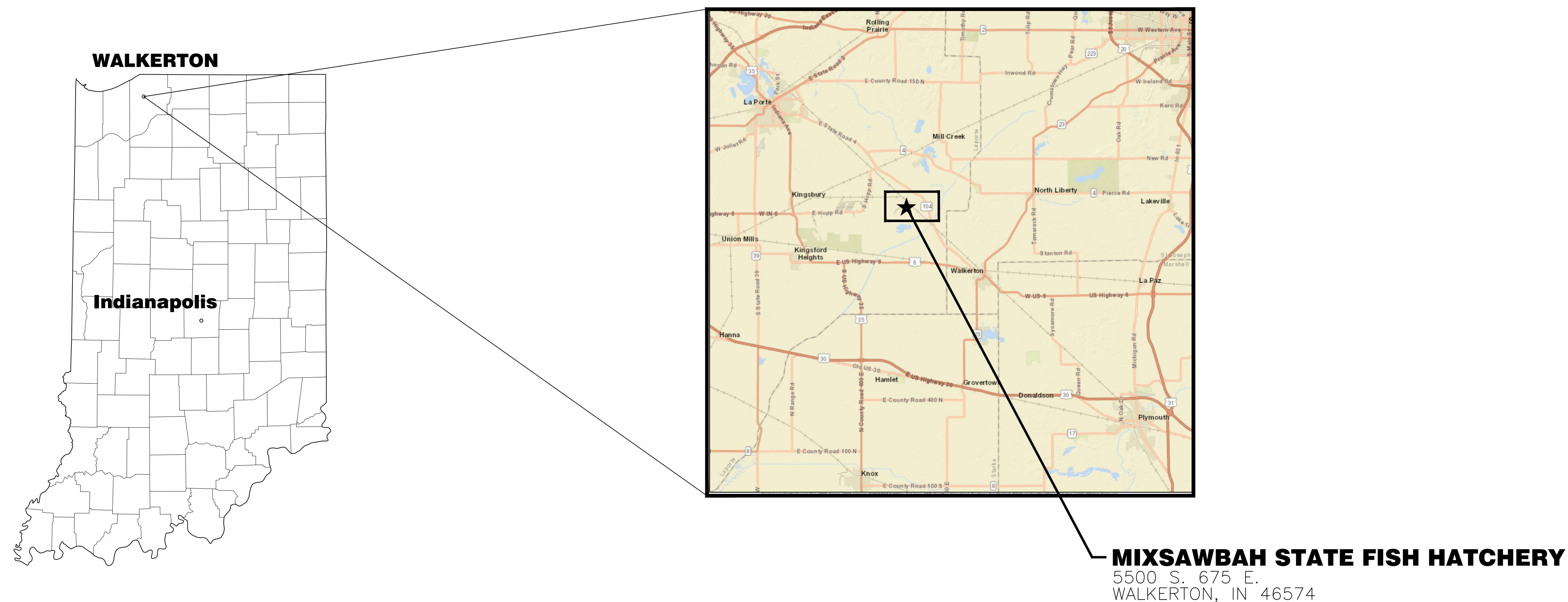


MIXSAWBAH FISH HATCHERY WASTEWATER TREATMENT PLANT IMPROVEMENTS PHASE 1 FOR THE INDIANA DEPARTMENT OF NATURAL RESOURCES LAPORTE COUNTY, INDIANA JULY 2024



629 Washington Street
Columbus, IN 47201
812-372-9911
812-372-7190 FAX

www.strand.com

CONTRACT 1-2023

Matthew L. Smith 7/16/2024

Matthew L. Smith, P.E. Indiana No. 10808971



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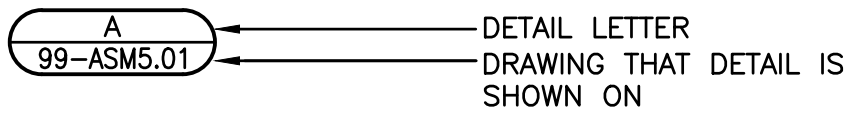
SHEET
1
00-G0.01

DRAWING LIST <table><thead><tr><th>SHEET NO.</th><th>DRAWING NO.</th><th>TITLE</th></tr></thead><tbody><tr><td colspan="3">00-GENERAL</td></tr><tr><td>1</td><td>00-G0.01</td><td>TITLE SHEET</td></tr><tr><td>2</td><td>00-G0.02</td><td>DRAWING LIST AND DESIGN CRITERIA</td></tr><tr><td>3</td><td>00-G0.03</td><td>STANDARD ABBREVIATIONS</td></tr><tr><td>4</td><td>00-G0.04</td><td>STANDARD SYMBOLS - 1</td></tr><tr><td>5</td><td>00-G0.05</td><td>STANDARD SYMBOLS - 2</td></tr><tr><td>6</td><td>00-G0.06</td><td>HYDRAULIC PROFILE</td></tr><tr><td>7</td><td>00-G0.07</td><td>PROCESS FLOW DIAGRAM</td></tr><tr><td colspan="3">05-SITE</td></tr><tr><td>8</td><td>05-D1.01</td><td>SITE - DEMOLITION PLAN</td></tr><tr><td>9</td><td>05-C1.01</td><td>SITE - LOCATION, GRADING AND EROSION CONTROL PLAN</td></tr><tr><td>10</td><td>05-M1.01</td><td>SITE - YARD PIPING PLAN</td></tr><tr><td>11</td><td>05-E1.01</td><td>SITE - ELECTRICAL PLAN</td></tr><tr><td colspan="3">15-PUMPING STATION</td></tr><tr><td>12</td><td>15-ASM1.01</td><td>PUMPING STATION - PLAN AND SECTIONS</td></tr><tr><td colspan="3">20-HATCHERY BUILDING</td></tr><tr><td>13</td><td>20-E1.01</td><td>HATCHERY BUILDING - ELECTRICAL PLAN</td></tr><tr><td colspan="3">99-SCHEDULES AND DETAILS</td></tr><tr><td>14</td><td>99-C5.01</td><td>CIVIL DETAILS - 1</td></tr><tr><td>15</td><td>99-ASME5.01</td><td>ARCHITECTURAL/STRUCTURAL/ELECTRICAL DETAILS - 1</td></tr><tr><td>16</td><td>99-E7.01</td><td>EXISTING ONE-LINE DIAGRAM</td></tr><tr><td>17</td><td>99-E7.02</td><td>PROPOSED ONE-LINE DIAGRAM</td></tr></tbody></table> SHEET TYPE DESIGNATORS 0 - GENERAL (SYMBOLS) 1 - PLANS 2 - ELEVATIONS 3 - SECTIONS 4 - LARGE SCALE VIEWS 5 - DETAILS 6 - SCHEDULES 7 - DIAGRAMS DISCIPLINE DESIGNATIONS G - GENERAL C - CIVIL D - DEMOLITION A - ARCHITECTURAL S - STRUCTURAL H - HEATING, VENTILATION, & AIR CONDITIONING M - PROCESS AND MECHANICAL FP - FIRE PROTECTION AND SUPPRESSION P - PLUMBING E - ELECTRICAL STRUCTURE IDENTIFICATION 05 - SITE 10 - TRICKLING BIOFILTERS 15 - PUMPING STATION 20 - HATCHERY BUILDING	SHEET NO.	DRAWING NO.	TITLE	00-GENERAL			1	00-G0.01	TITLE SHEET	2	00-G0.02	DRAWING LIST AND DESIGN CRITERIA	3	00-G0.03	STANDARD ABBREVIATIONS	4	00-G0.04	STANDARD SYMBOLS - 1	5	00-G0.05	STANDARD SYMBOLS - 2	6	00-G0.06	HYDRAULIC PROFILE	7	00-G0.07	PROCESS FLOW DIAGRAM	05-SITE			8	05-D1.01	SITE - DEMOLITION PLAN	9	05-C1.01	SITE - LOCATION, GRADING AND EROSION CONTROL PLAN	10	05-M1.01	SITE - YARD PIPING PLAN	11	05-E1.01	SITE - ELECTRICAL PLAN	15-PUMPING STATION			12	15-ASM1.01	PUMPING STATION - PLAN AND SECTIONS	20-HATCHERY BUILDING			13	20-E1.01	HATCHERY BUILDING - ELECTRICAL PLAN	99-SCHEDULES AND DETAILS			14	99-C5.01	CIVIL DETAILS - 1	15	99-ASME5.01	ARCHITECTURAL/STRUCTURAL/ELECTRICAL DETAILS - 1	16	99-E7.01	EXISTING ONE-LINE DIAGRAM	17	99-E7.02	PROPOSED ONE-LINE DIAGRAM	DESIGN CRITERIA MIXSAWBAH FISH HATCHERY WWTP IMPROVEMENTS INDIANA DEPARMENT OF NATURAL RESOURCES I. DESIGN FLOWS AND LOADINGS DESIGN INFLUENT FLOWS PEAK DAILY FLOW (MGD)4.84 RECYCLE DESIGN FLOW (MGD)5.05 DESIGN AVERAGE LOADINGS TO BIOFILTERS BOD₅ TSS TAN NITROGEN, AMMONIA (MG/L)2 DESIGN RECYCLE FLOWS AND LOADINGS DESIGN RECYCLE FLOW (MGD)4.84 BOD₅ TSS NITROGEN, AMMONIA (MG/L)0.05 TOTAL AVAILABLE NITROGEN (MG/L)1 DO (MG/L)2 PERMIT DISCHARGE FLOWS AND LOADINGS RECEIVING WATER BODYTAMMARACK LAKE TOTAL SUSPENDED SOLIDS MONTHLY AVERAGE (MG/L)7.5 WEEKLY AVERAGE (MG/L)10 AMMONIA-NITROGEN SUMMER MONTHLY AVERAGE (MG/L)1.3 SUMMER WEEKLY AVERAGE (MG/L)1.9 WINTER MONTHLY AVERAGE (MG/L)1.9 WINTER WEEKLY AVERAGE (MG/L)2.8 pH MINIMUM (S.U.)6 MAXIMUM(S.U.)9 II. UNIT DESIGN CRITERIA FILTRATION BIOFILTERS (EXISTING) TYPE MEDIA NUMBER OF TANKS SIZE, EACH, DIA. X AVE. SWD (FT) FLOATING BEAD BIOREACTOR POLYSTYRENE BEADS 5 22 x 7.25 PUMPING FORWARD FLOW PUMPS TYPE NUMBER POWER CAPACITY, EACH CAPACITY, FIRM SUBMERSIBLE 3 25 HP 1750 MGD @ 3.1' TDH 4.84 MGD PLANT RECYCLE PUMPS (EXISTING) TYPE NUMBER POWER CAPACITY, EACH CAPACITY, FIRM CENTRIFUGAL 3 30 HP 1700 GPM @ 58' TDH 3400 GPM BIOTILTER BACKWASH PUMP (EXISTING) TYPE NUMBER POWER CAPACITY, EACH CENTRIFUGAL 1 15 HP 330 GPM @ 102' TDH BIOFILTER EFFLEUNT PUMP (EXISTING) TYPE NUMBER POWER CAPACITY, EACH CENTRIFUGAL 1 10 HP 600 GPM @ 40' TDH	REGISTERED No. 10808971 STATE OF INDIANA PROFESSIONAL ENGINEER Matthew L. Smith 7/16/2024 DATE: 1/31/2024 REVISIONS 30% REVIEW NO. 1 GENERAL DRAWING LIST AND DESIGN CRITERIA MIXSAWBAH FISH HATCHERY WASTEWATER TREATMENT PLANT IMPROVEMENTS PHASE 1 INDIANA DEPARTMENT OF NATURAL RESOURCES LAPORTE COUNTY, INDIANA JOB NO. 4201.014 PROJECT MGR. MATTHEW SMITH SA STRAND ASSOCIATES® SHEET 2 00-G0.02
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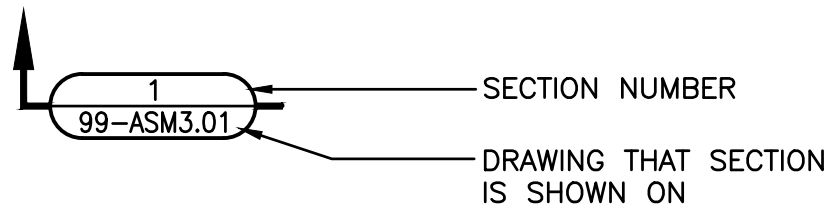
GENERAL EQUIPMENT ABBREVIATIONS			PLUMBING ABBREVIATIONS			ELECTRICAL ABBREVIATIONS			INSTRUMENT-SPECIFIC ELECTRICAL ABBREVIATIONS		
AC	AIR COMPRESSOR	SG	SLIDE GATE	AEW	APRON END WALL	FO	FAIL OPEN	NO	NORMALLY OPEN	A	AIR FLOW
ACU	ACCUMULATOR	SHFP	SODIUM HYPOCHLORITE FEED PUMP	BF	BLIND FLANGE	FPI	FINS PER INCH	NSF	NATIONAL SANITARY FOUNDATION	ALT	ALTERNATOR
ADT	AUTOMATIC DRIP TRAP	SHST	SODIUM HYPOCHLORITE STORAGE TANK	CA	COMPRESSED AIR	FPM	FEET PER MINUTE	NTS	NOT TO SCALE	BF	BUILDING FLOODING
AFT	AUTOMATIC FILTER	SLG	SLUICE GATE	CB	CATCH BASIN	FT	FEET	OCB	OIL CIRCUIT BREAKER	C	CAPACITANCE
AOV	AIR OPERATED VALVE	SP	SUMP PUMP	CD	CONDENSATE DRAIN	GA	GAUGE	OL	OVERLOAD	CA	CHLORINE ANALYZER
AM	ANOXIC MIXER	SRT	SILOXANE REMOVAL TANK	CI	CAST IRON	GPM	GALLONS PER MINUTE	OT	OVERTEMP	CH4	METHANE
AST	AUTOMATIC STRAINER	SSC	SCREENINGS SCREW CONVEYOR	CO	CLEAN OUT	LAT	LEAVING AIR TEMPERATURE	PR	PAIR	CON	CONDUCTANCE
BSLP	BLENDED SLUDGE PUMP	STCP	STRUVITE CHEMICAL PUMP	COND	CONDENSATE	LWT	LEAVING WATER TEMPERATURE	P	POLE	CS-1	CONSTANT (SINGLE) SPEED
B	BLOWER	STG	STOP GATE	CPVC	CHLORINATED POLYVNYL CHLORIDE	MBH	THOUSANDS OF BTU PER HOUR	PB	PULL BOX	CS-2	CONSTANT (TWO) SPEED
BC	BRIDGE CRANE	STR	STRAINER	CW	COLD WATER	MC	MECHANICAL CONTRACTOR	PC	PULL CORD	D	DENSITY
BFP	BELT FILTER PRESS	SV	SOLENOID VALVE	D	DRAIN	NA	NOT APPLICABLE	PH	PH SENSOR	DISC	DISCONNECT SWITCH
BFPP	BFP FEED PUMP	SWP	SCREENINGS WASHER/PRESS	DCBP	DOUBLE CHECK BACKFLOW PREVENTER	NC	NORMALLY CLOSED	ø	PHASE	DO	DISSOLVED OXYGEN
BFV	BUTTERFLY VALVE	TV	TELESCOPING VALVE	DF	DRINKING FOUNTAIN	NO	NORMALLY OPEN	PNL	PANELBOARD	DOU	DOWN-OFF-UP SELECTOR SWITCH
BLP	BIOSOLIDS LOADING PUMP	TWASP	TWAS PUMP	DFU	DRAINAGE FIXTURE UNIT	NPT	NATIONAL PIPE THREAD	PRI	PRIMARY	DP	DIFFERENTIAL PRESSURE
BLR	BOILER	UV	ULTRAVIOLET DISINFECTION	DI	DUCTILE IRON	NTS	NOT TO SCALE	PT	POTENTIAL TRANSFORMER	ESPB	EMERGENCY STOP PUSHBUTTON
BP	BOOSTER PUMP	WASP	WAS PUMP	ESEW	EMERGENCY SHOWER EYEWASH	OA	OUTSIDE AIR	PTZ	PAN, TILT, ZOOM CAMERA	ESPC	EMERGENCY STOP PULLCORD
BSLMP	BLENDED SLUDGE MIXING PUMP			EW	EYEWASH	OC	ON CENTER	PVC	POLYVINYL CHLORIDE	ETM	ELAPSED TIME METER
BSLP	BLENDED SLUDGE PUMP			FWC	ELECTRIC WATER COOLER	OV	OUTLET VELOCITY	PWR	POWER	F	BALL FLOAT
BSTM	BIOSOLIDS STORAGE MIXER			FLOOR	FLOOR CLEAN OUT	PD	PRESSURE DROP	CKT	CIRCUIT	RSC	FLANGE-MOUNTED
BTP	BIOSOLIDS TRANSFER PUMP			FD	FLOOR DRAIN	PSI	POUNDS PER SQUARE INCH	CL	CENTERLINE	RTS	REMOTE TEST SWITCH
CENT	CENTRIFUGE			FOR	FUEL OIL RETURN	PSIG	POUNDS PER SQUARE INCH GAUGE	CLG	CEILING	RVNR	REDUCED VOLTAGE NON-REVERSING
CNTP	CENTRATE PUMP			FOS	FUEL OIL SUPPLY	RA	RETURN AIR	COL	COLUMN	RVSS	REDUCED VOLTAGE SOLID STATE
CENTP	CENTRIFUGE FEED PUMP			HB	HOSE BIBB	RPM	REVOLUTIONS PER MINUTE	CT	CURRENT TRANSFORMER	SC	SHORT CIRCUIT
CP	CHEMICAL PUMP			HD	HUB DRAIN	SA	SUPPLY AIR	CTE	CONNECT TO EXISTING	SCADA	SUPERVISORY CONTROL AND DATA
COMP	COMPRESSOR			HDPE	HIGH DENSITY POLYETHYLENE	SP	STATIC PRESSURE	CU	COPPER	SCC	SUPERVISORY CONTROL CENTER
CON	CONVEYOR			HHWR	HEATING HOT WATER RETURN			CUH	CABINET UNIT HEATER	SE	SERVICE ENTRANCE
DBC	DEWATERED BIOSOLIDS CONVEYOR			HHWS	HEATING HOT WATER SUPPLY			D	DEDICATED	SEC	SECONDARY
DCP	DECANT PUMP			HR	HOSE REEL			DC	DIRECT CURRENT	SH	SHIELDED
DEWP	DISINFECTED EFFLUENT PUMP			HWL	HIGH WATER LEVEL			DISC	DISCONNECT	SPD	SURGE PROTECTION DEVICE
DP	DRAINAGE PUMP			HW	HOT WATER			DWG	DRAWING	SS	STAINLESS STEEL
DRLP	DIGESTER RECIRCULATION PUMP			HWR	HOT WATER RETURN			E	EMERGENCY	STP	SHIELDED TWISTED PAIR
DSLMP	DIGESTER MIXING PUMP			IE	INVERT ELEVATION			EC	ELECTRICAL CONTRACTOR	SV	SOLENOID VALVE
DSLTP	DIGESTED SLUDGE TRANSFER PUMP			IWP	INDIRECT WASTE PIPE			EDH	ELECTRIC DUCT HEATER	SW	SWITCH
DT	DRIP TRAP			L	LAVATORY			EF	EXHAUST FAN	SWBD	SWITCHBOARD
DOW	DOWNWARD OPENING WEIR GATE			MB							

DRAFTING SYMBOLS

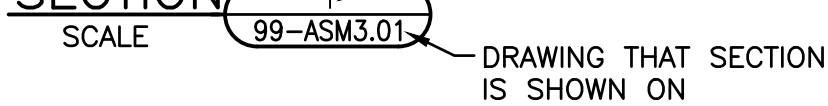
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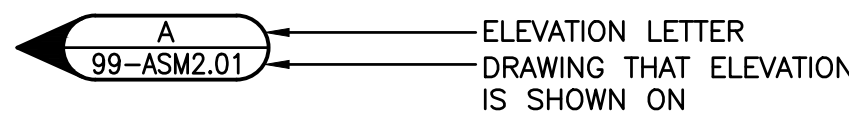
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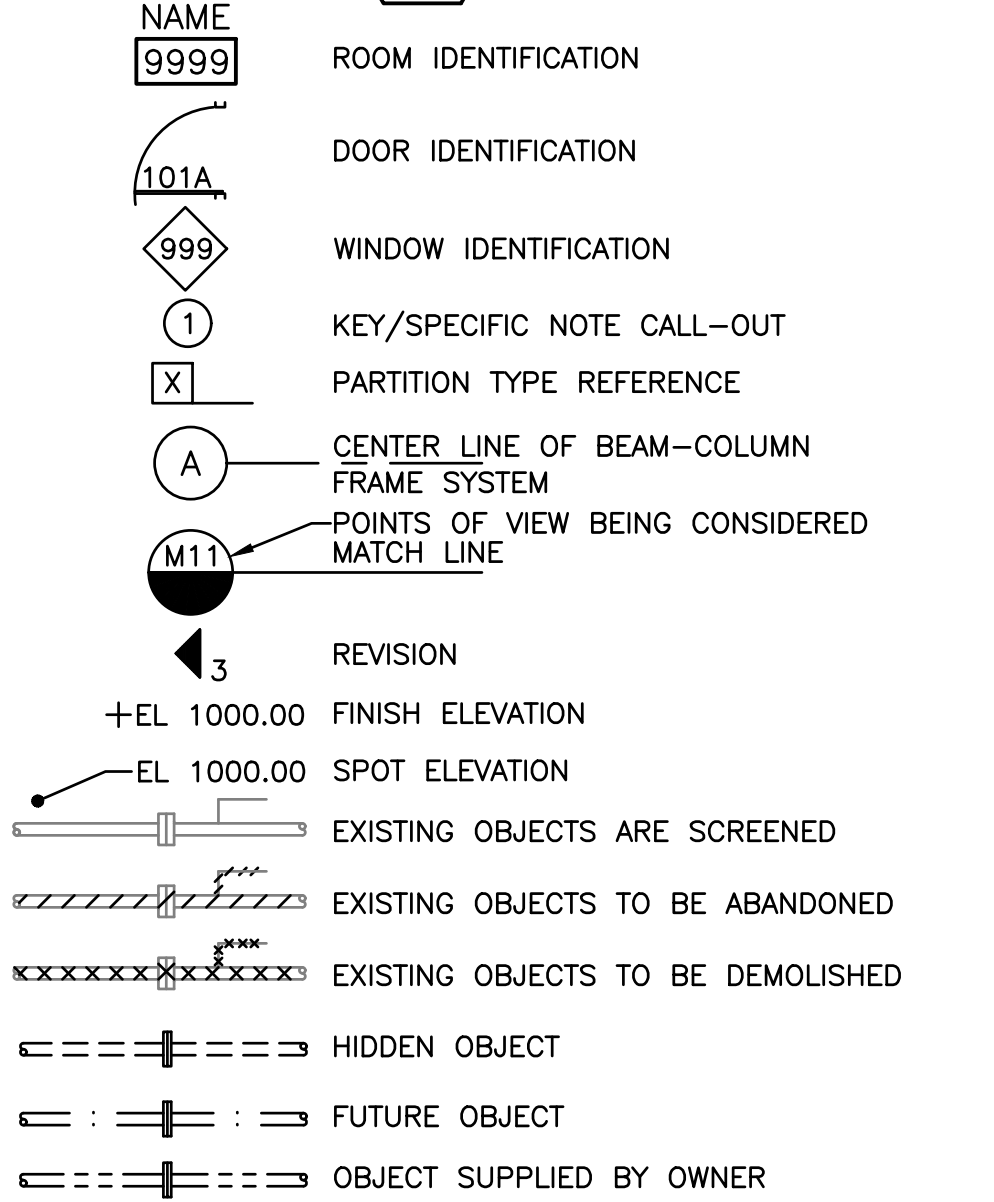
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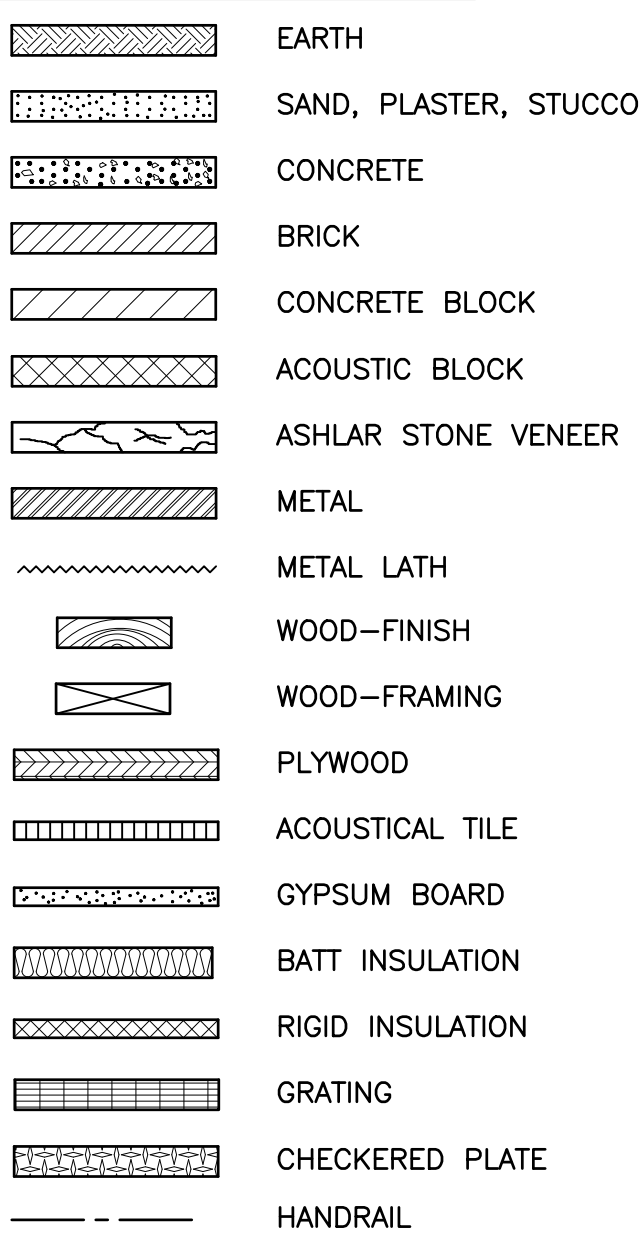
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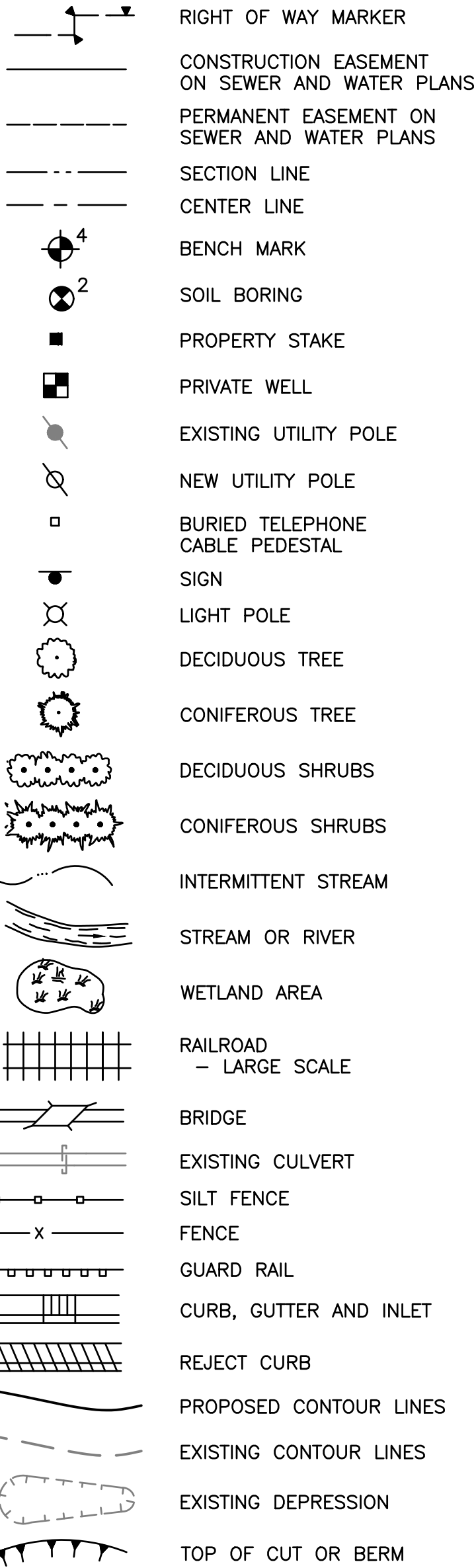
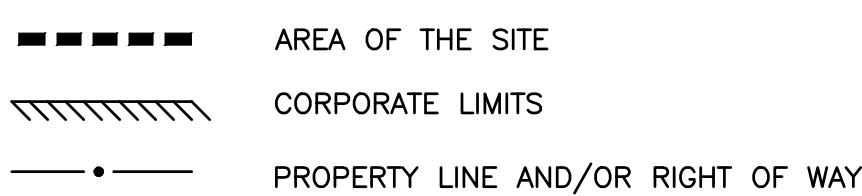
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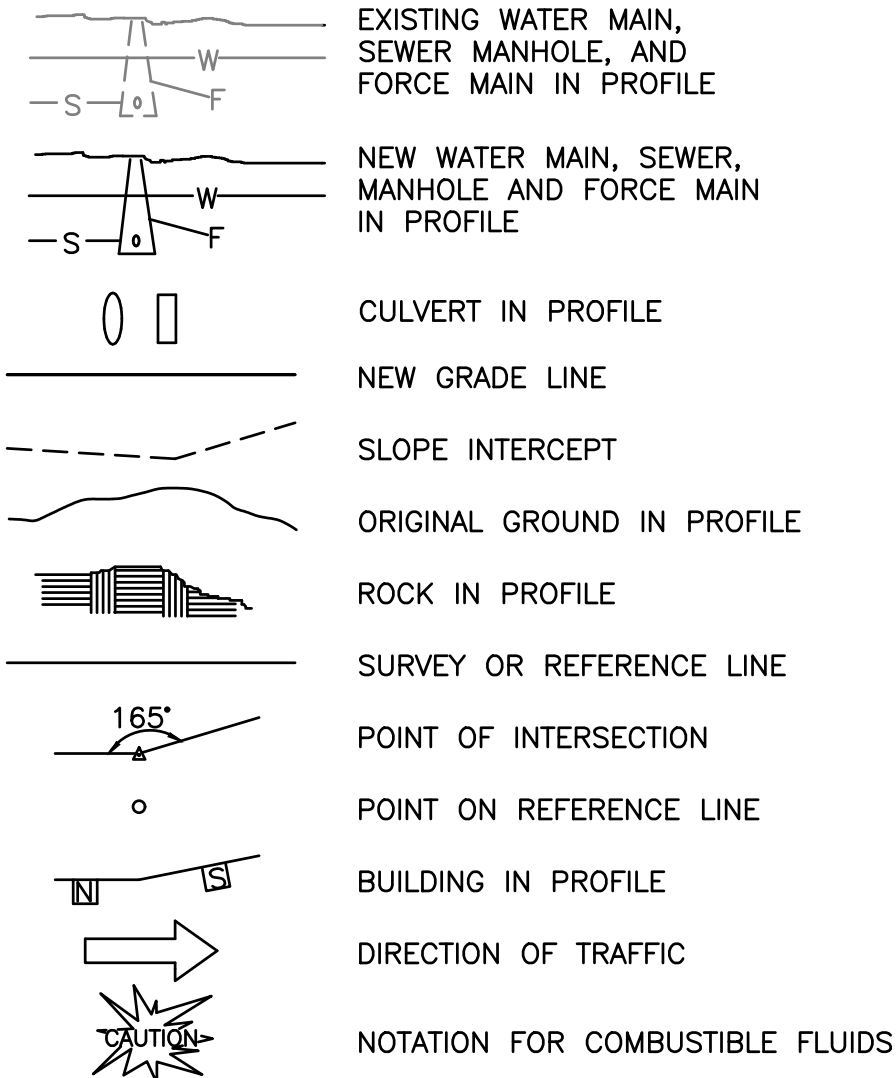
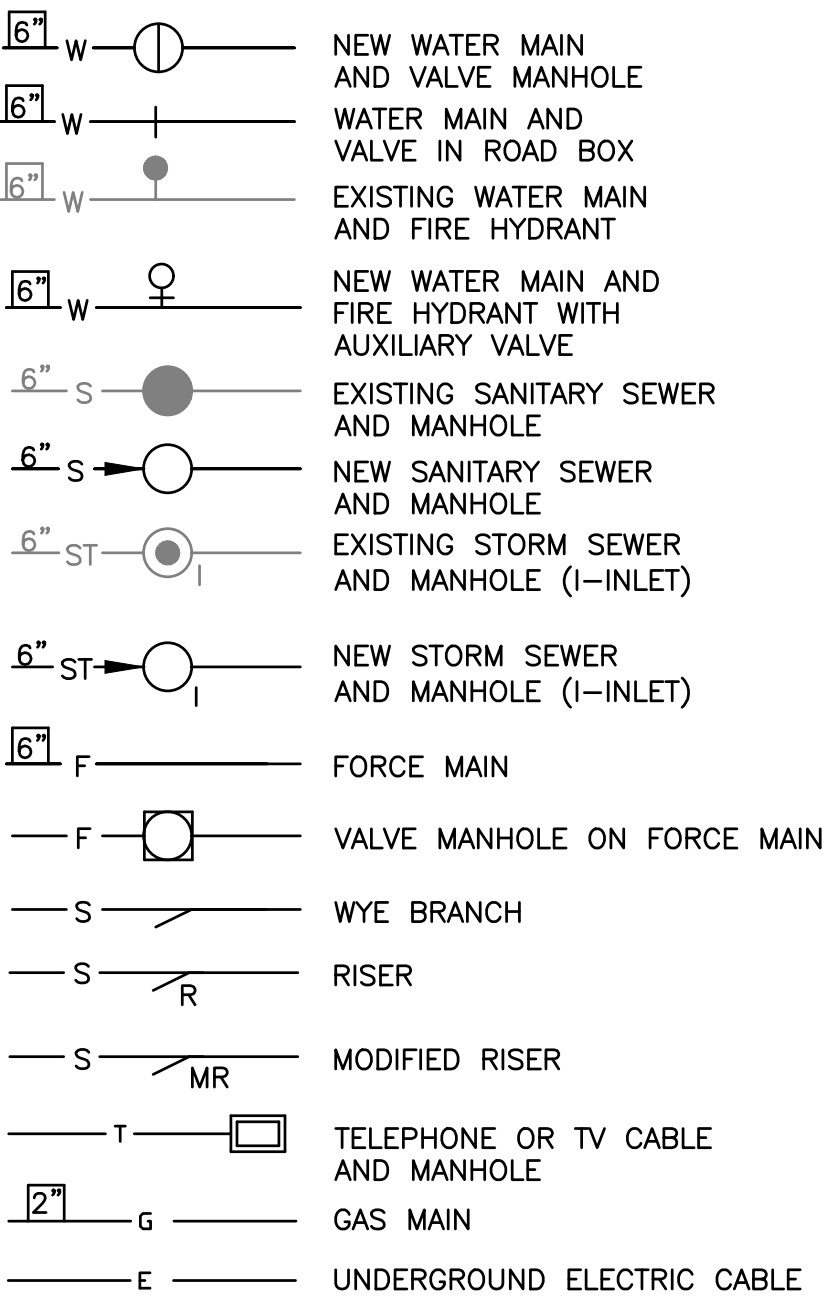
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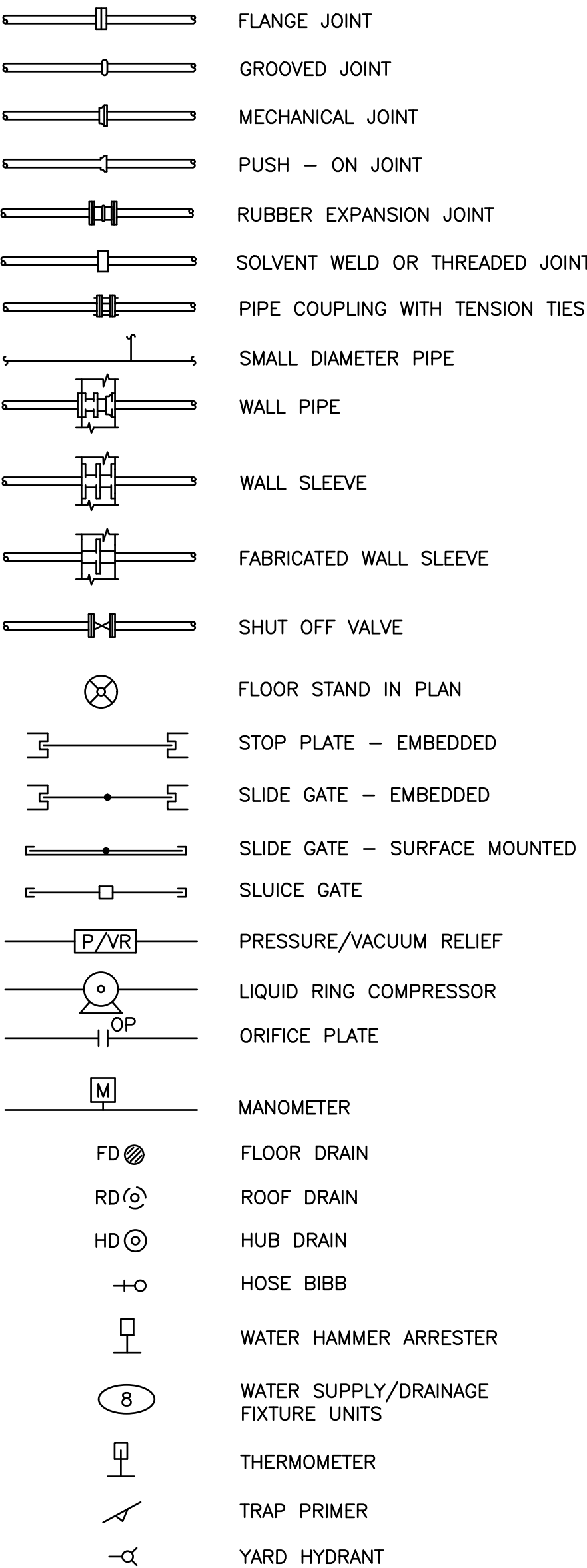
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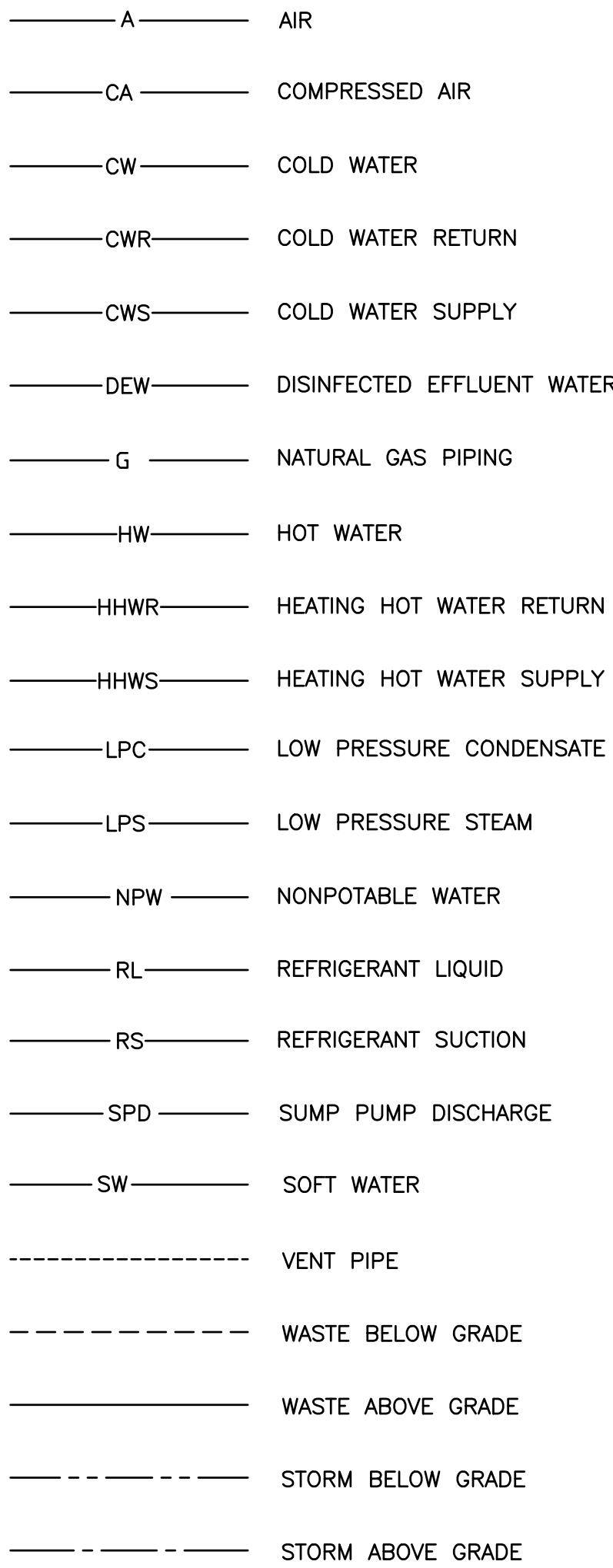
UNDERGROUND UTILITY SYMBOLS



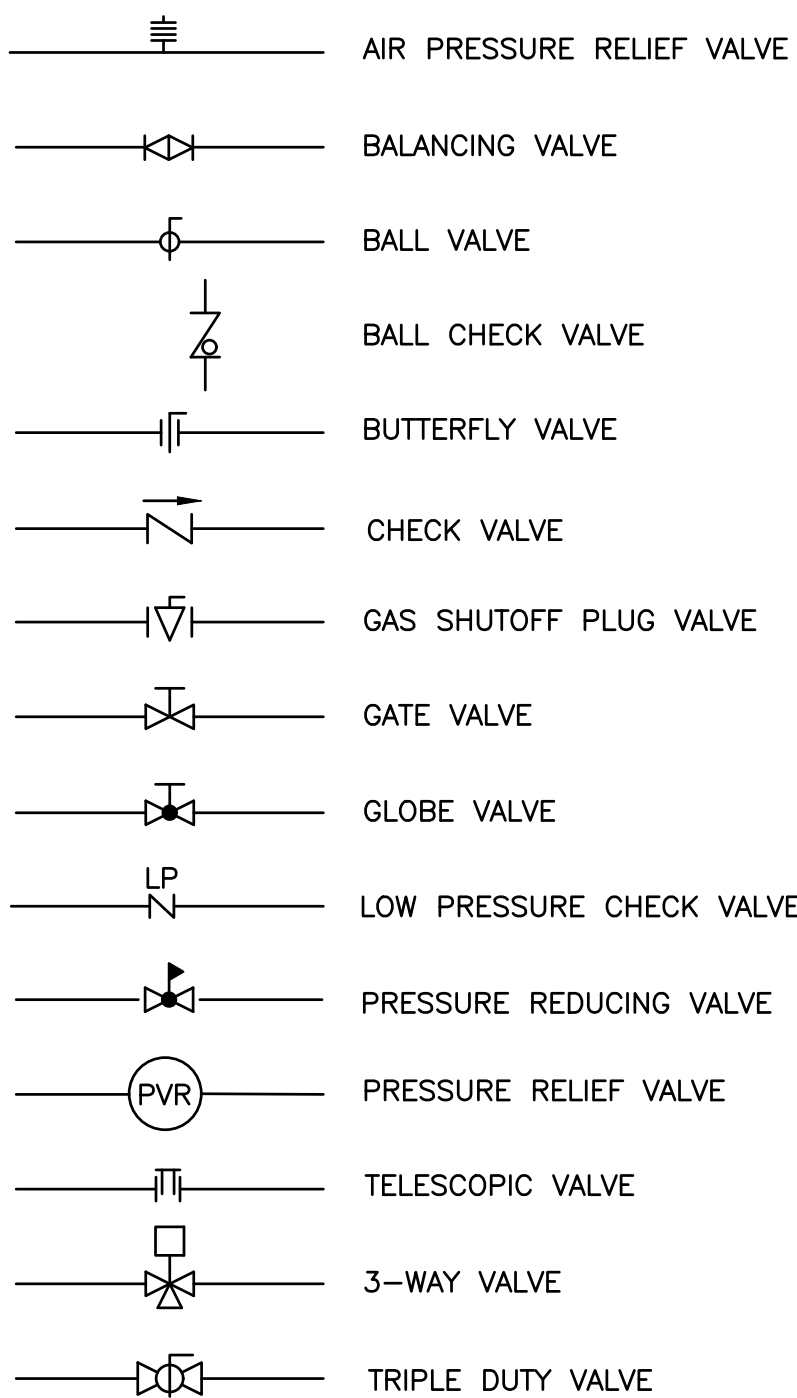
PIPING SYMBOLS



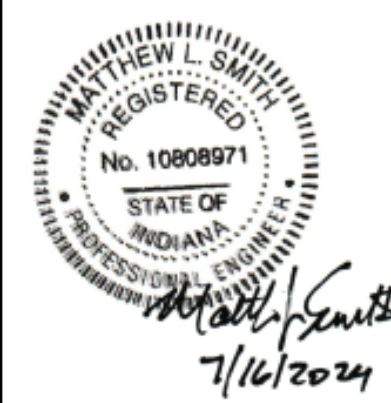
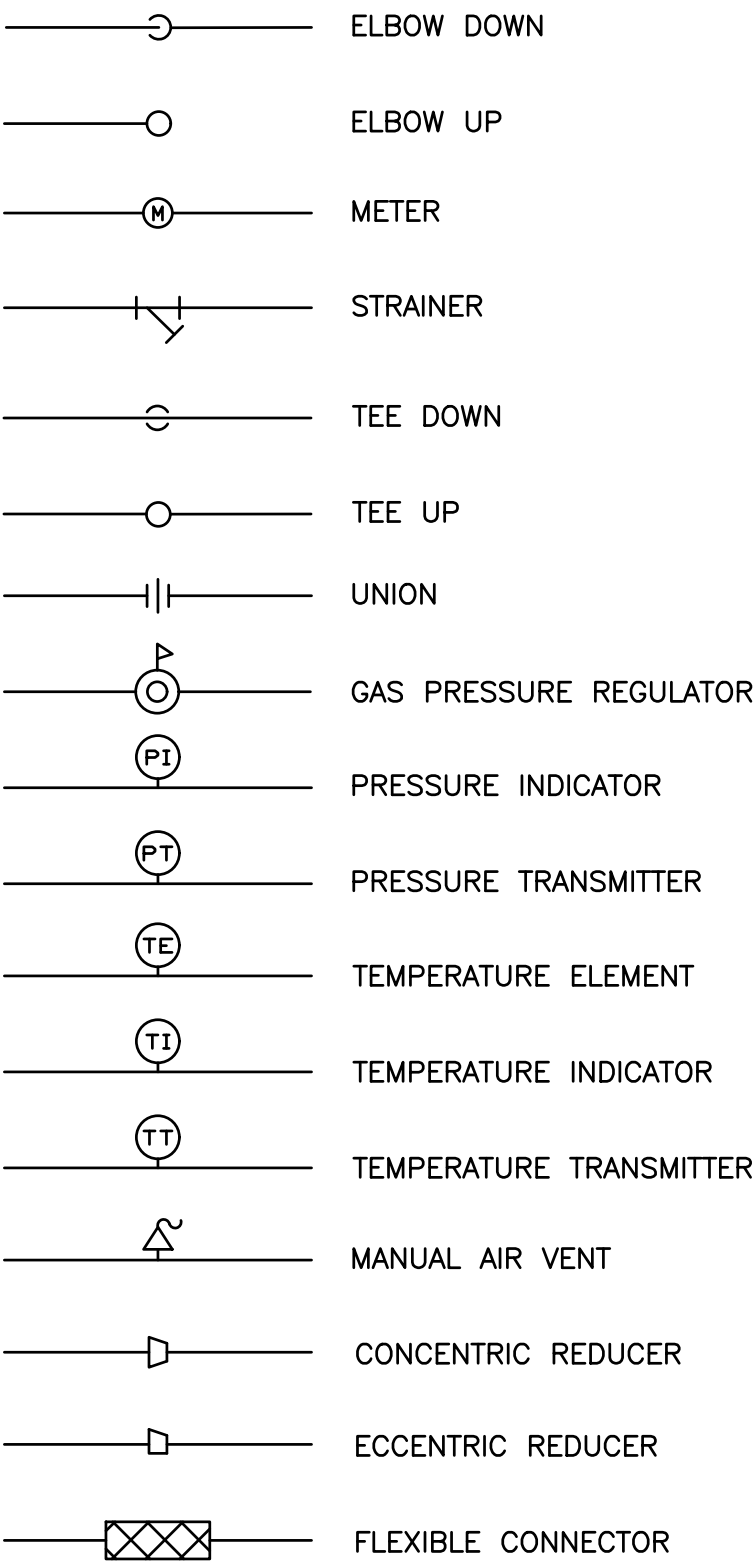
PIPING DESIGNATIONS



VALVE SYMBOLS



PIPING SYMBOLS



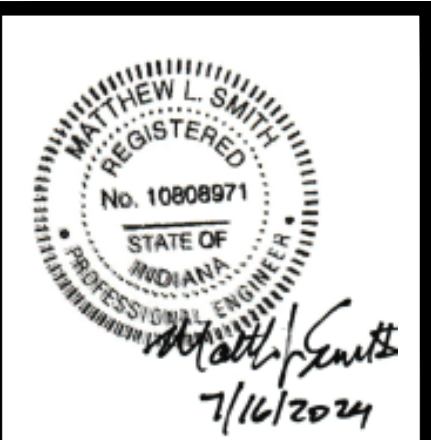
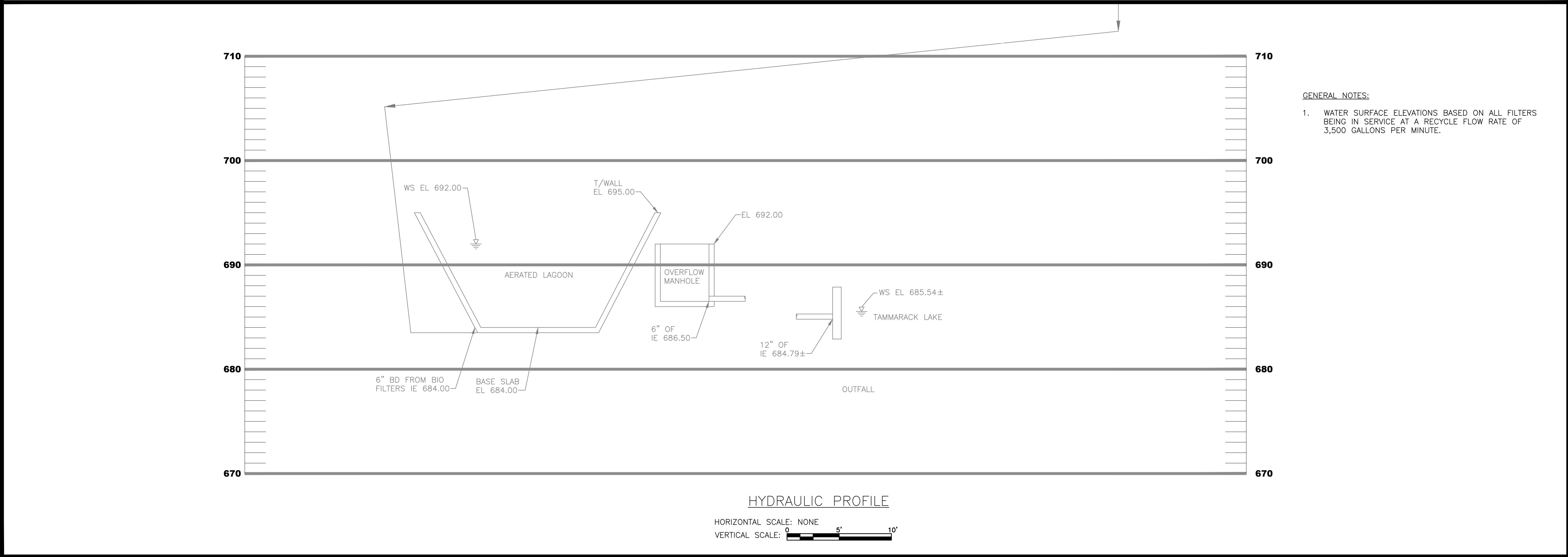
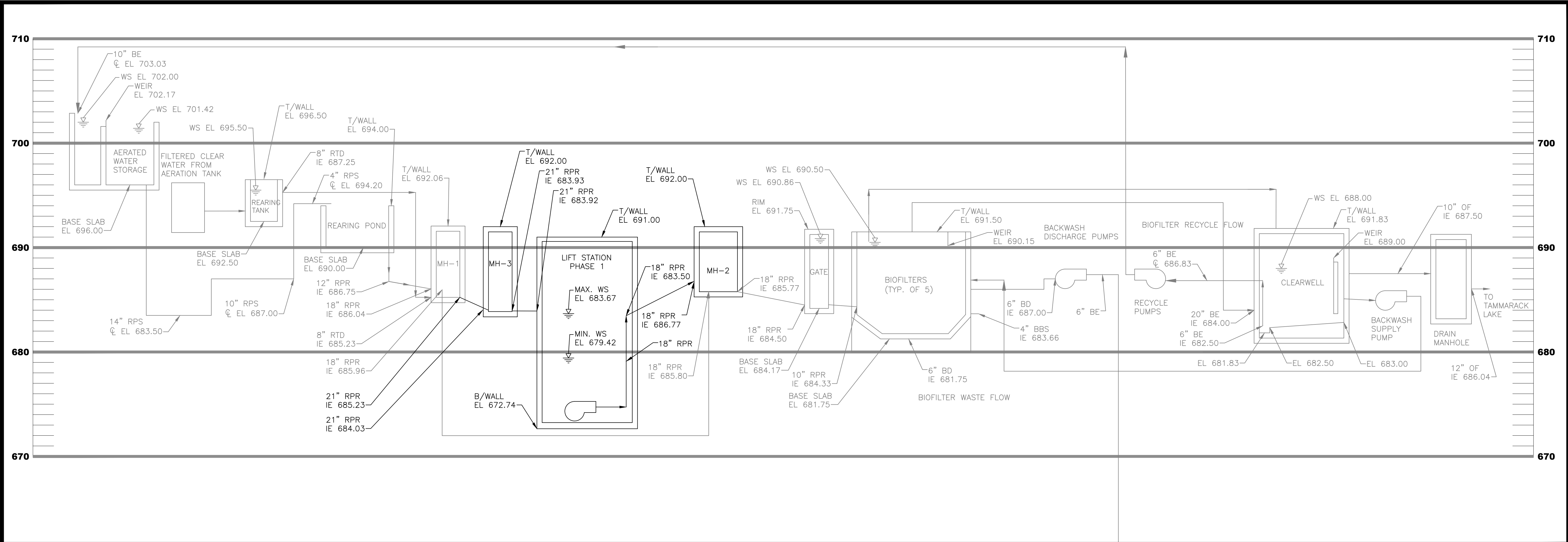
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REVISIONS									
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GENERAL
STANDARD SYMBOLS - 1
MIXSAWBAH FISH HATCHERY
WASTEWATER TREATMENT PLANT IMPROVEMENTS PHASE 1
INDIANA DEPARTMENT OF NATURAL RESOURCES
LAPORTE COUNTY, INDIANA

JOB NO.
4201.014
PROJECT MGR.
MATTHEW SMITH



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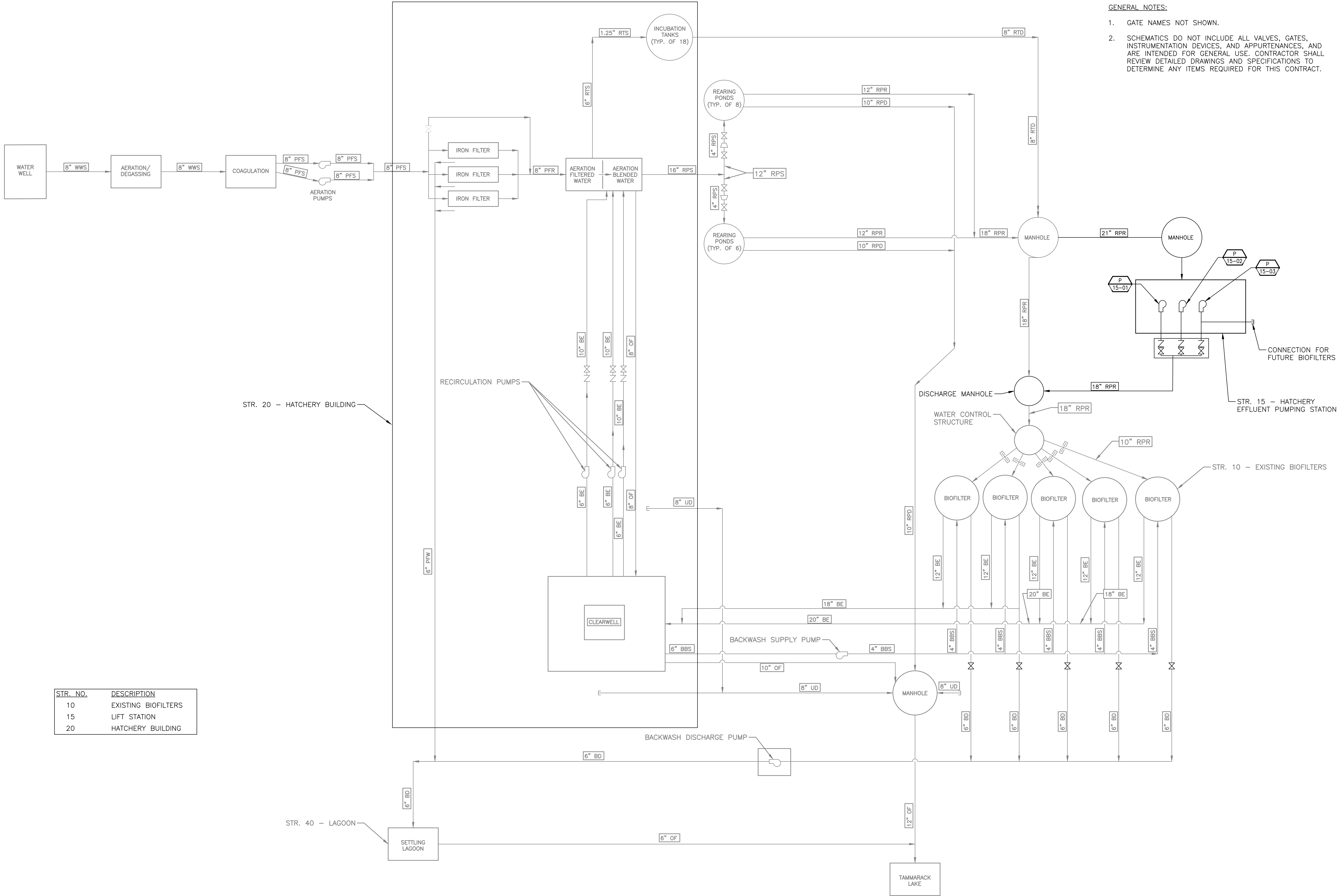
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REVISIONS						
NO.	1					
	30% REVIEW					

GENERAL
HYDRAULIC PROFILE
MIXSAWBAH FISH HATCHERY
WASTEWATER TREATMENT PLANT IMPROVEMENTS PHASE 1
INDIANA DEPARTMENT OF NATURAL RESOURCES
LAPORTE COUNTY, INDIANA

JOB NO.
4201.014
PROJECT MGR.
MATTHEW SMITH



SHEET
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- GENERAL NOTES:
- GATE NAMES NOT SHOWN.
 - SCHEMATICS DO NOT INCLUDE ALL VALVES, GATES, INSTRUMENTATION DEVICES, AND APPURTENANCES, AND ARE INTENDED FOR GENERAL USE. CONTRACTOR SHALL REVIEW DETAILED DRAWINGS AND SPECIFICATIONS TO DETERMINE ANY ITEMS REQUIRED FOR THIS CONTRACT.



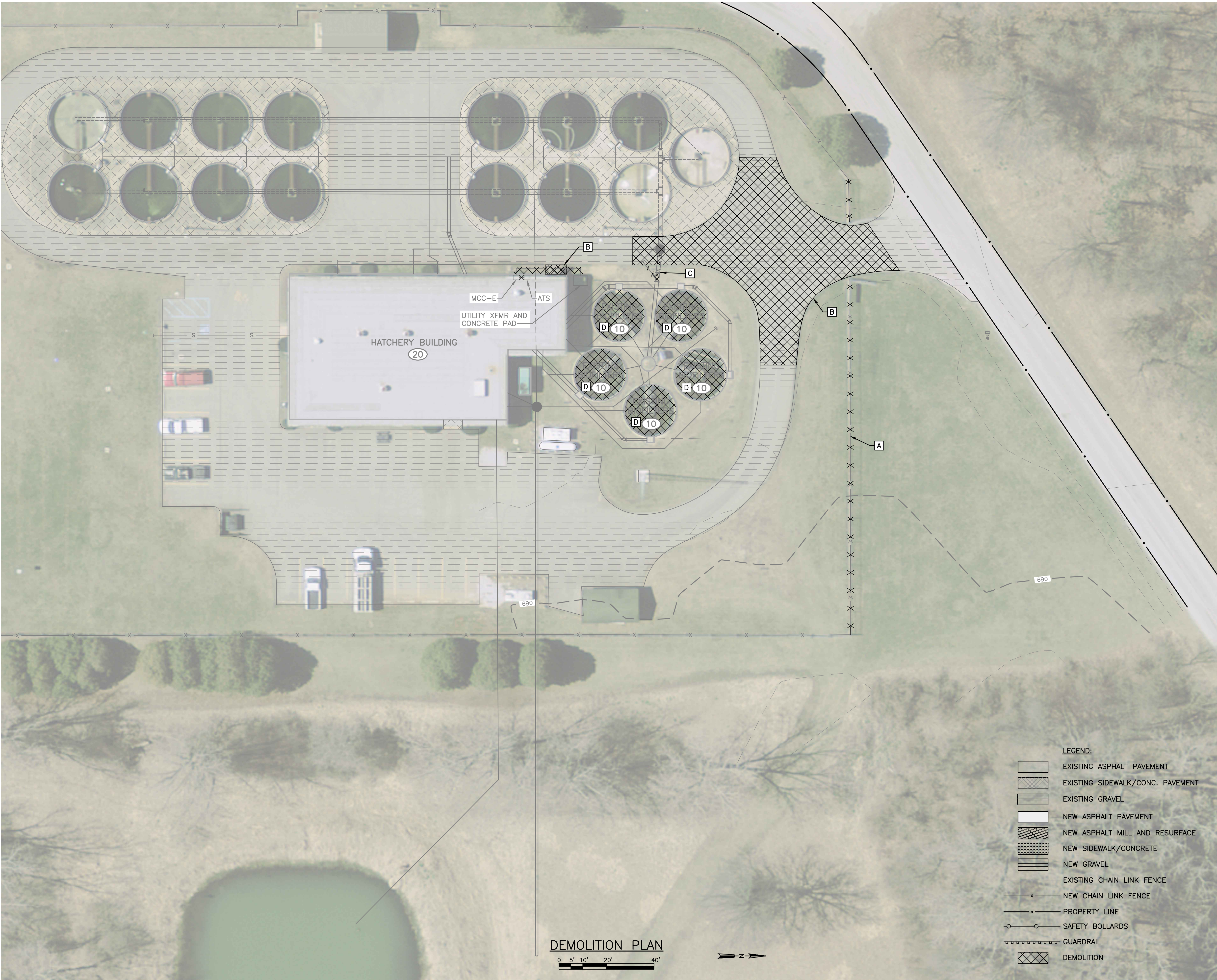
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NO.	1								
REVISIONS									
	30% REVIEW								

GENERAL
PROCESS FLOW DIAGRAM
MIXSAWBAH FISH HATCHERY
WASTEWATER TREATMENT PLANT IMPROVEMENTS PHASE 1
INDIANA DEPARTMENT OF NATURAL RESOURCES
LAPORTE COUNTY, INDIANA

JOB NO.
4201.014
PROJECT MGR.
MATTHEW SMITH



SHEET
7
00-G0.07



- GENERAL NOTES:**
1. THE EXISTING INFORMATION SHOWN ON THIS DRAWING IS FROM EXISTING DRAWINGS AND A SURVEY OF THE SITE. IT DOES NOT NECESSARILY ACCURATELY REFLECT ALL EXISTING SURFACE AND SUBSURFACE FEATURES AT THE PROJECT SITE. CONTRACTOR SHALL VISIT THE PROJECT SITE AND BECOME FAMILIAR WITH ACTUAL CONDITIONS AT THE SITE.
 2. SILT FENCE SHALL BE IN PLACE PRIOR TO THE START OF ANY DEMOLITION OR REMOVAL WORK ON THE SITE. THE SITE PLAN DOES NOT NECESSARILY SHOW ALL SILT FENCES THAT WILL BE REQUIRED TO PREVENT THE RUNOFF OF SEDIMENT-LADEN STORM WATER INTO WATERWAYS. SILT FENCE SHALL BE PROVIDED AT OTHER LOCATIONS WHERE REQUIRED.
 3. SEE SPECIFICATION SECTION 01 11 00 – SUMMARY OF WORK FOR ADDITIONAL REQUIREMENTS RELATED TO THE CONSTRUCTION SEQUENCE.
 4. SEE SPECIFICATION SECTION 02 41 00 – DEMOLITION FOR ADDITIONAL REQUIREMENTS FOR ITEMS TO BE DEMOLISHED, ABANDONED, OR REMOVED. SEE SPECIFICATION SECTION 31 23 00 – EXCAVATION, FILL, BACKFILL, AND GRADING FOR EXCAVATION AND BACKFILL REQUIREMENTS. IN GENERAL, ONLY STRUCTURES THAT ARE CALLED OUT ON THE SITE DEMOLITION PLAN BY NOTE ARE INTENDED TO BE REMOVED, DEMOLISHED, OR ABANDONED IN ACCORDANCE WITH THE SPECIFICATIONS. STRUCTURES OR PORTIONS THEREOF THAT ARE NOT CALLED OUT ON THE SITE PLAN FOR REMOVAL ARE TO REMAIN AS IS AND DO NOT REQUIRE ANY RESTORATION OR REPAIR UNDER THIS CONTRACT UNLESS OTHERWISE NOTED ON THE DRAWINGS.
 5. ALL AREAS OF SITE THAT ARE DISTURBED BY CONTRACTOR INCLUDING BUT NOT LIMITED TO: REMOVAL OF STRUCTURES, SIDEWALKS, PIPES, AND OTHER MISCELLANEOUS ITEMS AND CONSTRUCTION TRAFFIC SHALL BE BACKFILLED, FINISHED GRADED, TOPSOIL, SEEDED AND MULCHED IN ACCORDANCE WITH DIVISION 31 OF SPECIFICATIONS OR REQUIRED IN ACCORDANCE WITH DIVISION 03 OF THE SPECIFICATIONS.
 6. ALL TREES AND VEGETATION ON THE PROPERTY SHALL BE PROTECTED UNLESS DESIGNATED TO BE REMOVED OR THEY CANNOT BE SAVED, AS APPROVED BY OWNER.
 7. AREAS WHERE GRADED OR STOCKPILED EARTH WILL REMAIN EXPOSED FOR MORE THAN 20 DAYS SHALL BE PROTECTED FROM EROSION BY TEMPORARY SEEDING. PROVIDE SILT FENCE SURROUNDING AREAS OF STOCKPILED SOIL.
 8. ALL CONCRETE TO BE DEMOLISHED SHALL BE REMOVED FROM SITE UNLESS IT MEETS REQUIREMENTS OF COMPACTED FILL SPECIFICATIONS. ALL REINFORCING IS TO BE REMOVED FROM SITE.
 9. PROVIDE CLEARING AND GRUBBING AS NECESSARY FOR NEW CONSTRUCTION.
 10. REMOVE ALL EXISTING ELECTRICAL EQUIPMENT AND MATERIALS ASSOCIATED WITH THE ITEMS BEING REMOVED AS SHOWN ON THIS DRAWING, AS WELL AS ALL EXISTING ELECTRICAL DEVICES, MATERIALS, EQUIPMENT, WIRING, AND EXPOSED CONDUITS NOT BEING REUSED. CONCEALED CONDUITS NOT BEING REUSED SHALL BE CAPPED AND ABANDONED IN PLACE.

- DEMOLITION KEY NOTES:**
- [A] REMOVE ALL EXISTING FENCE. REMOVAL SHALL INCLUDE POSTS, GATES, AND RAILS.
 - [B] REMOVE EXISTING ASPHALT PAVEMENT, PAVED AREAS SHOWN FOR REMOVAL ARE APPROXIMATE.
 - [C] ABANDON EXISTING PIPE AND REMOVE TEE IN ADDITION TO NECESSARY PIPE TO ACCOMMODATE DOGHOUSE MANHOLE.
 - [D] BID ALTERNATIVE 1 ONLY – REMOVE MEDIA RETENTION BAFFLE FROM TOP OF BIOFILTER AND ALUMINUM SUPPORTS.



DATE:	1/31/2024								
REVISIONS									
NO.	1								

SITE DEMOLITION PLAN

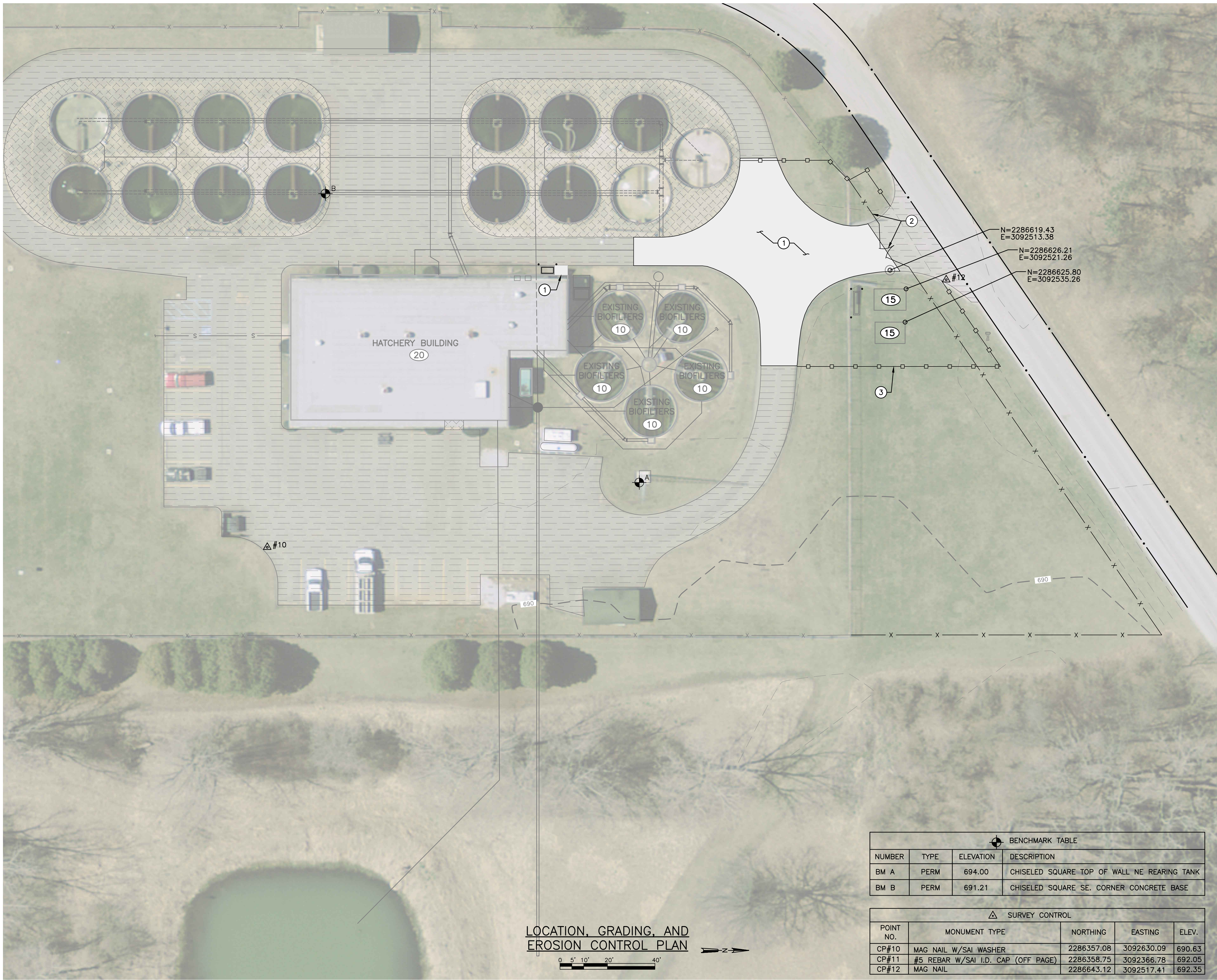
MIXSAWBAH FISH HATCHERY
WASTEWATER TREATMENT PLANT IMPROVEMENTS PHASE 1
INDIANA DEPARTMENT OF NATURAL RESOURCES
LAPORTE COUNTY, INDIANA

JOB NO.
4201.014

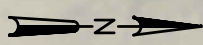
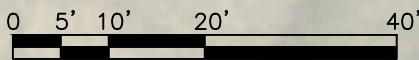
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05-D1.01



LOCATION, GRADING, AND
EROSION CONTROL PLAN



BENCHMARK TABLE			
NUMBER	TYPE	ELEVATION	DESCRIPTION
BM A	PERM	694.00	CHISELED SQUARE TOP OF WALL NE REARING TANK
BM B	PERM	691.21	CHISELED SQUARE SE. CORNER CONCRETE BASE

SURVEY CONTROL				
POINT NO.	MONUMENT TYPE	NORTHING	EASTING	ELEV.
CP#10	MAG NAIL W/SAI WASHER	2286357.08	3092630.09	690.63
CP#11	#5 REBAR W/SAI I.D. CAP (OFF PAGE)	2286358.75	3092366.78	692.05
CP#12	MAG NAIL	2286643.12	3092517.41	692.35

GENERAL NOTES:

- CONTRACTOR SHALL CONTACT AGENCIES FOR UTILITY LOCATIONS.
- CONTRACTOR SHALL COORDINATE WITH OWNER FOR AREA(S) OF USE OF SITE. CONTRACTOR SHALL MAINTAIN DRIVE ACCESS AT ALL TIMES.
- LOCATIONS OF EXISTING BUILDINGS AND SITE STRUCTURES APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY.
- SEE 05-D1.01 FOR DEMOLITION PLAN.
- SEE 05-M1.01 FOR OVERALL PROPOSED YARD PIPING PLAN.
- SEE 05-E1.01 FOR OVERALL PROPOSED ELECTRICAL PLAN.
- SEE $\frac{H}{99-C5.01}$ FOR ASPHALT PAVEMENT DETAIL.
- SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER TO REDUCE EROSION. SOIL STABILIZATION MEASURES SHALL CONSIDER THE TIME OF YEAR, SITE CONDITIONS, AND USE OF TEMPORARY OR PERMANENT MEASURES.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.
- EROSION CONTROL MEASURES ON THE DRAWINGS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS REQUESTED BY THE ENGINEER, OWNER, OR GOVERNING AGENCY.
- CONSTRUCTION ENTRANCE TO THE SITE WILL BE THE CURRENT ENTRANCE.
- PROVIDE TEMPORARY ACCESS ROAD IN DEMOLISHED PAVEMENT AREA PER DETAIL $\frac{D}{99-C5.01}$.

KEY NOTES:

- MATCH EXISTING PAVEMENT ELEVATIONS.
- NEW FENCING AND GATE $\frac{F}{99-C5.01}$
- SILT FENCE (TYP.) $\frac{E}{99-C5.01}$

LEGEND:

- EXISTING ASPHALT PAVEMENT
- EXISTING SIDEWALK/CONC. PAVEMENT
- EXISTING GRAVEL
- NEW ASPHALT PAVEMENT
- NEW ASPHALT MILL AND RESURFACE
- NEW SIDEWALK/CONCRETE
- NEW GRAVEL
- EXISTING CHAIN LINK FENCE
- NEW CHAIN LINK FENCE
- PROPERTY LINE
- SAFETY BOLLARDS
- GUARDRAIL
- DEMOLITION



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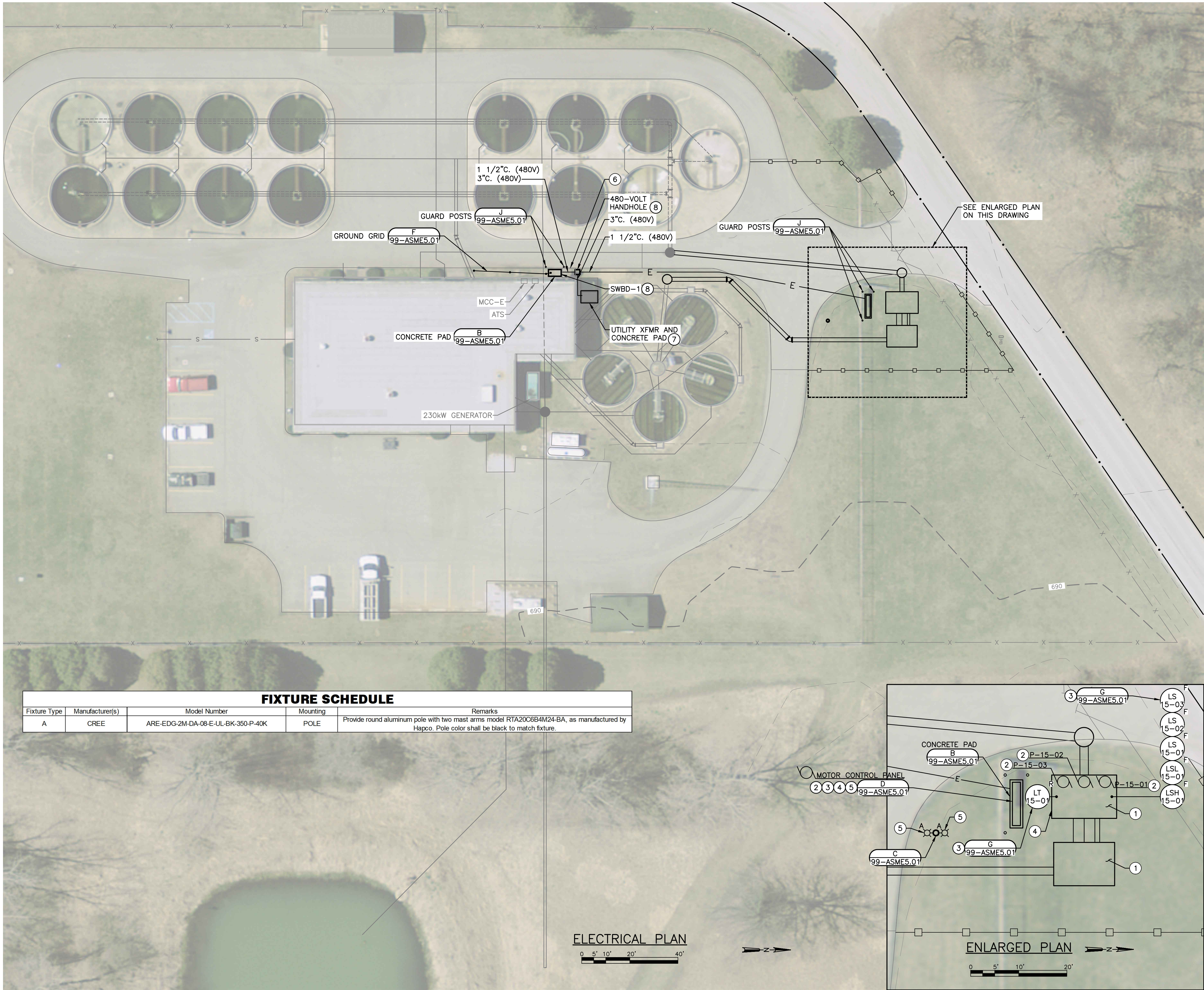
SITE
LOCATION, GRADING, AND EROSION CONTROL PLAN

MIXSAWBAH FISH HATCHERY
WASTEWATER TREATMENT PLANT IMPROVEMENTS PHASE 1
INDIANA DEPARTMENT OF NATURAL RESOURCES
LAPORTE COUNTY, INDIANA

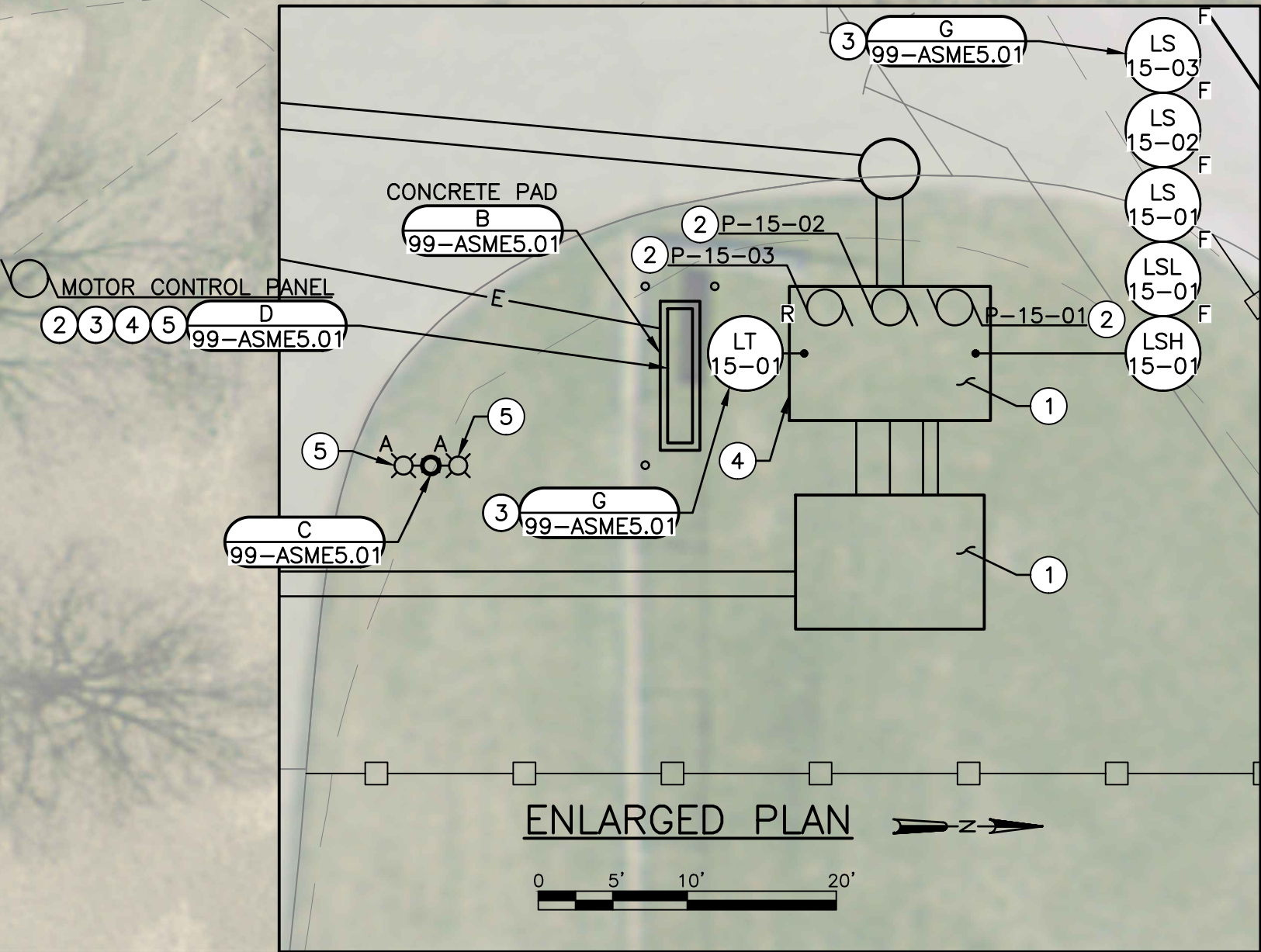
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FIXTURE SCHEDULE				
Fixture Type	Manufacturer(s)	Model Number	Mounting	Remarks
A	CREE	ARE-EDG-2M-DA-08-E-UL-BK-350-P-40K	POLE	Provide round aluminum pole with two mast arms model RTA20C6B4M24-BA, as manufactured by Hapco. Pole color shall be black to match fixture.



- GENERAL NOTES:
- REFER TO SPECIFICATION SECTION 01 11 00 FOR INFORMATION ON CONSTRUCTION SEQUENCING.
 - REFER TO SPECIFICATION SECTION 26 09 90 FOR WIRING ASSOCIATED WITH THE SCADA SYSTEM.
 - ONLY MAJOR ELECTRICAL FEEDER ROUTES ARE SHOWN ON THIS DRAWING. CONDUIT ROUTES FOR BRANCH CIRCUITS, INSTRUMENTATION, AND CONTROL CIRCUITS ARE NOT SPECIFICALLY SHOWN. PROVIDE CONDUIT AND HANDHOLES AS REQUIRED FOR ALL OTHER CIRCUITS.
 - WHERE EXISTING EARTHWORK OR ASPHALT/CONCRETE IS DISTURBED BY CONSTRUCTION ACTIVITIES, PROVIDE BASE COURSE AND PATCH AREA TO MATCH EXISTING.

- KEY NOTES:
- ALL ELECTRICAL WORK AND EQUIPMENT IN THE WET WELL AND VALVE MANHOLE SHALL BE RATED FOR A CLASS I, DIVISION 1, GROUPS C AND D LOCATION. ALL ELECTRICAL WORK AND EQUIPMENT WITHIN A 3 FOOT RADIUS OF THE WET WELL VENT SHALL BE RATED FOR CLASS I, DIVISION 1, GROUPS C AND D LOCATION. ALL ELECTRICAL WORK AND EQUIPMENT WITHIN A 3'-0" TO 5'-0" RADIUS OF THE WET WELL VENT AND 3'-0" FROM THE ACCESS HATCHES (ALL SIDES) TO 18" ABOVE GRADE SHALL BE RATED FOR A CLASS I, DIVISION 2, GROUPS C AND D LOCATION.
 - PROVIDE MANUFACTURER-FURNISHED CABLE IN 2 1/2" CONDUIT FROM PUMP TO MOTOR CONTROL PANEL.
 - LT-15-01, LSL-15-01, LSH-15-01, AND LS-15-01 THROUGH LS-15-03 SHALL BE WIRED INTRINSICALLY SAFE AND MOUNTED SUCH THAT CABLES ARE EASILY ACCESSIBLE FROM THE WET WELL HATCH. PROVIDE MANUFACTURER-FURNISHED CABLE IN 1" CONDUIT FROM EACH FLOAT SWITCH TO MOTOR CONTROL PANEL AND PROVIDE MANUFACTURER-FURNISHED CABLE IN 3/4" CONDUIT FROM THE LEVEL TRANSMITTER TO MOTOR CONTROL PANEL.
 - MOTOR CONTROL PANEL SHALL BE LOCATED MINIMUM 7'-0" FROM THE WET WELL.
 - PROVIDE 2~#12 AND #12 GROUND IN 3/4" CONDUIT FROM MOTOR CONTROL PANEL TO EACH FIXTURE FOR 120-VOLT POWER TO FIXTURES.
 - SAWCUT EXISTING ASPHALT/CONCRETE AS REQUIRED FOR INSTALLATION OF UNDERGROUND ELECTRICAL WORK. ASPHALT/CONCRETE SHALL BE CUT ON NEAT, PARALLEL LINES AND SHALL NOT BE DAMAGED BEYOND THE LIMITS OF CONSTRUCTION. PROVIDE BASE COURSE AND REPLACE ASPHALT/CONCRETE TO MATCH EXISTING.
 - RELOCATE EXISTING UTILITY XFMR. PROVIDE CONCRETE PAD FOR RELOCATED UTILITY XFMR SIZED PER UTILITY REQUIREMENTS. COORDINATE UTILITY SERVICE MODIFICATIONS WITH UTILITY COMPANY.
 - PROVIDE 3~3" CONDUITS FROM SWBD-1 TO HANDHOLE AS SPARE.

Matthew L. Smith
REGISTERED
No. 10808971
STATE OF
INDIANA
Professional Engineer
7/16/2024

DATE: 1/31/2024

NO. 1

REVISIONS

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SITE
ELECTRICAL PLAN

MIXSAWBAH FISH HATCHERY
WASTEWATER TREATMENT PLANT IMPROVEMENTS PHASE 1
INDIANA DEPARTMENT OF NATURAL RESOURCES
LAPORTE COUNTY, INDIANA

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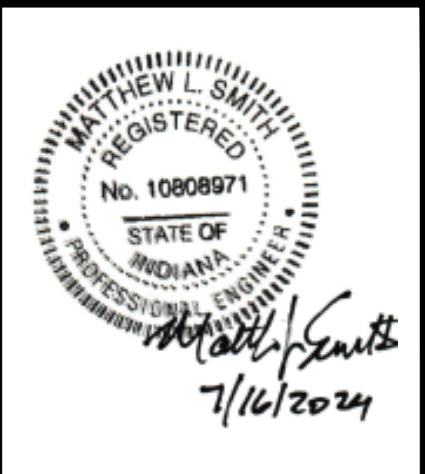
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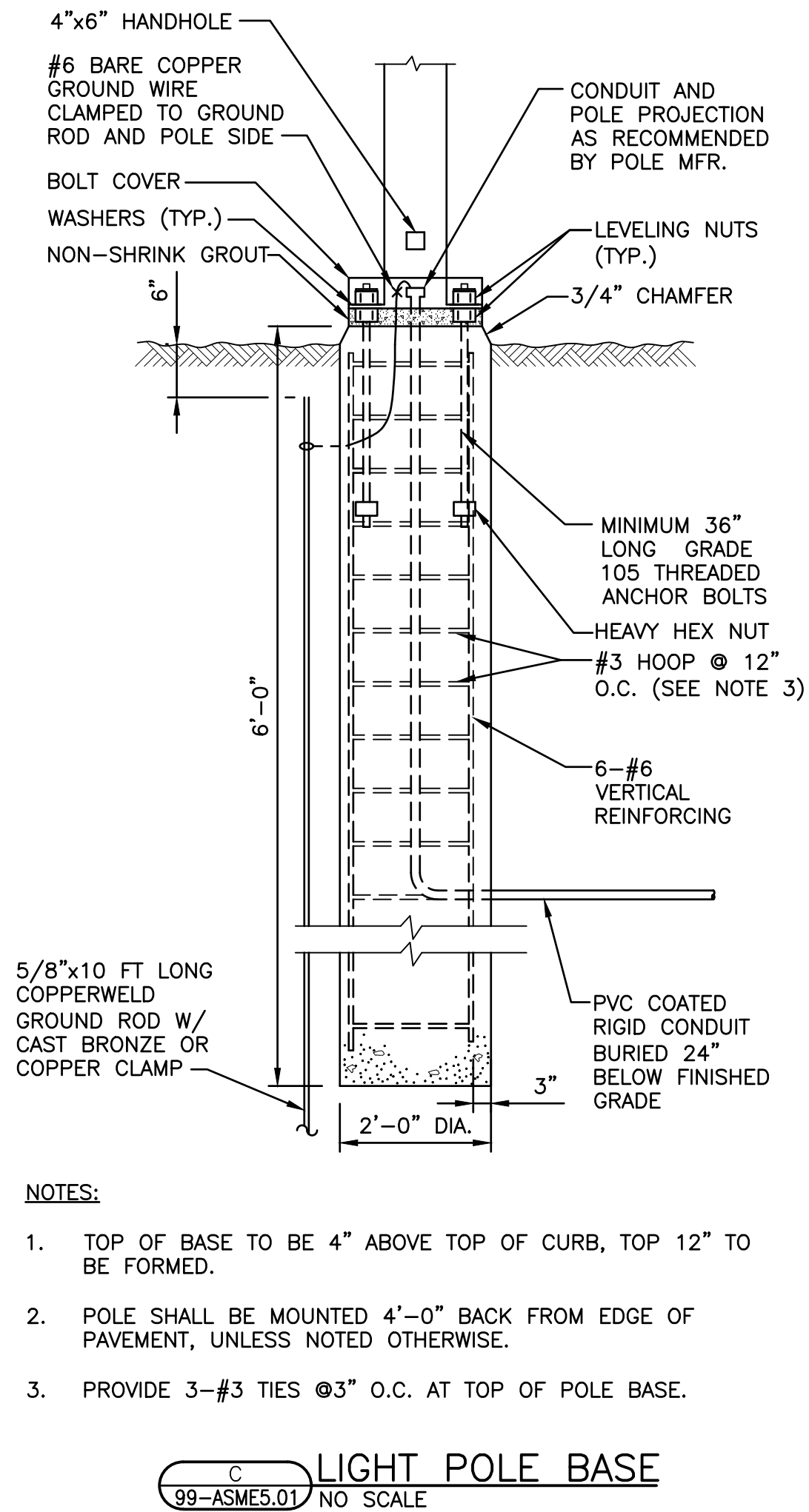
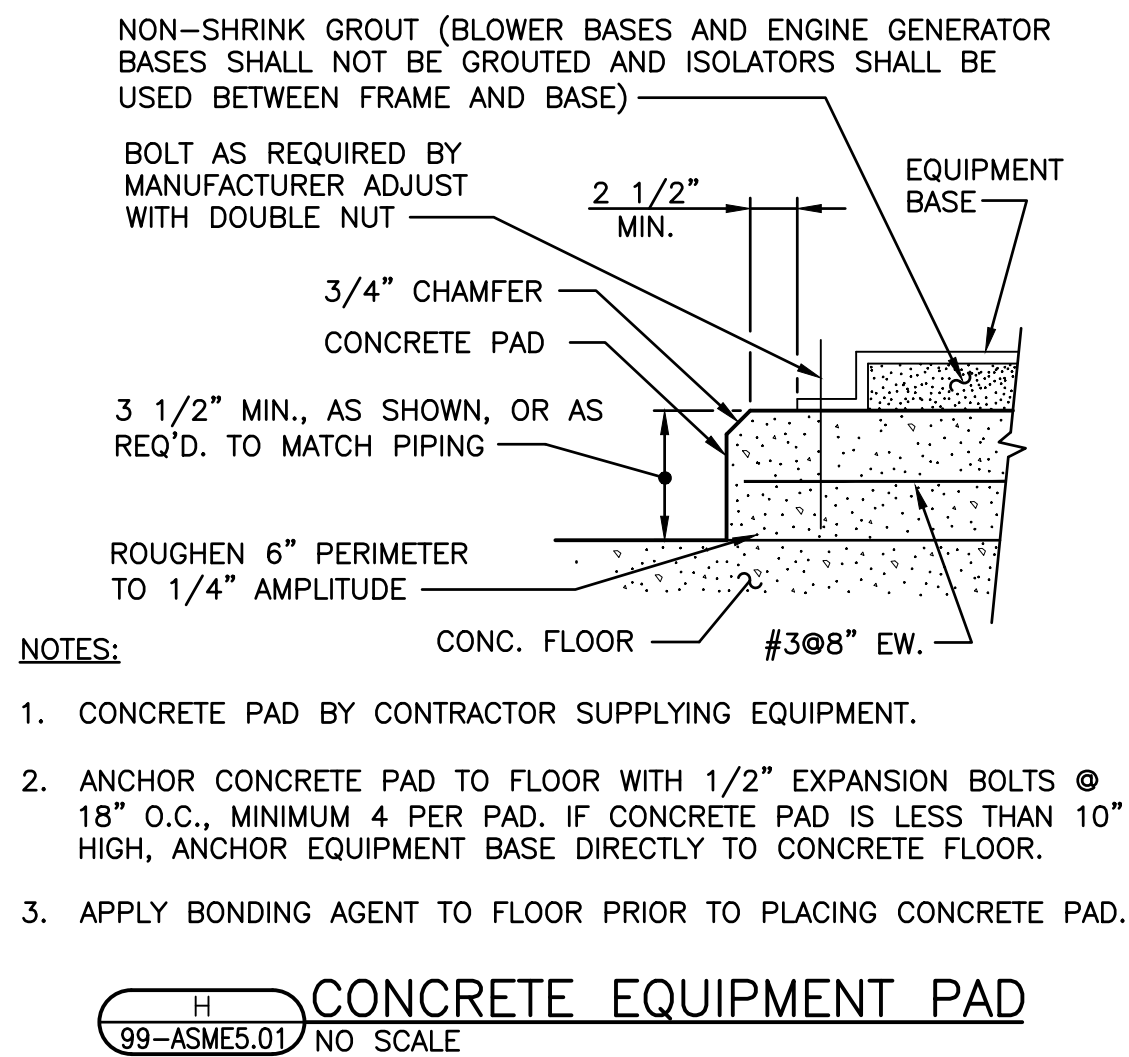
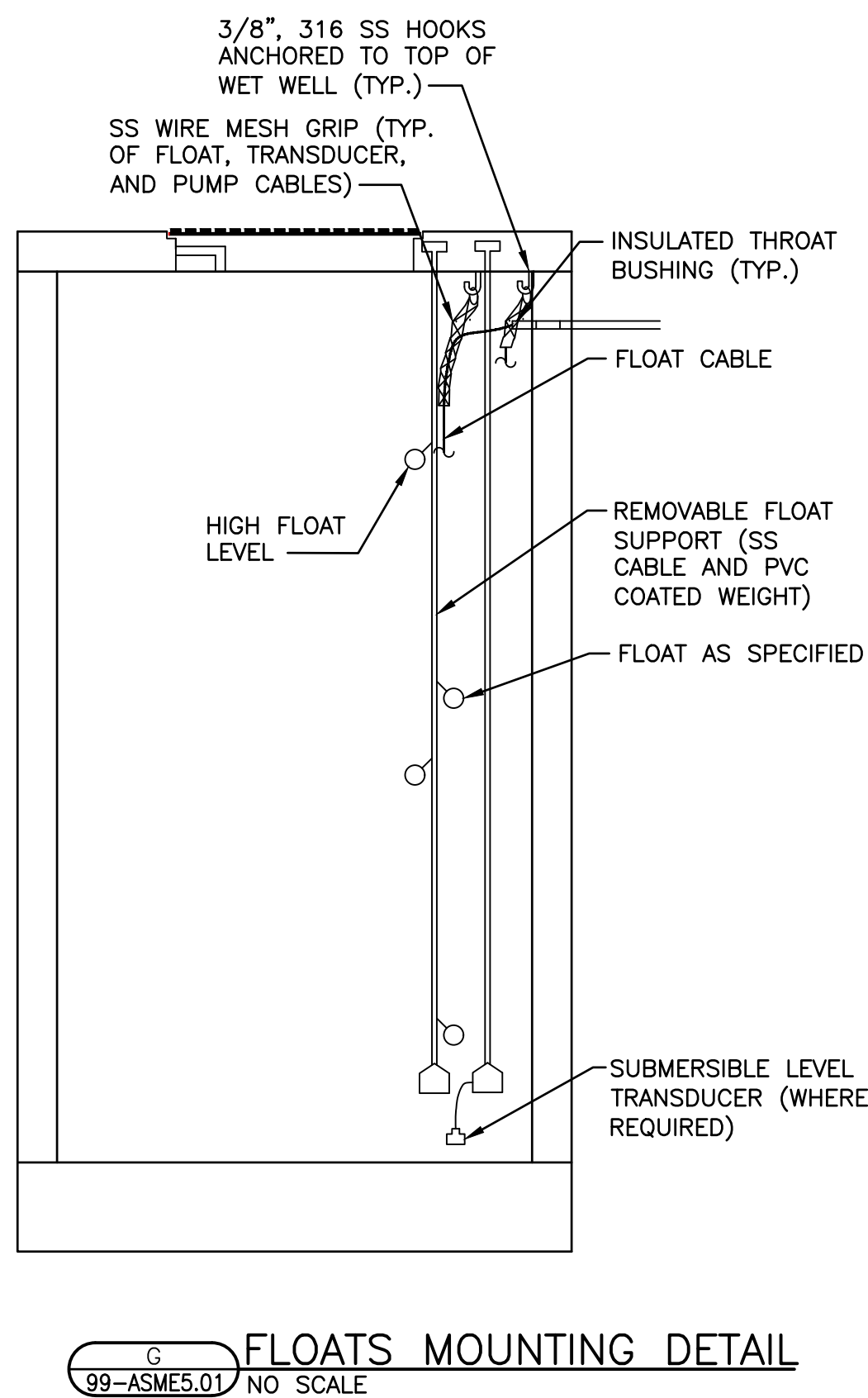
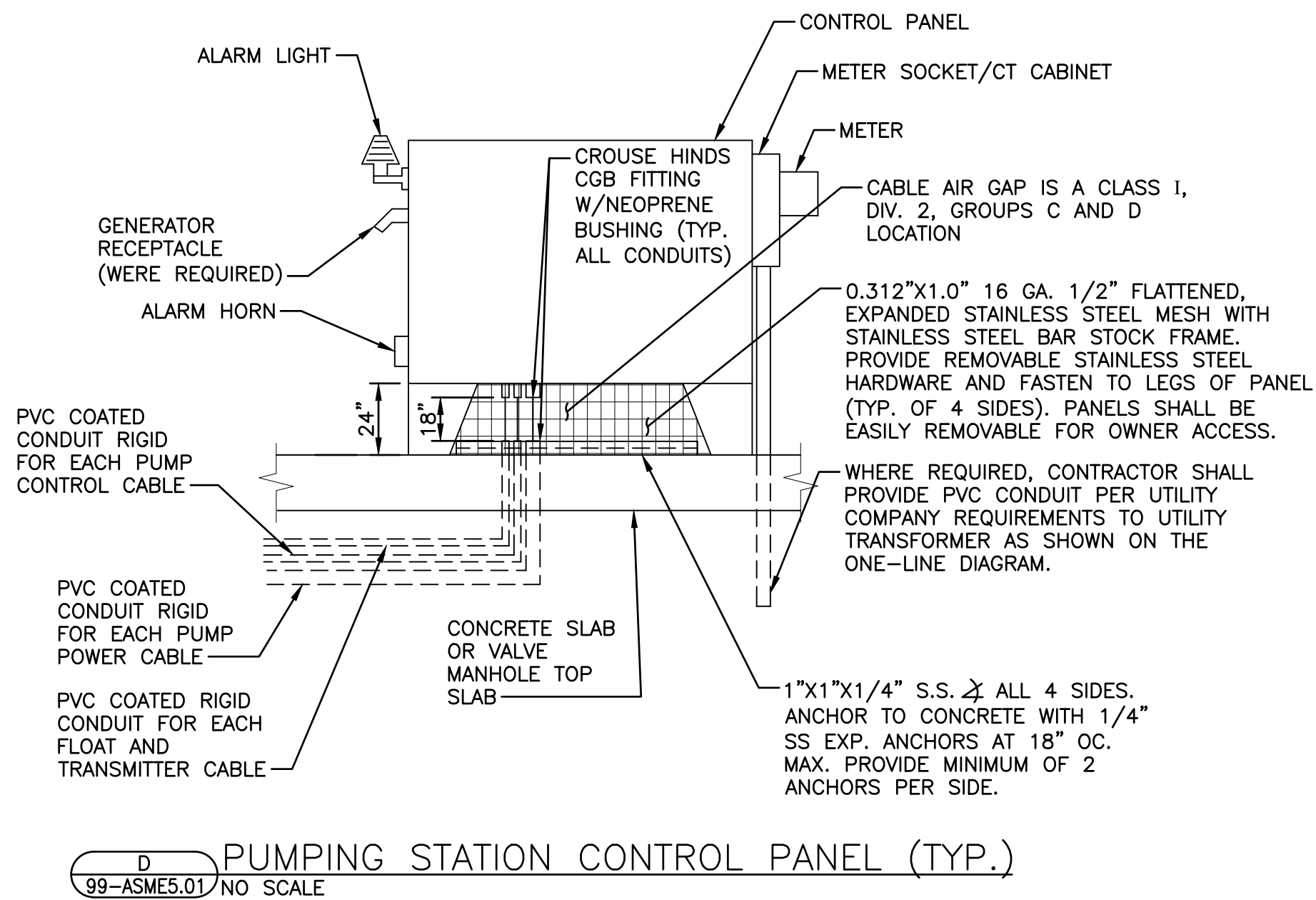
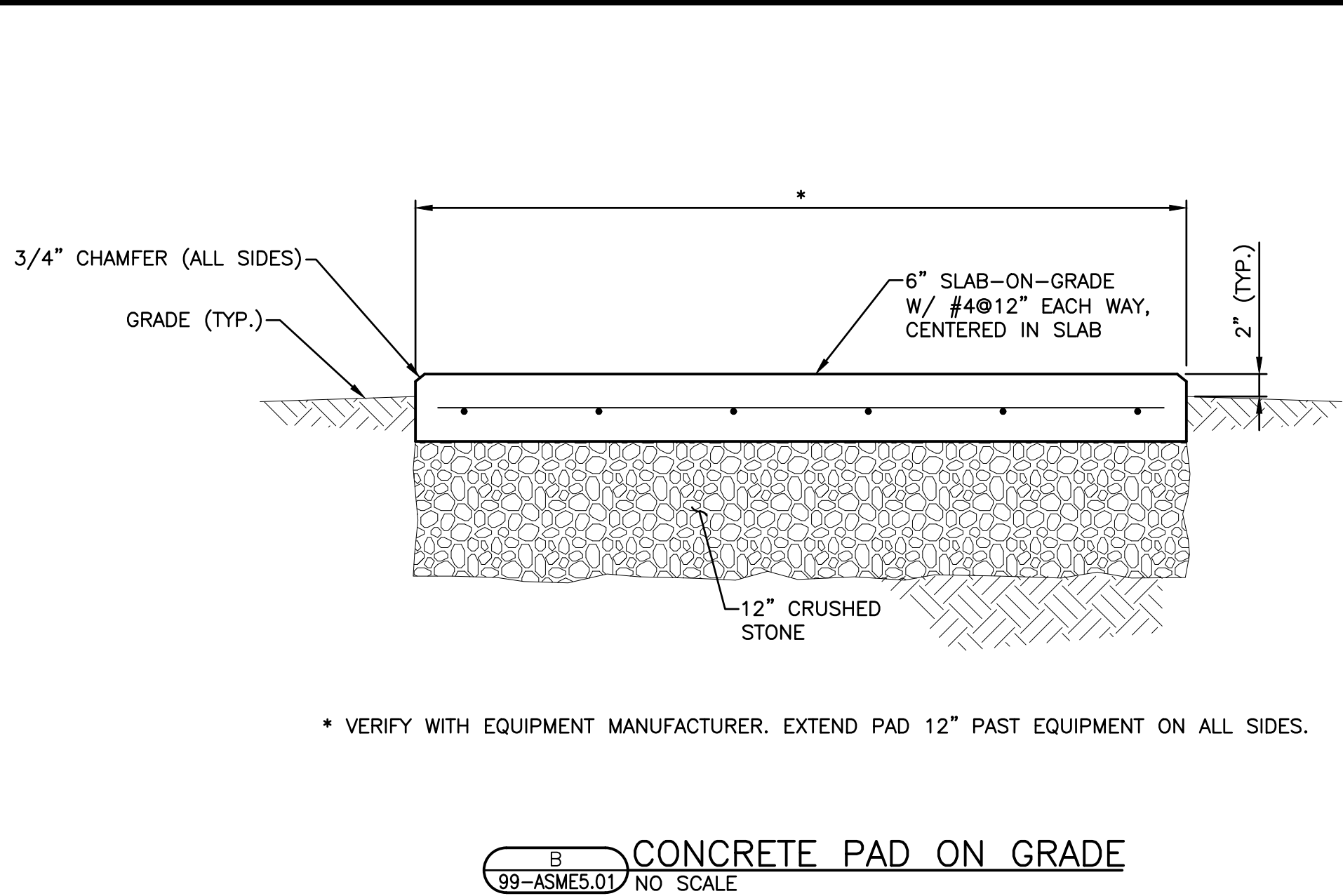
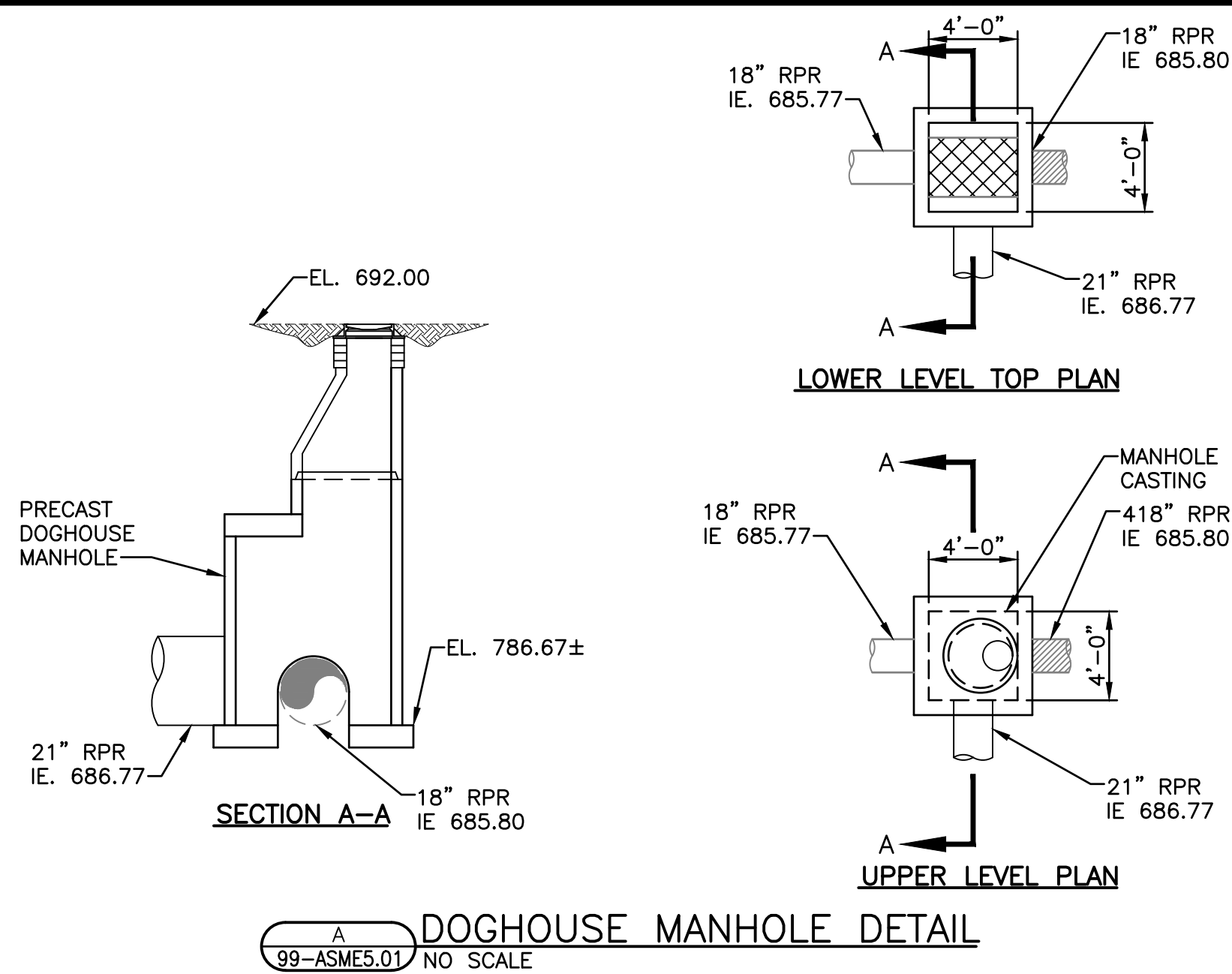
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SCHEDULES AND DETAILS
ARCHITECTURAL/STRUCTURAL/ELECTRICAL DETAILS
MIXSAWBAH FISH HATCHERY
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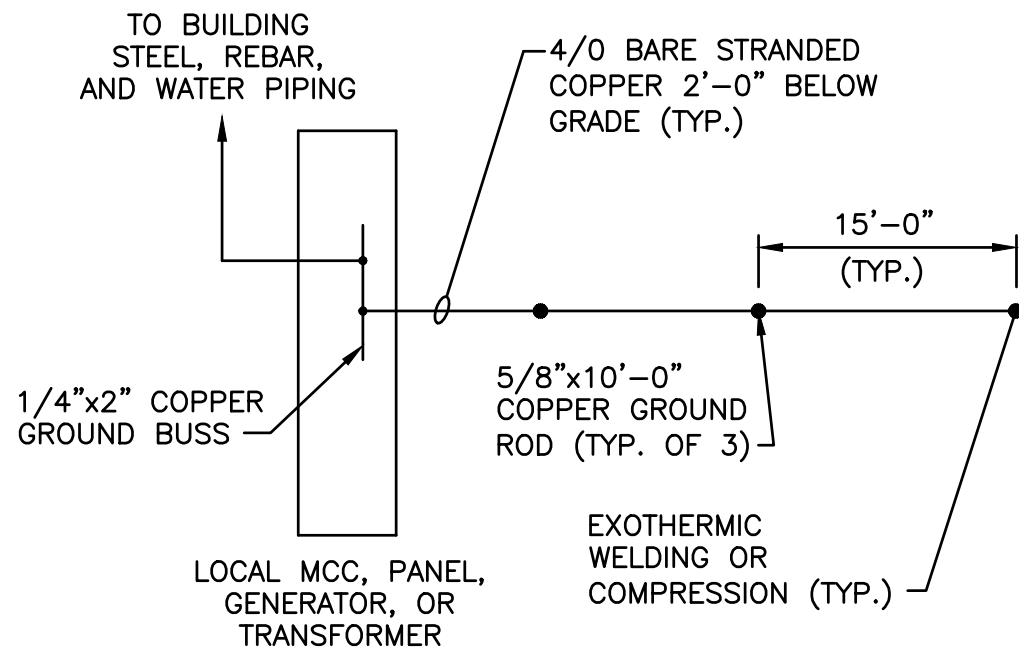
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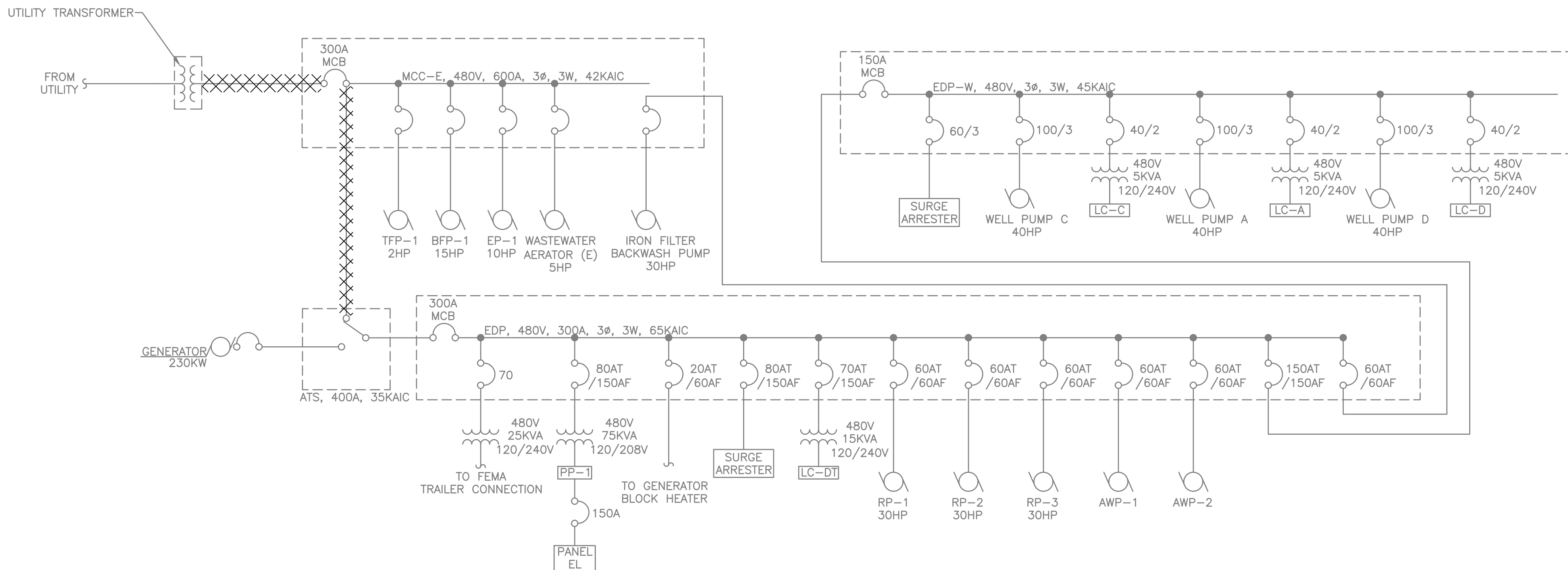
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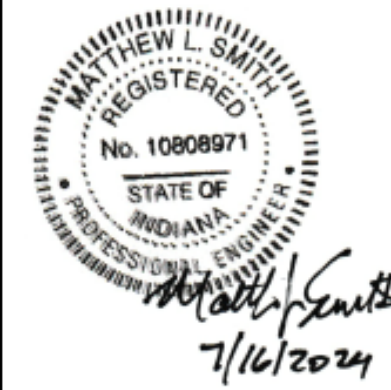


E FREE AIR WIRE GUARD
99-ASME5.01 NO SCALE





EXISTING ONE-LINE DIAGRAM



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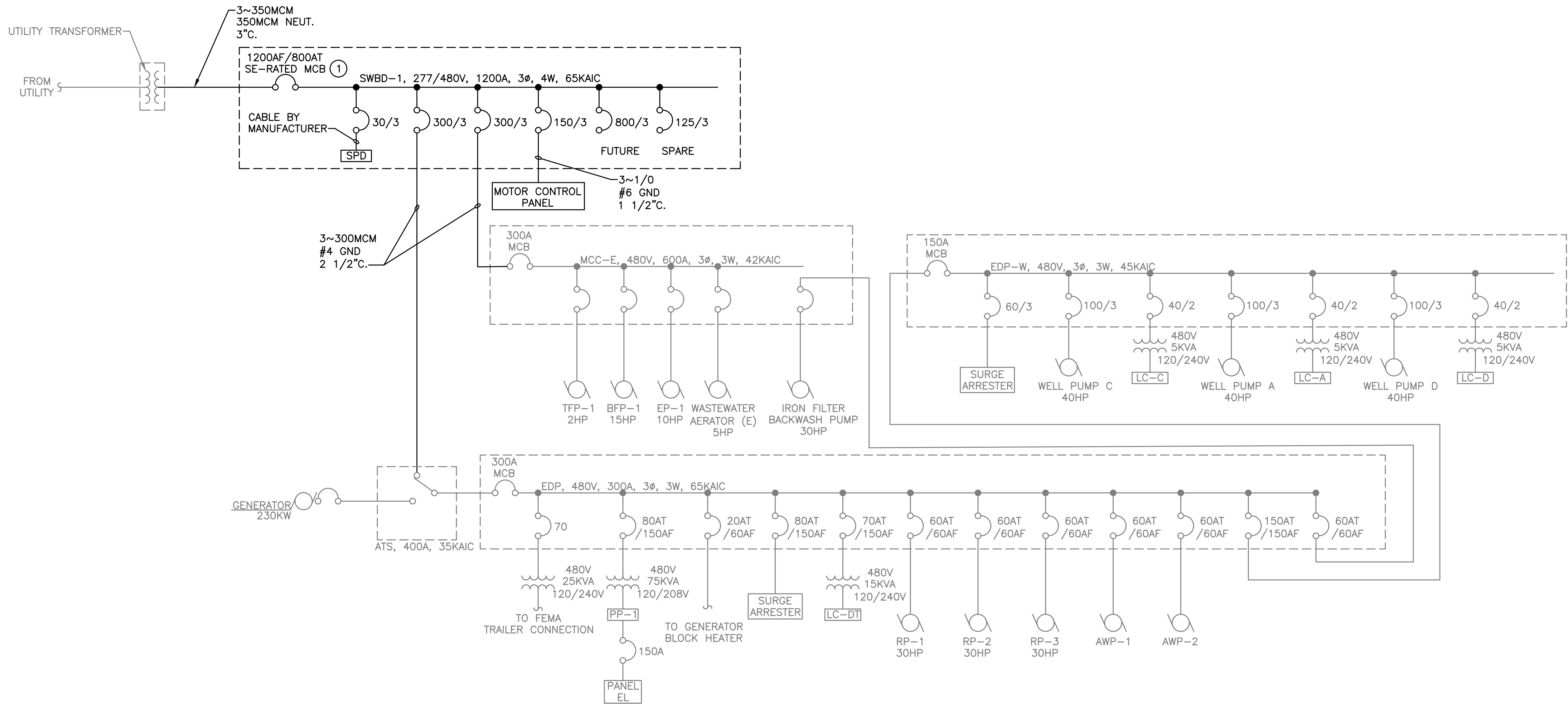
EXISTING ONE-LINE DIAGRAM
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PROPOSED ONE-LINE DIAGRAM

- KEY NOTES:
- ① BREAKER LONG TIME TRIP SETTING SHALL BE 320A. PROVIDE TAMPER-EVIDENT CABLE SEAL FOR BREAKER TRIP SETTING COVER.



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PROPOSED ONE-LINE DIAGRAM

MIXSAWBAH FISH HATCHERY
WASTEWATER TREATMENT PLANT IMPROVEMENTS PHASE 1
INDIANA DEPARTMENT OF NATURAL RESOURCES
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