







**GENERAL**

- THESE DRAWINGS ARE TO BE COORDINATED WITH THE ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL, AND CIVIL DRAWINGS.
- THIS STRUCTURE AND ALL CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE SECTIONS OF THE NC BUILDING CODE AND ANY LOCAL LAWS WHERE THE STRUCTURE IS TO BE CONSTRUCTED.
- THESE STRUCTURAL NOTES ARE AN INTEGRAL PART OF THE STRUCTURAL DRAWINGS AND ARE TO BE USED IN CONJUNCTION WITH THE JOB SPECIFICATIONS. WHEN THERE ARE NO SPECIFICATIONS IN ADDITION TO THESE NOTES SHALL GOVERN. WHEN THERE IS A SPECIFICATION IN ADDITION TO THE NOTES THE MORE STRINGENT OF THE TWO SHALL GOVERN.

**MISCELLANEOUS**

- THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY BRACING, SHORING, AND GUYING OF FRAMING AND WALLS AGAINST WIND, CONSTRUCTION LOADS, AND OTHER TEMPORARY FORCES UNTIL SUCH PROTECTION IS NO LONGER REQUIRED FOR THE SAFE SUPPORT OF THE FRAMING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING THE DIMENSIONS OF THE STRUCTURAL DRAWINGS AND ADVISING THE ENGINEER OF ANY DIFFERENCES IN DIMENSIONS BETWEEN THE PRE-ENGINEERED METAL BUILDING PLANS AND SECTIONS PRIOR TO COMMENCING CONSTRUCTION.
- CONSTRUCTION SAFETY: THESE STRUCTURAL DRAWINGS DO NOT CONTAIN NECESSARY COMPONENTS FOR SAFETY DURING CONSTRUCTION.

**FOUNDATIONS**

- THE STRUCTURAL ENGINEER HAS NOT PERFORMED A SUBSURFACE INVESTIGATION. THE FOUNDATION IS BASED UPON AN ASSUMED SOIL BEARING CAPACITY OF 2000 PSF NET BEARING. VERIFICATION OF THIS ASSUMED VALUE IS THE RESPONSIBILITY OF THE OWNER OR CONTRACTOR. SHOULD ANY ADVERSE SOIL CONDITION BE ENCOUNTERED, THE STRUCTURAL ENGINEER MUST BE CONTACTED BEFORE PROCEEDING.
- ANY FILL SHALL BE PLACED UNDER THE DIRECTION OR RECOMMENDATION OF A LICENSED PROFESSIONAL ENGINEER. THE RESULTING SOIL SHALL BE COMPACTED TO A MINIMUM OF 95 PERCENT MAXIMUM DRY DENSITY.
- SITE PREPARATION: REMOVE TOPSOIL, ORGANICS, SOFT CLAY, AND ANY OTHER UNSOUND MATERIAL FROM UNDER ALL FLOOR SLABS, FOOTINGS, AND 5'-0" BEYOND BUILDING WALL. PROOFROLL THE EXPOSED SUBGRADE WITH A FULLY LOADED, TANDEM AXLE DUMP TRUCK OR SIMILAR RUBBER Tired CONSTRUCTION EQUIPMENT AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER IN ORDER TO DENSIFY THE EXPOSED SUBGRADE AND TO LOCATE SOFT UNSUITABLE SOILS. REMOVE AND REPLACE ANY UNSUITABLE SOILS AS DIRECTED BY THE GEOTECHNICAL ENGINEER. BACKFILL AS REQUIRED WITH CLEAN SELECTED FILL COMPACTED IN 8" TO 10" LOOSE THICKNESS LIFTS AND COMPACT TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT. UPPER 18" OF FILL UNDER FLOOR SLABS TO BE COMPACTED IN 6" MAXIMUM LAYERS TO 98% DENSITY AT OPTIMUM MOISTURE CONTENT (ASTM D-698).
- WHEN BOTTOM OF FOUNDATIONS ARE AT OR BELOW THE GROUND WATER TABLE, PROPERLY DEWATER THE FOUNDATION EXCAVATION PRIOR TO PLACING CONCRETE.
- AN IMAGINARY 45 DEGREE LINE EXTENDING DOWNWARD AND OUTWARD FROM THE BOTTOM CORNER OF ANY EXISTING FOUNDATION SHALL NOT INTERSECT ANY INTENDED EXCAVATION FOR ADJACENT FOUNDATIONS OR UTILITIES, UNLESS NOTED OTHERWISE ON THE DRAWINGS.

**CONCRETE**

- REINFORCED CONCRETE WORK SHALL COMPLY WITH BOTH "SPECIFICATIONS FOR STRUCTURAL BUILDINGS" ACI 301 AND "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" ACI 318
- CONCRETE SHALL BE PLACED IN ACCORDANCE WITH ACI 304R.
- DURING HOT WEATHER THE CONTROL OF CONCRETE PLACEMENT, PROTECTION AND CURING SHALL COMPLY WITH ACI 305R.
- WHEN THE MEAN DAILY TEMPERATURE IS BELOW 40 DEGREES F THE CONTROL OF PLACEMENT, PROTECTION AND CURING SHALL COMPLY WITH ACI 306R.
- CONCRETE SHALL HAVE NORMAL WEIGHT AGGREGATE AND A MINIMUM COMPRESSIVE STRENGTH (F<sub>c</sub>) AT 28 DAYS AS LISTED BELOW.
 

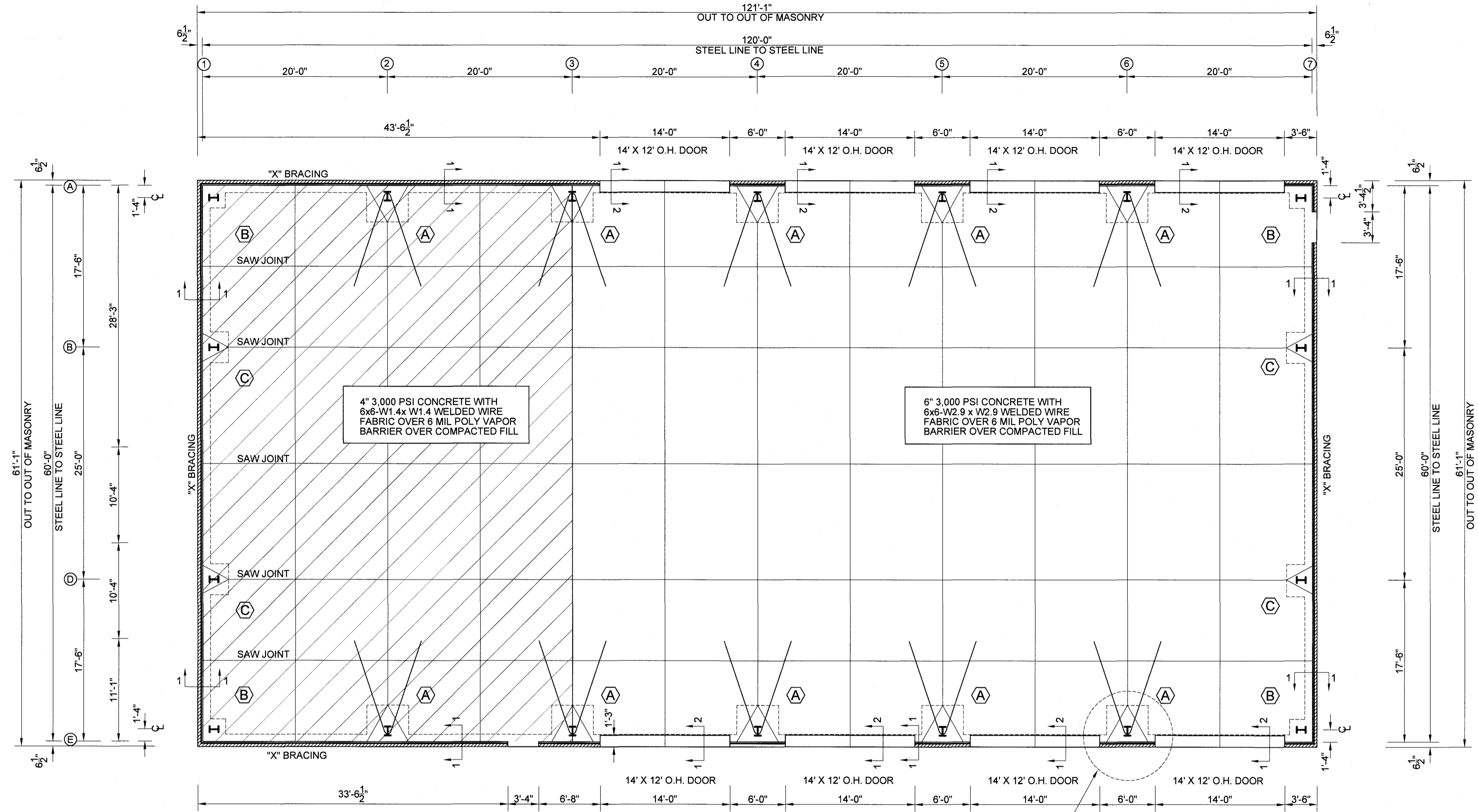
5.1 FOOTINGS	3000 PSI
5.2 SLABS-ON-GRADE	3000 PSI
5.3 ELEVATED SLABS	3000 PSI
- ENTRAINED AIR MUST BE USED IN ALL CONCRETE THAT WILL BE EXPOSED TO FREEZING AND THAWING AND DEICING CHEMICALS. AMOUNT OF AIR ENTRAINMENT (PERCENT) SHALL BE IN ACCORDANCE WITH THE FOLLOWING SCHEDULE WITH A RANGE OF -1 TO +2 PERCENTAGE POINTS OF THE TARGET VALUE:
 

6.1 FOOTINGS	5%
6.2 INTERIOR SLABS	0%, SEE NOTE BELOW
6.3 EXTERIOR SLABS	5%

NOTE: IT IS RECOMMENDED THAT INTERIOR SLABS TO BE GIVEN A SMOOTH, DENSE, HARD-TROWELED FINISH NOT TO CONTAIN ENTRAINED AIR SINCE BULSTERING OR DELAMINATION MAY OCCUR. IF SLAB WILL BE EXPOSED TO DEICING OR OTHER AGGRESSIVE CHEMICALS, CONTACT STRUCTURAL ENGINEER FOR PROPER AIR ENTRAINMENT REQUIREMENTS.
- CONCRETE SLABS ON GRADE SHALL BE CONSTRUCTED IN ACCORDANCE WITH ACI 302.1R-96 "GUIDE FOR CONCRETE SLAB AND SLAB CONSTRUCTION"
- CONTROL JOINTS SHALL BE SPACED IN SLABS ON GRADE AT A MAXIMUM OF 20'-0" O.C. UNLESS OTHERWISE NOTED.

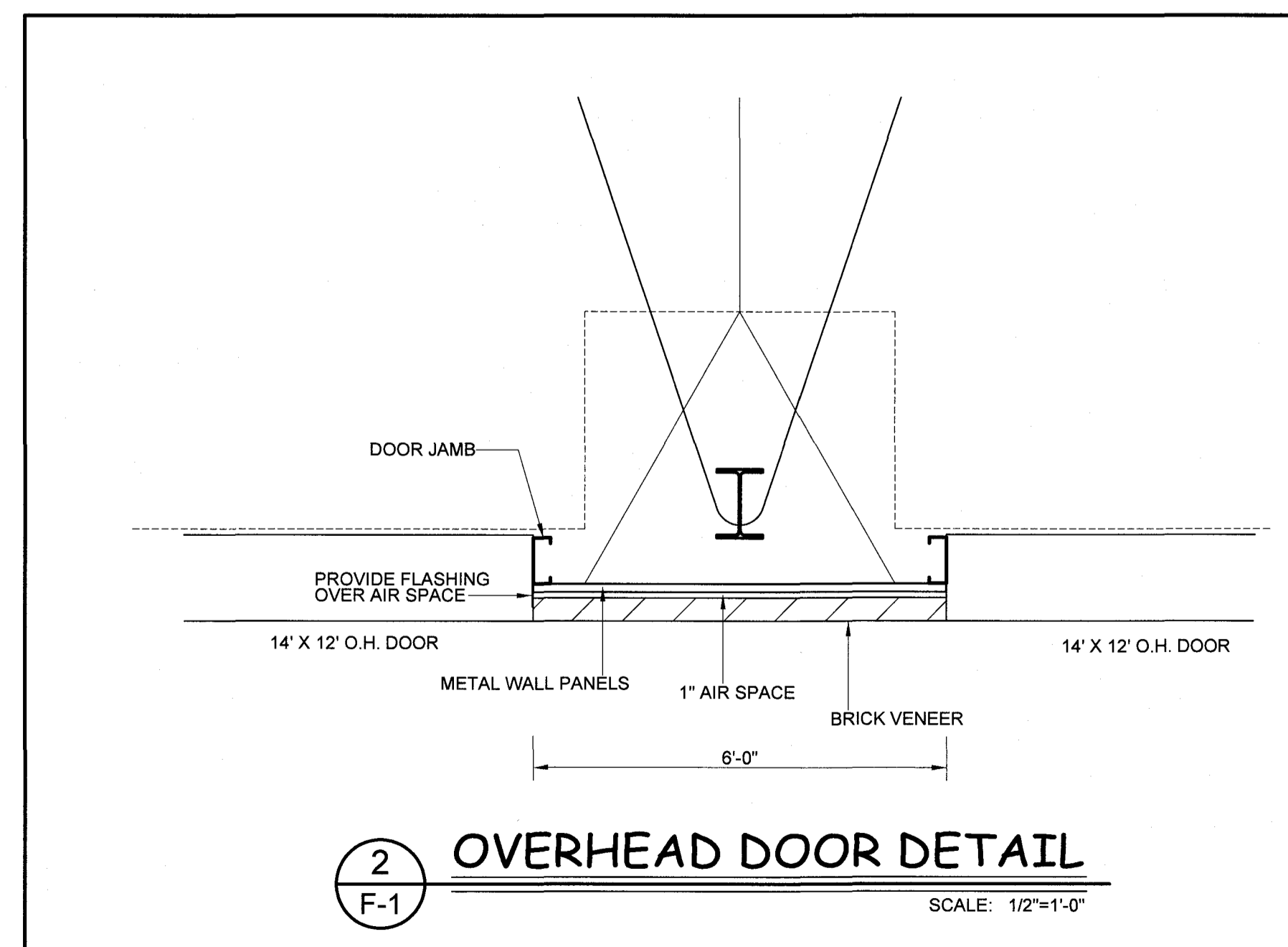
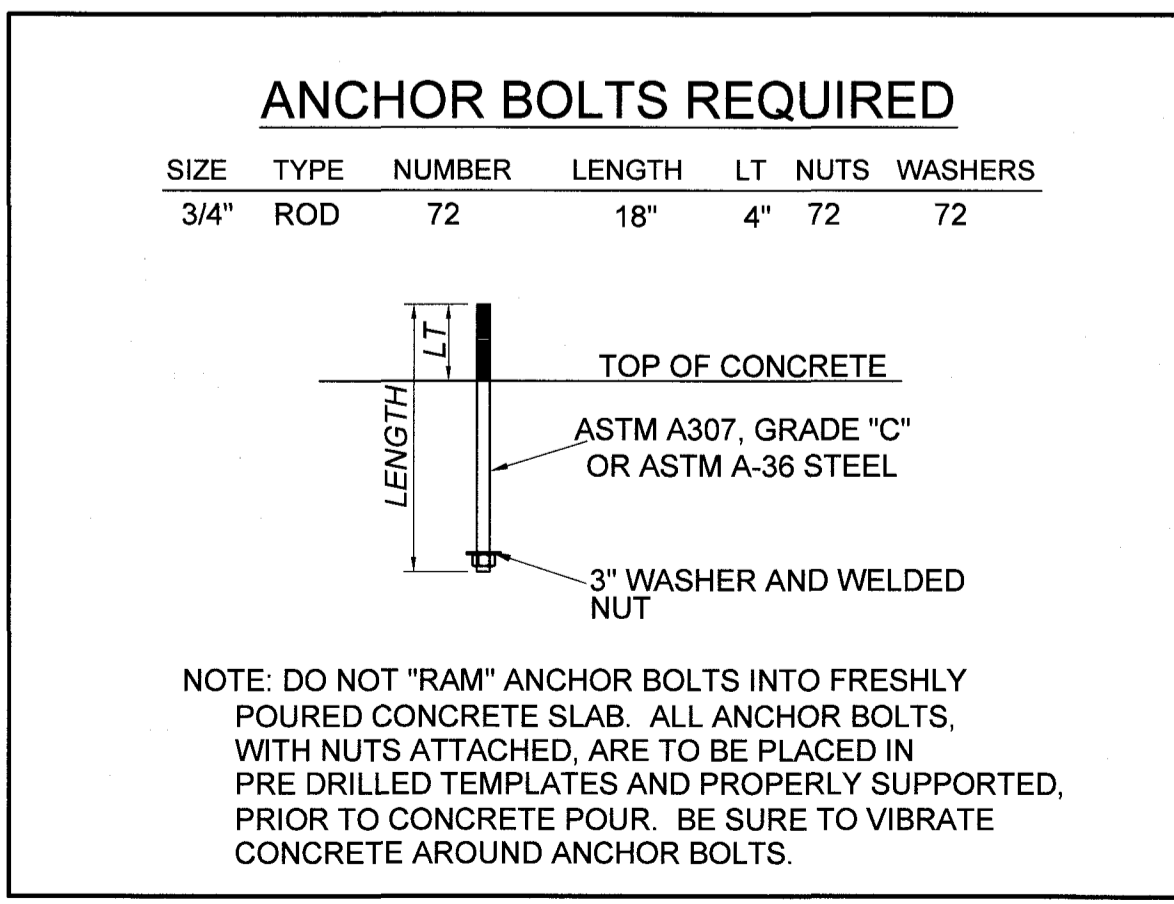
**REINFORCING STEEL**

- REINFORCING STEEL SHALL COMPLY WITH ASTM A615, GRADE 60. WELDED WIRE FABRIC SHALL COMPLY WITH ASTM A185. WELDABLE REINFORCING BARS SHALL COMPLY WITH ASTM A706, GRADE 60.
- CLEAR CONCRETE COVER ON REINFORCING STEEL: BOTTOM OF FOOTINGS= 3". SIDE AND TOP SURFACE OF FOOTINGS= 2". BOTTOM OF SLAB ON GRADE = 2 1/2". WALL SURFACE = 2", TOP OR BOTTOM SURFACE OF FLOOR SLABS = 3/4"
- PROVIDE CLASS 3 BAR AND MESH SUPPORTS.
- DETAILING, FABRICATION AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 315 (LATEST EDITION) MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES.
- HORIZONTAL FOOTING AND WALL REINFORCEMENT SHALL BE CONTINUOUS AND SHALL HAVE 90° BENDS OR CORNER BARS SHALL BE INSTALLED. THE CORNER BAR SHALL HAVE THE SAME SIZE AND SPACING AS THE HORIZONTAL REINFORCEMENT WITH A CLASS B TENSION SPLICE.
- LAP REINFORCEMENT AS REQUIRED A MINIMUM OF 40 BAR DIAMETERS FOR TENSION OR COMPRESSION UNLESS NOTED OTHERWISE. SPLICES IN MASONRY SHALL BE A MINIMUM OF 48 BAR DIAMETERS.
- WHERE REINFORCING DOWELS ARE REQUIRED THEY SHALL BE EQUIVALENT SIZE AND SPACING AS THE VERTICAL REINFORCEMENT. THE DOWEL SHALL EXTEND 48 BAR DIAMETERS VERTICALLY AND 20 BAR DIAMETERS INTO FOOTING.

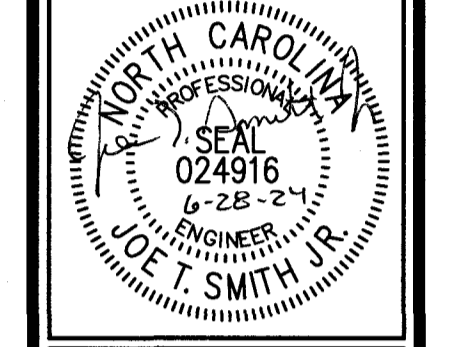


**1 FOUNDATION PLAN**  
SCALE: 1/8"=1'-0"

CONTRACTOR SHALL PROVIDE ENGINEER WITH FINAL BUILDING PLANS AND LOAD REACTIONS FROM PRE-ENGINEERED METAL BUILDING MANUFACTURER FOR VERIFICATION OF COLUMN FOOTING SIZES PRIOR TO COMMENCING CONSTRUCTION.



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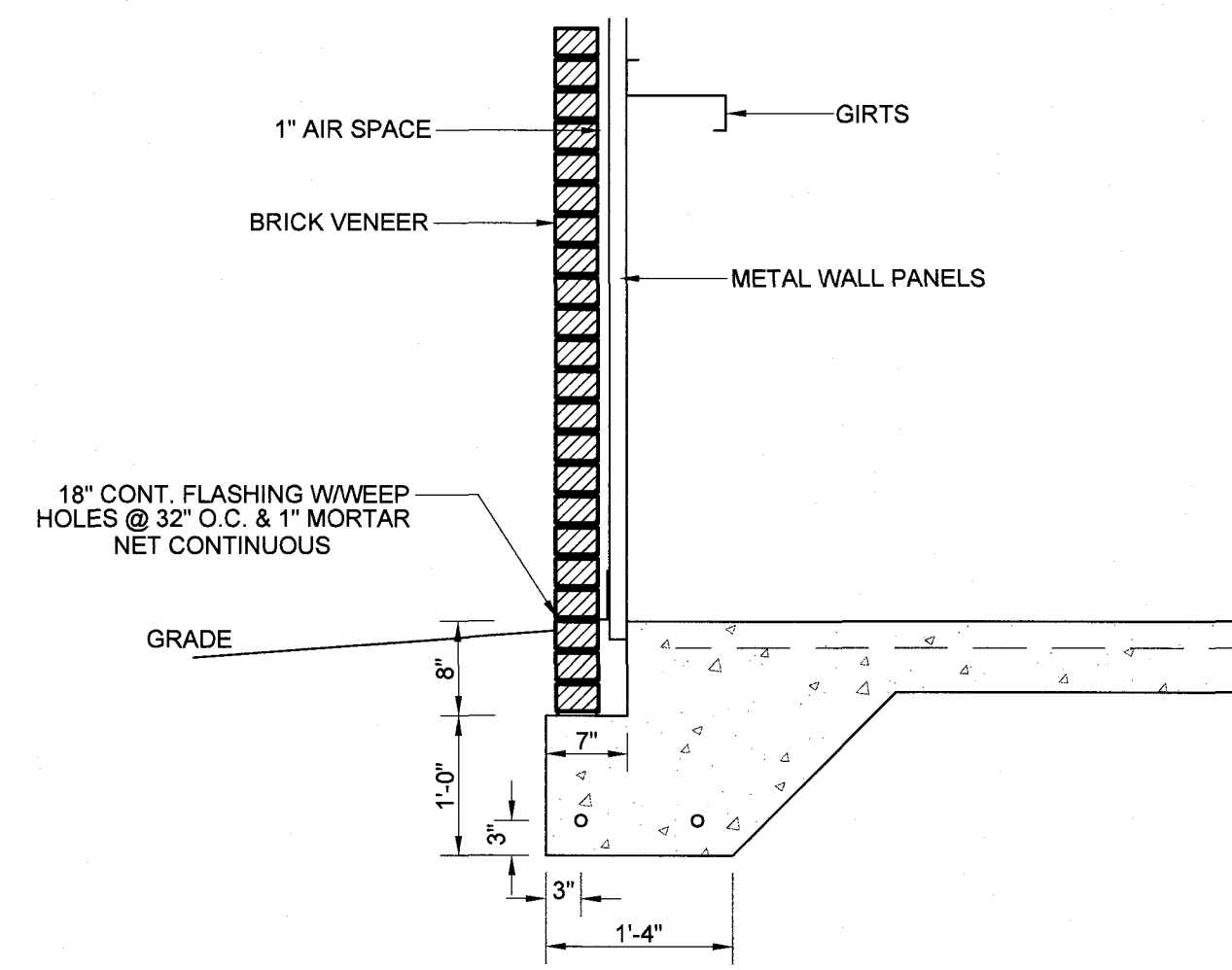


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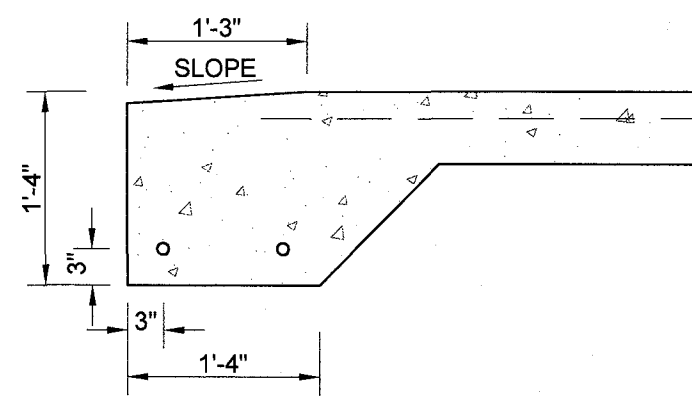
**Campbell Bus Storage Garage**  
Buies Creek, NC 27506

DATE: 28 June 2024  
DRAWN BY: J.S.  
SCALE: 1/8" = 1'-0"

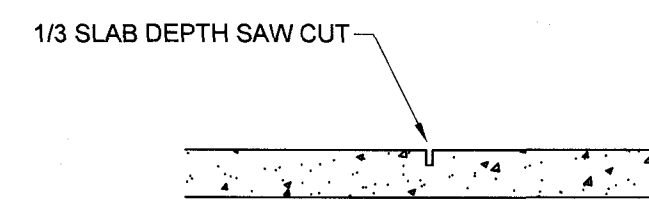
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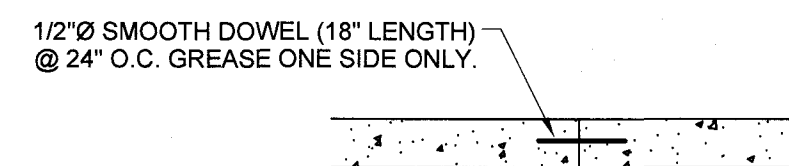
**SECTION 1-1**



**SECTION 1-2**

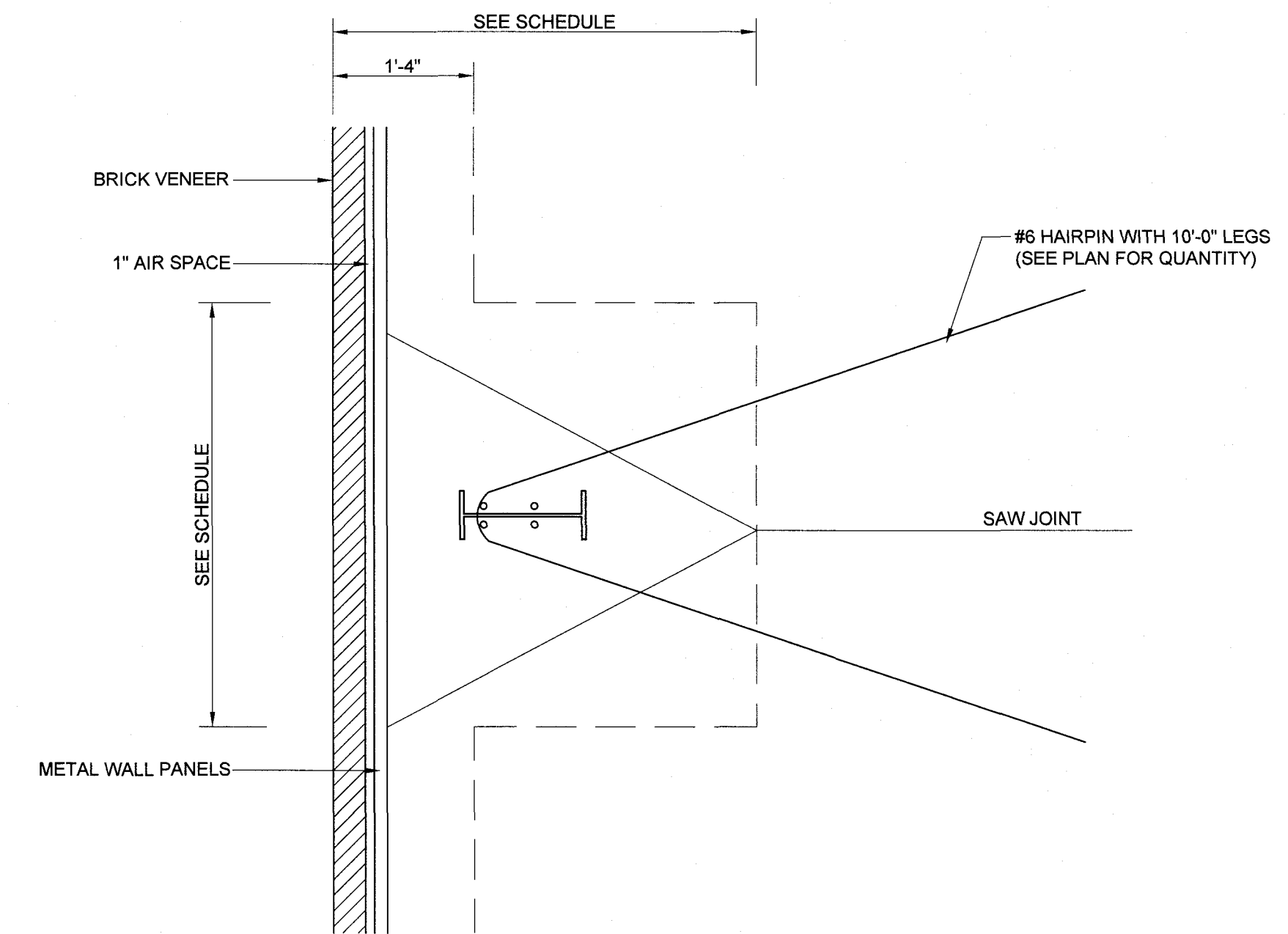


**SAW JOINT**



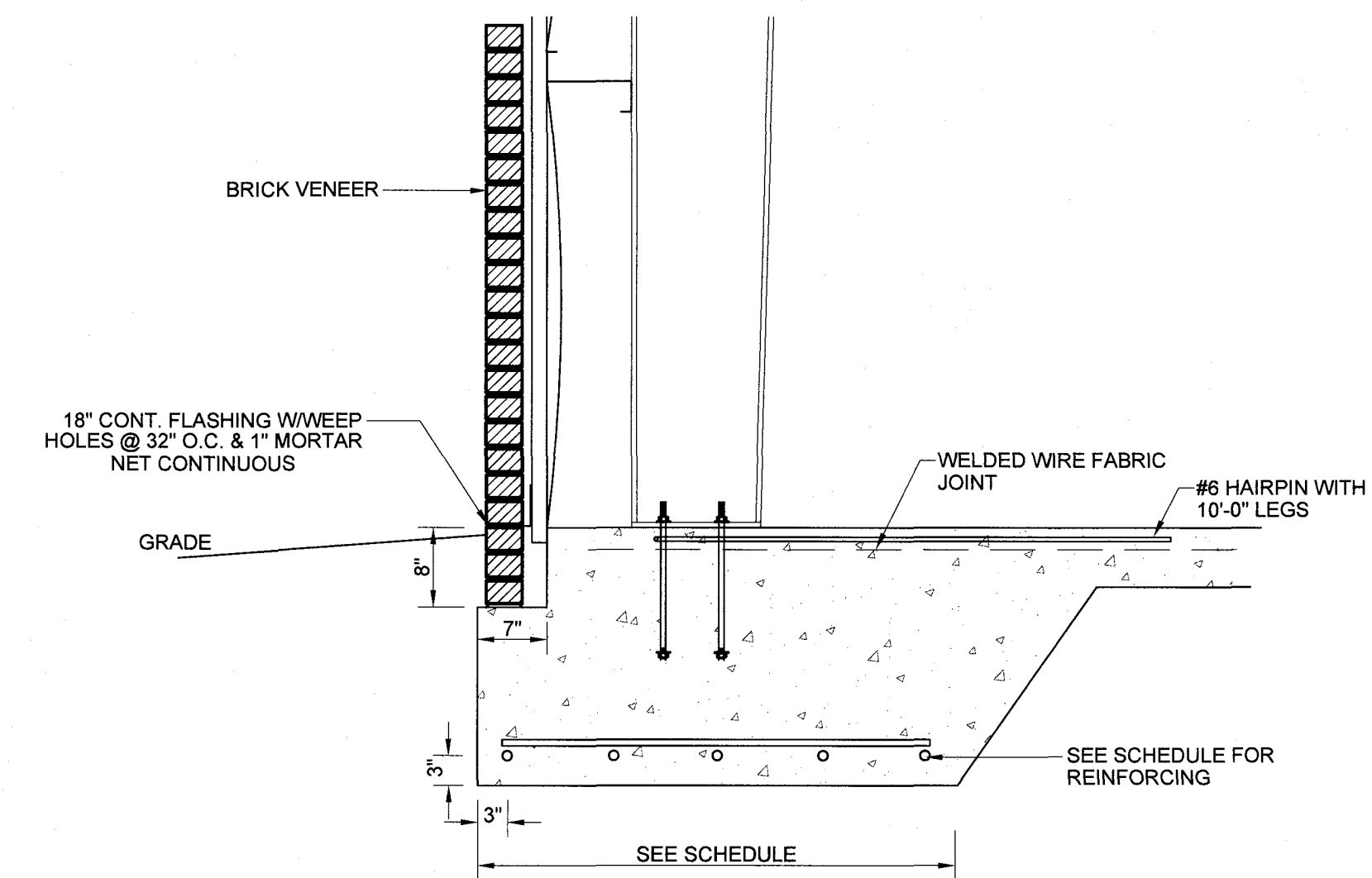
**DOWEL CONSTRUCTION JOINT**

NOTE: DOWELED CONSTRUCTION JOINTS  
MAY BE SUBSTITUTED FOR SAW JOINTS.

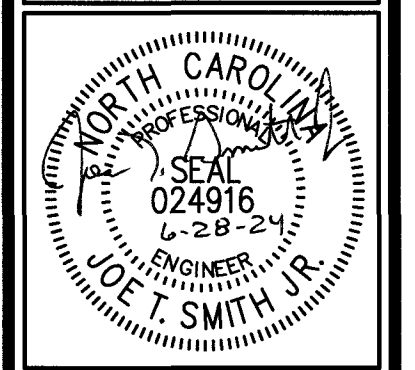


**PLAN**

MARK	FOOTING SIZE	REBAR
A	4'-6" X 4'-6" X 2'-0"	(6) #5 E.W. (BOT.)
B	3'-0" X 3'-0" X 2'-0"	(3) #4 E.W. (BOT.)
C	3'-4" X 3'-4" X 2'-0"	(4) #4 E.W. (BOT.)



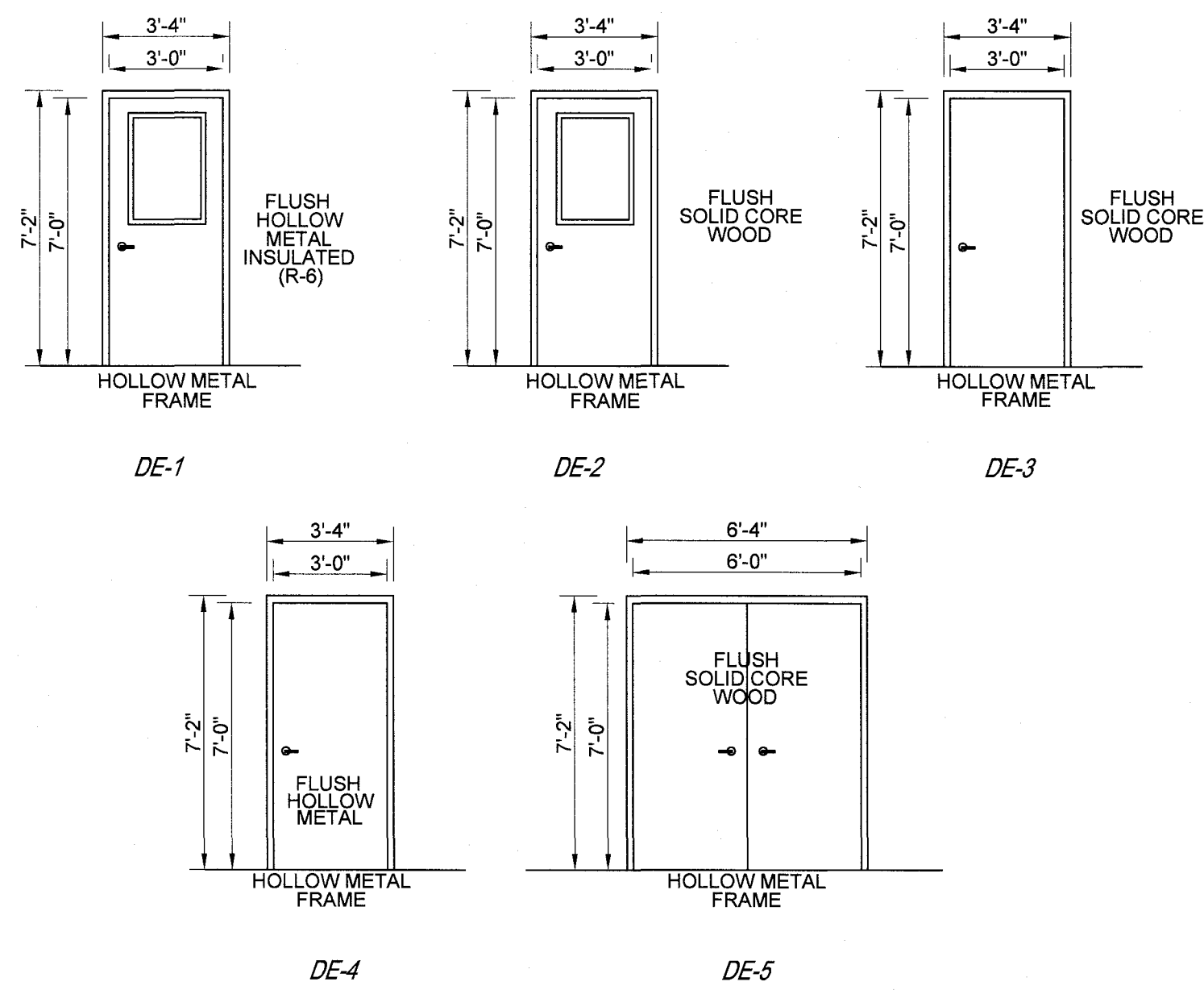
**FOOTING DETAIL**



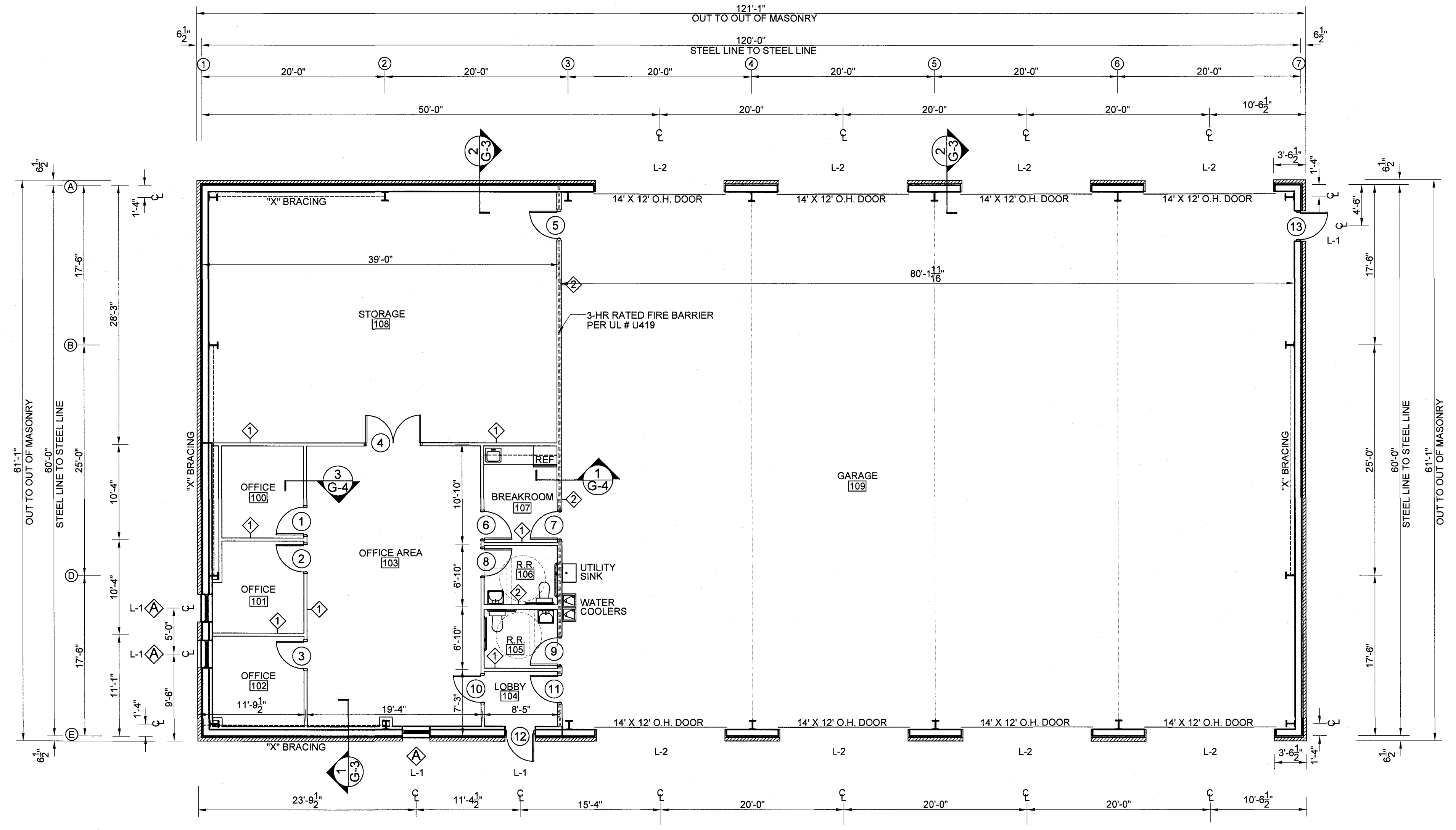
REV	DATE	DESCRIPTION



ROOM FINISH SCHEDULE																		
NO.	DESCRIPTION	FLOORS				BASE				WALLS				CEILING				CLG. HGT.
		CARPET	LVT	EXPOSED CONCRETE	RUBBER BASE AT GYPSUM LOCATIONS	PAINTED GYPSUM BOARD EXPOSED METAL BUILDING INSULATION	PAINTED GYPSUM BOARD EXPOSED METAL BUILDING INSULATION	ACOUSTICAL CEILING EXPOSED METAL BUILDING INSULATION	ACOUSTICAL CEILING EXPOSED METAL BUILDING INSULATION	ACOUSTICAL CEILING EXPOSED METAL BUILDING INSULATION	ACOUSTICAL CEILING EXPOSED METAL BUILDING INSULATION	ACOUSTICAL CEILING EXPOSED METAL BUILDING INSULATION	ACOUSTICAL CEILING EXPOSED METAL BUILDING INSULATION					
100	OFFICE			2	1											9'-0"		
101	OFFICE			2	1											9'-0"		
102	OFFICE			2	1											9'-0"		
103	OFFICE AREA			2	1											9'-0"		
104	LOBBY			2	1											9'-0"		
105	RESTROOM			2	1											9'-0"		
106	RESTROOM			2	1											9'-0"		
107	KITCHEN			2	1											9'-0"		
108	STORAGE			3	1											VARIES		
109	GARAGE			3	1											VARIES		



DOOR ELEVATIONS

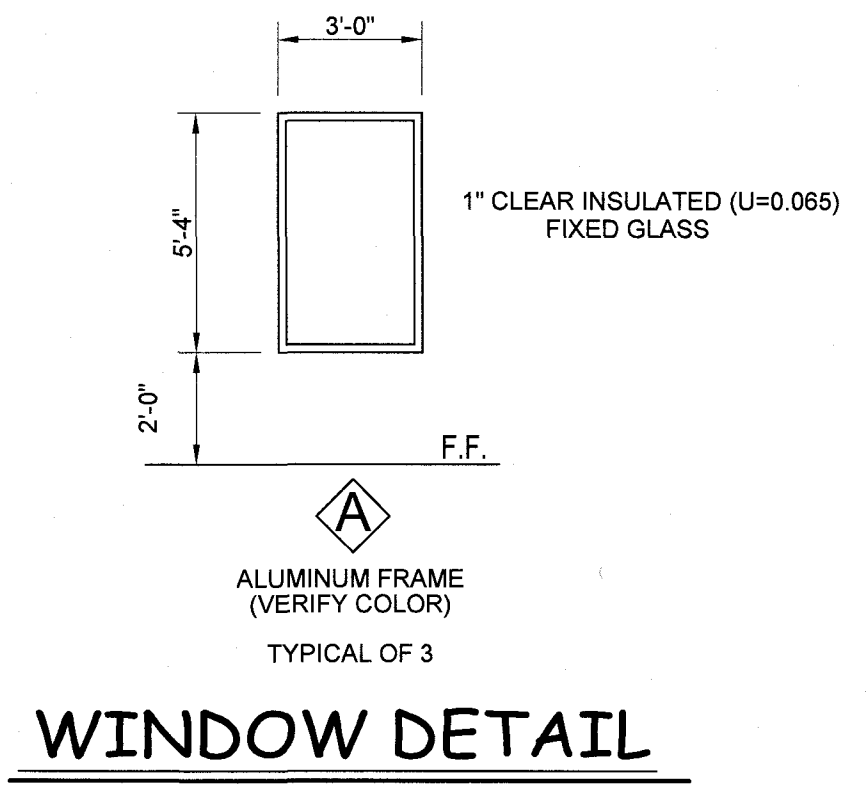


FLOOR PLAN  
SCALE: 1/8"=1'-0"

INTERIOR WALL LEGEND:	
①	- 3/8" 20 GA. STUDS AT 16" O.C.
②	- 6" 18 GA. STUDS AT 16" O.C.

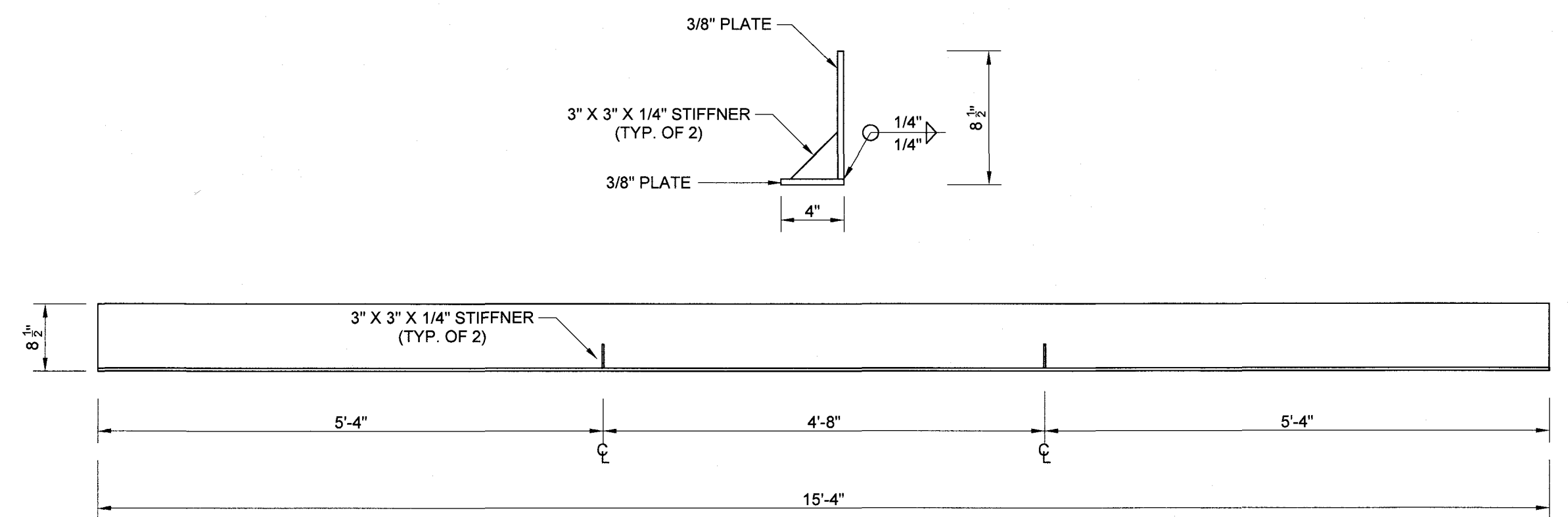
RATED WALL LEGEND:	
---	3-HR RATED FIRE BARRIER PER UL # U419

NUMBER	DOORS					FRAME		HARDWARE								REMARKS	
	SIZE	THICKNESS	LABEL/RATING	MATERIAL	ELEV	MATERIAL		CLOSER	PANIC DEVICE	PUSH PLATES/PULL HANDLES	PASSAGE	PRIVACY	KEYED ENTRY	MORTISE	PUSH BUTTON		
1	3-0 x 7-0	1 3/4"	-	SOLID CORE	DE-3	HOLLOW METAL											
2	3-0 x 7-0	1 3/4"	-	SOLID CORE	DE-3	HOLLOW METAL											
3	3-0 x 7-0	1 3/4"	-	SOLID CORE	DE-3	HOLLOW METAL											
4	PR 3-0 x 7-0	1 3/4"	-	SOLID CORE	DE-5	HOLLOW METAL											
5	3-0 x 7-0	1 3/4"	3-HR	HOLLOW METAL	DE-4	HOLLOW METAL	1										
6	3-0 x 7-0	1 3/4"	-	SOLID CORE	DE-3	HOLLOW METAL											
7	3-0 x 7-0	1 3/4"	3-HR	HOLLOW METAL	DE-5	HOLLOW METAL	1										
8	3-0 x 7-0	1 3/4"	-	SOLID CORE	DE-3	HOLLOW METAL											
9	3-0 x 7-0	1 3/4"	3-HR	HOLLOW METAL	DE-4	HOLLOW METAL	1										
10	3-0 x 7-0	1 3/4"	-	SOLID CORE	DE-2	HOLLOW METAL											
11	3-0 x 7-0	1 3/4"	3-HR	HOLLOW METAL	DE-1	HOLLOW METAL	1										
12	3-0 x 7-0	1 3/4"	-	HOLLOW METAL	DE-1	HOLLOW METAL	1										
13	3-0 x 7-0	1 3/4"	-	HOLLOW METAL	DE-4	HOLLOW METAL	1										



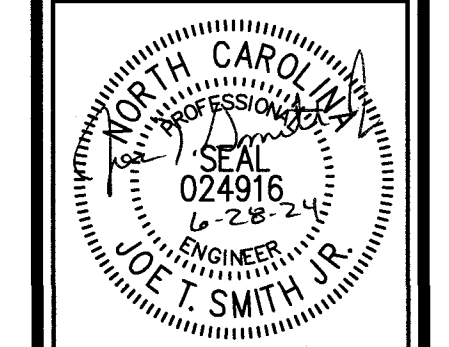
WINDOW DETAIL

LINTEL SCHEDULE					
MARK	TOTAL	TYPE	SIZE	LENGTH	REMARKS
L-1	5	(1) ANGLE	3 1/2" x 3 1/2" x 1/4" ANGLE	4'-8"	8" BEARING EA END
L-2	8	(1) ANGLE	8 1/2" x 4" x 3/8" ANGLE	15'-4"	8" BEARING EA END



L-2 LINTEL DETAIL

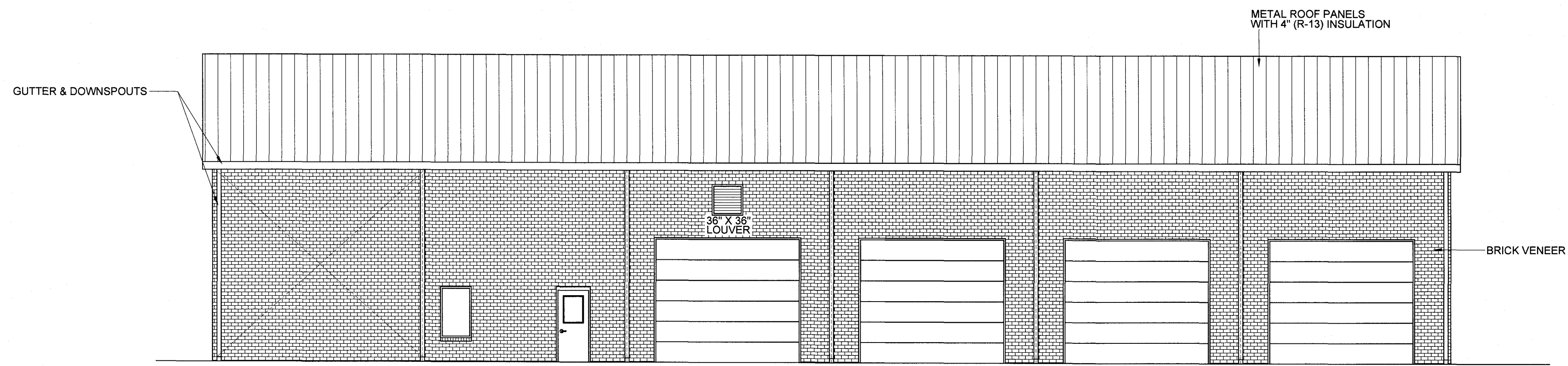
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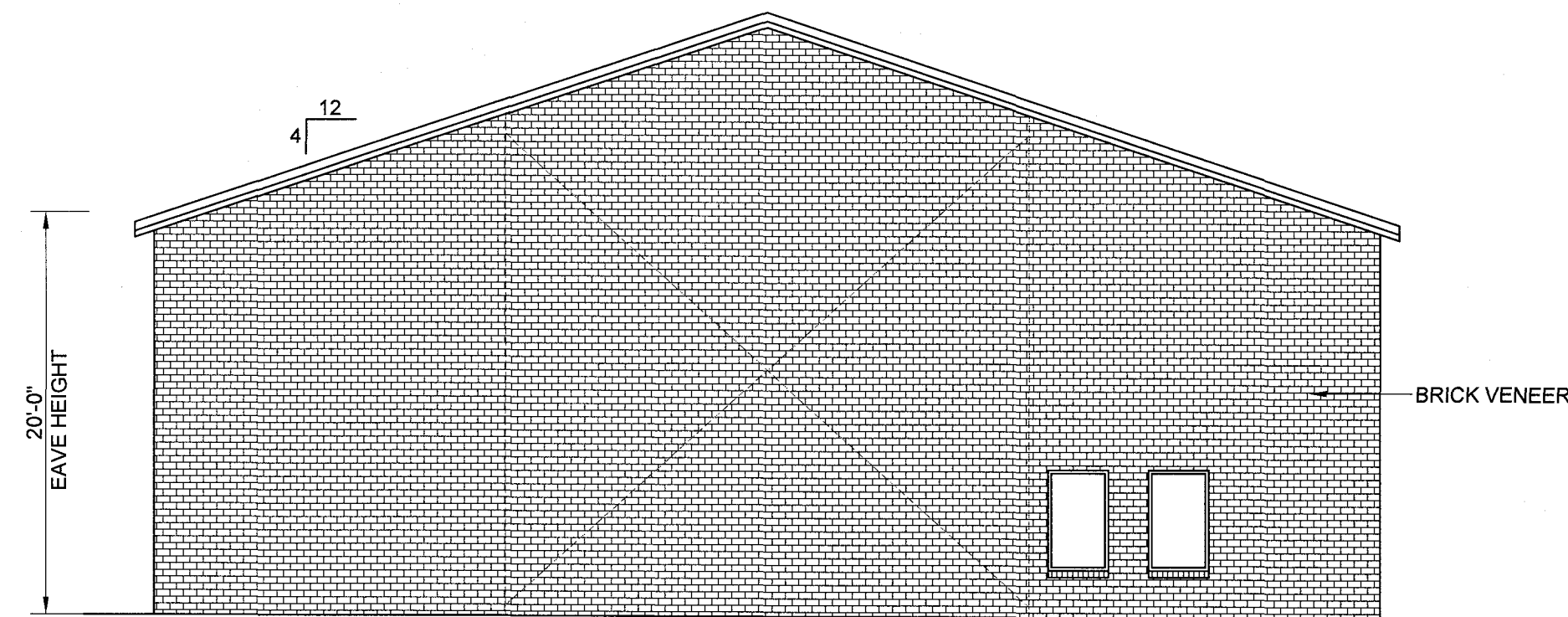
REVISIONS	
REV.	DESCRIPTION

Campbell Bus Storage Garage  
Buies Creek, NC 27506

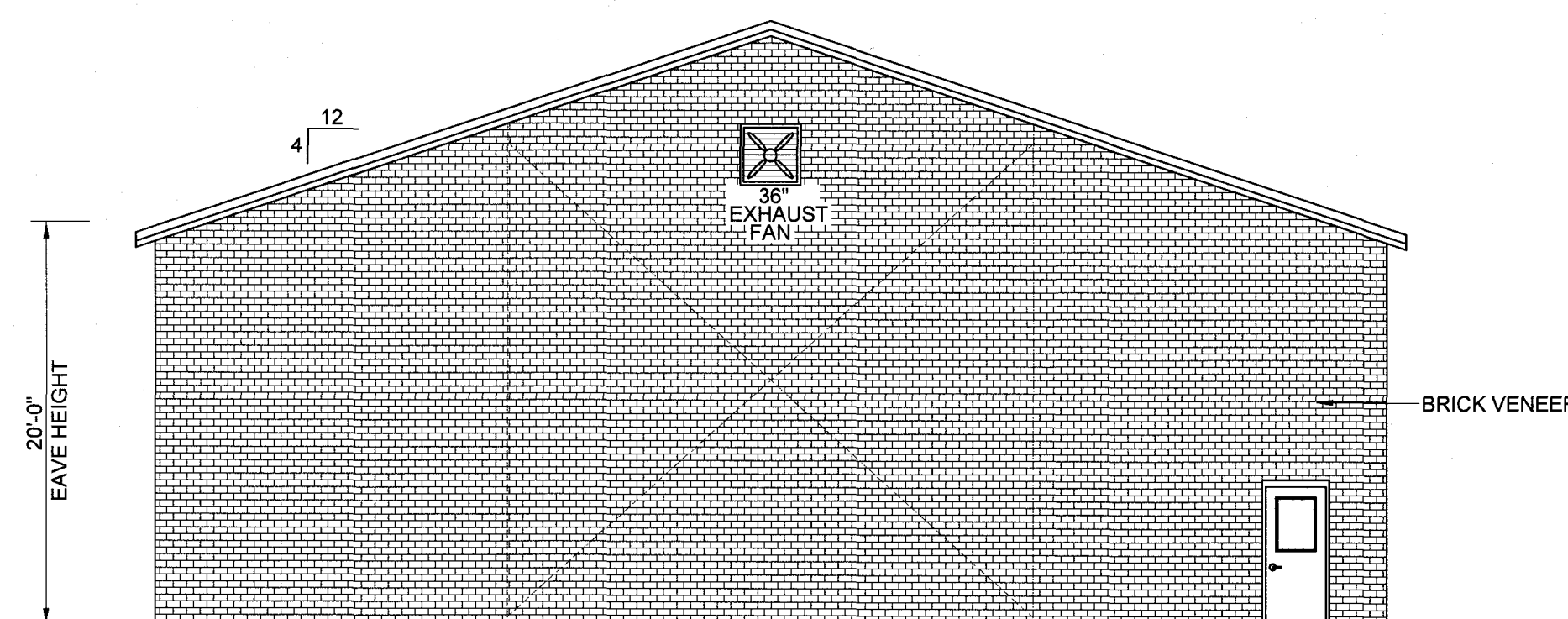
DATE: 28 June 2024  
DRAWN BY: J.S.  
SCALE: 1/8" = 1'-0"  
**G-1**



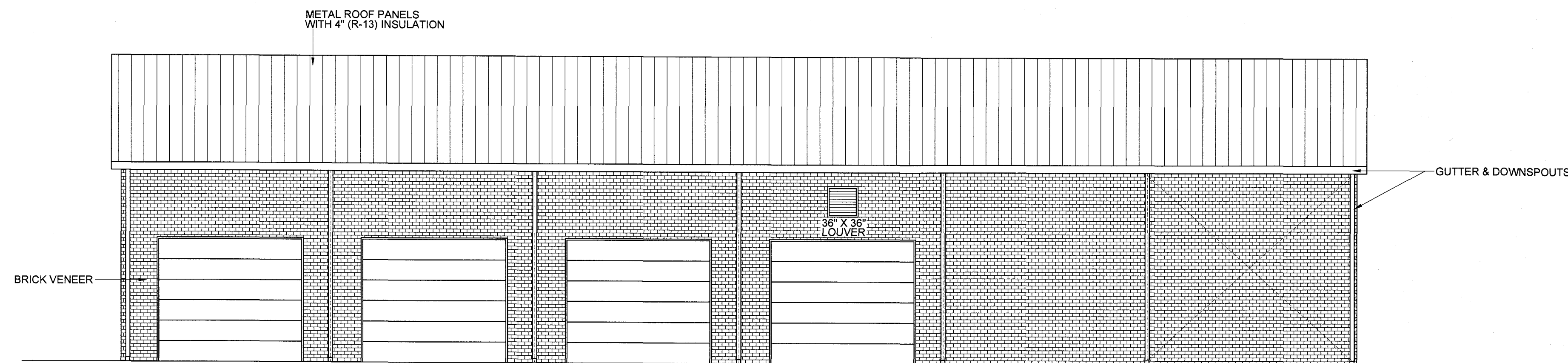
**1 FRONT ELEVATION**  
SCALE: 1/8"=1'-0"



**2 LEFT ELEVATION**  
SCALE: 1/8"=1'-0"



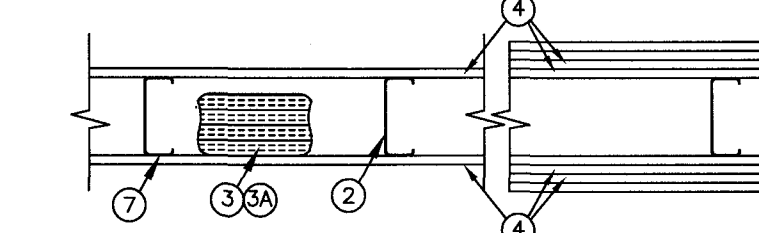
**3 RIGHT ELEVATION**  
SCALE: 1/8"=1'-0"



**4 REAR ELEVATION**  
SCALE: 1/8"=1'-0"

**FIRE RESISTANCE RATING- ANSUL 263**  
DESIGN NO. U419  
OCTOBER 08, 2003  
**NONBEARING WALL RATING - 1.23 OR 4 HR (SEE ITEMS 3 & 4)**

FOR NUMBER OF LAYERS AND HOURLY RATINGS SEE ITEM 4



**1. FLOOR AND CEILING RUNNERS** - (NOT SHOWN) CHANNEL SHAPED, FABRICATED FROM MIN. 25 MSG CORROSION-PROTECTED STEEL, MIN. WIDTH TO ACCOMMODATE STUD SIZE, WITH MIN. 1 IN. LONG LEGS, ATTACHED TO FLOOR AND CEILING WITH FASTENERS 24 IN. OC MAX.

**2. STEEL STUDS** - CHANNEL SHAPED, FABRICATED FROM MIN. 25 MSG CORROSION-PROTECTED STEEL, MINIMUM WIDTH AS INDICATED UNDER ITEM 4, MIN. 1-1/4 IN. FLANGES AND 1/4 IN. RETURN, SPACED A MAX. OF 24 IN. OC. STUDS TO BE CUT 3/8 TO 3/4 IN. LESS THEN ASSEMBLY HEIGHT.

**3. BATTS AND BLANKETS\*** - (REQUIRED AS INDICATED UNDER ITEM 4) - MINERAL WOOL BATTS, FRICTION FITTED BETWEEN STUDS AND RUNNERS, MIN. NOM. THICKNESS AS INDICATED UNDER ITEM 4, SEE BATTS AND BLANKETS (BKNV OR BZJZ). CATEGORIES FOR NAMES OF CLASSIFIED COMPANIES.

**3A. BATTS AND BLANKETS\*** - (OPTIONAL) - PLACED IN STUD CAVITIES, ANY GLASS FIBER OR MINERAL WOOL INSULATION BEARING THE UL CLASSIFICATION MARKING AS TO SURFACE BURNING CHARACTERISTICS AND/OR FIRE RESISTANCE. SEE BATTS AND BLANKETS (BKNV OR BZJZ) CATEGORIES FOR NAMES OF CLASSIFIED COMPANIES.

**4. GYPSUM BOARD\*** - GYPSUM PANELS WITH BEVELED, SQUARE OR TAPERED EDGES, APPLIED VERTICALLY OR HORIZONTALLY, VERTICAL JOINTS CENTERED OVER STUDS AND STAGGERED ONE STUD CAVITY ON OPPOSITE SIDES OF STUDS. HORIZONTAL JOINTS IN ADJACENT LAYERS (MULTILAYER SYSTEMS) STAGGERED ONE STUD CAVITY. HORIZONTAL JOINTS NEED NOT BE BACKED BY STEEL FRAMING. HORIZONTAL EDGE JOINTS AND HORIZONTAL BUTT JOINTS ON OPPOSITE SIDES OF STUDS NEED NOT BE STAGGERED. HORIZONTAL EDGE JOINTS AND HORIZONTAL BUTT JOINTS IN ADJACENT LAYERS (MULTILAYER SYSTEMS) STAGGERED A MIN. OF 12 IN. THE THICKNESS AND NUMBER OF LAYERS FOR THE 1 HR, 2 HR, 3 HR AND 4 HR RATING ARE AS FOLLOWS:

RATING	MIN. STUD DEPTH	NO. OF LAYERS & THICKNESS OF PANELS	MIN. THICKNESS OF INSULATION (ITEM 3)
1	3-1/2	1 LAYER, 5/8 IN. THICK	OPTIONAL
1	2-1/2	1 LAYER, 1/2 IN. THICK	1-1/2 IN.
1	1-5/8	1 LAYER, 3/4 IN. THICK	OPTIONAL
2	1-5/8	2 LAYERS, 1/2 IN. THICK	OPTIONAL
2	1-5/8	2 LAYERS, 5/8 IN. THICK	OPTIONAL
2	3-1/2	1 LAYER, 3/4 IN. THICK	3 IN.
3	1-5/8	3 LAYERS, 1/2 IN. THICK	OPTIONAL
3	1-5/8	2 LAYERS, 3/4 IN. THICK	OPTIONAL
3	1-5/8	3 LAYERS, 5/8 IN. THICK	OPTIONAL
4	1-5/8	4 LAYERS, 5/8 IN. THICK	OPTIONAL
4	1-5/8	4 LAYERS, 1/2 IN. THICK	OPTIONAL
4	2-1/2	2 LAYERS, 3/4 IN. THICK	2 IN.

**CANADIAN GYPSUM COMPANY** - 1/2 IN THICK TYPE C, IP-X2 OR IPC-AR, WRC, 5/8 IN. THICK TYPE AR, C, IP-AR, IP-X2, IPC-AR, SCX, SHX, WRX, OR WRC; 3/4 IN. THICK TYPE IP-X3, ULTRACODE, ULTRACODE SHC OR ULTRACODE WRC.

**UNITED STATES GYPSUM COMPANY** - 1/2 IN THICK TYPE C, IP-X2, IPC-AR OR WRC, 5/8 IN. THICK TYPE SCX, SHX, WRX, IP-X1, AR, C, WRC, FRX-C, IP-AR, 3/4 IN. THICK TYPE IP-X3, ULTRACODE, ULTRACODE SHC OR ULTRACODE WRC.

**USG MEXICO S A D E C V** - 1/2 IN THICK TYPE C, IP-X2, IPC-AR OR WRC, 5/8 IN. THICK TYPE AR, C, IP-AR, SCX, SHX, WRX, WRC OR 3/4 IN. THICK TYPE IP-X3, ULTRACODE, ULTRACODE SHC OR ULTRACODE WRC.

**4A. GYPSUM BOARD\*** - (AS AN ALTERNATE TO ITEM 4) - 5/8 IN. THICK, 2 FT. WIDE, TONGUE AND GROOVE EDGE, APPLIED HORIZONTALLY AS THE OUTER LAYER TO ONE SIDE OF THE ASSEMBLY. SECURED AS DESCRIBED IN ITEM 5. JOINT COVERING (ITEM 7) NOT REQUIRED.

**CANADIAN GYPSUM COMPANY** - TYPE SHX.

**UNITED STATES GYPSUM COMPANY** - TYPE SHX.

**USG MEXICO S A D E C V** - TYPE SHX.

**5. FASTENERS** - (NOT SHOWN) - TYPE S OR S-12 STEEL SCREWS TO ATTACH PANELS TO STUDS (ITEM 2) OR FURRING CHANNELS (ITEM 6). SINGLE LAYER SYSTEMS: 1 IN. LONG FOR 1/2 AND 5/8 IN. THICK PANELS OR 1-1/4 IN. LONG FOR 3/4 IN. THICK PANELS, SPACED 16 IN. OC. WITH SCREWS OFFSET 8 IN. FROM THE FIRST LAYER. THREE LAYER SYSTEM: FIRST LAYER - 1 IN. LONG FOR 1/2 IN., 5/8 IN. THICK PANELS, SPACED 24 IN. OC.; SECOND LAYER - 1-1/2 IN. LONG FOR 1/2 IN., 5/8 IN. THICK PANELS, SPACED 24 IN. OC.; THIRD LAYER - 2-1/4 IN. LONG FOR 1/2 IN., 5/8 IN. THICK PANELS OR 2-5/8 IN. LONG FOR 3/4 IN. THICK PANELS, SPACED 12 IN. OC. SCREWS OFFSET MIN. 6 IN. FROM LAYER BELOW.

**6. FURRING CHANNELS** - (OPTIONAL, NOT SHOWN, FOR SINGLE OR DOUBLE LAYER SYSTEMS) - RESILIENT FURRING CHANNELS FABRICATED FROM MIN. 25 MSG CORROSION-PROTECTED STEEL, SPACED VERTICALLY A MAX. OF 24 IN. OC. FLANGE PORTION ATTACHED EACH INTERSECTING STUD WITH 1/2 IN. LONG TYPE S-12 STEEL SCREWS. NOT FOR USE WITH ITEM 4A.

**6A. STEEL FRAMING MEMBERS (NOT SHOWN)\*** - (OPTIONAL ON ONE OR BOTH SIDES, NOT SHOWN, FOR SINGLE OR DOUBLE LAYER SYSTEMS) - AS AN ALTERNATE TO ITEM 6, FURRING CHANNELS AND STEEL FRAMING MEMBERS AS DESCRIBED BELOW:

a. **FURRING CHANNELS** - FORMED OF NO. 25 MSG GALV. STEEL, 2-3/8 IN. WIDE BY 7/8 IN. DEEP. SPACED MAX. 24 IN. OC. PERPENDICULAR TO STUDS. CHANNELS SECURED TO STUDS AS DESCRIBED IN ITEM 6. GYPSUM BOARD ATTACHED TO FURRING CHANNELS AS DESCRIBED IN ITEM 5. NOT FOR USE WITH ITEM 4A.

b. **STEEL FRAMING MEMBERS\*** - USED TO ATTACH FURRING CHANNELS (ITEM 6A) TO STUDS (ITEM 2). CLIPS SPACED MAX. 48 IN. OC. AND SECURED TO STUDS WITH NO. 8 X 1-1/2 IN. MINIMUM SELF DRILLING, S-12 STEEL SCREW THROUGH THE CENTER GROMMET. FURRING CHANNELS ARE FRICTION FITTED INTO CLIPS.

**PAC INTERNATIONAL INC** - TYPE RSIC-1.

**7. JOINT TAPE AND COMPOUND** - VINYL OR CASEIN, DRY OR PREMIXED JOINT COMPOUND APPLIED IN TWO COATS TO JOINTS AND SCREW HEADS OF OUTER LAYERS. PAPER TAPE, NOM. 2 IN. WIDE, EMBEDDED IN FIRST LAYER OF COMPOUND OVER ALL JOINTS OF OUTER PANELS. PAPER TAPE AND JOINT COMPOUND MAY BE OMITTED WHEN GYPSUM PANELS ARE SUPPLIED WITH A SQUARE EDGE.

**8. SIDING, BRICK OR STUCCO** - (OPTIONAL, NOT SHOWN) - ALUMINUM, VINYL OR STEEL SIDING, BRICK VENEER OR STUCCO, MEETING THE REQUIREMENTS OF LOCAL CODE AGENCIES. INSTALLS OVER GYPSUM PANELS. BRICK VENEER ATTACHED TO STUDS WITH CORRUGATED METAL WALL TIES ATTACHED TO EACH STUD WITH STEEL SCREWS, NOT MORE THAN EACH SIXTH COURSE OF BRICK.

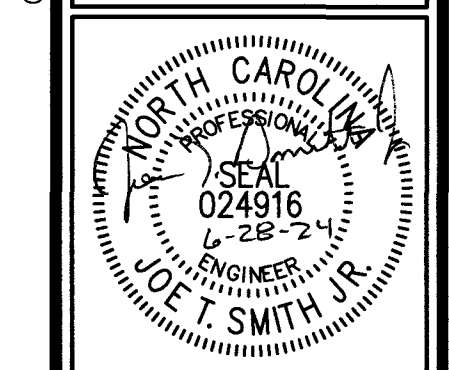
**9. CAULKING AND SEALANTS\*** - (OPTIONAL, NOT SHOWN) - A BEAD OF ACOUSTICAL SEALANT APPLIED AROUND THE PARTITION PERIMETER FOR SOUND CONTROL.

**UNITED STATES GYPSUM COMPANY** - TYPE AS

\*BEARING THE UL CLASSIFICATION MARK

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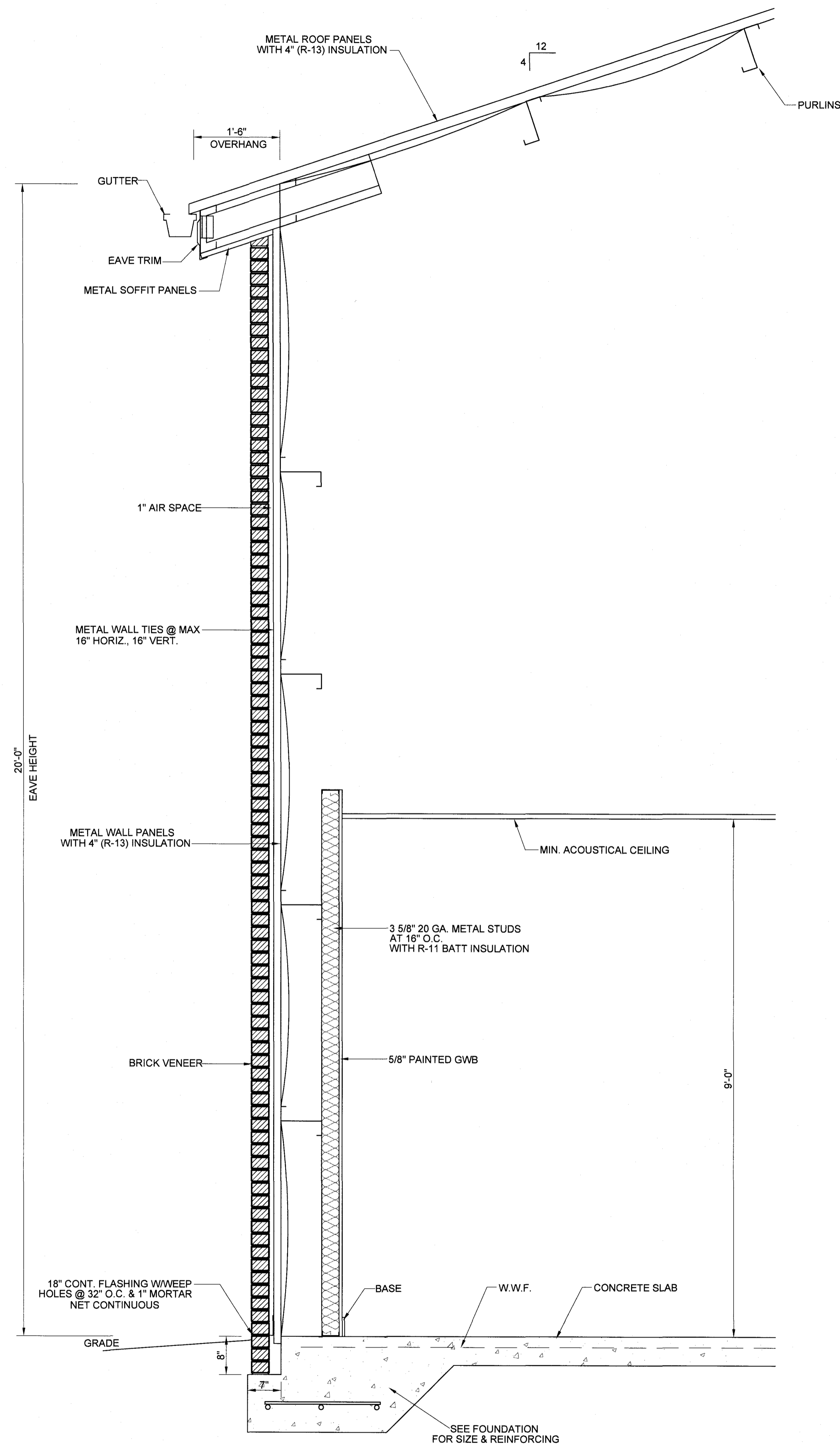


NO.	DATE	DESCRIPTION

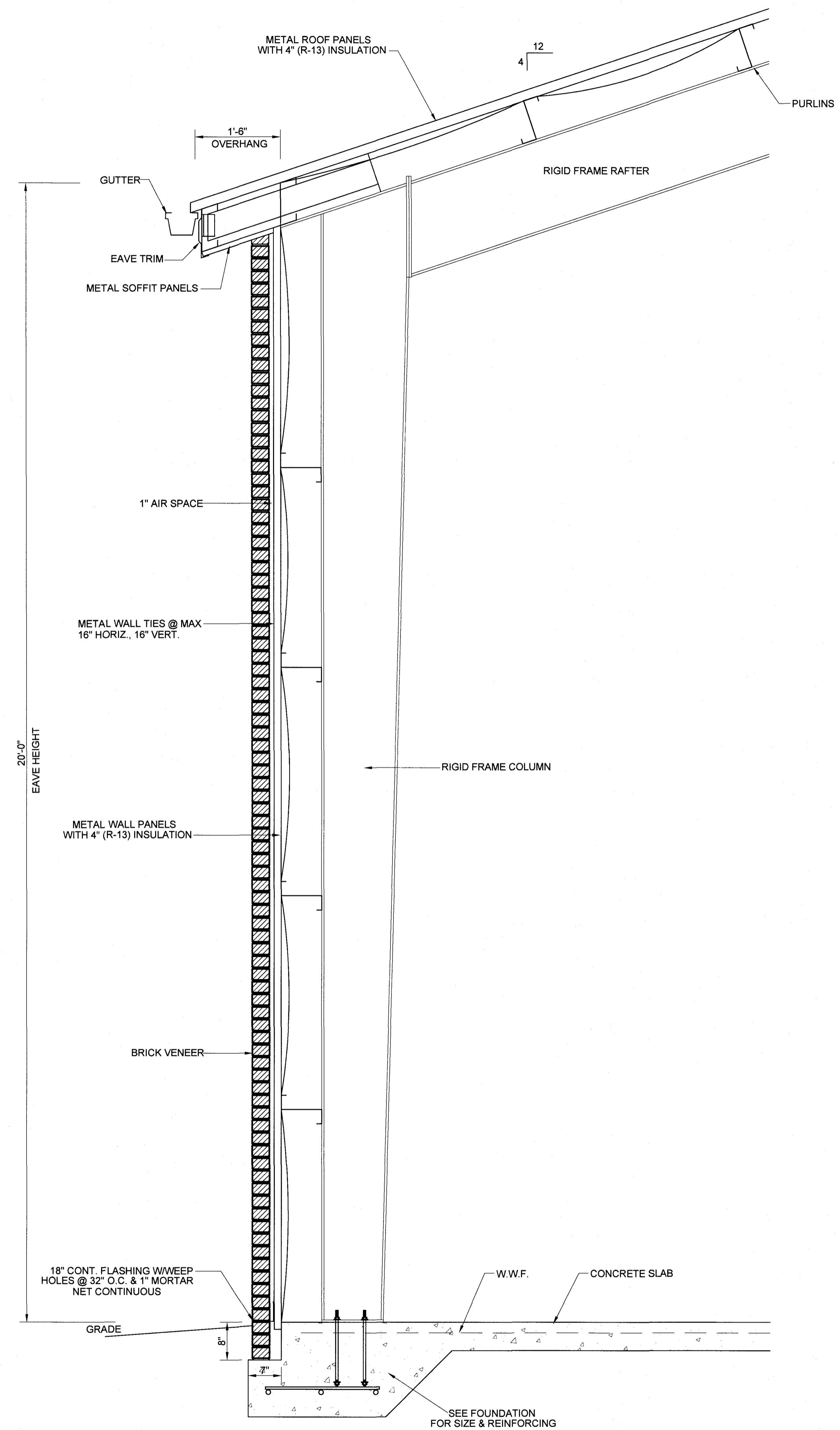
**Campbell Bus Storage Garage**  
Buies Creek, NC 27506

DATE: 28 June 2024  
DRAWN BY: J.S.  
SCALE: 1/8" = 1'-0"

**G-2**



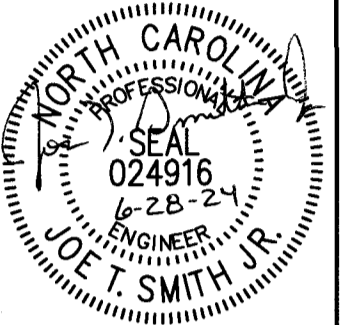
1 TYP. SIDEWALL AT OFFICE AREA  
G-3 SCALE: 3/4"=1'-0"



2 TYP. SIDEWALL SECTION AT GARAGE AREA  
G-3 SCALE: 3/4"=1'-0"

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REV	DATE	DESCRIPTION

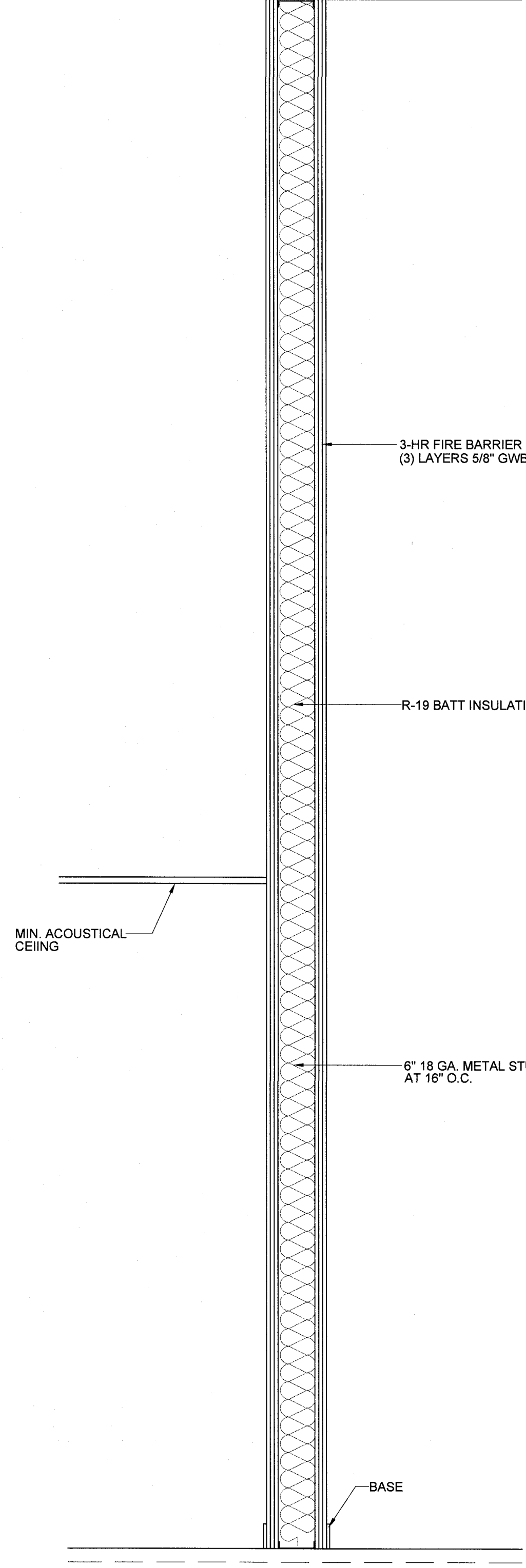
**Campbell Bus Storage Garage**  
Buies Creek, NC 27506

DATE: 28 June 2024  
DRAWN BY: J.S.  
SCALE: 3/4" = 1'-0"

**G-3**



METAL ROOF PANELS WITH 4" (R-13) INSULATION



3-HR FIRE BARRIER PER UL #U419 (3) LAYERS 5/8" GWB EACH SIDE

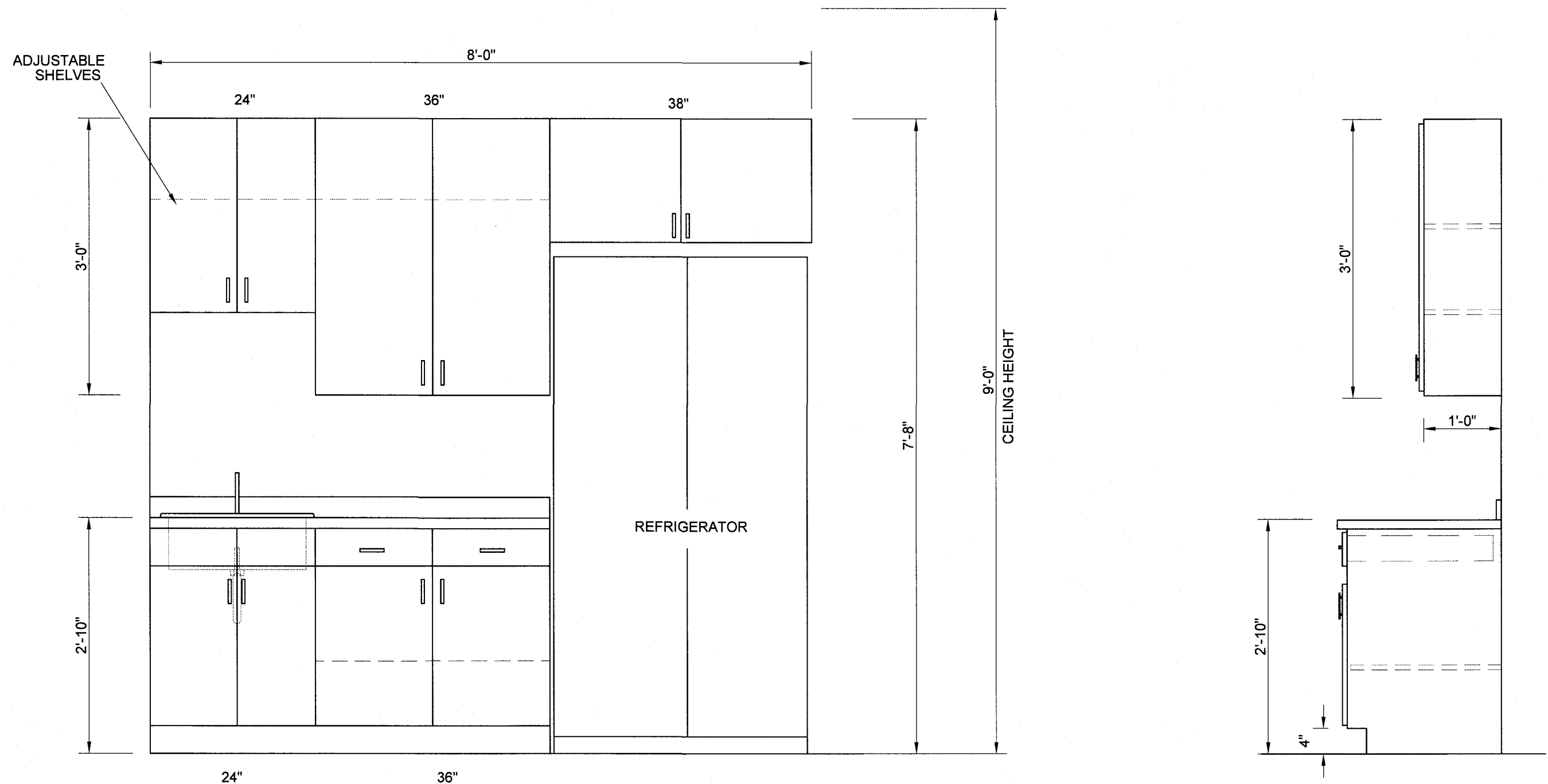
R-19 BATT INSULATION

MIN. ACOUSTICAL CEILING

6" 18 GA. METAL STUDS AT 16" O.C.

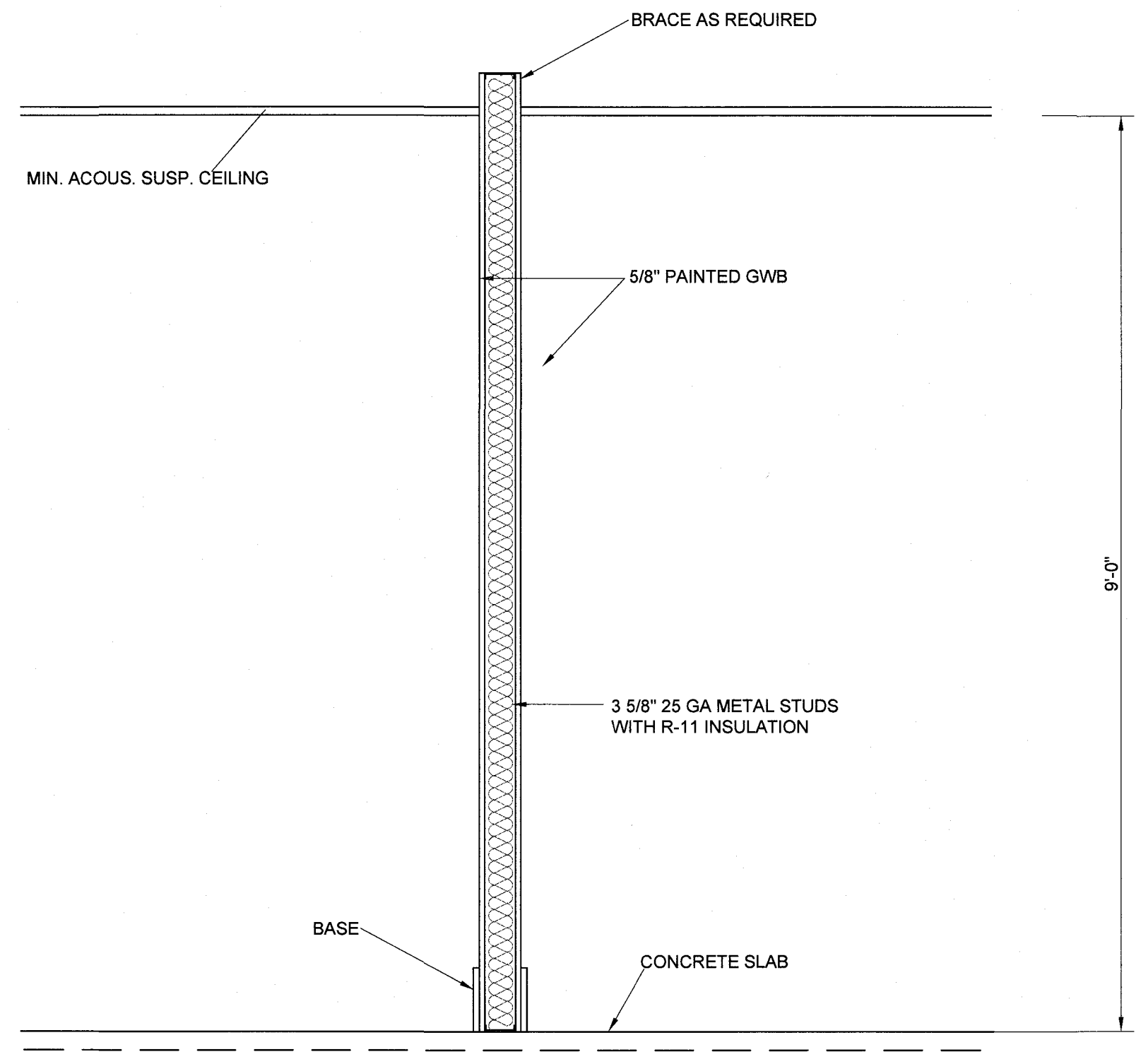
BASE

**1**  
SECTION THRU 3-HR FIRE BARRIER  
SCALE: 3/4"=1'-0"



**2**  
BREAK ROOM CABINETS  
SCALE: 3/4"=1'-0"

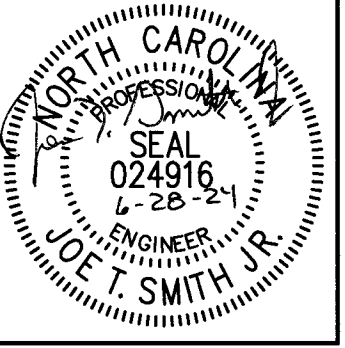
-LAMINATE COUNTER TOPS & BACKSPLASH  
-CABINETS TO BE LAMINATE EXTERIOR WITH MELAMINE INTERIOR



**3**  
TYP. INTERIOR WALL DETAIL  
SCALE: 3/4"=1'-0"

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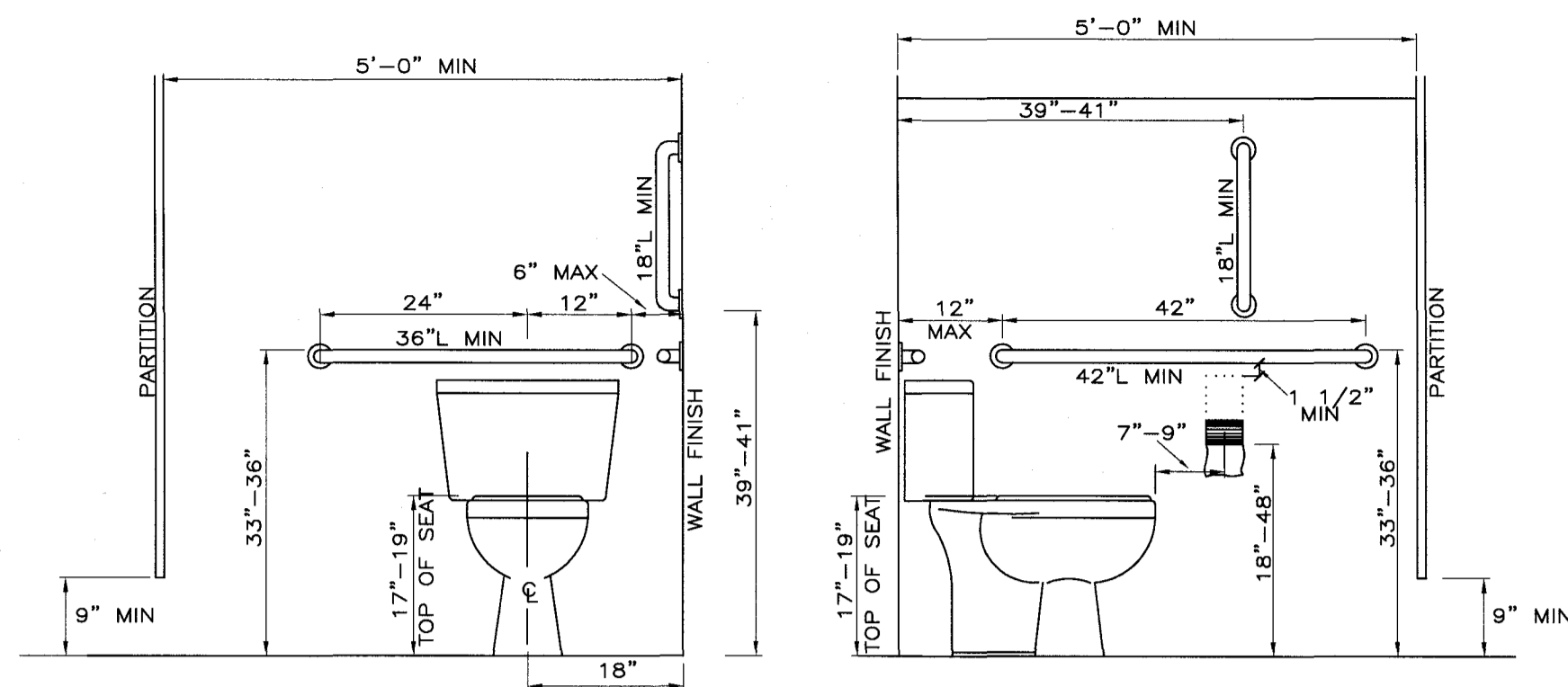
REVISIONS	
REV.	DESCRIPTION

**Campbell Bus Storage Garage**  
Buies Creek, NC 27506

DATE: 28 June 2024  
DRAWN BY: J.S.  
SCALE: 3/4" = 1'-0"

**G-4**

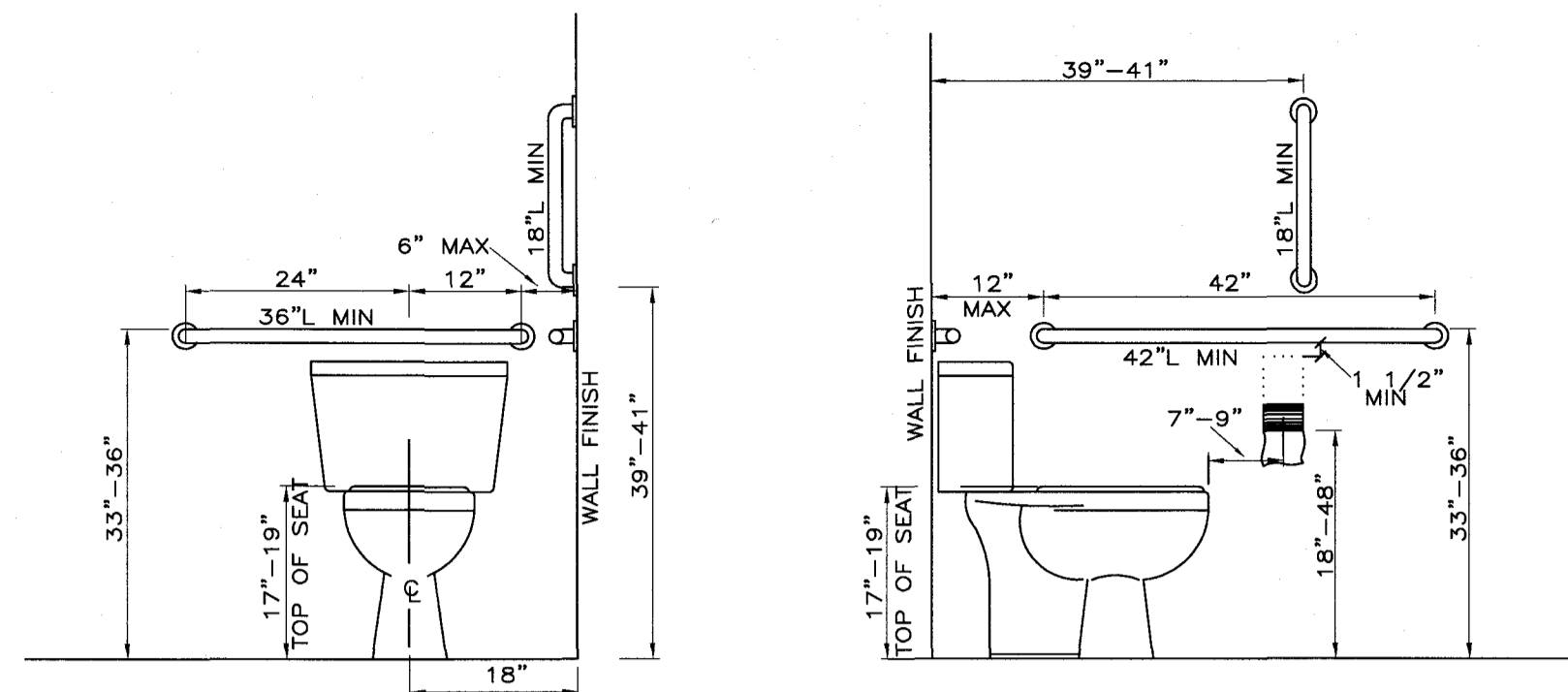




FRONT ELEVATION

SIDE ELEVATION

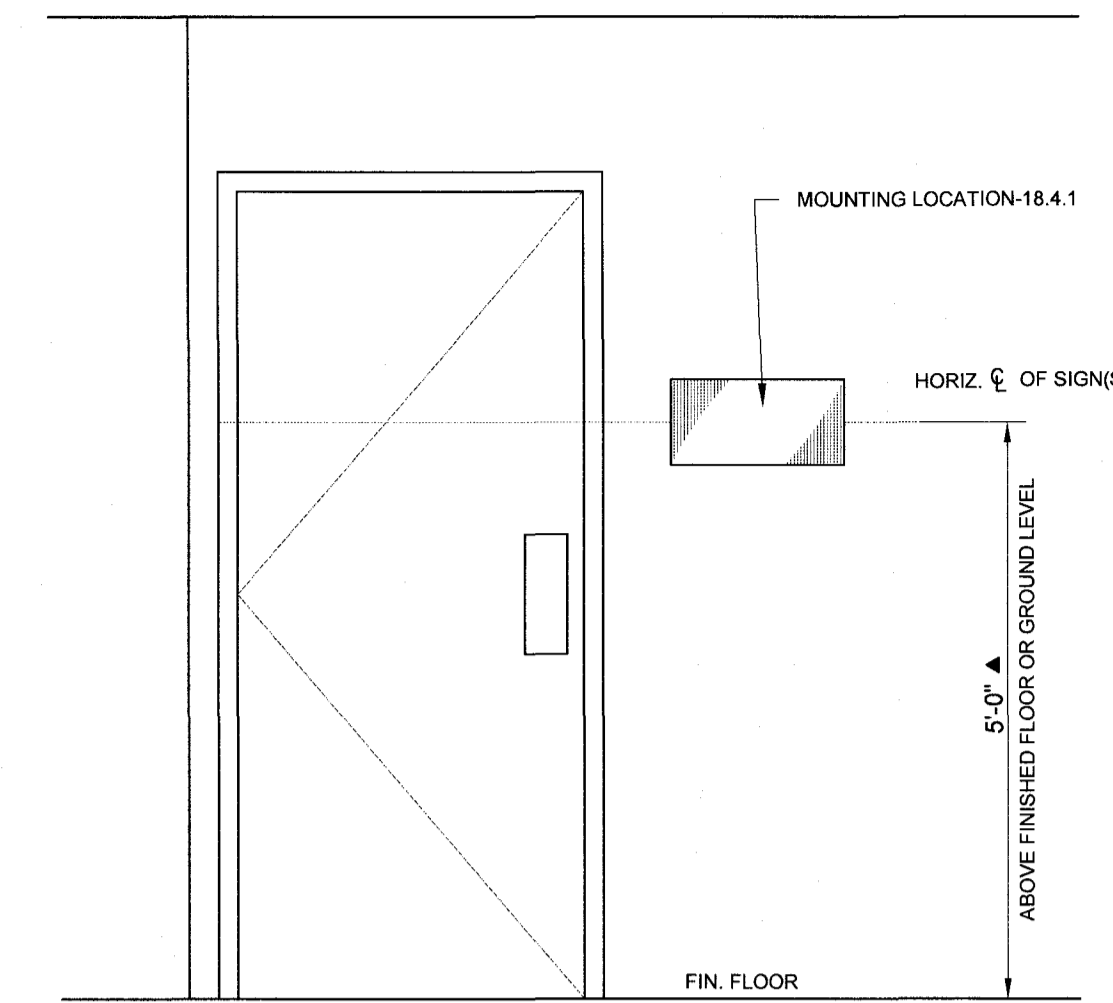
**TOILET ELEVATIONS FOR MULTIPLE STALL RESTROOMS**  
(ADA REQUIREMENTS)



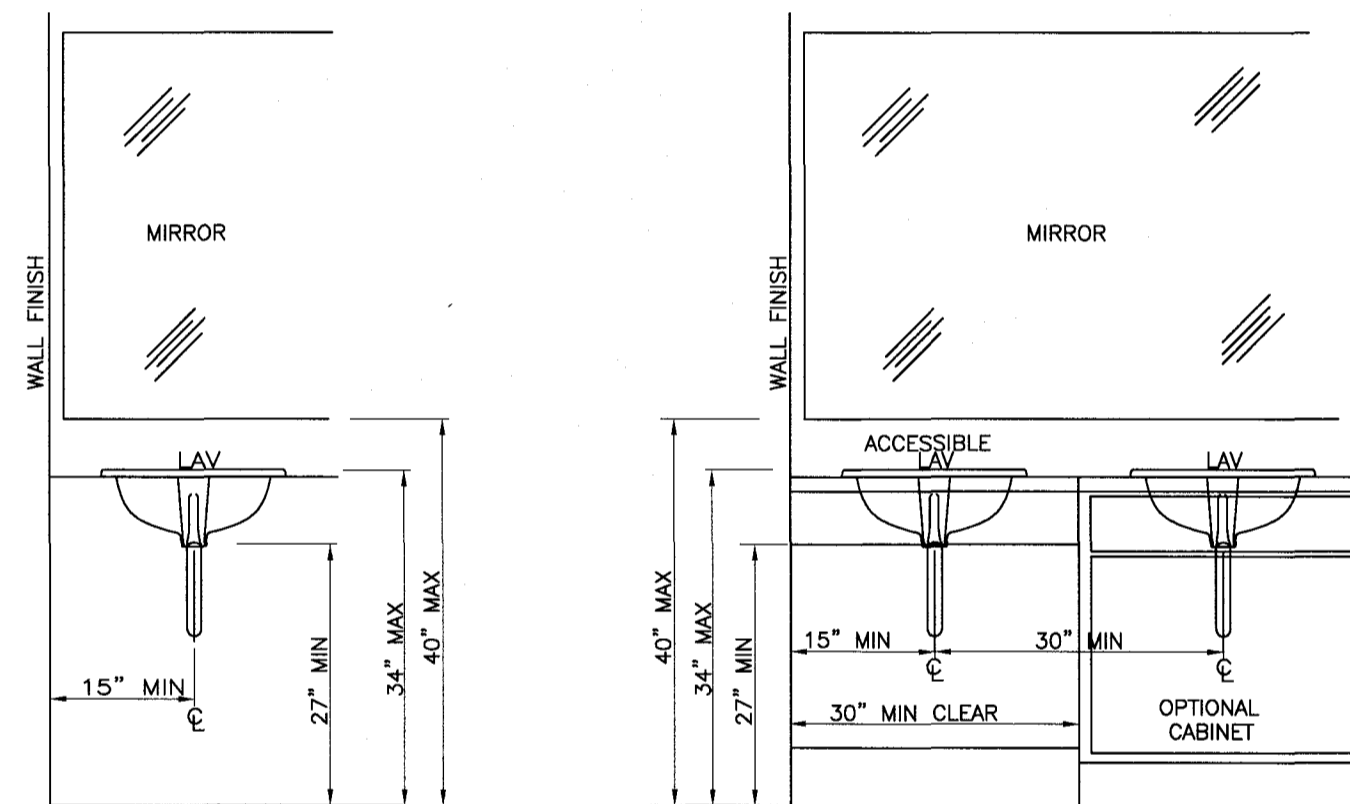
FRONT ELEVATION

SIDE ELEVATION

**TOILET ELEVATIONS FOR SINGLE RESTROOMS**  
(ADA REQUIREMENTS)



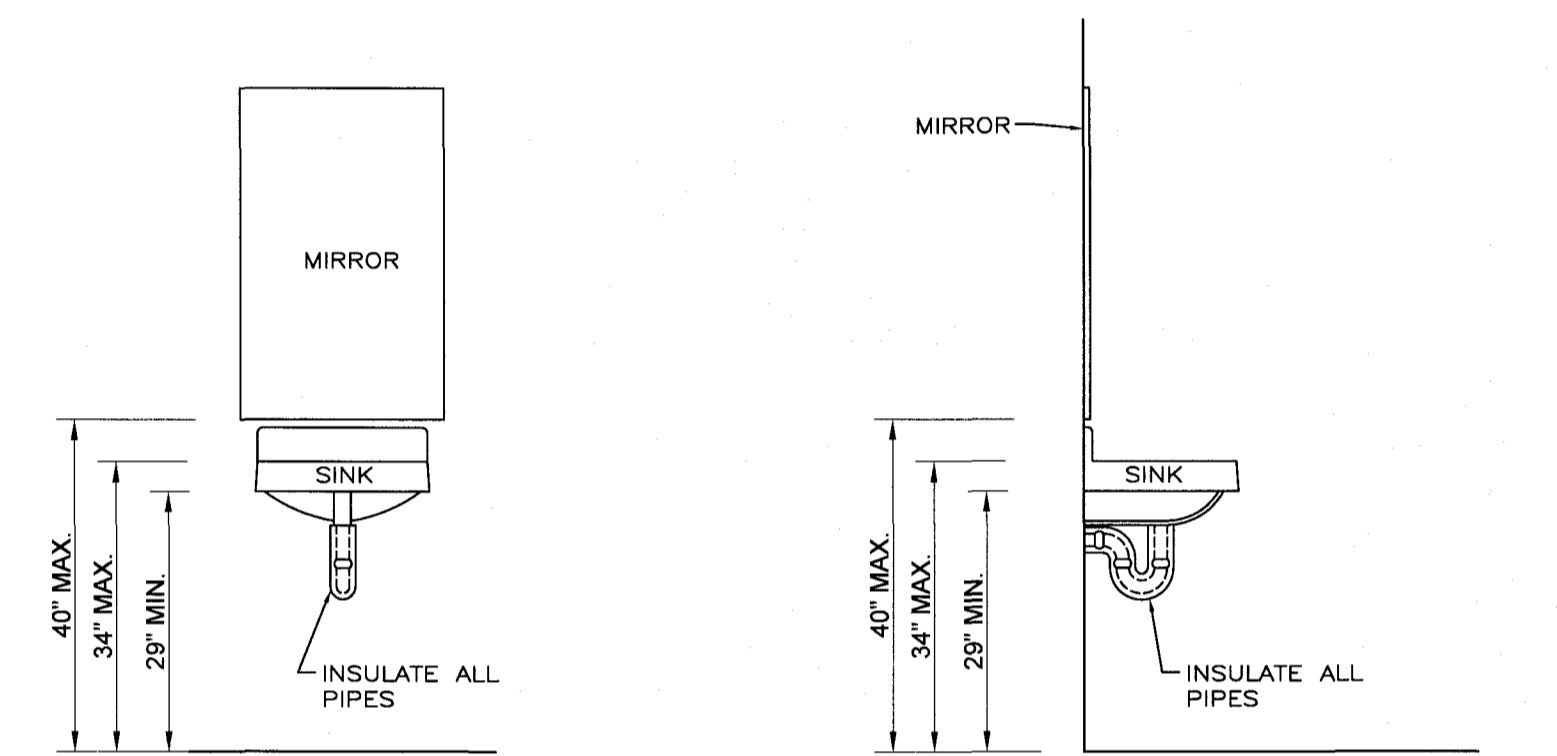
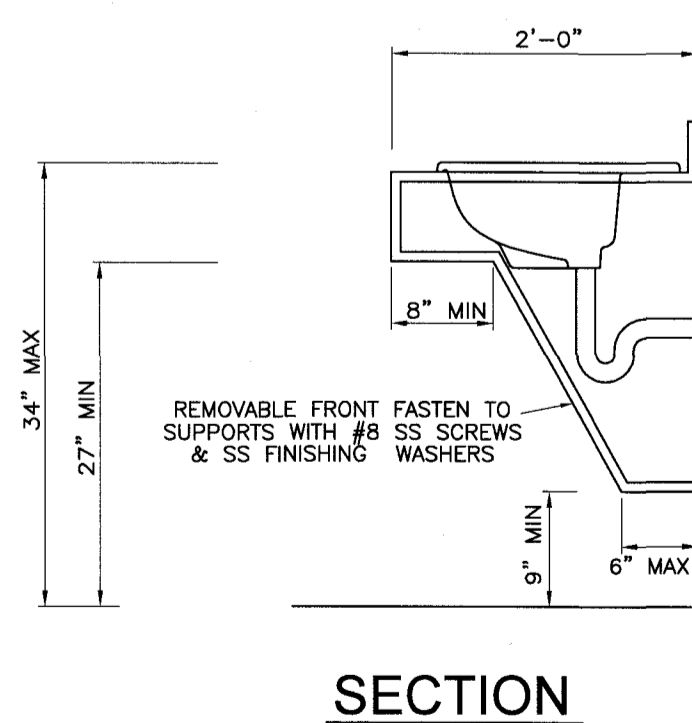
**SIGNAGE MOUNTING LOCATION & HEIGHT**  
(ADA REQUIREMENTS)



SINGLE VANITY

MULTIPLE VANTIES

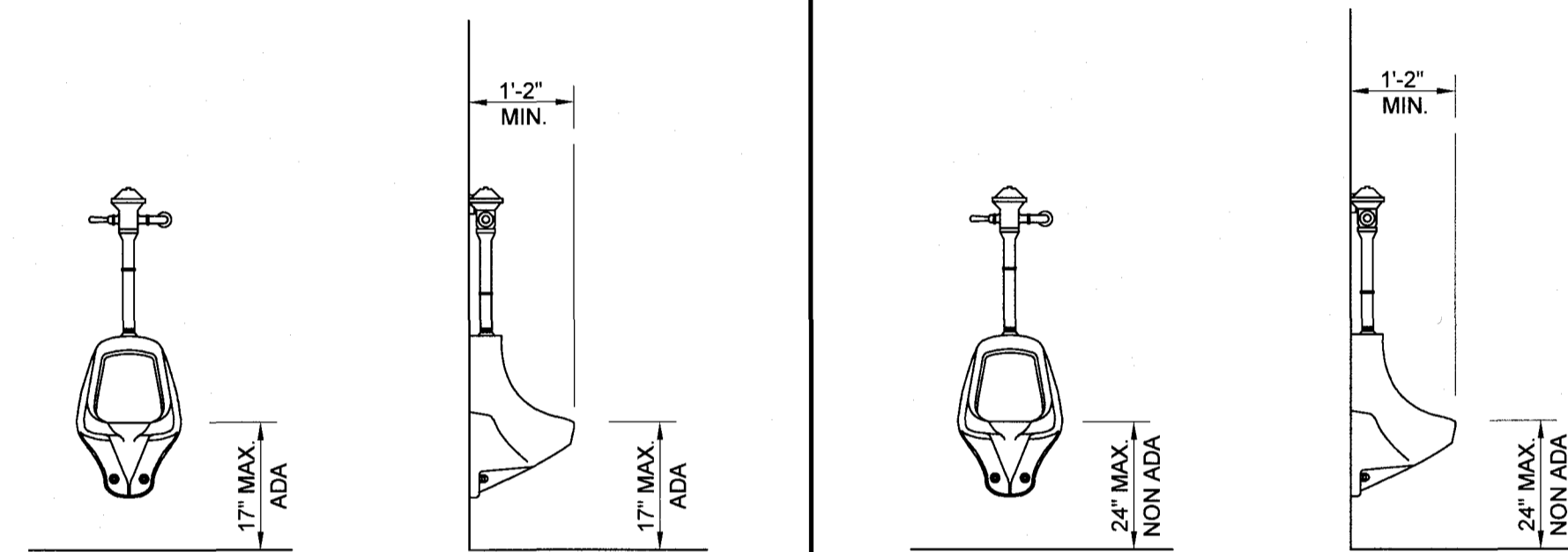
**CABINET MOUNTED VANITY DETAILS**  
(ADA REQUIREMENTS)



LAVATORY AND MIRROR

LAVATORY AND MIRROR

**WALL HUNG LAVATORY DETAILS**

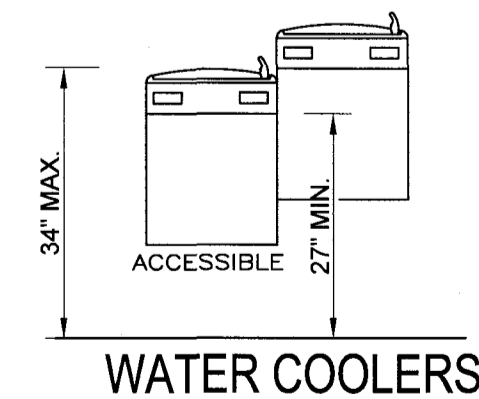


HC URINAL

HC URINAL

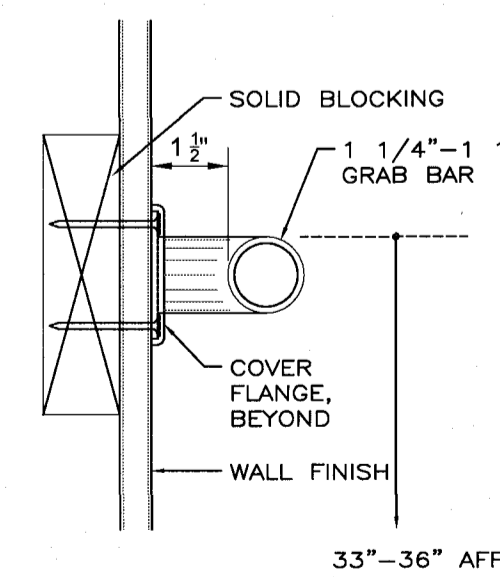
STANDARD URINAL

**URINAL DETAILS**

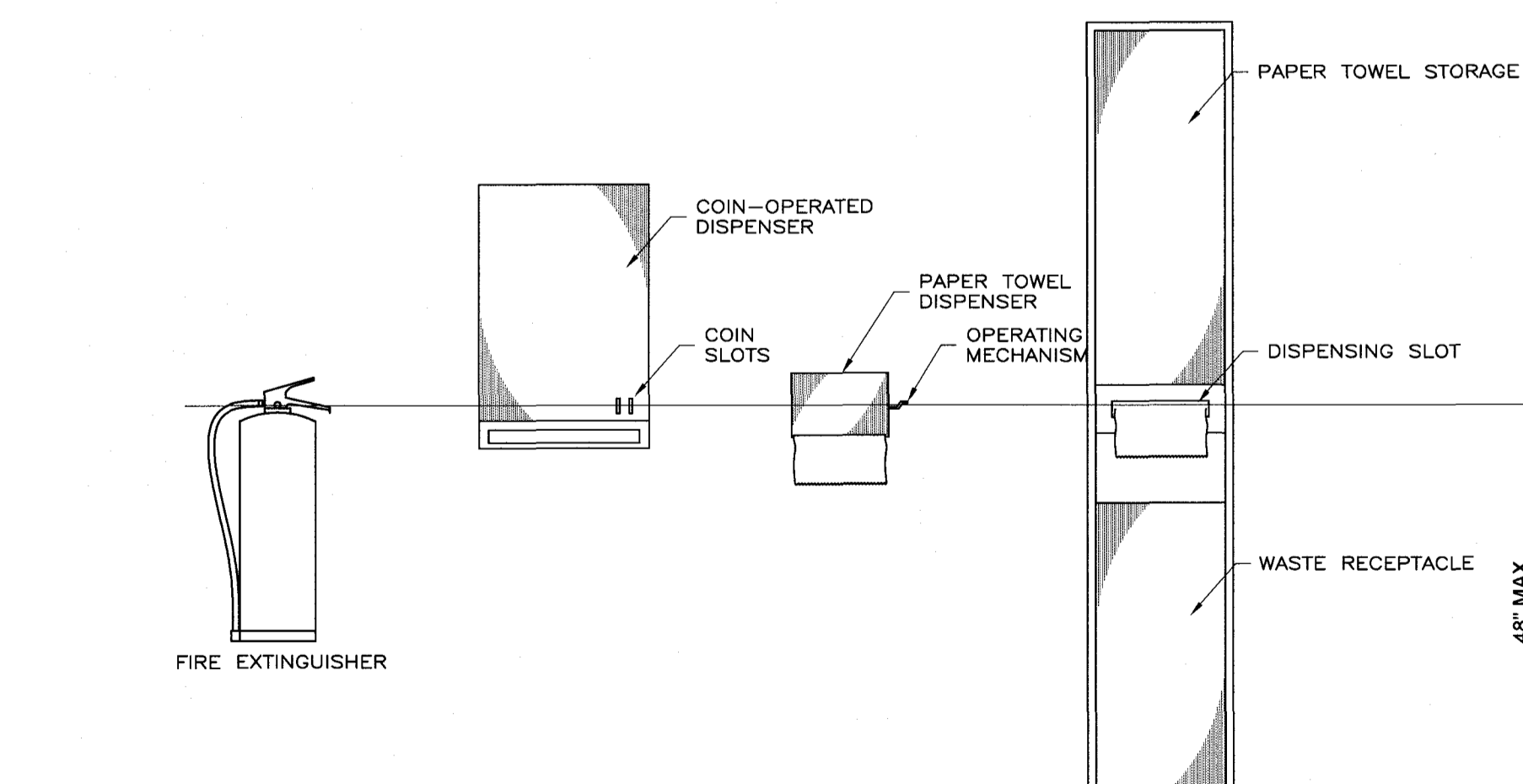


WATER COOLERS

**WATER COOLER DETAILS**  
(ADA REQUIREMENTS)

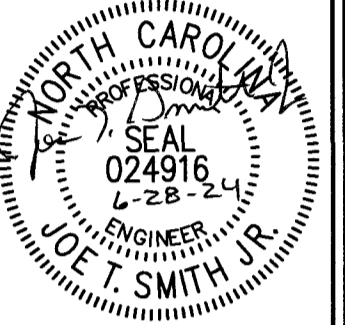


**GRAB BAR DETAIL**  
(ADA REQUIREMENTS)



**DISPENSERS**  
(ADA REQUIREMENTS)

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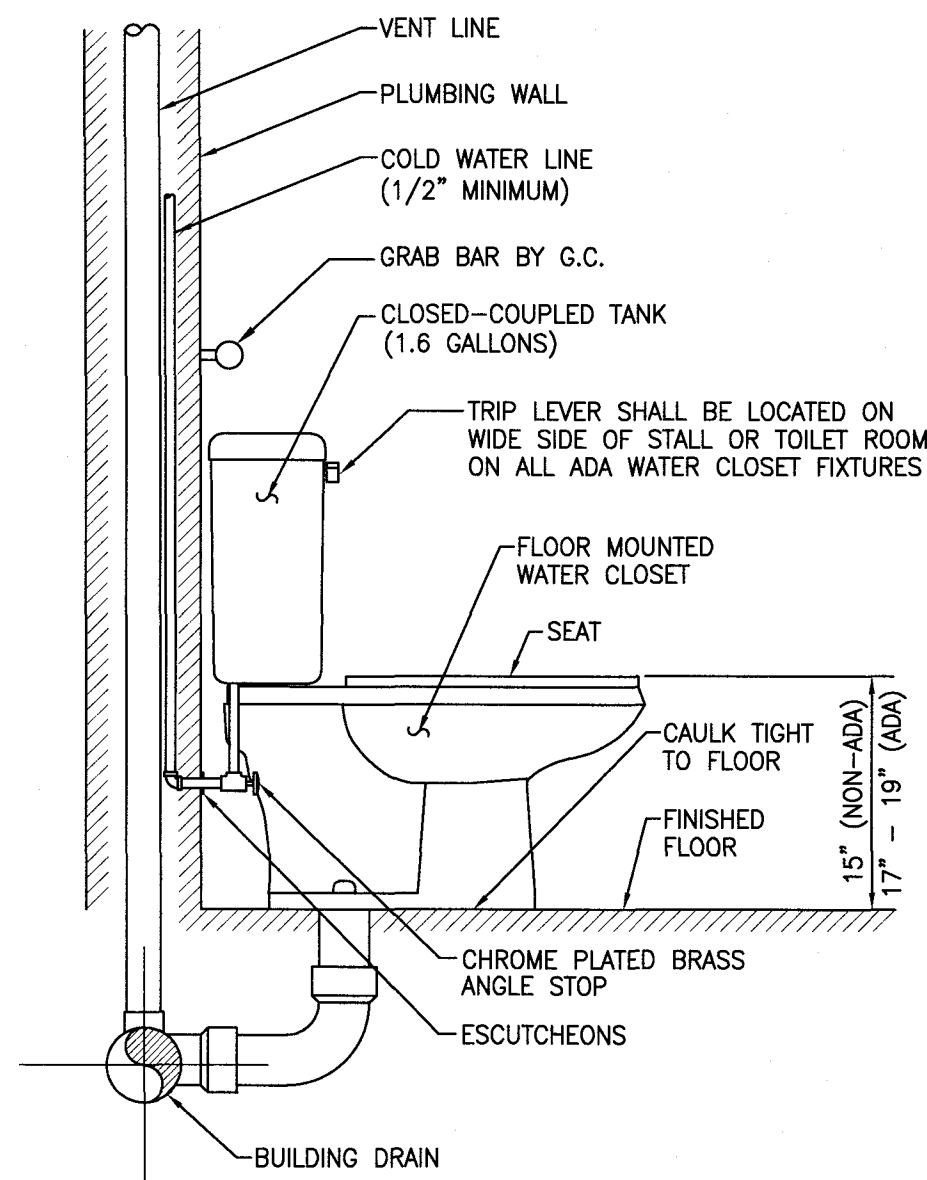


REV.	DATE	DESCRIPTION

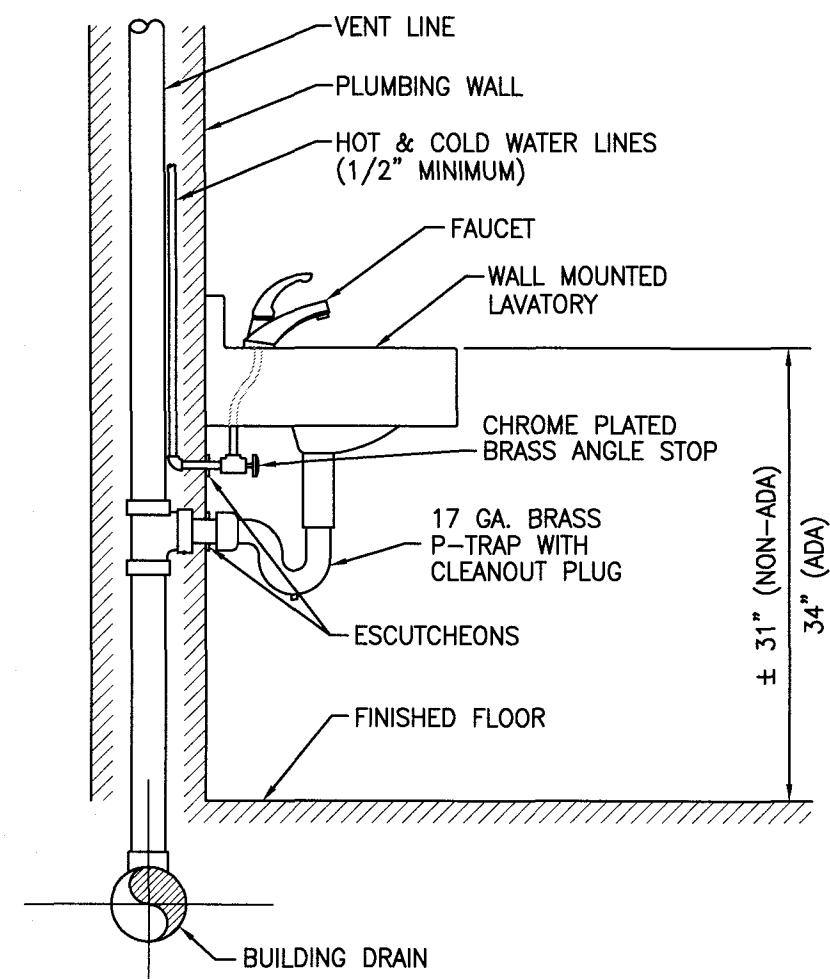
**Campbell Bus Storage Garage**  
Buies Creek, NC 27506





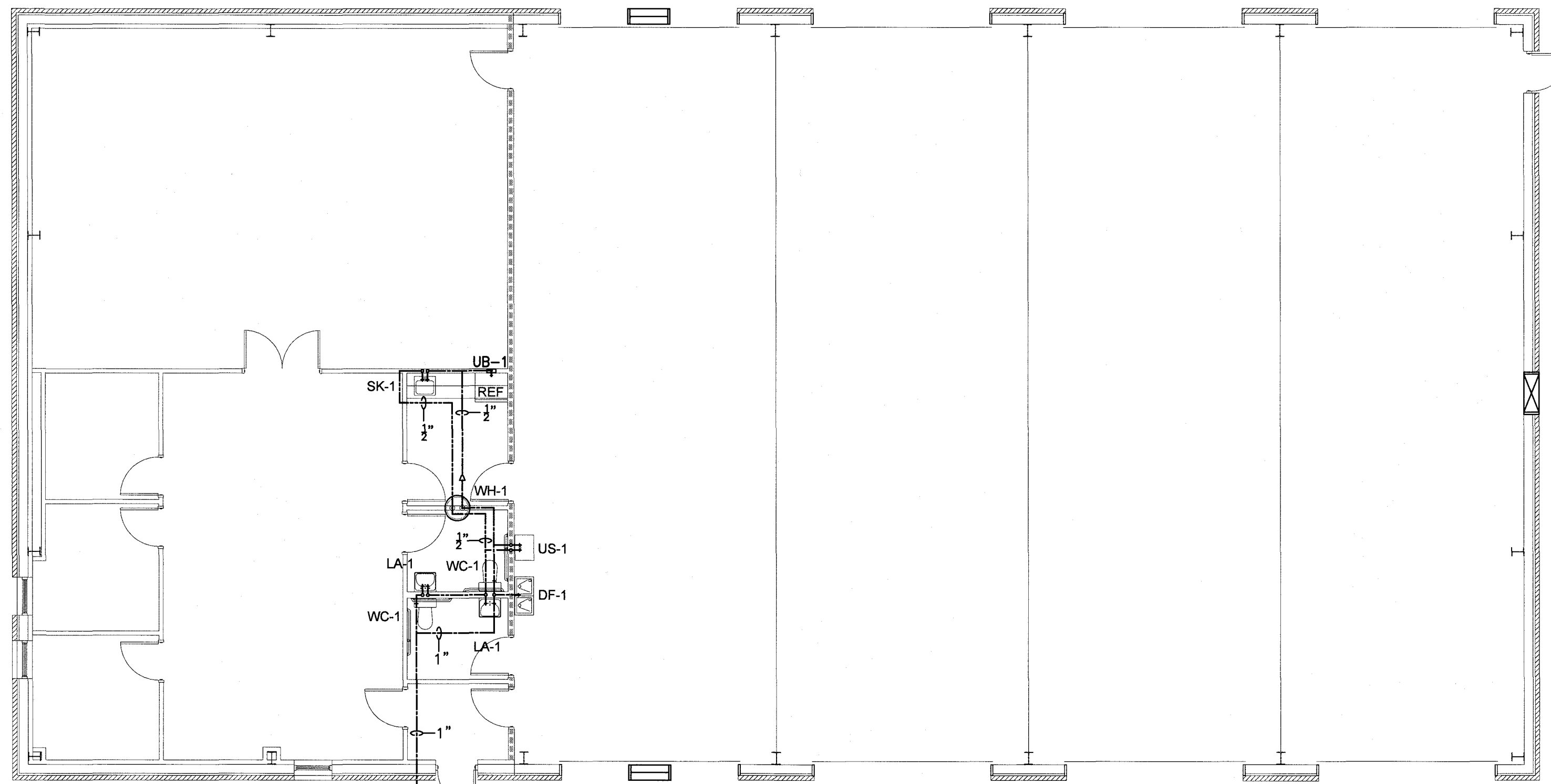


**DETAIL NO. 1**  
FLOOR MOUNTED WATER CLOSET WITH FLUSH TANK  
SCALE: NTS



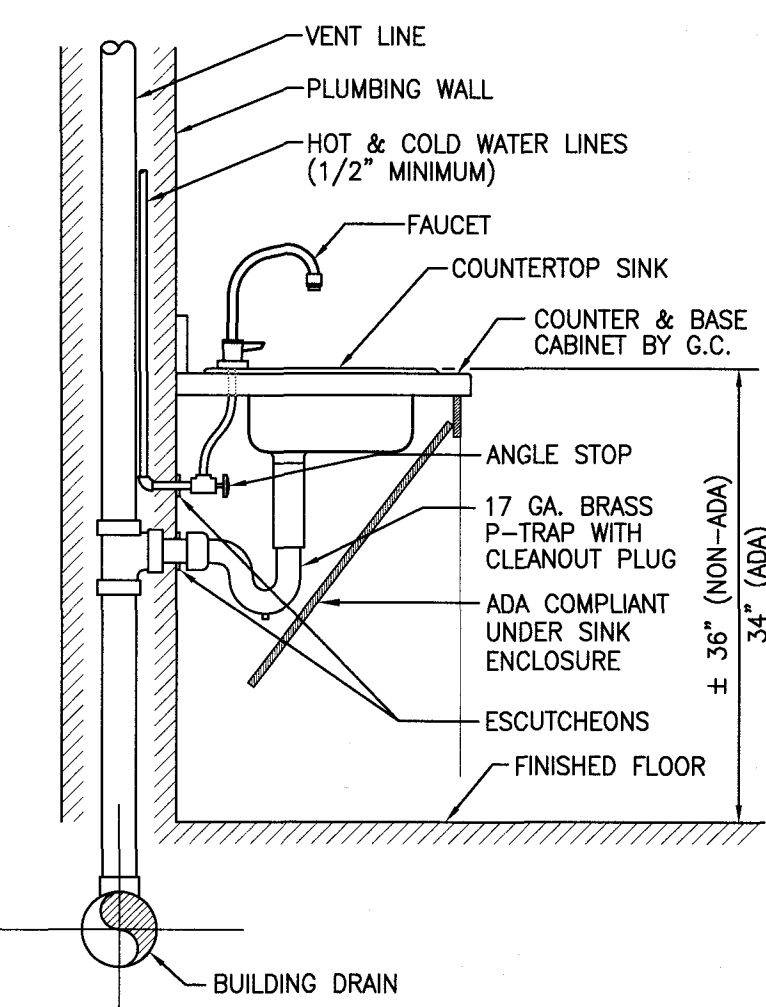
- NOTES:**
1. PROVIDE ADA LAVATORIES WITH PRE-WRAPPED ANTI-MICROBIAL MOLDED CLOSED CELL VINYL ON EXPOSED HOT & COLD WATER AND DRAIN LINES.
  2. WATER SUPPLY INLETS AND RISERS SHALL BE BRASS OR COPPER (CHROME PLATED WHERE EXPOSED TO VIEW).

**DETAIL NO. 2**  
WALL MOUNTED LAVATORY  
SCALE: NTS



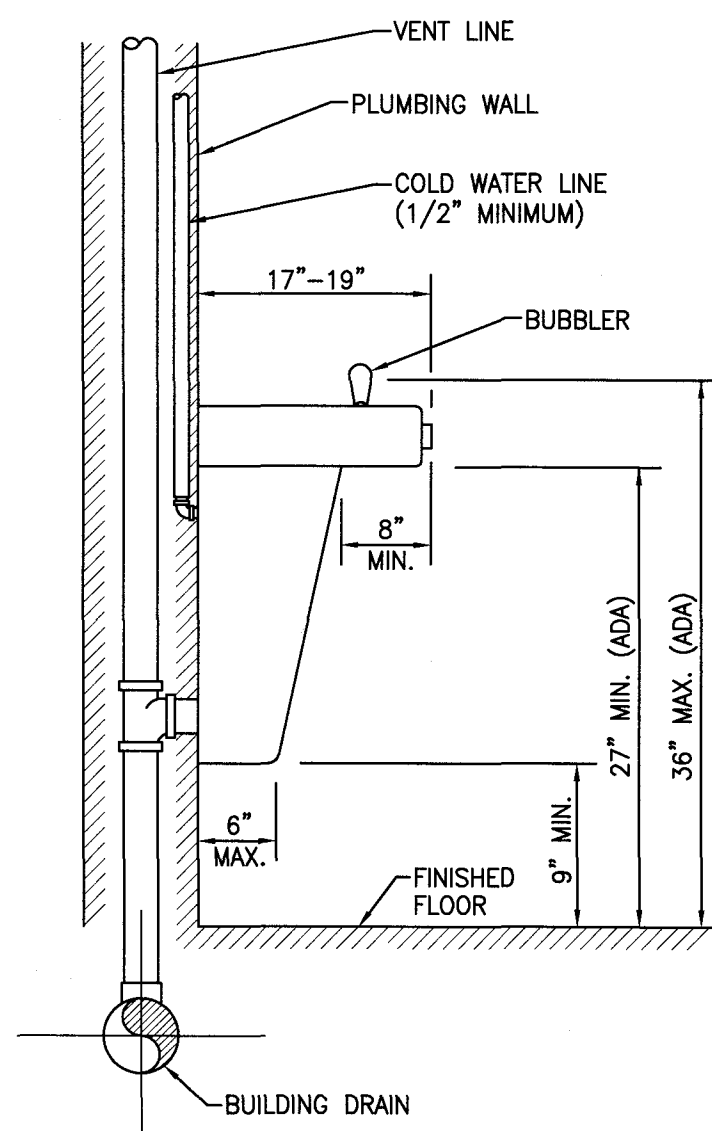
**1**  
**P-2** **PLUMBING PLAN - HOT & COLD WATER PIPING LAYOUT**  
SCALE: 1/8"=1'-0"

**FIRE RATING LEGEND**  
----- 3 HR. RATED FIRE BARRIER PER UL #U419



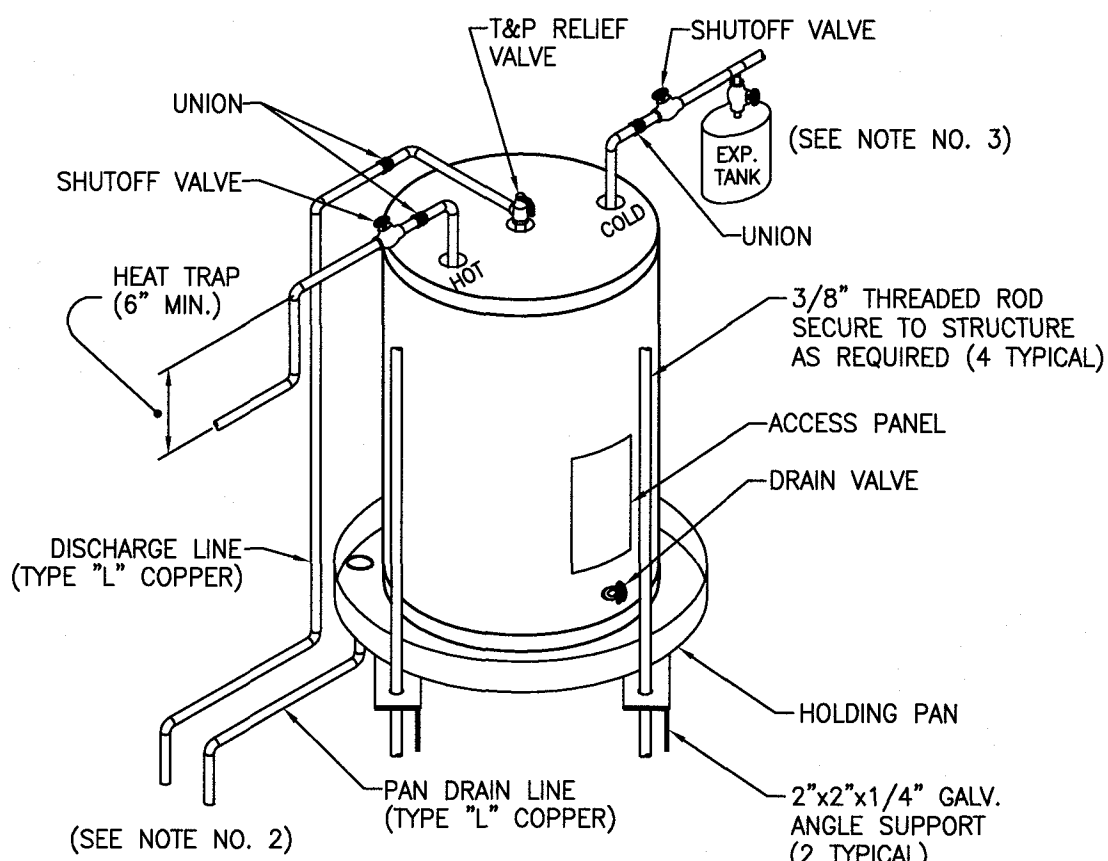
- NOTES:**
1. G.C. SHALL PROVIDE ADA COMPLIANT UNDERSPACE SINK PROTECTIVE ENCLOSURES FOR ALL ADA SINKS.
  2. WATER SUPPLY INLETS AND RISERS SHALL BE BRASS OR COPPER (CHROME PLATED WHERE EXPOSED TO VIEW).

**DETAIL NO. 3**  
COUNTERTOP MOUNTED SINK  
SCALE: NTS



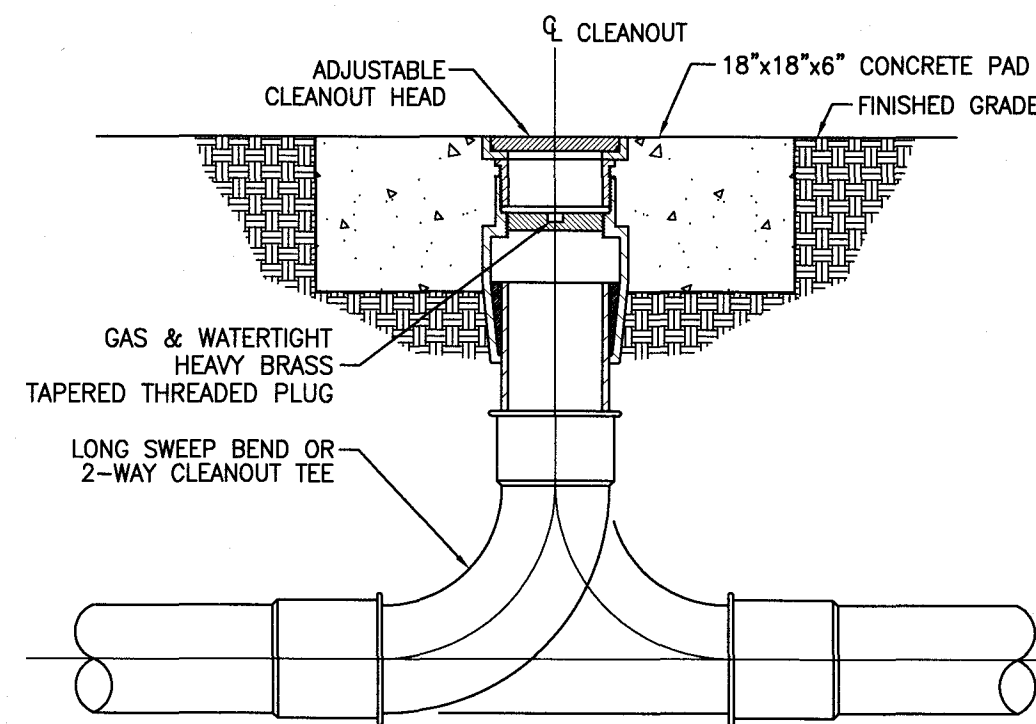
- NOTE:** PROVIDE APRON ACCESSORY ON UPPER SPLIT LEVEL UNITS WHEN INSTALLED IN NON-RECESSED APPLICATIONS.

**DETAIL NO. 4**  
WALL MOUNTED DRINKING FOUNTAIN  
SCALE: NTS

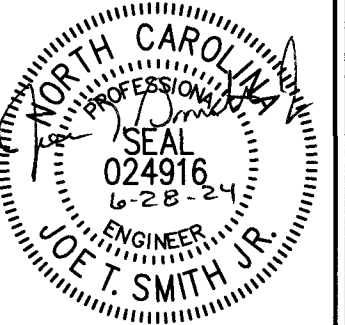


- NOTES:**
1. PAN SHALL BE CONSTRUCTED OF A MIN. OF 24 GA. GALV. METAL OR 1/16 INCH HIGH IMPACT PLASTIC AND SUFFICIENT SIZE & SHAPE TO RECEIVE ALL DRIPPINGS. DISCHARGE & PAN DRAIN SHALL BE FULL-SIZE OF RELIEF VALVE BUT NOT LESS THAN 1 INCH, TERMINATING OVER A SUITABLY LOCATED AT EXTERIOR OF BUILDING 6 INCHES ABOVE GRADE.
  2. PROVIDE PRECHARGED DIAPHRAGM EXPANSION TANK ON SYSTEMS HAVING CHECK VALVES OR BACKFLOW PREVENTERS ON SUPPLY WATER LINE. TANK SHALL BE 2 GALLON CAPACITY U.N.O. AND APPROVED FOR POTABLE WATER SYSTEMS.

**DETAIL NO. 5**  
CEILING MOUNTED ELECTRIC WATER HEATER  
SCALE: NTS



**DETAIL NO. 6**  
CLEANOUT ON GRADE WITH LONG SWEEP BEND OR 2-WAY TEE  
SCALE: NTS



REV.	DATE	DESCRIPTION

**Campbell Bus Storage Garage**  
Buies Creek, NC 27506

**MECHANICAL NOTES:**

- MECHANICAL PLANS ARE INTENDED TO PROVIDE INFORMATION FOR INSTALLATION OF A COMPLETE OPERATING MECHANICAL SYSTEM. PROVIDE ALL ESSENTIAL LABOR, MATERIALS & DEVICES REQUIRED TO PRODUCE A QUALITY END PRODUCT.
- CONTRACTOR SHALL REVIEW & BECOME FAMILIAR WITH THE WORK OF ALL TRADES FOR PURPOSES OF COORDINATION AND ROUTING. CONTRACTOR SHALL PROVIDE REQUIRED PLANNING, COORDINATION AND SEQUENCING OF HVAC INSTALLATION WITH BUILDING COMPONENTS AND OTHER TRADES.
- ALL WORK SHALL COMPLY WITH LOCAL, STATE & NATIONAL CODES. WORKMANSHIP SHALL MEET OR EXCEED INDUSTRY STANDARDS.
- FABRICATE AND INSTALL DUCT PER SMACNA STANDARDS FOR 2-INCH WC WITH GALVANIZED METAL (26 GAUGE MINIMUM). ALL RADIUS ELBOWS & TEES SHALL HAVE CENTERLINE RADIUS OF 1.5 X DUCT WIDTH. ALL SQUARE ELBOWS & TEES SHALL HAVE TURNING VANES. DUCT UPSTREAM OF VAV TERMINALS SHALL BE CONSTRUCTED FOR 3-INCH WC. PRIOR TO FABRICATION, MECHANICAL CONTRACTOR SHALL FIELD VERIFY STRUCTURAL OBSTRUCTIONS & CEILING SPACE LIMITATIONS AND MAKE NECESSARY DUCT MODIFICATIONS INCLUDING CHANGING OF ASPECT RATIOS, ADDING OFFSETS, AND SHIFTING LOCATIONS. PROTECT DUCT BY STORING IN A CLEAN AND DRY ENVIRONMENT PRIOR TO INSTALLATION. COVER ENDS OF EXPOSED WORK AT THE END OF EVERY SHIFT.
- ALL DUCT JOINTS, SEAMS & BRANCH TAKEOFFS SHALL BE SEALED AIR-TIGHT WITH DUCT SEALANT EQUAL TO HARDCAST IRON-GRIP OR FOIL-GRIP TAPE EQUAL TO HARDCAST AFG-140Z.
- ALL EXPOSED & EXTERIOR DUCT SHALL BE CONSTRUCTED OF PAINT GRIP GALVANIZED METAL. SEAL ALL JOINTS & SEAMS WEATHERTIGHT USING SMACNA APPROVED DUCT SEALER WITH UV PROTECTION.
- ROUND RUNOUTS SHALL HAVE SPIN-INS WITH DAMPERS, RECTANGULAR BRANCH DUCTS SHALL HAVE 45 DEGREE TAPS WITH AIR EXTRACTORS AND ALL TEES SHALL HAVE SPLITTER DAMPERS. PROVIDE ANY OTHER DEVICES REQUIRED TO BALANCE AIR SYSTEM.
- FLEX DUCT SHALL HAVE METALIZED VAPOR BARRIER WITH MIN. R-VALUE OF 5.0. BOTH ENDS SHALL BE SECURED WITH NYLON BANDS AND METALIZED DUCT TAPE PER MFG'S RECOMMENDATIONS AND IN ACCORDANCE WITH U.L. 181B.
- RIGID ROUND AND RECTANGULAR DUCT SHALL BE EXTERNALLY INSULATED WITH 2-INCH THICK 3/4 LB. DENSITY FIBERGLASS BLANKET WITH FSK VAPOR BARRIER AND A MIN. R-VALUE OF 6.5. STAPLE AND SEAL ALL JOINTS WITH 4-INCH WIDE METALIZED DUCT TAPE EQUAL TO SHURFLEX SF-683.
- INSULATE & SEAL ALL GRILLE & DIFFUSER NECKS TO MAINTAIN VAPOR BARRIER AND ELIMINATE CONDENSATION.
- CONDENSATE TRAPS FOR ALL AC UNITS SHALL BE SIZED AS RECOMMENDED BY UNIT MFG. CONDENSATE PIPING AND TRAPS SHALL BE SCHEDULE 40 PVC ROUTED TO BUILDING EXTERIOR.
- REFRIGERANT PIPING SHALL BE TYPE ACR COPPER WITH SILVER SOLDERED JOINTS. INSTALL PER EQUIPMENT INSTALLATION INSTRUCTIONS. INSULATION SHALL BE 1-INCH THICK MINIMUM.
- PROVIDE GRAVITY SHUT-OFF DAMPERS ON OUTSIDE AIR INTAKE DUCTS.
- ALL PIPING SHALL BE SUPPORTED & SECURED WITH SUITABLE HANGERS, STRAPS OR PIPE STANDS. SUPPORT WITH NO DROOPS OR SAGS. ALL HANGERS AND ATTACHMENTS SHALL BE PLATED, GALVANIZED OR PAINTED. PROVIDE ISOLATION ON PIPING OF DISSIMILAR MATERIALS.
- POWER WIRING, DISCONNECTS & STARTERS NOT FURNISHED WITH HVAC EQUIPMENT AND FINAL CONNECTIONS SHALL BE BY THE E.C.
- CONTROL WIRING, RELAYS AND INTERLOCKING DEVICES SHALL BE PROVIDED BY THE M.C.
- TEMPERATURE CONTROLS FOR EACH HEATING-COOLING SYSTEM SHALL CONSIST OF AN ELECTRONIC PROGRAMMABLE HEATING-COOLING THERMOSTAT WITH HEAT-OFF-COOL-AUTO SYSTEM SWITCH & AUTO-ON FAN SWITCH. MOUNT THERMOSTATS 48-INCHES A.F.F.
- INSTALL EQUIPMENT TO FACILITATE SERVICING, MAINTENANCE & REPAIR IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AS WELL AS SPECIFIC INSTRUCTIONS ON PLANS.
- PROVIDE FLEX CONNECTORS AT ALL DUCT TO EQUIPMENT CONNECTIONS NOT HAVING INTERNALLY ISOLATED FANS.
- PROVIDE CONCRETE HOUSEKEEPING PADS FOR ALL GROUND & FLOOR MOUNTED EQUIPMENT. UNLESS NOTED OTHERWISE ALL PADS SHALL BE 4" THICK & 4" LARGER THAN EQUIPMENT ON ALL SIDES.
- CONTRACTOR SHALL BALANCE AIR SYSTEM TO QUANTITIES INDICATED ON PLANS AND PROVIDE TYPE WRITTEN REPORT WITH O&M MANUALS.
- ALL EQUIPMENT & SYSTEMS SHALL BE WASHED, MECHANICAL AREAS CLEANED AND PAINTED SURFACES TOUCHED UP TO MATCH FACTORY APPLIED FINISHES. ALL DUCT SYSTEMS AND AIR HANDLERS SHALL BE VACUUM AND WIPED CLEAN ON THE INSIDE PRIOR TO TURNING THE PROJECT OVER TO THE OWNER. SYSTEMS THAT HAVE NOT BEEN ADEQUATELY PROTECTED DURING INSTALLATION WILL REQUIRE CLEANING AGAIN AT THE END OF THE PROJECT.
- CONTRACTOR SHALL PROVIDE BUILDING OWNER WITH A COMPLETE OPERATING & MAINTENANCE MANUAL INCLUDING EQUIPMENT BASIC DATA, CONTROL INFORMATION, ROUTINE MAINTENANCE ACTIONS AND SERVICE AGENCIES NAME, PHONE NUMBER & ADDRESS.

AIR DISTRIBUTION SCHEDULE										
MARK	CFM RANGE	TYPE	FACE	NECK	PATTERN	MAT'L	FINISH	MANF.	MODEL	NOTES
A	0-100	T-BAR - LOUVERED SUPPLY	24x24	6#	4-WAY	STEEL	WHITE ENAMEL	H&C	HVS	-
B	105-230	T-BAR - LOUVERED SUPPLY	24x24	8#	4-WAY	STEEL	WHITE ENAMEL	H&C	HVS	-
C	235-380	T-BAR - LOUVERED SUPPLY	24x24	10#	4-WAY	STEEL	WHITE ENAMEL	H&C	HVS	-
D	385-450	T-BAR - LOUVERED SUPPLY	24x24	12#	4-WAY	STEEL	WHITE ENAMEL	H&C	HVS	-
RA	0-1200	T-BAR - PERF RETURN	24x24	SEE PLANS	-	STEEL	WHITE ENAMEL	H&C	RENPS	1

- NOTES:**
- PROVIDE WITH MOLDED FIBERGLASS BACK. NECK SIZES TO MATCH ROUND RUNOUT SIZES ON PLANS.
  - PROVIDE FILTER GRILLES WITH 1" THICK FIBERGLASS FILTERS. T-BAR FILTER GRILLES USE 20x20 FILTERS.

HEAT PUMP (INDOOR UNIT) SCHEDULE													
MARK	SUPPLY FAN				COOLING CAPACITY		AUX. HEAT	VOLT/PH	MCA	MOCP	MANF.	MODEL	WEIGHT
	SA	CFM	OA	CFM	EXT	SP	MTR						
AH-1	1200	200	0.5"	1/2	36.0 MBH	27.0 MBH	9.6 KW	240/1#	53	60A	TRANE	TEM3A0B36S31	150 LBS

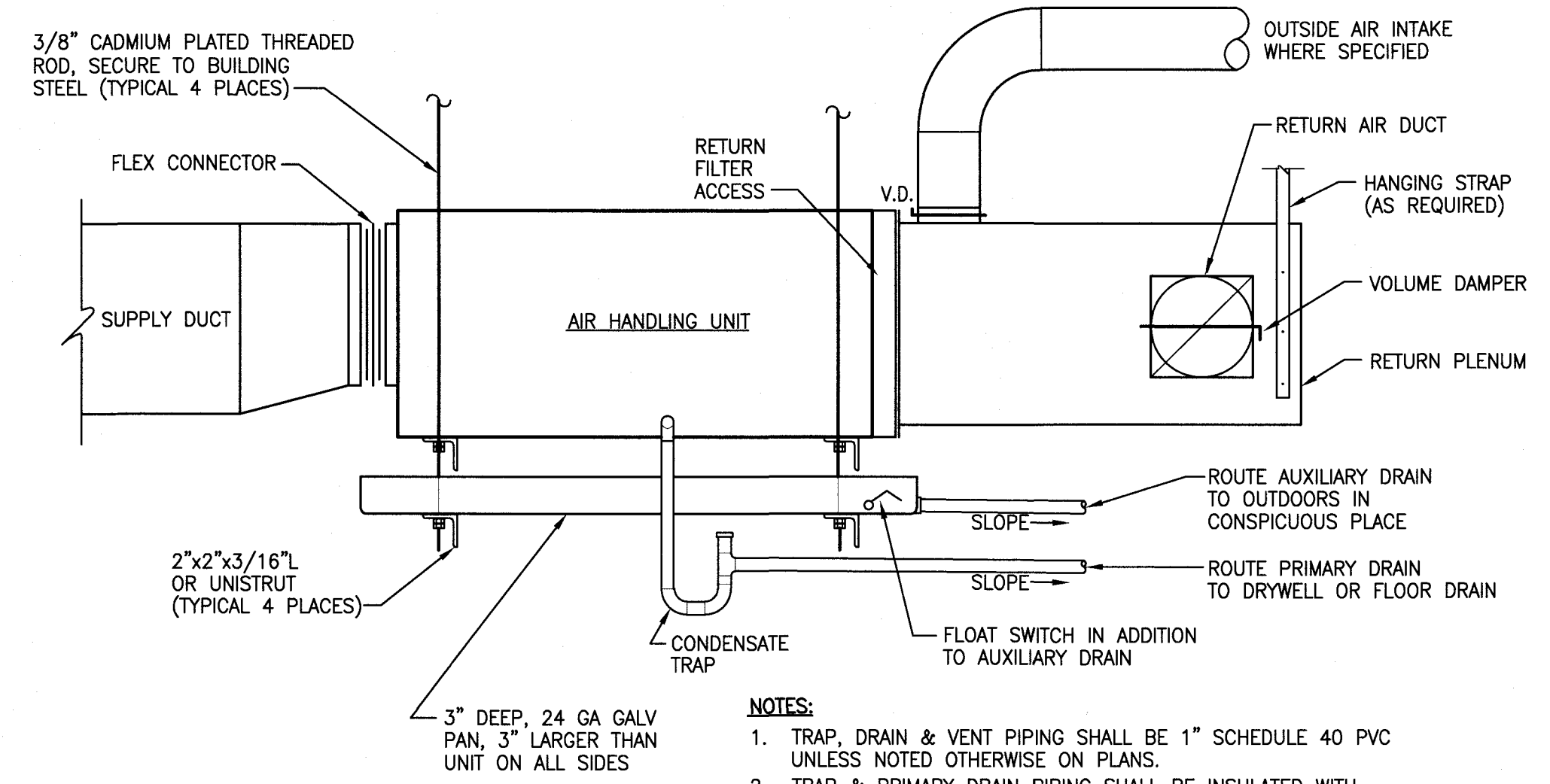
- NOTES:**
- PROVIDE THE FOLLOWING OPTIONS AND ACCESSORIES:
    - SINGLE POINT WIRING CONNECTION
    - 7-DAY PROGRAMMABLE THERMOSTAT WITH LOCKOUT FUNCTION

HEAT PUMP (OUTDOOR UNIT) SCHEDULE												
MARK	EAT(DB)	NOM CAP	VOLT/PH	MCA	MOCP	MIN. RATING	COP	MANF.	MODEL	WEIGHT		
	HP-1	95"	3.0 TONS	240/1#	22	35A	13 SEER	3.1	TRANE	4TWS3036C1	198 LBS	
<b>NOTES:</b> <ol style="list-style-type: none"> <li>PROVIDE THE FOLLOWING OPTIONS AND ACCESSORIES:                             <ul style="list-style-type: none"> <li>COMPRESSOR ANTI SHORT CYCLE DELAY</li> <li>LOW AMBIENT CONTROL TO 55°</li> </ul> </li> </ol>												

EXHAUST FAN SCHEDULE												
MARK	TYPE	CFM	SP	MTR	HP	VOLT/PH	FLA	MANF.	MODEL	SONES	WEIGHT	NOTES
EF-1	CEILING	70	0.125"	49W	120/1#	1.15	BROAN	671	6.0	4	LBS	1,2
EF-2	CEILING	70	0.125"	49W	120/1#	1.15	BROAN	671	6.0	4	LBS	1,2

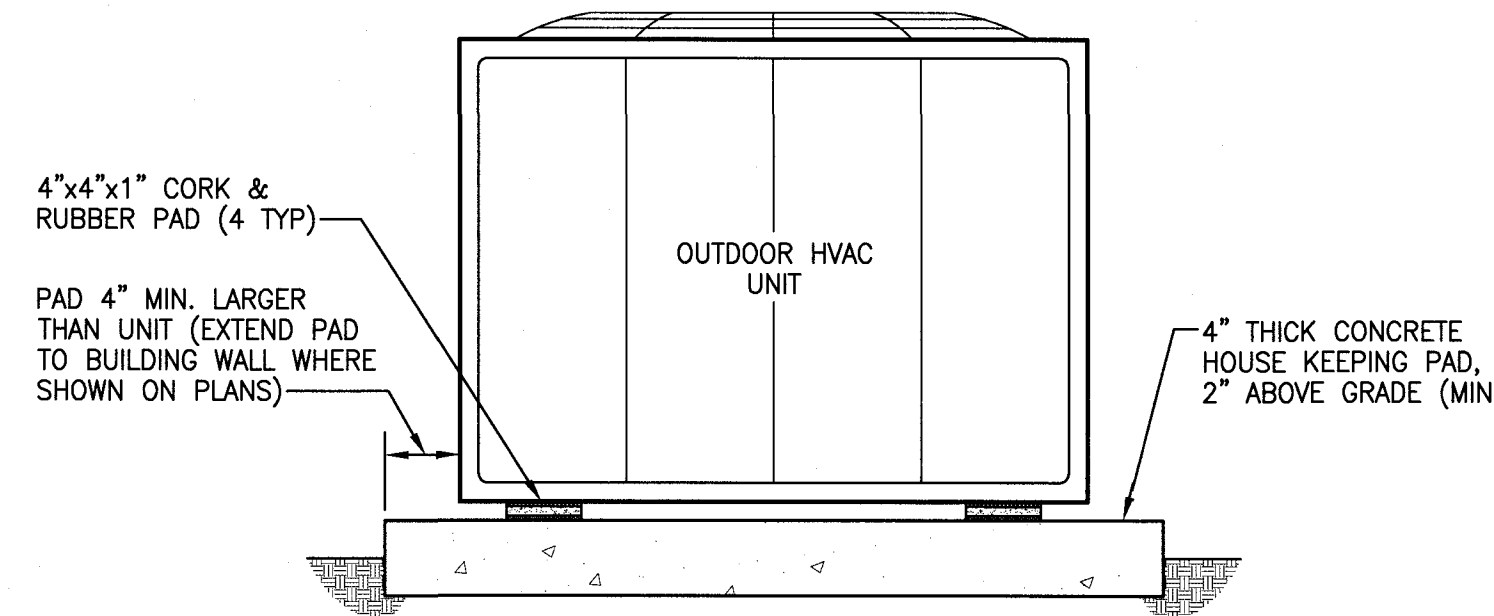
- NOTES:**
- INTERLOCK CEILING FANS WITH LIGHT SWITCHES BY E.C.
  - PROVIDE WITH BIRD SCREEN & ROOF OR WALL CAP.

HVAC LEGEND	
	RIGID RECTANGULAR DUCT
	RIGID RECTANGULAR DUCT WITH LINER
	RIGID ROUND DUCT
	FLEXIBLE DUCT
	90° ELBOW WITH TURNING VANES
	FLEXIBLE CONNECTION
	MANUAL VOLUME DAMPER
	MOTOR OPERATED DAMPER
	SMOKE DETECTOR WITH ACCESS DOOR
	ACCESS DOOR VERTICAL OR HORIZONTAL
	BRANCH DUCT WITH 45° TAP
	SUPPLY DIFFUSER WITH ROUND NECK
	RETURN/EXHAUST GRILLE W/ROUND NECK
	POWERED ROOF EXHAUSTER
	PITCHED ROOF JACK, EXHAUST
	CEILING EXHAUST FAN
	WALL THERMOSTAT
	AIR DISTRIBUTION MARK "b", 200 CFM
	EQUIPMENT MARK (SEE SCHEDULES)
	FLOW DIRECTION ARROW
	GAS PIPING
	GATE VALVE
	GAS COCK
	UNION
	REDUCER
<b>ABBREVIATIONS:</b>	
G.C.	GENERAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
E.C.	ELECTRICAL CONTRACTOR
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
UNO	UNLESS NOTED OTHERWISE
BOD	BOTTOM OF DUCT
TOD	TOP OF DUCT



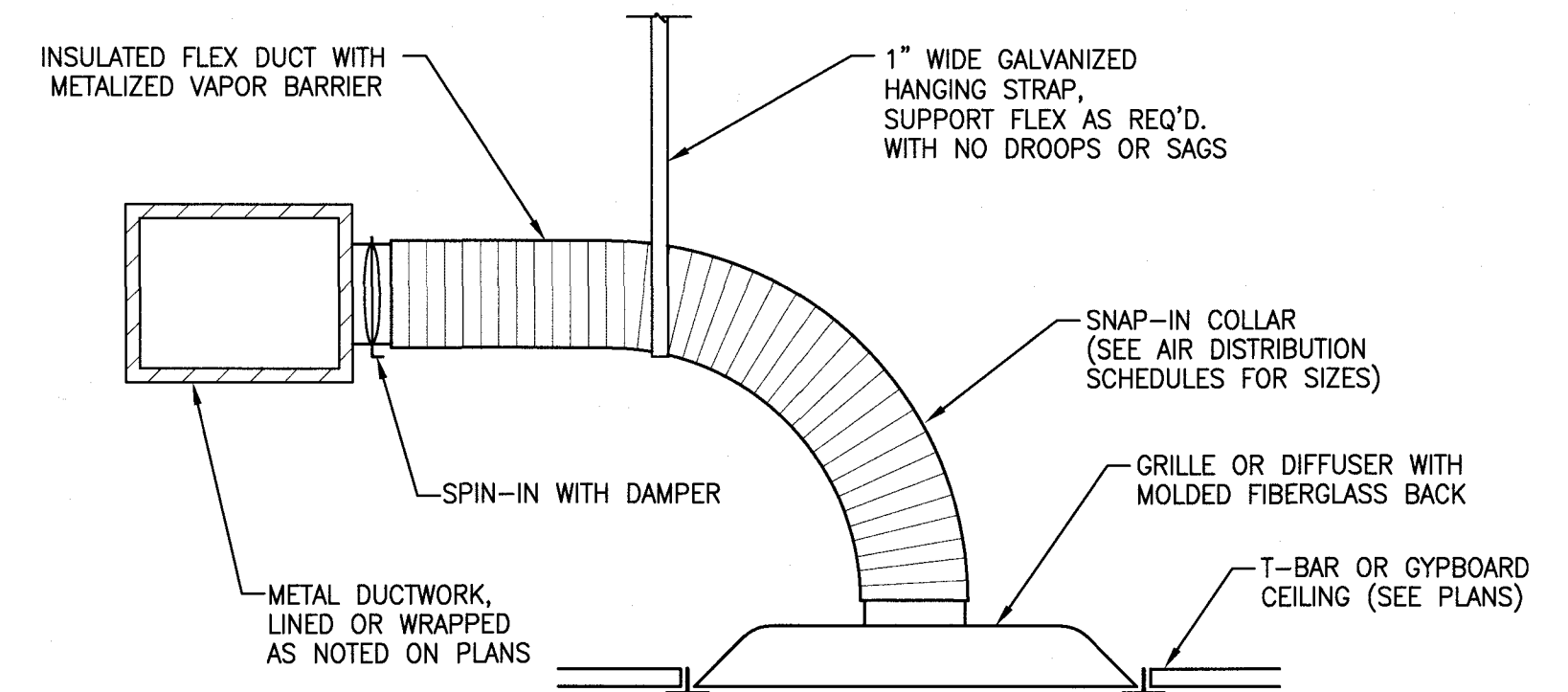
**DETAIL NO. 1**

ABOVE CEILING AIR HANDLING UNIT  
SCALE: NTS



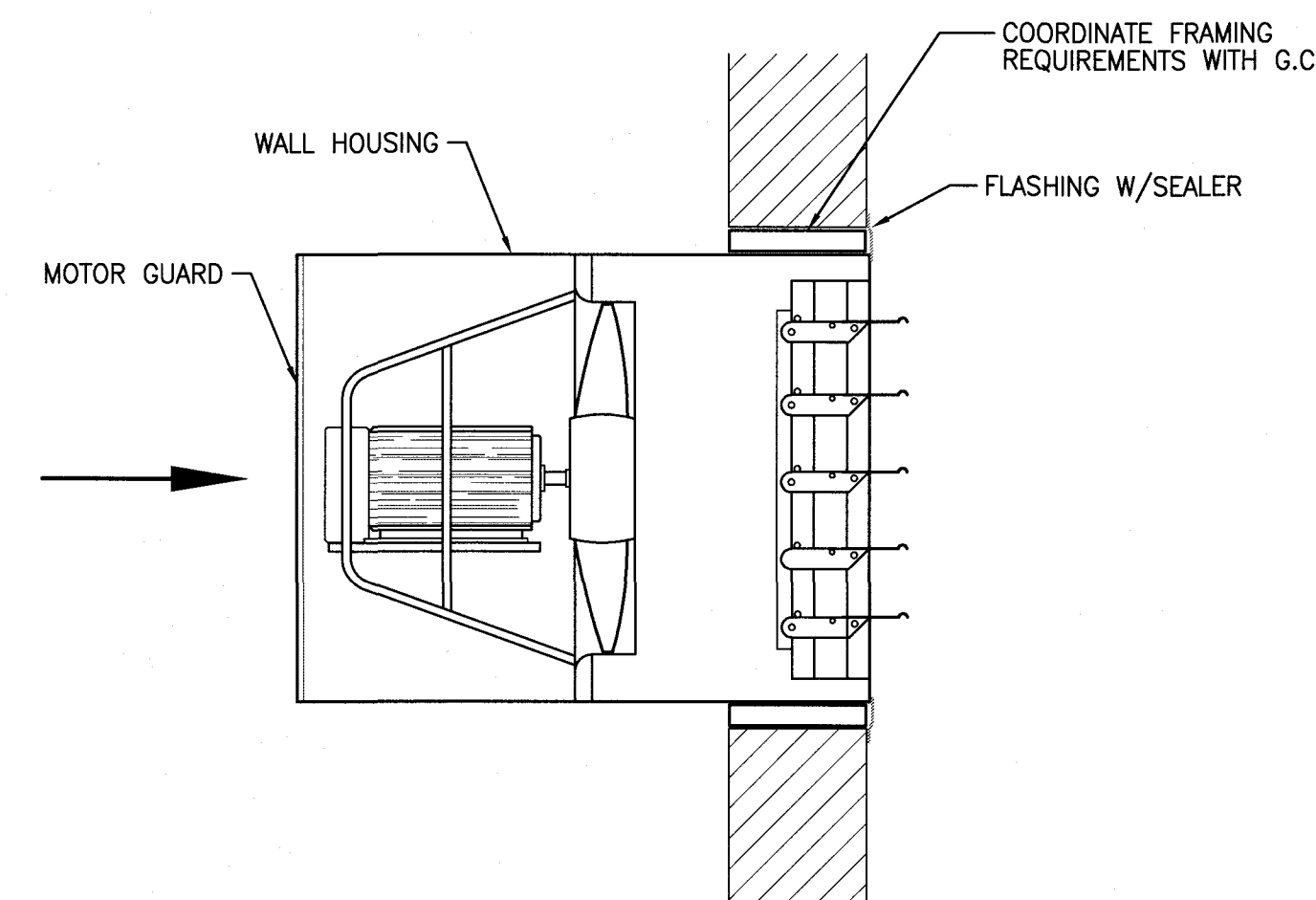
**DETAIL NO. 2**

OUTDOOR HVAC UNIT INSTALLATION  
SCALE: NTS



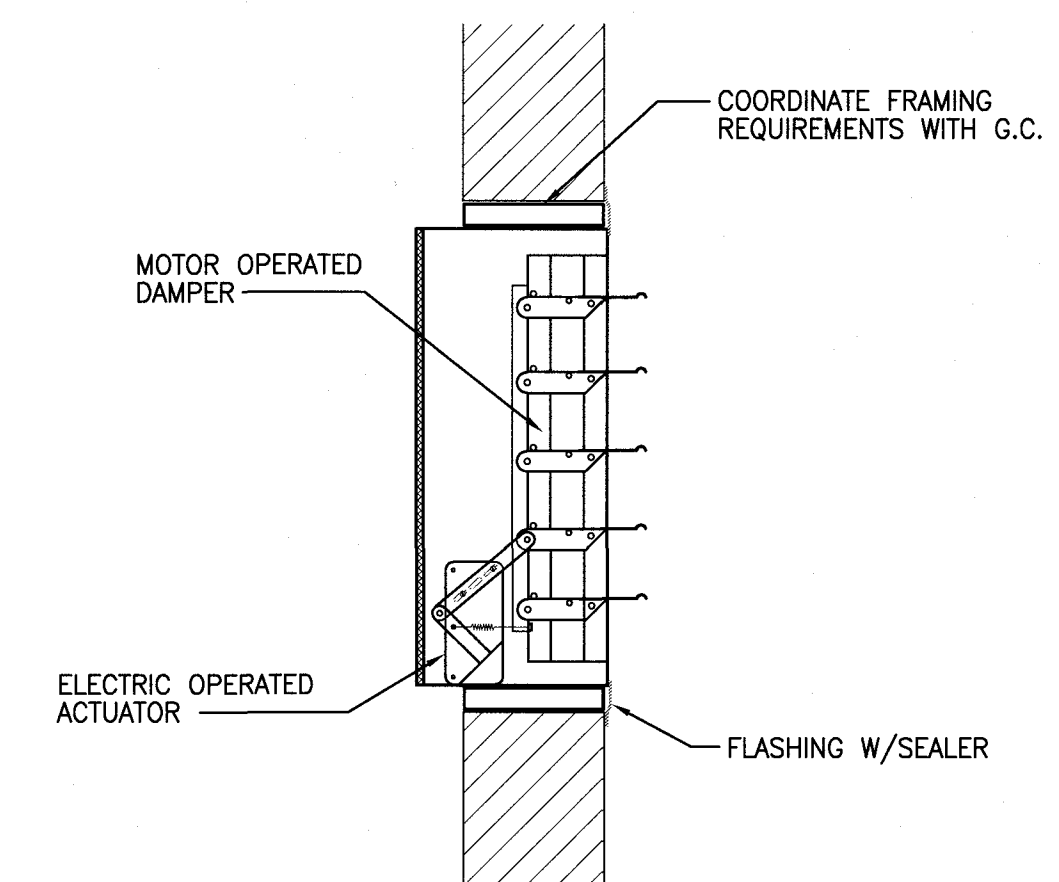
**DETAIL NO. 3**

AIR DISTRIBUTION INSTALLATION  
SCALE: NTS



**DETAIL NO. 4**

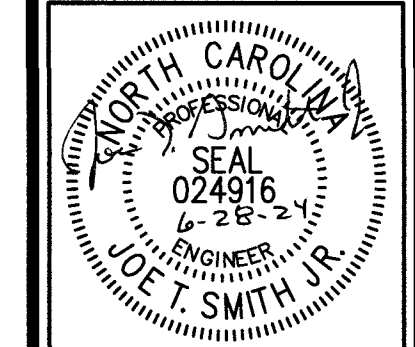
WALL EXHAUST FAN INSTALLATION  
SCALE: NTS



**DETAIL NO. 5**

MOTOR OPERATED INTAKE LOUVER  
SCALE: NTS

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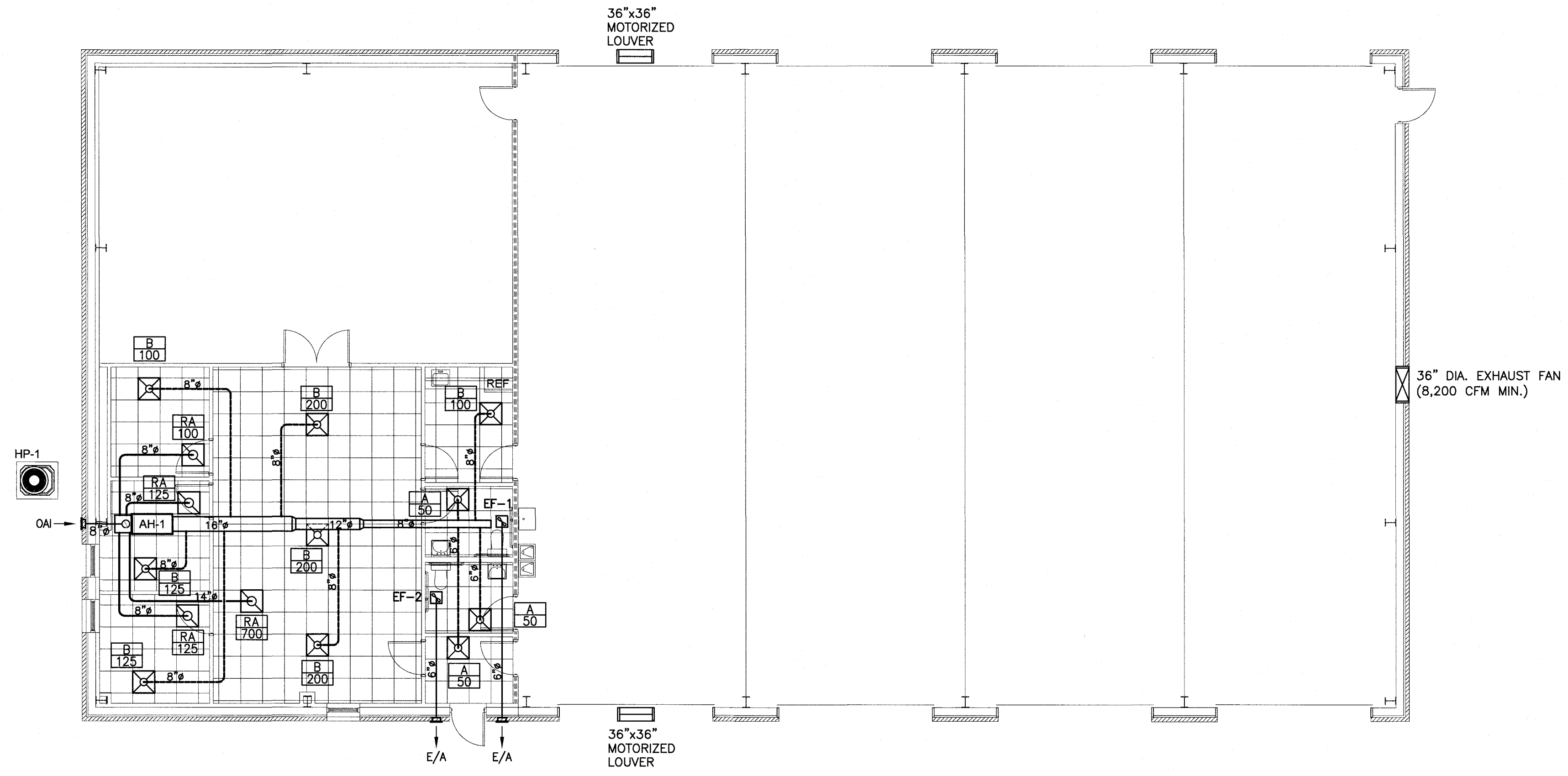
REV	DATE	DESCRIPTION

**Campbell Bus Storage Garage**  
Buies Creek, NC 27506

DATE: 28 June 2024  
DRAWN BY: JS  
SCALE: 1/8" = 1'-0"

**M-1**





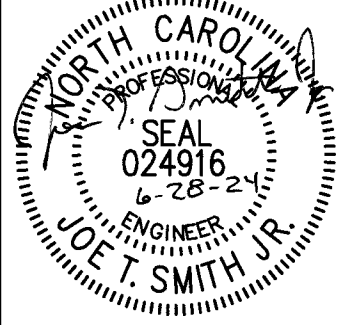
**FIRE RATING LEGEND**

----- 3 HR. RATED FIRE BARRIER PER UL #U419

**1 MECHANICAL PLAN - DUCT & EQUIPMENT LAYOUT**

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

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REVISIONS	
REV. DATE	DESCRIPTION

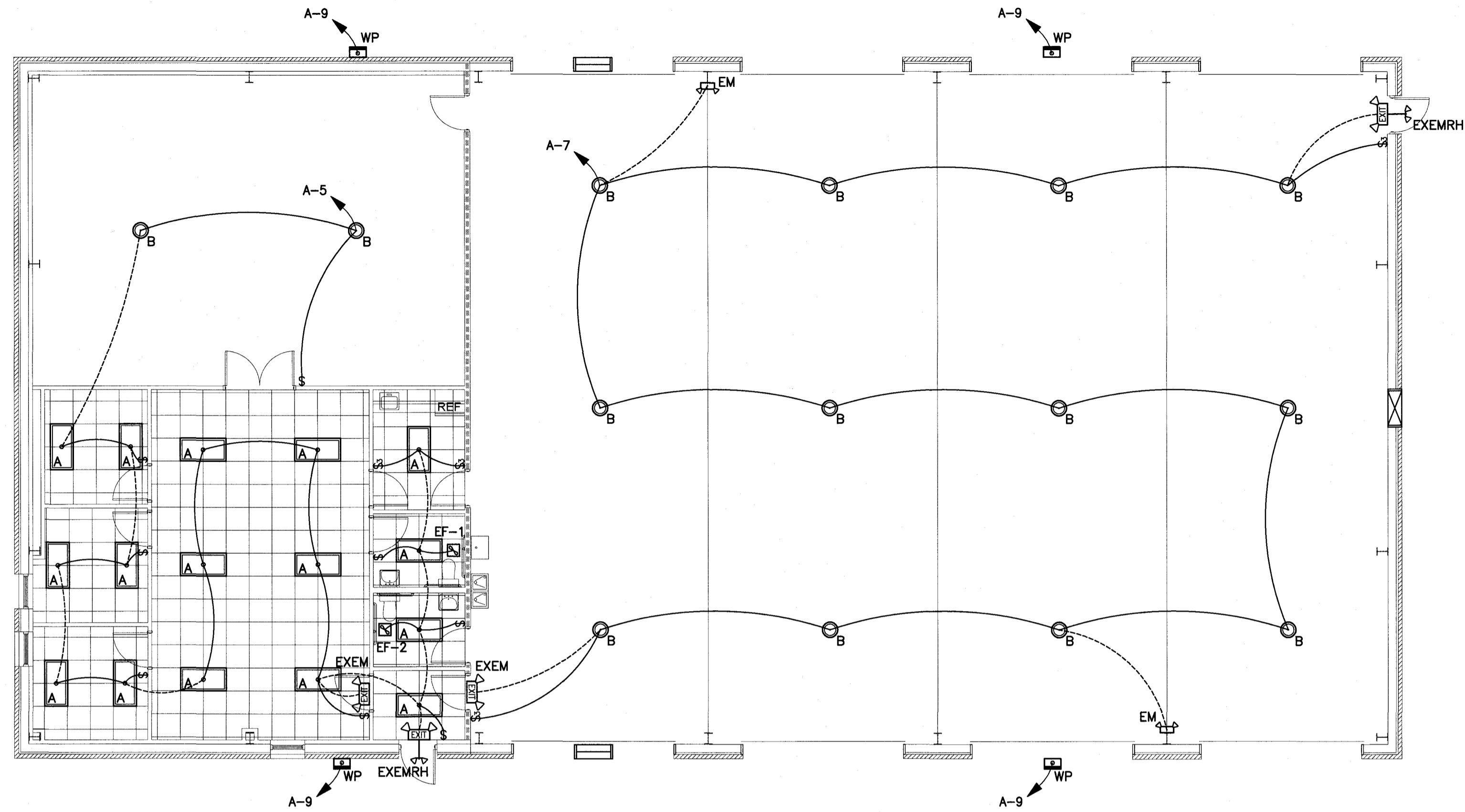
**Campbell Bus Storage Garage**  
 Buies Creek, NC 27506

DATE: 28 June 2024  
 DRAWN BY: JS  
 SCALE: 1/8" = 1'-0"

**M-2**

**ELECTRICAL NOTES:**

- ELECTRICAL PLANS ARE INTENDED TO PROVIDE INFORMATION FOR INSTALLATION OF A COMPLETE ELECTRICAL SYSTEM. PROVIDE ALL ESSENTIAL LABOR, MATERIALS & DEVICES REQUIRED TO PRODUCE A QUALITY END PRODUCT.
- CONTRACTOR SHALL REVIEW & BECOME FAMILIAR WITH THE WORK OF ALL TRADES FOR PURPOSES OF COORDINATION AND ROUTING. CONTRACTOR SHALL PROVIDE REQUIRED PLANNING, COORDINATION AND SEQUENCING OF ELECTRICAL INSTALLATION WITH BUILDING COMPONENTS AND OTHER TRADES.
- ALL WORK SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC). WORKMANSHIP SHALL MEET OR EXCEED INDUSTRY STANDARDS.
- ELECTRICAL CONTRACTOR SHALL PROVIDE ALL DISCONNECTS, STARTERS, DEVICES AND ELECTRICAL COMPONENTS UNLESS SPECIFICALLY NOTED AS PROVIDED BY OTHERS.
- ELECTRICAL CONTRACTOR SHALL PROVIDE ALL LINE AND LOAD SIDE WIRING INCLUDING ALL TERMINATIONS TO EQUIPMENT PROVIDED UNDER OTHER TRADES. POWER WIRING TO CONTROL DEVICES SHALL BE PROVIDED BY E.C.. INTERLOCK WIRING SHALL BE PROVIDED BY THE CONTRACTOR INSTALLING THE CONTROL DEVICE.
- ALL WIRING, PANELBOARDS, DEVICES AND OTHER LIKE MATERIALS SHALL BE UL LISTED & LABELED. ALL MATERIALS SHALL MEET THE NEC FOR THE INTENDED USE AND INSTALLED IN ACCORDANCE WITH THE NEC.
- PROVIDE THHN/THWN COPPER WIRE. PROVIDE A MINIMUM WIRE SIZE OF #12. ALL WIRE #8 AND LARGER SHALL BE STRANDED. CONDUCTORS AND CONDUIT ON PLANS AND SCHEDULES REFLECT AMPACITIES PER NEC 310-16 75C RATING. CONTRACTOR SHALL VERIFY ALL TERMINATIONS, LUGS, ETC. ARE RATED FOR USE PER NEC 110-4C. OTHERWISE PROVIDE CONDUCTOR AND CONDUIT SIZED PER LOWEST TEMPERATURE RATING OF ANY TERMINATION WITHIN A CIRCUIT. A SEPARATE INSULATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE PROVIDED FOR ALL CIRCUITS.
- PROVIDE MC CABLE FOR ALL SINGLE PHASE BRANCH CIRCUITS 30 AMPS AND SMALLER. PROVIDE CONDUIT FOR ALL OTHER WIRING. EMT OR RIGID SHALL BE USED WHERE EXPOSED TO PHYSICAL DAMAGE. CONDUIT ABOVE GRADE SHALL BE STEEL. CONDUIT BELOW GRADE MAY BE PVC CHANGING TO STEEL IN THE ELBOW TURNING UP. EMT SHALL NOT BE USED IN DIRECT CONTACT WITH THE EARTH OR WHERE EXPOSED TO SEVERE PHYSICAL DAMAGE. FITTINGS ON STEEL CONDUIT SHALL BE COMPRESSION TYPE.
- PROVIDE ONE-INCH EMPTY CONDUITS EXTENDING ABOVE CEILING FOR ALL TELEPHONE AND DATA OUTLETS SHOWN ON PLANS. PROVIDE PROTECTIVE BUSHINGS ON ENDS OF CONDUIT. ALL CABLING IS PROVIDED BY OTHERS.
- PROVIDE 3/4-INCH EMPTY CONDUITS TERMINATING ABOVE THE CEILING FOR ALL HVAC THERMOSTATS. JUNCTION BOXES SHALL MATCH ORIENTATION OF THERMOSTATS PROVIDED BY M.C.. MOUNT JUNCTION BOXES 48-INCHES A.F.F. UNLESS NOTED OTHERWISE. PROVIDE PROTECTIVE BUSHINGS ON ENDS OF CONDUIT.
- PANELBOARDS FOR SERVICE ENTRANCE SHALL BE SERVICE ENTRANCE RATED. PROVIDE NEMA 3R PANELBOARDS WHERE LOCATED OUTSIDE. PROVIDE NEUTRAL AND GROUNDING BARS IN ALL PANELBOARDS UNLESS NOTED OTHERWISE. GROUND ALL SERVICE ENTRANCE PANELS IN ACCORDANCE WITH THE NEC.
- PROVIDE TYPE WRITTEN PANEL SCHEDULES IN EACH PANEL INDICATING THE LOAD DESCRIPTION FOR EACH BREAKER. LABEL PANELS ON PANEL FACE WITH PHENOLIC LABELS INDICATING PANEL NUMBER OR LETTER DESIGNATION, VOLTAGE AND PHASE.
- PROVIDE FUSED AND NON-FUSED DISCONNECT SWITCHES AS INDICATED ON PLANS. DISCONNECTS LOCATED OUTSIDE SHALL BE NEMA-3R. PROVIDE REJECTION CLIPS IN FUSED DISCONNECTS.
- PROVIDE LIGHTING AS SCHEDULED IN THE FIXTURE SCHEDULE OR OTHERWISE NOTED ON PLANS. LIGHTING INSTALLED IN SUSPENDED CEILINGS SHALL BE SUPPORTED INDEPENDENTLY OF THE CEILING GRID SYSTEM.
- PROVIDE EMERGENCY AND EXIT LIGHTS AS SHOWN ON PLANS. POWER SHALL BE PROVIDED FROM LIGHTING CIRCUITS ON THE UNSWITCHED LEG OF THE CIRCUIT SUCH THAT POWER TO THE EMERGENCY AND EXIT LIGHTS IS NOT DISCONNECTED WHEN NORMAL LIGHTING IS OFF. EXTERIOR EMERGENCY LIGHTS SHALL BE WIRED SUCH THAT PHOTOCELL AND/OR TIME CLOCK OPERATION DOES NOT DISCONNECT POWER TO BATTERIES.
- RECEPTACLES SHALL BE 20 AMP, 120V UNLESS NOTED OTHERWISE.
- RECEPTACLES ABOVE COUNTERTOPS AND ADJACENT TO SINKS & LAVATORIES SHALL BE GROUND FAULT. KITCHEN RECEPTACLES SHALL BE GROUND FAULT.
- RECEPTACLES INSTALLED OUTSIDE SHALL BE GROUND FAULT WITH "IN USE" WEATHERPROOF COVERS.
- WALL SWITCHES SHALL BE SINGLE POLE, 20 AMP, 120/277V.
- PROVIDE STANDARD SIZE WALL PLATES FOR ALL DEVICES AND BLANK WALL PLATES FOR JUNCTION BOXES. WALL PLATES SHALL BE HIGH IMPACT, SMOOTH NYLON, COLOR TO MATCH DEVICE.



1  
E-1

**ELECTRICAL PLAN - LIGHTING LAYOUT**

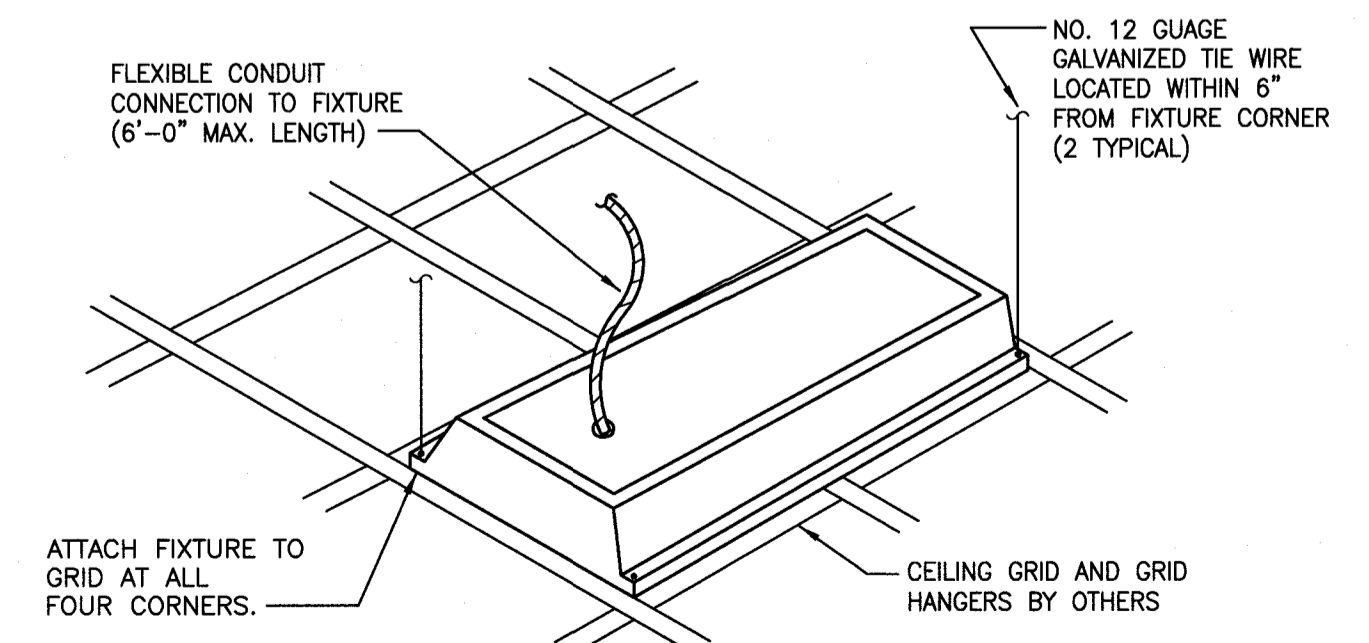
SCALE: 1/8"=1'-0"

**FIRE RATING LEGEND**

----- 3 HR. RATED FIRE BARRIER PER UL #U419

MARK	DESCRIPTION	LIGHT FIXTURE SCHEDULE				NOTES	
		LAMP TYPE	LAMP NO.	LAMP WATTS	FIXTURE INPUT WATTS		
A	2x4 LAY-IN TROFFER	LED	-	-	37	120	
B	16" ROUND HIGH BAY	LED	-	-	125	120	12,000 LUMEN
WP	WALL PACK	LED	-	-	112	120	PHOTOCELL CONTROLLED
EXEMRH	EXIT/EMER.LIGHT WITH REMOTE HEADS	LED	4	1	3	120	
EM	EMERGENCY LIGHT	LED	2	1	3	120	

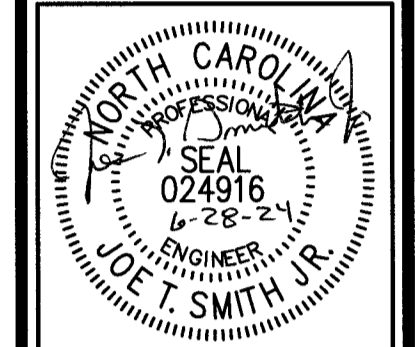
- NOTES:**
- PROVIDE EXIT LIGHTS WITH SINGLE OR DOUBLE-FACE AS REQUIRED, CHEVRON DIRECTIONAL INDICATORS, MOUNTING BRACKETS & NICKEL CADMIUM BATTERY BACKUP.
  - PROVIDE ALL FIXTURES WITH LAMPS OF MODERATE TONE (3500K) AND GOOD CRI (COLOR RENDERING INDEX).
  - FIXTURES SHOWN WITH DIAGONAL LINES SHALL OPERATE ALL TIMES AS NIGHT LIGHTS.
  - PROVIDE FIXTURES BY LITHONIA, COLUMBIA, HUBBLE, OR EQUAL PRODUCT.



**DETAIL NO. 1**

TYPICAL RECESSED FIXTURE SUPPORT  
SCALE: NTS

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REV#	DATE	DESCRIPTION

REV#	DATE	DESCRIPTION

**Campbell Bus Storage Garage**  
Bulies Creek, NC 27506

DATE: 28 June 2024  
DRAWN BY: JS  
SCALE: 1/8" = 1'-0"

**E-1**



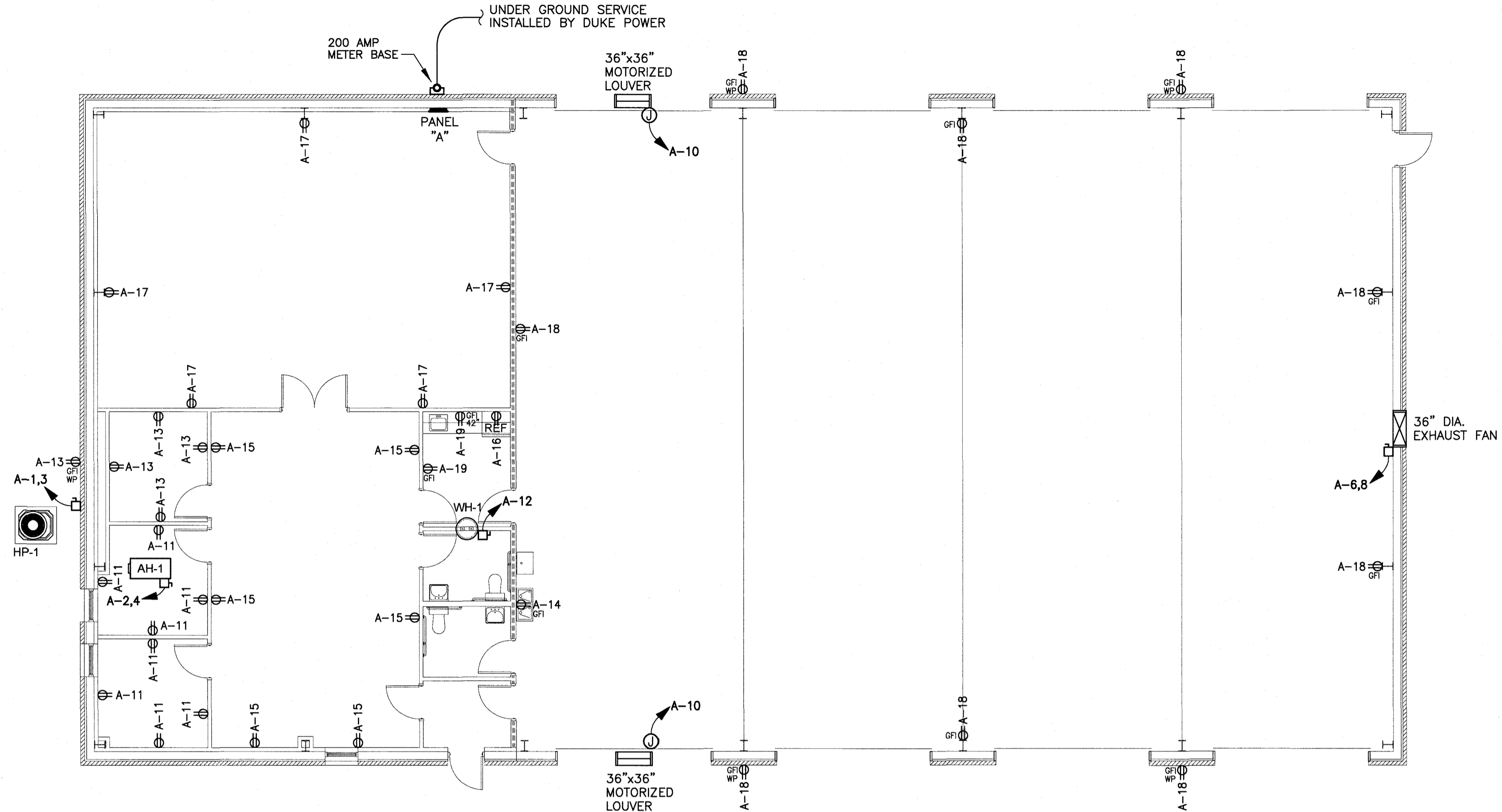
ELECTRICAL LEGEND		
SYM.	DESCRIPTION	REMARKS
⊕	JUNCTION BOX	DOUBLE GANG UNO
□	NON-FUSED DISCONNECT	-
⊞	FUSED DISCONNECT	-
⊙	OCCUPANCY SENSOR	-
\$	SWITCH	MOUNT 48" TOD AFF
\$ <sub>D</sub>	DIMMER SWITCH	MOUNT 48" TOD AFF COORDINATE WITH BALLAST
\$ <sub>3</sub>	3 WAY SWITCH	MOUNT 48" TOD AFF
\$ <sub>4</sub>	4 WAY SWITCH	MOUNT 48" TOD AFF
⊕	RECEPTACLE	MOUNT 16" BOD AFF
⊕ <sub>IG</sub>	ISOLATED GROUND RECEPTACLE	MOUNT 16" BOD AFF
⊕ <sub>GFI</sub>	GROUND FAULT RECEPTACLE	MOUNT 6" ABV. COUNTER
⊕ <sub>WP GFI</sub>	GROUND FAULT, WEATHERPROOF RECEPT.	MOUNT 24" BOD AFG
⊕ <sub>S</sub>	SPECIAL RECEPTACLE	-
⊕ <sub>DD</sub>	DOUBLE DUPLEX RECEPTACLE	-
⊕ <sub>CKT #</sub>	CIRCUIT IDENTIFIER	-
▽	PHONE OUTLET	DOUBLE GANG UNO
▽	DATA/PHONE OUTLET	DOUBLE GANG UNO

**NOTES:**

- STANDARD MOUNTING HEIGHTS OF DEVICES SHALL BE AS LISTED IN LEGEND. SPECIFIC MOUNTING HEIGHT OF A DEVICE MAY VARY AS NOTED ON PLANS.
- E.C. SHALL COORDINATE COLOR SELECTION OF DEVICES AND COVERPLATES WITH ARCHITECT, OWNER AND/OR G.C.
- PROVIDE EQUIPMENT SHOWN BY HUBBELL, PASS & SEYMOUR, COOPER WIRING DEVICES, OR EQUAL PRODUCT.

**ABBREVIATIONS:**

G.C.	GENERAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
E.C.	ELECTRICAL CONTRACTOR
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
UNO	UNLESS NOTED OTHERWISE
BOD	BOTTOM OF DEVICE
TOD	TOP OF DEVICE

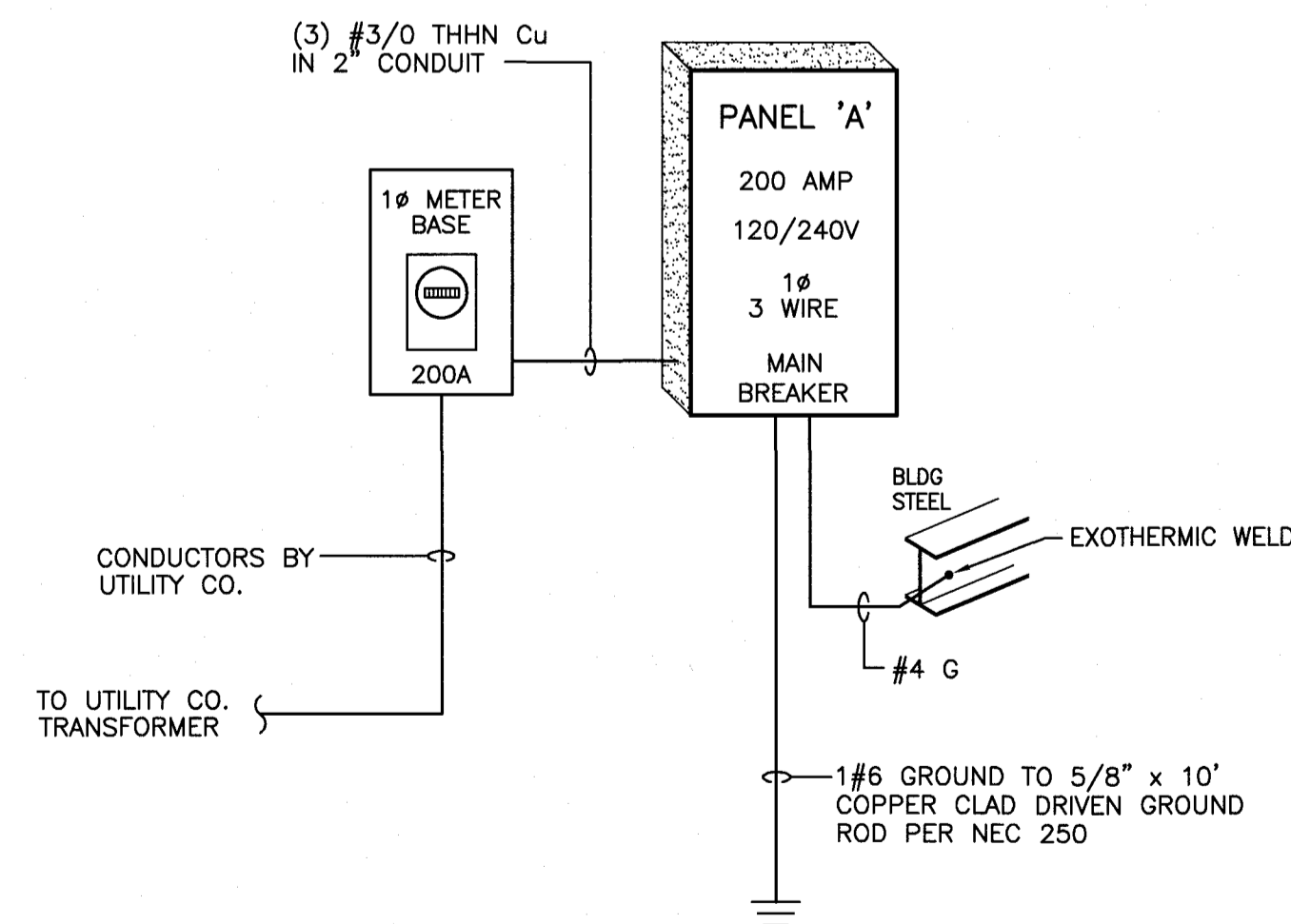


**1 ELECTRICAL PLAN - POWER & RECEPTACLE LAYOUT**  
SCALE: 1/8"=1'-0"

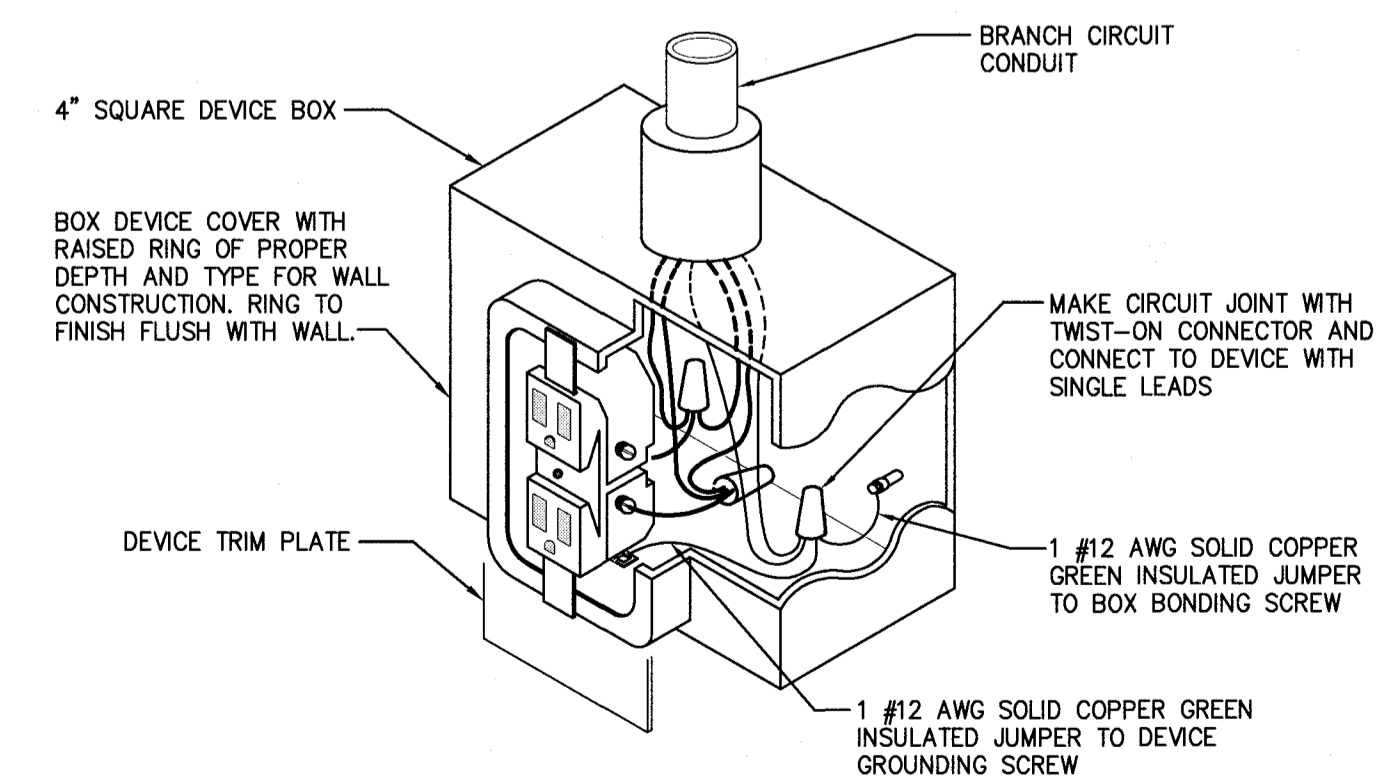
**FIRE RATING LEGEND**  
----- 3 HR. RATED FIRE BARRIER PER UL #U419

**SEE REVISION NEXT PAGE**

PANELBOARD SCHEDULE									
PANEL "A"	FLUSH MOUNTED	SERVICE ENTRANCE RATED				200 AMP	1Ø, 3 WIRE		
MAIN BREAKER	BOTTOM FEED	22K AIC				120/240 VOLT			
NEMA 1	COPPER BUS					200 AMP (BUS RATING)			
LOAD SERVED	WIRE SIZE	CKT NO.	PHASE	WIRE SIZE	LOAD SERVED				
HP-1	#10	1	A	#6	AH-1				
OFFICE AREA LIGHTS	#12	3	A	#12	WALL EXHAUST FAN				
GARAGE LIGHTS	#12	5	A	#12	LOUVERS				
EXTERIOR LIGHTS	#12	7	A	#12	WATER HEATER				
RECEPTACLES	#12	9	A	#12	WATER COOLER				
RECEPTACLES	#12	11	A	#12	REFRIGERATOR				
RECEPTACLES	#12	13	A	#12	RECEPTACLES				
RECEPTACLES	#12	15	A	#12					
RECEPTACLES	#12	17	A	#12					
		19	A	#12					
		21	A	#12					
		23	A	#12					
		25	A	#12					
		27	A	#12					
		29	A	#12					
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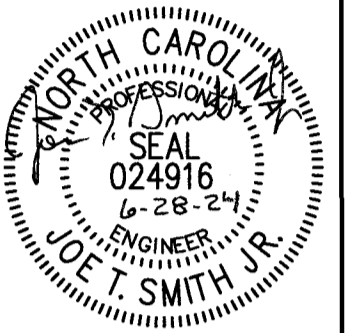


**ELECTRICAL RISER**  
POWER DIAGRAM LAYOUT  
SCALE: N.T.S.



**DETAIL NO. 1**  
RECEPTACLE GROUNDING DIAGRAM  
SCALE: N.T.S.

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REV	DATE	DESCRIPTION

**Campbell Bus Storage Garage**  
Buies Creek, NC 27506

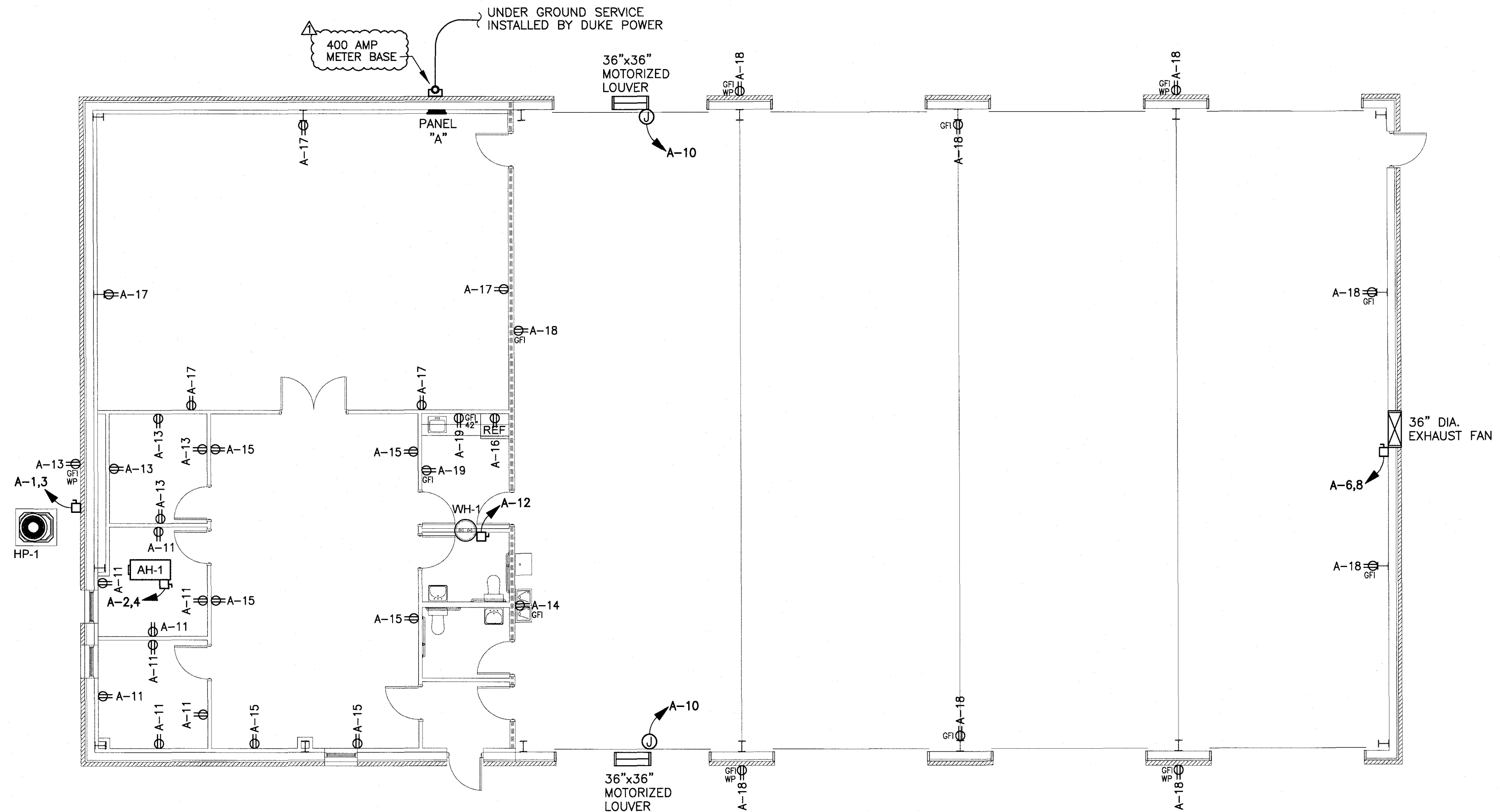
DATE: 28 June 2024  
DRAWN BY: JS  
SCALE: 1/8" = 1'0"

ELECTRICAL LEGEND		
SYM.	DESCRIPTION	REMARKS
⊕	JUNCTION BOX	DOUBLE GANG UNO
⊞	NON-FUSED DISCONNECT	-
⊞	FUSED DISCONNECT	-
⊞	OCCUPANCY SENSOR	-
\$	SWITCH	MOUNT 48" TOD AFF
\$ <sub>0</sub>	DIMMER SWITCH	MOUNT 48" TOD AFF COORDINATE WITH BALLAST
\$ <sub>3</sub>	3 WAY SWITCH	MOUNT 48" TOD AFF
\$ <sub>4</sub>	4 WAY SWITCH	MOUNT 48" TOD AFF
⊕	RECEPTACLE	MOUNT 16" BOD AFF
⊕ <sub>IG</sub>	ISOLATED GROUND RECEPTACLE	MOUNT 16" BOD AFF
⊕ <sub>GFI</sub>	GROUND FAULT RECEPTACLE	MOUNT 6" ABV. COUNTER
⊕ <sub>GFI</sub>	GROUND FAULT, WEATHERPROOF RECEPT.	MOUNT 24" BOD AFG
⊕ <sub>S</sub>	SPECIAL RECEPTACLE	-
⊕	DOUBLE DUPLEX RECEPTACLE	-
⊕ <sub>CKT #</sub>	CIRCUIT IDENTIFIER	-
▽	PHONE OUTLET	DOUBLE GANG UNO
▽	DATA/PHONE OUTLET	DOUBLE GANG UNO

NOTES:  
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 2. E.C. SHALL COORDINATE COLOR SELECTION OF DEVICES AND COVERPLATES WITH ARCHITECT, OWNER AND/OR G.C.  
 3. PROVIDE EQUIPMENT SHOWN BY HUBBELL, PASS & SEYMOUR, COOPER WIRING DEVICES, OR EQUAL PRODUCT.

ABBREVIATIONS:

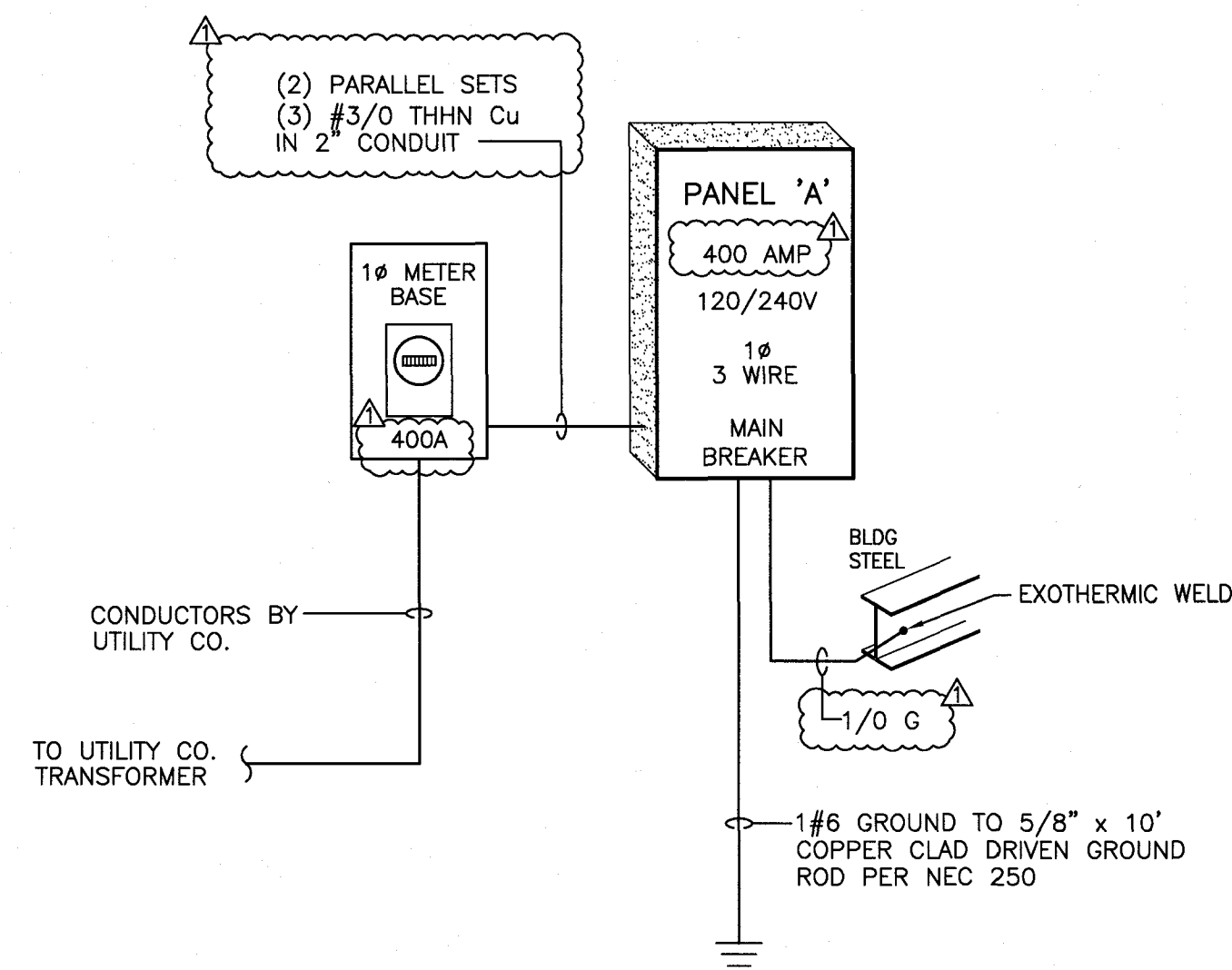
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P.C.	PLUMBING CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
E.C.	ELECTRICAL CONTRACTOR
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
UNO	UNLESS NOTED OTHERWISE
BOD	BOTTOM OF DEVICE
TOD	TOP OF DEVICE



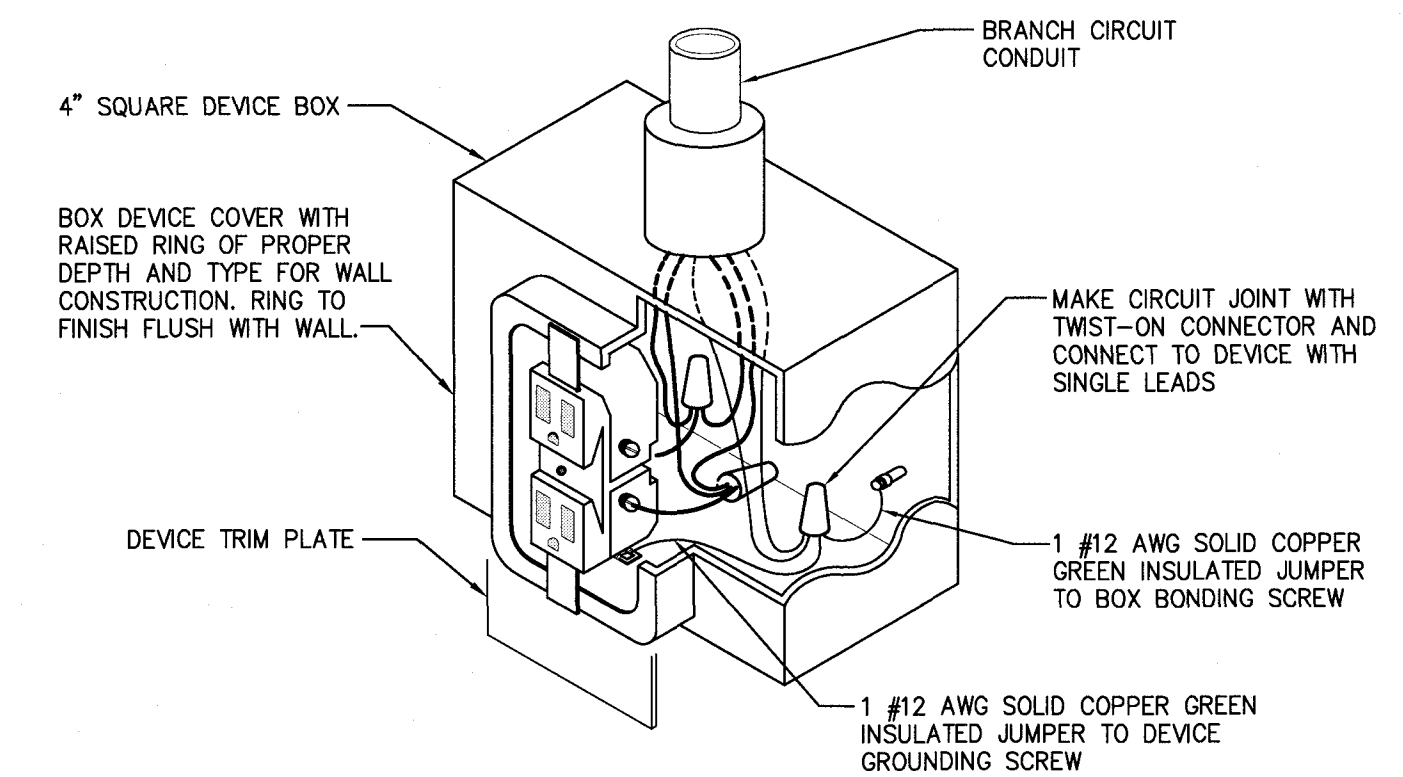
1 ELECTRICAL PLAN - POWER & RECEPTACLE LAYOUT  
 SCALE: 1/8"=1'-0"

FIRE RATING LEGEND  
 ----- 3 HR. RATED FIRE BARRIER PER UL #U419

PANELBOARD SCHEDULE					
PANEL "A"	FLUSH MOUNTED	SERVICE ENTRANCE RATED		400 AMP	1Ø, 3 WIRE
MAIN BREAKER	BOTTOM FEED	22K AIC		120/240 VOLT	
NEMA 1	COPPER BUS	400 AMP (BUS RATING)			
LOAD SERVED	WIRE SIZE	CKT NO.	PHASE	WIRE SIZE	LOAD SERVED
HP-1	#10	1	35	2	AH-1
OFFICE AREA LIGHTS	#12	5	20	6	WALL EXHAUST FAN
GARAGE LIGHTS	#12	7	20	8	LOUVERS
EXTERIOR LIGHTS	#12	9	20	10	WATER HEATER
RECEPTACLES	#12	11	20	12	WATER COOLER
RECEPTACLES	#12	13	20	14	REFRIGERATOR
RECEPTACLES	#12	15	20	16	RECEPTACLES
RECEPTACLES	#12	17	20	18	
		19		20	
		21		22	
		23		24	
		25		26	
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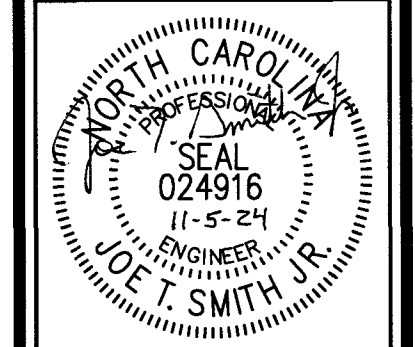


ELECTRICAL RISER  
 POWER DIAGRAM LAYOUT  
 SCALE: N.T.S.



DETAIL NO. 1  
 RECEPTACLE GROUNDING DIAGRAM  
 SCALE: N.T.S.

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REV.	DATE	DESCRIPTION
1	11-5-24	CHANGED PANEL TO 400 AMP

**Campbell Bus Storage Garage**  
 Buies Creek, NC 27506