











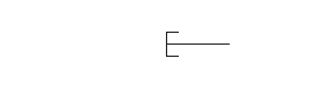

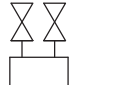














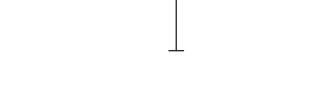










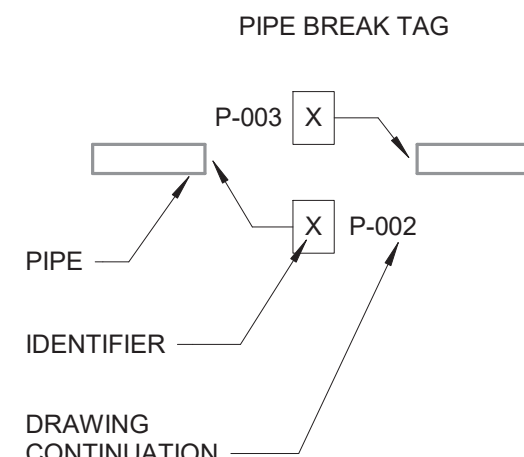


ABBREVIATIONS				SYMBOLS				GENERAL NOTES			
AD AFF ASME ASTM BFP(A) BFV BHP BLDG BV CFM CI CL CO CO2 CODP COL CF CISPI CLG CLW CU CV CW DAF DCDA DF DFU DIA DN DWH DWV DROP ED EFF EL ESE ET FD FT FLG FP FS GAL GC GPH GPM GV HB HP HR HVAC HW HWS HWR HZ INV IN IW IWH KS KW LAV LB LCP	AREA DRAIN ABOVE FINISHED FLOOR AMERICAN SOCIETY OF MECHANICAL ENGINEERS AMERICAN SOCIETY FOR TESTING AND MATERIALS BACKFLOW PREVENTER (ASSEMBLY) BUTTERFLY VALVE BRAKE HORSE POWER BUILDING BALL VALVE CUBIC FEET PER MINUTE CAST IRON CENTERLINE CLEAN OUT CARBON DIOXIDE CLEAN OUT DECK PLATE COLUMN CUBIC FEET CAST IRON SOIL PIPE INSTITUTE CEILING CLEAR WATER DRAIN COPPER CHECK VALVE COLD WATER DISSOLVED AIR FLOTATION DOUBLE CHECK DETECTOR ASSEMBLY BACKFLOW PREVENTER DIRNKING FOUNTAIN DRAINAGE FIXTURE UNIT DIAMETER DOWN TO FLOOR BELOW DOMESTIC WATER HEATER DRAIN, WASTE AND VENT DROP WITHIN CURRENT VIEW EMERGENCY DRAIN EFFICIENCY ELEVATION EMERGENCY SHOWER AND EYEWASH EXPANSION TANK FLOOR DRAIN FEET FLANGED FIRE PROTECTION FLOW SWITCH GALLON GENERAL CONTRACTOR GALLONS PER HOUR GALLONS PER MINUTE GATE VALVE HOSE BIBB HORSEPOWER HOSE REEL HEATING, VENTILATION AND AIR CONDITIONING HOT WATER HOT WATER SUPPLY HOT WATER RETURN HERTZ INVERT ELEVATION INCH INDIRECT WASTE INSTANTANEOUS WATER HEATER KITCHEN SINK KILOWATT LAVATORY POUND LOCAL CONTROL PANEL	MAX MIN MSB NC NFPA NH NPHW NPSH NPW NRS NTS OD OSY PG PH PSI PVC PW QTY RCP RD REQD RISE RM RPM RPZ RWL SAN SAS SCADA SCH SD SF SP SH SS ST STOR TD TMV TYP TW TWH UP UL UR UV V VAC VAR VB VFD VTR W WC1 WCO WFD WH WHA WJWW WM WT XH	MAXIMUM MINIMUM MOP SERVICE BASIN NORMALLY CLOSED NATIONAL FIRE PROTECTION ASSOCIATION HUBLESS CAST IRON SOIL PIPE NON POTABLE HOT WATER NET POSITIVE SUCTION HEAD NON POTABLE WATER NON RISING STEM NOT TO SCALE OUTSIDE DIAMETER OR OVERFLOW DRAIN OUTSIDE SCREW AND YOKE PRESSURE GUAGE PHASE POUNDS PER SQUARE INCH POLY VINYL CHLORIDE POTABLE WATER QUANTITY RECIRCULATING PUMP ROOF DRAIN REQUIRED RISE WITHIN CURRENT VIEW ROOM REVOLUTIONS PER MINUTE REDUCED PRESSURE ZONE BACKFLOW PREVENTER RAIN WATER LEADER SANITARY SAMPLING SINK SUPERVISORY CONTROL AND DATA ACQUISITION SCHEDULE STORM DRAIN SQUARE FOOT SUMP PUMP SHOWER SERVICE SINK STORAGE TANK STORAGE TRENCH DRAIN THERMOSTATIC MIXING VALVE TYPICAL TEPID WATER TEPID WATER HEATER UP TO FLOOR ABOVE UNDERWRITERS LABORATORY URINAL ULTRAVIOLET SANITARY VENT VACUUM VARIABLE VACUUM BREAKER VARIABLE FREQUENCY DRIVE VENT THROUGH ROOF WASTE WATER CLOSET TYPE 1 WALL CLEAN OUT WATER FLOW DETECTOR WATER HEATER WATER HAMMER ARRESTER WESTCHESTER JOINT WATERWORKS WATER METER WEIGHT EXTRA HEAVY CAST IRON SOIL PIPE	 BALL VALVE - NORMALLY OPEN  BALL VALVE - NORMALLY CLOSED  MOTORIZED BALL VALVE  GATE VALVE  GLOBE VALVE  GAS COCK OR PLUG VALVE  BUTTERFLY VALVE  PIPE CAP  PRESSURE REDUCING VALVE  CHECK VALVE  BACKFLOW PREVENTER DOUBLE CHECK VALVE  SMALL BACKFLOW PREVENTER REDUCED PRESSURE ZONE (RPZ) (2" OR SMALLER)  LARGE BACKFLOW PREVENTER REDUCED PRESSURE ZONE (RPZ) (2" OR LARGER)  PIPE CAP  WATER METER  THERMOSTATIC MIXING VALVE  EYEWASH SHOWER  LAVATORY/KITCHEN SINK  FLEX CONNECTOR	 AUTOMATIC CONTROL VALVE 2-WAY  AUTOMATIC CONTROL VALVE 3-WAY  PIPING ELBOW, 90° TURNED DOWN  PIPING ELBOW, 90° TURNED UP  PIPING TEE, OUTLET TURNED DOWN  PIPING TEE, OUTLET TURNED UP  PRESSURE GAGE WITH SHUTOFF COCK (BALL VALVE)  THERMOMETER  FLOOR OR ROOF DRAIN  P-TRAP  FLOOR CLEAN OUT  CIRCULATING PUMP  STRAINER WYE TYPE WITH BALL VALVE BLOW OFF  HOSE BIBB  TEMPERATURE GAUGE  PRESSURE GAUGE  DF  SERVICE SINK/MOP SINK BASIN  HOSE BIBB  SHOWER  URINAL	1. THE ENTIRE PLUMBING SYSTEM SHALL BE IN ACCORDANCE WITH THE 2020 EDITION OF THE NEW YORK STATE PLUMBING CODE, BUILDING CODE, AND ENERGY CODE REGULATIONS AND THE CODE OF THE VILLAGE OF HARRISON. 2. THE PIPING INDICATED ON THESE PLANS ARE DIAGRAMMATIC. ALL WORK SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION. CONTRACTOR SHALL COORDINATE ROUTING OF ALL PIPING WITH OTHER TRADES AND SHALL PROVIDE ANY NECESSARY OFFSETS, REROUTING, TEES, ELBOWS, ETC. REQUIRED FOR A COMPLETE AND COORDINATED INSTALLATION. 3. THE CONTRACTOR SHALL OBTAIN AND PAY ALL FEES RELATED TO PERMITTING, AND INSPECTIONS. 4. CONTRACTOR SHALL COORDINATE ANY PLUMBING OR PIPING SYSTEM SHUT DOWN WITH THE OWNER 48 HOURS IN ADVANCE. 5. ALL PLUMBING AND PIPING SYSTEMS SHALL BE SUPPORTED AS REQUIRED BY CODE REQUIREMENTS AND PER MANUFACTURER'S RECOMMENDATIONS. 6. ALL PLUMBING FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS WRITTEN INSTRUCTIONS. CONTRACTOR SHALL MAINTAIN ON-SITE THE WRITTEN INSTRUCTIONS FOR THE INSPECTOR'S REVIEW. 7. ALL PIPING PENETRATIONS THROUGH WALLS, AND FLOORS SHALL BE SEALED TO EQUAL THE FIRE RATING OF THE WALL OR FLOOR. 8. THE PLUMBING SYSTEM SHALL BE TESTED AS REQUIRED BY CODE OR BY THE REQUIREMENTS OF THE LOCAL PLUMBING INSPECTOR. 9. THE ENTIRE DOMESTIC WATER SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH THE LOCAL HEALTH DEPARTMENT REQUIREMENTS AND AS SPECIFIED. 10. ROUTE ALL PIPING CONCEALED ABOVE CEILINGS, WITHIN WALLS OR IN CHASES EXCEPT AS SPECIFICALLY NOTED, OR IN MECHANICAL ROOMS. 11. SEE ARCHITECTURAL DRAWINGS FOR FIXTURE LOCATIONS AND MOUNTING HEIGHTS. 12. CONTRACTOR SHALL PROVIDE AND INSTALL WHEN REQUIRED BY CODE AN AIR GAP SERVING INDIVIDUAL FIXTURES, DEVICES, APPLIANCES OR APPARATUS. 13. SEE SANITARY WASTE AND VENT RISER SCHEMATIC DIAGRAM FOR WASTE AND VENT PIPE SIZES. 14. SEE DOMESTIC WATER RISER SCHEMATIC DIAGRAM FOR DOMESTIC WATER PIPE SIZES. 15. CONTRACTOR SHALL PROVIDE WATER STOPS AT EACH FIXTURE. 16. SIZE AND LOCATION OF CLEANOUTS (AS WELL AS ALL PLUMBING WORK) SHALL BE IN ACCORDANCE WITH THE PLUMBING CODE. 17. PATCH ALL SURFACES DISTURBED DURING THE CONSTRUCTION OF PLUMBING COMPONENTS TO MATCH ADJACENT SURFACES. WORK SHALL BE DONE ONLY BY WORKMAN SKILLED IN THE TRADE INVOLVED AND TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE. 18. ALL CONCEALED VALVES, WATER HAMMER ARRESTORS, CLEANOUTS, ETC., CONCEALED IN WALLS SHALL BE PROVIDED WITH AN ACCESS PANEL SUCH AS ZURN MODEL ZN-1460 OR APPROVED EQUAL. 19. ALL CONCEALED PIPING IN CHASE AREAS SHALL BE SUPPORTED WITH A PIPING SUPPORT SYSTEM SUCH AS SUMNER POSIFIX, STAKFIX AND CHANNEL OR APPROVED EQUAL. 20. DO NOT ROUTE PLUMBING PIPE OVER OR IN FRONT OF ELECTRICAL PANELS, BREAKERS, ETC. 21. MINIMUM SLOPE OF SANITARY DRAIN PIPES SHALL BE 1/4" PER FOOT FOR PIPE SIZES EQUAL TO OR LESS THAN 2-1/2" AND 1/8" PER FOOT FOR 3" AND LARGER. 22. ALL HOSE BIBS SHALL BE PROVIDED WITH VACUUM BREAKER BFP. 23. THE SYMBOLS AND ABBREVIATIONS LIST ON THIS SHEET IS A COMPREHENSIVE STANDARD GUIDE INTENDED FOR GENERAL USE ON ALL PROJECTS. THEREFORE NOT ALL THE SYMBOLS AND ABBREVIATIONS CONTAINED IN THIS LIST ARE NECESSARILY USED ON THIS PARTICULAR PROJECT AND SHOULD BE USED FOR CLARIFICATION ONLY. 24. THE CONTRACT DRAWINGS SO NOT SHOW ALL VALVES AND APPURTENACES. ALL DOMESTIC HOT WATER FIXTURES SHALL HAVE A POINT-OF-USE THERMOSTATIC MIXING VALVE IN CONFORMANCE WITH THE APPLICABLE ASSE STANDARD LISTED IN 2020 NYS PC 607.1.2. ALL DOMESTIC WATER BRANCH LINES SUPPLYING QUICK-CLOSING VALVES OR FIXTURES SHALL HAVE A WATER HAMMER ARRESTOR AT THE END OF THE BRANCH LINE CONFORMING TO NYS PC 604.9 AND ASSE 1010. SHUT-OFF VALVES SHALL BE INSTALLED WHERE REQUIRED BY NYS PC 606.1 AND 606.2. 25. ALL HORIZONTAL STORM DRAIN PIPING SHALL BE SLOPED AT 1/8" PER FOOT.					
LINETYPES - PLANS AND SECTIONS											
_____	NEW (PLUMBING)	-----	NEW PLUMBING, EMBEDDED IN SLAB (WHERE DENOTED ON SPECIFIC PLANS)								
_____	NEW (NON-PLUMBING)	-----	FUTURE (PLUMBING)								
LINETYPES - POTABLE WATER RISER											
_____	POTABLE WATER	-----	NON POTABLE WATER								
_____	HOT WATER SUPPLY	-----	LEVEL/ROOM								
_____	HOT WATER RETURN	-----									
LINE TYPES - ISOMETRIC SANITARY RISER											
-----	VENT	-----	DRAIN								

PIPE BREAK TAG



PIPE

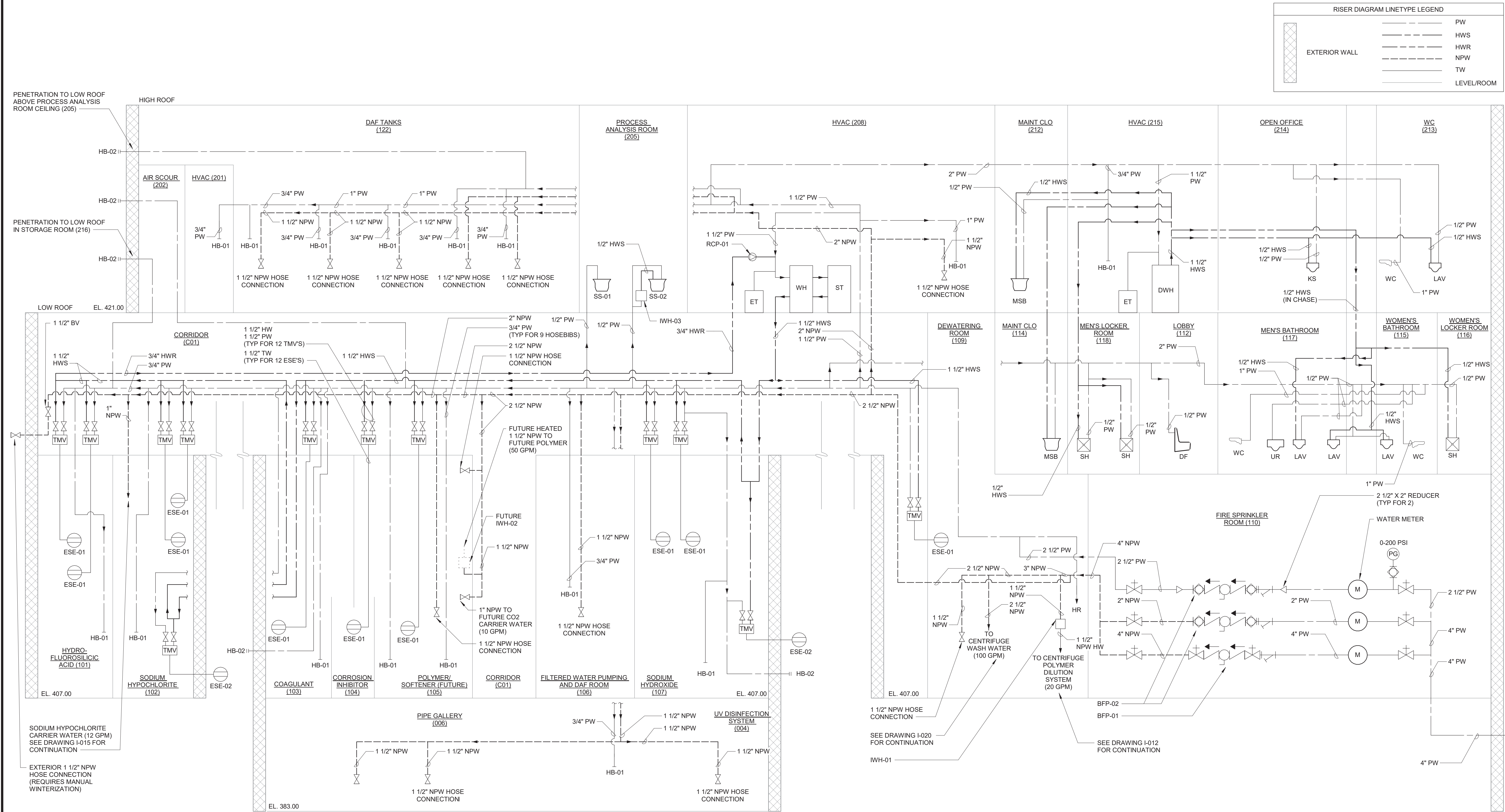
IDENTIFIER

DRAWING CONTINUATION

WARNING  
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				PROJECT ENGINEER: R. FROST		BID SET			WESTCHESTER JOINT WATER WORKS MAMARONECK, NY		FILTRATION PLANT PLUMBING GENERAL NOTES, SYMBOLS AND ABBREVIATIONS	DATE:	FEB 2025
				DESIGNED BY: M. GIORDANO								HAZEN NO.:	90388-000
				DRAWN BY: J. LURIE								CONTRACT NO.:	A1364-A
				CHECKED BY: R. VAN DYKE					RYE LAKE WATER FILTRATION PLANT HARRISON, NY			DRAWING NUMBER:	P-001
REV	ISSUED FOR	DATE	BY	IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE									





WARNING

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PROJECT ENGINEER:	R. FROST
DESIGNED BY:	M. GIORDANO
DRAWN BY:	J. LURIE
CHECKED BY:	R. VAN DYKE
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
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  
PLUMBING  
DOMESTIC WATER RISER DIAGRAM

DATE: FEB 2025  
HAZEN NO.: 90388-000  
CONTRACT NO.: A1364-A  
DRAWING NUMBER: P-002

Autodesk Docs/090388-000\_Rye\_Lake\_Filtration/090388-000-WFP-P-04  
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				DESIGNED BY:	M. GIORDANO
				DRAWN BY:	J. LURIE
				CHECKED BY:	R. VAN DYKE
				IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
REV	ISSUED FOR	DATE	BY		

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	M. GIORDANO
DRAWN BY:	J. LURIE
CHECKED BY:	R. VAN DYKE
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET

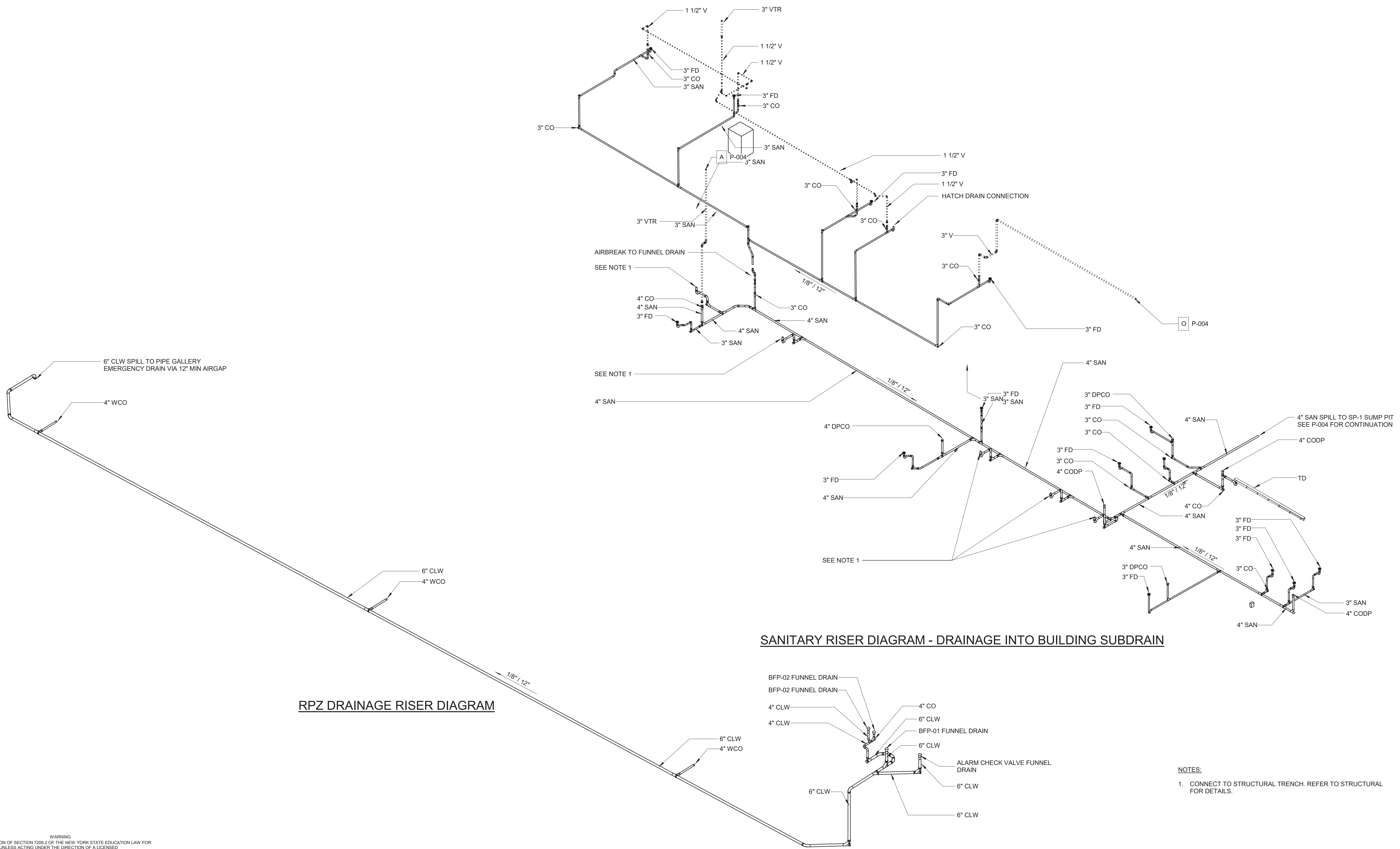


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498 SEVENTH AVENUE, 11th FLOOR  
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY  
  
RYE LAKE WATER FILTRATION PLANT  
HARRISON, NY

FILTRATION PLANT  
PLUMBING  
SANITARY RISER DIAGRAM - SHEET 1

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	P-003








**NOTES:**

1. PIPE BREAK "F" CONNECTS TO THE 3" VENT BRANCH SERVING THE ASSOCIATED COMBINATION WASTE AND VENT SYSTEM SHOWN ON VIEW 1 ON THIS SHEET.
2. PIPE BREAK "H" CONNECTS TO THE 4" SANITARY DRAIN SERVING THE FIRST FLOOR BATHROOM FIXTURES SHOWN ON VIEW 2 ON P-105. THOSE FIXTURES INCLUDE:
  - A. TWO (2) WC'S
  - B. THREE (3) LAV'S
  - C. ONE (1) UR

					PROJECT ENGINEER:	R. FROST
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REV		ISSUED FOR	DATE	BY		

## BID SET



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NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

# RYE LAKE WATER FILTRATION PLANT HARRISON, NY

FILTRATION PLANT  
PLUMBING  
SANITARY RISER DIAGRAM - SHEET 2

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	P-004

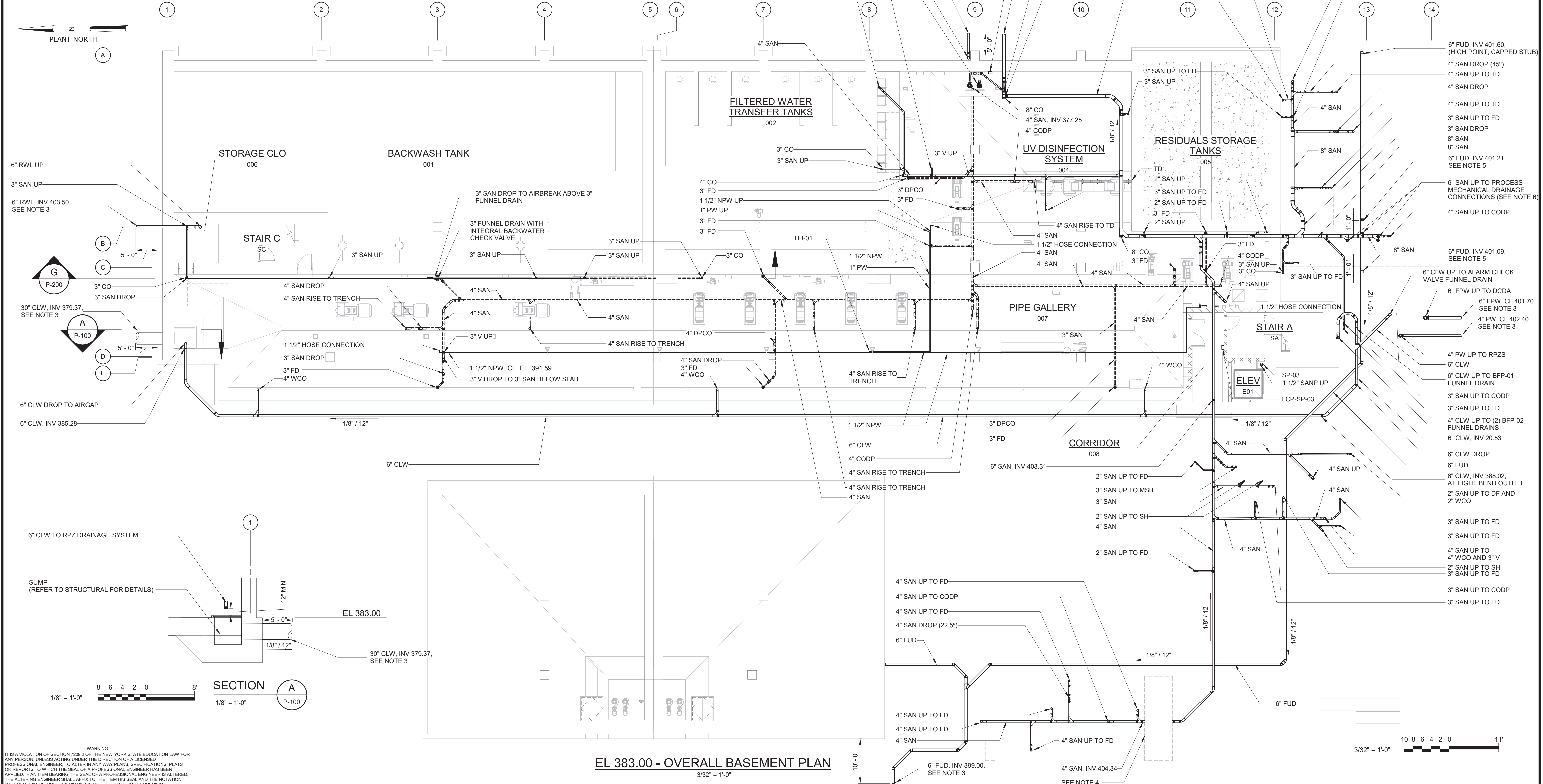






NOTES:

1. THE WORK OF OTHER TRADES IS HIDDEN OR SHOWN HALF-TONED FOR CLARITY.
2. 3" SUMP PUMP DISCHARGE SHALL CONNECT TO BUILDING DRAIN AT TOP OF PIPE.
3. SEE C-131 FOR CONTINUATION.
4. A SHORT LENGTH OF 4" SAN PIPE SHALL BE INSTALLED IN THE STRUCTURAL ENCASEMENT SHOWN. COORDINATE WITH INSTALLATION OF PROCESS PIPE.
5. A SHORT LENGTH OF 6" FUD PIPE SHALL BE INSTALLED IN THE STRUCTURAL ENCASEMENT SHOWN. THIS PIPE SHALL NOT BE PERFORATED, SPECIFICATION SHALL MATCH THAT OF BELOW GROUND RWL ON P-601.
6. CONNECTION BETWEEN XH CAST IRON AND PERFORATED PVC SHALL BE MADE OUTSIDE OF THE ENCASEMENT.
7. PIPING SHALL BE INSTALLED IN THE STRUCTURAL ENCASEMENT SHOWN. COORDINATE WITH INSTALLATION OF PROCESS PIPE BELOW. PROVIDE P-TRAPS. REFER TO MECHANICAL DRAWINGS FOR CONTINUATION.



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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	M. GIORDANO
DRAWN BY:	J. LURIE
CHECKED BY:	R. VAN DYKE
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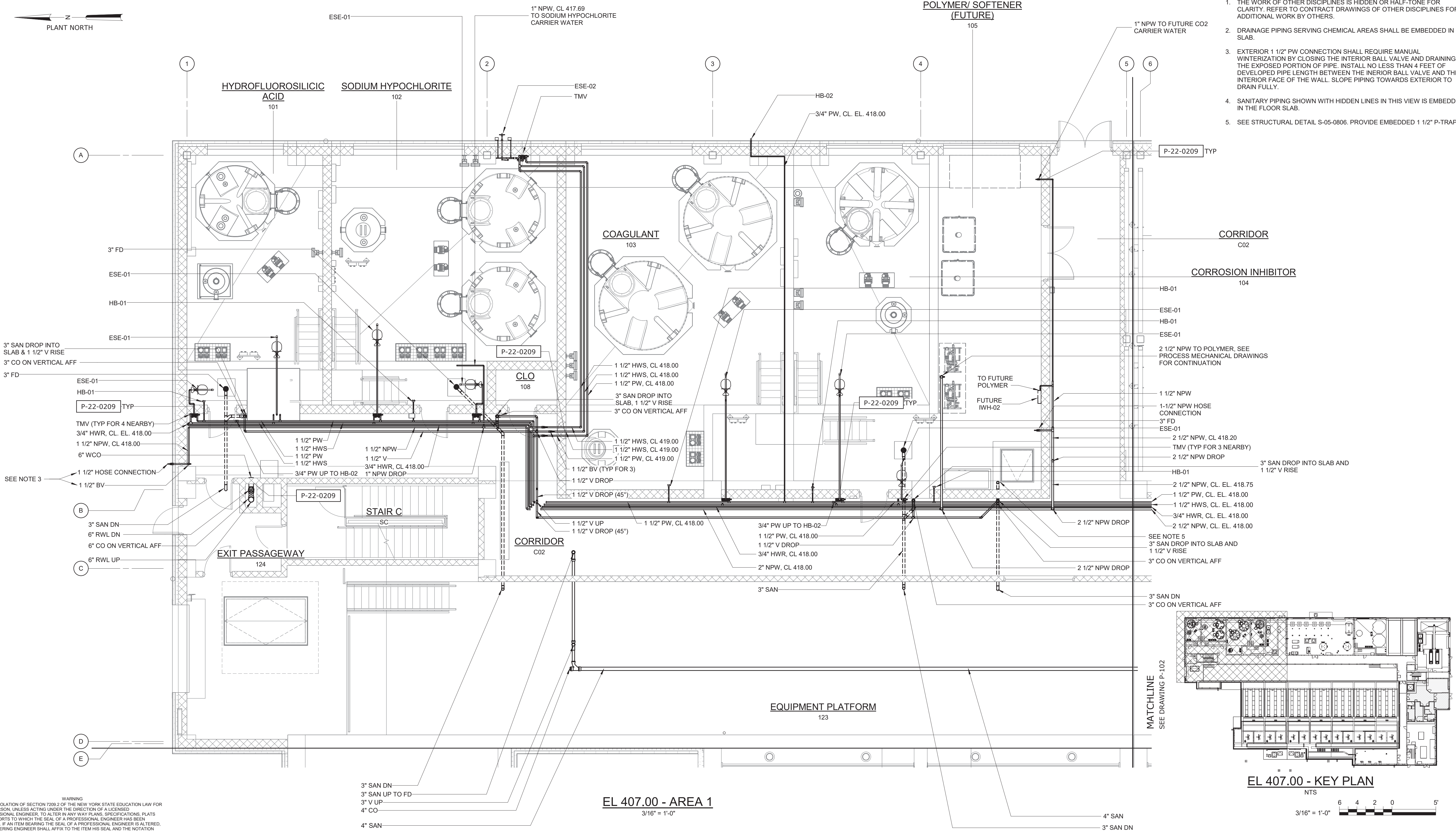
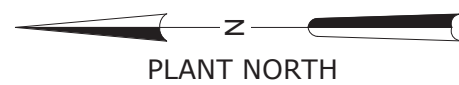
WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT  
HARRISON, NY

FILTRATION PLANT  
PLUMBING  
BASEMENT PLAN EL 383.00

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	P-100





- NOTES:
1. THE WORK OF OTHER DISCIPLINES IS HIDDEN OR HALF-TONE FOR CLARITY. REFER TO CONTRACT DRAWINGS OF OTHER DISCIPLINES FOR ADDITIONAL WORK BY OTHERS.
  2. DRAINAGE PIPING SERVING CHEMICAL AREAS SHALL BE EMBEDDED IN SLAB.
  3. EXTERIOR 1 1/2" PW CONNECTION SHALL REQUIRE MANUAL WINTERIZATION BY CLOSING THE INTERIOR BALL VALVE AND DRAINING THE EXPOSED PORTION OF PIPE. INSTALL NO LESS THAN 4 FEET OF DEVELOPED PIPE LENGTH BETWEEN THE INTERIOR BALL VALVE AND THE INTERIOR FACE OF THE WALL. SLOPE PIPING TOWARDS EXTERIOR TO DRAIN FULLY.
  4. SANITARY PIPING SHOWN WITH HIDDEN LINES IN THIS VIEW IS EMBEDDED IN THE FLOOR SLAB.
  5. SEE STRUCTURAL DETAIL S-05-0806. PROVIDE EMBEDDED 1 1/2" P-TRAP.

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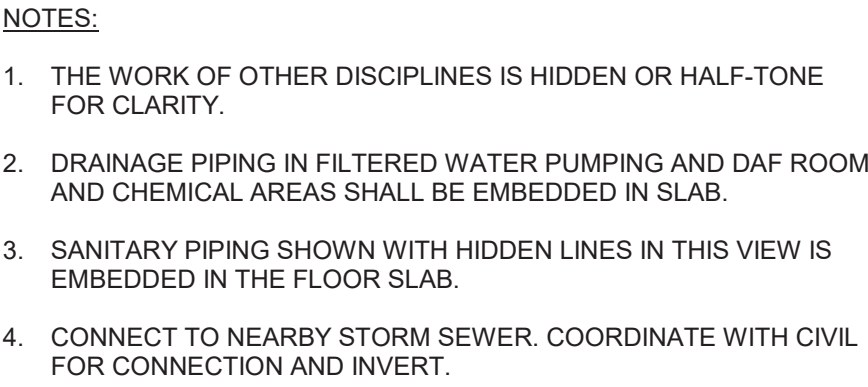
WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT  
HARRISON, NY

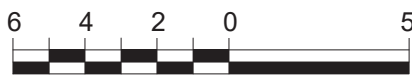
FILTRATION PLANT  
PLUMBING  
EL. 407.00 - AREA 1

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





NTS

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


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BID SET

# Hazen

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

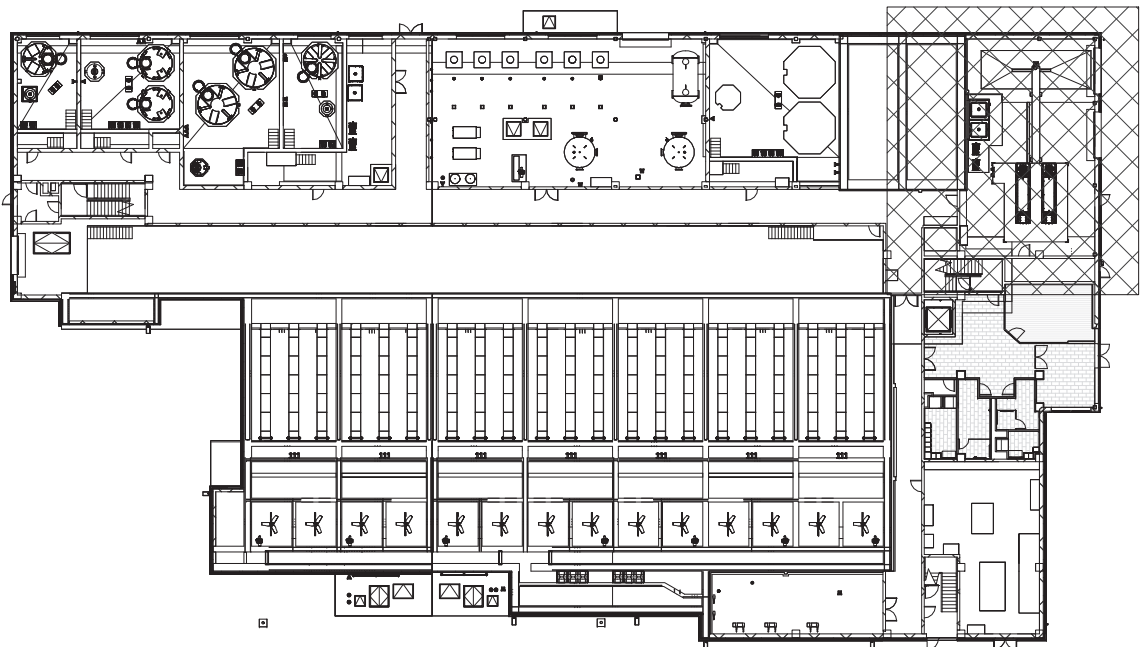
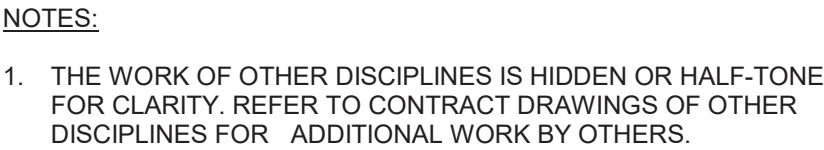
WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

# RYE LAKE WATER FILTRATION PLANT HARRISON, NY

FILTRATION PLANT  
PLUMBING  
EL. 407.00 - AREA 2

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






EL 407.00 - KEY PLAN  
NTS

3/16" = 1'-0"

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					PROJECT ENGINEER:	R. FROST
					DESIGNED BY:	M. GIORDANO
					DRAWN BY:	J. LURIE
					CHECKED BY:	R. VAN DYKE
					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

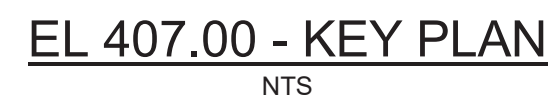
FILTRATION PLANT  
PLUMBING  
EL. 407.00 - AREA 3

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



PLANT NORTH

1. THE WORK OF OTHER DISCIPLINES IS HIDDEN OR HALF-TONE FOR CLARITY. REFER TO CONTRACT DRAWINGS OF OTHER DISCIPLINES FOR ADDITIONAL WORK BY OTHERS.
2. SEE STRUCTURAL DETAIL S-05-0806.
3. CONNECT TO NEARBY STORM SEWER. COORDINATE WITH CIVIL FOR CONNECTION AND INVERT.



NTS

④

WVL DE


(K)

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

120

**MATCHLINE**  
SEE DRAWING P-105

[illegible]

PROJECT ENGINEER:	R. FROST		
DESIGNED BY:	M. GIORDANO		
DRAWN BY:	J. LURIE		
CHECKED BY:	R. VAN DYKE		
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  
PLUMBING  
EL. 407.00 - AREA 5

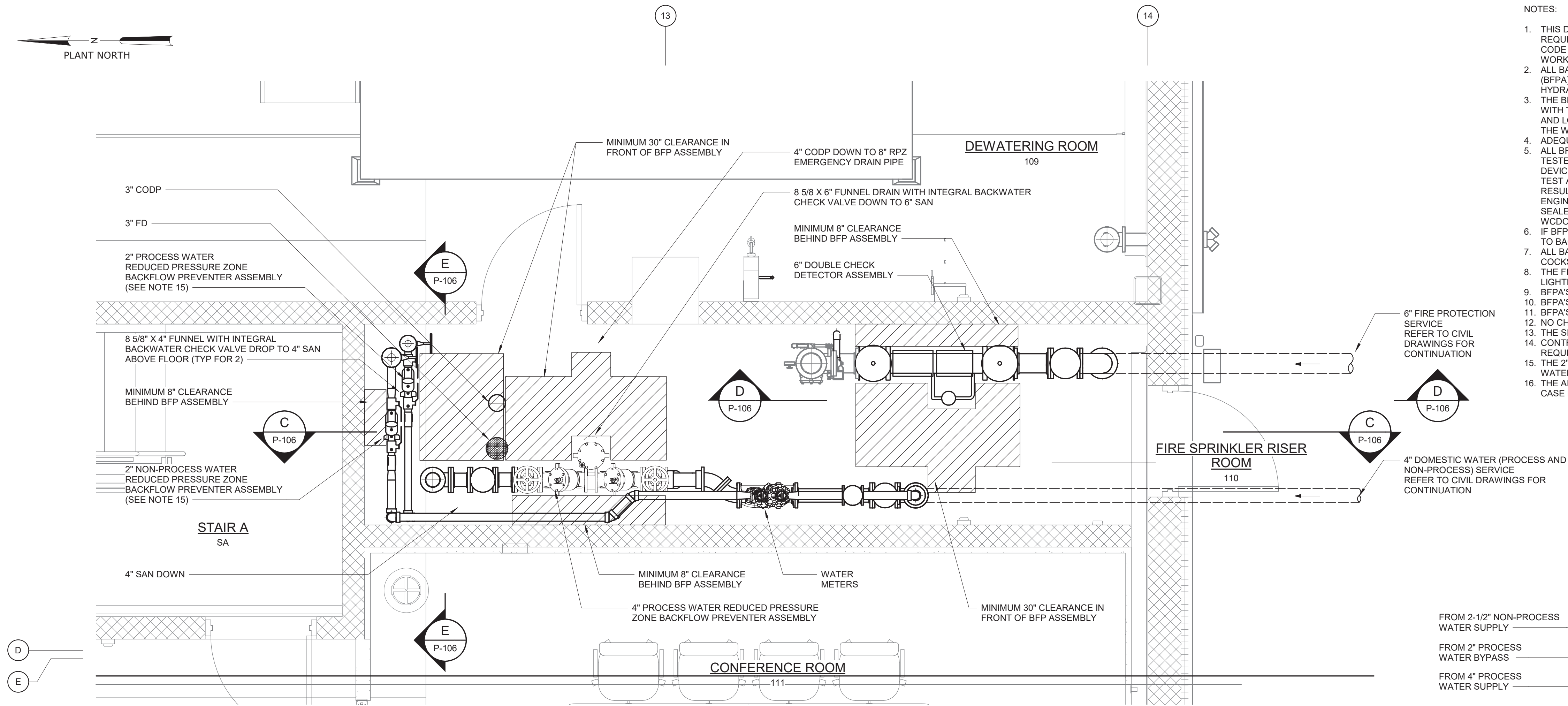
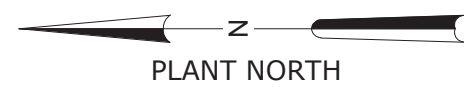
DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	

P-104



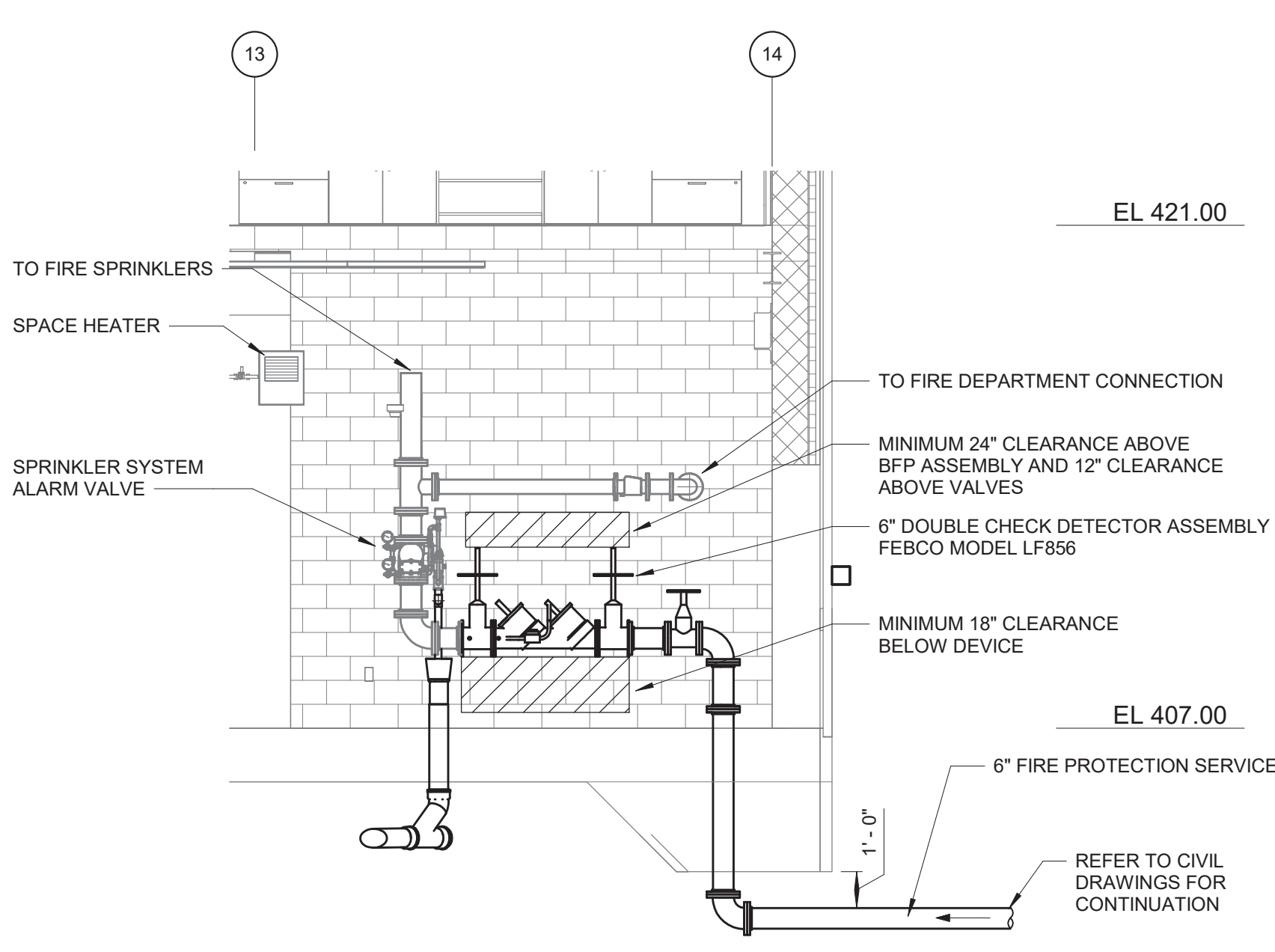
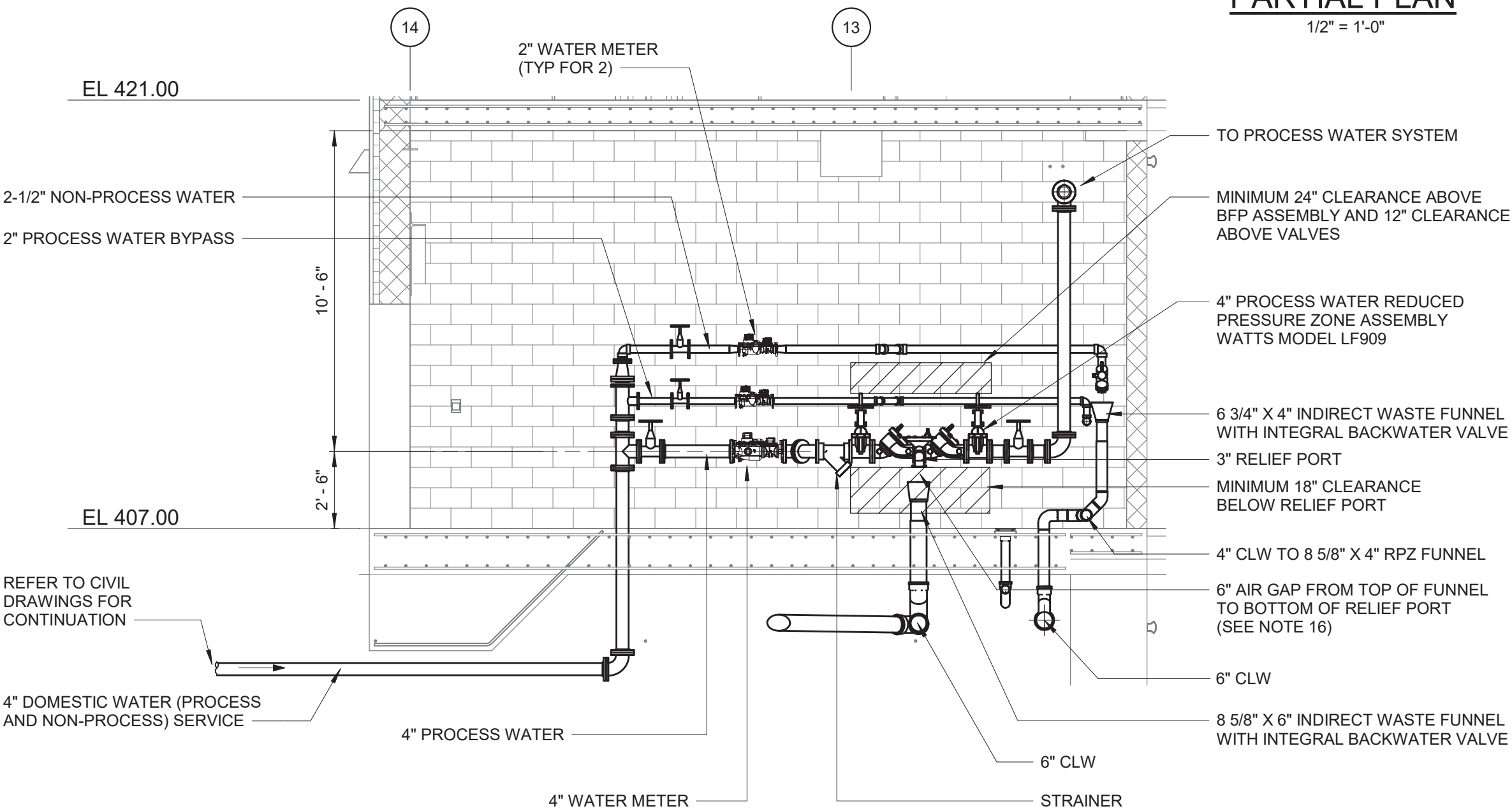
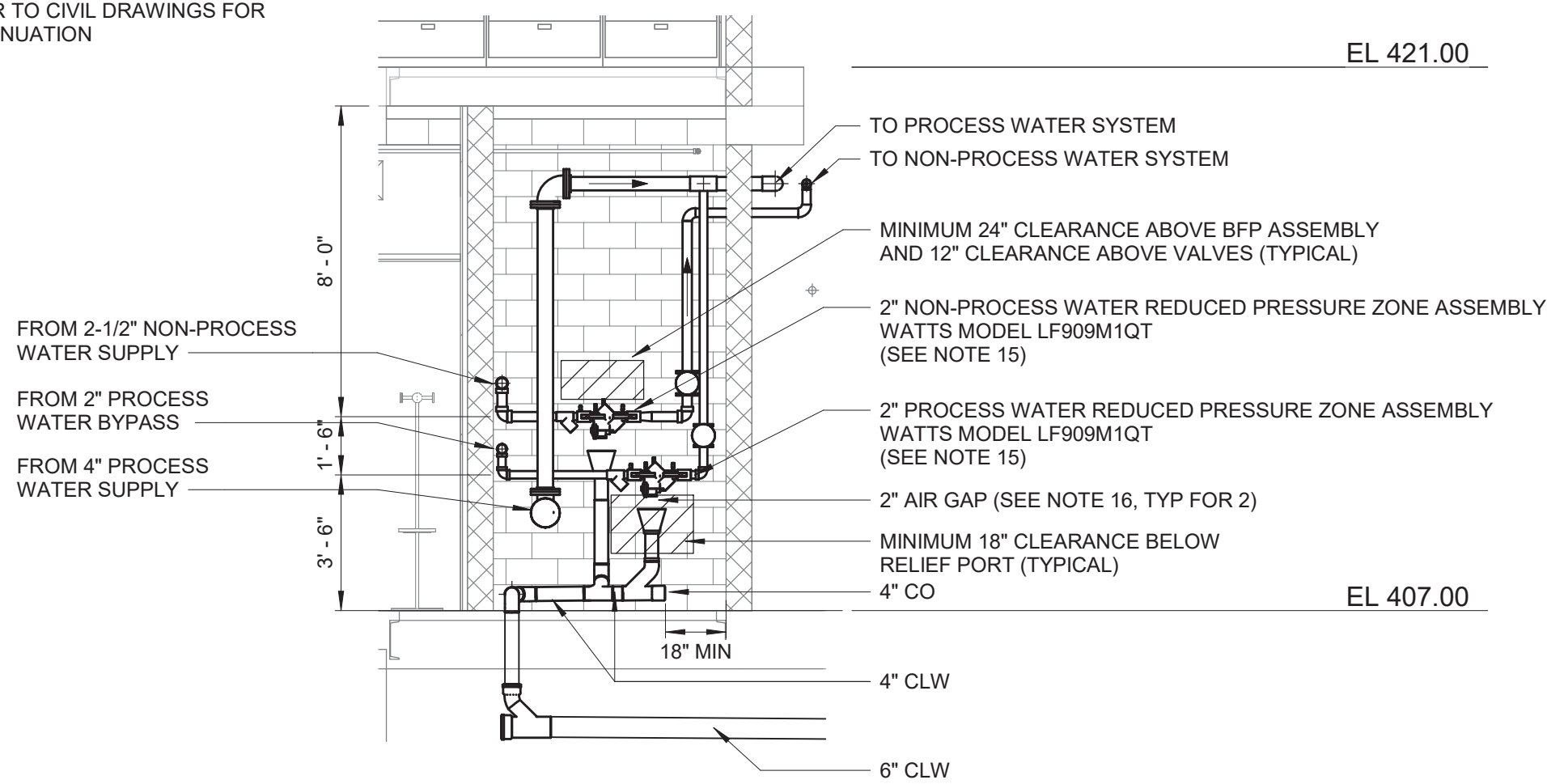






NOTES:

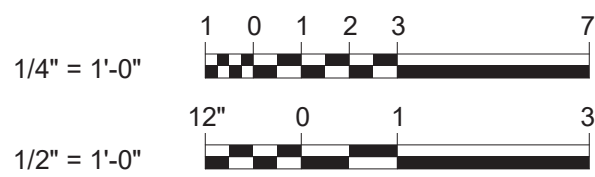
1. THIS DRAWING PROVIDES A CONCEPTUAL BACKFLOW PREVENTION ARRANGEMENT AND ASSOCIATED DRAINAGE REQUIREMENTS FOR THE SUBJECT WATER SERVICE FOR THE PURPOSE OF DEMONSTRATING BACKFLOW PREVENTION CODE COMPLIANCE. THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER ERECTION OF THE ACTUAL COMPLETE WORKING SYSTEM OF PIPING AND DEVICES PER ALL APPLICABLE CODES AND STANDARD PRACTICES.
2. ALL BACKFLOW PREVENTION DEVICES MUST BE FROM THE LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES (BFPA) BY THE UNIVERSITY OF SOUTHERN CALIFORNIA FOUNDATION OF CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH.
3. THE BFPA SHALL BE INSTALLED AS SHOWN ON THE APPROVED PLANS. THE INSTALLATION MUST BE IN CONFORMANCE WITH THE REQUIREMENTS OF NYSDOH, WESTCHESTER COUNTY DEPARTMENT OF HEALTH (WCDOH), WATER SUPPLIER AND LOCAL PLUMBING CODES. DEVIATIONS FROM THE APPROVED PLANS ARE NOT ALLOWED WITHOUT PERMISSION OF THE WATER SUPPLIER.
4. ADEQUATE SUPPORT FOR THE BFPA SHALL BE PROVIDED.
5. ALL BFPAS SHALL BE INSPECTED AND TESTED ANNUALLY BY A NEW YORK STATE CERTIFIED BACKFLOW PREVENTER TESTER. ADDITIONALLY, AN INITIAL TEST OF THE DEVICE SHALL BE PERFORMED BY SUCH A TESTER PRIOR TO THE DEVICE BEING PLACED INTO SERVICE. NEW YORK STATE DEPARTMENT OF HEALTH (NYSDOH) FORM 1013 "REPORT ON TEST AND MAINTENANCE OF BACKFLOW PREVENTION DEVICE" SHALL BE COMPLETED IN ITS ENTIRETY AND ALL RESULTS SHALL BE FORWARDED TO THE WCDOH WITH COPIES TO OWNER, LOCAL WATER PROVIDER DESIGN ENGINEER, AND CERTIFIED TESTER. ATTENTION IS CALLED TO PART B OF NYSDOH 1013 WHICH SHALL BE SIGNED AND SEALED BY THE DESIGN ENGINEER, CERTIFYING THAT THE DEVICE HAS BEEN INSTALLED IN CONFORMANCE WITH THE WCDOH APPROVED PLANS.
6. IF BFP DEVICE IS GREATER THAN 5 FT. FROM THE WATER METER, ALL EXPOSED PIPING MUST BE MARKED "FEED LINE TO BACKFLOW PREVENTER - DO NOT TAP" AT 5 FT. INTERVALS.
7. ALL BACKFLOW PREVENTION DEVICES & TEST COCKS SHALL FACE FORWARD, WITH ADEQUATE ACCESS TO THE TEST COCKS TO FACILITATE TESTING AND MAINTENANCE.
8. THE FIRE SPRINKLER RISER ROOM SHALL BE PROVIDED WITH ADEQUATE HEAT TO PREVENT FREEZING AND ADEQUATE LIGHTING FOR TESTING AND MAINTENANCE.
9. BFPAS SHALL BE A MINIMUM OF 8 IN. FROM WALLS.
10. BFPAS SHALL BE A MINIMUM OF 30 IN. FROM FLOORS.
11. BFPAS SHALL BE LEAD FREE AND USC APPROVED.
12. NO CHEMICALS ARE UTILIZED IN THE FIRE SUPPRESSION SYSTEM.
13. THE SITE (AND BFPAS) ARE LOCATED OUTSIDE OF THE 100-YEAR FLOODPLAIN.
14. CONTRACTOR SHALL DRILL HOLE AND RUN WIRE FOR REMOTE READING SYSTEM IN ACCORDANCE WITH WJWW REQUIREMENTS.
15. THE 2" REDUCED PRESSURE ZONE BACKFLOW PREVENTION ASSEMBLIES FOR THE NON-PROCESS AND PROCESS WATER SYSTEMS ARE SHOWN FOR CLARITY AND ARE NOT INCLUDED IN THIS APPLICATION.
16. THE AIR GAP SHALL BE AT LEAST TWICE THE DIMENSION OF THE EFFECTIVE OPENING OF THE RELIEF PORT; BUT IN NO CASE LESS THAN 1 INCH.



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.

SECTION C  
1/4" = 1'-0"  
P-106

SECTION D  
1/4" = 1'-0"  
P-106



				PROJECT ENGINEER:	R. FROST
				DESIGNED BY:	M. GIORDANO
				DRAWN BY:	J. LURIE
				CHECKED BY:	R. VAN DYKE
				IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div> <div>01/2"1"</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

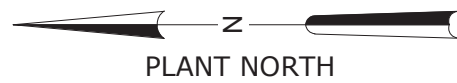
FILTRATION PLANT  
PLUMBING  
BACKFLOW PREVENTION PLAN

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

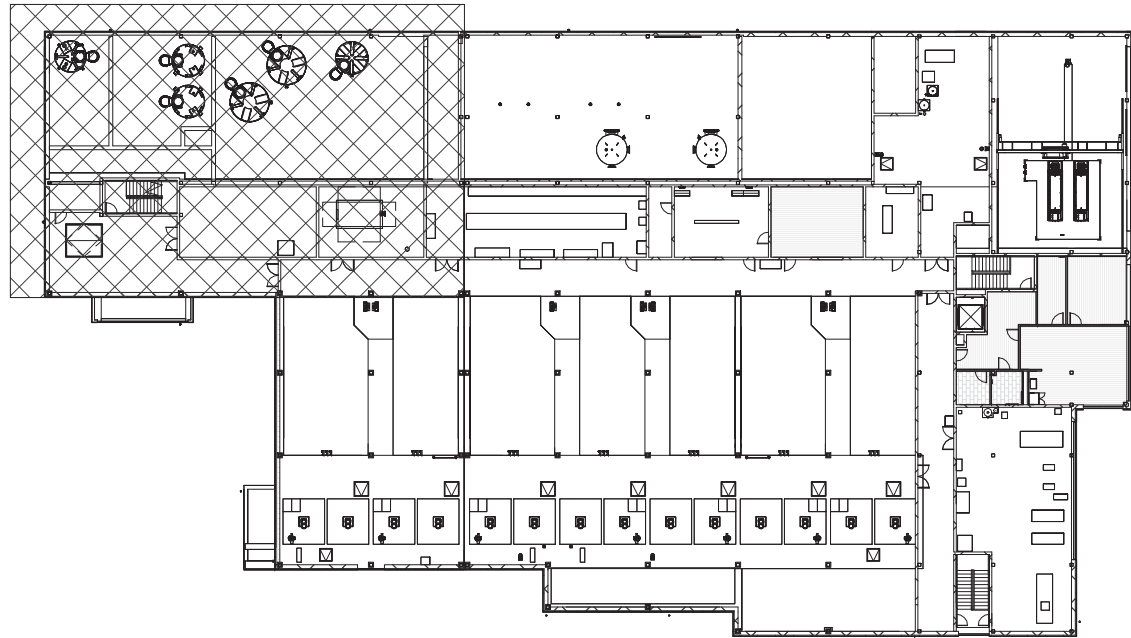
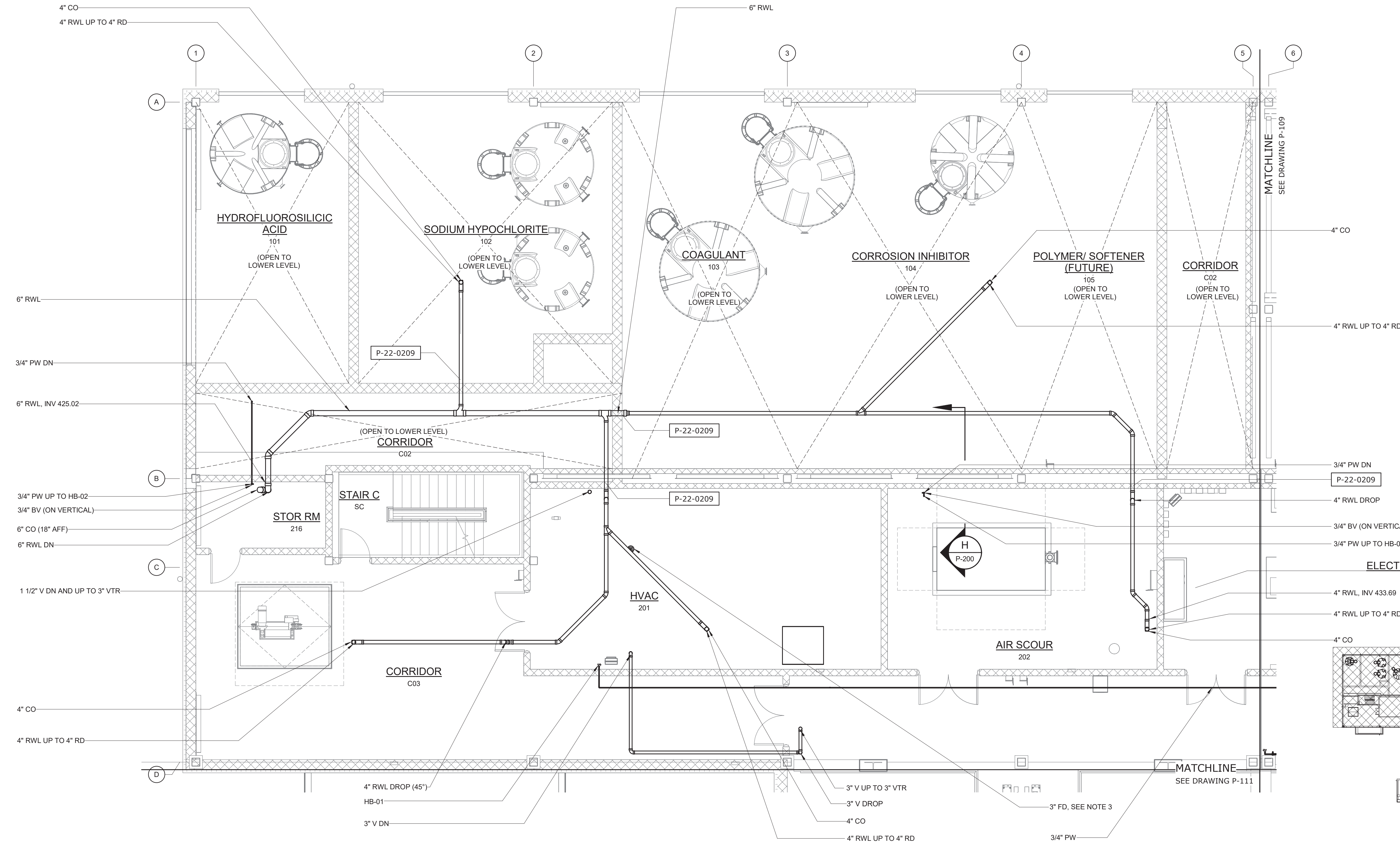








- NOTES:
1. THE WORK OF OTHER DISCIPLINES IS HIDDEN OR HALF-TONE FOR CLARITY. REFER TO CONTRACT DRAWINGS OF OTHER DISCIPLINES FOR ADDITIONAL WORK BY OTHERS.
  2. COORDINATE LOCATION OF FLOOR DRAIN WITH AIR SCOUR EQUIPMENT.
  3. COORDINATE LOCATION OF FLOOR DRAIN WITH AIR HANDLING UNIT.
  4. ALL HORIZONTAL STORM DRAIN PIPING SHALL BE SLOPED AT 1/8" PER FOOT.



EL 421.00 - KEY PLAN

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

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

WARNING  
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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	M. GIORDANO
DRAWN BY:	J. LURIE
CHECKED BY:	R. VAN DYKE
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

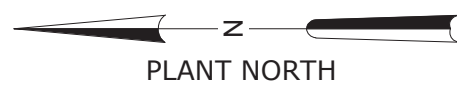
FILTRATION PLANT  
PLUMBING  
EL. 421.00 - AREA 1

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

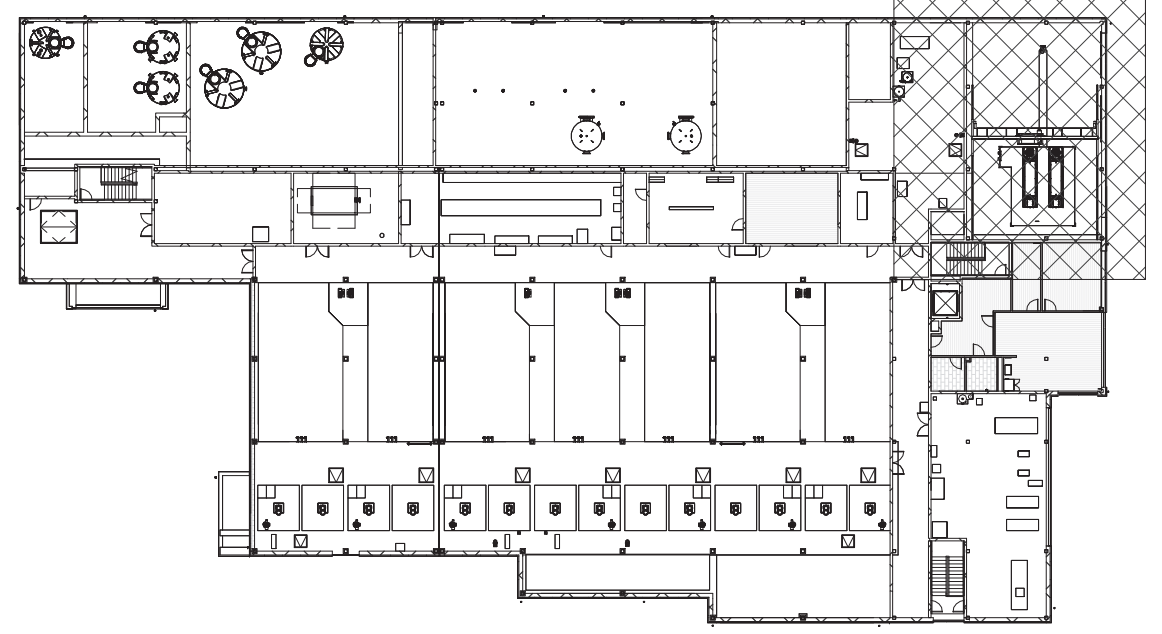
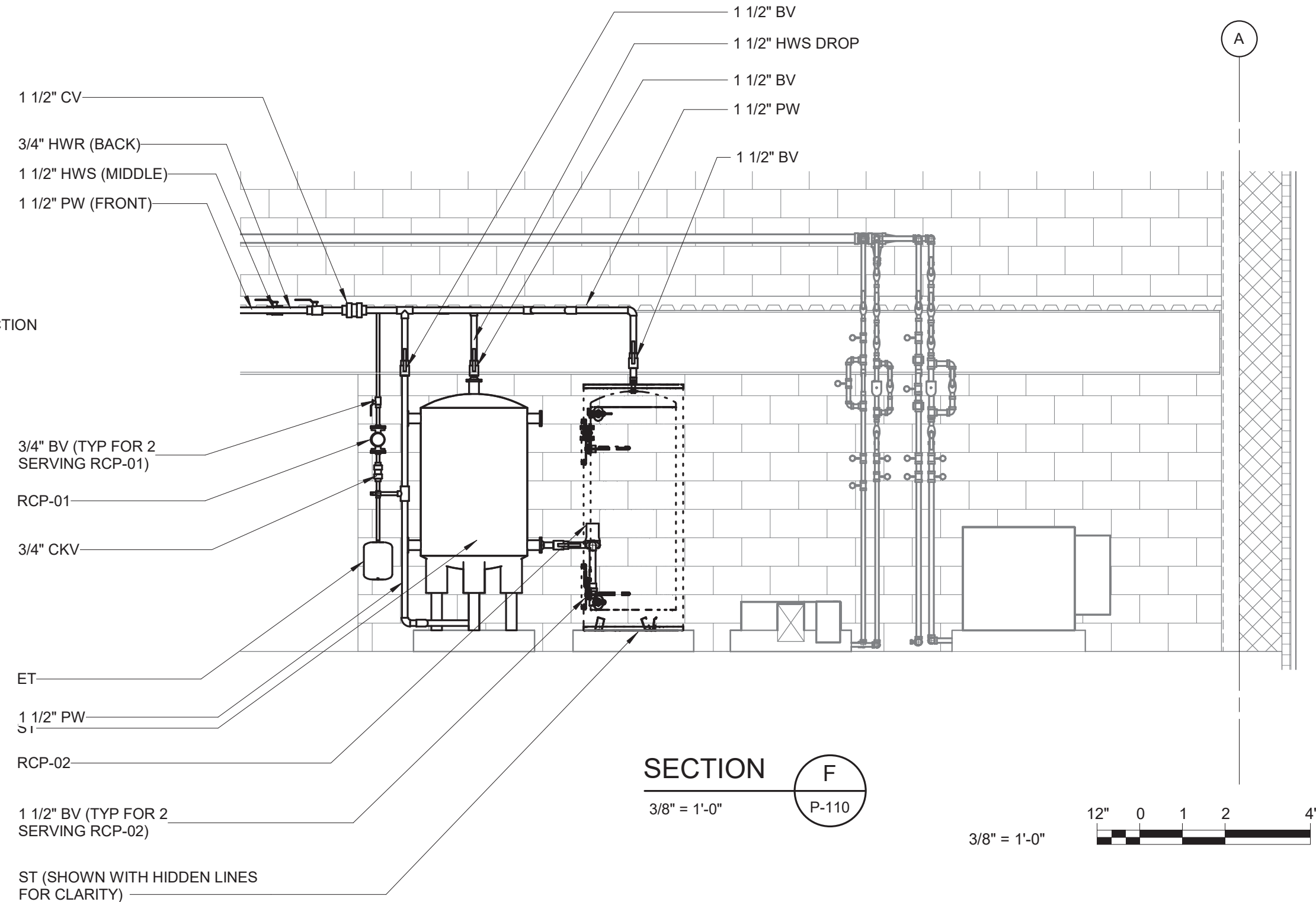
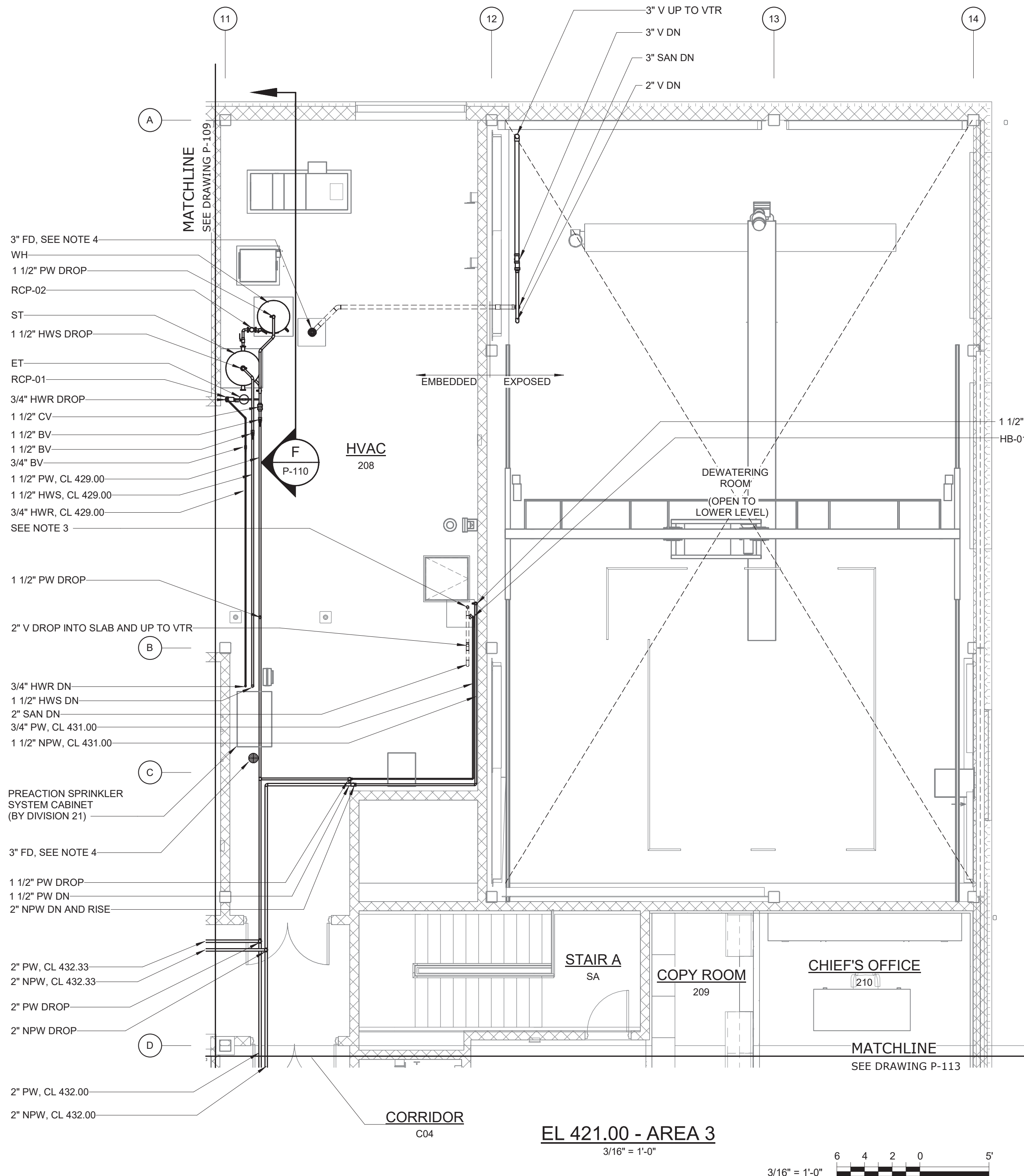








- NOTES:
1. THE WORK OF OTHER DISCIPLINES IS HIDDEN OR HALF-TONE FOR CLARITY. REFER TO CONTRACT DRAWINGS OF OTHER DISCIPLINES FOR ADDITIONAL WORK BY OTHERS.
  2. DRAINAGE PIPING IN HVAC ROOMS (208 AND 215) SHALL BE EMBEDDED IN SLAB.
  3. SEE STRUCTURAL DETAIL S-05-0806. PROVIDE EMBEDDED 2" P-TRAP.
  4. COORDINATE FLOOR DRAIN LOCATION WITH ASSOCIATED EQUIPMENT DRAIN.



WARNING  
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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	M. GIORDANO
DRAWN BY:	J. LURIE
CHECKED BY:	R. VAN DYKE
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

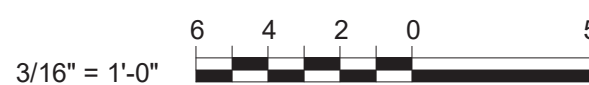
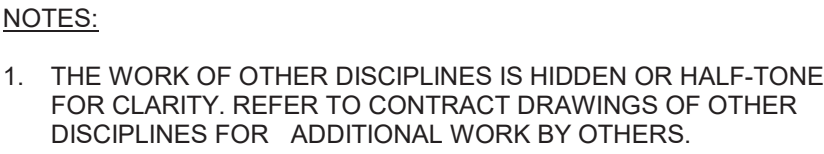
FILTRATION PLANT  
PLUMBING  
EL. 421.00 - AREA 3


DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	P-110








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

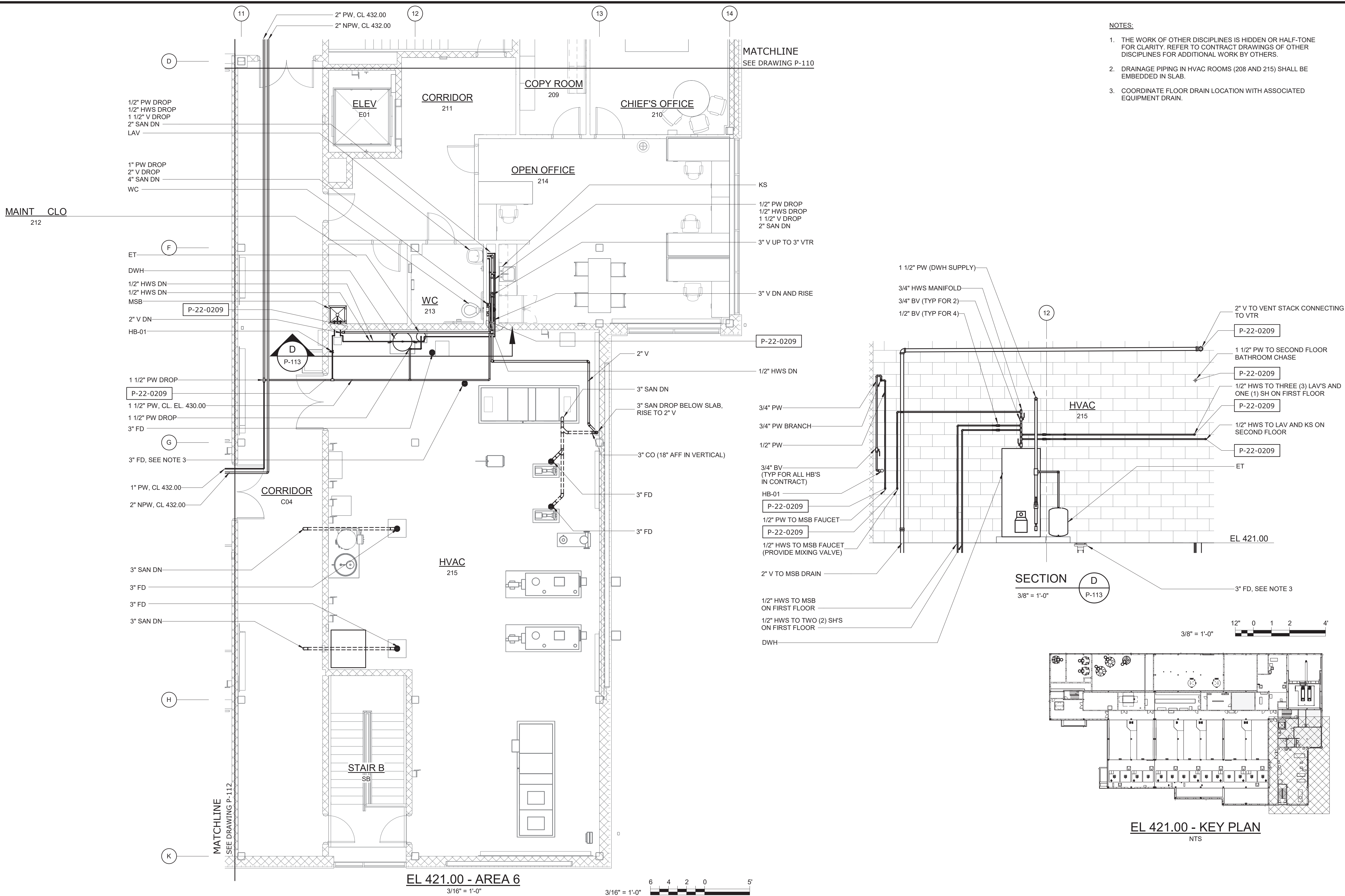
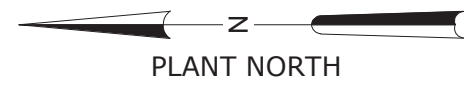
PROJECT ENGINEER:	R. FROST
DESIGNED BY:	M. GIORDANO
DRAWN BY:	J. LURIE
CHECKED BY:	R. VAN DYKE
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">0      1/2"      1</div>  </div>

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:	P-112





- NOTES:
1. THE WORK OF OTHER DISCIPLINES IS HIDDEN OR HALF-TONE FOR CLARITY. REFER TO CONTRACT DRAWINGS OF OTHER DISCIPLINES FOR ADDITIONAL WORK BY OTHERS.
  2. DRAINAGE PIPING IN HVAC ROOMS (208 AND 215) SHALL BE EMBEDDED IN SLAB.
  3. COORDINATE FLOOR DRAIN LOCATION WITH ASSOCIATED EQUIPMENT DRAIN.

EL 421.00 - AREA 6  
3/16" = 1'-0"

SECTION D  
3/8" = 1'-0"  
P-113

EL 421.00 - KEY PLAN  
NTS

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:	M. GIORDANO
DRAWN BY:	J. LURIE
CHECKED BY:	R. VAN DYKE
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

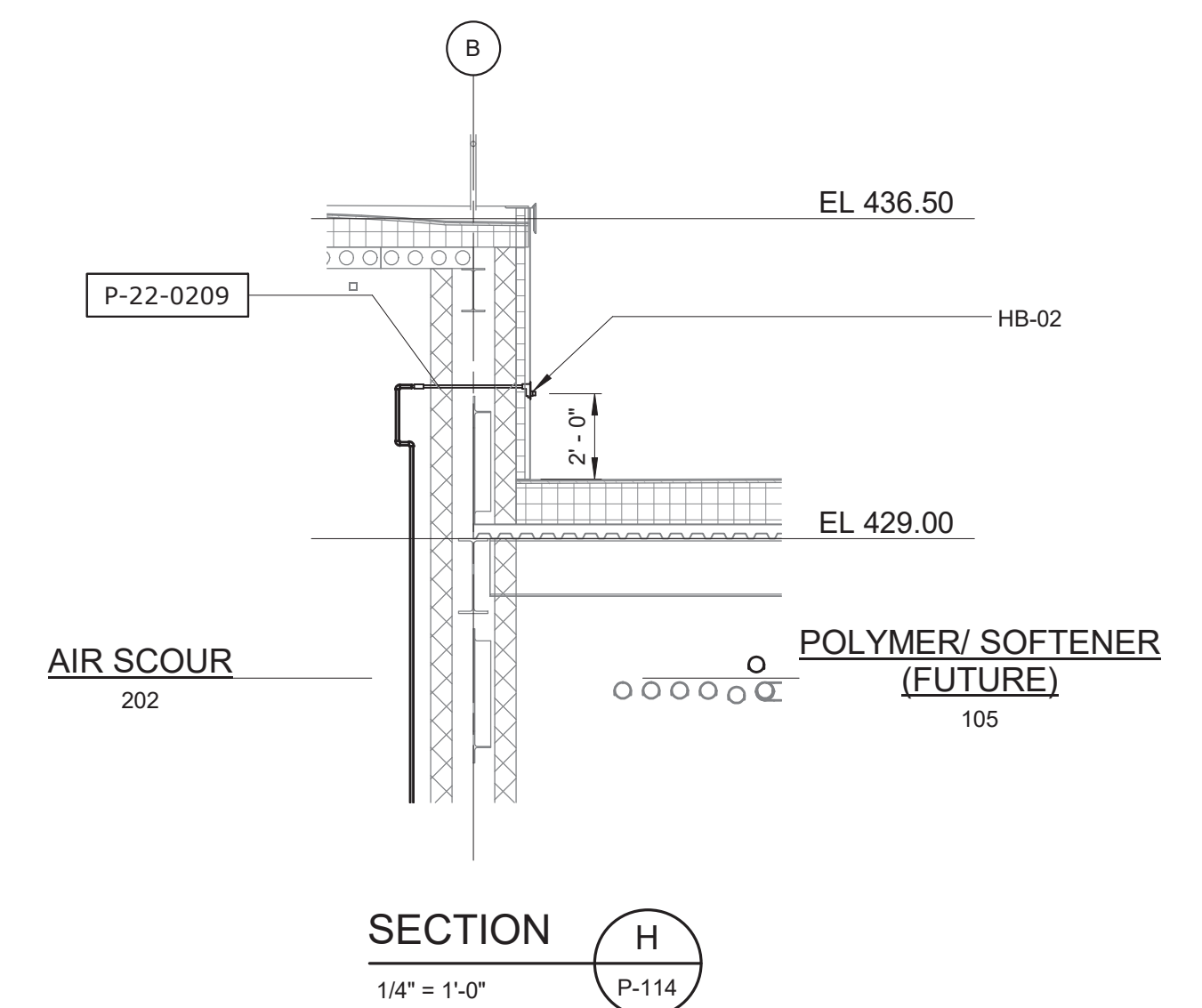
FILTRATION PLANT  
PLUMBING  
EL. 421.00 - AREA 6

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









DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	P-200



Autodesk Docs\\00388-000\_Rye\_Lake\_Filtration\\00388-000\\WFP-P-14  
2/7/2025 2:29:28 PM

PLUMBING FIXTURE SCHEDULE																	
TAG	LOCATION	FIXTURE	MANUFACTURER		GALLONS PER FLUSH/MIN	FAUCET/FLUSH VALVE MANUFACTURER	FAUCET/VALVE MODEL	PW (IN)	HW (IN)	TW (IN)	DRAIN (IN)	VENT (IN)	ELECTRICAL				NOTES
			MAKE	MODEL									VOLT	PHASE	HZ	AMP	
BFP-01	FIRE SPRINKLER RISER ROOM (110)	REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER	WATTS	LF909 LARGE	-	-	-	4	-	-	-	-	-	-	-	-	1, 9, 12, 14, 18, 19
BFP-02	FIRE SPRINKLER RISER ROOM (110)	REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER	WATTS	LF909 SMALL	-	-	-	2	-	-	-	-	-	-	-	-	1, 9, 12, 14, 18, 19
BFP-03	FIRE SPRINKLER RISER ROOM (110)	DOUBLE CHECK DETECTOR BACKFLOW PREVENTER	WATTS	LF856	-	-	-	6	-	-	-	-	-	-	-	-	1, 10, 12, 13
CODP	SEE PLANS	EXTRA HEAVY DUTY FLOOR CLEANOUT	ZURN	ZS1400-AR	-	-	-	-	-	-	SEE PLANS	-	-	-	-	-	2, 15, 16
ESE-01	CHEMICAL AREAS	EMERGENCY SHOWER/EYEWASH	BRADLEY CORPORATION	S19314DCBF	22	-	-	-	-	1-1/4	-	-	115	1	60	3.0	5, 30, 17
ESE-02	FILL STATIONS	FROSTPROOF EMERGENCY SHOWER/EYEWASH	BRADLEY CORPORATION	S19-310TW18	22	-	-	-	-	1-1/4	-	-	115	1	60	3.0	5, 30
ET	HVAC ROOM (208)	EXPANSION TANK	AMTROL	THERM X TROL	-	-	-	1	-	-	-	-	-	-	-	-	1, 18
FD	REFER TO DRAWINGS	FLOOR DRAIN	ZURN	Z508-AR	-	-	-	-	-	-	SEE PLANS	-	-	-	-	-	2, 15, 16, 29
DF	LOBBY (112)	DRINKING FOUNTAIN	ELKAY	EMABFT	0.75	-	-	3/8	-	-	1-1/4	1-1/4	115	1	60	-	1, 18, 19
HB-01	REFER TO DRAWINGS	HOSE BIBB	ZURN	Z1341XL	5	-	-	3/4	-	-	-	-	-	-	-	-	1, 4, 19, 20
HB-02	REFER TO DRAWINGS	FROSTPROOF HOSE BIBB	ZURN	Z1321XL	5	-	-	3/4	-	-	-	-	-	-	-	-	1, 4, 19, 21
HR	DEWATERING ROOM (109)	HOSE REEL	STEEL EAGLE	K01-0105-1-SS	5	-	-	1/2	-	-	-	-	-	-	-	-	1, 23
KS	OPEN OFFICE (214)	KITCHEN SINK	JUST	SL-1921-A-GR	1.75	CHICAGO	786-CP	1/2	1/2	-	1-1/2	1-1/4	-	-	-	-	1, 18, 19, 25
LAV	REFER TO DRAWINGS	WALL HUNG LAVATORY	AMERICAN STANDARD	MURRO 0954004EC.020	0.4	AMERICAN STANDARD	7755.3.5	1/2	1/2	-	1-1/4	1-1/4	-	-	-	-	1, 18, 19, 24, 25, 31
MSB	MAINT CLO (114) & MAINT. CLO (212)	MOP SINK BASIN	WESTERN WILLIAMS	SS-2424	3	T & S BRASS	B-0665-BSTR	1/2	1/2	-	3	1-1/2	-	-	-	-	1, 18, 19, 22, 25
RD	ROOF	ROOF DRAIN	ZURN	Z-121-AR-C	-	-	-	-	-	-	4	-	-	-	-	-	11
SH	MENS LOCKER ROOM (118) AND WOMENS LOCKER ROOM (116)	SHOWER	STERN WILLIAMS	WDA-3410 TERRAZO 60 X 30 ADA SHOWER PAN	2.5	SYMMONS	S5998	1/2	1/2	-	2	2	-	-	-	-	1, 24, 26
SS-01	PROCESS ANALYSIS ROOM (205)	SAMPLING SINK	ELKAY	LRAD291855	3	ELKAY	LK535GN05L2	1/2	-	-	1-1/2	-	-	-	-	-	1, 18, 19, 22, 24, 25
SS-02	PROCESS ANALYSIS ROOM (205)	SERVICE SINK	ELKAY	LRAD291855	3	ELKAY	LK406GN08L2	1/2	1/2	-	1-1/2	1-1/4	-	-	-	-	1, 18, 19, 22, 24, 25
TD	REFER TO DRAWINGS	TRENCH DRAIN	ABT DRAINS	POLYDRAIN	-	-	-	-	-	-	4	2	-	-	-	-	2
TMV	REFER TO DRAWINGS	THERMOSTATIC MIXING VALVE	LAWLER	911-84701	-	-	-	1-1/4	1-1/4	1-1/4	-	-	-	-	-	-	1, 7, 27
UR	MENS BATHROOM (117)	FLUSH VALVE URINAL	KOHLER	K-4991-ET	0.125	KOHLER	K-7528	3/4	-	-	2	1-1/2	-	-	-	-	1, 24, 28
WC	REFER TO DRAWINGS	FLUSH VALVE WATER CLOSET	KOHLER	K-4325-0	1.28	KOHLER	K-10956-SV	1	-	-	4	2	-	-	-	-	1, 6, 24

NOTES:

1. REFER TO SPECIFICATION 22 40 00 FOR CONSTRUCTION AND ACCESSORY DETAILS.
2. REFER TO SPECIFICATION 22 13 16 FOR CONSTRUCTION AND ACCESSORY DETAILS.
3. REFER TO SPECIFICATION 22 14 13 FOR CONSTRUCTION AND ACCESSORY DETAILS.
4. REFER TO SPECIFICATION 22 11 19 FOR CONSTRUCTION AND ACCESSORY DETAILS.
5. REFER TO SPECIFICATION 22 45 00 FOR CONSTRUCTION AND ACCESSORY DETAILS.
6. PROVIDE WATER CLOSET WITH WALL CARRIER AND SOLID PLASTIC SEAT.
7. UNIT TO INCLUDE ROUGH BRONZE FINISH, INLET CHECK VALVES, DIAL THERMOMETERS, LOCKABLE BALL VALVES, 70-90 DEGREE SET POINT.
8. PROVIDE ZURN Z41B-V (BACKWATER VALVE) WHERE SPECIFIED ON DRAWINGS.
9. PROVIDE WITH SENTRYPLUS ALERT UNIVERSAL UPGRADE KIT INCLUDING FLOOD SENSOR AND CONTROL BOX (ONE SHARED SENSOR FOR BOTH 2" RPZS).
10. INSTALL TWO (2) TAMPER SWITCH MONITORS ON INTEGRAL OS & Y VALVES.
11. THREADED OUTLET, FACTORY-APPLIED ACID-RESISTANT EPOXY COATED FINISH, MEMBRANE CLAMP AND UNDERDECK CLAMP.
12. FIXTURE SHALL BE UL LISTED AND APPROVED BY THE FOUNDATION FOR CROSS-CONNECITON CONTROL AND HYDRAULIC REASEARCH OF SOUTHERN CALIFORNIA.
13. FIXTURE SHALL BE FM APPROVED AND MEET THE REQUIRMENTS OF ASSE 1048 AND AWWA C510.
14. FIXTURE SHALL MEET THE REQUIRMENTS OF ASSE 1013 AND AWWA C511-92.
15. FIXTURE SHALL INCLUDE AN ANSI A112.21.1M H-20 EXTRA-HEAVY DUTY STAINLESS STEEL OR POLISHED NICKEL TOP AND ACID-RESISTANT EPOXY-COATED CAST IRON BODY.
16. INSIDE-CAULK CONNECTION FOR XH CAST IRON PIPE, NH CONNECTION FOR NH CAST IRON PIPE, NEO-LOC (OR EQUIVALENT) FOR PVC PIPE.
17. FIXTURE SHALL BE BARRIER-FREE WITH DUST COVER.
18. FIXTURE OR FAUCET SHALL BE CERTIFIED TO NSF-61.
19. FIXTURE SHALL BE CERTIFIED TO NSF-372 OR SHALL BE MANUFACTURED IN ACCORDANCE WITH THE FEDERAL SAFE WATER DRINKING ACT SECTION 1417.
20. FIXTURE SHALL INCLUDE ASSE 1011 VACUUM BREAKER.
21. FIXTURE SHALL INCLUDE ASSE 1019 VACUUM BREAKER.
22. FIXTURE SHALL INCLUDE ASSE 1001 VACUUM BREAKER.
23. FIXTURE SHALL BE ALL STAINLESS STEEL CONSTRUCTION.
24. FIXTURE SHALL MEET THE AMERICANS WITH DISABILITIES ACT GUIDELINES AND ANSI A117.1.
25. PROVIDE ASSE 1070 APPROVED POINT-OF-USE MIXING VALVE.
26. PROVIDE ASSE 1016 APPROVED SHOWER MIXING VALVE.
27. MIXING VALVE SHALL BE ASSE 1071 APPROVED.
28. PROVIDE URINAL WITH WALL CARRIER.
29. PROVIDE FLOOR DRAIN OUTLETS WITH BARRIER TYPE TRAP SEAL MEETING THE REQUIREMENTS OF ASSE 1072. ZURN Z1072 OR EQUAL.
30. PROVIDE WITH S19-324 NEMA 4X SIGNAL SYSTEM WITH STAINLESS STEEL FLOW SWITCH AND 12 FT CABLE.
31. PROVIDE LAVATORY WITH WALL CARRIER, ANGLE STOPS, FLEX TUBE RISERS, STRAINER, AND P TRAP.

PLUMBING PUMP SCHEDULE																	
TAG	LOCATION	MANUFACTURER		TYPE	CONTROLS	CAPACITY (GPM)	HEAD (FT)	SHUTOFF HEAD (FT)	SUCTION SIZE (IN)	DISCHARGE SIZE (IN)	IMPELLER TYPE	MOTOR		POWER			NOTES
		MAKE	MODEL									HP	RPM	VOLT	PH	HZ	
SP-01	PIPE GALLERY (007)	LIBERTY PUMPS	LGS203M	SUMP PUMP	DUPLEX PANEL, ANALOG FLOAT	50	35	110	-	1 1/4"	-	2	3450	208	3	60	1, 3, 6
SP-02	PIPE GALLERY (007)	LIBERTY PUMPS	LGS203M	SUMP PUMP	DUPLEX PANEL, ANALOG FLOAT	50	35	110	-	1 1/4"	-	2	3450	208	3	60	1, 4, 6
SP-03	ELEVATOR (E01)	LIBERTY PUMPS	FL63M-5	SUMP PUMP	SIMPLEX PANEL, ANALOG FLOAT	50	45	-	-	2"	VORTEX	3/5	3450	208	3	60	1, 6, 7
RCP-01	HVAC ROOM (203)	XYLEM	ECOCIRC XLN20-35	RECIRCULATION PUMP	INTEGRAL DIGITAL LOGIC CONTROLLER, EXTERNAL TEMPERATURE SENSOR	3.3	10.6	-	1 1/2"	1 1/2"	-	1/12	VAR	115	1	60	2, 5, 6
RCP-02	HVAC ROOM (208)	XYLEM	ECOCIRC XLN20-35	RECIRCULATION PUMP	INTEGRAL DIGITAL LOGIC CONTROLLER, EXTERNAL TEMPERATURE SENSOR	3.3	10.6	-	1 1/2"	1 1/2"	-	1/12	VAR	115	1	60	2, 5, 6

NOTES:

1. REFER TO SPECIFICATION 22 33 00 FOR CONSTRUCTION AND ACCESSORY DETAILS.
2. REFER TO SPECIFICATION 22 11 23 FOR CONSTRUCTION AND ACCESSORY DETAILS.
3. DUTY PUMP
4. STANDBY PUMP
5. PUMP SHALL HAVE STAINELSS STEEL HOUSRING, AND SHALL BE CERTIFIED TO NSF-372.
6. PUMP SHALL BE UL LISTED.
7. PUMP SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF ASME A17.1-2022.

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.

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PIPING SYSTEM SCHEDULE										
SYSTEM	SYSTEM TYPE	LOCATION	PIPE	FITTING	JOINT	COATING	INSULATION	JACKET	SPECIFICATION REFERENCE	NOTES
CLW	CLEARWATER DRAIN	ABOVE GROUND	CAST IRON - NH - ASTM A888 AND CISPI 301	CAST IRON - NH - ASTM A888 AND CISPI 301	HUBLESS COUPLING - CISPI 301	OIL-BASED ENAMEL	-	-	22 13 16	-
CLW	CLEARWATER DRAIN	BELOW GROUND	CAST IRON - XH - ASTM A74	CAST IRON - XH - ASTM A74	POURED LEAD AND OAKUM	OIL-BASED ENAMEL	-	-	22 13 16	-
FPW	FIRE PROTECTION	ABOVE GROUND	CARBON STEEL - ASTM A795 - SCH 40	DUCTILE IRON - ASTM A536	GROOVED COUPLING - DUCTILE IRON - ASTM A536	FUSION-BONDED EPOXY	-	-	21 13 13	1, 2
FPW	FIRE PROTECTION	BELOW GROUND	DUCTILE IRON - AWWA C151	DUCTILE IRON - AWWA C110	FLANGE - ASME B16.1 - CLASS 125	FUSION-BONDED EPOXY	-	-	21 13 13	1
FPW	FIRE PROTECTION	CHEMICAL AREAS	AUSTENITIC STAINLESS STEEL - ASTM A312 - GRADE 304, 304L, 316 OR 316L - SCH 40	WROT AUSTENITIC STAINLESS STEEL - ASTM A403 - GRADE 304, 304L, 316 OR 316L	THREADED - ASME B1.20.1	-	-	-	21 13 13	1
FUD	SUBSOIL DRAIN	ALL	PVC PERFORATED SEWER PIPE - ASTM D2729	PVC - ASTM D2665	TWO-PART SOLVENT CEMENT - ASTM F656 AND D2855	-	-	-	22 13 16	-
HWR	HOT WATER RETURN	ALL	COPPER TUBE - TYPE L - ASTM B88	WROT COPPER - ASME B16.22	SOLDER	FUSION-BONDED EPOXY	CELLULAR GLASS - ASTM C 552, TYPE II, CLASS 2	PVC - ASTM C 921, TYPE I	22 11 13	3, 4
HWS	HOT WATER SUPPLY	CHEMICAL AREAS	CPVC - ASTM F441 - SCH 40	CPVC - ASTM F438 - SCH 40	TWO-PART SOLVENT CEMENT - ASTM F493 AND D2846	-	CELLULAR GLASS - ASTM C 552, TYPE II, CLASS 2	PVC -	22 11 13	3, 4
HWS	HOT WATER SUPPLY	NON-CHEMICAL AREAS	COPPER TUBE - TYPE L - ASTM B88	WROT COPPER - ASME B16.22	SOLDER	FUSION-BONDED EPOXY	CELLULAR GLASS - ASTM C 552, TYPE II, CLASS 2	PVC - ASTM C 921, TYPE I	22 11 13	3, 4
NPW	NON-POTABLE WATER	CHEMICAL AREAS	CPVC - ASTM F441 - SCH 40	CPVC - ASTM F438 - SCH 40	TWO-PART SOLVENT CEMENT - ASTM F493 AND D2846	-	CELLULAR GLASS - ASTM C 552, TYPE II, CLASS 2	PVC - ASTM C 921, TYPE I	22 11 13	3, 4
NPW	NON-POTABLE WATER	NON-CHEMICAL AREAS	COPPER TUBE - TYPE L - ASTM B88	WROT COPPER - ASME B16.22	SOLDER	FUSION-BONDED EPOXY	CELLULAR GLASS - ASTM C 552, TYPE II, CLASS 2	PVC - ASTM C 921, TYPE I	22 11 13	3, 4
NPW HW	NON-POTABLE HOT WATER	ALL	COPPER TUBE - TYPE L - ASTM B88	WROT COPPER - ASME B16.22	SOLDER	FUSION-BONDED EPOXY	CELLULAR GLASS - ASTM C 552, TYPE II, CLASS 2	PVC - ASTM C 921, TYPE I	22 11 13	3, 4
PW	POTABLE WATER	ABOVE GROUND (NON-CHEMICAL AREAS)	COPPER TUBE - TYPE L - ASTM B88	WROT COPPER - ASME B16.22	SOLDER	FUSION-BONDED EPOXY	CELLULAR GLASS - ASTM C 552, TYPE II, CLASS 2	PVC - ASTM C 921, TYPE I	22 11 13	3, 4
PW	POTABLE WATER	BELOW GROUND	COPPER TUBE - TYPE K - ASTM B88	WROT COPPER - ASME B16.22	SOLDER	FUSION-BONDED EPOXY	CELLULAR GLASS - ASTM C 552, TYPE II, CLASS 2	PVC - ASTM C 921, TYPE I	22 11 13	3, 4
PW	POTABLE WATER	CHEMICAL AREAS	CPVC - ASTM F441 - SCH 40	CPVC - ASTM F438 - SCH 40	TWO-PART SOLVENT CEMENT - ASTM F493 AND D2846	-	CELLULAR GLASS - ASTM C 552, TYPE II, CLASS 2	PVC - ASTM C 921, TYPE I	22 11 13	3, 4
RWL	STORM DRAINAGE	ABOVE GROUND	PVC - ASTM D2665	PVC - ASTM D2665	TWO-PART SOLVENT CEMENT - ASTM F656 AND D2855	-	FIBERGLASS - ASTM C1393	PVC - ASTM C 921, TYPE I	22 14 13	4, 5
RWL	STORM DRAINAGE	BELOW GROUND AND IN PIPE GALLERY	CAST IRON - XH - ASTM A74	CAST IRON - XH - ASTM A74	POURED LEAD AND OAKUM	OIL-BASED ENAMEL	-	-	22 14 13	-
SAN	SANITARY DRAINAGE	ABOVE GROUND	PVC - ASTM D2665	PVC - ASTM D2665	TWO-PART SOLVENT CEMENT - ASTM F656 AND D2855	-	-	-	22 13 16	-
SAN	SANITARY DRAINAGE	BELOW GROUND AND IN PIPE GALLERY	CAST IRON - XH - ASTM A74	CAST IRON - XH - ASTM A74	POURED LEAD AND OAKUM	OIL-BASED ENAMEL	-	-	22 13 16	-
SAN	SANITARY DRAINAGE	EMBEDDED IN SLAB	CAST IRON - NH - ASTM A888 AND CISPI 301	CAST IRON - NH - ASTM A888 AND CISPI 301	HUBLESS COUPLING - CISPI 301	-	-	-	22 13 16	6
SANP	SUMP PUMP DISCHARGE	ALL	PVC PRESSURE PIPE - ASTM D1784 - SCH 80	PVC PRESSURE FITTINGS - ASTM D2467 - SCH 80	TWO-PART SOLVENT CEMENT - ASTM F656 AND D2855	-	-	-	22 11 13	-
TW	TEPID WATER	ALL	CPVC - ASTM F441 - SCH 40	CPVC - ASTM F438 - SCH 40	TWO-PART SOLVENT CEMENT - ASTM F493 AND D2846	-	-	-	22 11 13	-
V	SANITARY VENT	ABOVE GROUND	PVC - ASTM D2665	PVC - ASTM D2665	TWO-PART SOLVENT CEMENT - ASTM F656 AND D2855	-	-	-	22 13 16	-
V	SANITARY VENT	BELOW GROUND AND IN PIPE GALLERY	CAST IRON - XH - ASTM A74	CAST IRON - XH - ASTM A74	POURED LEAD AND OAKUM	OIL-BASED ENAMEL	-	-	22 13 16	-

NOTES:  
1. PIPING, FITTINGS AND JOINTS SHALL BE UL LISTED AND FM APPROVED FOR USE AS FIRE SPRINKLER PIPING. SYSTEM SHALL CONFORM TO NFPA 13 AND NFPA 24.  
2. HOT-DIPPED GALVANIZED CONFORMING TO ASTM A123.  
3. PIPING, FITTINGS, JOINTS AND BRAZE MATERIALS SHALL BE CERTIFIED TO NSF 61 AND ANNEX G.  
4. REFER TO SPECIFICATION 22 07 19 FOR INSULATION AND JACKET REQUIREMENTS.  
5. INSULATE ALL HORIZONTAL PIPES.  
6. COUPLINGS SHALL BE HEAVY DUTY (CHARLOTTE PIPE PART NO SDC 4 OR EQUIVALENT), AND SHALL BE EXPLICITLY SPECIFIED BY THE MANUFACTURER AS SUITABLE FOR CONCRETE-ENCASEMENT. WRAP ALL COUPLINGS IN POLYETHYLENE SHEET MIN 3' BEYOND COUPLING EDGES. WRAP SHALL BE VIRGIN POLYETHYLENE CONFORMING TO THE REQUIREMENTS OF ASTM D WITH A MINIMUM THICKNESS OF .008" FOR LOW-DENSITY WRAP AND .004" FOR HIGH-DENSITY CROSS-LAMINATED WRAP. VISUALLY INSPECT FOR ANY RIPS OR TEARS AND REPLACE ACCORDINGLY BEFORE THE SLAB IS POURED. REFER TO THE LATEST EDITION OF THE CISPI CAST IRON SOIL PIPE AND FITTINGS HANDBOOK HANDBOOK.

WATER HEATER SCHEDULE																	
TAG	LOCATION	MANUFACTURER		TYPE	PW (IN)	HW (IN)	INPUT (KW)	DESIGN FLOW RATE (GPM)	ELEMENT (QTY)	ELEMENT (KW)	STORAGE TEMPERATURE (°F)	RECOVERY RATE @ 100 DEGREE RISE (GPH)	STORAGE (GALLONS)	POWER			NOTES
		MAKE	MODEL											VOLT	PH	HZ	
WH	HVAC ROOM (208)	HUBBELL	SEA120	ELECTRIC	1 1/2"	1 1/2"	18	25	3	6	160	74	120	460	3	60	1-4
DWH	HVAC ROOM (215)	HUBBELL	E40	ELECTRIC	3/4	3/4	4.5	5	2	4.5	160	12	40	208	3	60	1-4

NOTES:  
1. REFER TO SPECIFICATION 22 33 00 FOR CONSTRUCTION AND ACCESSORY DETAILS  
2. ALL WATER HEATERS SHALL MEET OR EXCEED STANDBY LOSS REQUIREMENTS PER US DEPT OF ENERGY AND ASHRAE 90.1-2016  
3. RATED FOR 150 PSIG WORKING PRESSURE  
4. INSTALL DIELECTRIC UNIONS AND SHUT OFF ISOLATION VALVES AT EACH WATER CONNECTION

INSTANTANEOUS WATER HEATER SCHEDULE														
TAG	LOCATION	MANUFACTURER		TYPE	PW (IN)	HW (IN)	INPUT (KW)	ΔT (°F)	FLOW (GPM)		POWER			NOTES
		MAKE	MODEL						DESIGN	TURN-ON	VOLT	PH	HZ	
IWH-01	DEWATERING ROOM (109)	EEMAX	AP054480	ELECTRIC	1-1/4	1-1/4	54	18	20	1.5	480	3	60	1
IWH-02	POLYER ROOM (107)	EEMAX	AP054480	ELECTRIC	1-1/4	1-1/4	54	18	20	1.5	480	3	60	1, 2
IWH-03	PROCESS ANALYSIS ROOM (205)	EEMAX	SPEX3208	ELECTRIC	3/8	3/8	3	41	.5	.25	208	1	60	1, 3

NOTES:  
1. REFER TO SPECIFICATION 22 33 00 FOR CONSTRUCTION AND ACCESSORY DETAILS  
2. FOR FUTURE USE. DO NOT CONNECT WATERSIDE CONNECTIONS.  
3. COORDINATE WITH ARCHITECT FOR INSTALLATION IN CASEWORK.

STORAGE TANK SCHEDULE								
TAG	LOCATION	MANUFACTURER		CAPACITY (GAL)	LINING MATERIAL	INSULATION	WEIGHT (LBS)	NOTES
		MAKE	MODEL					
ST	HVAC ROOM (208)	HUBBELL	SH120SL	120	HYDRASTONE CEMENT	2" POLYURETHANE FOAM	900	1-3

NOTES:  
1. REFER TO SPECIFICATION 22 33 00 FOR CONSTRUCTION AND ACCESSORY DETAILS  
2. MAXIMUM PRESSURE 150 PSI  
3. TANK MATERIAL SHALL BE CARBON STEEL

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.

				PROJECT ENGINEER:	R. FROST
				DESIGNED BY:	M. GIORDANO
				DRAWN BY:	J. LURIE
				CHECKED BY:	R. VAN DYKE
				IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
REV	ISSUED FOR	DATE	BY		

BID SET



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

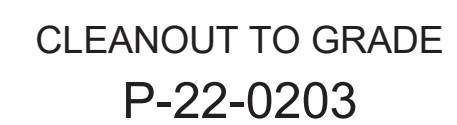
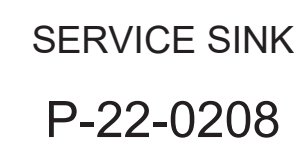
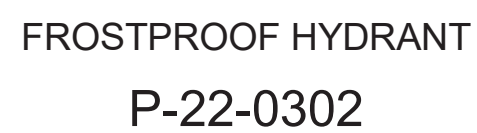
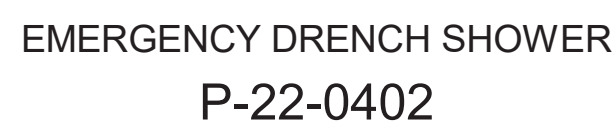
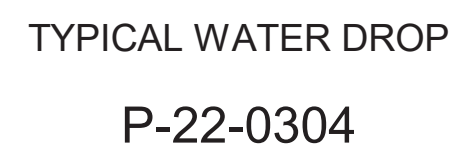
WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT  
HARRISON, NY

FILTRATION PLANT  
PLUMBING  
SCHEDULES - SHEET 2

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	P-601



BID SET

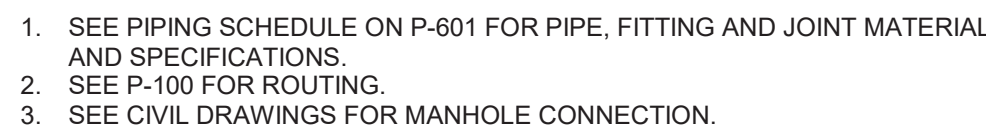
WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT  
HARRISON, NY

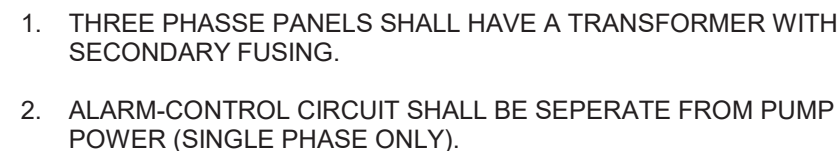
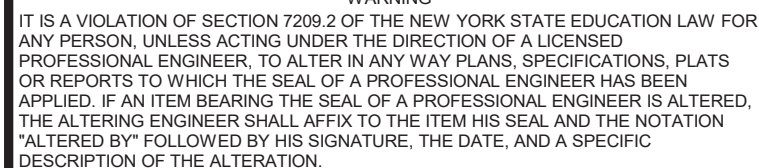
FILTRATION PLANT  
PLUMBING  
DETAILS - SHEET 1

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	P-602





DETAIL	A
NTS	P-100



1. TANK VOLUME - 22 GAL.  
ACCEPTANCE VOL. - 12 GAL.

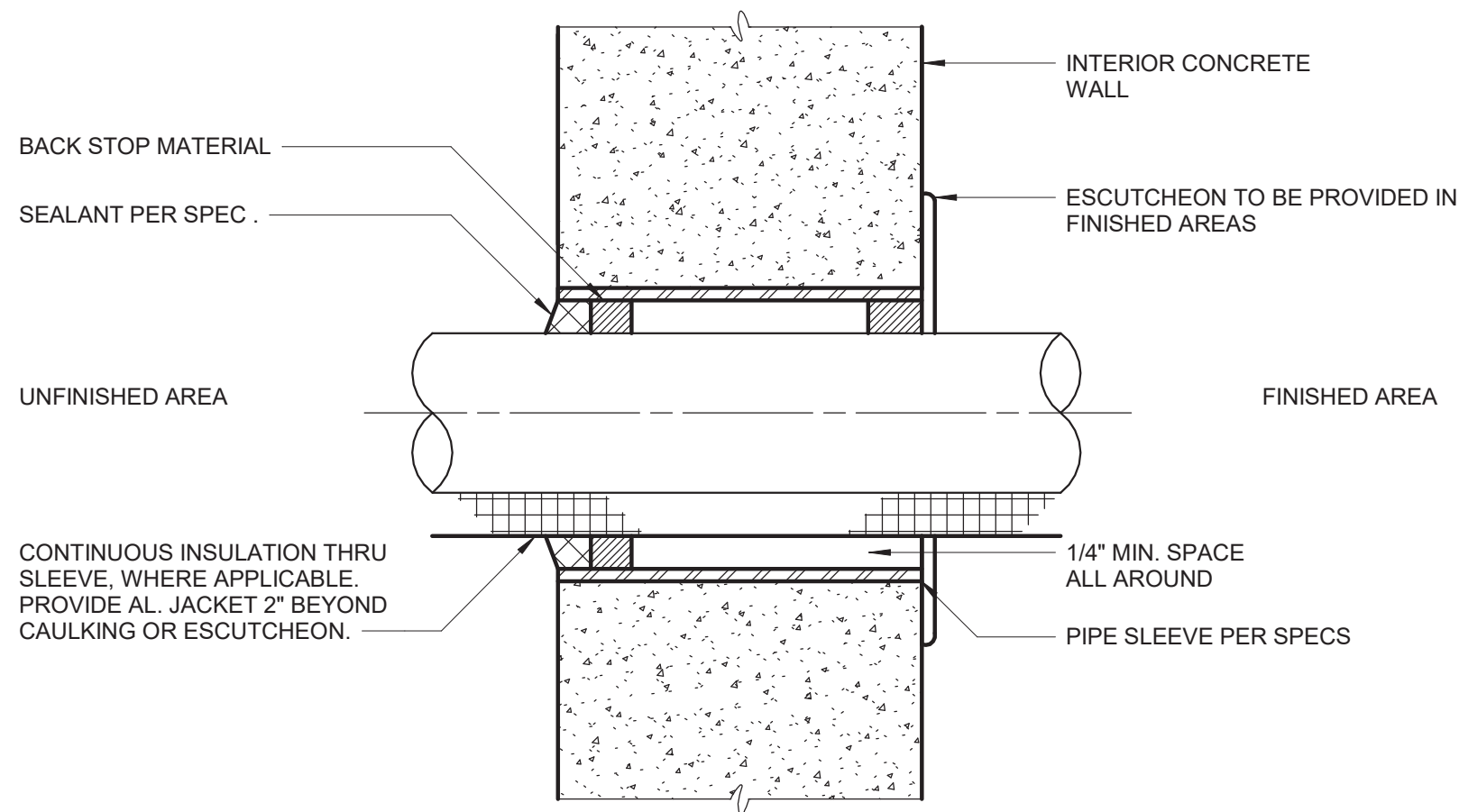
P-22-0903

BID SET

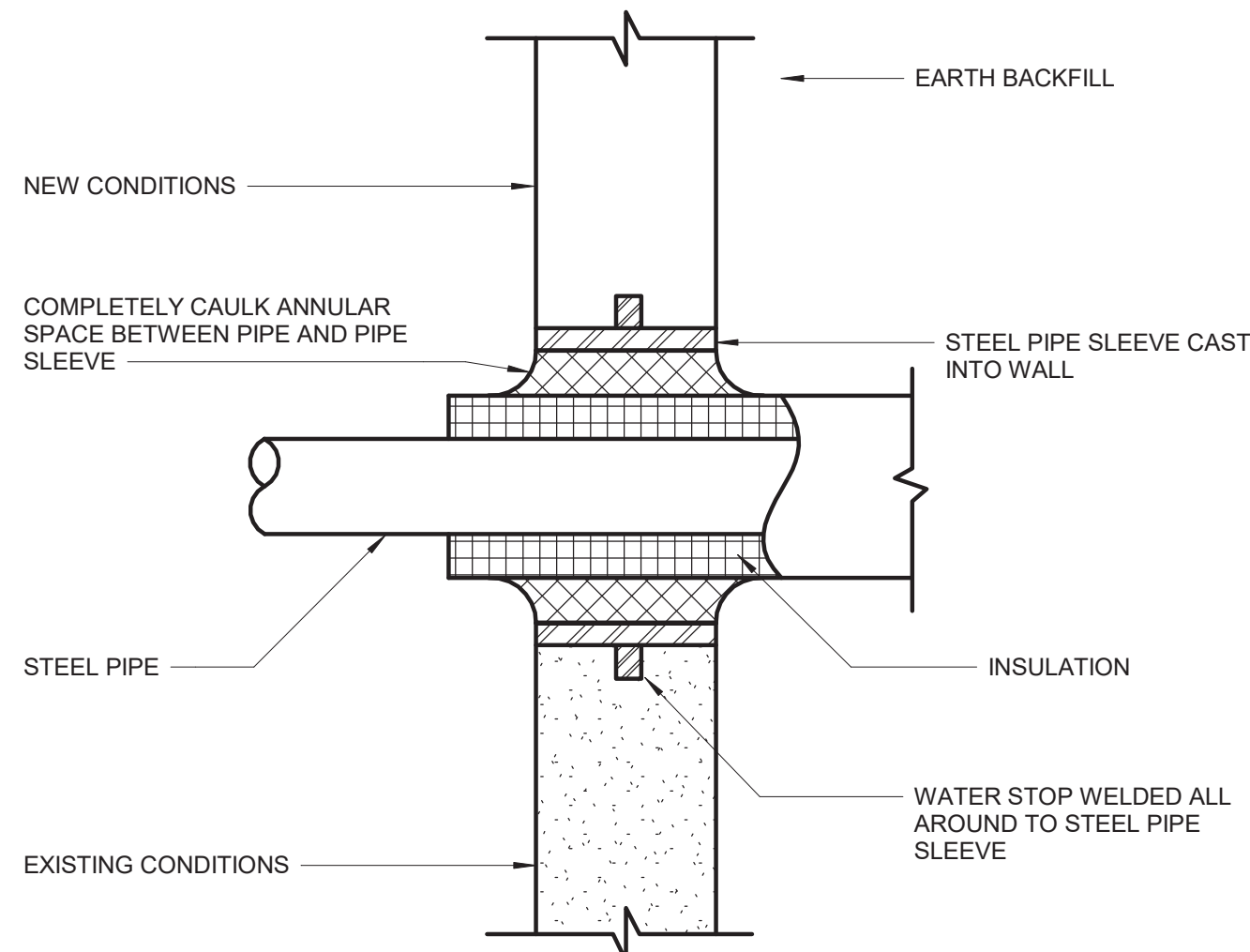
HAZEN AND SAWYER  
498 SEVENTH AVENUE, 11th FLOOR  
NEW YORK, NEW YORK 10018

# RYE LAKE WATER FILTRATION PLANT HARRISON, NY

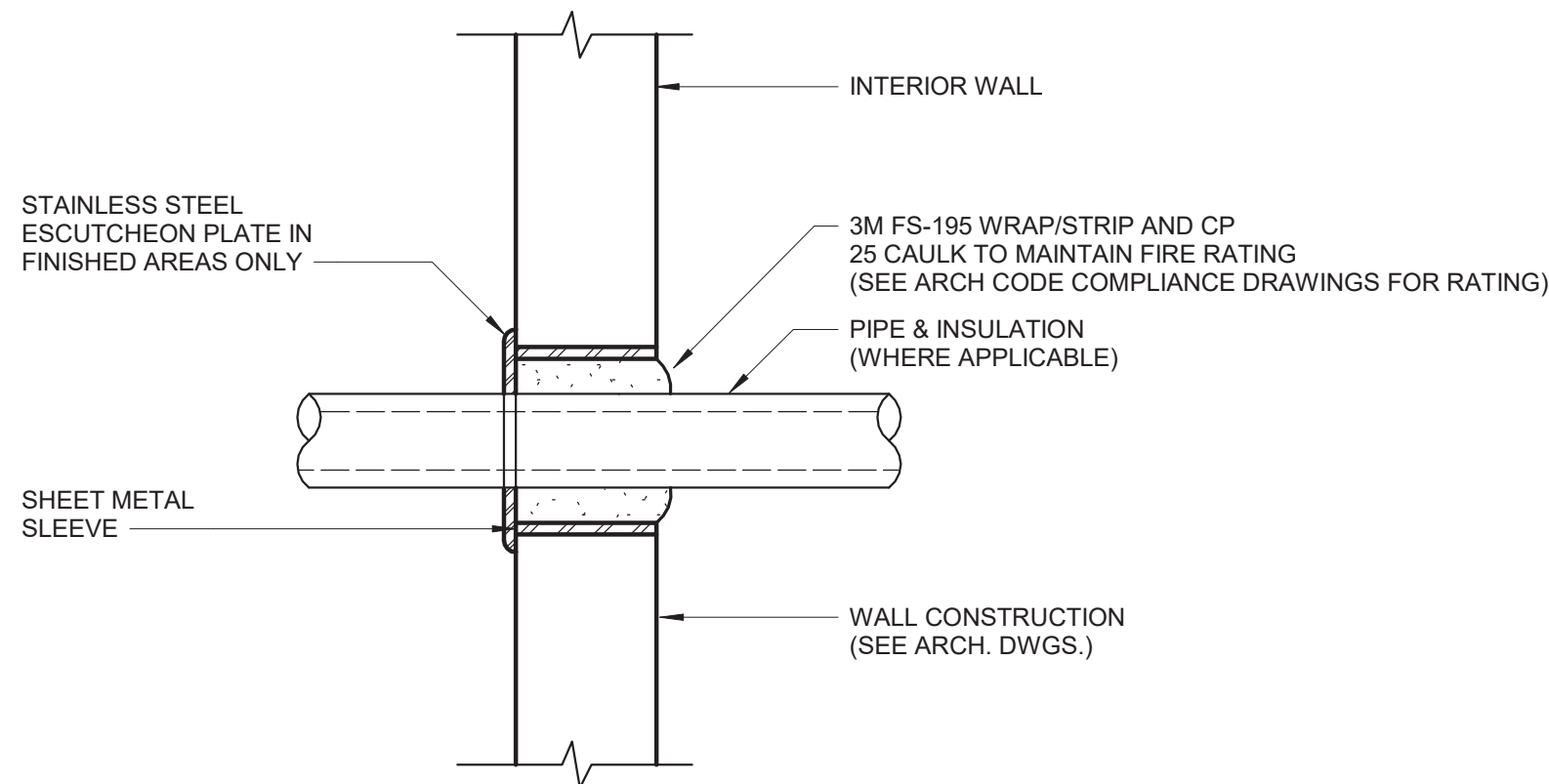
DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	P-603



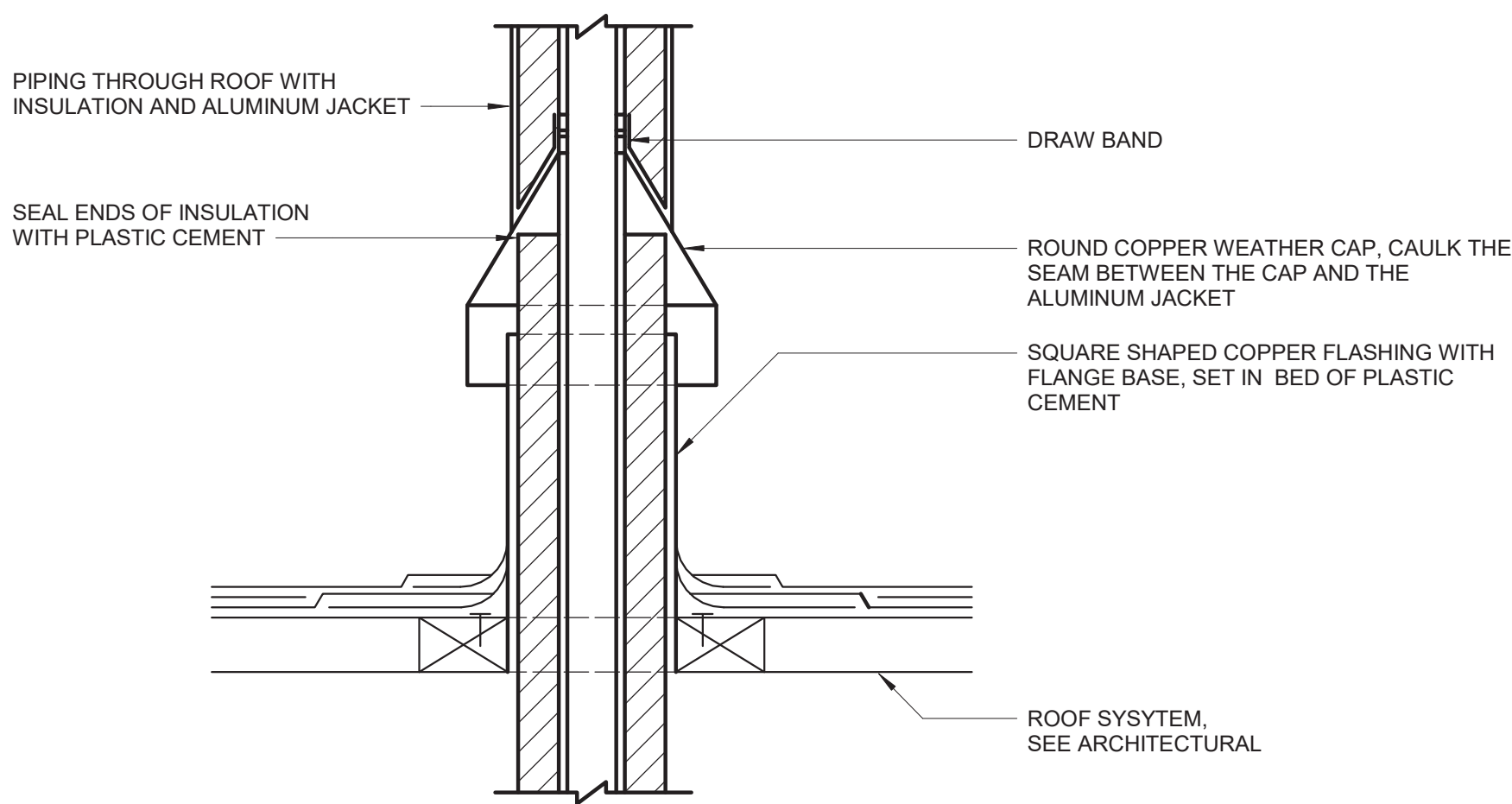
PIPE SLEEVE WALL PENETRATION  
P-22-0217



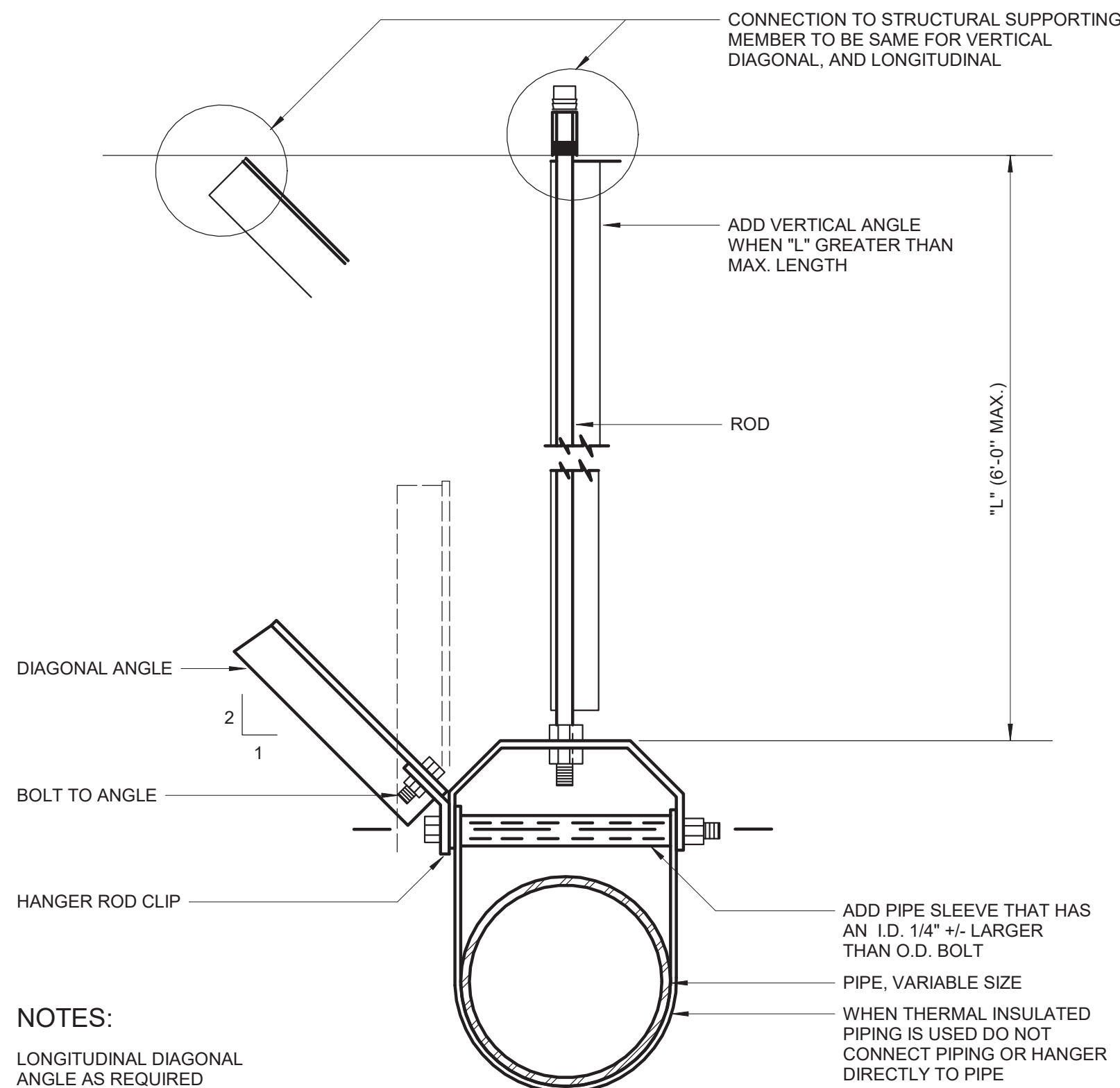
INSULATED PIPE WALL PENETRATION  
P-22-0206



RATED WALL PENETRATION  
P-22-0209



PIPE ROOF PENETRATION  
P-22-0215

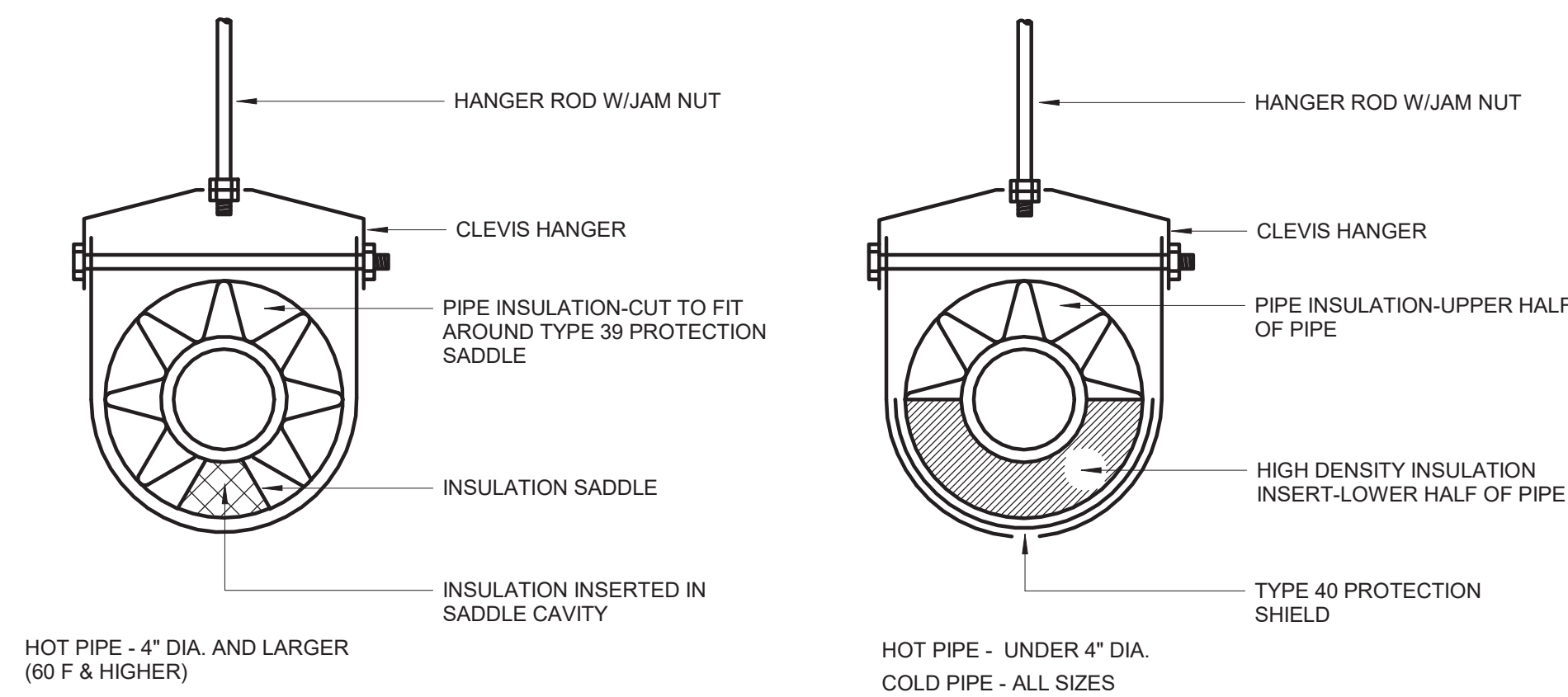


SEISMIC PIPE HANGER BRACING  
H-23-0501

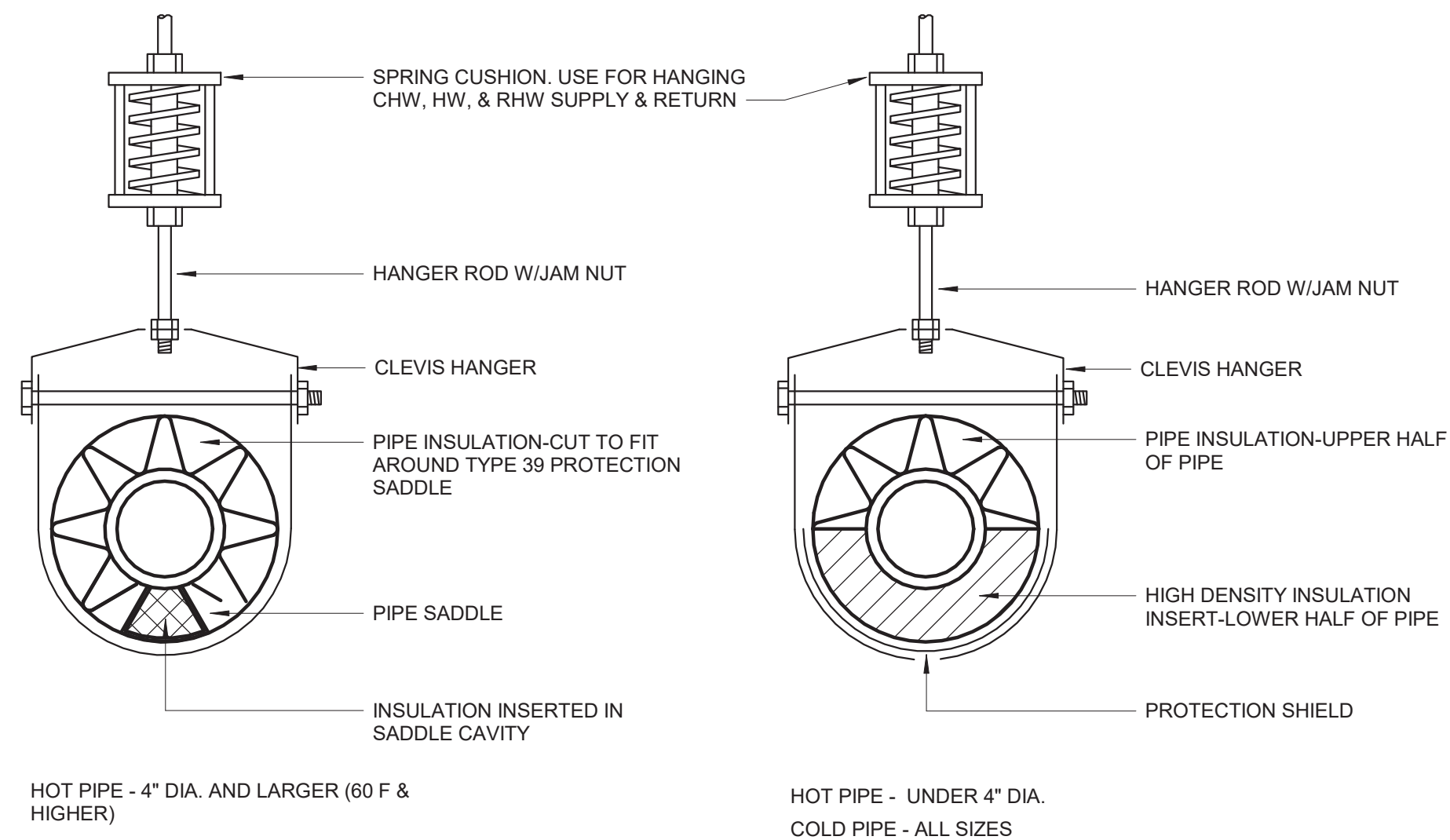
NOTES:

LONGITUDINAL DIAGONAL ANGLE AS REQUIRED (SHOWN DOTTED) (SLOPE 1 TO 1)

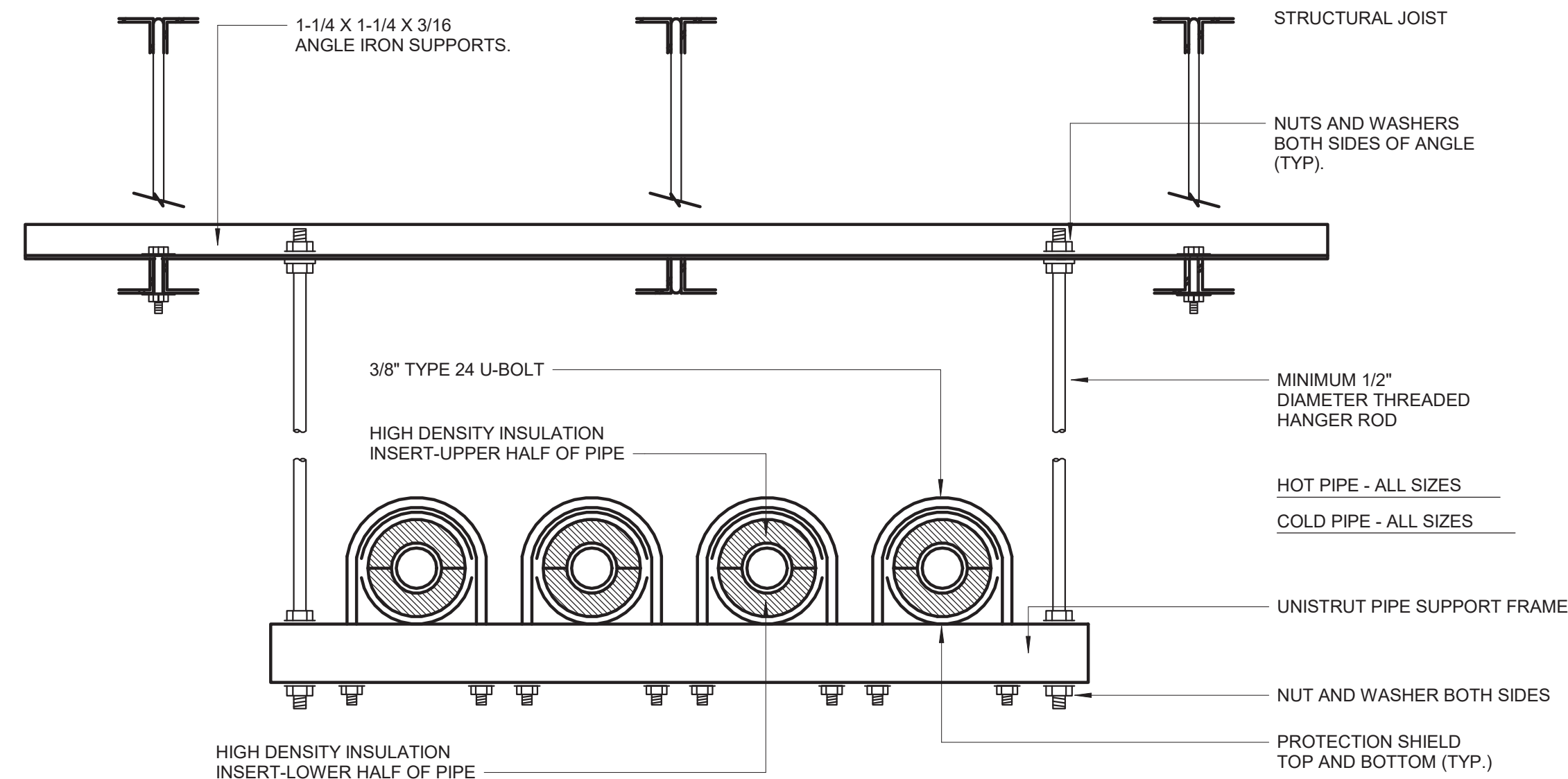
ADD PIPE SLEEVE THAT HAS AN I.D. 1/4\"/>



INSULATED PIPE HANGER  
P-22-0803



INSULATED PIPE SPRING HANGER  
P-22-0806



TRAPPEZE HANGER SUPPORT  
P-22-0808

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:	M. GIORDANO
DRAWN BY:	J. LURIE
CHECKED BY:	R. VAN DYKE
IF THIS BAR DOES NOT MEASURE 1\"/>	0 1/2\"/>

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  
PLUMBING  
DETAILS - SHEET 3

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