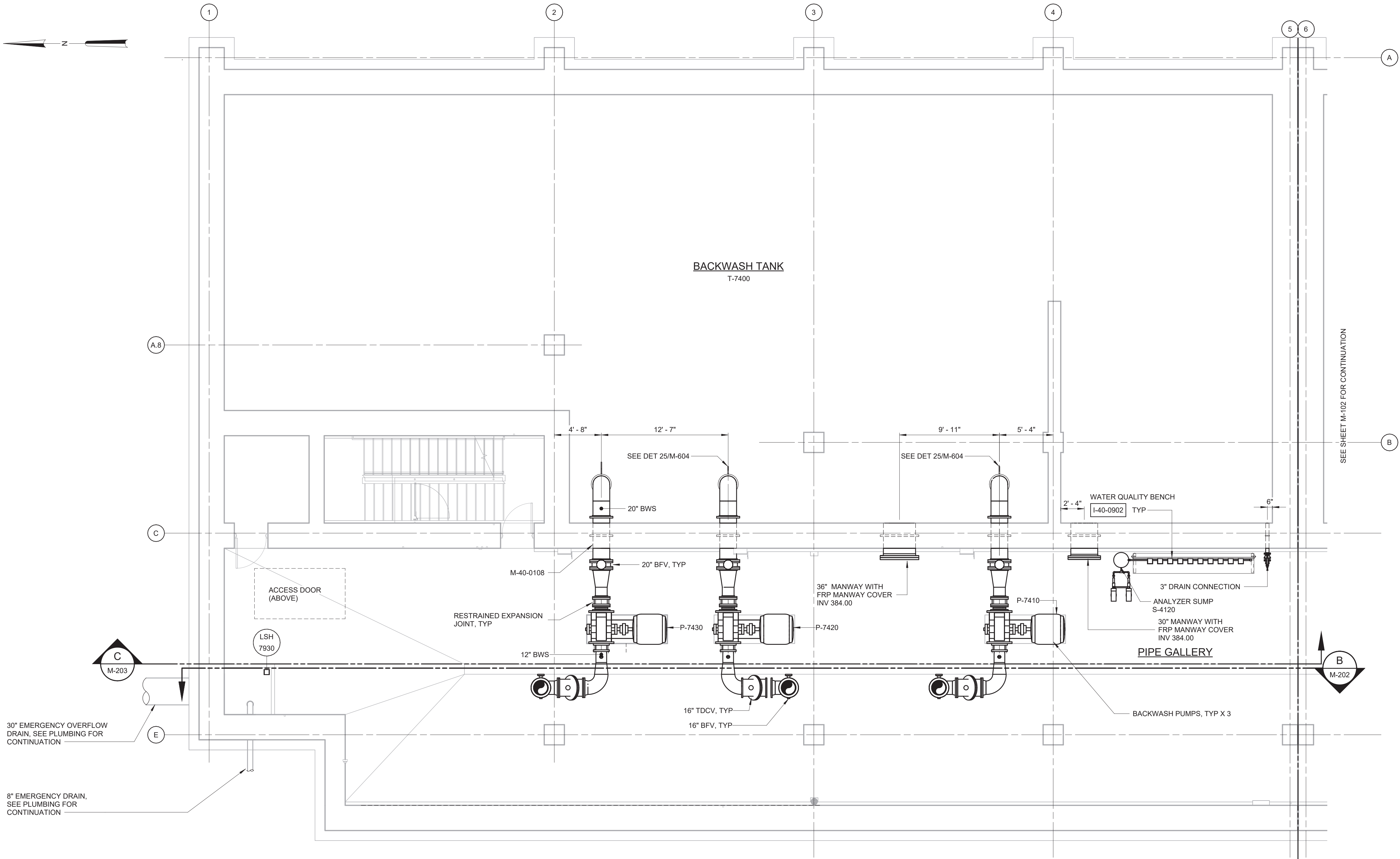
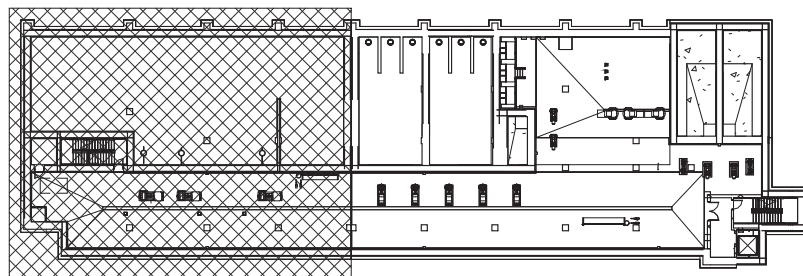


ABBREVIATIONS										GENERAL NOTES									
AB	ANCHOR BOLT	DB	DRY BULB	GWF	GLAZED WALL FINISH	OA	OUTDOOR AIR	STL	STEEL	WCO	WALL CLEANOUT	1. PROVIDE BIRD/INSECT SCREENS FOR ALL VENTS.							
ABW	AUTOMATIC BACKWASH	DC	DIRECT CURRENT	GYP	GYPSPUM	OC	ON CENTER	STO	STORAGE	WD	WALL DIFFUSER								
AC	ALTERNATING CURRENT / ASBESTOS CEMENT / AIR CONDITIONING	DCDA	DOUBLE CHECK DETECTOR ASSEMBLY	H	HEIGHT	OD	OUTSIDE DIAMETER	STRU	STRUCTURAL	WE	WEIGHT ELEMENT	LEGEND							
ACCU	AIR COOLING UNIT	DET	DETAIL	HB	HOSEBIB	OF	OUTSIDE FACE	SUB	SUBSTITUTE	WF	WIDE FLANGE								
ACH	AIR CHANGES PER HOUR	DF	DRAINAGE FIXTURE UNIT	HDW	HARDWARE	OFF	OFFICE	SUP	SUPPLY	WH	WATER GUAGE	SYMBOLS							
ACT	ACOUSTIC TILE	DFU	DRAINAGE FIXTURE UNIT	HEX	HEXAGONAL	OPNG	OPENING	SUR	SURFACE	WHA	WATER HAMMER ARRESTER								
AD	AREA DRAIN	DHU	DEHUMIDIFICATION UNIT	HHWL	HIGH HIGH WATER LEVEL	OPP	OPPOSITE	SUSP	SUSPENDE	WI	WROUGHT IRON	MATERIALS							
ADDL	ADDITIONAL	DI	DISCRETE INPUT	HM	HOLLOW METAL	ORIG	ORIGINAL	SW	SWITCH	WIT	WEIGHT INDICATING								
ADJ	ADJUSTABLE	DIA (Ø)	DIAMETER	HMCP	HOLLOW STRUCTURAL SECTION	OT	OPEN TRUSS	SWBD	SWITCHBOARD	WJWW	WESTCHESTER JOINT	LINETYPES							
AF	ABOVE FINISHED FLOOR	DIAG	DIAGONAL	HMI	HUMAN/MACHINE INTERFACE	OVHD	OVERHEAD	SWD	SIDE WATER DEPTH		WATER WORKS								
AGGR	AGGREGATE	DIM	DIMENSION	HRZ	HORIZONTAL	P	PROPANE	SYM	SYMMETRICAL		WATER LEVEL	PROPOSED ITEMS							
AHU	AIR HANDLING UNIT	DISC	DISCHARGE	HP	HORSEPOWER	PAR	PARALLEL	T	TREAD / THERMOSTAT		WATER LINE								
AI	ANALOG INPUT	DIST	DISTRIBUTION	HPT	HIGH POINT	PC	POINT OF CURVE/ PIECE	T&B	TONGUE AND GROOVE	WL	WATER METER	EXISTING ITEMS							
AL	ALLOWANCE/ALLOWABLE	DJ	DOUBLE JOINT	HR	HOSE REEL / HOUR	PCC	POINT OF COMPOUND CURVE	T&G	TANGENT	WMS	WIRE MESH SCREEN								
ALLOW	ALTERNATE	DL	DEAD LOAD	HSS	HOLLOW STRUCTURAL SECTION	PCF	POUNDS PER CUBIC FOOT+	TAN	TANGENT	WO	WINDOW OPENING	HIDDEN ITEMS							
ALT	ALTERNATE	DN	DOWN	HTR	HEATER	PD	PRESSURE DROP	TBM	TEMPORARY BENCH MARK	W/O	WITHOUT								
ALF	ANALOG OUTPUT	DOZ	DISCRETE OUTPUT	HVAC	HEATING, VENTILATION AND AIR CONDITIONING	PE	PLAIN END / POWER EXHAUSTER	TD	TOP OF CURB	WPFG	WATERPROOF	DEMOLITION ITEMS							
APPROX	APPROXIMATE	DOZ	DOLZEN	HVAC	HEATING, VENTILATION AND AIR CONDITIONING	PE LINING	POLYETHYLENE LINING	TDCV	TRENCH DRAIN	WPT	WALL PENETRATING TYPE								
ARCH	ARCHITECTURAL	DPIT	DIPIT	HW	HOT WATER	PERF	PERFORATED	TDH	TOTAL DYNAMIC HEAD	WSE	WATER SURFACE ELEVATION	CENTER LINE							
ASB	ASBESTOS	DPOL	DEWATERING POLYMER	HWB	HOT WATER BOILER	PERP	PERPENDICULAR	TFE	TETRAFLUOROETHYLENE	WSH	WEIGHT SWITCH HIGH HIGH								
ASPH	ASPHALT	DPSL	DIFFERENTIAL PRESSURE SENSOR LOW	HWL	HIGH WATER LEVEL	PG	PRESSURE GAUGE	TECH	TECHNICAL	WSP	WEATHERSTRIP	MATCH LINE							
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	DR	DOOR	HWP	HOT WATER PUMP	PH	HYDROGEN ION CONCENTRATION / PHASE	TEL	TELEPHONE	WT	WEIGHT								
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	DWG	DRAWING	HWS	HOT WATER RETURN			TEMP	TEMPERATURE	WV	WATER VALVE	INSTRUMENTATION DESIGNATIONS							
AT	ASPHALT TILE	DWL	DOWEL	HWD	HOT WATER SUPPLY	PI	POINT OF INTERSECTION / PRESSURE INDICATOR	TER	TERRAZZO	WWF	WELDED WIRE FABRIC								
ATC	AUTOMATIC TEMPERATURE CONTROL	DWV	DRAINAGE, WASTE AND VENT	HYZ	HERTZ	PL	PROPERTY LINE/ PLATE	THK	THICK	XH	EXTRA HEAVY CAST IRON SOIL PIPE	AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
						PLC	PROGRAMMABLE LOGIC CONTROLLER	THRU	THROUGH										
B	BORING					PLC	PROGRAMMABLE LOGIC CONTROLLER	TMV	THERMOSTATIC MIXING VALVE			FE FLOW ELEMENT FI FIELD INDICATOR FIT FLOW INDICATING TRANSMITTER							
BD	BOARD					PNL	PANEL	TOD	TOP OF DECK										
BFE	BOTTOM OF FITTING ELEV	E	EAST/ EASEMENT			PP	POWER POLE	TOD	TOP OF DECK			FS FLOW SWITCH LDI LEVEL DIFFERENTIAL INDICATOR							
BFP	BACKFLOW PREVENTER	EA	EACH/ EXHAUST AIR			PRFAB	PREFABRICATED	TOD	TOP OF DECK										
BFPFA	BACKFLOW PREVENTER ASSEMBLY	EAT	ENTERING AIR TEMPERATURE			PRV	PRESSURE RELIEF VALVE	TOM	TOP OF MASONRY/ MANHOLE			LE LEVEL ELEMENT LIT LEVEL INDICATING TRANSMITTER							
		ECC	ECCENTRIC			PS	PUMPING STATION	TOS	TOP OF SLAB										
BFV	BUTTERFLY VALVE	EF	EACH FACE / EXHAUST FAN			PSF	POUNDS PER SQUARE FOOT	TOW	TOP OF WALL			LSH LEVEL SWITCH HIGH LSHH LEVEL SWITCH HIGH HIGH LSL LEVEL SWITCH LOW LSLL LEVEL SWITCH LOW LOW							
BHP	BRAKE HORSE POWER	EFF	EFFLUENT / EFFICIENCY			PSI	POUNDS PER SQUARE INCH	TOL	TOLERANCE										
BITUM	BITUMINOUS	EIP	EXIST IRON PIPE			PSIG	POUNDS PER SQUARE INCH	TPS	TWISTED PAIR SHIELDED			MOV MOTOR OPERATING GATE PIT PRESSURE INDICATING TRANSMITTER							
BL	BASE LINE/ BUILDING LINE	EJ	EXPANSION JOINT			GAUGE		TRANS	TRANSFORMER										
BLCP	BOILER LOCAL CONTROL	EL	ELEVATION			IWH	INSTANTANEOUS WATER HEATER	TS	TEMPERATURE SWITCH			WQ WATER QUALITY WWW WASTE WASHWATER WWWR WASHWATER RECYCLE							
		ELC	ELECTRIC/ ELECTRICAL			PTN	PARTITION	TW	TEPID WATER										
BLDG	BUILDING	ELL	ELBOW			PV	PLUG VALVE / PROPANE VAPORIZER	TWH	TEPID WATER HEATER			AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
BLK	BLOCK	EMB	EMBEDDED			J	JOIST	TYP	TYPICAL										
BM	BENCH MARK	ENGR	ENGINEER			JB	JUNCTION BOX	UG	UNDERGROUND			AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
BMCP	BOILER MASTER CONTROL	ENGR	ENGINEER			JCT	JUNCTION	UH	HOT WATER UNIT HEATER										
		ENT	ENTRANCE			JT	JOINT	UNFIN	UNDERWRITERS LABORATORY UNFINISHED			AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
BOC	BACK OF CURB	EOP	EDGE OF GRAVEL			KW	KILOWATT	UNFIN	UNDERWRITERS LABORATORY UNFINISHED										
BOD	BOTTOM OF DUCT	EQ	EQUAL			KS	KITCHEN SINK	UNO	UNLESS NOTED OTHERWISE			AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
BOT	BOTTOM	EQPT	EQUIPMENT					UR	URINAL										
BRG	BEARING	ES	ELECTRIC POWER SUPPLY			L	LENGTH/ ANGLE	UTIL	UTILITY			AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
BRK	BRICK	ESD	EMERGENCY SHUTDOWN STATION			LA	LINE AHEAD	UV	ULTRAVIOLET										
BRNZ	BRONZE					LAM	LAMINATED	UV254	UV ABSORBANCE AT 254 NANOMETERS			AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
BSMT	BASEMENT	ESE	EMERGENCY SHOWER AND EYEWASH			LAV	LEAVING AIR TEMPERATURE AND EYEWASH												
BTU	BRITISH THERMAL UNIT	ESP	EXTERNAL STATIC PRESSURE			LB	POUND/ LINE BACK	V	SANITARY VENT			AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
BUR	BUILT-UP ROOFING	ET	EXPANSION TANK			LCP	LOCAL CONTROL PANEL	VAC	VACUUM										
BV	BALL VALVE	ETC	ET CETERA			LCS	LOCAL CONTROL STATION	VAT	VINYL ASBESTOS TILE			AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
		EUH	ELECTRIC UNIT HEATER			LF	LINEAR FEET	VB	VACUUM BREAKER										
C	CLOSET/ CARPET/ CHANNEL	EW	EACH WAY			LG	LONG / LEVEL GAUGE	VCP	VITRIFIED CLAY PIPE / VENDOR CONTROL PANEL			AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
CAB	CABINET	EWT	ENTERING WATER TEMPERATURE			LL	LIVE LOAD	VD	VOLUME DAMPER										
CB	CATCH BASIN					LLH	LONG LEG HORIZONTAL	VEL	VELOCITY			AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
C/C	CENTER TO CENTER	EX	EXCAVATE			LLV	LONG LEG VERTICAL	VENT	VENTILATING/ VENTILATION										
CCP	CENTRIFUGE CONTROL PANEL	EXC	EXCAVATE			LLWL	LOW LOW WATER LEVEL	VERT	VERTICAL			AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
CD	CEILING DIFFUSER	EXH	EXHAUST			LP	LIGHT POLE	VFD	VARIABLE FREQUENCY DRIVE										
CE	CONSTRUCTION EASEMENT	EXP	EXPANSION			LPT	LOW POINT	VOL	VOLUME			AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
CEM	CEMENT	EXT	EXTERIOR			LR	LONG RADIUS	VP	VENT PIPE										
CER	CERAMIC					LT	LIGHT	VWC	VINYL WALL COVERING			AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
CF	CUBIC FEET	F	FLUORINE / FAHRENHEIT			LTG	LIGHTING												
CFM	CUBIC FEET PER MINUTE	FAB	FABRICATE			LTV	LOUVER	W	WEST/ WIDTH			AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
CFT	CHEMICAL FEED TANK	FACP	FIRE ALARM CONTROL PANEL			LWL	LOW WATER LEVEL	W/	WITH										
CI	CAST IRON/ CUBIC INCHES	F&C	FRAME AND COVER			LWT	LEAVING WATER TEMPERATURE	WB	WET BULB			AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
CISPI	CAST IRON SOIL PIPE	F&G	FRAME AND GRATE					WC	WATER CLOSET / WATER COLUMN										
CL	CLOSET	FC	FLUSHING CONNECTION									AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
CLG	CEILING	FD	FLOOR DRAIN / FIRE DAMPER																
CLKG	CAULKING	FDC	FIRE DEPARTMENT CONNECTION									AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
CLR	CLEAR	FDN	FOUNDATION																
CLW	CLEAR WATER DRAIN	FE	FIRE EXTINGUISHER									AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
CMP	CORRUGATED METAL PIPE	FF	FINISHED FLOOR																
CMU	CONCRETE MASONRY UNIT	FH	FIRE HYDRANT									AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
CO2	CARBON DIOXIDE	FIN	FINISH																
CO	CLEANOUT	FIX	FIXTURE									AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
COAG	COAGULANT	FLX	FLEXIBLE																
CODP	CLEANOUT DECK PLATE	FLG	FLANGE									AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
COL	COLUMN	FLUOR	FLUORESCENT																
COMP	COMPRESSOR	FLXC	FLEXIBLE CONNECTION									AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
CONC	CONCRETE	FM	FLOW METER																
CONN	CONNECTION	FP	FIRE PROTECTION									AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
CONST	CONSTRUCTION	FRP	FIBERGLASS REINFORCED POLYESTER LAMINATE																
CONT	CONTINUOUS	FRP	FIBERGLASS REINFORCED POLYESTER LAMINATE									AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
CONTR	CONTRACTOR	FS	FLOW SWITCH																
CONV	CONVEYOR	FT	FEET									AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
CORP	CORPORATION	FTG	FOOTING/ FITTING																
CORRR	CORROSION	FURR	FURRING/ FURRED									AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
CP	CONCRETE PLANK	G	GAS/ GAS LINE																
CPP	CENTRIFUGE POWER PANEL	GA	GAUGE									AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
CPVC	CHLORINATED POLYVINYL CHLORIDE	GAC	GRANULAR ACTIVATED CARBON																
		GAL	GALLON									AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
CRS	COURSE	GALV	GALVANIZED																
CT	CERAMIC TILE	GALV	GALVANIZED									AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
CTJ	CONTROL JOINT	GOT	GENERAL CONTRACTOR																
CU	COPPER	GD	GRAVITY DAMPER									AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
CV	CHECK VALVE	GEN	GENERATOR																
CW	COLD WATER	GI	GALVANIZED IRON									AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
CY	CUBIC YARD	GL	GLASS																
		GLBV	GLOBE VALVE									AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
		GMU	GLYCOL MAKEUP UNIT																
		GPH	GALLONS PER HOUR									AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
		GPM	GALLONS PER MINUTE																
		GR	GRADE / GRAINS OF MOISTURE									AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
		GV	GATE VALVE																
		GW	GUY WIRE									AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
		GWB	GYPSPUM WALL BOARD																
												AE ANALYTICAL ELEMENT AIT ANALYTICAL INDICATING TRANSMITTER							
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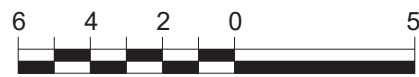


PARTIAL PLAN AT EL 383.00 - AREA 1
3/16" = 1'-0"



KEY PLAN

1/64" = 1'-0"
3/16" = 1'-0"

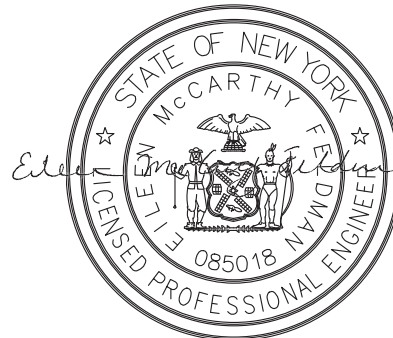


WARNING
IT IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER IN ANY WAY PLANS, SPECIFICATIONS, PLATS OR REPORTS TO WHICH THE SEAL OF A PROFESSIONAL ENGINEER HAS BEEN APPLIED. IF AN ITEM BEARING THE SEAL OF A PROFESSIONAL ENGINEER IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE ITEM HIS SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE, THE DATE, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	C. THORNTON
DRAWN BY:	B. CASULL
CHECKED BY:	E. FELDMAN
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



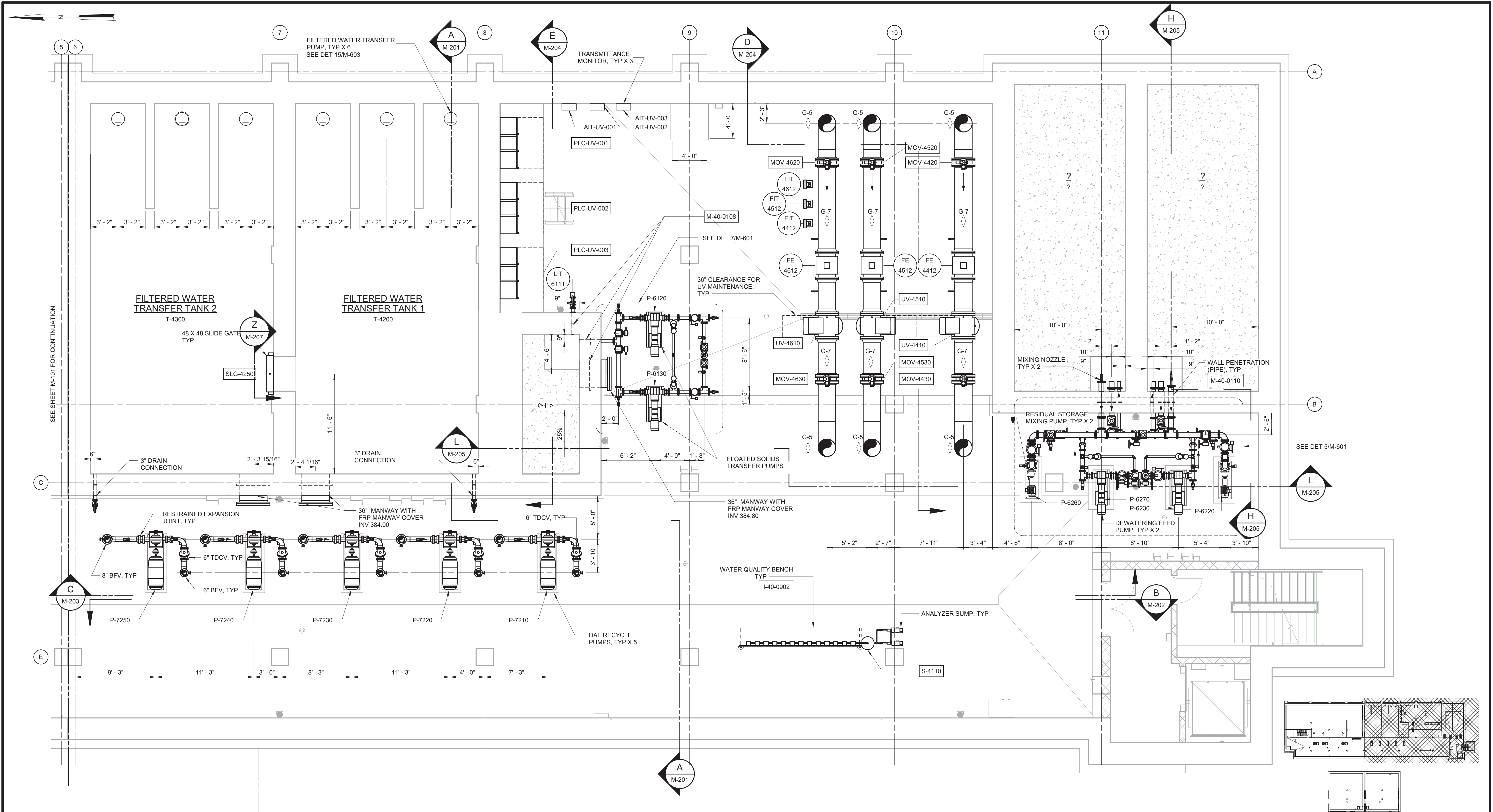
Hazen
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

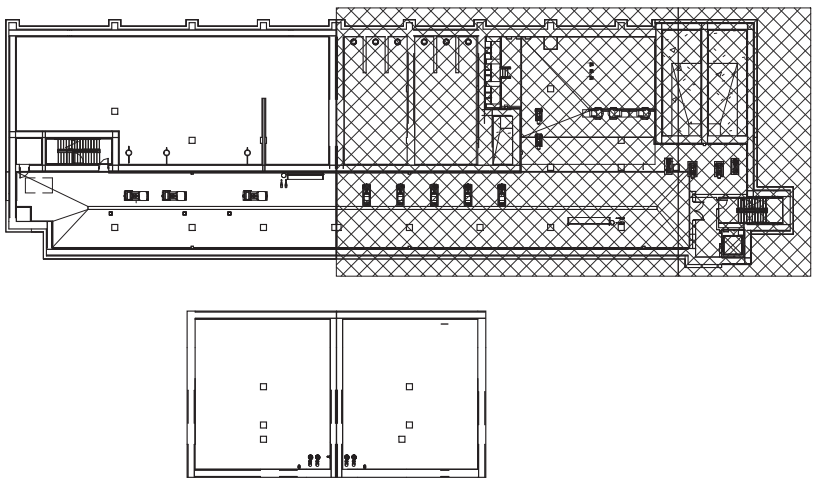
RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
MECHANICAL
PARTIAL PLAN AT EL 383.00 - AREA 1

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	M-101



PARTIAL PLAN AT EL 383.00 - AREA 2 & 3
3/16" = 1'-0"

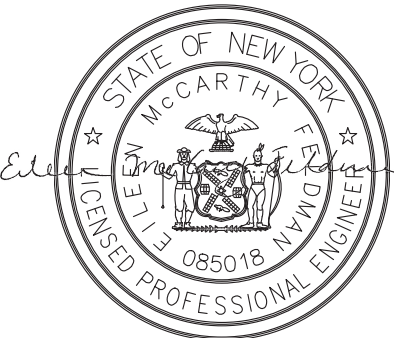


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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	C. THORNTON
DRAWN BY:	B. CASULL
CHECKED BY:	E. FELDMAN
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



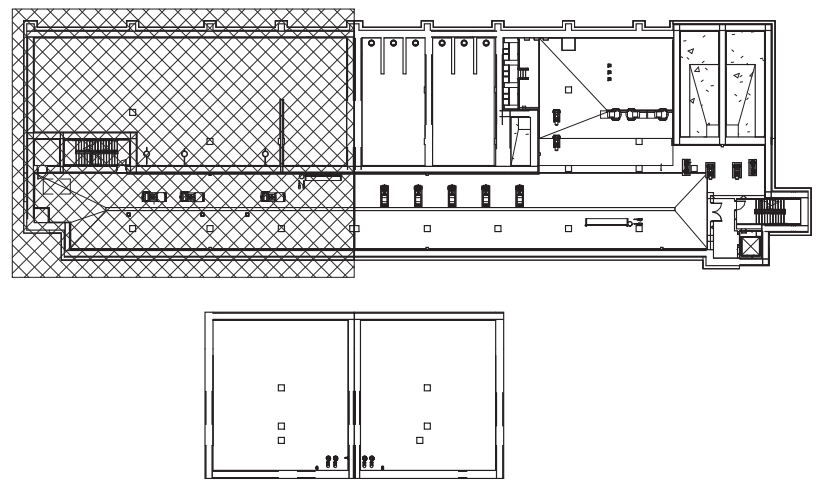
Hazen
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
MECHANICAL
PARTIAL PLAN AT EL 383.00 - AREA 2 & 3

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	M-102



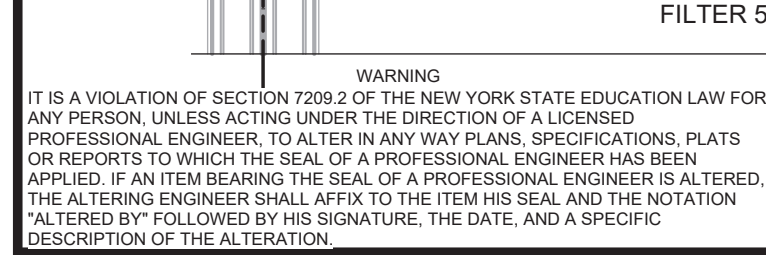
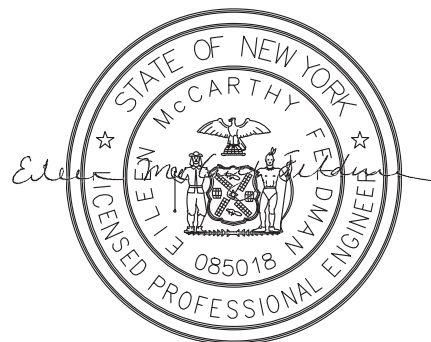
$1/64" = 1'-0"$
 $3/16" = 1'-0"$

The image shows two horizontal graphic scale bars. The top bar is for a scale of 1/64 inch = 1 foot. It is divided into four equal segments, with tick marks at the boundaries. Above the bar, the numbers 6, 4, 2, and 0 are placed from left to right, and the number 5' is placed at the far right end. The bottom bar is for a scale of 3/16 inch = 1 foot. It is also divided into four equal segments, with tick marks at the boundaries. Above the bar, the numbers 6, 4, 2, and 0 are placed from left to right, and the number 5' is placed at the far right end.

BID SET

RYE LAKE WATER FILTRATION PLANT HARRISON, NY

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	M-103

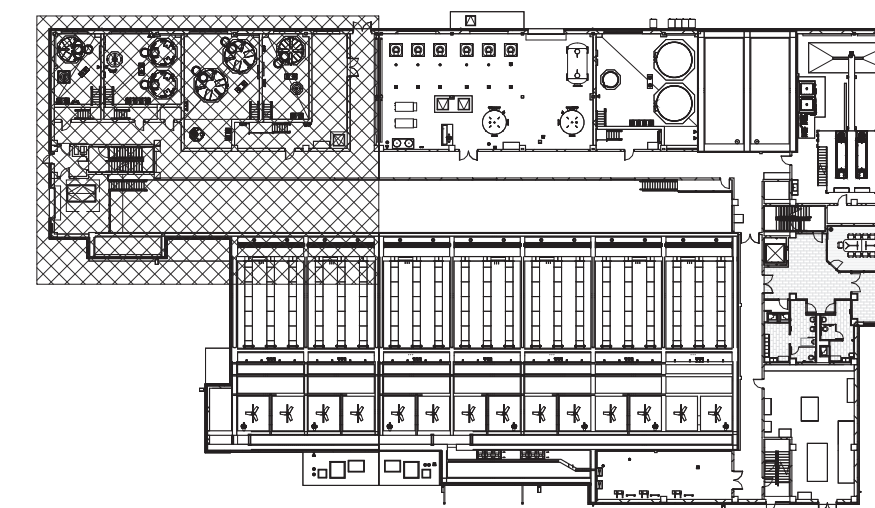

$$3/16'' = 1'-0''$$
BID SET

Hazen

RYE LAKE WATER FILTRATION PLANT HARRISON, NY

PARTIAL PLAN AT EL 398.00 - AREA 2 & 3

189 of 392




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

3/16" = 1'-0"

WARNING

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PROJECT ENGINEER:	R. FROST
DESIGNED BY:	C. THORNTON
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CHECKED BY:	E. FELDMAN
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">0 1/2"</div>  </div>

BID SET



Hazen

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498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

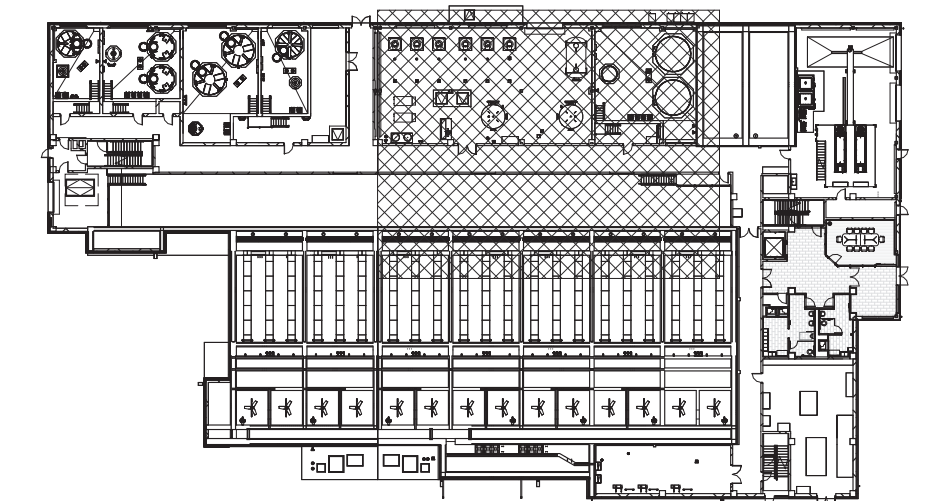
RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
MECHANICAL
PARTIAL PLAN AT EL 407.00 - AREA 1


DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	

M-105

1. TANK INSTRUMENTS, VENT PIPING AND CHEMICAL FEED PIPING IN CHEMICAL ROOMS ARE SHOWN ON SHEET M-111 FOR CLARITY.


$$1/64'' = 1'-0''$$

$\frac{3}{16}'' = 1'-0''$

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	C. THORNTON
DRAWN BY:	B. CASULL
CHECKED BY:	E. FELDMAN
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	<div style="display: flex; align-items: center;"> 0  1/2" 1 </div>

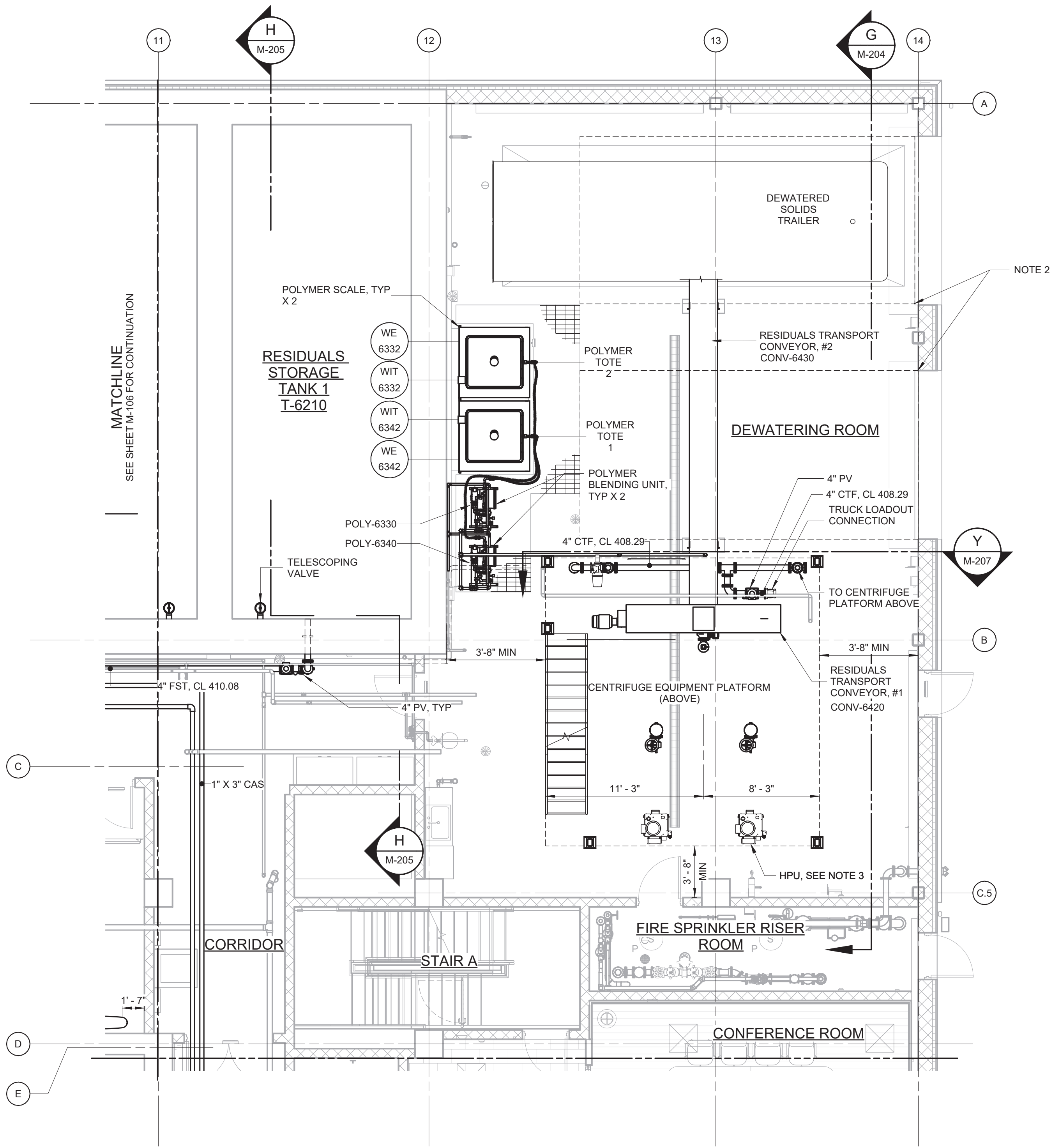
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

RYE LAKE WATER FILTRATION PLANT HARRISON, NY

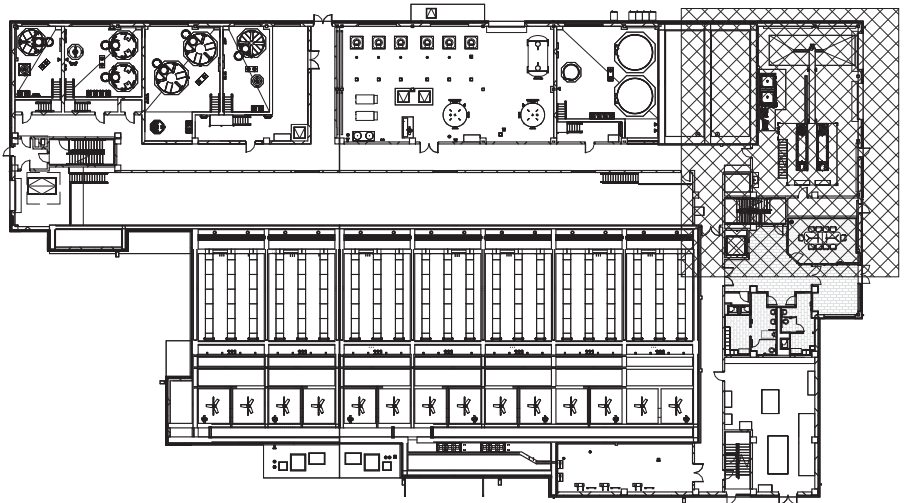
FILTRATION PLANT
MECHANICAL
PARTIAL PLAN AT EL 407.00 - AREA 2

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	M-106

- NOTE:
1. PLATFORM, CENTRIFUGES, AND CENTRIFUGE LCPS TO BE COORDINATED WITH MANUFACTURERS.
 2. CONVEYOR SUPPORTS ARE TO BE DESIGNED BY THE CONVEYOR MANUFACTURER, AS PER SPECIFICATION 46 76 42, AND COORDINATED WITH THE CONTRACTOR AS TO NOT IMPEDE OR BLOCK ACCESS FROM THE ROLL-UP DOORS.
 3. CONTRACTOR SHALL COORDINATE WITH MANUFACTURER FOR MATERIALS, ROUTING, AND SUPPORT OF HYDRAULIC TUBING.



PARTIAL PLAN AT EL 407.00 - AREA 3
3/16" = 1'-0"



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

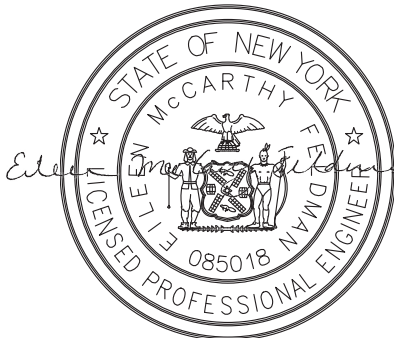
3/16" = 1'-0" 6 4 2 0 5'

WARNING
IT IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER IN ANY WAY PLANS, SPECIFICATIONS, PLATS OR REPORTS TO WHICH THE SEAL OF A PROFESSIONAL ENGINEER HAS BEEN APPLIED, IF AN ITEM BEARING THE SEAL OF A PROFESSIONAL ENGINEER IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE ITEM HIS SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE, THE DATE, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	C. THORNTON
DRAWN BY:	B. CASULL
CHECKED BY:	E. FELDMAN
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



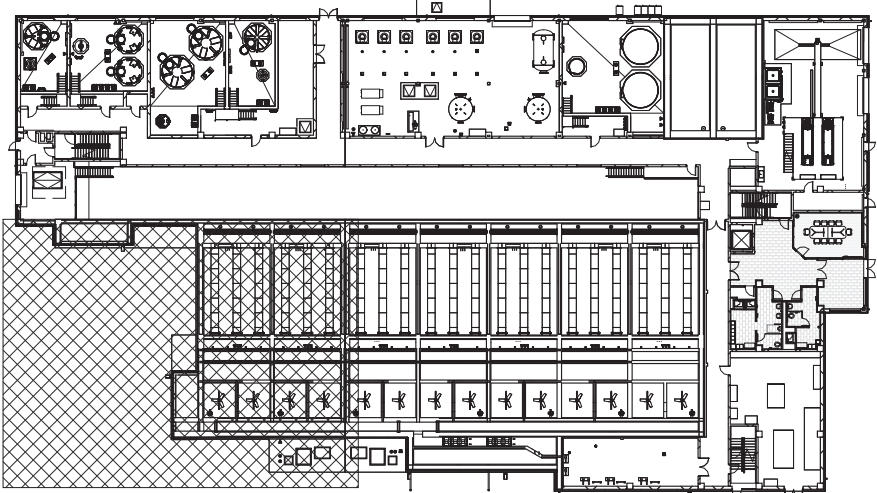
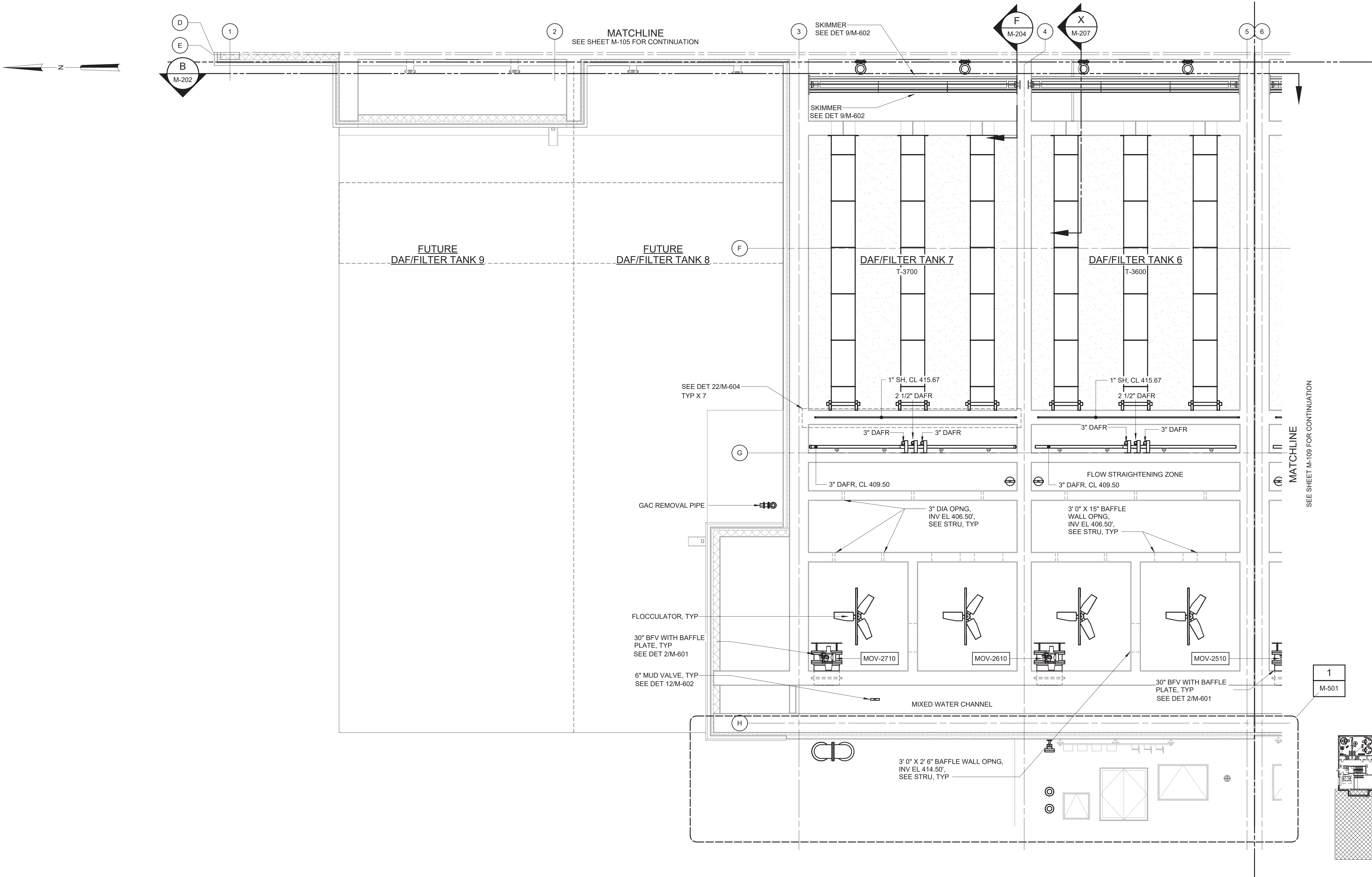
Hazen
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
MECHANICAL
PARTIAL PLAN AT EL 407.00 - AREA 3

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	M-107



PARTIAL PLAN AT EL 407.00 - AREA 4
3/16" = 1'-0"

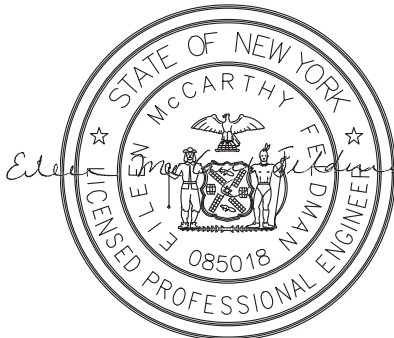
KEY PLAN
1/64" = 1'-0"
3/16" = 1'-0"

WARNING
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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	C. THORNTON
DRAWN BY:	B. CASULL
CHECKED BY:	E. FELDMAN
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



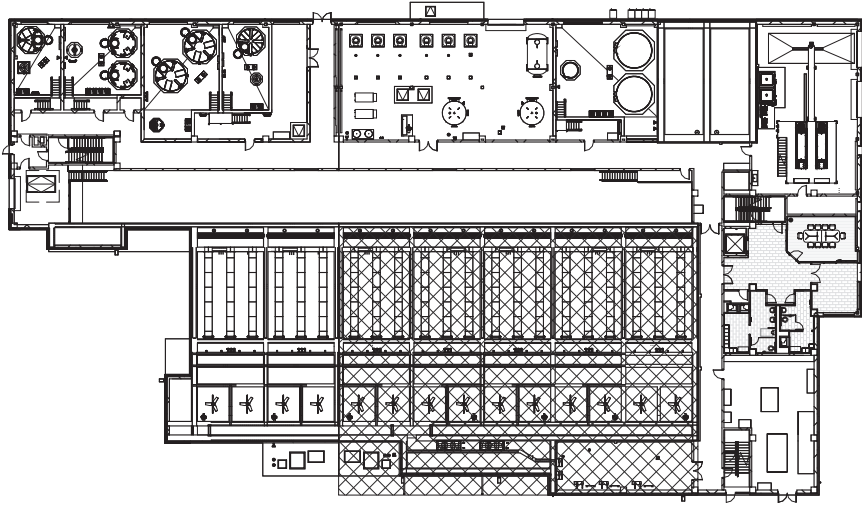
Hazen
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

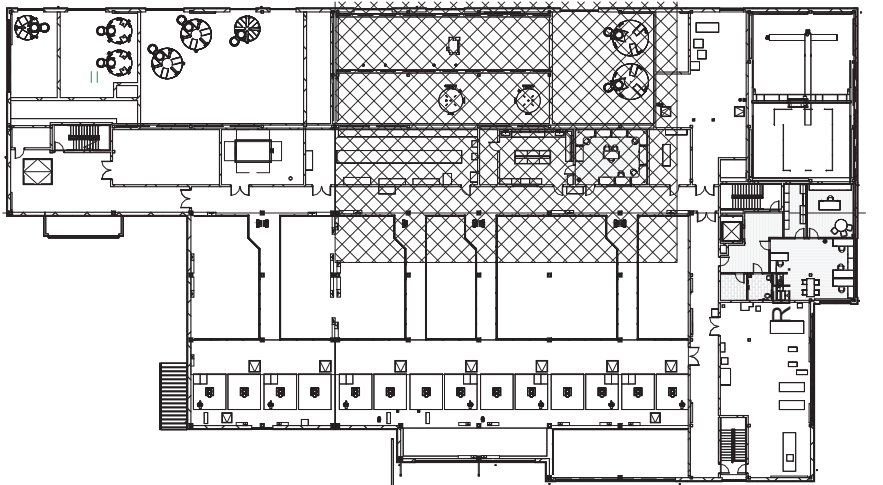
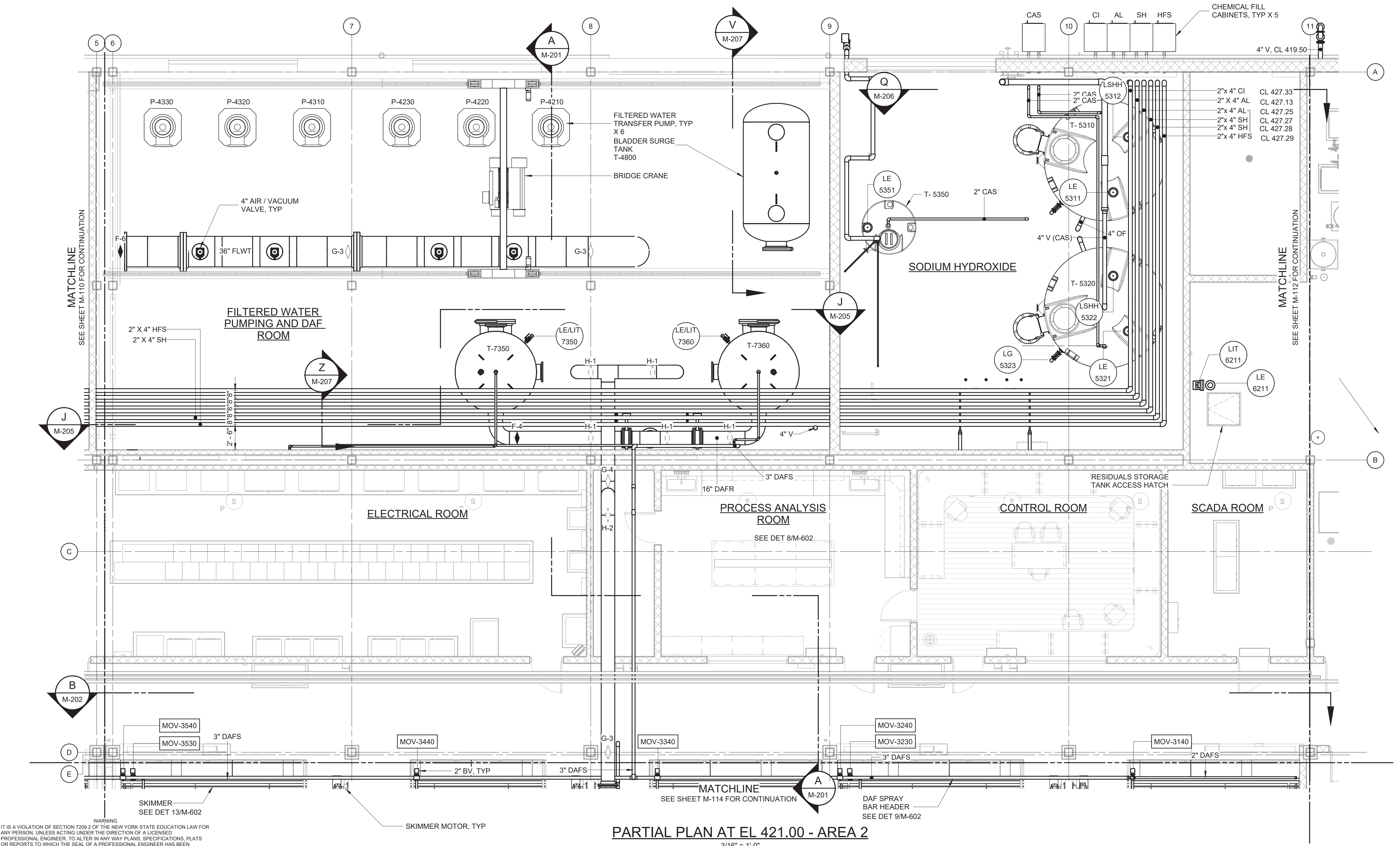
RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
MECHANICAL
PARTIAL PLAN AT EL 407.00 - AREA 4

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	M-108



- NOTES:
1. PROVIDE BIRD/INSECT SCREENS FOR ALL VENTS.
 2. LOWER CHEMICAL PIPING, INSTRUMENTS AND EQUIPMENT ARE SHOWN ON SHEET M-105 FOR CLARITY.
 3. CHEMICAL FILL STATIONS AND TANKS SHALL BE LABELED AS PER SPECIFICATION 43 41 43 AND 10 14 00.
 4. LIQUID CHEMICAL STORAGE TANKS SHALL BE VENTED PER SPECIFICATION 43 41 43. TANKS SHALL BE VENTED SEPARATE FROM OTHER CHEMICALS, AND NOT COMMON BETWEEN BULK AND DAY TANKS OF THE SAME CHEMICAL.
 5. SECONDARY CONTAINMENT VOLUME FOR EACH CHEMICAL ROOM PROVIDED BY CONCRETE CURBED AREA, AS SHOWN IN S-106 AND S-108.
 6. CHEMICAL ROOMS SHALL CONTAIN A NON-DRAINING SUMP AND FLOOR DRAINED TO IT, AS SHOWN ON S-108 AND S-109.
 7. SURFACE COATINGS IN CHEMICAL ROOM ARE PROVIDED IN THE ROOM FINISH SCHEDULE, AS SHOWN ON A-604 AND DETAILED PER SPECIFICATION 09 97 00.



WARNING
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					PROJECT ENGINEER:	R. FROST
					DESIGNED BY:	C. THORNTON
					DRAWN BY:	B. CASULL
					CHECKED BY:	E. FELDMAN
					IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	
REV	ISSUED FOR			DATE	BY	<div><div></div><div>0</div><div>1/2"</div><div>1"</div></div>

BID SET



Hazen

HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

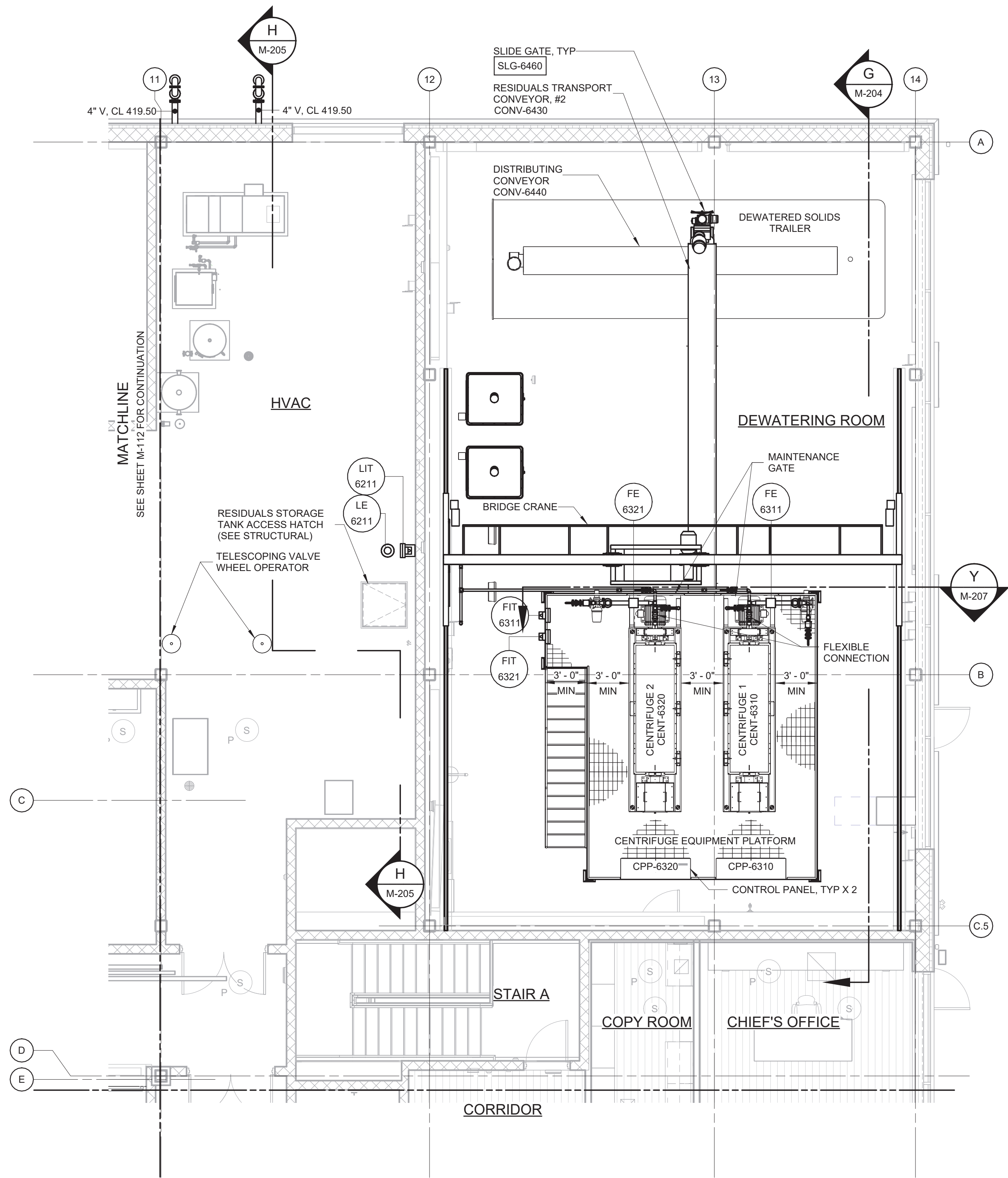
RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
MECHANICAL
PARTIAL PLAN AT EL 421.00 - AREA 2

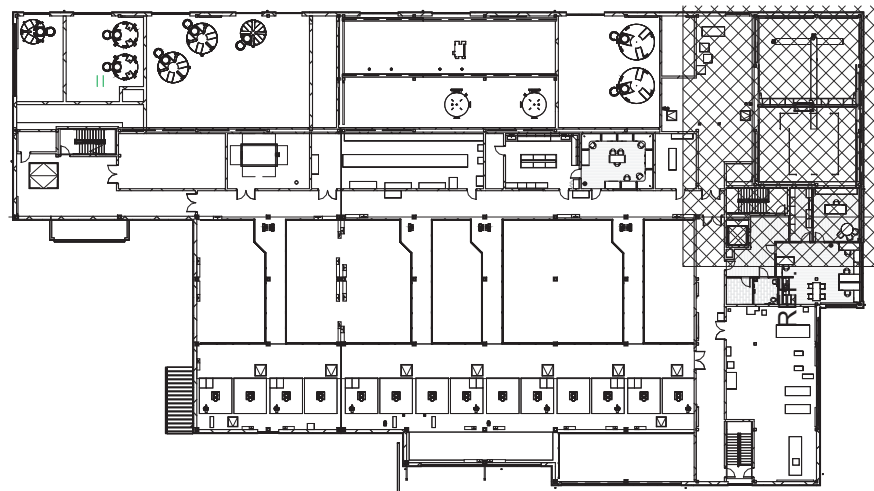
DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	M-111

Autodesk Docs/90388-000_Rye_Lake_Filtration/90388-000-WFP-M111
2/20/2025 1:05:39 AM

NOTE:
1. PROVIDE BIRD/INSECT SCREENS FOR ALL VENTS.



PARTIAL PLAN AT EL 421.00 - AREA 3
3/16" = 1'-0"



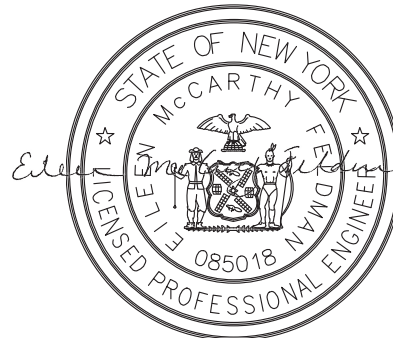
KEY PLAN

1/64" = 1'-0"
3/16" = 1'-0"
6 4 2 0 5'

WARNING
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REV	ISSUED FOR	DATE	BY	PROJECT ENGINEER:	R. FROST
				DESIGNED BY:	C. THORNTON
				DRAWN BY:	B. CASULL
				CHECKED BY:	E. FELDMAN
				IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



Hazen

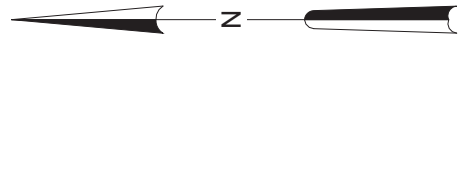
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

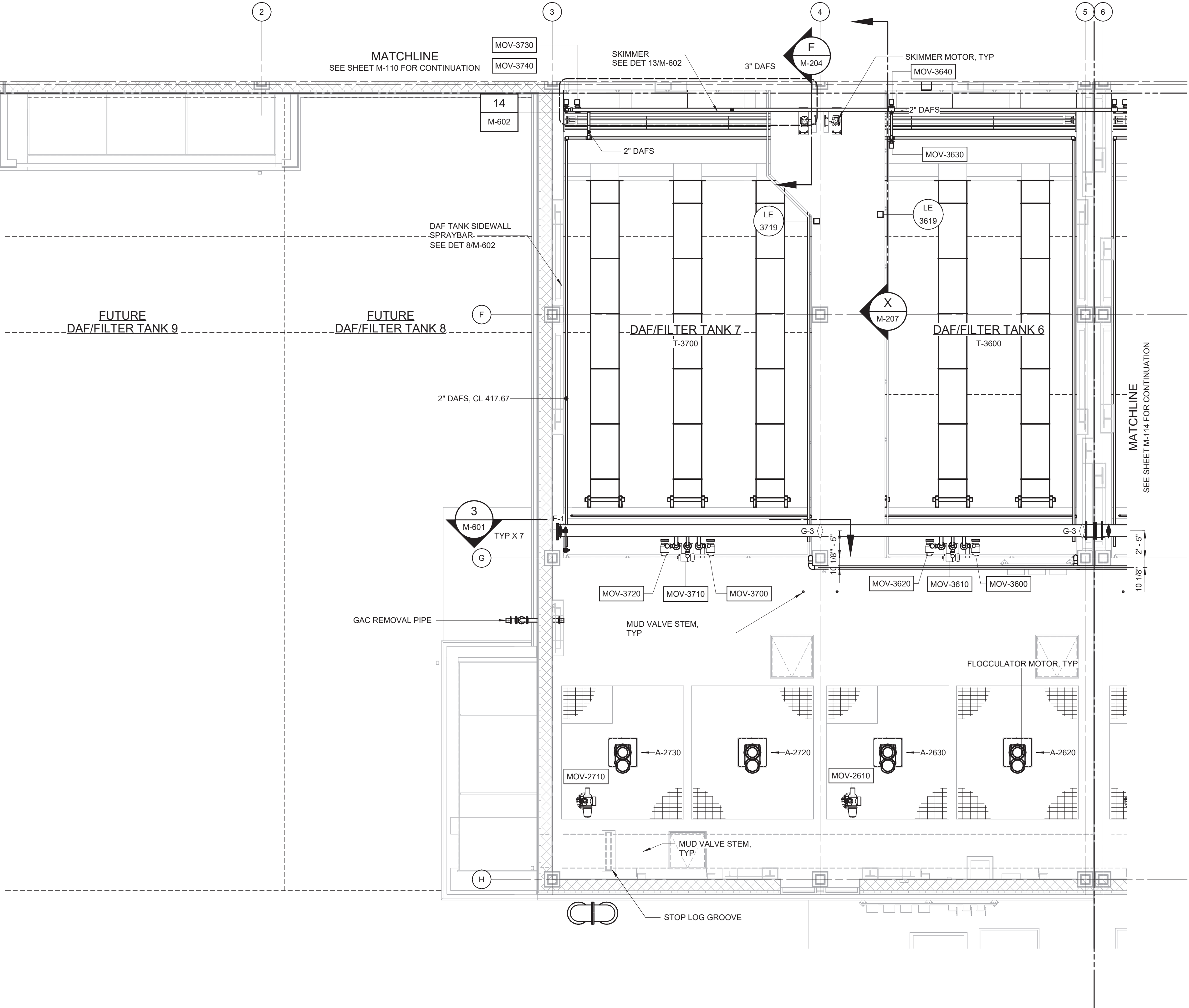
RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
MECHANICAL
PARTIAL PLAN AT EL 421.00 - AREA 3

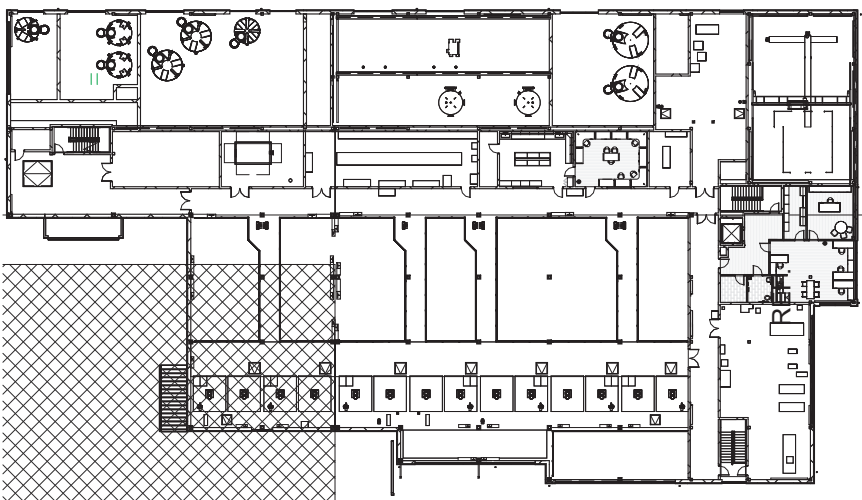
DATE: FEB 2025
HAZEN NO.: 90388-000
CONTRACT NO.: A1364-A
DRAWING NUMBER: M-112



- NOTE:
- 12" AND 16" DAF RECYCLE (DAFR) PIPING INTENDED TO BE SUPPORTED BY THE COLUMNS USING PIPE SUPPORTS (SUCH AS M-40-0303). CONTRACTOR MAY SUBMIT ALTERNATE PIPE SUPPORTS FOR APPROVAL. PIPE SUPPORTS SHALL NOT EXTEND TO THE OPERATING FLOOR NOR THE ROOF.



PARTIAL PLAN AT EL 421.00 - AREA 4
3/16" = 1'-0"



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

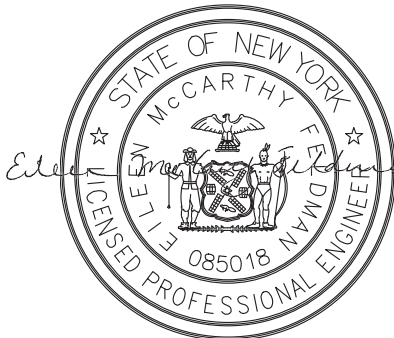
3/16" = 1'-0"
6 4 2 0 5'

WARNING
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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	C. THORNTON
DRAWN BY:	B. CASULL
CHECKED BY:	E. FELDMAN
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



Hazen
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY


FILTRATION PLANT
MECHANICAL
PARTIAL PLAN AT EL 421.00 - AREA 4

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	M-113



-
- 6 4 2 0 5'
- $\frac{3}{16}'' = 1'-0''$

REV	ISSUED FOR	DATE	BY

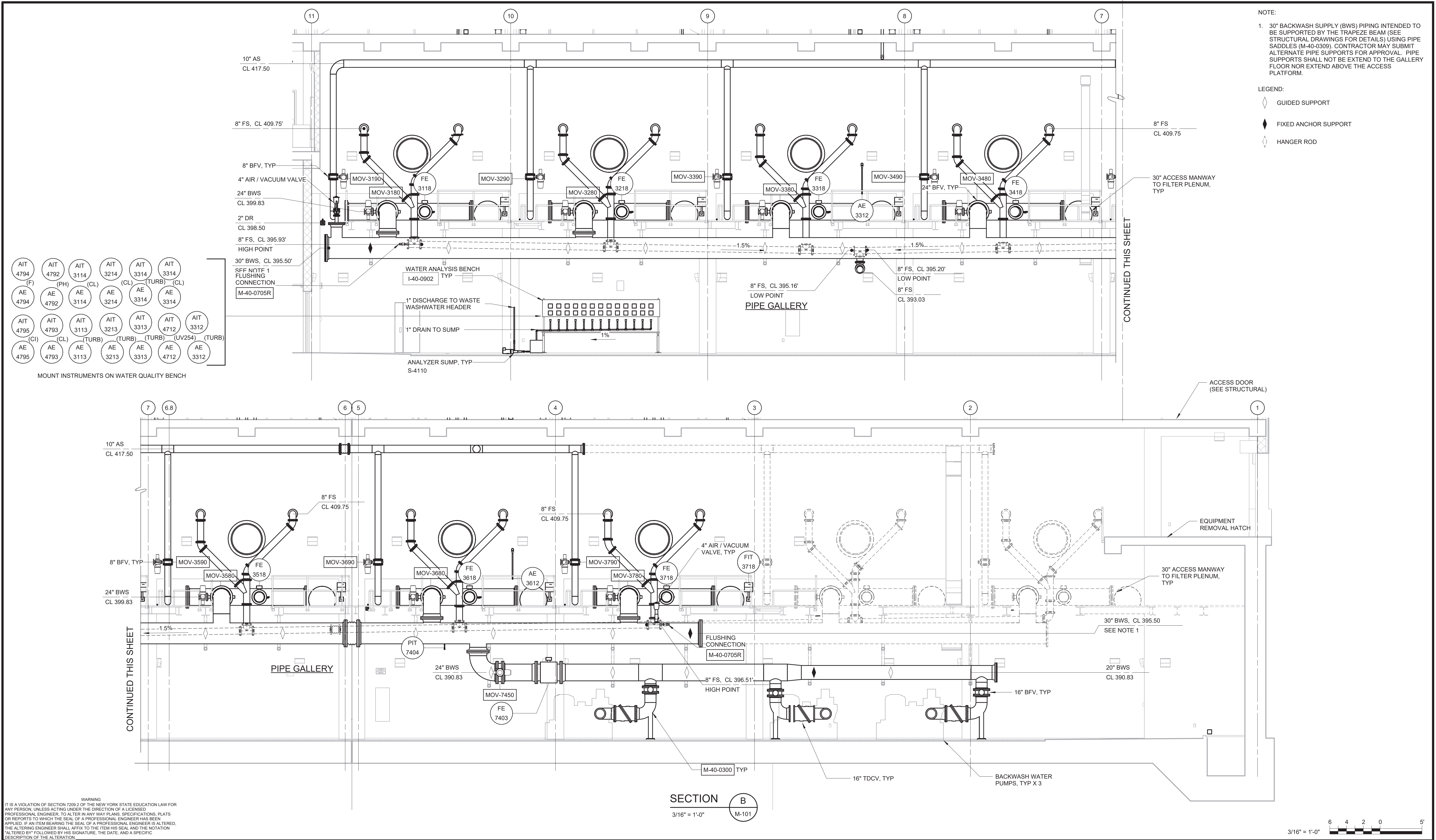
PROJECT ENGINEER:	R. FROST
DESIGNED BY:	C. THORNTON
DRAWN BY:	B. CASULL
CHECKED BY:	E. FELDMAN
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	<div style="display: flex; align-items: center;"> 0  1/2" 1" </div>

The seal is circular with the text "STATE OF NEW YORK" at the top and "LICENSED PROFESSIONAL ENGINEER" at the bottom. In the center, it says "McCarthy Eileen" and "085018". The seal also features a central emblem with a sun, a plow, and a sheaf of wheat, flanked by two figures holding a shield.

HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

RYE LAKE WATER FILTRATION PLANT HARRISON, NY

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	M-201



REV				ISSUED FOR	DATE	BY

BID SET

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	C. THORNTON
DRAWN BY:	B. CASULL
CHECKED BY:	E. FELDMAN
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

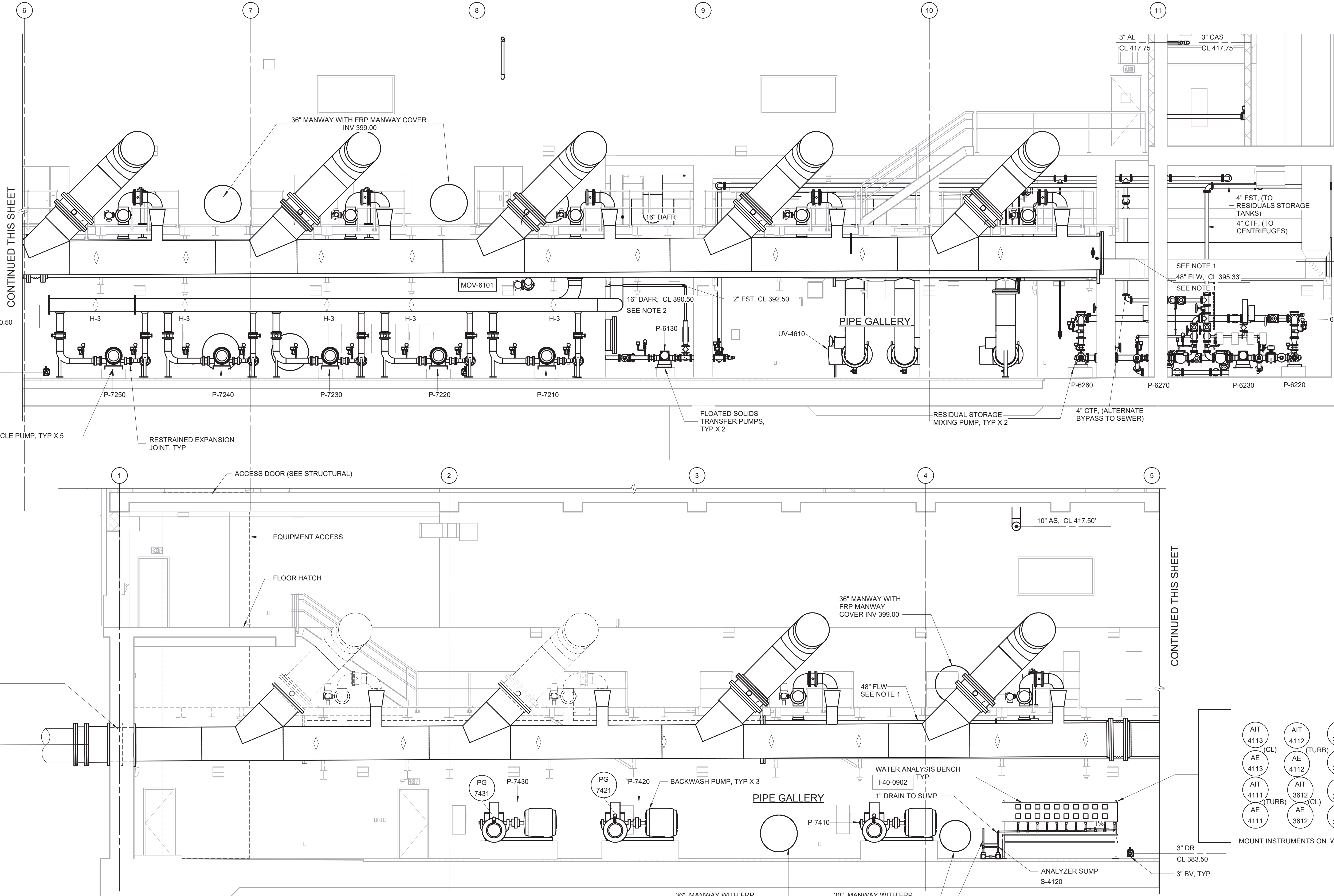
WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
MECHANICAL
SECTIONS - SHEET 2

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	M-202

Autodesk Docs/90388-000_Rye_Lake_Filtration/90388-000-WFP-M-202
2/20/2025 1:06:04 AM



- NOTES:
- 42" WASTE WASHWATER (WWW) PIPING AND 48" FILTERED WATER (FLW) PIPING INTENDED TO BE SUPPORTED BY THE TRAPEZE BEAM (SEE STRUCTURAL DRAWINGS FOR DETAILS) USING PIPE SADDLES (M-40-0309). CONTRACTOR MAY SUBMIT ALTERNATE PIPE SUPPORTS FOR APPROVAL. PIPE SUPPORTS SHALL NOT EXTEND TO THE GALLERY FLOOR NOR EXTEND ABOVE THE ACCESS PLATFORM.
 - DAFR PUMP SUCTION (FLW) AND DISCHARGE (DAFR) HEADERS AT ELEVATION 390.50 ARE INTENDED TO BE SUPPORTED BY THE TRAPEZE BEAM ABOVE USING BRACED HANGER SUPPORTS (M-40-0306R) (SEE STRUCTURAL DRAWINGS FOR DETAILS). CONTRACTOR MAY SUBMIT ALTERNATE PIPE SUPPORTS FOR APPROVAL. PIPE SUPPORTS SHALL NOT EXTEND TO THE GALLERY FLOOR NOR EXTEND ABOVE THE ACCESS PLATFORM.

- LEGEND:
- GUIDED SUPPORT
 - FIXED ANCHOR SUPPORT
 - HANGER ROD

WARNING
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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	C. THORNTON
DRAWN BY:	B. CASULL
CHECKED BY:	E. FELDMAN
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



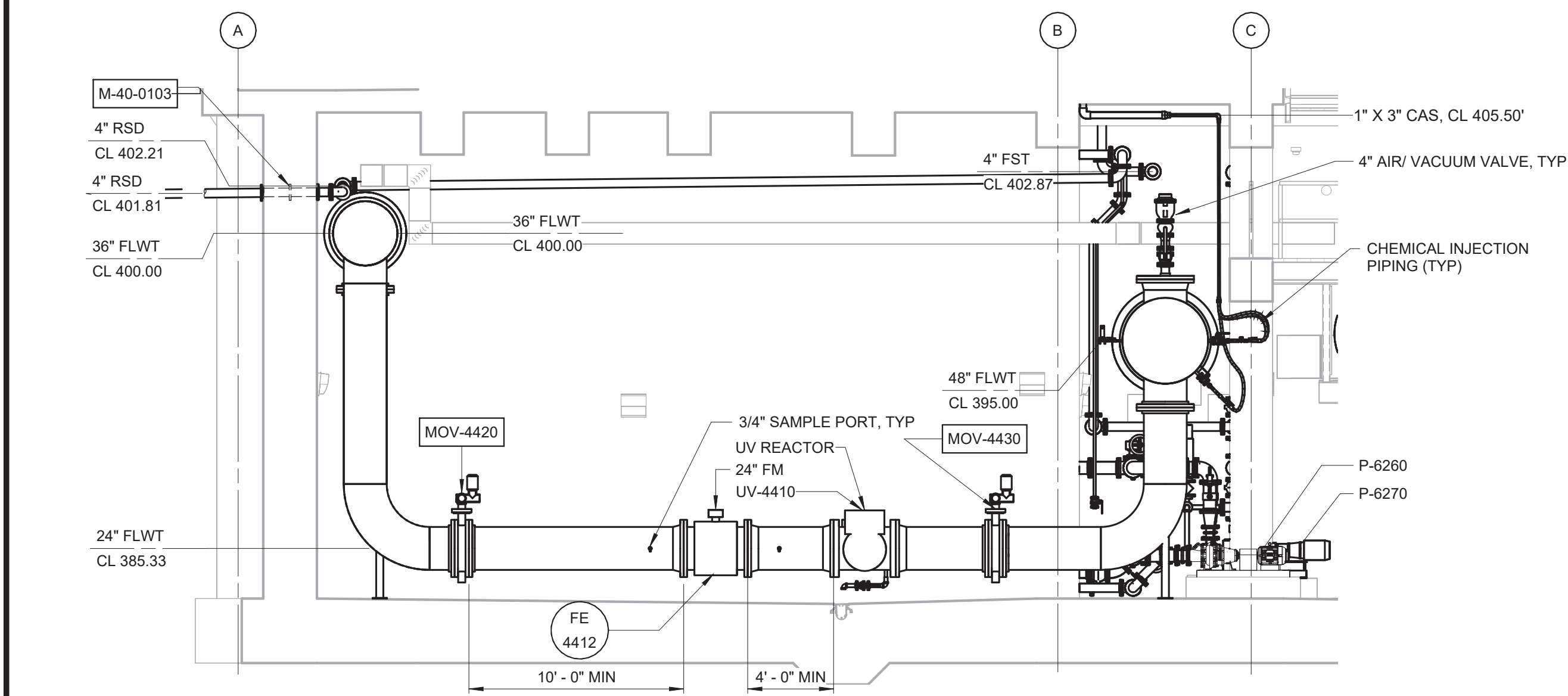
Hazen
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

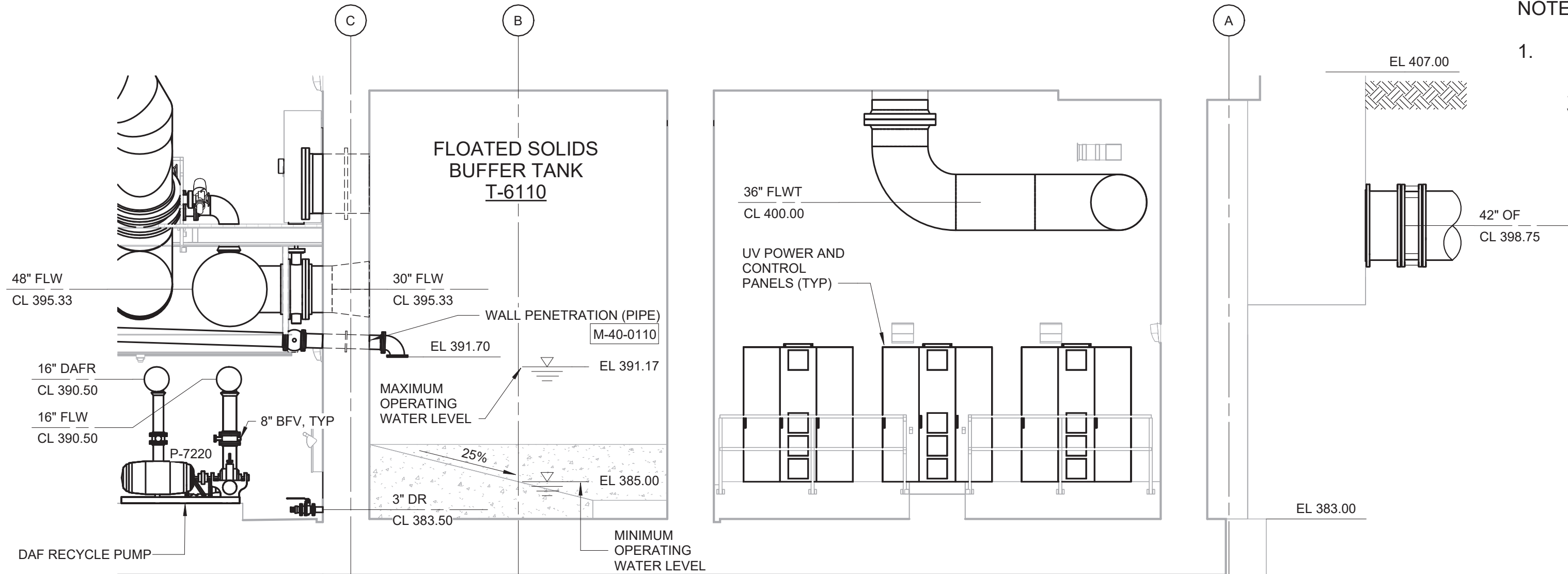
RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
MECHANICAL
SECTIONS - SHEET 3

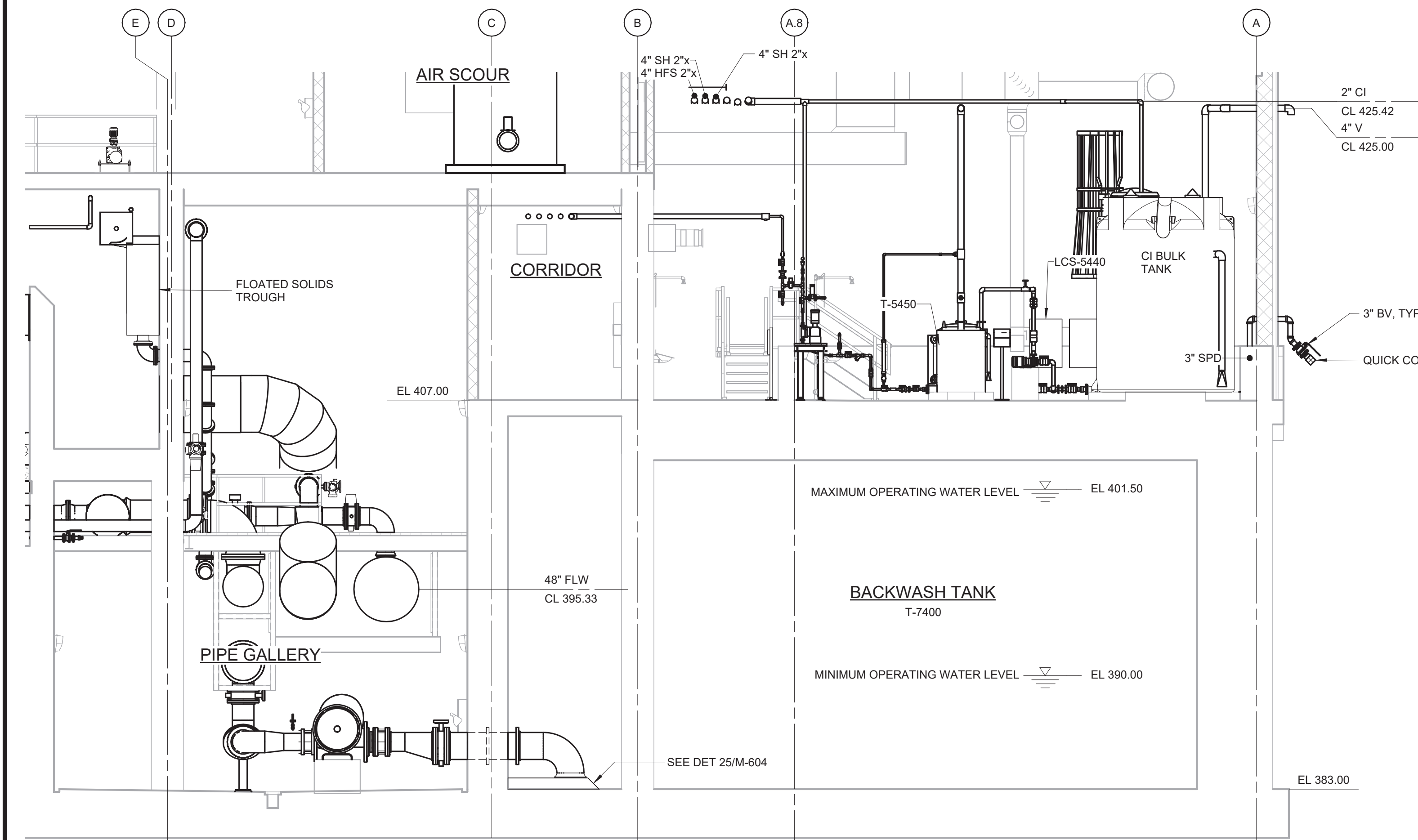
DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	M-203



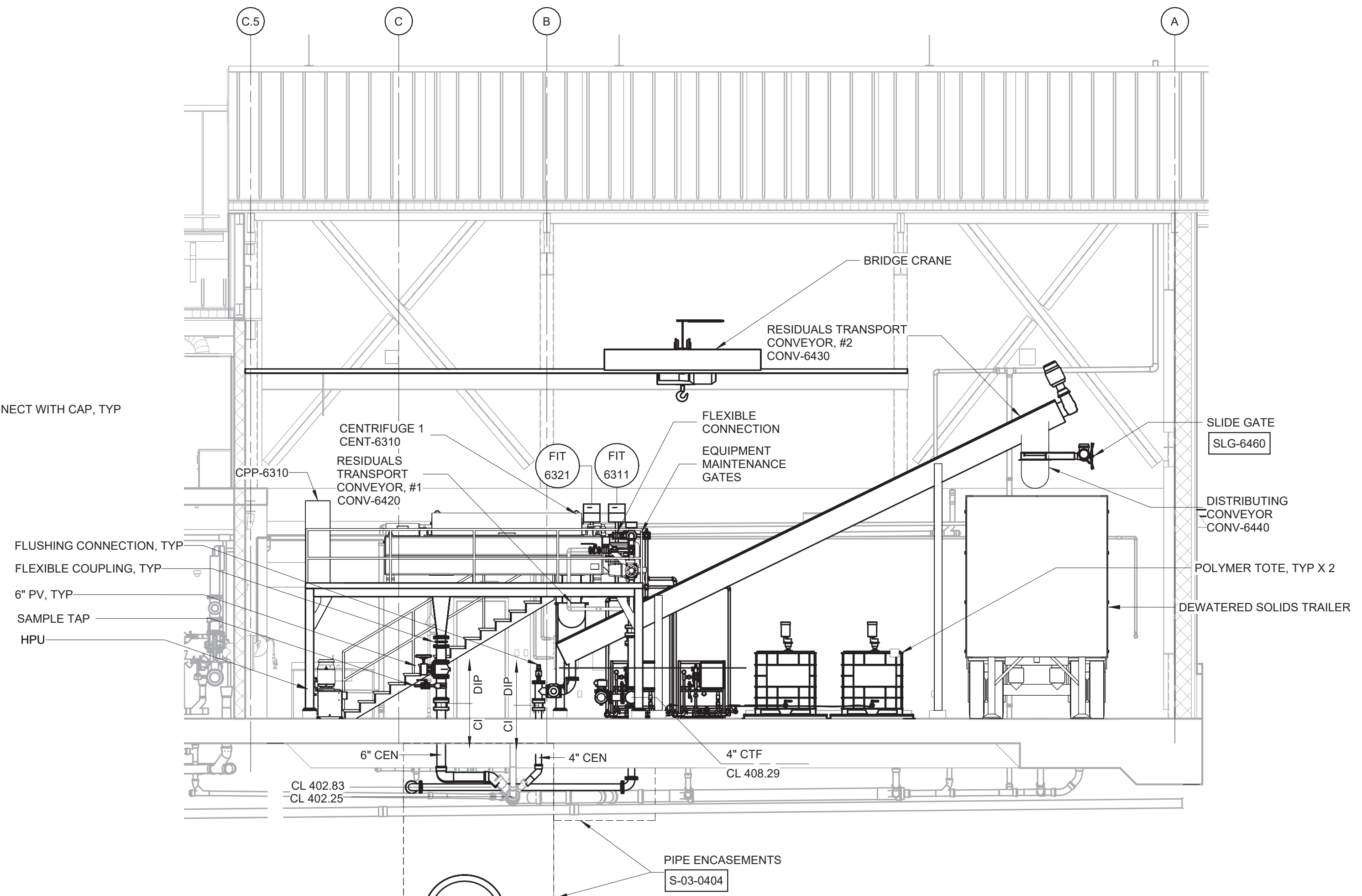
SECTION D
3/16" = 1'-0"
M-102



SECTION E
3/16" = 1'-0"
M-102



SECTION F
3/16" = 1'-0"
M-103



SECTION G
3/16" = 1'-0"
M-107

NOTE:
1. PROVIDE BIRD/INSECT SCREENS FOR ALL VENTS.

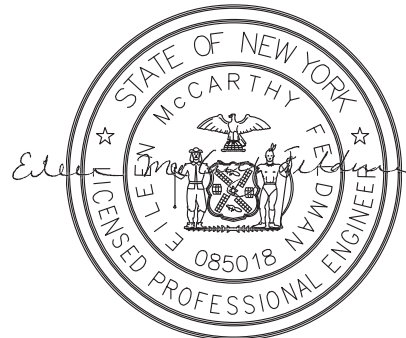
3/16" = 1'-0"

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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	C. THORNTON
DRAWN BY:	B. CASULL
CHECKED BY:	E. FELDMAN
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



Hazen
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

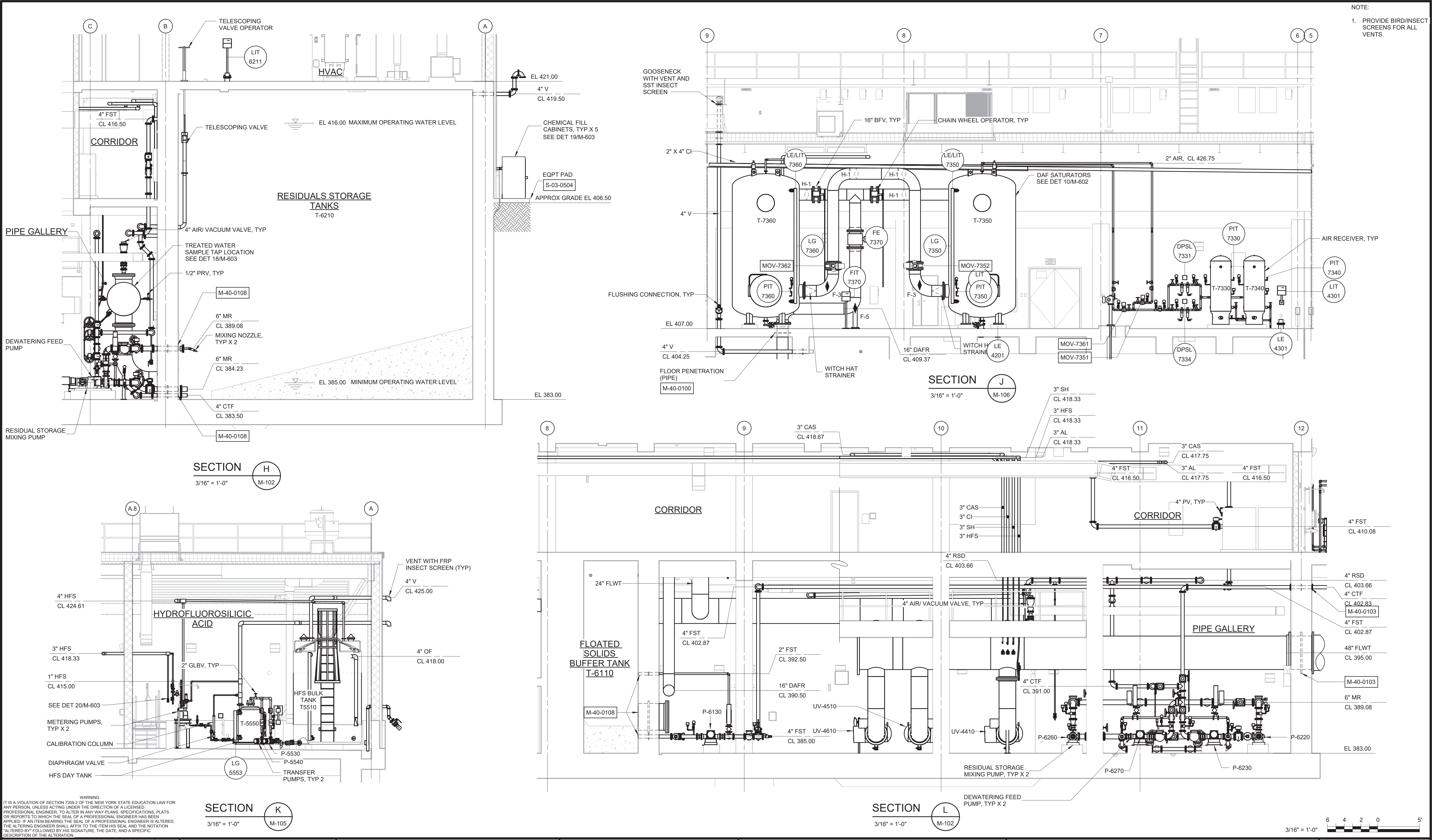
WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
MECHANICAL
SECTIONS - SHEET 4

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	M-204

Autodesk Docs/90388-000_Rye_Lake_Filtration/90388-000-WFP-M104
2/20/2025 10:17 AM



PROJECT: R. FROST				
DESIGNED BY: C. THORNTON				
DRAWN BY: B. CASULL				
CHECKED BY: E. FELDMAN				
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE				
REV	ISSUED FOR	DATE	BY	

BID SET

HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

STATE OF NEW YORK
JAMES MCCARTHY
REGISTERED PROFESSIONAL ENGINEER
085018

Hazen

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
MECHANICAL
SECTIONS - SHEET 5

DATE: FEB 2025
HAZEN NO.: 90388-000
CONTRACT NO.: A1364-A
DRAWING NUMBER: M-205

Autodesk Docs/90388-000_Rye_Lake_Filtration/90388-000-WFP-M-104
2/20/2025 10:25 AM

1. PROVIDE BIRD/INSECT SCREENS FOR ALL VENTS.




DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	

Autodesk Docs://90388-000_Rye_Lake_Filtration/90388-000-WFP-M.rvt
2/20/2025 1:06:36 AM

WARNING

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					PROJECT ENGINEER:	R. FROST
					DESIGNED BY:	C. THORNTON
					DRAWN BY:	B. CASULL
					CHECKED BY:	E. FELDMAN
					IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	<div> <div>0</div> <div>1/2"</div> <div>1</div>  </div>
REV	ISSUED FOR	DATE	BY			

BID SET



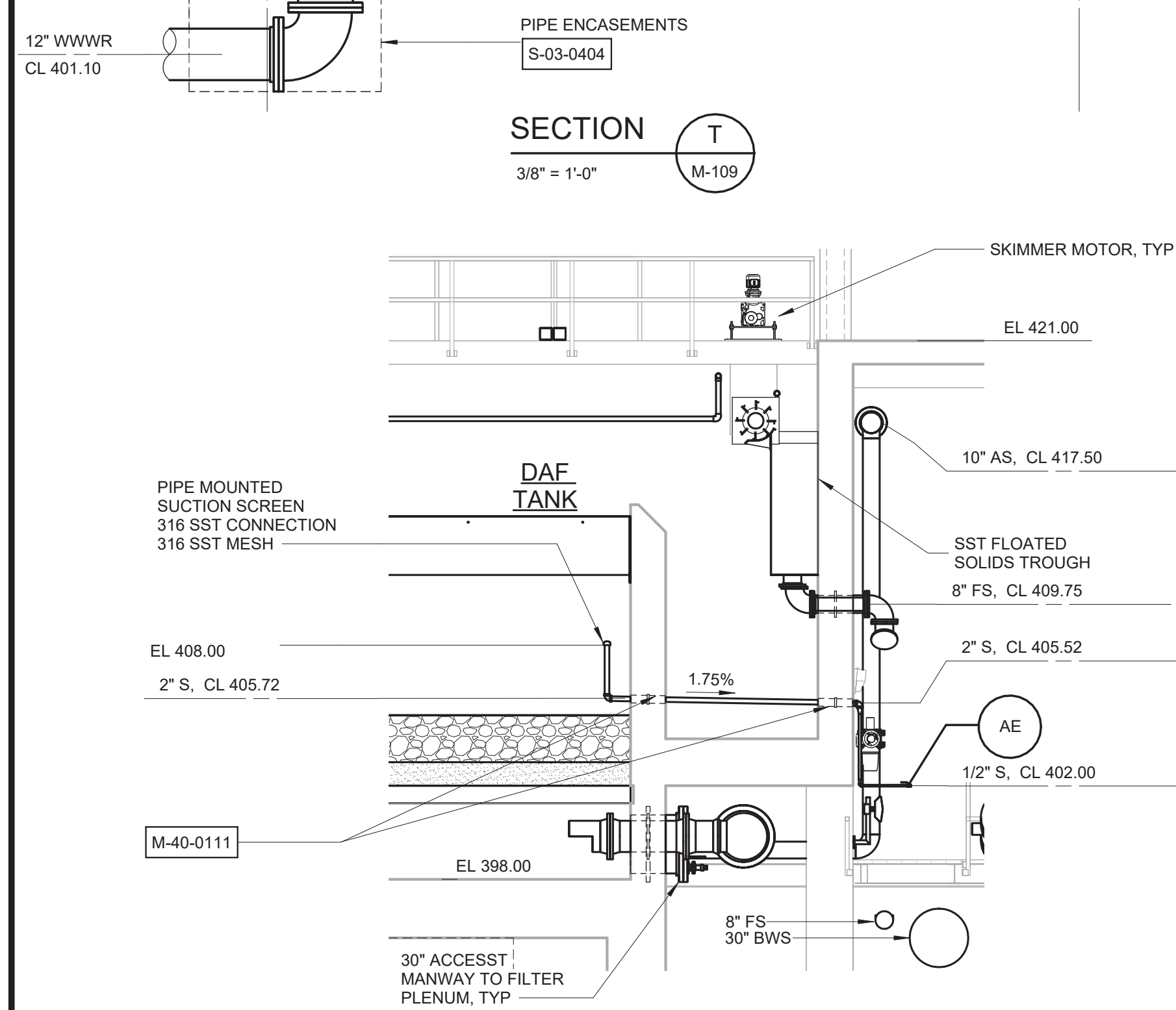
Hazen

HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT HARRISON, NY

FILTRATION PLANT
MECHANICAL
SECTIONS - SHEET 6

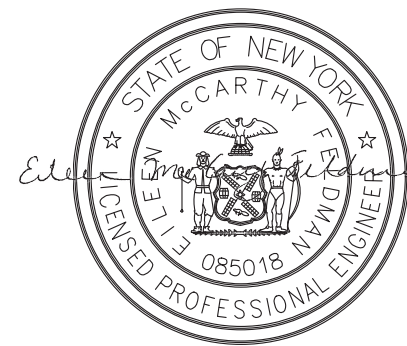


SECTION

3/16" = 1'-0"

X

M-103

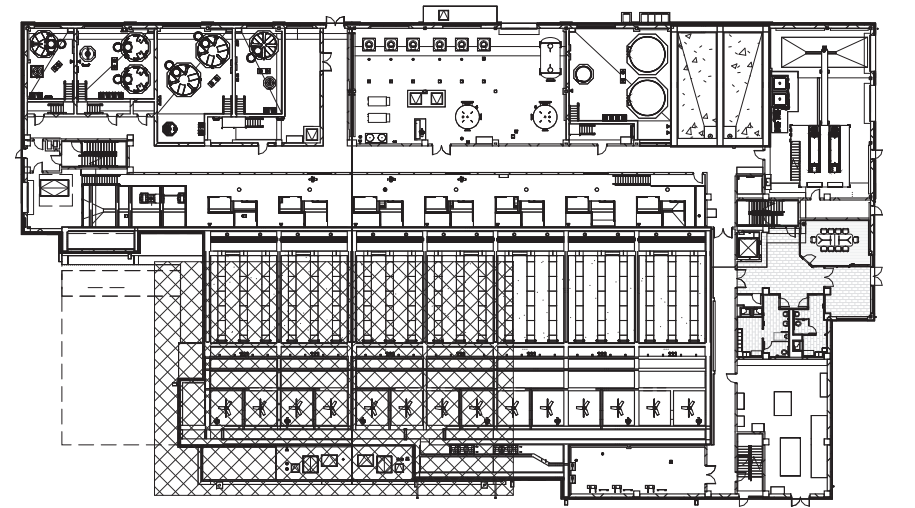
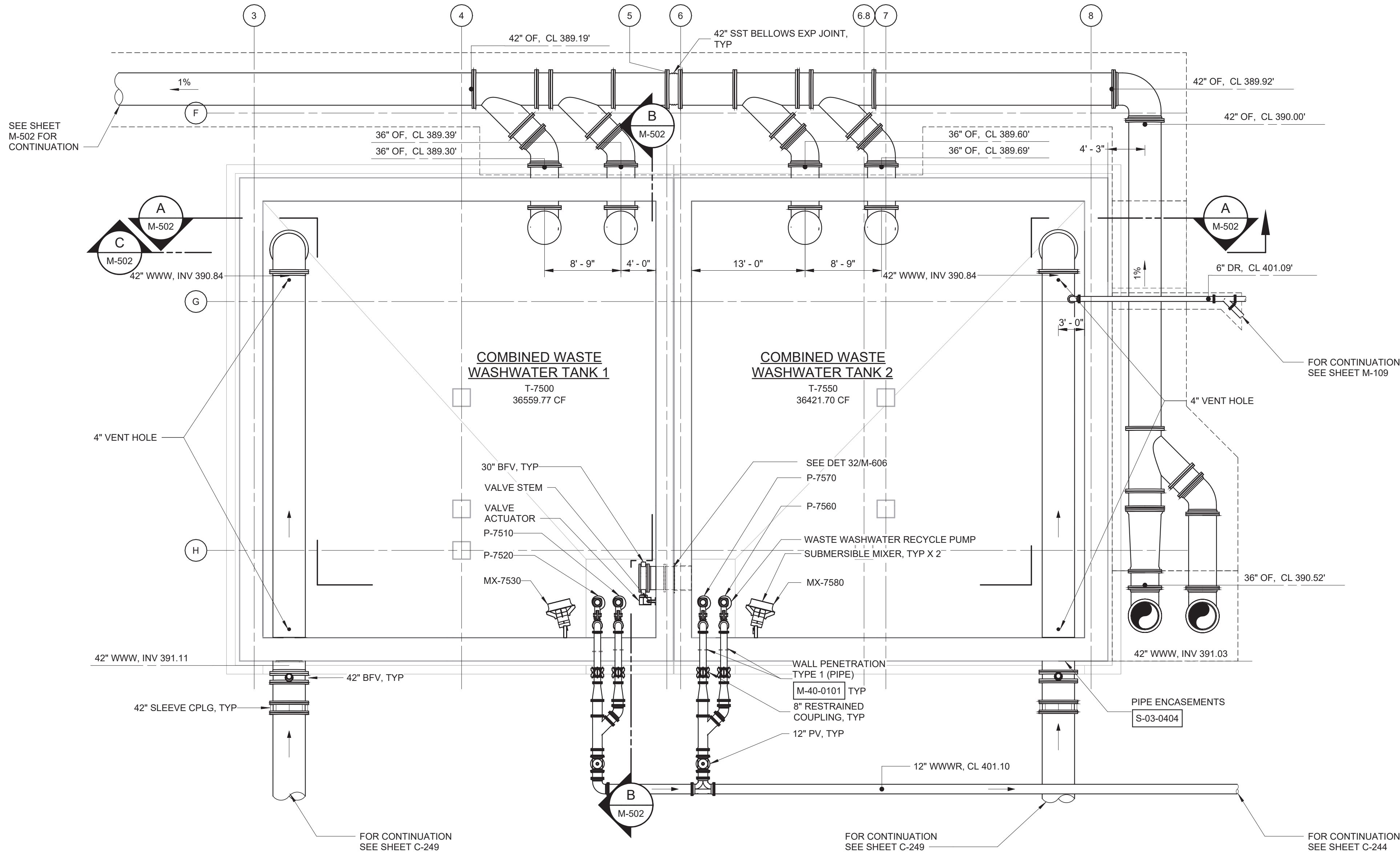
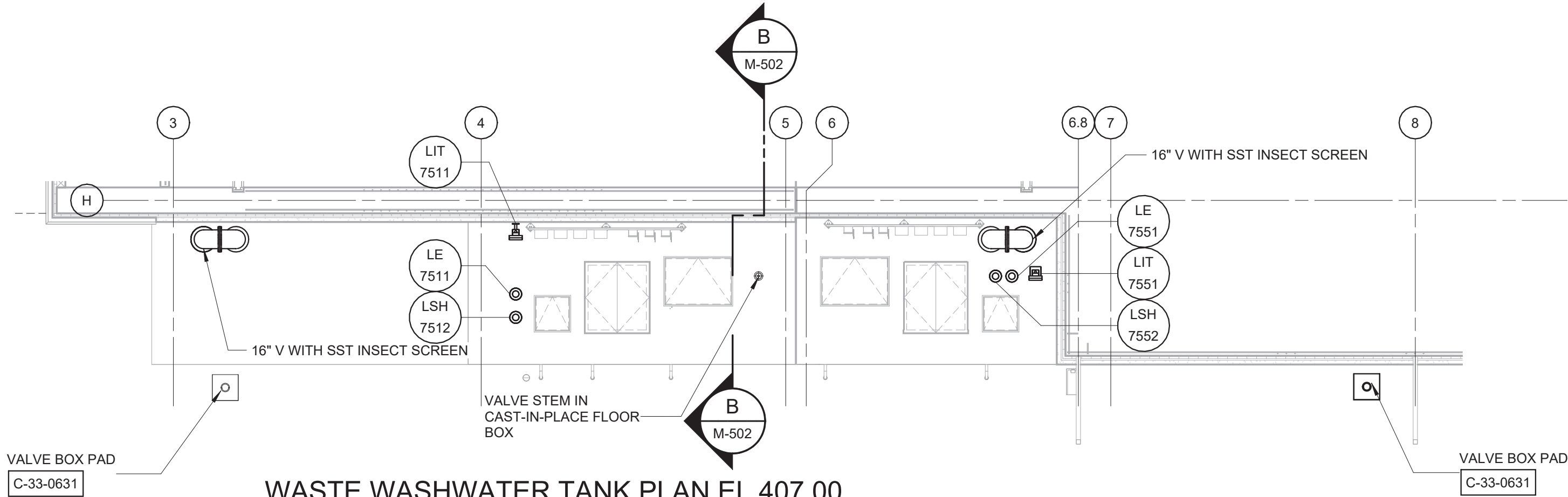
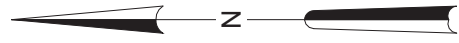
BID SET

HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

RYE LAKE WATER FILTRATION PLANT HARRISON, NY

FILTRATION PLANT
MECHANICAL
SECTIONS - SHEET 7

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	M-207

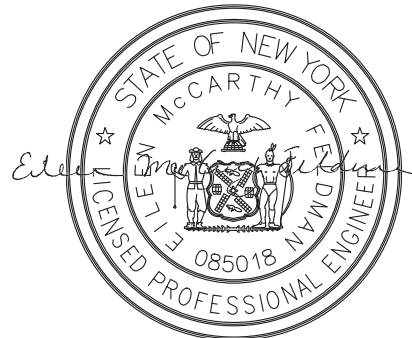


WARNING
IT IS A VIOLATION OF SECTION 2209.2 OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER IN ANY WAY PLANS, SPECIFICATIONS, PLATS OR REPORTS TO WHICH THE SEAL OF A PROFESSIONAL ENGINEER HAS BEEN APPLIED. IF AN ITEM BEARING THE SEAL OF A PROFESSIONAL ENGINEER IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE ITEM HIS SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE, THE DATE, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	C. THORNTON
DRAWN BY:	B. CASULL
CHECKED BY:	E. FELDMAN
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



Hazen
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

WASTE WASHWATER TANK
MECHANICAL
PLANS

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	M-501

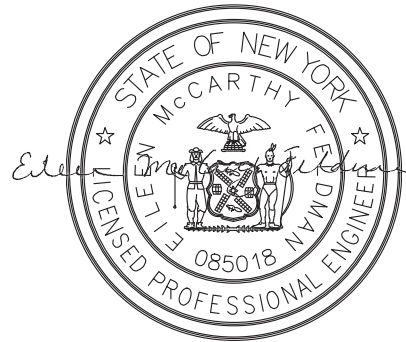
Autodesk Docs/90388-000_Rye_Lake_Filtration/90388-000-WFP-M-501
2/20/2025 1:07:01 AM

WARNING
IT IS A VIOLATION OF SECTION 2209.2 OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER IN ANY WAY PLANS, SPECIFICATIONS, PLATS OR REPORTS TO WHICH THE SEAL OF A PROFESSIONAL ENGINEER HAS BEEN APPLIED. IF AN ITEM BEARING THE SEAL OF A PROFESSIONAL ENGINEER IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE ITEM HIS SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE, THE DATE, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	C. THORNTON
DRAWN BY:	B. CASULL
CHECKED BY:	E. FELDMAN
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



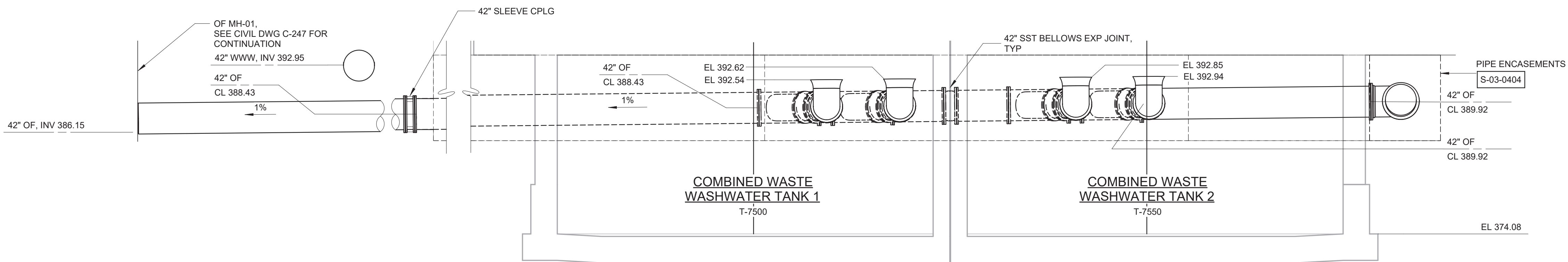
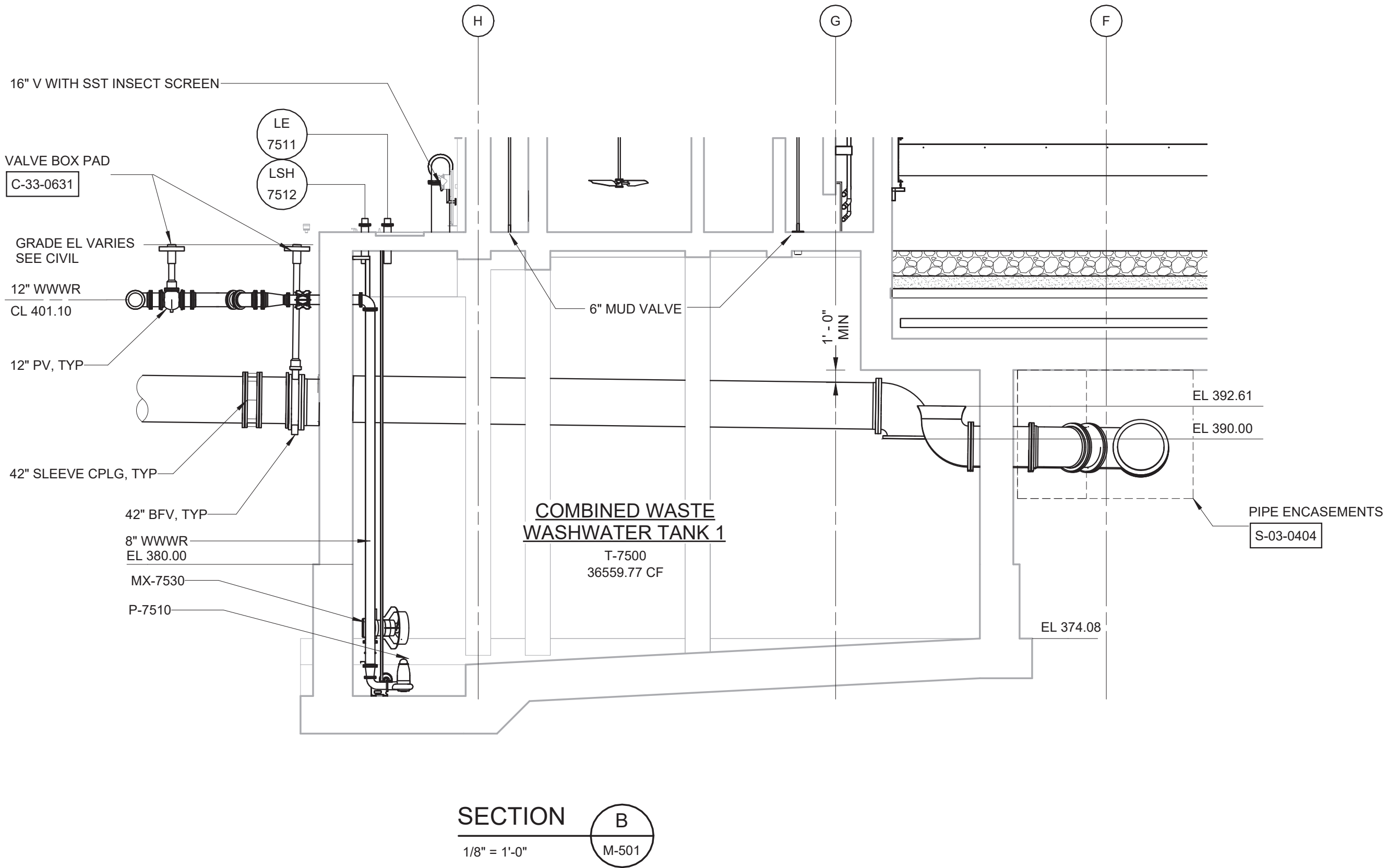
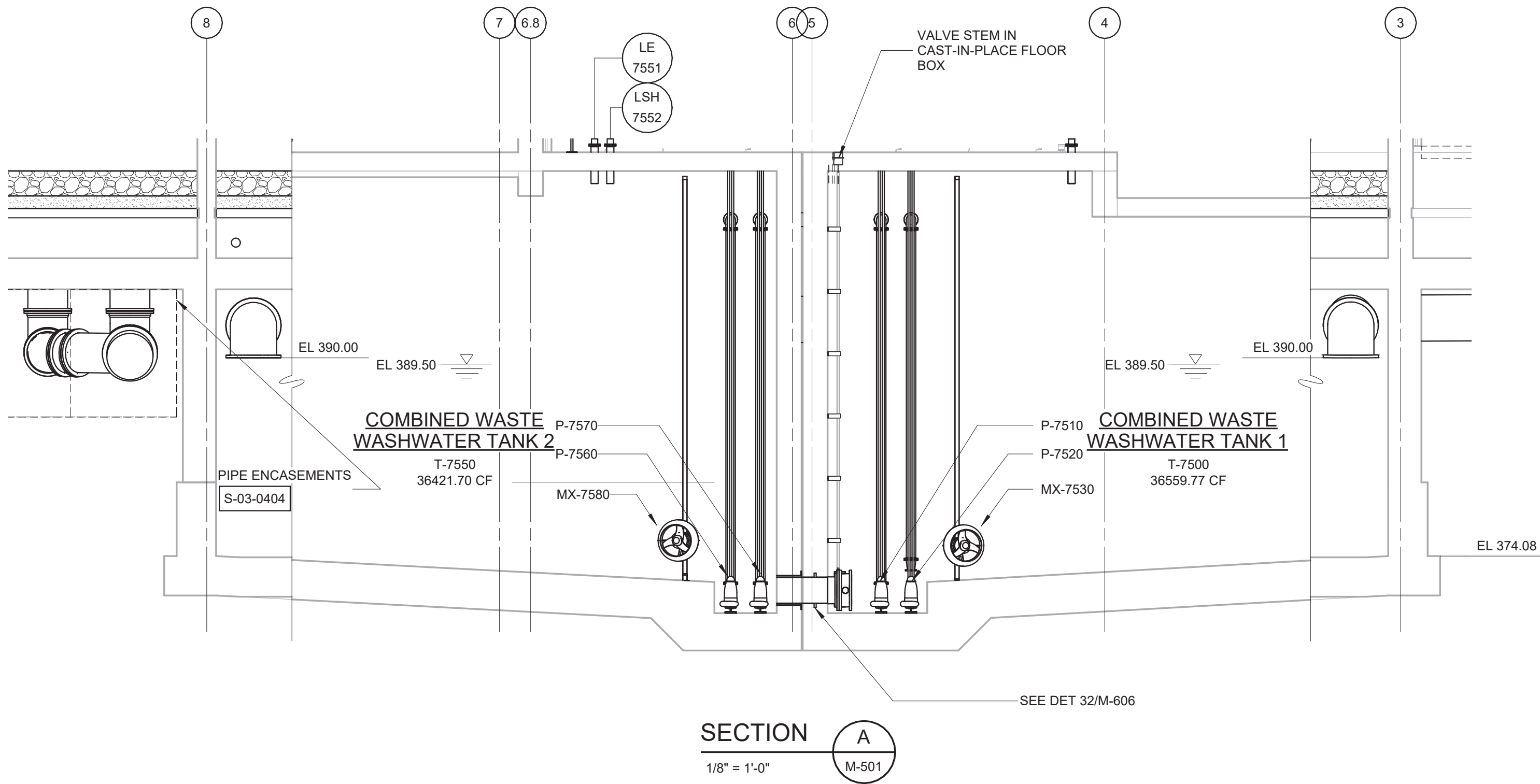
Hazen
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

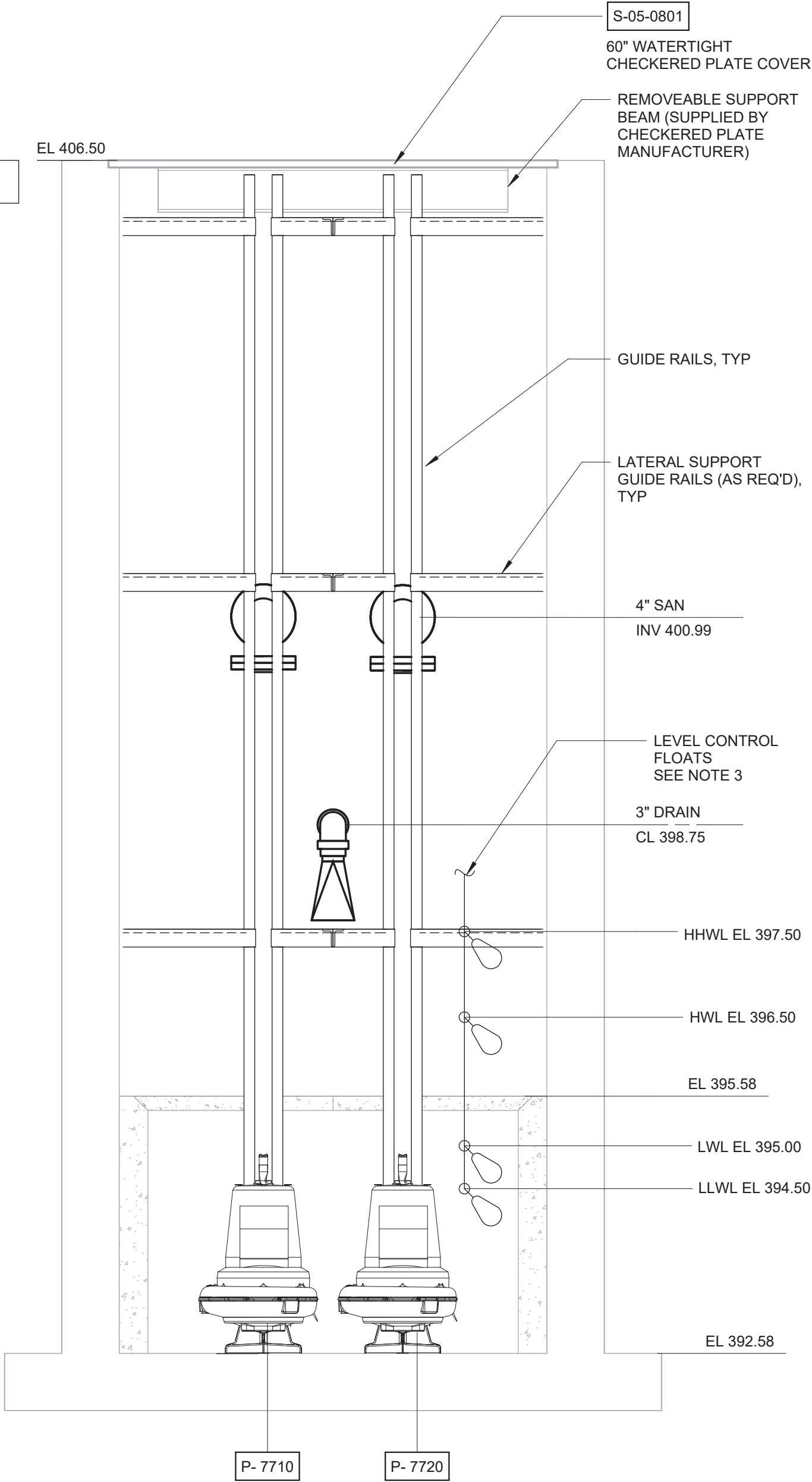
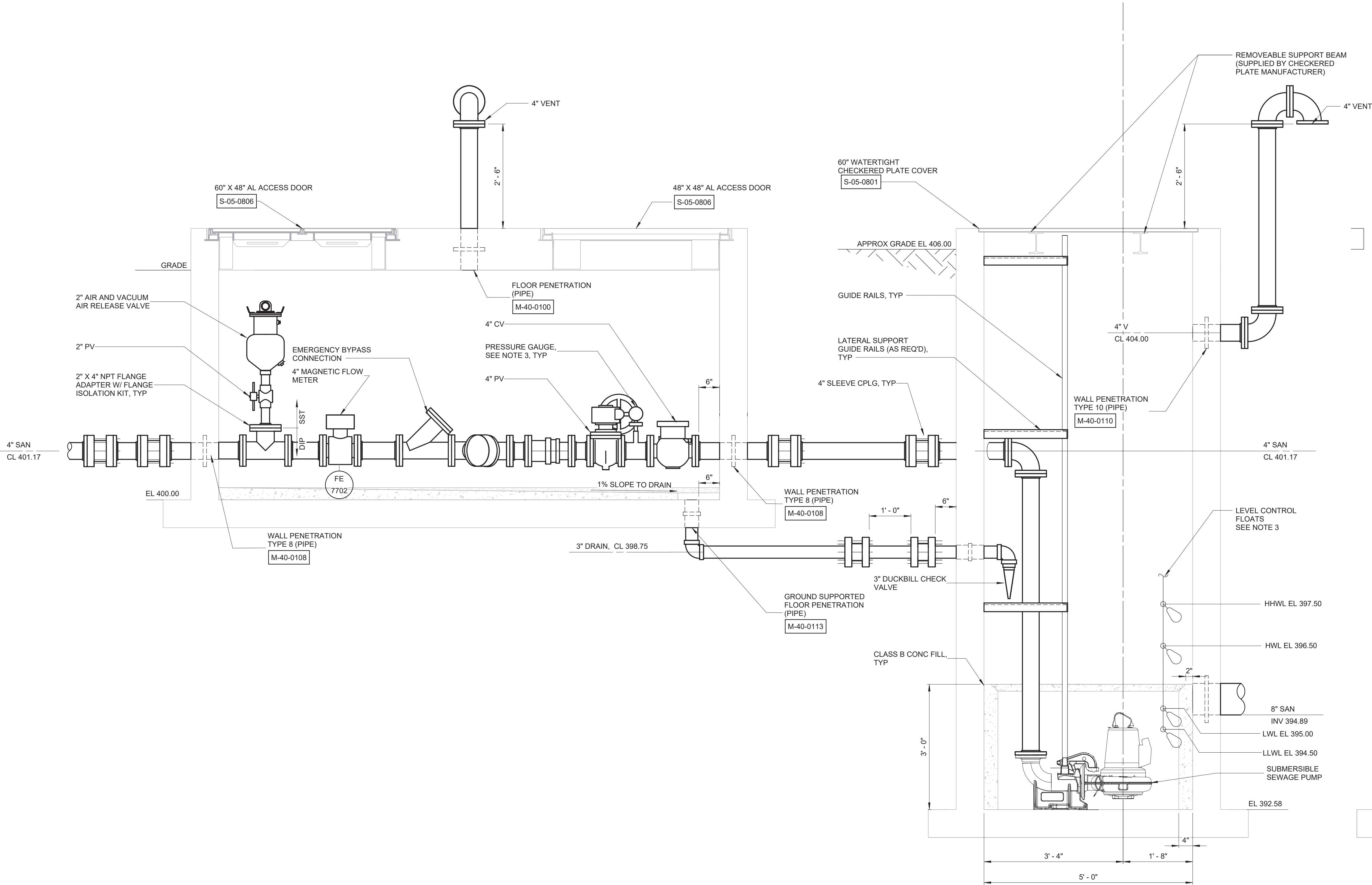
RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

WASTE WASHWATER TANK
MECHANICAL
SECTIONS

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	M-502



- NOTES:
- CONTRACTOR SHALL REFERENCE CONTRACT SPECIFICATION SECTION 33 05 61 - UTILITY STRUCTURES AND SECTION 01 35 20 - CONFINED SPACE ENTRY FOR DESIGN REQUIREMENTS FOR PRECAST VAULTS. CONTRACTOR SHALL SUBMIT DESIGN CALCULATIONS AND DRAWINGS SIGNED AND SEALED BY A CURRENTLY REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW YORK. DESIGN CALCULATIONS SHALL INCLUDE CONFIRMATION STRUCTURES ADEQUATELY RESIST FLOTATION WHEN THEY ARE TOTALLY EMPTY AND SUBJECTED TO GROUNDWATER THE FULL HEIGHT OF THE STRUCTURE.
 - EXCAVATION SUPPORT SYSTEMS ARE NOT DEPICTED ON CONTRACT DRAWINGS. FULL EXTENT OF EXCAVATION SUPPORT REQUIRED TO PERFORM CONSTRUCTION IS THE EXCLUSIVE RESPONSIBILITY OF THE CONTRACTOR.
 - SEE INSTRUMENTATION DRAWINGS.
 - CONTRACTOR SHALL NOT INSTALL ANY EQUIPMENT, CONDUIT, PIPE AND OTHER OBSTRUCTIONS ABOVE SANITARY PUMP STATION WET WELL AND DRY WELL ACCESS OPENINGS TO MAINTAIN OVERHEAD CLEARANCE FOR EQUIPMENT INSTALLATION AND REMOVAL.
 - SANITARY PUMP STATION WET WELL IS CLASSIFIED AS CLASS 1, DIVISION 1, GROUP D. SANITARY PUMP STATION DRY WELL IS CLASSIFIED AS CLASS 1, DIVISION 2, GROUP D. ALL EQUIPMENT IN SANITARY PUMP STATION WET WELL AND DRY WELL SHALL BE RATED FOR CLASS 1, DIVISION 1, GROUP D.
 - PROVIDE 3 TYPE H-3 SIGNS FOR THE SANITARY PUMP STATION, SEE ARCHITECTURAL DRAWINGS.



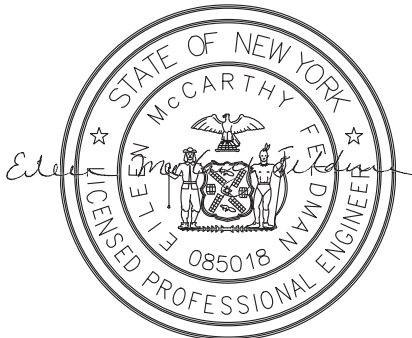
SECTION A
3/4" = 1'-0"

SECTION B
3/4" = 1'-0"

WARNING
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REV	ISSUED FOR	DATE	BY	PROJECT ENGINEER: R. FROST
				DESIGNED BY: M. BECZEK
				DRAWN BY: B. CASULL
				CHECKED BY: E. FELDMAN
				IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

BID SET



Hazen
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

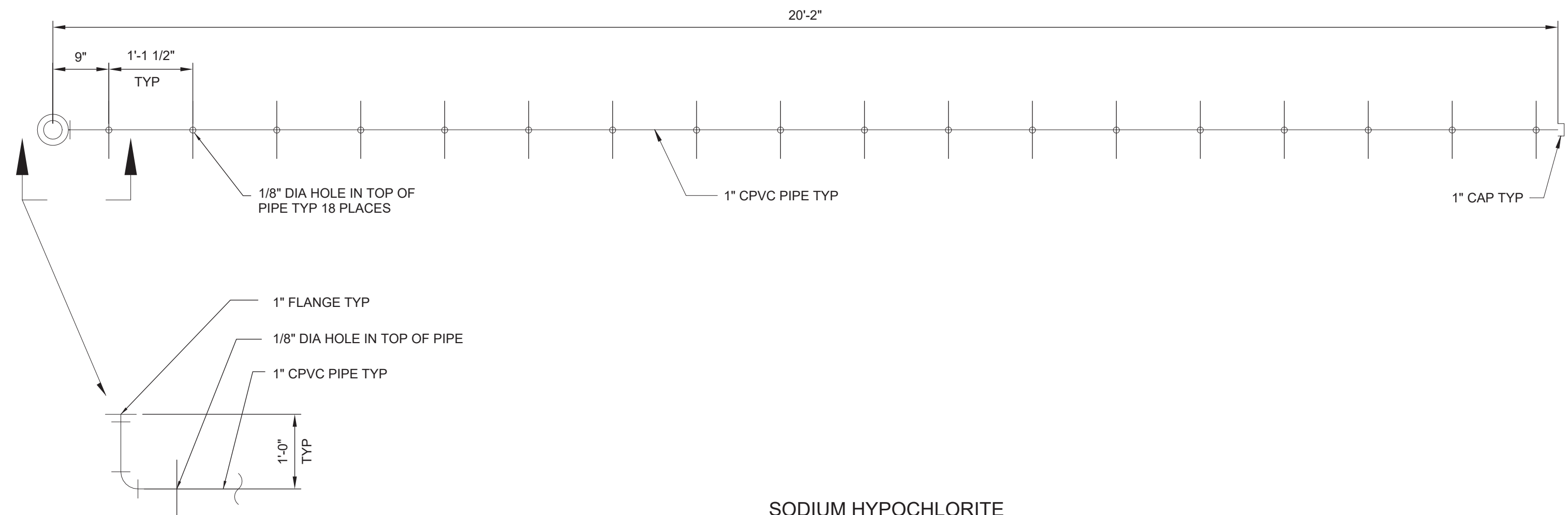
RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

SANITARY PUMP STATION
MECHANICAL
SECTIONS

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	M-504

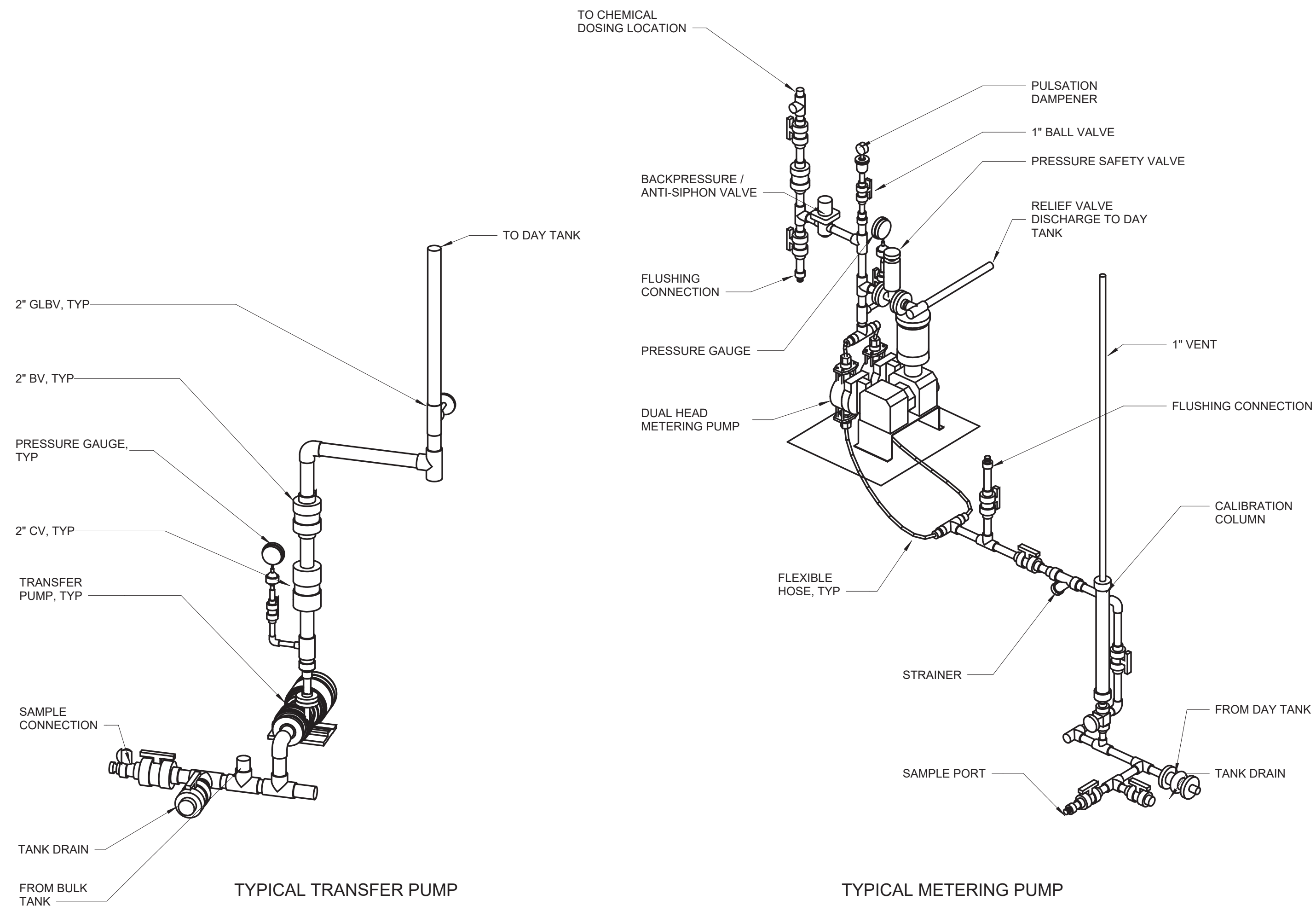


DETAIL	21
NTS	



SODIUM HYPOCHLORITE
PRE-FILTER FEED SPARGER

DETAIL	22
NTS	

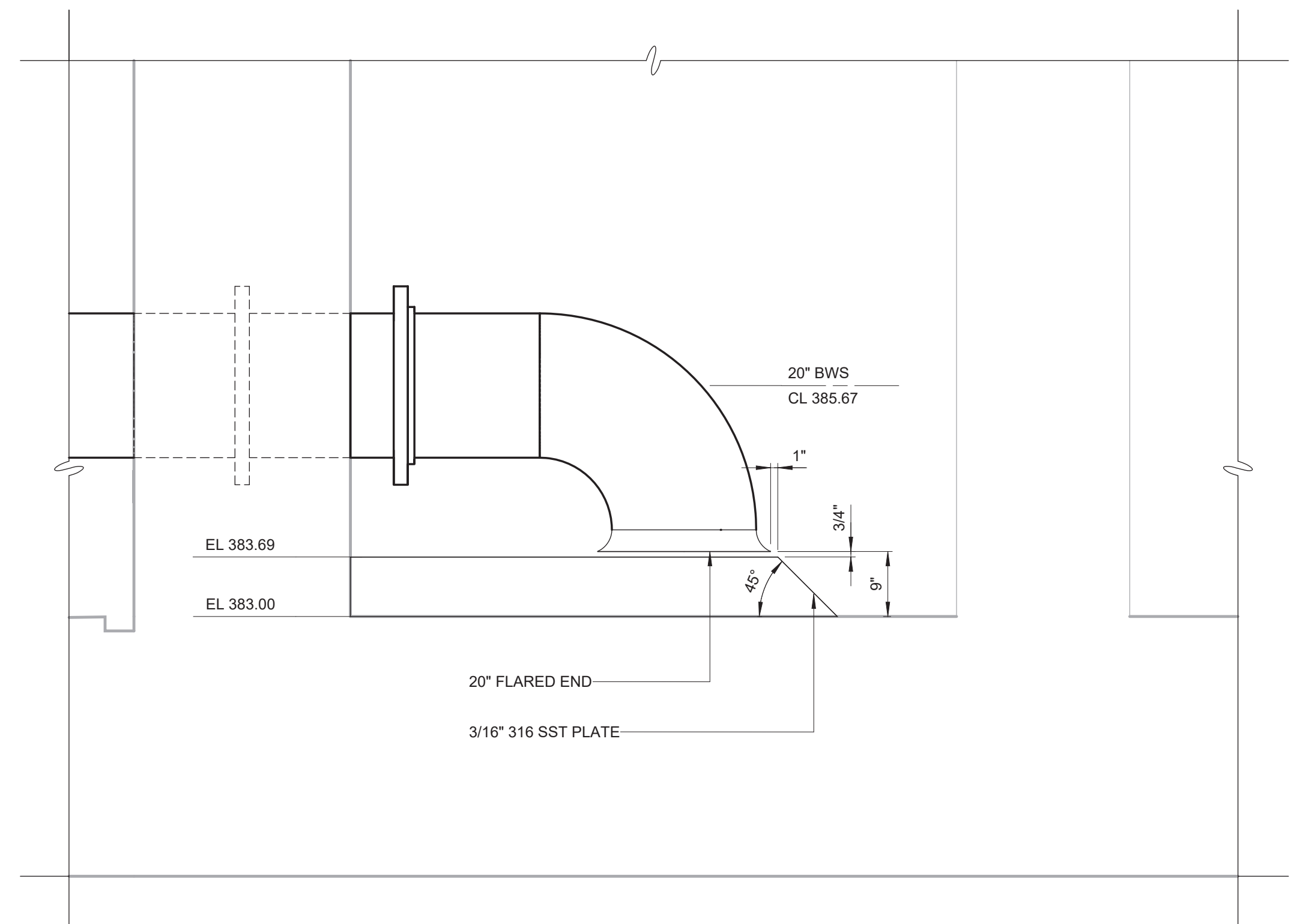


TYPICAL TRANSFER PUMP

DETAIL	23
NTS	

TYPICAL METERING PUMP


DETAIL	24
NTS	



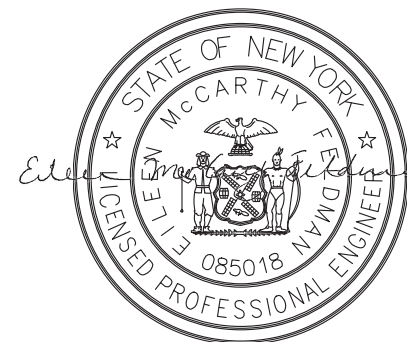
VORTEX SUPPRESSION FLOOR
SPLITTER PLATE

DETAIL	25
NTS	M-101

[illegible]

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	C. THORNTON
DRAWN BY:	B. CASULL
CHECKED BY:	E. FELDMAN
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	<div style="display: flex; align-items: center;"> 0  1/2" 1 </div>

BID SET



Hazen

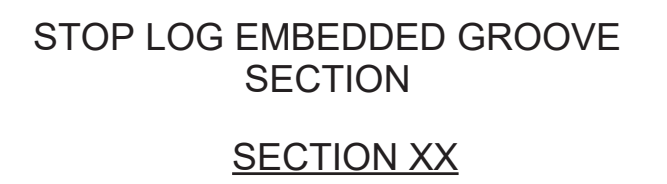
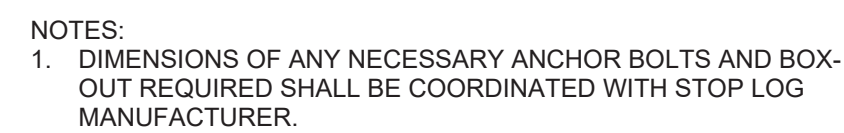
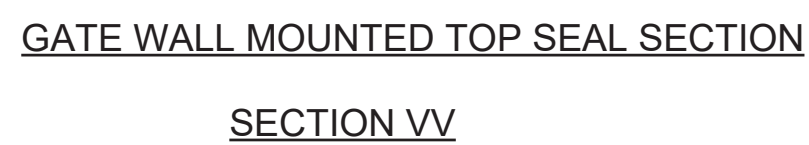
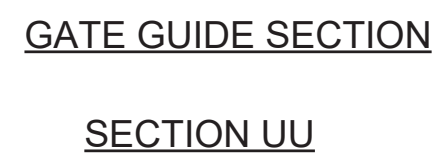
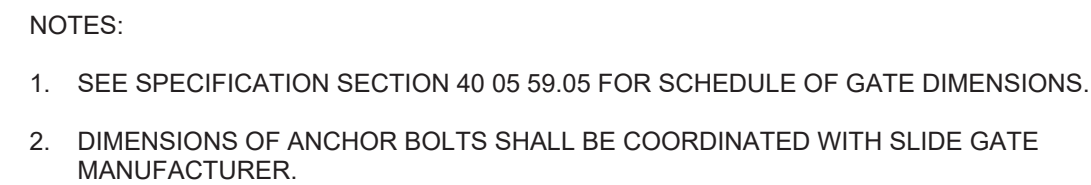
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT HARRISON, NY


MECHANICAL
DETAILS - SHEET 4

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	M-604



DETAIL	26
NTS	

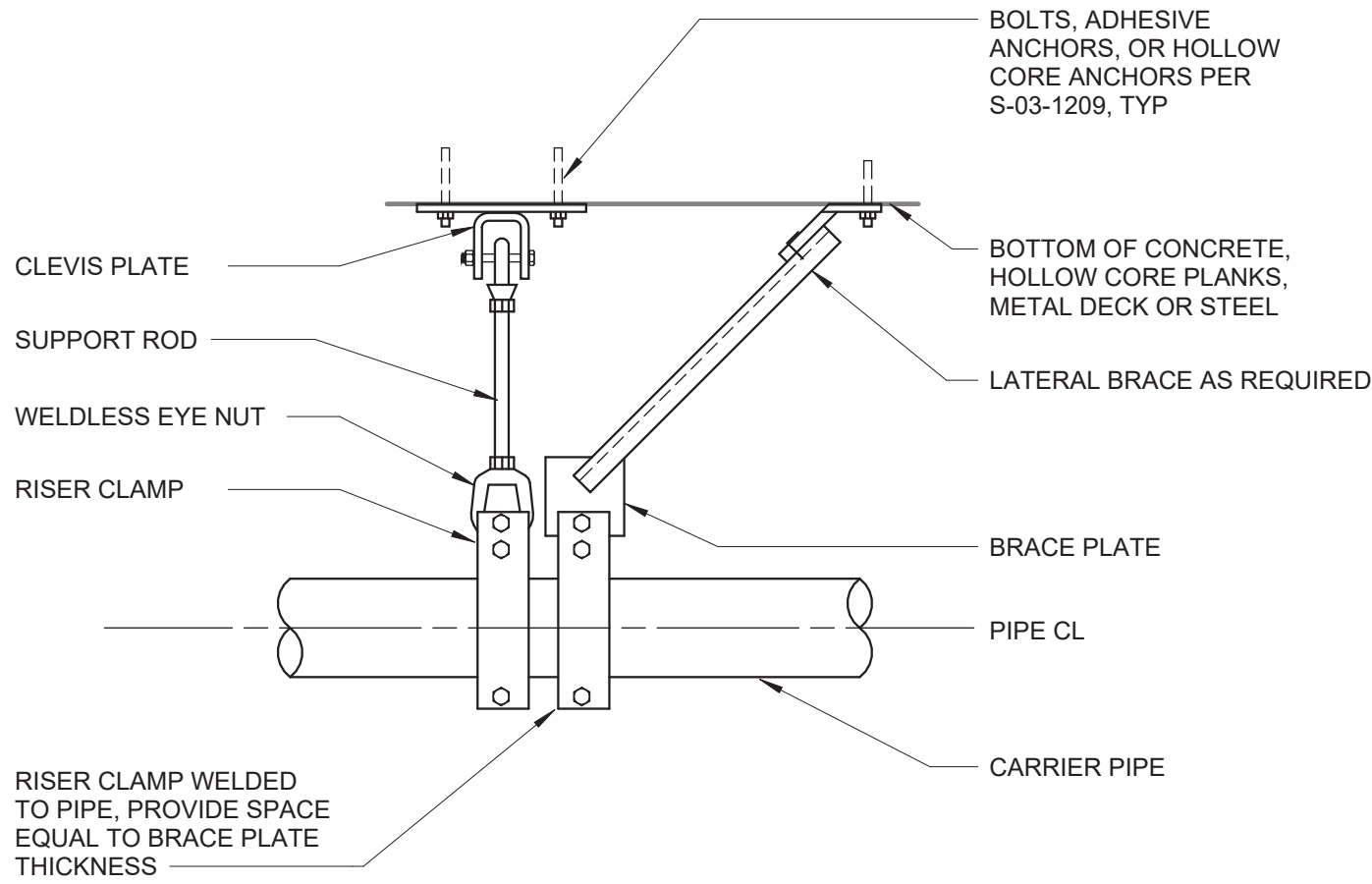
DETAIL	27
NTS	

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	C. THORNTON
DRAWN BY:	B. CASULL
CHECKED BY:	E. FELDMAN
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	<div style="display: flex; align-items: center;"> 0  1/2" 1 </div>

The seal is circular with the text "STATE OF NEW YORK" at the top and "LICENSED PROFESSIONAL ENGINEER" at the bottom. In the center is the coat of arms of the State of New York, featuring a shield with a plow, a sheaf of wheat, and a sailing ship, topped by a sunburst and a crest with a figure holding a staff. The name "McCarthy" is written above the coat of arms, and the license number "085018" is written below it. The signature "Eileen McCarthy" is written across the seal.

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

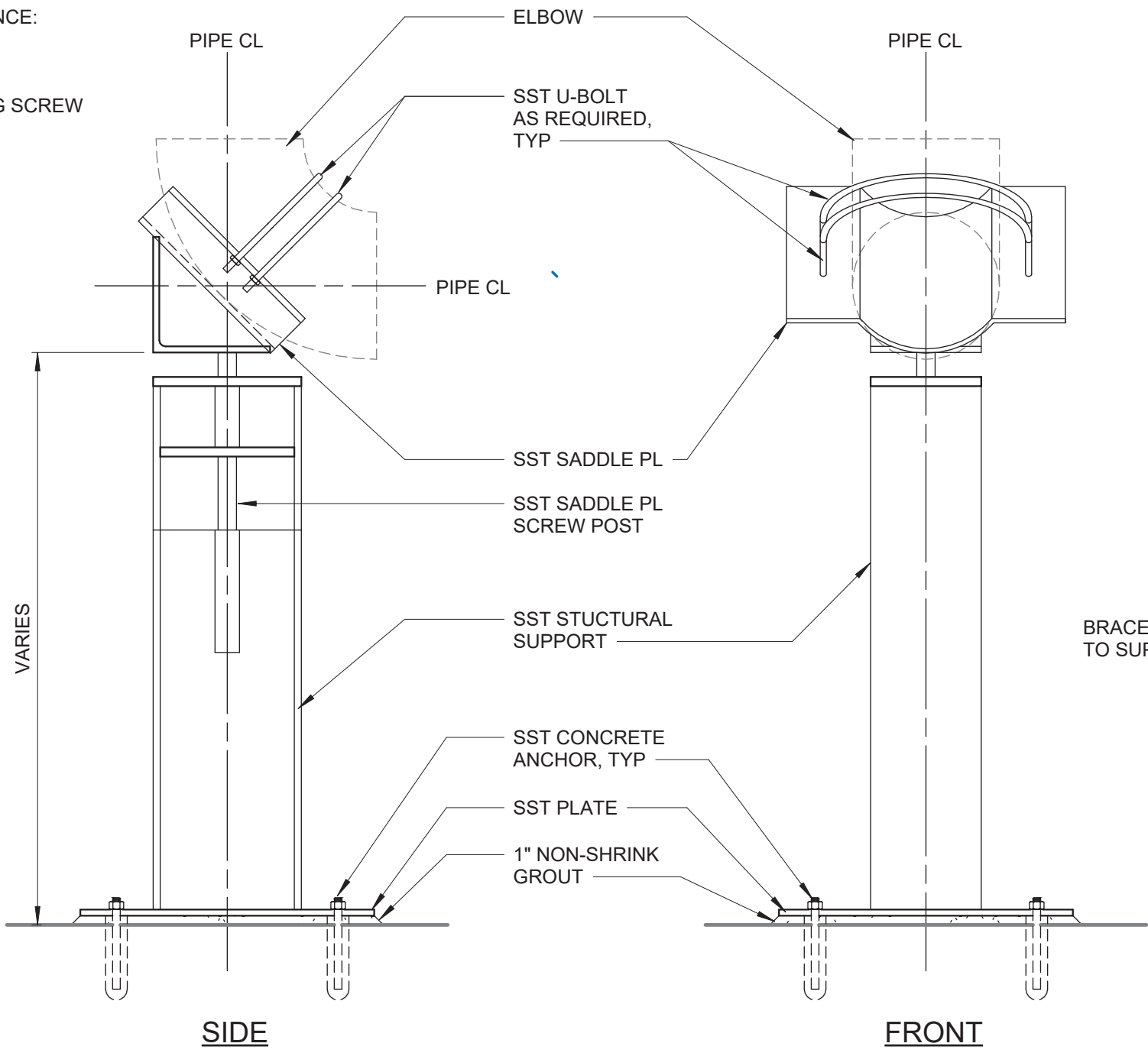
DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	M-605



BRACED PIPE HANGER

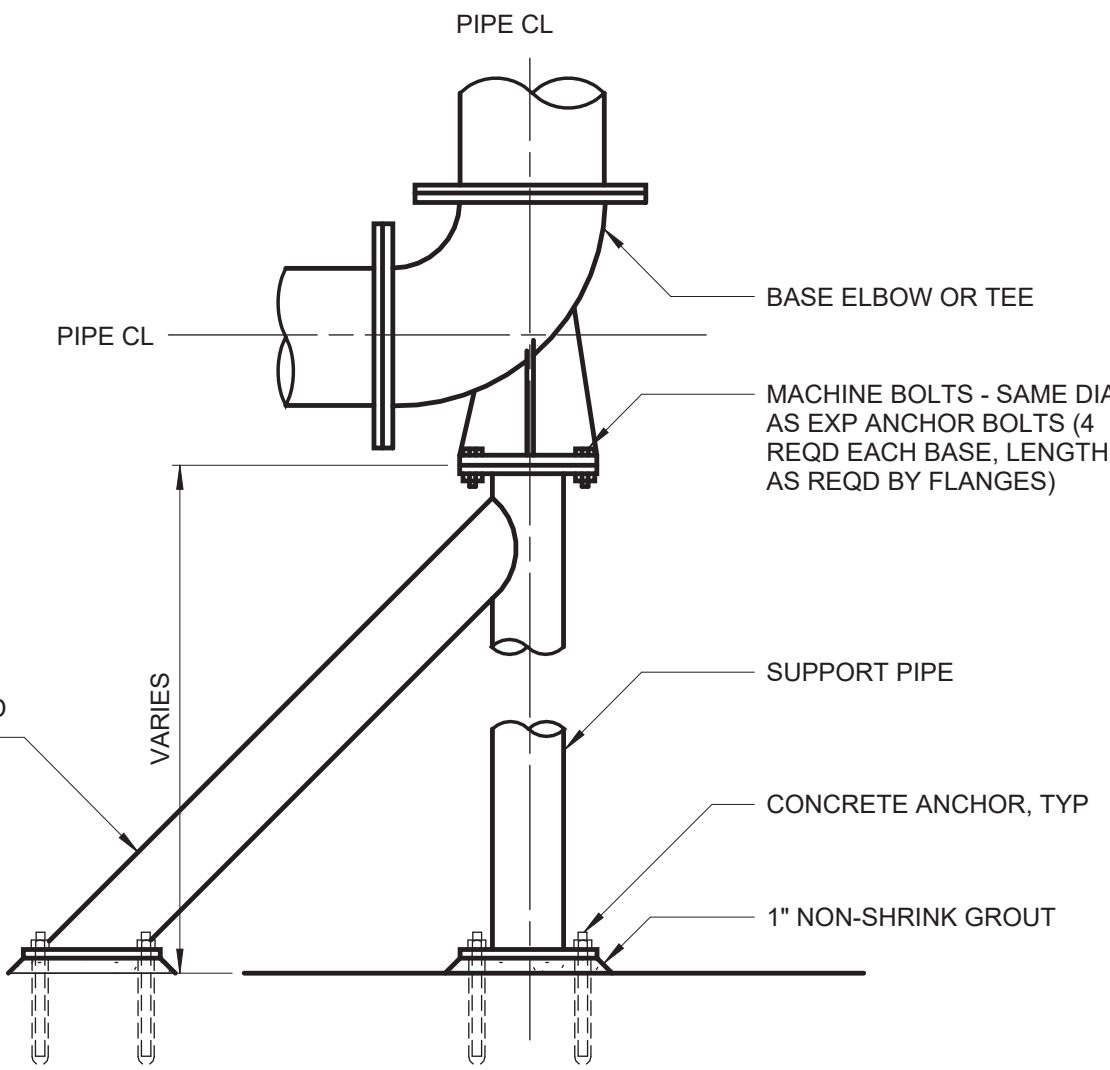
DETAIL	28
NTS	

- ELBOW REMOVAL SEQUENCE:
1. DISASSEMBLE ELBOW
 2. LOWER SADDLE USING SCREW
 3. REMOVE U-BOLTS
 4. REMOVE ELBOW



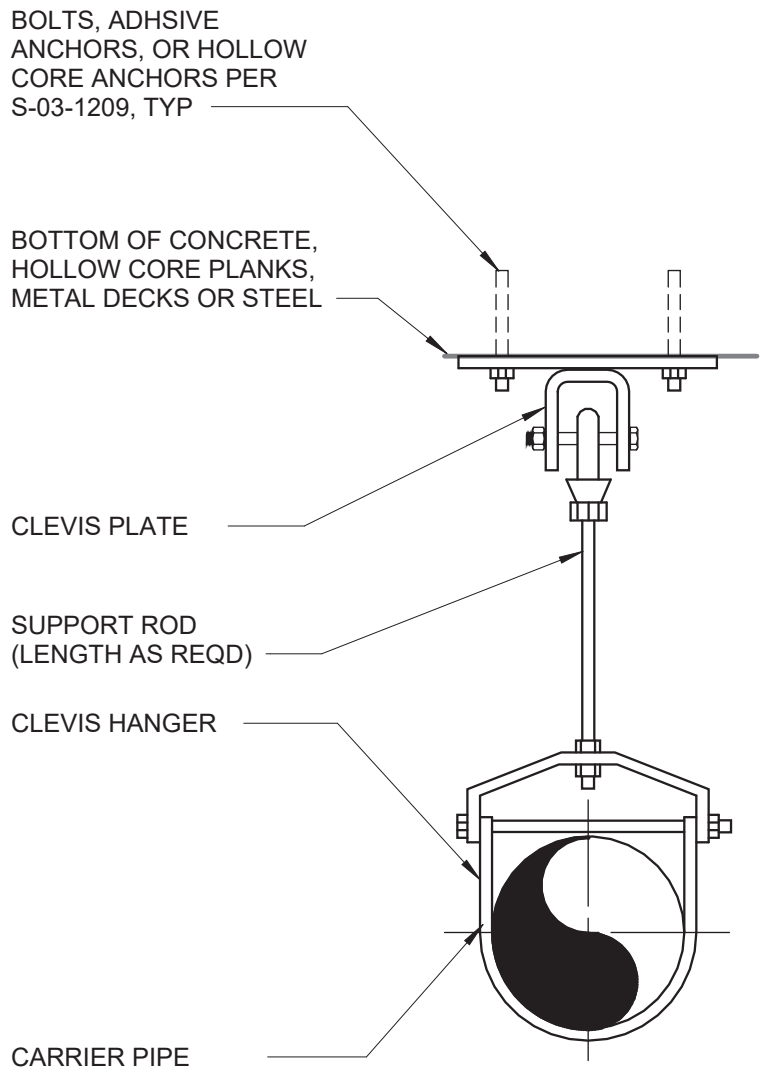
REMOVABLE ELBOW SUPPORT

DETAIL	29
NTS	



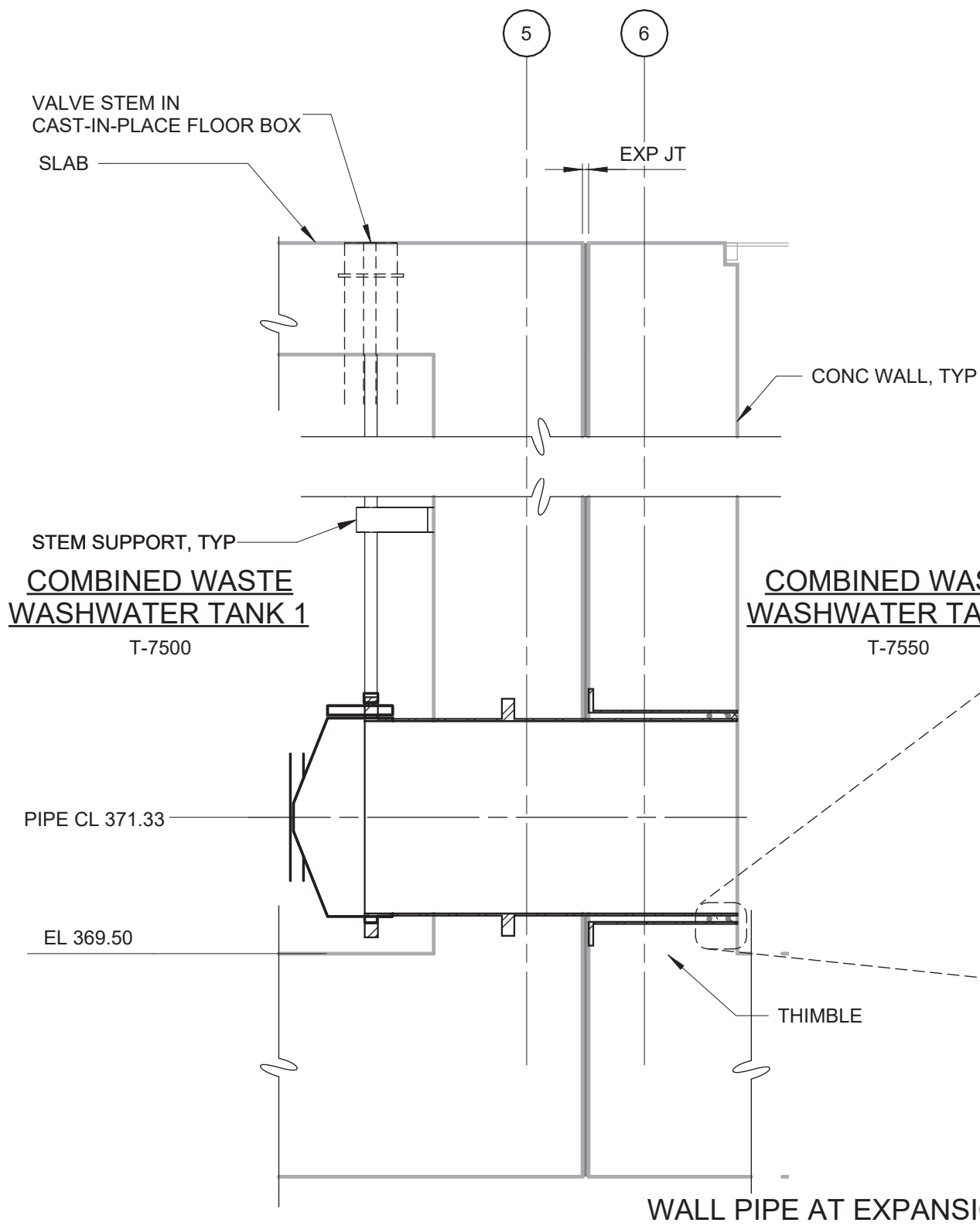
BASE ELBOW SUPPORT

DETAIL	30
NTS	

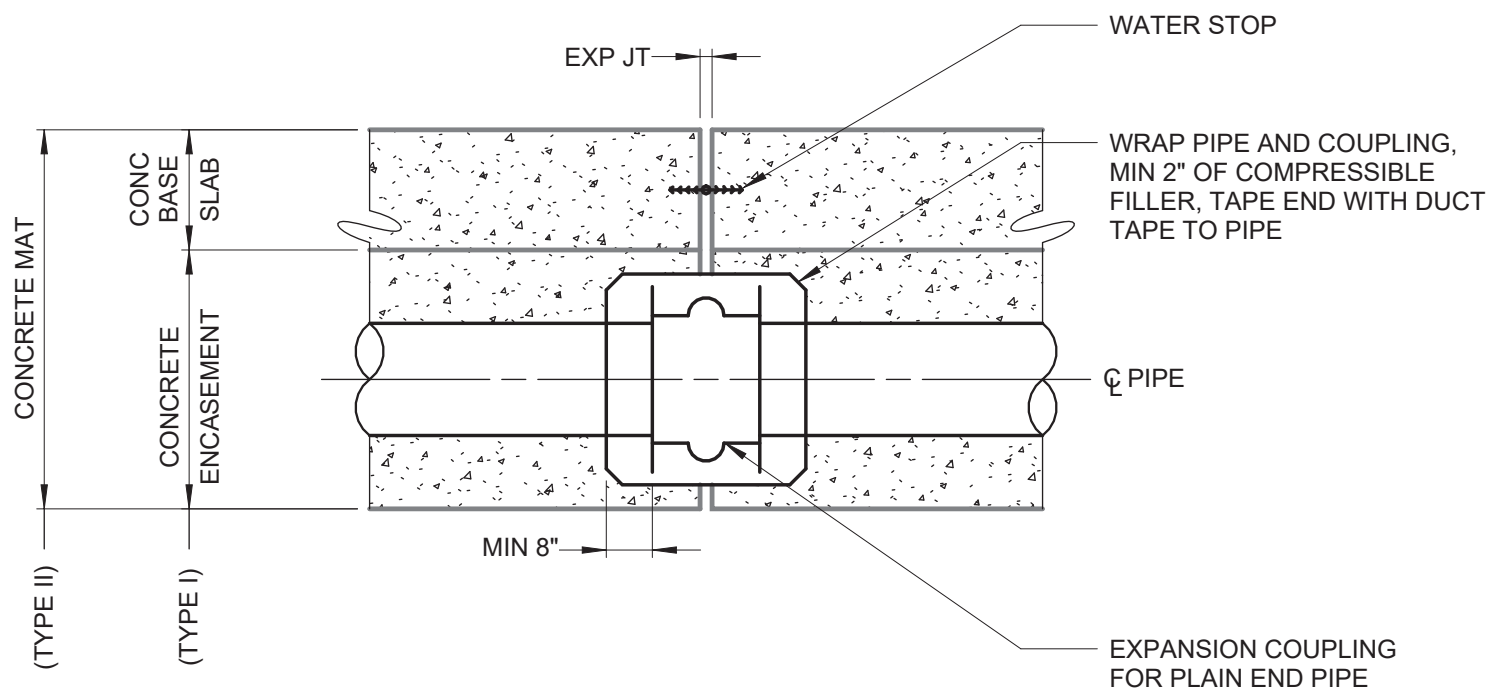
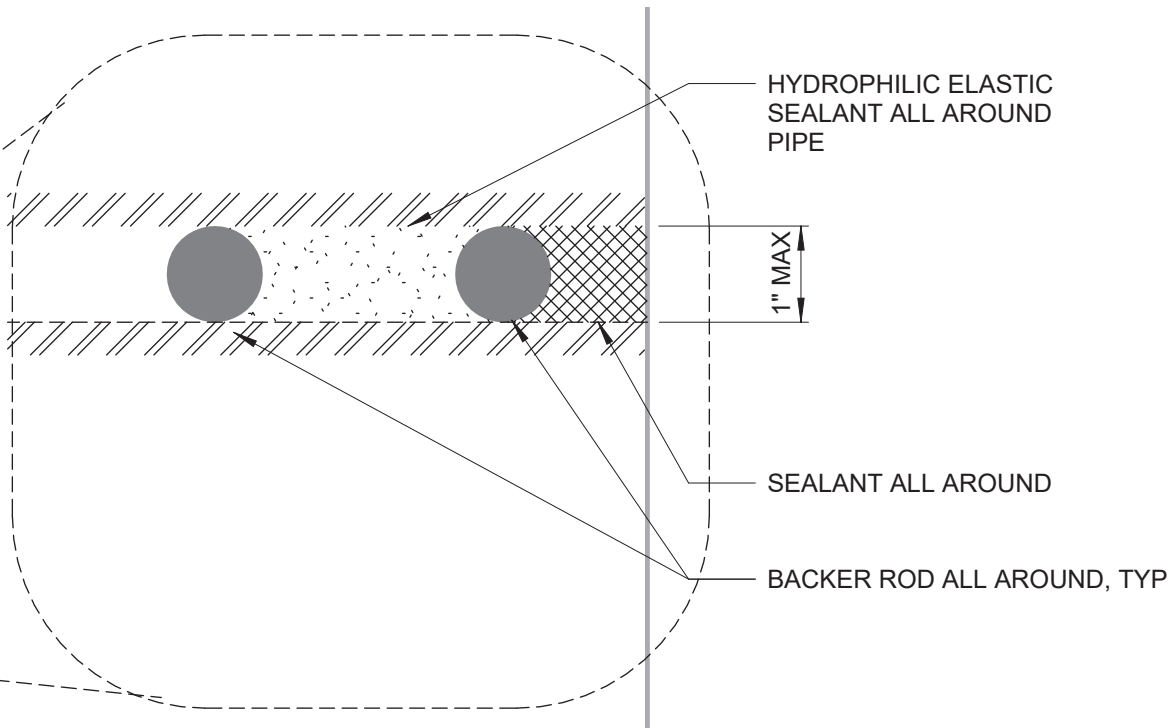


HANGER ATTACHED TO BEAM

DETAIL	31
NTS	



DETAIL	32
NTS	M-501



BURIED PIPE EXPANSION JOINT
W/ CONC ENCASEMENT (TYPE I)
OR IN CONCRETE MAT (TYPE II)

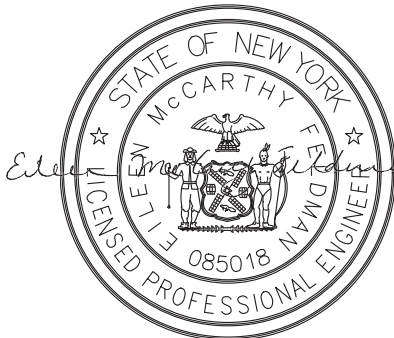
DETAIL	33
NTS	

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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	C. THORNTON
DRAWN BY:	B. CASULL
CHECKED BY:	E. FELDMAN
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



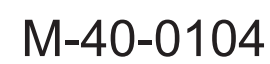
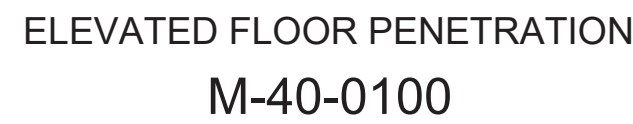
Hazen
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

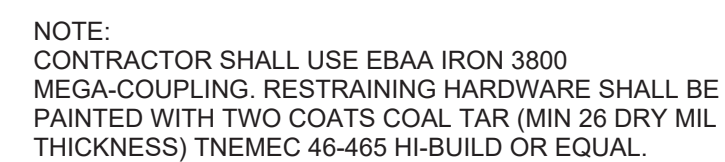
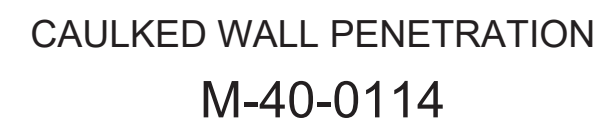
RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

MECHANICAL
DETAILS - SHEET 6

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	M-606




1. ALL WALL PIPES SHALL BE CAST UNLESS OTHERWISE NOTED.
2. PROVIDE PIPE JOINT WITHIN FIVE (5) FEET OF JOINT AT EXTERIOR FACE OF WALL AT CONNECTION TO ALL NEW AND EXISTING STRUCTURES OR MANHOLES.
3. ALL NEW OPENINGS IN EXISTING CONCRETE WALLS AND SLABS SHALL BE SAWCUT OR CHISELLED OUT WITH JACKHAMMERS OR STITCH DRILLING SHALL NOT BE PERMITTED. ANNUAL SURFACE SHALL BE SMOOTH. ANNUAL SURFACE SHALL BE ROUGHENED BY APPROVED METHODS WHEN INSTALLATION OF NONSHRINK GROUT IS REQUIRED AT EXISTING CONCRETE WALLS.



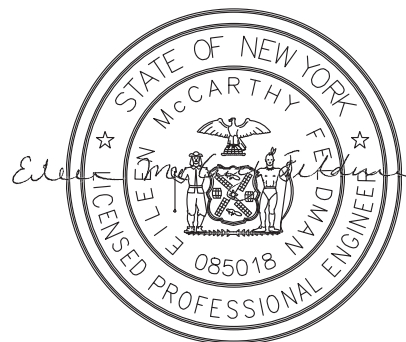
RESTRAINED MJ SOLID SLEEVE
M-40-0700

WARNING

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					PROJECT ENGINEER:	R. FROST
					DESIGNED BY:	C. THORNTON
					DRAWN BY:	B. CASULL
					CHECKED BY:	E. FELDMAN
					IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	<div> <div>0</div> <div>1/2"</div> <div>1</div>  </div>
REV	ISSUED FOR	DATE	BY			

BID SET



Hazen

HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT HARRISON, NY

MECHANICAL
DETAILS - SHEET 7

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	M-607

BASE ELBOW (TEE)
M-40-0300

ADJUSTABLE SADDLE

M-40-0304

FLANGE SUPPORT

FABRICATED PIPE SUPPORT (AT FLANGE)

M-40-0308

SCHEDULE A				
BASE ELBOW (TEE) (DIM IN INCHES)				
PIPE SIZE	A	B	C	D DIA x LG
3	1 1/2	5	4 7/8	1/2 x 5
4	2	6	5 1/2	5/8 x 5
5-6	2 1/2	7	VARIES	5/8 x 5
8-10	4	9	VARIES	5/8 x 5
12-16	6	11	VARIES	3/4 x 6
18-24	8	13 1/2	VARIES	3/4 x 6
30	10	16	23	7/8 x 7
36	12	19	26	7/8 x 7

SCHEDULE B				
ADJUSTABLE SADDLE (DIM IN INCHES)				
PIPE SIZE	A	B	C	D DIA x LG
3	2 1/2	7	1 1/2	5/8 x 5
4-12	3	7 1/2	2 1/2	5/8 x 5
14-16	4	9	3	5/8 x 5
18-20	6	11	3 1/2	3/4 x 6
24-48	6	11	4	3/4 x 6

PIPE SUPPORT

M-40-0305

FABRICATED PIPE SUPPORT
(AT PIPE)

M-40-0309R

SCHEDULE C							
SUPPORT RODS AND BRACKET SPACING (FOR STANDARD WEIGHT PIPE)							
PIPE SIZE (INCHES)	BACK PLATE (INCHES)	MINIMUM ROD Ø (INCHES)		MAX SPAN IN FEET (SEE NOTE 8)			
		PROCESS PIPING	STEEL AIR PIPING	COPPER	PLASTIC	STEEL	DIP (SEE NOTE 7)
UP TO 1	SEE NOTE 4	3/8	3/8	5	5	6	-
1 1/4-2	"	3/8	3/8	8	5	10	-
2 1/2-3 1/2	"	3/8	3/8	8	5	12	6
4-5	"	1/2	3/8	-	5	14	8
6	"	5/8	3/8	-	5	15	9
8-12	"	3/4	1/2	-	5	15	9
14-16	"	7/8	1/2	-	5	15	9
18	"	1	1/2	-	5	18	10
20-24	"	1 1/4	5/8	-	5	18	10

PIPE SUPPORT BRACKET

PIPE SUPPORT

M-40-0303

BRACED PIPE HANGER

M-40-0306R

PIPE SUPPORT RACK

M-40-0307

PIPE WALL SUPPORT AND SUPPORT RACK
SHALL BE ASSEMBLED W/ CHANNEL FRAMES
AND ACCESSORIES AS MANUFACTURED BY
UNISTRUT CORP OR EQUAL

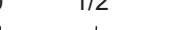
PIPE WALL SUPPORT

WALL HANGER PIPE SUPPORT

M-40-0302

NOTES:

1. CONTRACTOR SHALL DESIGN THE SUPPORT SYSTEMS BASED ON ACTUAL WEIGHTS AND CONDITIONS AS SPECIFIED OR AS SHOWN ON THE CONTRACT DRAWINGS. PIPE HANGERS, SUPPORTS AND BRACKETS SHOWN HERE IN VARIOUS COMBINATIONS ARE REFERRED TO AS MINIMUM REQUIREMENTS FOR ACCEPTABLE SUPPORTS AS TO TYPES, MATERIALS, THICKNESSES, ORIENTATION, AND QUALITY. CONTRACTOR SHALL SUBMIT DESIGN CALCULATIONS AND DETAILS FOR PIPE SUPPORTS SEALED BY A PROFESSIONAL ENGINEER LICENSED BY THE STATE OR COMINGUALVEAL OF THE PROJECT IS LOCATED WITH ALL PIPE HANGER AND SUPPORT SUBMISSIONS FOR REVIEW BY THE ENGINEER. WHEN SUBMITTING PROPOSED PIPE SUPPORTS AND SUPPORT LOCATIONS THE CONTRACTOR SHALL USE APPROVED PIPING LAYOUT SUBMITTAL DRAWINGS TO BE COORDINATED WITH THE SUPPORT TYPE AND LOCATION WITH ACCURATE DIMENSIONS TO DEMONSTRATE THAT SUPPORTS DO NOT EXCEED THE MAXIMUM SPACING REQUIREMENTS OF SECTION 40 05 07. THIS ENSURES THAT SUPPORTS HAVE BEEN COORDINATED WITH ACTUAL PIPE INSTALLATION DRAWINGS, AND THAT SPACING DOES NOT EXCEED THE MAXIMUM ALLOWABLE SPACING. THE PIPE SUPPORTS SHOWN AND REFERENCED UNDER SCHEDULES A, B & C ARE DESIGNED AND DETAILED FOR GRAVITY LOADING ONLY. RESULTING LATERAL LOADS FROM CONSTRUCTION CONDITIONS, DESIGN SEISMIC EVENT OR OTHER UNUSUAL CONDITIONS SHALL BE APPLIED TO THE PIPE, AND OTHER NON-STRUCTURAL COMPONENTS IN ACCORDANCE WITH THE GOVERNING BUILDING CODE. SUPPLEMENTAL LATERAL STIFFNESS, RESISTANCE AND MEMBERS (WHEN NECESSARY) SHALL BE PROVIDED ALONG THE PIPE OR GRAVITY SUPPORTS AND CONNECTIONS WHEN REQUIRED BY CALCULATIONS.
2. TYPICALLY, REINFORCED CONCRETE SUPPORTS SHALL BE USED WHEN PIPE CENTERLINE IS LESS THAN 3- FEET ABOVE CONCRETE FLOOR OR FINISHED GRADE, AND AT A MINIMUM, SHALL CONFORM TO STANDARD DETAIL 304-01.
3. MSS REFERS TO THE MANUFACTURERS STANDARDIZATION SOCIETY OF THE VALVE AND FITTINGS INDUSTRY, STANDARD PRACTICE SP-58 AND SP-69.
4. PIPE WALL SUPPORT AND PIPE SUPPORT RACK SHALL BE ASSEMBLED WITH CHANNEL FRAMES, AND ARE REFERRED TO AS MANUFACTURED BY UNISTRUT CORP, OR VERSABAR CORP, OR EQUAL.
5. FABRICATED PIPE SUPPORT MAY BE USED AS SHOWN IN PIPE SUPPORT RACK DETAIL, OR TO SUPPORT PIPE FROM THE FLOOR.
6. BACK PLATES SHALL BE DESIGNED BY THE CONTRACTOR, AND COORDINATED WITH THE TYPES AND THE WEIGHTS INVOLVED. BACK PLATE TO BE SUPPLIED BY BRACKET MANUFACTURER.
7. ALL INSULATED PIPES SHALL USE A SHIELD (MSS TYPE 40) WITH THE APPLICABLE PIPE SUPPORT.
8. MINIMUM OF ONE HANGER PER PIPE SECTION OR JOINT, ON THE BARREL. ALSO AT CHANGE IN DIRECTION AND BRANCH CONNECTIONS.
9. RODS AND SPACING ARE BASED ON STANDARD WEIGHT MATERIALS ACCORDING TO MSS SP-69. AND ARE FOR REFERENCE ONLY. THE CONTRACTOR SHALL SPACE HIS HANGERS BASED ON ACTUAL CONDITIONS.
10. REQUIRE THE SUBMITTAL OF ALL RELATED SPECIFICATION SECTIONS AND DRAWINGS OF THE CONTRACT DOCUMENTS REGARDING SUPPLEMENTAL DESIGN REQUIREMENTS RELATING TO PERFORMANCE SUBMISSIONS BY CONTRACTOR. ALL NON-STRUCTURAL COMPONENTS, INCLUDING PIPING, HVAC DUCTS, LUMINAIRES, AND OTHER NON-STRUCTURAL SUPPORT SYSTEMS SHALL BE ADEQUATELY DESIGNED AND INSTALLED UTILIZING SUFFICIENT CONNECTIONS AND MEMBERS TO ACCOMMODATE AND RESIST THE DESIGN LATERAL FORCES ASSOCIATED WITH A SPECIFIC COMPONENT'S DYNAMIC INERTIA OR THE DESIGN DYNAMIC EVENT. REFER TO THE CODE COMPLIANCE DRAWING FOR STRUCTURAL DESIGN INFORMATION FOR SPECIFIC SEISMIC DESIGN CRITERIA.

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	C. THORNTON
DRAWN BY:	B. CASULL
CHECKED BY:	E. FELDMAN
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	<div style="display: flex; align-items: center;"> 0  </div>

BID SET



Hazen

HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT HARRISON, NY

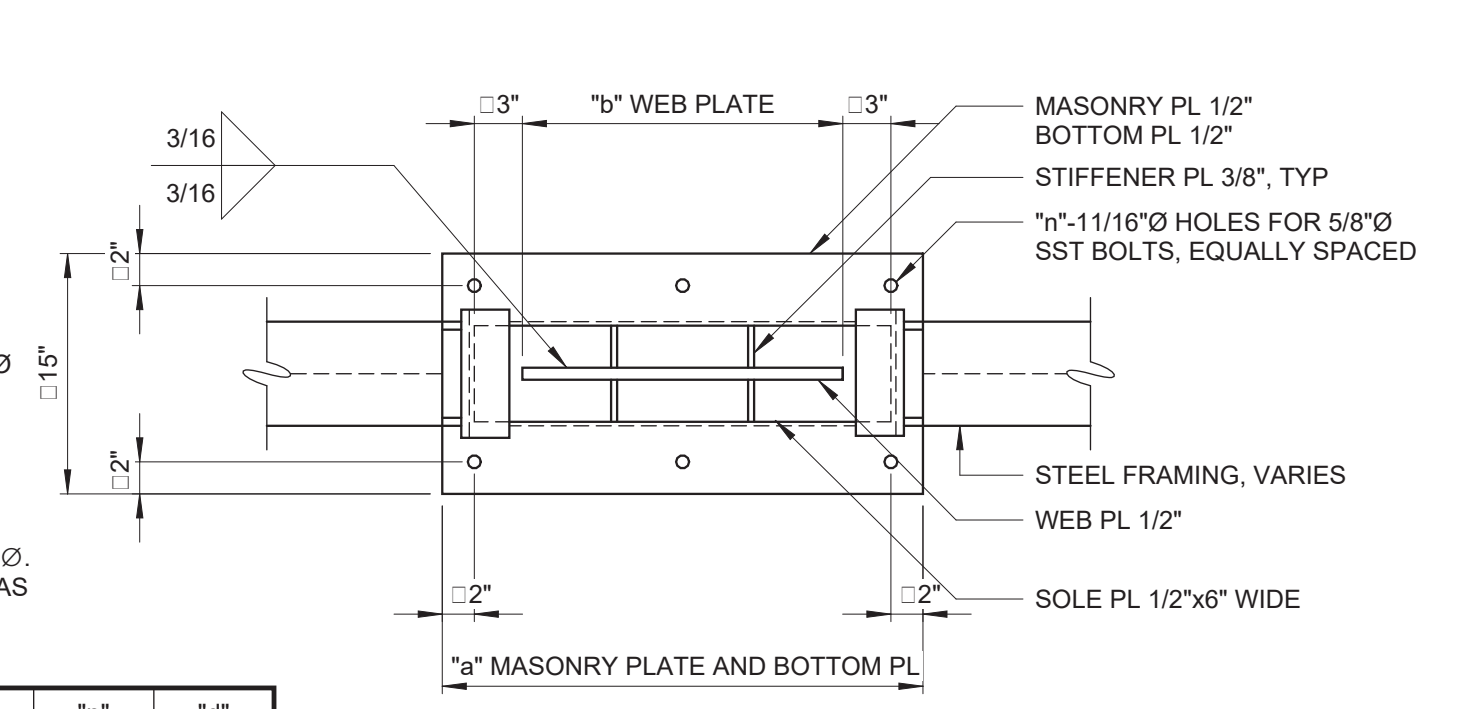
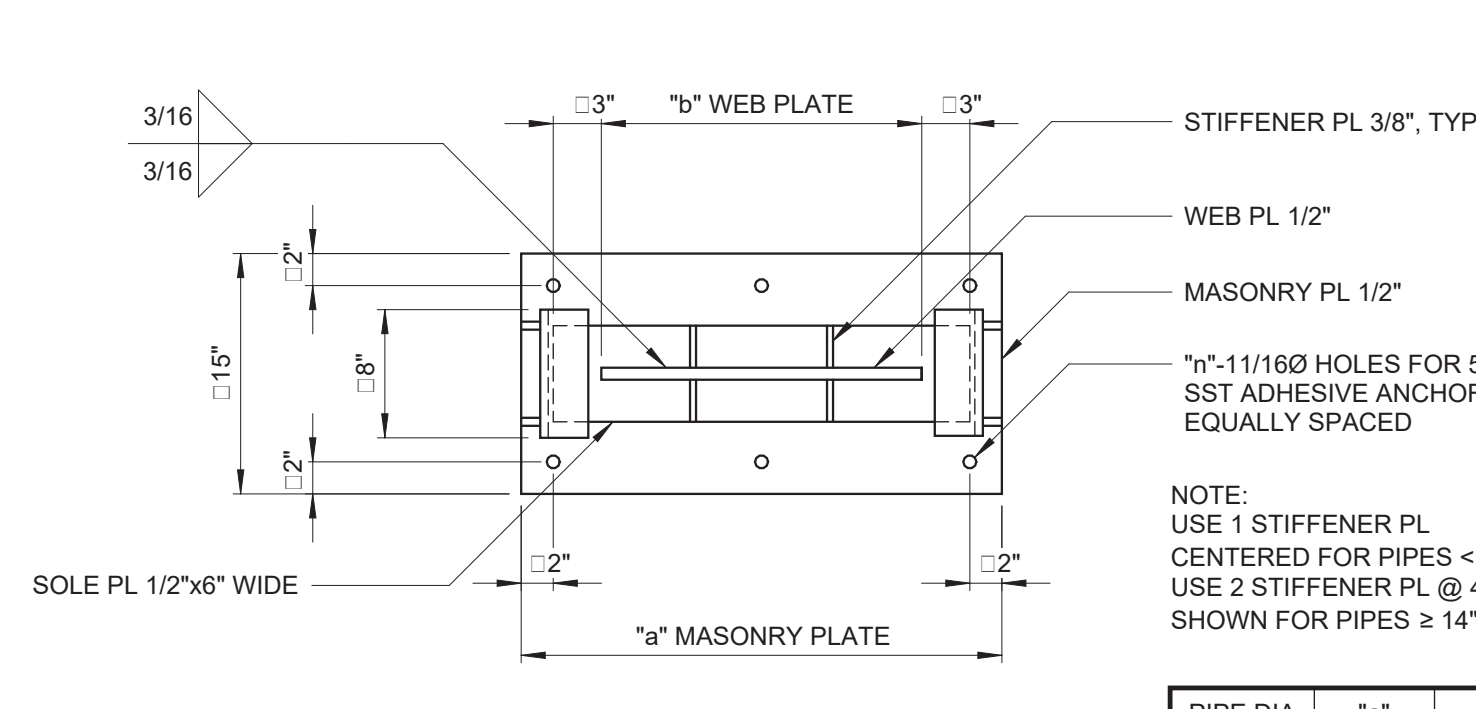
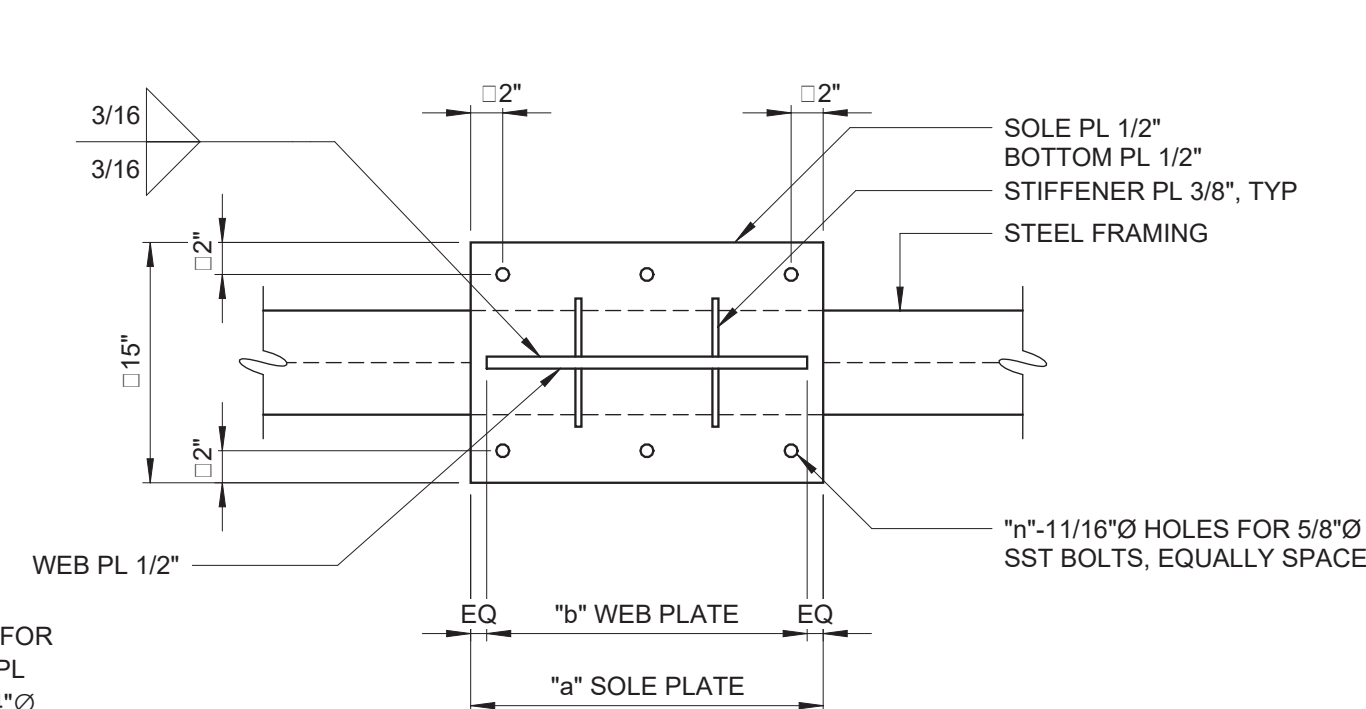
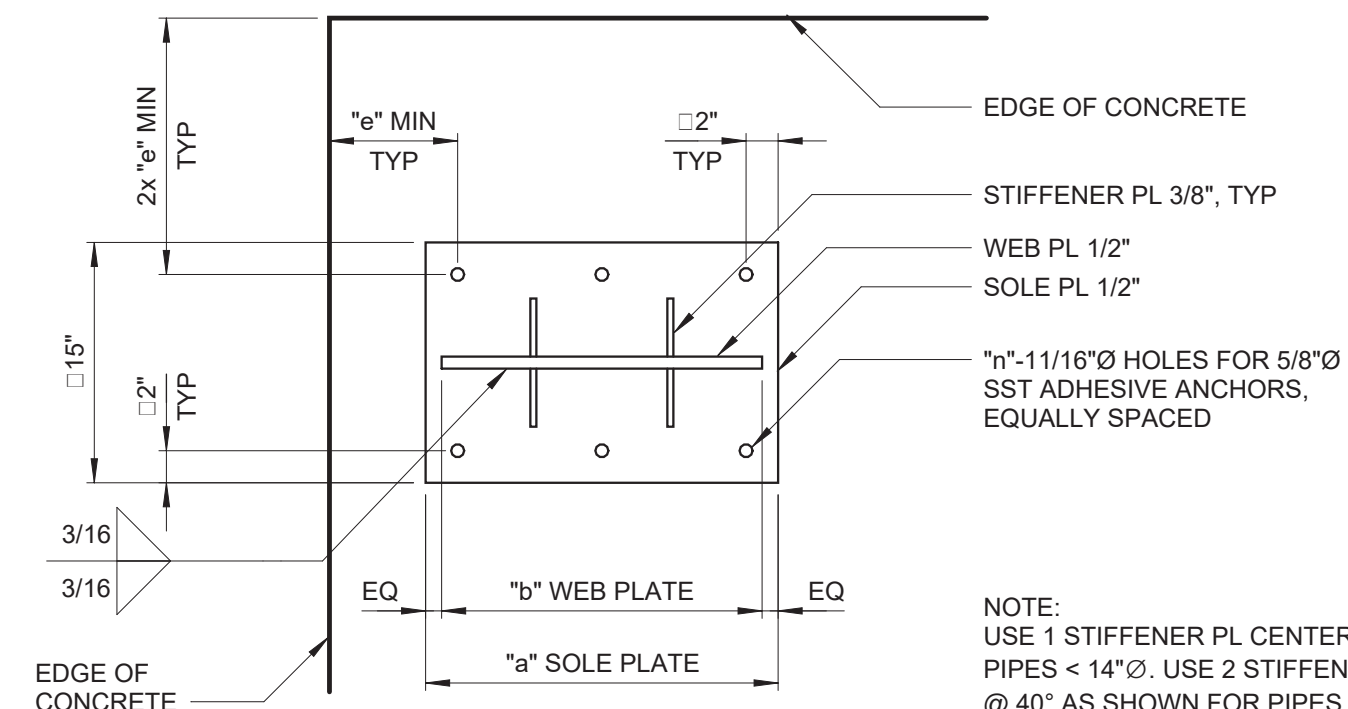
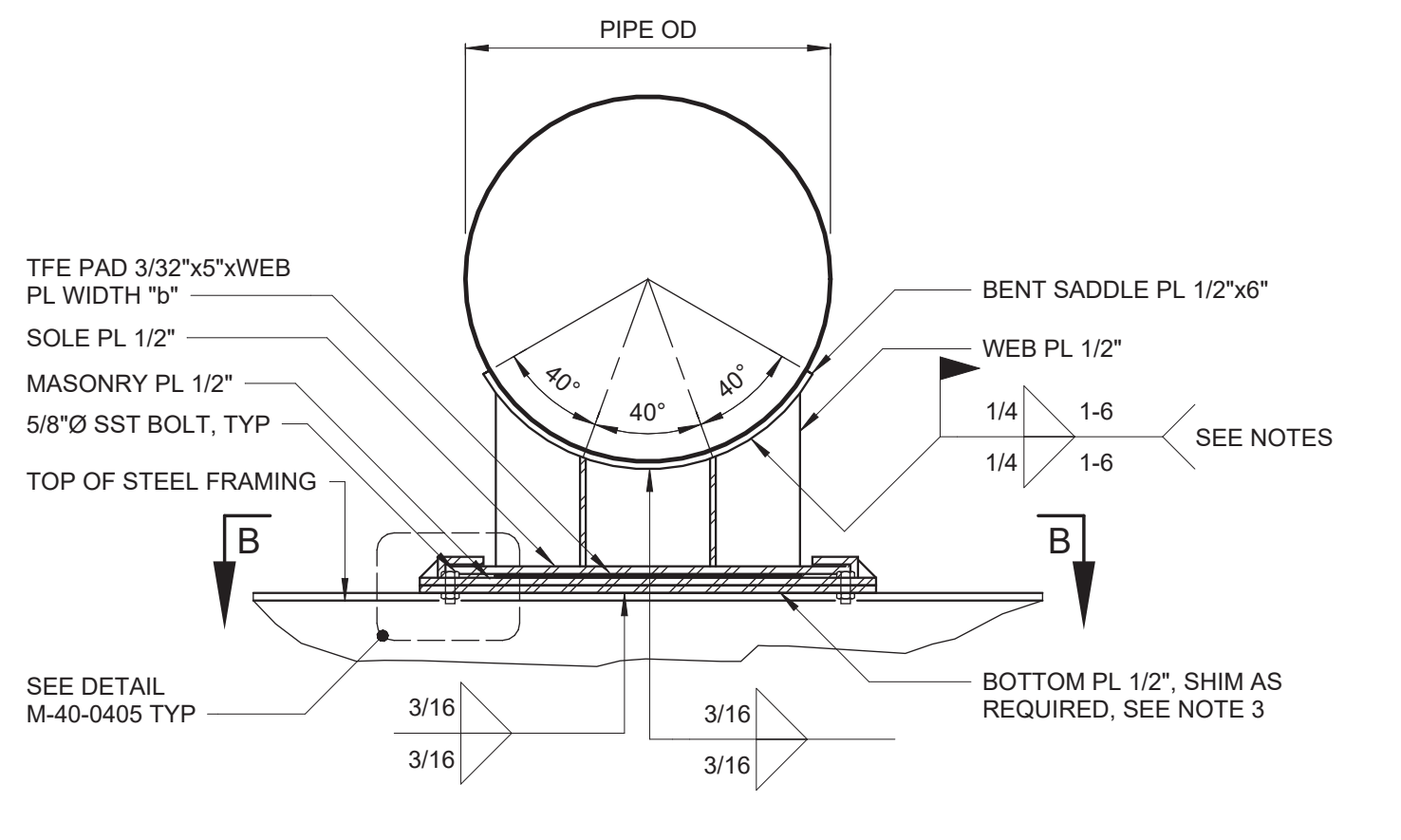
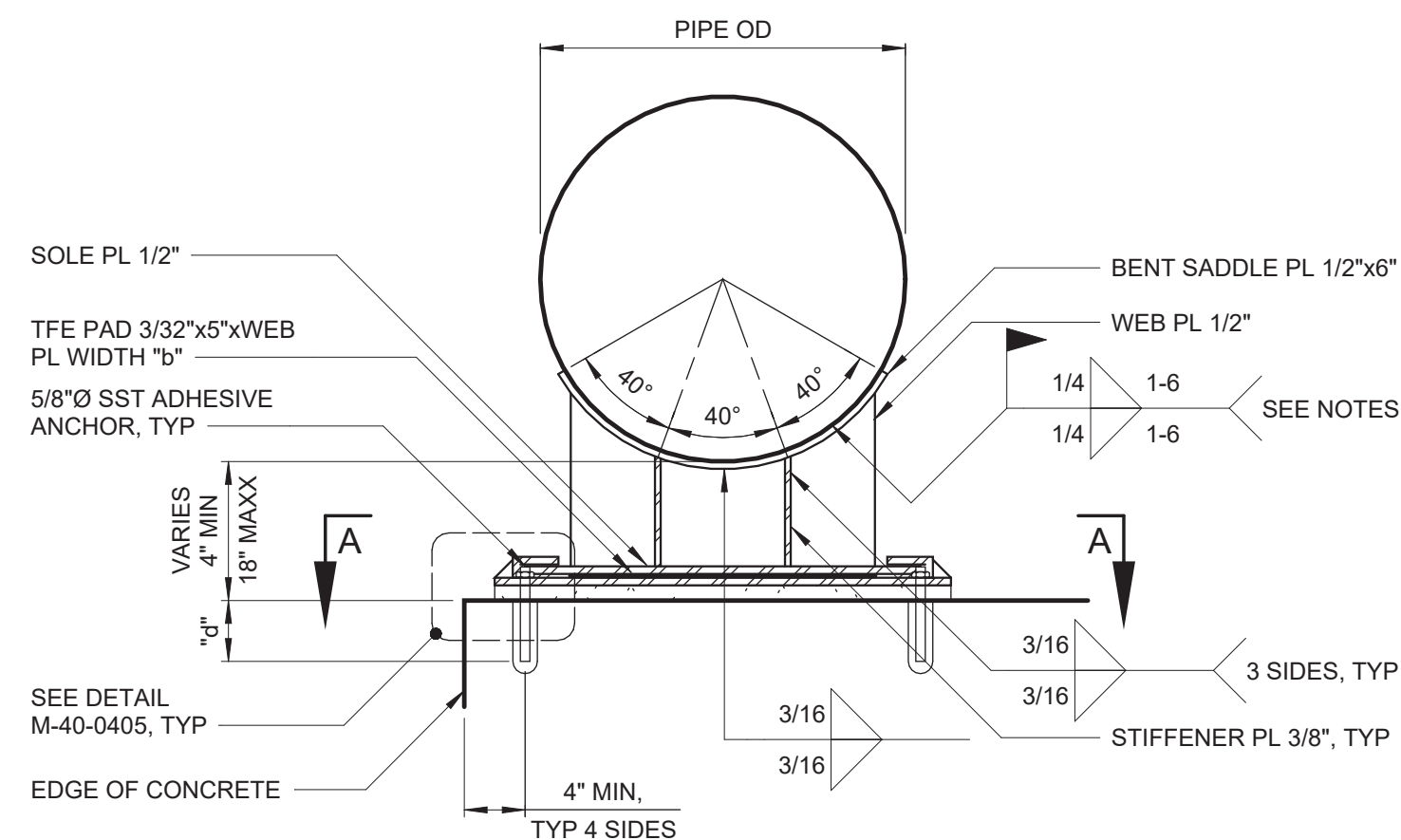
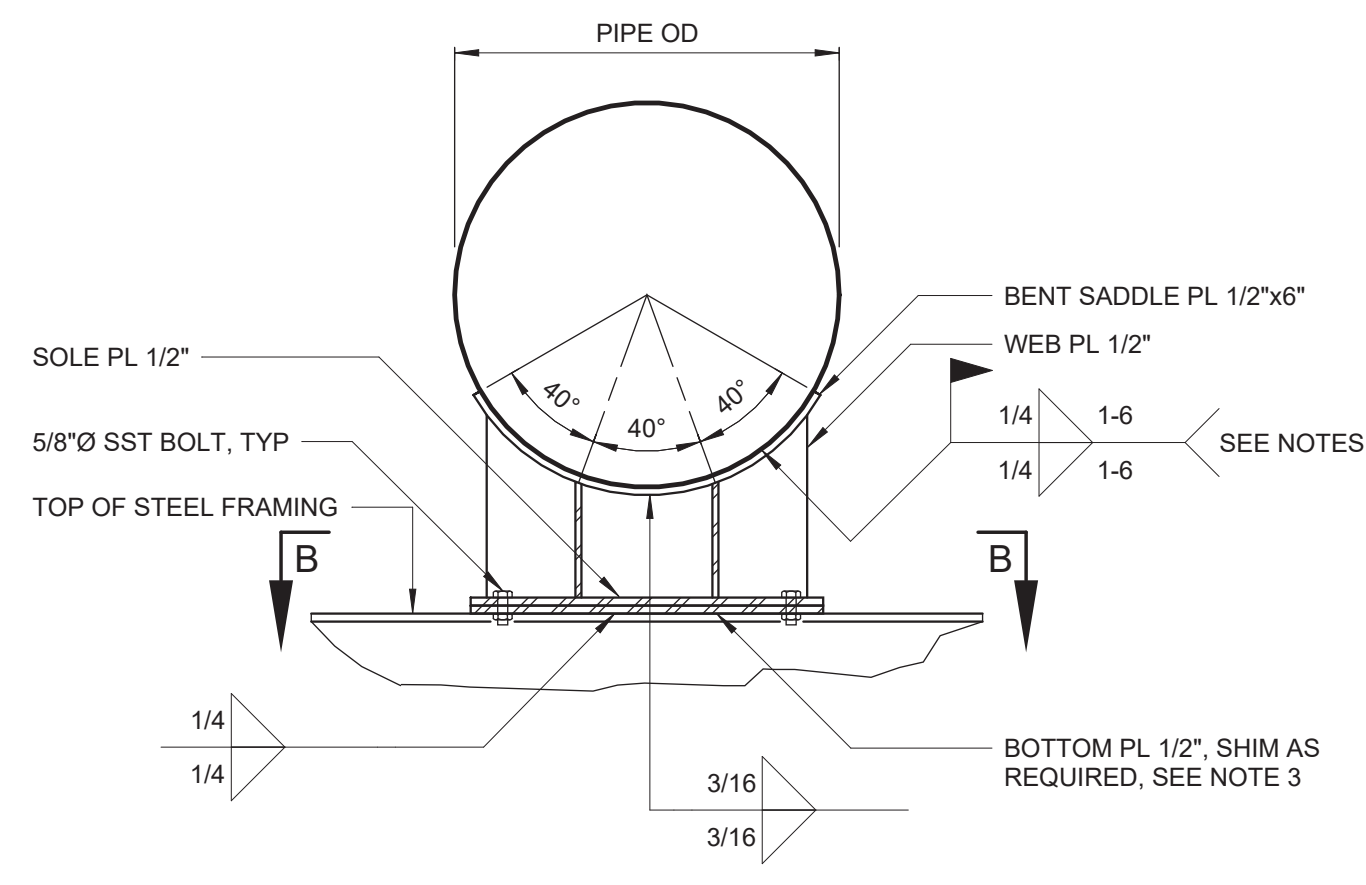
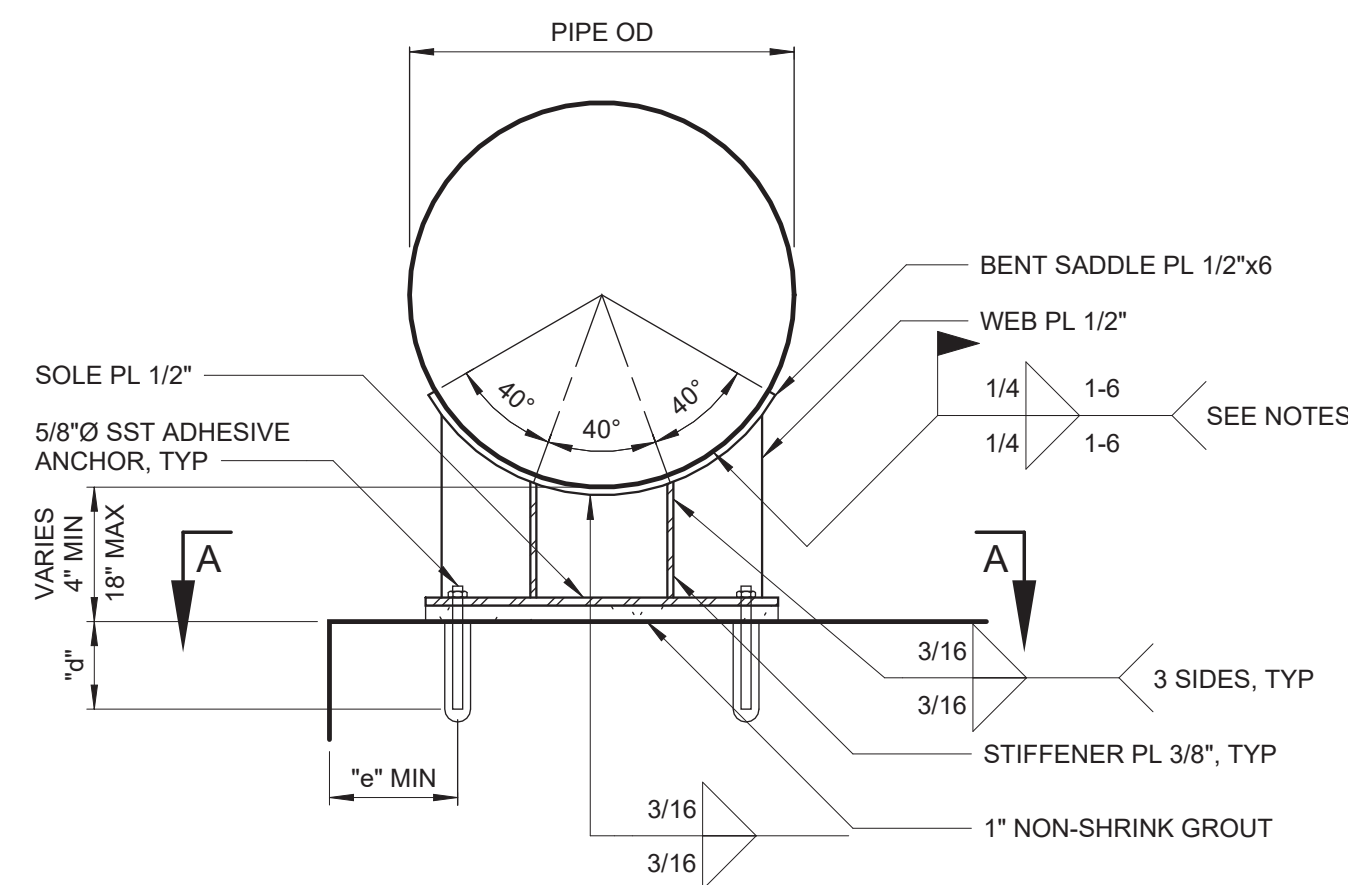
MECHANICAL
DETAILS - SHEET 8

DATE: FEB 2025

HAZEN NO.: 90388-000

CONTRACT NO.: A1364-A

DRAWING
NUMBER:



PIPE DIA	"a"	"b"	"n"	"d"
6"	14"	4"	4	4"
8"	16"	6"	4	4"
10"	16"	6"	4	4"
12"	18"	8"	4	4"
14"	20"	10"	4	4"
16"	22"	12"	4	4"
18"	2'-0"	14"	4	5"
20"	2'-2"	16"	6	5"
24"	2'-6"	20"	6	6"

SECTIONAL PLAN A-A

FIXED SUPPORT FOR
6"-24" PROCESS AIR PIPE
MOUNTED ON CONCRETE

SECTIONAL PLAN B-B

FIXED SUPPORT FOR
6"-24" PROCESS AIR PIPE
MOUNTED ON STEEL

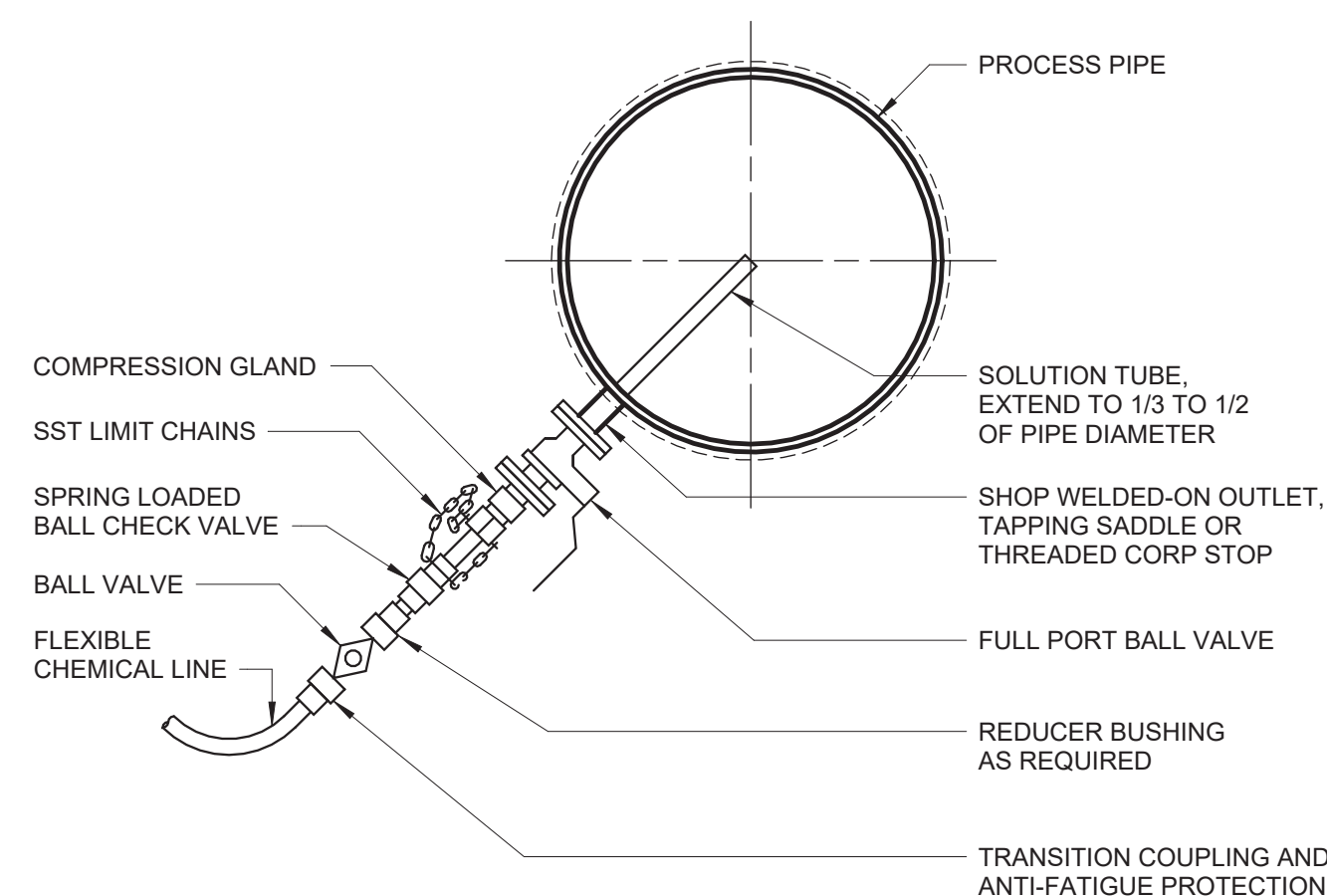
SECTIONAL PLAN A-A

SLIDING SUPPORT FOR
6"-24" PROCESS AIR PIPE
MOUNTED ON CONCRETE

SECTIONAL PLAN B-B

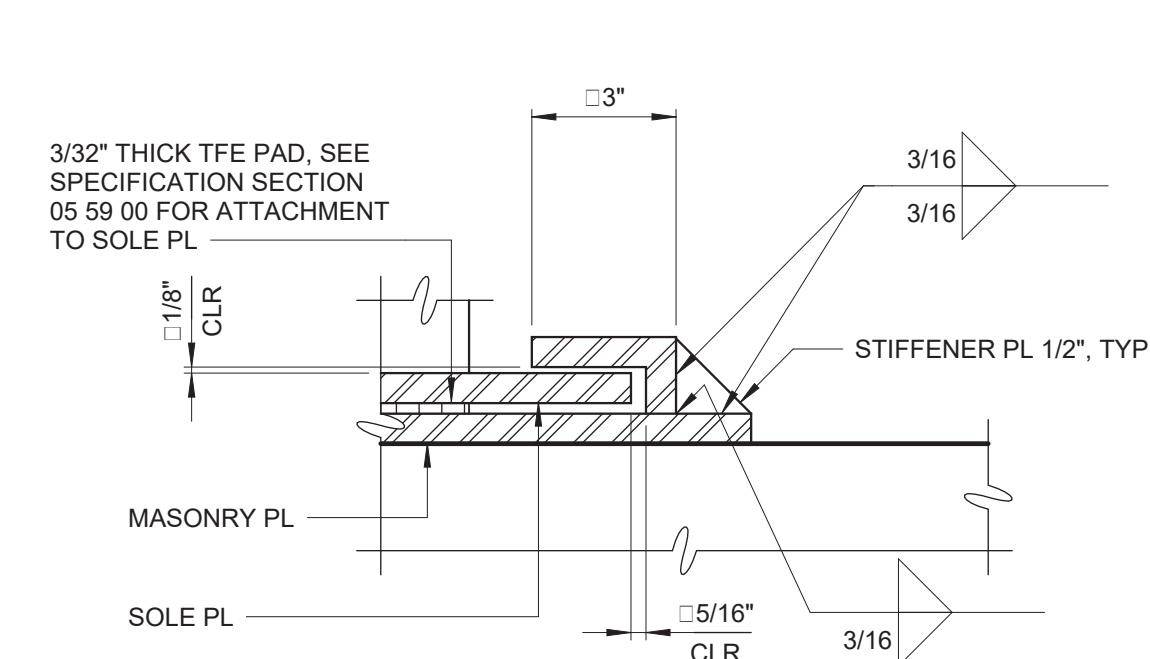
SLIDING SUPPORT FOR
6"-24" PROCESS AIR PIPE
MOUNTED ON STEEL

M-40-0401

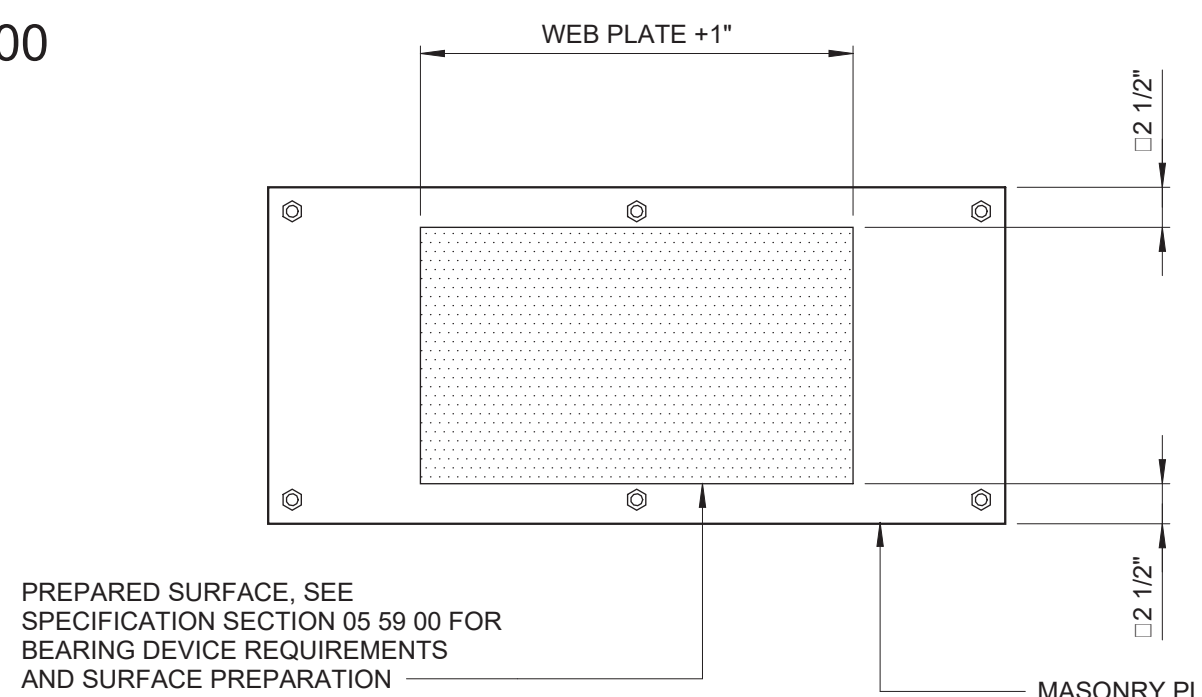


- NOTES:
1. CHEMICAL INJECTION QUILL SHALL BE INSTALLED IN INTERIOR SPACES OR IN A MANHOLE BUILT AROUND THE PROCESS PIPE. ORIENTATION WILL VARY TO SUIT THE INSTALLATION, TAKING INTO ACCOUNT CHEMICAL CONSIDERATIONS AND REQUIRED CLEARANCE FOR RETRACTION AND INSERTION.
 2. ALL WETTED COMPONENTS OF INJECTION QUILL SHALL BE COMPLETELY RESISTANT TO CORROSION BY THE SPECIFIED CHEMICAL..
 3. CHEMICAL INJECTION QUILL SHALL BE PROVIDED AS SPECIFIED IN SPECIFICATION SECTION 46 41 42.

CHEMICAL INJECTION QUILL
M-46-0100R



SLIDING PLATE HOLD-DOWN
M-40-0405



MASONRY PL BEARING SURFACE PREPARATION

M-40-0406


PROCESS AIR PIPE SUPPORT NOTES:


1. MATERIAL OF SUPPORT FROM SOLE PLATE AND ABOVE SHALL MATCH MATERIAL OF PIPE.
2. MATERIAL OF BOTTOM PLATE SHALL MATCH MATERIAL OF STEEL FRAMING BELOW.
3. SHIM PLATE SHALL BE LOCATED ON TOP OF BOTTOM PLATE AND SHALL HAVE THE SAME DIMENSIONS AS BOTTOM PLATE.
4. DISSIMILAR METALS SHALL BE ISOLATED PER 40 05 00.
5. AIR PIPE SHALL BE FULLY INSTALLED PRIOR TO FIELD WELDING SADDLE PLATES TO PIPE.
6. ALL WORK INCLUDING FIELD WELDS SHALL BE APPROVED BY ENGINEER PRIOR TO TESTING OF AIR PIPE.
7. SOLE PLATE SHALL BE CENTERED ON MASONRY PLATE ON INITIAL INSTALLATION.

M-4

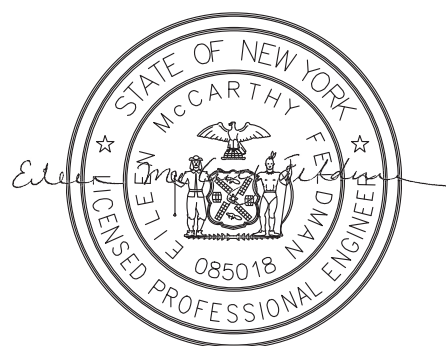
WARNING

IT IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON, UNLAWFULLY UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER IN ANY WAY PLANS, SPECIFICATIONS, PLATS OR REPORTS TO WHICH THE SEAL OF A PROFESSIONAL ENGINEER HAS BEEN APPLIED, IF AN ITEM BEARING THE SEAL OF A PROFESSIONAL ENGINEER IS ALTERED. THE ALTERING ENGINEER SHALL AFFIX TO THE ITEM HIS SEAL AND THE NOTATION "ALTERED BY FOLLOWED BY HIS SIGNATURE, THE DATE, AND A SPECIFIC DESCRIPTION OF THE ALTERATION."

				PROJECT ENGINEER:	R. FROST
				DESIGNED BY:	C. THORNTON
				DRAWN BY:	B. CASULL
				CHECKED BY:	E. FELDMAN
REV	ISSUED FOR	DATE	BY	IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	<div> <div>0</div> <div>1/2"</div> <div>1"</div>  </div>

PROJECT ENGINEER:	R. FROST
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IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">0 1/2" 1"</div>  </div>

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RYE LAKE WATER FILTRATION PLANT HARRISON, NY

MECHANICAL
DETAILS - SHEET 9

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	M-609

