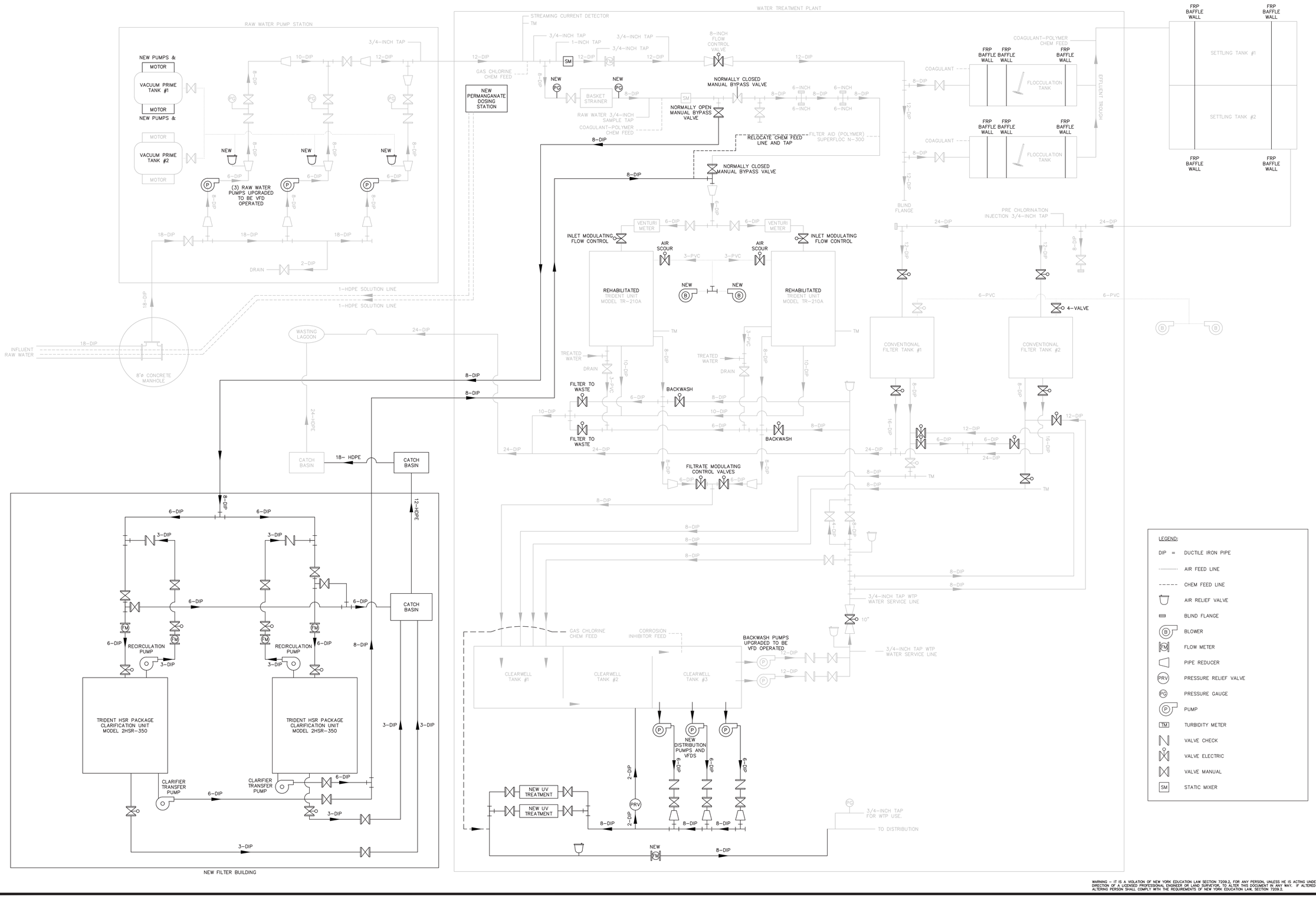

WARNING – IT IS A VIOLATION OF NEW YORK EDUCATION LAW SECTION 7209.2, FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION LAW, SECTION 7209.2.

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FILE:

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CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
55 SOUTH MAIN ST, ONEONTA, NY 13820 - 607.432.8073
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16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
546 BROADWAY, MONTICELLO, NY 12701 - 845.791.1777

STATE OF NEW YORK ROBERT FORTUNATO 081890 LICENSED PROFESSIONAL ENGINEER

REVISIONS

NO.	DATE	DESCRIPTION
1.	06/21/24	MAY 2024 DOH COMMENTS
2.	10/02/24	SEPT. 24 DOH COMMENTS

RHINEBECK WTP
PLANT IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NEW YORK

PROPOSED
PROCESS FLOW
DIAGRAM

SHEET:
C-002

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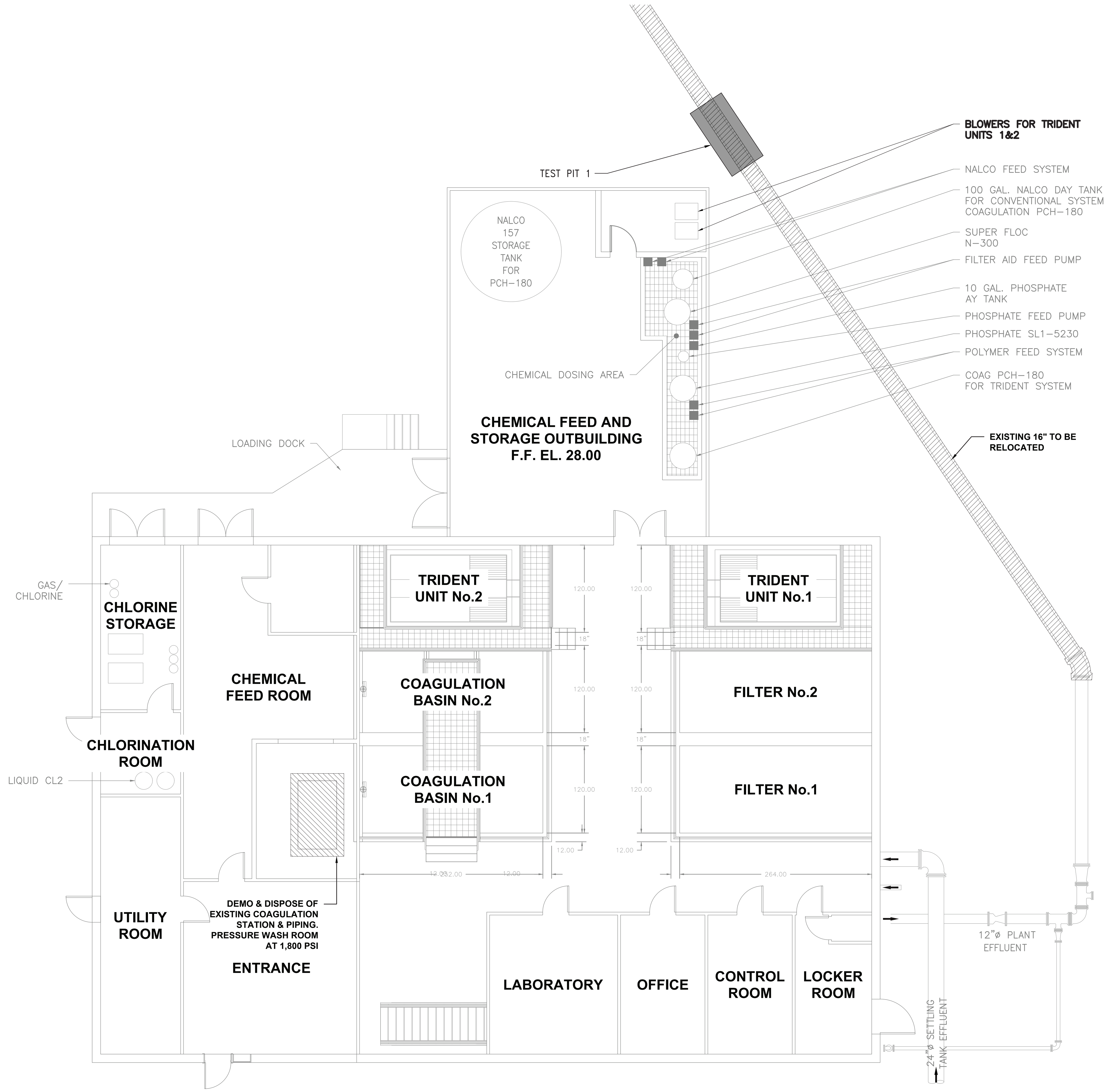
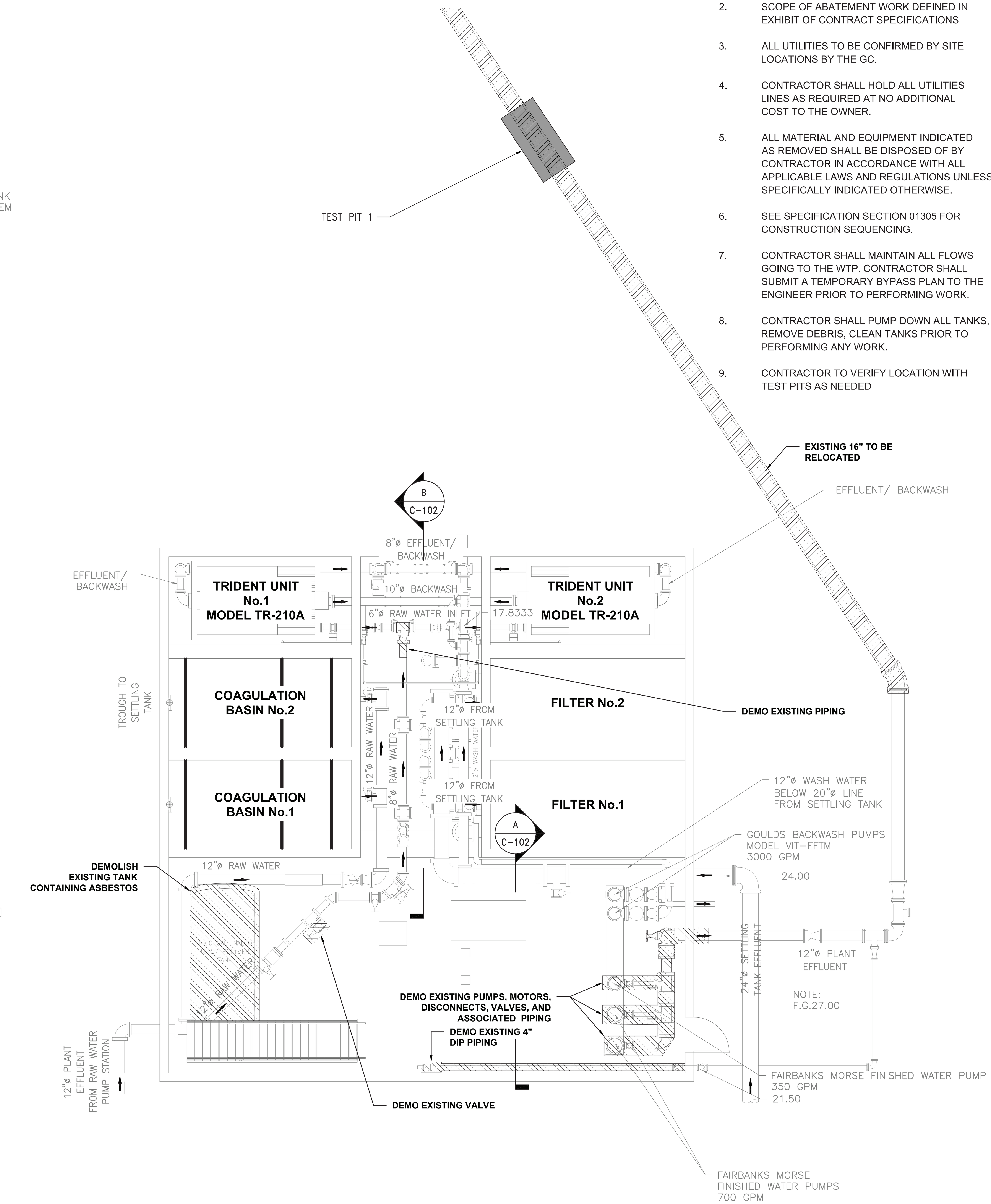


OPERATING FLOOR DEMO PLAN

SCALE: 1/8"=1'-0"



LOWER FLOOR DEMO PLAN

SCALE: 1/8"=1'-0"

NOTES:

1. DEMO WORK TO INCLUDE ABATEMENT OF HAZARDOUS MATERIAL
2. SCOPE OF ABATEMENT WORK DEFINED IN EXHIBIT OF CONTRACT SPECIFICATIONS
3. ALL UTILITIES TO BE CONFIRMED BY SITE LOCATIONS BY THE GC.
4. CONTRACTOR SHALL HOLD ALL UTILITIES LINES AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER.
5. ALL MATERIAL AND EQUIPMENT INDICATED AS REMOVED SHALL BE DISPOSED OF BY CONTRACTOR IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE.
6. SEE SPECIFICATION SECTION 01305 FOR CONSTRUCTION SEQUENCING.
7. CONTRACTOR SHALL MAINTAIN ALL FLOWS GOING TO THE WTP. CONTRACTOR SHALL SUBMIT A TEMPORARY BYPASS PLAN TO THE ENGINEER PRIOR TO PERFORMING WORK.
8. CONTRACTOR SHALL PUMP DOWN ALL TANKS, REMOVE DEBRIS, CLEAN TANKS PRIOR TO PERFORMING ANY WORK.
9. CONTRACTOR TO VERIFY LOCATION WITH TEST PITS AS NEEDED

DATE: 10/29/2024
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STATE OF NEW YORK LICENSED PROFESSIONAL ENGINEER

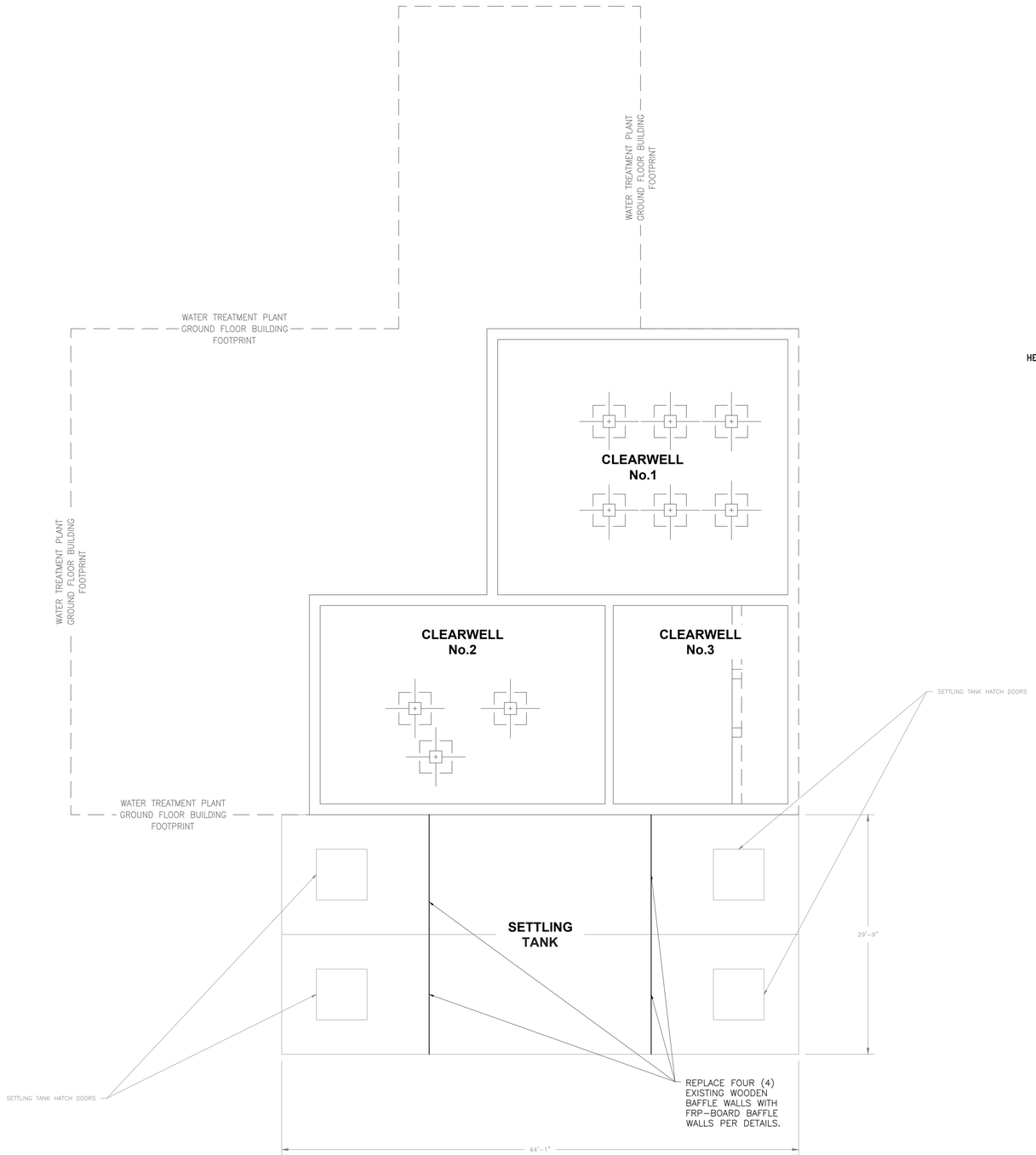
REVISIONS

NO.	DATE	DESCRIPTION
1.	06/21/24	MAY 2024 DOH COMMENTS
2.	11/24	ADDENDUM #1

RHINEBECK WTP
PLANT IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NEW YORK

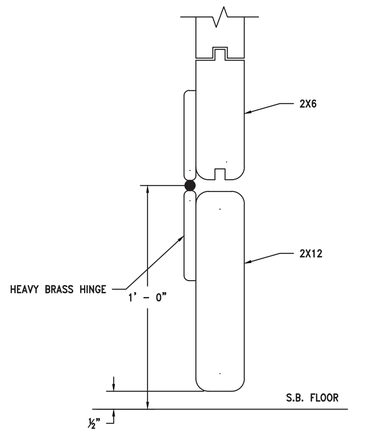
DEMO FLOOR PLANS

SHEET:
C-101



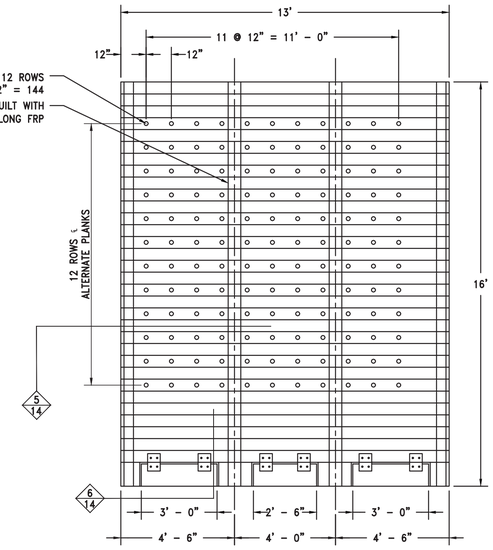
PROPOSED UPGRADES TO EXISTING SETTLING TANKS

SCALE: 1/8"=1'-0"



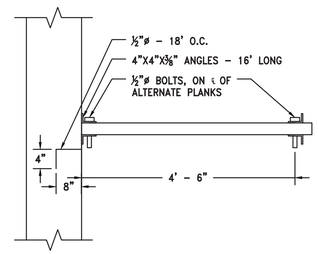
FLAP GATE SECTION 6/14

SCALE: NTS



TRAINING WALL DETAIL

SCALE: 1' - 3'



SECTION 5/14

SCALE: NTS

DATE: 10/29/2024
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REVISIONS

NO.	DATE	DESCRIPTION
1.	06/21/24	MAY 2024 DOH COMMENTS

RHINEBECK WTP
PLANT IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NEW YORK

PROPOSED UPGRADES TO
EXISTING SETTLING TANKS

SHEET:
C-104

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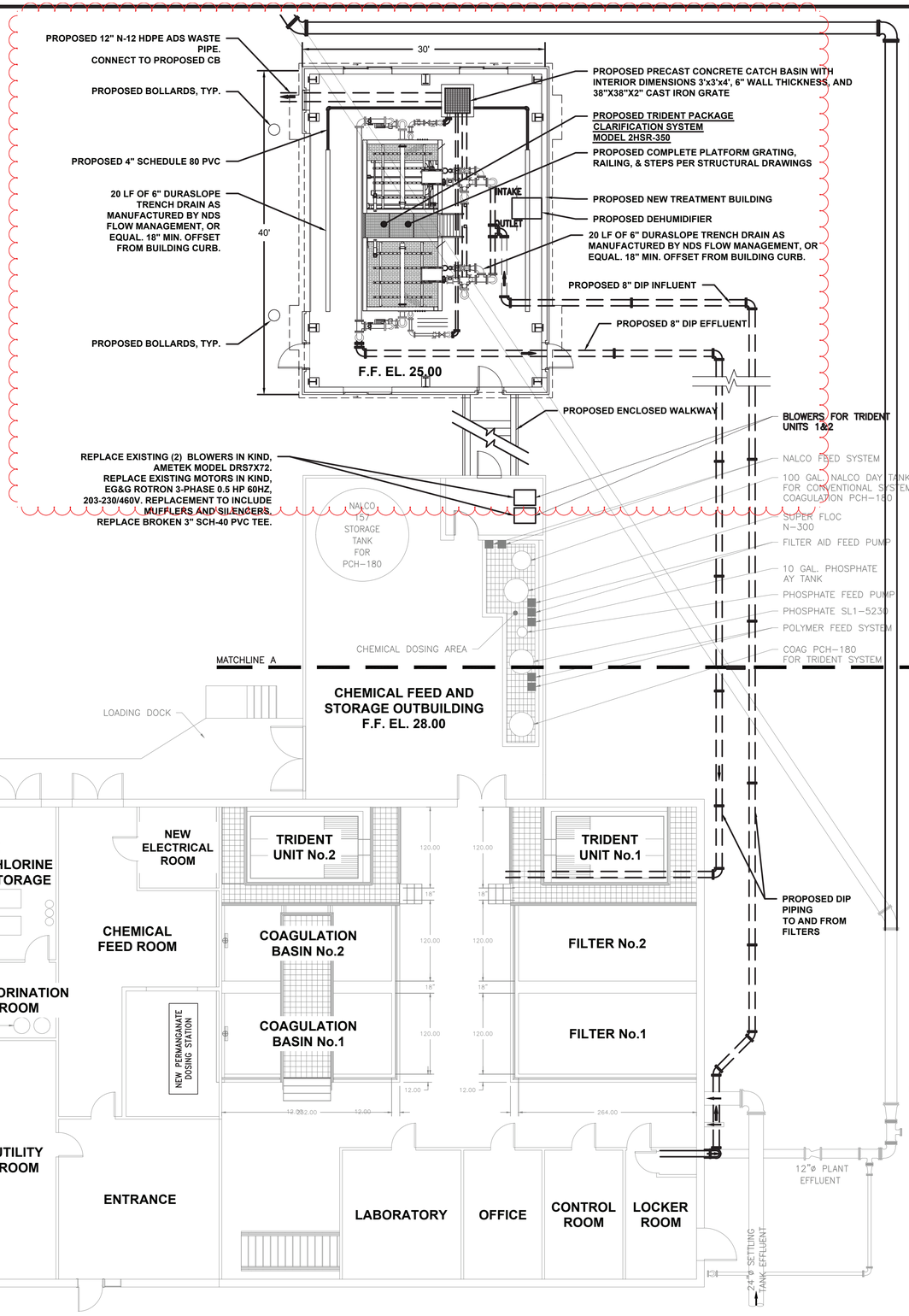
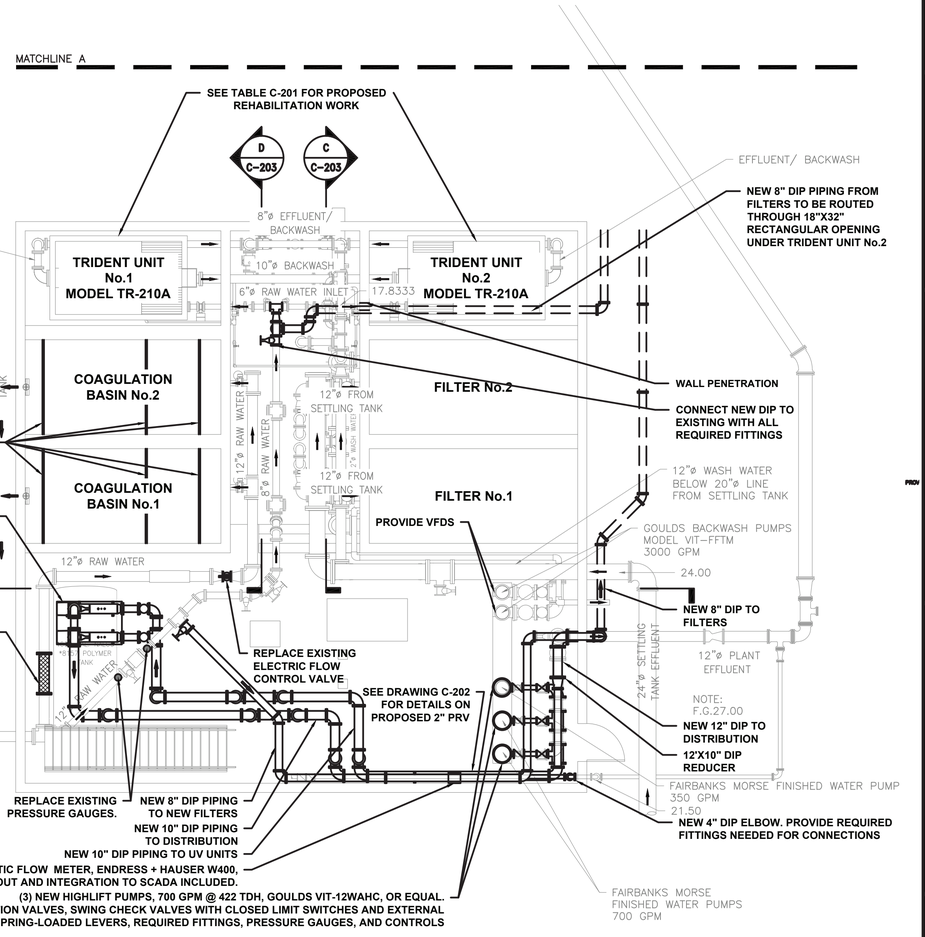


TABLE C-201A - REHABILITATION OF TR-210A TRIDENT UNITS			
SCOPE	QTY PER UNIT	QTY TOTAL	MODEL
HANDTOOL RUST AND FULL RECOAT	1	2	N/A
MEDIA RETENSION GRATING AND GASKET	1	2	FOR TRIDENT TR210A
PISTON AND WASTE GATE INCLUDING CONNECTION TO EXISTING	1	2	FOR TRIDENT TR210A
3-IN ELECTRIC ACTUATED VALVE	1	2	PRATT MK2 POSITRON II, 115V, 1/5 HP
6-IN ELECTRIC ACTUATED VALVE	1	2	PRATT MK2 POSITRON II, 115V, 1/5 HP
6-IN ELECTRIC ACTUATED MODULATING VALVE	2	4	PRATT MK2 POSITRON II, 115V, 1/5 HP
8-IN ELECTRIC ACTUATED VALVE	1	2	PRATT MK2 POSITRON II, 115V, 1/5 HP
PRESSURE SWITCHES	3	6	ASCO PB31B
PRESSURE GAUGE	2	4	BAILEY PTSDGD122110100
SOLENOID VALVE	1	2	
FLOAT SWITCH	3	6	
TRANSDUCERS	1	2	
TABLE C-201B - REHABILITATION OF CONVENTIONAL FILTRATION SYSTEM			
4-IN ELECTRIC ACTUATED VALVE	N/A	1	PRATT MK2 POSITRON II, 115V, 1/5 HP
6-IN ELECTRIC ACTUATED VALVE		2	PRATT MK2 POSITRON II, 115V, 1/5 HP
8-IN ELECTRIC ACTUATED VALVE		2	PRATT MK2 POSITRON II, 115V, 1/5 HP
10-IN ELECTRIC ACTUATED VALVE		1	PRATT MK2 POSITRON II, 115V, 1/5 HP
12-IN ELECTRIC ACTUATED VALVE		4	PRATT MK2 POSITRON II, 115V, 1/5 HP
16-IN ELECTRIC ACTUATED VALVE		2	PRATT MK2 POSITRON II, 115V, 1/5 HP

NOTES:

1. ALL UTILITIES TO BE CONFIRMED IN THE FIELD BY THE CONTRACTOR. CONTRACTOR SHALL PROVIDE COST IN BASE BID TO LOCATE ALL EXISTING SANITARY, WATER AND ELECTRIC LINES ON SITE BY A QUALIFIED PROFESSIONAL LOCATING SERVICE.
2. CONTRACTOR SHALL HOLD ALL UTILITIES LINES AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER.
3. CONTRACTOR SHALL PROVIDE ALL S.S. SUPPORTS.
4. BURIED JOINTS SHALL BE RESTRAINED AND EXPOSED JOINTS SHALL BE FLANGED.
5. ALL HARDWARE SHALL BE S.S.
4. ALL PLUG VALVES SHALL BE GEAR ACTUATED PLUG VALVES.
5. ALL PLUG VALVES IN EQ AND WTP TANKS VALVE VAULT SHALL HAVE EXTENDED S.S. OPERATORS WITH VALVE BOX COVERS. PROVIDE ALL S.S. SUPPORTS, COUPLINGS, AND ALL APPURTENANCES.



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REVISIONS

NO.	DATE	DESCRIPTION
1.	06/21/24	MAY 20/24 DOH COMMENTS
1.	10/02/24	SEPT. 24 DOH COMMENTS
2.	11/01/24	ADDENDUM #1

RHINEBECK WTP
PLANT IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NEW YORK

OVERALL NEW PIPING PLAN

SHEET: C-201

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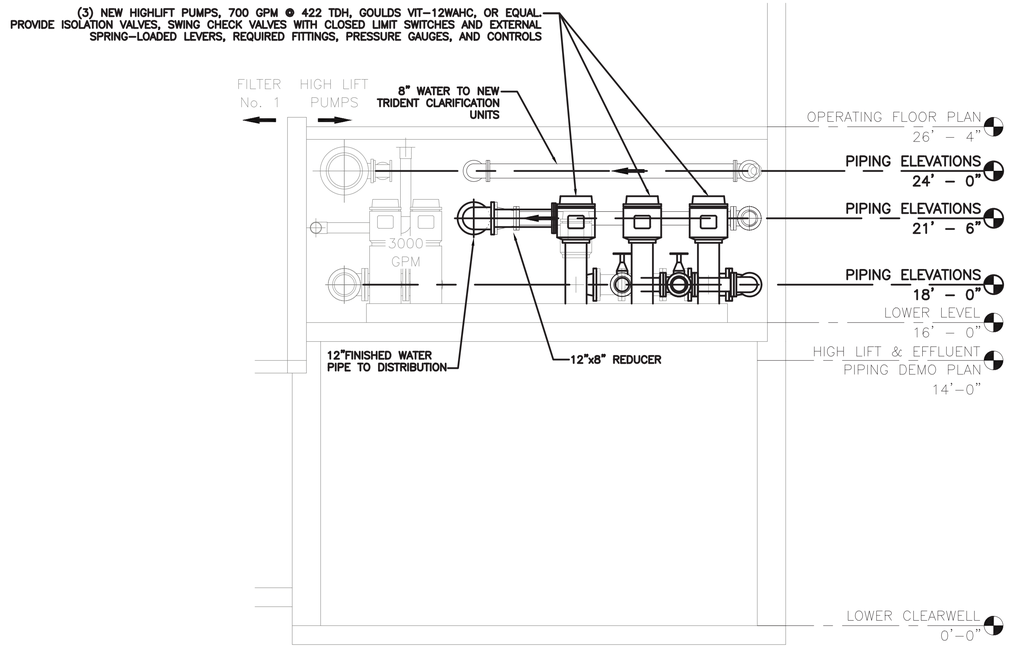
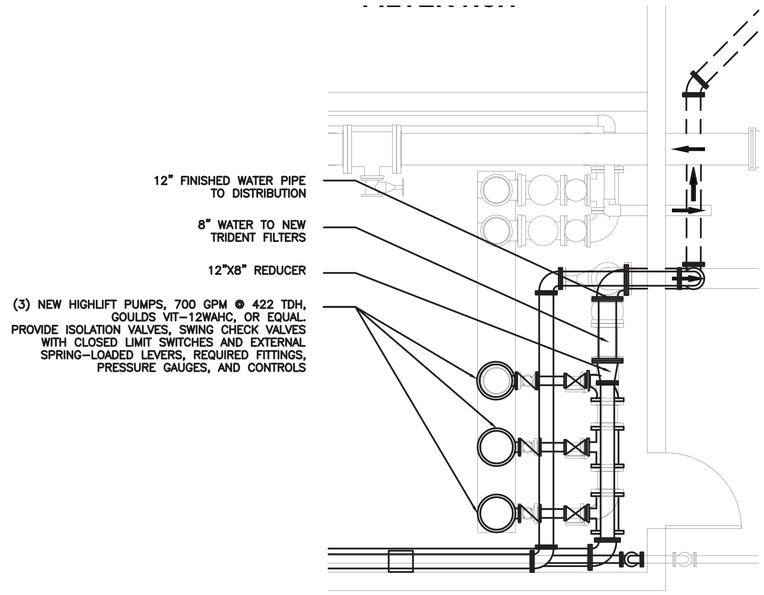


A C-202 HIGH LIFT PUMP NEW PIPING SECTION

SCALE: 1/4"=1'-0"



HIGH LIFT PUMP NEW PIPING PLAN

SCALE: 1/4"=1'-0"

NOTES:

1. ALL UTILITIES TO BE CONFIRMED IN THE FIELD BY THE CONTRACTOR. CONTRACTOR SHALL PROVIDE COST IN BASE BID TO LOCATE ALL EXISTING SANITARY, WATER AND ELECTRIC LINES ON SITE BY A QUALIFIED PROFESSIONAL LOCATING SERVICE.
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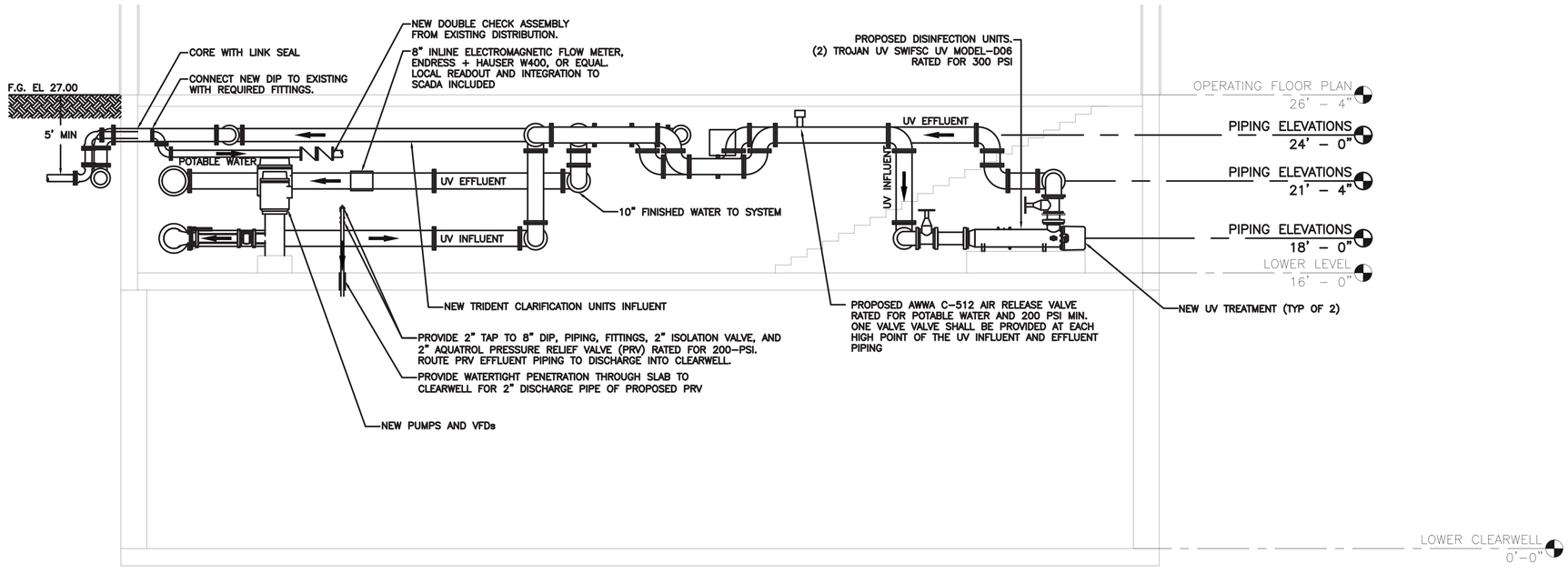

B C-202 FILTER AND UV TREATMENT PIPING SECTION

SCALE: 1/4"=1'-0"

DATE: 11/1/2024
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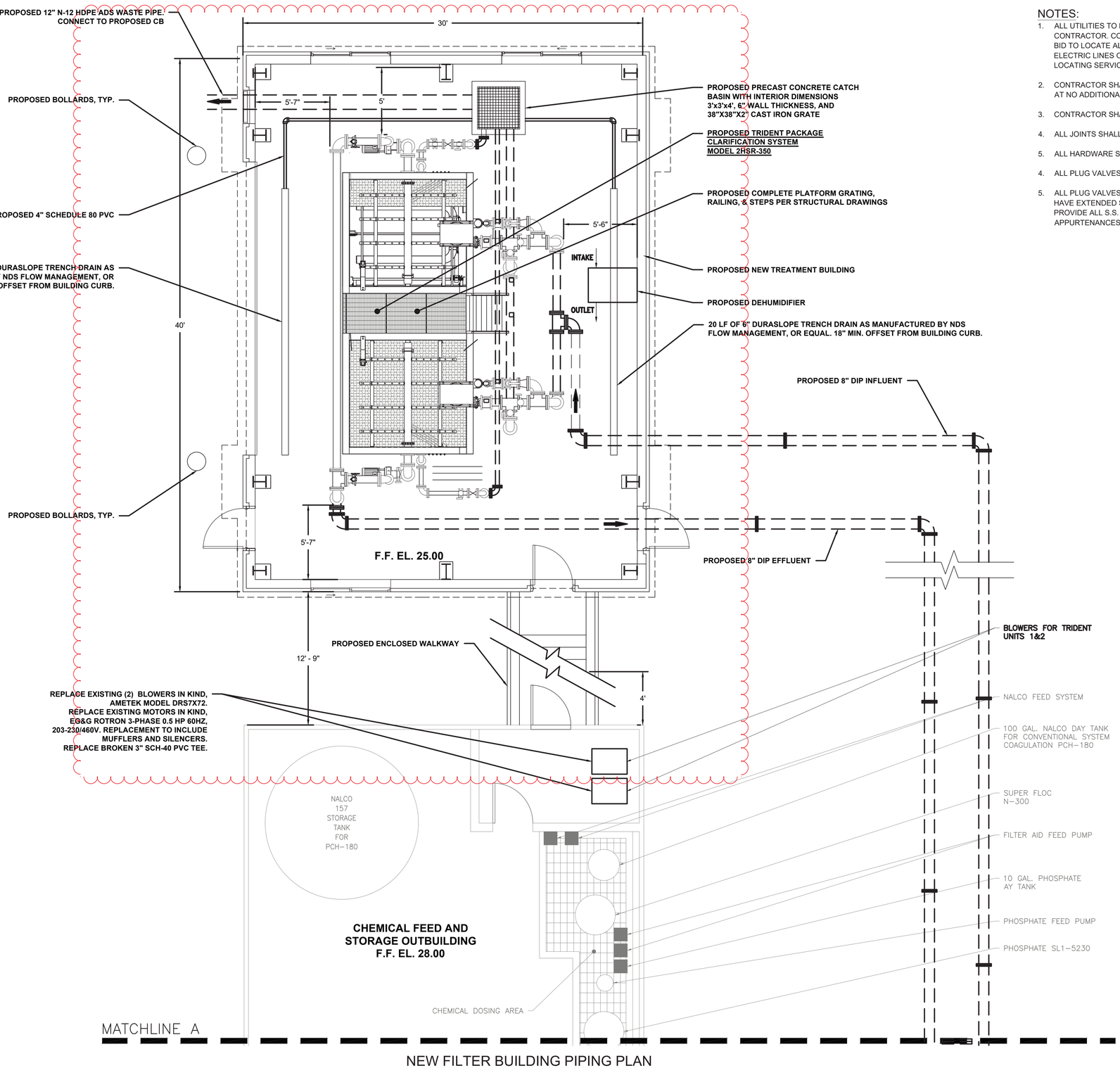
REVISIONS

NO.	DATE	DESCRIPTION
1.	06/21/24	MAY 2024 DOH COMMENTS
2.	10/02/24	SEPT. 24 DOH COMMENTS
3.	11/1/24	ADDENDUM #1

RHINEBECK WTP
PLANT IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NEW YORK

NEW PIPING SECTIONS

SHEET: C-202



NEW FILTER BUILDING PIPING PLAN

SCALE: 1/4"=1'-0"

NOTES:

1. ALL UTILITIES TO BE CONFIRMED IN THE FIELD BY THE CONTRACTOR. CONTRACTOR SHALL PROVIDE COST IN BASE BID TO LOCATE ALL EXISTING SANITARY, WATER AND ELECTRIC LINES ON SITE BY A QUALIFIED PROFESSIONAL LOCATING SERVICE.
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3. CONTRACTOR SHALL PROVIDE ALL S.S. SUPPORTS.
4. ALL JOINTS SHALL BE RESTRAINED.
5. ALL HARDWARE SHALL BE S.S.
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5. ALL PLUG VALVES IN EQ AND WTP TANKS VALVE VAULT SHALL HAVE EXTENDED S.S. OPERATORS WITH VALVE BOX COVERS. PROVIDE ALL S.S. SUPPORTS, COUPLINGS, AND ALL APPURTENANCES.

DATE: 11/1/2024
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REVISIONS

NO.	DATE	DESCRIPTION
1.	06/21/24	MAY 2024 DOH COMMENTS
2.	11/01/24	ADDENDUM #1

RHINEBECK WTP
PLANT IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NEW YORK

NEW FILTER BUILDING PIPING PLAN

SHEET: C-204

APPLICABLE CODE:

THE NEW YORK STATE UNIFORM FIRE PREVENTION AND BUILDING CODE (THE "UNIFORM CODE"): CONSTRUCTION SHALL CONFORM TO THE CURRENT EDITIONS OF THE 2018 INTERNATIONAL BUILDING CODE (IBC), THE 2020 NEW YORK STATE CODE SUPPLEMENT, THE 2018 INTERNATIONAL ENERGY CONSERVATION CODE (IECC), THE 2020 SUPPLEMENT TO THE NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE, AS WELL AS ALL OTHER CURRENT LOCAL, STATE, AND FEDERAL CODES AND REGULATIONS APPLICABLE TO THIS PROJECT. CONTRACTOR SHALL CONSTRUCT THE PROJECT IN ACCORDANCE WITH THE APPLICABLE CODES.

BUILDING DATE & CODE

OCCUPANCY CLASSIFICATION: (CHAPTERS 3 & 5)

☒ SINGLE ☐ MIXED ☐ NON-SEPARATED ☐ COMBINATION

IF SEPARATED, FIRE RESISTANCE RATING OF FIRE BARRIER (TABLE 508.4): HR

OCCUPANCY CLASSIFICATION(S): U

USES: HIGHWAY VEHICLE & MISCELLANEOUS STORAGE

CONSTRUCTION CLASSIFICATION (CHAPTER 6): IIB

AUTOMATIC SPRINKLER SYSTEM PROVIDED: ☐ YES ☒ NO

NFPA STANDARD: ☐ 13 ☐ 13R

HEIGHT & AREA - ACTUAL (CHAPTER 5)

BUILDING HEIGHT	HEIGHT IN FEET	HEIGHT IN STORIES
	28' – 3"	1
BUILDING AREA SUMMARY	BUILDING AREA	
FIRST	11,644 SF	
TOTAL (NOT INCLUDING BASEMENT)	11,644 SF	

HEIGHT & AREA – ALLOWABLE (CHAPTER 5)

AREA PER TABLE 504.3 & 506.2

OCCUPANCY CLASSIFICATION	TABULAR AREA	TABULAR HEIGHT	
		FEET	STORIES
U	8,500 SF	55 FT	2

INCREASE DUE TO FRONTAGE ALLOWED, THEREFORE ALLOWABLE AREA INCREASED TO 14,875 SF

FIRE RESISTANCE OF BUILDING ELEMENTS:

BASED ON CONSTRUCTION TYPE IIB

	REQUIRED	PROVIDED	SECTION
STRUCTURAL FRAME	0	0	TABLE 601
BEARING WALLS (EXTERIOR)	NA	NA	TABLE 601
BEARING WALLS (INTERIOR)	NA	NA	TABLE 601
NON-BEARING WALLS (EXTERIOR)	0	0	TABLE 601
NON-BEARING WALS (INTERIOR)	0	0	TABLE 601
FLOOR CONSTRUCTION	0	0	TABLE 601
ROOF CONSTRUCTION	0	0	TABLE 601
VERTICAL EXIT ENCLOSURE	NA	NA	713.4
SHAFT ENCLOSURE	NA	NA	713.4
CORRIDORS	NA	NA	TABLE 1020.1

INTERIOR FINISHES:

BASED ON MOST RESTRICTIVE

USE GROUP B	REQUIRED	PROVIDED	SECTION
WALLS & CEILING: EXITS	NA	NA	TABLE 803.13
WALLS & CEILING: CORRIDORS	NA	NA	TABLE 803.13
WALLS & CEILING: ROOMS	NA	NA	TABLE 803.13
FLOORS	NA	NA	TABLE 803.13

FIRE PROTECTION SYSTEMS: CHAPTER 9

SIZE AND LOCATION OF FIRE AREAS INDICATED ON CODE COMPLIANCE DRAWING(S)

FIRE PROTECTION SYSTEM	REQUIRED	PROVIDED	SECTION
AUTOMATIC SPRINKLER	-	-	903
ALTERNATIVE AUTO FIRE EXIT	-	-	904
STANDPIPE	-	-	905
PORTABLE FIRE EXTINGUISHER	NO	YES	906
FIRE ALARM & DETECTION	-	-	907
EMERGENCY ALARM	-	-	908
SMOKE CONTROL SYSTEM	-	-	909
SMOKE & HEAT VENTS	-	-	910
FIRE COMMAND CENTER	-	-	911

MEANS OF EGRESS: CHAPTER 10

DESIGN OCCUPANT LOAD SUMMARY

FLOOR LEVEL	DESIGN OCCUPANT LOAD
FIRST	58
TOTAL	58

NOTE: DESIGN OCCUPANT LOAD FOR MEANS OF EGRESS SIZING.

MEANS OF EGRESS ELEMENT	REQUIRED	PROVIDED	SECTION
NUMBER OF EXITS	2	6	TABLE 1006.2.1
EXIT ACCESS TRAVEL DISTANCE	300	75	TABLE 1017.2
DEAD-END LIMIT	20	-	1020.4
COMMON PATH OF TRAVEL LIMIT	75	75	1006.2.1
EGRESS WIDTH			
ELEMENT	REQUIRED	PROVIDED	SECTION
DOORS – FIRST FLOOR	2.8	36	1005.3.2
STAIRS	NA	NA	1005.3.1
CORRIDORS – FIRST FLOOR	44" MIN	-	1020.2

PLUMBING FIXTURE REQUIREMENTS: CHAPTER 29

OCCUPANCY CLASSIFICATION	OCCUPANT LOAD	WATER CLOSETS MEN REQUIRED	WATER CLOSETS MEN PROVIDED	WATER CLOSETS WOMEN REQUIRED	WATER CLOSETS WOMEN PROVIDED	URINALS REQUIRED	URINALS PROVIDED	D.F. REQUIRED	D.F. PROVIDED	LAVATORIES MEN REQUIRED	LAVATORIES MEN PROVIDED	LAVATORIES WOMEN REQUIRED	LAVATORIES WOMEN PROVIDED
U	58	0	0	0	0	0	0	0	0	0	0	0	0

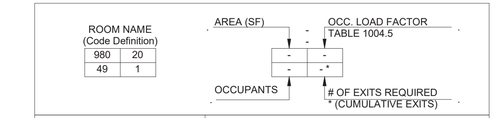
SEPARATE FACILITIES FOR EACH GENDER REQUIRED?	☐ YES	☒ NO	2902.2
SEPARATE EMPLOYEE FACILITIES REQUIRED?	☐ YES	☒ NO	2902.2
LOCATION OF EMPLOYEE FACILITIES COMPLIES?	☒ YES	☐ NO	2902.2
LOCATION OF PUBLIC FACILITIES COMPLIES?	☒ YES	☐ NO	2902.2
OTHER PLUMBING FIXTURE REQUIREMENTS?	Lavatories will be provided in new highway garage facility		

CODE:

1. ALL WORK SHALL CONFORM TO FEDERAL, STATE AND LOCAL CODES AS INTERPRETED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
2. DO NOT INSTALL FIRE EXTINGUISHERS/CABINETS/BRACKETS UNTIL ALL LOCATIONS HAVE BEEN REVIEWED AND APPROVED BY THE CODE AUTHORITY HAVING JURISDICTION. CONTRACTOR SHALL COORDINATE WITH FIRE MARSHALL PRIOR TO INSTALLATION.
3. THE ARCHITECTS CERTIFICATION ON THIS PROJECT IS ONLY FOR THE CONSTRUCTION WORK SHOWN TO BE DONE. IT DOES NOT CONSTITUTE APPROVAL OF ANY PRE-EXISTING CONDITIONS OR REVIEW OF THOSE CONDITIONS FOR CODE COMPLIANCE.
4. THE ARCHITECT'S CERTIFICATION ON THIS PROJECT IS FOR COMPLIANCE WITH THE BUILDING CODE OF NEW YORK STATE AND ITS VARIOUS REFERENCE STANDARDS, FOR PURPOSES OF OBTAINING A BUILDING PERMIT THROUGH THE AUTHORITY HAVING JURISDICTION AND TO CONVEY CONSTRUCTION REQUIREMENTS FOR THE PROJECT. CERTIFICATION DOES NOT GUARANTEE COMPLIANCE WITH LOCAL CODES THAT MAY APPLY.
5. GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, AIA DOCUMENT A201-2007 AND ANY OTHER DOCUMENTS AS PROVIDED BY THE OWNER SHALL BE INCORPORATED INTO THE OWNER-CONTRACTOR CONTRACT BY REFERENCE.
6. CONSTRUCTION SHALL CONFORM TO CURRENT EDITIONS OF THE NEW YORK STATE UNIFORM FIRE PREVENTION AND BUILDING CODE (THE "UNIFORM CODE"): CONSTRUCTION SHALL CONFORM TO CURRENT EDITIONS OF THE 2018 INTERNATIONAL BUILDING CODE (IBC), THE 2020 NEW YORK STATE UNIFORM CODE SUPPLEMENT, THE 2018 INTERNATIONAL ENERGY CONSERVATION CODE (IECC), THE 2020 SUPPLEMENT TO THE NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE, 2010 AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS FOR ACCESSIBLE DESIGN (28 CFR PART 36, SUBPART D), 2009 ADA ACCESSIBILITY AND USABLE BUILDINGS AND FACILITIES (ICC/ANSI A117.1-2009), AS WELL AS WITH ALL OTHER CURRENT LOCAL, STATE AND FEDERAL CODES AND REGULATIONS APPLICABLE TO THIS PROJECT. CONTRACTOR SHALL CONSTRUCT THE PROJECT IN ACCORDANCE WITH THE APPLICABLE CODES RELEVANT TO THIS PROJECT.
7. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND PAYMENT OF ALL PERMIT AND APPLICATION FEES FOR THE CONSTRUCTION OF THE PROJECT.
8. TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS ARE IN CONFORMANCE WITH THE 2020 SUPPLEMENT OF THE NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE.
9. THE FOLLOWING IS AN EXCERPT FROM THE NEW YORK EDUCATION LAW ARTICLE 145 SECTION 7209 AND APPLIES TO THESE DRAWINGS: "IT IS A VIOLATION OF THIS LAW FOR ANY PERSON UNLESS HE IS ACTING UNDER THE DIRECT SUPERVISION OF A LICENSED ARCHITECT TO ALTER AN ITEM IN ANY WAY." IF ANY ITEM BEARING THE SEAL OF AN ARCHITECT IS ALTERED, THE ALTERING ARCHITECT SHALL AFFIX HIS SEAL AND NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE AND DATE OF SUCH ALTERNATION AND SPECIFIC DESCRIPTION OF THE ALTERATION.

ENERGY CODE REQUIREMENTS

1. THE NEW STRUCTURE COMPLIES WITH THE 2020 NYS BUILDING CODE REQUIREMENTS, PRESCRIPTIVE METHOD
2. CLIMATE ZONE (IECCNYS TABLE C301.1): 5A - SARATOGA COUNTY
3. ROOF (IECCNYS C402.1.4): METAL BUILDING
   - REQUIRED: U ≤ 0.035
   - PROVIDED: U = 0.022
   - NOTE: PRE-ENGINEERED BUILDING MANUFACTURER IS RESPONSIBLE FOR PROVIDING ENERGY CODE REQUIREMENTS IN WALL AND ROOF ASSEMBLY AS STIPULATED IN THE CONTRACT DOCUMENTS.
4. WALLS, ABOVE GRADE (IECCNYS C402.1.4): METAL BUILDING
   - REQUIRED: U ≤ 0.052
   - PROVIDED: U = 0.039
   - NOTE: PRE-ENGINEERED BUILDING MANUFACTURER IS RESPONSIBLE FOR PROVIDING ENERGY CODE REQUIREMENTS IN WALL AND ROOF ASSEMBLY AS STIPULATED IN THE CONTRACT DOCUMENTS.
5. WALLS, BELOW GRADE (IECCNYS C402.1.3): CONCRETE
   - REQUIRED: R ≥ 7.5 CI
   - PROVIDED: R = 10 CI
6. FLOORS (IECCNYS C402.1.3): UNHEATED SLAB-ON-GRADE
   - REQUIRED: R ≥ 10
   - PROVIDED: R = 10
7. DOORS (IECCNYS C402.1.3): OPAQUE NON-SWINGING DOORS
   - REQUIRED: R ≥ 4.75
   - PROVIDED: R = NA
8. DOORS (IECCNYS C402.1.4): SWINGING DOORS
   - REQUIRED: U ≤ 0.37
   - PROVIDED: U = NA
9. FENESTRATION REQUIREMENTS (IECCNYS C402.4):
   - A. FIXED
     - REQUIRED: U ≤ 0.38
     - PROVIDED: U = NA
   - B. ENTRANCE DOOR
     - REQUIRED: U ≤ 0.77
     - PROVIDED: U = 0.43
   - C. OPERABLES
     - REQUIRED: U ≤ 0.45
     - PROVIDED: U = NA
10. MAXIMUM FENESTRATION ALLOWABLE (IECCNYS C402.4):
    - REQUIRED: 0.30
    - PROVIDED: NA
    - REQUIRED TOTAL: 2125 SF
    - PROVIDED TOTAL: 0 SF
11. MINIMUM SKYLIGHT FENESTRATION (IECCNYS C402.4.2):
    - NOT APPLICABLE
12. WRITTEN STATEMENT:
    - TO THE BEST OF OUR KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT, THE DESIGN IS IN COMPLIANCE WITH THE ENERGY CODE. THIS STATEMENT IS BEING PROVIDED AS REQUIRED OF THE 2020 NYS ENERGY CODE SUPPLEMENT, SECTION C103.2.2.



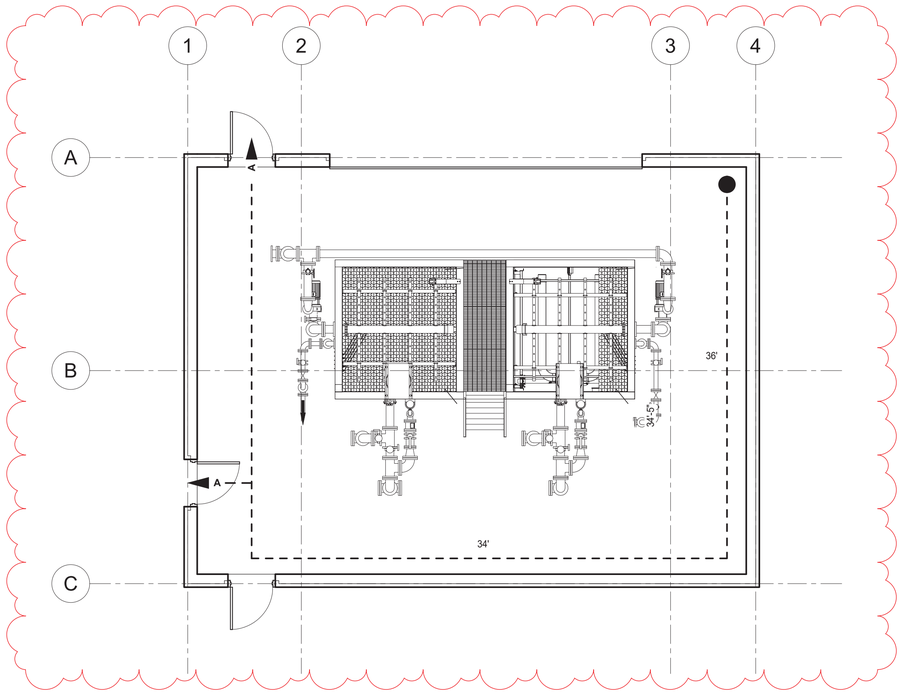
XX' — PATH OF EGRESS TO AN EXIT - [TRAVEL DISTANCE NOTED IN (XX') EQUALS TOTAL DISTANCE FOR ROUTE] - MAXIMUM DISTANCE ALLOWED PER TABLE 1017.2

X — EXIT AND EXIT TYPE AS DESCRIBED BELOW

EXIT REQUIREMENTS BY TYPE

EXIT	OCCUP. LOAD	REQUIRED WIDTH (INCHES)*	PROVIDED WIDTH (INCHES)	NOTES
A	9	1.8	36	MIN WIDTH PER 1010.1.1 = 32 INCHES
B	14	2.8	36	MIN WIDTH PER 1010.1.1 = 32 INCHES

* REQUIRED WIDTH CALCULATED 1005.3.2: 0.2 INCHES PER OCCUPANT



DATE: 11.2024
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SCALE: As indicated
REVIEWED BY: AM
PROJECT NO.: 22-2496
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
55 SOUH MAIN ST, ONEONTA, NY 13820 - 607.432.8073
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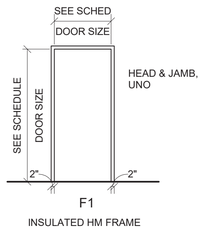
REVISIONS

NO.	DATE	DESCRIPTION
1	11/01/2024	ADDENDUM #1

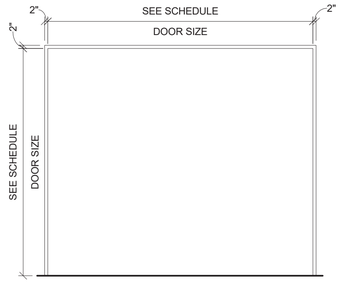
RHINEBECK WTP IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NY

CODE COMPLIANCE & LIFE SAFETY PLANS

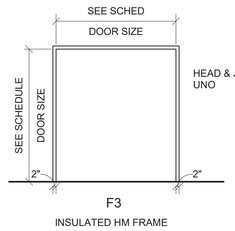
SHEET: A001



F1
INSTULATED HM FRAME



F2
STEEL CHANNEL



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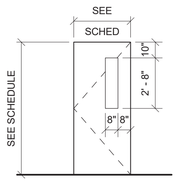
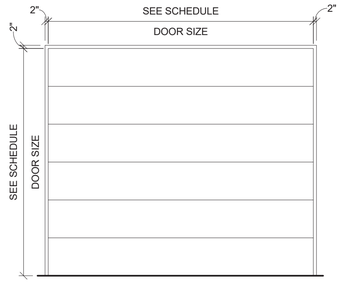
INSTULATED HM FRAME

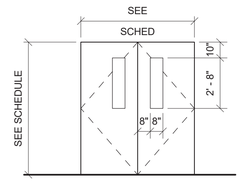


1
INSTULATED HM

DOOR FRAME TYPES



2
STEEL



3
INSTULATED HM

DOOR TYPES

1 A003 DOOR FRAME & TYPES
N.T.S

DOOR SCHEDULE

Type Mark	DOOR SIZE					DOOR			FRAME				DOOR FIRE RATING	MANUFACTURER	REMARKS	HARDWARE GROUP
	ROUGHT HEIGHT	ROUGH WIDTH	HEIGHT	WIDTH	THICKNESS	TYPE	MATERIAL	FINISH	TYPE	DEPTH	MATERIAL	FINISH				
C-130	15' - 0"	22' - 0"	15' - 0"	22' - 0"	1 3/4"	1	INSULATED HOLLOW METAL	PAINT, COLOR BY OWNER	F2	2" (W) x 5 3/4" (D)	HOLLOW METAL	PAINT, COLOR BY OWNER	N/A	OVERHEAD DOOR CORPORATION	SECTIONAL OVERHEAD DOORS 422 SERIES INSULATED STEEL DOORS	D1
C131	7' - 2"	3' - 4"	7' - 0"	3' - 0"	1 3/4"	1	INSULATED HOLLOW METAL	PAINT, COLOR BY OWNER	F1	2" (W) x 5 3/4" (D)	HOLLOW METAL	PAINT, COLOR BY OWNER	N/A	CECO ASSA-ABLOY	LEGION FLUSH	D1
C131	7' - 2"	3' - 4"	7' - 0"	3' - 0"	1 3/4"	1	INSULATED HOLLOW METAL	PAINT, COLOR BY OWNER	F1	2" (W) x 5 3/4" (D)	HOLLOW METAL	PAINT, COLOR BY OWNER	N/A	CECO ASSA-ABLOY	LEGION FLUSH	D1
C131	7' - 2"	3' - 4"	7' - 0"	3' - 0"		1	INSULATED HOLLOW METAL	PAINT, COLOR BY OWNER	F1	2" (W) x 5 3/4" (D)	HOLLOW METAL	PAINT, COLOR BY OWNER	N/A	CECO ASSA-ABLOY	LEGION FLUSH	D1
C131	7' - 2"	3' - 4"	7' - 0"	3' - 0"	1 3/4"	1	INSULATED HOLLOW METAL	PAINT, COLOR BY OWNER	F1	2" (W) x 5 3/4" (D)	HOLLOW METAL	PAINT, COLOR BY OWNER	N/A	CECO ASSA-ABLOY	LEGION FLUSH	D1

ABBREVIATIONS:

HM HOLLOW METAL
PF PREFINISHED
PT SEMI-GLOSS PAINT
STLSTEEL

HARDWARE SCHEDULE:

D1:
1. (3) 4-1/2"x 4-1/2" HINGES
2. (1) STORAGE LOCKSET
3. (1) CLOSER
4. WEATHERSTRIPPING
5. (1) SWEEP
6. (1) THRESHOLD

D2:
1. WEATHERSTRIPPING

D3:
1. (6) 4-1/2"x 4-1/2" HINGES
2. (1) STORAGE LOCKSET
3. (2) CLOSER
4. (2) SWEEP

D4:
1. (3) 4-1/2"x 4-1/2" HINGES
2. (1) PRIVACY LOCKSET
3. (1) CLOSER
4. (1) SWEEP
5. (1) WALL STOP

D5:
1. (3) 4-1/2"x 4-1/2" HINGES
2. (1) STORAGE LOCKSET
3. (1) CLOSER
4. (1) SWEEP

Window Schedule

Type Mark	Head Height	Window Size				Window Materials			Manufacturer	Egress Window
		Rough Height	Rough Width	Height	Width	Frame Finish	Trim Finish	Glazing		

DATE: 11.2024
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REVIEWED BY: AM
PROJECT NO.: 22-2496
FILE:

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CIVIL AND ENVIRONMENTAL ENGINEERING
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REVISIONS

NO.	DATE	DESCRIPTION
1	11/01/2024	ADDENDUM #1

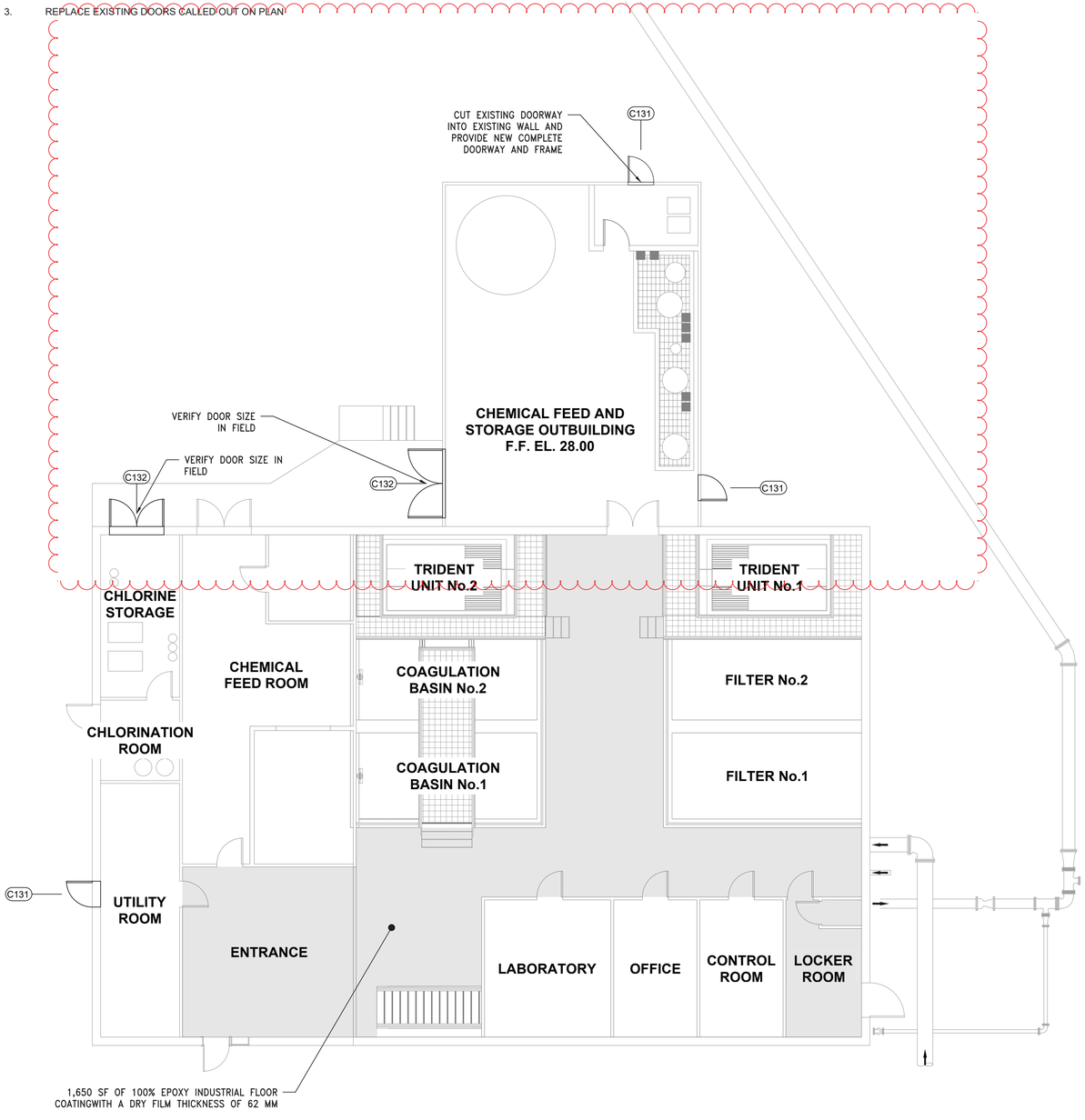
RHINEBECK WTP
IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NY

DOOR & WINDOW
OPENING SCHEDULE &
DETAILS

SHEET:
A003

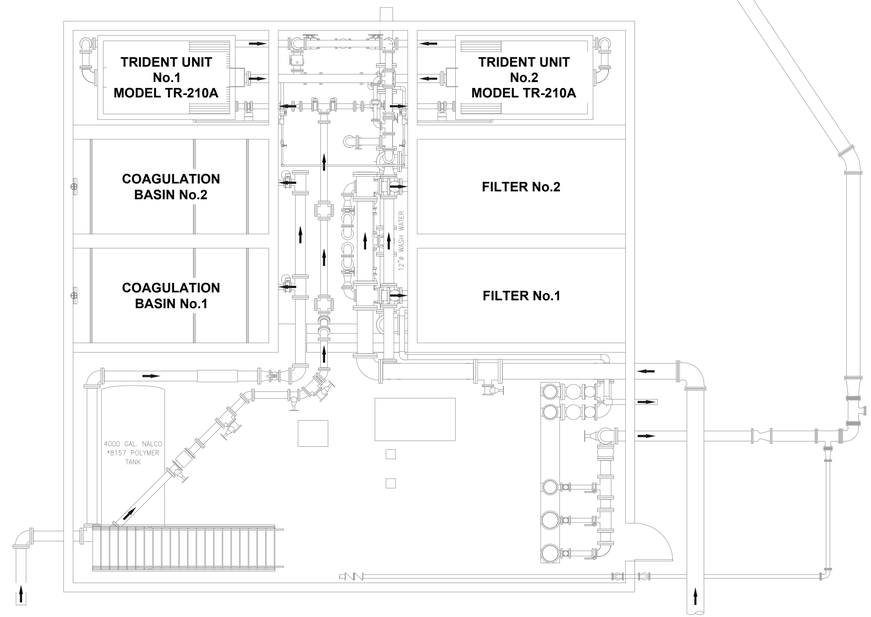
NOTES:

1. EPOXY COAT ALL FLOORS AS INDICATED ON PLAN
2. REPAIR LEAKS BY EXISTING ELECTRIC
3. REPLACE EXISTING DOORS CALLED OUT ON PLAN



OPERATING ARCHITECTURAL FLOOR PLAN

SCALE: 1/8"=1'-0"



LOWER ARCHITECTURAL FLOOR

SCALE: 1/8"=1'-0"

DATE: 11/1/2024
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SCALE: ____
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6 TOWNSEND STREET, WALTON, NY 13856 - 607.865.9235
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REVISIONS

NO.	DATE	DESCRIPTION
1.	06/21/24	MAY 2024 DOH COMMENTS
2.	11/01/24	ADDENDUM #1

RHINEBECK WTP
PLANT IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NEW YORK

WTP REHAB FLOOR PLAN

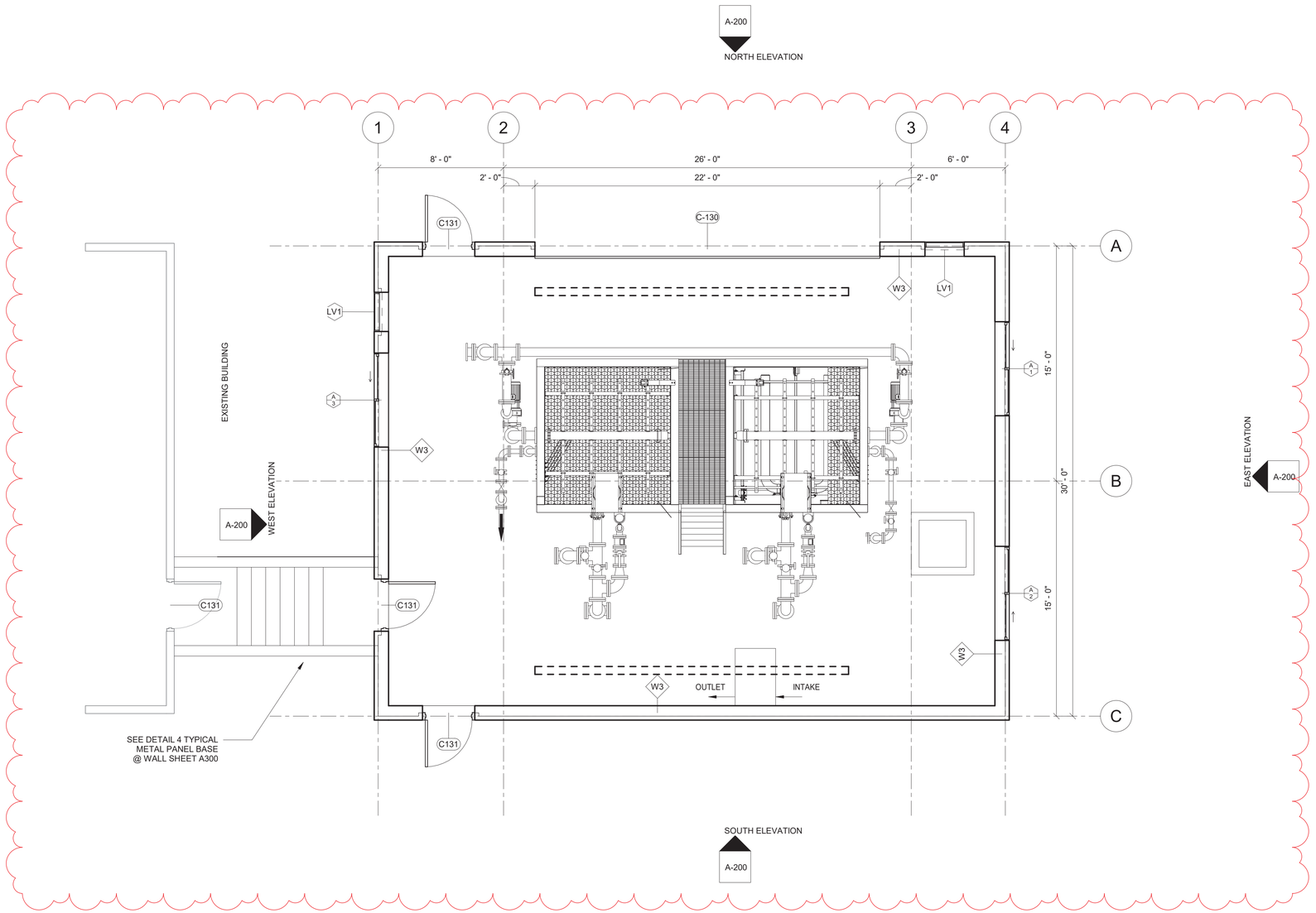
SHEET: A-100

ARCHITECTURAL LEGEND

- (#) • INDICATES KEYED NOTE.
- W- • INDICATES NEW WALL, REF WALL SCHEDULE.
- -- • INDICATES NEW WINDOW, REF WINDOW SCHEDULE ON 'A' DWGS
- -- • INDICATES NEW DOOR, REF DOOR SCHEDULE ON 'A' DWGS
- -- • INDICATES NEW GRIDLINE

PLAN NOTES

1. ALL ELEVATIONS ARE REFERENCED FROM 0'-0" = LEVEL 1 FINISH FLOOR.
2. GRIDLINES ARE LOCATED AT EXTERIOR FACE OF PEMB STEEL LINES.
3. DETAILS ON THESE PLANS ARE INTENDED TO DEPICT THE GENERAL CONSTRUCTION METHODS FOR THIS STRUCTURE. CONNECTIONS, DETAILS AND CONDITIONS NOT SPECIFICALLY SHOWN THAT ARE SIMILAR TO THOSE THAT ARE SPECIFIED SHALL BE ASSUMED ONE AND THE SAME. IF QUESTIONS REGARDING THE APPLICATION OF DETAILS ARE ENCOUNTERED, NOTIFY THE ARCHITECT / ENGINEER FOR CLARIFICATION IN A TIMELY MANNER PRIOR TO BID OPENING.
4. DIMENSIONS AT DOORS ARE ROUGH OPENING OF STRUCTURAL FRAME.
5. REFER TO SPECIFICATION 074116, 074213.19, AND 133419 FOR REQUIRED WARRANTIES.
6. CONTRACTOR TO PROVIDE PROOF OF MANUFACTURER'S INSTALLATION CERTIFICATION AND TRAINING.
7. CONTRACTOR TO PROVIDE DOCUMENTATION OF THE NECESSARY MANUFACTURER'S INSTALLATION. CERTIFICATION AND TRAINING CAN BE OBTAINED PRIOR TO INSTALLATION OF THE PEMB STRUCTURE.



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FILE:

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REVISIONS

NO.	DATE	DESCRIPTION
1	11/01/2024	ADDENDUM #1

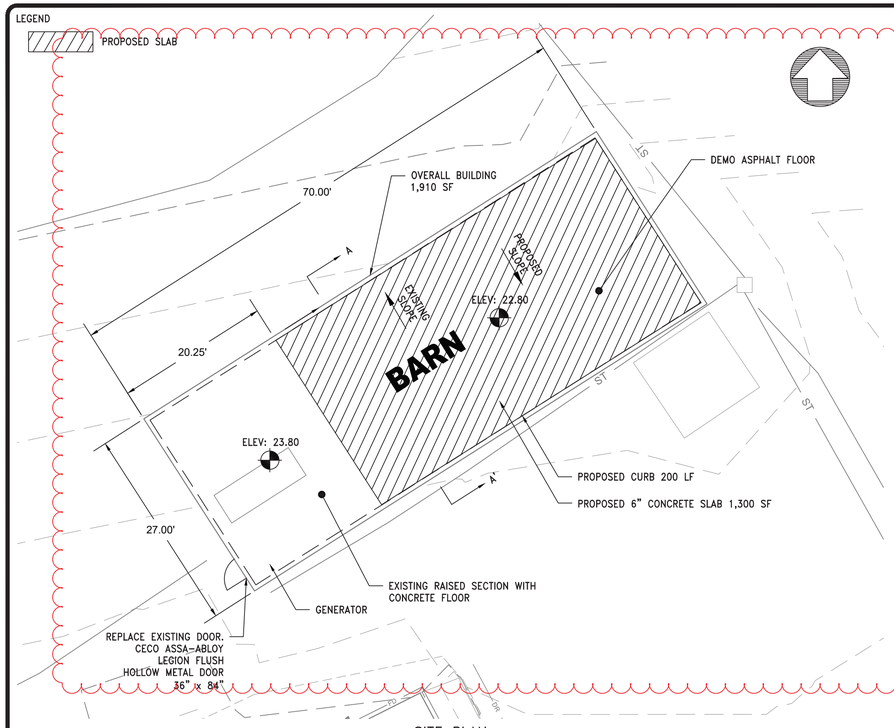
RHINEBECK WTP IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NY

FIRST FLOOR PLAN

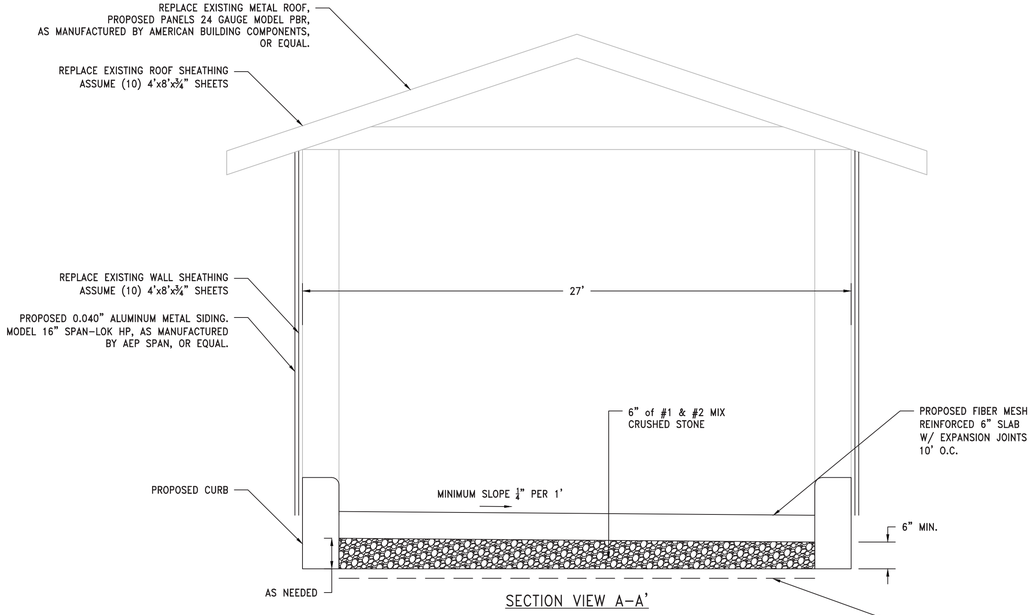
SHEET: A101

LEGEND

PROPOSED SLAB



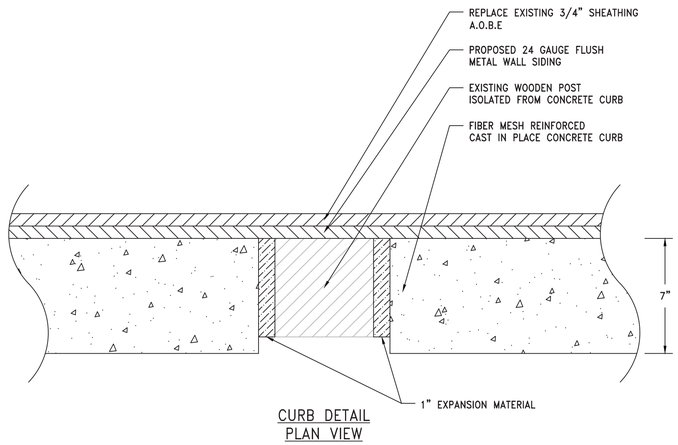
SITE PLAN
SCALE: 1" = 10'



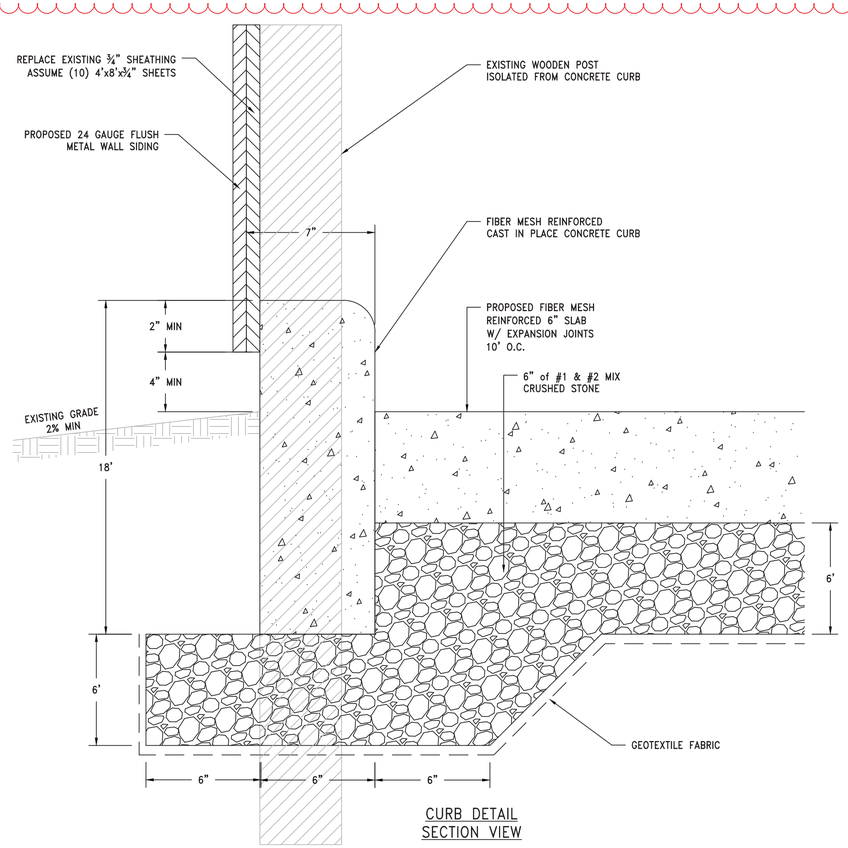
SECTION VIEW A-A'

NOTES:

1. CONCRETE CURB TO BE CAST AROUND EXISTING WOODEN POSTS/ COLUMNS.
2. REPLACE ALL EXISTING FASCIA BOARDS, SOFFITS, DRIP EDGES, & VENTS.
3. REPLACE EXISTING ROLL-UP OVERHEAD DOORS IN KIND.
4. CLOSE ALL OPENINGS IN ALL WALLS TO ENSURE THE BUILDINGS PROTECTED FROM THE ELEMENTS.
5. THERE IS NO EXISTING OR PROPOSED INSULATION.
6. REPLACE ALL THREE OVERHEAD LIFTING SECTIONAL ROLL-UP DOORS, OPENING DIMENSIONS 8'H X 10'W.
7. PROVIDE ONE TRUSS MOUNTED LED LIGHT AND ONE WALL POST MOUNTED RECEPTACLE 15' O.C. ALONG THE LENGTH OF THE BUILDING.



CURB DETAIL
PLAN VIEW



CURB DETAIL
SECTION VIEW

DATE: 11/1/2024
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SCALE: ____
REVIEWED BY: RF
PROJECT NO.: ----
FILE: ____

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REVISIONS

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RHINEBECK WTP
PLANT IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NEW YORK

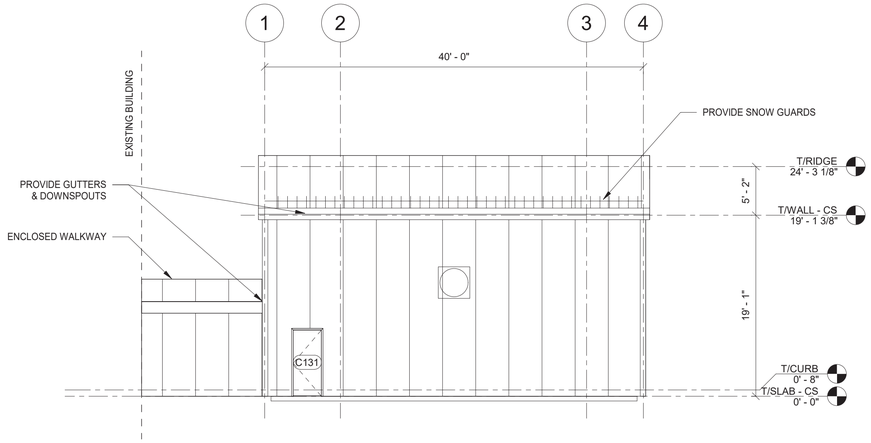
PROPOSED UPGRADES TO
EXISTING BARN

SHEET:
A-102

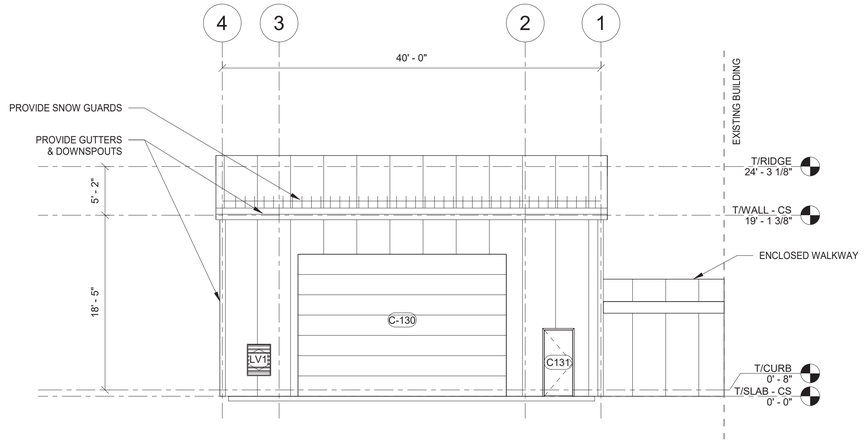
File: H:\DRAWINGS\RHINEBECK (V)\22-2486 WTP\A-102 - BARN UPGRADES.DWG Saved: 11/1/2024 9:59:39 AM Plotted: 11/1/2024 9:59:49 AM User: Iris Brokes LastSavedBy: brokes!

ELEVATION NOTES

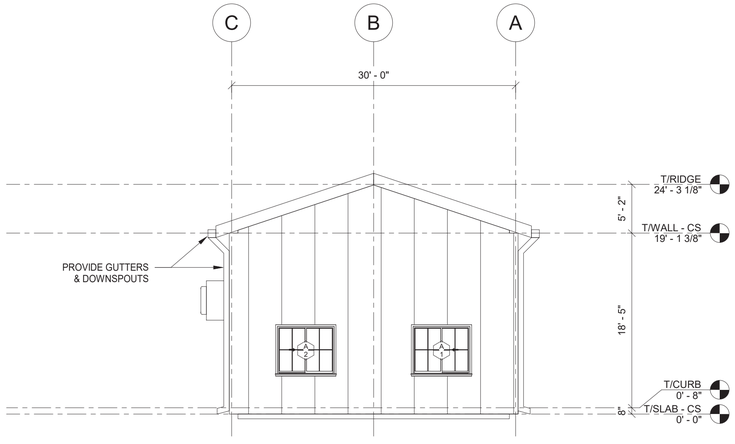
1. ALL ELEVATIONS ARE REFERENCED FROM 0'-0" = LEVEL 1 FINISH FLOOR.
2. GRIDLINES ARE LOCATED AT EXTERIOR FACE OF PEMB STEEL LINES.
3. DETAILS ON THESE PLANS ARE INTENDED TO DEPICT THE GENERAL CONSTRUCTION METHODS FOR THIS STRUCTURE. CONNECTIONS, DETAILS AND CONDITIONS NOT SPECIFICALLY SHOWN THAT ARE SIMILAR TO THOSE THAT ARE SPECIFIED SHALL BE ASSUMED ONE AND THE SAME. IF QUESTIONS REGARDING THE APPLICATION OF DETAILS ARE ENCOUNTERED, NOTIFY THE ARCHITECT / ENGINEER FOR CLARIFICATION IN A TIMELY MANNER PRIOR TO BID OPENING.
4. ALIGN JOINTS OF 42" ROOF PANELS WITH JOINTS OF 42" WALL PANELS.
5. DOOR, WINDOW, & STOREFRONT MANUFACTURER RESPONSIBLE FOR DESIGN OF ALL CONNECTIONS TO JAMBS, SILLS, & HEADERS.
6. DIMENSIONS SHOWN ON ELEVATIONS ARE ROUGH OPENING OF STRUCTURAL FRAME.
7. REFER TO SPECIFICATION 074116, 074213.19, AND 133419 FOR REQUIRED WARRANTIES.
8. CONTRACTOR TO PROVIDE PROOF OF MANUFACTURER'S INSTALLATION CERTIFICATION AND TRAINING.
9. CONTRACTOR TO PROVIDE DOCUMENTATION OF THE NECESSARY MANUFACTURER'S INSTALLATION. CERTIFICATION AND TRAINING CAN BE OBTAINED PRIOR TO INSTALLATION OF THE PEMP STRUCTURE.
11. ROOF PANELS SHALL BE 36" WIDE, 6" THICK, 24 GAUGE METAL SPAN INSULATED PANELS, LS-36, OR EQUAL.
12. WALL PANELS SHALL BE 36" WIDE, 3" THICK, 24-GAUGE METAL SPAN INSULATED PANELS, LS-36 OR EQUAL.



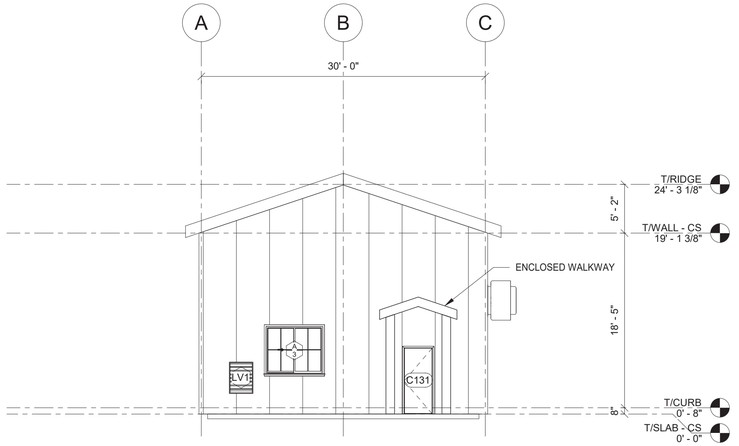
4 A-200 SOUTH ELEVATION
1/8" = 1'-0"



3 A-200 NORTH ELEVATION
1/8" = 1'-0"



2 A-200 EAST ELEVATION
1/8" = 1'-0"



1 A-200 WEST ELEVATION
1/8" = 1'-0"

DATE: 11.2024
DRAWN BY: IB
SCALE: As indicated
REVIEWED BY: AM
PROJECT NO.: 22-2496
FILE:

DELAWARE ENGINEERING, D.P.C.
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REVISIONS

NO.	DATE	DESCRIPTION
1	11/01/2024	ADDENDUM #1

RHINEBECK WTP
IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NY

ELEVATIONS

SHEET:
A-200

ABBREVIATIONS:

"	INCH
#	NUMBER, POUND
&	AND
'	FEET
(E)	EXISTING
(N)	NEW
@	AT
A=	AXIAL FORCE
AB	ANCHOR BOLT
ABV	ABOVE
ACI	AMERICAN CONCRETE INSTITUTE
ADD	ADDENDUM, ADDITION
ADJ	ADJUST, ADJUSTABLE
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
ALUM	ALUMINUM
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AVG	AVERAGE
AWS	AMERICAN WELDING SOCIETY
B/	BOTTOM OF
B/W	BETWEEN
BALC	BALCONY
BD	BOARD
BEV	BEVEL
BKR	BACKER
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
BOC	BOTTOM OF CURB
BOT/BTM	BOTTOM
BOW	BOTTOM OF WALL
BP	BASEPLATE
BRDG	BRIDGE, BRIDGING
BRG	BEARING
BRK	BRICK
BSMT	BASEMENT
BU	BUILT-UP
C	CHANNEL
C=	COMPRESSION FORCE
CEM	CEMENT, CEMENTITIOUS
CGS	CENTER OF GRAVITY OF STRAND
CIP	CAST IN PLACE
CJ	CONTROL JOINT
CJP	COMPLETE JOINT PENETRATION
CL	CENTER LINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
COMP	COMPOSITE, COMPENSATION
CONC	CONCRETE
COND	CONDITION
CONN	CONNECTION
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
CORR	CORRIDOR
CTR	CENTER
CTRL	CONTROL
CTSK	COUNTERSINK
CU	CUBIC
CUST	CUSTOM
CY	CUBIC YARD
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DEFL	DEFLECTION
DEG	DEGREE
DEMO	DEMOLITION
DEPT	DEPARTMENT
DET	DETAIL
DIA - Ø	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DKG	DECKING
DL	DEAD LOAD
DWG	DRAWING
DWGS	DRAWINGS
DWL	DOWEL
EA	EACH
EF	EACH FACE
EIFS	EXTERIOR INSULATED FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
ENGR	ENGINEER
EOD	EDGE OF DECK
EOP	EDGE OF PLATE
EOR	ENGINEER OF RECORD
EOS	EDGE OF SLAB
EQ	EQUAL
EQPT	EQUIP
ES	EACH SIDE
EW	EACH WAY
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR

F TO F	FACE TO FACE
F'c	CONCRETE COMPRESSIVE STRENGTH
FAB	FABRICATIONS/FABRICATED
FB	FLAT BAR
FD	FLOOR DRAIN
FF	FINISH FLOOR
FFE	FINISH FLOOR ELEVATION
FIN	FINISH
FLR	FLOOR
FNDN	FOUNDATION
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FR	FIRE RATED, FIRE RESISTIVE
FRM	FRAMED, FRAMING
FRT	FIRE RETARDANT TREATED
FT	FOOT, FEET
FTG	FOOTING
FUT	FUTURE
Fy	YIELD STRESS
GA	GAUGE
GALV	GALVANIZED
GB	GRADE BEAM
GC	GENERAL CONTRACTOR
GEN	GENERAL
GL	GLU-LAMINATED
GLB	GLU-LAMINATED BEAM
GND	GROUND
GR	GRADE
GYP	GYPSUM
GYP BD	GYPSUM BOARD
HAS	HEADED ANCHOR STUD
HC	HOLLOW CORE
HCP	HOLLOW CORE PLANK
HDR	HEADER
HEX	HEXAGONAL
HI	HIGH
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT
HVAC	HEATING - VENTILATION - AIR CONDITIONING
IBC	INTERNATIONAL BUILDING CODE
ICF	INSULATED CONCRETE FORMS
ID	INSIDE DIAMETER
IJ	ISOLATION JOINT
IN	INCH, INCHES
INFO	INFORMATION
INSP	INSPECTION
INSUL	INSULATION
INT	INTERIOR
INV	INVERT
JT	JOINT, JOINTS
k	KILOPOUND (1000 POUNDS)
K-FT	KIP-FOOT (1000 POUND - FEET)
KIP	KILOPOUND (1000 POUNDS)
L	ANGLE, LEFT, LENGTH
LAM	LAMINATE, LAMINATED
LAT	LATERAL
LB	POUND
LF	LINEAL FEET, LINEAR FOOTAGE
LG	LONG
LIN	LINEAR
LIN FT	LINEAL FEET, LINEAR FOOTAGE
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LNTL	LINTEL
LONG	LONGITUDINAL
LS	LONG SLOTTED
LSH	LONG SIDE HORIZONTAL
LSL	LAMINATED STRAND LUMBER
LSV	LONG SIDE VERTICAL
LT WT	LIGHT WEIGHT
LVL	LAMINATED VENEER LUMBER
MAX	MAXIMUM
MB	MACHINE BOLT
MC	MISCELLANEOUS CHANNEL
MCJ	MASONRY CONTROL JOINT
MECH	MECHANICAL
MEMB	MEMBRANE
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MEZZ	MEZZANINE
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MTL	METAL
MTL	METAL
MUL	MULLION
N	NORTH
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
NW	NORMAL WEIGHT

OC	ON CENTER
OD	OUTSIDE DIAMETER
OPNG	OPENING
OPP	OPPOSITE
OSB	ORIENTED STRAND BOARD
OWSJ	OPEN WEB STEEL JOIST
P/L	PROPERTY LINE
PAF	POWDER ACTUATED FASTENER
PC	PRECAST
PCF	POUNDS PER CUBIC FOOT
Pd	DRIFTED SNOW LOAD
PE	PROFESSIONAL ENGINEER
PEMB	PRE ENGINEERED METAL BUILDING
PERF	PERFORATE, PERFORATED, PERFORMANCE
PERIM	PERIMETER
PERP	PERPENDICULAR
Pf	FLAT ROOF SNOW LOAD
PJP	PARTIAL JOINT PENETRATION
PL	PLATE
PLF	POUNDS PER LINIER FOOT
PLWD	PLYWOOD
PMEJ	PREMOLDED EXPANSION JOINT
PMF	PREMOLDED FILLER
PNL	PANEL
PREFAB	PREFABRICATED
PREFIN	PREFINISHED
Ps	SLOPED ROOF SNOW LOAD
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
PT	PRESSURE TREATED
PTD	PAINTED
QTY	QUANTITY
R	RISER
R=	BEAM END SHEAR REACTION
RAD	RADIUS
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REF	REFER - REFERENCE
REINF	REINFORCING
REQ'D	REQUIRED
REV	REVISION
RO	ROUGH OPENING
SCHED	SCHEDULE
SCL	STRUCTURAL COMPOSITE LUMBER
SE	STRUCTURAL ENGINEER
SECT	SECTION
SF	SQUARE FEET
SGL	SINGLE
SHT	SHEET
SHTG	SHEATHING
SIM	SIMILAR
SIMP	SIMPSON STRONG TIE
SL	SNOW LOAD
SOG	SLAB ON GRADE
SPEC	SPECIFICATIONS
SQ	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STRUCT	STRUCTURAL
SUSP	SUSPENDED
SYS	SYSTEM
T	TREAD
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
T/	TOP OF
T=	TENSION FORCE
TAN	TANGENT
THK	THICK
THRD	THREADED
TOB	TOP OF BEAM
TOC	TOP OF COLUMN, TOP OF CURB, TOP OF CONCRETE
TOF	TOP OF FOOTING
TOJ	TOP OF JOIST
TOL	TOP OF LINTEL, LANDING
TOL	TOLERANCE
TOP	TOP OF PIER, TOP OF PLATE
TOPV	TOP OF PAVEMENT
TOS	TOP OF STEEL, TOP OF SLAB
TOW	TOP OF WALL
TRANS	TRANSVERSE
TRANSL	TRANSLUCENT
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UTIL	UTILITY
VERT	VERTICAL
VFY	VERIFY
VIF	VERIFY IN FIELD
W	SNOW DRIFT WIDTH
W/	WITH
W/O	WITHOUT
WCJ	WALL CONTRACTION JOINT
WD	WOOD
WF	WIDE FLANGE
WP	WORK POINT
WR	WATER RESISTANT, WATER RESISTIVE
WS	WATERSTOP
WT	WEIGHT
WWF	WELDED WIRE FABRIC

PROJECT DESCRIPTION:
1. PRE-ENGINEERED METAL BUILDING.
2. STEEL-FRAMED COVERED WALKWAY

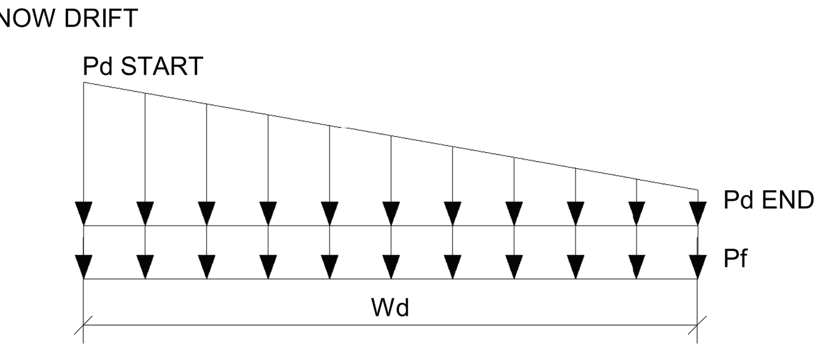
GENERAL:
1. THE STRUCTURAL DRAWINGS ARE A PORTION OF THE CONTRACT DOCUMENTS AND ARE INTENDED TO BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, CIVIL, MECHANICAL, AND ELECTRICAL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE REQUIREMENTS FROM THE ENTIRE SET OF CONTRACT DOCUMENTS (INCLUDING THE PROJECT SPECIFICATIONS) INTO THEIR WORK.
2. THESE GENERAL NOTES SUPPLEMENT THE PROJECT SPECIFICATIONS. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. NOTES AND DETAILS ON THE STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER THE GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.
4. VERIFY ALL DIMENSIONS WITH THE ARCHITECTURAL DRAWINGS.
5. DETAILS ON THESE PLANS ARE INTENDED TO DEPICT THE GENERAL CONSTRUCTION METHODS FOR THIS STRUCTURE. CONNECTIONS, DETAILS, AND CONDITIONS NOT SPECIFICALLY SHOWN THAT ARE SIMILAR TO THOSE THAT ARE SPECIFIED SHALL BE ASSUMED ONE AND THE SAME. IF QUESTIONS REGARDING THE APPLICATION OF DETAILS ARE ENCOUNTERED, NOTIFY THE ARCHITECT/ENGINEER FOR CLARIFICATION IN A TIMELY MANNER PRIOR TO BID OPENING.

CODE REQUIREMENTS:
1. CONFORM TO 2018 INTERNATIONAL BUILDING CODE AS ADOPTED W/ AMMENDMENTS BY THE 2020 NYS BUILDING CODE.
2. ALL REFERENCE TO OTHER CODES AND STANDARDS (ACI, ASCE, ASTM, ETC.) SHALL BE FOR THE EDITIONS LISTED IN CHAPTER 35 OF THE IBC.

TEMPORARY CONDITIONS:
1. THE STRUCTURE HAS BEEN DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT REQUIRED AS A RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES.
2. CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD.

DESIGN CRITERIA:
1. DESIGN CRITERIA ASSUMED FOR PRELIMINARY FOUNDATION DESIGN - VERIFICATION REQUIRED UPON RECEIPT OF MANUFACTURER'S ENGINEERED SHOP DRAWINGS AND BASE REACTION CALCULATIONS. DESIGN WAS BASED ON THE STRENGTH AND DEFLECTION CRITERIA OF THE IBC. IN ADDITION TO THE DEAD LOADS, THE FOLLOWING LOADS AND ALLOWANCES WERE USED FOR DESIGN, WITH LIVE LOADS (L.L.) REDUCED IN ACCORDANCE WITH THE IBC:

A. RISK CATEGORY		III
B. DEAD LOADS		UNIFORM
1. ROOF		
• 6" INSULATED METAL ROOF PANEL		6 PSF
• COLLATERAL		20 PSF
• TOTAL ROOF DEAD LOAD		26 PSF
C. LIVE LOADS	UNIFORM	CONCENTRATED
1. ROOF	20 PSF	2000 LBS
2. SLAB-ON-GRADE	200 PSF	2000 LBS
D. SNOW LOADS		UNIFORM
1. GROUND SNOW LOAD, Pg		40 PSF
2. FLAT ROOF SNOW LOAD, Pf		37 PSF
3. EXPOSURE FACTOR, Ce		1.0
4. THERMAL FACTOR, Ct		1.2
5. IMPORTANCE FACTOR, Is		1.1
6. SLOPE FACTOR, Cs		1.0
7. SLOPED ROOF SNOW LOAD, Ps & Pbal		37 PSF
8. UNBALANCED SLOPED ROOF SNOW LOAD		
A. WINDWARD - FROM EAVE TO RIDGE		12 PSF
B. LEEWARD - FROM RIDGE TO 8' - 0"		56 PSF
C. LEEWARE - FROM 8' 0" TO EAVE		37 PSF
9. SNOW DRIFT		N/A



LOCATION	Wd	Pd START (PSF)	Pd END (PSF)
COLUMN LINE 1	9' - 8"	46	0

E. WIND LOADS	
1. WIND VELOCITY, V_{ULT}	120 MPH
2. WIND VELOCITY, V_{ASD}	93 MPH
3. EXPOSURE CATEGORY	C
4. INTERNAL PRESSURE COEFFICIENT, GC_{pi}	+/-0.18
5. COMPONENTS & CLADDING PRESSURES - STRENGTH LEVEL	UNIFORM
• ZONE 1 - ROOF INTERIOR	+20/-63 PSF
• ZONE 2r - ROOF RIDGE	+20/-92PSF
• ZONE 2e - ROOF EAVE	+20/-63 PSF
• ZONE 2n - ROOF RAKE	+20/-63 PSF
• ZONE 3r - ROOF RIDGE CORNER	+20/-109PSF
• ZONE 3e - ROOF EAVE CORNER	+20/-92 PSF
• ZONE 4 - WALL SURFACE	+34/-37 PSF
• ZONE 5 - WALL CORNER	+34/-46 PSF
OVERHANG	
• ZONE 1 - ROOF INTERIOR	-77 PSF
• ZONE 2r - ROOF RIDGE	-106 PSF
• ZONE 2e - ROOF EAVE	-78 PSF
• ZONE 2n - ROOF RAKE	-106 PSF
• ZONE 3r - ROOF RIDGE CORNER	-141 PSF
• ZONE 3e - ROOF EAVE CORNER	-124 PSF
F. SEISMIC LOADS	
1. SITE CLASS	D
2. IMPORTANCE FACTOR, Ie	1.25
3. SEISMIC DESIGN CATEGORY	B
4. EARTHQUAKE SPECTRAL RESPONSE, Ss	0.171
5. EARTHQUAKE SPECTRAL RESPONSE (1 SECOND), S_1	0.053
6. DESIGN SPECTRAL RESPONSE, S_{DS}	0.183
7. DESIGN SPECTRAL RESPONSE (1 SECOND), S_{D1}	0.086
8. SEISMIC RESISTING SYSTEM	
• STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE	
9. RESPONSE MODIFICATION FACTOR, R	3.0
10. DEFLECTION AMPLIFICATION FACTOR, Cd	3
11. SEISMIC RESPONSE COEFFICIENT, Cs	0.076
12. BASE SHEAR, V	25 KIPS (ASD WIND)
13. ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE PER ASCE 7-16 SECTION 12.8

FOUNDATIONS:
1. FOUNDATION DESIGN IS BASED ON GEOTECHNICAL REPORT, DATED JUNE 28, 2024 AND ADDENDA PREPARED BY ATLANTIC TESTING LABORATORIES, REPORT # CD10726-E-01-06-24. SOIL BEARING PRESSURE NOT TO EXCEED 3000 PSF FOR FOOTINGS WITHIN BUILDING FOOTPRINT. REFER TO GEOTECHNICAL REPORT FOR ALL PROJECT REQUIREMENTS PERTAINING TO EARTHWORK, INCLUDING BUT NOT LIMITED TO, EXCAVATION, BACKFILLING, COMPACTION, AND MATERIALS.
2. FOUNDATION SYSTEM - CONCRETE WALLS, COLUMN PIERS, SLABS-ON-GRADE AND SPREAD FOOTINGS.
3. ALL FOOTINGS SHALL BE A MINIMUM OF 54" BELOW LOWEST FINAL GRADE FOR EXTERIOR FOOTINGS AND 12" FOR INTERIOR FOOTINGS FOR BEARING ON MEDIUM PLASTICITY SOILS.
4. FOUNDATION UNITS SHALL BE CENTERED UNDER SUPPORTED STRUCTURAL MEMBERS, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
5. THE CONTRACTOR SHALL REVIEW ALL GEOTECHNICAL ENGINEER RECOMMENDATIONS PRIOR TO THE COMMENCEMENT OF ANY SITE WORK.
6. STRUCTURAL FILL MATERIALS, PLACEMENT, AND COMPACTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
7. IMPORTED ENGINEERED STRUCTURAL FILL PLACED AS FILL BENEATH PROPOSED FOUNDATIONS/SLABS-ON-GRADE, AND AS BACKFILL, SHALL BE A MATERIAL CONSISTING OF PREDOMINATELY GRANULAR SOILS, FREE FROM ORGANIC MATTER, CLAY, ICE, DEBRIS, OR OTHER DELETERIOUS MATERIAL; SUCH AS IS OUTLINED IN THE GEOTECHNICAL REPORT . THE PROPOSED MATERIAL FOR ENGINEERED FILL SHALL BE REVIEWED AND APPROVED BY THE PROJECT ENGINEER.
8. PLACEMENT OF ALL FILL SHALL BE OBSERVED AND TESTED FOR RELATIVE COMPACTION BY A QUALIFIED TECHNICIAN UNDER THE GUIDANCE OF THE GEOTECHNICAL ENGINEER. MINIMUM TESTING FREQUENCY SHALL BE ESTABLISHED BY THE GEOTECHNICAL ENGINEER.
9. THE CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER PRIOR TO COMMENCEMENT OF FILLING OPERATIONS.
10. ALL GENERAL EXCAVATIONS AND FOOTINGS SHALL BE INSPECTED AND APPROVED PRIOR TO THE PLACEMENT OF ANY SOIL BACKFILL AND/OR CONCRETE.
11. ALL FILL, BACKFILL AND COMPACTION ACTIVITIES, PARTICULARLY DURING WET WEATHER CONDITIONS, SHALL FOLLOW RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
12. PLACE BACKFILL AND FILL MATERIALS IN HORIZONTAL LAYERS NOT MORE THAN 8" IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 6" IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS.
13. ALL FOUNDATION ELEMENTS ARE TO BE PLACED ON UNDISTURBED APPROVED NATIVE SOIL OR ON APPROVED COMPACTED STRUCTURAL FILL AS OUTLINED IN THE GEOTECHNICAL REPORT. STRUCTURAL FILL SHALL EXTEND 1'-0" MINIMUM BEYOND THE FOUNDATION ELEMENT AND THEN DOWNWARD TO NATURAL SOILS AT A SLOPE OF 2 HORIZ. TO 1 VERT.
14. BACKFILL AND FILL MATERIALS SHALL BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY ACCORDING TO THE MODIFIED PROCTOR TEST (ASTM D-1557).
15. BACKFILL AGAINST FOUNDATION WALLS BELOW GRADE SO THAT THE DIFFERENCE IN THE FILL LEVEL ON OPPOSITE SIDES OF THE WALL DOES NOT EXCEED 1'-0" AT ANY TIME.
16. EACH PRIME CONTRACTOR SHALL PROVIDE ALL TRENCHING WORK REQUIRED FOR ITS CONTRACT, INCLUDING TRENCH EXCAVATION, AND BACKFILL (WITH ACCEPTABLE FILL, SEE GEOTECHNICAL REPORT) TO WITHIN 1'-0" OF FINISH GRADE/FLOOR. ALL TRENCHING WORK WITHIN THE BUILDING FOOTPRINT SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. GENERAL CONTRACTOR MUST ACCEPT, IN WRITING, THE QUALITY OF THE TRENCH BACKFILL OF OTHER PRIME CONTRACTORS BEFORE BEGINNING WORK OVER THE TOP OF THE TRENCH.
17. EXCAVATION AND BACKFILL OPERATIONS SHALL BE MAINTAINED IN A DRY CONDITION. SURFACE AND INFILTRATING WATER SHALL BE REMOVED BY SITE GRADING AND PUMPING FROM SUMPS AS REQUIRED.
18. NO FOUNDATION CONCRETE SHALL BE PLACED IN WATER OR ON FROZEN SUBGRADE MATERIAL.
19. PROTECT IN-PLACE FOUNDATIONS AND SLABS FROM FROST PENETRATION UNTIL THE PROJECT IS COMPLETED.
20. THE CONTRACTOR IS RESPONSIBLE FOR EXCAVATION SAFETY. EXCAVATIONS MUST BE PERFORMED IN ACCORDANCE WITH THE CURRENT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS.
21. PROVIDE TEMPORARY OR PERMANENT SUPPORTS WHETHER SHORING, SHEETING OR BRACING SO THAT NO HORIZONTAL MOVEMENT OR VERTICAL SETTLEMENT OCCURS TO EXISTING STRUCTURES, STREETS OR UTILITIES ADJACENT TO THE PROJECT SITE.

CONCRETE:
1. ALL CONCRETE WORK SHALL CONFORM TO "ACI 318 - BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND CHAPTER 19 OF THE NEW YORK STATE BUILDING CODE.
2. CONCRETE STRENGTHS SHALL BE VERIFIED BY STANDARD 28-DAY CYLINDER TESTS PER ASTM C39, UNLESS NOTED OTHERWISE, AND SHALL BE AS INDICATED IN SPECIFICATION 03300 & BELOW

LOCATION	EXPOSURE CLASS F S W C	AIR CONTENT	f'c psi	MAX W/C RATIO
INT. SLAB-ON-GRADE	F0 S0 W0 C0	1.0% - 3.0%	4000	0.50
EXT. SLAB-ON-GRADE	F3 S0 W0 C2	4.5% - 7.5%	5000	0.40
PIERS/FDN/RETAINING WALLS	F2 S0 W0 C1	4.5% - 7.5%	4500	0.45
FOOTINGS	F0 S1 W0 C1	1.0% - 3.0%	4000	0.50

3. MINIMUM CEMENT CONTENT PER CUBIC YARD SHALL BE AS INDICATED IN ACI 301 TABLE 4.2.2.1 & SPECIFICATION 033000.
4. THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS, ALONG WITH TEST DATA COMPLIANT WITH ACI-318 CHAPTER 5, A MINIMUM OF TWO WEEKS PRIOR TO PLACING CONCRETE.
5. UNLESS NOTED OTHERWISE, ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE (±145 PCF) WITH ALL CEMENT CONFORMING TO ASTM C150, TYPE I / II. MAXIMUM AGGREGATE SIZE SHALL BE 1-1/2" FOR FOOTINGS AND 3/4" FOR WALLS AND SLABS, CONFORMING TO ASTM C33.
6. NO WATER MAY BE ADDED TO CONCRETE IN THE FIELD UNLESS IT CONFORMS TO THE APPROVED MIX DESIGN AND IS SPECIFICALLY APPROVED IN WRITING BY THE CONCRETE SUPPLIER.
7. NOTE 7 REMOVED.
8. A WATER REDUCING ADMIXTURE CONFORMING TO ASTM C494 USED IN STRICT CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS SHALL BE INCORPORATED INTO CONCRETE MIX DESIGNS. A HIGH RANGE WATER REDUCING ADMIXTURE CONFORMING TO ASTM C494 TYPE "F" OR TYPE "G" MAY BE USED IN CONCRETE MIXES, PROVIDED THAT THE SLUMP DOES NOT EXCEED 10-INCHES.
9. CONCRETE SHALL BE PLACED IN ONE CONTINUOUS OPERATION WHEREVER PRACTICAL. CONSTRUCTION JOINTS IN BEAMS, JOISTS, AND SLABS SHALL BE LOCATED AT MID-SPAN WITH REINFORCING CONTINUING THROUGH AS IF THE JOINT DID NOT OCCUR. VERTICAL CONSTRUCTION JOINTS IN WALLS SHALL BE LOCATED MIDWAY BETWEEN COLUMNS OR PILASTERS.
10. SLEEVES, OPENING, CONDUITS, AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO PLACING CONCRETE. CONDUITS EMBEDDED IN SLABS SHALL NOT BE LARGER IN OUTSIDE DIMENSION THAN ONE-THIRD THE THICKNESS OF THE SLAB AND SHALL NOT BE SPACED CLOSER THAN THREE DIAMETERS ON-CENTER.
11. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR THE LAYOUT OF CONSTRUCTION AND CONTROL JOINTS FOR CONCRETE SLABS-ON-GRADE. THE JOINTS SHALL BE LOCATED AT MAXIMUM 10'-0" ON-CENTER, EACH WAY, FORMING RECTANGLES WITH A LENGTH TO WIDTH RATIO NOT EXCEEDING 1.5 IN ANY DIRECTION. CONTROL JOINTS SHALL INTERSECT AT COLUMN BLOCKOUTS, AT ENDS OF BEARING WALLS, AND AT ALL RE-ENTRANT CORNERS IN THE SLAB.
12. ALL BOLTS AND/OR ANCHOR RODS EMBEDDED INTO CONCRETE SHALL CONFORM TO ASTM SPECIFICATION F1554 GRADE 36 UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS.
13. ANCHOR RODS ARE TO BE LOCATED BY MEANS OF TEMPLATE. ANCHOR RODS SHALL NOT BE HAND SET OR WET SET.
14. ANCHOR RODS AND EMBEDDED ITEMS SHALL BE SET IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE SECTION 7.5.
15. WHERE NEW CONCRETE IS PLACED AGAINST EXISTING CONCRETE, THE EXISTING CONCRETE SURFACE SHALL BE CLEANED AND ROUGHENED TO A MINIMUM 1/4" AMPLITUDE.
16. PROVIDE 3/4" CHAMFERS ON ALL EXPOSED CONCRETE EDGES, UNLESS NOTED OTHERWISE.
17. PREPARATION, CONSTRUCTION, AND PROTECTION OF CONCRETE DURING COLD WEATHER OR HOT WEATHER SHALL CONFORM TO ACI 318 26.5.4, 26.5.5, AND ACI 306R AND 305R.

DATE: 01.23.24
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1	11/1/2024	ADDENDUM #1

RHINEBECK WTP IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NY

GENERAL STRUCTURAL NOTES

SHEET:
S001

REINFORCING STEEL:

1. REINFORCING STEEL SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE TO “ACI 318 — BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE” AND “ACI 315—MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES.”

2. ALL REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS AND GRADES UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS:

   A. SMOOTH WELDED WIRE FABRIC—ASTM A185
   B. ALL OTHER REINFORCEMENT—ASTM A615, GRADE 60

3. REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A706. WELDING OF REINFORCING STEEL SHALL CONFORM TO AWS D1.4. ALL WELDING SHALL BE DONE BY AWS CERTIFIED WELDERS USING LOW HYDROGEN E70XX ELECTRODES.

4. REINFORCING STEEL SHALL BE SECURELY TIED IN-PLACE WITH #16 ANNEALED IRON WIRE. BARS IN BEAMS, SLABS, AND FOUNDATIONS SHALL BE SUPPORTED ON WELL-CURED CONCRETE BLOCKS, OR APPROVED METAL CHAIRS, AS SPECIFIED BY THE “CRSI MANUAL OF STANDARD PRACTICE,” MSP-1.

5. ALL REINFORCEMENT SHALL BE FREE OF LOOSE MILL AND RUST SCALE, OIL, DIRT, OR COATINGS OF ANY KIND THAT REDUCE THE BOND STRENGTH TO THE CONCRETE.

6. REINFORCEMENT STEEL SHALL NOT BE DISPLACED OR ALTERED FOR THE CONVENIENCE OF OTHER TRADES UNLESS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.

7. “WET SETTING” OF REINFORCING STEEL, ANCHOR RODS, EMBEDDED PLATES AND INSERTS IS NOT PERMITTED.

8. ALL REINFORCEMENT SHALL BE CONTINUOUS WITH ADEQUATE LAP LENGTHS AT SPLICE LOCATIONS.

9. THE FOLLOWING MINIMUM LAP SPLICE LENGTHS SHALL BE PROVIDED FOR ALL REINFORCING STEEL:

TYPICAL LAP SPLICE SCHEDULE (IN)

BAR SIZE	4,000 PSI		4,500 PSI		5,000 PSI	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	16	16	16	16	16	16
#4	20	16	19	16	19	16
#5	25	20	24	19	23	17
#6	30	24	28	23	26	21
#7	49	38	46	36	43	34
#8	62	47	58	45	55	42
#9	76	58	71	55	68	52
#10	91	71	86	67	82	64
#11	110	85	103	80	98	76

   A. FOR CENTER-TO-CENTER SPACING LESS THAN SHOWN BELOW MULTIPLY THE ABOVE VALUES BY THE FACTOR INDICATED:

BAR	SPACING	FACTOR
#3	< 1.875"	1.5
#4	< 2.500"	1.7
#5	< 3.125"	2.0
#6	< 3.750"	2.2
#7	< 3.875"	2.1
#8	< 4.000"	2.0
#9	< 4.125"	1.9
#10	< 4.375"	1.7
#11	< 4.500"	1.6

   B. TABLE VALUES APPLY FOR CLEAR COVER GREATER THAN OR EQUAL TO 1-1/2". CONTACT ENGINEER OF RECORD IF CONDITIONS VARY.

   C. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BAR.

   D. VALUES ARE FOR UNCOATED BARS.

10. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR ALL REINFORCING STEEL:

MINIMUM CONCRETE COVER (CAST-IN-PLACE)

USE	CLEAR COVER
FORMED CONCRETE SURFACES IN CONTACT W/ EARTH OR EXPOSED TO WEATHER	2" CLEAR COVER 1.5" CLEAR COVER TO TIES
SLAB-ON-GRADE BARS	2" CLEAR COVER FROM TOP OF SLAB
CONCRETE CAST AGAINST EARTH	3"

11. CONTINUE HORIZONTAL WALL BARS THROUGH PILASTERS, COLUMNS AND INTERSECTING WALLS.

12. PROVIDE HOOKED FOOTING DOWELS OF THE SAME SIZE AND SPACING AS THE VERTICAL WALL REINFORCEMENT. LAP SPLICE DOWELS TO THE VERTICAL WALL REINFORCEMENT AND TERMINATE WITH STANDARD 90 DEGREE HOOK INTO THE FOOTING. HOOK SHALL LAY IN-PLANE WITH BOTTOM REINFORCEMENT.

13. AT SLAB AND WALL OPENINGS, PROVIDE A MINIMUM OF TWO #5 BARS OVER, UNDER, AND AT THE SIDES OF THE OPENING. EXTEND THESE BARS A LAP DISTANCE (OR A MINIMUM OF 2’-0”) PAST THE OPENING ON ALL SIDES.

14. PROVIDE ONE #5 FOR SINGLE LAYER, AND TWO #5 FOR DOUBLE LAYER REINFORCING, 4’-0” LONG, DIAGONALLY AT EACH CORNER OF ALL WALL AND SLAB OPENINGS.

15. REFERENCE TYPICAL DETAILS FOR THE DISPOSITION OF REINFORCEMENT AT WALL CORNERS, WALL INTERSECTIONS, AND FOR BARS IN SMALL WALL SECTIONS.

16. PROVIDE #5 CARRIER BAR AT 3’-0” MAX SPACING FOR ALL SLAB, JOIST, AND WALL REINFORCING NOT SUPPORTED BY OTHER TRANSVERSE REINFORCEMENT.

17. PROVIDE CORNER BARS AT CORNERS AND INTERSECTIONS FOR WALLS AND FOUNDATIONS EQUAL IN SIZE, NUMBER, AND SPACING TO HORIZONTAL REINFORCING. SIZE CORNER BARS TO PROVIDE A FULL LAP WITH HORIZONTAL REINFORCMENT ON EACH LEG.

SHORING AND RE-SHORING:

1. SHORING AND RE-SHORING IS THE CONTRACTOR’S RESPONSIBILITY AND SHALL CONFORM TO ACI 347-04 AND ACI 347.2R-05.

2. SHORING AND SUPPORTING FORMWORK SHALL NOT BE REMOVED FROM HORIZONTAL MEMBERS BEFORE THE CONCRETE STRENGTH HAS REACHED AT LEAST 70 PERCENT OF THE SPECIFIED DESIGN STRENGTH AS DETERMINED FROM FIELD CURED CYLINDERS. IN ADDITION, SHORING SHALL NOT BE REMOVED SOONER THAN THE FOLLOWING:

SHORING AND RE-SHORING

ELEMENT	MINIMUM REMOVAL TIME	COMMENTS
WALLS, COLUMNS, AND BEAM SIDES	12 HR. CUMULATIVE WITH 50 DEGREES FARENHEIT SURROUNDING TEMPERATURE	WHERE FORMS ALSO SUPPORT FORMWORK FOR SLABS OR SOFFITS, THE REMOVAL TIME OF THE LATTER GOVERNS

CONCRETE ACCESSORIES:

1. DEFORMED BAR ANCHORS (D.B.A.) SHALL BE NELSON TYPE D2L (ICC ESR-2907) OR APPROVED EQUAL.

2. HEADED SHEAR STUDS SHALL BE NELSON HEADED ANCHORS WITH FLUXED ENDS (ICC ESR-2856) OR APPROVED EQUAL.

3. HEADED SHEAR STUDS AND DEFORMED BAR ANCHORS SHALL BE AUTOMATICALLY END-WELDED WITH THE MANUFACTURER’S STANDARD EQUIPMENT AND IN ACCORDANCE WITH THE ASSOCIATED ICC REPORTS.

4. PERMANENTLY EXPOSED EMBEDDED PLATES AND ANGLES SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION. EMBEDDED ITEMS SHALL NOT BE LOADED, NOR SHALL WELDS BE APPLIED, FOR A MINIMUM OF 7-DAYS AFTER CASTING OF CONCRETE.

5. PROVIDE WATERSTOPS AT ALL HORIZONTAL AND VERTICAL CONCRETE JOINTS WHERE INDICATED ON DRAWINGS AND DETAILS. WATERSTOPS INDICATED TO BE HYDROPHLLIC STRIP WATERSTOP SHALL MAINTAIN A MINIMUM CLEAR COVER OF 3 INCHES. REFER TO MANUFACTURER'S WRITTEN INSTRUCTIONS FOR ADDITIONAL INFORMATION.

6. APPROVED POST-INSTALLED ANCHORS ARE AS FOLLOWS:

APPROVED POST-INSTALLED CONCRETE ANCHORS

TYPE	ANCHOR	ICC REPORT
CONCRETE SCREW	SIMPSON TITEN HD	ICC ESR-2713
	HILTI KWIK HUS-EZ	ICC ESR-3027
EPOXY ADHESIVE	SIMPSON SET-XP	ICC ESR-2508
	HILTI HIT-RE 500V3	ICC ESR-2322
EXPANSION	SIMPSON STRONG-BOLT II	ICC ESR-3814
	HILTI KWIK BOLT TZ	ICC ESR-1917

   A. ALL ANCHORS SHALL BE INSTALLED IN STRICT CONFORMANCE TO THE APPLICABLE ICC REPORT.

   B. REINFORCEMENT SHALL NOT BE CUT IN NEW, OR EXISTING CONCRETE DURING INSTALLATION OF POST-INSTALLED ANCHORS.

   C. ANCHORS THAT ARE LEFT EXPOSED TO WEATHER SHALL BE STAINLESS STEEL OR HOT-DIPPED GALVANIZED.

EPOXY REPAIR ADHESIVE:

1. EPOXY REPAIR ADHESIVE SHALL CONFORM TO ASTM C881 AND SHALL BE A TWO-COMPONENT, LIQUID EPOXY WITH NON-SAG CONSISTENCY AND LONG POT LIFE. THE EPOXY ADHESIVE SHALL BE SUITABLE FOR USE ON DRY OR DAMP SURFACES.

2. ADHESIVE SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS:
   A. 14 DAY BOND STRENGTH (SLANT SHEAR) = 1690 PSI
   B. 7 DAY TENSILE STRENGTH = 7150 PSI
   C. 7 DAY COMPRESSIVE STRENGTH = 12000 PSI
   D. LINEAR COEFFICIENT OF SHRINKAGE = 0.008 (MAX VALUE)

3. HOLE SIZES AND INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND THE REQUIREMENTS SET FORTH IN THE APPROVED ICC EVALUATION REPORT.

4. REINFORCEMENT SHALL NOT BE CUT OR DAMAGED IN EITHER NEW OR EXISTING CONCRETE DURING INSTALLATION.

PRE-ENGINEERED METAL BUILDING (PEMB):

1. THE PRE-ENGINEERED BUILDING SUPPLIER SHALL FURNISH THE FRAME REACTIONS TO THE ENGINEER OF RECORD, PRIOR TO COMMENCEMENT OF FOUNDATION CONSTRUCTION. THE REACTIONS FURNISHED SHALL BE THE MAXIMUM, WORST-CASE REACTIONS RESULTING FROM LOAD CASES.

2. SUBMIT ENGINEERED AND CHECKED SHOP DRAWINGS AND CALCULATIONS TO THE ENGINEER FOR REVIEW. SHOP DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER IN THE LOCAL JURISDICTION. SUBMITTALS SHALL INCLUDE PLANS LOCATING AND DEFINING ALL ELEMENTS FURNISHED BY THE MANUFACTURER, WITH ALL MAJOR OPENINGS SHOWN. SECTIONS AND DETAILS SHOWING CONNECTIONS, BASEPLATES, WALL CONDITIONS AND ROOF CONDITIONS OF THE PRE-ENGINEERED BUILDING. ALL SUBMITTAL MATERIAL MUST BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION AND INSTALLATION.

3. THE PRE-ENGINEERED BUILDING SUPPLIER SHALL FURNISH ANCHOR ROD INFORMATION TO THE FOUNDATION CONTRACTOR. ANCHOR ROD PATTERNS SHOWN ON THE FOUNDATION DETAILS ARE SCHEMATIC ONLY. THE GENERAL CONTRACTOR SHALL FURNISH AND SUPPLY THE ANCHOR RODS FOR INSTALLATION IN FOUNDATIONS.

4. ALL ANCHOR RODS SHALL BE F1554 GRADE 36. EMBED ANCHOR RODS 18" MINIMUM INTO CONCRETE PIERS; FINAL ANCHOR BOLT LAYOUT AND EMBEDMENTS SHALL BE CONFIRMED UPON RECEIPT OF PEMB REACTIONS AND DRAWINGS.

5. ALL STEEL SHALL BE FACTORY PRIMED..

6. PRE-ENGINEERED METAL BUILDING STEEL SHALL BE AS FOLLOWS:

   A. RIGID CLEAR SPAN FRAMES: I-SHAPED FRAME SECTIONS FABRICATED FROM SHOP-WELDED, BUILT-UP STEEL PLATES OR STRUCTURAL-STEEL SHAPES. INTERIOR COLUMNS WHERE SHOWN SHALL BE FABRICATED FROM ROUND STEEL PIPES OR TUBES, OR SHOP-WELDED, BUILT-UP STEEL PLATES.
      a. FRAME CONFIGURATION: SINGLE GABLE.
      b. EXTERIOR COLUMN: TAPERED.
      c. RAFTER: TAPERED.

   B. END-WALL FRAMING: MANUFACTURER'S STANDARD PRIMARY END-WALL FRAMING FABRICATED FOR FIELD-BOLTED ASSEMBLY TO COMPLY WITH THE FOLLOWING:
      a. END-WALL RAFTERS: C-SHAPED, COLD-FORMED, STRUCTURAL-STEEL SHEET; OR I-SHAPED SECTIONS FABRICATED FROM SHOP-WELDED, BUILT-UP STEEL PLATES OR STRUCTURAL-STEEL SHAPES.

   C. SECONDARY FRAMING: MANUFACTURER'S STANDARD SECONDARY FRAMING, INCLUDING PURLINS, GIRTS, EAVE STRUTS, FLANGE BRACING, BASE MEMBERS, GABLE ANGLES, CLIPS, HEADERS, JAMBS, AND OTHER MISCELLANEOUS STRUCTURAL MEMBERS. UNLESS OTHERWISE INDICATED, FABRICATE FRAMING FROM EITHER COLD-FORMED, STRUCTURAL-STEEL SHEET OR ROLL-FORMED, METALLIC-COATED STEEL SHEET, PREPAINTED WITH COIL COATING, TO COMPLY WITH THE FOLLOWING:
      a. PURLINS: C- OR Z-SHAPED SECTIONS; FABRICATED FROM BUILT-UP STEEL PLATES, STEEL SHEET, OR STRUCTURAL-STEEL SHAPES; MINIMUM 2-1/2-INCH- (64-MM-) WIDE FLANGES.
      b. GIRTS: C- OR Z-SHAPED SECTIONS; FABRICATED FROM BUILT-UP STEEL PLATES, STEEL SHEET, OR STRUCTURAL-STEEL SHAPES. FORM ENDS OF Z-SECTIONS WITH STIFFENING LIPS ANGLED 40 TO 50 DEGREES FROM FLANGE, WITH MINIMUM 2-1/2-INCH- (64-MM-) WIDE FLANGES.
      c. EAVE STRUTS: UNEQUAL-FLANGE, C-SHAPED SECTIONS; FABRICATED FROM BUILT-UP STEEL PLATES, STEEL SHEET, OR STRUCTURAL-STEEL SHAPES; TO PROVIDE ADEQUATE BACKUP FOR METAL PANELS.
      d. FLANGE BRACING: MINIMUM 2-BY-2-BY-1/8-INCH (51-BY-51-BY-3-MM) STRUCTURAL-STEEL ANGLES OR 1-INCH- (25-MM-) DIAMETER, COLD-FORMED STRUCTURAL TUBING TO STIFFEN PRIMARY-FRAME FLANGES.
      e. SAG BRACING: MINIMUM 1-BY-1-BY-1/8-INCH (25-BY-25-BY-3-MM) STRUCTURAL-STEEL ANGLES.
      f. BASE OR SILL ANGLES: MANUFACTURER'S STANDARD BASE ANGLE, MINIMUM 3-BY-2-INCH (76-BY-51-MM), FABRICATED FROM ZINC-COATED (GALVANIZED) STEEL SHEET.
      g. PURLIN AND GIRT CLIPS: MANUFACTURER'S STANDARD CLIPS FABRICATED FROM STEEL SHEET. PROVIDE GALVANIZED CLIPS WHERE CLIPS ARE CONNECTED TO GALVANIZED FRAMING MEMBERS.
      h. FRAMING FOR OPENINGS: CHANNEL SHAPES; FABRICATED FROM COLD-FORMED, STRUCTURAL-STEEL SHEET OR STRUCTURAL-STEEL SHAPES. FRAME HEAD AND JAMB OF DOOR OPENINGS AND HEAD, JAMB, AND SILL OF OTHER OPENINGS.

   D. BRACING: PROVIDE ADJUSTABLE WIND BRACING AS FOLLOWS:
      a. RIGID PORTAL FRAMES: FABRICATED FROM SHOP-WELDED, BUILT-UP STEEL PLATES OR STRUCTURAL-STEEL SHAPES TO MATCH PRIMARY FRAMING; OF SIZE REQUIRED TO WITHSTAND DESIGN LOADS.

ALUMINUM:

1. STRUCTURAL ALUMINUM SHALL BE DOMESTIC ALLOY 6061-T6. QUALITY, FABRICATIONS, ASSEMBLY, AND ERECTION SHALL BE IN ACCORDANCE WITH THE ALUMINUM ASSOCIATION'S SPECIFICATION FOR ALUMINUM STRUCTURES, LATEST EDITION.

   MATERIAL

A.	SHEET AND PLATE:	ASTM B209
B.	ROLLED BARS AND RODS:	ASTM B211
C.	EXTRUDED BARS, RODS, SHAPES, AND TUBES:	ASTM B221
D.	ROLLED OR EXTRUDED STRUCTURAL SHAPES:	ASTM B308
E.	EXTRUDED STRUCTURAL PIPE AND TUBE:	ASTM B429

2. FASTENERS: UNLESS DETAILED OTHERWISE, ALL FASTENERS SHALL BE 316 STAINLESS STEEL. ALUMINUM BOLTS, WHERE SPECIFIED SHALL BE 2024-T4 OR 6061-T6 ALLOY.

3. ALL WELDING SHALL CONROM WITH AWS D.1.2, LATEST STRUCTURAL WELDING CODE-ALUMINUM.

4. DESIGN AND DETAILING OF THE CONNECTIONS IS THE RESPONSIBILITY OF THE FABRICATOR AND FABRICATOR'S ENGINEER. ENGINEER SHALL BE REGISTERED IN THE LOCAL JURISDICTION. USE RATIONAL ENGINEERING DESIGN AND STANDARD PRACTICE FOR THE CRITERIA SET FORTH IN THE CONTRACT DOCUMENTS. THE DETAILS SHOWN ON THE DRAWINGS ARE CONCEPTUAL AND DO NOT INDICATE THE REQUIRED WELD SIZES OR NUMBER OF BOLTS UNLESS SPECIFICALLY NOTED.

5. ALL ALUMINUM ITEMS SHALL BE ANODIZED UNLESS OTHERWISE NOTED. ANODIZING FINISH SHALL COMPLY WITH STANDARDS FOR ANODIZED ARCHITECTURAL ALUMINUM BY THE ALUMINUM ASSOCIATION. DO NOT ANODIZE ALUMINUM SURFACES WITHIN 3 INCHES OF ANY SURFACE INDICATED TO BE FIELD WELDED. ANODIZED FINISH SHALL BE CLEAR ANODIZED PER AA-M10C11C21A41 WITH A MINIMUM 0.7 MIL COATING.

6. WHERE THE CONTACT OF DISSIMILAR METALS MAY CAUSE ELECTROLYSIS OR WHERE ALUMINUM WILL COME IN CONTACT WITH CONCRETE, MORTAR OR PLASTER, THE CONTACT SURFACE OF THE ALUMINUM SHALL BE COATED WITH 1 COAT OF ZINC CHROMATE PRIMER AND 1 HEAVY COAT OF ALUMINUM PIGMENTED ASPHALT PAINT.

7. THOROUGHLY CLEAN STRUCTURAL ALUMINUM. REMOVE OIL, GREASE, AND SIMILAR CONTAMINANTS IN ACCORDANCE WITH SSPC SP-1 "SOLVENT CLEANING".

8. ALUMINUM GRATING & STAIR TREADS SHALL BE 6063-T6 AND HAVE A CLEAR ANODIZED PER AA-M10C11C21A41 WITH A MINIMUM 0.7 MIL COATING.

DATE:	01.23.24
DRAWN BY:	EK
SCALE:	12" = 1'-0"
REVIEWED BY:	CAM
PROJECT NO.:	22-2496
FILE:	

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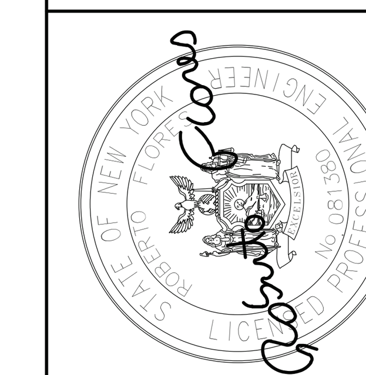

REVISIONS

NO.	DATE	DESCRIPTION
1	11/1/2024	ADDENDUM #1

RHINEBECK WTP IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NY

GENERAL STRUCTURAL NOTES

SHEET:
S002

SPECIAL INSPECTIONS - STEEL

Inspections & Test	Cont.	Per.	IBC Ref.	Required For Project	Referenced Standard
Steel Construction				Yes	
1. Structural Steel				Yes	
a. Inspection Tasks Prior To Welding				Yes	
iii. Manufacturer certifications for welding consumables available		X	1705.2.1	Yes	AISC 360 Table N.5.4-1
i. Welder Qualification records and continuity records	X		1705.2.1	Yes	AISC 360 Table N.5.4-1
ii. Welding Procedure Specifications (WPS) Available	X		1705.2.1	Yes	AISC 360 Table N.5.4-1
iv. Material identification (type/grade)		X	1705.2.1	Yes	AISC 360 Table N.5.4-1
v. Welder identification system		X	1705.2.1	Yes	AISC 360 Table N.5.4-1
vi. Fit up of groove welds (including joint geometry)		X	1705.2.1	Yes	AISC 360 Table N.5.4-1
vii. Fit up of CJP groove welds of HSS, T-, Y-, and K-joints without backing (including joint geometry)		X	1705.2.1	Yes	AISC 360 Table N.5.4-1
viii. Configuration and finish of access holes		X	1705.2.1	Yes	AISC 360 Table N.5.4-1
ix. Fit-up of fillet welds		X	1705.2.1	Yes	AISC 360 Table N.5.4-1
x. Check Welding equipment		X	1705.2.1	Yes	AISC 360 Table N.5.4-1
b. Inspection Tasks During Welding				Yes	
i. Control and Handling of welding consumables.		X	1705.2.1	Yes	AISC 360 Table N.5.4-2
ii. No welding over cracked tack welds.		X	1705.2.1	Yes	AISC 360 Table N.5.4-2
iii. Environmental Conditions		X	1705.2.1	Yes	AISC 360 Table N.5.4-2
iv. Verify WPS followed		X	1705.2.1	Yes	AISC 360 Table N.5.4-2
v. Verify Welding Techniques		X	1705.2.1	Yes	AISC 360 Table N.5.4-2
vi. Placement and installation of steel headed stud anchors		X	1705.2.1	Yes	AISC 360 Table N.5.4-2
c. Inspection Tasks after Welding				Yes	
i. Welds cleaned		X	1705.2.1	Yes	AISC 360 Table N.5.4-3
ii. Size, length, and location of welds	X		1705.2.1	Yes	AISC 360 Table N.5.4-3
iii. Welds meet visual acceptance criteria	X		1705.2.1	Yes	AISC 360 Table N.5.4-3
iv. Arc strikes	X		1705.2.1	Yes	AISC 360 Table N.5.4-3
v. K-area		X	1705.2.1	Yes	AISC 360 Table N.5.4-3
vi. Weld access holes in rolled heavy shapes and built-up heavy shapes	X		1705.2.1	Yes	AISC 360 Table N.5.4-3
vii. Backing removed and weld tabs removed (if required)	X		1705.2.1	Yes	AISC 360 Table N.5.4-3
viii. Repair activities	X		1705.2.1	Yes	AISC 360 Table N.5.4-3
iv. Document acceptance or rejection of welded joint or member	X		1705.2.1	Yes	AISC 360 Table N.5.4-3
x. No prohibited welds have been added without the approval of the EOR		X	1705.2.1	Yes	AISC 360 Table N.5.4-3
d. Inspection Tasks Prior to Bolting				Yes	
i. Manufacturer's certification available for fastener materials	X		1705.2.1	Yes	AISC 360 Table N.5.6-1
ii. Fasteners marked in accordance with ASTM requirements		X	1705.2.1	Yes	AISC 360 Table N.5.6-1
iii. Proper fasteners selected for the joint detail (grade, type, bolt length if threads are to be excluded from shear plane)		X	1705.2.1	Yes	AISC 360 Table N.5.6-1
iv. Proper bolting procedure selected for joint detail		X	1705.2.1	Yes	AISC 360 Table N.5.6-1
v. Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements.		X	1705.2.1	Yes	AISC 360 Table N.5.6-1
vi. Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and methods used.		X	1705.2.1	Yes	AISC 360 Table N.5.6-1
vii. Proper storage provided for bolts, nuts, washers and other fastener components. X 1705.2.11 AISC 360 Table N5.6-1		X	1705.2.1	Yes	AISC 360 Table N.5.6-1
e. Inspection Tasks During Bolting				Yes	
i. Fastener assemblies, of suitable condition, placed in all holes and washers (if required) are positioned as required.		X	1705.2.1	Yes	AISC 360 Table N.5.6-2
ii. Joint brought to the snug-tight condition prior to the pretensioning operation.		X	1705.2.1	Yes	AISC 360 Table N.5.6-2
iii. Fastener component not turned by the wrench prevented from rotating.		X	1705.2.1	Yes	AISC 360 Table N.5.6-2
iv. Fasteners are pretensioned in accordance with the RCSC Specification, progressing systematically from the most rigid point toward the free edges.		X	1705.2.1	Yes	AISC 360 Table N.5.6-2
f. Inspection Tasks After Bolting				Yes	
i. Document acceptance or rejection of bolted connections.	X		1705.2.1	Yes	AISC 360 Table N.5.6-3

SPECIAL INSPECTIONS - CONCRETE

Inspections & Test	Cont.	Per.	IBC Ref.	Required For Project	Referenced Standard
Concrete Construction				Yes	
1. Inspect reinforcement, including prestressing tendons, and verify placement.		X	1705.3	Yes	ACI 318 Ch. 20, 25.2, 25.3, 26.6.1-26.6.3 IBC 1908.4
2 Reinforcing Bar Welding:			1705.3	No	
a. Verify weldability of reinforcing bars other than ASTM A706:		X	1705.3	No	AWS D1.4 ACI 318: 26.6.4
b. Inspect single pass fillet welds, maximum 5/16" ACI 318: 26.6.4		X	1705.3	No	AWS D1.4 ACI 318: 26.6.4
c. Inspect all other welds	X		1705.3	No	AWS D1.4 ACI 318: 26.6.4
3. Inspect anchors cast in concrete.		X	1705.3	Yes	ACI 318: 17.8.2
4. Inspect anchors post-installed in hardened concrete members.			1705.3	Yes	
a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads.	X		1705.3	Yes	ACI 318: 17.8.2.4
b. Mechanical anchors and adhesive anchors not defined in item 4a.		X	1705.3	Yes	ACI 318: 17.8.2
5. Verify use of required design mix		X	1705.3	Yes	ACI 318: Ch. 19, 26.4.3, 26.4.4; IBC 1904.1, 1904.2, 1908.2, 1908.3
6. Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of concrete.	X		1705.3	Yes	ASTM C172, ASTM C31; ACI 318: 26.5, 26.12; IBC 1908.10
7. Inspect concrete and shotcrete placement for proper application techniques.	X		1705.3	Yes	ACI 318: 26.5; IBC 1908.6, 1908.7, 1908.8
8. Verify maintenance of specified curing temperature and techniques.		X	1705.3	Yes	ACI 318: 26.5.3-26.5.5 IBC: 1908.9
9. Inspect Prestressed concrete for:			1705.3	No	
a. Application of prestressing forces	X		1705.3	No	ACI 318: 26.10
b. Grouting of bonded prestressing tendons	X		1705.3	No	ACI 318: 26.10
10. Inspect erection of precast concrete members		X	1705.3	No	ACI 318: Ch. 26.9
11. Verify in-situ concrete strength, prior to stressing tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs.		X	1705.3	No	ACI 318: 26.11.2
12. Inspect formwork for shape, location and dimensions of the concrete member being formed.		X	1705.3	Yes	ACI 318: 26.11.2b
13. Fabricated Items - Precast Concrete		X	1704.2.5; 1705.10	No	

SPECIAL INSPECTIONS - FOUNDATIONS

Inspections & Test	Cont.	Per.	IBC Ref.	Required For Project	Referenced Standard
Foundations				Yes	
A. Soils				Yes	
1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.		X	1705.6	Yes	
2. Verify excavations are extended to a proper depth and have reached proper material.		X	1705.6	Yes	
3. Perform classification and testing of compacted fill materials.		X	1705.6	Yes	
4. Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill.	X		1705.6	Yes	
5. Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly.		X	1705.6	Yes	
B. Driven Deep Foundations				No	
1. Verify element materials, sizes and lengths, comply with the requirements.	X		1705.7	No	
2. Determine capacities of test elements and conduct additional load tests, as required.	X		1705.7	No	
3. Inspect driving operations and maintain complete and accurate records for each elements	X		1705.7	No	
4. Verify placement locations and plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and document any damage to foundation element.	X		1705.7	No	
5. For steel elements, perform additional special inspections in accordance with Section 1705.2.	--	--	1705.7	No	
6. For concrete elements and concrete-filled elements, perform tests and additional special inspections in accordance with Section 1705.3.	--	--	1705.7	No	
7. For specialty elements, perform additional inspections as determined by the registered design professional in responsible charge.	--	--	1705.7	No	
C. Cast-in-place Deep Foundations				No	
1. Inspect drilling operations and maintain complete and accurate records for each element.	X		1705.8	No	
2. Verify placement locations and plumbness, confirm element diameters, bell diameters (if applicable), lengths, embedment into bedrock (if applicable) and adequate end-bearing strata capacity. Record concrete or grout volumes.	X		1705.8	No	
3. For concrete elements, perform tests and additional special inspections in accordance with Section 1705.3.	--	--	1705.8	No	
D. Helical Pile Foundations	X		1705.9	No	

SPECIAL INSPECTION AND TESTING:

1. SPECIAL INSPECTION WILL BE PROVIDED BY THE OWNER BASED ON THE REQUIREMENTS OF THE CURRENT EDITION OF THE NYSBC AS SUMMARIZED IN THE SPECIAL INSPECTION AND TESTING PROGRAM ON SHEET S003. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE AND ACCESS FOR THE SPECIAL INSPECTOR TO PERFORM THESE INSPECTIONS.

STRUCTURAL OBSERVATION:

1. THE STRUCTURAL ENGINEER OF RECORD (SER) WILL PERFORM STRUCTURAL OBSERVATIONS BASED ON THE REQUIREMENTS OF THE IBC AT THE STAGES OF CONSTRUCTION LISTED BELOW. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE AND ACCESS FOR THE SER TO PERFORM THESE OBSERVATIONS:

STRUCTURAL OBSERVATIONS

CONSTRUCTION PHASE	OBSERVATION BY SER	COMMENTS
PRIOR TO FIRST CONCRETE POUR	X	REF FOOTNOTE A, B, C
AT COMPLETION OF HORIZONTAL ROOF DIAPHRAGM	X	REF FOOTNOTE A, B
PRIOR TO COVERING STRUCTURAL ELEMENTS	X	REF FOOTNOTE A, B
AS REQUIRED TO ADDRESS STRUCTURAL ISSUES	X	REF FOOTNOTE A, B

A. STRUCTURAL OBSERVATIONS ARE INTENDED TO VERIFY GENERAL CONFORMANCE WITH THE STRUCTURAL DRAWINGS. SPECIAL INSPECTIONS AND TESTING ARE STILL REQUIRED.

B. A FIELD REPORT WILL BE SUBMITTED TO THE BUILDING DEPARTMENT FOLLOWING EACH VISIT.

C. STRUCTURAL OBSERVATION TO OCCUR AFTER THE REINFORCING STEEL HAS BEEN INSTALLED.

SUBMITTALS:

1. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO THE FABRICATION AND CONSTRUCTION OF ALL STRUCTURAL ITEMS INCLUDING THE FOLLOWING:

SUBMITTALS

ITEM	SUBMITTAL (A, C)	DEFERRED SUBMITTAL (B, C)	COMMENTS
CONCRETE MIX DESIGNS	X		
CONCRETE REINFORCEMENT	X		
REINFORCING STEEL MILL CERTS	X		
CONCRETE ANCHORAGES	X		
EMBEDDED STEEL ITEMS	X		
PRE-ENGINEERED METAL BUILDING SHOP DRAWINGS AND BASE REACTIONS	X	X	
ALUMINUM GUARDRAILS	X	X	
ALUMINUM STAIRS, GRATING, AND FRAMING	X		

A. IF THE SHOP DRAWINGS DIFFER FROM OR ADD TO THE DESIGN OF THE STRUCTURAL DRAWINGS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN NEW YORK STATE. ANY MODIFICATIONS TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER AND ARE SUBJECT TO REVIEW AND ACCEPTANCE BY THE STRUCTURAL ENGINEER OF RECORD.

B. DESIGN DRAWINGS, SHOP DRAWINGS, AND CALCULATIONS FOR THE DESIGN AND FABRICATION OF ITEMS THAT ARE DESIGNED BY OTHERS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN NEW YORK STATE. CALCULATIONS SHALL BE INCLUDED FOR ALL CONNECTIONS TO THE STRUCTURE CONSIDERING LOCALIZED EFFECTS ON STRUCTURAL ELEMENTS INDUCED BY THE CONNECTION LOADS. DESIGN SHALL BE BASED UPON THE REQUIREMENTS OF THE NYSBC AND AS NOTED UNDER "DESIGN CRITERIA."

C. FIELD ENGINEERED DETAILS DEVELOPED BY THE CONTRACTOR THAT DIFFER FROM, OR ADD TO, THE STRUCTURAL DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN NEW YORK STATE AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO CONSTRUCTION. ANY SUCH DETAILS ARE SUBJECT TO REVIEW AND ACCEPTANCE BY THE STRUCTURAL ENGINEER OF RECORD.

DATE:	01.23.24
DRAWN BY:	EK
SCALE:	12" = 1'-0"
REVIEWED BY:	CAM
PROJECT NO.:	22-2496
FILE:	

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
55 SOUTH MAIN ST, ONEONTA, NY 13820 - 607.432.8073
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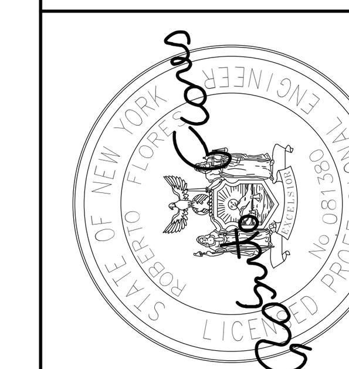


REVISIONS

NO.	DATE	DESCRIPTION
1	11/1/2024	ADDENDUM #1

RHINEBECK WTP IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NY

SPECIAL INSPECTION & SUBMITTALS

SHEET: S003

STRUCTURAL LEGEND

- `-` • INDICATES FOUNDATION TYPE MARK, REFERENCE THE FOUNDATION SCHEDULE.
- LOW HIGH • INDICATES FLOOR/ROOF STEP.
- LOW HIGH • INDICATES TOP FOUNDATION WALL STEP.
- LOW HIGH • INDICATES TOP FOOTING STEP.
- • INDICATES STRUCTURAL WALL BELOW.
- (#) • INDICATES KEYED NOTE.
- (--) • INDICATES NEW GRIDLINE

FOUNDATION PLAN NOTES

1. ALL ELEVATIONS REFERENCED FROM 0'-0" = FF.
2. VERIFY ALL DIMENSIONS WITH THE ARCHITECTURAL DRAWINGS AND METAL BUILDING DRAWINGS. GRIDLINES ARE LOCATED AT OUTSIDE FACE OF CONCRETE FOUNDATION WALLS AND CENTERLINE OF COLUMNS WHERE INDICATED.
3. DETAILS ON THESE PLANS ARE INTENDED TO DEPICT THE GENERAL CONSTRUCTION METHOD FOR THIS STRUCTURE. CONNECTIONS, DETAILS AND CONDITIONS NOT SPECIFICALLY SHOWN THAT ARE SIMILAR TO THOSE THAT ARE SPECIFIED SHALL BE ASSUMED ONE AND THE SAME. IF QUESTIONS ARISE REGARDING THE APPLICATION OF DETAILS ARE ENCOUNTERED, NOTIFY THE STRUCTURAL ENGINEER OF RECORD FOR CLARIFICATION IN A TIMELY MANNER PRIOR TO BID OPENING.
4. REFERENCE MEP DRAWINGS FOR ALL ELEVATIONS, PIPE PENETRATIONS, ETC. REFER TO STRUCTURAL DETAILS CORRESPONDING TO SPECIFIC ITEMS SUCH AS PIPE PENETRATIONS, OPENINGS, ETC.
5. VERIFY SIZE AND LOCATION OF ALL SLAB AND WALL PENETRATIONS.
6. ALL WALL FOOTINGS ARE WF1, UNLESS OTHERWISE NOTED. WALL FOOTINGS ARE CENTERED ON FOUNDATION WALLS.
7. TOP OF FOOTING ELEVATION IS -4' - 0" UNLESS OTHERWISE NOTED.
8. ALL STEM WALLS TO BE 8" THICK UNO ON PLAN. REINFORCEMENT TO BE #5@12" OC, EW, CENTER OF WALL.
9. TOP OF FOUNDATION WALL ELEVATION IS 1'-0" UNLESS OTHERWISE NOTED.
10. TOP OF PIER ELEVATION IS 0'-0" UNLESS OTHERWISE NOTED.
11. NOTE 11 REMOVED.

WALL FOOTING SCHEDULE

MARK	WIDTH	THICKNESS	LONG. REINF.	TRANS. REINF.
WF1	2' - 0"	1' - 0"	(3) #5, EQ SP, BTM	#5 @18" OC, BTM

FOOTING SCHEDULE

MARK	LENGTH	WIDTH	THICKNESS	LONG. REINF.	TRANS. REINF.
F1	3' - 6"	3' - 6"	1' - 0"	(4) #5, EQ SP, BTM	(4) #5, EQ SP, BTM
F2	5' - 6"	5' - 6"	1' - 0"	(6) #5, EQ SP, BTM	(6) #5, EQ SP, BTM

PIER SCHEDULE

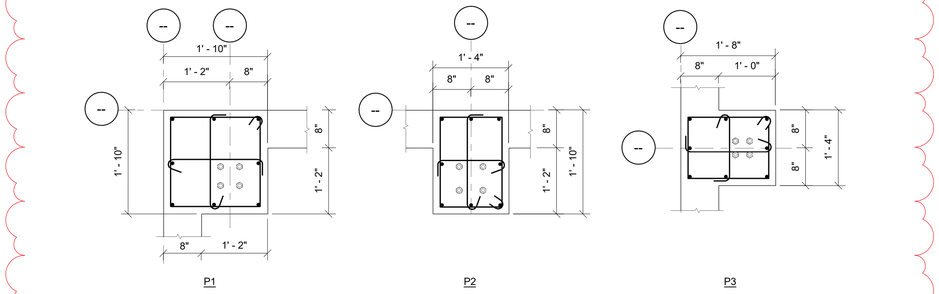
MARK	SIZE	VERT REINF	TIES
P1	22"x22"	(8) #5, EQ SP	1 @2",1 @3", REMAINDER @10"
P2	16"x22"	(8) #5, EQ SP	1 @2",1 @3", REMAINDER @10"
P3	16"x20"	(8) #5, EQ SP	1 @2",1 @3", REMAINDER @10"

KEYNOTES (#)

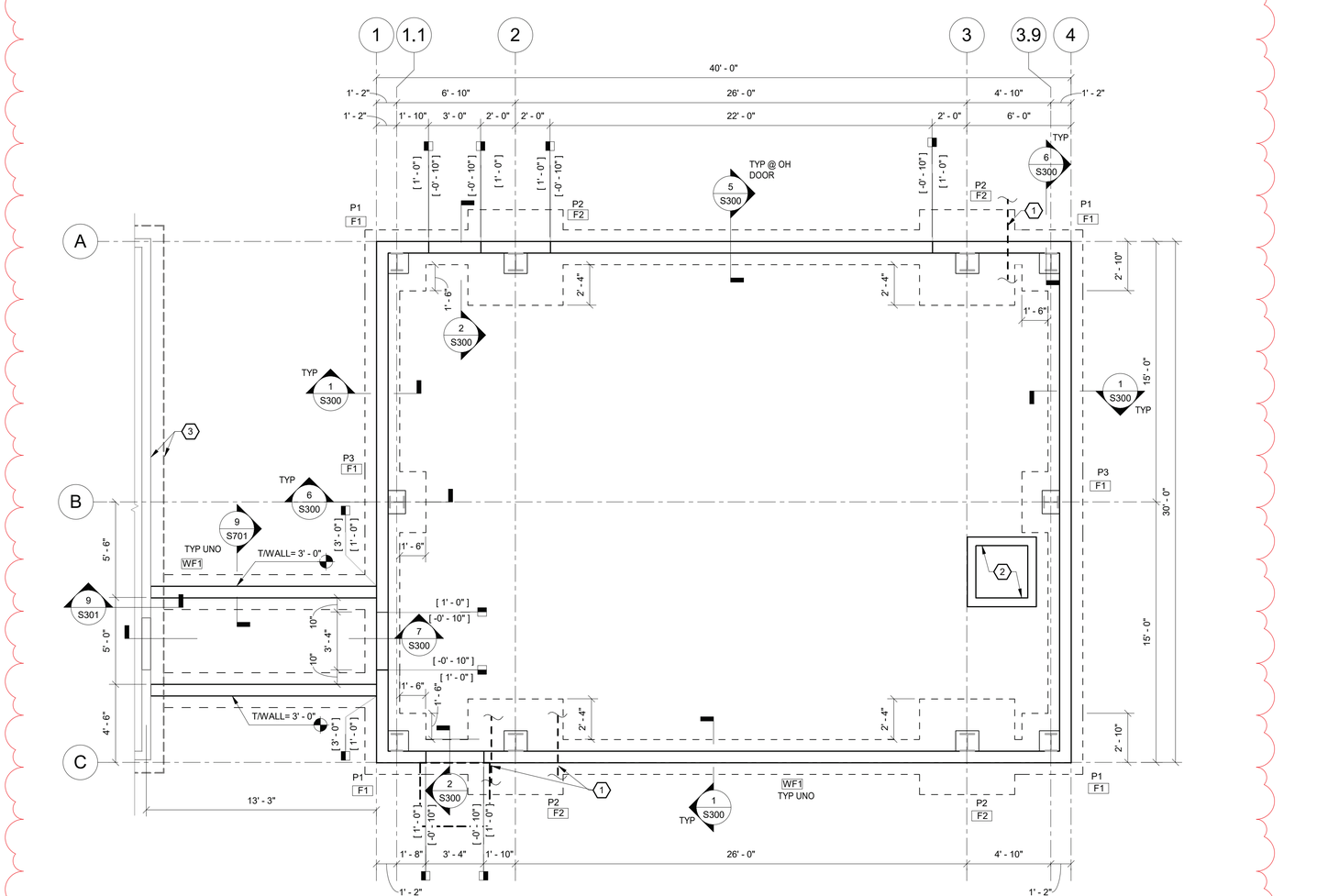
1 PIPE PENETRATION THROUGH FOUNDATION WALL; REFER TO MECH PLANS AND S300 FOR ADDITIONAL INFORMATION

2 PRECAST CATCH BASIN PER CIVIL/MECH

3 EXISTING FOUNDATIONS, VERIFY LOCATION AND T/FTG ELEVATION IN FIELD



2 / S100 PIER TYPES
N.T.S



1 / S100 FOUNDATION PLAN
1/4" = 1'-0"

DATE: 01.23.24
DRAWN BY: EK
SCALE: As indicated
REVIEWED BY: CAM
PROJECT NO.: 22-2496
FILE:

DELAWARE ENGINEERING, D.P.C.
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REVISIONS

NO.	DATE	DESCRIPTION
1	11/1/2024	ADDENDUM #1

RHINEBECK WTP IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NY

FOUNDATION PLAN

SHEET: S100

STRUCTURAL LEGEND

Symbol	Description
[-]	INDICATES FOUNDATION TYPE MARK, REFERENCE THE FOUNDATION SCHEDULE.
LOW / HIGH	INDICATES FLOOR/ROOF STEP.
LOW / HIGH	INDICATES TOP FOUNDATION WALL STEP.
LOW / HIGH	INDICATES TOP FOOTING STEP.
(dashed wall)	INDICATES STRUCTURAL WALL BELOW.
#	INDICATES KEYED NOTE.
--	INDICATES NEW GRIDLINE

FRAMING PLAN NOTES

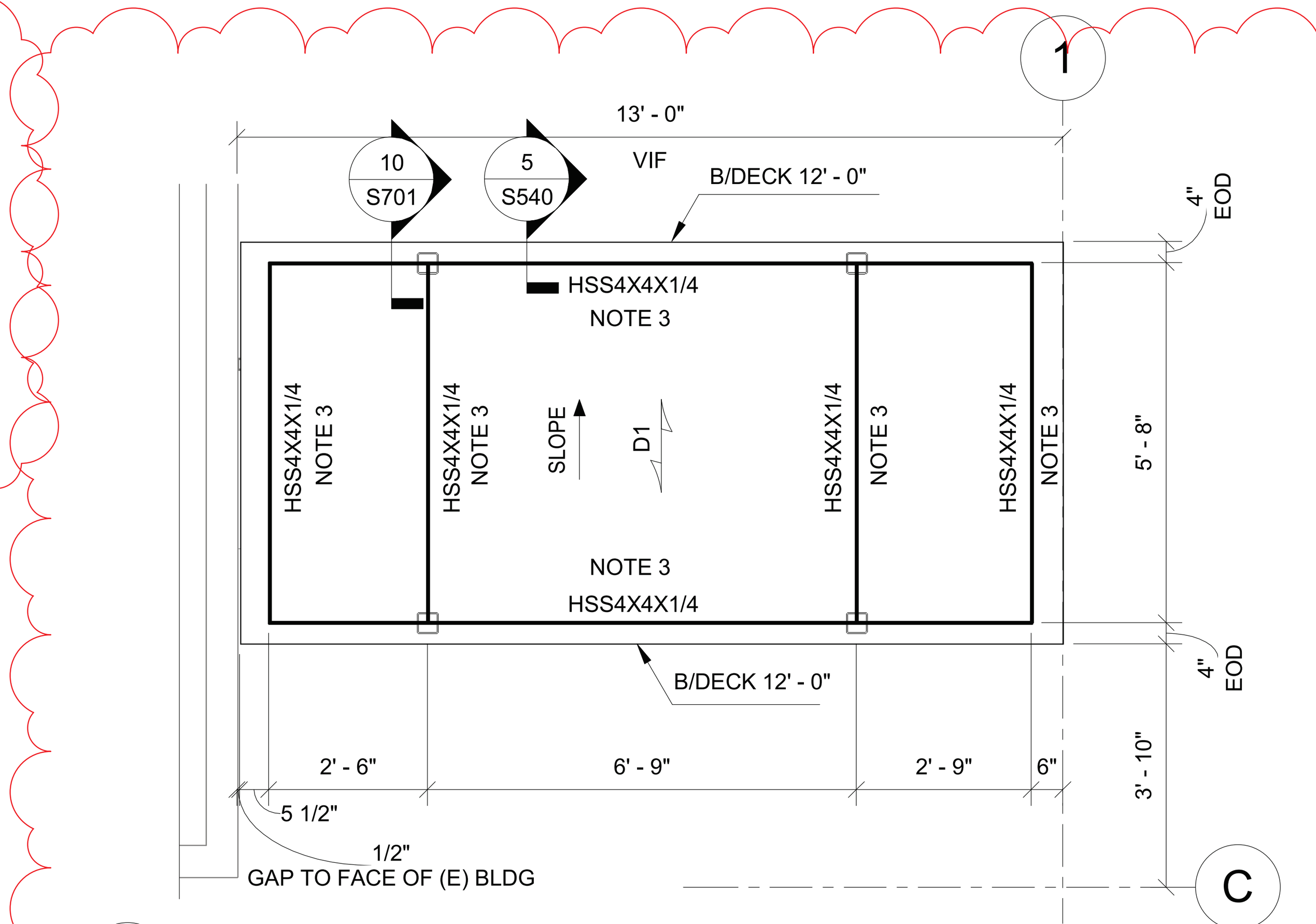
1. ALL ELEVATIONS ARE REFERENCED FROM 0'-0" = FF = 25.0'.
2. VERIFY ALL DIMENSIONS WITH THE ARCHITECTURAL DRAWINGS AND THE METAL BUILDING DRAWINGS. GRIDLINES ARE LOCATED AT EXTERIOR FACE OF CONCRETE FOUNDATION WALLS AND CENTERLINE OF COLUMNS WHERE INDICATED.
3. DETAILS ON THESE PLANS ARE INTENDED TO DEPICT THE GENERAL CONSTRUCTION METHODS FOR THIS STRUCTURE. CONNECTIONS, DETAILS AND CONDITIONS NOT SPECIFICALLY SHOWN THAT ARE SIMILAR TO THOSE THAT ARE SPECIFIED SHALL BE ASSUMED ONE AND THE SAME. IF QUESTIONS REGARDING THE APPLICATION OF DETAILS ARE ENCOUNTERED, NOTIFY THE ENGINEER FOR CLARIFICATION IN A TIMELY MANNER PRIOR TO BID OPENING.
4. REFERENCE MEP DRAWINGS FOR ALL ELEVATIONS, PIPE PENETRATIONS, ETC. REFER TO STRUCTURAL DETAILS CORRESPONDING TO SPECIFIC ITEMS SUCH AS PIPE PENETRATIONS, OPENINGS, ETC.
5. REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION FOR ALL DOORS.
6. G1 INDICATES SPAN DIRECTION OF 1 1/2" SERRATED ALUMINUM GRATING W/ 3/16" BEARING BARS @ 1 3/16" OC AND CROSS BARS @ 2" OC. ALL EDGES OF GRATING AND OPENINGS IN GRATING SHALL BE BANDED.
7. ALL GRATING SHALL CONFORM TO ANSI/NAAMM MBG 531. ATTACH TO SUPPORTING STEELWITH MANUFACTURER'S STANDARD HOLD DOWN CLIPS. GRATING AND HARDWARE SHALL HAVE EITHER STAINLESS STEEL TYPE 316 FINISH OR ANODIZED FINISH.

KEYNOTES

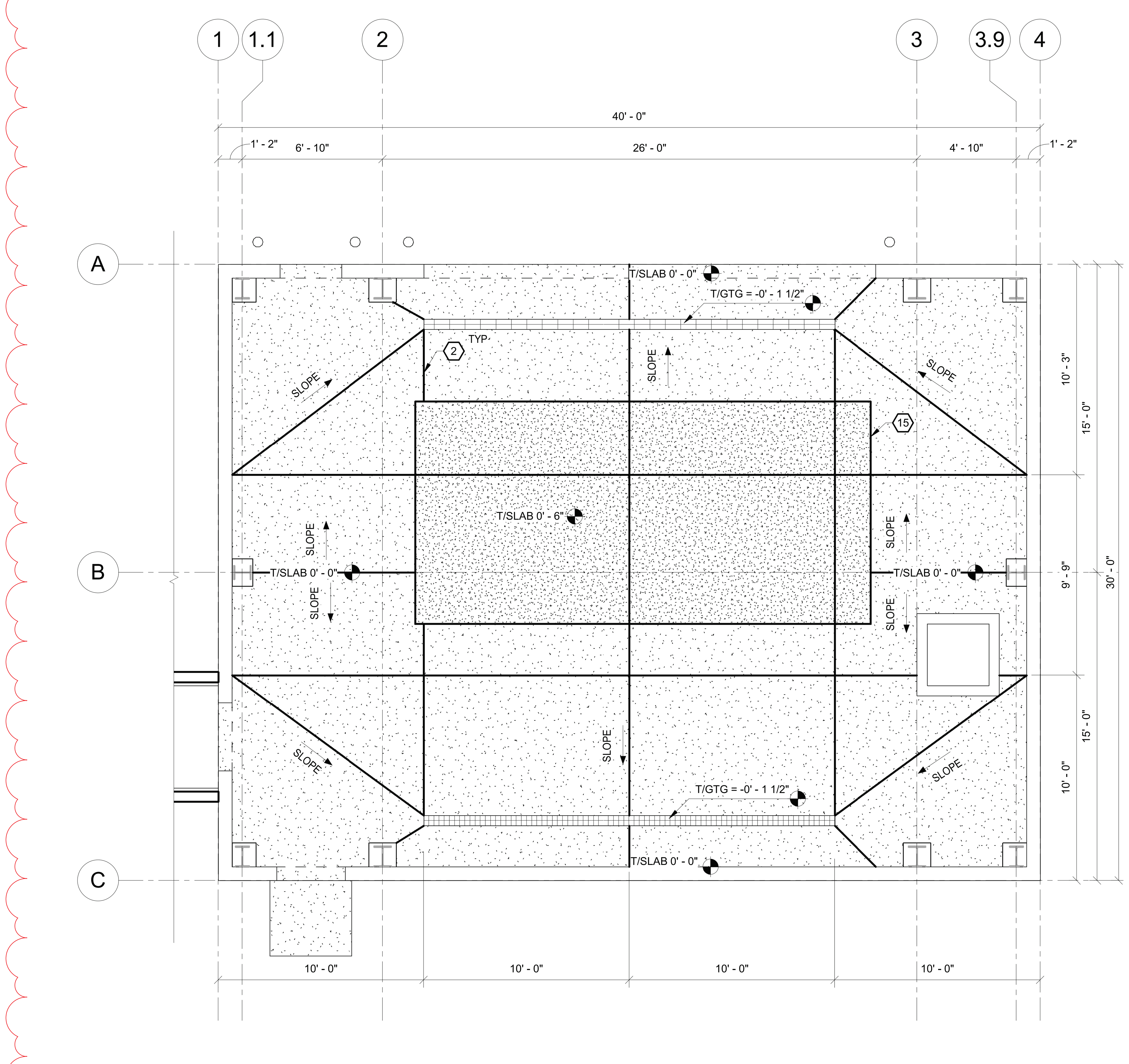
1. 8" NORMAL WEIGHT SLAB-ON-GRADE. REINFORCE WITH #5 @ 16" OC EW, PER 3/S301
2. CONTROL JOINT, CONTINUE THROUGH AND INCLUDE IN HOUSEKEEPING PAD WHERE APPLICABLE, TYPICAL PER 5/S301
3. 14" THICK CAST-IN-PLACE EQUIPMENT PAD (SLAB-ON-GRADE); REINFORCE WITH #5@12" OC, EW, T&B. FINAL DIMENSIONS OF PAD TO BE COORDINATED WITH EQUIPMENT MANUF; PAD EXTENTS TO BE MIN 6" GREATER THAN EQUIPMENT EXTENTS EA SIDE. T/ PAD PER PLAN
4. BOLLARD, TYPICAL PER 11/S300.
5. ALUMINUM STAIRS, CONT'R TO SUBMIT AS PART OF DELEGATED DESIGN
6. ALUMINUM POST TO BE RT4x4x0.188, REFERENCE 3/S701 FOR ATTACHMENT TO SLAB
7. THICK DASHED LINE INDICATES EXTENTS OF ALUMINUM HANDRAIL PER 1/S701
8. TRENCH DRAIN, 6" WIDE x 20' - 0" LONG DURO-SLOPE BY NDS W/ GALVANIED DS-221 GRATING OR APPROVED EQUAL, PER 9/S301.
9. SLAB OPENING FOR CATCH BASIN, PER MECHANICAL
10. 5" THICK SLAB-ON-GRADE; REINFORCE WITH EPOXY-COATED #5 @ 12 EW, 2" CLEAR FROM TOP OF SLAB
11. EXISTING EXTERIOR WALL OF CHEMICAL FEED/STORAGE BLDG, FF ELEV = 28.0'
13. CAST-IN-PLACE CONCRETE STAIRS, REINFORCE W/ #5@12" OC, EW, PER DETAIL 7/S300
14. 600S162-43 INFILL METAL STUD WALL W/ 600T150-43 TOP AND BOTTOM TRACK; U-BRIDGING MID-HEIGHT OF WALL PER 3/S540 & 4/S540
15. EDGE JOINT, PER 5/S301

ROOF FRAMING PLAN NOTES

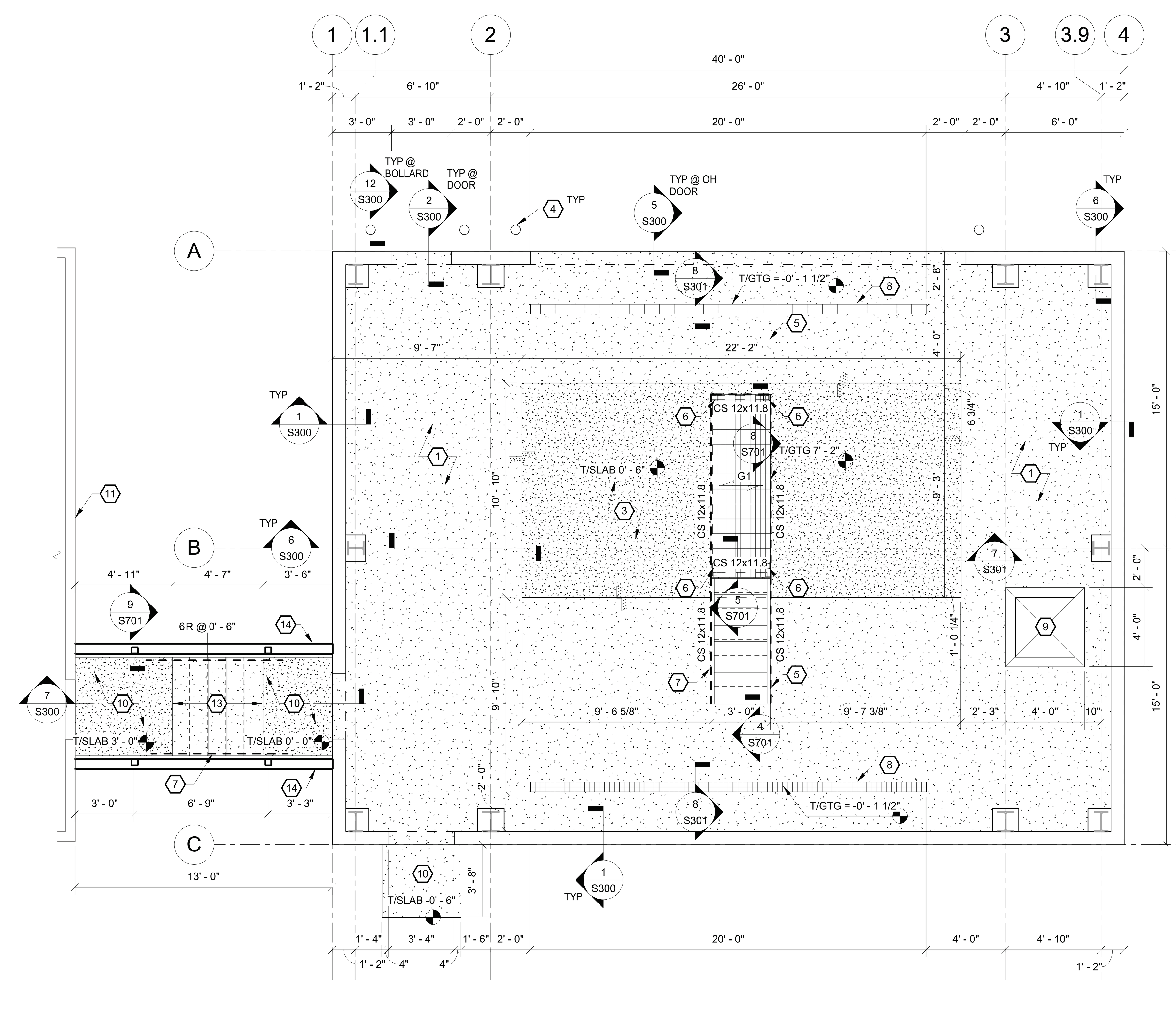
1. ALL ELEVATIONS ARE REFERENCED FROM 0'-0" = FF = 25.0'.
2. D1 INDICATES SPAN DIRECTION OF 3" TYPE N METAL ROOF DECK, 20 GAGE, GALVANIZED (G90). FASTEN TO STEEL SUPPORTS (END AND INTERIOR SUPPORTS) WITH HILTI X-ENP19 PAF IN A 36/4 PATTERN. SIDELAP FASTENING TO BE HILTI SCREW S-SLC01/02 AT 12" OC. FASTENER SUBSTITUTION ACCEPTABLE UPON APPROVAL OF PROPOSED FASTENER DOCUMENTATION BY THE EOR.
3. ALL WELDED FRAME TO BE FABRICATED AS ONE UNIT WITH MITERED CORNERS.



3 WALKWAY ROOF FRAMING PLAN
S101 3/8" = 1'-0"



2 SLAB PLAN
S101 1/4" = 1'-0"



1 FIRST FLOOR STRUCTURAL FRAMING PLAN
S101 1/4" = 1'-0"

DATE:	01.23.24
DRAWN BY:	EK
SCALE:	As indicated
REVIEWED BY:	CAM
PROJECT NO.:	22-2496
FILE:	

DELAWARE ENGINEERING, D.P.C.
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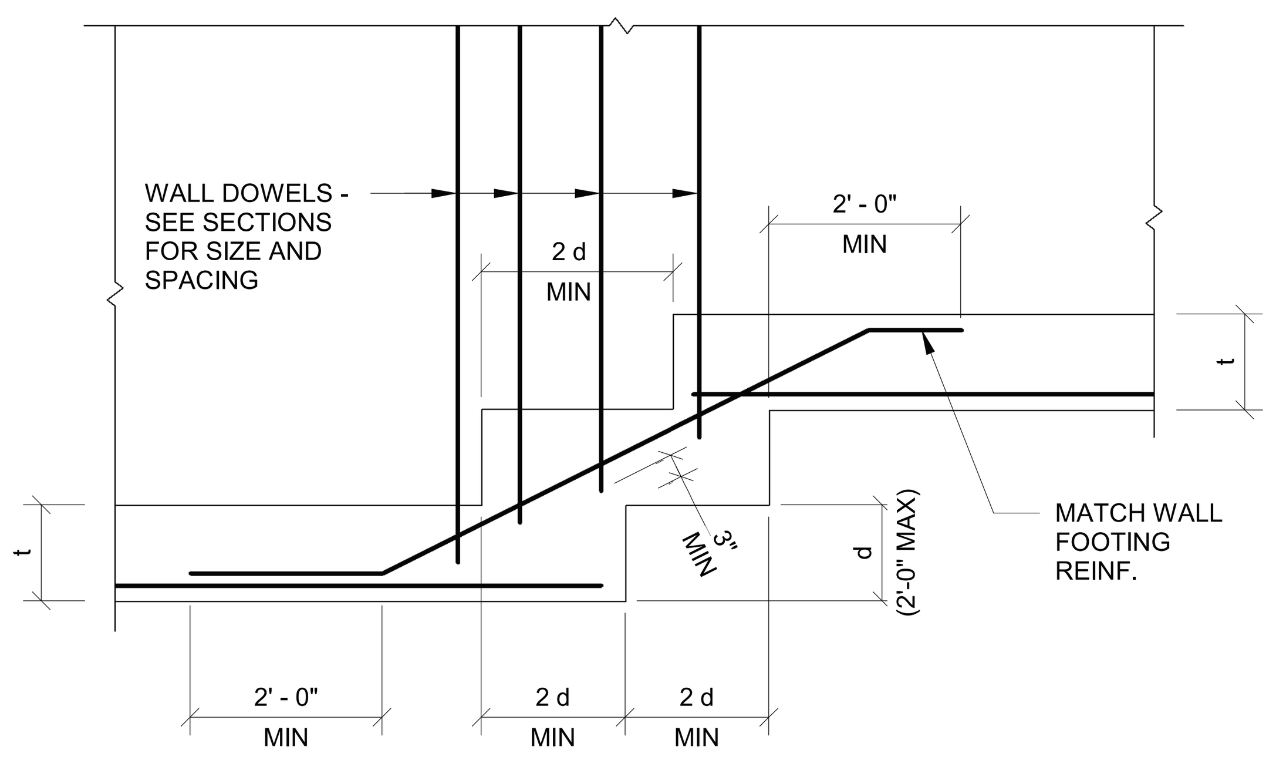
REVISIONS

NO.	DATE	DESCRIPTION
1	11/1/2024	ADDENDUM #1

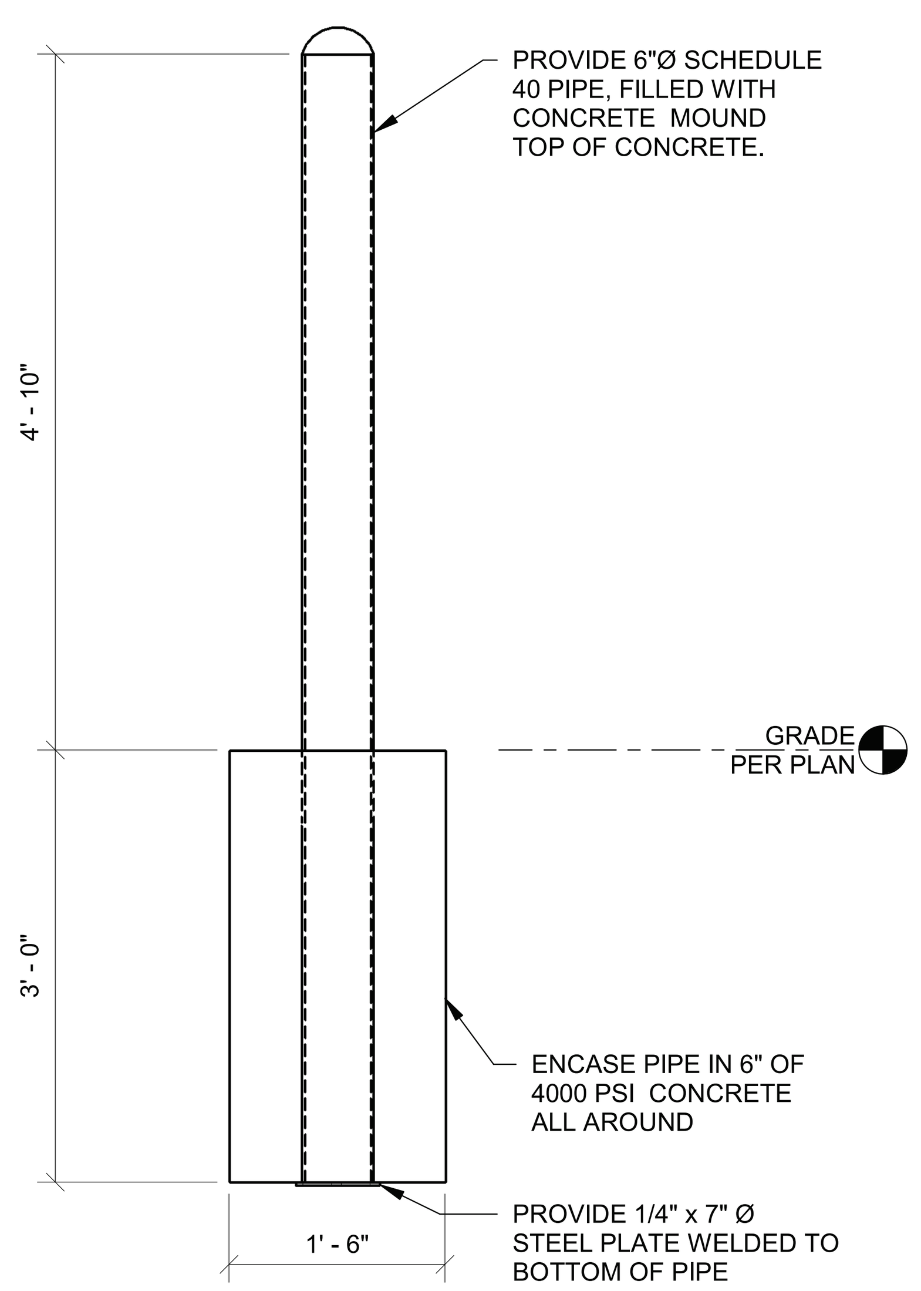
RHINEBECK WTP IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NY

FIRST FLOOR FRAMING PLAN

SHEET:
S101



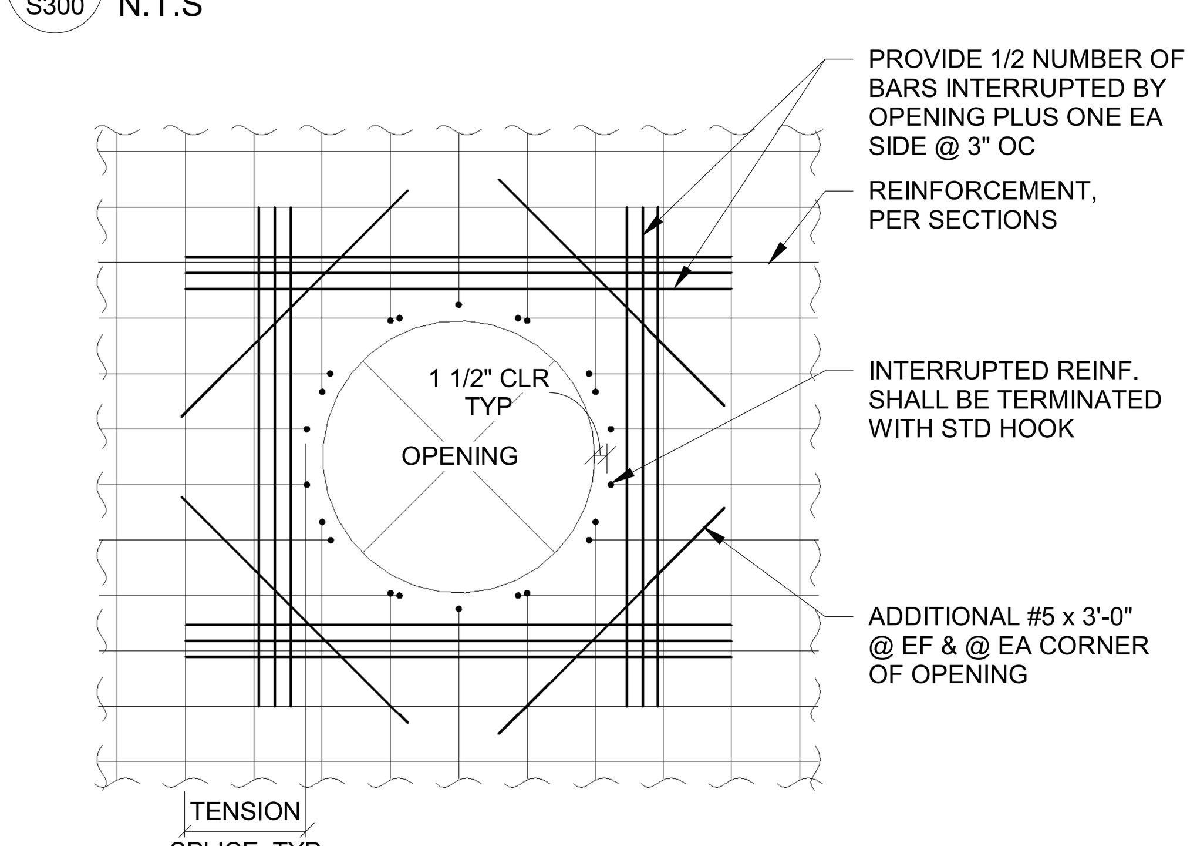
13 TYPICAL STEPPED FOOTING DETAIL
S300 N.T.S



NOTES:

1. REFER TO PLANS FOR LOCATIONS

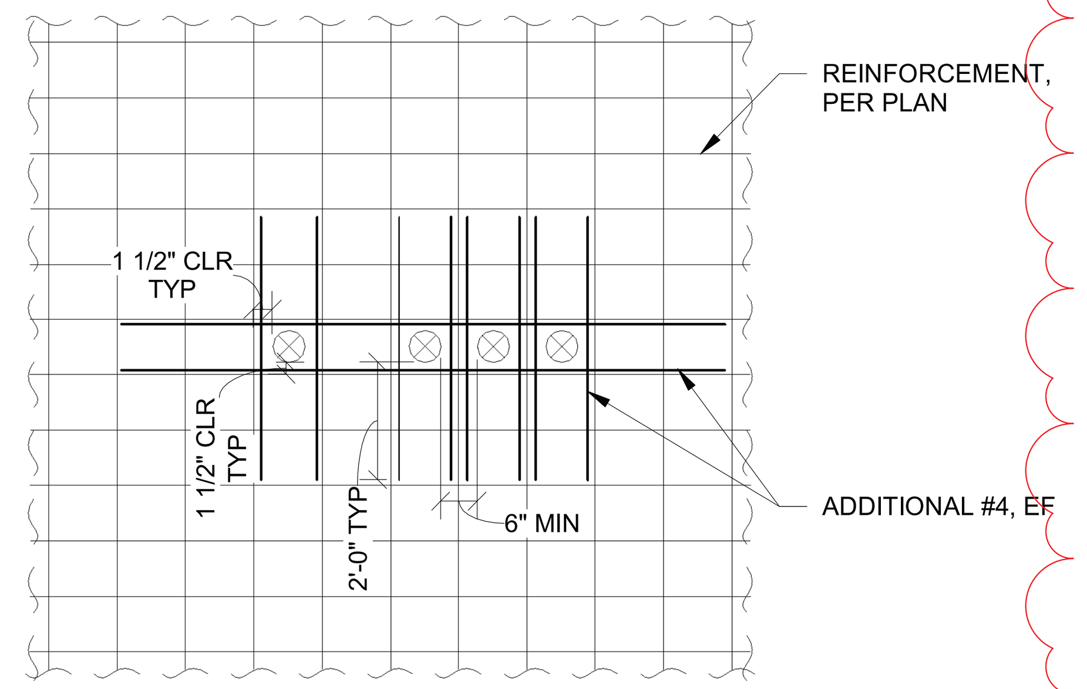
12 TYPICAL 6" BOLLARD SECTION
S300 N.T.S



NOTES:

1. MAX OPENING SIZE 4' - 0"

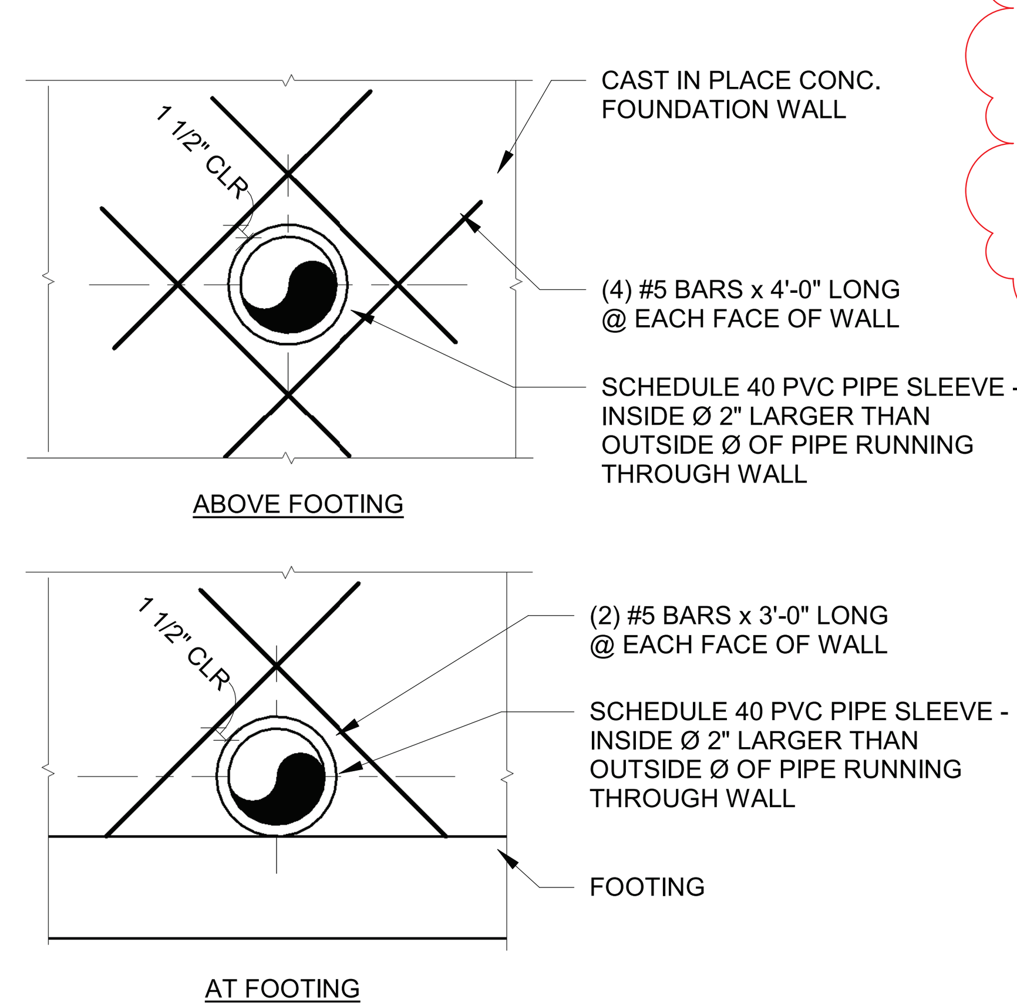
11 TYPICAL WALL SLEEVE OPENING
S300 N.T.S



NOTES:

1. COORDINATE THE LOCATION OF THE SLEEVES SUCH THAT THEY DO NOT INTERRUPT THE WALL REINFORCEMENT.

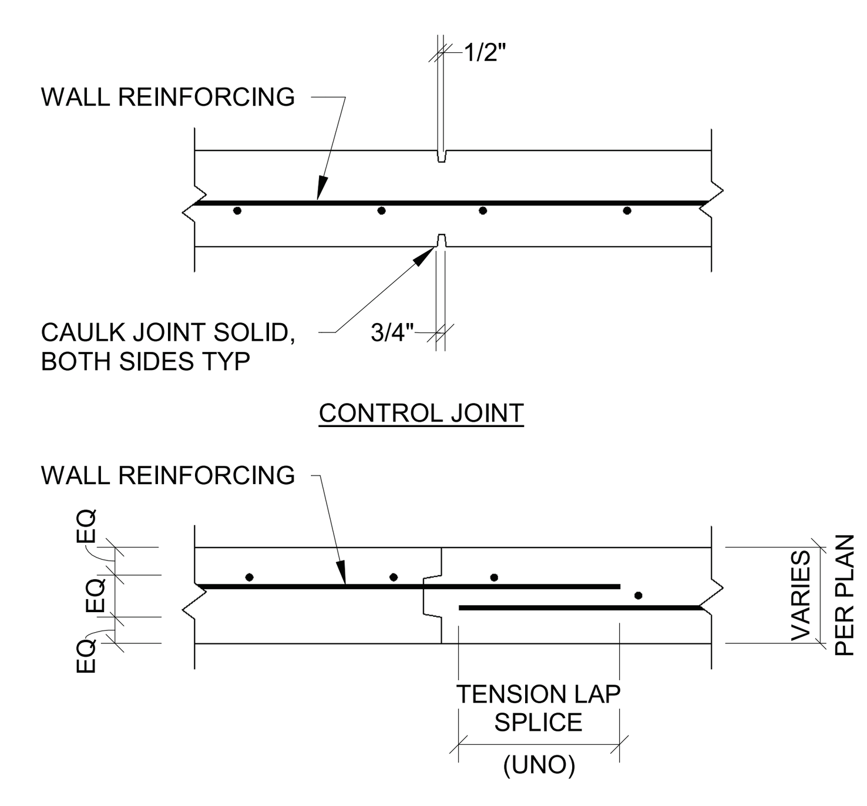
10 TYPICAL MULTIPLE WALL SLEEVE OPENING DETAIL
S300 N.T.S



NOTES:

1. PROVIDE 6" MINIMUM CLEAR COVER BETWEEN ADJACENT OPENINGS.

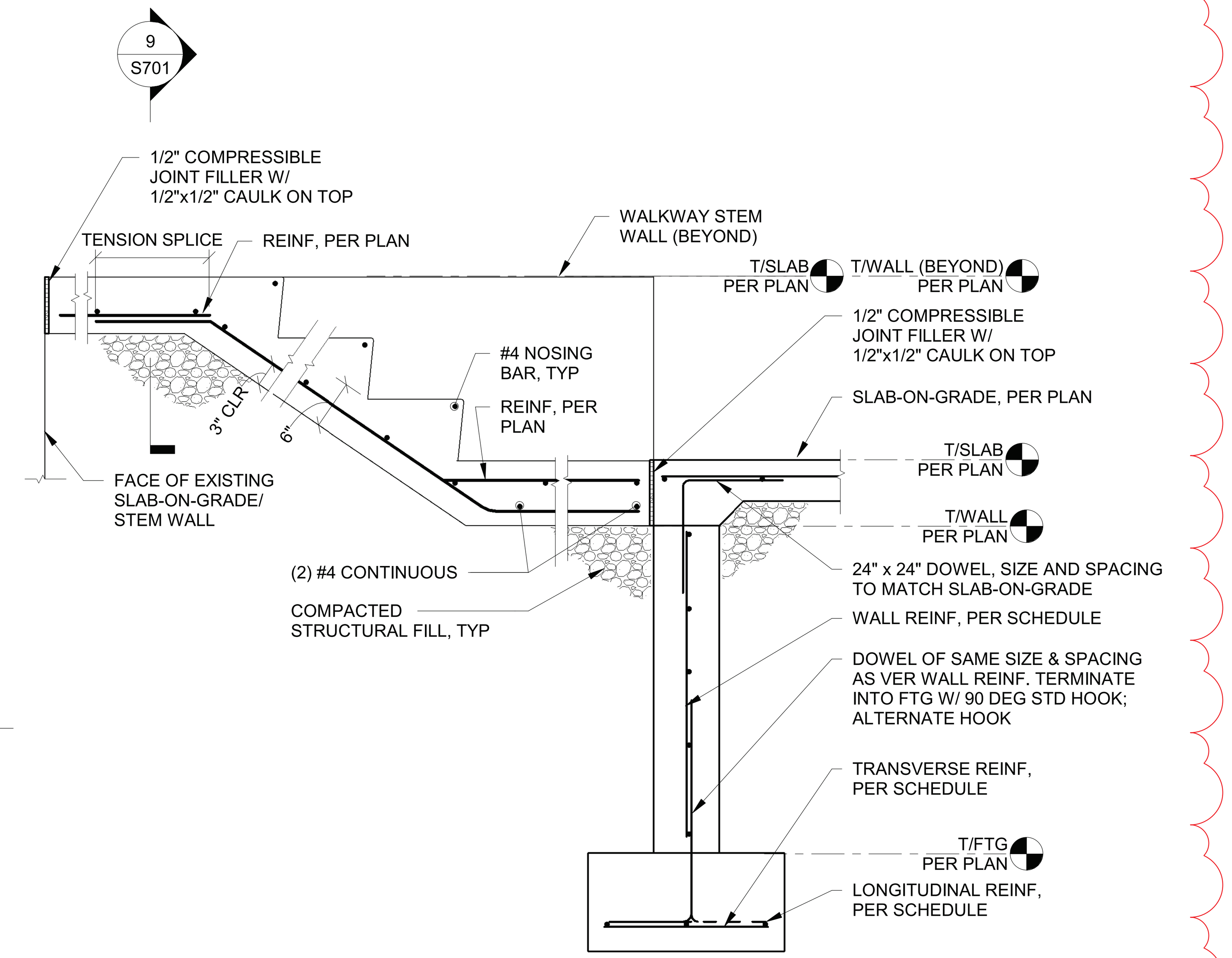
9 TYPICAL WALL REINFORCING FOR PIPE OPENING
S300 N.T.S



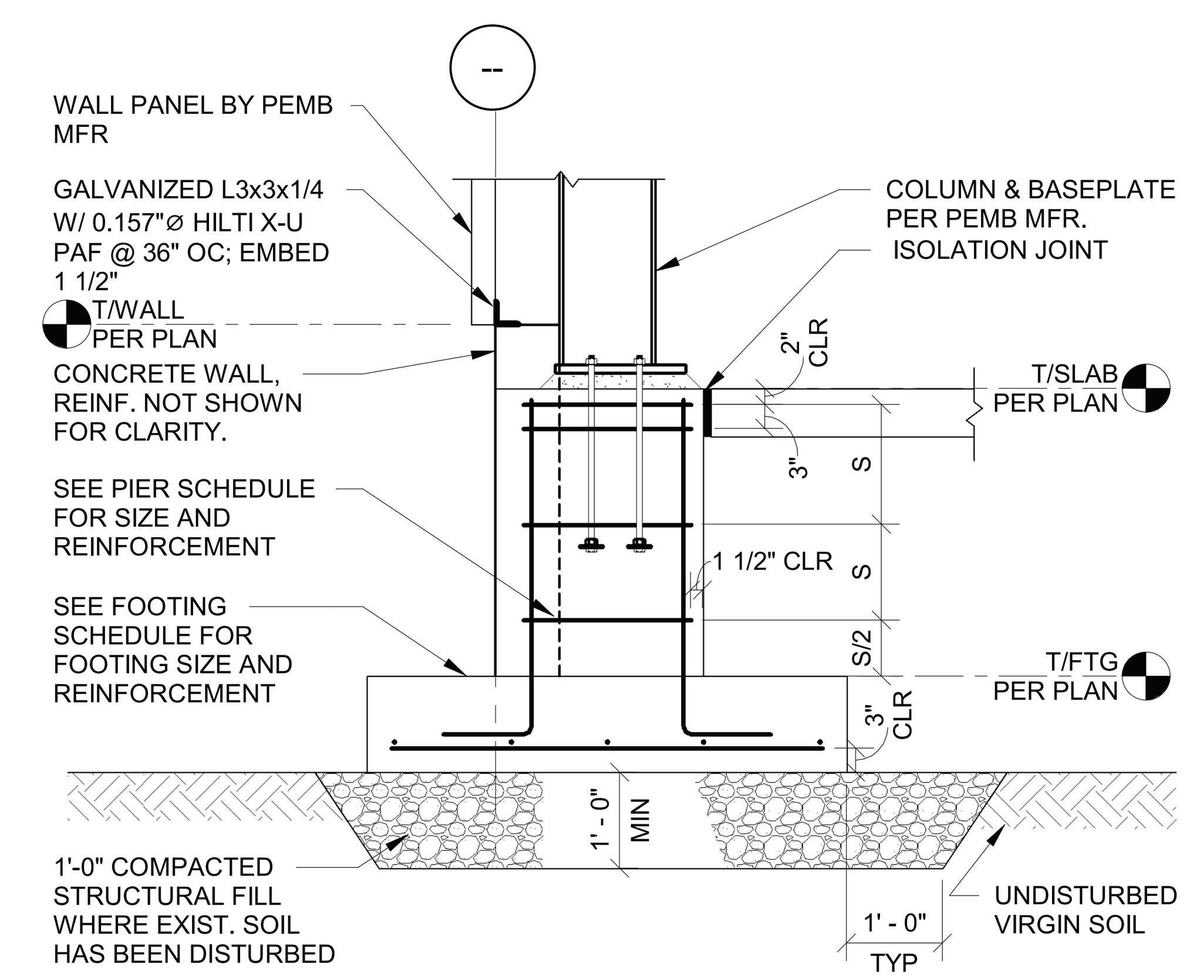
NOTES:

1. PROVIDE CONSTRUCTION AND CONTROL JOINTS IN CONCRETE WALLS AS FOLLOWS UNLESS OTHERWISE INDICATED:
   - FOUNDATION WALLS - 25'-0" (MAX)
2. DO NOT PLACE WITHIN 5 FEET OF A PIER, CORNER, INTERSECTIONS, AND ENDS.
3. COORDINATE JOINT LOCATIONS WITH BRICK VENEER CONTROL JOINT LOCATIONS, SEE ARCHITECTURAL DRAWINGS.
4. ALL CONSTRUCTION JOINTS MUST BE LOCATED ON SHOP DRAWINGS AND APPROVED BY THE ENGINEER OF RECORD. NO CONSTRUCTION JOINTS MAY BE FORMED IN THE FIELD WITHOUT THE ENGINEERS APPROVAL

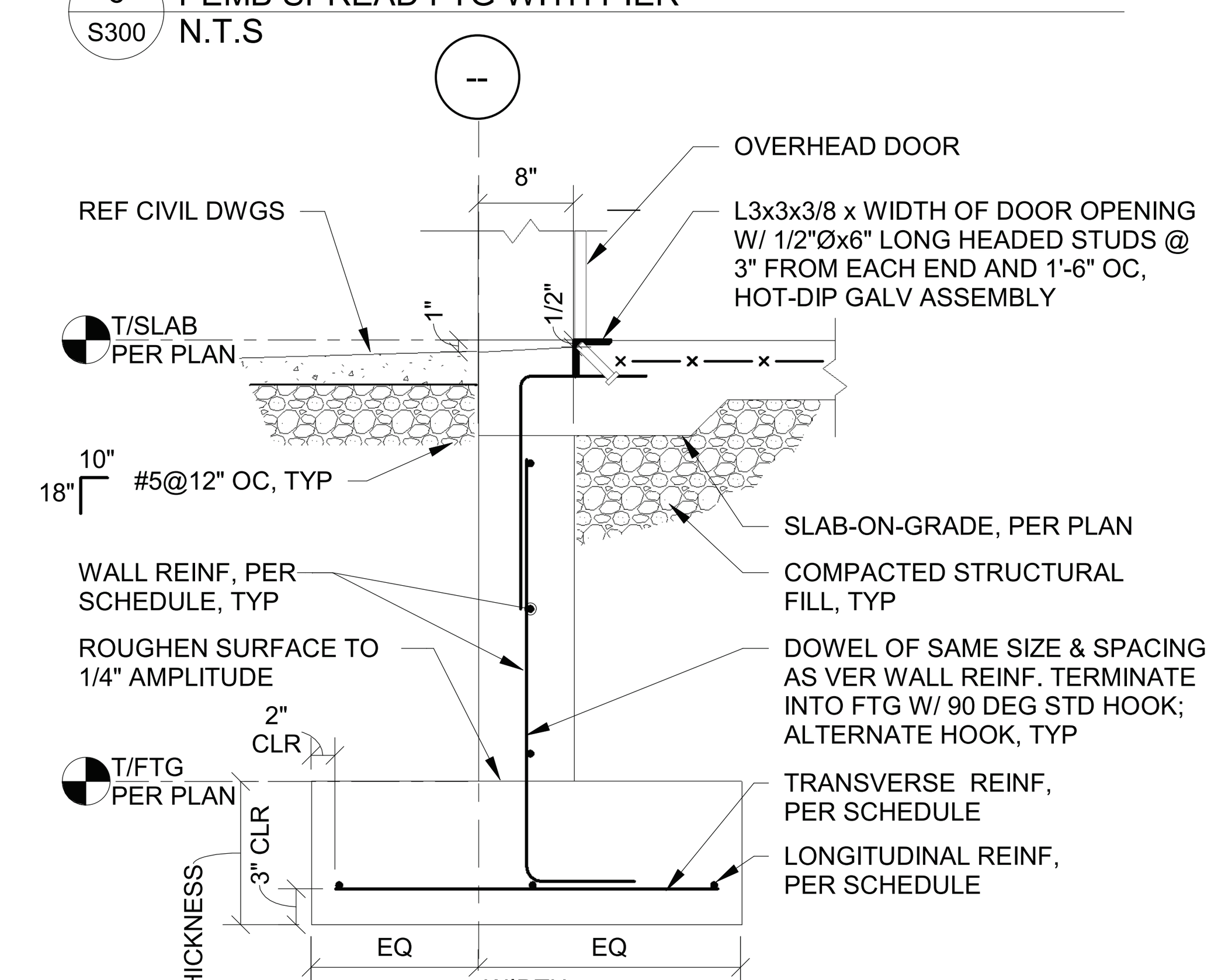
8 TYPICAL CONCRETE WALL JOINT DETAILS
S300 N.T.S



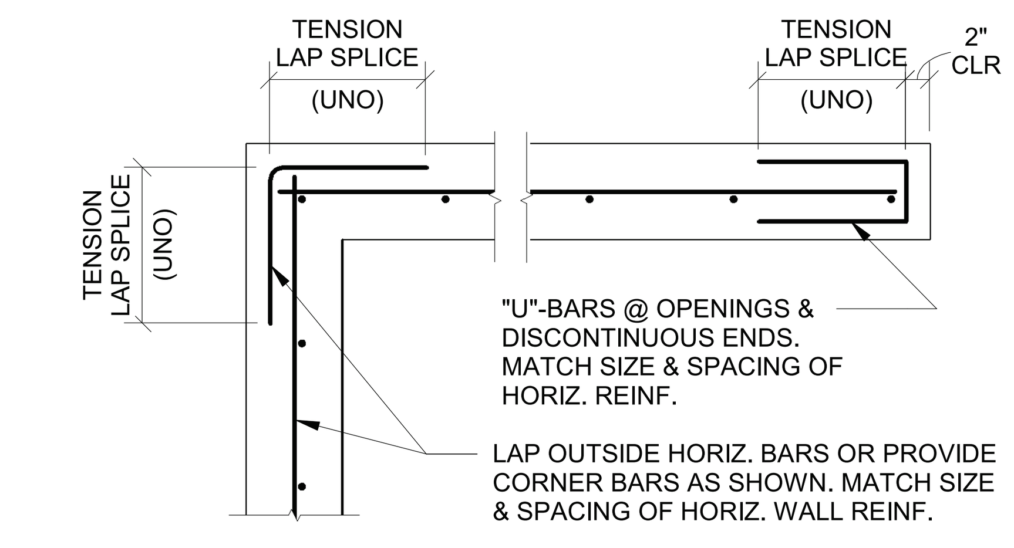
7 DETAIL @WALKWAY SLAB
S300 N.T.S



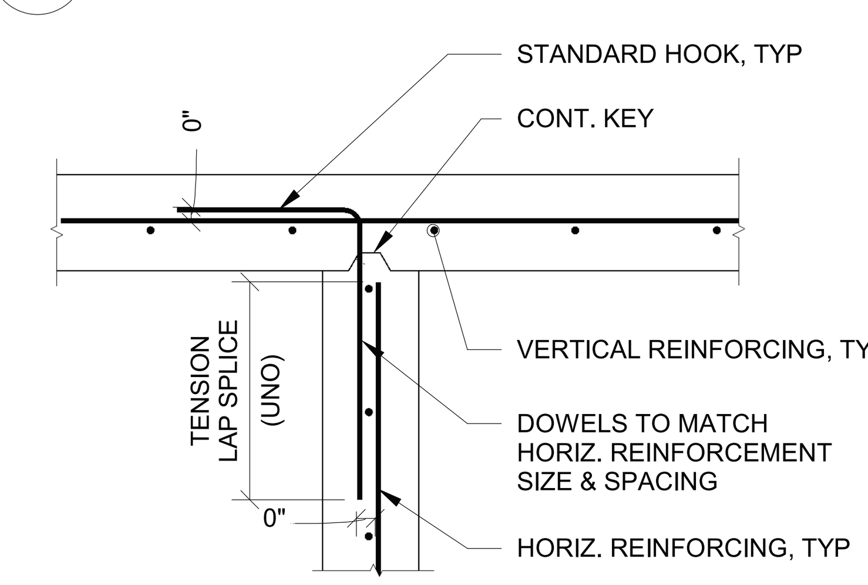
6 PEMB SPREAD FTG WITH PIER
S300 N.T.S



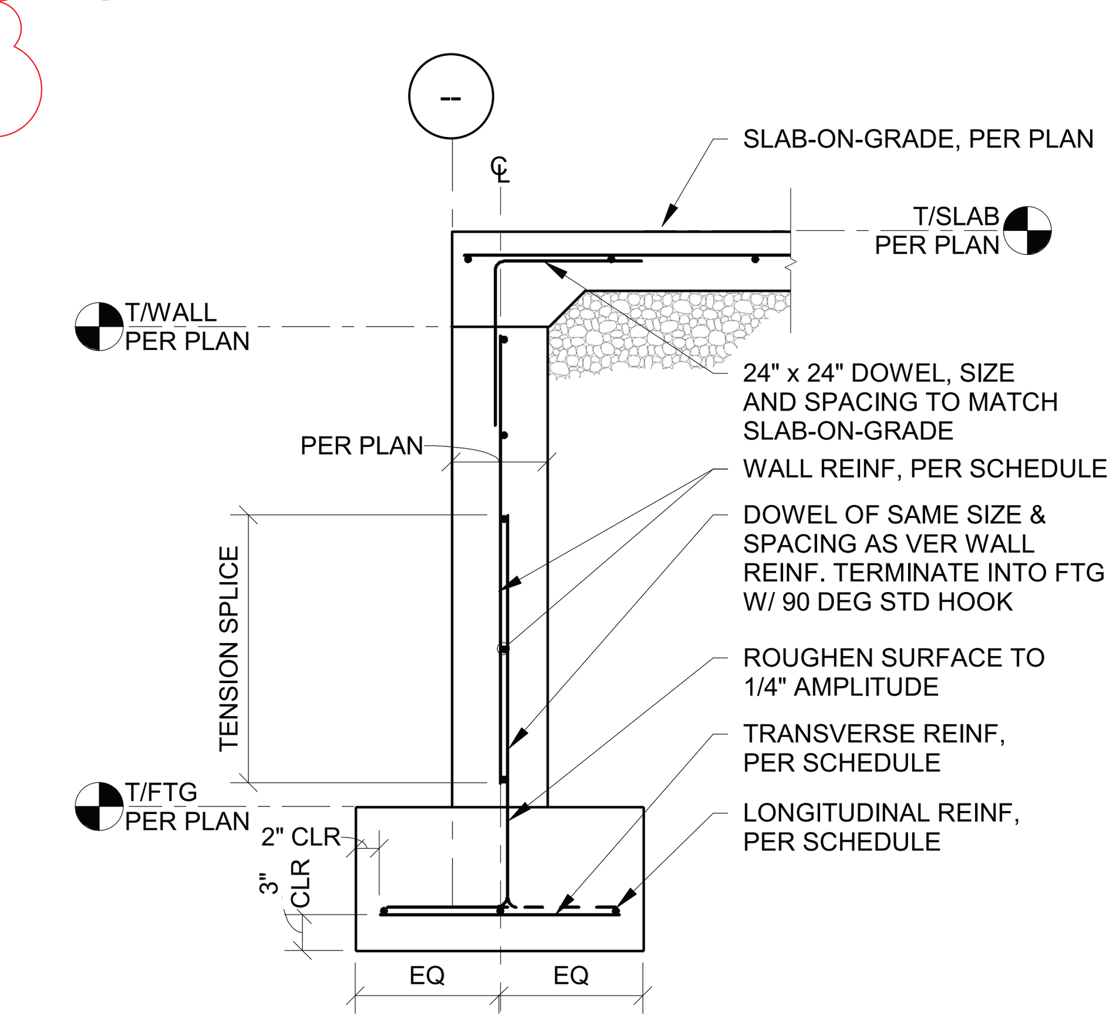
5 TYPICAL FDN DETAIL @ VEHICLE DOOR
S300 N.T.S



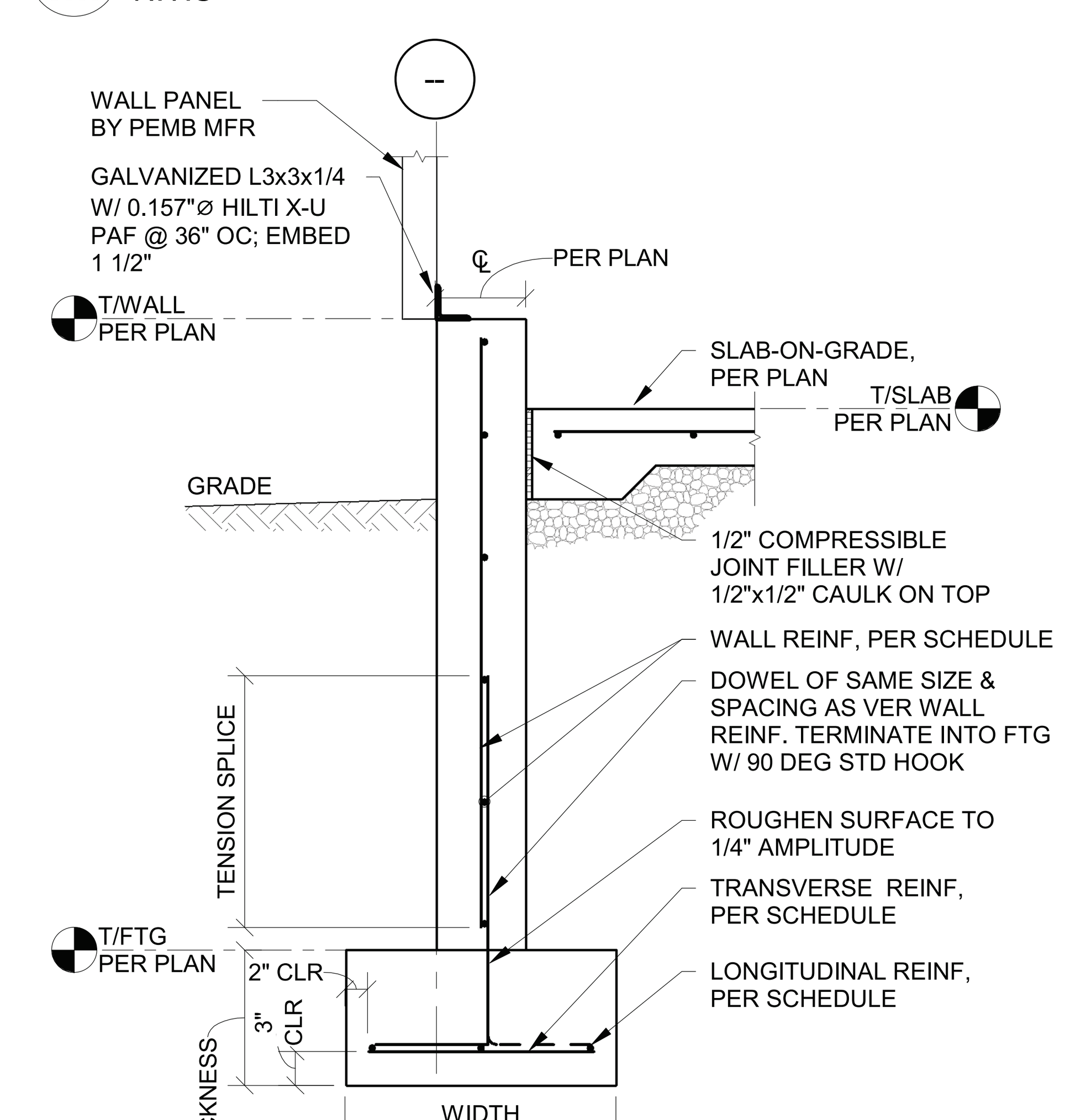
4 TYPICAL CONCRETE WALL CORNER & END DETAIL
S300 N.T.S



3 TYPICAL CONCRETE WALL INTERSECTION DETAIL
S300 N.T.S



2 TYPICAL FOUNDATION WALL DETAIL
S300 N.T.S



1 TYPICAL FOUNDATION WALL DETAIL
S300 N.T.S

DATE:	01.23.24
DRAWN BY:	EK
SCALE:	As indicated
REVIEWED BY:	CAM
PROJECT NO.:	22-2496
FILE:	

DELAWARE ENGINEERING, D.P.C.
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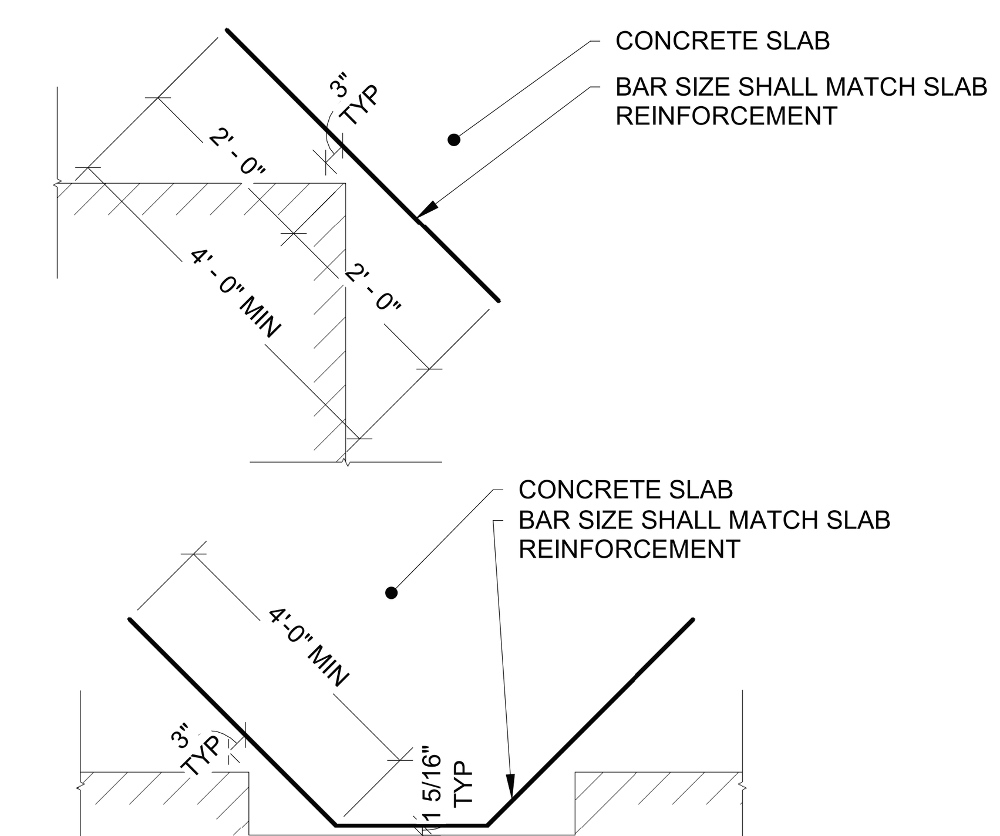
REVISIONS

NO.	DATE	DESCRIPTION
1	11/1/2024	ADDENDUM #1

RHINEBECK WTP IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NY

CONCRETE DETAILS

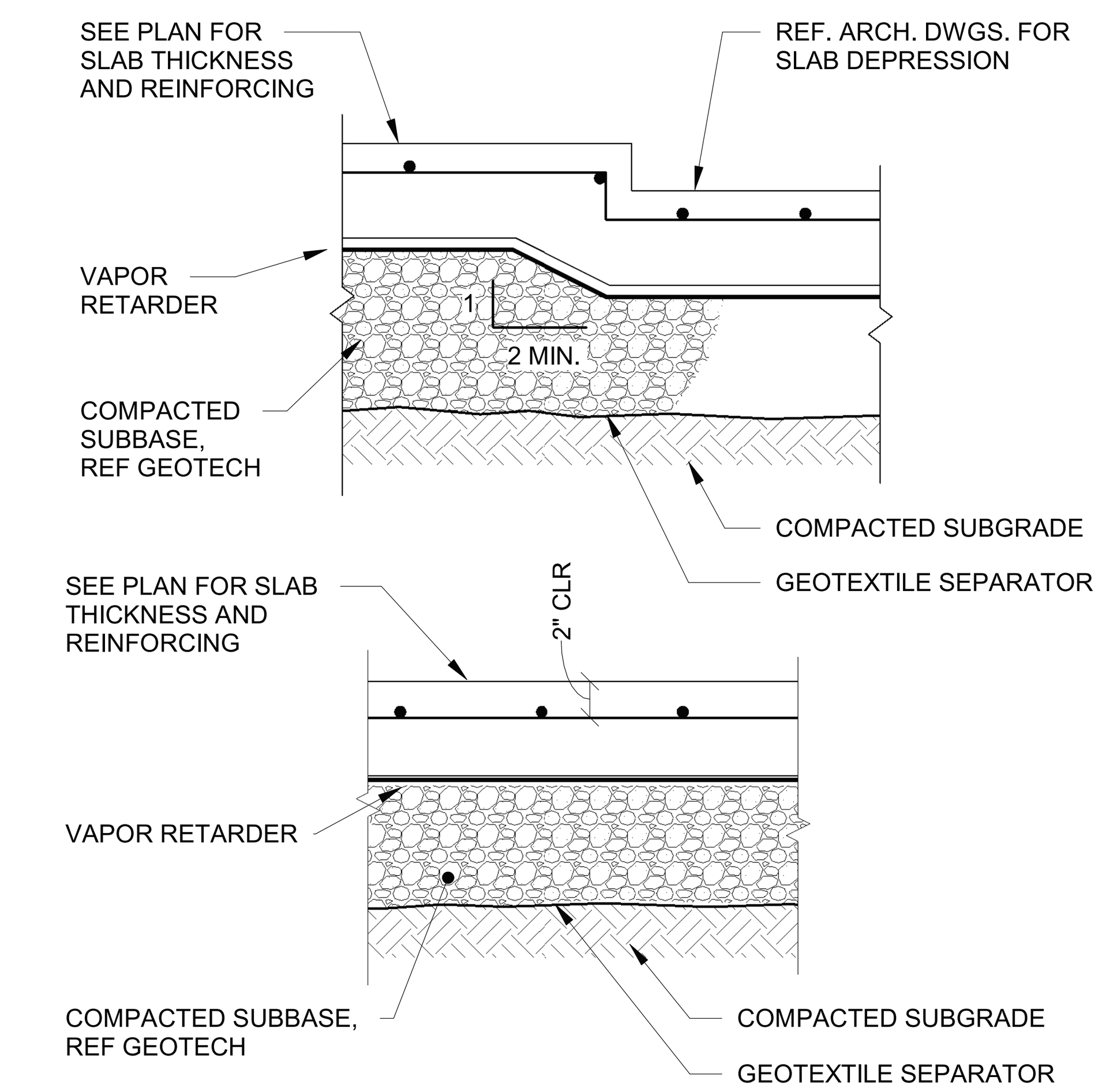
SHEET:
S300



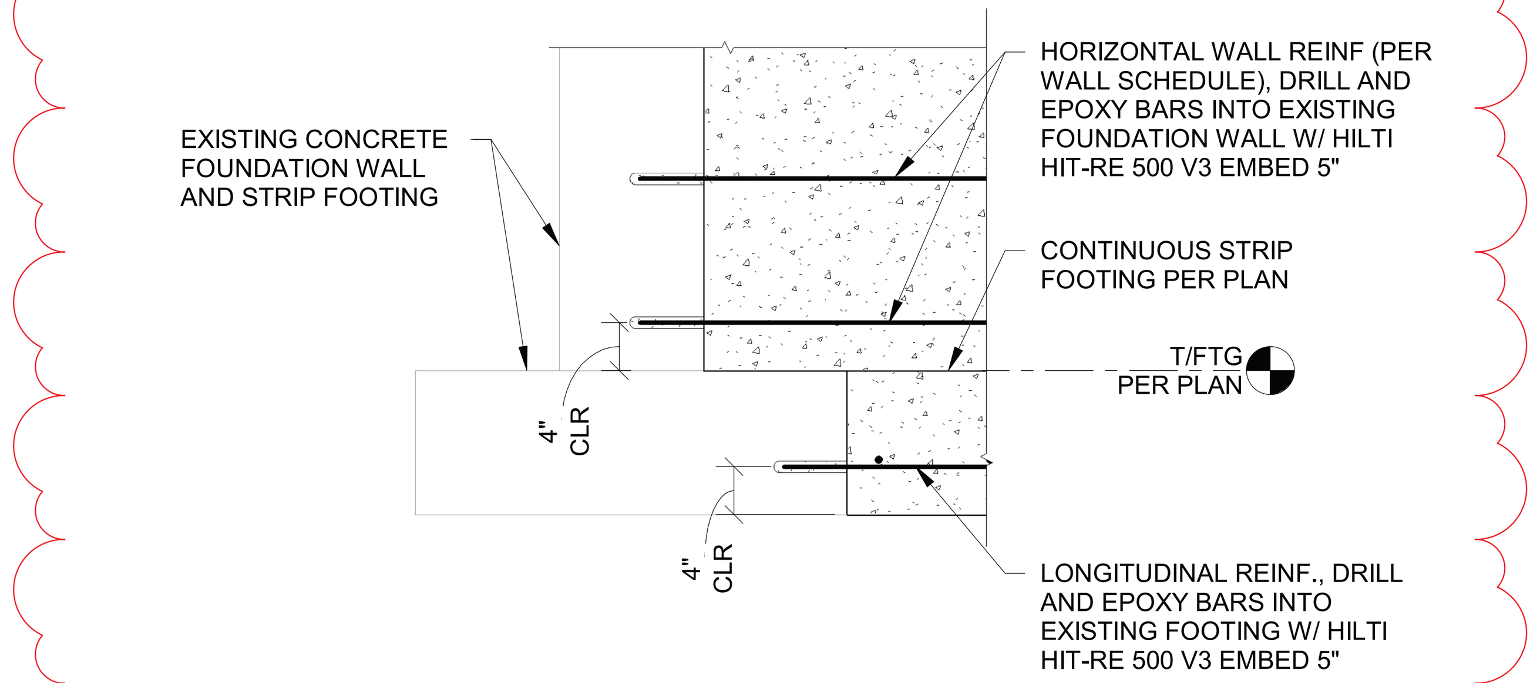
NOTES:

1. DETAIL APPLIES AT ALL CONCRETE SLAB RE-ENTRANT CORNERS.

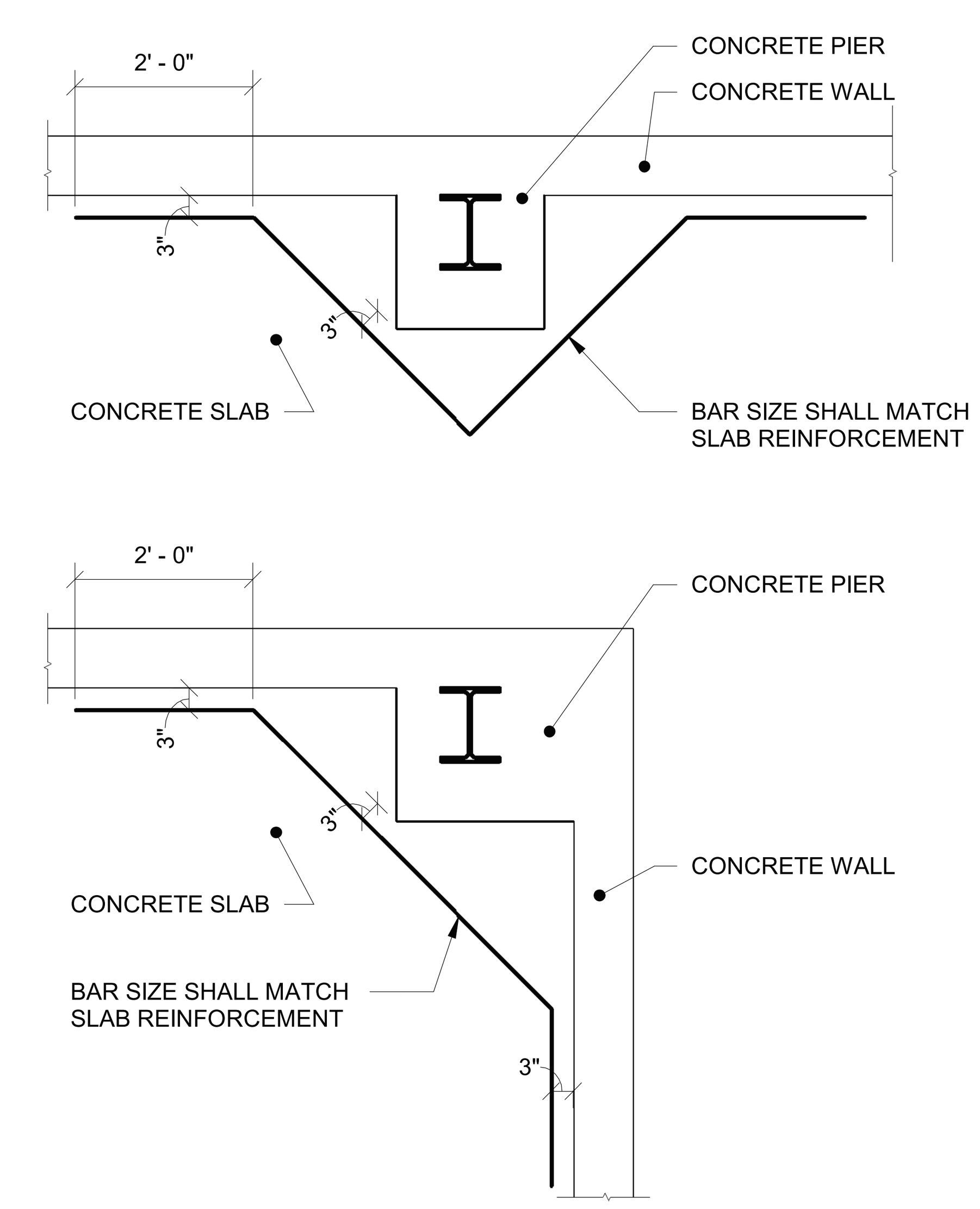
6 S301 TYPICAL RE-ENTRANT CORNER PLAN DETAILS
N.T.S

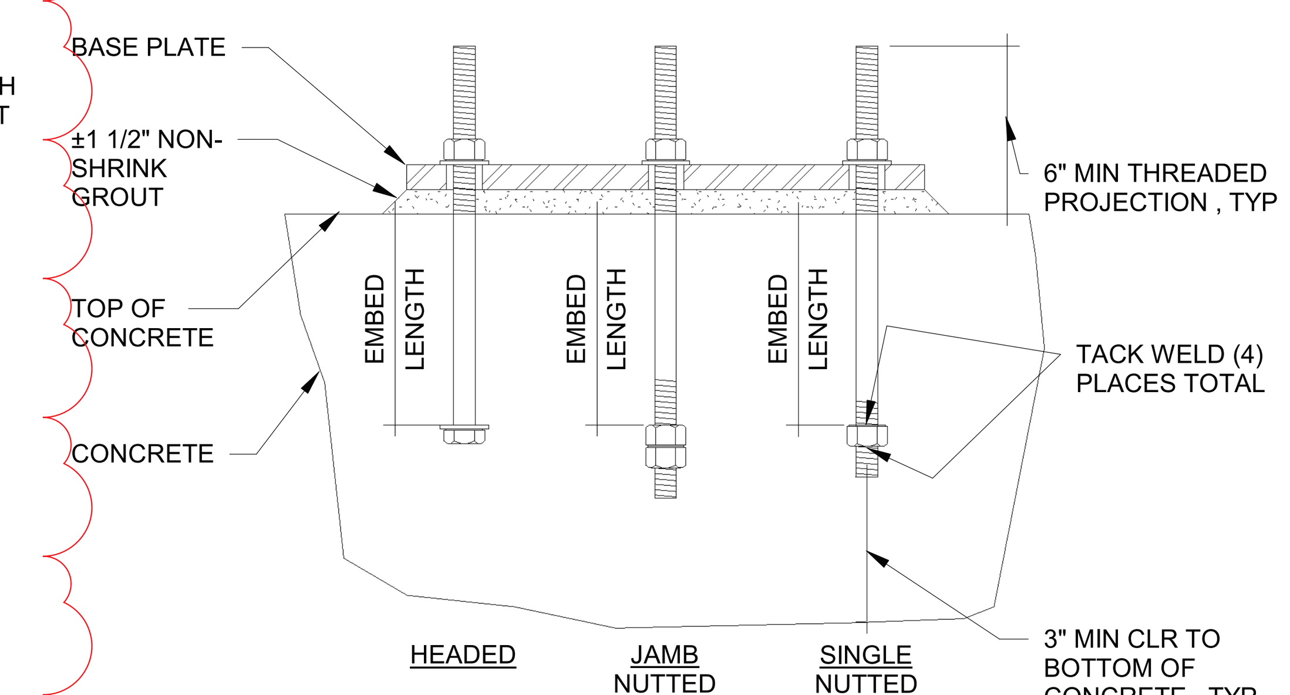


3 S301 TYPICAL SLAB-ON-GRADE CONSTRUCTION
N.T.S



9 S301 INTERIOR SPREAD FOOTING @ EXISTING FOOTING
N.T.S

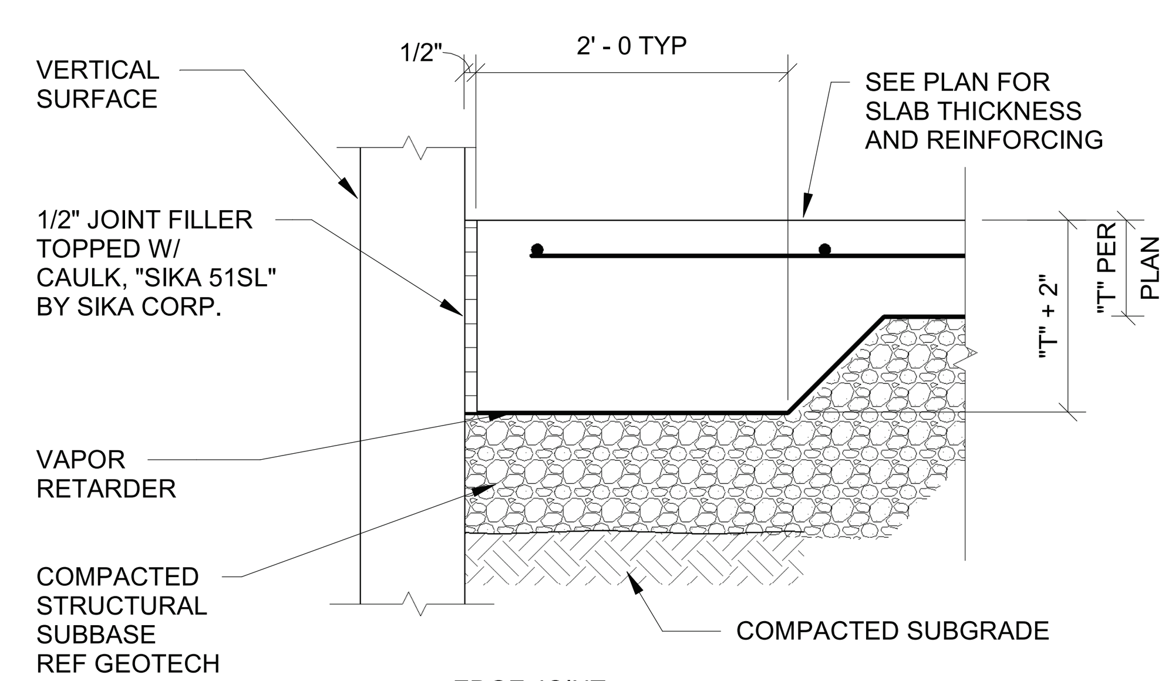


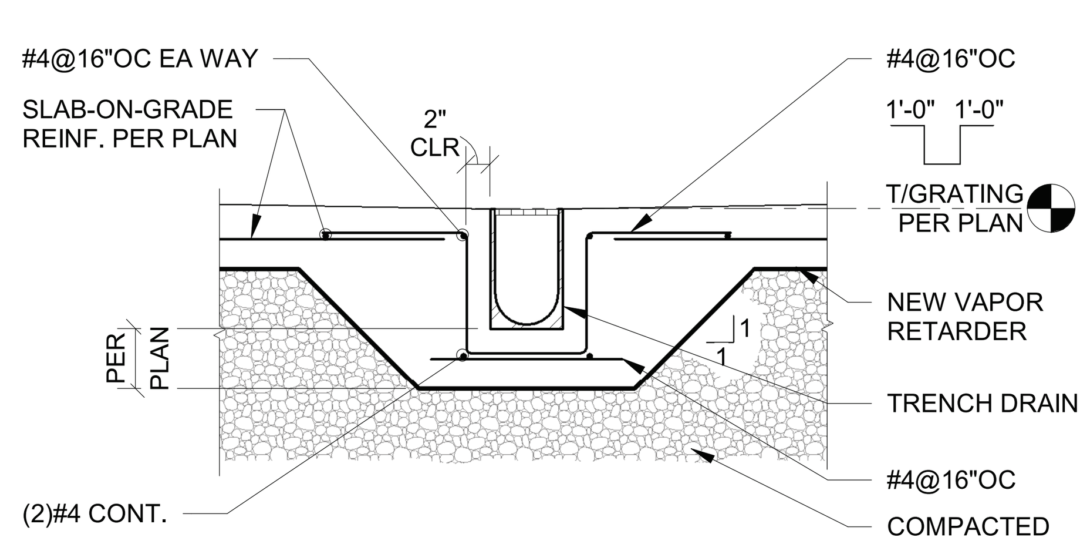


NOTES:

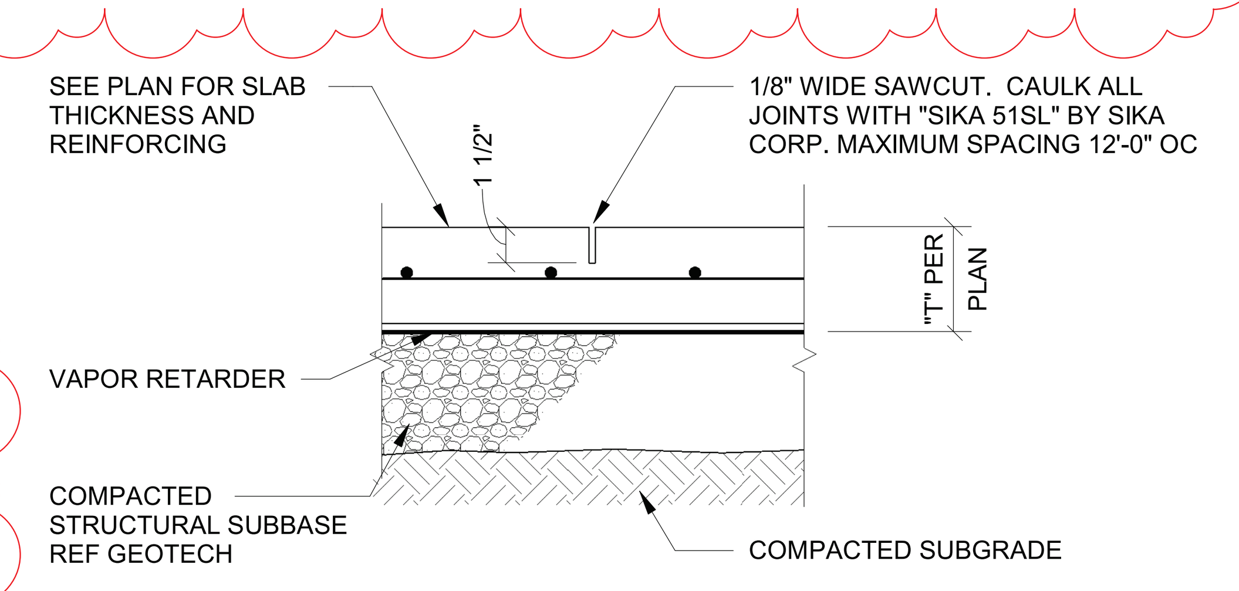
1. ANCHOR RODS TO BE ASTM F1554 GRADE 36.
2. NUTS FOR ANCHOR RODS SHALL BE STANDARD HEX NUTS TYPE ASTM A563-A.
3. WASHER FOR ANCHOR RODS SHALL BE ASTM F436. PROVIDE WASHER BETWEEN ALL NUTS AND BASE PL'S.
4. ALL ANCHOR ROD EMBEDED ENDS SHALL BE ONE OF THE FOLLOWING
   A. HEADED
   B. JAMB NUTTED (DOUBLE NUTTED)
   C. SINGLE NUTTED (TACK WELD IN (4) LOCATIONS TO SECURE NUT IN PLACE)
5. ALL HOLES IN BASE PLATES SHALL BE ANCHOR ROD DIAMETER + 3/16" MAXIMUM.
6. ALL ANCHOR RODS, NUTS, AND WASHERS SHALL BE HOT-DIPPED GALVANIZED.

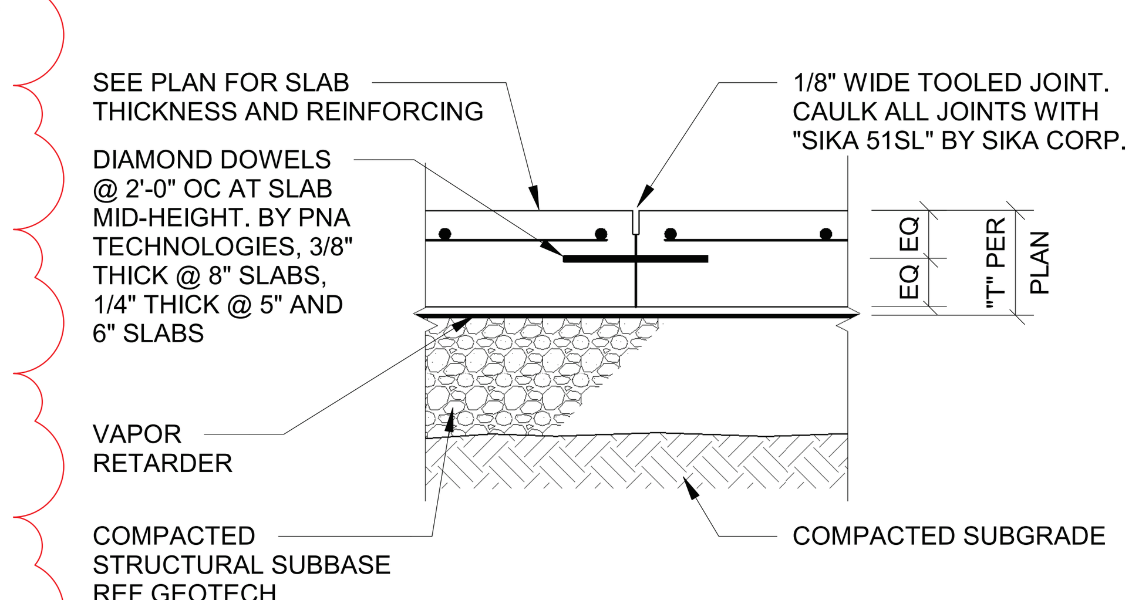
2 S301 TYPICAL ANCHOR ROD EMBEDMENT DETAIL
N.T.S



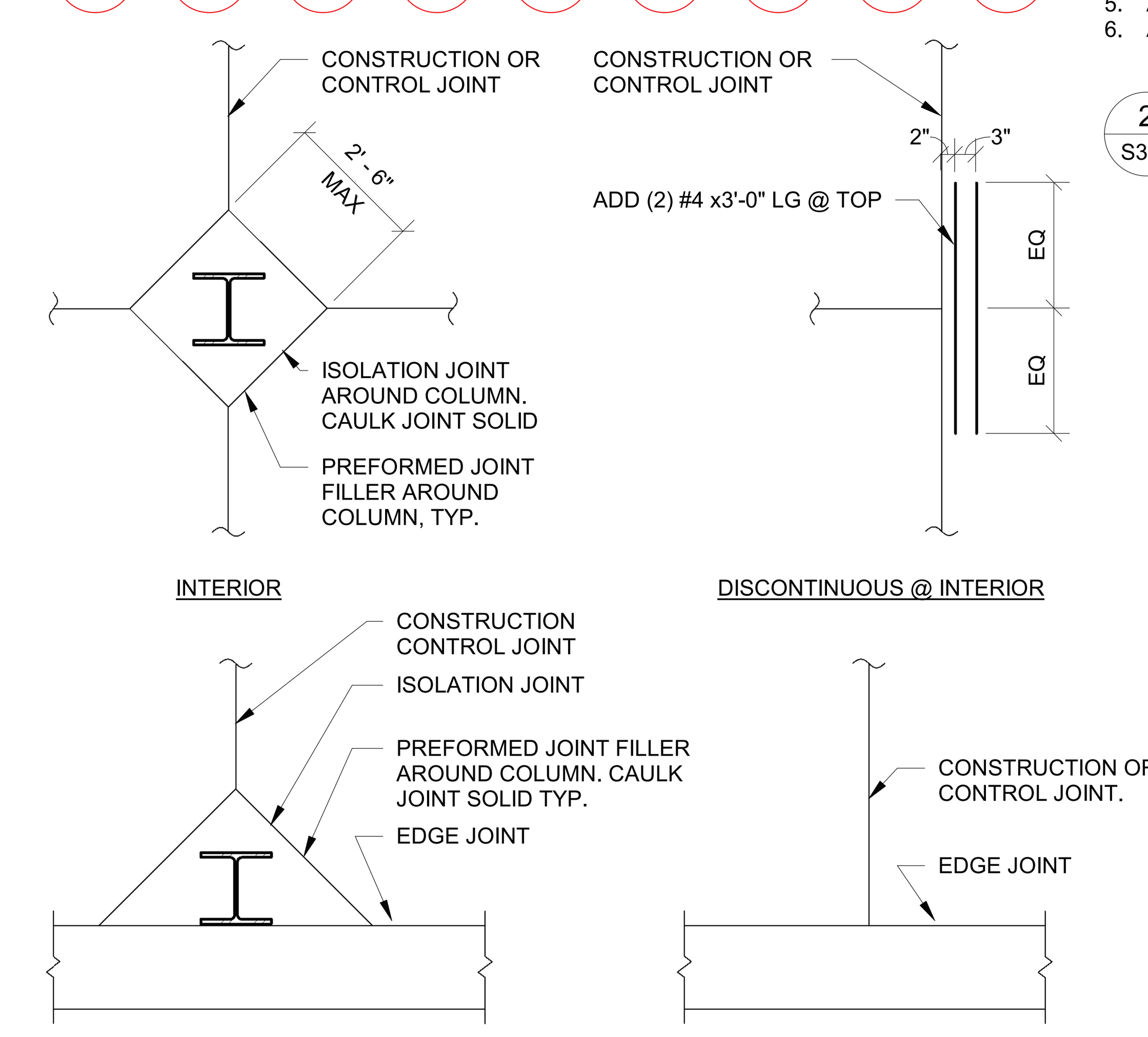


8 S301 TYPICAL TRENCH DRAIN DETAIL @ NEW SLAB
N.T.S





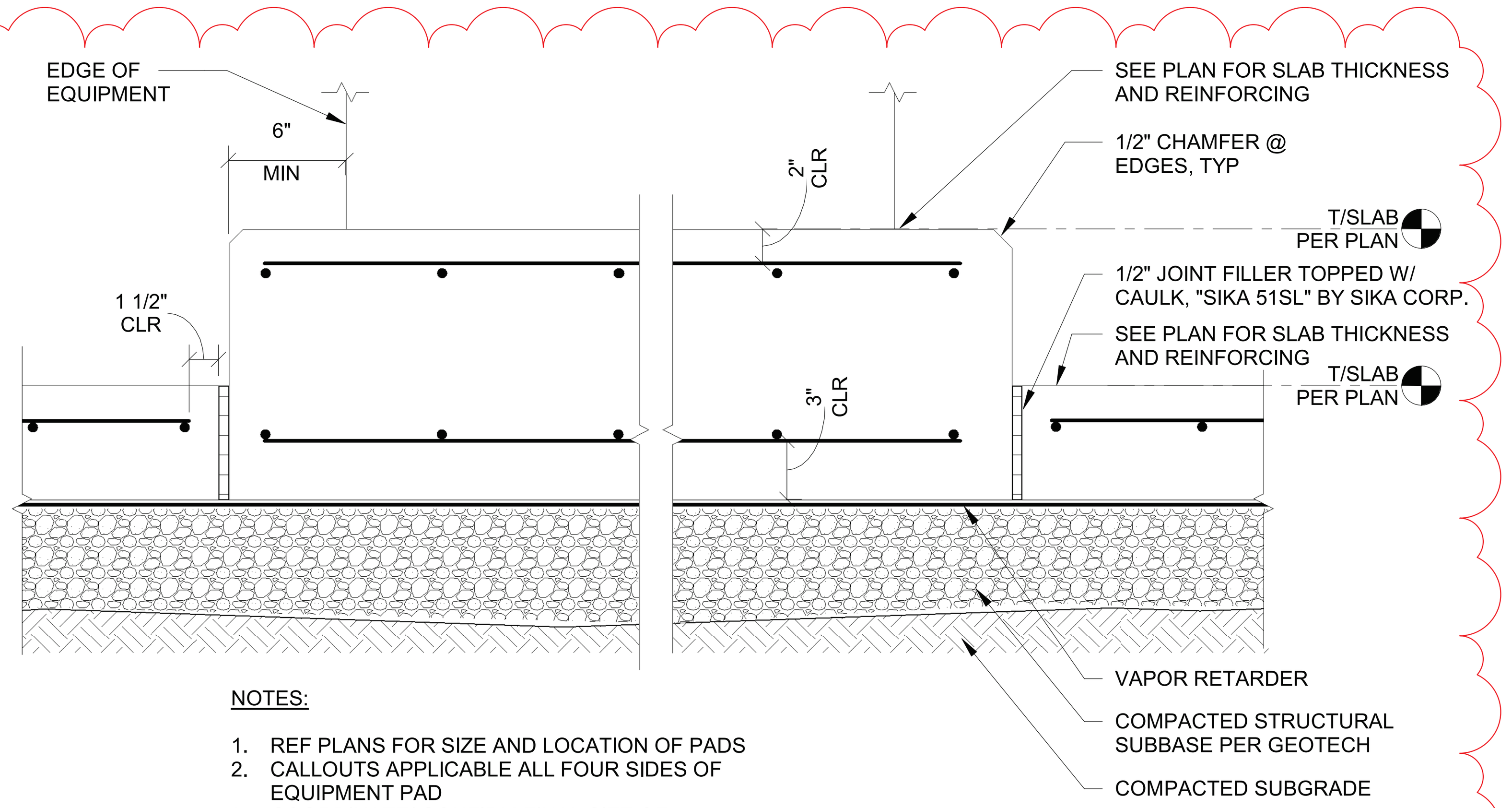
5 S301 TYPICAL SLAB-ON-GRADE JOINTS
N.T.S



NOTES:

1. SEE PLAN FOR SLAB JOINT LOCATIONS.

4 S301 TYPICAL SLAB-ON-GRADE JOINT DETAILS
N.T.S

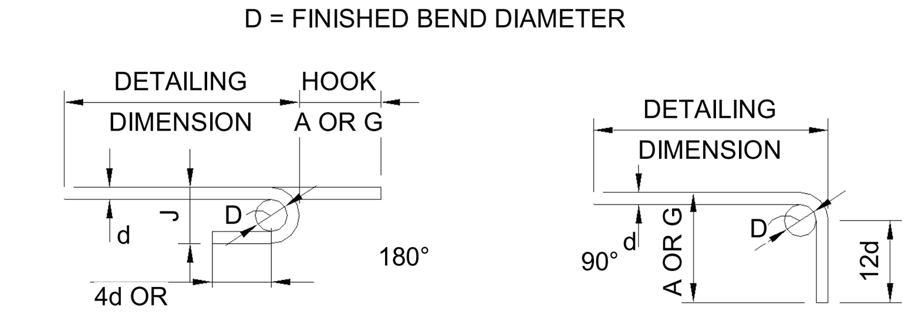


NOTES:

1. REF PLANS FOR SIZE AND LOCATION OF PADS
2. CALLOUTS APPLICABLE ALL FOUR SIDES OF EQUIPMENT PAD
3. COORDINATE/ CONFIRM FINAL SIZE OF EQUIPMENT SLAB WITH MANUFACTURER. EDGE OF SLAB SHALL BE OFFSET 6" MIN FROM OUTSIDE FACE OF EQUIPMENT.

7 S301 EQUIPMENT SLAB
N.T.S

RECOMMENDED END HOOKS
ALL GRADES OF STEEL
D = FINISHED BEND DIAMETER



BAR SIZE	D, IN.	180° HOOKS, IN.		90° HOOKS N.
		A OR G	J	A OR G
#3	2 1/4	5	3	6
#4	3	6	4	8
#5	3 3/4	7	5	10
#6	4 1/2	8	6	12
#7	5 1/4	10	7	14
#8	6	11	8	16
#9	9 1/2	15	11 3/4	19
#10	10 3/4	17	13 1/4	22
#11	12	19	15 3/4	24
#12	18 1/4	27	21 3/4	31

1 S301 TYPICAL REBAR END HOOK DETAIL
N.T.S

DATE: 01.23.24
DRAWN BY: EK
SCALE: As indicated
REVIEWED BY: CAM
PROJECT NO.: 22-2496
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
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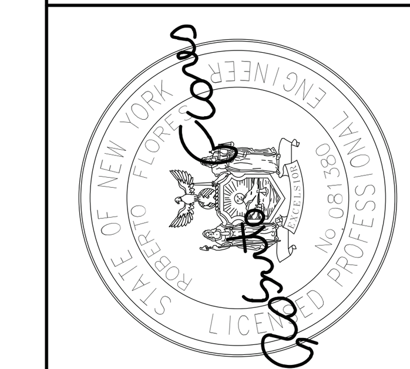
16 EAST MARKET ST, RED HOOK, NY 12571 - 518.452.1290
548 BROADWAY, MONTICELLO, NY 12701 - 845.791.7777
223 MAIN ST, GOSHEN, NY 10924 - 845.615.9232



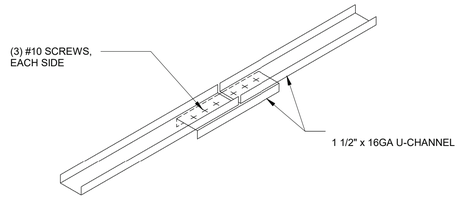
REVISIONS

NO.	DATE	DESCRIPTION
1	11/1/2024	ADDENDUM #1

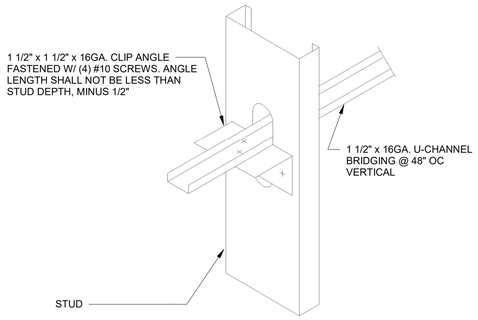
RHINEBECK WTP IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NY

CONCRETE DETAILS

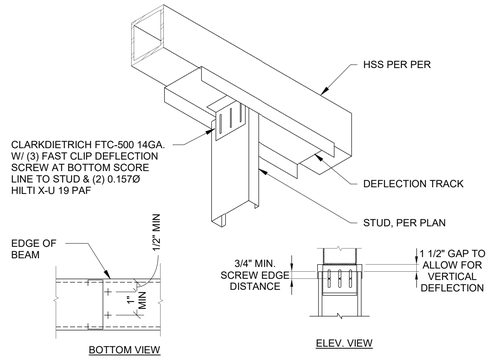
SHEET:
S301



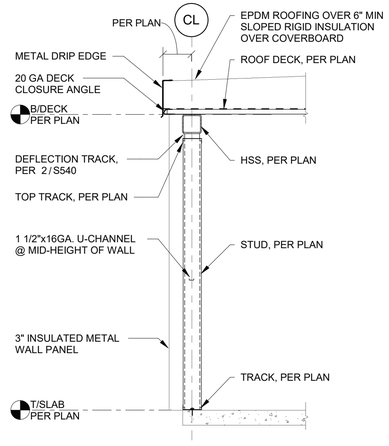
4 / S540 CFMF U-BRIDGING SPLICE DETAIL
N.T.S



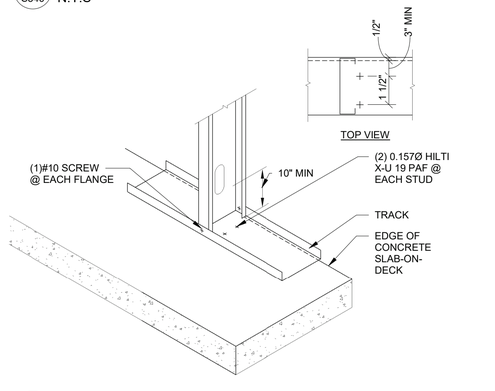
3 / S540 CFMF WALL U-BRIDGING CONNECTION
N.T.S



2 / S540 CFMF TYPICAL DEFLECTION TRACK @ BEAM
N.T.S



5 / S540 CFMF WALL DETAIL
N.T.S



1 / S540 CFMF TRACK CONNECTION @ SLAB
N.T.S

REVISIONS

NO.	DATE	DESCRIPTION
1	11/1/2024	ADDENDUM #1

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CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
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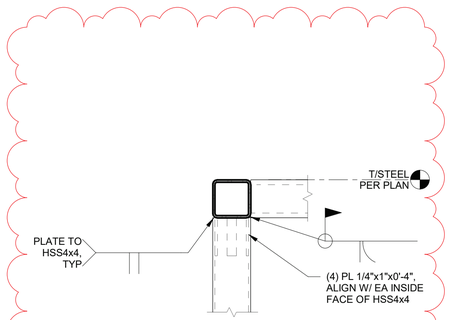
15 EAST MAIN ST, RED HOOK, NY 12571 - 845.757.2280
548 BROADWAY, MONTICELLO, NY 12701 - 845.791.7777
223 MAIN ST, GOSHEN, NY 10924 - 845.615.9232

DATE: 01.23.24
DRAWN BY: EK
SCALE: As indicated
REVIEWED BY: CAM
PROJECT NO.: 22-2496
FILE:

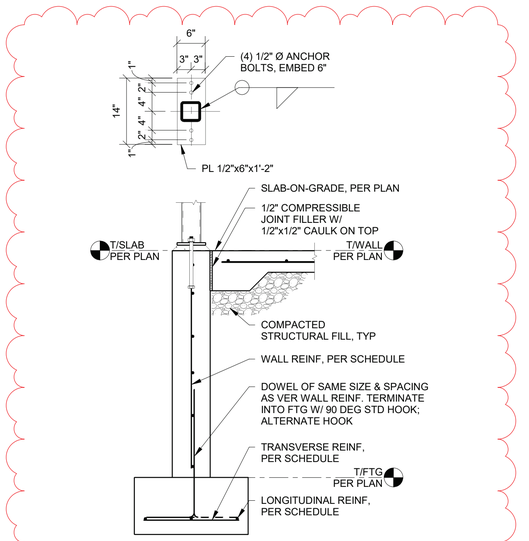
RHINEBECK WTP
IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NY

CFS DETAILS

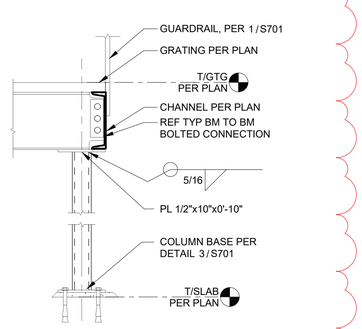
SHEET:
S540



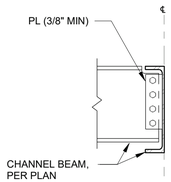
10 S701 FIXED CONNECTION @ HSS
N.T.S



9 S701 DETAIL @WALKWAY SLAB
N.T.S



8 S701 POST BASE @ SLAB
N.T.S



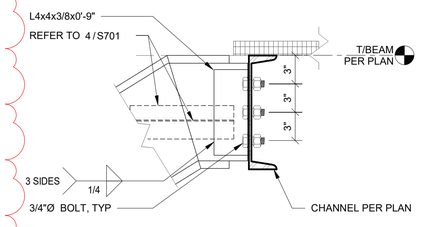
MINIMUM NUMBER OF ROWS OF BOLTS
C8 - 2 C12 - 3

BEAM TO BEAM

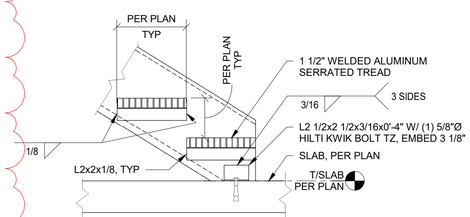
NOTES:

1. AT ALL BEAM CONNECTIONS, PROVIDE NUMBER OF 3/4" Ø A325 BOLTS REQUIRED TO SATISFY REACTIONS SHOWN ON FRAMING PLANS, BUT IN NO CASE LESS THAN THE MINIMUM NUMBER OF ROWS OF BOLTS FOR THE BEAM DEPTH AS INDICATED IN THE TABLE.

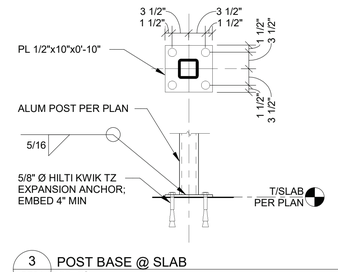
6 S701 BEAM TO BEAM CONNECTION
N.T.S



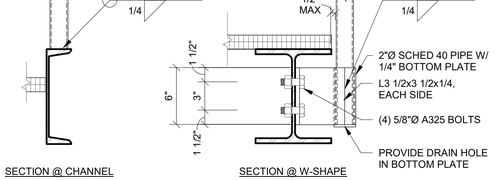
5 S701 STAIR STRINGER CONNECTION
N.T.S



4 S701 STAIR STRINGER @ SLAB
N.T.S

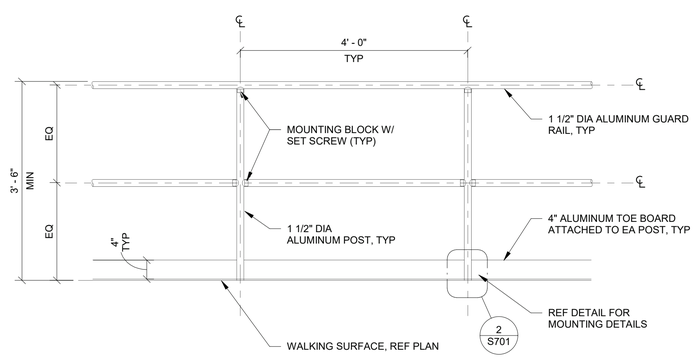


3 S701 POST BASE @ SLAB
N.T.S



2 S701 TYPICAL GUARDRAIL POST BASE CONNECTIONS
N.T.S

NOTE:
ALL GUARDRAIL AND HANDRAIL SHALL BE DESIGNED AND SUBMITTED TO THE ENGINEER AS A DELEGATED SUBMITTAL AS SPECIFIED IN THE GENERAL STRUCTURAL NOTES. THE ELEVATION AND DETAILS SHOWN ARE FOR REFERENCE ONLY.



1 S701 TYPICAL GUARDRAIL ELEVATION
N.T.S

NOTES:
1. SEAL CONCRETE SURFACE W/ (2) COATS 'SEAL-HARD', BY L+M CONSTRUCTION CHEMICAL CO.
2. ALL SLAB-ON-GRADE REBAR SHALL BE EPOXY COATED.
3. SLAB-ON-GRADE, POLE FOOTING NOT BY PANEL MANUF.
4. REFER TO CIVIL/ELEC FOR LOCATION

7 S701 ELECTRICAL KIOSK
N.T.S

DATE: 01.23.24
DRAWN BY: EK
SCALE: As indicated
REVIEWED BY: CAM
PROJECT NO.: 22-2496
FILE:

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
55 SOUTH MAIN ST, ONEONTA, NY 13820 - 607.432.8073
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548 BROADWAY, MONTICELLO, NY 12701 - 845.791.7777
223 MAIN ST, GOSHEN, NY 10924 - 845.615.9232

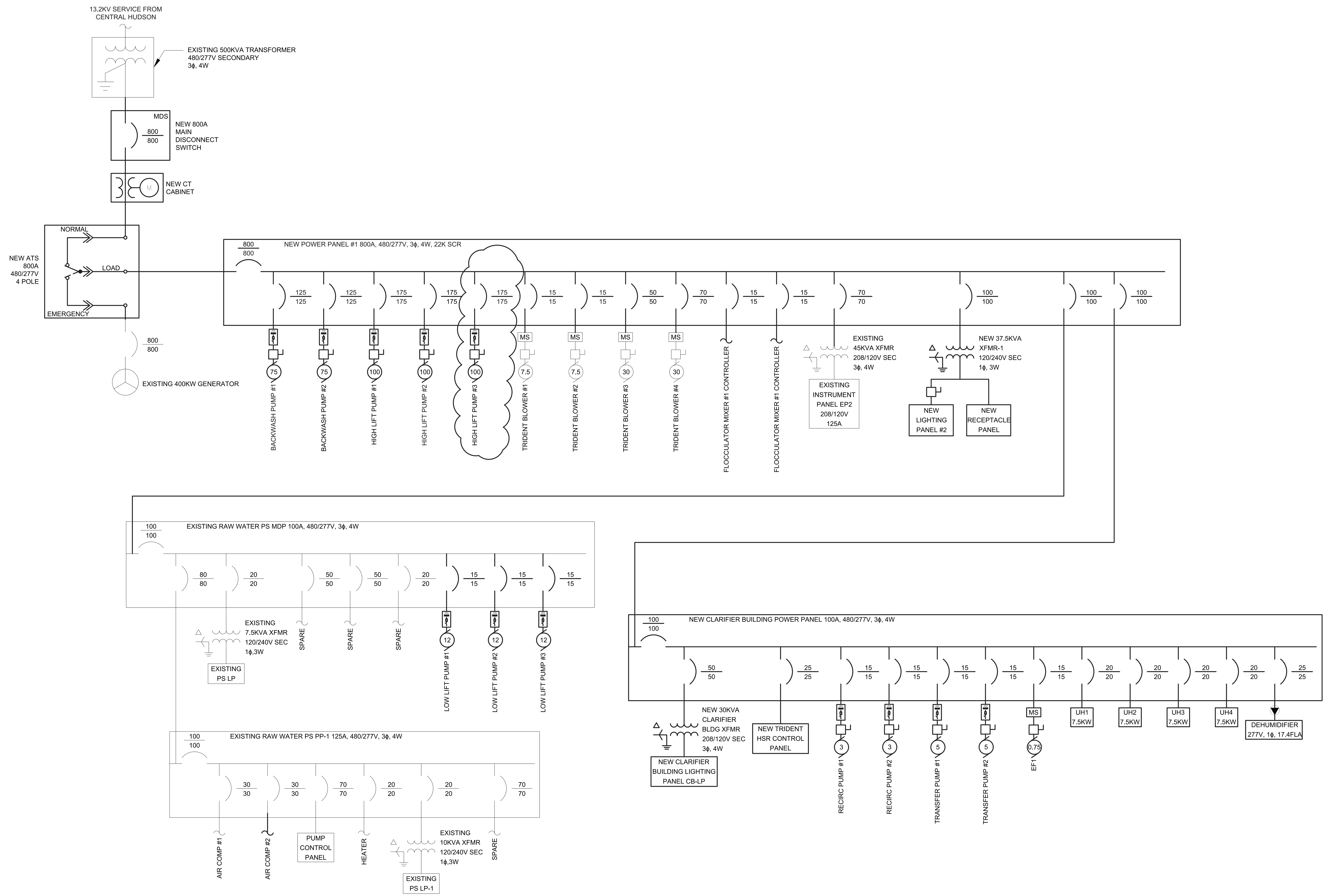
REVISIONS

NO.	DATE	DESCRIPTION
1	11/1/2024	ADDENDUM #1

RHINEBECK WTP
IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NY

MISC DETAILS

SHEET:
S701



DATE:	10/28/2024
DRAWN BY:	EMB
SCALE:	NTS
REVIEWED BY:	RF
PROJECT NO.:	----
FILE:	

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
55 SOUTH MAIN ST, ONEONTA, NY 13820 - 607.432.8073
31 NORTH MAIN STREET, LIBERTY, NY 12754 - 845.747.9952
6 TOWNSEND STREET, WALTON, NY 13856 - 607.865.9235
16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
548 BROADWAY, MONTICELLO, NY 12701 - 845.791.7777

REVISIONS

NO.	DATE	DESCRIPTION
1.	11/01/24	ADDENDUM #1

RHINEBECK WTP
PLANT IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NEW YORK

ONE LINE DIAGRAM

SHEET:
E-003

CONDUIT AND CABLE SCHEDULE

CONDUIT		CABLE		PURPOSE	FROM	VIA	TO	REMARKS
NO.	SIZE	QTY.	SIZE					
A1.1	(x2) 4"	4/EA	600MCM	POWER	UTILITY		MDS	
A1.2	(x2) 4"	4/EA	600MCM	POWER	MDS		CT CABINET	
A1.3	(x2) 4"	4/EA	600MCM	POWER	CT CABINET		ATS	
A1.4	(x2) 3"	4/EA	350MCM	POWER	EXISITING GENERATOR CONNECTION FEED		ATS	EX CABLES
A1.5	(x2) 4"	4/EA	600MCM	POWER	ATS		NEW POWER PANEL #1	
A2.1	1"	4	#4	POWER	NEW POWER PANEL #1		EXISTING 45KVA XFMR	
A2.2	1-1/4"	4	#3	POWER	NEW POWER PANEL #1		NEW 37.5KVA XFMR-1	
A2.3	1-1/4"	4	#3	POWER	NEW 37.5KVA XFMR-1	DISCONNECT	NEW LIGHTING PANEL	
A2.4	1-1/4"	4	#3	POWER	NEW 37.5KVA XFMR-1		NEW RECEPTACLE PANEL	
B1.1	3/4"	4	#12	POWER	NEW POWER PANEL #1		EXISTING TRIDENT BLOWER #1 MS	
B1.2	3/4"	4	#12	POWER	NEW POWER PANEL #1		EXISTING TRIDENT BLOWER #2 MS	
B1.3	3/4"	4	#8	POWER	NEW POWER PANEL #1		EXISTING TRIDENT BLOWER #3 MS	
B1.4	3/4"	4	#8	POWER	NEW POWER PANEL #1		EXISTING TRIDENT BLOWER #4 MS	
B2.1	3/4"	1	CAT6	CONTROL	FILTER #1 RIO		MAIN CONTROL PANEL	
B2.2	3/4"	1	CAT6	CONTROL	FILTER #2 RIO		MAIN CONTROL PANEL	
C1.1	1-1/2"	4	#2	POWER	NEW POWER PANEL #1		NEW CLARIFIER BUILDING POWER PANEL	
C1.2	3/4"	4	#8	POWER	NEW CLARIFIER BUILDING POWER PANEL		NEW CLARIFIER BUILDING XFMR	
C1.3	1"	4	#2	POWER	NEW CLARIFIER BUILDING XFMR		NEW CLARIFIER BUILDING LIGHTING PANEL	
C1.4	3/4"	4	#10	POWER	NEW CLARIFIER BUILDING POWER PANEL		NEW TRIDENT HSR CONTROL PANEL	
C1.5	3/4"	1	CAT6	CONTROL	MAIN CONTROL PANEL		NEW TRIDENT HSR CONTROL PANEL	
C1.6	3/4"	3	#12	POWER	NEW CLARIFIER BUILDING LIGHTING PANEL		UNIT A CONTROL PANEL	
C1.7	3/4"	1	CAT6	CONTROL	NEW TRIDENT HSR CONTROL PANEL		UNIT A CONTROL PANEL	
C1.8	3/4"	3	#12	POWER	NEW CLARIFIER BUILDING LIGHTING PANEL		UNIT B CONTROL PANEL	
C1.9	3/4"	1	CAT6	CONTROL	NEW TRIDENT HSR CONTROL PANEL		UNIT B CONTROL PANEL	
C2.1	3/4"	4	#12	POWER	NEW CLARIFIER BUILDING POWER PANEL		CLARIFIER TRANSFER PUMP #1 VFD	
C2.2	3/4"	4	#12	POWER	CLARIFIER TRANSFER PUMP #1 VFD	DISCONNECT	CLARIFIER TRANSFER PUMP #1	
C2.3	3/4"	1	CAT6	CONTROL	UNIT A CONTROL PANEL		CLARIFIER TRANSFER PUMP #1 VFD	
C2.4	3/4"	4	#12	POWER	NEW CLARIFIER BUILDING POWER PANEL		RECIRC PUMP #1 VFD	
C2.5	3/4"	4	#12	POWER	RECIRC PUMP #1 VFD	DISCONNECT	RECIRC PUMP #1	
C2.6	3/4"	1	CAT6	CONTROL	UNIT A CONTROL PANEL		RECIRC PUMP #1 VFD	
C2.7	3/4"	4	#12	POWER	UNIT A CONTROL PANEL	DISCONNECT	CLARIFIER #1 DRIVE UNIT	
C3.1	3/4"	4	#12	POWER	NEW CLARIFIER BUILDING POWER PANEL		CLARIFIER TRANSFER PUMP #2 VFD	
C3.2	3/4"	4	#12	POWER	CLARIFIER TRANSFER PUMP #2 VFD	DISCONNECT	CLARIFIER TRANSFER PUMP #2	
C3.3	3/4"	1	CAT6	CONTROL	UNIT B CONTROL PANEL		CLARIFIER TRANSFER PUMP #2 VFD	
C3.4	3/4"	4	#12	POWER	NEW CLARIFIER BUILDING POWER PANEL		RECIRC PUMP #2 VFD	
C3.5	3/4"	4	#12	POWER	RECIRC PUMP #2 VFD	DISCONNECT	RECIRC PUMP #2	
C3.6	3/4"	1	CAT6	CONTROL	UNIT B CONTROL PANEL		RECIRC PUMP #2 VFD	
C3.7	3/4"	4	#12	POWER	UNIT B CONTROL PANEL	DISCONNECT	CLARIFIER #2 DRIVE UNIT	
C4.1	3/4"	3	#12	POWER	NEW CLARIFIER BUILDING LIGHTING PANEL		INFLUENT ACTUATED VALVE #1	
C4.2	3/4"	8	#14	CONTROL	UNIT A CONTROL PANEL		INFLUENT ACTUATED VALVE #1	
C4.3	3/4"	3	#12	POWER	NEW CLARIFIER BUILDING LIGHTING PANEL		SLUDGE RECYCLE VALVE #1	
C4.4	3/4"	8	#14	CONTROL	UNIT A CONTROL PANEL		SLUDGE RECYCLE VALVE #1	
C4.5	3/4"	3	#12	POWER	NEW CLARIFIER BUILDING LIGHTING PANEL		SLUDGE BLOWDOWN VALVE #1	
C4.6	3/4"	8	#14	CONTROL	UNIT A CONTROL PANEL		SLUDGE BLOWDOWN VALVE #1	
C4.7	3/4"	3	#12	POWER	NEW CLARIFIER BUILDING LIGHTING PANEL		CLARIFIER TRANSFER VALVE #1	
C4.8	3/4"	8	#14	CONTROL	UNIT A CONTROL PANEL		CLARIFIER TRANSFER VALVE #1	
C5.1	3/4"	3	#12	POWER	NEW CLARIFIER BUILDING LIGHTING PANEL		INFLUENT ACTUATED VALVE #2	
C5.2	3/4"	8	#14	CONTROL	UNIT B CONTROL PANEL		INFLUENT ACTUATED VALVE #2	
C5.3	3/4"	3	#12	POWER	NEW CLARIFIER BUILDING LIGHTING PANEL		SLUDGE RECYCLE VALVE #2	
C5.4	3/4"	8	#14	CONTROL	UNIT B CONTROL PANEL		SLUDGE RECYCLE VALVE #2	
C5.5	3/4"	3	#12	POWER	NEW CLARIFIER BUILDING LIGHTING PANEL		SLUDGE BLOWDOWN VALVE #2	
C5.6	3/4"	8	#14	CONTROL	UNIT B CONTROL PANEL		SLUDGE BLOWDOWN VALVE #2	
C5.7	3/4"	3	#12	POWER	NEW CLARIFIER BUILDING LIGHTING PANEL		CLARIFIER TRANSFER VALVE #2	
C5.8	3/4"	8	#14	CONTROL	UNIT B CONTROL PANEL		CLARIFIER TRANSFER VALVE #2	
C6.1	3/4"	3	#12	POWER	NEW CLARIFIER BUILDING LIGHTING PANEL		INLET METER #1	
C6.2	3/4"	1	16TS	CONTROL	UNIT A CONTROL PANEL		INLET METER #1	
C6.3	3/4"	3	#12	POWER	NEW CLARIFIER BUILDING LIGHTING PANEL		INLET METER #2	
C6.4	3/4"	1	16TS	CONTROL	UNIT B CONTROL PANEL		INLET METER #2	
C6.5	3/4"	3	#12	POWER	NEW CLARIFIER BUILDING LIGHTING PANEL		SLUDGE RECIRC METER #1	
C6.6	3/4"	1	16TS	CONTROL	UNIT A CONTROL PANEL		SLUDGE RECIRC METER #1	
C6.7	3/4"	3	#12	POWER	NEW CLARIFIER BUILDING LIGHTING PANEL		SLUDGE RECIRC METER #2	
C6.8	3/4"	1	16TS	CONTROL	UNIT B CONTROL PANEL		SLUDGE RECIRC METER #2	
C7.1	3/4"	1	16TS	CONTROL	UNIT A CONTROL PANEL		LEVEL TRANSMITTER #1	
C7.2	3/4"	1	16TS	CONTROL	UNIT B CONTROL PANEL		LEVEL TRANSMITTER #2	
C7.3	3/4"	3	#12	POWER	NEW CLARIFIER BUILDING LIGHTING PANEL		TURBIDIMETER ASSEMBLY #1	
C7.4	3/4"	1	16TS	CONTROL	UNIT A CONTROL PANEL		TURBIDIMETER ASSEMBLY #1	
C7.5	3/4"	1	VSC	PWR/CTRL	TURBIDIMETER CONTROLLER #1		TURBIDIMETER SENSOR #1	
C7.6	3/4"	3	#12	POWER	NEW CLARIFIER BUILDING LIGHTING PANEL		TURBIDIMETER ASSEMBLY #2	
C7.7	3/4"	1	16TS	CONTROL	UNIT B CONTROL PANEL		TURBIDIMETER ASSEMBLY #2	
C7.8	3/4"	1	VSC	PWR/CTRL	TURBIDIMETER CONTROLLER #2		TURBIDIMETER SENSOR #2	
C8.1	3/4"	4	#12	POWER	NEW CLARIFIER BUILDING LIGHTING PANEL		DOOR OPENER MOTOR	
C8.2	3/4"	6	#14	CONTROL	DOOR OPENER CONTROLLER		DOOR OPENER MOTOR	

CONDUIT AND CABLE SCHEDULE

CONDUIT		CABLE		PURPOSE	FROM	VIA	TO	REMARKS
NO.	SIZE	QTY.	SIZE					
D1.1	3/4"	3	#12	POWER	NEW POWER PANEL #1		FLOCCULATOR MIXER #1 CONTROLLER	
D1.2	3/4"	3	#12	POWER	NEW POWER PANEL #1		FLOCCULATOR MIXER #2 CONTROLLER	
P1.1	2"	4	2/0	POWER	NEW POWER PANEL #1		NEW HIGH SERVICE PUMP #1 VFD	
P1.2	2"	4	2/0	POWER	NEW HIGH SERVICE PUMP #1 VFD	DISCONNECT	NEW HIGH SERVICE PUMP #1	
P1.3	3/4"	1	CAT6	CONTROL	MAIN CONTROL PANEL		NEW HIGH SERVICE PUMP #1 VFD	
P1.4	3/4"	4	#14	CONTROL	MAIN CONTROL PANEL		HIGH SERVICE PUMP #1 CHECK VALVE	LIMIT SWITCH
P2.1	2"	4	2/0	POWER	NEW POWER PANEL #1		NEW HIGH SERVICE PUMP #2 VFD	
P2.2	2"	4	2/0	POWER	NEW HIGH SERVICE PUMP #2 VFD	DISCONNECT	NEW HIGH SERVICE PUMP #2	
P2.3	3/4"	1	CAT6	CONTROL	MAIN CONTROL PANEL		NEW HIGH SERVICE PUMP #2 VFD	
P2.4	3/4"	4	#14	CONTROL	MAIN CONTROL PANEL		HIGH SERVICE PUMP #2 CHECK VALVE	LIMIT SWITCH
P3.1	2"	4	2/0	POWER	NEW POWER PANEL #1		NEW HIGH SERVICE PUMP #3 VFD	
P3.2	2"	4	2/0	POWER	NEW HIGH SERVICE PUMP #3 VFD	DISCONNECT	NEW HIGH SERVICE PUMP #3	
P3.3	3/4"	1	CAT6	CONTROL	MAIN CONTROL PANEL		NEW HIGH SERVICE PUMP #3 VFD	
P3.4	3/4"	4	#14	CONTROL	MAIN CONTROL PANEL		HIGH SERVICE PUMP #3 CHECK VALVE	LIMIT SWITCH
P4.1	1-1/4"	4	#1	POWER	NEW POWER PANEL #1		NEW BACKWASH PUMP #1 VFD	
P4.2	1-1/4"	4	#1	POWER	NEW BACKWASH PUMP #1 VFD	DISCONNECT	NEW BACKWASH PUMP #1	
P4.3	3/4"	1	CAT6	CONTROL	MAIN CONTROL PANEL		NEW BACKWASH PUMP #1 VFD	
P5.1	1-1/4"	4	#1	POWER	NEW POWER PANEL #1		NEW BACKWASH PUMP #2 VFD	
P5.2	1-1/4"	4	#1	POWER	NEW BACKWASH PUMP #2 VFD	DISCONNECT	NEW BACKWASH PUMP #2	
P5.3	3/4"	1	CAT6	CONTROL	MAIN CONTROL PANEL		NEW BACKWASH PUMP #2 VFD	
L1.1	1-1/2"	4	#2	POWER	NEW POWER PANEL #1		EXISTING RAW WATER PS MDP	
L1.2	2"	1	FIBER	CONTROL	MAIN CONTROL PANEL		NEW RAW WATER CONTROL PANEL	
L1.3	3/4"	3	#12	POWER	EXISTING PS LP-1		NEW RAW WATER CONTROL PANEL	
L2.1	3/4"	4	#8	POWER	EXISTING RAW WATER PS MDP		NEW RAW WATER PUMP #1 VFD	
L2.2	3/4"	4	#8	POWER	NEW RAW WATER PUMP #1 VFD		NEW RAW WATER PUMP #1	
L2.3	3/4"	1	CAT6	CONTROL	NEW RAW WATER PUMP #1 VFD		NEW RAW WATER CONTROL PANEL	
L2.4	3/4"	8	#14	CONTROL	NEW RAW WATER PUMP #1 VFD		NEW RAW WATER PUMP #1 THERM/SEAL	
L3.1	3/4"	4	#8	POWER	EXISTING RAW WATER PS MDP		NEW RAW WATER PUMP #2 VFD	
L3.2	3/4"	4	#8	POWER	NEW RAW WATER PUMP #2 VFD		NEW RAW WATER PUMP #2	
L3.3	3/4"	1	CAT6	CONTROL	NEW RAW WATER PUMP #2 VFD		NEW RAW WATER CONTROL PANEL	
L3.4	3/4"	8	#14	CONTROL	NEW RAW WATER PUMP #2 VFD		NEW RAW WATER PUMP #2 THERM/SEAL	
L4.1	3/4"	4	#8	POWER	EXISTING RAW WATER PS MDP		NEW LOW LIFT PUMP #3 VFD	
L4.2	3/4"	4	#8	POWER	NEW RAW WATER PUMP #3 VFD		NEW RAW WATER PUMP #3	
L4.3	3/4"	1	CAT6	CONTROL	NEW RAW WATER PUMP #3 VFD		NEW RAW WATER CONTROL PANEL	
L4.4	3/4"	8	#14	CONTROL	NEW RAW WATER PUMP #3 VFD		NEW RAW WATER PUMP #3 THERM/SEAL	
L5.1	3/4"	4	#14	CONTROL	NEW RAW WATER CONTROL PANEL		EXISTING AIR COMPRESSOR CP 1	
L5.2	3/4"	4	#14	CONTROL	NEW RAW WATER CONTROL PANEL		EXISTING AIR COMPRESSOR CP 2	
M1.1	3/4"	3	#12	POWER	PUMP STATION PANEL		MIXER MS/DC	
M1.2	3/4"	10	#14	CONTROL	PUMP STATION PANEL		MIXER CONTROL PANEL	
M1.3	3/4"	4	#12	POWER	MIXER CONTROL PANEL		MIXER	
M1.4	3/4"	10	#14	CONTROL	MIXER CONTROL PANEL		MIXER	
U1.1	3/4"	3	#8	POWER	EXISTING INSTRUMENT POWER PANEL		UV CP #1	
U1.2	3/4"	1	CAT6	CONTROL	MAIN CONTROL PANEL		UV CP #1	
U1.3	3/4"	-	VSC	PWR/CTRL	UV CP #1		UV UNIT #1	
U2.1	3/4"	3	#8	POWER	EXISTING INSTRUMENT POWER PANEL		UV CP #2	
U2.2	3/4"	1	CAT6	CONTROL	MAIN CONTROL PANEL		UV CP #2	
U2.3	3/4"	-	VSC	PWR/CTRL	UV CP #2		UV UNIT #2	
F1.1	3/4"	3	#12	POWER	EXISTING INSTRUMENT POWER PANEL		NEW EFFLUENT FM TRANSMITTER	
F1.2	3/4"	1	16TS	CONTROL	MAIN CONTROL PANEL		NEW EFFLUENT FM TRANSMITTER	
F1.3	3/4"	1	VSC	PWR/CTRL	NEW EFFLUENT FM TRANSMITTER		NEW EFFLUENT FLOW METER	
F2.1	3/4"	3	#12	POWER	EXISTING INSTRUMENT POWER PANEL		NEW CLARIFIER FLOW CONTROL VALVE	
F2.2	3/4"	8	#14	CONTROL	MAIN CONTROL PANEL		NEW CLARIFIER FLOW CONTROL VALVE	
H1.1	3/4"	4	#12	POWER	NEW CLARIFIER BUILDING POWER PANEL	MS/DC	EF1	
H1.2	3/4"	3	#12	POWER	LV1		EF1 MS/DC	
H1.3	3/4"	3	#12	POWER	LV2		EF1 MS/DC	
H1.4	3/4"	2	#12	CONTROL	TSTAT		EF1 MS/DC	
H1.5	3/4"	2	#12	CONTROL	HSTAT		EF1 MS/DC	
H2.1	3/4"	4	#12	POWER	NEW CLARIFIER BUILDING POWER PANEL	DISCONNECT	UH1	
H2.2	3/4"	4	#12	POWER	NEW CLARIFIER BUILDING POWER PANEL	DISCONNECT	UH2	
H2.3	3/4"	2	#12	CONTROL	TSTAT		UH1	
H2.4	3/4"	2	#12	CONTROL	TSTAT		UH2	
H2.5	3/4"	4	#12	POWER	NEW CLARIFIER BUILDING POWER PANEL	DISCONNECT	UH3	
H2.6	3/4"	4	#12	POWER	NEW CLARIFIER BUILDING POWER PANEL	DISCONNECT	UH4	
H2.7	3/4"	2	#12	CONTROL	TSTAT		UH3	
H2.8	3/4"	2	#12	CONTROL	TSTAT		UH4	
H3.1	3/4"	3	#12	POWER	NEW CLARIFIER BUILDING POWER PANEL		DEHUMIDIFER 277V RECEPTACLE	
H3.2	3/4"	2	#12	CONTROL	DEHUMIDIFIER		DEHUMIDIFIER HSTAT	

DATE: 10/28/2024
DRAWN BY: EMB
SCALE: NTS
REVIEWED BY: RF
PROJECT NO.: ----
FILE:

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16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
548 BROADWAY, MONTICELLO, NY 12701 - 845.791.1777

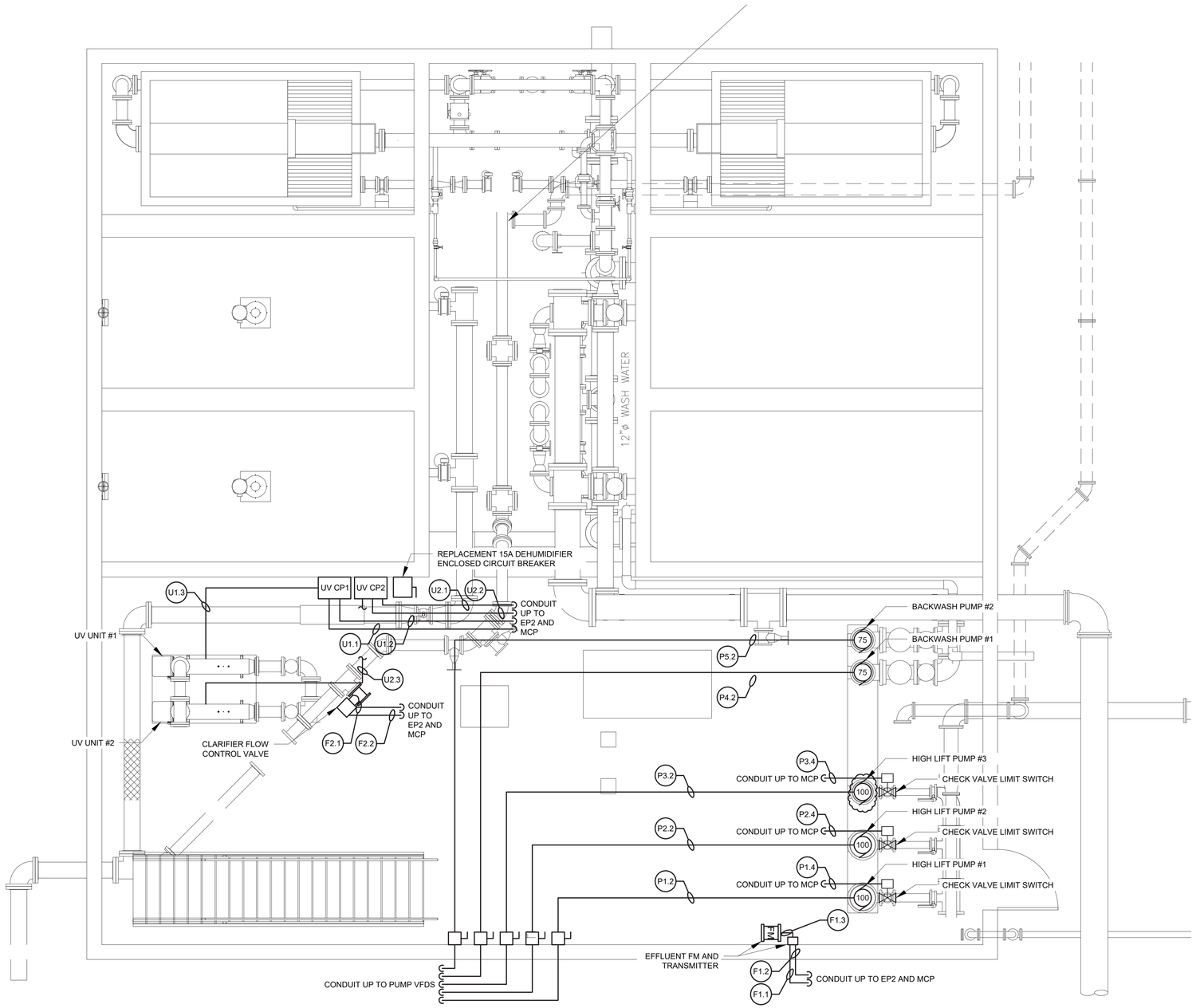
REVISIONS

NO.	DATE	DESCRIPTION
1.	11/01/24	ADDENDUM #1

RHINEBECK WTP
PLANT IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NEW YORK

CONDUIT & CABLE SCHEDULES

SHEET: E-004



0 2 4 8

SCALE: 1/4"=1'-0"

DATE: 10/28/2024
DRAWN BY: EMB
SCALE: AS SHOWN
REVIEWED BY: RF
PROJECT NO.: ----
FILE:

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REVISIONS

NO.	DATE	DESCRIPTION
1.	11/01/24	ADDENDUM #1

RHINEBECK WTP
PLANT IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NEW YORK

LOWER LEVEL
ELECTRICAL PLAN

SHEET:
E-104

Belt Drive Upblast Centrifugal Wall
Exhaust Fan

MARK INFORMATION		FAN INFORMATION						MOTOR INFORMATION						
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	V/C/P	ENCLOSURE	MOTORRPM	WINDINGS	NEC FLA*	SONES
1	EF1	CUBE-300-7	5,300	0.29	415	0.54	216	0.75	460/60/3	TF	1725	1	1.6	7.3

*NEC FLA - Based on table 430.250 or 430.248 of National Electrical Code 2020. Actual motor FLA may vary for sizing thermal overload, consult factory"

EF1 : SELECTED OPTIONS AND ACCESSORIES
Standard Curb Cap Size - 40 Square
Sidewall Mounting - Fan Configured for Wall-Mounted Applications
Curb will be Through Wall, 6 in. Wall Thickness
UL/cUL 705 Listed - "Power Ventilators"
Switch, NEMA-1, Toggle,
Foam Curb Seal (Factory Applied)
Damper Shipped Loose, WD-330-PB-34X34, Gravity Operated, Coated, Nominal Size
Coated with Permatector, Concrete Gray-RAL 7023, Fan And Attached Acc
Hood Hasps
Stainless Steel Fasteners - 300 Series
Stainless Steel Shaft - 300 Series
Wiring Pigtail, Internal, General, 9 ft from Unit of Flexible Metal Conduit
Birdscreen: Stainless Steel, nom. 69% Free Area
Bearings with Grease Fittings, L10 life of 100,000 hrs (L50 avg. life 500,000 hrs)
Conduit Chase Qty 1

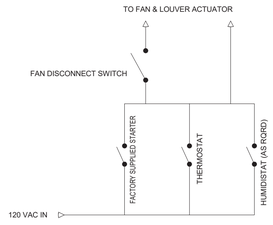
LOUVER SCHEDULE						
MARK TYPE	ID #	TAG	QTY	MODEL	WIDTH	HEIGHT
LV1	1-1	LV1	2	ECD-601	32	40

UNIT HEATER SCHEDULE									
ID	LOCATION	MANUFACTURER & MODEL NUMBER	TYP	KW	BTU	AIRFLOW (CFM)	VOLT/PH/HZ	MAX MTG HGT (FT)	NOTES
UH-1	CLARIFIER BLDG	MODINE NEW-480360-075	HORIZONTAL	7.5	25,600	700	460/3/60	8.5	NEW ADJUSTABLE WALL MOUNT BRACKET
UH-2	CLARIFIER BLDG	MODINE NEW-480360-075	HORIZONTAL	7.5	25,600	700	460/3/60	8.5	NEW ADJUSTABLE WALL MOUNT BRACKET
UH-3	CLARIFIER BLDG	MODINE NEW-480360-075	HORIZONTAL	7.5	25,600	700	460/3/60	8.5	NEW ADJUSTABLE WALL MOUNT BRACKET
UH-4	CLARIFIER BLDG	MODINE NEW-480360-075	HORIZONTAL	7.5	25,600	700	460/3/60	8.5	NEW ADJUSTABLE WALL MOUNT BRACKET

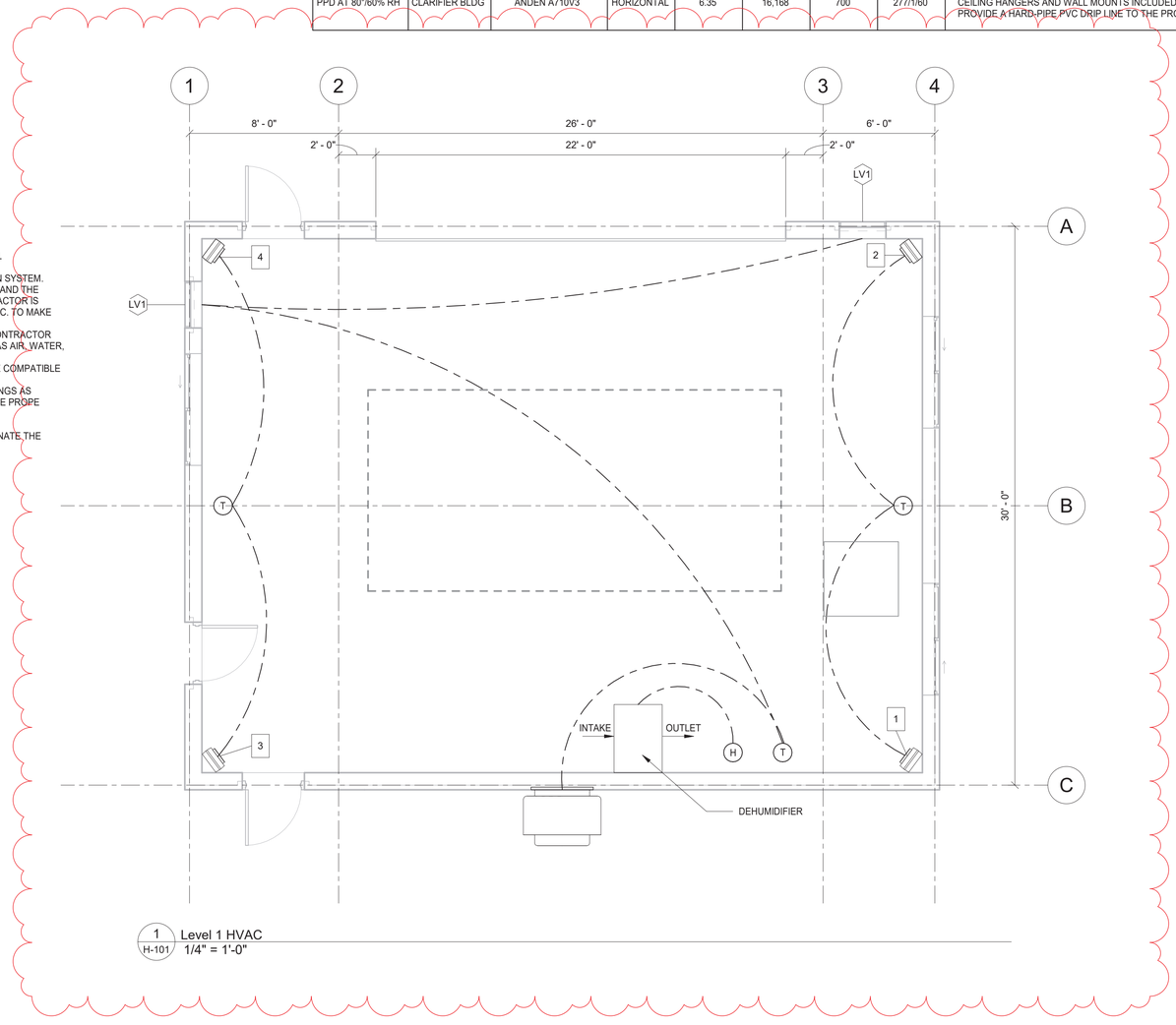
DEHUMIDIFIER SCHEDULE								
CAPACITY	LOCATION	MANUFACTURER & MODEL NUMBER	TYP	KW	BTU/H	AIRFLOW (CFM)	VOLT/PH/HZ	NOTES
PPD AT 80°/60% RH	CLARIFIER BLDG	ANDEN A710V3	HORIZONTAL	6.35	16,168	700	277/1/60	CEILING HANGERS AND WALL MOUNTS INCLUDED AS NEEDED PROVIDE A HARD-PIPE PVC DRIP LINE TO THE PROPOSED CB IN THE ROOM

HVAC NOTES:

1. EXHAUST FANS AND LOUVERS SHALL BE GREENHECK OR APPROVED EQUAL
2. HYDRONIC HEATERS SHALL BE MODINE.
3. ALL EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
4. EXHAUST FANS SHALL HAVE HONEYWELL T6051A1016/U COOLING THERMOSTATS AS SHOWN. HONEYWELL H466166 LINE VOLTAGE HUMIDISTATS SHALL BE INSTALLED WHERE SHOWN. SINGLE POLE SWITCHES W/PILOT LIGHT (EXP AS REQUIRED) SHALL PROVIDE MANUAL OVERRIDE WHERE SHOWN. THE FAN SHALL RUN ON CLOSED CONTACTS IN ANY CONTROL. GREENHECK CAPS FILE WILL BE PROVIDED UPON REQUEST.
5. ALL HEATERS SHALL HAVE HONEYWELL T4 PRO TH4110U2005 PROGRAMMABLE THERMOSTATS. AQUASTATS SHALL PROVIDE FAN CONTROL FOR UNIT HEATERS.
6. ALL HYDRONIC PIPING SHALL BE TYPE L COPPER W/1" FIBERGLASS INSULATION INSTALLED AS A REVERSE RETURN SYSTEM.
4. THE WEIGHT OF THE UNIT HEATERS, FANS AND OTHER HVAC EQUIPMENT SHALL BE VERIFIED BEFORE PURCHASE AND THE APPROPRIATE HANGERS AND SUPPORTS WILL BE CONFIRMED AND PROVIDED BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING AND PROVIDING ALL NECESSARY SUPPORTS, BRACES, PADS, CONNECTIONS, ETC. TO MAKE THE UNIT FULLY FUNCTIONAL AND OPERATIONAL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
5. THE DRAWINGS SHOW THE GENERAL ARRANGEMENT OF THE EQUIPMENT AND THE MAJOR COMPONENTS. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING A FULLY OPERATIONAL UNIT COMPLETE WITH ANCILLARY CONNECTIONS SUCH AS AIR, WATER, POWER, FUEL, AND INSTRUMENTATION.
6. CONTRACTOR SHALL COORDINATE MOUNTING AND INSTALLATION OF ALL UNITS, AND ACCESSORY DEVICES TO BE COMPATIBLE WITH AMBIENT AND ENVIRONMENTAL CONDITIONS OF INSTALLATION LOCATION.
7. CONTRACTOR SHALL PROVIDE PENETRATIONS AND RESPECTIVE FLASHING THROUGH WALLS, FLOORS, AND CEILINGS AS NECESSARY TO ROUTE VENTING PIPES, CONDENSATE PIPES, AND ANY OTHER ACCESSORIES NECESSARY FOR THE PROPE FUNCTION OF THE HVAC UNITS.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR PIPING AND CONNECTING UNITS TO FUEL SOURCES, IF APPLICABLE.
9. 9. IF DAMPERS ARE TO BE INSTALLED IN A ROOM CONTAINING A GENERATOR, THE CONTRACTOR SHALL COORDINATE THE NORMAL POSITION OF THE DAMPERS WITH THE ENGINEER PRIOR TO INSTALLATION.



TYPICAL EXHAUST FAN WIRING SCHEMATIC
NTS



1 H-101 Level 1 HVAC
1/4" = 1'-0"

DATE: 11.2024
DRAWN BY: IB
SCALE: As indicated
REVIEWED BY: Approver
PROJECT NO.: 22-2496
FILE:

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REVISIONS

NO.	DATE	DESCRIPTION
1	11/01/2024	ADDENDUM #1

RHINEBECK WTP
IMPROVEMENTS
VILLAGE OF RHINEBECK
DUTCHESS COUNTY, NY

HVAC FLOOR PLN

SHEET:
H-101