

GENERAL STRUCTURAL NOTES

- G-1

THESE NOTES ARE GENERAL AND SUPPLEMENT THE SPECIFICATIONS. THESE NOTES APPLY TO THE ENTIRE PROJECT UNLESS MODIFIED OR NOTED OTHERWISE IN THE CONTRACT DOCUMENTS.
- G-2

STANDARD DETAILS SHALL BE USED WHEN REFERRED TO OR WHEN NO MORE RESTRICTIVE OR DIFFERENT DETAILS ARE SHOWN ON THE DRAWINGS.
- G-3

DESIGN IS IN ACCORDANCE WITH AND CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF THE BUILDING CODE OF NEW YORK STATE. THE DESIGN LOADS AND OTHER DESIGN VALUES GIVEN IN NOTES G-4 THROUGH G-8 WERE USED FOR DESIGN OF STRUCTURES UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- G-4

LIVE LOAD ON STAIRS AND PLATFORMS 100 PSF. FOR ADDITIONAL LIVE LOAD INFORMATION SEE LIVE LOAD PLANS ON S-002.
- G-5

SNOW LOAD:

GROUND SNOW LOAD (Pg) = 30 PSF
FLAT-ROOF SNOW LOAD (Pf) = 23 PSF
SLOPED ROOF SNOW LOAD (Ps) = 23 PSF
SNOW EXPOSURE FACTOR (Ce) = 1
SNOW LOAD IMPORTANCE FACTOR (Is) = 1.1
THERMAL FACTOR (Ci) = 1
SEE PLANS FOR ADDITIONAL SNOW LOADS.
- G-6

WIND DESIGN CRITERIA:

BASIC DESIGN WIND SPEED (V) = 125 MPH
RISK CATEGORY = III
WIND EXPOSURE = B

PARAMETER STRUCTURE	PRESSURE COEFFICIEN T GCpi	WIND DESIGN PRESSURE	COMPONENTS AND CLADDING	LATERAL LOAD RESISTING SYSTEM
FILTRATION PLANT	±0.55	28 PSF	24 PSF	BRACED FRAME

- G-7

SEISMIC LOAD:

RISK CATEGORY = III
SEISMIC IMPORTANCE FACTOR (Ie) = 1.25
SITE CLASS = D
MAPPED SPECTRAL RESPONSE ACCELERATIONS (Ss/S1) = 0.285/0.06
SPECTRAL RESPONSE ACCELERATIONS (SMS/SM1) = 0.448/0.145
SPECTRAL RESPONSE COEFFICIENTS (SDS/SD1) = 0.299/0.097
SEISMIC DESIGN CATEGORY = B
- | <div>PARAMETER</div> <div>STRUCTURE</div> | BASIC
STRUCTURAL
SYSTEM | DESIGN
BASE
SHEAR | SEISMIC
RESPONSE
COEFFICIENT
Cs | RESPONSE
MODIFICATION
COEFFICIENT R | ANALYSIS
PROCEDURE |
|---|-------------------------------|-------------------------|--|---|-----------------------------|
| FILTRATION PLANT | G | 200 K | 0.13 | 3 | EQUIVALENT
LATERAL FORCE |

- G-8

RAIN LOAD:

RAIN INTENSITY (i) = 2.61 IN/HR
- G-9

ALL DIMENSIONS INDICATED FOR EXISTING STRUCTURES SHALL BE VERIFIED BY FIELD MEASUREMENT. ALL DIMENSIONS THAT ARE CONTROLLED BY OR RELATED TO EQUIPMENT SHALL BE VERIFIED BY THE CONTRACTOR WITH THE MANUFACTURER SHOP DRAWINGS PRIOR TO CONSTRUCTION.
- G-10

THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING INFORMATION IN THE FIELD AS REQUIRED FOR NEW WORK.
- G-11

IF A CONFLICT IS FOUND BETWEEN DIFFERENT PORTIONS OF THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. CONTINUED CONSTRUCTION OF THE AREA IN CONFLICT SHALL BE AT THE CONTRACTOR'S OWN RISK UNTIL THE CONFLICT IS RESOLVED.
- G-12

EQUIPMENT ANCHOR SIZES, TYPES, EMBEDMENT AND PATTERNS SHALL BE VERIFIED WITH THE MANUFACTURER. ALL ANCHOR PATTERNS SHALL BE TEMPLATED TO INSURE ACCURACY OF PLACEMENT.
- G-13

STRUCTURAL DRAWINGS SHALL BE USED IN COORDINATION WITH THE DRAWINGS OF ALL OTHER DISCIPLINES AND MANUFACTURER'S SHOP DRAWINGS.
- G-14

STRUCTURES HAVE BEEN DESIGNED FOR OPERATIONAL LOADS ON THE COMPLETED STRUCTURE. DURING CONSTRUCTION, THE STRUCTURES SHALL BE PROTECTED BY BRACING AND TEMPORARY SUPPORTS WHEREVER EXCESSIVE CONSTRUCTION LOADS MAY OCCUR. OVERSTRESSING OF ANY STRUCTURAL ELEMENT IS PROHIBITED.
- G-15

IF CONTRACTOR DESIRES TO TEMPORARILY PLACE OR MOVE LOADS ON OR ADJACENT TO EXISTING STRUCTURES OR UTILITIES DURING CONSTRUCTION PROCESS, CONTRACTOR IS EXCLUSIVELY RESPONSIBLE FOR MAINTAINING STRUCTURAL INTEGRITY AND AVOIDING OVERSTRESSING AND DAMAGING EXISTING STRUCTURES AND UTILITIES. CONTRACTOR SHALL SUBMIT STRUCTURAL CALCULATIONS AND DRAWINGS VERIFYING THAT PROPOSED CONSTRUCTION (INCLUDING APPLICATION OF TEMPORARY CONSTRUCTION LOADS) WILL NOT OVERSTRESS OR DAMAGE EXISTING STRUCTURES AND UTILITIES. DRAWINGS AND CALCULATIONS SHALL BE SEALED BY A PROFESSIONAL ENGINEER CURRENTLY REGISTERED IN THE STATE OF NEW YORK.
- G-16

NO BACKFILL SHALL BE PLACED AGAINST ANY SUBSTRUCTURE WALLS UNLESS ALL ADJACENT SUPPORTING ELEMENTS HAVE ACHIEVED DESIGN STRENGTH, OR WALLS HAVE BEEN PROPERLY BRACED, AND IN ANY CASE NOT SOONER THAN 28 DAYS AFTER THE PLACING OF CONCRETE UNLESS APPROVED BY THE ENGINEER. SUPPORTING ELEMENTS SHALL INCLUDE ADJACENT WALLS, SLABS, BEAMS AND COLUMNS.
- G-17

LEAKAGE TESTING OF HYDRAULIC STRUCTURES SHALL NOT BEGIN UNTIL ALL STRUCTURAL ELEMENTS HAVE REACHED THE SPECIFIED MINIMUM CONCRETE STRENGTH. BACKFILL SHALL NOT BE PLACED AROUND ANY HYDRAULIC STRUCTURE UNTIL THE LEAKAGE TEST HAS BEEN COMPLETED UNLESS APPROVED BY THE ENGINEER.

STRUCTURAL METALS

- M-1

DETAIL, FABRICATE, AND ERECT STRUCTURAL STEEL IN ACCORDANCE WITH ANSI/AISC 360 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, LATEST EDITION.
- M-2

STEEL MATERIAL:

A) STRUCTURAL HSS:

ASTM A500, GRADE C (46/50 KSI) OR A1085 GRADE A (50 KSI)

B) STRUCTURAL PIPE:

ASTM A53, GRADE B (35 KSI)

C) PLATES, BARS AND ANGLES:

ASTM A36 UNO (36 KSI)

D) STRUCTURAL W, C, & MC SHAPES:

ASTM A992 (50 KSI)

E) STRUCTURAL M & S SHAPES:

ASTM A36 (36 KSI)

F) STRUCTURAL HP

ASTM A572 GRADE 50 (50 KSI)

G) ANCHOR RODS

ASTM F1554 GRADE 55 (55 KSI)

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:	J. EDER
				DRAWN BY:	R. HERNANDEZ
				CHECKED BY:	C. PHILLIPS
				IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	01/2"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

STRUCTURAL
GENERAL STRUCTURAL NOTES

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-001

STRUCTURAL METALS, CONTINUED

- M-3

PROVIDE MINIMUM 3/4" DIAMETER ASTM F3125 GRADE A325 TYPE 1 OR GRADE F1852 TYPE 1 HIGH STRENGTH BOLTS WITH SNUG TIGHTENED TYPE N CONNECTIONS FOR STRUCTURAL STEEL UNLESS NOTED OTHERWISE. HOLES FOR BOLTS SHALL BE STANDARD SIZE UNLESS NOTED OTHERWISE.
- M-4

PROVIDE TYPICAL STEEL BEAM CONNECTIONS FOR A CAPACITY OF NOT LESS THAN ONE HALF OF THE TOTAL UNIFORM LOAD CAPACITY TABULATED IN THE AISC TABLES FOR ALLOWABLE LOADS OF BEAMS UNLESS NOTED OTHERWISE.
- M-5

DO NOT PAINT STEEL SURFACES WHICH ARE TO BE WELDED OR ARE TO BE ENCASED IN CONCRETE.
- M-6

ALL STAINLESS STEEL FABRICATIONS EXPOSED TO UNDERWATER SERVICE SHALL BE TYPE 316. ALL OTHER STAINLESS STEEL FABRICATIONS SHALL BE TYPE 304 UNLESS NOTED OTHERWISE.
- M-7

ALUMINUM SHALL BE ALLOY 6061-T6 UNLESS NOTED OTHERWISE.
- M-8

ALL BOLTS, ANCHORS, AND CONCRETE ANCHORS CONNECTING ALUMINUM SHALL BE STAINLESS STEEL TYPE 316 FOR UNDERWATER APPLICATIONS AND TYPE 304 FOR ALL OTHER APPLICATIONS.
- M-9

ALUMINUM SHALL BE ISOLATED FROM CONTACT WITH CONCRETE AND DISSIMILAR METALS.
- M-10

ALL GROOVE AND BUTT WELDS SHALL BE FULL PENETRATION.
- M-11

FILLET WELD SIZES SHALL NOT BE LESS THAN THE MINIMUM SIZE REQUIRED BY AISC CODE FOR PLATE SIZES TO BE CONNECTED AND SHALL BE APPLIED TO THE ENTIRE JOINT CONTACT LENGTH, AND NOT LESS THAN 3/16".
- M-12

ALL WELDS SHALL BE PERFORMED IN THE SHOP UNLESS NOTED BY A FIELD WELD SYMBOL OR APPROVED BY ENGINEER.
- M-13

BOTTOM SURFACES OF BASE PLATES SHALL BE GROUTED TO ENSURE FULL BEARING CONTACT WITH CONCRETE SLAB.
- M-14

WHENEVER ONE MEMBER IS FASTENED TO ANOTHER WITH FASTENINGS (BOLTS, WELDS, ETC.) SET AT A UNIFORM SPACING, A MINIMUM OF TWO FASTENINGS PER PIECE SHALL BE CONNECTED AND THE FIRST AND LAST FASTENINGS SHALL BE LOCATED NOT TO EXCEED 0.25 OF FASTENER SPACING FROM EACH END.
- M-15

GRATING PANELS SHALL BE CONFINED TO PREVENT MOVEMENT PER STANDARD DETAIL S-05-0706. USE OF GRATING CLIP ATTACHMENT IS NOT ACCEPTABLE TO PREVENT GRATING MOVEMENT.

FOUNDATIONS

- F-1

CONCRETE (CAST-IN-PLACE) NOTES APPLY TO FOUNDATIONS.
- F-2

ALLOWABLE SOIL BEARING PRESSURE

PARAMETER STRUCTURE	ALLOWABLE SOIL BEARING PRESSURE
FILTRATION PLANT	6000 PSF
WASTE WASHWATER TANKS	6000 PSF

- F-3

MINIMUM DEPTH FROM ADJACENT FINISHED GRADE TO BOTTOM OF FOUNDATION (FROST DEPTH) = 48 INCHES.
- F-4

DEWATERING OPERATIONS MAY END WHEN SLABS AT GRADE ARE FULLY CURED. WHERE THERE IS NO SLAB AT GRADE, DEWATERING OPERATIONS MAY END WHEN THE FULL HEIGHT OF THE WALL IS FULLY CURED.

PRECAST CONCRETE

- PC-1

PRECAST STRUCTURAL MEMBERS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW YORK. OPENINGS TO ALLOW VENT PIPES, STRUCTURAL STEEL BRACING AND COLUMNS TO PASS THROUGH SHALL BE PROVIDED.
- PC-2

PRECAST VAULTS AND MANHOLES SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW YORK. STRUCTURAL DRAWINGS SHALL INDICATE DESIGN IS IN COMPLIANCE WITH THE BUILDING CODE OF NEW YORK STATE.

CONCRETE (CAST-IN-PLACE)

- C-1

DESIGN OF CONCRETE ELEMENTS INCLUDING WALLS, FORMED SLABS, BEAMS, AND COLUMNS IS IN ACCORDANCE WITH ACI 318 (CODE REQUIREMENTS FOR STRUCTURAL CONCRETE) AND 350 (CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES).
- C-2

CONCRETE STRENGTH CLASSES (28-DAY COMPRESSIVE STRENGTH):

A) CLASS A1 CONCRETE (4,500 PSI): NORMAL WEIGHT STRUCTURAL CONCRETE TO BE USED IN ALL STRUCTURES QUALIFYING AS ENVIRONMENTAL CONCRETE STRUCTURES THAT ARE DESIGNED IN ACCORDANCE WITH ACI 350 INCLUDING PUMP STATIONS, TANKS, BASINS, PROCESS STRUCTURES, AND ANY STRUCTURES CONTAINING FLUID OR PROCESS CHEMICALS OR OTHER MATERIALS USED IN TREATMENT PROCESS.

B) CLASS A2 CONCRETE (4,500 PSI): NORMAL WEIGHT STRUCTURAL CONCRETE IN ALL STRUCTURES OTHER THAN STRUCTURES QUALIFYING AS ENVIRONMENTAL CONCRETE STRUCTURES AS DESCRIBED ABOVE, AND FOR ALL SIDEWALKS, CURB AND GUTTERS, AND PAVEMENT.

C) CLASS A3 CONCRETE (4,500 PSI): NORMAL WEIGHT STRUCTURAL CONCRETE TO BE USED FOR INTERIOR SLABS WHERE A TYPE "D" STEEL TROWELED FINISH OR TYPE "G" HARDENED FINISH IS REQUIRED. CLASS A3 CONCRETE SHALL NOT CONTAIN ENTRAINED AIR.

D) CLASS A6 CONCRETE (4500 PSI): NSF 61 CERTIFIED NORMAL WEIGHT STRUCTURAL CONCRETE TO BE USED FOR CLASS A6 CONCRETE IN LOCATIONS INDICATED ON CONTRACT DRAWINGS.

E) CLASS B CONCRETE (3,000 PSI): NORMAL WEIGHT STRUCTURAL CONCRETE USED FOR DUCT BANK ENCASEMENTS, CATCH BASINS, FENCE AND GUARD POST EMBEDMENT, CONCRETE FILL, AND OTHER AREAS WHERE SPECIFICALLY NOTED ON CONTRACT DRAWINGS.
- C-3

ALL BAR REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60 UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A1064.
- C-4

CONCRETE COVER FOR REINFORCING (UNLESS NOTED OTHERWISE ON THE DRAWINGS):

A) CONCRETE DEPOSITED DIRECTLY AGAINST SOIL:

3"

B) CONCRETE EXPOSED TO WEATHER (#5 OR SMALLER):

1 1/2"

C) CONCRETE EXPOSED TO WEATHER (#6 OR LARGER):

2"

D) SLABS:

1 1/2"

E) AT SURFACES CONTACTING FLUID:

2"

F) BEAMS AND COLUMNS (TO MAIN REINFORCEMENT):

2"

G) BEAMS AND COLUMNS (TO COLUMN TIES OR STIRRUPS):

1 1/2"

H) WALLS 12" OR MORE:

2"

I) WALLS LESS THAN 12" (#5 OR SMALLER):

1 1/2"

J) WALLS LESS THAN 12" (#6 OR LARGER):

2"

K) FOR SURFACES EXPOSED TO FLUID IN BEAMS, COLUMNS AND WALLS:

ADD 1/2" TO ABOVE VALUES
- C-5

SPLICES SHALL BE CLASS "B" CONFORMING TO THE PROVISIONS OF ACI 318 UNLESS NOTED OTHERWISE. SPLICE LENGTH FOR TWO DIFFERENT SIZED BARS TO BE LAP SPLICED TOGETHER SHALL BE THE LENGTH OF THE LARGER BAR UNLESS NOTED OTHERWISE.
- C-6

CONSTRUCTION JOINTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS. CONSTRUCTION JOINTS NOT SHOWN SHALL BE SUBMITTED BY THE CONTRACTOR FOR THE APPROVAL OF THE ENGINEER PRIOR TO SUBMITTING REBAR SHOP DRAWINGS.

CONCRETE (CAST-IN-PLACE), CONTINUED

- C-7

ALL JOINTS WHICH ARE IN MEMBERS IN CONTACT WITH LIQUID OR BELOW GRADE SHALL HAVE A WATERSTOP. CONSTRUCTION JOINTS SHALL HAVE A 6" PVC RIBBED WATERSTOP. EXPANSION JOINTS SHALL HAVE A 9" PVC CENTER BULB RIBBED WATERSTOP. IN VERTICAL JOINTS, WATERSTOPS SHALL TERMINATE NO LESS THAN 18" ABOVE THE MAXIMUM WATER SURFACE OR 18" ABOVE GRADE, WHICHEVER IS HIGHER.
- C-8

ALL EXPOSED CORNERS SHALL HAVE A 3/4" CHAMFER.
- C-9

EQUIPMENT SUPPORTS, ANCHORAGES, OPENINGS, RECESSES AND REVEALS NOT SHOWN ON THE STRUCTURAL DRAWINGS BUT REQUIRED BY OTHER CONTRACT DOCUMENTS, SHALL BE INSTALLED PRIOR TO PLACING CONCRETE.
- C-10

REINFORCING BARS AND ACCESSORIES SHALL NOT BE IN CONTACT WITH ANY METAL PIPE, PIPE FLANGE, METAL CONDUIT, OR OTHER METAL PARTS EMBEDDED IN CONCRETE. A MINIMUM CLEARANCE OF 2" SHALL BE PROVIDED.
- C-11

CONDUITS AND OTHER SIMILAR ITEMS EMBEDDED IN OR PENETRATING THROUGH CONCRETE SHALL BE SPACED ON CENTER NOT LESS THAN 3 TIMES THEIR OUTSIDE DIMENSION, BUT NOT LESS THAN 2 1/2" CLEAR. WHEN SUCH ITEMS ARE EMBEDDED IN WALLS OR SLABS, THEY SHALL NOT OCCUPY MORE THAN 1/3 OF THE MEMBER THICKNESS.
- C-12

AT ALL TYPICAL CURBS, EQUIPMENT PADS, AND PIPE SUPPORT PIERS, REINFORCING DOWELS SHOWN MAY BE REPLACED WITH MATCHING DOWELS SET IN EPOXY IN DRILLED HOLES AS SPECIFIED. DOWELS LOCATED CLOSER THAN 3" FROM ANY EDGE OF CONCRETE SHALL NOT BE REPLACED WITH DRILLED DOWELS.
- C-13

ADJUST THE LOCATION OF DOWELS OR ANCHORS PLACED INTO HARDENED CONCRETE AS NEEDED TO AVOID DRILLING THROUGH ANY REINFORCING BARS. IF THE LOCATION NEEDS TO BE MODIFIED, CONTACT THE ENGINEER. CONTRACTOR SHALL USE NON-DESTRUCTIVE MEANS TO FIELD LOCATE REINFORCEMENT PRIOR TO DRILLING HOLES FOR DOWELS OR ANCHORS.
- C-14

CLEAR DISTANCE FROM ANCHOR RODS TO ANY CONCRETE EDGE SHALL BE 4" MINIMUM UNLESS NOTED OTHERWISE.

MASONRY

- M-1

MASONRY MORTAR SHALL BE ASTM C 270 TYPE "S" AND MASONRY GROUT SHALL CONFORM TO REQUIREMENTS OF ASTM C 476.
- M-2

CONCRETE MASONRY UNIT NET AREA COMPRESSIVE STRENGTH SHALL BE 2,000 PSI WHEN TESTED IN ACCORDANCE WITH ASTM C 140. COMPLETE TEST REPORTS SHALL BE SUBMITTED TO THE BUILDING INSPECTOR.
- M-3

HORIZONTAL JOINT REINFORCEMENT SHALL BE AS SHOWN ON ARCHITECTURAL DRAWINGS. HORIZONTAL JOINT REINFORCEMENT SHALL CONFORM TO ASTM A 951 AND REINFORCEMENT STEEL SHALL CONFORM TO REQUIREMENTS OF ASTM A 615 FOR GRADE 60 BILLET STEEL.
- M-4

EXTERIOR CONCRETE MASONRY UNIT WALLS SHALL BE FULLY REINFORCED WITH #5 VERTICAL BARS AT 32 INCHES ON CENTER, CENTERED IN FULLY GROUTED CELLS, UNLESS SHOWN OTHERWISE ON THE DRAWINGS. INTERIOR CONCRETE MASONRY UNIT WALLS SHALL BE REINFORCED WITH #5 VERTICAL BARS AT 48 INCHES ON CENTER, CENTERED IN FULLY GROUTED CELLS, UNLESS SHOWN OTHERWISE ON DRAWINGS.
- M-5

VERTICAL REINFORCEMENT SHALL BE PROVIDED AT WALL ENDS, CORNERS, AND INTERSECTIONS AND IMMEDIATELY ADJACENT TO ALL OPENINGS, CONTROL JOINTS, AND COLUMNS. SEE STANDARD DETAILS FOR MASONRY OPENINGS.
- M-6

MASONRY REINFORCEMENT LAP SPLICES SHALL BE CONTACT SPLICES. UNLESS NOTED OTHERWISE, LENGTH OF SPLICE FOR SINGLE BARS IN CENTER OF CELLS OF 8" OR LARGER CMU SHALL BE A MINIMUM OF 26 INCHES FOR #4 BARS, 32 INCHES FOR #5 BARS, AND 50 INCHES FOR #6 BARS. LENGTH OF SPLICE FOR OTHER CONDITIONS SHALL BE AS SHOWN ON THE DRAWINGS.
- M-7

BOND BEAM REINFORCEMENT SHALL BE CONTINUOUS AT ALL WALL INTERSECTIONS, SEE STANDARD DETAILS. WHERE BOND BEAM REINFORCEMENT IS INTERRUPTED BY OPENINGS REINFORCEMENT SHALL BE PROVIDED WITH 90° HOOKS AT EACH ENDS. BOND BEAM REINFORCEMENT SHALL BE 2-#6 BARS UNLESS OTHERWISE INDICATED.
- M-8

DOWELS SHALL BE EITHER CAST INTO CONCRETE OR INSTALLED WITH A DOWEL ADHESIVE SYSTEM. IF CAST, DOWELS SHALL BE EMBEDDED IN STEM WALL OR FOUNDATION SLAB A MINIMUM 9" AND SHALL HAVE A STD 90° HOOK. IF INSTALLED WITH A DOWEL ADHESIVE SYSTEM DOWELS SHALL BE STRAIGHT BARS EMBEDDED A MINIMUM OF 10" INTO CONCRETE.
- M-9

VENEER SUPPORT STEEL ANGLES SHALL BE GALVANIZED L6x6x3/8 WITH 1/2" DIAMETER GALVANIZED ADHESIVE ANCHORS AT 24" ON CENTER AND 4" EMBEDMENT (MIN 3 ANCHORS PER ANGLE). ANGLE SHALL EXTEND 8" BEYOND OPENINGS.
- M-10

MASONRY LINTELS SHALL BE EITHER PRECAST CONCRETE "U" SECTIONS OR CONCRETE MASONRY "U" BLOCKS UNLESS SHOWN OTHERWISE.
- M-11

FOR CONCRETE MASONRY "U" BLOCK LINTELS SEE STANDARD DETAILS FOR MASONRY OPENINGS AND THE CMU OPENING REINFORCEMENT SCHEDULE, UNLESS OTHERWISE NOTED ON DRAWINGS.

NONSTRUCTURAL COMPONENT ANCHORAGE

- A-1

ANCHORAGE OF ALL ARCHITECTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS SHALL BE DESIGNED AND INSTALLED TO RESIST THE CONTROLLING CONDITION OF OPERATIONAL FORCES, WIND FORCES OR SEISMIC FORCES IN ACCORDANCE WITH THE GOVERNING BUILDING CODE. SEISMIC FORCES SHALL BE AS PER ASCE 7. COMPONENTS SHALL BE BOLTED, WELDED, OR OTHERWISE POSITIVELY FASTENED WITHOUT CONSIDERATION OF FRICTIONAL RESISTANCE PRODUCED BY THE EFFECTS OF GRAVITY. A CONTINUOUS LOAD PATH OF SUFFICIENT STRENGTH AND STIFFNESS TO RESIST REQUIRED FORCES SHALL BE PROVIDED BETWEEN THE COMPONENT AND THE SUPPORTING STRUCTURE. ANCHORAGE SHALL BE DESIGNED TO RESIST LOADS IN BOTH ORTHOGONAL DIRECTIONS (TRANSVERSE AND LONGITUDINAL) AND SHALL BE DESIGNED AND SEALED BY THE CONTRACTOR'S ENGINEER CURRENTLY REGISTERED IN THE STATE OF NEW YORK.
- A-2

COMPONENT REACTION FORCES AT THE POINT OF ATTACHMENT TO THE STRUCTURE SHALL BE SUBMITTED TO AND COORDINATED WITH THE ENGINEER FOR CONFIRMATION THAT SUPPORTING STRUCTURE IS ADEQUATE TO RESIST REQUIRED REACTION FORCES.
- A-3

CONTRACTOR SHALL PROVIDE SPECIAL SEISMIC CERTIFICATION (SSC) FROM MANUFACTURER OF EQUIPMENT FOR ALL SYSTEMS DEEMED NECESSARY BY SPECIFICATIONS. SPECIAL SEISMIC CERTIFICATION SHALL BE IN COMPLIANCE WITH ASCE 7.

SPECIAL INSPECTIONS

- SI-1

SPECIAL INSPECTIONS SHALL BE IN ACCORDANCE WITH SPECIFICATIONS AND THE BUILDING CODE OF NEW YORK STATE.

DELEGATED STRUCTURAL DESIGN ITEMS

- DSD-1

THE FOLLOWING ITEMS SHALL BE SUBMITTED AS DELEGATED STRUCTURAL DESIGNS DURING CONSTRUCTION, IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS. THIS LIST OF ITEMS IS NOT NECESSARILY COMPREHENSIVE.

A. EXCAVATION SUPPORT SYSTEMS

B. SOIL TIEDOWNS

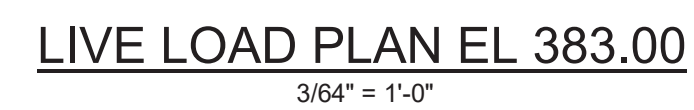
C. PRECAST CONCRETE STRUCTURES

D. PRECAST CONCRETE PLANKS

E. PIPE SUPPORTS NOT SPECIFICALLY DESIGNED AND DETAILED ON THE CONTRACT DRAWINGS

F. EQUIPMENT ANCHORAGE
- DSD-2

DRAWINGS AND CALCULATIONS FOR EACH ITEM SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW YORK.



WARNING

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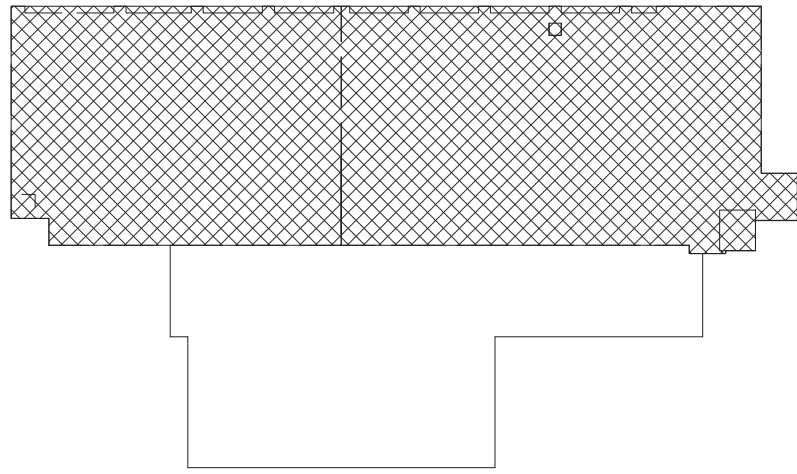
PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	M. ROBLE
CHECKED BY:	C. PHILLIPS
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1 

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:	S-002

1. SOIL TIEDOWNS SHALL BE DESIGNED FOR AN ALLOWABLE UPLIFT LOAD OF 158 KIPS. SEE DETAIL 1/S-300.
2. SOIL TIEDOWNS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH SPECIFICATION 31 68 13.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING SOIL TIEDOWNS STRESSING AND LOCKOFF METHOD PRIOR TO PLACEMENT OF THE BASE SLAB. DESIGN AND INSTALLATION SHALL BE THE EXCLUSIVE RESPONSIBILITY OF THE CONTRACTOR.
4. CONTRACTOR SHALL FIELD VERIFY LOCATION OF ALL SOIL TIEDOWNS AND NOTIFY ENGINEER OF INTERFERENCES. ENGINEER WILL PROVIDE REVISED SOIL TIEDOWN LOCATIONS IF NECESSARY.
5. CONTRACTOR SHALL FIELD VERIFY ELEVATIONS FOR TOP OF COMPETENT DECOMPOSED ROCK PRIOR TO INSTALLATION OF SOIL TIEDOWNS.
6. FOR SUPPORT OF EXCAVATION, SEE DRAWING S-126



LOWER SOIL TIEDOWN PLAN - AREA 1, 2, AND 3
3/32" = 1'-0"

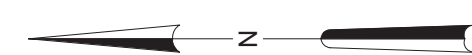
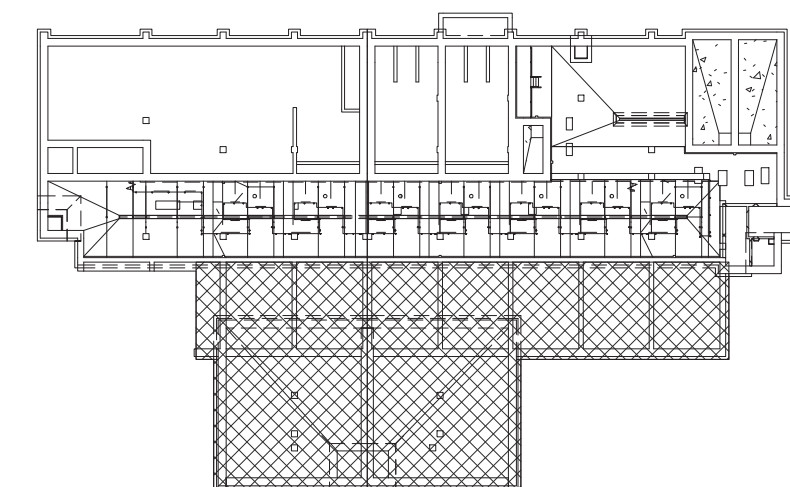
[illegible]

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

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


$$3/32'' = 1'-0''$$

$$3/32'' = 1'-0$$

1. ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
2. SOIL TIEDOWNS SHALL BE DESIGNED FOR AN ALLOWABLE UPLIFT LOAD OF 158 KIPS, SEE DETAIL 1/S-300.
3. SOIL TIEDOWNS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH SPECIFICATION 31 68.13.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING SOIL TIEDOWN STRESSING AND LOCKOFF METHOD PRIOR TO PLACEMENT OF THE BASE SLAB. DESIGN AND INSTALLATION SHALL BE THE EXCLUSIVE RESPONSIBILITY OF THE CONTRACTOR.
5. CONTRACTOR SHALL FIELD VERIFY LOCATION OF ALL SOIL TIEDOWNS AND NOTIFY ENGINEER OF INTERFERENCES. ENGINEER WILL PROVIDE REVISED SOIL TIEDOWN LOCATIONS IF NECESSARY.
6. CONTRACTOR SHALL FIELD VERIFY ELEVATIONS FOR TOP OF COMPETENT DECOMPOSED ROCK PRIOR TO INSTALLATION OF SOIL TIEDOWNS.
7. FOR SUPPORT OF EXCAVATION, SEE DRAWING S-126.

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.

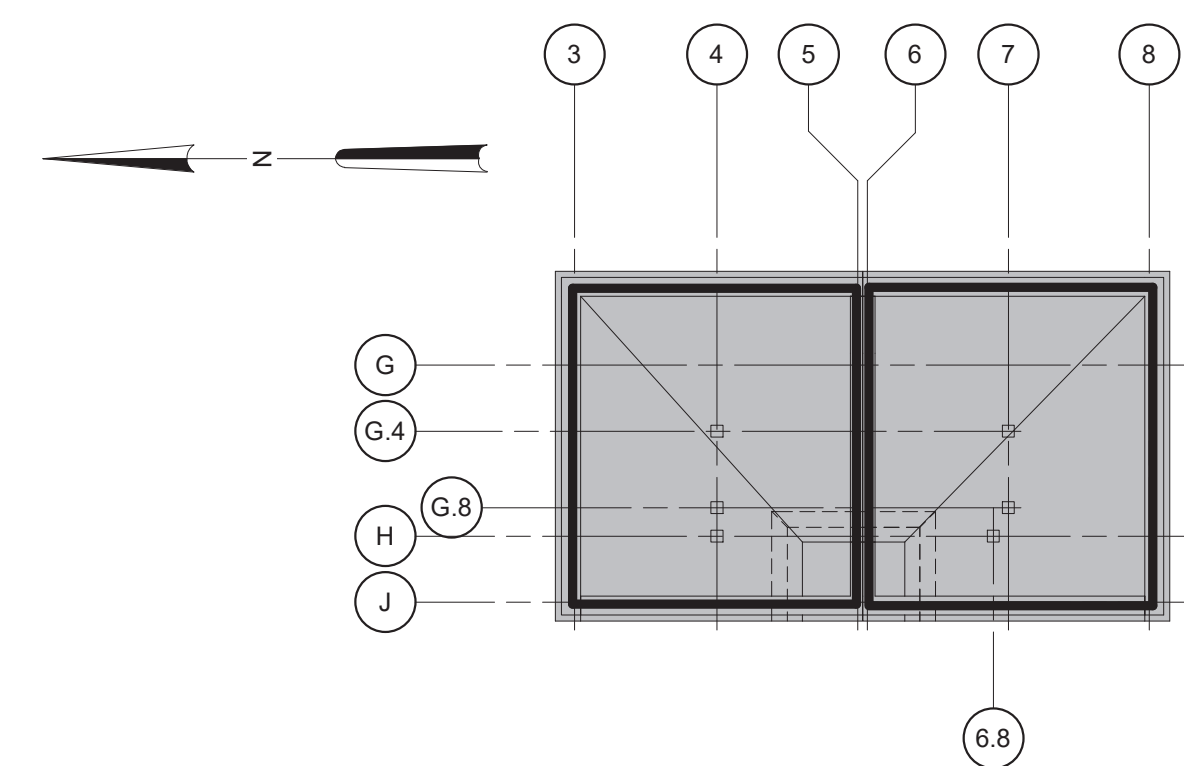
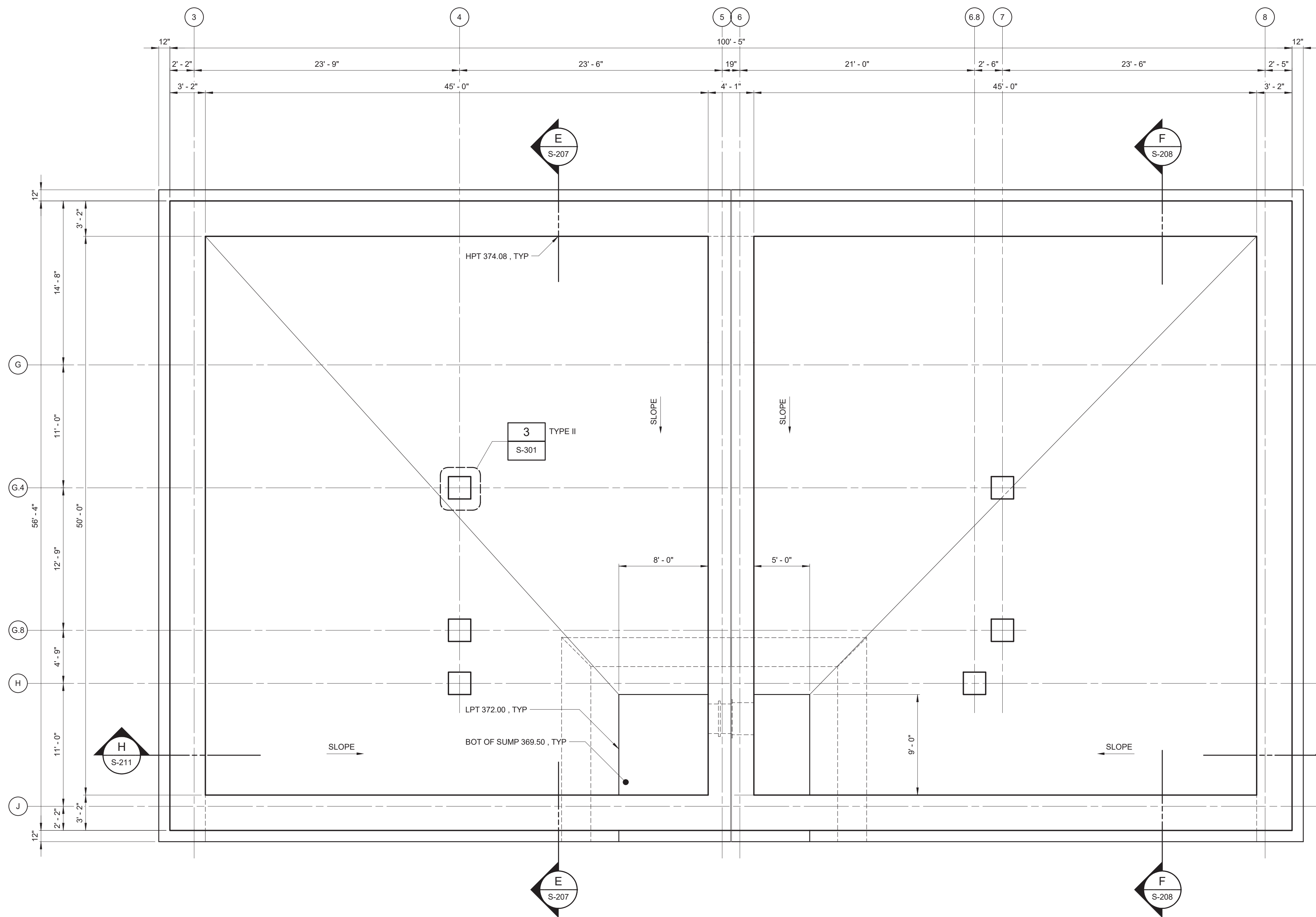
						PROJECT ENGINEER:	R. FROST
						DESIGNED BY:	J. EDER
						DRAWN BY:	R. HERNANDEZ
						CHECKED BY:	C. PHILLIPS
						IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	
REV	ISSUED FOR	DATE	BY				

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

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
STRUCTURAL
SOIL TIEDOWN PLAN AREA 4 AND 5

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



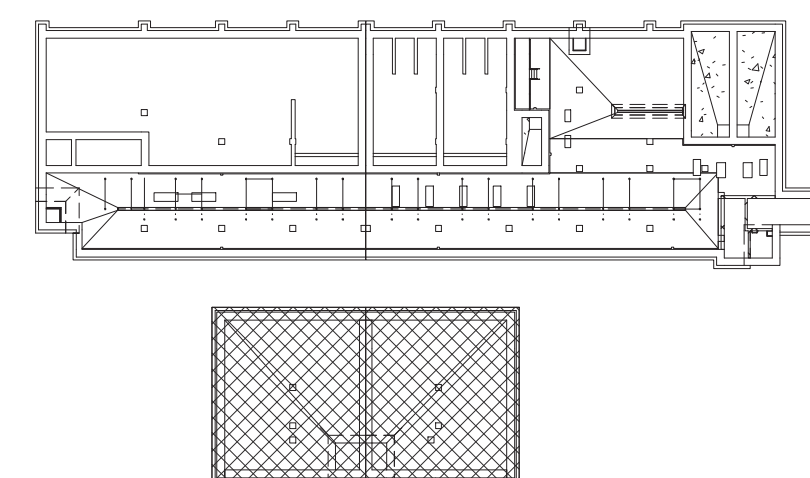
NOTES:
1. MINIMUM EXTENT OF CLASS A6 CONCRETE AS INDICATED. REFER TO
NOTE C-2 ON DWG S-001.

LEGEND

 PROVIDE CLASS A6 CONCRETE
FULL HEIGHT OF WALL

 PROVIDE CLASS A6 CONCRETE
FOR SLAB AT EL 374.08

CLASS A6 CONCRETE LOCATION PLAN AT 374.08

$$1/32'' = 1'-0''$$


KEYPLAN
1/64" = 1'-0"

PLAN AT EL 374.08 - AREA 4 AND 5

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

WARNING

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.

DESCRIPTION OF THE ALTERATION				PROJECT ENGINEER:	R. FROST
				DESIGNED BY:	J. EDER
				DRAWN BY:	R. HERNANDEZ
				CHECKED BY:	C. PHILLIPS
				IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	
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
STRUCTURAL
PLAN AT EL 374.08 - AREA 4 AND 5

DATE: FEB 2025

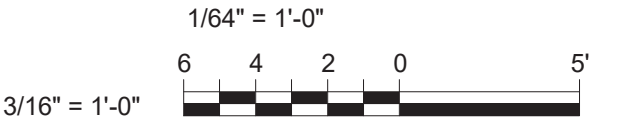
HAZEN NO.: 90388-000

CONTRACT NO.: A1364-A

DRAWING
NUMBER:

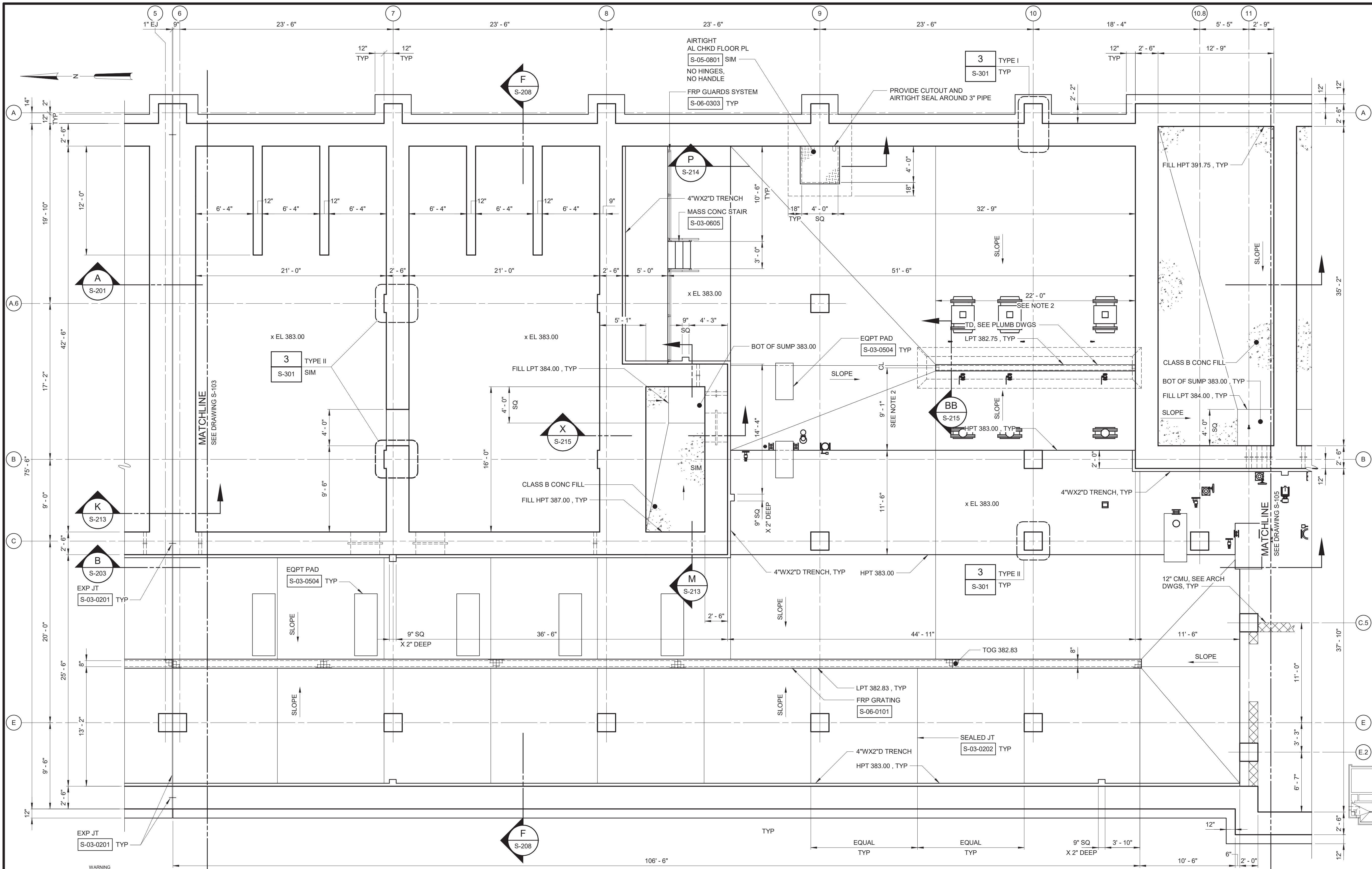
S-102

1. OVERALL FACILITY PLANS ARE SHOWN ON G-100 (EL 384.00), G-101 (EL 421.00), G-103 (ROOF).

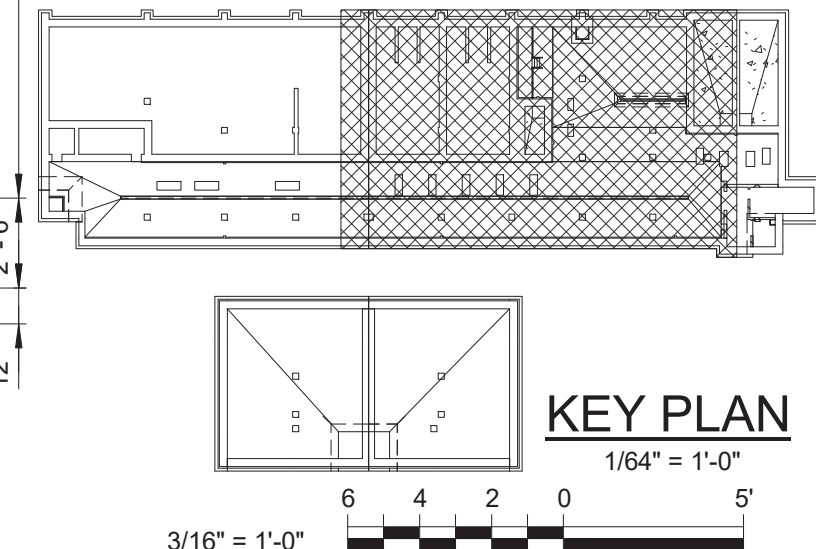


DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-103

Autodesk Docs/09388-000_Ply_Lake_Filtration/09388-000-WFP-S-14
2/20/2025 10:58:55 AM



- NOTES:
- OVERALL FACILITY PLANS ARE SHOWN ON G-100 (EL 384.00), G-101 (EL 421.00), G-103 (ROOF).
 - COORDINATE LOCATION AND DIMENSIONS OF TRENCH DRAIN WITH PLUMBING DRAWINGS.



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

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
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

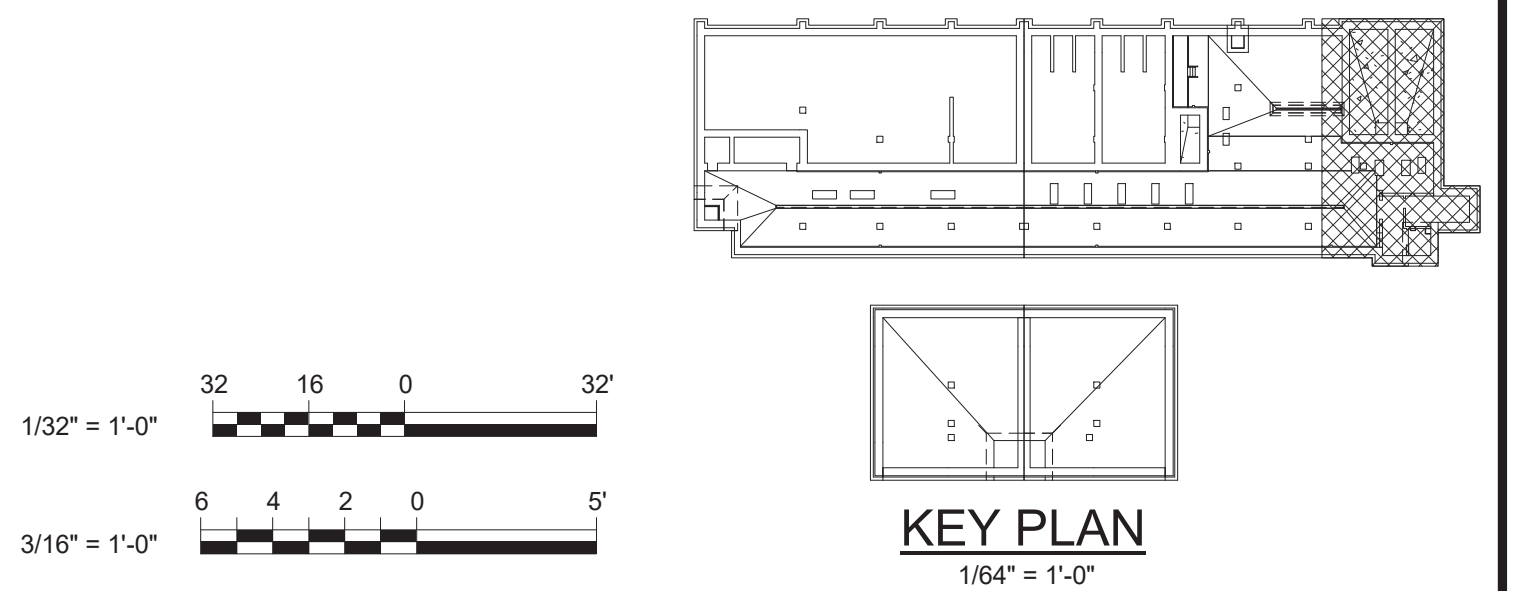
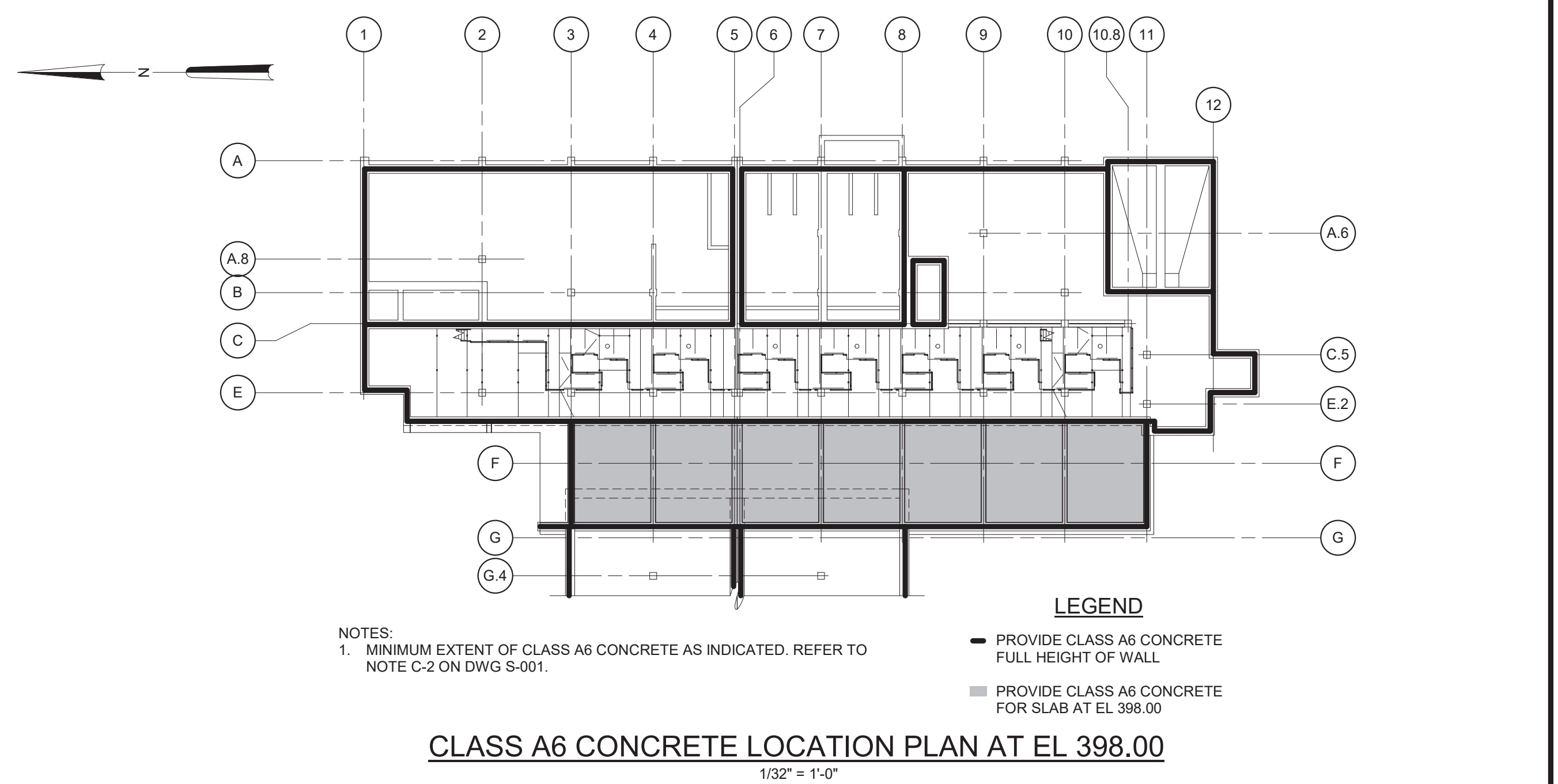
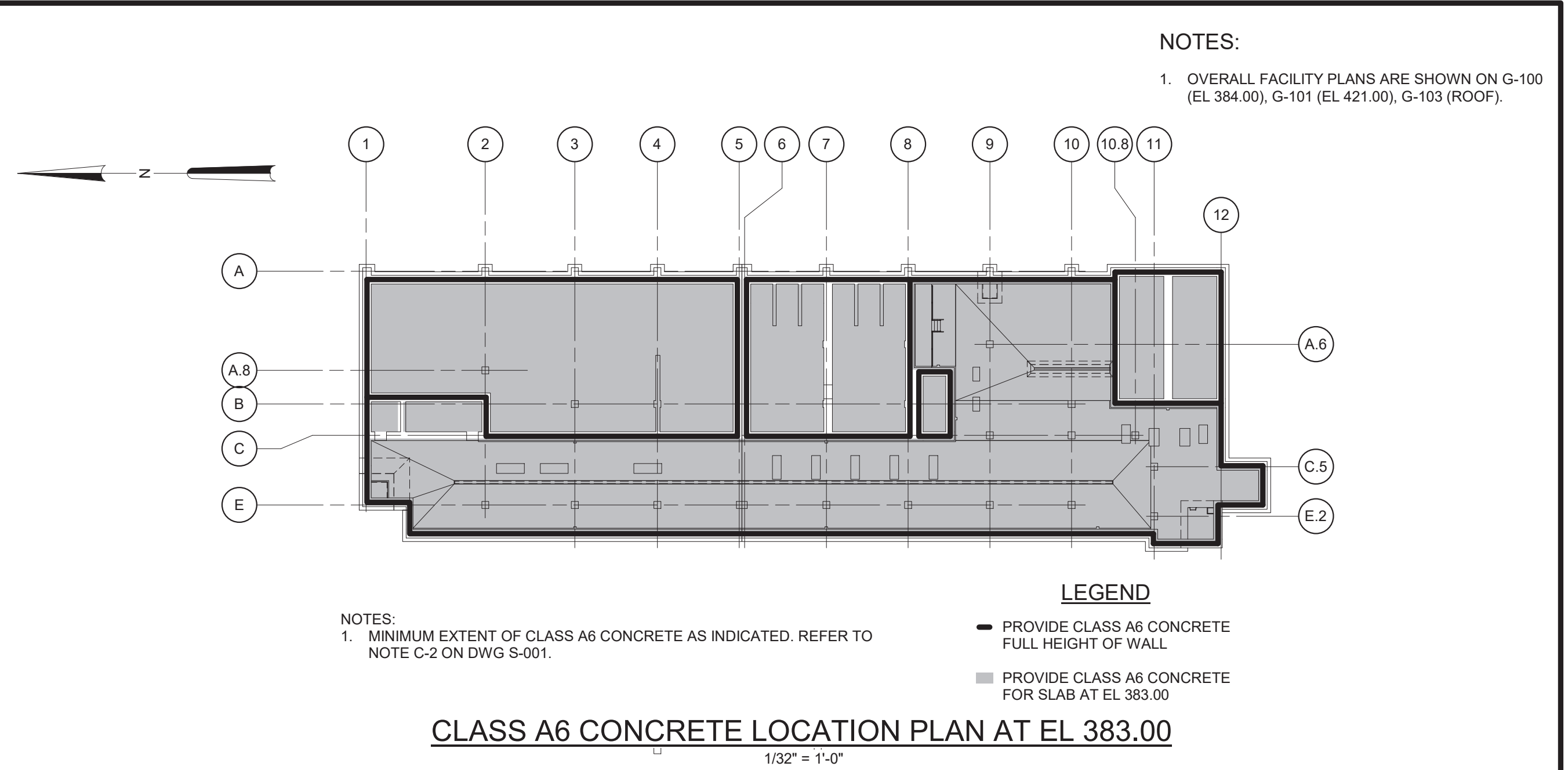
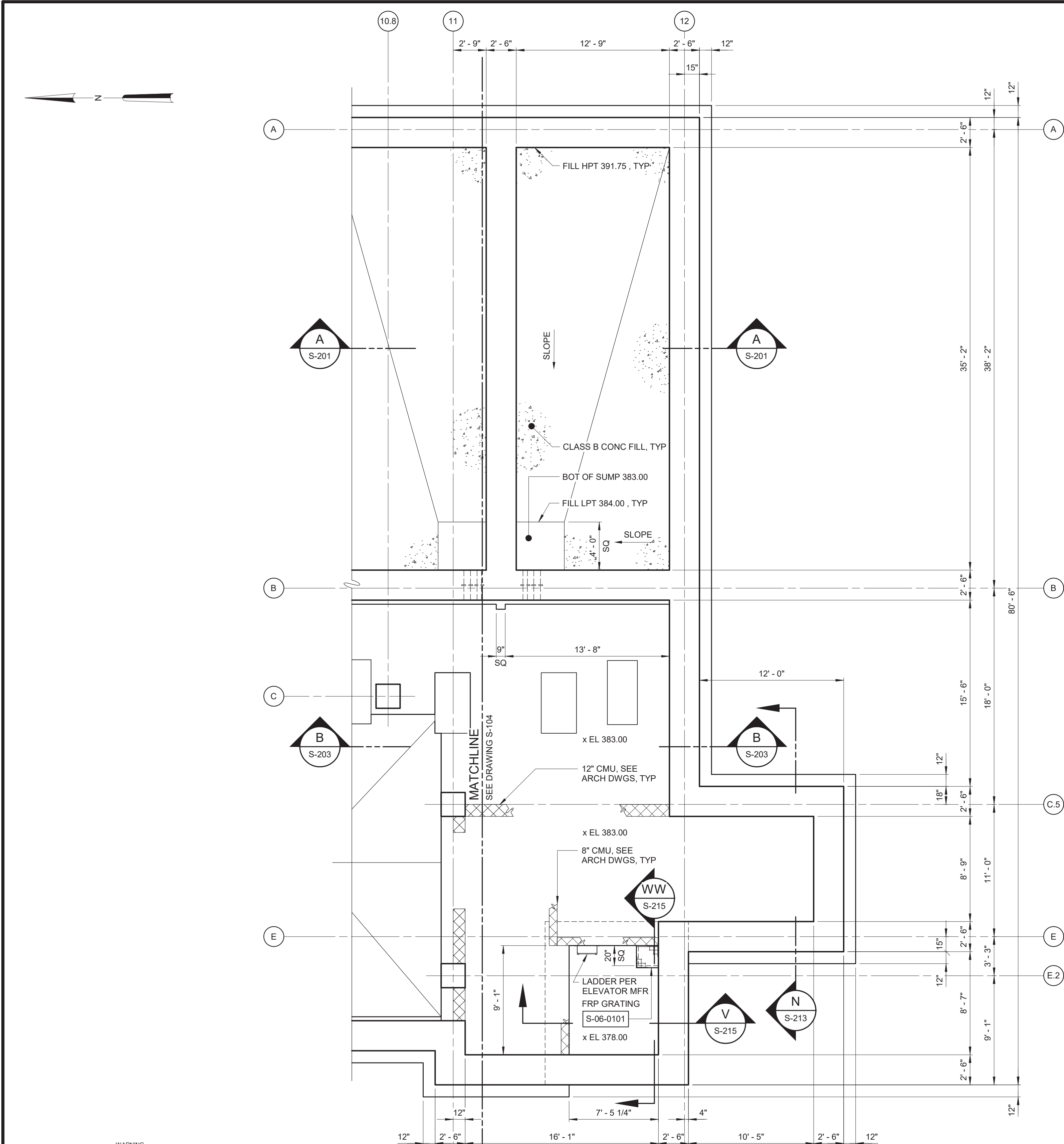
WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
STRUCTURAL
PLAN AT EL 383.00 - AREA 2

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-104

Autodesk Docs/00388-000_Rye_Lake_Filtration/00388-000-WFP-S-105
2/20/2025 10:58:55 AM



REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET

STATE OF NEW YORK
J.C. EDER
LICENSED PROFESSIONAL ENGINEER
097035

Hazen

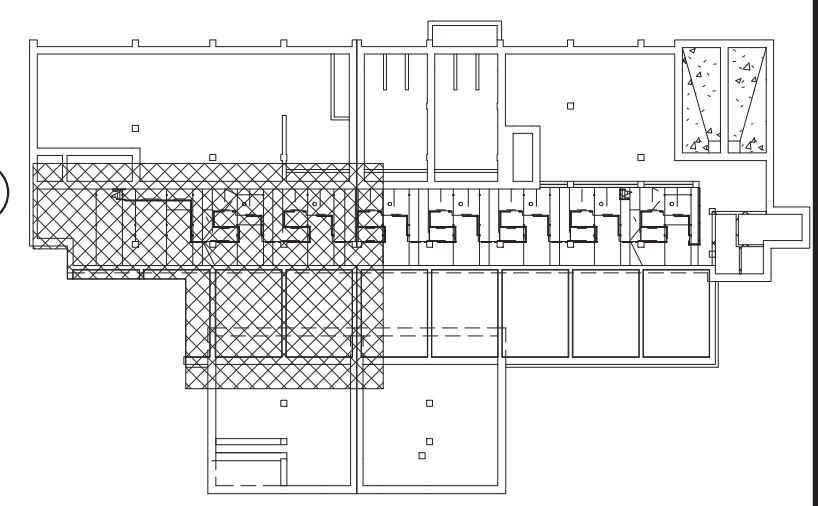
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
STRUCTURAL
PLAN AT EL 383.00 - AREA 3

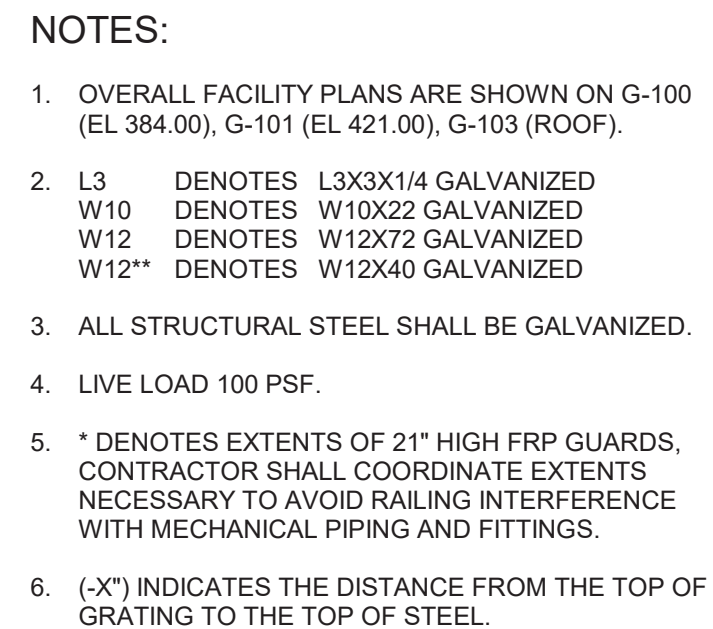
DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-105



3/16" = 1'-0"

122 of 392

Autodesk Docs://90388-000_Rye_Lake_Filtration/90388-000-WFP-S.mt
2/20/2025 10:59:00 AM


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

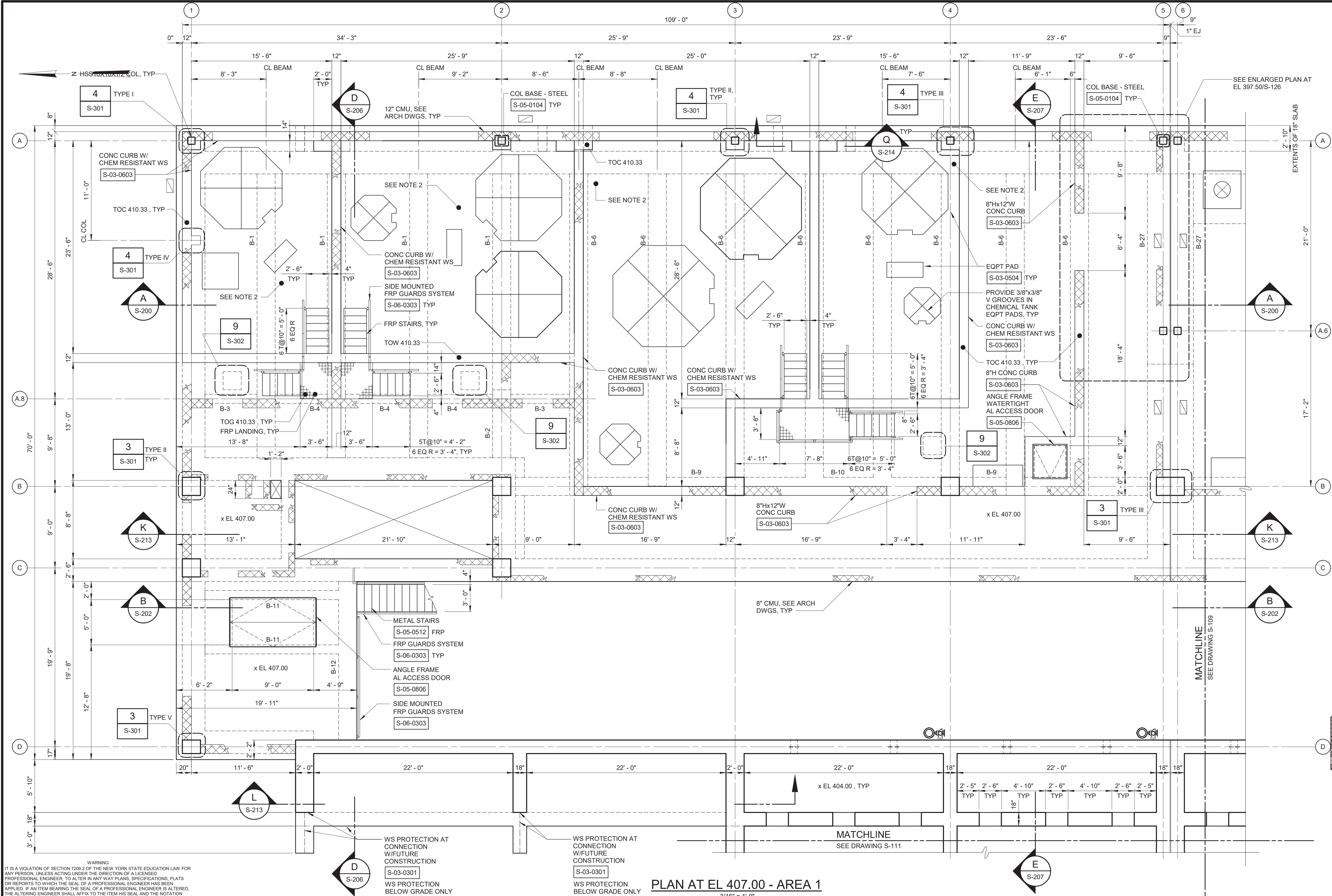
MATCHLINE
SEE DRAWING S-106

BID SET

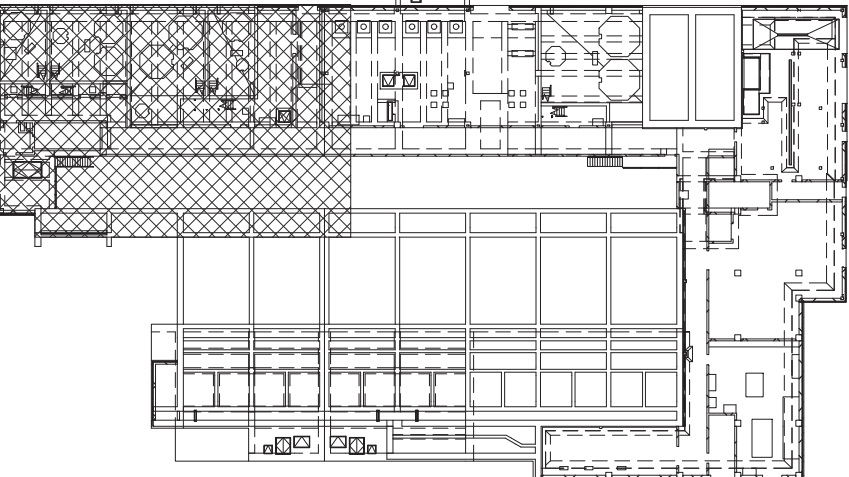
RYE LAKE WATER FILTRATION PLANT HARRISON, NY

FILTRATION PLANT
STRUCTURAL
PLAN AT EL 398.83 - AREA 2 AND 5

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

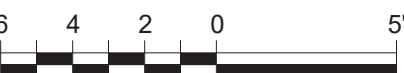


- NOTES:
- OVERALL FACILITY PLANS ARE SHOWN ON G-100 (EL 384.00), G-101 (EL 421.00), G-103 (ROOF)
 - FOR FLOOR SLOPES, SEE FLOOR SLOPE PLAN AT EL 407.00 - AREA 1/S-110.
 - INDICATES LOCATION OF VERTICAL BRACE, SEE FRAMING ELEVATIONS.



KEY PLAN

1/64" = 1'-0"



PLAN AT EL 407.00 - AREA 1

3/16" = 1'-0"

WARNING:
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PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
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

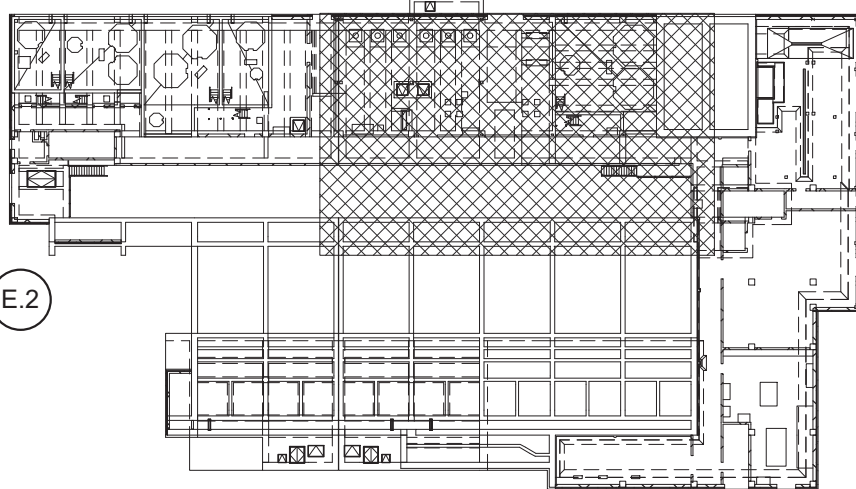
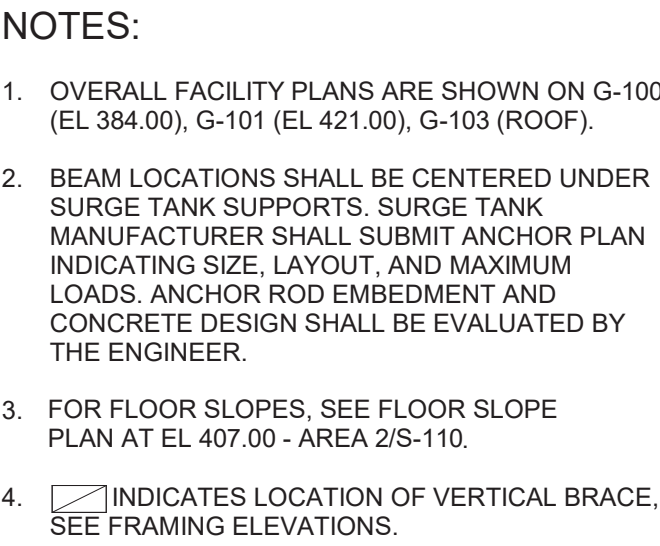
WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

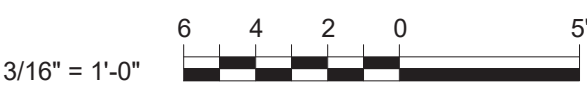
FILTRATION PLANT
STRUCTURAL
PLAN AT EL 407.00 - AREA 1

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

S-108



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



WARNING

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					PROJECT ENGINEER:	R. FROST
					DESIGNED BY:	J. EDER
					DRAWN BY:	R. HERNANDEZ
					CHECKED BY:	C. PHILLIPS
					IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	
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

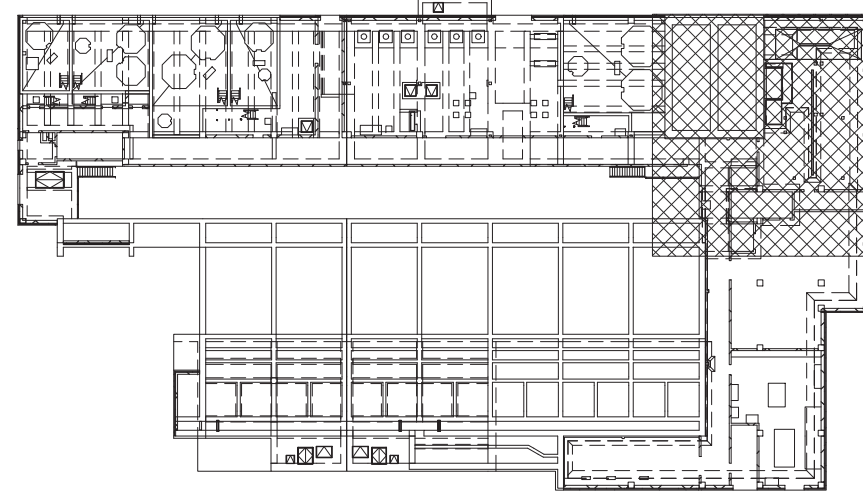
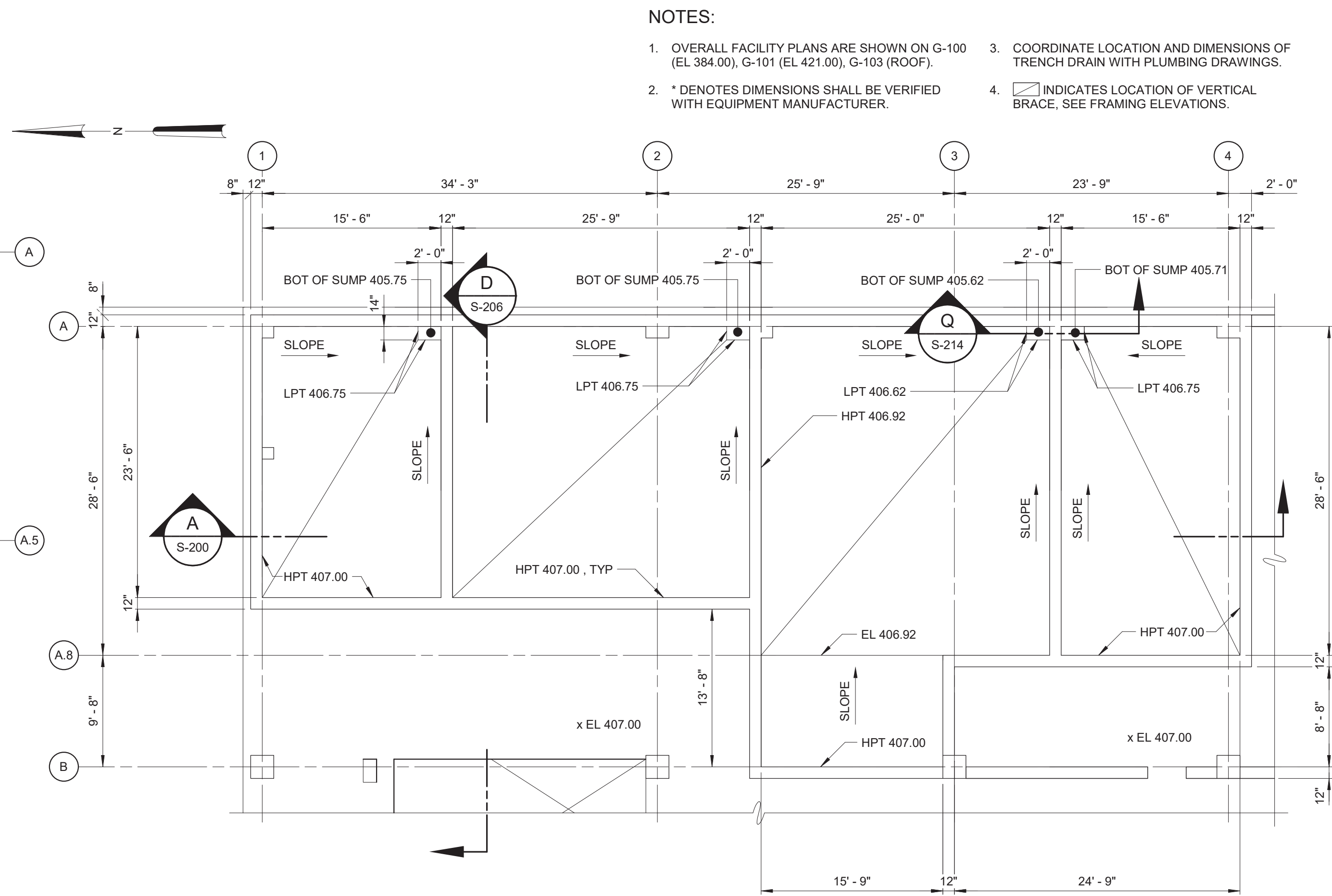
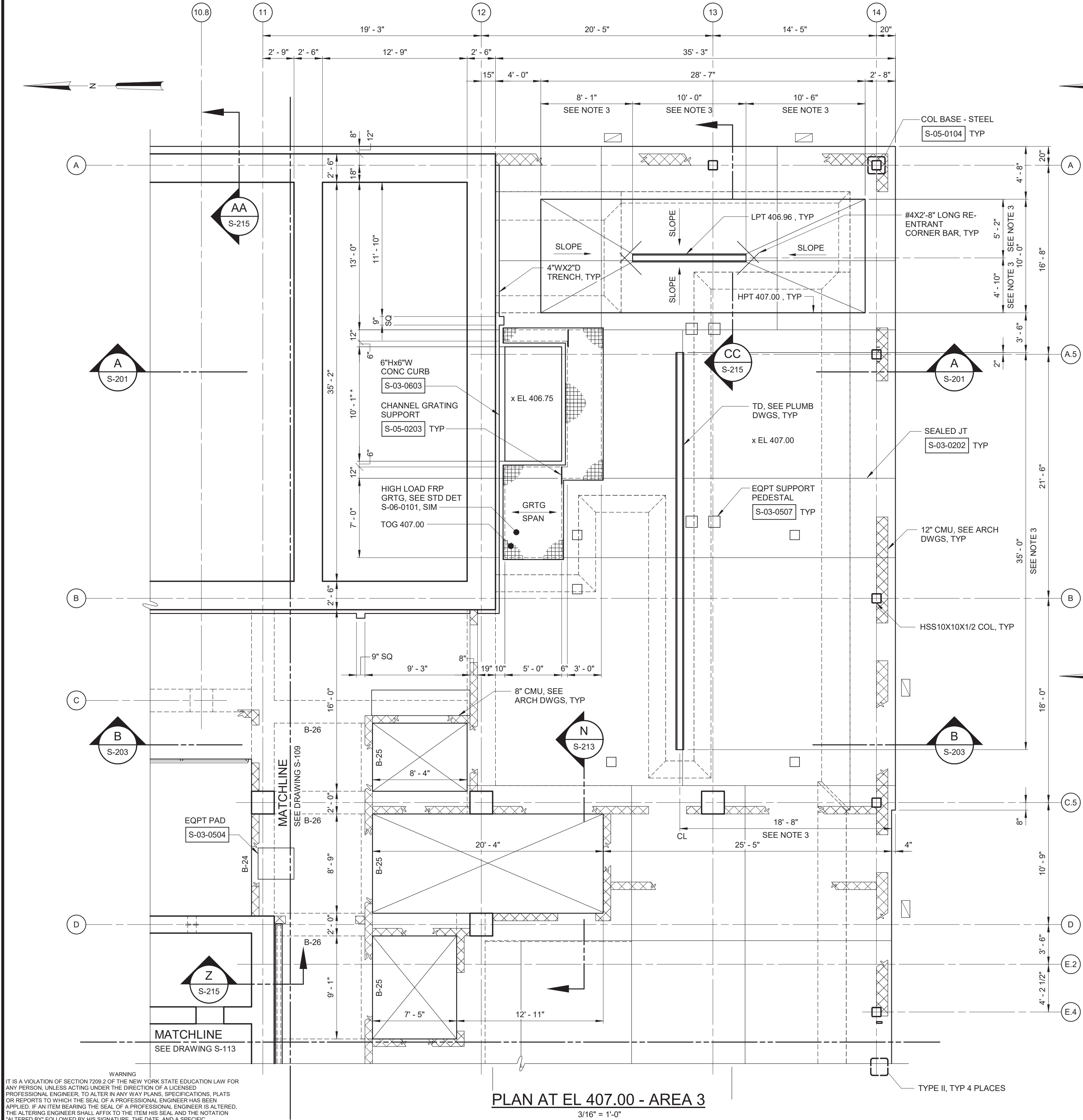
RYE LAKE WATER FILTRATION PLANT HARRISON, NY

FILTRATION PLANT
STRUCTURAL
PLAN AT EL 407.00 - AREA 2

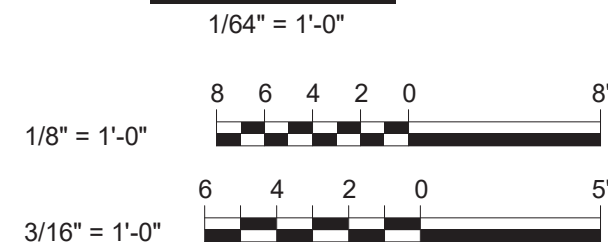
DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	

S-109

Autodesk Docs/09388-000_Ply_Lake_Filtration/09388-000-WFP-S-11
2/20/2025 10:59:13 AM



KEY PLAN



REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
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

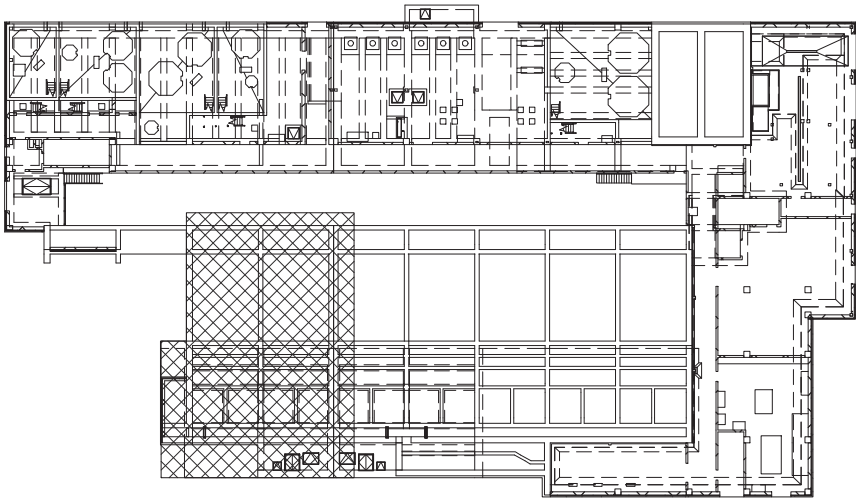
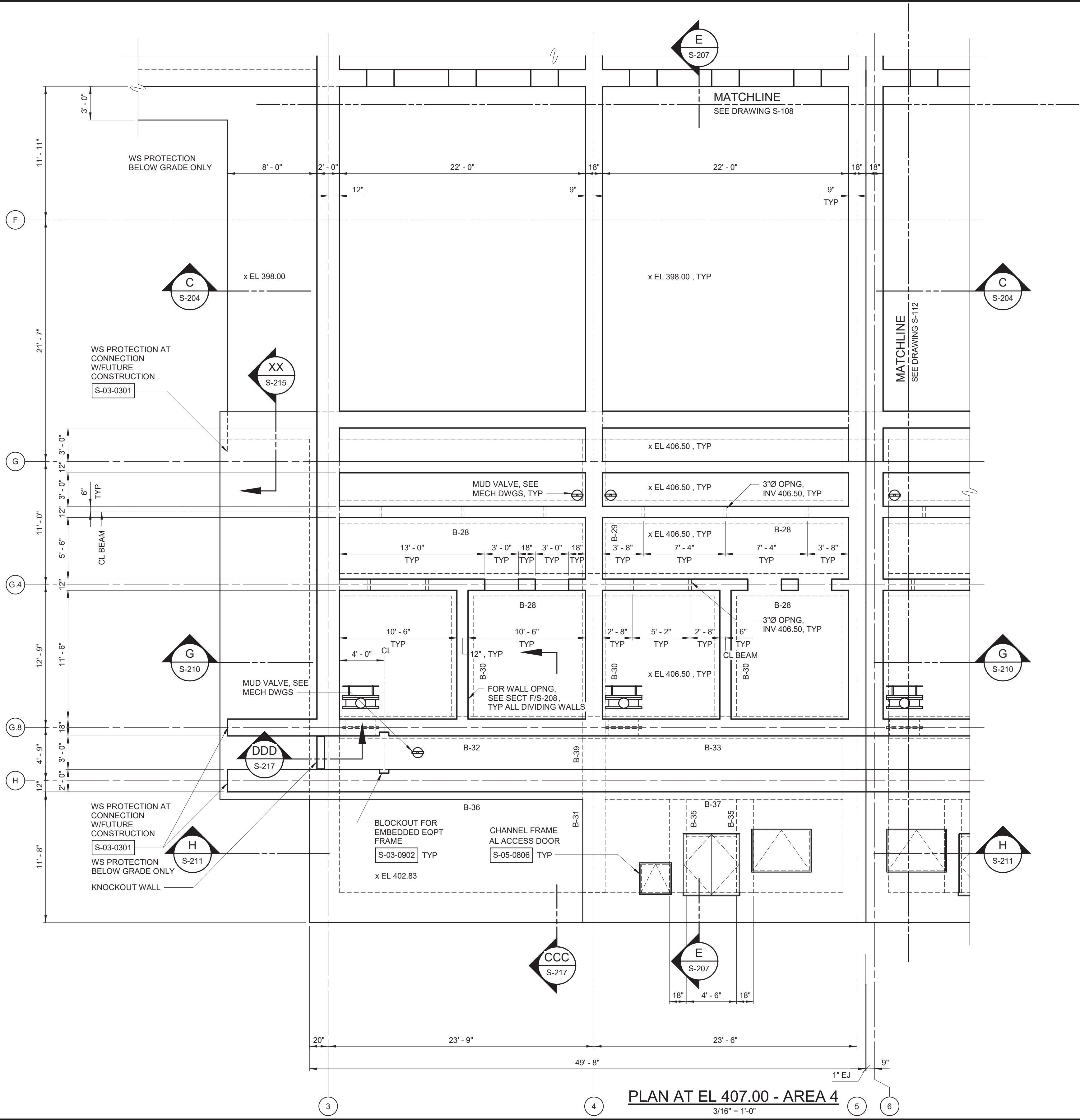
RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
STRUCTURAL
PLAN AT EL 407.00 - AREA 3 AND FLOOR SLOPE
PLAN AT EL 407.00 - AREA 1 AND 2

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

NOTES:

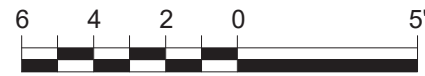
1. OVERALL FACILITY PLANS ARE SHOWN ON G-100 (EL 384.00), G-101 (EL 421.00), G-103 (ROOF).



KEY PLAN

1/64" = 1'-0"

3/16" = 1'-0"



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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
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

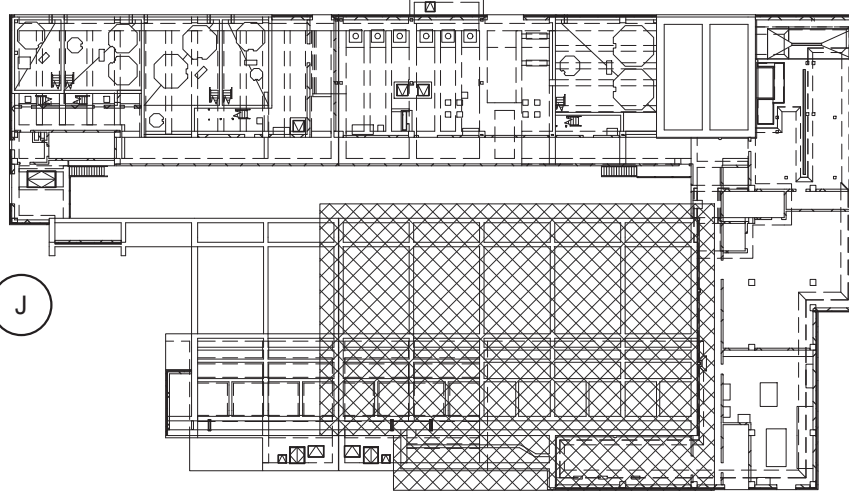
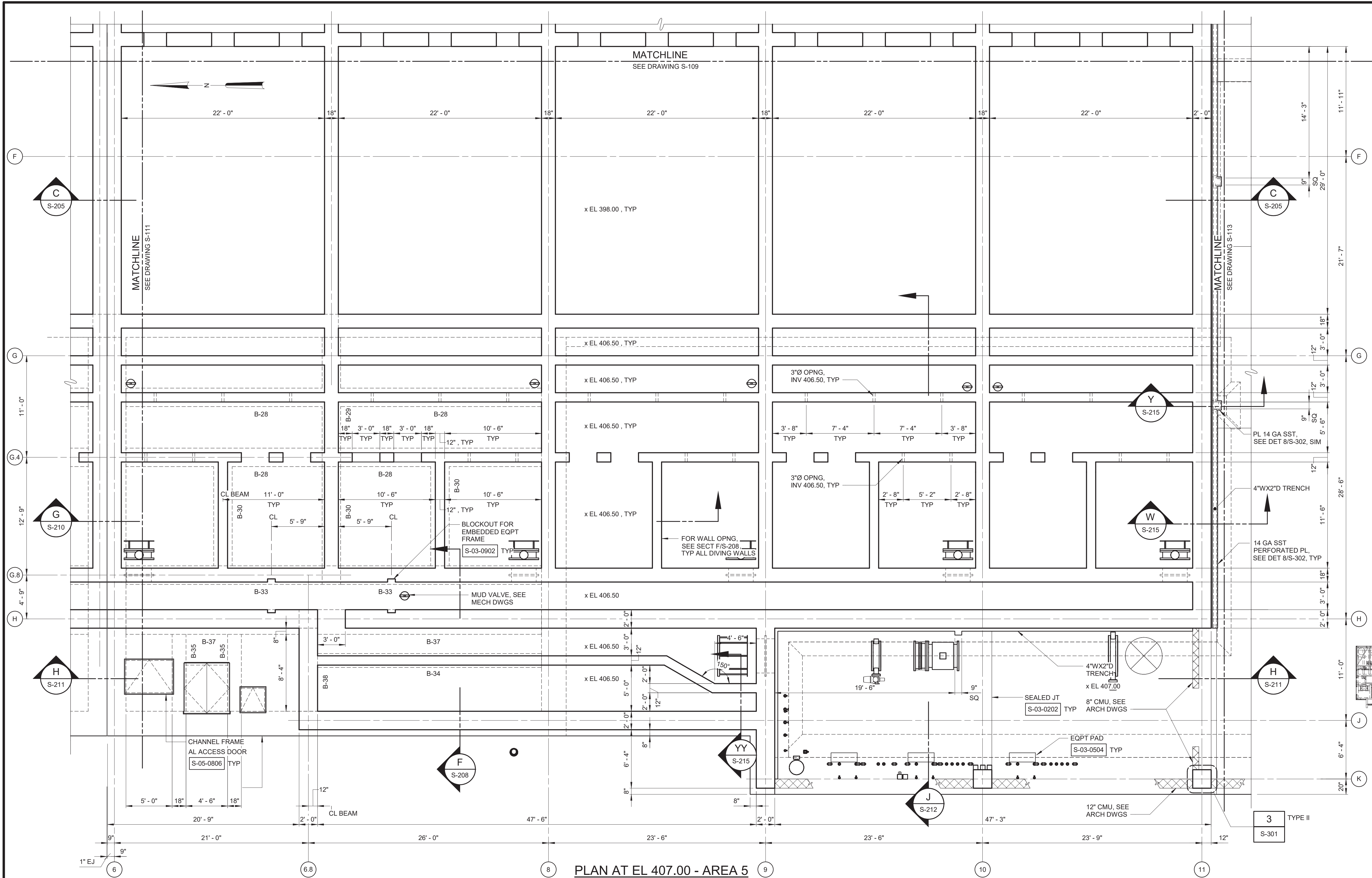
RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
STRUCTURAL
PLAN AT EL 407.00 - AREA 4

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

NOTES:

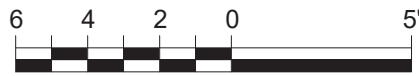
1. OVERALL FACILITY PLANS ARE SHOWN ON G-100 (EL 384.00), G-101 (EL 421.00), G-103 (ROOF).



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:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
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

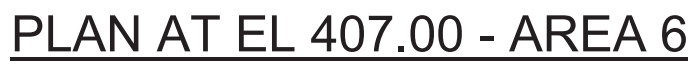
WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

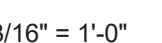
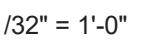
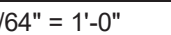
FILTRATION PLANT
STRUCTURAL
PLAN AT EL 407.00 - AREA 5

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

1. OVERALL FACILITY PLANS ARE SHOWN ON G-100 (EL 384.00), G-101 (EL 421.00), G-103 (ROOF).



- PROVIDE CLASS A6 CONCRETE
FULL HEIGHT OF WALL
- PROVIDE CLASS A6 CONCRETE
FOR SLAB AT EL 407.00

$$1/32'' = 1'-0''$$


WARNING

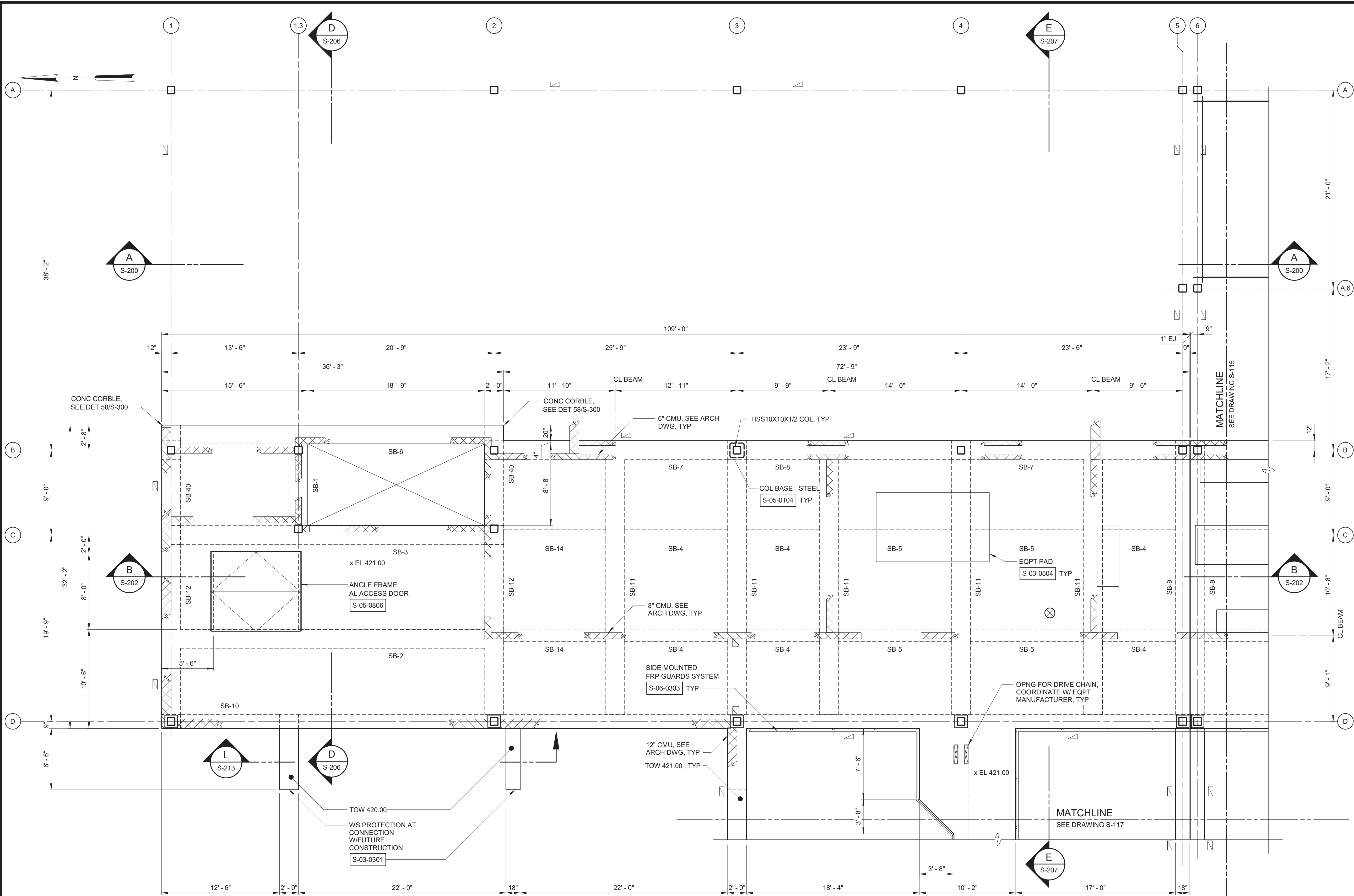
PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 

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:	

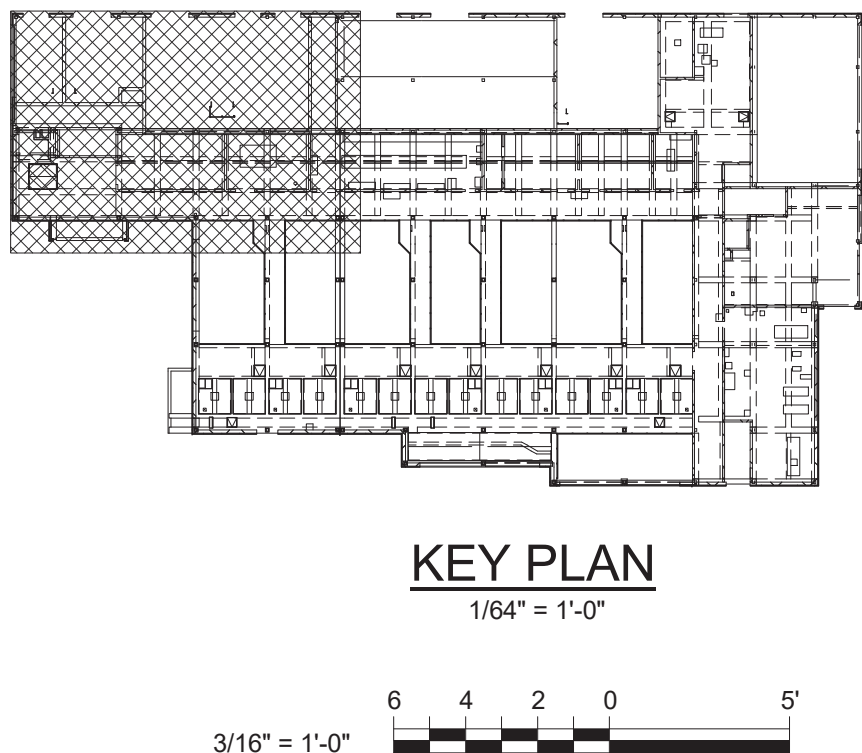
Autodesk Docs://90388-000_Rye_Lake_Filtration/90388-000-WFP-S.mvt



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.

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

- NOTES:
- OVERALL FACILITY PLANS ARE SHOWN ON G-100 (EL 384.00), G-101 (EL 421.00), G-103 (ROOF).
 - ALL HSS10 COLUMNS ALONG GRID LINE D SHALL BE ENCASED IN CONCRETE PER DETAIL 12/S-302.
 - ▨ INDICATES LOCATION OF VERTICAL BRACE, SEE FRAMING ELEVATIONS.



REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
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

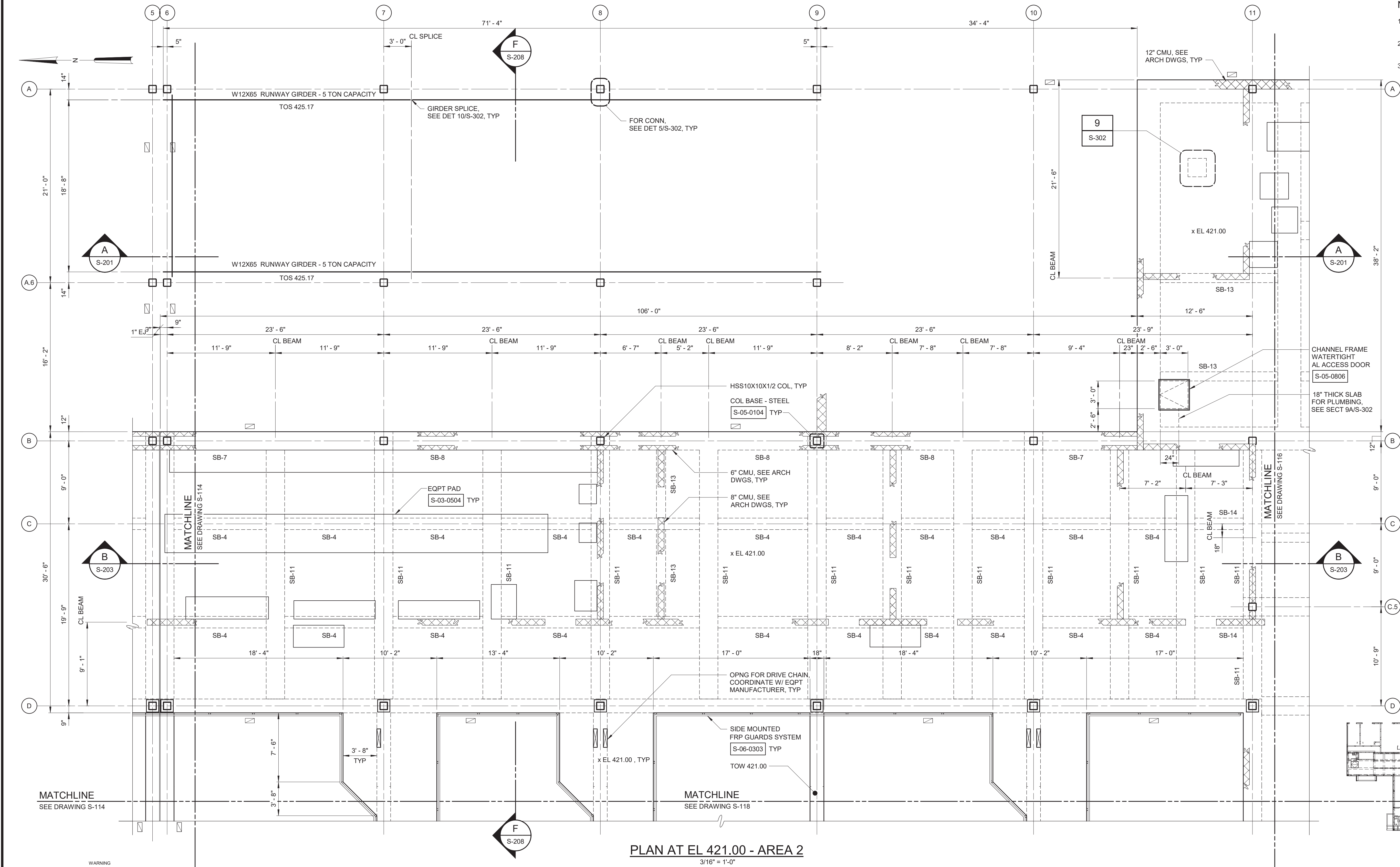
WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

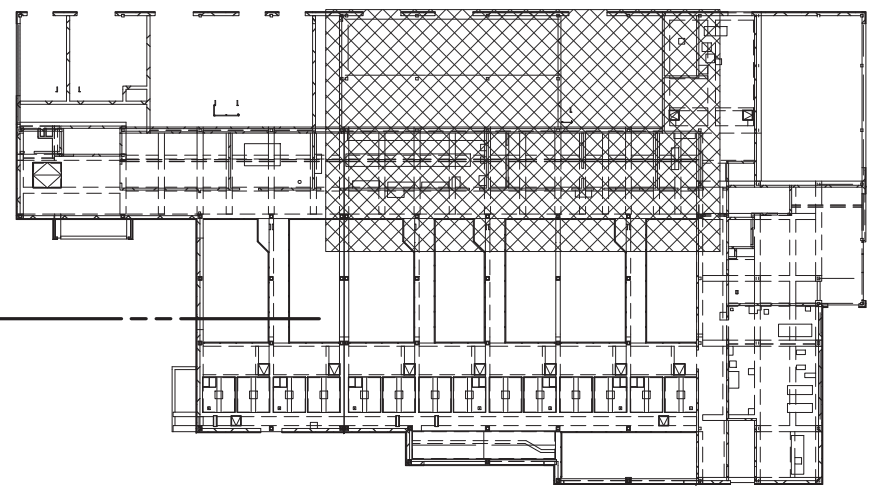
FILTRATION PLANT
STRUCTURAL
PLAN AT EL 421.00 - AREA 1

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-114

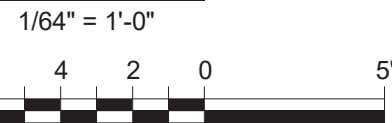
Autodesk Docs/00388-000_Rye_Lake_Filtration/00388-000-WFP-S-115
2/20/2025 10:52:28 AM



- NOTES:
- OVERALL FACILITY PLANS ARE SHOWN ON G-100 (EL 384.00), G-101 (EL 421.00), G-103 (ROOF).
 - ALL HSS10 COLUMNS ALONG GRID LINE D SHALL BE ENCASED IN CONCRETE PER DETAIL 12/S-302.
 - INDICATES LOCATION OF VERTICAL BRACE, SEE FRAMING ELEVATIONS.



KEY PLAN



3/16" = 1'-0"

PLAN AT EL 421.00 - AREA 2
3/16" = 1'-0"

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:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
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
STRUCTURAL
PLAN AT EL 421.00 - AREA 2

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-115

Autodesk Docs/090388-000_Rye_Lake_Filtration/090388-000-WFP-S-116
2/20/2025 10:59:30 AM

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:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



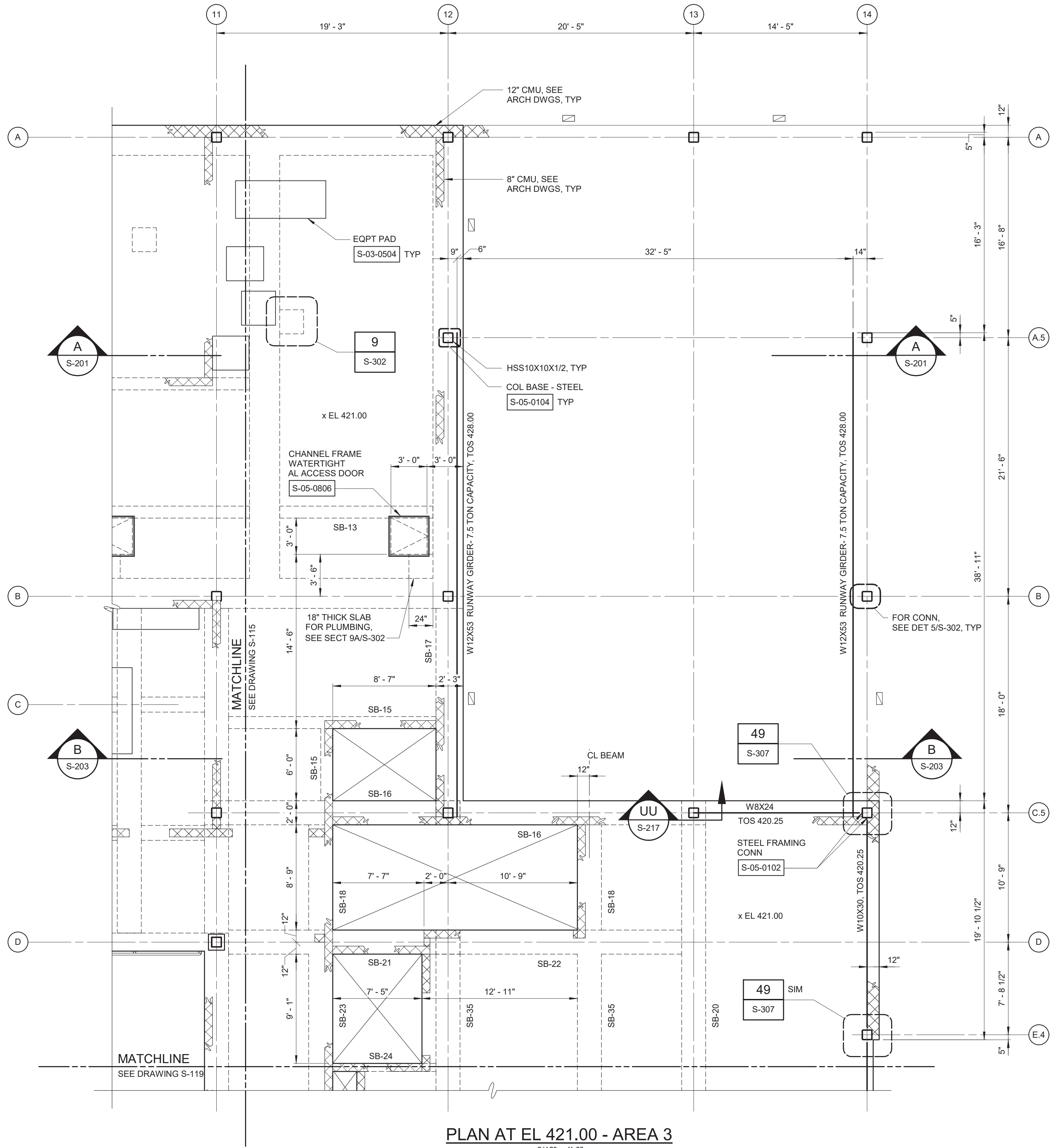
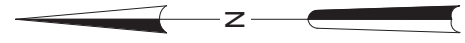
Hazen
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

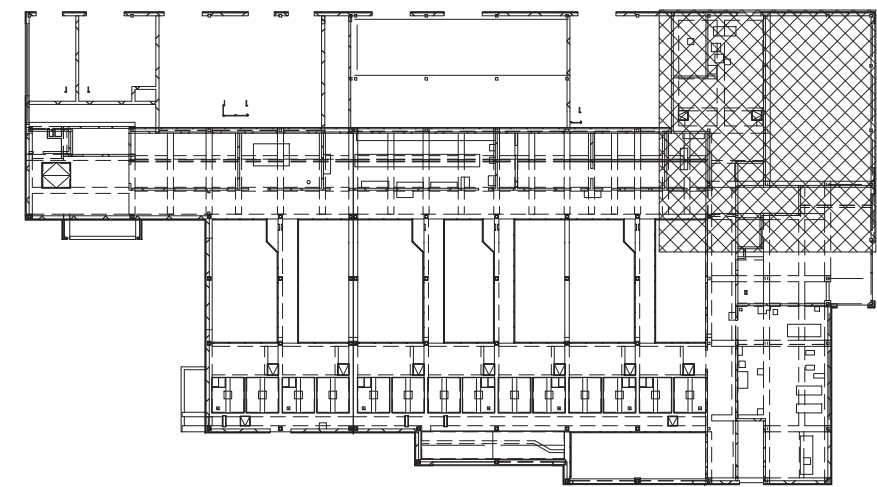
FILTRATION PLANT
STRUCTURAL
PLAN AT EL 421.00 - AREA 3

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-116



NOTES:

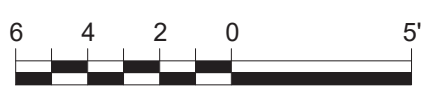
- OVERALL FACILITY PLANS ARE SHOWN ON G-100 (EL 384.00), G-101 (EL 421.00), G-103 (ROOF).
- ALL HSS10 COLUMNS ALONG GRID LINE D SHALL BE ENCASED IN CONCRETE PER DETAIL 12/S-302.
- ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
- INDICATES LOCATION OF VERTICAL BRACE, SEE FRAMING ELEVATIONS.

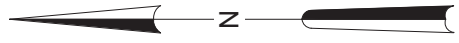


KEY PLAN

1/64" = 1'-0"

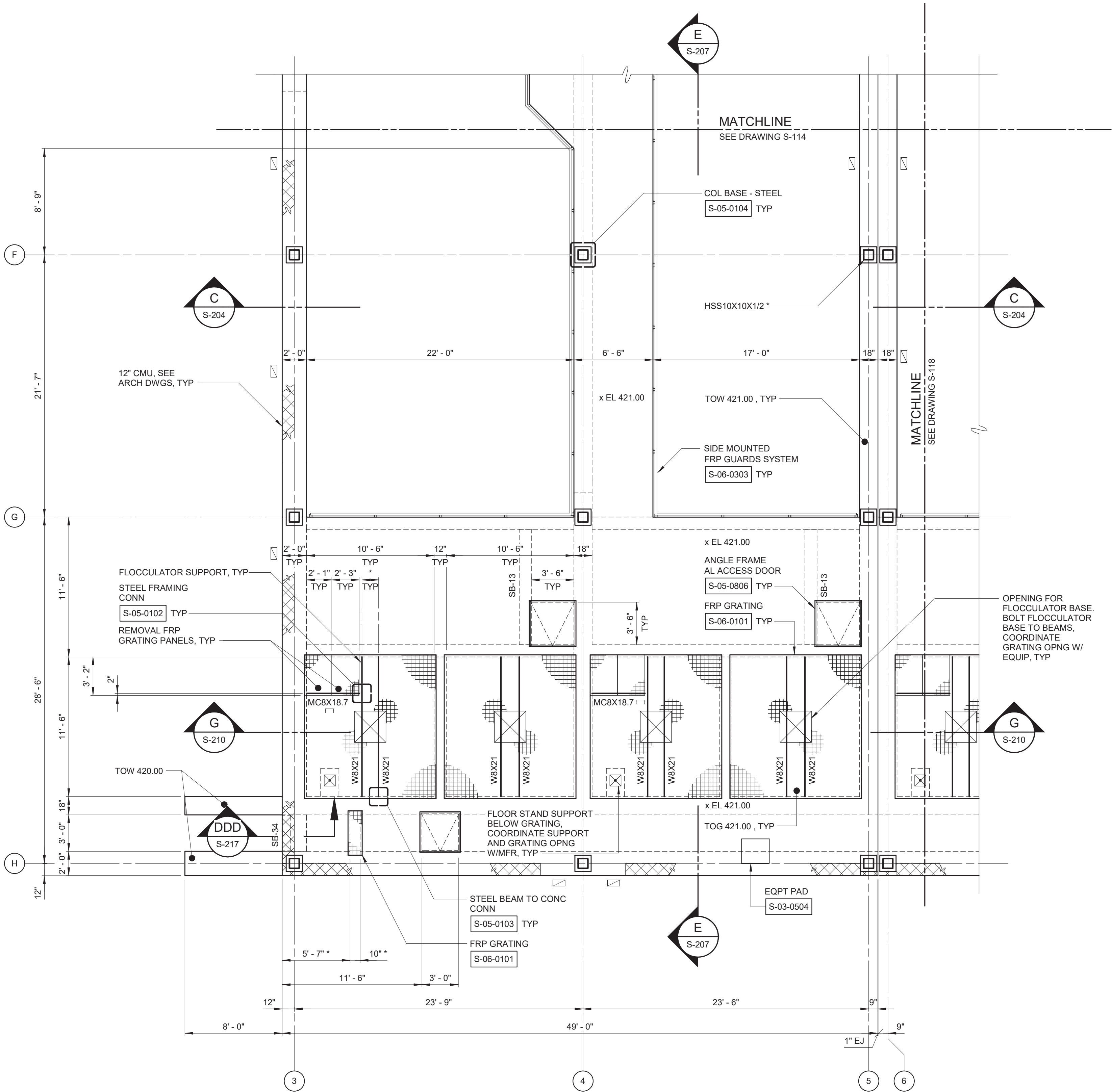
3/16" = 1'-0"





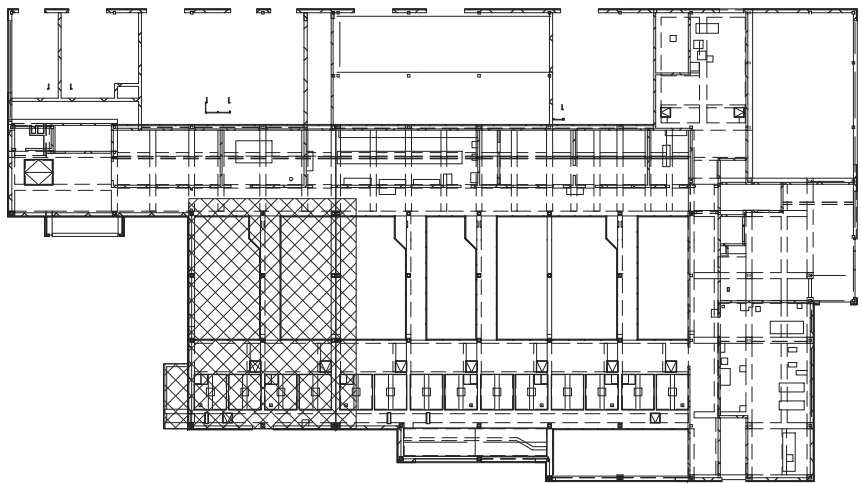
NOTES:

- OVERALL FACILITY PLANS ARE SHOWN ON G-100 (EL 384.00), G-101 (EL 421.00), G-103 (ROOF).
- ALL HSS10 COLUMNS SHOWN ON THIS DRAWING SHALL BE ENCASED IN CONCRETE PER DETAIL 12/S-302.
- * DENOTES DIMENSIONS SHALL BE VERIFIED WITH EQUIPMENT MANUFACTURER.
- ▢ INDICATES LOCATION OF VERTICAL BRACE, SEE FRAMING ELEVATIONS.



PLAN AT EL 421.00 - AREA 4

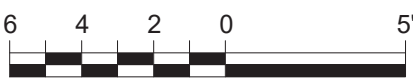
3/16" = 1'-0"



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:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



Hazen

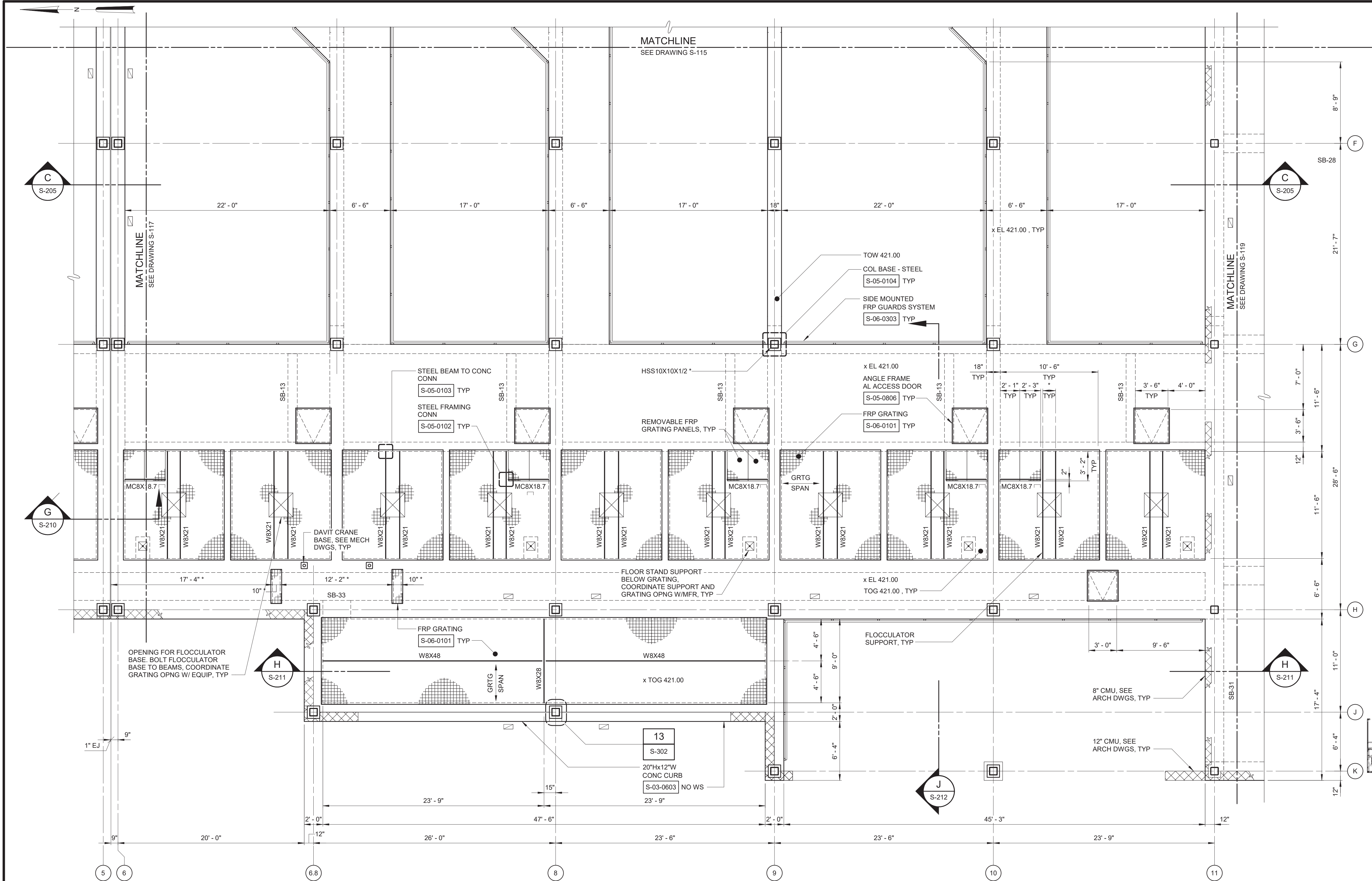
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

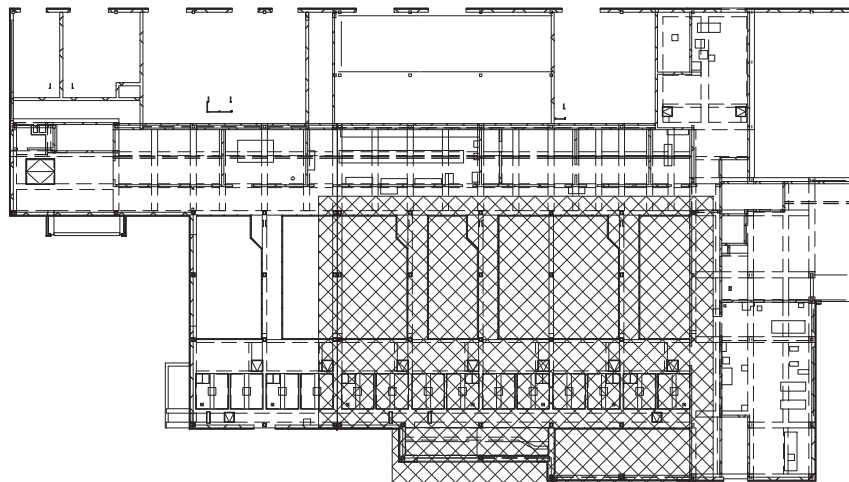
RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
STRUCTURAL
PLAN AT EL 421.00 - AREA 4

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-117



- NOTES:
- OVERALL FACILITY PLANS ARE SHOWN ON G-100 (EL 384.00), G-101 (EL 421.00), G-103 (ROOF).
 - ALL HSS10 COLUMNS SHOWN ON THIS DRAWING SHALL BE ENCASED IN CONCRETE PER DETAIL 12/S-302 UNLESS NOTED OTHERWISE.
 - * DENOTES DIMENSIONS SHALL BE VERIFIED WITH EQUIPMENT MANUFACTURER.
 - INDICATES LOCATION OF VERTICAL BRACE, SEE FRAMING ELEVATIONS.



PLAN AT EL 421.00 - AREA 5

WARNING
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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



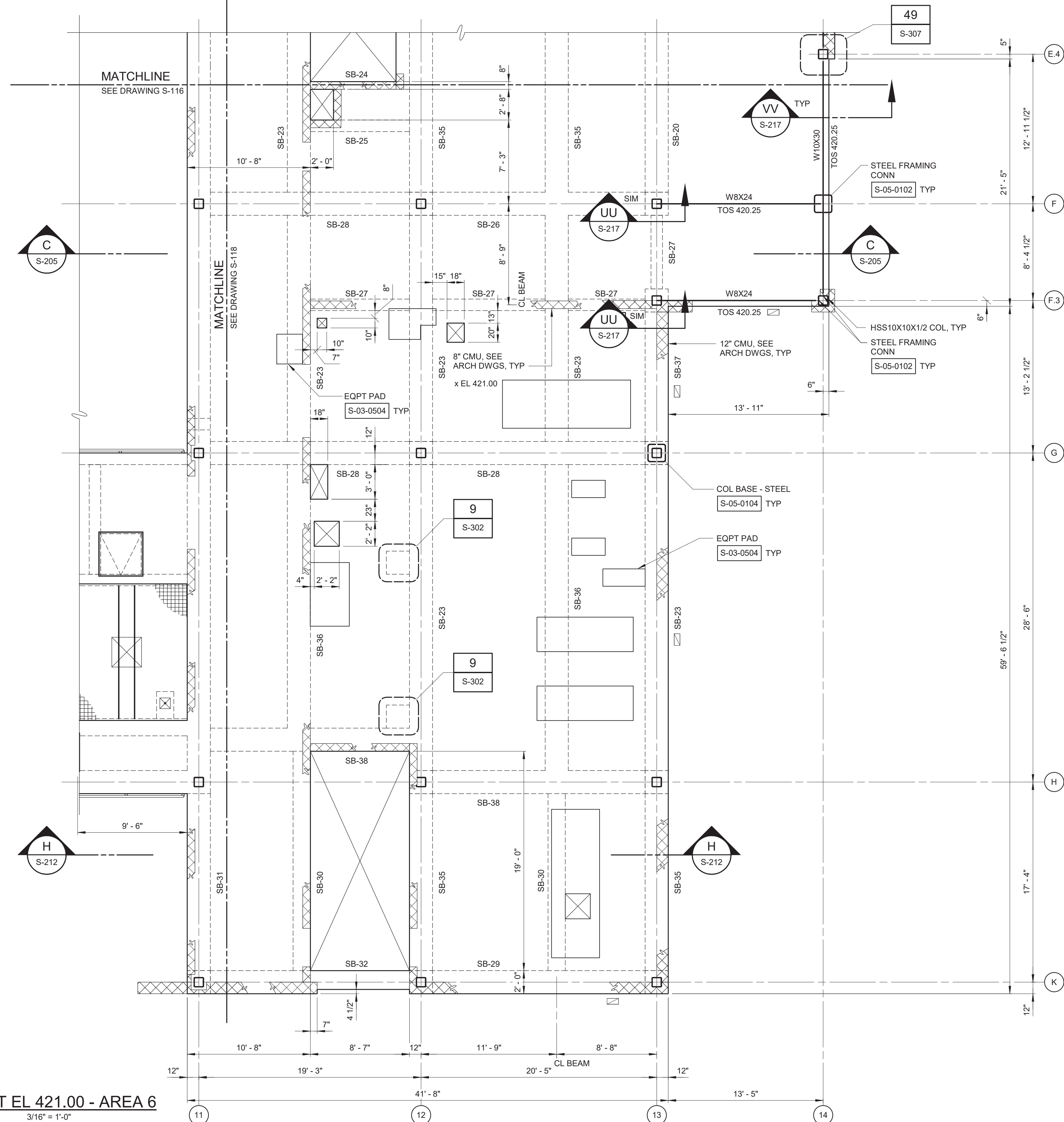
Hazen
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

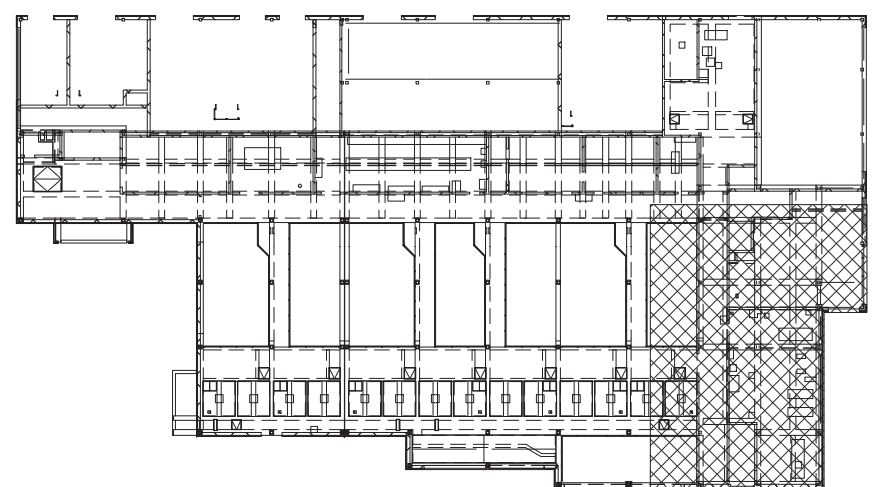
RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
STRUCTURAL
PLAN AT EL 421.00 - AREA 5

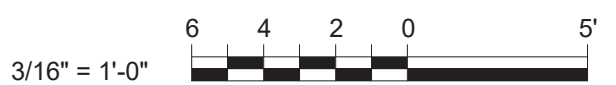
DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-118



1. OVERALL FACILITY PLANS ARE SHOWN ON G-100 (EL 384.00), G-101 (EL 421.00), G-103 (ROOF).
2. ALL HSS10 COLUMNS ALONG GRID LINE 11 SHALL BE ENCASED IN CONCRETE PER DETAIL 12/S-302.
3. ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
4.  INDICATES LOCATION OF VERTICAL BRACE, SEE FRAMING ELEVATIONS.



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



WARNING

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PLAN AT EL 421.00 - AREA 6

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

PROJECT: TOWN OF FISH LAKE				PROJECT ENGINEER: R. FROST	
				DESIGNED BY: J. EDER	
				DRAWN BY: R. HERNANDEZ	
				CHECKED BY: C. PHILLIPS	
				IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	
REV	ISSUED FOR	DATE	BY		



Hazen

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

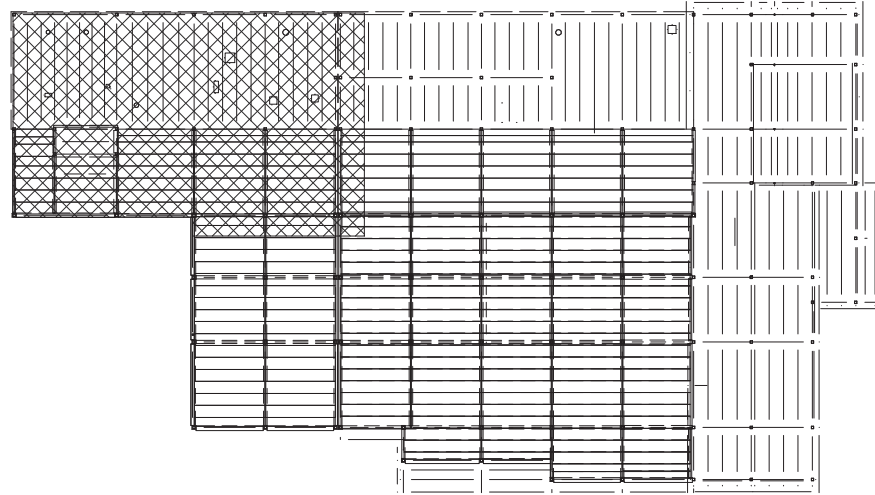
WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
STRUCTURAL
PLAN AT EL 421.00 - AREA 6

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

S-119


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

1. OVERALL FACILITY PLANS ARE SHOWN ON G-100 (EL. 384.00), G-101 (EL. 421.00), G-103 (ROOF).
2. * DENOTES CONCRETE ENCASED FRAMING. FOR CONCRETE ENCASED BEAMS, SEE DETAIL 7/IS-302 UNLESS NOTED OTHERWISE.
3. ALL HSS10 COLUMNS ALONG GRID LINE D SHALL BE ENCASED IN CONCRETE PER DETAIL 12/S-302.
4. FOR STEEL BEAM TO COLUMN CONNECTIONS, SEE STANDARD DETAIL S-05-0102 TYPE II. FOR STEEL BEAM TO STEEL BEAM CONNECTIONS, SEE STANDARD DETAIL S-05-0102 TYPE I UNLESS NOTED OTHERWISE.
5.  INDICATES LOCATION OF VERTICAL BRACE, SEE FRAMING ELEVATIONS.
6. ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
7. METAL DECK SHALL BE 1/4" C 20 GUGE. FASTENER PATTERN SHALL BE 36/4, 5/8 PADDLE WELDS W/ #21 SCREW SIDELAP FASTENERS PER SPAN EQUALLY SPACED. AT OPENINGS IN METAL DECK, DECK SHALL BE ATTACHED TO STRUCTURAL MEMBERS ON ALL SIDES WITH #10 SCREWS AT 9" MAX. PROVIDE POUR STOPS AT ALL EDGES UNO.
8. PROVIDE CONNECTION PLATES FOR FUTURE CONSTRUCTION IDENTICAL TO THOSE UNDER THIS CONTRACT.

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.

[illegible]

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0  1/2" 1

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

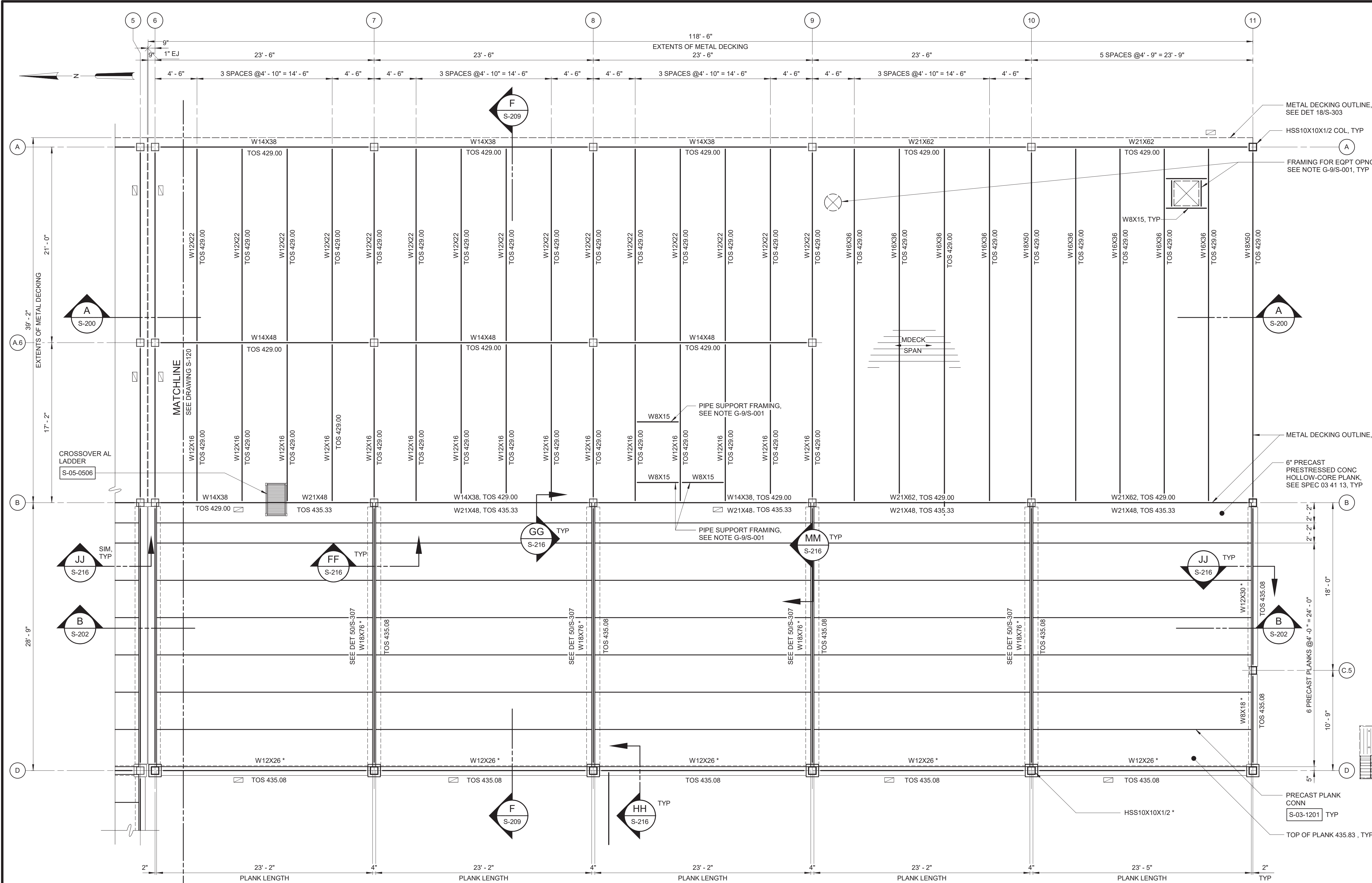
RYE LAKE WATER FILTRATION PLANT HARRISON, NY

FILTRATION PLANT
STRUCTURAL
FLAT ROOF FRAMING PLAN - AREA 1

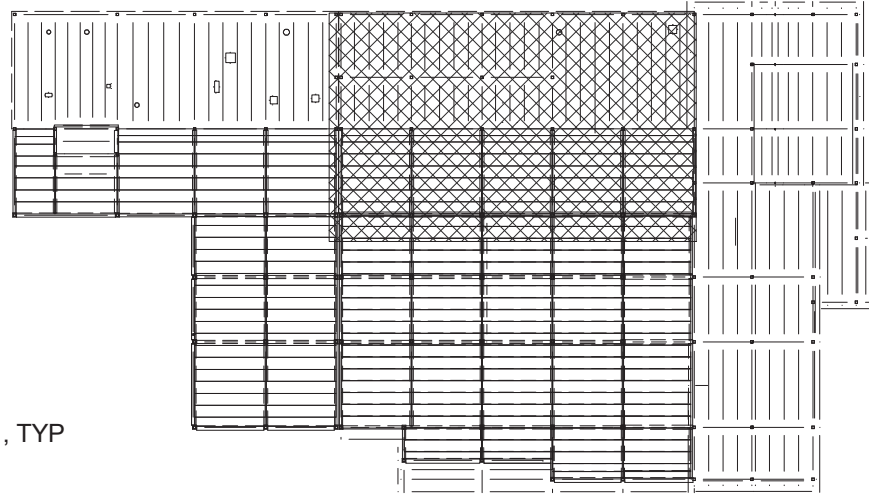
DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	

S-120

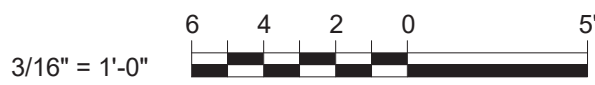
Autodesk Docs/00388-000_Ply_Lake_Filtration/00388-000-WFF-S-14
2/20/2025 10:59:43 AM



- NOTES:
- OVERALL FACILITY PLANS ARE SHOWN ON G-100 (EL 384.00), G-101 (EL 421.00), G-103 (ROOF).
 - * DENOTES CONCRETE ENCASED FRAMING. FOR CONCRETE ENCASED BEAMS, SEE DETAIL 7/S-302 UNLESS NOTED OTHERWISE.
 - ALL HSS10 COLUMNS ALONG GRID LINE D SHALL BE ENCASED IN CONCRETE PER DETAIL 12/S-302.
 - FOR STEEL BEAM TO COLUMN CONNECTIONS, SEE STANDARD DETAIL S-05-0102 TYPE II. FOR STEEL BEAM TO BEAM CONNECTIONS, SEE STANDARD DETAIL S-05-0102 TYPE I UNLESS NOTED OTHERWISE.
 - ☐ INDICATES LOCATION OF VERTICAL BRACE, SEE FRAMING ELEVATIONS.
 - ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
 - METAL DECK SHALL BE 1.5 C 20 GAGE. FASTENER PATTERN SHALL BE 36/4. 5/8" PUDDLE WELDS W/ 2#10 SCREW SIDELAP FASTENERS PER SPAN EQUALLY SPACED. AT OPENINGS IN METAL DECK, DECK SHALL BE ATTACHED TO STRUCTURAL MEMBERS ON ALL SIDES WITH #10 SCREWS AT 9" MAX. PROVIDE POUR STOPS AT ALL EDGES UNO.



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



WARNING
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				PROJECT ENGINEER:	R. FROST
				DESIGNED BY:	J. EDER
				DRAWN BY:	R. HERNANDEZ
				CHECKED BY:	C. PHILLIPS
				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



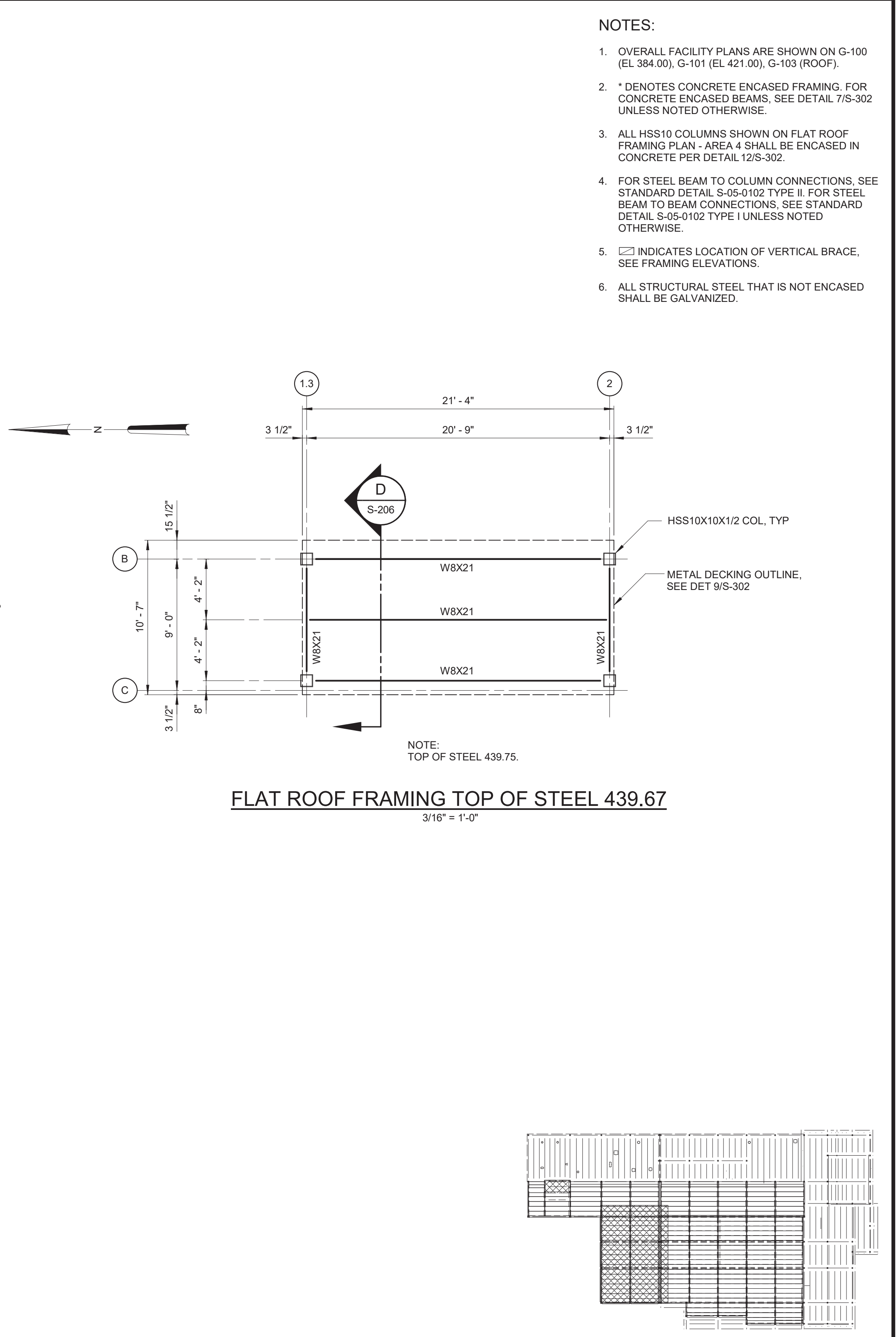
Hazen
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
STRUCTURAL
FLAT ROOF FRAMING PLAN - AREA 2

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-121

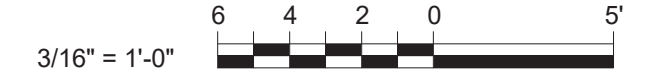
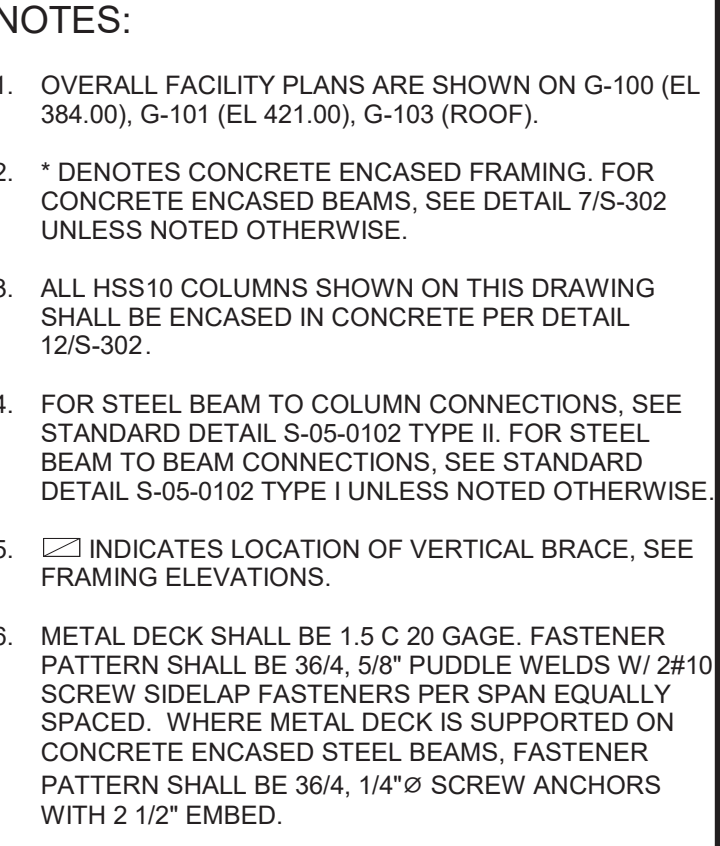

$$3/16'' = 1'-0''$$
BID SET

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

RYE LAKE WATER FILTRATION PLANT HARRISON, NY

FILTRATION PLANT
STRUCTURAL
FLAT ROOF FRAMING PLANS - AREA 4 AND TOP OF
STEEL 439.67

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-122



SHED ROOF FRAMING PLAN - AREA 5

				PROJECT ENGINEER:	R. FROST
				DESIGNED BY:	J. EDER
				DRAWN BY:	R. HERNANDEZ
				CHECKED BY:	C. PHILLIPS
				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

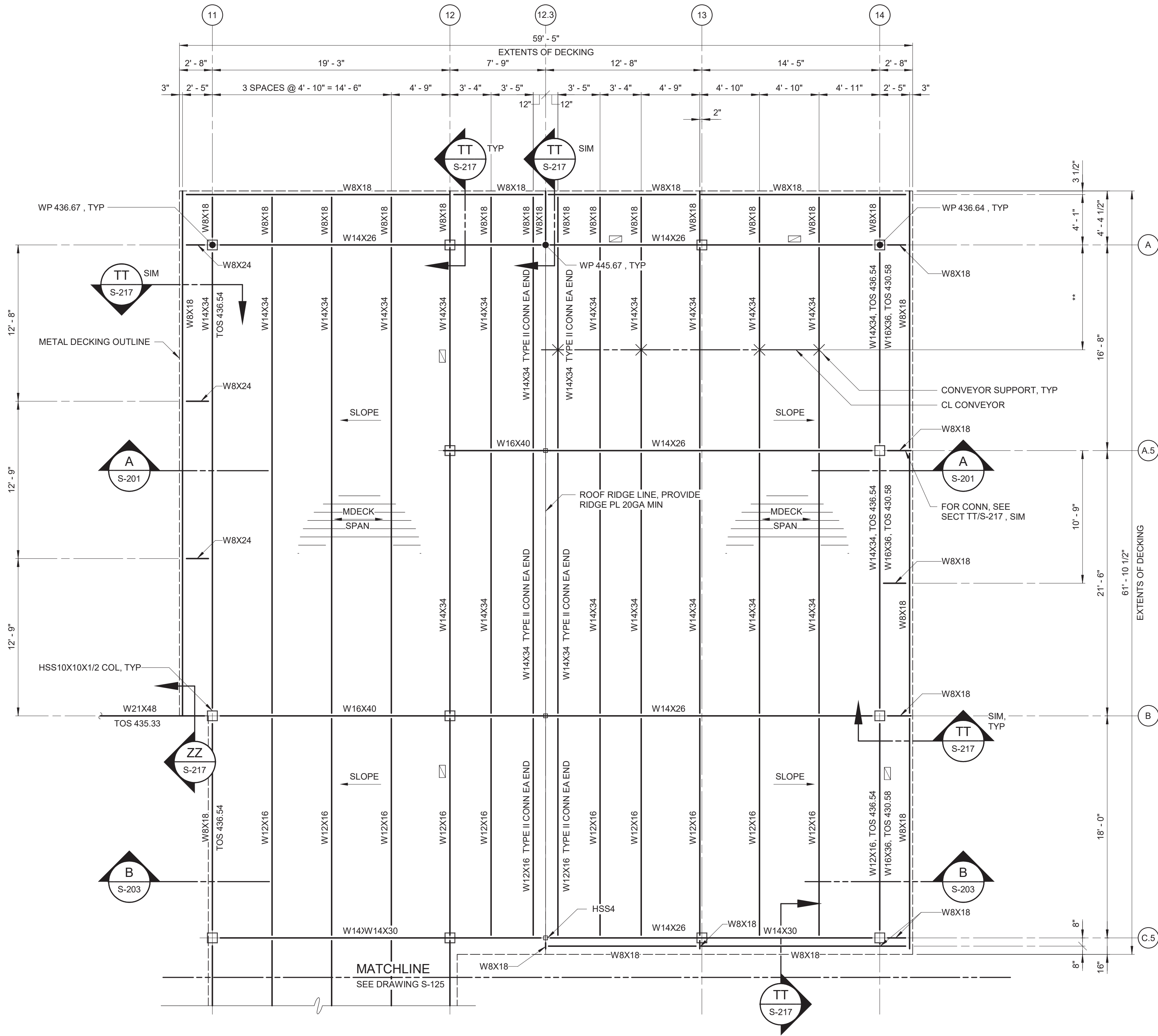
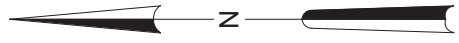
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
STRUCTURAL
SHED ROOF FRAMING PLAN - AREA 5

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-123



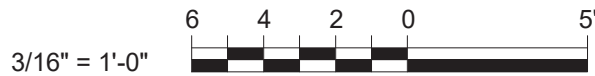
GABLE ROOF FRAMING PLAN - AREA 3

3/16" = 1'-0"



KEY PLAN

1/64" = 1'-0"



- NOTES:
- OVERALL FACILITY PLANS ARE SHOWN ON G-100 (EL 384.00), G-101 (EL 421.00), G-103 (ROOF).
 - FOR STEEL BEAM TO COLUMN CONNECTIONS, SEE STANDARD DETAIL S-05-0102 TYPE II. FOR STEEL BEAM TO BEAM CONNECTIONS, SEE STANDARD DETAIL S-05-0102 TYPE I UNLESS NOTED OTHERWISE.
 - INDICATES LOCATION OF VERTICAL BRACE, SEE FRAMING ELEVATIONS.
 - ALL STRUCTURAL STEEL SHALL BE GALVANIZED.
 - ** DENOTES DIMENSIONS SHALL BE VERIFIED WITH EQUIPMENT MANUFACTURER.
 - METAL DECK SHALL BE 1.5 WR 20 GAGE. FASTENER PATTERN SHALL BE 36/5 5/8" PUDDLE WELDS W/ 2#10 SCREW SIDELAP FASTENERS PER SPAN EQUALLY SPACED. WHERE BEAM FLANGES ARE NOT PARALLEL TO METAL DECK, PROVIDE BENT PLATES WELDED TO BEAMS AND TO METAL DECK.

WARNING
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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
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

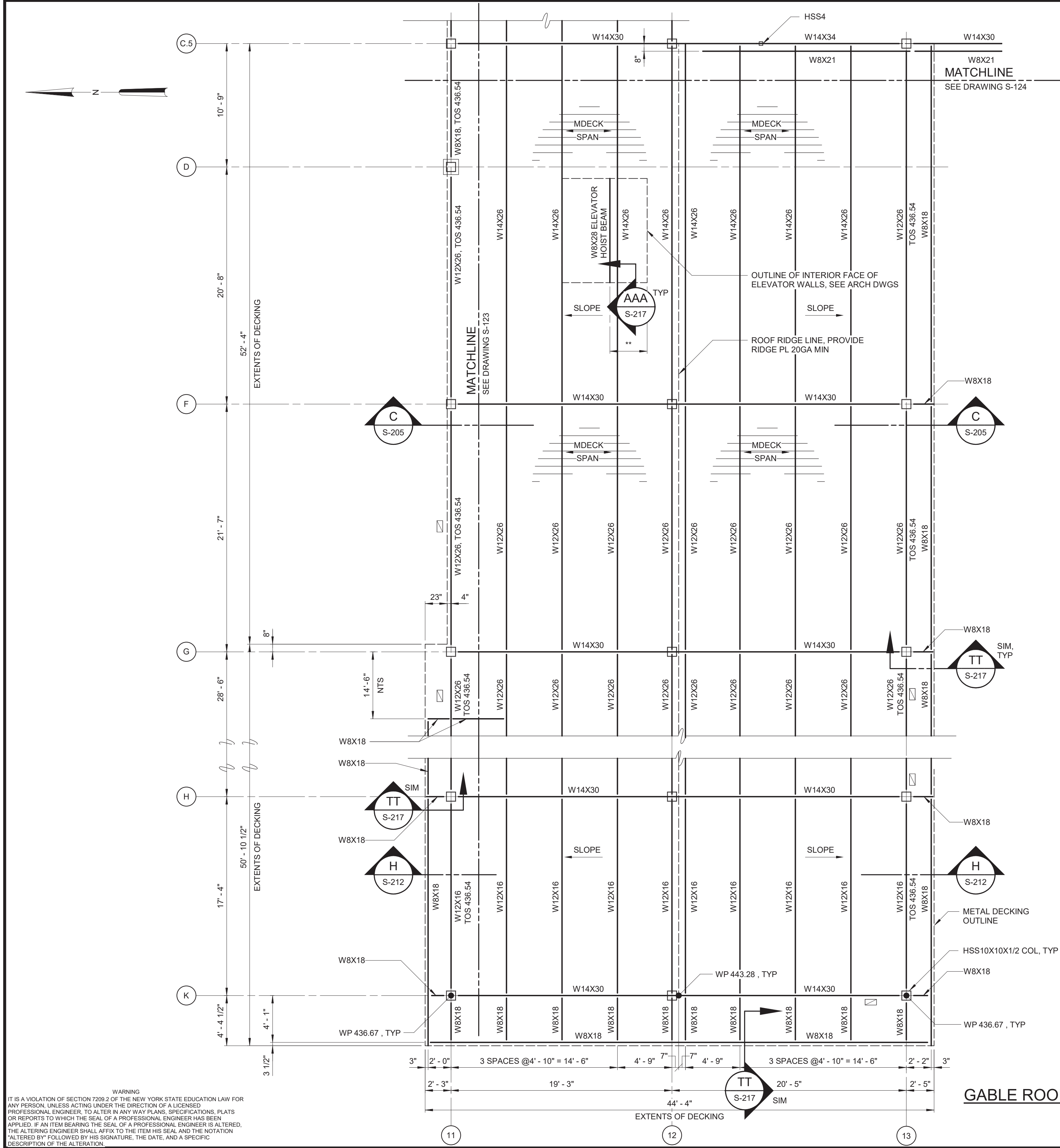
WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

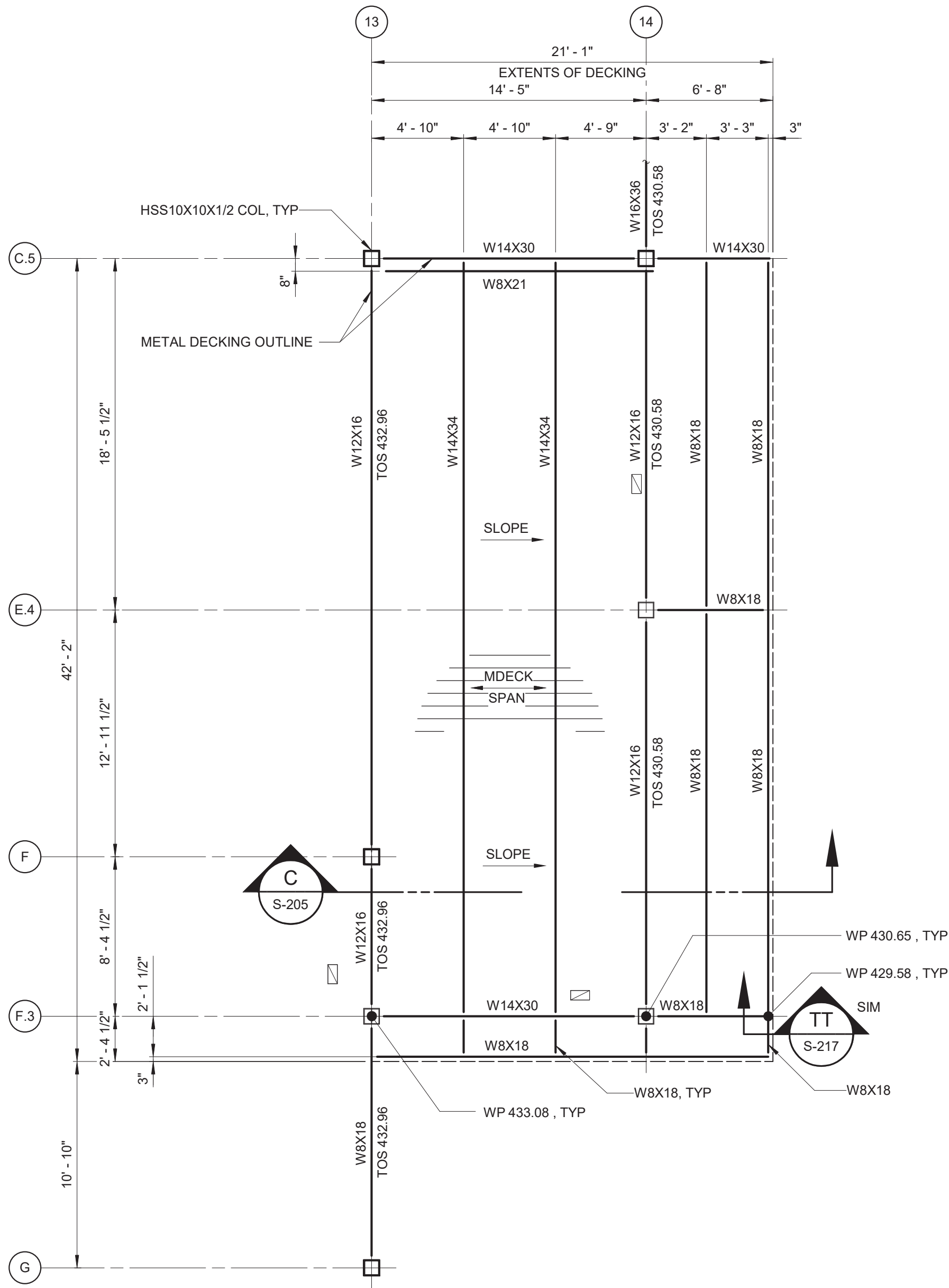
FILTRATION PLANT
STRUCTURAL
GABLE ROOF FRAMING PLAN - AREA 3

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-124

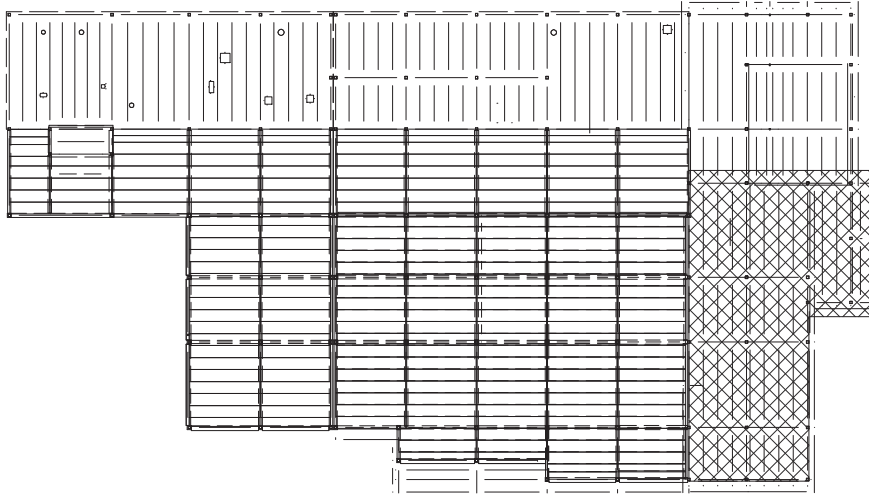
Autodesk Docs/00388-000_Rye_Lake_Filtration/00388-000-WFP-S-125
2/20/2025 10:59:53 AM



GABLE ROOF FRAMING PLAN - AREA 6

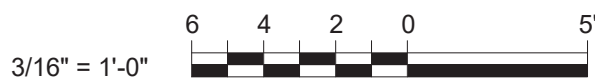


LOW ROOF - AREA 6



KEY PLAN

1/64" = 1'-0"



NOTES:

- OVERALL FACILITY PLANS ARE SHOWN ON G-100 (EL 384.00), G-101 (EL 421.00), G-103 (ROOF).
- FOR STEEL BEAM TO COLUMN CONNECTIONS, SEE STANDARD DETAIL S-05-0102 TYPE II. FOR STEEL BEAM TO BEAM CONNECTIONS, SEE STANDARD DETAIL S-05-0102 TYPE I UNLESS NOTED OTHERWISE.
- INDICATES LOCATION OF VERTICAL BRACE, SEE FRAMING ELEVATIONS.
- ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
- ** DENOTES DIMENSIONS SHALL BE VERIFIED WITH EQUIPMENT MANUFACTURER.
- METAL DECK SHALL BE 1.5 C 20 GAGE. FASTENER PATTERN SHALL BE 36/5 5/8" PUDDLE WELDS W/ 2#10 SCREW SIDELAP FASTENERS PER SPAN EQUALLY SPACED. WHERE BEAM FLANGES ARE NOT PARALLEL TO METAL DECK, PROVIDE BENT PLATES WELDED TO BEAMS AND TO METAL DECK.

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
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
STRUCTURAL
ROOF FRAMING PLANS - AREA 6

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

S-125

1. REFER TO SPECIFICATION 31 00 01 EARTHWORK



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 FOR 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.

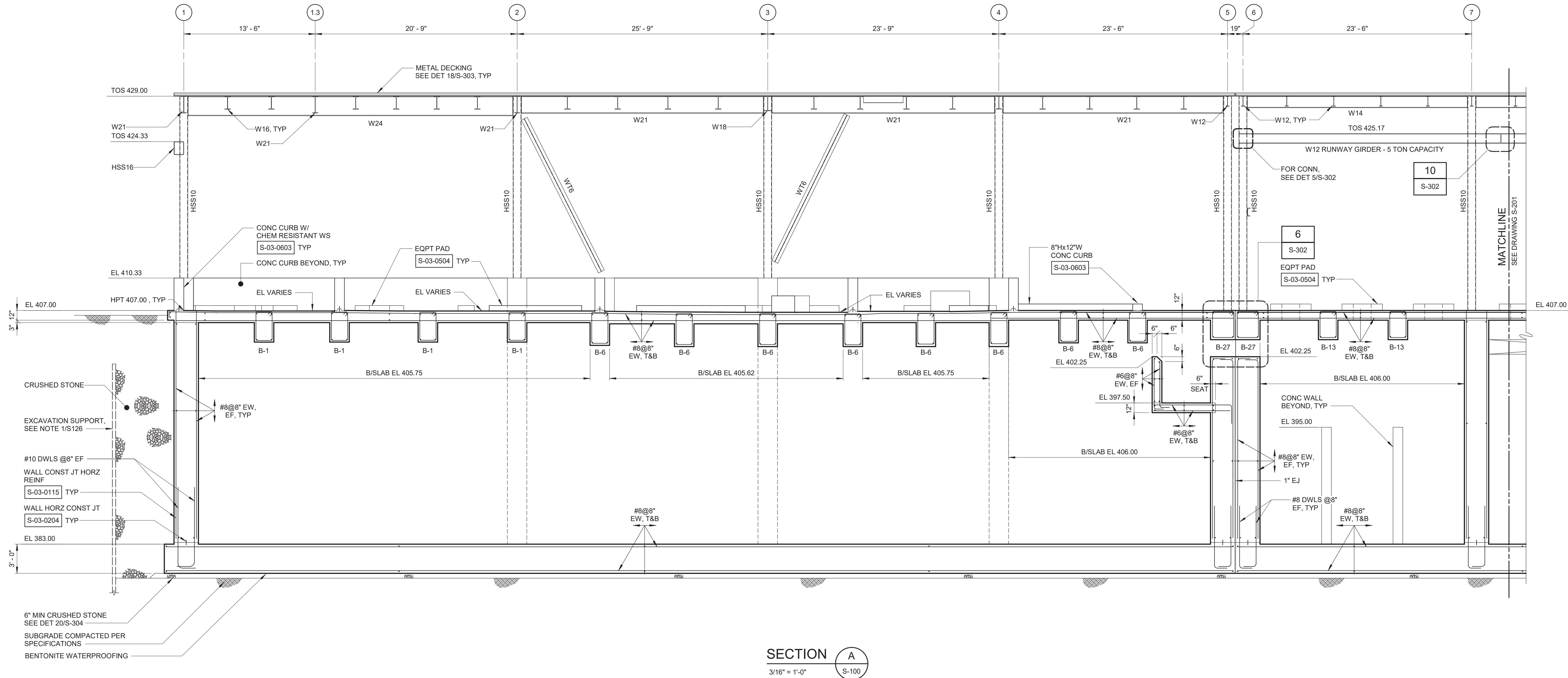
PROJECT ENGINEER:	R. FROST	
DESIGNED BY:	J. EDER	
DRAWN BY:	R. HERNANDEZ	
CHECKED BY:	C. PHILLIPS	
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE		
0 1/2" 1" 		

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-126

NOTES:

- ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
- SOIL TIEDOWNS NOT SHOWN. SEE SOIL TIEDOWN PLANS.



WARNING
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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
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
STRUCTURAL
SECTIONS - SHEET 1

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

1. ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
2. SOIL TIEDOWNS NOT SHOWN, SEE SOIL TIEDOWN PLANS.

BID SET

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

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

1. ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
2. SOIL TIEDOWNS NOT SHOWN, SEE SOIL TIEDOWN PLANS.
3. * DENOTES CONCRETE ENCASED FRAMING. FOR CONCRETE ENCASED BEAMS, SEE DETAIL 7/5-302 UNO. FOR CONCRETE ENCASED COLUMNS SEE DETAIL 12/S-302 UNLESS NOTED OTHERWISE.

BID SET

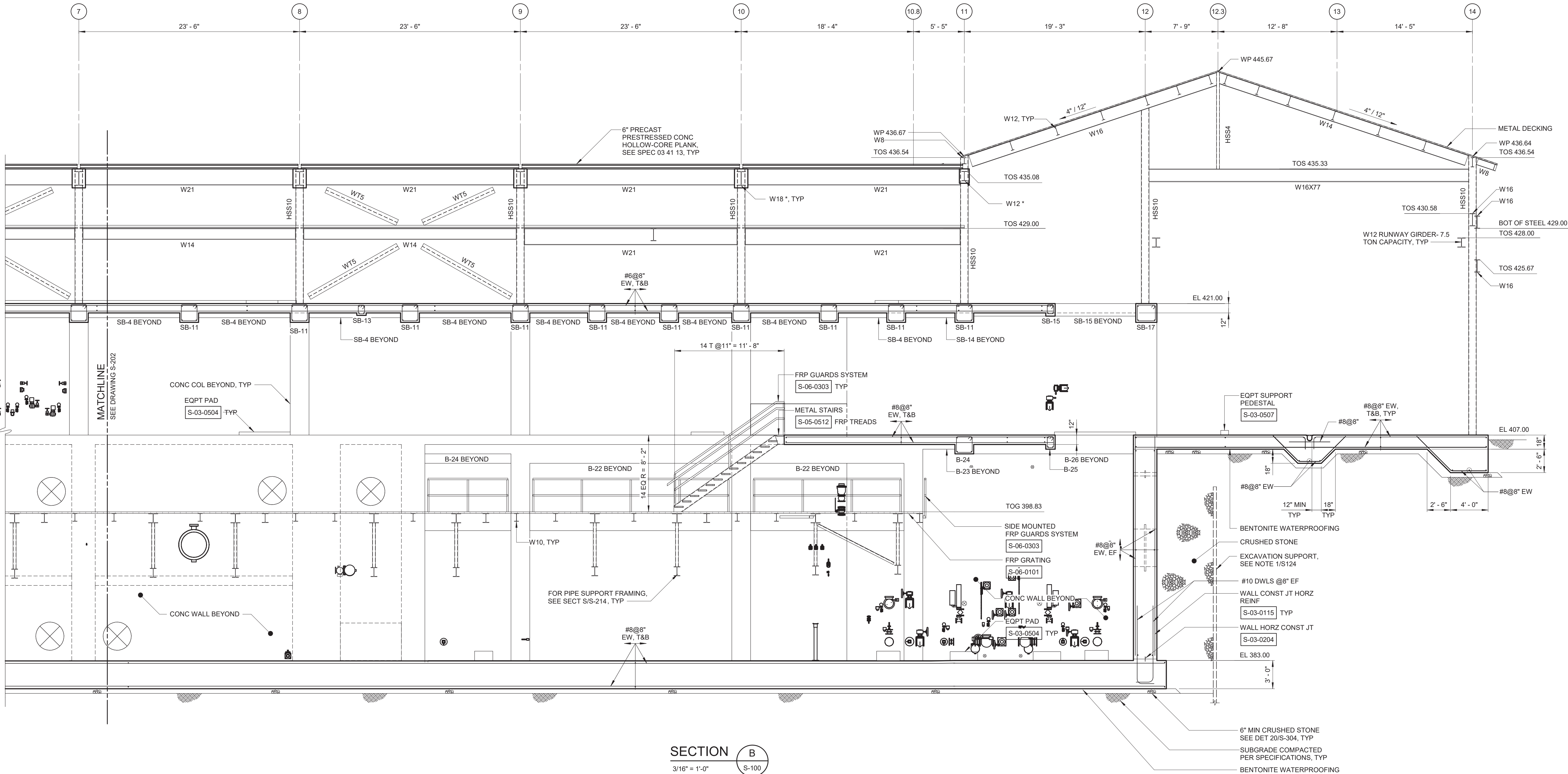
WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT HARRISON, NY

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

S-202

- NOTES:
- ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
 - SOIL TIEDOWNS NOT SHOWN, SEE SOIL TIEDOWN PLANS.
 - * DENOTES CONCRETE ENCASED FRAMING. FOR CONCRETE ENCASED BEAMS, SEE DETAIL 7/S-302 UNO. FOR CONCRETE ENCASED COLUMNS SEE DETAIL 12/S-302 UNLESS NOTED OTHERWISE.



SECTION B
3/16" = 1'-0"

3/16" = 1'-0"

WARNING
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REV	ISSUED FOR	DATE	BY	PROJECT ENGINEER: R. FROST
				DESIGNED BY: J. EDER
				DRAWN BY: R. HERNANDEZ
				CHECKED BY: C. PHILLIPS
				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

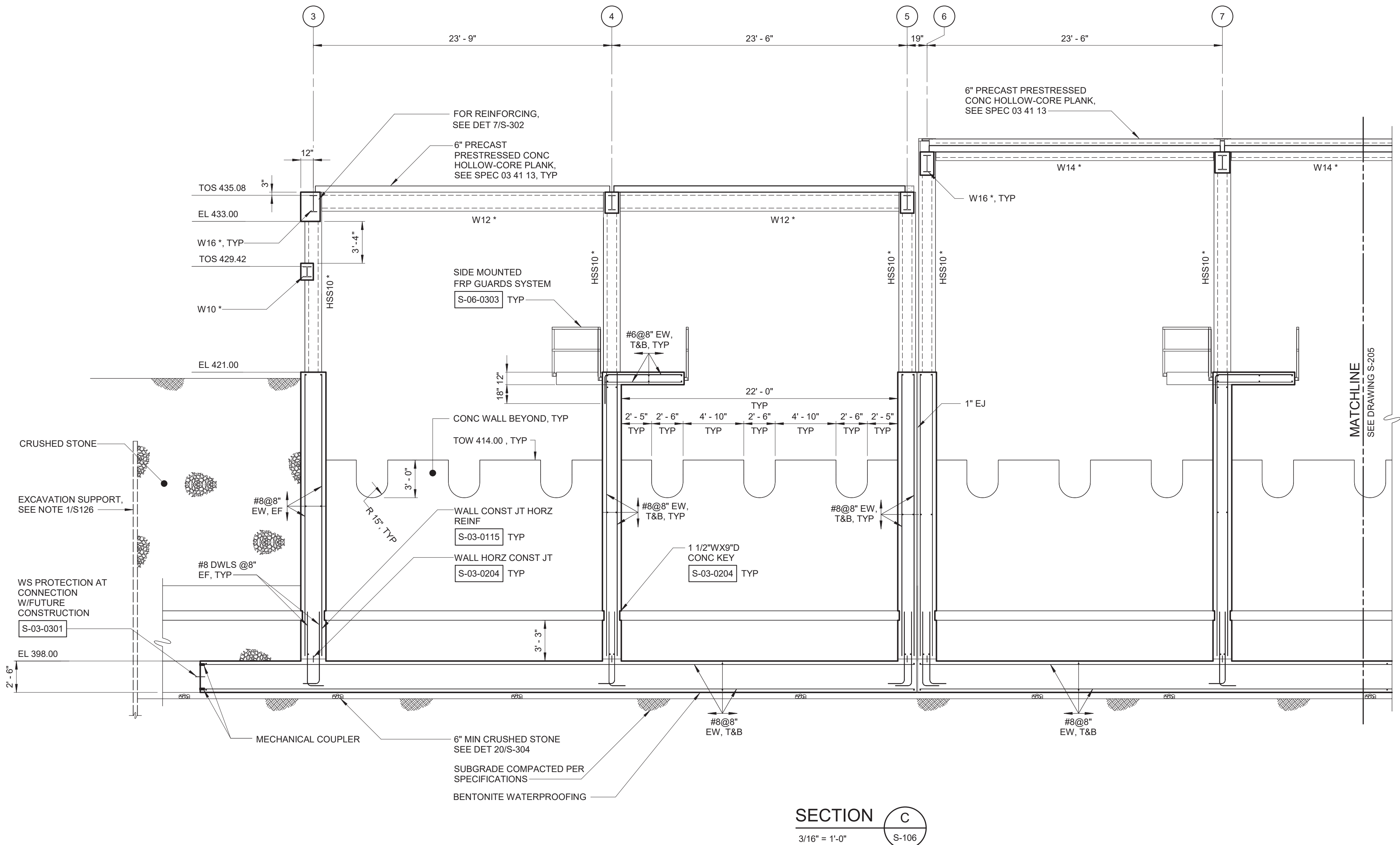
RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
STRUCTURAL
SECTIONS - SHEET 4

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

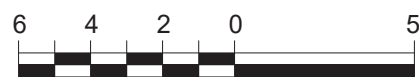
NOTES:

1. SOIL TIEDOWNS NOT SHOWN, SEE SOIL TIEDOWN PLANS.
2. ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
3. * DENOTES CONCRETE ENCASED FRAMING. FOR CONCRETE ENCASED BEAMS, SEE DETAIL 7/S-302 UNO. FOR CONCRETE ENCASED COLUMNS SEE DETAIL 12/S-302 UNLESS NOTED OTHERWISE.



SECTION C
3/16" = 1'-0"

3/16" = 1'-0"



WARNING
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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
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

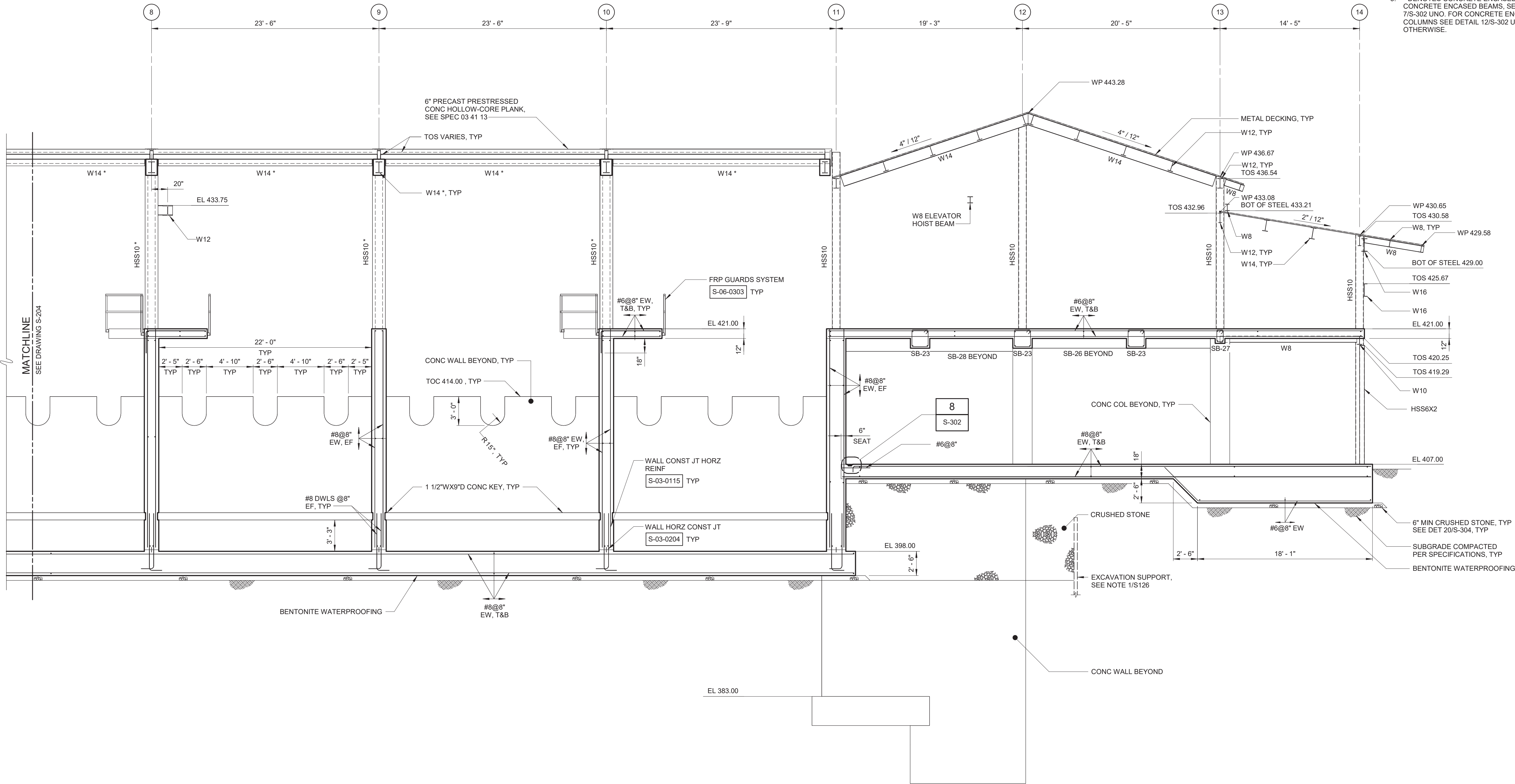
RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
STRUCTURAL
SECTIONS - SHEET 5

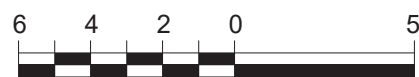
DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-204

NOTES:

1. ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
2. SOIL TIEDOWNS NOT SHOWN. SEE SOIL TIEDOWN PLANS.
3. * DENOTES CONCRETE ENCASED FRAMING. FOR CONCRETE ENCASED BEAMS, SEE DETAIL 7/S-302 UNO. FOR CONCRETE ENCASED COLUMNS SEE DETAIL 12/S-302 UNLESS NOTED OTHERWISE.



SECTION C
3/16" = 1'-0"



WARNING
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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
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
STRUCTURAL
SECTIONS - SHEET 6

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

1. ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
2. SOIL TIEDOWNS NOT SHOWN, SEE SOIL TIEDOWN PLANS.
3. * DENOTES CONCRETE ENCASED FRAMING. FOR CONCRETE ENCASED BEAMS, SEE DETAIL 7/5-302 UNO. FOR CONCRETE ENCASED COLUMNS SEE DETAIL 12/5-302 UNLESS NOTED OTHERWISE.



WARNING

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				PROJECT ENGINEER:	R. FROST
				DESIGNED BY:	J. EDER
				DRAWN BY:	R. HERNANDEZ
				CHECKED BY:	C. PHILLIPS
				IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1" 
REV	ISSUED FOR	DATE	BY		

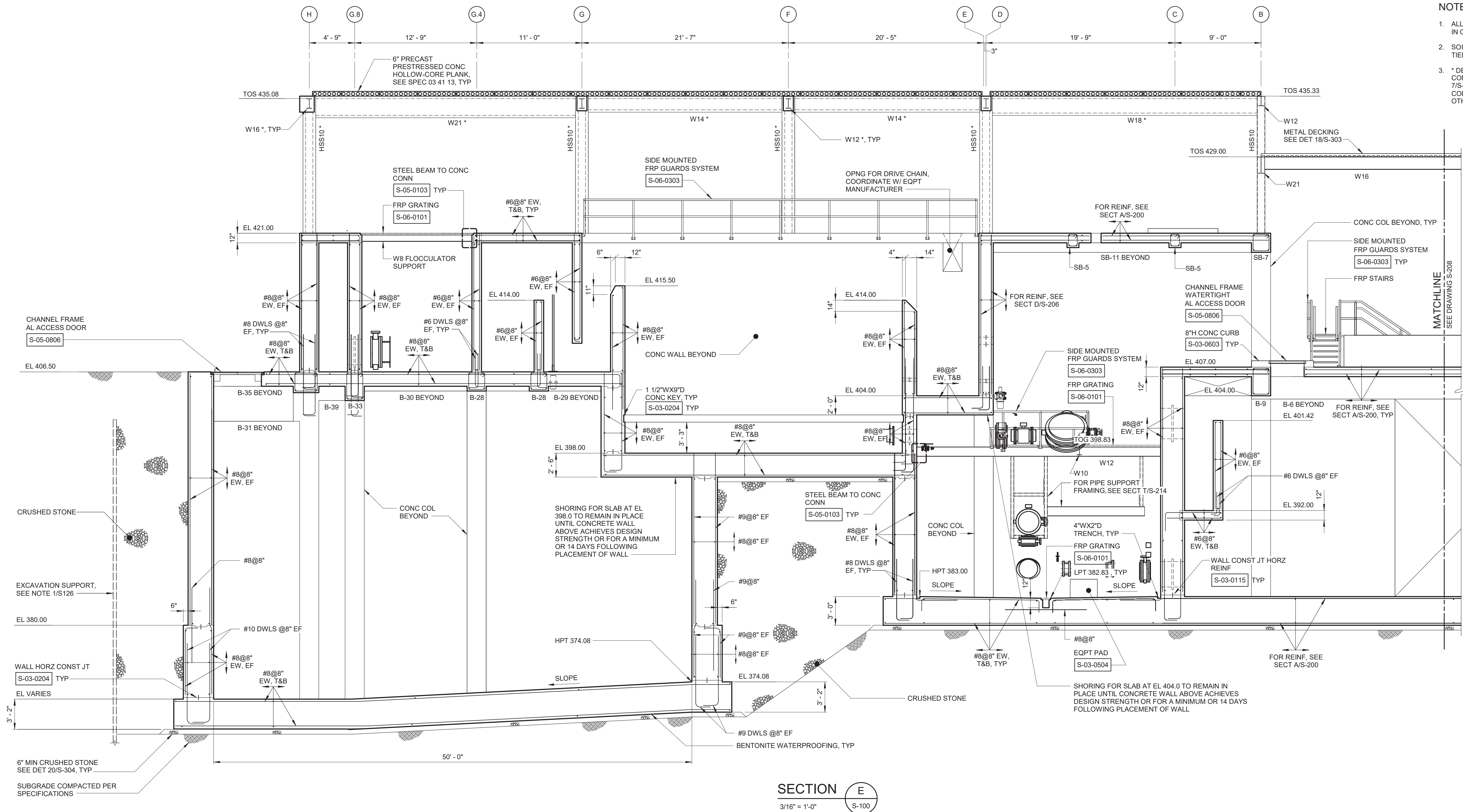
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

RYE LAKE WATER FILTRATION PLANT HARRISON, NY

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-206

NOTES:

- ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
- SOIL TIEDOWNS NOT SHOWN. SEE SOIL TIEDOWN PLANS.
- * DENOTES CONCRETE ENCASED FRAMING. FOR CONCRETE ENCASED BEAMS, SEE DETAIL 7/S-302 UNO. FOR CONCRETE ENCASED COLUMNS SEE DETAIL 12/S-302 UNLESS NOTED OTHERWISE.



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

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

WARNING
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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
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

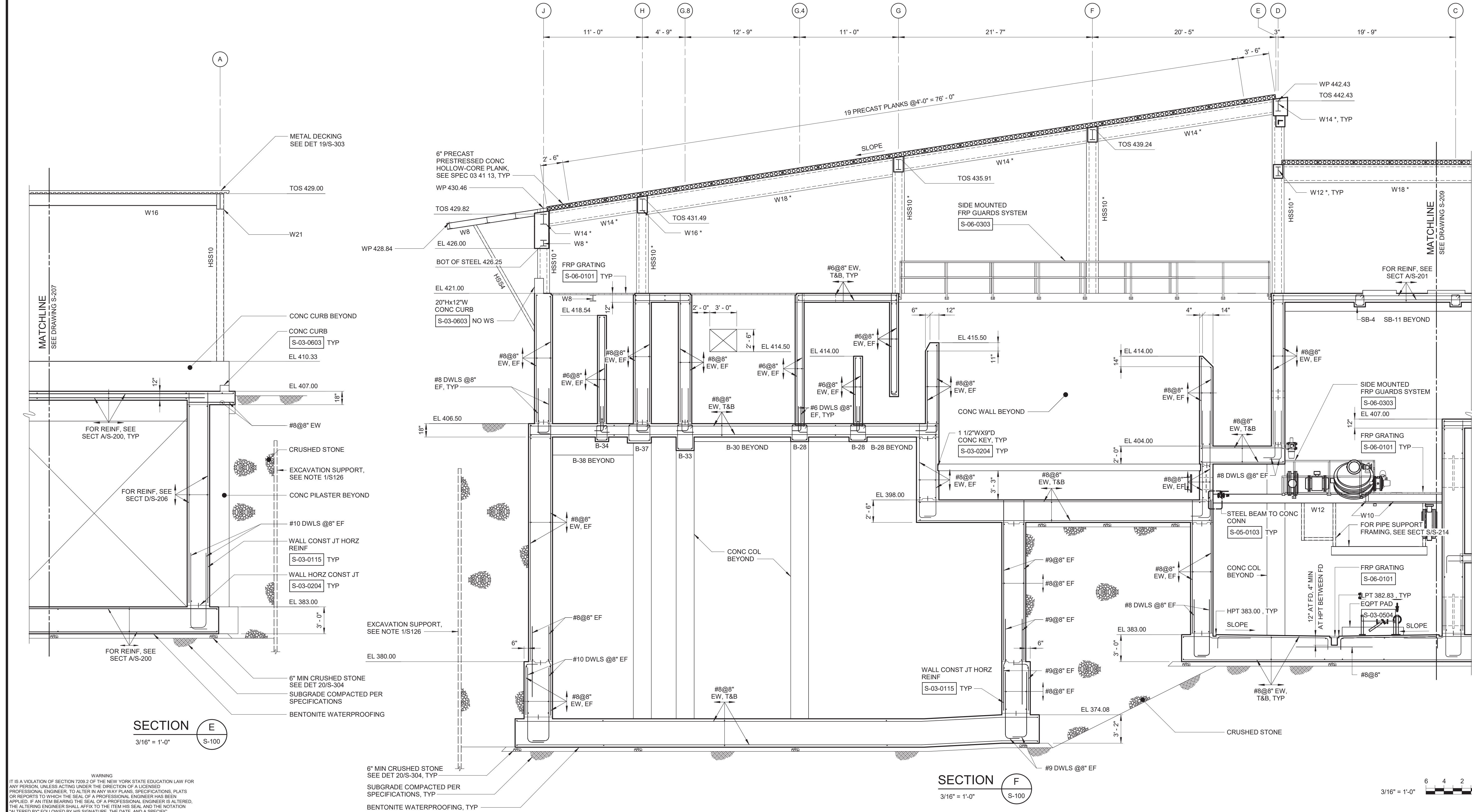
WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
STRUCTURAL
SECTIONS - SHEET 8

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

- NOTES:
1. ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
 2. SOIL TIEDOWNS NOT SHOWN, SEE SOIL TIEDOWN PLANS.
 3. * DENOTES CONCRETE ENCASED FRAMING, FOR CONCRETE ENCASED BEAMS, SEE DETAIL 7/S-302 UNO, FOR CONCRETE ENCASED COLUMNS SEE DETAIL 12/S-302 UNLESS NOTED OTHERWISE.



WARNING:
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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
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
STRUCTURAL
SECTIONS - SHEET 9

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-208

1. ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
2. SOIL TIEDOWNS NOT SHOWN, SEE SOIL TIEDOWN PLANS.
3. * DENOTES CONCRETE ENCASED FRAMING. FOR CONCRETE ENCASED BEAMS, SEE DETAIL 7/5-302 UNO. FOR CONCRETE ENCASED COLUMNS SEE DETAIL 12/5-302 UNLESS NOTED OTHERWISE.



WARNING

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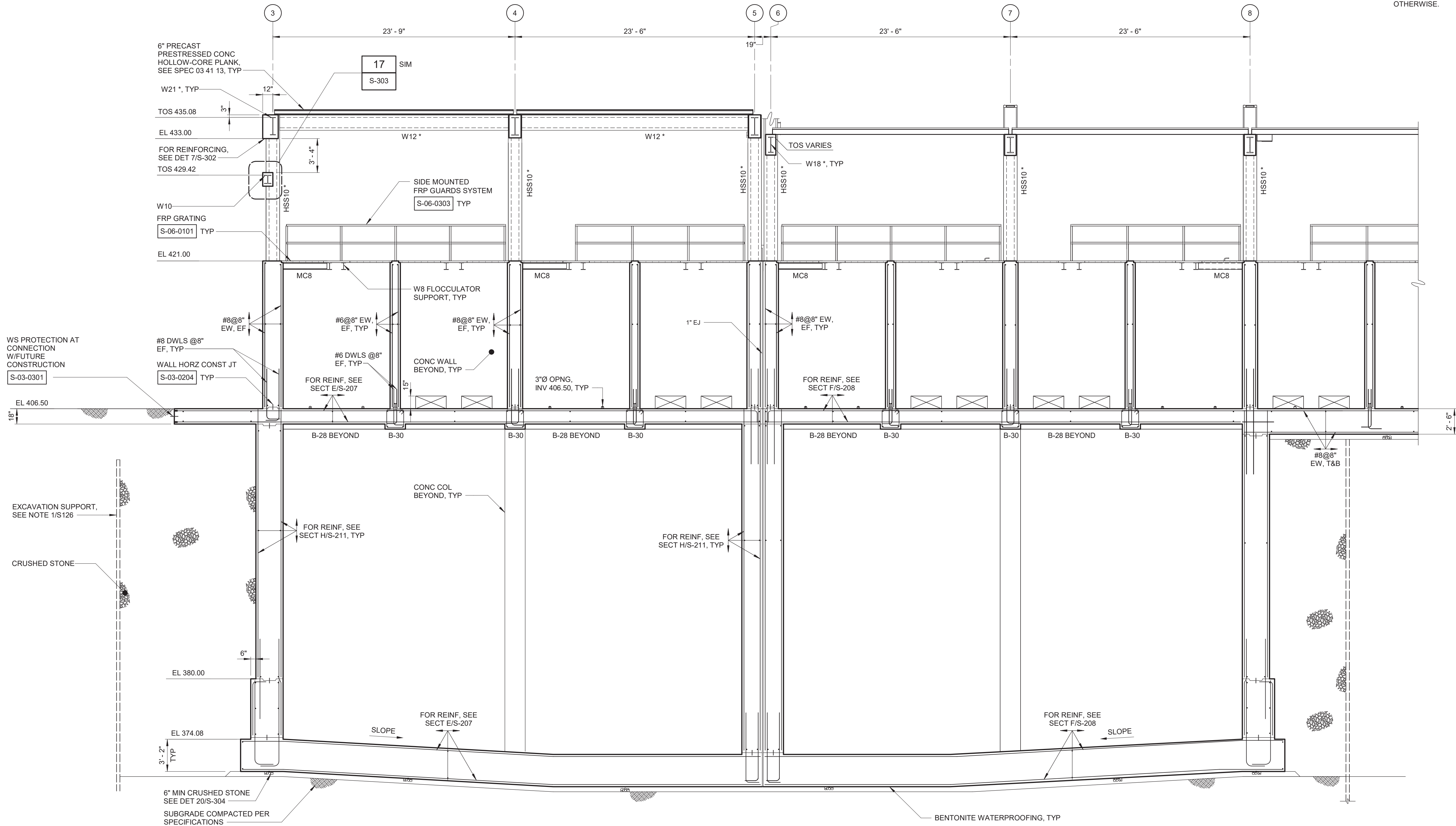
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RYE LAKE WATER FILTRATION PLANT HARRISON, NY

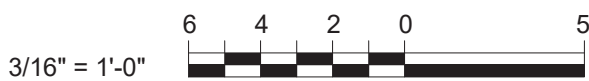
DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-209

NOTES:

1. ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
2. SOIL TIEDOWNS NOT SHOWN. SEE SOIL TIEDOWN PLANS.
3. * DENOTES CONCRETE ENCASED FRAMING. FOR CONCRETE ENCASED BEAMS, SEE DETAIL 7/S-302 UNO. FOR CONCRETE ENCASED COLUMNS SEE DETAIL 12/S-302 UNLESS NOTED OTHERWISE.



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



WARNING
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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
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

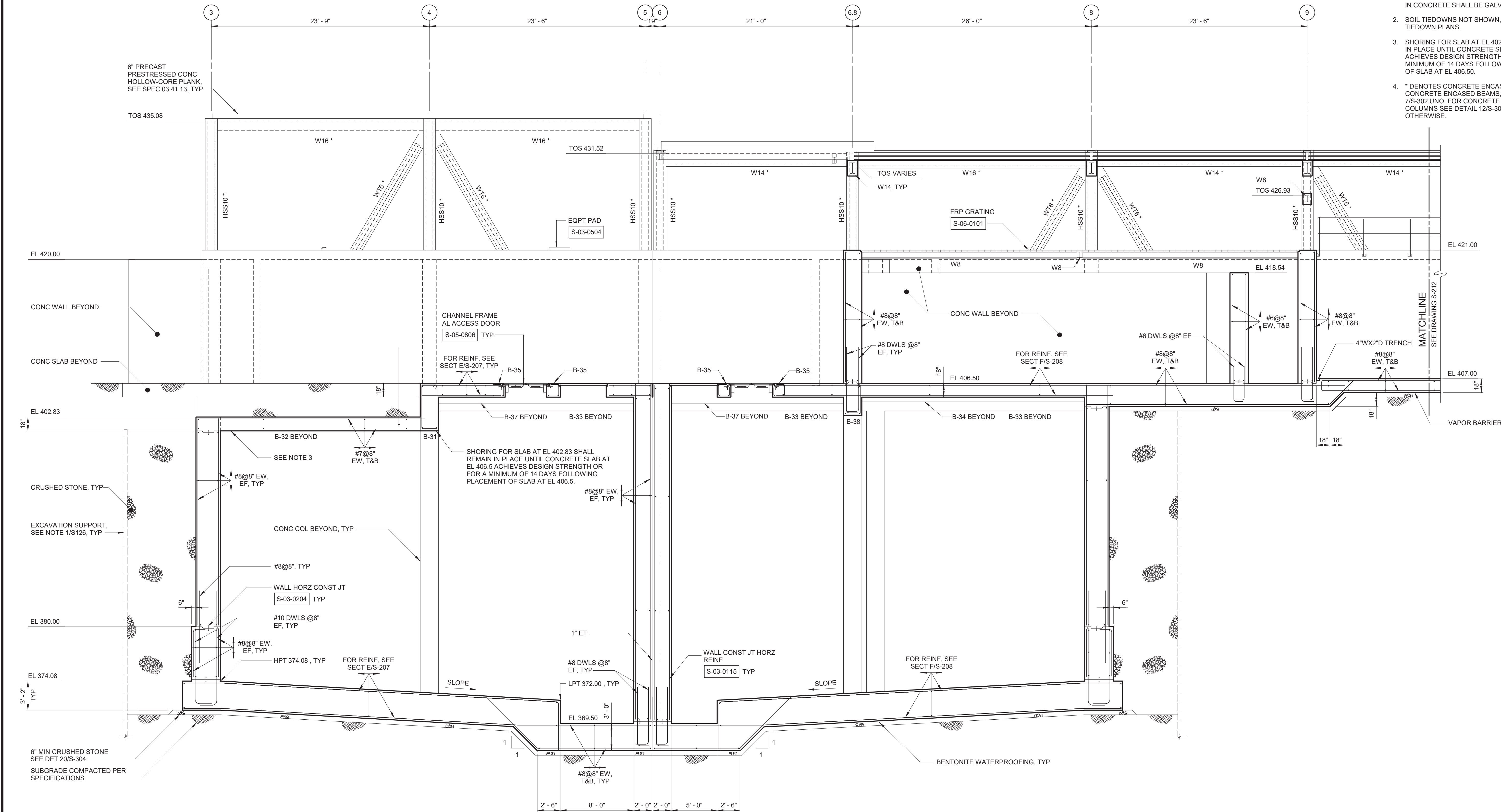
RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
STRUCTURAL
SECTIONS - SHEET 11

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-210

NOTES:

1. ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
2. SOIL TIEDOWNS NOT SHOWN. SEE SOIL TIEDOWN PLANS.
3. SHORING FOR SLAB AT EL 402.83 SHALL REMAIN IN PLACE UNTIL CONCRETE SLAB AT EL 406.50 ACHIEVES DESIGN STRENGTH OR FOR A MINIMUM OF 14 DAYS FOLLOWING PLACEMENT OF SLAB AT EL 406.50.
4. * DENOTES CONCRETE ENCASED FRAMING. FOR CONCRETE ENCASED BEAMS, SEE DETAIL 7/S-302 UNO. FOR CONCRETE ENCASED COLUMNS SEE DETAIL 12/S-302 UNLESS NOTED OTHERWISE.



WARNING
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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
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

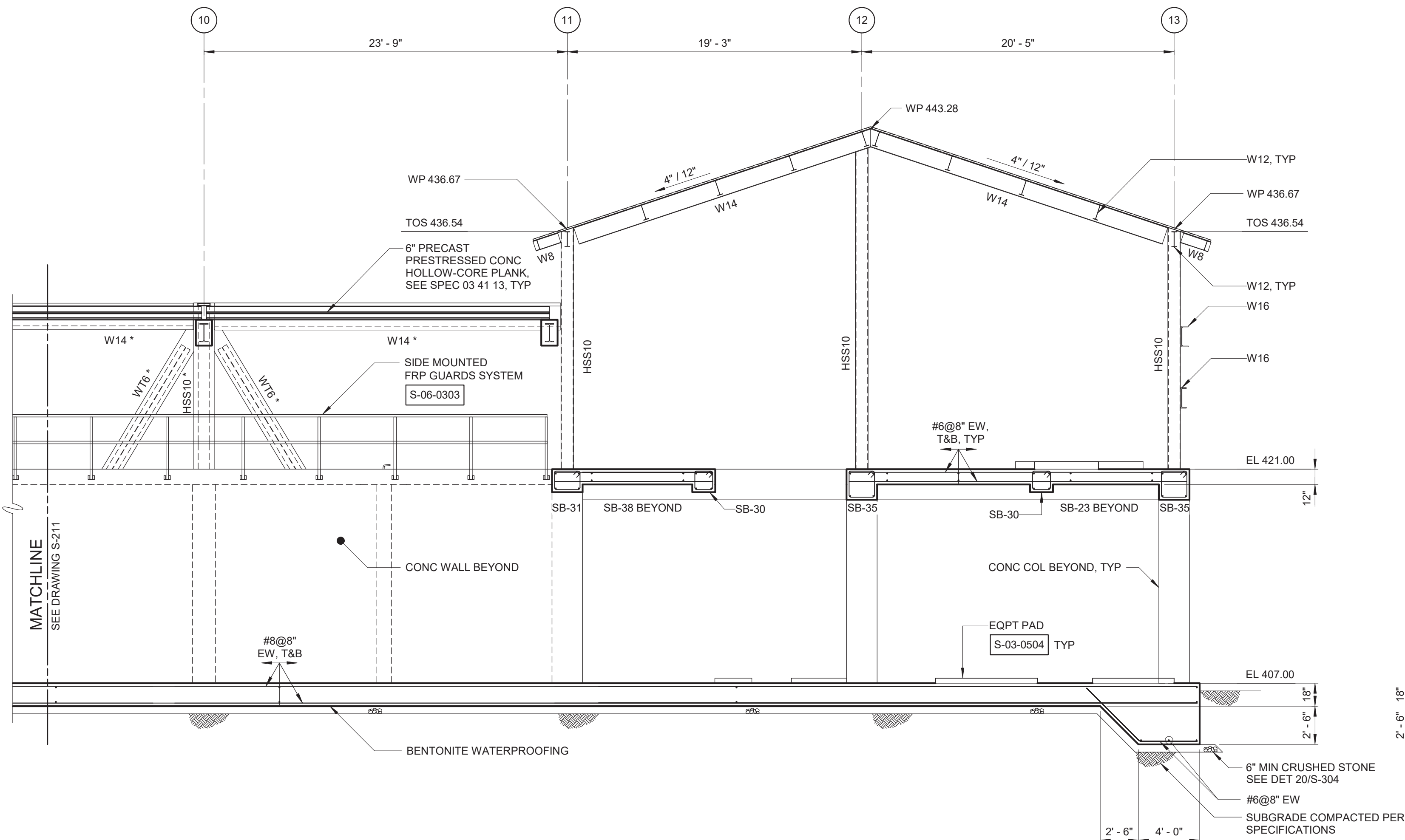
WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

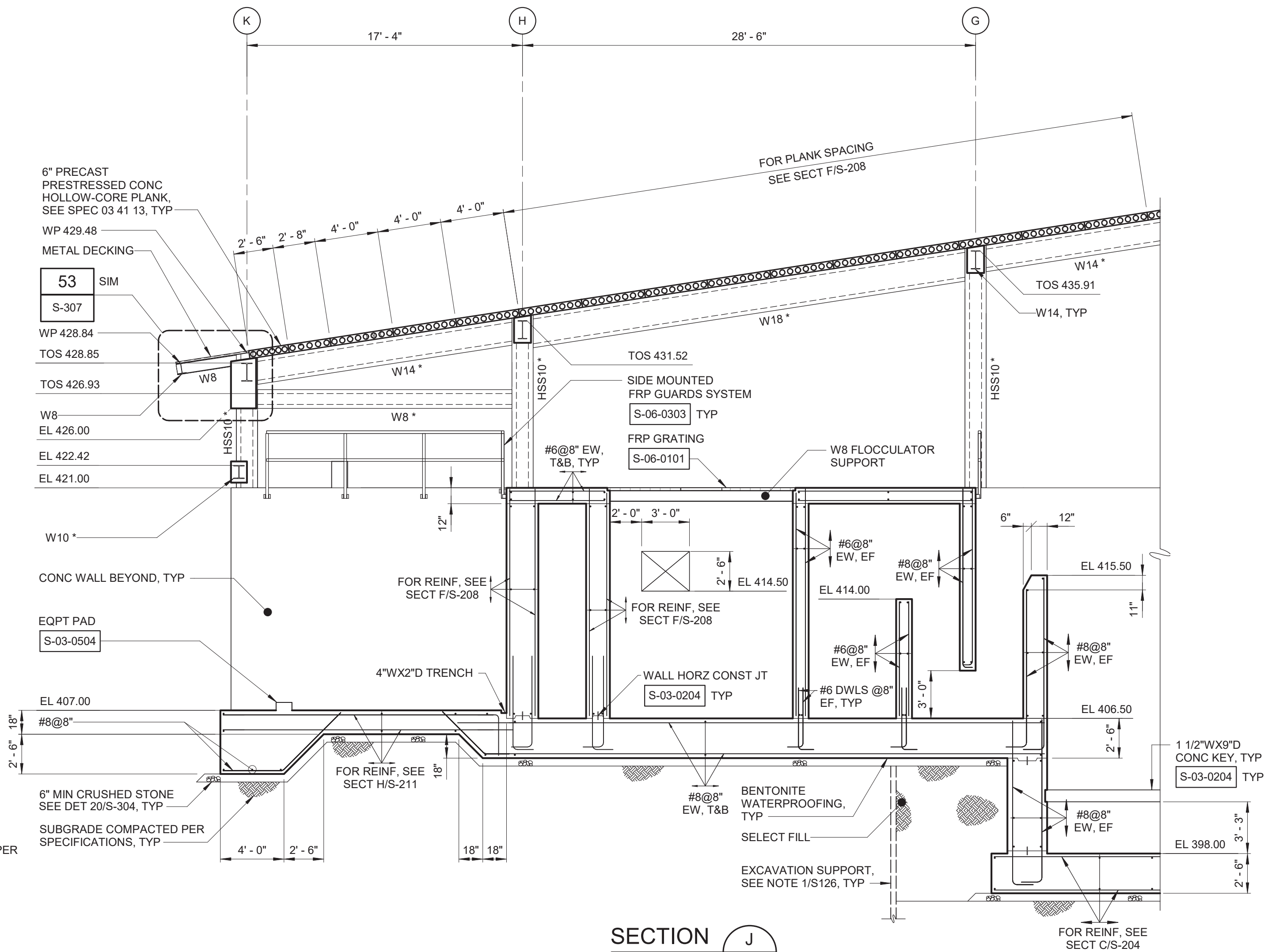
FILTRATION PLANT
STRUCTURAL
SECTIONS - SHEET 12

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-211

- NOTES:
1. ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
 2. SOIL TIEDOWNS NOT SHOWN. SEE SOIL TIEDOWN PLANS.
 3. * DENOTES CONCRETE ENCASED FRAMING. FOR CONCRETE ENCASED BEAMS, SEE DETAIL 7/S-302 UNO. FOR CONCRETE ENCASED COLUMNS SEE DETAIL 12/S-302 UNLESS NOTED OTHERWISE.



SECTION H
3/16" = 1'-0"



SECTION J
3/16" = 1'-0"

6 4 2 0 5'
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:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



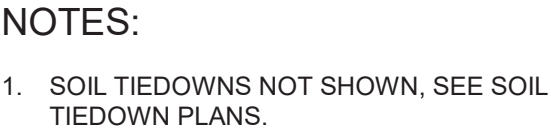
Hazen
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
STRUCTURAL
SECTIONS - SHEET 13

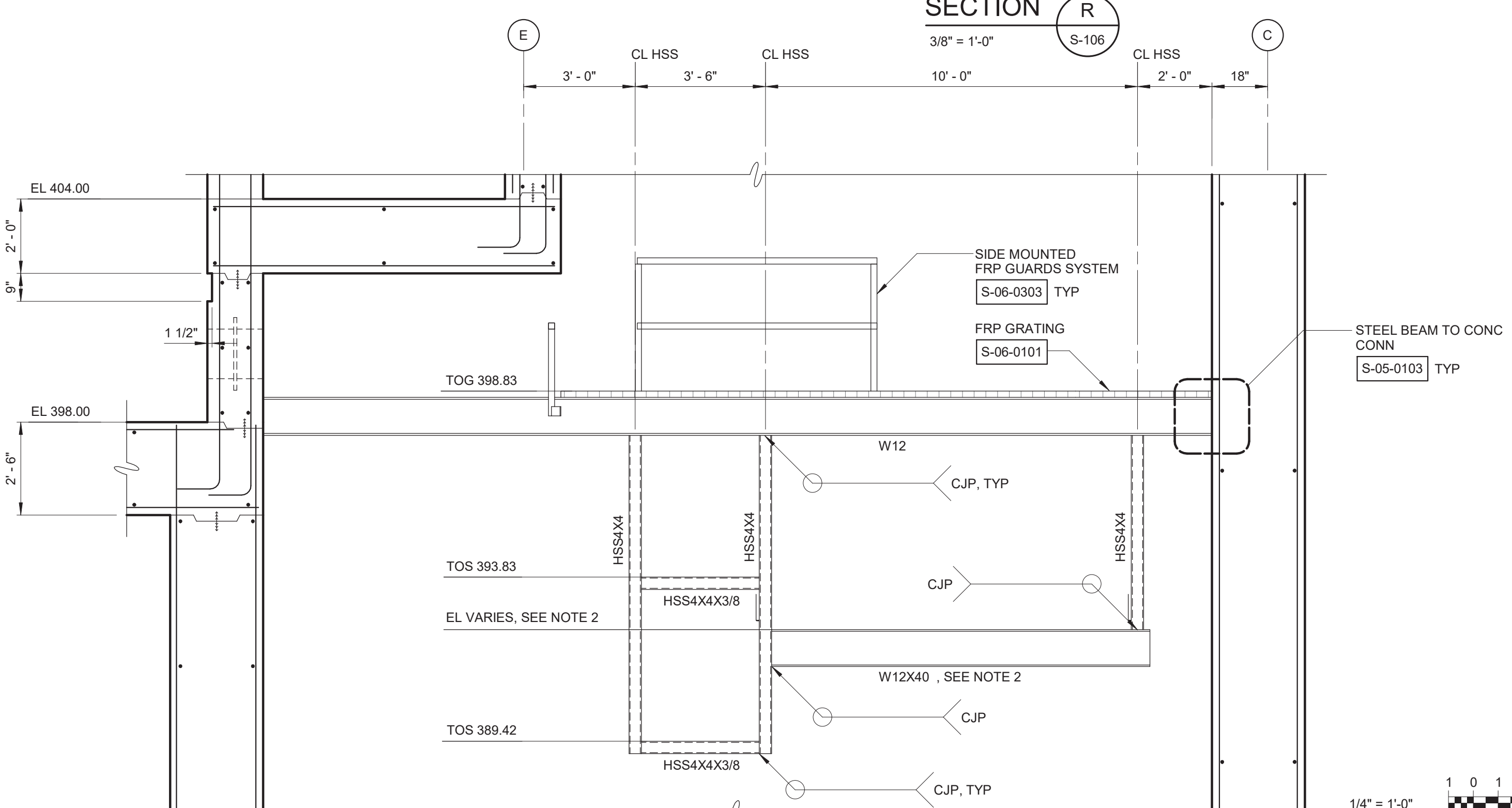
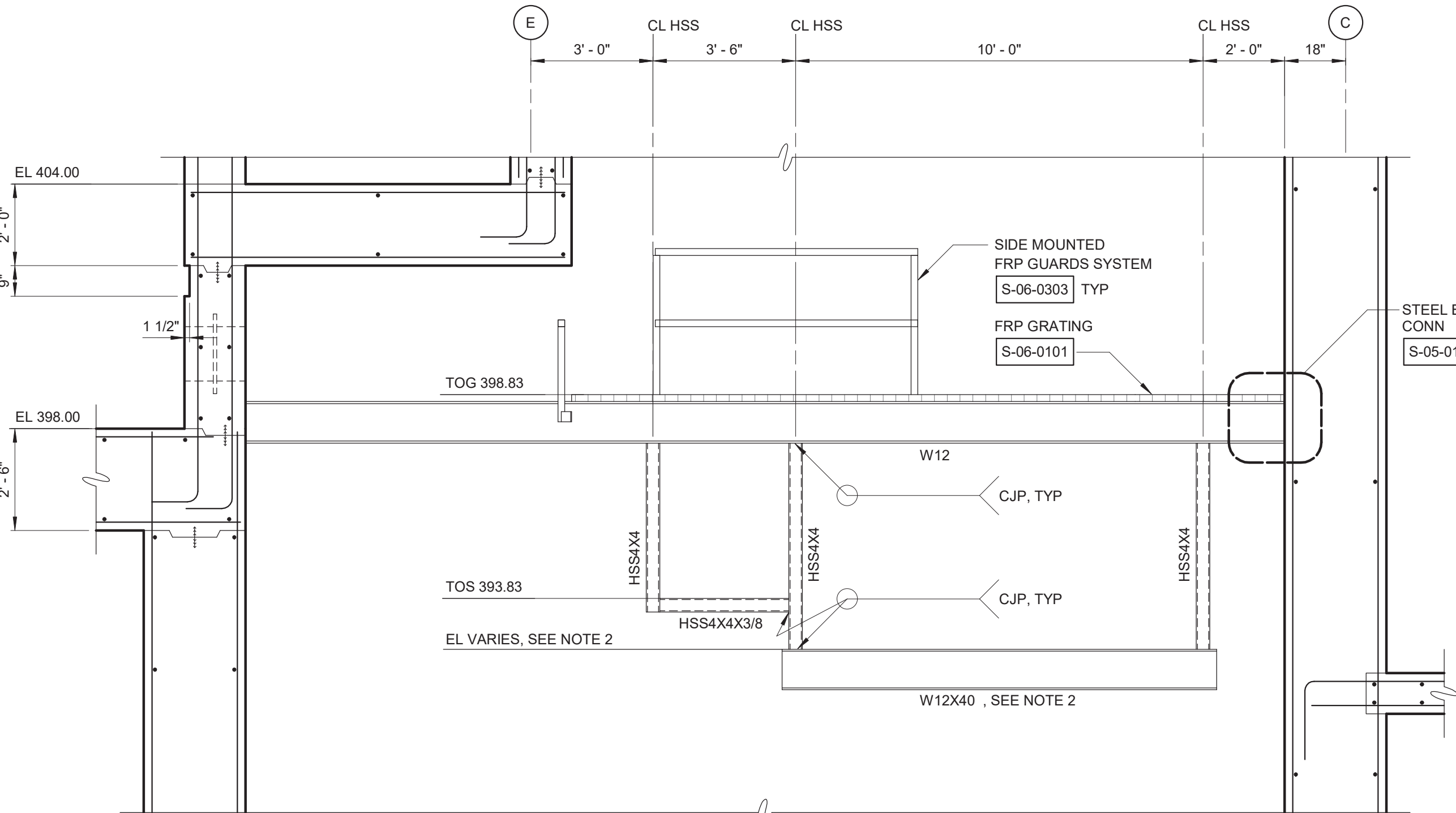
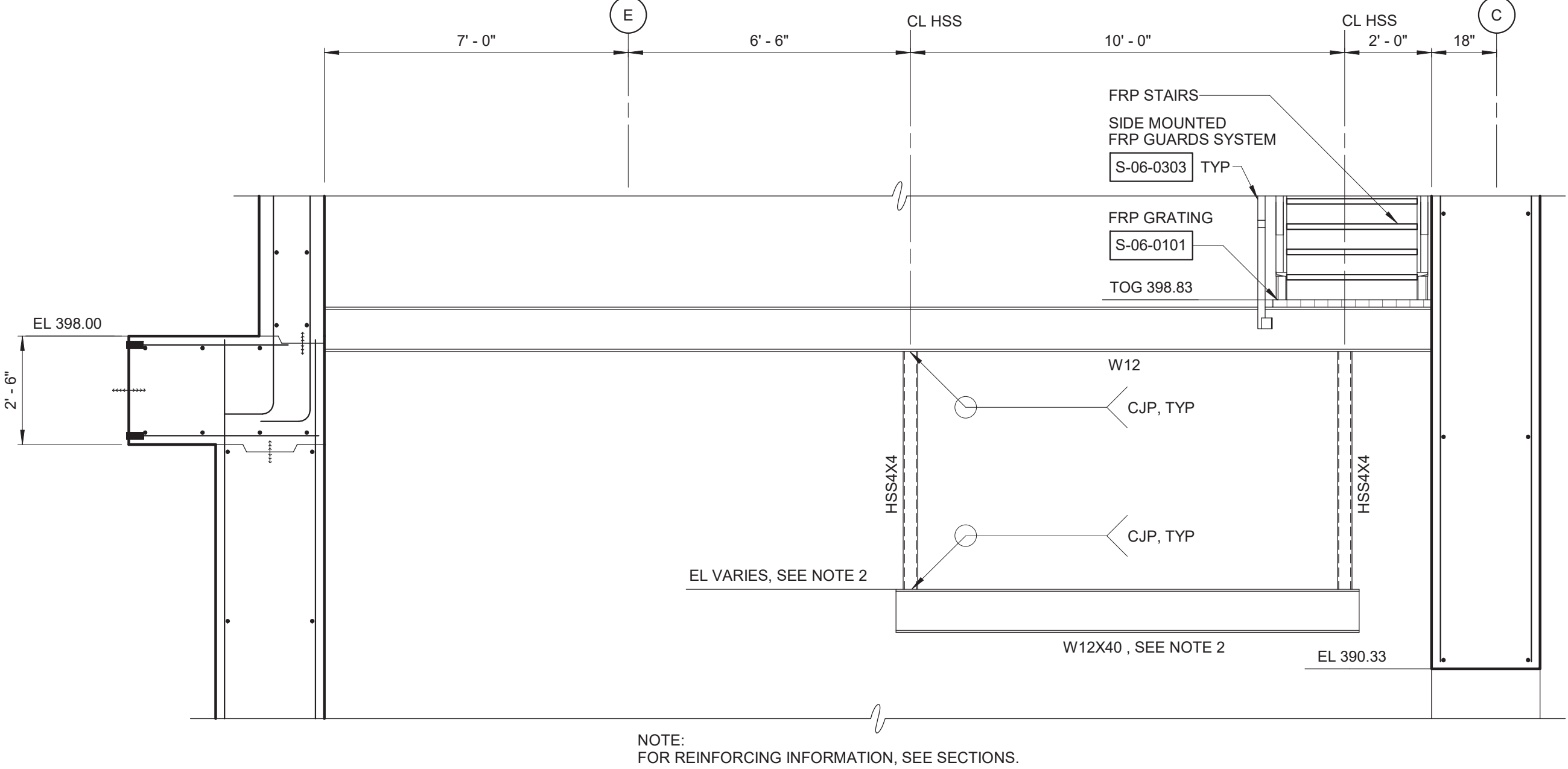
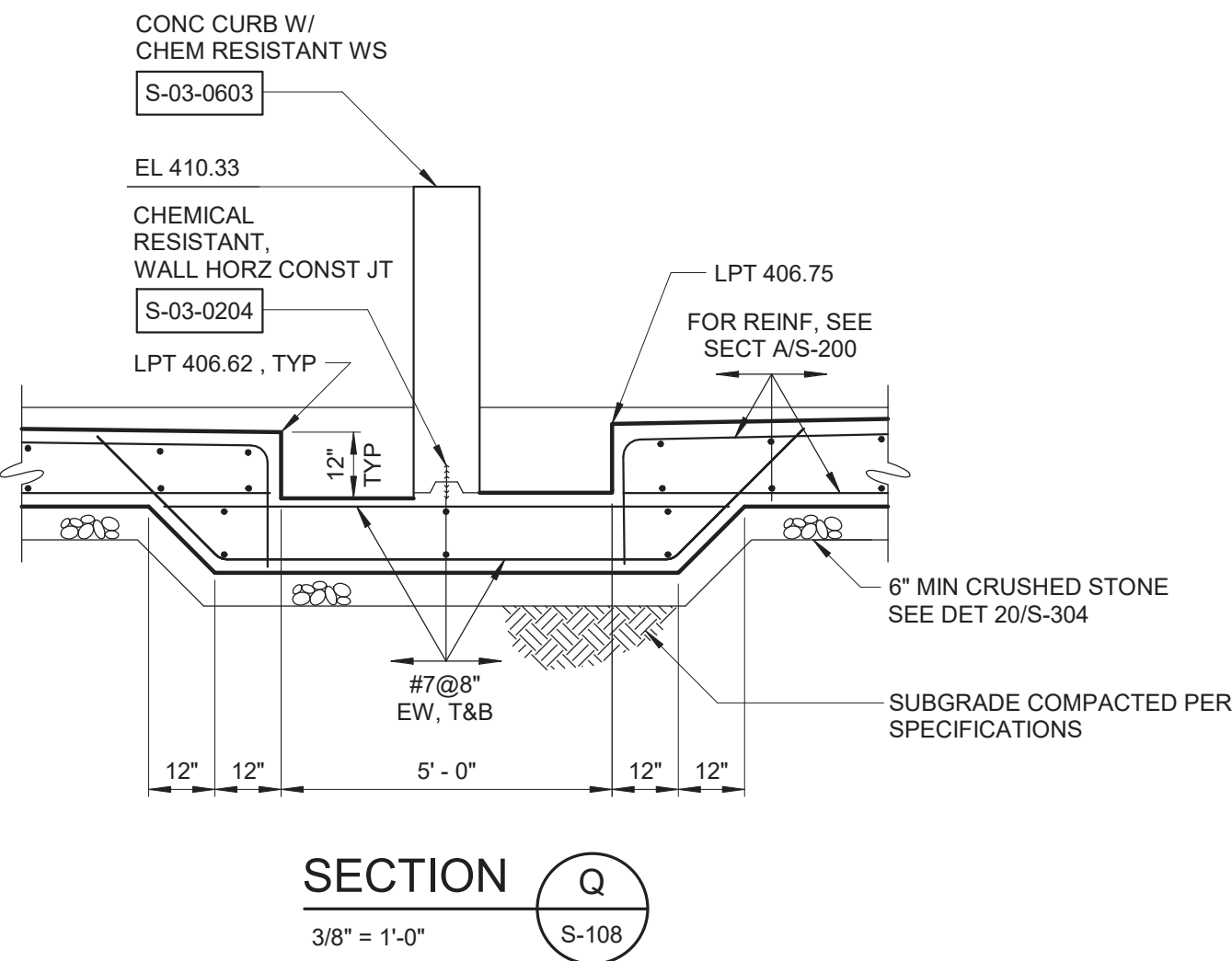
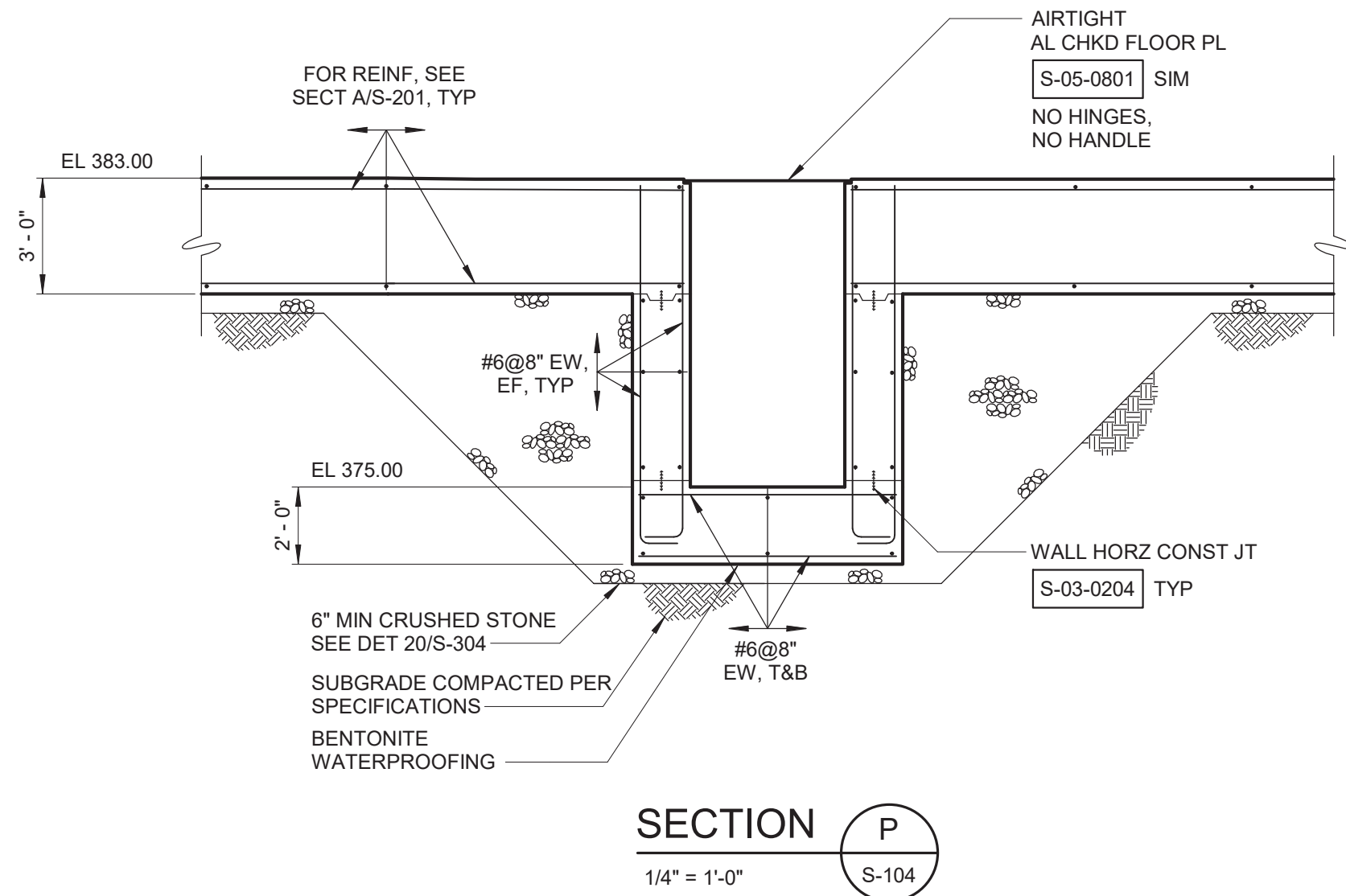
DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-212



DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-213

NOTES:

1. ALL STRUCTURAL STEEL SHALL BE GALVANIZED.
2. TRAPEZES ARE INTENDED TO SUPPORT PROCESS PIPES USING PIPE SADDLES PER STANDARD DETAIL M-40-0309 OR HANGERS SIMILAR TO STANDARD DETAIL M-40-0306. FOR PROCESS PIPE SIZES AND LOCATIONS, SEE MECHANICAL DRAWINGS. 30"Ø BWS, 20"Ø BWS, 42"Ø WWW, AND 48"Ø FLW PIPES AND PIPES CONNECTED TO THEM SHALL BE SUPPORTED AT LOCATIONS SHOWN ON MECHANICAL DRAWINGS. CONTRACTOR MAY SUBMIT ALTERNATE PIPE SUPPORTS FOR APPROVAL. TOP OF STEEL ELEVATIONS SHALL BE DETERMINED TO ACCOMMODATE PIPES AND PIPE SUPPORTS.
3. SOIL TIEDOWNS NOT SHOWN, SEE SOIL TIEDOWN PLANS.



WARNING:
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SECTION S
3/8" = 1'-0"

SECTION T
3/8" = 1'-0"

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



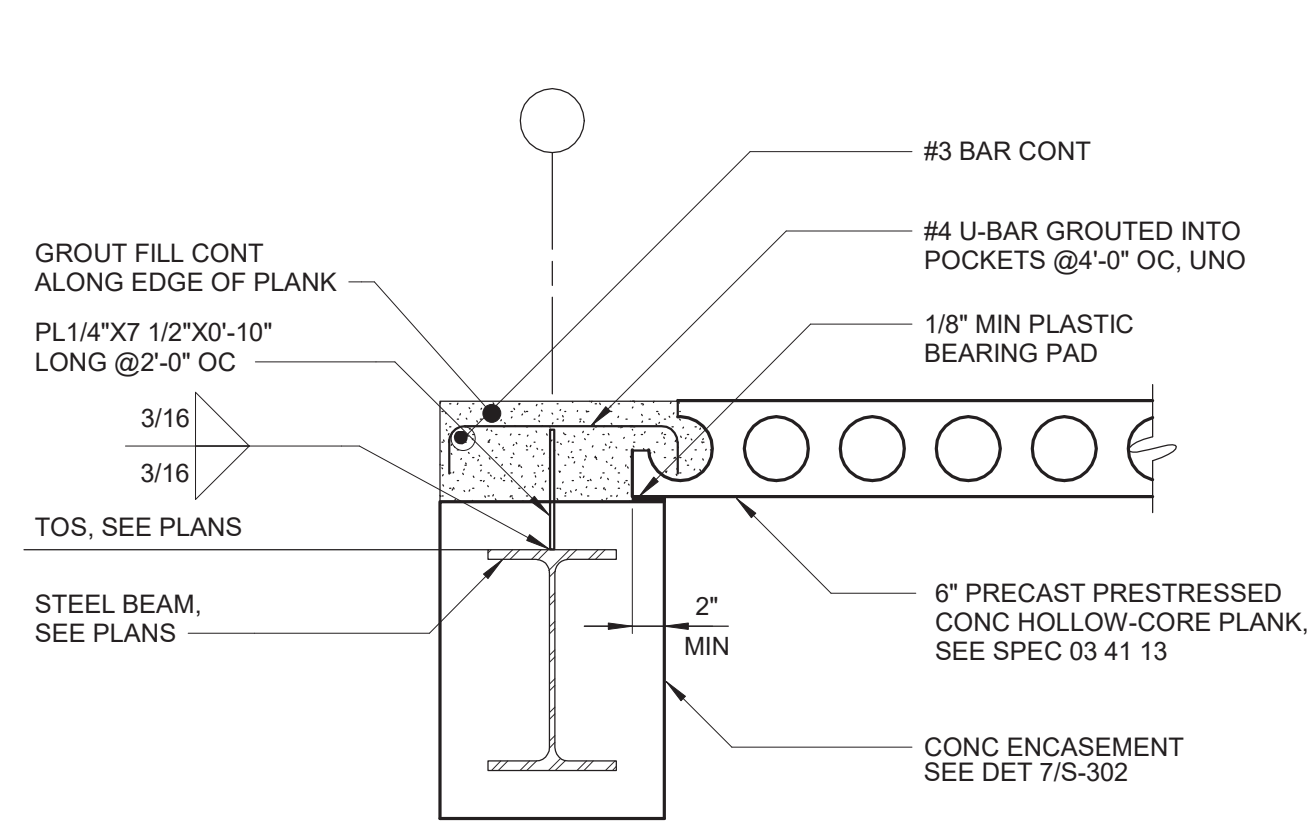
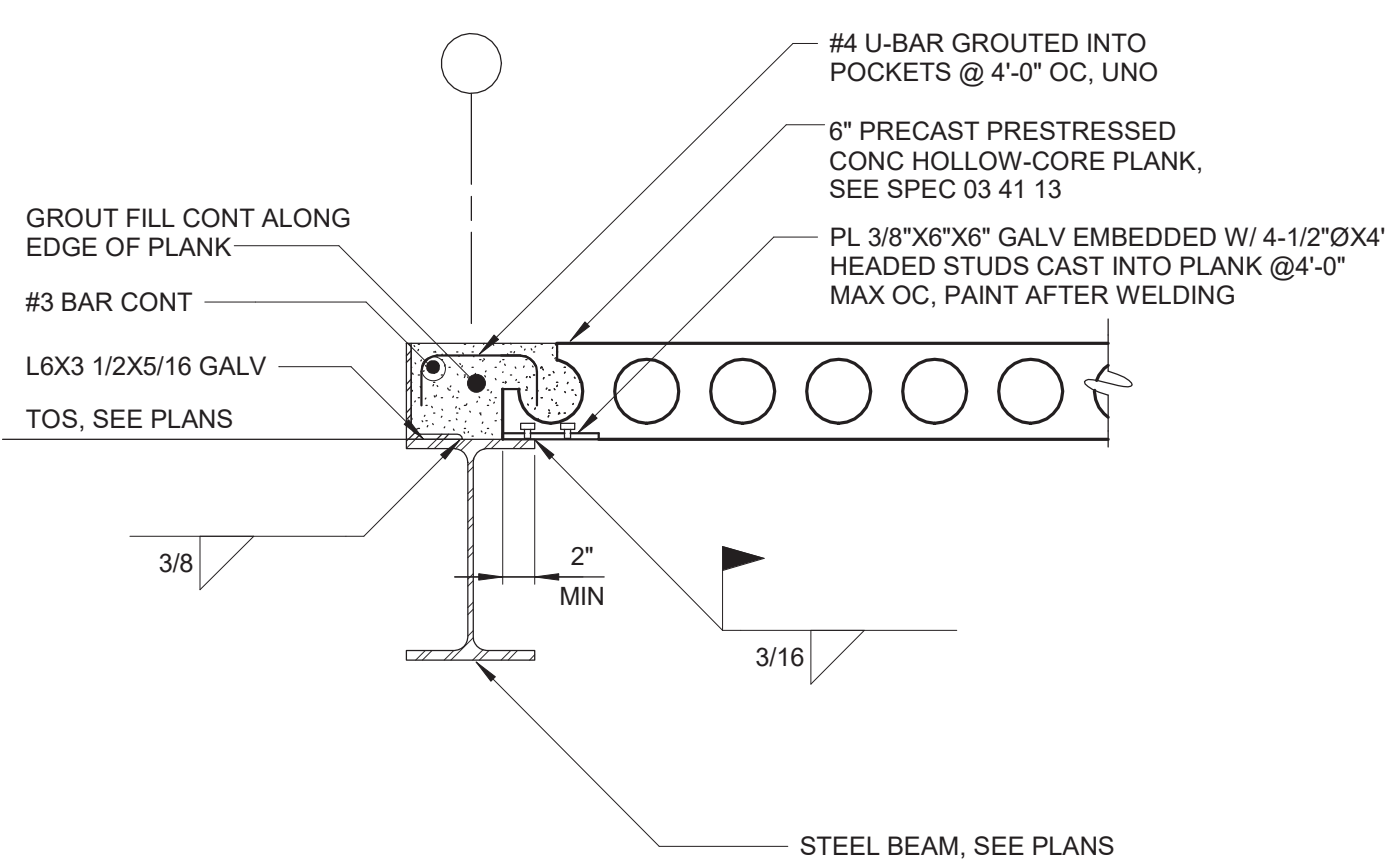
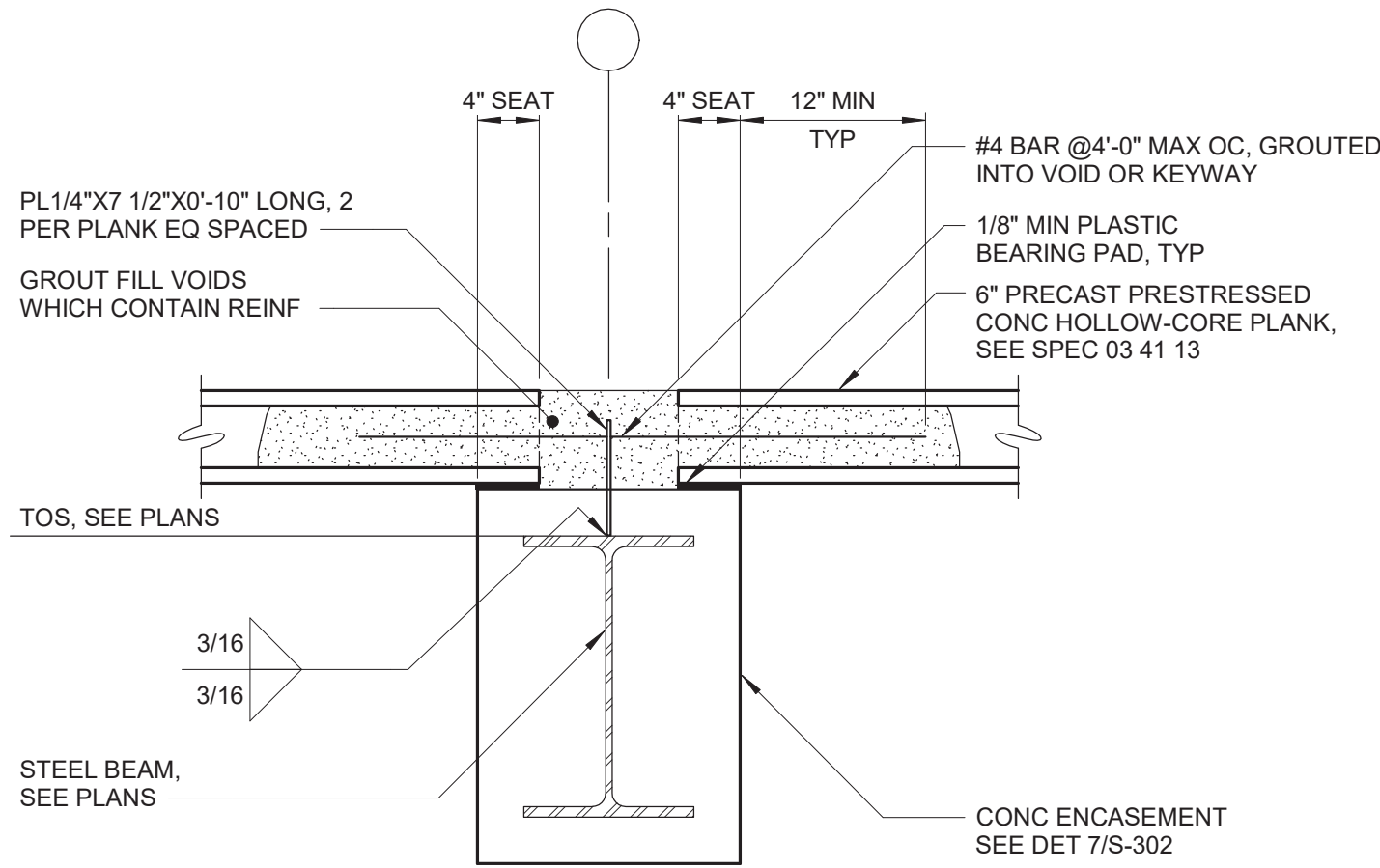
Hazen
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

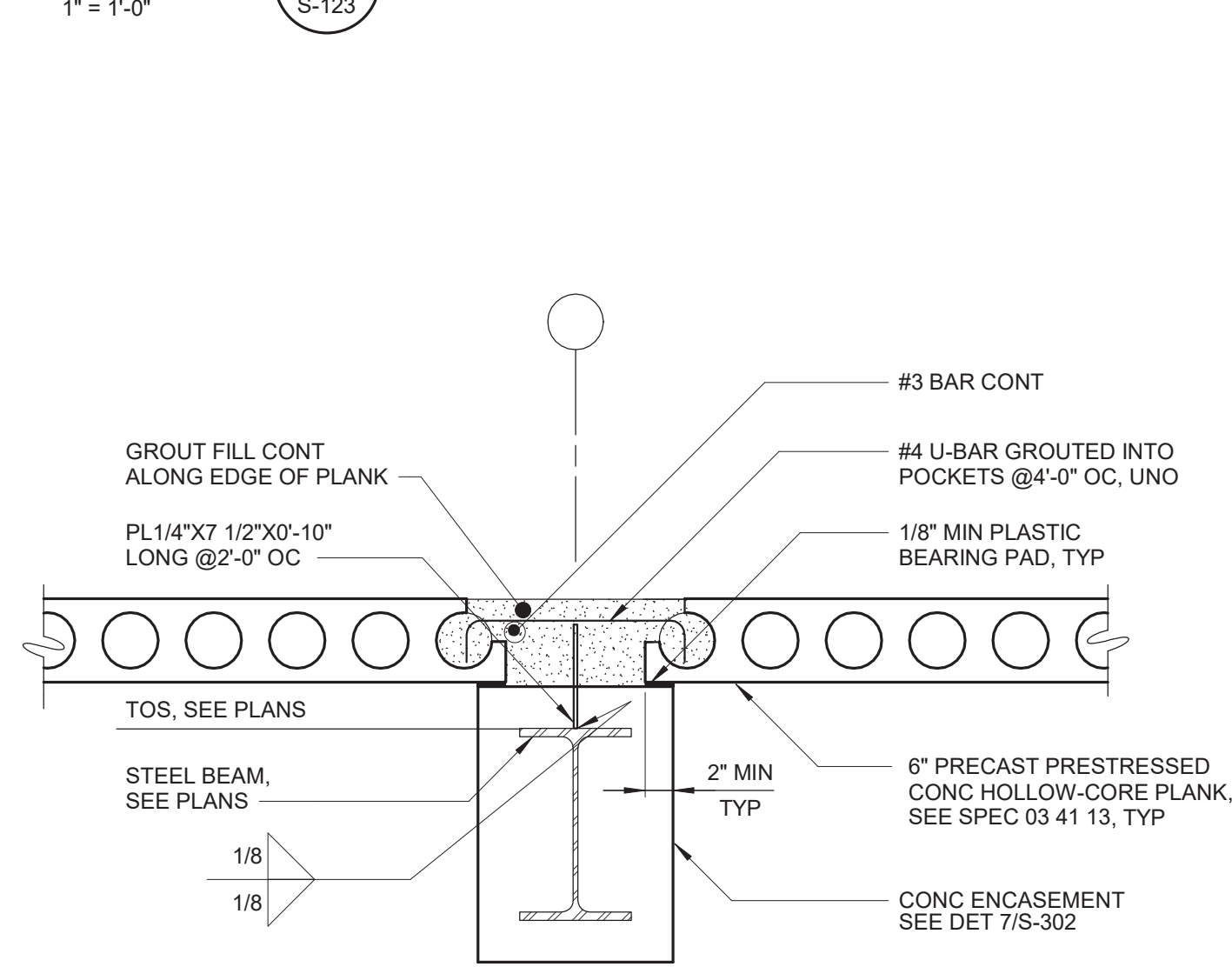
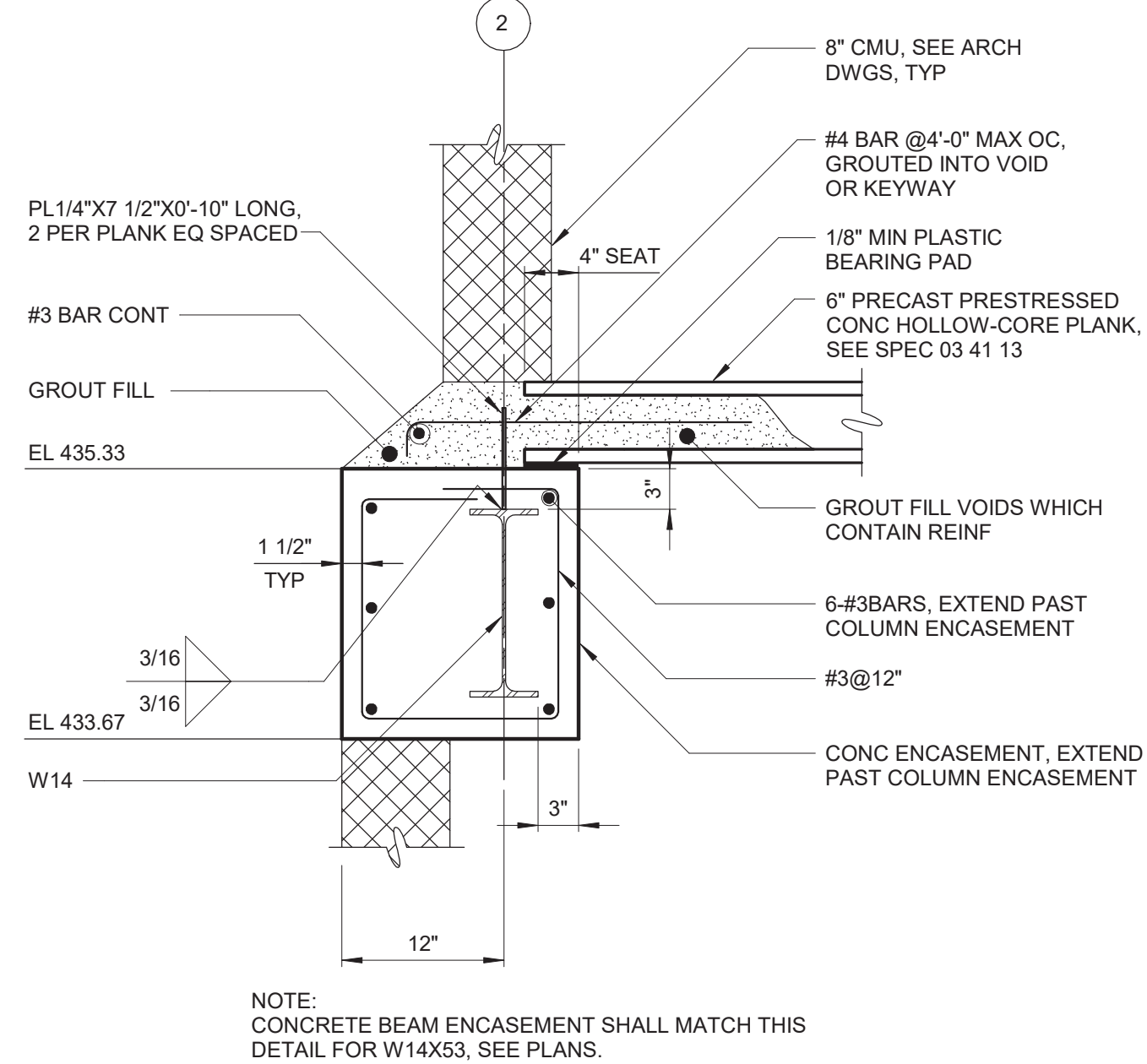
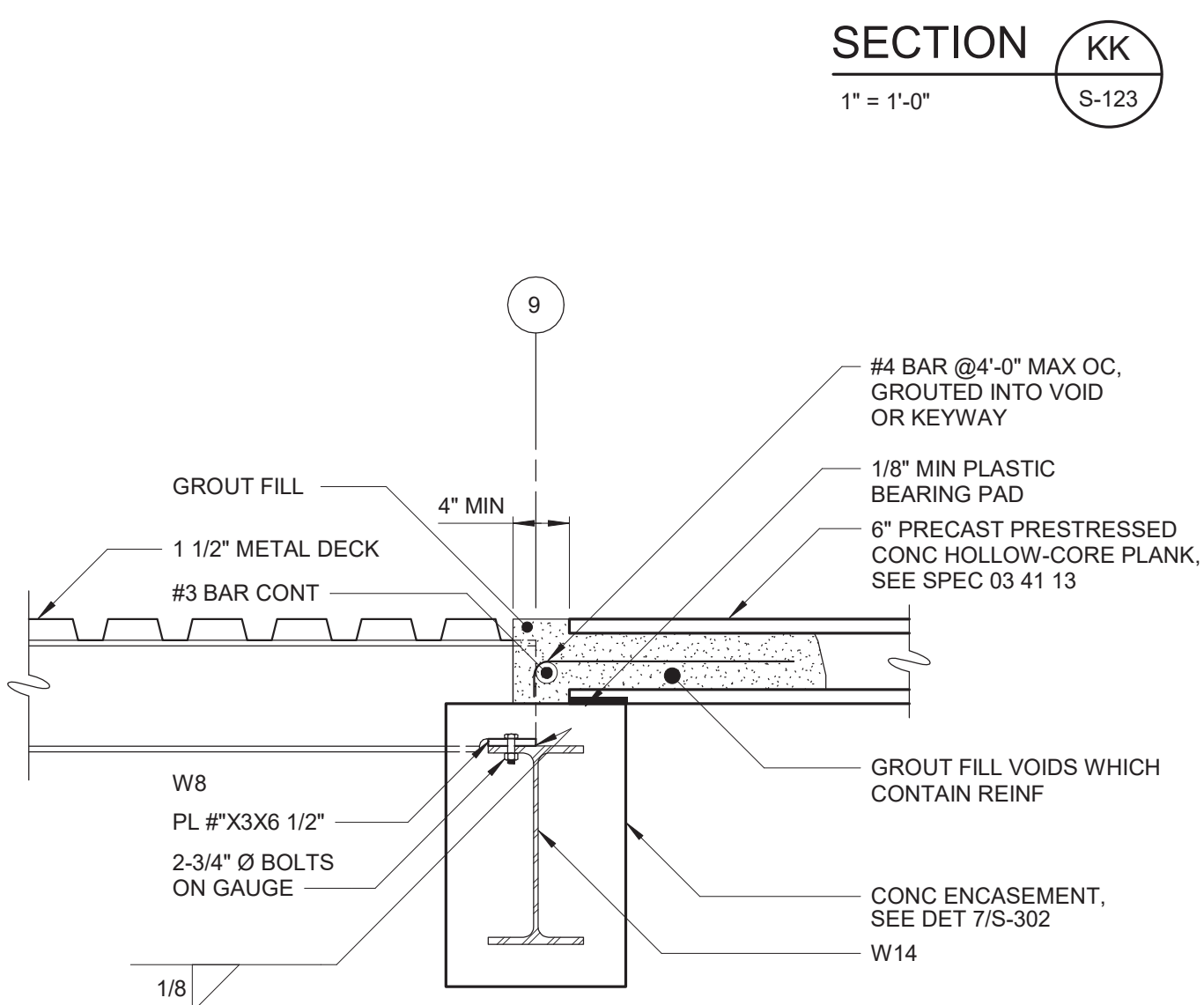
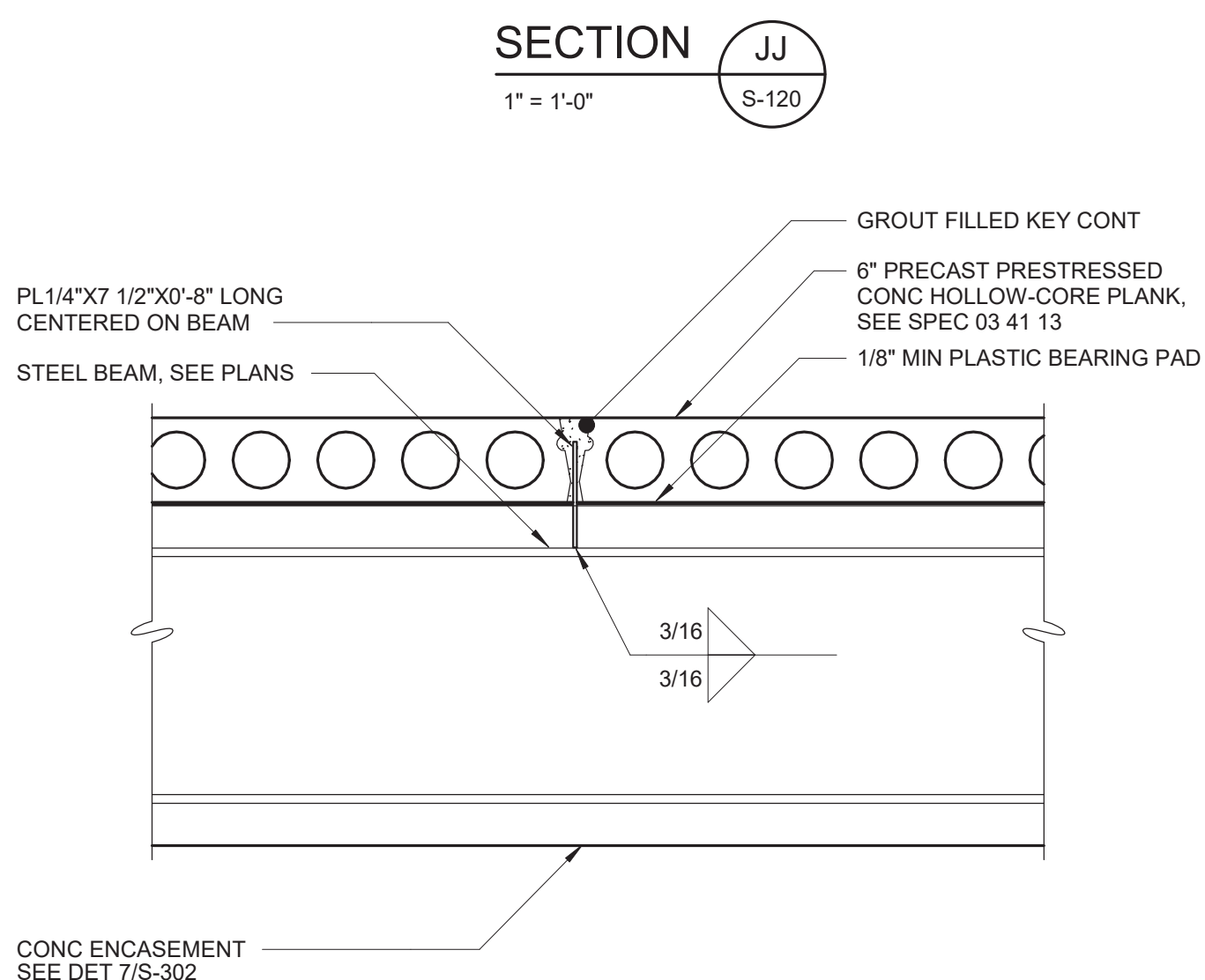
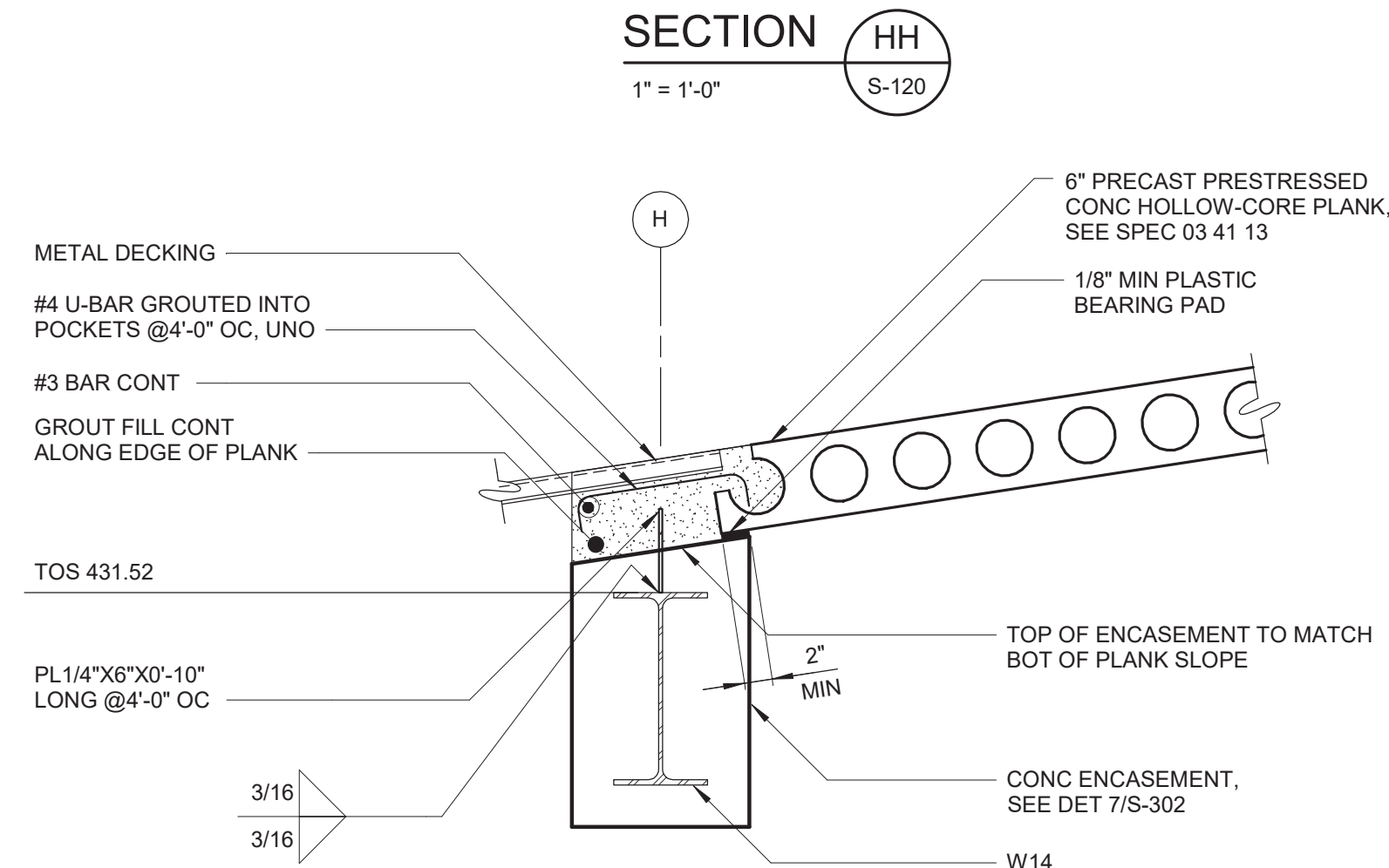
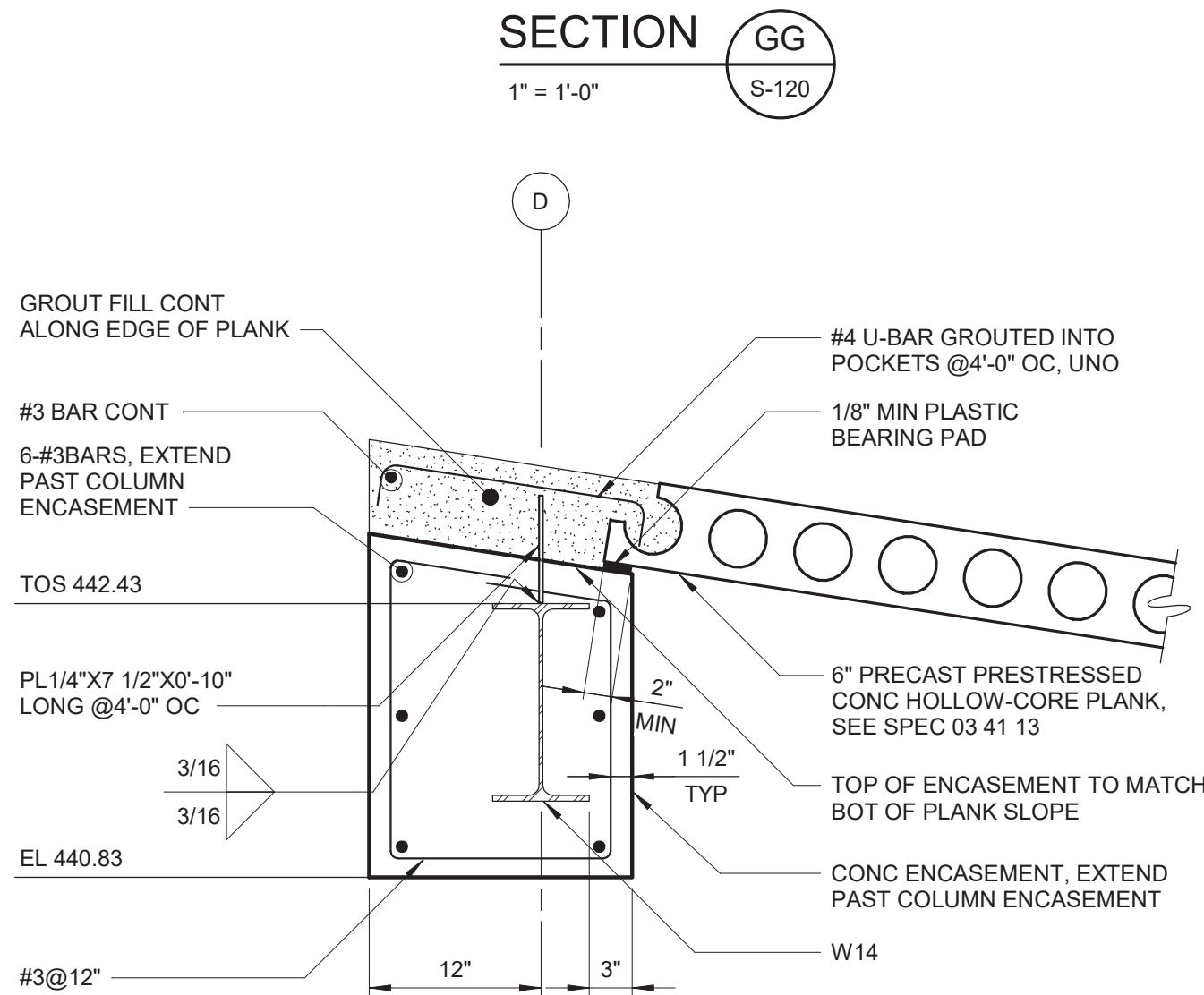
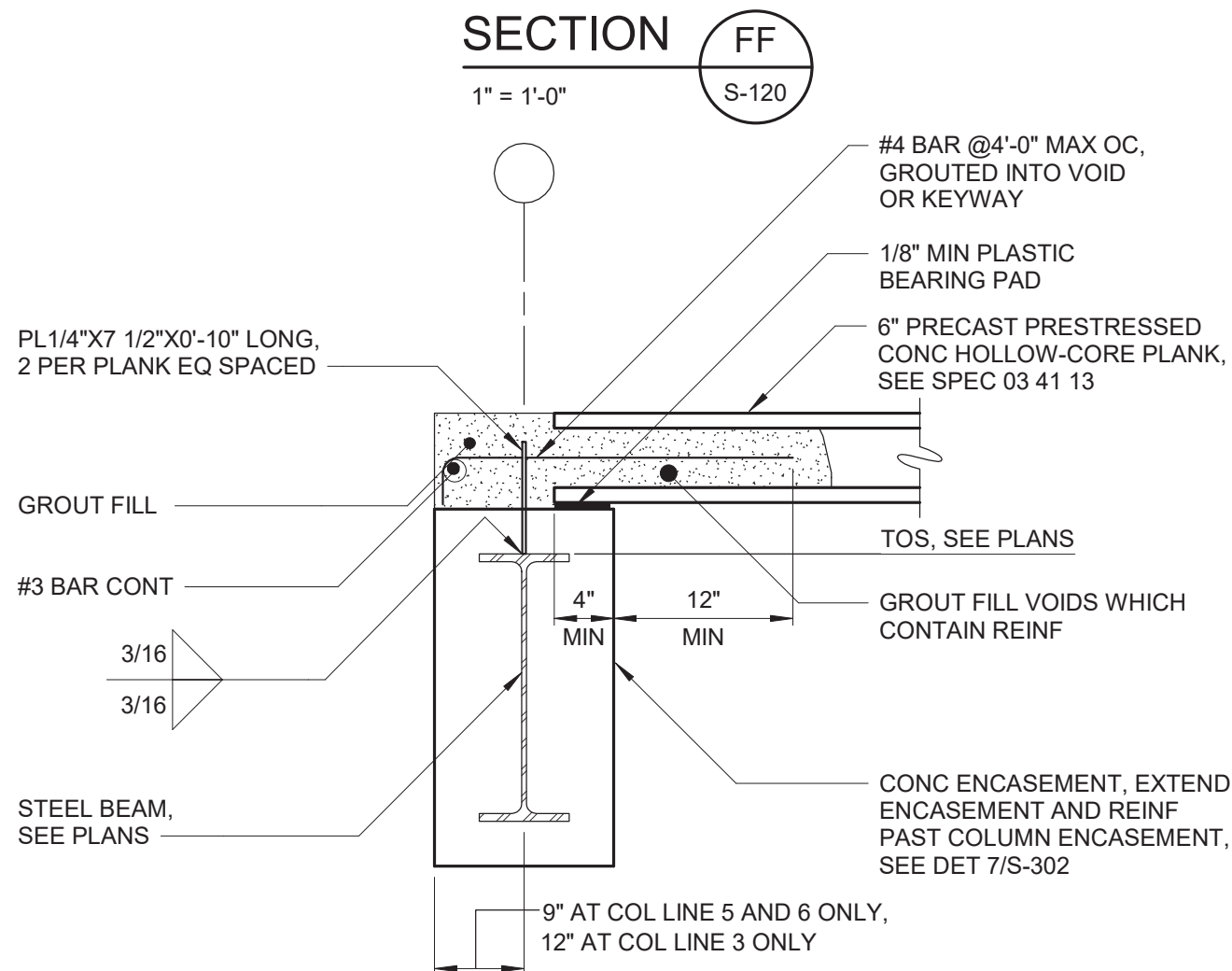
RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
STRUCTURAL
SECTIONS - SHEET 15

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-214



- NOTES:
- ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
 - FOR SUPPORT OF EXCAVATION, SEE DRAWING S-126.



1" = 1'-0"

12" 6 0 1'

WARNING

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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
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

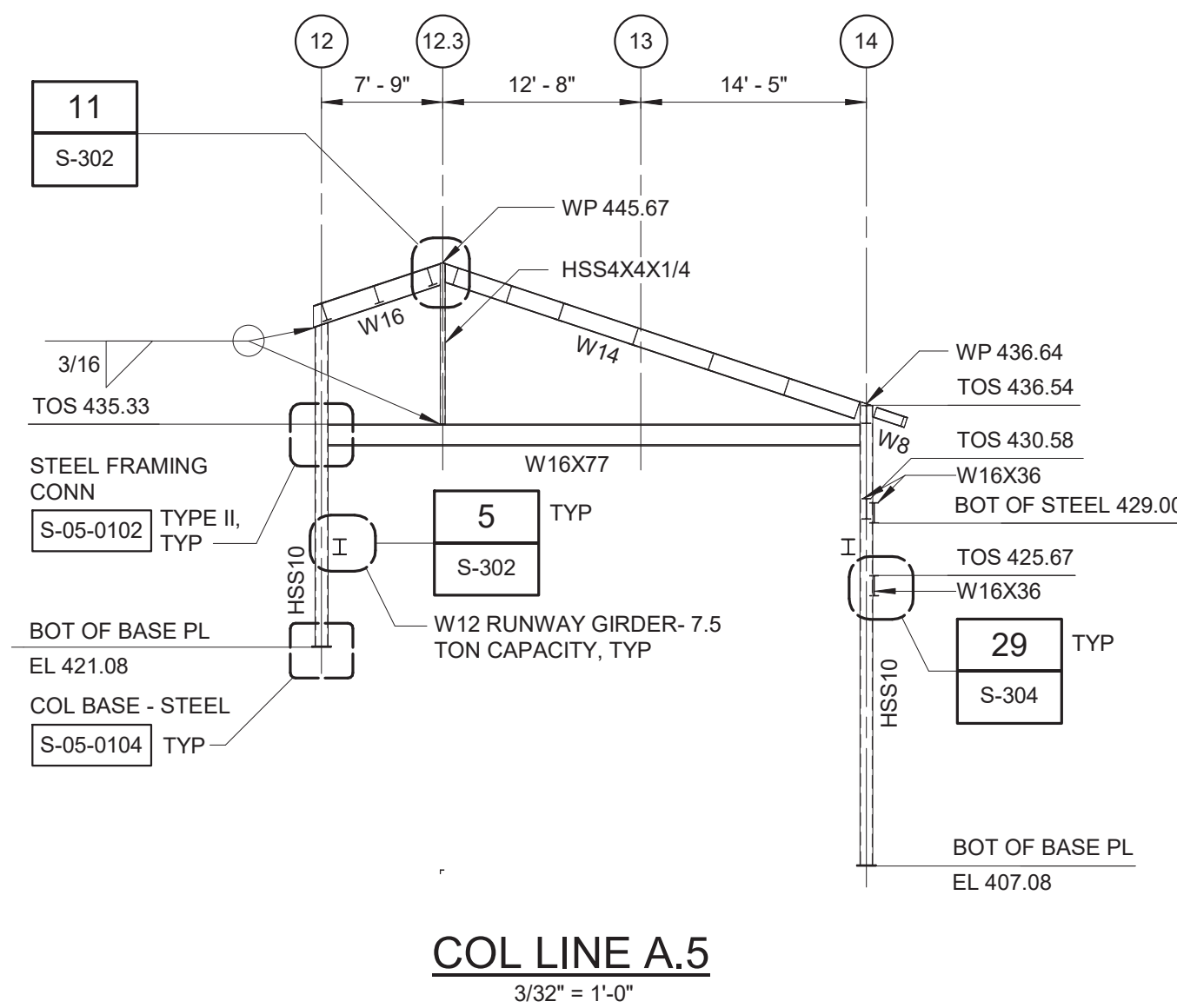
WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
STRUCTURAL
SECTIONS - SHEET 17

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-216

1. ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
2. FOR COLUMN CAP PLATE, SEE DETAIL 14/S-303, UNLESS NOTED OTHERWISE.



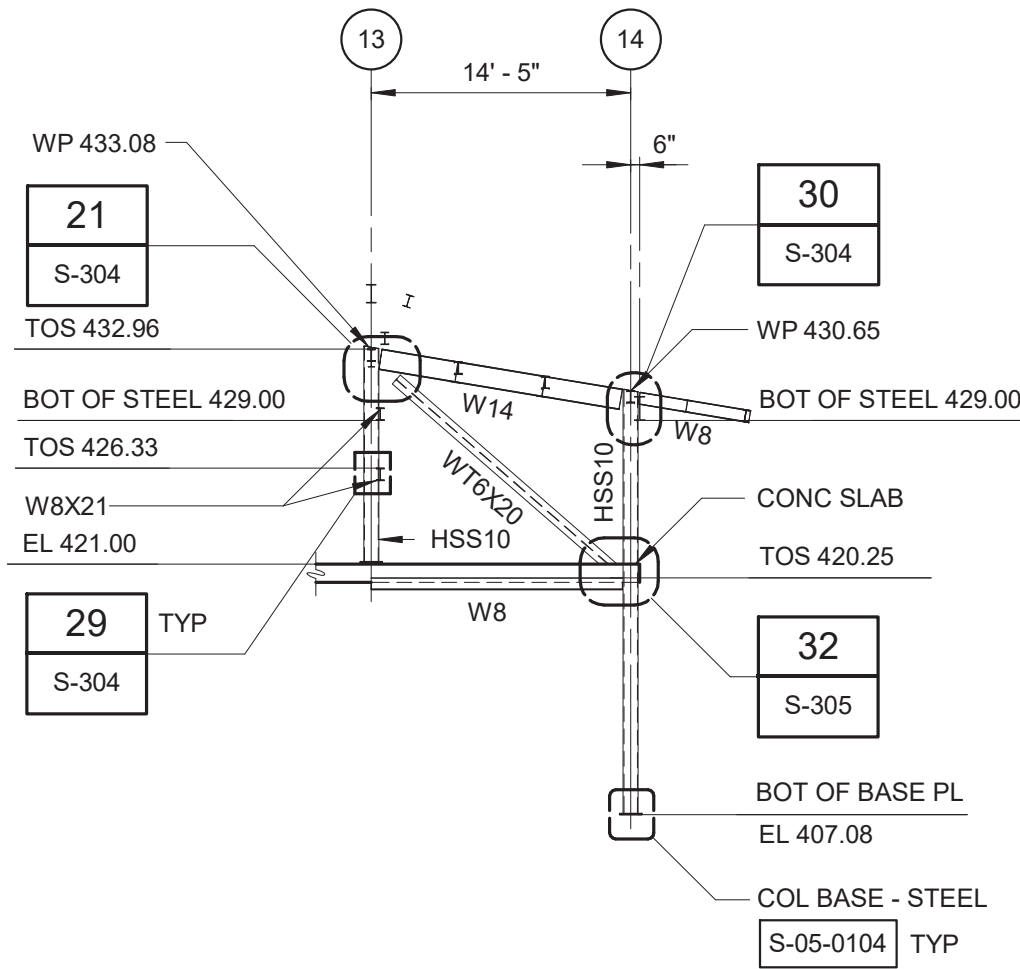
WARNING

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.

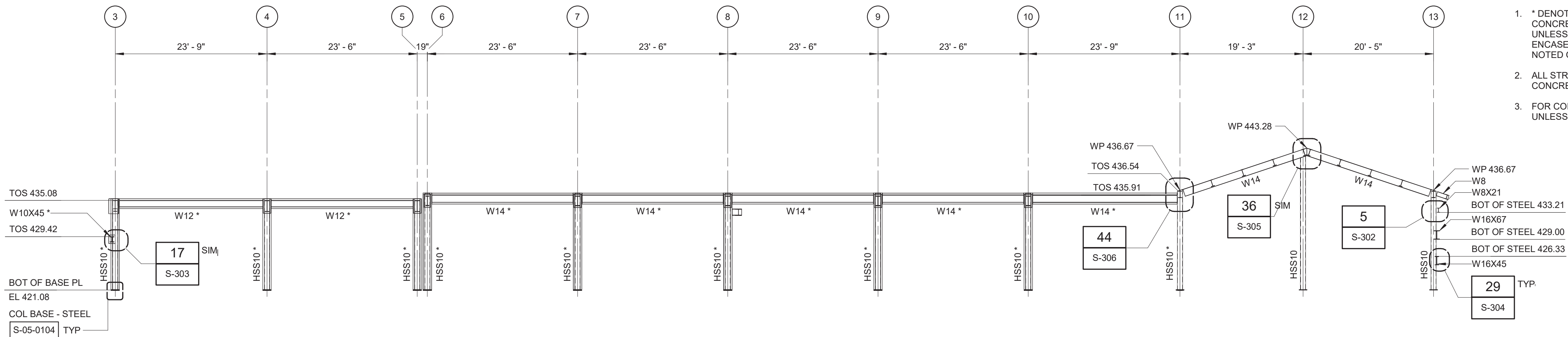
BID SET		Hazen HAZEN AND SAWYER 498 SEVENTH AVENUE, 11th FLOOR NEW YORK, NEW YORK 10018	WESTCHESTER JOINT WATER WORKS MAMARONECK, NY	FILTRATION PLANT STRUCTURAL FRAMING ELEVATIONS - SHEET 1	DATE: FEB 2025
			RYE LAKE WATER FILTRATION PLANT HARRISON, NY		HAZEN NO.: 90388-000
					CONTRACT NO.: A1364-A
					DRAWING NUMBER: S-218

162 of 392

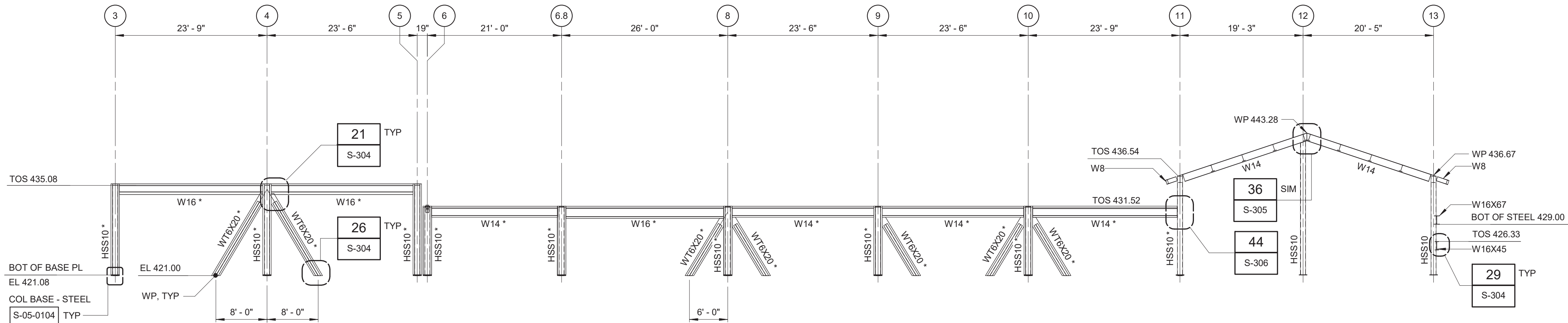
- NOTES:
- * DENOTES CONCRETE ENCASED FRAMING. FOR CONCRETE ENCASED BEAMS, SEE DETAIL 7/S-302 UNLESS NOTED OTHERWISE. FOR CONCRETE ENCASED COLUMNS, SEE DETAIL 12/S-302, UNLESS NOTED OTHERWISE.
 - ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
 - FOR COLUMN CAP PLATE, SEE DETAIL 14/S-303, UNLESS NOTED OTHERWISE.



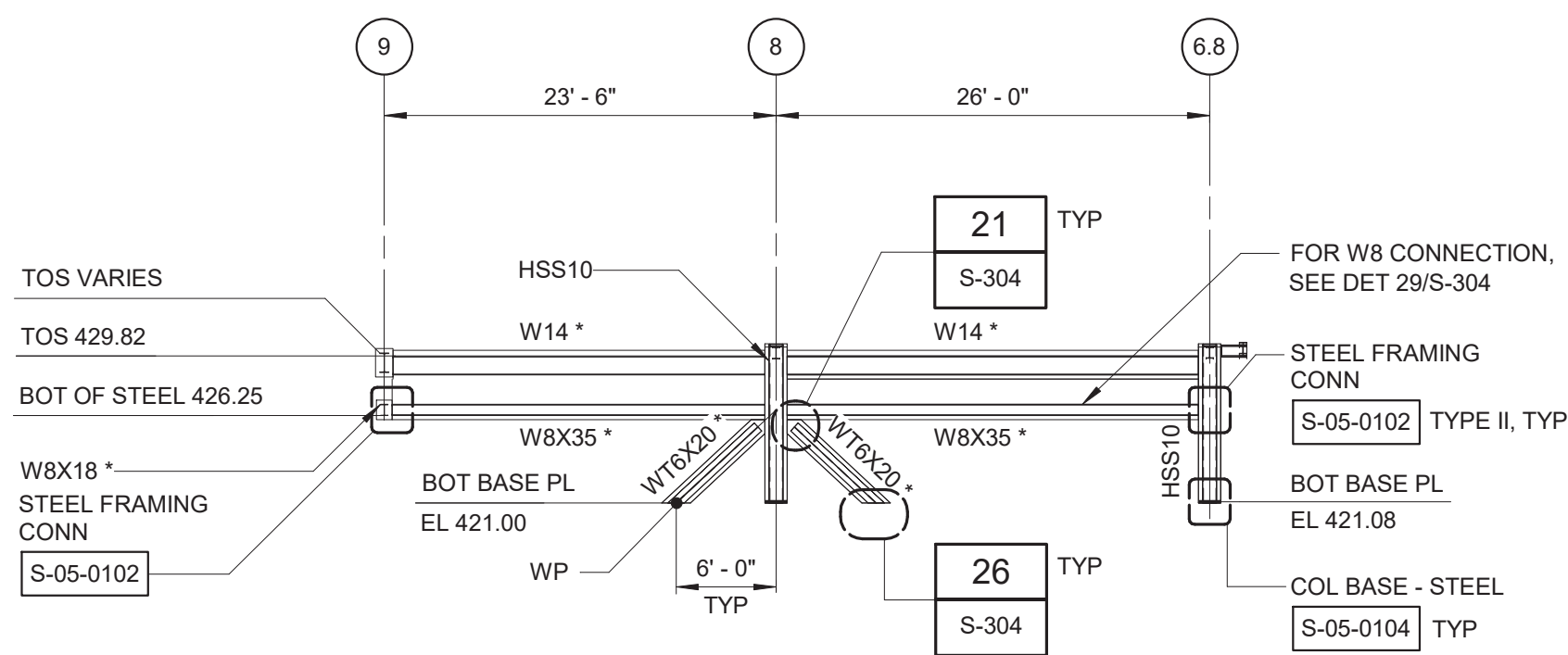
COL LINE F.3
3/32" = 1'-0"



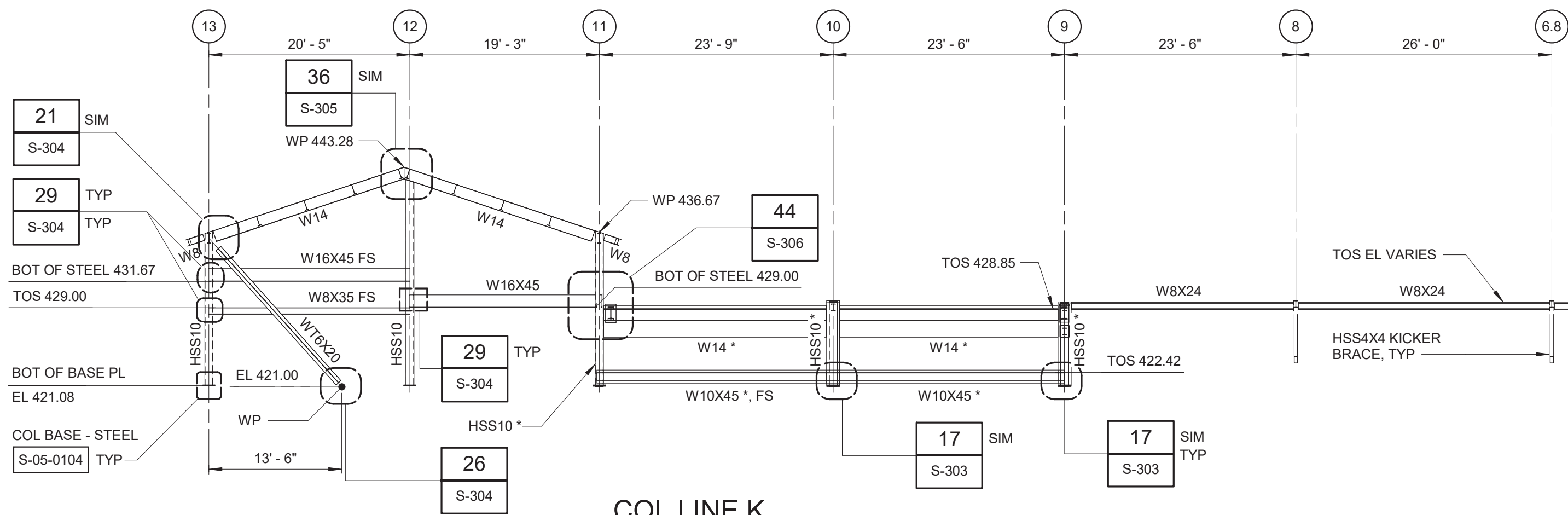
COL LINE G
3/32" = 1'-0"



COL LINE H
3/32" = 1'-0"

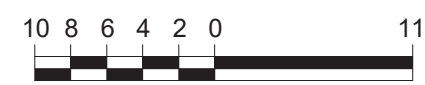


COL LINE J
3/32" = 1'-0"



COL LINE K
3/32" = 1'-0"

3/32" = 1'-0"



WARNING:
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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
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

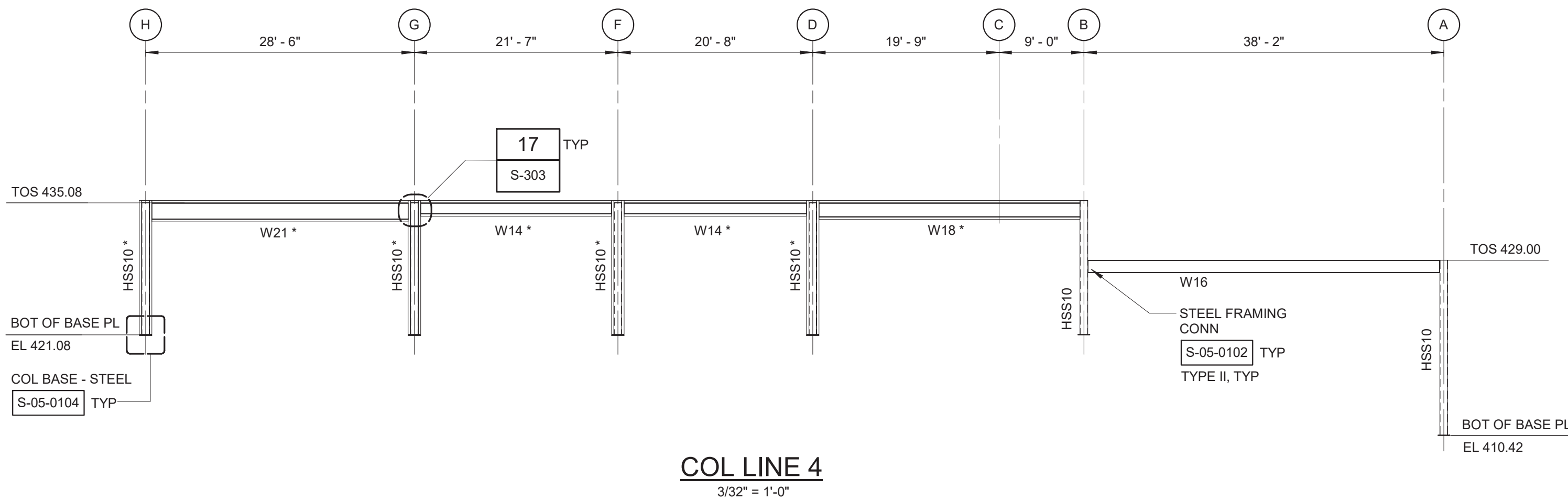
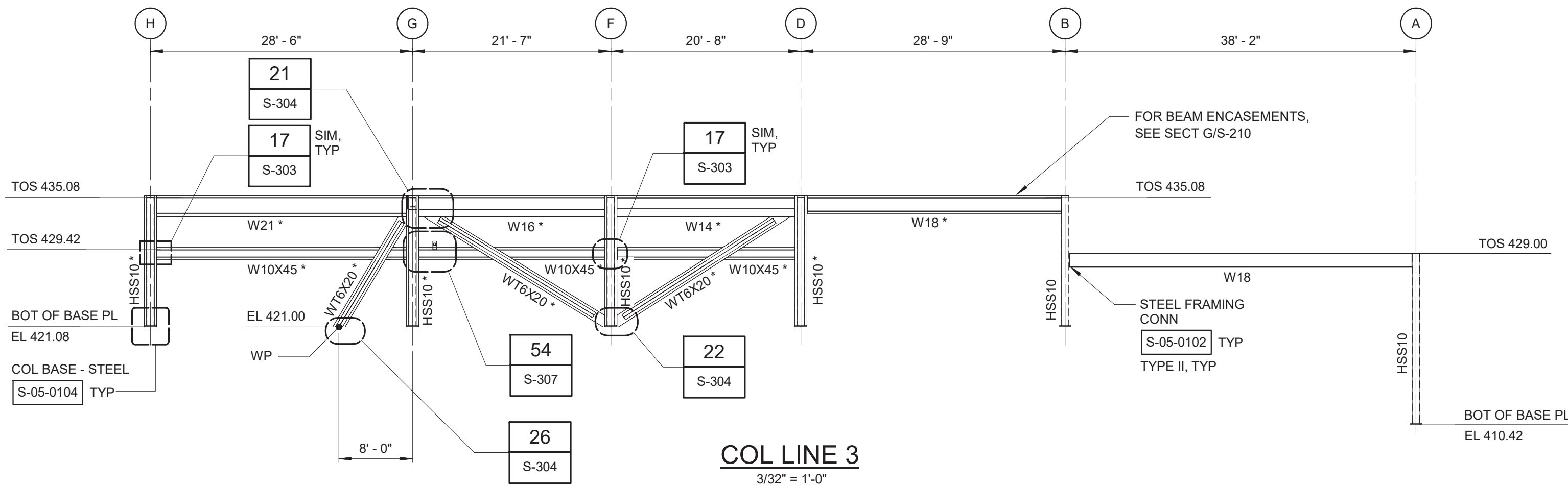
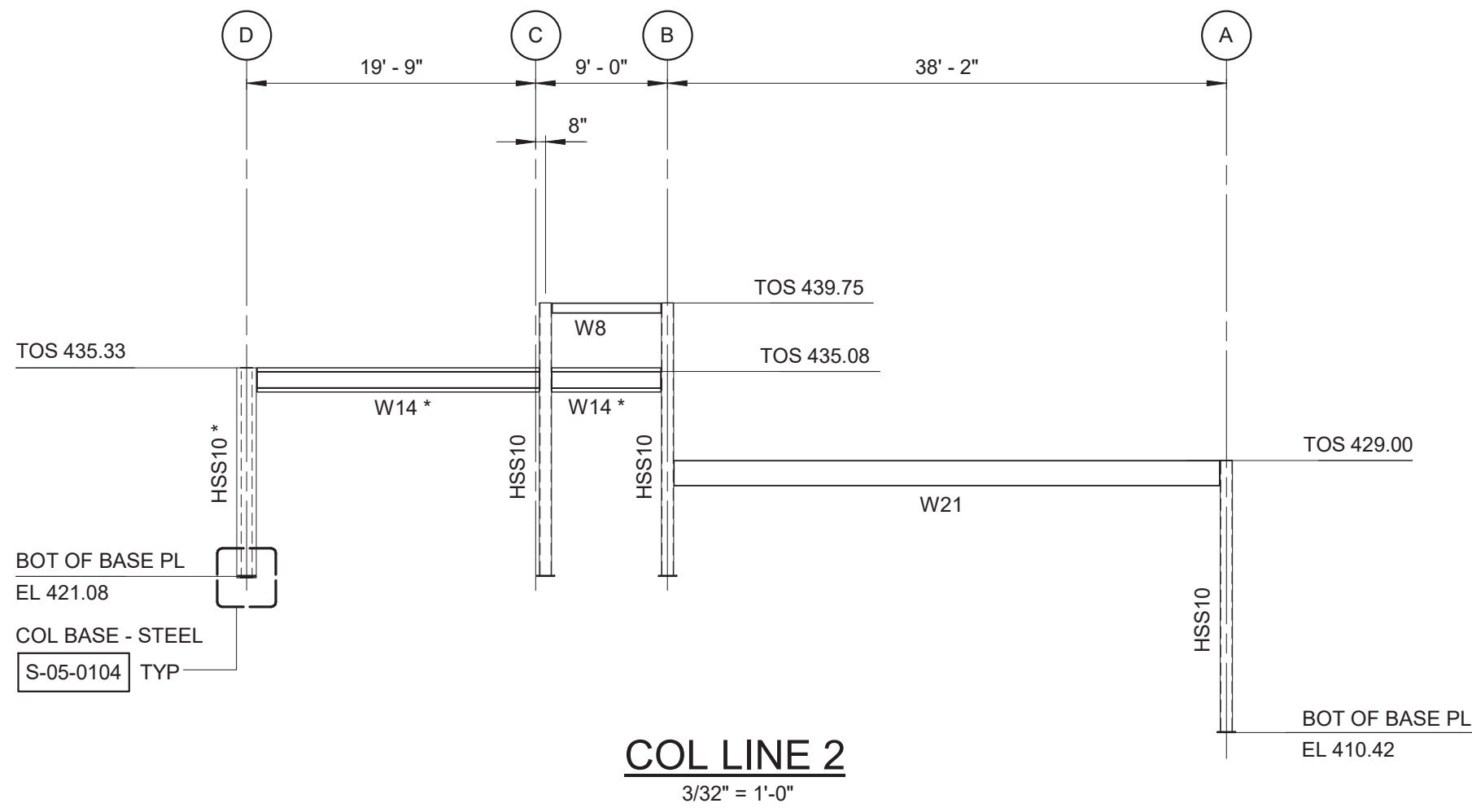
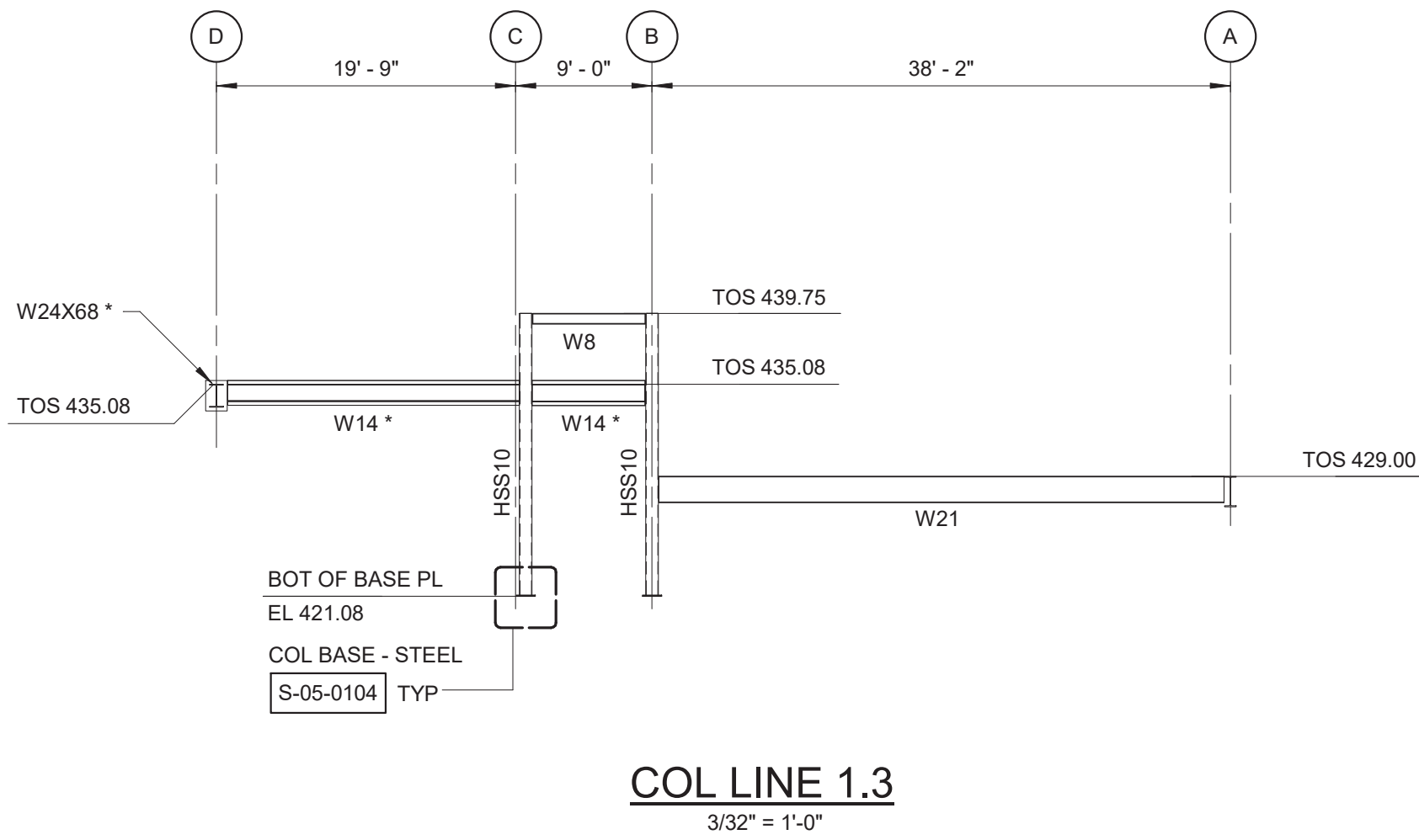
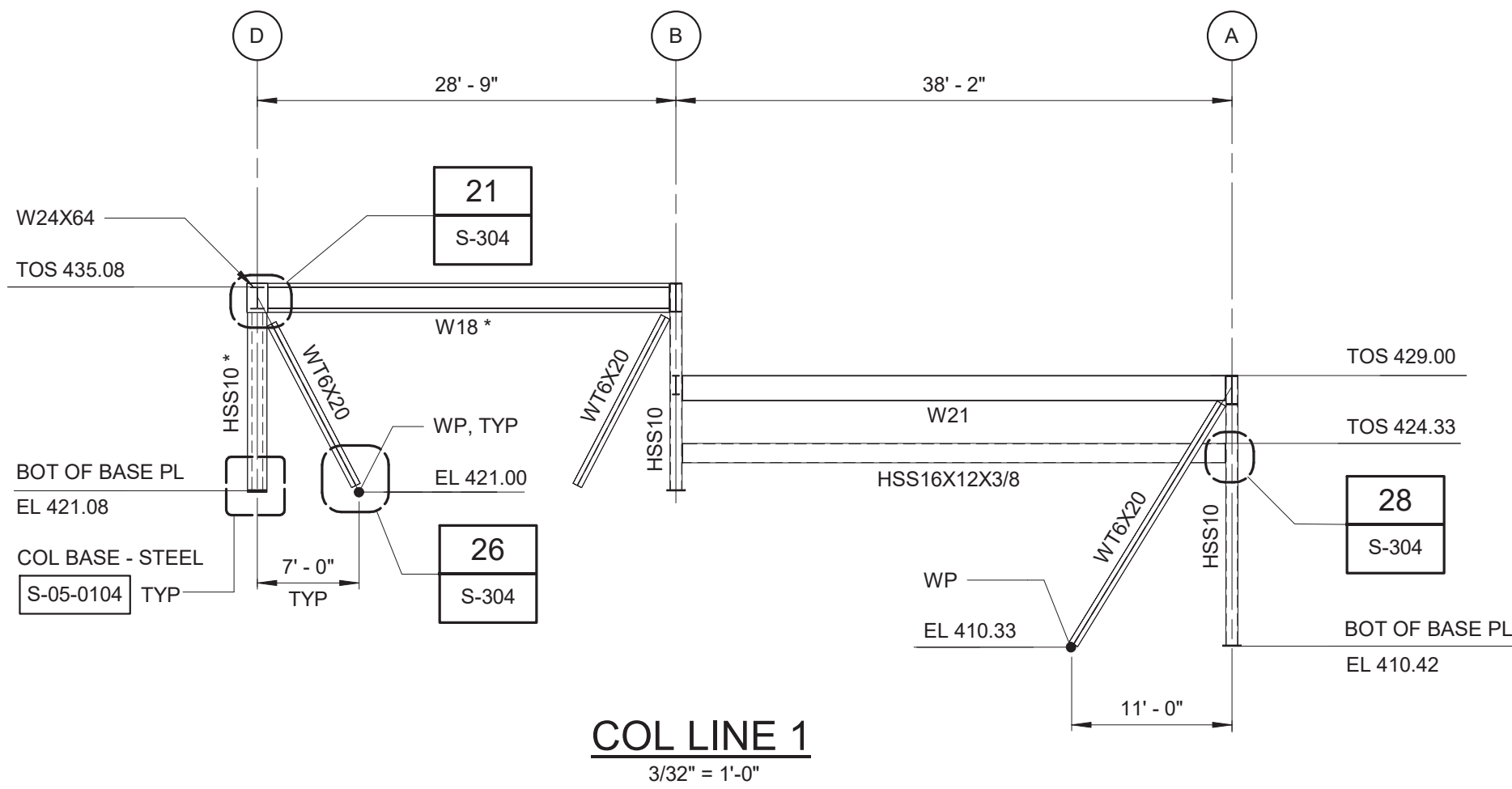
WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
STRUCTURAL
FRAMING ELEVATIONS - SHEET 3

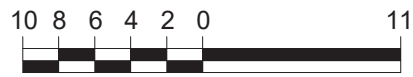
DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-220

- NOTES:
- * DENOTES CONCRETE ENCASED FRAMING. FOR CONCRETE ENCASED BEAMS, SEE DETAIL 7/S-302 UNLESS NOTED OTHERWISE. FOR CONCRETE ENCASED COLUMNS, SEE DETAIL 12/S-302, UNLESS NOTED OTHERWISE.
 - ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
 - FOR COLUMN CAP PLATE, SEE DETAIL 14/S-303, UNLESS NOTED OTHERWISE.



WARNING
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3/32" = 1'-0"



REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
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
STRUCTURAL
FRAMING ELEVATIONS - SHEET 4

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-221

1. * DENOTES CONCRETE ENCASED FRAMING. FOR CONCRETE ENCASED BEAMS, SEE DETAIL 7/S-302 UNLESS NOTED OTHERWISE. FOR CONCRETE ENCASED COLUMNS, SEE DETAIL 12/S-302, UNLESS NOTED OTHERWISE.
2. SLOPE OF BEAM ENCASEMENT SHALL MATCH TOP OF BEAM ENCASEMENT AT COLUMN 6 BETWEEN COLUMN LINES H AND G.
3. ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
4. FOR COLUMN CAP PLATE, SEE DETAIL 14/S-303, UNLESS NOTED OTHERWISE.



WARNING

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					PROJECT ENGINEER:	R. FROST
					DESIGNED BY:	J. EDER
					DRAWN BY:	R. HERNANDEZ
					CHECKED BY:	C. PHILLIPS
					IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1" 
REV	ISSUED FOR	DATE	BY			

STATE OF NEW YORK
JC Eder
097035
LICENSED PROFESSIONAL ENGINEER

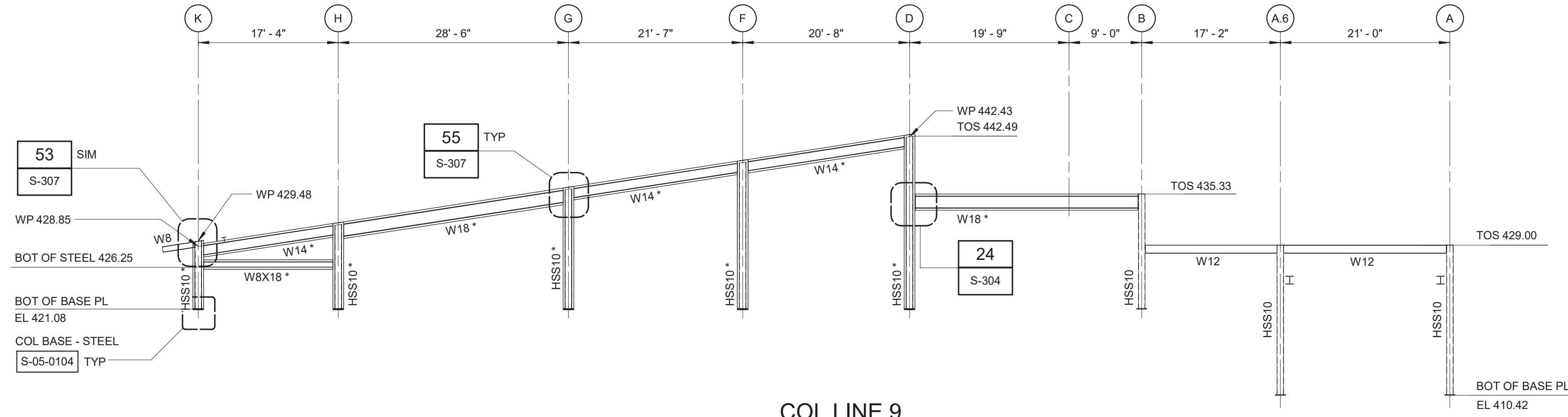
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

RYE LAKE WATER FILTRATION PLANT HARRISON, NY

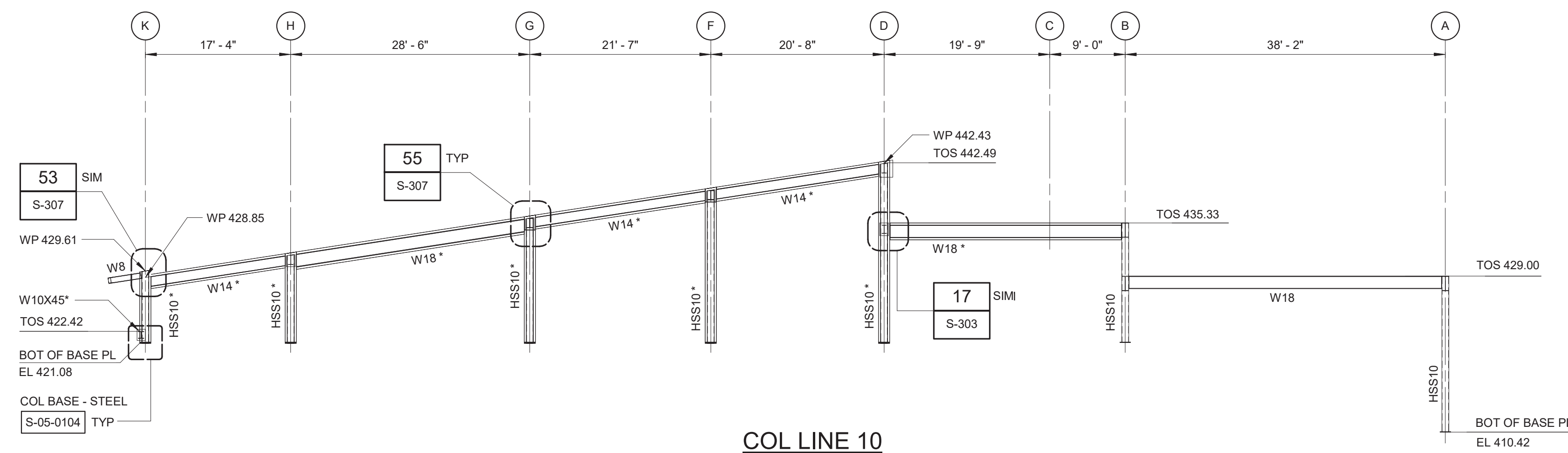
FILTRATION PLANT
STRUCTURAL
FRAMING ELEVATIONS - SHEET 5

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-222

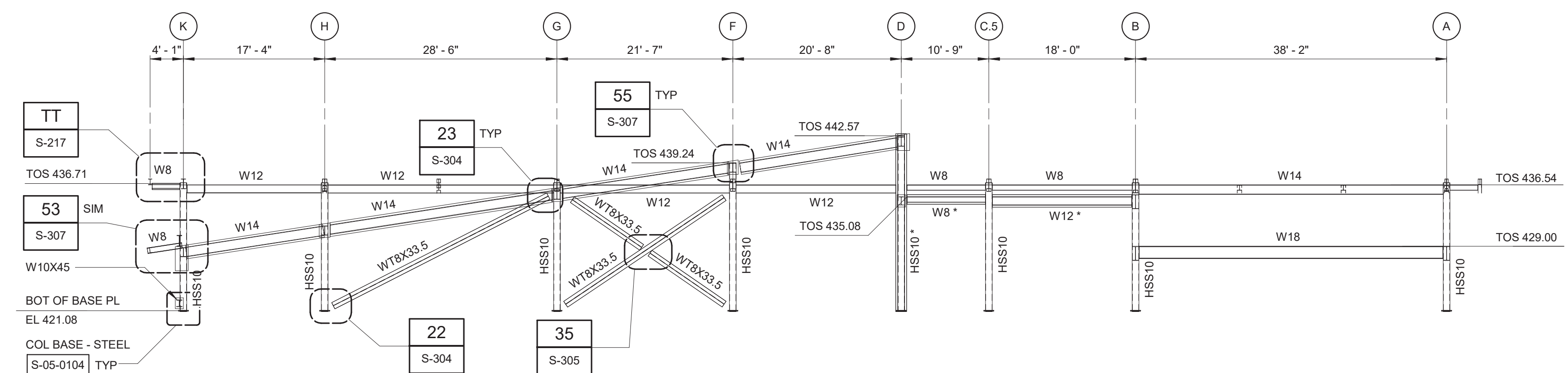
- NOTES:
- * DENOTES CONCRETE ENCASED FRAMING. FOR CONCRETE ENCASED BEAMS, SEE DETAIL 7/S-302 UNLESS NOTED OTHERWISE. FOR CONCRETE ENCASED COLUMNS, SEE DETAIL 12/S-302, UNLESS NOTED OTHERWISE.
 - SLOPE OF BEAM ENCASEMENT SHALL MATCH TOP OF BEAM ENCASEMENT AT COLUMN 6 BETWEEN COLUMN LINES H AND G.
 - ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
 - FOR COLUMN CAP PLATE, SEE DETAIL 14/S-303, UNLESS NOTED OTHERWISE.



COL LINE 9
3/32" = 1'-0"



COL LINE 10
3/32" = 1'-0"



COL LINE 11
3/32" = 1'-0"

10 8 6 4 2 0 11'
3/32" = 1'-0"

WARNING
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				PROJECT ENGINEER:	R. FROST
				DESIGNED BY:	J. EDER
				DRAWN BY:	R. HERNANDEZ
				CHECKED BY:	C. PHILLIPS
				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

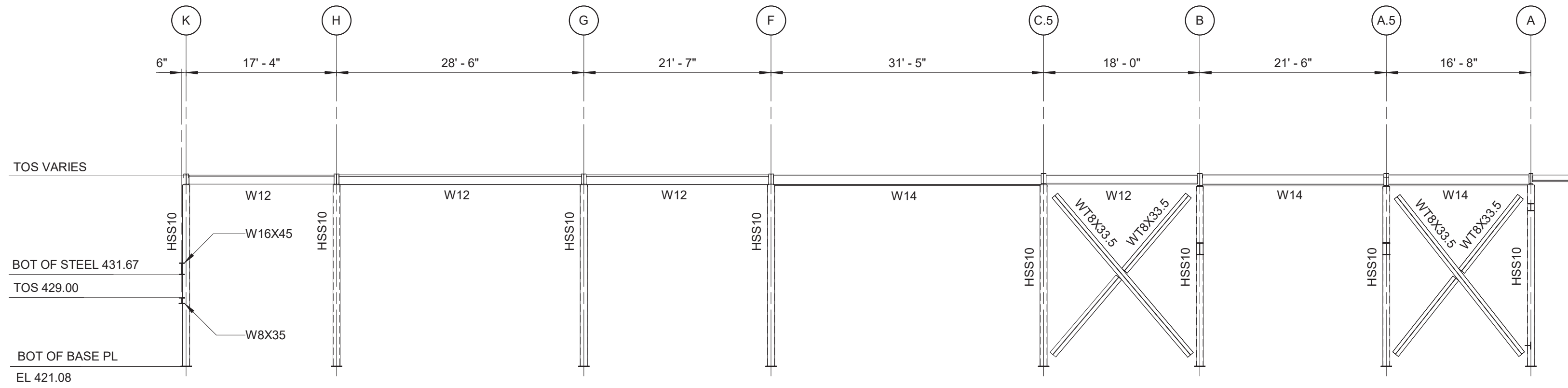
WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

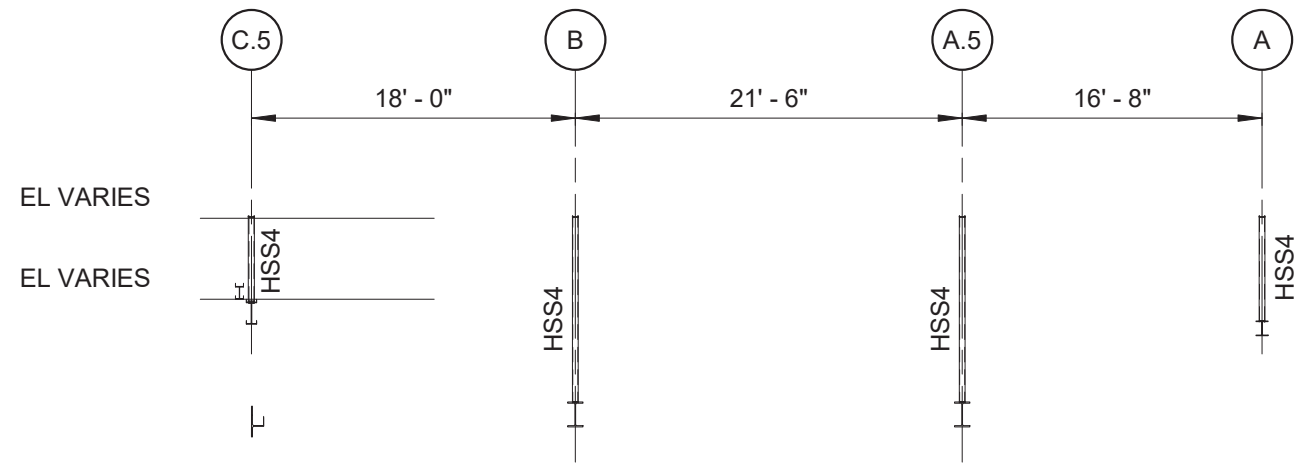
FILTRATION PLANT
STRUCTURAL
FRAMING ELEVATIONS - SHEET 6

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-223

Autodesk Docs\\90388-000_Rye_Lake_Filtration\\90388-000-WFP-S-11
2/20/2025 1:00:44 AM



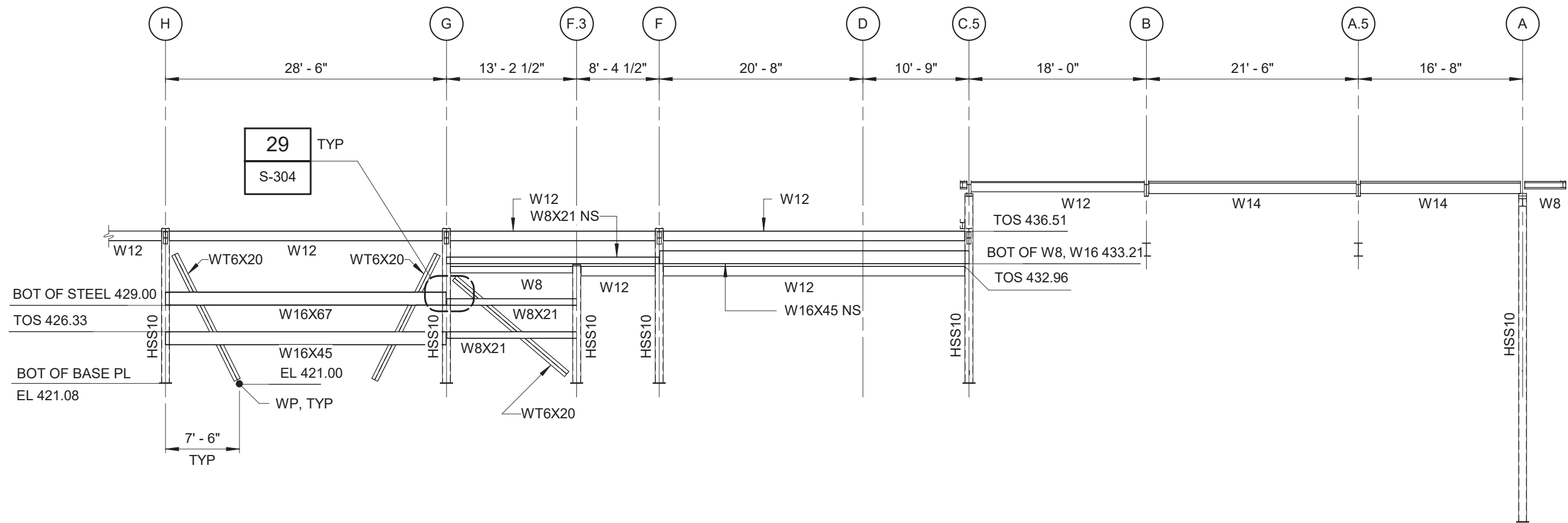
COL LINE 12
3/32" = 1'-0"



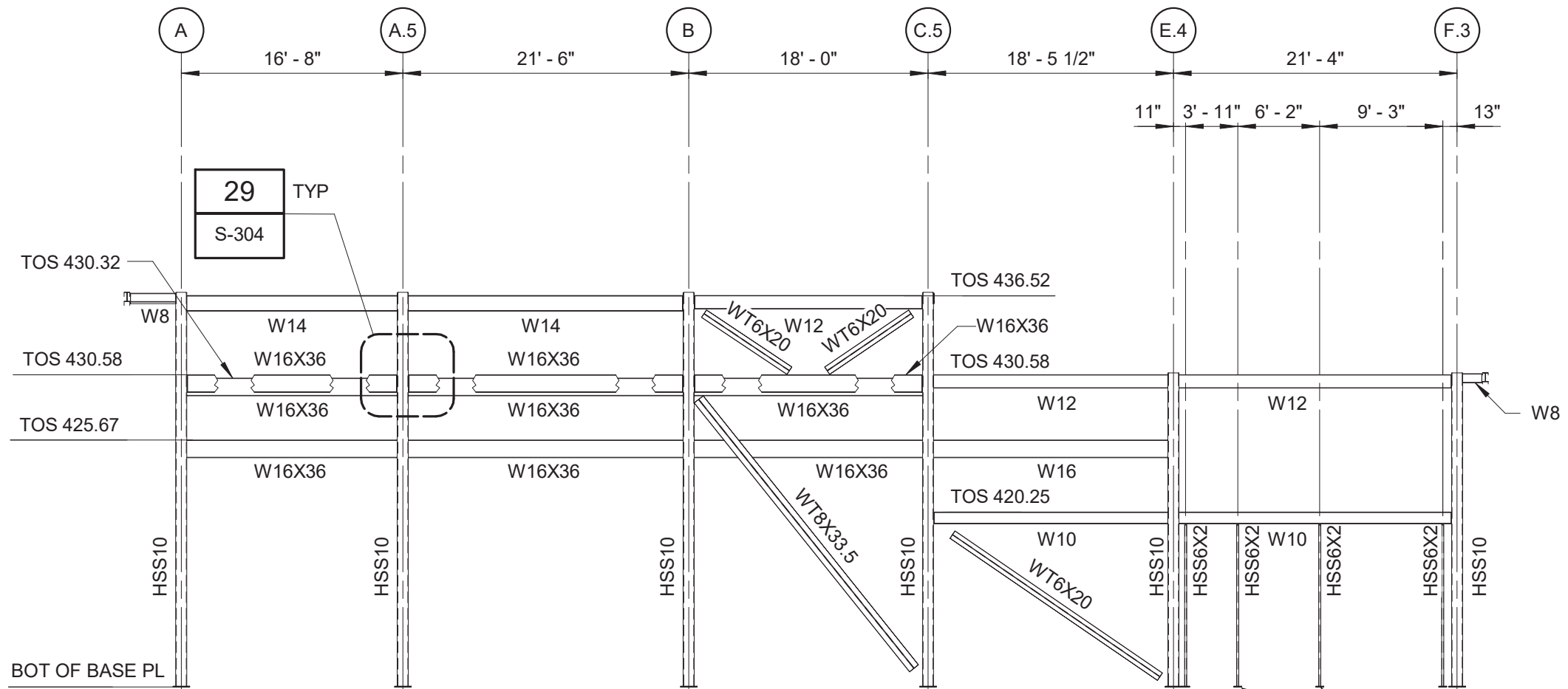
COL LINE 12.3
3/32" = 1'-0"

NOTES:

- * DENOTES CONCRETE ENCASED FRAMING. FOR CONCRETE ENCASED BEAMS, SEE DETAIL 7/S-302 UNLESS NOTED OTHERWISE. FOR CONCRETE ENCASED COLUMNS, SEE DETAIL 12/S-302, UNLESS NOTED OTHERWISE.
- SLOPE OF BEAM ENCASEMENT SHALL MATCH TOP OF BEAM ENCASEMENT AT COLUMN 6 BETWEEN COLUMN LINES H AND G.
- ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.
- FOR COLUMN CAP PLATE, SEE DETAIL 14/S-303, UNLESS NOTED OTHERWISE.



COL LINE 13
3/32" = 1'-0"



COL LINE 14
3/32" = 1'-0"

7"x7"
COL BASE - STEEL
[S-05-0104] TYP
TYPE II

Autodesk Docs/09388-000_Rye_Lake_Filtration/09388-000-WFF-S-14
2/20/2025 11:09:45 AM

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:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
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

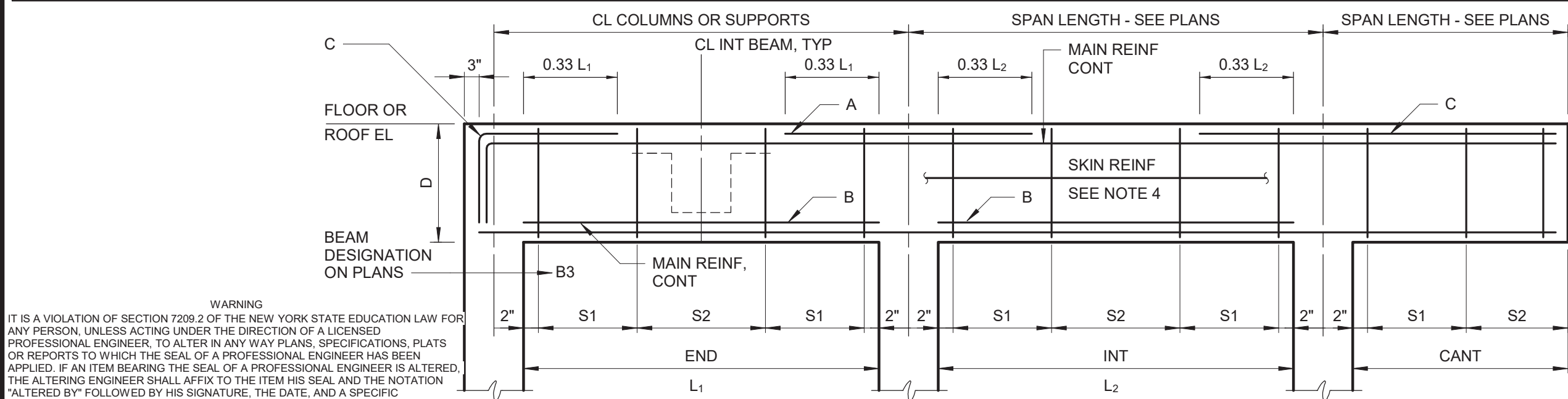
FILTRATION PLANT
STRUCTURAL
FRAMING ELEVATIONS - SHEET 7

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-224

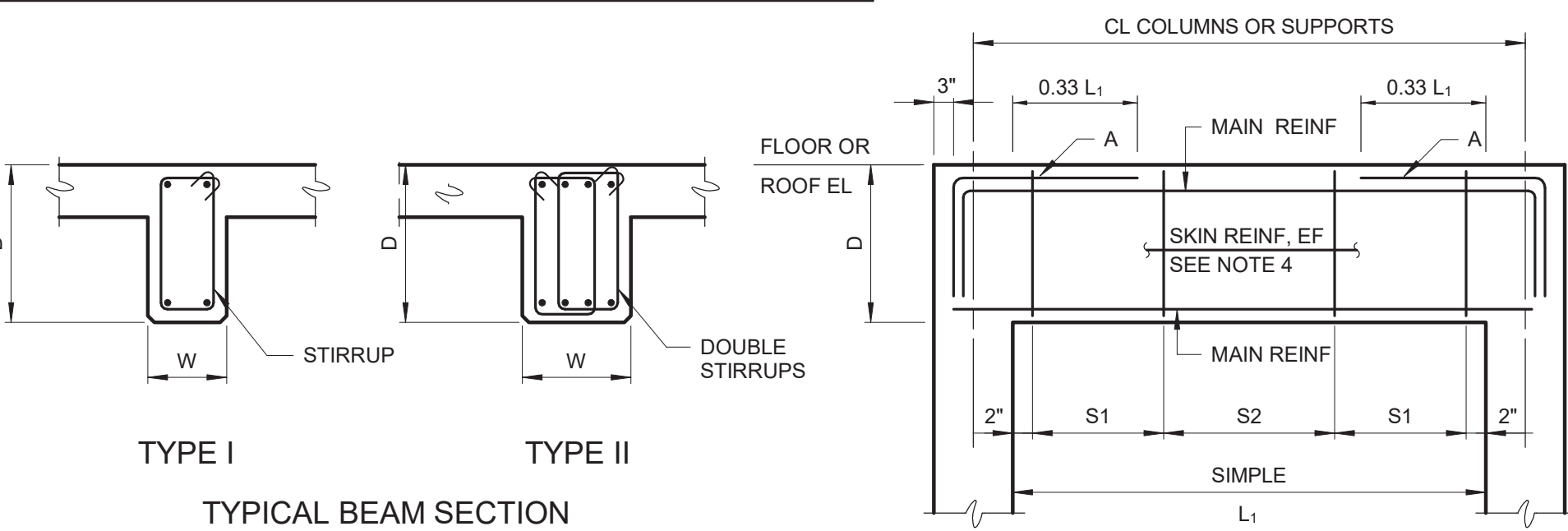
3/32" = 1'-0"
10 8 6 4 2 0 11'

BEAM SCHEDULE															
MARK	COUNT	SPAN TYPE	SIZE		TOP EL	MAIN REINF		ADDL REINF			S1 STIRRUPS		S2 STIRRUPS		REMARKS
			W"	D"		TOP	BOT	A	B	C	SIZE	SPACIN G	SIZE	SPACING	
LB-1	2	END	24"	24"	398.83			-	-	-					
LB-2	1	INT	24"	24"	398.83			-	-	-					
B-1	4	SIMP	24"	36"	407.00	5-#10	10-#10	-	-	-	#4	6"	#4	6"	PLACE BOTTOM REINF IN TWO LAYERS
B-2	1	SIMP	24"	36"	407.00	5-#10	10-#10	-	-	-	#4	6"	#4	6"	
B-3	2	END	12"	18"	407.00	3-#6	3-#6	-	-	-	#4	8"	#4	8"	
B-4	3	INT	12"	18"	407.00	3-#6	3-#6	-	-	-	#4	8"	#4	8"	
B-6	8	SIMP	24"	40"	407.00	8-#9	16-#9	-	-	-	#4	6"	#4	6"	PLACE BOTTOM REINF IN TWO LAYERS
B-9	2	END	24"	36"	407.00	6-#9	6-#9	5-#9	5-#9	-	2-#4	6"	2-#4	7"	PLACE TOP AND BOTTOM REINF IN TWO LAYERS, DOUBLE STIRRUPS, SEE DETAIL 57
B-10	1	INT	24"	36"	407.00	6-#9	6-#9	5-#9	5-#9	-	#4	5"	#4	5"	PLACE TOP AND BOTTOM REINF IN TWO LAYERS
B-11	2	SIMP	12"	24"	407.00	3-#8	3-#8	-	-	-	#4	9"	#4	9"	
B-12	1	SIMP	24"	24"	407.00	4-#8	4-#8	-	-	-	#4	9"	#4	9"	
B-13	4	SIMP	24"	36"	407.00	5-#9	10-#9	-	-	-	#4	6"	#4	6"	
B-14	2	END	24"	36"	407.00	5-#10	5-#10	4-#10	4-#10	-	#4	3"	#4	5"	PLACE BOTTOM REINF IN TWO LAYERS
B-15	1	SIMP	30"	36"	407.00	6-#9	9-#10	-	-	-	#4	6"	#4	6"	
B-16	1	SIMP	24"	36"	407.00	5-#10	5-#10	-	-	-	#4	8"	#4	8"	
B-17	1	SIMP	12"	24"	VARIES	3-#6	3-#6	-	-	-	#4	10"	#4	10"	
B-18	2	SIMP	18"	24"	407.00	3-#7	3-#7	-	-	-	#4	8"	#4	8"	
B-19	2	END	24"	36"	407.00	3-#9	3-#9	2-#9	-	-	#4	6"	#4	12"	
B-20	2	END	24"	36"	407.00	4-#9	3-#9	4-#9	2-#9	-	#4	5"	#4	5"	
B-21	4	SIMP	24"	36"	VARIES	4-#6	10-#9	-	-	-	#4	3.5"	#4	4.5"	PLACE BOTTOM REINF IN TWO LAYERS
B-22	4	INT	24"	36"	407.00	3-#9	3-#9	2-#9	2-#9	-	#4	6"	#4	12"	
B-23	1	END	24"	18"	407.00	3-#9	3-#9	-	-	-	#4	8"	#4	8"	
B-24	3	END	24"	24"	407.00	6-#8	6-#8	-	-	-	#4	10"	#4	10"	
B-25	3	SIMP	12"	18"	407.00	2-#6	2-#6	-	-	-	#4	8"	#4	8"	
B-26	3	SIMP	24"	24"	407.00	4-#8	4-#8	-	-	-	#4	10"	#4	10"	
B-27	2	SIMP	30"	36"	407.00	4-#8	6-#8	-	-	-	#4	10"	#4	12"	
B-28	8	SIMP	24"	24"	406.50	4-#8	4-#8	-	-	-	#4	10"	#4	12"	
B-29	2	SIMP	24"	24"	406.50	5-#6	5-#6	-	-	-	#4	11"	#4	11"	
B-30	6	SIMP	24"	24"	406.50	4-#6	4-#6	-	-	-	#4	11"	#4	11"	
B-31	1	END	24"	62"	406.50	6-#9	6-#9	-	-	-	#4	9"	#4	9"	
B-32	1	SIMP	24"	62"	406.50	8-#9	8-#9	-	-	-	#4	6"	#4	6"	
B-33	3	SIMP	24"	36"	406.50	9-#9	9-#9	-	-	-	#4	9"	#4	9"	DOUBLE STIRRUPS, SEE DETAIL 57
B-34	1	SIMP	18"	24"	406.50	5-#9	5-#9	-	-	-	#4	10"	#4	10"	
B-35	4	SIMP	18"	18"	406.50	4-#9	4-#9	-	-	-	#4	12"	#4	12"	
B-36	1	SIMP	32"	62"	406.50	7-#9	7-#9	-	-	-	#4	12"	#4	12"	
B-37	3	END	32"	26"	406.50	4-#8	4-#8	-	-	-	#4	12"	#4	12"	
B-38	1	SIMP	24"	42"	406.50	6-#9	6-#9	-	-	-	#4	6"	#4	6"	
B-39	1	INT	24"	36"	406.50	6-#9	6-#9	-	-	-	#4	5"	#4	5"	
SB-1	1	SIMP	24"	24"	421.00	8-#9	6-#8	-	-	-	2-#4	5"	2-#4	5"	DOUBLE STIRRUPS, SEE DETAIL 57
SB-2	1	SIMP	24"	24"	421.00	8-#9	6-#8	-	-	-	#4	10"	#4	10"	
SB-3	1	SIMP	24"	30"	421.00	6-#9	6-#8	-	6-#9	-	#4	8"	#4	8"	PLACE BOTTOM REINF IN TWO LAYERS
SB-4	28	INT	15"	18"	421.00	6-#8	6-#8	-	-	-	#4	6"	#4	6"	
SB-5	4	SIMP	15"	18"	421.00	6-#8	6-#8	-	-	-	#4	6"	#4	6"	
SB-6	1	SIMP	24"	36"	421.00	8-#8	8-#9	-	8-#9	-	#4	4"	#4	4"	PLACE BOTTOM REINF IN TWO LAYERS, DOUBLE STIRRUPS, SEE DETAIL 57
SB-7	4	END	24"	24"	421.00	8-#9	8-#9	3-#9	3-#9	-	#4	6"	#4	6"	PLACE TOP AND BOTTOM REINF IN TWO LAYERS, DOUBLE STIRRUPS, SEE DETAIL 57
SB-8	4	INT	24"	24"	421.00	8-#9	8-#9	3-#9	3-#9	-	#4	4"	#4	4"	
SB-9	2	SIMP	18"	24"	421.00	6-#9	6-#9	-	-	-	#4	10"	#4	10"	
SB-10	1	SIMP	18"	24"	421.00	4-#9	4-#9	-	-	-	#4	10"	#4	10"	
SB-11	18	SIMP	24"	24"	421.00	8-#9	8-#9	-	8-#9	-	#4	5"	#4	5"	PLACE BOTTOM REINF IN TWO LAYERS
SB-12	2	END	24"	24"	421.00	8-#9	8-#9	-	4-#9	-	#4	5"	#4	10"	PLACE BOTTOM REINF IN TWO LAYERS
SB-13	12	SIMP	12"	15"	421.00	6-#6	6-#6	-	-	-	#4	6"	#4	6"	
SB-14	4	END	15"	18"	421.00	6-#6	6-#6	-	-	-	#4	6"	#4	6"	
SB-15	2	SIMP	12"	16"	421.00	4-#8	4-#8	-	-	-	#4	10"	#4	10"	
SB-16	2	SIMP	24"	24"	421.00	5-#8	5-#8	-	-	-	#4	10"	#4	10"	
SB-17	1	SIMP	27"	24"	421.00	4-#8	4-#8	-	-	-	#4	10"	#4	10"	
SB-18	2	END	24"	16"	421.00	4-#6	4-#6	-	-	-	#4	6"	#4	6"	
SB-20	1	END	24"	30"	421.00	6-#9	12-#9	6-#9	-	-	#4	6"	#4	6"	PLACE TOP AND BOTTOM REINF IN TWO LAYERS
SB-21	1	SIMP	24"	24"	421.00	4-#8	8-#8	-	-	-	#4	10"	#4	10"	
SB-22	1	SIMP	24"	24"	421.00	4-#8	8-#8	-	-	-	#4	10"	#4	10"	
SB-23	6	INT	24"	24"	421.00	11-#9	11-#9	-	-	-	#4	3"	#4	5"	PLACE TOP AND BOTTOM REINF IN TWO LAYERS
SB-24	1	SIMP	8"	18"	421.00	2-#6	2-#6	-	-	-	#4	8"	#4	8"	
SB-25	1	SIMP	12"	18"	421.00	3-#6	3-#6	-	-	-	#4	8"	#4	8"	
SB-26	1	END	24"	24"	421.00	6-#9	11-#9	5-#9	-	-	#4	6"	#4	6"	PLACE TOP AND BOTTOM REINF IN TWO LAYERS
SB-27	4	SIMP	12"	18"	421.00	3-#6	3-#6	-	-	-	#4	8"	#4	8"	
SB-28	3	END	24"	28"	421.00	6-#9	11-#9	5-#9	-	-	#4	5"	#4	5"	PLACE TOP AND BOTTOM REINF IN TWO LAYERS
SB-29	1	END	24"	24"	421.00	6-#9	11-#9	5-#9	-	-	#4	6"	#4	6"	
SB-30	2	END	18"	18"	421.00	5-#8	5-#8	-	-	-	#4	8"	#4	8"	
SB-31	1	SIMP	24"	18"	421.00	5-#8	5-#5	-	-	-	#4	8"	#4	8"	
SB-32	1	END	24"	24"	421.00	6-#8	6-#8	-	-	-	#4	6"	#4	11"	FOR BEAM DETAIL, SEE S-119
SB-33	1	SIMP	24"	12"	421.00	2-#5	2-#5	-	-	-	#4	5"	#4	5"	
SB-34	1	SIMP	24"	24"	421.00	3-#6	3-#6	-	-	-	#4	10"	#4	10"	
SB-35	4	END	24"	24"	421.00	6-#8	6-#8	-	-	-	#4	11"	#4	11"	
SB-36	2	END	24"	24"	421.00	10-#9	10-#9	-	-	-	#4	7"	#4	7"	PLACE TOP AND BOTTOM REINF IN TWO LAYERS
SB-37	1	END	24"	24"	421.00	8-#9	8-#9	-	8-#9	-	#4	4"	#4	4"	
SB-38	2	SIMP	24"	24"	421.00	5-#9	11-#9	-	-	-	#4	5"	#4	5"	
SB-40	2	END	24"	24"	421.00	8-#8	8-#9	-	-	-	2-#4	5"	2-#4	5"	DOUBLE STIRRUPS, SEE DETAIL 57

NOTE:
1. SEE STANDARD DETAIL S-03-1001 FOR TYPICAL BEAM ELEVATIONS.



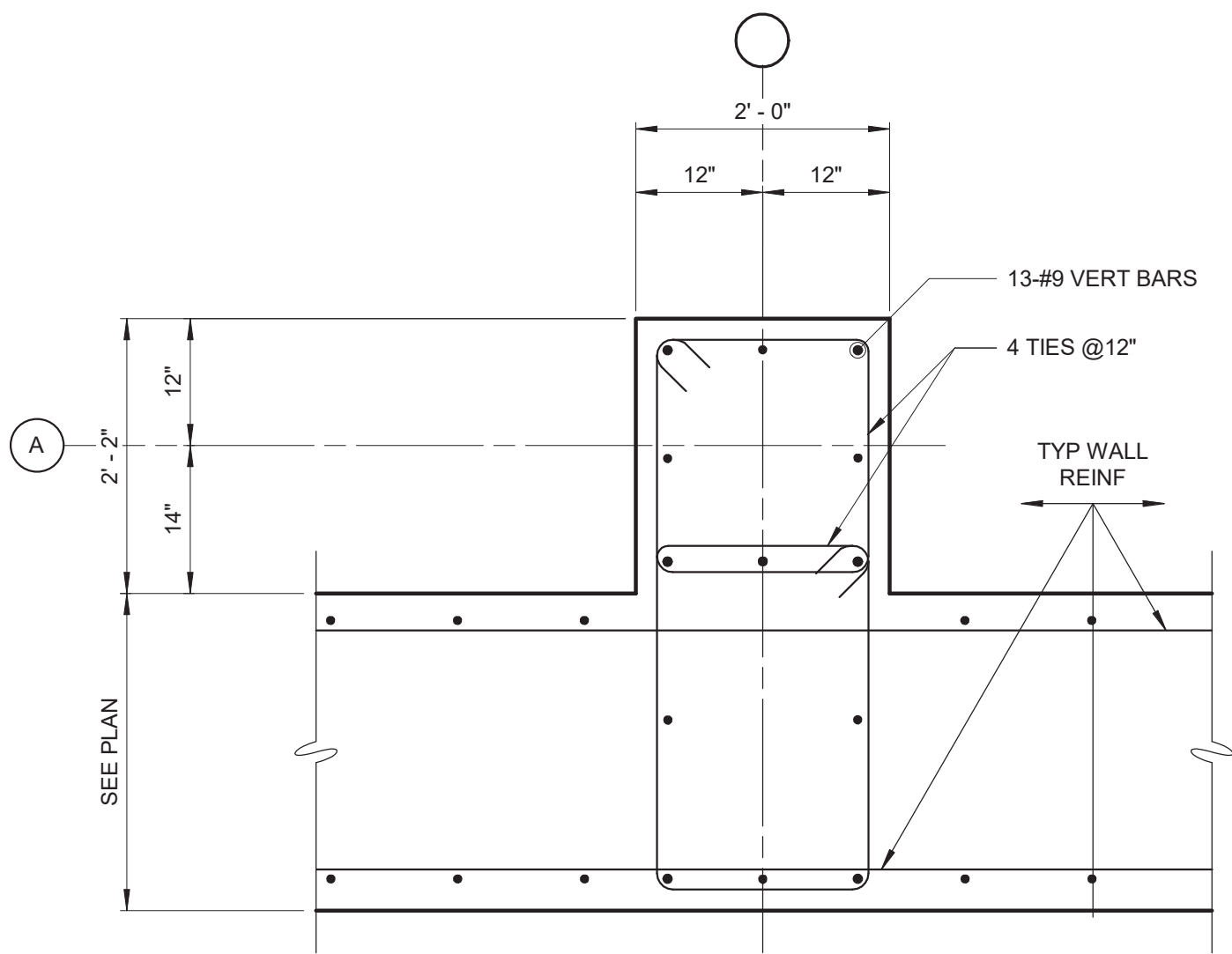
WARNING IT IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER IN ANY WAY PLANS, SPECIFICATIONS, PLATS OR REPORTS TO WHICH THE SEAL OF A PROFESSIONAL ENGINEER HAS BEEN APPLIED. IF AN ITEM 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	BID SET
				DESIGNED BY: J. EDER	
				DRAWN BY: R. HERNANDEZ	
				CHECKED BY: C. PHILLIPS	
REV	ISSUED FOR	DATE	BY	IF THIS BAR DOES NOT MEASURE 1\" THEN DRAWING IS NOT TO FULL SCALE 0 1/2\" 1\"	



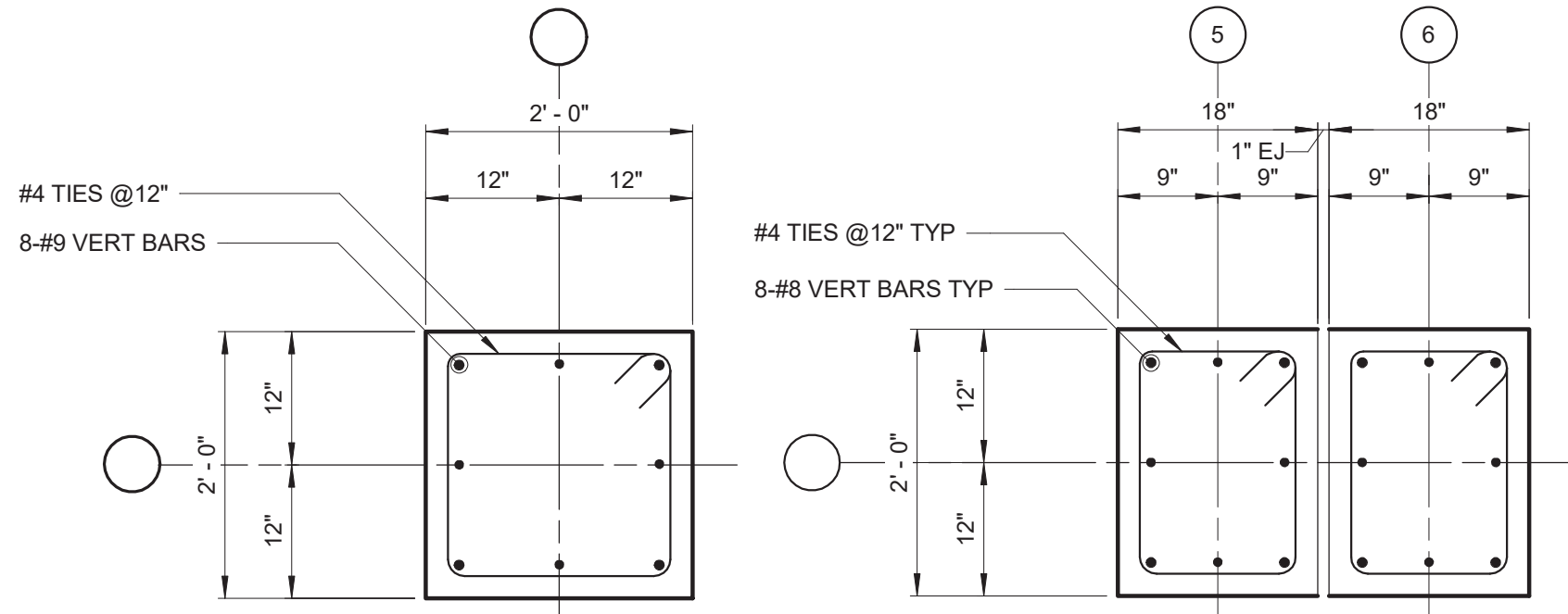
- WHERE BEAMS FRAME INTO CONCRETE WALLS, WALLS SHALL BE BLOCKED OUT FULL HEIGHT AND WIDTH OF BEAM TO PROVIDE A MINIMUM 8\" SEAT FOR BEAM BEARING. WALL REINFORCEMENT SHALL NOT BE INTERRUPTED THROUGH BLOCKOUT.
- S1 = 2x\"D\" FOR STIRRUP SPACING SEE BEAM SCHEDULE
- CONTINUOUS BOTTOM BARS IN ALL BEAMS MAY BE SPLICED AT COLUMN CENTERLINES. CONTINUOUS TOP BARS MAY BE SPLICED AT MID-SPAN.
- UNLESS NOTED OTHERWISE, PROVIDE SKIN REINFORCEMENT BETWEEN TOP AND BOTTOM MAIN REINFORCEMENT AS FOLLOWS:
FOR BEAMS >18\" THRU 36\" IN DEPTH, PROVIDE #5@12\" EF
FOR BEAMS >36\" THRU 84\" IN DEPTH, PROVIDE #5@6\" EF
FOR BEAMS >84\" IN DEPTH, SEE REMARKS IN BEAM SCHEDULE.
- ALL STIRRUPS SHALL BE CLOSED TIES, TYPE T1, (ACI 315)
- SEE DRAWINGS FOR BEAM ELEVATION DIAGRAMS SPECIFICALLY REFERRED TO IN THE BEAM SCHEDULES.
- WHEN TWO LAYERS OF FLEXURAL REINFORCEMENT ARE REQUIRED THE SPACING BETWEEN THE LAYERS SHALL BE 3 INCHES.

TYPICAL BEAM ELEVATION
S-03-1001

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 STRUCTURAL BEAM SCHEDULE AND DETAILS				DATE: FEB 2025
																HAZEN NO.: 90388-000
																CONTRACT NO.: A1364-A
																DRAWING NUMBER: S-300

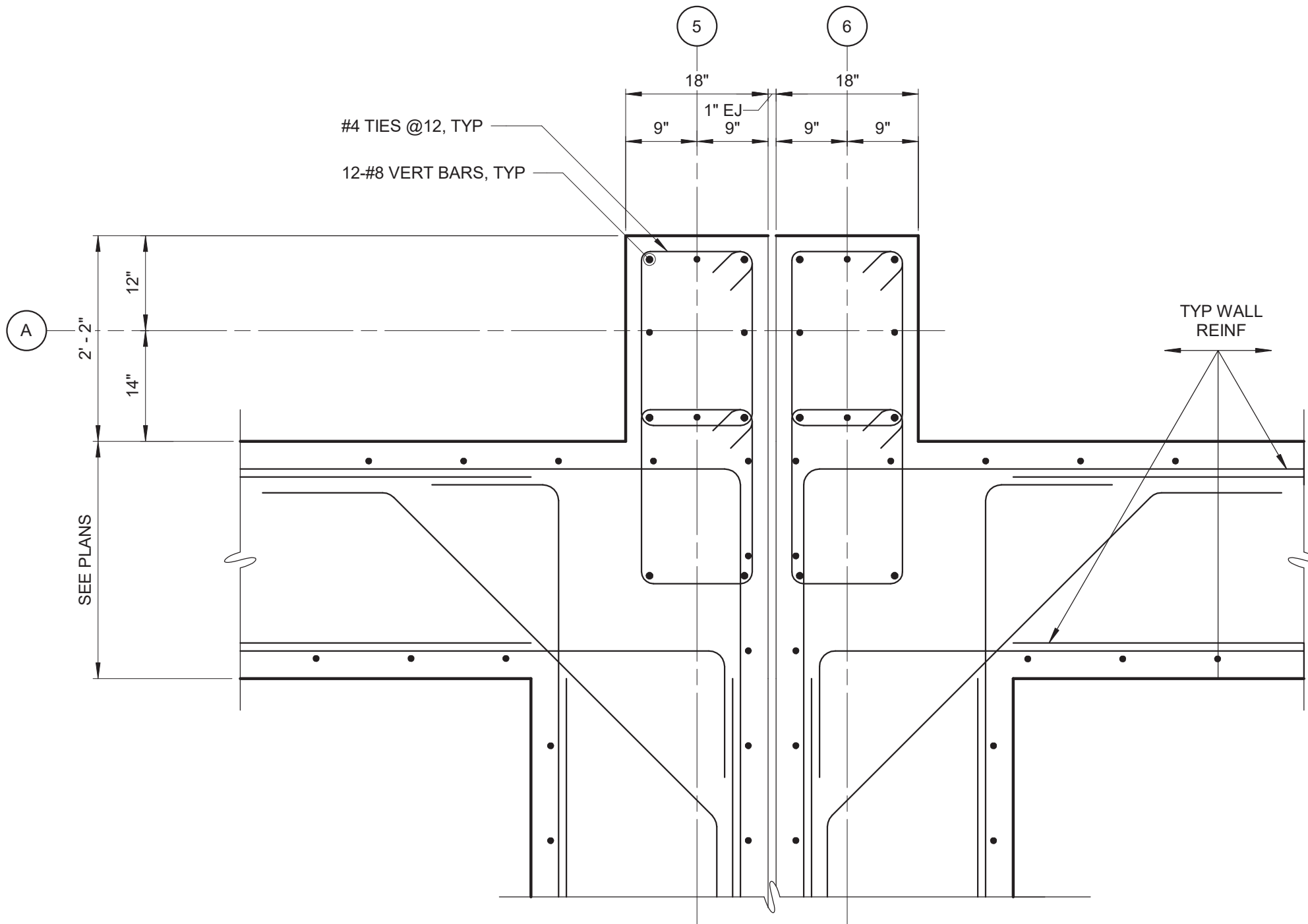


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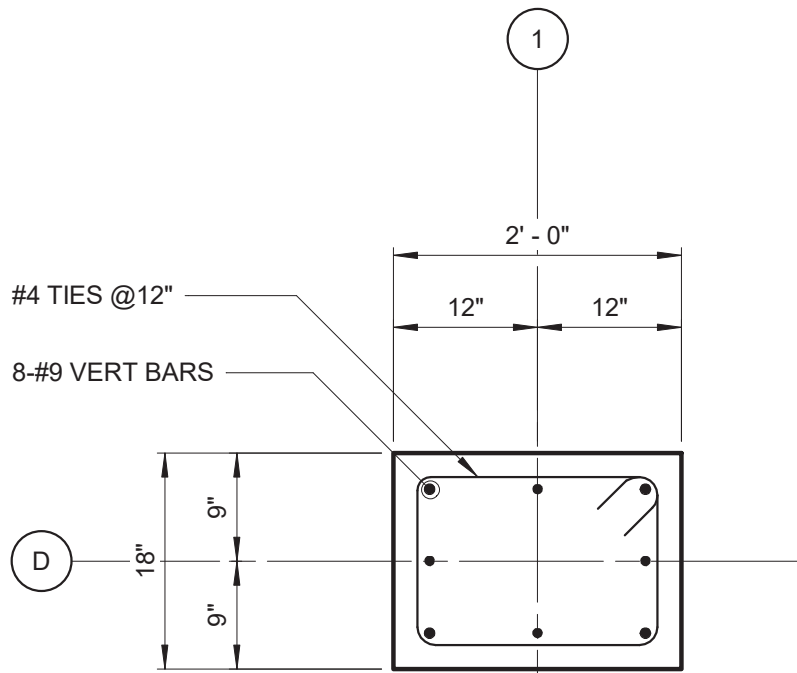


TYPE II

TYPE III



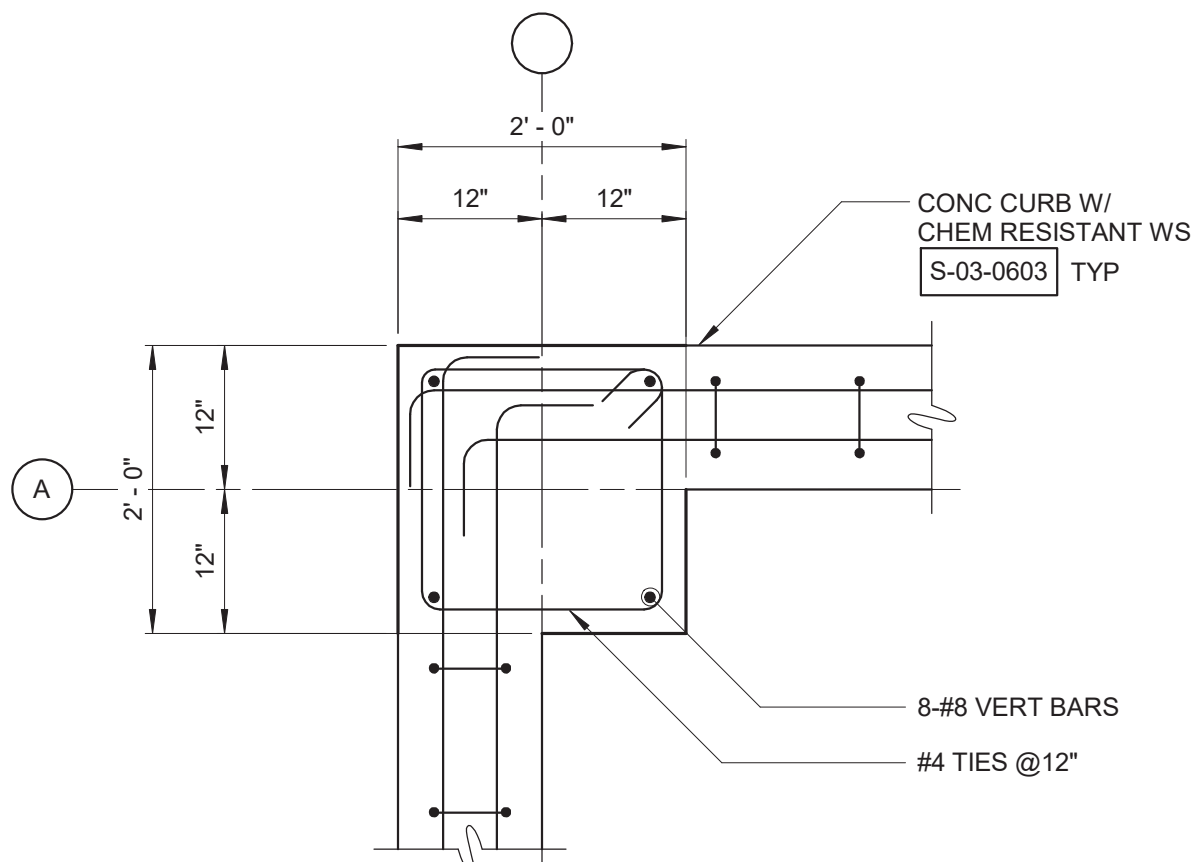
TYPE IV



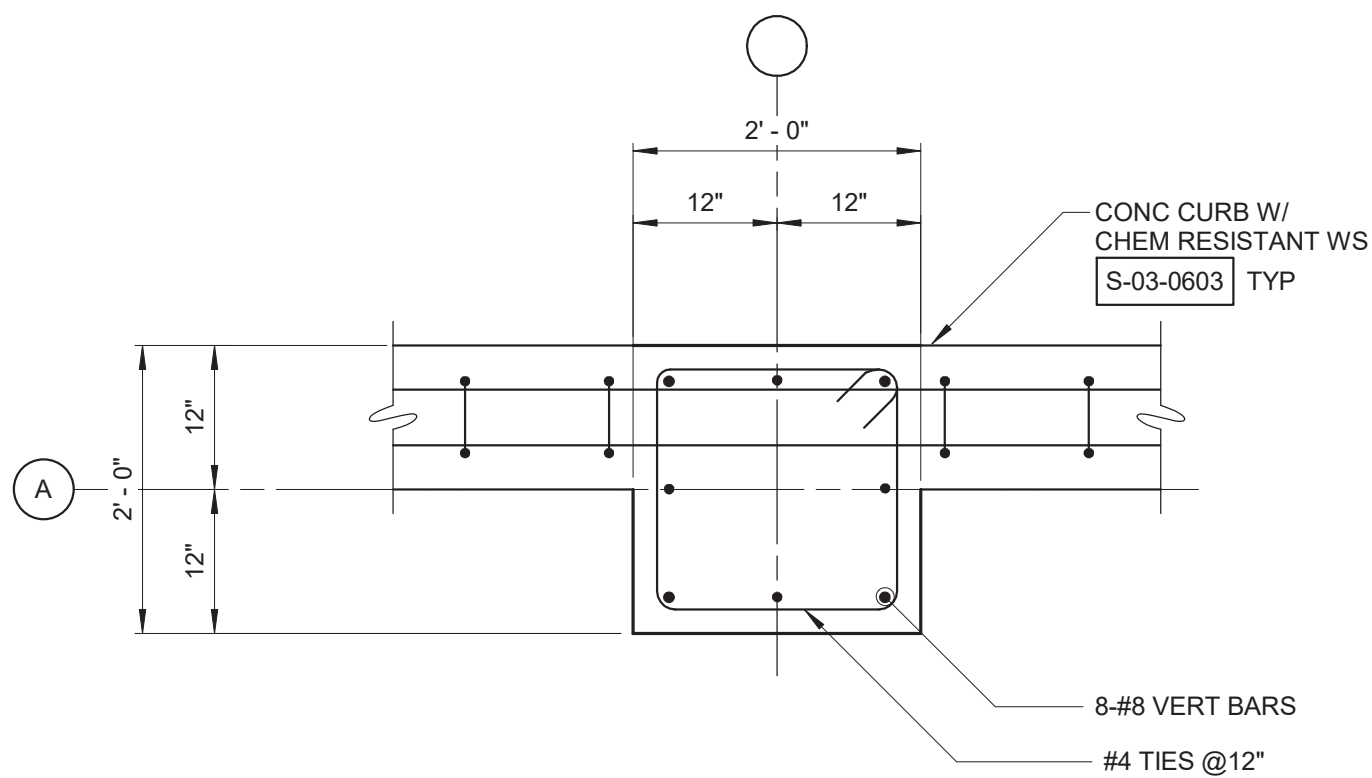
TYPE V

DETAIL	3
3/4" = 1'-0"	S-102

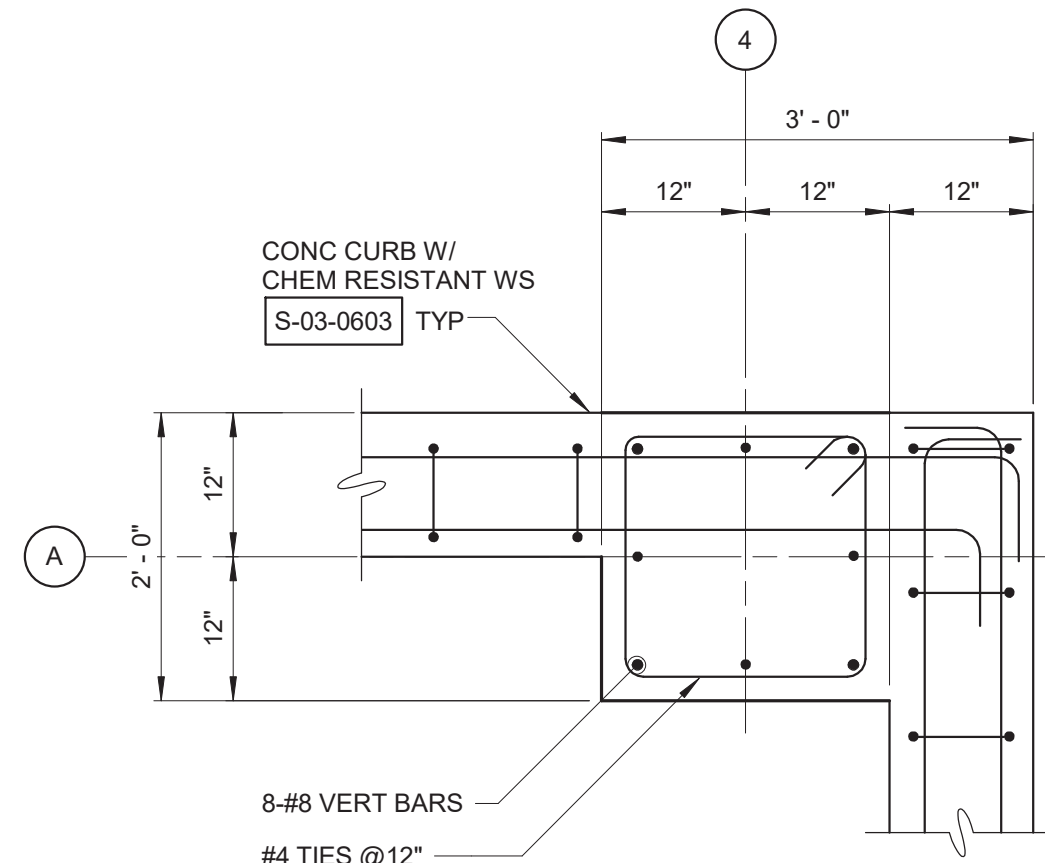
NOTE:
FOR COLUMN ELEVATION DETAILS, SEE DET S-03-0802



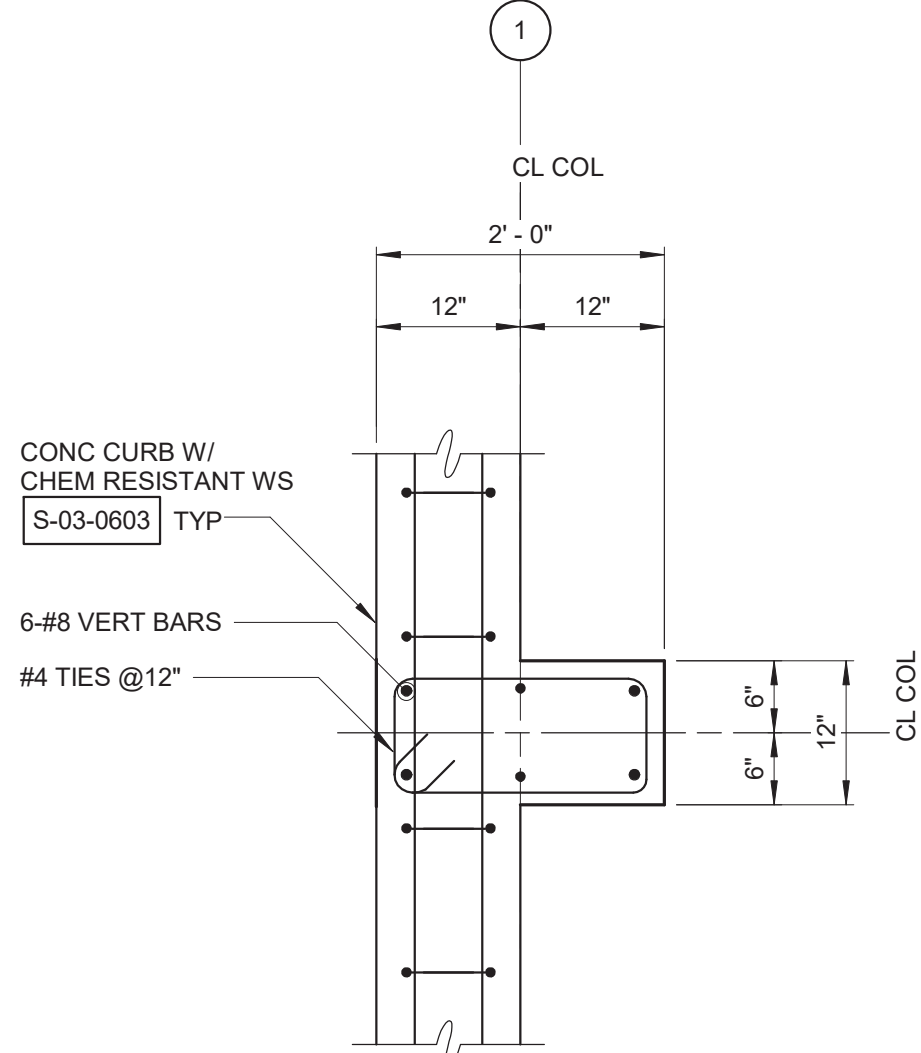
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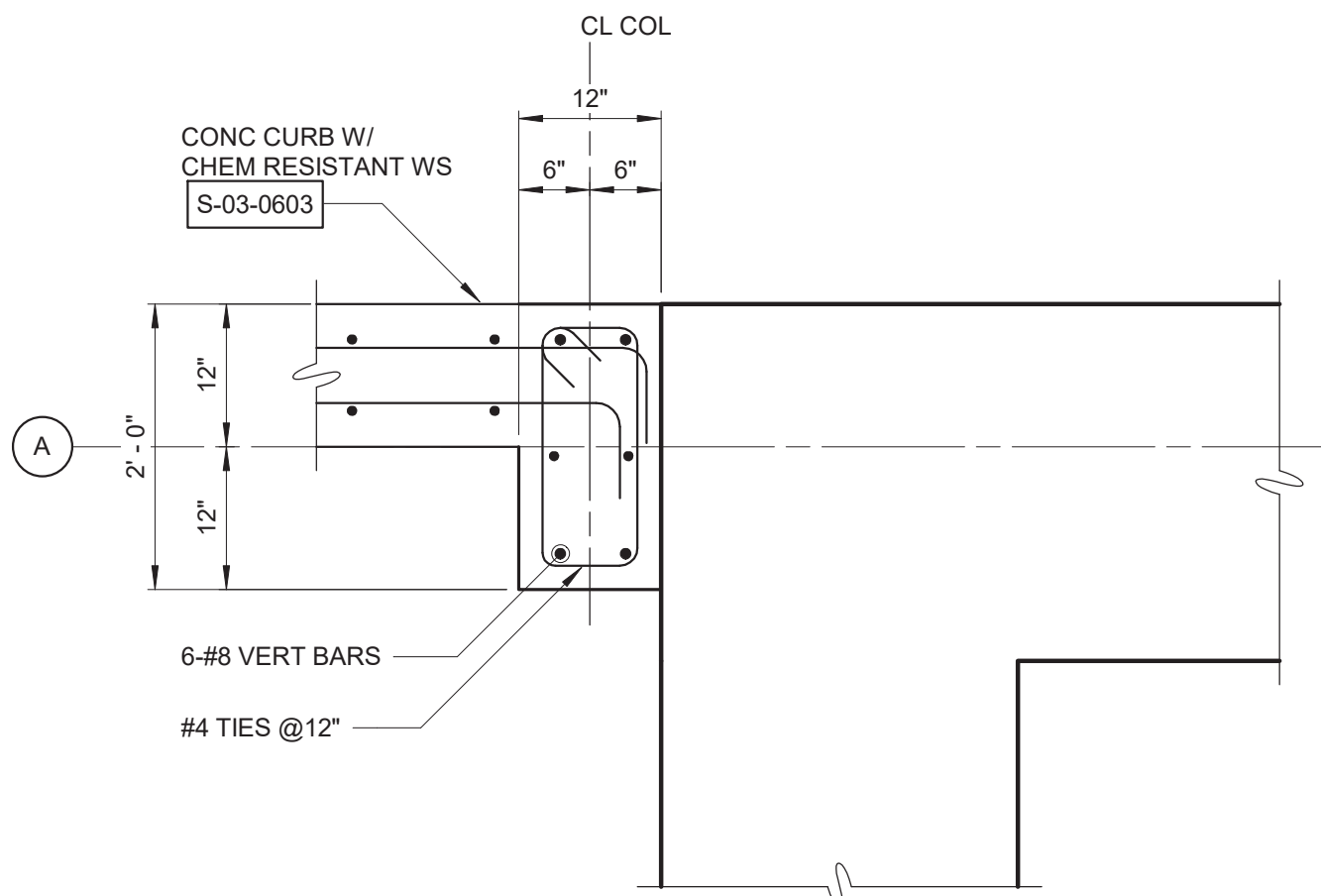
TYPE II



TYPE III



TYPE IV



TYPE V

DETAIL	4
3/4" = 1'-0"	S-108

NOTE:
FOR COLUMN ELEVATION DETAILS, SEE DET S-03-0802

3/4" = 1'-0"



Autodesk Docs/00388-000_Rye_Lake_Filtration/00388-000-WFF-S-14
2/20/2025 11:05:50 AM

WARNING
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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
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
STRUCTURAL
DETAILS - SHEET 1

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-301

Autodesk Docs/09388-000_Rye_Lake_Filtration/09388-000-WFP-S-14
2/20/2025 11:09:52 AM

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

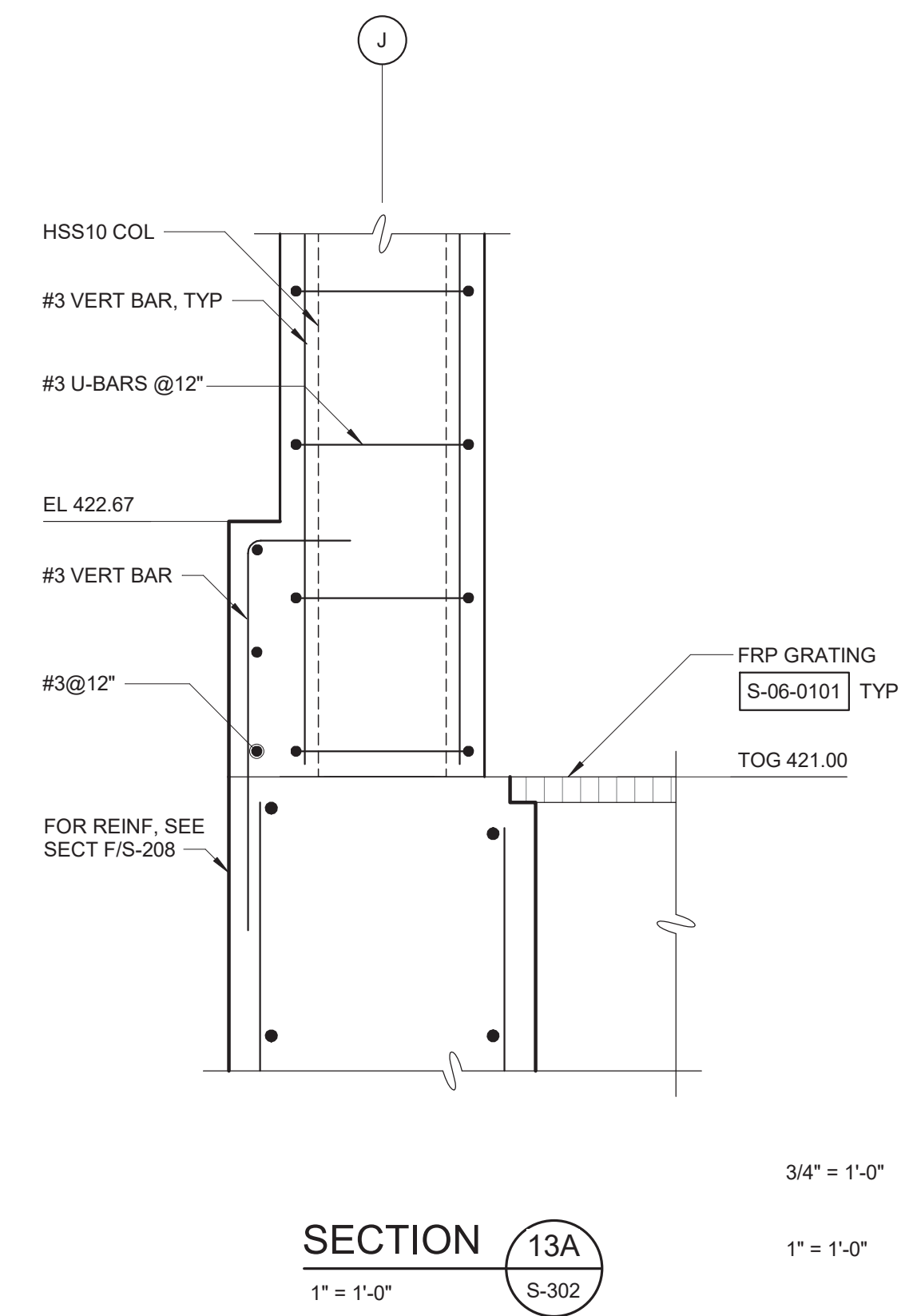
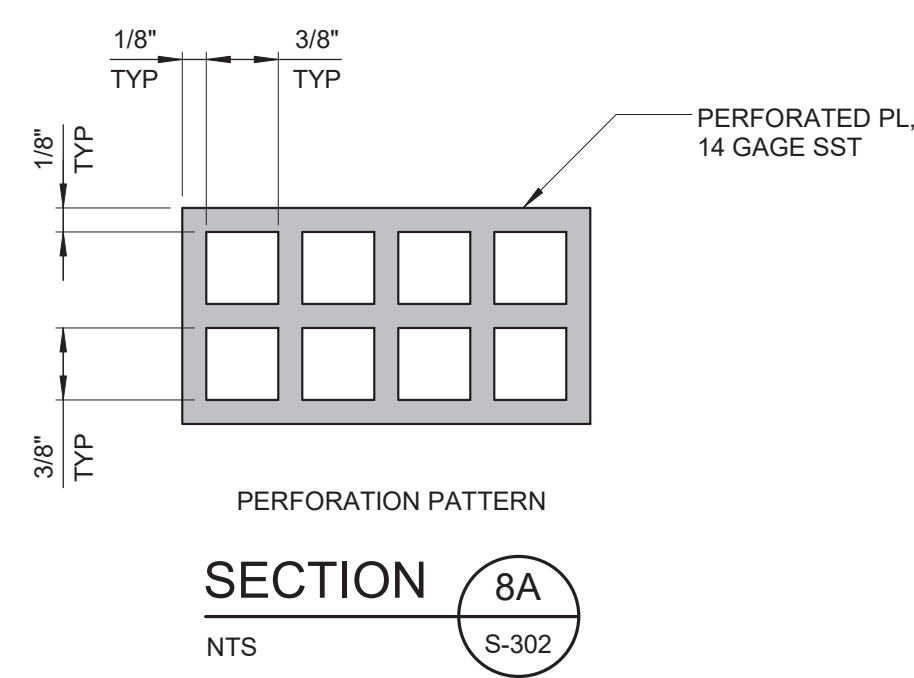
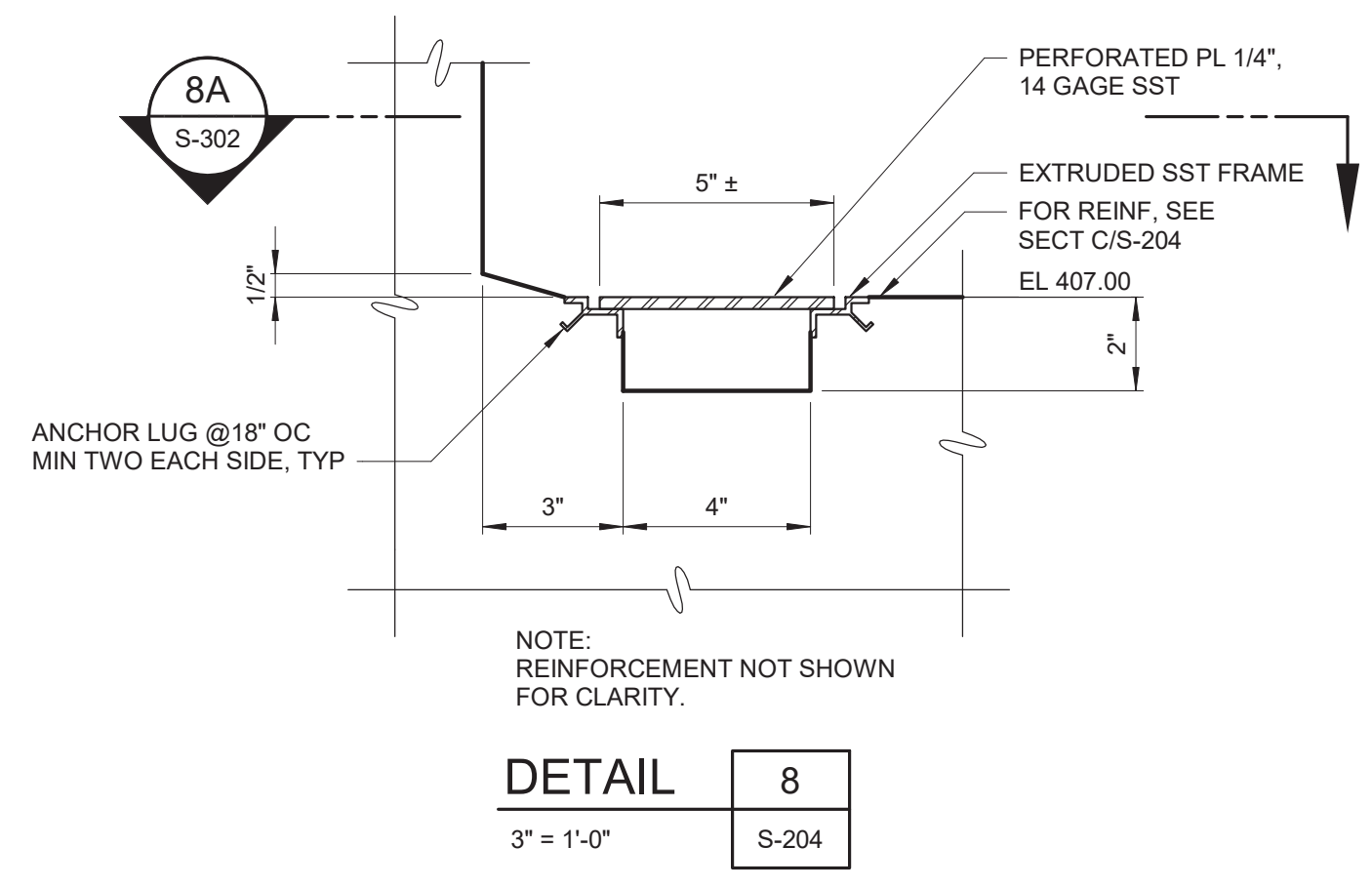
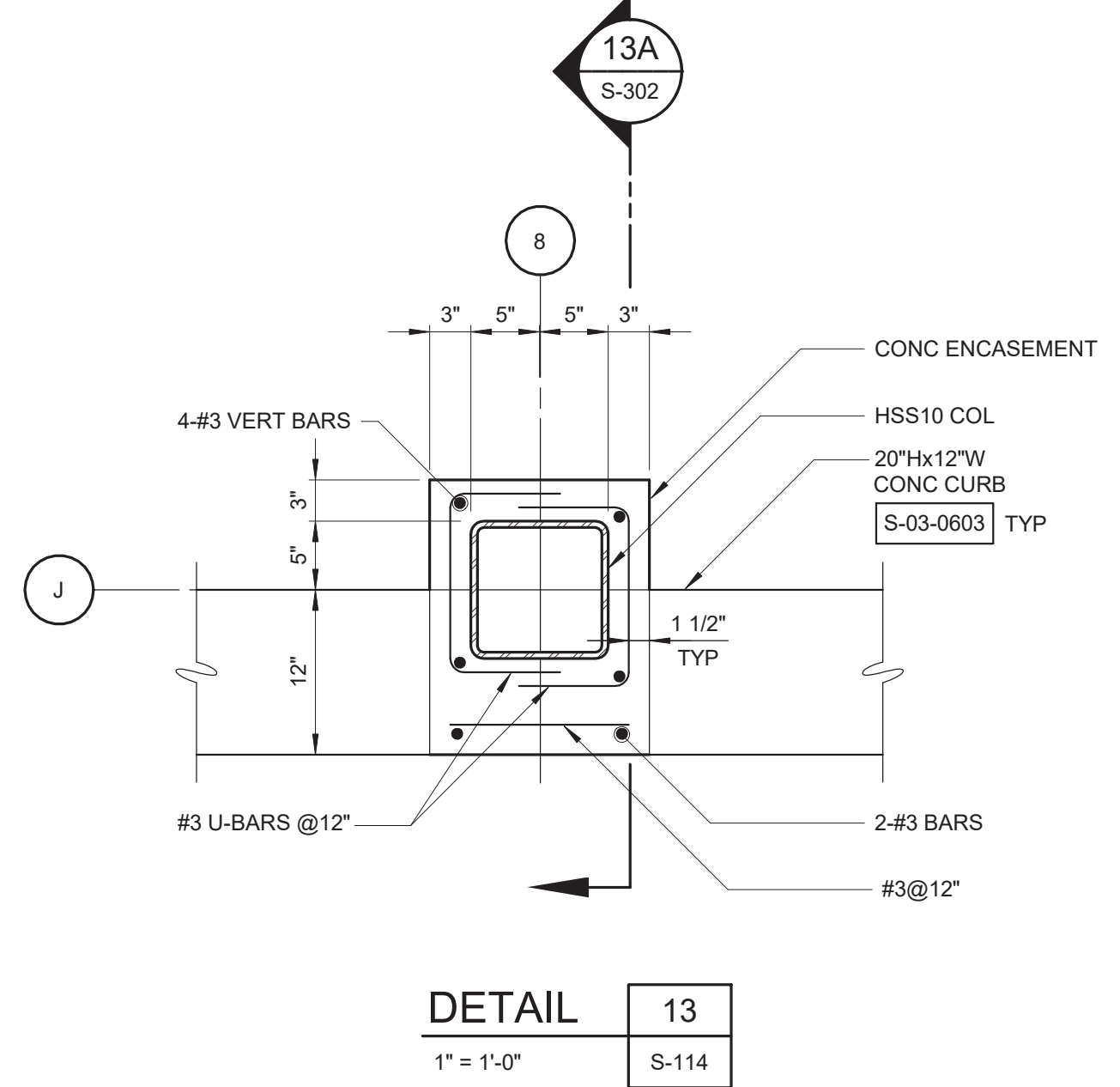
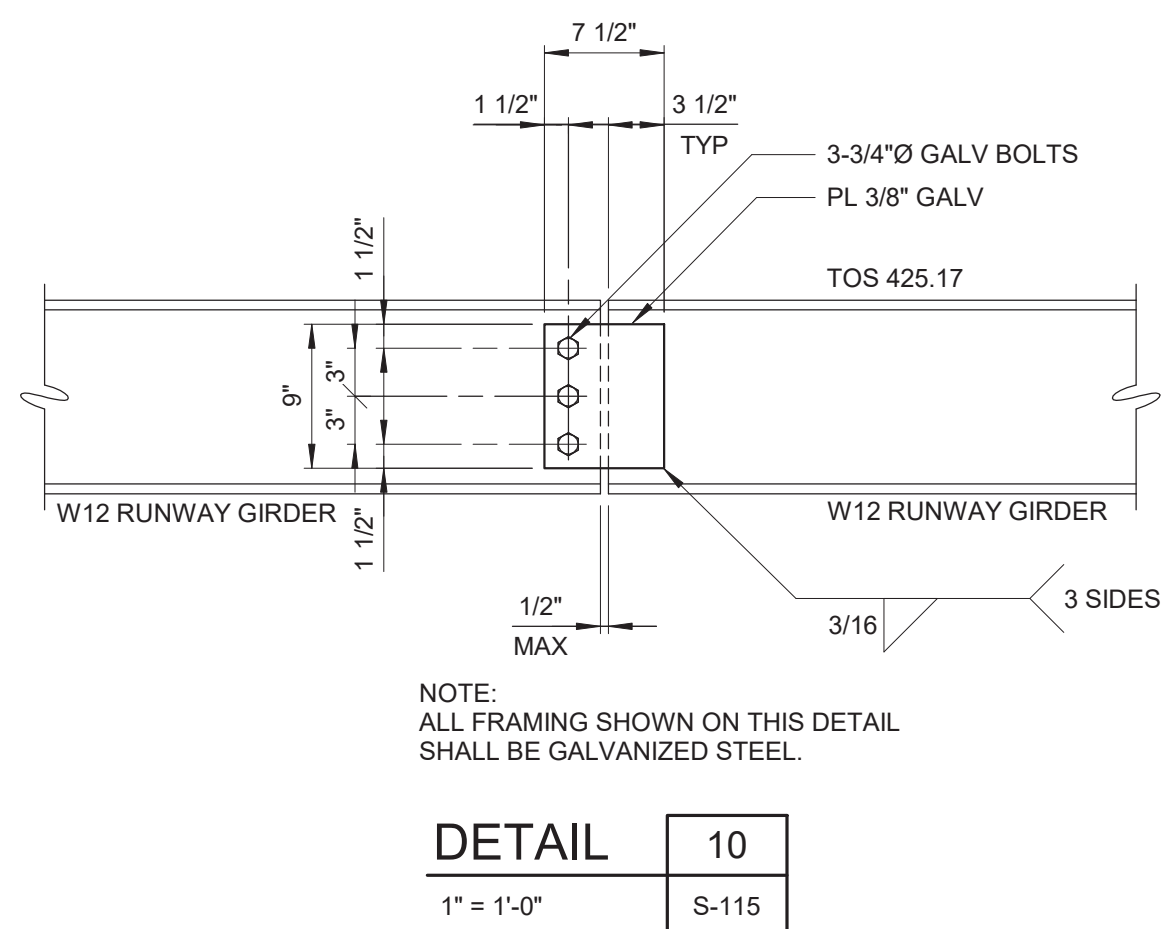
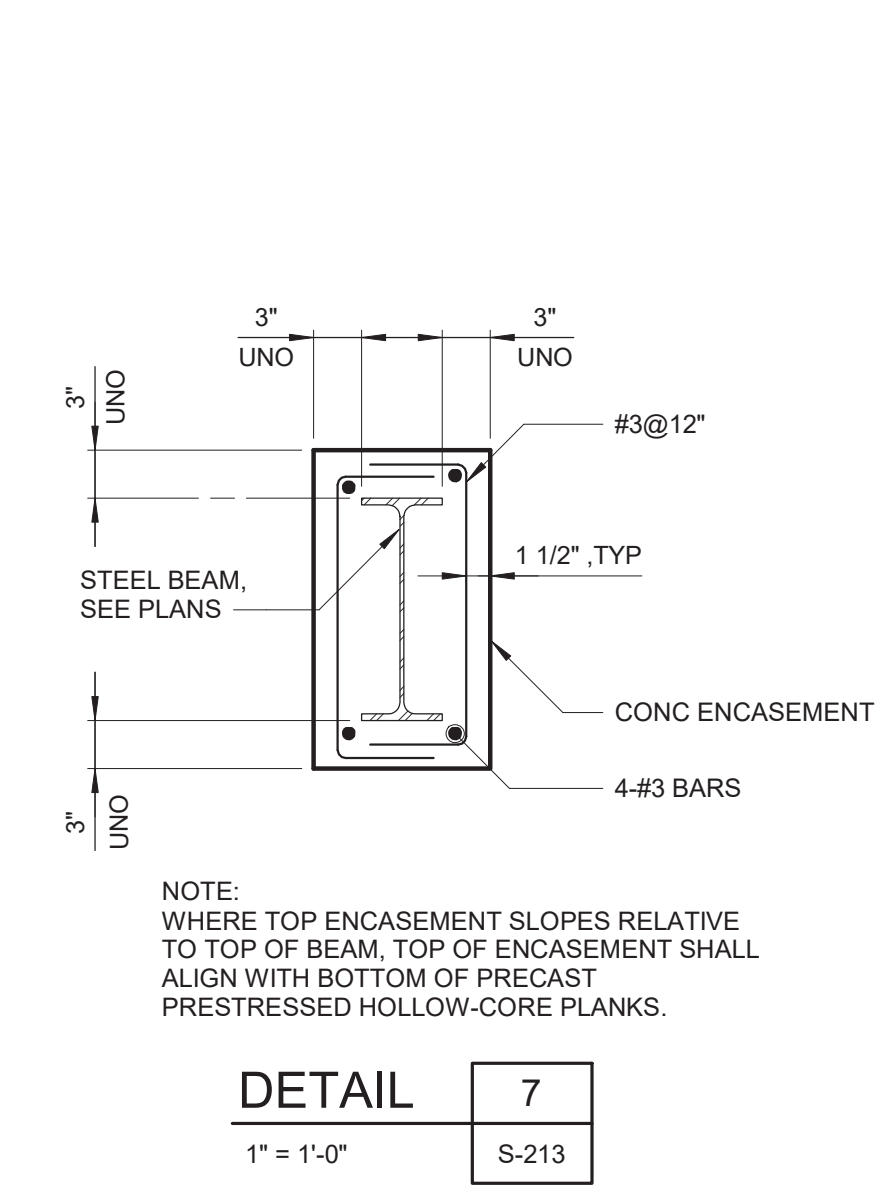
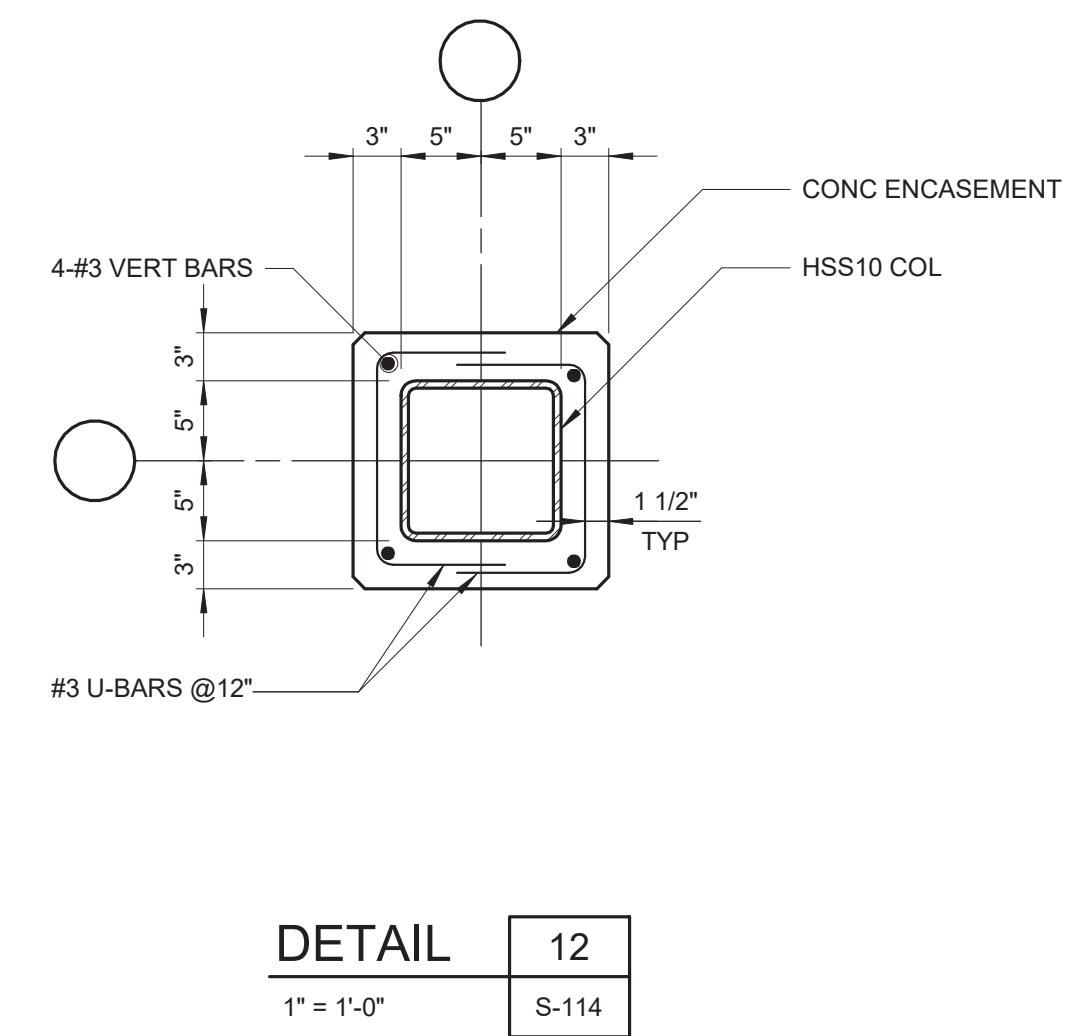
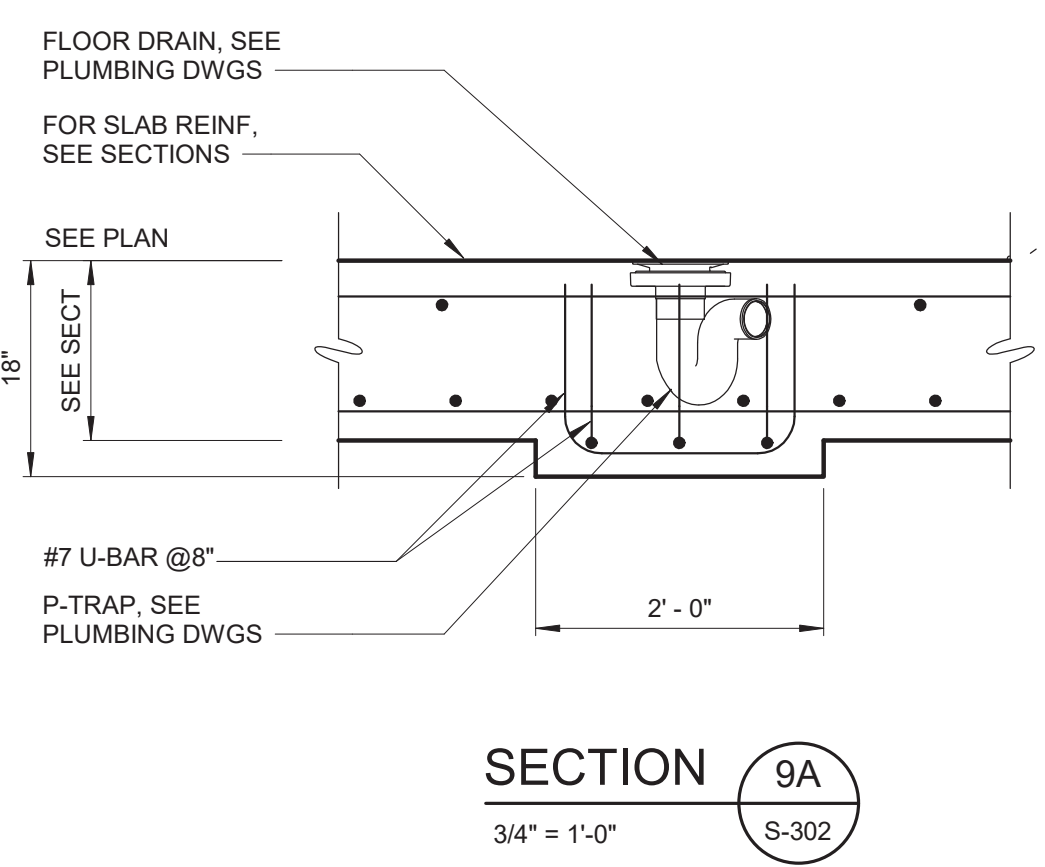
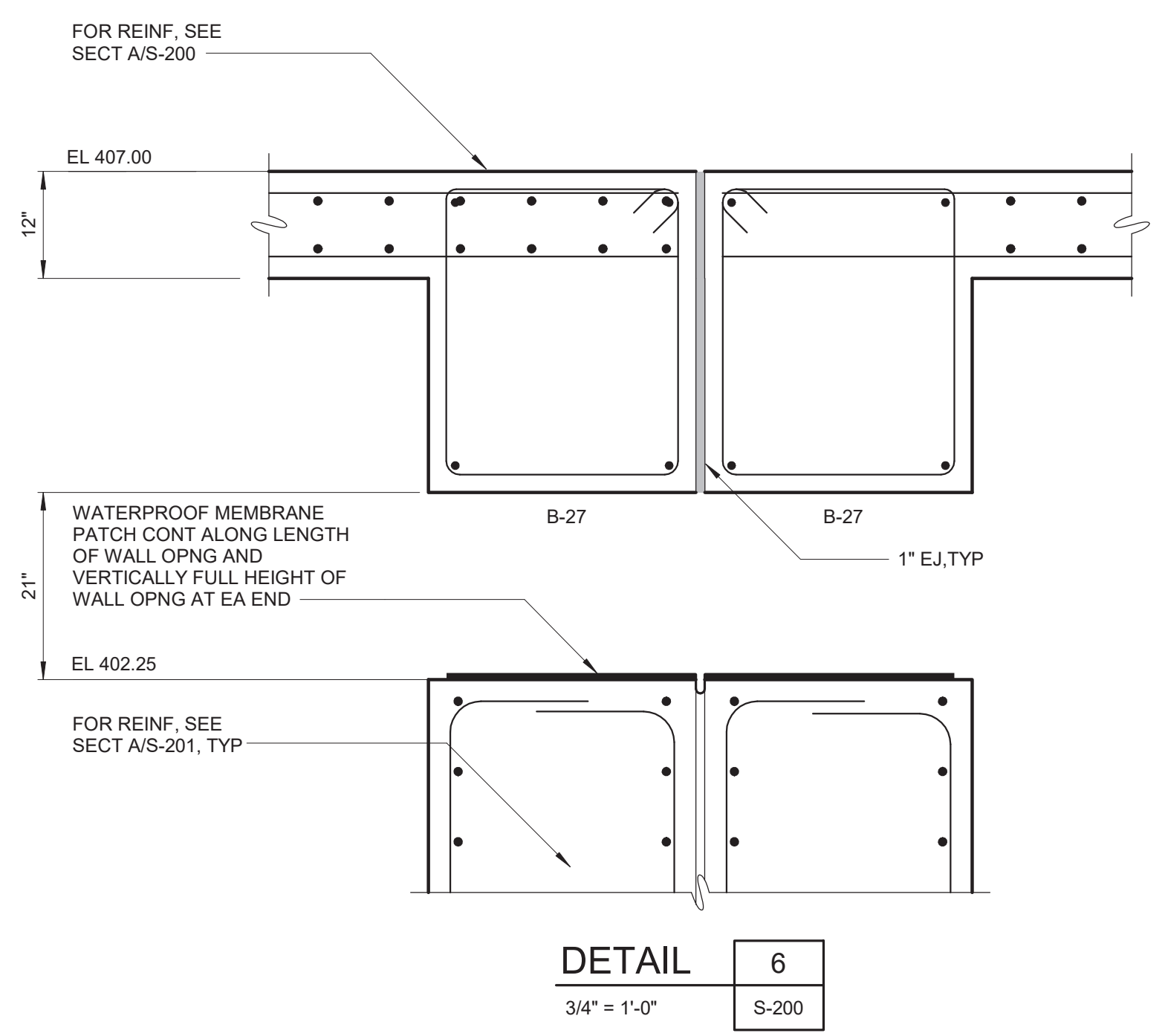
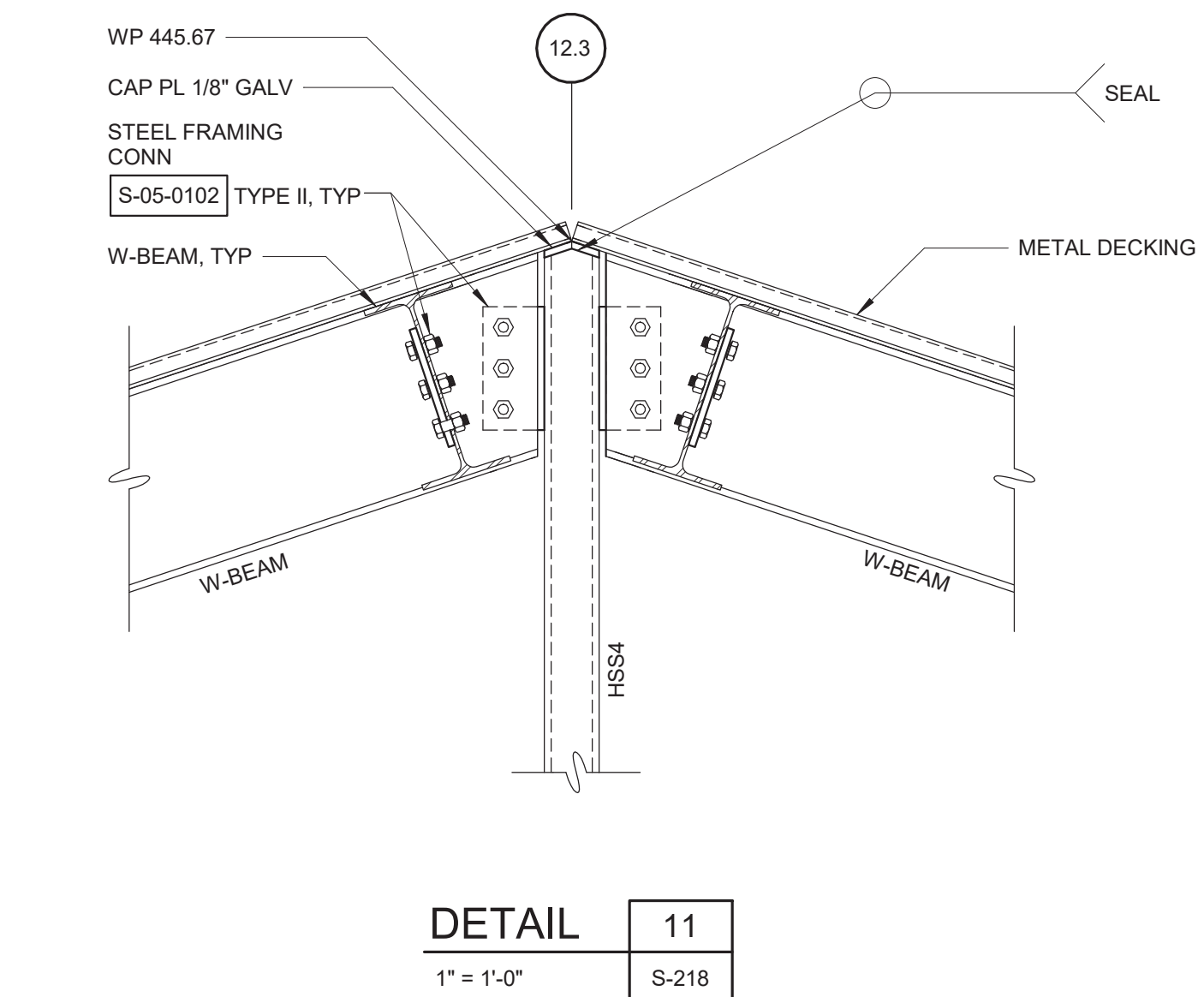
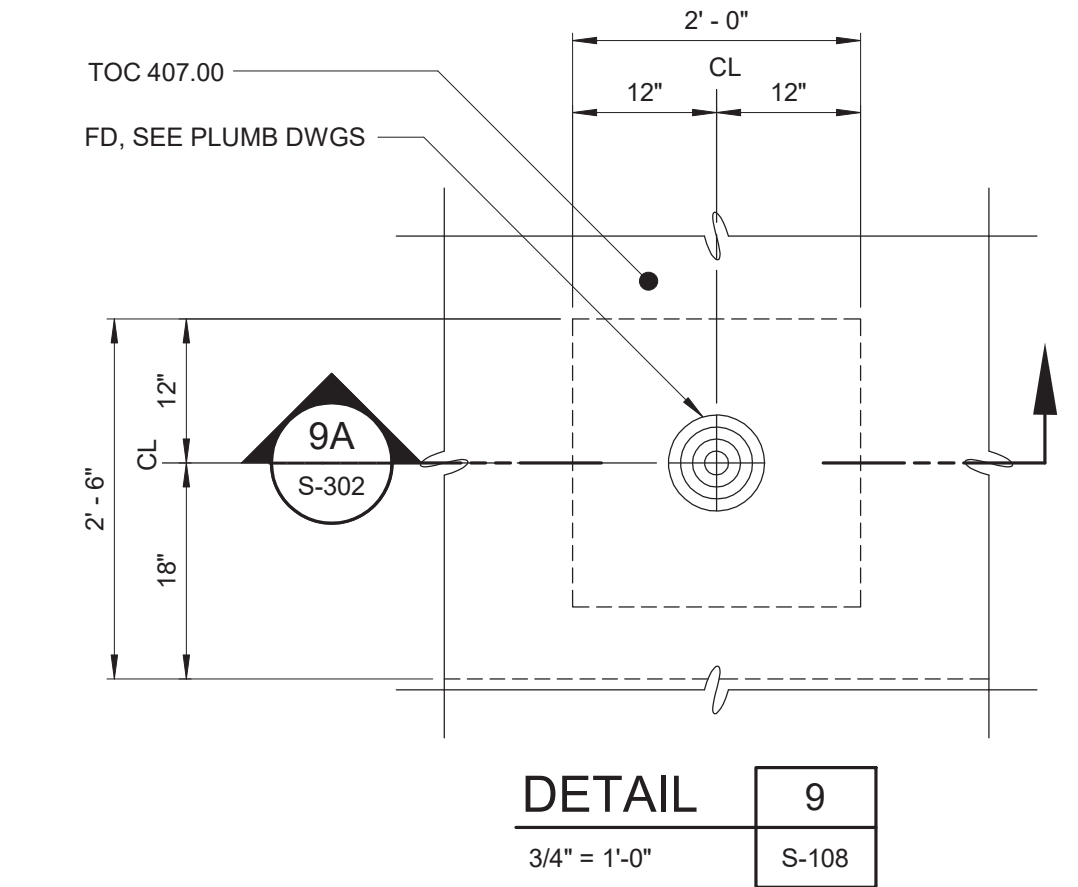
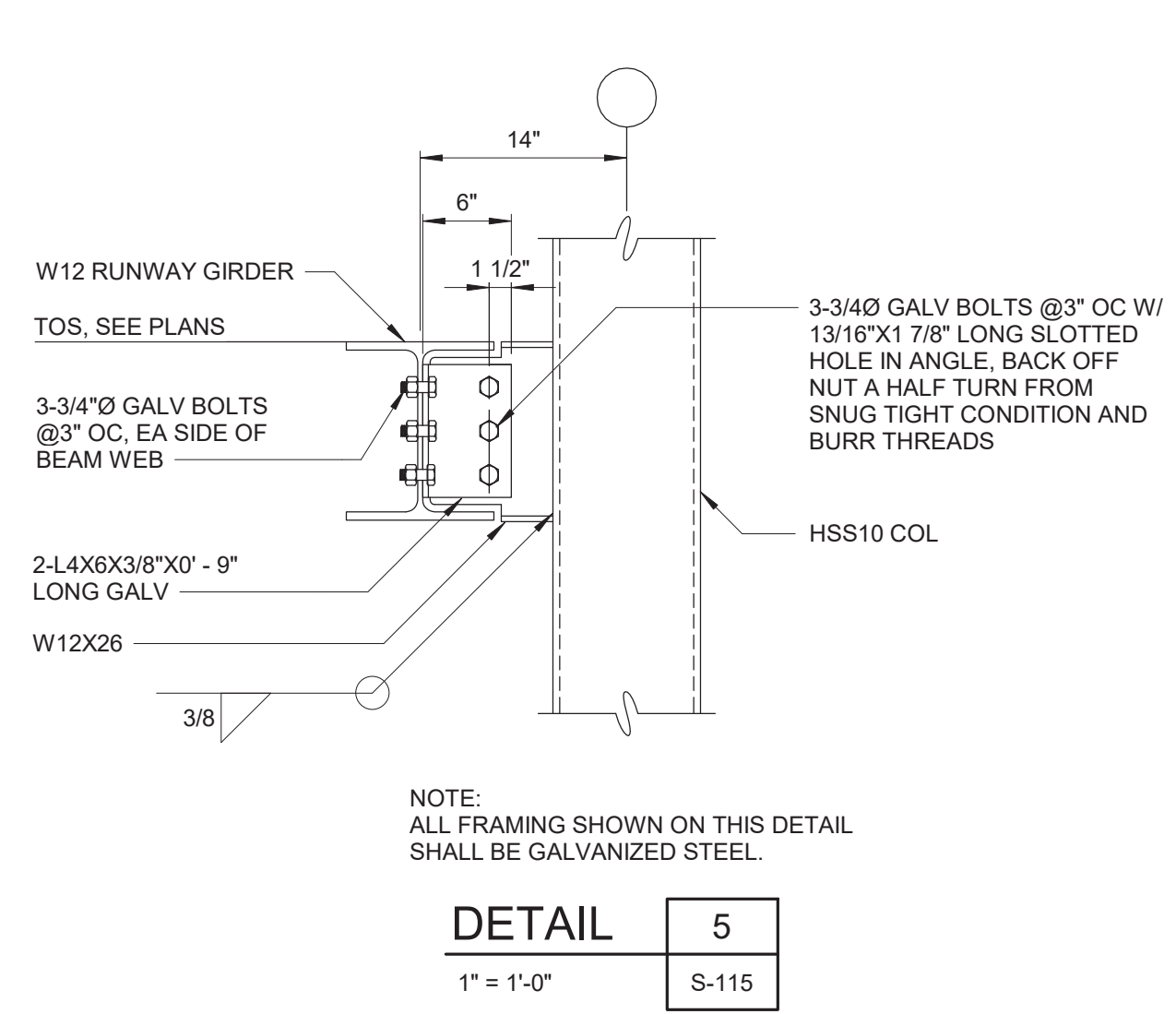
WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
STRUCTURAL
DETAILS - SHEET 2

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-302

NOTES:
1. ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.



1. ALL STRUCTURAL STEEL THAT IS NOT ENCASED IN CONCRETE SHALL BE GALVANIZED.

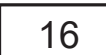


1. AT SLOPED BEAMS, SLOPE CAP PLATE AND CONCRETE ENCASEMENT TO MATCH BEAM SLOPE. CONNECTING BEAMS NOT SHOWN.
2. IN LOCATIONS WHERE HSS10 COLUMN IS NOT ENCASED, CAP PLATE SHALL BE GALVANIZED.
3. REINFORCEMENT NOT SHOWN FOR CLARITY.

14

$$1'' = 1'-0''$$

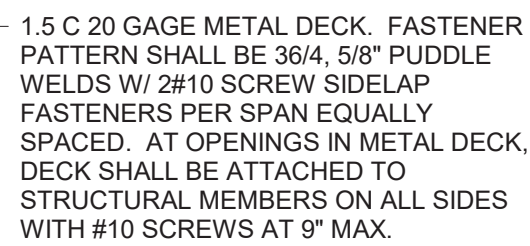

15

$$1/2'' = 1'-0$$

$$1'' = 1'-0''$$


17

$$1'' = 1'-0''$$

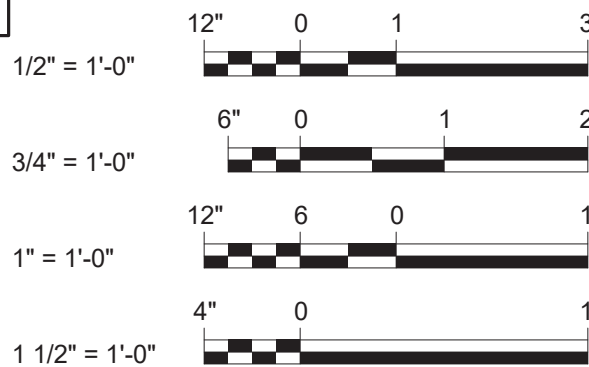

17A

$$1\frac{1}{2}'' = 1'-0''$$


18

$$1'' = 1' - 0''$$


19

$$1'' = 1' - 0'$$


WARNING

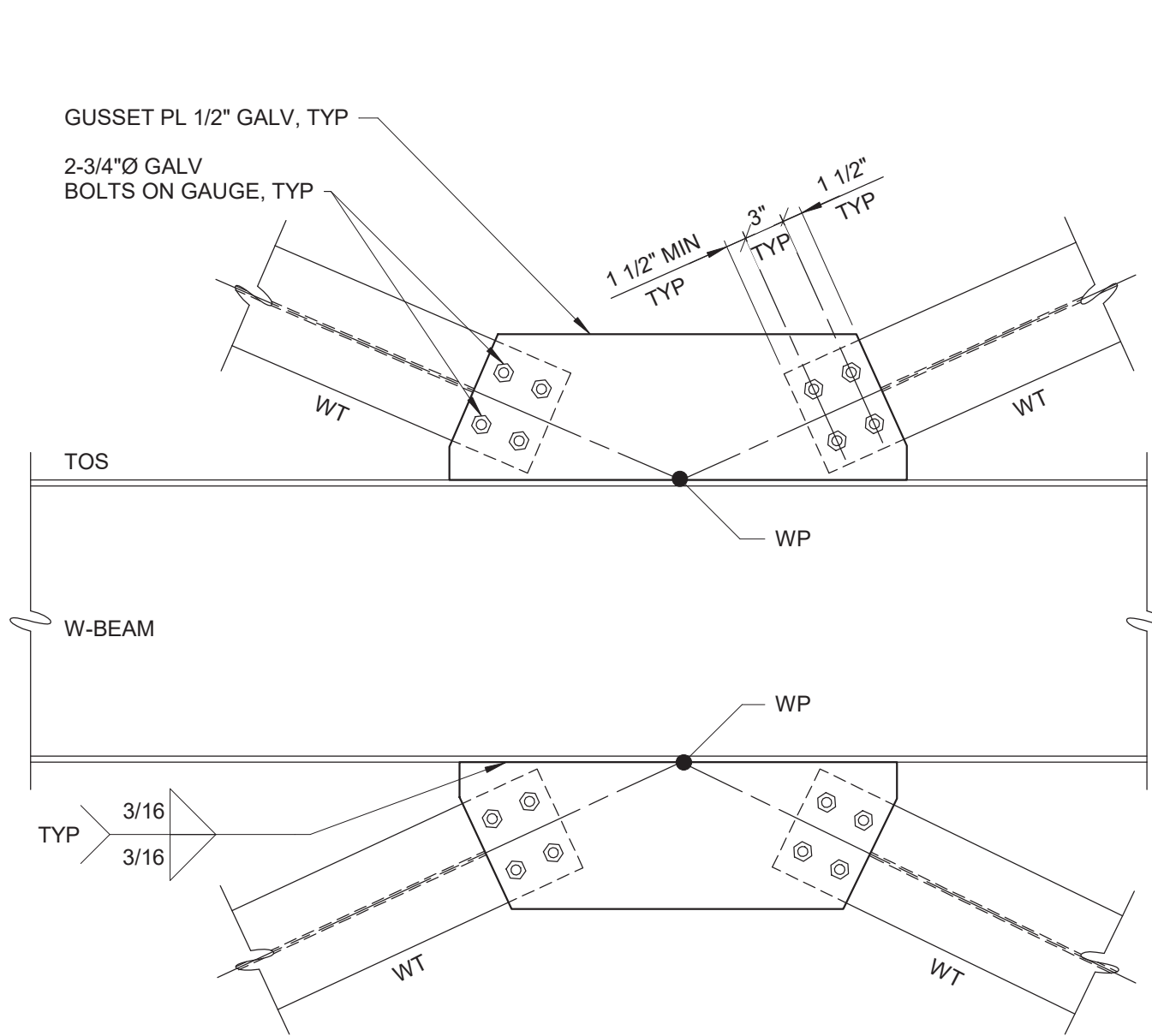
PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 

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

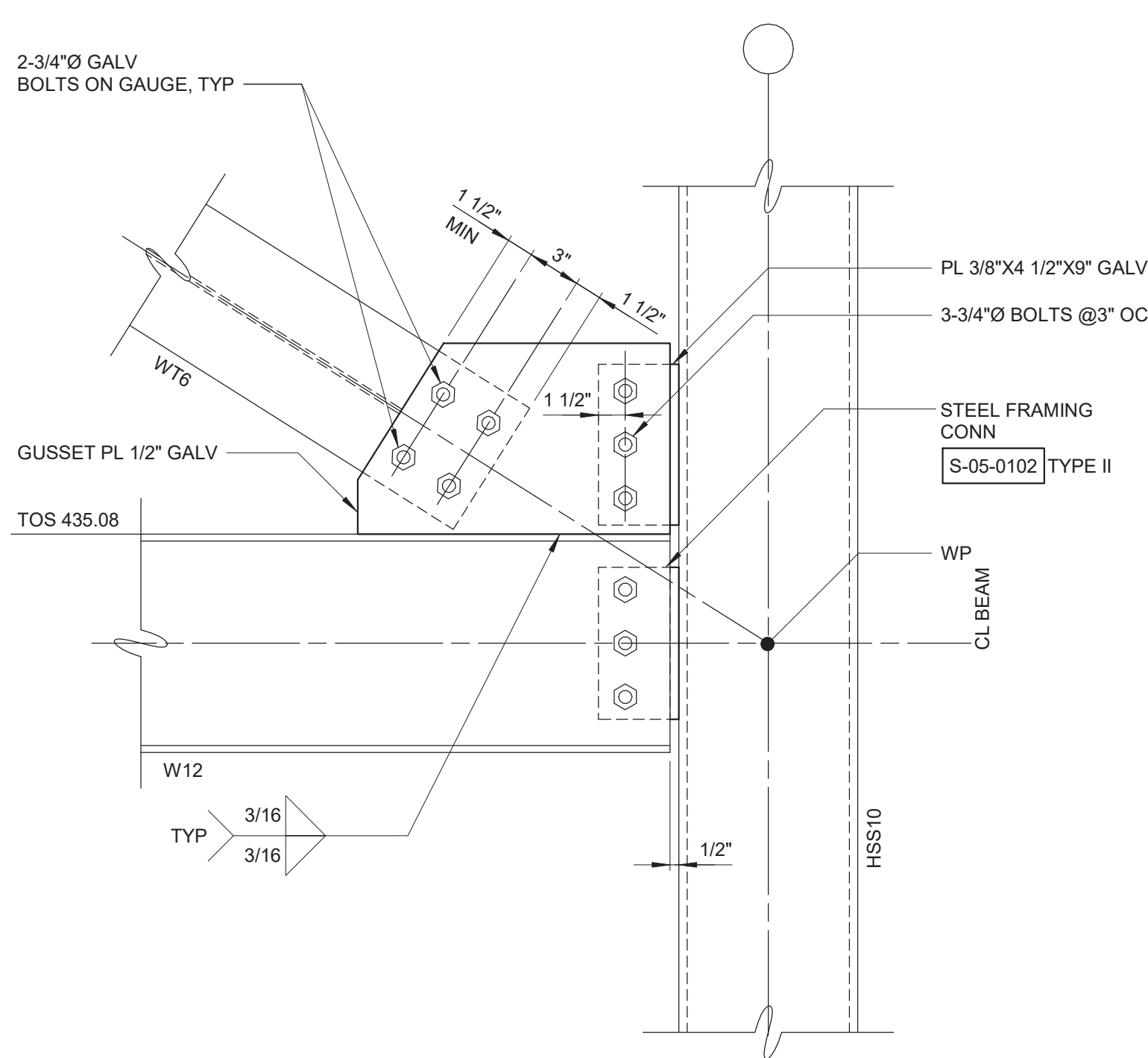
RYE LAKE WATER FILTRATION PLANT HARRISON, NY

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

S-303

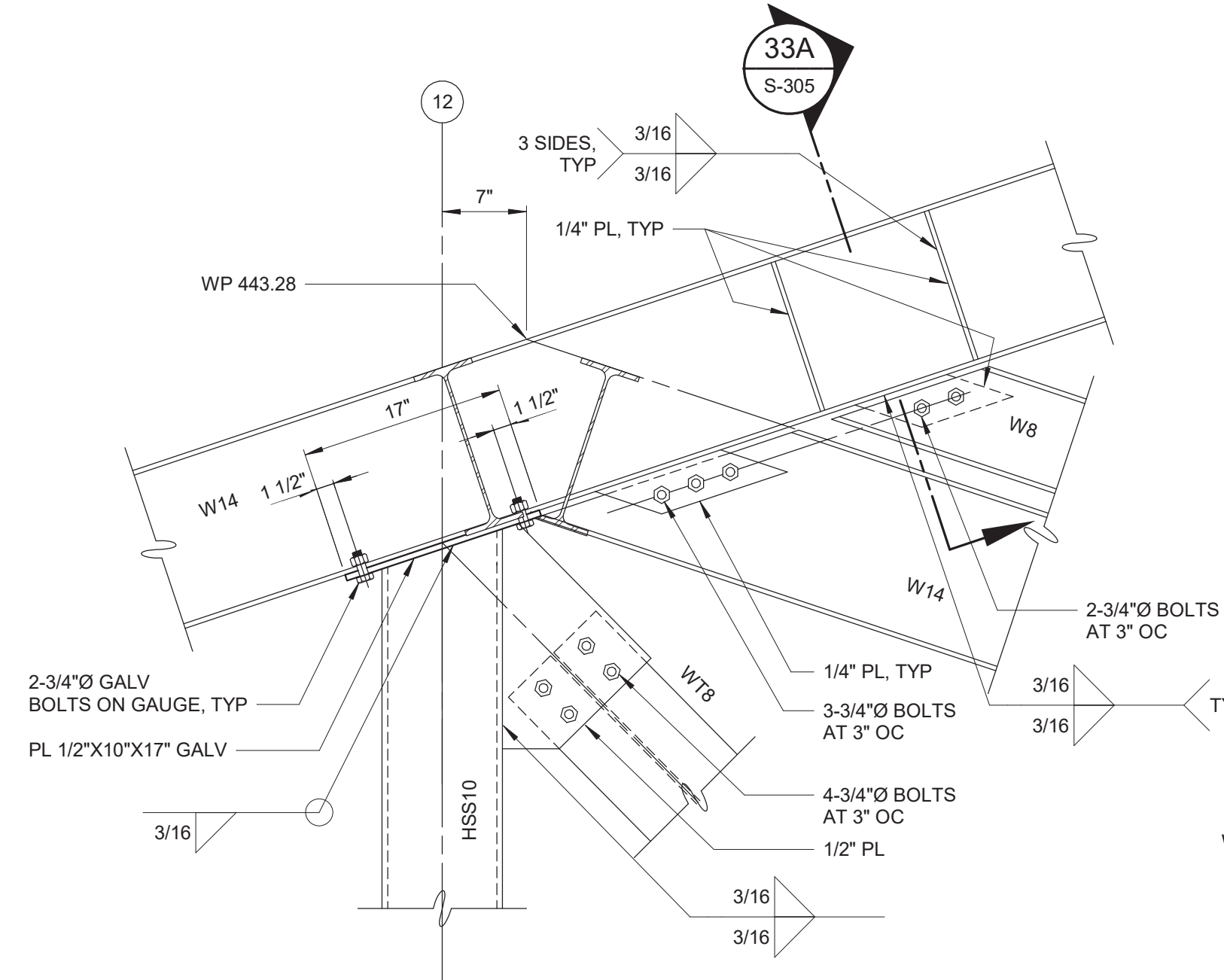


DETAIL 31
1" = 1'-0"

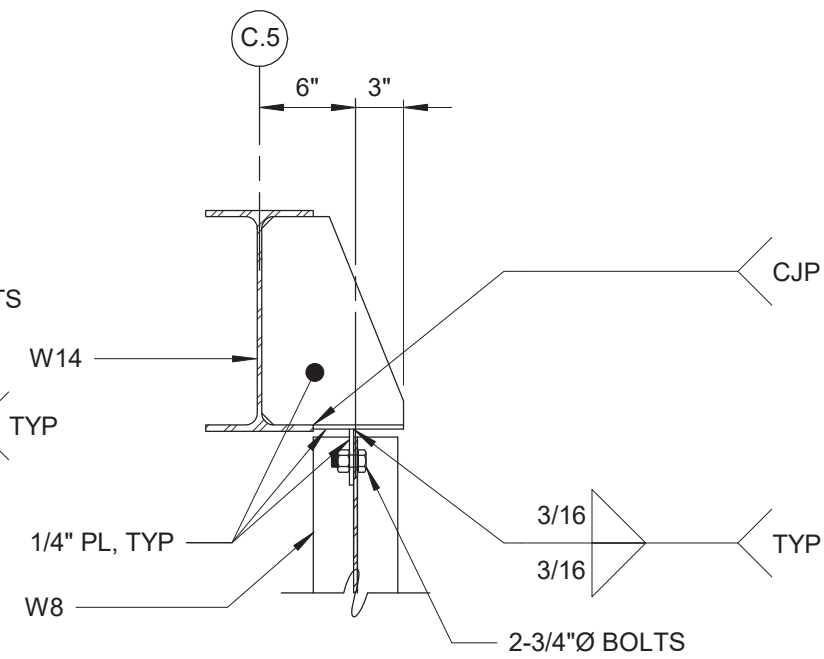


NOTE:
CONCRETE ENCASEMENT NOT SHOWN. FOR
ENCASEMENT INFORMATION, SEE DETAIL 40/S-306
AND FRAMING ELEVATIONS.

DETAIL 32
1 1/2" = 1'-0"

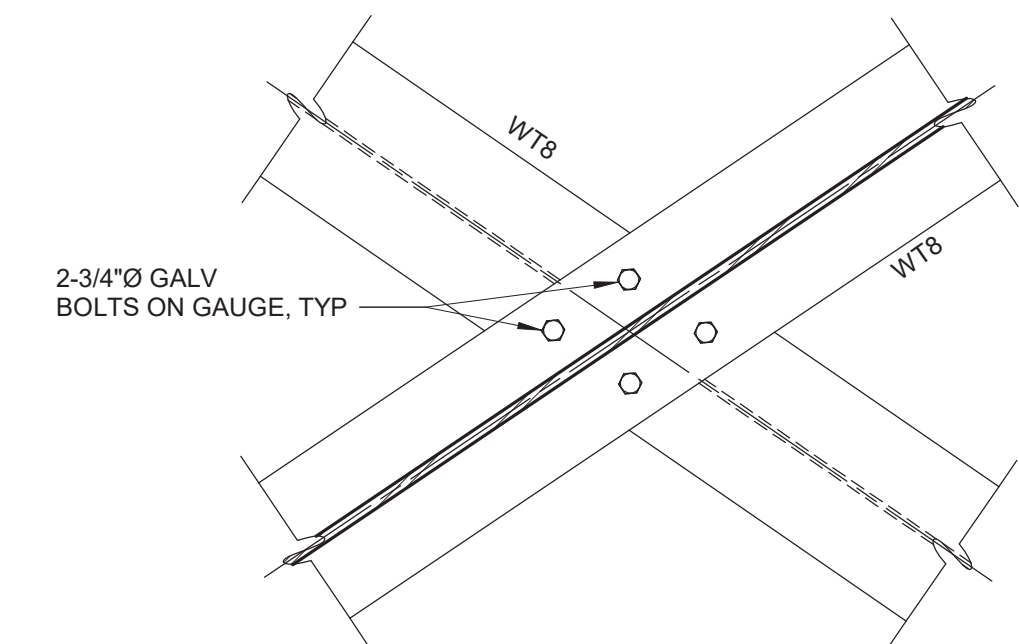


DETAIL 33
1" = 1'-0"



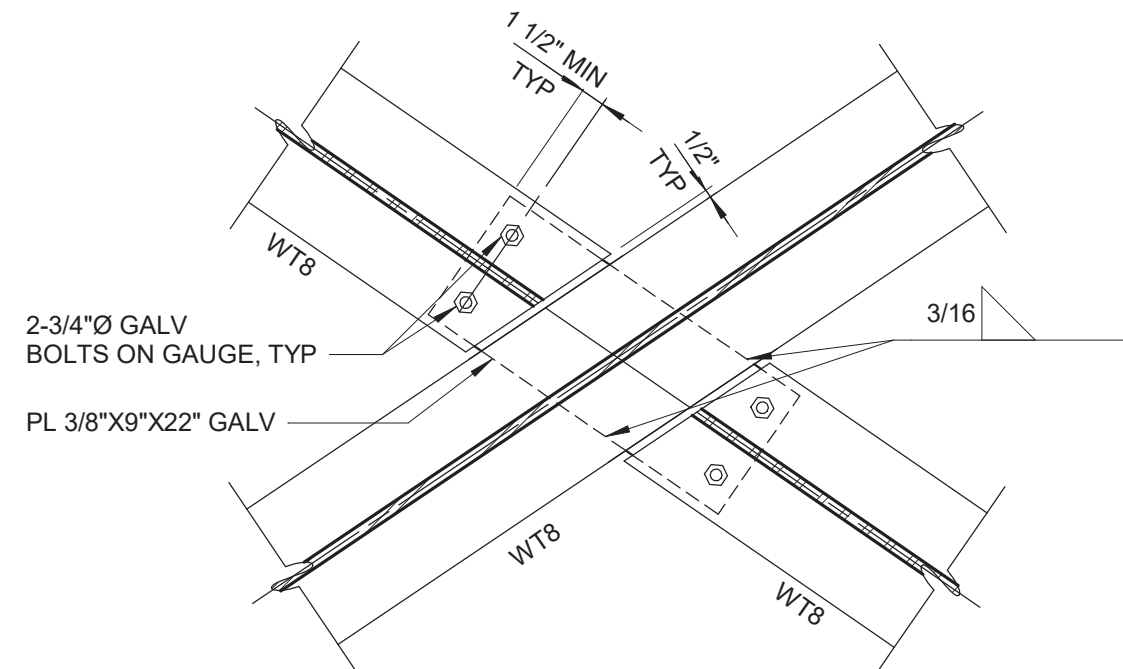
SECTION 33A
1" = 1'-0"

NOTES:
1. ALL STRUCTURAL STEEL THAT IS NOT ENCASED
IN CONCRETE SHALL BE GALVANIZED.



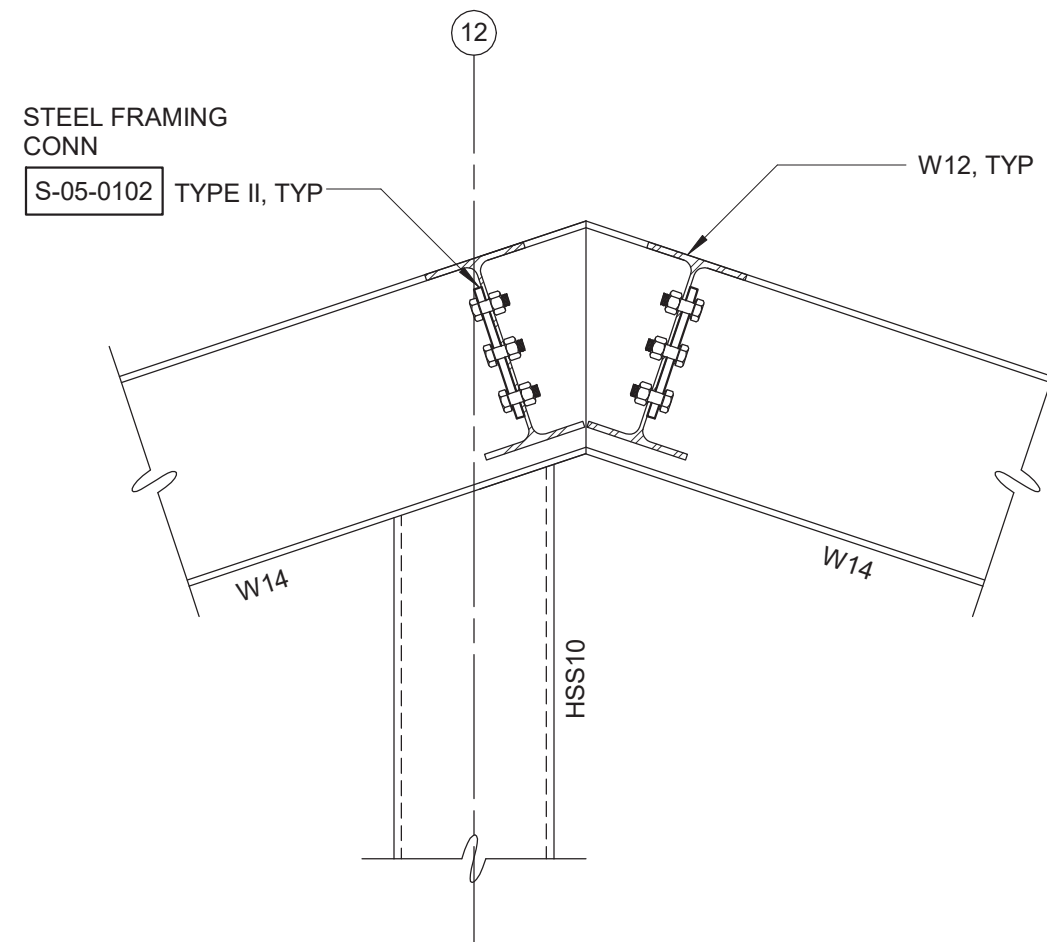
NOTE:
CONCRETE ENCASEMENT NOT SHOWN. FOR
ENCASEMENT INFORMATION, SEE DETAIL 7/S-302 SIMILAR
AND FRAMING ELEVATIONS.

DETAIL 34
1" = 1'-0"

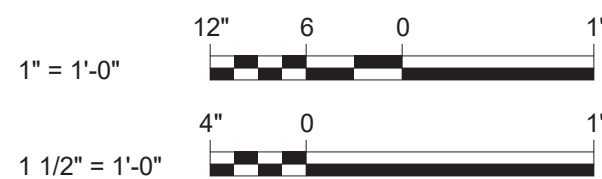


NOTE:
CONCRETE ENCASEMENT NOT SHOWN. FOR
ENCASEMENT INFORMATION, SEE DETAIL 7/S-302 SIMILAR
AND FRAMING ELEVATIONS.

DETAIL 35
1" = 1'-0"



DETAIL 36
1" = 1'-0"



Autodesk Docs/090388-000_Rye_Lake_Filtration/090388-000-WFP-S-14
2/20/2025 11:00:55 AM

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: J. EDER
				DRAWN BY: R. HERNANDEZ
				CHECKED BY: C. PHILLIPS
				IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

BID SET



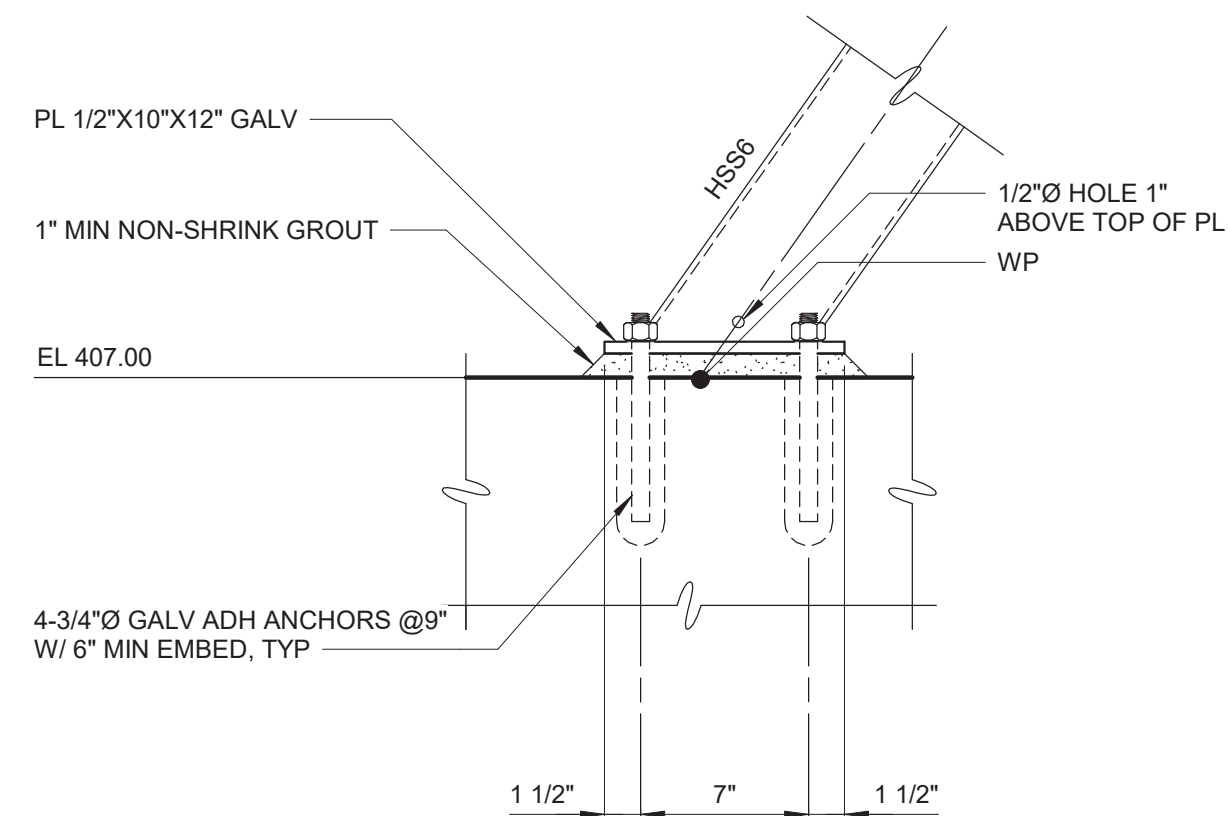
Hazen
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

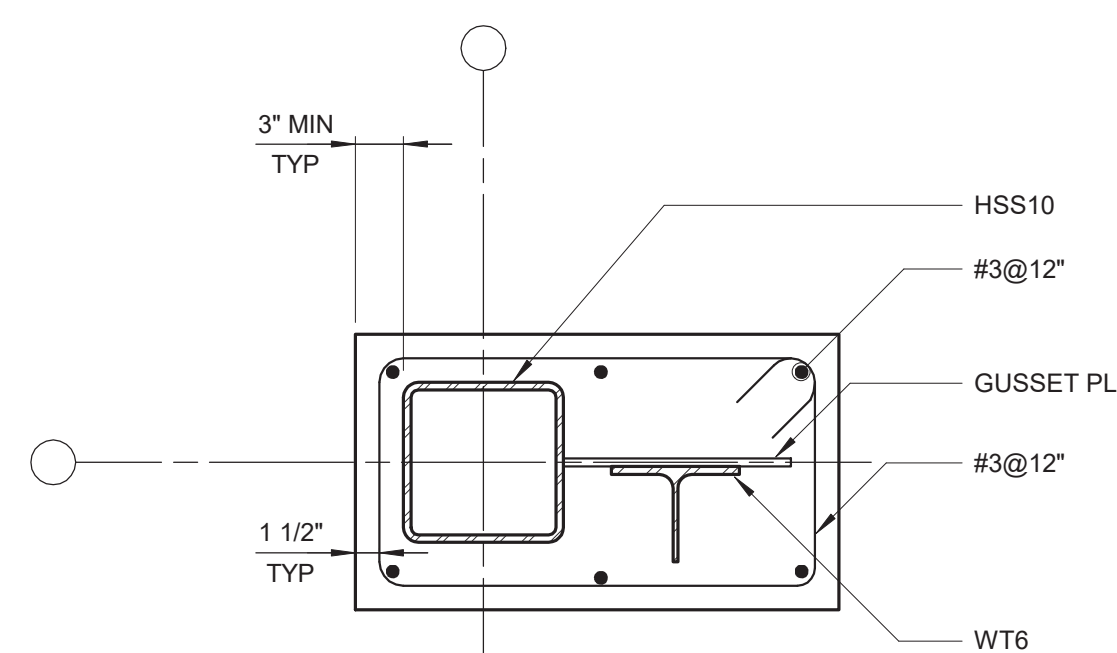
RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
STRUCTURAL
DETAILS - SHEET 5

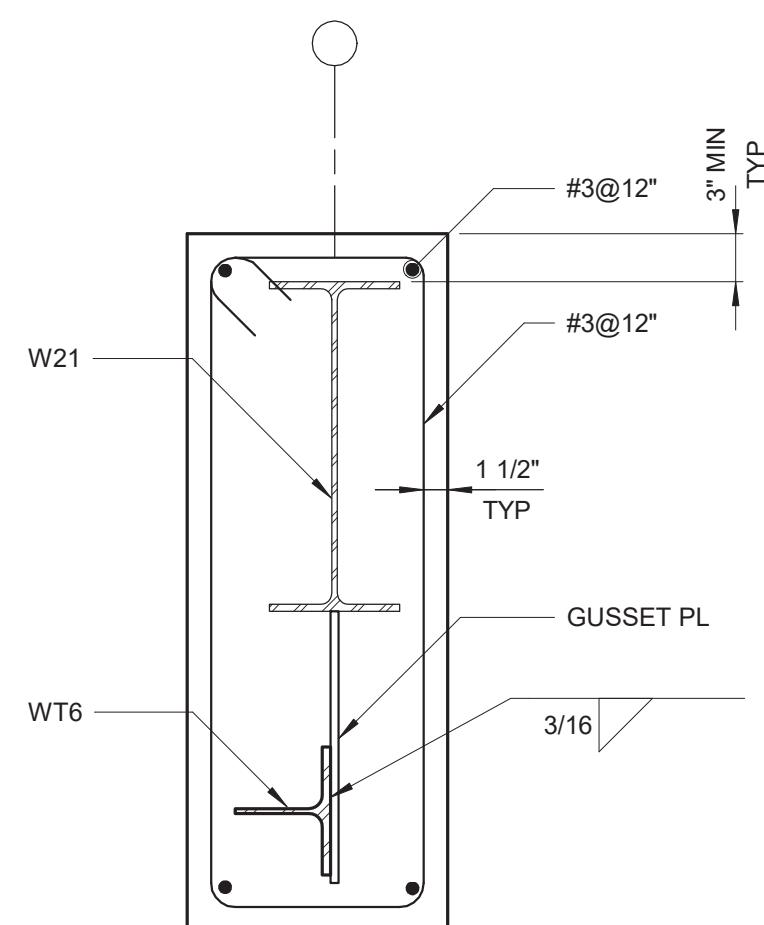
DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-305



DETAIL	37
1 1/2" = 1'-0"	S-222



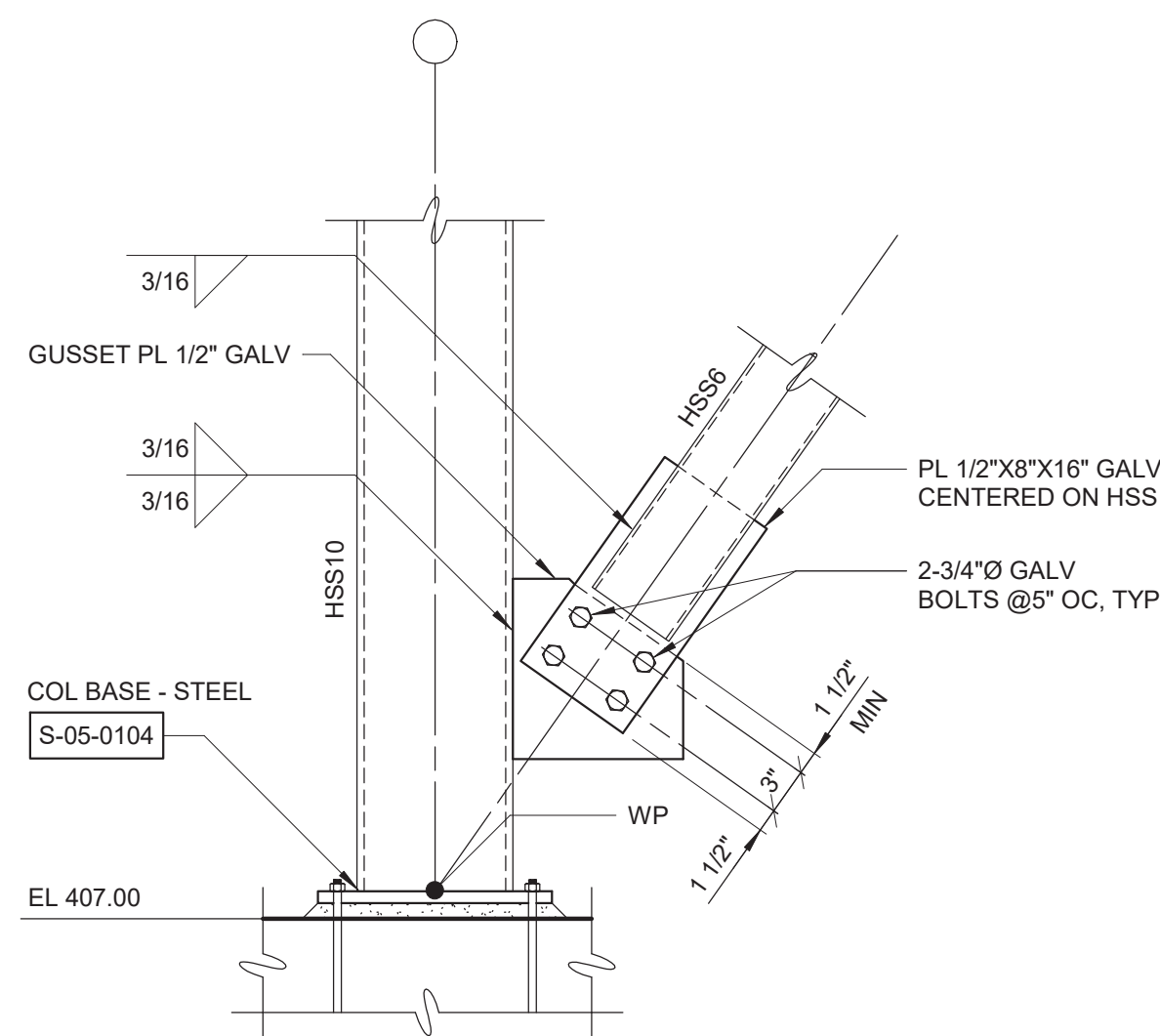
SECTION 40A
1" = 1'-0" S-306



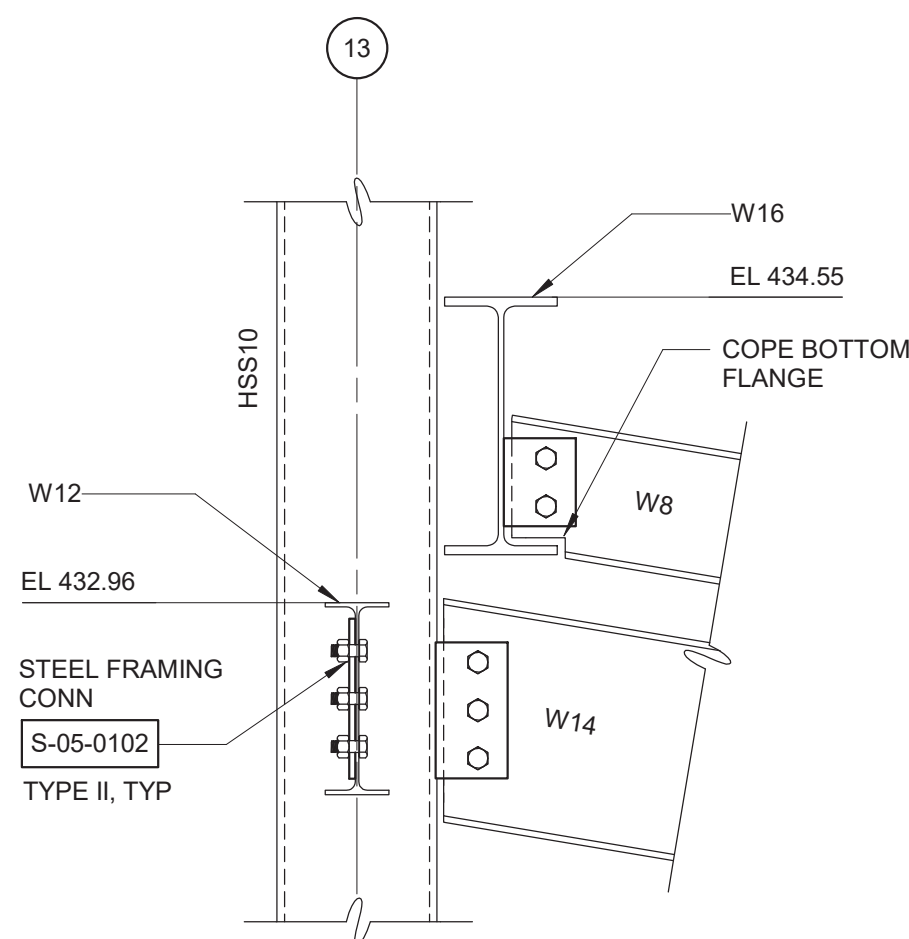
SECTION 40B
1" = 1'-0" S-306

WARNING

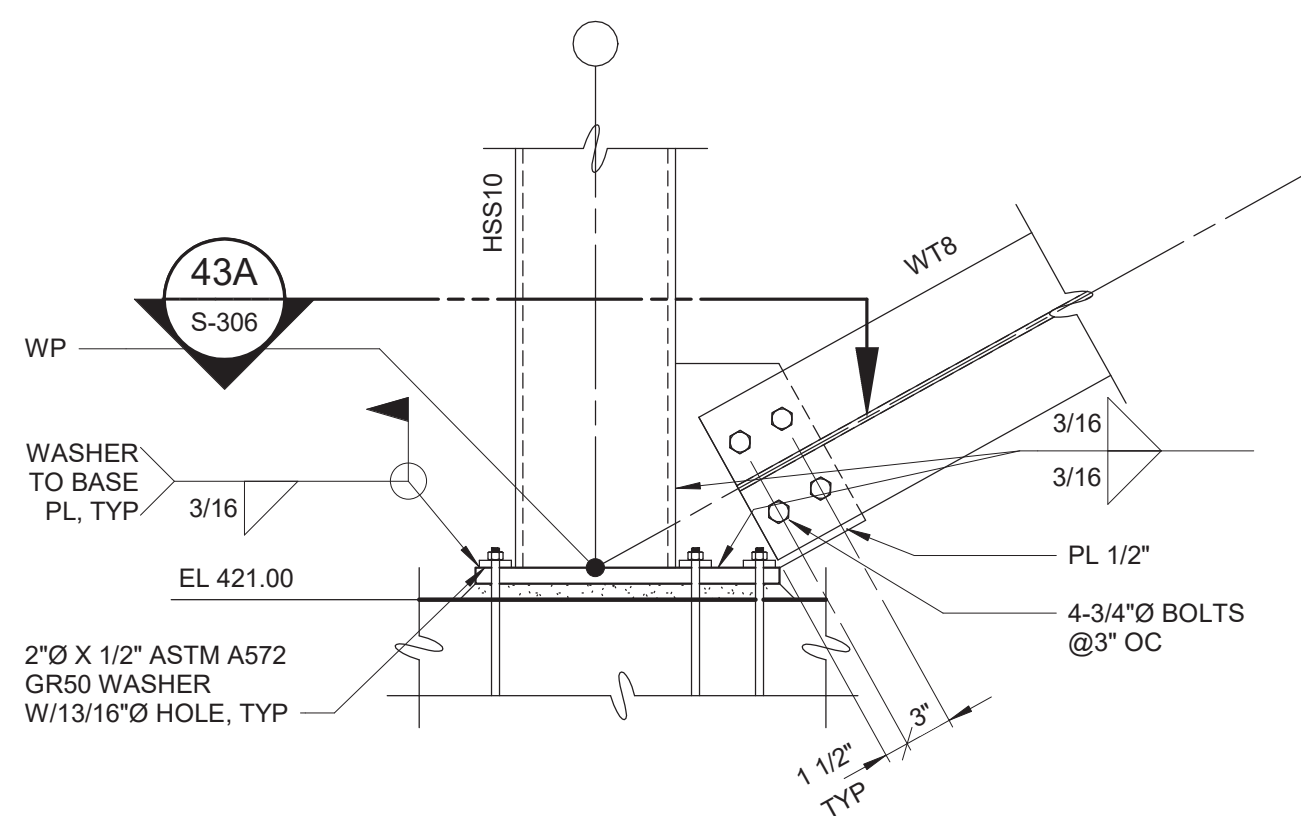
IT IS A VIOLATION OF SECTION 2209.2 OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER IN ANY MANNER PLANS, SPECIFICATIONS, PLATS OR REPORTS TO WHICH THE SEAL OF A PROFESSIONAL ENGINEER HAS BEEN APPLIED. IF AN ITEM BEARING 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.



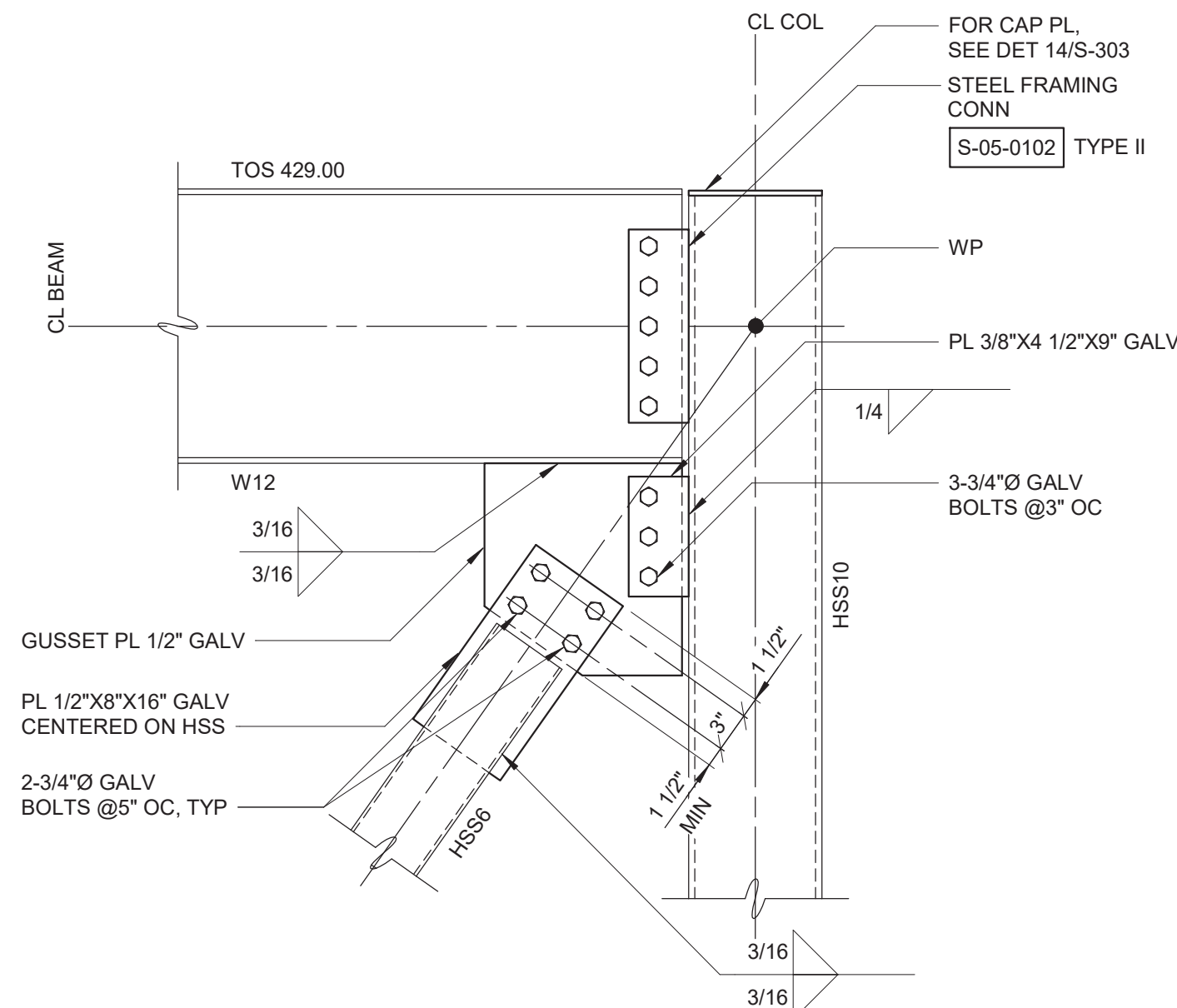
DETAIL	38
1" = 1'-0"	S-222



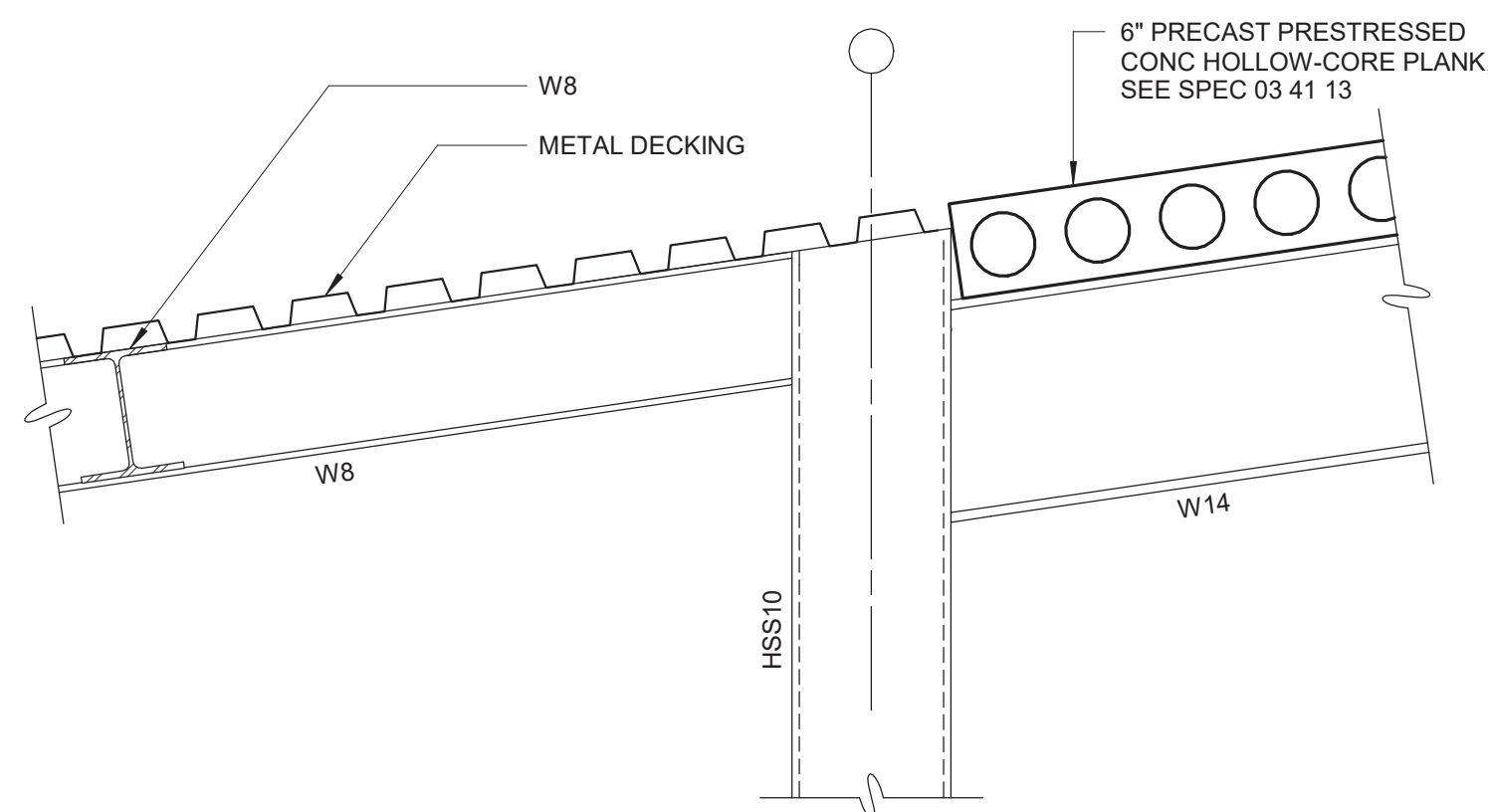
DETAIL	41
1" = 1'-0"	S-219



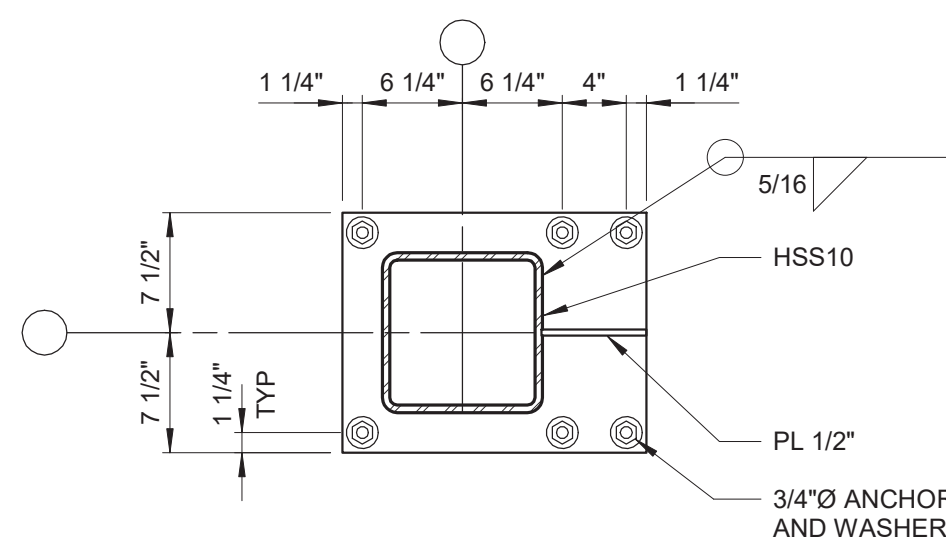
DETAIL	43
1" = 1'-0"	S-219



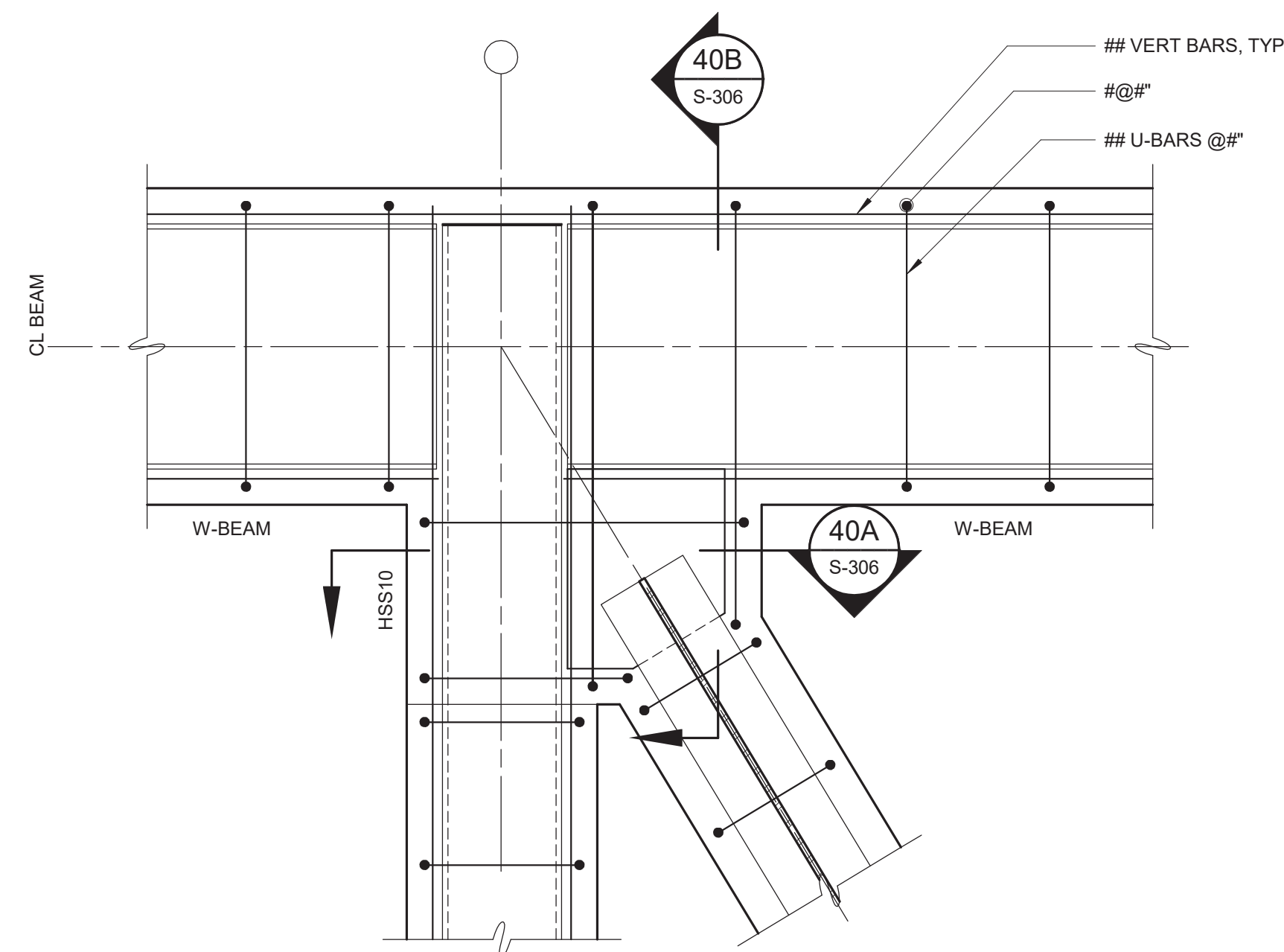
DETAIL	39
1" = 1'-0"	S-222



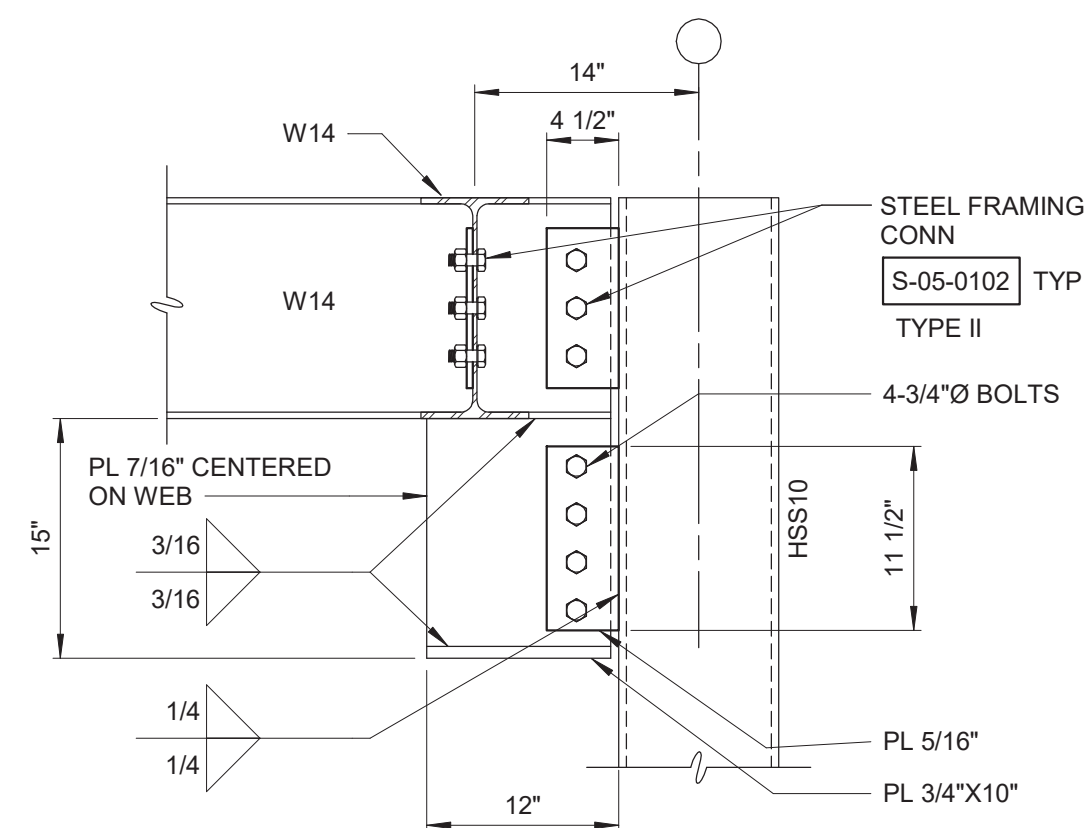
DETAIL	42
1" = 1'-0"	



SECTION 43A
1" = 1'-0" S-306



DETAIL	40
1" = 1'-0"	S-304



DETAIL	44
1" = 1'-0"	S-219



REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST		
DESIGNED BY:	J. EDER		
DRAWN BY:	R. HERNANDEZ		
CHECKED BY:	C. PHILLIPS		
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

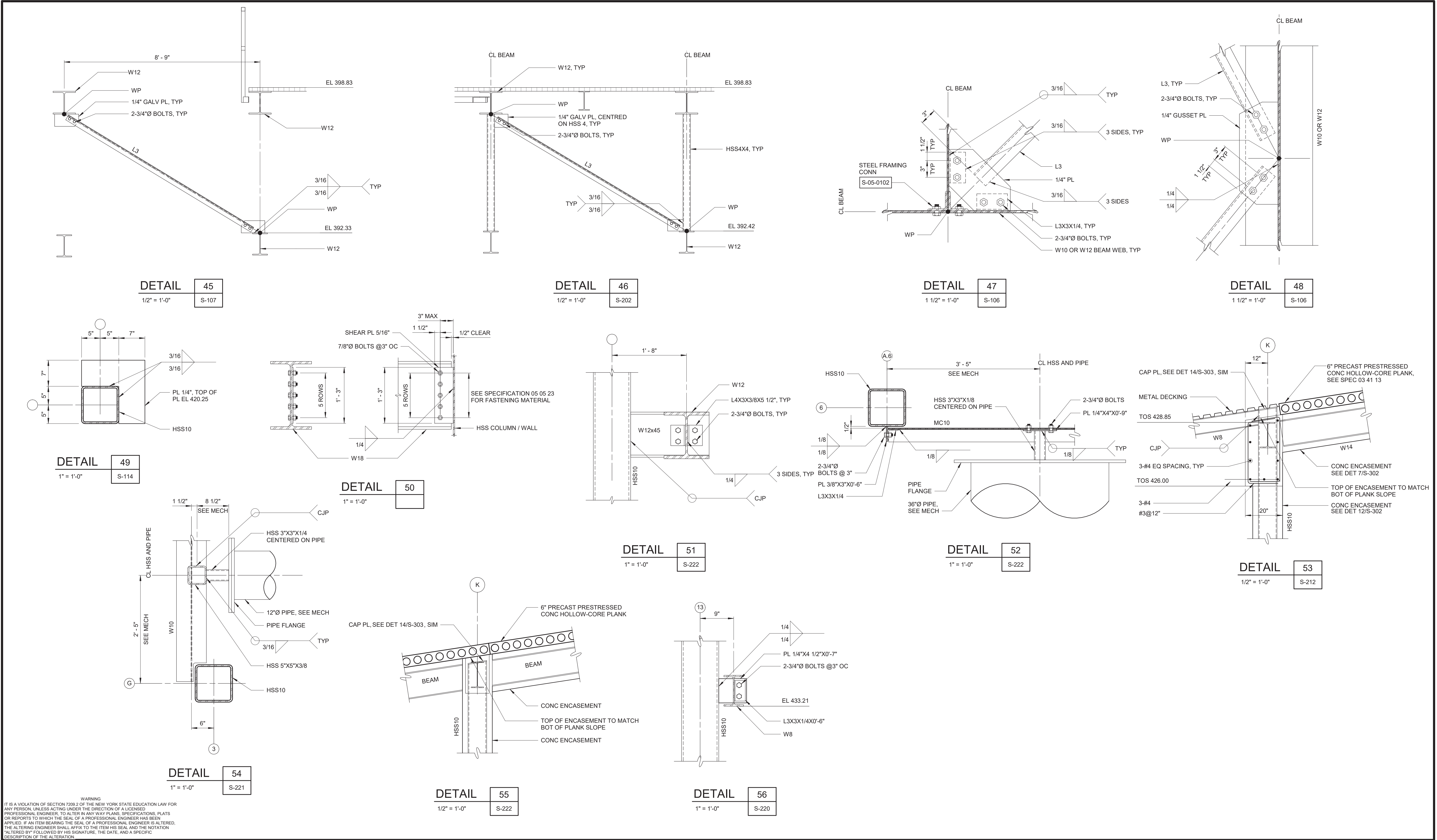
WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

FILTRATION PLANT
STRUCTURAL
DETAILS - SHEET 6

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-306

Autodesk Docs/09388-000_Rye_Lake_Filtration/09388-000-WFP-S-14
2/20/2025 11:09:55 AM



				PROJECT ENGINEER:	R. FROST
				DESIGNED BY:	J. EDER
				DRAWN BY:	R. HERNANDEZ
				CHECKED BY:	C. PHILLIPS
				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

STATE OF NEW YORK
J.C. EDER
LICENSED PROFESSIONAL ENGINEER
097035

Hazen

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

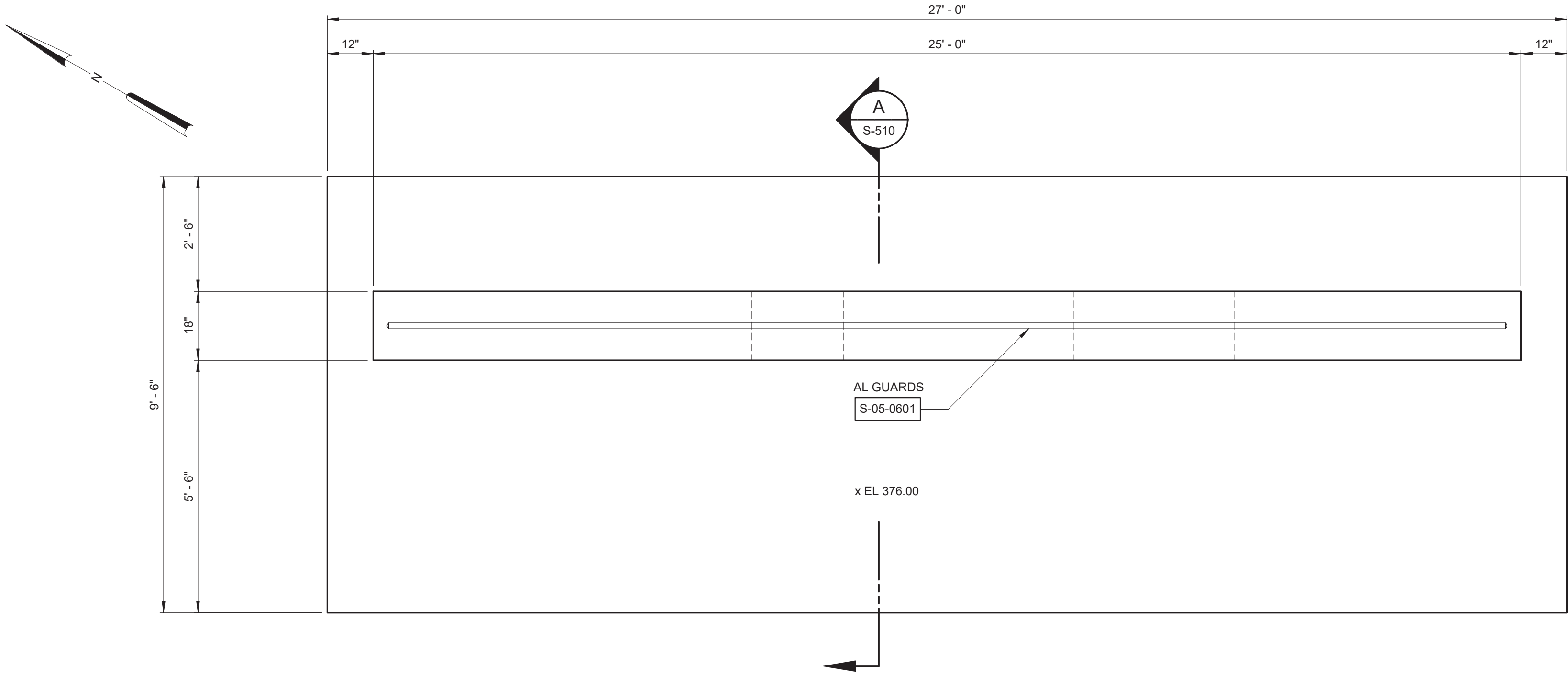
WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

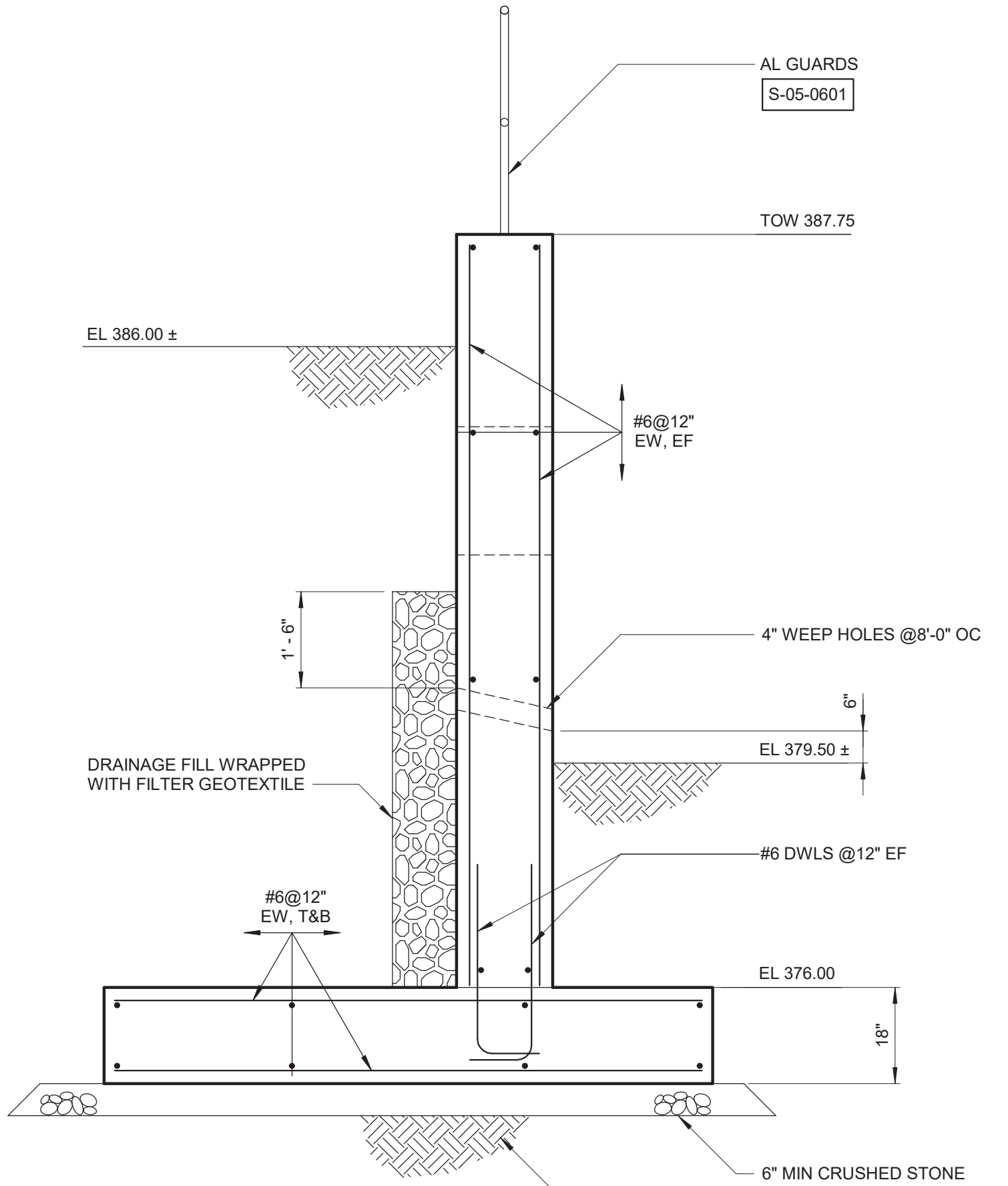
FILTRATION PLANT
STRUCTURAL
DETAILS - SHEET 7

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-307

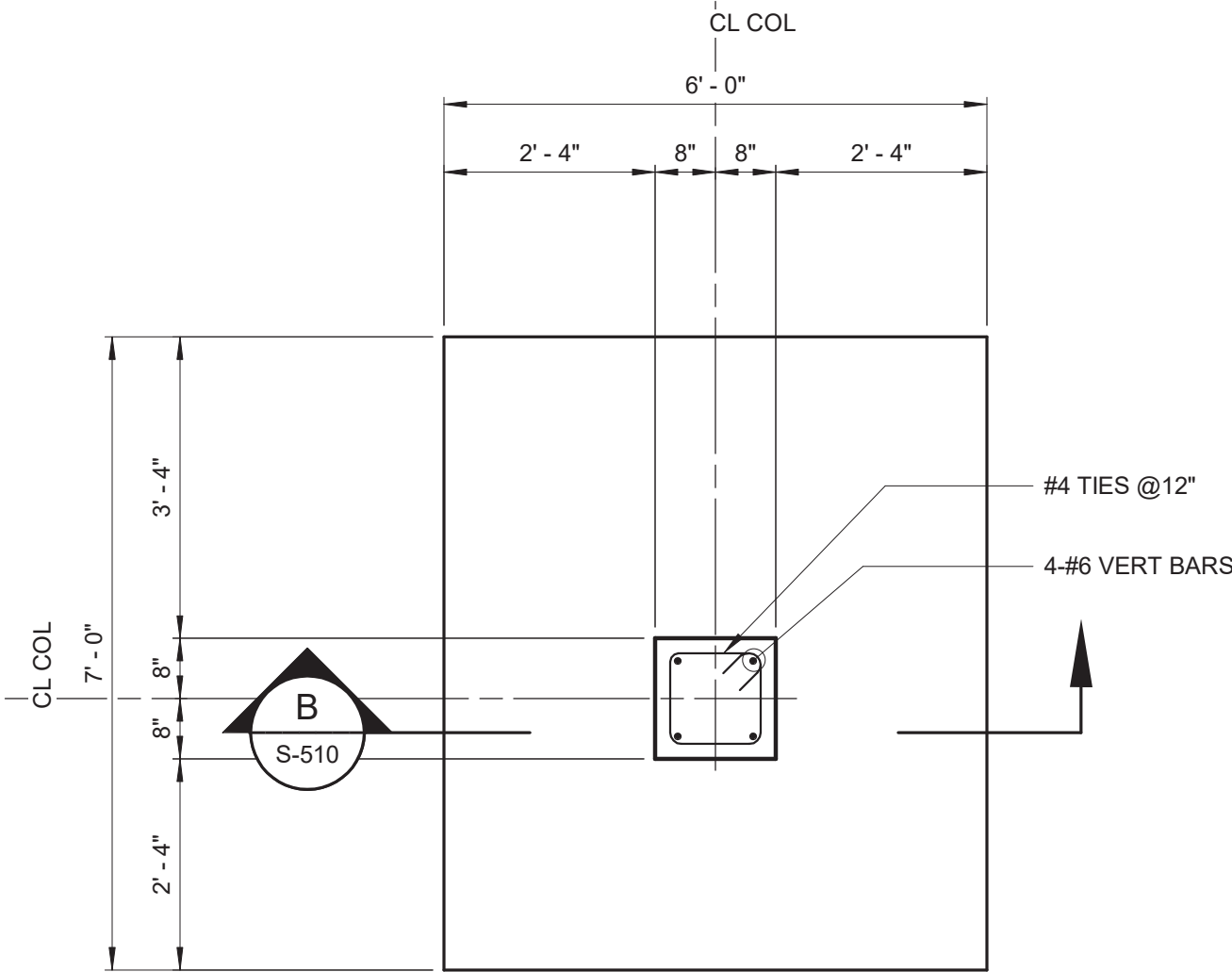
- NOTES:
- FOR STRUCTURE LOCATIONS SEE CIVIL DRAWINGS.
 - FOR GATE DETAILS SEE DRAWING A-501 SITE ENTRANCE PLAN AND DETAILS.



HEADWALL PLAN
1/2" = 1'-0"

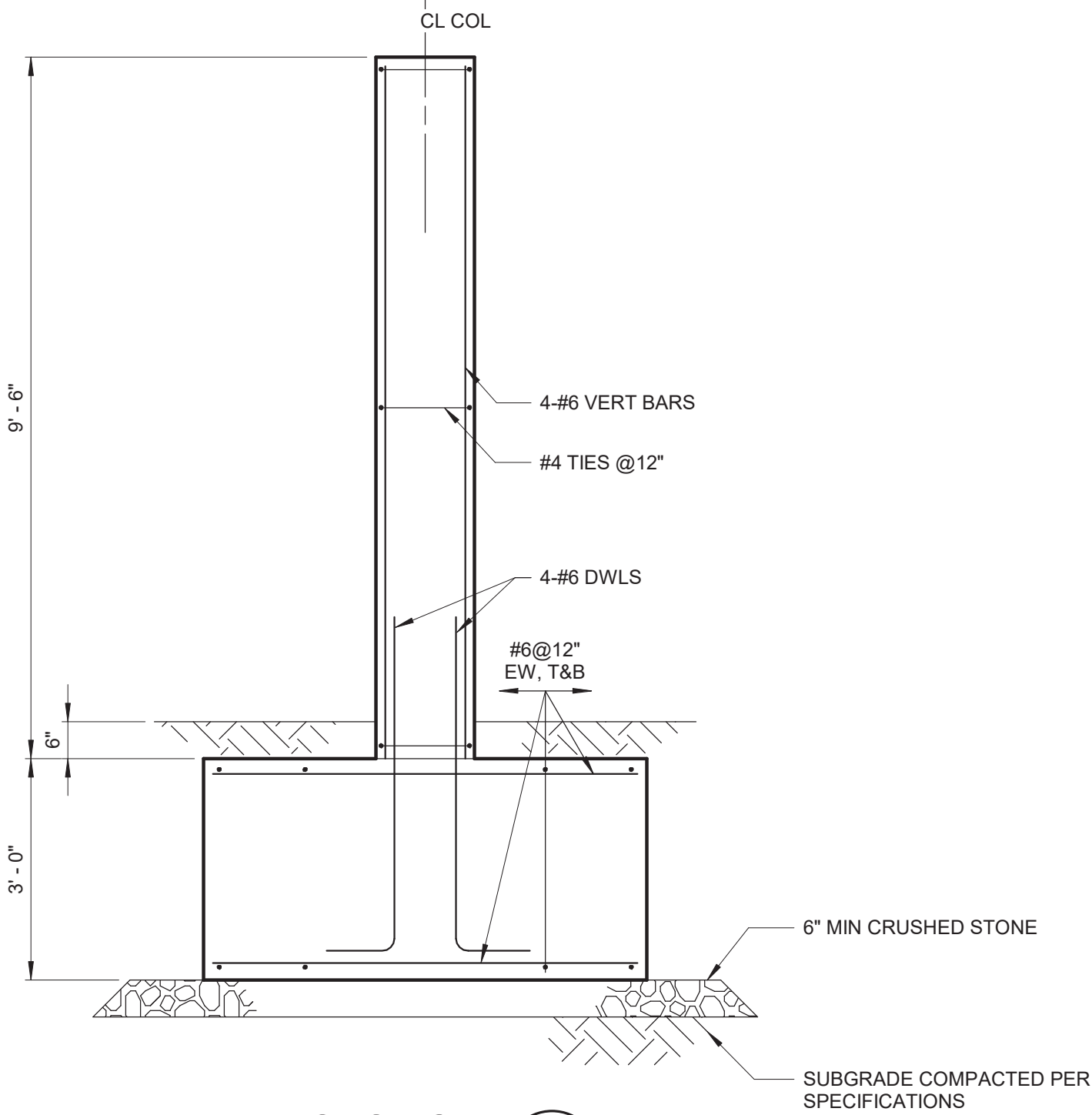


SECTION A
1/2" = 1'-0"



NOTE:
PROVIDE TWO FOUNDATIONS AND POSTS.

GATE POST AND FOUNDATION PLAN
1/2" = 1'-0"



SECTION B
1/2" = 1'-0"

WARNING
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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	J. MEDLEY
CHECKED BY:	C. PHILLIPS
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

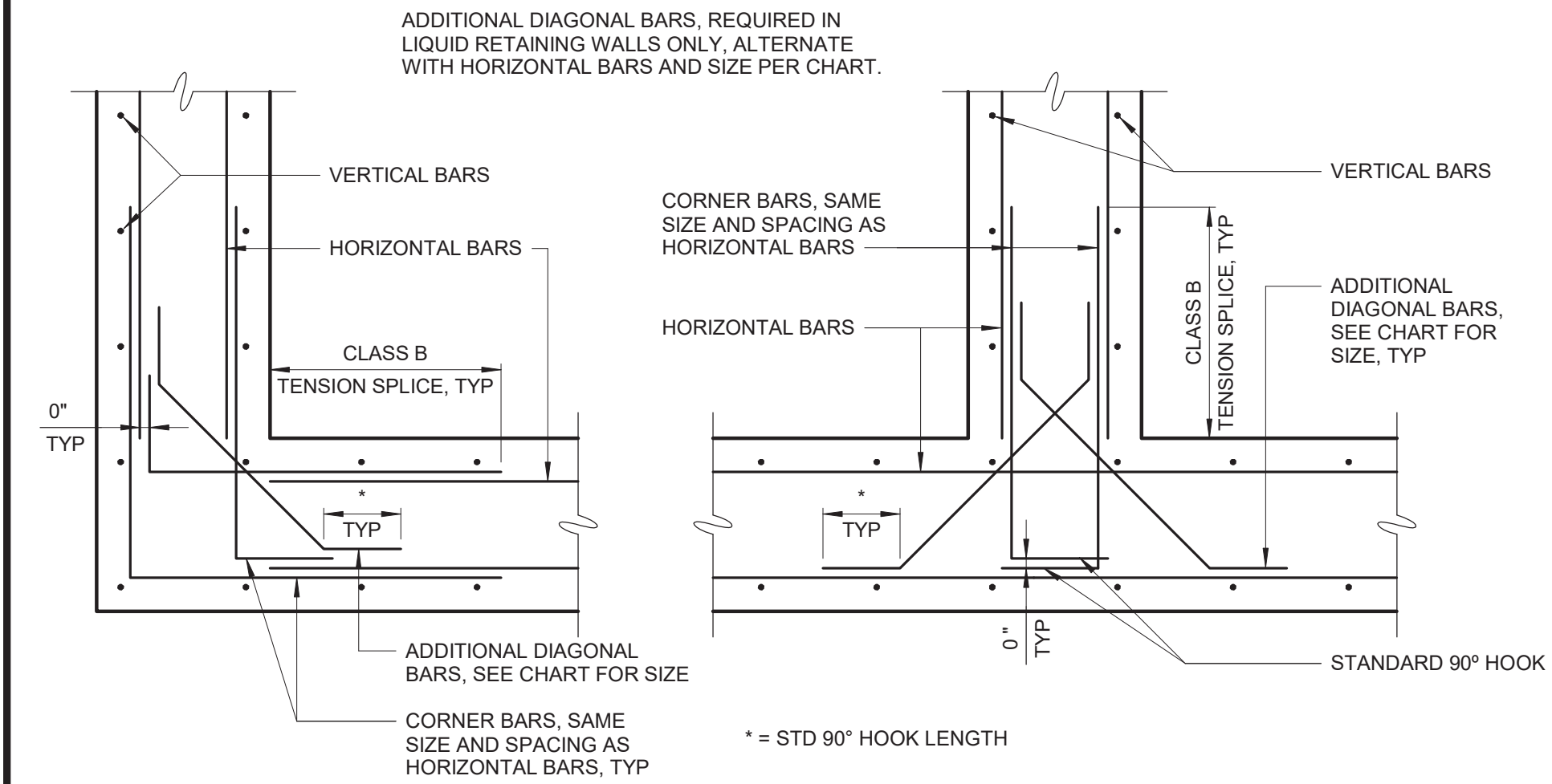
WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

SITE STRUCTURES
STRUCTURAL
PLANS AND SECTIONS

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-510

Autodesk Docs/09388-000_Ply_Lake_Filtration/09388-000-General-Struct
2/20/2025 9:46:00 AM



DIAGONAL BAR SIZE CHART	
BAR SIZE - HORIZONTAL REINFORCEMENT	BAR SIZE - DIAGONAL REINFORCEMENT
# 3	# 3
# 4	# 3
# 5	# 4
# 6	# 5
# 7	# 5
# 8	# 6
# 9	# 7
# 10	# 8
# 11	# 9

AT LOCATIONS WHERE DIFFERENT SIZE HORIZONTAL BARS CONVERGE, THE LARGER BAR SIZE SHALL CONTROL

NOTES:

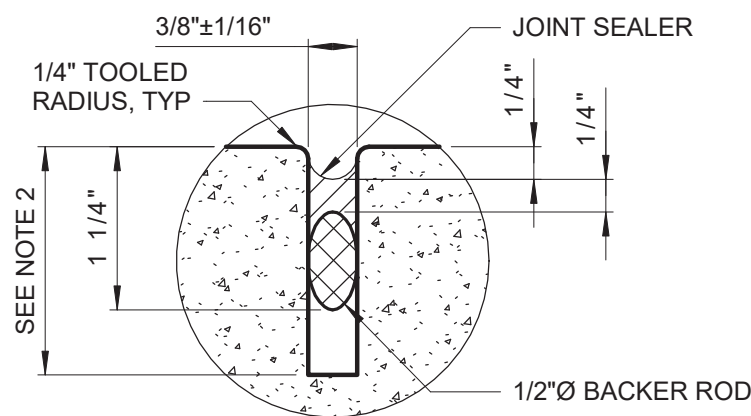
- THIS DETAIL APPLIES FOR OPENINGS 8"Ø AND LARGER. FOR SMALLER OPENINGS, BEND BARS OR ADJUST SPACING OF REINFORCEMENT TO AVOID OPENING.
- PLACE EXTRA BARS OF THE SAME SIZE AS THE INTERRUPTED BARS AT EACH SIDE OF OPENING. QUANTITY OF EXTRA BARS AT EACH SIDE SHALL EQUAL HALF THE QUANTITY OF INTERRUPTED BARS EXCEPT WHERE NOTED OTHERWISE.
- PROVIDE ONE DIAGONAL BAR EACH SIDE OF OPENING WITH SIZE EQUAL TO MAIN REINFORCEMENT, TYPICAL EACH FACE.
- WHERE INVERT OF OPENING IN WALL IS LESS THAN 44 BAR DIAMETERS FROM TOP OF SLAB, EXTRA REINFORCEMENT ON EACH SIDE SHALL INCLUDE DOWELS EMBEDDED INTO SLAB WITH STANDARD 90 DEGREE HOOKS TO SPLICE WITH EXTRA VERTICAL REINFORCEMENT. DOWELS SHALL ALSO STILL BE PROVIDED BELOW OPENING.
- WHERE INVERT OF OPENING IN WALL OR SLAB IS CLOSER THAN 44 BAR DIAMETERS TO EDGE OF SLAB OR BOTTOM OF WALL, EXTRA DIAGONAL BARS MAY BE TERMINATED TWO INCHES FROM EDGE OF SLAB OR BOTTOM OF WALL. DOWELS DO NOT HAVE TO BE PROVIDED TO SPLICE WITH DIAGONAL BARS.

REINFORCING AT OPENINGS

S-03-0109

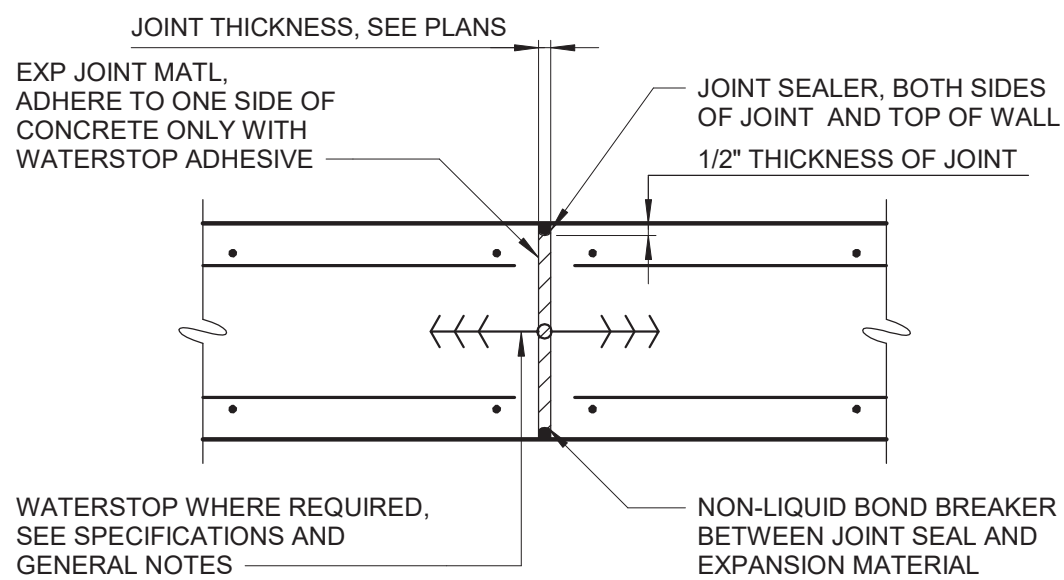
NOTES:

- VERTICAL JOINTS SHALL BE FORMED BY AN APPROVED JOINT INSERT. HORIZONTAL JOINTS SHALL BE FORMED BY AN APPROVED JOINT INSERT OR SAWCUTTING PERFORMED PER SPECIFICATION.
- DEPTH SHALL BE 1 1/2" IN REINF CONC DEPTH SHALL BE 1/3 OF CONCRETE THICKNESS IN UNREINFORCED CONCRETE PAVEMENT.



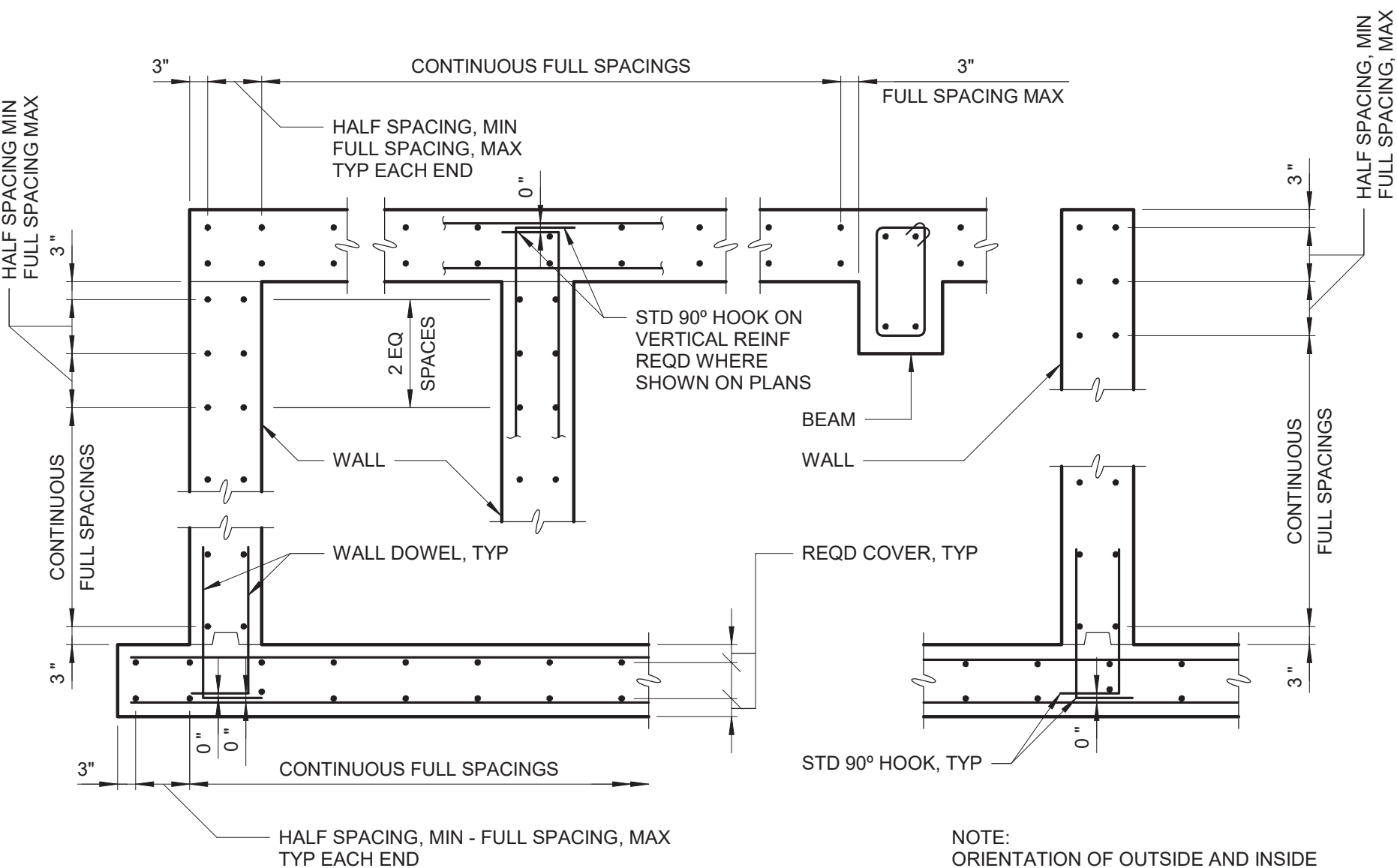
SEALED JOINT

S-03-0202



EXPANSION JOINT

S-03-0201

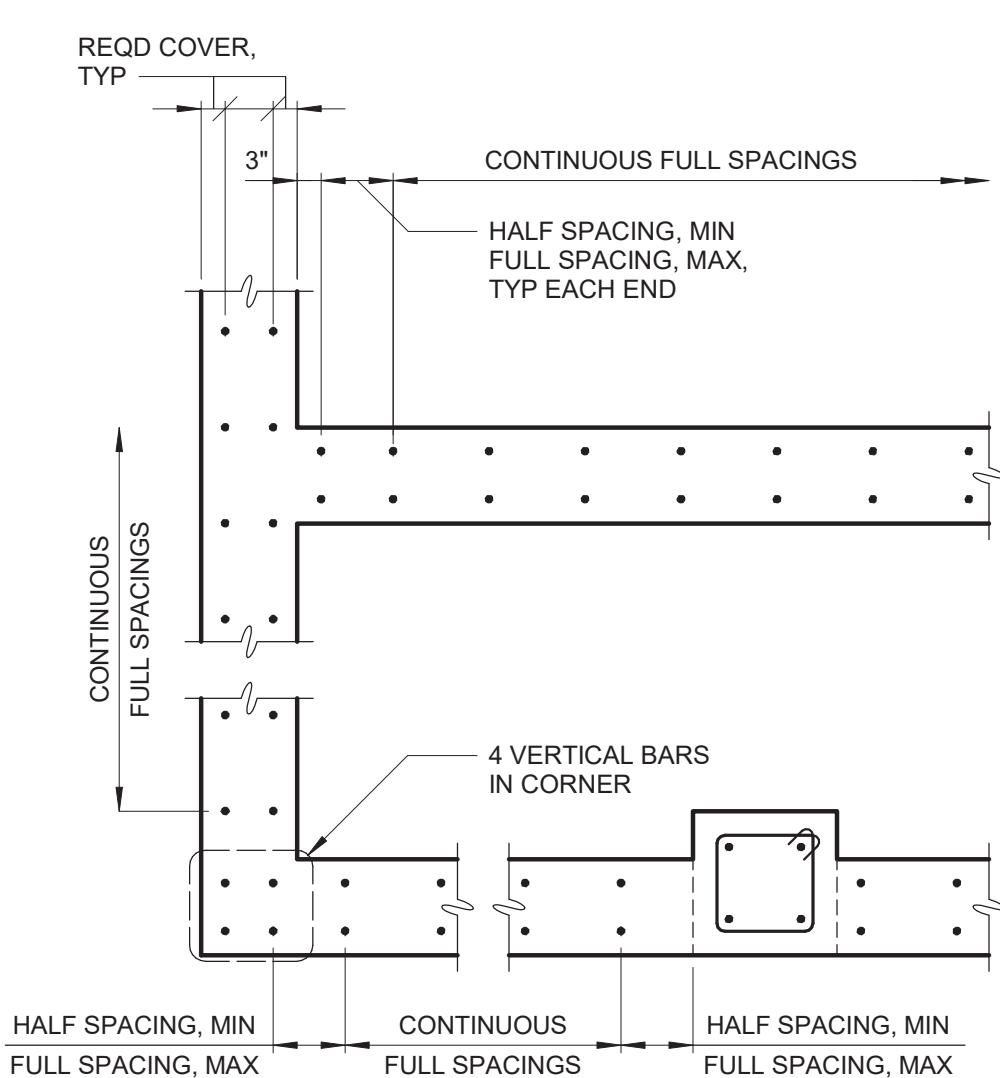


SECTION - WALLS AND SLABS

NOTE: ORIENTATION OF OUTSIDE AND INSIDE LAYERS OF REINF SHALL BE AS SHOWN ON PLANS. "FULL SPACING" IS BAR SPACING CALLED OUT ON PLANS.

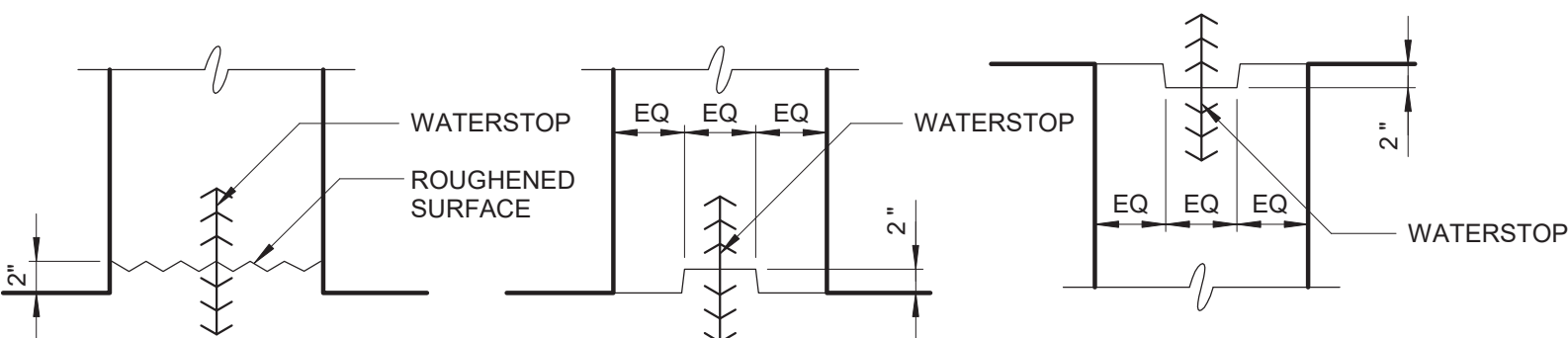
BAR PLACEMENT

S-03-0110



CONSTRUCTION JOINT

S-03-0203



TYPE I - STARTER WALL

TYPE II - KEYWAY

TYPE III - INVERTED KEYWAY

NOTES:

- TYPE I - STARTER WALL IS REQUIRED FOR ALL BASE OF WALLS 12 INCHES OR LESS IN THICKNESS WHERE WATERSTOPS ARE REQUIRED.
- TYPE I - STARTER WALL IS PREFERRED, BUT TYPE II - KEYWAY IS ACCEPTABLE FOR BASE OF WALLS GREATER THAN 12 INCHES IN THICKNESS WHERE WATERSTOPS ARE REQUIRED.
- TYPE III - INVERTED KEYWAY IS REQUIRED AT TOP OF WALLS WHERE WATERSTOPS ARE REQUIRED.

WALL HORIZONTAL CONSTRUCTION JOINTS

S-03-0204

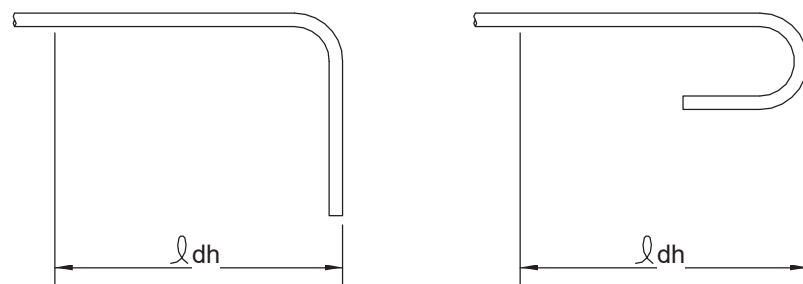
DEVELOPMENT LENGTH OF STANDARD HOOKS

FOR UNCOATED BARS IN TENSION

$f_y = 60,000 \text{ psi}$ $f_c' = 4000 \text{ psi OR GREATER}$

BAR SIZE	DEVELOPMENT LENGTH, ℓ_{dh}	
	BASIC	W/ CONC COVER *
#3	8"	6"
#4	10"	7"
#5	1'-0"	9"
#6	1'-3"	11"
#7	1'-5"	1'-0"
#8	1'-7"	1'-2"
#9	1'-10"	1'-4"
#10	2'-1"	1'-6"
#11	2'-3"	1'-7"

* SIDE COVER NORMAL TO PLANE OF HOOK AT LEAST 2 1/2"; AND FOR 90° HOOK, END COVER BEYOND OUTSIDE END OF HOOK AT LEAST 2".



BASIC DEVELOPMENT LENGTH AND SPLICE LENGTH

FOR UNCOATED BARS IN TENSION

** BASED ON MATERIALS AND CONDITIONS AS FOLLOWS:

$f_y = 60,000 \text{ psi}$

CLEAR COVER ≥ 1.5 INCHES

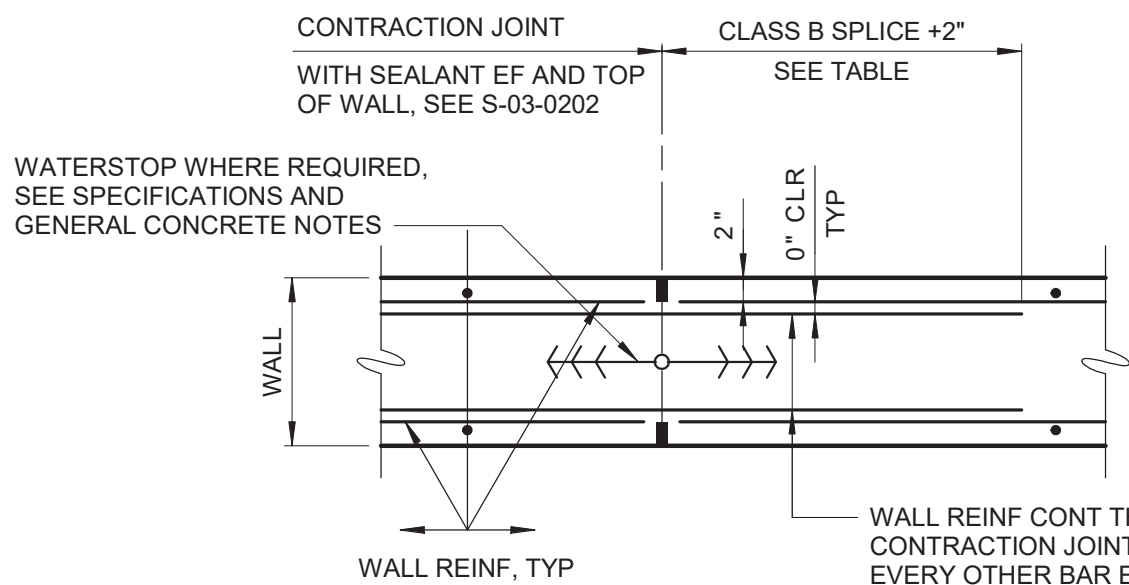
$f_c' = 4000 \text{ psi OR GREATER}$

NORMAL WEIGHT CONCRETE

BASIC DEVELOPMENT LENGTH ℓ_d				BAR SIZE	CLASS B SPLICE LENGTH $1.3 \times \ell_d$			
CLEAR SPACING $\geq 3"$		CLEAR SPACING $< 3"$			CLEAR SPACING $\geq 3"$		CLEAR SPACING $< 3"$	
BASIC	TOP *	BASIC	TOP *		BASIC	TOP *	BASIC	TOP *
1'-0"	1'-0"	1'-0"	1'-4"	# 3	1'-0"	1'-3"	1'-4"	1'-8"
1'-0"	1'-3"	1'-7"	2'-1"	# 4	1'-3"	1'-8"	2'-1"	2'-9"
1'-3"	1'-7"	2'-4"	3'-0"	# 5	1'-7"	2'-0"	3'-0"	3'-11"
1'-6"	1'-11"	3'-1"	4'-0"	# 6	1'-11"	2'-5"	4'-0"	5'-2"
2'-5"	3'-1"	4'-11"	6'-4"	# 7	3'-1"	4'-0"	6'-4"	8'-3"
3'-0"	3'-11"	6'-0"	7'-9"	# 8	3'-11"	5'-1"	7'-9"	10'-1"
3'-8"	4'-9"	6'-9"	8'-9"	# 9	4'-9"	6'-3"	8'-9"	11'-4"
4'-6"	5'-10"	7'-7"	9'-10"	# 10	5'-10"	7'-7"	9'-10"	12'-9"
5'-5"	7'-0"	8'-5"	10'-11"	# 11	7'-0"	9'-1"	10'-11"	14'-2"

* TOP REINFORCEMENT IS ANY HORIZONTAL REINFORCEMENT SO PLACED THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE REINFORCEMENT.

** FOR MATERIALS OR CONDITIONS DIFFERENT FROM THOSE STATED, LENGTHS SHOWN IN CHART SHALL BE MODIFIED TO CONFORM TO THE PROVISIONS OF ACI 318-14, SECTION 25.3.



WALL CONTRACTION JOINT

S-03-0207

				PROJECT ENGINEER:	R. FROST
				DESIGNED BY:	J. EDER
				DRAWN BY:	R. HERNANDEZ
				CHECKED BY:	C. PHILLIPS
				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

STRUCTURAL STANDARD DETAILS
SHEET 1

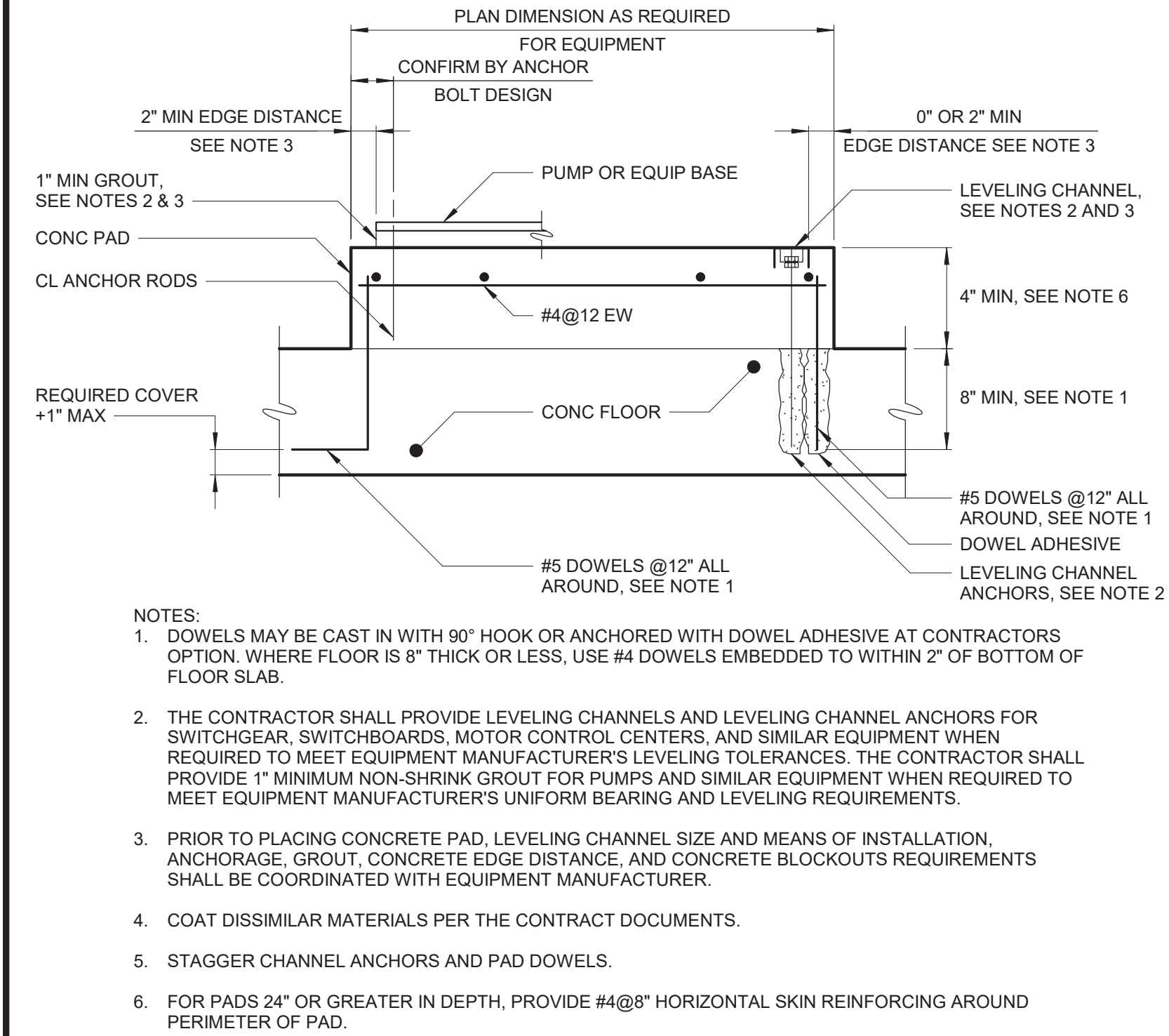
DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-600

Autodesk Docs\\09388-000_Rye_Lake_Filtration\\09388-000-General\\Struct
2/20/2025 9:46:00 AM

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:	J. EDER
					DRAWN BY:	R. HERNANDEZ
					CHECKED BY:	C. PHILLIPS
					IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
REV	ISSUED FOR	DATE	BY			

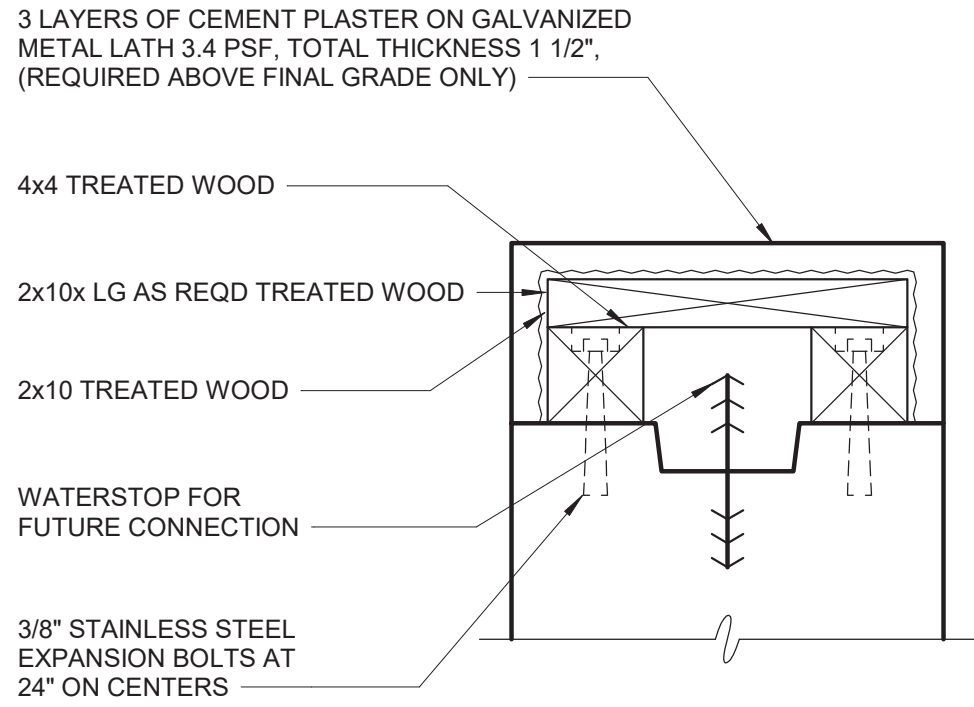
EQUIPMENT PAD
S-03-0504



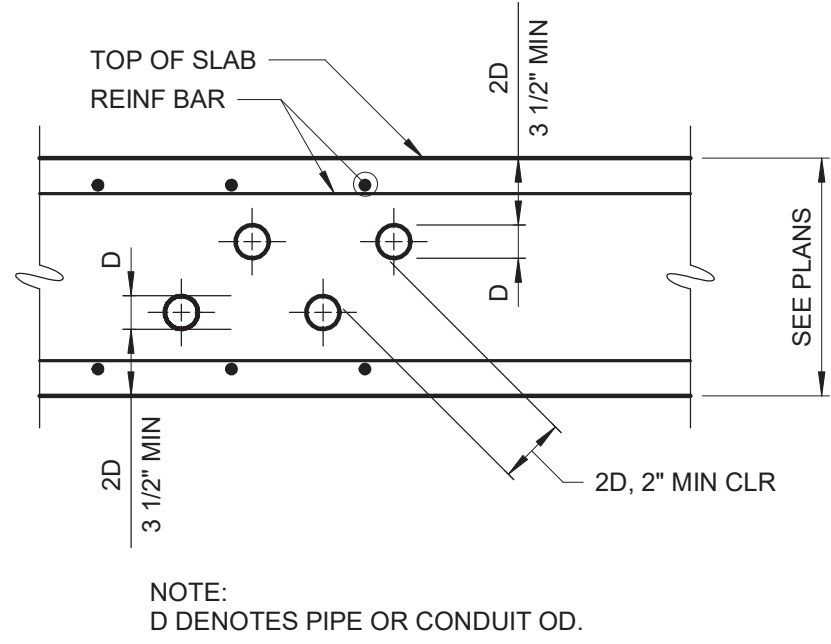
CONSTRUCTION JOINT

WATERSTOP PROTECTION AT CONNECTION WITH FUTURE CONSTRUCTION AT CONC ABOVE GRADE

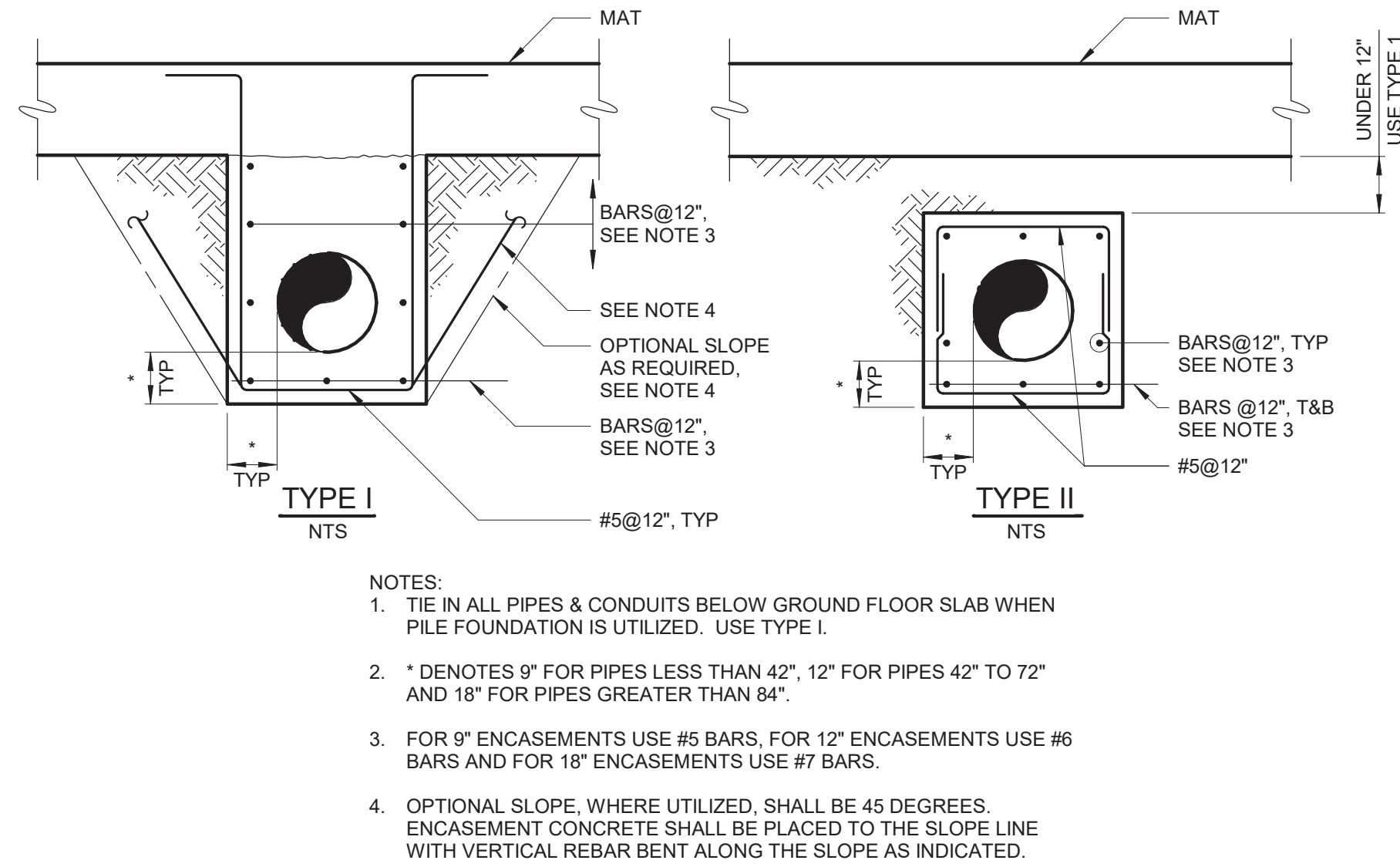
S-03-0301



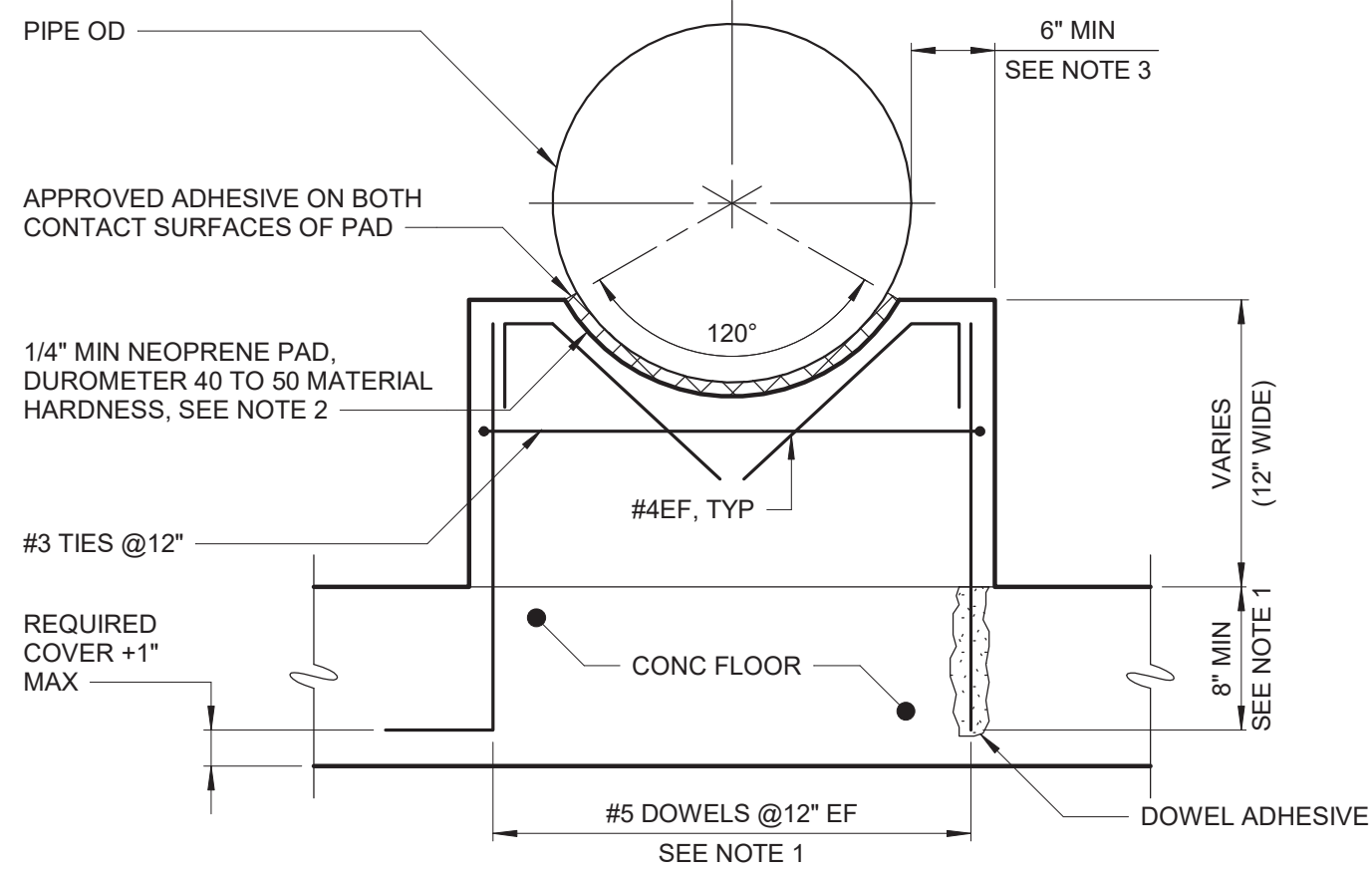
PIPE OR CONDUIT EMBEDDED IN SLAB
S-03-0403



PIPE ENCASEMENTS
S-03-0404

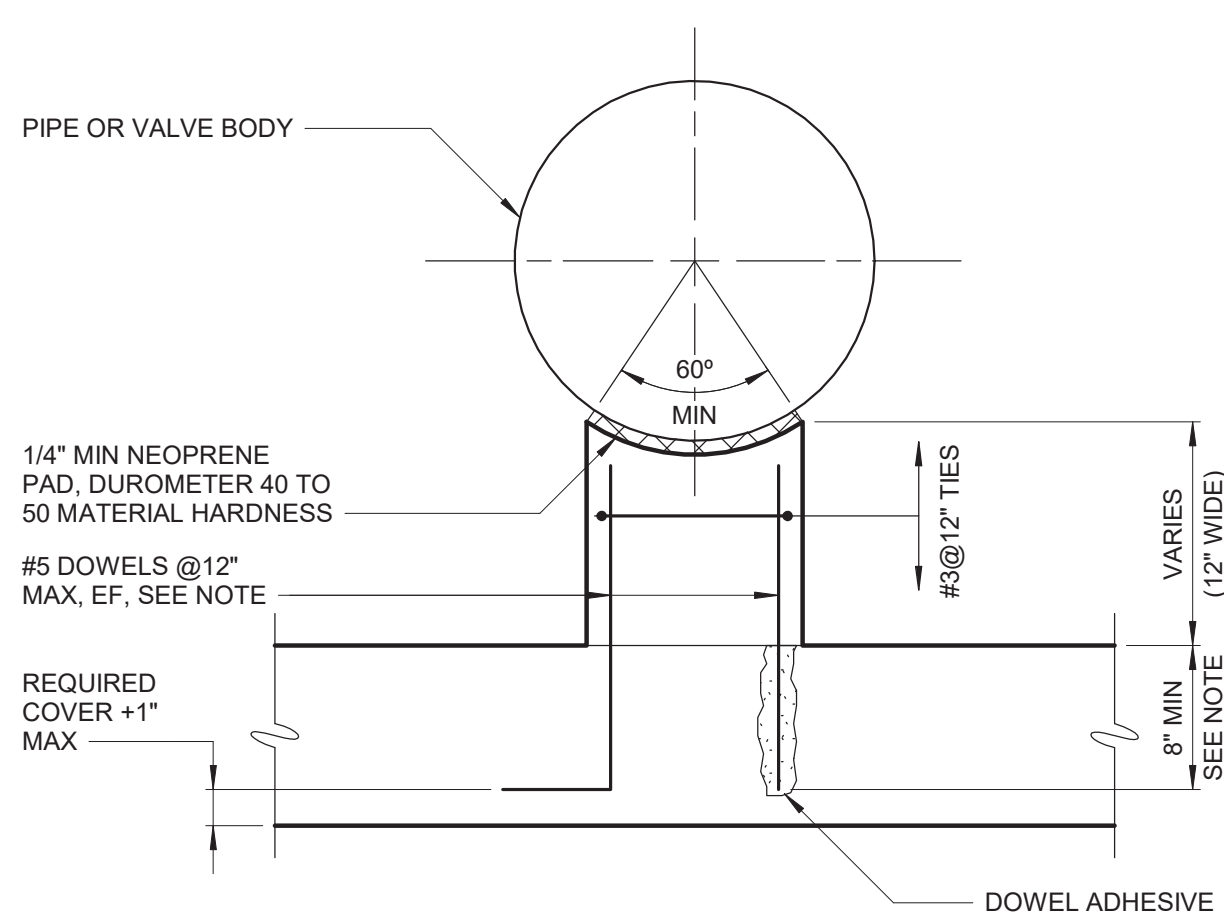


ALL PIPING AND CONDUITS BELOW SLABS ON EARTH TO BE ENCASED BY GENERAL CONTRACTOR UNLESS NOTED OTHERWISE.



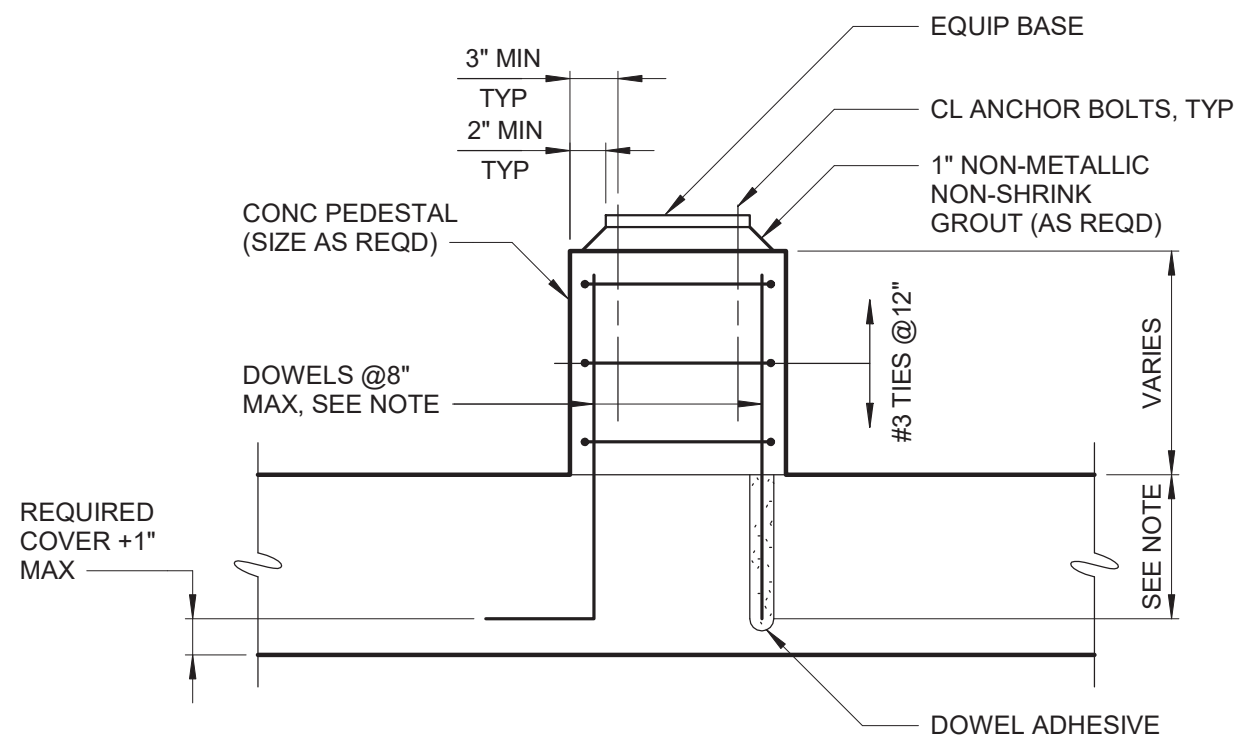
- NOTES:
- DOWELS MAY BE CAST IN WITH 90° HOOK OR ANCHORED WITH DOWEL ADHESIVE AT CONTRACTORS OPTION. WHERE FLOOR IS 8" THICK OR LESS, USE #4 DOWELS EMBEDDED TO WITHIN 2" OF BOTTOM OF FLOOR SLAB.
 - ENGINEER SHALL VERIFY THICKNESS OF PAD WILL ACCOMMODATE DESIGN MOVEMENT, PARTICULARLY FOR OUTSIDE AERIAL PIPE.
 - COORDINATE SUPPORT WIDTH WITH PIPE STRAP ANCHORAGE REQUIREMENTS. PROVIDE 6" MINIMUM, FROM CENTER OF PIPE STRAP ANCHOR ROD TO EDGE OF CONCRETE.

CRADLE PIPE SUPPORT
S-03-0505



- NOTES:
- DOWELS MAY BE CAST IN WITH 90° HOOK OR ANCHORED WITH DOWEL ADHESIVE AT CONTRACTORS OPTION. WHERE FLOOR IS 8" THICK OR LESS, USE #4 DOWELS EMBEDDED TO WITHIN 2" OF BOTTOM OF FLOOR SLAB.
 - PIER SHALL BE MINIMUM 12" THICK EACH WAY HORIZONTALLY, AND SHALL BE SQUARE UNDER LARGE VALVE BODIES SUCH AS CHECK VALVES.

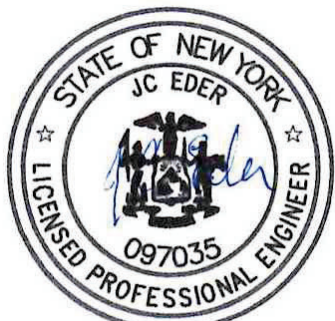
PIER
PIPE SUPPORT
S-03-0506



NOTE:
TOTAL AREA OF DOWELS SHALL NOT BE LESS THAN ONE PERCENT OF THE TOTAL PLAN AREA OF THE PEDESTAL, EQUALLY SPACED AROUND ALL 4 SIDES OF PEDESTAL. DOWELS MAY BE CAST IN WITH 90° HOOK OR ANCHORED WITH DOWEL ADHESIVE AT CONTRACTORS OPTION. WHEN DOWEL ADHESIVE IS USED, EMBED TO DEVELOP 125 PERCENT OF YIELD STRENGTH OF DOWELS.

EQUIPMENT SUPPORT PEDESTAL
S-03-0507

BID SET



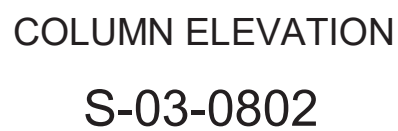
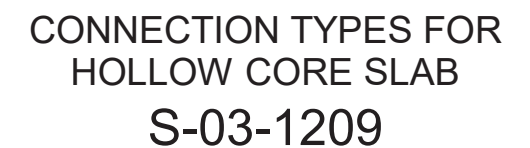
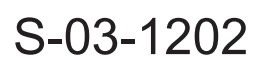
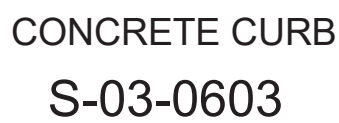
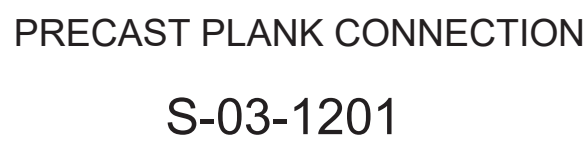
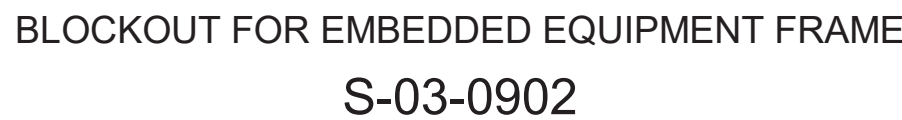
Hazen
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

STRUCTURAL STANDARD DETAILS
SHEET 2

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



PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1" 

BID SET



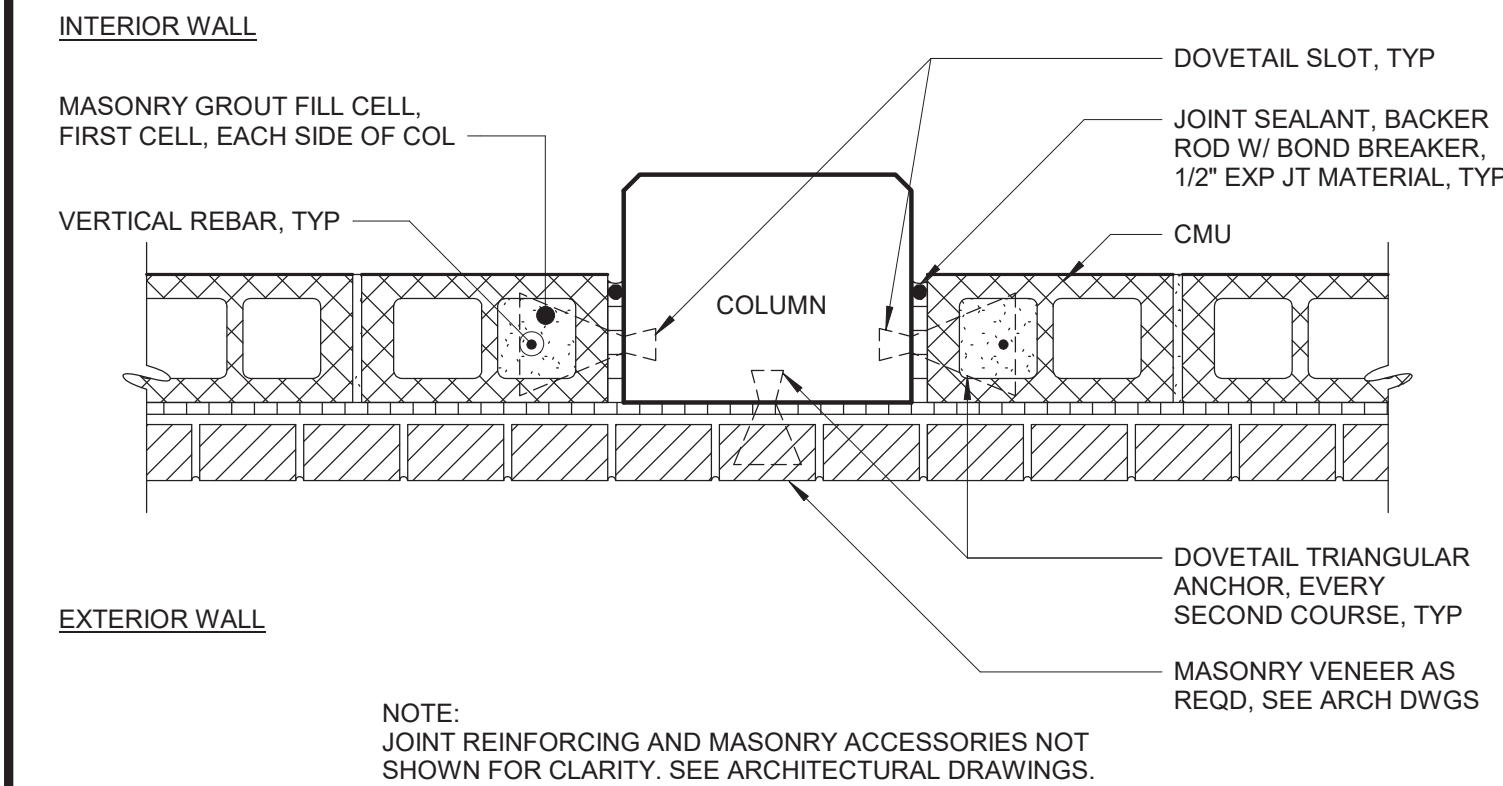
WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT HARRISON, NY

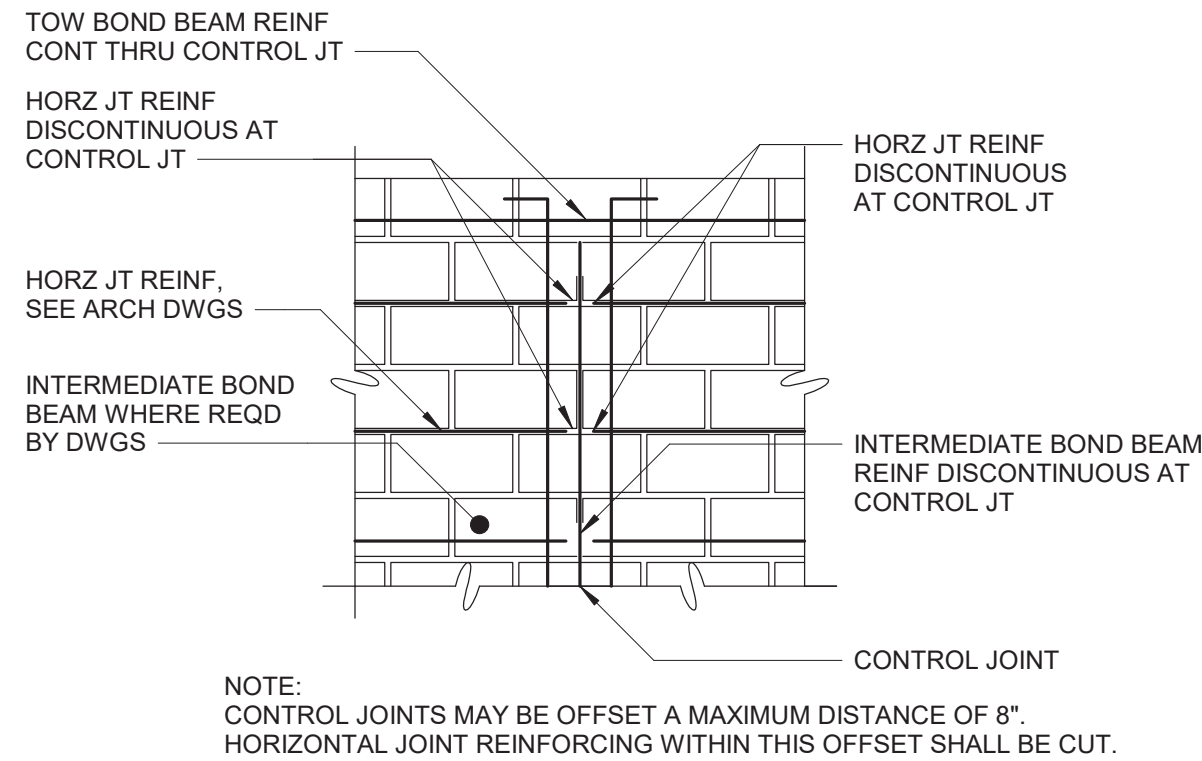
STRUCTURAL STANDARD DETAILS
SHEET 3

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

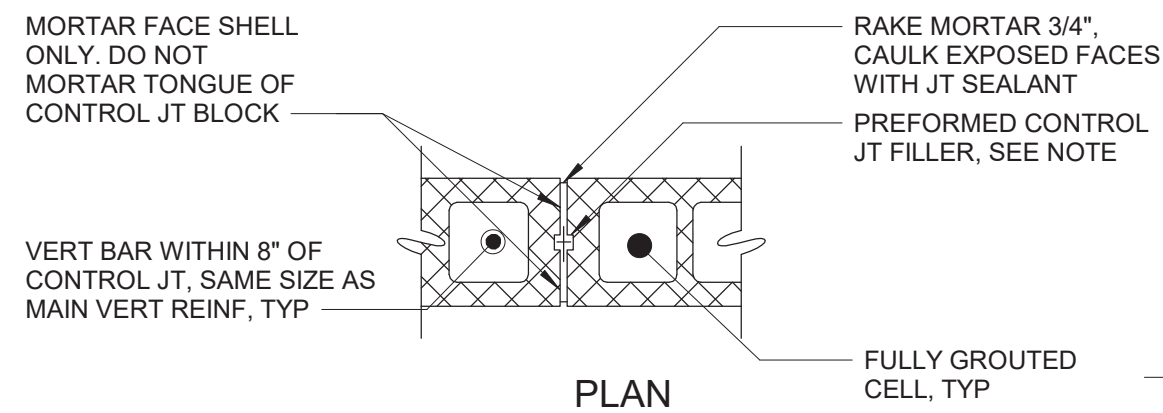
Autodesk Docs\\09388-000_Pye_Lake_Filtration\\09388-000-General\\Struct



MASONRY TIE-IN AT COLUMN
S-04-0103



ELEVATION

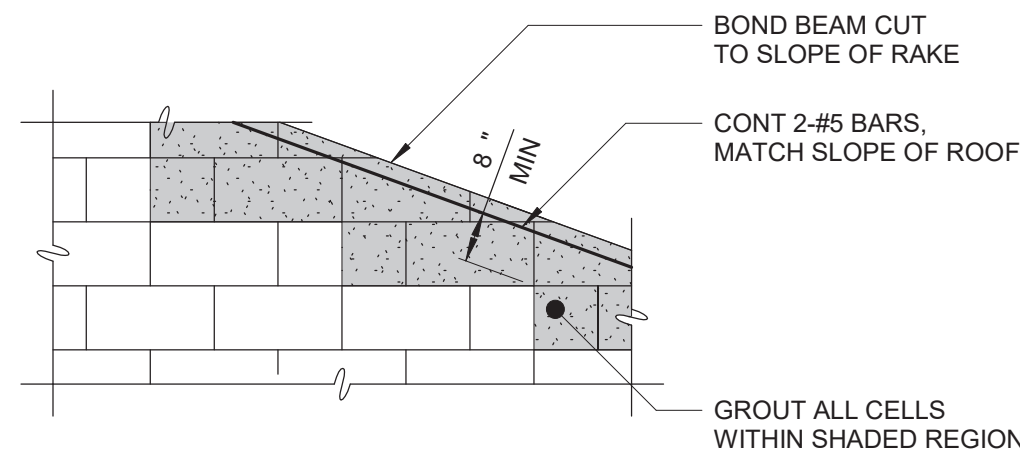


PLAN

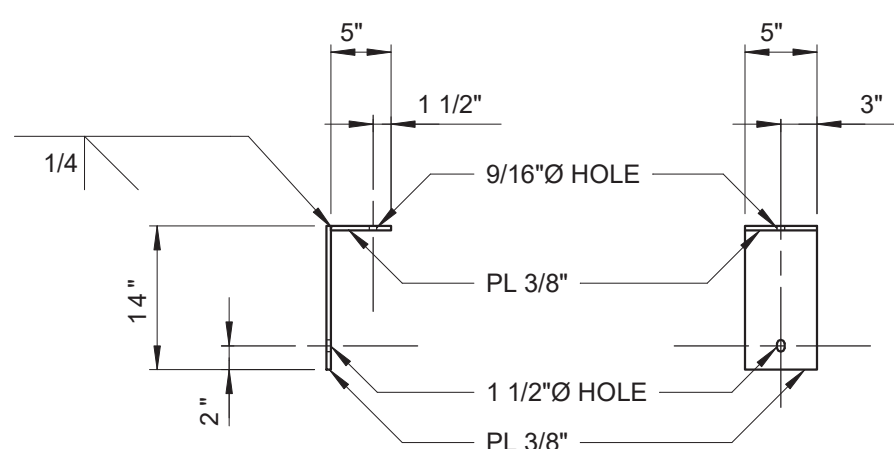
NOTE: WIDE FLANGED PREFORMED CONTROL JOINT FILLER MAY BE USED.

CONTROL JOINT BLOCK

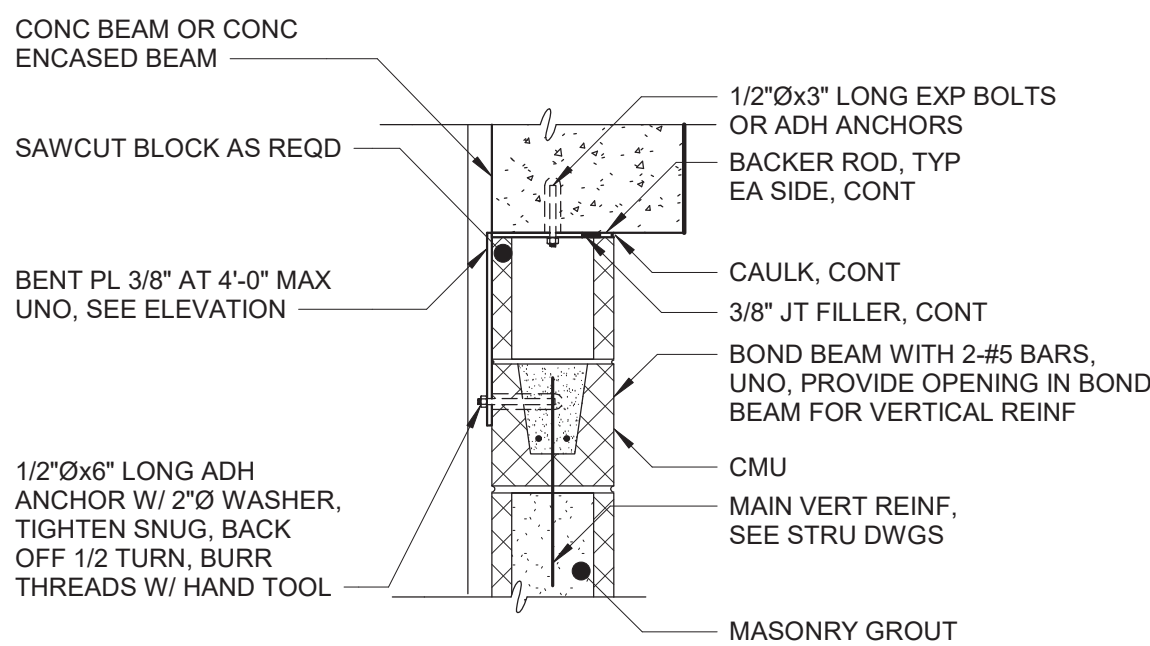
S-04-0105



S-04-0204



ELEVATION

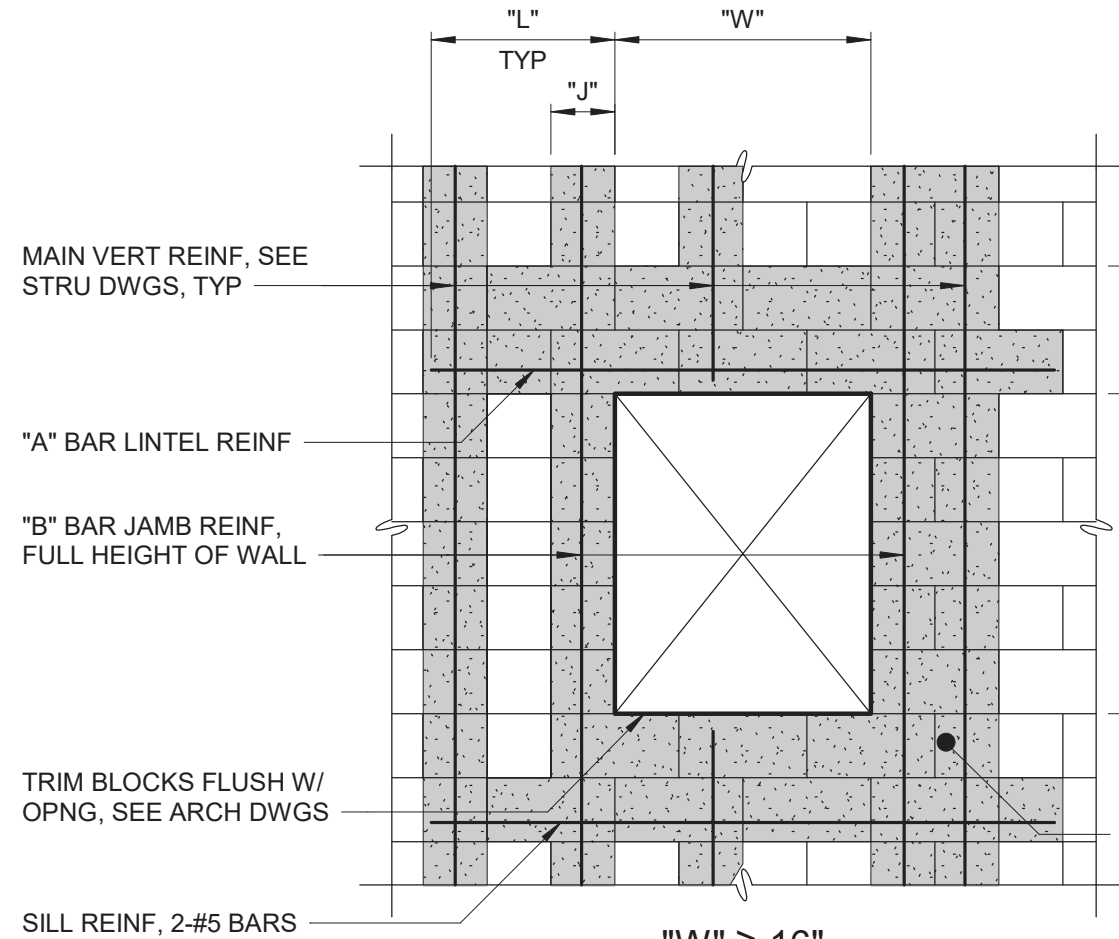


MASONRY WALL TO CONCRETE CONNECTION

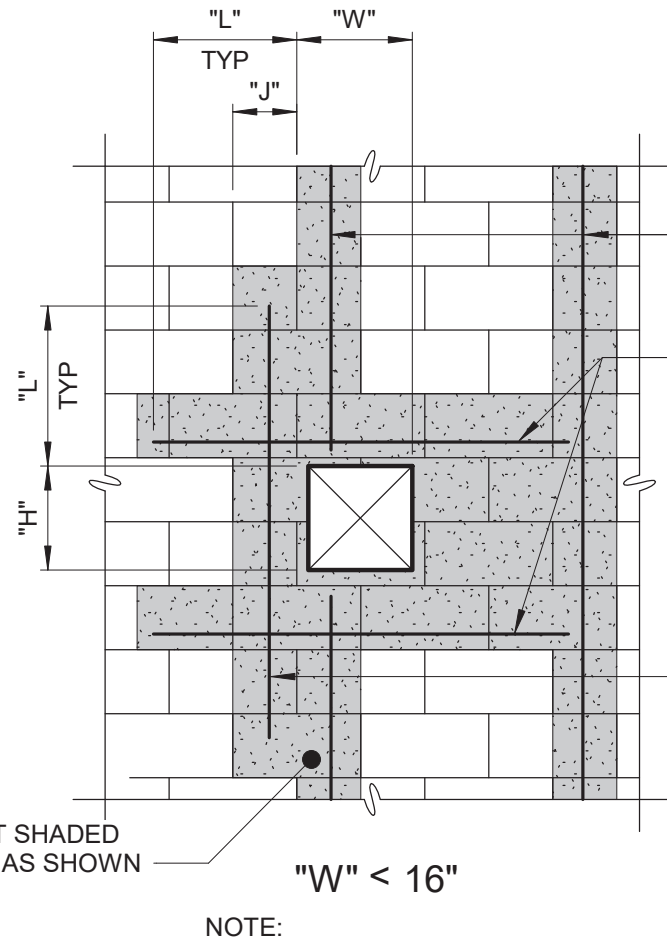
S-04-0109

CMU OPENING REINFORCEMENT SCHEDULE					
"W" OPNG WIDTH	LINTEL DEPTH	LINTEL STIRRUP	"A" BAR LINTEL	"B" BAR JAMB	"J" MIN JAMB WIDTH
UP TO 2'-8"	8"	-	#5 BAR	1-#5 BAR EA JAMB	8"
>2'-8" <= 4'-0"	8"	-	2-#5 BARS	1-#5 BAR EA JAMB	8"
>4'-0" <= 6'-0"	16"	#3@8"	2-#5 BARS	2-#5 BAR EA JAMB	16"
>6'-0" <= 8'-0"	24"	#3@8"	2-#5 BARS	2-#5 BAR EA JAMB	16"
>8'-0" <= 12'-0"	24" *	#3@8"	2-#5 BARS	3-#5 BAR EA JAMB	24"
24" WIDE LOUVER AT COL LINE 1	16"	#3@8"	2-#6 BARS	3-#5 BAR EA JAMB	24"

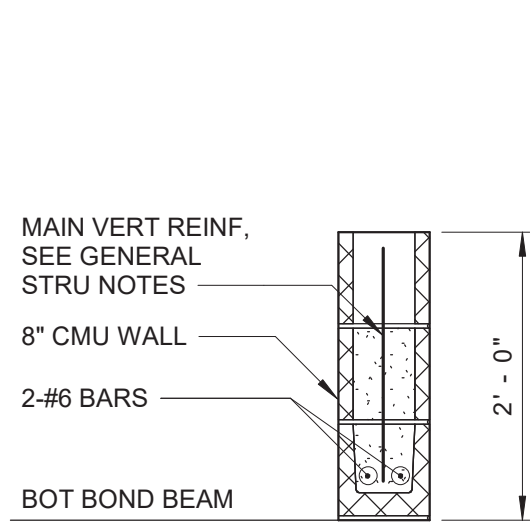
* 16" AT TRANSLUCENT PANELS



NOTE: "L" = 25" FOR #4 AND #5 BARS "L" = 30 INCHES FOR #6 BARS



NOTE: "L" = 25" FOR #4 AND #5 BARS "L" = 30 INCHES FOR #6 BARS

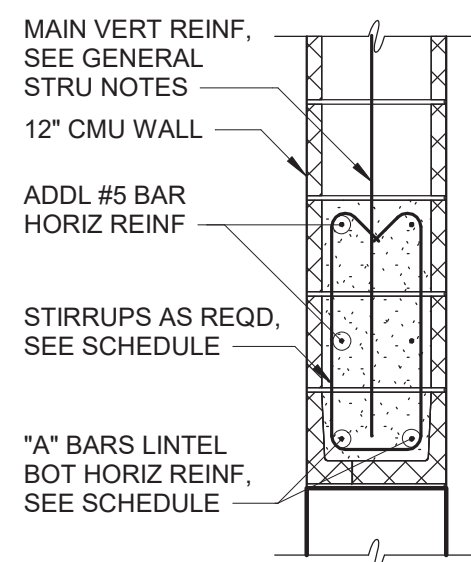


8" LINTEL ABOVE TRANSLUCENT WALL SYSTEMS AND 24' - 0" WIDE LOUVER

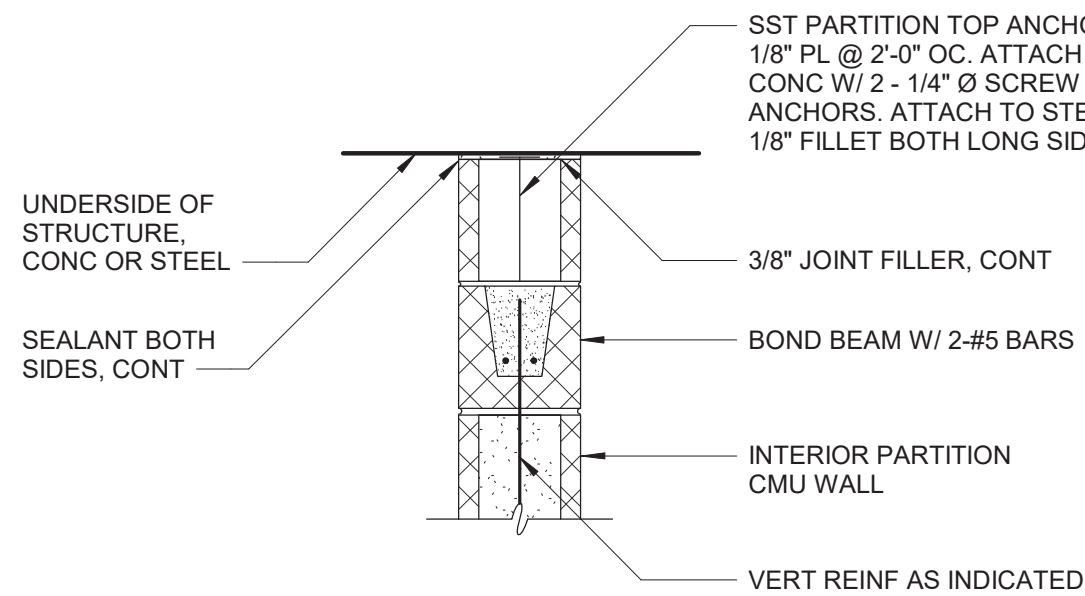
TYPICAL MASONRY OPENINGS

8" LINTEL SECTION

S-04-0202

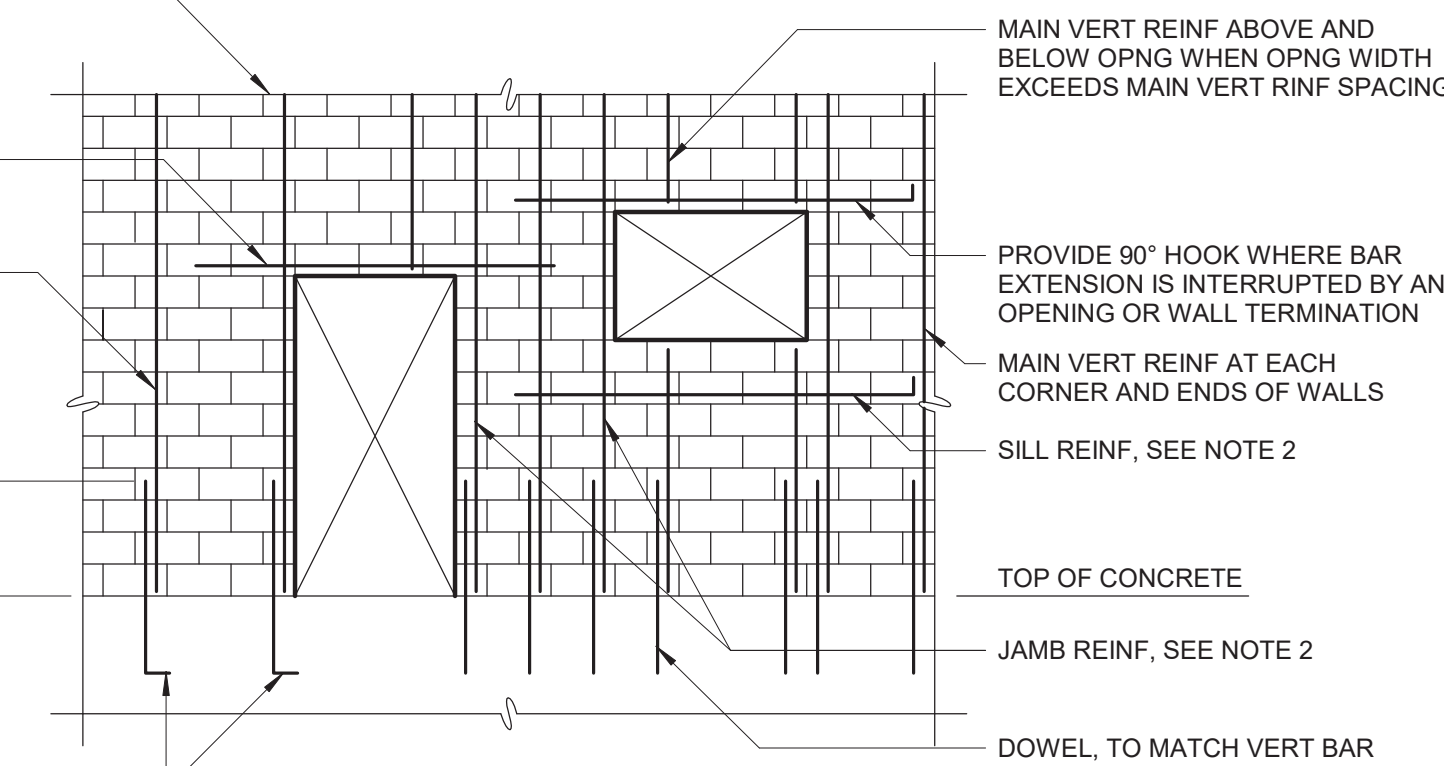
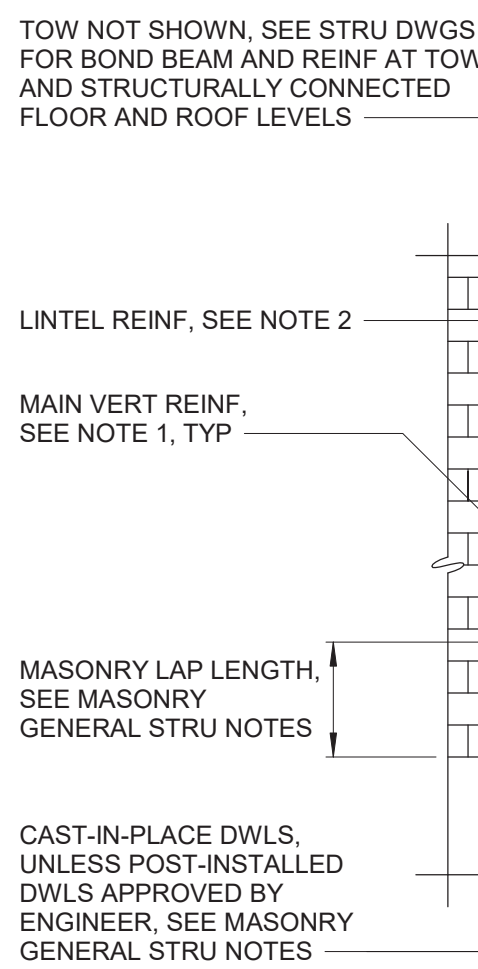


12" LINTEL SECTION



TOP OF CMU WALLS FOR INTERIOR WALLS

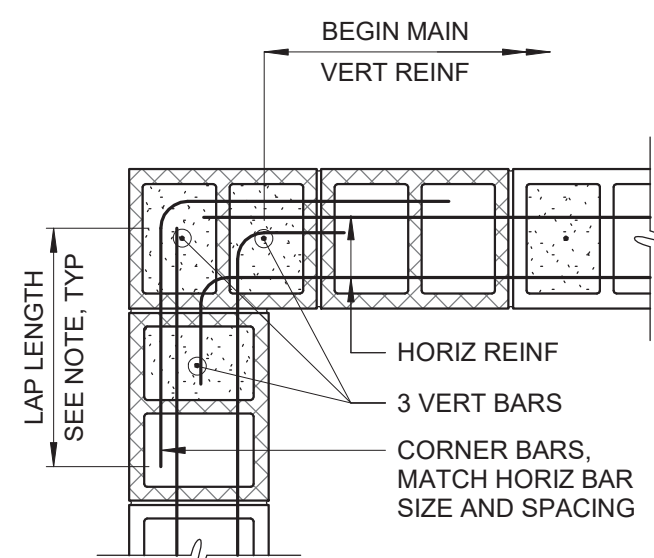
S-04-0205



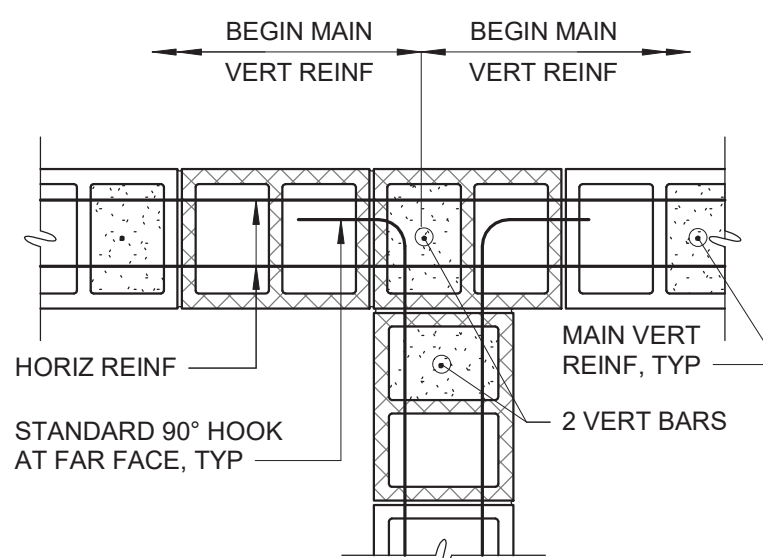
NOTES:
1. FOR MAIN VERTICAL REINFORCING, SEE STRUCTURAL DRAWINGS. PROVIDE 90 DEGREE HOOK AT TOP OF WALL UNLESS NOTED OTHERWISE.
2. FOR LINTEL AND REINFORCING AT OPENINGS, SEE DETAIL S-04-0202.
3. JOINT REINFORCING NOT SHOWN FOR CLARITY. SEE ARCHITECTURAL DRAWINGS.

TYPICAL MASONRY REINFORCING ELEVATION

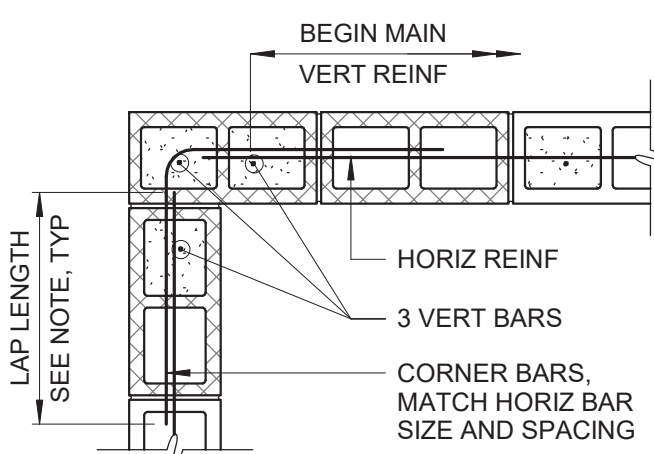
S-04-0201



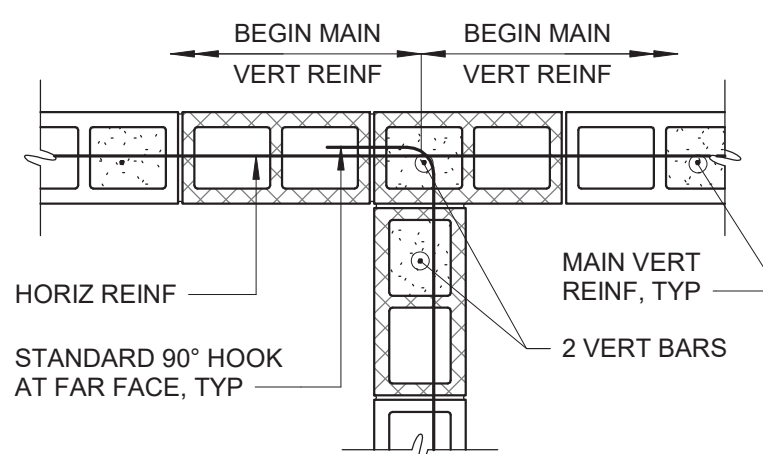
DOUBLE MAT EXTERIOR CORNER PLAN



DOUBLE MAT INTERIOR CORNER PLAN



SINGLE MAT EXTERIOR CORNER PLAN



SINGLE MAT INTERIOR CORNER PLAN

NOTES:
1. SEE MASONRY GENERAL STRUCTURAL NOTES FOR LAP SPLICE LENGTH REQUIREMENTS.
2. DETAIL APPLIES TO BOND BEAM HORIZONTAL REINFORCING.

TYPICAL MASONRY WALL INTERSECTION REINFORCING

S-04-0203

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					PROJECT ENGINEER:	R. FROST
					DESIGNED BY:	J. EDER
					DRAWN BY:	R. HERNANDEZ
					CHECKED BY:	C. PHILLIPS
					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

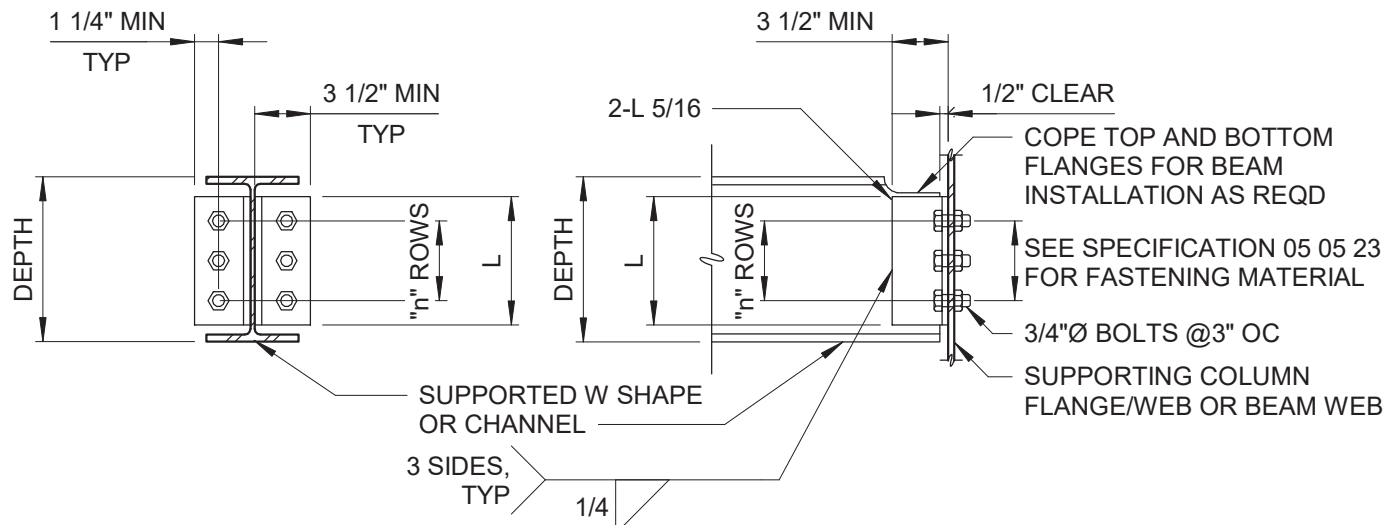
WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

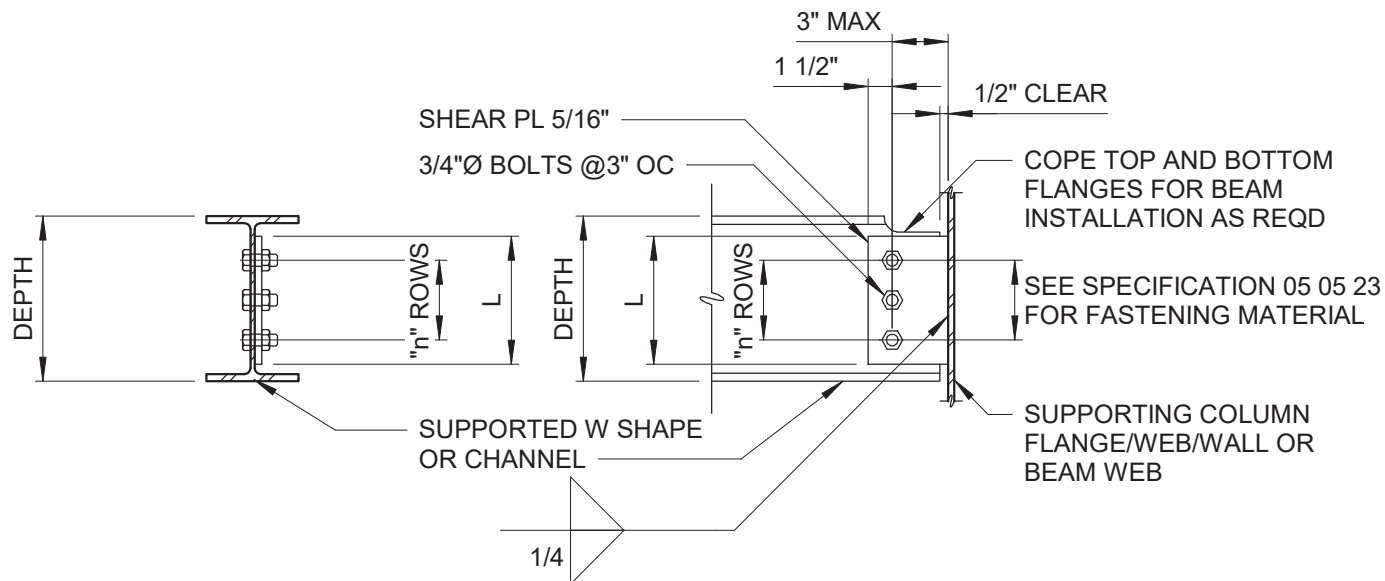
STRUCTURAL STANDARD DETAILS
SHEET 4

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

NOMINAL BEAM DEPTH, INCHES	(n) ROWS	L, INCHES
8-10	2	5 1/2"
12-15	3	8 1/2"
16-18	4	11 1/2"
21	5	1'-2 1/2"
24	6	1'-5 1/2"
27	7	1'-8 1/2"
30	8	1'-11 1/2"
33	9	2'-2 1/2"
36	10	2'-5 1/2"



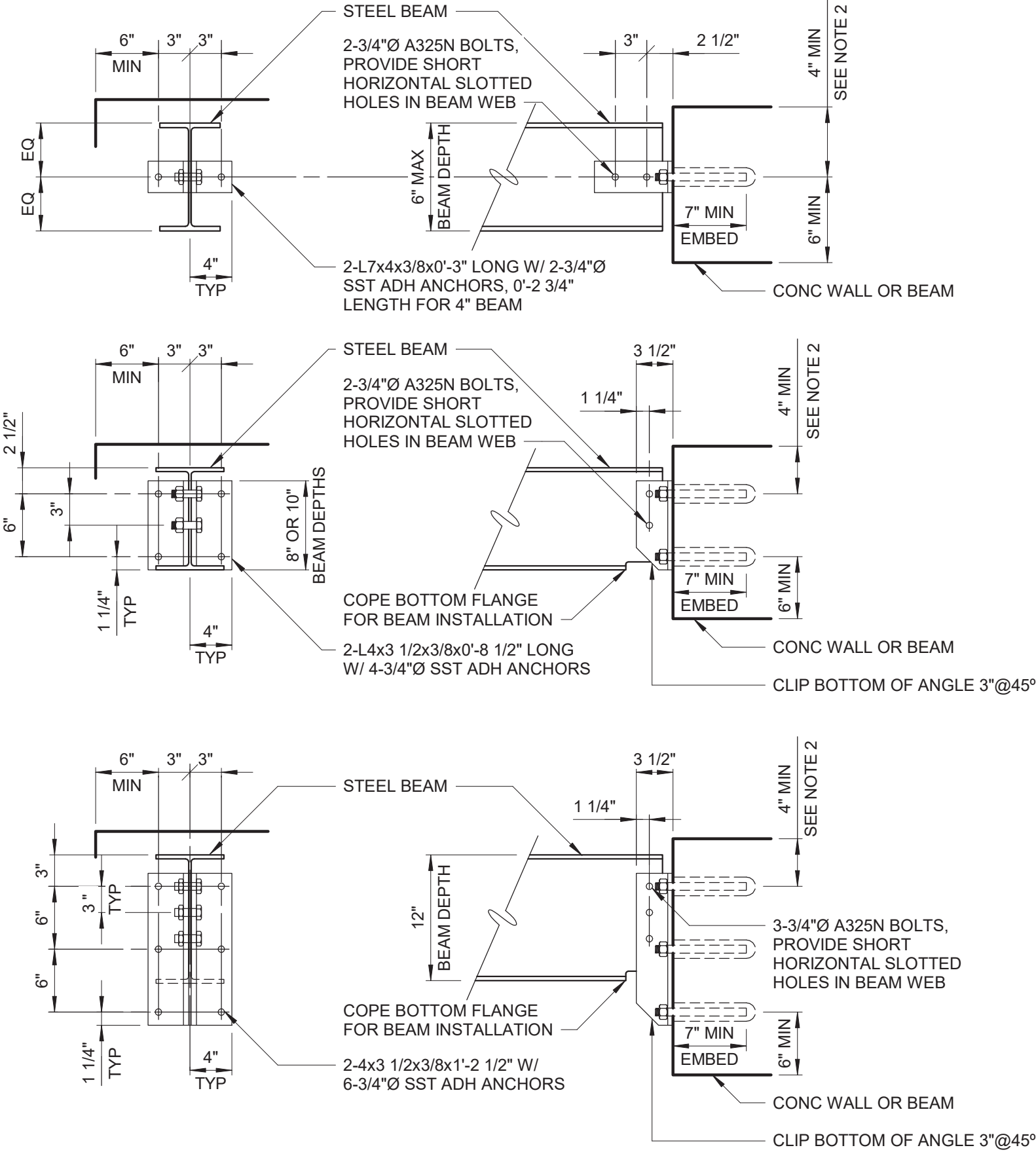
TYPE I DOUBLE ANGLE



TYPE II SINGLE PLATE

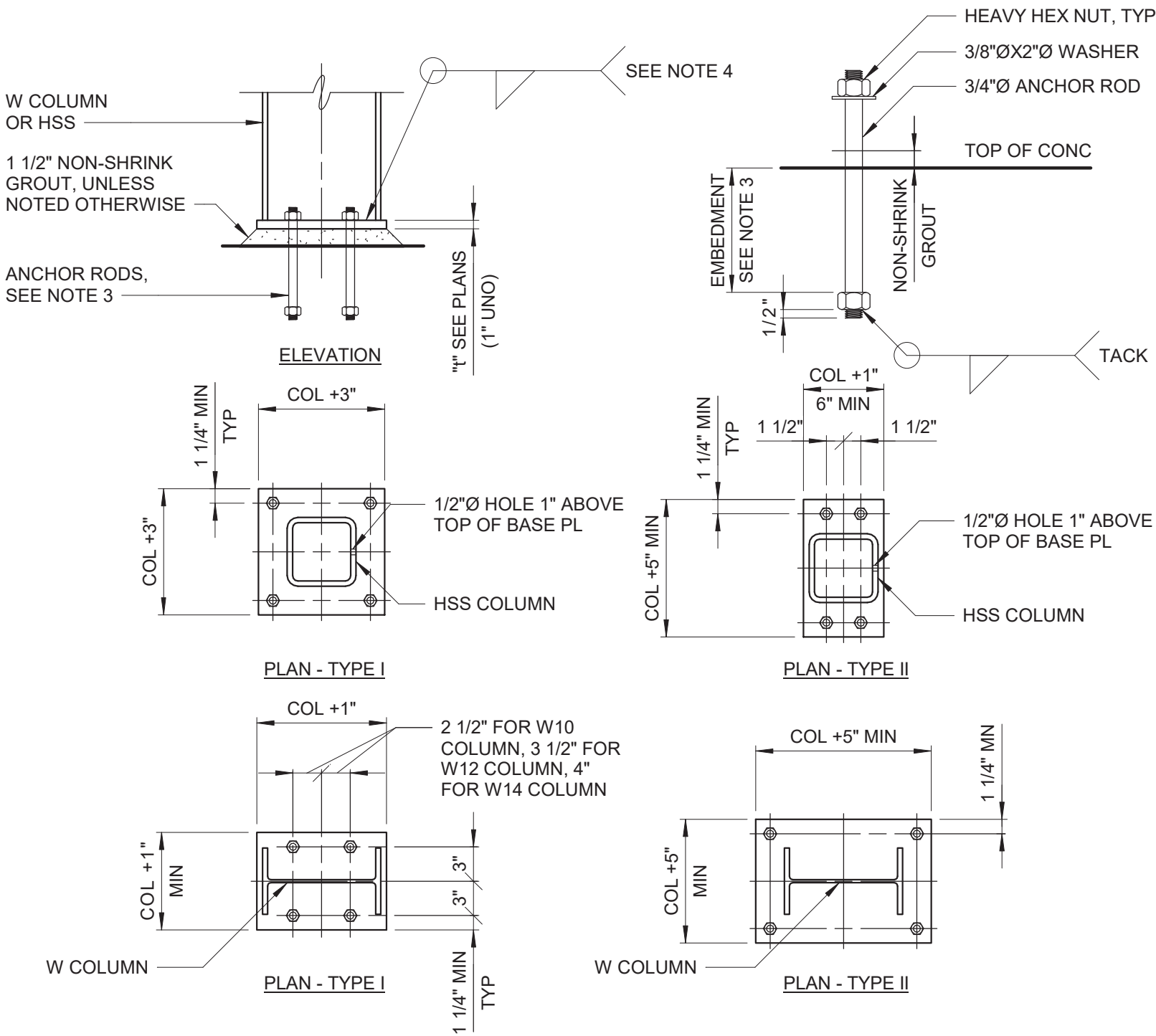
- NOTES:
- TYPE I DOUBLE ANGLE CONNECTION SHALL BE USED UNO ON DRAWINGS.
 - TYPE II CONNECTIONS SHALL BE USED AT ALL BEAM CONNECTIONS TO HSS COLUMNS.

STEEL FRAMING CONNECTION
S-05-0102



- NOTES:
- WHERE BOTH ENDS OF BEAM ARE ATTACHED TO A WALL, PROVIDE LONG HORIZONTALLY SLOTTED HOLES IN BEAM WEB AT ONE END. TIGHTEN NUTS SNUG TIGHT, BACK OFF 1/2 TURN, AND LOCK WITH DOUBLE NUT.
 - DO NOT CUT EXISTING CONCRETE BEAM TOP REINFORCING DURING DRILL-IN ANCHOR INSTALLATION. FIELD LOCATE BEAM REINFORCING PRIOR TO FABRICATION WITH GROUND PENETRATING RADAR OR OTHER ACCEPTABLE MEANS. ADD LENGTH TO CLIP ANGLES AS REQUIRED TO LOWER ANCHORS TO CLEAR REINFORCING WHILE MAINTAINING SPACING AND EDGE DISTANCE AS SHOWN.

STEEL BEAM TO CONCRETE CONNECTION
S-05-0103



- NOTES:
- TYPE I COLUMN BASE PLATE SHALL BE USED UNLESS NOTED OTHERWISE ON THE DRAWINGS.
 - ALL COLUMN BASEPLATES SHALL BE ASTM A572 GRADE 50.
 - UNLESS OTHERWISE NOTED, ANCHOR RODS SHALL BE 3/4" DIAMETER x REQUIRED LENGTH WITH LEVELING NUTS AND 1'-0" MINIMUM EMBED. BASE PLATES SHALL BE CENTERED ON COLUMN.
 - WELD SIZE SHALL BE DETERMINED BY THE THICKEST MEMBER JOINED; MINIMUM WELD SIZE SHALL BE 3/16" FILLET FOR MATERIAL THICKNESS UP TO AND INCLUDING 1/2", 1/4" FILLET FOR THICKNESS OVER 1/2" TO 3/4", AND 5/16" FILLET FOR MATERIAL THICKNESS OVER 3/4". ALL WELDS SHALL BE SINGLE-PASS WELDS.
 - PROVIDE HOLE DIAMETER PER AISC RECOMMENDATIONS.

COLUMN BASE - STEEL
S-05-0104

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REV	ISSUED FOR	DATE	BY		

BID SET



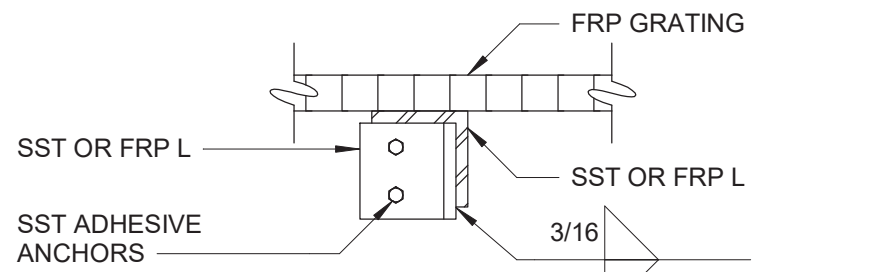
Hazen
HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

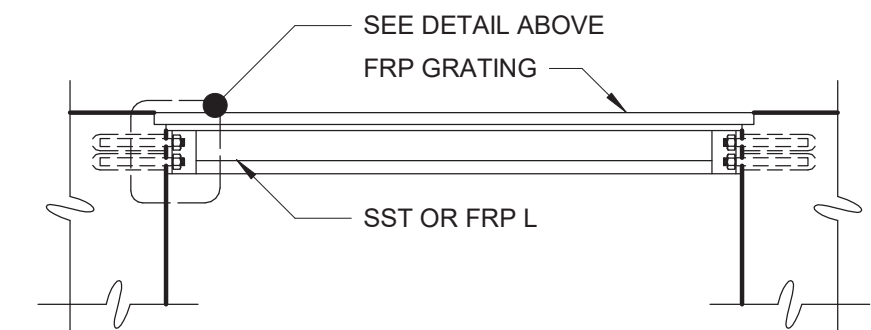
RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

STRUCTURAL STANDARD DETAILS
SHEET 5

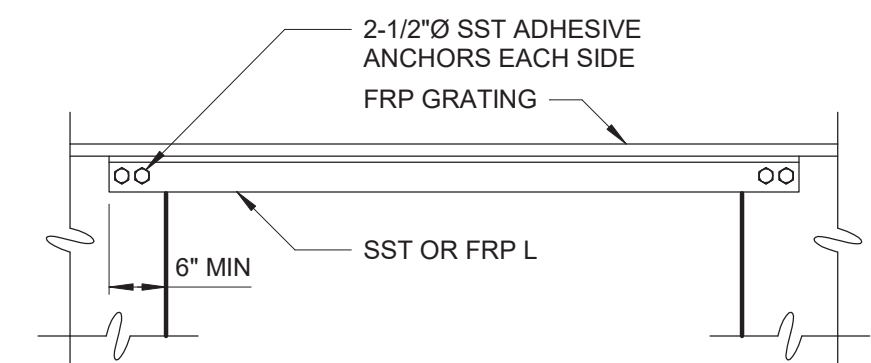
DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	S-604



DETAIL

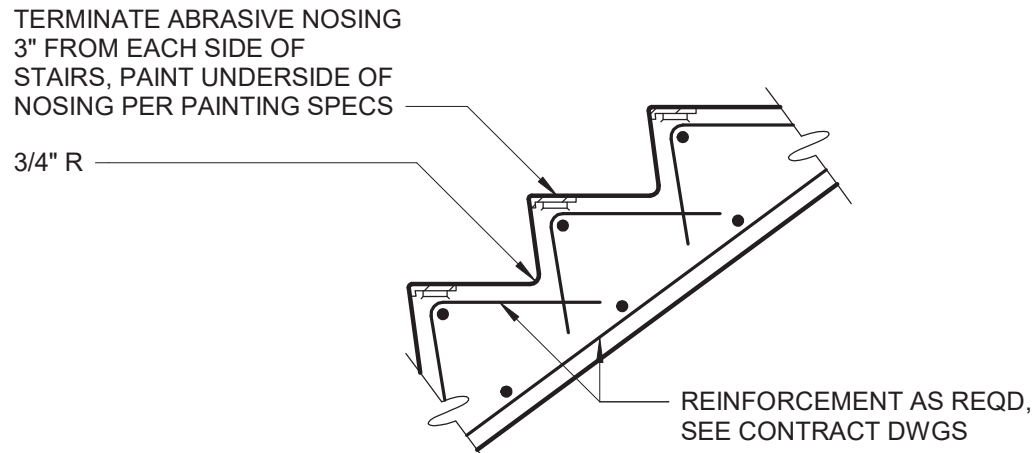


TYPE 2

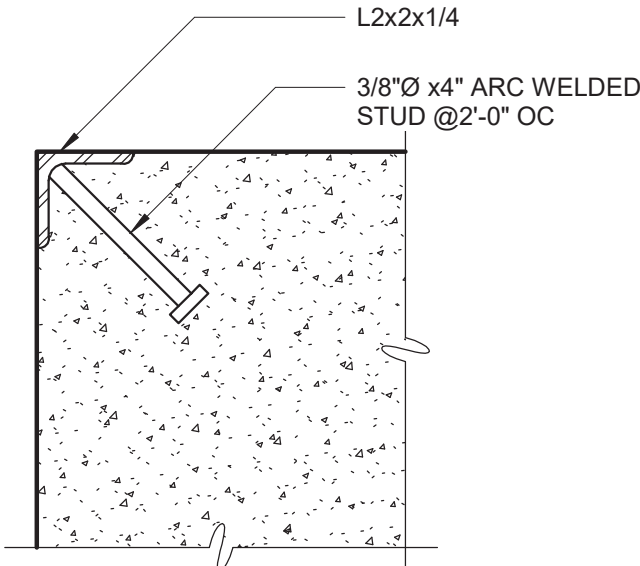


TYPE 1

CHANNEL GRATING SUPPORT
S-05-0203

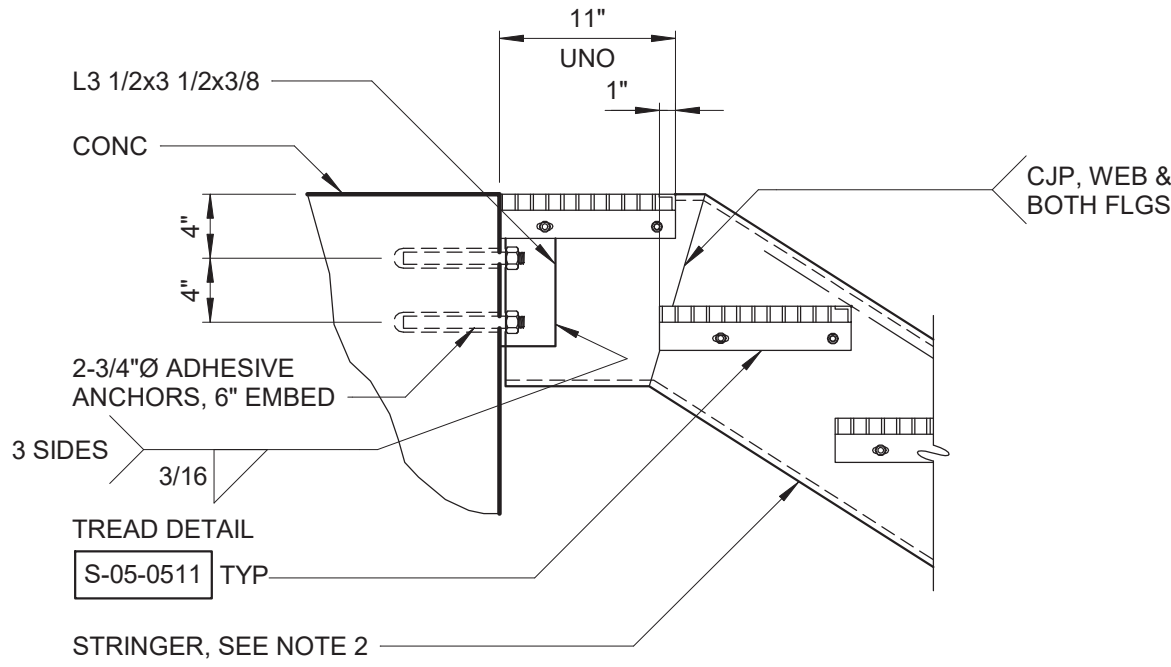


STAIR NOSING
S-05-0303

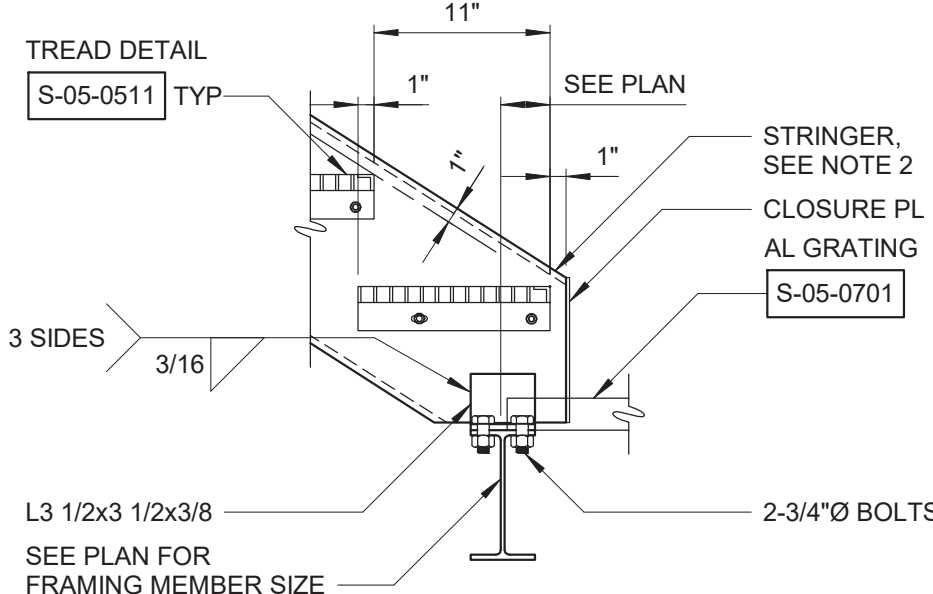


NOTE:
CORNER GUARD REQUIRED ONLY
WHERE SHOWN ON PLANS

CORNER GUARD
S-05-0304



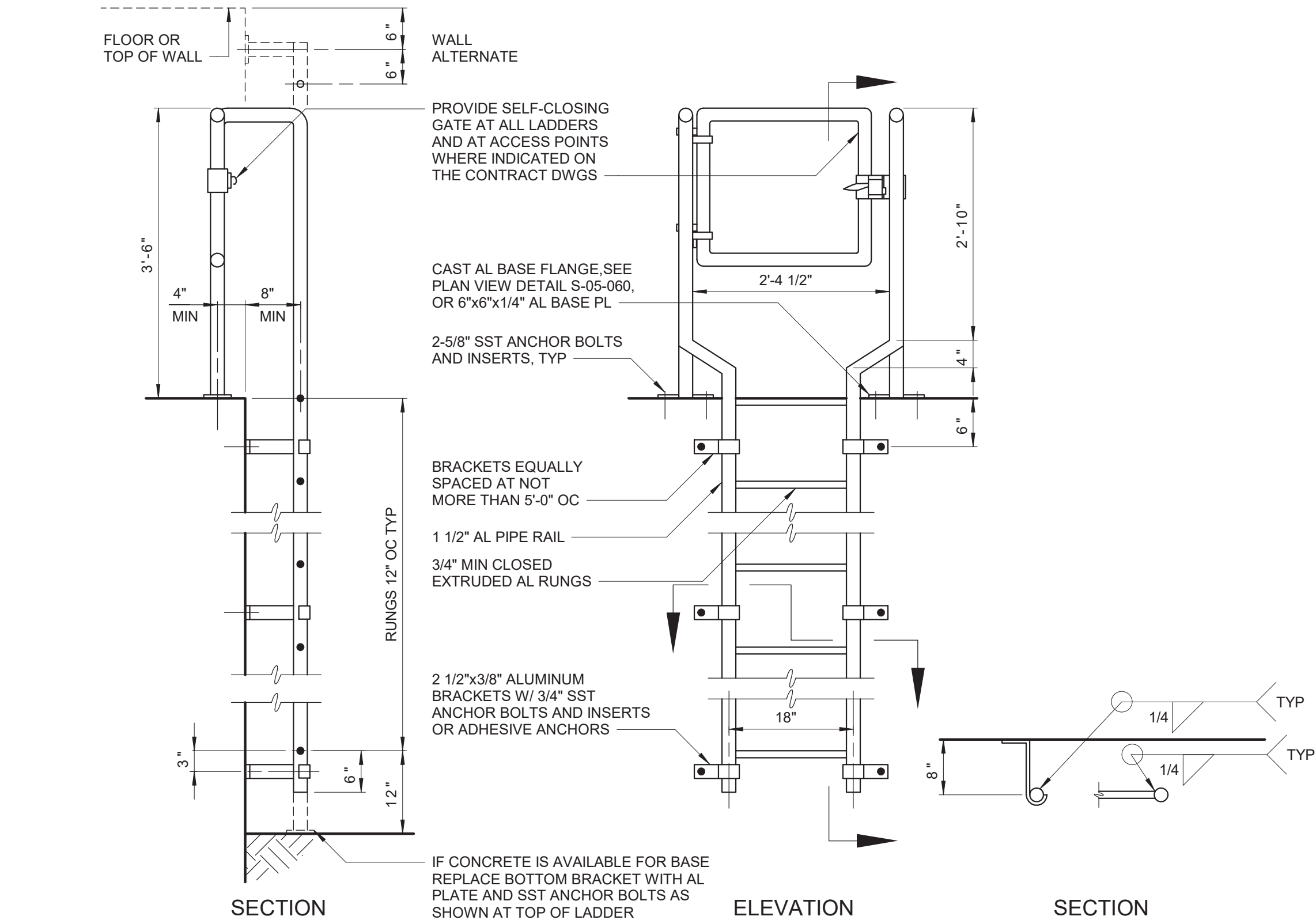
UPPER CRIPPLED STRINGER
CONNECTION TO CONCRETE



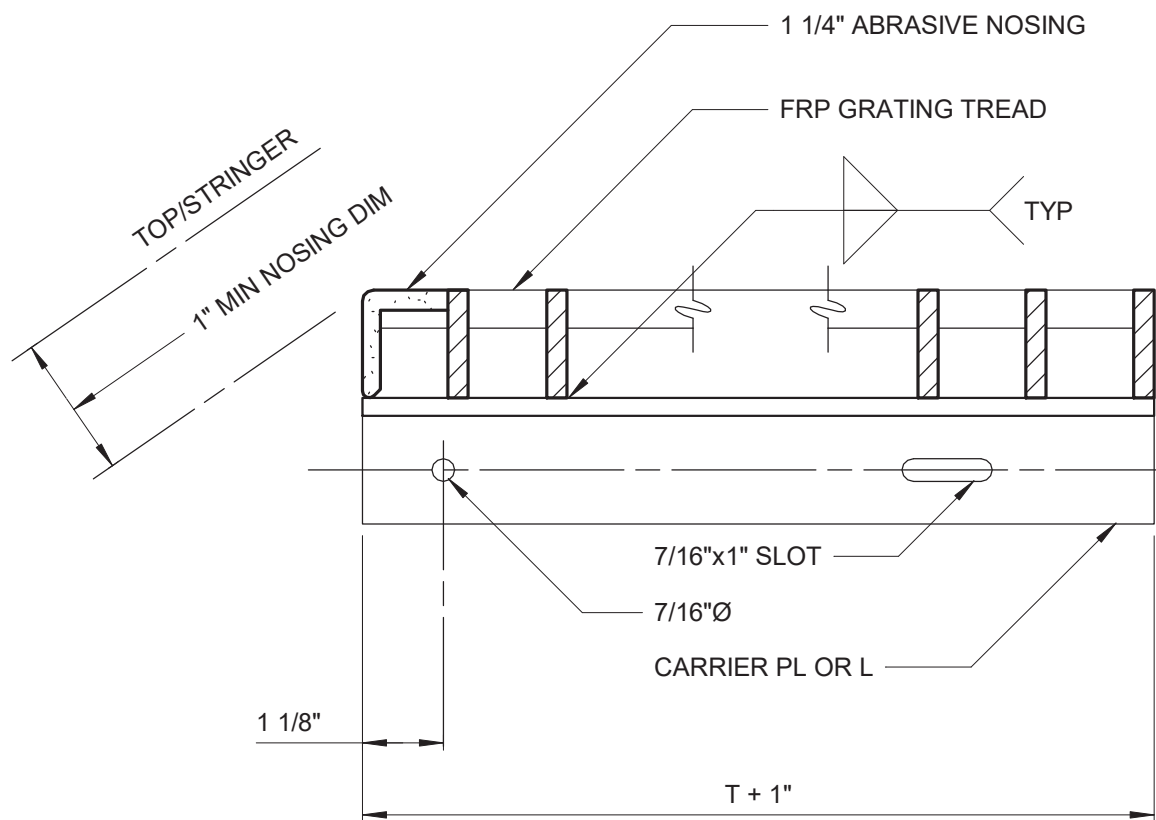
LOWER STRINGER CONNECTION
TO FRAMING MEMBER

- NOTES:
1. PROVIDE PROTECTION FOR DISSIMILAR METALS AND CONCRETE PER SPECIFICATIONS.
 2. PROVIDE C12x20.7 STRINGERS.
 3. STAIR GUARDS AND TOEBOARD NOT SHOWN FOR CLARITY.
 4. BOLTS FOR CARBON STEEL STAIRS SHALL BE GRADE A325, UNLESS NOTED OTHERWISE.
 5. FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION.
 6. CLOSURE PLATES, ANGLES AND OTHER APPURTENANCES SHALL MATCH STRINGER MATERIAL.

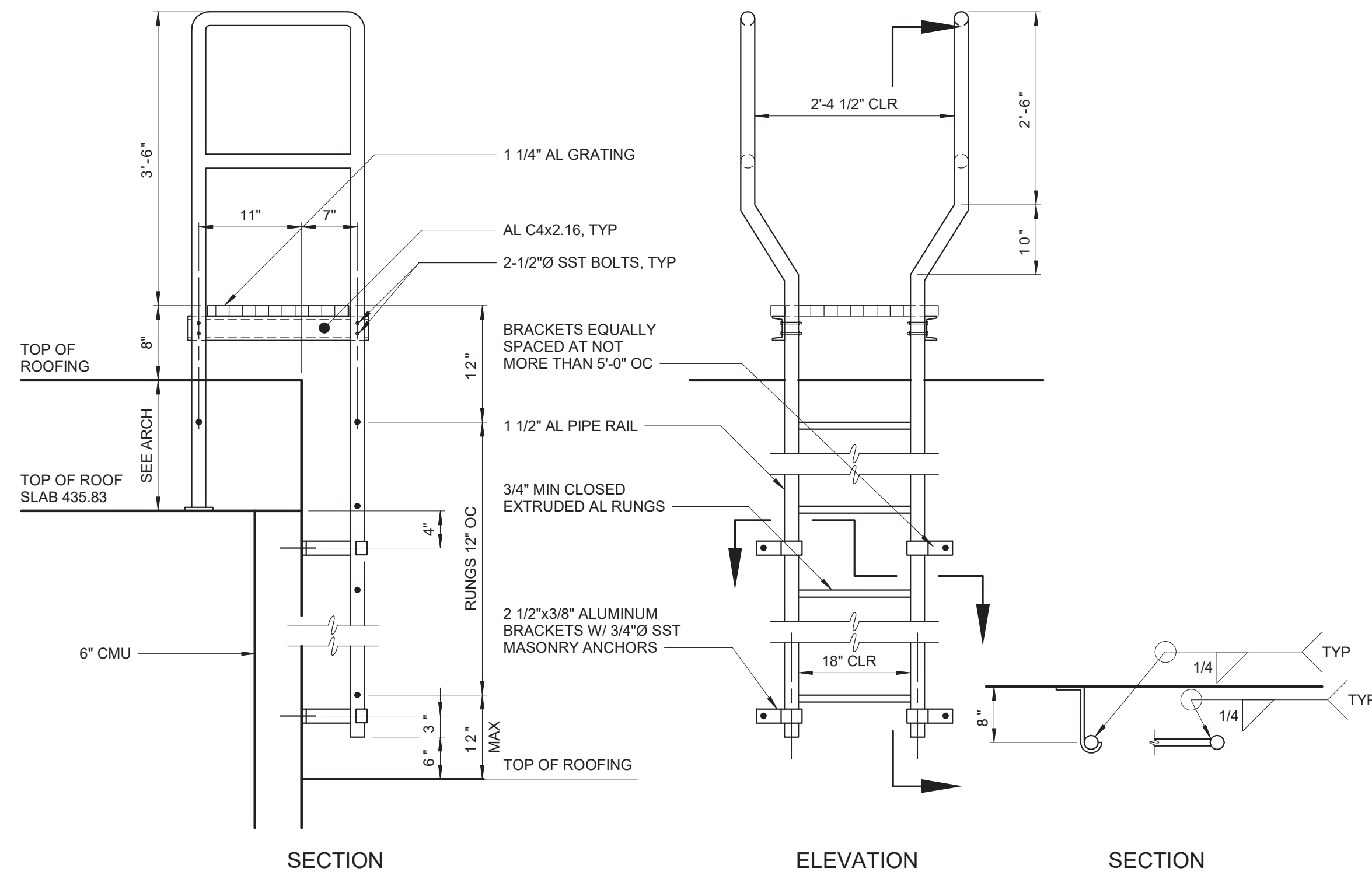
METAL STAIRS
S-05-0512



ALUMINUM LADDER
S-05-0501

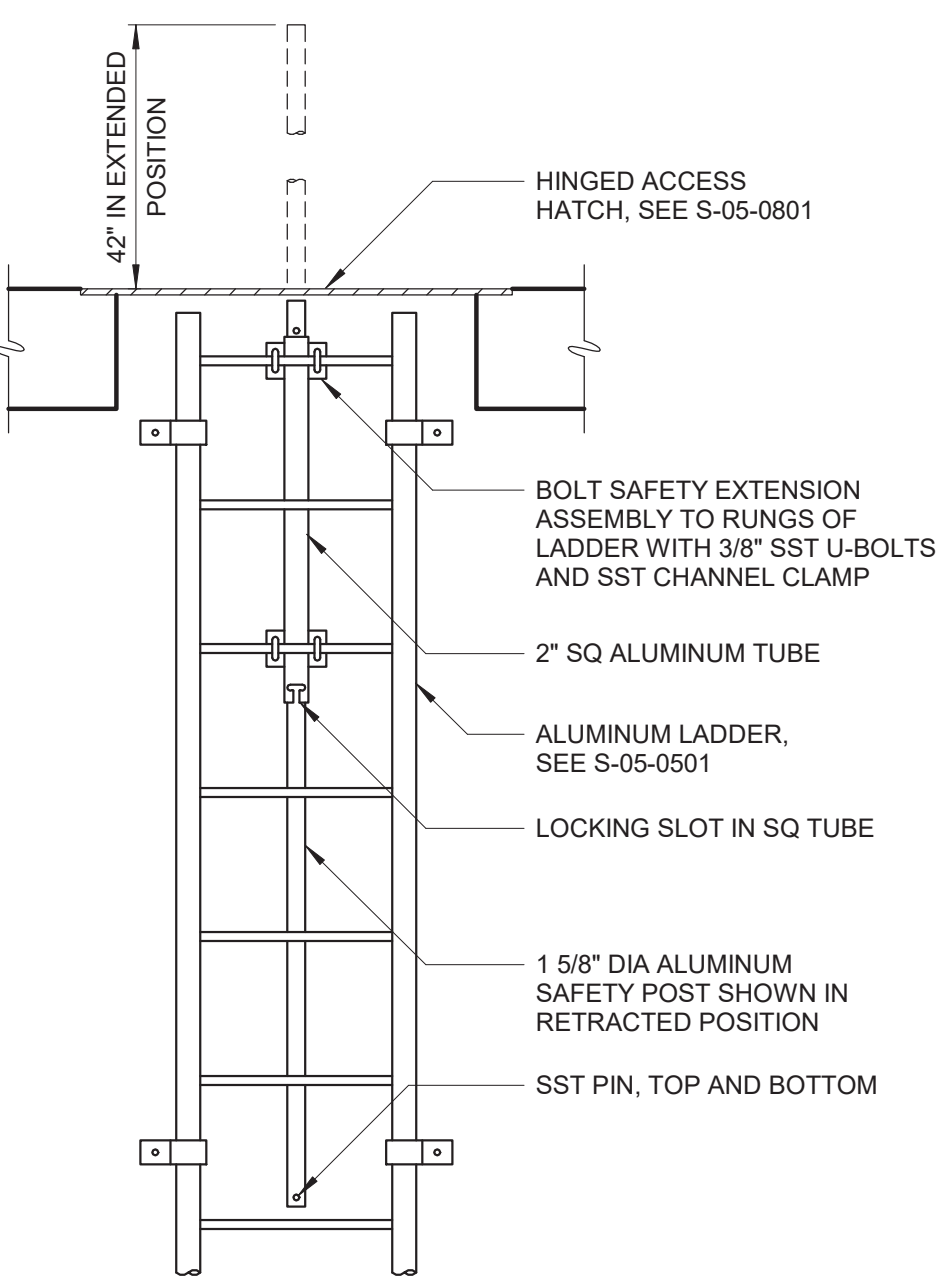


TREAD DETAIL
S-05-0511



NOTE:
SEE SPECIFICATION SECTION 05 51 33 FOR
SAFETY LADDER SYSTEM REQUIREMENTS.

CROSSOVER
ALUMINUM LADDER
S-05-0506



RETRACTABLE SAFETY EXTENSION
S-05-0504

Autodesk Docs/090388-000_Rye_Lake_Filtration/090388-000-General-Struct
2/20/2025 9:46:03 AM

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	J. EDER
DRAWN BY:	R. HERNANDEZ
CHECKED BY:	C. PHILLIPS
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



Hazen
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NEW YORK, NEW YORK 10018

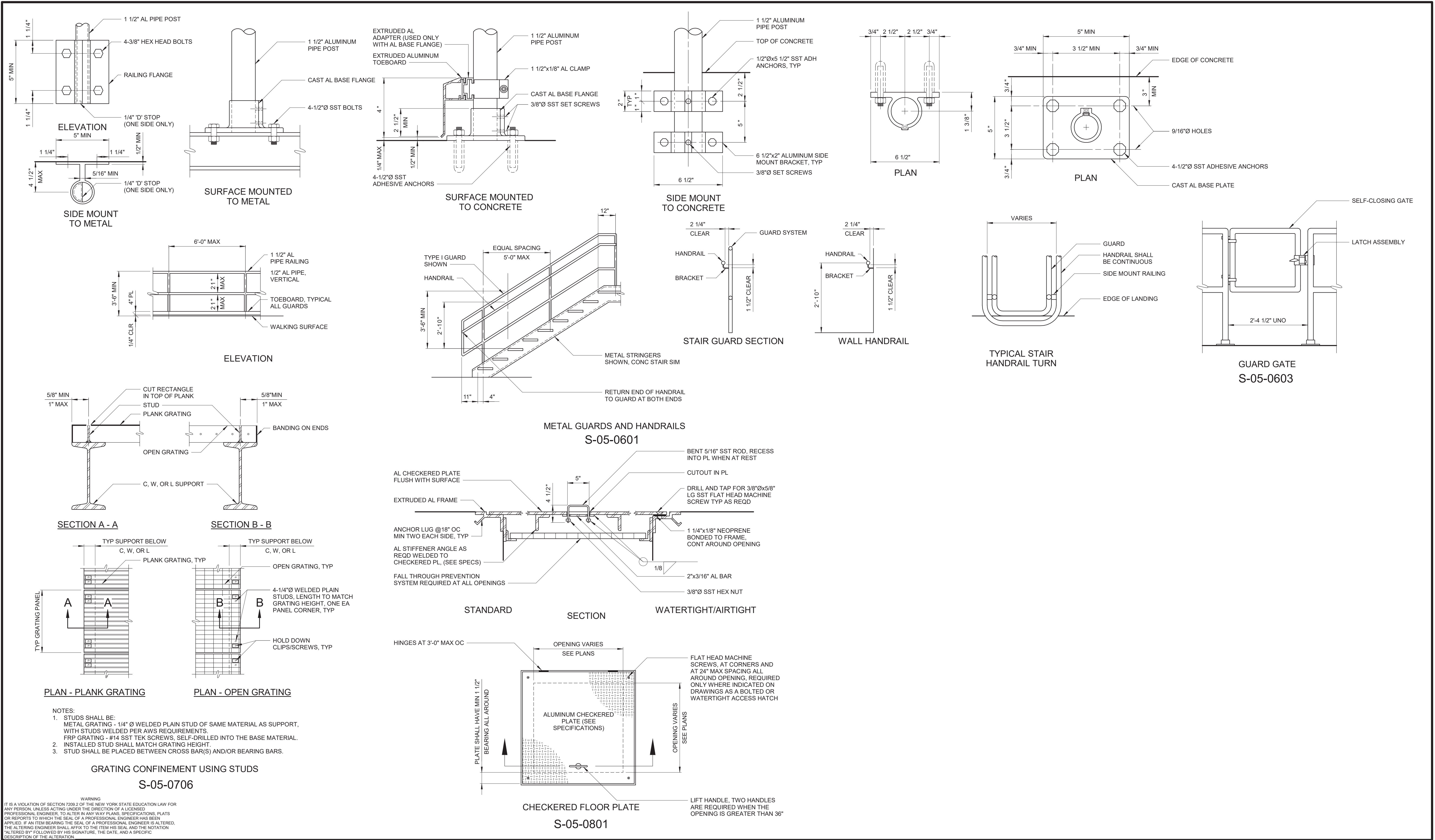
WESTCHESTER JOINT WATER WORKS
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

STRUCTURAL STANDARD DETAILS
SHEET 6

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

Autodesk Docs/09388-000_Pye_Lake_Filtration/09388-000-General-Struct



REV	ISSUED FOR	DATE	BY	PROJECT ENGINEER: R. FROST
				DESIGNED BY: J. EDER
				DRAWN BY: R. HERNANDEZ
				CHECKED BY: C. PHILLIPS
				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

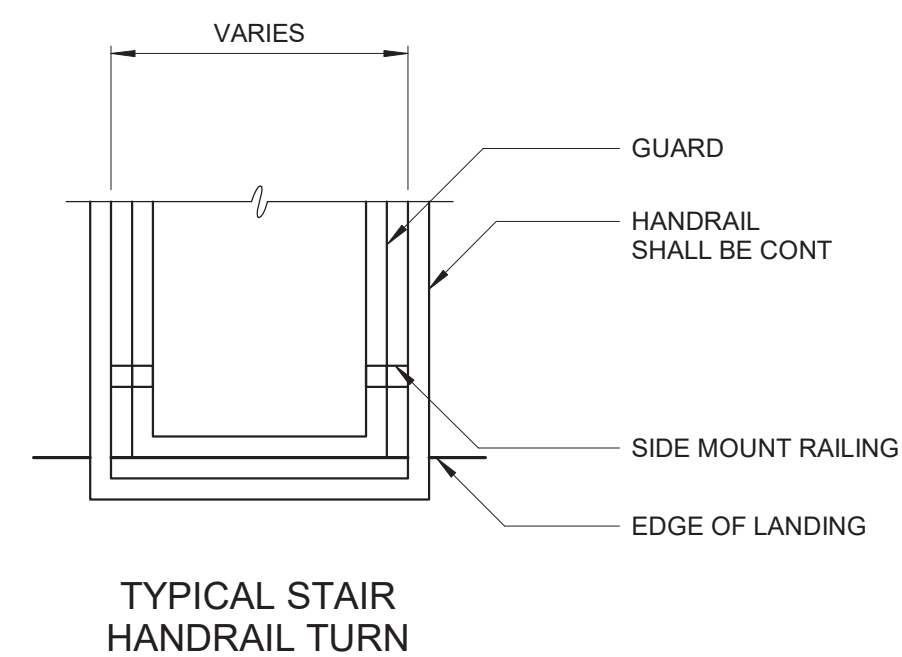
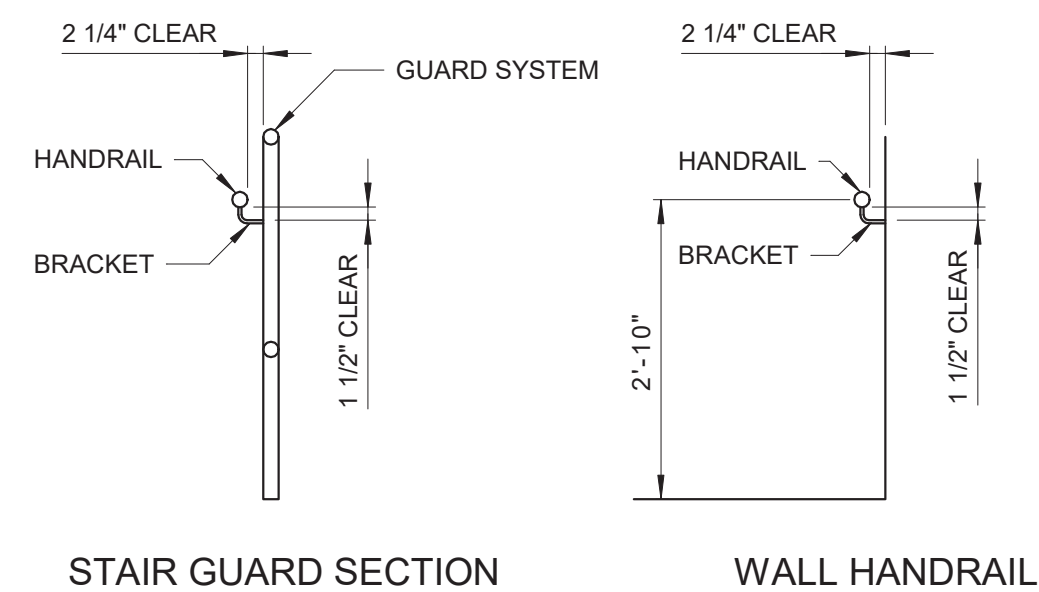
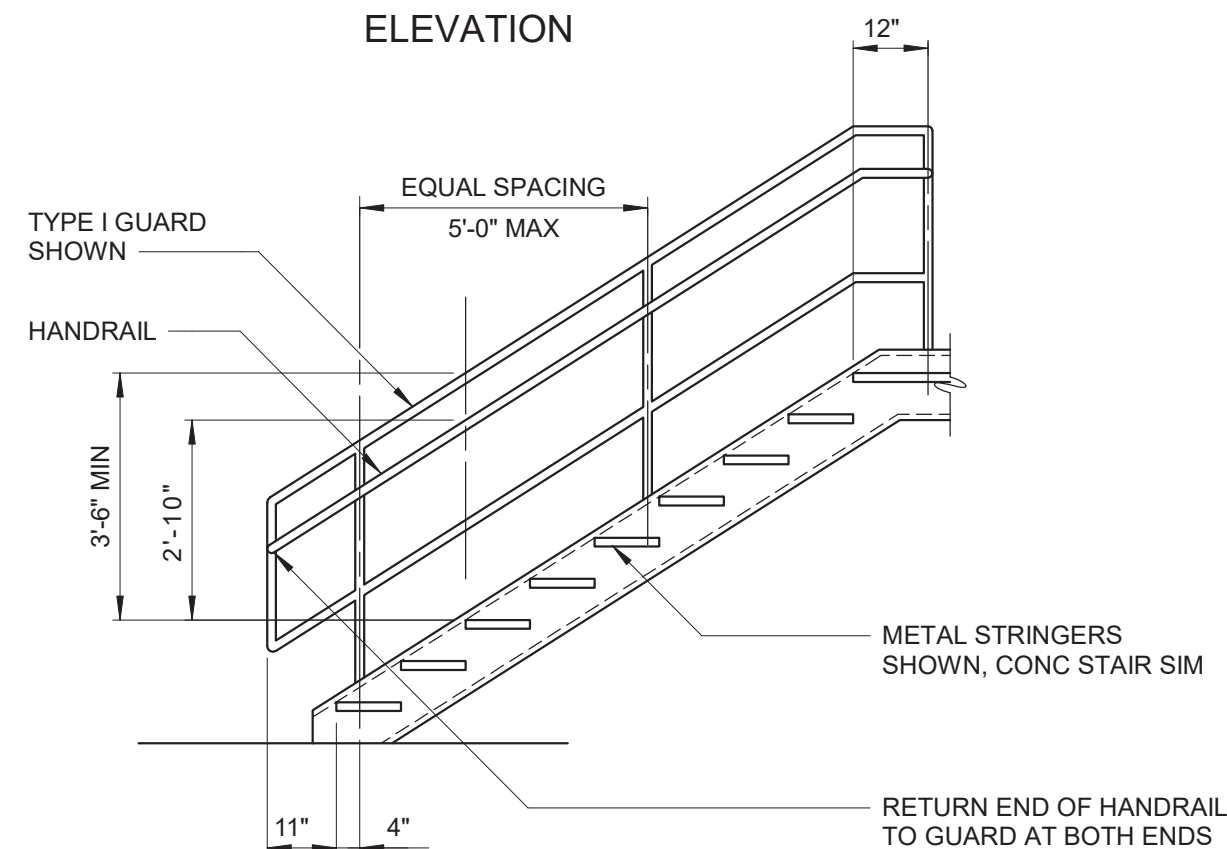
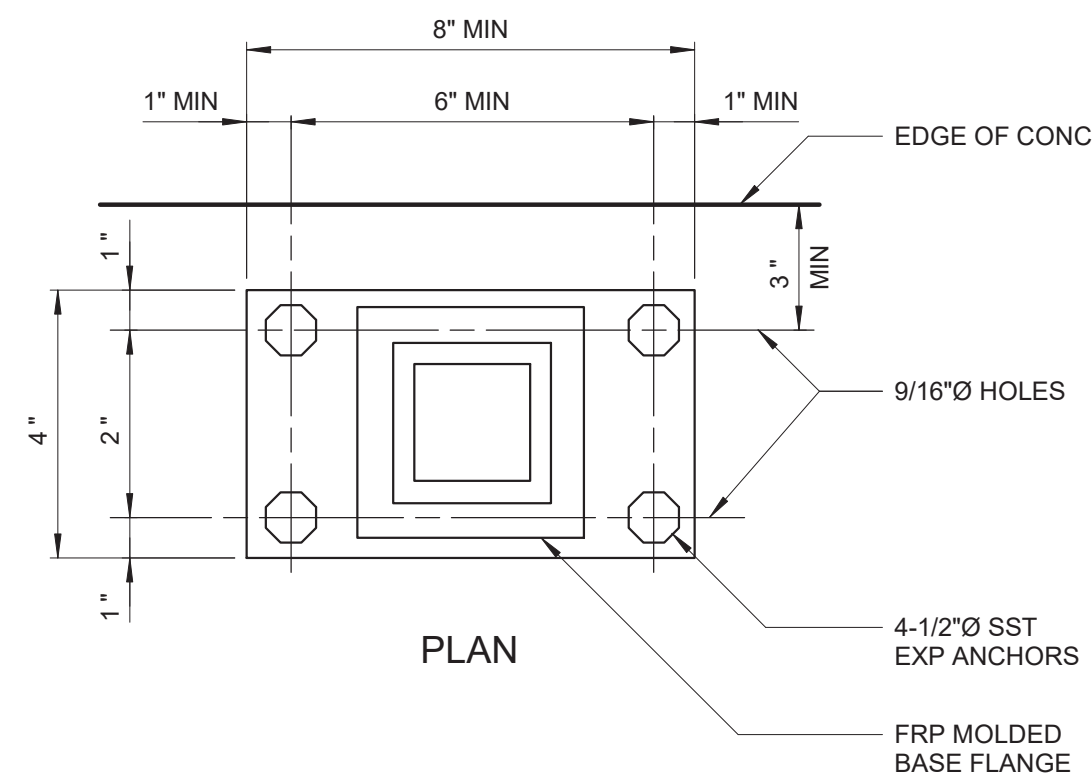
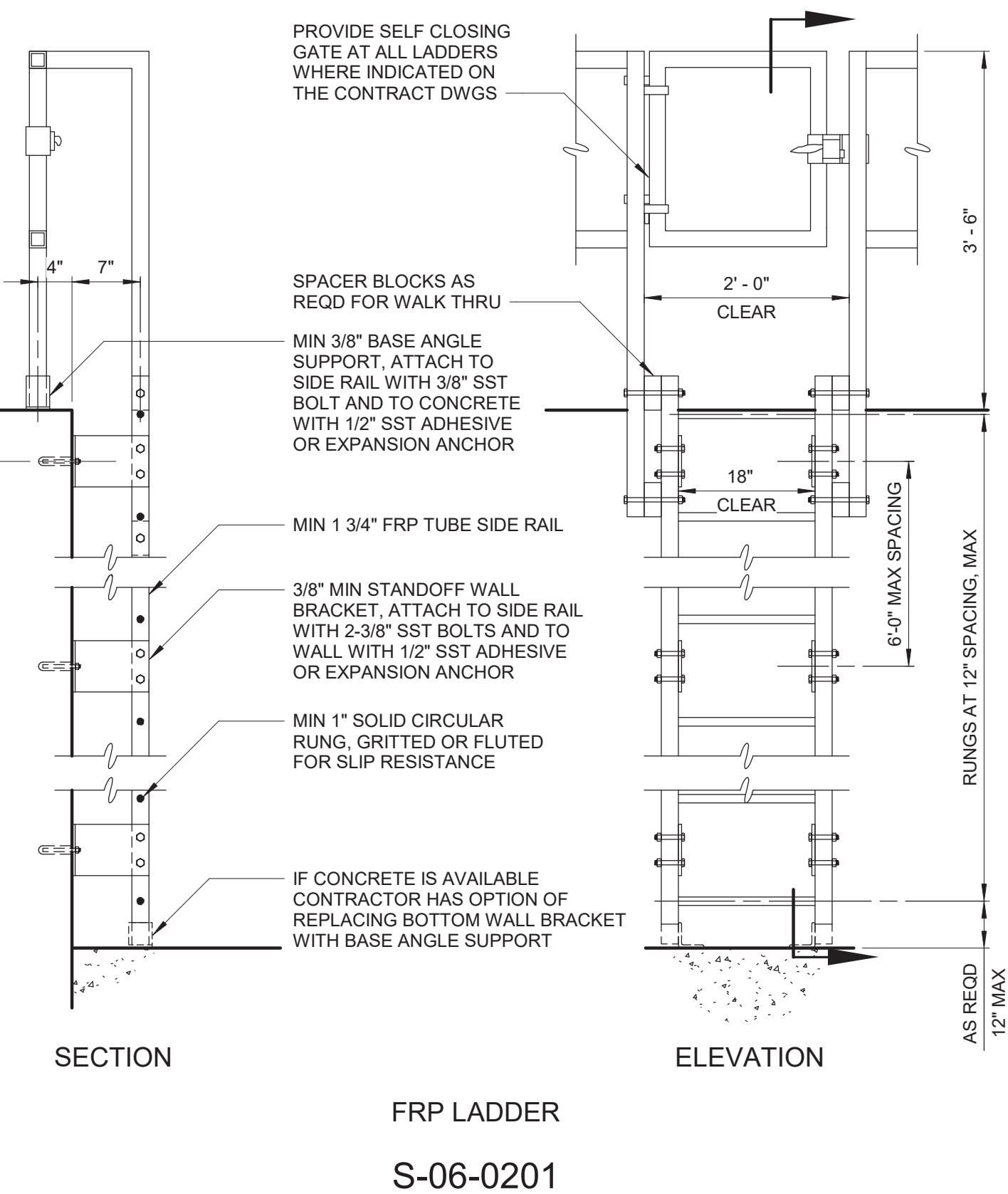
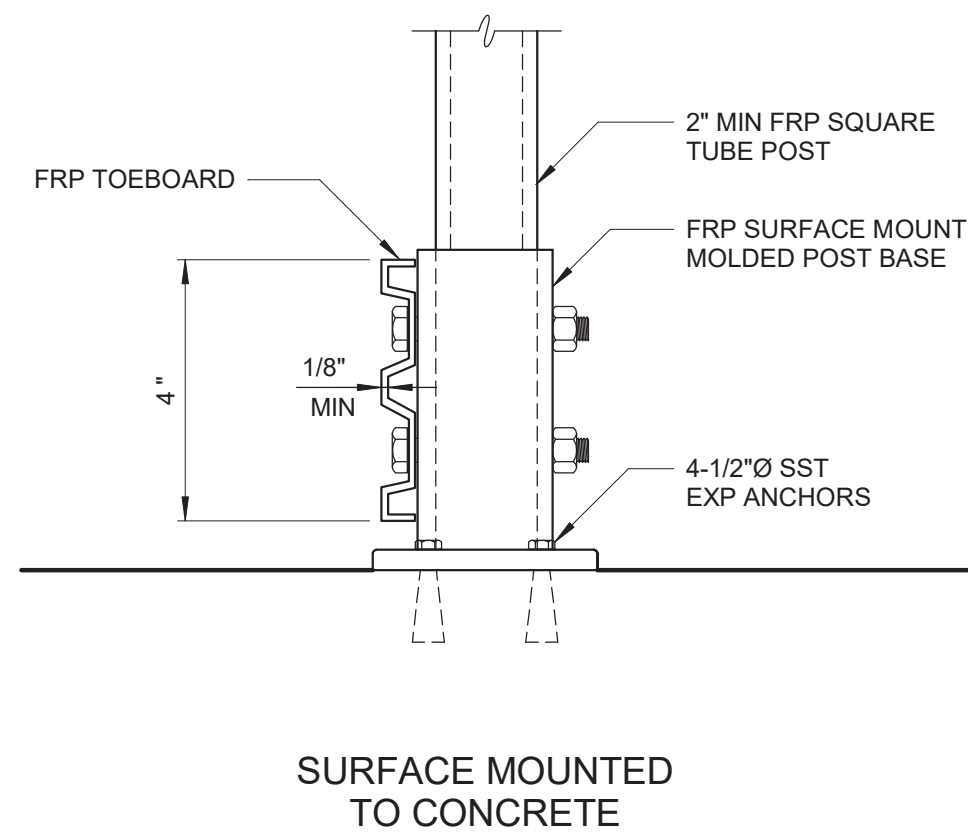
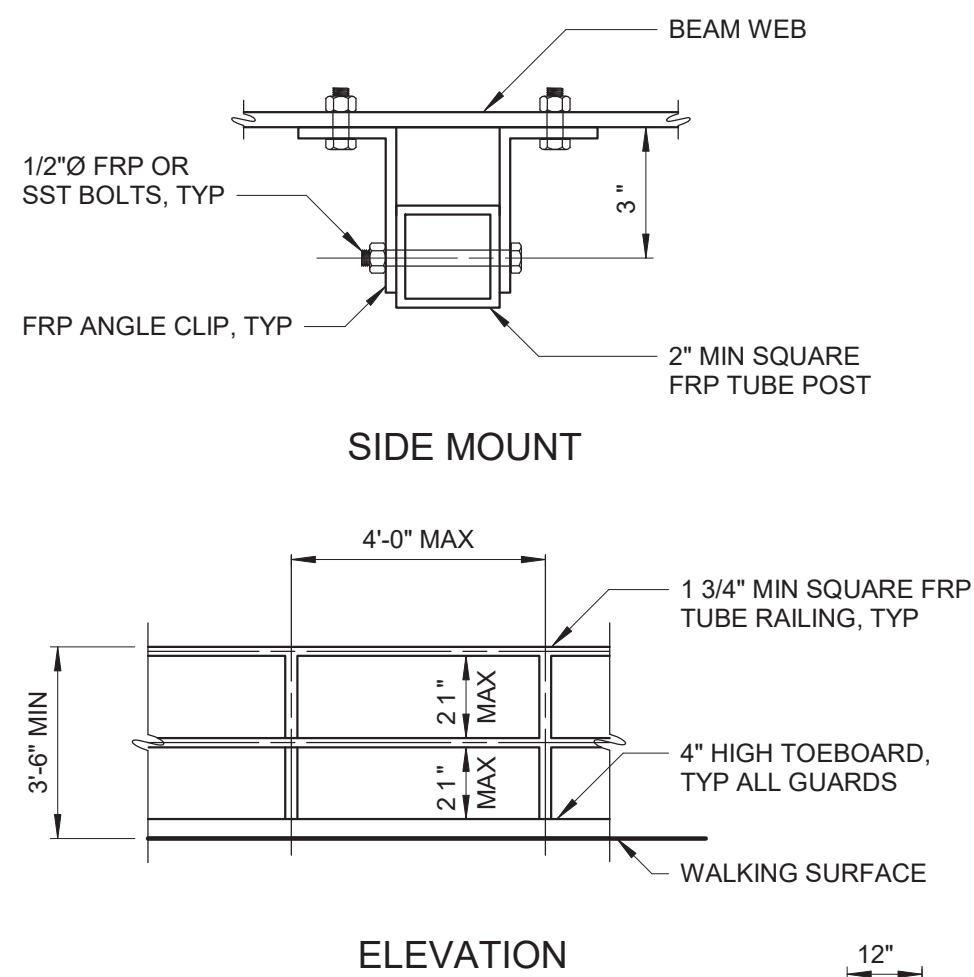
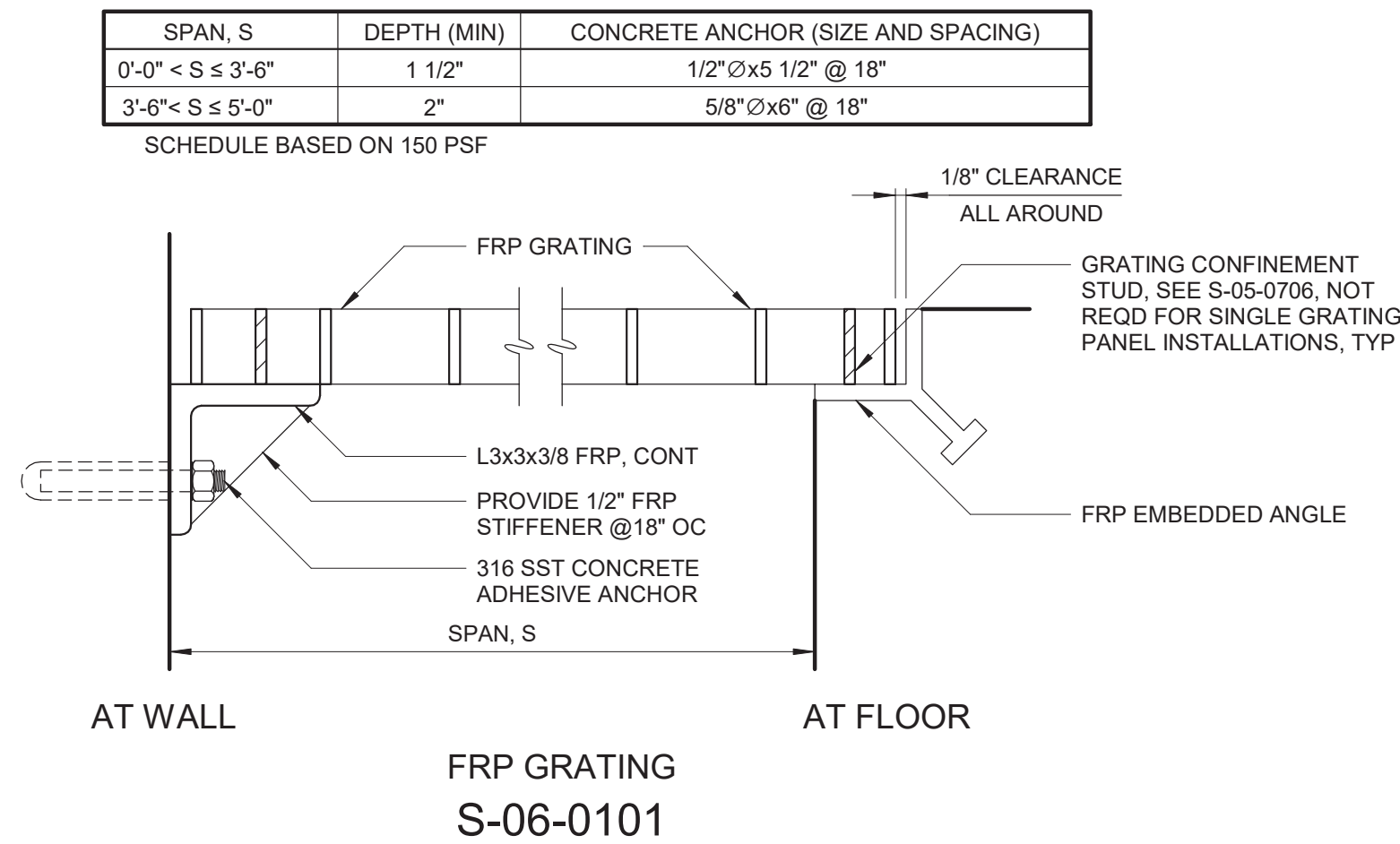
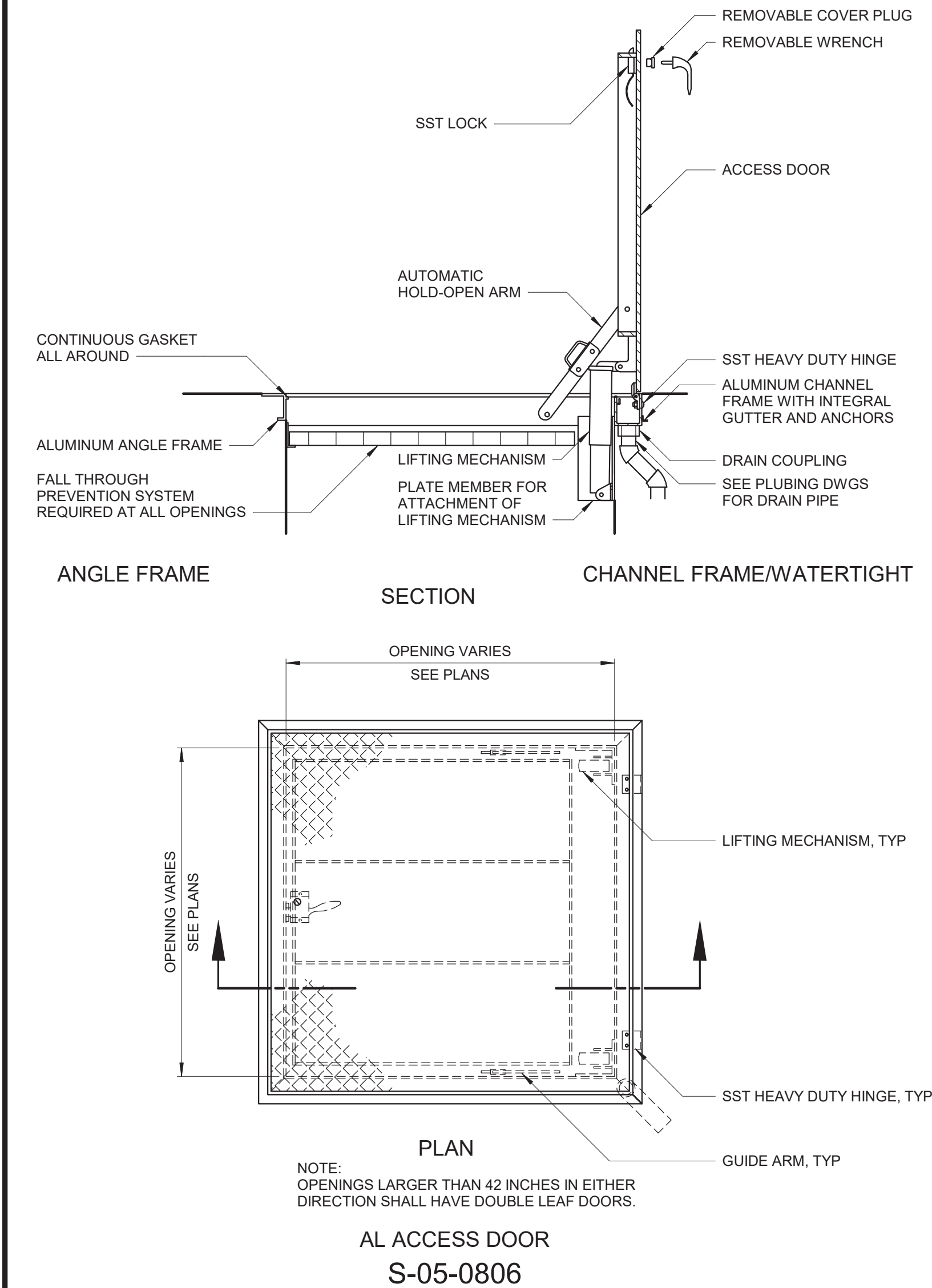
RYE LAKE WATER FILTRATION PLANT
HARRISON, NY

STRUCTURAL STANDARD DETAILS
SHEET 7

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

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Autodesk Docs\\09388-000_Rye_Lake_Filtration\\09388-000-General\\Struct



FRP GUARDS AND HANDRAIL SYSTEM
S-06-0303

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: J. EDER
				DRAWN BY: R. HERNANDEZ
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RYE LAKE WATER FILTRATION PLANT
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STRUCTURAL STANDARD DETAILS
SHEET 8

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