# BID SET ABSS

# EASTERN HS PRESS BOX/CONCESSIONS

MEBANE, NC







**BID SET** 

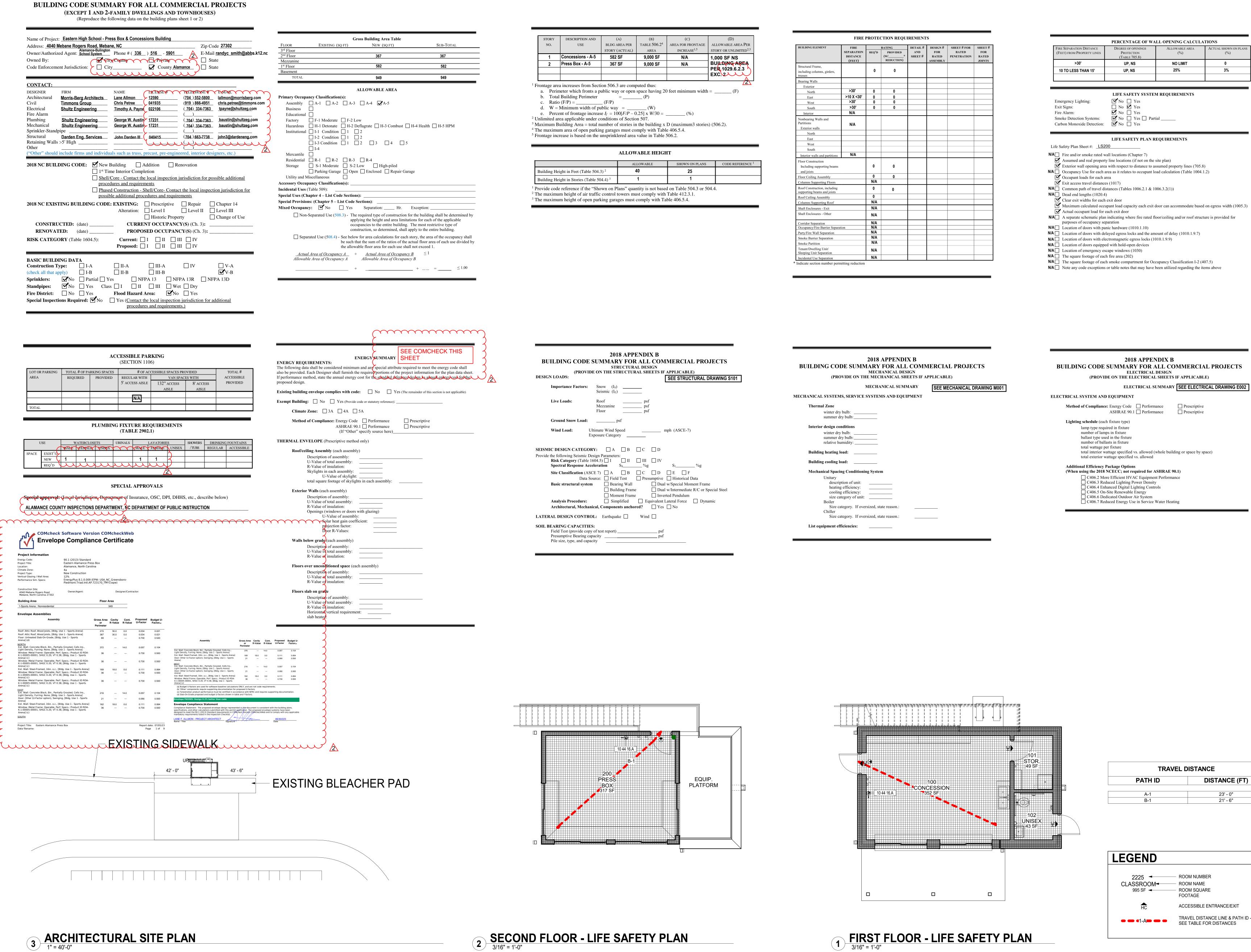


DISCIPLINE	S	
ARCHITECTURAL	PLUMBING	MECH

GENERAL	CIVIL	STRUCTURAL	ARCHITECTURAL	PLUMBING	MECHANICAL	ELECTRICAL
CS100 COVER SHEET LS100 APPENDIX B & LIFE SAFETY PLANS	C1 PUMP STATION PLAN C2 PUMP STATION PLAN	S101 FOUNDATION, FIRST FLOOR, SECOND FLOOR FRAMING, ROOF FRAMING PLAN & NOTES S102 DETAILS	A200 FLOOR PLANS A500 EXTERIOR ELEVATIONS A800 WALL SECTIONS A1001 2D STANDARD AND ADA MOUNTING HEIGHTS AND DIMENSIONS A1200 DOOR SCHEDULE & DETAILS	P001 PLUMBING SCHEDULES, NOTES AND DETAILS P101 PLUMBING FLOOR PLAN AND NOTES	M001 MECHANICAL LEGEND, NOTES, SCHEDULES AND DETAILS M101 MECHANICAL FLOOR PLANS	E001 ELECTRICAL SPECIFICATIONS, LEGEND AND DIAGRAMS E002 ELECTRICAL SCHEDULES E101 ELECTRICAL FLOOR PLANS

FINISH SCHEDULE & PLANS

A1300



2018 APPENDIX B

**Morris** Berg ARCHITECT 1401 WEST MOREHEAD STREET, SUITE 125, CHARLOTTE, NC 28201 (704) 552-5800 FAX (704) 552-7420

C SEAL O <del>125</del>90 /



**BID SET** 

ISSUE DATE: 12/01/2022 REVISIONS Revision 1 Revision 2

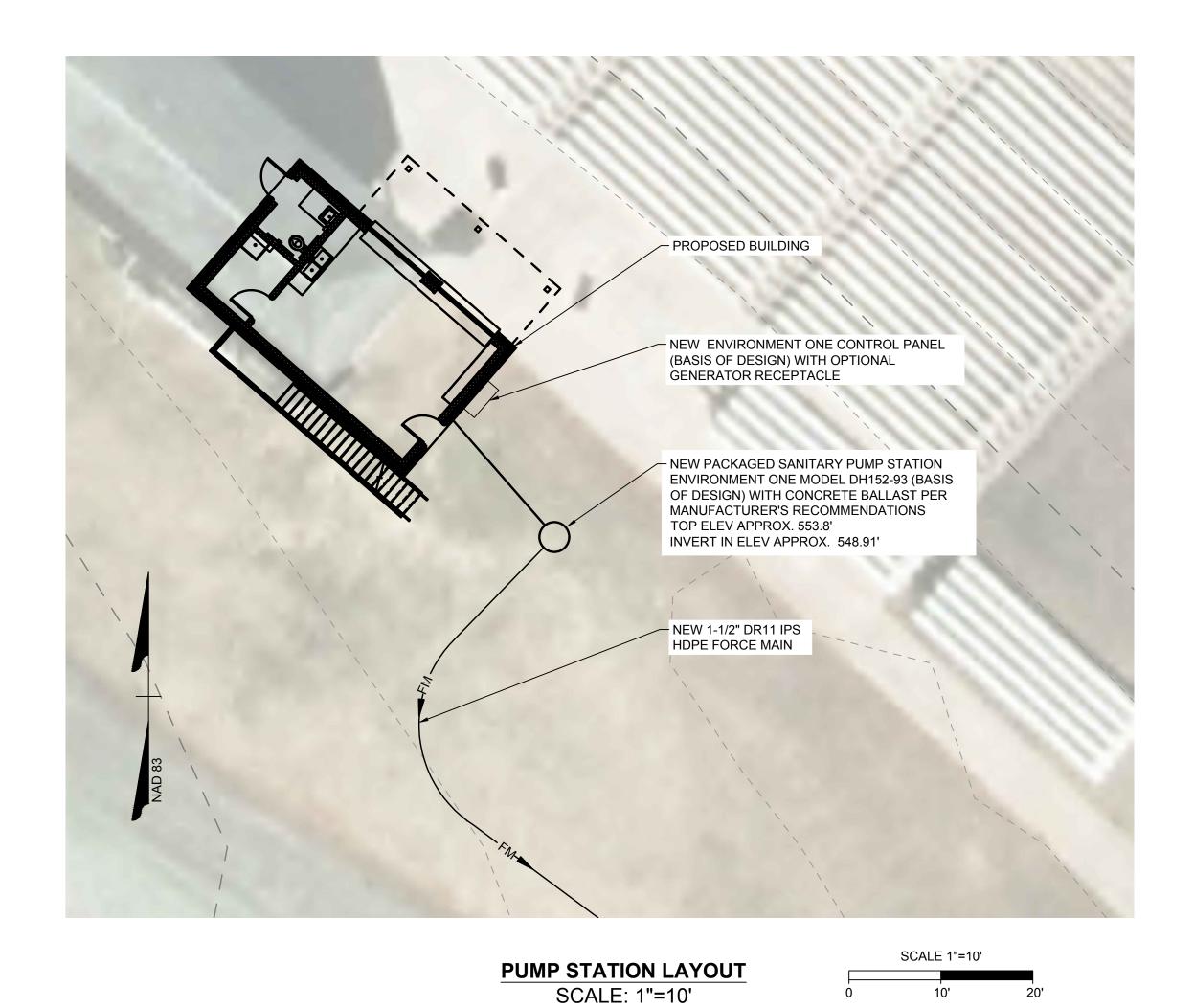
NO. DESCRIPTION DATE 03/30/23

TRAVEL DISTANCE **DISTANCE (FT)** 

ROOM SQUARE FOOTAGE ACCESSIBLE ENTRANCE/EXIT TRAVEL DISTANCE LINE & PATH ID -SEE TABLE FOR DISTANCES

PROJECT NUMBER 2212 SHEET TITLE APPENDIX B & LIFE SAFETY PLANS SHEET NUMBER

LS100



## DESIGN CRITERIA:

- 1. PUMP STATION IS NOT LOCATED WITHIN 100-YR FLOODPLAIN ACCORDING TO FEMA FIRM MAP 3710981600K DATED
- 2. THE PRESS BOX AND CONCESSIONS STAND HAS BEEN DESIGNED TO HANDLE AN AVERAGE DAILY FLOW OF 50 GALLONS PER 100 SQUARE FEET OF SPACE PER DAY (GPD) BASED ON 15A NCAC 02T FLOW RULES: 453 SQUARE FEET AT 50 GPD/100 SQ FT. OVER A PERIOD OF 6 HOURS HAS A PEAK INFLUENT RATE OF 1.57 GALLONS PER MINUTE BASED ON A PEAKING FACTOR OF 2.5. THE STATION WILL BE A DUPLEX ENVIRONMENT ONE STATION (OR APPROVED EQUAL) WITH A 1-1/2" INCH FORCE MAIN, WHICH WILL DISCHARGE TO AN EXISTING MANHOLE IN THE NORTH WEST CORNER OUTSIDE OF THE GYM.
- PUMP STATION FLOWS ARE HANDLED BY A SINGLE ENVIRONMENT ONE SUBMERSIBLE GRINDER PUMP OR APPROVED EQUIVALENT OPERATING AT THE RATE SHOWN BELOW. A SECOND ENVIRONMENT ONE PUMP IS PROVIDED FOR
- 4. THE DESIGN PUMPING RATE IS 13.5 GPM AT 28.76' TDH UTILIZING A SINGLE PUMP.

## PUMP STATION NOTES:

- 1. ALL PUMP STATION COMPONENTS SHALL BE SUPPLIED BY ONE MANUFACTURER: ENVIRONMENT ONE OR APPROVED
- 2. CONTRACTOR TO MAINTAIN A DRY EXCAVATION UNTIL ALL BACKFILLING IS COMPLETED.
- 3. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM PUMP STATION.

- 1. ALL ABOVE-GRADE ENCLOSURES INSTALLED UNDER THIS CONTRACT SHALL BE PAD LOCKABLE AND NEMA 4X.
- 2. ALL WIRE INSTALLED UNDER THIS CONTRACT SHALL BE COPPER.
- 3. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES AND REGULATIONS; AND THE RECOMMENDATIONS AND REQUIREMENTS OF THE EQUIPMENT MANUFACTURERS.
- 4. NO ELECTRICAL SPLICES ALLOWED IN WET WELL.
- 5. ALL EXTERIOR CONDUITS SHALL BE UNDERGROUND AND SHALL BE INSTALLED PER 1996 NEC TABLE 300-5 & TABLE 300-50 AND ARTICLE 300-6 (PROTECTION AGAINST CORROSION).
- 6. E/ONE CELLULAR MODEM SENTRY ADVISOR AND SENTRY PROTECT PLUS DUPLEX SHALL BE COMBINED INTO ONE PANEL. MANUFACTURER'S PANEL SHALL ALSO INCLUDE A GENERATOR CONNECTION AND MANUAL TRANSFER SWITCH.

GASKETED LID, HDPE

DUAL WALL, CORRUGATED HDPE ACCESSWAY

INTERNAL WELL VENT

DISCHARGE 1 1/4" FPT

(304 S.S.)

\_ QUICK DISCONNECT ASSY.

CHECK VALVE (NORYL)

- ANTI-SIPHON VALVE

1/2" NOMINAL WALL THICKNESS 150 GALLON CAPACITY

KC | PD | 09/30/19 | F

MODEL DH152 / DR152

DETAIL SHEET

NA0052P02

(304 S.S.)

S.S. CAST BALL VALVE

1 1/4" DISCHARGE LINE

(304 S.S.)

**BASIS OF DESIGN:** 

SEMI-POSITIVE DISPLACEMENT TYPE PUMP

EACH DIRECTLY DRIVEN BY A 1 HP MOTOR

CONCRETE BALLAST MAY BE REQUIRED SEE INSTALLATION INSTRUCTIONS
FOR DETAILS

NOTE: DIMENSIONS ARE FOR REF ONLY

FIELD JOINT REQUIRED FOR MODELS DH152-129 / DR152-129

DH152-160 / DR152-160

ACCESS WAY VENT

POWER/ALARM CABLE 6 CONDUCTOR W/GND

E/ONE EQUALIZER -

ELECTRICAL QUICK DISCONNECT ~ NEMA 6P (EQD)

INLET, GROMMET TO ACCEPT 4.50" O.D.

PVC PIPE (STANDARD)

DUST COVER SUPPLIED FOR SHIPMENT (NOT

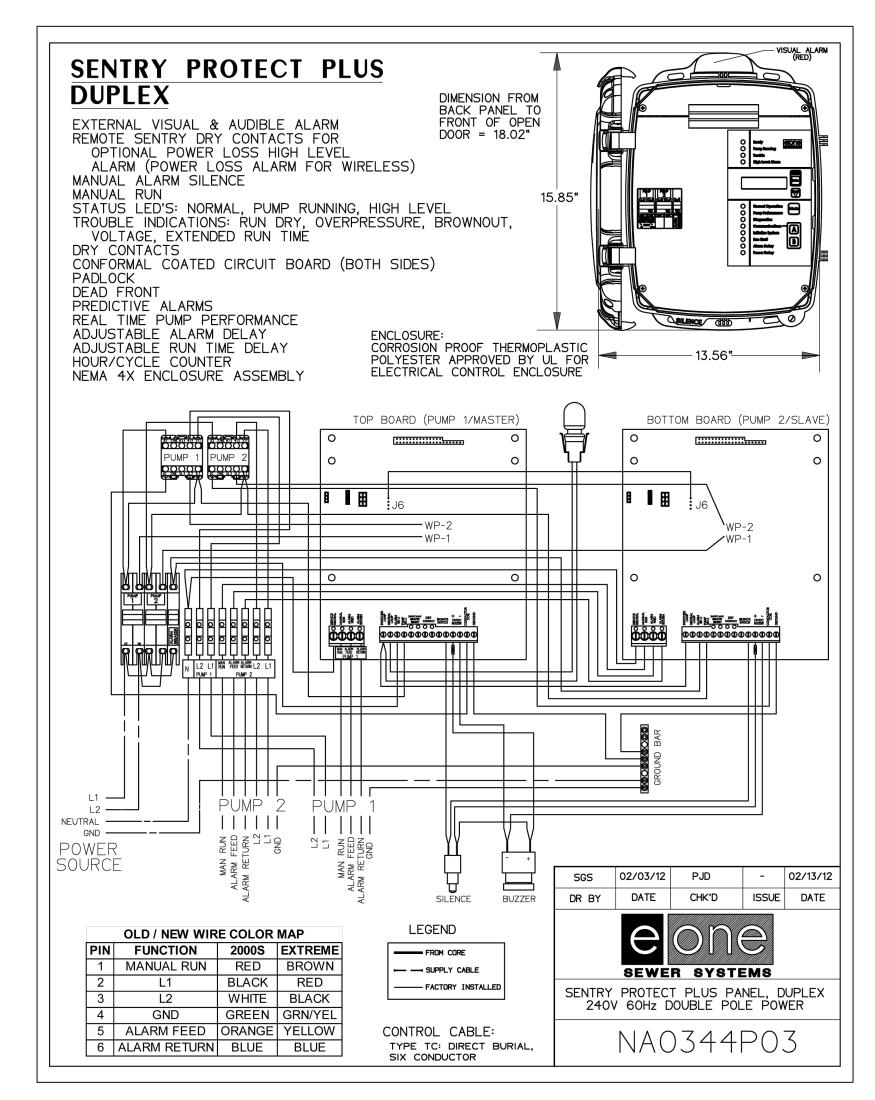
SUITABLE FOR BURIAL)

1. CONTRACTOR TO FIELD VERIFY INVERT ELEVATION AND SELECT APPROPRIATE HEIGHT OF E-ONE PACKAGED PS.

2. CONTRACTOR TO CHECK WITHIN WORK AREA FOR EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.

## PUMP STATION BALLAST REQUIREMENTS

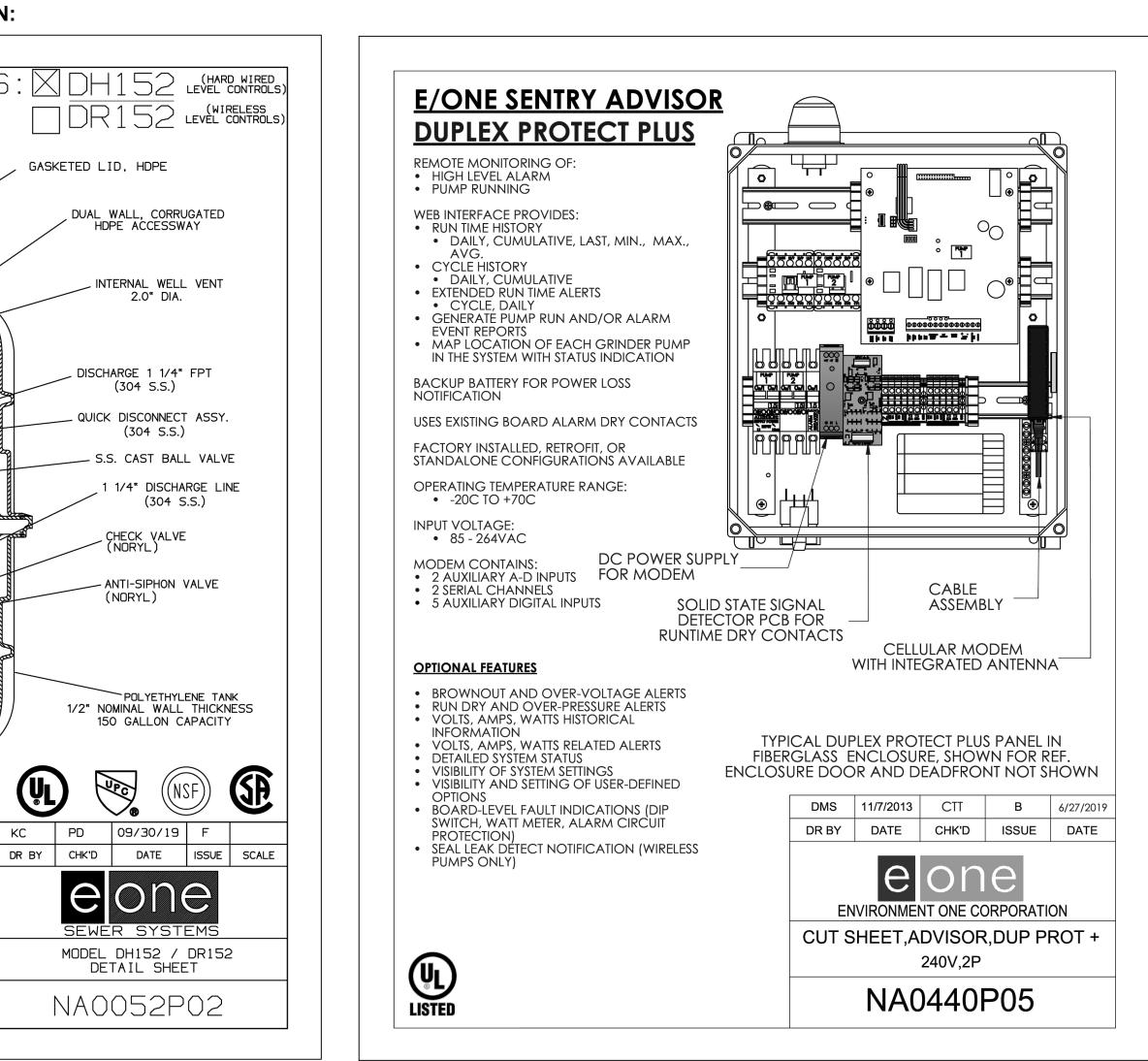
	Station Height (in)	Wetwell Volume (cu ft)	FNet- Buoyant (lb)	Station Weight (lb)	Fballast (lb)	Volume Concrete (cu ft)	Weight Concrete in Air (lb)
-	93 inches	22	902.8	470	2787.4	6.1	915
	129 inches	22	863.8	509	5174.4	6.1	915
	160 inches	22	833.8	539	7253.4	6.1	915



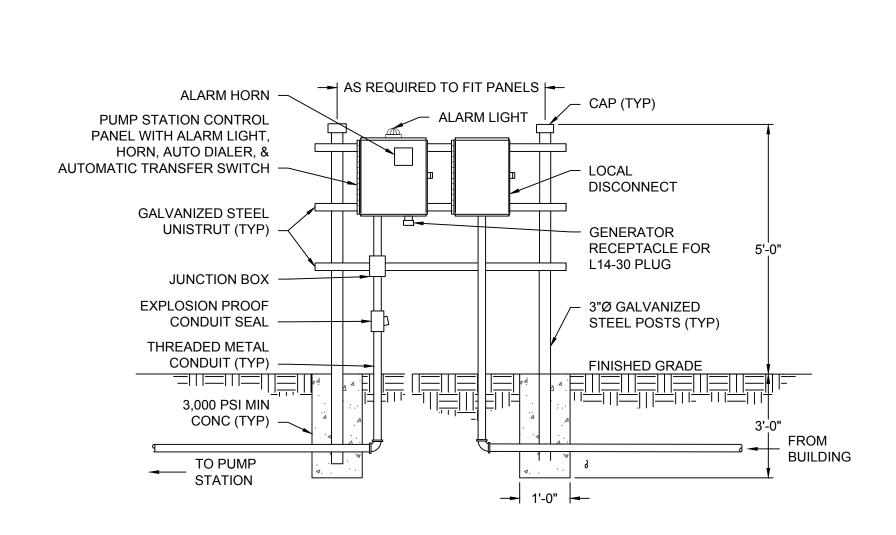
**DUPLEX PUMP CONTROL PANEL** SCALE: NOT TO SCALE

## E|ONE SPD PUMP PERFORMANCE CURVE GRINDER PUMP, 1HP, 1725 RPM 7 7 230 200 190 140 130 120 110 13.5 GPM at 28.76' TDH (ONE PUMP RUNNING) SYSTEM CURVE 0 2 4 6 8 10 12 14 16 18 DISCHARGE (Q), GPM ESD 08-0022 REV. 2, 6/08

**DUPLEX GRINDER PUMP STATION SECTION** PUMP PERFORMANCE CURVE SCALE: NOT TO SCALE



SENTRY ADVISOR



CONTROL PANEL MOUNTING DETAIL SCALE: NOT TO SCALE

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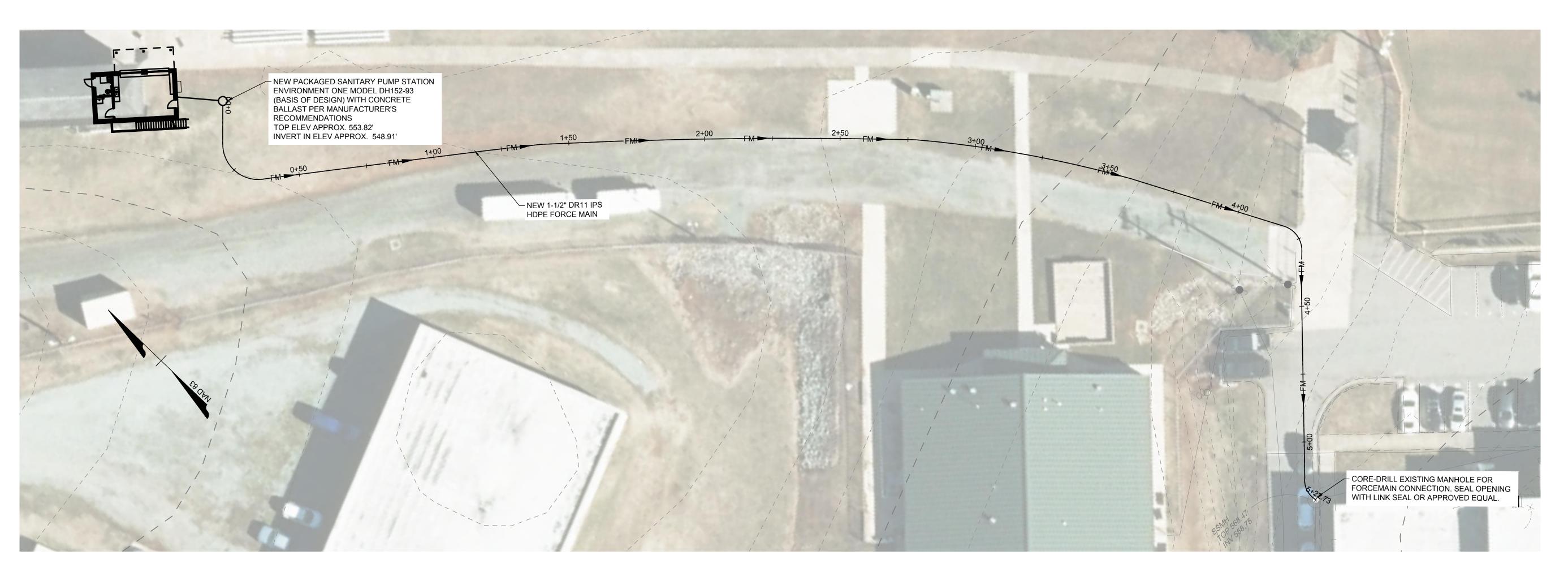
ISSUE DATE: 12/01/2022 REVISIONS NO. DESCRIPTION DATE

PROJECT NUMBER 2212

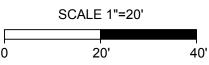
SHEET NUMBER

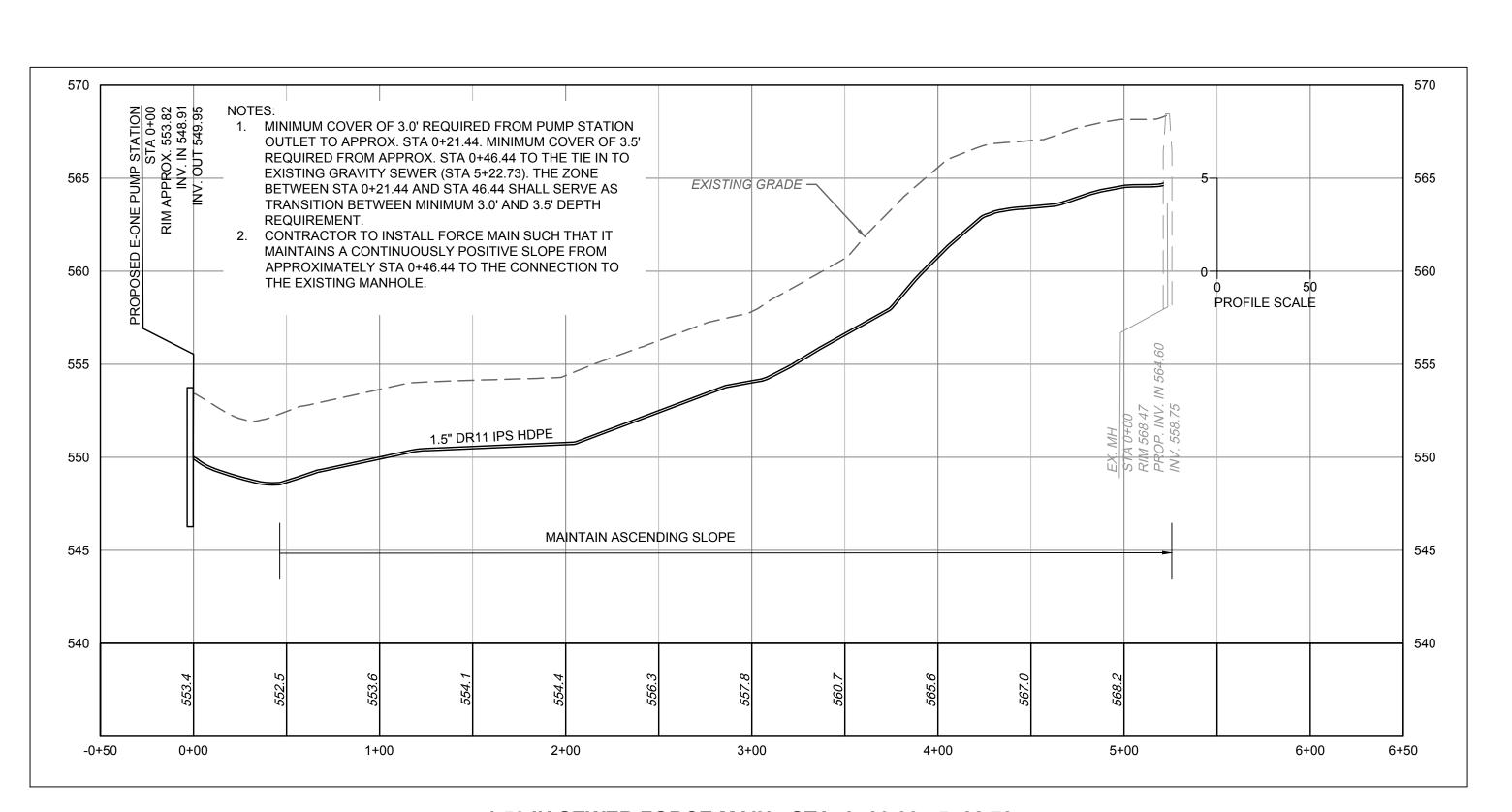
PUMP STATION PLAN

SHEET TITLE



FORCE MAIN AND PUMP STATION PLAN
SCALE: 1"=20'





1.50 IN SEWER FORCE MAIN - STA. 0+00.00 - 5+22.73

HORZ: 1" = 50'

VERT: 1" = 5'

Morris Berg
A R C H I T E C T S

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TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY



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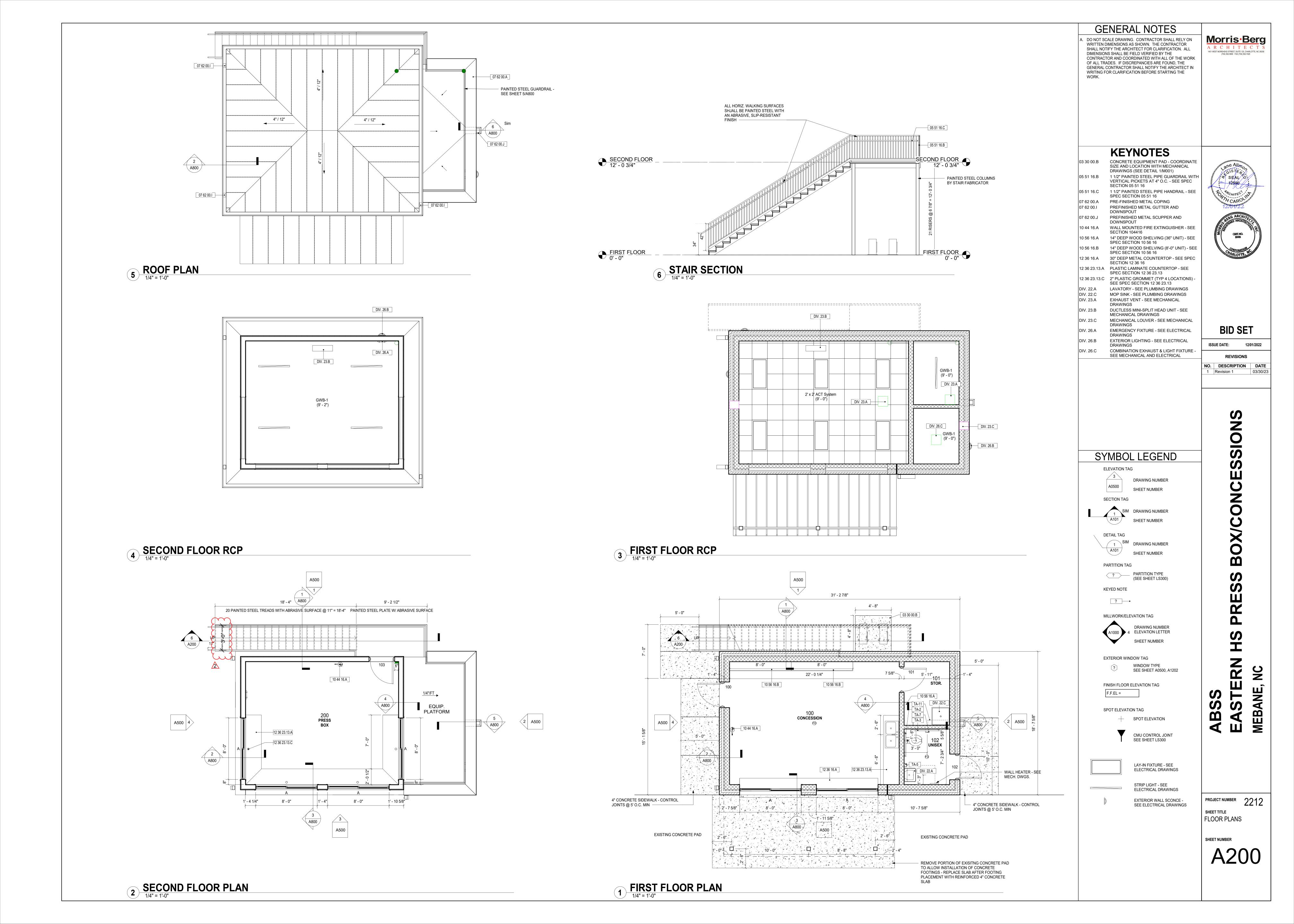
STERN HS PRESS BOX/CONCESSIONS

PROJECT NUMBER 2212
SHEET TITLE

PUMP STATION PLAN

SHEET NUMBER

**C**2



**KEYNOTES** 

04 20 00.C FACE BRICK - SEE SECTION 042000 05 51 16.A FABRICATED METAL STAIRS - SEE SPEC SECTION 05

05 51 16.B 1 1/2" PAINTED STEEL PIPE GUARDRAIL WITH VERTICAL PICKETS AT 4" O.C. - SEE SPEC SECTION 05

DIV. 23.D DUCTLESS MINI-SPLIT - SEE MECHANICAL DRAWINS DIV. 26.B EXTERIOR LIGHTING - SEE ELECTRICAL DRAWINGS

07 41 13.16 STANDING-SEAM METAL ROOFING OVER #15 FELT OVER 1/2" PLYWOOD SHEATHING

07 46 46 FIBER-CEMENT SIDING 07 62 00.A PRE-FINISHED METAL COPING 07 62 00.I PREFINISHED METAL GUTTER AND DOWNSPOUT DIV. 23.C MECHANICAL LOUVER - SEE MECHANICAL DRAWINGS Morris Berg ARCHITECTS 1401 WEST MOREHEAD STREET, SUITE 125, CHARLOTTE, NC 28208 (704) 552-5800 FAX (704) 552-7420





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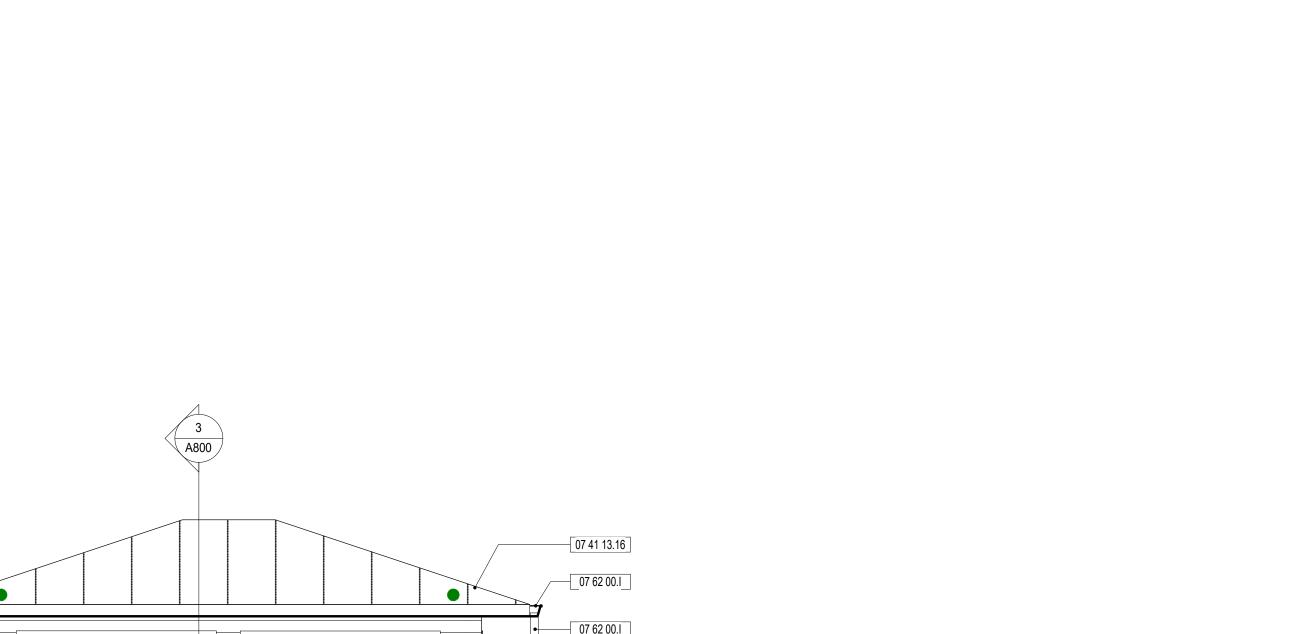
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MEBANE,

PROJECT NUMBER 2212 SHEET TITLE EXTERIOR ELEVATIONS

SHEET NUMBER

A500

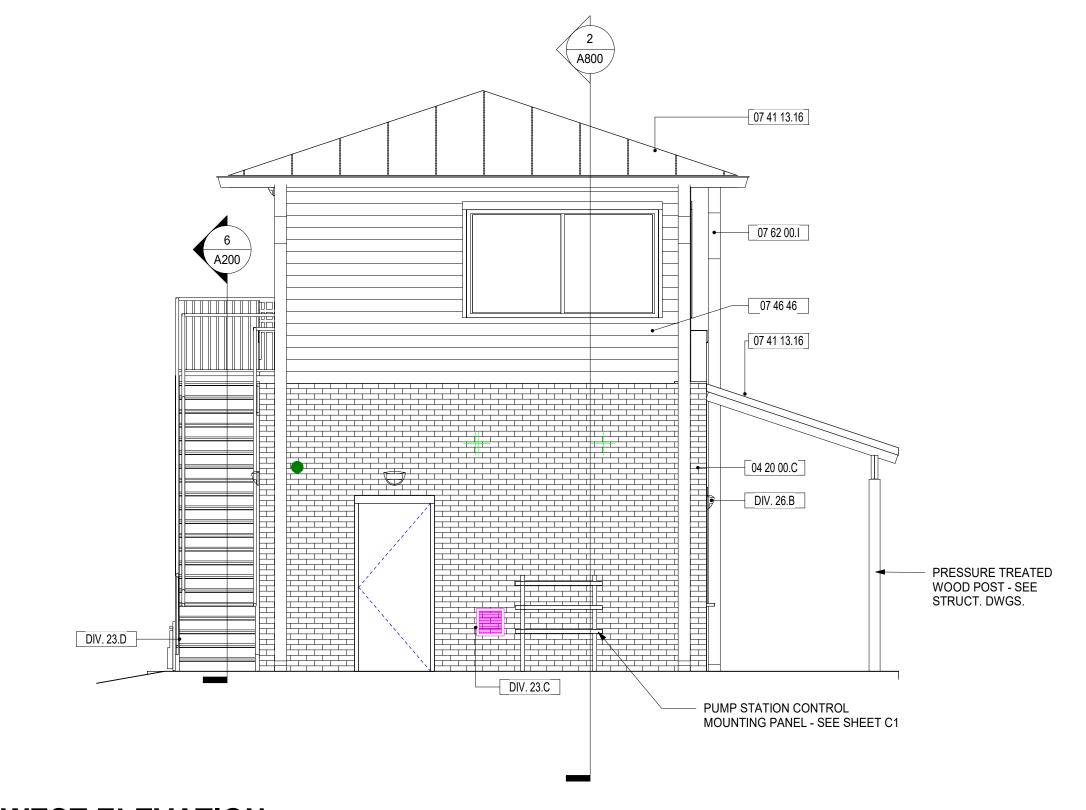


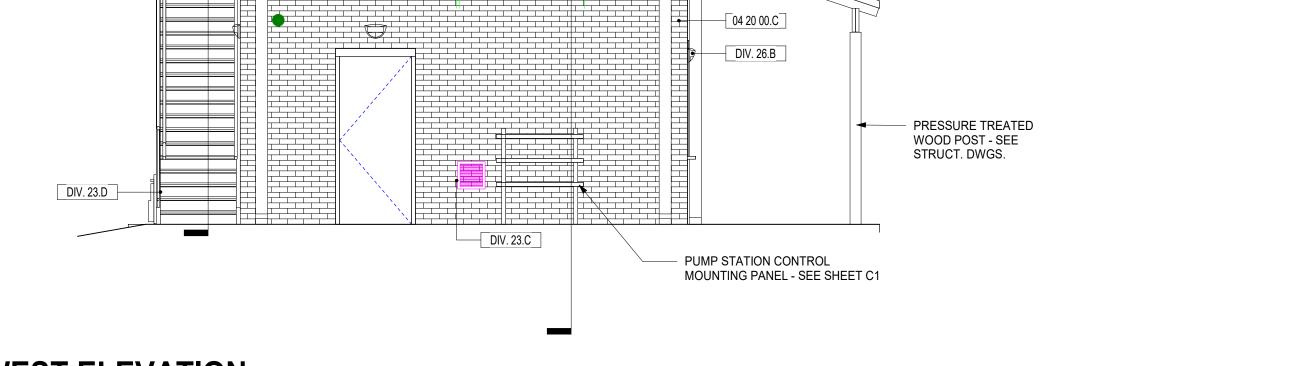
07 62 00.A

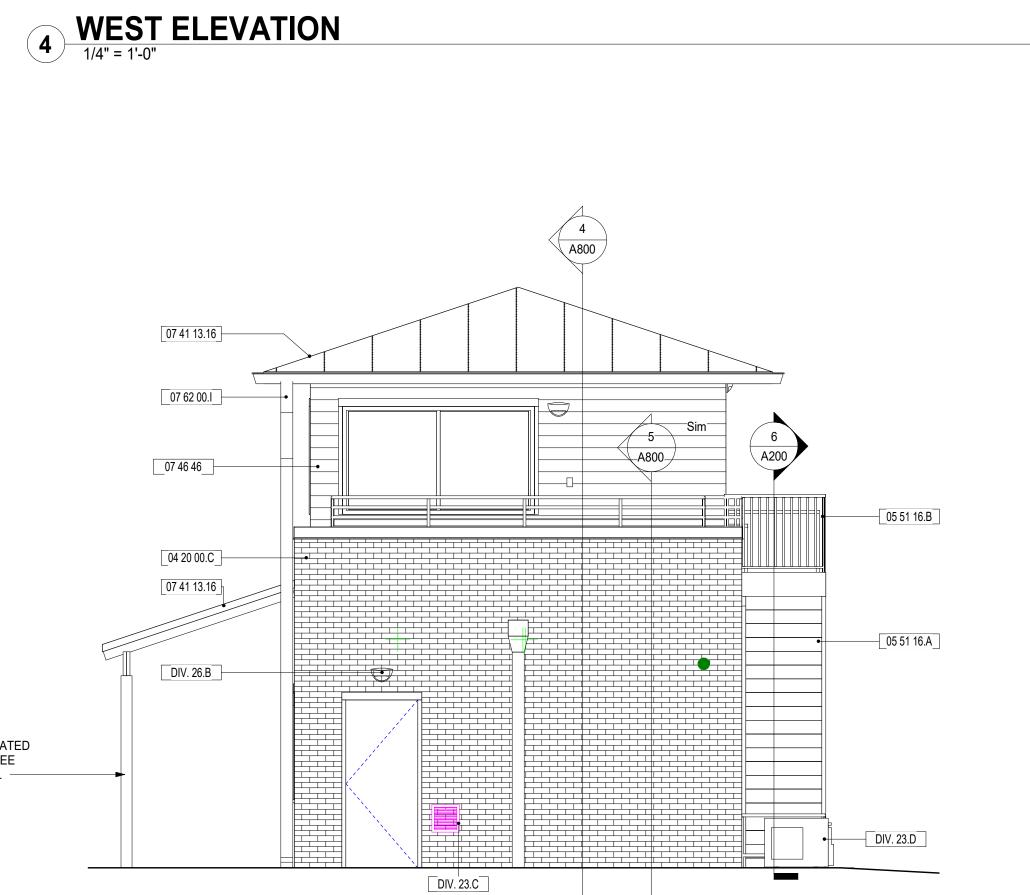
04 20 00.C

DIV. 26.B

PRESSURE TREATED WOOD POSTS - SEE STRUCT. DWGS.

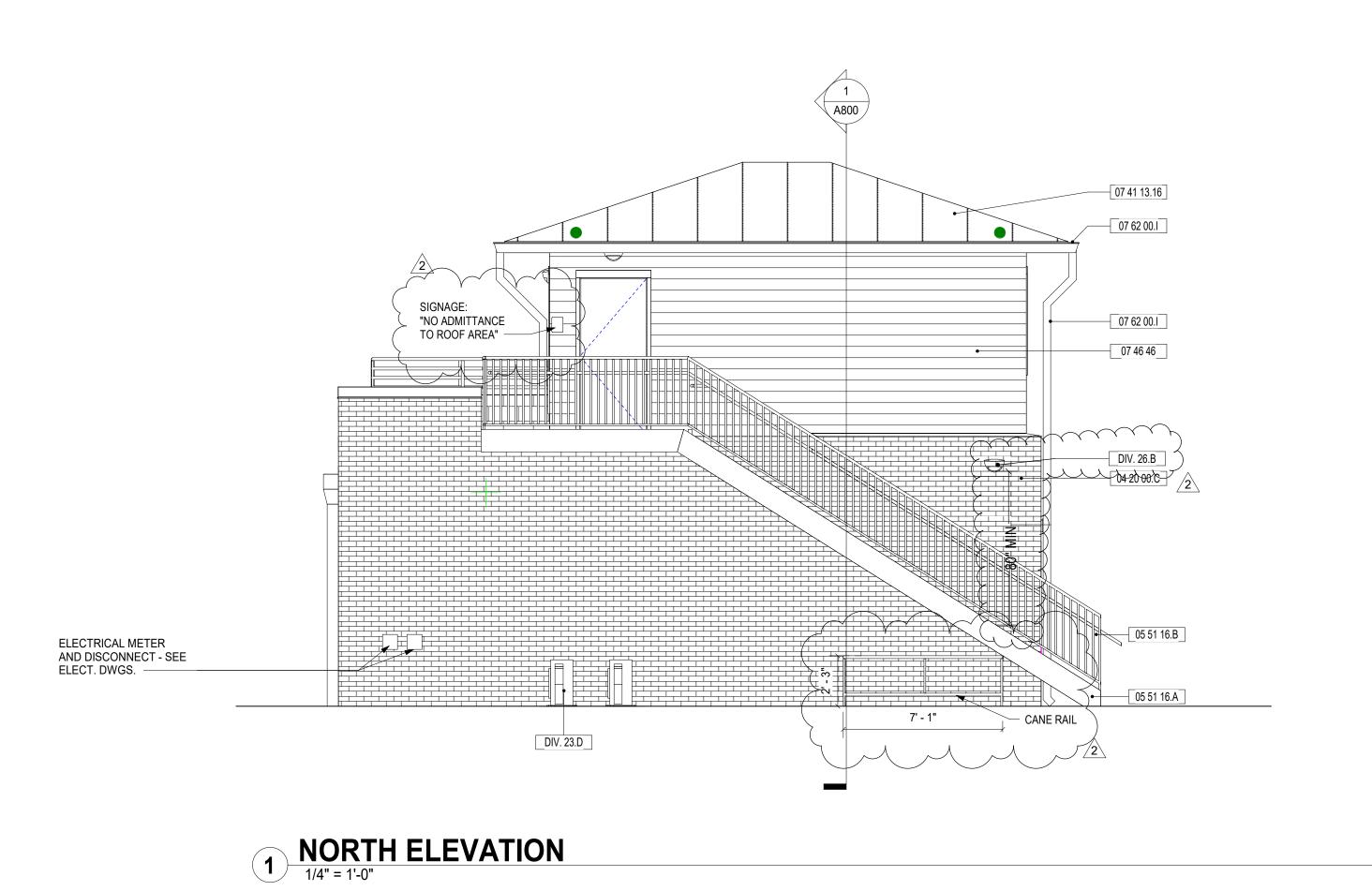




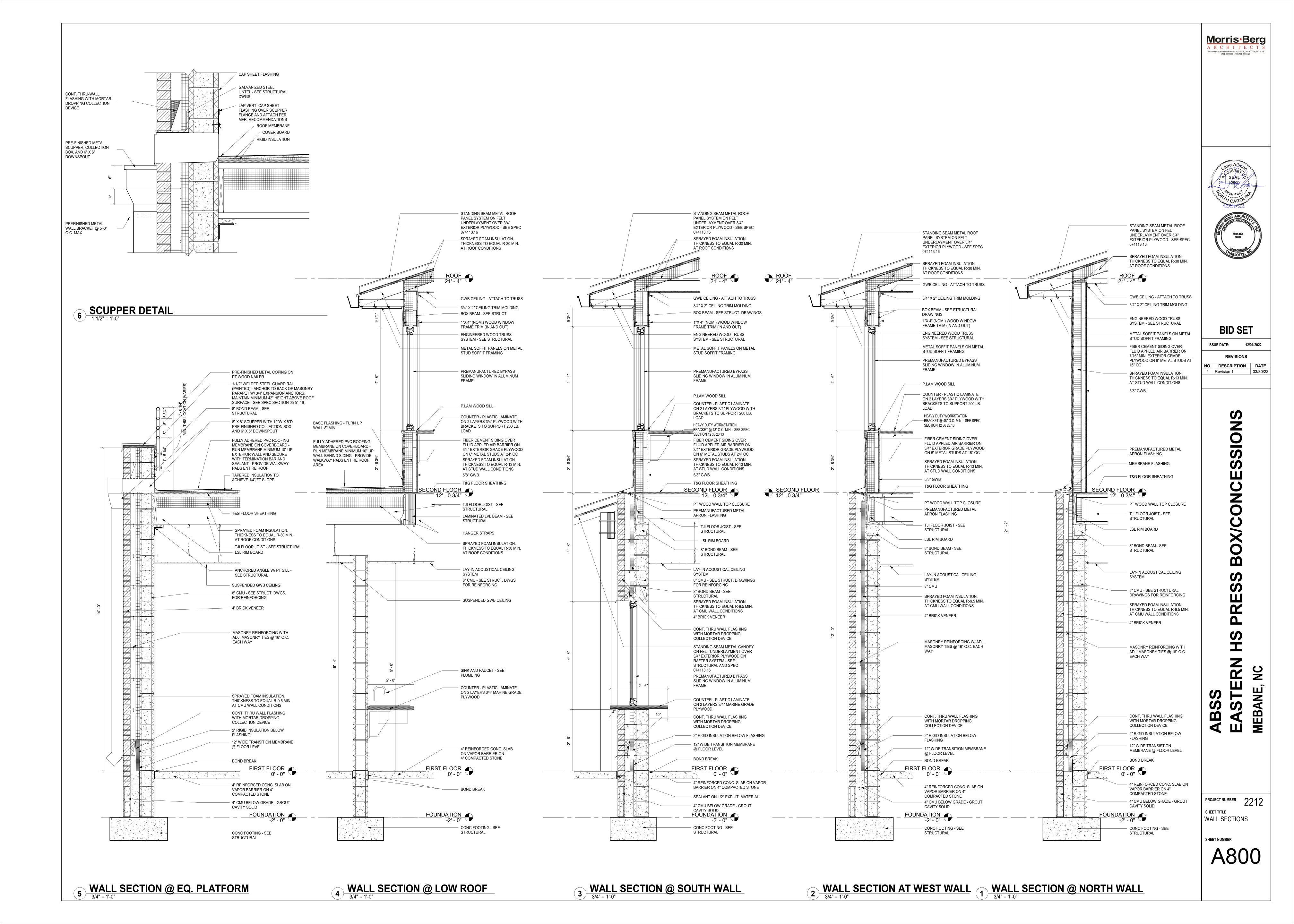


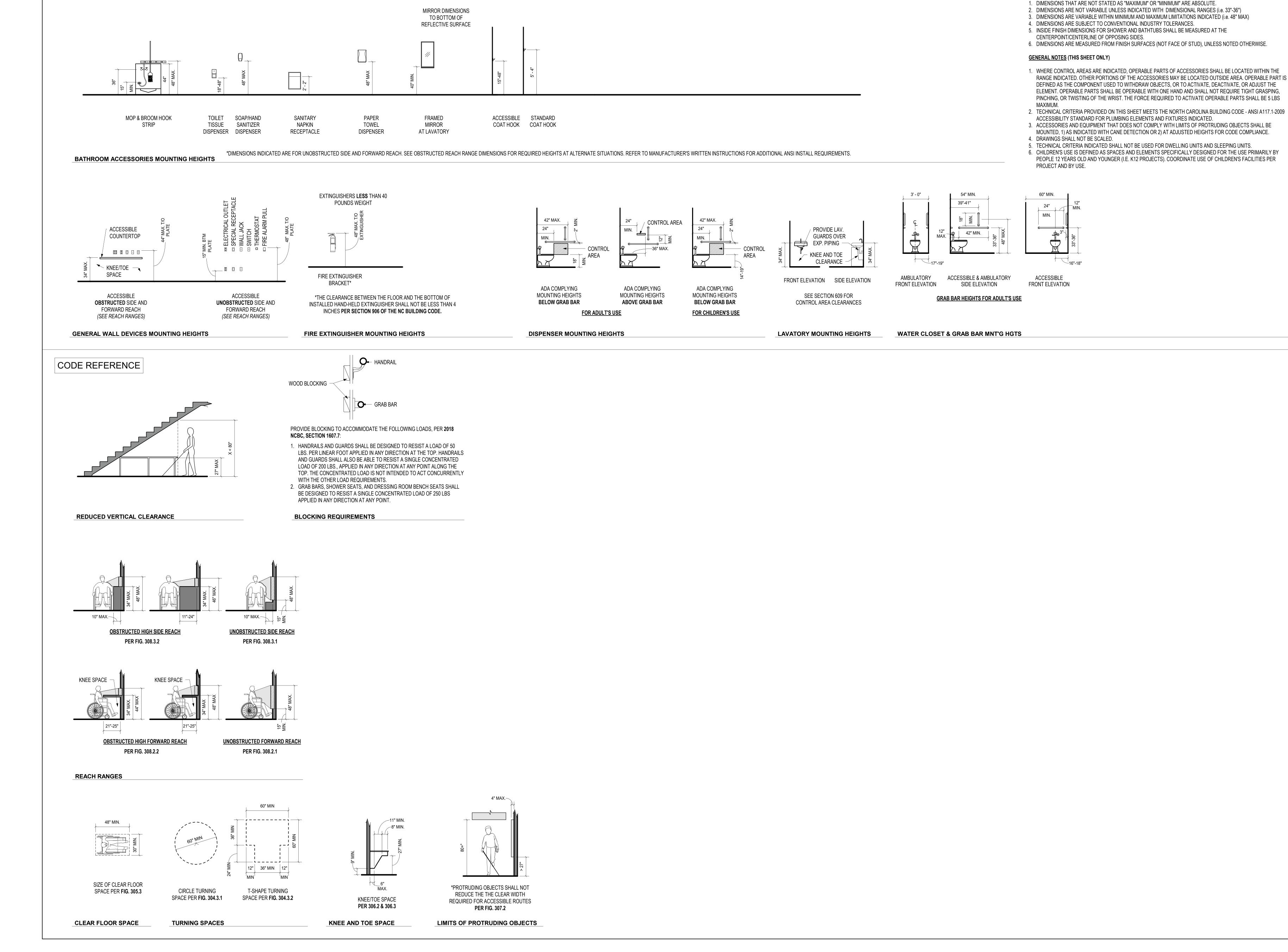
PRESSURE TREATED WOOD POST - SEE STRUCT. DWGS. ———

2 EAST ELEVATION
1/4" = 1'-0"



3 SOUTH ELEVATION
1/4" = 1'-0"





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**DIMENSIONAL NOTES** (THIS SHEET ONLY)





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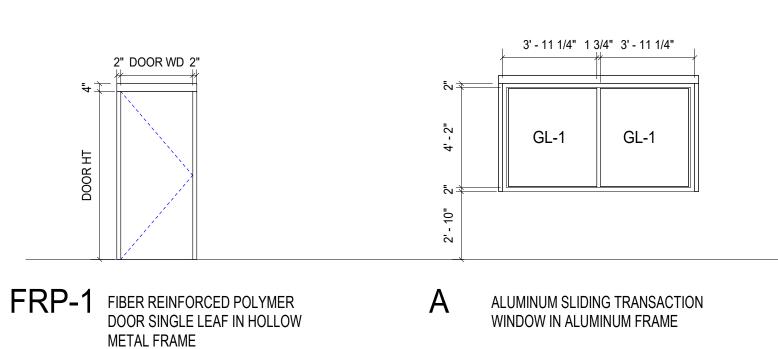
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NO. DESCRIPTION DATE

PROJECT NUMBER 2212

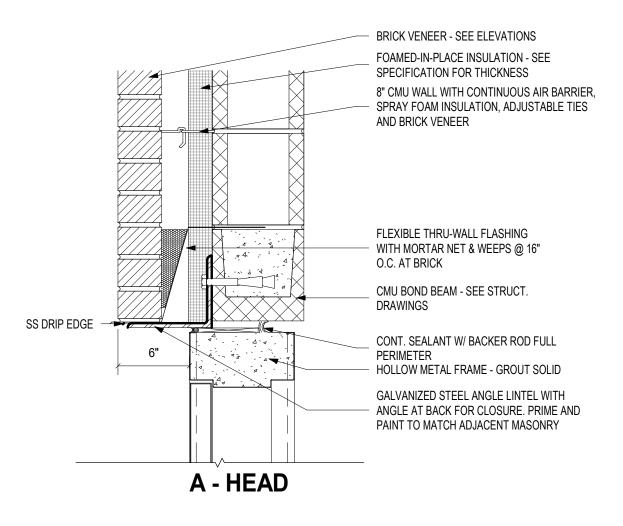
SHEET TITLE 2D STANDARD AND ADA MOUNTING HEIGHTS AND DIMENSIONS SHEET NUMBER

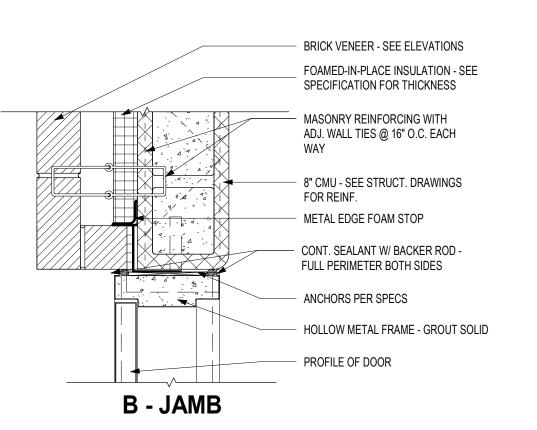
	DOOR SCHEDULE																		
D	OOR		DIMENS	SIONS		DOOR					GLASS		LO	UVER			SIGNAC	GE .	
MARK	TYPE	WALL TYPE	WIDTH	HEIGHT	HEAD	JAMB	SILL	HARDWARE	LABEL	TYPE	WIDTH	HEIGHT	WIDTH	HEIGHT	COMMENTS	ROOM #	SIGN TO READ	SEEN	TYPE
FIRST FLOC	DR .						'			'									
100	FRP-1	MAS	3' - 0"	7' - 0"	1A	1B	1C	1											
101	HM-1	CMU	3' - 0"	7' - 0"	2A	2B	2C	3											
102	FRP-1	MAS	3' - 0"	7' - 0"	1A	1B	1C	2											
SECOND FL	-OOR FRP-1		3' - 0"	7' - 0"	3A		30												

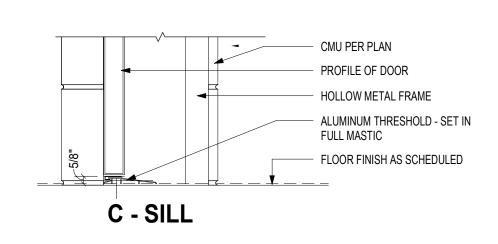


HM-1 HOLLOW METAL DOOR SINGLE LEAF IN HOLLOW METAL FRAME

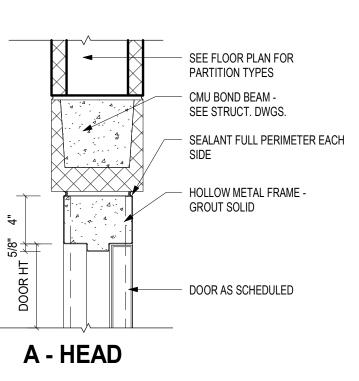
**DOOR & WINDOW TYPES** 

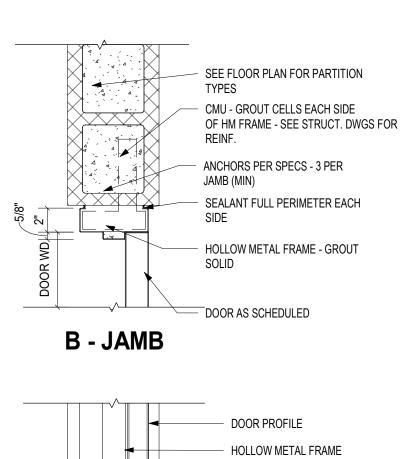


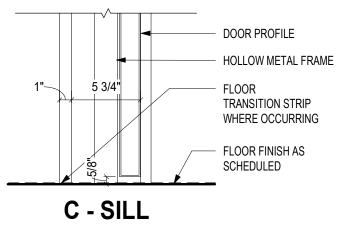




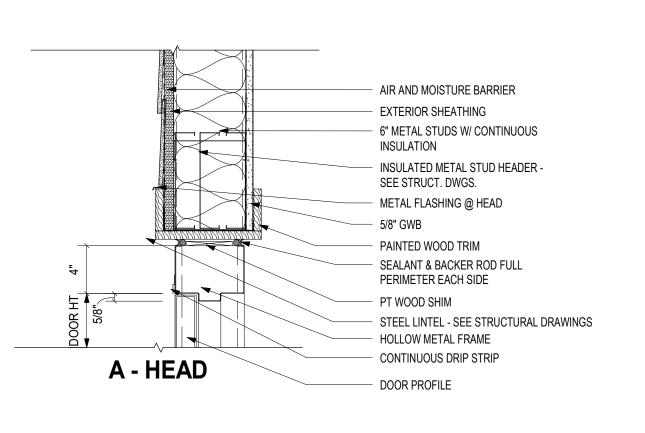
EXT. HM FRAME @ CMU W/ CAV & VENEER

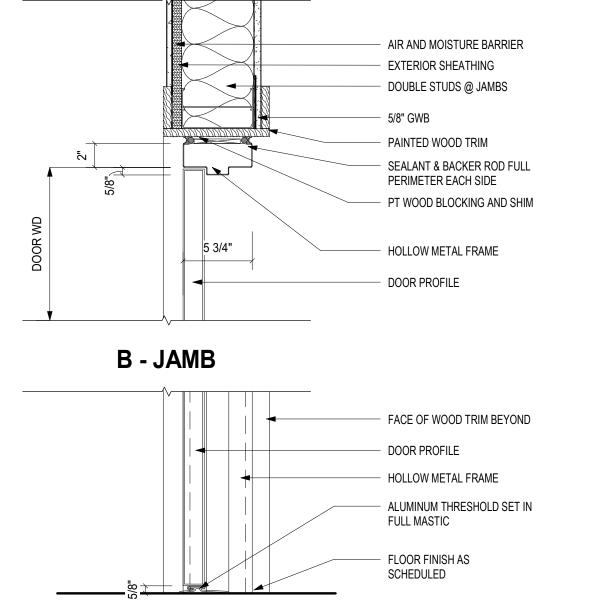






2 INT DOOR IN HM FRAME (BUTT) @ CMU





C - SILL

EXT. DOOR W/ HM FRAME IN STUD

1 1/2" = 1'-0"

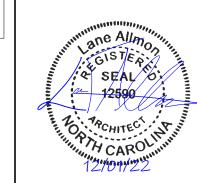
## **GENERAL DOOR NOTES**

- 1. THE INTENT OF THE HEAD/JAMB/SILL DETAILS SHOWN ON THIS SHEET ARE TO SHOW SIZE, CONFIGURATION, AND TYPES OF DOORS AND FRAMES PLUS CONNECTIONS TO ADJACENT STRUCTURE. ADJACENT MATERIALS (DRYWALL, CEILINGS, FLOOR CONDITIONS, LINTELS, INSULATION, ETC.) MAY VARY, VERIFY EACH DOOR AND FRAME BY REFERRING TO PLANS, ELEVATIONS, AND DETAILS. FIELD VERIFY ROUGH OPENINGS. COORDINATE SHOP DRAWINGS FOR FRAME SIZES.
- 2. CAULK ALL FRAME EDGES (INTERIOIR AND EXTERIOIR) AT ADJACENT SURFACES.
- 3. LOCATE ALL INTERIOR DOOR FRAMES THROAT RETURN FOUR INCHES (8") TO THE CLOSEST ADJACENT PERPENDICULAR CMU PARTITION, U.O.N.

## **GLAZING TYPES:**

GL-1 3/4" CLEAR INSULATED GLASS

(NOTE: SEE SPECIFICATION SECTION 085653 FOR FURTHER DESCRIPTION OF GLAZING TYPES.)



Morris Berg

ARCHITECTS

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**BID SET** 

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REVISIONS

 NO.
 DESCRIPTION
 DATE

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 Revision 1
 03/30/23

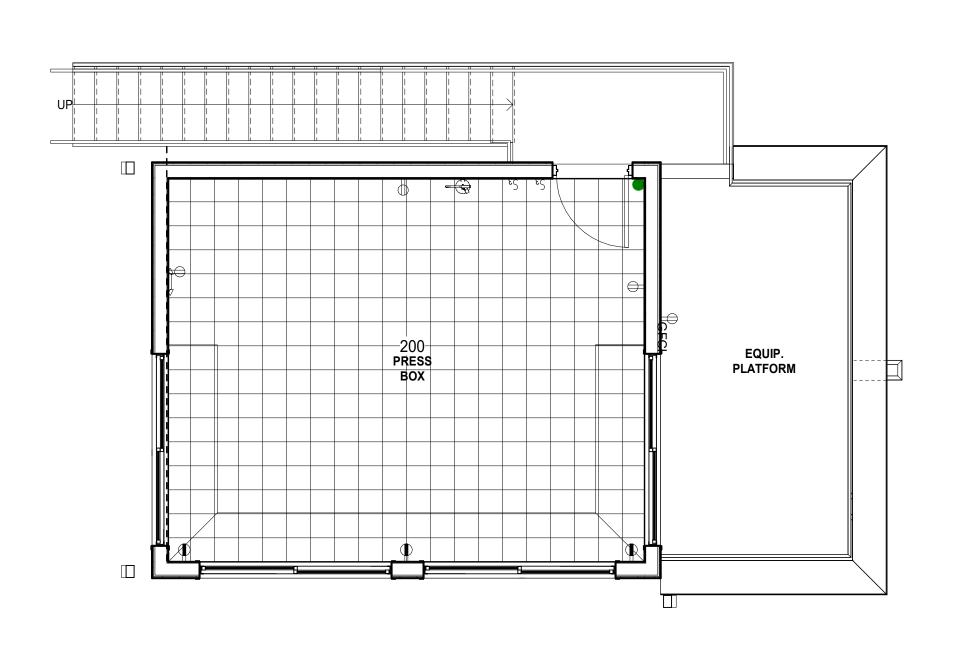
STERN HS PRESS BOX/CONCESSIONS

PROJECT NUMBER 2212

SHEET TITLE
DOOR SCHEDULE &

A 1 2 0 0

				FINI	ISH SCHEDU	JLE	
RO	ОМ					WINDOW	
NUMBER	NAME	FLOOR	BASE	WALL	CEILING	TREATMENT	REMARKS
IRST FLOOR							
100	CONCESSION	RF-1	RFB-1	P-1	ACT-1		
101	STOR.	RF-1	RFB-1	P-1	ACT-1		
102	UNISEX	RF-1	RFB-1	P1	GB-1		
ECOND FLOOR							
200	PRESS BOX	LVT-1	RB-1	P-1	ACT-1		



FIRST FLOOR PLAN - FINISH PLAN

FINISH DESCRIPTION

FLOOR

LVT-1 LUXURY VINYL TILE RF-1 RESINOUS FLOORING

RFB-1 INTEGRAL RESINOUS BASE RB-1 RUBBER - TYPE TS (TAUPE)

WA

P-1 WALL PAINT (CREAM)

CEILING

AC-1 2X2 LAY-IN ACOUSTICAL AC-2 2X2 LAY-IN ACOUSTICAL

## WINDOW TREATMENT

BL HORIZONTAL BLINDS - SEE SPEC SECTION 122113
RS-1 MECHANICAL ROLLER SHADE- SEE SPEC SECTION 22413
RS-2 MANUAL ROLLER SHADE- SEE SPEC SECTION 122413

## FINISH NOTES

- 1. ALL FINISHES ARE TO COMPLY WITH THE 2018 NORTH CAROLINA STATE BUILDING CODE CHAPTER 8.
- 2. ALL FINISH MATERIALS TO MEET OR EXCEED THE FLAME SPREAD REQUIREMENTS OF TABLE 803.11 OF THE 2018 NORTH CAROLINA STATE BUILDING CODE.
- 3. PROVIDE APPROPRIATE TRANSITION STRIP AT ALL DOORS
  AND LOCATIONS WHERE FLOOR FINISH MATERIALS
- 4. FIELD VERIFY ALL ACCENT WALL LOCATIONS (START AND STOP POINTS) WITH ARCHITECT BEFORE PAINTING.

## **FLOOR FINISHES**

LUXURY VINYL TILE (LVT) 12" X 12"- SPEC SECTION 096519

LVT-1: FIELD COLOR (WHITE)

RESINOUS FLOORING (RF) - SPEC SECTION 096723

RF-1: RESINOUS FLOORING (NEUTRAL FLAKE)

**BID SET** 

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REVISIONS

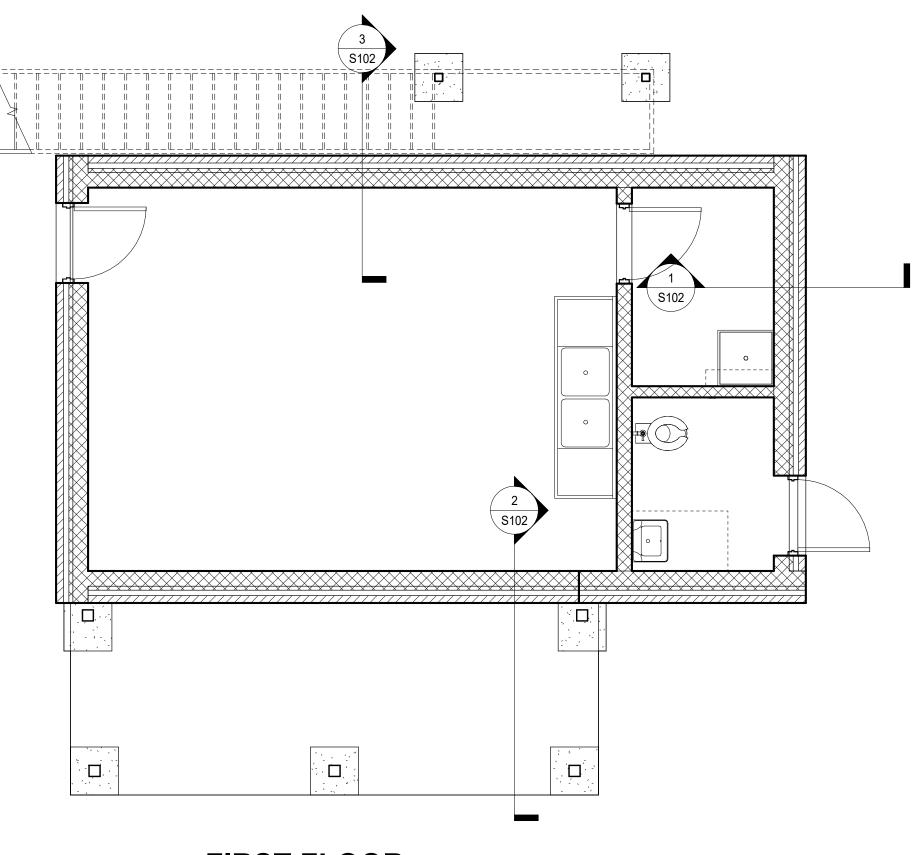
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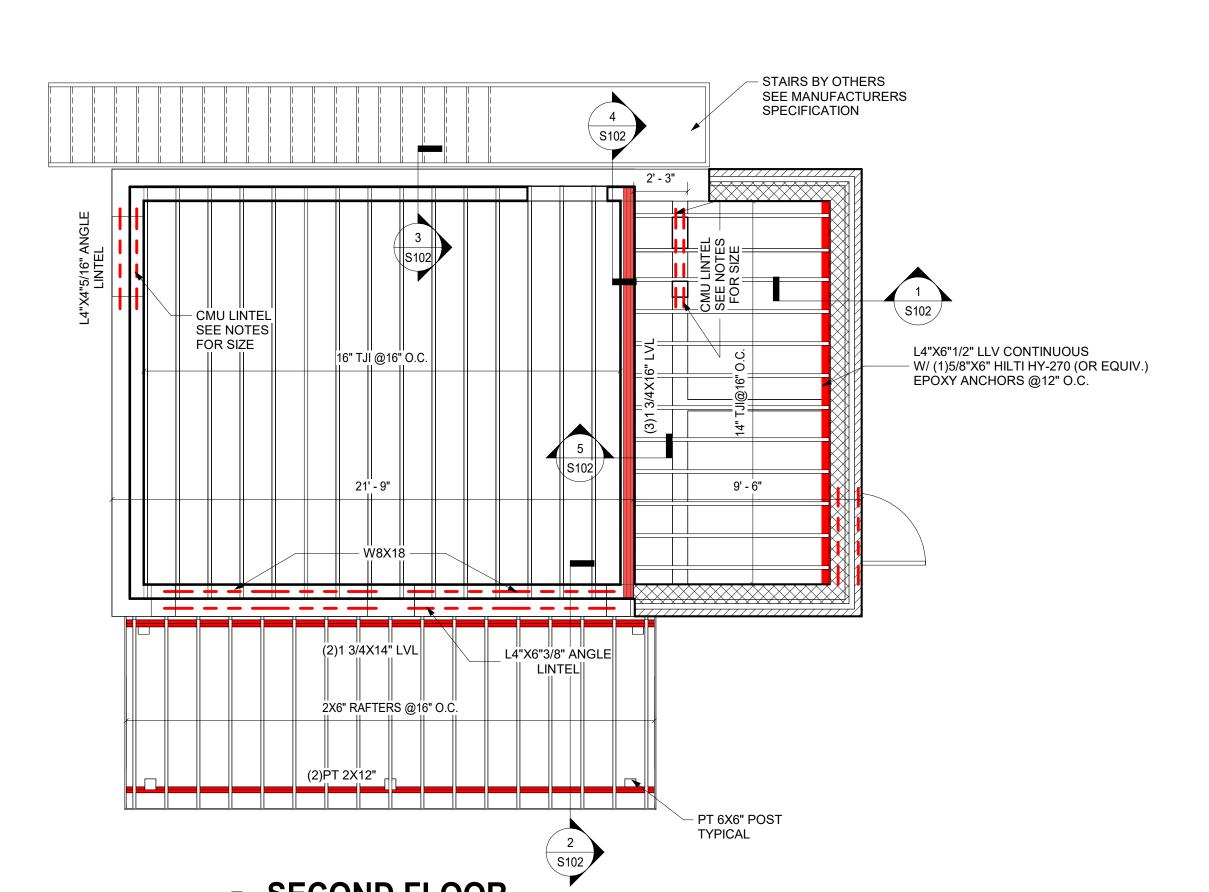
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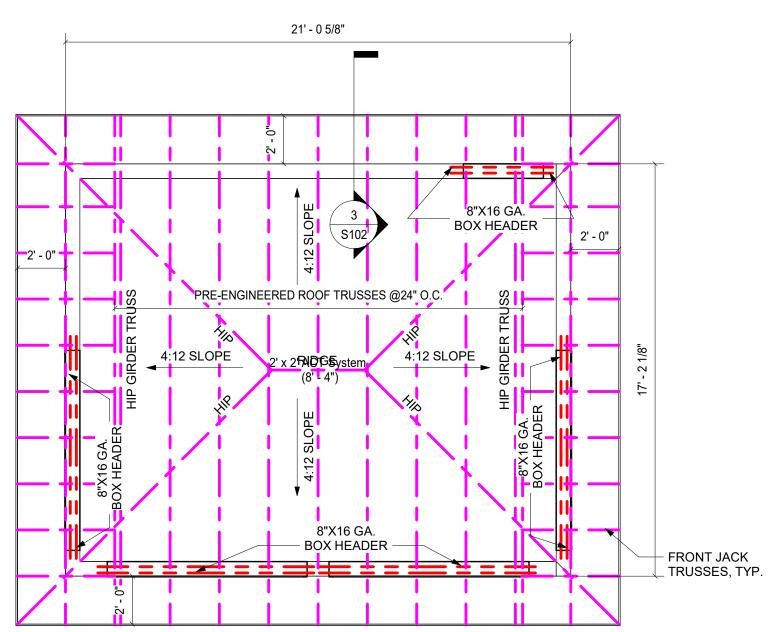
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SHEET TITLE
FINISH SCHEDULE &
PLANS

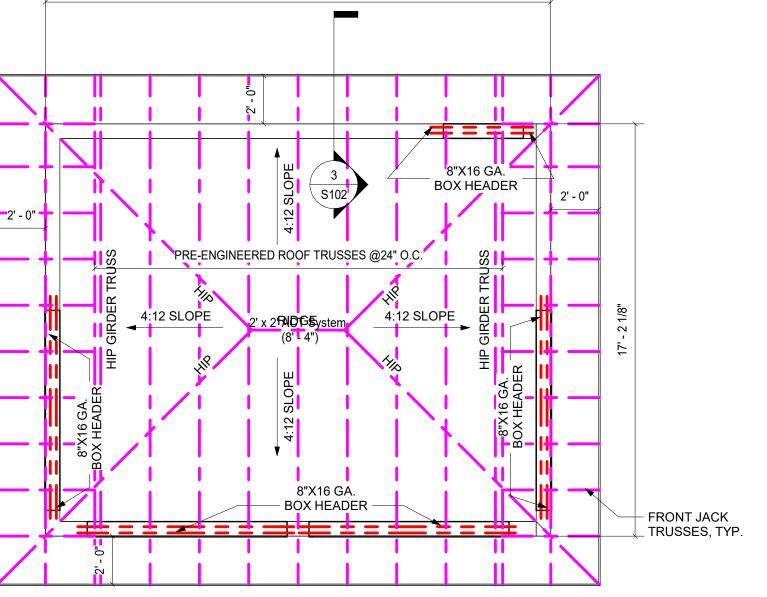
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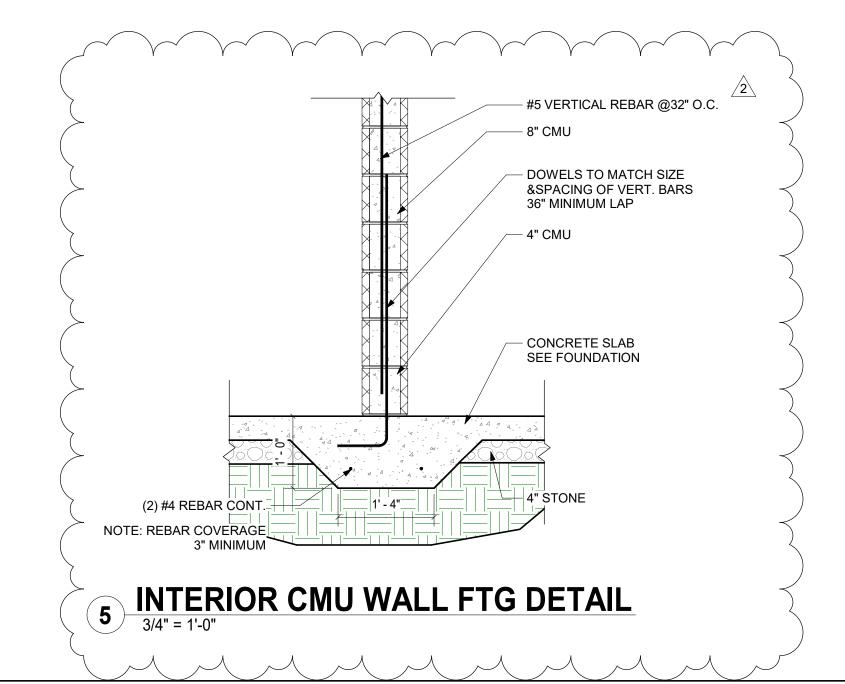


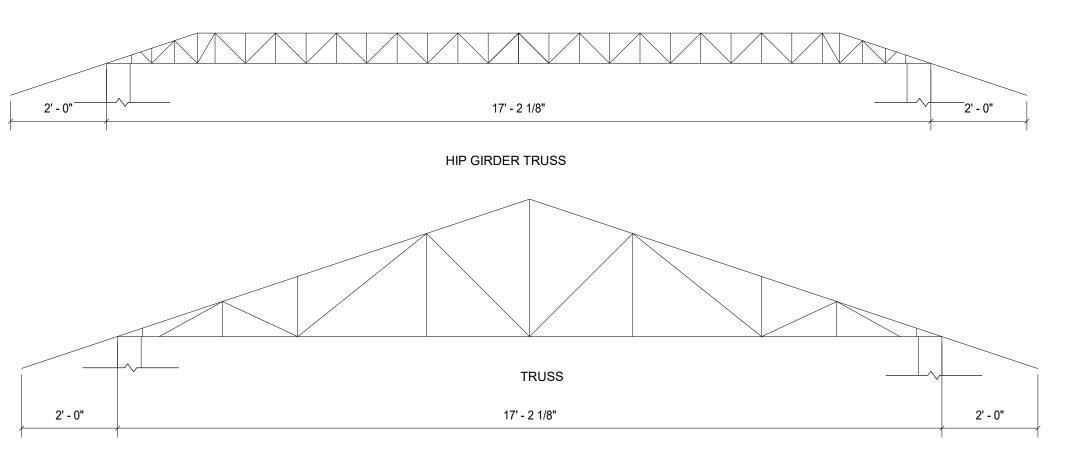
**ROOF FRAMING PLAN**1/4" = 1'-0"



ROOF TRUSS LOADS FOR TRUSS DESIGNER: TCDL=10 PSF

Earthquake





STRUCTURAL STEEL

YIELD STRENGTH AS FOLLOWS:

4'-1" TO 5'-0"

5'-1" TO 6'-0"

6'-1" TO 8'-0"

OF THE CONTRACTOR.

ENGINEER'S APPROVAL.

SLOTTED CONNECTIONS.

DESIGN LOADS:

Live Loads:

Wind Load:

Analysis Procedure:

Importance Factors:

Ground Snow Load: 15 psf

SEISMIC DESIGN CATEGORY

Site Classification:

Architectural, Mechanical, Components anchored?

Field Test (provide copy of test report):

BCDL=10 PSF TCLL=20 PSF

BCLL=0 PSF

Presumptive Bearing capacity:

Pile size, type and capacity:

LATERAL DESIGN CONTROL:

SOIL BEARING CAPACITIES:

Basic Wind Speed: Exposure Category

Provide the following Seismic Design Parameters:

Occupancy Category (Table 1604.5)

Spectral Response Acceleration:

Basic structural system (check one)

 ⊠ Bearing Wall Building Frame

Wind Base Shear:

Seismic Base Shear:

Moment Frame

1. W SHAPES: Fy = 50 ksi, PER ASTM A 992.

B. ALL ANCHOR RODS SHALL BE ASTM F1554 GRADE 36.

ALL HIGH STRENGTH BOLTS SHALL BE ASTM A325N.

ALL STRUCTURAL STEEL SHALL BE ASTM FABRICATED AND ERECTED IN

ACCORDANCE WITH AISC "STEEL CONSTRUCTION MANUAL" WITH A MINIMUM

PLATES, ANGLES AND CHANNELS: Fy = 36 ksi PER ASTM A36.

ALL STEEL PIPE COLUMNS SHALL CONFORM TO ASTM A53, GRADE B, Fy = 35 ksi. STANDARD SCHEDULE 40 PIPE TO BE USED UNLESS NOTED OTHERWISE.

ALL HSS SQUARE AND RECTANGULAR SHAPES SHALL BE ASTM A500 GRADE B, Fy

L 4 x 3-1/2 x 1/4

L 4 x 3-1/2 x 5/16

L 5 x 3-1/2 x 5/16

L 6 x 3-1/2 x 3/8

WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE "STRUCTURAL WELDING CODE" AWS D1.1-2006. USE 70 KSI, LOW-HYDROGEN ELECTRODES.

ALL STEEL LINTELS SHALL HAVE A MINIMUM OF 6" BEARING AND SHALL BE

CONTRACTOR SHALL DESIGN AND ERECT SHORING AND/OR BRACING OF

EXISTING WALLS AS REQUIRED DURING INSTALLATION OF LINTELS. DESIGN AND

ERECTION OF SHORING AND/OR BRACING SHALL BE THE SOLE RESPONSIBILITY

NO OPENINGS IN BEAMS OR COLUMNS ARE PERMITTED WITHOUT STRUCTURAL

STRUCTURAL ENGINEER AS TO LOCATION, TYPE OF SPLICE AND CONNECTION TO

ALL MISCELLANEOUS STEEL CONNECTIONS SHALL BE WELDED ALL AROUND WITH ONE-QUARTER-INCH FILLET WELD UNLESS OTHERWISE NOTED, EXCEPT FOR

PROVIDE A MINIMUM BEARING LENGTH OF 6" FOR ALL BEAMS SUPPORTED ON

ALL WORK SHALL COMPLY WITH THE AISC CODE "CODE OF STANDARD PRACTICE

FOR STEEL BUILDINGS AND BRIDGES" EXCEPT THAT PARAGRAPH 4.2.1 SHALL BE

STRUCTUAL DESIGN:

\_\_\_1.0

\_\_\_1.0

\_\_\_1.0

115 mph (ASCE-7-10)

 $\square$  A  $\boxtimes$  B  $\square$  C  $\square$  D

⊠ Equivalent Lateral Force □ Dynamic

 $S_{MS}$  24.9 %g  $S_{M1}$  18.6 %g

Dual w/ Special Moment Frame

 $V_{XX}$  5.04K  $V_{YY}$  4.08K

V<sub>XX</sub> <u>1.74K</u> V<sub>YY</sub> <u>1.74K</u>

2000 psf

□ Dual w/ Intermediate R/C or Special Steel

 $\Box$  A  $\Box$  B  $\Box$  C  $\boxtimes$  D  $\Box$  E  $\Box$  F

Inverted Pendulum

Data Source: ☐ Field Test ☐ Presumptive ☐ Historical Data

Wind (I ):w

Snow (I):s

Roof:

Mezzanine:

Observation Floor:

Seismic (I ):E

SPLICING OF STRUCTURAL STEEL MEMBERS WHERE NOT DETAILED ON THE

CONTRACT DOCUMENTS IS PROHIBITED WITHOUT PRIOR APPROVAL OF THE

PROPORTIONED AS FOLLOWS FOR EACH 4" OF WALL WIDTH.

TRUSS PROFILE

## **WOOD TRUSS NOTES**

- PRE-ENGINEERED WOOD ROOF TRUSSES AND TRUSS LATERAL BRACING ARE TO BE DESIGNED BY THE MANUFACTURER FOR THE LOADS GIVEN IN CONFORMANCE WITH ANSI/TPI 1 "NATIONAL DESIGN STANDARD FOR METAL-PLATE-CONNECTED WOOD TRUSS CONSTRUCTION" AND ALL CODE REQUIRED LOADING CONDITIONS. REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL TRUSS DIMENSIONS AND TRUSS CONFIGURATIONS. SHOP DRAWINGS SHALL INCLUDE A TRUSS LAYOUT DRAWING.
- WOOD ROOF TRUSS SHOP DRAWINGS SHALL INDICATE BOTH TEMPORARY AND PERMANENT LATERAL BRACING. IN ACCORDANCE WITH TPI HIB "COMMENTARY AND RECOMMENDATIONS FOR HANDLING, INSTALLING & BRACING OF METAL PLATE CONNECTED TRUSSES", AND TPI DSB "RECOMMEND DESIGN SPECIFICATION FOR TEMPORARY BRACING OF METAL PLATE CONNECTED WOOD TRUSSES." LATERAL BRACING LOADS IMPOSED ON TO THE BUILDING STRUCTURE SHALL BE CLEARLY INDICATED ON SHOP DRAWINGS. ALL SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A NC REGISTERED ENGINEER SUBMITTED TO THE ARCHITECT FOR APPROVAL.
- ALL TRUSS JOISTS SHALL BE DESIGNED, FABRICATED, ERECTED AND INSTALLED PER THE MANUFACTURER'S REQUIREMENTS; PERMANENT LATERAL BRACING AND TEMPORARY BRACING SHALL BE PROVIDED DURING CONSTRUCTION PER TRUSS JOIST RECOMMENDATIONS.
- PRE-ENGINEERED WOOD TRUSS ENGINEER SHALL CONSIDER ALL APPLICABLE DESIGN LOAD CASES AS REQUIRED BY THE IBC CODE.
- PROVIDE HURRICANE CLIPS AT ROOF TRUSS BEARING POINTS WHERE UPLIFT FORCES ARE INDICATED ON THE TRUSS SHOP DRAWINGS. THE FOLLOWING TRUSS CONNECTIONS
  - BY SIMPSON OR APPROVED EQUAL ARE REQUIRED TWO – H1 401 - 800 LBS 801 - 1265 LBS TWO – H2.5A 1266 – 1785 LBS ONE – LGT2 1786 - 3330 LBS ONE – MGT

ONE – HGT2

ALL ROOF SHEATHING SHALL BE LAID CONTINUOUSLY BETWEEN THE EDGES OF THE ROOF. NO INTERRUPTIONS ARE PERMITTED AT CAP TRUSSES OR AT ROOF OVERBUILDS.

3331 - 4200 LBS

7. ROOF TRUSSES SHALL BE @ 24" O.C.

## CONCRETE NOTES

- 1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH ACI 301, ACI 318 AND ACI 302. 2. CEMENT SHALL COMPLY WITH ASTM C150, TYPE I OR III.
- REINFORCING STEEL SHALL BE DEFORMED BILLET STEEL CONFORMING TO ASTM A615 GRADE 60. ALL REINFORCEMENT SPLICES SHALL BE A MINIMUM OF 40 BAR DIAMETERS.
- CAST IN PLACE CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH F'c
- AS FOLLOWS: A. SLAB-ON-GRADE AND FOOTINGS = 3000 PSI.
- PROVIDE WWF 6x6 W1.4xW1.4 IN ALL SLAB-ON-GRADE. ALL WIRE FABRIC SHALL CONFORM TO ASTM A185. ALL MESH EDGES SHALL LAP A MINIMUM OF TWO (2) SQUARES. MINIMUM CONCRETE COVER BETWEEN FACE OF REINFORCING BAR AND FACE OF
- CONCRETE SHALL BE AS FOLLOWS: CONCRETE CAST AGAINST EARTH = 3" FORMED CONCRETE EXPOSED TO WEATHER OR EARTH = 2" FORMED CONCRETE NOT EXPOSED TO WEATHER:
- BEAMS, COLUMNS = 1-1/2" ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE A MINIMUM AIR ENTRAINMENT OF 6% <u>+</u> 1.5% PER ACI- 318 4.2.1.
- GROUT SHALL BE NON-SHRINKABLE, NON-METALLIC CONFORMING TO ASTM C1107, AND SHALL HAVE A SPECIFIED COMPRESSIVE STRENGTH AT 28 DAYS OF 5,000 PSI. PREGROUTING OF BASE PLATES SHALL NOT BE PERMITTED.
- 9. MATERIALS: (fc BASED ON 28 DAY UNLESS NOTED)

## **MASONRY NOTES**

- 1. ALL HOLLOW CONCRETE MASONRY UNITS SHALL BE LIGHT WEIGHT AND CONFORM TO ASTM C90-93 TYPE I HAVING A PRISM STRENGTH F'm = 1500 PSI.
- GALVANIZED HORIZONTAL JOINT REINFORCEMENT SHALL BE PLACED IMMEDIATELY ABOVE AND BELOW ALL OPENINGS AND AT 16" O.C. VERTICALLY. REINFORCEMENT SHALL BE LADDER TYPE, AND WHERE SPLICED, SHALL LAP A MINIMUM OF 6". REINFORCEMENT SHALL CONFORM TO ASTM A-82 AND ASTM A153, CLASS B2, HOT DIP GALVANIZED (1.5
- ALL VERTICAL WALL REINFORCEMENT INTERRUPTED BY WALL OPENINGS SHALL BE PLACED IMMEDIATELY ADJACENT TO EACH OF THE OPENINGS.
- MASONRY MORTAR SHALL BE ASTM C270 TYPE N PCL FOR ABOVE GRADE WALLS, TYPE S FOR BELOW GRADE WALLS.
- ALL MASONRY CELLS CONTAINING BOLTS OR REINFORCEMENT SHALL BE FILLED WITH COARSE GROUT PER ASTM C476, AGGREGATE PER ASTM C404.
- PROVIDE TWO (2) COURSES OF SOLID CMU PER ASTM C 90 OR GROUT-FILLED CMU BENEATH ALL BEAM AND HEADER BEARING POINTS.

PROVIDE DOWELS WITH STANDARD BAR HOOK IN FOOTING TO MATCH DIAMETER AND

- SPACING OF VERTICAL REINFORCEMENT. MINIMUM SPLICE LENGTH = 24". TIE MATERIAL SHALL CONFORM TO ASTM A366 AND ASTM A153, CLASS B2, HOT DIP
- GALVANIZED (1.5 OZ/SF.) STEEL WIRE SHALL CONFORM TO ASTM A82.
- SCREW FASTENERS SHALL BE SELF-DRILLING/SELF-TAPPING WITH MILD SHANK AND HARDENED TIP AND AN ORGANIC-POLYMER COATING CONFORMING TO ASTM A449.
- PROVIDE #5 CORNER BARS AT ALL BOND BEAM CORNERS TO LAP A MINIMUM OF 40 BAR DIAMETERS.
- 11. ALL MASONRY LINTELS SHALL HAVE A MINIMUM BEARING LENGTH OF 8" AND SHALL BE PROPORTIONED AS FOLLOWS FOR EACH 4" OF THICKNESS FOR NON-LOAD-BEARING WALLS, F'c=3000 PSI.
- LINTEL (8" DEEP) W/1 #4 T&B 4'-1" TO 5'-0" W/1 #5 T&B 5'-1" TO 8'-0" W/1 #6 T&B
- ALL MASONRY WORK SHALL BE IN CONFORMANCE WITH THE "SPECIFICATIONS FOR MASONRY STRUCTURES" ACI 530.1-02/ASCE 6-02/TMS 602-02.
- PROVIDE ADJUSTABLE MASONRY ANCHORS TO STEEL BEAMS AND COLUMNS WHICH ARE EMBEDDED IN MASONRY AT 2'-8" O.C. MAXIMUM.
- ALL CMU GROUT SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 2000 PSI.
- PROVIDE CRACK CONTROL JOINTS AT ALL WALL RETURNS AND JAMBS OF OPENINGS AND AT A MAXIMUM SPACING OF 25-FEET ON CENTER.
- SPECIAL INSPECTIONS NOT REQUIRED BY CODE PER SECTION 1705.1.3.

- A. ALL WORK SHALL CONFORM TO THE STANDARDS OF THE "AMERICAN IRON AND STEEL INSTITUTE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBER" -LATEST EDITION.
- ALL WELDING SHALL BE IN ACCORDANCE WITH THE "AMERICAN WELDING SOCIETY D.1.3, STRUCTURAL WELDING CODE FOR SHEET STEEL." MIN. 14 GAUGE MEMBERS SHALL BE USED AT WELDED CONNECTIONS. ALL WELDS SHALL BE TOUCHED UP WITH ZINC RICH PAINT.
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL SIGNED AND SEALED BY THE CONTRACTOR'S NC REGISTERED PROFESSIONAL ENGINEER TO THE ARCHITECT DEPICTING:
- CROSS-SECTIONS, PLANS AND ELEVATIONS. CONNECTION DETAILS SHOWING REQUIRED SCREWS/WELDS. FLOOR TO FLOOR ELEVATIONS. DIMENSIONS.
- BRIDGING LOCATIONS. ALL MATERIALS SHALL BE GALVANIZED AND COLD FORMED OF STEEL CONFORMING TO ASTM A570 GRADE D FOR JOISTS. ASTM 446 FOR TRACKS AND

STUDS. MINIMUM 18 GAUGE (NO EXCEPTIONS.)

- E. ALL AXIALLY LOADED STUDS SHALL HAVE FULL BEARING INSIDE TRACK WEB
- PRIOR TO ATTACHMENT. NO SPLICES IN LOADED STUDS ARE PERMITTED. WALL STUD BRACING SHALL BE INSTALLED AT THIRD POINTS IN ALL BEARING
- PARTITIONS; AT MID-HEIGHT IN NON-LOAD BEARING PARTITIONS. JOISTS SHALL BE LOCATED DIRECTLY OVER BEARING STUDS, OR A LOAD DISTRIBUTION MEMBER SHALL BE PROVIDED AT THE TOP TRACK.
  - DOUBLE STUDS AND WEB STIFFENERS SHALL BE PROVIDED AT ALL JOIST HEADER BEARING POINTS.
  - END BLOCKING SHALL BE PROVIDED WHERE JOIST ENDS ARE NOT OTHERWISE RESTRAINED FROM ROTATION. UNIFORM AND LEVEL JOIST BEARING SHALL BE PROVIDED IN ALL CASES.
  - ALL WALL AND ROOF SHEATHING SHALL BE MIN. 7/16" APA STRUCTURAL I RATED AND FASTENED W/8d COMMON NAILS AT ROOF OR #6 SELF-TAPING SCREWS AT LT. GA. STUDS@ 6" O.C. ALONG EDGES AND 8"O.C. ALONG INTERMEDIATE SUPPORTS. PROVIDE BLOCKING AT ALL JOINTS.

1401 WEST MOREHEAD STREET, SUITE 125, CHARLOTTE, NC 28208 (704) 552-5800 FAX (704) 552-7420 DARDEN ENGINEERING SERVICES, PLLC
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Mooresville, NC 28117 Phone: 704-663-7738 CARO 06/27/2023.

Morris Berg

A R C H I T E C T

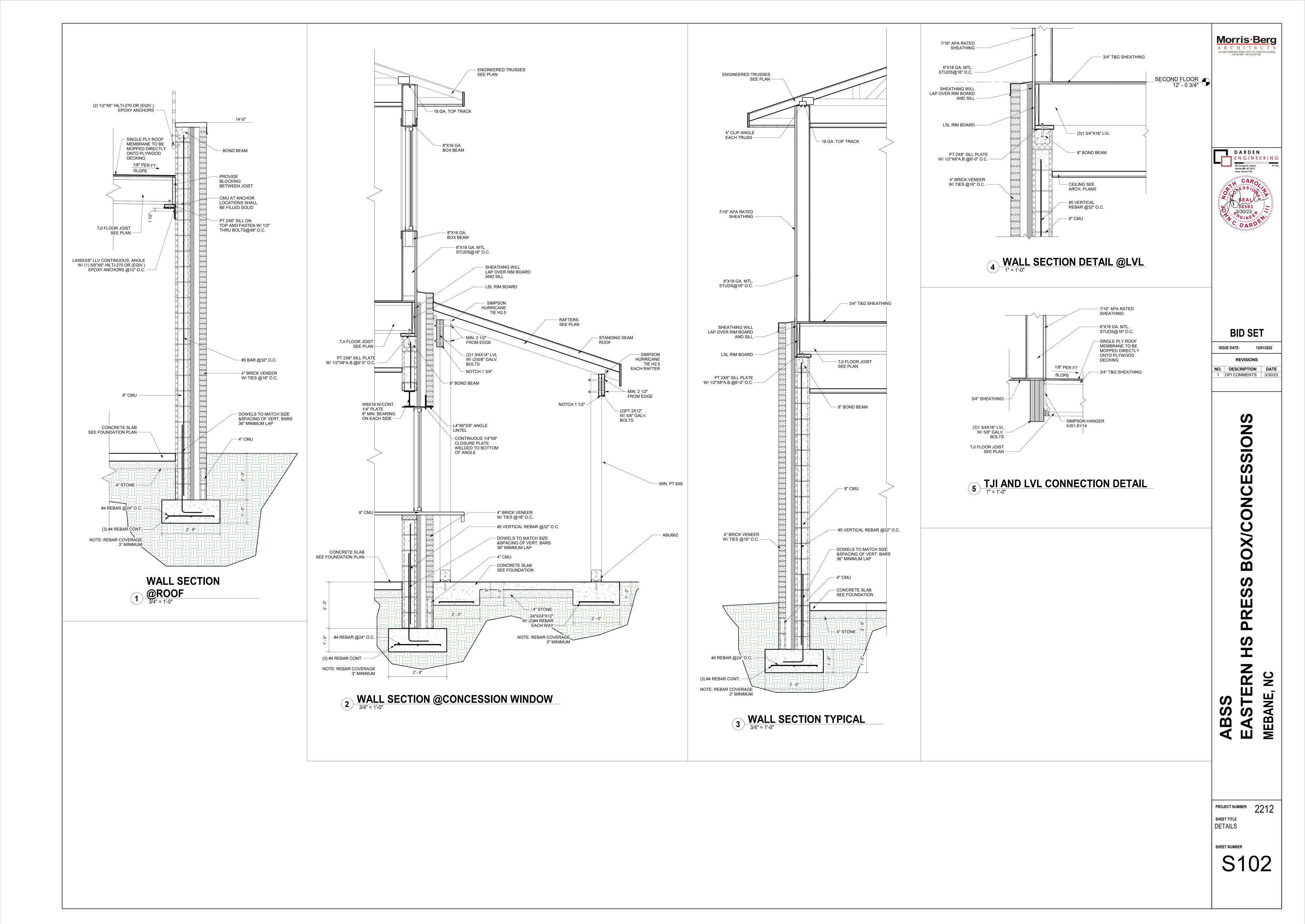
**BID SET** 

ISSUE DATE: 12/01/2022 NO. DESCRIPTION DATE DPI COMMENTS 3/30/23

ADD DETAIL

PROJECT NUMBER 2212

SHEET TITLE FOUNDATION, FIRST FLOOR, SECOND FLOOR FRAMING, ROOF FRAMING PLAN &NOTES



## PLUMBING MATERIALS AND NOTES

## **DOMESTIC WATER PIPING:**

1. DOMESTIC WATER PIPING AND JOINTS <u>BELOW GRADE</u>: PROVIDE TYPE 'K' SOFT ANNEALED SEAMLESS COPPER TUBING (ASTM B 88) WITH NO JOINTS FOR PIPING 2-1/2" AND SMALLER. PROVIDE DUCTILE IRON PIPE AND FITTINGS (AWWA C151, AWWA C110) WITH RUBBER GASKET JOINTS AND RODS (AWWA C111) PIPING 3" AND LARGER.

2. DOMESTIC WATER PIPING AND JOINTS ABOVE GRADE: PROVIDE TYPE 'L' HARD DRAWN SEAMLESS COPPER TUBING (ASTM B 88) AND CAST COPPER ALLOY FITTINGS (ASME B16.18). JOINTS 1" AND SMALLER SHALL BE LEAD FREE 95-5 TIN/SILVER SOLDER JOINTS (ASTM B 32), JOINTS 1-1/4" AND LARGER SHALL BE BCÚP SILVER/PHOSPHORUS/COPPER BRAZED JOINTS (AWS A5.8) OR PROVIDE COPPER PIPE AND FITTINGS AS SPECIFIED ABOVE EXCEPT WITH GROOVED ENDS (ASTM B 88, ASME B16.18) AND JOINTS UTILIZING GROOVED MECHANICAL COUPLINGS MEETING (ASTM F1476). CPVC PIPING IN COMPLIANCE WITH ASTM D2846 IN CONJUCTION WITH CPVC SOLVENT CEMENT IN COMPLIANCE WITH ASTM F493 MAY BE USED. TYPE A PEX PIPING EQUAL TO UPONNOR MAY BE USED.

3. STERILIZE THE DOMESTIC WATER SYSTEM IN ACCORDANCE WITH THE AMERICAN WATER WORKS ASSOCIATION'S SPECIFICATIONS AND LOCAL HEALTH DEPARTMENT REGULATIONS.

4. INSULATE DOMESTIC WATER PIPING ABOVE GRADE (EXCEPT EXPOSED CONNECTIONS TO PLUMBING FIXTURES) WITH GLASS FIBER INSULATION HAVING A VAPOR BARRIER AND JACKET. PIPE INSULATION SHALL HAVE A CONDUCTIVITY NOT EXCEEDING 0.27 BTUH x SQ. FT. FOLLOW SCHEDULE BELOW:

SERVICE TYPE **INSULATION THICKNESS** DOMESTIC HOT WATER & CIRCULATION 1/2" - 1-1/4" 1-1/2" DOMESTIC HOT WATER & CIRCULATION 1-1/2" - 4" DOMESTIC COLD WATER 1/2" - 1-1/4" DOMESTIC COLD WATER 1-1/2" - 4"

5. DOMESTIC WATER PIPING INSULATION, JACKETS, COVERINGS, SEALERS, MASTICS AND ADHESIVES ARE REQUIRED TO MEET A FLAME-SPREAD RATING OF 25 OR LESS AND A SMOKE-DEVELOPED RATING OF 50 OR LESS, AS TESTED BY ASTM E84 (NFPA 255) METHOD AND SHALL BE PLENUM RATED.

6. PROVIDE FULL PORT, BALL TYPE SHUT-OFF VALVES AND INSTALL IN A LOCATION THAT PERMITS ACCESS FOR SERVICE WITHOUT DAMAGE TO THE BUILDING OR FINISHED MATERIALS.

7. PROTECT COPPER PIPING AGAINST CONTACT WITH DISSIMILAR METALS. ALL HANGERS, SUPPORTS, ANCHORS AND CLIPS SHALL BE COPPER OR COPPER PLATED. WHERE COPPER PIPING IS CARRIED ON TRAPEZE HANGERS WITH OTHER PIPING. PROVIDE A PERMANENT ELECTROLYTIC ISOLATION MATERIAL TO PREVENT CONTACT WITH DISSIMILAR OTHER METALS.

8. PROTECT COPPER PIPING AGAINST CONTACT WITH ALL MASONRY, WHERE COPPER IS SLEEVED THROUGH MASONRY, PROVIDE COPPER OR RED BRASS SLEEVES. WHERE COPPER MUST BE CONCEALED IN OR AGAINST MASONRY PARTITIONS, PROVIDE A HEAVY COATING OF ASPHALTIC ENAMEL ON THE COPPER PIPING AND 15# ASPHALT SATURATED FELT BETWEEN THE PIPING AND THE MASONRY

9. DOMESTIC WATER PIPING SHALL BE SLOPED FOR DRAINAGE WITH DRAIN VALVES INSTALLED AT LOW POINTS.

10. BALANCE THE DOMESTIC HOT WATER CIRCULATION SYSTEM TO THE PERFORMANCE SPECIFICATIONS INDICATED ON THE PLANS AND PROVIDE THE ENGINEER WITH THREE COPIES OF A COMPLETE TEST AND BALANCE REPORT. THE REPORT IS TO BE ISSUED A MINIMUM OF TWO WEEKS PRIOR TO PROJECT COMPLETION. THE TEST AND BALANCE REPORT WILL BE SUBJECT TO REVIEW AND APPROVAL BY THE ENGINEER. ANY ADDITIONAL TESTING, ADJUSTING AND BALANCING REQUIRED (AT ENGINEER'S REQUEST) AFTER REVIEW OF THE INITIAL REPORT SHALL BE PROVIDED AT NO ADDITIONAL COST. TEST AND BALANCE REPORT TO BE COMPLETED BY AN INDEPENDENT CERTIFIED TEST AND BALANCE CONTRACTOR.

SANITARY WASTE / VENT AND STORM PIPING:

1. SANITARY WASTE AND STORM DRAIN PIPING <u>BELOW</u> GRADE: PROVIDE BELL AND SPIGOT WITH RUBBER GASKET JOINTS OR SOLID CORE SCHEDULE 40 PVC PIPE, IN ACCORDANCE WITH ASTM D-2665. ALL BURIED PLASTIC PIPING SHALL BE INSTALLED PER ASTM D2321. FOAM CORE PVC PIPE IS <u>NOT</u> APPROVED. <u>PLASTIC PIPING WITH AN INSIDE DIAMETER OF 2" AND LARGER SHALL NOT BE USED FOR STORM DRAINAGE, SANITARY WASTE AND VENT CONDUCTORS IN BUILDING IN WHICH THE TOP OCCUPIED FLOOR EXCEEDS 75 FEET IN</u>

2. SANITARY WASTE/VENT PIPING ABOVE GRADE: PROVIDE STANDARD WEIGHT CAST IRON "NO-HUB" WITH HEAVY DUTY NO-HUB COUPLINGS CERTIFIED BY CISPI 310 AND NSF INTERNATIONAL. SOIL, WASTE AND VENT PIPING UNDER 2" IN SIZE ABOVE GROUND MAY BE GALVANIZED STEEL PIPE WITH GALVANIZED MALLEABLE DRAINAGE TYPE FITTINGS. ALL CAST IRON PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADE MARK OF CISPI AND LISTED BY NSF INTERNATIONAL. SCHEDULE 40 PVC PIPE AND SOCKET FITTINGS (ASTM D 2665) WITH SOLVENT WELD JOINTS (ASTM D2855). FOAM CORE PIPE IS NOT APPROVED. DO NOT INSTALL PVC PIPING IN RETURN AIR PLENUMS.

3. SLOPE SANITARY WASTE PIPING AT 1/4" PER FOOT MINIMUM FOR PIPING 2-1/2" AND SMALLER AND 1/8" PER FOOT MINIMUM FOR PIPING 3" AND LARGER UNLESS NOTED OTHERWISE.

4. PROVIDE CLEAN-OUTS AT THE BASE OF SANITARY WASTE STACKS AND AT EVERY TURN IN PIPING IN EXCESS OF 45° AND NO FURTHER THAN 100'-0" APART IN A LOCATION THAT PERMITS ACCESS FOR SERVICE WITHOUT DAMAGE TO THE BUILDING OR FINISHED MATERIALS.

CLEANOUTS SHALL BE PROVIDED IN AN 18"x18"x6" CONCRETE PAD. 6. WHERE WASTE PIPING IS EXPOSED IN REST ROOM AREAS, PROVIDE CHROME PLATED BRASS PIPING, REMOVABLE P-TRAPS,

MATCHING STOPS AND ESCUTCHEONS FOR ALL LAVATORIES.

7. INSULATE MECHANICAL ROOM FLOOR DRAIN BODIES, P'TRAP AND HORIZONTAL DRAIN PIPING ABOVE GRADE WITH 1" THICK GLASS FIBER INSULATION WITH VAPOR BARRIER AND JACKET.

5. PROVIDE FLOOR CLEANOUTS WITH TOPS DESIGNED TO MATCH SPECIFIC FLOOR FINISHES SUCH AS CARPET, TILE, ETC. YARD

8. PIPING INSULATION, JACKETS, COVERINGS, SEALERS, MASTICS AND ADHESIVES ARE REQUIRED TO MEET A FLAME-SPREAD RATING OF 25 OR LESS AND A SMOKE-DEVELOPED RATING OF 50 OR LESS. AS TESTED BY ASTM E84 (NFPA 255) METHOD.

## PLUMBING FIXTURE SCHEDULES

## **GENERAL REQUIREMENTS:**

P-1A - WATER CLOSET (FLOOR MOUNTED - ADA COMPLIANT - 1.28 GPF MANUAL FLUSH VALVE)
AMERICAN STANDARD 3043.102, EQUAL: KOHLER K-4368, CRANE 3H701; 16-3/4" HIGH ELONGATED BOWL, SIPHON JET, VITREOUS CHINA; FLUSH VALVE TO BE AUTOMATIC INFRA-RED SENSOR ACTIVATED. MANUAL FLUSH VALVE: ZURN AQUAVANTARGE 1.28 GPF Z6000AVHET, CHROME METAL COVER. 11" ABOVE WATER CLOSET; CHURCH 9500CT OPEN FRONT SEAT, WHITE SOLID PLASTIC.

ELKAY LRAD-3319-60-4; 33"x19-1/2"x6"; 4 HOLES; LK-35 DRAIN; LK-53 PIPE; LK-2433C FAUCET WITH SPRAY AND HOSE.

P-5 - MOP SINK
FIAT MSB-2424, 24"x24" MOLDED STONE BASIN WITH 3" CAST BRASS DRAIN AND DOME STRAINER; SERVICE FAUCET #830-AA WITH VACUUM BREAKER: INTEGRAL STOPS: #832-AA-30" HOSE AND HOSE BRACKET.

P-8A - WALL MOUNTED LAVATORY (ADA COMPLIANT - SENSOR ACTIVATED) AMERICAN STANDARD 4869.004, EQUAL: KOHLER K-2849; 20"x18" ENAMELED CAST IRON, WALL HUNG LAVATORY, 4" CENTERS, DELTA: 86T0104 0.5 GPM SINGLE BUTTON METERING FAUCET; GRID DRAIN. PROVIDE THERMOSTATIC MIXING VALVE EQUAL TO LAWLER 570 AND SET HOT WATER TEMPERATURE TO NOT EXCEED 110 DEGREES.

FPWH - FROST PROOF WALL HYRANT WADE W-8601, EQUAL: ZURN Z-1321, WOODFORD 65; EXPOSED NON-FREEZE WALL HYDRANT WITH INTEGRAL VACUUM BREAKER,

## STAINLESS STEEL FACE AND 3/4" SWEAT INLET.

EWH-1 - ELECTRIC WATER HEATER (1 LOCATION)
A.O. SMITH: DEL 30 (30 GALLON 4.5KW, 208V, 1@ - CREATES 34GPH @ 72 DEGREE TEMP RISE) WATER HEATERS SHALL HAVE COMBINATION TEMPERATURE AND PRESSURE RELIEF VALVE, MAGNESIUM ANODE; GLASS-LINED, 5 YEAR WARRANTY ON TANK, STANDARD WARRANTY ON ACCESSORIES, SEE PLANS FOR SIZES. PROVIDE A 2 GALLON BLADDER TYPE EXPANSION TANK ON WATER HEATERS ABOVE 3 GALLON STORAGE.

PLUN	PLUMBING FIXTURE SCHEDULES (CONT.)													
LABEL FIXTURE NAME COLD WATER HOT WATER WASTE VENT														
<u>P-1A</u>	WATER CLOSET (ADA)	1-1/4"	-	4"	2"									
<u>P-4A</u>	SINK (COUNTER MOUNTED)	1/2"	1/2"	2	1-1/2"									
<u>P-5</u>	MOP SINK	1/2"	1/2"	3	1-1/2"									
<u>P-8A</u>	LAVATORY (WALL MOUNTED)	1/2"	1/2"	2	1-1/2"									
<u>FPWH</u>	FROST PROOF WALL HYDRANT	3/4"	-	-	-									
					_									

## PLUMBING GENERAL NOTES

1. PLUMBING WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LOCAL AND STATE PLUMBING CODE AND WITH THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.

2. GENERAL AND SPECIAL CONDITIONS ARE HEREBY MADE AN INTEGRAL PART OF THE PLUMBING SPECIFICATIONS INSOFAR AS THE GENERAL AND SPECIAL CONDITIONS ARE APPLICABLE TO THE PLUMBING WORK, UNLESS OTHERWISE SPECIFIED.

3. SCOPE: PROVIDE ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED FOR THE COMPLETION AND OPERATION OF ALL PLUMBING SYSTEMS IN ACCORDANCE WITH ALL APPLICABLE CODES.

4. PERMITS: APPLY AND PAY FOR ALL NECESSARY PERMITS. FEES AND INSPECTIONS REQUIRED BY ANY PUBLIC AUTHORITY HAVING JURISDICTION. ACREAGE CHARGES, FACILITIES CHARGES AND BOND PROPERTY ASSESSMENTS ARE NOT TO BE CONSTRUED TO BE A PART OF THIS CONTRACT.

5. WARRANTY: PROVIDE A ONE YEAR WARRANTY, FROM THE DATE OF ACCEPTANCE OF WORK BY THE OWNER, FOR ALL PLUMBING MATERIALS AND EQUIPMENT.

6. COORDINATE ALL PLUMBING PIPING LOCATIONS, ROUGH-IN LOCATIONS AND EQUIPMENT LOCATIONS WITH OTHER TRADES TO AVOID CONFLICTS AND INTERFERENCES. FINAL PIPING AND EQUIPMENT LOCATIONS SHALL BE A CODE COMPLIANT INSTALLATION

7. FIELD VERIFY PROPER OPERATION OF EXISTING SYSTEMS BEFORE STARTING CONSTRUCTION. NOTIFY THE ARCHITECT / ENGINEER OF RECORD OF ANY PROBLEMS OR DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND EXISTING CONDITIONS AND/OR ANY POTENTIAL PROBLEMS OBSERVED BEFORE CONTINUING WORK IN THE EFFECTED AREAS.

8. CUT WALLS, FLOORS AND CEILINGS AS REQUIRED FOR INSTALLATION OF PLUMBING WORK. ALL CUTTING SHALL BE HELD TO A MINIMUM. PATCH AND FINISH SURFACES TO MATCH ADJOINING SURFACES.

9. PLUMBING PLANS SHALL NOT BE SCALED. REFERENCE THE ARCHITECTURAL PLANS FOR ALL LOCATIONS OF PLUMBING FIXTURES, WALLS, DOORS, WINDOWS, ETC.

10. PLUMBING PIPING SHALL BE LOCATED CONCEALED IN WALLS, PARTITIONS OR ABOVE CEILINGS UNLESS NOTED OTHERWISE. PLUMBING PIPING IN EXPOSED AREAS SHALL BE RUN TIGHT TO UNDERSIDE OF STRUCTURE.

11. PLUMBING PIPING, VENTS, ETC. EXTENDING THROUGH EXTERIOR WALLS AND/OR THE ROOF SHALL BE FLASHED AND COUNTER FLASHED IN A WATERPROOF MANNER. COORDINATE FLASHING WITH THE GENERAL CONTRACTOR.

12. DO NOT INSTALL PLUMBING PIPING IN AREAS SUBJECT TO FREEZING TEMPERATURES. INSTALL PLUMBING PIPING SHOWN IN EXTERIOR WALLS ON THE CONDITIONED SIDE OF THE WALL INSULATION.

13. PROVIDE NON-CONDUCTING DIELECTRIC UNIONS WHENEVER CONNECTING DISSIMILAR METALS.

14. ATTACH HANGERS TO STRUCTURE, HANGERS SHALL NOT ATTACH TO THE DECK.

15. PROVIDE ACCESS DOORS FOR VALVES, WATER HAMMER ARRESTORS, TRAP PRIMERS, ETC. CONCEALED IN MASONRY WALLS, GYPBOARD WALLS AND/OR CEILINGS THAT WILL REQUIRE MAINTENANCE ACCESS.

16. PLUMBING SYSTEMS INCLUDE, BUT ARE NOT LIMITED TO: PLUMBING FIXTURES AND EQUIPMENT, FIRE STOPPING, SEISMIC BRACING, PIPE IDENTIFICATION, DOMESTIC WATER SYSTEM, SANITARY WASTE AND VENT SYSTEM.

PLUMBING FIXTURES AND EQUIPMENT:

1. PROVIDE COMPLETE PLUMBING FIXTURES AND EQUIPMENT. INCLUDE SUPPLIES, STOPS, VALVES, FAUCETS, DRAINS, TRAPS, TAIL PIECES, ESCUTCHEONS, ETC.

2. PLUMBING FIXTURES AND EQUIPMENT SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS AND INSTALLATION INSTRUCTIONS.

3. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH SUBSTITUTIONS TO SPECIFIED PLUMBING FIXTURES AND EQUIPMENT INCLUDING BUT NOT LIMITED TO; PROVIDING MAINTENANCE ACCESS CLEARANCE, PIPING, ELECTRICAL, REPLACEMENT OF OTHER SYSTEM COMPONENTS, BUILDING ALTERATIONS, ETC. AND ANY MODIFICATIONS TO ASSOCIATED MECHANICAL, ELECTRICAL OR PLUMBING SYSTEMS REQUIRED BY THE EQUIPMENTS INSTALLATION INSTRUCTIONS. ALL COSTS ASSOCIATED WITH SUBSTITUTIONS SHALL BE INCLUDED IN THE ORIGINAL BASE BID.

## FIRE STOPPING:

1. FIRE STOP ALL PENETRATIONS, BY PIPING OR CONDUITS, OF FIRE RATED WALLS, FLOORS AND PARTITIONS. PROVIDE A DEVICE(S) OR SYSTEM(S) WHICH HAS BEEN TESTED AND LISTED AS COMPLYING WITH ASTM E-814 AND INSTALL IN ACCORDANCE WITH THE CONDITIONS OF THEIR LISTING. PROVIDE A DEVICE(S) OR SYSTEM(S) WITH AN 'F' RATING EQUAL TO THE RATING OF THE ASSEMBLY BEING PENETRATED. REFER TO ARCHITECTURAL PLANS FOR WALL AND FLOOR TYPES.

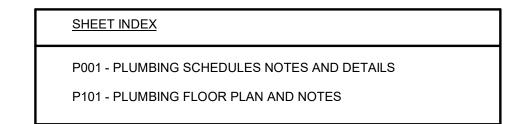
## SEISMIC BRACING:

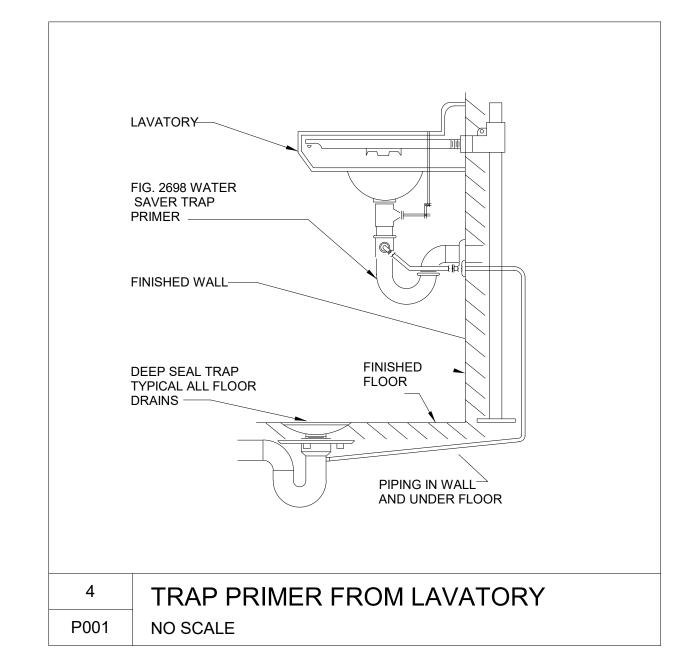
1. PROPERLY SUPPORT AND BRACE VERTICALLY AND HORIZONTALLY ALL PIPING, APPARATUS, EQUIPMENT, ETC. IN ACCORDANCE WITH APPLICABLE CODES TO PREVENT EXCESSIVE MOVEMENT DURING SEISMIC CONDITIONS.

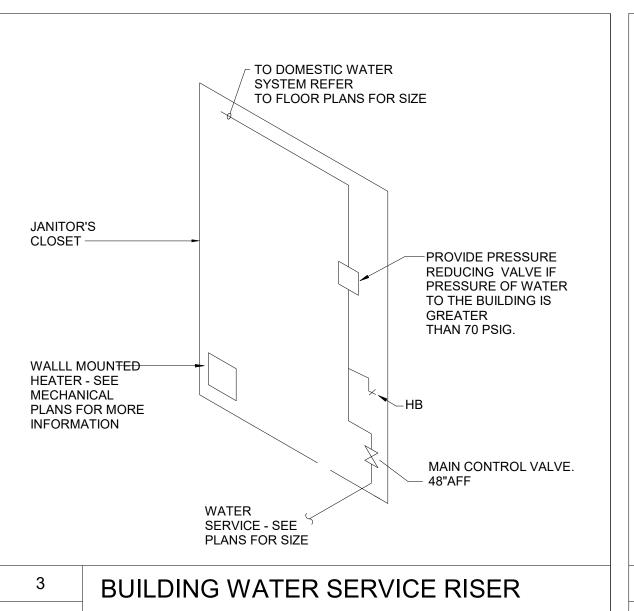
## PIPE INDENTIFICATION:

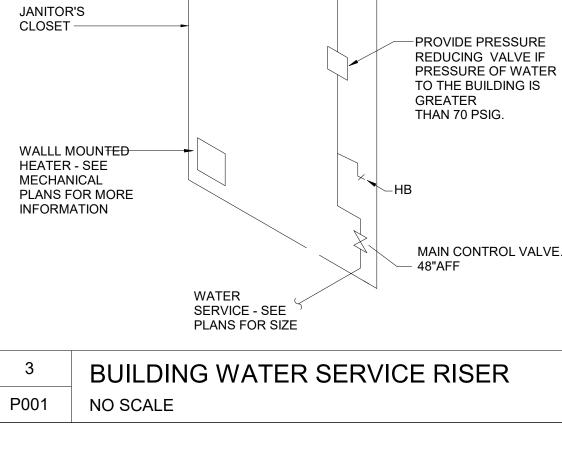
1. PIPE IDENTIFICATION SHALL MATCH THE OWNER'S STANDARD. IF NO STANDARD EXISTS, THEN THE PIPE IDENTIFICATION SHALL BE IN ACCORDANCE WITH ANSI A13.1.

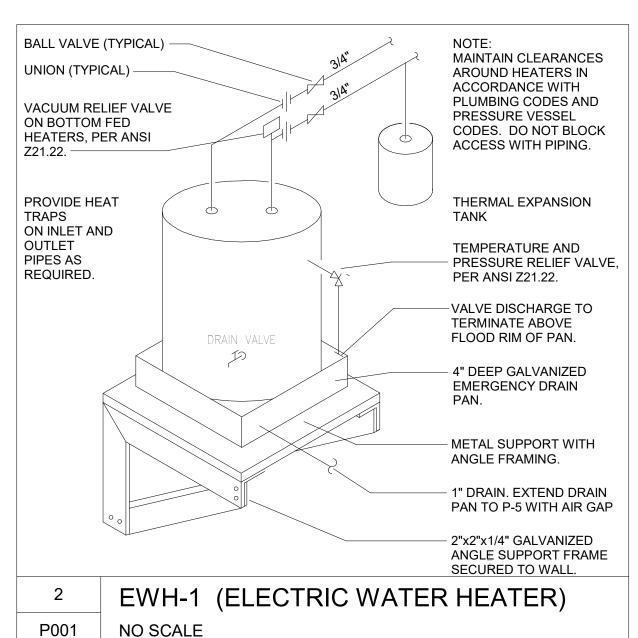
2. PROVIDE PIPING LABELS FOR ALL PLUMBING PIPING. PIPING LABELS SHALL BE ACRYLIC FACED, WRAP-AROUND TYPE. EACH LABEL SHALL INDICATE THE PIPING CONTENTS, DIRECTION OF FLOW AND SHALL BEAR THE MANUFACTURER'S STANDARD COLOR FOR THE

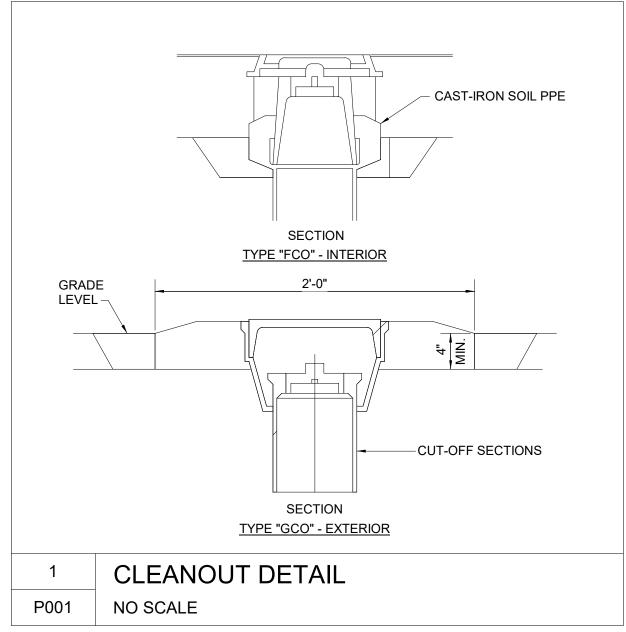












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Morris Berg



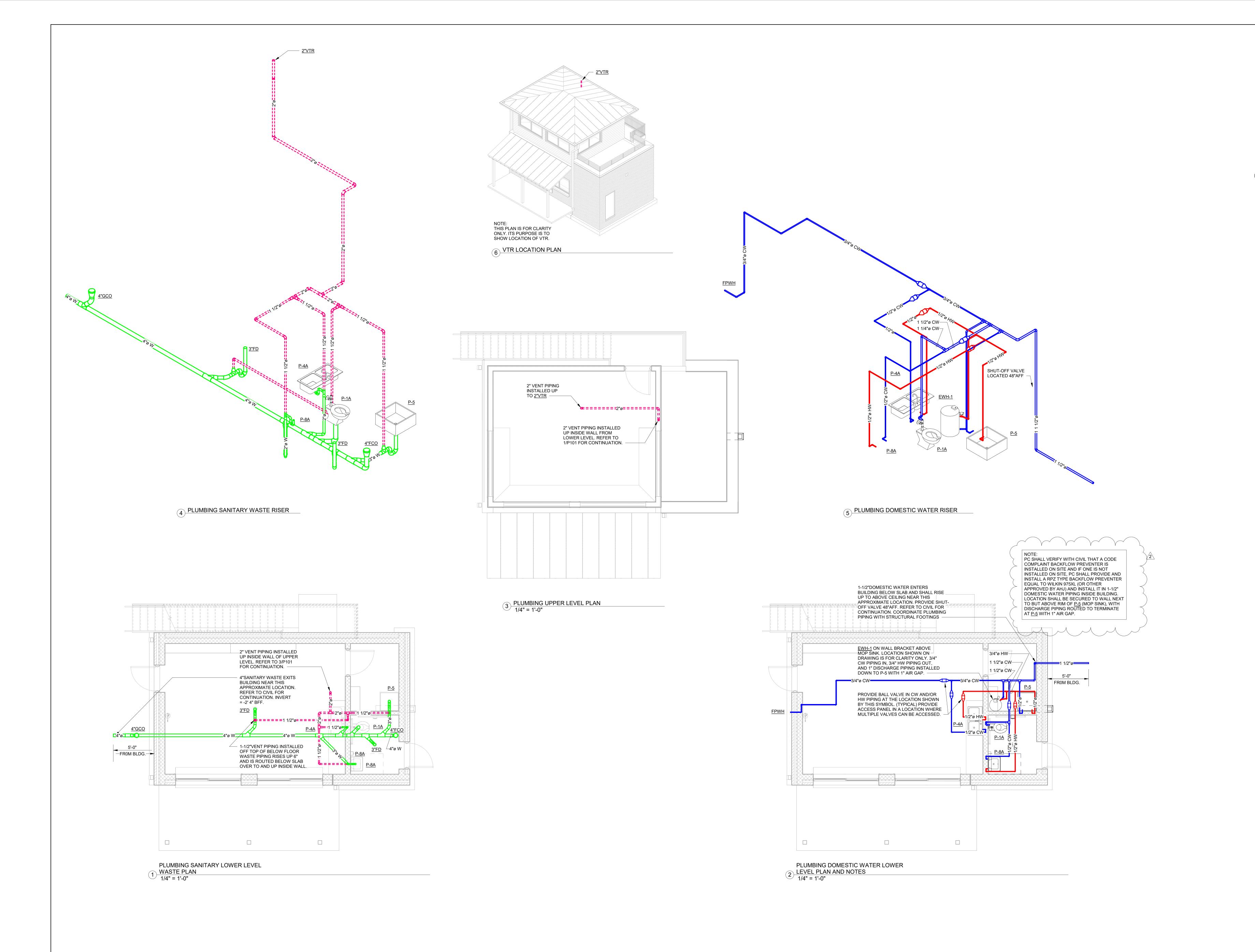
212 N. McDowell St, Suite 204

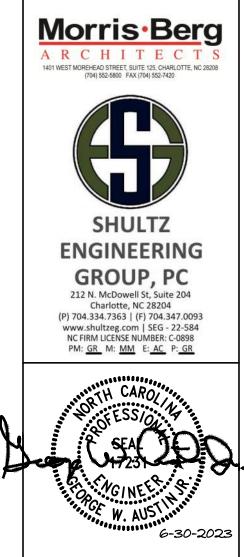
ISSUE DATE: 12/01/2022 MARCH 30,2023

PROJECT NUMBER

PLUMBING SCHEDULES NOTES AND DETAILS

SHEET NUMBER





**PERMIT SET** 

ISSUE DATE: MARCH 30,2023 REV 2 JUNE 30,2023

PROJECT NUMBER 2212

SHEET TITLE PLUMBING FLOOR PLAN AND NOTES

SHEET NUMBER

FAN S	CHEDUL	E											
UNIT	SERVICE	AREA	MANUFACTURER	FAN TYPE &	CFM	S.P.	RPM	FLA	DRIVE	ELECTRIC	AL DATA	CONTROL SCHEME	ACCESSORIES
DESIG.	SERVICE	SERVED	& MODEL #	ARRANGEMENT	CPM	<b>3.</b> F.	KFM	r <sub>L</sub> x	TYPE	HP/WATTS	VOLT/PH	NOTE NOTE	NOTES
EF-1	EXHAUST	BATHROOM/ STORAGE	GREENHECK SP-A110L	CEILING MOUNT W/ LIGHT	70	0.3"	BY MFG	SEE MANF.	DIRECT	16 W	115/1ø	A	SEE BELOW
EF-2/3	EXHAUST	CONCESSION	GREENHECK SP-A110	CEILING MOUNT	70	0.3"	BY MFG	SEE MANF.	DIRECT	16 W	115/1ø	A	SEE BELOW

NOTES:

. INTEGRAL DISCONNECT SWITCH 4. UL RATED 2. BACKDRAFT DAMPER 5. SPEED CONTROLLER BY MANUFACTURER

3. WALL CAP, SEE SHEET M101

CONTROL:

A. INTERLOCK WITH WALL SWITCH

DUC	DUCTLESS SPLIT SYSTEM HEAT PUMP														
			CO	OLING			INDOO	r unit		OUTDO	or unit				
UNIT NO.	LOCATION	AREA SERVED	RATED CAP BTU/H	ENERGY EFFECIENCY	POWER SUPPLY	MCA AMPS	FAN MOTOR FLA	FAN MOTOR OUTPUT WATTS	AIRFLOW CFM	MCA AMPS	FUSE BREAKER AMPS	WEIGHT (LBS.)	MITSIBISHI MODEL NO	NOTES	
SSAH-1	WALL MOUNT	1ST FLOOR	ı	-	208V-1ø	1	0.33	30	320-425	NOTE 1	NOTE 1	50	PKA-A18HA7	SEE BELOW	
SSAH-2	WALL MOUNT	2ND FLOOR	ı	-	208V-1ø	1	0.33	30	320-425	NOTE 1	NOTE 1	50	PKA-A18HA7	SEE BELOW	
SSHP-1	OUTSIDE	1ST FLOOR	18,000	18.5 SEER	208V-1ø	-	0.5	-	_	11	30	150	PUZ-A18NKA7	SEE BELOW	
SSHP-2	OUTSIDE	2ND FLOOR	18,000	18.5 SEER	208V-1ø	-	0.5	-	_	11	30	150	PUZ-A18NKA7	SEE BELOW	

- 1. INDOOR UNITS RECEIVE POWER FROM OUTDOOR UNIT THROUGH
- FIELD SUPPLIED INTERCONNECTED WIRING. RATED CONDITIONS (COOLING) INDOOR: DB 73°F, OUTDOOR: DB 95°F, WB 75°. 7. DISCONNECT SWITCHES BY E.C.
- LOW AMBIENT FAN CONTROL.
- PROVIDE WITH CONDENSATE PUMP PER MANUFACTURER'S RECOMMENDATIONS WITH
- EMERGENCY UNIT SHUTOFF IF REQUIRED. PROVIDE WALL MOUNTED THERMOSTAT.

LOW PRESSURE DUCTWORK

**DUCTWORK HANGER DETAILS** 

- 6. REFRIGERANT PIPING AND CONDENSATE PIPING SHALL BE RUN IN WALLS. NO EXPOSED PIPING ALLOWED.

ELE(	CTRIC W	VALL HEATE	R SCHE	DULE	
TAG	AREA SERVED	MANUFACTURER & MODEL #	HEATING CAP. (kW)	ELECTRICAL DATA VOLT/PH	NOT
WH-1	BATHROOM	MARKEL F3052T2DWB	2.0	208V/1ø	SEE BEL
2.	PROVIDE SUI	RFACE MOUNTING F ERMOSTAT INTEGRAL SCONNECT.			

TABLE 403.3 OA REQUIREMENTS	
1ST FLOOR	352 SF
OPERABLE WINDOW/DOOR AREA	49 SF
WINDOW/DOOR TO FLOOR PERCENTAGE	13.9 %
2ND FLOOR	317 SF
OPERABLE WINDOW/DOOR AREA	77 SF
WINDOW/DOOR TO FLOOR PERCENTAGE	24.3 %

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT	
THERMAL ZONE	<b>4</b> A
EXTERIOR DESIGN CONDITIONS WINTER DRY BULB SUMMER DRY BULB	18.5 94.4
INTERIOR DESIGN CONDITIONS WINTER DRY BULB SUMMER DRY BULB RELATIVE HUMIDITY	70 75 50
BUILDING HEATING LOAD	42.8 MBH
BUILDING COOLING LOAD	32.4 MBH
MECHANICAL SPACE CONDITIONING SYSTEM UNITARY  DESCRIPTION OF UNIT HEATING EFFICIENCY COOLING EFFICIENCY HEAT OUTPUT OF UNIT COOLING OUTPUT OF UNIT BOILER TOTAL BOILER OUTPUT CHILLIER TOTAL CHILLIER OUTPUT	SEE SCHEDULES SEE SCHEDULES SEE SCHEDULES SEE SCHEDULES NA NA
LIST EQUIPMENT EFFICIENCIES	SEE SCHEDULES
EQUIPMENT SCHEDULES WITH MOTORS (MECHANICAL SYSTEMS) MOTOR HORSEPOWER NUMBER OF PHASES MINIMUM EFFICIENCY MOTOR TYPE NUMBER OF POLES	SEE SCHEDULES SEE SCHEDULES SEE SCHEDULES SEE SCHEDULES SEE SCHEDULES

NOTES	S:					
1.	PROVIDE	SURFAC	e moun	TING F	Rame	<u>.</u>
2. 1	PROVIDE	<b>THERMO</b>	STAT INT	<b>EGRAL</b>	TO	UN
3. 1	NTEGRAL	DISCON	NECT.			

٠.	INTEGRAL DISCONNECT
4.	FAN DELAY SWITCH.
5.	UL RATED.
6.	RECESSED IN WALL.

TABLE 403.3 OA REQUIREMENTS	
1ST FLOOR	352 SF
OPERABLE WINDOW/DOOR AREA	49 SF
WINDOW/DOOR TO FLOOR PERCENTAGE	13.9 %
2ND FLOOR	317 SF
OPERABLE WINDOW/DOOR AREA	77 SF
WINDOW/DOOR TO FLOOR PERCENTAGE	24.3 %

*MINIMUM REQUIRED OPENABLE AREA TO	BE 4%.
<b>ENERGY REQUIREMENTS:</b>	
MECHANICAL SYSTEMS, SERVICE SYSTEMS AND E	QUIPMENT
THERMAL ZONE	<b>4A</b>
EXTERIOR DESIGN CONDITIONS WINTER DRY BULB SUMMER DRY BULB	18.5 94.4
INTERIOR DESIGN CONDITIONS	

## MECHANICAL GENERAL NOTES

- 1. FURNISH ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED FOR THE COMPLETE INSTALLATION AND OPERATION OF ALL SYSTEMS IN THIS SECTION OF WORK IN ACCORDANCE WITH RECOMMENDED PRACTICE AND ALL APPLICABLE CODES.
- 2. DO NOT SCALE DRAWINGS. SEE ARCHITECTURAL DRAWINGS & REFLECTED CEILING PLANS FOR EXACT LOCATION OF DOORS, WINDOWS, CEILING DIFFUSERS, ETC.
- 3. ALL MECHANICAL PERMITS AND INSPECTION FEES SHALL BE OBTAINED AND PAID FOR BY THE MECHANICAL CONTRACTOR.
- 4. MECHANICAL CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS FOR ONE YEAR, EFFECTIVE THE DAY THE PROJECT IS ACCEPTED BY THE OWNER. REFRIGERANT COMPRESSORS SHALL BE GUARANTEED FOR FIVE YEARS.
- DRAWINGS ARE DIAGRAMMATIC AND MAY NOT SHOW ALL REQUIRED FITTINGS. CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE TYPE, SIZE AND LOCATION OF ALL AIR DEVICES, DUCTWORK, PIPING AND EQUIPMENT WITH THE CEILING PLAN, LIGHTS, STRUCTURAL ELEMENTS AND OTHER TRADES. CONTRACTOR TO FURNISH AND INSTALL ALL BENDS, OFFSETS, ELBOWS, ETC. AS REQUIRED. VERIFY ALL CLEARANCES PRIOR TO FABRICATING DUCTWORK
- 6. CONTRACTOR IS RESPONSIBLE FOR PROVIDING MATERIALS AND INSTALLING THE WORK IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND NATIONAL CODES.
- DUCTWORK
- A. ALL DUCTWORK SHALL BE GALVANIZED SHEET METAL CONSTRUCTED IN ACCORDANCE WITH SMACNA STANDARDS WITH A MINIMUM PRESSURE CLASSIFICATION OF 2", SEAL CLASS C, WITH A MAXIMUM LEAKAGE RATE OF 5%.
- B. ALL SQUARE ELBOWS SHALL HAVE TURNING VANES. ALL RECTANGULAR ELBOWS SHALL BE LONG RADIUS UNLESS SPACE LIMITATIONS REQUIRE SQUARE ELBOWS.
- C. ALL DUCT DIMENSIONS SHOWN ARE INTERIOR CLEAR DIMENSIONS.
- D. PROVIDE A MANUAL BALANCING DAMPER AT ALL SUPPLY AND RETURN BRANCH TAKEOFFS.
- E. ALL SHEET METAL DUCTWORK SHALL BE LINED WITH DUCT LINER. ALL REMAINING SUPPLY, OUTSIDE AIR AND EXTERIOR DUCTS SHALL BE EITHER INTERNALLY LINED OR EXTERNALLY INSULATED WITH DUCT WRAP. PROVIDE AN ADDITIONAL 1-1/2" OF DUCT WRAP AND AN ALUMINUM JACKET FOR ALL EXTERIOR DUCT.
- F. ALL DUCT SYSTEMS ARE TO BE PER U.L. STANDARDS. DUCTS ARE TO BE INSTALLED WITH NO RESTRICTIONS AND AN ABSOLUTE MINIMUM AMOUNT OF AIR LEAKAGE.
- G. ALL DUCT INSULATION SHALL BE RUN CONTINUOUSLY THROUGH FLOORS AND PARTITIONS.
- - A. CONDENSATE DRAINS SHALL BE SCHEDULE 40 PVC OR TYPE L COPPER WITH SOLDERED JOINTS.
  - B. REFRIGERANT PIPING SHALL BE TYPE ACR WROUGHT COPPER WITH WROUGHT COPPER FITTINGS AND BRAZED JOINTS.
- C. THE MECHANICAL CONTRACTOR SHALL PROVIDE REFRIGERANT AND LOW VOLTAGE CONTROL LINES FROM THE CONDENSER TO THE AIR HANDLING UNIT. COORDINATE ROUTING AND INSTALLATION WITH THE GENERAL CONTRACTOR. SIZE REFRIGERANT LINES PER MANUFACTURER'S REQUIREMENTS.
- A. DUCT LINER FIBROUS GLASS DUCT LINER, MINIMUM 1-1/2" THICK WITH R-VALUE TO MEET LOCAL ENERGY CODE, WITH COATED SURFACE EXPOSED TO AIR STREAM. APPLY WITH MECHANICAL FASTENERS AND 100% COVERAGE OF ADHESIVE.
- B. DUCT WRAP MINERAL FIBER BLANKET, MINIMUM 2" THICK WITH R-VALUE TO MEET LOCAL ENERGY CODE, WITH REINFORCED FOIL AND PAPER VAPOR RETARDANT JACKET. APPLY WITH MECHANICAL FASTENERS AND ADHESIVE.
- C. INTERIOR CONDENSATE DRAINS INSULATE WITH 1/2" THICK FLEXIBLE ELASTOMERIC PIPE INSULATION.
- D. REFRIGERANT SUCTION LINES INSULATE WITH 1" THICK FLEXIBLE ELASTOMERIC PIPE INSULATION. PROVIDE ALUMINUM JACKET FOR EXTERIOR INSULATION.
- E. AIR DISTRIBUTION INSULATE TOP—SIDE AS REQUIRED PER CODE
- 10. ALL PIPING, DUCTS, VENTS, ETC., EXTENDING THROUGH WALLS & ROOF SHALL BE FLASHED & COUNTER-FLASHED IN A WATERPROOF MANNER.
- 11. EXTEND ALL CONDENSATE DRAINS TO JANITORS SINK, FLOOR DRAIN, SPLASH BLOCK OR AS REQUIRED PER CODE. DRAINS FROM AHU'S SHALL BE TRAPPED. SLOPE 1/8" PER FOOT.
- 12. LOCATE ALL THERMOSTATS AND SWITCHES 4'-0" ABOVE FINISHED FLOOR. FURNISH A THERMOSTAT FOR EVERY DEVICE REQUIRING ONE WHETHER SHOWN ON DRAWINGS OR NOT.
- 13. ALL EQUIPMENT SHALL BE INSTALLED PER CODE & MANUFACTURER'S REQUIREMENTS FOR SERVICE AND ACCESS CLEARANCES.
- 14. ALL EQUIPMENT SHALL BE U.L LISTED.
- 15. MECHANICAL CONTRACTOR SHALL BALANCE SYSTEM TO AIR QUANTITIES INDICATED ON PLANS AND PROVIDE A COMPETE BALANCING REPORT IN ACCORDANCE WITH NEBB OR AABC STANDARDS.
- 16. ALL CONTROL WIRING SHALL BE BY MECHANICAL CONTRACTOR.
- 17. PROVIDE A CLEAN SET OF FILTERS FOR ALL AIR HANDLING EQUIPMENT AT SUBSTANTIAL COMPLETION.
- 18. MAINTAIN A MINIMUM 10'-0" BETWEEN OUTDOOR AIR INTAKES AND EXHAUST FAN DISCHARGE AND PLUMBING VENTS, ETC. FIELD COORDINATE.
- 19. PROVIDE 4" THICK CONCRETE PAD FOR ALL GROUND MOUNTED OUTDOOR HVAC UNITS. PADS SHALL BE MINIMUM 6" LARGER THAN UNIT ON ALL SIDES.
- 20. RUN DUCT UP WITHIN STRUCTURE OR THROUGH JOIST WEBS WHERE POSSIBLE & WHERE REQUIRED TO MAINTAIN CEILING HEIGHTS. PROVIDE OFFSETS IN DUCT WHERE REQ'D WITH MAX. 45° ELBOWS. MAKE BRANCH TAPS OFF TOP, SIDES OR BOTTOM AS REQ'D. NO BACK TO BACK 90° ELBOWS ALLOWED.
- 21. REFRIGERANT PIPING SHALL BE SIZED & INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND INSTALLATION INSTRUCTIONS.
- 22. ALL EQUIPMENT SHALL BE LABELED ACCORDING TO NUMBERING / IDENTIFICATION SYSTEM PER PLANS.
- 23. ALL EQUIPMENT SUPPORT IS REQUIRED TO MEET 1621 NCSBC.
- 24. ON MAKING PIPE CONNECTIONS TO EQUIPMENT, CARE SHOULD BE TAKEN TO ARRANGE PIPES SO AS NOT TO INTERFERE WITH OPENING OF ACCESS DOORS.
- 25. ELECTRICAL CONTRACTOR TO PROVIDE ALL HIGH VOLTAGE ELECTRICAL WIRING, CONDUIT, DISCONNECT SWITCHES, FUSES, ETC. TO CONDENSING UNITS AND AIR HANDLERS. ALL FINAL ELECTRICAL CONNECTIONS ARE BY ELECTRICAL CONTRACTOR.
- 26. PRIOR TO BEGINNING ANY WORK. MECHANICAL CONTRACTOR IS RESPONSIBLE TO NOTIFY THE OWNER'S REPRESENTATIVE, ARCHITECT OR ENGINEER IF THE MECHANICAL DESIGN CONFLICTS WITH EXISTING OR UNFORESEEN FIELD CONDITIONS.

MECHANIC	AL LEGEND		
	CEILING SUPPLY AIR DIFFUSER CEILING RETURN AIR DIFFUSER CEILING EXHAUST FAN THERMOSTAT / UNIT CONTROL CO2 SENSOR NEW ROUND METAL DUCT NEW ROUND FLEX DUCT DUCT ELBOW W/TURNING VANES CONNECT TO EXISTING POINT OF DISCONNECT NEW TRANSFER GRILLE	PU CFM AFF EER SP H SD (X) FD V.D.	PACKAGED UNIT CUBIC FEET PER MINUTE ABOVE FINISHED FLOOR ENERGY EFFICIENCY RATIO STATIC PRESSURE DOOR UNDER CUT 3/4" DUCT SMOKE DETECTOR EXISTING NEW FIRE DAMPER VOLUME DAMPER TURNING VANES

## **MECHANICAL SHEET INDEX**

MO01 MECHANICAL LEGEND, NOTES, SCHEDULES AND DETAILS

M101 MECHANICAL FLOOR PLANS

PROJECT NUMBER

SHEET TITLE MECHANICAL LEGEND, NOTES, SCHEDULES AND DETAILS SHEET NUMBER

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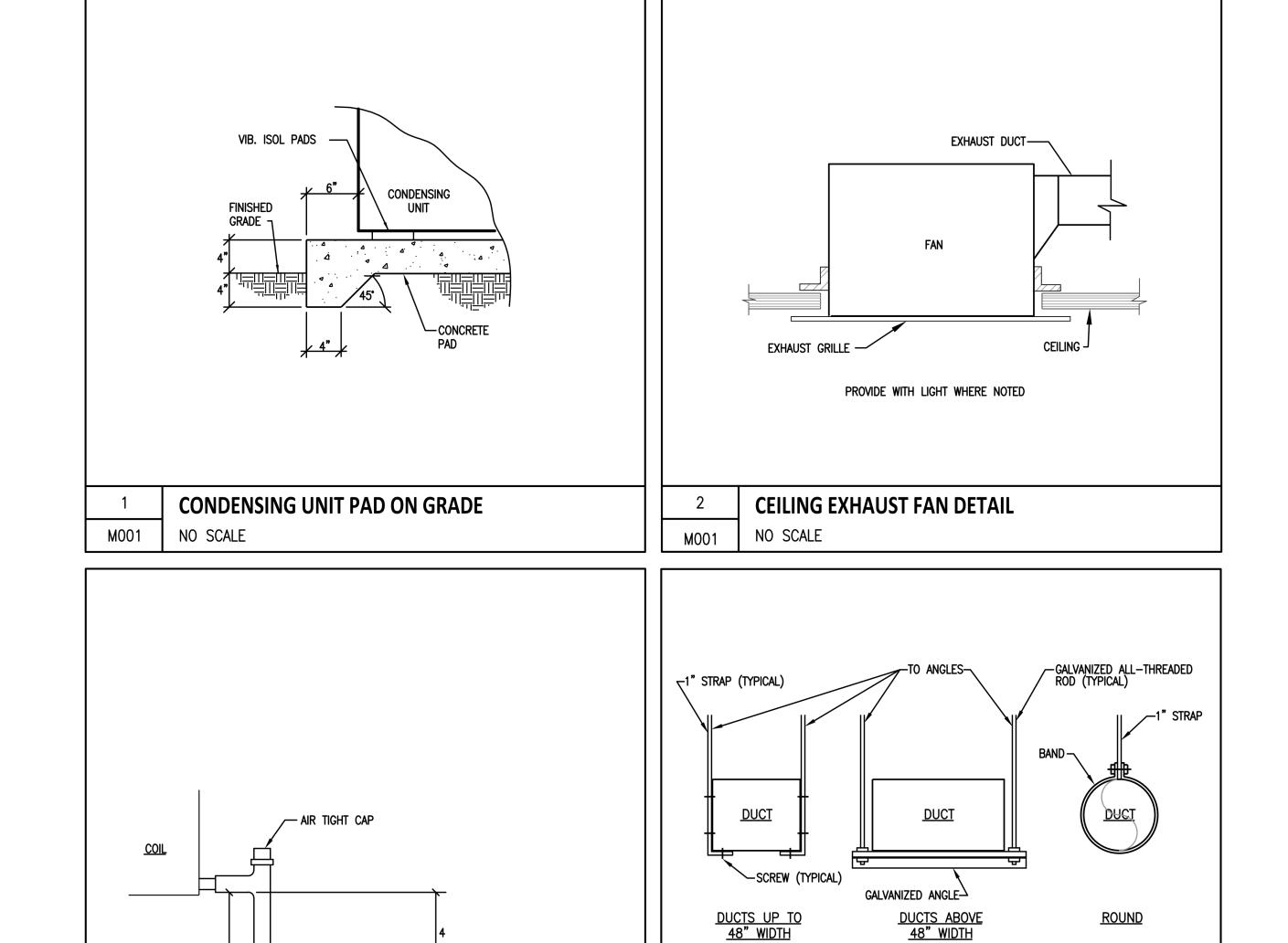
(P) 704.334.7363 | (F) 704.347.0093

www.shultzeg.com | SEG - 22-584 NC FIRM LICENSE NUMBER: C-0898

PM: GR M: MM E: AC P: GR

**BID SET** 

ISSUE DATE: 12/01/2022



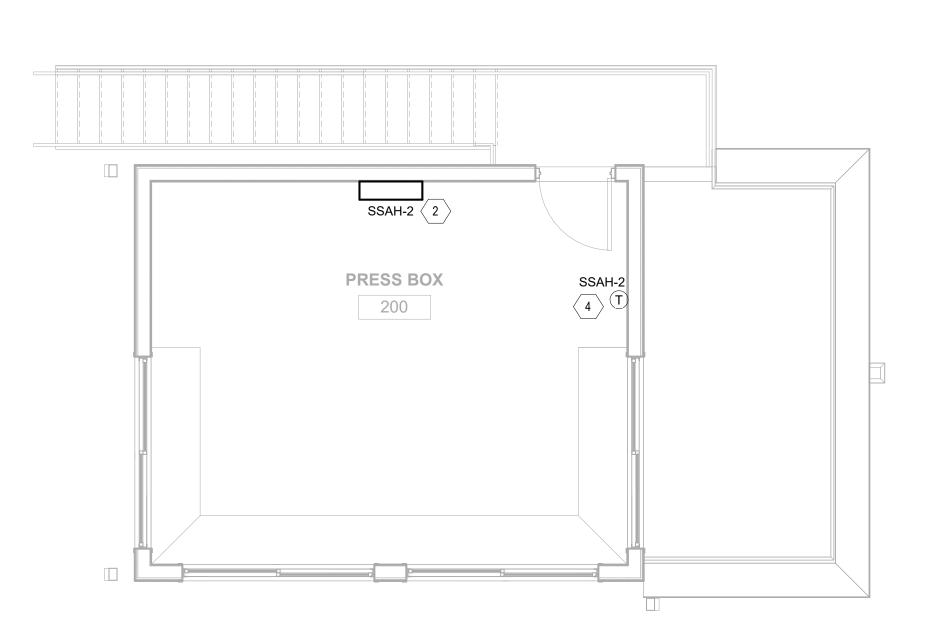
M001

NO SCALE

**CONDENSATE TRAP DETAIL** 

M001

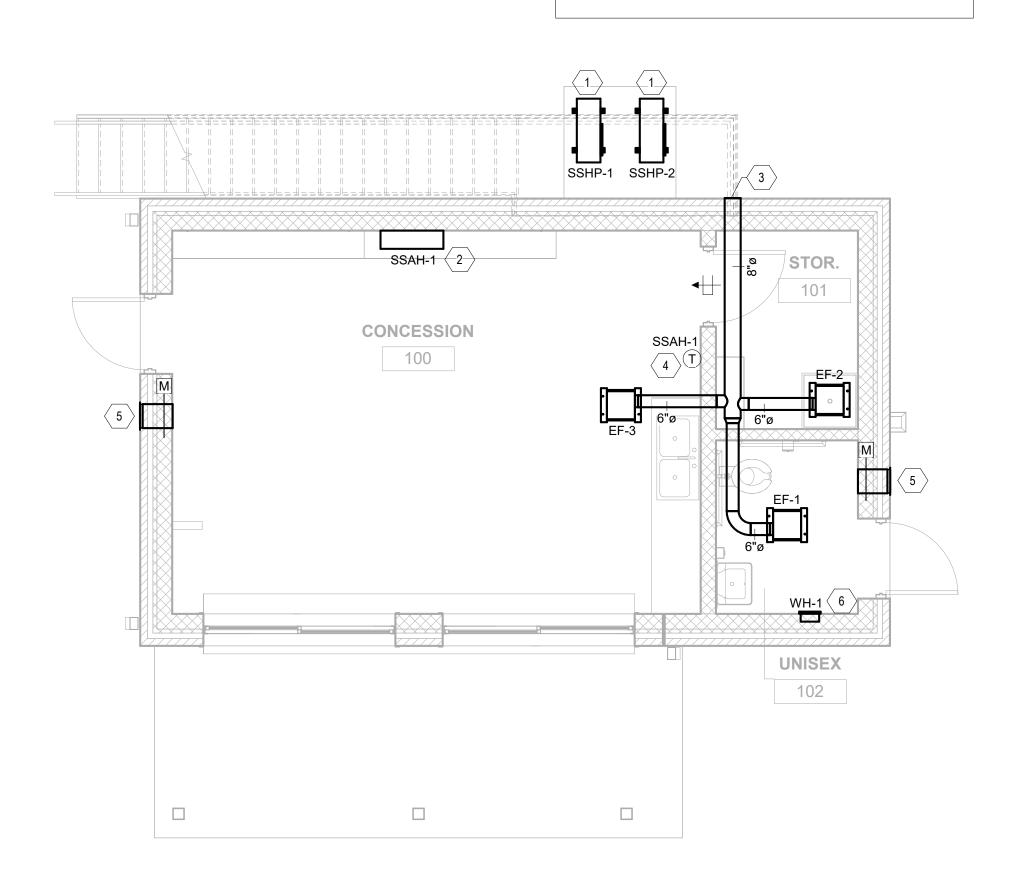
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2 MECHANICAL SECOND FLOOR PLAN 1/4" = 1'-0"

## KEYNOTES

- 1 ROUTE REFRIGERANT LINES UP IN EXTERIOR WALL AND OVER TO RESPECTIVE AHU. COORDINATE EXACT PLACEMENT OF UNITS AND PIPE ROUTING WITH OWNER PRIOR TO PRICING AND INSTALLATION.
- ROUTE CONDENSATE TO EXTERIOR AND PROVIDE SPLASH BLOCK. COORDINATE EXACT PLACEMENT OF UNITS AND PIPE ROUTING WITH OWNER PRIOR TO PRICING AND INSTALLATION.
- ROUTE 8"Ø EXHAUST AIR DUCT TO EXTERIOR.
  PROVIDE A LOUVERED WALL CAP. COORDINATE FINISH
  WITH ARCHITECT/OWNER PRIOR TO ORDERING.
  PROVIDE WITH BIRDSCREEN. MAINTAIN A MINIMUM OF
  10'-0" FROM INTAKE OPENINGS.
- 4 COORDINATE LOCATION OF THERMOSTATS WITH ARCHITECT/OWNER.
- PROVIDE 12"x12" RUSKIN ELF6375DFL EXHAUST LOUVER IN WALL. PROVIDE WELDED CONSTRUCTION AND ALUMINUM BIRDSCREEN. MOUNT BOTTOM OF LOUVER 1'-6" ABOVE FINISHED FLOOR. MAINTAIN A MINIMUM OF 10'-0" FROM EXHAUST TERMINATIONS. PROVIDE WITH MOTORIZED DAMPER AND INTERLOCK WITH EXHAUST FAN OPERATION. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO PRICING AND INSTALLATION.
- 6 MOUNT BOTTOM OF WALL HEATER 1'-6" ABOVE FINISHED FLOOR.



1 MECHANICAL FIRST FLOOR PLAN 1/4" = 1'-0" A R C H I T E C T S

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PM: GR M: MM E: AC P: GR



**BID SET** 

ISSUE DATE: 12/01/2022

EASTERN HS PRESS BOX/CONCESSIONS
MEBANE, NC

PROJECT NUMBER 2212

SHEET TITLE
MECHANICAL FLOOR
PLANS

SHEET NUMBER

M101

## ELECTRICAL SPECIFICATIONS

### **SECTION 260100** ELECTRICAL SYSTEMS DESCRIPTIONS

REQUIREMENTS.

- A. PROJECT INCLUDES ELECTRICAL SYSTEMS FOR THE FOLLOWING APPLICATIONS: REFER TO INDIVIDUAL SPECIFICATION SECTIONS FOLLOWING FOR DETAILED
  - a. POWER AND DISTRIBUTION. b. LIGHTING, INCLUDING EXIT AND EMERGENCY LIGHTING.
  - TELEPHONE. d. POWER CONNECTIONS FOR HVAC, PLUMBING AND OWNER-PROVIDED EQUIPMENT.
- B. PRODUCTS SYSTEMS, PRODUCTS, AND STANDARDS ARE LISTED IN INDIVIDUAL SPECIFICATION SECTIONS WHICH FOLLOW.
- 2. <u>ALL MATERIALS, DEVICES, APPLIANCES, AND EQUIPMENT SHALL BE NEW</u> AND LABEL LISTED BY AN APPROVED THIRD PARTY TESTING AGENCY <u>APPROVED BY THIS STATE.</u>
- GENERAL PROJECT REQUIREMENTS
- WIRING SYSTEMS AS SPECIFIED HEREIN AND SHOWN ON THE DRAWINGS. 2. ALL ELECTRICAL PERMITS AND INSPECTION FEES SHALL BE OBTAINED AND

PROVIDE ALL WORK AND MATERIALS FOR THE INSTALLATION OF COMPLETE

- PAID FOR BY THE ELECTRICAL CONTRACTOR. 3. ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS
- 4. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE MOST

FOR ONE YEAR EFFECTIVE THE DAY THE PROJECT IS ACCEPTED BY THE

- RECENT ADOPTED VERSION OF THE N.F.P.A., NATIONAL ELECTRICAL CODE (N.E.C.), AND ALL APPLICABLE STATE AND LOCAL CODES.
- 5. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL CUTTING AND PATCHING FOR INSTALLATION OF ELECTRICAL WORK AND REPAIR ANY DAMAGE DONE.
- SHOP DRAWINGS AND CATALOG DATA SHALL BE SUBMITTED FOR LIGHTING FIXTURES, PANELBOARDS, DISCONNECT SWITCHES, WIRING DEVICES AND MISCELLANEOUS MATERIALS. SHOP DRAWINGS SHALL BE SUBMITTED AS SPECIFIED IN ARCHITECTURAL SPECIFICATIONS, OR AT A MINIMUM, PROVIDE AN ELECTRONIC "PDF" FILE OF ALL SUBMITTAL MATERIALS.
- PROVIDE ENGRAVED PHENOLIC NAMEPLATES FOR PANELBOARDS, AND DISCONNECT SWITCHES. LABELS SHALL BE WHITE LETTERS ON BLACK FIELD. NAMEPLATE SHALL INDICATE EQUIPMENT NAME, VOLTAGE AND CIRCUIT/FEEDER SERVING EQUIPMENT (WHERE APPLICABLE).
- COORDINATE POWER SERVICE LOCATION AND REQUIREMENTS WITH LOCAL POWER COMPANY. MAKE PROVISIONS FOR METERING AS REQUIRED BY POWER COMPANY. IF REQUIRED, CONTRACTOR SHALL PROVIDE AND INSTALL CONCRETE SERVICE TRANSFORMER PAD PER POWER COMPANY REQUIREMENTS. IT SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE ALL REQUIREMENTS WITH THE LOCAL POWER COMPANY PRIOR TO SUBMISSION OF BID. ANY ADDITIONAL COSTS REQUIRED BY THE POWER COMPANY SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR AND SHALL BE INCLUDED IN THE BID.
- ELECTRICAL CONTRACTOR SHALL TEST ALL WIRING FOR CONTINUITY AND GROUNDS PRIOR TO WIRING BEING ENERGIZED. FAULTY WIRING SHALL BE replaced.
- 10. ELECTRICAL CONTRACTOR SHALL CONNECT ALL HVAC, PLUMBING, AND OTHER CONTRACTOR OR OWNER FURNISHED EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS (UNLESS OTHERWISE NOTED). CONTROL WIRING FOR EQUIPMENT NOT PROVIDED BY THE ELECTRICAL CONTRACTOR, SHALL BE PROVIDED BY THE RESPECTIVE CONTRACTOR. COORDINATE WITH EQUIPMENT SHOP DRAWINGS AND EQUIPMENT CONTRACTOR FOR DISCONNECT SWITCH, CONDUIT, WIRING REQUIREMENTS, FUSE AND BREAKER SIZES, AND VOLTAGE REQUIREMENTS, ALL FINAL CONNECTIONS TO JUNCTION BOXES SHALL BE BY THE ELECTRICAL CONTRACTOR.
- 11. EACH BIDDER SHALL VISIT THE JOB SITE PRIOR TO BIDDING TO FAMILIARIZE HIMSELF/HERSELF WITH EXISTING CONDITIONS. FAILURE TO VISIT SITE SHALL NOT EXCUSE CONTRACTOR FROM PERFORMING REQUIRED WORK, NOR SHALL IT BE AN ACCEPTABLE REASON FOR REQUESTING ADDITIONS TO THE CONTRACT.
- 12. THE EXISTING PORTIONS OF THIS FACILITY WILL REMAIN IN OPERATION DURING THIS CONSTRUCTION. ELECTRICAL CONTRACTOR SHALL CAUSE AS LITTLE DISRUPTION AS POSSIBLE TO THE FUNCTIONING OF THE FACILITY IN ORDER TO MAINTAIN THE COMFORT AND SAFETY OF THE OCCUPANTS.
- 13. THIS PROJECT INVOLVES SOME WORK ON EXISTING ELECTRICAL FACILITIES. EXISTING FEEDER, BRANCH CIRCUITS, COMMUNICATIONS, RACEWAYS, ETC. WHICH ARE DISRUPTED BY THIS PROJECT SHALL BE RE-ROUTED AND/OR RE-FED FROM A NEW SOURCE AS REQUIRED TO MAINTAIN THEM IN FULL AND PERMANENT SERVICE.
- 14. IF APPLICABLE, PROVIDE MIN. 24" HORIZONTAL SEPARATION BETWEEN BOXES INSTALLED IN OPPOSITE SIDES OF THE SAME FIRE-RATED WALL AS REQUIRED BY N.E.C. ART. 300.21
- 15. IF APPLICABLE, FIRE-STOPPING OF PENETRATIONS IN RATED WALLS AND FLOORS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE MOST RECENT, ADOPTED EDITION OF THE STATE BUILDING CODE USING APPROVED ASSEMBLIES SUCH AS THE FOLLOWING:

## CONDUIT PENETRATIONS OF 1, 2 OR 4 HOUR GYPBOARD WALLS - U.L. #W-L-1080.

CONDUIT PENETRATIONS OF 1 OR 2 HOUR CONCRETE WALLS OR FLOORS, OR BLOCK WALLS - U.L. #C-AJ-1044. CONDUIT PENETRATIONS OF 4 HOUR CONCRETE WALLS OR FLOORS, OR

BLOCK WALLS - U.L. #C-AJ-1044.

- 16. IF APPLICABLE, IN REQUIRED FIRE-RATED WALLS AND PARTITIONS, OPENINGS FOR INSTALLATION OF BOXES THAT ARE GREATER THAN 16 SQUARE INCHES SHALL BE PROTECTED AS REQUIRED BY A THIRD PARTY TESTING AGENCY APPROVED BY THIS STATE. COORDINATE CLOSELY WITH THE GENERAL CONTRACTOR TO INSURE THAT THE INTEGRITY OF THE rating is maintained
- 17. IT IS THE RESPONSIBILITY OF ALL CONTRACTORS AND TRADES TO COORDINATE THE INSTALLATION OF THEIR WORK WITH THE INSTALLATION OF WORK BY ALL OTHER CONTRACTORS AND TRADES. THE REQUIREMENTS OF THESE DRAWINGS, GENERAL REQUIREMENTS AND ALL ITEMS OF THE CONTRACT DOCUMENTS ARE EQUALLY BINDING ON ALL CONTRACTORS AND TRADES. EACH CONTRACTOR IS REQUIRED TO MAINTAIN FULL SETS OF THE CONTRACT DOCUMENTS FOR HIS EMPLOYEES' USE, ON THE PROJECT, TO ASSURE THAT ALL WORK IS PROPERLY COORDINATED AND INSTALLED WITH THE WORK OF OTHER CONTRACTORS AND TRADES.
- 18. WHENEVER THERE ARE DISCREPANCIES BETWEEN DRAWINGS, OR BETWEEN THE DRAWINGS AND SPECIFICATIONS, OR CONFLICTS WITHIN THE SPECIFICATIONS AND/OR DRAWINGS, AND SUCH DISCREPANCY IS NOT CALLED TO THE ENGINEER'S ATTENTION IN TIME TO PERMIT CLARIFICATION BY ADDENDUM, THE CONTRACTOR SHALL BASE HIS BID UPON PROVIDING THE BETTER QUALITY OR GREATER OF WORK OR MATERIAL CALLED FOR, SHALL SUBMIT A WRITTEN STATEMENT WITH HIS PROPOSAL NOTING SUCH DISCREPANCIES, AND SHALL SO FURNISH AND INSTALL SUCH BETTER QUALITY OR GREATER QUANTITY UNLESS OTHERWISE ORDERED IN WRITING.
- 19. CONTRACTOR SHALL ASSUME FULL LIABILITY FOR ANY WORK, EQUIPMENT AND MATERIALS PURCHASED AND/OR INSTALLED THAT ARE IN DISCREPANCY, IF IT IS NOT FIRST BROUGHT TO THE ATTENTION OF THE ENGINEER, IN WRITING, FOR CLARIFICATION. IF NOT BROUGHT TO THE ENGINEER'S ATTENTION, CONTRACTOR SHALL PAY FOR ANY EQUIPMENT, MATERIALS AND WORK THAT MUST BE REPLACED.

## RACEWAYS AND BOXES

A. PROJECT INCLUDES ELECTRICAL CONDUIT, TUBING, SURFACE RACEWAYS, BOXES, AND CABINETS FOR ELECTRICAL POWER AND SIGNAL DISTRIBUTION.

## B. PRODUCTS

- WIRING METHODS: a. CONCEALED OR EXPOSED INDOOR WIRING: ZINC-COATED ELECTRICAL METALLIC TUBING FOR SIZES 1/2" THROUGH 4", INTERMEDIATE STEEL CONDUIT FOR SIZES LARGER THAN 4".
- b. EXPOSED OUTDOOR WIRING: RIGID OR INTERMEDIATE STEEL CONDUIT. c. CONCEALED OUTDOOR WIRING: INTERMEDIATE STEEL CONDUIT OR SCHEDULE 80 OR 40 PVC.
- UNDERGROUND WIRING, SINGLE RUN: SCHEDULE 80 OR 40 PVC. UNDERGROUND WIRING, GROUPED: SCHEDULE 80 OR 40 PVC. CONNECTION TO EQUIPMENT: FLEXIBLE METAL CONDUIT, LIQUIDTIGHT AT EXTERIOR OR IN DAMP LOCATIONS.
- 2. FITTINGS FOR ELECTRICAL METALLIC TUBING SHALL BE HEXAGONAL, GALVANIZED STEEL, GLAND TYPE, COMPRESSION TYPE AND THREADLESS.
- RACEWAY ACCESSORY MATERIALS:
- a. CONDUIT BODIES: SHALL COMPLY WITH N.E.C. REQUIREMENTS.
- 4. BOXES AND FITTINGS: a. CABINET BOXES: CODE GAUGE GALVANIZED SHEET METAL, NEMA 1 -INDOORS, NEMA 3R -OUTDOORS OR IN DAMP LOCATIONS. b. Pull and Junction Boxes: Code Gauge Galvanized Sheet
- METAL, NEMA 1 -INDOORS, NEMA 3R -OUTDOORS OR IN DAMP LOCATIONS. c. METAL OUTLET, DEVICE AND SMALL WIRING BOXES: SHALL COMPLY WITH UL 514A.
- C. EXECUTION PROPERLY SUPPORT ALL CONDUITS WITH STRAPS AND CLAMPS PER THE MOST RECENT, ADOPTED EDITIONS OF THE N.E.C. AND STATE BUILDING CODE. RUN ALL CONDUITS PARALLEL OR PERPENDICULAR TO BUILDING

WALLS/SURFACES.

2. MINIMUM CONDUIT SIZE ABOVE SLAB/GRADE SHALL BE 1/2". MINIMUM

CONDUIT SIZE IN OR BELOW FLOOR SLAB SHALL BE 3/4".

- RACEWAY PENETRATIONS THROUGH FLOOR SLABS AND FIRE-RATED WALLS SHALL BE FILLED WITH IMPERVIOUS, NON-SHRINK GROUT SUFFICIENTLY TIGHT TO PREVENT THE TRANSFER OF SMOKE, FIRE, WATER, AND DUST. ROOF PENETRATIONS SHALL BE WITHIN THE EQUIPMENT CURB.
- 4. CONDUITS INSTALLED UNDERGROUND OR IN CONCRETE SHALL HAVE JOINTS MADE WATER-TIGHT BY USING A POLYTETRA-FLUOROETHYLENE
- TAPE. ALL METALLIC UNDERGROUND CONDUITS SHALL BE THOROUGHLY COATED WITH TWO COATS OF ASPHALTUM OR BITUMASTIC. 5. PROVIDE PULLWIRE IN ALL EMPTY CONDUITS.

A. PROJECT INCLUDES 1. WIRES, CABLES, AND CONNECTORS FOR POWER, LIGHTING, SIGNAL, CONTROL AND RELATED SYSTEMS RATED 600 VOLTS AND LESS.

## B. PRODUCTS

- WIRE COMPONENTS: a. CONDUCTORS FOR POWER AND LIGHTING CIRCUITS: SOLID CONDUCTORS FOR SIZES #14 AWG THROUGH #8 AWG, STRANDED
- CONDUCTORS FOR #6 AWG AND LARGER. b. CONDUCTOR MATERIAL: COPPER.
- INSULATION: THHN/THWN. d. JACKETS: FACTORY-APPLIED NYLON OR PVC, COLOR CODED: "BLACK/RED/BLUE/WHITE" FOR "A", "B" AND "C" PHASES, NEUTRAL, RESPECTIVELY FOR 120/208-VOLT SYSTEM.
- e. BRANCH CIRCUIT CONDUCTORS: SHALL NOT BE SMALLER THAN #12 AWG. CONTROL WIRING MAY BE #14 AWG. f. NEUTRAL CONDUCTORS: #10 AWG MINIMUM FOR ALL MULTIWIRE BRANCH CIRCUITS.
- g. "MC" TYPE CABLE WITH INTEGRAL, GREEN, INSULATED GROUND CONDUCTOR, MAY ONLY BE UTILIZED TO SERVE BRANCH CIRCUITS SIZED #8 AWG OR SMALLER. WHERE PERMITTED BY OWNER AND WHERE CONCEALED AND PROTECTED FROM DAMAGE. h. WIRING TO LIGHTING FIXTURES SHALL BE AS REQUIRED BY U.L.
- CABLES:
- a. Control/signal transmission media: Twisted Pair Type. CONNECTORS: UL LISTED SOLDERLESS METAL CONNECTORS WITH APPROPRIATE TEMPERATURE RATINGS.

## <u>SECTION 262726</u>

### A. PROJECT INCLUDES WIRING DEVICES FOR ELECTRICAL SERVICE.

- B. PRODUCTS
- 1. WIRING DEVICES AND COMPONENTS: a. RECEPTACLES: 20-AMP DUPLEX (HUBBELL #5362, OR APPROVED
- b. GROUND-FAULT INTERRUPTER (GFI) RECEPTACLES: FEED-THRU TYPE GROUND-FAULT CIRCUIT INTERRUPTER WITH INTEGRAL DUPLEX RECEPTACLES. (HUBBELL #GF-5362, OR APPROVED EQUIVALENT).
- c. PLUGS AND PLUG CONNECTOR: AS SPECIFIED ON DRAWINGS. d. SNAP SWITCHES: SINGLE-POLE, 20 AMPERE (HUBBELL #1221, OR APPROVED EQUIVALENT), THREE-WAY, 20 AMPERE (HUBBELL #1223,
- OR APPROVED EQUIVALENT). e. WALL PLATES: SINGLE AND COMBINATION TYPES, 302 BRUSHED STAINLESS STEEL, UNLESS OTHERWISE NOTED ON DRAWINGS. f. COLOR OF ALL DEVICES AND COVERPLATES TO BE GRAY, UNLESS OTHERWISE NOTED ON DRAWINGS.

### C. EXECUTION 1. DUPLEX RECEPTACLES SHALL BE 20-AMP.

- 2. DEVICE/OUTLET BOXES SHALL NOT BE MOUNTED BACK-TO-BACK IN
- 3. WEATHERPROOF COVERS SHALL PROTECT THE OUTLET WHILE IN USE, EQUIVALENT TO LEVITON #M5999. COVERS SHALL BE EXTRA DEEP. METALLIC WITH OUTLET MOUNTED IN HORIZONTAL ORIENTATION.
- 4. PROVIDE ALL OUTLETS (INCLUDING TELEPHONE) WITH APPROPRIATE COVERPLATES.

## SERVICE AND DISTRIBUTION

A. PROJECT MAY INCLUDE 1. ELECTRICAL SERVICE AND DISTRIBUTION INCLUDING SERVICE ENTRANCE GROUNDING, PANELBOARDS, OVERCURRENT PROTECTIVE DEVICES, AND DISCONNECT SWITCHES.

## PRODUCTS

- GROUNDING: a. GROUNDING EQUIPMENT: COPPER CONDUCTORS, N.E.C. APPROVED
- CONNECTORS. b. GROUNDING ELECTRODES: COPPER-CLAD STEEL GROUND RODS. GROUNDING SYSTEM: SHALL COMPLY WITH N.E.C. ARTICLE 250. d. SERVICE GROUND IMPEDANCE SHALL BE MEASURED, AND SHALL BE 5 OHMS OR LESS. IF UPON MEASUREMENT, SERVICE GROUND READING EXCEEDS 5 OHMS, THEN ADDITIONAL

GROUND RODS SHALL BE DRIVEN TO REDUCE READING TO 5

OHMS OR LESS. NOTIFY ENGINEER OF FINAL SERVICE GROUND

- MEASUREMENT. PANFI BOARDS: b. PANELBOARDS: WITH OVERCURRENT PROTECTIVE DEVICES. DEAD-FRONT SAFETY ENCLOSURE SUITABLE FOR USE (20" WIDE MINIMUM WITH 4" WIRING GUTTERS AT TOP, SIDES, AND BOTTOM),
- COPPER BUS, MECHANICAL TYPE MAIN AND NEUTRAL LUGS. c. PANELBOARD TYPE: LIGHTING AND APPLIANCE BRANCH CIRCUIT PANELBOARDS, BOLT ON CIRCUIT BREAKERS. d. SERIES RATING IS NOT ALLOWED FOR ALL NEW PANELBOARDS,
- CIRCUIT BREAKERS AND DEVICES. e. ACCEPTABLE MANUFACTURERS: SQUARE D, SIEMENS, G.E. OR

## CUTLER-HAMMER.

- 3. DISCONNECT SWITCHES: a. HEAVY—DUTY TYPE.
- b. NEMA 1 ENCLOSURE INDOORS, NEMA 3R ENCLOSURE -
- OUTDOORS AND WET AREAS. c. FUSED OR NON-FUSED AS INDICATED ON DRAWINGS. FUSED SWITCHES SHALL HAVE REJECTION-TYPE FUSE CLIPS.
- e. ALL DISCONNECTS SHALL BE HEAVY-DUTY RATED, AND SHALL HAVE A MECHANICAL INTERLOCK TO PREVENT THE DOOR FROM BEING OPENED, WITHOUT DEFEATING THE INTERLOCK, THE MECHANICAL INTERLOCK SHALL ALSO PREVENT ACTIVATING THE SWITCH WHEN THE DOOR IS OPEN. THE MECHANICAL INTERLOCK SHALL BE DE-FEATABLE BY A SPECIAL TOOL, AND SHALL BE U.L. LISTED AS PART OF THE DISCONNECT
- ACCEPTABLE MANUFACTURERS: SQUARE D, SIEMENS, G.E. OR CUTLER-HAMMER
- 4. OVERCURRENT PROTECTIVE DEVICES: a. OVERCURRENT PROTECTIVE DEVICES: INTEGRAL TO PANELBOARDS.
- b. FUSIBLE SWITCHES: RATING AS INDICATED ON DRAWINGS AND SUITABLE FOR USE. MOLDED CASE CIRCUIT BREAKERS: BOLT-ON TYPE, AUTOMATIC
- THERMAL MAGNETIC TYPE CALIBRATED FOR 40-DEGREES C, OR AMBIENT COMPENSATION d. ACCEPTABLE MANUFACTURERS: SQUARE D, SIEMENS, G.E. OR CUTLER-HAMMER.

## a. SIZES INDICATED ON DRAWINGS.

- b. CLASS R-5, TIME DELAY, UNLESS OTHERWISE NOTED. c. A SET OF 3 SPARE FUSES OF EACH SIZE AND TYPE SHALL BE FURNISHED TO THE OWNER.
- d. ACCEPTABLE MANUFACTURERS: BUSSMAN, GOULD SHAWMUT OR LITTLE
- ALL MULTI-CIRCUIT HOMERUNS SHALL BE PROTECTED WITH A MULTI-POLE, SIMULTANEOUS-TRIP CIRCUIT BREAKER PER N.E.C. 210-4B.
- 2. ALL TERMINATION'S ON ELECTRICAL GEAR/EQUIPMENT (i.e. PANELBOARDS, DISCONNECT SWITCHES, etc.) SHALL HAVE DUAL RATED 60-DEGREE / 75-DEGREE LUGS/TERMINALS.

## INTERIOR AND EXTERIOR LIGHTING

- A. PROJECT INCLUDES 6327.INTERIOR AND EXTERIOR LIGHTING FIXTURES, LAMPS, BALLASTS, EMERGENCY LIGHTING UNITS, EXIT SIGNS AND ACCESSORIES.
- B. PRODUCTS INTERIOR AND EXTERIOR LIGHTING COMPONENTS (SEE "LIGHT FIXTURE
- . EXIT SIGNS: L.E.D., SELF-POWERED NI-CAD BATTERY TYPE. EMERGENCY LIGHTING UNITS: INTEGRAL, NI-CAD BATTERY, L.E.D.
- ACRYLIC LENS: A-12, .125" MINIMUM. d. L.E.D. LAMPS SHALL BE MINIMUM OF 85 CRI, 3500 KELVIN IN INTERIOR LIGHT FIXTURES AND 5000 KELVIN IN EXTERIOR LIGHT

FIXTURES, UNLESS NOTED OTHERWISE ON LIGHT FIXTURE SCHEDULE.

- C. EXECUTION
- COORDINATE LIGHT FIXTURE MOUNTING METHODS WITH ARCHITECTURAL
- 2. COORDINATE LIGHT FIXTURE VOLTAGE WITH VOLTAGE OF LIGHTING CIRCUIT SERVING LIGHT FIXTURE.
- 3. IN COMPLIANCE WITH THE ENERGY CONSERVATION CODE, ALL RECESSED LIGHT FIXTURES INSTALLED IN THE BUILDING THERMAL ENVELOPE SHALL BE IC-RATED AND LABELED FOR MEETING ASTM E 283. THESE FIXTURES SHALL BE SEALED WITH A GASKET OR CAULK BETWEEN THE HOUSING AND THE INTERIOR WALL OR CEILING COVERING.
- 4. CATALOG NUMBERS GIVEN ON PLANS OR IN SPECIFICATIONS DENOTE MINIMUM QUALITY AND PERFORMANCE REQUIRED. APPROVED EQUIVALENT

EQUIPMENT BY OTHER MANUFACTURERS IS ACCEPTABLE.

### <u>SECTION 270000</u> TELEPHONE/DATA/CATV SYSTEMS

- A. PROJECT INCLUDES 1. SYSTEM REQUIREMENTS: EMPTY CONDUIT SYSTEM WITH OUTLET BOXES.
- B. PRODUCTS
- 1. TELEPHONE/DATA/CATV DISTRIBUTION SYSTEM COMPONENTS: RACEWAYS, BOXES, CABINETS: COMPLY WITH PROJECT STANDARDS. BACKBOARD: INTERIOR GRADE, FIRE-RETARDANT PLYWOOD,
- 3/4-INCH THICK, WITH TWO COATS OF GRAY, FIRE-RETARDANT Enamel Paint. c. OUTLET: EMPTY 4" SQUARE DEVICE BOX WITH SINGLE-GANG TRIM RING. BOX MOUNTED AT 18" A.F.F. TO CENTER, UNLESS NOTED OTHERWISE. PROVIDE WITH BLANK COVERPLATE TO MATCH
- PROJECT/BUILDING STANDARD COVERPLATES. EXTEND EMPTY CONDUIT FROM EACH DEVICE BOX AND STUB TO 6" ABOVE NEAREST ACCESSIBLE CEILING SPACE. IF ACCESSIBLE CEILING SPACE IS NOT AVAILABLE, EXTEND CONDUIT BACK TO NEAREST TELE/DATA/CATV TERMINAL BOARD, MINIMUM 3/4" OR AS INDICATED. LEAVE PULLSTRING IN CONDUIT.

## END OF SPECIFICATIONS

## ELECTRICAL SYMBOL SCHEDULE

## <u>DESCRIPTION</u>

<u>GENERAL</u> CONDUIT RUN CONCEALED IN CEILING OR IN WALL.

- CONDUIT RUN CONCEALED IN FLOOR OR BELOW SLAB/GRADE.
- CONDUIT RUN EXPOSED ON SURFACE.
- CIRCUIT HOME RUN. NUMBER OF ARROWS INDICATES NUMBER OF
- CONDUIT WITH BUSHING AND CAP.
- 120/208 VOLT DISTRIBUITION OR BRANCH CIRCUIT PANELBOARD.
- FLUSH OR SURFACE-MOUNTED JUNCTION BOX.
- DUPLEX, GROUNDING TYPE, 120 VOLT, 20 AMP, RECEPTACLE WITH COVERPLATE. PROVIDE #12 GREEN GROUND JUMPER. MOUNT 18" A.F.F. TO CENTER UNLESS OTHERWISE SHOWN.
- SAME AS DUPLEX RECEPTACLE ABOVE EXCEPT MOUNTED ABOVE COUNTERTOP BACKSPLASH, OR AT 46" A.F.F. TO CENTER WHERE THERE IS NO ASSOCIATED CASEWORK. SAME AS DUPLEX RECEPTACLE ABOVE EXCEPT MOUNTED IN
- WHILE RECEPTACLE IS IN USE. SAME AS DUPLEX RECEPTACLE ABOVE EXCEPT GROUND-FAULT INTERRUPTING TYPE.

<u>POWER</u>

<u>COMMUNICATIONS</u> FLUSH MOUNTED COMBINATION TELE./DATA OUTLET, 18" A.F.F. TO CENTER, UNLESS OTHERWISE NOTED. RUN ONE 3/4" EMPTY CONDUIT TO 12" ABOVE ACCESSIBLE CEILING. LEAVE PULL WIRE IN CONDUIT. PROVIDE BLANK COVER.

WEATHERPROOF ENCLOSURE WITH COVER THAT IS WEATHER-RESISTANT

SAME AS FLUSH TELE./DATA OUTLET ABOVE EXCEPT MOUNTED 6" ABOVE COUNTER BACKSPLASH, 46" A.F.F. TO CENTER ON WALL/COLUMN, OR AT HEIGHT INDICATED.

## <u>DESCRIPTION</u>

## <u>SYMBOL</u>

<u>CONTROLS</u> SINGLE POLE, 120/277 VOLT, 20 AMP, RECESSED WALL SWITCH

WITH PLATE. MOUNT 46" A.F.F. TO CENTER.

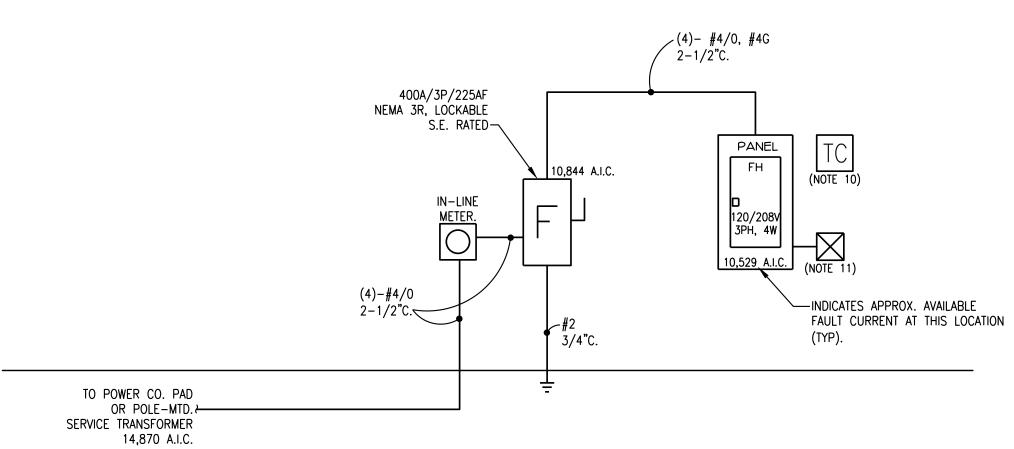
- THREE WAY, 120/277 VOLT, 20 AMP, RECESSED WALL SWITCH WITH PLATE. MOUNT 46" A.F.F. TO CENTER.
- SAME AS SINGLE POLE TOGGLE SWITCH ABOVE, EXCEPT PROVIDED WITH WEATHERPROOF COVER. MOUNT 46" A.F.F. TO CENTER.
- OCCUPANCY SENSOR WALL SWITCH, 120/277-VOLT, 1000W, RECESSED WALL-MOUNTED SENSOR WITH COVERPLATE. DUAL TECHNOLOGY PASSIVE INFRARED/ULTRASONIC TECHNOLOGY. AUTOMATIC ON, 30-SEC TO 30-MIN TIME DELAY ADJUSTMENT TO TURN LIGHTS OFF. HUBBELL LIGHTHAWK SERIES, OR APPROVED EQUIVALENT BY LEVITON OR WATT-STOPPER.
- CEILING-MOUNTED OCCUPANCY SENSOR, LINE-VOLTAGE, 2000 SQ FT. SEMI-RECESSED SENSOR WITH COVERPLATE. DUAL TECHNOLOGY PASSIVE INFRARED/ULTRASONIC TECHNOLOGY. AUTOMATIC ON. 30-SEC TO 30-MIN TIME DELAY ADJUSTMENT TO TURN LIGHTS OFF. WHITE COLOR. HUBBELL OMNI SERIES, OR APPROVED EQUIVALENT BY

LEVITON OR WATT-STOPPER.



LED LIGHTING FIXTURE. LETTER INDICATES TYPE. SEE LIGHT FIXTURE SCHEDULE.

- LED LIGHTING FIXTURE WITH EMERGENCY BATTERY BATTERY BACK-UP. LETTER INDICATES TYPE. SEE LIGHT FIXTURE SCHEDULE. CONNECTED TO UNSWITCHED LEG OF LOCAL LIGHTING CIRCUIT.
- EXIT SIGN WITH BATTERY. NUMBER OF FACES AND ARROWS AS INDICATED ON DRAWINGS. LETTERS INDICATE TYPE. SEE LIGHT FIXTURE SCHEDULE.



## **POWER RISER DIAGRAM**

- POWER RISER DIAGRAM NOTES:
- ALL NEW WIRE SHALL BE THHN/THWN COPPER.
- 2. SERIES RATING OF NEW EQUIPMENT IS NOT ALLOWED. ALL NEW MULTI-CIRCUIT HOMERUNS SHALL BE PROTECTED WITH A MULTI-POLE, SIMULTANEOUS-TRIP CIRCUIT BREAKER PER N.E.C. 210.4B.
- 4. A.I.C. RATINGS SHOWN ON PANELBOARD SCHEDULES ARE THE MINIMUM ALLOWED RATINGS. A.I.C. RATINGS OF ALL NEW PANELBOARDS SHALL EQUAL OR EXCEED THE FAULT CURRENT INDICATED ON THE RISER DIAGRAM OR PANELBOARD SCHEDULES.
- 5. UNLESS NOTED OTHERWISE, PROVIDE GREEN EQUIPMENT GROUNDING CONDUCTOR IN ALL NEW CIRCUITS. GROUNDING CONDUCTORS SHALL BE SIZED PER N.E.C. ARTICLE 250.
- 6. ALL TERMINATION'S ON NEW ELECTRICAL GEAR/EQUIPMENT (I.E. PANELBOARDS, DISCONNECT SWITCHES, ETC.) SHALL HAVE DUAL RATED 60-DEGREE / 75-DEGREE LUGS/TERMINALS.
- 7. PROVIDE APPROPRIATE ARC-FLASH HAZARD LABELING ON ALL NEW ELECTRICAL GEAR INDICATING HAZARD LEVEL PRESENT. 8. IF EXISTING PANELBOARD IS TO BE RE-USED, THE A.I.C. RATING OF ANY NEW CIRCUIT BREAKERS OR ELECTRICAL EQUIPMENT SHALL EQUAL OR EXCEED
- 9. EXISTING CONDITIONS WERE DETERMINED FROM LIMITED SITE SURVEY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY
- 10. TIMECLOCK SHALL BE 4-CIRCUIT, ASTRONOMIC, ELECTRONIC TYPE. TORK "D SERIES", OR APPROVED EQUIVALENT.
- 11. PROVIDE AND INSTALL SURGE PROTECTION ON THE MAIN SERVICE/PANELBOARD MDP. S.P.D. SHALL HAVE THE FOLLOWING MINIMUM CHARACTERISTICS FOR A 208V/3-PHASE SYSTEM:

RATINGS OF EXISTING PANELBOARDS/EQUIPMENT.

A. U.L. 1449 (4TH EDITION) AND U.L. 1283 COMPLIANT B. LED STATUS LIGHTS AND AUDIBLE ALARM MINIMUM OF 10 YEAR MANUFACTURER'S WARRANTY

ARCHITECT/ENGINEER IMMEDIATELY OF ANY IRRECONCILABLE CONFLICTS.

PEAK SINGLE-IMPLUSE SURGE CURRENT RATING: 250KA PER PHASE MCOV: 115% OF NOMINAL SYSTEM VOLTAGE OR GREATER VPR: VOLTAGE PROTECTION RATING: 600 - L-N, N-G; 800 - L-G; 1000 - L-L.



Morris Berg

ARCHITECT



**PERMIT SET** ISSUE DATE: December 01, 2022

March 30, 2023 June 30, 2023 

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PROJECT NUMBER SHEET TITLE ELECTRICAL SPECIFICATIONS, LEGEND AND DIAGRAMS

SHEET NUMBER ELECTRICAL SHEET LIST ELECTRICAL SPECIFICATIONS, LEGEND AND DIAGRAMS

ELECTRICAL SCHEDULES

ELECTRICAL FLOOR PLANS

								EQUI	PMENT SC	CHEDU	LE						
				LOAD	INFORM	ATION	ı			DISCONNI	ECT INFOR	MATION			-		
CONNECTION DESIGNATION	LOAD DESCRIPTION	VOLTS/P H	НР	LOAD	FLA	MCA	МОСР	FURN. BY	INSTALLED BY	TYPE	SWITCH RATING	POLE	FUSE OR TRIP RATING	NEMA ENCL TYPE	CIRCUIT ID	CONNECTION NOTES	CONNECTION DESIGNATION
EF-1	EXHAUST FAN	120/1	-1	0.1 KVA				EQ. MFGR.	EQ. MFGR.	1-	-	1	-	11-	FH-2	NOTES 1 AND 3	EF-1
EF-2	EXHAUST FAN	120/1	-	0.1 KVA				EQ. MFGR.	EQ. MFGR.	-	-	1	-	-	FH-4	NOTES 1 AND 3	EF-2
EF-3	EXHAUST FAN	120/1	-	0.1 KVA				EQ. MFGR.	EQ. MFGR.	1-	-	1	L-	n_	FH-6	NOTES 1 AND 3	EF-3
EWH-1	ELEC. WATER HEATER	208/1	-	4.5 KVA				ELEC. CNTR.	ELEC. CNTR.	NON- FUSED	60	2	-	1	FH-8	NOTES 2 AND 3	EWH-1
SSAH-1	AIR HANDLING UNIT	208/1	-	0.2 KVA		1	15	EQ. MFGR.	EQ. MFGR.	-	-	-	-	·	-	NOTES 2 AND 3	SSAH-1
SSAH-2	AIR HANDLING UNIT	208/1	-	0.2 KVA		1	15	EQ. MFGR.	EQ. MFGR.	-	-	-	-	11=	-	NOTES 2 AND 3	SSAH-2
SSHP-1	HEAT PUMP	208/1	-	2.3 KVA		11	30	ELEC. CNTR.	ELEC. CNTR.	FUSED	30	2	F.P.N.	3R	FH-12	NOTES 2 AND 3	SSHP-1
SSHP-2	HEAT PUMP	208/1	-	2.3 KVA		11	30	ELEC. CNTR.	ELEC. CNTR.	FUSED	30	2	F.P.N.	3R	FH-16	NOTES 2 AND 3	SSHP-2
WH-1	WALL HEATER	208/1	-	2.0 KVA				EQ. MFGR.	EQ. MFGR.	1-	-	2	-	-	FH-20	NOTES 1 AND 3	WH-1
SP-1	SANITARY PUMP	120/1	(2) - 1HP	3.8 KVA				EQ. MFGR.	EQ. MFGR.	-	-	-	-	1-	FH-24	NOTES 3 AND 4	SP-1

- 1 WIRE TO "LINE-SIDE" OF INTEGRAL, N.E.C.-COMPLIANT DISCONNECT SWITCH PROVIDED WITH UNIT.
- POWER FOR INDOOR AIR HANDLING UNIT IS FED FROM RESPECTIVE OUTDOOR CONDENSING UNIT. EXTEND POWER CIRCUIT FROM CONDENSING UNIT TO LINE-SIDE OF INTEGRAL, N.E.C.-COMPLIANT DISCONNECT SWITCH PROVIDED IN AIR HANDLING UNIT BY MANUFACTURER. FIELD VERIFY CONNECTIONS TO EQUIPMENT WITH MECH. CONTRACTOR PRIOR TO ROUGH-IN.
- COORD WITH MECH/PLUMB CONTRACTORS AND OTHER EQUIPMENT VENDORS/INSTALLERS TO ENSURE OVERCURRENT PROTECTION DEVICES AND ASSOCIATED CIRCUIT FOR EQUIP IS SIZED PER MFGRRS RECOMMENDATIONS. ANY CHANGES REQUIRED SHALL BE MADE PRIOR TO ORDERING MATERIALS AND WILL BE INSTALLED AT THE COST OF THE PERSON AND/OR COMPANY MAKING THE CHANGES.

  4 DISCONNECT SWITCH FOR SANITARY PLIMP TO BE PROVIDED AND INSTALLED BY MANUFACTURER. ELECTRICAL CONTRACTOR IS TO WIRE THE CIRCUIT TO THE LINE SIDE OF THE PLIMP STATION CONTROL PANEL

4	DISCONNECT SWITCH FOR SANITARY PUMP TO BE PROVIDED AND INSTALLED BY MANUFACTURER. ELECTRICAL CONTRACTOR IS TO WIRE THE CIRCUIT TO THE LINE SIDE OF THE PUMP STATION CONTROL PANEL.

	2018 APPE	NDIX B	
BUIL	DING CODE SUI	MMARY	FOR ALL
COMMERC	IAL PROJECTS	(ELECT	RICAL DESIGN)
ELECTRICAL SYSTE	M AND EQUIPMENT		
METHOD OF COMF	PLIANCE		
ENERGY CODE: ASHRAE 90.1:	■ PRESCRIPTIVE	_	RFORMANCE RFORMANCE
LIGHTING SHEDULE	- - -		
NUMBER OF LA BALLAST TYPE I NUMBER OF BA TOTAL WATTAGE	QUIRED IN FIXTURE MPS IN FIXTURE USED IN FIXTURE LLASTS IN FIXTURE PER FIXTURE WATTAGE SPECIFIED VS. A		LIGHT FIXTURE SCHEDULE  0.293KW vs. 0.696KW
(TRADABLE)	R WATTAGE SPECIFIED VS. A  R WATTAGE SPECIFIED VS. A  E)		0.500KW vs. 1.038KW N/A
ADDITIONAL EFFICI	ENCY PACKAGE OPTIC	<u>ons</u>	
C406.3 REDU	EFFICIENT HVAC EQUIP CED LIGHTING POWER D	ENSITY	DRMANCE
C406.5 ON-S	NCED DIGITAL LIGHTING ITE RENEWABLE ENERGY	•	

C406.6 DEDICATED OUTDOOR AIR SYSTEM

C406.7 REDUCED ENERGY USE IN SERVICE WATER HEATING

EB	DESCRIPTION:			CK LIGHT FIXTURE LIGHT HEADS, INT		YCARBONATE HOUSING BATTERY.	LAMP INFO:	NO.		YPE _ED	BALLAST TYPE:	NA	NOTE(S):	MOUNT AT NOTE	
	MANUFACTURER:	LIGHTALA	RMS	CATALOG SERIES	Ţι	.CA SERIES	EQUIVA	_ENT_MAN	IUFACT:		SEE LIST E	BELOW	TOTAL FIXT.	WATTAGE:	4.0
	EQUIVALENT MANU	FACTURER:	SURE-LITES	CATALOG SI	RIES:	SEL50 SERIES							TOTAL FIXT.	WATTAGE:	4.0
	EQUIVALENT MANU	FACTURER:	DUAL LITES	CATALOG SI	RIES:	EZ-2 SERIES							TOTAL FIXT.	WATTAGE:	4.0
	EQUIVALENT MANU	FACTURER:	CHLORIDE	CATALOG SI	RIES:	CTX6 SERIES							TOTAL FIXT.	WATTAGE:	4.0
FL	DESCRIPTION:		MOUNTED COMBII JIPMENT SCHEDUL		TURE '	WITH EXHAUST FAN	LAMP INFO:	NO.		YPE _ED	BALLAST TYPE:	NA	NOTE(S):	PROVIC BY ME WIRE BY	DED CH ELEC
	MANUFACTURER:	GREENHE	CK	CATALOG SERIES	5	SP-A110L	EQUIVA	ENT MAN	IUFACT:		_	•	TOTAL FIXT.		16
	EQUIVALENT MANU	FACTURER:	-	CATALOG SI	RIES:	-			•				TOTAL FIXT.	WATTAGE:	_
	EQUIVALENT MANU	FACTURER:	_	CATALOG SI	RIES:	-							TOTAL FIXT.	WATTAGE:	_
	EQUIVALENT MANU	FACTURER:	-	CATALOG SI	RIES:	-							TOTAL FIXT.	WATTAGE:	_
OA	DESCRIPTION:					STR. ALUMINUM HOUSING MOUNT AT 9'-0" A.F.F.	LAMP INFO:	NO. LED		YPE LUM/40K	BALLAST TYPE:	NA	NOTE(S):	U.L. WET SEE NO	LABEL TE 3.
	MANUFACTURER:	STONCO		CATALOG SERIES	L	YTEPRO	EQUIVA	ENT MAN	IUFACT:		SEE LIST E	BELOW	TOTAL FIXT.	WATTAGE:	65
	EQUIVALENT MANU	FACTURER:	COOPER-INVUE	CATALOG SI	RIES:	ENC SERIES							TOTAL FIXT.	WATTAGE:	65
	EQUIVALENT MANU	FACTURER:	LITHONIA	CATALOG SI	RIES:	ARC2 SERIES							TOTAL FIXT.	WATTAGE:	65
	EQUIVALENT MANU	FACTURER:	-	CATALOG SI	RIES:	_							TOTAL FIXT.	WATTAGE:	65
OAE	DESCRIPTION:	SAME AS SEE NOT		OVIDED WITH INTE	GRAL	BATTERY.	LAMP INFO:	NO. LED		YPE .UM/40K	BALLAST TYPE:	NA	NOTE(S):	U.L. WET SEE NO	LABEL [E 3.
	MANUFACTURER:	STONCO		CATALOG SERIES	L	YTEPRO	EQUIVA	ENT MAN	IUFACT:		SEE LIST E	BELOW	TOTAL FIXT.	WATTAGE:	65
	EQUIVALENT MANU	FACTURER:	COOPER-INVUE	CATALOG SI	RIES:	ENC SERIES							TOTAL FIXT.	WATTAGE:	65
	EQUIVALENT MANU	FACTURER:	LITHONIA	CATALOG SI	RIES:	ARC2 SERIES							TOTAL FIXT.	WATTAGE:	65
	EQUIVALENT MANU	FACTURER:	-	CATALOG SI	RIES:	-						T	TOTAL FIXT.	WATTAGE:	65
T2	DESCRIPTION:			ITH WHITE ENAME	_ FINIS	ACRYLIC PRISMATIC SH	INFO:	NO. LED	4800L	YPE LUM/35K	BALLAST TYPE:	ELECTRONIC	NOTE(S):	SEE NOTE	1
	MANUFACTURER:	METALUX	I	CATALOG SERIES		24GR LED	EQUIVA	ENT MAN	IUFACT:	A	PPROVED EQ	UIVALENT	TOTAL FIXT.		37.4
	EQUIVALENT MANU			CATALOG SI		2TL SERIES							TOTAL FIXT.		37.4
	EQUIVALENT MANU			CATALOG SI		LJT SERIES							TOTAL FIXT.		37.4
	EQUIVALENT MANU					LGLED SERIES			_		<b></b>	1	TOTAL FIXT.	WATTAGE:	_
SL	DESCRIPTION:		Lensed Strip SU Ite Finish.	ı		. Steel housing	INFO:	NO. LED	5500L	YPE LUM/35K	BALLAST TYPE:	NA	NOTE(S):	SEE NOTE	2 & 3
	MANUFACTURER:	DAY-BRI	ı	CATALOG SERIES		LUX STREAM	EQUIVA	ENT MAN	IUFACT:		SEE LIST E	BELOW	TOTAL FIXT.		45
	EQUIVALENT MANU			CATALOG SI		SNLED SERIES							TOTAL FIXT.		45
	EQUIVALENT MANU			CATALOG SI		WL SERIES  LCL SERIES							TOTAL FIXT.		45 45

ALL EMERGENCY LIGHTS, EXIT SIGNS AND NIGHT LIGHTS SHALL BE CONNECTED TO THE UNSWITCHED LEG OF THE NEAREST LIGHTING CIRCUIT SERVING THAT SAME AREA/ROOM.
 COORDINATE MOUNTING REQUIREMENTS OF ALL FIXTURES WITH ARCHITECTURAL PLANS AND FINISH SCHEDULES.
 LIGHT FIXTURE CONTROLLED BY TIME CLOCK.
 FIXTURE SHALL OPERATE AS NORMAL FIXTURE UNLESS POWER IS LOST. THEN FIXTURE WILL BE ENERGIZED REGARDLESS OF STATUS OF CONTROLS.
 PROVIDE GASKETING ON DOOR FRAME AND LENS, INSTALL LENS WITH PRISMS UP.

							PA	NEL	. FH							
			MAIN	TYPE:	MAIN L	UG ON	LY		VO	LTAGE (L	L):	208	PHASE:		3	
			AMPERE RA	TING:					VO	LTAGE (L	N):	120	WIRE:		4	
			LUG OPT	IONS:						RTG (AM	•	225	MIN. KAIC:		22	
			REM	ARKS:	EXISTING	PANEL,	SEE NO	ΓΕ Α			,		MOUNTING:	SL	JRFAC	E
CC	TBRK	R			WIRE	LOAD		PHASE	<b>=</b>	LOAD	WIRE				CCT BF	RKR
NO.	AMPS	Р	LOAD DESCRIPTION	NOTE	SIZE	KVA	Α	В	С	KVA	SIZE	NOTE	LOAD DESCRIPTION	Р	AMPS	NO
1	20	1	RECPT - TELEPHONE BACKBOARD		12	0.2	0.3			0.1	12		(EF-1) EXHAUST FAN	1	20	2
3	20	1	RECPT - 1ST FLR BACK WALL		12	0.4		0.5		0.1	12		(EF-2) EXHAUST FAN	1	20	4
5	20	1	RECPT - 1ST FLR BACK WALL		12	0.4			0.5		12	_connection to	(EF-3) EXHAUST FAN	700	· 20	6
7	20	1	RECPT - 1ST FLR ENTRY WALL		12	0.4	2.7		Wasser	2.3	10		(EWH-1) ELEC. WATER HEATER	2	30	8
9	20	1	RECPT - 1ST FLR WINDOW WALL		12	0.5		2.8	200	2.3						
11	20	1	RECPT - 1ST FLR SINK WALL		12	0.4			1.5	<b>14.1 1</b>	10·····	A Marine	(SSAH-4/SSHP-1) SPLIT SYSTEM	2		12
13	20	1	RECPT - 2ND FLR STANDARD		12	0.9	2.0			1.1						
15	20	1	RECEPT - 2ND FLR COUNTER		12	0.5		1.6		1.1	10		(SSAH-2/SSHP-2) SPLIT SYSTEM	2	30	16
17	20	1	LIGHTING - EXTERIOR		12	0.5			1.6	1.1						
19	20	1	LIGHTING - 1ST FLOOR		12	0.3	1.3			1.0	12		(WH-1) WALL HEATER	2		20
21	20	1	LIGHTING - 2ND FLOOR		12	0.2		1.2		1.0				Z	2	
23	20	1	SPARE						0.9	0.9	10		(SP-1) SANITARY PUMP	2	30	24
25	20	1	SPARE				0.9			0.9						
27			SPACE ONLY					0.0					SPACE ONLY			28
29			SPACE ONLY						0.0				SPACE ONLY			30
31			SPACE ONLY				0.0						SPACE ONLY			32
33			SPACE ONLY					0.0					SPACE ONLY			34
35			SPACE ONLY						0.0				SPACE ONLY			36
37			SPACE ONLY				0.0						SPACE ONLY			38
39			SPACE ONLY					0.0					SPACE ONLY			40
41			SPACE ONLY						0.0				SPACE ONLY			42

				7.1   6.1   4.5				
	CONN	DEMD	DEMD		DEMD	DEMD	CONN	
NEC ARTICLE 220 LOAD CATEGORY:	KVA	FACT	KVA		KVA	FACT	KVA	NEC ARTICLE 220 LOAD CATEGORY:
TOTAL INTERIOR LIGHTS	0.5	1.25	0.6					
I ENERGY CODE REQ'D.	0.5				0.3	1.00	0.3	MISC. HVAC S
N NON-ENER. CODE REQ'D.	0.0				1.7	1.00	1.7	MOTORS M
E EXTERIOR LIGHTS	0.5	1.25	0.6		0.0	0.25	0.0	LARGEST MOTOR LM
R RECEPTACLES (FIRST 10)	3.7	1.00	3.7		4.5	1.00	4.5	WATER HEATERS W
(REMAINDER)	0.0	0.50	0.0		0.0	1.00	0.0	ELEVATORS L
P HVAC PACKAGED UNITS	4.6	1.00	4.6		0.0	1.00	0.0	KITCHEN EQUIPMENT K
H HEAT PUMPS / COND. UNITS	0.0	1.00	0.0				0	NO. OF UNITS OF EQUIP.
A AIR HANDLING UNITS	0.0	1.00	0.0		0.0	1.25	0.0	COMPUTER LOADS O
D CHILLER / COOLING TOWER	0.0	1.00	0.0		0.0	1.00	0.0	SHOP EQUIPMENT Q
T ELECTRIC HEAT	2.0	1.00	2.0		0.0	1.00	0.0	MISC. LOADS C
V VAV BOXES / FAN BOXES	0.0	1.00	0.0		0.0	1.00	0.0	SYSTEM FURNITURE Z

NOTE: A EXISTING PANEL IS TO BE PROVIDED BY OWNER AND INSTALLED BY CONTRACTOR

CONNECTED KVA:	17.8
CONNECTED AMPS:	49
DEMAND AMPS:	50

Morris Berg

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PM: GR M: MM E: AC P: GR

PERMIT SET

ISSUE DATE: December 01, 2022

REV1 March 30, 2023

REV2 June 30, 2023

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PROJECT NUMBER

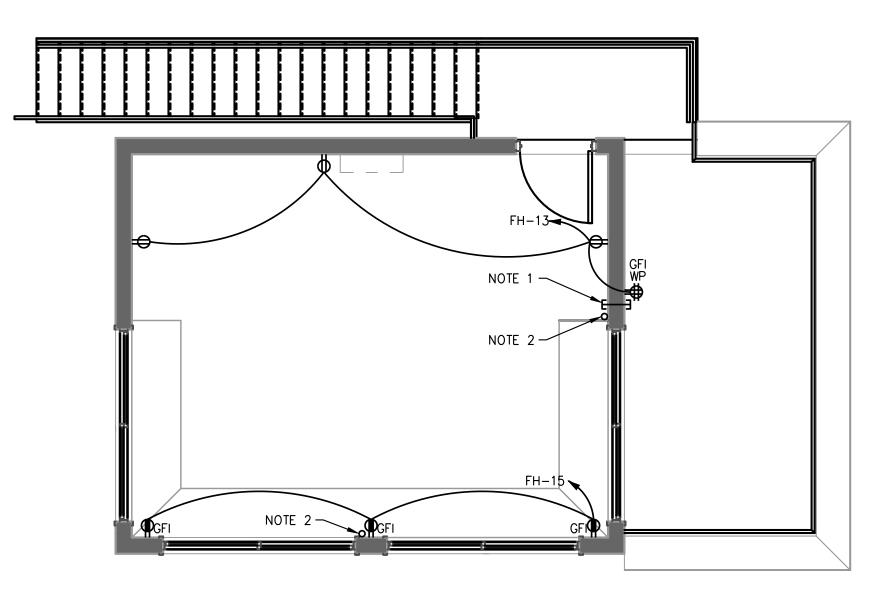
SHEET TITLE

ELECTRICAL

SCHEDULES

SHEET NUMBER

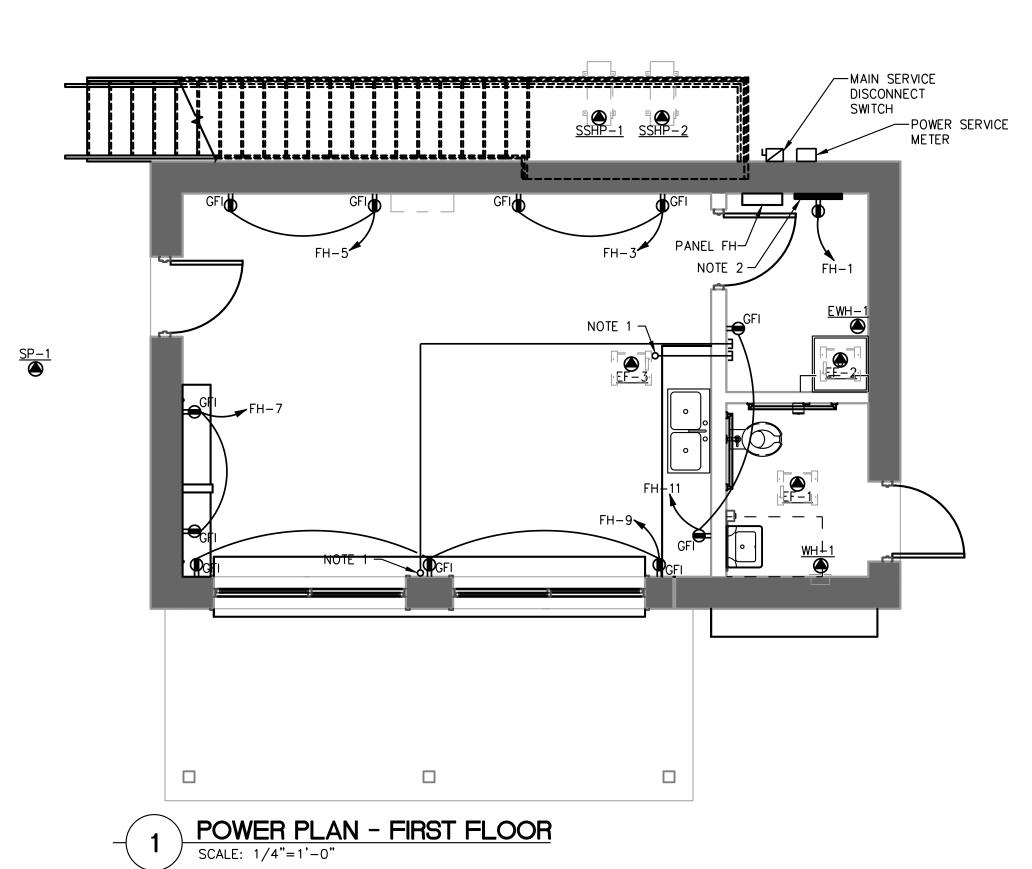
E002



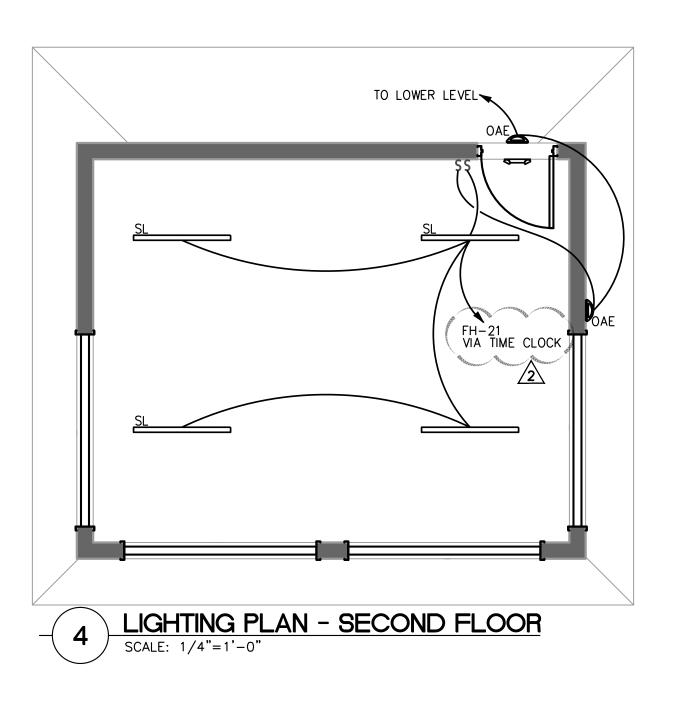
## POWER PLAN - SECOND FLOOR SCALE: 1/4"=1'-0"

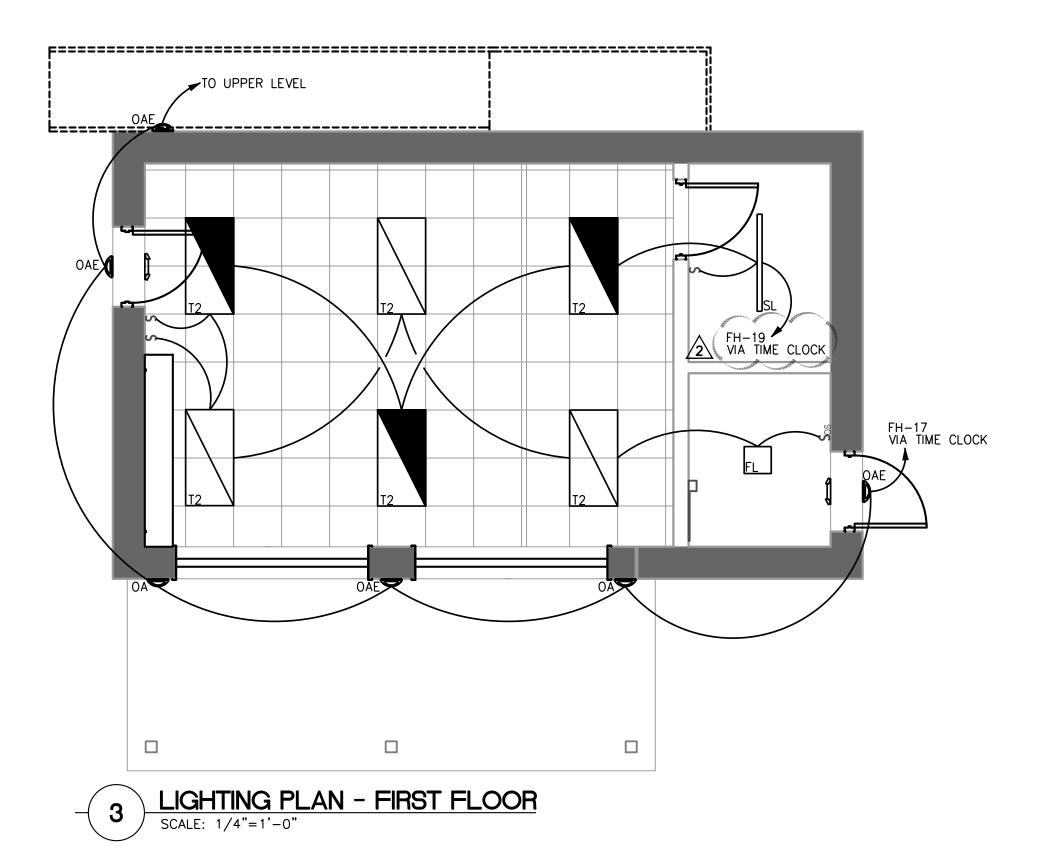
## POWER NOTES:

- 1. PROVIDE EMPTY, 1-1/2" SLEEVE THROUGH WALL FOR ANY TELECOM/CAMERA CABLING. PROVIDE LOCKABLE, NEMA 3R COVER ON EXTERIOR SIDE. FIELD COORDINATE WITH OWNER PRIOR TO ROUGH-IN.
- 2. PROVIDE EMPTY 1-1/2" CONDUIT STUBBED DOWN THROUGH FLOOR, ACROSS LOWER LEVEL (ABOVE FINISHED CEILING) AND STUB-OUT INTO STORAGE/JANITORS CLOSET FOR ANY TELECOM/CAMERA/SCOREBOARD CABLING. FIELD COORDINATE WITH OWNER PRIOR



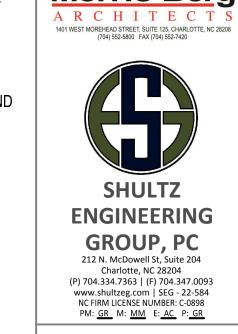
- 1. EMPTY 1-1/2" CONDUIT STUBBED DOWN THROUGH FLOOR FROM ABOVE, ACROSS LOWER LEVEL (ABOVE FINISHED CEILING) AND STUB-OUT INTO STORAGE ROOM, FOR ANY TELECOM/CAMERA/SCOREBOARD CABLING. FIELD COORDINATE WITH OWNER PRIOR TO ROUGH-IN.
- 2. PROVIDE AND INSTALL 2'X2' PLYWOOD BACK BOARD MOUNTED ON WALL JUST BELOW CEILING/ROOF STRUCTURE FOR TELECOM. FIELD COORDINATE EXACT LOCATION AND REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN.





## **GENERAL NOTES**

- 1. ALL INSTALLATIONS SHALL CONFORM TO THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AS WELL AS ALL APPLICABLE STATE AND LOCAL CODES.
- 2. ALL ELECTRICAL EQUIPMENT AND DEVICES SHALL BE SUITABLE FOR ITS APPLICATION PER THE LISTING INSTRUCTIONS OF A NATIONALLY RECOGNIZED AND APPROVED TESTING LABORATORY.
- 3. ALL EMERGENCY, EGRESS AND EXIT LIGHTING FIXTURES TO BE CONNECTED TO CIRCUIT SERVING LIGHTING FIXTURES IN IMMEDIATE AREA PRIOR TO LOCAL CONTROLS OF FIXTURES (UN-SWITCHED CIRCUIT).
- 4. REFER TO SHEET E002 FOR EQUIPMENT ((A)) CONNECTION INFORMATION.



<u>Morris·Berg</u>



**PERMIT SET** 

ISSUE DATE: December 01, 2022 March 30, 2023 REV2 June 30, 2023

MEBANE,

PROJECT NUMBER

SHEET TITLE 2212 ELECTRICAL FLOOR PLANS

SHEET NUMBER