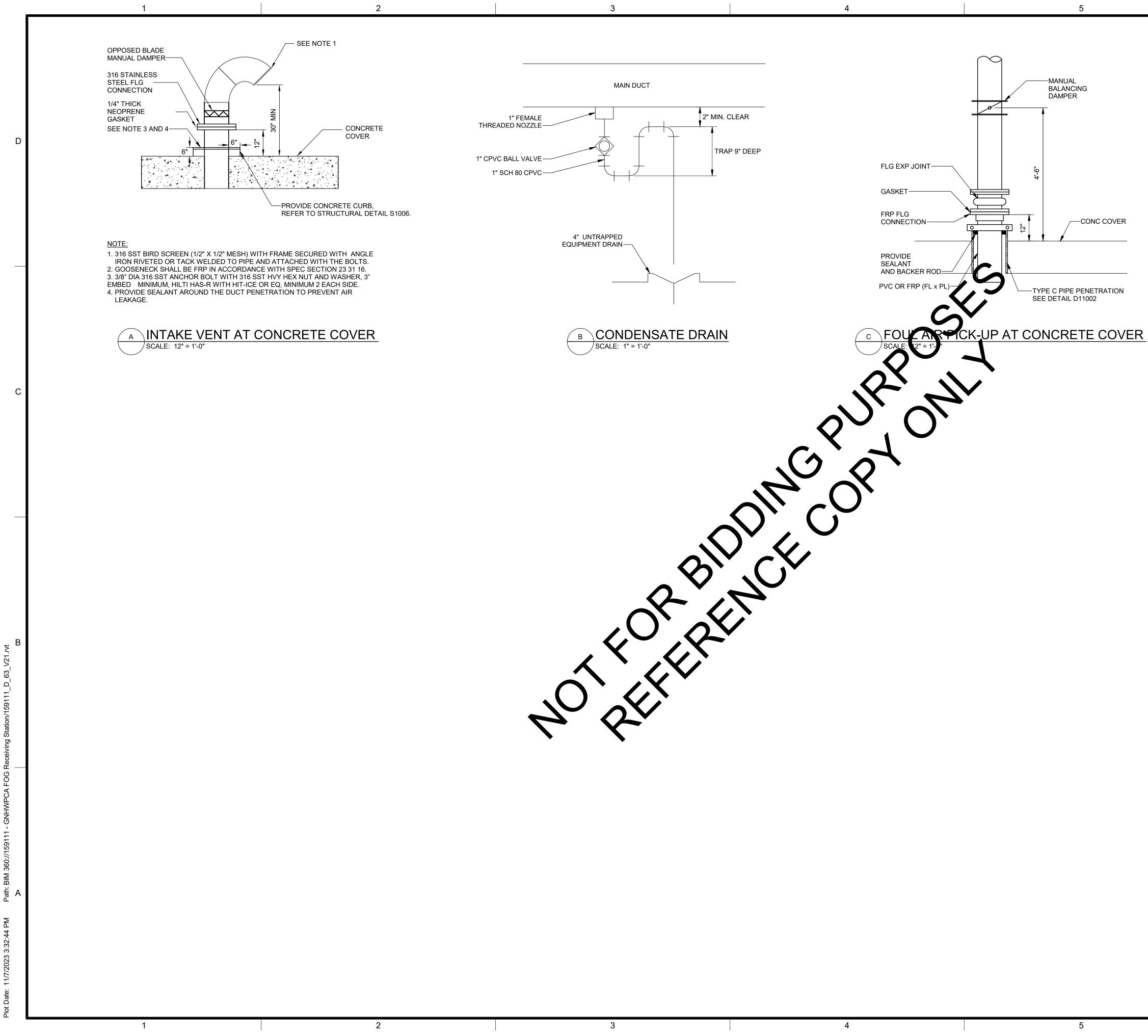


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Environmental engineering and consulting 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	
BID DOCUMENTS NOVEMBER 2023	C
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DESIGNED: K.BYRNES DRAWN: J.ANIBAS CHECKED: T.HULL CHECKED: APPROVED: S.CLARK FILENAME BC PROJECT NUMBER 159111 CLIENT PROJECT NUMBER XX PROCESS STANDARD DETAILS 5 – EQUIPMENT MOUNTING DETAILS (2 OF 3)	
DRAWING NUMBER	I

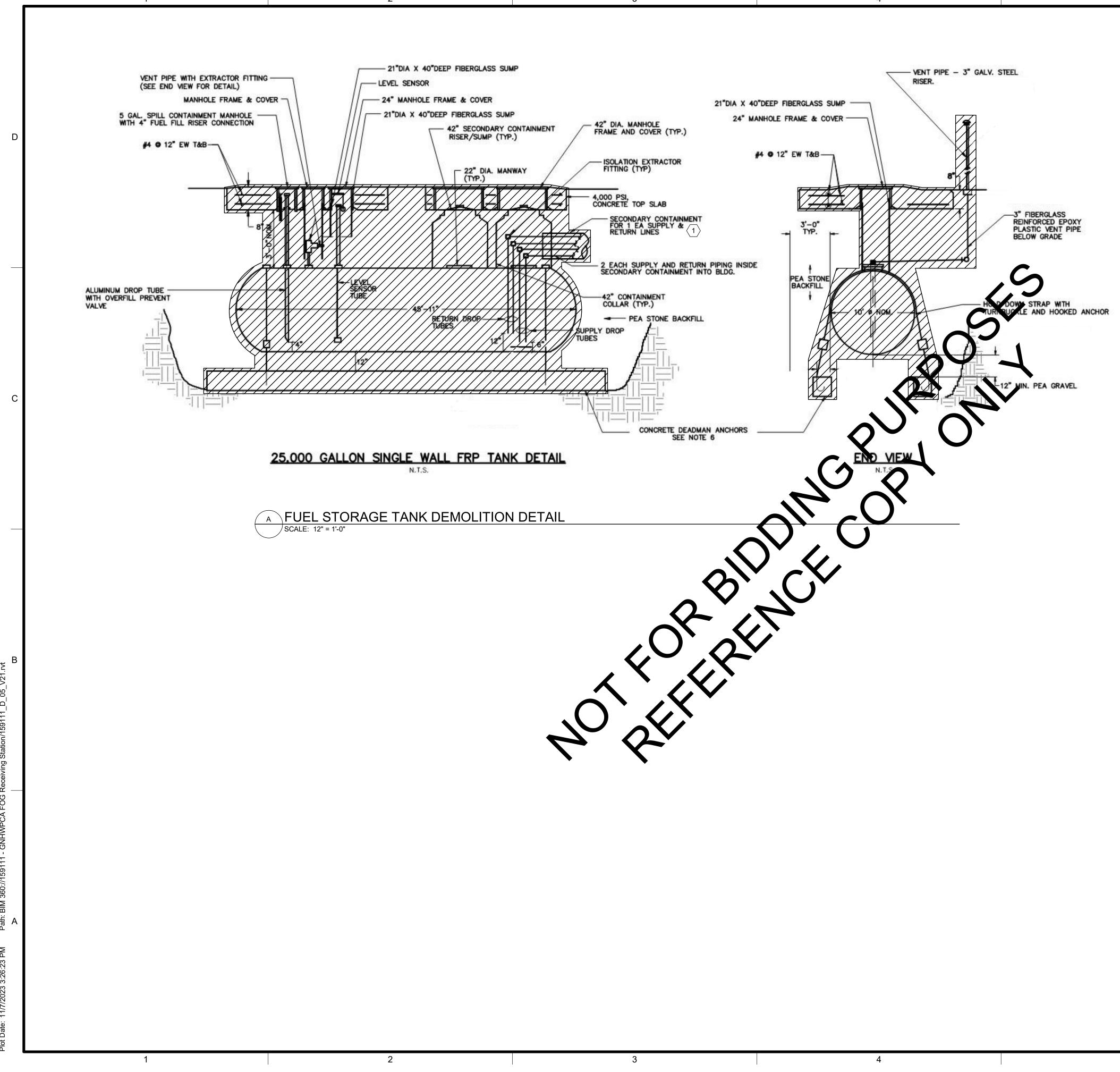




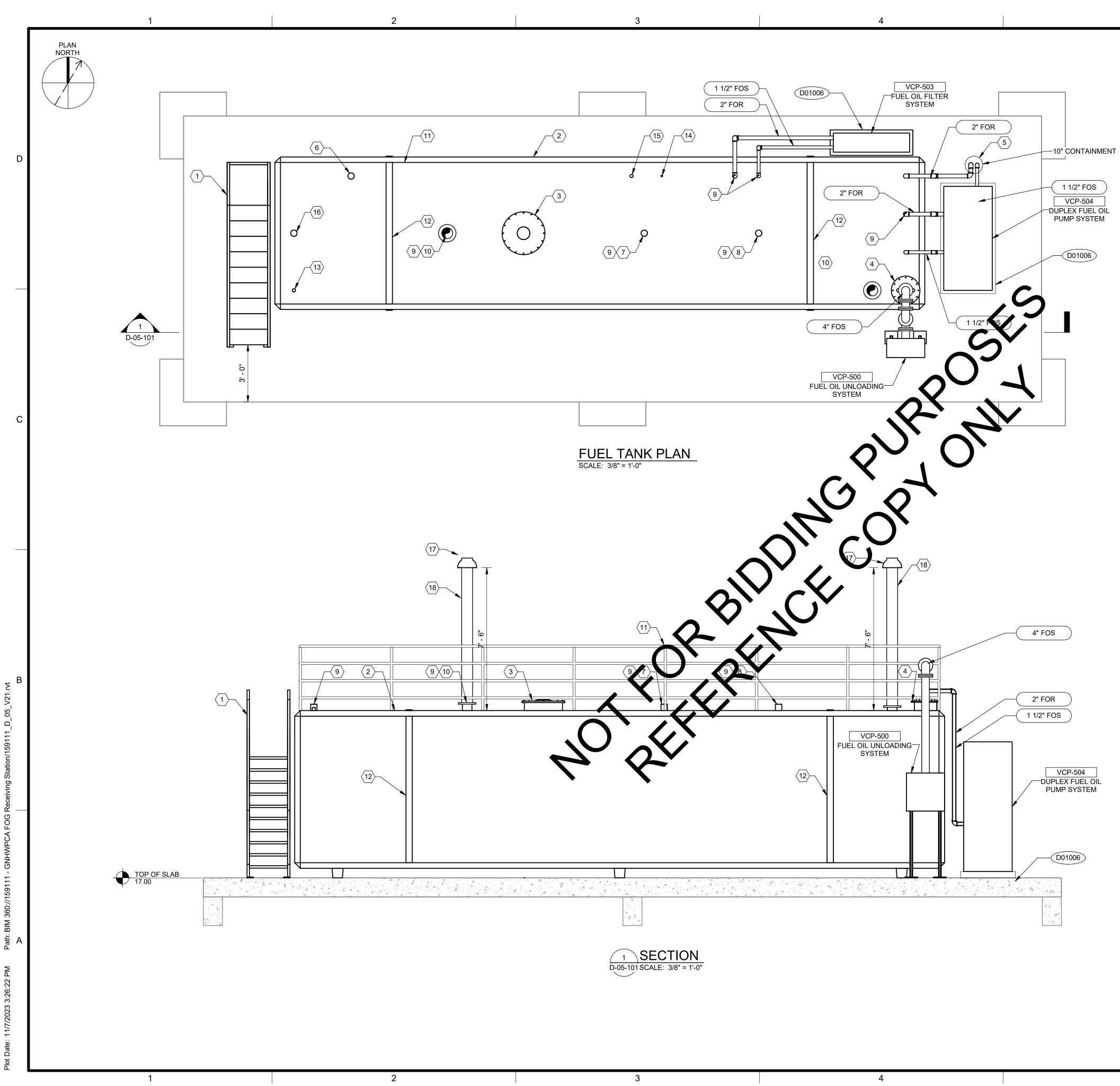




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ENVIRONMENTAL ENGINEERING AND CONSULTING 200 Brickstone Sq Ste 403, Andover, MA 01810	
(978) 794-0336	
BID DOCUMENTS NOVEMBER 2023	С
GNHWPCA Protecting the Environment	
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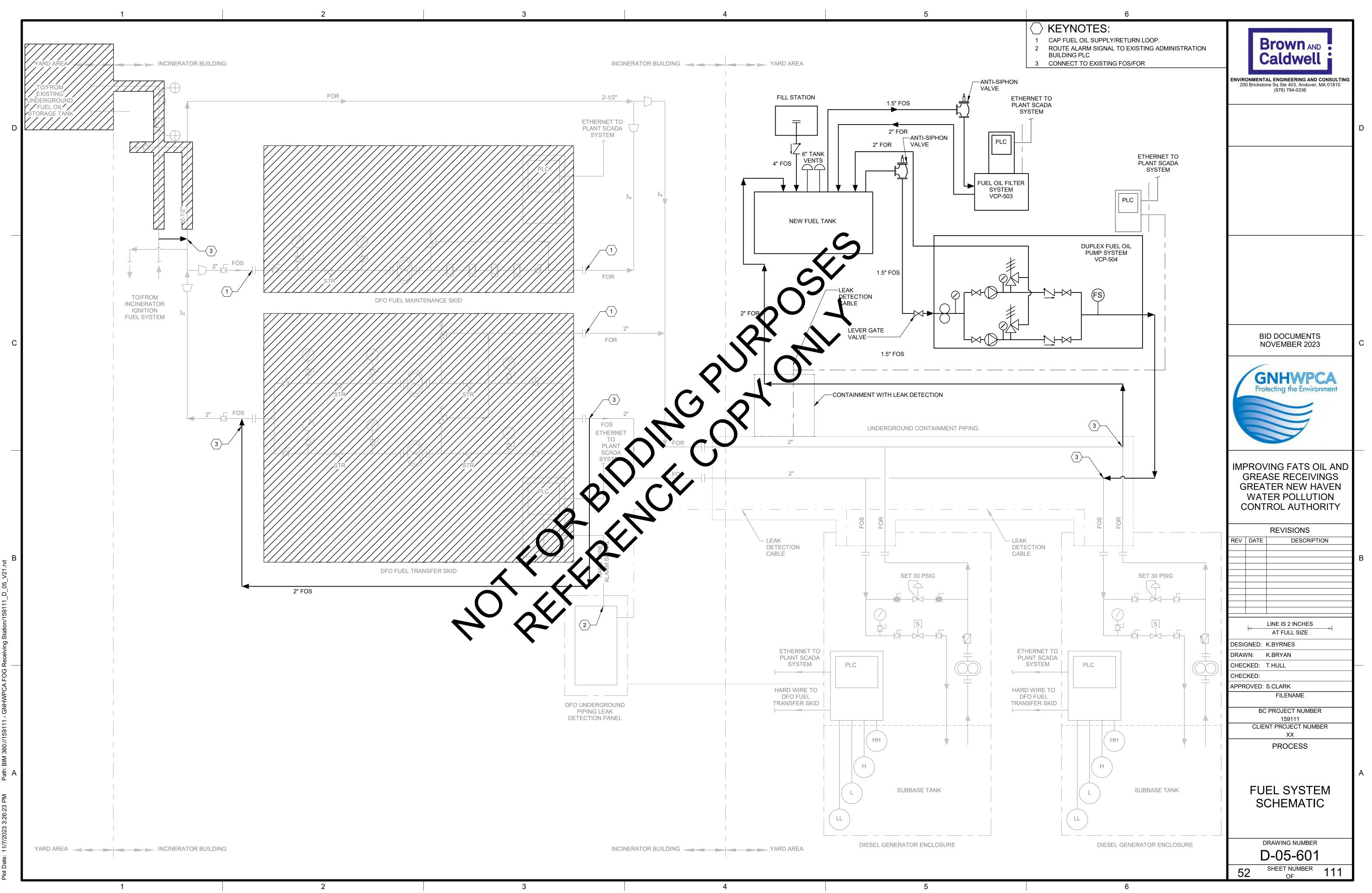


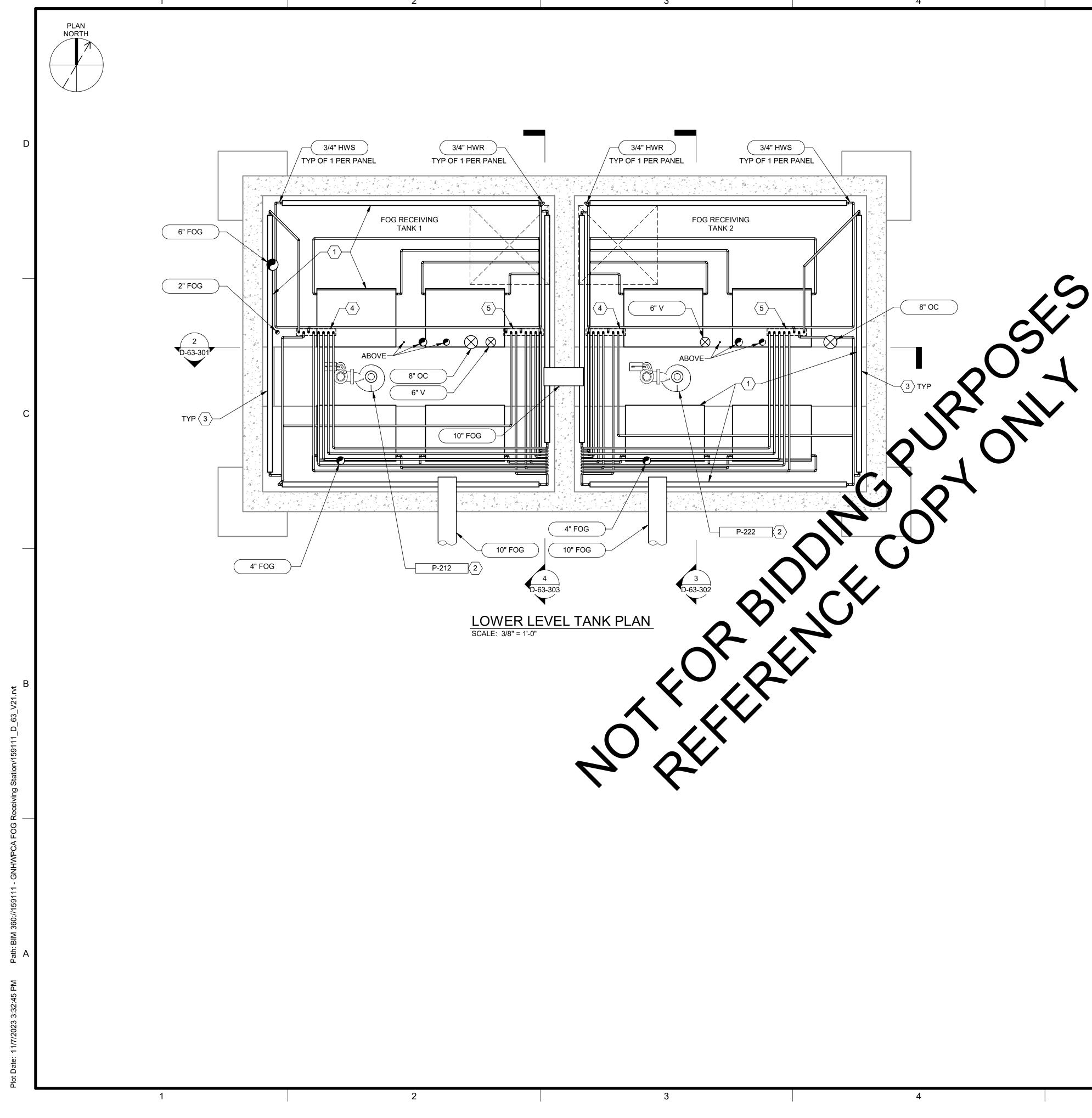
6				
GENERAL NOTES:				
1. INFORMATION IS FROM RECORD DRAWINGS. CONTRACTOR TO		F	Brown AND	
FIELD VERFIY PRIOR TO CONSTRUCTION.			aldwell	
2. DEMOLISH AND REMOVE FUEL STORAGE TANK, FOUNDATION, MANHOLES, AND ALL APPURTENANCES		C	aluwell	
→ KEYNOTES:			AL ENGINEERING AND CONSULTING	
1 SUPPLY AND RETURN LINES AND CONTAINMENT SHALL BE	20	JU Bricksto	one Sq Ste 403, Andover, MA 01810 (978) 794-0336	
DEMOLISHED FROM THE TANK TO THE ADMIN BUILDING.				
PIPES AND CONTAINMENT SHALL BE CAPPED INSIDE ADMIN BUILDING.				
				D
			D DOCUMENTS	
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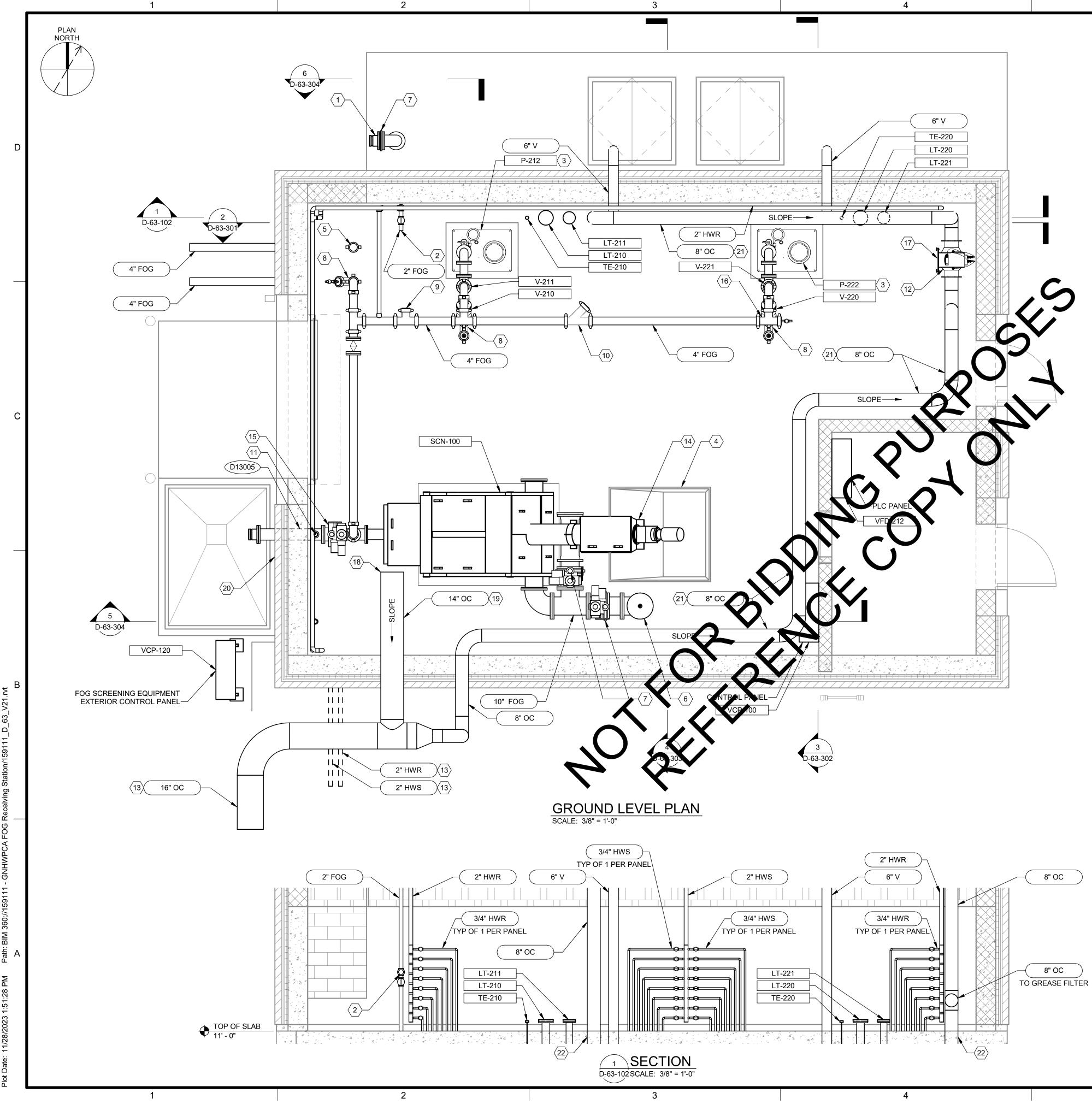


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 GENERAL NOTES: STORAGE TANK VENTS REQUIRE A CAP TO BE PLACED ON THE OPEN END AND MUST BE A MINIMUM OF 8' ABOVE THE TANK. CONTRACTOR SHALL COORDINATE EXACT DIMENSIONS AND LOCATIONS OF TANK OUTLETS WITH MANUFACTURER REQUIREMENTS. CONTRACTOR TO COORDINATE PAD DIMENSIONS IN ACCORDANCE WITH TANK MANUFACTURER. TANK MANUFACTURER IS RESPONSIBLE FOR PROVIDING STAIR AND RAIL DESIGN AND CONNECTION TO STORAGE TANK FOR INSTALLATION BY CONTRACTOR. APPLY NON-SLIP COATING TO THE TOP HORIZONTAL SURFACE OF THE TANK. 	Environmental engineering and consulting 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	С
 6. REFER TO CIVIL FOR BOLLARD LOCATIONS. KEYNOTES: STAIR UNIT PROVIDED BY TANK MANUFACTURER. 12,000 GALLON FUEL STORAGE TANK. SEE SPECIFICATION SECTION 26 32 13.15. 24" MANWAY WITH 8" EMERGENCY VENT NIPPLE LOCATE HINGE ALONG LONG AXIS OF TANK. 7 GALLON OVERFILL WITH 4" FILL NIPPLE. STUB CONTAINMENT 6" ABOVE PAD. PROVIDE END 		
 GLOSURE. INTERSTITIAL LEAK DETECTION. LEVEL SWITCH. LEVEL SENSOR. 6" NIPPLE. 6" VENT. HANDRAIL HURRICANE HOLD DOWN RESTRAINT, SIZE AND LOCATION SHALL BE DETERMINED BY MANUFACTURER 2" NIPPLE 1" TEST PORT 2" INTERSTITIAL 4" NIPPLE 	BID DOCUMENTS	
10 4 WITTEE 17 TANK VENT PROTECTOR 18 6" TANK VENT	NOVEMBER 2023	C
	IMPROVING FATS OIL AND GREASE RECEIVINGS GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY	
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	FUEL STORAGE TANK PLAN AND SECTION DRAWING NUMBER	ļ
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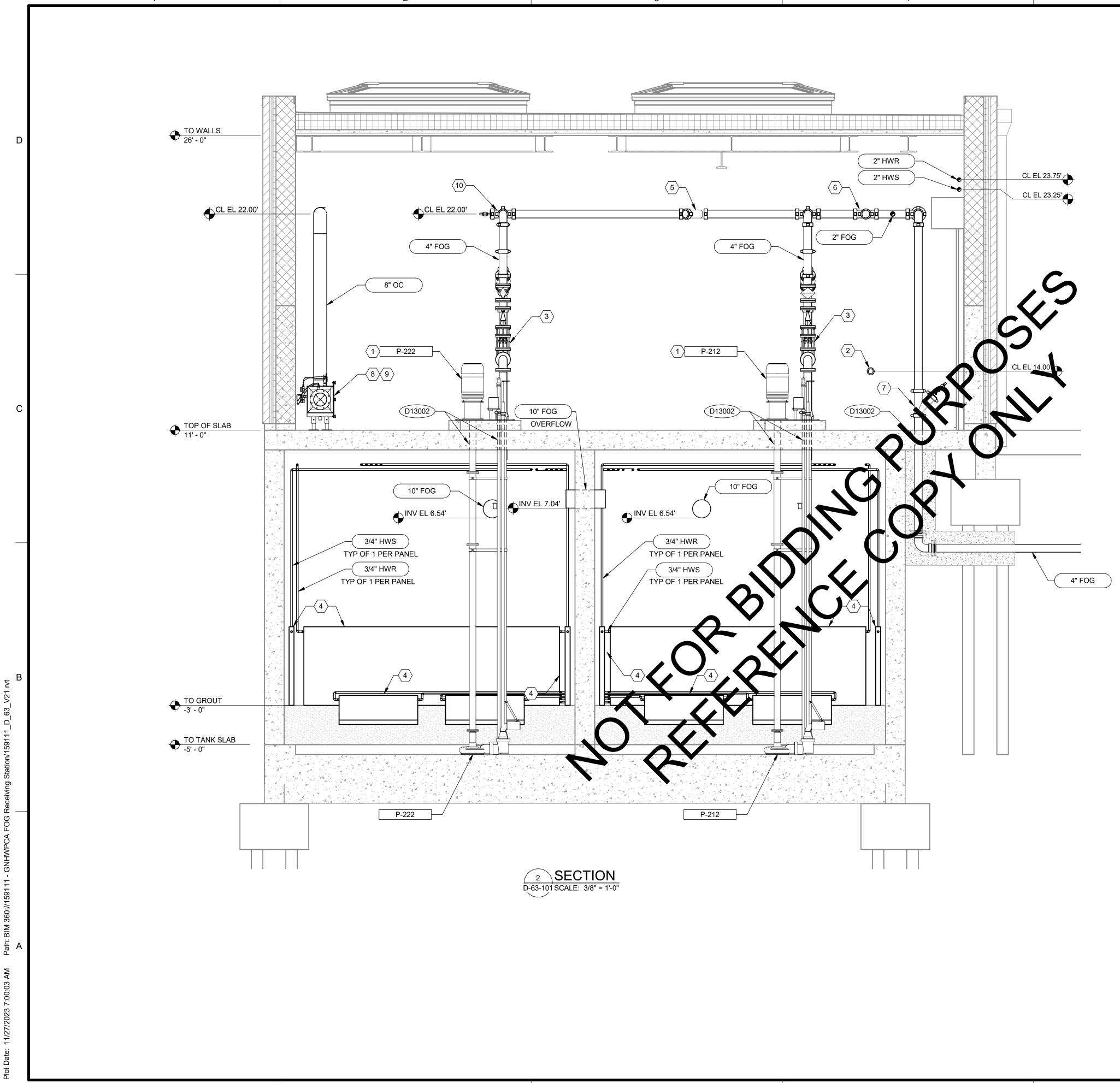




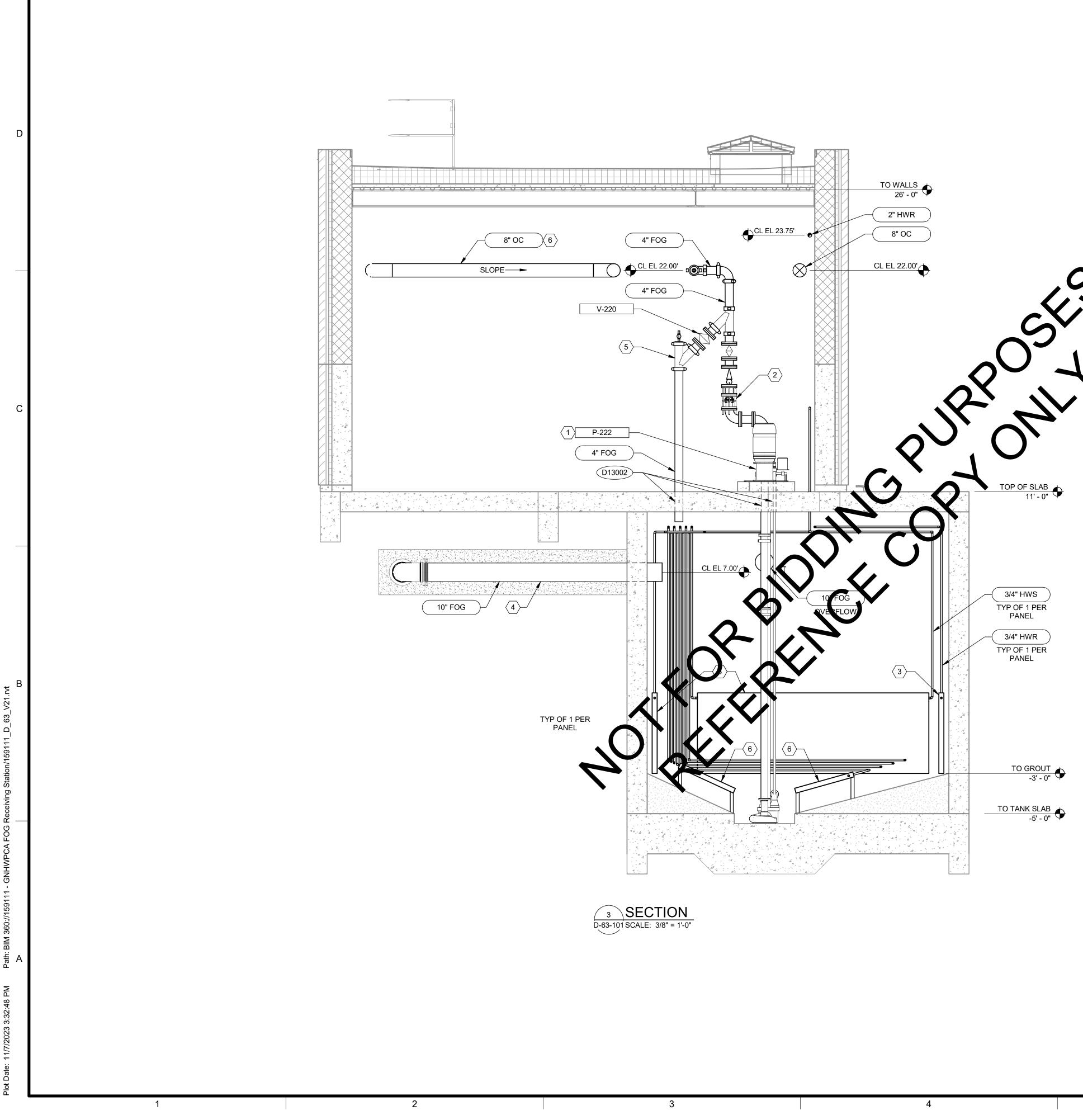
 \rightarrow KEYNOTES: IMMERSION HEAT EXCHANGER PANEL. SEE SPECIFICATION Brown 1 SECTION 23 83 16. 2 CHOPPER PUMP. (TYPICAL OF 2) SEE SPECIFICATION SECTION 43 23 80.15. Caldwell 3 MOUNT HEAT EXCHANGER PANELS 3" OFF OF THE WALL USING 316 SS ANCHOR BOLTS WITH SPACER. SIZE AND ENVIRONMENTAL ENGINEERING AND CONSULTING 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336 NUMBER OF ANCHOR BOLTS TO BE PROVIDED BY HEAT EXCHANGER MANUFACTURER. 4 HWR PIPES FROM ABOVE. HWS PIPES FROM ABOVE. D BID DOCUMENTS NOVEMBER 2023 С GNHWPCA Protecting the Environment IMPROVING FATS OIL AND GREASE RECEIVINGS GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY REVISIONS REV DATE DESCRIPTION В LINE IS 2 INCHES AT FULL SIZE DESIGNED: K.BYRNES DRAWN: J.ANIBAS CHECKED: T.HULL CHECKED: APPROVED: S.CLARK FILENAME BC PROJECT NUMBER 159111 CLIENT PROJECT NUMBER XX PROCESS А LOWER LEVEL TANK PLAN DRAWING NUMBER D-63-101 SHEET NUMBER OF 53 111 6



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$\langle \rangle$	KEYNOTES:		
1	6" CAM LOCK QUICK CONNECT.	Drown	
2	SAMPLE PORT.	Brown AND .	
3	CHOPPER PUMP. (TYPICAL OF 2) SEE SPECIFICATION SECTION 43 23 80.15.	Caldwell	
4	DUMPSTER BY OTHERS.		
5 6	PIPE STUB WITH GROOVED PIPE CAP. BLIND FLANGE WITH 2" FLUSHING CONNECTION INCLUDING	ENVIRONMENTAL ENGINEERING AND CONSULTING 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	
7	BALL VALVE AND QUICK CONNECT. KNIFE GATE VALVE.		
8	LATERAL WITH GROOVED PIPE CAP WITH 3/4" FLUSHING		
	CONNECTION INCLUDING MOTORIZED BALL VALVE AND BALL CHECK VALVE. CONNECT TO HOT 2W. REFER TO		
	M-63-101 FOR CONTINUATION.		D
9 10	TEE WITH GROOVED PIPE CAP. LATERAL WITH GROOVED PIPE CAP.		
11	2" FLUSHING CONNECTION INCLUDING BALL VALVE AND QUICK CONNECT.		
12	GREASE FILTER WITH DRAIN AND P-TRAP. SEE DETAIL		
13	B/D-00-507. SEE SHEET C-05-101 FOR CONTINUATION.		
14	BAGGING SYSTEM TO BE INSTALLED ON END OF		
15	DISCHARGE CHUTE. PINCH VALVE.		
16	TEE WITH GROOVED PIPE CAP WITH 2" FLUSHING		
	CONNECTION INCLUDING BALL VALVE AND QUICK CONNECT.		
17	AREA WITHIN 3' OF GREASE FILTER ARE RATED CLASS 1 DIV 2 PER NFPA 820.		
18	SEE SHEET M-630-101 FOR CONTINUATION.		
19	ALL OC DUCTWORK SHALL BE SLOPED @ 1/16" PER FOOT IN DIRECTION INDICATED, REFER TO M-63-101 FOR		
	CONTINUATION.		
20	WALL MOUNTED 100 LB. CAPACITY JIB CRANE ARM WITH RETRACTABLE HOIST. SEE DETAIL 8/A-00-501 FOR		
	MOUNTING DETAIL. JIB CRANE ARM SHALL BE WALL CANTILEVER WORK STATION JIB CRANE, MODEL		
	WSJ200-100-4 BY GORBEL CRANES OR EQUAL. RETRACTABLE HOIST SHALL BE ALLIED MOLEX		
	WOODHEAD/BRAD 130172-0221 OR EQUAL.		
21	ALL OC DUCTWORK SHALL BE SLOPED @ 1/16" PER FOOT IN DIRECTION INDICATED.	BID DOCUMENTS NOVEMBER 2023	с
22	BALANCE SYSTEM TO 315 CFM PER TANK, REFER TO SPECIFICATION SECTION 23 05 93.		
		GNHWPCA	
		Protecting the Environment	
		IMPROVING FATS OIL AND	
		GREASE RECEIVINGS	
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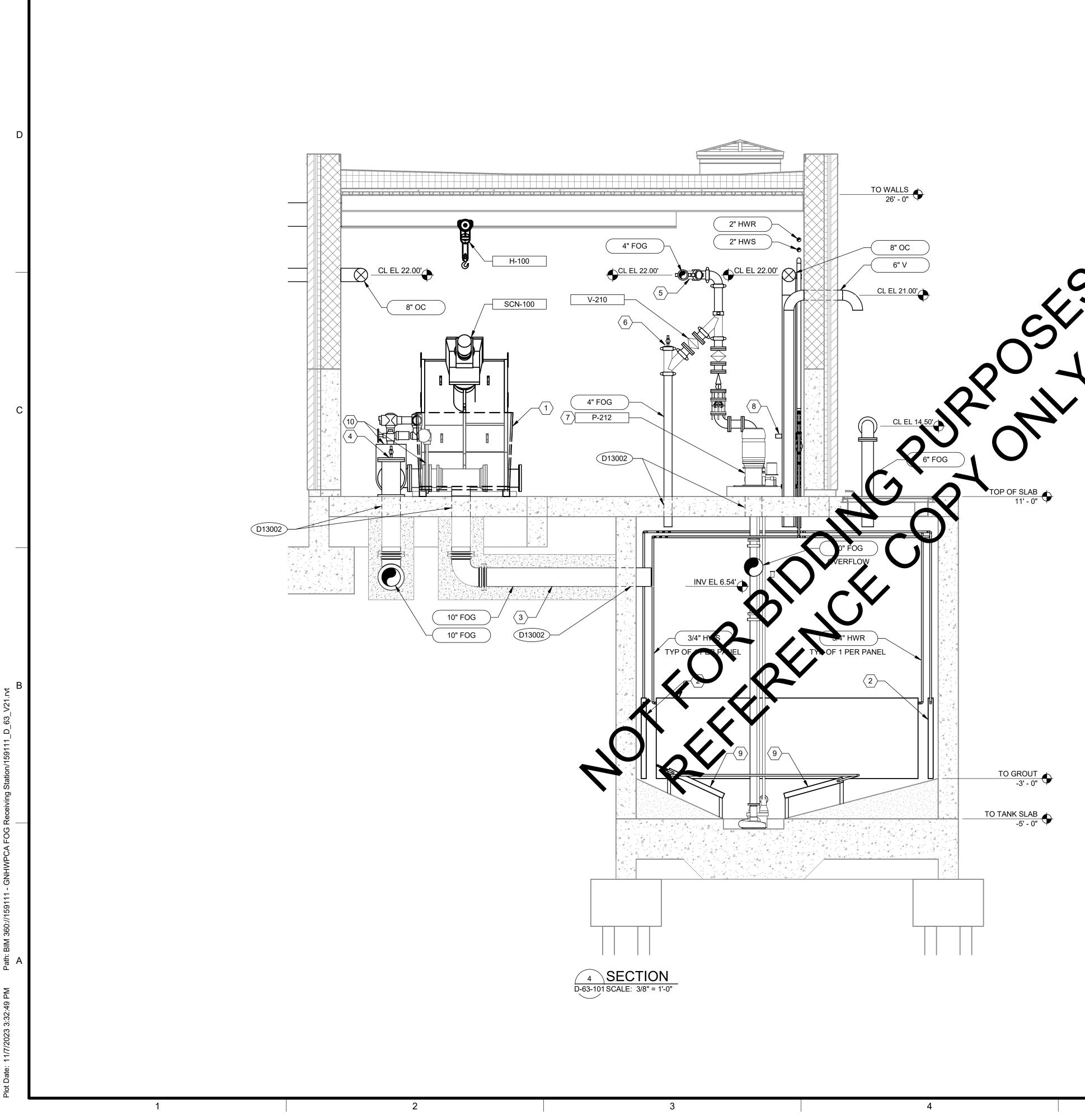


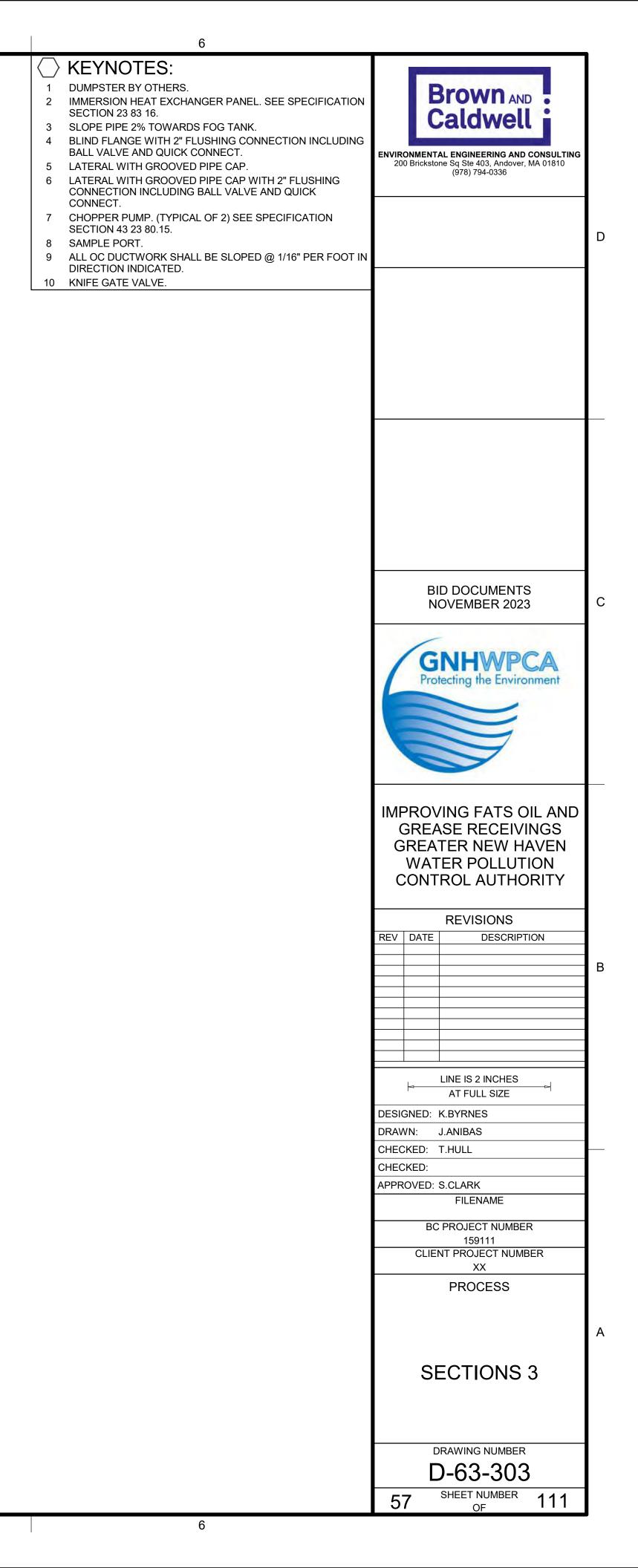
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\bigcirc	KEYNOTES: CHOPPER PUMP. (TYPICAL OF 2) SEE SPECIFICATION SECTION 43 23 80.15.		F	Brown AND .	
2	SAMPLE PORT.			aldwell	
3 4	EQUIPMENT CONNECTION FITTING. (TYPICAL) IMMERSION HEAT EXCHANGER PANEL. SEE SPECIFICATION			aluwell	
5	SECTION 23 83 16. LATERAL WITH GROOVED PIPE CAP.			AL ENGINEERING AND CONSULTING ne Sq Ste 403, Andover, MA 01810 (978) 794-0336	
6 7	TEE WITH GROOVED PIPE CAP. LATERAL WITH GROOVED PIPE CAP WITH 3/4" FLUSHING			(370) 734-0000	
·	CONNECTION INCLUDING MOTORIZED BALL VALVE AND BALL CHECK VALVE. CONNECT TO HOT 2W. REFER TO				
8	M-63-101 FOR CONTINUATION. GREASE FILTER WITH DRAIN AND P-TRAP. SEE DETAIL				D
-	B/D-00-507.				
9	AREA WITHIN 3' OF GREASE FILTER ARE RATED CLASS 1 DIV 2 PER NFPA 820.				
10	TEE WITH GROOVED PIPE CAP WITH 2" FLUSHING CONNECTION INCLUDING BALL VALVE AND QUICK				
	CONNECT.				
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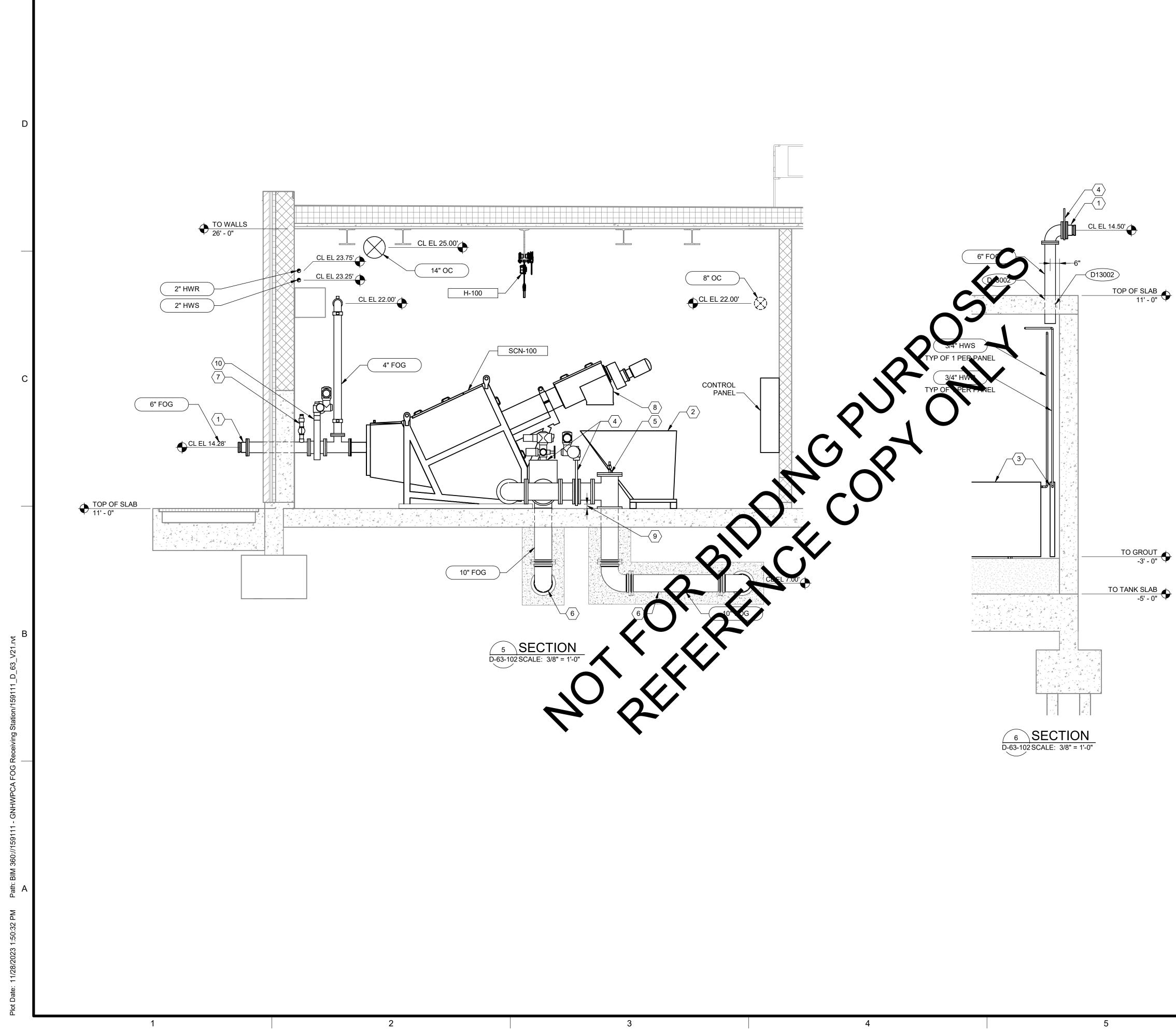


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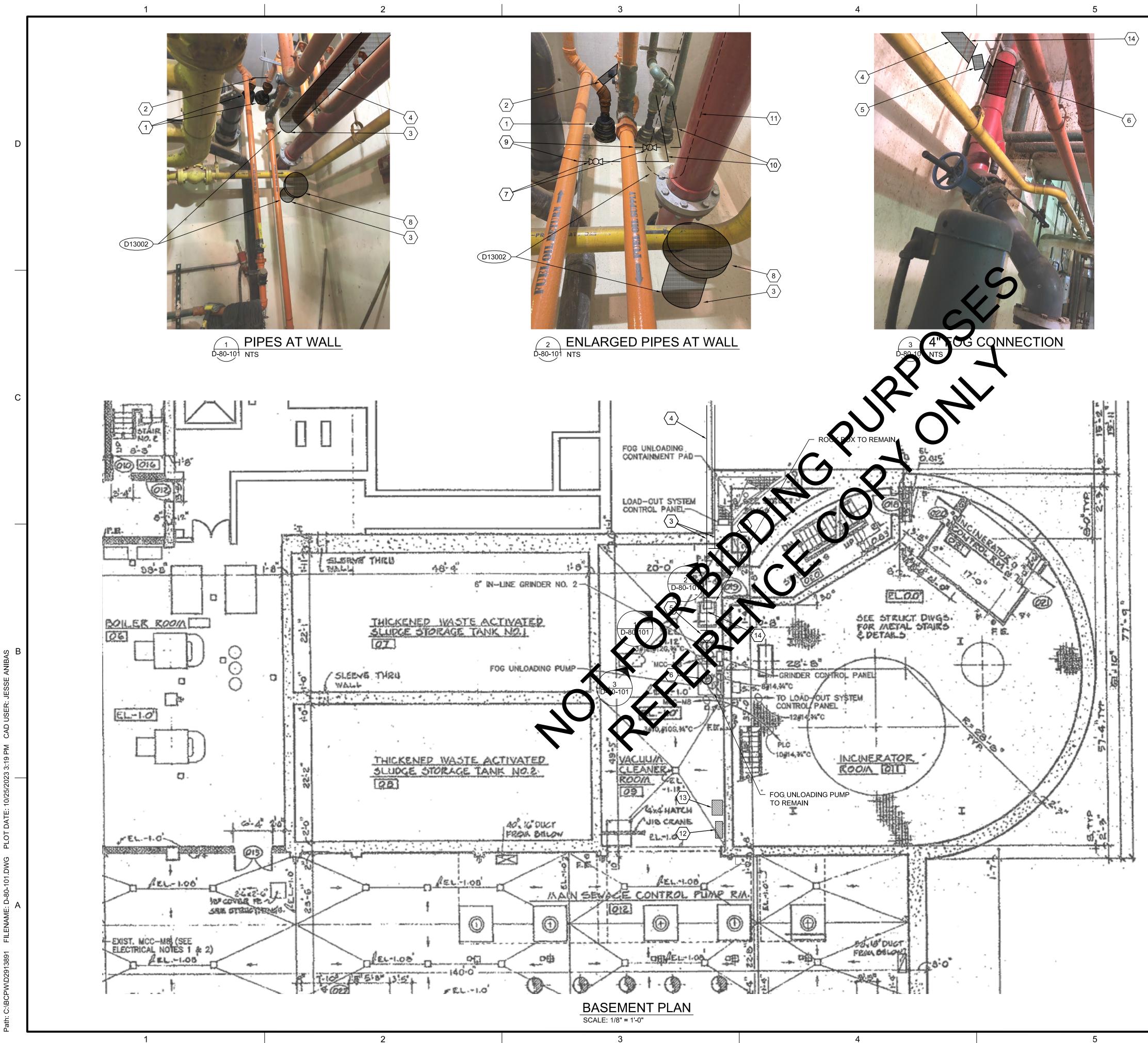
 \rightarrow KEYNOTES: 1 CHOPPER PUMP. (TYPICAL OF 2) SEE SPECIFICATION SECTION 43 23 80.15. **Brown** AND Caldwell 2 EQUIPMENT CONNECTION FITTING. (TYPICAL) 3 IMMERSION HEAT EXCHANGER PANEL. SEE SPECIFICATION SECTION 23 83 16. ENVIRONMENTAL ENGINEERING AND CONSULTING 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336 4 SLOPE PIPE 2% TOWARDS FOG TANK. 5 LATERAL WITH GROOVED PIPE CAP WITH 2" FLUSHING CONNECTION INCLUDING BALL VALVE AND QUICK CONNECT. 6 ALL OC DUCTWORK SHALL BE SLOPED @ 1/16" PER FOOT IN DIRECTION INDICATED. D BID DOCUMENTS NOVEMBER 2023 С GNHWPCA Protecting the Environment IMPROVING FATS OIL AND GREASE RECEIVINGS GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY REVISIONS REV DATE DESCRIPTION В LINE IS 2 INCHES AT FULL SIZE DESIGNED: K.BYRNES DRAWN: J.ANIBAS CHECKED: T.HULL CHECKED: APPROVED: S.CLARK FILENAME BC PROJECT NUMBER 159111 CLIENT PROJECT NUMBER XX PROCESS Α **SECTIONS 2** DRAWING NUMBER D-63-302 SHEET NUMBER OF 56 111 6



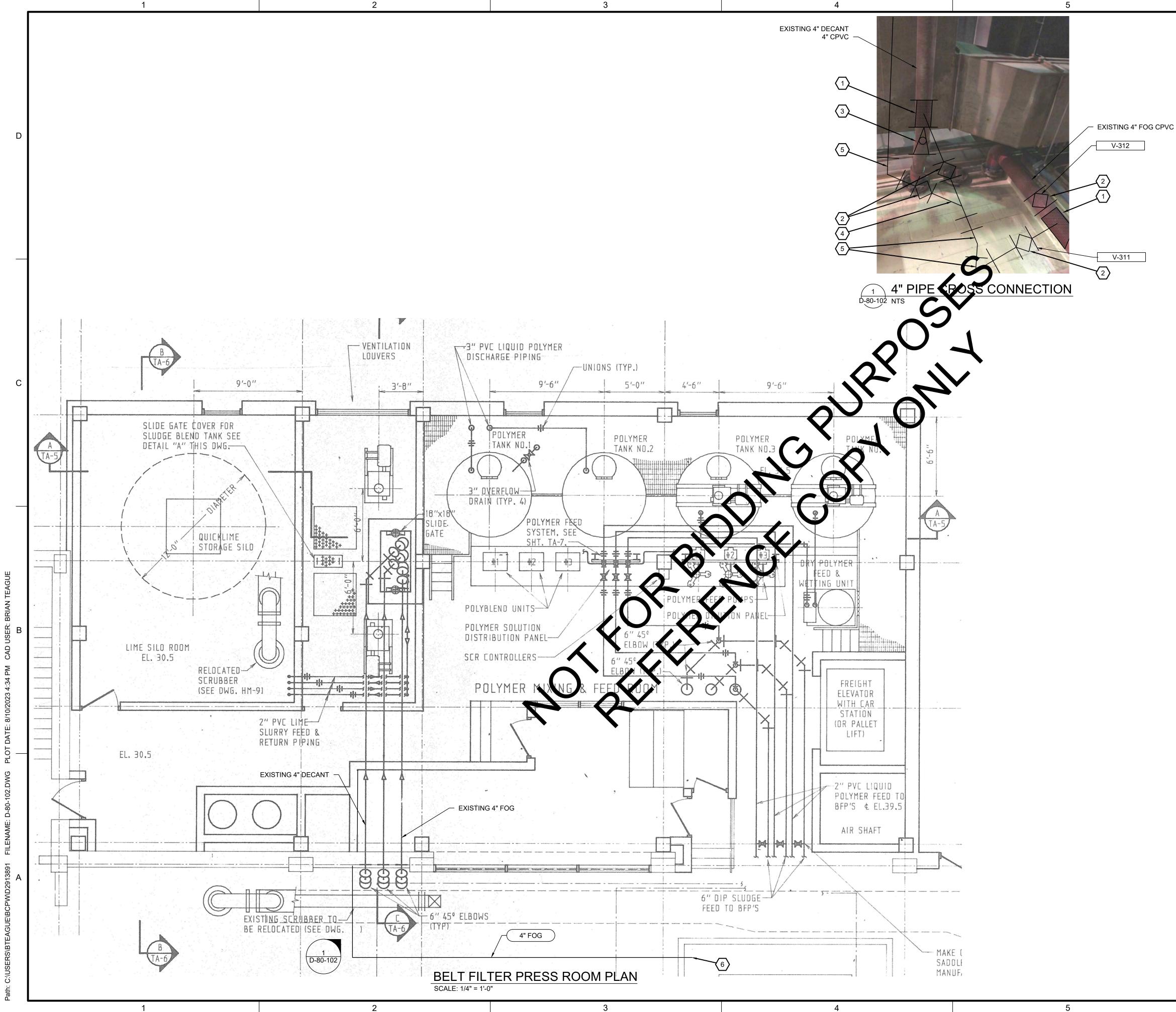




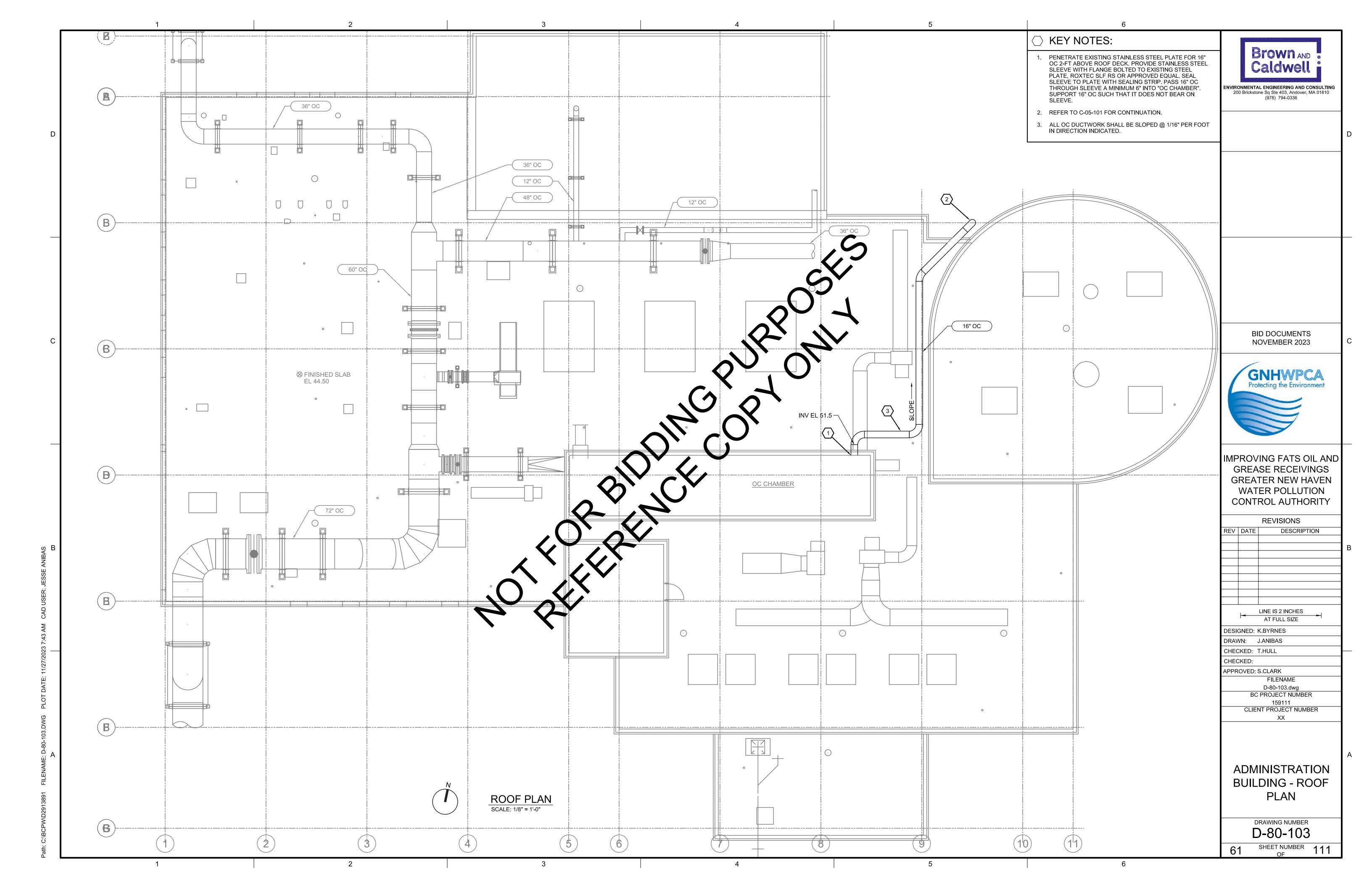
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1 2 3 4 5 6 7	KEYNOTES: 6" CAM LOCK QUICK CONNECT. DUMPSTER BY OTHERS. IMMERSION HEAT EXCHANGER PANEL. SEE SPECIFICATION SECTION 23 83 16. KNIFE GATE VALVE. BLIND FLANGE WITH 2" FLUSHING CONNECTION INCLUDING BALL VALVE AND QUICK CONNECT. SLOPE PIPE 2% TOWARDS FOG TANK. 2" FLUSHING CONNECTION INCLUDING BALL VALVE AND QUICK CONNECT.	ENVIR 20		AL ENGINEERING AND CONSULTING ne Sq Ste 403, Andover, MA 01810 (978) 794-0336	
8	BAGGING SYSTEM TO BE INSTALLED ON END OF DISCHARGE CHUTE.				D
9 10	3" MINIMUM FROM FLANGE TO FLOOR . PINCH VALVE.				
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	GENERAL NOTES:		
	 INFORMATION BASED ON AVAILABLE AS-BUILT DRAWINGS. CONTRACTOR TO FIELD VERIFY DIMENSIONS PRIOR TO CONSTRUCTION. 	Environmental engineering and consulting 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	
			D
	→ KEY NOTES:		
	1. DEMOLISH GAS PIPE WALL PENETRATIONS.		
	2. INSTALL NEW GAS PIPE CROSS CONNECTION.		
	3. NEW 4" FOG PIPE WALL PENETRATION.		
	4. 4" FOG.		
	5. INSTALL 4" PLUG VALVE.		
	6. NEW TEE CONNECTION TO EXISTING 4" FOG.		
	7. INSTALL BALL VALVE.		
	8. INSTALL BLIND FLANGE.		
	 NEW TEE CONNECTION. 10. ROUTE PIPE CROSS CONNECTION AS NEEDED AROUND 		
	NEW 4" FOG PIPING.	BID DOCUMENTS NOVEMBER 2023	С
	11. REPRESENTS THE APPROXIMATE 4" FOG PIPE LOCATION.		
	12. REMOVE FUEL MAINTENANCE SKID. CAP 2" FOR/FOS ON INTAKE AND DISCHARGE OF SKID.	CNUMPCA	
	 REMOVE FUEL TRANSFER SKID, CONTROL PANEL, AND STARTERS. PROVIDE 2" FOS TO CONNECT SUCTION TO DISCHARGE OF SKID. CAP 2" FOR. 	GNHWPCA Protecting the Environment	
	14. LATERAL WITH GROOVED PIPE CAP WITH 2" FLUSHING		
	CONNECTION INCLUDING BALL VALVE AND QUICK CONNECT.		
		IMPROVING FATS OIL AND	
		GREASE RECEIVINGS	
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	GENERAL NOTES:		
	1. INFORMATION BASED ON AVAILABLE AS-BUILT DRAWINGS. CONTRACTOR TO FIELD VERIFY DIMENSIONS PRIOR TO	Brown AND	
	CONSTRUCTION.	Caldwell	
	 CONTRACTOR RESPONSIBLE TO COORDINATE VALVE LOCATION WITH EXISTING PIPING AND DUCTING SO THAT VALVE IS OPERABLE. 	ENVIRONMENTAL ENGINEERING AND CONSULTING 200 Brickstone Sq Ste 403, Andover, MA 01810	
		(978) 794-0336	
,			D
	 INSTALL NEW 4" TEE. INSTALL NEW 4" PLUG VALVE. 		
	 INSTALL NEW 4" PLOG VALVE. INSTALL NEW 4" BALL CHECK VALVE. 		
	4. INSTALL NEW 4" WYE.		
	5. INSTALL NEW 4" BENDS AS NEEDED.		
	6. FOLLOW EXISTING LINES, CUT GRATING AS NEEDED, TERMINATE AT SAME ELEVATION AS EXISTING.		
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		GNHWPCA Protecting the Environment	
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		GREASE RECEIVINGS GREATER NEW HAVEN	
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		 (FIRST DIMENSION DUCT SIDE SHOWN. SECOND DIMENSION SIDE NOT SHOWN) ACOUSTICALLY LINED DUCT (SIZES SHOWN ARE NET INSIDE) RECTANGULAR SUPPLY DUCT ELBOW TURNED TOWARD RECTANGULAR RETURN/EXHAUST DUCT ELBOW TURNED TOWARD ROUND SUPPLY DUCT ELBOW TURNED AWAY 		X SIZE	 RETURN GRILLE OR REGISTER X = DESIGNATION, IF ANY WALL OR DUCT SUPPLY GRILLE OR DIFFUSER X = DESIGNATION, IF ANY CEILING SUPPLY
		SHOWN ARE NET INSIDE) RECTANGULAR SUPPLY DUCT ELBOW TURNED TOWARD RECTANGULAR RETURN/EXHAUST DUCT ELBOW TURNED TOWARD ROUND SUPPLY DUCT ELBOW TURNED AWAY			 OR DIFFUSER X = DESIGNATION, IF ANY CEILING SUPPLY
		TURNED TOWARD RECTANGULAR RETURN/EXHAUST DUCT ELBOW TURNED TOWARD ROUND SUPPLY DUCT ELBOW TURNED AWAY	4+	X SIZE CFM	CEILING SUPPLY
		DUCT ELBOW TURNED TOWARD ROUND SUPPLY DUCT ELBOW TURNED AWAY	4	X SIZE CFM	
					X = DESIGNATION, IF ANY
				X SIZE CFM	CEILING EXHAUST OR RETURN — GRILLE OR REGISTER X = DESIGNATION, IF ANY
		ROUND SUPPLY DUCT ELBOW TURNED TOWARD			
		RECTANGULAR MAIN WITH ROUND BRANCH		DAM	IPERS
		RECTANGULAR MAIN WITH RECTANGULAR BRANCH	BD -	MANUAL BA	LANCING DAMPER
		CONCENTRIC SQUARE TO ROUND	DFD, SD, OR FS		DAMPER, SMOKE DAMPER, OR E
		CONCENTRIC TRANSITION, RECTANGLE OR ROUND		CON	TROLS
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1		OR ROUND	TE	TEMPERATURE	
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·			FS	FLOW SWITCH	
F			HS	HAND SWITCH	
\ 		MITERED ELBOW WITH TURNING VANES	M	MOTORIZED	
	F	PLAN SYMBOLS		HVAC EC	QUIPMENT
		END OF DEMOLITION			
		CONNECT TO EXISTING		LOUVI	ΞR

STANDARD ABBREVIATIONS

HVAC GENERAL NOTES

A/C AFF	AIR CONDITIONING ABOVE FINISHED FLOOR	1. 2.	GENERAL HVAC NOTES APPLY TO ALL HVAC DRAWINGS, EQUIPMENT AND APPURTENANCES. IN CASE OF CONFLICT BETWEEN THE DRAWINGS, THE MOST STRINGENT REQUIREMENTS SHALL		
BD	BALANCING DAMPER	3.	GOVERN UNLESS OTHERWISE SPECIFICALLY APPROVED. FURNISH AND INSTALL HEATING, VENTILATING AND AIR CONDITIONING EQUIPMENT, DUCTWORK AND		
BDD BTU	BACKDRAFT DAMPER BRITISH THERMAL UNIT	0.	APPUTENANCES TO AVOID INTERFERENCES WITH STRUCTURE, PIPING, EQUIPMENT, CONDUIT,		
BTUH	BRITISH THERMAL UNITS PER HOUR		LIGHTING, ETC. DUCTWORK AND ASSOCIATED ACCESSORIES MAY REQUIRE REROUTING TO		
CAP CC	CAPACITY COOLING COIL		FACILITATE INSTALLATION. CONTRACTOR SHALL SUBMIT THE PLAN AND DETAIL FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.		
CF	CUBIC FEET	4.	DRAWINGS SHALL BE CONSIDERED DIAGRAMMATIC ONLY. CONTRACTOR SHALL		MA
CFM	CUBIC FEET PER MINUTE		A. FIELD VERIFY EXACT LOCATIONS, SIZES AND ELEVATIONS OF ALL ITEMS SHOWN AS EXISTING PRIOR TO DEMOLITION OR THE INSTALLATION OF ANY NEW WORK.		CO
D DIA	DEGREE DIAMETER		B. COORDINATE WITH ALL INVOLVED DISCIPLINES THE FINAL LOCATION OF EQUIPMENT AND		
DN	DOWN		PIPING.		FD
EA			C. WHEN PLACING NEW HVAC EQUIPMENT, CONTRACTOR SHALL VERIFY LOCATIONS OF EXHAUSTS AND VENTS. ALL EXHAUSTS AND VENTS SHALL BE A MINIMUM 10 FEET AWAY FROM		
EAT EL	ENTERING AIR TEMPERATURE ELEVATION		HVAC UNITS OUTDOOR AIR INTAKES. CONTRACTOR SHALL FIELD VERIFY PRIOR TO BID WHERE		
ESP	EXTERNAL STATIC PRESSURE		THE INTERFERENCES ARE AND PRICE ACCORDINGLY OR MAKE ALLOWANCES IN BID.		F
EWT EXH	ENTERING WATER TEMPERATURE EXHAUST		D. REVIEW THE CONTRACT DRAWINGS, THE MANUFACTURER'S LAYOUT DRAWINGS, INSTALLATION REQUIREMENTS, MANUFACTURER'S OPERATING AND MAINTENANCE		
F	FAHRENHEIT		REQUIREMENTS, AND CODE REQUIRED CLEARANCES.		
FD	FIRE DAMPER	5.	NOT ALL THE ITEMS ARE SHOWN IN PLANS, SECTIONS, DETAILS, AND SCHEMATICS DRAWINGS. THE CONTRACTOR SHALL PROVIDE ALL ITEMS EVEN IF THEY ARE SHOWN AT ONLY ONE LOCATION ON	1.	THE PLUMBI BETWEEN FI
FF FPM	FINISHED FLOOR FEET PER MINUTE		THE DRAWINGS. IN ADDITION, THE CONTRACTOR SHALL PROVIDE ALL ITEMS REQUIRED PER		EXACT LOCA
FPS	FEET PER SECOND		SPECIFICATION WHETHER THEY ARE SHOWN ON THE DRAWINGS OR NOT.	2.	
FSD	COMBINATION FIRE/SMOKE DAMPER	6.	THE DRAWINGS ARE NOT INTENDED TO SHOW EVERY OFFSET OR FITTING OR EVERY EXISTING INTERFERENCE THAT MAY BE ENCOUNTERED DURING INSTALLATION OF THE WORK. LOCATION OF		NOTIFY OTH FOR THIS PC
FT GA	FEET GAUGE		ALL ITEMS NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. EXACT LOCATIONS	3.	INSTALL PLU
GAL	GALLONS		NECESSARY TO SECURE BEST CONDITIONS AND RESULTS MUST BE DETERMINED AT THE JOB SITE		CONTRACTO AS MAY BE F
GALV			AND SHALL BE ESTABLISHED AND INCORPORATED INTO THE CONTRICTOR'S APPROVED SUBMITTAL BEFORE BEING INSTALLED.	4.	ROUTE PIPIN
GPM HOA	GALLONS PER MINUTE HAND-OFF-AUTO	7.	ALL VALVES SHOWN SHALL BE FULL LINE AND PORT SIZE LINESD OTHERWISE NOTED.	5.	INSTALL PIPI USE OF SPA
HP	HORSEPOWER	8.	PENETRATION OF PIPES, CONDUITS, ETC., IN WALLS AND/ON FZOOR® REQUIRING PROTECTED	6.	GROUP PIPI
HR			OPENINGS SHALL BE FIRE STOPPED. MATERIAL SHALL BE A TOSTED ASSEMBLY APPROVED BY THE STATE FIRE MARSHAL. PENETRATIONS THROUGH OTHER STEM COMPONENTS, E.G. DUCTWORK,	7.	INSTALL PIPI
HVAC	HEATING, VENTILATING AND AIR CONDITIONING		IS STRICTLY PROHIBITED.	8.	STRESSING PROVIDE CL
ID	INSIDE DIAMETER	9.	INSTALL ALL WORK TO CLEAR ARCHITECTURAL, STRUCTURAL MEMBERS AND PROCESS MECHANICAL		VALVES AND
IN	INCHES		SYSTEMS. ADJUST PIPING AS NECESSARY. TO ITEM UCH AS PIPE ETC., SHALL BE IN CONTACT WITH ANY EQUIPMENT. INSTALL ALL PIPING AT HIGH. S POSSIBLE OR AS SPECIFIED ON DRAWINGS	9.	PROVIDE AC
INFIL INSUL	INFILTRATION INSULATE, INSULATION		TO MAINTAIN MAXIMUM ACCESSIBILITY	10. 11.	INSTALL VAL INSTALL BAL
I/O	INPUT/OUTPUT	10.	TO MAINTAIN MAXIMUM ACCESSIBILITY CLOSELY COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO THENCHING, DEMOLITION OR INSTALLATION OF NEW. IDENTIFY CIZE AND LOCATIONS OF ALL PENETRATIONS THROUGH FOUNDATIONS, WALLS OR ROOTS PF OR TO FABRICATION OF ANY SYSTEM OR ORDERING		SYSTEM, OR
KW	KILOWATT		INSTALLATION OF NEW. IDENTIFY OVER TO LOCATIONS OF ALL PENETRATIONS THROUGH		FLOW. INSTA WATER LINE
LAT LBS	LEAVING AIR TEMPERATURE POUNDS		MATERIALS AFFECTED BY POSTBLETCE ORDINATION CONFLICTS	12.	INSTALL GLO
LWT	LEAVING WATER TEMPERATURE	11.	CONTRACTOR SHALL RECEIVE WITTEN APPROVAL FROM THE ENGINEER BEFORE MAKING	40	SERVICES.
MAX	MAXIMUM	12.	PENETRATIONS THAT ARE NOT DET ALED ON THE CONTRACT DOCUMENTS. USE CAUTION WHEN SAME CUTTING THROUGH EXISTING CONCRETE FLOOR OR WALL.	13.	EXTEND CLE
MBH MIN	THOUSANDS BTU PER HOUR MINIMUM, MINUTE	12.	CONSTRUCTION FOR THE ISTALLATION OF MECHANICAL/PLUMBING SYSTEMS TO AVOID CUTTING		ENSURE CLE
OA	OUTSIDE AIR		EXISTING REBAR AT EDGE OF OPENING. LEAVE SUF ICIENT REBAR EXPOSED TO TIE NEW	14.	INSTALL APF WHERE CON
OD			REINFORCING FOR REPLACEMENT CONCRETE AND OR OTHER STRUCTURAL ATTACHMENTS FOR NEW CONSTRUCTION	15.	INSTALL WA
ODP PH	OPEN DRIP PROOF PHASE	13.	CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REVISIONS, TRANSITIONS, OFFSETS, ETC TO AVOID		VALVE ON H REQUIRED T
PI	PRESSURE INDICATOR		EQUIPMENT, PRING EQUIPMENT, OR STRUCTURE AND TO MAKE A COMPLETE AND FUNCTIONING		HAMMER AR
PRES	PRESSURE	14.	SYSTEM PIPE AND SUCT SUPPORTS AND EXPANSION CONTROL ARE THE RESPONSIBILITY OF THE		
PS PSIA	PRESSURE SWITCH POUNDS PER SQUARE INCH ABSOLUTE		CONTRICTOR.		BE INSTALLE GROUPS. W
PSIG	POUNDS PER SQUARE INCH GAGE	15.	NOVAL CORAINS WITH 1/4" ALL VALVES AT THE LOW POINTS OF ALL HYDRONIC PIPING.	10	ACCORDAN
QTY RA	QUANTITY RETURN AIR	16.	DUST SIZES INDICATED ARE CLEAR DIMENSIONS INSIDE THE DUCT OR THE DUCT LINING.	16.	INSTALL WA
RG	RETURN GRILLE	\frown	ADJUSTED TO CONNECT TO ACTUAL EQUIPMENT FURNISHED AT NO ADDITIONAL COST TO THE		TO ACHIEVE
RH	RELATIVE HUMIDITY		OWNER.	17.	HANGERS FOR SWIVEL, SPL
RPM SA	REVOLUTIONS PER MINUTE SUPPLY AIR		DUCT AND PIPECONNECTIONS TO EQUIPMENT SHALL INCLUDE A FLEXIBLE CONNECTOR AS APPROVED BY THE ENGINEER.	18.	WALL SUPPO
SCFM	STANDARD CUBIC FEET PER MINUTE	19.	DUCE SHALL BE INSTALLED AS SEAL CLASS "A" AND LEAKAGE CLASS BETTER THAN "4".	19.	COPPER PIP
SD	SMOKE DETECTOR, SMOKE DAMER	20.	AIR 1964, ACCESS DOORS OF NOT LESS THAN 12" X 12" SIZE SHALL BE PROVIDED TO ALLOW TSPECTION OF ALL DAMPERS AND FILTERS.	20.	PLATED. INSTALL HAN
SF SP	SQUARE FEET, SUPPLY FILTER SET POINT, STATIC PRES URF	21.	THE LOCATION OF REFRIGERANT PIPING TO THE AIR HANDLING UNITS SHALL NOT INTERFERE WITH	-	COVERING A
SST	STAINLESS STEEL		FILTE REMOVAL OR SERVICING THE EQUIPMENT.	21.	ADJUSTMEN PLACE A HAI
T	THERMOSTAT, THERMOMETER	Ĉ.	ROO FANS, VENTS, AND HOODS SHALL BE PROVIDED WITH ½" MESH STAINLESS STEEL BIRD SCREENS OVER ALL OPENINGS.		RISER PIPIN
TD TDH	TEMPERATURE DAFE RENCE	20.	ALL STAINLESS STEEL SHALL BE TYPE 316 OR 316L UNLESS SPECIFICALLY NOTED.	22. 23.	PRIME COAT PROVIDE SL
TEAO	TOTALLY ENCLOSED AIR OVER	24.	APPLY HERESITE P-413 PHENOLIC COATING OR EQUAL ON ALL LOUVERS, CASINGS, COILS, AND	23.	MASONRY W
TEFC	TOTALLY PINCES SEL FAN COOLED	▲ 25	FANS. HVAC DUCTING SHALL BE ALUMINUM UNLESS OTHERWISE NOTED		REQUIREME
TEMP TS	TEMPER TURE TEMPERATURE SWITCH	20.	TIVAC DOCTING STALE DE ALOMINOM UNLEGS OTTENWISE NOTED		MASONRY W ANNULAR SF
TW	THERMOWER			24.	SIZE SLEEVE
VAV					EXPANSION WRAPPING (
VEL VTR	VELONITY VENT THROUGH ROOT				FLASHING A
W	WITH			05	WEATHER/W
W/O	WITHOUT			25.	WHERE PIPI
WC	WET BULB WATER COLUMN				SEAL. PROV
XP	EXPLOSENTROOF			26.	BOTH SIDES CONTRACTO
	$\wedge \mathbf{V}$			20.	WALL AND F
•					FIXTURES, T CHARACTER
					PROVISIONS
	\blacktriangleright			27.	INSTALL CO
				28.	BALL VALVE
				29.	NO GALVANI

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PLUMBING SYMBOLS

-MARK FD-1 4" -SIZE

ARK DESIGNATION
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)

DESCRIPTION CLEANOUT FLOOR DRAIN

PLUMBING GENERAL NOTES

IBING DRAWINGS ARE DIAGRAMMATIC AND SHOW THE RELATIONSHIP I FIXTURES AND CONNECTIONS. DO NOT SCALE THE DRAWINGS. FOR OCATIONS VERIFY LOCATIONS WITH ARCHITECTURAL DRAWINGS. IATE PLUMBING WORK WITH THE WORK OF OTHER TRADES AND OTHERS OF ANY CHANGES OF ANY CHASE OR ACCESS REQUIREMENTS S PORTION OF THE WORK.

PLUMBING IN ACCORDANCE WITH NATIONAL, STATE AND LOCAL CODES, CTOR TO PAY FOR PERMITS, FEES, INSPECTIONS AND CONNECTIONS BE REQUIRED FOR THIS WORK.

PING IN ORDERLY MANNER AND MAINTAIN SLOPE GRADIENT. PIPING TO CONSERVE BUILDING SPACE AND NOT TO INTERFERE WITH PACE.

PIPING WHENEVER PRACTICAL AT COMMON ELEVATIONS. PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT NG PIPE, JOINTS OR CONNECTED EQUIPMENT.

CLEARANCE FOR INSTALLATION OF INSULATION AND ACCESS TO AND FITTINGS. ACCESS WHERE VALVES AND FITTINGS ARE NOT EXPOSED.

VALVES WITH STEMS UPRIGHT OR HORIZONTAL, NOT INVERTED. BALL VALVES FOR SHUT-OFF AND TO ISOLATE EQUIPMENT, PARTS OF OR VERTICAL RISERS. HANDLE SHALL POINT IN THE DIRECTION OF STALL MANUAL AIR VENTS WITH CAPS AT HIGH POINTS OF POTABLE INES.

GLOBE VALVES FOR THROTTLING, BYPASS OR MANUAL FLOW CONTROL

CLEANOUTS TO FINISHED FLOOR OR WALL SURFACE. LUBRICATE ED CLEANOUT PLUG WITH MIXTURE OF GRAPHITE AND LINSEED OIL. CLEARANCE OF CLEANOUT FOR RODDING OF DRAINAGE SYSTEM. APPROVED POTABLE WATER PROTECTION DEVICE ON PLUMBING LINES CONTAMINATION OF DOMESTIC WATER MAY OCCUR. WATER HAMMER ARRESTORS COMPLETE WITH ACCESSIBLE ISOLATION I HOT AND COLD WATER SUPPLY PIPING. INSTALL AT LOCATIONS ED TO PREVENT WATER HUMMER. CONTRACTOR IS TO INSTALL WATER ARRESTORS PER STANDARD PLUMBING PRACTICE AS NEEDED EVEN IF E NOT SHOWN ON THE DRAWINGS. AS A MINIMUM ARRESTORS ARE TO LLED AT ANY FAST CLOSING VALVE, AND AT FLUSH VALVES IN TOILET WATER HAMMER ARRESTORS ARE TO BE SIZED AND SELECTED IN

ANCE WITH UNIVERSAL STANDARD P.D.I. - WH201. WATER HEATER IN ACCORDANCE WITH MANUFACTURER'S

TIONS. COORDINATE WITH PLUMBING AND RELATED ELECTRICAL WORK EVE OPERATING SYSTEM. FOR PIPE SIZES 1/2" TO 1 1/2" TO BE CARBON STEEL, ADJUSTABLE

SPLIT RING. PPORT FOR PIPE SIZES TO 3" TO BE CAST-IRON HOOK.

PIPE SUPPORT TO BE CARBON STEEL RING, ADJUSTABLE, COPPER ANGERS TO PROVIDE MINIMUM 1/2" SPACE BETWEEN FINISH

G AND ADJACENT WORK, USE HANGERS WITH 1 1/2" MINIMUM VERTICAL ENT. HANGER WITHIN 12" OF EACH HORIZONTAL ELBOW AND SUPPORT

PING INDEPENDENTLY OF CONNECTED HORIZONTAL PIPING. DAT EXPOSED STEEL HANGERS AND SUPPORTS.

SLEEVES FOR PIPES THROUGH NEW CONCRETE FLOORS AND WALLS AND FIREPROOF CAULK SLEEVES IN ACCORDANCE WITH NFPA MENTS. FOR PIPES THROUGH EXISTING CONCRETE FLOORS AND WALLS, CORE NEW HOLE AND PROVIDE FIREPROOF CAULK IN SPACE BETWEEN PIPE AND CORE.

EVES/CORES LARGE ENOUGH TO ALLOW FOR MOVEMENT DUE TO ON AND CONTRACTION. PROVIDE FOR CONTINUOUS INSULATION NG OF GLASS FIBER TYPE, NON-COMBUSTIBLE. PROVIDE FLEXIBLE AND METAL COUNTER FLASHING WHERE PIPING PENETRATES R/WATERPROOFED WALLS, FLOORS AND ROOFS.

PIPING PENETRATES FLOOR, CEILING OR WALL, CLOSE OFF SPACE I PIPE AND ADJACENT WORK WITH STUFFING INSULATION AND CAULK OVIDE CLOSE FITTING METAL COLLAR OR ESCUTCHEON COVERS AT ES OF PENETRATION.

CTOR TO VERIFY EXISTING CONDITIONS BEFORE STARTING WORK, THAT ID FLOOR FINISHES ARE PREPARED AND READY FOR INSULATION OF , THAT ELECTRICAL POWER IS AVAILABLE AND OF THE CORRECT FERISTICS AND THAT THE MILLWORK IS CONSTRUCTED WITH ADEQUATE ONS FOR THE INSTALLATION OF COUNTERTOP LAVATORIES. COMPONENTS LEVEL AND PLUMB.

LVES FOR DOMESTIC WATER SERVICE TO BE FULL PORT, BRONZE, 2

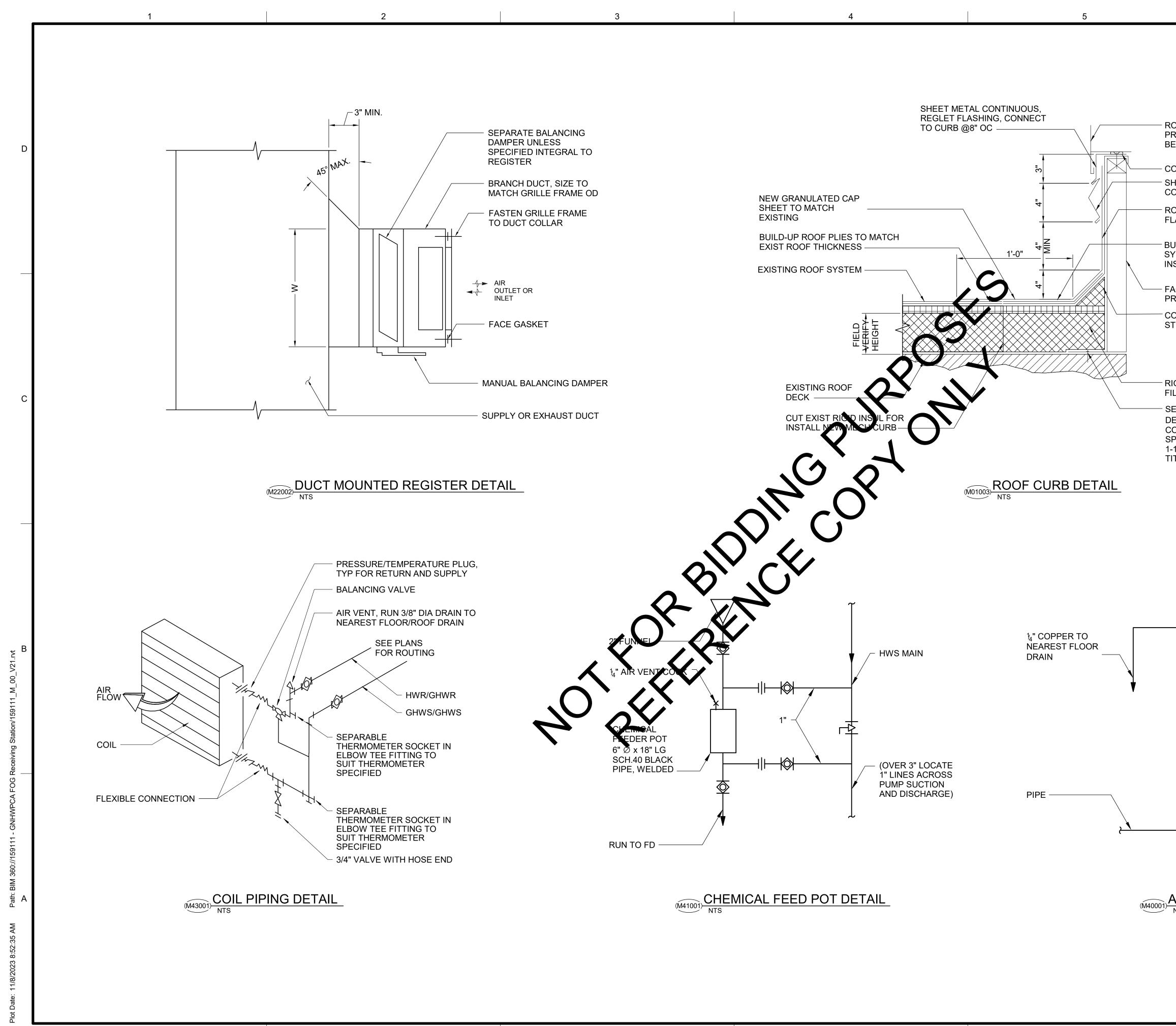
NO GALVANIZED OR ZINC COATED PIPING OR MATERIALS SHALL BE USED IN THE HEATING WATER GLYCOL SYSTEM OR THE FUEL OIL SYSTEM.

Brown AND Caldwell ENVIRONMENTAL ENGINEERING AND CONSULTING 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	
	D
BID DOCUMENTS NOVEMBER 2023	С
GRHWPCA Protecting the Environment	
IMPROVING FATS OIL AND GREASE RECEIVINGS GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY	
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BC PROJECT NUMBER 159111	
CLIENT PROJECT NUMBER XX BUILDING MECHANICAL	
HVAC GENERAL NOTES, SYMBOLS, AND LEGENDS	А
DRAWING NUMBER	

SHEET NUMBER

OF

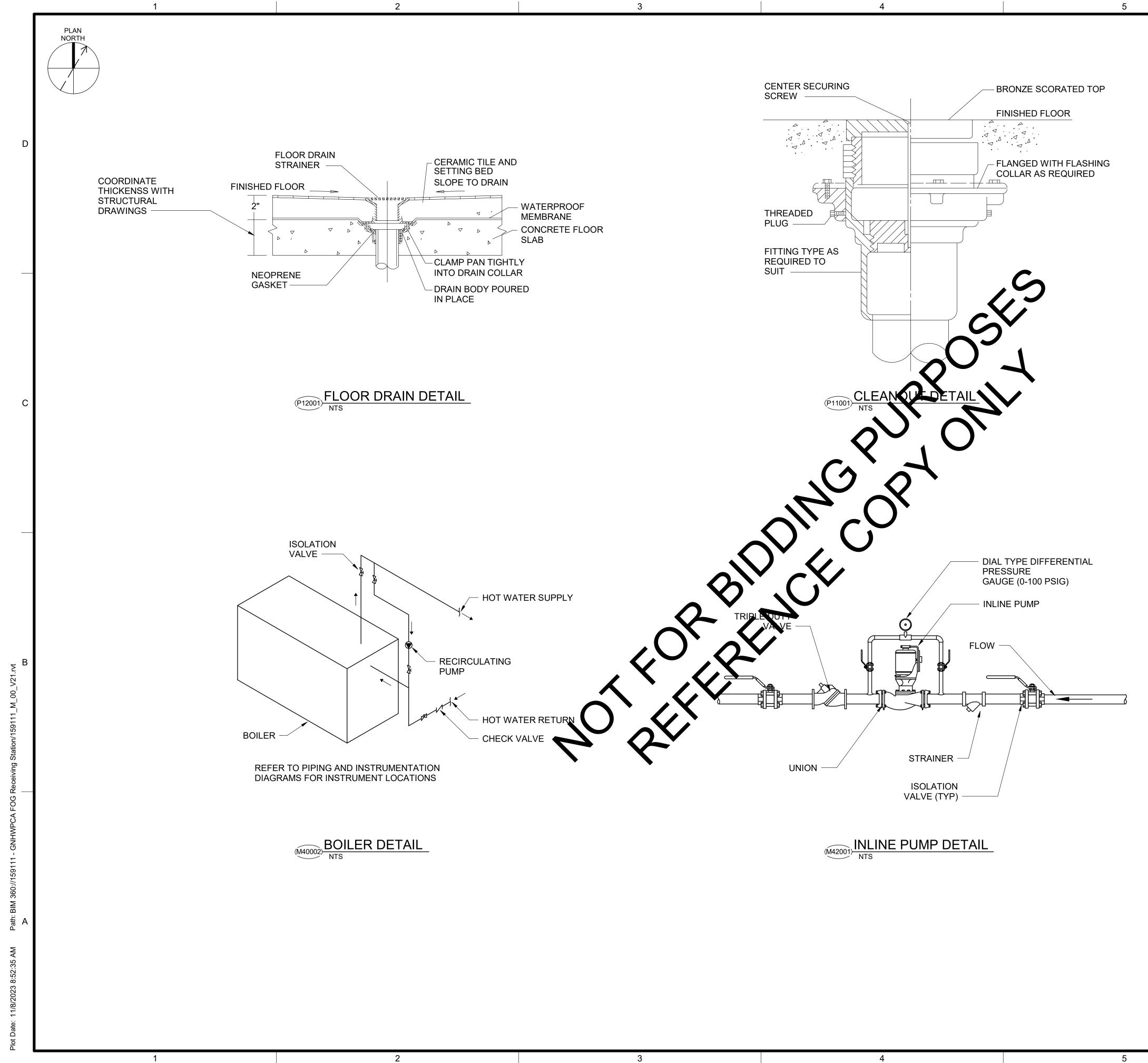
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	Brown AND Caldwell ENVIRONMENTAL ENGINEERING AND CONSULTING 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	
ROOF-MOUNTED SUPPLY FAN. PROVIDE SEISMIC RESTRAINTS SETWEEN FAN AND CURB.		D
CONTINUOUS GASKET SHEET METAL SPRINGFORM COUNTER FLASHING SYSTEM ROOF MEMBRANE LASHING PLY		
UILT-UP ROOF MEMBRANE YSTEM OVER RIGID NSULATION		
ACTORY SUPPLIED PRE-FABRICATED CURB CONTINUOUS FIBER BOARD CANT STRIP		
RIGID INSULATION ILL AT ROOF CUT-OUT SECURE ROOF CURB TO CONCRETE DECK WITH 1/4"Ø STAINLESS STEEL	BID DOCUMENTS NOVEMBER 2023	С
CONCRETE SCREW, 12 EQUALLY SPACED, 1-3/4" EMBEDMENT DEPTH, -1/2" MIN. EDGE DISTANCE; SIMPSON TITAN HD SERIES, OR EQUAL.	GRHWPCA Protecting the Environment	
	IMPROVING FATS OIL AND GREASE RECEIVINGS GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY	
AUTOMATIC AIR VENT	REVISIONS REV DATE DESCRIPTION	В
COUPLING		
BALL VALVE		
10" MIN	DRAWN: J.BUTLER CHECKED: D.STEWART CHECKED: APPROVED: D.STEWART FILENAME	
<u>ب</u>	BC PROJECT NUMBER 159111 CLIENT PROJECT NUMBER XX BUILDING MECHANICAL	
AIR VENT DETAIL NTS	DETAILS 1	A
	DRAWING NUMBER M-00-501	
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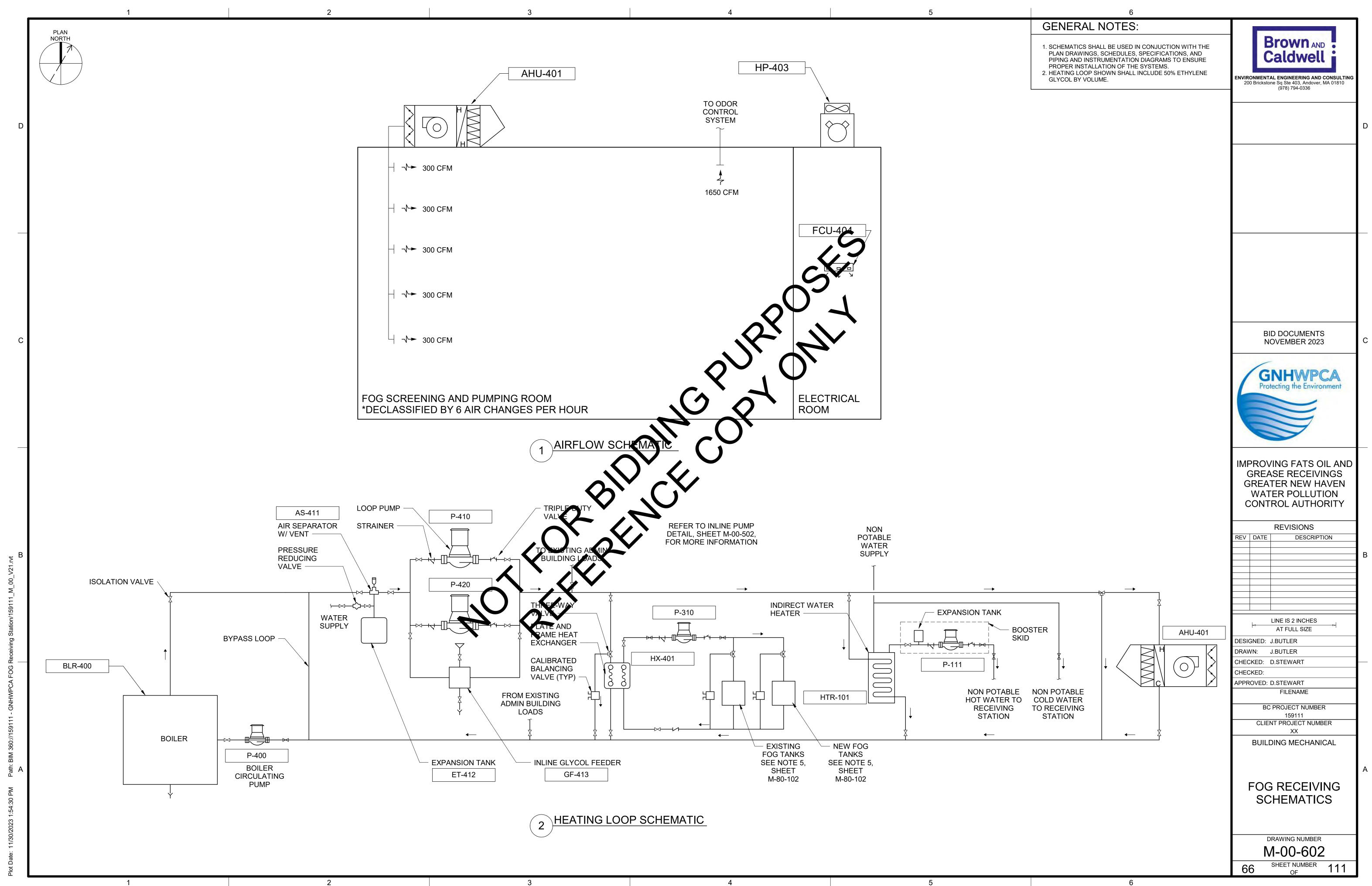


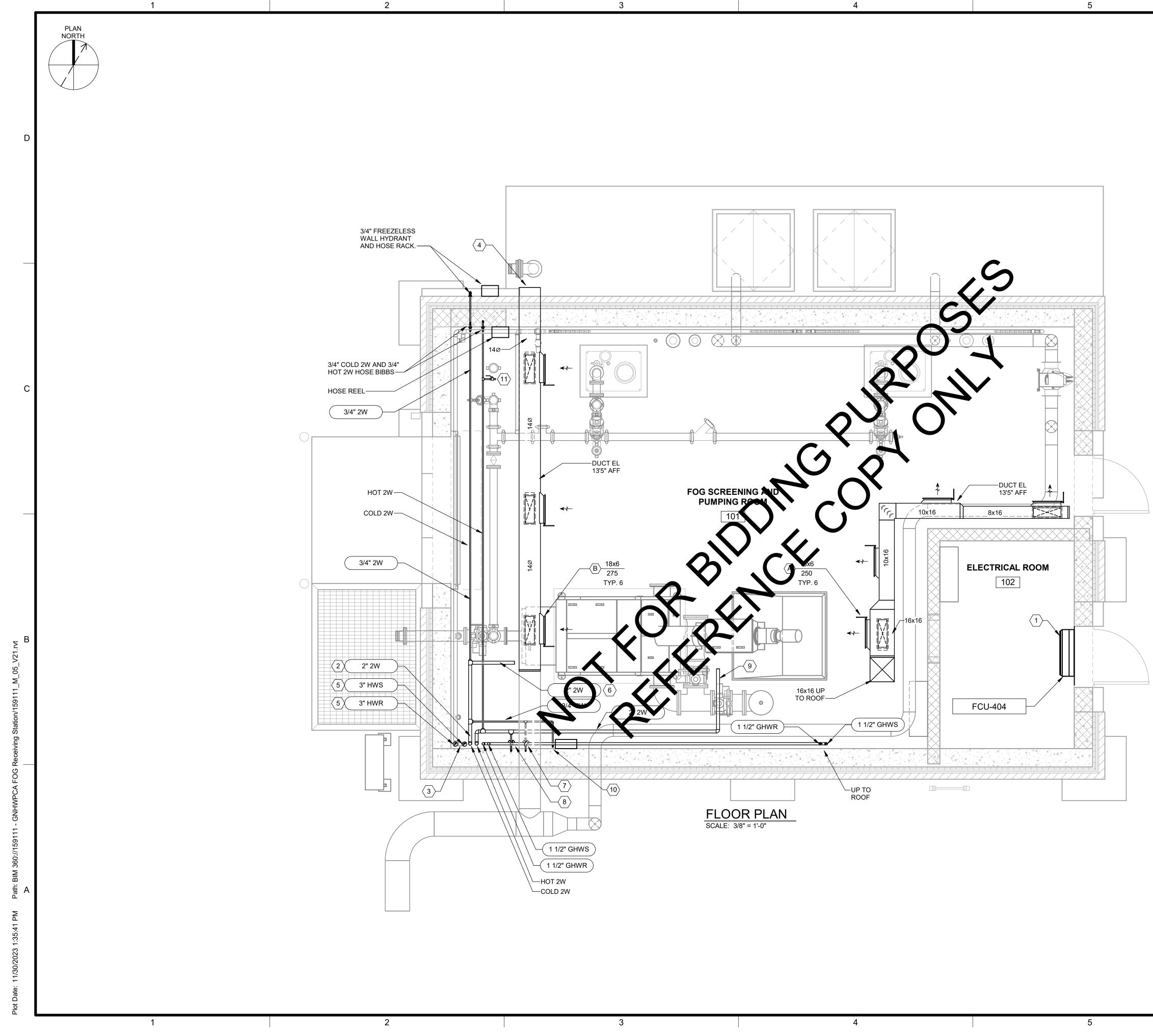
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Caldwell ENVIRONMENTAL ENGINEERING AND CONSULTING 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	
BID DOCUMENTS NOVEMBER 2023	C
GNHWPCA Protecting the Environment	
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DETAILS 2	Δ
DRAWING NUMBER M-00-502	
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		ΔΗΙ					Brown AND
		ELECTRICAL		HEATING			Caldwell
TAG MANUFACTURER HU-401 TRANE		MOTOR /OLTAGE (V) FAN HP FAN BHP FLA (A) MCA (A) 120/1 1 1/2 1.074 2.00 2.50		ROWSENTERING DB (F)LEAVING DB (F)TOTAL CAPACIT (BTUH)1875109,000	Y FLUID FLUID DROP FLOWRATE	FLUID PRESSURE DROP (FT-WG)OPERATING WEIGHT (LBS)NOTES0.9410001, 2, 3, 4	ENVIRONMENTAL ENGINEERING AND CONS 200 Brickstone Sq Ste 403, Andover, MA 01 (978) 794-0336
	OATED HW COIL. SS STEEL INNER LINER, STAINLESS STEEL DRAIN PANS, & STAINLESS STE DOUBLE WALL CONSTRUCTION WITH ROBUST THERMAL BREAK AND MFR		ATING DESIGN CONDITIONS OR PAY TO R	RESOLVE SWEATING ISSUE IN THE FIELD.			
	IS 50% ETHLYENE GLYCOL BY VOLUME.						
		PUMP SCHEDULE					
TAGMANUFACTURERP-111BELL & GOSSETTP-310BELL & GOSSETTP-400BELL & GOSSETT	MODELSIZELOCATIONTYPEMINIBOOST EXTREMEMBX1A20DADMINISTRATION BLDGIN-LINe-802x2x9.5CADMINISTRATION BLDGIN-LINECOCIRC XL45-375MAINTENANCE BLDGIN-LIN	E AST SYSTEM FLUID GLYCOL E HEATING WATER WATER N/A E HEATING WATER WATER N/A	RATE (GPM) TEMP (DEG F) HEAD (FT-WG) SUC SIZE (33 200 100	IPE CONNECTIONS ELEC CTION DISCHARGE MOTOR MOT (NOM IN) SIZE (NOM IN) SIZE (HP) SPEED 1.5 1.5 180 2 2 5 180 2.5 2.5 3 230	(RPM)PH(Y/N)(LBS)NOTES0480/3N18210480/3Y1951		
P-410BELL & GOSSETTP-420BELL & GOSSETT	e-803x3x11BMAINTENANCE BLDGIN-LINe-803x3x11BMAINTENANCE BLDGIN-LIN		ENE220200 - 18091ENE220200 - 18091	3 3 10 180 3 10 180			
IINIBOOST EXTREME PUM	SKID SHALL BE PROVIDED WITH A BELL & GOSSETT SERIES PTA-80V EXI	PANSION TANK, OR APPROVED EQUAL.		20-1			
				2 \			BID DOCUMENTS NOVEMBER 2023
			COOLING	EATING			
TAGMANUFACTURCU-404TRANE		CONDENSING UNITAIRFLOW (CFM)COOLING CAPACITY (MBH)COOL ENTERINGHP-40345518.0	DLING DESIGN IG TEMP DB/WB (F)SENSIBLE HEAT FACTORCAN CAN CAN 0.73	HEATINGHEATING DESIGNPACITY (MBH)ENTERING TEMP DB (F)3.660	VOLT/ VOLT/ MCA PHASE NOTES 1.0 208/1 1		GNHWPC Protecting the Environm
DOOR UNIT SHALL BE PO	WERED BY THE CORRESPONDING OUTDOOR UNIT.		208				
							IMPROVING FATS OIL
	HEAT PUMP SCHEDULE			INDIRECT WATER HEA			
TAG MANUFACTURE	COOLING HEAT CAPACITY DESIGN COOLING CAPA	CITY DESIGN HEATING VOLT/			HEATING HOT WATER FLOW PLY RETURN RATE CAPACITY P (F) TEMP (F) (GPM) (GAL)		GREATER NEW HAV WATER POLLUTIO
IP-403 TRANE	COOLING CAPACITY (MBH)DESIGN COOLING DESIGN COOLING OA TEMP DB (F)HEAT CAPAC CAPAC (MBTRUZA0181KA70BA18.08713.0	NG CITY DESIGN HEATING H) OA TEMP DB (F) EER PHASE MC			PLY RETURN RATE CAPACITY P (F) TEMP (F) (GPM) (GAL)		GREATER NEW HAV WATER POLLUTIO CONTROL AUTHORI REVISIONS
HP-403 TRANE	COOLING CAPACITY (MBH)DESIGN COOLING DESIGN COOLING OA TEMP DB (F)HEAT CAPAC CAPAC (MBTRUZA0181KA70BA18.08713.0	NG CITY DESIGN HEATING OA TEMP DB (F) EER VOLT/ PHASE MC		AG MANUFACTURER MODEL TEM	PLY RETURN RATE CAPACITY P (F) TEMP (F) (GPM) (GAL)		GREATER NEW HAV WATER POLLUTIO CONTROL AUTHOR REVISIONS
IP-403 TRANE	COOLING CAPACITY (MBH)DESIGN COOLING DESIGN COOLING (MB OA TEMP DB (F)HEAT CAPAC (MB (MB 13.TRUZA0181KA70BA18.08713.NTROLS.	NG CITY I)DESIGN HEATING OA TEMP DB (F)VOLT/ EERVOLT/ PHAGEMCX5810.7108/211.0		AG MANUFACTURER MODEL TEM 2-101 BRADFORD WHITE SW-120C-5 2	PLY P (F)RETURN TEMP (F)FLOW RATE 		GREATER NEW HAV WATER POLLUTIO CONTROL AUTHORI REVISIONS
HP-403 TRANE	COOLING CAPACITY (MBH)DESIGN COOLING OA TEMP DB (F)HEAT CAPAC (MBTRUZA0181KA70BA18.08713.NTROLS.ST13.8713.BOILER SCHE	NG CITY I) DESIGN HEATING OA TEMP DB (F) VOLT/ EER VOLT/ PHAGE MCX 5 8 10.7 08/4 11.0 OULE	MOCP OTES TA 28 HTR BOX VENT	AG MANUFACTURER MODEL TEM 2-101 BRADFORD WHITE SW-120C-5 24 GRILLES, DIFFUSERS,	PLY P (F)RETURN TEMP (F)FLOW RATE (GPM)CAPACITY (GAL)00190201070019020107		GREATER NEW HAV WATER POLLUTIO CONTROL AUTHORI REVISIONS
IP-403 TRANE ICLUDE LOW AMBIENT CO TAG MANUFACTURER	COOLING CAPACITY (MBH) DESIGN COOLING OA TEMP DB (F) HEAT CAPAC (APA (MB TRUZA0181KA70BA 18.0 87 13. NTROLS. ST 90110000000000000000000000000000000000	NG CITY I) DESIGN HEATING OA TEMP DB (F) VOLT/ EER VOLT/ PHAGE MCX 5 8 10.7 08/2 11.0 OULE	MOCP OTES 28 HTR HTR HTR HTR HTR HTR HTR HTR	AGMANUFACTURERMODELTEM2-101BRADFORD WHITESW-120C-524GRILLES, DIFFUSERS,TAGMANUFACTURERMATITUS4	PLY P (F)RETURN TEMP (F)FLOW RATE (GPM)CAPACITY (GAL)0019020107		GREATER NEW HAV WATER POLLUTIO CONTROL AUTHORI REV DATE DESCRIPTION
IP-403 TRANE ICLUDE LOW AMBIENT CO ISTALL BOILER IN ACCORE ROVIDE BOILER AS SHOW	Image: Rest of the second s	NG DITY H) DESIGN HEATING OA TEMP DB (F) VOLT/ EER VOLT/ PHAGE MCN MCN 3 8 10.7 08/ 11.0 0 8 10.7 08/ 11.0 DULE Imput (MD1) Imput EFFICIENCY FIREB PRESS (IN W 19.2 FIREB PRESS (IN W 19.2 CUT CODE REQUIREMENTS. 88.5% 86.5% 1.14	MOCP OTES 28 HTR HTR HTR BOX VENT SURE VENT GIAMETER WEIGHT (IN) KEIGHT (LBS) NOTES	AGMANUFACTURERMODELTEM2-101BRADFORD WHITESW-120C-524GRILLES, DIFFUSERS,TAGMANUFACTURERMATITUS4	PLY P (F)RETURN TEMP (F)FLOW RATE (GPM)CAPACITY (GAL)00190201070019020107AND REGISTERS SCHEDULEODELSIZE (WxH)300SUPPLY18x6		GREATER NEW HAV WATER POLLUTIO CONTROL AUTHORI REVISIONS REV DATE DESCRIPTION
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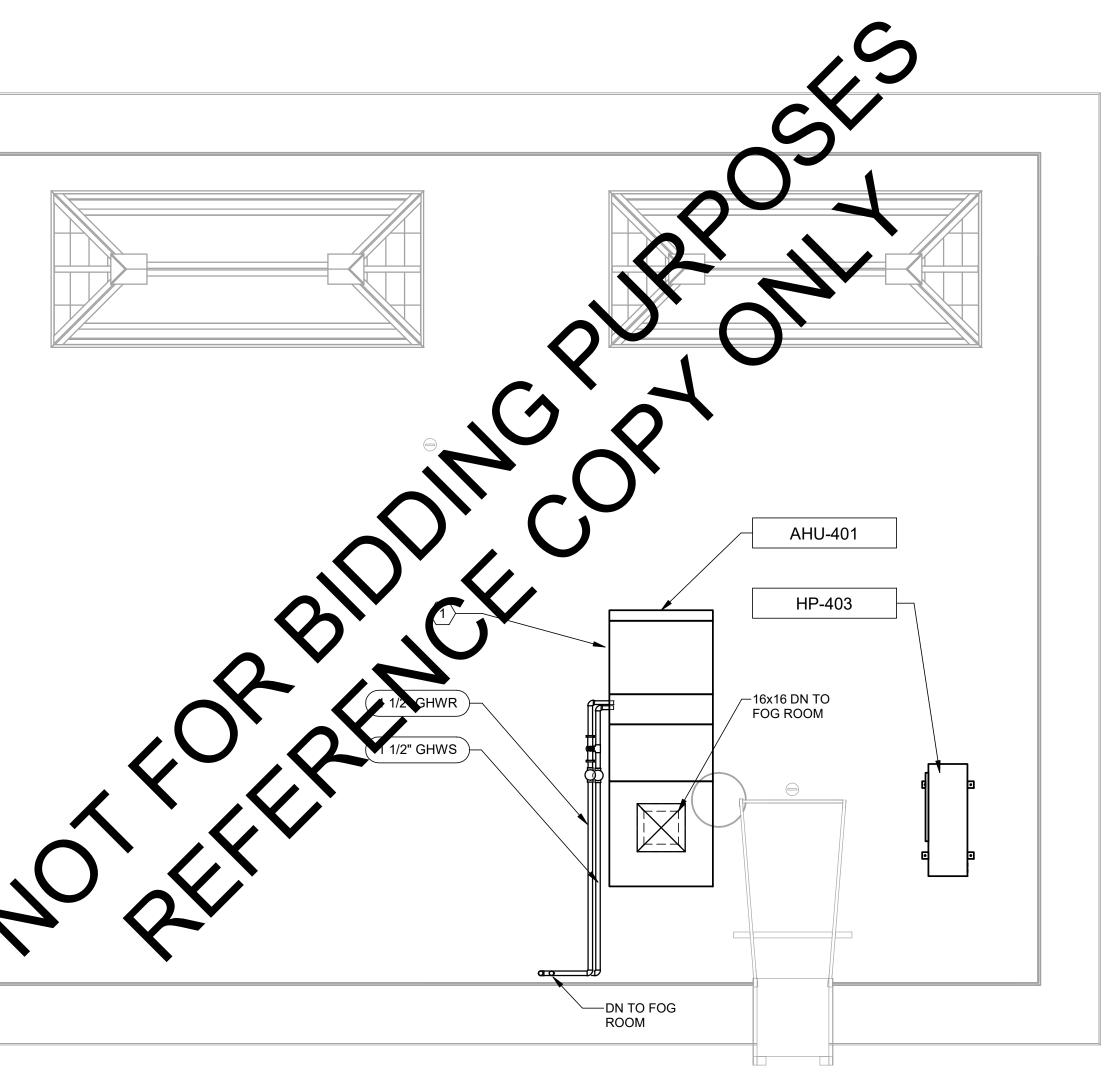
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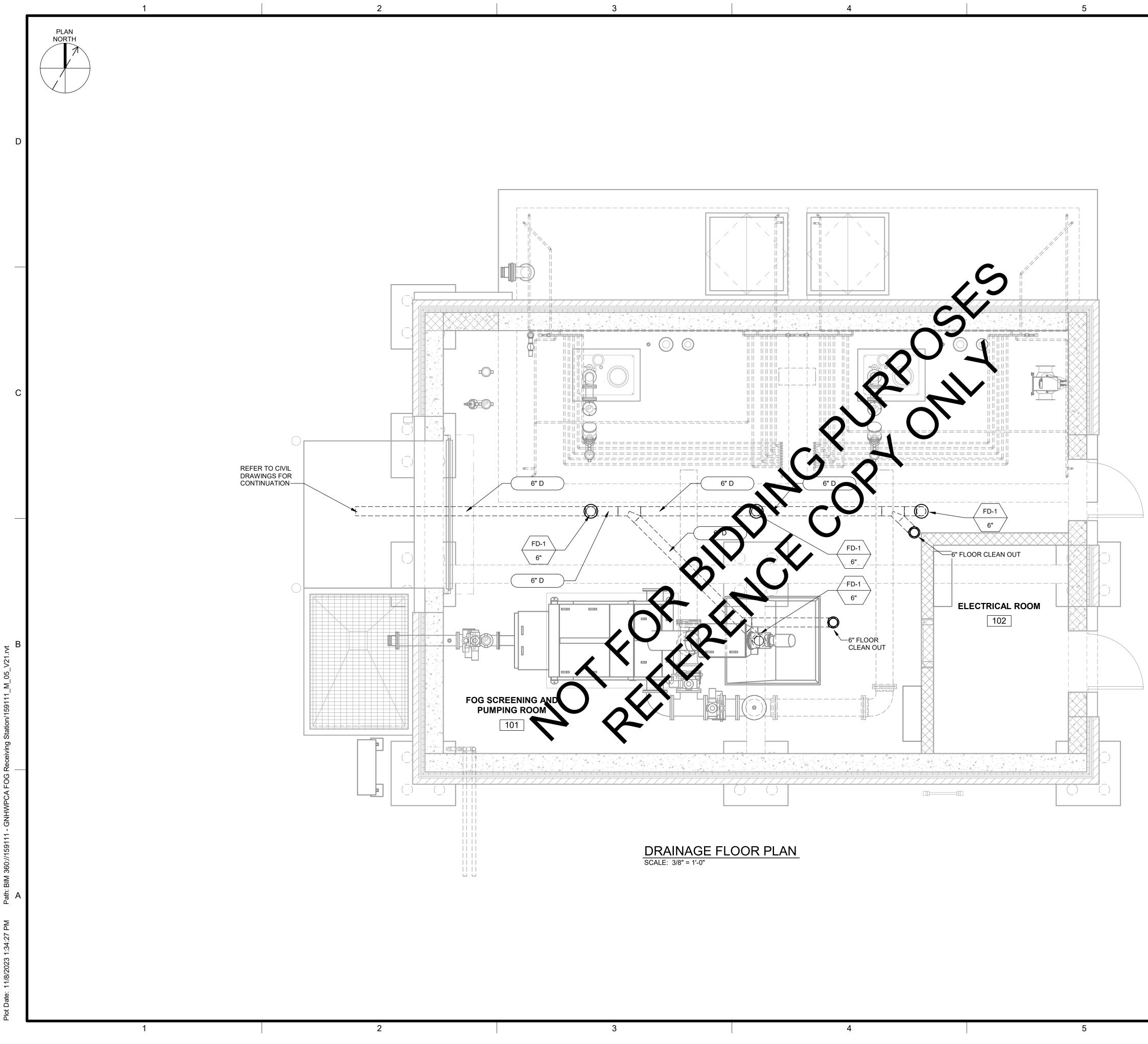
GENERAL NOTES:		
 FOG SCREENING AND PUMPING ROOM SHALL BE DECLASSIFIED THROUGH SIX (6) AIR CHANGES PER HOUR. INSULATE ALL 2W HOT AND 2W COLD PIPING. 	Brown AND . Caldwell	
 KEYNOTES: FAN COIL UNIT SHALL BE MOUNTED ABOVE THE ELECTRICAL ROOM DOOR. ROUTE FAN COIL UNIT CONDENSATE DRAIN TO THE NEAREST FLOOR DRAIN. CONDENSATE DRAIN AND REFRIGERANT LINES SHALL NOT BE ROUTED ABOVE ELECTRICAL EQUIPMENT. CONNECT 2W PIPING TO FOG SCREENING EQUIPMENT. REFER TO PROCESS MECHANICAL SHEETS FOR FOG SCREENING INFORMATION. HYDRONIC PIPING DOWN TO THE TUNNEL BELOW. REFER 	ENVIRONMENTAL ENGINEERING AND CONSULTING 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	D
 TO SHEET M-80-102 FOR CONTINUATION. 4 CONNECT 14" FRP DUCTWORK TO 16" FRP DUCTWORK SHOWN ON THE PROCESS MECHANICAL DRAWINGS. 5 CONNECT 3" HOT WATER SUPPLY AND RETURN TO FOG TANK HEAT EXCHANGERS. REFER TO PROCESS MECHANICAL SHEETS FOR HEAT EXCHANGER INFORMATION. 6 FIELD ROUTE 2W COLD WATER TO SCREENING UNIT PROCESS CONNECTIONS. 7 3/4" HOT 2W DOWN TO HOSE BIB. 8 3/4" COLD 2W DOWN TO HOSE BIB. 9 FIELD ROUTE 2W HOT WATER TO SCREENING UNIT 		
PROCESS CONNECTIONS. 10 3/4" COLD 2W DOWN TO HOSE REEL. 11 3/4" HOT 2W. SEE SHEET D-63-101 FOR CONTINUATION.		
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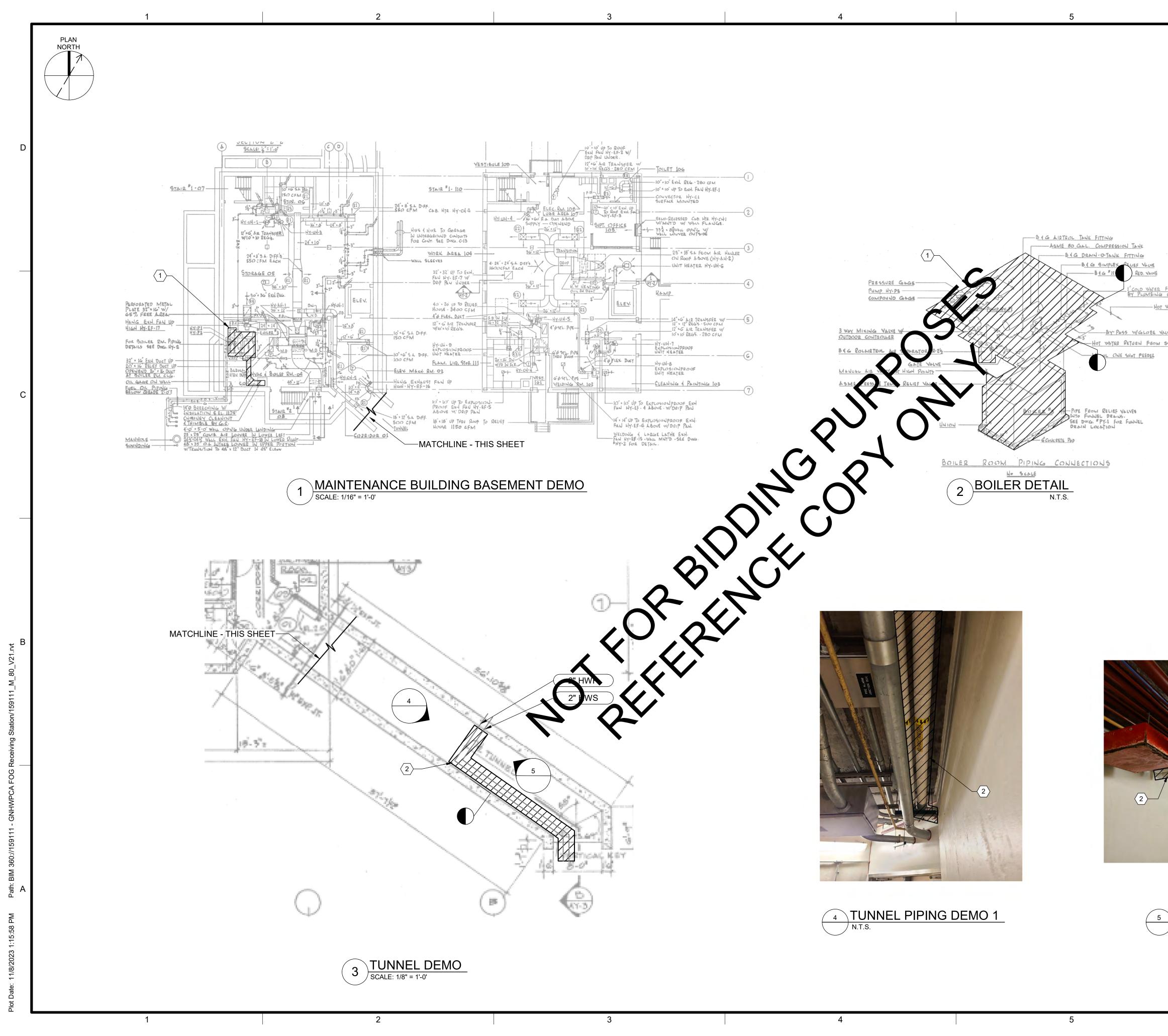


ROOF PLAN SCALE: 3/8" = 1'-0"

GENERAL NOTES:		
1. ROOF EQUIPMENT MOUNTING AND REQUIRED PENETRATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR.	Brown AND Caldwell	
1 PROVIDE VIBRATION ISOLATION FOR THE AIR HANDLING	ENVIRONMENTAL ENGINEERING AND CONSULTING 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	
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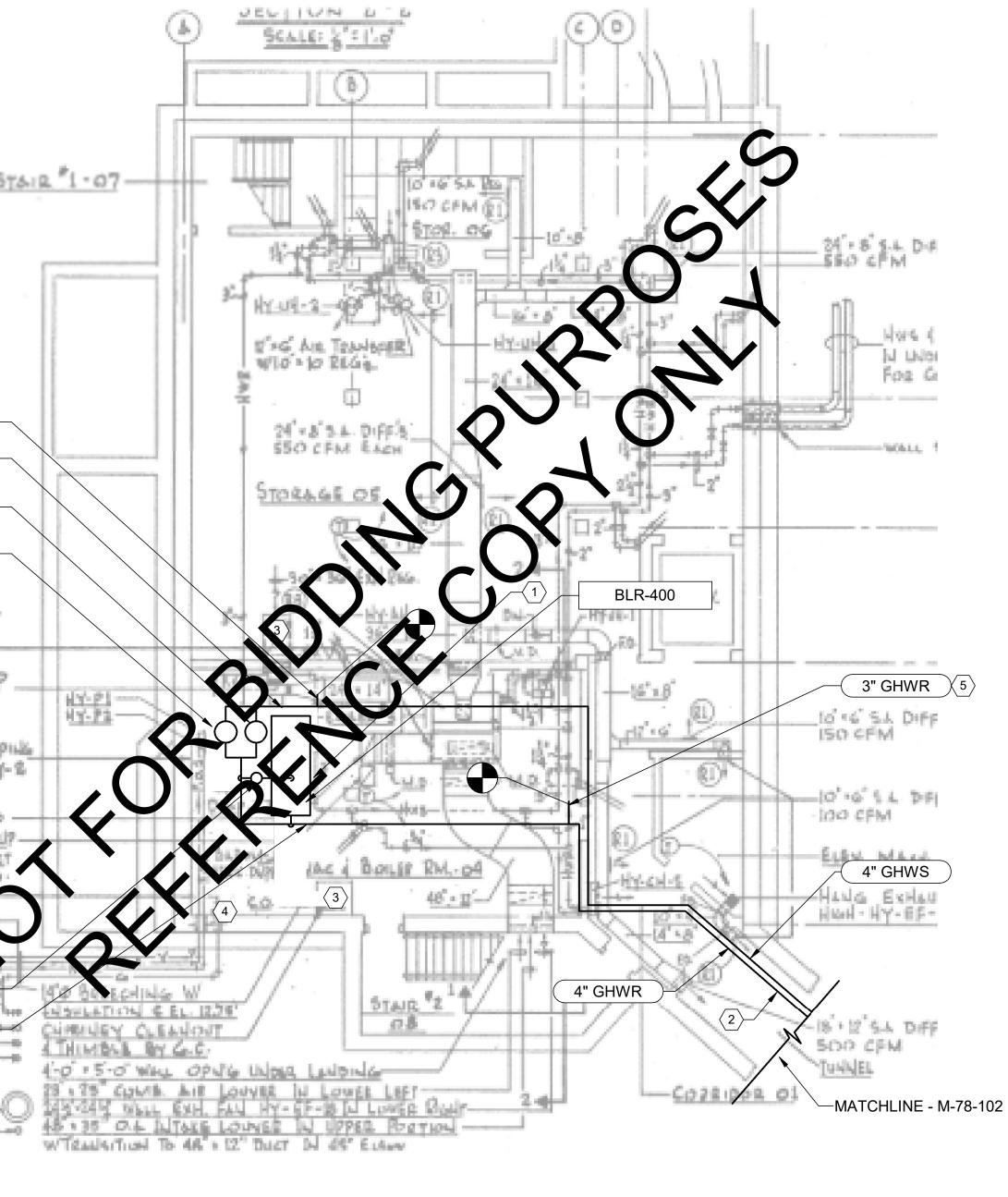


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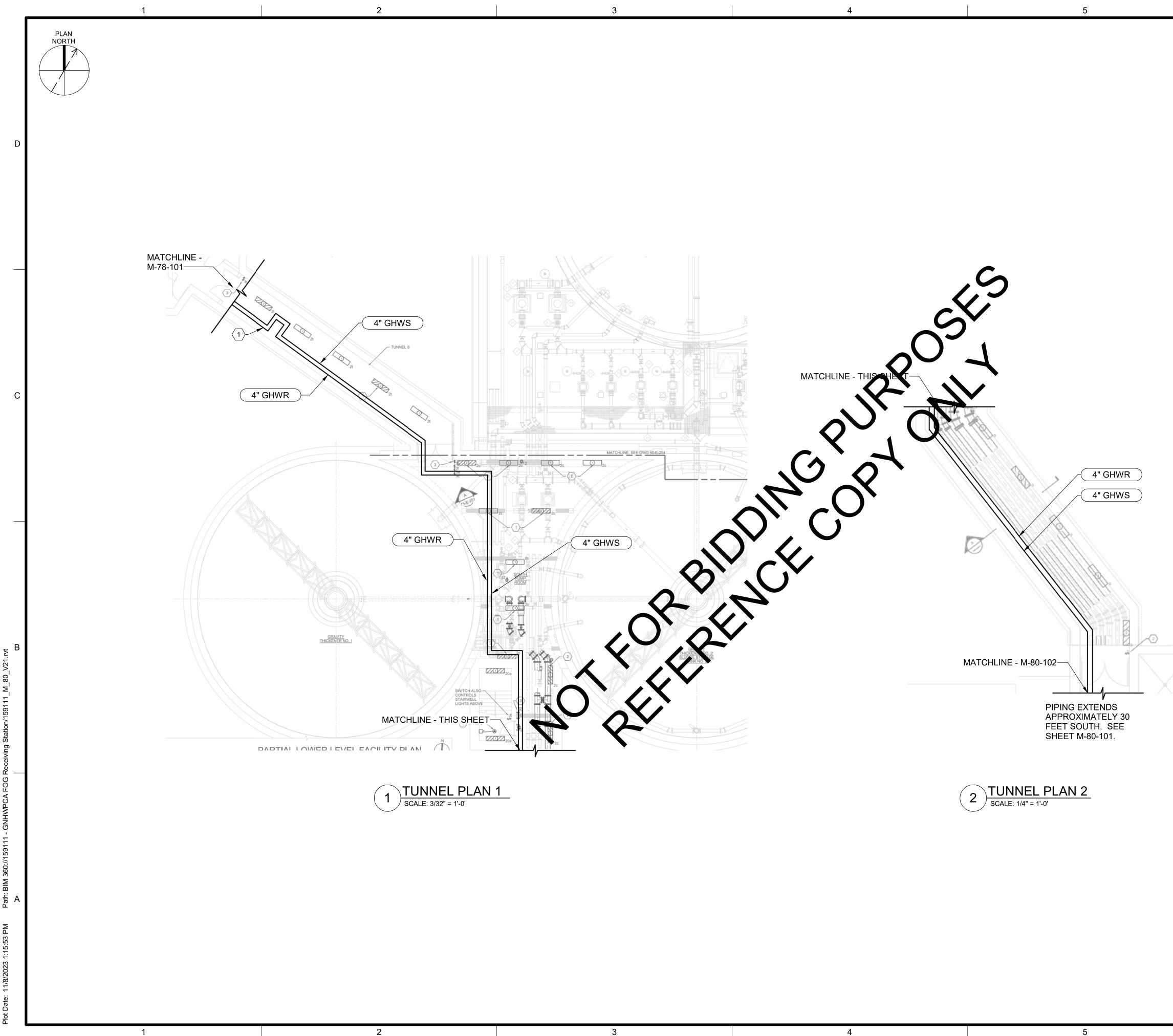
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GENERAL NOTES: 1. INFORMATION ON THIS DRAWING REPRESENTING EXISTING EQUIPMENT AND SYSTEMS WAS DRAWN FROM PAST RECORD DRAWINGS AND HAS NOT BEEN FIELD VERIFIED. NOT ALL EXISTING EXISTING EQUIPMENT AND SYSTEMS ARE SHOWN. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING EQUIPMENT, SYSTEMS, DIMENSIONS, ELSIVITIONS AND LOCATIONIS AS DECUMPED FOR	Brown AND Caldwell ENVIRONMENTAL ENGINEERING AND CONSULTING	
 ELEVATIONS, AND LOCATIONS AS REQUIRED FOR CONSTRUCTION PURPOSES. 2. EXISTING BOILER FUEL CONNECTIONS SHALL REMAIN. KEYNOTES: DEMOLISH EXISTING BOILER, PUMPS, COMPRESSION TANK, AIR SEPARATOR, AND ASSOCIATED PIPING AS INDICATED. DEMOLISH BOILER CONCRETE PAD. PROVIDE NEW EQUIPMENT AND PIPING HANGERS AND SUPPORTS. 3" HOT WATER SUPPLY AND RETURN LINES SERVING THE MAINTENANCE BUILDING SHALL BE REUSED. REFER TO SHEET M-78-101 FOR NEW INSTALLATION WORK. DEMOLISH EXISTING 2" HOT WATER SUPPLY AND RETURN PIPING LOCATED IN THE TUNNEL AS INDICATED. CAP 	200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	D
FILL - CONTR. WATER SUPPLY TO SYSTEM		
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TUNNEL PIPING DEMO 2 N.T.S.	MAINTENANCE BUILDING BASEMENT DEMOLITION PLAN DRAWING NUMBER MD-78-101	А
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	PLAN NORTH			
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				<u>Bra</u>
С				(5) 3" GHWS
				4" GHWS P-410 P-420
				PERFORATED METAL PLATE 32"× 16" W/ GG % FREE ALREA HANG EXH. FAU UP HIGH HY-EF-17
tz: Fi				FOR BOILER 2NL PIPILE DETAILS SEE DWG. HY-S 32" = 14" EXH DUCT UP- 20" < 14" PELLEF DUCT UP-
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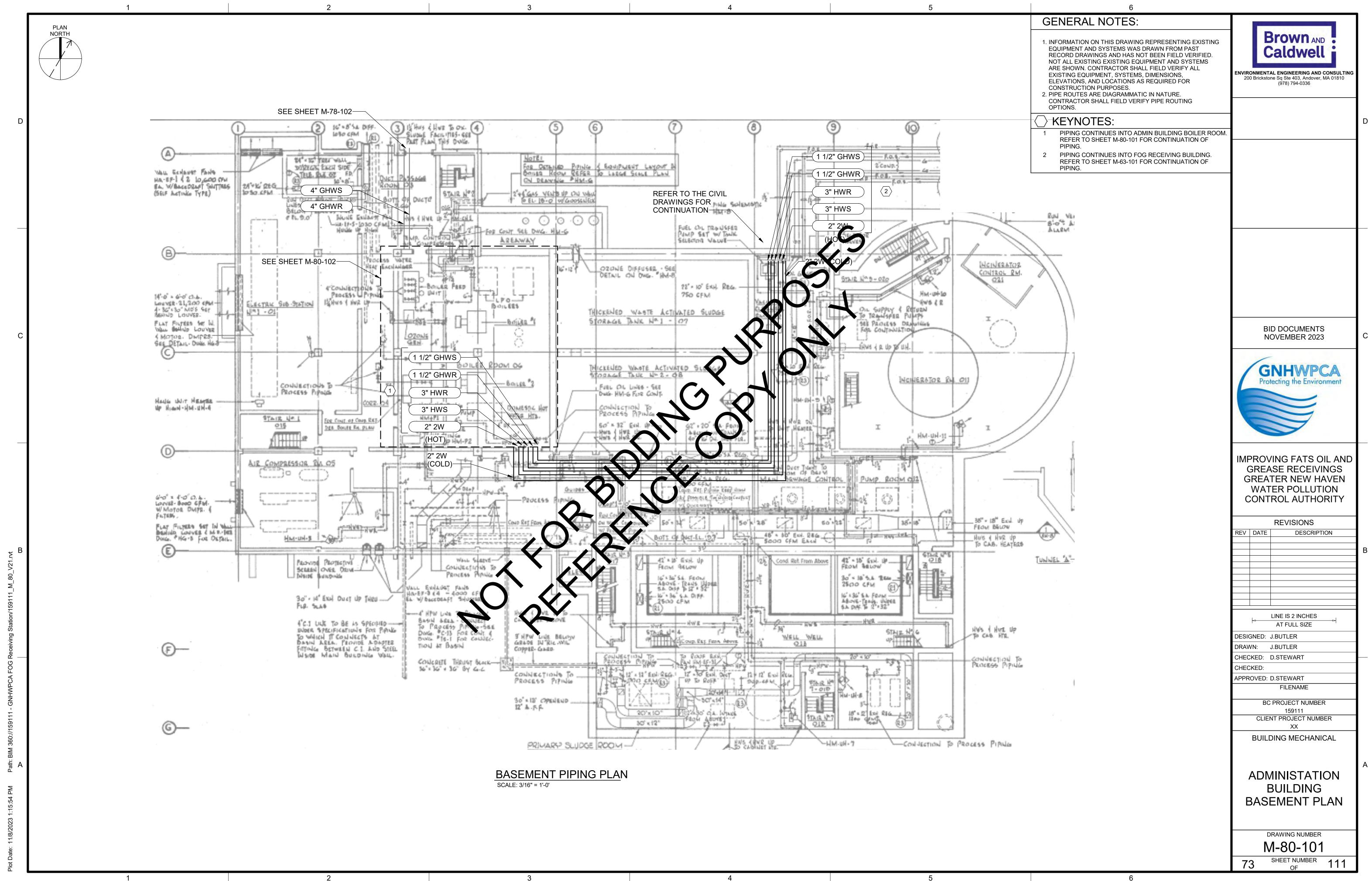


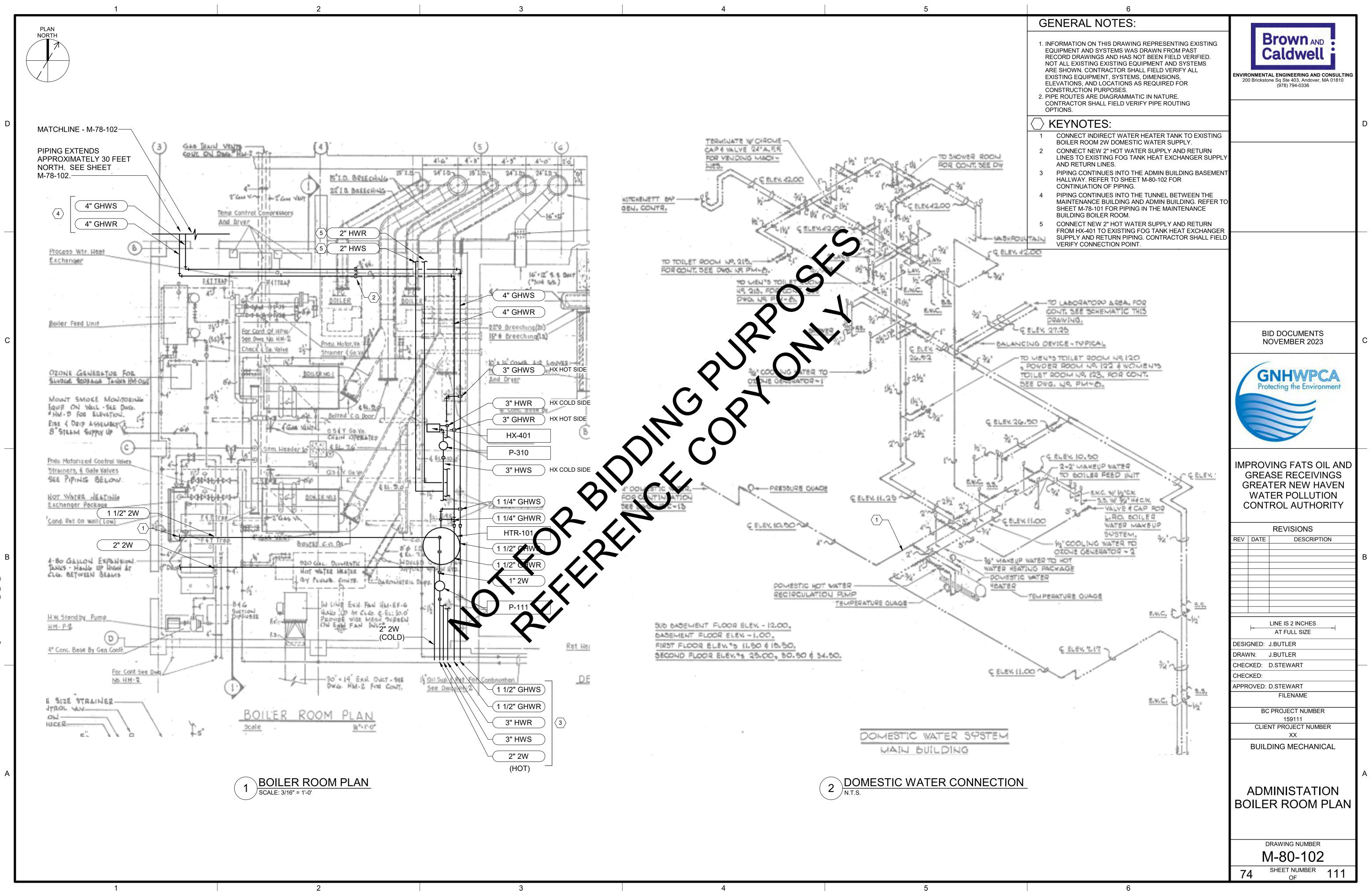


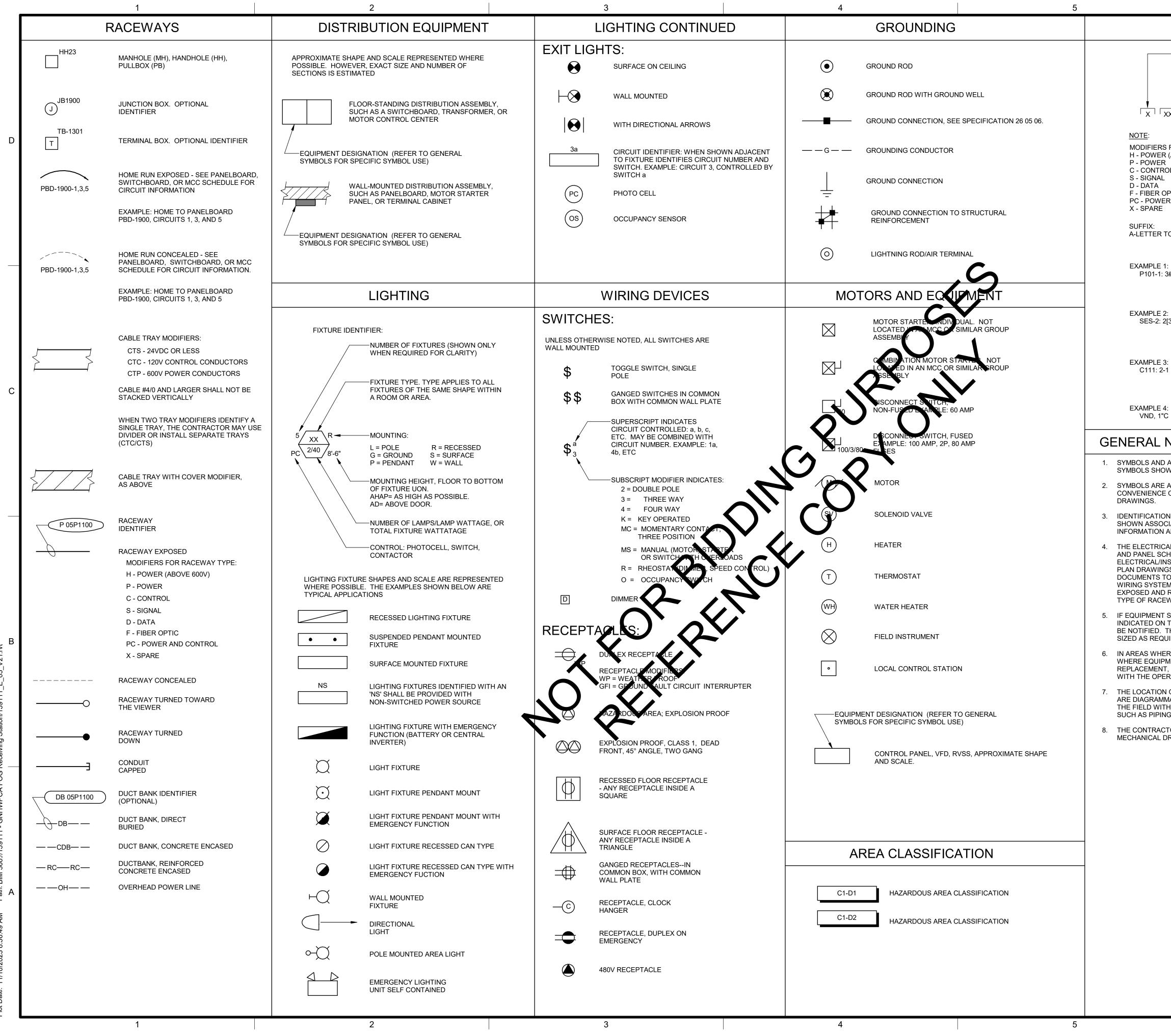
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GENERAL NOTES:		
 INFORMATION ON THIS DRAWING REPRESENTING EXISTING EQUIPMENT AND SYSTEMS WAS DRAWN FROM PAST RECORD DRAWINGS AND HAS NOT BEEN FIELD VERIFIED. NOT ALL EXISTING EXISTING EQUIPMENT AND SYSTEMS ARE SHOWN. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING EQUIPMENT, SYSTEMS, DIMENSIONS, ELEVATIONS, AND LOCATIONS AS REQUIRED FOR CONSTRUCTION PURPOSES. NEW BOILER EQUIPMENT (INCLUDING, BUT NOT LIMITED TO, BOILER, MAIN LOOP PUMPS, RECIRCULATING PUMP, EXPANSION TANK, GLYCOL FEED POT, AND AIR 	Brown AND Caldwell Environmental Engineering and consulting 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	
SEPARATOR) SHALL BE PLACED IN THE SAME LOCATION AS THE RESPECTIVE EXISTING EQUIPMENT WHERE POSSIBLE. REFER TO SHEET M-00-602 FOR HYDRONIC LOOP		D
1 MOUNT BOILER ON A NEW CONCRETE EQUIPMENT PAD, REFER TO STRUCTURAL STANDARD DETAILS FOR PROPER EQUIPMENT PAD INSTALLATION. BOILER LOCATION SHALL COMPLY WITH REQUIRED EQUIPMENT CLEARANCES. CONNECT EXISTING FUEL SUPPLY LINES.		
2 ROUTE NEW 4" TUNNEL PIPING IN SAME LOCATION AS THE EXISTING HOT WATER PIPING IN THE TUNNEL. REFER TO DEMOLITION SHEET MD-78-101 FOR EXISTING PIPE ROUTES.		
3 CONTRACTOR SHALL FIELD VERIFY EXISTING BOILER COMBUSTION AIR SUPPLY AND EXHAUST DUCTS AND SHALL CONNECT NEW BOILER INSTALLATION TO EXISTING COMBUSTION AIR DUCTS PER MANUFACTURER'S INSTRUCTIONS AND APPLICABLE		
CODES. 4 CONTRACTOR SHALL FIELD VERIFY FUEL OIL AND		
NATURAL GAS SUPPLY AND SHALL CONNECT NEW BOILER INSTALLATION TO BOTH FUEL SUPPLIES PER MANUFACTURER'S INSTRUCTIONS AND APPLICABLE CODES.		
5 CONNECT NEW 3" HOT WATER SUPPLY AND RETURN TO EXISTING MAINTENANCE BUILDING HOT WATER SUPPLY AND RETURN PIPING.		
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GENERAL NOTES: Brown AND 1. INFORMATION ON THIS DRAWING REPRESENTING EXISTING Caldwell EQUIPMENT AND SYSTEMS WAS DRAWN FROM PAST RECORD DRAWINGS AND HAS NOT BEEN FIELD VERIFIED. NOT ALL EXISTING EXISTING EQUIPMENT AND SYSTEMS ARE SHOWN. CONTRACTOR SHALL FIELD VERIFY ALL ENVIRONMENTAL ENGINEERING AND CONSULTING 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336 EXISTING EQUIPMENT, SYSTEMS, DIMENSIONS, ELEVATIONS, AND LOCATIONS AS REQUIRED FOR CONSTRUCTION PURPOSES. 2. PIPE ROUTES SHOWN ARE DIAGRAMMATIC IN NATURE. CONTRACTOR SHALL FIELD VERIFY PIPE ROUTES TO AVOID CONFLICTS. > KEYNOTES: D ROUTE NEW 4" TUNNEL PIPING IN SAME LOCATION AS 1 THE EXISTING HOT WATER PIPING IN THE TUNNEL. REFER TO DEMOLITION SHEET MD-78-101 FOR EXISTING PIPE ROUTES. BID DOCUMENTS NOVEMBER 2023 С GNHWPCA Protecting the Environment 0.000 IMPROVING FATS OIL AND GREASE RECEIVINGS GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY REVISIONS REV DATE DESCRIPTION В LINE IS 2 INCHES AT FULL SIZE DESIGNED: J.BUTLER DRAWN: J.BUTLER CHECKED: D.STEWART CHECKED: APPROVED: D.STEWART FILENAME BC PROJECT NUMBER 159111 CLIENT PROJECT NUMBER XX BUILDING MECHANICAL MAINTENANCE **BUILDING TUNNEL** PLAN DRAWING NUMBER M-78-102 SHEET NUMBER OF 72 111

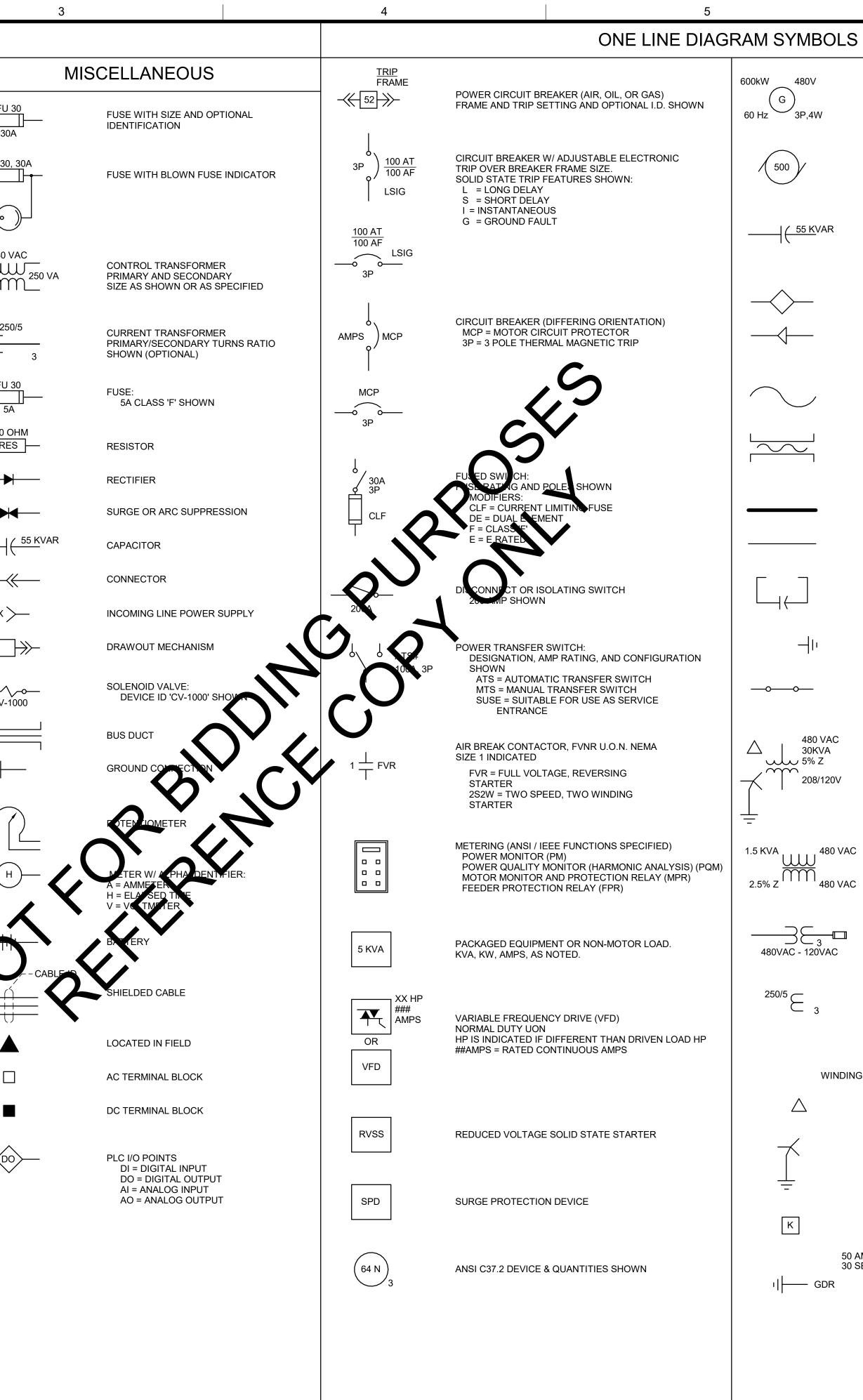






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FOR CABLE TYPE INCLUD (ABOVE 600V)	E:				D
PTIC R AND CONTROL					
O CREATE UNIQUE ID					
#2/0, #6G, 2"C	FOR CIRCUIT P101: THREE NO. 2/0 CONDUCTORS, ONE NO. 6 AWG GROUND WIRE IN A 2" CONDUIT	\vdash			
3 #1/0, #6G, 1 1/2"C]	FOR SES-2: TWO PARALLEL RUNS OF THREE NO. 1/0 CONDUCTORS, ONE NO. 6 AWG GROUND IN 1 1/2" CONDUIT				
PR #16S, 1"C	FOR CONTROL CIRCUIT: TWO SIGNAL CABLES OF #16 AWG TWISTED SHIELDED PAIR IN 1" C.				с
	VENDOR CABLE, 1"C (CONDUIT BY CONTRACTOR) TYP		N	OVEMBER 2023	
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	S ARE GENERAL IN NATURE. SOME USED ON THE CONTRACT DRAWINGS.				
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IENT IS LIFTED AND MOVE NO CONDUITS SHALL BE	D BRIDGE CRANES, HOISTS, ETC., OR ED FOR MAINTENANCE OR RUN OVERHEAD THAT WILL INTERFERE NT OR ACCESS TO EQUIPMENT.				
OF THE CONTROL STATIC IATIC ONLY. THE ACTUAL	ONS SHOWN ON THE PLAN DRAWINGS LOCATION SHALL BE COORDINATED IN				
G, PROCESS EQUIPMENT,	ANAGER AND ADJACENT EQUIPMENT ETC. WITH THE STRUCTURAL AND		4	LINE IS 2 INCHES AT FULL SIZE	
RAWINGS FOR CONDUIT \$	STUB UP AND TERMINATION LOCATIONS.	DRA	WN:	A.VIRAMONTES J.HART	
		CHE	CKED:	W.DICKERSON	
		APPF	ROVED:	W.DICKERSON FILENAME	
			BC	PROJECT NUMBER 159111	
			CLIE	NT PROJECT NUMBER XX	
				ELECTRICAL	
				GENDS AND YMBOLS 1	А
		7	5	E-00-001 SHEET NUMBER 111	

	GENERAL			GRAM SYMBOLS
	GENERAL		INPUT 5	WIICHES
	CONDUCTORS CONNECTED	NORMALLY OPEN	NORMALLY CLOSED	INITIATING VARIABLE
	CONDUCTORS NOT CONNECTED	SS	SS	
	TERMINAL POINT FOR EXTERNAL CONNECTIONS	°, ∼	0-0	SPEED
	EXISTING EQUIPMENT (SCREENED)	TS	TS C	TEMPERATURE
	INDICATING LIGHTS	ws	WS	FORCE OR
	DIRECT CONNECTION	₹ Vo	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	TORQUE
-	PUSH TO TEST. TEST VOLTAGE	zs	ZS	POSITION (LIMIT)
	X1 LENS COLOR: (L = LENS COLOR) A = AMBER			
	B= BLUE G= GREEN R= RED W= WHITE	FS	FS	FLOW
	PUSH BUTTONS	LS	LS	LEVEL
	HS-XXXX	PS	PS	
	 PUSHBUTTON, MOMENTARY O CONTACT, NORMALLY OPEN 	\sim	010	PRESSURE
	HS-XXXX PUSHBUTTON, MOMENTARY CONTACT, NORMALLY CLOSED			
	HS-XXXX PUSHBUTTON WITH		TIMING I	RELAYS
	MUSHROOM HEAD, EMERGENCY STOP	$\begin{pmatrix} TR \\ 1 \end{pmatrix}$	OPERATING CC	IL:
	SELECTOR SWITCHES	SEC7 MIN	FUNCTION: ON OR OFF DEL RANGE: SEC / I SET: SEC / MIN	MIN
	HS-XXXXX	NORMALLY	NORM CLOS	ALLY
	1 2 2 POSITION MAINTAINED	TR3 < OR	TR3 TR °-T	
	CONTACT X = CONTACTS CLOSED O = CONTACTS OPEN	LINE 50		, TÓ (ON DELAY) 50
	HS-XXXXX	NORMALLY OPEN		
		TR3 O OR	TR3 TR Υ TC	
	2 POSITION SPRING XO RETURNED TO RIGHT O = CONTACTS OPENED	LINE 50	LINE	
				NE OR RUNG NUMBER IG NUMBER 50 SHOWN)
			CONTA	CTORS
		\frown		
	OX O = CONTACTS OPENED			GOIL: ACTOR, LIGHTING, OR GENERAL USE DR FORWARD
	CONTROL RELAYS		M = MAIN (1M = FIRS 2M = SECC	OR LINE T MAIN OR WYE DND MAIN OR DELTA
	JUNINUL NELAIJ		S = SLOW	R REVERSE OR START TION CONTROL
	CR 1 CR = CONTROL RELAY FUNCTION	ID		
	U L 8 MECHANICALLY LATCHED RELAY WITH UNLATCHED		OPTIONAL	ACTS AIR BREAK, NEMA SIZE
	d LR COIL		RVS = F	RS: FULL VOLTAGE REVERSING REDUCED VOLTAGE STARTER REDUCED VOLTAGE SOLID STATE
	OUTPUT CONTACTS. LINE NUMBER OF RELAY COIL CR1 CR2 SHOWN (OPTIONAL)		STA = RVAT	REDUCED VOLTAGE SOLID STATE RTER REDUCED VOLTAGE NSFORMER STARTER
	LINE 30 LINE 30 L = LATCH U = UNLATCH TR = TIMER RELAY	м	2S2W = STAR	TWO SPEED, TWO WINDING
	OL LR = LATCH RELAY	$ $ \bigcirc	-	, •



GENERATOR WITH WINDING CONFIGURATION VOLTAGE, POWER, FREQUENCY SHOWN. POWER FACTOR OPTIONAL

MOTOR, HORSE POWER SHOWN

POWER FACTOR CORRECTIONS CAPACITOR KVAR RATING SHOWN

POTHEAD

STRESS CONE

PORTABLE CABLE

CABLE BUS

BUS CONDUCTOR

CABLE CONDUCTOR

SURGE ARRESTOR

LIGHTNING ARRESTOR

TEST DEVICE

POWER TRANSFORMER, VOLTAGES, SIZE,

AND IMPEDANCE SHOWN

ISOLATION TRANSFORMER, VOLTAGES, SIZE, AND IMPEDANCE SHOWN

POTENTIAL TRANSFORMER, PT QUANTITY

SHOWN (3) AND VOLTAGES SHOWN

CURRENT TRANSFORMER, CT QUANTITY AND 250:5 TURNS RATIO SHOWN

WINDING CONFIGURATIONS:

KIRK KEY INTERLOCK

50 AMP/ 30 SEC

NEUTRAL GROUNDING RESISTOR. AMPS/TIME RATING SHOWN

Brown AND

Caldwell

ENVIRONMENTAL ENGINEERING AND CONSULTING

200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336

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В

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BID DOCUMENTS NOVEMBER 2023



IMPROVING FATS OIL AND GREASE RECEIVINGS **GREATER NEW HAVEN** WATER POLLUTION CONTROL AUTHORITY

REVISIONS REV DATE DESCRIPTION LINE IS 2 INCHES AT FULL SIZE

DESIGNED: A.VIRAMONTES DRAWN: J.HART CHECKED: W.DICKERSON CHECKED: APPROVED: W.DICKERSON FILENAME

BC PROJECT NUMBER 159111 CLIENT PROJECT NUMBER XX

ELECTRICAL

LEGENDS AND SYMBOLS 2

DRAWING NUMBER E-00-002 SHEET NUMBER 76 111 OF

	ABBREVIATIONS			
<u>A</u>		<u>l</u>		
a, amp ac aff ahap aic	AMP(S), AMPERE(S) ALTERNATING CURRENT ABOVE FINISHED FLOOR AS HIGH AS POSSIBLE AMPS INTERRUPTING CAPACITY, SYMM.	ICOM ID IMC INCAND INTLK	INTERCOM INSIDE DIAMETER INTERMEDIATE METAL CONDUIT INCANDESCENT INTERLOCK	
AL ARCH ASYM ATS	ALUMINUM ARCHITECT(URAL) ASYMMETRICAL AUTOMATIC TRANSFER SWITCH	INST I/O IPB	INSTANTANEOUS INPUT-OUTPUT INSTRUMENT PULLBOX	
AUTO AUX AWG	AUTOMATIC AUXILIARY AMERICAN WIRE GAUGE	<u>J</u> JB	JUNCTION BOX	
<u>B</u>	AMERICAN WIRE GAUGE	<u>к</u>	JUNCTION BOX	
– BC BLDG BOT	BARE COPPER BUILDING BOTTOM	– KCMIL KV KVA	1000 CIRCULAR MIL KILOVOLT KILOVOLT-AMPERE	
<u>с</u> с	CONDUCTOR, CONDUIT	KVAR KW KWH	KILOVOLT-AMPERE REACTIVE KILOWATT KILOWATT-HOUR	
C CB CKT	CIRCUIT BREAKER CIRCUIT	L		
CLG CM	CEILING CENTIMETERS	L LC	LONG LIGHTING CONTACTOR	
CND CNTL C.O.	CONDUIT CONTROL CONDUIT ONLY, SPARE	LCP LCS LED	LOCAL CONTROL PANEL LOCAL CONTROL STATION LIGHT EMITTING DIODE	
CONC CPT	CONCRETE CONTROL POWER TRANSFORMER	LHH LMH	LOW VOLTAGE HANDHOLE LOW VOLTAGE MANHOLE	
CT CU	CURRENT TRANSFORMER COPPER	LP LT LTG LV	LIGHTING PANEL LONG TIME LIGHTING LOW VOLTAGE	
<u>D</u> DB	DUCT BANK, DIRECT	<u>M</u>	LOW VOLTAGE	
DC	BURIAL DIRECT CURRENT, DATA CABLE	М	METER	
DCU DET	DISTRIBUTED CONTROL UNIT DETAIL	MA MBS	MILLIAMPERE MANUAL BYPASS SWITCH	
DIAG DISC DWG	DIAGRAM DISCONNECT DRAWING	MCC MCP MPC MECH	MOTOR CONTROL CENTER MOTOR CIRCUIT PROTECTOR MINI POWER CENTER MECHANICAL	
E		MFR MH	MANUFACTURE(R) MANHOLE, METAL HALIDE	
EA EC ECP	EACH EMPTY CONDUIT EQUIPMENT CONTROL PANEL	MIC MIS MISC	MICROPHONE MANAGEMENT INFORMATION STATION MISCELLANEOUS	
EDB EG	ELECTRICAL DUCTBANK ENGINE GENERATOR SET	MMGC MM MMH	MISCELLANEOUS MILLIMETER MEDIUM VOLTAGE MANHOLE	
EL ELEC	ELEVATION ELECTRIC(AL)	MOV MTS	MOTOR OPERATED VALVES MANUAL TRANSFER SWITCH	
EMH EMER	ELECTRICAL MANHOLE EMERGENCY	MV MVMC	MILLIVOLT, MEDIUM VOLTAGE MEDIUM VOLTAGE MOTOR CONTROL	
ENCL EPB		<u>N</u>		
ETM EP EQUIP	ELAPSED TIME METER EXPLOSION PROOF EQUIPMENT	N/A N.C.	NOT APPLICABLE NORMALLY CLOSED	
EX	EXISTING	NEUT, N NF	NONMALL CLOSED NEUTRAL NON-FUSED	
<u>F</u>		NIC N.O.	NOT IN CONTRACT NORMALLY OPEN	
FDR FL	FEEDER FLUORESCENT	NO. NOM	NUMBER NOMINAL	
FLA FLEX	FULL LOAD AMPS FLEXIBLE CONDUIT	NP NTS	NAMEPLATE NOT TO SCALE	
F.O. FO FUT	FAIL OPEN FIBER OPTIC FUTURE	<u>0</u>		
<u>G</u>		OC OCC	ON CENTER OPERATION CONTROL CENTER	
GDR	GROUNDING RESISTOR	OD OH	OUTSIDE DIAMETER OVERHEAD	
GEC	GROUND ELECTRODE CONDUCTOR	OIS OT	OPERATOR INTERFACE STATION OIL TIGHT	
GF GFI GND, G GRS	GROUND FAULT GROUND FAULT INTERRUPTER GROUND GALVANIZED RIGID STEEL	ows <u>P</u>	OPERATOR WORKSTATION	
<u>H</u>		P PBD	POLE, PHASE PANEL BOARD	
н	HIGH	PB PCP	PUSHBUTTON, PULLBOX PROCESS CONTROL PANEL	
HGT HH	HEIGHT HANDHOLE HICH INTENSITY DISCHARCE	PF PH	POWER FACTOR PHASE PROCRAMMARI ELOCIC CONTROLLER	
HID HMI HD	HIGH INTENSITY DISCHARGE HUMAN MACHINE INTERFACE	PLC PMM PNI	PROGRAMMABLE LOGIC CONTROLLER POWER METERING MODULE	
HP HPS HTR	HORSEPOWER HIGH PRESSURE SODIUM HEATER	PNL PP PR	PANEL POWER PANEL PAIR	
HTR HV	HEATER HIGH VOLTAGE HEATING, VENTILATION, AND AIR CONDITIONING	PRI PT	PAIR PRIMARY POTENTIAL TRANSFORMER	
HVAC		E I		



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	3 4	5
		GENERAL
Q QSB <u>R</u> RCPT REF REQD RE STL RMS RTD RTU RVSS <u>S</u> SA SCR SD SEC SEL SHH SMH SPEC SPD SPKR ST STP SUB SW SWBD SVKR ST STP SUB SW SWBD SYMM SYS <u>I</u> TB TEL TEN FR TI TEN TEN TEN TEN TEN TEN TEN TEN TEN TEN	3 4 QUARTZ STANDBY RECEPTACLE REFERENCE RESURED REINFORCING STEEL ROOT MEAN SOUARE RESURTANCE TEMPERATURE DETECTOR RESUSTANCE TEMPERATURE DETECTOR REMOTE TERMINAL UNIT REDUCED VOLTAGE SOLID STATE STARTER SURGE ARRESTOR SUCON CONTROLLED RECTIFIER SMOKE DETECTOR SECONDARY SECONDARY SECONDARY SECONDARY SURGE PROTECTION DEVICE SPEAKER SHORT TIME SHIELDED TWISTED PAIR SURGE FORTECTION DEVICE SPEAKER SHORT TIME SHIELDED TWISTED PAIR SWITCH GEAR SYSTEM TERMINAL BOX TELEPHONE TEMPERATURE TRANSFORMER TIMO TELEVISION TEMPERATURE TRANSFORMER TAM	
TVSS TYP <u>U</u> U/G UON UPS <u>V</u> V VA VAR VC VCP VND <u>W</u> W W/ W/O WW WG WP X XMR XP Z _	TRANSIENT VOLTAGE SURGE SUPPRESSOR TYPICAL UNDERGROUND UNLESS OTHERWISE NOTED UNINTERRUPTIBLE POWER SUPPLY VOLT VOLT VOLTAMPERE VOLTAMPERE REACTIVE VACUUM CONTACTOR VENDOR CONTROL RINE VENDOR CONTROL RINE VENDOR WATT IMPERIDE WITH WITH WITH GOUND EATHERPROOF TRANSIDRINK	
Z	REDANCE	

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RAL NOTES

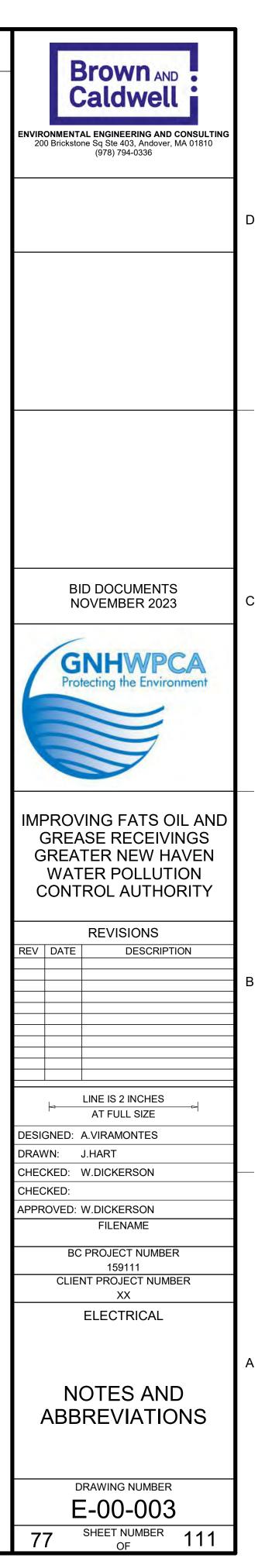
GRAMS AND RISER DIAGRAMS AND PANEL SCHEDULES IN HE ELECTRICAL/INSTRUMENTATION SOURCES AND LOADS/DEVICES ORK. THE CONTRACTOR SHALL USE THESE DOCUMENTS TO AY AND WIRING SYSTEM FOR EACH CIRCUIT. ALL INDOOR RACEWAY RACTOR, UNLESS OTHERWISE NOTED. THE TYPE OF RACEWAY AND

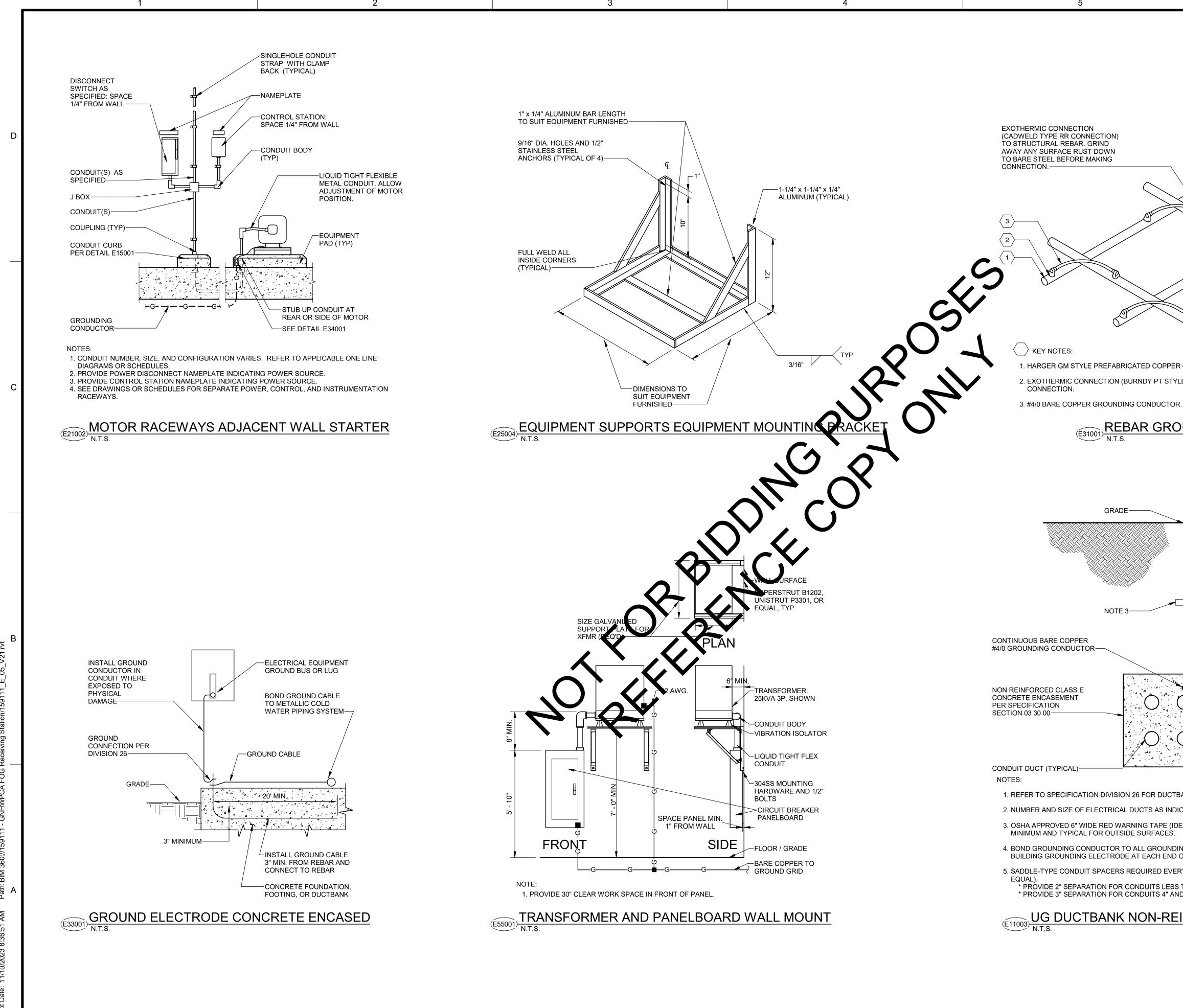
LARGER LOAD THAN INDICATED ON THE SINGLE LINE DIAGRAM, THE E CABLE, CONDUIT AND ELECTRICAL EQUIPMENT SHALL BE SIZED AS

RANES, HOISTS, ETS., OR WHERE EQUIPMENT IS LIFTED AND MOVED S SHALL BE RUN OVERHEAD THAT WILL INTERFERE WITH THE JIPMENT.

I ON THE PLAN DRAWINGS ARE DIAGRAMMATIC ONLY. THE ACTUAL TH THE CONSTRUCTION MANAGER AND ADJACENT EQUIPMENT SUCH

TRUCTURAL AND MECHANICAL DRAWINGS FOR CONDUIT STUB UP





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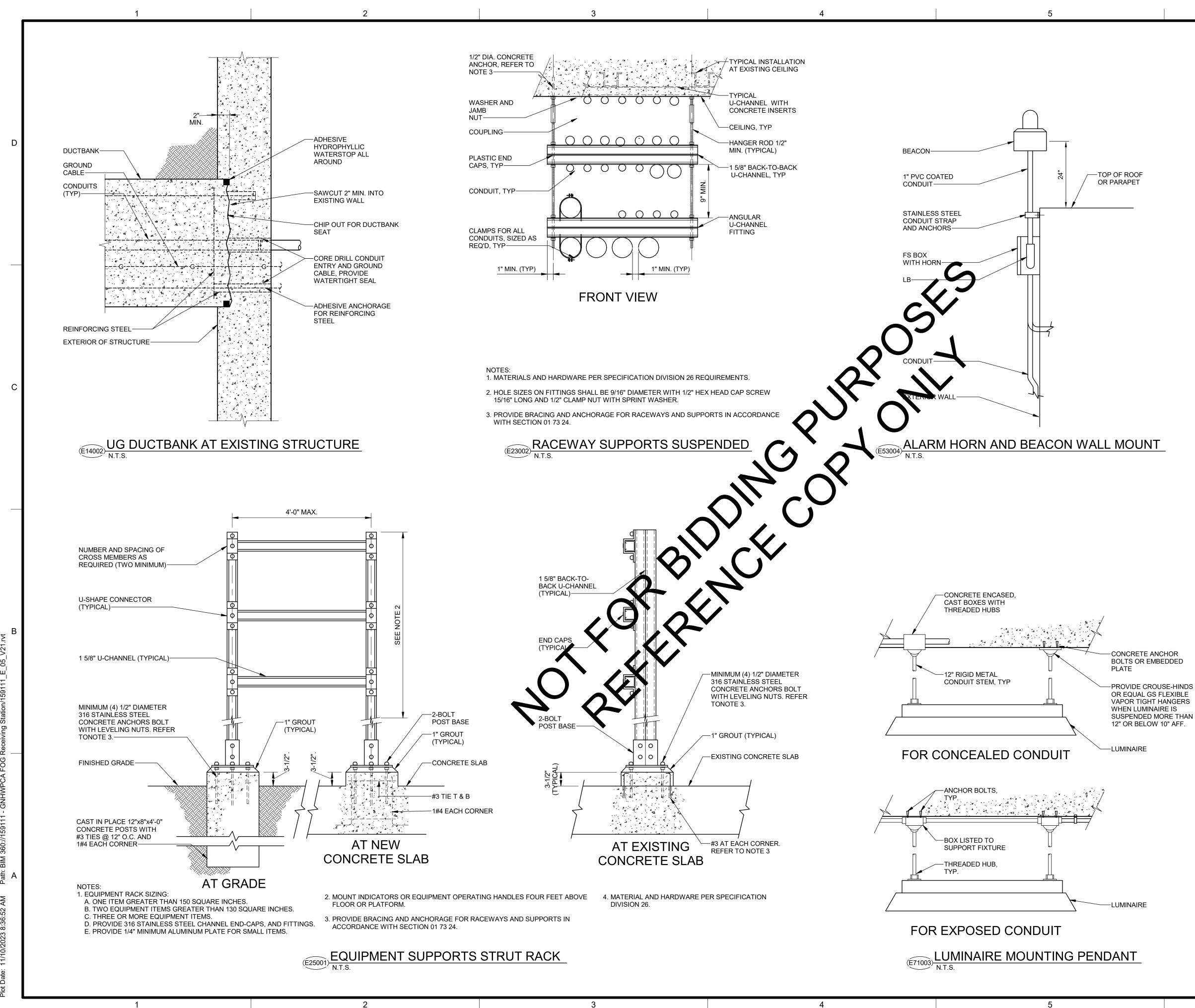
	ENVIRONMENTAL ENGINEERING AND CONSULTING 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336
R GROUND MESH OR REINFORCING BAR MAT.	
(LE ULTRAWELD OR CADWELD TYPE RR)	BID DOCUMENTS NOVEMBER 2023
DUNDING BOND	GRHWPCA Protecting the Environment
12" DEPTH ATED VGS	IMPROVING FATS OIL AND GREASE RECEIVINGS GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY
COVER DEPTH 24"	REVISIONS REV DATE DESCRIPTION
	LINE IS 2 INCHES AT FULL SIZE DESIGNED: A.VIRAMONTES DRAWN: A.VIRAMONTES CHECKED: W.DICKERSON
BANK CONSTRUCTION REQUIREMENTS.	CHECKED: APPROVED: W.DICKERSON FILENAME BC PROJECT NUMBER
DEAL DU-601 OR EQUAL). DIMENSIONS ARE	159111 CLIENT PROJECT NUMBER XX
O OF THE DUCTBANK. ERY 8' (CARLON SNAP-LOC, SNAP-N-STAC, OR S THAN 4". ND LARGER.	ELECTRICAL
<u>EINFORCED</u>	STANDARD DETAILS 1
	DRAWING NUMBER E-00-004 SHEET NUMBER 111
6	78 SHEET NUMBER 111

Brown AND

Caldwel

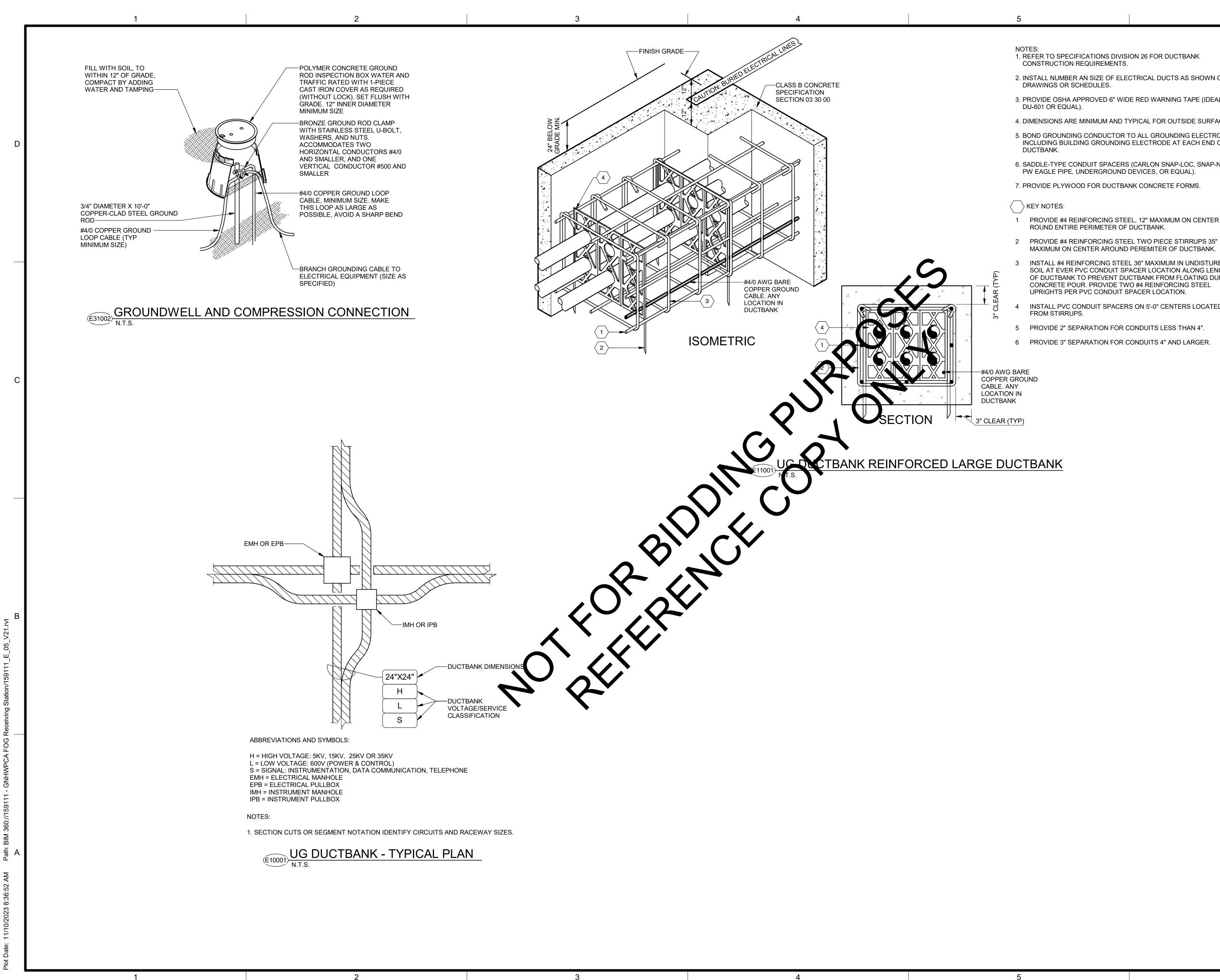
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Brown AND Caldwell ENVIRONMENTAL ENGINEERING AND CONSULTIN 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	IG
	C
BID DOCUMENTS NOVEMBER 2023	C
GNHWPCA Protecting the Environment	
IMPROVING FATS OIL AND GREASE RECEIVINGS GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY	D
REVISIONS REV DATE DESCRIPTION	_
	E
LINE IS 2 INCHES	_
DRAWN: J.HART CHECKED: W.DICKERSON	_
CHECKED: APPROVED: W.DICKERSON	
FILENAME BC PROJECT NUMBER	_
159111 CLIENT PROJECT NUMBER XX	
ELECTRICAL	
STANDARD DETAILS 2	₽
DRAWING NUMBER	
79 SHEET NUMBER 111	



2. INSTALL NUMBER AN SIZE OF ELECTRICAL DUCTS AS SHOWN ON

3. PROVIDE OSHA APPROVED 6" WIDE RED WARNING TAPE (IDEAL

4. DIMENSIONS ARE MINIMUM AND TYPICAL FOR OUTSIDE SURFACES.

5. BOND GROUNDING CONDUCTOR TO ALL GROUNDING ELECTRODES, INCLUDING BUILDING GROUNDING ELECTRODE AT EACH END OF

6. SADDLE-TYPE CONDUIT SPACERS (CARLON SNAP-LOC, SNAP-N-STAC,

PROVIDE #4 REINFORCING STEEL, 12" MAXIMUM ON CENTER

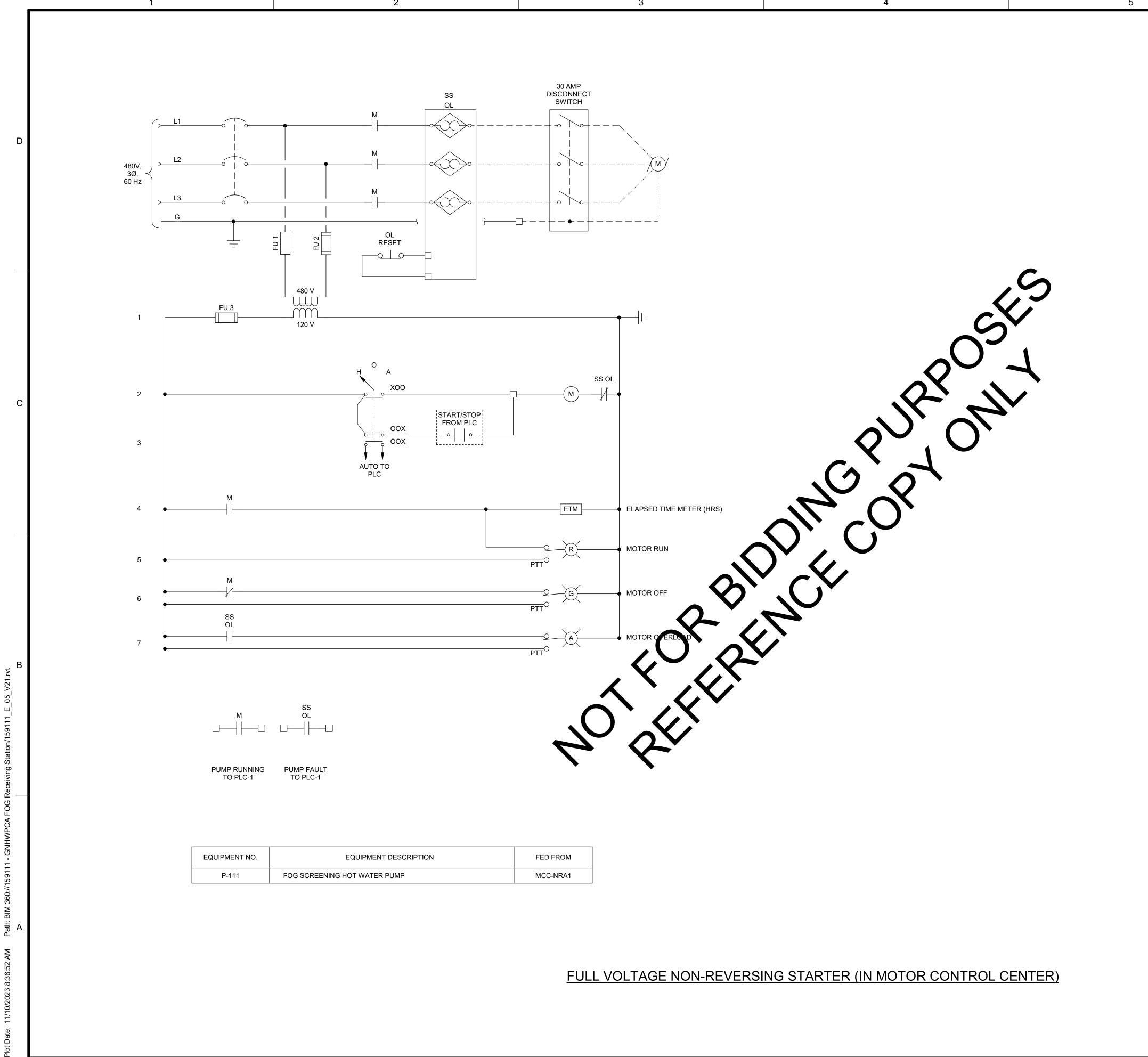
MAXIMUM ON CENTER AROUND PEREMITER OF DUCTBANK.

INSTALL #4 REINFORCING STEEL 36" MAXIMUM IN UNDISTURBED SOIL AT EVER PVC CONDUIT SPACER LOCATION ALONG LENGTH OF DUCTBANK TO PREVENT DUCTBANK FROM FLOATING DURING CONCRETE POUR. PROVIDE TWO #4 REINFORCING STEEL

INSTALL PVC CONDUIT SPACERS ON 5'-0" CENTERS LOCATED 12"

6 PROVIDE 3" SEPARATION FOR CONDUITS 4" AND LARGER.

BID DOCUMENTS NOVEMBER 2023 C INPROVING FATS OIL AND GREASE RECEIVINGS GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY A REVISIONS REVISIONS REVISIONS Intermediate Improved to the security of the	Brownend Calcoull And years and yea	D
GREASE RECEIVINGS GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY REVISIONS REV DATE DESCRIPTION LINE IS 2 INCHES I I LINE IS 2 INCHES I DESIGNED: A.VIRAMONTES DRAWN: J.HART CHECKED: W.DICKERSON CHECKED: M.DICKERSON FILENAME BC PROJECT NUMBER BC PROJECT NUMBER XX ELECTRICAL A STANDARD DETAILS A DRAWING NUMBER 3	NOVEMBER 2023	С
DRAWN: J.HART CHECKED: W.DICKERSON CHECKED: APPROVED: W.DICKERSON FILENAME BC PROJECT NUMBER 159111 CLIENT PROJECT NUMBER XX ELECTRICAL A STANDARD DETAILS 3	GREASE RECEIVINGS GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY REVISIONS REV DATE DESCRIPTION REV DATE DESCRIPTION H H H LINE IS 2 INCHES H AT FULL SIZE H	В
	DRAWN: J.HART CHECKED: W.DICKERSON CHECKED: APPROVED: W.DICKERSON FILENAME BC PROJECT NUMBER 159111 CLIENT PROJECT NUMBER XX ELECTRICAL STANDARD DETAILS 3	A



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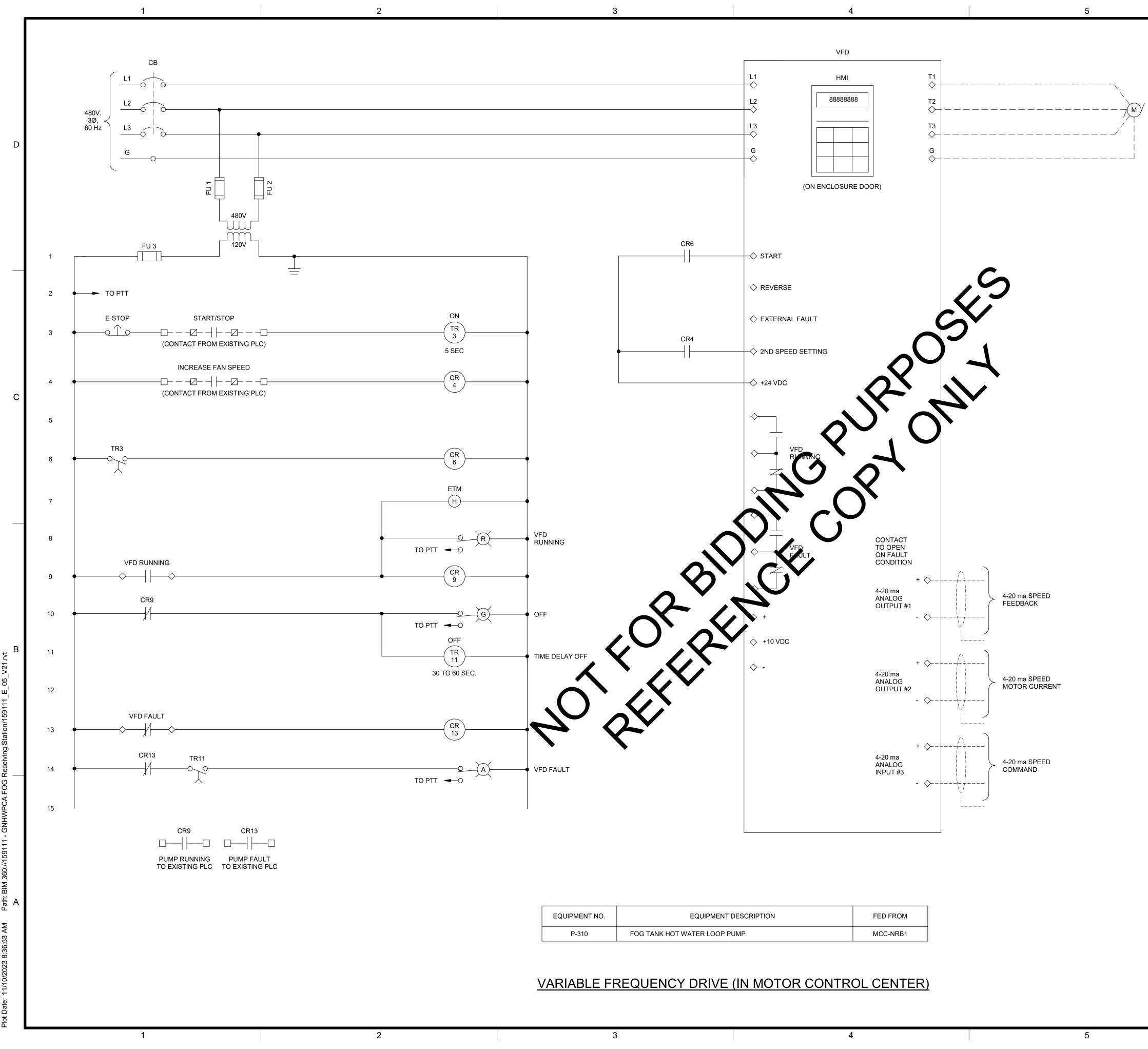
GENERAL NOTES: Brown AND SCHEMATIC DIAGRAM INDICATES PRINCIPAL OPERATION ONLY. MANUFACTURER SHALL ADJUST SCHEMATIC TO Caldwell MEET FUNCTIONAL AND OPERATIONAL NEEDS AS OUTLINED IN THE CONTRACT DOCUMENTS. ENVIRONMENTAL ENGINEERING AND CONSULTING 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336 D LEGEND TERMINAL LOCATED IN MCC STARTER TERMINAL LOCATED ON REMOTE PANEL INDICATED \square ----- FIELD WIRING BID DOCUMENTS NOVEMBER 2023 С **GNHWPC** Protecting the Environment IMPROVING FATS OIL AND GREASE RECEIVINGS GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY REVISIONS REV DATE DESCRIPTION В LINE IS 2 INCHES AT FULL SIZE DESIGNED: A.VIRAMONTES DRAWN: J.HART CHECKED: W.DICKERSON CHECKED: APPROVED: W.DICKERSON FILENAME BC PROJECT NUMBER 159111 CLIENT PROJECT NUMBER XX ELECTRICAL ELEMENTARY WIRING DIAGRAMS NO. 1

111

DRAWING NUMBER

E-00-301

SHEET NUMBER OF



JIPMENT NO.	EQUIPMENT DESCRIPTION	FED FROM
P-310	FOG TANK HOT WATER LOOP PUMP	MCC-NRB1

GENERAL NOTES:

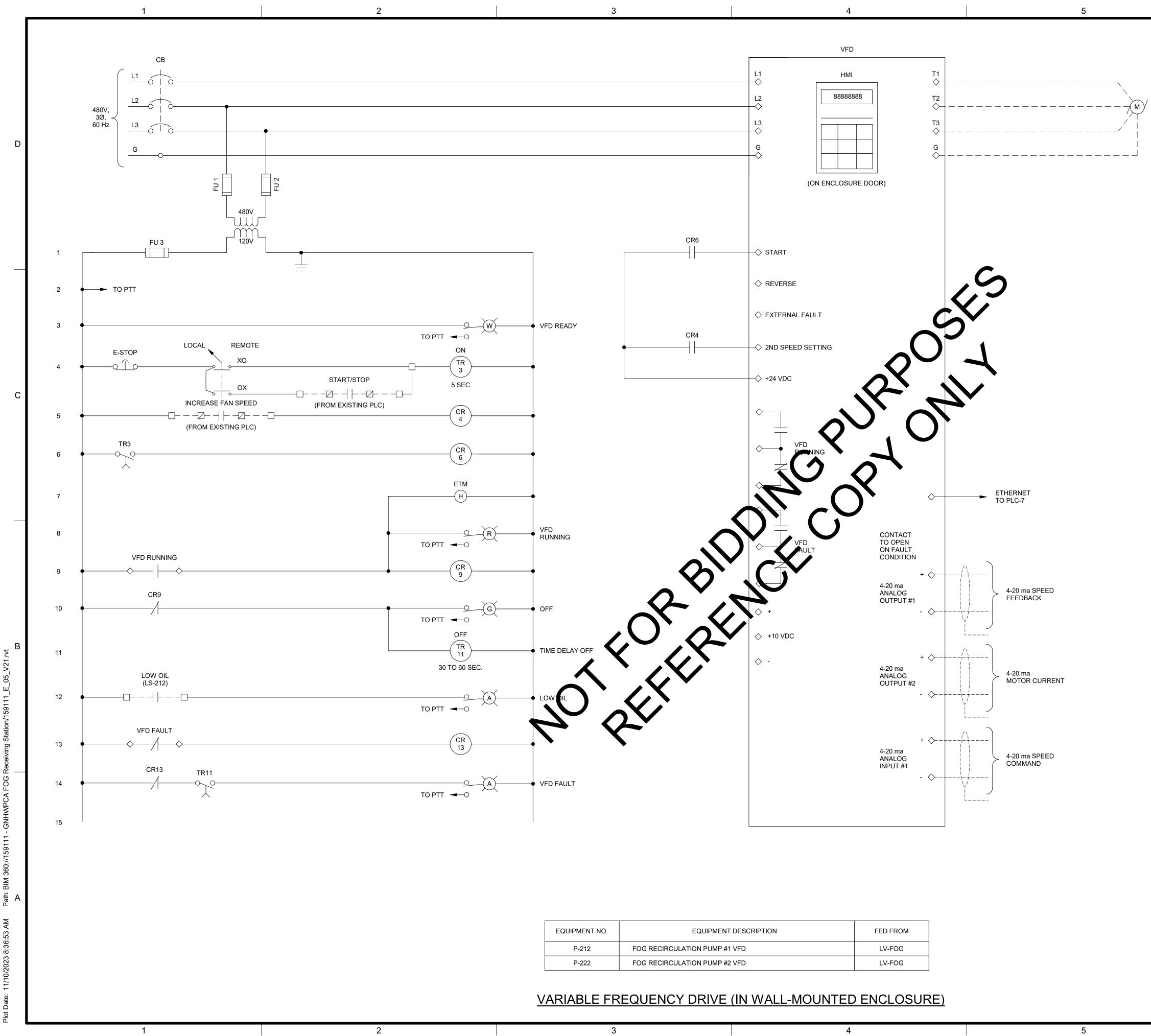
SCHEMATIC DIAGRAM INDICATES PRINCIPAL OPERATION ONLY. MANUFACTURER SHALL ADJUST SCHEMATIC TO MEET FUNCTIONAL AND OPERATIONAL NEEDS AS OUTLINED IN THE CONTRACT DOCUMENTS.

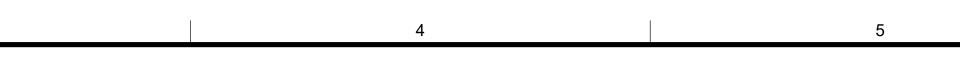


IENTAL ENGINEERING AND COL

LEGEND TERMINAL LOCATED IN MCC STARTER \square TERMINAL LOCATED ON REMOTE PANEL INDICATED ----- FIELD WIRING

200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	
	D
BID DOCUMENTS NOVEMBER 2023	с
GNHWPCA	
Protecting the Environment	
IMPROVING FATS OIL AND GREASE RECEIVINGS	
GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY	
REVISIONS REV DATE DESCRIPTION	
	В
AT FULL SIZE DESIGNED: A.VIRAMONTES	
DRAWN: J.HART CHECKED: W.DICKERSON	
CHECKED: APPROVED: W.DICKERSON	
FILENAME	
BC PROJECT NUMBER 159111 CLIENT PROJECT NUMBER	
ELEMENTARY	A
WIRING DIAGRAMS NO. 2	
DRAWING NUMBER	
82 SHEET NUMBER 111	





QUIPMENT NO.	EQUIPMENT DESCRIPTION	FED FROM
P-212	FOG RECIRCULATION PUMP #1 VFD	LV-FOG
P-222	FOG RECIRCULATION PUMP #2 VFD	LV-FOG

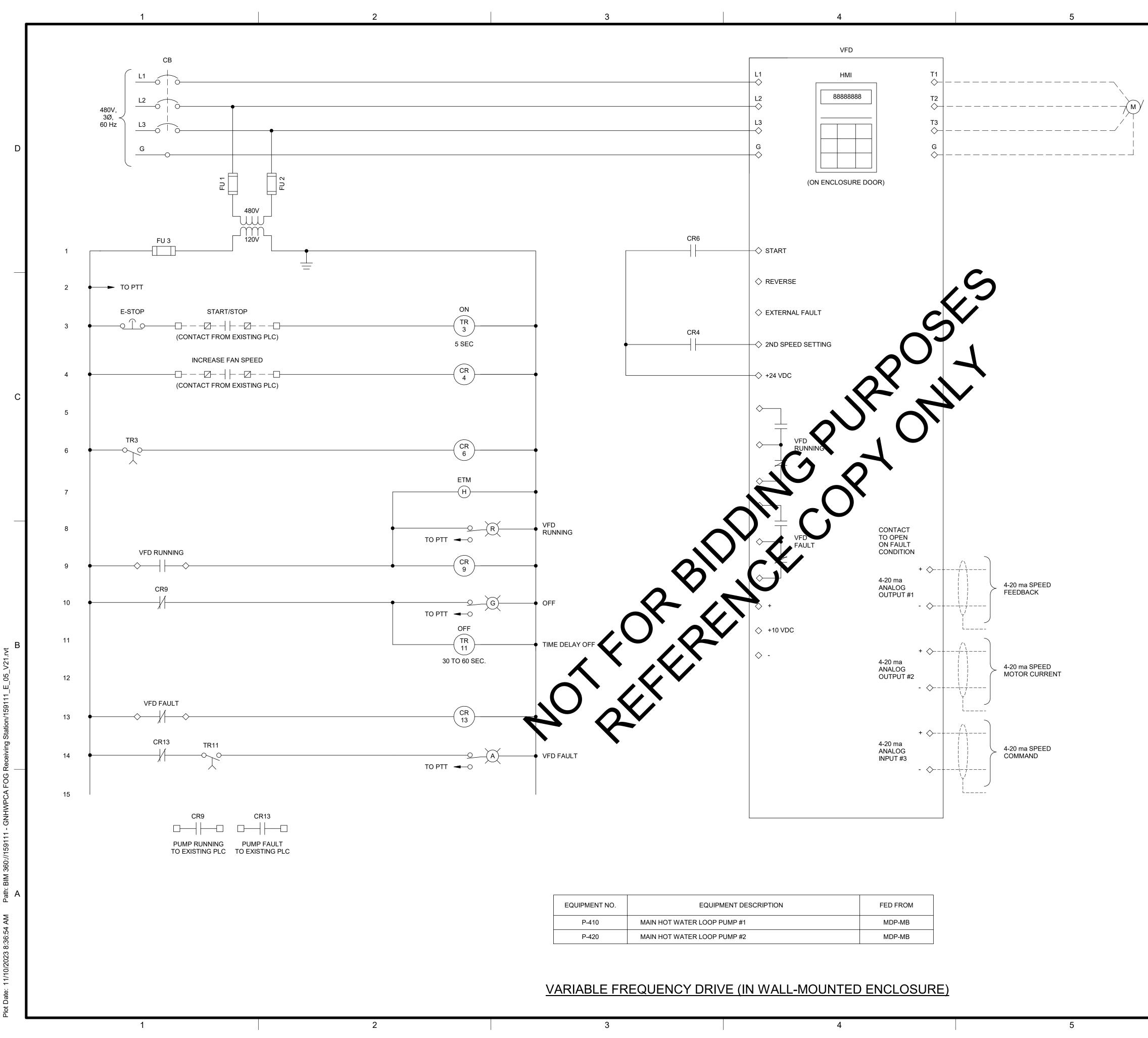
GENERAL NOTES: Brown AND SCHEMATIC DIAGRAM INDICATES PRINCIPAL OPERATION ONLY. MANUFACTURER SHALL ADJUST SCHEMATIC TO Caldwell MEET FUNCTIONAL AND OPERATIONAL NEEDS AS OUTLINED IN THE CONTRACT DOCUMENTS. ENVIRONMENTAL ENGINEERING AND CONSULTING 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336 LEGEND TERMINAL LOCATED IN VFD ENCLOSURE TERMINAL LOCATED ON REMOTE PANEL INDICATED \square ----- FIELD WIRING BID DOCUMENTS NOVEMBER 2023 С GNHWPC Protecting the Environment IMPROVING FATS OIL AND GREASE RECEIVINGS В

_	WAT	ER NEW HAVEN ER POLLUTION ROL AUTHORITY	
		REVISIONS	
REV	DATE	DESCRIPTION	
			В
	7	LINE IS 2 INCHES AT FULL SIZE	
DESI	GNED:	A.VIRAMONTES	
DRAV	VN:	J.HART	
CHEC	KED:	W.DICKERSON	
CHEC	CKED:		
APPR	OVED:	W.DICKERSON	
		FILENAME	
	BC	PROJECT NUMBER	
		159111	
	CLIEI	NT PROJECT NUMBER XX	
		ELECTRICAL	
W		EMENTARY NG DIAGRAMS NO. 3	A
	D	RAWING NUMBER	

E-00-303

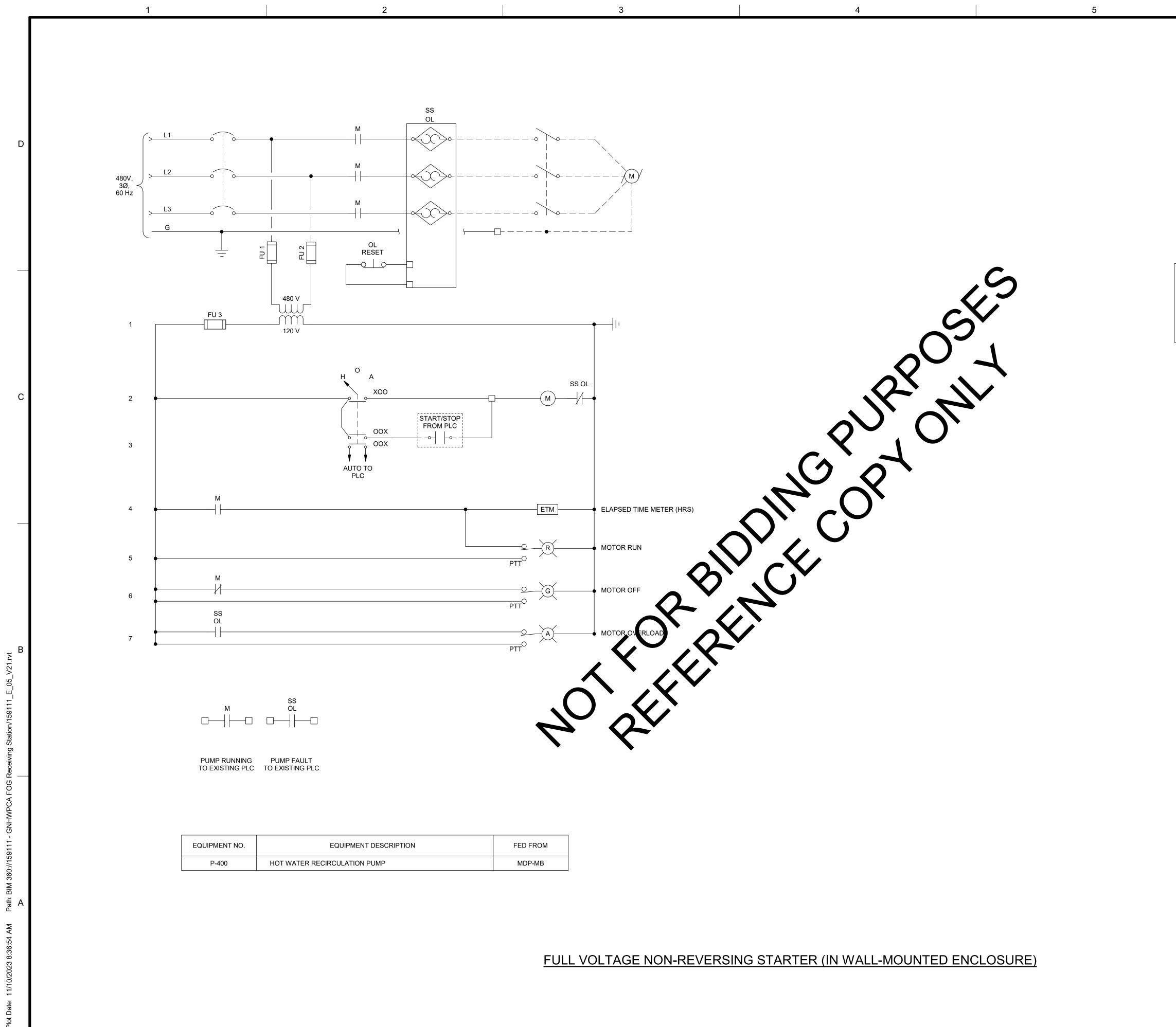
SHEET NUMBER OF

83



EQUIPMENT NO.	EQUIPMENT DESCRIPTION	FED FROM
P-410	MAIN HOT WATER LOOP PUMP #1	MDP-MB
P-420	MAIN HOT WATER LOOP PUMP #2	MDP-MB

6		
GENERAL NOTES:	Drown	
1. SCHEMATIC DIAGRAM INDICATES PRINCIPAL OPERATION ONLY. MANUFACTURER SHALL ADJUST SCHEMATIC TO MEET FUNCTIONAL AND OPERATIONAL NEEDS AS	Brown AND Caldwell	
OUTLINED IN THE CONTRACT DOCUMENTS.	ENVIRONMENTAL ENGINEERING AND CONSULTING	
	200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	
		D
LEGEND		
TERMINAL LOCATED IN VFD ENCLOSURE		
TERMINAL LOCATED ON REMOTE PANEL INDICATED		
 FIELD WIRING		
	BID DOCUMENTS NOVEMBER 2023	С
	GNHWPCA Protecting the Environment	
	IMPROVING FATS OIL AND	
	GREASE RECEIVINGS GREATER NEW HAVEN	
	WATER POLLUTION CONTROL AUTHORITY	
	REVISIONS REV DATE DESCRIPTION	
		в
	LINE IS 2 INCHES	
	AT FULL SIZE	
	DRAWN: J.HART CHECKED: W.DICKERSON	
	CHECKED:	
	APPROVED: W.DICKERSON FILENAME	
	BC PROJECT NUMBER 159111	
	CLIENT PROJECT NUMBER XX	
	ELECTRICAL	
		А
	ELEMENTARY WIRING DIAGRAMS	
	NO. 4	
	drawing number E-00-304	
	84 SHEET NUMBER 111	

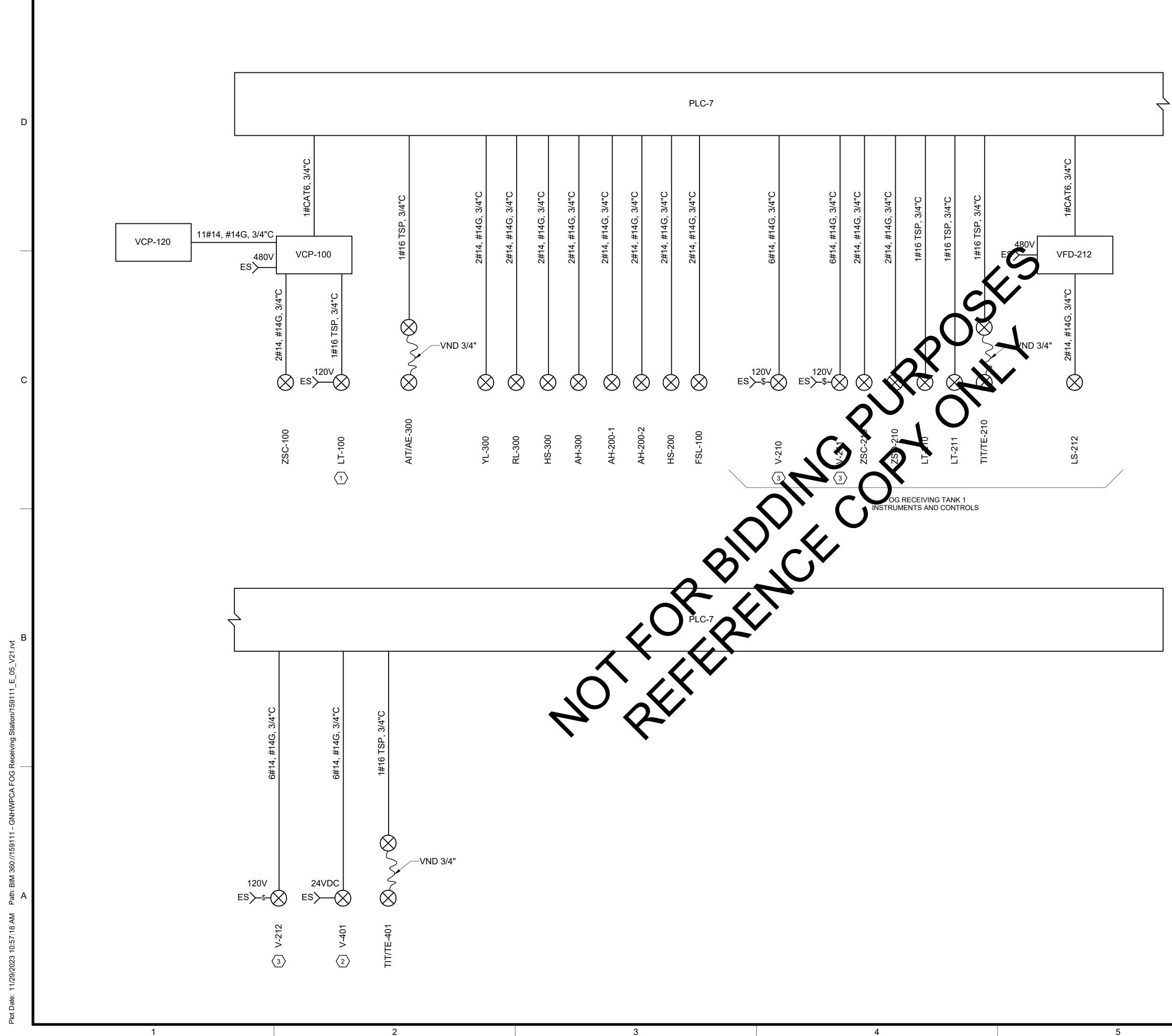


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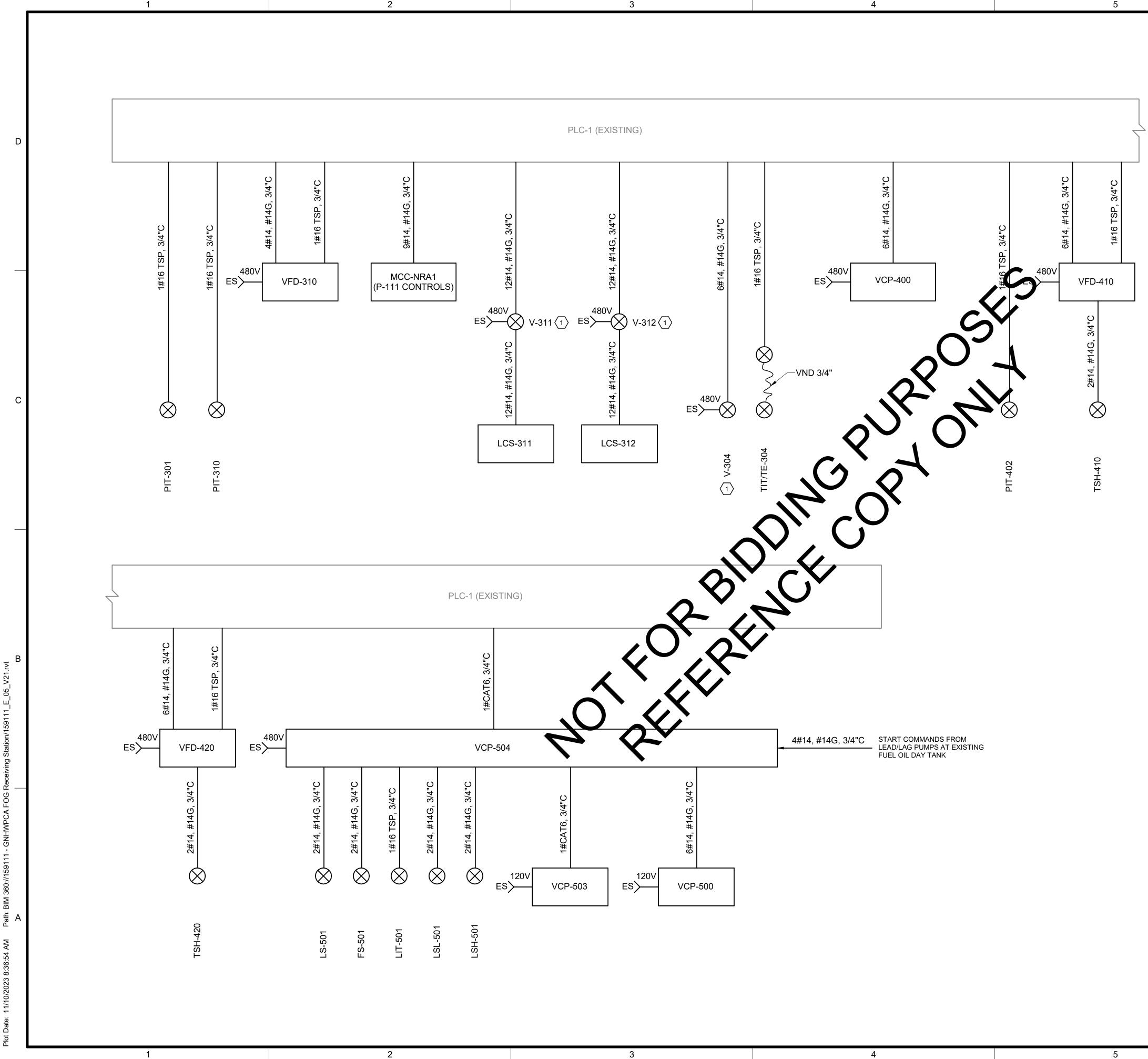
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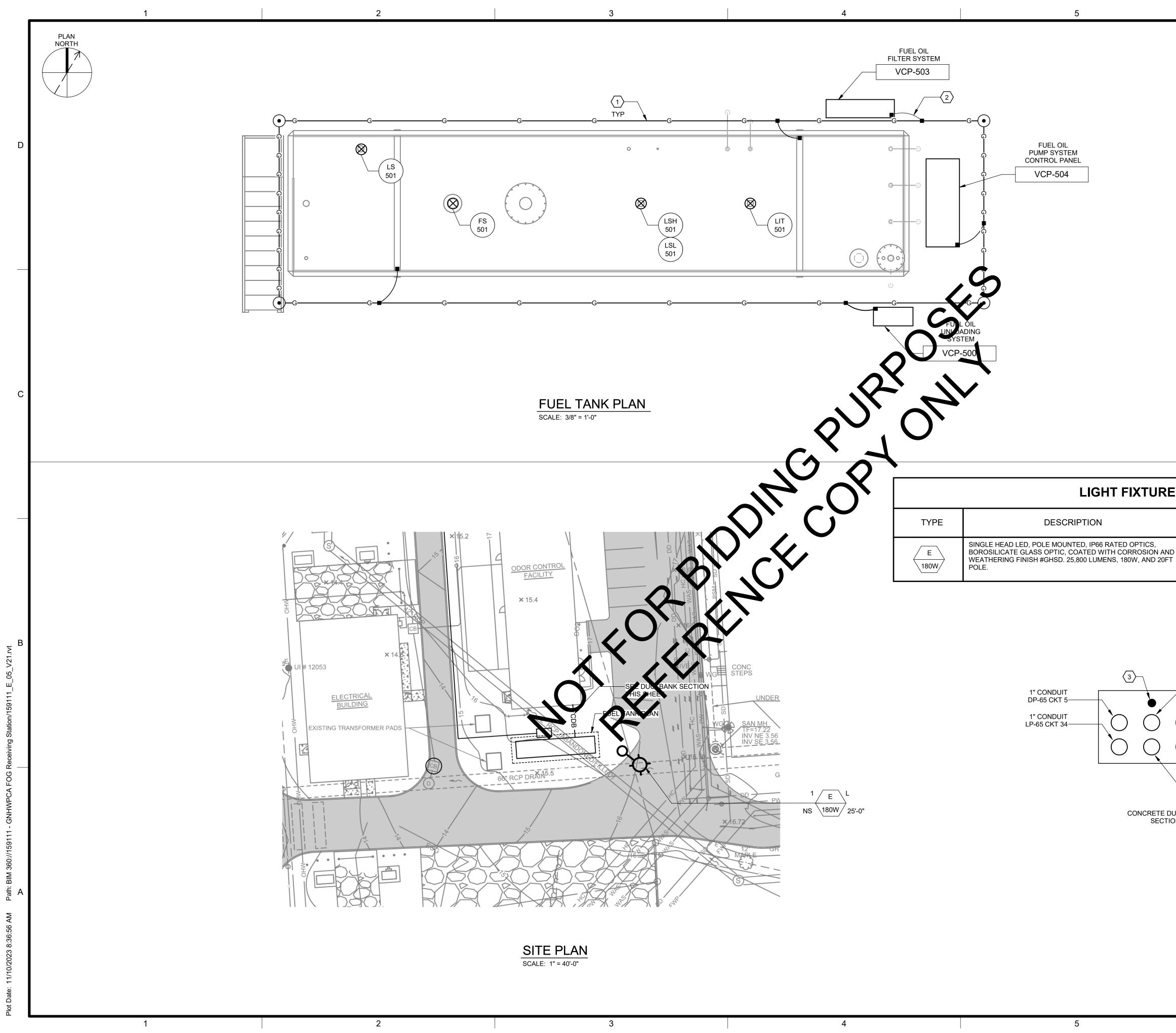
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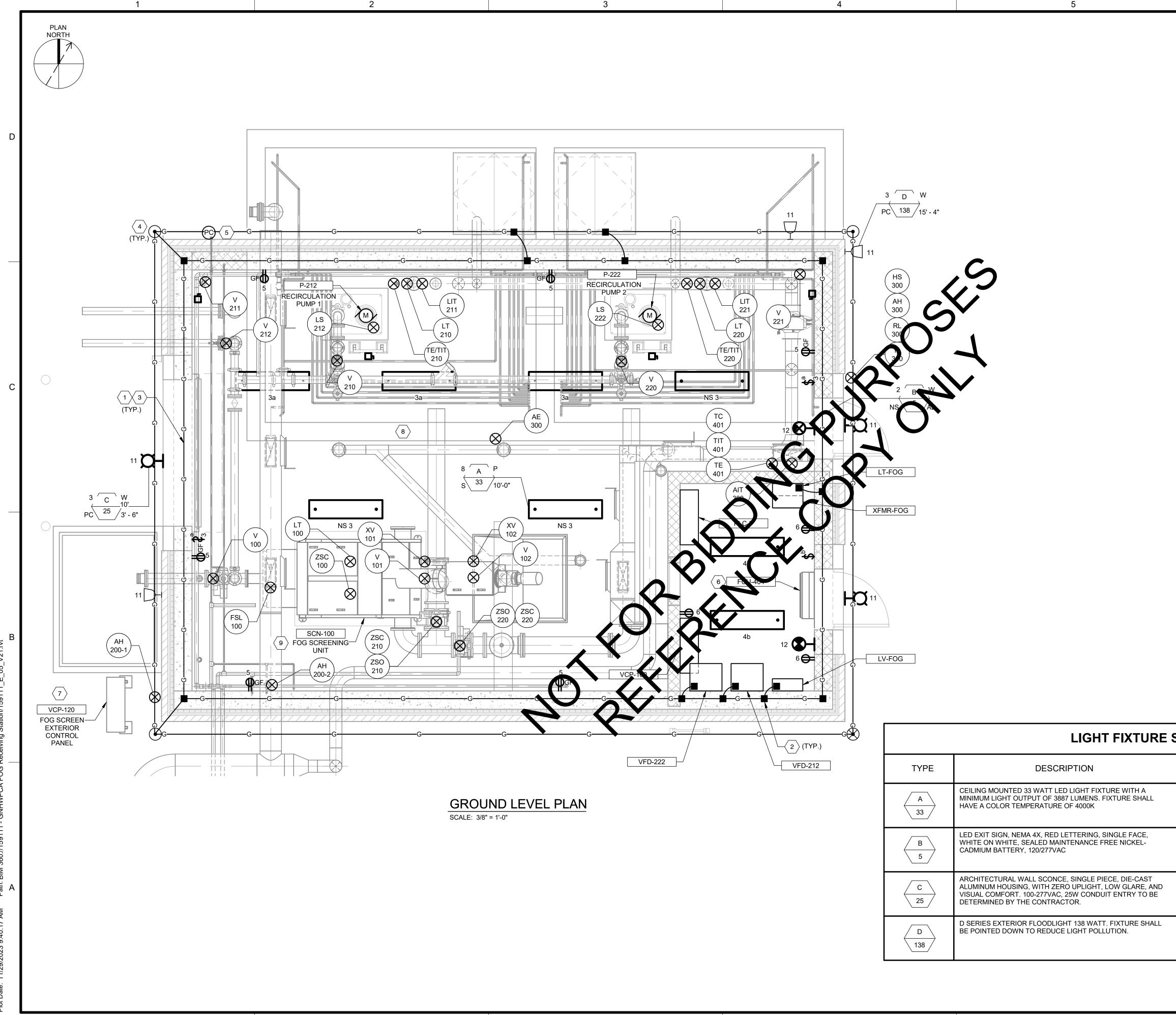
6	
GENERAL NOTES:	
1. CONTRACTOR SHALL HAVE THE OPTION OF COMBINING MULTIPLE CONTROL CIRCUITS OF LIKE TYPES INTO COMMON CONDUITS SIZED PER CODE, 1" MINIMUM. CONDUITS SHALL BE GROUPED BY TYPE AS FOLLOWS AND DIFFERENT TYPES SHALL NOT BE ROUTED IN THE SAME CONDUIT OR RACEWAY. SUBMIT PROPOSED COMBINED CIRCUITS FOR REVIEW PRIOR TO BEGINNING WORK, AND PROVIDE AS-BUILT DRAWINGS	
SHOWING FINAL CIRCUITING FOR RECORD DRAWING DOCUMENTATION. - 120 VOLT AC CONTROL - ANALOG SIGNAL (4-20mA) ETHEONET (NETWOORK COMMUNICATIONS	
 ETHERNET / NETWORK COMMUNICATIONS DC CONTROL 2. INSTRUMENTS AND CONTROLS FOR FOG RECEIVING TANK 1 ARE TYPICAL FOR FOG RECEIVING TANK 2. 	
	-
1. 120V POWER SUPPLIED FROM ASSOCIATED VENDOR CONTROL PANEL (VCP).	
2. SEE P&ID SHEET I-63-101 FOR LOCAL VALVE CONTROLS. 24VDC POWER SUPPLIED FROM AHU-401.	
3. SEE P&ID SHEET I-63-102 FOR LOCAL VALVE CONTROLS. PROVIDE 120V LOCAL DISCONNECT SWITCH FOR VALVE.	
	BID DOCUMENTS NOVEMBER 2023
	GNHWPCA Protecting the Environment
	IMPROVING FATS OIL AND GREASE RECEIVINGS GREATER NEW HAVEN WATER POLLUTION
	CONTROL AUTHORITY
	REVISIONS REV DATE DESCRIPTION
	LINE IS 2 INCHES
	DESIGNED: A.VIRAMONTES DRAWN: J.HART
	CHECKED: W.DICKERSON
	APPROVED: W.DICKERSON FILENAME
	BC PROJECT NUMBER
	159111 CLIENT PROJECT NUMBER XX
	ELECTRICAL
	CONTROL RISER DIAGRAM 1
	DRAWING NUMBER
	E-00-601
6	86 SHEET NUMBER 111
0	



GENERAL NOTES:		
1. CONTRACTOR SHALL HAVE THE OPTION OF COMBINING MULTIPLE CONTROL CIRCUITS OF LIKE TYPES INTO COMMON CONDUITS SIZED PER CODE, 1" MINIMUM. CONDUITS SHALL BE GROUPED BY TYPE AS FOLLOWS AND DIFFERENT TYPES SHALL NOT BE ROUTED IN THE SAME CONDUIT OR RACEWAY. SUBMIT PROPOSED COMBINED CIRCUITS FOR REVIEW PRIOR TO BEGINNING WORK, AND PROVIDE AS-BUILT DRAWINGS SHOWING FINAL CIRCUITING FOR RECORD DRAWING DOCUMENTATION.	Environmental engineering and consulting 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	
- 120 VOLT AC CONTROL - ANALOG SIGNAL (4-20mA) - ETHERNET / NETWORK COMMUNICATIONS - DC CONTROL		D
KEYNOTES:		
1. SEE P&ID SHEET I-80-103 FOR LOCAL VALVE CONTROLS.		
	BID DOCUMENTS NOVEMBER 2023	С
	GNHWPCA Protecting the Environment	
	IMPROVING FATS OIL AND GREASE RECEIVINGS GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY	
	REVISIONS REV DATE DESCRIPTION	
		В
	LINE IS 2 INCHES 너무 AT FULL SIZE	
	DESIGNED: A.VIRAMONTES DRAWN: J.HART	
	CHECKED: W.DICKERSON	
	CHECKED: APPROVED: W.DICKERSON	
	FILENAME	
	BC PROJECT NUMBER 159111	
	CLIENT PROJECT NUMBER XX	
	ELECTRICAL	
	CONTROL RISER DIAGRAM 2	А
	DRAWING NUMBER	
	E-00-602	
6	87 SHEET NUMBER 111	

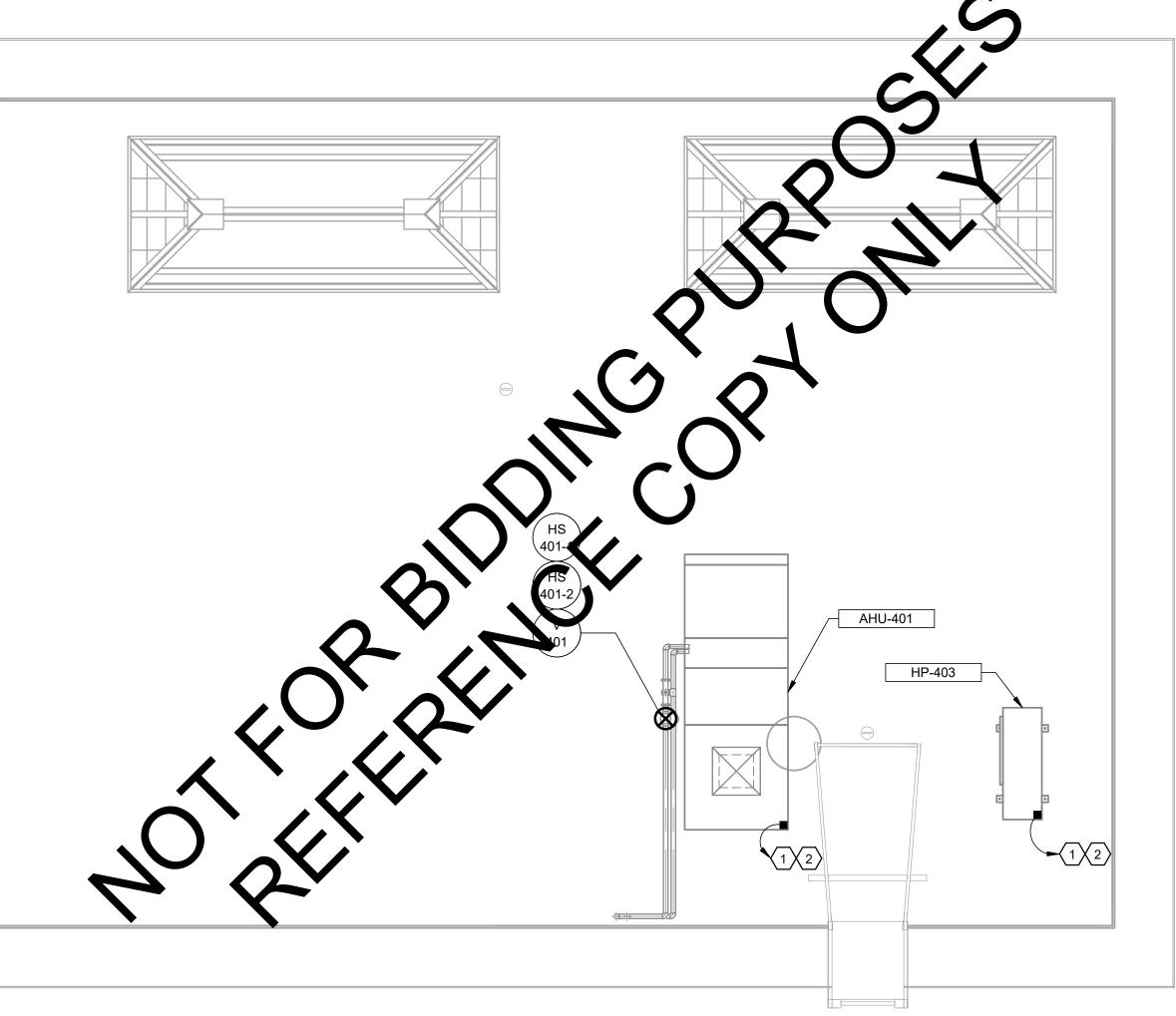


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	GENERAL NOTES:		
	1. THE CONTROL PANELS SHOWN ON THIS DRAWING ARE FED FROM PANELBOARDS DP-65 AND LP-65 IN THE ODOR CONTROL FACILITY. SEE DRAWING E-65-502 FOR PANELBOARD SCHEDULES. ROUTE CONDUITS UNDERGROUND FROM ODOR CONTROL FACILITY TO FUEL TANK AREA AS SHOWN. CONTROL PANELS SHALL BE MOUNTED PER DETAIL E25001 ON DRAWING E-00-005.	ENVIRONMENTAL ENGINEERING AND CONSULTING 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	
	2. ALL COMPONENTS FOR THE GROUNDING SYSTEM SHALL COMPLY WITH THE REQUIREMENTS IN SPECIFICATION SECTION 26 05 27.		
	 LOCATION AND ROUTING OF GROUNDING CONDUCTORS AND ELECTRODES ARE SHOWN DIAGRAMMATICALLY. THE GROUNDING SYSTEM SHALL BE INSTALLED TO SUIT FIELD CONDITIONS WITHOUT INTERFERING WITH STRUCTURAL MEMBERS OR UNDERGROUND PIPING. 		D
	KEYNOTES:		
	1. ALL GROUND CONDUCTORS SHALL BE #4/0 AWG BARE STRANDED COPPER FOR THE MAIN GROUND ELEMENTS AND #4/0 AWG BARE COPPER TO EQUIPMENT GROUND BUS.		
	2. CONNECTION BETWEEN MAIN GROUND CONDUCTOR AND EQUIPMENT FRAMES SHALL BE #2 AWG.		
	3. CONNECT #4/0 BARE COPPER CONDUCTOR EMBEDDED IN THE DUCTBANK TO THE FUEL TANK AREA GROUNDING RING.		
	4. SEPARATE POWER CONDUITS AND SIGNAL CONDUITS WITHIN THE SAME DUCKBANK BY 12 INCHES OR GREATER SEPARATION. NETWORK CABLE SHALL BE INSTALLED IN RMC-STEEL CONDUIT. SEE SHEET E-00-602 FOR NETWORK CIRCUIT INFORMATION.	BID DOCUMENTS NOVEMBER 2023	С
		GNHWPCA Protecting the Environment	
ΞS	CHEDULE		
	MODEL #		
D T	HOLOPHANE MGLEDM SERIES: MGLEDM-P4-40K-MVOLT-MG-VH GHSD-US-PCLL-WG (COATED W/ #GHSD OR SIMILAR), COLOR TO MATCH POLE. OR APPROVED EQUAL. POLE: RTS-2059B-BK-B04 OR APPROVED EQUAL.	IMPROVING FATS OIL AND GREASE RECEIVINGS GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY	
		REVISIONS REV DATE DESCRIPTION	
			В
/	1" CONDUIT LP-65 CKT 33		
Ć		LINE IS 2 INCHES	
С	$\mathbf{\hat{z}}$	DESIGNED: A.VIRAMONTES DRAWN: J.HART	
		CHECKED: W.DICKERSON	
	1" CONDUIT NETWORK CABLE <4	APPROVED: W.DICKERSON FILENAME	
OUCTE	BANK	BC PROJECT NUMBER 159111	
		ELECTRICAL	
		FUEL STORAGE AREA PLANS	A
		E-05-102 88 SHEET NUMBER 111	
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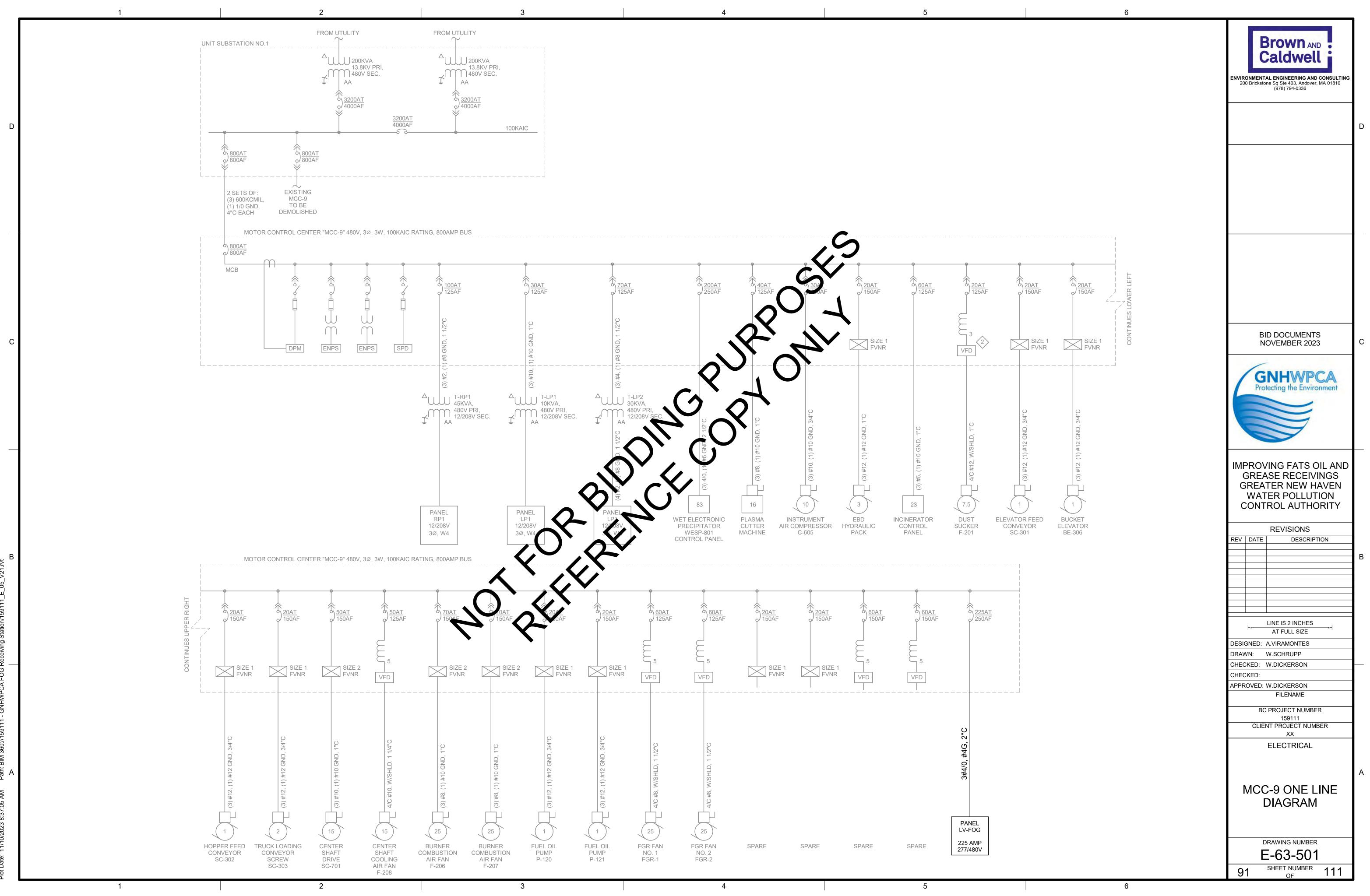
	6		
	GENERAL NOTES:		
	1. ALL THE COMPONENTS FOR THE GROUNDING SYSTEM SHALL COMPLY WITH THE REQUIREMENTS IN SPECIFICATION SECTION 26 05 27.	Brown AND . Caldwell	
	2. LOCATION AND ROUTING OF GROUNDING CONDUCTORS AND ELECTRODES ARE SHOWN DIAGRAMATICALLY. THE GROUNDING SYSTEM SHALL BE INSTALLED TO SUIT FIELD CONDITIONS WITHOUT INTERFERING WITH STRUCTURAL MEMBERS OR UNDERGROUND PIPING.	ENVIRONMENTAL ENGINEERING AND CONSULTING 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	
	3. ALL BELOW GROUND OR EMBEDDED CONNECTIONS SHALL BE MADE WITH UL LISTED EXOTHERMIC WELDED CONNECTIONS.		
	4. ALL LUMINAIRES, EXIT SIGNS, AND RECEPTACLES ARE ENERGIZED BY PANELBOARD LT-FOG. CIRCUIT IS AS SHOWN ON PLAN. SEE DRAWING E-63-502 FOR PANEL SCHEDULE.		D
	5. FINAL PLACEMENT OF LIGHT FIXTURES SHALL BE READILY ACCESSIBLE FOR MAINTENANCE AND/OR REPLACEMENT. AVOID CONFLICT WITH OTHER DISCIPLINES AND FOREIGN SYSTEMS.		
	 6. PROVIDE 2#12, #12G, 3/4"C FOR EACH OF THE FOLLOWING 120V VALVES ASSOCIATED WITH SCN-100 THAT WILL BE POWERED FROM VCP-100: V-100 V-101 V-102 		
	- XV-101 - XV-102		
	KEYNOTES:		
	 ALL GROUND CONDUCTORS SHALL BE #4/0 AWG BARE STRANDED COPPER FOR THE MAIN GROUND ELEMENTS AND # 4/0 AWG BARE COPPER TO EQUIPMENT GROUND BUS. CONNECTION BETWEEN MAIN GROUND CONDUCTOR AND EQUIPMENT FRAMES SHALL BE #2 AWG. 		
	3. INSTALL GROUND CONDUCTOR IN THE FOUNDATION STRUCTURE AS SHOWN.		
	4. TIE EMBEDDED GROUND CONDUCTOR TO THE BUILDING GROUNDING RING.	BID DOCUMENTS NOVEMBER 2023	С
	5. PHOTOCELL FOR EXTERIOR LIGHTING.		
	6. FAN COIL UNIT IS POWERED FROM CORRESPONDING OUTDOOR UNIT HP-403.	GNHWPCA	
	7. FOG SCREEN EXTERIOR CONTROL PANEL SHALL BE MOUNTED ABOVE THE DESIGN FLOOD ELEVATION.	Protecting the Environment	
	8. FOG BUILDING MONORAIL AND HOIST/TROLLEY REQUIRE SEPARATE CIRCUITS AS SHOWN ON THE PANELBOARD SCHEDULE, BUT ARE PART OF THE SAME SYSTEM. EQUIPMENT IS CONTROLLED VIA REMOTE CONTROL TYPE CONTROLLER. MONORAIL SYSTEM SHALL BE INSTALLED IN FOG BUILDING PROCESS AREA.		
	 FOG SCREENING UNIT SCN-100 SHALL BE POWERED FROM VCP-100. PROVIDE 3#12, #12G, 3/4"C. 	IMPROVING FATS OIL AND	
		GREASE RECEIVINGS GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY	
		REVISIONS	
		REV DATE DESCRIPTION	
			В
		LINE IS 2 INCHES	
SC	HEDULE	AT FULL SIZE	
	MODEL #	CHECKED: W.DICKERSON	
	ITHONIA LIGHTING VAP 4000LM FST MD MVOLT GZ10 40K 80CRI	CHECKED: APPROVED: W.DICKERSON	
		FILENAME BC PROJECT NUMBER 159111	
L	ITHONIA LIGHTING LV SW 1 R 120/277 EL N UM 4X	CLIENT PROJECT NUMBER XX	
		ELECTRICAL	
(F M C	ITHONIA LIGHTING WST LED P2 40K VW-MVOLT PBBW DDBXD PROVIDE HARDWARE AND ASSOCIATED ACCESSORIES FOR MOUNTING AS INDICATED ON THE PLANS). OPTIONS: PIR1FC3V, SF MOLOPHANE PSLED P5 MVOLT 65 40K YMS GYSDP 06 23 10KVMP	GROUND LEVEL PLAN	А
	IR		
		DRAWING NUMBER E-63-101	
		89 SHEET NUMBER 111	

Plot Date: 11/10/2023 8:37:02 AM Path: BIM 360://159111 - GNHWPCA FOG Receiving Station/159111_E_05_V21.rvt D	ving Station/159111_E_05_V21.rvt B	С	D	
			PLAN NORTH	
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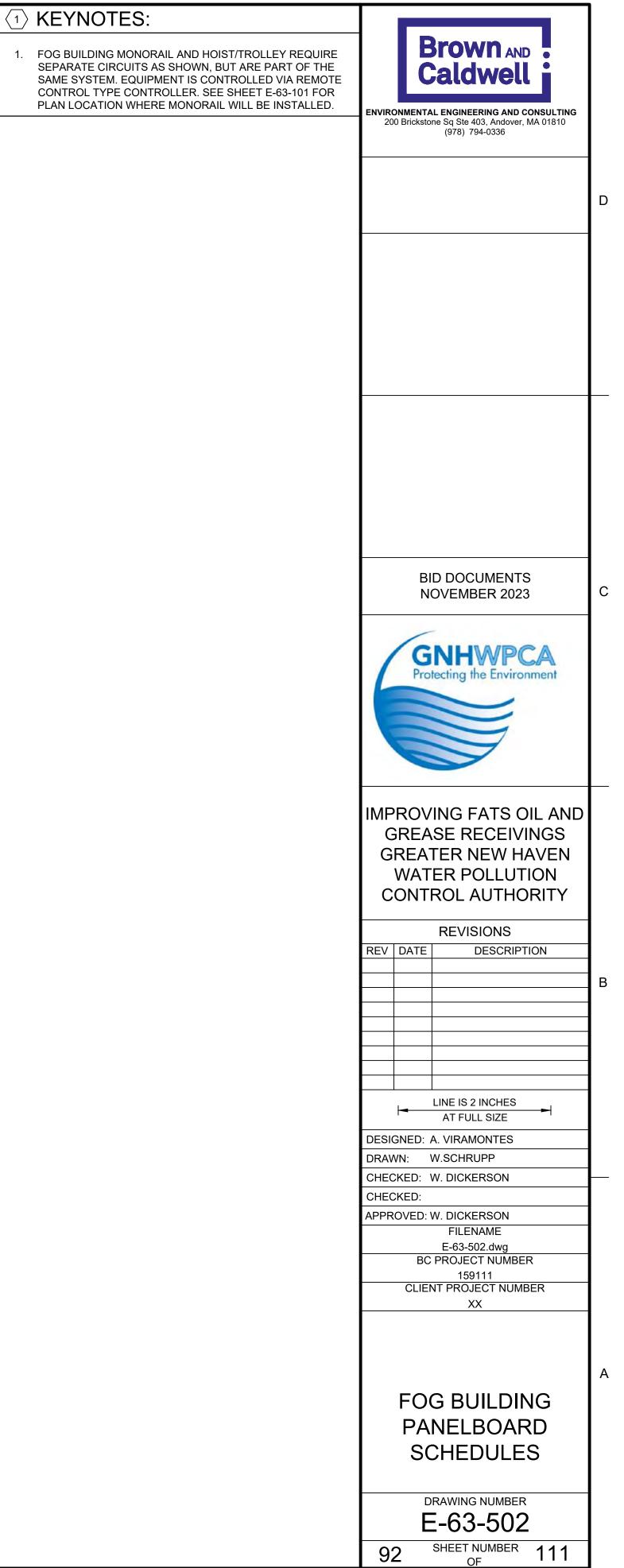
ROOF PLAN SCALE: 3/8" = 1'-0"

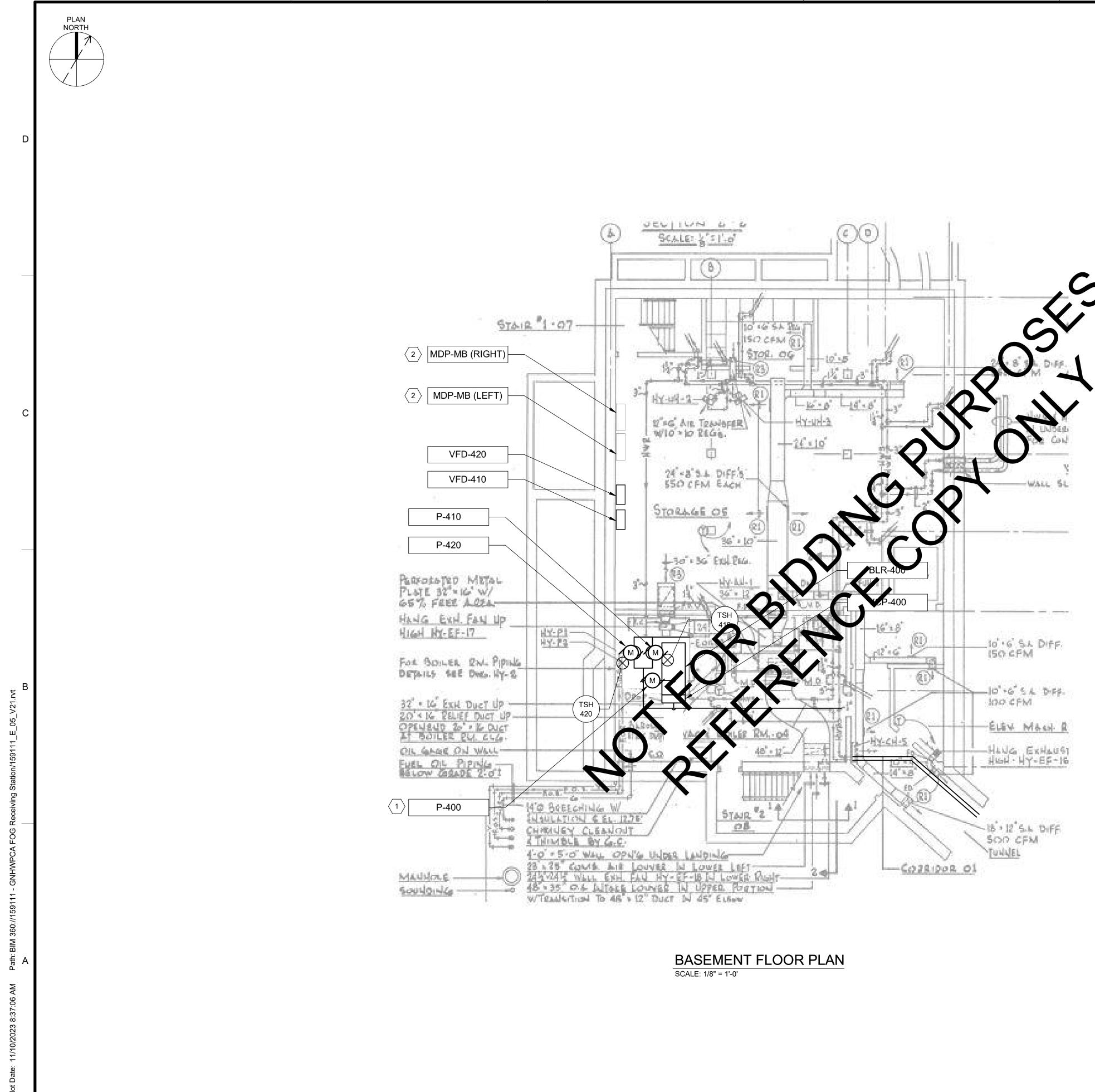
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GENERAL NOTES:				
1. ROOF EQUIPMENT MOUNTING AND REQUIRED PENETRATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR.		Br Ca	own AND	
2. ALL COMPONENTS FOR THE GROUNDING SYSTEM SHALL COMPLY WITH THE REQUIREMENTS IN SPECIFICATION SECTION 26 05 27.		Brickstone So	NGINEERING AND CONSULTING Ste 403, Andover, MA 01810 978) 794-0336	
3. LOCATION AND ROUTING OF GROUNDING CONDUCTORS AND ELECTRODES ARE SHOWN DIAGRAMMATICALLY. THE GROUNDING SYSTEM SHALL BE INSTALLED TO SUIT FIELD CONDITIONS WITHOUT INTERFERING WITH STRUCTURAL MEMBERS OR UNDERGROUND PIPING.				D
1. PROVIDE GROUND CONNECTION FOR ROOF MOUNTED				
EQUIPMENT BACK TO BUILDING GROUNDING RING. 2. CONNECTION BETWEEN MAIN GROUND CONDUCTOR AND				
EQUIPMENT FRAMES SHALL BE #2 AWG.				
			OCUMENTS EMBER 2023	С
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			63-102	
	90		OF 111]
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	PANEL:		ELECTRICAL ROOM				V-FOG SCCR: MAINS:	65 KA 225A MCB	BUS:	 225A		
	MOUNT	ING: WALL					VOLTS:		B03.	2235		
	NOTE:	MANUFACTURE	R TO PROVIDE BREAKER I	OR INTEGRA		HASE						
	POLE	LOAD DESCRIPTION	CONDUIT AND CABLE	KVA	A	B C	KVA	CONDUIT AND CABLE	LOAD DESCRIPTION	POLE CKT		
1 3	1 20/.5 1	SCREEN CONTROL PANEL	3#12, #12G, 3/4"C	1.33 1.33	10.33	10.33	9.00		RECIRC PUMP VFD 1	2 50/3 4		
5	20/0	(VCP-100)	0//12, //120, 0/110	1.33		10.00			(VFD-212)	6		
7 9		RECIRC PUMP VFD 2	3#10, #10G, 3/4"C	9.00 9.00	19	19	10.00		30KVA LIGHTING XFMR	8 50/3 10		
3 11	00/0	(VFD-222)	o#10, #100, 0/4 0	9.00		19			(XFMR-FOG)			
13 15		FOG BUILDING MONORAIL	3#12, #12G, 3/4"C	0.61 0.61	0.77	0.77	0.16		FOG BUILDING HOIST/TROLLEY	15/3 16 1		
17	10/0	(H-100)	0#12, #120, 0/4 0	0.61		0.77			(H-100)			
19 21	20/3	SPARE		0.00 0.00	0	0	0.00		SPARE	20/3 22		
23	20/0			0.00		C	0.00			24		
25 27	20/3	SPARE		0.00	0	0	0.00		SPARE	26 20/3 28		
29				0.00		C	0.00			30		
31 33	20/3	SPARE		0.00	0	0	0.00		SPARE	32 20/3 34		
35				0.00		C	0.00			36		
37 39	20/3	SPARE		0.00	0	0	0.00		SPARE	38 20/3 40		
41				0.00		C				42		
				TOTALS KVA	30.1	30.1 30	.1					
				TOTALS								_
	NNECTE	D LOAD: 90.30 KVA DAD: 72.00 KVA		AMPS = 86.64	36.2	36.2 3	6.2		FED FROM: MCC-9			\frown
										J		
				PA	NEL	BOARI) LT-FO					
	PANEL:		ELECTRICAL ROOM				SCCR MAIN		BUS:	100A		
	MOUNT	ING: WALL					VOLT		200.			
	NOTE: TRIP /	MANUFACTURE	R TO PROVIDE BREAKER I	OR INTEGRA		PHASE	LO					
	POLE	LOAD DESCRIPTION	CONDUIT AND CABLE	KVA	Α		С К		E LOAD DESCRIPTION			\mathbf{N}) \mathbf{n}
1	1 1 5 / 1 1	FOG BUILDING AIR HANDLING UNIT (AHU-401)	2#12, #12G, 3/4"C	0.40	0.7		0.	2#12, #12G, 3/4"C	FLUSHING VALVE (V-21)	2) 15/1 2		
3		FOG BUILDING LIGHTS	2#12, #12G, 3/4"C		<u> </u>			2#12 #12G 3//"C	FOG ELECTRICAL ROOM	¹ 15/1 4	X	
-				0.20		0.27	0.)/	LIGHTS FOG ELECTRICAL ROOM	Λ		' ~
5	15/1	FOG BUILDING RECEPTS	2#12, #12G, 3/4"C	1.08			1.62 0.	54 2#12, #12G, 3/4"C	RECEPTS	" 15/1 6		
7		FOG BUILDING HEAT PUMP (HP-403)	2#12, #12G, 3/4"C	3.10 3.10	3.1	21		00	SPARE	30/2 8 10		\mathbf{X}
9		(HP-403) FOG BUILDING		3.10		3.1	0.	00				
11		EXTERIOR LIGHTS	2#12, #12G, 3/4"C	0.49			0.5 0.	2#12, #12G, 3/4"C	FOG BUILDING EXIT LIG	HTS 15/1 12		
13		FOG SCREEN EXTERIOR CONTROL PANEL	2#12, #12G, 3/4"C						SPARE	15/1 14		
		(VCP-120)	,	0.40	0.4		0.	00			γV , ∇	
	15/1	TANK 1 DRAIN VALVE (V-210)	2#12, #12G, 3/4"C					2#12, #12G, 3/4"C	TANK 1 THREE-WAY VALVE	15/1 16		
15		IANN I DRAIN VALVE (V-210)	2#12, #12G, 3/4 C	0.30		0.6	0.		(V-211)			
15									TANK 1 THREE-WAY		´ ↓ () ▼	
	15/1	TANK 2 DRAIN VALVE (V-220)	2#12, #12G, 3/4"C					2#12, #12G, 3/4"C	VALVE (V-221)	15/1 18		
	15/1	SPARE		0.30	0	+	0.6 0.	30 DO	SPARE		1	
17	15/1	SPARE SPARE		0.00		0	0.	00 00	SPARE SPARE	15/1 22		
17 19 21	:.//	SPARE		0.00	0		0.	00	SPARE	15/ 26		
17 19 21 23 25	15/1	SPARE SPARE		0.00		0	0. 0 0.	00	SPARE SPARE	<u>1011 28</u> 15/1 30		
17 19 21 23 25 27	15/1 15/1			0.00	0		0.	00	SPARE	15/1 30 15/1 32		
19 21 23 25 27 29	15/1 15/1 15/1 15/1	SPARE		0.00		0		00	SPARE SPARE			
17 21 23 25 27 29 31 33	15/1 15/1 15/1 15/1 15/1	SPARE			1	1		00 00	SPARE			
17 19 21 23 25 27 29 31 33 35 37	15/1 15/1 15/1 15/1 15/1 15/1 15/1	SPARE SPARE SPARE		0.00	0		0.					
17 19 21 23 25 27 29 31 33 35 37 39	15/1 15/1 15/1 15/1 15/1 15/1 15/1 15/1	SPARE SPARE SPARE SPARE		0.00	0	0	0.	00	SFARE	15/ 40		
17 19 21 23 25 27 29 31 33 35 37 39	15/1 15/1 15/1 15/1 15/1 15/1 15/1 15/1	SPARE SPARE SPARE		0.00	0	0		00	SPARE S ARE	15/ 40 /15/1 42		
17 19 21 23 25 27 29 31 33 35 37 39	15/1 15/1 15/1 15/1 15/1 15/1 15/1 15/1	SPARE SPARE SPARE SPARE		0.00 0.00 0.00 TOTALS KVA		0	0. 00.	00	SFARE			
17 21 23 25 27 29 31 33 35 37 39 41	15/1 15/1 15/1 15/1 15/1 15/1 15/1 15/1	SPARE SPARE SPARE SPARE		0.00 0.00 0.00 TOTALS		3.97	0. 00.	00	SFARE	/IA XFMR-FOG)		





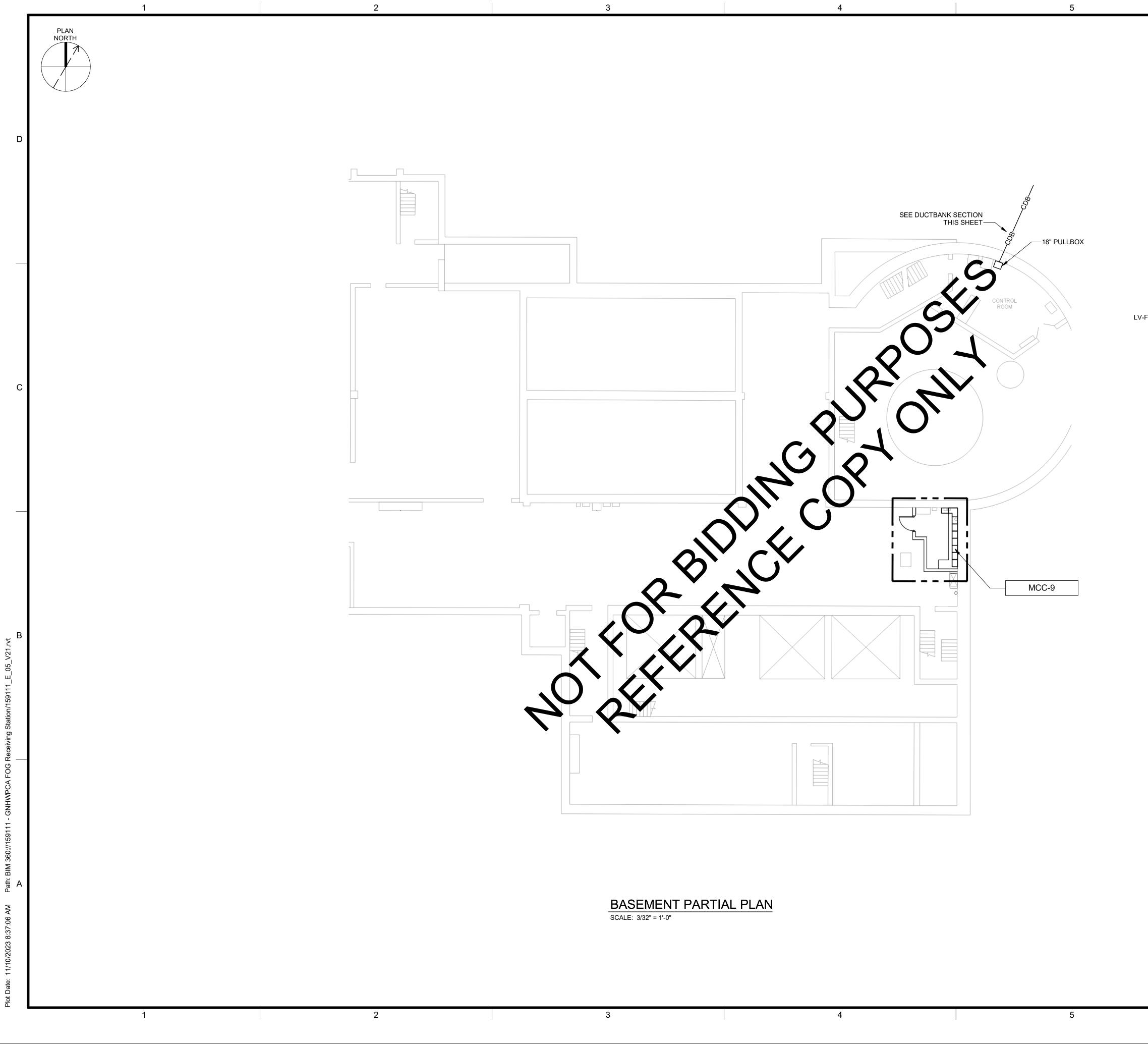


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	LOAD SO	CHEDULE	
EQUIPMENT NO.	EQUIPMENT DESCRIPTION	BREAKER SIZE	CIRCUIT INFORMATION
VCP-400	BOILER CONTROL PANEL	15 AMPS	3#12, #12G, 3/4"C
P-410	MAIN LOOP PUMP #1	35 AMPS	3#12, #12G, 3/4"C
P-420	Main Loop Pump #2	35 AMPS	3#12, #12G, 3/4"C

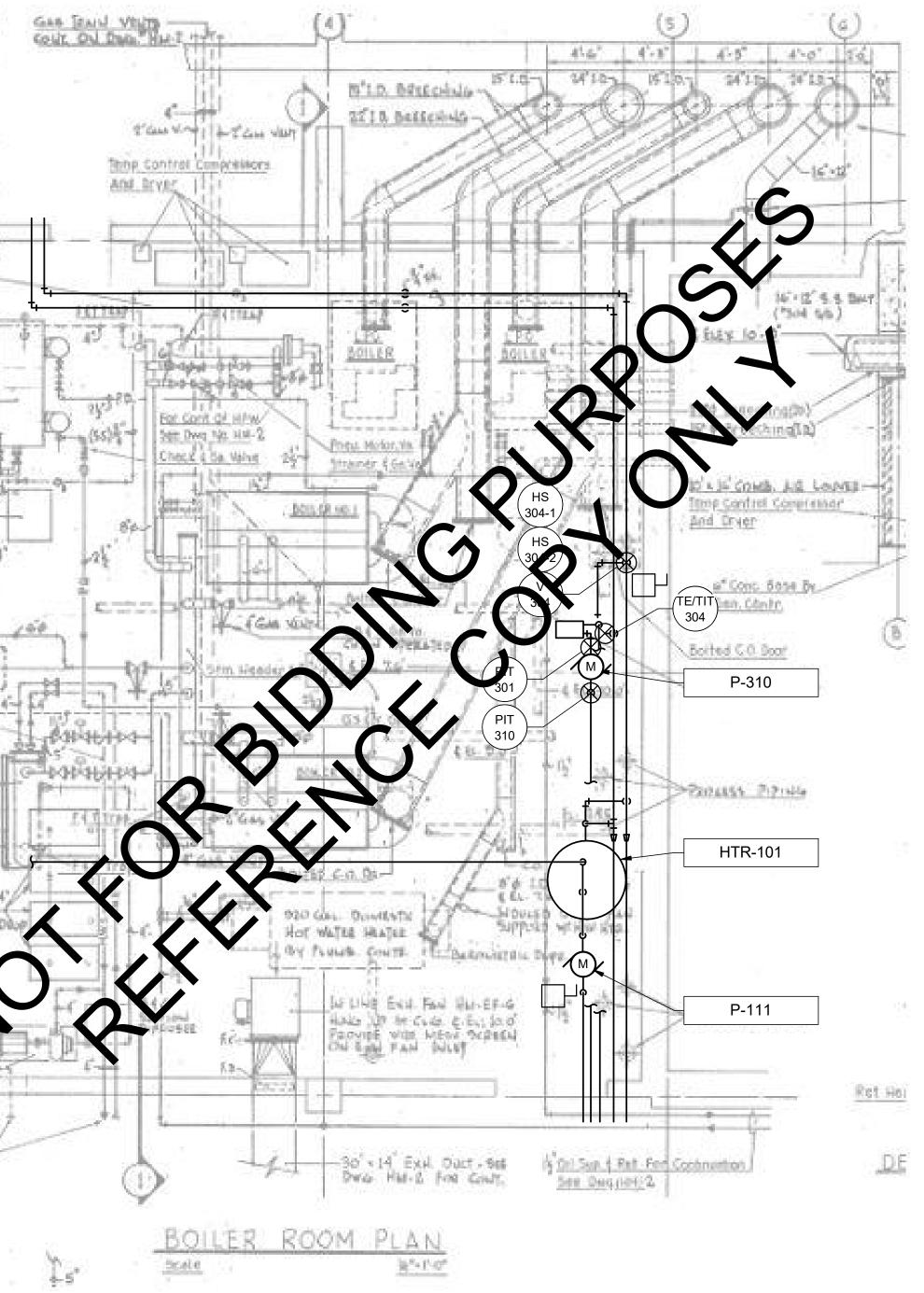
1.	POWER FOR HOT WATER SHALL BE SUPPLIED BY V	RECIRCULATION PUMP (P-400) CP-400.	Brown AND Caldwell	
2.	THAT ARE DEDICATED TO SHEET. REFER TO THE LO	CONTAINS FOUR SPARE BREAKERS THE LOADS SHOWN ON THIS DAD SCHEDULE ON THIS SHEET FOR OORDINATE WITH THE AUTHORITY ATION.	ENVIRONMENTAL ENGINEERING AND CONSULTING 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	
				D
			BID DOCUMENTS NOVEMBER 2023	С
			GNHWPCA Protecting the Environment	
			IMPROVING FATS OIL AND GREASE RECEIVINGS GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY	
			REVISIONS	
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			LINE IS 2 INCHES ⊢⊐————————————————————————————————————	
			DESIGNED: A.VIRAMONTES DRAWN: J.HART	
			CHECKED: W.DICKERSON CHECKED: APPROVED: W.DICKERSON	
			FILENAME BC PROJECT NUMBER	
			159111 CLIENT PROJECT NUMBER XX	
SC	HEDULE		ELECTRICAL	
Τ	BREAKER SIZE	CIRCUIT INFORMATION	MAINTENANCE	A
	15 AMPS	3#12, #12G, 3/4"C	BUILDING	
	35 AMPS 35 AMPS	3#12, #12G, 3/4"C 3#12, #12G, 3/4"C	BASEMENT PLAN	
			E-78-101 93 SHEET NUMBER 111	
		6	90 OF III	I

KEYNOTES:



GENERAL NOTES: Brown AND 1. CONDUIT ROUTING BETWEEN MCC-9 IN THE ADMINISTRATION BUILDING BASEMENT AND THE LV-FOG PANELBOARD IN THE Caldwell FOG RECEIVING BUILDING SHALL BE ROUTED VIA UNDERGROUND DUCTBANK PER CIVIL SHEET C-101-05. THE CONDUITS SHALL LEAVE THE ADMINISTRATION BUILDING BASEMENT UNDERGROUND VIA THE NEW 18" PULLBOX ENVIRONMENTAL ENGINEERING AND CONSULTING 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336 SHOWN. D 2"CONDUIT LV-FOG PANELBOARD FEEDER--2" SPARE CONDUIT CONCRETE DUCTBANK SECTION BID DOCUMENTS NOVEMBER 2023 С GNHWPCA Protecting the Environment IMPROVING FATS OIL AND GREASE RECEIVINGS GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY REVISIONS REV DATE DESCRIPTION В LINE IS 2 INCHES AT FULL SIZE DESIGNED: A.VIRAMONTES DRAWN: J.HART CHECKED: W.DICKERSON CHECKED: APPROVED: W.DICKERSON FILENAME BC PROJECT NUMBER 159111 CLIENT PROJECT NUMBER XX ELECTRICAL ADMINISTRATION BUILDING BASEMENT PLAN DRAWING NUMBER E-80-101 SHEET NUMBER 0F 111 94

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4

BOILER ROOM PLAN

4

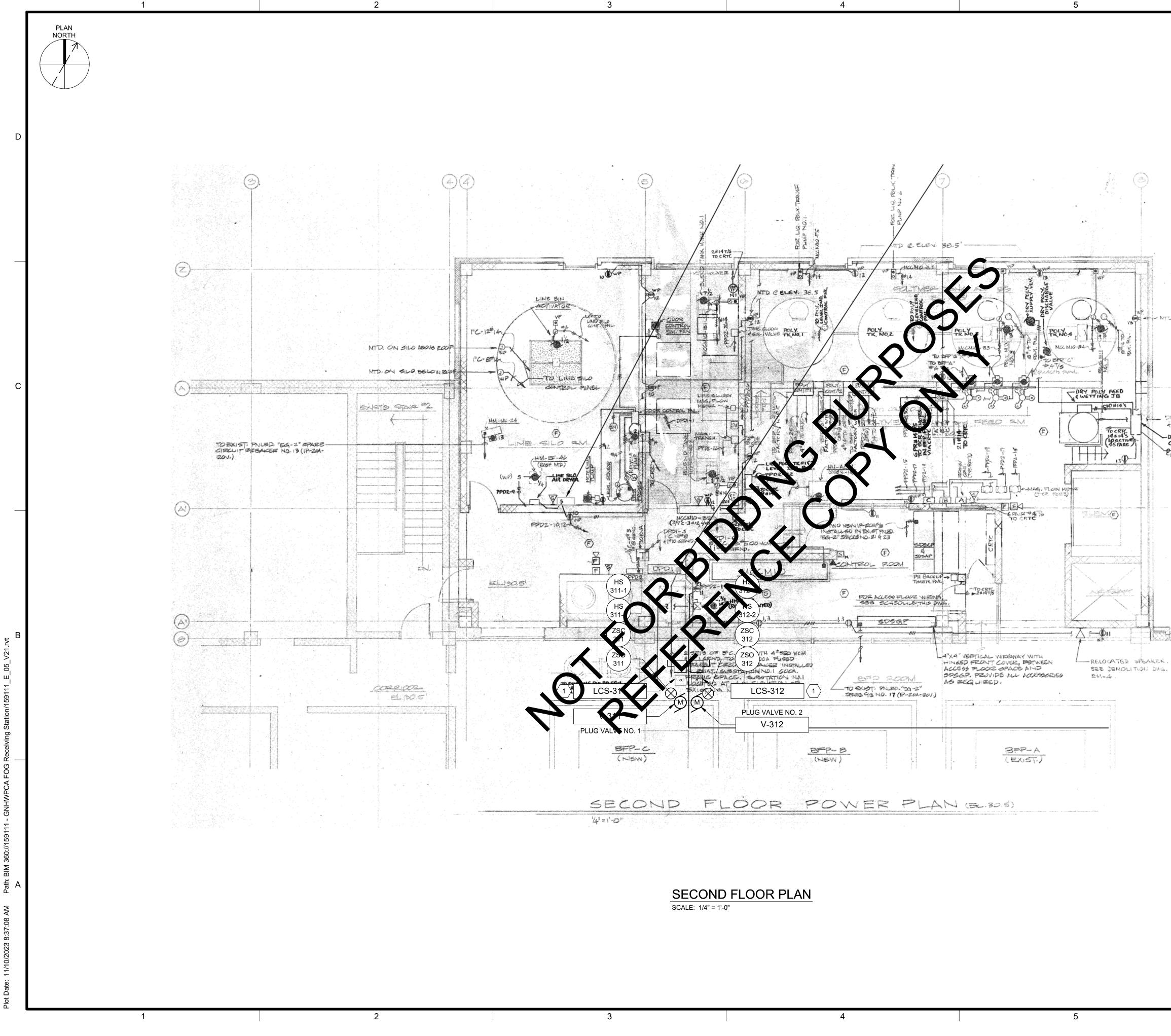
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SCALE: 3/16" = 1'-0'

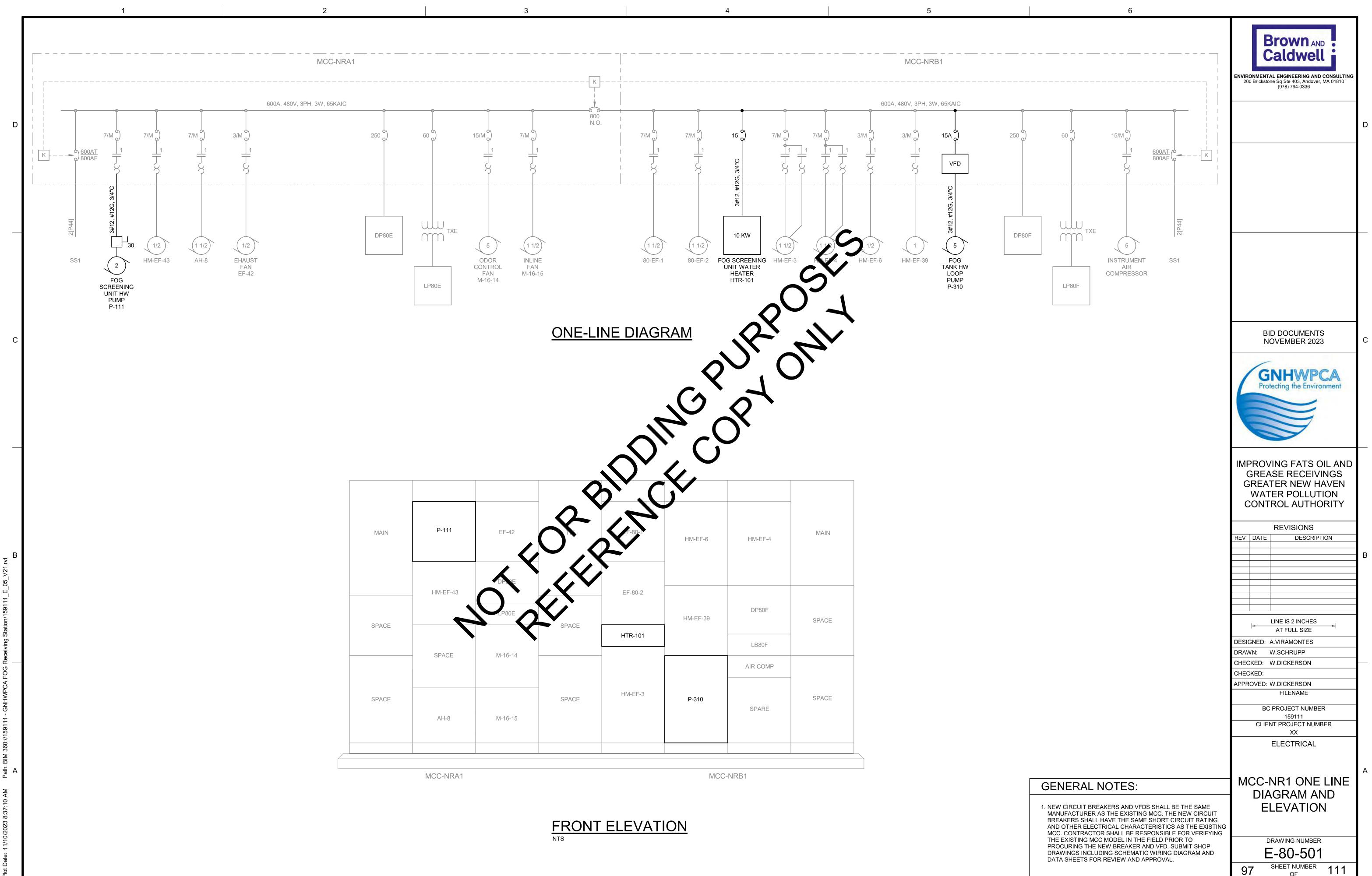
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GENERAL NOTES: Brown AND 1. PROVIDE LOCAL DISCONNECT SWITCH FOR MOTOR LOADS AS SHOWN ON THE PLAN. DISCONNECT SWITCHES SHALL BE INSTALLED IN PROXIMITY TO THE LOAD. COORDINATE LOCATIONS WITH FIELD CONDITIONS.

	ONMENT	AL ENGINEERING AND CONSULTING ne Sq Ste 403, Andover, MA 01810 (978) 794-0336	
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		D DOCUMENTS OVEMBER 2023	C
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		/ING FATS OIL AND	
(G	GREA GREA WAT	ASE RECEIVINGS TER NEW HAVEN TER POLLUTION ROL AUTHORITY	
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DESI	 ⊲ GNED:	LINE IS 2 INCHES AT FULL SIZE A.VIRAMONTES	
		J.HART W.DICKERSON	
	CKED:	W.DICKERSON FILENAME	
		PROJECT NUMBER 159111 NT PROJECT NUMBER	
		XX ELECTRICAL	
_		INISTRATION R ROOM PLAN	4
		DRAWING NUMBER	
	5	SHEET NUMBER 111	ĺ



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	KEYNOTES:				1
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	1. INSTALL LOCAL CONTROL STATION IN ACCESSIBLE LOCATION IN PROXIMITY TO ITS ASSOCIATED VALVE ACTUATOR. POWER			Brown AND	
	SUPPLY FOR LOCAL CONTROL STATION TO BE DERIVED		(Caldwell	
	FROM VALVE ACTUATOR. SEE P&ID SHEET E-80-103 FOR LOCAL VALVE CONTROLS TO BE MIMICKED AT LOCAL				
	CONTROL STATION.			AL ENGINEERING AND CONSULTING	
		_ 20	JU Bricksto	one Sq Ste 403, Andover, MA 01810 (978) 794-0336	
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DRY PO	LYMER L PANEL		Pro	INHWPCA	
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				/ING FATS OIL AND	
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				TER POLLUTION TROL AUTHORITY	
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35 36 36 37 15/3 HEAT EXCHANGER VALVE (V-304) 3#12, #12G, 3/4"C 2.00 2 0.00 41 2.00 2 0.00 40 41 70TALS 2 0.00	LCCATION: FIRST FLOOR ADMIN BUILDING MAILS: MLO BUS: 125A MOUNTNS: WAIL VOLTS: 480, 39, 30 SPARE FOR FOR <t< th=""><th>LCCATION: FIRST FLOOR ADMIN BUILDING VAL VOLTS: MO BUS: 123- NOTE: EXISTING FAMELBOARD VOLTS: 40, 30, 30/ VOLTS: 40, 30, 30/ VOLTS: 40, 30, 30/ TRIP/ NOTE: EXISTING FAMELBOARD CONDUIT AND CABLE LOAD PHASE LOAD FOLE VOLTS: 40, 30, 30/ TRIP/ 1 201 SPARE CONDUIT AND CABLE KVA A B C KVA KVA</th><th></th><th></th><th></th><th>PA</th><th>NEL</th><th>BOA</th><th>RD P</th><th>P-1</th><th></th><th></th><th></th><th></th></t<>	LCCATION: FIRST FLOOR ADMIN BUILDING VAL VOLTS: MO BUS: 123- NOTE: EXISTING FAMELBOARD VOLTS: 40, 30, 30/ VOLTS: 40, 30, 30/ VOLTS: 40, 30, 30/ TRIP/ NOTE: EXISTING FAMELBOARD CONDUIT AND CABLE LOAD PHASE LOAD FOLE VOLTS: 40, 30, 30/ TRIP/ 1 201 SPARE CONDUIT AND CABLE KVA A B C KVA				PA	NEL	BOA	RD P	P-1				
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TOTALS	TOTALS	TOTALS	39 15/3 //		3#12, #12G, 3/4"C			2	2		_	SPACE		\sim
			41						2	0.00			42	
CONNECTED LOAD: 90.00 KVA DEMAND LOAD: 72.00 KVA = 36.64 A FED FROM: MCC-NRA2 FED FROM: MCC-NRA2 FED FROM: MCC-NRA2	CONNECTED LOAD: 90.00 KVA = 88.84 A = 88.84 A FED FROM: MCC-NRAZ FED FROM: MCC-NRAZ FED FROM: MCC-NRAZ FED FROM: MCC-NRAZ	COMPETED LOAD: 10.00 KVA 200 K					30	30	30					
CONNECTED LOAD: 90.00 KVA [AMPS] 36.1] 36.1] 36.1] = 86.64 A FED FROM: MCC-NRA2	CONNECTED LOAD: 90.00 KVA [AMPS 35.1] 35.1] TED FROM: MCC-NRA2	COMPOSED LGAD: 12.00 KVA 14.1 18.1 18.1 19.1 19.1 19.1 19.1 19.1 19												
DEMANDIDAD: /200 KVA = 80.64 A PED FKOM: MCC-NKAZ	LEMANDICAL 200 NA = 20.04 A FEDEROR MICLARAZ	LUMALIAN PENTAN						I 36.1	36.1					
		NORPHINCE												



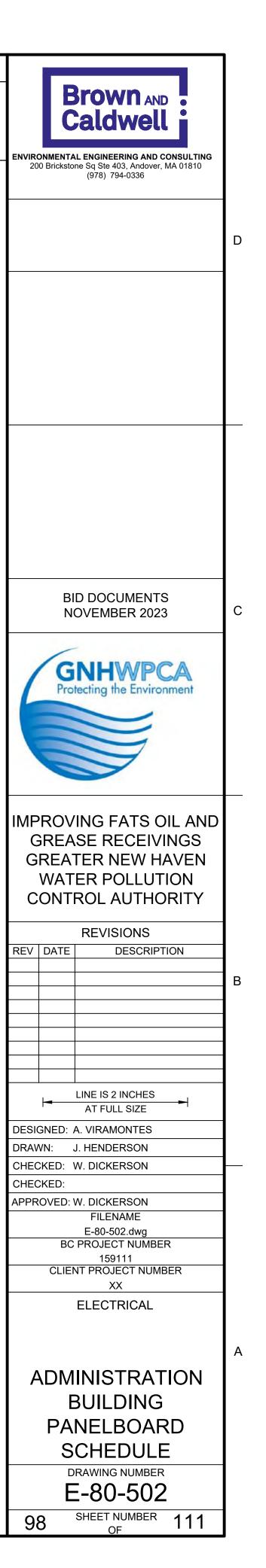
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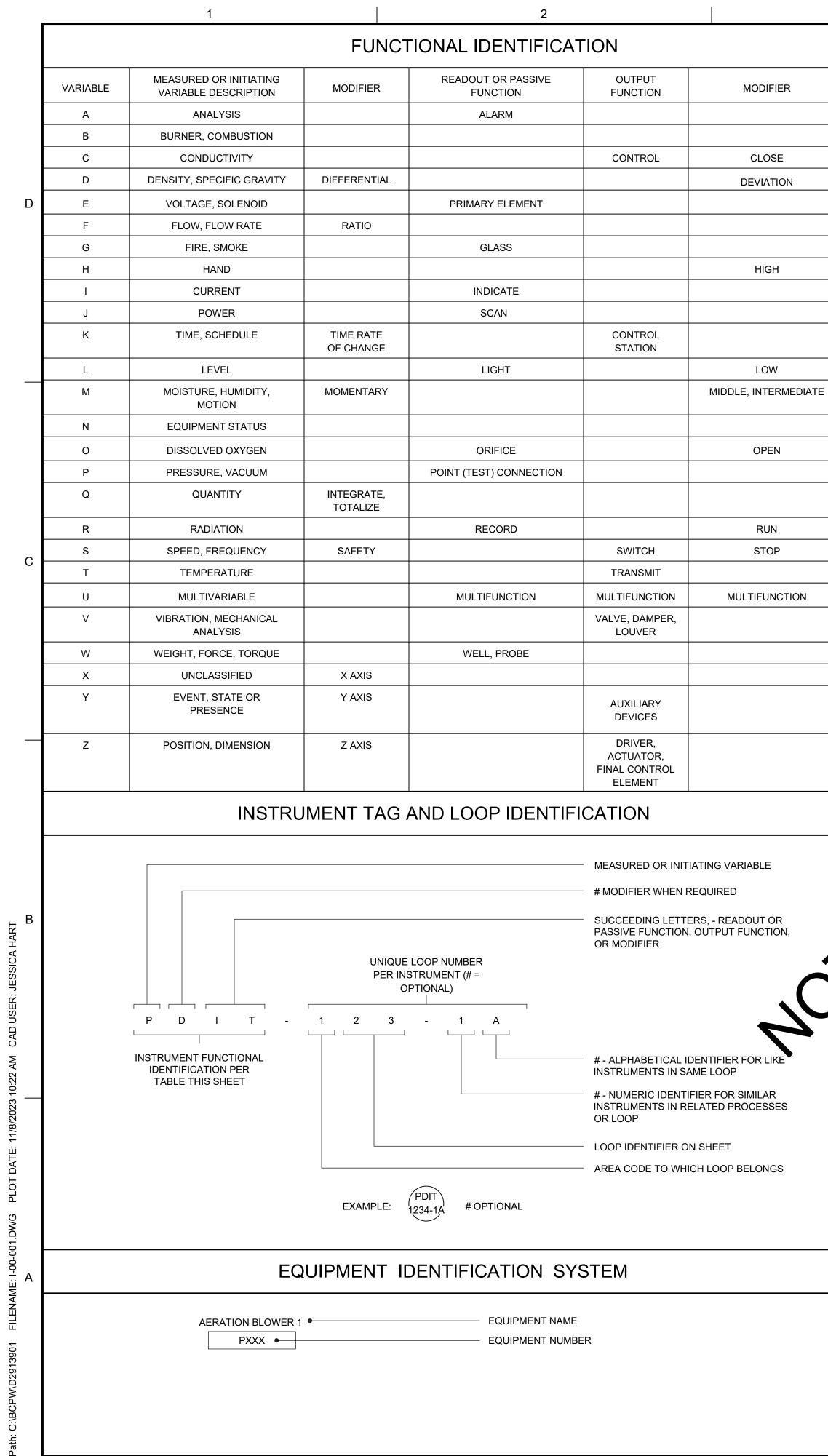
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GENERAL NOTES:

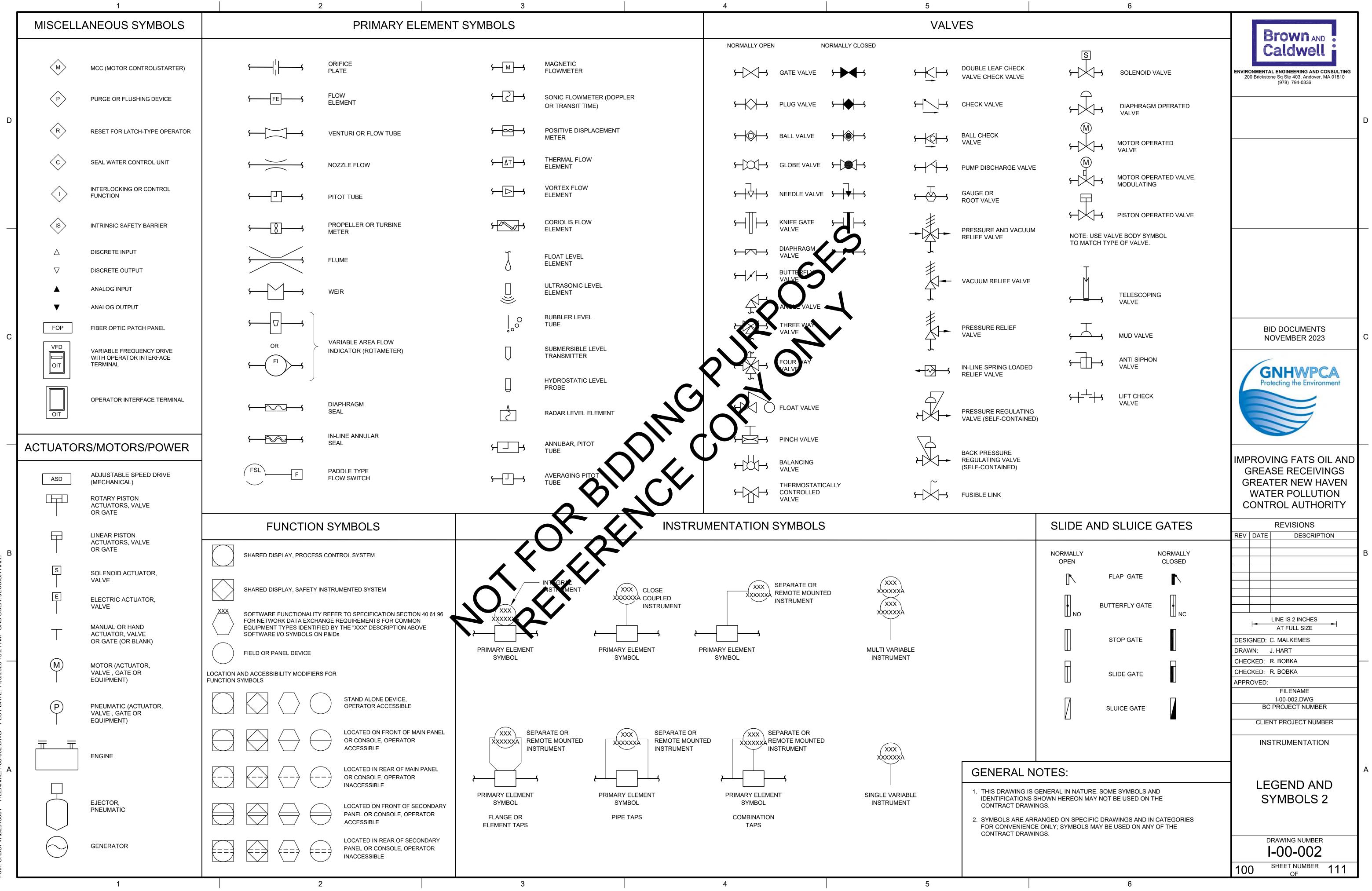
1. PROVIDE UPDATED TYPED CIRCUIT DIRECTORY FOR EXISTING PANELS.





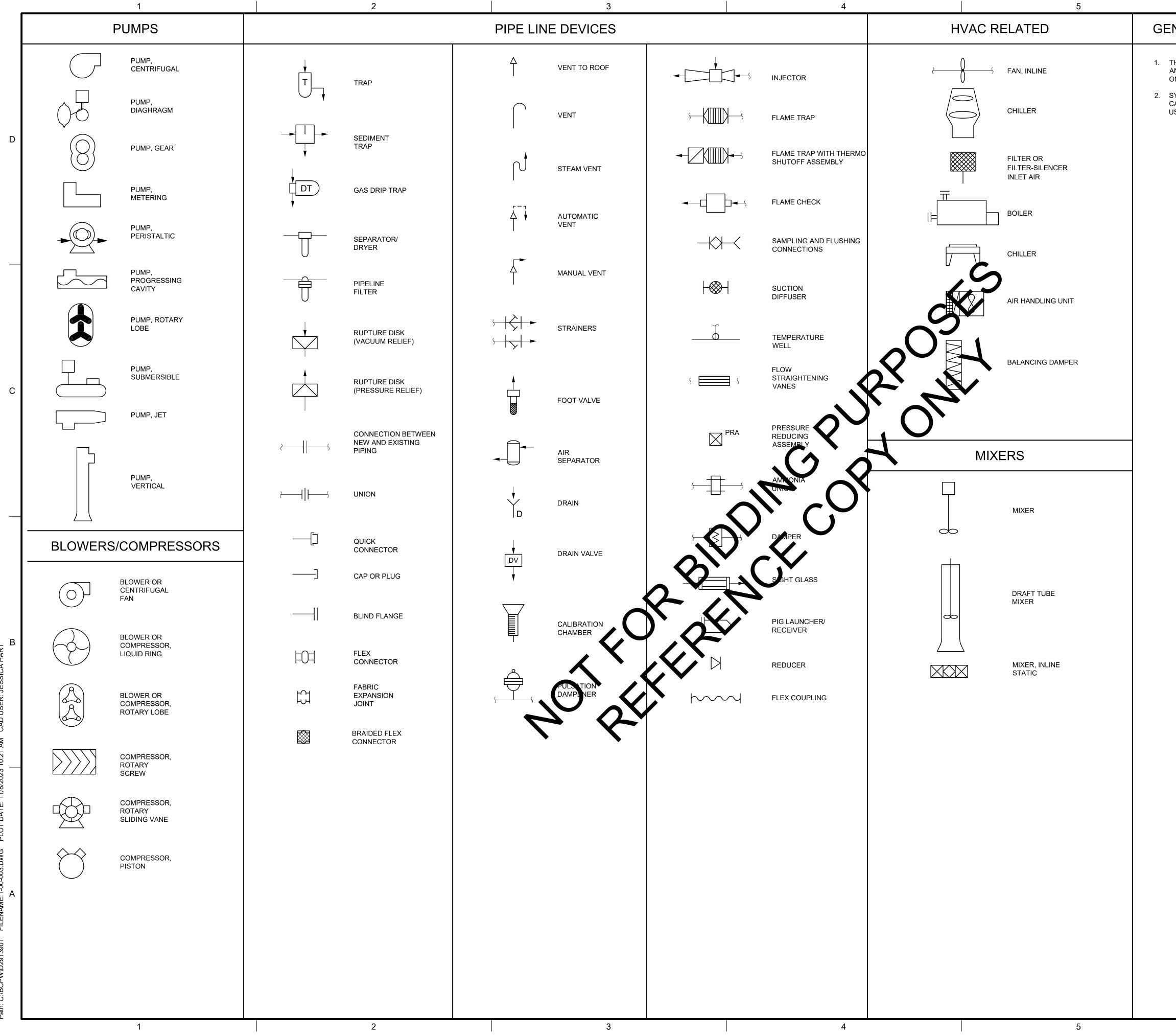
INSIR	RUMENT SIGNAL LINES	PROCESS LI	INES
— EN — EN — EN — I	EN — ETHERNET CAT CABLE		RIMARY PROCESS FLOW
	INSTRUMENT SUPPLY, PROCESS TAPS	→ NEW SE	CONDARY PROCESS FLOW
	PNEUMATIC SIGNAL		ILITY PROCESS FLOW
	— – ELECTRICAL SIGNAL (ANALOG OR DISCRETE)		IG PROCESS FLOW, EQUIPN NAL PATH (SCREENED)
-\$\$\$-	FIELDBUS (DEVICENET OR FOUNDATION)		ISTING CONNECTIONS
X	CAPILLARY TUBE OR FILLED SYSTEM	PROCES	SS AREA
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	ELECTROMAGNETIC OR SONIC SIGNAL (GUIDED)		
$\sim$ $\sim$	ELECTROMAGNETIC OR SONIC SIGNAL (UNGUIDED)	DDOCES	SS AND SIGNAL
<u> </u>			SYS1
-••	— MECHANICAL LINK	WHEN ANROLESS LINE CROSSES FROM DRAWING DRAWING NUMBERS NEED TO BE REFERENCED. A IS FUMPING NO A TANK ON A SEPARATE P&ID, SEE	AS AN EXAMPLE; A PROCES
<u> </u>			
·	ELECTRIC POWER SUPPLY 120 VAC 60 HZ UNLESS OTHERWISE		I-601-100 A
	NOTED. (e.g. ES-480 VAC)	s s	CAUSTIC SODA TORAGE TANK
>	- SERVICE AIR SUPPLY	PEDCESS DESCRIPTION OF	/J
>	INSTRUMENT QUALITY AR SUPPLY	WHERE LINE GOES TO/FROM	
>	— WATER SUPPLITUDE C3,ETC.	IF THERE ARE MULTIPLE LINES CROSSING THE SA DRAWINGS. IT IS ACCEPTABLE TO ADD A LETTER F	
TYPICAL IN	STRUMENT IDENTIFICATION	CONTRO	L AND MEASUF
	$\mathbf{O}^{\mathbf{v}}$		
	PANEL OCATION #	ACK ACKNOWLEDGE AM AUTO/MAN	OCA OCP
	$\nabla \langle \rangle$		OCP OL OP
	PANEL OCATION # EVACTIONAL IDENTIFICATION CONTROL AND MEASUREMENT	AM AUTO/MAN	OCP OL
	PANEL OCATION #	AM AUTO/MAN BYP BYPASS CL CLOSE	OCP OL OP OSC/L CKING PA
	PANEL OCATION # EVACTIONAL IDENTIFICATION CONTROL AND MEASUREMENT	AM       AUTO/MAN         BYP       BYPASS         CL       CLOSE         CL2       CHLORINE         CMAT       COMPUTER/MANUAL/AUTO/TRAC         COMB       COMBUSTIBLE GAS         CP       CONTROL POWER	OCP OL OP OSC/L CKING PA PAL PB
	PANEL OCATION # EXACTIONAL IDENTIFICATION CONTROL AND MEASUREMENT NOTATIONS #	AMAUTO/MANBYPBYPASSCLCLOSECL2CHLORINECMATCOMPUTER/MANUAL/AUTO/TRACCOMBCOMBUSTIBLE GASCPCONTROL POWERCONDCONDUCTIVITY	OCP OL OP OSC/L CKING PA PAL
	PANEL OCATION # EXACTIONAL IDENTIFICATION CONTROL AND MEASUREMENT NOTATIONS #	AM       AUTO/MAN         BYP       BYPASS         CL       CLOSE         CL2       CHLORINE         CMAT       COMPUTER/MANUAL/AUTO/TRAC         COMB       COMBUSTIBLE GAS         CP       CONTROL POWER	OCP OL OP OSC/L PA PAL PB pH POT
	PANEL OCATION # EXACTIONAL IDENTIFICATION CONTROL AND MEASUREMENT NOTATIONS # FUNCTION SYMBOL * PART OF VENDOR PACKAGE	AMAUTO/MANBYPBYPASSCLCLOSECL2CHLORINECMATCOMPUTER/MANUAL/AUTO/TRACCOMBCOMBUSTIBLE GASCPCONTROL POWERCONDCONDUCTIVITYDECDECREASEDODISSOLVED OXYGEN	CKING PA PAL PB PH POT RDY REV
	PANELVOCATION # FUNCTIONAL IDENTIFICATION CONTROL AND MEASUREMENT NOTATIONS # FUNCTION SYMBOL A A A A A A A A A A A A A	AMAUTO/MANBYPBYPASSCLCLOSECL2CHLORINECMATCOMPUTER/MANUAL/AUTO/TRACCOMBCOMBUSTIBLE GASCPCONTROL POWERCONDCONDUCTIVITYDECDECREASEDODISSOLVED OXYGENESPEMERGENCY STOP	CKING PA PAL PB pH POT RDY REV RNG
	PANEL OCATION # EXACTIONAL IDENTIFICATION CONTROL AND MEASUREMENT NOTATIONS # FUNCTION SYMBOL * PART OF VENDOR PACKAGE	AMAUTO/MANBYPBYPASSCLCLOSECL2CHLORINECMATCOMPUTER/MANUAL/AUTO/TRACCOMBCOMBUSTIBLE GASCPCONTROL POWERCONDCONDUCTIVITYDECDECREASEDODISSOLVED OXYGEN	CKING PA PAL PB PH POT RDY REV
LP2 1234 NETWORK T	PANELOCATION # PANELOCATION # CONTROL AND MEASUREMENT NOTATIONS # PART OF VENDOR PACKAGE LOOP NUMBER # = OPTIONAL TYPE	AMAUTO/MANBYPBYPASSCLCLOSECL2CHLORINECMATCOMPUTER/MANUAL/AUTO/TRACCOMBCOMBUSTIBLE GASCPCONTROL POWERCONDCONDUCTIVITYDECDECREASEDODISSOLVED OXYGENESPEMERGENCY STOPFWDFORWARD	CKING PA PAL PB PH POT RDY REV RNG ROF
LP2 LP2 LP2 LP2 LP2 LP2 LP2 LP2 LP2 LP2	PANELOCATION # PANELOCATION # CONTROL AND MEASUREMENT NOTATIONS # PART OF VENDOR PACKAGE LOOP NUMBER # = OPTIONAL TYPE	AMAUTO/MANBYPBYPASSCLCLOSECL2CHLORINECMATCOMPUTER/MANUAL/AUTO/TRACCOMBCOMBUSTIBLE GASCPCONTROL POWERCONDCONDUCTIVITYDECDECREASEDODISSOLVED OXYGENESPEMERGENCY STOPFWDFORWARDF/RFORWARD/REVERSE	CKING PA PAL PB PH POT RDY REV RNG ROF RST SO2 SP
LP2 1234 NETWORK T	PANELOCATION # PANELOCATION # CONTROL AND MEASUREMENT NOTATIONS # PART OF VENDOR PACKAGE LOOP NUMBER # = OPTIONAL TYPE	AMAUTO/MANBYPBYPASSCLCLOSECL2CHLORINECMATCOMPUTER/MANUAL/AUTO/TRACCOMBCOMBUSTIBLE GASCPCONTROL POWERCONDCONDUCTIVITYDECDECREASEDODISSOLVED OXYGENESPEMERGENCY STOPF/RFORWARDF/RFORWARD/REVERSEF/SFAST/SLOWHLOAHIGH/LOW/OFF/AUTOHOAHIGH/LOW/OFF/AUTO	CKING PA PAL PB PH POT RDY REV RNG ROF RST SO2
LP2 LP2 232 LP2 232 LP2 123 LP2 123 LP2 123 LP2 123 LP2 123 LP2 123 LP2 LP2 123 LP2 LP2 LP2 LP2 LP2 LP2 LP3 LP2 LP3 LP3 LP3 LP3 LP3 LP3 LP3 LP3 LP3 LP3	PANELOCATION # PANELOCATION # CONTROL AND MEASUREMENT NOTATIONS # PART OF VENDOR PACKAGE LOOP NUMBER # = OPTIONAL TYPE	AMAUTO/MANBYPBYPASSCLCLOSECL2CHLORINECMATCOMPUTER/MANUAL/AUTO/TRACCOMBCOMBUSTIBLE GASCPCONTROL POWERCONDCONDUCTIVITYDECDECREASEDODISSOLVED OXYGENESPEMERGENCY STOPF/RFORWARDF/RFORWARD/REVERSEF/SFAST/SLOW	CKING PA PAL PB PH POT RDY REV RNG ROF RST SO2 SP ST TCP
NETWORK T FOUNDATION F DEVICENET ETHERNET PROFIBUS N PROFINET	PANELOCATION # PANELOCATION # CONTROL AND MEASUREMENT NOTATIONS # PART OF VENDOR PACKAGE LOOP NUMBER # = OPTIONAL TYPE	AMAUTO/MANBYPBYPASSCLCLOSECL2CHLORINECMATCOMPUTER/MANUAL/AUTO/TRACCOMBCOMBUSTIBLE GASCPCONTROL POWERCONDCONDUCTIVITYDECDECREASEDODISSOLVED OXYGENESPEMERGENCY STOPFWDFORWARDF/RFORWARD/REVERSEF/SFAST/SLOWHLOAHIGH/LOW/OFF/AUTOHOALHAND/OFF/AUTO/LOCALHORHAND/OFF/REMOTE	OCP OL OP OSC/L PA PAL PB pH POT RDY REV RNG ROF RST SO2 SP ST
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NETWORK T FOUNDATION I DEVICENET ETHERNET PROFIBUS PROFINET RTU MODBUS RTU ICP MODBUS TCP CONTROL INDU PROTOCOL	PANELVOCATION # TVICTIONAL IDENTIFICATION CONTROL AND MEASUREMENT NOTATIONS # FUNCTION SYMBOL PART OF VENDOR PACKAGE LOOP NUMBER # = OPTIONAL TYPE FIELDBUS	AMAUTO/MANBYPBYPASSCLCLOSECL2CHLORINECMATCOMPUTER/MANUAL/AUTO/TRACCOMBCOMBUSTIBLE GASCPCONTROL POWERCONDCONDUCTIVITYDECDECREASEDODISSOLVED OXYGENESPEMERGENCY STOPFWDFORWARDF/RFORWARD/REVERSEF/SFAST/SLOWHLOAHIGH/LOW/OFF/AUTOHOALHAND/OFF/AUTOHORHAND/OFF/REMOTEJOAJOG/OFF/AUTOLLLEAD/LAGLORLOCAL/OFF/REMOTELOSLOCKOUT STOP	CKING CKING CKING CKING PA PAL PB PH POT RDY REV RNG ROF RST SO2 SP ST TCP T/S
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IP2         IP3         IP2         IP3         IP4         I	PANELVOCATION # TVICTIONAL IDENTIFICATION CONTROL AND MEASUREMENT NOTATIONS # FUNCTION SYMBOL PART OF VENDOR PACKAGE LOOP NUMBER # = OPTIONAL TYPE FIELDBUS	AMAUTO/MANBYPBYPASSCLCLOSECL2CHLORINECMATCOMPUTER/MANUAL/AUTO/TRACCOMBCOMBUSTIBLE GASCPCONTROL POWERCONDCONDUCTIVITYDECDECREASEDODISSOLVED OXYGENESPEMERGENCY STOPFWDFORWARDF/RFORWARD/REVERSEF/SFAST/SLOWHLOAHIGH/LOW/OFF/AUTOHOALHAND/OFF/AUTOHORHAND/OFF/REMOTEJOAJOG/OFF/AUTOLLLEAD/LAGLORLOCAL/OFF/REMOTELOSLOCKOUT STOP	CKING CKING CKING CKING PA PAL PB PH POT RDY REV RNG ROF RST SO2 SP ST TCP T/S
N PROFINET PROFIBUS N PROFINET -RTU MODBUS RTU -TCP MODBUS TCP IP CONTROL INDU PROTOCOL	PANELVOCATION # TVICTIONAL IDENTIFICATION CONTROL AND MEASUREMENT NOTATIONS # FUNCTION SYMBOL PART OF VENDOR PACKAGE LOOP NUMBER # = OPTIONAL TYPE FIELDBUS	AMAUTO/MANBYPBYPASSCLCLOSECL2CHLORINECMATCOMPUTER/MANUAL/AUTO/TRACCOMBCOMBUSTIBLE GASCPCONTROL POWERCONDCONDUCTIVITYDECDECREASEDODISSOLVED OXYGENESPEMERGENCY STOPFWDFORWARDF/RFORWARD/REVERSEF/SFAST/SLOWHLOAHIGH/LOW/OFF/AUTOHOALHAND/OFF/AUTOHORHAND/OFF/REMOTEJOAJOG/OFF/AUTOLLLEAD/LAGLORLOCAL/OFF/REMOTELOSLOCKOUT STOP	CKING CKING CKING CKING PA PAL PB PH POT RDY REV RNG ROF RST SO2 SP ST TCP T/S

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	GENERAL NOTES:	Brown AND .	
W	<ol> <li>THIS DRAWING IS GENERAL IN NATURE. SOME SYMBOLS AND IDENTIFICATIONS SHOWN HEREON MAY NOT BE USED ON THE CONTRACT DRAWINGS.</li> <li>SYMBOLS ARE ARRANGED ON SPECIFIC DRAWINGS AND IN CATEGORIES FOR CONVENIENCE ONLY; SYMBOLS MAY BE USED ON ANY OF THE CONTRACT DRAWINGS.</li> </ol>	ENVIRONMENTAL ENGINEERING AND CONSULTING 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	
PMENT			D
	A ROSS REFERENCE A		
	SHEET WHERE LINE CONTINUES TO/FROM		
   /   /   	A I-602-100 CAUSTIC SODA PUMP P&ID I-601-100	BID DOCUMENTS NOVEMBER 2023	С
	PROCESS DESCRIPTION OF WHERE LINE GOES TO/FROM	GRHWPCA Protecting the Environment	
	OPEN/CLOSE/AUTO PURGE VALVE OP/CL/PC OVERLOAD OPEN	IMPROVING FATS OIL AND GREASE RECEIVINGS GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY	
	OPEN/STOP/CLOSE WITH LOCAL/REMOTE SELECT PAUSE LOW PRESSURE PUSH BUTTON pH	REVISIONS          REV       DATE       DESCRIPTION         Image: Constraint of the second secon	В
i	POTENTIOMETER READY REVERSE RUNNING REVERSE/OFF/FORWARD RESET	LINE IS 2 INCHES AT FULL SIZE	
	SULFUR DIOXIDE STOP START	DESIGNED: C. MALKEMES DRAWN: J. HART CHECKED: R. BOBKA CHECKED: R. BOBKA APPROVED:	
	TEST/CLOSE/PC TEST/NORMAL/SILENCE TROUBLE	FILENAME I-00-001.DWG BC PROJECT NUMBER CLIENT PROJECT NUMBER	
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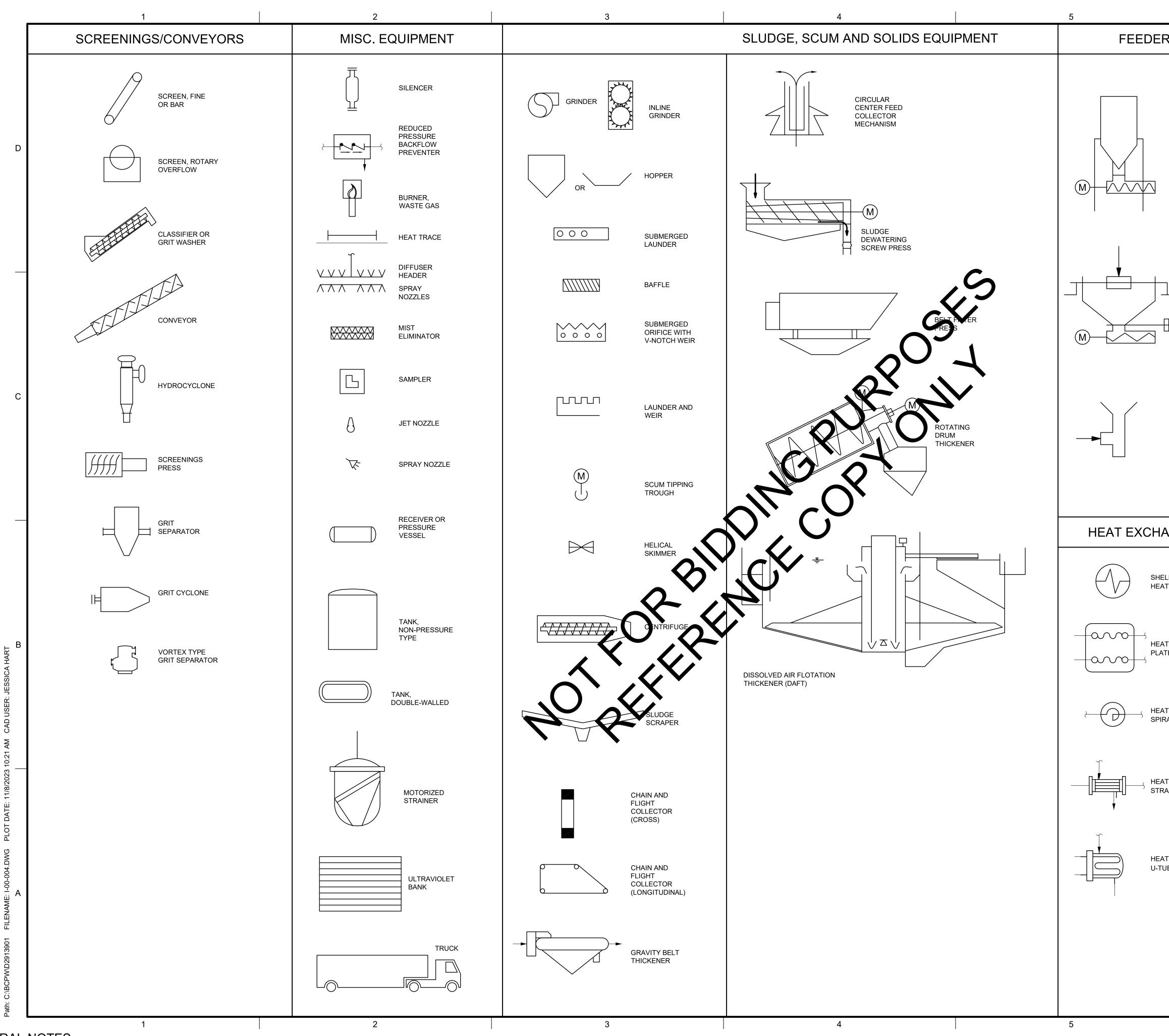


## GENERAL NOTES:

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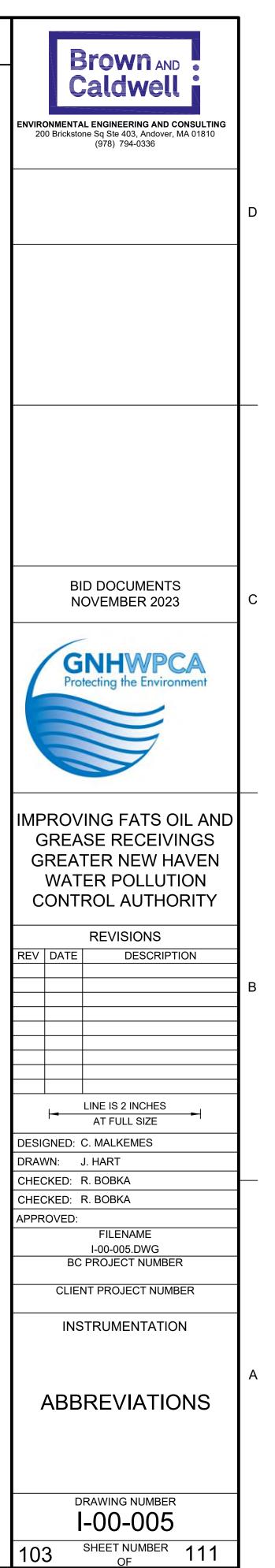
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RS	GENERAL NOTES:	Brown AND .	
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MICROSAND FEEDER			
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		BID DOCUMENTS NOVEMBER 2023	С
INJECTOR		GRHWPCA Protecting the Environment	
ANGERS		IMPROVING FATS OIL AND	
LL AND TUBE T EXCHANGER		GREASE RECEIVINGS GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY	
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T EXCHANGER RAL TYPE		LINE IS 2 INCHES AT FULL SIZE	
T EXCHANGER AIGHT TUBE TYPE		DRAWN: J. HART CHECKED: R. BOBKA CHECKED: R. BOBKA APPROVED: FILENAME I-00-004.DWG BC PROJECT NUMBER	
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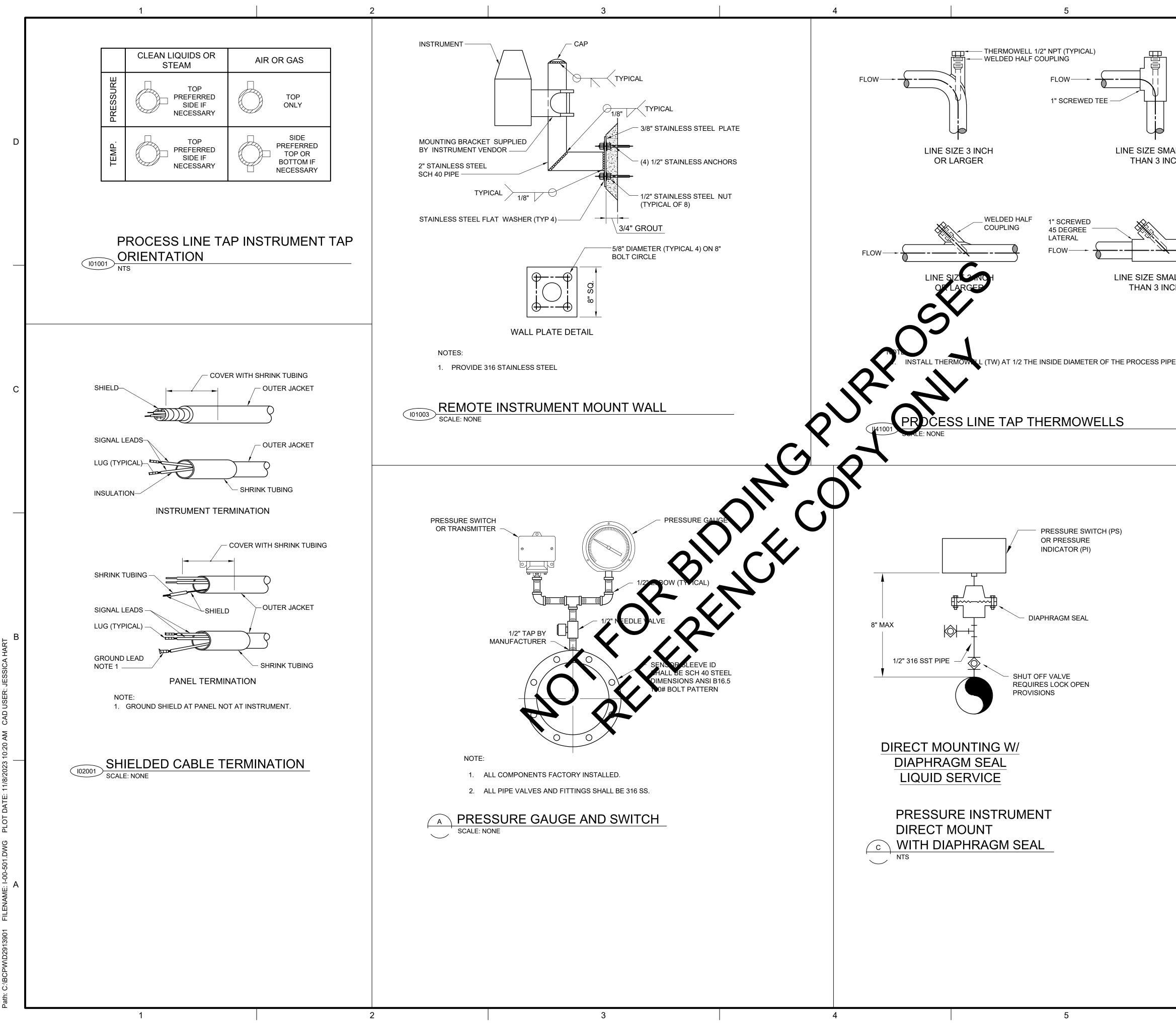
	PIPING SYSTEMS	
ABBREVIATION SERVICE	ABBREVIATION SERVICE	ABBREVIATION SERVICE
A       AERATION AIR         AA       AGITATION AIR         AFE       AIR FLOTATION EFFLUENT         AL       ALUM         AW       APPLIED WATER         B       BRINE         BA       BACKWASH AIR         BC       BOFILTER CICULATION         BCTL       BOILER CHEMICAL TREATMENT, LOW PRESSURE         BDL       BOILER CHEMICAL TREATMENT, MEDIUM PRESSURE         BDL       BOILER BLOWDOWN, LOW PRESSURE         BFE       BIOFILTER EFFLUENT         BFE       BIOFILTER FEEDWATER, LOW PRESSURE         BFM       BIOFILTER FEEDWATER, LOW PRESSURE         BFM       BIOFILTER FEEDWATER, MEDIUM PRESSURE	HHOHHIGH PRESSURE HYDRAULIC OILHRRHEAT RESERVOIR RETURNHRSHEAT RESERVOIR SUPPLYHRWRECIRCULATING POTABLE HOT WATERHSGHIGH PRESSURE SLUDGE GASHWPOTABLE HOT WATERHWRLOW TEMPERATURE HEATING RETURNHWSLOW TEMPERATURE HEATING SUPPLYIIAINSTRUMENT AIRJJWRJWRJACKET WATER RETURN	SA       SERVICE AIR         SCR       STEAM CLEAN RINSE         SCR       STEAM CLEAN RINSE         SCS       STEAM CLEAN SUPPLY         SD       SANITARY DRAIN         SDG       SULFUR DIOXIDE GAS         SDL       SULFUR DIOXIDE LIQUID         SDS       SULFUR DIOXIDE SOLUTION         SDV       SULPHUR DIOXIDE VACUUM         SE       SECONDARY EFFLUENT         SEP       SEPTAGE         SN       SUPERNATANT         SS       SECONDARY SLUDGE         SSC       SECONDARY SCUM         STA       STARTING AIR         STD       STORM DRAIN
C         CCW       CONDENSER COOLING WATER         CD       CHEMICAL DRAIN         CEN       CENTRATE         CF       CENTRIFUGE FEED         CL       CONDENSATE, LOW PRESSURE         CLG       CHLORINE GAS         CLL       CHLORINE LIQUID         CLS       CHLORINE SOLUTION         CLV       CHLORINE VACUUM         CM       CONDENSATE, MEDIUM PRESSURE         CS       CIRCULATING SLUDGE         CSO       CAUSTIC SODA         CWR       CHILLED WATER RETURN         CWS       CHILLED WATER SUPPLY	JWS JACKET WATER SUPPLY          JWS       JACKET WATER SUPPLY         L       LOR       LUBE OIL RETURN         LOS       LUBE OIL SUPPLY         LOW       LUBE OIL WASTE         LSG       LOW PRESSURE SLUDGE GAS         M       MIXED GAS         ML       MIXED LIQUOR         MSG       MEDIUM PRESSURE SLUDGE GAS	STML       STEAM, LOW PRESSURE         STMM       STEAM, MEDIUM PRESSURE         I       I         TD       TANK DRAIN         TE       THICKENER EFFLUENT         THS       THICKENER OVERFLOW         TS       TRANSPER SLUDGE         TSC       THICKENED SCUM         TWAS       TNICKENED WASTE ACTIVATED SLUDGE         Y       Y
D       DRAIN         DIW       DEIONIZED WATER         DS       DIGESTED SLUDGE         DSF       DIESEL FUEL         DSS       SCREENED DIGESTED SLUDGE         DW       DISTILLED WATER         E       E         EE       ENGINE EXHAUST         ES       EQUALIZED SLUDGE         F       FLOAT         FA       FOUL AIR         FC       FERRIC CHLORIDE	MTWR MTWS       MEDIUM TEMPERATURE HEATING RETURN MEDIUM TEMPERATURE HEATING SUPPLY         N       NG         NG       NATURAL GAS         Q       OC         OC       ODOR CONTROL OF         OF       OVERFLOW OLP         P       OXYGEN LOW PRESSURE	V VENT VACUUM VBCUUM VP PETROLEUM VENT VSL STEAM VENT, LOW PRESSURE VSM TEAM VENT, MEDIUM PRESSURE VSM WASTE ACTIVATED SLUDGE WAS WASTE MIXED LIQUOR 1 1W POTABLE WATER (CITY WATER)
FCFERRIC CHLORIDEFLTFILTRATEFOFUEL OILFOGFATS, OILS, GREASEFORFUEL OIL RETURNFOSFUEL OIL SUPPLYFSFLOTATION SLUDGEFWFILTERED WATERGGASGASGASOLINEGASGAS CIRCULATIONGRGRIT	PDPUMPED DRAINAGEPEPRIMARY EFFLUENTPOLPOLYMERPSPRIMARY SLUDGEPSCPRIMARY SCUMBRASRASRETURNACTIVATED SLUDGERSRAW SEWAGERWRAVI WATERRWPBAINWATER IPERWRREDLAINED WATER	1WS       POTABLE SOFT WATER         2       2         2W       NONPOTABLE CITY WATER         2WHP       NO. 2 WATER HIGH PRESSURE         2WL       LANDSCAPE IRRIGATION         2WS       SOFTENED NONPOTABLE CITY WATER         3       3W         3W       NO.3 WATER (SECONDARY EFFLUENT)         3WHP       NO. 3 WATER HIGH PRESSURE         3WLC       NO. 3 WATER LOW PRESSURE CHLORINATED         3WLP       NO. 3 WATER LOW PRESSURE
A     AERATOR     E       A     AERATOR     E       ACC     AIR CONDITION COIL     EB       ACU     AIR CONDITIONING UNIT     EG       AD     AIR DRYER     EPR       AF     AIR FILTER     E	ENGINE GENERATOR MOULEMEEMISCELLANEVAPORATORMIEMISCELLAN	JWLF     NO. 3 WATER       3WS     NO. 3 SPRAY WATER       T     T       T     TANK       ONTROL CENTER     TBN       NEOUS ELECTRICAL EQUIPMENT     TCV       NEOUS INSTRUMENTATION     TFR       T     TANSFORMER       PMENT     TM
AHC       AIR HANDLING UNIT W/COIL       E         AHU       AIR HANDLING UNIT       F         ASC       ADJUSTABLE SPEED CONTROL       F         ASD       ADJUSTABLE SPEED DRIVE       FLC         ATS       AUTOMATIC TRANSFER SWITCH       FL         B       BLOWER       FUR         BFP       BELT FILTER PRESS       G         BLR       BOILER       G	FAN FLOCCULATON FLOCCULATON FILTER FILTER FURNACEMME MOP MOTOR OF MSP MUX MUX MULTIPLEX MX MX MZ MULTIZONE MZ OCFURNACEOORTODOR REM	NEOUS MECHANICAL EQUIPMENT TRS TRANSFER SWITCH PERATOR ARTER PANEL <u>U</u> KER UH UNIT HEATER
BNRBURNER BP BACKFLOW PREVENTER BSNGDR GDR GTCCCILHCCOILHCDRCONDENSOR CFRHEXCFRCHEMICAL FEEDER CHEMICAL FEEDERHOPCOLCOLLECTOR COMMINUTORHPUCONCONVEYOR CONVEYORHTTCPCOMPRESSOR 	AND BRAN PC PROCESS HOIST PEJ PNEUMATION HEAT EXCHANGER PLC PROGRAMI HYDRAULIC OPERATOR PNL PANEL	
CV     CONTROL VALVE       CYL     CYLINDER       D     L       DIS     DISTRIBUTOR       DPR     DAMPER       DS     DISCONNECT SWITCH       DU     DRIVE UNIT	INJECTOR SCN SCREEN (B SCR SCRUBBEF SEP SEPARATO LOUVER SLR SILENCER SMP SAMPLER SS SAND SEP/ ST STEAM TR/ SUB SUBSTATIO SWBD SWITCHBO SWGR SWITCHGE	ARATOR AP DN DARD

## **GENERAL NOTES:**

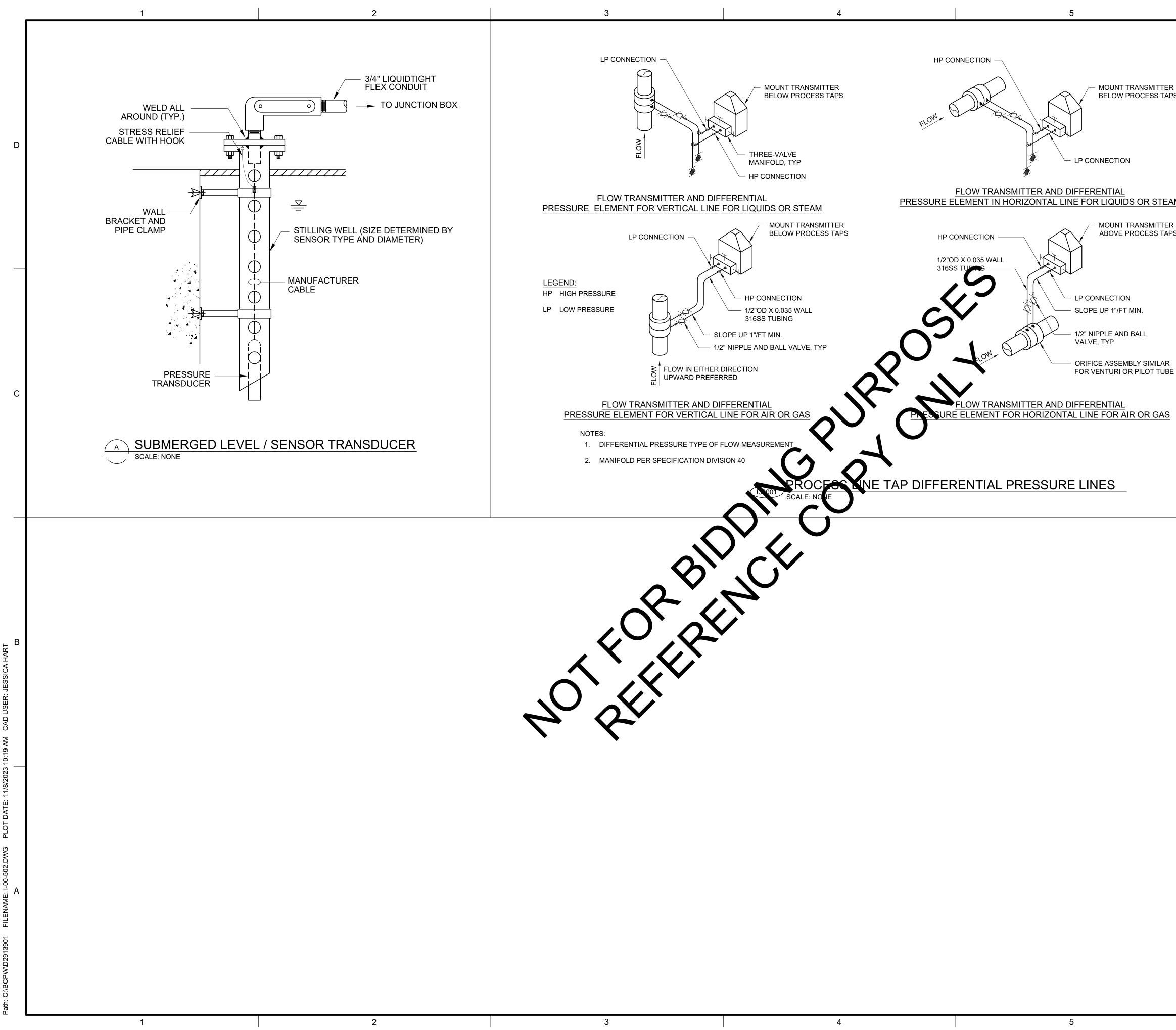
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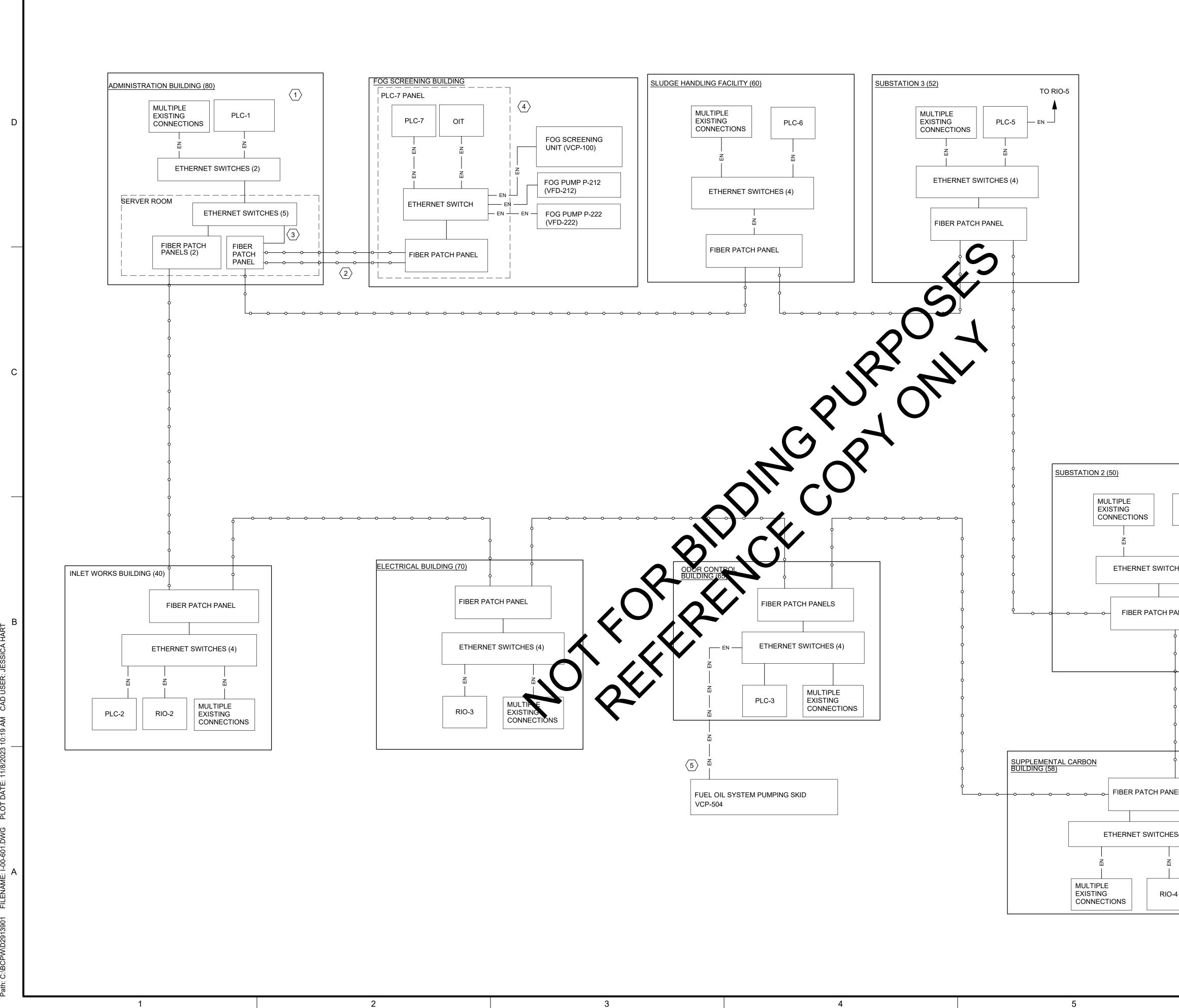




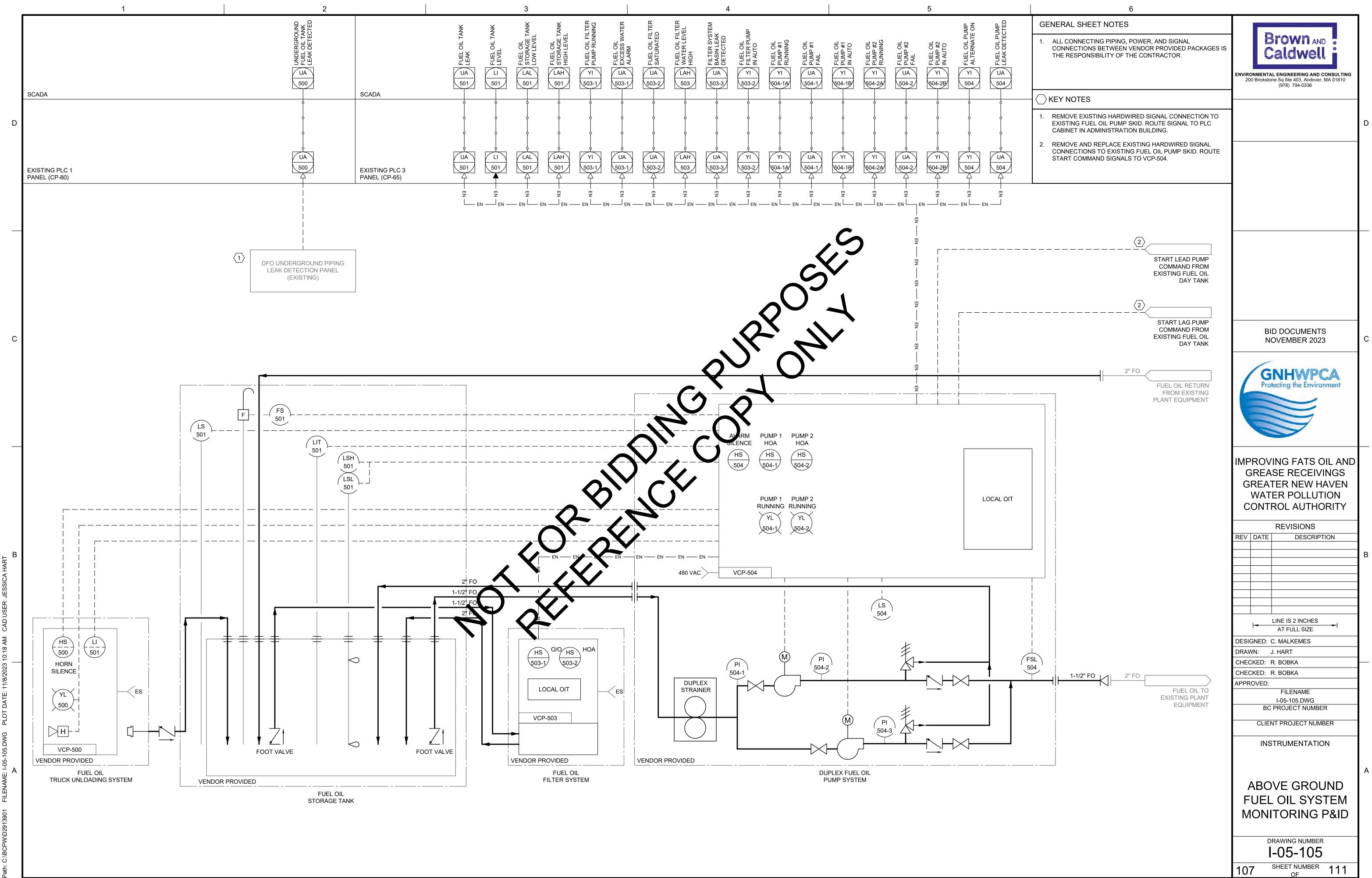
	Brown AND Caldwell Environmental engineering and consulting 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	
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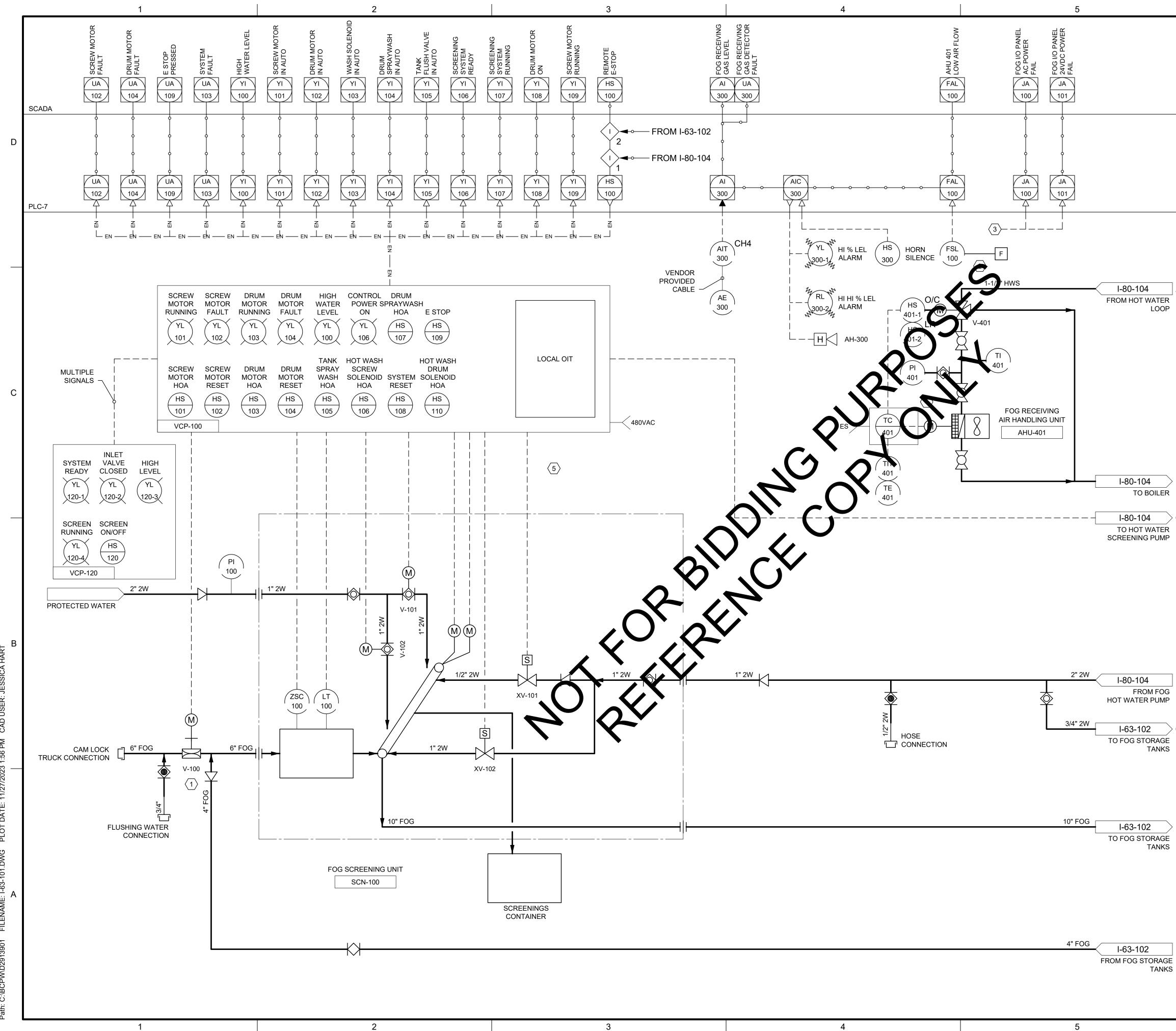


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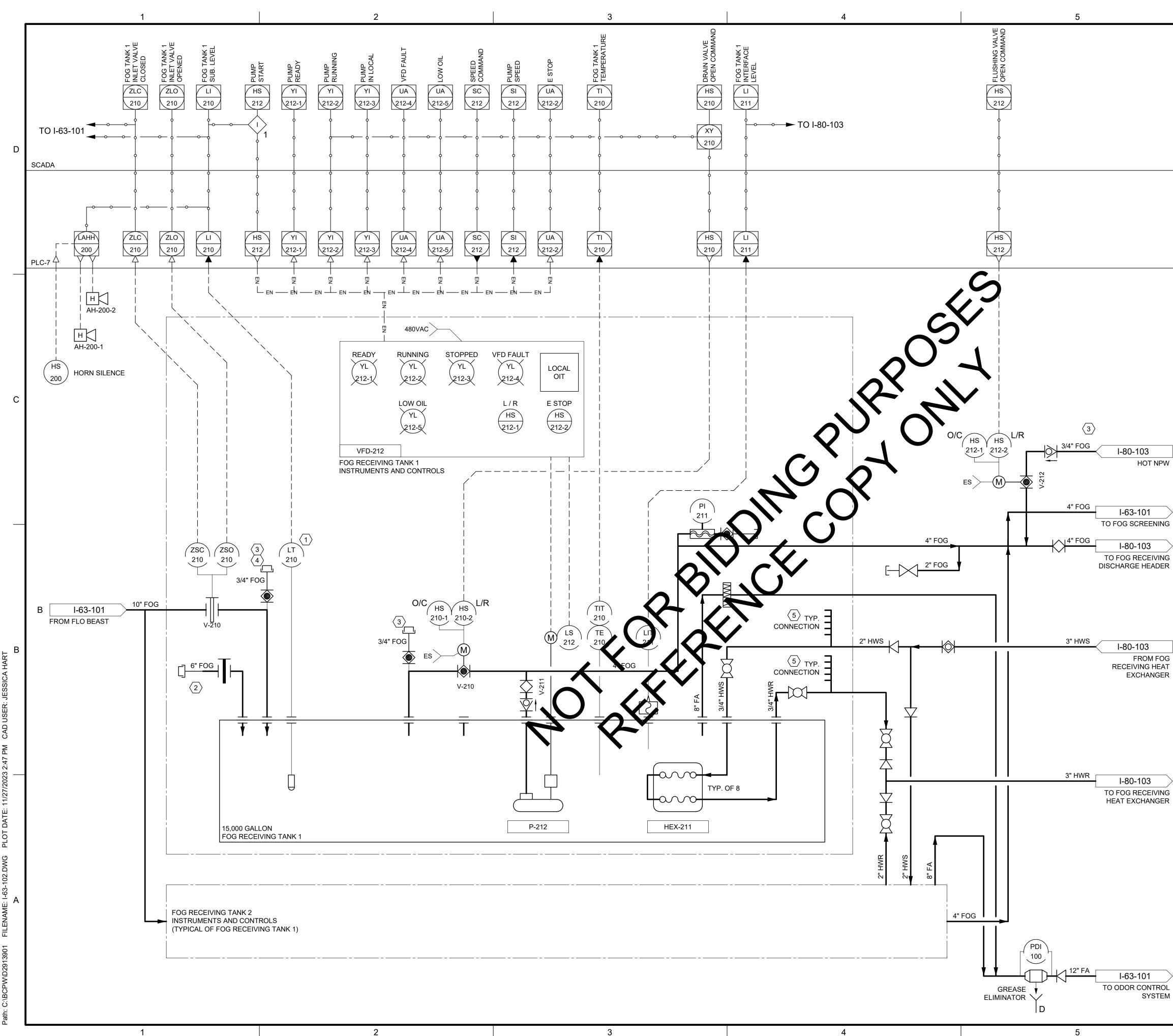
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	GENERAL SHEET NOTES		
	1. BLOCK DIAGRAM ONLY SHOWS A BASIC REPRESENTATION OF PLANT NETWORK EQUIPMENT NEEDED TO COMPLETE THE CONTRACTED WORK AND IS NOT INTENDED TO PROVIDE EXISTING CABLE SIZES AND ROUTES.	Brown AND Caldwell	
		200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	
	KEY NOTES <ol> <li>ADD SIGNAL WIRING BETWEEN PLC-1 AND NEW EQUIPMENT</li> </ol>		
	AS SHOWN ON DRAWINGS I-05-105, I-80-103, AND I-80-104. AUTHORITY'S SYSTEM INTEGRATOR TO INSTALL EQUIPMENT IN EXISTING PLC PANEL TO INTERFACE WITH PLC.		D
	2. INSTALL 2, 6 MULTIMODE PAIR CABLES BETWEEN NEW FOG BUILDING AND EXISTING NETWORK SERVER ROOM IN ADMINISTRATION BUILDING 80. INSTALL NEW PATCH PANEL IN SERVER ROOM.		
	3. PROVIDE 4 MULTIMODE FIBER PATCH CABLES TO CONNECT TO NEW FIBER OPTIC PATCH PANEL TO EXISTING NETWORK HARDWARE.		
	4. NETWORK EQUIPMENT SHOWN IN NEW FOG RECEIVING BUILDING TO BE PROVIDED BY THE AUTHORITY'S SYSTEM INTEGRATOR IN NEW PLC PANEL.		
	5. ADD SIGNAL WIRING BETWEEN PLC-3 AND NEW EQUIPMENT AS SHOWN ON DRAWING I-05-105. AUTHORITY'S SYSTEM INTEGRATOR TO INSTALL EQUIPMENT IN EXISTING PLC PANEL TO INTERFACE WITH PLC.		
	SHEET LEGEND		
	FIBER OPTIC PATCH CABLE		
	— EN — EN — EN — ETHERNET CAT CABLE		
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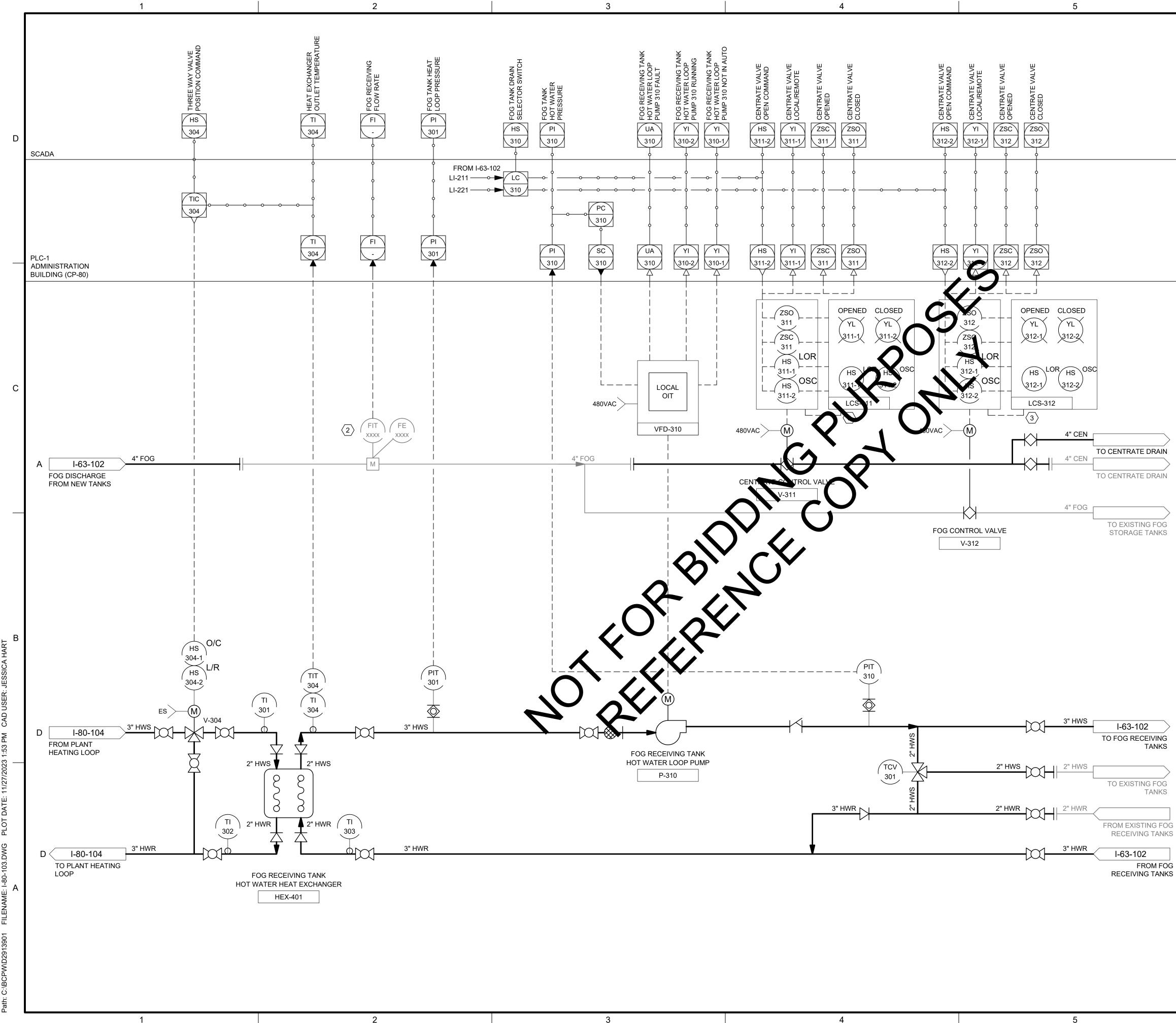


FROM FOG STORAGE

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	GENERAL SHEET NOTES		
	1. POWER FOR FOG SCREENING UNIT DRIVE MOTORS, VALVES, INSTRUMENTS, AND SOLENOID VALVES IS DERIVED FROM THE FOG SCREENING UNIT VENDOR CONTROL PANEL VCP-100.	Brown AND Caldwell ENVIRONMENTAL ENGINEERING AND CONSULTING 200 Brickstone Sq Ste 403, Andover, MA 01810	
		(978) 794-0336	
	1. MOTORIZED INLET VALVE TO BE SUPPLIED BY SCREENING		
	UNIT VENDOR. 2. FLOW SWITCH INSTALLED IN AHU-401 INLET DUCT AND SET		D
	TO ALARM WHEN AIR FLOW DROPS BELOW 1500CFM.		
	3. SIGNALS DERIVED FROM RELAYS INTERNAL TO FOG RECEIVING I/O PANEL.		
	4. AIR HANDLING UNITS STARTER AND INTERLOCKS OUTLINED IN SPECIFICATION SECTION 23 81 00. MOTORIZED THREE-WAY VALVE V-401 IS TO BE POWERED AND CONTROLLED BY AIR HANDLING UNIT 24VDC CONTROL POWER.		
A	5. ALL POWER AND SIGNAL CONNECTIONS BETWEEN VENDOR CONTROL PANEL VCP-100 AND FOG SCREENING UNIT SCN-100 ARE THE RESPONSIBILITY OF THE CONTRACTOR.		
	INTERLOCKS		
	1. FOG SCREENING UNIT TO STOP IF HOT WATER PUMP IS IN FAULT.		
	2. FOG SCREENING UNIT TO STOP IF: FOG STORAGE TANK INLET VALVE IS OPEN AND	BID DOCUMENTS	
	CORRESPONDING HIGH LEVEL ALARM IS ACTIVE FOR THE FOG STORAGE TANK.	NOVEMBER 2023	С
	BOTH FOG INLET VALVES ARE CLOSED.	GNHWPCA	
		Protecting the Environment	
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		DESIGNED: C. MALKEMES DRAWN: J. HART	
		CHECKED: R. BOBKA CHECKED: R. BOBKA	
		APPROVED:	
		FILENAME I-63-101.DWG BC PROJECT NUMBER	
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	GENERAL SHEET NOTES		
	1. VALVES, INSTRUMENTS, PUMPS, AND PUMP CONTROLS FOR FOG RECEIVING TANK 1 ARE TYPICAL FOR FOG RECEIVING TANK 2.	ENVIRONMENTAL ENGINEERING AND CONSULTING 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	
		(976) 794-0350	
	1. A HIGH HIGH LEVEL ALARM CONDITION SENSED BY LT-210 WILL INITIATE AN AUDIBLE HORN INSIDE AND OUTSIDE OF THE FOG RECEIVING BUILDING. THE SAME AUDIBLE ALARMS INSIDE AND OUTSIDE OF THE FOG RECEIVING BUILDING WILL BE INITIATED BY LT-220 FOR FOG RECEIVING TANK 2.		D
	<ol> <li>6" PIPE STUB WITH GROOVED PIPE CAP ONLY INSTALLED FOR FOG RECEIVING TANK 1.</li> </ol>		
	3. FLUSHING WATER CONNECTION.		
	4. FLUSHING CONNECTION FOR FOG TANK 1 ONLY.		
	5. 3/4" HWS AND 3/4" HWR LINES TYPICAL FOR 8 HEAT EXCHANGER CONNECTIONS. ONE SHOWN FOR CLARITY.		
	INTERLOCKS		
	1. A LOW LOW LEVEL ALARM CONDITION SENSED BY LT-210 WILL PREVENT THE OPERATION OF PMP-212. A LOW LOW LEVEL ALARM CONDITION SENSED BY LT-220 WILL PREVENT THE OPERATION OF PMP-222.		
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C		GNHWPCA Protecting the Environment	
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		CLIENT PROJECT NUMBER	
		INSTRUMENTATION	
		FOG STORAGE AND PUMPING P&ID	А
		DRAWING NUMBER I-63-102 SHEET NUMBER 111	
		109 SHEET NUMBER 111	



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GENERAL SHEET NOTES	Brown AND .	
EXCHANGERS HEX-211 AND HEX-221 IN FOG RECEIVING TANKS.	Caldwell	
	ENVIRONMENTAL ENGINEERING AND CONSULTING 200 Brickstone Sq Ste 403, Andover, MA 01810 (978) 794-0336	
1. AS THE INTERFACE LEVEL DROPS AS MEASURED BY LIT-211 OR LIT-221 IN THE FOG RECEIVING TANK, LC-310 WILL COMMAND V-312 TO OPEN AND V-311 TO CLOSE.		D
2. PROVIDE ALL WIRING AND CONDUIT TO TIE EXISTING FLOW METER SIGNAL INTO EXISTING PLC.		
<ol> <li>POWER SUPPLY FOR LOCAL CONTROL STATION TO BE DERIVED FROM ACTUATOR.</li> </ol>		
	BID DOCUMENTS	6
	NOVEMBER 2023	С
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	FOG DISCHARGE AND PROCESS PIPING P&ID	
	drawing number <b>I-80-103</b>	
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