



Office Use Only

Project ID# PZC-22-010  
 Address: Edgewater Circle  
 MBL: 10A/85/5C

PLANNING & ZONING COMMISSION  
 TOWN OF EAST HAMPTON

RECEIVED  
 NOV 29 2022  
 TIME WALKIN

**Minimum Requirements for Submission of Application to  
 Planning and Zoning Commission**  
*This form must be submitted with your application.*

Application Requirements are based on the application type selected on application form.

**Site Plan Review/Modification (See Section 9.1 for details)**

- Pre-Application Meeting – Date of Meeting 11-17-2022
- Complete Application Form
- ~~Complete Chatham Health District Application Form~~
- Fee Paid
- Site Plan (11 Copies) – See Section 9.2.C.2 for specifications
- Drainage Calculations in Compliance with Section 7.5
- Report from Fire Marshal **Not Required**
- Bond Estimates As Required, See Section 9.2.C.2

CT Water is regulated by State of CT DPH. Chatham defers to CT DPH. This project has been submitted to DPH for their review.

**Special Permit (See Section 9.2 for details)**

- Pre-Application Meeting – Date of Meeting \_\_\_\_\_
- Complete Application Form
- Complete Chatham Health District Application Form
- Fee Paid
- Site Plan (11 Copies) - See Section 9.2.C.2 for specifications
- Pending Approval from IWWA
- Drainage Calculations in Compliance with Section 7.5
- Pending Approval or report from Fire Marshal
- Pending Approval or report from Public Works
- Traffic Study (As Required)
- Bond Estimates (As Required)
- Public Hearing Requirements

**Zone Change (See Section 9.3 for details)**

- Complete Application Form
- Fee Paid
- A-2 Survey of Property showing surrounding properties and respective zone (10 Copies)
- Reports from Chatham Health District, Fire Marshal, Police Dept. and Public Works
- Public Hearing Requirements

**Amendment to Zoning Regulations (See Section 9.3 for details)**

- Complete Application Form
- Fee Paid
- Existing Regulation with proposed Amendments (10 Copies)
- Rationale for Amendment (10 Copies)
- Reports from Chatham Health District, Fire Marshal, Police Dept. and Public Works
- Public Hearing Requirements

I certify that this application is complete.  
 Signature of Applicant: *Alan M. Wing* Date: 11-18-2022

The Commission reserves the right to add additional requirements in accordance with the Regulations.  
**Only Complete Application Packages Will Be Accepted**



TOWN OF EAST HAMPTON  
Planning and Zoning Commission  
1-860-267-7450  
www.easthamptonct.gov

PZC 22-010  
Date 11/29/22

Fee Paid   
Check # 1192 \$ 435.00  
Rec'd. By [Signature]

LOCATION 213 Edgewater Circle

MAP 10A BLK 85 LOT 5C

PROJECT NAME Edgewater Well Metering Building

ZONE MUDD

APPLICANT Connecticut Water Company  
ADDRESS 93 W. Main St., Clinton, CT 06413

PHONE \_\_\_\_\_  
EMAIL \_\_\_\_\_

CONTACT PERSON Adam M. Wing, P.E.

PHONE 860-304-7457  
EMAIL adam.wing@ctwater.com

OWNER Edgewater Hill Enterprises LLC  
ADDRESS 138 East High St., East Hampton, CT 06424

PHONE \_\_\_\_\_  
EMAIL \_\_\_\_\_

SURVEYOR/ENGINEER Weston & Sampson Engineers, Inc.  
ADDRESS 712 Brook St., Suite 103, Rocky Hill, CT 06067

PHONE 860-513-1473  
EMAIL \_\_\_\_\_

ATTORNEY \_\_\_\_\_  
ADDRESS \_\_\_\_\_

PHONE \_\_\_\_\_  
EMAIL \_\_\_\_\_

APPLICATION TYPE (application must be completed in FULL in order to be accepted)

- 1. SUBDIVISION /RESUBDIVISION /CONSERVATION SUBDIVISION NO. OF LOTS \_\_\_\_\_
- 3. SITE PLAN MODIFICATION Residential  Commercial \_\_\_\_\_
- 4. SPECIAL PERMIT---SECTION \_\_\_\_\_ OF THE ZONING REGS. FOR \_\_\_\_\_
- 5. ZONE CHANGE---FROM \_\_\_\_\_ TO \_\_\_\_\_
- 6. AMENDMENT TO ZONING REGULATIONS
- 7. LAKE POCOTOPAUG PROTECTION AREA \_\_\_\_\_
- 8. ACTIVE ADULT NO OF UNITS \_\_\_\_\_
- 7. OTHER (DESCRIBE) \_\_\_\_\_

APPLICATION REQUIREMENTS: This application and 10 sets of plans shall be submitted to the Land Use Office and shall be received by the Commission at the next regularly scheduled meeting. (see meeting schedule for deadline dates)

A complete application shall consist of an application, fees, maps /plans( A-2 survey), engineers report including drainage calculations and watershed calculations( pre and post), bond estimates, hydrology report, environmental studies, waiver requests and traffic study where applicable

Preliminary discussions are highly recommended for subdivisions 5 lots & over and for larger Special Permit Applications  
Abutters notice receipts (green cards) must be handed in to the Planning Office prior to the meeting

APPLICANTS SIGNATURE [Signature] DATE 11-18-2022

OWNER'S SIGNATURE [Signature] DATE 11/29/22

The owner and applicant hereby grant the East Hampton Planning and Zoning Commission and/or it's agents permission to enter upon the property to which the application is requested for the purpose of inspection and enforcement of the Zoning Regulations and Subdivision Regulations of the Town of East Hampton.

**PLANNING AND ZONING FEE SCHEDULE**

Note: Each application requires an additional \$60 fee to be submitted to the State (effective 10/09)

\$ 60.00

**SUBDIVISION APPLICATION & CONSERVATION SUBDIVISION**

No. of lots \_\_\_\_\_

A fee of \$500 plus the sum of \_\_\_\_\_ \$ 150/lot

1-5 lots \_\_\_\_\_ \$ 150/lot

Plus a developer's fee of 3% of the bond filed for subdivisions requiring public improvements to be paid at the time bonds are filed with the Town and prior to any construction

**SITE PLAN REVIEW**

Residential/Commercial \_\_\_\_\_ \$ 150

Commercial, Industrial, Designed Development: Calculated by total sq ft of impervious surface

New Construction

Square Feet \_\_\_\_\_

Less than 3000 Sq Ft \_\_\_\_\_ \$ 150

3001 to 5,000 Sq Ft \_\_\_\_\_ \$ 250

5001 to 10,000 Sq ft \_\_\_\_\_ \$ 600

10,001 to 15,000 Sq ft \_\_\_\_\_ \$ 1100

For every additional 5000 Sq Ft \_\_\_\_\_ \$ 500

**SPECIAL PERMIT**

Special Permit \_\_\_\_\_ \$ 150

150

Commercial, Industrial, Designed Development: Calculated by total sq ft of impervious surface

New Construction

Square Feet \_\_\_\_\_

Less than 3000 Sq Ft \_\_\_\_\_ \$ 150

150

Less than 5000Sq Ft \_\_\_\_\_ \$ 300

5001 to 10,000 Sq Ft \_\_\_\_\_ \$ 600

10,001 to 15,000Sq Ft \_\_\_\_\_ \$ 1100

For every additional 5000 Sq FT \_\_\_\_\_ \$ 500

For Special Permits involving Commercial Properties fees increase by \$50

**SITE PLAN MODIFICAT ION**

Minor Amendment \_\_\_\_\_ \$ 50

Major Amendment \_\_\_\_\_ \$ 100

ZONING OR SUBDIVISION REGULATION TEXT CHANGE \_\_\_\_\_ \$ 300

CHANGE IN ZONING MAP \_\_\_\_\_ \$ 500

LAKE POCOTOPAUG PROTECTION AREA \_\_\_\_\_ \$ 75

75

APPLICATION FOR MULTI-FAMILY, ACTIVE ADULT AND HOD \_\_\_\_\_ \$ 1000

Number of unit's \_\_\_\_\_

Plus the sum of \_\_\_\_\_ \$100/unit

**Total**

435

# CONNECTICUT WATER COMPANY

## EDGEWATER CIRCLE WELLFIELD IMPROVEMENTS AND METER BUILDING EAST HAMPTON, CT

Project:



CONNECTICUT WATER  
COMPANY  
93 WEST MAIN STREET  
CLINTON, CT 06413

EDGEWATER CIRCLE  
WELLFIELD IMPROVEMENTS  
AND METER BUILDING

EAST HAMPTON, CT



Weston & Sampson Engineers, Inc.  
712 Brook Street, Suite 103  
Rocky Hill, CT 06067  
(860) 513-1473 (800) SAMPSON  
www.westonandsampson.com

Consultants:

Seal:

Revisions:

Rev	Date	Description

Issued For: 90% DESIGN REVIEW  
NOT FOR CONSTRUCTION

Date: OCTOBER, 2022

Drawn By: KJM

Reviewed By: RGT

Approved By: RGT

W&S Project No: ENG22-0253

Drawing Title:

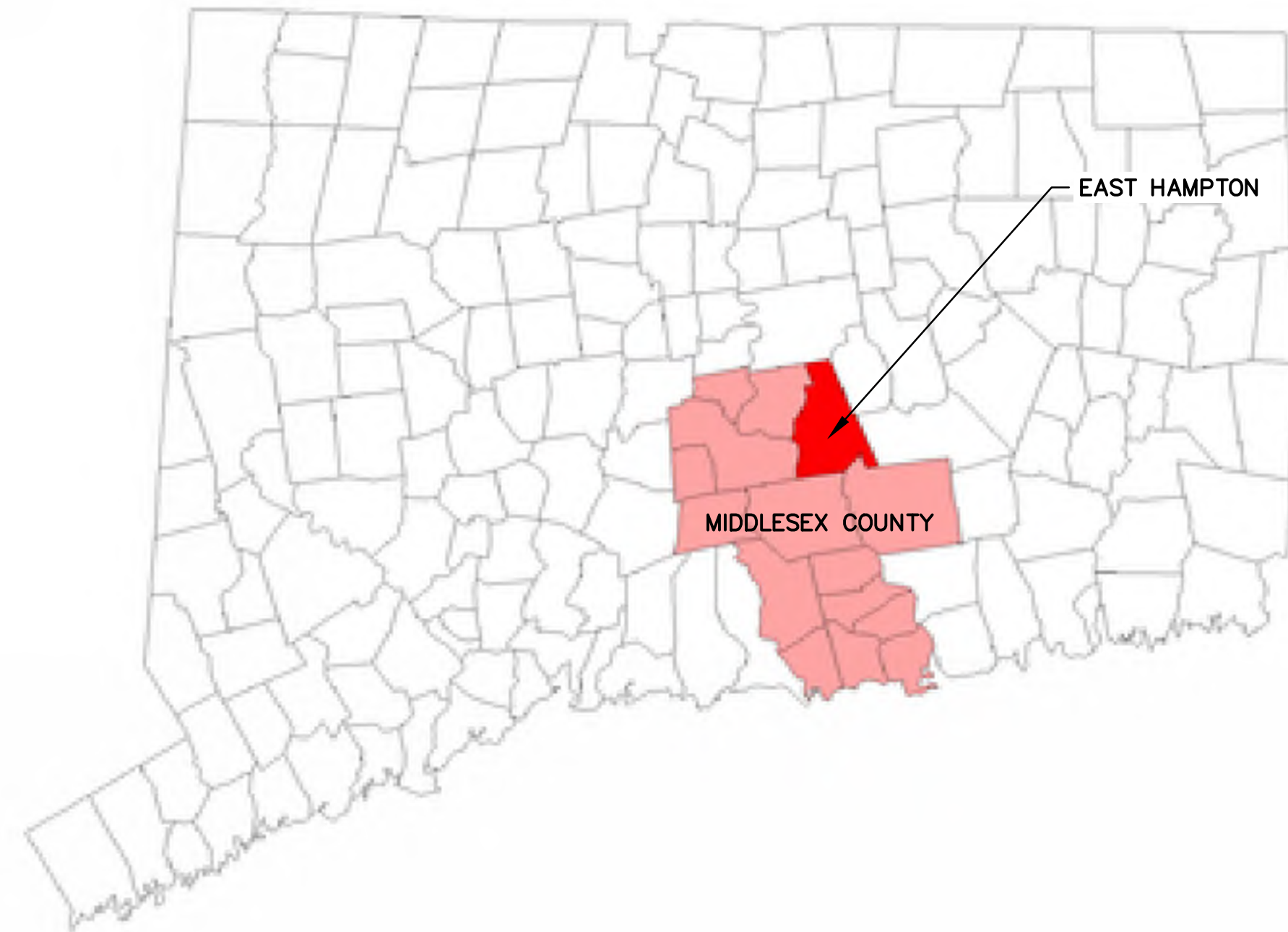
COVER  
SHEET

Sheet Number:

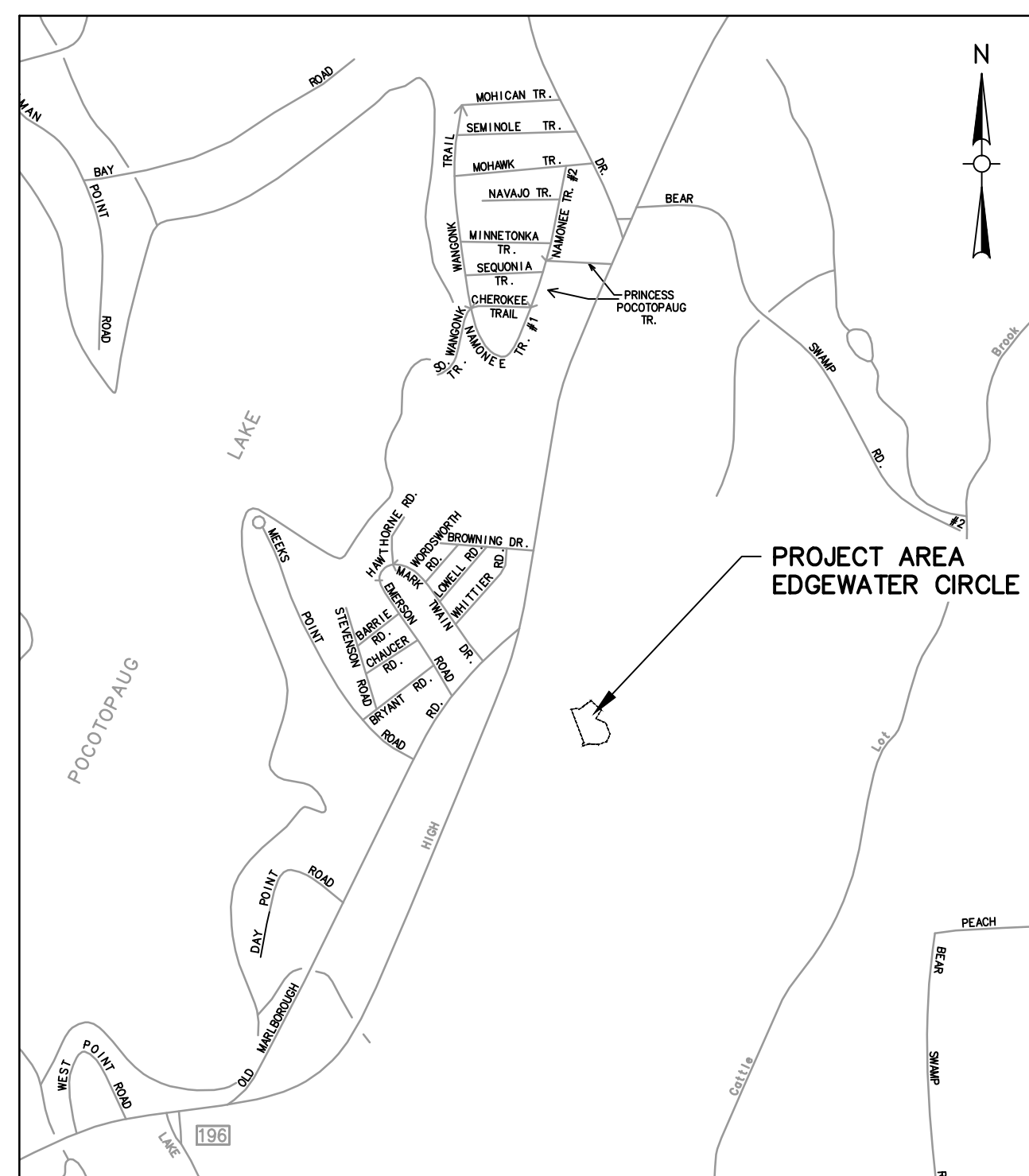
T100

### DRAWING INDEX

<u>SHEET NO.</u>	<u>TITLE</u>
T100	COVER SHEET
C100	ABBREVIATIONS, NOTES AND LEGEND
C200	METER BUILDING EXISTING CONDITIONS PLAN
C300	METER BUILDING SITE PLAN
C901	CIVIL AND SITE DETAILS
C902	CIVIL AND SITE DETAILS
C903	CIVIL AND SITE DETAILS
A100	ARCHITECTURAL PLANS AND CODE DATA
A101	BUILDING SECTIONS
A102	WALL SECTIONS AND DETAILS
A103	ARCHITECTURAL DETAILS
S001	STRUCTURAL GENERAL NOTES
S002	STRUCTURAL TYPICAL DETAILS I
S003	STRUCTURAL TYPICAL DETAILS II
S100	FOUNDATION PLAN AND DETAILS
S200	SLAB PLAN AND DETAILS
S300	FRAMING PLAN AND DETAILS
M100	PROCESS GENERAL NOTES AND SCHEDULES
M201	METER BUILDING LAYOUT PLAN
I001	INSTRUMENTATION AND CONTROLS ABBREVIATIONS, NOTES & LEGEND
I100	INSTRUMENTATION AND CONTROLS DIAGRAMS I
E001	ELECTRICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES
E002	ELECTRICAL SITE PLAN
E101	ELECTRICAL PLANS
E501	ELECTRICAL DETAILS
E601	ELECTRICAL SCHEDULES
H000	LEGENDS, NOTES AND ABBREVIATIONS
H101	FIRST FLOOR NEW WORK DUCT PLAN
H501	DETAILS
H701	AUTOMATIC TEMPERATURE CONTROLS



CONNECTICUT MUNICIPAL MAP  
SCALE: N.T.S.



SITE LOCUS MAP  
SCALE: 1"= 1000'

RECEIVED  
11.29.2022  
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Land Use Dept.

# LEGEND

DESCRIPTION	EXISTING	PROPOSED
SANITARY SEWER	S	
FORCE MAIN	FM	
ROOF LEADER		
STORM DRAIN	pmd	D
FOOTING DRAIN		FD
GAS	G	
ELECTRIC	pme	E
TELEPHONE	T	T
OVERHEAD UTILITIES	ov	ov
SANITARY SEWER MANHOLE	⊙	
STORM DRAIN MANHOLE	⊙	
ELECTRICAL MANHOLE	⊙	
TELEPHONE MANHOLE	⊙	
AIR RELEASE VALVE MANHOLE		
FORCE MAIN CLEANOUT MANHOLE		
CLEANOUT		o
CATCH BASIN	□	
HYDRANT	⊙	⊙
HAND HOLE	HH	
GATE VALVE	⊙	⊙
CHECK VALVE	⊙	
CURB STOP	⊙	
BUTTERFLY VALVE	⊙	
BALL VALVE	⊙	
REDUCER	△	
CAP OR PLUG	⊙	⊙
GAS GATE VALVE	⊙	
UTILITY POLE	⊙	⊙
LIGHT POST	☆	
EDGE OF PAVEMENT	—	—
SAWCUT		---
CURB	⌒	⌒
SIDEWALK	⌒	
PROPERTY LINE ALONG STONE WALL	⌒	
REMAINS OTHER STONE WALL	⌒	
RETAINING WALL	⌒	
BOLLARD	⊙	⊙
SHRUB/BUSH	⊙	
HANDICAP SPACE	⊙	
TREE LINE	⊙	
SURVEY MARKER	⊙	
LIMIT OF WORK		---
100' UPLAND WETLANDS REVIEW		---
SPOT ELEVATIONS	x,x'	x141.5
CONTOUR LINES	---10---	---10---
DEPRESSION CONTOUR LINES	---	---
HOUSE NUMBER	#35	
RIP RAP	⊙	⊙
STONE APRON		⊙
METAL GUIDE RAIL		
SIGN	⊙	
TEST PIT	⊙	⊙
BORING	⊙ B-1	
CHAIN LINK FENCE	---	---
SILTATION FENCE	---	---
COMPOST FILTER TUBE		---
ROCK OUTCROP	xxxxxxx	
SWALE AND FLOW DIRECTION	←	
GUY WIRE	←	
MONITORING WELL	⊙	
WETLAND FLAG	⊙ #20	
CONCRETE STOP COLLAR		---
TRUST BLOCK		⊙

**NOTE:** ITEMS SHOWN IN THE LEGEND AND ABBREVIATIONS MAY NOT BE PRESENT IN THESE PLANS.

# ABBREVIATIONS

AC	ASBESTOS CEMENT PIPE
ACCMP	ASPHALT COATED CORRUGATED METAL PIPE
ARV	AIR RELEASE VALVE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BC	BITUMINOUS CONCRETE
BCLC	BITUMINOUS CONCRETE LIP CURB
BIT	BITUMINOUS
BLDG	BUILDING
BM	BENCH MARK
BMP	BEST MANAGEMENT PRACTICE
BO	BLOW OFF
BV	BUTTERFLY VALVE
CATV	CABLE TELEVISION
CB	CATCH BASIN
CC	CONCRETE CURB
CI	CAST IRON
⊙	CENTERLINE
CL	CEMENT LINED
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CT	CONNECTICUT
CTDOT	CONNECTICUT DEPARTMENT OF TRANSPORTATION
CU FT	CUBIC FEET
CWC	CONNECTICUT WATER COMPANY
CY	CUBIC YARD
D	STORM DRAIN, DEPTH FROM RIM TO INVERT
DI	DROP INLET, DUCTILE IRON
DIA	DIAMETER
DMH	DRAIN MANHOLE
DWG	DRAWING
E	EAST, ELECTRIC
EA	EACH
EF	EACH FACE
EL/ELEV	ELEVATION
E.M.	ELECTRICAL METER
EOP	EDGE OF PAVEMENT
EW	EACH WAY
EXIST	EXISTING
FE	FLARED END
FF	FINISHED FLOOR
FL	FLOW LINE
FLG	FLANGE
FT	FEET, FOOT
G	NATURAL GAS
GALV	GALVANIZED
GC	GRANITE CURB
GR	GRANITE
HDPE	HIGH DENSITY POLYETHYLENE
HORIZ	HORIZONTAL
HP	HIGH PRESSURE
HYD	FIRE HYDRANT
INV	INVERT
IWC	INTERMITTENT WATER COURSE
ID	INSIDE DIAMETER
IP	IRON PIPE
LB	POUND
LF	LINEAR FEET
LS	LUMP SUM
MAX	MAXIMUM
MB	MAIL BOX
MECH	MECHANICAL
MH	MECHANICAL MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
N	NORTH
N/A	NOT APPLICABLE
NE	NORTH EAST
NW	NORTH WEST
NF	NOT FOUND
N/F	NOW OR FORMERLY
NO OR #	NUMBER
N.T.S.	NOT TO SCALE
PCB	PROPOSED CATCH BASIN
PCCP	PRESTRESSED CONCRETE CYLINDER PIPE
PDMH	PROPOSED DRAINAGE MANHOLE
PE	PLAIN END, POLYETHYLENE
PED	PEDESTRIAN
PL	PROPERTY LINE
PL	PLATE
PSMH	PROPOSED SANITARY MANHOLE
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
RCP	REINFORCED CONCRETE PIPE
RET.	RETAINING
RL	ROOF LEADER
ROW	RIGHT-OF-WAY
RQD	ROCK QUALITY
RW	RAW WATER
S	SEWER, SOUTH
SC	SITE CONTRACTOR
SE	SOUTH EAST
SECT	SECTION
SF	SQUARE FEET
SHT	SHEET
SMH	SANITARY SEWER MANHOLE
SPEC	SPECIFICATIONS
SQ FT	SQUARE FEET
SS	SEWER SERVICE, STAINLESS STEEL
STA	STATION
STL	STEEL
SW	SIDEWALK, SOUTH WEST
T	TELEPHONE
TBM	TEMPORARY BENCH MARK
TF	TOP OF FRAME
THK	THICK (NESS)
TS	TOP OF SLAB
TW	TREATED WATER
TYP	TYPICAL
UP	UTILITY POLE
VC	VITRIFIED CLAY
VERT	VERTICAL
W	WATER, WEST
W/	WITH
W/O	WITHOUT

# CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL CALL "CALL BEFORE YOU DIG" (CBYD) AT 1-800-922-4455 OR 811 AT LEAST 72 HOURS, SATURDAYS, SUNDAYS, AND HOLIDAYS EXCLUDED, PRIOR TO EXCAVATING AT ANY LOCATION. A COPY OF THE (CBYD) PROJECT REFERENCE NUMBER(S) SHALL BE GIVEN TO THE OWNER PRIOR TO EXCAVATION.
2. LOCATIONS OF EXISTING PIPES, CONDUITS, UTILITIES, FOUNDATIONS AND OTHER UNDERGROUND OBJECTS ARE NOT WARRANTED TO BE CORRECT AND THE CONTRACTOR SHALL HAVE NO CLAIM ON THAT ACCOUNT SHOULD THEY BE OTHER THAN SHOWN. CONTRACTOR SHALL DIG TEST PITS AS NEEDED TO LOCATE THESE ITEMS. DIGGING OF TEST PITS SHALL BE INCIDENTAL TO THE PROJECT AND AT NO COST TO THE OWNER.
3. STONE WALLS, FENCES, MAIL BOXES, SIGNS, CURBS, LIGHT POLES, ETC.. SHALL BE REMOVED AND REPLACED AS NECESSARY TO PERFORM THE WORK. UNLESS OTHERWISE INDICATED, ALL SUCH WORK SHALL BE AT NO COST TO THE OWNER.
4. ALL PAVEMENT AND AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS BEYOND THE LIMITS OF CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
5. CONCRETE CRADLES OR ARCHES SHALL BE CONSTRUCTED WHERE SHOWN ON THE DRAWINGS OR WHERE REQUIRED BY THE ENGINEER. UNLESS OTHERWISE INDICATED, CONCRETE USED FOR PIPE ANCHOR BLOCKS, BACKING, PIPE CRADLES, ARCHES, AND FILL SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
6. APPROVED JOINT RESTRAINT METHODS SHALL BE PROVIDED FOR ALL WATER MAINS WHERE ANY BENDS, TEES, PLUGS, OR WYES ARE INSTALLED.
7. THE CONTRACTOR SHALL NOT STORE ANY APPARATUS, MATERIALS, SUPPLIES, OR EQUIPMENT ON DRAINAGE STRUCTURES OR WITHIN 100 FEET OF WETLANDS OR WATERCOURSE.
8. ALL WATER MAIN JOINTS SHALL BE FULLY RESTRAINED.
9. AFTER INSTALLATION, ALL PRESSURE (PUMPED) PIPELINES SHALL BE PRESSURE TESTED FOR TIGHTNESS AT 125 PSIG. ALL LEAKS SHALL BE CORRECTED AND RETESTED UNTIL PRESSURE TEST IS SATISFACTORILY COMPLETED.
10. ALL WATER MAINS SHALL BE DISINFECTED PER SPECIFICATION AND CONNECTICUT WATER REQUIREMENTS.
11. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL REVIEW THE CONTRACT DOCUMENTS AND COORDINATE ALL EQUIPMENT BETWEEN THE DIFFERENT CONSTRUCTION DISCIPLINES FOR LOCATION, SIZE, SERVICEABILITY, SUPPORT SYSTEMS, CONNECTIONS (PIPING, ELECTRICAL, INSTRUMENTATION, ETC.), INCIDENTALS AND ANY AND ALL OTHER COMPONENTS REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM MEETING THE APPROVAL OF THE ENGINEER.
12. CONTRACTOR SHALL VISIT AND EXAMINE THE SITE TO FULLY UNDERSTAND ALL THE CONDITIONS PERTAINING TO THE WORK, UNDERSTAND DIFFICULTIES TO BE ENCOUNTERED, UNDERSTAND THE SCOPE OF THE DEMOLITION WORK FOR ALL SYSTEMS WHETHER SHOWN OR DESCRIBED AT NO ADDITIONAL COST TO THE OWNER. THE EXACT LOCATION OF EXISTING PIPE, BUILDINGS, SERVICES, ETC. ARE TO BE FIELD VERIFIED.
13. CONTRACTOR TO VERIFY ALL DIMENSIONS, CLEARANCES, ELEVATIONS, AND SIZES OF EXISTING PIPES, EQUIPMENT AND STRUCTURES.
14. ALL WORK UNDER THIS CONTRACT SHALL BE LIMITED TO THE "LIMIT OF WORK" BOUNDARY SHOWN ON THE DRAWING.
15. DEMOLITION DEBRIS MATERIAL SHALL IMMEDIATELY BECOME THE PROPERTY OF THE CONTRACTOR AND BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS UNLESS OTHERWISE REQUIRED BY THE OWNER.
16. IF UNSUITABLE MATERIAL IS ENCOUNTERED IN STRUCTURAL AREAS OR AREAS OF PROPOSED PAVEMENT, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.
17. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN EROSION AND SEDIMENT CONTROLS FOR THE DURATION OF THE PROJECT. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE FURNISHED, INSTALLED, MAINTAINED, AND REPLACED BY THE CONTRACTOR AS NEEDED TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT LEAVE THE LIMIT OF WORK.
18. ALL UTILITY WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE RULES AND REGULATIONS AND STANDARDS OF THE APPLICABLE LOCAL UTILITY COMPANY.
19. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED CONSTRUCTION PERMITTING AND MAINTAINING COMPLIANCE.
20. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE STANDARDS AND SPECIFICATIONS OF THE CONNECTICUT WATER COMPANY. SITE WORK SHALL CONFORM TO THE CONNECTICUT DEPARTMENT OF TRANSPORTATION (FORM 818), AS AMENDED.
21. INLAND WETLAND BOUNDARY LIMITS DELINEATED ON APRIL 5, 2022 BY BOUNDARIES, LLC. AND FIELD LOCATED BY GESICK & ASSOCIATES, P.C. ON APRIL 21, 2022.

Project:



CONNECTICUT WATER COMPANY  
93 WEST MAIN STREET  
CLINTON, CT 06413

EDGEWATER CIRCLE  
WELLFIELD IMPROVEMENTS  
AND METER BUILDING

EAST HAMPTON, CT



Weston & Sampson Engineers, Inc.  
712 Brook Street, Suite 103  
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Consultants:

Seal:

Revisions:

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Issued For: 90% DESIGN REVIEW  
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Date: OCTOBER, 2022

Drawn By: KJM

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Drawing Title:

ABBREVIATIONS,  
NOTES, AND  
LEGEND

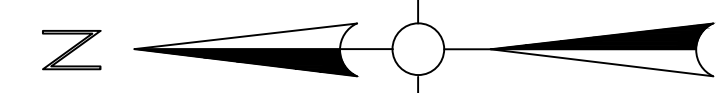
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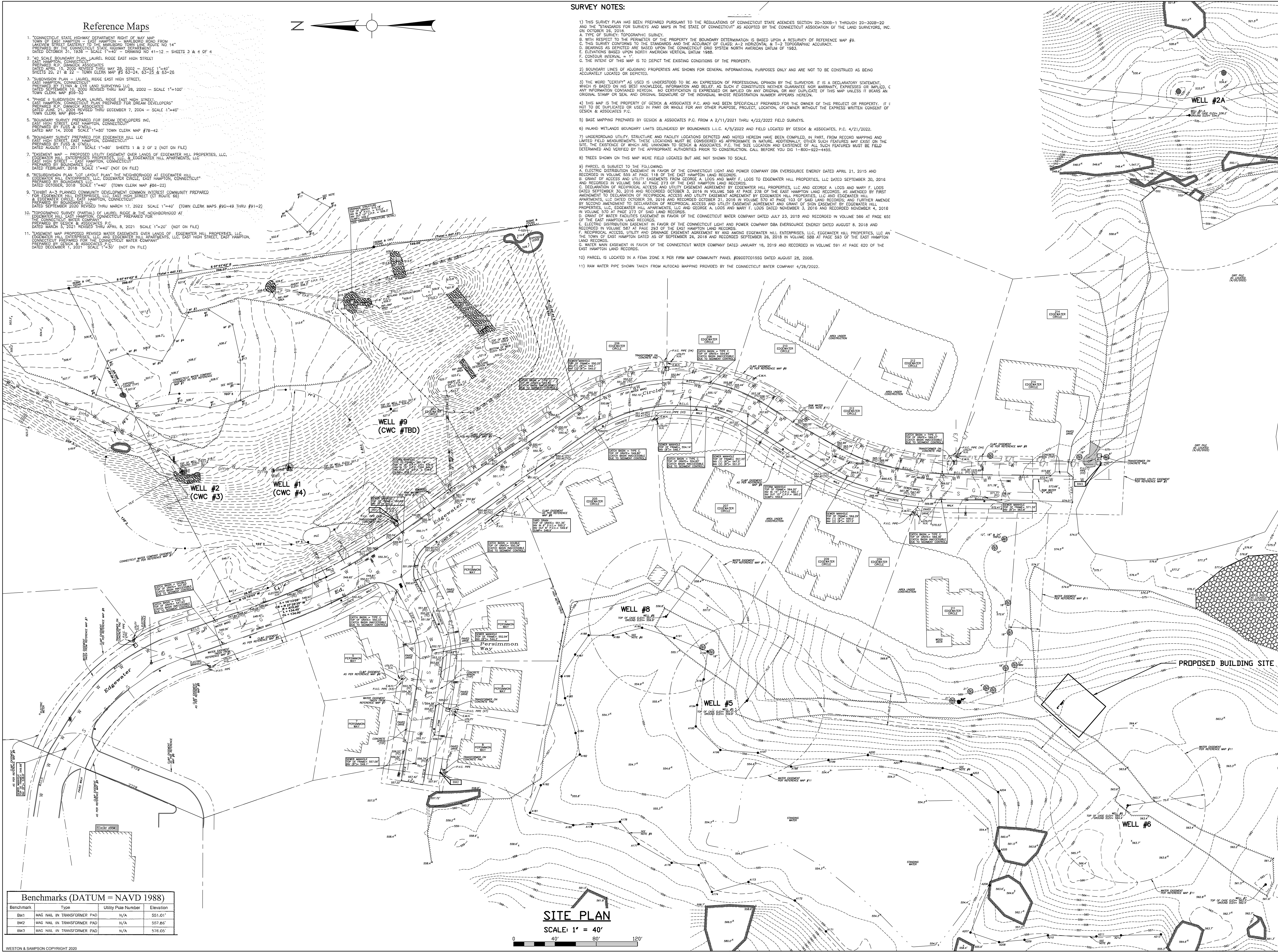
Reference Maps

1. CONNECTICUT STATE HIGHWAY DEPARTMENT RIGHT OF WAY MAP TOWN OF EAST HAMPTON - EAST HAMPTON - WASHINGTON ROAD FROM LAKEVIEW STREET EASTERN TO THE HARTFORD TOWN LINE ROUTE NO. 14 DATED OCTOBER 31, 1935 - SCALE 1"=40' - CORRIDOR NO. 41-12 - SHEETS 3 & 4 OF 4
2. TOWN CLERK BOUNDARY PLAN, LAUREL RIDGE EAST HIGH STREET, EAST HAMPTON, CONNECTICUT PREPARED BY DMACK ASSOCIATES DATED APRIL 15, 2000 REVISED THRU MAY 28, 2002 - SCALE 1"=40' SHEETS 20 & 21 - TOWN CLERK MAP #8 - 20-22 & 30-28
3. SUBDIVISION PLAN - LAUREL RIDGE EAST HIGH STREET, EAST HAMPTON, CONNECTICUT PREPARED BY TOWN & LIGHT LIMITED PARTNERSHIP LAND SURVEYING LLC DATED FEBRUARY 14, 2002 REVISED THRU MAY 28, 2002 - SCALE 1"=100' TOWN CLERK MAP #56-00
4. PHASE II SUBDIVISION PLAN, LAUREL RIDGE EAST HIGH STREET, EAST HAMPTON, CONNECTICUT PLANNED FOR GREAT DEVELOPERS PREPARED BY DMACK ASSOCIATES DATED JUNE 23, 2004 REVISED THRU DECEMBER 7, 2004 - SCALE 1"=40' TOWN CLERK MAP #66-50
5. TRIANGULAR SURVEY PREPARED FOR GREAT DEVELOPERS INC, EAST HIGH STREET, EAST HAMPTON, CONNECTICUT PREPARED BY TOWN & LIGHT LIMITED PARTNERSHIP LAND SURVEYING LLC DATED MAY 14, 2008 - SCALE 1"=80' TOWN CLERK MAP #78-42
6. PRELIMINARY SURVEY PREPARED FOR EDGEWATER HILL LLC FOR LAND BUREAU, EAST HAMPTON, CONNECTICUT PREPARED BY BOUNDARIES LLC DATED AUGUST 11, 2011 - SCALE 1"=80' SHEETS 1 & 2 OF 2 (NOT ON FILE)
7. EASEMENT MAP - PROPOSED UTILITY EASEMENT OVER LANDS OF EDGEWATER HILL PROPERTIES, LLC, EAST HIGH STREET, EAST HAMPTON, CONNECTICUT PREPARED BY BOUNDARIES LLC DATED FEBRUARY, 2016 - SCALE 1"=40' (NOT ON FILE)
8. SUBDIVISION PLAN FOR LAND PLAN OF THE NEIGHBORHOOD AT EDGEWATER HILL ENTERPRISES, LLC, EDGEWATER CIRCLE, EAST HAMPTON, CONNECTICUT DATED OCTOBER, 2016 - SCALE 1"=40' (TOWN CLERK MAP #86-22)
9. CONSENT A-3 PLANNED COMMUNITY DEVELOPMENT COMMON INTEREST COMMUNITY PREPARED FOR EDGEWATER HILL ENTERPRISES, LLC AND EAST HIGH STREET (ROUTE 63) & PERSIMMON CIRCLE, EAST HAMPTON, CONNECTICUT DATED SEPTEMBER 2020 REVISED THRU MARCH 17, 2022 - SCALE 1"=40' (TOWN CLERK MAPS #90-49 THRU #91-2)
10. TOPOGRAPHIC SURVEY (PARTIAL) OF LAUREL RIDGE & THE NEIGHBORHOOD AT EDGEWATER HILL, EAST HAMPTON, CONNECTICUT PREPARED FOR THE CONNECTICUT WATER COMPANY PREPARED BY GESSICK & ASSOCIATES P.C. DATED MARCH 5, 2021 REVISED THRU APRIL 8, 2021 - SCALE 1"=20' (NOT ON FILE)
11. EASEMENT MAP PROPOSED REVISED WATER EASEMENTS OVER LANDS OF EDGEWATER HILL PROPERTIES, LLC, EDGEWATER HILL ENTERPRISES, LLC AND EDGEWATER HILL APARTMENTS, LLC, EAST HIGH STREET, EAST HAMPTON, CONNECTICUT PREPARED FOR THE CONNECTICUT WATER COMPANY PREPARED BY GESSICK & ASSOCIATES P.C. DATED DECEMBER 1, 2021 - SCALE 1"=30' (NOT ON FILE)



SURVEY NOTES:

- 1) THIS SURVEY PLAN HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTION 20-300B-1 THROUGH 20-300B-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF THE LAND SURVEYORS, INC. ON OCTOBER 26, 2016.
  - A. TYPE OF SURVEY: TOPOGRAPHIC SURVEY.
  - B. WITH RESPECT TO THE PERMETER OF THE PROPERTY THE BOUNDARY DETERMINATION IS BASED UPON A RESURVEY OF REFERENCE MAP #9.
  - C. THIS SURVEY CONFORMS TO THE STANDARDS AND THE ACCURACY OF CLASS A-2 HORIZONTAL & 1-2 TOPOGRAPHIC ACCURACY.
  - D. BEARINGS AS REPORTED ARE BASED UPON THE CONNECTICUT GRID SYSTEM NORTH AMERICAN DATUM OF 1983.
  - E. ELEVATIONS BASED UPON NORTH AMERICAN VERTICAL DATUM 1988.
  - F. CONTOUR INTERVAL: 1'
  - G. THE INTENT OF THIS MAP IS TO DEPICT THE EXISTING CONDITIONS OF THE PROPERTY.
- 2) BOUNDARY LINES OF ADJOINING PROPERTIES ARE SHOWN FOR GENERAL INFORMATIONAL PURPOSES ONLY AND ARE NOT TO BE CONSTRUED AS BEING ACCURATELY LOCATED OR DEPICTED.
- 3) THE WORD "CERTIFY" AS USED IS UNDERSTOOD TO BE AN EXPRESSION OF PROFESSIONAL OPINION BY THE SURVEYOR. IT IS A DECLARATORY STATEMENT WHICH IS BASED ON HIS BEST KNOWLEDGE, INFORMATION AND BELIEF AS SUCH IT CONSTITUTES NEITHER GUARANTEE NOR WARRANTY, EXPRESSED OR IMPLIED, OF ANY INFORMATION CONTAINED HEREON. NO CERTIFICATION IS EXPRESSED OR IMPLIED ON ANY ORIGINAL OR ANY DUPLICATE OF THIS MAP UNLESS IT BEARS AN ORIGINAL STAMP OR SEAL AND ORIGINAL SIGNATURE OF THE INDIVIDUAL WHOSE RECORDS APPEAR HEREON.
- 4) THIS MAP IS THE PROPERTY OF GESSICK & ASSOCIATES P.C. AND HAS BEEN SPECIFICALLY PREPARED FOR THE OWNER OF THIS PROJECT OR PROPERTY. IT IS NOT TO BE DUPLICATED OR USED IN PART OR WHOLE FOR ANY OTHER PURPOSE, PROJECT, LOCATION, OR OWNER WITHOUT THE EXPRESS WRITTEN CONSENT OF GESSICK & ASSOCIATES P.C.
- 5) BASE MAPPING PREPARED BY GESSICK & ASSOCIATES P.C. FROM A 2/11/2021 THRU 4/22/2022 FIELD SURVEYS.
- 6) INLAND WETLANDS BOUNDARY LIMITS DELINEATED BY BOUNDARIES LLC 4/3/2022 AND FIELD LOCATED BY GESSICK & ASSOCIATES, P.C. 4/21/2022.
- 7) UNDERGROUND UTILITY, STRUCTURE, AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING AND LIMITED FIELD MEASUREMENTS. THESE LOCATIONS MUST BE CONSIDERED AS APPROXIMATE IN NATURE. ADDITIONALLY OTHER SUCH FEATURES MAY EXIST ON THE SITE THE EXISTENCE OF WHICH ARE UNKNOWN TO GESSICK & ASSOCIATES, P.C. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.
- 8) TREES SHOWN ON THIS MAP WERE FIELD LOCATED BUT ARE NOT SHOWN TO SCALE.
- 9) PARCEL IS SUBJECT TO THE FOLLOWING:
  - A. ELECTRIC DISTRIBUTION EASEMENT IN FAVOR OF THE CONNECTICUT LIGHT AND POWER COMPANY DBA EVERSOURCE ENERGY DATED APRIL 21, 2015 AND RECORDED IN VOLUME 555 AT PAGE 273 OF THE EAST HAMPTON LAND RECORDS.
  - B. DECLARATION OF RECORDS, ACCESS AND UTILITY EASEMENT AGREEMENT BY EDGEWATER HILL PROPERTIES, LLC DATED SEPTEMBER 30, 2016 AND RECORDED IN VOLUME 569 AT PAGE 273 OF THE EAST HAMPTON LAND RECORDS.
  - C. DECLARATION OF RECORDS, ACCESS AND UTILITY EASEMENT AGREEMENT BY EDGEWATER HILL PROPERTIES, LLC AND GEORGE A. LOOS AND MARY F. LOOS DATED SEPTEMBER 30, 2016 AND RECORDED OCTOBER 3, 2016 IN VOLUME 569 AT PAGE 278 OF THE EAST HAMPTON LAND RECORDS, AS AMENDED BY FIRST AMENDMENT TO DECLARATION OF RECORDS, ACCESS AND UTILITY EASEMENT AGREEMENT BY EDGEWATER HILL PROPERTIES, LLC AND EDGEWATER HILL APARTMENTS, LLC DATED OCTOBER 29, 2016 AND RECORDED OCTOBER 31, 2016 IN VOLUME 570 AT PAGE 103 OF SAID LAND RECORDS; AND FURTHER AMENDED BY SECOND AMENDMENT TO DECLARATION OF RECORDS, ACCESS AND UTILITY EASEMENT AGREEMENT AND GRANT OF SIGN EASEMENT BY EDGEWATER HILL PROPERTIES, LLC, EDGEWATER HILL APARTMENTS, LLC AND GEORGE A. LOOS AND MARY F. LOOS DATED NOVEMBER 3, 2016 AND RECORDED NOVEMBER 4, 2016 IN VOLUME 570 AT PAGE 273 OF SAID LAND RECORDS.
  - D. GRANT OF WATER FACILITIES EASEMENT IN FAVOR OF THE CONNECTICUT WATER COMPANY DATED JULY 23, 2018 AND RECORDED IN VOLUME 586 AT PAGE 652 OF THE EAST HAMPTON LAND RECORDS.
  - E. ELECTRIC DISTRIBUTION EASEMENT IN FAVOR OF THE CONNECTICUT LIGHT AND POWER COMPANY DBA EVERSOURCE ENERGY DATED AUGUST 8, 2016 AND RECORDED IN VOLUME 587 AT PAGE 288 OF THE EAST HAMPTON LAND RECORDS.
  - F. RECIPROCAL ACCESS, UTILITY AND DRAINAGE EASEMENT AGREEMENT BY AND AMONG EDGEWATER HILL ENTERPRISES, LLC, EDGEWATER HILL PROPERTIES, LLC AND THE TOWN OF EAST HAMPTON DATED AS OF SEPTEMBER 26, 2018 AND RECORDED SEPTEMBER 26, 2018 IN VOLUME 588 AT PAGE 593 OF THE EAST HAMPTON LAND RECORDS.
  - G. WATER MAIN EASEMENT IN FAVOR OF THE CONNECTICUT WATER COMPANY DATED JANUARY 16, 2019 AND RECORDED IN VOLUME 591 AT PAGE 620 OF THE EAST HAMPTON LAND RECORDS.
- 10) PARCEL IS LOCATED IN A FEMA ZONE X PER FIRM MAP COMMUNITY PANEL #0907031555 DATED AUGUST 28, 2008.
- 11) RAW WATER PIPE SHOWN TAKEN FROM AUTOCAD MAPPING PROVIDED BY THE CONNECTICUT WATER COMPANY 4/28/2022.



Benchmarks (DATUM = NAVD 1988)

Benchmark	Type	Utility Pole Number	Elevation
BM1	MAG NAIL IN TRANSFORMER PAD	N/A	551.01'
BM2	MAG NAIL IN TRANSFORMER PAD	N/A	557.80'
BM3	MAG NAIL IN TRANSFORMER PAD	N/A	576.05'



Project:  
**Connecticut Water**  
CONNECTICUT WATER COMPANY  
93 WEST MAIN STREET  
CLINTON, CT 06413  
EDGEWATER CIRCLE  
WELLFIELD IMPROVEMENTS  
AND METER BUILDING  
EAST HAMPTON, CT

**Weston & Sampson**  
Weston & Sampson Engineers, Inc.  
112 Brook Street, Suite 103  
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Consultants:

Seal:

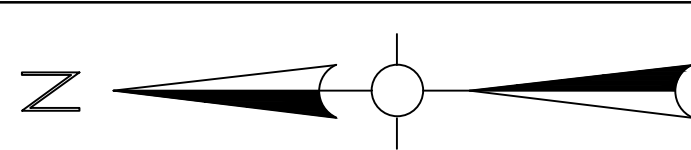
Revisions:

Rev	Date	Description

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Date: OCTOBER, 2022  
Drawn By: KJM  
Reviewed By: RGT  
Approved By: RGT  
W&S Project No: ENG22-0253

Drawing Title:  
**METER BUILDING  
EXISTING  
CONDITIONS PLAN**  
CWC Drawing Number:  
Sheet Number:  
**C200**



SEE WELL HEAD CONNECTION DETAIL DRAWING C902  
WELL PUMP TO BE FURNISHED AND INSTALLED BY OWNER

Project:  
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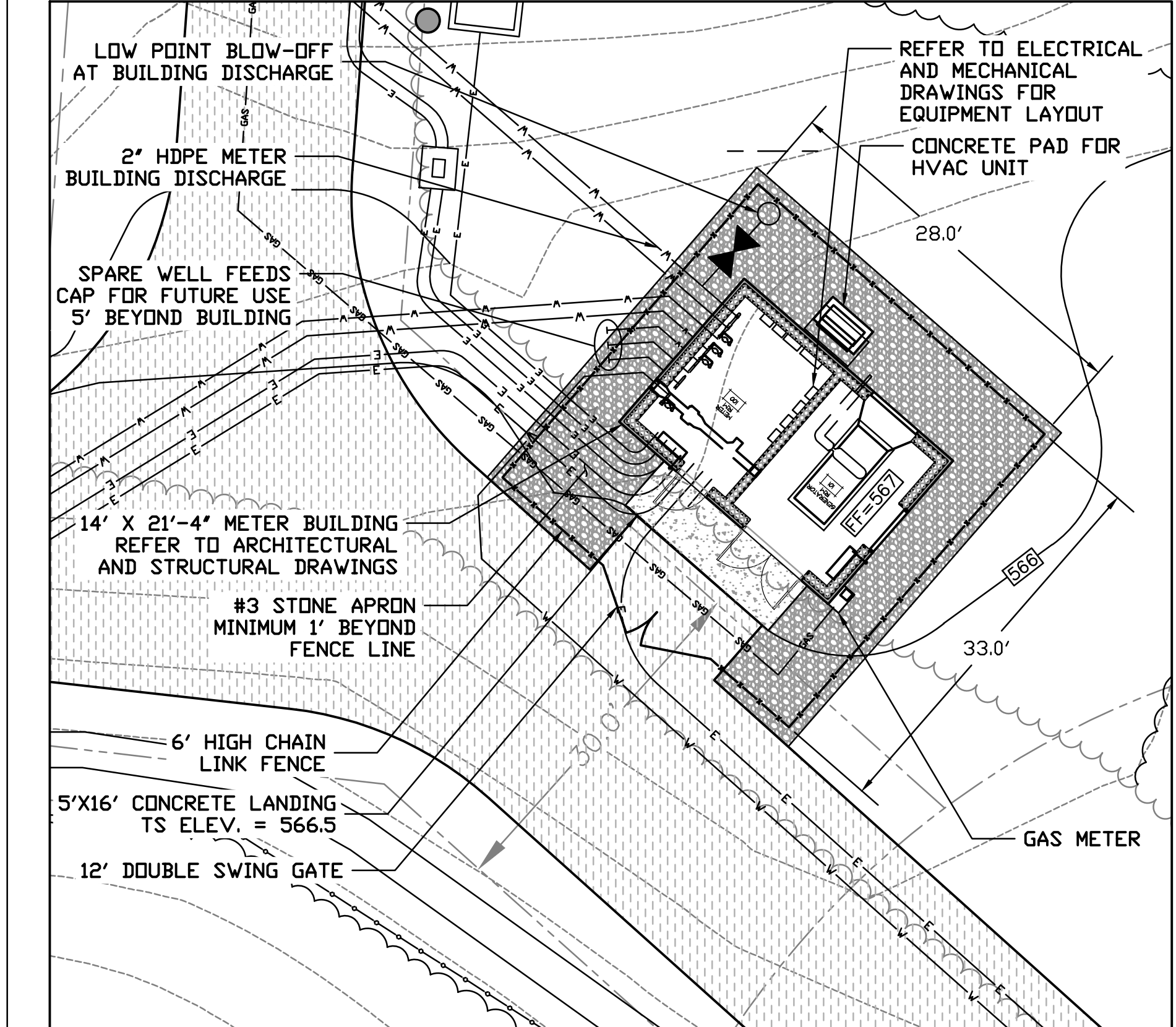
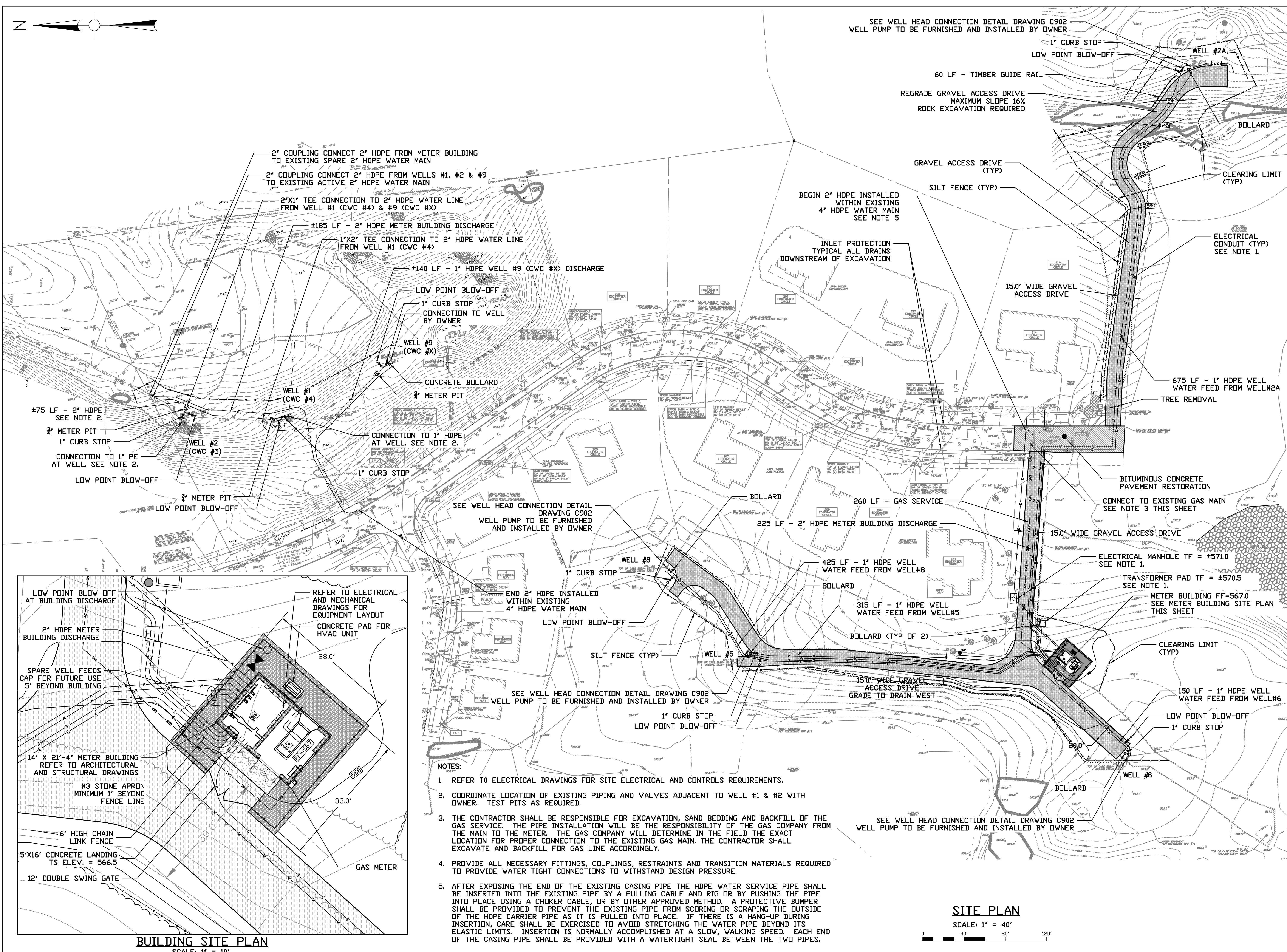
Drawing Title:

**METER BUILDING  
SITE PLAN**

CWC Drawing Number:

Sheet Number:

**C300**



**BUILDING SITE PLAN**  
SCALE: 1" = 10'

- NOTES:
- REFER TO ELECTRICAL DRAWINGS FOR SITE ELECTRICAL AND CONTROLS REQUIREMENTS.
  - COORDINATE LOCATION OF EXISTING PIPING AND VALVES ADJACENT TO WELL #1 & #2 WITH OWNER. TEST PITS AS REQUIRED.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXCAVATION, SAND BEDDING AND BACKFILL OF THE GAS SERVICE. THE PIPE INSTALLATION WILL BE THE RESPONSIBILITY OF THE GAS COMPANY FROM THE MAIN TO THE METER. THE GAS COMPANY WILL DETERMINE IN THE FIELD THE EXACT LOCATION FOR PROPER CONNECTION TO THE EXISTING GAS MAIN. THE CONTRACTOR SHALL EXCAVATE AND BACKFILL FOR GAS LINE ACCORDINGLY.
  - PROVIDE ALL NECESSARY FITTINGS, COUPLINGS, RESTRAINTS AND TRANSITION MATERIALS REQUIRED TO PROVIDE WATER TIGHT CONNECTIONS TO WITHSTAND DESIGN PRESSURE.
  - AFTER EXPOSING THE END OF THE EXISTING CASING PIPE THE HDPE WATER SERVICE PIPE SHALL BE INSERTED INTO THE EXISTING PIPE BY A PULLING CABLE AND RIG OR BY PUSHING THE PIPE INTO PLACE USING A CHOKER CABLE, OR BY OTHER APPROVED METHOD. A PROTECTIVE BUMPER SHALL BE PROVIDED TO PREVENT THE EXISTING PIPE FROM SCORING OR SCRAPING THE OUTSIDE OF THE HDPE CARRIER PIPE AS IT IS PULLED INTO PLACE. IF THERE IS A HANG-UP DURING INSERTION, CARE SHALL BE EXERCISED TO AVOID STRETCHING THE WATER PIPE BEYOND ITS ELASTIC LIMITS. INSERTION IS NORMALLY ACCOMPLISHED AT A SLOW, WALKING SPEED. EACH END OF THE CASING PIPE SHALL BE PROVIDED WITH A WATERTIGHT SEAL BETWEEN THE TWO PIPES.

**SITE PLAN**

SCALE: 1" = 40'



# EROSION CONTROL NOTES

## PROJECT DESCRIPTION

THE PROJECT INVOLVES THE CONSTRUCTION OF A NEW WATER METER BUILDING FACILITY, AND ALL RELATED TRENCHING, UTILITIES, ACCESS DRIVES, FENCING, AND VEGETATIVE RESTORATION. THE PROJECT IS LOCATED AT EDGEWATER CIRCLE, IN EAST HAMPTON, CONNECTICUT.

## WATER EROSION CONTROL MEASURES

EROSION AND SEDIMENT CONTROL MEASURES SHALL CONSIST OF COMPOST FILTER TUBES, NON-WOVEN FILTER FABRIC MATERIAL WITH A WIRE MESH BACKING, OR A WOVEN FABRIC (SILT FENCE). ALL MATERIAL SHALL BE NEW AND FREE FROM DEFECTS THAT WOULD COMPROMISE THE EFFECTIVENESS OF THE CONTROL MEASURES. AFTER COMPLETION, ALL MATERIAL SHALL BE DISPOSED OF PROPERLY. LOCATION OF EROSION AND SEDIMENT CONTROL STRUCTURES CAN BE SEEN ON THE SITE PLAN (SEE LEGEND FOR CONTROL STRUCTURE SYMBOL). NOTE: ALL WATER CONTROL MEASURES ARE LOCATED DOWN-GRADIENT FROM DISTURBED AREAS. IF TOPSOIL IS TO BE STORED IN AN AREA NOT SHOWN ON THE SITE PLAN, DUE TO UNFORESEEN EVENTS, PRIOR TO STORING, THE DOWN-GRADIENT PERIMETER OF THE STORAGE AREA SHALL BE PROPERLY PROTECTED PER THE SPECIFICATIONS DETAILED ON THIS PLAN.

## WIND EROSION CONTROL MEASURES

DURING DRY WEATHER CONDITIONS, DISTURBED AREAS SHALL BE PROTECTED AGAINST WIND EROSION. DUSTY AREAS SHALL BE SPRAYED WITH WATER TO PREVENT WIND-BORNE PARTICLES.

## CONSTRUCTION LITTER CONTROL

DURING CONSTRUCTION, ALL WRAPPINGS, BOXES, SCRAPS OF BUILDING MATERIAL, AND OTHER LITTER ITEMS SHALL BE DISPOSED OF PROPERLY BY USE OF A DUMPSTER OR CARTED AWAY. THE SITE SHALL BE INSPECTED AND CLEANED DAILY DURING CONSTRUCTION.

## TYPICAL CONSTRUCTION SEQUENCE

PRIOR TO THE DEVELOPMENT OF THE PARCEL, EROSION AND SEDIMENT CONTROL STRUCTURES SHALL BE INSTALLED AS SHOWN ON PLAN. A TYPICAL SEQUENCE OF DEVELOPMENT IS:

1. CLEARLY DEFINE AND FLAG THE PROPERTY LIMITS OF AND LIMITS OF CONSTRUCTION. ALL WORK IS TO BE PERFORMED WITHIN THE LIMIT OF WORK.
2. HOLD PRE-CONSTRUCTION MEETING (REMEMBER TO CALL BEFORE YOU DIG 1-800-922-4455)
3. INSTALL PERIMETER EROSION AND SEDIMENTATION CONTROLS IN ACCORDANCE WITH THE PLANS.
4. STOCKPILES SHALL BE SECURED WITH EROSION AND SEDIMENT CONTROLS.
5. CUT OR FILL REMAINDER OF SITE TO ESTABLISH THE SUB-GRADE.
6. DRAINAGE FACILITIES STARTING AT THE OUTFALL AND PROCEEDING UPGRADE. INSTALL REMAINING UTILITIES. IN AREAS WHERE NEW PAVING IS NOT PROPOSED, REPAIR PAVEMENT OVER UTILITY TRENCHES IN ACCORDANCE WITH "PERMANENT PAVEMENT REPLACEMENT DETAIL".
7. INSTALL WATER SYSTEM PIPING AS INDICATED ON THE PLANS. PERFORM PRESSURE TESTING PRIOR TO PLACEMENT OF FOUNDATION.
8. INSTALL NEW ELECTRICAL UTILITIES.
9. EXCAVATE AND CONSTRUCT FOUNDATION OF BUILDING WITH APPROPRIATE STUBS/OPENINGS FOR UTILITIES. UPON COMPLETION BACKFILL FOUNDATION WALLS.
10. PLACE, GRADE AND COMPACT THE PROCESSED AGGREGATE ACCESS DRIVE.
11. APPLY STABILIZATION MEASURES (TOPSOIL, SEEDING, ETC.) TO REMAINING DISTURBED AREAS IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL DETAILS.
12. INSPECT AND CLEAN DRAINAGE SYSTEMS AS NEEDED.
13. TOPSOIL AND GRADE WHERE REQUIRED AND WITHIN 2 FEET OF PROPOSED CURBING.
14. FINE GRADE, RAKE, SEED, AND MULCH.
15. UPON SUBSTANTIAL COMPLETION OF THE BUILDING, COMPLETE THE BALANCE OF SITE WORK AND STABILIZATION OF ALL OTHER DISTURBED AREAS.
16. AFTER ENTIRE SITE IS STABILIZED IN ACCORDANCE WITH THE APPLICABLE EROSION AND SEDIMENT CONTROL MEASURES, REMOVE TEMPORARY EROSION AND SEDIMENT CONTROLS (E.G. SILT FENCES).

## SEEDING

ALL DISTURBED AREAS SHALL BE RESTORED WITH A VEGETATIVE STABILIZATION MATERIAL (GRASS). THE SOIL SHALL BE ADJUSTED TO A PH OF 5.7 OR HIGHER. THIS CAN BE DONE BY USING THE APPROPRIATE AMOUNT OF GROUND LIMESTONE OR FERTILIZER, AS REQUIRED BY A SOIL TEST. IF A TEST IS NOT PERFORMED, THE AREA SHALL BE FERTILIZED WITH 10-10-10 OR EQUAL AT A RATE OF 300 POUNDS PER ACRE (11 POUNDS PER 1000 SQUARE FEET). THE LIME OR FERTILIZER SHALL BE WORKED INTO THE SOIL A MINIMUM OF 4 INCHES. ALL STONES TWO INCHES OF LARGER IN DIAMETER SHALL BE REMOVED ALONG WITH ALL DELETERIOUS MATERIAL (SUCH AS BUILDING MATERIAL WASTE, STUMPS, ETC.). THE SEED SHALL BE APPLIED BY EITHER HAND, CYCLONE SEEDER, A CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY INCLUDING BOTH SEED AND FERTILIZER). HYDROSEEDINGS WHICH ARE MULCHED MAY BE LEFT ON SOIL SURFACE. REFER TO SPECIFICATION 32 90 19 FOR THE REQUIRED SEED MIX. RECOMMENDED SEEDING DATES ARE APRIL 1 THROUGH JUNE 1 AND AUGUST 15 THROUGH SEPTEMBER 1. ALL SEEDED AREAS SHALL BE MAINTAINED TO ENSURE PROPER GROWTH AND TO MINIMIZE EROSION.

## MULCH

MULCH SHALL CONSIST OF STRAW. IT SHALL BE APPLIED AT A RATE OF 1.5 - 2.0 TONS PER ACRE, OR 70 - 90 POUNDS (1-1/2 - 2) BALES PER 1000 SQUARE FEET (31.6' X 31.6'). ALL MULCH MATERIAL SHALL BE FREE FROM WEEDS AND COARSE MATTER. ALL REQUIRED GRADING SHALL BE COMPLETE PRIOR TO PLACEMENT OF MULCH. APPLICATION OF MULCH MATERIAL SHALL BE BY HAND OR MACHINE AND UNIFORM IN THICKNESS. MULCH MATERIAL SHALL BE ANCHORED IMMEDIATELY AFTER APPLICATION TO MINIMIZE WINDBLOWN DISTURBANCE. ANCHORING SHALL BE BY MECHANICAL DEVICE OR LIQUID MULCH BINDER DURING MULCH APPLICATION.

## GENERAL NOTES

ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PERFORMED IN ACCORDANCE WITH THE 2002 CONNECTICUT GUIDELINES FOR EROSION AND SEDIMENT CONTROL, OR LATEST REVISION.

ALL DISTURBED AREAS SHALL BE KEPT TO A MINIMUM. FINAL GRADING AND RESTORATION SHALL BE ACCOMPLISHED AS SOON AS PRACTICAL.

EROSION AND SEDIMENT CONTROL STRUCTURES SHALL BE INSTALLED PRIOR TO SITE WORK. IF IT IS NOT POSSIBLE TO DO SO, THE OWNER'S REPRESENTATIVE SHALL BE NOTIFIED IN ORDER TO MAINTAIN THE INTEGRITY OF DESIGN.

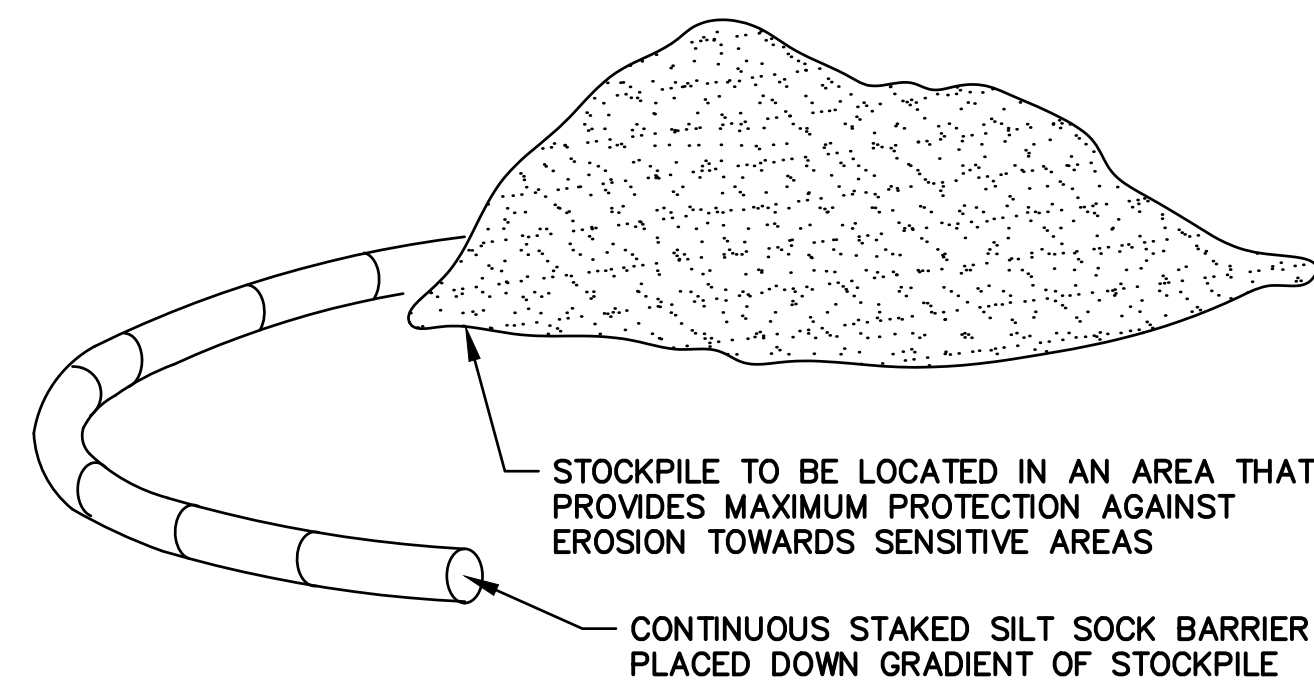
ALL CONTROL STRUCTURES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION AND REMOVED WHEN STABILIZATION HAS BEEN ATTAINED. IF THE PROPOSED CONTROL MEASURES ARE NOT SATISFACTORY, ADDITIONAL CONTROL MEASURES SHALL BE TAKEN.

ALL RUNOFF FROM THE DISTURBED AREA SHALL BE CONTROLLED AND FILTERED. NON-WOVEN SYNTHETIC FIBER FILTER FABRIC, COMPOST FILTER TUBES OR SILTATION FENCE SHALL BE USED IN THE AREAS SHOWN ON THE SITE PLAN AND INSTALLED AS SHOWN ON THIS PLAN.

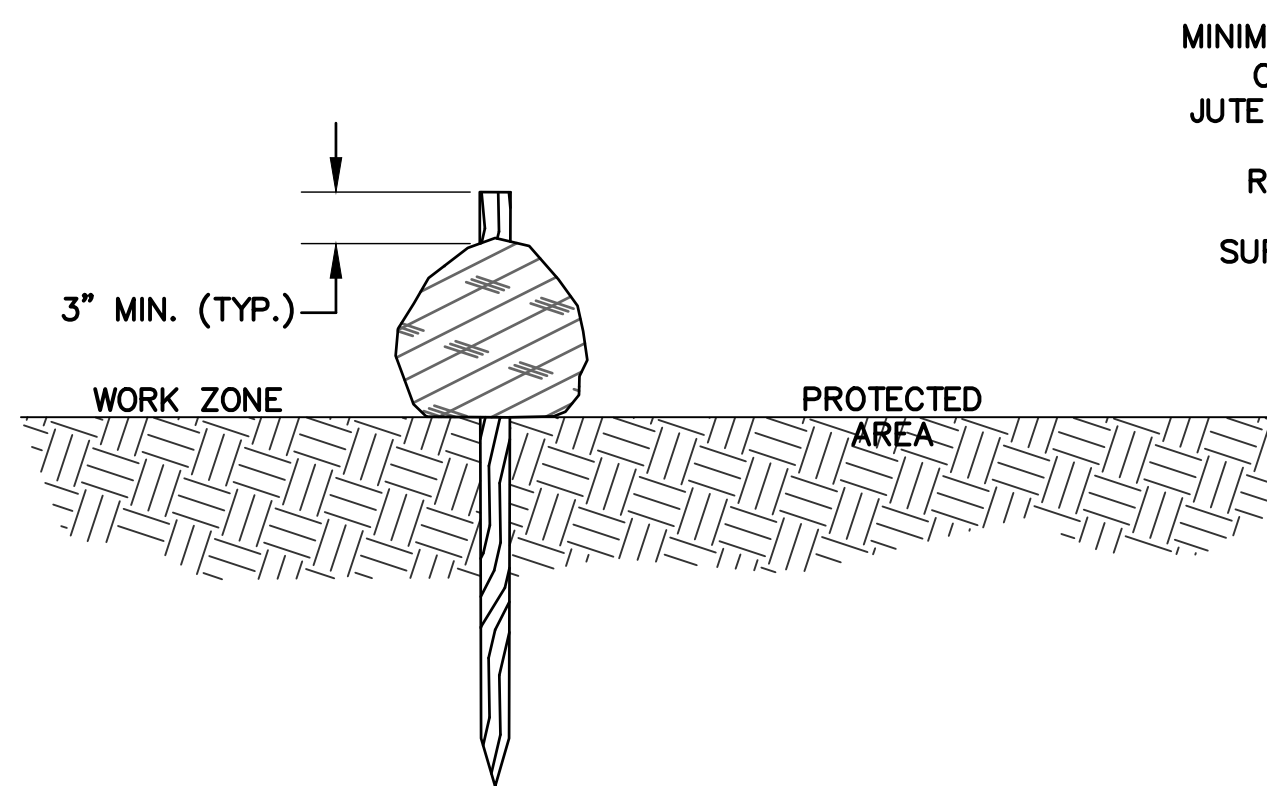
CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF SEDIMENT AND EROSION CONTROL MEASURES. THIS RESPONSIBILITY INCLUDES THE ACQUISITION OF MATERIALS, INSTALLATION, AND MAINTENANCE OF EROSION AND SEDIMENT STRUCTURES, THE COMMUNICATION AND DETAILED EXPLANATION TO ALL PEOPLE INVOLVED IN THE SITE WORK OF THE REQUIREMENTS AND OBJECTIVE OF THE EROSION AND SEDIMENT CONTROL MEASURES. TWO WEEKS PRIOR TO THE START OF WORK, THE CONTRACTOR SHALL SUBMIT A WORKING PHONE NUMBER OF THE INDIVIDUAL RESPONSIBLE FOR THE IMPLEMENTATION OF THIS PLAN.

THE OWNER SHALL BE NOTIFIED OF ANY PROPOSED ALTERATION TO THE EROSION AND SEDIMENTATION CONTROL PLAN, PRIOR TO ALTERING, IN ORDER TO ENSURE THE FEASIBILITY OF THE ADDITION, SUBTRACTION, OR CHANGE IN THE PLAN.

CONTRACTOR SHALL INSPECT SEDIMENTATION CONTROL MEASURES FOR SEDIMENT AFTER RAINSTORMS OF 1/4 INCH OR MORE AND CLEAN AS NEEDED. ENSURE THAT ENTIRE SITE IS CLEANED OF DEBRIS AND SEDIMENT UPON COMPLETION OF WORK.

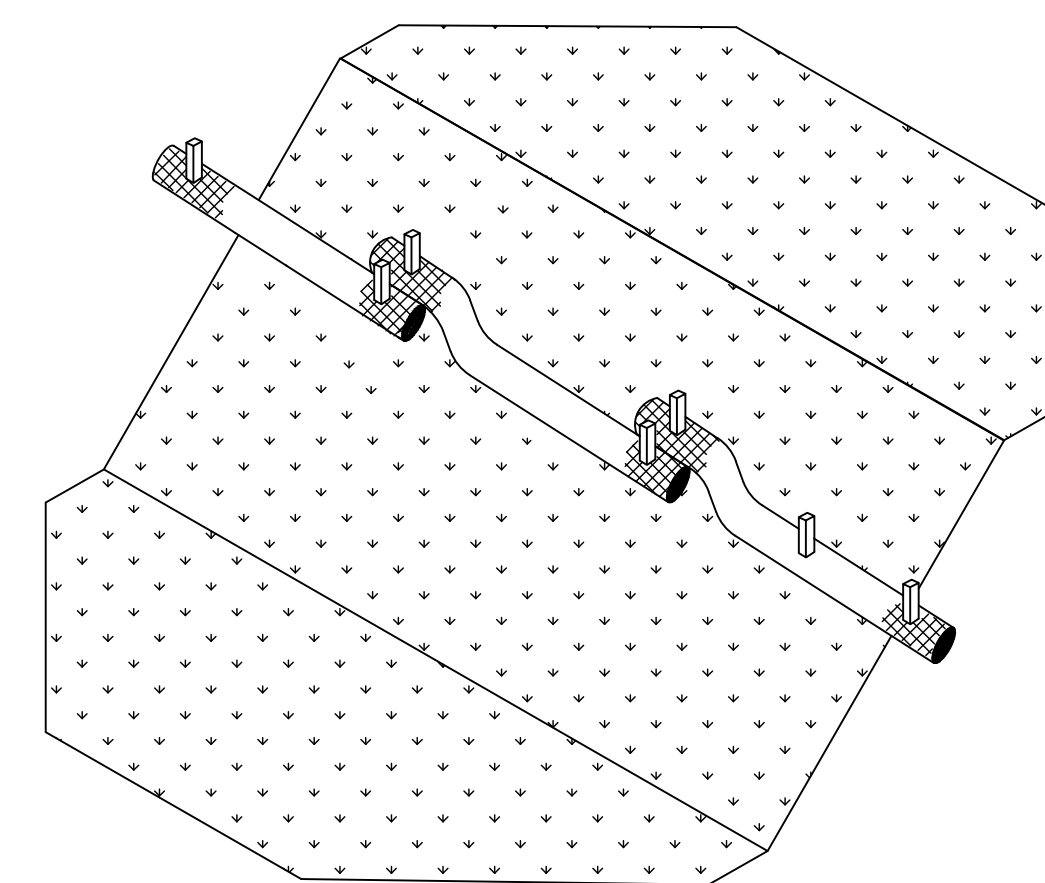


**TEMPORARY STOCKPILE DETAIL**  
N.T.S.



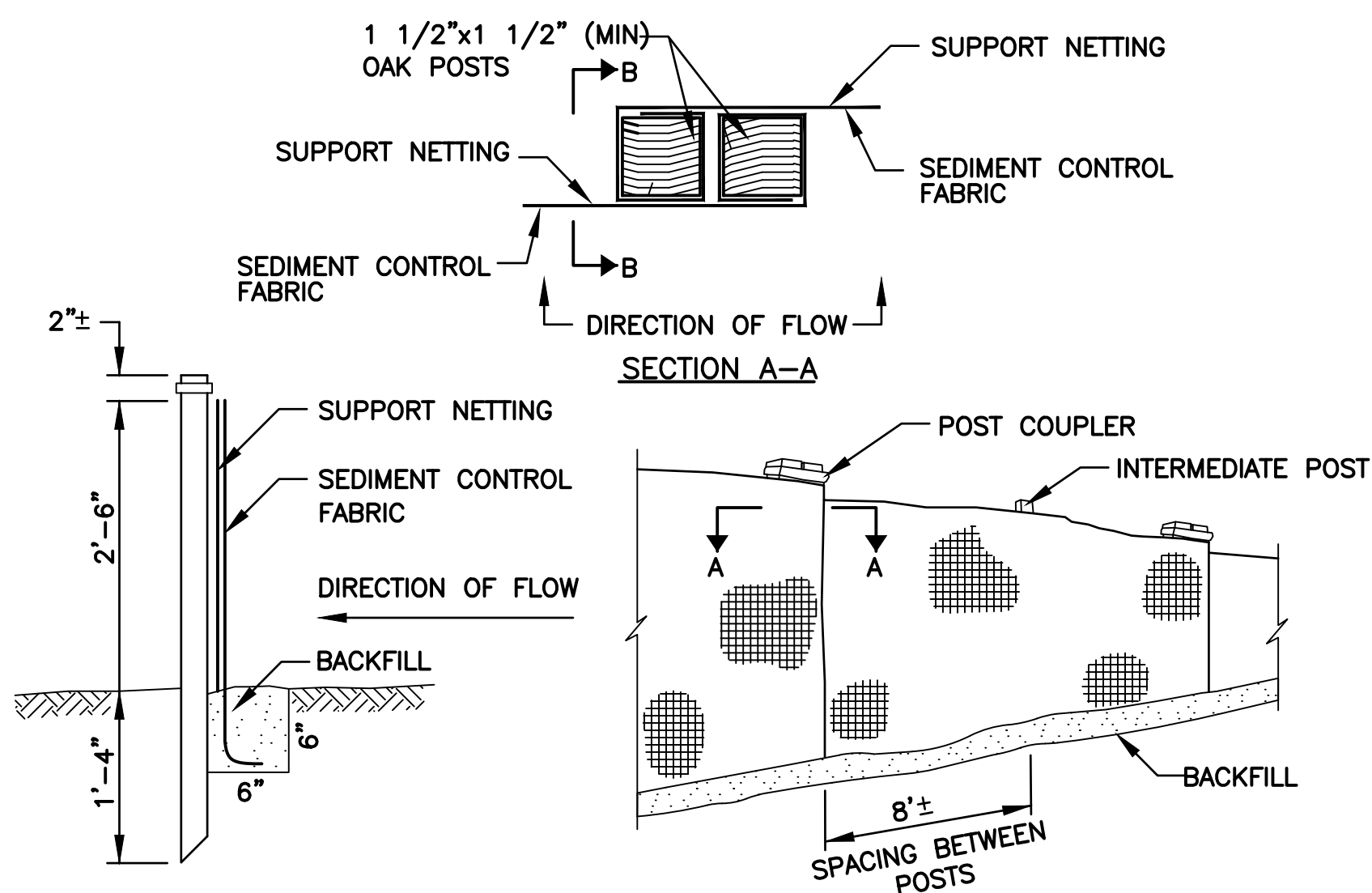
**COMPOST FILTER TUBE DETAIL**

N.T.S.



**COMPOST FILTER TUBE PLAN DETAIL**

N.T.S.



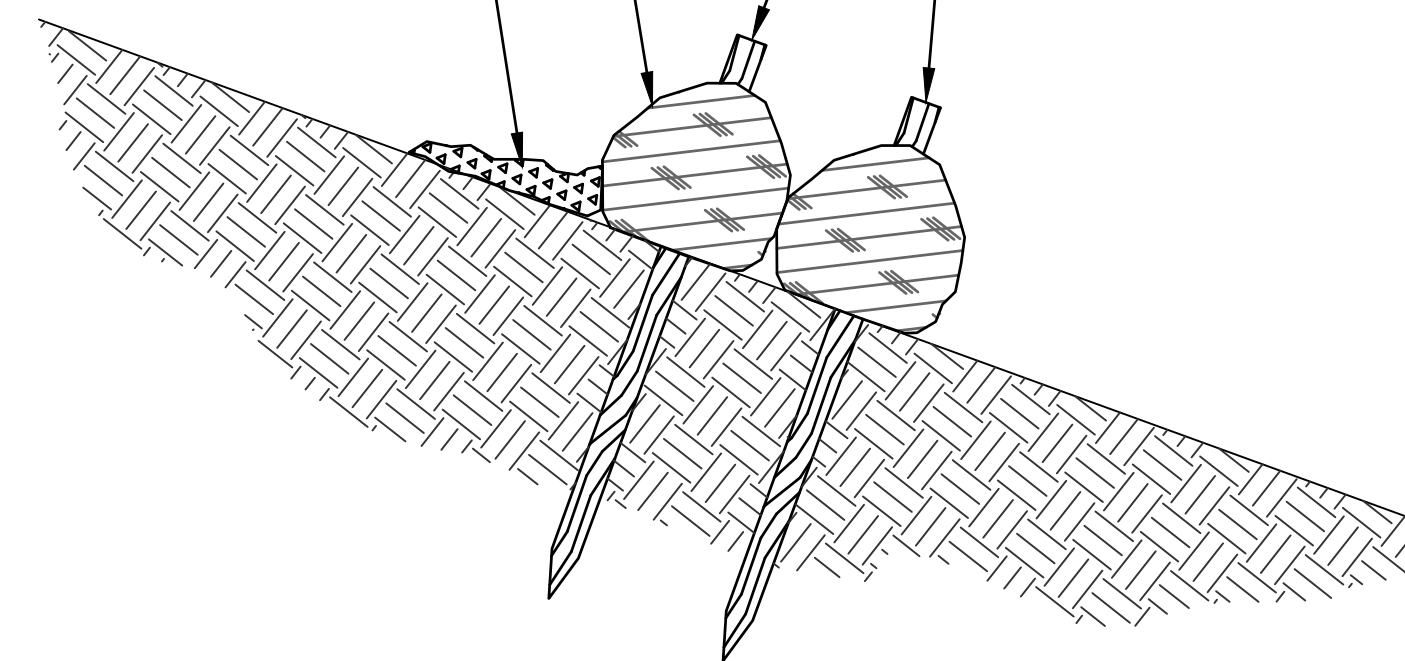
**SILT FENCE DETAIL**

N.T.S.

MINIMUM 12" IN DIAMETER WITH AN EFFECTIVE HEIGHT OF 9.5". TUBES FOR COMPOST FILTERS SHALL BE JUTE MESH OR APPROVED BIODEGRADABLE MATERIAL. ADDITIONAL TUBES SHALL BE USED AT THE REQUIREMENT OF THE ENGINEER. TAMP TUBES IN PLACE TO ENSURE GOOD CONTACT WITH SOIL SURFACE. IT IS NOT NECESSARY TO TRENCH TUBES INTO EXISTING GRADE.

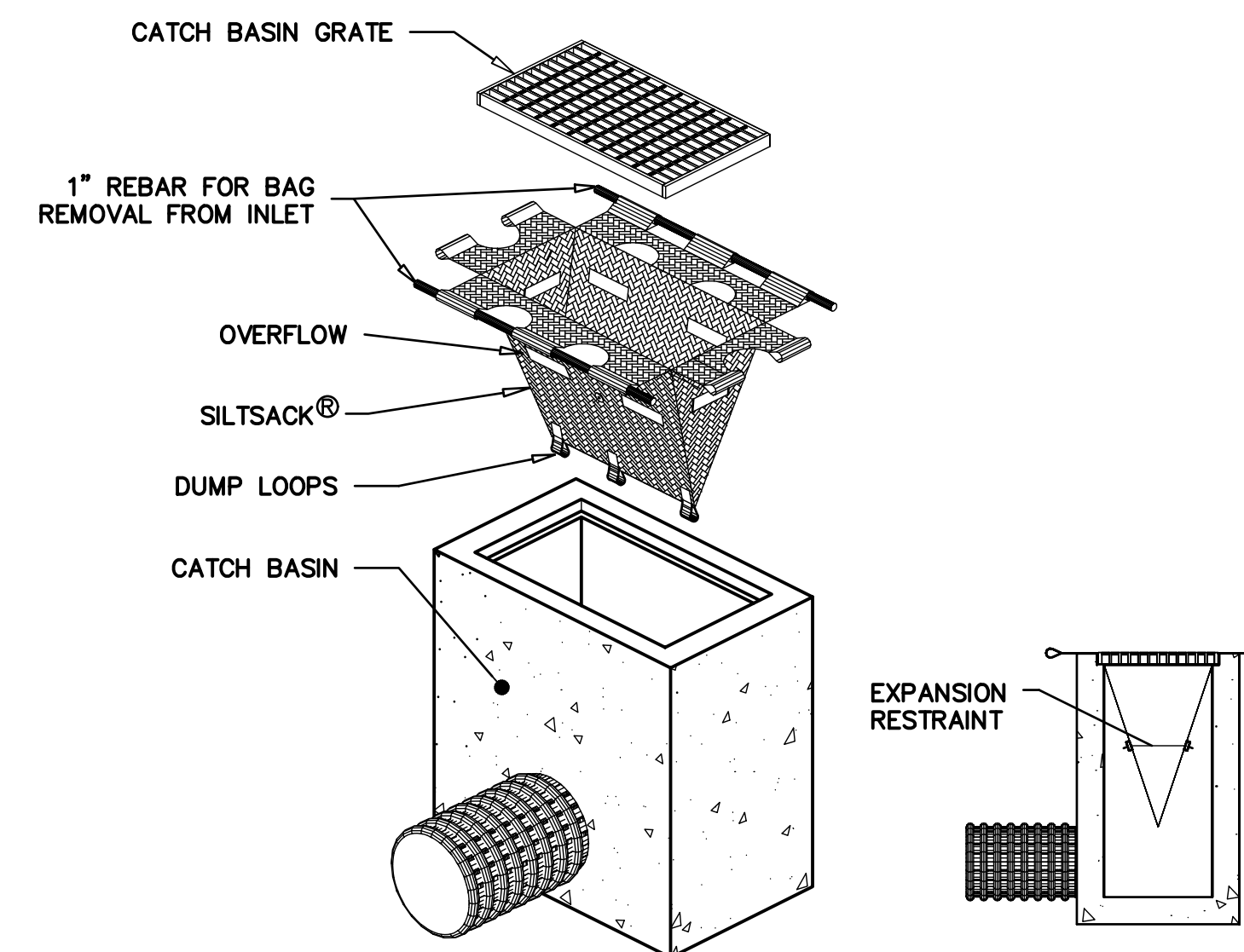
2" DEEP x 12" WIDE LAYER OF LOOSE COMPOST MATERIAL PLACED ON UPHILL/FLOW SIDE OF TUBES TO FILL SPACE BETWEEN SOIL SURFACE AND TUBES.

2" x 2" x 3' UNTREATED HARDWOOD STAKES, UP TO 10' APART OR AS REQUIRED TO SECURE TUBES IN PLACE. WHEN STAKING IS NOT POSSIBLE, SUCH AS WHEN TUBES MUST BE PLACED ON PAVEMENT, HEAVY CONCRETE OR CINDER BLOCKS CAN BE USED BEHIND TUBES UP TO 10' APART OR AS REQUIRED TO SECURE TUBES IN PLACE.



**WOODEN STAKE SECTION**

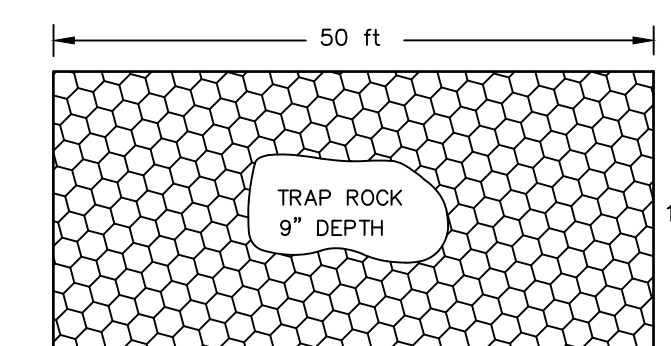
N.T.S.



- NOTES:
1. PROVIDE HI-FLOW SILT SACK TYPE A FOR TYPE "C-L" CATCH BASIN TOPS AND TYPE B WITH CURB DEFLECTOR FOR TYPE "C" CATCH BASIN TOPS OR OTHER STRUCTURES WITH CURB INLET.

**CATCH BASIN INLET PROTECTION**

N.T.S.



- NOTES:
1. TRAP ROCK SHALL BE CTDOT NO. 3 STONE (M.01.01)
  2. FILTER FABRIC SHALL BE PLACED BELOW STONE FOR EASE OF REMOVAL.

**ANTI-TRACK PAD**

N.T.S.

Project:



CONNECTICUT WATER COMPANY  
93 WEST MAIN STREET  
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Seal:

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Drawing Title:

**CIVIL AND SITE  
DETAILS**

CWC Drawing Number:

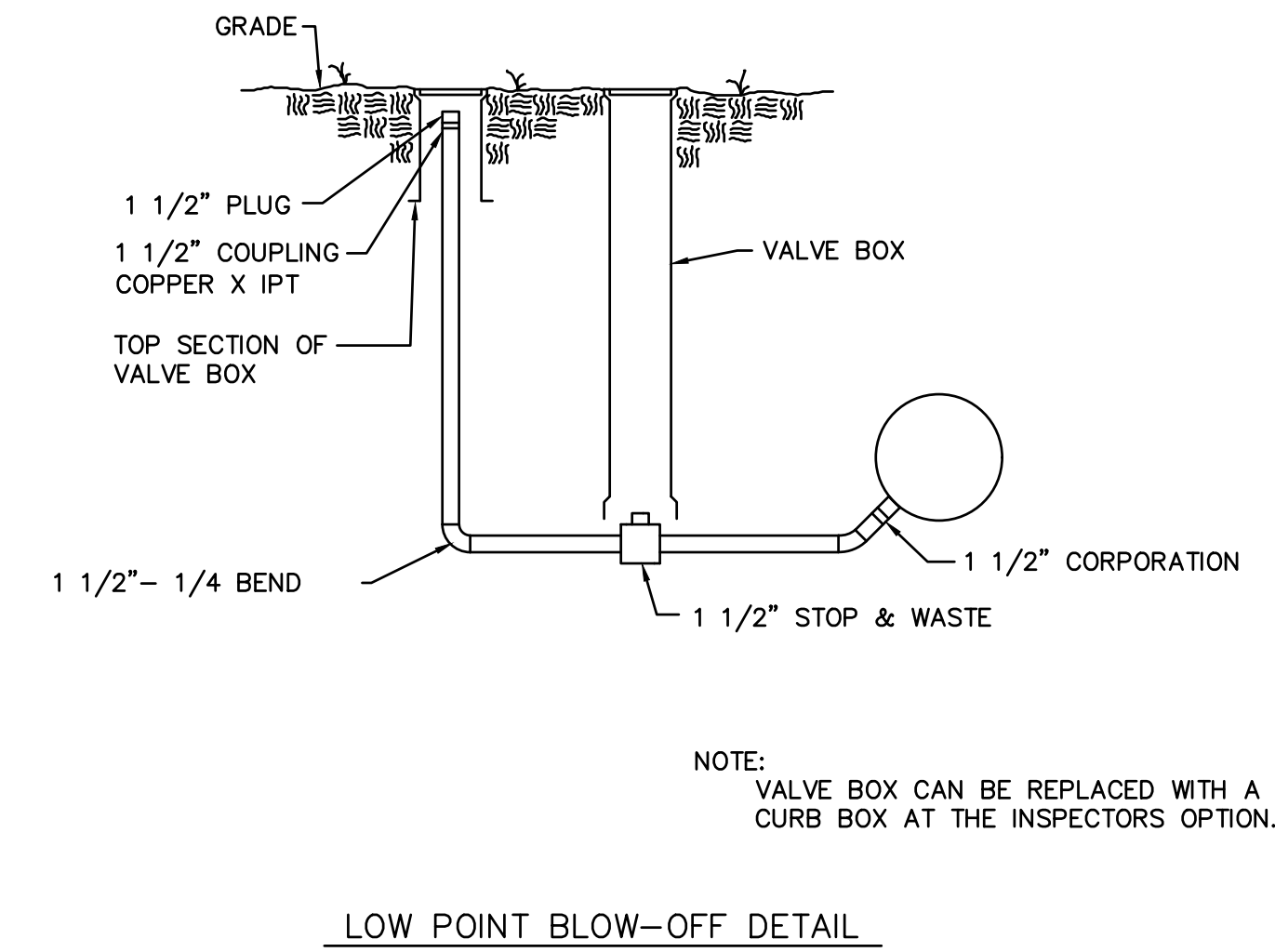
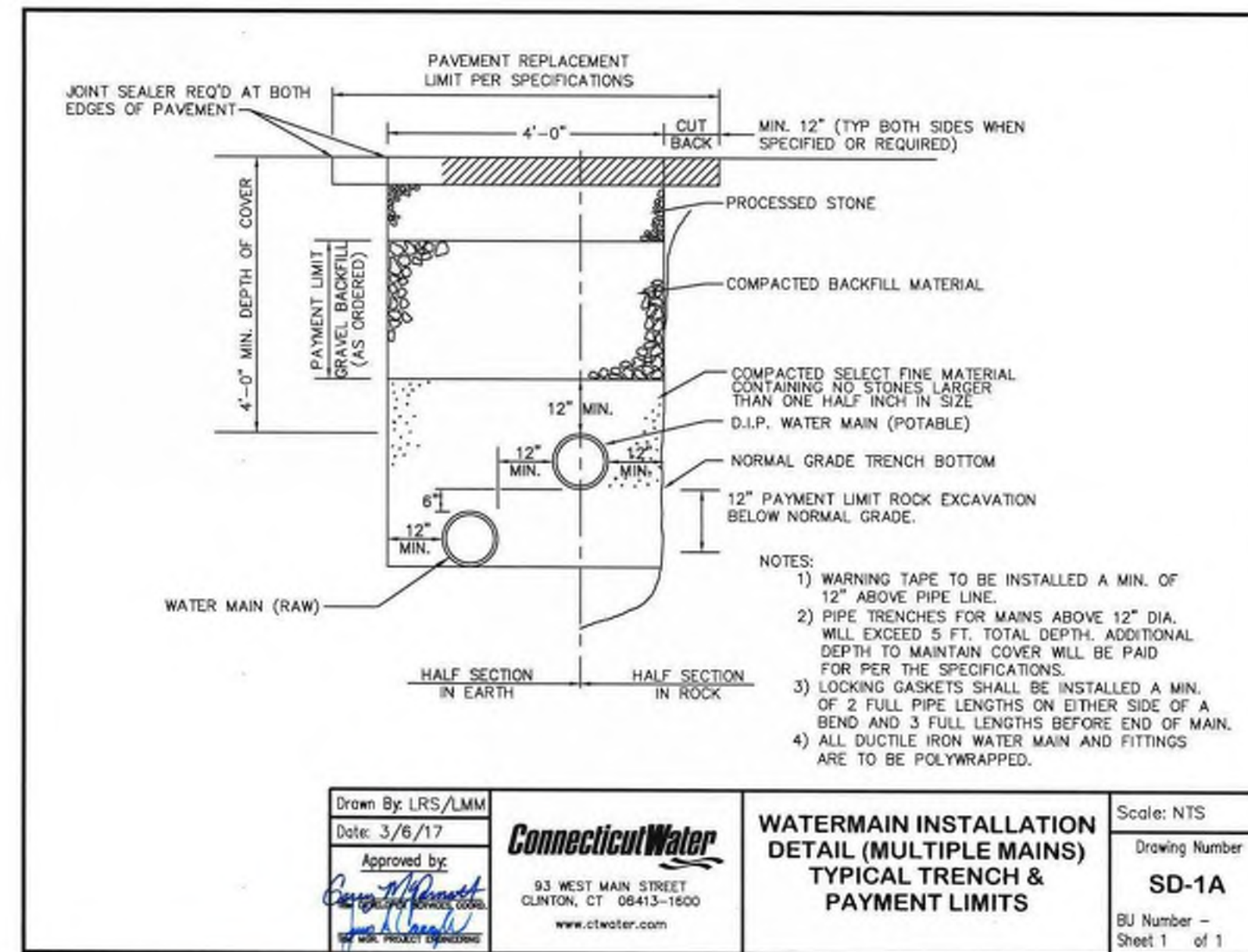
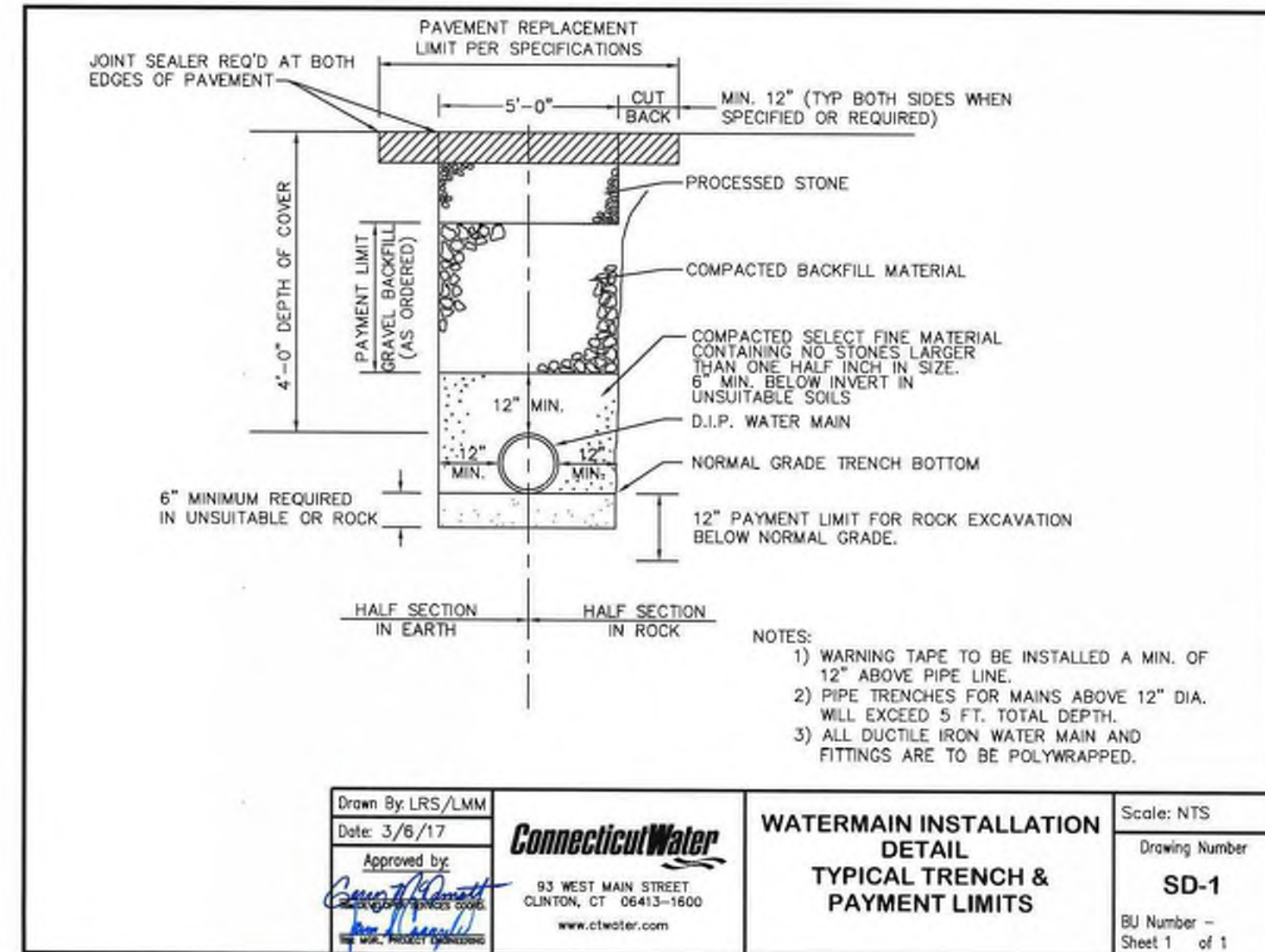
**WE-**

Sheet Number:

**C901**







Project:  
**Connecticut Water**  
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Consultants:

Seal:  
CERTIFICATION NOT REQUIRED FOR DETAILS (PREPARED BY OTHERS)

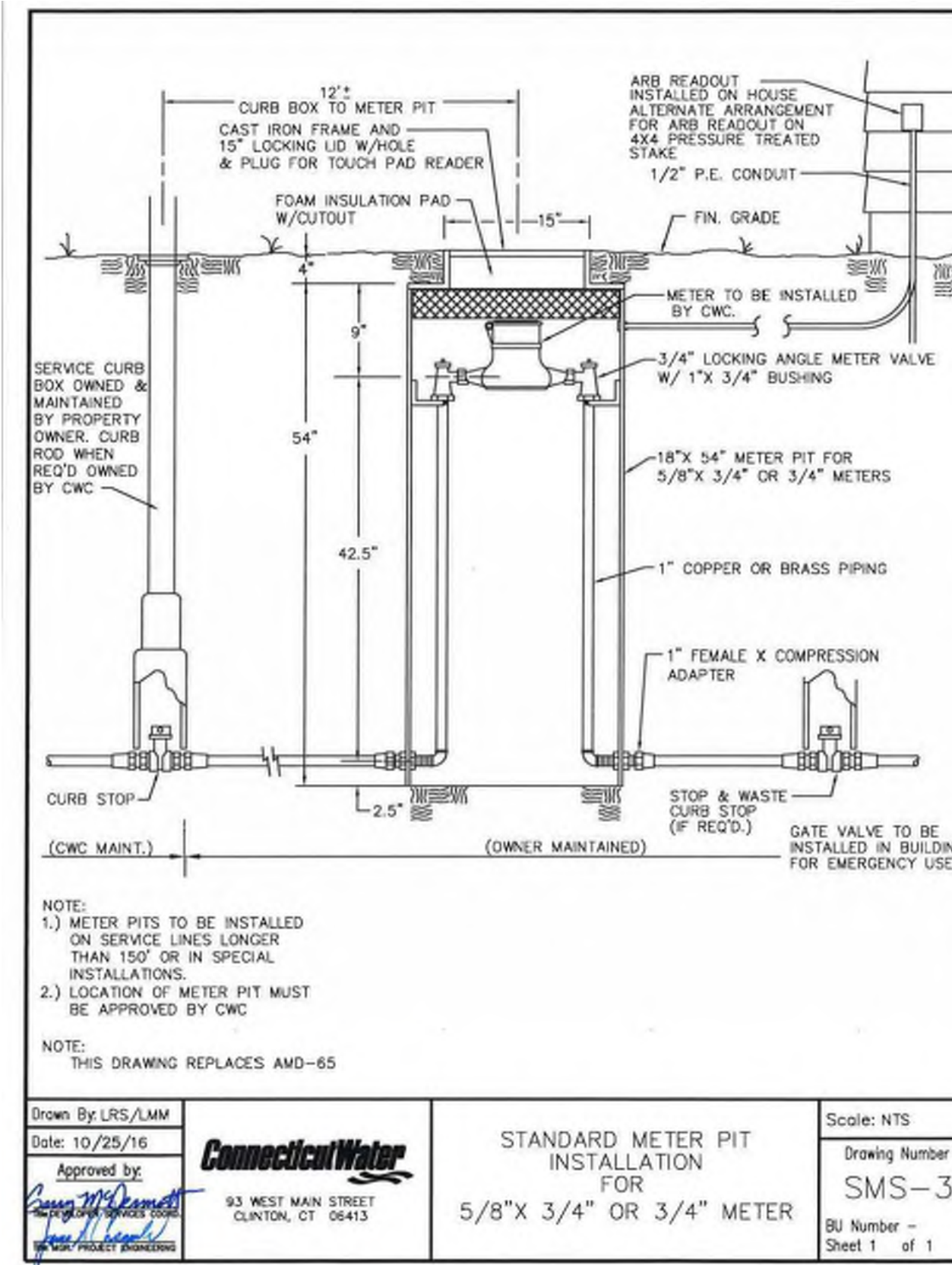
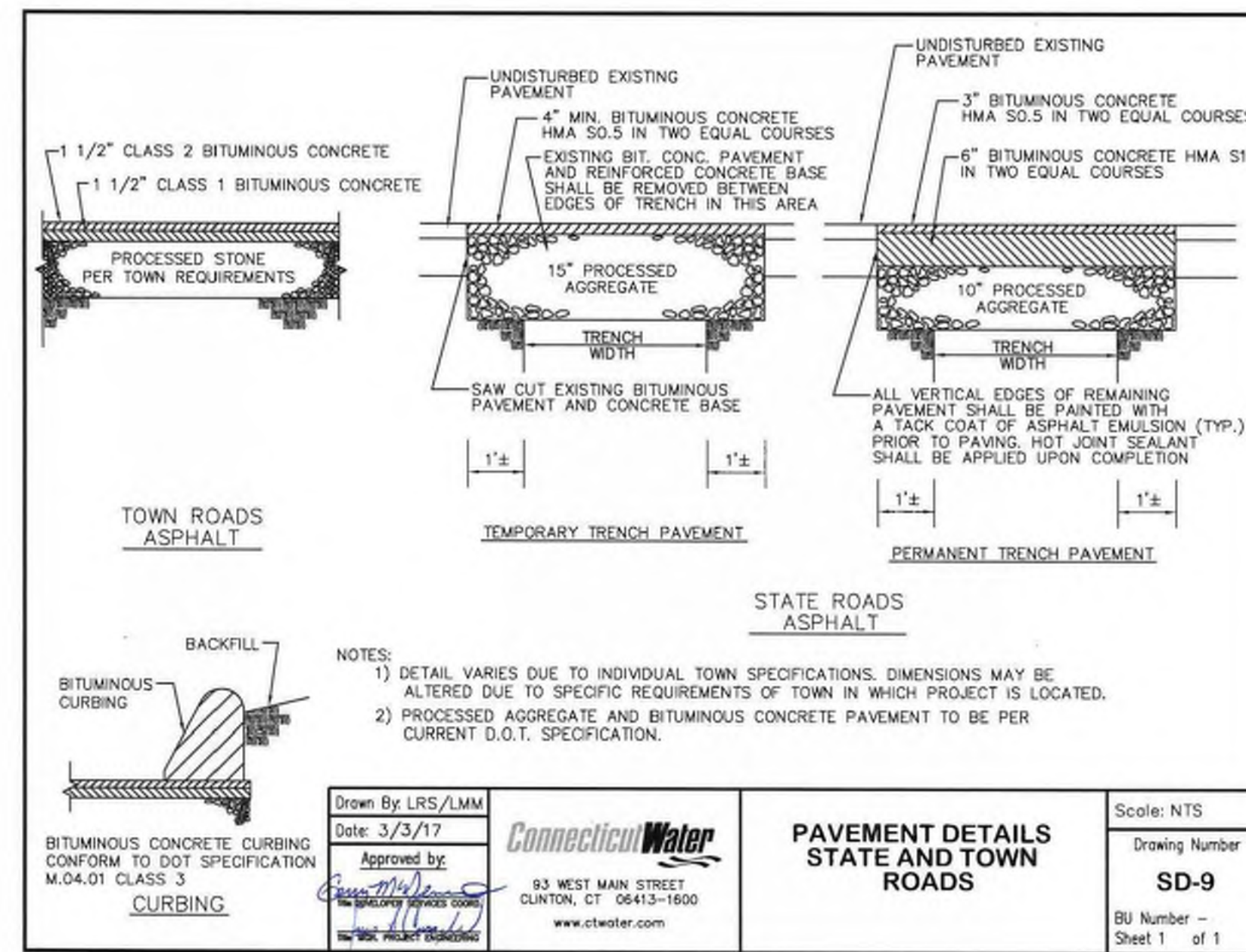
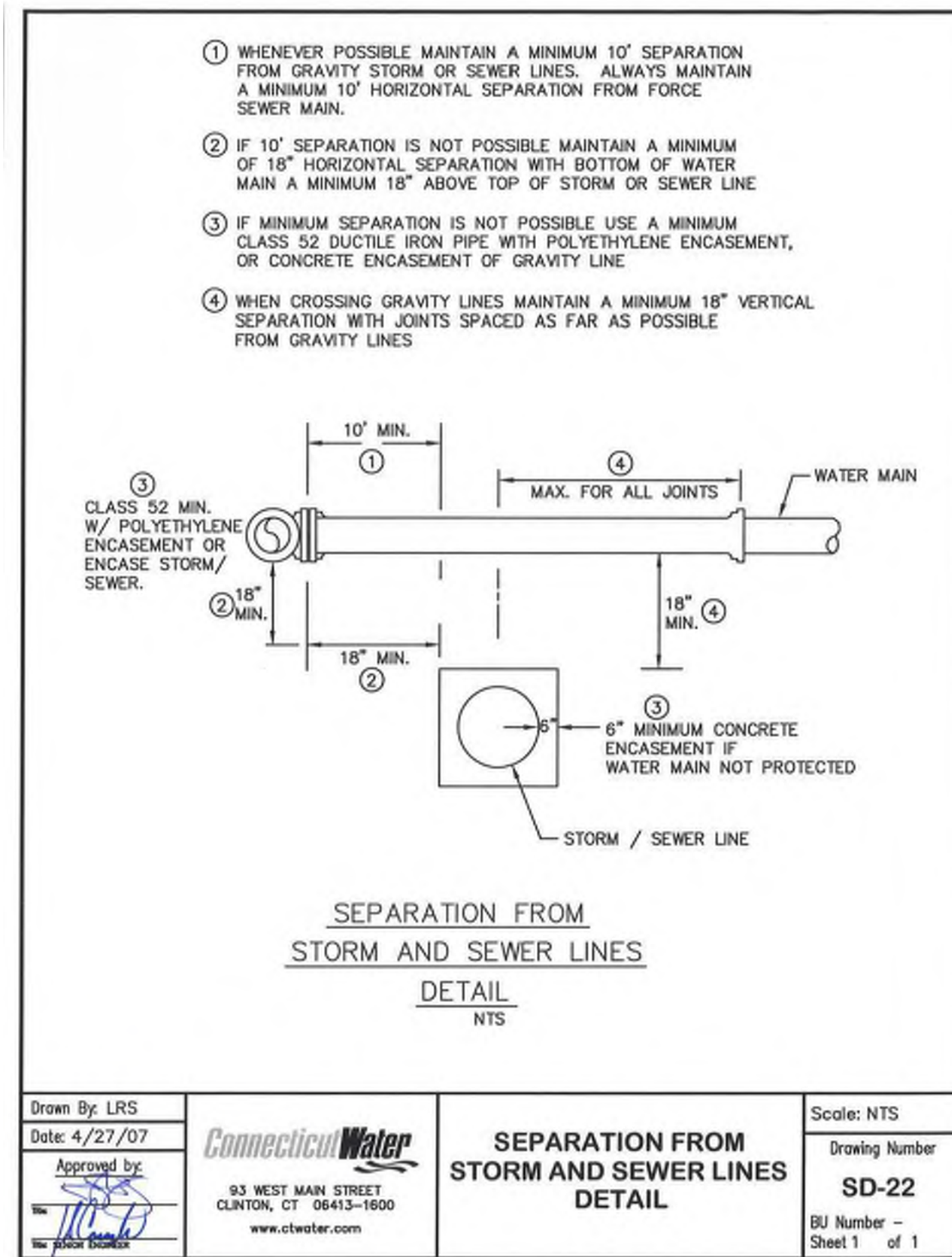
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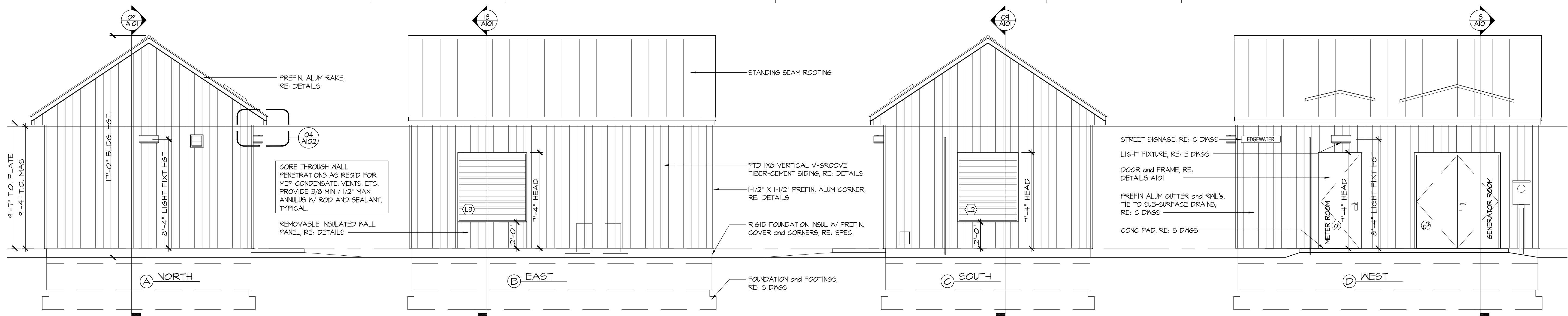
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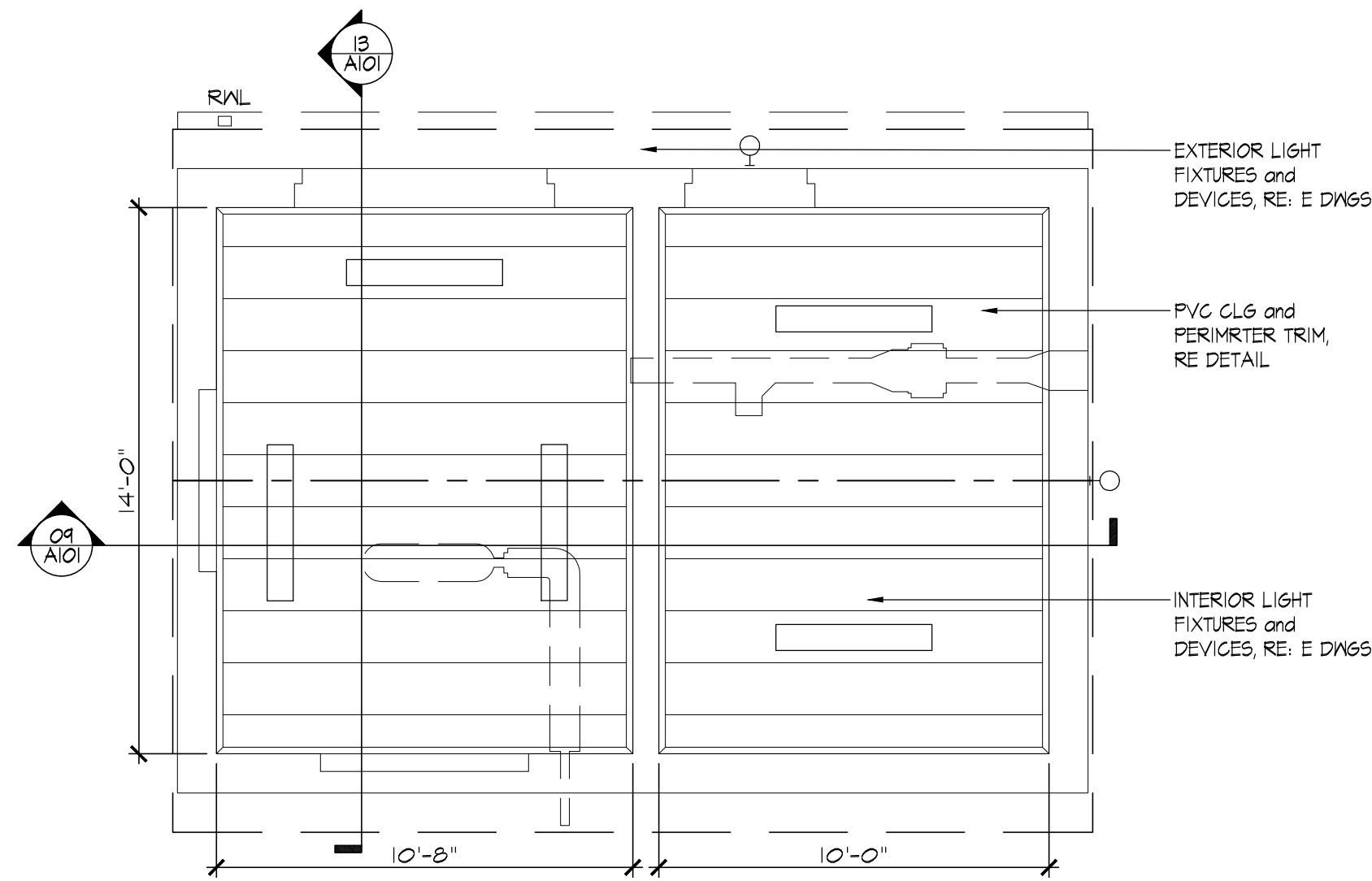
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Drawing Title:  
**CIVIL AND SITE DETAILS**  
CWC Drawing Number:  
WE-  
Sheet Number:  
**C903**

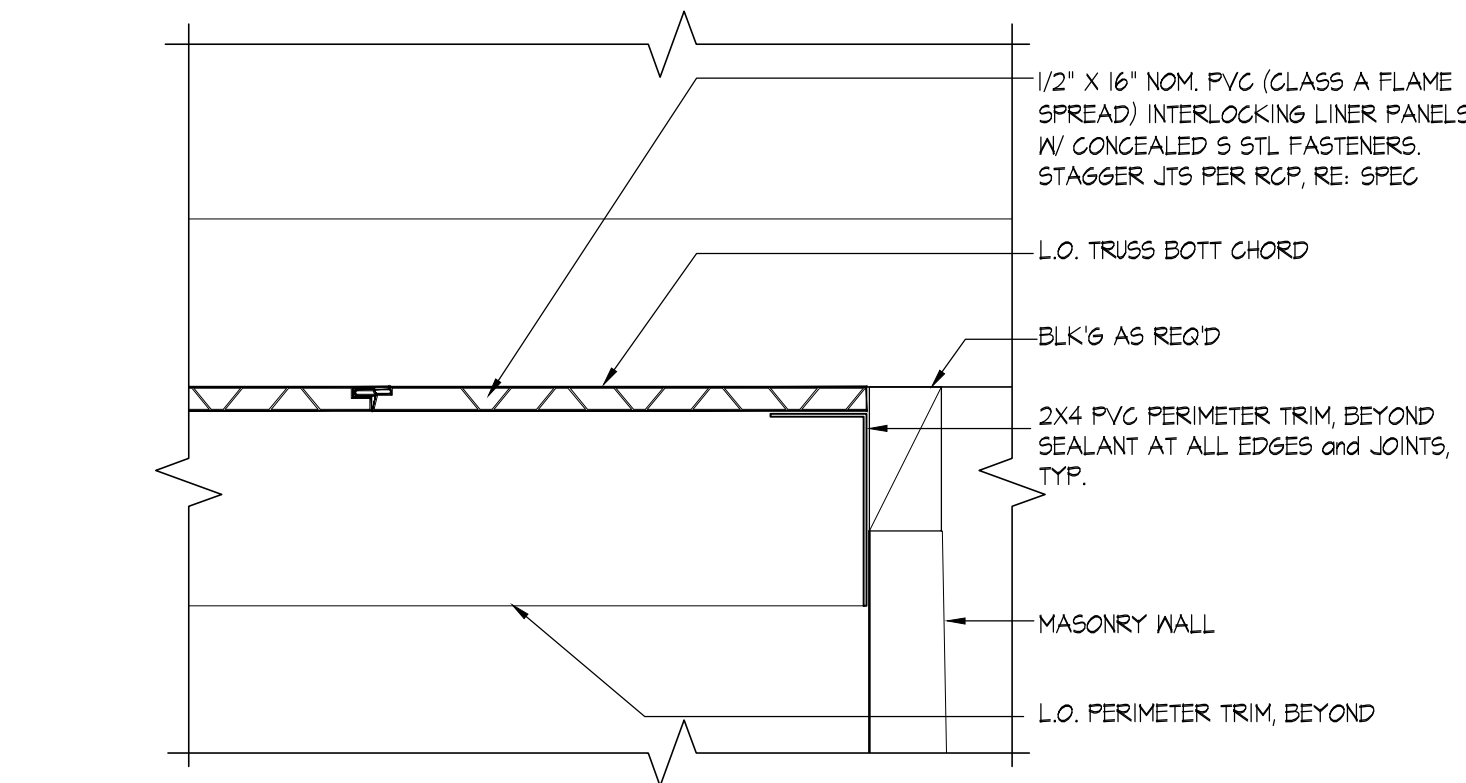




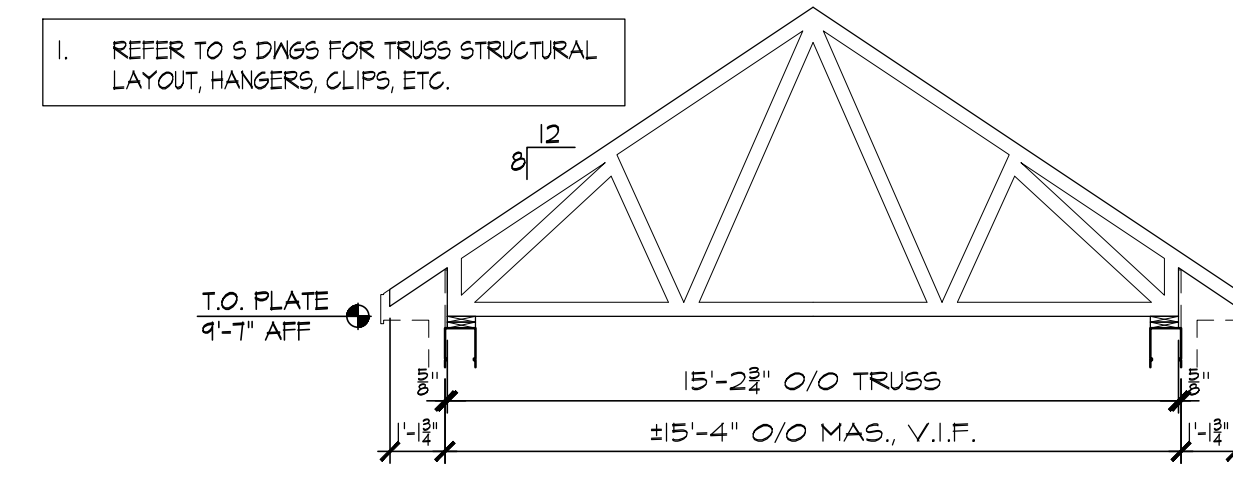
**16 Exterior Elevations**  
SCALE: 1/4" = 1'-0"



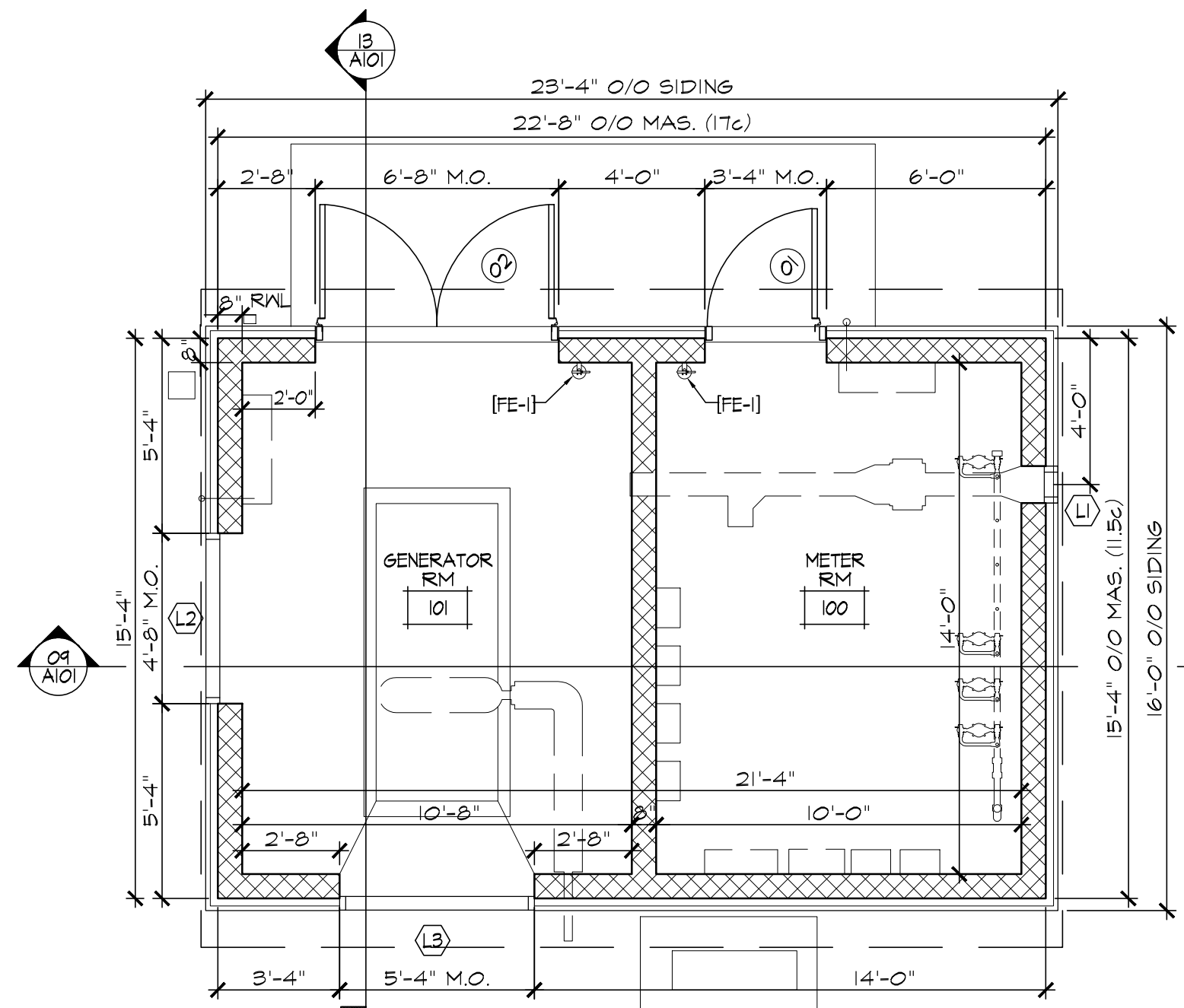
**14 Reflected Ceiling Plan**  
SCALE: 1/4" = 1'-0"



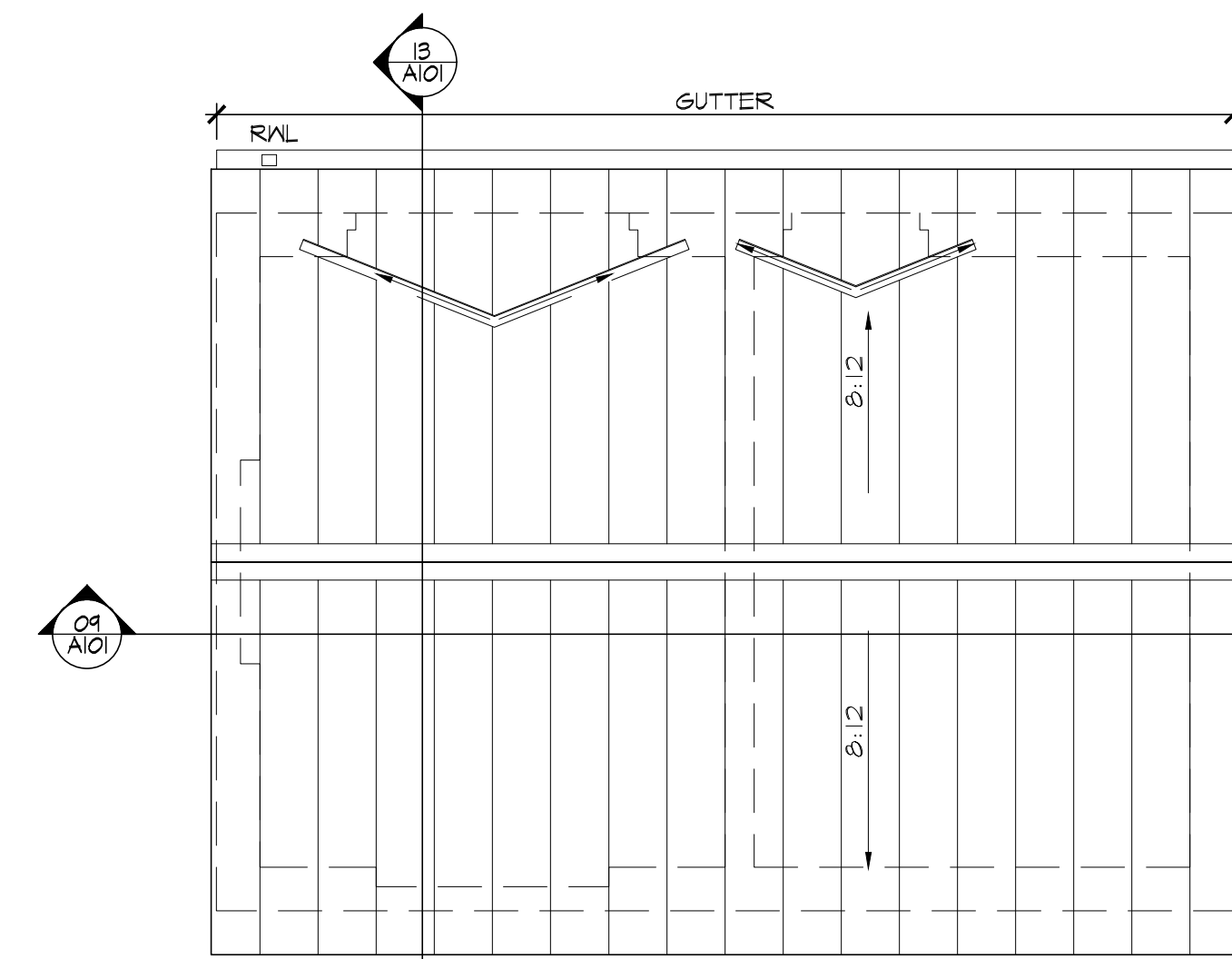
**11 PVC Ceiling Detail**  
SCALE: 3" = 1'-0"



**10 Roof Truss Profile**  
SCALE: 1/4" = 1'-0"



**13 Floor Plan**  
SCALE: 1/4" = 1'-0"



**09 Roof Plan**  
SCALE: 1/4" = 1'-0"

**05 Project Narrative**  
NO SCALE

**01 Code Data**  
NO SCALE

OCCUPANCY CLASSIFICATION (IBC 508.4):	Single Occupancy/Non-separated
USE GROUP CLASSIFICATION (IBC 502):	F2 Factory Industrial - Low Hazard
CONSTRUCTION TYPE (IBC 601):	5B (UNPROTECTED)
BUILDING HEIGHT (IBC table 504.3/504.4):	ALLOWED: 40 FT/2 STORIES (NS-Not sprinklered) ACTUAL: 11 FT/1 STORY
BUILDING AREA (IBC table 506.2):	ALLOWABLE AREA: 13,000 SF / FLR (5B, NS-Not sprinklered) ACTUAL: 363.65 SF
FIRE RESISTANCE RATINGS (IBC table 601):	<ul style="list-style-type: none"> <li>PRIMARY STRUCTURAL FRAME (cols, girders, trusses): 0 hr</li> <li>BEARING WALLS: Exterior 0 hr, Interior 0 hr</li> <li>NONBEARING WALLS &amp; PARTITIONS (Exterior) (Table 602): 5B, Exterior 0 hr &gt;30 FT (table 602) - N/A 5B, Exterior 0 hr &gt;10 X &lt;30FT (table 602) - N/A 5B, Exterior 1 hr &gt;15 X &lt;10FT (table 602) - N/A</li> <li>NONBEARING WALLS &amp; PARTITIONS (Interior): 0 hr</li> <li>FLOOR CONSTRUCTION: 0 hr</li> <li>ROOF CONSTRUCTION: 0 hr</li> </ul>
FIRE AREA SEPARATION (IBC 701.3):	TENANT SEPARATION, WALLS AND FLOORS: 2 hr - N/A
FIRE PARTITIONS (708):	<ul style="list-style-type: none"> <li>CORRIDORS (table 106.1): 1 hr - N/A</li> <li>SMOKE BARRIERS (709): 1 hr - N/A</li> <li>SMOKE PARTITIONS (710): 0 hr - N/A</li> </ul>
SHAFT ENCLOSURES (IBC 719):	2 hr (4 STORIES), 1 hr (4 STORIES)-N/A
EXTERIOR OPENINGS (IBC table 105.8):	No Limit
FULLY SPRINKLERED (IBC 903.2):	NOT REQUIRED
STAIRS and ELEVATOR (IBC 1023):	2 hr (4 STORIES), 1 hr (4 STORIES)-N/A
OCCUPANT LOAD	363.65 / 300.65 / person ± 2p
EXIT CAPACITY:	REQUIRED (IBC 1010.1): 32' Clear Door Opening width PROVIDED: 36" MINIMUM
Number EXITS (table 1006.2.1):	1 Exit (49p w/ 75ft max common path of travel) PROVIDED: 1 Req'd / 1 Provided
DISTANCE BETW EXITS:	1/2 X DIAGONAL, RE: PLAN FOR ACTUAL, N/A
TRAVEL DISTANCE (IBC 1011.2):	300ft (NS-Not sprinklered), RE: PLAN FOR ACTUAL
INTERIOR FINISH REQUIREMENTS (IBC 903.5):	F-2 No Restrictions Provided. Vertical Exit Passageway: Class B [F5+26-75, SD 0-450] Exit Access Corridors: Class B [F5+26-75, SD 0-450] Rooms and Enclosed Spaces: Class C [F5+16-200, SD 0-450]
FIRE PROTECTION:	<ul style="list-style-type: none"> <li>AUTOMATIC SPRINKLER SYSTEM (903): N/A (903.2.3)</li> <li>INCIDENTAL USE AREAS (302.1): N/A</li> <li>ADDITIONAL REQ'D SYSTEMS (table 903.2.3): N/A</li> <li>PORTABLE EXTINGUISHERS (906): REQ'D/PROVIDED</li> <li>FIRE ALARM / DETECTION SYSTEMS (907): N/A (907.2.4)</li> </ul>
MEANS OF EGRESS ILLUMINATION (1006):	REQ'D
EXIT SIGNS (1011):	N/A
ACCESSIBILITY (Chapter 11):	N/A (1103.2.4 EQUIPMENT SPACES)
ACCESS TO UNOCCUPIED SPACES (1209):	N/A
STRUCTURAL SYSTEMS (Chapters 16, 17, 18):	REFER TO STRUCTURAL DRAWINGS
BUILDING ENVELOPE REQUIREMENTS (IECC C402.1.3)	CLIMATE ZONE: 5A - CONNECTICUT
INSULATION:	R39
ROOF'S ATTIC:	R-19 + R-5.8ci OR R-20
WALLS, ABOVE GRADE, WOOD FRAMED:	R-11.4ci
WALLS, MASS:	R-15ci
WALLS, BELOW GRADE:	R10 FOR 24" BELOW
FLOORS, SLAB-ON-GRADE, UNHEATED:	U 0.10 REQ'D / PROVIDED
SWINGING DOORS:	

**PROJECT DESCRIPTION:**

THE PROPOSED METER BUILDING IS CONSTRUCTED WITH EXTERIOR WALLS OF MASONRY WITH INSULATION AND FIBER-CEMENT SIDING, WITH METAL ROOFING ON PRE-ENGINEERED WOOD TRUSSES. THE BUILDING IS DESIGNED AS AN ENCLOSURE TO PROTECT TREATMENT PROCESS EQUIPMENT WITH INDIVIDUALS ASSIGNED TO MAINTAIN SYSTEMS AND OPERATIONS, AND IS NOT REQUIRED TO MEET ACCESSIBILITY REQUIREMENTS.

NO HAZARDOUS MATERIALS ARE SCHEDULED FOR USE IN THIS BUILDING.

**APPLICABLE CODES:**

- ALL WORK SHALL BE IN CONFORMANCE WITH ALL APPLICABLE STATE AND LOCAL CODES, ORDINANCES AND STATUTES.
- 2022 CONNECTICUT STATE BUILDING CODE, COMPRISED OF:
  - 2021 INTERNATIONAL EXISTING BUILDING CODE
  - 2021 INTERNATIONAL BUILDING CODE
  - 2021 INTERNATIONAL MECHANICAL CODE
  - 2021 INTERNATIONAL PLUMBING CODE
  - 2021 INTERNATIONAL ENERGY CONSERVATION CODE
  - 2017 ANSI A117.1 ACCESSIBLE and USABLE BUILDINGS and FACILITIES
- 2022 CONNECTICUT FIRE SAFETY CODE
  - 2021 INTERNATIONAL FIRE SAFETY CODE
  - 2021 NFPA 101 LIFE SAFETY CODE

**Project:**  
**Connecticut Water**  
 CONNECTICUT WATER COMPANY  
 93 WEST MAIN STREET  
 CLINTON, CT 06413  
 EGDEWATER CIRCLE  
 WELLFIELD IMPROVEMENTS  
 AND METER BUILDING  
 EAST HAMPTON, CT

**Weston & Sampson**  
 Weston & Sampson Engineers, Inc.  
 712 Brook Street, Suite 103  
 Rocky Hill, CT 06067  
 (860) 513-1473 (800) SAMPSON  
 www.westonandsampson.com

**Consultants:**  
**BREWSTER ARCHITECTS**  
 111 Glen Road  
 Lebanon, Connecticut 06249  
 860.642.9997

**Seal:**

**Revisions:**

Rev	Date	Description

**Issued For:** 90% DESIGN REVIEW  
NOT FOR CONSTRUCTION



**Date:** OCTOBER, 2022  
**Drawn By:** JRP/WWB  
**Reviewed By:** WWB  
**Approved By:**  
**BJA Project No:** 22.004

**Drawing Title:**  
 ARCHITECTURAL  
 PLANS and  
 CODE DATA

**CWC Drawing Number:**

**Sheet Number:**

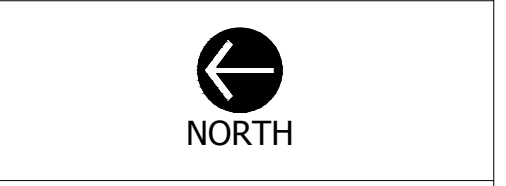
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Revisions:

Rev	Date	Description

Issued For: 90% DESIGN REVIEW NOT FOR CONSTRUCTION



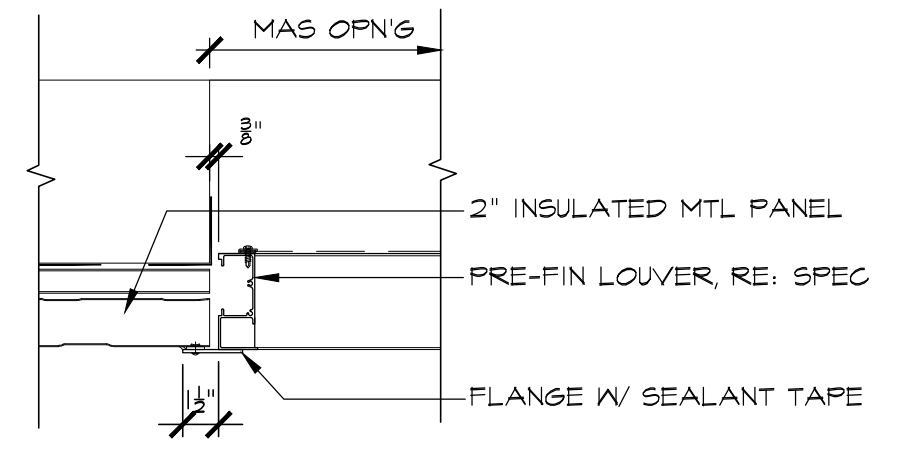
Date: OCTOBER, 2022  
 Drawn By: JRP/WWB  
 Reviewed By: WWB  
 Approved By: .  
 BIA Project No: 22.004

Drawing Title:  
**WALL SECTIONS and DETAILS**

CWC Drawing Number:

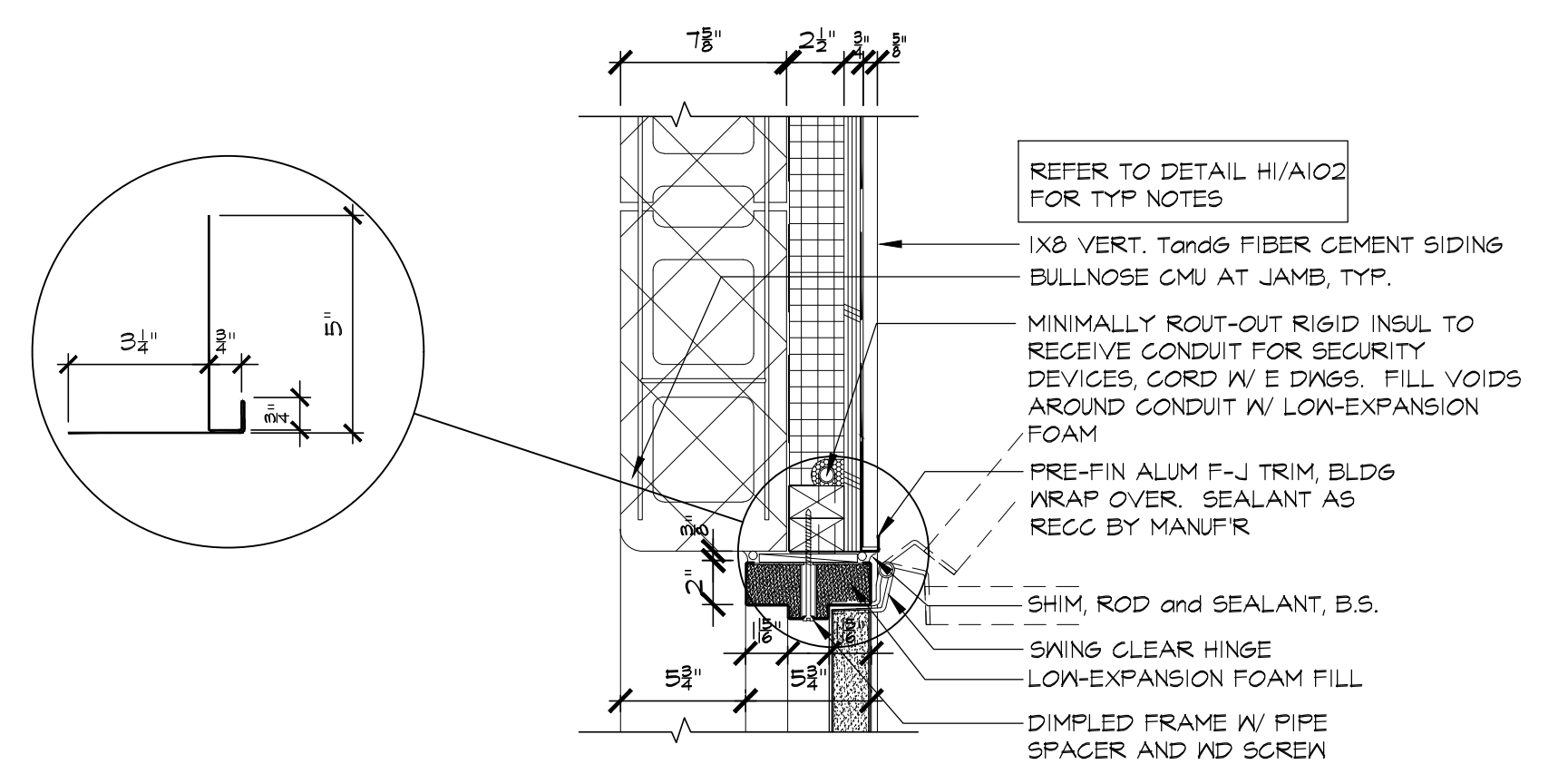
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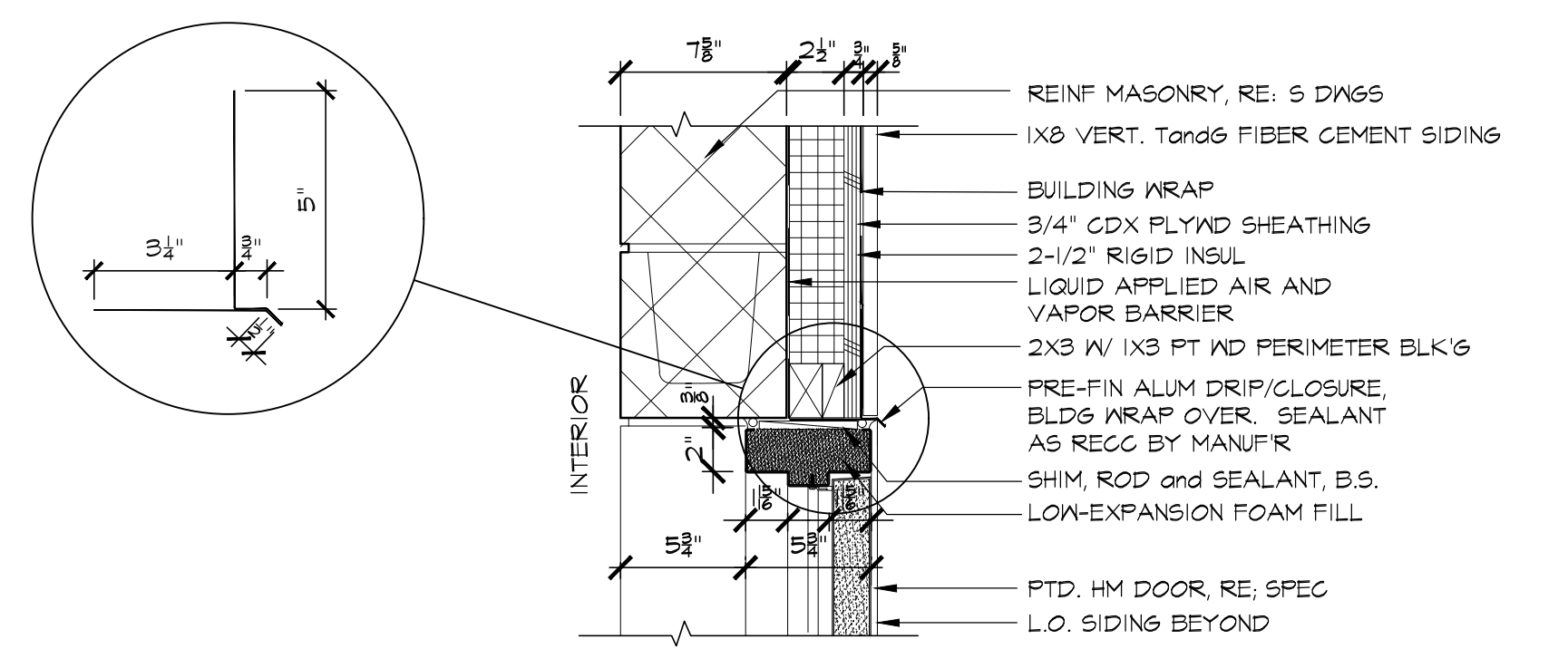


**A** JAMB DETAIL at LOUVER (HD + SILL SIM.)

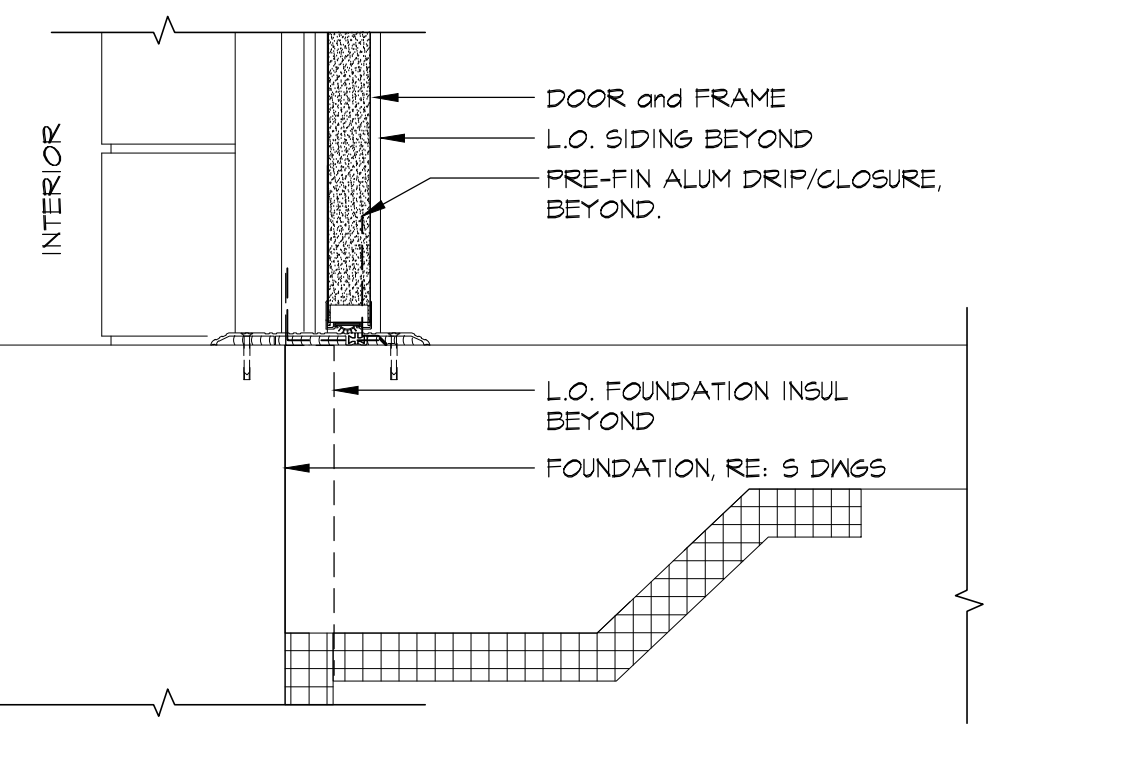
**16 Louver Details**  
 NO SCALE



**J** JAMB DETAIL @ DOOR

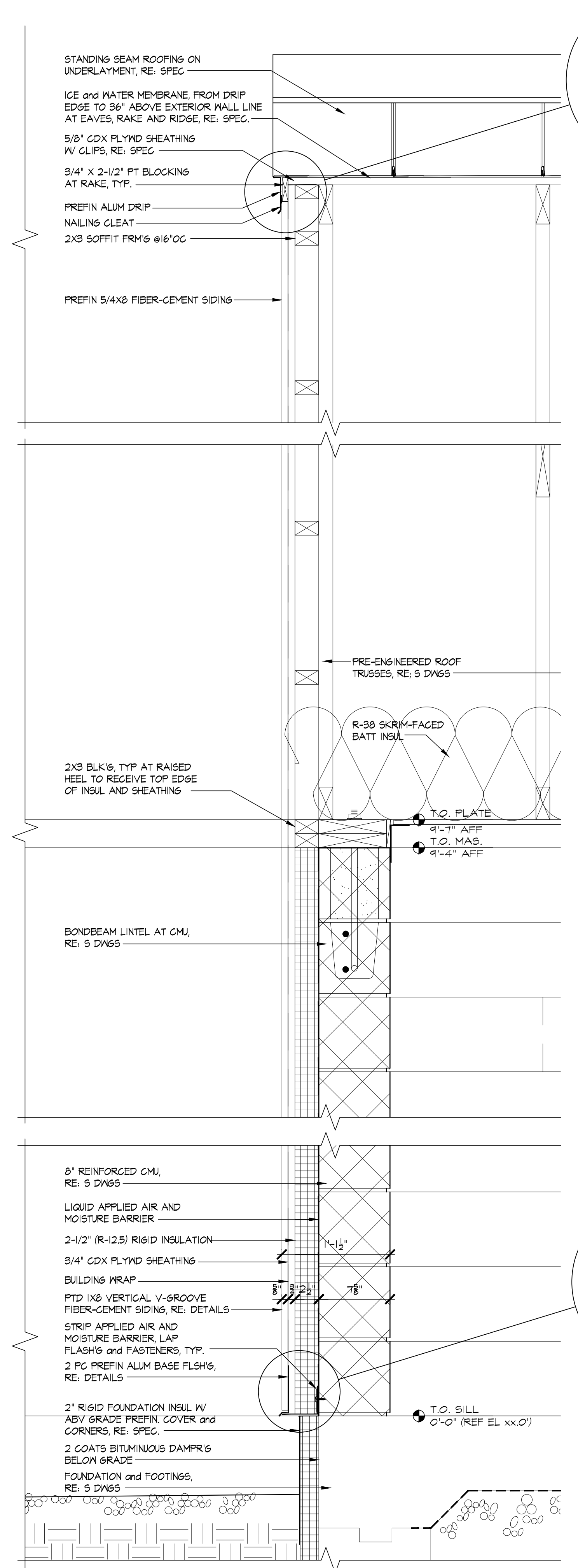


**H** HEAD DETAIL @ DOOR

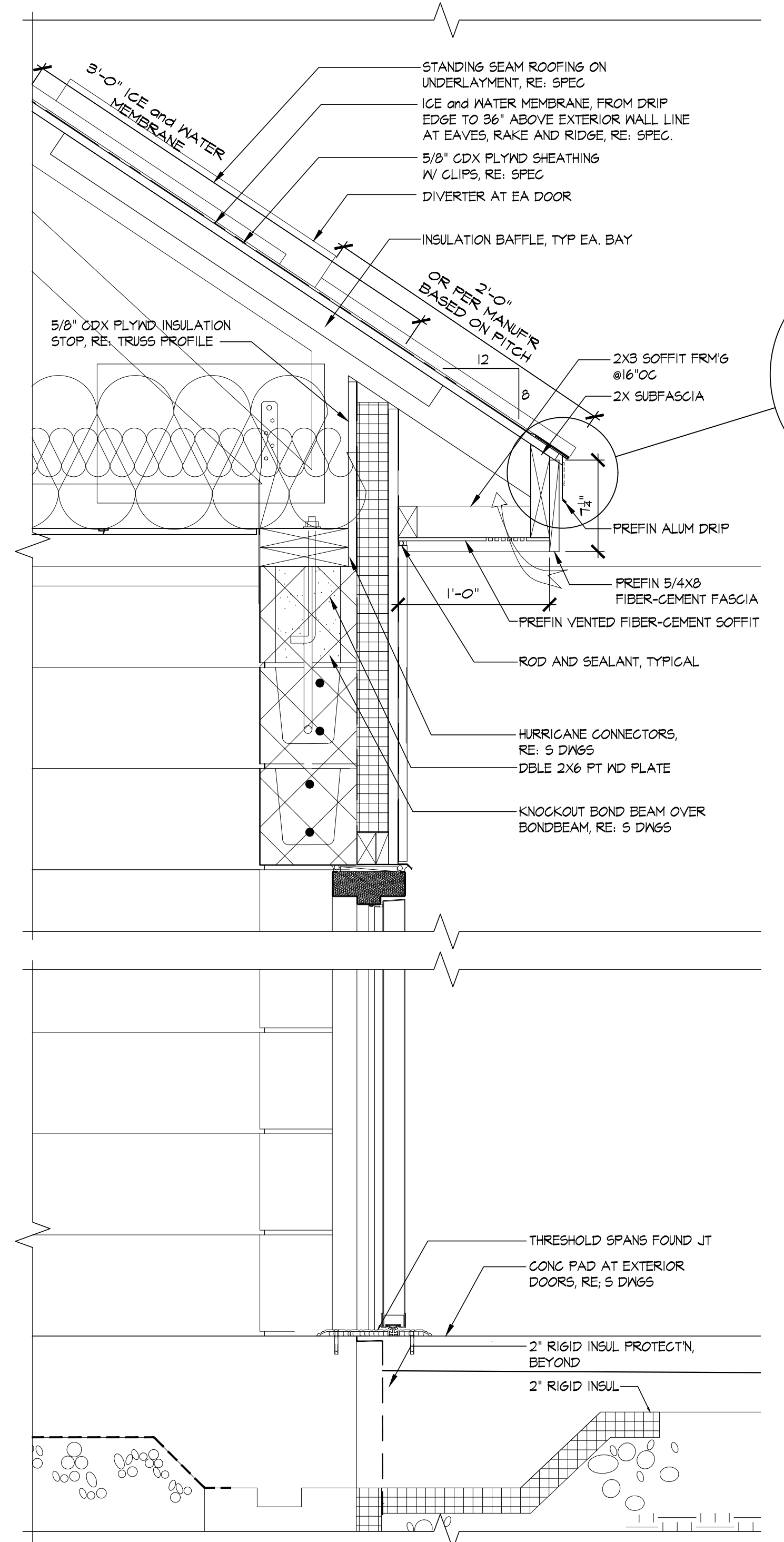


**S** SILL DETAIL @ DOOR

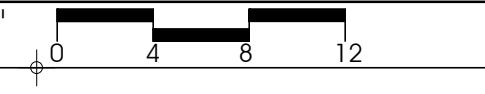
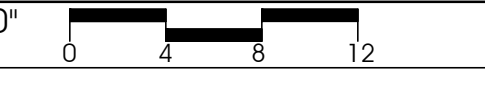
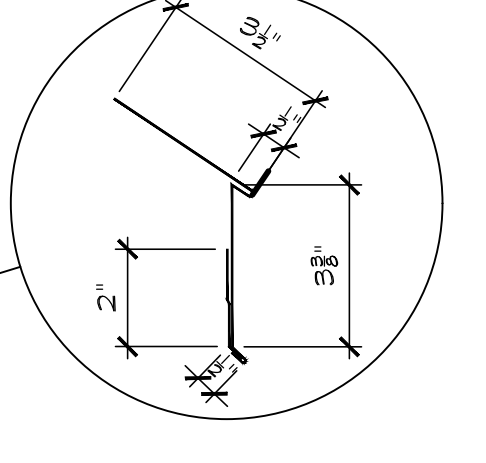
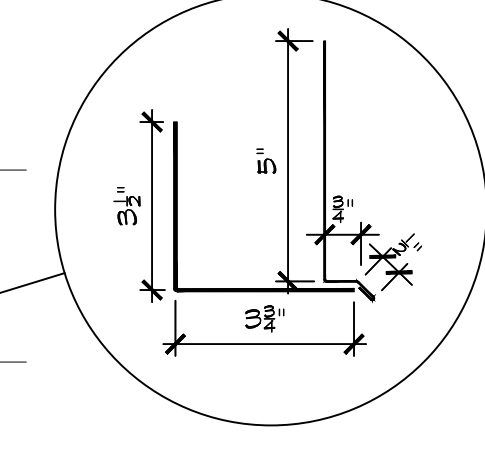
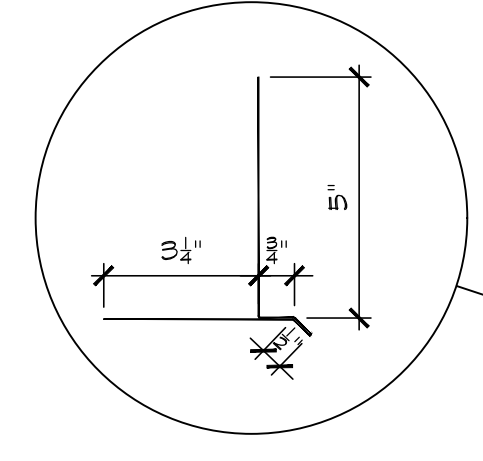
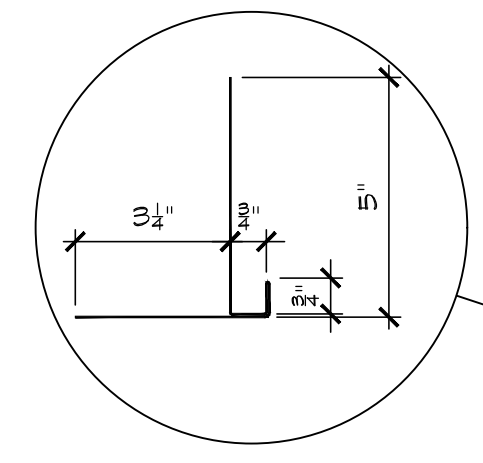
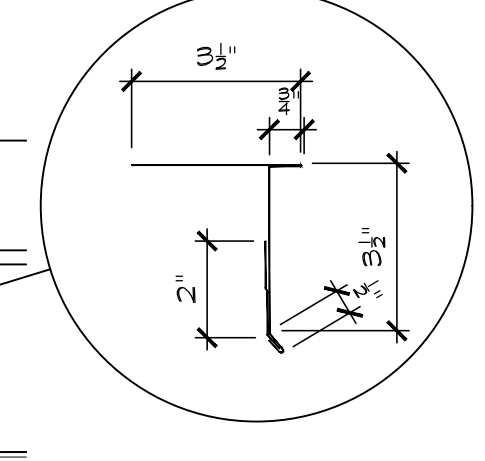
**13 Door and Frame Details**  
 SCALE: 1-1/2" = 1'-0"

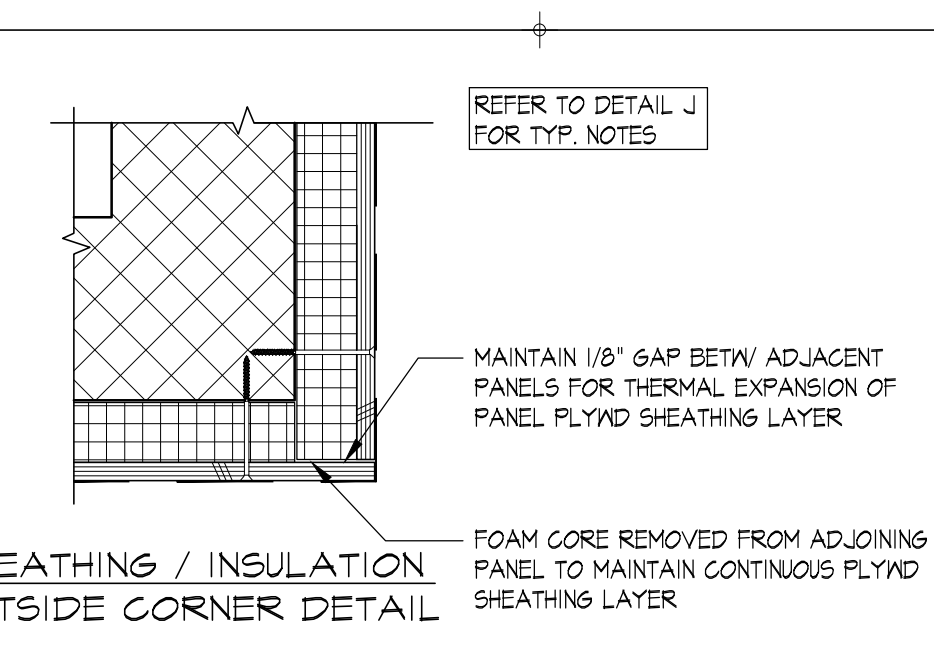
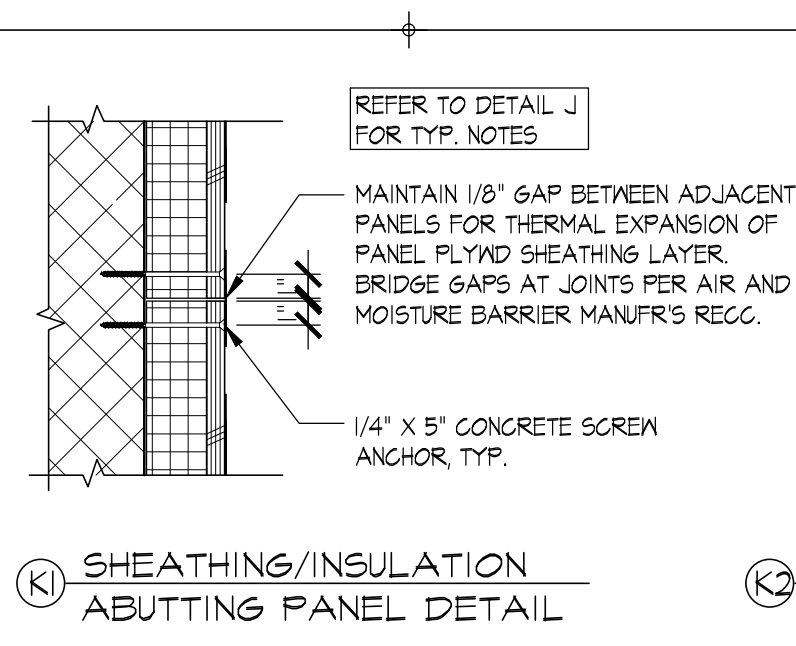
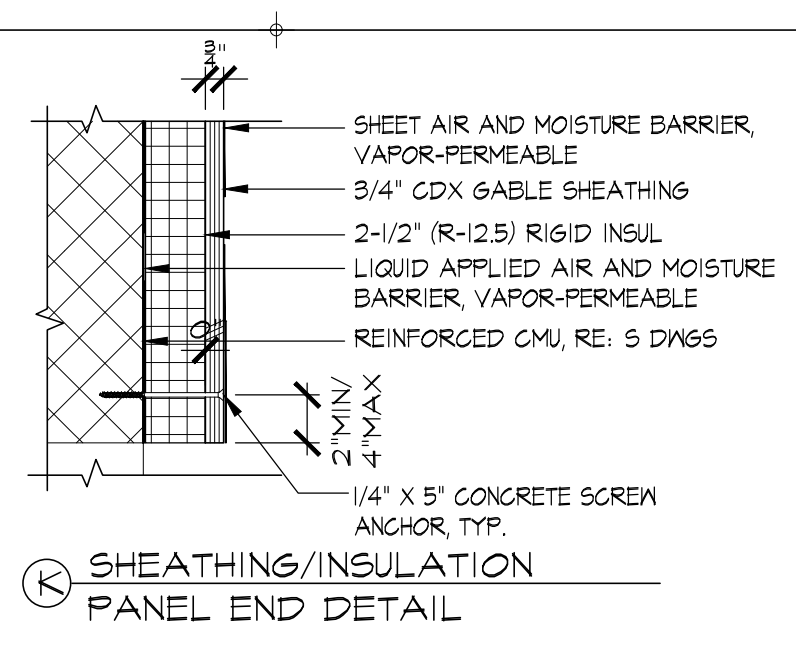
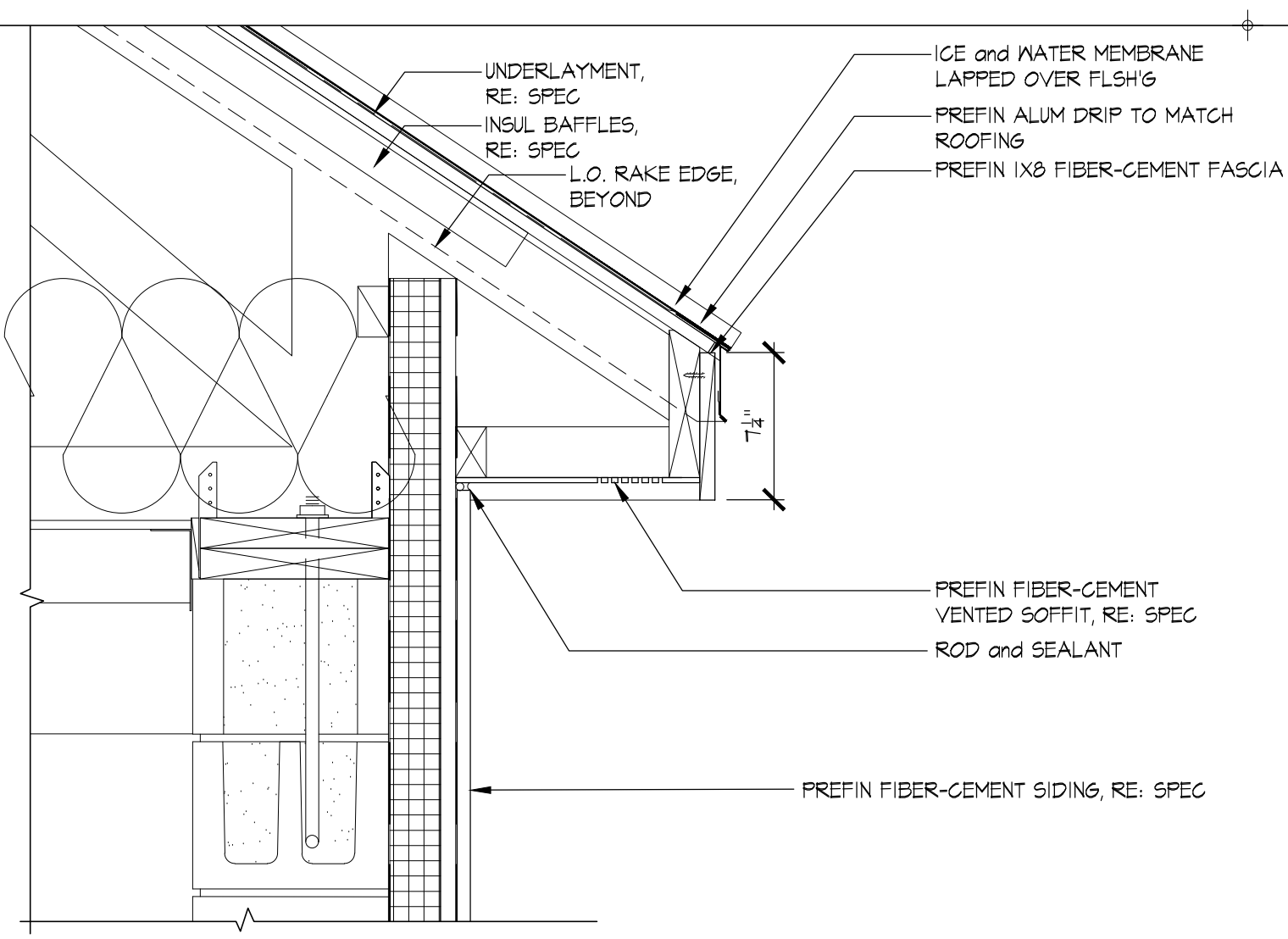


**05 Wall Section**  
 SCALE: 1-1/2" = 1'-0"

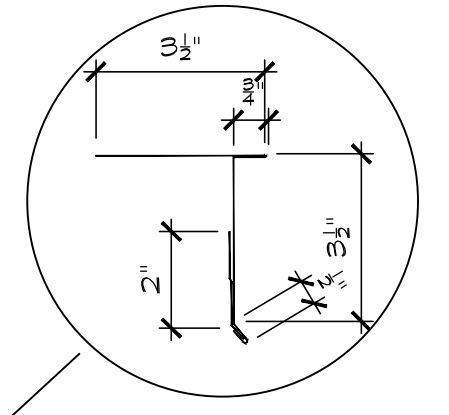


**01 Wall Section**  
 SCALE: 1-1/2" = 1'-0"

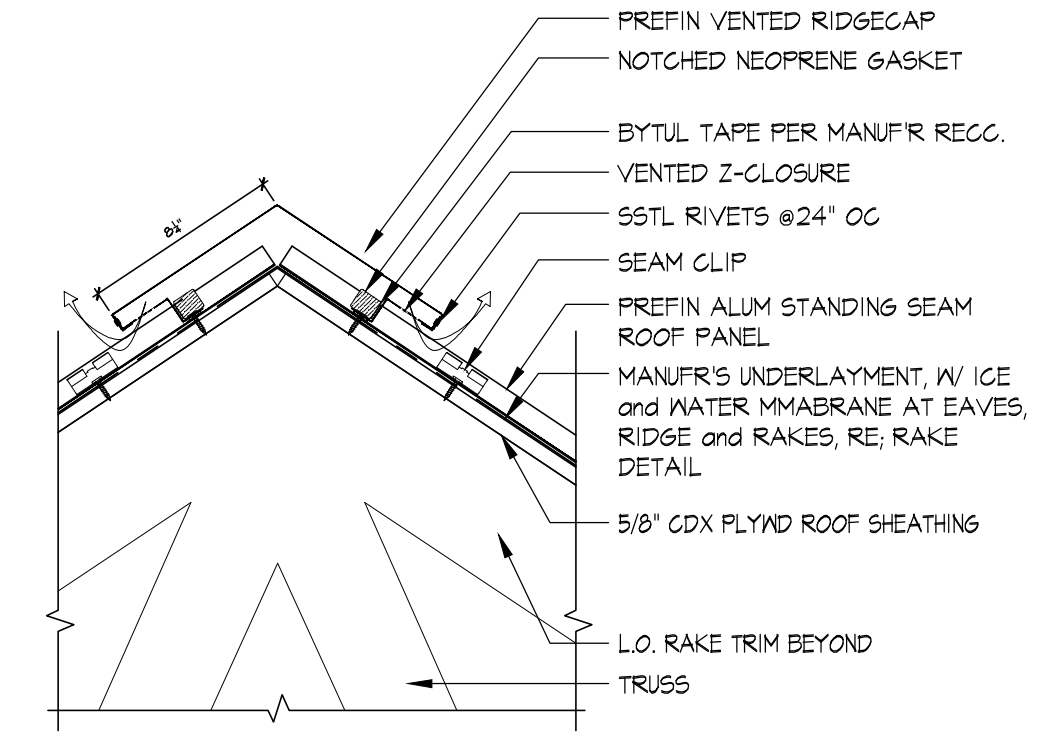
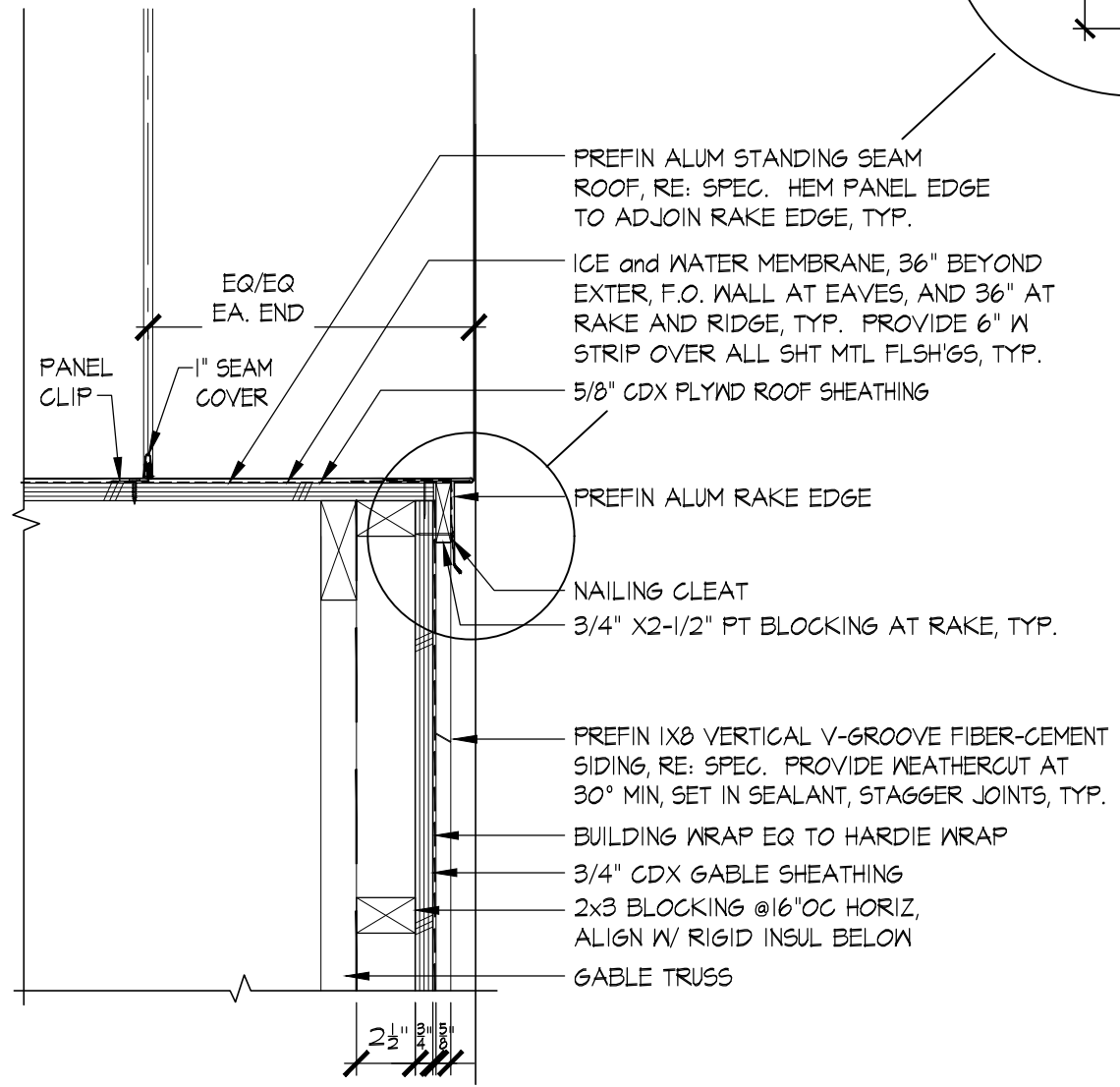
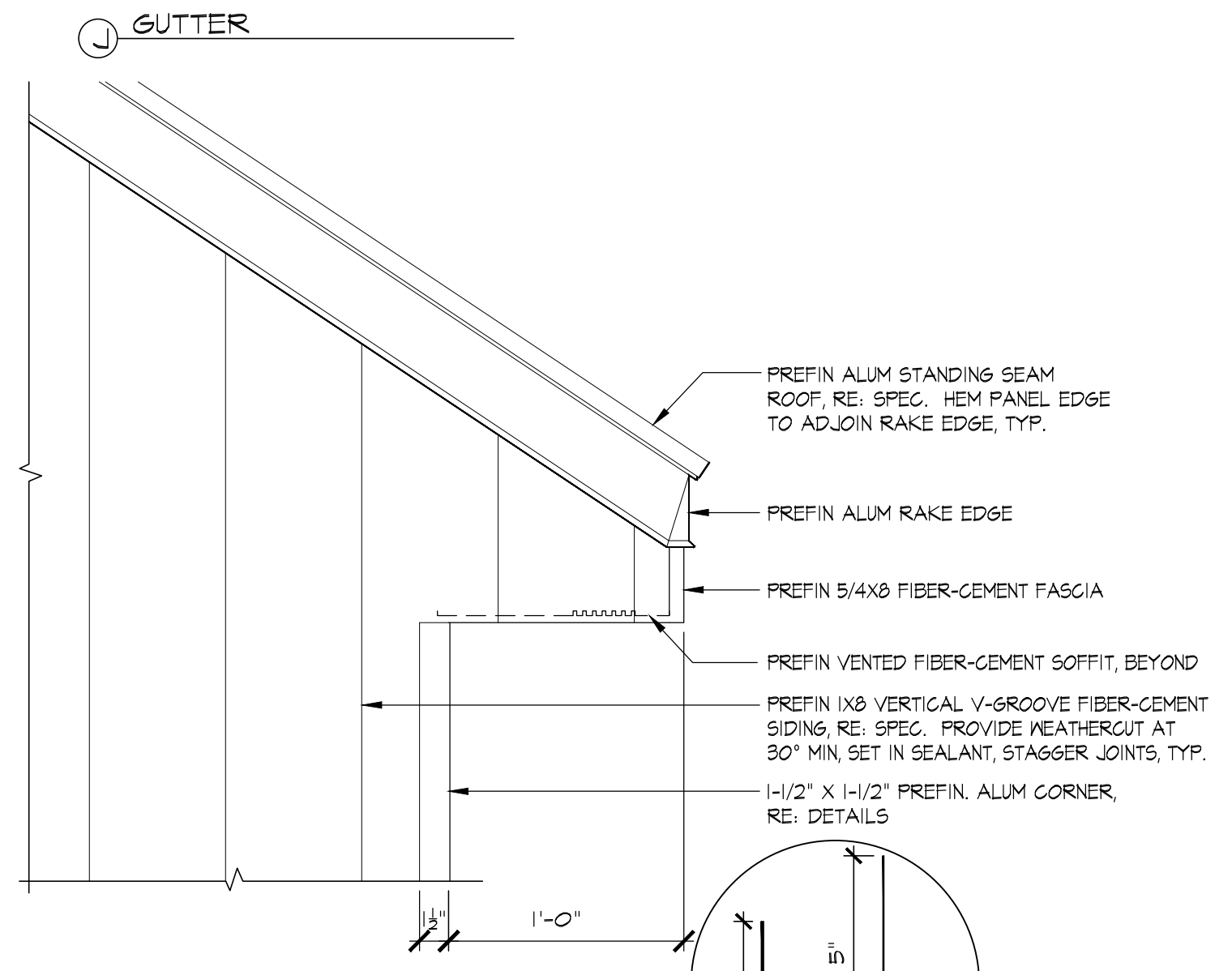




- RIGID INSUL / PLYND PANEL INSTALLATION:**
- LAYOUT REQUIREMENTS:
    - ORIENT PANELS HORIZONTALLY IN A RUNNING BOND PATTERN WITH A 16" (MIN) JOINT OFFSET
    - MAINTAIN 1/8" GAP BETWEEN ADJACENT PANELS TO ALLOW FOR THERMAL EXPANSION OF PANEL PLYND SHEATHING LAYER
  - FASTENING REQTS:
    - FASTEN RIGID INSUL TO CMU SUBSTRATE USING 1/4" X 5" CONCRETE SCREEN ANCHORS.
    - CONCRETE SCREEN ANCHORS MUST BE INSTALLED PER MANUF'S RECCS.
    - FASTENER SPACING TO BE BASED ON WIND LOADS:
      - WIND LOADS UP TO 60 PSF (ASD):
        - HORIZONTAL SPACING W/IN FIELD OF PANEL: 16" O.C. (MAX)
        - VERTICAL SPACING W/IN FIELD OF PANEL: 16" O.C. (MAX)
        - VERTICAL SPACING ALONG EDGE OF PANEL: 8" O.C. (MAX)
      - FASTENER EDGE DISTANCE: 1/2" (MIN) TO 2" (MAX) FOR PANELS NOT AT SUBSTRATE ENDS/EDGES  
2" (MIN) EDGE DISTANCE REQUIRED AT ENDS/EDGES OF CMU BLOCK



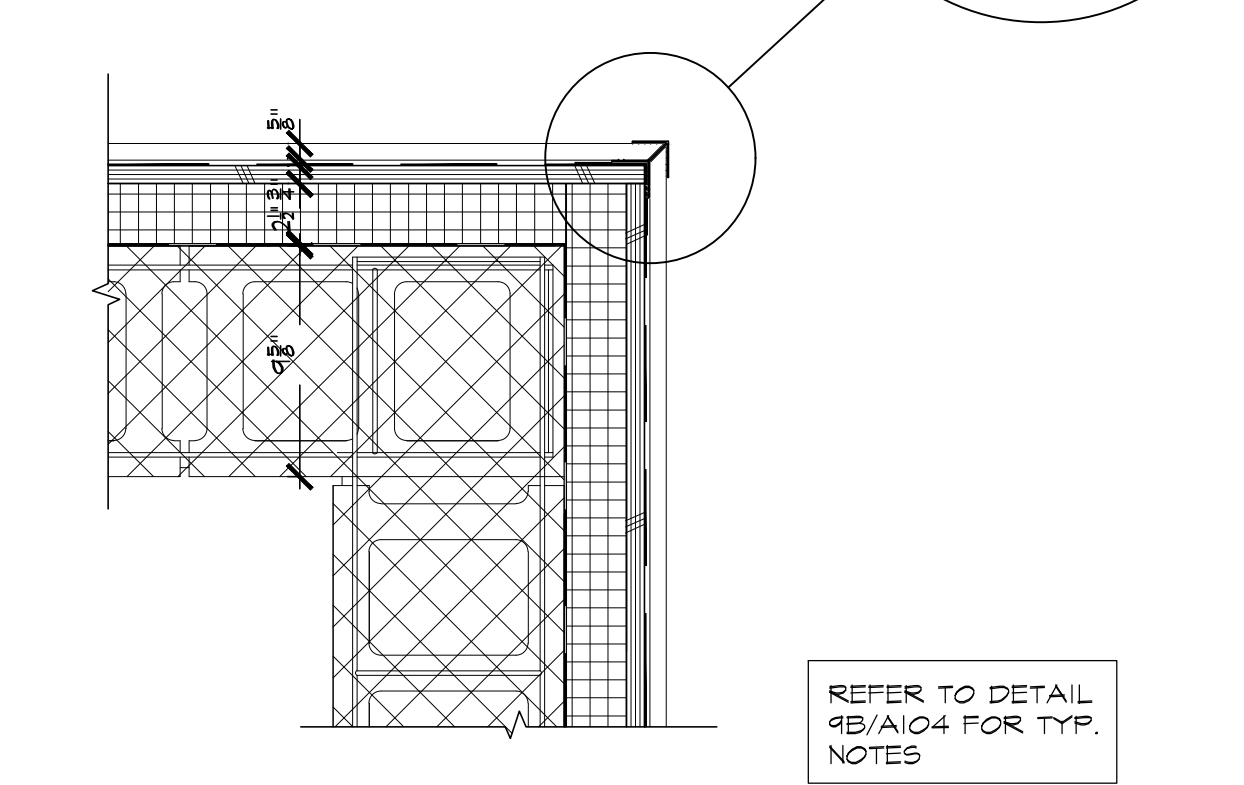
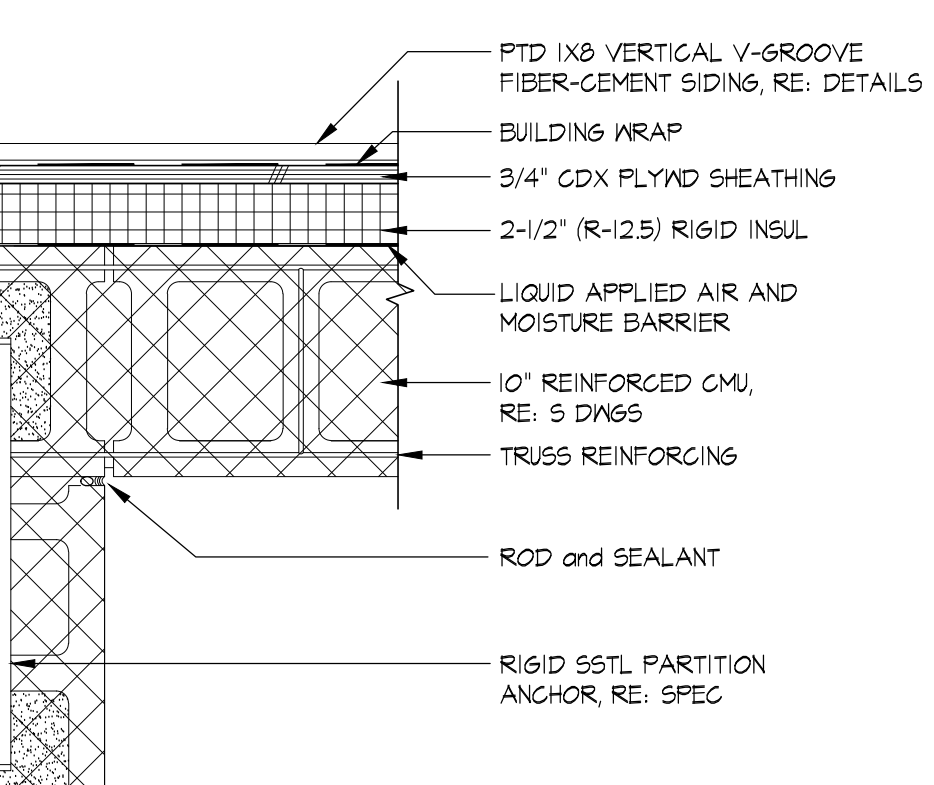
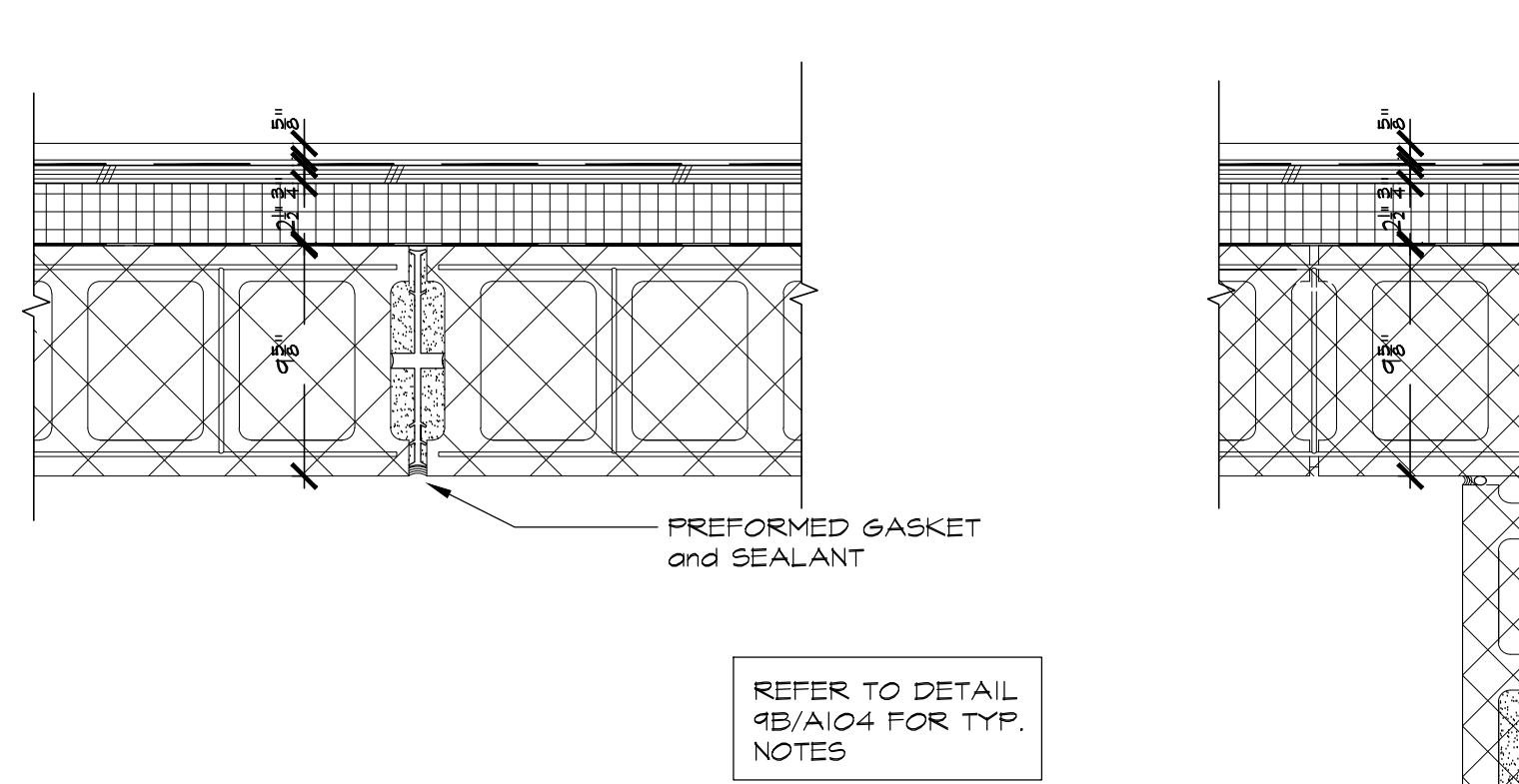
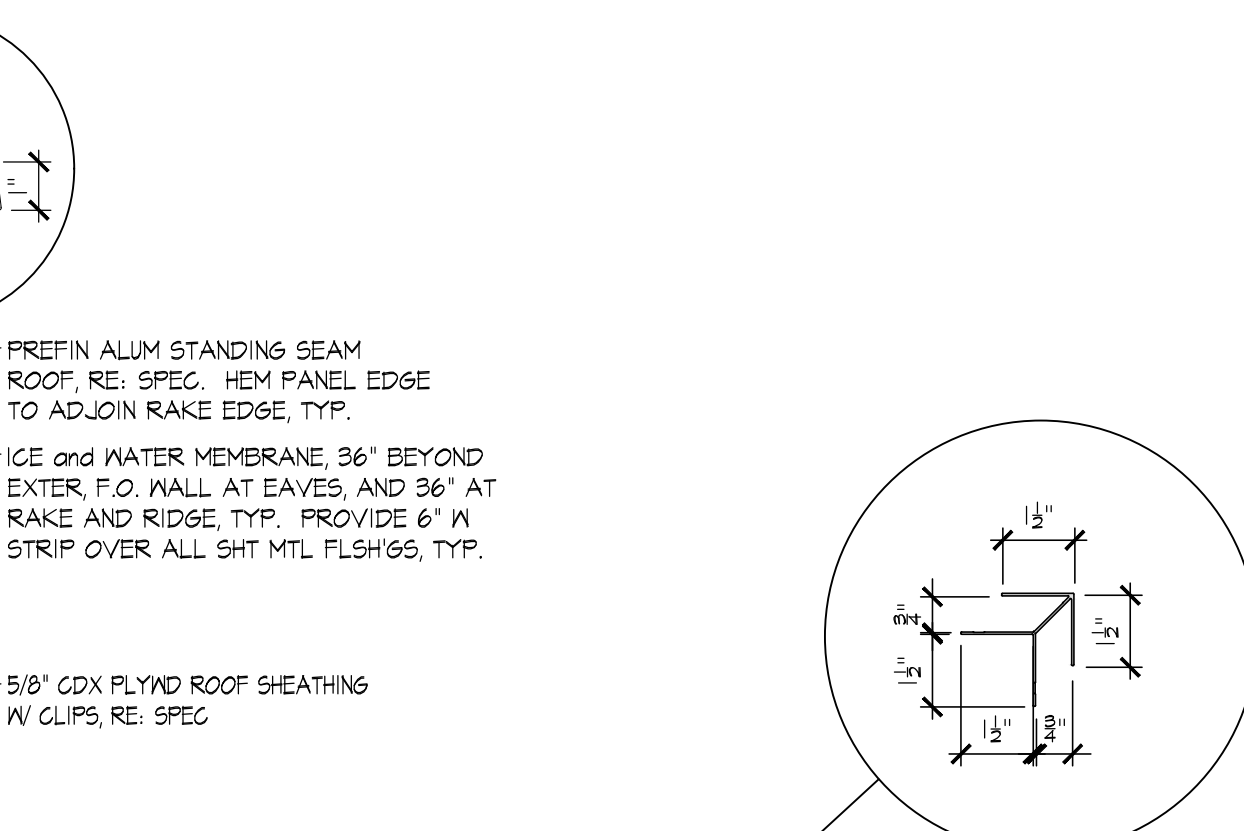
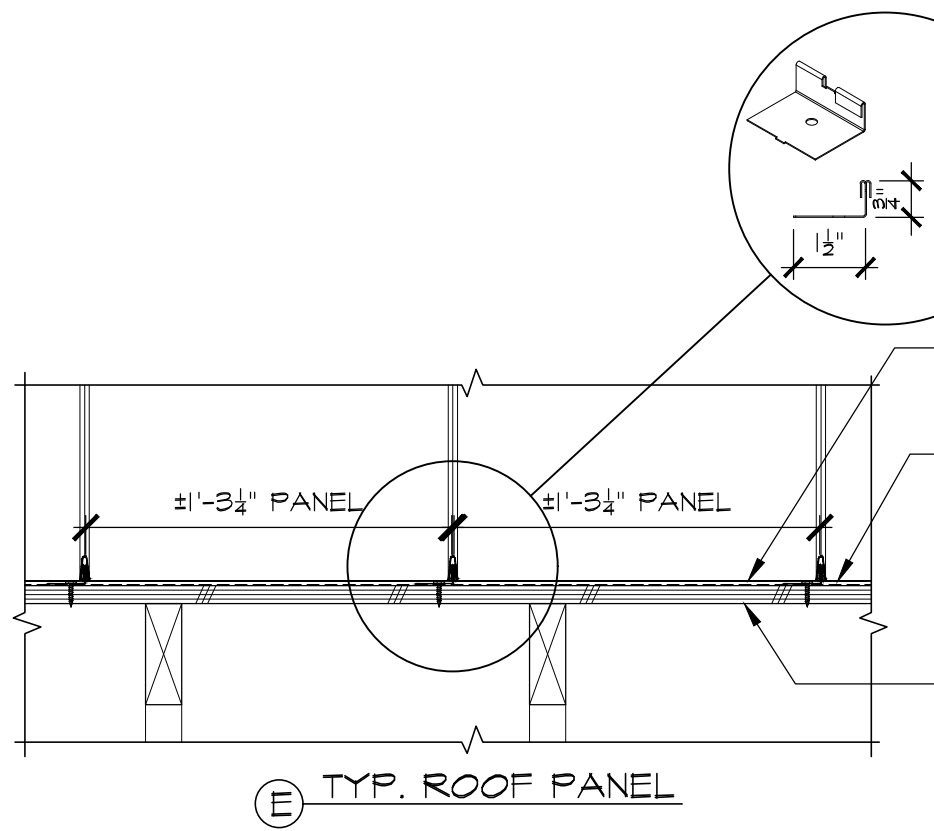
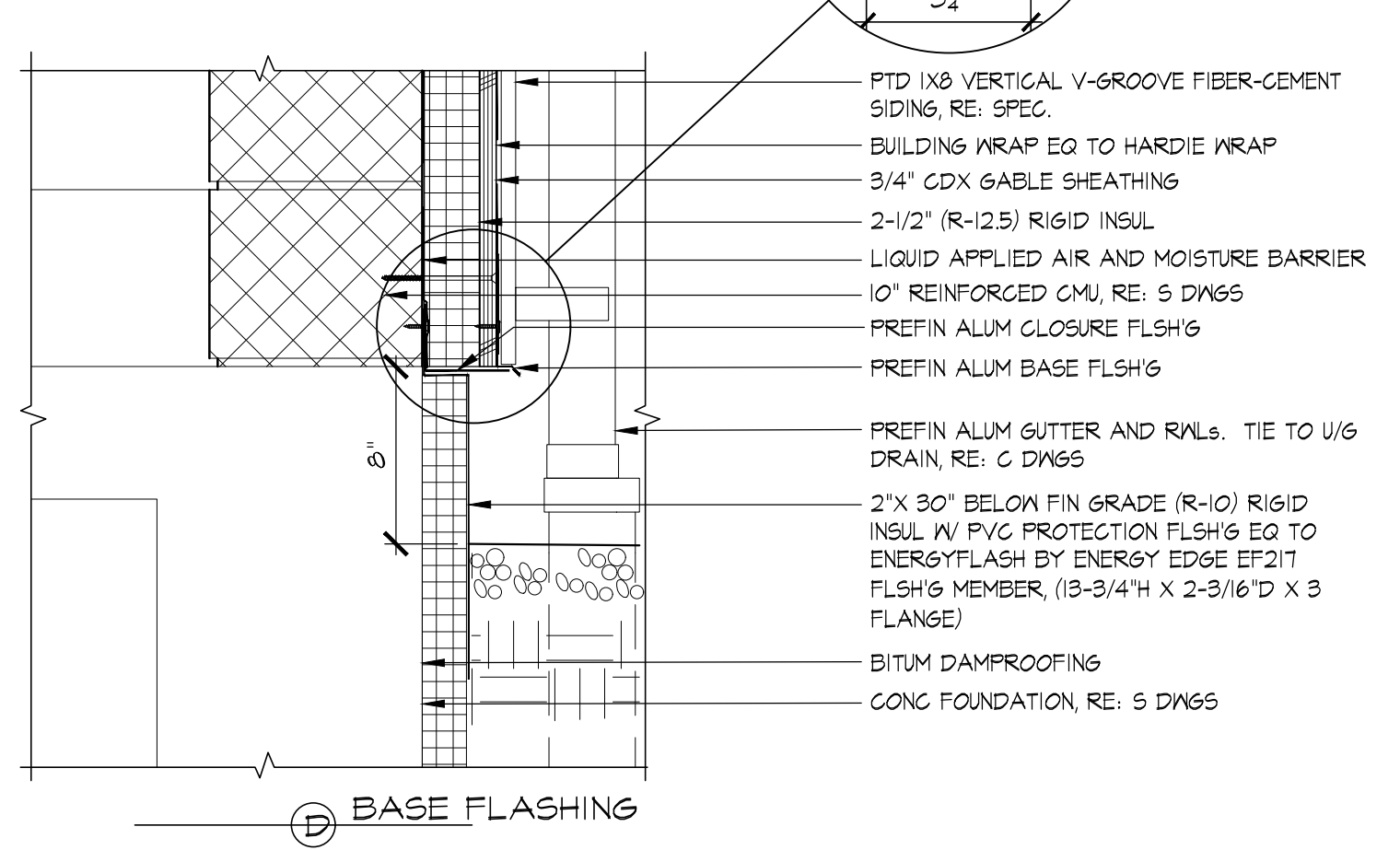
**N PANEL FASTENING REQTS**



**O GUTTER**

**P RAKE**

**Q RIDGE**



**U TYP. PLAN @ COMPOSITE WALL**

**V TYP. CONTROL JOINT @ COMPOSITE WALL**

**W TYP. CORNER @ COMPOSITE WALL**

**Project:**  
**Connecticut Water**  
CONNECTICUT WATER COMPANY  
93 WEST MAIN STREET  
CLINTON, CT 06413  
EGDEWATER CIRCLE  
WELLFIELD IMPROVEMENTS  
AND METER BUILDING  
EAST HAMPTON, CT

**Weston & Sampson**  
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712 Brook Street, Suite 103  
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**Consultants:**  
**BREWSTER ARCHITECTS**  
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Lebanon, Connecticut 06249  
603.642.9907

**Seal:**

**Revisions:**

Rev	Date	Description

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**Date:** OCTOBER, 2022  
**Drawn By:** JRP/WWB  
**Reviewed By:** WWB  
**Approved By:** .  
**BIA Project No:** 22.004

**Drawing Title:**  
**ARCHITECTURAL  
DETAILS**

**CWC Drawing Number:**

**Sheet Number:**

**A103**

### 1.0 – GENERAL

- 1.01 THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ALL OTHER CONTRACT DRAWINGS AND SPECIFICATIONS. REFER TO CIVIL, ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR LOCATION, DIMENSIONS, AND DETAILS OF OPENINGS, SLEEVES, EMBEDMENTS, INSERTS, PADS, CURBS, DEPRESSIONS, ANCHOR BOLTS AND OTHER PROJECT REQUIREMENTS NOT SHOWN ON STRUCTURAL DRAWINGS.
- 1.02 THE CONTRACTOR IS RESPONSIBLE FOR CHECKING, COORDINATING AND VERIFYING ALL DIMENSIONS IN THE FIELD PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL IMMEDIATELY REPORT ANY DISCREPANCY TO THE ARCHITECT AND ENGINEER AS A REQUEST FOR INFORMATION (RFI) BEFORE PROCEEDING WITH WORK.
- 1.03 THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING IN THE FIELD THE EXISTENCE AND LOCATION OF OVERHEAD, BURIED AND/OR EMBEDDED UTILITIES, AND FOR VERIFYING LOCATIONS OF ALL EMBEDDED MECHANICAL, ELECTRICAL AND PLUMBING SYSTEMS AFFECTED BY THE WORK OF THIS CONTRACT.
- 1.04 ALL WORK IS TO CONFORM WITH THE FOLLOWING CODES AND STANDARDS:
  - (A) 2022 STATE BUILDING CODE, STATE OF CONNECTICUT
  - (B) INTERNATIONAL BUILDING CODE 2021
  - (C) BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", AMERICAN CONCRETE INSTITUTE ACI 318-05
  - (D) "MANUAL OF STEEL CONSTRUCTION" AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) – 13TH EDITION
  - (E) "STRUCTURAL WELDING CODE – STEEL" – AMERICAN WELDING SOCIETY – AWS D1.1-92.
  - (F) "SEISMIC PROVISION FOR STRUCTURAL STEEL BUILDINGS" – AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)
  - (G) "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES" – AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE-7)

FOR ADDITIONAL CODES AND STANDARDS REFER TO THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.

- 1.05 THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER OF UNFORSEEN CONDITIONS THAT MAY BE UNCOVERED DURING CONSTRUCTION AS A REQUEST FOR INFORMATION (RFI) BEFORE PROCEEDING WITH WORK.
- 1.06 PERMANENT STRUCTURAL ELEMENTS TO BE DESIGNED IN ACCORDANCE WITH PERFORMANCE SPECIFICATIONS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
  - (A) MISC. ARCH COMPONENT SEISMIC SUPPORTS
  - (B) MISC. MECHANICAL AND ELECTRICAL COMPONENT AND SYSTEM SEISMIC SUPPORTS
  - (C) PREFABRICATED WOOD TRUSS

FOR PERFORMANCE DESIGN REQUIREMENTS OF ELEMENTS LISTED ABOVE, REFER TO ADDITIONAL NOTES ON THESE SHEETS AND IN THE TECHNICAL SPECIFICATIONS. ALL DESIGN SUBMITTAL DRAWINGS AND CALCULATIONS SHALL BE CERTIFIED, SIGNED AND SEALED BY A PROFESSIONAL STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CONNECTICUT.

- 1.07 STRUCTURAL REQUIREMENTS TO ACCOMMODATE FIXED EQUIPMENT, INCLUDING BUT NOT LIMITED TO ROOF TOP UNITS ARE INCIDENTAL TO THE REQUIREMENTS OF A SPECIFIC EQUIPMENT MANUFACTURER. ALL WORK SHALL CONFORM TO APPROVED EQUIPMENT MANUFACTURER'S SHOP DRAWINGS AND INSTALLATION INSTRUCTIONS. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL ANY REQUIRED MODIFICATIONS TO ACCOMMODATE APPROVED EQUIPMENT DRAWINGS. SUCH MODIFICATIONS SHALL BE MADE AT NO COST TO THE OWNER.
- 1.08 DETAILS AND NOTES SHOWN ON STRUCTURAL DRAWINGS SHALL BE APPLICABLE TO ALL PARTS OF THE STRUCTURAL WORK EXCEPT WHERE SPECIFICALLY REQUIRED OTHERWISE BY CONTRACT DOCUMENTS. CONDITIONS NOT SPECIFICALLY SHOWN SHALL BE SIMILAR TO THOSE SHOWN FOR LIKE CONDITIONS AS DETERMINED BY THE ENGINEER.
- 1.09 IN ACCORDANCE WITH SPECIFICATION SECTION 01 45 23, TESTING AND INSPECTION OF STRUCTURAL WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE COSTS FOR TESTING AND INSPECTION WILL BE PAID BY THE CONTRACTOR. PROVIDE TEST RESULTS TO THE ENGINEER IN A TIMELY MANNER.
- 1.10 THE CONTRACTOR SHALL DESIGN AND PROVIDE ALL REQUIRED SHORING AND TEMPORARY BRACING TO RESIST FORCES ON THE STRUCTURE THROUGHOUT THE CONSTRUCTION PERIOD.

### 2.0 – GENERAL DESIGN LOADS

- 2.01 DEAD LOADS:
  - (A) ACTUAL WEIGHT OF BUILDING COMPONENTS
  - (B) ACTUAL WEIGHT OF FIXED MEP EQUIPMENT
- 2.02 LIVE LOADS:
  - (A) SLAB ON GRADE: 150 PSF
- 2.03 SNOW LOADS:
  - (A) GROUND SNOW LOAD (Pg): 30 PSF
  - (B) FLAT ROOF SNOW LOAD (Pf): 30 PSF
  - (C) SNOW EXPOSURE FACTOR (Ce): 1.0
  - (D) SNOW LOAD IMPORTANCE FACTOR (Is): 1.1
  - (E) THERMAL FACTOR (Ct): 1.1
- 2.04 WIND LOADS ON RECTANGULAR STRUCTURES:
 

ALLOWABLE STRESS DESIGN

  - (A) NOMINAL WIND SPEED (3-SECOND GUST): 101 MPH
  - (B) BUILDING CATEGORY: III
  - (C) IMPORTANCE FACTOR: 1.15
  - (D) EXPOSURE: C
- 2.05 SEISMIC LOADS:
  - (A) SEISMIC IMPORTANCE FACTOR, Ie: 1.25
  - (B) SEISMIC USE GROUP: II
  - (C) MAPPED SPECTRAL RESPONSE ACCELERATIONS:
    - S<sub>s</sub> = 0.210
    - S<sub>1</sub> = 0.056
    - SITE CLASS: D
  - (D) SPECTRAL RESPONSE COEFFICIENTS:
    - SDS = 0.224
    - SD1 = 0.290
  - (E) SD1 = 0.290
  - (F) SEISMIC DESIGN CATEGORY: B
  - (G) BASIC SEISMIC FORCE RESISTING SYSTEM = ORDINARY REINFORCED MASONRY SHEAR WALLS

DESIGN BASE SHEAR, RESPONSE COEFFICIENTS = 2  
RESPONSE MODIFICATION FACTOR = 0.140W  
ANALYSIS PROCEDURE USED = SIMPLIFIED SEISMIC DESIGN

### 3.0 – FOUNDATIONS

- 3.01 THE SUBSURFACE CONDITIONS DESCRIBED IN THE DRAWINGS, SPECIFICATIONS, TEST BORINGS AND TEST PITS ARE INCLUDED ONLY TO ASSIST THE CONTRACTOR DURING BIDDING AND SUBSEQUENT CONSTRUCTION AND REPRESENT CONDITION ONLY AT THESE SPECIFIC LOCATION AT THE PARTICULAR TIME THEY ARE MADE.
- 3.02 FOUNDATION DESIGN REQUIREMENTS: ALLOWABLE BEARING PRESSURE = 2000 PSF. BEARING PRESSURE IS ALLOWED TO BE INCREASED 1/3 FOR WIND OR SEISMIC LOADINGS. AT RETAINING WALLS THE MAXIMUM PRESSURE ON THE TOE CAN BE 50% HIGHER THAN AVERAGE PRESSURES, CITED ABOVE.
- 3.03 THE CONTRACTOR SHALL DESIGN AND PROVIDE ALL TEMPORARY EARTH SUPPORT, SHORING AND BRACING REQUIRED TO PERFORM THE WORK IN ACCORDANCE WITH OSHA, STATE AND LOCAL REQUIREMENTS.
- 3.04 THE CONTRACTOR SHALL DESIGN AND PROVIDE SHEETING, SHORING, BRACING, AND/OR UNDERPINNING IN ORDER TO PROTECT EXISTING UTILITIES FROM EXCESSIVE MOVEMENTS DURING THE CONSTRUCTION PERIOD, IN ACCORDANCE WITH OSHA, STATE & LOCAL REQUIREMENTS.
- 3.05 CARRY OUT CONTINUOUS CONTROL OF SURFACE AND SUBSURFACE WATER. DEWATER ANY AREAS REQUIRING EXCAVATION IN ADVANCE OF PERFORMING EXCAVATION. MAINTAIN GROUNDWATER LEVELS AT LEAST 2 FEET BELOW PLANNED SUBGRADES.
- 3.06 ALL SUBGRADES TO RECEIVE FILL MATERIALS, FOUNDATIONS, SLABS OR OTHER CONSTRUCTION SHALL BE FREE OF RUNNING OR STANDING WATER PRIOR TO PLACEMENT.
- 3.07 FOUNDATIONS SHALL BE INSTALLED IN THE GEOMETRY SHOWN IN THE PLANS, ANY ROCK ENCOUNTERED DURING EXCAVATION SHALL BE REMOVED TO CLEAR THE REQUIRED FOUNDATION GEOMETRY.

### 4.0 – CAST IN PLACE CONCRETE

- 4.01 CONCRETE WORK SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-02; 318R-02)" AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301-99)".
- 4.02 MAXIMUM SLUMP OF CAST-IN-PLACE CONCRETE SHALL BE 3" FOR PAVEMENT, 4" FOR FOOTINGS, SLABS AND BEAMS. FOR PUMPED CONCRETE MAX. 8". SEE SPECIFICATIONS FOR DETAILS.
- 4.03 UNLESS OTHERWISE NOTED, ALL CONCRETE SHALL BE AIR ENTRAINED PER SPECIFICATION REQUIREMENTS, AND SHALL CONFORM TO THE LATEST BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318.
- 4.04 CONCRETE SHALL BE PLACED WITHOUT HORIZONTAL CONSTRUCTION JOINTS EXCEPT WHERE SHOWN OR NOTED; VERTICAL CONSTRUCTION JOINTS AND STOPS IN CONCRETE WORK SHALL BE MADE AT MIDSPAN OR AT POINTS OF MINIMUM SHEAR.
- 4.05 CONCRETE SLABS SHALL BE CAST LEVEL, UNLESS SHOWN OTHERWISE.
- 4.06 CONTRACTOR SHALL COORDINATE LOCATIONS OF FLOOR DRAINS, PIPING, ELECTRICAL CONDUITS, GROUNDS, SLEEVES, INSERTS, ETC. WITH CONCRETE CONSTRUCTION. ALL FLOOR SLAB PENETRATIONS SHALL MAINTAIN A 12" MINIMUM EDGE CLEARANCE TO THE EDGE OF CONCRETE BEAMS, UNLESS OTHERWISE NOTED.
- 4.07 CONSTRUCTION JOINTS IN WALLS AND SLABS SHALL BE KEPT. FOUNDATION WALLS SHALL RECEIVE CONSTRUCTION JOINTS IN NO MORE THAN 40'-0" INTERVALS ON CONTINUOUS WALL SPANS. USE OF CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON THE DRAWING WILL REQUIRE APPROVAL OF THE ENGINEER.
- 4.08 PROVIDE WALL SLEEVES WITH INTERMEDIATE WALL COLLARS AT ALL CAST/DUCTILE IRON AND PLASTIC PIPE PENETRATIONS, UNLESS OTHERWISE INDICATED.
- 4.09 BEAMS AND COLUMNS SHALL NOT BE PENETRATED UNLESS SPECIFICALLY SHOWN ON STRUCTURAL DRAWINGS OR APPROVED BY THE ENGINEER.
- 4.10 ALL EXPOSED CORNERS OF CONCRETE BEAMS, COLUMNS AND WALLS SHALL HAVE A 3/4" CHAMFER UNLESS OTHERWISE NOTED.
- 4.11 WHERE NEW CONCRETE IS TO BE CAST AGAINST EXISTING A BONDING AGENT SHALL BE APPLIED TO THE EXISTING FACES.
- 4.12 UNLESS NOTED OTHERWISE, CONCRETE SHALL BE NORMAL WEIGHT AND HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH AS FOLLOWS:
  - (A) SPREAD FOOTINGS, FOUNDATION WALLS, PERIMETER WALLS: 4000 PSI
  - (B) SLABS ON GRADE: 4500 PSI
  - (C) ALL OTHER CONCRETE: 4000 PSI
- 4.13 ALL PERMANENTLY EXPOSED VERTICAL AND HORIZONTAL CONCRETE SURFACES SHALL BE TREATED OR SEALED IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
- 4.14 CONCRETE WORK SHALL BE COORDINATED WITH ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL WORK, AND ALL EQUIPMENT. THE CONTRACTOR SHALL VERIFY INSTALLATION AND LOCATIONS OF ALL EMBEDDED ITEMS INCLUDING BUT NOT LIMITED TO INSERTS, ANCHOR BOLTS, DOWELS, BLOCKOUTS, SLEEVES, EMBEDDED PIPING, AND EMBEDDED CONDUIT PRIOR TO CONCRETE PLACEMENT.
- 4.15 FOR STRUCTURAL ELEMENTS, THE LOCATION AND MAXIMUM SPACING OF VERTICAL JOINTS SHALL BE AS FOLLOWS:
 

ELEMENT	JOINT TYPE	SPACING, FT.	LOCATION
FOUNDATION WALL	CONSTRUCTION	40	FACE OF WALL

SUBMIT JOINT LOCATIONS AND DETAILS FOR APPROVAL.
- 4.16 FOR SLAB ON GRADE, LOCATE CONSTRUCTION OR CONTROL JOINTS ALONG COLUMN LINES. PROVIDE JOINTS AT 20 FT. MAX SPACING. SUBMIT JOINT LOCATIONS AND DETAILS FOR APPROVAL.
- 4.17 A MINIMUM OF 72 HOURS SHALL ELAPSE BETWEEN ADJACENT CONCRETE PLACEMENTS.
- 4.18 CONCRETE SLABS SHALL BE PLACED SO THAT THE SLAB THICKNESS IS AT NO POINT LESS THAN THAT INDICATED ON THE DRAWINGS.
- 4.19 PROVIDE A VAPOR BARRIER UNDER FLOOR SLABS ON GRADE.
- 4.20 CONCRETE FLOOR SURFACES SHALL BE FINISHED AS FOLLOWS:
  - (A) SLABS-ON-GRADE: STEEL TROWEL FINISH
- 4.21 ALL CONCRETE SHALL BE WATER CURED UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.

### 5.0 – CAST IN PLACE CONCRETE REINFORCEMENT

- 5.01 REINFORCEMENT DETAILING, FABRICATION, AND ERECTION SHALL CONFORM TO "ACI DETAILING MANUAL" – SP-66, "CRSI MANUAL OF STANDARD PRACTICE".
- 5.02 STEEL REINFORCEMENT, UNLESS NOTED OTHERWISE, SHALL CONFORM TO THE FOLLOWING:
  - (A) BARS, TIES, AND STIRRUPS.....ASTM A615 GRADE 60
  - (B) WELDED WIRE FABRIC.....ASTM A185, FLAT SHEETS FOR FLOOR SLABS.
- 5.03 REINFORCING STEEL SHALL BE UNCOATED AND DEFORMED.
- 5.04 MINIMUM CONCRETE PROTECTIVE COVERING FOR REINFORCEMENT, UNLESS NOTED OTHERWISE, SHALL BE AS FOLLOWS:
  - (A) SURFACES CAST AGAINST AND PERMANENTLY IN CONTACT WITH EARTH: 3.0"
  - (B) FORMED SURFACES BACKFILLED WITH EARTH OR EXPOSED TO WEATHER: 2.0"
  - (C) SURFACES NOT IN CONTACT WITH EARTH OR EXPOSED TO WEATHER: 1.5"
- 5.05 REINFORCING STEEL SHALL BE CONTINUOUS THROUGH ALL CONSTRUCTION JOINTS, CORNERS, AND INTERSECTIONS UNLESS OTHERWISE NOTED. REINFORCING SHALL BE LAPPED AT NECESSARY SPLICES OR HOOKED AT DISCONTINUOUS ENDS, UNLESS OTHERWISE NOTED.
- 5.06 FOR REINFORCING STEEL SPLICE LAP LENGTHS REFER TO THE TABLE BELOW UNLESS OTHERWISE INDICATED.
- 5.07 MECHANICAL SPLICES SHALL BE PERMITTED SUBJECT TO APPROVAL BY THE ENGINEER. MECHANICAL SPLICES SHALL DEVELOP AT LEAST 125 PERCENT OF THE SPECIFIED YIELD STRENGTH OF THE BAR. NO WELDED CONNECTIONS ARE PERMITTED.
- 5.08 WELDED WIRE FABRIC (WWF) SHALL BE LAPPED (1) SQUARE PLUS (2) INCHES WHERE REQUIRED AND SHALL BE WIRED TOGETHER AT ALL LAPS. WWF SHALL BE SUPPORTED BY CHAIRS AND/OR CARRYING BARS PRIOR TO CONCRETE PLACEMENT.
- 5.09 REINFORCEMENT SHALL NOT BE TACK WELDED.
- 5.10 NOTIFY THE TESTING LAB AND ENGINEER 48 HOURS (MIN) PRIOR TO SCHEDULED CONCRETE PLACEMENT TO ACCOMMODATE INSPECTION OF REINFORCEMENT. NO CONCRETE SHALL BE PLACED WITHIN 48 HOURS OF SUCH NOTIFICATION.

### 6.0 – STRUCTURAL STEEL

- 6.01 DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC "MANUAL OF STEEL CONSTRUCTION", 13TH EDITION AND THE LATEST CODE OF THE STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.
- 6.02 STRUCTURAL STEEL SHALL BE NEW STEEL CONFORMING TO THE FOLLOWING:
  - (A) WIDE FLANGE SHAPES: ASTM A992 OR ASTM A572 GR50.
  - (B) OTHER STEEL SHAPES, PLATES AND BARS: ASTM A572 OR ASTM A36.
  - (C) STRUCTURAL TUBING: ASTM A500 GR B.
- 6.03 ANCHOR BOLTS, LEVELING PLATES OR BEARING PLATES SHALL BE LOCATED AND BUILT INTO CONNECTION WORK, PRESET BY TEMPLATES OR SIMILAR METHODS. PLATES SHALL BE SET IN FULL BEDS OF NON-SHRINK GROUT, UNLESS NOTED OTHERWISE.
- 6.04 ALL WELDED CONNECTIONS SHALL BE MADE BY APPROVED CERTIFIED WELDERS AND SHALL CONFORM TO A.W.S. SPECIFICATIONS AMENDED TO DATE. ELECTRODES SHALL BE E70XX.
- 6.05 STRUCTURAL STEEL FRAMING SHALL BE WITHIN TOLERANCE BEFORE CONNECTIONS ARE FINALLY BOLTED OR WELDED.
- 6.06 FIELD CUTTING OF STRUCTURAL STEEL OR ANY FIELD MODIFICATIONS OF STRUCTURAL STEEL SHALL NOT BE MADE WITHOUT PRIOR WRITTEN APPROVAL BY THE ENGINEER FOR EACH SPECIFIC USE.
- 6.07 STRUCTURAL SHAPES AND THE BEARING PLATES FOR STRUCTURAL SHAPES SHALL BE HOT DIP GALVANIZED PER ASTM A123, UNLESS NOTED OTHERWISE.
- 6.08 ANCHOR BOLTS SHALL CONFORM TO ASTM F1554 GRADE 55 UNLESS NOTED OTHERWISE. ANCHOR BOLTS SHALL BE HOT-DIP GALVANIZED.

### 7.0 – REINFORCED CONCRETE MASONRY

- 7.01 ALL REINFORCED MASONRY SHALL CONFORM TO THE LATEST EDITION OF ACI 530 AND THE STATE BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.
- 7.02 CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, GRADE N, TYPE 1, NORMAL WEIGHT WITH A MINIMUM NET AREA UNIT STRENGTH OF 2,800 PSI AT 28 DAYS.
- 7.03 MINIMUM COMPRESSIVE STRENGTH OF CONCRETE MASONRY AT 28 DAYS SHALL BE f'm=2,000 PSI.
- 7.04 GROUT SHALL CONFORM TO ASTM 476, FINE TYPE WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2500 PSI.
- 7.05 ALL REINFORCING BARS SHALL CONFORM TO ASTM 615, GRADE 60, DEFORMED BARS. PREFABRICATED TRUSS-TYPE REINFORCING SHALL BE FABRICATED FROM No.9 GAUGE UNCOATED WIRE MESH WHICH MEETS ALL APPLICABLE REQUIREMENTS OF ASTM A 82.
- 7.06 PROVIDE GROUTED BOND BEAMS @ 4'-0" O.C. WITH #5 HORIZONTAL REINFORCEMENT, AT THE BOTTOM AND TOP OF WALL AND AT ROOF DIAPHRAGM CONNECTION.

### 8.0 WATERSTOPS

- 8.01 ALL WATERSTOPS SHALL BE 6" RIBBED IN NON MOVEMENT JOINTS, 6" RIBBED WITH CENTERBULB IS REQUIRED AT ALL MOVEMENT JOINTS. WATERSTOPS SHALL BE MANUFACTURED BY GREENSTREAK GROUP INC. OR APPROVED EQUAL.
- 8.02 SWELL STOPS SHALL BE RECTANGULAR IN PROFILE AND SHALL BE MANUFACTURED BY GREENSTREAK GROUP INC. OR APPROVED EQUAL.

### 9.0 CARPENTRY

- 9.01 ALL WOOD CONSTRUCTION SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATIONS FOR STRESS GRADE LUMBER AND ALL STATE AND LOCAL CODES, AND AMERICAN INSTITUTE OF TIMBER FRAMING.
- 9.02 ALL 2X DIMENSIONAL LUMBER SHALL BE S-P-F NO. ½ GRADE OR BETTER U.N.O.
- 9.03 TIMBER AT EXTERIOR CANOPY SHALL BE SOUTHERN PINE STRUCTURAL GRADE (MIN. Fb = 1,500 PSI BEFORE FACTORS) AND PRESSURE TREATED.
- 9.04 SAWN LUMBER AND TIMBER SHALL BE KILN DRIED TO A MOISTURE CONTENT OF 19%.
- 9.05 NAIL 2-PLY BEAMS WITH 1 ROW OF 16d NAILS AT 12" ON CENTER FOR EVERY 3" MEMBER WIDTH & NAIL 3-PLY BEAMS WITH 1 ROW OF 16d NAILS AT 12" ON CENTER BOTH SIDES FOR EVERY 3" OF MEMBER WIDTH.
- 9.06 CONNECTING ELEMENTS INCLUDING BUT NOT NECESSARILY LIMITED TO NAILS, SCREWS, BOLTS, NUTS, WASHERS, CLIPS, ETC. EXPOSED TO THE ELEMENTS SHALL BE HOT-DIPPED GALVANIZED (HDG). PRE-ENGINEERED CONNECTORS SHALL BE G185 GALVANIZED OR HOT-DIPPED GALVANIZED, ALL OTHERS PAINTED.
- 9.07 MINIMUM NAILING SHALL MEET OR EXCEED THE FASTENING SCHEDULE PER THE IBC 2015 TABLE 2304.10.1.
- 9.08 TIMBER SILL PLATES ON CONCRETE SHALL BE PRESSURE TREATED SOUTHERN PINE NO. 1 GRADE IN ACCORDANCE WITH THE AMERICAN WOOD-PRESERVERS' ASSOCIATION.
- 9.09 ALL ROOF PANELS SHALL BE ¾" APA RATED 32/16 PLYWOOD OR "ADVANTECH" SHEATHING. NAIL ALL PLYWOOD EDGES WITH 10d COMMON NAILS AT 6" ON CENTER U.N.O. INTERMEDIATE NAILING SHALL BE 10d NAILS AT 12" ON CENTER.
- 9.10 BLOCKING OR "H" CLIPS SHALL BE PROVIDED AT ALL UNSUPPORTED PLYWOOD EDGES AND WHERE FRAMING IS SPACED GREATER THAN 2'-0" ON CENTER.
- 9.11 SUBMIT PRODUCT DATA FOR SAWN LUMBER/TIMBER, CONNECTION MATERIAL, AND OTHER ACCESSORIES FOR APPROVAL.

### 10.0 PREFABRICATED TIMBER TRUSS

- 10.01 ALL TRUSSES ARE CONSTRUCTED OF WOOD AND MEMBER SPACING SHALL NOT EXCEED 2'-0" ON CENTER.
- 10.02 TRUSS DESIGN SHALL ACCOUNT FOR UNBALANCED SNOW DRIFT LOADING.
- 10.03 TRUSS BOTTOM CHORDS SHALL BE DESIGNED FOR A MINIMUM CEILING DEAD LOAD OF 10 PSF AND 20 PSF LIVE LOAD.
- 10.04 TRUSSES SHALL BE DESIGNED FOR 20 PSF MIN. NET WIND UPLIFT.
- 10.05 ALL MECHANICAL/ELECTRICAL/PLUMBING IMPOSED LIVE LOAD SHALL BE SUPPORTED FROM THE TOP OR BOTTOM CHORD.
- 10.06 MINIMUM TRUSS MEMBER SIZES FOR TOP AND BOTTOM CHORD TO BE 2X6 U.N.O.
- 10.07 ALL TRUSS SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR FINAL APPROVAL.
- 10.08 TRUSS SHALL BEAR DIRECTLY ON 2X8 PLATES WHICH SHALL BE SECURED TO CMU WALLS.
- 10.09 EACH TRUSS SHALL BE SECURED TO THE PLATE WITH A TIE-DOWN. TIE-DOWNS TO BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
- 10.10 PERMANENT BOTTOM CHORD LATERAL RESTRAINT SHALL BE INSTALLED AT A MAXIMUM OF 10' ON CENTER AND SHALL RUN THE ENTIRE LENGTH OF THE BUILDING. DIAGONAL BRACING SHALL BE INSTALLED FROM LATERAL RESTRAINT TO LATERAL RESTRAINT AT APPROXIMATELY 45' FROM RESTRAINTS AND BE SPACED A MAXIMUM OF 20' APART UNLESS OTHERWISE NOTED. BRACING AND RESTRAINTS SHALL BE SECURED AT EACH BOTTOM CHORD INTERSECT.

**MINIMUM SPLICE AND EMBEDMENT LENGTH SCHEDULE**  
(UNLESS SHOWN OTHERWISE ON DRAWINGS)

CLASS	B TENSION SPLICE		Fy = 60,000 PSI	
	Fc = 4000 PSI NORMAL WEIGHT			
BAR SIZE	TOP BARS			
	1	2	3	4
#3	18"	18"	18"	18"
#4	26"	24"	24"	24"
#5	40"	32"	30"	30"
#6	57"	45"	40"	36"
#7	77"	62"	54"	43"
#8	102"	81"	71"	57"
#9	129"	103"	90"	72"
#10	163"	131"	114"	92"
#11	200"	160"	140"	112"

STRUCTURAL ELEMENT	CONCRETE COVER	CATEGORY			
		CATEGORY ACCORDING TO CENTER-TO-CENTER BAR SPACING			
		≤ 3d	> 3d < 4d	≥ 4d	≥ 6d
BEAMS, COLUMNS, AND INNER LAYERS OF WALLS OR SLABS	≤ d	1	1	1	2
	≥ d	1	3	5	6
ALL OTHERS	≤ d	1	1	1	2
	≥ d < 2d	1	3	3	4
	≥ 2d	1	3	5	6

### ABBREVIATIONS

F.F.E.	FINISH FLOOR ELEVATION
W.W.F.	WELDED WIRE FABRIC
TYP.	TYPICAL
C.J.	CONTROL JOINT
CONST. JT.	CONSTRUCTION JOINT
CMU	CONCRETE MASONRY UNIT
ℓ	CENTER LINE
E.W.	EACH WAY
T&B	TOP AND BOTTOM
T.W.E.	TOP OF WALL ELEVATION
B.F.W.	BOTTOM OF FOOTING ELEVATION
DBL.	DOUBLE
CONC.	CONCRETE
MIN.	MINIMUM
ARCH.	ARCHITECTURAL
CONN.	CONNECTION
EL.	ELEVATION
O.C.	ON CENTER
U.N.O.	UNLESS NOTED OTHERWISE
REINF.	REINFORCEMENT
CONT.	CONTINUOUS
H.P.	HIGH POINT
GA.	GAUGE
VERT.	VERTICAL
HORIZ.	HORIZONTAL
N.T.S.	NOT TO SCALE
S.L.	STRUCTURAL LINE
SQ.	SQUARE
[xx"-xx"]	INDICATES ELEVATION
F.S.	FOOTING STEP
M.O.	MASONRY OPENING

Project:



CONNECTICUT WATER COMPANY  
93 WEST MAIN STREET  
CLINTON, CT 06413

EDGEWATER CIRCLE  
WELLFIELD IMPROVEMENTS  
AND METER BUILDING

EAST HAMPTON, CT

Weston & Sampson

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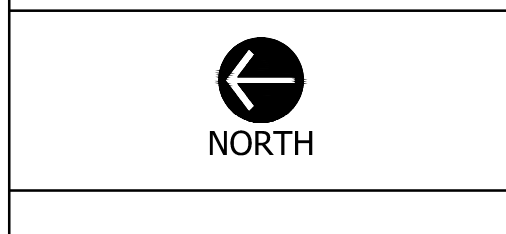
Consultants:

Seal:

Revisions:

Rev	Date	Description

Issued For: 90% DESIGN REVIEW  
NOT FOR CONSTRUCTION



Date: OCTOBER, 2022

Drawn By: MMM

Reviewed By: PJG

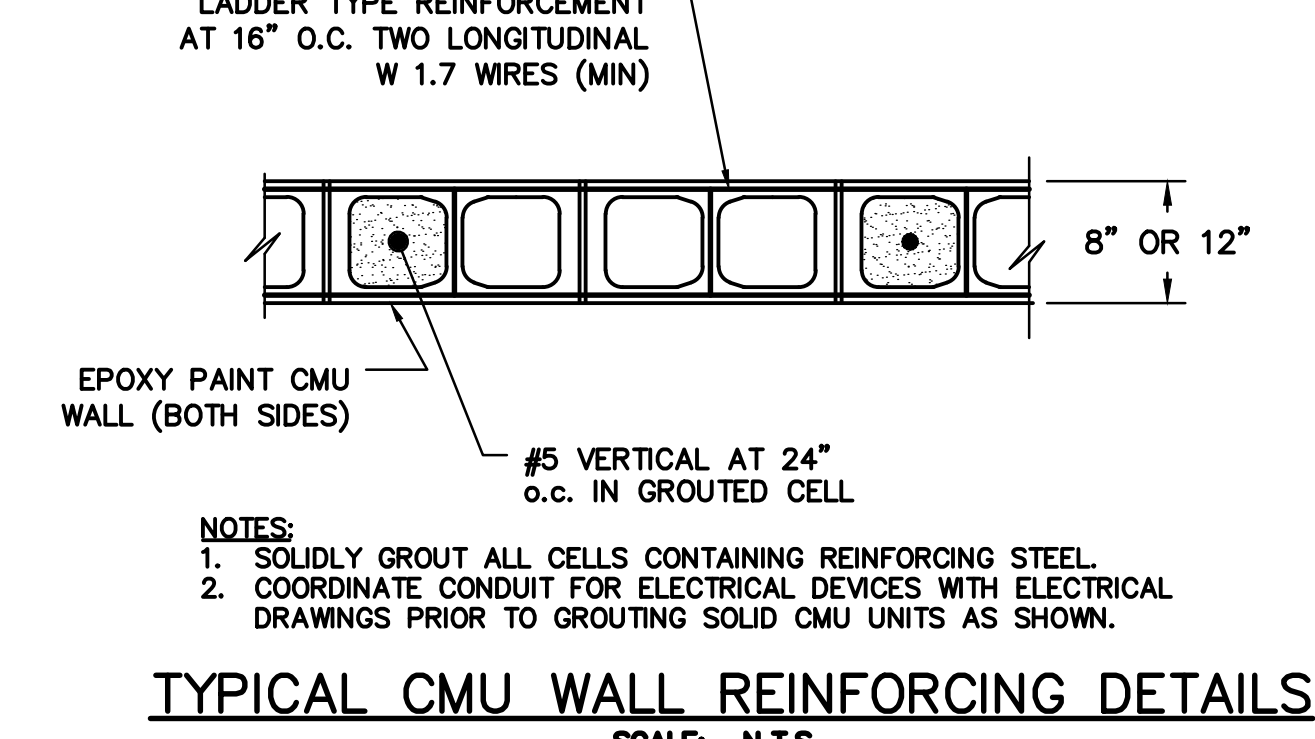
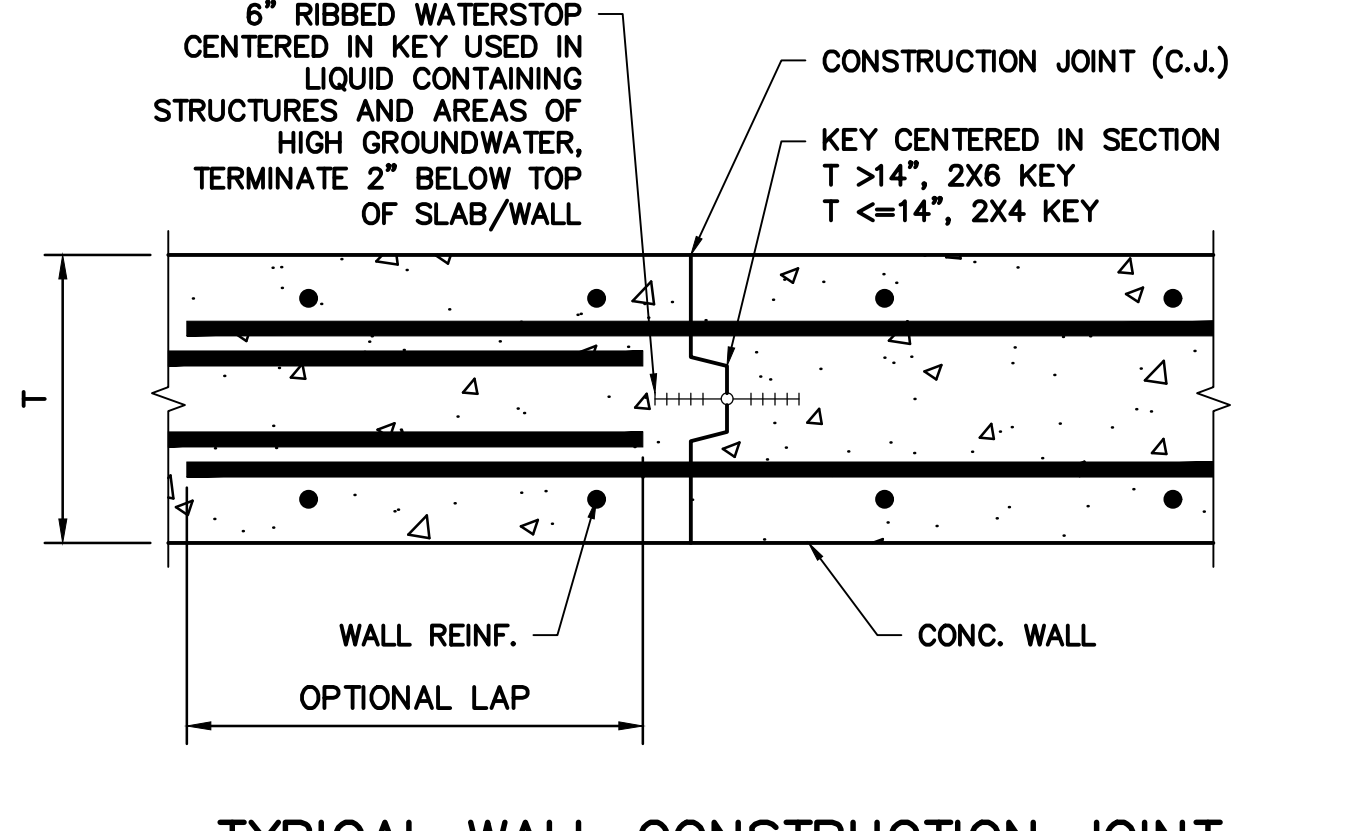
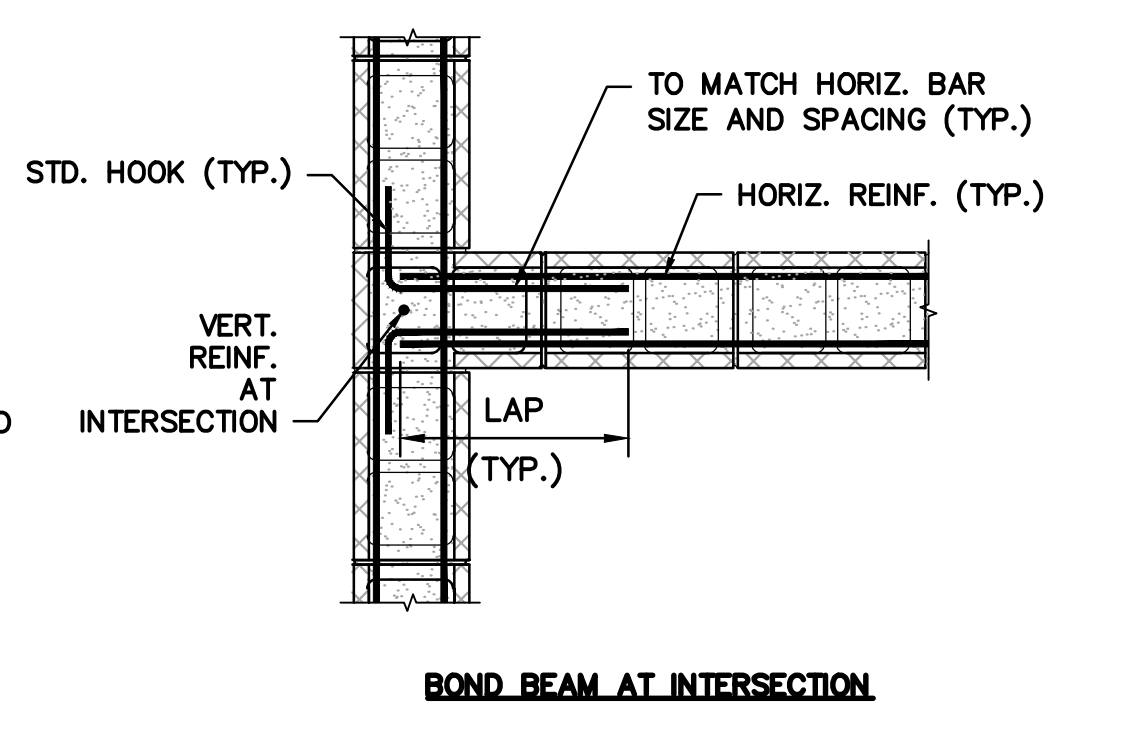
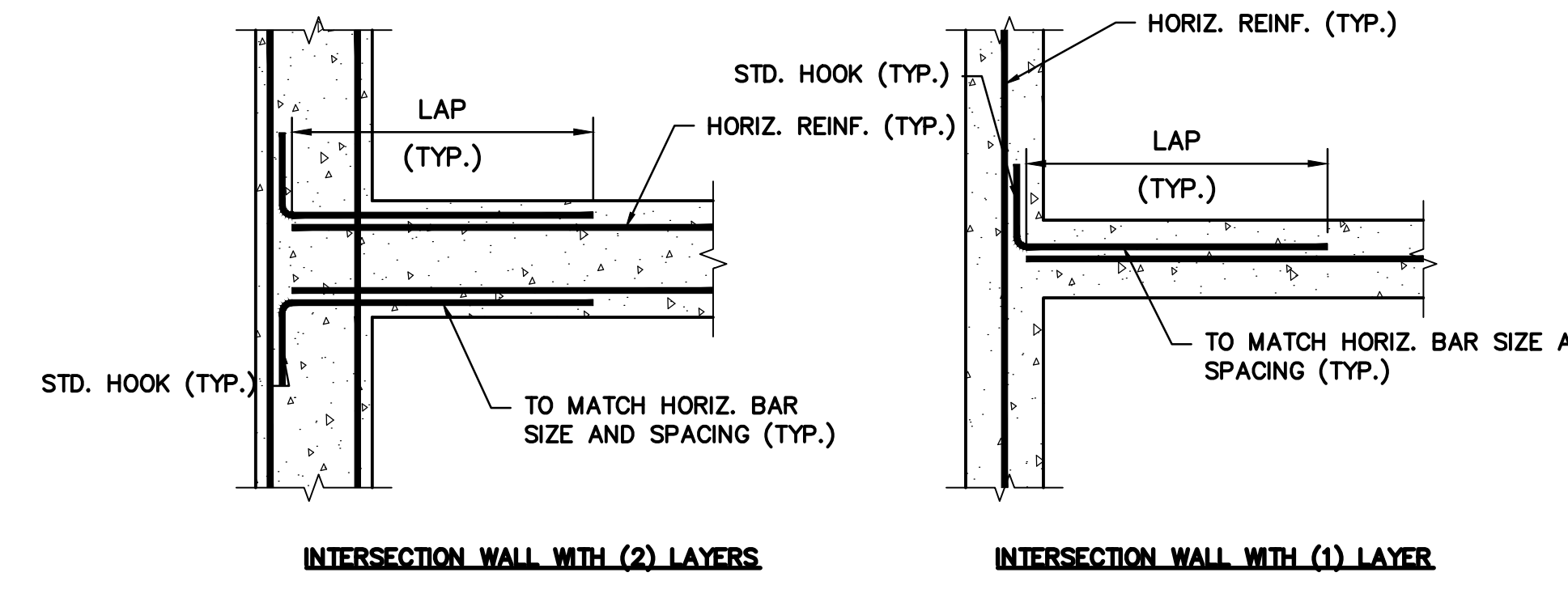
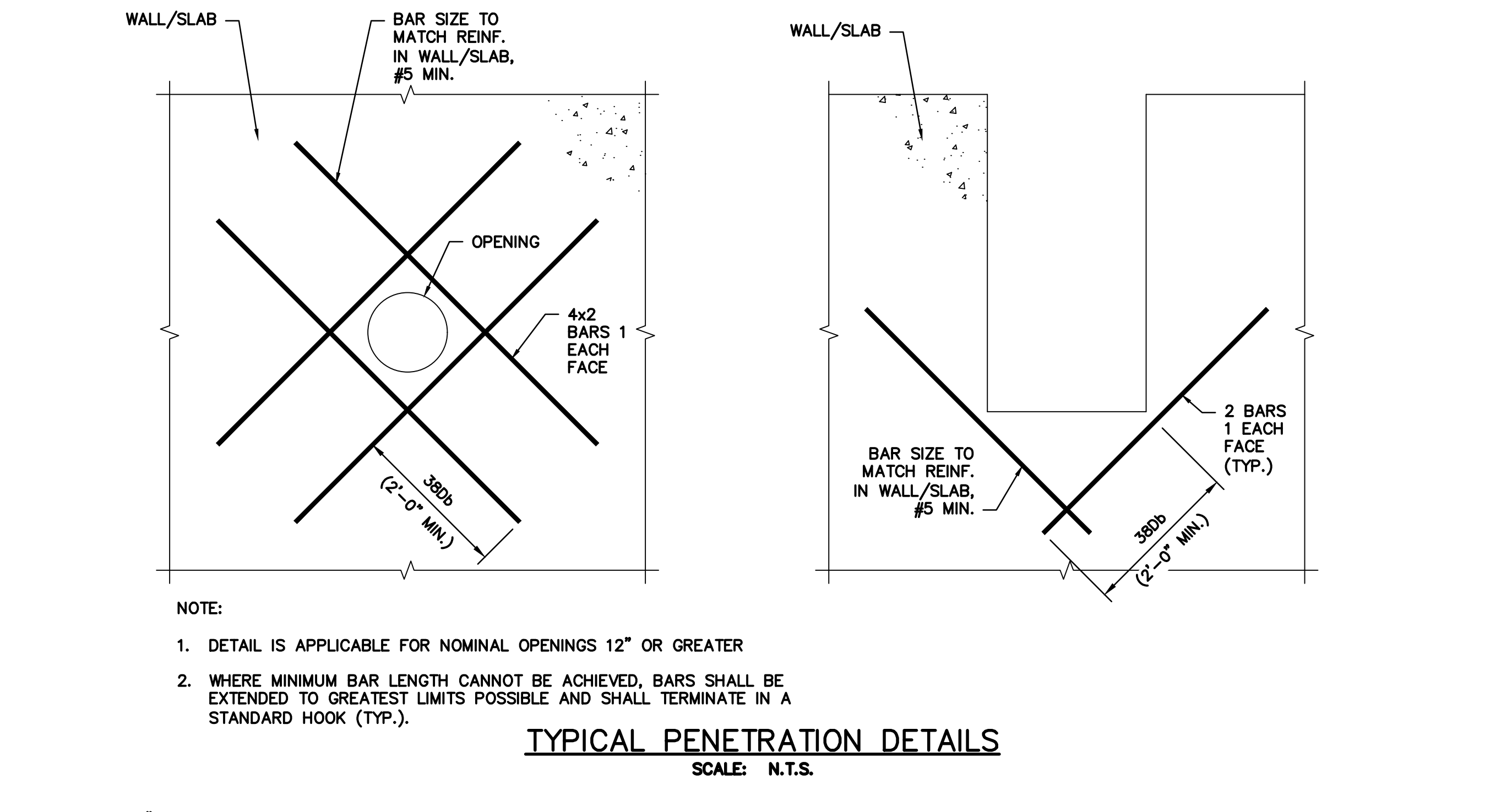
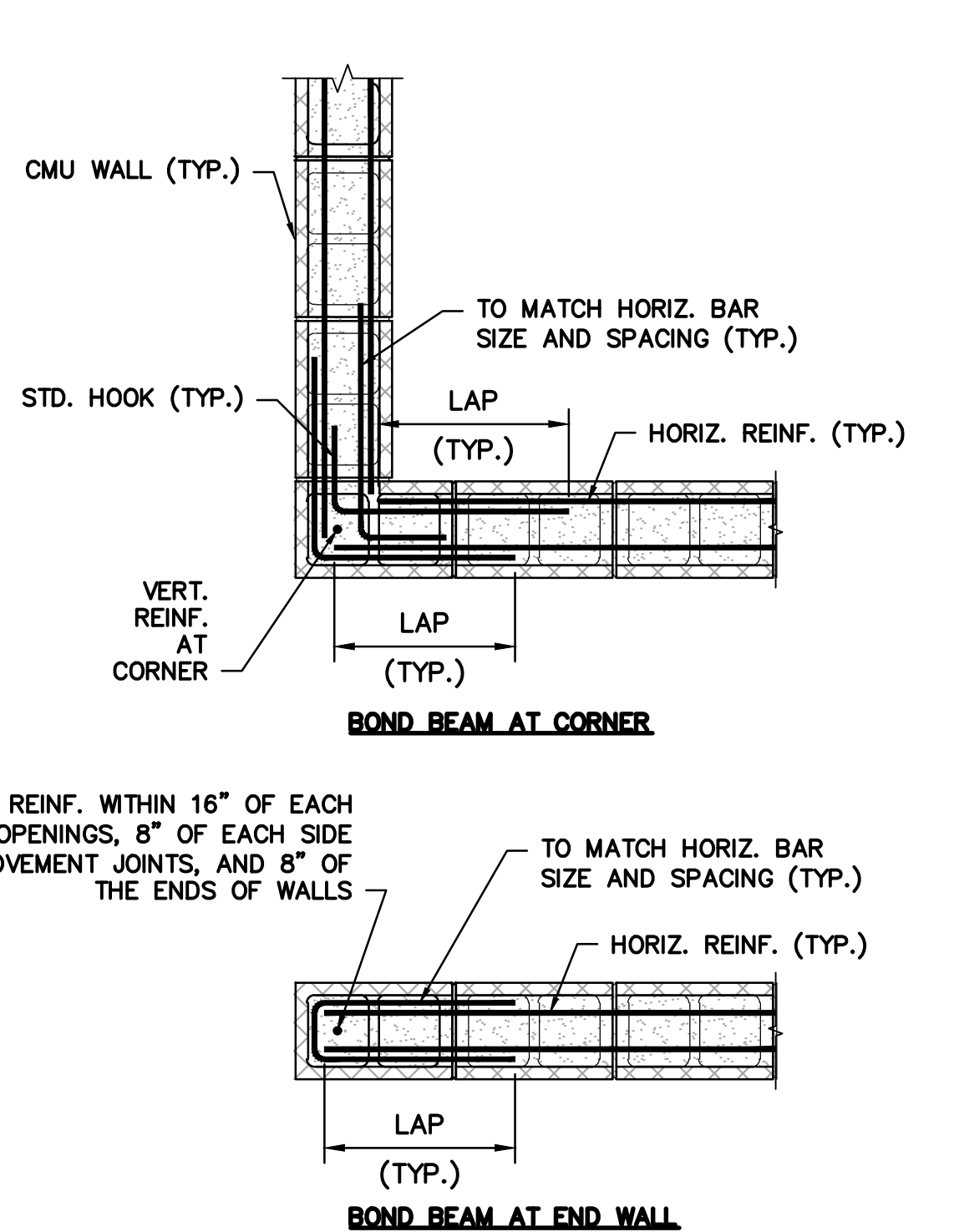
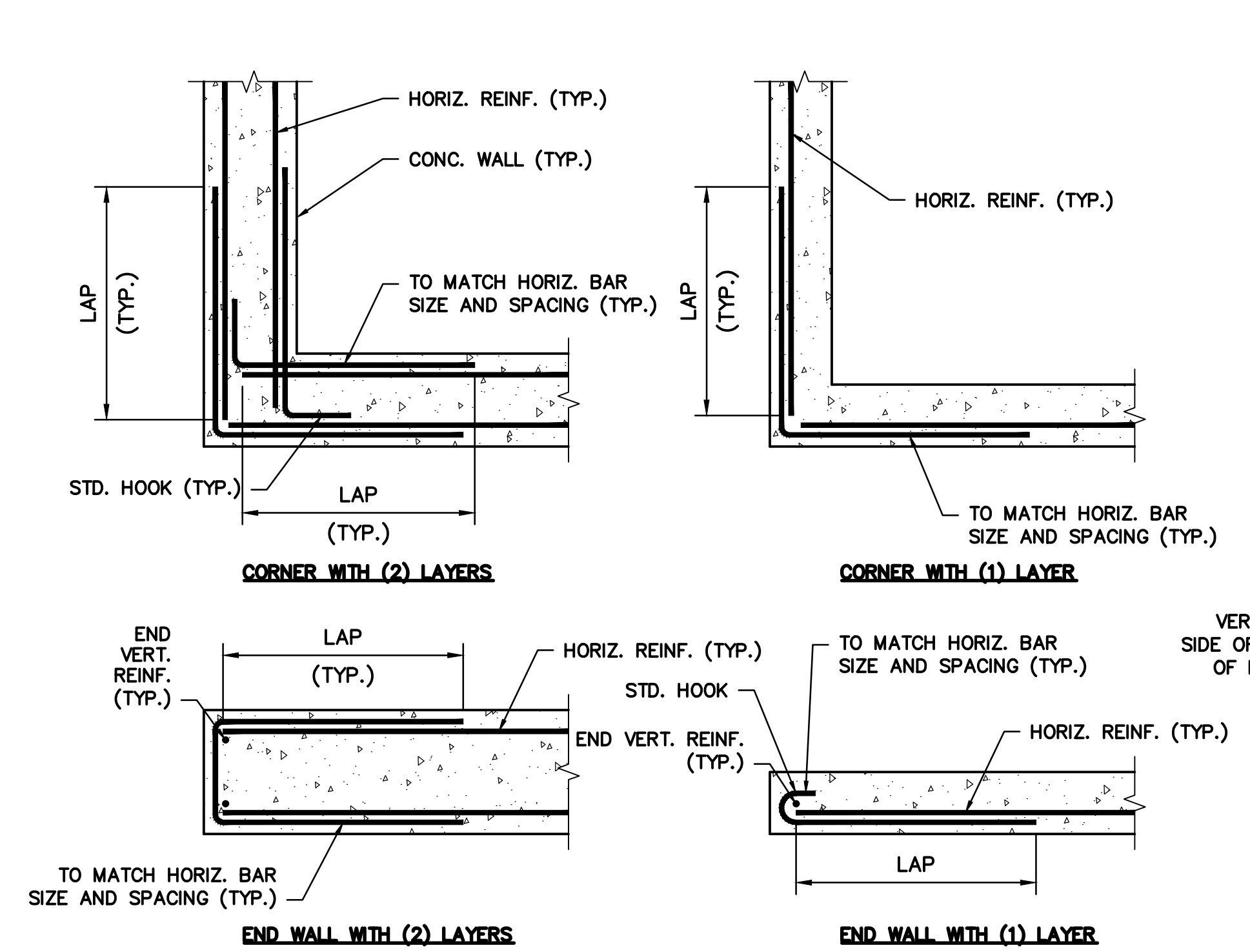
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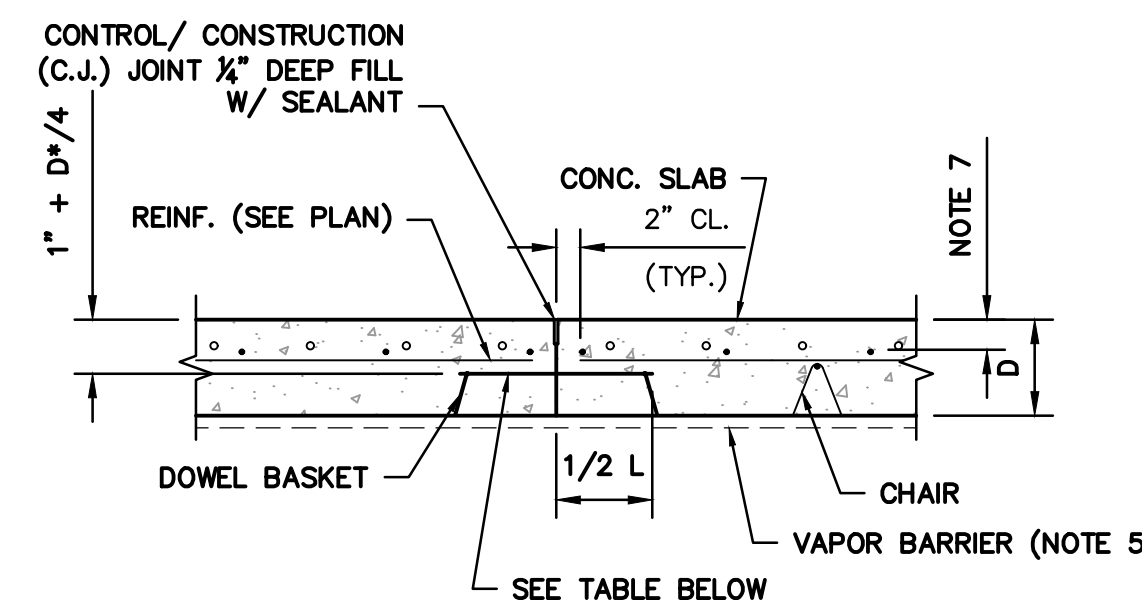
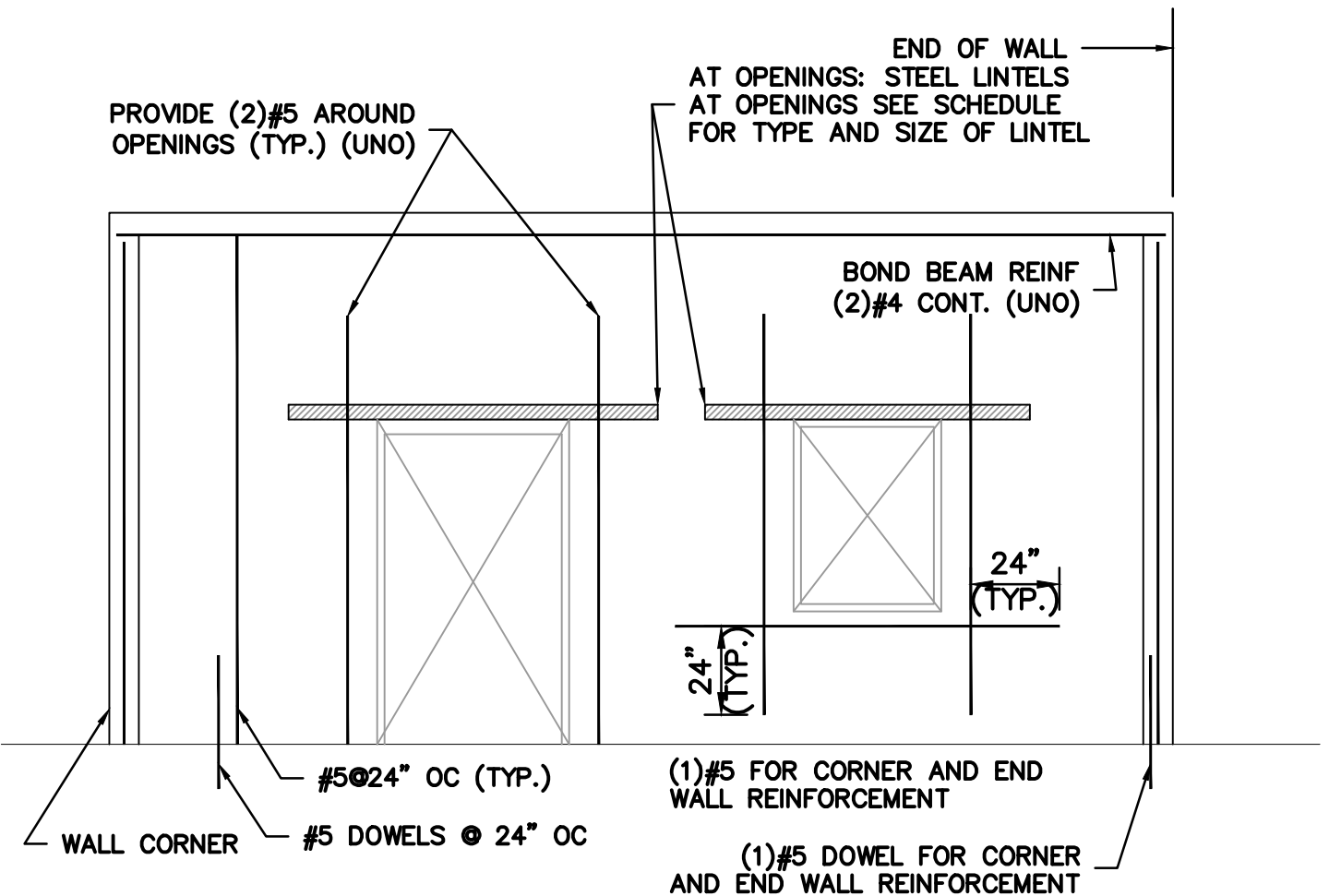
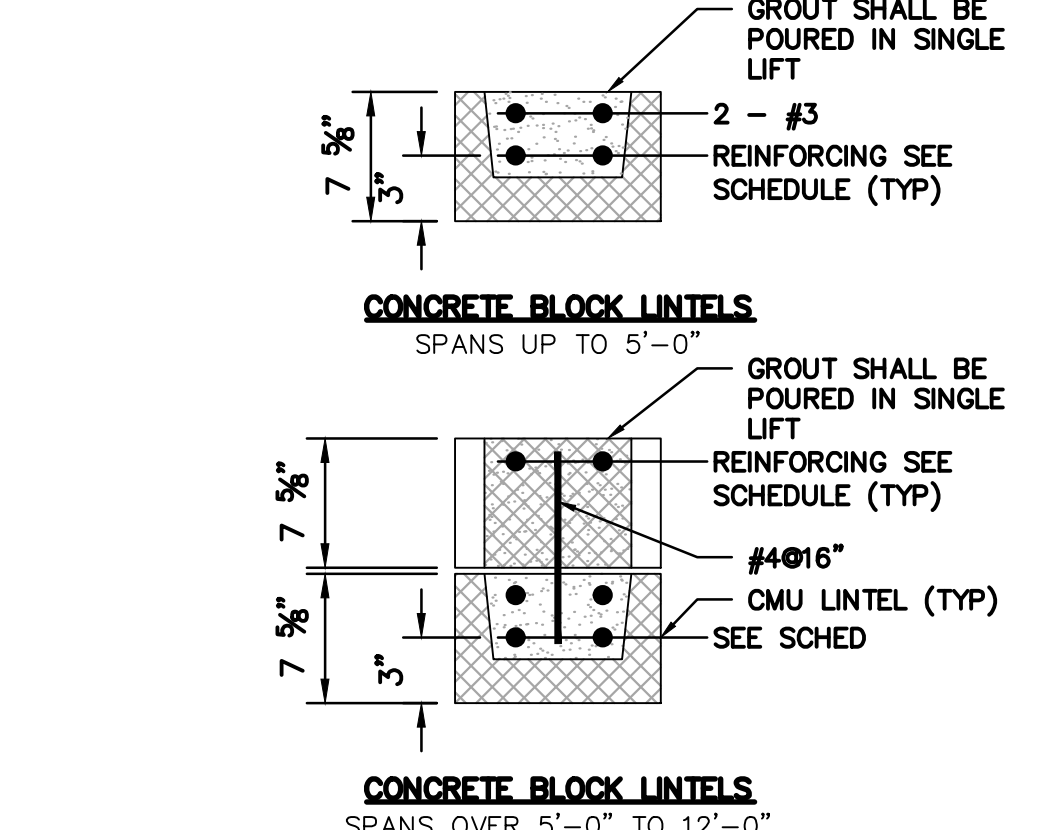
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**STRUCTURAL GENERAL NOTES**

Sheet Number: **S001**



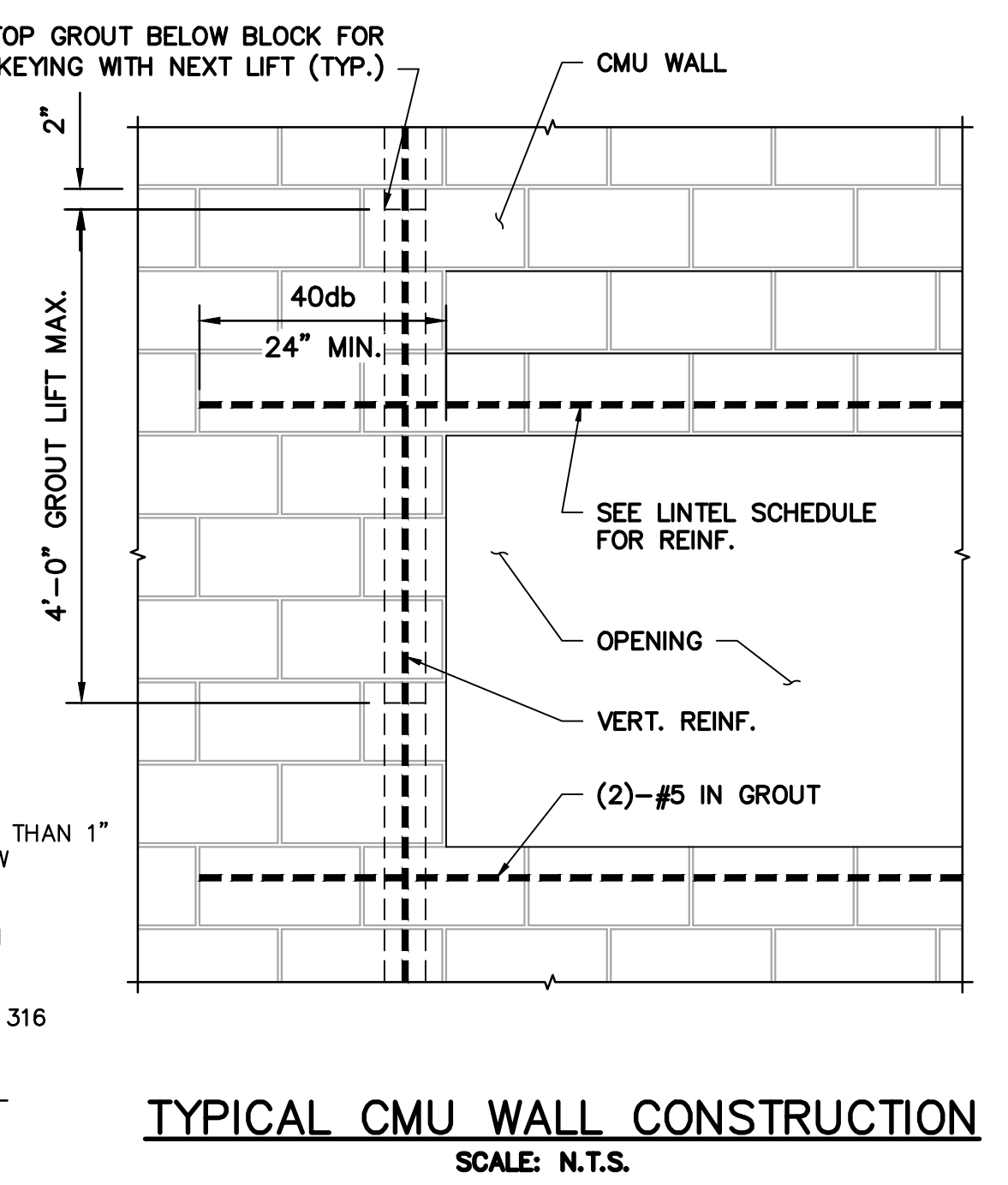
\* VERTICAL REINFORCING NOT SHOWN FOR CLARITY  
**TYPICAL REINFORCING DETAILS**  
 SCALE: N.T.S.



SLAB THICKNESS, IN.	MIN. DOWEL LENGTH (L), IN.	MAXIMUM DOWEL SPACING, IN.	DOWEL DIAMETER AND TYPE
LESS THAN 8	N/A	N/A	N/A
8 TO AND INCLUDING 11.5	16	12	1" BAR

MASONRY OPENING	8" WALL	12" WALL
3'	2-LL 3/2"x3/2"x1/4"	3-LL 3/2"x3/2"x1/4"
4'	2-LL 4"x3/2"x1/4"	3-LL 4"x3/2"x1/4"
5'	2-LL 5"x3/2"x1/4"	3-LL 5"x3/2"x1/4"
6'	2-LL 5"x3/2"x3/8"	3-LL 5"x3/2"x3/8"
8'	2-LL 6"x3/2"x3/8"	3-LL 6"x3/2"x3/8"

- STEEL LINTEL NOTES:
- PROVIDE AND INSTALL LINTEL ANGLES FOR MASONRY OPENINGS IN ACCORDANCE WITH THE SCHEDULE ABOVE. INSTALL LONG LEG VERTICAL. SEE PLANS FOR LOCATION.
  - PROVIDE 4" MIN. BEARING AT EACH END BUT NOT LESS THAN 1" PER FOOT OF SPAN. FILL 2 COARSE OF MASONRY BELOW BEARING WITH GROUT.
  - WHEN MINIMUM BEARING CAN NOT BE PROVIDED ATTACH SECURELY TO ADJACENT STRUCTURAL SUPPORT.
  - MINIMUM THICKNESS SHALL BE 2" AND ANGLE SHALL BE 316 STAINLESS STEEL.
  - WHERE THICKNESS EXCEEDS 12" PROVIDE AN ADDITIONAL ANGLE FOR EACH ADDITION 4" OF WALL.



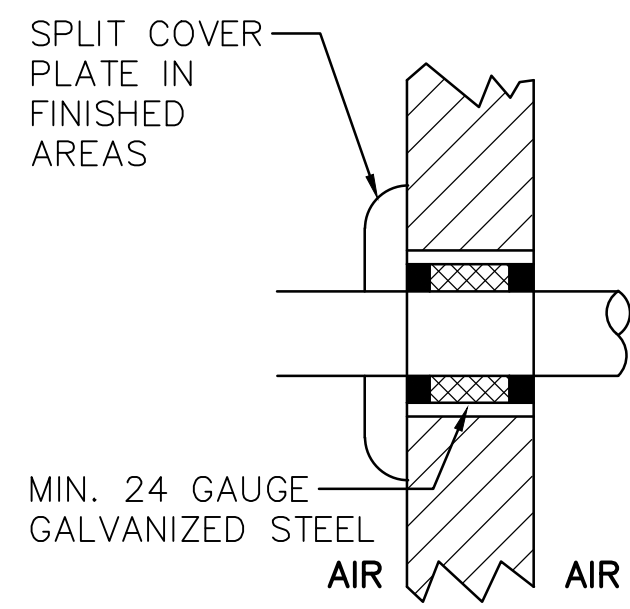
CLEAR SPAN L	REINF. IN LINTEL	END BEARING
UP TO 4'-0"	1-#5 2-#4 2-#4	2-#4 8"
TO 5'-0"	1-#5 2-#4 2-#4	2-#4 8"
TO 6'-0"	2-#5 2-#4 2-#5	2-#5 8"
TO 7'-0"	2-#5 2-#6 2-#6	2-#6 8"
TO 8'-0"	2-#5 2-#7 2-#7	3-#6 8"
TO 9'-0"	2-#6 2-#8 2-#8	3-#6 8"
TO 12'-0"	- - -	2-#7 8"

- NOTES:
- CONCRETE  $f_c = 3000$  PSI
  - CMU  $f_m = 1,500$  PSI MIN
  - REINFORCING SHALL EXTEND NO LESS THAN 24" OR 40 BAR DIAMETERS PAST OPENINGS.
  - MINIMUM BEARING LENGTH FOR LINTEL IS 4".
  - CONTINUE VERTICAL WALL REINFORCEMENT THROUGH LINTEL (NOT SHOWN FOR CLARITY)

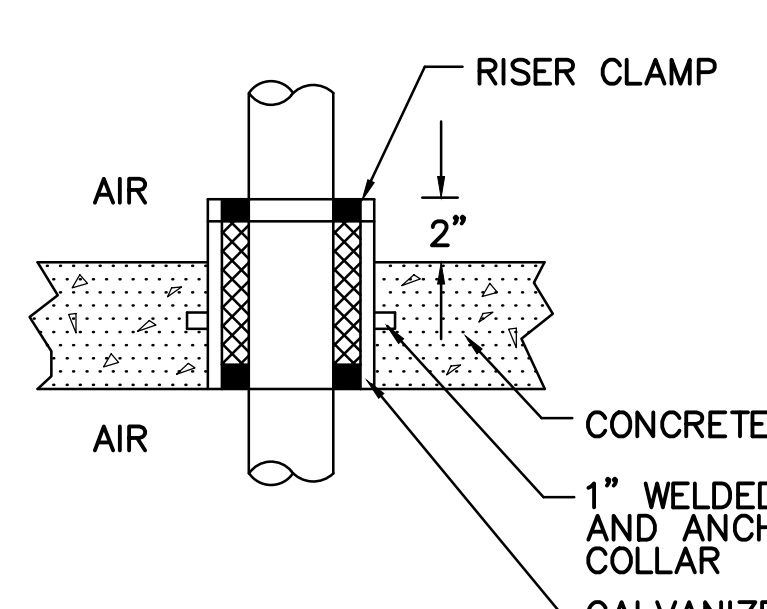
**MASONRY LINTEL DETAIL**  
 SCALE: N.T.S.

**TYPICAL MASONRY WALL REINFORCEMENT**  
 SCALE: N.T.S.

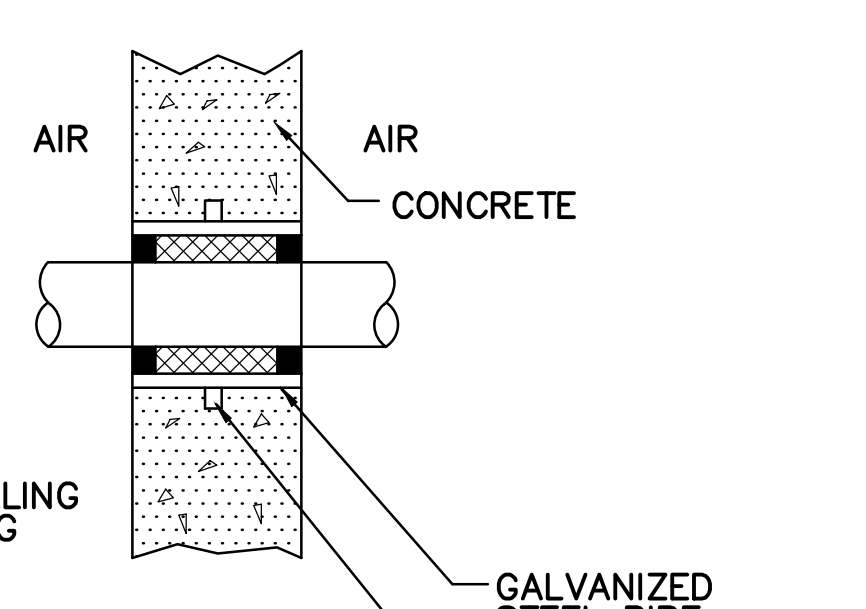




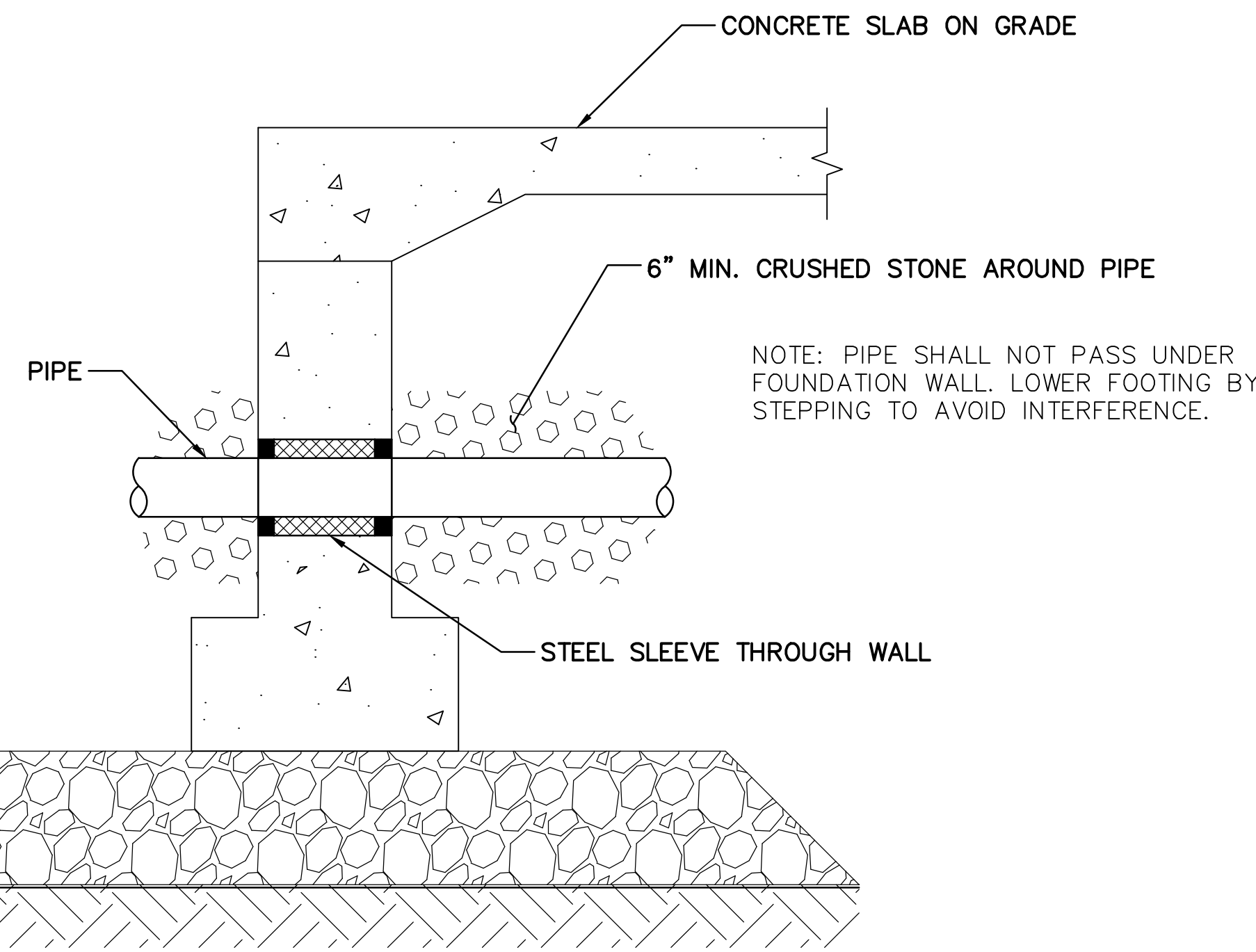
NON-BEARING PARTITION



FLOOR



WALL



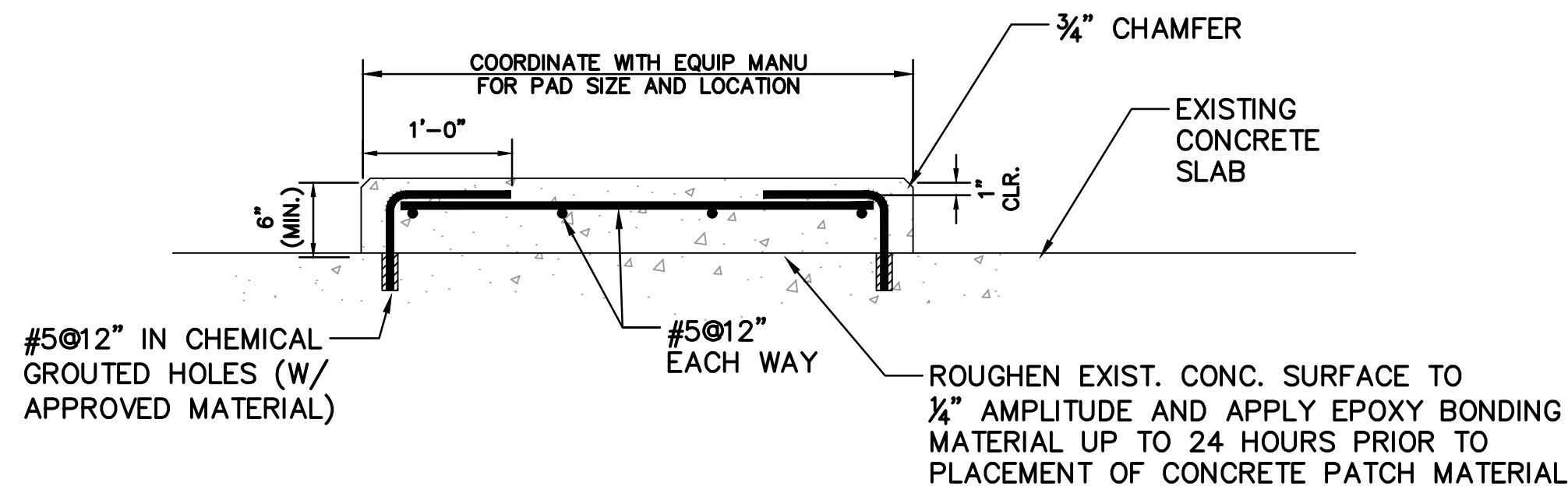
PIPE THROUGH WALL DETAIL

SCALE: N.T.S.

- NOTES:
1. PROVIDE MINIMUM 1/4" ANNULAR SPACE BETWEEN SLEEVE AND PIPE, PACK WITH OAKUM AND SEAL ENDS WITH SEALANT PER SPECIFICATIONS.

PIPING SLEEVE DETAILS

SCALE: N.T.S.



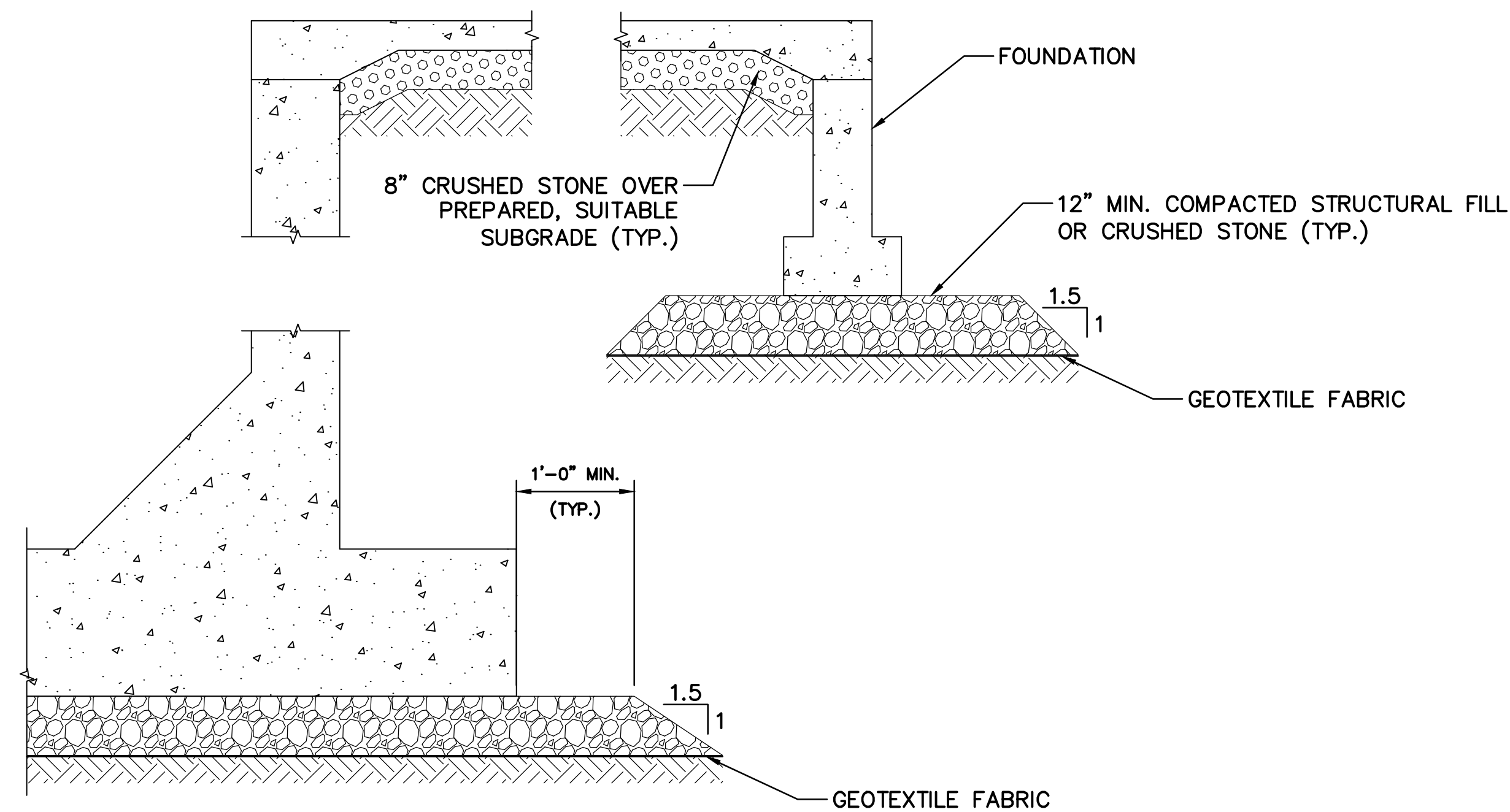
SIZE OF PAD AND ANCHOR BOLTS AS REQUIRED BY EQUIPMENT MANUFACTURER UNLESS OTHERWISE NOTED

NOTES:

1. ROUGHEN EXISTING CONCRETE SURFACE TO 1/4" AMPLITUDE AND MOISTEN CONCRETE SURFACE PRIOR TO CONCRETE POUR.
2. ALL CONCRETE SHALL BE NORMAL WEIGHT AND SHALL HAVE A 28 DAY COMPRESSION STRENGTH OF f'c = 3,000 psi.
3. REINFORCING STEEL SHALL BE DEFORMED ASTM A-615 GRADE 60.

TYPICAL INTERIOR EQUIPMENT PAD

SCALE: N.T.S.



STRUCTURAL FILL DETAIL

SCALE: N.T.S.

Project:



CONNECTICUT WATER COMPANY  
93 WEST MAIN STREET  
CLINTON, CT 06413

EDGEWATER CIRCLE  
WELLFIELD IMPROVEMENTS  
AND METER BUILDING

EAST HAMPTON, CT



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Date: OCTOBER, 2022

Drawn By: MMM

Reviewed By: PJG

Approved By: RGT

W&S Project No: ENG22-0253

Drawing Title:

STRUCTURAL  
TYPICAL DETAILS II

Sheet Number:

S003

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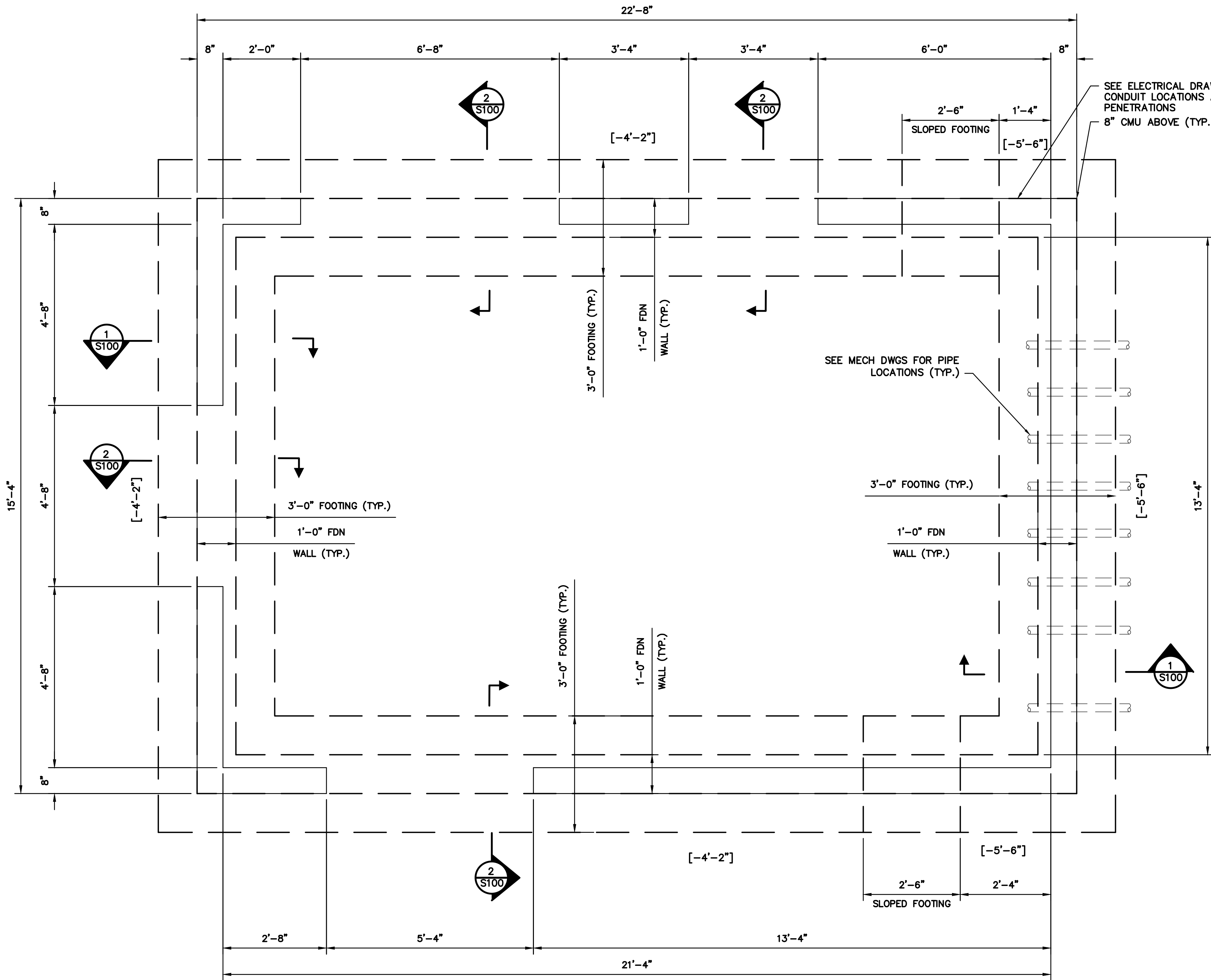
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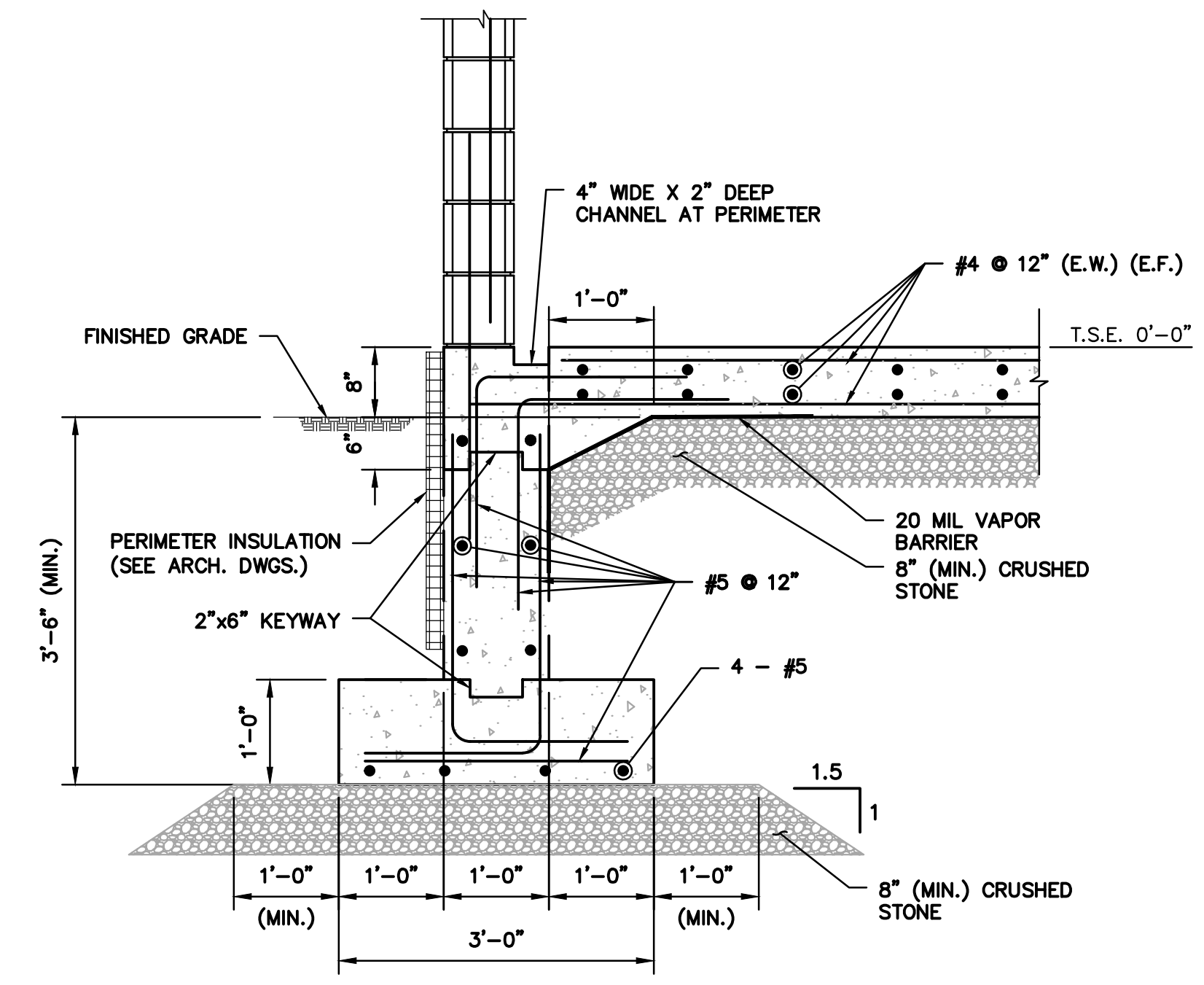
Date: OCTOBER, 2022  
 Drawn By: MMM  
 Reviewed By: PJG  
 Approved By: RGT  
 W&S Project No: ENG22-0253

Drawing Title:  
**FOUNDATION PLAN  
 AND DETAILS**  
 Sheet Number:  
**S100**

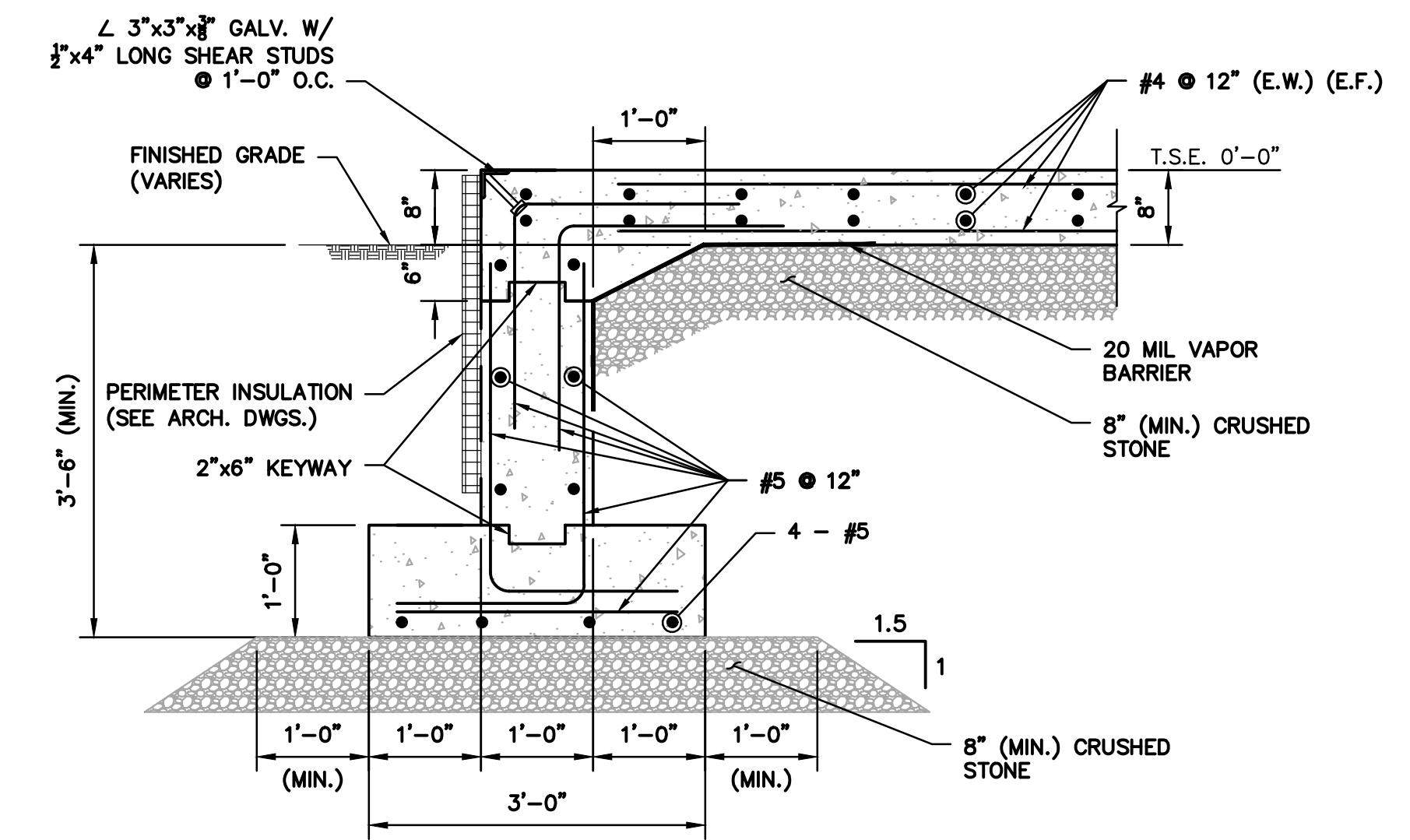


**FOUNDATION PLAN**  
 SCALE: 1:20

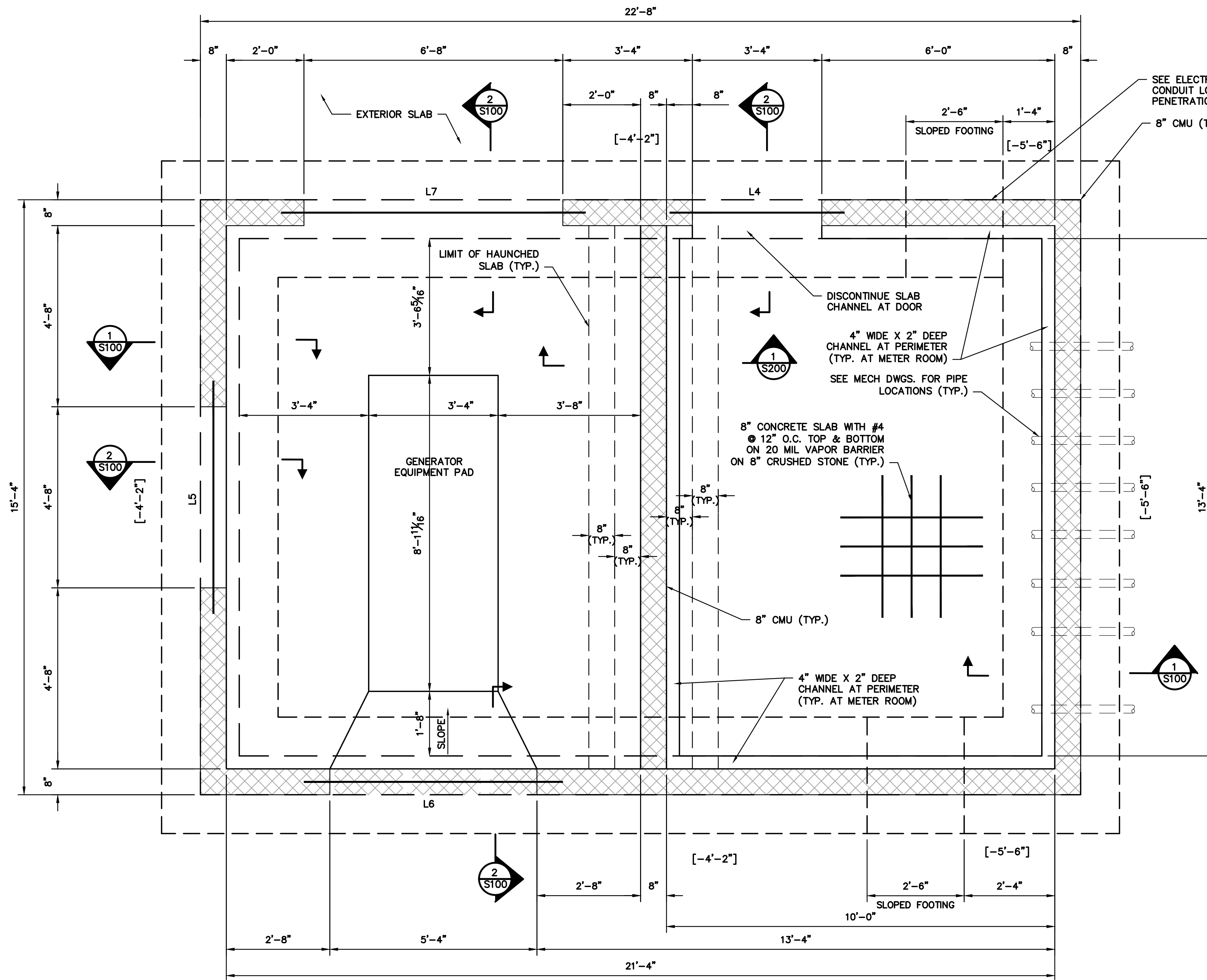
- NOTES:**
1. GENERAL CONTRACTOR TO COORDINATE ALL WORK (INCLUDING, BUT NOT LIMITED TO, FLOOR ELEVATIONS, DIMENSIONS, FINISH DETAILS, PENETRATIONS, ETC.) WITH THE ARCHITECTURAL, SITE, EQUIPMENT, ELECTRICAL, PLUMBING AND MECHANICAL DRAWINGS.
  2. [XX'-XX"] INDICATES BOTTOM OF FOOTING ELEVATION. ALL EXTERIOR FOOTINGS SHALL BE LOCATED A MINIMUM OF 3'-6" BELOW FINISHED GRADE.
  3. A RELATIVE ELEVATION OF 0'-0" CORRELATES WITH A PROJECT ELEVATION OF 567.0.
  4. SEE GENERAL NOTES ON SHEET NO. S001.



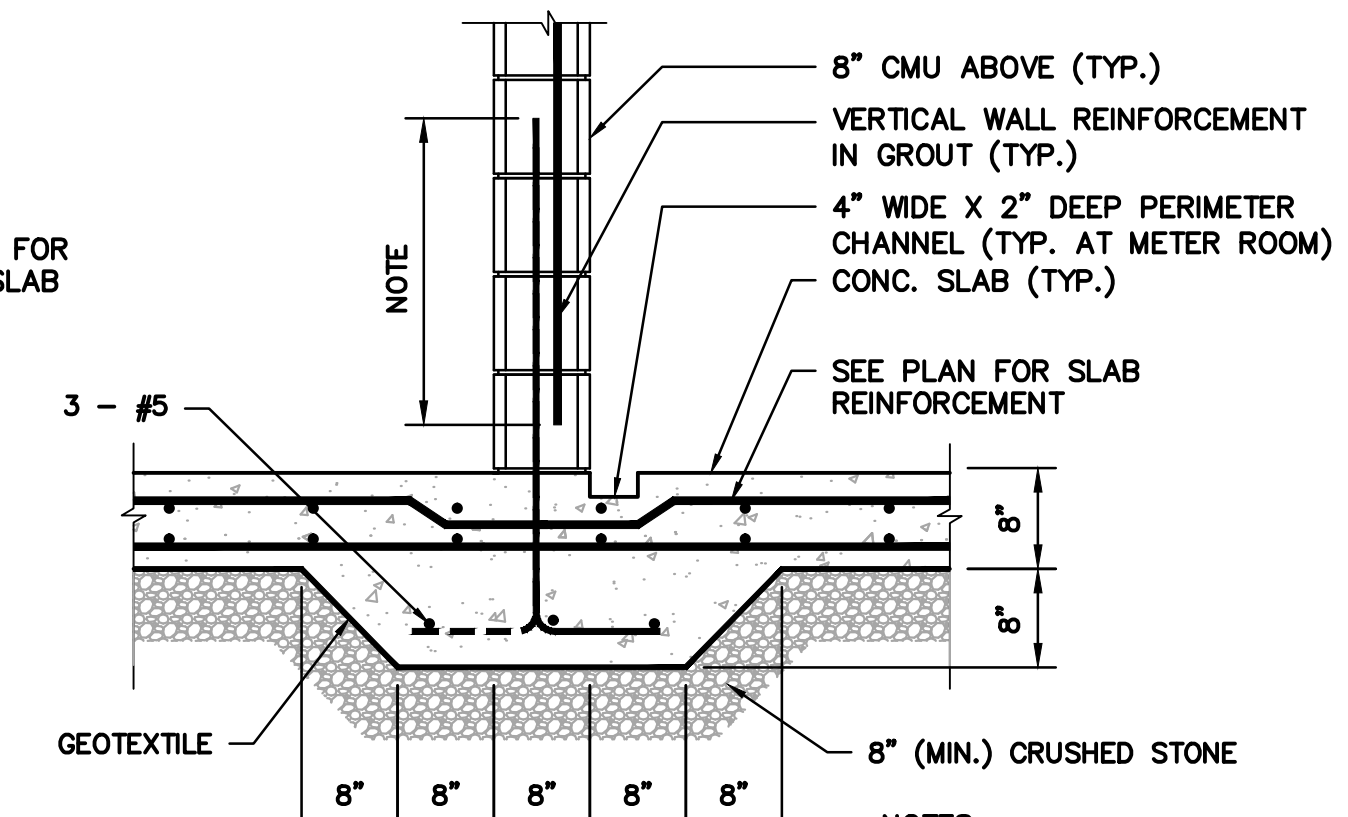
**1 TYPICAL FOUNDATION WALL SECTION**  
 SCALE: 3/4" = 1'-0"



**2 TYPICAL FOUNDATION WALL SECTION AT DOORWAY**  
 SCALE: 3/4" = 1'-0"



**SLAB PLAN**  
SCALE: 1:20



**1 TYPICAL INTERIOR WALL SECTION**  
SCALE: 3/4" = 1'-0"

- NOTES:
1. SPLICE LAP BARS AS REQUIRED FOR BAR SIZE.

- NOTES:
1. GENERAL CONTRACTOR TO COORDINATE ALL WORK (INCLUDING, BUT NOT LIMITED TO, FLOOR ELEVATIONS, DIMENSIONS, FINISH DETAILS, PENETRATIONS, ETC.) WITH THE ARCHITECTURAL, SITE, EQUIPMENT, PLUMBING AND MECHANICAL DRAWINGS.
  2. A RELATIVE ELEVATION OF 0'-0" CORRELATES WITH A PROJECT ELEVATION OF 567.0.
  3. SEE GENERAL NOTES ON SHEET NO. S001.
  4. COORDINATE MASONRY AND WALL OPENINGS (DOORS, VENTS, WINDOWS, ETC.) WITH ARCHITECTURE AND MEP DRAWINGS.
  5. LOCATIONS OF CONSTRUCTION JOINTS AND SAW JOINTS TO BE RESPONSIBILITY OF THE CONTRACTOR. REFER TO GENERAL NOTES FOR SPACING REQUIREMENTS. SUBMIT JOINT LOCATIONS TO THE ENGINEER FOR APPROVAL. REFER TO S001 FOR DETAILS.
  6. L-# INDICATES CONCRETE MASONRY UNIT (CMU) LINTEL TYPE. REFER TO CMU LINTEL SCHEDULE ON S001 FOR LINTEL INFORMATION. STEEL LINTELS SHALL NOT BE USED IN INTERIOR CONCRETE MASONRY WALLS UNLESS NOTED OTHERWISE ON THE PLANS.

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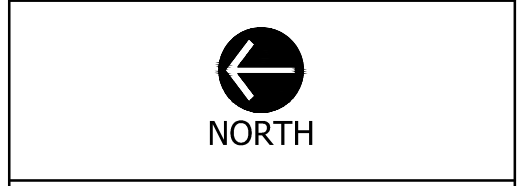
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Seal:

Revisions:

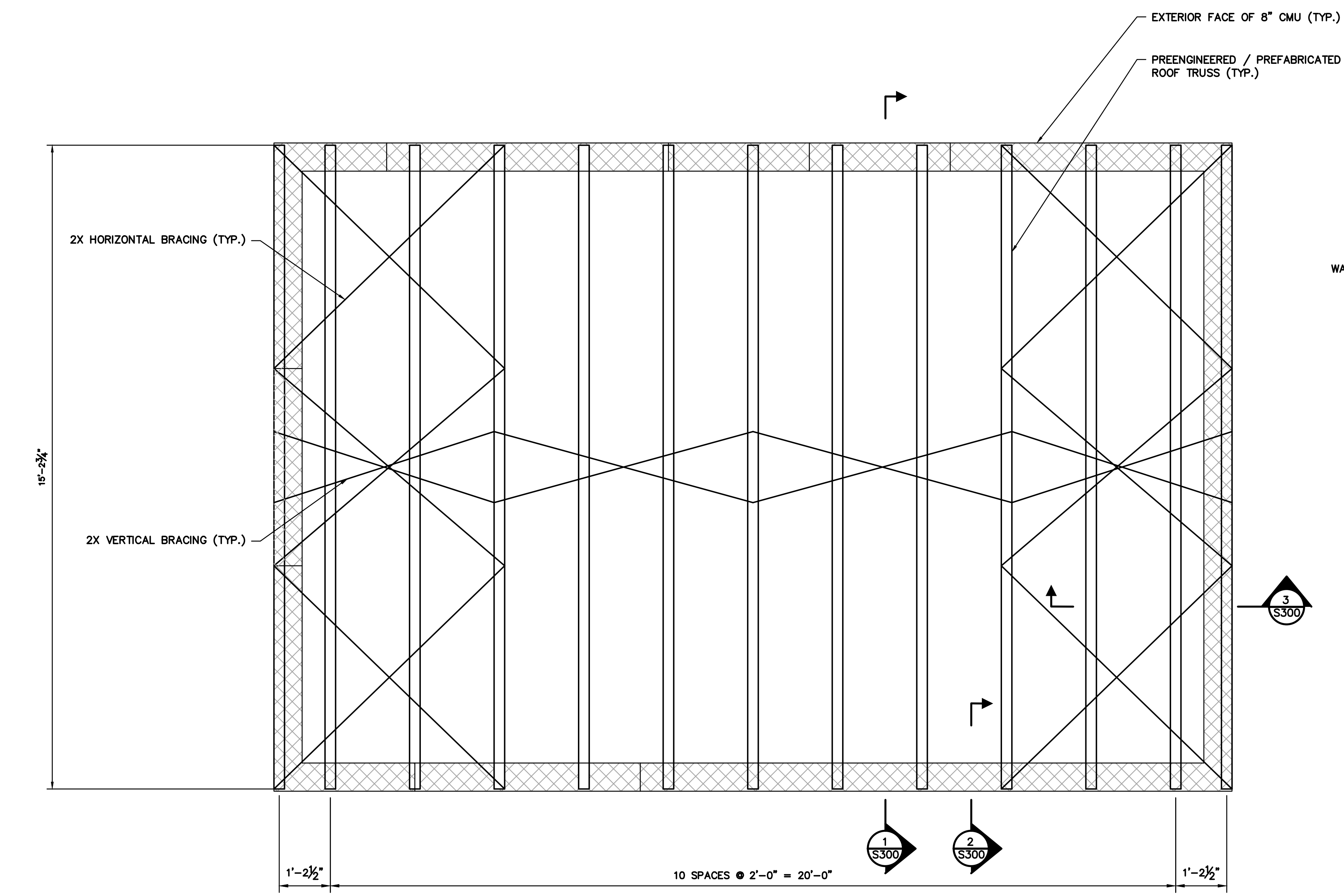
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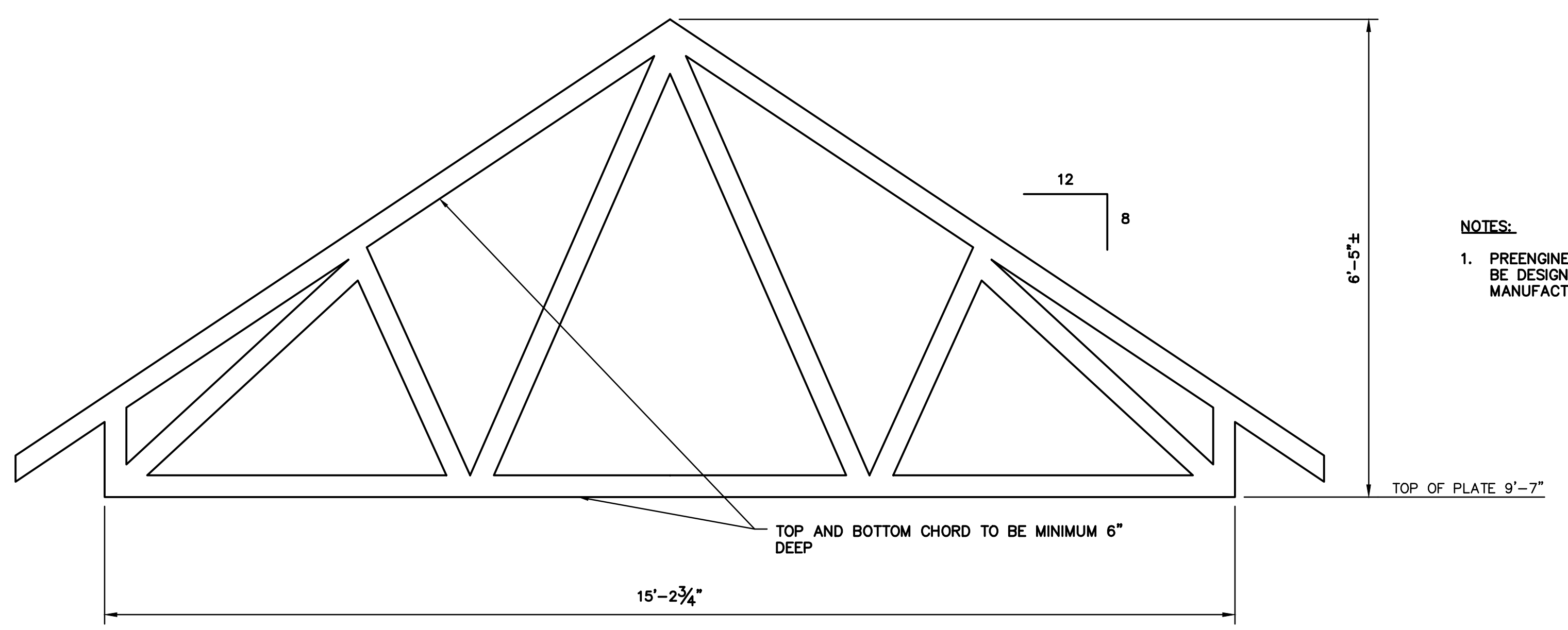


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 Approved By: RGT  
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Drawing Title:  
**SLAB PLAN AND DETAILS**  
 Sheet Number:  
**S200**

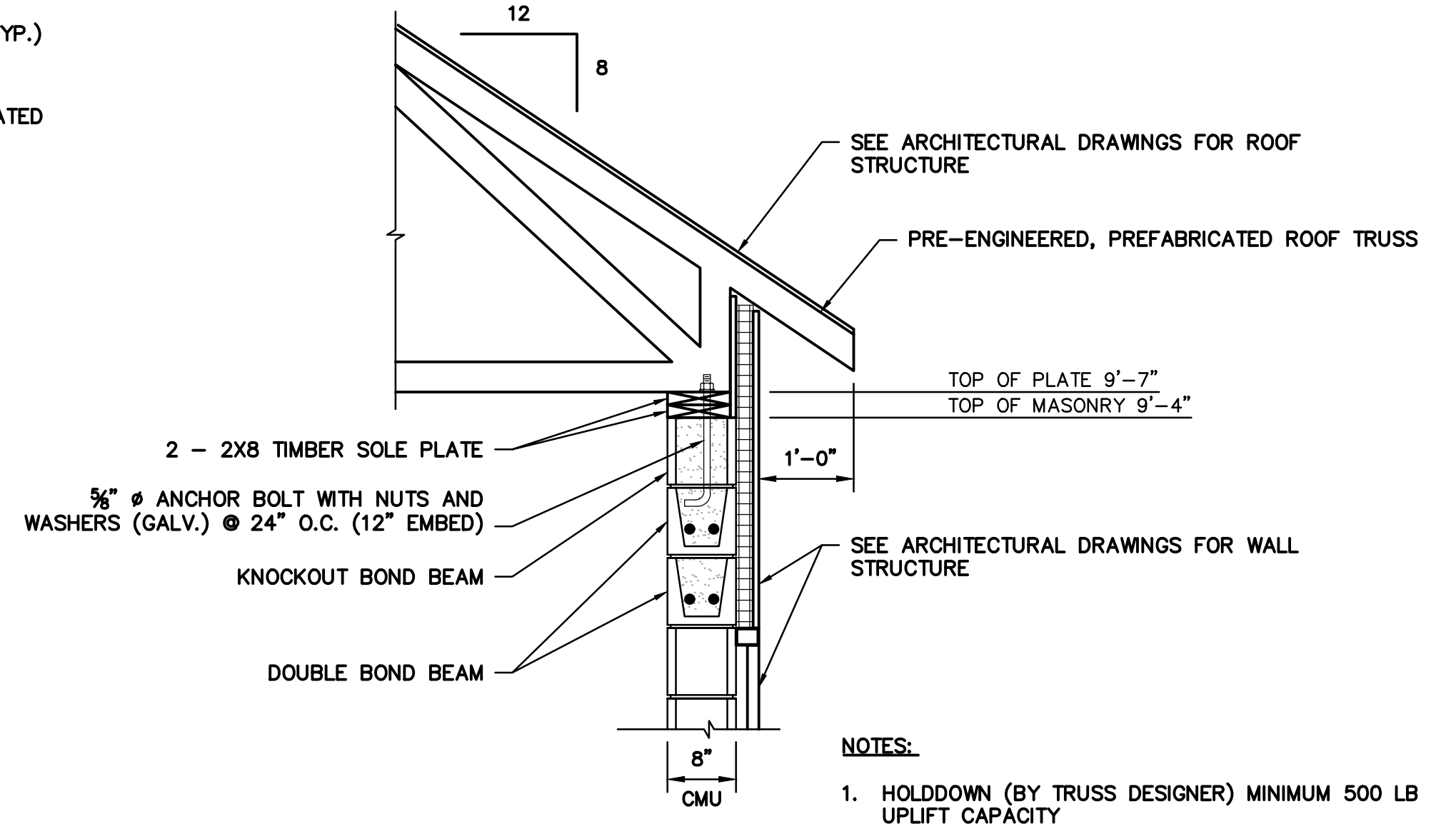


**FRAMING PLAN**  
 SCALE: 1:20



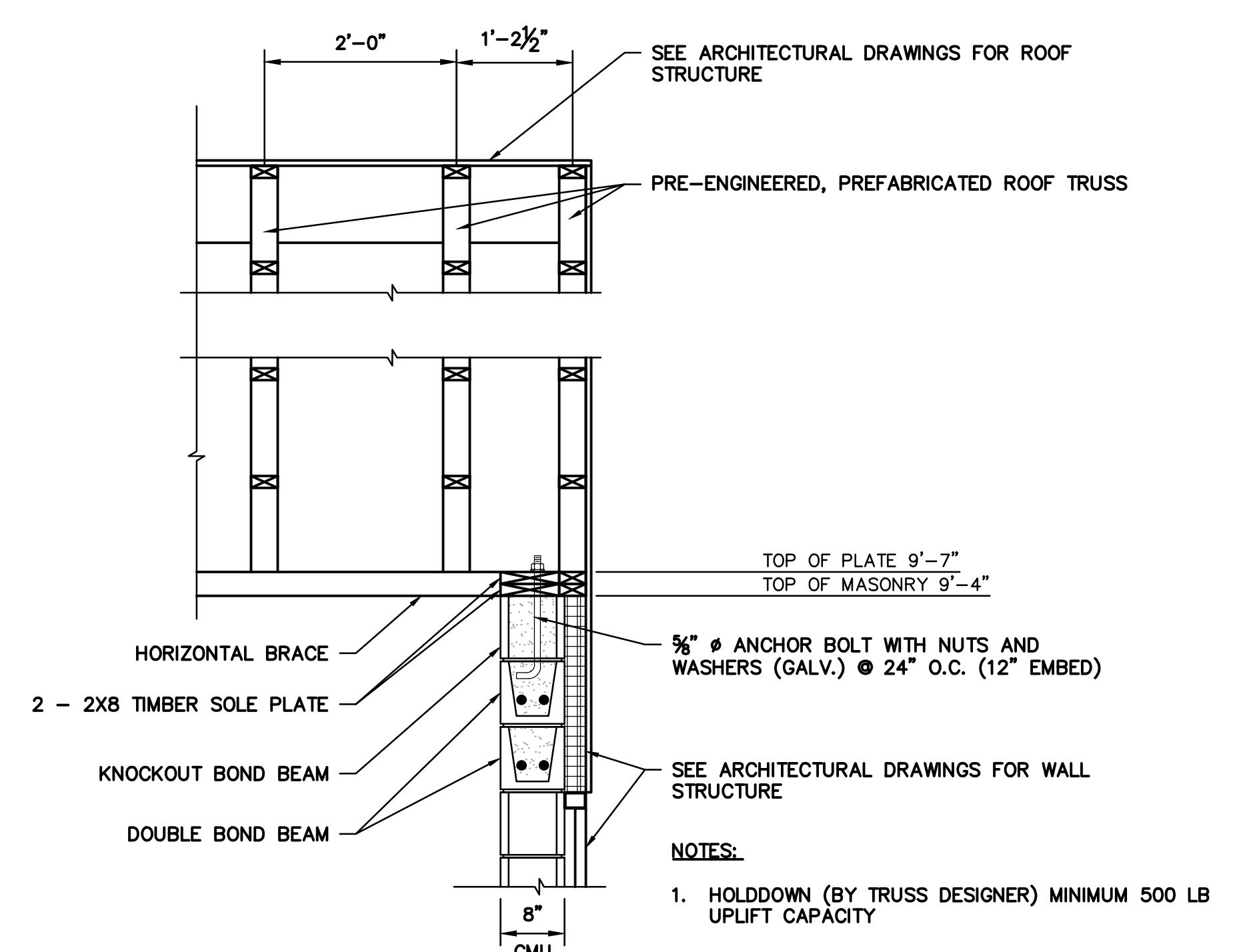
**1 TYPICAL TRUSS DETAIL**  
 SCALE: 3/4" = 1'-0"

NOTES:  
 1. PREENGINEERED, PREFABRICATED WOOD ROOF TRUSS TO BE DESIGN OR MANUFACTURED BY ROOF TRUSS MANUFACTURER SLOPE 8V:12H.



**2 SECTION**  
 SCALE: 3/4" = 1'-0"

NOTES:  
 1. HOLDDOWN (BY TRUSS DESIGNER) MINIMUM 500 LB UPLIFT CAPACITY



**3 SECTION**  
 SCALE: 3/4" = 1'-0"

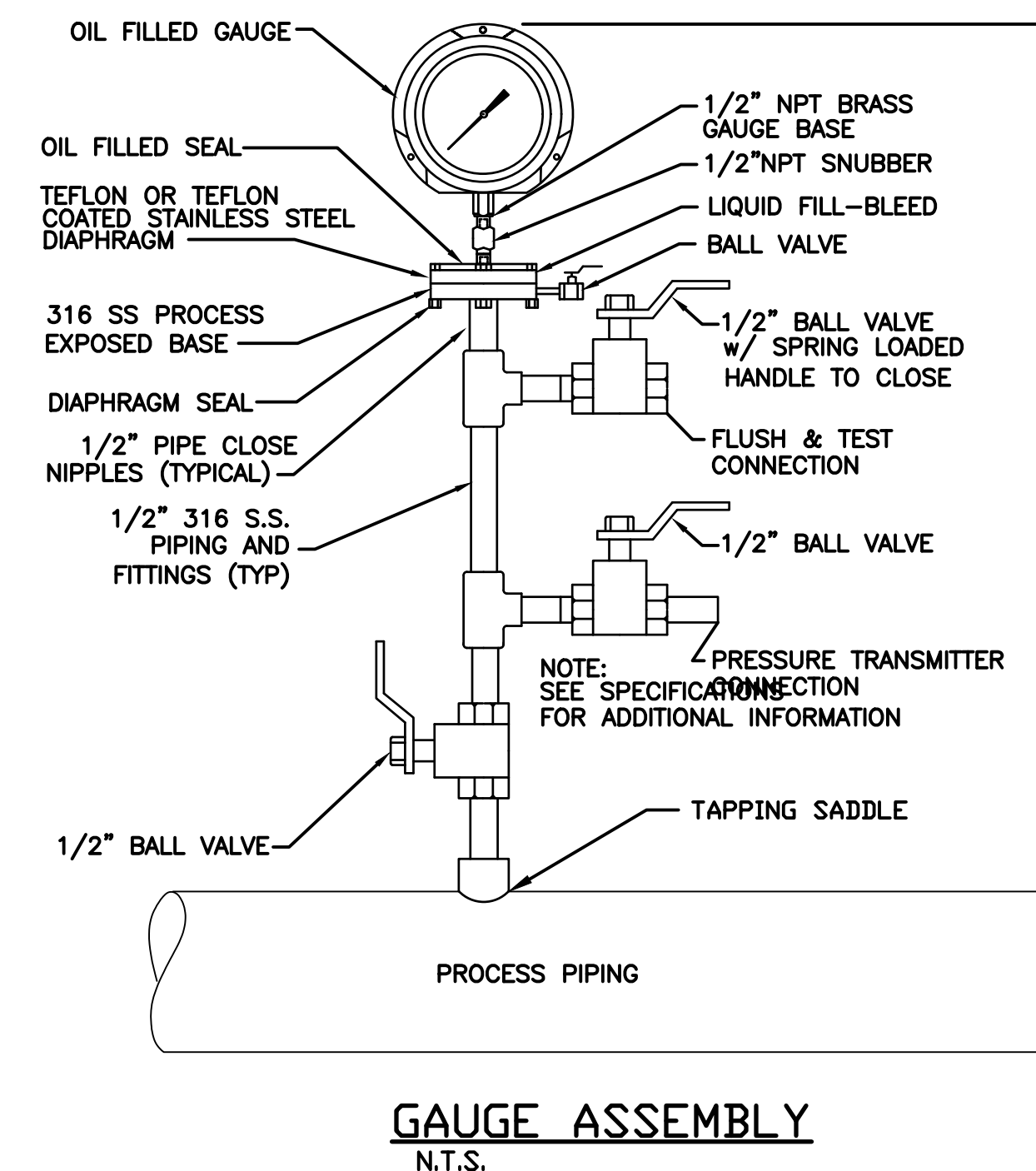
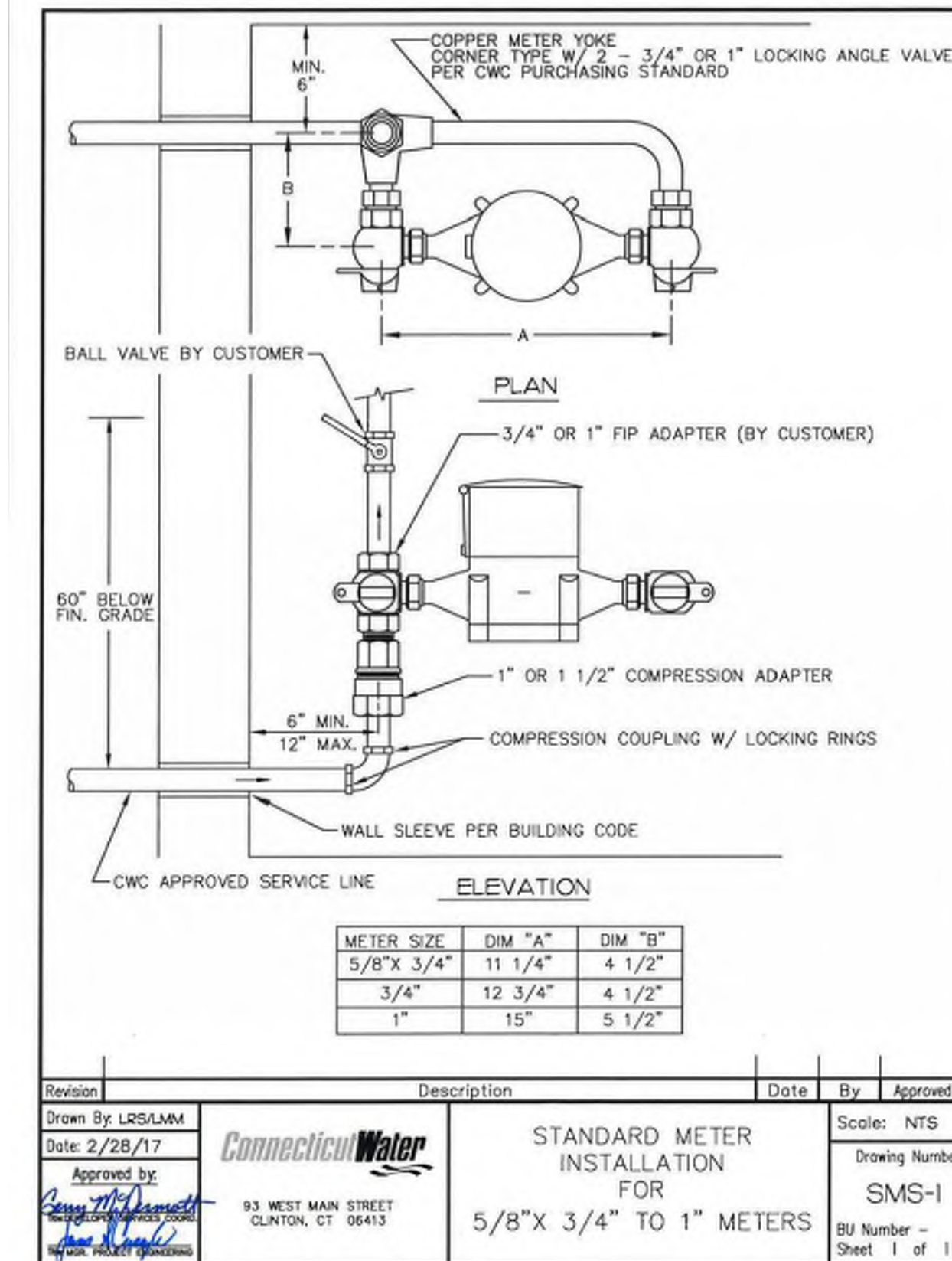
NOTES:  
 1. HOLDDOWN (BY TRUSS DESIGNER) MINIMUM 500 LB UPLIFT CAPACITY

**PROCESS GENERAL NOTES**

- FOR PIPING MATERIAL, REFER TO THE PIPE SCHEDULE ON THIS SHEET.
- PIPES 3-INCHES OR LESS IN DIAMETER SHALL HAVE UNIONS INSTALLED ADJACENT TO EQUIPMENT, FITTINGS AND TANKS, UNLESS OTHERWISE NOTED ON DRAWINGS. FLANGES ARE ACCEPTABLE ON 3-INCH OR LARGER DIAMETER PIPING.
- ALL PIPES SHALL BE ADEQUATELY RESTRAINED AND SUPPORTED.
- AFTER INSTALLATION, ALL PRESSURE (PUMPED) PIPELINES SHALL BE PRESSURE TESTED FOR TIGHTNESS AT 125 PSIG. ALL LEAKS SHALL BE CORRECTED AND RETESTED UNTIL PRESSURE TEST IS SATISFACTORILY COMPLETED.
- ALL PIPING SHALL BE CLEANED BEFORE TESTING.
- PROVIDE REINFORCED CONCRETE PAD UNDER ALL EQUIPMENT, CONTROL PANELS, PIPE AND EQUIPMENT SUPPORTS, TANKS, ETC. UNLESS OTHERWISE INDICATED (SEE DETAIL).
- ALL EQUIPMENT AND PIPING LAYOUT DIMENSIONS SHALL BE FIELD VERIFIED AND COORDINATED WITH EQUIPMENT SUPPLIED, AND/OR FIELD CONDITIONS.
- DO NOT SCALE DISTANCES OR DIMENSIONS FROM THE DRAWINGS. WRITTEN DIMENSIONS SHALL PREVAIL. REPORT ANY DISCREPANCIES IMMEDIATELY.
- PROVIDE OVERSIGHT AND COORDINATION OF SUBCONTRACTORS AND TRADE DISCIPLINES.
- ALL MECHANICAL EQUIPMENT PIPING AND VALVES SHALL BE LAID TO SCALE IN THE FIELD OR ELECTRONICALLY BY AN EQUIPMENT VENDOR PRIOR TO PURCHASE OF EQUIPMENT, CORING PIPE PENETRATIONS OR ROUTING MECHANICAL EQUIPMENT TO CONFIRM THERE ARE NO CONFLICTS AND MECHANICAL EQUIPMENT WILL FIT IN THE ALLOCATED SPACE.
- PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM AS SHOWN ON THE DRAWINGS AND AS OUTLINED IN THE SPECIFICATIONS. THE DETERMINATION OF COMPLETE AND FUNCTIONAL SHALL BE AT THE SOLE DISCRETION OF THE ENGINEER. THE ENGINEER SHALL MAKE THIS DETERMINATION IN THE FIELD BASED ON ACTUAL FIELD CONDITIONS.
- MATERIALS AND WORKMANSHIP FURNISHED UNDER THIS CONTRACT SHALL BE A STANDARD, HIGH-GRADE QUALITY, AND OF THE BEST WORKMANSHIP AND DESIGN. ALL LIKE PARTS OF EQUIPMENT OF THE SAME SIZE OR CAPACITY SHALL BE INTERCHANGEABLE. SUITABLE PROVISION SHALL BE MADE FOR EASY ADJUSTMENT OR REPLACEMENT OF ALL PARTS REQUIRING ADJUSTMENT OR REPLACEMENT.
- IT IS NOT THE INTENT OF THESE DRAWINGS TO PORTRAY EVERY DETAIL OF THE REQUIRED WORK. PROVIDE THE EQUIPMENT AND SYSTEMS COMPLETE SO THAT WHEN ASSEMBLED AND INSTALLED THEY SHALL OPERATE AND PERFORM AS DESCRIBED HEREIN.
- ALL MECHANICAL AND ELECTRICAL LAYOUTS ARE GENERALLY DIAGRAMMATIC AS SHOWN ON THESE DRAWINGS. THE WORK OF THE VARIOUS TRADES SHALL BE COORDINATED TO AVOID INTERFERENCE AND TO SECURE MAXIMUM HEAD ROOM. PARTICULAR ATTENTION IS DRAWN TO CONGESTED SPACES INSIDE AND OUTSIDE OF THE STRUCTURES. IF, IN THE INTEREST OF COORDINATION AND EXPEDIENCY, IT BECOMES NECESSARY TO DEVELOP "INTERFERENCE DRAWINGS" (DEFINED AS DRAWINGS EMBODYING THE WORK OF TRADES INVOLVED, ILLUSTRATING DETAILS OR CONSTRUCTION PROPOSED AND ARRANGEMENT OF ACTUAL EQUIPMENT AND APPARATUS PURCHASED). SUCH DRAWINGS SHALL BE PREPARED AND SHALL BE COORDINATED WITH OTHER TRADES.
- THE INSTALLATION OF FACILITIES AND APPURTENANT WORK SHALL BE PROVIDED IN ACCORDANCE WITH THE REQUIREMENTS OF ALL FEDERAL, STATE, AND MUNICIPAL CODES AND REGULATIONS GOVERNING THE WORK. IN INSTANCES WHERE THE REQUIREMENT OF DRAWINGS AND SPECIFICATIONS ARE IN EXCESS OF THE REQUIREMENTS OF THE APPLICABLE CODES AND REGULATIONS, AND ARE PERMITTED THEREUNDER, THEN THE REQUIREMENTS OF THE CONTRACT DOCUMENTS SHALL GOVERN.
- ALL EQUIPMENT SHALL BE INSTALLED IN STRICT CONFORMANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER, AS APPROVED, TRULY LEVEL AND PLUMB, AND SHALL BE PROVIDED COMPLETE WITH ALL NECESSARY PIPING, FITTINGS, VALVES, CONTROLS, WIRING, AND APPURTENANCES AND ACCESSORIES SO THE EQUIPMENT WILL BE LEFT COMPLETE AND IN SATISFACTORY OPERATING CONDITION. PARTICULAR CARE SHALL BE TAKEN IN THE INSTALLATION OF PUMPS IN ORDER TO PREVENT A STRAIN OF THE PIPING OR PUMP FLANGES AND SHALL INSURE THE CORRECT ALIGNMENT OF SHAFTS, COUPLINGS, AND BEARINGS.
- WHERE CONNECTION OF THE NEW PIPING SYSTEMS TO EXISTING PIPING SYSTEMS IS REQUIRED, PROVIDE MISCELLANEOUS FITTINGS, FILLER FLANGES, COUPLINGS, ETC. AS MAY BE REQUIRED TO COMPLETE THE WORK, WHETHER SHOWN ON THE DRAWINGS OR NOT. FIELD VERIFY ALL EXISTING PIPING DIMENSIONS.
- ALL PIPING SYSTEMS AND EQUIPMENT SHALL BE ADEQUATELY AND SAFELY SUPPORTED. DESIGN, PROVIDE, AND INSTALL ALL SUPPORTS AS REQUIRED BY THE PIPING AND EQUIPMENT PROVIDED. AT A MINIMUM, ALL PIPING SYSTEMS SHALL BE SUPPORTED PER THE REQUIREMENTS OF MANUFACTURER'S STANDARDIZATION SOCIETY (MSS) SP-58 AND MSS SP-69. SUPPORT DESIGN SHALL ACCOMMODATE ALL STATIC AND OPERATIONAL CONDITIONS TO WHICH THE PIPING AND EQUIPMENT MAY BE SUBJECTED. SUPPORTS SHALL BE IN ADDITION TO THOSE SHOWN ON THE DRAWINGS.
- FINAL LOCATION OF EQUIPMENT AND CONNECTION POINTS SHALL BE DETERMINED IN THE FIELD. ALL DIMENSIONS SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE.
- INSTALL EQUIPMENT SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE, AND REPAIR. MINOR DEVIATIONS FROM THE DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT PRIOR APPROVAL.
- OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED FOR THE EXECUTION OF THE WORK AND OBTAIN NECESSARY APPROVALS FROM AUTHORITIES THAT HAVE JURISDICTION.
- INFORMATION SHOWN ON SCHEMATICS AND DETAIL DRAWINGS BUT NOT SHOWN ON FLOOR PLANS, AND VICE VERSA, SHALL MUTUALLY APPLY. IT IS NOT INTENDED TO SHOW EVERY OFFSET, FITTING, OR COMPONENT; HOWEVER, PROVIDE A COMPLETE INSTALLATION AS NECESSARY.
- PIPE COUPLINGS MAY OR MAY NOT BE SHOWN ON THE DRAWINGS. THE USE OF PIPE COUPLINGS SHALL BE AS REQUIRED UNLESS SPECIFICALLY DICTATED.

**PIPE SCHEDULE**

SYMBOL	DESCRIPTION	LOCATION	MATERIAL	JOINT SYSTEM
W	WATER	INTERIOR	COPPER K	THREADED
		EXTERIOR	HDPE	BUTT FUSED



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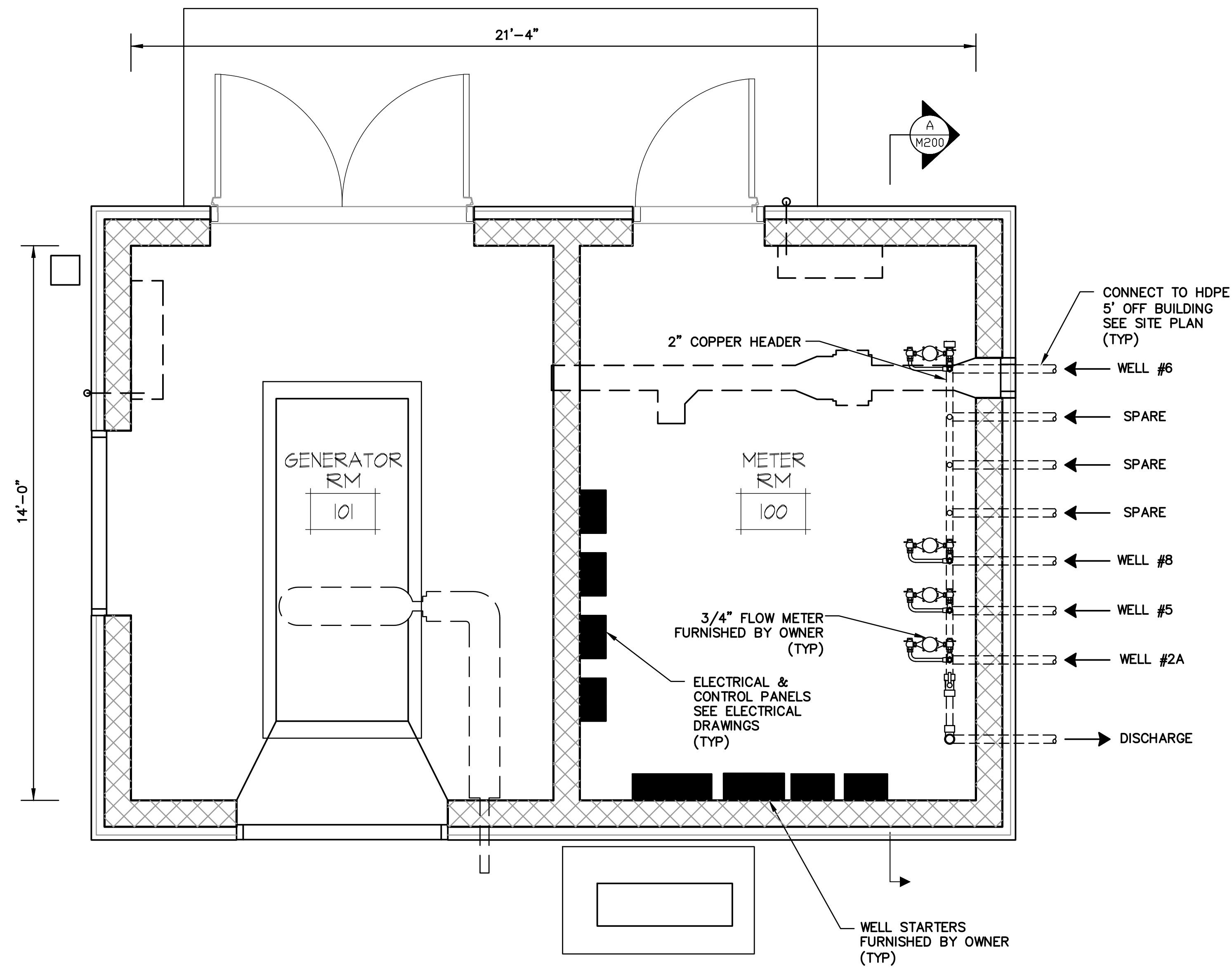
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 Approved By: RGT  
 W&S Project No: ENG22-0253

Drawing Title:  
**PROCESS GENERAL NOTES AND SCHEDULES**

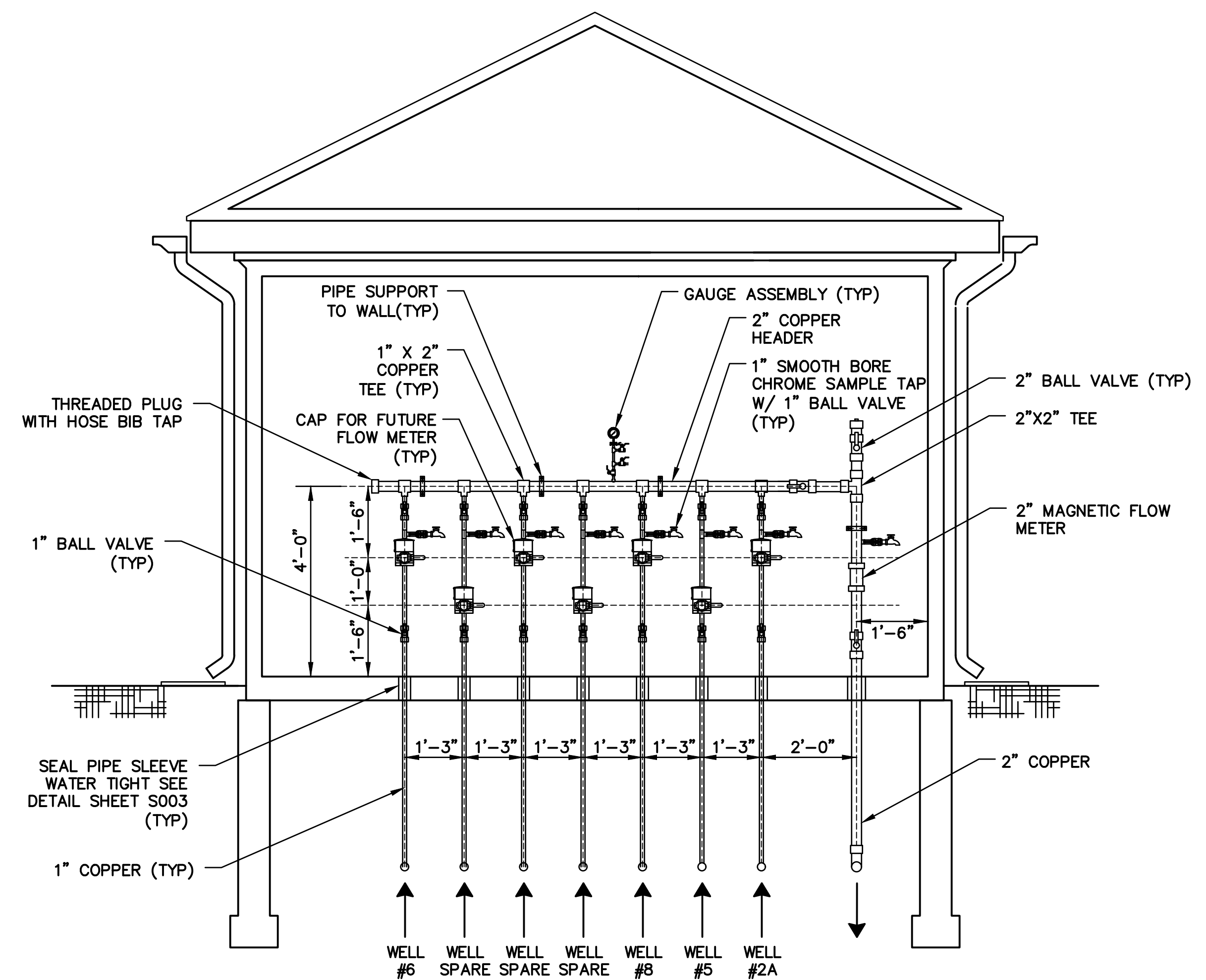
CWC Drawing Number:

Sheet Number:

**M100**



**METER BUILDING PLAN**  
SCALE: 1/2"=1'-0"



**SECTION A-A**  
SCALE: 1/2"=1'-0"

- NOTES:**
- SEE NOTES SHEET M100.
  - CT WATER WILL RETAIN THE SERVICES OF NIC SYSTEMS CORPORATION WHO WILL PROVIDE DESIGN SERVICES
  - NIC WILL PROVIDE PLCS
  - CT WATER WILL PROVIDE FLOW METERS AND PRESSURE SENSORS
  - SIMA DRILLING WILL PROVIDE AND INSTALL MOTOR STARTERS
  - GENERAL CONTRACTOR WILL INSTALL ALL EQUIPMENT PROVIDED BY NIC, SIMA, AND CT WATER, UNLESS OTHERWISE INDICATED.
  - SIMA WILL DESIGN AND INSTALL WELL PUMPS AND MOTOR STARTERS. (DESIGNED FOR 0.5 HP)
  - CONTROL PUMPS ON/OFF REMOTELY FROM LAUREL RIDGE WTP. ALL PUMPS WILL TURN ON AND OFF TOGETHER BASED ON WATER STORAGE TANK LEVEL AT THE LAUREL RIDGE WTP. "HARD" COMMAND TO TURN ON AND OFF PUMPS, NOT "MESSAGE".
  - CT WATER WILL PROVIDE WATER LEVEL MONITORING DETAIL/CUTSHEET AS PART OF THE WELL CASING CONSTRUCTION DETAIL

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W&S Project No: ENG22-0253

Drawing Title:  
**METER BUILDING LAYOUT PLAN**

CWC Drawing Number:

Sheet Number:

**M201**

**INSTRUMENT SYMBOLS**

- LOCALLY MOUNTED
- REAR OF PANEL OR RACK MOUNTED
- FRONT OF PANEL MOUNTING (PRIMARY LOCATION)
- FRONT OF PANEL MOUNTING (AUXILIARY LOCATION)
- INSTRUMENTS SHARING COMMON HOUSING
- PROCESS/CONTROLS INTERLOCK
- SHARED DISPLAY FUNCTION (BLIND)
- SHARED DISPLAY FUNCTION (OPERATOR ACCESS PRIMARY LOCATION)
- SHARED DISPLAY FUNCTION (OPERATOR ACCESS AUXILIARY LOCATION)
- COMPUTER FUNCTION (BLIND)
- COMPUTER FUNCTION (OPERATOR ACCESS PRIMARY LOCATION)
- COMPUTER FUNCTION (OPERATOR ACCESS AUXILIARY LOCATION)
- PLC LOGIC FUNCTION (BLIND)
- PLC LOGIC FUNCTION (OPERATOR ACCESS PRIMARY LOCATION)
- PLC LOGIC FUNCTION (OPERATOR ACCESS AUXILIARY LOCATION)
- PERSONAL SAFETY ALARM PUSH BUTTON (AII) OR EMERGENCY STOP PUSH BUTTON (RIL)
- AII - AMBER INDICATING LIGHT  
BIL - BLUE INDICATING LIGHT  
GIL - GREEN INDICATING LIGHT  
RIL - RED INDICATING LIGHT  
WIL - WHITE INDICATING LIGHT
- ALARM ACTIVATED HORN
- RED FLASHING BEACON HORN
- DIGITAL OUTPUT
- DIGITAL INPUT
- ANALOG OUTPUT
- ANALOG INPUT

**HAND SWITCHES**

- SPECIFIC SWITCH FUNCTION, (TYP)
  - LOOP NUMBER
  - HOA
  - VFD
  - ISP
  - M
- AO—AUTO/OFF  
 AM—AUTO/MANUAL  
 E—STOP—EMERGENCY STOP  
 FOR—FORWARD/OFF/REVERSE  
 FS—FAST/SLOW  
 FOS—FAST/OFF/SLOW  
 HOA—HAND/OFF/AUTO  
 HOR—HAND/OFF/REMOTE  
 LOR—LOCAL/OFF/REMOTE  
 LOS—LOCKOUT/STOP  
 LR—LOCAL/REMOTE  
 OC—OPEN/CLOSE  
 OCA—OPEN/CLOSE/AUTO  
 OSC—OPEN/STOP/CLOSE  
 OO—ON/OFF  
 SS—START/STOP  
 SOR—START/OFF/RESET

**PRIMARY ELEMENTS**

- AUTOMATIC CONTROL VALVE
- MAGNETIC FLOW METER
- TURBINE FLOW METER
- ULTRASONIC FLOW METER
- ORIFICE FLOW METER
- FLOW SWITCH
- LEVEL CAPACITANCE
- ULTRASONIC LEVEL SENSOR
- PROBE LEVEL SENSOR
- PRESSURE GAUGE
- DIFFERENTIAL PRESSURE GAUGE
- PRESSURE SWITCH
- PRESSURE TRANSMITTER
- TEMPERATURE GAUGE
- TEMPERATURE TRANSMITTER
- VENTURI FLOW METER

**INSTRUMENT LINE SYMBOLS**

- CONNECTION TO PROCESS OR INSTRUMENT IMPULSE LINE
- INSTRUMENT PNEUMATIC SIGNAL LINE (3-15 PSIG UNLESS NOTED OTHERWISE)
- INSTRUMENT ELECTRONIC SIGNAL LINE (CURRENT OR VOLTAGE AS NOTED ON SPEC SHEETS)
- FIELD TUBING OR CAPILLARY FOR THERMAL ELEMENTS AND PRESSURE SEALS
- INTERNAL SYSTEM LINK (SOFTWARE OR DATA LINK)
- UNGUIDED ELECTROMAGNETIC OR SONIC SIGNAL
- HEAT TRACED LINE
- RS232/RS485 SERIAL
- POWER
- INSTRUMENTATION
- ETHERNET
- FIBER OPTIC MEDIA

**INSTRUMENTATION DESIGNATIONS**

- A/B SELECTOR SWITCH
- A/M AUTO/MANUAL
- CLR CHLORINE RESIDUAL
- E-STOP EMERGENCY STOP
- ESD EMERGENCY SHUT DOWN
- F/R FORWARD/REVERSE
- H/O/A HAND/OFF/AUTO
- O/C OPEN CLOSE
- OL MOTOR OVERLOAD TRIP
- O/O ON OR OFF
- pH HYDROGEN ION CONCENTRATION
- S/S START STOP
- S START
- TU TURBIDITY
- ESE INDUSTRIAL ETHERNET SWITCH/HUB
- FOC FIBER OPTIC CONVERTER
- PSA PERSONAL SAFETY ALARM ILLUMINATED PUSHBUTTON
- EMERGENCY STOP ILLUMINATED PUSHBUTTON
- HIGH LOW ANALOG SELECT
- PSA PERSONAL SAFETY ALARM
- DO DISSOLVED OXYGEN
- NOX NITRATE
- TSS TOTAL SUSPENDED SOLIDS
- OIT OPERATOR INTERFACE TERMINAL (LOCAL PANEL MOUNT HMI)
- HMI HUMAN MACHINE INTERFACE
- PC PERSONAL COMPUTER
- LCP LOCAL CONTROL PANEL
- CP CONTROL PANEL
- PLC PROGRAMMABLE LOGIC CONTROLLER
- FO FIBER OPTIC MEDIA

**NOTES:**

1. THIS IS A GENERAL LEGEND AND NOTES SHEET AND SOME SYMBOLS OR NOTATIONS MAY NOT APPLY TO THIS PROJECT.
2. TAG ID NUMBERS AND EQUIPMENT TAG ID NUMBERS SHALL BE PROVIDED ON ACTUAL INSTRUMENTS AND EQUIPMENT. NUMBER COMPLETE FACILITY EQUIPMENT AND INSTRUMENTATION WITH TAG IDS, ENGRAVED LAMICOID WHITE ON BLACK.
3. ANALOG SIGNALS ARE 4-20 MA DC UNLESS OTHERWISE NOTED.
4. ALL PROCESS AND PROGRAMMABLE LOGIC CONTROL FUNCTIONS ARE DETAILED IN THE SPECIFICATIONS. THE FOLLOWING SHEETS SCHEMATICALLY REPRESENT INSTRUMENTATION AND CONTROL.
5. ALL PROCESS CONTROL FUNCTIONS AND DISPLAYS TO BE PROVIDED AT THE COMPUTER CONTROL SYSTEM SHALL BE PROVIDED BY THE INSTRUMENTATION AND CONTROL SYSTEM PROVIDER AS SPECIFIED.
6. SEE ELECTRICAL DRAWINGS FOR INSTRUMENTATION BLOCK DIAGRAMS FOR INTERCONNECTIONS BETWEEN CONTROL DEVICES, WIRING, AND SCADA SYSTEM NETWORK.
7. DEVICES MAY BE SUFFIXED 'H' OR 'L' TO DESIGNATE HIGH OR LOW ACTIVATION, AND 'HH' OR 'LL' TO DESIGNATE HIGH-HIGH OR LOW-LOW ACTIVATION.
8. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INSTRUMENTATION EQUIPMENT IDENTIFICATION, LINE SYMBOLS, ADDITIONAL ABBREVIATIONS AND INSTRUMENT TAGGING CONVENTIONS.
9. PROVIDE ISOLATION VALVES ON ALL SAMPLE LINES, 2 VALVE MANIFOLDS FOR ALL ABSOLUTE AND PRESSURE GAUGE DEVICES, AND 3-VALVE MANIFOLDS FOR ALL DIFFERENTIAL PRESSURE DEVICES.
10. REFERENCE CONTROL PANEL DRAWINGS INSTRUMENTATION CONFIGURATIONS AND PROCESS INSTRUMENTATION DRAWINGS FOR DETAILS.
11. SEE MECHANICAL SHEETS FOR INSTRUMENT AND EQUIPMENT LOCATIONS AND ADDITIONAL INSTALLATION DETAILS.

INSTRUMENTATION IDENTIFICATION LETTERS					
FIRST-LETTER			SUCCEEDING-LETTERS		
SYMBOL	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS	-	ALARM	-	-
B	BURNER, COMBUSTION	-	-	-	-
C	-	-	-	CONTROL	-
D	-	DIFFERENTIAL	-	-	-
E	VOLTAGE	-	SENSOR (PRIMARY ELEMENT)	-	-
F	FLOW RATE	RATIO (FRACTION)	-	-	-
G	-	-	GLASS, VIEWING DEVICE	-	-
H	HAND	-	-	-	HIGH
I	CURRENT (ELECTRICAL)	-	INDICATE	-	-
J	POWER	SCAN	-	-	-
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE	-	CONTROL STATION	-
L	LEVEL	-	LIGHT	-	LOW
M	-	MOMENTARY	-	-	MIDDLE, INTERMEDIATE
N	-	-	-	-	-
O	-	-	-	-	-
P	PRESSURE, VACUUM	-	ORIFICE, RESTRICTION	-	-
Q	QUANTITY	INTEGRATE, TOTALIZE	-	-	-
R	RADIATION	-	POINT (TEST) CONNECTION	-	-
S	SPEED, FREQUENCY	SAFETY	-	-	-
T	TEMPERATURE	-	RECORD	-	-
U	MULTIVARIABLE	-	-	SWITCH	-
V	VIBRATION, MECHANICAL ANALYSIS	-	-	TRANSMIT	-
W	WEIGHT, FORCE	-	-	MULTIFUNCTION	MULTIFUNCTION
X	UNCLASSIFIED	X AXIS	-	VALVE, DAMPER, LOUVER	-
Y	EVENT, STATE OR PRESENCE	Y AXIS	-	WELL	-
Z	POSITION, DIMENSION	Z AXIS	-	UNCLASSIFIED	UNCLASSIFIED
			-	UNCLASSIFIED	UNCLASSIFIED
			-	RELAY, COMPUTE, CONVERT	-
			-	DRIVER, ACTUATOR, UNCLASSIFIED	-
			-	FINAL CONTROL ELEMENT	-

Project:

**Connecticut Water**

CONNECTICUT WATER COMPANY  
93 WEST MAIN STREET  
CLINTON, CT 06413

EDGEWATER CIRCLE  
WELLFIELD IMPROVEMENTS  
AND METER BUILDING

EAST HAMPTON, CT

**Weston & Sampson**

Weston & Sampson Engineers, Inc.  
712 Brook Street, Suite 103  
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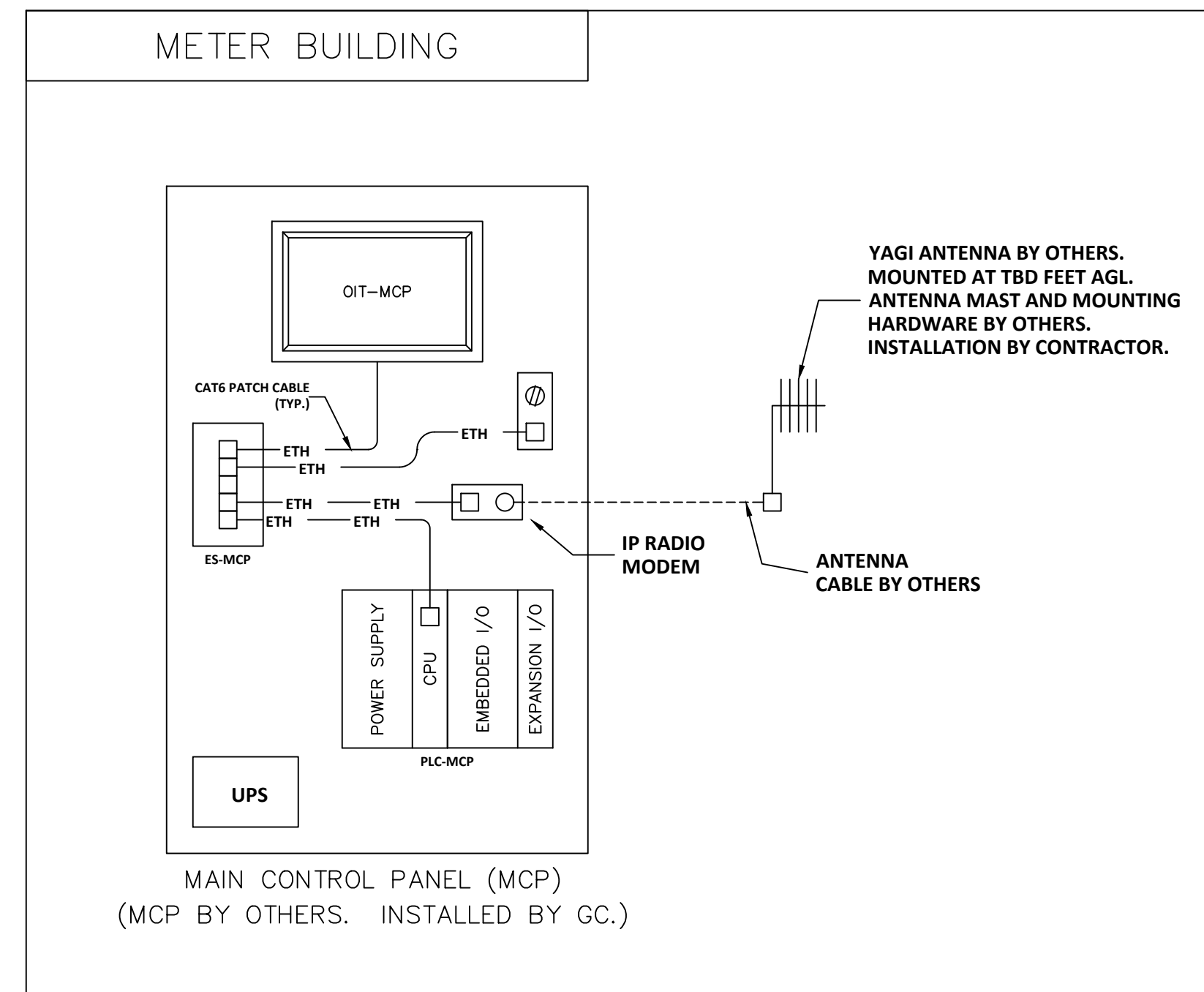
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**INSTRUMENTATION AND CONTROLS ABBREVIATIONS NOTES AND LEGEND**

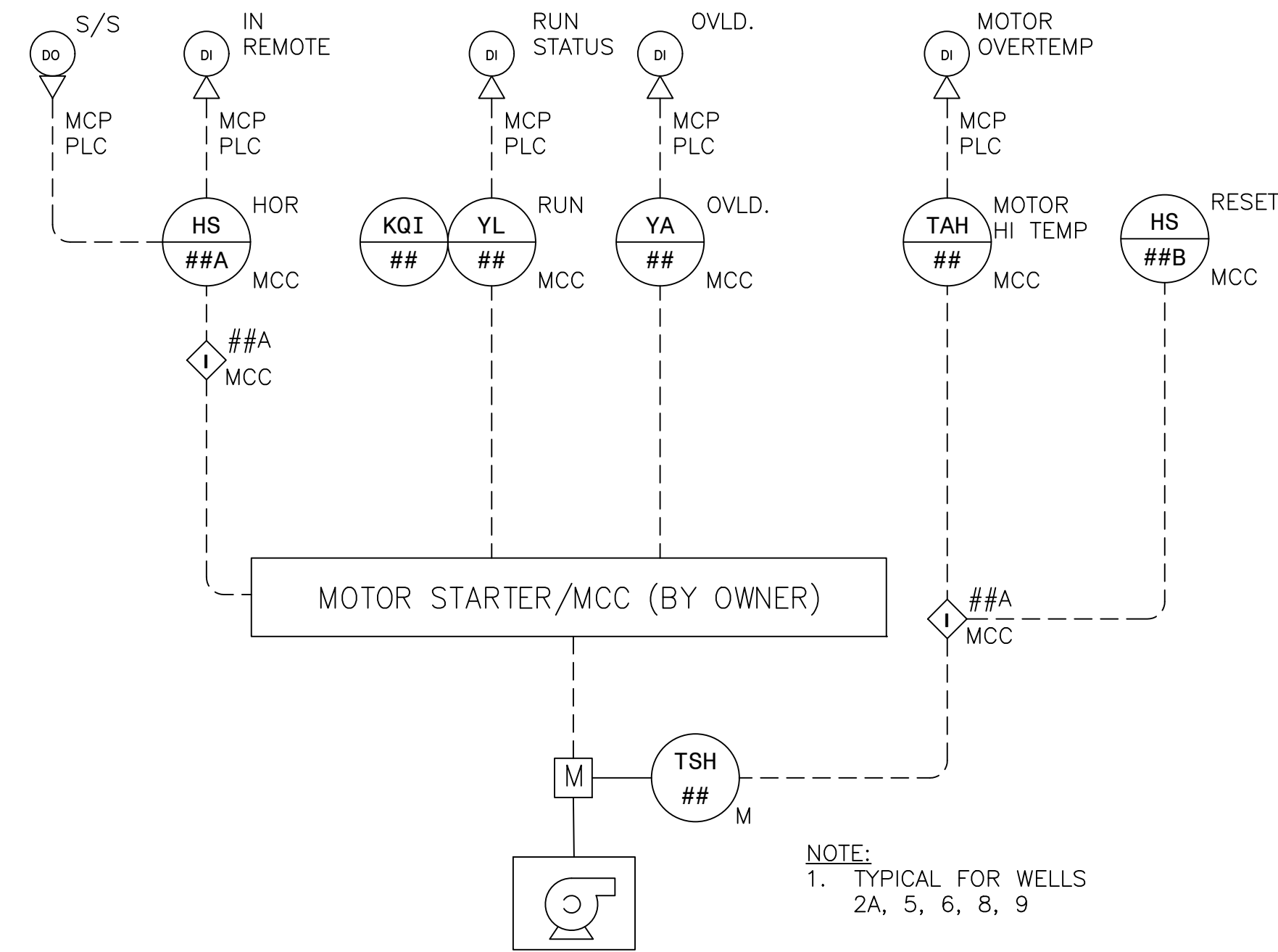
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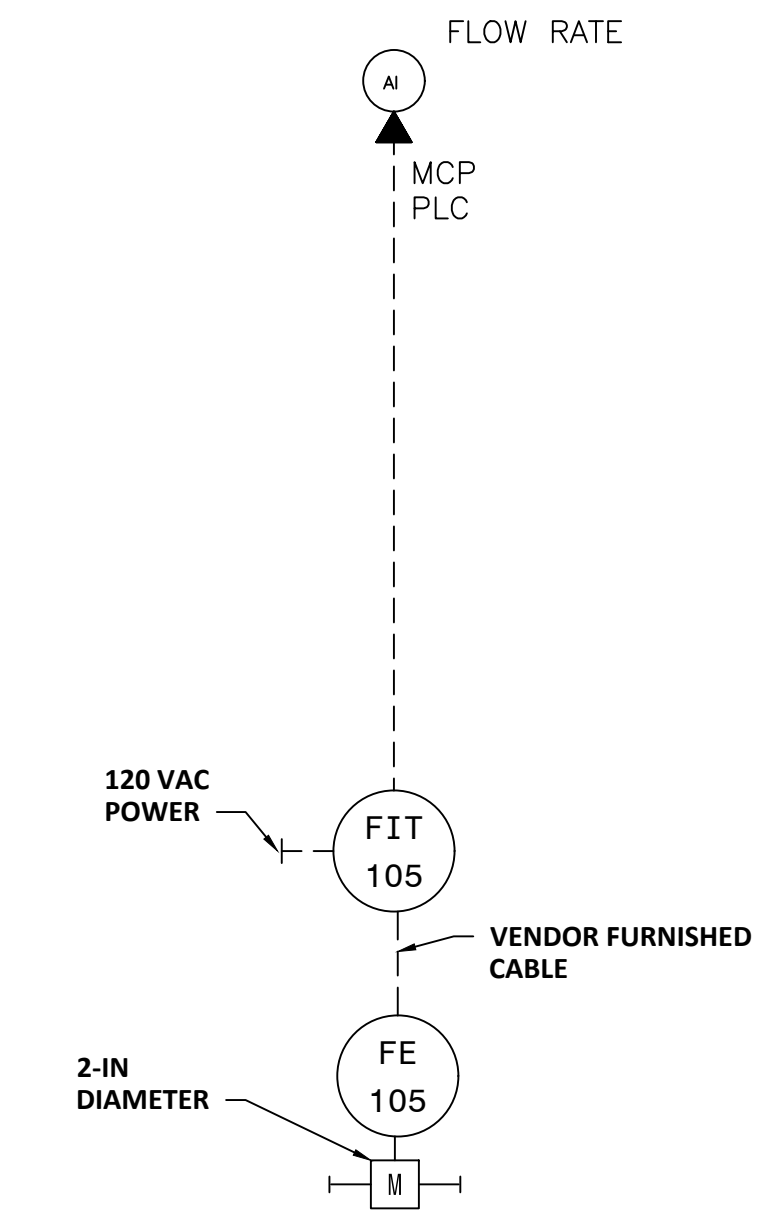
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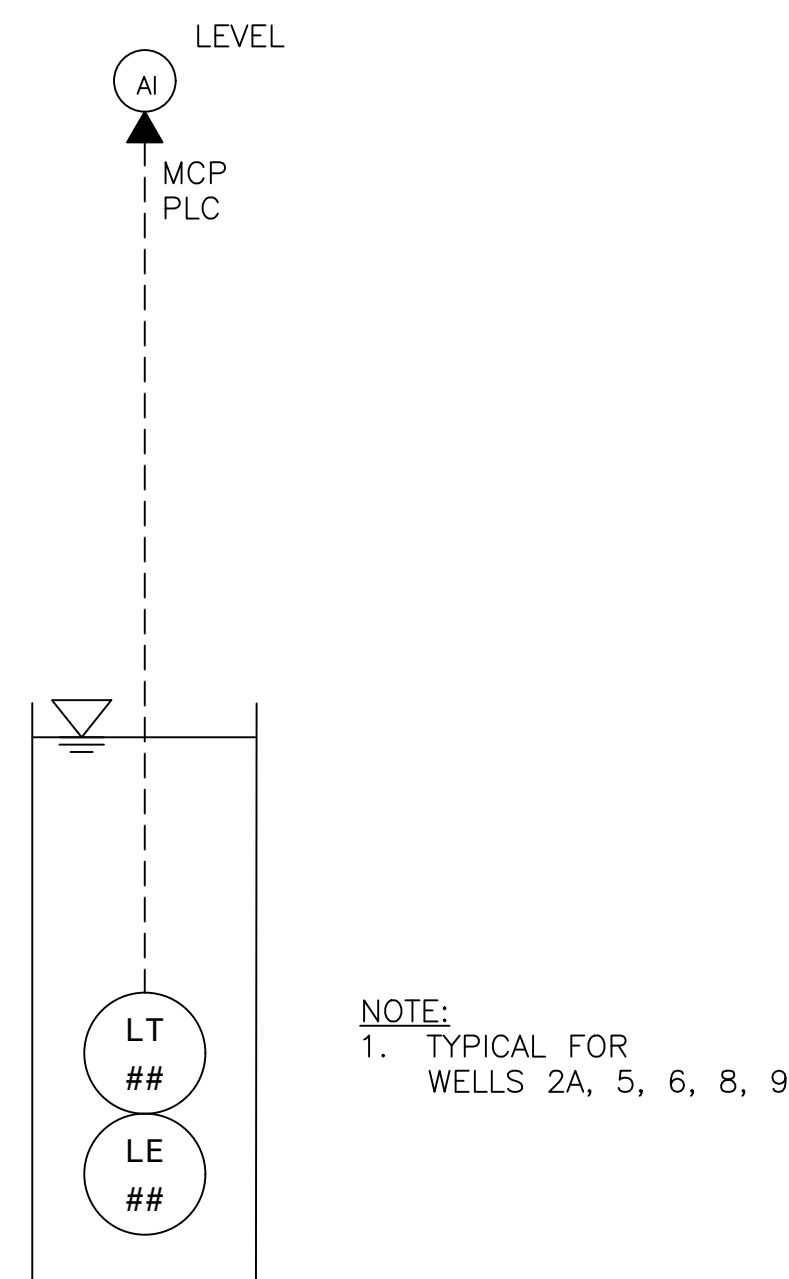
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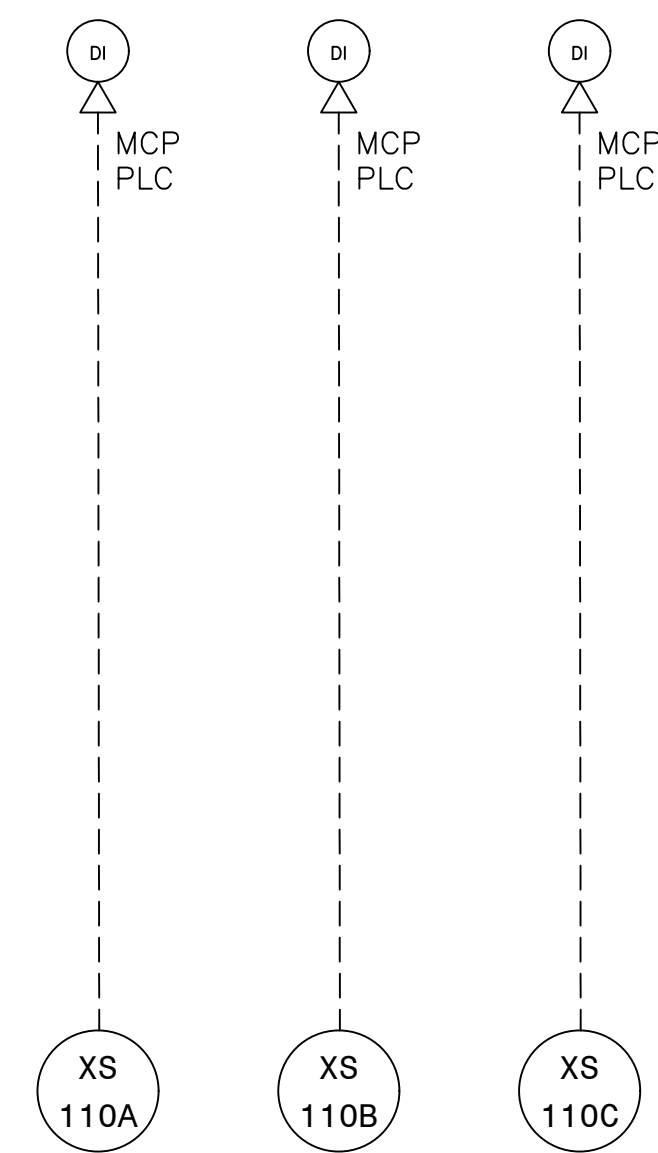
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N.T.S.



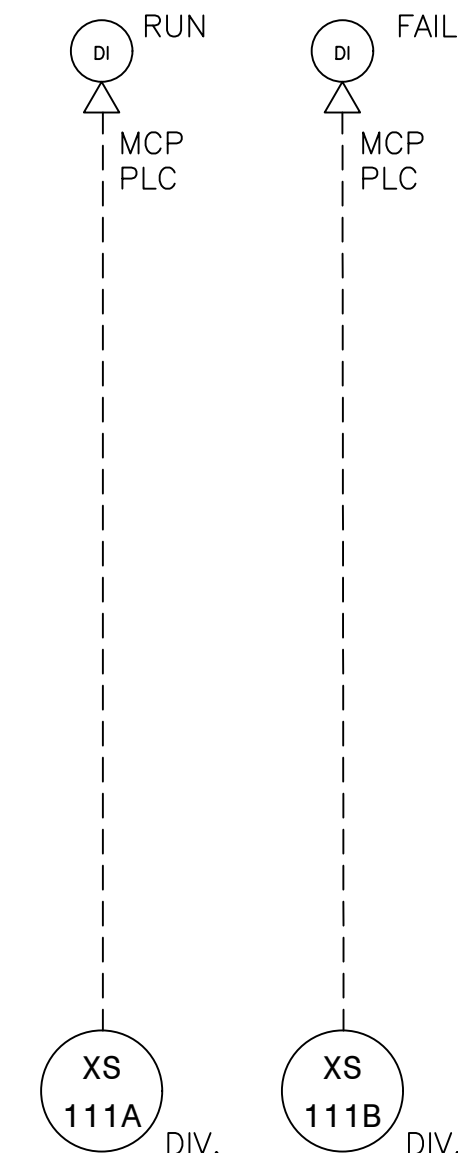
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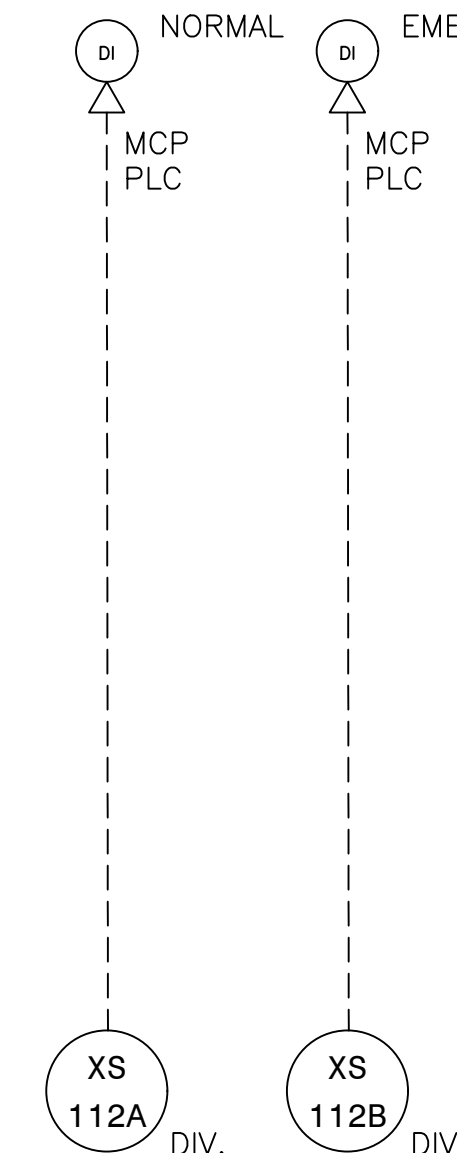
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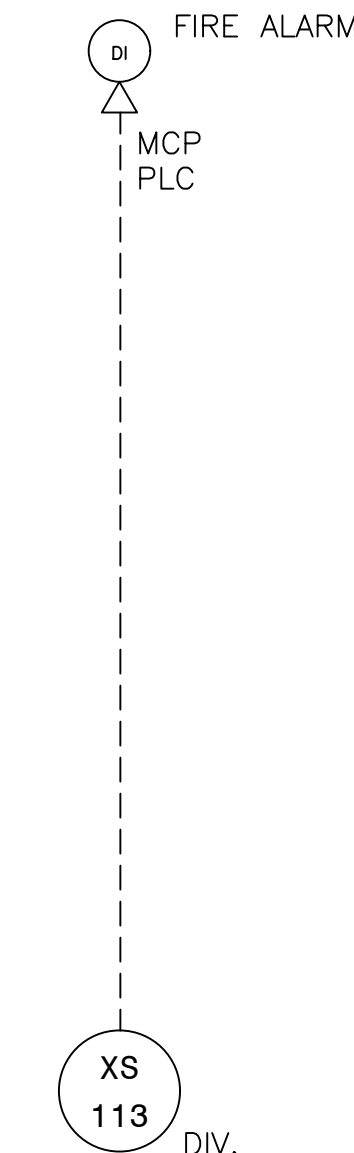
DOOR SWITCH  
DETAIL  
N.T.S.



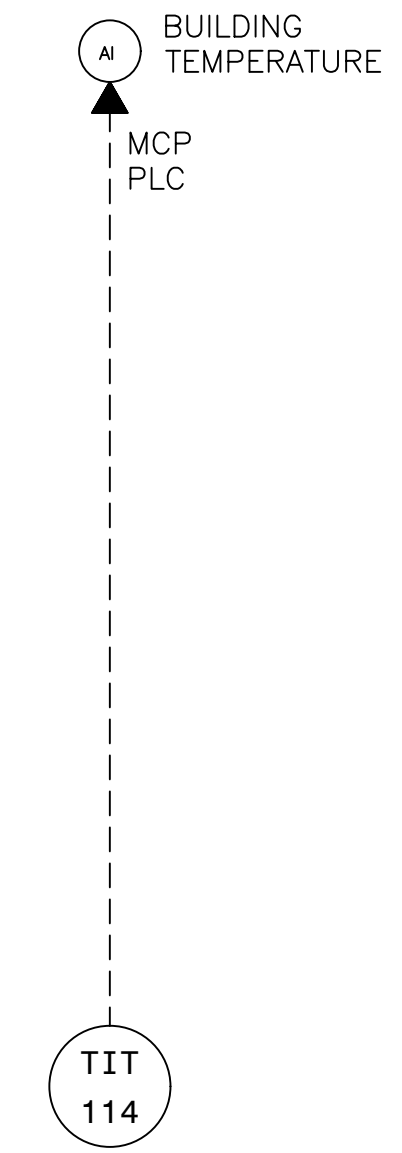
GENERATOR  
DETAIL  
N.T.S.



ATS DETAIL  
N.T.S.



FACP DETAIL  
N.T.S.



BLDG. TEMPERATURE  
INSTRUMENT DETAIL  
N.T.S.

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**INSTRUMENTATION  
AND CONTROLS  
DIAGRAMS I**

CWC Drawing Number:

Sheet Number:

**1100**



ELECTRICAL ABBREVIATIONS LIST

1P 1 POLE (2P, 3P, 4P, ETC.)	AS AMP SWITCH	CMPR COMPRESSOR	DS SAFETY DISCONNECT SWITCH	FIXT FIXTURE	HTG HEATING	LTG LIGHTING	MSP MOTOR STARTER PANELBOARD	PA PUBLIC ADDRESS	RM ROOM	SYM SYMMETRICAL	V VOLT	∠ ANGLE
A AMPERE	AT AMP TRIP	CONN CONNECTION	DT DOUBLE THROW	FLR FLOOR	HTR HEATER	LTNG LIGHTING	MSBD MAIN SWITCHBOARD	PB PULL BOX OR PUSHBUTTON	RSC RIGID STEEL CONDUIT	SYS SYSTEM	VA VOLT-AMPERES	@ AT
AC ABOVE COUNTER OR AIR CONDITIONER	ATS AUTOMATIC TRANSFER SWITCH	CONST CONSTRUCTION	DWG DRAWING	FLUOR FLUORESCENT	HVAC HEATING, VENTILATING AND AIR CONDITIONING	LV LOW VOLTAGE	MT MOUNT	PE PNEUMATIC ELECTRIC	RTU ROOF TOP UNIT	TEL TELEPHONE	VDI VIDEO DISPLAY TERMINAL	Δ DELTA
ACLG ABOVE CEILING	AUX AUXILIARY	CONTR CONTRACTOR	ELEC ELECTRIC, ELECTRICAL	FUSE FUSE	HVAC HEATING, VENTILATING AND AIR CONDITIONING	MAX MAXIMUM	MT.C EMPTY CONDUIT	PED PEDESTAL	SC SURFACE CONDUIT	TEL/DATA TELEPHONE/DATA	VERT VERTICAL	· FEET
ADJ AUTOMATIC DOOR OPENER	AV AUDIO VISUAL	CONTR CONTRACTOR	ELEV ELEVATOR	FUSDS FUSED SAFETY DISCONNECT SWITCH	IC INTERRUPTING CAPACITY	MC MECHANICAL CONTRACTOR	MTS MANUAL TRANSFER SWITCH	PF POWER FACTOR	SEC SECONDARY	TERM TERMINAL	VFD VARIABLE FREQUENCY DRIVE	· INCHES
AF AMP FRAME	AWG AMERICAN WIRE GAUGE	CP CIRCULATING PUMP	EM EMERGENCY	GAL GALLON	IC INTERRUPTING CAPACITY	MC MECHANICAL CONTRACTOR	N.C. NORMALLY CLOSED	PIV POST INDICATING VALVE	SIM SIMILAR	TR TAMPER RESISTANT	W WATT	Ø PHASE
AFF ABOVE FINISHED FLOOR	BATT BATTERY	CRT CATHODE-RAY TUBE	EMS ENERGY MANAGEMENT SYSTEM	GALV GALVANIZED	IG ISOLATED GROUND	MCB MAIN CIRCUIT BREAKER	NEC NATIONAL ELECTRICAL CODE	PNL PANEL	SIN SOLID NEUTRAL	T-STAT THERMOSTAT	W/ WITH	C CENTER LINE
AFG ABOVE FINISHED GRADE	BD BOARD	CT CURRENT TRANSFORMER	EMT ELECTRICAL METALLIC TUBING	GC GENERAL CONTRACTOR	IMC INTERMEDIATE METAL CONDUIT	MCC MOTOR CONTROL CENTER	NEMA NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION	PP POWER POLE	SPEC SPECIFICATION	TTC TELEPHONE TERMINAL CABINET	WG WIRE GUARD	P PLATE
AFI ARC FAULT CIRCUIT INTERRUPTER	BLDG BUILDING	CTR CENTER	EP ELECTRIC PNEUMATIC EQUIPMENT	GEN GENERATOR	INCAND INCANDESCENT	MDC MAIN DISTRIBUTION CENTER	MANUFACTURER'S ASSOCIATION	PR PAIR	SPKR SPEAKER	TV TELEVISION	WH WATER HEATER	
AHU AIR HANDLING UNIT	BMS BUILDING MANAGEMENT SYSTEM	CU COPPER	EQUIP EQUIPMENT	GFI GROUND FAULT CIRCUIT INTERRUPTER	IR INFRARED	MDF MAIN DISTRIBUTION PANEL	NON-FUSED SAFETY DISCONNECT SWITCH	PROJ PROJECTION	SP SPARE	TVTC TELEVISION TERMINAL CABINET	W/O WITHOUT	
AL ALUMINUM	CAB CABINET	DCP PUMP	EXIST EXISTING	GND GROUND	IW INTERLOCK WITH	MFR MANUFACTURER	NOT IN CONTRACT	PRV POWER ROOF VENTILATOR	SR SURFACE RACEWAY	TYP TYPICAL	WP WEATHERPROOF	
ALT ALTERNATE	CAT CATALOG	DEPT DEPARTMENT	EXH EXHAUST	GRS GALVANIZED RIGID STEEL (CONDUIT)	J-BOX JUNCTION BOX	MFS MAIN FUSED DISCONNECT SWITCH	NIC NOT IN CONTRACT	PT POTENTIAL TRANSFORMER	SS STAINLESS STEEL	UC UNDER COUNTER	XFR TRANSFORMER	
AMP AMPERE	CATV CABLE TELEVISION	DET DETAIL	EXP EXPLOSION PROOF	GYP BD GYPSUM BOARD	KV KILOVOLT	MH MANHOLE	NL NIGHT LIGHT	PVC POLYVINYL CHLORIDE (CONDUIT)	SSW SELECTOR SWITCH	UE UNDERGROUND ELECTRICAL	XFR TRANSFER	
AMPL AMPLIFIER	CB CIRCUIT BREAKER	DIA DIAMETER	FA FIRE ALARM	HOA HANDS-OFF-AUTOMATIC SWITCH	KVA KILOVOLT-AMPERE	MI MICROPHONE	N.O. NORMALLY OPEN	PWR POWER	STA STATION	UG UNDERGROUND		
ANNUN ANNUNCIATOR	CCVT CLOSED CIRCUIT TELEVISION	DISC DISCONNECT	FABP FIRE ALARM BOOSTER POWER SUPPLY PANEL	HORIZ HORIZONTAL	KW KLOWATT	MSC MISCELLANEOUS	NTS NOT TO SCALE	QUAN QUANTITY	STD STANDARD	UH UNIT HEATER		
APPROX APPROXIMATELY	CCTV CIRCUIT TELEVISION	DIST DISTRIBUTION	FAFP FIRE ALARM CONTROL PANEL	HP HORSEPOWER	KWH KLOWATT HOUR	MLO MAIN LUGS ONLY	OH OVERHEAD	RCPT RECEPTACLE	SURF SURFACE MOUNTED	UT UNDERGROUND TELEPHONE		
AQ-STAT AQUASTAT	CLG CEILING	DN DOWN	FCAP FIRE ALARM CONTROL PANEL	HPF HIGH POWER FACTOR	LOC LOCATE OR LOCATION	MMS MANUAL MOTOR STARTER	OHD OVERHEAD DOOR	REQD REQUIRED	SW SWITCH	UV UNIT VENTILATOR OR ULTRAVIOLET		
ARCH ARCHITECTURAL	COMB COMBINATION	DRP DAMPER	FCU FAN COIL UNIT	HT HEIGHT	LT LIGHT	MMA MULTIOUTLET ASSEMBLY	OL OVERLOADS	RM ROOM	SWBD SWITCHBOARD			

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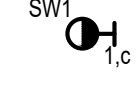
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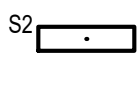
ELECTRICAL  
LEGEND,  
ABBREVIATIONS  
AND GENERAL  
NOTES


**Sheet Number:**


E001


**LIGHTING/LIGHTING CONTROL LEGEND**

 WALL MOUNTED EMERGENCY LED FIXTURE WITH EMERGENCY BATTERY BACKUP BALLAST. PROVIDE THIRD WIRE FOR EMERGENCY MODE BYPASS IF SWITCHED (TYPICAL). "SW1" DENOTES FIXTURE TYPE; NUMERAL DENOTES CIRCUIT NUMBER. "c" SUBSCRIPT DENOTES SWITCH CONTROL WHERE SHOWN

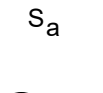
 1" X 4" PENDANT OR SURFACE MOUNTED LED FIXTURE "S2" DENOTES FIXTURE TYPE; NUMERAL DENOTES CIRCUIT NUMBER. "a" SUBSCRIPT DENOTES SWITCH CONTROL WHERE SHOWN


 1" X 4" PENDANT OR SURFACE MOUNTED EMERGENCY LED FIXTURE WITH EMERGENCY BATTERY BACKUP BALLAST. PROVIDE THIRD WIRE FOR EMERGENCY MODE BYPASS IF SWITCHED (TYPICAL). "S2E" DENOTES FIXTURE TYPE; NUMERAL DENOTES CIRCUIT NUMBER. "a" SUBSCRIPT DENOTES SWITCH CONTROL WHERE SHOWN

 EXIT SIGN CEILING OR PENDANT MOUNTED. ARROWS DENOTE DIRECTION OF EGRESS. NUMERAL DENOTES CIRCUIT NUMBER. SHADED CHEVRONS DENOTE EXIT FACES.

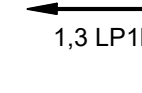
 WALL MOUNTED EXIT SIGN. ARROWS DENOTE DIRECTION OF EGRESS. NUMERAL DENOTES CIRCUIT NUMBER. SHADED CHEVRONS DENOTE EXIT FACES.

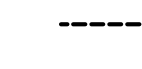
**LIGHTING CONTROL SWITCHES**


 SINGLE POLE SWITCH, "a" SUBSCRIPT DENOTES CIRCUITS CONTROLLED.

 PHOTOCCELL


**RACEWAY AND WIRING**

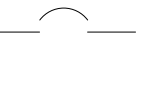
 HOMERUN TO PANELBOARD WITH 3/4", 2 #12 & 1#12GND UNLESS NOTED OTHERWISE. NUMERALS 1 AND 3 INDICATE CIRCUITS IN PANELBOARD. RACEWAYS LARGER THAN 3/4" AND CONDUCTORS LARGER THAN #12 AWG SHALL BE INDICATED ON THE DRAWINGS. PROVIDE AN INSULATED GREEN GROUND WIRE IN ALL RACEWAYS. MINIMUM SIZE TO BE #12AWG.

 RACEWAY RUN UNDERGROUND OR CONCEALED IN SLAB

 RACEWAY RUN EXPOSED

**ONE-LINE POWER DIAGRAM SYMBOLS**


 GROUND - SYSTEM AND/OR EQUIPMENT


 CIRCUIT BREAKER

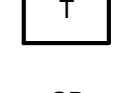
**GENERAL ELECTRICAL NOTES**

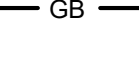
- DRAWINGS ARE DIAGRAMMATIC ONLY. THE EXACT LOCATION, MOUNTING HEIGHTS, SIZE OF EQUIPMENT AND ROUTING OF RACEWAYS SHALL BE COORDINATED AND DETERMINED IN THE FIELD.
- THE EXACT LOCATION AND MOUNTING HEIGHTS OF ALL LIGHTING FIXTURES LOCATED IN MECHANICAL/ELECTRICAL EQUIPMENT SPACES SHALL BE COORDINATED IN THE FIELD BY THE ELECTRICAL CONTRACTOR BEFORE INSTALLATION OF SAME, SO AS TO AVOID INTERFERENCE WITH DUCTS, PIPING AND OTHER MECHANICAL/ELECTRICAL EQUIPMENT.
- ALL STRAIGHT FEEDER, BRANCH CIRCUIT AND AUXILIARY SYSTEM CONDUIT RUNS SHALL BE PROVIDED WITH SUFFICIENT PULL BOXES TO LIMIT THE MAXIMUM LENGTH OF ANY SINGLE CABLE PULL TO 150 FEET. EXACT SIZES OF PULL BOXES AND LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ELECTRICAL CONTRACTOR.
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE HVAC, PLUMBING, AND GENERAL CONTRACTORS AS APPLICABLE AS TO THE EXACT LOCATION OF THEIR RESPECTIVE EQUIPMENT; THE POWER WIRING, CONTROL WIRING AND ALL ELECTRICAL CONNECTIONS AND CONDUIT TURN-UPS SHALL BE COORDINATED WITH THE RESPECTIVE CONTRACTORS BEFORE THE START OF CONSTRUCTION IN THE FIELD.
- SLEEVES ARE TO BE UTILIZED FOR PASSAGE OF CONDUITS THROUGH FLOORS OR WALLS. CONDUITS AND BOXES ARE TO BE SUPPORTED BY THE USE OF PRESET FASTENERS INSTALLED IN FLOORS, WALLS OR COLUMNS. CONDUITS AND BOXES ARE TO BE INSTALLED CONCEALED IN MASONRY WALLS AND ABOVE HUNG CEILINGS. ALL SLEEVES ARE TO BE SEALED WITH APPROVED FIRE STOPPING SEALANT.
- ALL LIGHTING FIXTURES, ELECTRICAL DEVICES, CABLES AND RACEWAYS ARE TO BE INDEPENDENTLY SUPPORTED OF THE CEILING SYSTEM. FIXTURES ARE TO BE SUPPORTED FROM THE STRUCTURE BY THE USE OF JACK CHAIN, THREADED ROD OR OTHER MEANS APPROVED BY THE ENGINEER. CEILING SYSTEM TIE WIRES AND GRID ARE NOT TO BE UTILIZED FOR THE SUPPORT OF ELECTRICAL DEVICES, CABLES AND RACEWAYS. APPROVED SUPPORTS, HANGERS, CLIPS, ETC. ARE TO BE UTILIZED.
- COMBINED HOMERUNS OF TWO (2) OR THREE (3) CIRCUITS MAY BE UTILIZED. HOWEVER, THE NEUTRAL CONDUCTOR IS TO BE INCREASED TO #10AWG. COMBINED HOMERUNS ARE TO BE LIMITED TO 20A, LIGHTING AND POWER CIRCUITS.
- WORK SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE WITH CONNECTICUT AMENDMENTS, CONNECTICUT BUILDING CODE, NFPA AND REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION.
- THE WORD "CONTRACTOR" AS USED IN THE "ELECTRICAL WORK" SHALL MEAN THE ELECTRICAL SUBCONTRACTOR.
- CONTRACTOR SHALL PAY FOR ALL PERMITS, INSURANCE AND TESTS, AND SHALL PROVIDE LABOR AND MATERIAL TO COMPLETE THE ELECTRICAL WORK SHOWN.
- CONTRACTOR PAY ELECTRIC UTILITY COMPANY BACKCHARGES
- CONTRACTOR SHALL PROVIDE ALL REQUIRED COORDINATION WITH ELECTRIC UTILITY.
- EXCEPT AS OTHERWISE NOTED, THE ELECTRICAL WORK SHALL INCLUDE PANELBOARDS, CIRCUIT BREAKERS, FEEDERS, WIRING, RACEWAYS, LIGHTING FIXTURES, DEVICES, SAFETY SWITCHES, TRANSFORMERS AND CONNECTION NECESSARY TO OPERATE MOTORS AND OTHER EQUIPMENT.
- THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY LIGHTING AND POWER AND THE GENERAL CONTRACTOR SHALL PAY ALL ENERGY CHARGES FOR TEMPORARY POWER AND LIGHTING.
- DURING CONSTRUCTION, THE ELECTRICAL CONTRACTOR SHALL KEEP HIS PORTION OF THE WORK NEAT, CLEAN AND ORDERLY.
- ALL SYSTEMS SHALL BE TESTED FOR SHORT CIRCUIT AND GROUNDS PRIOR TO ENERGIZING AND ANY DEFECTS SHALL BE CORRECTED.
- ALL CUTTING AND PATCHING REQUIRED FOR ELECTRICAL WORK SHALL BE INCLUDED AS PART OF THIS SECTION.
- COMPLETE SHOP DRAWINGS SHALL BE SUBMITTED FOR ELECTRICAL EQUIPMENT. WHERE SPECIFIED ELECTRICAL EQUIPMENT IS SUBSTITUTED, THE ELECTRICAL CONTRACTOR SHALL SUBMIT COMPLETE SPECIFICATIONS ON THE SUBSTITUTE AS WELL AS THE ITEM ORIGINALLY SPECIFIED.
- MATERIALS SHALL BE SPECIFICATION GRADE AND UL LISTED.
- WHERE MATERIAL IS CALLED OUT IN THE LEGEND BY MANUFACTURER, TYPE OR CATALOG NUMBER, SUCH DESIGNATIONS ARE TO ESTABLISH STANDARDS OR DESIRED QUALITY. ACCEPTANCE OR REJECTIONS OF PROPOSED SUBSTITUTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
- WORK SHALL BE COORDINATED WITH THAT OF OTHER TRADES TO ELIMINATE INTERFERENCES.
- ELECTRICAL WORK SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL COMPLETION.
- WORK SHALL BE GROUNDED IN ACCORDANCE WITH CODE REQUIREMENTS. COMPLETE EQUIPMENT (INSULATED GREEN WIRE) GROUNDING SYSTEM SHALL BE INSTALLED.
- WIRING METHODS:
  - EXTERIOR UNDERGROUND FEEDERS SHALL BE PVC SCHEDULE 80 FOR DIRECT BURIED AND PVC SCHEDULE 40 FOR CONCRETE ENCASED.
  - EXTERIOR ABOVE GRADE FEEDERS SHALL BE RGS CONDUIT.
  - INTERIOR FEEDERS EXPOSED OR BURIED IN CONCRETE WALLS/SLABS SHALL BE RGS CONDUIT.
  - INTERIOR BRANCH CIRCUITS FOR HVAC AND PLUMBING EQUIPMENT SHALL BE RGS.
  - LIGHTING FIXTURE CONNECTIONS SHALL BE MC CABLE.
  - EQUIPMENT CONNECTIONS SHALL BE LIQUID TIGHT FLEXIBLE METAL CONDUIT.
- CONDUIT PASSING THROUGH FIRE RATED WALLS AND FLOORS SHALL BE PROVIDED WITH ALL NECESSARY MATERIALS TO ENSURE THAT THE FIRE RATED INTEGRITY IS MAINTAINED.
- CONTRACTOR SHALL CHECK EXISTING CONDITIONS TO DETERMINE EXACT EXTENT OF WORK TO BE PERFORMED PRIOR TO BIDDING. DIMENSIONS RELEVANT TO EXISTING WORK SHALL BE VERIFIED IN THE FIELD.
- IN AREAS NOT AFFECTED BY THIS RENOVATION, THIS SUBCONTRACTOR SHALL MAINTAIN CONTINUITY OF ELECTRIC SERVICE.
- PROVIDE AS-BUILT "CADD" DRAWINGS AT THE COMPLETION OF THE PROJECT.
- ELECTRICAL CONTRACTOR SHALL LABEL ALL ELECTRICAL DEVICES INCLUDING BUT NOT LIMITED TO RECEPTACLES, TEL/DATA OUTLETS, DISCONNECT SWITCHES, PANELBOARDS, THERMAL MOTOR SWITCHES, CONTROL PANELS, JUNCTION BOXES, ETC.
  - RECEPTACLES - PANEL NAME AND CIRCUIT DESIGNATION
  - DISCONNECTS - PANEL NAME, CIRCUIT DESIGNATION AND EQUIPMENT SERVING.
  - THERMAL MOTOR SWITCHES - PANEL NAME, CIRCUIT DESIGNATION AND EQUIPMENT SERVING.
  - ENCLOSED CIRCUIT BREAKERS - PANEL NAME, CIRCUIT DESIGNATION AND EQUIPMENT SERVING.
  - PANELBOARDS - PANEL NAME, VOLTAGE, AMPERAGE, PHASE AS WELL AS PANEL AND CIRCUIT IT IS FED FROM.
  - CONTROL PANEL - PANEL NAME AND CIRCUIT DESIGNATION
  - JUNCTION BOXES - PANEL NAME AND CIRCUIT DESIGNATION
- ADDRESS QUESTIONS TO THE ENGINEER IN WRITING BEFORE AWARD OF CONTRACT, OTHERWISE ENGINEER INTERPRETATION OF MEANING AND INTENT OF DRAWINGS SHALL BE FINAL.


**POWER LEGEND**


 480V PANELBOARD-SURFACE MOUNTED


 208V PANELBOARD-SURFACE MOUNTED


 DRY TYPE TRANSFORMER


 GROUND BUS WALL MOUNTED EXTEND A 1/2", 1-#6 INSULATED GROUND TO THE BUILDING GROUND SYSTEM

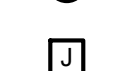
 FUSIBLE SAFETY SWITCH - RATING AND TYPE AS NOTED ON THE DRAWING. (30 AMP, 20 AMP FUSE, 3 POLE)


 MOTOR, NUMERAL DENOTES HORSE POWER


 PULL BOX


 HAND-OFF-AUTOMATIC SELECTOR SWITCH


 THREE FUNCTION PUSHBUTTON SWITCH

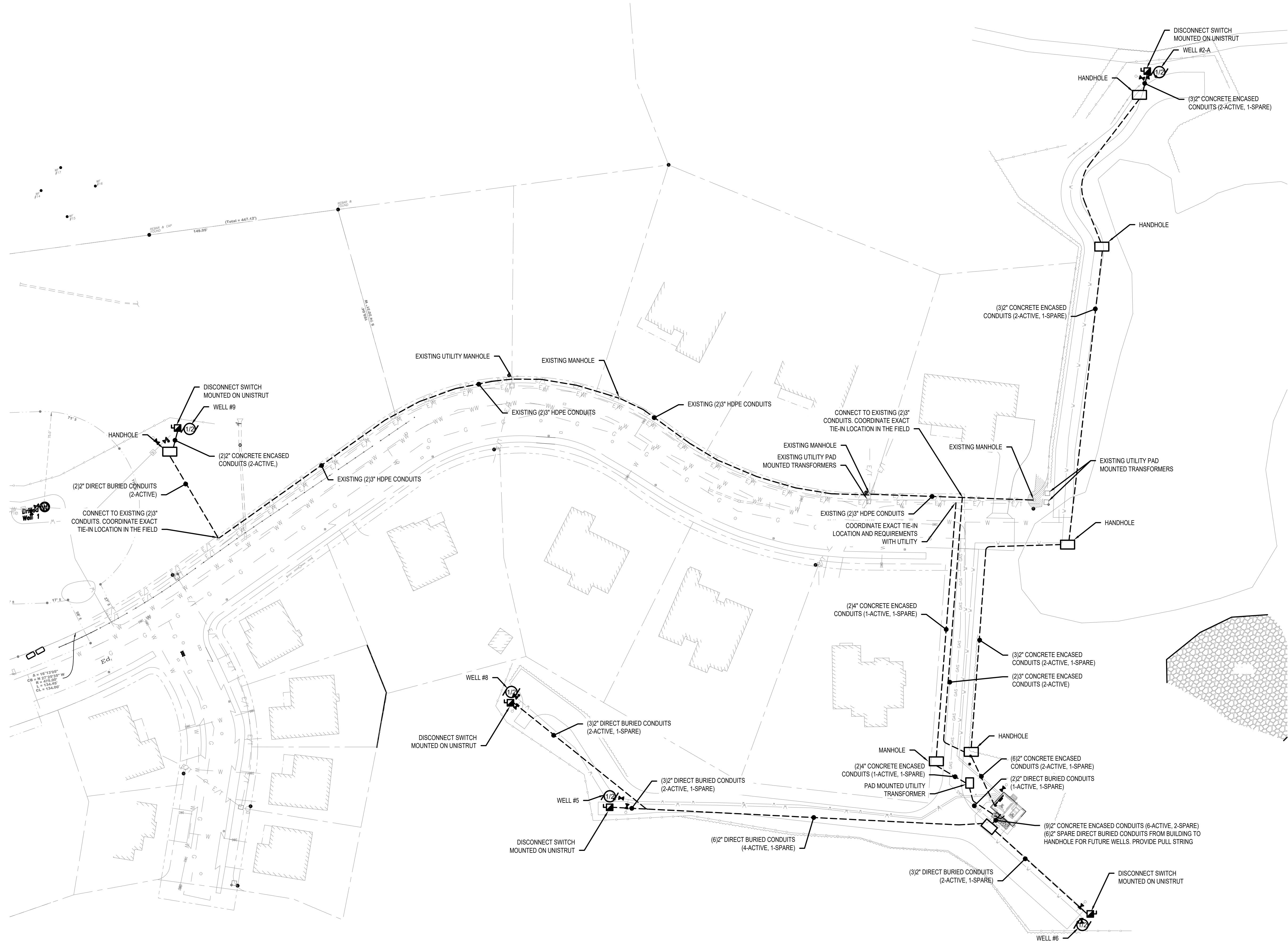
 FLUSH WALL MOUNTED JUNCTION BOX WITH BLANK COVERPLATE, SIZE AS REQUIRED BY N.E.C.

 JUNCTION BOX WITH BLANK COVERPLATE, SIZE AS REQUIRED BY N.E.C.

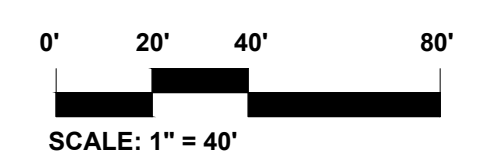
 EMERGENCY GENERATOR

 AUTOMATIC TRANSFER SWITCH

 EMERGENCY PUSH BUTTON



1 SITE PLAN  
SCALE: 1" = 40'-0"



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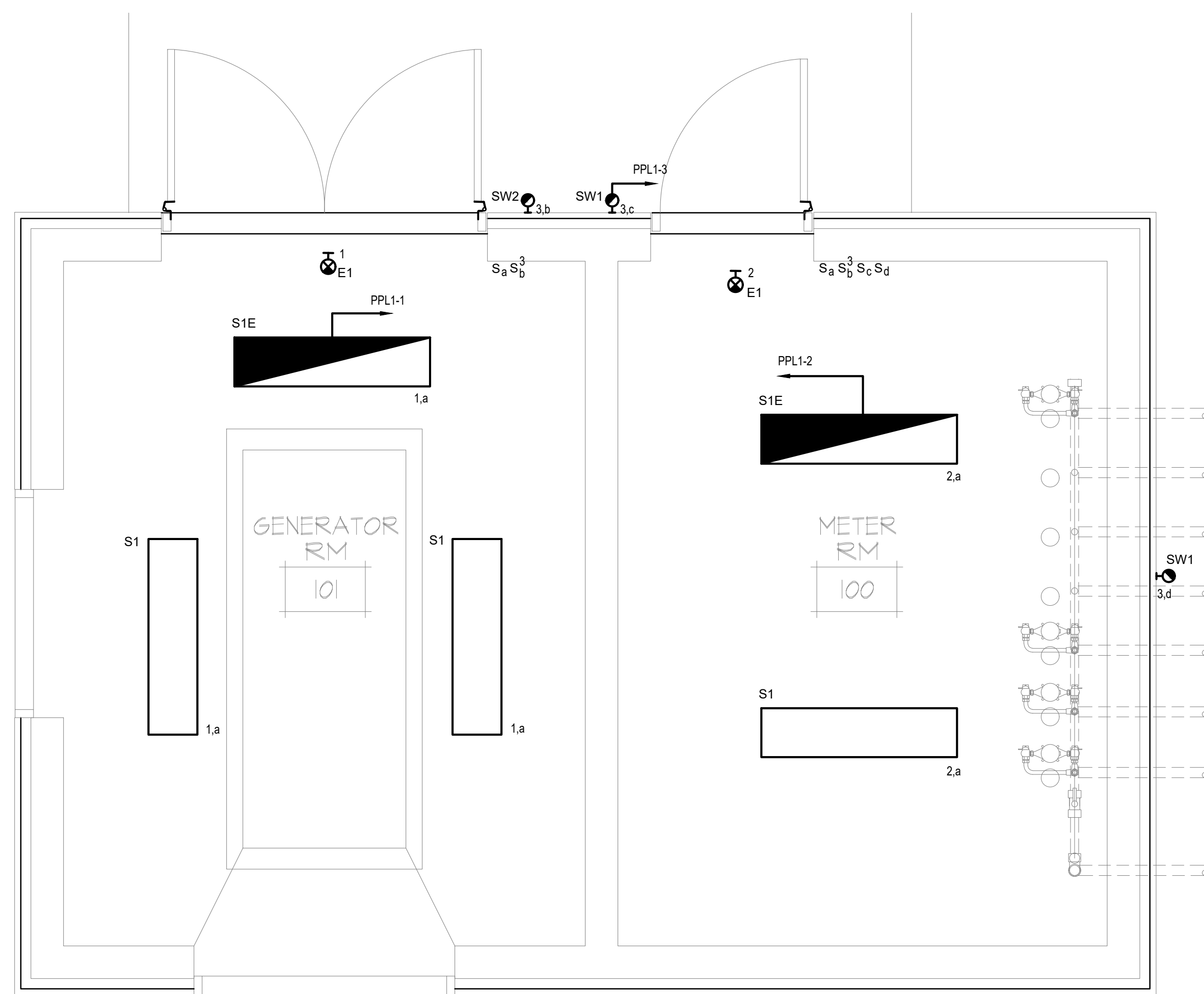
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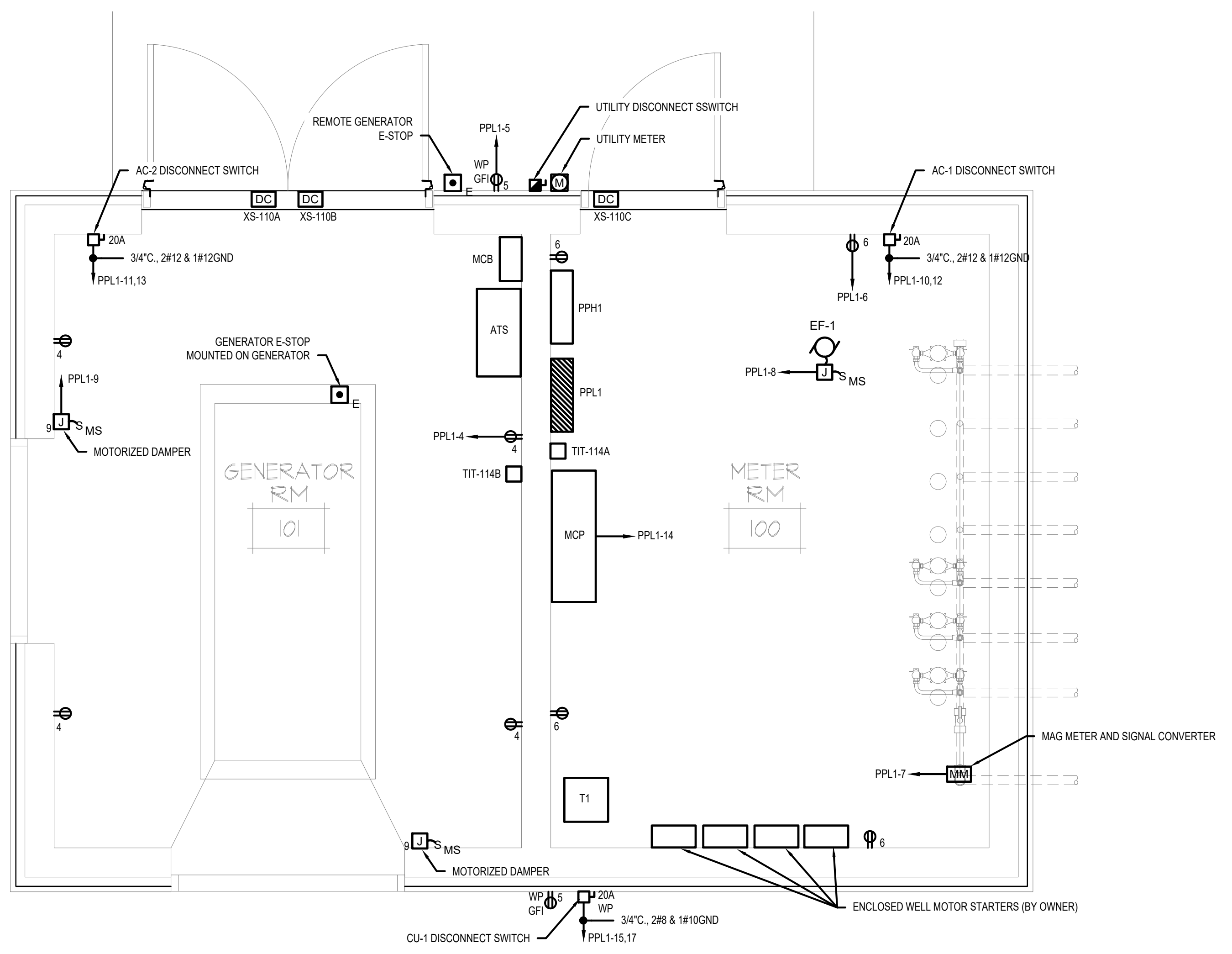
Date: OCTOBER, 2022  
Drawn By: DNM  
Reviewed By: RFM  
Approved By: RFM  
W&S Project No: ENG22-0253

Drawing Title:  
**ELECTRICAL SITE PLAN**

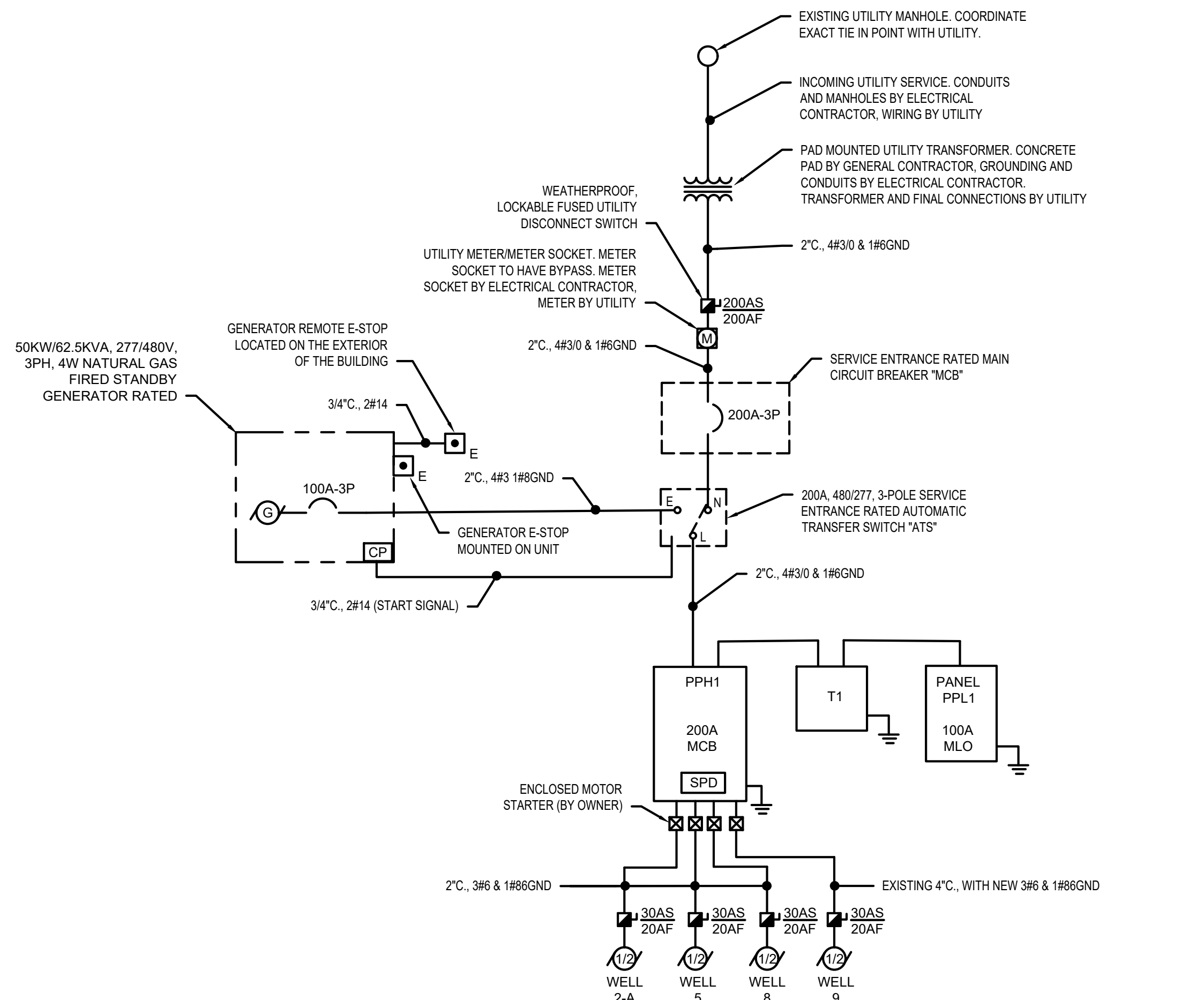
Sheet Number:  
**E002**



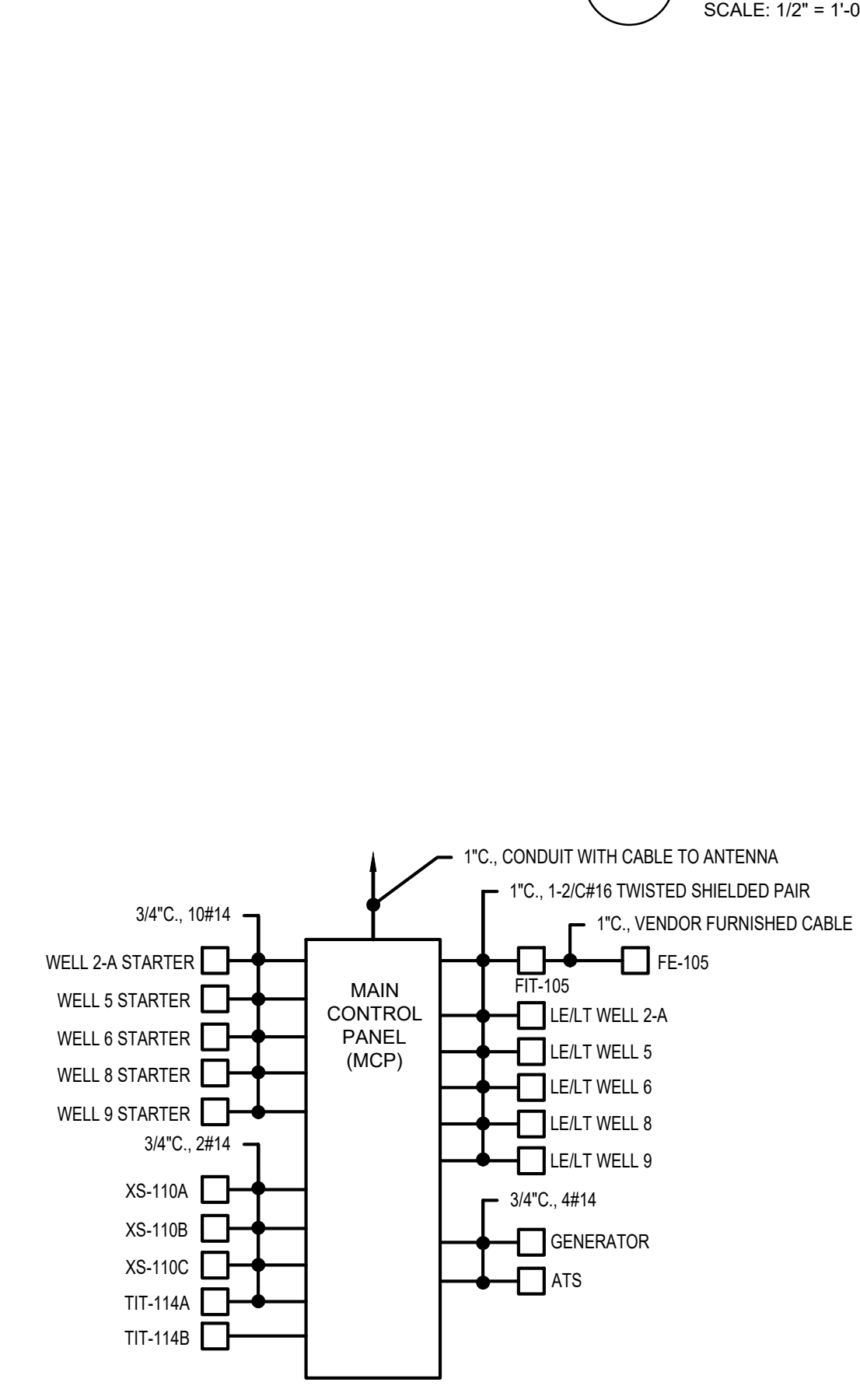
**1 LIGHTING PLAN**  
SCALE: 1/2" = 1'-0"



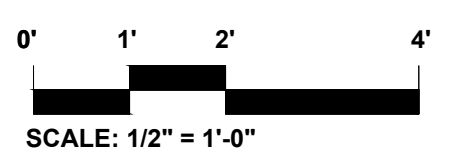
**2 POWER PLAN**  
SCALE: 1/2" = 1'-0"



**3 ELECTRICAL ONE LINE DIAGRAM**  
NOT TO SCALE



**4 MAIN CONTROL PANEL (MCP) WIRING DIAGRAM**  
NOT TO SCALE



**Project:**  
**Connecticut Water**  
CONNECTICUT WATER COMPANY  
93 WEST MAIN STREET  
CLINTON, CT 06413  
EDGEWATER CIRCLE  
WELLFIELD IMPROVEMENTS  
AND METER BUILDING  
EAST HAMPTON, CT

**Weston & Sampson**  
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**Consultants:**

**Seal:**

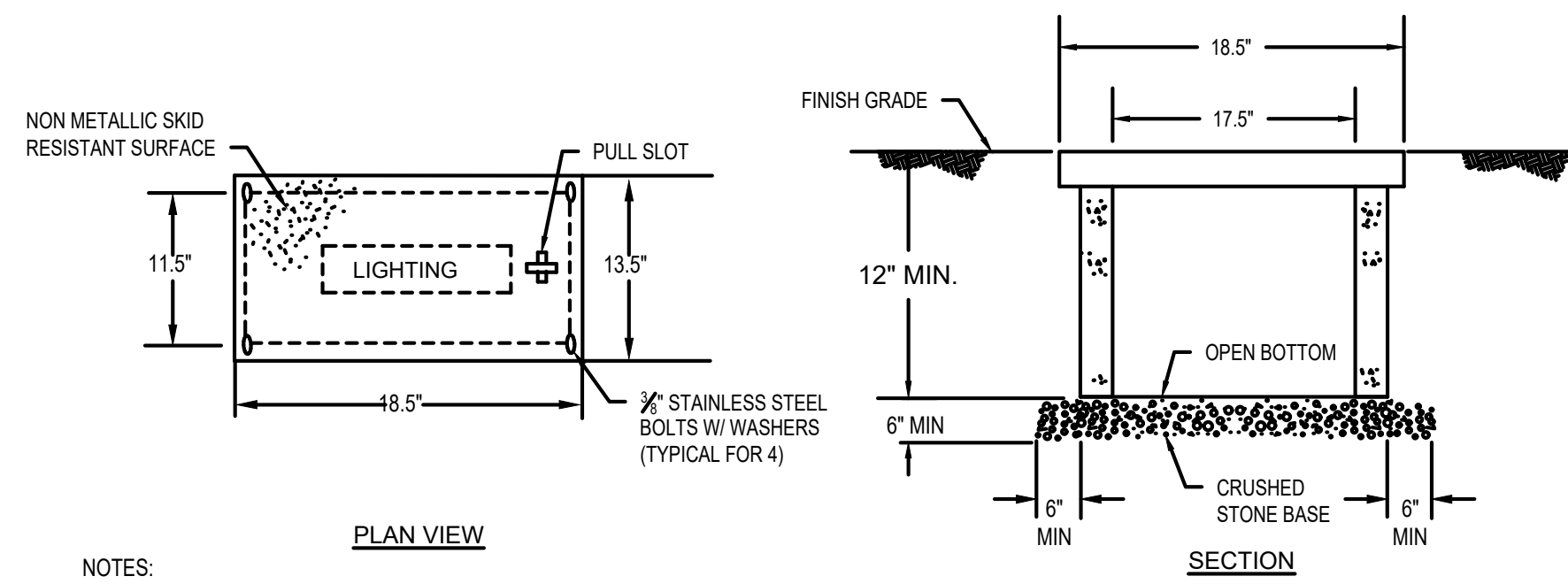
**Revisions:**

Rev	Date	Description

**Issued For:** 90% DESIGN REVIEW  
NOT FOR CONSTRUCTION

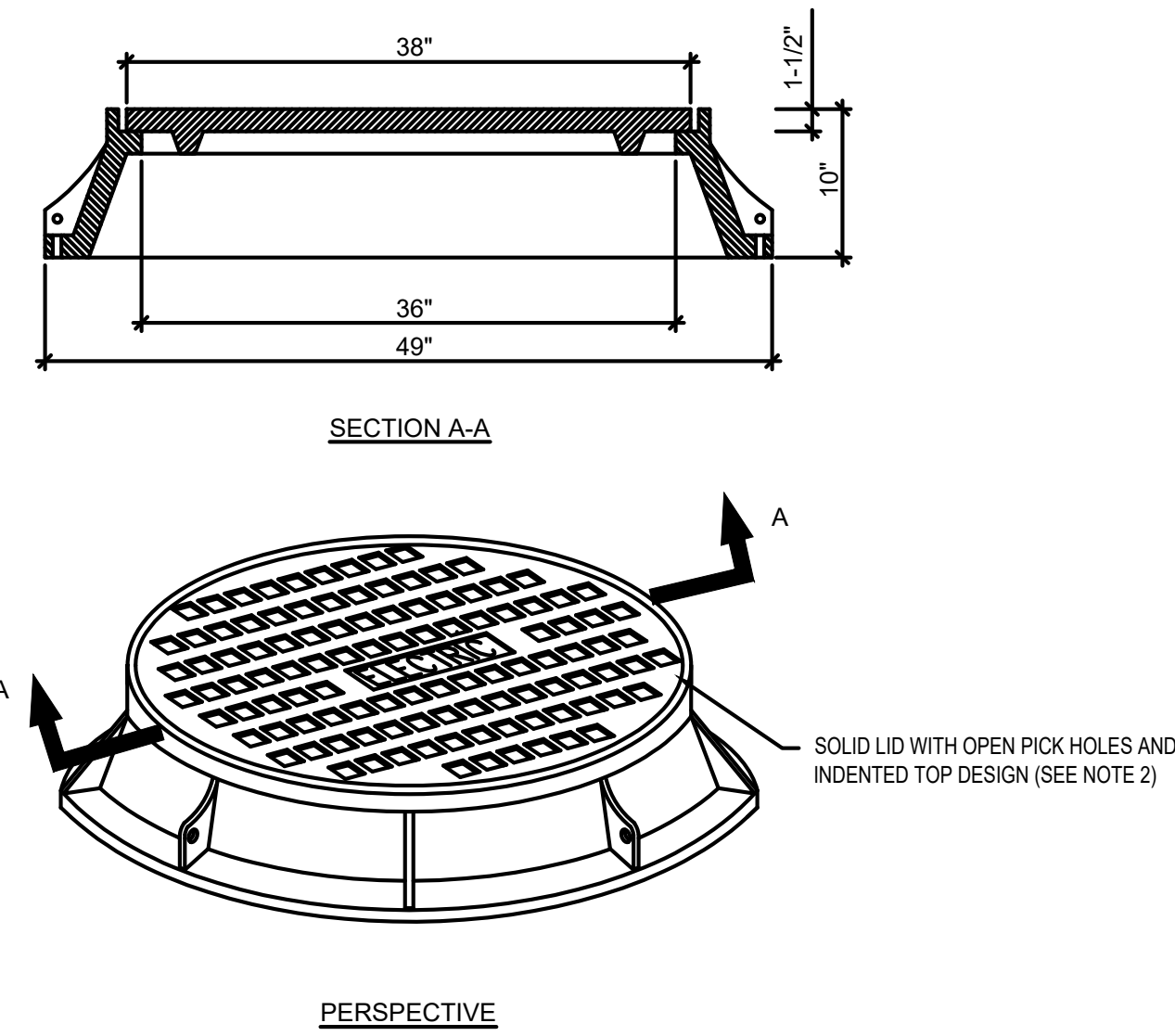
**Date:** OCTOBER, 2022  
**Drawn By:** DNM  
**Reviewed By:** RFM  
**Approved By:** RFM  
**W&S Project No:** ENG22-0253

**Drawing Title:**  
**ELECTRICAL PLANS**  
**Sheet Number:**  
**E101**



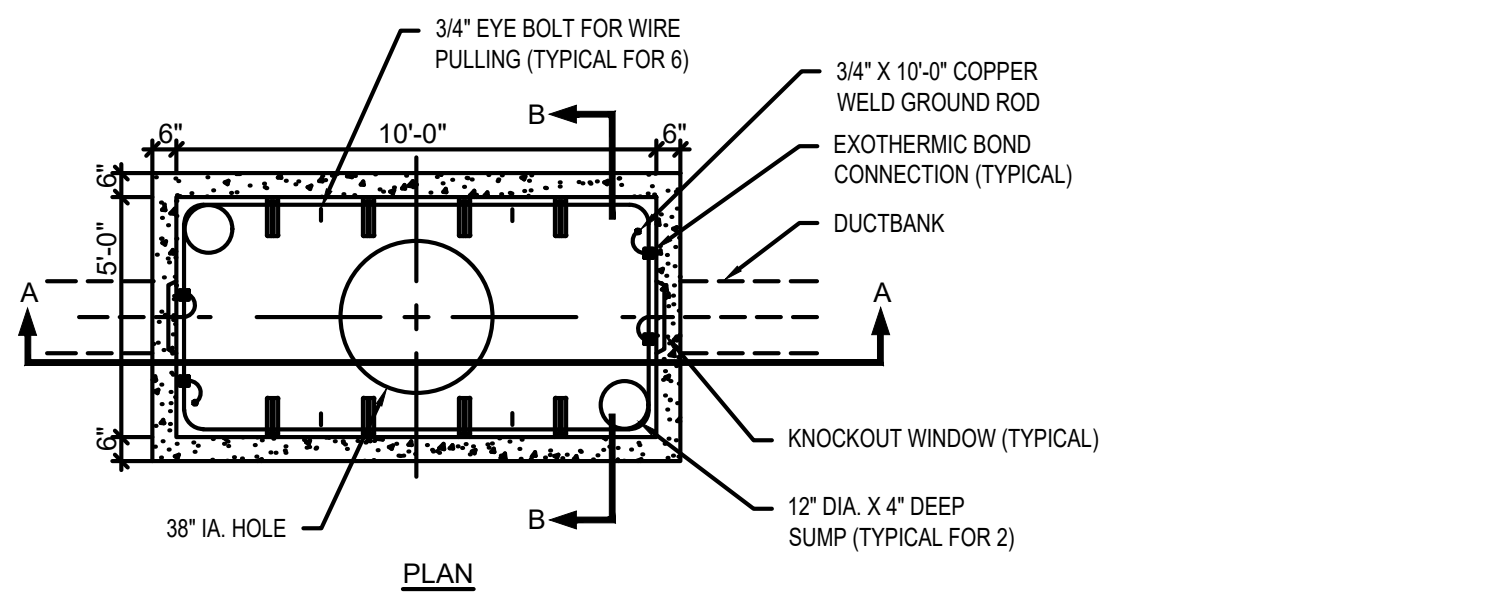
- NOTES:
1. THIS HANDHOLE IS INTENDED FOR NON-DELIBERATE VEHICULAR TRAFFIC ONLY.
  2. HANDHOLE SHALL BE PREFABRICATED POLYMER CONCRETE AGGREGATE EQUAL TO QUAZITE OR EQUAL PRE CAST CONCRETE CONSTRUCTION.

**1** PREFABRICATED HANDHOLE "HH" DETAIL  
 NOT TO SCALE



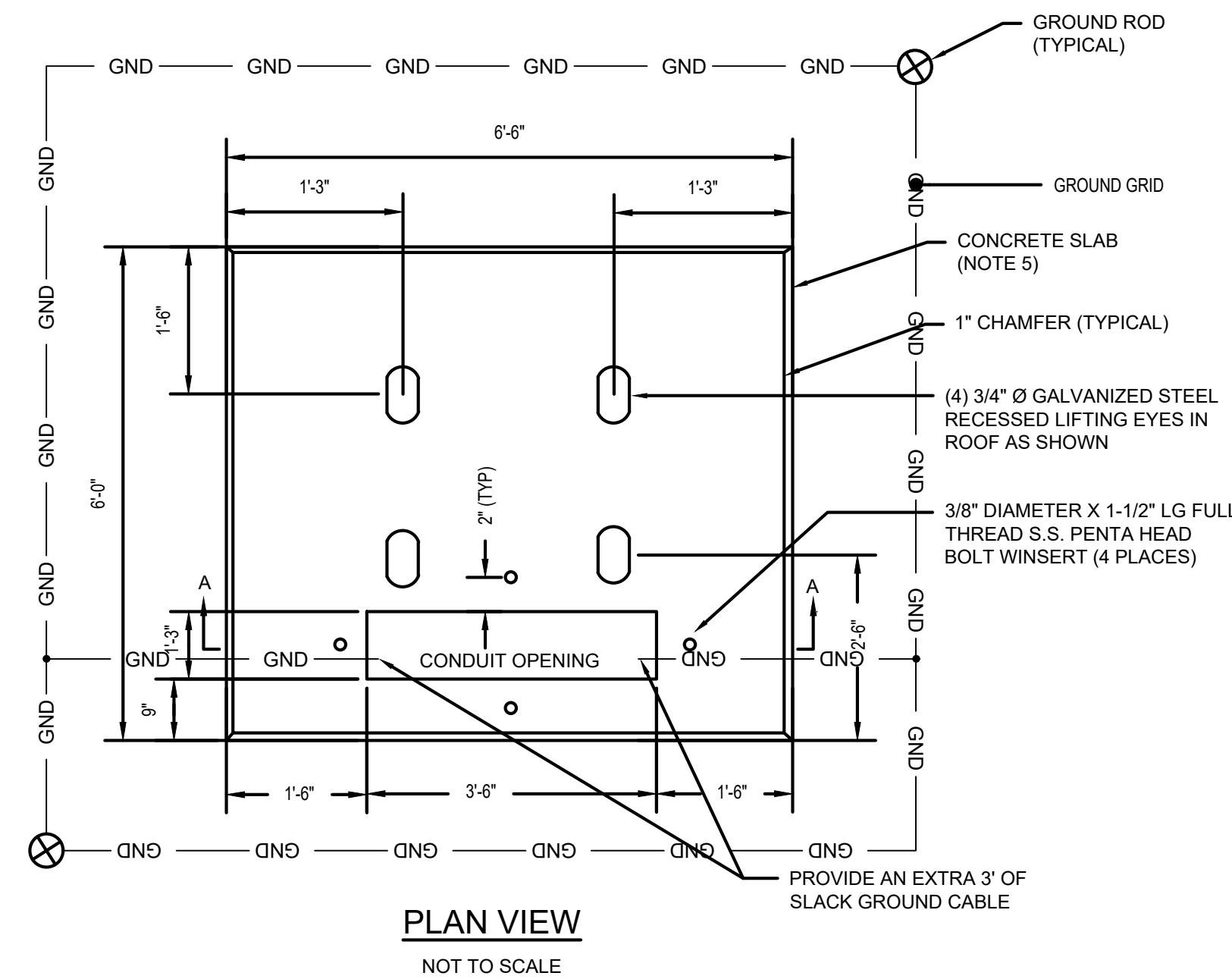
- NOTES:
1. COORDINATE EXACT REQUIREMENTS WITH RESPECTIVE UTILITY COMPANY OR SERVICE PROVIDER AS REQUIRED.
  2. LID TO BE LETTERED "ELECTRIC" OR "TELEPHONE", REFER TO RESPECTIVE MANHOLE DETAIL.
  3. MANHOLE FRAME AND LID SHALL BE "NEENAH FOUNDRY" #R-1640-D OR EQUAL.

**3** MANHOLE FRAME AND COVER DETAIL  
 NOT TO SCALE



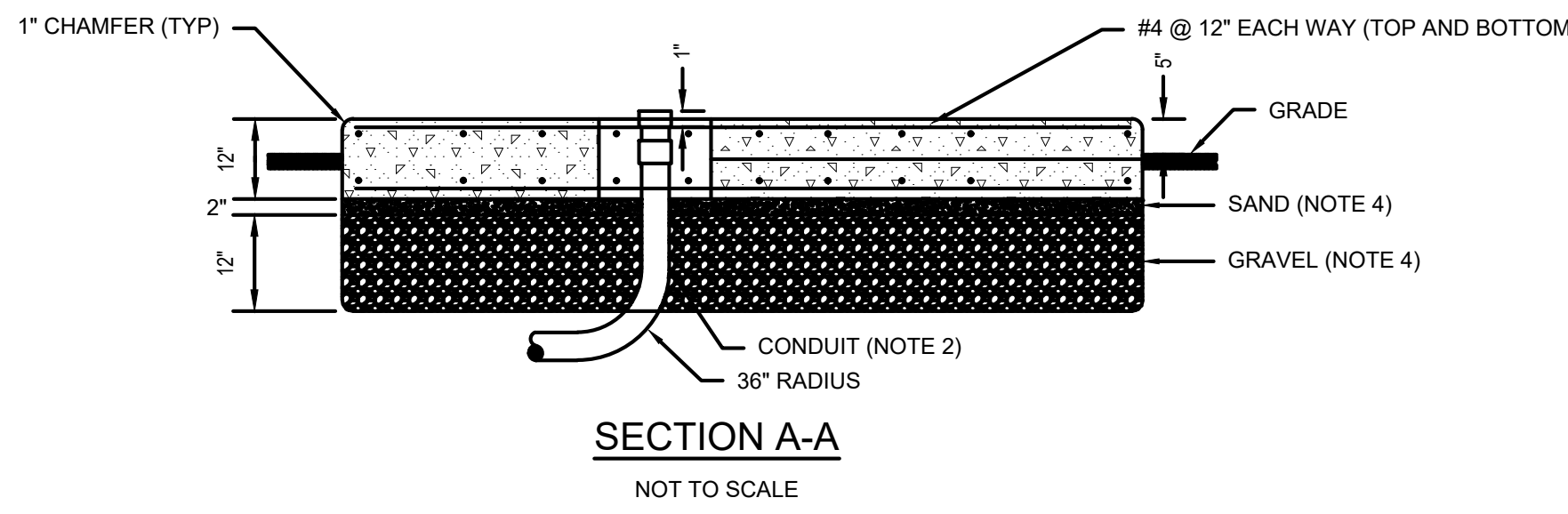
- NOTES:
1. CONCRETE MINIMUM STRENGTH - 5,000 PSI @ 28 DAYS.
  2. CONSTRUCTION JOINT SHALL BE SEALED WITH 1" BUTYL RUBBER SEALANT, CONSEAL #CS#101 OR EQUAL.
  3. EXTERIOR WALL SURFACES OF MANHOLE SHALL BE DAMP PROOFED WITH EMULSIFIED ASPHALT COMPOUND, SONNEBORN HYDROCID 700B OR EQUAL.
  4. 8" LONG NONMETALLIC ARM. SEE MANHOLE CABLE RACK DETAIL.

**2** TYPICAL PRECAST ELECTRIC MANHOLE DETAIL  
 NOT TO SCALE



- PADMOUNT - FOUNDATION NOTES:**
1. SCOPE - THIS STANDARD COVERS SPECIFICATIONS FOR THE CONSTRUCTION OF PADMOUNT TRANSFORMER FOUNDATIONS AND GROUNDING FOR EVERSORCE.
  2. CONDUIT BY ELECTRICAL CONTRACTOR - INSTALL CONDUITS AS SHOWN BEFORE SLAB IS POURED. USE 36" RADIUS BENDS, WITH COUPLINGS, NIPPLES AND BUSHINGS AS REQUIRED. (MATERIAL MAY BE GALVANIZED STEEL, BLACK IRON, OR TYPE II FIBER OR PLASTIC.) TERMINATIONS OF CONDUITS SHALL BE LOCATED EXACTLY AS SHOWN, SOLID OR DOTTED, DEPENDING UPON NUMBER OF DUCTS. THE NIPPLE AND BUSHING SHOULD BE INSTALLED AFTER THE TRANSFORMER IS PLACED AND BEFORE THE CABLES ARE PULLED.
  3. GROUND GRID BY ELECTRICAL CONTRACTOR - INSTALL #1/0 S.D. 7 STRAND BARE COPPER WIRE LOOP 1'-0" BELOW GRADE. BOND TO ALL EXPOSED METALLIC CONDUIT AND LEAVE 3'-0" OF WIRE ABOVE PAD FOR GROUNDING TRANSFORMER AT TWO OPPOSITE POINTS IN THE CABLE CONDUIT OPENINGS. 3.A. PHOS-COPPER BRAZE CONNECTIONS, CADWELD, OR USE TWO APPROVED CONNECTORS PER JOINT. INSTALL TWO 8 FT. GALVANIZED STEEL (3/4") GROUND RODS WHERE SHOWN. LEAVE GRID EXPOSED UNTIL INSPECTED BY THE UTILITY COMPANY.
  4. GRAVEL & SAND BY GENERAL CONTRACTOR - GRAVEL AND SAND SHALL BE PLACED AS SHOWN IN FIGS. 1 AND 2; THE GRAVEL BEING COMPACTED AND THE SAND THOROUGHLY WETTED JUST BEFORE PLACING THE CONCRETE.
  5. CONCRETE SLAB BY GENERAL CONTRACTOR. CONCRETE SHALL BE IN ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS.
  6. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY FOR ALL INSTALLATION REQUIREMENTS PRIOR TO THE START OF ANY WORK.

- EVERSOURCE MINIMUM PAD REQUIREMENTS**
1. CONCRETE MINIMUM STRENGTH, 5000 PSI @ 28 DAYS.
  2. STEEL REINFORCEMENT - ASTM A615, GRADE 60.
  3. MINIMUM STEEL COVER, 1-1/2 INCHES.
  4. DESIGN LOADING -- AASHTO HS20-44.
  5. DESIGN SPECIFICATIONS -- ACI 318 & AASHTO LOAD FACTOR DESIGN METHOD.
  6. REINFORCED TO SUPPORT H-20 WHEEL LOAD.
  7. MANUFACTURERS NAME TO BE STENCILED ON VERTICAL WALL OF CUTOUT OPENING.




**4** PAD MOUNTED UTILITY TRANSFORMER DETAIL  
 NOT TO SCALE

LIGHTING FIXTURE SCHEDULE											
TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	NO. OF LAMPS	LAMP TYPE	LUMENS	COLOR TEMP	MOUNTING	VOLTAGE	LOAD (WATTS)	NOTES
E1	LED EXIT SIGN. MOUNTING, NUMBER OF FACES AND ARROWS AS SHOWN ON FLOOR PLANS	COOPER LIGHTING	LPX7-5D	-	LED	-	-	UNIVERSAL	120	2.4	
S2	1' X 4' ENCLOSED AND GASKETED, VAPORTIGHT LED FIXTURE	COOPER LIGHTING	4VT2-LD5-4-DR-UNV-L835-CD1-WL-U	-	LED	4000	3500K	SURFACE	120	56	
S2E	1' X 4' ENCLOSED AND GASKETED, VAPORTIGHT EMERGENCY LED FIXTURE	COOPER LIGHTING	4VT2-LD5-4-DR-UNV-EL10W-L835-CD1-WL-U	-	LED	4000	3500K	SURFACE	120	56	
SW1	WALL MOUNTED EXTERIOR LED LIGHT FIXTURE	COOPER LIGHTING	GLEON-SA1-B-740-U-T3-WM-BZ	-	LED	1313	3500K	WALL	120	40	
SW2	WALL MOUNTED EXTERIOR LED SPOT LIGHT FIXTURE	COOPER/HALO LIGHTING	FSL2850L	-	LED	3100	5000K	WALL	120	28.23	

DRY TYPE TRANSFORMER SCHEDULE 480-120/208V									
SIZE	KVA	PRIMARY AMPS	SECONDARY AMPS	480 VOLT OVERCURRENT	208 VOLT OVERCURRENT	480V FEEDER CODE	120/208V FEEDER CODE	GROUND SIZE	
T2	30	36	83	50A, 3P	100A, 3P	3#4 & 1#10G - 1°C.	4#1 & 1#6G - 1 1/2°C.	#8-3/4°C	

PANELBOARD: PPH1											
		VOLTS: 277/480		PHASE: 3		WIRE: 4		MOUNTING: SURFACE		AIC: 42,000A	
MIANS: 200		MLO/MAIN CIRCUIT BREAKER: 200 MCB		200% NUETRALS:		COMMENTS:					
POLE	CIRCUIT DESCRIPTION	CIRCUIT	DAD-KVA	LTG	RCPT	MOTORS	MISC	POLE	CIRCUIT DESCRIPTION	CIRCUIT	DAD-KVA
1	Well #2-A	20A-1P				0.91		2	Well #5	20A-1P	
3								4			
5								6			
7	Well #6	20A-1P				0.91		8	Well #8	20A-1P	
9								10			
11								12			
13								14	Well #8	20A-1P	
15	Panel PPL1 Via 30KVA Transform	50A-3P					10.17	16			
17								18			
19	SPARE	20A-1P						20	SPARE	20A-1P	
21	SPARE	20A-1P						22	SPARE	20A-1P	
23	SPARE	20A-1P						24	SPARE	20A-1P	
25	SPARE	20A-1P						26	SPARE	20A-1P	
27	SPARE	20A-1P						28	SPARE	20A-1P	
29	SPARE	20A-1P						30	SPARE	20A-1P	
31	SPARE	20A-1P						32	SPARE	20A-1P	
33	SPARE	20A-1P						34	SPARE	20A-1P	
35	SPARE	20A-1P						36	SPARE	20A-1P	
37	SPARE	20A-1P						38	SPARE	20A-1P	
39	SPARE	20A-1P						40	SPARE	20A-1P	
41	SPARE	20A-1P						42	SPARE	20A-1P	
SUBTOTAL CONNECTION			0.00	0.00		1.83	10.17	SUBTOTAL CONNECTION			0.00
DEMAND FACTOR			---	---		---	0.70	DEMAND FACTOR			---
TOTAL			0.00	0.00		1.83	7.12	TOTAL			0.00
TOTAL KVA = 11.69			DIVIDED BY:		360	AMPS: 32.47	AMPS * 1.25 =		40.59		

PANELBOARD: PPL1											
		VOLTS: 120/208		PHASE: 3		WIRE: 4		MOUNTING: SURFACE		AIC:	
MIANS: 225		MLO/MAIN CIRCUIT BREAKER: 225 MCB		200% NUETRALS:		ISOLATED GROUND:		FEED THRU LUGS:			
POLE	CIRCUIT DESCRIPTION	CIRCUIT	BREAKER	LTG	RCPT	HP	MISC	POLE	CIRCUIT DESCRIPTION	CIRCUIT	BREAKER
1	INTERIOR LIGHTING	20A-1P		0.20				2	INTERIOR LIGHTING	20A-1P	0.2
3	EXTERIOR LIGHTING	20A-1P		0.10				4	RECEPTACLES (GEN ROOM)	20A-1P	0.72
5	RECEPTACLES (EXTERIOR)	20A-1P			0.18			6	RECEPTACLES (METER ROOM)	20A-1P	0.72
7	MAG METERE AND SIGNAL CONVERTER	20A-1P				0.50		8	EF-1	20A-1P	
9	MOTORIZED DAMPERS	20A-1P				0.20		10			
11								12	AC-2P	20A-1P	
13	AC-2	20A-2P					1	14	MCP	20A-1P	0.5
15								16	SPARE	20A-1P	
17	CJ-1	40A-2P				7.5		18	SPARE	20A-1P	
19	SPARE	20A-1P						20	SPARE	20A-1P	
21	SPARE	20A-1P						22	SPARE	20A-1P	
23	SPARE	20A-1P						24	SPARE	20A-1P	
25	SPARE	20A-1P						26	SPARE	20A-1P	
27	SPARE	20A-1P						28	SPARE	20A-1P	
29	SPARE	20A-1P						30	SPARE	20A-1P	
SUBTOTAL CONNECTION			0.30	0.18		0.00	9.20	SUBTOTAL CONNECTION			0.20
DEMAND FACTOR			---	---		---	0.70	DEMAND FACTOR			---
TOTAL			0.30	0.18		0.00	6.44	TOTAL			0.20
TOTAL KVA = 10.17			DIVIDED BY:		360	AMPS: 28.25	AMPS * 1.25 =		35.31		

Project:  
  
 CONNECTICUT WATER COMPANY  
 93 WEST MAIN STREET  
 CLINTON, CT 06413  
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Consultants:  
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Seal:  
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Rev	Date	Description

Revisions:  
 Issued For: 90% DESIGN REVIEW  
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Date: OCTOBER, 2022  
 Drawn By: DNM  
 Reviewed By: RFM  
 Approved By: RFM  
 W&S Project No: ENG22-0253

Drawing Title:  
**ELECTRICAL SCHEDULES**  
 Sheet Number:  
**E601**

ABBREVIATIONS			
Ø	ROUND DIAMETER	ID	INSIDE DIAMETER
ABV	ABOVE	IEER	INTEGRATED EER
AC	AIR CONDITIONING	IN	INCH
ACCU	AIR COOLED CONDENSING UNIT	IN WC	INCHES WATER COLUMN
ACD	AUTOMATIC CONTROL DAMPER	IN WG	INCHES WATER GAUGE
ACT	ACOUSTICAL CEILING TILE	KW	KILOWATT
ACU	AIR CONDITIONING UNIT	L	LENGTH
AD	ACCESS DOOR	LAT	LEAVING AIR TEMPERATURE
ADD	ADDENDUM	LB	POUND
ADDL	ADDITIONAL	LBHR	POUNDS PER HOUR
AFT	ABOVE FINISHED FLOOR	LP	LOW PRESSURE
AHU	AIR HANDLING UNIT	LVR	LOUVER
ALT	ALTERNATE	LWT	LEAVING WATER TEMPERATURE
AMB	AMBIENT	M/A	MIXED AIR
AMP	AMPERE	MAX	MAXIMUM
AP	ACCESS PANEL	MAV	MANUAL AIR VENT
APD	AIR PRESSURE DROP	MBH	ONE THOUSAND BTU PER HOUR
ARCH	ARCHITECT/ARCHITECTURAL	MCA	MINIMUM CIRCUIT AMPACITY
ATC	AUTOMATIC TEMPERATURE CONTROL	MCF	ONE THOUSAND CUBIC FEET
ATM	ATMOSPHERE	MD	MOTORIZED DAMPER
AVG	AVERAGE	MCH	MECHANICAL
BDD	BACKDRIFT DAMPER	MEZZ	MEZZANINE
BFC	BELOW FINISHED CEILING	MFR	MANUFACTURER
BFF	BELOW FINISHED FLOOR	MIN	MINIMUM
BFP	BACKFLOW PREVENTER	MISC	MISCELLANEOUS
BHP	BRAKE HORSEPOWER	MOC	MAXIMUM OVER CURRENT PROTECTION
BID	BACKWARD INCLINED	MTR	MOTOR
BLDG	BUILDING	N/A	NOT APPLICABLE
BOD	BOTTOM OF DUCT	NC	NORMALLY CLOSED
BOS	BOTTOM OF STEEL	NG	NATURAL GAS
BSMT	BASEMENT	NO	NUMBER
BTU	BRITISH THERMAL UNITS	NTS	NOT TO SCALE
BTUH	BRITISH THERMAL UNITS PER HOUR	O	OXYGEN
CA	COMBUSTION AIR	O/A	OUTSIDE AIR
CAP	CAPACITY	OAI	OUTDOOR AIR INTAKE
CC	COOLING COIL	OD	OUTSIDE DIAMETER
CD	CONDENSATE DRAIN	ODP	OPEN DRIP PROOF
CENT	CENTRIFUGAL	OED	OPEN END DUCT
CF	CUBIC FEET	P	PUMP
CFM	CUBIC FEET PER MINUTE	PD	PRESSURE DROP
CL	CENTERLINE	PD	PRESSURE DIFFERENCE
CLG	CEILING	PH	PHASE
CLG	COOLING	PLB	PLUMBING
CO	CLEAN OUT	PRESS	PRESSURE
CONN	CONNECTION	PRV	PRESSURE REDUCING VALVE
CP	CONDENSATE PUMP	PSI	POUNDS PER SQUARE INCH
CSF	CHEMICAL SHOT FEEDER	PSIA	PSI ABSOLUTE
CT	COOLING TOWER	PSID	PSI DIFFERENTIAL
CU	CONDENSING UNIT	PSIG	PSI GAUGE
D	DEPTH	PWR	POWER
DB	DRY BULB	QTY	QUANTITY
DDC	DIRECT DIGITAL CONTROLS	R	RADIUS
DEG	DEGREE	R/A	RETURN AIR
DIA	DIAMETER	RCP	RADIANT CEILING PANEL
DIM	DIMENSION	RD	REFRIGERANT DISCHARGE
DN	DOWN	RED	REDUCER
DOV	DRAIN OFF VALVE	RET	RETURN
DP	DIFFERENTIAL PRESSURE	RHC	REHEAT COIL
DX	DIRECT EXPANSION	RHGB	REFRIGERANT HOT GAS BYPASS
EA	EACH	RLA	REFRIGERANT LIQUID
E/A	EXHAUST AIR	RLA	RUNNING LOAD AMPS
EAT	ENTERING AIR TEMPERATURE	RM	ROOM
ECM	ELECTRONICALLY COMMUTATED MOTOR	RPM	REVOLUTIONS PER MINUTE
EER	ENERGY EFFICIENCY RATIO	RS	REFRIGERANT SUCTION
EF	EXHAUST FAN	RS	SUPPLY AIR
EFF	EFFICIENCY	SEER	SEASONAL ENERGY EFFICIENCY RATING
ELEC	ELECTRICAL	SENS	SENSIBLE
ELEV	ELEVATION	SF	SQUARE FOOT
ERU	ENERGY RECOVERY UNIT	SF	SUPPLY FAN
ERV	ENERGY RECOVERY VENTILATOR	SHR	SENSIBLE HEAT RATIO
EQUIP	EQUIPMENT	SM	SURFACE MOUNT
ESP	EXTERNAL STATIC PRESSURE	SP	STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE	SPECS	SPECIFICATIONS
EWV	ELECTRIC WATER HEATER	SS	STAINLESS STEEL
EXP	EXPANSION	SUP	SUPPLY
EXT	EXTERNAL	T	THERMOSTAT
EXIST	EXISTING	T/A	TRANSFER AIR
F	DEGREES FAHRENHEIT	TAV	THERMOSTATIC AIR VENT
FA	FREE AREA	TD	TEMPERATURE DROP
FC	FLEXIBLE CONNECTION	TEFC	TOTALLY ENCLOSED FAN COOLED
FCU	FAN COIL UNIT	TEMP	TEMPERATURE
FD	FIRE DAMPER	TF	TRANSFER FAN
FL	FLOOR	TOD	TOP OF DUCT
FLA	FULL LOAD AMPS	TOP	TOP OF PIPE
FLM	FEET PER MINUTE	TOS	TOP OF STEEL
FPS	FEET PER SECOND	TOT	TOTAL
FT	FOOT/FEET	TR	TRANSFER
G	GAS	TSP	TOTAL STATIC PRESSURE
GA	GAUGE	TYP	TYPICAL
GAL	GALLON	UH	UNIT HEATER
GALV	GALVANIZED	UNO	UNLESS NOTED OTHERWISE
GC	GENERAL CONTRACTOR	UNOCC	UNOCCUPIED
GPH	GALLONS PER HOUR	UV	UNIT VENTILATOR
GPM	GALLONS PER MINUTE	V	VOLTS
GRD	GRADE	VAR	VARIABLE
GV	GRAVITY VENTILATOR	VAV	VARIABLE AIR VOLUME
HD	HEAD	VD	VOLUME DAMPER
HGB	HOT GAS BYPASS	VEL	VELOCITY
HP	HORSE POWER	VENT	VENTILATION
HP	HIGH POINT	VFD	VARIABLE FREQUENCY DRIVE
HR	HOUR	VTR	VENT THROUGH ROOF
HT	HEIGHT	W	WATT
HTR	HEATER	W	WIDTH
HV	HEATING AND VENTILATION UNIT	W	WITH
HW	HOT WATER	WO	WITHOUT
HWC	HOT WATER HEATING COIL	WB	WET BULB
HWR	HOT WATER RETURN	WC	WATER COLUMN
HWS	HOT WATER SUPPLY	WG	WATER GAUGE
HX	HEAT EXCHANGER	WMS	WIRE MESH SCREEN
HZ	HERTZ	WPD	WATER PRESSURE DROP
		WTD	WATER TEMPERATURE DIFFERENCE
		ΔP	CHANGE IN PRESSURE
		ΔT	CHANGE IN TEMPERATURE
		°F	DEGREES FAHRENHEIT

NOTE: SOME OR ALL SYMBOLS MAY BE USED ON THIS PROJECT

### SCOPE OF WORK (INCLUDING BUT NOT LIMITED TO)

- IF WORK IS DONE DURING THE HEATING SEASON, THE CONTRACTOR SHALL PROVIDE TEMPORARY HEAT AT NO ADDITIONAL COST TO THE OWNER.
- PROVIDE DUCTLESS SPLIT SYSTEM WITH GRADE MOUNTED CONDENSING UNIT.
- PROVIDE EXHAUST FANS TO PROVIDE VENTILATION FOR MECHANICAL SPACES.

### HVAC GENERAL NOTES

- MECHANICAL GENERAL NOTES APPLY TO ALL MECHANICAL DRAWINGS. THE WORD "CONTRACTOR" USED IN "HVAC" OR "MECHANICAL" WORK SHALL MEAN THE HVAC FILED SUB-BIDDER OR MECHANICAL CONTRACTOR.
- FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM INCLUDING ALL INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE HVAC WORK COMPLETE AND READY FOR OPERATION. FINAL PRODUCT SHALL CONFORM TO ALL REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL MECHANICAL CODE.
- CARE SHALL BE TAKEN DURING THE INSTALLATION TO NOT DAMAGE OR INTERRUPT BUILDING SYSTEMS AND SERVICES THAT ARE ALREADY INSTALLED. DAMAGE TO SUCH SYSTEMS OR EQUIPMENT CAUSED BY THIS CONTRACTOR DURING INSTALLATION SHALL BE REPAIRED AND/OR REPLACED AT THIS CONTRACTOR'S EXPENSE TO THE COMPLETE SATISFACTION OF THE BUILDING OWNER.
- LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWING, ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. WORK SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN THE FIELD.
- ALL WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED, INCLUDING BUT NOT LIMITED TO DIV 22 AND 28. OFFSETS IN PIPING AND DUCTS (INCLUDING DIVIDED DUCTS) AND TRANSITIONS AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
- VERIFY ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. VERIFY AND PROVIDE DUCT AND/OR PIPE TRANSITIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DIMENSIONS BEFORE FABRICATION.
- ALL MATERIALS AND EQUIPMENT UNLESS SPECIFICALLY INDICATED AS REUSED, SHALL BE NEW.
- ACCESS PANELS SHALL BE FURNISHED TO ALLOW FOR CLEANING OF COILS AND SERVICING OF DAMPERS, HEATERS, VALVES, AND ALL CONCEALED MECHANICAL EQUIPMENT TO BE INSTALLED BY THE GENERAL CONTRACTOR.
- INSTALL NEW ROOM THERMOSTATS AND SENSORS 4 FEET AFF OR AS DIRECTED OTHERWISE BY ARCHITECT.
- WHEN SECTION OF DUCTWORK IS NOT LABELED FOR SIZE, THE LARGER SIZE INDICATED ON THE CONNECTED DUCT SHALL PREVAIL. SIZE OF DUCT RUN-OUTS TO DIFFUSER SHALL EQUAL DIFFUSER NECK SIZE.
- THE FIRE PROOFING OF THE BUILDING STRUCTURE IS NOT TO BE REMOVED FOR THE INSTALLATION OF HANGERS, SUPPORTS, DUCTWORK, ETC. IF FIRE PROOFING IS DAMAGED, IT SHALL BE REPAIRED AT THE EXPENSE OF THE TRADE.
- THE CONTRACTOR SHALL TEST AND CALIBRATE ALL CONTROLS AND VERIFY ALL ARE FULLY FUNCTIONAL AND SUBMIT DOCUMENTATION. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- THE CONTRACTOR SHALL PROVIDE AND SUBMIT DOCUMENTATION FOR TESTING AND BALANCING OF ALL AIR AND WATER SYSTEMS, DUCT AND PIPING PRESSURE AND LEAKAGE TESTS, OPERATING AND MAINTENANCE MANUALS, AND AS BUILT DRAWINGS. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- THE CONTRACTOR SHALL COORDINATE ALL FRESH AIR INTAKE, FLUE TERMINATION, AND EXHAUST TERMINATION LOCATIONS WITH ALL OTHER TRADES BASED ON CLEARANCE REQUIREMENTS INDICATED IN THE 2015 IMC AND ALL OTHER APPLICABLE FEDERAL, STATE, AND LOCAL CODES.
- REFER TO THE PROJECT SPECIFICATIONS FOR FURTHER REQUIREMENTS.
- IN ACCORDANCE WITH SPECIFICATION FOR DIVISION 23, THE CONTRACTOR SHALL COORDINATE WITH ALL TRADES AND PREPARE COORDINATION DRAWINGS PRIOR TO INSTALLATION. COORDINATION DRAWINGS SHALL BE SUBMITTED TO THE OWNERS REPRESENTATIVE FOR REVIEW PRIOR TO INSTALLATION.
- MINIMAL CONTROL POWER HAS BEEN IDENTIFIED ON THE ATC DRAWINGS. IF ANY ADDITIONAL POWER IS REQUIRED BASED ON SYSTEMS DESIGN BY THE CONTROLS CONTRACTOR THE ATC/BAS CONTRACTOR SHALL BE RESPONSIBLE TO SUPPLY THAT POWER. COORDINATE ALL POWER REQUIREMENTS WITH DIV 26.

### DESIGN CONDITIONS

#### CODES/STANDARDS

2022 CONNECTICUT STATE BUILDING CODE  
2021 INTERNATIONAL MECHANICAL CODE  
2021 INTERNATIONAL ENERGY CONSERVATION CODE

#### OUTDOOR AIR TEMPERATURE

ASHRAE - HARTFORD CT  
WINTER 8°F DB/5°F WB  
SUMMER 91°F DB/73°F WB

#### INDOOR CONDITIONS (°F)

SPACE	WINTER	SUMMER
GENERATOR ROOM	65	80
METER ROOM	65	80

#### MINIMUM VENTILATION

SPACE	CFM/PERSON	CFM/SF
GENERATOR ROOM	0	0.12
METER ROOM	0	0.12

### CALLOUT SYMBOLS

	SECTION DESIGNATION
	SECTION SHEET NUMBER
	REVISION NUMBER
	THERMOSTAT/TEMPERATURE SENSOR, DUCT MOUNTED
	THERMOSTAT, WALL MOUNTED
	S = SUPPLY A = SCHEDULED DIFFUSER (100) - CFM TO BALANCE TO
	R = RETURN A = SCHEDULED DIFFUSER (100) - CFM TO BALANCE TO
	E = EXHAUST A = SCHEDULED DIFFUSER (100) - CFM TO BALANCE TO
	T = TRANSFER A = SCHEDULED DIFFUSER (100) - CFM TO BALANCE TO
	X = EXISTING NECK SIZE (RECTANGULAR SHOWN) (100) - REBALANCE TO DESIGNATED CFM
	XXX = REBALANCE TO DESIGNATED GPM
	EQUIPMENT TAG (REFER TO SCHEDULES FOR DETAILS)

NOTE: SOME OR ALL SYMBOLS MAY BE USED ON THIS PROJECT

### DUCTWORK

SINGLE LINE	ALL DIMENSIONS IN INCHES UNLESS NOTED OTHERWISE	DOUBLE LINE
	RECTANGULAR DUCT W = WIDTH, D = DEPTH	
	ROUND DUCT (DIA = INSIDE DIAMETER)	
	STANDARD RADIUS ELBOW (R = W) SUPPLY/RETURN/EXHAUST	
	FULL LENGTH SPLITTER VANES (R < W) SUPPLY/RETURN/EXHAUST	
	HORIZONTAL OFFSET SUPPLY/RETURN/EXHAUST	
	90° TAP TAKE-OFF (45° SQUARE TO ROUND, 45° TAKE-OFF TRANSITION TO ROUND, AND BELLMOUTH, RESPECTIVELY)	
	RECTANGULAR WYE W/ 45° TAKE-OFFS	
	RECTANGULAR TO ROUND TRANSITION	
	ACOUSTICALLY LINED DUCTWORK	
	FLEXIBLE DUCTWORK	
	OPEN END DUCT W/ 1/2"x1/2" WMS	

NOTE: SOME OR ALL SYMBOLS MAY BE USED ON THIS PROJECT

### DUCTWORK/RGD SYMBOLS

	FIRE DAMPER - SELF CLOSING W/ACCESS DOOR
	MOTORIZED DAMPER - AUTOMATIC W/ ACCESS DOOR
	MANUAL VOLUME DAMPER
	STANDARD 4-WAY BLOW SUPPLY DIFFUSER
	3-WAY BLOW SUPPLY DIFFUSER
	2-WAY BLOW SUPPLY DIFFUSER
	1-WAY BLOW SUPPLY DIFFUSER
	RETURN OR EXHAUST GRILLE OR REGISTER
	RETURN OR EXHAUST AIRFLOW
	SUPPLY AIRFLOW

NOTE: SOME OR ALL OF THE SYMBOLS MAY BE USED ON THIS PROJECT

### DIFFUSERS

SINGLE LINE	ALL DIMENSIONS IN INCHES UNLESS NOTED OTHERWISE	DOUBLE LINE
	TAKE-OFF TO DIFFUSER/GRILLE	
	TAKE-OFF W/ FLEXIBLE DUCT TO DIFFUSER/GRILLE	
	CEILING DUCT MOUNTED DIFFUSER/GRILLE	
	SIDEWALL DUCT MOUNTED DIFFUSER/GRILLE	

NOTE: SOME OR ALL SYMBOLS MAY BE USED ON THIS PROJECT

### PIPING ABBREVIATIONS

	A	COMPRESSED AIR
	CWR	CONDENSER WATER RETURN
	CWS	CONDENSER WATER SUPPLY
	CHWR	CHILLED WATER RETURN
	CHWS	CHILLED WATER SUPPLY
	CD	CONDENSATE DRAIN
	D	DRAIN
	FOG	FUEL OIL GAUGE
	FOR	FUEL OIL RETURN
	MU	MAKE-UP WATER
	NG	NATURAL GAS
	PC	PUMPED CONDENSATE
	RD	REFRIGERANT DISCHARGE
	RG	REFRIGERANT GAS
	RHGB	REFRIGERANT HOT GAS BYPASS
	RL	REFRIGERANT LIQUID
	RS	REFRIGERANT SUCTION
	(NAME)	REMOVE EXISTING PIPING

NOTE: SOME OR ALL SYMBOLS MAY BE USED ON THIS PROJECT

### PIPING LEGEND

	BALL VALVE
	RELIEF/SAFETY VALVE
	UNION
	PIPE - CAPPED
	DIRECTION OF FLOW
	PIPE CONNECTION - TOP
	PIPE CONNECTION - BOTTOM
	PIPE - DOWN
	PIPE - UP
	PITCH OF PIPE - (R) RISE OR (D) DROP
	REDUCER - CONCENTRIC
	REDUCER - ECCENTRIC
	PIPE BREAK (SINGLE LINE)
	CLEANOUT FOR CONDENSATE DRAIN PIPE

NOTE: SOME OR ALL SYMBOLS MAY BE USED ON THIS PROJECT

Project:

**ConnecticutWater**

CONNECTICUT WATER COMPANY  
93 WEST MAIN STREET  
CLINTON, CT 06413

EAST HAMPTON SITE IMPROVEMENTS  
WATER METER BUILDING

EAST HAMPTON, CT

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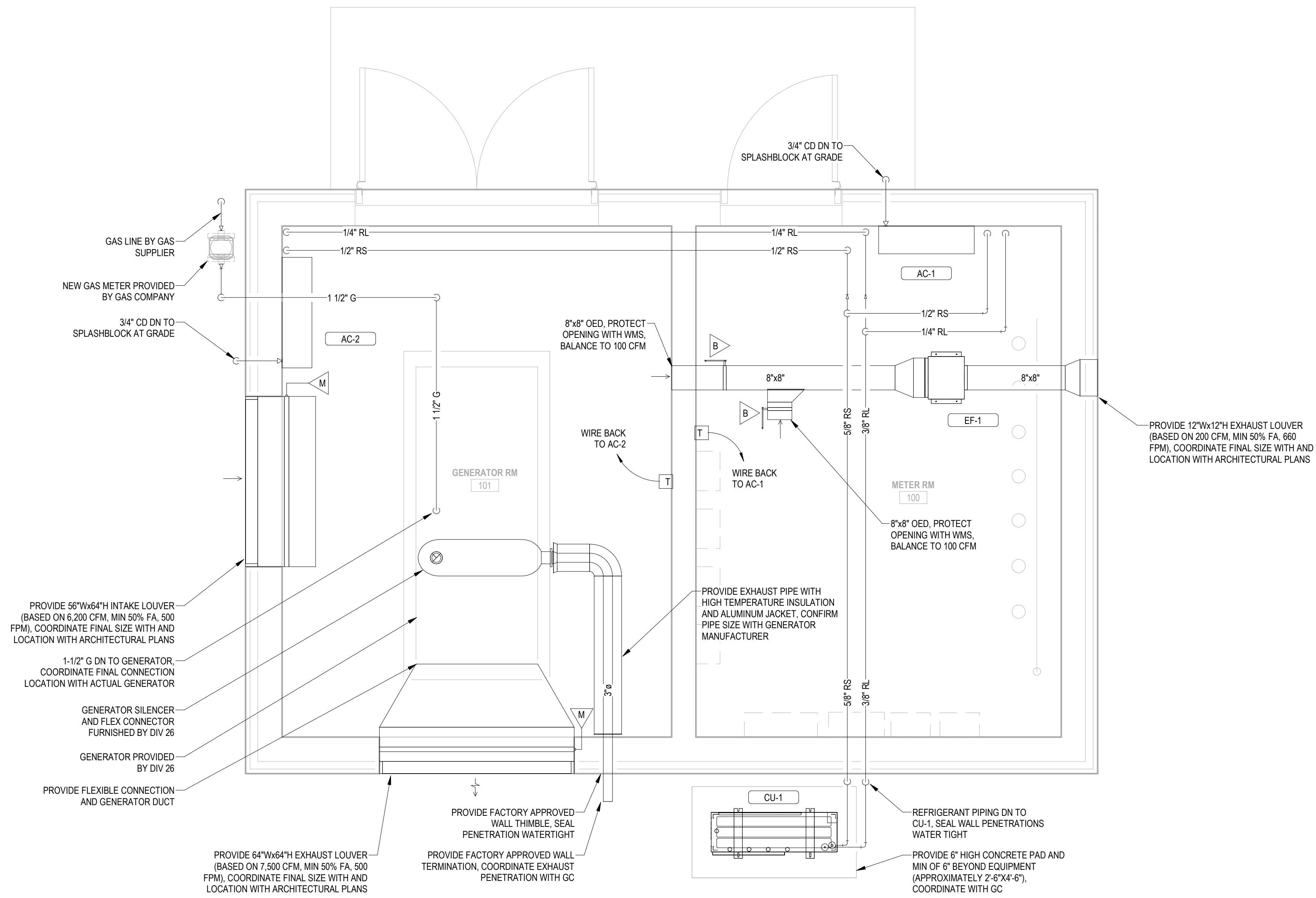
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Drawing Title:

LEGENDS, NOTES,  
AND  
ABBREVIATIONS

Sheet Number:

**H000**



1-MECH  
1/2" = 1'-0"

PIPE INSULATION							
MINIMUM INSULATION THICKNESS IN INCHES FOR INDOOR PIPE SIZES (SEE NOTES BELOW)							
PIPING SYSTEM TYPES	FLUID TEMPERATURE RANGE (°F)	<1'	1' & 1-1/4'	1-1/2' - 3'	4' - 6'	8' AND UP	K-FACTOR (BTU-INCH/°F-HR-SF) AT AVG TEMPERATURE (°F)
ENGINE EXHAUST	601-1200	4.5	5	5	6	6	0.53-0.59 @ 500°F
REFRIGERANT OR COOLING COIL CONDENSATE DRAIN	<60	0.5	.75	.75	.75	.75	0.20-0.27 @ 75°F

NOTES:  
 1. REFER TO SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION.  
 2. FOR MINIMUM THICKNESS OF ALTERNATIVE INSULATION TYPES OUTSIDE THE STATED CONDUCTIVITY RANGE, SEE TEST METHOD FOR STEADY STATE HEAT TRANSFER PROPERTIES OF HORIZONTAL PIPE INSULATIONS, ASTM C 335-95, AND THE STATE ENERGY CODE.  
 3. ALL OUTDOOR REFRIGERANT PIPING SHALL BE PROVIDED WITH 3/4" THICK INSULATION WITH PVC JACKETING.

NATURAL GAS LOAD SUMMARY SCHEDULE						
TAG	QTY	APPLIANCE	INPUT (CFH)	SUBTOTAL (CFH)	REQ'D PRESSURE (IN WC)	LOCATION
GEN	1	GAS GENERATOR	806	806	6" - 13"	GEN ROOM
<b>TOTAL (CFH)</b>				<b>806</b>		

PIPE SIZING BASED ON A MAXIMUM DISTANCE OF 30' (50 EQUIVALENT FEET) @ 1/2 PSI OR LESS INLET PRESSURE AND 0.5" WC PRESSURE DROP.

DUCTLESS SPLIT HEAT PUMP SCHEDULE																										
LOCATION			REFRIGERANT			FAN			COOLING COIL				HEATING COIL				SOUND PRESS			ELECTRICAL						
ID	NAME	NO	MANUFACTURER	MODEL NO.	TYPE	TYPE	SUPPLY (CFM)	OA (CFM)	ESP (IN WC)	NOMINAL CAP (TONS)	TOTAL (MBH)	SENSIBLE (MBH)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	CAP (MBH)	EAT DB (°F)	LAT DB (°F)	LEVEL (dB)	WEIGHT (lb)	MCA	MOCP	V	PH	REMARKS	
AC-1	METER RM	100	MITSUBISHI ELECTRIC	PKFY-P18NLMU-E	WALL MOUNT	R-410	350	0	0.00	1.3	15.0	9.9	67.0	80.0	53.5	17.0	70.0	114.6	40	30	0.2	15.0	208	1	1	1 THRU 6
AC-2	GENERATOR RM	101	MITSUBISHI ELECTRIC	PKFY-P18NLMU-E	WALL MOUNT	R-410	440	0	0.00	1.5	18.0	12.1	67.0	80.0	53.9	20.0	70.0	112.3	46	30	0.2	15.0	208	1	1	1 THRU 6

- NOTES:  
 1. REFER TO SPECIFICATIONS, DETAILS, AND CONTROL DIAGRAMS FOR ADDITIONAL INFORMATION.  
 2. PROVIDE FACTORY THERMOSTATS (LOCAL DISPLAY AND OVERRIDE ONLY), REFER TO PLANS FOR QUANTITIES AND LOCATIONS.  
 3. PROVIDE WITH FACTORY DRAIN PAN LEVEL SENSORS AND FILTERS.  
 4. PROVIDE EC TYPE MOTORS WITH MULTIPLE FAN SPEED SETTINGS.  
 5. PROVIDE WITH CONDENSATE PUMP.  
 6. DISCONNECT SHALL BE BY DIV 26.

REMOTE AIR COOLED HEAT PUMP SCHEDULE																																			
LOCATION			COOLING				HEATING				CONDENSER FAN				COMPRESSOR				ELECTRICAL DATA																
ID	NAME	NO.	SERVES	MANUFACTURER	MODEL NO.	TYPE	NOMINAL CAP (MBH)	ACTUAL CAP (MBH)	EER	SUMMER AMBIENT DB (°F)	NOMINAL CAP (MBH)	ACTUAL CAP (MBH)	HSPF	WINTER AMBIENT DB (°F)	QTY	TYPE	DRIVE TYPE	MOTOR POWER (HP)	TYPE	REFRIGERANT	CIRCUIT (QTY)	STAGES (QTY)	QTY	RLA	LRA	SOUND PRESS (dB)	WEIGHT (lb)	FLA	MCA	MOCP	V	PH	REMARKS		
CU-1			AC-1, AC-2	MITSUBISHI ELECTRIC	MXZ-SM48NAMHZ-U1	PAD MOUNTED	4.0	36.0	13.8	95.0	45	42.0	12.1	2.0	2	HERMETIC	DIRECT	1	2.8	SCROLL	R-410	2	1	1	19	22	54	305	1	36	40	208	1	1	1 THRU 5

- NOTES:  
 1. REFER TO SPECIFICATIONS, DETAILS, AND CONTROL DIAGRAMS FOR ADDITIONAL INFORMATION.  
 2. PROVIDE WITH LOW AMBIENT CONTROLS AND ACCESSORIES FOR OPERATION DOWN TO 30°F (INCLUDING WIND BAFFLE AND MOUNTING BASE).  
 3. PROVIDE 24" HIGH STAND WITH SQUARE TUBULAR POWDER COATED STEEL, MIN 12 INCH SQUARE FOOTINGS WITH NYLON VIBRATION ISOLATION, EQUAL TO QUICK-SLING STAND MODEL QSSSVRF.  
 4. COMPRESSOR SHALL HAVE DC DRIVEN INVERTER TECHNOLOGY, CRANKCASE HEATERS, INTERNAL THERMAL OVERLOAD, AND COMPRESSOR ISOLATION.  
 5. PROVIDE WITH 1 YEAR COMPLETE UNIT WARRANTY (PARTS AND LABOR) AND 5 YEAR EXTENDED PARTS WARRANTY.

EXHAUST FAN SCHEDULE																			
LOCATION			FAN			MOTOR			SOUND PRESS LEVEL			ELECTRICAL DATA							
ID	NAME	NO.	MANUFACTURER	MODEL NO.	TYPE	DESIGN	ESP	RPM	TYPE	DRIVE TYPE	HP or KW	ECM	STONES	WEIGHT (lb)	FLA	V	PH	REMARKS	
EF-1	METER RM	100	Greenheck	CSP-A290	INLINE	200	0.50	981	FWC	SOLIDE STATE	0.08		3	29	0.8	120	1	1	1 THRU 6

- NOTES:  
 1. REFER TO SPECIFICATIONS, DETAILS, AND CONTROL DIAGRAMS FOR ADDITIONAL INFORMATION.  
 2. PROVIDE GALVANIZED STEEL HOUSING WITH BOLTED ACCESS PANELS.  
 3. PROVIDE WITH SOLID STATE SPEED CONTROL.  
 4. PROVIDE FLEXIBLE CONNECTOR BETWEEN EXHAUST FAN AND DUCT CONNECTION.  
 5. PROVIDE WITH SINGLE POINT POWER AND FACTORY TOGGLE TYPE DISCONNECT SWITCH.  
 6. PROVIDE HANGING SPRING TYPE VIBRATION ISOLATION.

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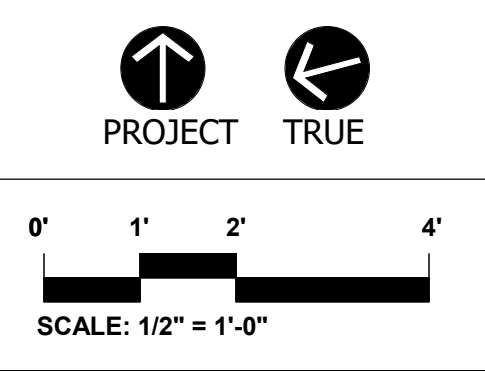
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Revisions:

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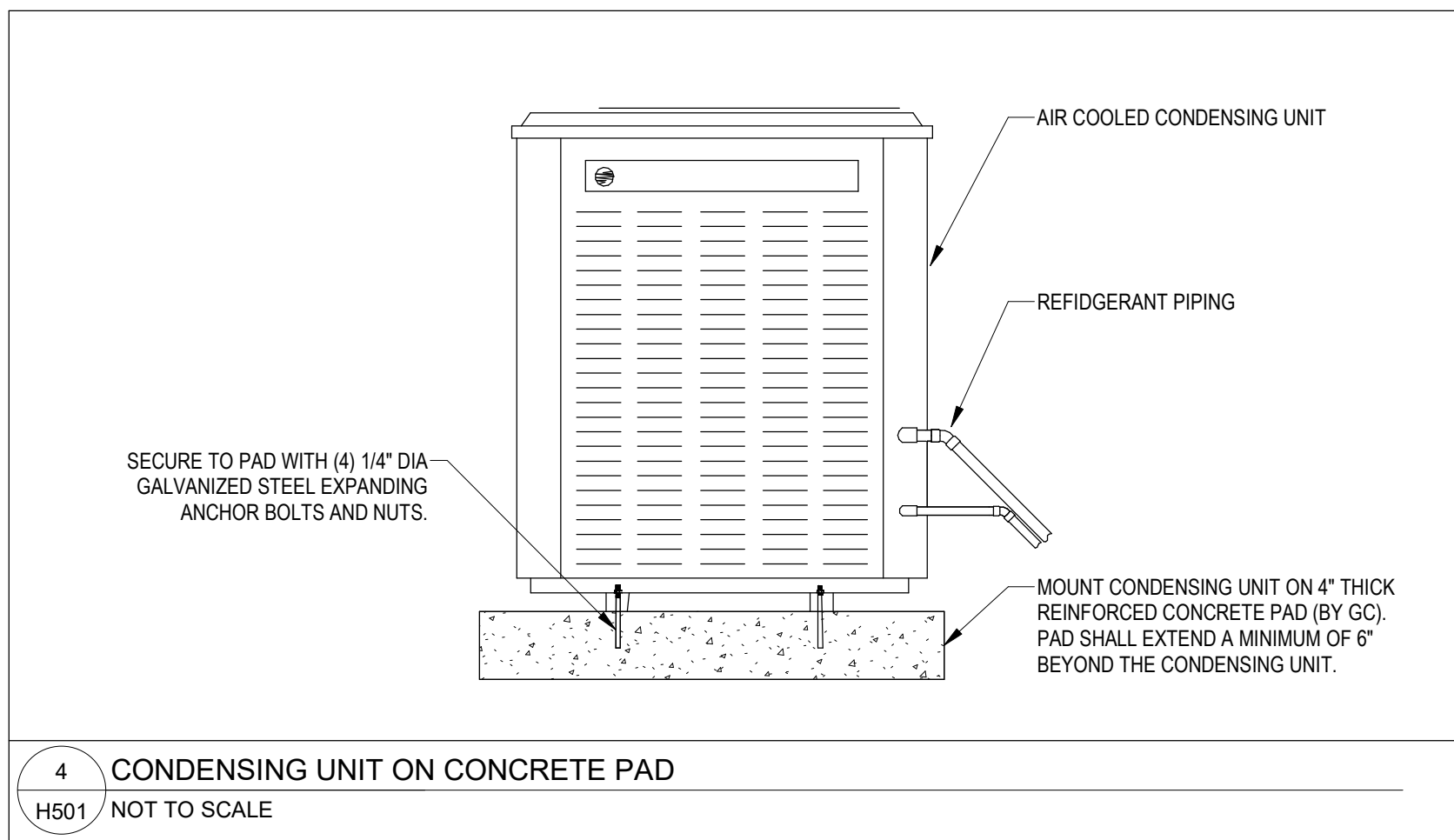
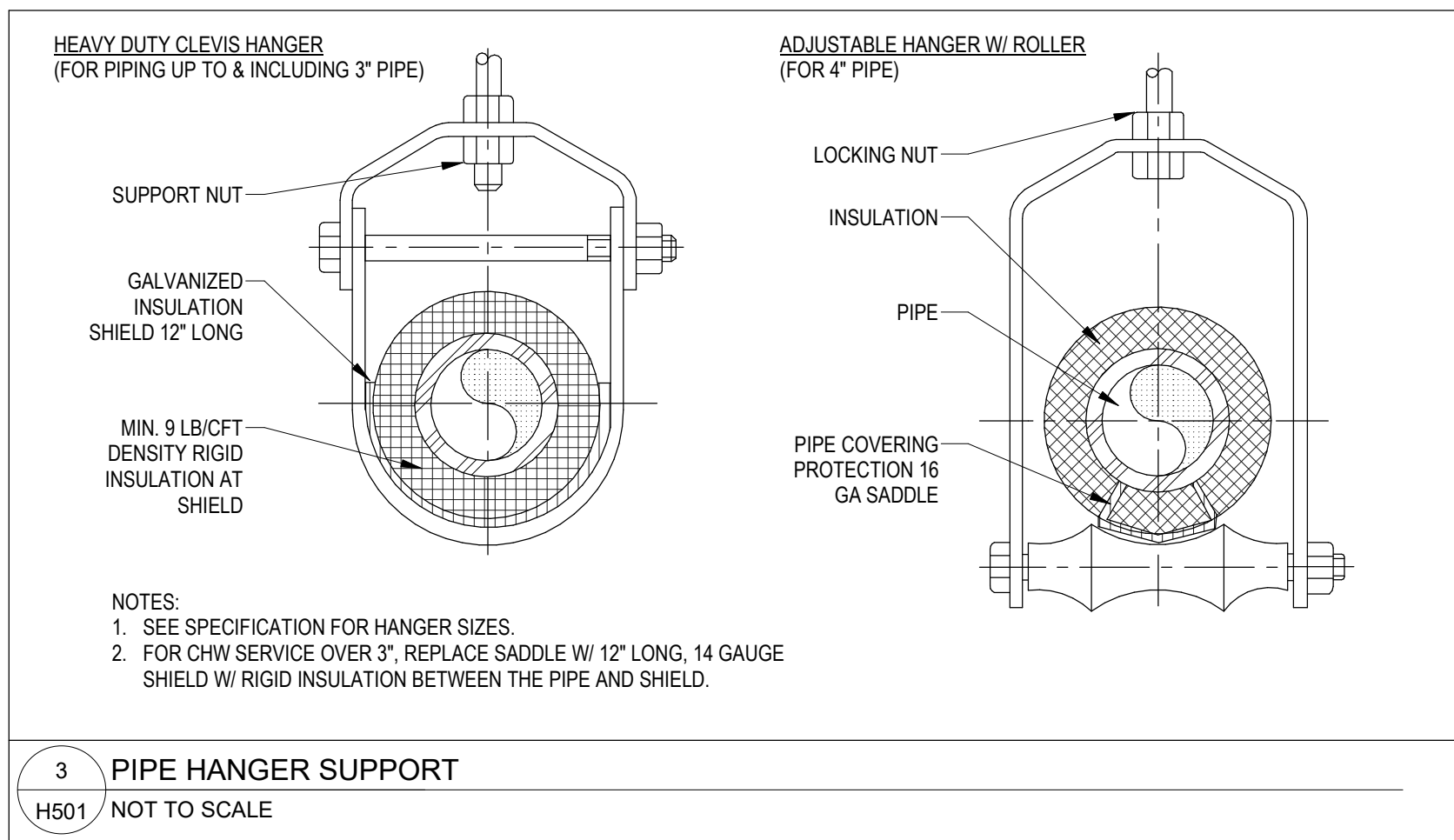
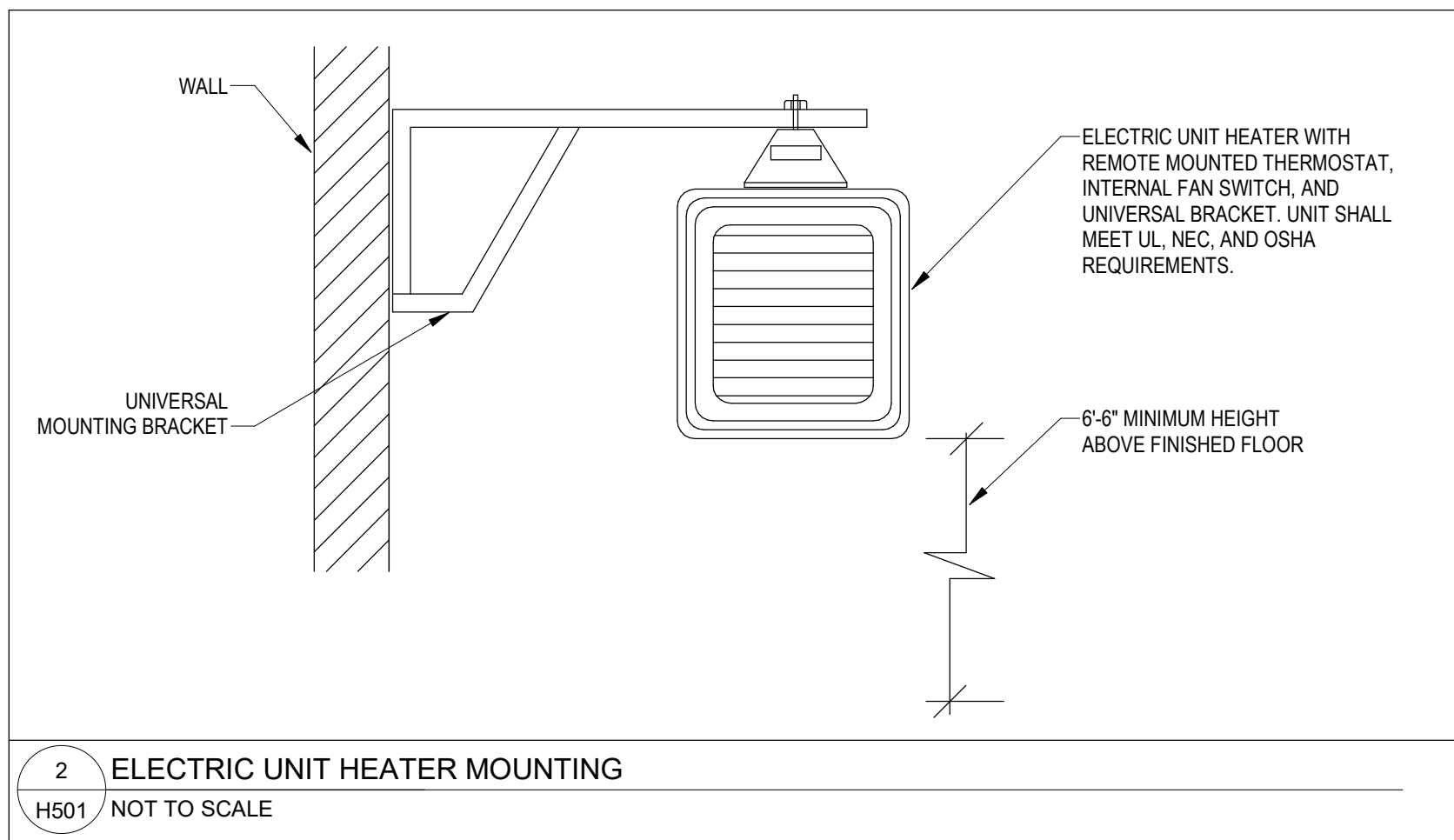
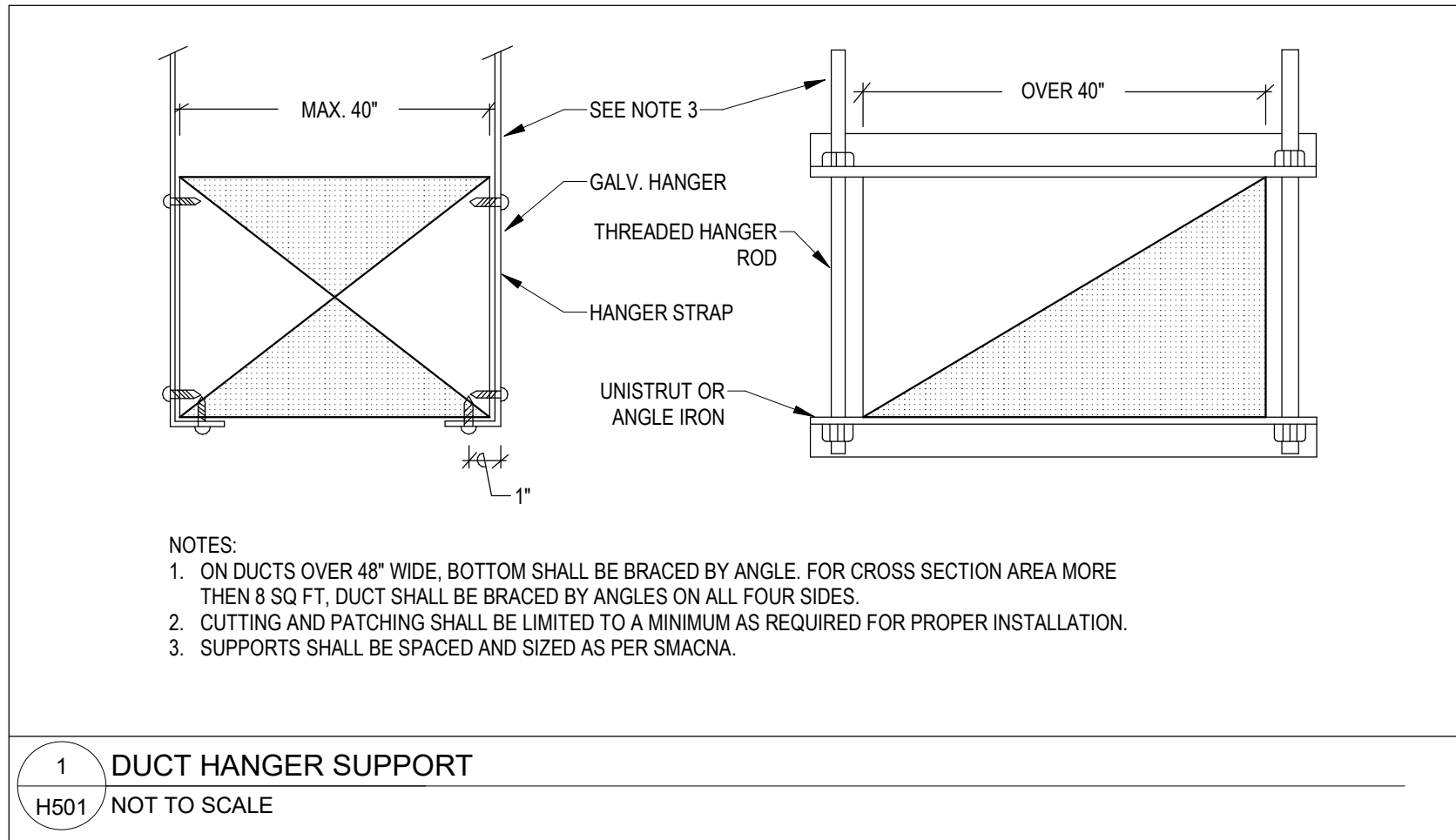
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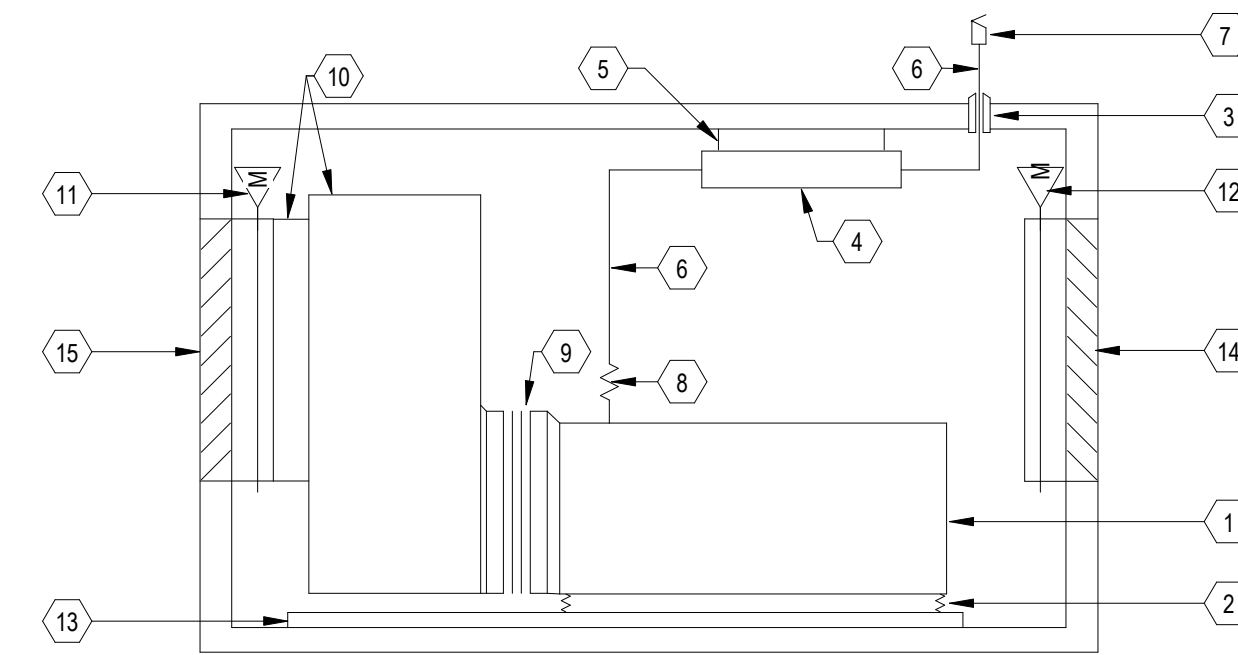
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**FIRST FLOOR  
 NEW WORK DUCT  
 PLAN**

Sheet Number:  
**H101**



EMERGENCY GENERATOR NUMBERED NOTES:

- EMERGENCY GENERATOR FURNISHED AND INSTALLED BY DIVISION 26.
- SPRING ISOLATORS; FURNISHED AND INSTALLED BY DIVISION 26.
- EXHAUST FLUE ROOF THIMBLE; FURNISHED AND INSTALLED BY DIVISION 23.
- MUFFLER; FURNISHED BY DIVISION 26 AND INSTALLED BY DIVISION 23.
- MUFFLER HANGERS; FURNISHED BY DIVISION 26 AND INSTALLED BY DIVISION 23.
- EXHAUST FLUE; FURNISHED AND INSTALLED BY DIVISION 23.
- EXHAUST FLUE EXIT CONE; FURNISHED AND INSTALLED BY DIVISION 23.
- EXHAUST FLUE FLEX CONNECTION; FURNISHED AND INSTALLED BY DIVISION 23.
- DUCT TRANSITION AND FLEX CONNECTION; FURNISHED AND INSTALLED BY DIVISION 23.
- EXHAUST AIR DUCTWORK; FURNISHED AND INSTALLED BY DIVISION 23.
- EXHAUST AIR MOTORIZED DAMPER; FURNISHED AND INSTALLED BY DIVISION 23.
- OUTSIDE AIR MOTORIZED DAMPER; FURNISHED AND INSTALLED BY DIVISION 23.
- CONCRETE HOUSEKEEPING PAD; FURNISHED AND INSTALLED BY GENERAL CONTRACTOR.
- OUTSIDE AIR LOUVER; FURNISHED AND INSTALLED BY GENERAL CONTRACTOR.
- EXHAUST AIR LOUVER; FURNISHED AND INSTALLED BY GENERAL CONTRACTOR.



EMERGENCY GENERATOR SCHEMATIC

H501

NOT TO SCALE

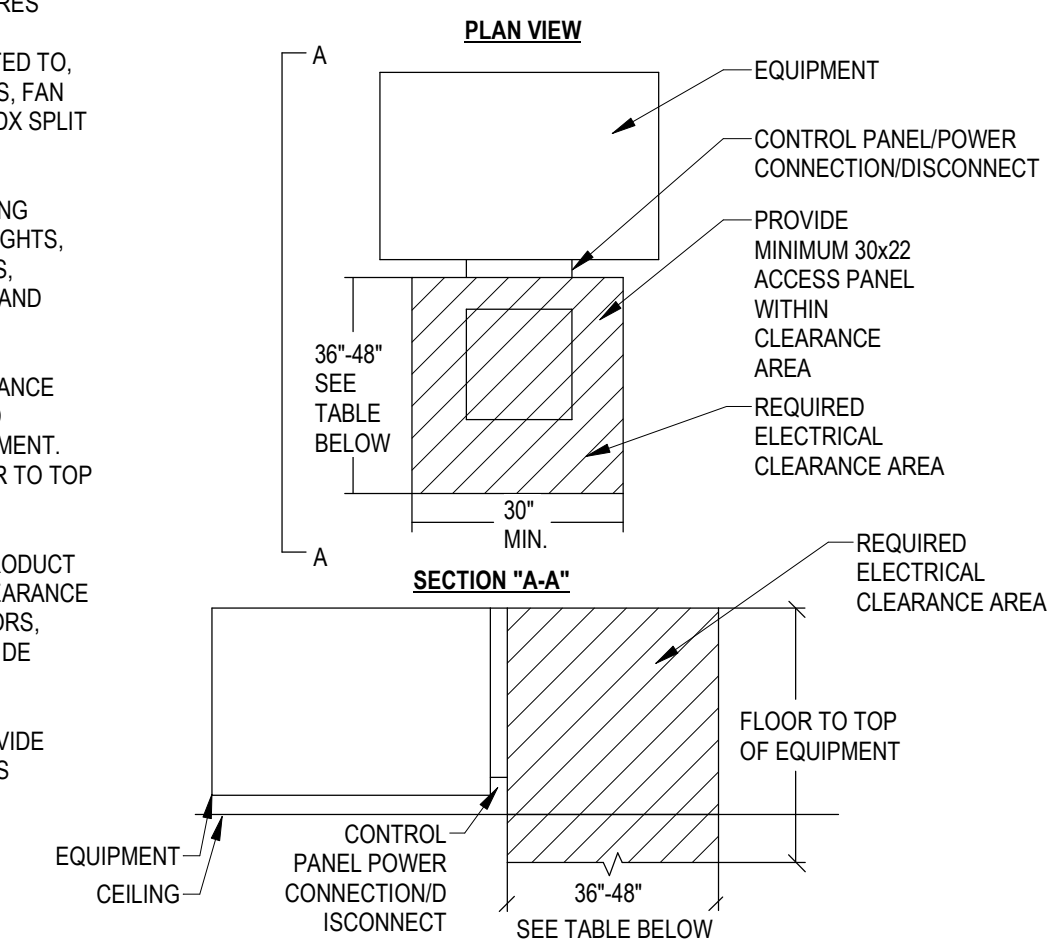
- NOTES:
- NO EQUIPMENT FOREIGN TO THE ELECTRICAL INSTALLATION (PIPING, DUCTS, ETC) SHALL ENTER THE DEDICATED SPACE ABOVE OR BELOW ELECTRICAL POWER EQUIPMENT INCLUDING SWITCHGEAR, SWITCHBOARDS, PANELBOARDS, & MOTOR CONTROL CENTERS.
  - NO EQUIPMENT SHALL PROTRUDE INTO WORKING SPACE.
  - PIPING SYSTEMS INSTALLED ABOVE THE DEDICATED ELECTRICAL SPACE SHALL BE ALLOWED WHERE DRIP PANS ARE INSTALLED TO CAPTURE LEAKS, RUPTURES OR CONDENSATION DRIPS. THE PIPING AND DRIP PANS SHALL BOTH BE OUTSIDE THE DEDICATED SPACE ENVELOPE.

6 ELECTRICAL WORK AND DEDICATED SPACE

H501

NOT TO SCALE

- NOTES:
- DETAIL APPLIES TO ALL MECHANICAL EQUIPMENT LOCATED ABOVE A CEILING THAT REQUIRES POWER, INCLUDING CONTROL POWER. EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO, FAN POWERED BOXES, VAV BOXES, FANS, FAN COIL UNITS, HEAT PUMPS, CRAC UNITS, DX SPLIT SYSTEMS, DUCT HEATERS, ETC.
  - ELECTRICAL CLEARANCE AREA (INCLUDING WITHIN CEILING) MUST BE FREE FROM LIGHTS, SPRINKLER HEADS, FIRE ALARM DEVICES, SPEAKERS, PIPING, DUCTWORK, BEAMS AND OTHER OBSTRUCTIONS.
  - THE HEIGHT OF THE ELECTRICAL CLEARANCE SHALL BE AS REQUIRED TO INSTALL AND PERFORM MAINTENANCE ON THE EQUIPMENT. MINIMUM HEIGHT SHALL BE FROM FLOOR TO TOP OF EQUIPMENT.
  - REFER TO SPECIFIC MANUFACTURER PRODUCT DATA FOR ADDITIONAL ACCESS AND CLEARANCE REQUIREMENTS FOR FANS, COMPRESSORS, VALVES, DAMPERS, FILTERS, ETC. PROVIDE ACCESS PANELS AS REQUIRED.
  - COORDINATE WITH ALL TRADES TO PROVIDE THESE MINIMUM REQUIRED CLEARANCES



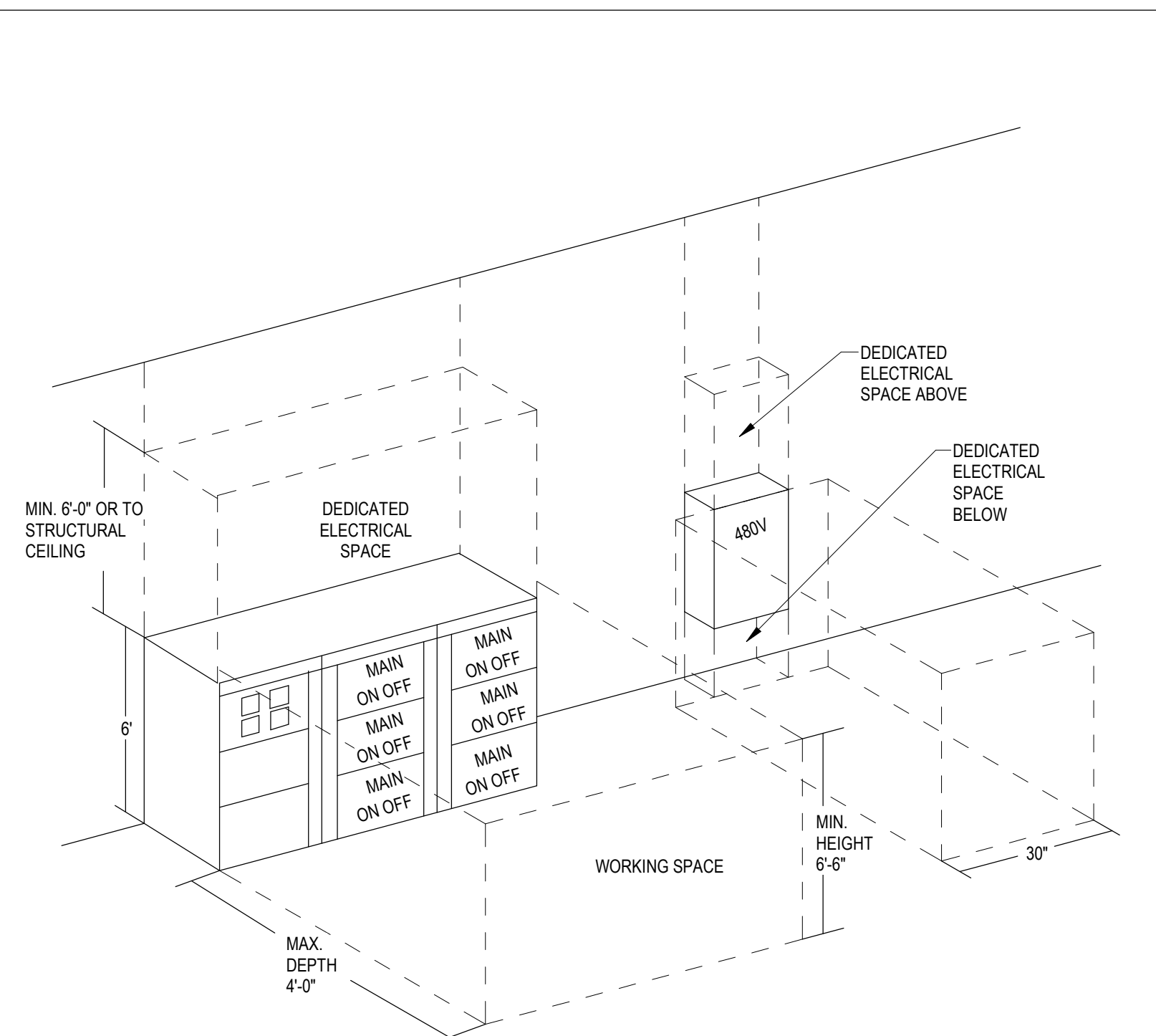
MINIMUM ELECTRICAL CLEARANCES (NEC 2017 COMPLIANCE)			
VOLTAGE TO GROUND (SINGLE PHASE VOLTAGE)	CONDITION 1	CONDITION 2	CONDITION 3
0-150	36"	36"	36"
151-600	36"	42"	48"

CONDITION 1 - EXPOSED LIVE PARTS ON ONE SIDE OF THE WORKING SPACE AND NO LIVE OR GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE, OR EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORKING SPACE THAT ARE EFFECTIVELY GUARDED BY INSULATING MATERIALS.  
CONDITION 2 - EXPOSED LIVE PARTS ON ONE SIDE OF THE WORKING SPACE AND GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE. CONCRETE BRICK, OR TILE WALLS SHALL BE CONSIDERED AS GROUNDED  
CONDITION 3 - EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORKING SPACE  
NOTE: CLEARANCE WIDTH SHALL BE 30" OR THE WIDTH OF THE CONTROL PANEL/POWER CONNECTION, WHICHEVER IS GREATER

7 ELECTRICAL CLEARANCE AT CEILING

H501

NOT TO SCALE

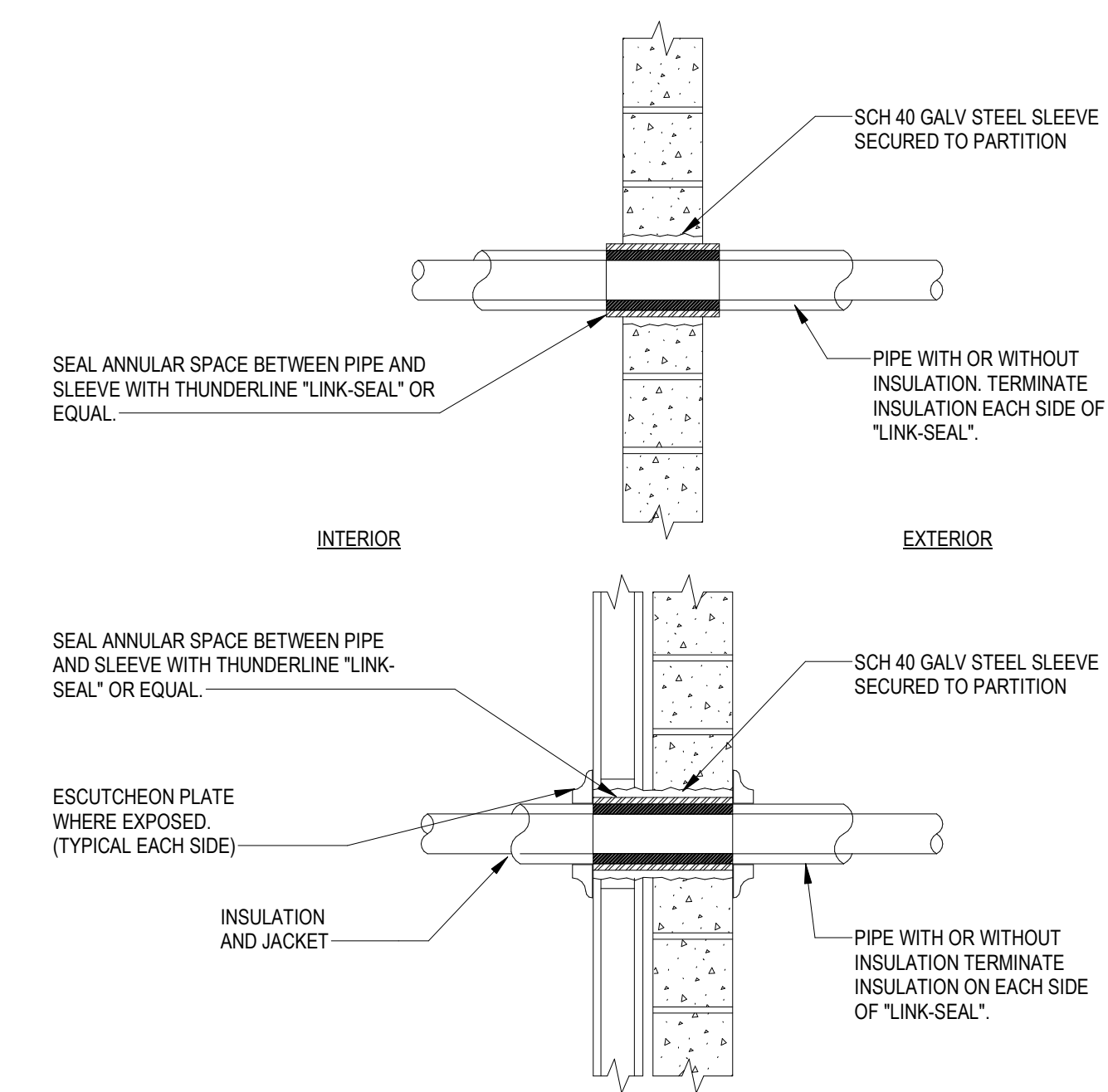


8 PIPE PENETRATION THRU EXTERIOR WALLS

H501

NOT TO SCALE

- NOTES:
- TYPICAL FOR NON-INSULATED PIPING AND CONDUIT.
  - TYPICAL FOR MASONRY OR CONCRETE WALL.
  - FOR WALL PENETRATION WITH FIRE RATINGS GREATER THAN (1) HOUR, USE THUNDERLINE "PYRO-PAC" SEALS OR EQUAL.
  - WHERE PIPING EXPOSED AT FINISHED WALL, FLUSH MOUNT SLEEVE, AND PROVIDE AN ESCUTCHEON PLATE.



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DETAILS

Sheet Number:

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