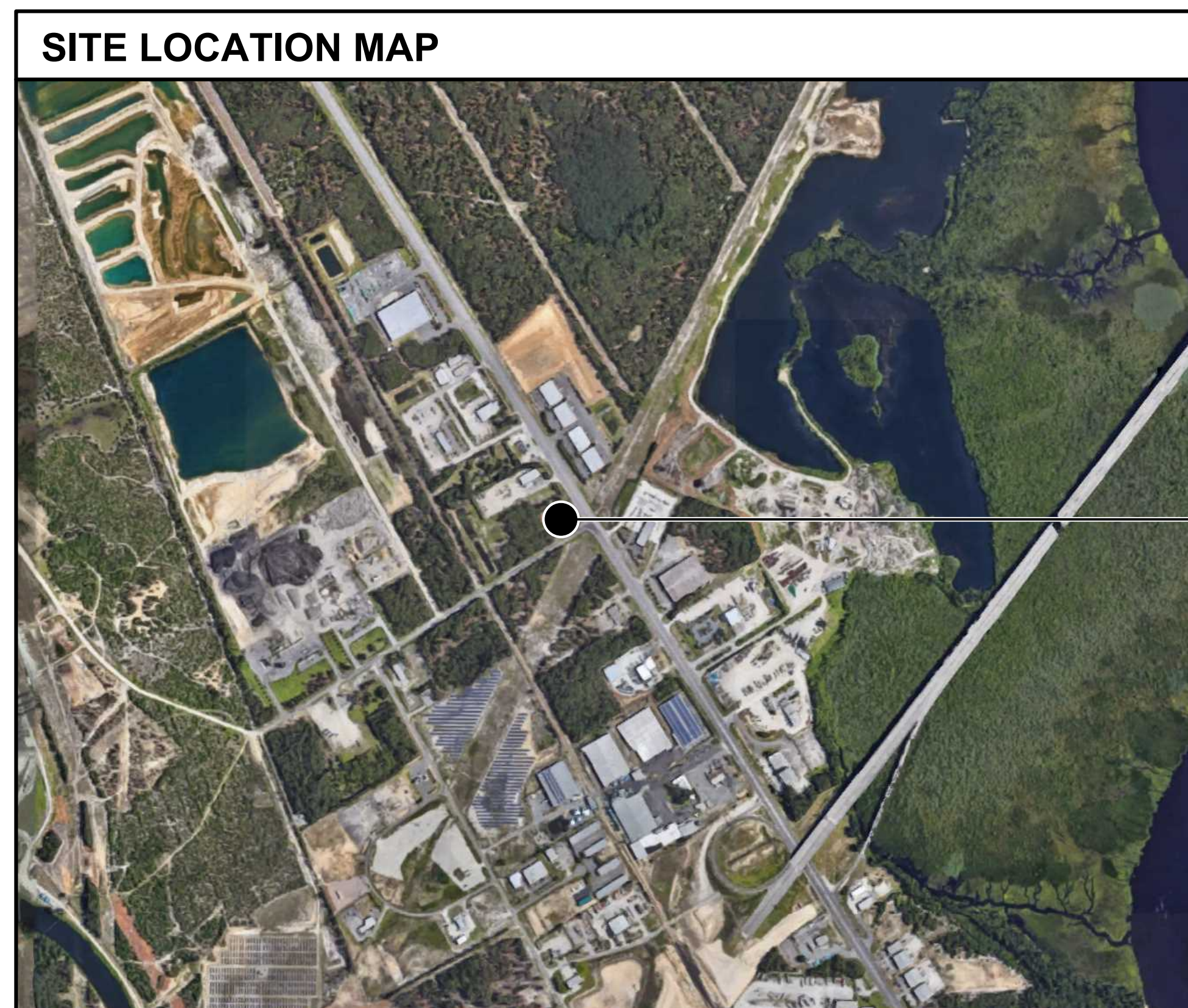


Hurricane Florence Repairs New Hanover County Fire Station 12

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28401

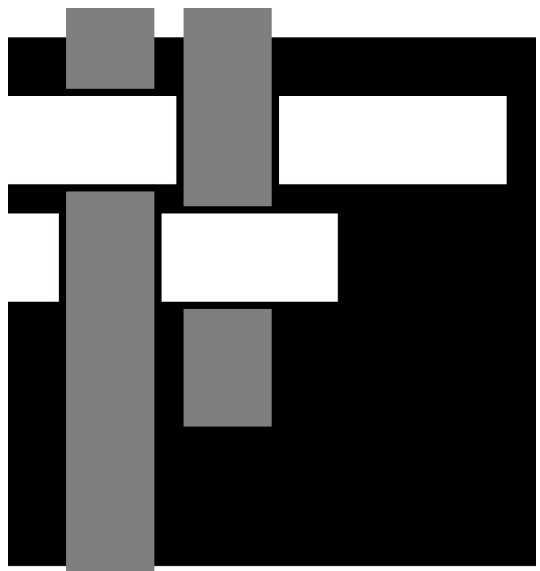
Construction Drawings
1 May, 2020



FIRE STATION 12

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Abbreviations	Symbols Legend
<p>A.C.T. - ACOUSTICAL CEILING TILE ADJ. - ADJUSTABLE A.F.F. - ABOVE FINISHED FLOOR ALUM. - ALUMINUM AHU - AIR HANDLING UNIT BLDG. - BUILDING B.O.S. - BOTTOM OF STEEL B.R. - BACKER ROD C.J. - CONTROL JOINT C.M.U. - CONCRETE MASONRY UNIT CONC. - CONCRETE C.O. - CLEAN OUT CONT. - CONTINUOUS CP - CONCRETE PIPE C.L. - CENTER LINE DIA. - DIAMETER DIM. - DIMENSION D.S. - DOWN SPOUT E.C. - ELECTRICAL CONTRACTOR E.J. - EXPANSION JOINT ELEV. - ELEVATION EQ. - EQUAL EQUIP. - EQUIPMENT EXIST. - EXISTING EXP. JT. - EXPANSION JOINT F.F.E. - FINISH FLOOR ELEVATION GALV. - GALVANIZED GA. - GAUGE G.C. - GENERAL CONTRACTOR GWB - GYPSUM WALL BOARD HT. - HEIGHT INSUL. - INSULATION INV. - INVERT JT. - JOINT MAS. - MASONRY MAX. - MAXIMUM MECH. - MECHANICAL MFG. - MANUFACTURER MIN. - MINIMUM NOM. - NOMINAL O.C. - ON CENTER PERF. - PERFORATED HPL - HIGH PRESSURE LAMINATE PLYWD. - PLYWOOD P.S.I. - POUNDS PER SQUARE INCH R. - RADIUS R/A - RETURN AIR R.A.G. - RETURN AIR GRILL R.C.P. - REINFORCED CONCRETE PIPE RD. - ROOF DRAIN REINF. - REINFORCEMENT RECD. - REQUIRED R.O. - ROUGH OPENING S/A - SUPPLY AIR S.S. - STAINLESS STEEL T.O.M. - TOP OF MASONRY STRUCT. - STRUCTURAL T.O.S. - TOP OF STEEL TRTD. - TREATED TYP. - TYPICAL V.B. - VAPOR BARRIER V.C.T. - VINYL COMPOSITE TILE VERT. - VERTICAL W/ - WITH @ - AT, AROUND, REGARDING</p>	<p>DRAWING TITLE</p> <p>INDICATES DRAWING #</p> <p>2 A1 Drawing Title Scale</p> <p>INDICATES SHEET WHERE DRAWING IS SHOWN</p> <p>BUILDING SECTION REFERENCE</p> <p>INDICATES SECTION #</p> <p>1 A1.0 INDICATES SHEET WHERE DRAWING IS SHOWN</p> <p>WALL SECTION REFERENCE</p> <p>INDICATES SHEET WHERE SECTION IS SHOWN</p> <p>3-A4.0 INDICATES SECTION #</p> <p>ELEVATION REFERENCE</p> <p>INDICATES SHEET WHERE ELEVATION IS SHOWN</p> <p>2-A1.4 INDICATES ELEVATION #</p> <p>PLAN DETAIL REFERENCE</p> <p>3-A4.0 INDICATES ENLARGED DETAIL</p> <p>100 DOOR # 100 ROOM #</p> <p>A WINDOW TYPE</p> <p>VERTICAL ELEVATION ABOVE REFERENCE POINT</p>



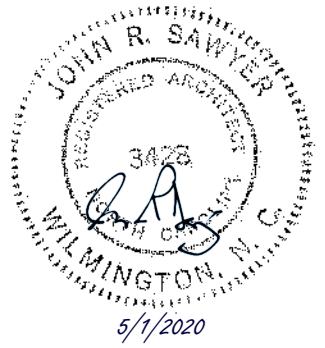
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124 Market St. Wilmington, NC 28401
910 762-0892 s2a3.com

WD JONES ENGINEERING, PLLC
Structural Engineering Services
100 B Old Eastwood Road, Unit 24, Wilmington, NC 28403
Office: (910) 323-5381 Email: wjones@wdjones.com

McFadyen
Engineers, PLLC

411 Peachtree Avenue, Suite 200
Wilmington, NC 28403
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1 May, 2020

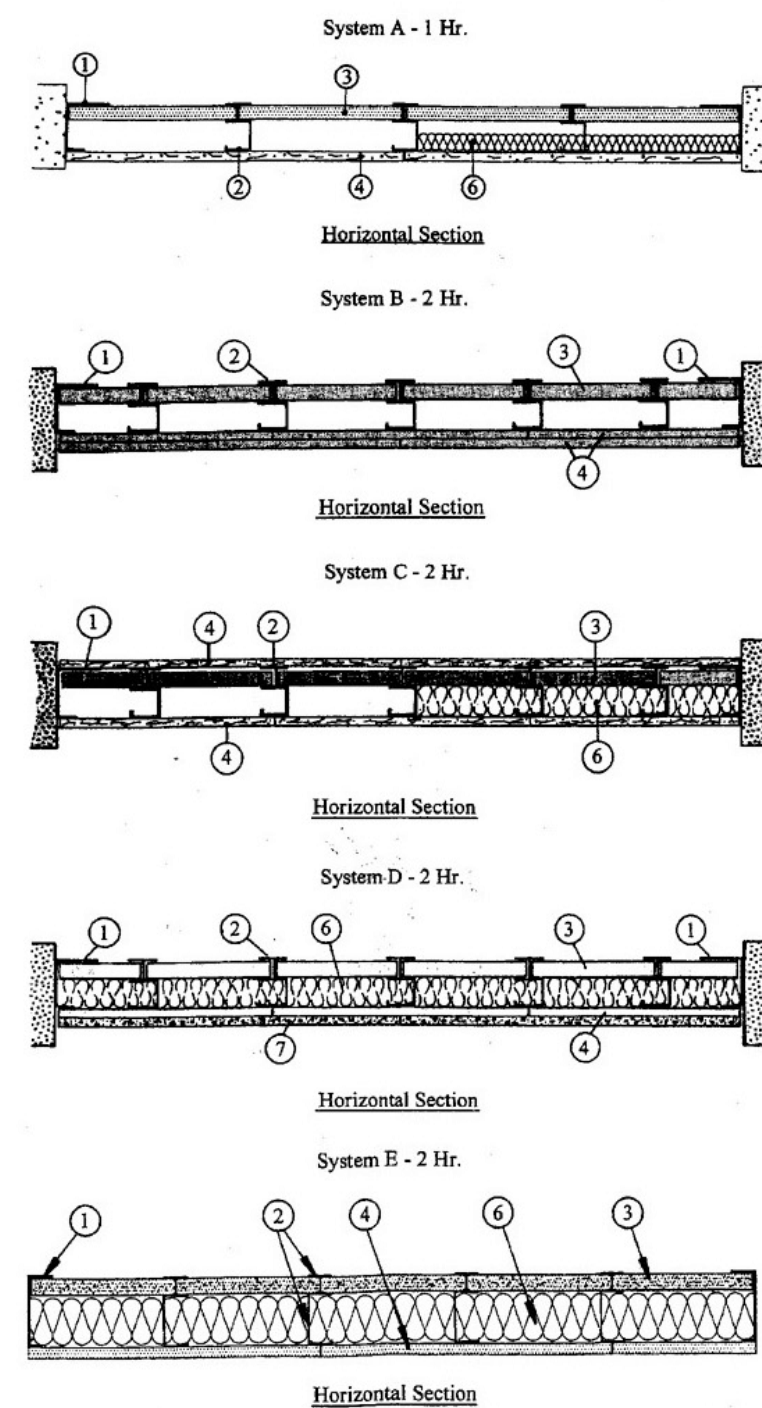
Revisions:

Cover

G1.0

1 of 3

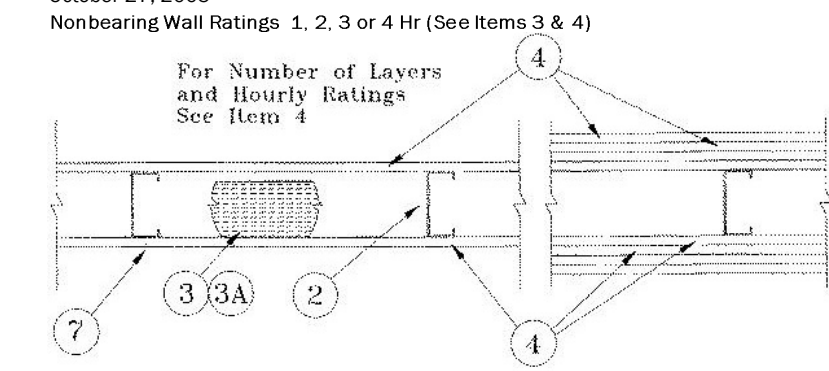
Design No. U415
Nonbearing Wall Ratings—1 or 2 Hr



- 1. Floor, Side and Ceiling Runners**—“J”—shaped runner, min 2-1/2 in. deep, with unequal legs of 1 in. and 2 in., fabricated from min 24 MSG galv steel. Runners positioned with short leg toward finished side of wall. Runners attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 24 in. OC.
- 2. Steel Studs**—“C”-H—shaped studs, min 2-1/2 in. deep, fabricated from min 25 MSG galv steel, cut to lengths 3/8 to 1/2 in. less than floor-to-ceiling height and spaced 24 in. or 600 mm OC.
- 2A. Steel Studs**—(Not Shown)—“E”—shaped studs installed in place of “C”-H—shaped studs (Item 2) and to secure the closure liner panels at the ends of walls. Fabricated from min 25 MSG galv steel, min 2-1/2 in. deep, with one leg 1 in. long and two legs 3/4 in. long. Shorter legs 1 in. apart to engage gypsum liner panels. Cut to lengths 3/8 in. less than floor to ceiling heights. Sill and lintel of opening formed with “J”—shaped runners (Item 1) secured to “E”—shaped studs with angle clips and steel screws.
- 3. Wallboard, Gypsum**—Gypsum liner panels, nom 1 in. thick, 24 in. or 600 mm (for metric spacing) wide. Panels cut 1 in. less in length than floor to ceiling height. Vertical edges inserted in “H”—shaped section of “C”-H” studs. Free edge of end panels attached to long leg of “J”—runners with 1-5/8 in. long Type 5 self-drilling, self-tapping bugle head steel screws spaced not greater than 12 in. OC. When wall height exceeds liner panel length, liner panel may be butted to extend to the full height of the wall.

- 4. Wallboard, Gypsum**
 - Systems A & D**
Gypsum panels, nom 5/8 in., thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type 5 self-drilling, self-tapping bugle head steel screws spaced 12 in. (24 in. OC in System D)
 - Canadian Gypsum Company** —Types AR, C, IP-X1, IP-X2, SCX, SHX, WRC, WRX
 - United States Gypsum Co.** —Types AR, C, IP-X1, IP-X2, SCX, SHX, WRC, WRX
 - Yeso Panamericano S.A. de C.V.** —Types AR, C, IP-X1, IP-X2, SCX, SHX, WRC, WRX
- System B**
Gypsum panels, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in two layers. Inner or base layer attached to studs with 1 in. long Type 5 self-drilling, self-tapping bugle head steel screws spaced 24 in. OC. Outer or face layer attached to studs with 1-5/8 in. long Type 5 self-drilling, self-tapping bugle head steel screws spaced 12 in. Joints between inner and outer layers staggered a min of 12 in. when applied horizontally. Joints centered over studs and staggered 24 in. when applied vertically.
- Canadian Gypsum Company** —1/2 in. Type C, IP-X2 or WRC; 5/8 in. Types AR, C, IP-X1, IP-X2, SCX, SHX, WRC, WRX
- United States Gypsum Co.** —1/2 in. Types C, IP-X2 or WRC; 5/8 in. Types AR, C, IP-X1, IP-X2, SCX, SHX, WRC, WRX
- Yeso Panamericano S.A. de C.V.** —1/2 in. Types C, IP-X2 or WRC; 5/8 in. Types AR, C, IP-X1, IP-X2, SCX, SHX, WRC, WRX

Design No. U419
October 27, 2005
Nonbearing Wall Ratings 1, 2, 3 or 4 Hr (See Items 3 & 4)

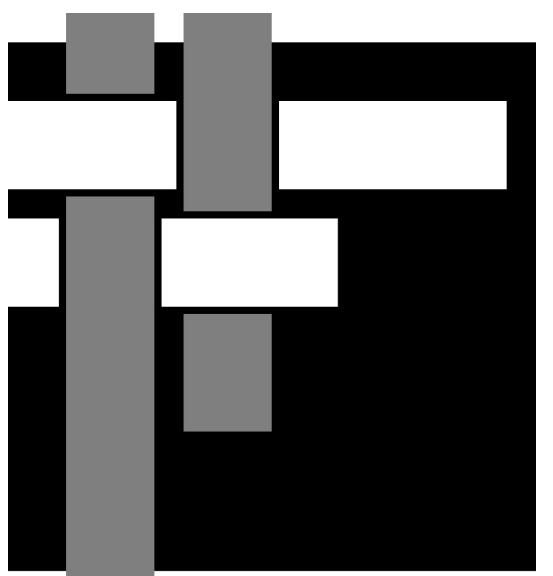


- 1. Floor and Ceiling Runners** (Not shown) Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min width to accommodate stud size, with min 1 in. long legs, attached to floor and ceiling with fasteners 24 in. OC max.
- 2. Steel Studs** Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min 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 than 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. Vertical 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 ratings are as follows:

Rating	Min Stud Depth	No. of Layers & Thkns of Panel	Min Thkns 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 5/8	1 layer, 3/4 in. thick	
2	1 5/8	2 layer, 1/2 in. thick	
2	1 5/8	2 layers, 5/8 in. thick	
2	3 1/2	1 layer, 3/4 in. thick	
3	1 5/8	3 layer, 1/2 in. thick	
3	1 5/8	2 layers, 3/4 in. thick	
3	1 5/8	3 layers, 5/8 in. thick	
4	1 5/8	4 layers, 5/8 in. thick	
4	1 5/8	4 layers, 1/2 in. thick	
4	2 1/2	2 layer, 3/4 in. thick	

- CANADIAN GYPSUM COMPANY** 1/2 in. thick Type C, Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WR or ULTRACODE
- UNITED STATES GYPSUM CO** 1/2 in. thick Type C, If Type SCX, SHX, WRX, IP-X1, AR, C, WRC, FRX-G, IP-AR IP-X3 or ULTRACODE
- USG MEXICO S A DE C V** 1/2 in. thick Type C, IP-X2, AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX, WF ULTRACODE
- When Item 6B, Steel Framing Members*, is used, No Hr: Min. stud depth is 3 1/2 in., min. thickness of ins. layers of gypsum board panels (1/2 in. or 5/8 in. in this channels as described in Item 5. One layer of gypsum thick) attached to opposite side of stud without furring.
- Gypsum Board*** (As an alternate to Item 4) 5/8 groove edge, applied horizontally as the outer layer. Secured as described in Item 5. Joint covering (Item CANADIAN GYPSUM COMPANY Type SHX. UNITED STATES GYPSUM CO Type SHX. USG MEXICO S A DE C V Type SHX.
- 5. Fasteners** (Not shown) Type S or S-12 steel screw (Item 2) or furring channels (Item 6). Single layer eye in. thick panels or 1-1/4 in. long for 3/4 in. thick can are applied horizontally, or 8 in. OC along vertical arc in the field when panels are applied vertically. Two la for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for OC. Second layer: 1-5/8 in. long for 1/2 in., 5/8 in. B in. thick panels, spaced 16 in. OC with screws offset systems. First layer: 1 in. long for 1/2 in., 5/8 in. thick Second layer: 1-5/8 in. long for 1/2 in., 5/8 in. thick layer: 2-1/4 in. long for 1/2 in., 5/8 in. thick panels c panels, spaced 12 in. OC. Screws offset min 6 in. fro First layer: 1 in. long for 1/2 in., 5/8 in. thick panels, 3-5/8 in. long for 1/2 in., 5/8 in. thick panels, space long for 1/2 in. thick panels or 2-5/8 in. long for 5/8 Fourth layer: 2-5/8 in. long for 1/2 in. thick panels or spaced 12 in. OC. Screws offset min 6 in. from layer 1
- 6. Furring Channels** (Optional, not shown, for single furring channels fabricated from min 25 MSG corrosi version a max of 24 in. OC. Flange portion attached in. long Type S-12 steel screws. Not for use with Item 6A. Steel Framing Members (Not Shown)* (Optional for single or double layer systems). As an alternate t Framing Members as described below:
 - Furring Channels** Formed of No. 25 MSG galv ste spaced max. 24 in. OC perpendicular to studs. Chan in Item 5. Gypsum board attached to furring channel use with Item 4A.
 - Steel Framing Members*** Used to attach furring; 2). Clips spaced max. 48 in. OC, and secured to stud self-drilling; S-12 steel screw through the center gro fitted into clips.
 - PAC INTERNATIONAL INC** Type PFSIC-1.
 - GB. Steel Framing Members** (Optional, Not Shown) channels and Steel Framing Members on only one sa
- a. Furring Channels** Formed of No. 25 MSG galv ste to studs. Channels secured to studs as described in 1 in stud cavity as described in Item 4. Two layers of g channels as described in Item 4. Not for use with Item b. Steel Framing Members* Used to attach furring; studs (Item 2) only. Clips spaced 48 in. OC, and sec in. coarse drywall screws, one through the hole at ea are friction fitted into clips.
- KINETICS NOISE CONTROL INC** Type Isoexam
- 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 layer panels. Paper tape and joint compound may be omitted when gypsum panels are supplied with a square edge.
- 8. Sliding Brick or Stucco** (Optional, not shown) Aluminum, vinyl or steel siding, brick veneer or stucco, meeting the requirements of local code agencies, installed 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 or brick.
- 9. Caulking and Sealants*** (Optional, not shown) A bead of acoustical sealant applied around the partition perimeter for sound control. UNITED STATES GYPSUM CO Type AS *Bearing the UL Classification Mark

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910 762-0892 s2a3.com

WD JONES ENGINEERING, PLLC
Structural Engineering Services
100 B Old Eastwood Road, Unit 24, Wilmington, NC 28403
Office: (910) 323-0361 Email: wdj@joneseng.com

McFadyen Engineers, PLLC
411 Peachtree Avenue, Suite 200
Wilmington, NC 28403
Office: (910) 399-1123



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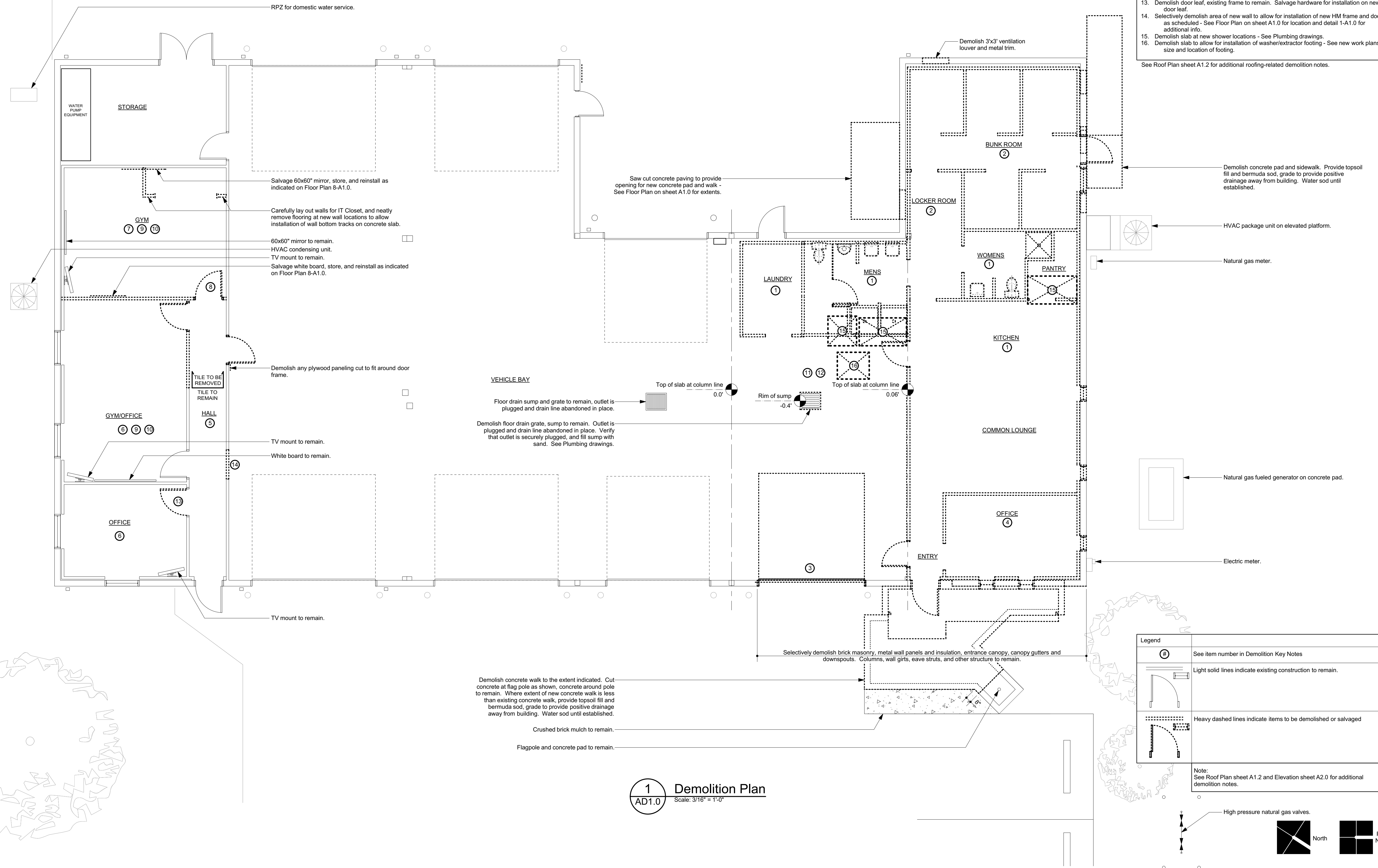
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UL Assemblies

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3 of 3

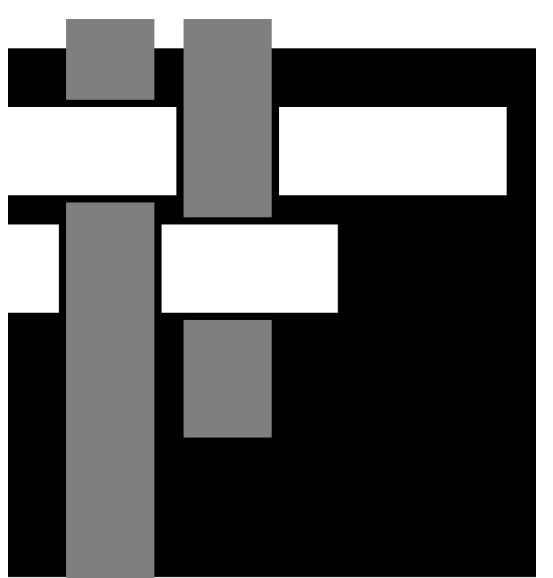
- Demolition Key Notes**
- Demolish quarry tile flooring and tile base.
 - Demolish VCT flooring.
 - Demolish plywood infill from 12-0 x 12-0 overhead door opening. Demolish door track and operator.
 - Remove remnant carpet adhesive and prep slab per spec section 09 0561.
 - Remove tile flooring and resilient base to length of demolished wall and prep slab per spec section 09 0561.
 - Demolish existing broadloom carpet, adhesive and resilient base, and prep slab per spec section 09 0561.
 - Resilient athletic sheet flooring and resilient base to remain. U.N.O.
 - Salvage door, frame, and hardware, to be installed in new opening - See Door Schedule on sheet A6.0.
 - Existing acoustic ceiling tile and grid to remain. Where ACT is removed to relocate wall and revise ceiling layout, salvage tile and grid for reinstallation in new layout - See RCP drawing.
 - Salvage light fixtures and relocate per plans - See Electrical drawings.
 - Salvage light fixtures from North vehicle bay, and provide to Owner - See Electrical drawings.
 - Coordinate with Owner's vehicle exhaust system vendor to salvage ducts from North vehicle bay, and salvage exhaust system fan for reinstallation in adjacent vehicle bay - See Mechanical drawings.
 - Demolish door leaf, existing frame to remain. Salvage hardware for installation on new door leaf.
 - Selectively demolish area of new wall to allow for installation of new HM frame and door as scheduled - See Floor Plan on sheet A1.0 for location and detail 1-A1.0 for additional info.
 - Demolish slab at new shower locations - See Plumbing drawings.
 - Demolish slab to allow for installation of washer/extractor footing - See new work plans for size and location of footing.

See Roof Plan sheet A1.2 for additional roofing-related demolition notes.



Legend	
	See item number in Demolition Key Notes
	Light solid lines indicate existing construction to remain.
	Heavy dashed lines indicate items to be demolished or salvaged
Note: See Roof Plan sheet A1.2 and Elevation sheet A2.0 for additional demolition notes.	

1
AD1.0 Demolition Plan
Scale: 3/16" = 1'-0"



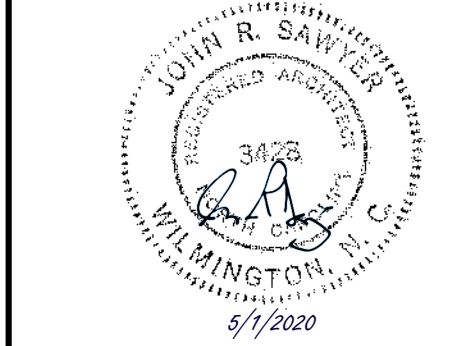
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124 Market St, Wilmington, NC 28401
910 762-0892 s2a3.com

WD JONES ENGINEERING, PLLC
Structural Engineering Services
1018 Old Eastwood Road, Unit 24 Wilmington, NC 28403
Office: (910) 523-5381 Email: wj@jonesecr.com

McFadyen
Engineers, PLLC

411 Peachtree Avenue, Suite 200
Wilmington, NC 28403
Office: (910) 399-1123



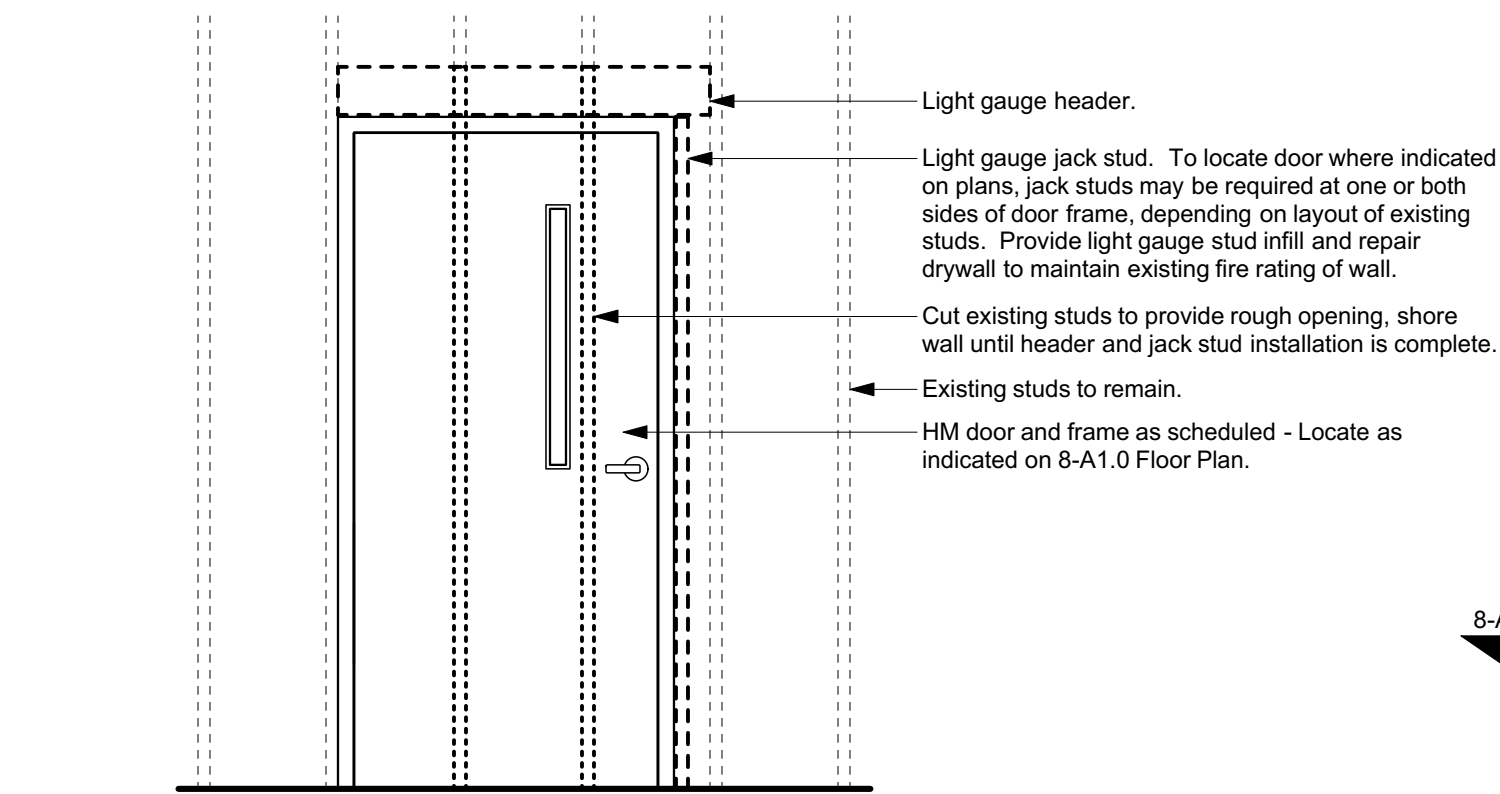
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1 May, 2020

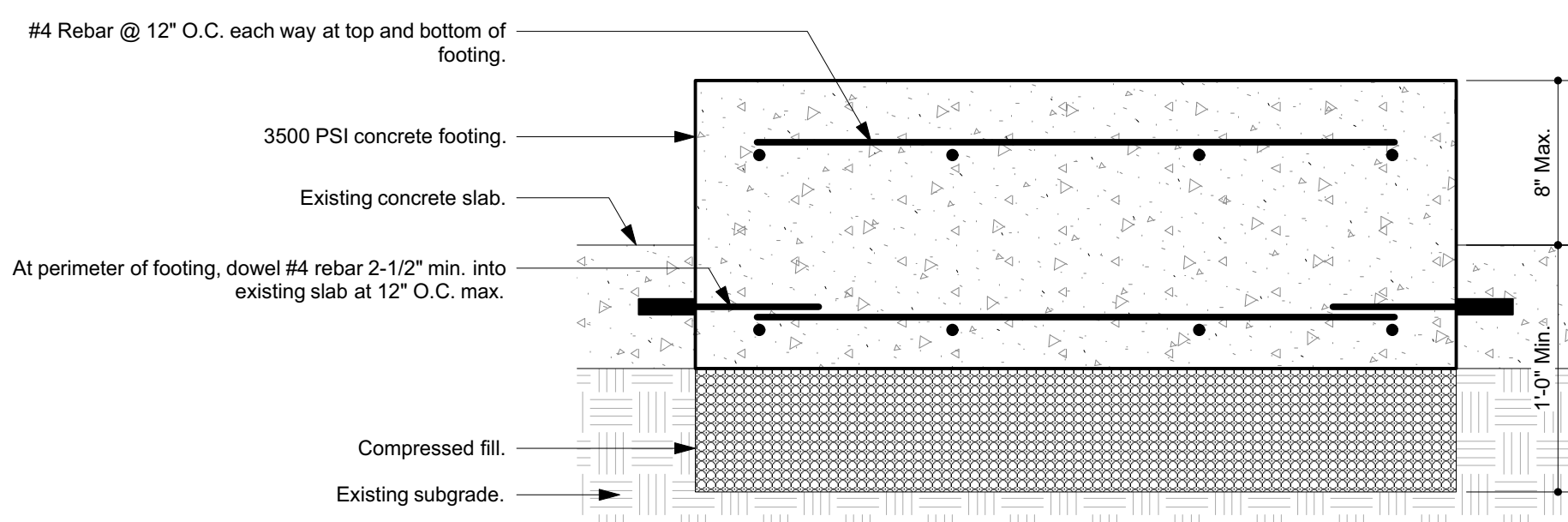
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Demolition Plan

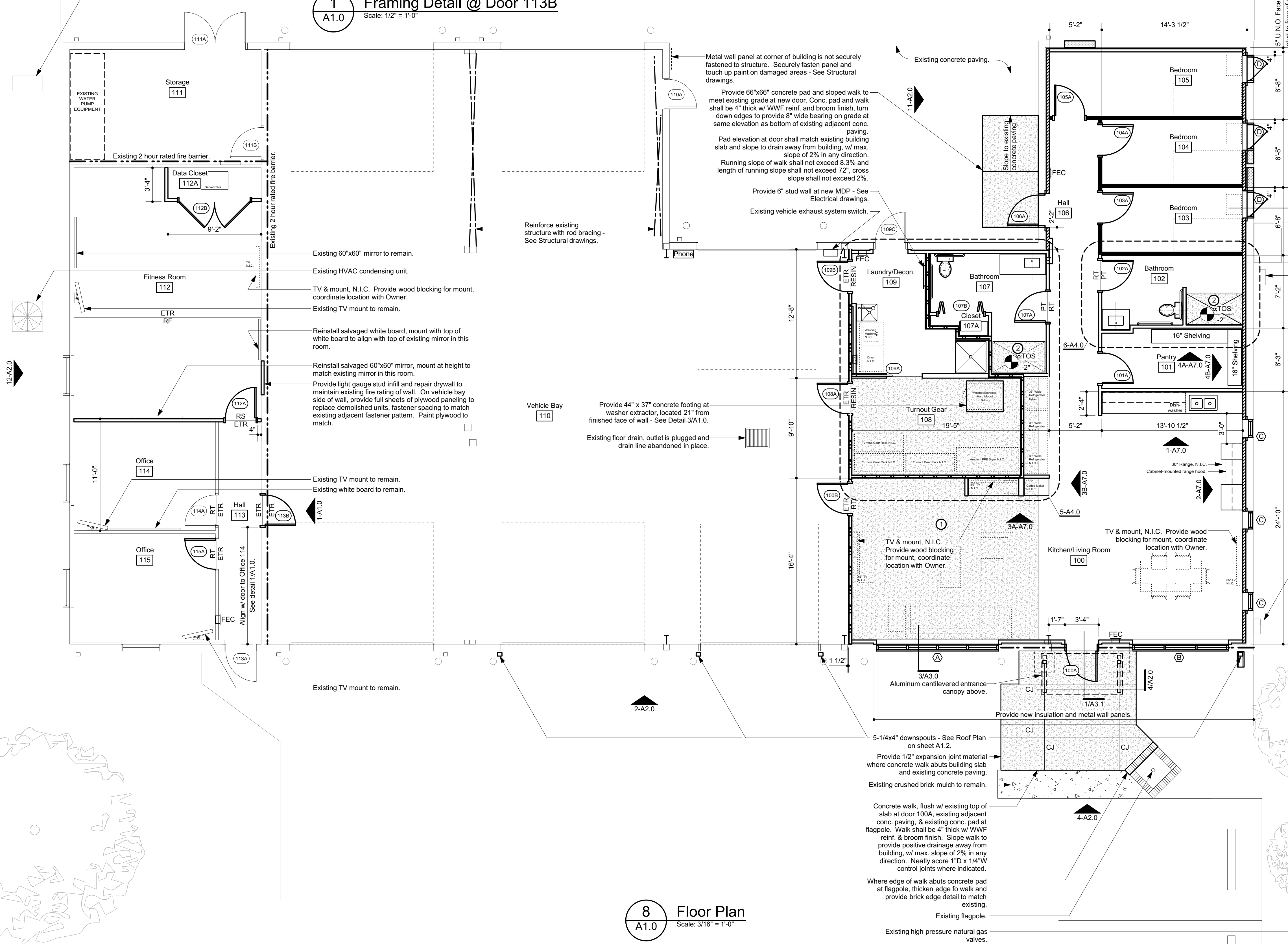
AD1.0



1 Framing Detail @ Door 113B
Scale: 1/2" = 1'-0"



3 Washer/Extractor Footing Detail
Scale: 1 1/2" = 1'-0"



8 Floor Plan
Scale: 3/16" = 1'-0"

Key Notes

1. Fill existing floor sump with sand, and pour new self-leveling concrete level with existing slab in Kitchen/Living Room, and level with vehicle bay slab at door 100B. See 1-A01.0 Demolition Plan for approximate existing Top of Slab elevations in this area.
2. Provide 4" thick depressed slab at showers, provide vapor barrier below new slab, seal perimeter of vapor barrier to existing slab per vapor barrier manufacturer's recommendations. Slope mud tile setting bed at shower floor to drain. Slope shall not exceed 2% in any direction.

Floor Finish Legend

- ETR - Existing to Remain
- RT - Resilient Tile
- RS - Resilient Sheet
- PT - Porcelain Tile

See sheet A7.1 for flooring transition details.

Legend	
	See item number in Key Notes
	Light solid lines indicate existing construction.
	Heavy solid lines indicate new construction; Indicates drywall stud wall extending 12" above ceiling, brace top of wall to structure; see wall section 2-A3.0. Stud thickness 3-5/8" U.N.O.
	Notes: -Provide corner protection from top of wall base to top of adjacent door frames at outside corners of interior walls, typical. -Provide min. 20 gauge studs at locations indicated to receive wall tile.
	Solid fill indicates drywall stud wall extending to underside of roof with acoustic insulation; see wall section 2-A3.0. Stud thickness 3-5/8" U.N.O.
	2-Hour Fire Barrier: drywall stud wall extends to underside of roof with acoustic insulation; see wall section 1-A3.0. Stud thickness 4" U.N.O. 1-Hour Fire Barrier: drywall stud wall extending to underside of roof; see wall section 2-A3.0. Stud thickness 3-5/8" U.N.O.
	Shear wall: Light gauge structural stud wall U.N.O. with fire-rated plywood extending to underside of roof. GWB stops 12" above ceiling; see wall section 3-A3.1 and Structural drawings. Stud thickness 3-5/8" U.N.O.
	Provide metal panels and insulation to patch existing opening.
	Light dashed lines indicate items not included in contract, to be provided by Owner.
	Fire extinguisher cabinet - Verify locations with Owner.



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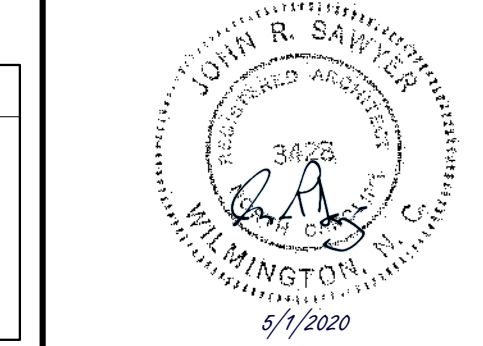
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910 762-0892 s2a3.com

WD JONES ENGINEERING, PLLC
Structural Engineering Services

100 B Old Eastwood Road, Unit 24, Wilmington, NC 28403
Office: (910) 523-5381 Email: wdjones@wdjones.com

McFadyen Engineers, PLLC

411 Peachtree Avenue, Suite 200
Wilmington, NC 28403
Office: (910) 399-1123



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1 May, 2020

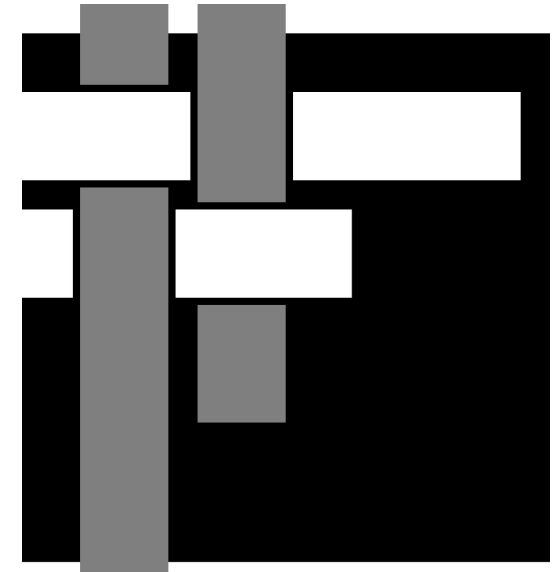
Revisions:

Floor Plan

A1.0

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910 762-0892 s2a3.com

WD JONES ENGINEERING, PLLC
Structural Engineering Services
100 B Old Eastwood Road, Unit 24 Wilmington, NC 28403
Office: (910) 523-5381 Email: wjengineering@ccz.com

**McFadyen
Engineers, PLLC**

411 Peachtree Avenue, Suite 200
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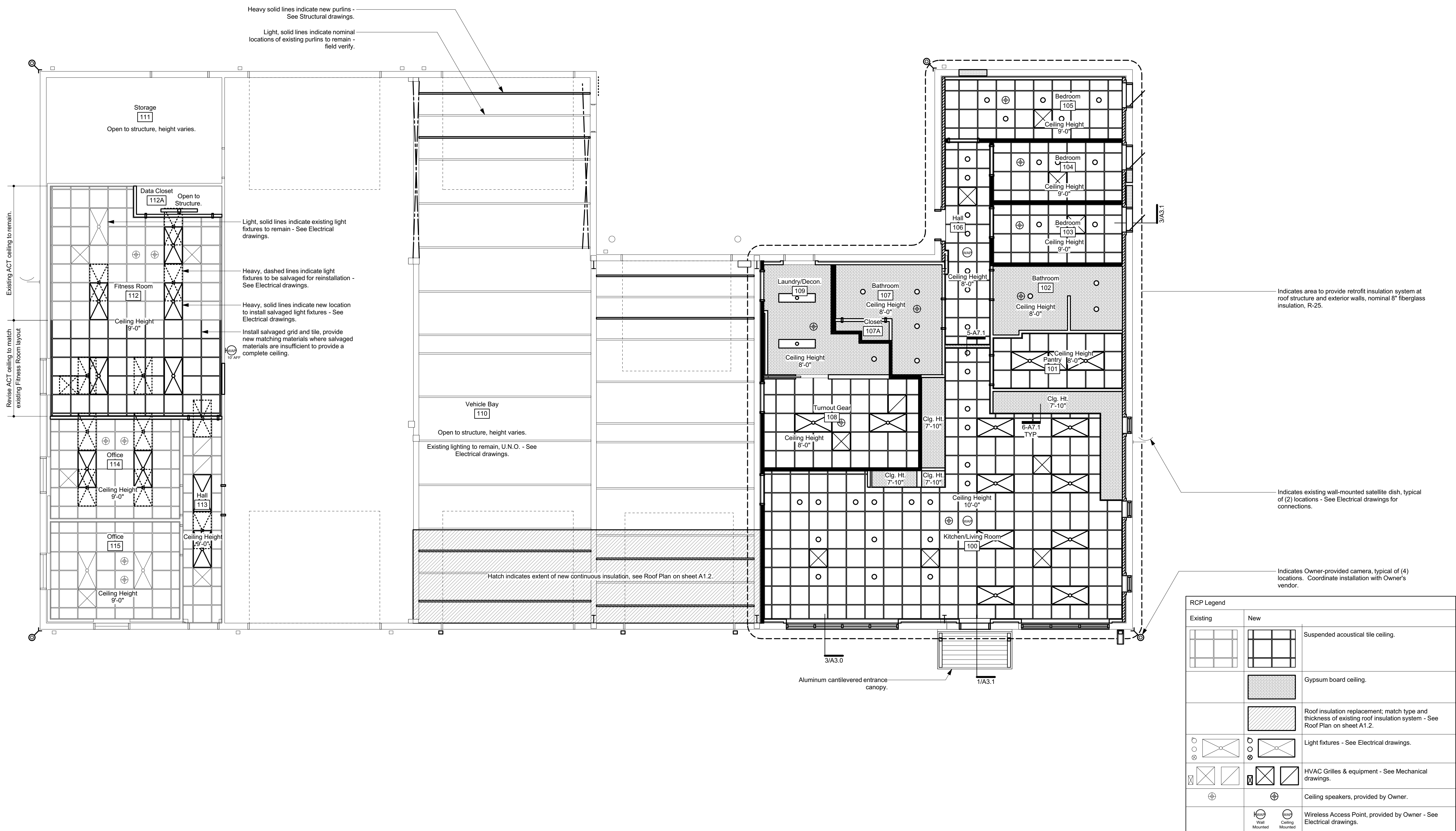
Coordination Drawings
1 May, 2020

Revisions:

Reflected
Ceiling Plan

A1.1

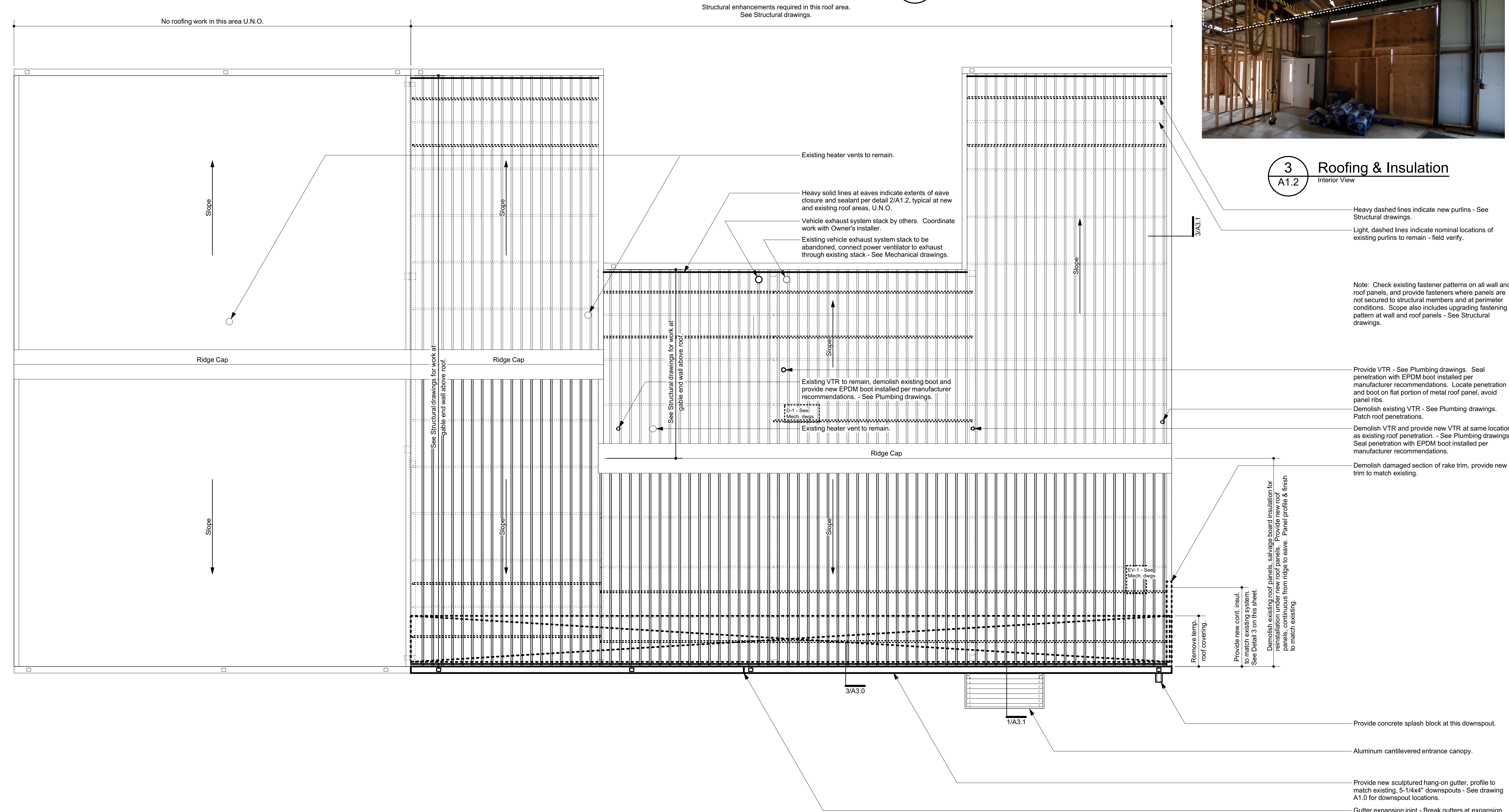
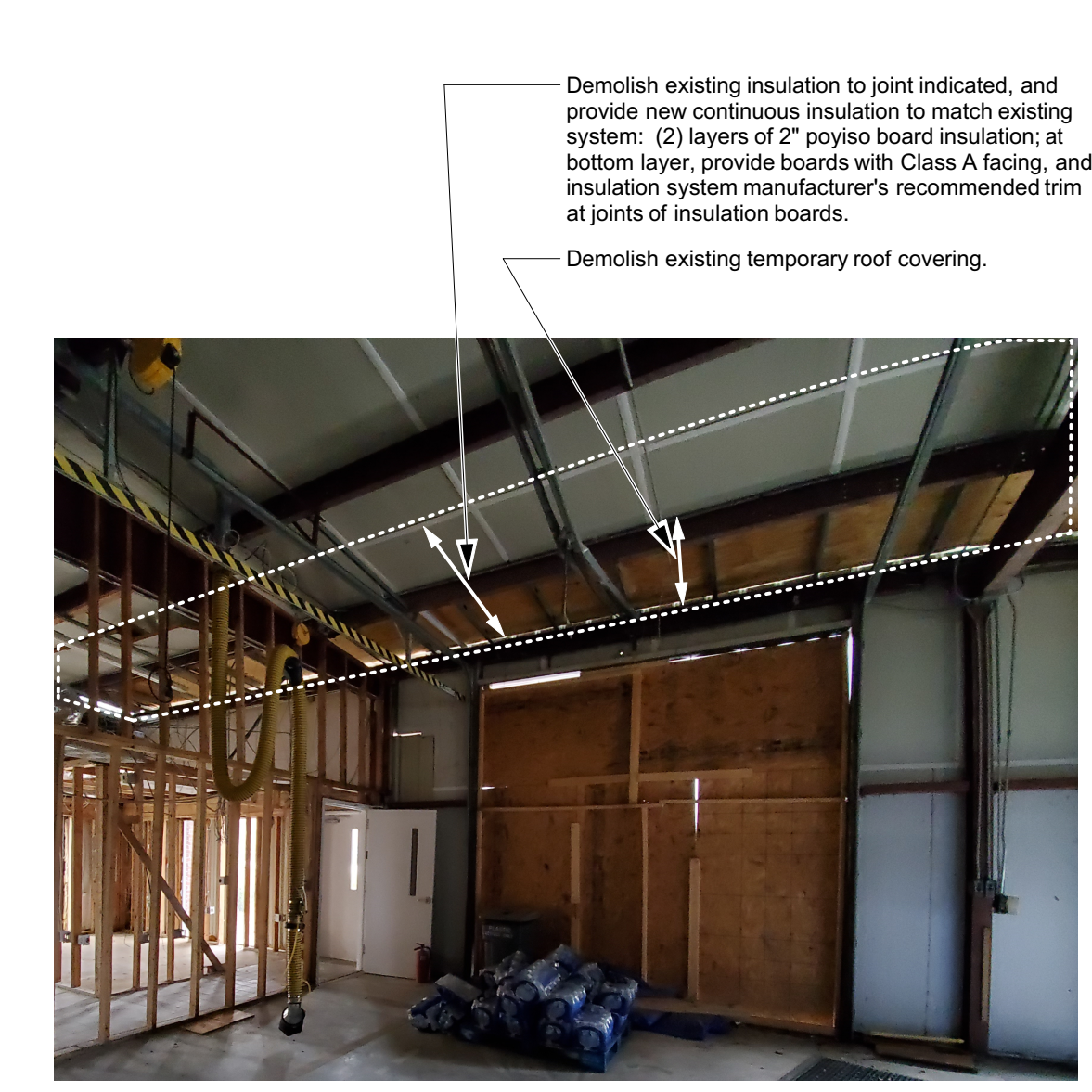
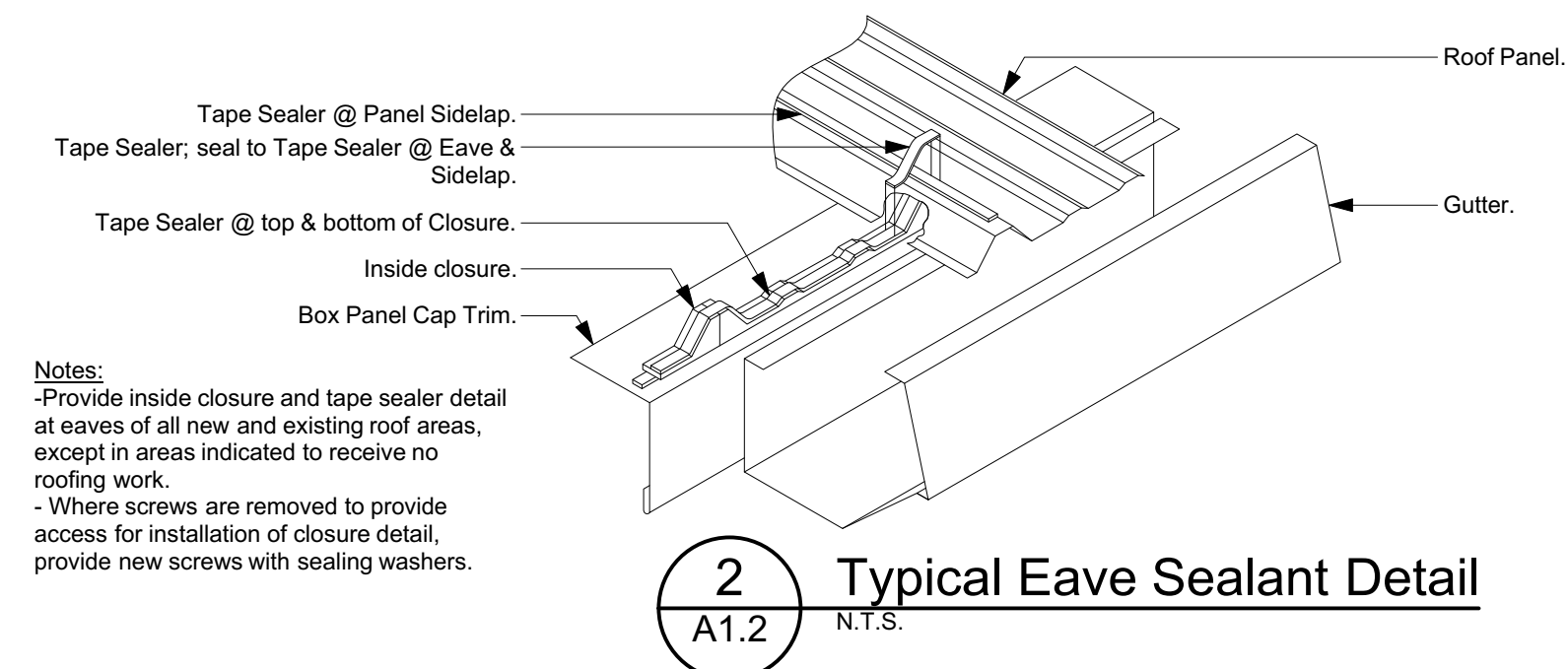
2 of 12
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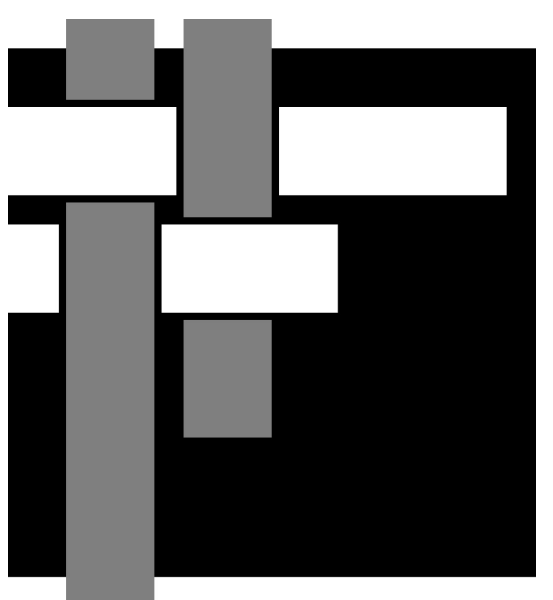
RCP Legend		
Existing	New	
		Suspended acoustical tile ceiling.
		Gypsum board ceiling.
		Roof insulation replacement; match type and thickness of existing roof insulation system - See Roof Plan on sheet A1.2.
		Light fixtures - See Electrical drawings.
		HVAC Grilles & equipment - See Mechanical drawings.
		Ceiling speakers, provided by Owner.
		Wireless Access Point, provided by Owner - See Electrical drawings.

8 Reflected Ceiling Plan
A1.1 Scale: 3/16" = 1'-0"





8 Roof Plan
 A1.2 Scale: 3/16" = 1'-0"



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WD JONES ENGINEERING, PLLC
 Structural Engineering Services
 100 B Old Eastwood Road, Unit 24 Wilmington, NC 28403
 Office: (910) 523-5381 Email: wjengineering@wdj.com

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 411 Peachtree Avenue, Suite 200
 Wilmington, NC 28403
 Office: (910) 399-1123



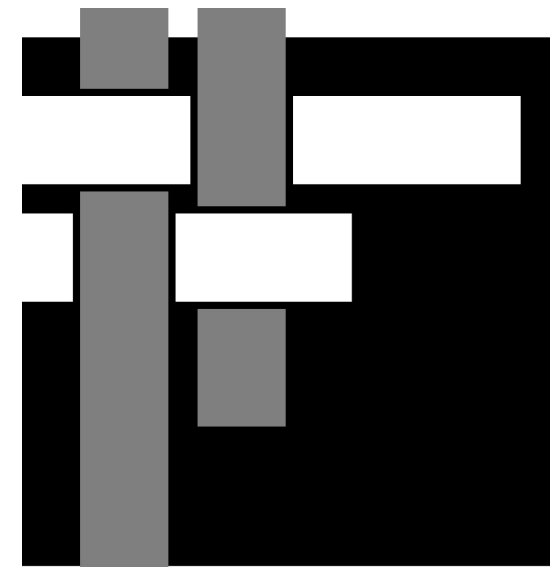
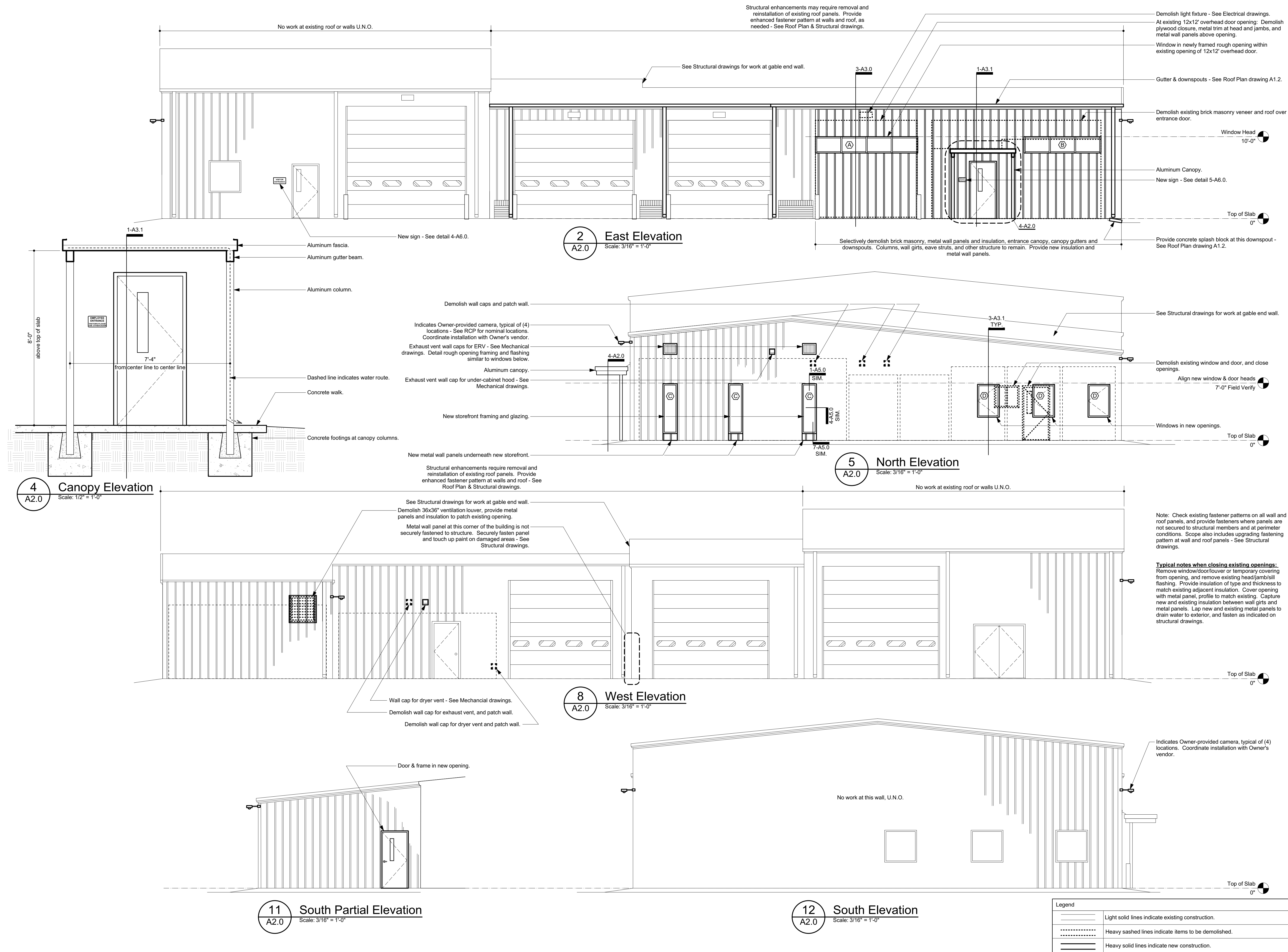
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Coordination Drawings
 1 May, 2020

Revisions:

Roof Plan

A1.2



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Office: (910) 523-5381 Email: wjengineering@comcast.net

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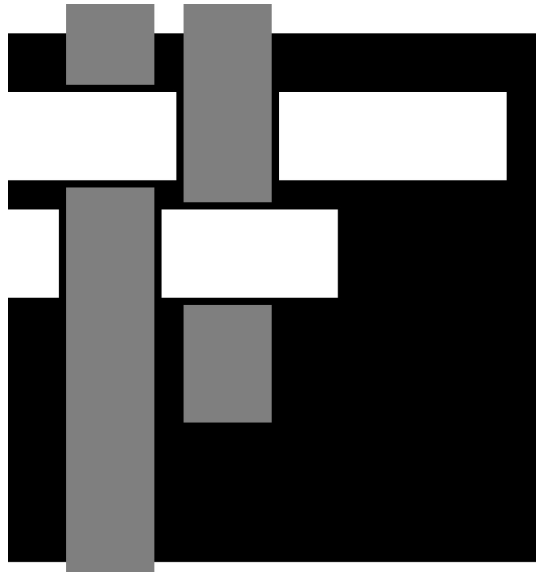
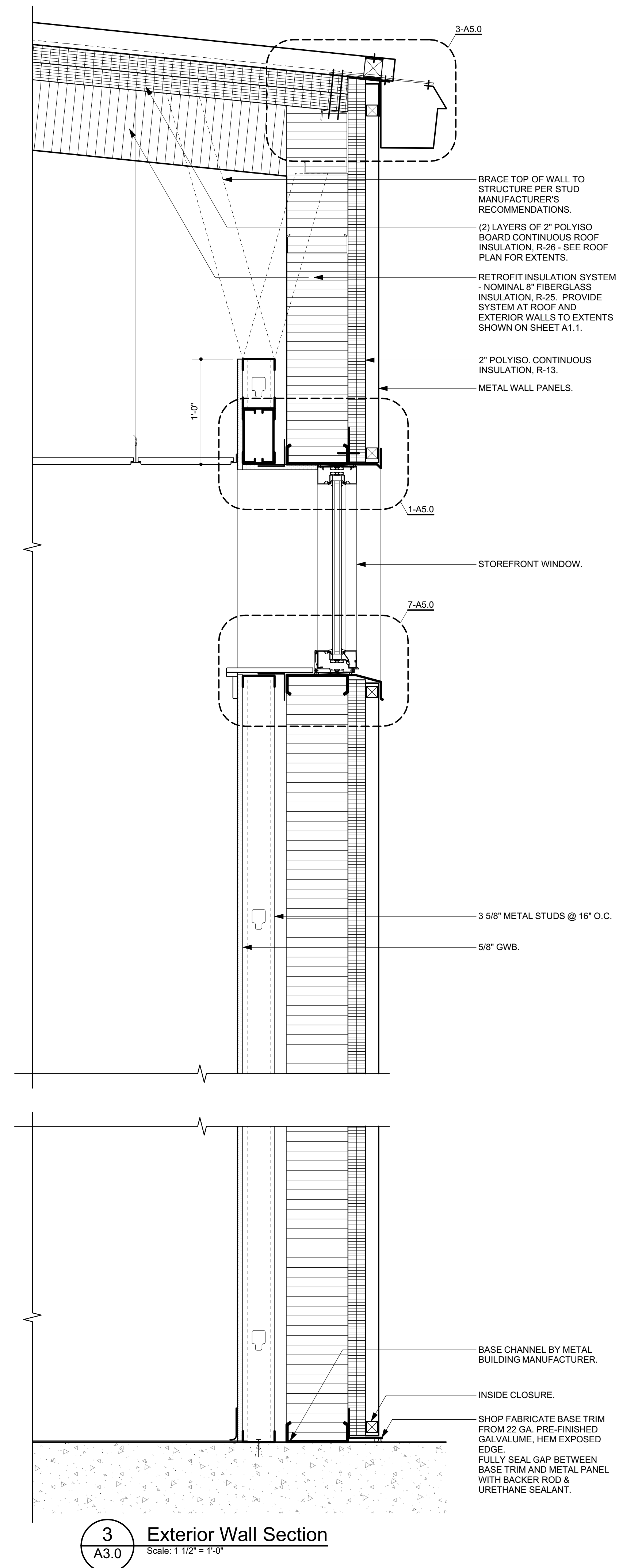
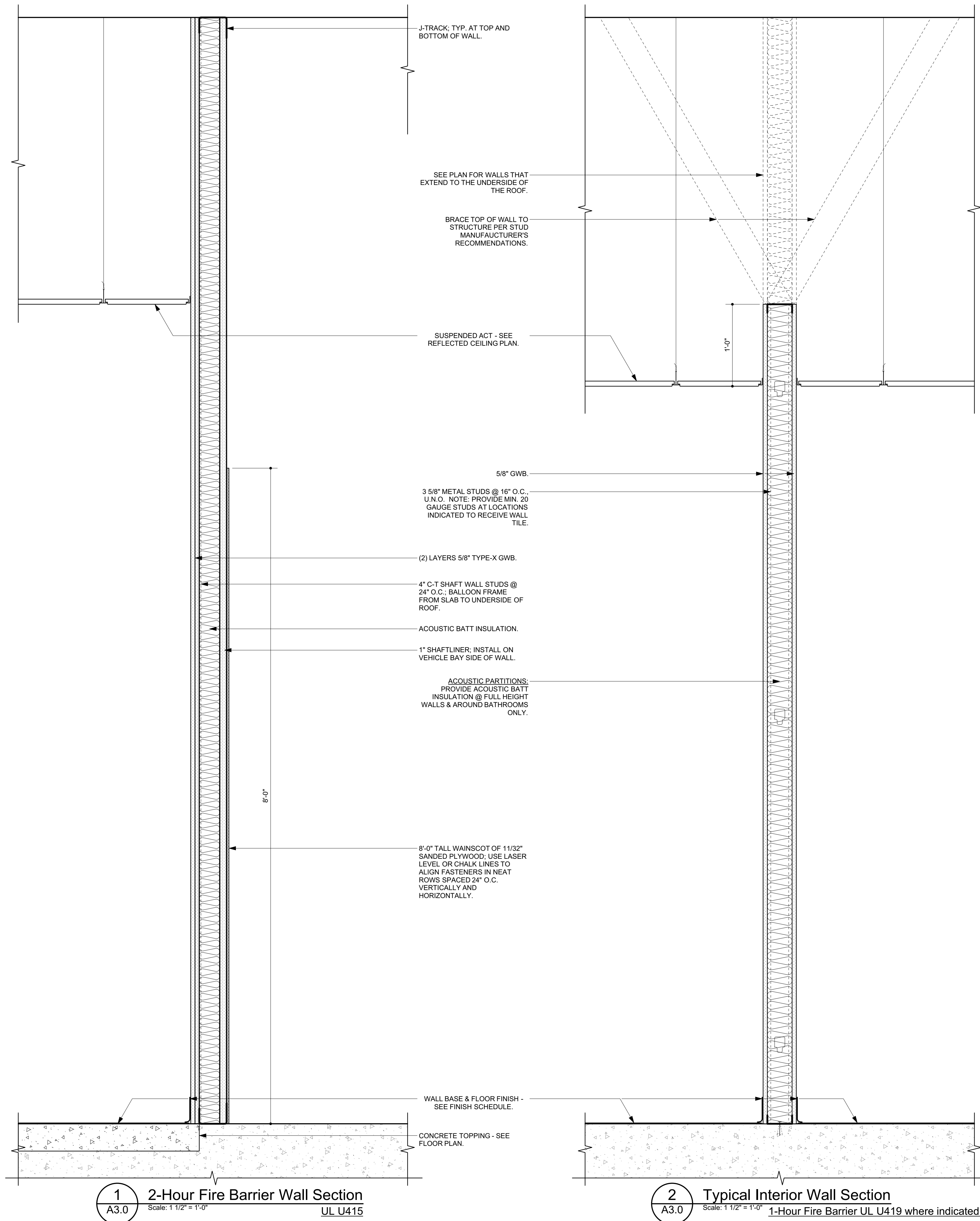
Coordination Drawings
1 May, 2020

Revisions:

Building
Elevations

A2.0

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100 B Old Eastwood Road, Unit 24 Wilmington, NC 28403
Office: (910) 523-5381 Email: wjeng@wdjeng.com

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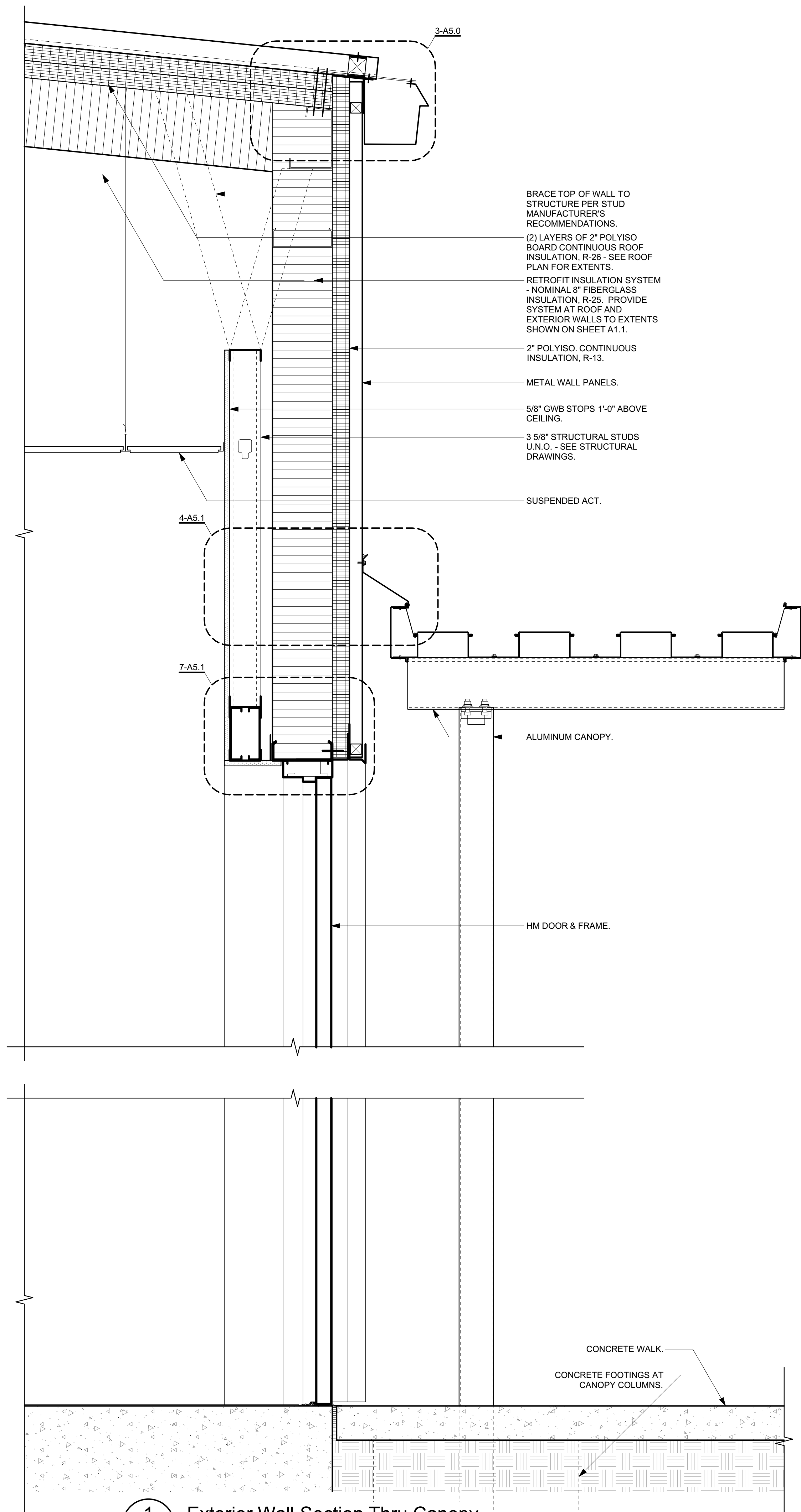
Coordination Drawings
1 May, 2020

Revisions:

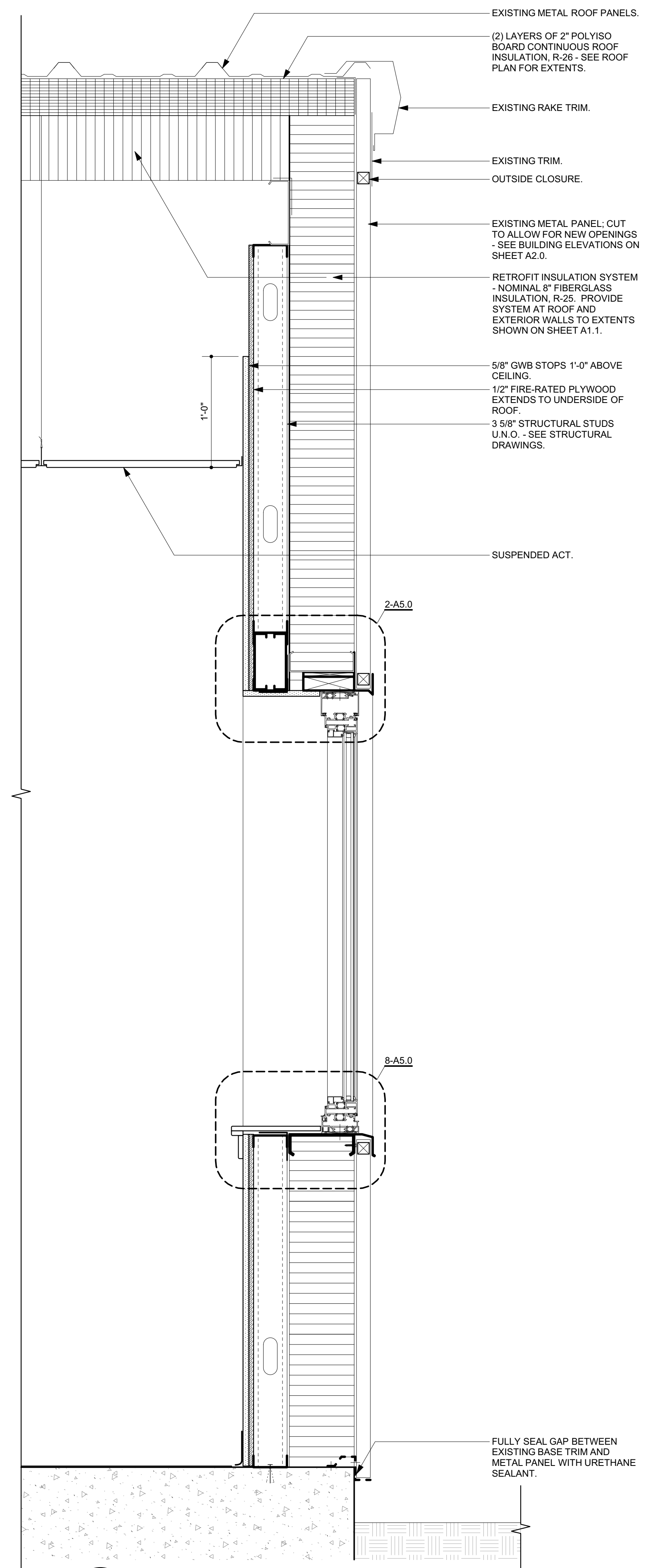
Wall Sections

A3.0

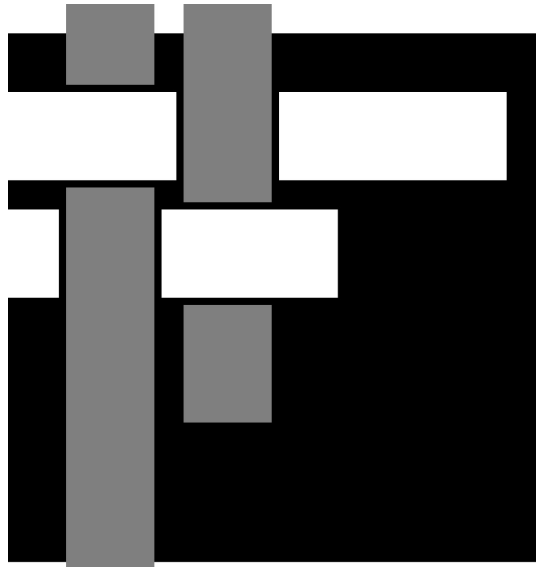
5 of 12



1
A3.1
Exterior Wall Section Thru Canopy
Scale: 1 1/2" = 1'-0"



3
A3.1
Exterior Shear Wall Section
Scale: 1 1/2" = 1'-0"



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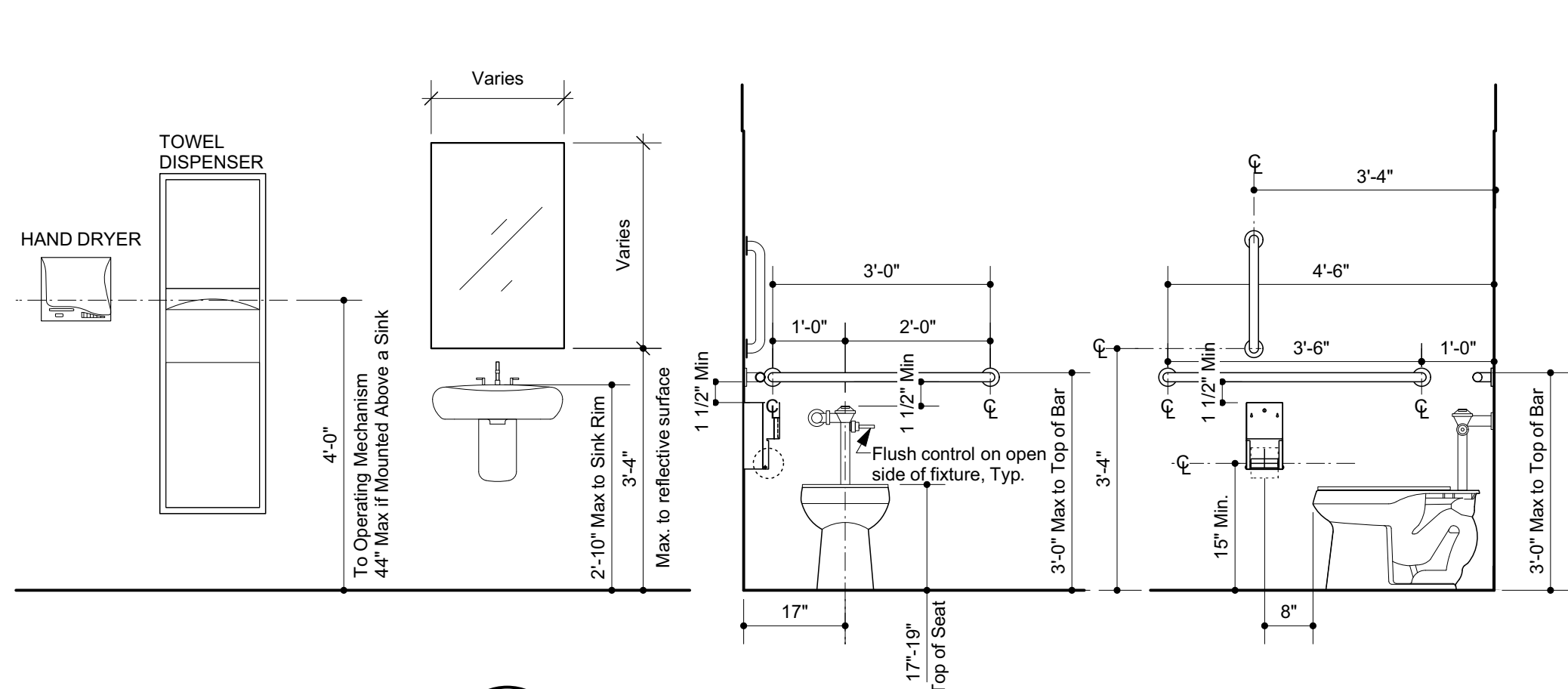
Coordination Drawings
1 May, 2020

Revisions:

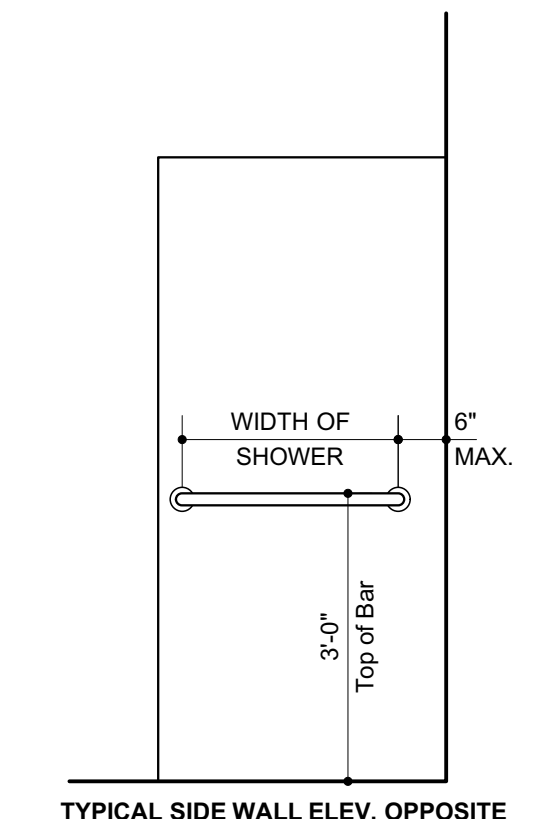
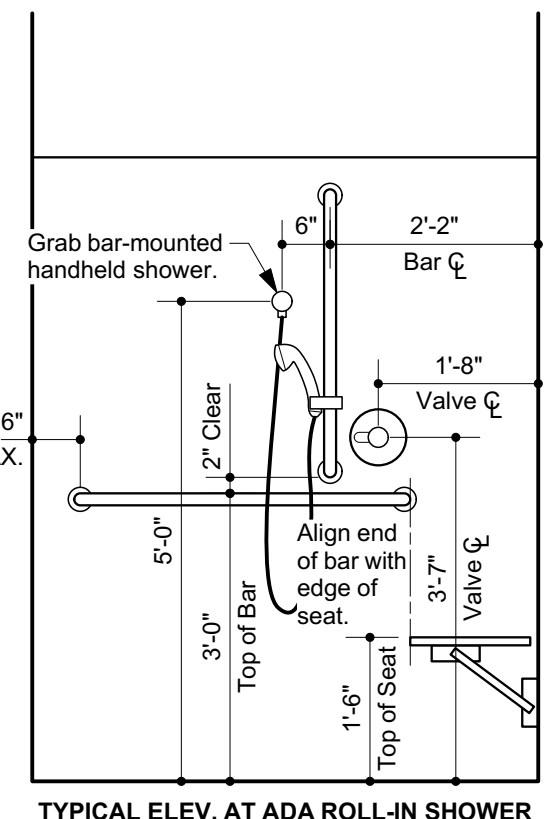
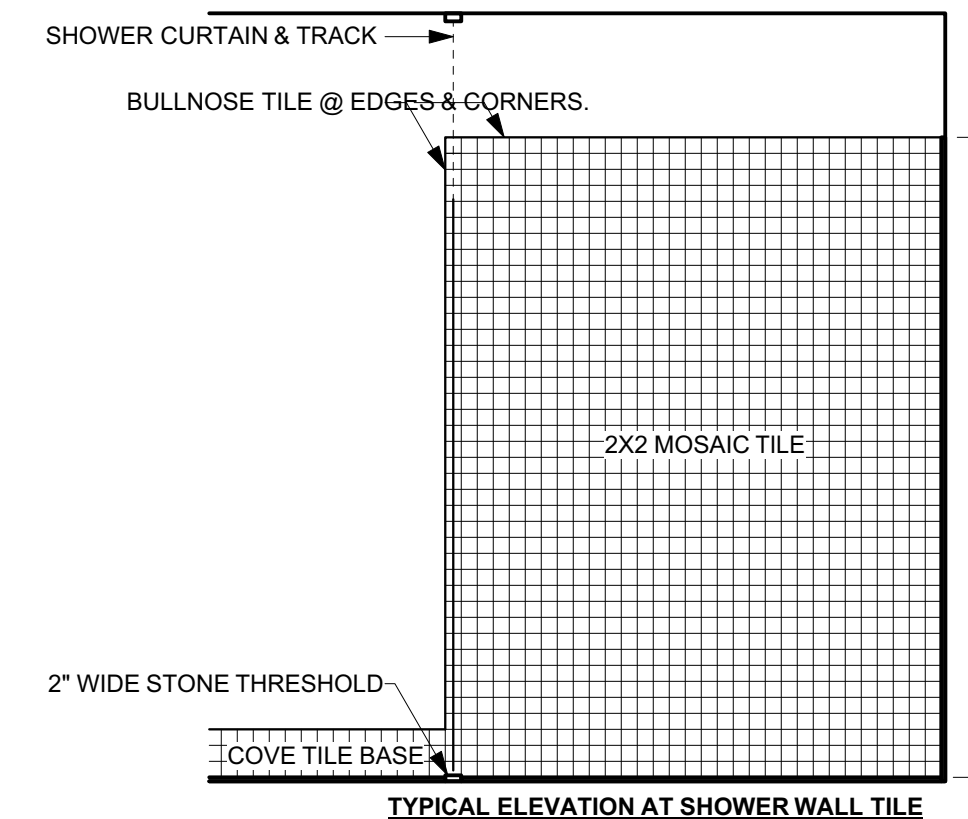
Wall Sections

A3.1

6 of 12

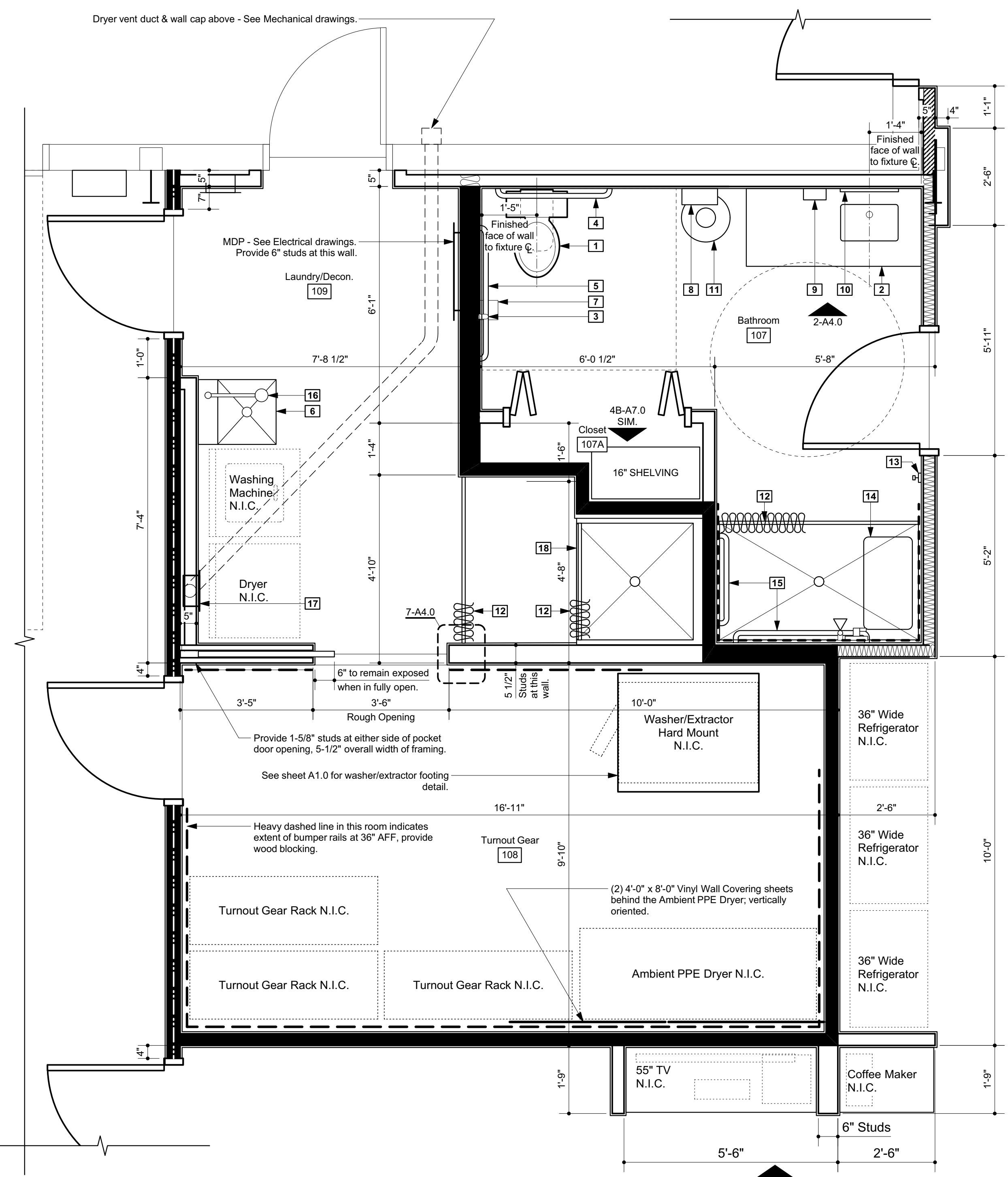


1 Restroom Fixture & Accessory Details
 A4.0 Scale: 1/2" = 1'-0"

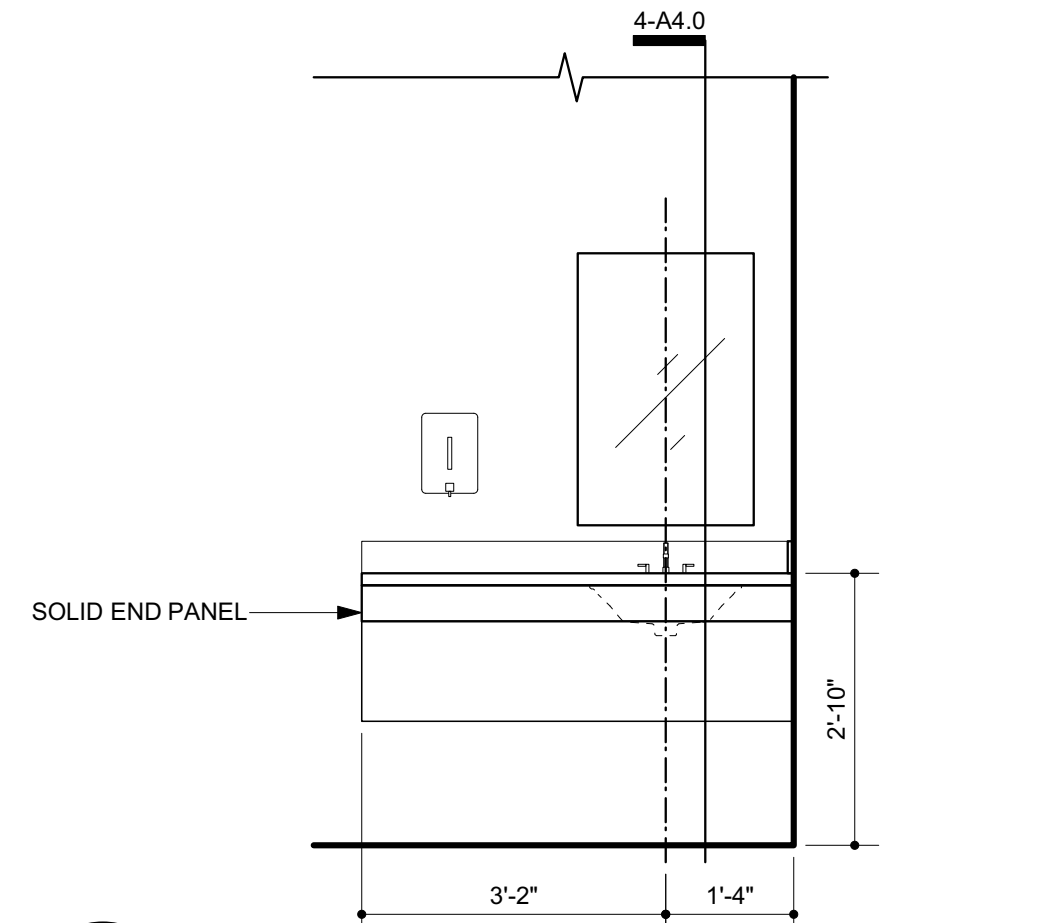


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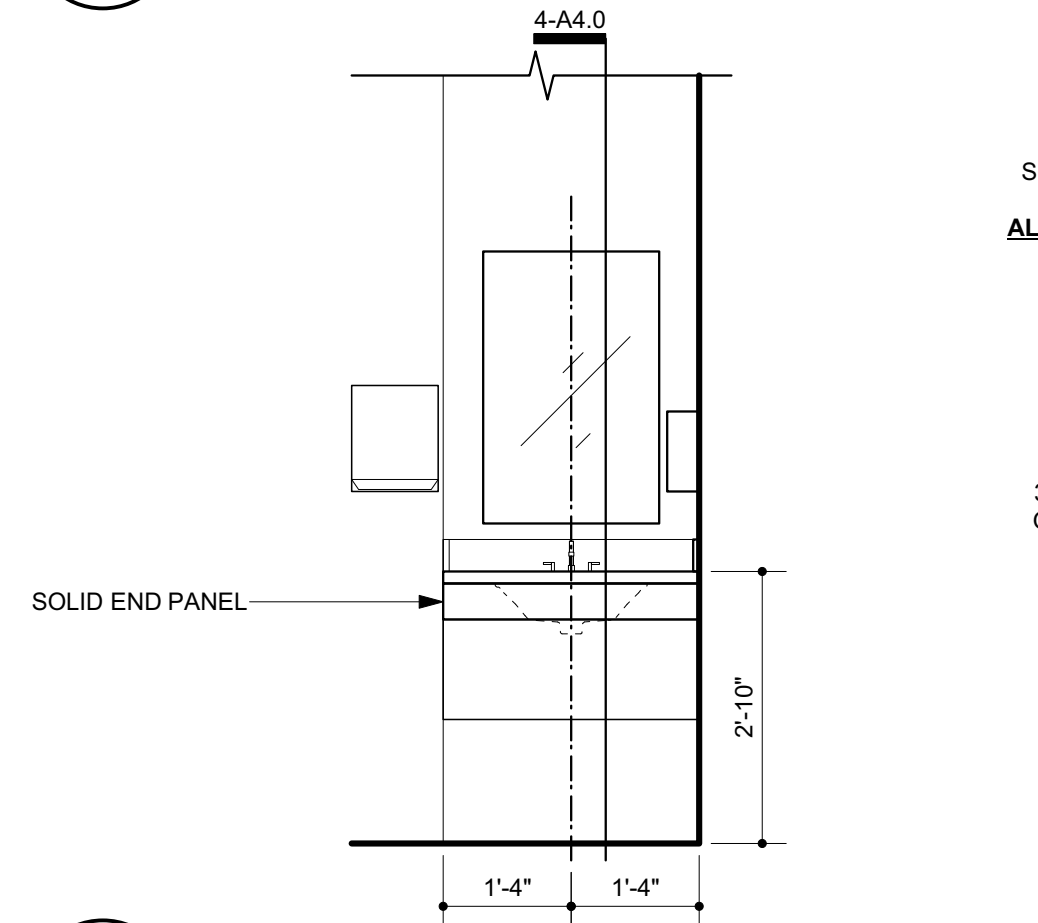
- See Specifications for manufacturers and model #s on all toilet accessories.
- See Plumbing Specifications for manufacturers and model #s on all fixtures.
- Grab bars shall support a 250lb load applied in any direction, along entire length.
- Grab bars shall not rotate in their fittings.
- Grab bar edges shall be min. 1/8" radius & free of sharp elements.
- Toilet Seat shall not spring back automatically to a lifted position.
- Flush control shall be operable w/ one hand w/out requiring light grasping, twisting of wrist or force greater than 5 lbs.
- Control shall be located on the wide side of accessible stalls.
- Toilet paper dispenser shall allow continuous paper delivery.
- Supply & drain lines shall be covered w/ pipe insulation or non-heat conducting baffle where exposed & shall not intrude on required knee space.



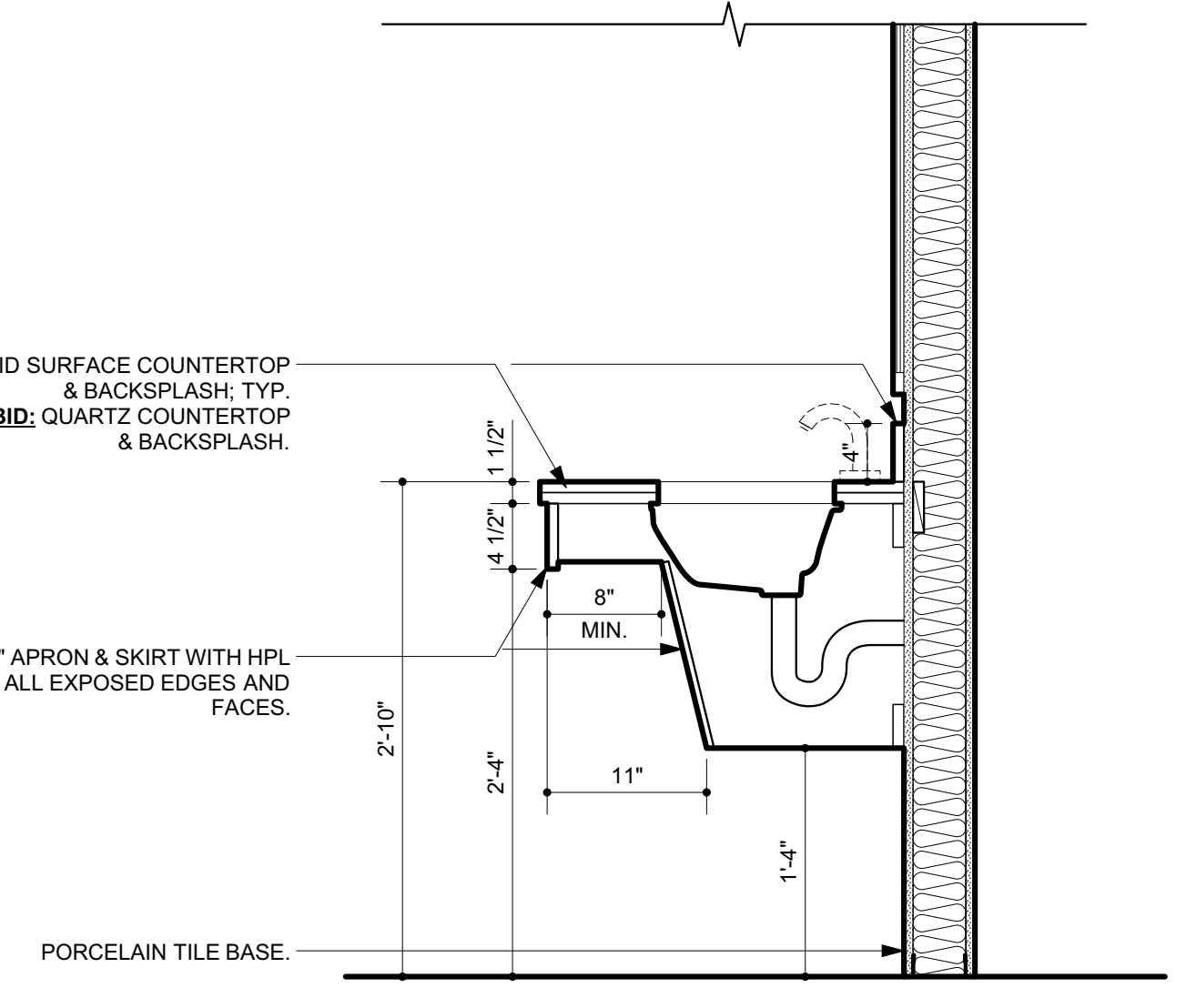
5 Bathroom 107, Laundry/Decon. 109, & Locker Room 108 Enlarged Plan
 A4.0 Scale: 1/2" = 1'-0"



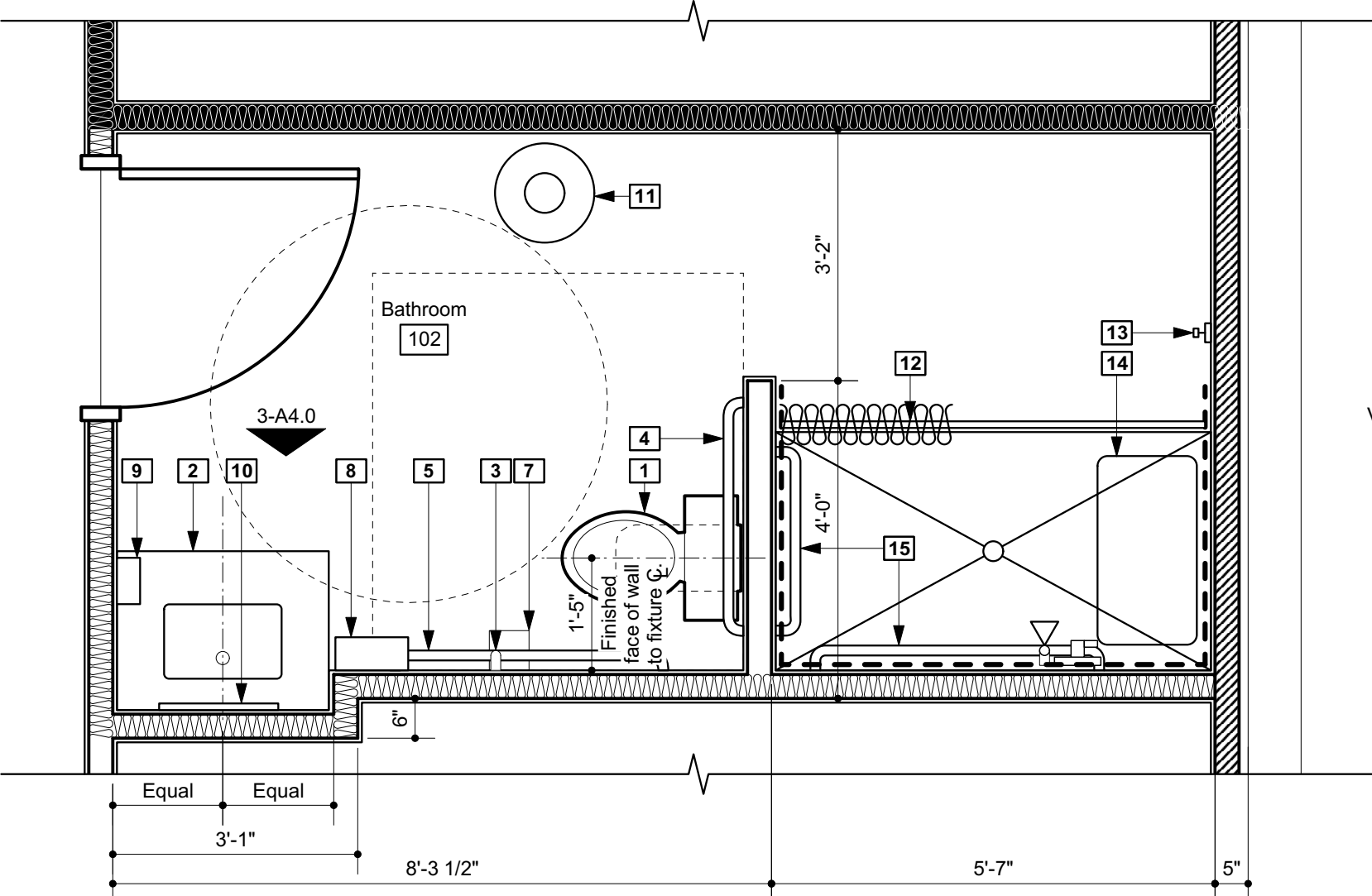
2 Bathroom 107 Casework Elevation
 A4.0 Scale: 1/2" = 1'-0"



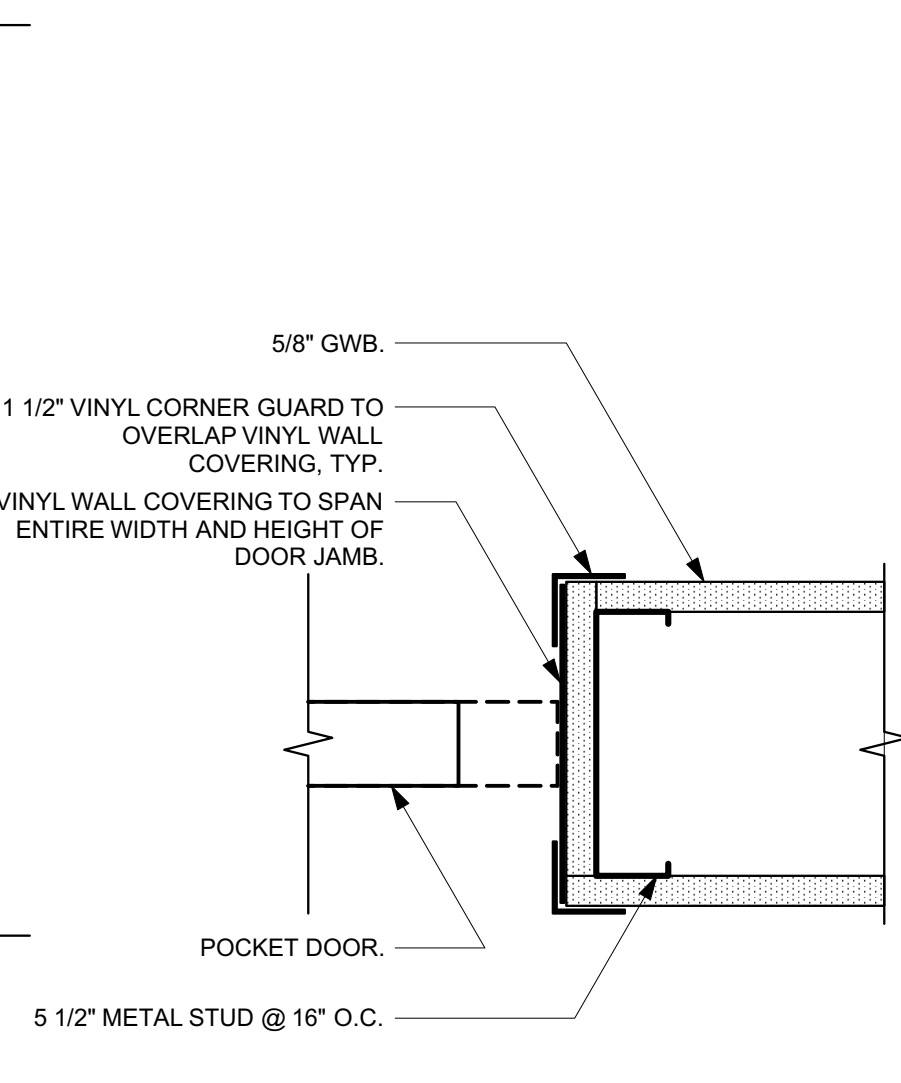
3 Bathroom 102 Casework Elevation
 A4.0 Scale: 1/2" = 1'-0"



4 Casework Section
 A4.0 Scale: 1" = 1'-0"



6 Bathroom 102 Enlarged Plan
 A4.0 Scale: 1/2" = 1'-0"

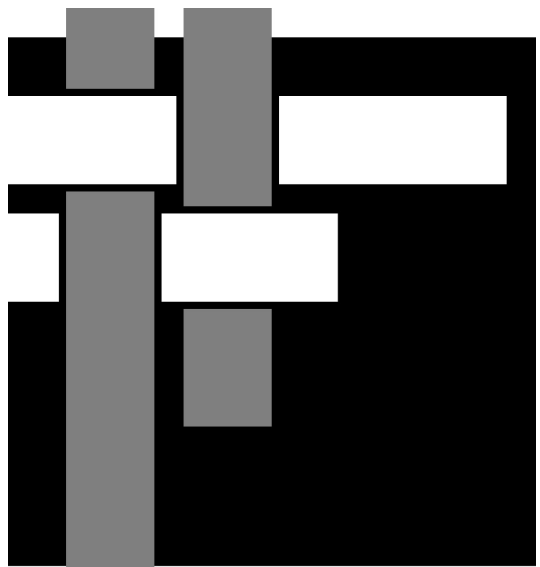


7 Pocket Door Jamb Detail
 A4.0 Scale: 3" = 1'-0"

Enlarged Plan Key Notes

1 Accessible Toilet Fixture	10 Mirror
2 Accessible Sink in casework vanity	11 Waste Receptacle
3 Grab Bar 18"	12 Shower Curtain & Track
4 Grab Bar 36"	13 Robe/Towel Hook
5 Grab Bar 42"	14 Shower Seat
6 Utility Sink	15 Shower Grab Bar
7 Toilet Tissue Dispenser	16 Eye Wash Station
8 Paper Towel Dispenser	17 Connection box for dryer exhaust duct.
9 Soap Dispenser	18 ADA Transfer shower insert.

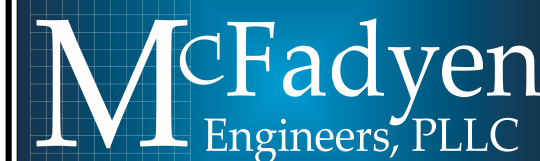
* Accessories furnished by Owner, and installed by GC.



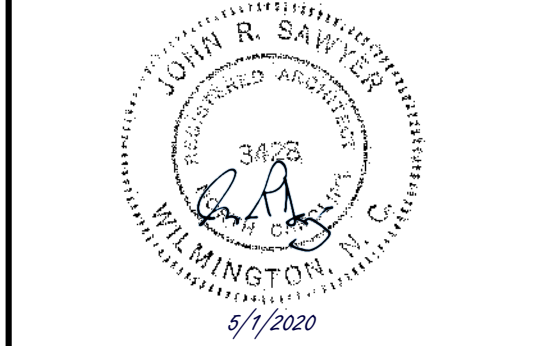
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 100 B Old Eastwood Road, Unit 24 Wilmington, NC 28403
 Office: (910) 523-5381 Email: wdjeng@wdjeng.com



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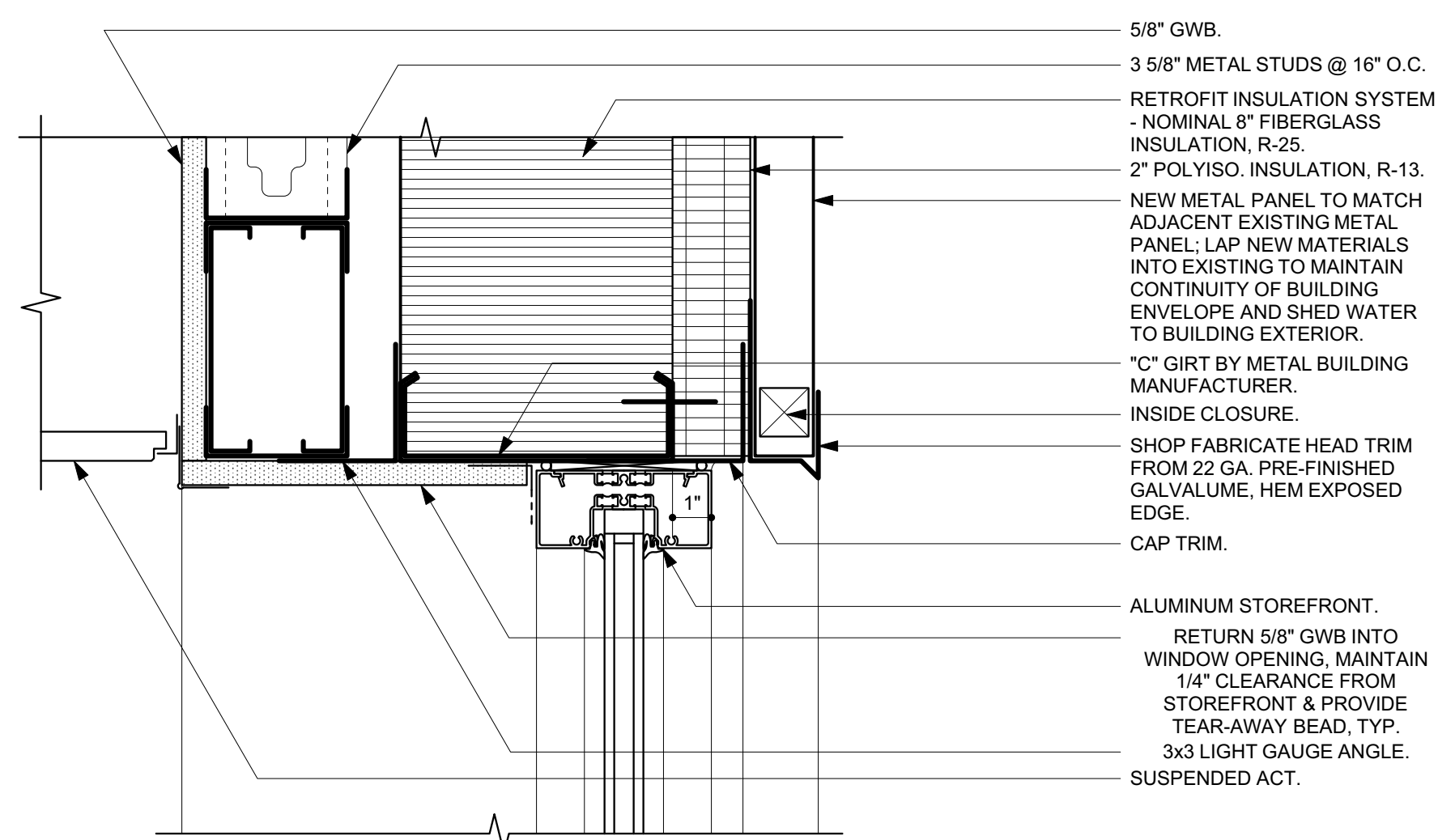
Coordination Drawings
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Revisions:

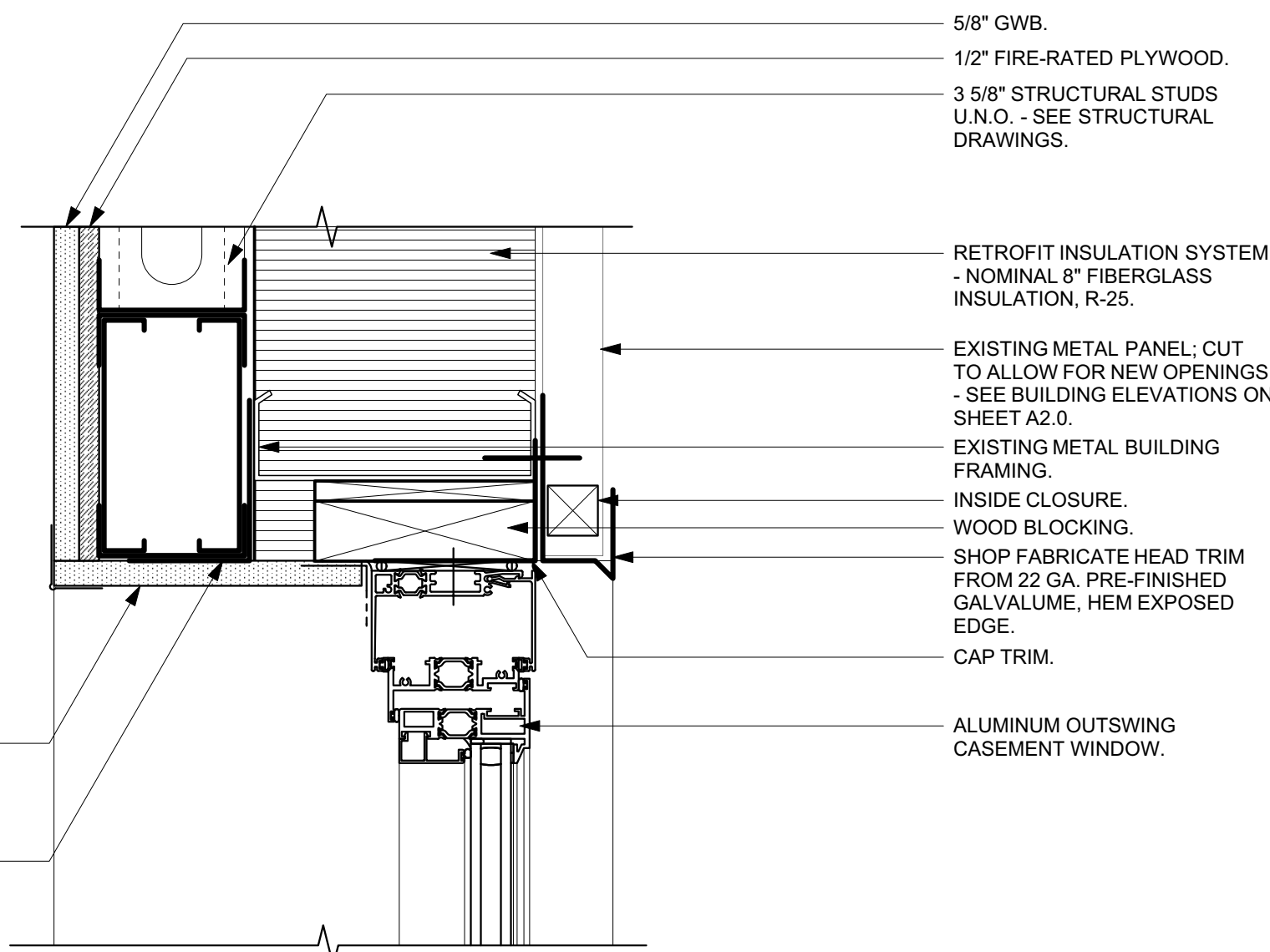
Enlarged Plans

A4.0

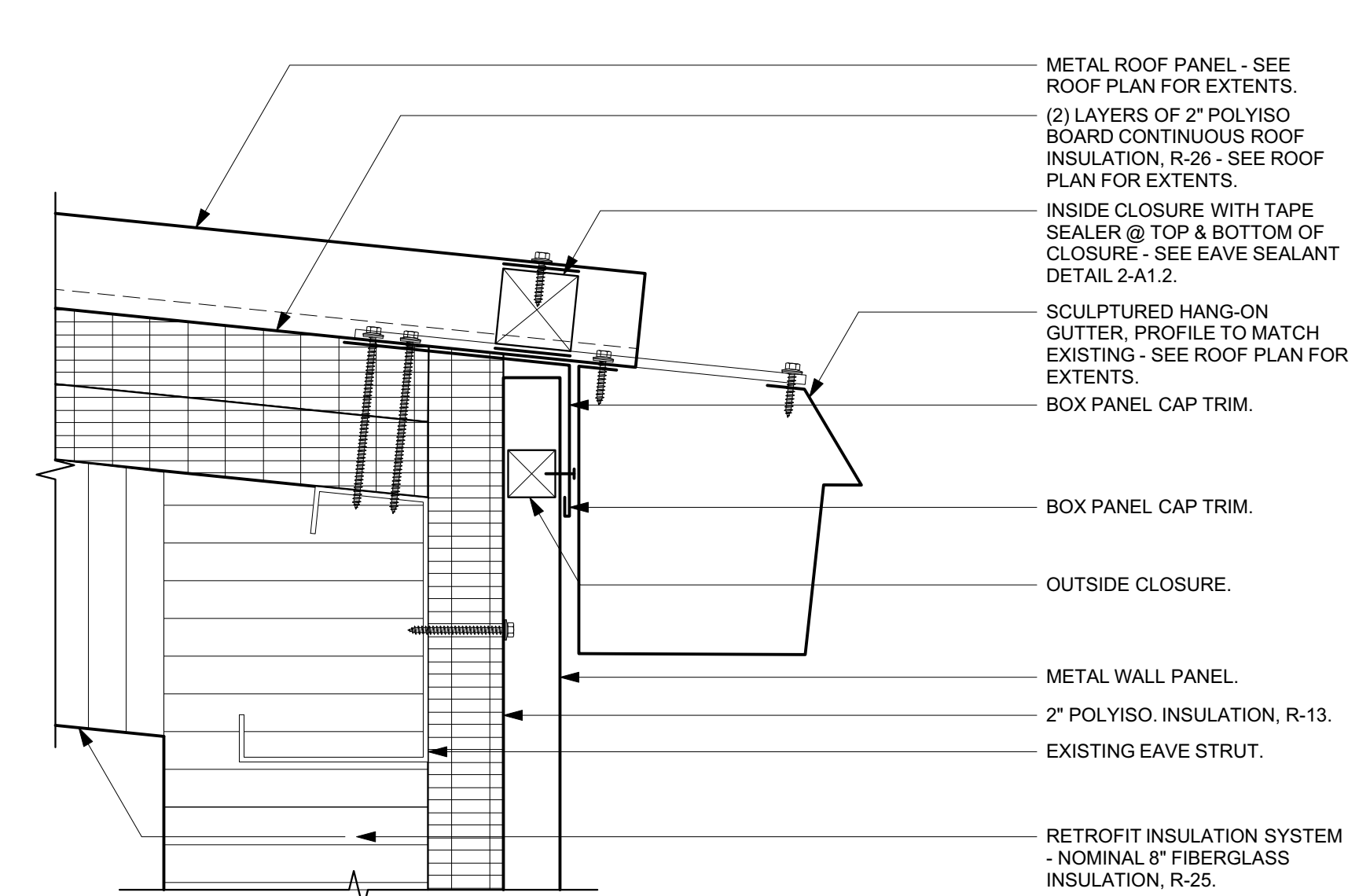
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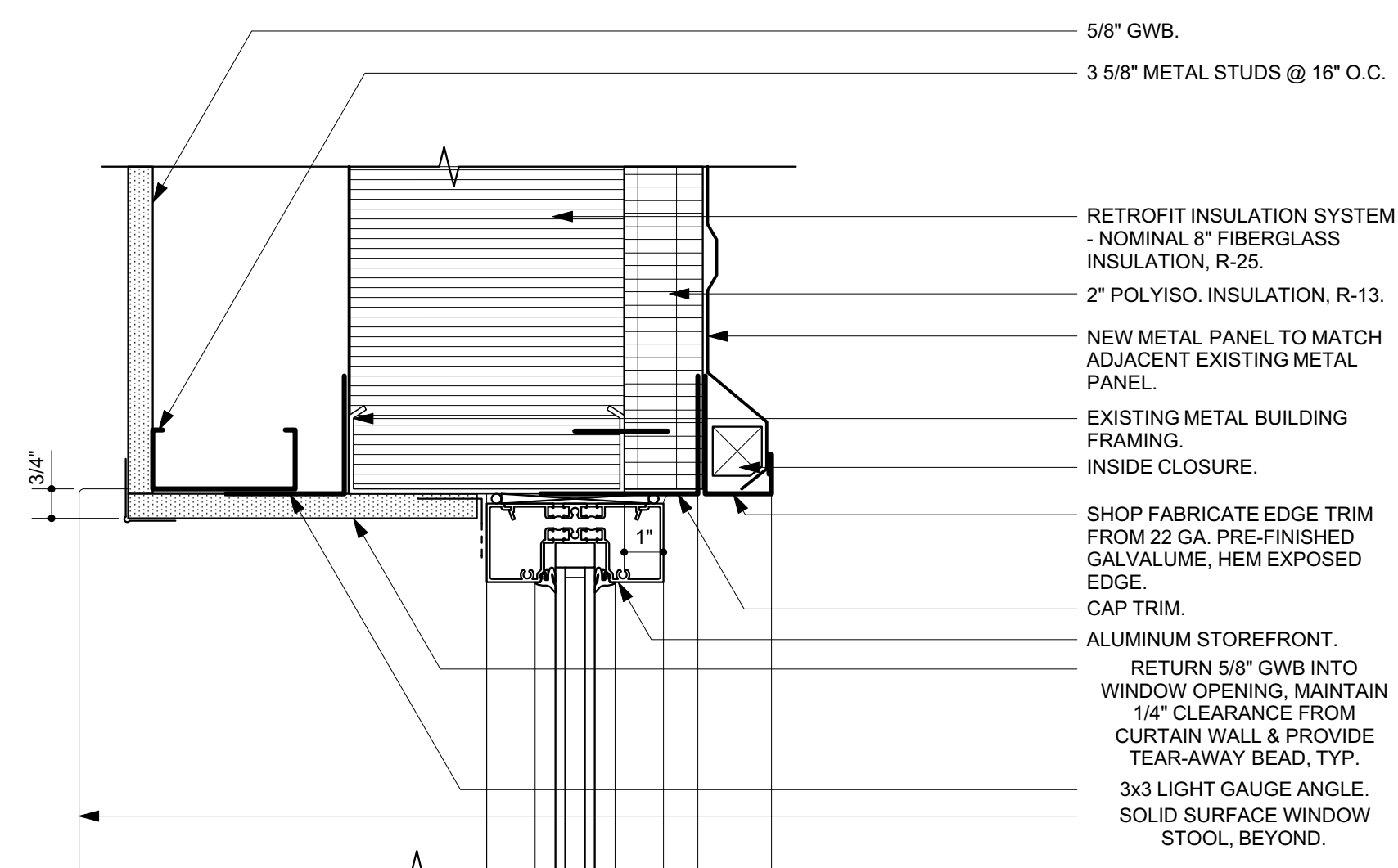
1 Head Detail
A5.0 Scale: 3" = 1'-0"



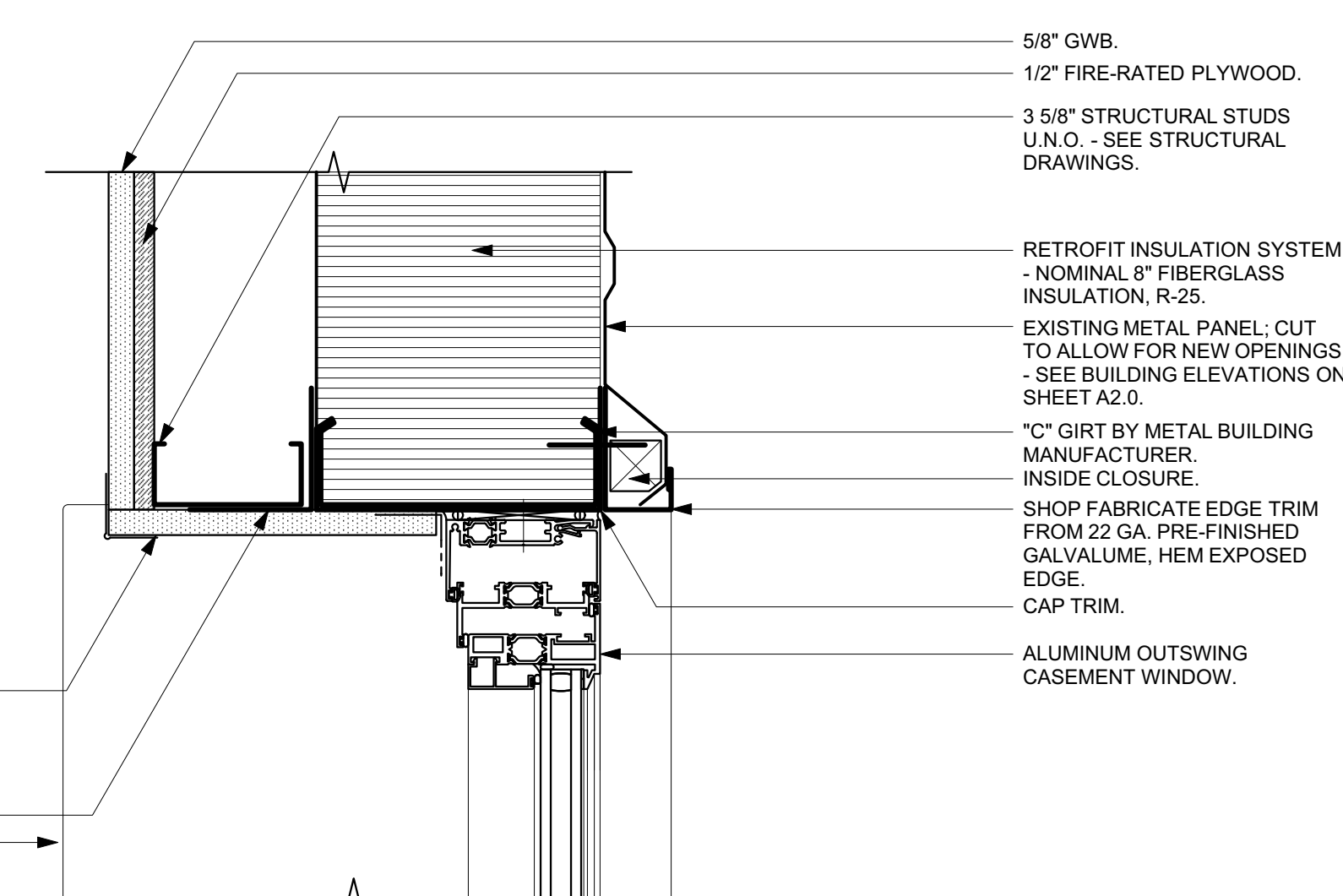
2 Head Detail @ Shear Wall
A5.0 Scale: 3" = 1'-0"



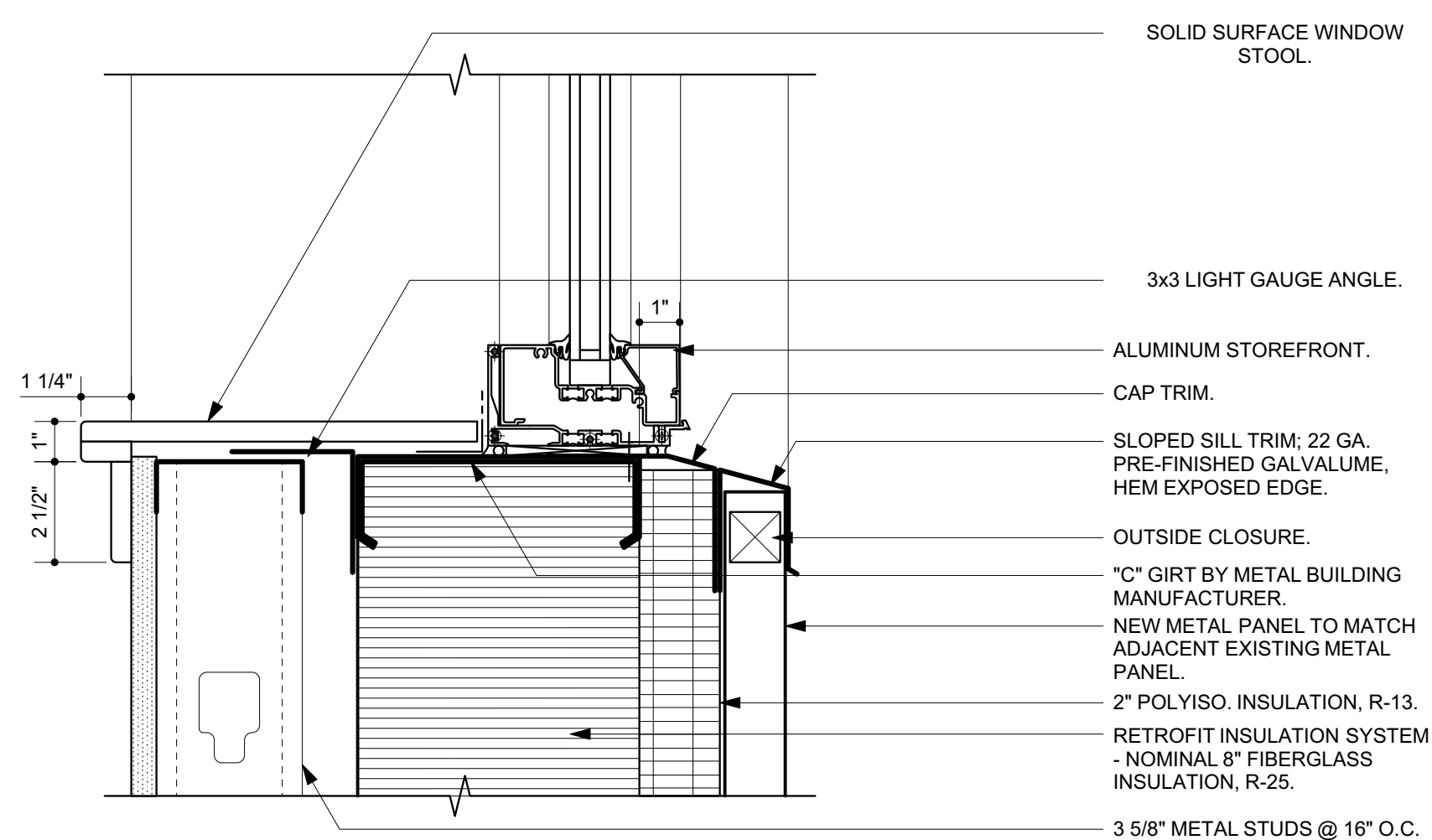
3 Roof Eave Detail
A5.0 Scale: 3" = 1'-0"



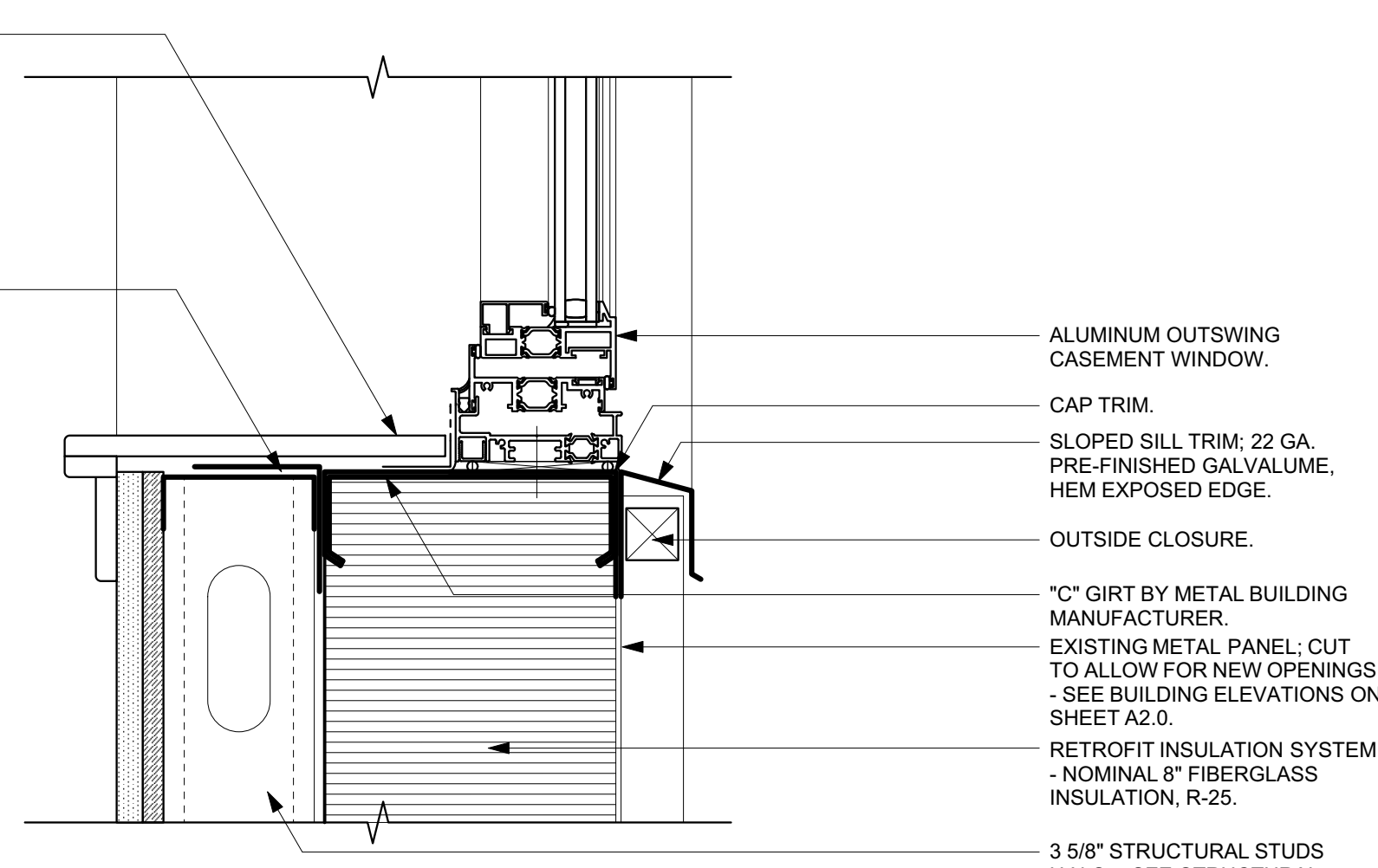
4 Jamb Detail
A5.0 Scale: 3" = 1'-0"



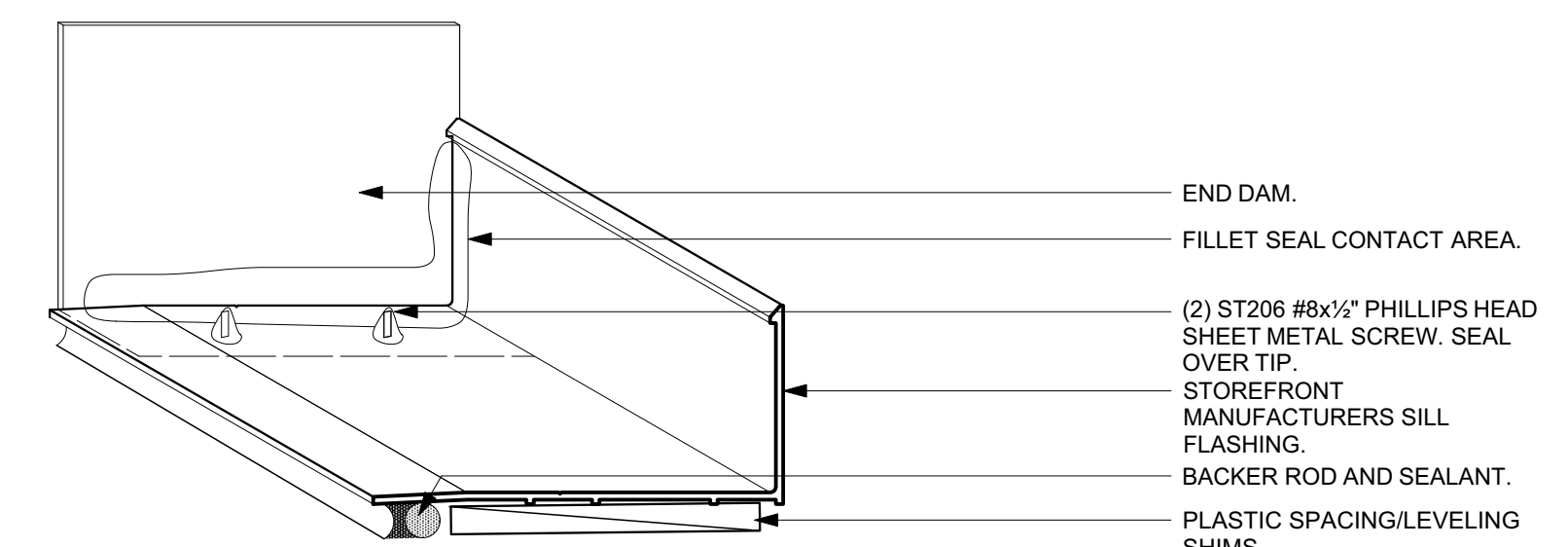
5 Jamb Detail @ Shear Wall
A5.0 Scale: 3" = 1'-0"



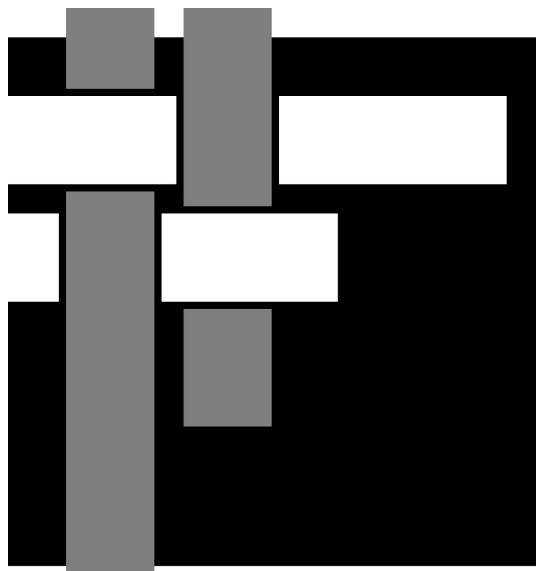
7 Sill Detail
A5.0 Scale: 3" = 1'-0"



8 Sill Detail @ Shear Wall
A5.0 Scale: 3" = 1'-0"



9 Storefront Sill Pan Detail
A5.0 Scale: Half Actual Size



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Structural Engineering Services
100 B Old Eastwood Road, Unit 24 Wilmington, NC 28403
Office: (910) 523-5381 Email: wjones@wdjones.com

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411 Peachtree Avenue, Suite 200
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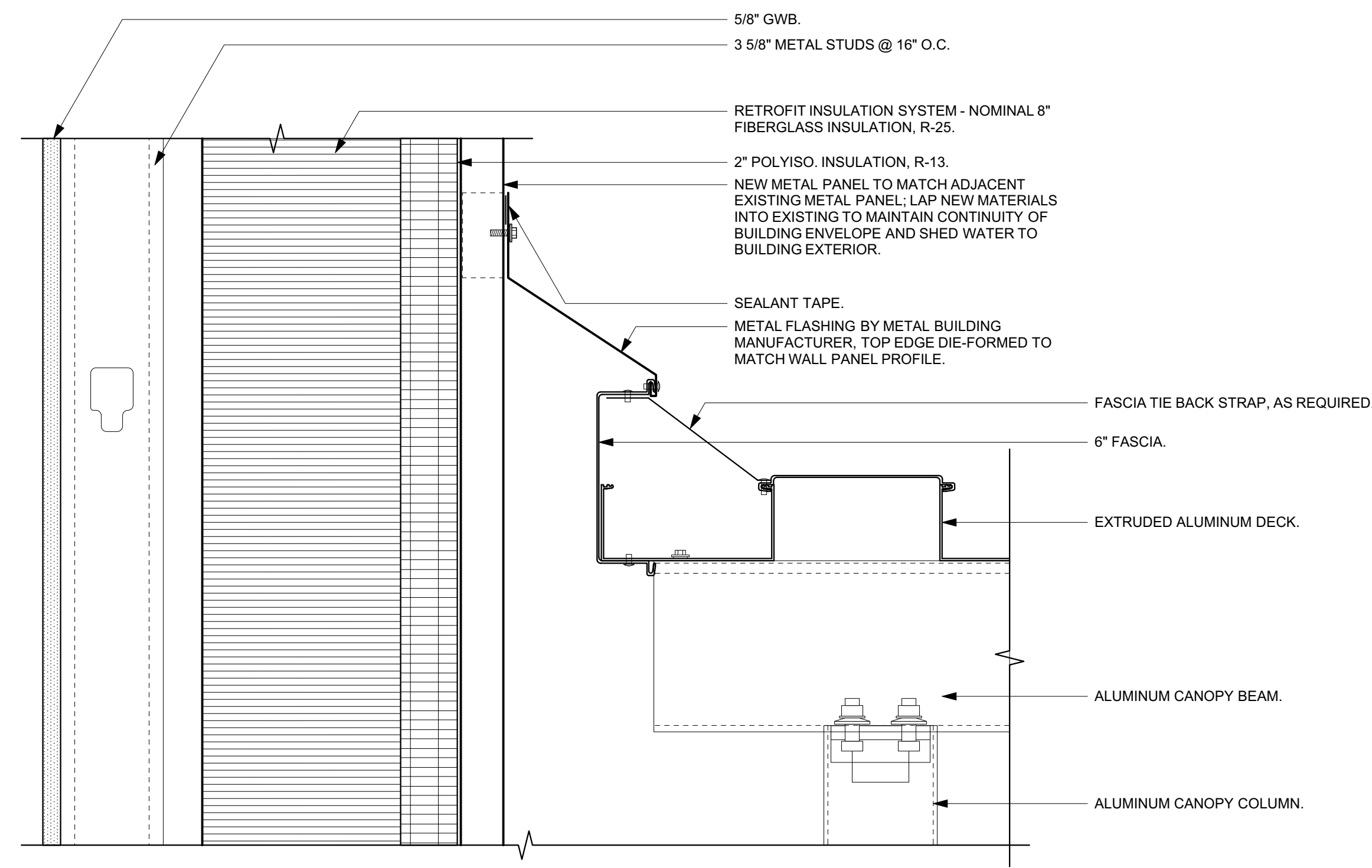
Coordination Drawings
1 May, 2020

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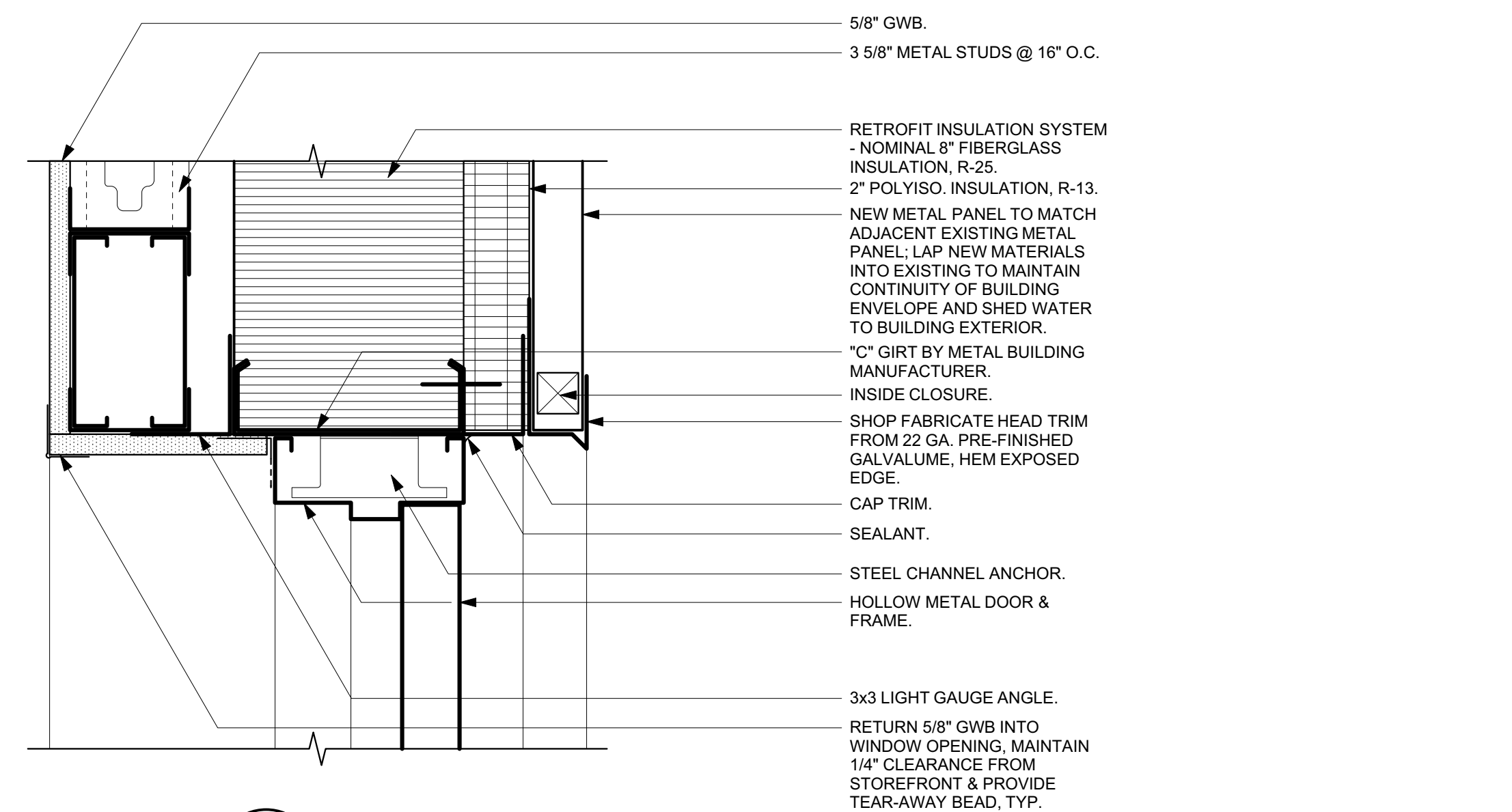
Details

A5.0

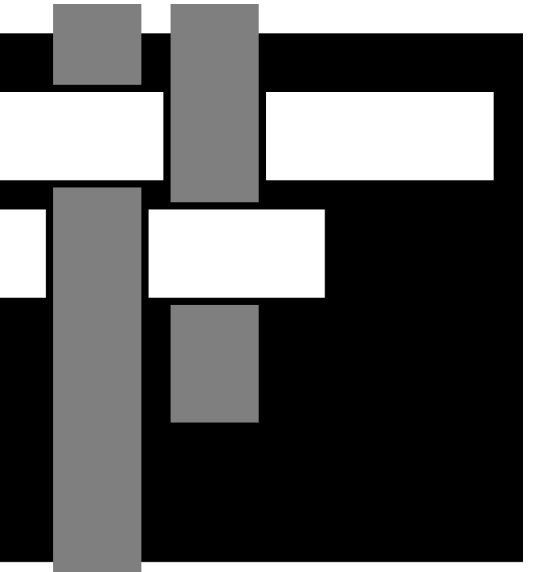
8 of 12



4 Canopy Detail
A5.1 Scale: 3" = 1'-0"



7 Head Detail @ HM Frame
A5.1 Scale: 3" = 1'-0"



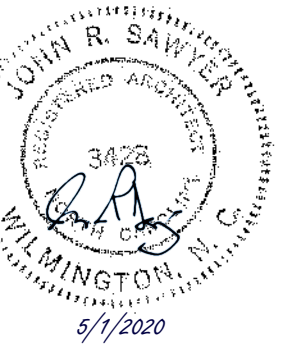
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1 May, 2020

Revisions:

Details

A5.1

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Finish Schedule										
ID	ROOM NAME	FLOOR FINISH	BASE MATERIAL	NORTH WALL FINISH	EAST WALL FINISH	SOUTH WALL FINISH	WEST WALL FINISH	CEILING	CEILING HT	REMARKS
100	Kitchen/Living Room	Resilient Tile	4" Vinyl Cove	GWB - Painted	GWB - Painted	GWB - Painted	GWB - Painted	ACT	See RCP	
101	Pantry	Resilient Tile	4" Vinyl Cove	GWB - Painted	GWB - Painted	GWB - Painted	GWB - Painted	ACT	See RCP	
102	Bathroom	Porcelain Tile	6" Porcelain Tile	GWB - Epoxy Painted	GWB - Epoxy Painted & Tile at Shower	GWB - Epoxy Painted	GWB - Epoxy Painted	GWB - Painted	See RCP	
103	Bedroom	Resilient Tile	4" Vinyl Cove	GWB - Painted	GWB - Painted	GWB - Painted	GWB - Painted	ACT	See RCP	
104	Bedroom	Resilient Tile	4" Vinyl Cove	GWB - Painted	GWB - Painted	GWB - Painted	GWB - Painted	ACT	See RCP	
105	Bedroom	Resilient Tile	4" Vinyl Cove	GWB - Painted	GWB - Painted	GWB - Painted	GWB - Painted	ACT	See RCP	
106	Hall	Resilient Tile	4" Vinyl Cove	GWB - Painted	GWB - Painted	GWB - Painted	GWB - Painted	ACT	See RCP	
107	Bathroom	Porcelain Tile	6" Porcelain Tile	GWB - Epoxy Painted	GWB - Epoxy Painted & Tile at Shower	GWB - Epoxy Painted	GWB - Epoxy Painted	GWB - Painted	See RCP	
107A	Closet	Porcelain Tile	6" Porcelain Tile	GWB - Epoxy Painted	GWB - Epoxy Painted	GWB - Epoxy Painted	GWB - Epoxy Painted	GWB - Painted	See RCP	
108	Turnout Gear	Resinous Flooring	4" Vinyl Cove	GWB - Epoxy Painted	GWB - Epoxy Painted & Vinyl Wall Covering	GWB - Epoxy Painted	GWB - Epoxy Painted	ACT	See RCP	
109	Laundry/Decon.	Resinous Flooring	4" Vinyl Cove	GWB - Epoxy Painted	GWB - Epoxy Painted	GWB - Epoxy Painted	GWB - Epoxy Painted	GWB - Painted	See RCP	See sheet A4.0 for extent of protective wall covering.
110	Vehicle Bay	Concrete, ETR	-	Plywood/GWB - Painted	-	Plywood/GWB - ETR	-	Open to structure	-	
111	Storage	Concrete, ETR	4" Vinyl Cove, ETR	Plywood - ETR	GWB - ETR	Open to structure, ETR	Open to structure, ETR	Open to structure	-	
112	Fitness Room	Resilient Sheet	4" Vinyl Cove	GWB - Painted	GWB - Painted	GWB - ETR, Painted	GWB - ETR, Painted	ACT, ETR & New	See RCP	See RCP for extents of existing & new ACT
112A	Data Closet	Resilient Sheet	4" Vinyl Cove	GWB - ETR, Painted	GWB - Painted	GWB - Painted	GWB - ETR, Painted	Open to structure	-	
113	Hall	Porcelain tile, ETR	4" Vinyl Cove, ETR	GWB - Painted, ETR	GWB - Painted, ETR	GWB - Painted, ETR	GWB - Painted	ACT, ETR	See RCP	
114	Office	Resilient Tile	4" Vinyl Cove	GWB - ETR, Painted	GWB - ETR, Painted	GWB - ETR, Painted	GWB - Painted	ACT, ETR	See RCP	
115	Office	Resilient Tile	4" Vinyl Cove	GWB - ETR, Painted	GWB - ETR, Painted	GWB - ETR, Painted	GWB - ETR, Painted	ACT, ETR	See RCP	

FINISH SCHEDULE LEGEND:

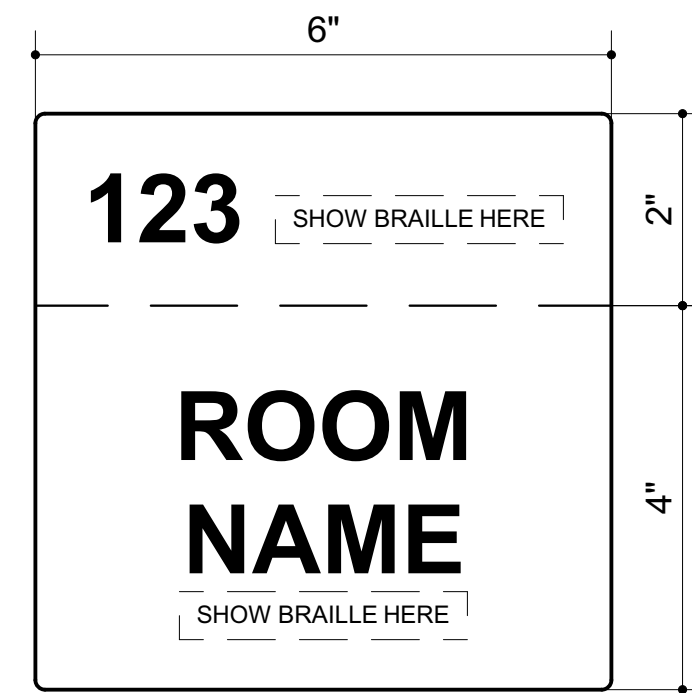
- ACT - Acoustical Ceiling Tile
- ETR - Existing to Remain
- GWB - Gypsum Wall Board

SEE SHEET A7.1 FOR FLOOR TRANSITION DETAILS.

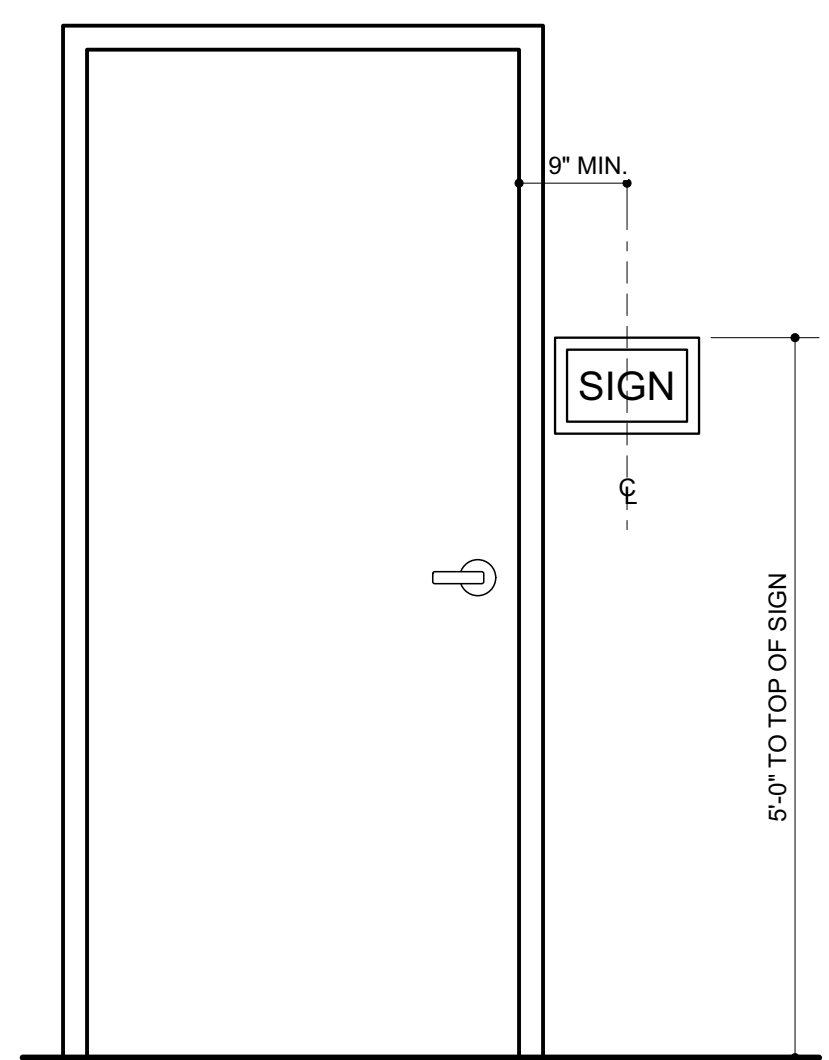
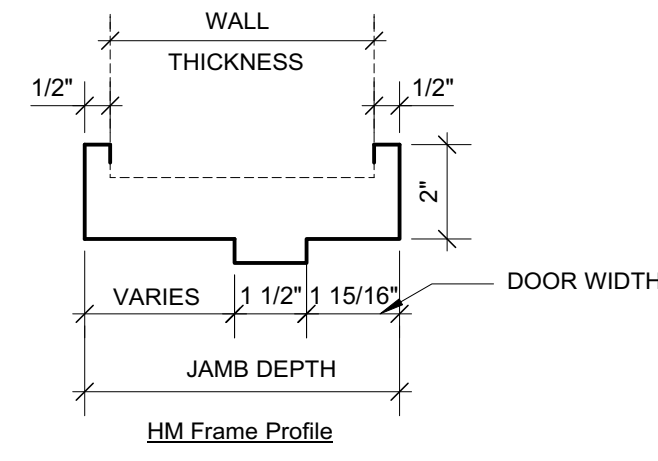
Door Schedule							
Door				Frame			
ID #	Size WxH	Type	Material	Type	Material	Jamb Depth	Remarks
100A	3-0 x 6-10	B	HM	1	HM	5-3/4"	Galvannealed door & frame. Provide frame prepped for electronic strike.
100B	3-0 x 6-10	C	HM	1	HM	6-1/4"	90 Minute Rated; Sign: "Living Quarters"
101A	3-0 x 6-10	A	Wood	1	HM	5-7/8"	
102A	3-0 x 6-10	A	Wood	1	HM	5-7/8"	
103A	3-0 x 6-10	A	Wood	1	HM	5-7/8"	
104A	3-0 x 6-10	A	Wood	1	HM	5-7/8"	
105A	3-0 x 6-10	A	Wood	1	HM	5-7/8"	
106A	3-0 x 6-10	B	HM	1	HM	5-3/4"	Galvannealed door & frame. Provide frame prepped for electronic strike.
107A	3-0 x 6-10	A	Wood	1	HM	5-7/8"	
107B	2-3 x 6-10 PR	A	Wood	1	HM	5-7/8"	Bi-Folding Doors
108A	3-0 x 6-10	A	HM	1	HM	6-1/4"	90 Minute Rated; Sign: "Turnout Gear"
109A	3-0 x 6-10	A	Wood	-	-	-	Pocket door
109B	3-0 x 6-10	A	HM	1	HM	6-1/4"	90 Minute Rated; Sign: "Laundry"
109C	3-0 x 6-10	ETR	HM	ETR	HM	ETR	Existing frame is prepped for electronic strike.
110A	3-0 x 6-10	ETR	HM	ETR	HM	ETR	Prep frame to receive electronic strike.
111A	3-0 x 6-10 PR	ETR	HM	ETR	HM	ETR	
111B	3-0 x 6-10	ETR	HM	ETR	HM	ETR	90 Minute Rated
112A	3-0 x 6-10	ETR	Flush wood, painted	ETR	HM	ETR	Install salvaged door & frame in new opening.
112B	3-6 x 6-10 PR	D	Flush wood, painted	1	HM	5-7/8"	Paint grade flush wood door
113A	3-0 x 6-10	ETR	HM	ETR	HM	ETR	Prep frame to receive electronic strike.
113B	3-0 x 6-10	C	HM	1	HM	9-3/8" - VIF	90 Minute Rated; Sign: "Office"
114A	3-0 x 6-10	ETR	Flush wood, painted	ETR	HM	ETR	
115A	3-0 x 6-10	B	Flush wood, painted	ETR	HM	ETR	Paint grade flush wood door

SIGNAGE NOTES

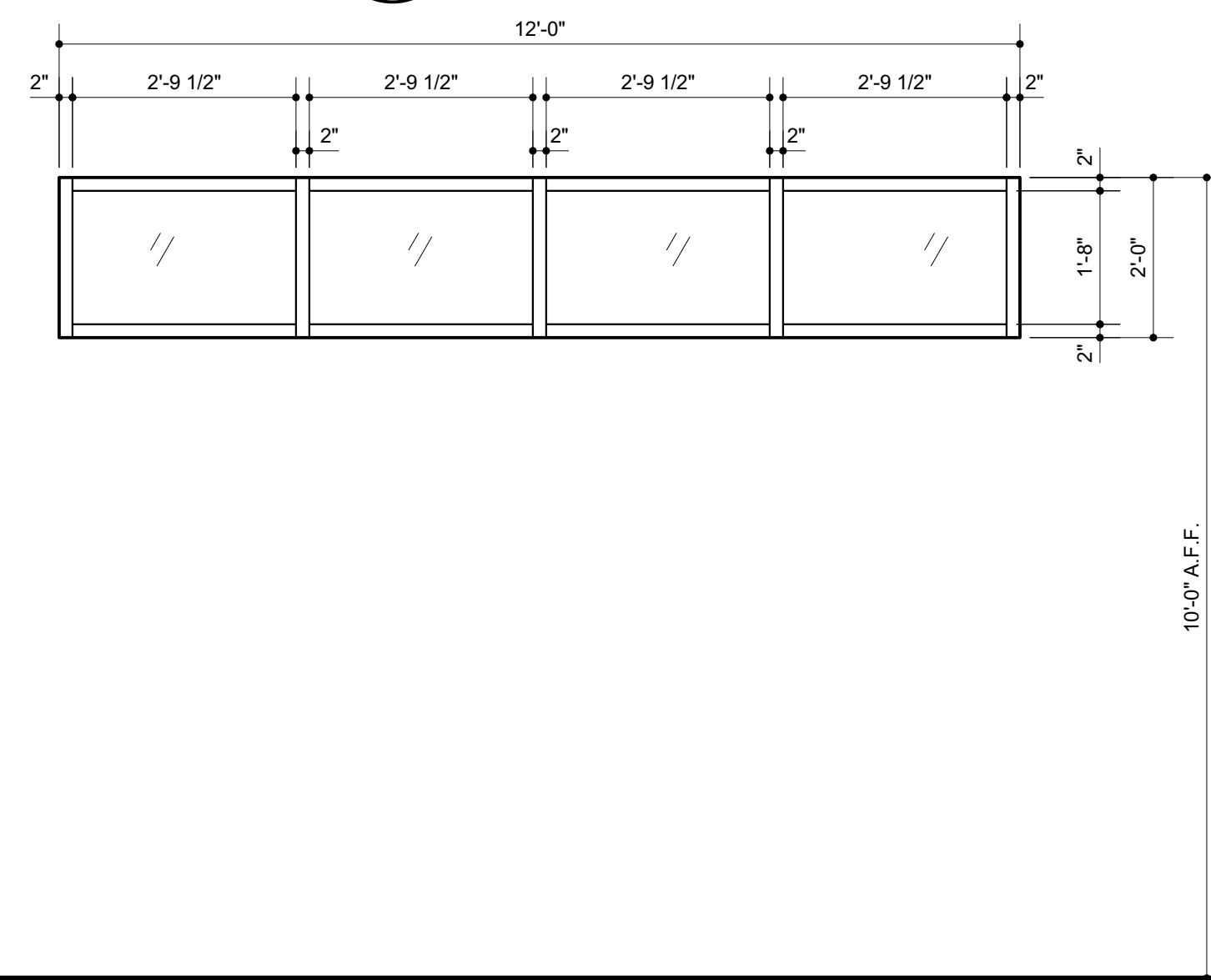
- See Remarks column for locations requiring room signs, U.N.O.
- See details 1-5/A6.0 for sign info.
- Provide ADA signage at all doors to restrooms.
- Final Room Names to be determined at a later date.



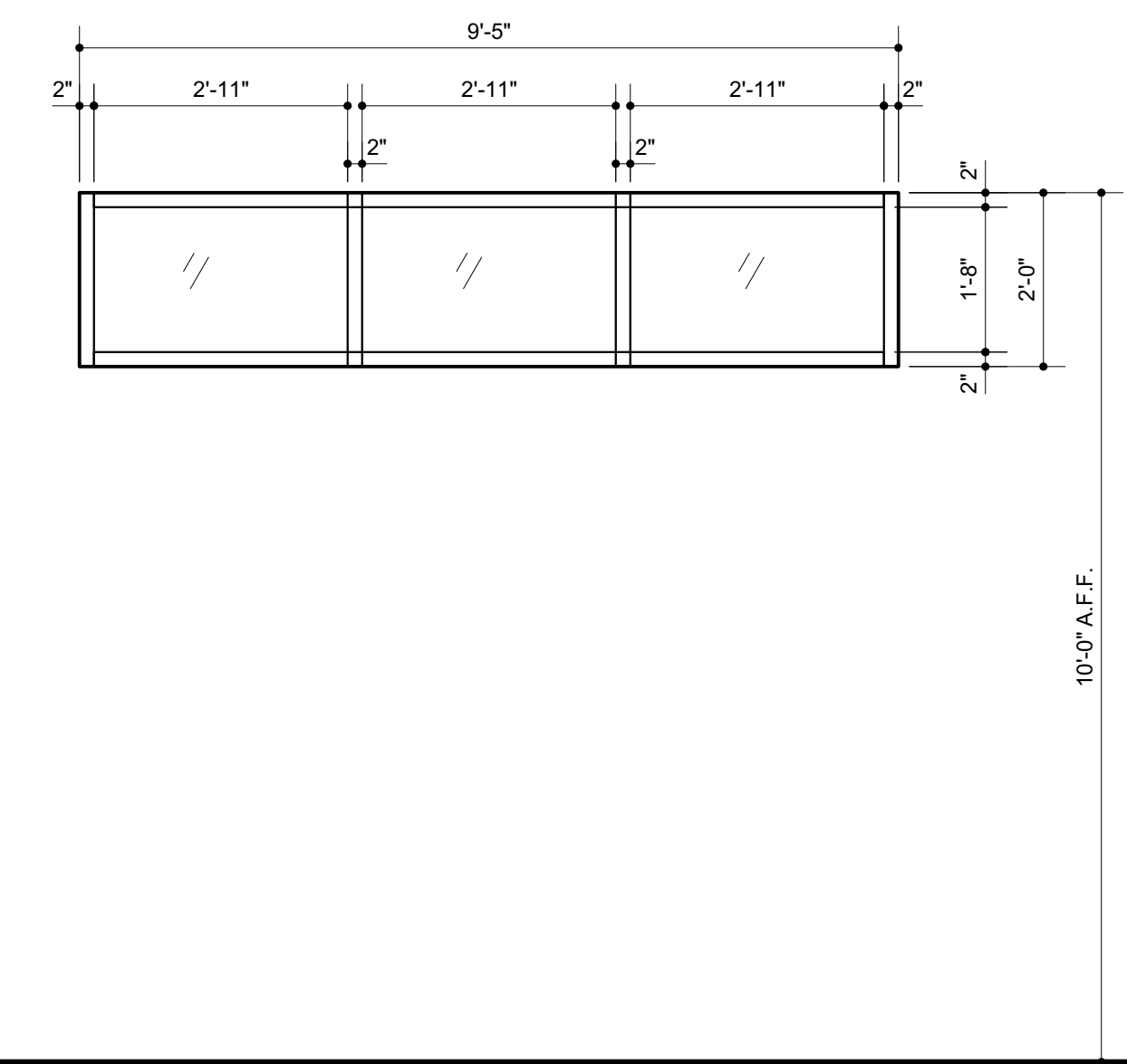
1 Signage Detail
A6.0
Scale: Half Actual Size



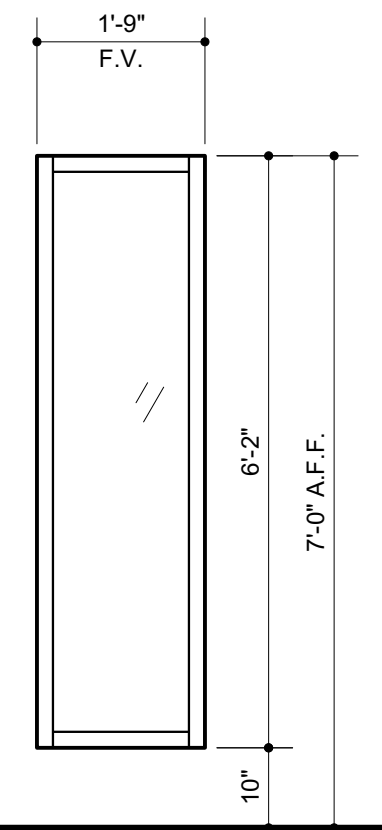
3 Typical Signage Detail
A6.0
Scale: 3/4" = 1'-0"



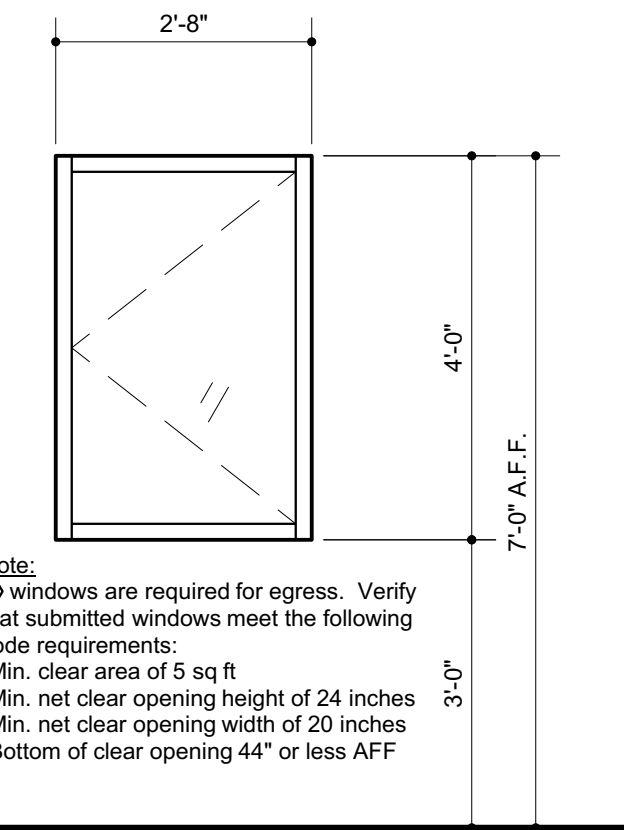
A STOREFRONT WINDOW ELEVATION
TYPICAL OF 1 LOCATION



B STOREFRONT WINDOW ELEVATION
TYPICAL OF 1 LOCATION

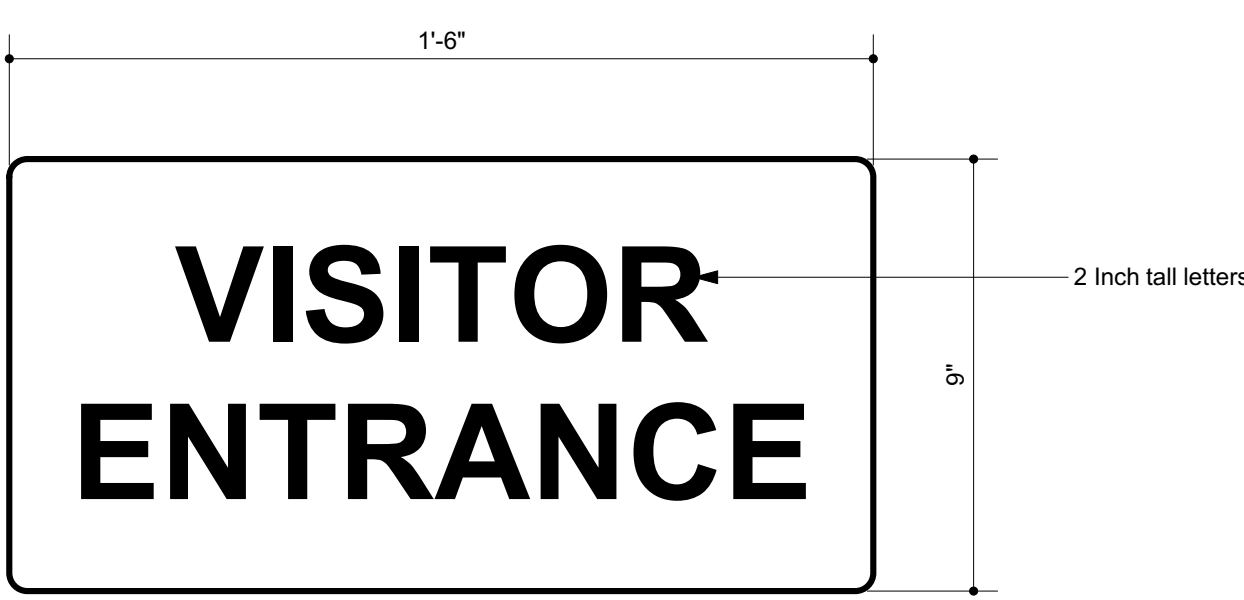


C STOREFRONT WINDOW ELEVATION
TYPICAL OF 3 LOCATIONS



D CASEMENT WINDOW ELEVATION
TYPICAL OF 3 LOCATIONS

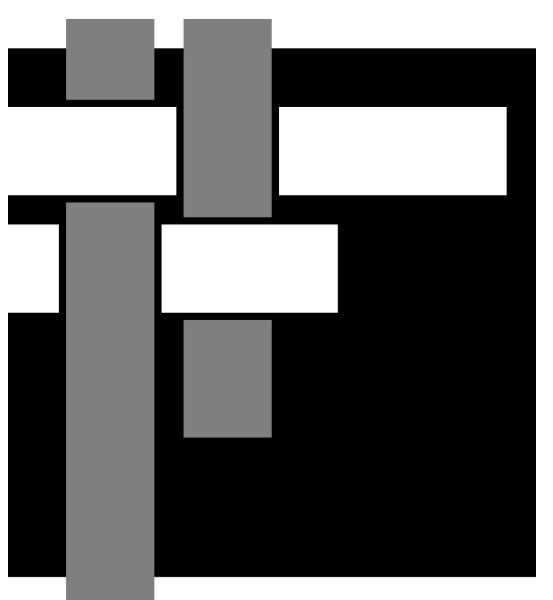
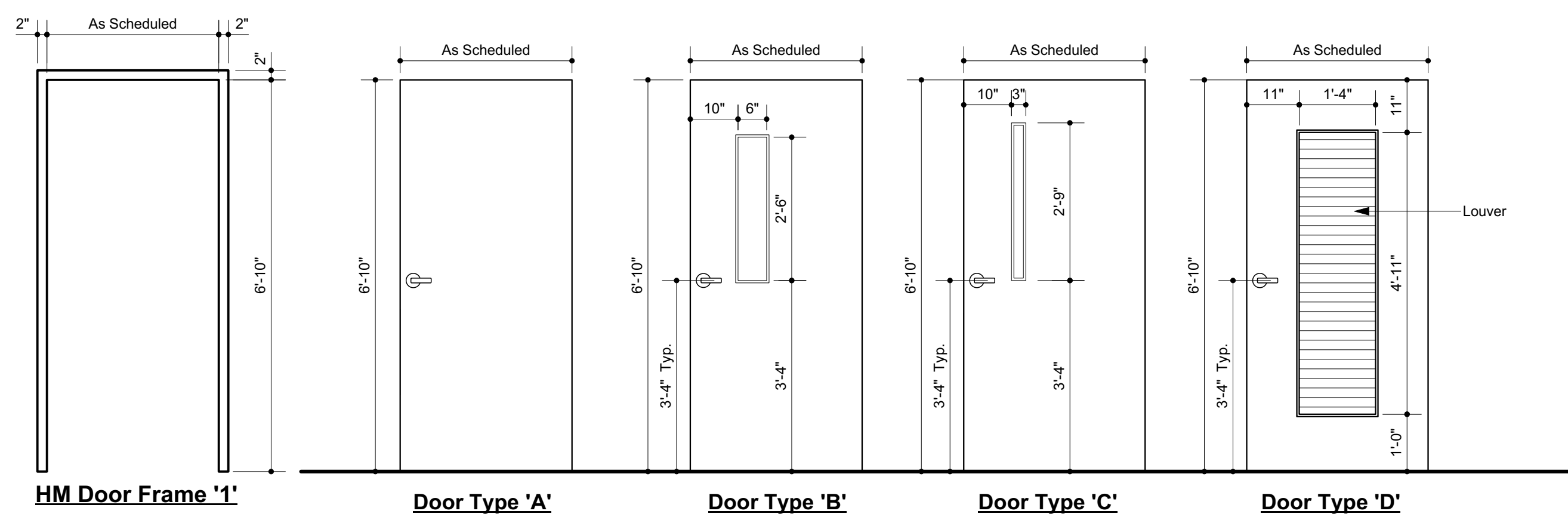
Note:
 (1) Windows are required for egress. Verify that submitted windows meet the following code requirements:
 -Min. clear area of 5 sq ft
 -Min. net clear opening height of 24 inches
 -Min. net clear opening width of 20 inches
 -Bottom of clear opening 44" or less AFF



4 Wall-Mounted Sign Detail
A6.0
Scale: 3" = 1'-0"



5 Wall-Mounted Sign Detail
A6.0
Scale: 3" = 1'-0"



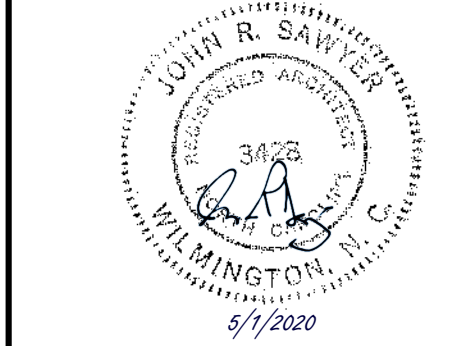
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ARCHITECTURE**

124 Market St, Wilmington, NC 28401
910 762-0892 s2a3.com

WD JONES ENGINEERING, PLLC
Structural Engineering Services
100 B Old Eastwood Road, Unit 24 Wilmington, NC 28403
Office: (910) 523-5381 Email: wdjones@wdjones.com

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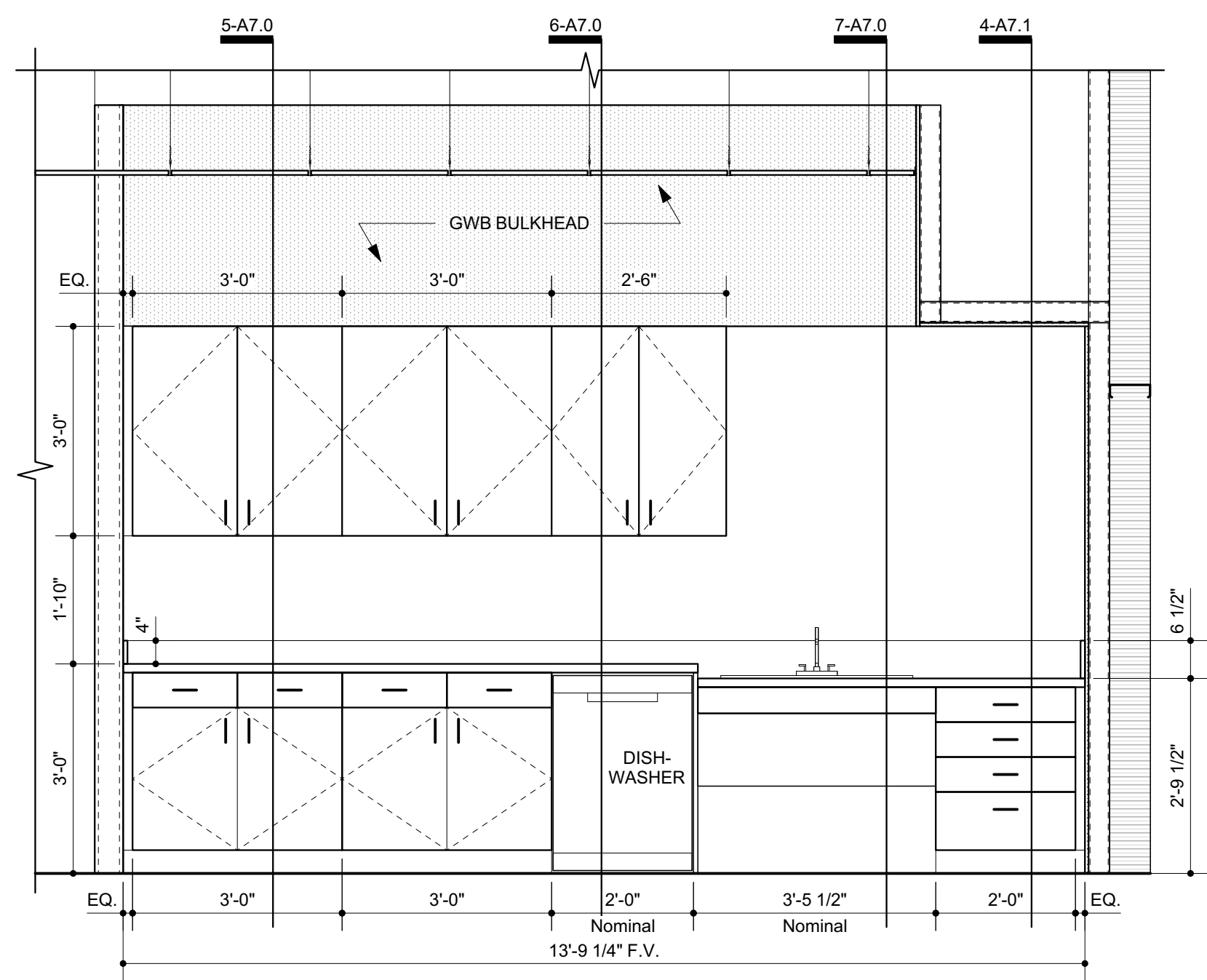
**Hurricane
Florence Repairs
New Hanover
County
Fire Station 12**
3805 US-421
Wilmington, NC

Coordination Drawings
1 May, 2020

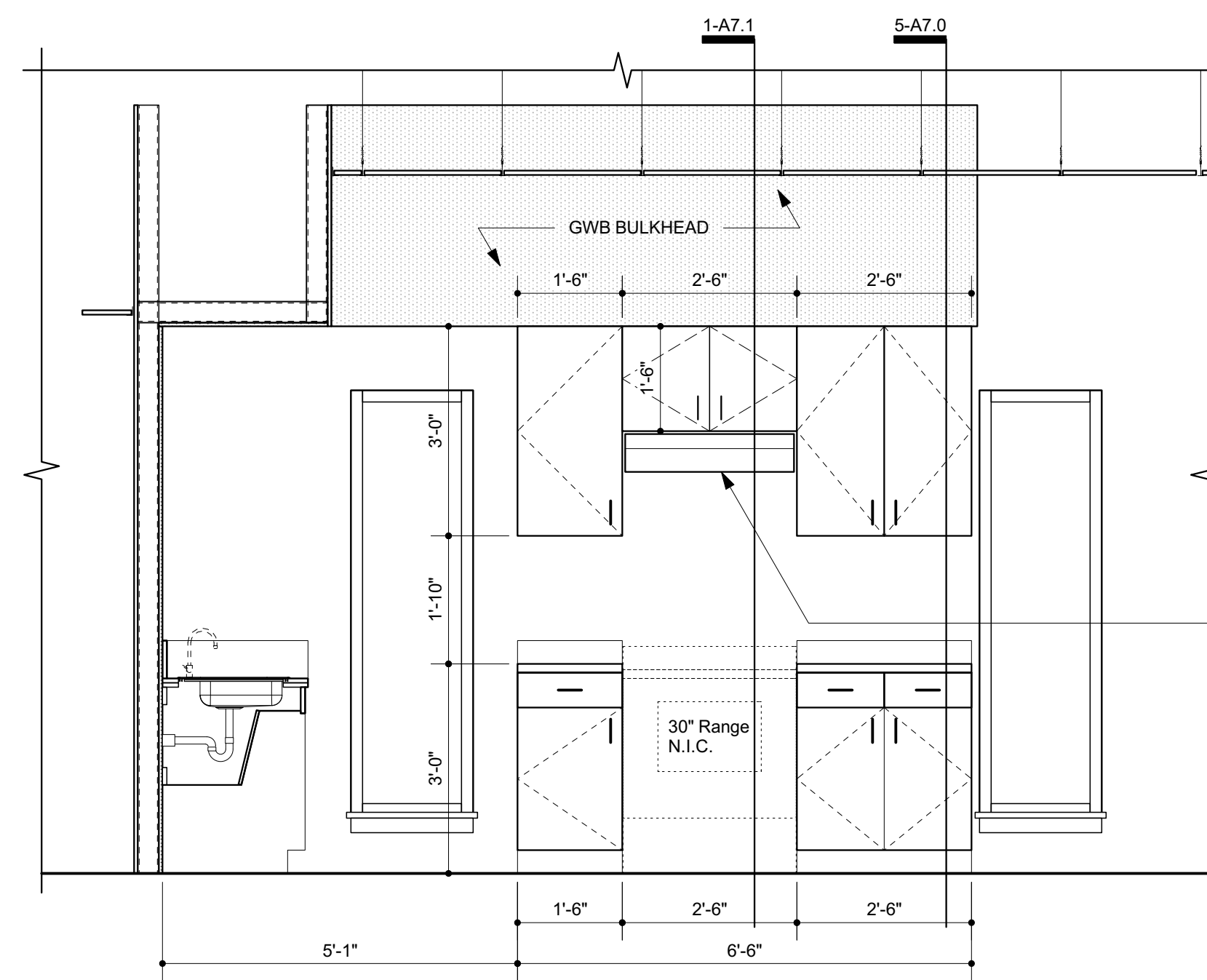
Revisions:

Door & Window
Elevations &
Schedules

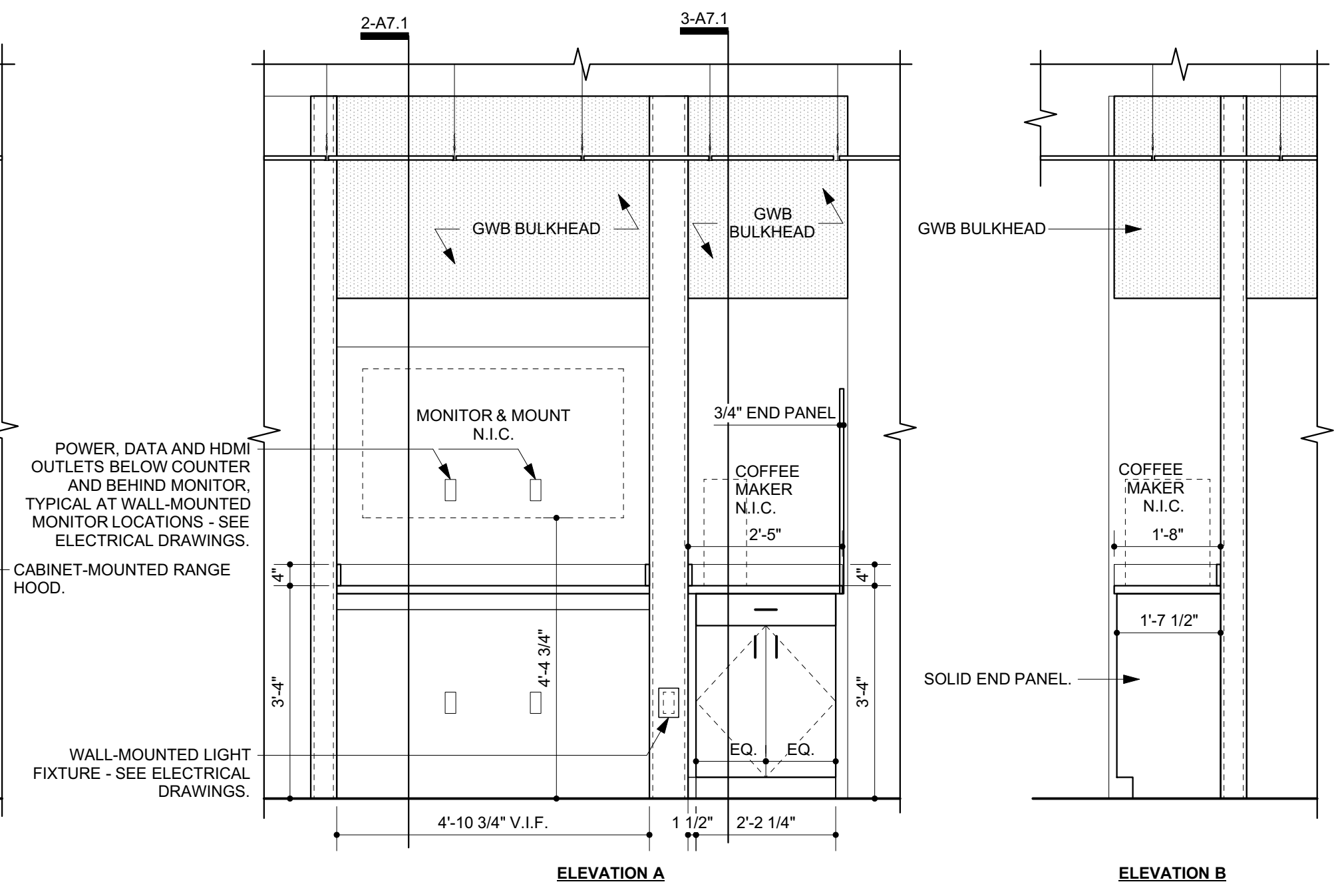
A6.0



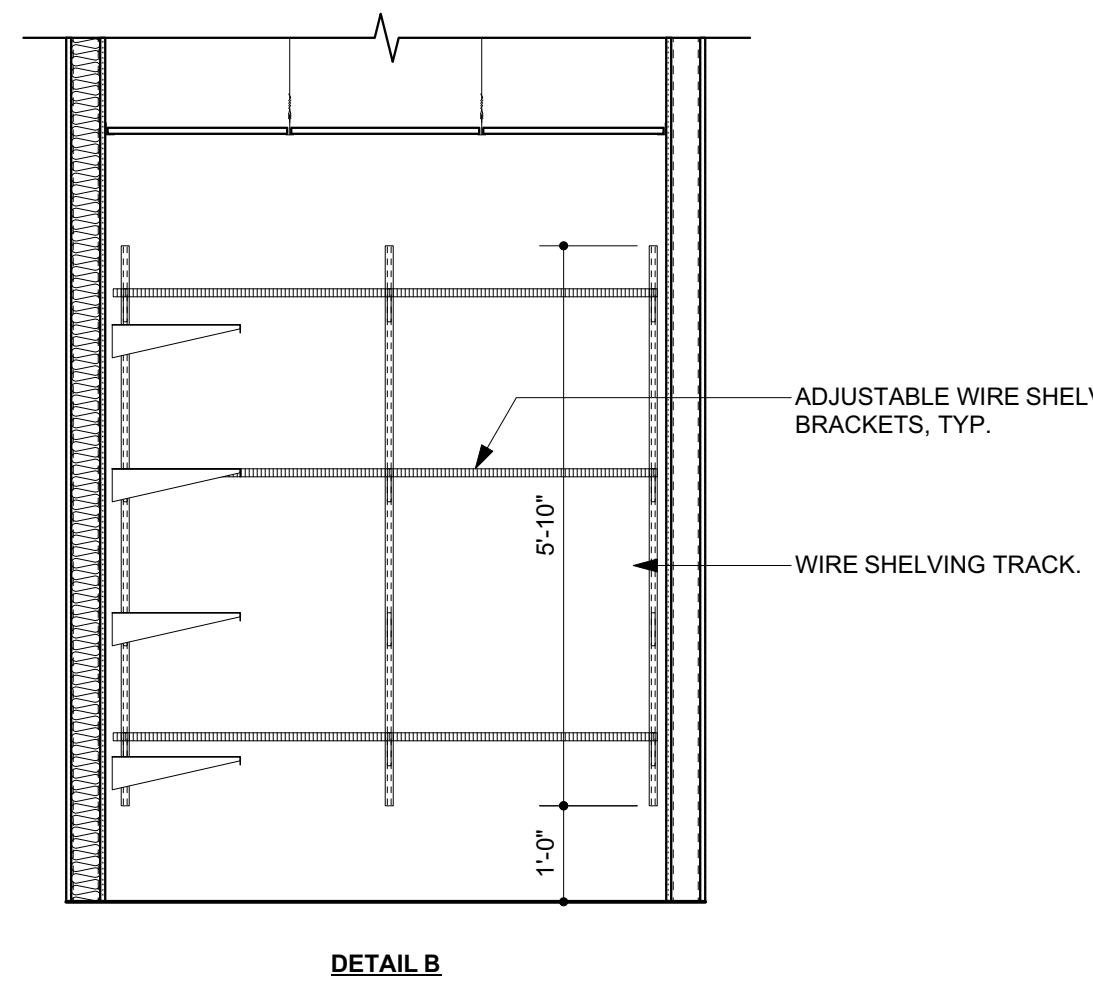
1 Casework Elevation
A7.0 Scale: 1/2" = 1'-0"



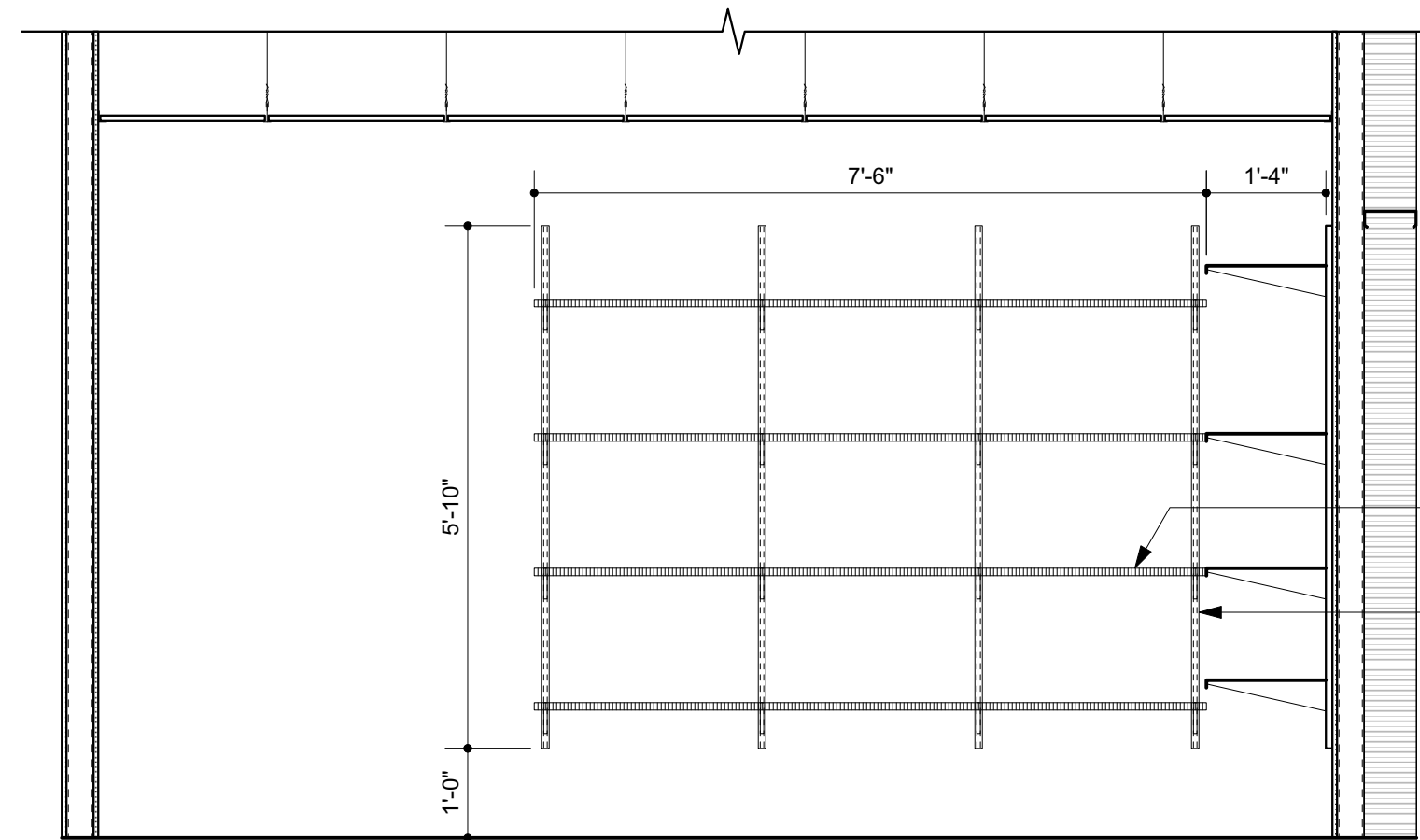
2 Casework Elevation
A7.0 Scale: 1/2" = 1'-0"



3 Casework Elevation
A7.0 Scale: 1/2" = 1'-0"

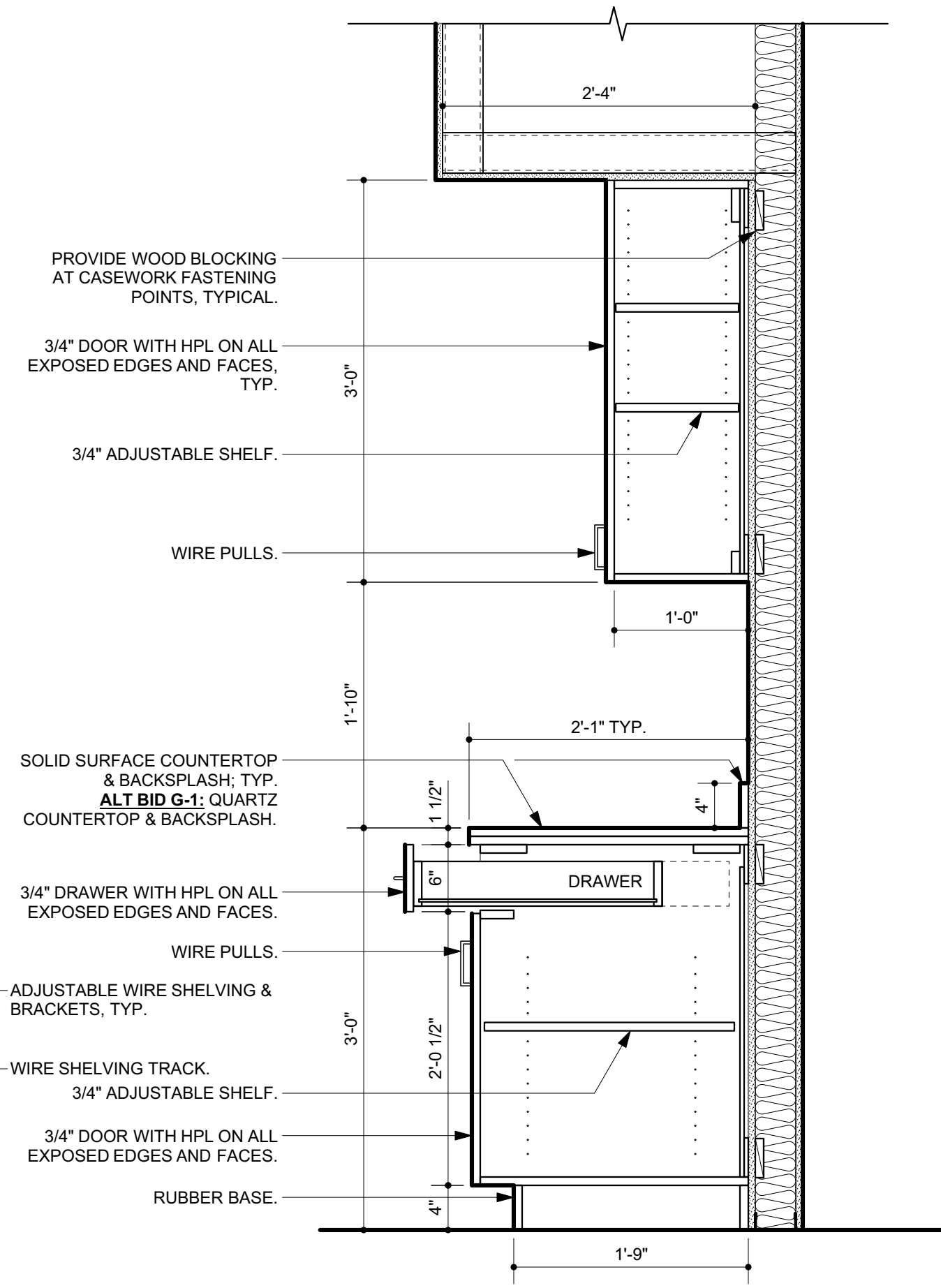


DETAIL B

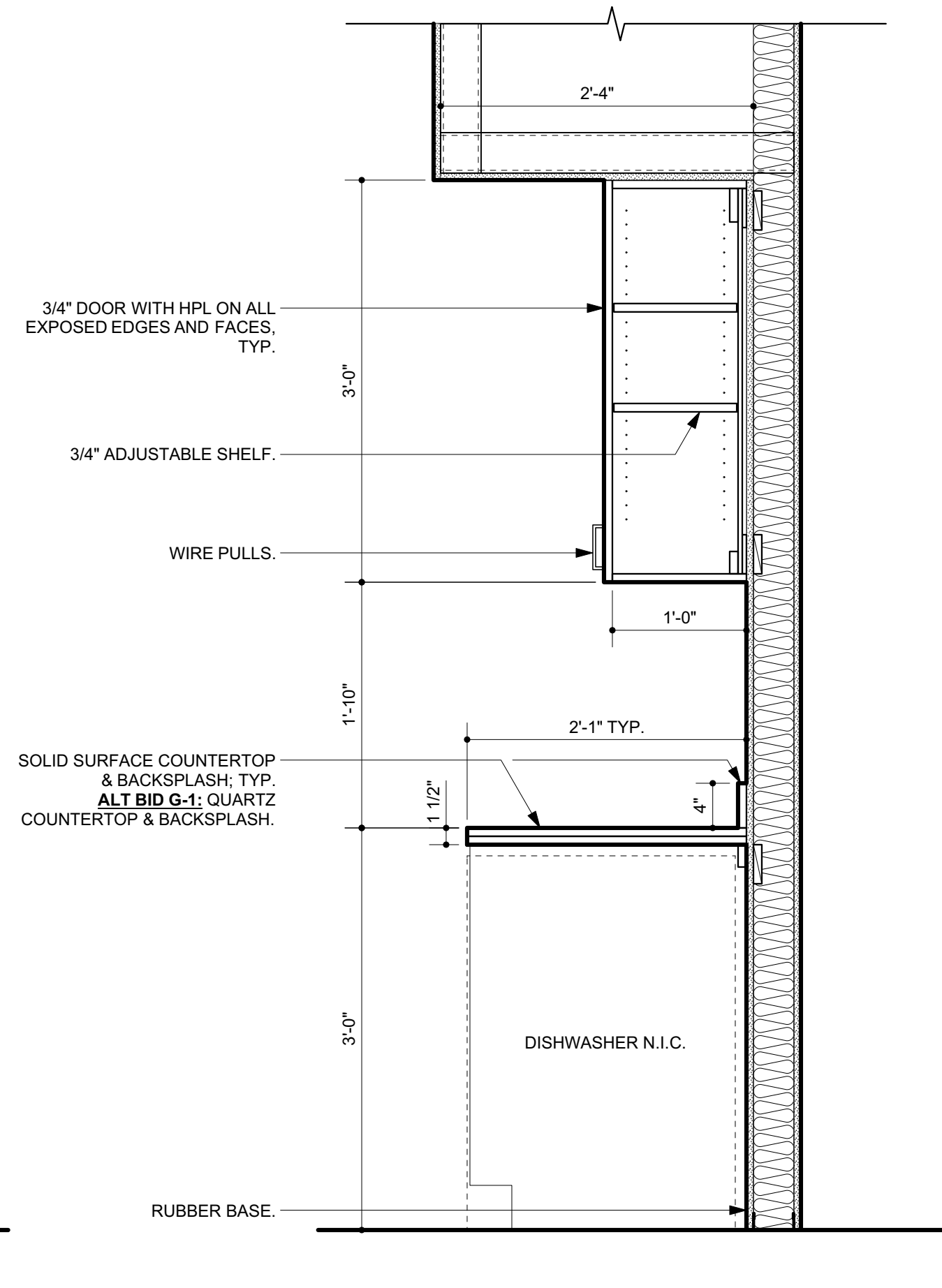


DETAIL A

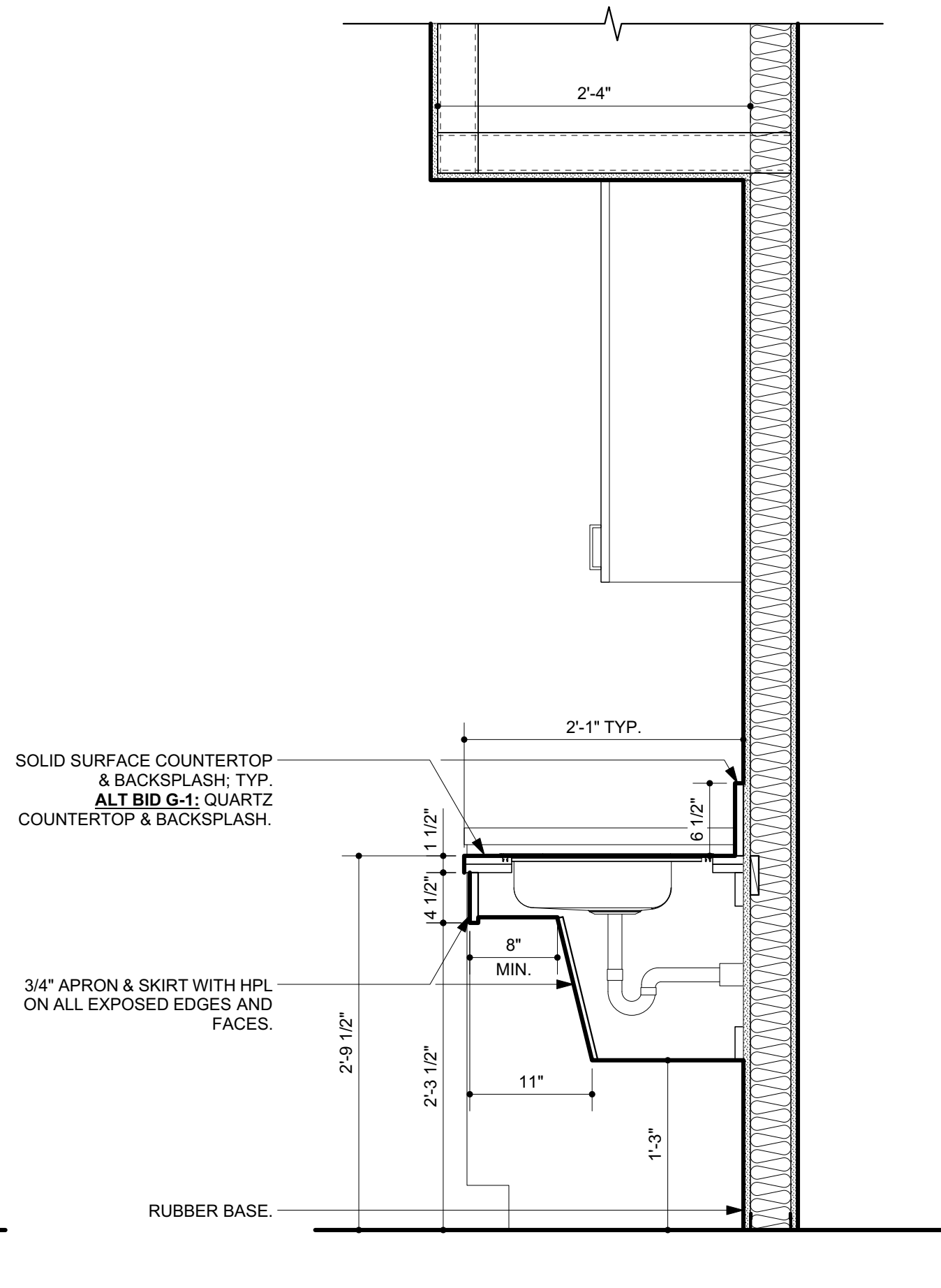
4 Wire Shelving Elevation
A7.0 Scale: 1/2" = 1'-0"



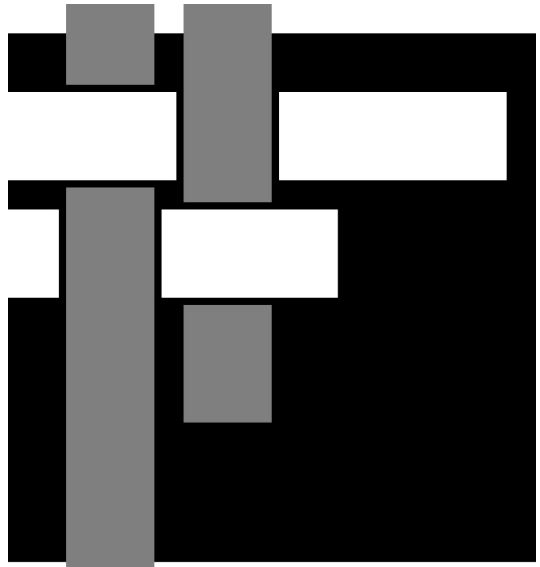
5 Casework Section
A7.0 Scale: 1" = 1'-0"



6 Casework Section
A7.0 Scale: 1" = 1'-0"



7 Casework Section
A7.0 Scale: 1" = 1'-0"



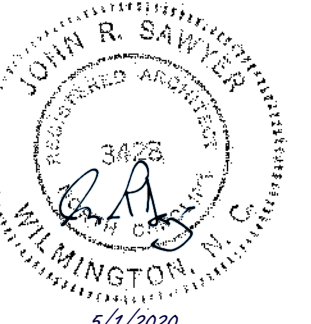
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910 762-0892 s2a3.com

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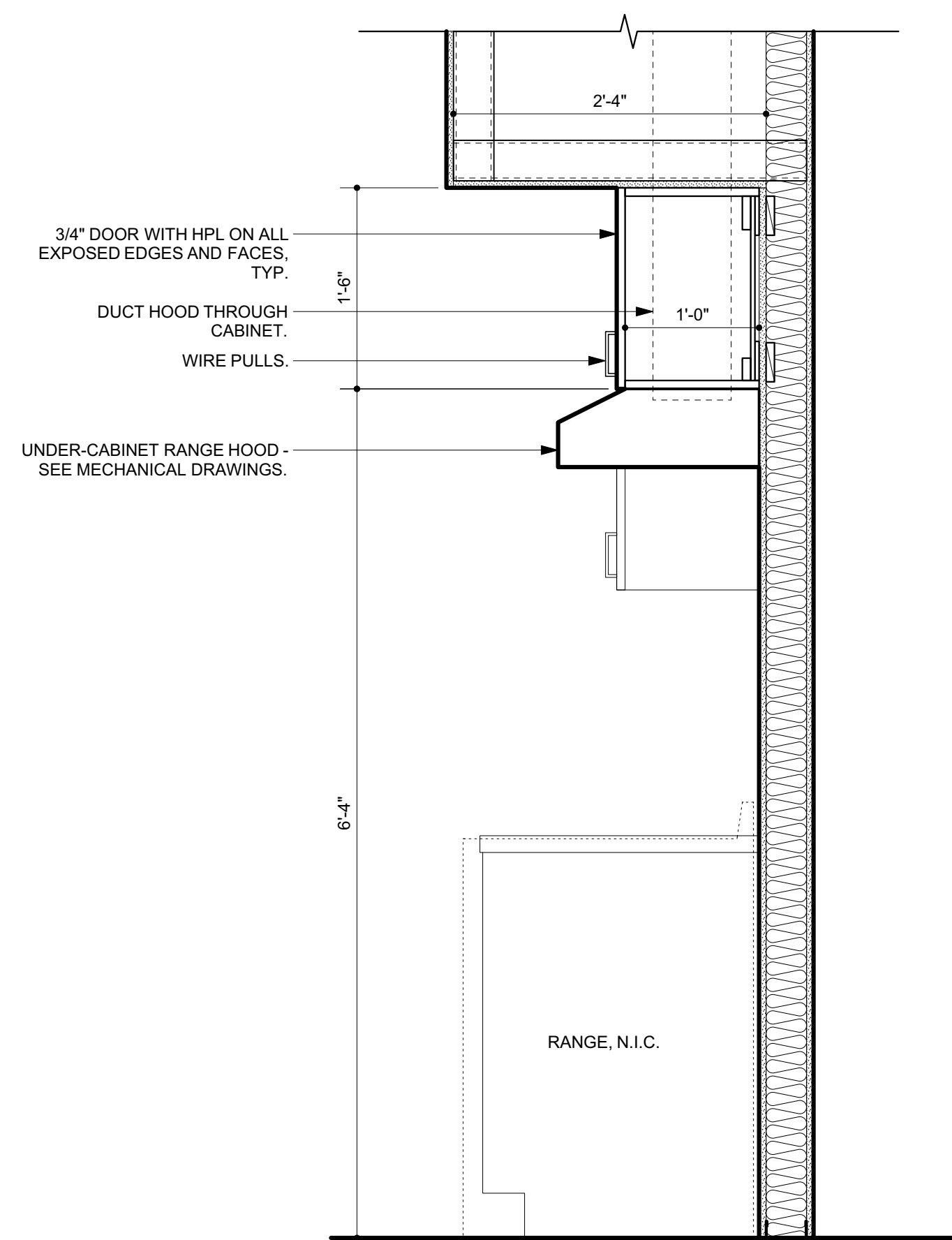
Coordination Drawings
1 May, 2020

Revisions:

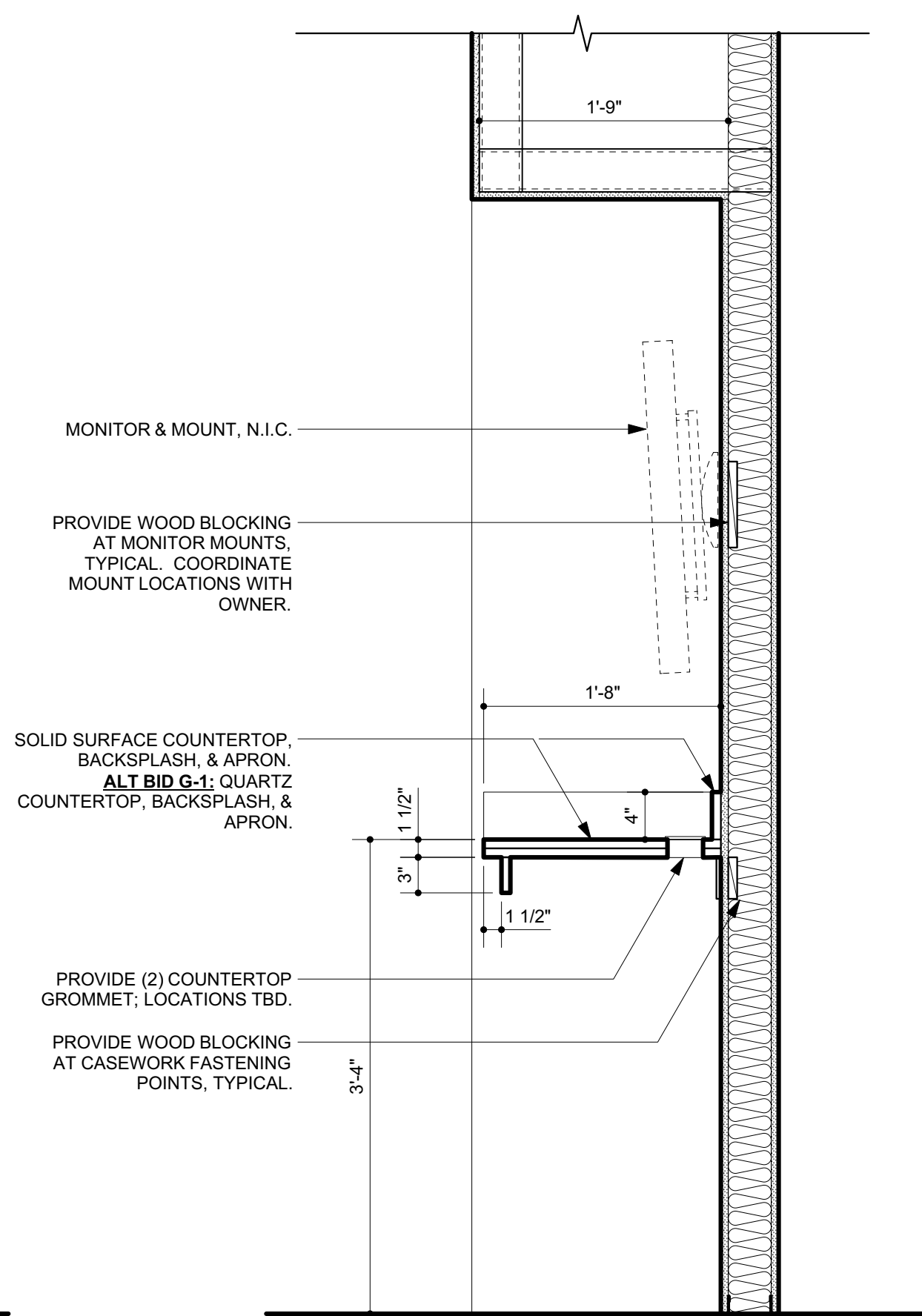
Casework
Elevations &
Sections

A7.0

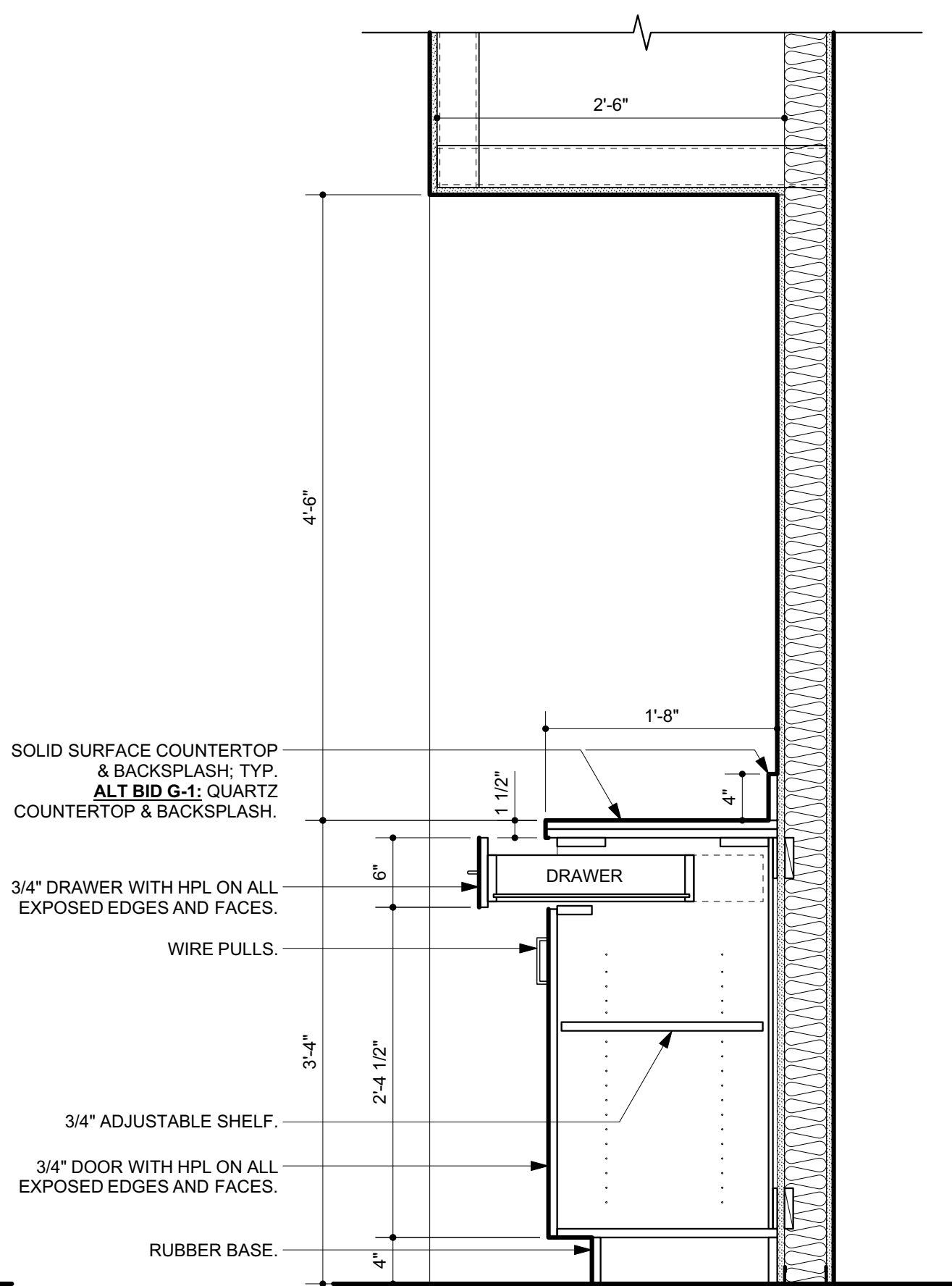
11 of 12



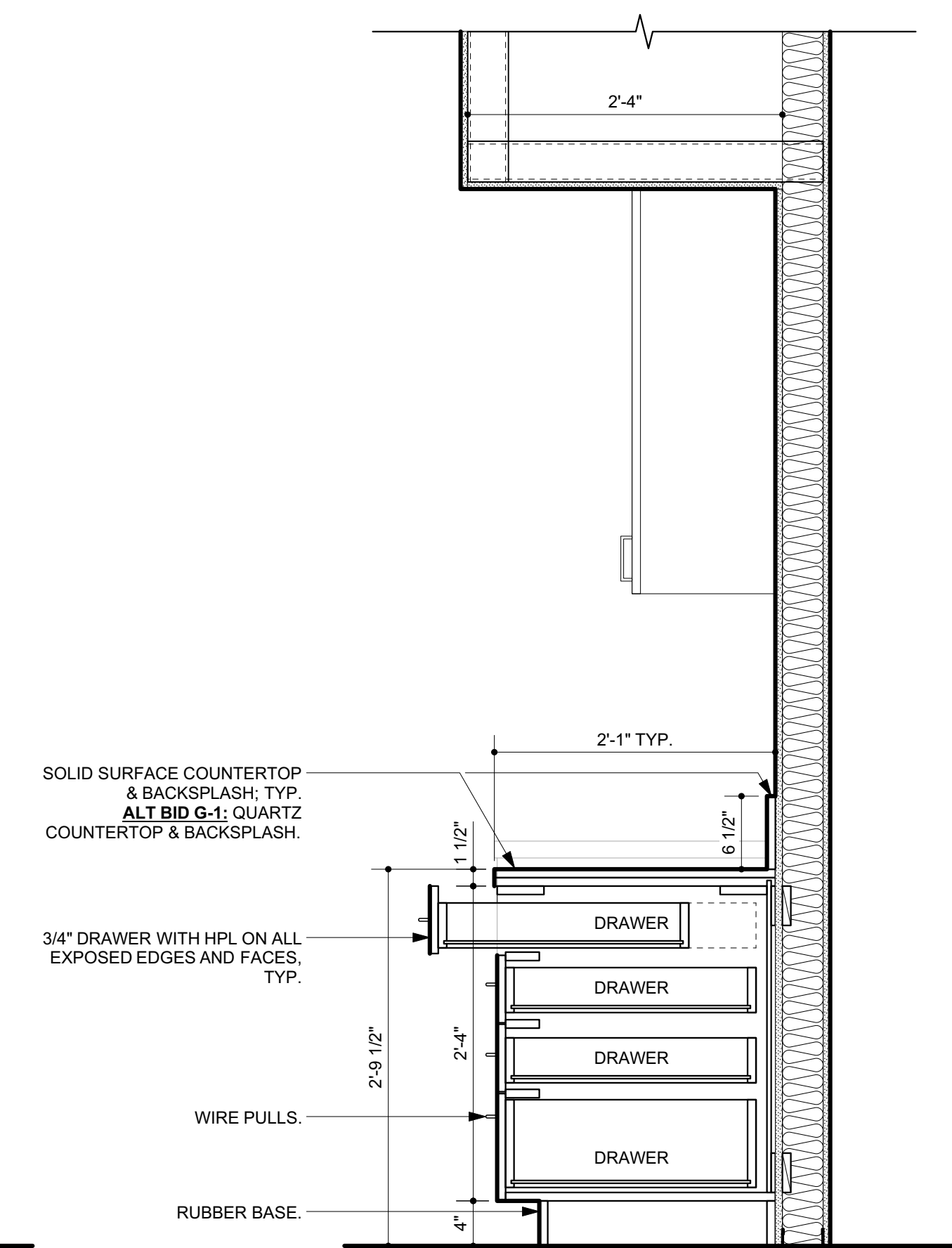
1 Casework Section
A7.1 Scale: 1" = 1'-0"



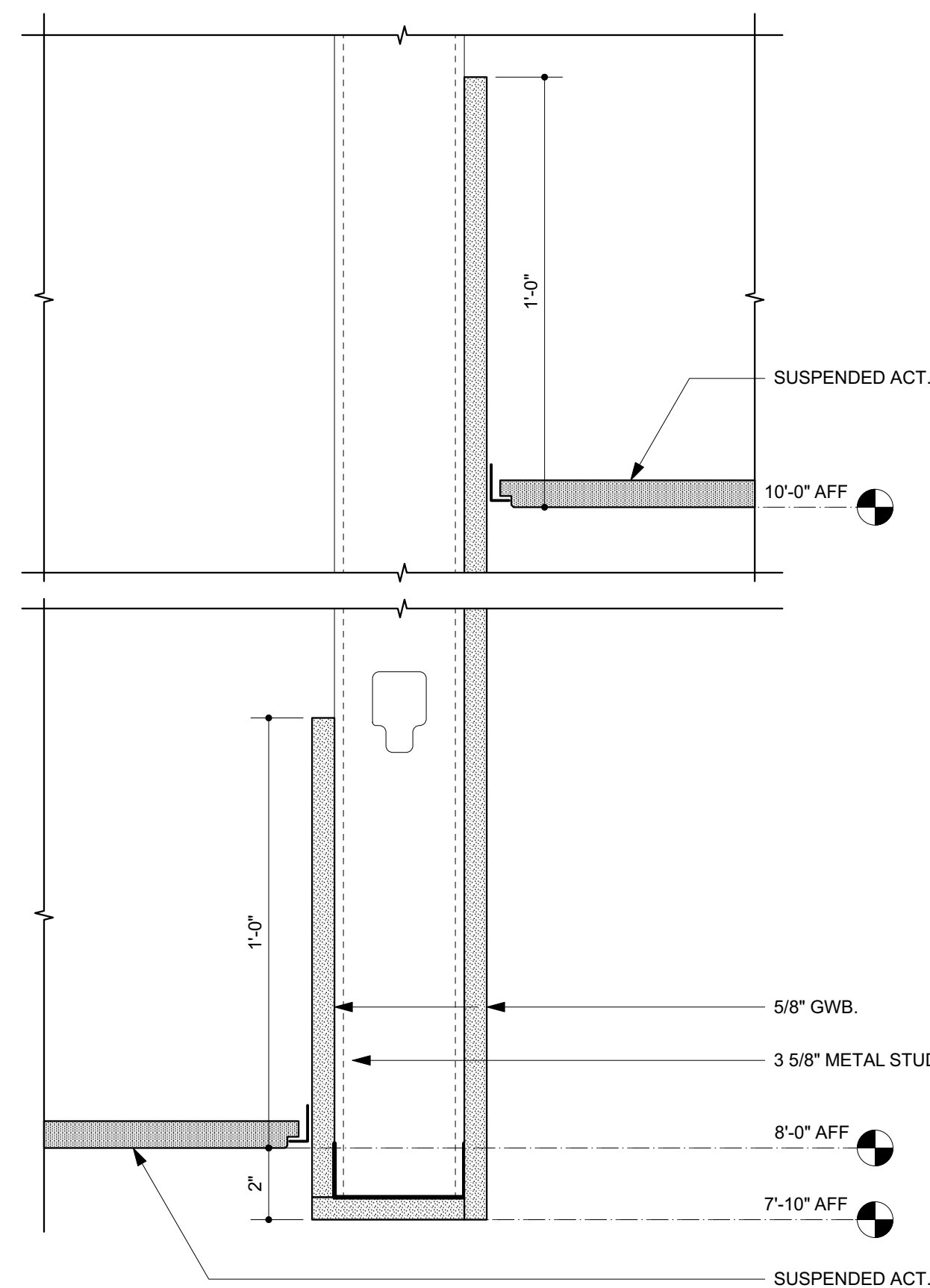
2 Casework Section
A7.1 Scale: 1" = 1'-0"



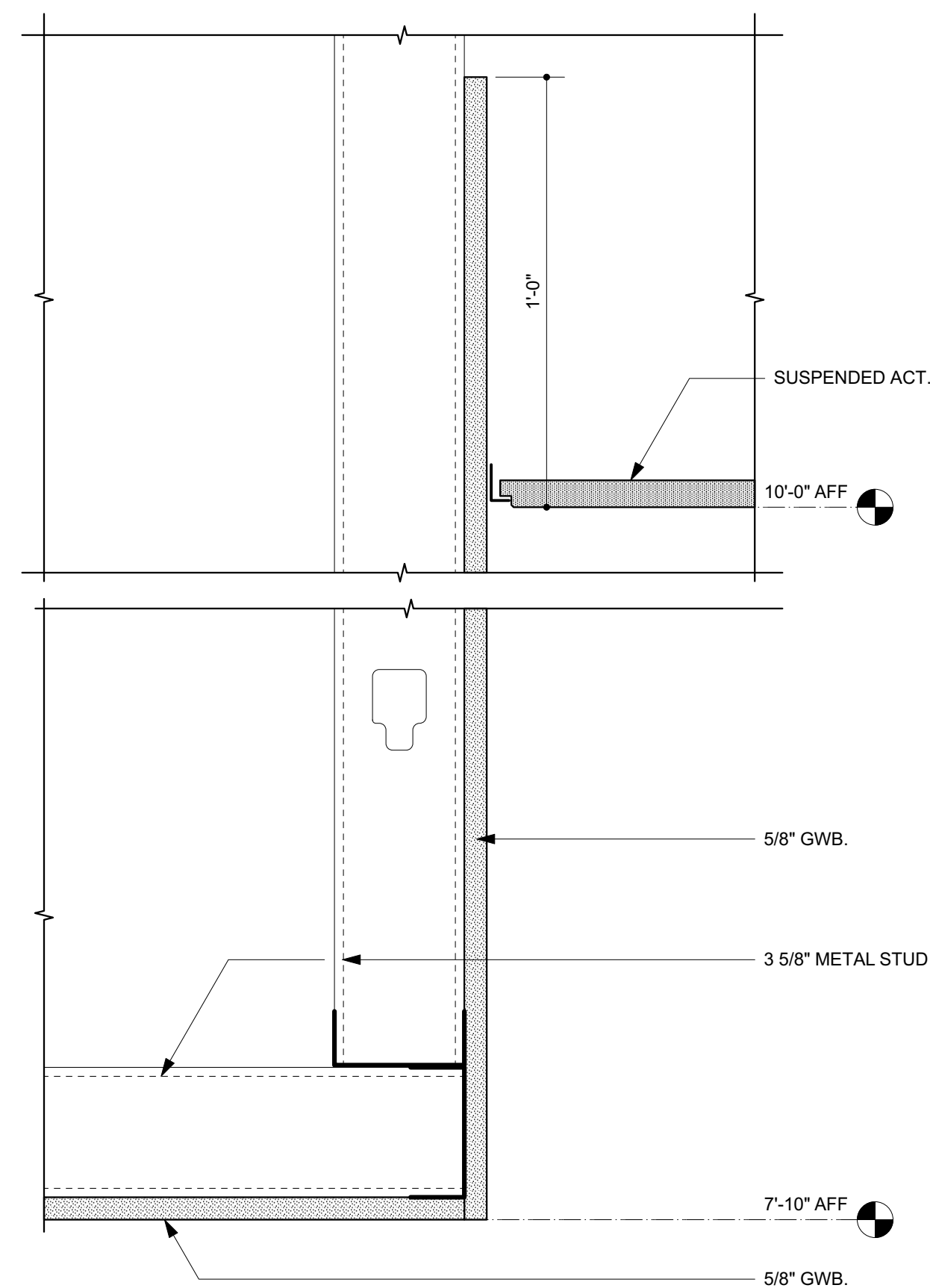
3 Casework Section
A7.1 Scale: 1" = 1'-0"



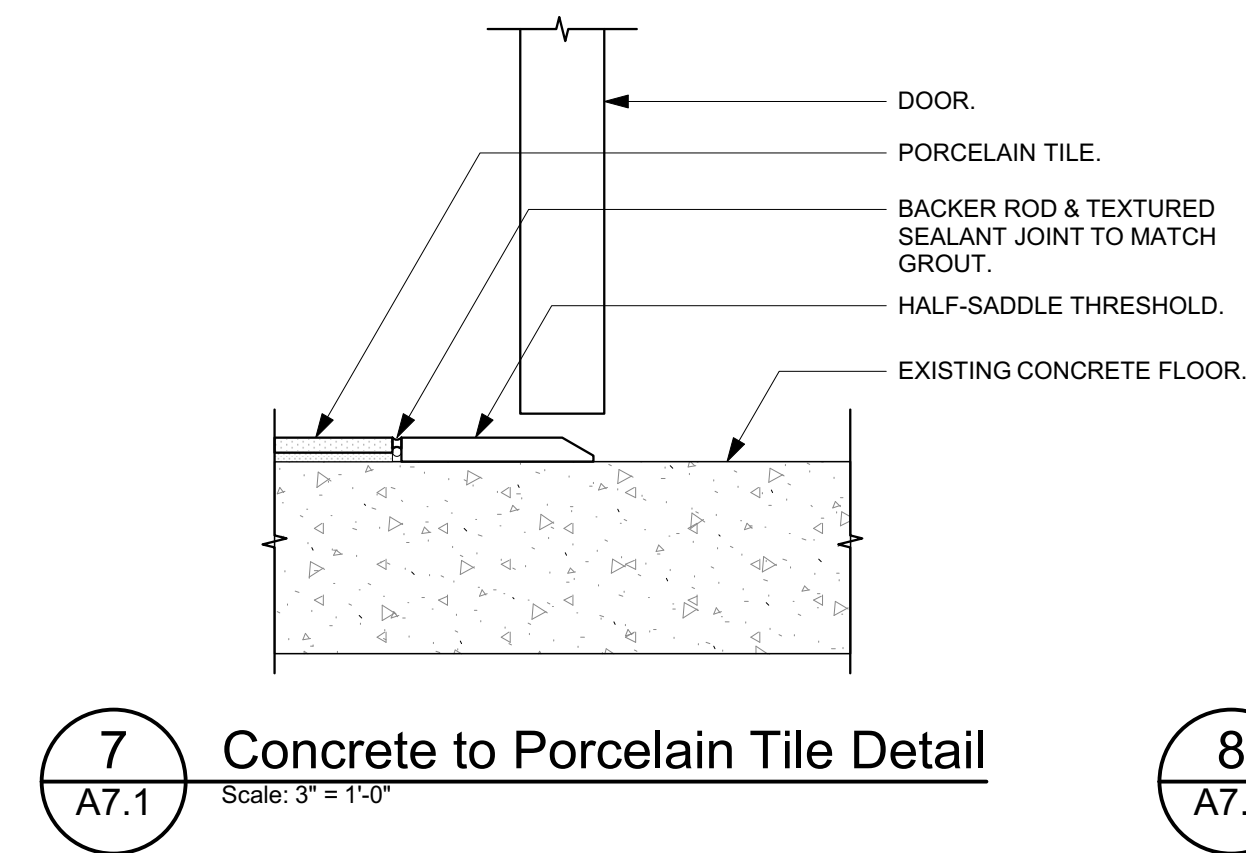
4 Casework Section
A7.1 Scale: 1" = 1'-0"



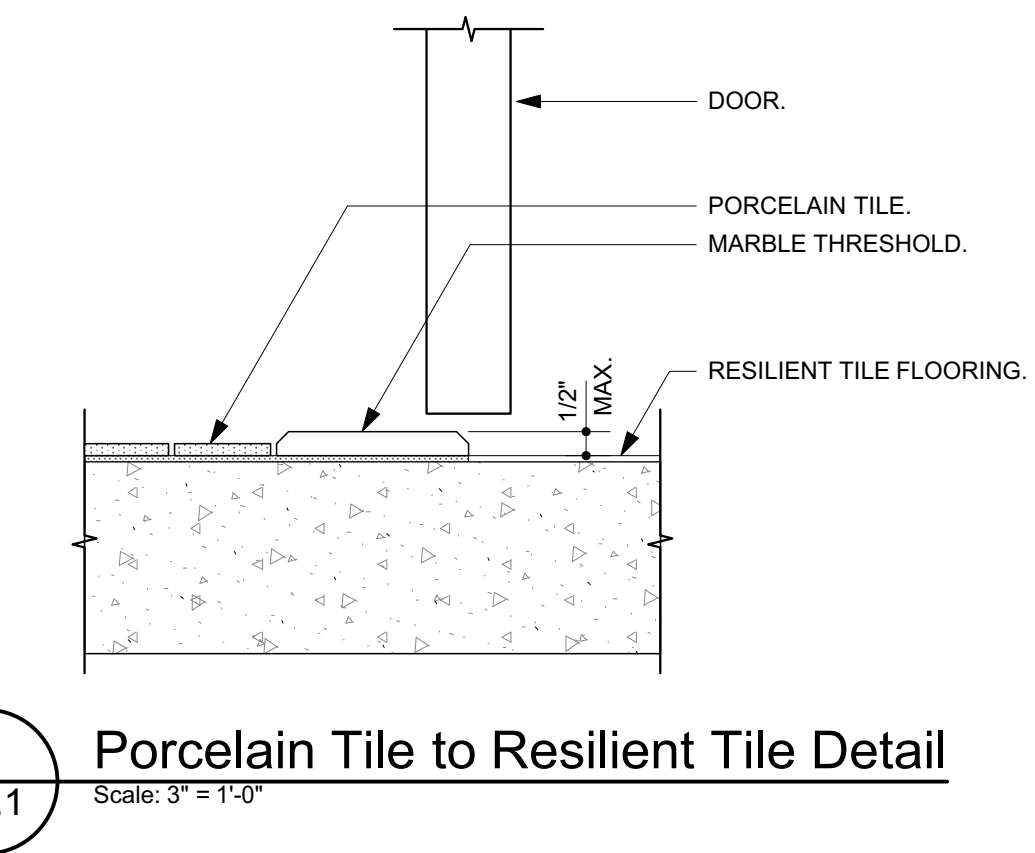
5 Bulkhead Detail
A7.1 Scale: 3" = 1'-0"



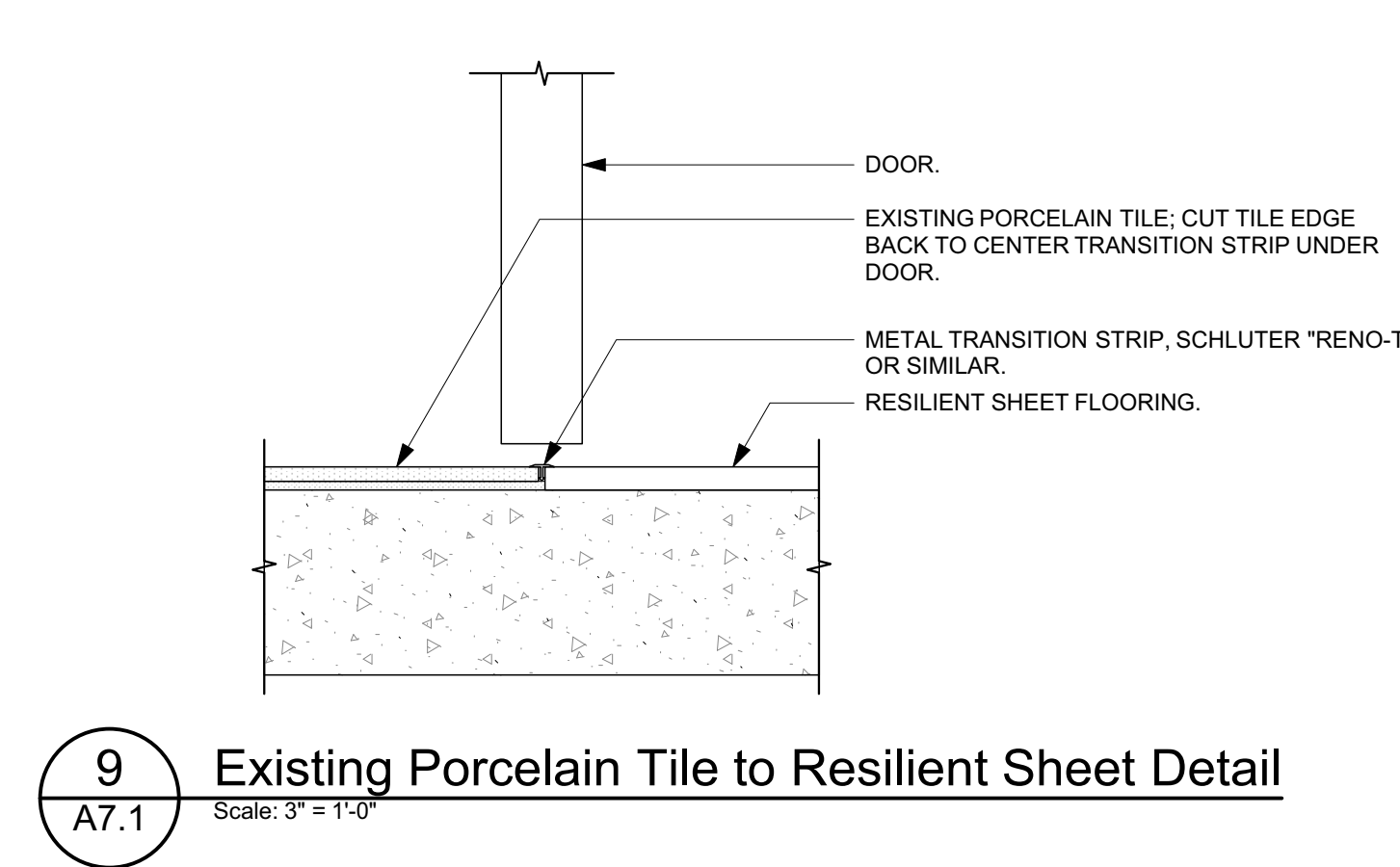
6 Bulkhead Detail
A7.1 Scale: 3" = 1'-0"



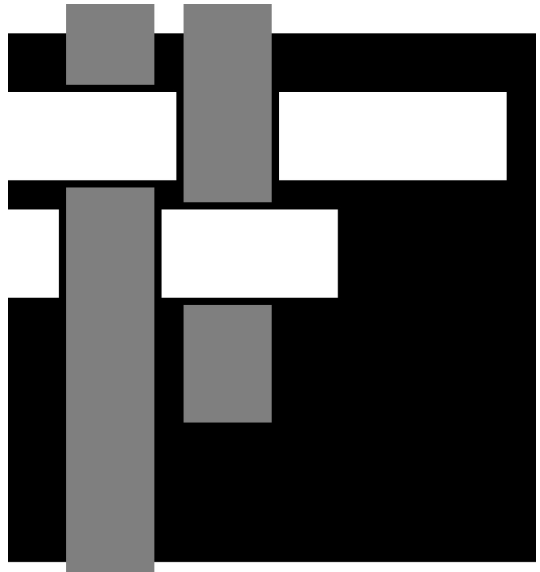
7 Concrete to Porcelain Tile Detail
A7.1 Scale: 3" = 1'-0"



8 Porcelain Tile to Resilient Tile Detail
A7.1 Scale: 3" = 1'-0"



9 Existing Porcelain Tile to Resilient Sheet Detail
A7.1 Scale: 3" = 1'-0"



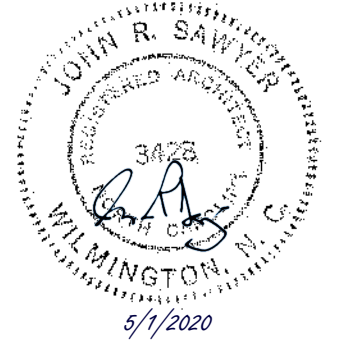
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Coordination Drawings
1 May, 2020

Revisions:

Casework
Sections &
Interior Details

A7.1

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STRUCTURAL INFORMATION FOR APPENDIX B STRUCTURAL DESIGN OF REPAIRS.

DESIGN LOADS:

IMPORTANT FACTORS: SNOW SEISMIC (Is) 1.2 (Ie) 1.5
LIVE LOADS: ROOF 20 PSF FLOOR 150 PSF

GROUND SNOW LOAD: 10 psf
WIND LOAD: BASIC WIND SPEED 153 mph (ASCE 7-10) EXPOSURE CATEGORY C

SEISMIC DESIGN CATEGORY: A B C D

RISK CATEGORY (TABLE 1604.5) I II III IV

SPECTRAL RESPONSE ACCELERATION Ss 22%g S 9.2%g

SITE CLASSIFICATION (ASCE 7-16) A B C D E F

Data Source: Field Test Presumptive Historical Data

BASIC STRUCTURAL SYSTEM (check one) Bearing Wall Dual w/ Special Moment Frame Building Frame Dual w/ Intermediate R/C or Special Steel Moment Frame Inverted Pendulum

ANALYSIS PROCEDURE: Simplified Equivalent Lateral Force Dynamic

LATERAL DESIGN CONTROL: Earthquake Wind

SOIL BEARING CAPACITY: Field Test (Provide copy of test report) N/A psf Presumptive Bearing capacity 2,000 psf Pile size, type, & capacity N/A psf

DESIGN CRITERIA NOT INCLUDED IN APPENDIX B:

WIND: Internal Pressure Coefficient: +/- 0.18 Components and Cladding Pressures: On Plans. Risk Category = IV Valt = 118.5 mph

SEISMIC: Srs = 0.25 Srv = 0.18 Response Modification Factor, R = 3 Seismic Response Coefficient Cs = 0.10 Seismic Base Shears = UNCHANGED BY PROPOSED WORK

FLOOD: Zone X Flood Design Class: IV

GENERAL NOTES:

- 1. DESIGN AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE NORTH CAROLINA BUILDING CODE.
2. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND INFORMATION WHEN APPLICABLE.
3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION AND COORDINATED WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, CIVIL, AND OTHER DOCUMENTS.
4. STRUCTURAL FRAME TO BE SHORED & BRACED UNTIL ERECTION IS COMPLETE.

ADHESIVE ANCHOR NOTES:

- 1. THE GROUT ADHESIVE MUST BE AS FOLLOWS:
2. SOLID OR FILLED MASONRY & CONCRETE
- "HLTI" HVA ADHESIVE ANCHOR SYSTEM OR "HLTI" HIT HY 150 INJECTION ADHESIVE ANCHOR SYSTEM
- "SIMPSON" SET-XP HIGH STRENGTH EPOXY EQUIVALENT OR BETTER PRODUCT
- HOLLOW MASONRY:
-- "HLTI" HY20 ADHESIVE ANCHOR SYSTEM WITH HIT SCREEN TUBE AND DISPENSER.
- EQUIVALENT OR BETTER PRODUCT
- ONLY BOLT TO HOLLOW MASONRY WHEN SPECIFIED ON DRAWINGS.
4. HOLES MUST BE DRILLED AND CLEANED PER ADHESIVE MANUFACTURER'S RECOMMENDATIONS. HOLES MUST BE BLOWN AND BRUSHED CLEAN. FAILURE TO PROPERLY CLEAN THE HOLES WILL COMPROMISE THE CAPACITY OF THE ANCHOR.
5. THREADED RODS AND ANCHOR BOLTS MUST BE A36 STEEL OR BETTER. REBAR MUST BE ASTM A615 GRADE 60 STEEL OR BETTER.
6. ALLOW PROPER SETTING AND CURING TIMES FOR THE ADHESIVE. THE ADHESIVE MANUFACTURER CAN SUPPLY GUIDELINES OR CONTACT OUR OFFICE.
7. THE MINIMUM EMBEDMENT DEPTH FOR ADHESIVE GROUTED ANCHORS IN SOLID MATERIAL IS 6" U.N.O.
8. HOLES FOR ANCHORS SHALL NOT BE DRILLED WITH DIAMOND CORE DRILL BITS.

STRUCTURAL STEEL NOTES:

- 1. HSS = HOLLOW STRUCTURAL SECTION
2. STRUCTURAL STEEL ANGLES, "M" SECTIONS, "S" SECTIONS, CHANNELS, AND PLATES = ASTM A36
STRUCTURAL STEEL "HP" SECTIONS = ASTM A572, GRADE 50
STRUCTURAL STEEL "M" SECTIONS = ASTM A992
4. ALL "F" SECTIONS USE SAME MATERIAL AS THEIR ROOF SHAPE
H.S.S (TUBE STEEL) RECTANGULAR AND ROUND = ASTM A500, GRADE B
STEEL PIPE = ASTM A53, GRADE B
3. DESIGN ALL CONNECTIONS FOR FULL STRENGTH OF MEMBERS, ALL BOLTS TO BE 3/4" DIA. H.S. ASTM A325 ("MIN.") UNLESS NOTED OTHERWISE. WELDING ELECTRODES TO BE E70 SERIES.
4. ALL WELDS TO BE MADE BY A CERTIFIED WELDER OF AWS FOR TYPE OF WELD WHICH IS REQUIRED.
SUBMIT SHOP DRAWINGS FOR ALL STEEL ELEMENTS.

PROJECT NOTES:

- 1. THESE DRAWINGS REFERENCE KNOWN ITEMS IN NEED OF REPAIR, SOME UPGRADES FOR BETTER WIND RESISTANCE, AND SOME REMODELING OF THE BUILDING, NO SEISMIC, FLOOD, ICE, OR RAIN UPGRADES HAVE BEEN PROPOSED. VERIFY ANY ADDITIONAL ITEMS THAT NEED TO BE REPAIRED. REFER TO PREVIOUS SUBMITTALS BY ARCHITECT AND TO THE ARCHITECTURAL DRAWINGS FOR MORE INFORMATION.
2. THE UPGRADES ARE LIMITED TO THE STEEL FRAMING AND DO NOT INCLUDE ALL ELEMENTS. REASONABLE AREAS AND ITEMS WERE CHOSEN FOR UPGRADE. THE FOUNDATION DOES NOT LIKELY MEET CURRENT WIND LOAD REQUIREMENTS, BUT CANNOT BE EASILY UPGRADED. TO BRING THE BUILDING INTO COMPLIANCE WITH CURRENT WIND (AND OTHER) DESIGN STANDARDS, TEARING THE BUILDING DOWN AND CONSTRUCTING A NEW ONE WOULD BE THE BEST OPTION.
3. THE NEWER SECTION ON THE SOUTH END OF THE BUILDING IS NOT INCLUDED IN THE UPGRADE RECOMMENDATIONS. THIS NEW FRAMING MORE RESEMBLES WHAT WOULD BE CURRENTLY REQUIRED.
4. WALL SIDING AND ROOF DECKING THAT IS REMAINING MUST BE CONNECTED IN A MANNER CONSISTENT WITH CURRENT STANDARDS AS MUCH AS PRACTICABLE. NEW PURLINS ARE BEING ADDED IN THE ROOF NEAR THE EAVES. ROOF PANELS MUST BE ATTACHED TO THOSE PURLINS.
5. THE ORIGINAL BUILDING HAS ROOF BRACING TO FORM A ROOF DIAPHRAGM. CURRENT STANDARDS WOULD RESULT IN A SIMILAR BRACING SCHEME. SO NO UPGRADES WERE RECOMMENDED IN THAT REGARD.
6. THE END RESULT OF THE UPGRADES WILL BE A SUBSTANTIAL IMPROVEMENT OF THE WIND RESISTANCE OF THE ROOF AND FRAMES. SOME WALLS HAVE BEEN UPGRADED MORE THAN OTHERS. THE NORTH WALL THAT IS NOW A SHEAR WALL WILL MEET CURRENT WIND DESIGN REQUIREMENTS FOR LATERAL LOADS WITH THE CURRENT FOUNDATION. WHEN THE SOUTHERN ADDITION WAS INSTALLED, THE BRACING ON THE ORIGINAL SOUTH WALL WAS REMOVED. WE HAVE ADDED A BRACE THAT WILL RESTORE THE ORIGINAL STRENGTH AND WITH THE ATTACHMENTS TO THE SOUTHERN ADDITION WILL ADD GREATER STRENGTH THAN THE ORIGINAL BUILDING DESIGN AND CONSTRUCTION.

SHOP DRAWINGS/SUBMITTALS:

- 1. SHOP DRAWINGS AND PRODUCT INFORMATION FOR NEW MATERIAL SUCH AS LIGHT GAGE (COLD FORMED) FRAMING AND ROOF PANELS MUST BE SUBMITTED FOR REVIEW.
2. NEW COMPONENTS SHOULD MEET THE WIND PRESSURES SHOWN ON THESE DRAWINGS WHEN POSSIBLE. DUE TO THE NATURE OF THE UPGRADES THERE MAY BE AREAS WHERE SUPPLEMENTAL BLOCKING NOT SHOWN ON THESE DRAWINGS ARE NEEDED TO CREATE PROPER CONNECTIONS.

WALL COMPONENT & CLADDING PRESSURES

Table with columns: AREA 1, 2, 3; ZONE 4; ZONE 5. Rows: 10 sq. ft., 20 sq. ft., 50 sq. ft., 100 sq. ft. Values include wind pressures like 46.7 / -50.6 PSF.

WALL/CLADDING PRESSURE NOTES:

- 1. AREA TO BE DETERMINED BY (SPAN) DIVIDED BY 3 OR ACTUAL TRIBUTARY LENGTH, WHICHEVER IS GREATER.
2. WALL PRESSURES SHOULD BE USED TO DETERMINE REQUIRED DESIGN PRESSURES FOR DOORS & WINDOWS AS WELL AS IN THE DESIGN OF FINISH MATERIAL AND ATTACHMENTS.
3. INTERPOLATION OF VALUES IS PERMITTED.
4. IF ANY PORTION OF A DOOR OR WINDOW IS IN ZONE 5, THE WHOLE UNIT MUST MEET ZONE 5 PRESSURES.
5. DESIGN PRESSURES SHOWN IN TABLE ARE STRENGTH DESIGN WIND PRESSURES. ALLOWABLE STRESS DESIGN WIND PRESSURES MAY BE CALCULATED BY MULTIPLYING TABLE PRESSURES BY 0.6.
6. DEFLECTIONS MAY BE CALCULATED BASED ON 42% OF THESE LOADS (OR 0.7 X ALLOWABLE STRESS DESIGN PRESSURES).

LIGHT GAUGE STEEL FRAMING NOTES:

- 1. ALL LIGHT GAUGE STEEL COMPONENTS ARE BASED ON "CLARK-DIETRICH" SPECIFICATIONS. (AN APPROVED EQUAL MAY BE SUBSTITUTED).
2. ALL LIGHT GAUGE STEEL FRAMING SHALL BE COLD FORMED STEEL STRUCTURAL MEMBERS DESIGNED BY LATEST SPECIFICATIONS OF A.I.S.I.
3. GALVANIZED STEEL STUDS, 12, 14, AND 16 GAGE, SHALL CONFORM TO A 653, S50, GRADE 50 CLASS 1, WITH FY = 50 KSI GALVANIZED STEEL STUDS, 18 AND 20 GAGE, SHALL CONFORM TO A 653, CQ, GRADE 33, WITH FY = 33 KSI.
4. ALL WELDS TO BE MADE BY A CERTIFIED WELDER OF AWS FOR TYPE OF WELD REQUIRED. WELDING ELECTRODES = E70 SERIES.
5. BRIDGING IN WALLS SHALL BE AT 9'-0" O.C. WITH (2) ROWS BRIDGING MAX.
6. SCREWS: SCREW PENETRATION THROUGH JOINED MATERIALS MUST BE A MINIMUM OF THREE EXPOSED SCREW THREADS. SPACING AND EDGE DISTANCE SHALL BE 1/2" OR MORE (OR AS SPECIFIED BY SCREW MANUFACTURER).
7. ITEMS LISTED AS DEFLECTION TRACKS ARE TO BE DEEP LEG TRACKS WITH THE STUDS NESTED IN IT. THE STUDS MUST BE BRACED AT THE TOP WITH BRIDGING OR FLAT STRAPS OR A VERTITRACK BY "THE STEEL NETWORK" (OR EQUAL) MAY BE USED. (USE VTD SERIES FOR INTERIOR WALLS AND VTX SERIES FOR EXTERIOR WALLS).
8. ALL INTERIOR NON LOAD BEARING WALLS ARE AS SPECIFIED ON ARCHITECTURAL DRAWINGS AND MUST MEET MIN. CODE REQUIREMENTS.
9. CONTRACTOR TO SUBMIT LIGHT GAUGE SHOP DRAWINGS AND CALCULATIONS FOR REVIEW.
10. REFER TO ARCHITECTURAL DRAWINGS FOR ALL LOCATIONS AND WIDTHS OF METAL STUD WALLS. CONTRACTOR TO DETERMINE REQUIRED GAUGE AND SPACING.
11. P.F. TO BE A POWER DRIVEN OR POWER ACTUATED STEEL FASTENER APPROPRIATE FOR USE INDICATED IN LENGTH & STYLE.
12. VERIFY ALL LIGHT GAUGE METAL FRAMING REQUIREMENTS USING ENTIRE SET OF DRAWINGS. ALL FRAMING REQUIREMENTS MAY NOT BE SHOWN ON STRUCTURAL DRAWINGS.
13. DESIGN ON PLANS IS FOR ESTIMATING PURPOSES. VERIFY FINAL REQUIREMENTS WITH APPROVED SHOP DRAWINGS.

GROSS ROOF COMPONENT UPLIFT PRESSURES (ROOF PITCH 1/4:12) 1

Table with columns: AREA 2, 4; ZONE 1, 4; ZONE 2, 4; ZONE 3, 4. Rows: 10 sq. ft., 20 sq. ft., 50 sq. ft., 100 sq. ft. Values include wind pressures like 20.8 / -51.0 PSF.

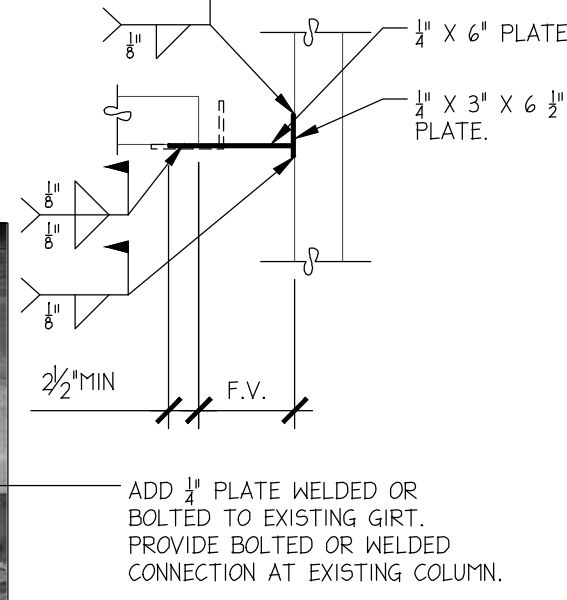
ROOF PRESSURE NOTES:

- 1. ROOF PRESSURES MAY BE USED IN DESIGN OF CONNECTIONS, DECKING, RAFTERS, AND FINISH MATERIAL.
2. AREA TO BE DETERMINED BY (SPAN) DIVIDED BY 3 OR ACTUAL TRIBUTARY AREA, WHICHEVER IS GREATER.
3. ROOF PRESSURES SHOULD BE USED TO DETERMINE REQUIRED DESIGN PRESSURES FOR RTU'S & SKY LITS AS WELL AS IN THE DESIGN OF FINISH MATERIAL AND ATTACHMENTS.
4. INTERPOLATION OF VALUES IS PERMITTED.
5. FOR OVERHANG ADD APPROPRIATE WALL PRESSURE TO THE UNDERSIDE OF THE OVERHANG.
6. DESIGN PRESSURES SHOWN IN TABLE ARE STRENGTH DESIGN WIND PRESSURES. ALLOWABLE STRESS DESIGN WIND PRESSURES MAY BE CALCULATED BY MULTIPLYING TABLE PRESSURES BY 0.6.
7. DEFLECTIONS MAY BE CALCULATED BASED ON 42% OF THESE LOADS (OR 0.7 X ALLOWABLE STRESS DESIGN PRESSURES).

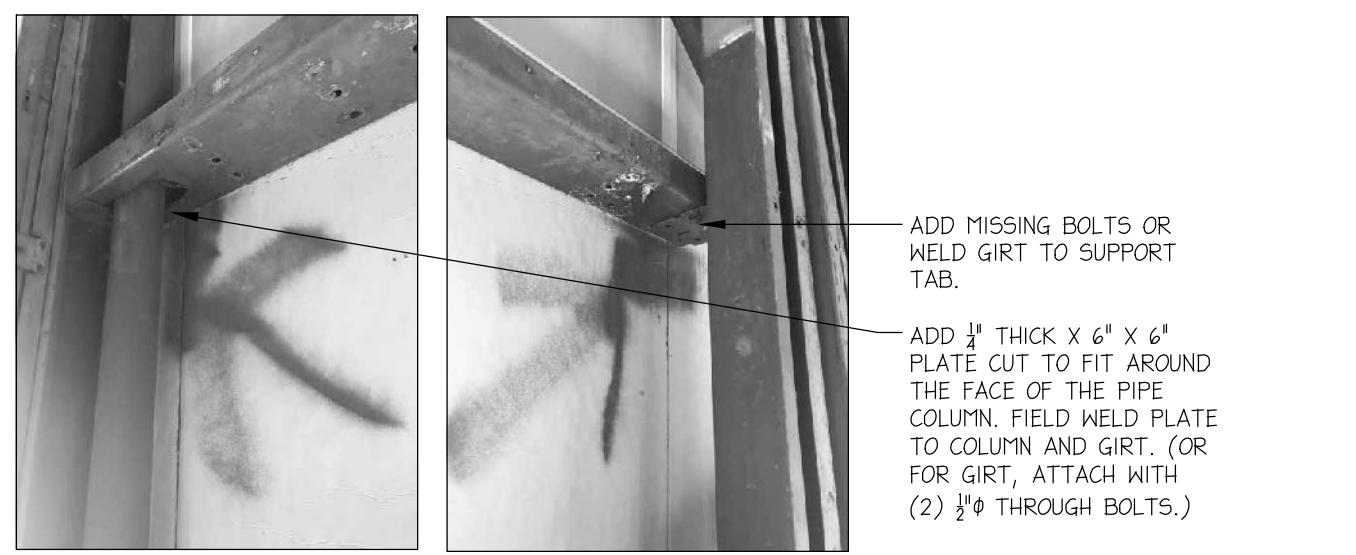
PURLIN AND GIRT NOTES:

- 1. VERIFY THE DIMENSIONS OF EXISTING MATERIALS IN ORDER TO PROPERLY ORDER NEW MATERIAL TO MATCH. ROOF PURLINS WERE MEASURED AT APPROXIMATELY 6 1/2" TO 7" DEEP DEPENDING ON LOCATION WITH 3" FLANGES. FIELD VERIFY GAGE OF MEMBERS.
2. PURLINS, GIRTS, AND EAVE STRUTS TO BE ASTM A 1011, GRADE 55 OR ASTM A 653, GRADE 55. BRACE BEAMS AND COLUMNS LATERALLY WITH ANGLES CONNECTING TO PURLIN OR GIRT WEBS AS APPLICABLE FOR ALL NEW PURLINS OR GIRTS.
3. NEW PURLINS OR GIRTS MUST HAVE SPAN AND CONNECTION DETAILS TO MATCH EXISTING MEMBERS. ADD CONNECTION MEMBERS, BOLTS, AND/OR WELDS AS NEEDED TO MATCH EXISTING CONDITIONS. FIELD VERIFY.
4. FINISH OF GIRTS AND PURLINS TO MATCH EXISTING OR AS INDICATED ON ARCHITECTURAL DRAWINGS.

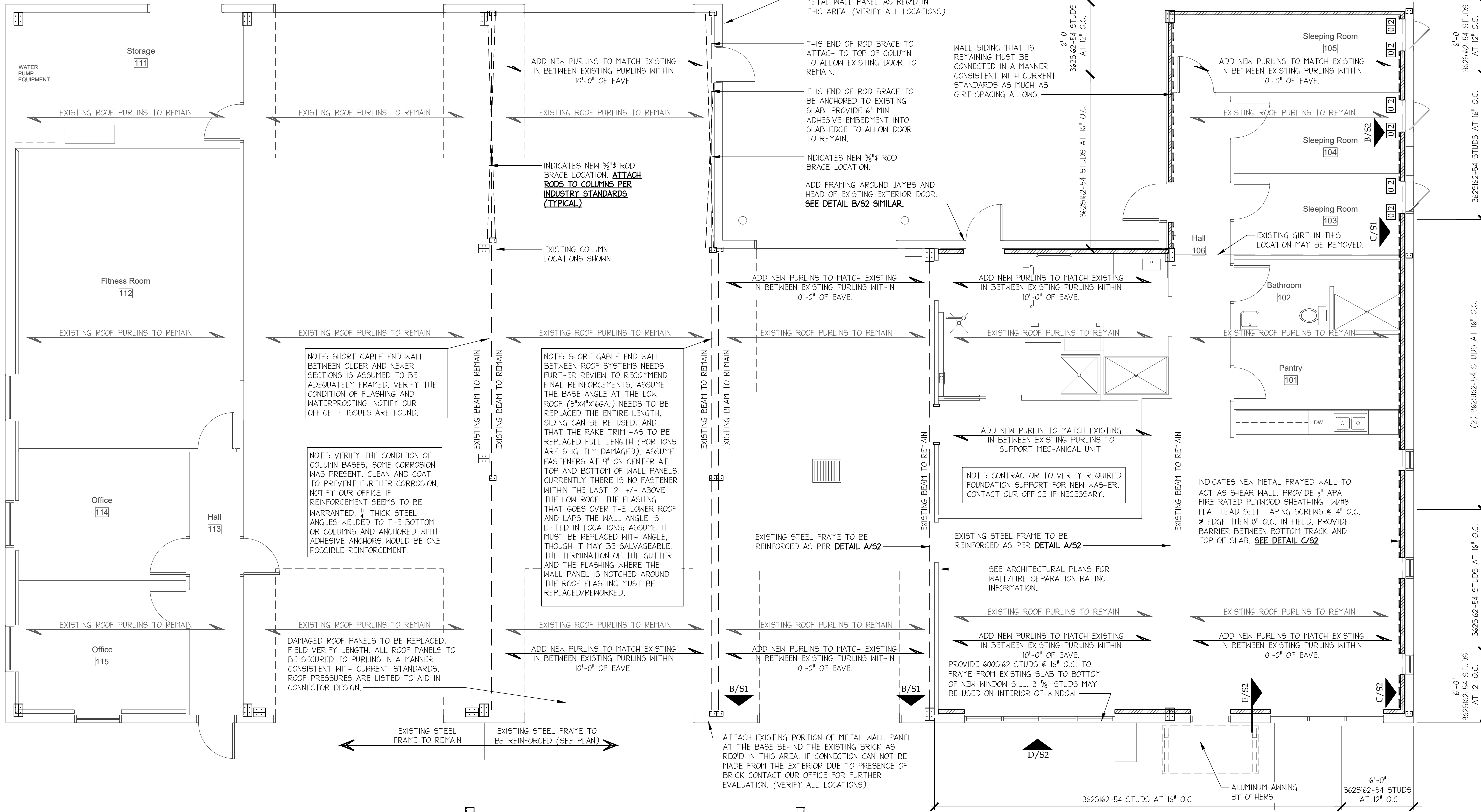
CONTRACTOR TO SHORE AND BRACE EXISTING STRUCTURE DURING ENTIRE RENOVATION



REPAIR REFERENCE DETAIL C



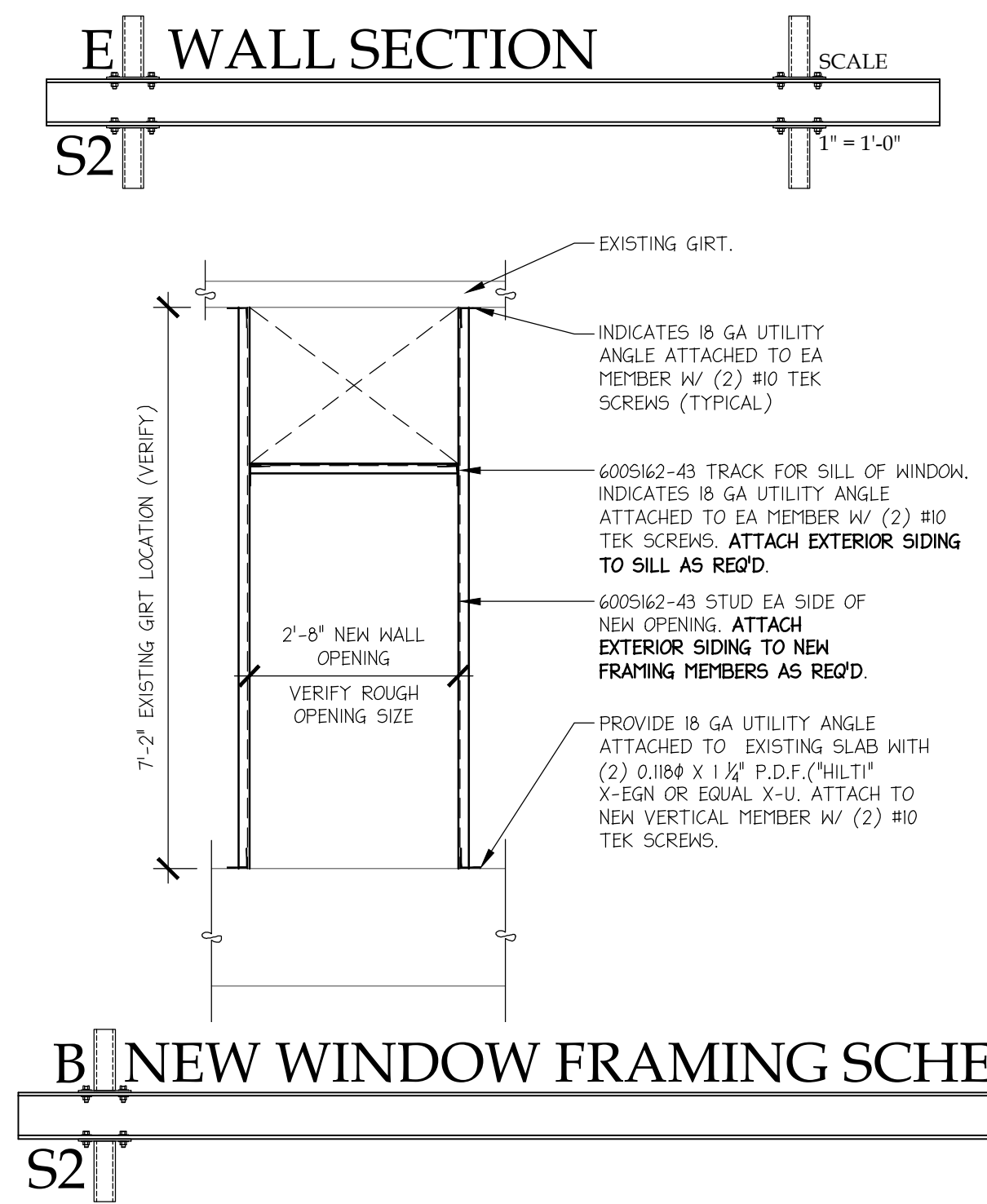
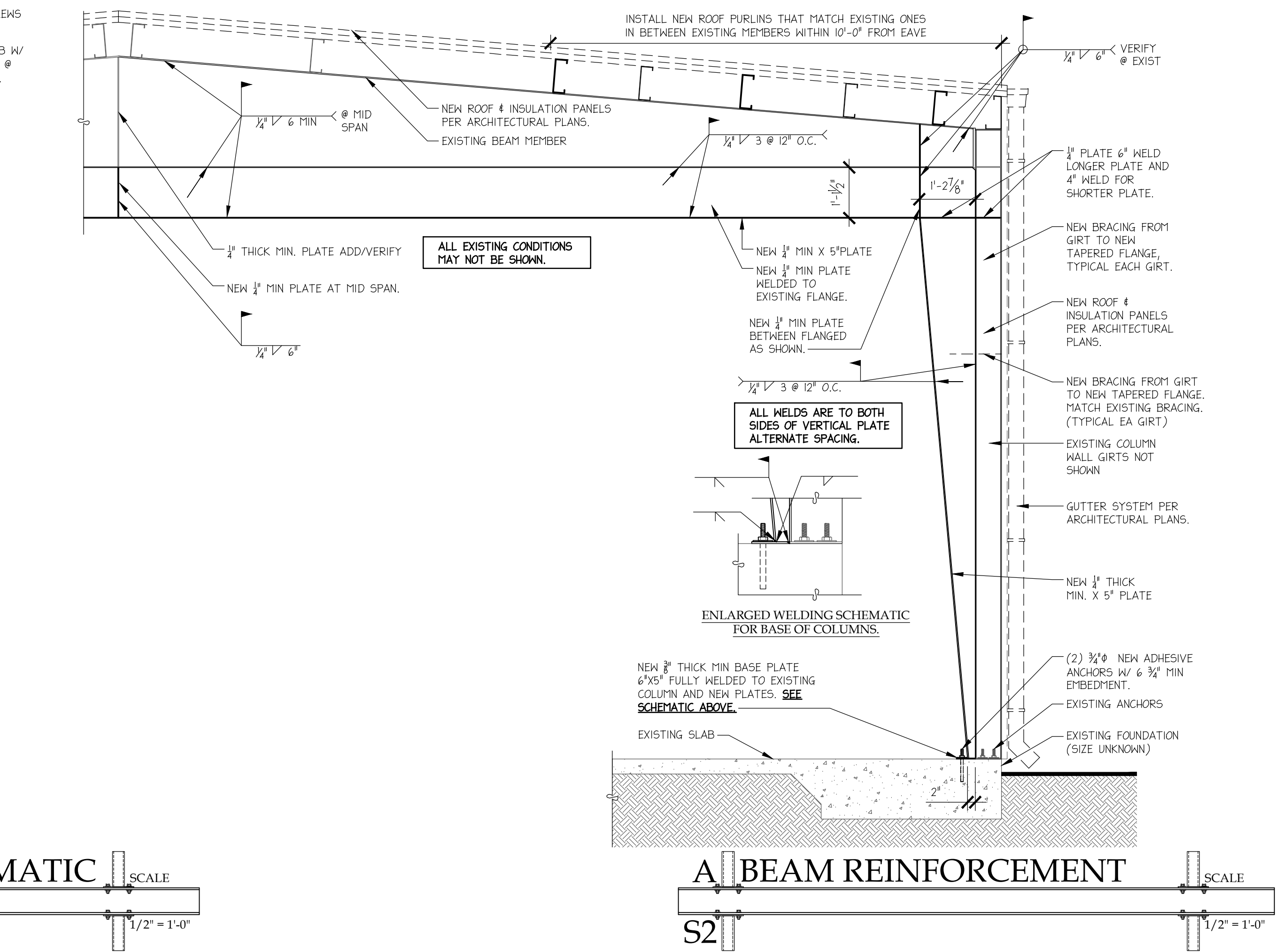
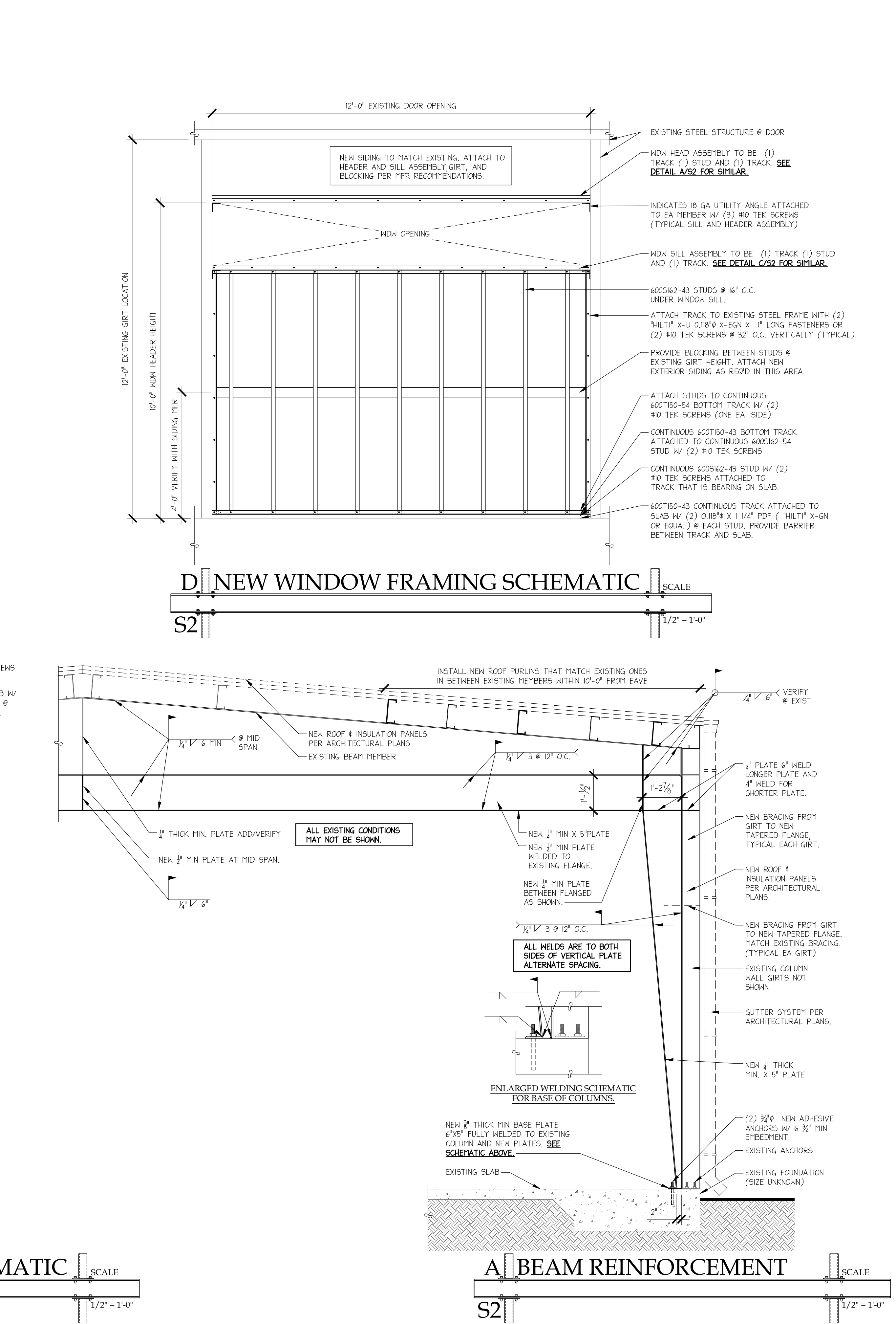
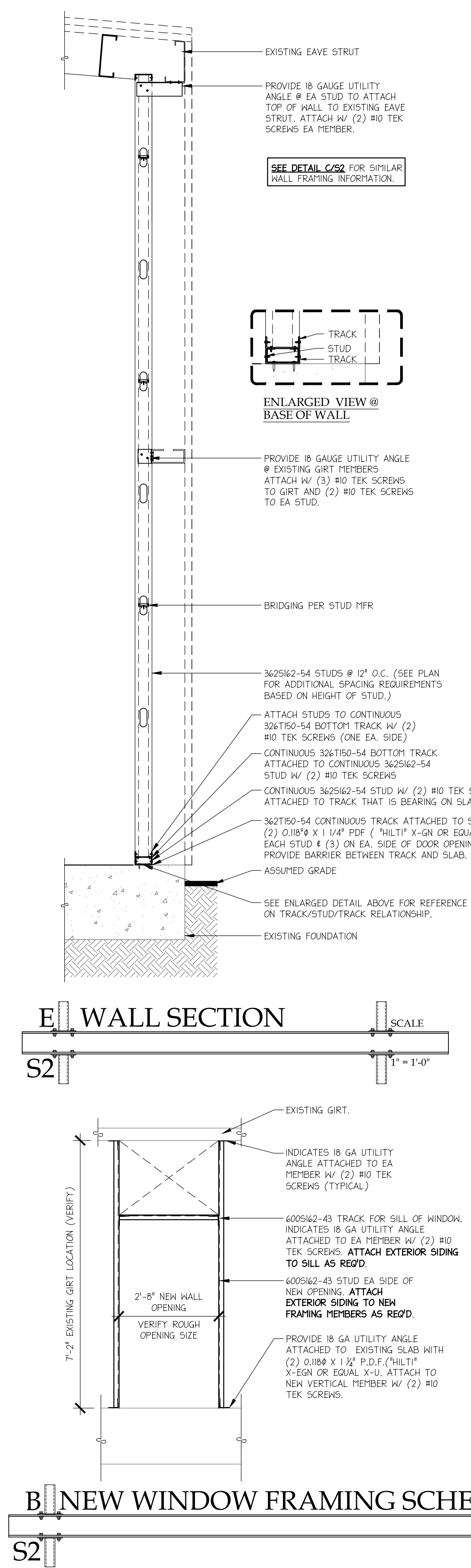
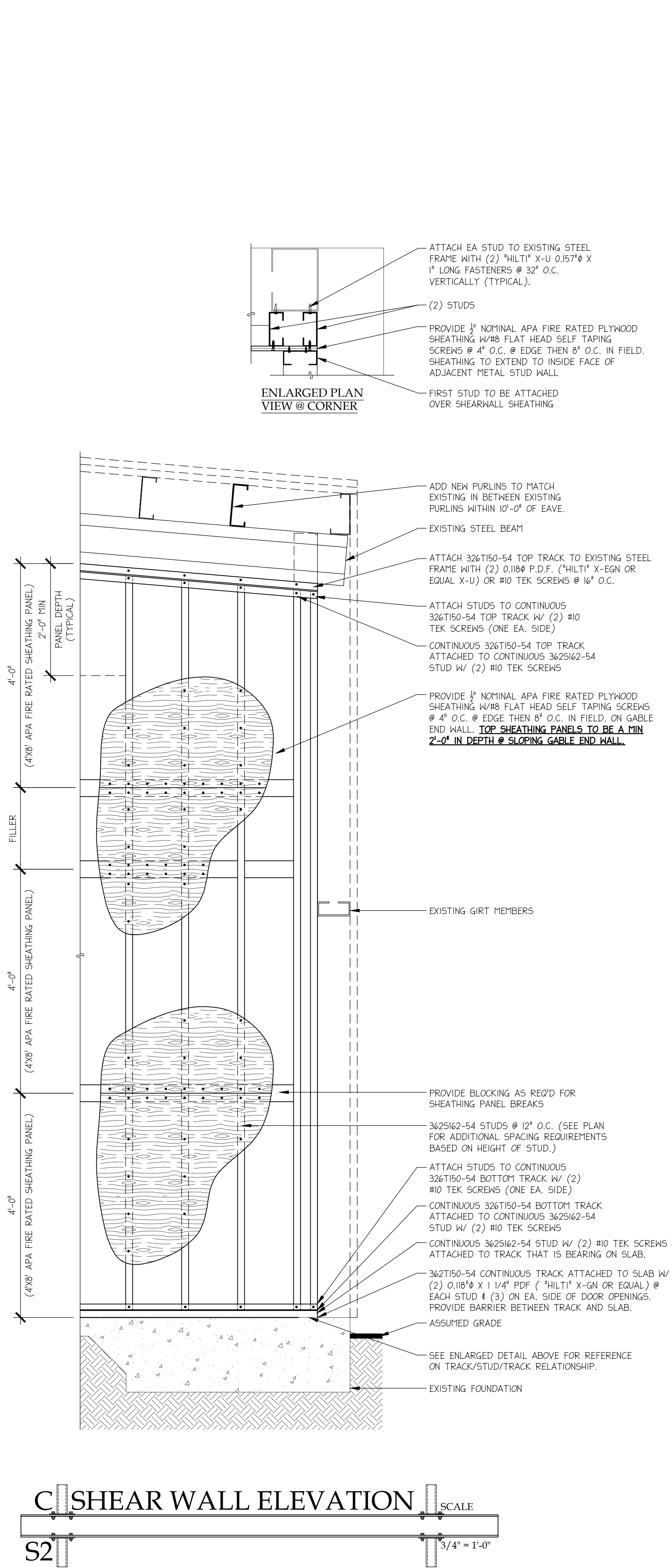
REPAIR REFERENCE DETAIL B



FRAMING PLAN

Professional engineering stamps and project information including: NHC Fire Station 12, 3805 Highway 421, Wilmington, North Carolina; Project No. 19132; Date: 4-30-2020; Project Description: Hurricane Florence Repairs; Drawn by: JLT; Discussed by: W.D.J.

WD JONES ENGINEERING, PLLC logo and contact information: EMAIL: OFFICE@WDJONESENGINEERING.COM, PHONE: 910-523-5581, 100 B OLD EASTWOOD ROAD, UNIT 24, WILMINGTON, N.C. 28403



NO.	REVISION	DATE	INTL.

NHC Fire Station 12
3805 Highway 421
Wilmington, North Carolina

PROJECT DESCRIPTION: Hurricane Florence Repairs
DRAWN BY: JLT
DATE: 4-30-2020
PROJECT NO: 19132
DESIGNED BY: W.D.J.

WD JONES ENGINEERING, PLLC
OFFICE: OFFICE@WDJONESENGINEERING.COM
PHONE: 910-523-5581
100 B OLD EASTWOOD ROAD, UNIT 24
WILMINGTON, N.C. 28403

SEAL P-1161
N.C.

S2 **2**

PLUMBING SPECIFICATIONS:

PART 1 GENERAL
1.1 SCOPE OF WORK: THESE DRAWINGS AND SPECIFICATIONS DESCRIBE THE SCOPE OF WORK REQUIRED FOR PROJECT PLUMBING SYSTEMS. PROVIDE ALL LABOR AND MATERIAL REQUIRED FOR COMPLETE, FULLY FUNCTIONING PLUMBING SYSTEMS...
1.2 CONTRACTOR: THE WORD "CONTRACTOR", "PLUMBING CONTRACTOR", AND "P.C." AS USED HEREIN SHALL MEAN THE PLUMBING INSTALLER UNLESS OTHERWISE QUALIFIED.
1.3 DRAWINGS: DRAWINGS ARE DIAGRAMMATIC AND MAY NOT COMPLETELY DESCRIBE EVERY DETAIL OF THE INSTALLATION...
1.4 CODE COMPLIANCE: COMPLY WITH THE LATEST EDITIONS OF THE FOLLOWING STANDARDS AND CODES, INsofar AS THEY APPLY:
- NORTH CAROLINA STATE BUILDING CODE (CODE), LATEST EDITION AND REVISIONS.
- LOCAL JURISDICTION REQUIREMENTS.
1.5 PERMITS AND INSPECTIONS: OBTAIN ALL PERMITS, LICENSES, INSPECTIONS, ETC., REQUIRED FOR THE WORK AND PAY FOR SAME...
1.6 SUPERVISION: PROVIDE SKILLED SUPERINTENDENTS TO SUPERVISE THE WORK FROM THE BEGINNING TO COMPLETION AND FINAL INSPECTION.
1.7 PROGRESS OF WORK: PERFORM WORK IN ACCORDANCE WITH SCHEDULE AND REQUIREMENTS OF THE GENERAL CONTRACTOR...
1.8 COORDINATION: COORDINATE PLUMBING WORK WITH THE WORK OF OTHER TRADES...
1.9 EQUIPMENT LOCATIONS: DETERMINE EXACT EQUIPMENT AND MATERIALS LOCATIONS TO PROVIDE BEST ARRANGEMENT AND TO FACILITATE PROPER MAINTENANCE AND SERVICING OF EQUIPMENT.
1.10 LISTING AND LABELING: ALL EQUIPMENT SHALL BE LABELED OR LISTED BY UL OR OTHER APPROVED TESTING AGENCY WHERE REQUIRED.
1.11 STORAGE SPACE: CONSULT WITH THE GENERAL CONTRACTOR REGARDING JOB SITE STORAGE FOR PLUMBING MATERIALS...
1.12 CLEANUP: REMOVE ALL DEBRIS GENERATED IN THE ACCOMPLISHMENT OF WORK UNDER THIS PROJECT...
1.13 ELECTRICAL WORK:
A. PERFORM ELECTRICAL WORK FOR PLUMBING EQUIPMENT IN COMPLIANCE WITH PROJECT ELECTRICAL REQUIREMENTS...
B. ELECTRICAL DRAWINGS ARE BASED ON ELECTRICAL CHARACTERISTICS INDICATED IN DRAWING PLUMBING EQUIPMENT SCHEDULES...
1.14 PLUMBING WORK IN CONNECTION WITH OTHER CONTRACTS
A. PROVIDE PLUMBING SERVICES AS REQUIRED FOR ITEMS FURNISHED BY OTHER CONTRACTORS...
B. NATURAL GAS SYSTEM- PROVIDE COMPLETE GAS PIPING SUPPLY FROM NATURAL GAS METER...
C. SITE UTILITIES- IN GENERAL, WORK UNDER THIS DIVISION COVERS WORK TO FIVE FEET OUTSIDE BUILDINGS...
D. OWNER FURNISHED EQUIPMENT- OBTAIN EXACT PLUMBING REQUIREMENTS AND ROUGH-IN LOCATIONS...
E. KITCHEN EQUIPMENT- OBTAINING EXACT PLUMBING REQUIREMENTS AND ROUGH-IN LOCATIONS...
1.15 SUBSTITUTIONS: MAJOR FIXTURES, EQUIPMENT, DEVICES, AND SPECIALTIES SHALL BE AS SCHEDULED ON THE DRAWINGS...
1.16 SUBMITTALS:
A. EQUIPMENT SUBMITTALS: SUBMIT ONE (1) ELECTRONIC COPY OF DESCRIPTIVE DATA FOR PLUMBING EQUIPMENT...
B. OPERATING AND MAINTENANCE MANUALS: SUBMIT TWO HARD COPIES AND ONE ELECTRONIC COPY OF COMPLETE OPERATING AND MAINTENANCE INSTRUCTIONS...
1.17 RECORD DRAWINGS: MAINTAIN ONE SET OF "RED-LINED" RECORD DRAWINGS ON SITE AT ALL TIMES...
1.18 WARRANTY: WARRANTY THE MATERIALS AND WORKMANSHIP COVERED BY THESE DRAWINGS AND SPECIFICATIONS FOR A PERIOD OF ONE YEAR...
1.19 EXISTING BUILDINGS AND CONSTRUCTION:
A. WORK UNDER THIS CONTRACT IS TO BE PERFORMED IN AN EXISTING BUILDING...
B. PERFORM ALL WORK IN ACCORDANCE WITH SAFETY REGULATIONS.
C. DO NOT CUT ANY STRUCTURAL MEMBERS WITHOUT EXPRESS WRITTEN INSTRUCTIONS...
D. COORDINATE INSTALLATION OF NEW PLUMBING SYSTEMS WITH EXISTING BUILDING SYSTEMS...
PART 2 MATERIALS
2.1 GENERAL: ALL PLUMBING MATERIALS SHALL CONFORM TO APPLICABLE CODE REQUIREMENTS...
2.2 VALVES:
A. BALL VALVES, 3" AND SMALLER: ASTM B 82, 200 PSI WOG, TWO-PIECE CONSTRUCTION...
B. CHECK VALVES, 3" AND SMALLER: MSS-SP-80, 125 PSI CWP, BRONZE BODY...
2.3 HANGERS, SUPPORTS AND ANCHORS:
A. HANGERS, SUPPORTS AND ANCHORS- B-LINE, GRINNELL, PHD OR EQUAL, MANUFACTURED PRODUCTS...

2.4 PIPING
A. DOMESTIC WATER PIPING (INTERIOR - ABOVE GROUND); ASTM F876, CROSSED LINK POLYETHYLENE (PEX) PLASTIC TUBING AND COMPATIBLE BRASS/BRONZE FITTINGS.
B. DOMESTIC WATER PIPING (BELOW GROUND OR SLAB); ASTM F876, CROSSED LINK POLYETHYLENE (PEX) PLASTIC TUBING AND COMPATIBLE BRASS/BRONZE FITTINGS.
C. DRAIN, WASTE & VENT PIPING: ASTM D2685 PVC-DWV W/ PLAIN ENDS, SCHEDULE 40; SOCKET TYPE FITTINGS; PVC SOLVENT-CEMENTED JOINTS...
D. GAS PIPING: ASTM A53, TYPE E OR S; GRADE B; SCHEDULE 40; BLACK STEEL WITH MALLEABLE-IRON, ASME B16.3, CLASS 150...
2.5 PIPE INSULATION:
A. PIPE INSULATION - MANSVILLE, KNAUF, OWENS-CORNING OR EQUAL, ASTM C547-77 CLASS 1 PREFORMED GLASS FIBER...
B. WHERE DOMESTIC WATER PIPING IS EXPOSED TO VIEW, PROVIDE PVC JACKETING W/ PVC ELBOW JACKETS...
C. INSULATION SCHEDULE:
DOMESTIC HOT AND COLD WATER
PIPE SIZE THICKNESS
<1 INCH 1.0 INCH
1-1/4 THROUGH 2 INCHES 1.5 INCH
2.6 SPECIALTIES:
A. UNIONS - PROVIDE UNIONS TO PERMIT DISASSEMBLY FOR EQUIPMENT SERVICE, REPAIRS, OR REPLACEMENT...
B. ESCUTCHEONS - PROVIDE CHROME PLATED BRASS ESCUTCHEONS ON ALL EXPOSED PIPING...
2.7 BACKFLOW PREVENTERS - PROVIDE VACUUM BREAKER BACKFLOW PREVENTERS ON ALL HOSE OUTLETS...
2.8 PLUMBING FIXTURES: PROVIDE FIXTURES AS SCHEDULED ON DRAWINGS OR EQUAL...
PART 3 EXECUTION
3.1 PREPARATION: VERIFY EXISTING CONDITIONS, COMPARE DRAWINGS WITH EXISTING CONDITIONS AND ADJUST INSTALLATION TO SUIT...
3.2 DEMOLITION: DEMOLISH EXISTING PLUMBING WORK ONLY AS REQUIRED TO INSTALL RENOVATIONS...
3.3 INSTALLATION: INSTALL ALL PLUMBING WORK IN ACCORDANCE WITH CODE, MANUFACTURER'S RECOMMENDATIONS AND GOOD INDUSTRY PRACTICE...
3.4 INSTALL PLUMBING PIPING PER ACCEPTED INDUSTRY METHODS...
3.5 PROVIDE ZONE SHUTOFF VALVES FOR WATER SUPPLIES ON BRANCH LINES AS PRESCRIBED BY CODE...
3.6 INSTALL EQUIPMENT LEVEL AND PLUMB, PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS...
3.7 SLOPE WASTE PIPING AT 1/4" / FT FOR PIPE SIZES 2-1/2" AND LESS, AND 1/8" / FT FOR PIPE SIZES 3" AND LARGER...
3.8 EXCAVATION - PERFORM ALL EXCAVATION, TRENCHING AND BACKFILLING NECESSARY TO INSTALL PLUMBING WORK...
3.9 SUPPORT AND FASTEN ALL ABOVE GROUND HORIZONTAL AND VERTICAL PIPING, EQUIPMENT ETC., SECURELY IN PLACE...
3.10 PROVIDE STEEL SUPPORTS, ANCHORS, FRAMES, BRACING, PLATES, BOLTS, NUTS, WASHERS, RODS, HANGERS, UPPER ATTACHMENTS...
3.11 SUPPORT EQUIPMENT FROM THE STRUCTURE IN AN APPROVED MANNER...
A. PIPE SUPPORT SPACING - AS FOLLOWS OR PER CODE IF MORE STRINGENT:
PVC - 4 FT INTERVALS FOR HORIZONTAL AND VERTICAL RUNS
PEX - 4 FT INTERVALS FOR HORIZONTAL AND VERTICAL RUNS
3.12 PROVIDE CLEVIS STYLE HANGERS FOR INDIVIDUAL PIPE RUNS...
3.13 ROUGH-INS - VERIFY FINAL LOCATION FOR ROUGH-INS W/ FIELD MEASUREMENTS AND WITH THE REQUIREMENTS OF THE ACTUAL EQUIPMENT...
3.14 FLOOR MOUNT WATER CLOSETS - FIRMLY AFFIX FLOOR MOUNTED WATER CLOSETS TO FLOOR AND CAULK TO FLOOR...
3.15 FIRE RATINGS - WHERE PIPING PENETRATES FIRE-RATED CONSTRUCTION, PROVIDE SUITABLE PROTECTION...
3.16 CUTTING & PATCHING - THIS CONTRACTOR IS RESPONSIBLE FOR ANY CUTTING AND PATCHING REQUIRED...
3.17 CLEAN-UP: CONTRACTOR SHALL REMOVE ALL DEBRIS DUE TO THIS WORK AND SHALL REPAIR, CLEAN AND REPLACE ALL DAMAGED OR SOILED SURFACES...
3.18 TESTING AND START-UP
A. ALL COSTS OF TESTS SHALL BE BORNE BY THIS CONTRACTOR...
B. TESTING - TEST ALL PLUMBING SYSTEMS PER REQUIREMENTS OF CODE AND LOCAL AUTHORITY...
C. DISINFECTION - DISINFECT POTABLE WATER SYSTEMS IN ACCORDANCE WITH CODE AND LOCAL AUTHORITY...
D. START-UP: START-UP, CHECK OUT AND ADJUST ALL PLUMBING WORK FOR PROPER OPERATION...
E. CLEANING: AFTER ALL FIXTURES, EQUIPMENT, ETC., HAVE BEEN INSTALLED, THE ENTIRE SYSTEM SHALL BE THOROUGHLY CLEANED...

PLUMBING ABBREVIATIONS

Table of plumbing abbreviations including: (X) EXISTING, AAV AIR ADMITTANCE VALVE, A.F.F. ABOVE FINISHED FLOOR, A.R.C.L. ACID RESISTANT CAST IRON, ADA AMERICANS WITH DISABILITIES ACT, BRZ BRONZE, BT BATHTUB, C.I. CAST IRON, CO CLEANOUT, CONC. CONCRETE, DCW DOMESTIC COLD WATER, DHW DOMESTIC HOT WATER, DIA. DIAMETER, E.C.I. ENAMELED CAST IRON, EC ELECTRICAL CONTRACTOR, EWC ELECTRIC WATER COOLER, EWH ELECTRIC WATER HEATER, FCO FLOOR CLEANOUT, FD FLOOR DRAIN, FS FLOOR SINK, GA GAUGE, GAL GALLON, GC GENERAL CONTRACTOR, GCO GRADE CLEANOUT, GPF GALLONS PER FLUSH, GPH GALLONS PER HOUR, GPM GALLONS PER MINUTE, GWH GAS-FIRED WATER HEATER, HB HOSE BIBB, INCL. INCLUDED, KS KITCHEN SINK, LAV LAVATORY, LP LIQUID PROPANE, MS MOP SERVICE BASIN, NAT. NATURAL GAS, NKL NICKEL, NON SIMULT. NON SIMULTANEOUS, O.F.L.C. OPEN FRONT LESS COVER, OB OUTLET BOX, OC ON CENTER, ORD.L. OVERFLOW ROOF DRAIN LEADER, PC PLUMBING CONTRACTOR, PRESS. BAL. PRESSURE BALANCED, RCVY. RECOVERY, RDL ROOF DRAIN LEADER, SA WATER HAMMER ARRESTOR, SH SHOWER, SK SINK, SLD. SLIDE, SS STAINLESS STEEL, TDH TOTAL DYNAMIC HEAD, UR URINAL, V VENT, VB VACUUM BREAKER, VC VITREOUS CHINA, VR VANDAL RESISTANT, VTR VENT THROUGH ROOF, W WASTE, WC WATER CLOSET, WCO WALL CLEANOUT, WH WALL HYDRANT

NOTE: ALL ABBREVIATIONS MAY NOT BE USED IN PROJECT.

PLUMBING LEGEND

Table of plumbing legend symbols including: CA COMPRESSED AIR PIPING, C CONDENSATE PIPING, 140°F DOMESTIC 140°F WATER PIPING, 140°F DOMESTIC 140°F RETURN WATER PIPING, 140R DOMESTIC COLD WATER PIPING, DOMESTIC HOT WATER CIRCULATION PIPING, DOMESTIC HOT WATER PIPING, F FILTERED WATER PIPING, SP FIRE SPRINKLER PIPING, FM FORCE MAIN PIPING, NO GAS PIPING (NAT. OR LP), GW GREASE WASTE PIPING, N2 NITROUS OXIDE PIPING, O2 OXYGEN PIPING, RD ROOF DRAIN PIPING, RD ROOF DRAIN PIPING, SANITARY VENT PIPING, SANITARY WASTE PIPING, T TEPID WATER PIPING, VAC VACUUM PIPING, BACKFLOW PREVENTION DEVICE, BALL VALVE, CHECK VALVE, CIRCUIT SETTER (BALANCING VALVE), CIRCULATION PUMP, CONTROL VALVE, EXTENT OF DEMOLITION, FCO FLOOR CLEANOUT, FD FLOOR DRAIN, FS FLOOR SINK, GAS-REGULATOR VALVE, GATE VALVE, GATE VALVE IN RISER, GRADE CLEANOUT, HOSE BIBB, PIPE CAP, PIPE ELBOW, PIPE ELBOW DOWN, PIPE ELBOW UP, PIPE TEE, PIPE TEE DOWN, PIPE TEE UP, SUMP PUMP, DEMOLITION KEYED NOTE TAG, NEW WORK KEYED NOTE, POINT OF CONNECTION - NEW TO EXISTING, PRESSURE REDUCING VALVE, SOLENOID VALVE, THERMOSTATIC MIXING VALVE, WALL CLEANOUT, WALL HYDRANT, WASHING MACHINE BOX, WATER HAMMER ARRESTOR

NOTE: ALL ITEMS LISTED IN THIS SCHEDULE MAY NOT BE USED IN PROJECT

GAS LOAD SCHEDULE table with columns: FIXTURE TAG, DESCRIPTION, BTUH RATING, QUANTITY, TOTAL. Includes entries for GWH1 and GWH2 (GAS-FIRED WATER HEATER) and a total of 398,000 BTUH. BUILDING SERVICE GAS PRESSURE (EXISTING) is 2 psi.

SAWYER SHERWOOD & ASSOCIATE ARCHITECTURE logo and contact information: 124 Market St., Wilmington, NC 28401, 910.762.0892, s2a3.com

McFadyen Engineers, PLLC logo and contact information: 411 Peachtree Avenue, Suite 200, Wilmington, NC 28403, Office: (910) 399-1123

Professional Engineer Seal for James R. Benson, License No. 11113, State of North Carolina, Seal 10592, dated 4/23/20.

Hurricane Florence Repairs New Hanover County Fire Station 12 3805 US-421 Wilmington, NC

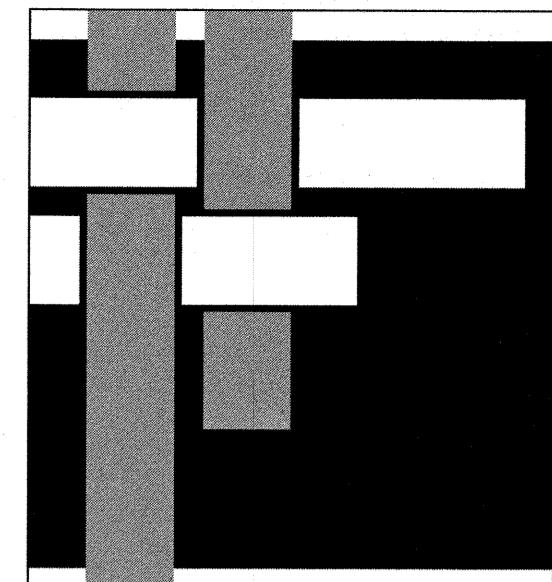
Construction Drawings 23 April, 2020

Revisions:

Plumbing Specs, Leg. Abbr. PO.1 1 of 6 © 2020 Sawyer Sherwood & Associate- All Rights Reserved

PLUMBING FIXTURE SCHEDULE											
DRAWING CODE	FIXTURE	DESCRIPTION	MANUFACTURER	MODEL	ALTERNATE APPROVED MANUFACTURERS	NOTES	PIPE SIZE				
							DCW	DHW	WASTE	VENT	
WC1	TANK TYPE WATER CLOSET, FLOOR MTD, 1.6GPF, ADA	BOWL	16.5" HIGH BOWL, ELONGATED, V.C., 2-1/8" TRAPWAY, CADET PRO	AMERICAN STANDARD	215AA.004	ZURN, KOHLER	6,7	1/2"	-	4"	2"
		SEAT	OFLC w/ SELF-SUSTAINING S.S. CHECK HINGE, HEIGHT 17-19" AFF	CHURCH	295SSCT	BEMIS, OLSONITE					
LAV1	COUNTERTOP LAVATORY, 0.5GPM, ADA	BOWL	19x14 VITREOUS CHINA, UNDERMOUNT, 34"A.F.F., MAX.	AMERICAN STANDARD	0330.000	ZURN, CRANE	2,4,5,7	1/2"	1/2"	2"	2"
		FAUCET	4" CENTERSET, SINGLE LEVER HANDLE, SOLID BRASS CONSTRUCTION, CERAMIC CARTRIDGE, HIGH TEMP LIMIT STOP	MOEN	8413F05	ZURN, DELTA					
		DRAIN	GRID STRAINER	MCGUIRE	155A	DEARBORN, DELTA					
		MIXING VALVE	LEAD FREE THERMOSTATIC MIXING VALVE - SETPOINT = 110°F INSTALL ON HOT WATER SUPPLY, ASSE 1070	CASH ACME	HG-135	LEONARD, WATTS					
SK1	2-COMPARTMENT COUNTERTOP SINK, 7.5" DEEP (ADA FRONT APPROACH)	BOWL	30x18x5.5, UNDERMOUNT, 18 GA S.S.	ELKAY	LR3322	JUST, ACORN	2,4,5,7,9	1/2"	1/2"	2"	2"
		FAUCET	180° HI-ARC PULLDOWN, SINGLE LEVER HANDLE, 1 HOLE, 1.5GPM, SOLID BRASS CONSTRUCTION, CHROME FINISH	MOEN	CA87011	DELTA, ZURN					
		DRAIN	BASKET STRAINER	ELKAY	LK35	ZURN, MOEN					
LS1	FLOOR MOUNT LAUNDRY SINK	SINK	24x20x12 MOLDED STONE w/ GRID DRAIN	FIAT	FL-7	SWANSTONE, MUSTEE	7,8	1/2"	1/2"	2"	2"
		FAUCET	CHROME PLATED BRASS, 4" WRIST BLADE HANDLES, VANDAL RESISTANT, CERAMIC CARTRIDGE	MOEN	74998	DELTA, ZURN					
EW1	DECK MOUNT EYE WASH	FIXT	EYE WASH / DRENCH HOSE UNIT	GUARDIAN	G5022	-	1	1/2"	1/2"	-	-
SH1	PREFAB TRANSFER SHOWER, ADA	ENCLOSURE	36x36 ACRYLIC- 1/2" CURB MAX. w/ GRAB BARS, FOLD-UP SEAT, CENTER DRAIN, CURTAIN ROD AND SHOWER CURTAIN	AQUATIC	3636BFS	ACRYLINE, AQUARIUS	-	1/2"	1/2"	2"	-
		VALVE	PRESS. BALANCED MIXING VALVE, LEVER HANDLE, HAND SHOWER, FLEXIBLE METAL HOSE, IN-LINE VAC. BREAKER, 3/8"SLIDE/GRAB BAR, 1.5GPM	MOEN	8370 / 52136GBM25	DELTA, SYMMONS					
		DRAIN	4-3/8" DIA. NICKEL BRONZE STRAINER, PVC	SIoux CHIEF	821	SMITH, ZURN					
SH2	JOB-BUILT SHOWER, ADA	ENCLOSURE	JOB-BUILT BY G.C. w/ GRAB BARS per ADA	-	-	-	-	1/2"	1/2"	2"	2"
		VALVE	PRESS. BALANCED MIXING VALVE, LEVER HANDLE, HAND SHOWER, FLEXIBLE METAL HOSE, IN-LINE VAC. BREAKER, 3/8"SLIDE/GRAB BAR, 1.5GPM	MOEN	8370 / 52136GBM25	DELTA, SYMMONS					
		DRAIN	4-3/8" DIA. NICKEL BRONZE STRAINER, PVC	SIoux CHIEF	821	SMITH, ZURN					
GWH1	INSTANTANEOUS GAS-FIRED WATER HEATER	FIXT	CONDENSING, NAT. GAS, 199 MBH WITH INTERNAL BUFFER TANK AND CIRCULATION PUMP	NAVIEN	NPE-240A	-	3/4"	3/4"	-	-	
GWH2	INSTANTANEOUS GAS-FIRED WATER HEATER	FIXT	CONDENSING, NAT. GAS, 199 MBH WITH INTERNAL BUFFER TANK AND CIRCULATION PUMP	NAVIEN	NPE-240A	-	3/4"	3/4"	-	-	
GCO	GRADE CLEANOUT	FIXT	C.I. BODY, RECESSED BRONZE PLUG.	SIoux CHIEF	877	ZURN, SMITH	-	-	-	MATCH	-
WCO	WALL CLEANOUT	FIXT	ROUND S/S ACCESS COVER & SCREW, RECESS BRONZE THRD. PLUG	SIoux CHIEF	870	ZURN, SMITH	-	-	-	MATCH	-
HB1	EXTERIOR HOSE BIBB	FIXT	FREEZELESS, POWDER COATED, 3/4"HOSE THREAD, ANTI-SIPHON	WOODFORD	19	ZURN, WATTS	3/4"	-	-	-	-
HB2	INTERIOR HOSE BIBB	FIXT	VACUUM BREAKER, WHEEL HANDLE, 3/4" HOSE THREAD	WOODFORD	24	ZURN, WATTS	3/4"	-	-	-	-
OB1	ICE MAKER BOX	FIXT	ABS HOUSING, 1/4 TURN BALL VALVE, CHROME PLATED BRASS, SHOCK ARRESTORS	SIoux CHIEF	696	OATEY, IPS	1/2"	-	-	-	-
OB2	WASHER CONNECTION BOX	FIXT	ABS HOUSING, 1/4 TURN BALL VALVE, CHROME PLATED BRASS, SHOCK ARRESTORS	SIoux CHIEF	696	OATEY, IPS	1/2"	1/2"	2"	-	-

- NOTES
1. PROVIDE AND INSTALL THERMOSTATIC MIXING VALVE MODEL G3600LF
 2. PROVIDE BRASS 1-1/2" TAILPIECE, CAST BRASS SLIP JOINT P-TRAP WITH CLEANOUT; PROVIDE ADA OFFSET ARRANGEMENT WHERE REQUIRED.
 3. NOT USED
 4. COORDINATE WITH MILLWORK.
 5. COORDINATE ADA MILLWORK ENCLOSURE FOR WATER AND DRAIN PIPING UNDER SINK.
 6. TRIP LEVER OR FLUSH HANDLE TO BE LOCATED ON WIDE SIDE OF STALL OR TOILET ROOM.
 7. PROVIDE 1/2" IPS X 3/8" OD ANGLE BRASS STOP(S) WITH RIGID COPPER RISERS. ALL EXPOSED PIPING SHALL BE CHROME PLATED.
 8. PROVIDE INLINE CHECK VALVES FOR WATER SUPPLY LINES.
 9. PROVIDE DISHWASHER CONNECTION.

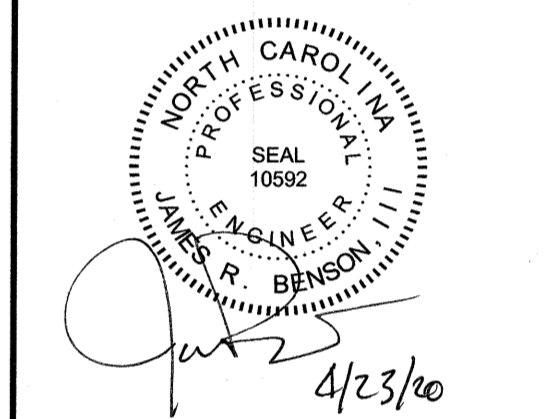


**SAWYER
SHERWOOD
& ASSOCIATE
ARCHITECTURE**

124 Market St. Wilmington, NC 28401
910.762-0892 s2a3.com

McFadyen
Engineers, PLLC

411 Peachtree Avenue, Suite 200
Wilmington, NC 28403
Office: (910) 399-1123



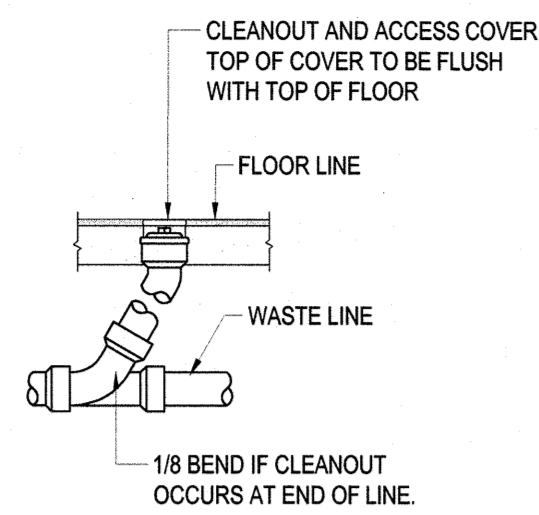
**Hurricane
Florence Repairs
New Hanover
County
Fire Station 12**
3805 US-421
Wilmington, NC

Construction Drawings
23 April, 2020

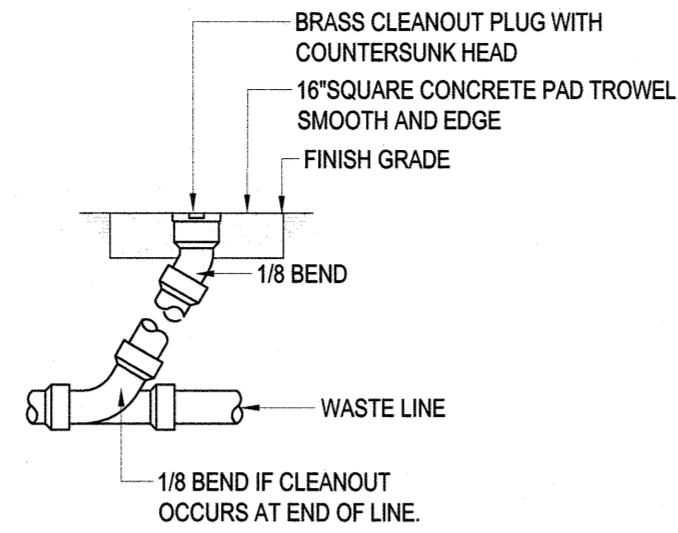
Revisions:

Plumbing
Fixture
Schedule

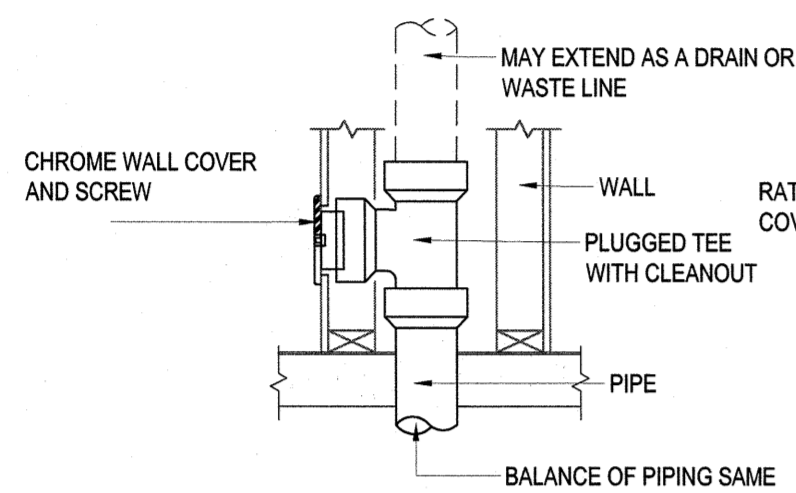
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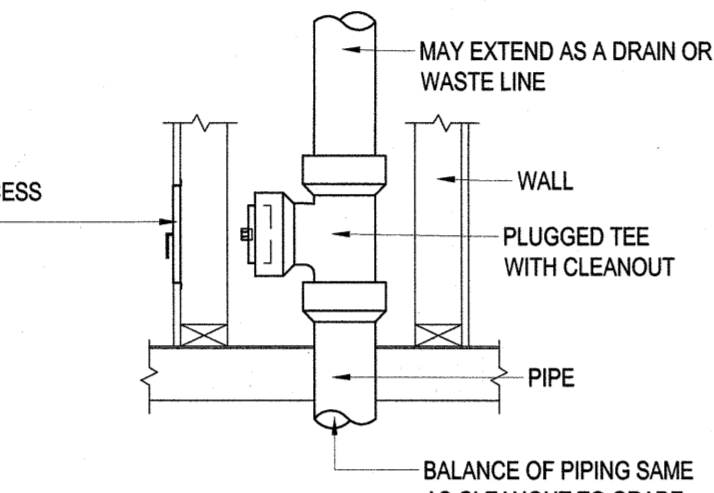
FLOOR CLEANOUT (FCO)



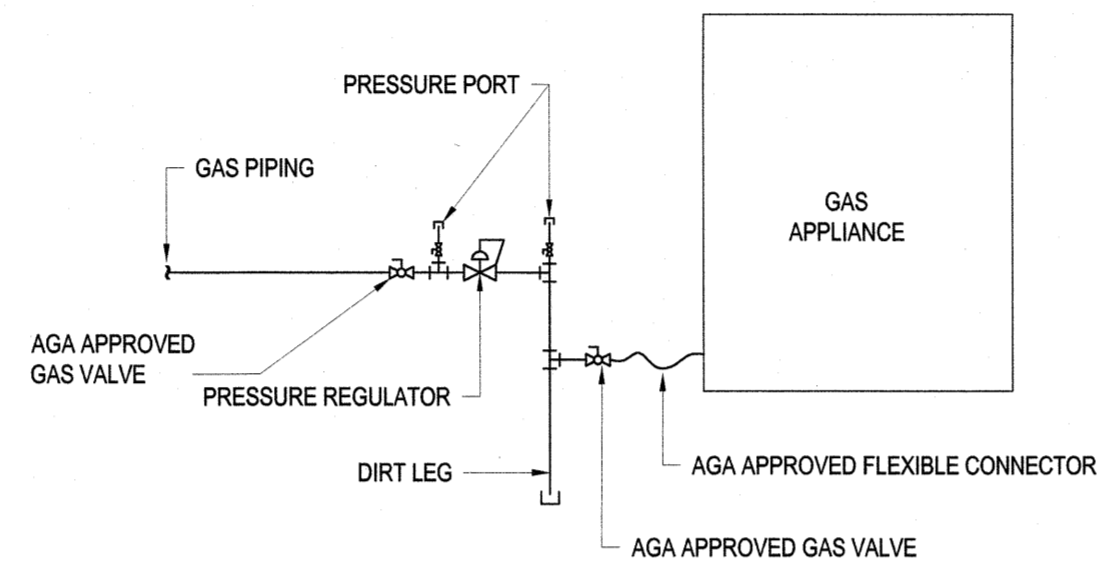
GRADE CLEANOUT (GCO)



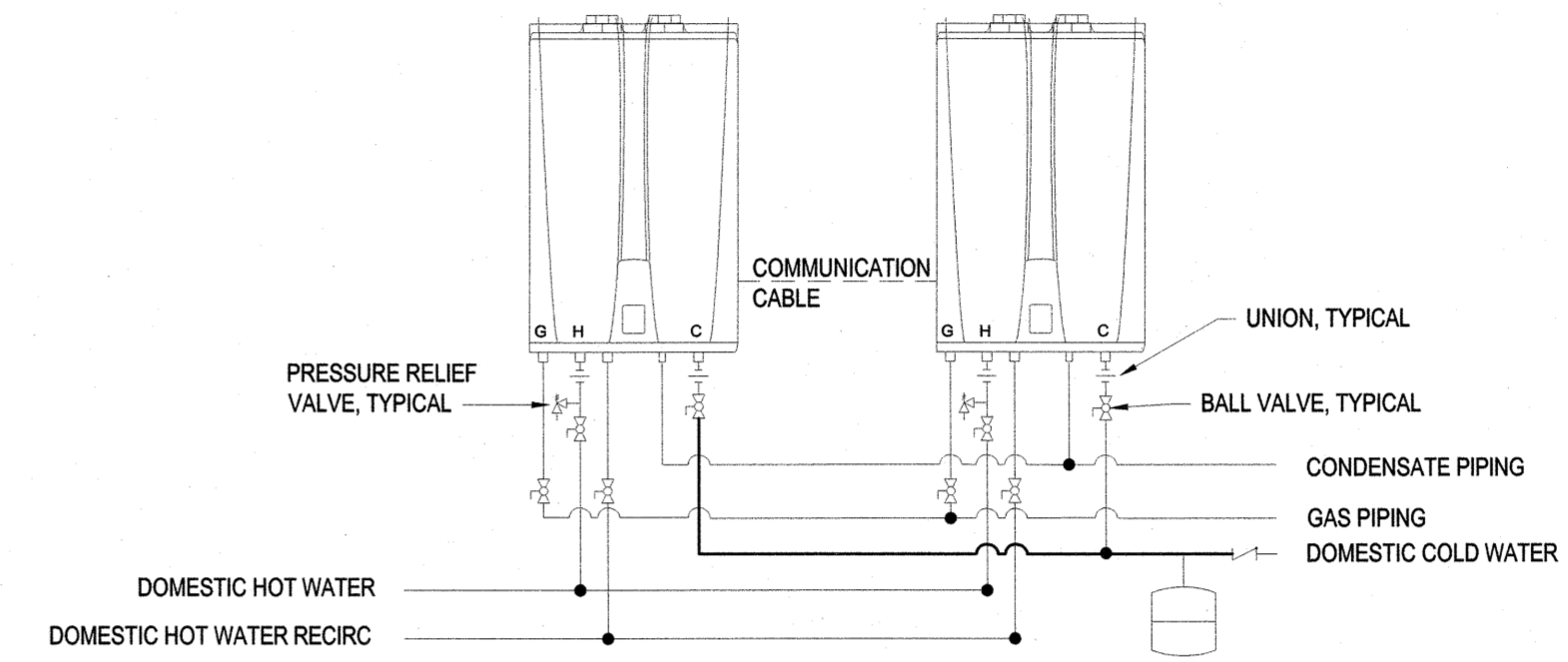
WALL CLEANOUT (WCO)



WALL CLEANOUT (WCO) RATED WALL

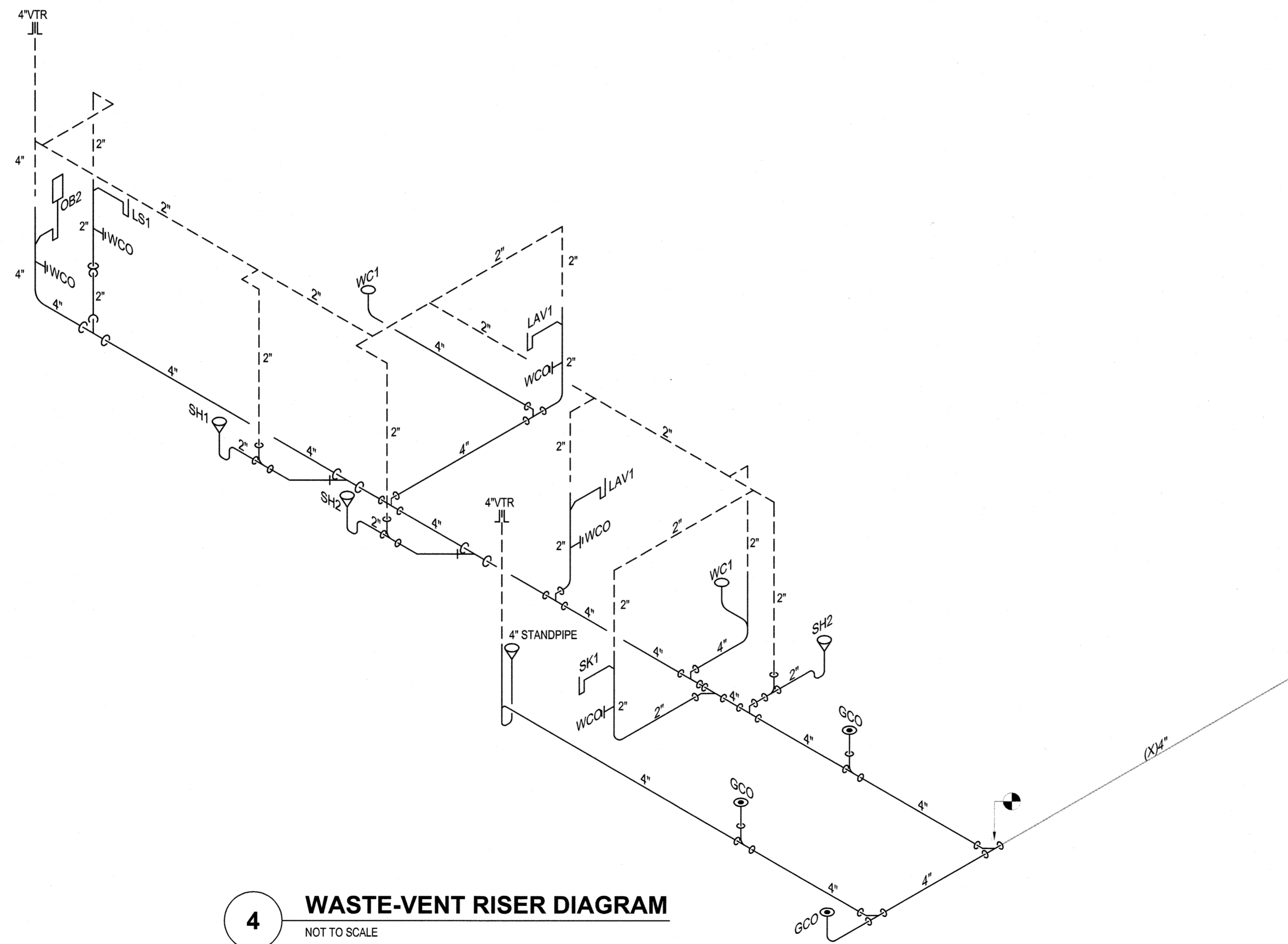


2 GAS APPLIANCE CONNECTION DETAIL
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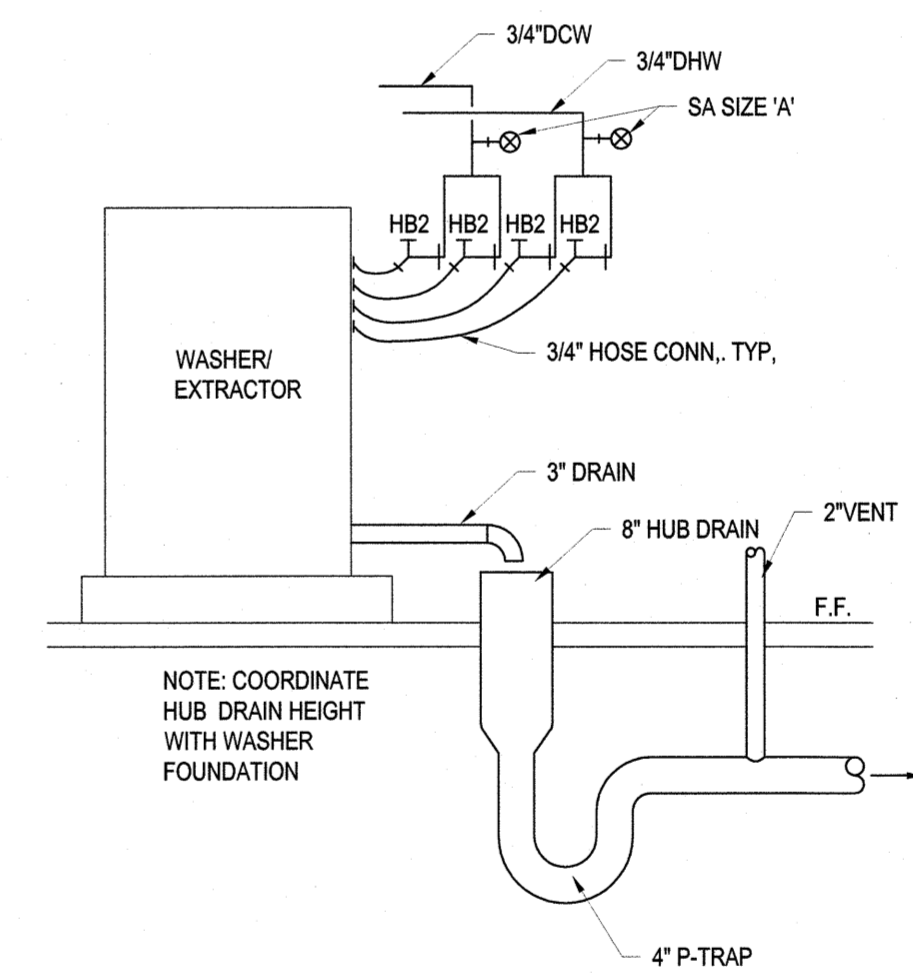


3 GAS FIRED INSTANTANEOUS WATER HEATER DETAILS
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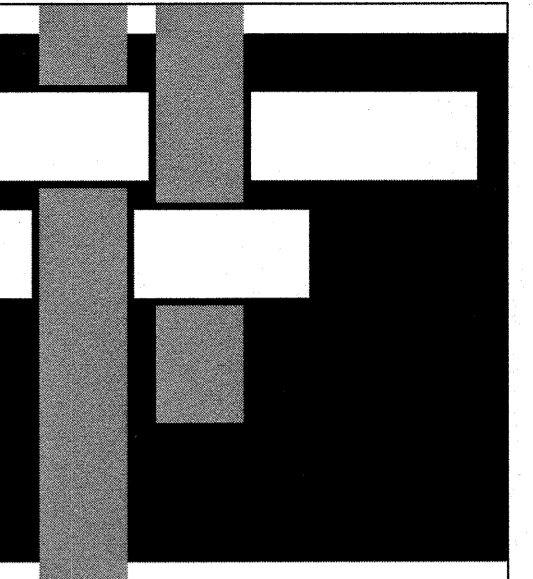
1 CLEANOUT DETAILS
NOT TO SCALE



4 WASTE-VENT RISER DIAGRAM
NOT TO SCALE



5 WASHER/EXTRACTOR DETAIL
NOT TO SCALE

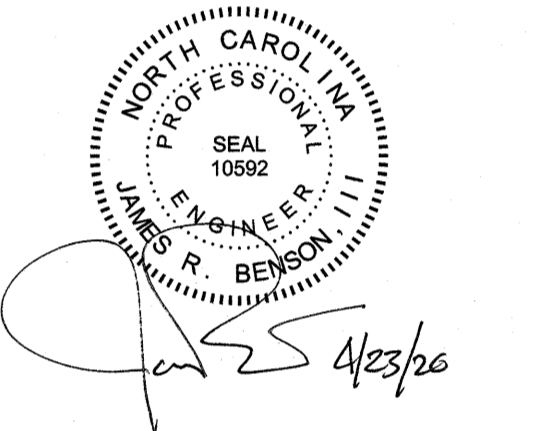


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& ASSOCIATE
ARCHITECTURE**

124 Market St, Wilmington, NC 28401
910 762-0892 s2a3.com

McFadyen
Engineers, PLLC

411 Peachtree Avenue, Suite 200
Wilmington, NC 28403
Office: (910) 399-1123



**Hurricane
Florence Repairs
New Hanover
County
Fire Station 12**
3805 US-421
Wilmington, NC

Construction Drawings
23 April, 2020

Revisions:

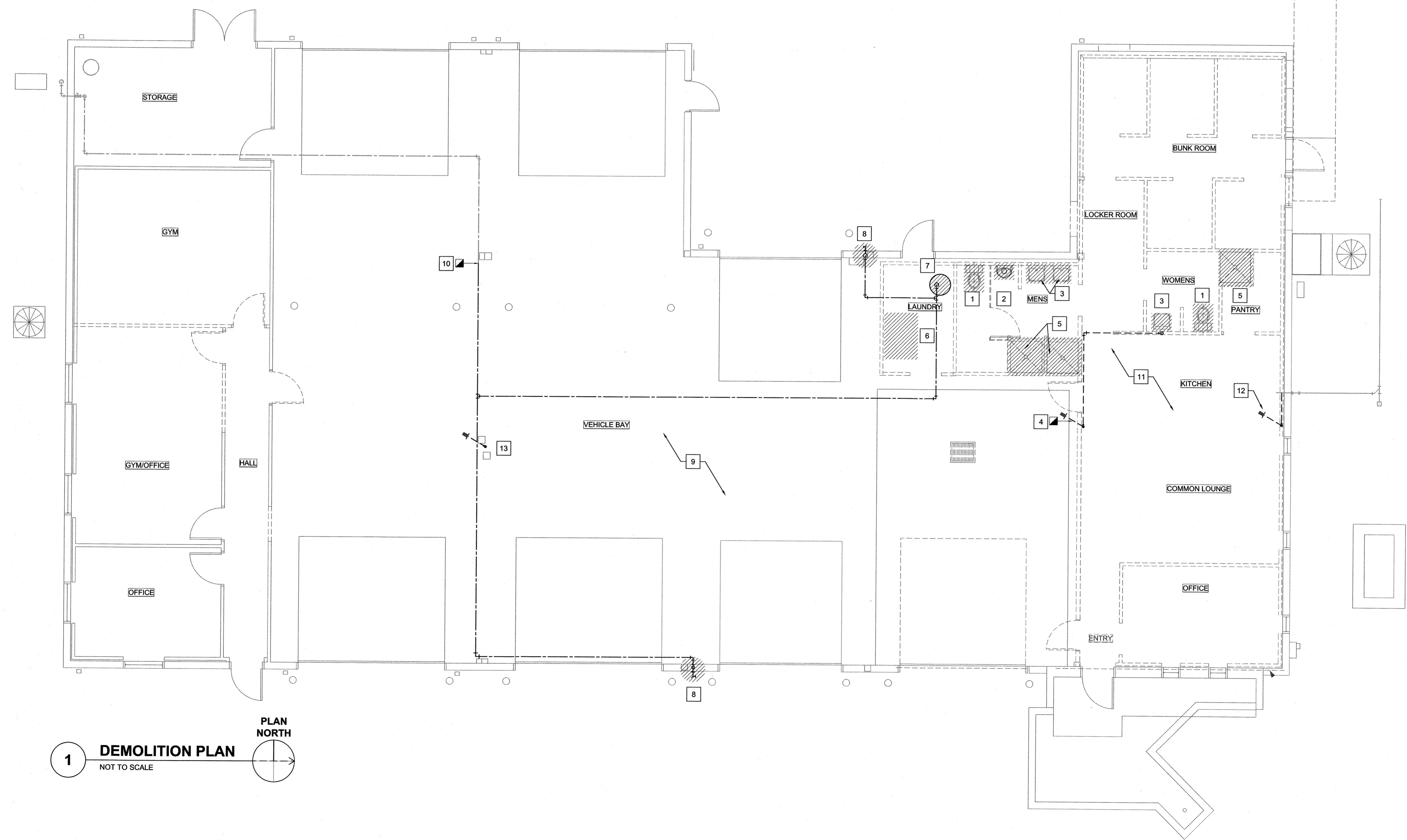
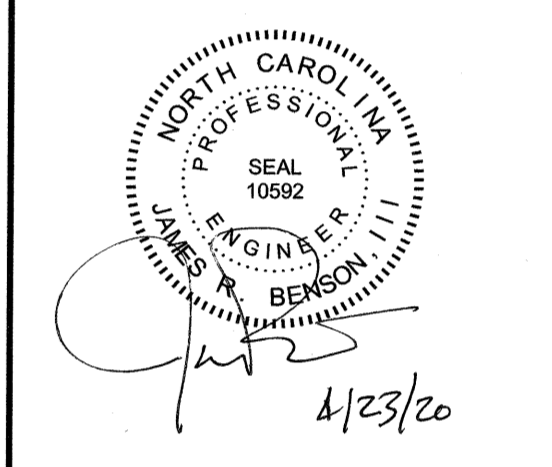
Plumbing
Details

P0.3

KEYED NOTES-DEMOLITION	
1	EXISTING WATER CLOSET: REMOVE IN ENTIRETY INCLUDING WASTE, VENT AND WATER PIPING.
2	EXISTING URINAL: REMOVE IN ENTIRETY INCLUDING WASTE, VENT AND WATER PIPING.
3	EXISTING LAVATORY: REMOVE IN ENTIRETY INCLUDING WASTE, VENT AND WATER PIPING.
4	EXISTING VTR: TO REMAIN. REMOVE ASSOCIATED VENT PIPING.
5	EXISTING SHOWER: REMOVE IN ENTIRETY INCLUDING WASTE, VENT AND WATER PIPING.
6	EXISTING WASHER CONNECTION: REMOVE IN ENTIRETY INCLUDING WASTE, VENT AND WATER PIPING.
7	EXISTING WATER HEATER: REMOVE IN ENTIRETY INCLUDING WATER PIPING.
8	EXISTING HOSE BIBB: DEMOLISH FOR REPLACEMENT.
9	EXISTING GAS PIPING TO HEATERS IN VEHICLE BAYS (NOT SHOWN); TO REMAIN.
10	EXISTING DOMESTIC CW SUPPLY: DEMOLISH IN ENTIRETY DOWNSTREAM OF TERMINATION POINT INDICATED.
11	CUT AND TRENCH EXISTING FLOOR AS REQUIRED FOR NEW WORK.
12	EXISTING VTR: REMOVE IN ENTIRETY INCLUDING ASSOCIATED VENT PIPING.
13	EXISTING VTR: TO REMAIN.

SAWYER SHERWOOD & ASSOCIATE ARCHITECTURE
 124 Market St. Wilmington, NC 28401
 910.762.0892 s2a3.com

McFadyen Engineers, PLLC
 411 Peachtree Avenue, Suite 200
 Wilmington, NC 28403
 Office: (910) 399-1123



1 DEMOLITION PLAN
 NOT TO SCALE

PLAN NORTH

**Hurricane Florence Repairs
 New Hanover County
 Fire Station 12**
 3805 US-421
 Wilmington, NC

Construction Drawings
 23 April, 2020

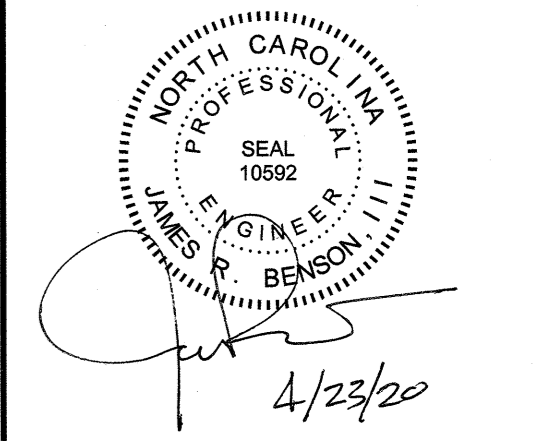
Revisions:

Plumbing
 Demolition
 Plan
PD1.1

KEYED NOTES	
1	CONNECT TO EXISTING WASTE PIPING
2	HUB DRAIN FOR OWNER FURNISHED WASHER-EXTRACTOR, SEE DETAIL 5/P0.3
3	PROVIDE DISHWASHER CONNECTION KIT.
4	EXISTING WASTE LINE TO EXISTING SEPTIC SYSTEM.
5	CUT /TRENCH/PATCH EXISTING FLOOR AS REQUIRED TO INSTALL NEW WASTE PAIPING.

**SAWYER
SHERWOOD
& ASSOCIATE
ARCHITECTURE**
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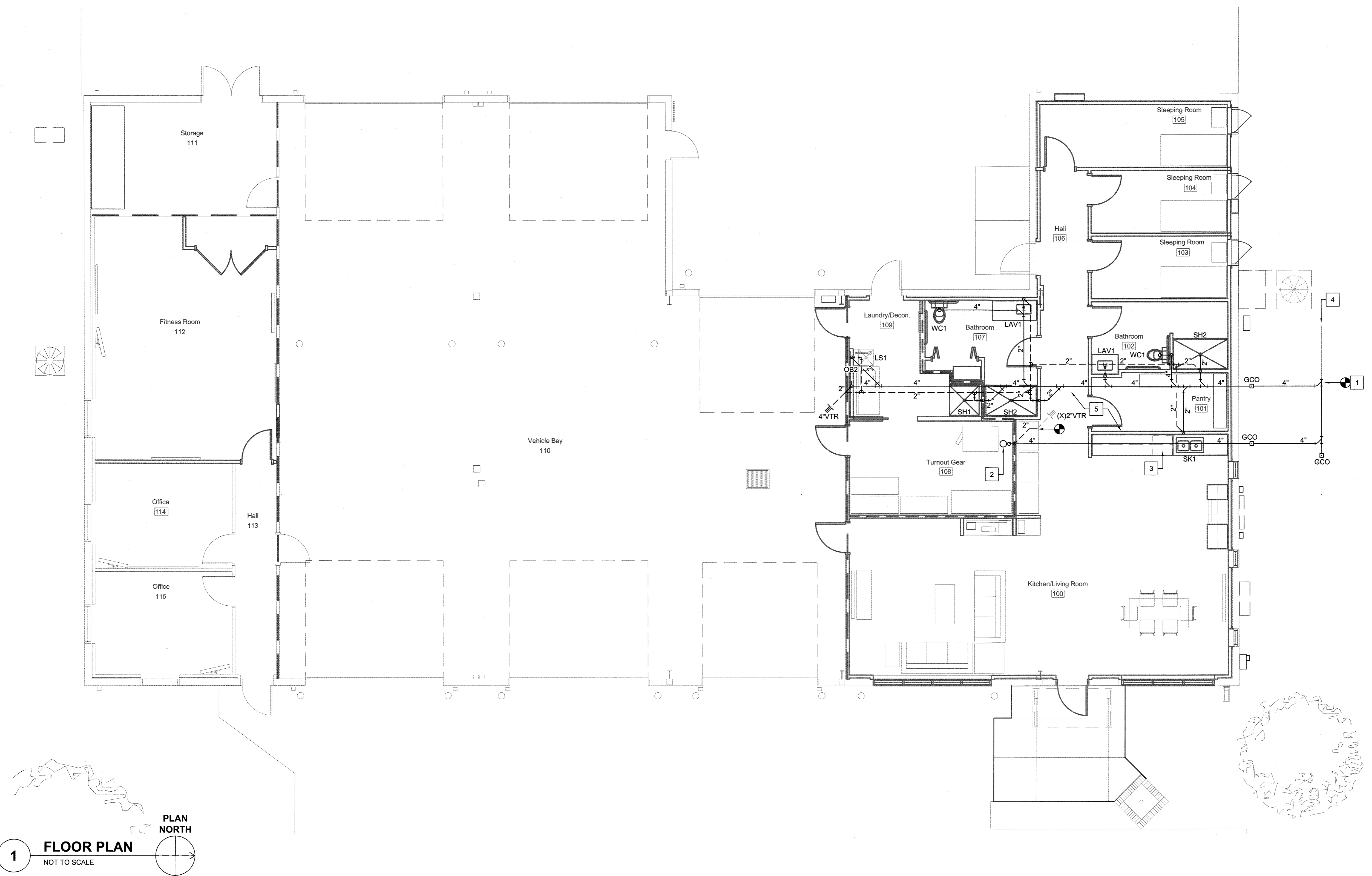
**Hurricane
Florence Repairs
New Hanover
County
Fire Station 12**
3805 US-421
Wilmington, NC

Construction Drawings
23 April, 2020

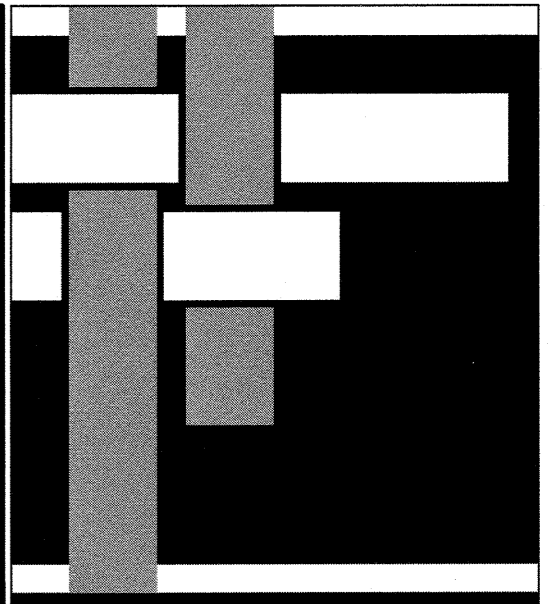
Revisions:

Plumbing
Waste-Vent
Floor Plan

P1.1



KEYED NOTES	
1	EXISTING DCW SUPPLY
2	EXISTING BACKFLOW FOR IRRIGATION SYSTEM TO REMAIN.
3	EXISTING DCW SERVICE INCLUDING SOFTENER SYSTEM AND BLADDER TANK TO REMAIN.
4	PROVIDE ACCESSIBLE SHUTOFF VALVE TO DRAIN HOSE BIBB DURING FREEZING WEATHER.
5	PROVIDE DECK MOUNTED EYE/FACE WASH ON SERVICE SINK WITH THERMOSTATIC MIXING VALVE.
6	PROVIDE HOSE CONNECTIONS ON DCW AND DHW SUPPLIES FOR OWNER FURNISHED WASHER/EXTRACTOR. SEE DETAIL 5/ P0.3
7	NOT USED.
8	PROVIDE DISHWASHER CONNECTION KIT. INSTALL IN ACCORDANCE WITH SECTION 409.2 AND/OR SECTION 608 OF THE NC PLUMBING CODE, LATEST EDITION
9	PROVIDE EXTERNAL MOUNTED, INSTANTANEOUS WATER HEATERS. SEE DETAIL 3/P0.3 INSTALL PER MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS.
10	EXTEND 3/4" GAS PIPING FROM EXISTING METER LOCATION TO NEW GAS WATER HEATERS. MAINTAIN EXISTING SUPPLIES TO OTHER APPLIANCES TO REMAIN.

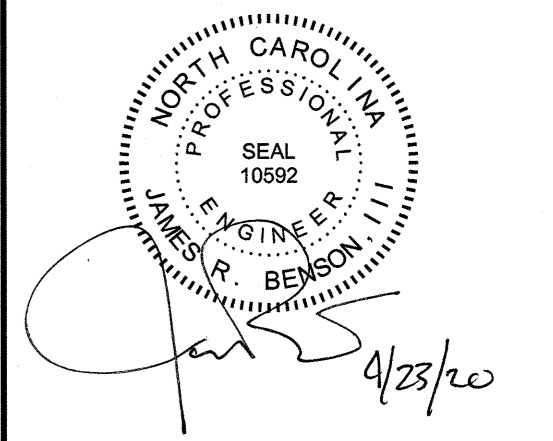


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& ASSOCIATE
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McFadyen
Engineers, PLLC

411 Peachtree Avenue, Suite 200
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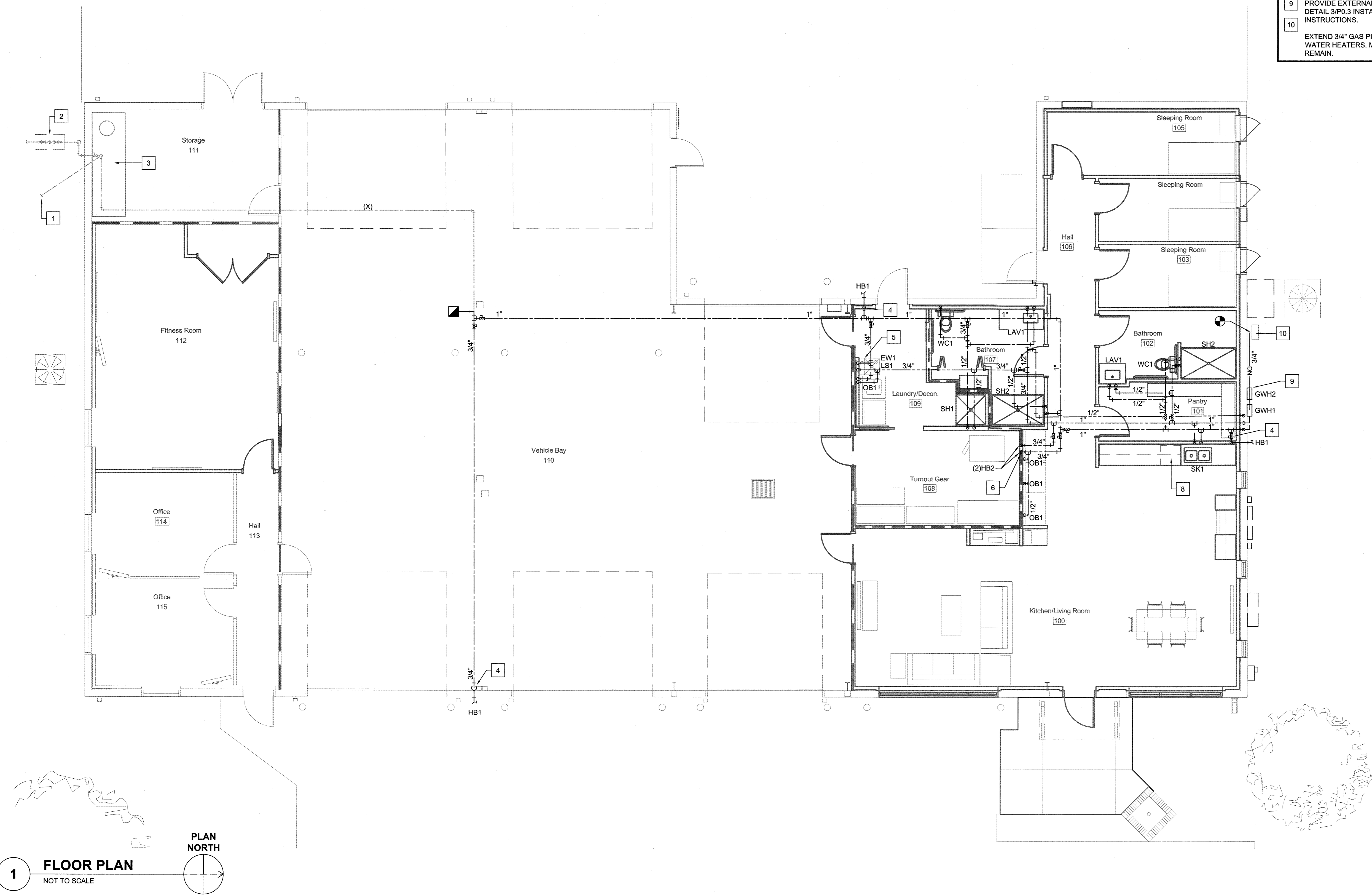
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Wilmington, NC

Construction Drawings
23 April, 2020

Revisions:

Plumbing
Water/Gas
Floor Plan

P2.1



1 FLOOR PLAN
NOT TO SCALE

PLAN NORTH

MECHANICAL DUCTWORK LEGEND	
	BALANCING DAMPER
	CEILING RETURN OR TRANSFER REGISTER/GRILLES
	EXHAUST GRILLES
	CEILING SUPPLY DIFFUSERS
	CONICAL TEE
	HORIZONTAL FIRE DAMPER
	VERTICAL FIRE DAMPER
	VERTICAL SMOKE DAMPER
	VERTICAL FIRE/SMOKE DAMPER
	FLEXIBLE DUCT CONNECTION
	DECLINED DROP WITH RESPECT TO AIRFLOW
	DROP
	INCLINED RISE WITH RESPECT TO AIRFLOW
	RISE
	INDICATES ROUND DUCTWORK
	MITERED ELBOW WITH TURNING VANES
	MOTORIZED CONTROL DAMPER
	RADIUS ELBOW
	SUPPLY DUCT TURNING UP (ROUND OR RECTANGULAR)
	RETURN DUCT TURNING UP (ROUND OR RECTANGULAR)
	EXHAUST DUCT TURNING UP (ROUND OR RECTANGULAR)
	OUTSIDE AIR DUCT TURNING UP (ROUND OR RECTANGULAR)
	SUPPLY DUCT TURNING DOWN (ROUND OR RECTANGULAR)
	RETURN DUCT TURNING DOWN (ROUND OR RECTANGULAR)
	EXHAUST DUCT TURNING DOWN (ROUND OR RECTANGULAR)
	OUTSIDE AIR DUCT TURNING DOWN (ROUND OR RECTANGULAR)
	SQUARE OR RECTANGULAR DUCTWORK
	VOLUME DAMPER
	TAKEOFF WITH 45° THROAT
	RETURN, EXHAUST OR TRANSFER AIR FLOW
	SUPPLY AIR FLOW
	DUCT CROSSING
	RECTANGULAR DUCT TURNING DOWN WITH CHANGE OF DIRECTION
	ROUND DUCT TURNING DOWN WITH CHANGE OF DIRECTION
	TERMINATION OF DUCT WITH BRANCH CONNECTIONS
	RECTANGULAR TO ROUND DUCT TRANSITION
	SUPPLY AIR DUCTWORK
	RETURN AIR DUCTWORK
	EXHAUST AIR DUCTWORK
	OUTSIDE AIR DUCTWORK
	MAKEUP AIR DUCTWORK

NOTE: ALL ITEMS MAY NOT BE USED IN PROJECT.

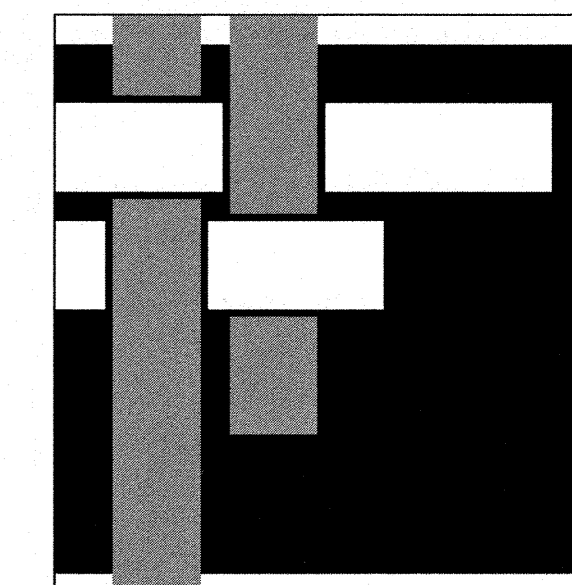
MECHANICAL ABBREVIATIONS	
ABBREVIATION	TERM
ADJ	ADJUSTABLE
AMCA	AIR MOVEMENT AND CONTROL ASSOCIATION
AMP	AMPERE (AMP, AMPS)
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
CFM	CUBIC FEET PER MINUTE
CIP	CAST IN PLACE
CMU	CONCRETE MASONRY UNIT
COP	COEFFICIENT OF PERFORMANCE
DB	DRY BULB
DEG OR °	DEGREE
EA	EXHAUST AIR
EG	EXHAUST GRILLE
EAT	ENTERING AIR TEMPERATURE
ECM	ELECTRONICALLY COMMUTATED MOTOR
EER	ENERGY EFFICIENCY RATIO
ESP	EXTERNAL STATIC PRESSURE
F	FAN
°F	FAHRENHEIT
FLA	FULL LOAD AMPS
FT	FEET
HC	HOT WATER COIL
HGT OR H	HEIGHT
HP	HORSEPOWER
HR	HOUR(S)
IN.	INCH
IN-WG	INCHES WATER GAUGE
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
L	LOUVER
MAX	MAXIMUM
MBH	1000 BTUH
MCA	MINIMUM CIRCUIT AMPACITY
MCWB	MEAN COINCIDENT WET BULB
MIN.	MINIMUM
MOCP	MAXIMUM OVER CURRENT PROTECTION
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
OZ	OUNCE
OA	OUTSIDE AIR
%	PERCENT
RA	RETURN AIR
RG	RETURN GRILLE
RPM	REVOLUTIONS PER MINUTE
RTU	ROOF TOP UNIT
SA	SUPPLY AIR
SF	SQUARE-FEET
SG	SUPPLY GRILLE
SQ	SQUARE
TG	TRANSFER GRILLE
TYP	TYPICAL
UH	UNIT HEATER
V/PH/Hz	VOLT/PHASE/HERTZ
VTR	VENT THROUGH ROOF
W	WIDTH
WB	WET BULB

NOTE: ALL ABBREVIATIONS MAY NOT BE USED IN PROJECT.

MECHANICAL SUMMARY	
MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT	
CLIMATE ZONE	3A - WARM/HUMID
WINTER DRY BULB:	23°F
SUMMER DRY BULB	91°F
INTERIOR DESIGN CONDITIONS	
WINTER DRY BULB	70°F
SUMMER DRY BULB	75°F
RELATIVE HUMIDITY	60%RH*
*DESIGN- NOT CONTROLLED	
BUILDING HEATING LOAD:	EXISTING EQUIPMENT
BUILDING COOLING LOAD:	EXISTING EQUIPMENT
	w/ SUPPLEMENTAL DEHUM 12MBH
MECHANICAL SPACING CONDITIONING SYSTEM	
UNITARY	
DESCRIPTION OF UNIT:	SEE SCHEDULES
HEATING EFFICIENCY:	SEE SCHEDULES
COOLING EFFICIENCY:	SEE SCHEDULES
SIZE CATEGORY OF UNIT:	SEE SCHEDULES
BOILER	
SIZE CATEGORY, IF OVERSIZED STATE REASON:	N/A
CHILLER	
SIZE CATEGORY, IF OVERSIZED STATE REASON:	N/A
LIST EQUIPMENT EFFICIENCIES:	SEE SCHEDULES

MECHANICAL LEGEND	
	TEMPERATURE SENSOR
	TEMPERATURE/HUMIDITY SENSOR
	INDICATES TO DEMOLISH
	EXTENT OF DEMOLITION
	POINT OF CONNECTION
	ACCESS DOOR
	DIFFUSER/ REGISTER/ GRILLE NO. AS SHOWN ON PLAN AND SCHEDULE
	SG, RG, TG, EG
	AIRFLOW, CFM

NOTE: ALL ITEMS MAY NOT BE USED IN PROJECT.

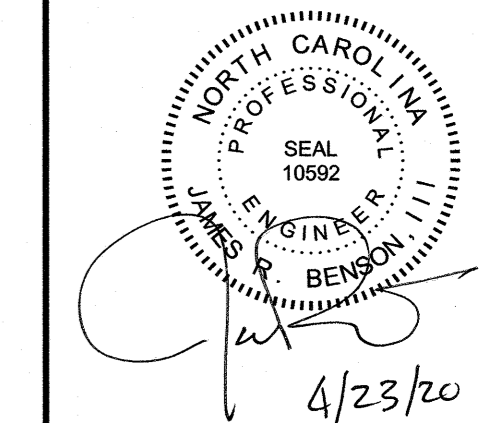


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ARCHITECTURE**

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Construction Drawings
23 April, 2020

Revisions:

Mechanical
Legend, Abbr.
& Summary

M0.1

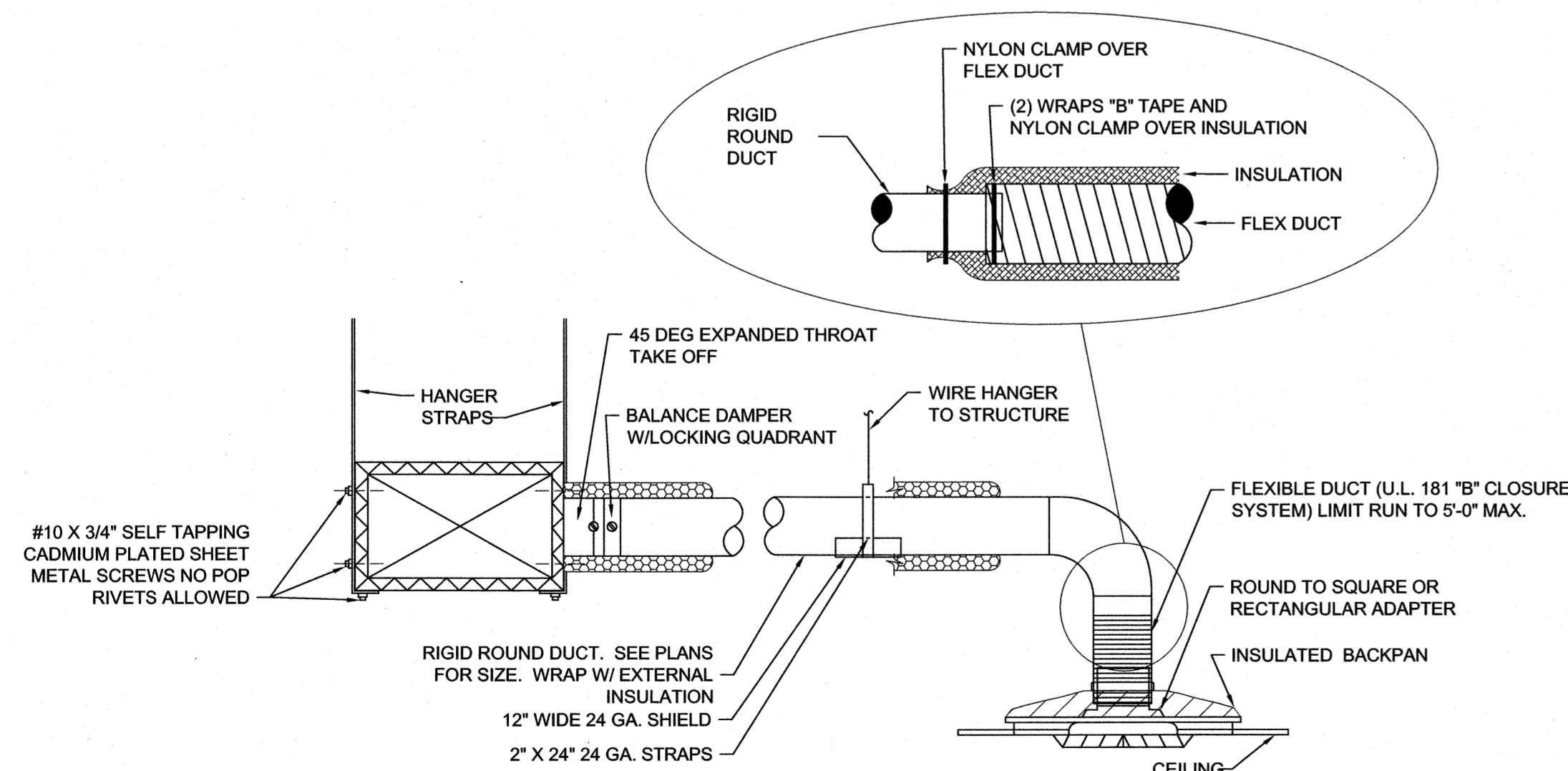
EXHAUST RECOVERY VENTILATOR																								
DRAWING CODE	DESIGN BASIS MANUFACTURER	MODEL	ALTERNATE APPROVED MFRS	CONFIGURATION	SUPPLY FAN				EXHAUST FAN				HEAT WHEEL CORE-SUMMER			HEAT WHEEL CORE-WINTER/VOLTAGE			FLA (AMPS)	MOCP (AMPS)	WEIGHT (LBS.)	NOTES	ACCESSORIES	
					AIRFLOW (CFM)	E.S.P. (IN. WG.)	DRIVE	MOTOR HP	AIRFLOW (CFM)	E.S.P. (IN. WG.)	DRIVE	MOTOR (HP)	OA EAT *Fdb*/Fwb	OA LAT *Fdb*/Fwb	EA EAT *Fdb	OA EAT *Fdb	OA LAT *Fdb	EA EAT *Fdb						(V/PH/Hz)
ER1	RENEWAIRE	EV300	GREENHECK, AIRXCHANGE	HORIZ. FIXED CORE	300	0.4	DIRECT	0.2	300	0.4	DIRECT	NOTE 2	91.0/79.0	79/8/73.0	75.0/85.0	23.0	55.8	70.0	120/1/60	3.3	15	115	1,2	A
NOTES: 1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. 2. SINGLE DOUBLE SHAFT MOTOR USED FOR SUPPLY AND EXHAUST.																								
ACCESSORIES: A. INTEGRAL DISCONNECT.																								

LOUVER SCHEDULE																
DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	TYPE	FRAME	DESCRIPTION	MATERIAL	LOUVER DEPTH (IN.)	SIZE (W x H) (IN.)	SERVICE	AIRFLOW (CFM)	PERFORMANCE RATINGS			NOTES	ACCESSORIES
												FREE AREA (SF)	S.P. LOSS (IN.H2O)	WATER PENETRATION (OZ./SF)		
L1	RUSKIN	EME6625D	GREENHECK, POTTORFF	FIXED	CHANNEL	VERTICAL, HURRICANE	ALUMINUM	6	20 x16	INTAKE	300	0.36	0.06	-	1,2	A
L2	RUSKIN	EME6625D	GREENHECK, POTTORFF	FIXED	CHANNEL	VERTICAL, HURRICANE	ALUMINUM	6	20 x16	EXHAUST	300	0.36	0.07	-	1,2	A
NOTES: 1. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION. 2. FINISH AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OF COLOR AND GLOSS.																
ACCESSORIES: A. BIRD SCREENING (MATERIAL TO MATCH LOUVER MATERIAL)																

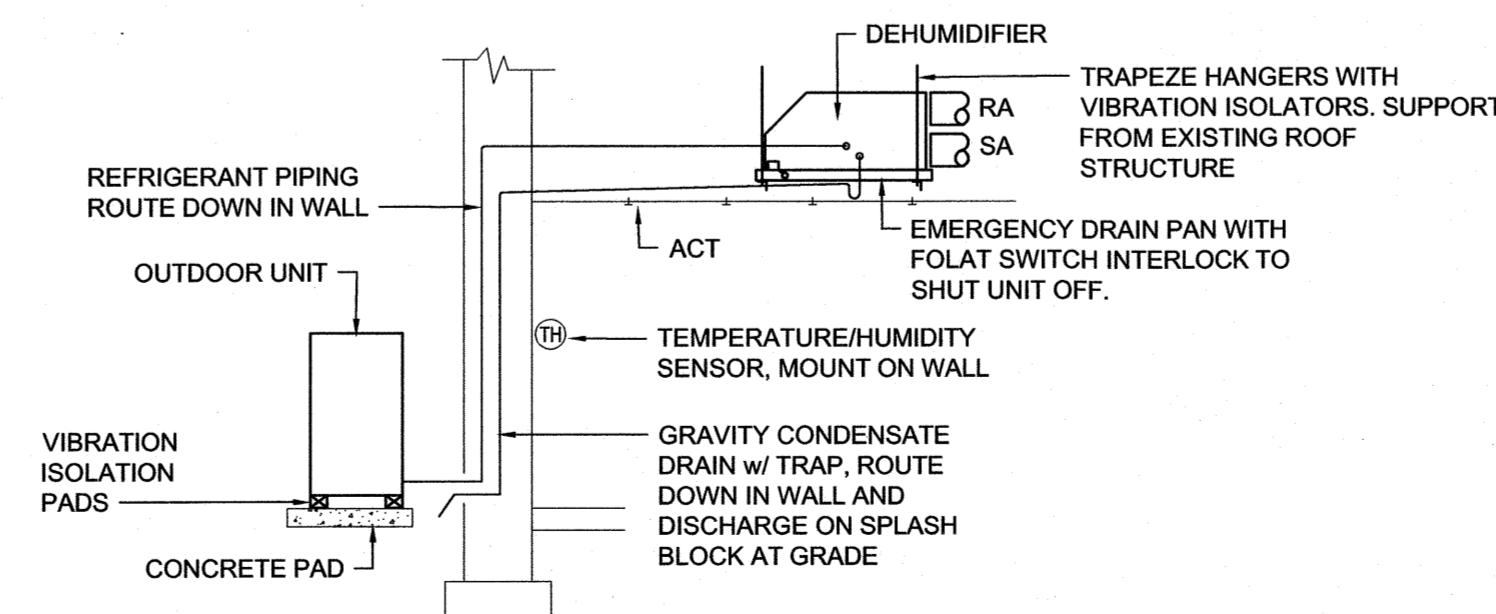
POWER VENTILATOR SCHEDULE																			
DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	FAN TYPE	SERVICE	CAPACITIES				ELECTRICAL					SONES	WEIGHT (LBS.)	NOTES	ACCESSORIES	
						AIRFLOW (CFM)	ESP (IN. WG.)	DRIVE ARRANGEMENT	FAN RPM	MOTOR RPM	MOTOR TYPE	MOTOR SIZE (W)	V/PH/Hz	FLA					MOCP
PV1	GREENHECK	SP-700A	TWIN CITY, PENNBARRY	CEILING-MOUNTED VENTILATORS	EXHAUST	500	0.90	DIRECT	1,100	110	ODP	350	120/1/60	3.0	15	6.5	39	1,2	A,B
NOTES: 1. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION. 2. CONTROLLED VIA ON/OFF SWITCH w/TIMED SHUTOFF. REFER TO ELECTRICAL PLANS. 3. RECONNECT TO EXISTING ROOF DISCHARGE CAP (VEHICLE EXHAUST) AS REQUIRED.																			
ACCESSORIES: A. BACKDRAFT DAMPER. B. INTEGRAL DISCONNECT SWITCH																			

DIFFUSERS, REGISTERS AND GRILLES SCHEDULE													
DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	TYPE	SERVICE	NECK SIZE (IN.)	BRANCH CONN. SIZE (IN.)	MODULE SIZE (IN.)	MATERIAL	FINISH	MOUNTING	NOTES	ACCESSORIES
S1	PRICE	640	METALAIR, TITUS	RECTANGULAR CEILING DIFFUSER	SUPPLY	6x12	60	-	ALUMINUM	WHITE	CEILING SURFACE	1,2	
S2	PRICE	ASCD	METALAIR, TITUS	SQUARE CEILING DIFFUSER	SUPPLY	60	60	24 x 24	ALUMINUM	WHITE	T-BAR	1,2	
S3	PRICE	ASCD	METALAIR, TITUS	SQUARE CEILING DIFFUSER	SUPPLY	80	80	24 x 24	ALUMINUM	WHITE	T-BAR	1,2	
S4	PRICE	ASCD	METALAIR, TITUS	SQUARE CEILING DIFFUSER	SUPPLY	100	80	24 x 24	ALUMINUM	WHITE	T-BAR	1,2	
R1	PRICE	630	METALAIR, TITUS	FIXED FACE GRILLE	RETURN	20 x 20	-	-	ALUMINUM	WHITE	T-BAR	1,2	
E1	PRICE	630	METALAIR, TITUS	FIXED FACE GRILLE	EXHAUST	12 x 12	-	-	ALUMINUM	WHITE	T-BAR	1,2	
NOTES: 1. REFER TO SPECIFICATION SECTION 233713 - DIFFUSERS, REGISTERS, AND GRILLES FOR FURTHER INFORMATION. 2. DUCT BRANCH CONNECTION SIZE TO BE EQUAL TO THE NECK SIZE OF DIFFUSER UNLESS NOTED OTHERWISE ON PLANS.													
ACCESSORIES:													

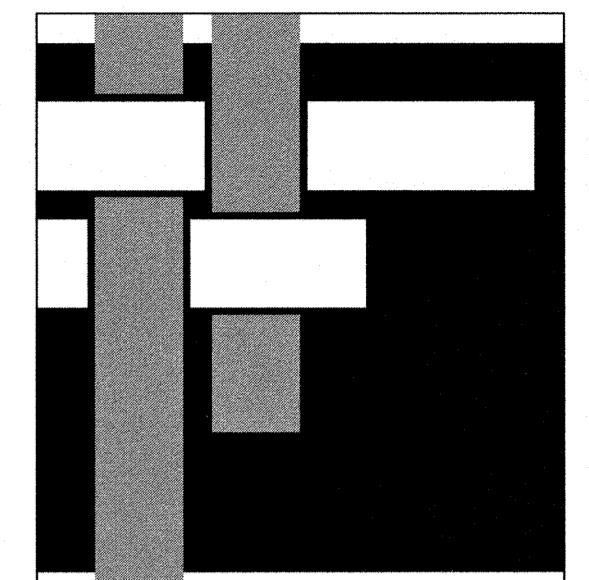
PACKAGED DEHUMIDIFIER SCHEDULE																		
DRAWING CODE	DESIGN BASIS MFR	MODEL	ALTERNATE APPROVED MFRS.	DEHUMID. CAPACITY @ 80°F/60%RH (PINTS/DAY)	INDOOR SECTION					OUTDOOR SECTION					NOTES	ACCESSORIES		
					FAN (CFM)	OA (CFM)	ESP (IN H2O)	ELECTRICAL VOLTAGE (V/PH/Hz)	MCA (AMPS)	MOCP (AMPS)	WEIGHT (LBS)	SENSIBLE COOLING (BTUH)	ELECTRICAL VOLTAGE (V/PH/Hz)	MCA (AMPS)			MOCP (AMPS)	WEIGHT (LBS)
D1	ULTRA-AIRE	SD12	NOVELAIRE, APRILAIRE	184.0	340	0	0.40	120/1/60	3.5	15	110	4300	120/1/60	12.1	20	75	1,2	A,B
NOTES: 1. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION. 2. INDOOR UNIT PLUG CONNECTED, OUTDOOR UNIT HARD-WIRED. 3. ALT. MFRS. EQUIPMENT REQUIRES DIFFERENT CONFIGURATION AND CONNECTIONS. CONTRACTOR IS RESPONSIBLE FOR ANY REDESIGN REQUIRED. NO EXTRAS WILL BE ALLOWED FOR REVISIONS TO BUILDING INFRASTRUCTURE TO SUPPORT ALT. EQUIPMENT INSTALLATION.																		
ACCESSORIES: A. DUCT ADAPTOR AND MATCHING DEH3000 WALL MOUNT HUMIDITY CONTROL. B. REFRIGERANT LINESET- 1/14"LIQ., 3/8" GAS, 50 FT. MAX.																		



1 TYPICAL DIFFUSER CONNECTION DETAIL
NOT TO SCALE



2 DEHUMIDIFIER DETAIL
NOT TO SCALE

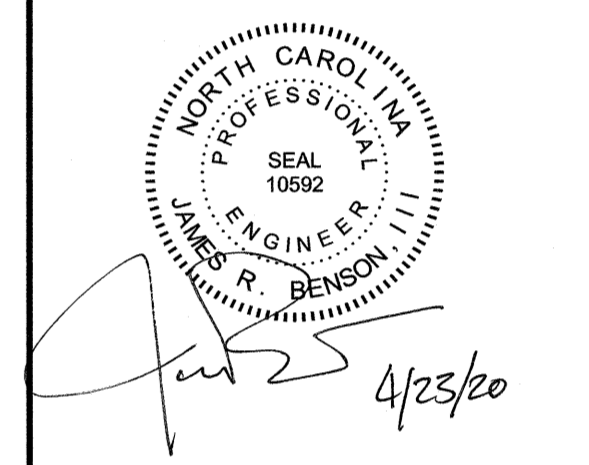


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Engineers, PLLC

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Construction Drawings
23 April, 2020

Revisions:

Mechanical
Schedules
and Details

M0.3

MECHANICAL KEYED NOTES	
KEY NO.	NOTE
1.	EXISTING PACKAGED HEAT PUMP: TO REMAIN. DEMOLISH INTERIOR AIR DISTRIBUTION IN ENTIRETY.
2.	EXISTING CONDENSING UNIT: TO REMAIN.
3.	EXISTING UNIT HEATERS, DUCTWORK AND NATURAL GAS PIPING IN BAYS TO REMAIN.
4.	EXISTING HVAC DUCTWORK, ACCESSORIES AND HANGERS TO BE REMOVED IN HATCHED AREA.
5.	EXISTING ERV: DEMOLISH IN ENTIRETY.
6.	EXISTING VEHICLE EXHAUST FAN AND DUCTWORK: TO BE RELOCATED BY OWNER. EXISTING EXHAUST VENT THROUGH ROOF TO REMAIN FOR REUSE.
7.	EXISTING VEHICLE EXHAUST PANEL: TO REMAIN.
8.	EXISTING HVAC IN GYM/OFFICE AREAS: TO REMAIN.

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McFadyen
Engineers, PLLC

411 Peachtree Avenue, Suite 200
Wilmington, NC 28403
Office: (910) 399-1123

James R. Benson
4/23/20

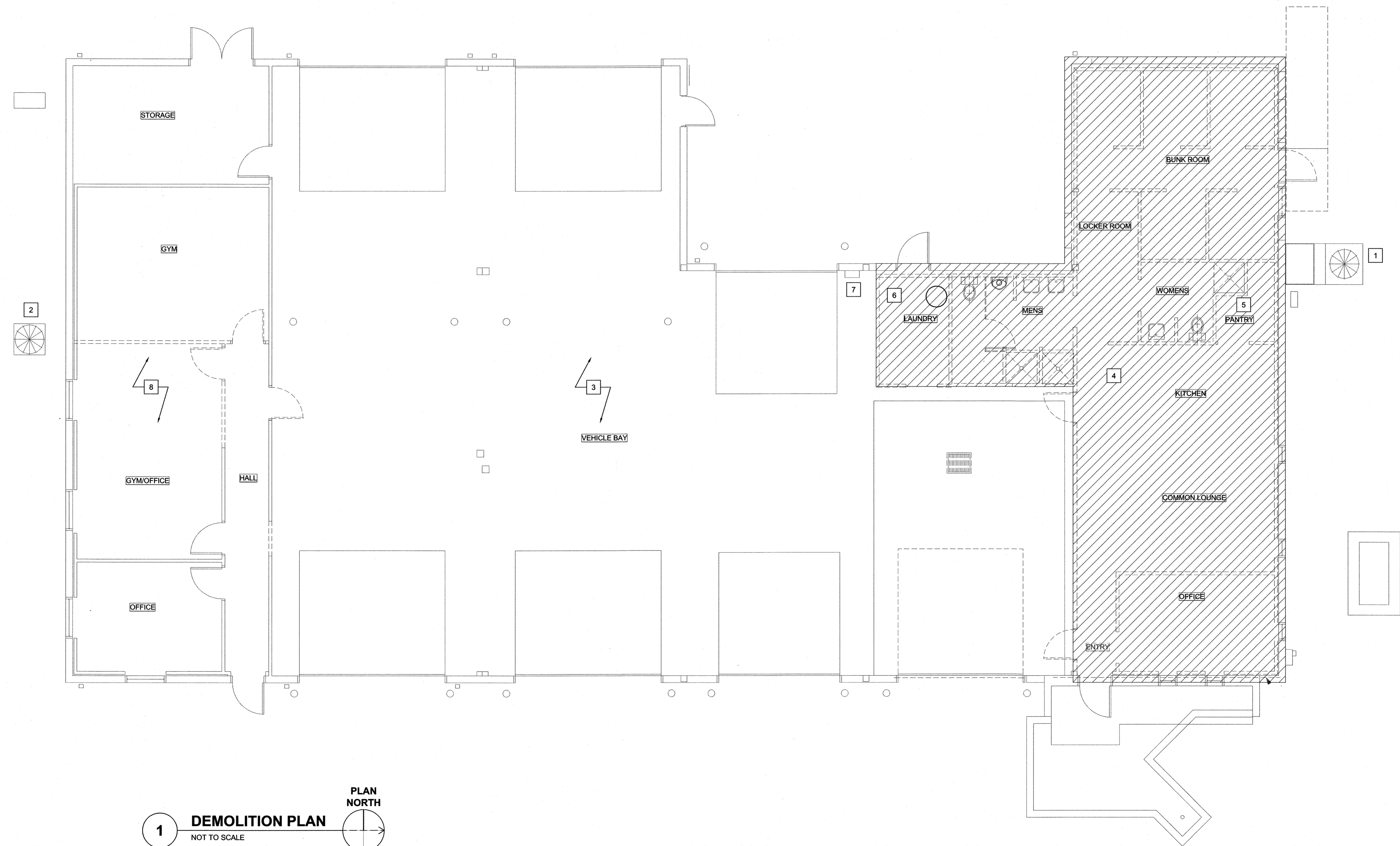
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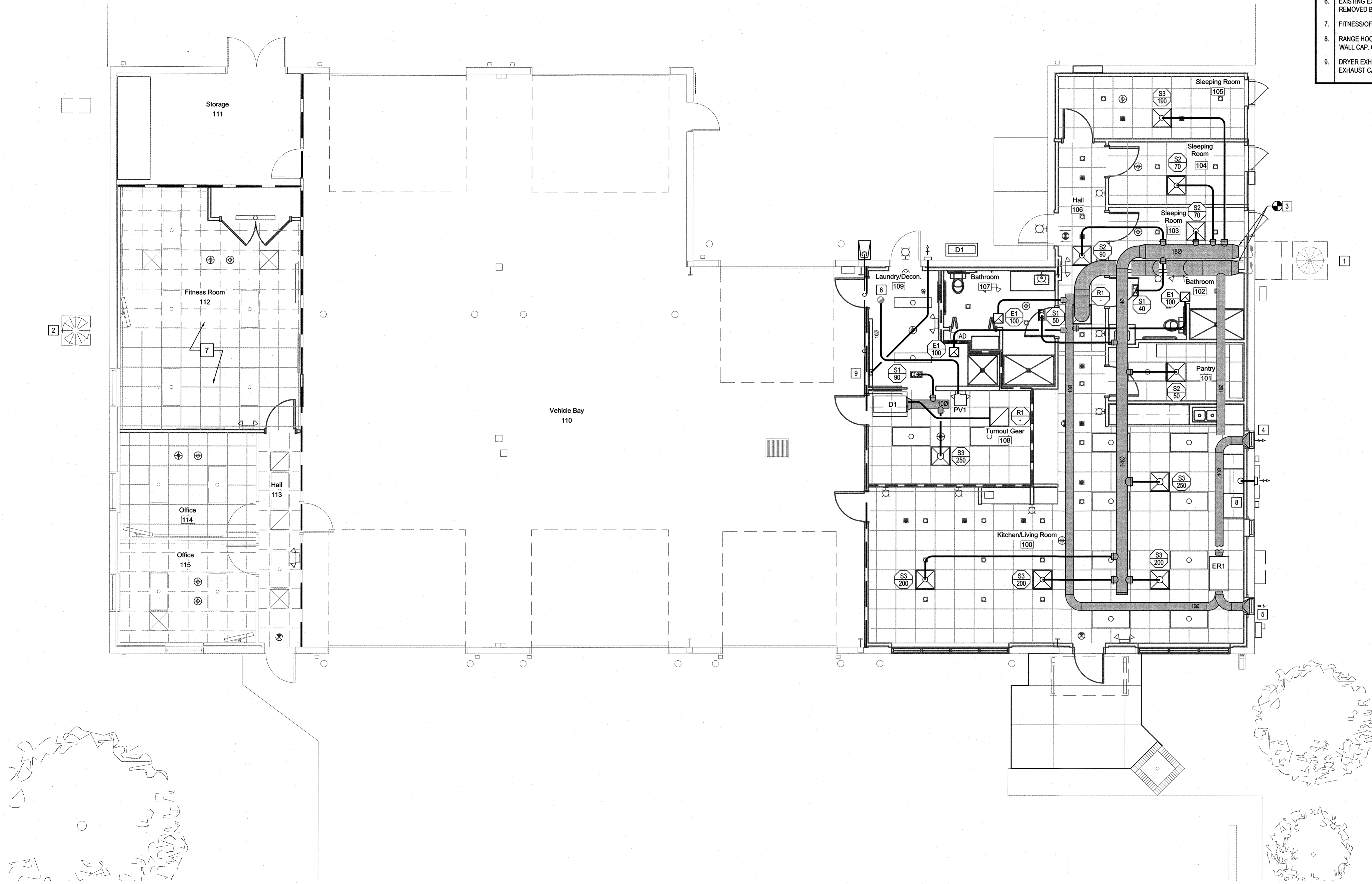
MD.1



1 DEMOLITION PLAN
NOT TO SCALE

PLAN NORTH

KEY NO.	NOTE
1.	EXISTING PACKAGED HEAT PUMP: TO REMAIN.
2.	EXISTING CONDENSING UNIT: TO REMAIN.
3.	CONNECT DUCTWORK TO EXISTING SUPPLY AND RETURN DUCT AT WALL PENETRATIONS.
4.	ERV EXHAUST FAN WALL CAP: MOUNT AS HIGH AS POSSIBLE.
5.	ERV OUTSIDE AIR INTAKE LOUVER: MOUNT AS HIGH AS POSSIBLE.
6.	EXISTING EXHAUST VENT THRU ROOF: TO REMAIN (EXISTING VEHICLE EXHAUST FAN TO BE REMOVED BY OTHERS PRIOR TO CONSTRUCTION), CONNECT NEW PV1 TO EXISTING EXHAUST VENT.
7.	FITNESS/OFFICE AREAS: NO HVAC WORK. EXISTING EQUIPMENT AND AIR DISTRIBUTION TO REMAIN.
8.	RANGE HOOD (BY G.C.): MECHANICAL CONTRACTOR TO INSTALL MATCHING EXHAUST DUCT AND WALL CAP. COORDINATE WITH G.C.
9.	DRYER EXHAUST: PROVIDE RECESSED WALL BOX (DRYERBOX DB-350 OR SIMILAR) AND WALL EXHAUST CAP. MOUNT HIGH AS POSSIBLE.

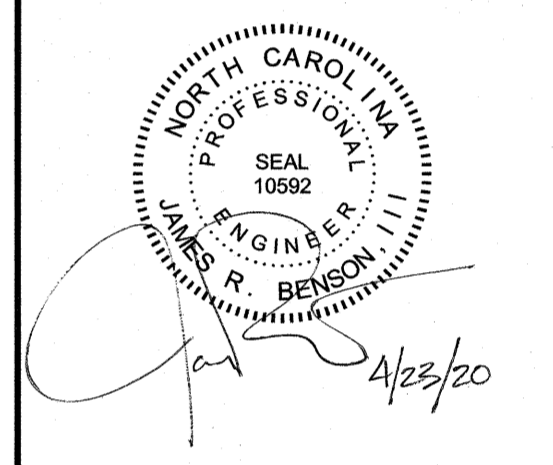


1 FLOOR PLAN
NOT TO SCALE

PLAN NORTH

SAWYER SHERWOOD & ASSOCIATE ARCHITECTURE
124 Morkel St. Wilmington, NC 28401
910.762-0892 s2a3.com

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New Hanover County
Fire Station 12
3805 US-421
Wilmington, NC

Construction Drawings
23 April, 2020

Revisions:

Mechanical
Floor
Plan
M1.1

Table with 2 columns: Abbreviations and their corresponding electrical symbols and descriptions. Includes items like AMPERES, ALTERNATING CURRENT, ALUMINUM, etc.

Legend table defining symbols for raceways, conduits, switches, receptacles, and lighting fixtures. Includes symbols for concealed and exposed raceways, homerun lines, and various types of electrical components.

Electrical General Notes section containing 17 numbered instructions regarding equipment, conductor requirements, grounding, and safety protocols.

Existing Electrical System Notes section containing 11 numbered instructions regarding the assessment and modification of existing electrical systems.

Estimated Load Summary table showing Maximum Historical Demand (21.000 KW), Removed Loads (Electric Water Heater), and New Loads (Refrigerator, Water Heater, etc.) totaling 124.267 A.

Electrical System and Equipment Method of Compliance section detailing prescriptive requirements for lighting schedules, interior wattage, and equipment specifications.

Professional logos and contact information for Sawyer Sherwood & Associate Architecture and McFadyen Engineers, PLLC.

Professional seal for a North Carolina Professional Engineer, including name, title, and expiration date.

Hurricane Florence Repairs New Hanover County Fire Station 12, including construction drawings information and a large E0.1 title.

Electrical Specifications - Continued

260553 IDENTIFICATION

- A. WIRE MARKERS: PROVIDE SPLIT SLEEVE TYPE WIRE MARKERS OR APPROVED EQUIVALENT ON EACH CONDUCTOR AT PANELBOARD GUTTERS, PULL BOXES, OUTLET AND JUNCTION BOXES, AND EACH LOAD CONNECTION. LEGEND: (1) POWER AND LIGHTING CIRCUITS: BRANCH CIRCUIT OR FEEDER NUMBER AS INDICATED ON DRAWINGS. (2) CONTROL CIRCUITS: CONTROL WIRE NUMBER AS INDICATED ON SCHEMATIC AND INTERCONNECTION DIAGRAMS ON DRAWINGS.
- B. IDENTIFICATION NAMEPLATES: FURNISH AND INSTALL ENGRAVED LAMINATED PHENOLIC NAMEPLATES FOR ALL ELECTRICAL EQUIPMENT SUPPLIED FOR IDENTIFICATION OF EQUIPMENT CONTROLLED, SERVED, PHASE, VOLTAGE, ETC. NAMEPLATES SHALL BE SECURELY ATTACHED TO EQUIPMENT WITH METAL SCREWS OR RIVETS AND SHALL IDENTIFY BY NAME THE EQUIPMENT CONTROLLED, ATTACHED, ETC. SEE DRAWINGS FOR DETAILS. INSTALL NAMEPLATE PARALLEL TO EQUIPMENT LINES. EMBOSSED, SELF-ADHESIVE PLASTIC TAPE IS NOT ACCEPTABLE.
- C. RECEPTACLE CIRCUIT IDENTIFICATION: PROVIDE ADHESIVE BACKED, LAMINATED PLASTIC RECEPTACLE DEVICE PLATE LABELS IDENTIFYING THE CIRCUIT FEEDING THE DEVICE. LABELS SHALL BE LABEL MACHINE PRINTED, BLACK LETTERING ON A CLEAR BACKGROUND, TO INDICATE PANEL AND CIRCUIT NUMBER FEEDING THE DEVICE AND SHALL BE CASIO, BROTHER, TAB8 OR APPROVED EQUAL. LEGIBLY PRINT CIRCUIT NUMBER ON FLAG TYPE PLASTIC CABLE TIE WITH A PERMANENT MARKER (SHARPIE, ETC.) AND ATTACH TO CONDUCTORS IN OUTLET BOX. FLAG SHALL BE READILY VISIBLE UPON REMOVAL OF DEVICE PLATE. ON EACH RECEPTACLE DEVICE PLATE APPLY CIRCUIT LABEL CENTERED ON THE LOWER PORTION BELOW THE RECEPTACLE, PARALLEL TO THE LOWER SURFACE. LABELS SHALL INDICATE PANEL AND CIRCUIT NUMBER FEEDING THE DEVICE (I.E., RPA-24).
- D. NEATLY AND LEGIBLY MARK CONDUITS AT JUNCTION BOXES ABOVE ACCESSIBLE CEILINGS WITH THE PANELBOARD AND CIRCUIT NUMBERS OF THE CIRCUITS CONTAINED IN THE RACEWAY USING A PERMANENT BLACK BOLD MARKING PEN.

262416 PANELBOARDS

- A. NEMA PBI, CIRCUIT BREAKER TYPE, LIGHTING AND APPLIANCE BRANCH CIRCUIT PANELBOARD WITH COPPER PHASE BUS, 100% COPPER GROUND AND NEUTRALS BUSES AND RATINGS AS INDICATED. CIRCUIT BREAKERS: NEMA AB 1, BOLT-ON TYPE. ENCLOSURE: NEMA PNB 1, TYPE 1 OR TYPE 3R CABINET BOX. 6 INCHES (153 MM) DEEP, 20 INCHES (508 MM) WIDE FOR 240 VOLT AND LESS PANELBOARDS. CABINET FRONT: FLUSH AND SURFACE CABINET FRONT DOOR-IN-DOOR TYPE WITH CONCEALED TRIM CLAMPS, CONCEALED HINGE, METAL DIRECTORY FRAME, AND FLUSH LOCK ALL KEYS ALIKE. FINISH IN MANUFACTURER'S STANDARD GRAY ENAMEL.
- B. PANELBOARDS SHALL BE MANUFACTURED BY CUTLER HAMMER, GENERAL ELECTRIC, SIEMENS OR SQUARE D.
- C. PROVIDE TYPED CIRCUIT DIRECTORY FOR EACH BRANCH CIRCUIT PANELBOARD. FINAL TYPED PANELBOARD DIRECTORIES INSTALLED IN THE PANELBOARD DOOR POCKET SHALL INCLUDE FINAL ACTUAL ROOM NAMES AND NUMBERS IN ADDITION TO THE GENERAL DESCRIPTION SHOWN ON THE PANEL SCHEDULES ON THE DRAWINGS. REVISE DIRECTORY TO REFLECT CIRCUITING CHANGES REQUIRED TO BALANCE PHASE LOADS. PROVIDE SPARE CONDUITS OUT OF EACH RECESSED PANELBOARD TO AN ACCESSIBLE LOCATION ABOVE CEILING AND BELOW FLOOR. MINIMUM SPARE CONDUITS: 5 EMPTY 1 INCH (DN27). IDENTIFY EACH AS SPARE. GROUND AND BOND PANELBOARD ENCLOSURE ACCORDING TO SECTION 260553.

262416 EXISTING PANELBOARDS

- A. CIRCUIT BREAKERS INDICATED TO BE INSTALLED IN EXISTING PANELBOARDS SHALL BE MOLDED CASE, UL LISTED AND SHALL BE RATED AS SHOWN ON THE DRAWINGS. PROVIDE ALL NECESSARY MOUNTING HARDWARE AND ACCESSORIES AS REQUIRED TO INSTALL NEW CIRCUIT BREAKERS. NEW CIRCUIT BREAKERS SHALL MATCH EXISTING TYPES INSTALLED AND BE RATED CONSISTENT WITH THE EXISTING EQUIPMENT TO MAINTAIN EQUIPMENT RATINGS. ACCESSORIES SHALL BE PROVIDED AS NOTED OR REQUIRED AND SHALL BE UL LISTED AND FIELD INSTALLABLE.
- B. PROVIDE REVERSED TYPED CIRCUIT DIRECTORY FOR EACH BRANCH CIRCUIT PANELBOARD MODIFIED BY THIS CONSTRUCTION. FINAL TYPED PANELBOARD DIRECTORIES INSTALLED IN THE PANELBOARD DOOR POCKET SHALL INCLUDE FINAL ACTUAL ROOM NAMES AND NUMBERS IN ADDITION TO THE GENERAL DESCRIPTION SHOWN ON THE PANEL SCHEDULES ON THE DRAWINGS. REVISE DIRECTORY TO REFLECT CIRCUITING CHANGES REQUIRED TO BALANCE PHASE LOADS.

262726 WIRING DEVICES

- A. PROVIDE HEAVY DUTY INDUSTRIAL SPECIFICATION GRADE RECEPTACLES AND SWITCHES. ALL DEVICES SHALL BE RATED 20 AMPERES. HUBBELL HBL 5362 AND HBL 1221/2/3/4, PASS AND SEYMOUR 5362A AND PS20AC1/2/3/4, OR LEVITON 5362 AND 1221/2/3/4.
- B. PROVIDE SPECIFICATION GRADE GRAY COMBINATION USB CHARGER RECEPTACLES AS INDICATED. ALL DEVICES SHALL BE RATED 20 AMPERES. HUBBELL USB20ACSW OR EQUAL BY PASS AND SEYMOUR OR LEVITON.
- C. MATCH DEVICE AND PLATE MATERIAL/COLOR TO EXISTING INSTALLED DEVICES.

262727 OCCUPANCY SENSORS

- A. OCCUPANCY SENSORS SHALL UTILIZE DUAL TECHNOLOGY SENSING. ACCEPTABLE TECHNOLOGY IS PASSIVE INFRARED (PIR), ULTRASONIC AND MICROPHONIC. DUAL TECHNOLOGY IS REQUIRED UTILIZING PIR AND ONE OF THE OTHER TECHNOLOGIES. SENSORS SHALL AUTOMATICALLY ADJUST TIME DELAYS AND SENSITIVITY BASED ON THE ACTIVITY LEVEL IN THE SPACE. ALL SWITCHES SHALL BE APPROVED BY A THIRD PARTY AGENCY, APPROVED FOR THE VOLTAGE AND CURRENT INDICATED. SENSORS SHALL BE COMPATIBLE WITH ALL LOAD TYPES AND REQUIRE NO MINIMUM LOAD.
- B. WALL SWITCH LINE VOLTAGE SENSORS FOR SMALL AREAS: LINE VOLTAGE, SINGLE GANG, WALL MOUNTED OCCUPANCY SENSOR SWITCH WITH ONE OVERRIDE SWITCH. SENSOR SHALL RECESS INTO SINGLE GANG SWITCH BOX AND FIT A STANDARD GF1 RECEPTACLE PLATE OPENING. SWITCHES SHALL BE COMPATIBLE WITH STANDARD THREE AND FOUR-WAY TOGGLE SWITCHES. PROVIDE HARD LENS SWITCHES IN STORAGE ROOMS AND OTHER LOCATION SUBJECT TO ABUSE. ADJUSTABLE TIME DELAY OF 20 MINUTES, 180 DEGREE FIELD OF VIEW, MINIMUM COVERAGE AREA OF 900 SF. VOLTAGE: 120-277 VOLTS AC, MINIMUM LOAD RATING 800 WATTS AT 120 VAC, 1200 WATTS AT 277 VAC. LUTRON, SENSOR SWITCH OR WATTSTOPPER.
- C. CEILING MOUNTED LOW VOLTAGE SENSORS FOR LARGE AREAS: LOW VOLTAGE, RECESS CEILING MOUNTED OCCUPANCY SENSOR SWITCH SHALL OPERATE IN CONJUNCTION WITH A LINE VOLTAGE POWER PACK TO CONTROL THE CONNECTED LIGHTING LOADS. SENSORS SHALL OPERATE ON A CLASS 2, THREE-CONDUCTOR CABLE SYSTEM. MULTIPLE SENSORS SHALL BE CONNECTABLE TO A SINGLE POWER PACK. SENSOR SHALL RECESS INTO A TWO GANG OUTLET BOX. ADJUSTABLE TIME DELAY OF 1 - 15 MINUTES. POWER PACKS SHALL BE RATED 20A AT 120-277 VOLTS AND SHALL BE COMPATIBLE WITH ALL LOAD TYPES. THEY SHALL HAVE THE CAPACITY TO POWER ADDITIONAL REMOTE HEADS OR ADDITIONAL RELAYS. LUTRON, SENSOR SWITCH OR WATTSTOPPER.

262816 SAFETY SWITCHES

- A. NEMA KS 1, TYPE HD WITH EXTERNALLY OPERABLE HANDLE INTERLOCKED (DEFEATABLE) TO PREVENT OPENING FRONT COVER WITH SWITCH IN ON POSITION, ENCLOSED LOAD INTERRUPTER KNIFE SWITCH. MECHANISMS SHALL BE NON-TEASIBLE, POSITIVE, QUICK MAKE-QUICK BREAK TYPE. HANDLE LOCKABLE IN ON OR OFF POSITION. SWITCHES SHALL HAVE HANDLES WHOSE POSITIONS ARE EASILY RECOGNIZABLE IN THE ON OR OFF POSITION. FUSE CLIPS SHALL BE DESIGNED TO ACCOMMODATE NEMA FU1, CLASS R FUSES.
- B. PROVIDE ACCESSORIES REQUIRED BY THEIR INSTALLATION. PROVIDE AUXILIARY SWITCH CONTACTS AS REQUIRED BY OTHER SYSTEMS. COORDINATE WITH OTHER DIVISIONS AS REQUIRED.
- C. APPLY ADHESIVE TAG ON INSIDE DOOR OF EACH FUSED SWITCH INDICATING NEMA FUSE CLASS AND SIZE INSTALLED.
- D. SAFETY SWITCHES SHALL BE MANUFACTURED BY CUTLER HAMMER, GENERAL ELECTRIC, SIEMENS OR SQUARE D.

265100 LIGHTING FIXTURES

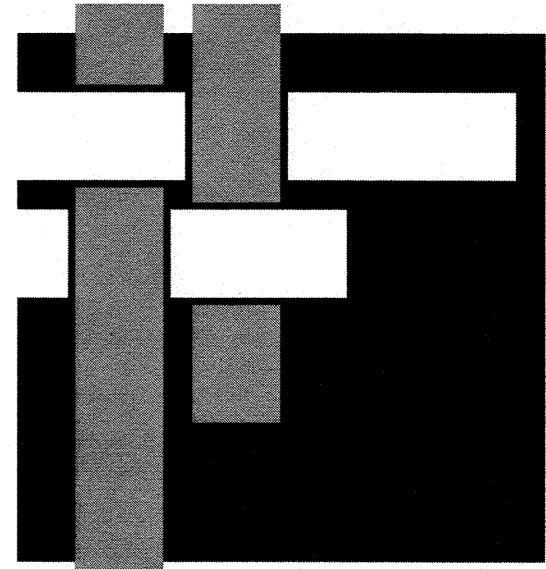
- A. LIGHTING FIXTURE TYPES SHALL BE FURNISHED AS REQUIRED BY THE LIGHTING FIXTURE SCHEDULE AS INDICATED ON THE DRAWINGS.
- B. ALL FIXTURES SHALL BE INSTALLED COMPLETE WITH LAMPS AND/OR LIGHT ENGINES AS INDICATED ON THE DRAWINGS.
- C. LED SOURCES SHALL BE HIGH INTENSITY WHITE, SINGLE COLOR OR AS NOTED. PROVIDE WHITE LEDS IN THE COLOR TEMPERATURE(S) SPECIFIED. THE COLOR TEMPERATURE IN ALL FIXTURES OF THE SAME TYPE SHALL BE CONSISTENT AND REMAIN SO OVER THE LIFE OF THE FIXTURE. COLOR CONSISTENCY BETWEEN FIXTURES SHALL CONFORM TO ANSI NEMA ANSLG STANDARD C78.377-2008. THE CONTRACTOR SHALL REPLACE FIXTURES EXHIBITING INCONSISTENT COLOR. MINIMUM LUMEN MAINTENANCE SHALL BE 70% OF RATED INITIAL LUMEN OUTPUT AT 50,000 HOURS OF OPERATION. MEASUREMENT OF LUMEN MAINTENANCE SHALL BE IN ACCORDANCE WITH IES LM-80-08. THE LUMINAIRE MANUFACTURER SHALL PROVIDE A MINIMUM OF FIVE YEAR WARRANTY FROM THE DATE OF FINAL ACCEPTANCE AGAINST PREMATURE FAILURE, DISCOLORATION AND DEFECTS. THE COLOR OR COLOR TEMPERATURE OF REPLACEMENT LEDS SHALL MATCH THOSE OF THE SAME LEDS TYPES THAT REMAIN IN OPERATION. THE MINIMUM COLOR RENDERING INDEX OF WHITE LEDS SHALL BE 80. ELECTRICAL AND PHOTOMETRIC PERFORMANCE OF LED ASSEMBLIES AND LUMINAIRES SHALL CONFORM TO IES LM 79-08.
- D. LENSES SHALL BE CLEAR VIRGIN ACRYLIC MATERIAL WITH UNIFORM 3/16" SQUARE BASED FEMALE CONE PRISMS ALIGNED 45° TO THE LENGTH AND WIDTH OF THE LENS PANEL. MINIMUM PRISM DEPTH SHALL BE 0.080" WITH A NOMINAL PANEL THICKNESS OF 0.125".
- E. LED DRIVERS: PROVIDE HIGH FREQUENCY ELECTRONIC TYPE WITH SECONDARY VOLTAGES MATCHING THOSE REQUIRED BY THE LED SOURCE THEY OPERATE. DRIVERS SHALL OPERATE WITHIN A OF - 140F AMBIENT TEMPERATURE RANGE AND SHALL COMPLY WITH FCC CLASS A STANDARDS FOR EMI. MINIMUM DRIVER SPECIFICATIONS:
 1. POWER FACTOR ≥ 90%.
 2. EFFICIENCY ≥ 90%.
 3. CURRENT CREST FACTOR - 1.5 MINIMUM.
 4. TOTAL HARMONIC DISTORTION < 20%.
 5. RATED LIFE - 50,000 HOURS.
 MANUFACTURERS SHALL HAVE BEEN MANUFACTURING LED DRIVERS FOR AT LEAST TEN YEARS WITH A DOCUMENTABLE LOW FAILURE RATE. THE CONTRACTOR SHALL PROVIDE A WRITTEN WARRANTY AGAINST DEFECTS IN MATERIAL AND WORKMANSHIP, INCLUDING REPLACEMENT FOR FIVE YEARS FROM THE DATE OF FINAL ACCEPTANCE.
- F. RELAMP LUMINAIRES THAT HAVE FAILED LAMPS AT SUBSTANTIAL COMPLETION. REPLACE LED MODULES IN WHICH MORE THAN 5% OF THE LEDS HAVE FAILED LAMPS AT FINAL ACCEPTANCE OF THE WORK.
- G. THE CONTRACTOR SHALL VERIFY THE TYPE CEILINGS OR WALLS THE FIXTURE IS TO BE USED WITH AND SHALL PROVIDE COMPATIBLE MOUNTING ATTACHMENTS AND TRIM. PROVIDE ALL ACCESSORIES, OPTIONS AND/OR FIELD FABRICATED SHROUDS OR ADDITIONAL MATERIALS REQUIRED COMPLYING WITH ALL APPLICABLE CODES TO MAINTAIN THE CEILING FIRE RATING AS REQUIRED BY REGULATORY AUTHORITIES.

265200 EMERGENCY AND EXIT LIGHTING FIXTURES

- A. EMERGENCY AND EXIT LIGHTING FIXTURES SHALL BE SELF-CONTAINED UNITS AUTOMATICALLY ACTIVATED WHEN THE LINE VOLTAGE DROPS BELOW 80% AND SHALL COMPLY WITH UL 924, NFPA 101 - LIFE SAFETY CODE, NFPA 70 - NEC AND THE NCSBC. LIGHTING FIXTURE TYPES SHALL BE FURNISHED AS REQUIRED BY THE LIGHTING FIXTURE SCHEDULE AS INDICATED ON THE DRAWINGS. CATALOG NUMBERS ARE PROVIDED AS A GUIDE TO THE DESIGN AND QUALITY OF FIXTURE DESIRED. EQUIVALENT DESIGNS AND EQUAL QUALITY FIXTURES OF OTHER MANUFACTURERS LISTED WILL BE ACCEPTABLE UPON APPROVAL OF THE ARCHITECT/ENGINEER. THE CONTRACTOR SHALL VERIFY FROM THE CONTRACT DRAWINGS THE TYPE CEILINGS OR WALLS THE FIXTURE IS TO BE USED WITH AND SHALL PROVIDE COMPATIBLE MOUNTING ATTACHMENTS AND TRIM. PROVIDE ALL ACCESSORIES OR ADDITIONAL MATERIALS REQUIRED TO MAINTAIN THE CEILING FIRE RATING AS REQUIRED BY REGULATORY AUTHORITIES.
- B. ALL FIXTURES SHALL BE COMPLETELY SELF-CONTAINED, PROVIDED WITH MAINTENANCE FREE BATTERY, AUTOMATIC CHARGER AND OTHER FEATURES. THEY SHALL BE INSTALLED COMPLETE WITH LAMPS, BATTERIES, ETC. WHICH SHALL BE NEW AND UNUSED AT TIME OF FINAL INSPECTION OF THE PROJECT FOR ACCEPTANCE.
- C. ALL FIXTURES SHALL HAVE SELF-DIAGNOSTICS. ELECTRONICS SHALL AUTOMATICALLY, OR MANUALLY UPON DEMAND, CONDUCT SELF TEST ON BATTERY CONDITION (INCLUDING ACTUAL DISCHARGE), CHARGER, LAMPS AND INTERNAL WIRING INTEGRITY PER NEC AND NFPA AT PRESCRIBED INTERVALS. A PILOT LIGHT SHALL INDICATE THE UNIT IS CONNECTED TO AC POWER. PROVIDE TEST SWITCH AND VISUAL INDICATOR(S) OF UNIT OPERATIONAL CONDITION INCLUDING CHARGER STATUS, READY AND SERVICE CODE. TEST SWITCH SHALL SIMULATE OPERATION OF THE UNIT UPON LOSS OF AC POWER BY ENERGIZING LAMPS FROM THE BATTERY, AND ALSO EXERCISE THE TRANSFER RELAY.
- D. WARRANTY: EACH UNIT SHALL BE WARRANTED FOR THREE YEARS. THE BATTERY SHALL HAVE AN ADDITIONAL TWO MORE YEARS PRO-RATED WARRANTY. WARRANTY SHALL DATE FROM THE DATE OF FINAL PROJECT ACCEPTANCE AND BE INCLUDED IN THE CONTRACT DOCUMENT.

271500 DATA AND VOICE CABLING

- A. TELEPHONE AND DATA OUTLETS SHALL BE PROVIDED AS SHOWN AND SHALL CONSIST OF DUAL RJ-45 JACKS IN A DEVICE PLATE INSTALLED ON A 4" SQUARE X 2 1/8" DEEP BOX WITH 1" CONDUIT TO THE ACCESSIBLE CEILING CAVITY. FOR EACH OUTLET, PROVIDE TWO CAT 6 CABLES TO THE TELEPHONE/DATA CLOSET, LOCATION AS SHOWN ON THE DRAWINGS. PROVIDE 1 HOOK CABLE SUPPORTS AT 4' MAXIMUM INTERVALS ABOVE ACCESSIBLE CEILINGS AND IN RACEWAYS AS SHOWN ACROSS THE APPARATUS BAYS TO THE TELEPHONE/DATA CLOSET. COORDINATE EXACT CONNECTION DETAILS WITH THE OWNER. TERMINATE ALL CABLES AND TEST TO CAT 6 PERFORMANCE CRITERIA. LEAVE SUFFICIENT CABLE SERVICE LOOPS FOR CONNECTION TO EQUIPMENT BY THE OWNER. LABEL ALL CABLES AND JACKS TO CONFORM TO THE OWNER'S EXISTING LABELING SCHEME AND AS REQUIRED BY THE OWNER. PROVIDE WRITTEN TEST RESULTS TO THE ARCHITECT/ENGINEER. INSTALLATION PERSONNEL SHALL BE BICSI CERTIFIED FOR THE WORK PERFORMED.
- B. PROVIDE A FOUR POST, FLOOR MOUNTED, BAKED-POLYESTER POWDER COAT PAINTED STEEL, 19" EQUIPMENT RACK WITH THREADED RAILS DESIGNED FOR MOUNTING TELECOMMUNICATIONS EQUIPMENT. WIDTH IS COMPATIBLE WITH EIA/ECEA 310-E, 19-INCH (482.6-MM) EQUIPMENT MOUNTING WITH AN OPENING OF 17.72-INCHES BETWEEN RAILS. FRAMES SHALL BE MODULAR UNITS DESIGNED FOR TELECOMMUNICATIONS TERMINAL SUPPORT AND COORDINATED WITH DIMENSIONS OF UNITS TO BE SUPPORTED. OVERALL HEIGHT 84 INCHES, OVERALL DEPTH 29 INCHES, PRE-TAPPED WITH 10-32 THREADING. PROVIDE WITH VERTICAL AND HORIZONTAL CABLE MANAGEMENT CHANNELS, TOP AND BOTTOM CABLE TROUGHS, GROUNDING LUG, AND A RACK MOUNTED 20A, 120V POWER STRIP WITH 12 5-20R RECEPTACLES, 6' CORD AND PLUG. BASE SHALL HAVE A MINIMUM OF FOUR MOUNTING HOLES FOR PERMANENT ATTACHMENT TO FLOOR. RACK SHALL BE SELF-LEVELING.
- C. MATCH JACKS AND PLATES MATERIAL/COLOR TO EXISTING INSTALLED DEVICES.
- D. PATCH PANELS WILL BE PROVIDED BY THE OWNER.
- E. SEE "NEW HANOVER COUNTY TELECOMMUNICATIONS CABLING GUIDELINES" FOR ADDITIONAL REQUIREMENTS.



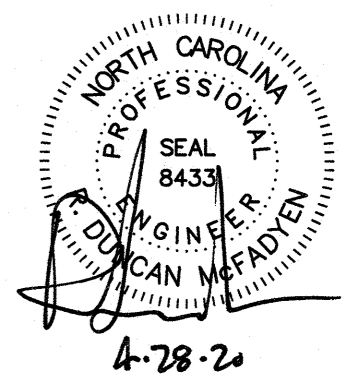
**SAWYER
SHERWOOD
& ASSOCIATE
ARCHITECTURE**

124 Market St, Wilmington, NC 28401
910 762-0892 s2a3.com

WD JONES ENGINEERING, PLLC
100 B Old Eastwood Road, Unit 24, Wilmington, NC 28403
Office: (910) 523-5381 Email: wjeng@wdjones.com

McFadyen
Engineers, PLLC

4411 Peachtree Avenue, Suite 200
Wilmington, NC 28403
Office: (910) 399-1123



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Florence Repairs
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Construction Drawings
23 April, 2020

Revisions:

Electrical
Specifications

E0.2.1

New Hanover County Telecommunications Cabling Guidelines

PURPOSE:

THIS DOCUMENT HAS BEEN PREPARED BY NEW HANOVER COUNTY (NHC) WITH THE SPECIFIC PURPOSE OF SETTING STANDARDS FOR STRUCTURED CABLE PLANTS IN SUPPORT OF LOCAL AREA NETWORKS (LAN) AND VOICE CONNECTIVITY THAT WILL FUNCTION AS FOLLOWS:

- ACCOMMODATE THE FUNCTIONAL REQUIREMENTS OF PRESENT AND FUTURE INFORMATION SERVICES.
- SUPPORT A MULTI-PRODUCT AND MULTI-VENDOR ENVIRONMENT.
- FACILITATE THE PLANNING AND INSTALLATION OF CABLING SYSTEMS THAT WILL SUPPORT THE DIVERSE COMMUNICATION NEEDS OF BUILDING OCCUPANTS.
- ENSURE UNIFORMITY OF STRUCTURED WIRING AND HARDWARE INFRASTRUCTURE INSTALLATIONS IN ALL NHC FACILITIES.

THE PRIMARY FOCUS OF THIS DOCUMENT IS TO DEFINE THE STANDARDS FOR MATERIAL, INFRASTRUCTURE, DESIGN, INSTALLATION, AND CERTIFICATION WITH RESPECT TO STRUCTURED CABLING SYSTEMS FOR NHC FACILITIES.

SCOPE:

THE SCOPE OF WORK FOR THE TELECOMMUNICATIONS CABLING CONTRACTOR SHALL BE TO FURNISH, INSTALL, TERMINATE, TEST AND WARRANTY THE FOLLOWING MATERIALS IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS, PERFORMANCE AND INSTALLATION REQUIREMENTS CONTAINED HEREIN AND IN THE DRAWINGS AND OTHERS THAT MAY BE APPLICABLE, WHICH ARE AVAILABLE ON SITE FROM THE OWNER, ARCHITECT AND GENERAL CONTRACTOR (GC). THIS BODY OF WORK CONSTITUTES THE BACKBONE AND LATERAL/LOCAL DISTRIBUTION WORK FOR LAN AND TELEPHONE CONNECTIVITY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE JOB TO PROVIDE ALL THE MATERIALS AND LABOR TO FURNISH, INSTALL, TEST AND CERTIFY A COMPLETE AND OPERATIONAL SYSTEM, EVEN IF NOT EXPLICITLY SPECIFIED HEREIN.

TYPICAL STRUCTURED CABLING SYSTEMS INCLUDE THE FOLLOWING ELEMENTS:

- HORIZONTAL CABLE.
- HORIZONTAL CROSS-CONNECTS.
- TRANSITION POINT (OPTIONAL).
- MAIN CROSS-CONNECT (MC).
- INTERMEDIATE CROSS-CONNECT.
- BACKBONE CABLING, INTRA AND INTER.
- WORKSTATION LOCATIONS OR INFORMATION MANAGEMENT OUTLETS (IMO).
- REMOTE WIRING CLOSET (RWC).
- MAIN DISTRIBUTION FRAME (MDF).
- GROUNDING

OBJECTIVE:

THE OBJECTIVE OF THIS NETWORK APPROACH IS TO PROVIDE NHC WITH A STANDARDIZED, COST-EFFECTIVE CABLE PLANT INFRASTRUCTURE THAT WILL ACCOMMODATE PRESENT AND FUTURE VOICE, VIDEO, AND DATA REQUIREMENTS. WORKSTATION CABLING INFRASTRUCTURE SHALL SUPPORT BANDWIDTH DEMANDS FROM 100 MEGABITS PER SECOND (Mbps) TO GIGABIT SPEEDS. BACKBONE CABLE INFRASTRUCTURE SHALL SUPPORT BANDWIDTH DEMANDS FROM GIGABIT SPEEDS AND BEYOND. THE INSTALLATION OF THE CABLE PLANT INFRASTRUCTURE SHALL COMPLY WITH LOCAL CODES, AS WELL AS, INDUSTRY AND FEDERAL STANDARDS.

STRUCTURED CABLE PLANT DESIGN:

THE NETWORK CABLE PLANT SHALL UTILIZE THE FOLLOWING CABLE DISTRIBUTION METHODS TO SUPPORT CONNECTIVITY THROUGHOUT THE BUILDING:

- HORIZONTAL WORKSTATION CABLING, WHICH WILL CONNECT THE USER WORKSTATION, OR INFORMATION MANAGEMENT OUTLET (IMO) TO THE NEAREST REMOTE WIRING CLOSET (RWC).
- WHERE APPROPRIATE, INTRA AND INTER-BUILDING COPPER BACKBONE CABLE, WHICH PROVIDES CONNECTIVITY BETWEEN WIRING CENTERS AND THE MAIN DISTRIBUTION FRAME (MDF.)
- WORK ZONE DISTRIBUTION CABLING FOR OPEN OFFICE SPACE. FIBER OPTIC INTRA AND INTER-BUILDING BACKBONE CABLE, WHICH ALSO PROVIDES CONNECTIVITY BETWEEN WIRING CENTERS AND THE MDF.

HORIZONTAL WORKSTATION CABLING:

ALL END-USER WORKSTATION LOCATIONS, WHETHER OCCUPIED OR VACANT, SHALL BE CABLED TO THE NEAREST WIRING CENTER. ALSO, STORAGE ROOMS, CONFERENCE ROOMS AND SIMILAR SPACE NOT DESIGNATED AS OFFICES SHALL BE CABLED TO ALLOW FOR OFFICE EXPANSION AND EQUIPMENT AS NEEDED.

TO COMPLY WITH ANSI/TIA/EIA-568-B.1 SPECIFICATION DISTANCE LIMITS, THE CABLE RUN FROM ANY USER WORKSTATION LOCATION TO THE NEAREST WIRING CENTER SHALL NOT EXCEED 100 METERS (328 FEET). THE ACTUAL LENGTH OF A CABLE RUN IS DEFINED AS THE TOTAL COMBINED LENGTH OF THE STATION CORD, WORKSTATION CABLE, AND PATCH-PANEL CABLE. WHEN PLANNING OR DESIGNING OFFICE SPACE THE COMMUNICATIONS CLOSETS SHALL BE LOCATED WITHIN 90 METERS OF ANY WORKSTATION OUTLET. THIS DESIGN APPROACH ALLOWS THE ADDITION OF PATCH CABLES AND WORKSTATION CORDS TO CONNECT DEVICES, WITHOUT EXCEEDING THE ANSI/TIA/EIA-568-B.1 SPECIFICATION DISTANCE LIMITS.

IN A BUILDING NOT EXCEEDING TWO STORIES, HORIZONTAL WORKSTATION CABLING MAY BE INSTALLED TO A SINGLE POINT, SUCH AS A COMPUTER ROOM, WIRING CENTER, OR THE MDF. THIS SCENARIO MAY BE USED IN PLACE OF A CREATING A RWC, THUS ELIMINATING ANY NEED FOR BACKBONE CABLING SYSTEMS. THIS INSTALLATION METHOD MAY BE UTILIZED WHEN COST IS A CONSTRAINT AND THE LENGTH OF THE CABLE RUN DOES NOT EXCEED THE SPECIFIED DISTANCE LIMITS.

EACH USER WORKSTATION LOCATION SHALL BE CABLED WITH CATEGORY (CAT) 6 COPPER CABLES FOR DATA TRANSMISSION, THAT WILL BE LABELED CLEARLY AT THE WALL JACK AND PATCH PANEL. WALL PLATE QUANTITIES WILL BE DETERMINED BASED ON THE NEEDS OF THE INSTALLATION. EACH WORKSTATION CABLE THAT IS ROUTED THROUGH A SUSPENDED CEILING AREA SHALL BE SECURED IN A MANNER THAT WILL KEEP ALL CABLE PLANT OFF OF ANY SUSPENDED CEILING TILES, SPRINKLER SYSTEMS, CEILING SUSPENSION HANGERS, AND ADHERE TO LOCAL AND FEDERAL BUILDING CODES. CABLE PLANT INSTALLED IN PLENUM ENVIRONMENTS SHOULD PROVIDE ENOUGH SLACK TO FACILITATE MINOR CONSTRUCTION MODIFICATIONS, OR CABLE RE-LOCATIONS, WITHOUT THE NEED TO INSTALL NEW CABLE ALTOGETHER. THIS INSTALLATION APPROACH NORMALLY REQUIRES APPROXIMATELY 20 FEET OF CABLE SLACK, SECURED IN AN APPROPRIATE MANNER, TO ENSURE CABLE IS MINIMIZED FROM RADIO FREQUENCY INTERFERENCE (RFI) AND ELECTRO-MAGNETIC INTERFERENCE (EMI) SOURCES.

WHEN ROUTED ABOVE A SUSPENDED CEILING, HORIZONTAL CABLES SHALL BE ROUTED DOWN THE INSIDE OF WALLS ("FISHED") WHEREVER POSSIBLE TO ENSURE NO EXPOSED CABLE IS VISIBLE. IF WALLS CANNOT BE FISHED, SURFACE MOUNTED (EXTERNAL) RACEWAY MAY BE USED TO ROUTE THE CABLE FROM THE CEILING TO THE INFORMATION OUTLET AND INSTALLED IN A SURFACE-MOUNTED OUTLET BOX. ALL ATTEMPTS SHALL BE MADE TO ENSURE NO HORIZONTAL CABLE IS EXPOSED WITHIN THE BUILDING AREA, PROVIDING A NEAT, PROFESSIONAL INSTALLATION. HORIZONTAL CABLES SHALL NEVER BE EXPOSED TO OUTDOOR ELEMENTS WITHOUT BEING PROTECTED IN PROPER CONDUIT/RACEWAY SYSTEMS AND HAVE PROPER LIGHTNING AND BONDING PROTECTION INSTALLED.

BACKBONE CABLING:

INTRA AND INTER-BACKBONE CABLING MAY CONSIST OF EITHER OR BOTH COPPER AND OPTICAL FIBER CABLES AND ARE REQUIRED WHERE THERE EXISTS MORE THAN ONE WIRE CENTER. THE INTRA AND INTER-BACKBONE SHALL BE INSTALLED TO PROVIDE STRUCTURED CONNECTIVITY BETWEEN CLOSETS

A MULTI-MODE, SINGLE MODE, OR COMBINATION OF FIBER-OPTIC BACKBONE STRUCTURE PROVIDES THE MEANS OF INTERCONNECTING ALL WIRING CLOSETS TO THE MDF IN A MULTI-SEGMENTED ENVIRONMENT. OPTICAL FIBER NOT ONLY PROVIDES EXTENSIVE BANDWIDTH CAPABILITIES TO THE LAN AND VOICE, BUT IT ALSO PROVIDES A SOLUTION TO THE DISTANCE-RELATED PROBLEMS ENCOUNTERED WITH COPPER CABLES IN LARGE INSTALLATIONS AND CAMPUS ENVIRONMENTS.

COPPER BACKBONE CABLING IS REQUIRED TO SUPPORT VOICE SERVICES, HOWEVER, THE SPECIFICATIONS AND DESIGNS ARE DETERMINED ON A SITE-BY-SITE BASIS. THIS IS DUE TO THE VARIETY, FUNDING, CAPACITY AND AVAILABILITY OF VOICE SERVICES AND DESIGNS. EACH REMOTE WIRING CLOSET SHALL BE CONNECTED TO THE MDF WITH A MULTI-STRAND, OPTICAL FIBER BACKBONE CABLE THAT RUNS DIRECTLY FROM THE WIRING CENTER TO THE MDF. ALL STRANDS WILL BE TERMINATED WITH ST STYLE CONNECTORS IN ACCORDANCE WITH THE ANSI/TIA/EIA STANDARDS IN RACK-MOUNTED PATCH PANELS. A MINIMUM TWELVE-STRAND FIBER SHALL BE INSTALLED IN ANY FACILITY PROVIDING CONNECTIVITY BETWEEN COMMUNICATIONS CLOSETS (TO BE DETERMINED ON A SITE-BY-SITE BASIS).

HORIZONTAL CABLES:

ALL CABLE, EQUIPMENT, AND MATERIALS SHALL MEET APPLICABLE ANSI/TIA/EIA-568-B, NATIONAL ELECTRICAL CODE (NEC) 770, INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 802 AND UNDERWRITERS LABORATORY (UL) VERIFICATION PROGRAM STANDARDS. ALL CABLE EQUIPMENT AND MATERIALS MUST BE MANUFACTURED BY FACILITIES THAT ARE INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO) 9001 REGISTERED AND CERTIFIED.

- SHALL BE CAT 6 RATING IN ACCORDANCE WITH ANSI/TIA/EIA-568-B.2
- FOUR-PAIR, 100-OHM, 24 AMERICAN WIRE GAGE (AWG).
- THE CABLE SHOULD HAVE CONTIGUOUS, 2-FOOT SEGMENT-LENGTH MARKERS PRINTED ON THE CABLE JACKET. THE MARKINGS MUST ALSO SHOW THE APPLICABLE PERFORMANCE OF CAT 6, AS WELL AS THE FIRE RATING OF THE CABLE BEING INSTALLED.
- THE FINISHED CABLE SHALL BE 100% PLENUM RATED IN ACCORDANCE WITH THE REQUIREMENTS OF NEC ARTICLE 800, UL 444, NFPA 262, (UL 910), AND APPLICABLE CANADIAN STANDARDS ASSOCIATION (CSA) STANDARDS.

PATCH CABLES:

- SHALL CONFORM TO THE ANSI/TIA/EIA SPECIFICATIONS OF CAT 6.
- 4-PAIR, UTP STRANDED CABLE.
- RJ-45 CONNECTORS ON BOTH ENDS.
- THE PATCH CABLES SHALL BE WRED IN ACCORDANCE WITH THE ANSI/TIA/EIA-568-B.2 AND ANSI/TIA/EIA-568-B.3 SPECIFICATIONS.
- CERTIFIED BY THE MANUFACTURER AS COMPLIANT WITH THE ANSI/TIA/EIA CAT 5E OR CAT 6 CRITERIA.
- CABLES SHALL BE AVAILABLE IN A WIDE VARIETY OF COLORS AND LENGTHS.

PATCH PANELS:

- SHALL CONFORM TO THE ANSI/TIA/EIA CAT 6 SPECIFICATIONS.
- THE PATCH PANEL WIRING SHALL BE IN COMPLIANCE WITH ANSI/TIA/EIA T568B WIRING STANDARDS.
- PROVIDE BACK WIRE MANAGEMENT HARDWARE.
- PROVIDE MODULAR DESIGN TO FACILITATE FIELD REPAIRS.
- PROVIDES STANDARD 110D TYPE IDC PCB MOUNTED CONNECTOR.
- AVAILABLE IN LOW AND HIGH DENSITY CONFIGURATIONS.
- MEET THE STANDARD EIA-310 RELAY RACK SPACING SPECIFICATIONS.
- PROVIDE RJ-45 INTERFACE.
- MEETS ALL FCC PART 68 SPECIFICATIONS.
- AVAILABLE IN 12, 24, 48, AND 96 PORT CAPACITIES.
- MATCH MAKE AND MODEL WITHIN EXISTING FACILITIES, WHERE POSSIBLE.

EQUIPMENT RACKS:

- SHALL CONFORM TO THE ANSI/TIA/EIA STANDARDS.
- CONFORM TO THE STANDARD EIA-310 MOUNTING SPECIFICATION.
- PROVIDE PRE-TAPPED 5/16" OR 10/32" THREADING.
- PROVIDE A FLEXIBLE MODULAR CONCEPT.
- PROVIDE VERTICAL WIRE MANAGEMENT.
- PROVIDE HORIZONTAL WIRE MANAGEMENT WHERE NEEDED.
- PROVIDE FLOOR MOUNTING HARDWARE EXCEPT FOR SWING GATE STYLE HARDWARE.
- STANDARD 4 POST RACKS WILL BE USED WHEN SPACE ALLOWS.
- MATCH MAKE AND MODEL WITHIN EXISTING FACILITIES, WHERE POSSIBLE.

GROUNDING:

ALL EQUIPMENT RACKS, CABINETS AND SYSTEMS MUST BE PROPERLY CONNECTED TO THE INDEPENDENT GROUND BUS PER THE ANSI/TIA/EIA 607 SPECIFICATIONS. IT IS THE RESPONSIBILITY OF THE CABLE INSTALLER TO CONNECT ALL COMMON CLOSET EQUIPMENT RACKS AND CABINETS TO THE PROVIDED GROUND BUS. IT IS ALSO THE RESPONSIBILITY OF THE CABLE INSTALLERS TO REPORT TO THE NHC PROGRAM MANAGER ANY DISCREPANCIES WITH RESPECT TO IMPROPER OR OMITTED GROUNDING SYSTEMS.

CABLE LADDERS AND FASTENERS:

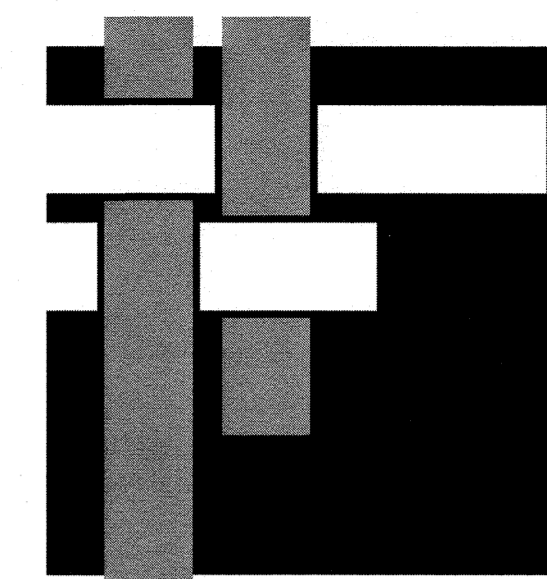
ALL CABLES INSTALLED IN OVERHEAD SPACES (SUCH AS ABOVE CEILING PANELS) SHALL BE SECURELY STRAPPED TO CEILING SLAB FASTENERS OR CABLE LADDERS THAT ARE FASTENED TO THE CEILING SLAB TO AVOID CONTACT WITH LIGHTING EQUIPMENT OR DROP CEILING SUPPORTS. WIRE MANAGEMENT CHANNELS OR CABLE LADDERS SHALL BE USED TO PROVIDE ORDERLY ARRANGEMENT OF ALL INSTALLED CABLES IN AND AROUND THE EQUIPMENT RACKS.

AS A GENERAL RULE, ALL CABLES SHALL BE SECURELY SUSPENDED, FASTENED, TIED, AND BUNDLED FIRMLY (WITHOUT DAMAGING THE CABLE JACKETS OR CREATING KINKS IN THE CABLE) TO MINIMIZE THE AMOUNT OF SPACE REQUIRED FOR CABLING AND CONFORM TO BICSI STANDARDS.

ADMINISTRATION:

LABEL CONVENTIONS SHALL APPLY TO ALL SITES, REGARDLESS OF THE NUMBER OF BUILDINGS AT THE SITE. THE INSTALLATION CONTRACTOR SHALL COMPLETE ALL TESTING OF THE CABLE PLANT. THE INSTALLATION CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL PERSONNEL, EQUIPMENT, INSTRUMENTATION, AND SUPPLIES THAT ARE NECESSARY TO PERFORM THE REQUIRED TESTING.

ALL INSTALLED COPPER CABLES SHALL BE TESTED WITH A LEVEL III CABLE TESTER TO CERTIFY THAT THE CABLE CONFORMS TO ANSI/TIA/EIA-568-B SPECIFICATIONS.



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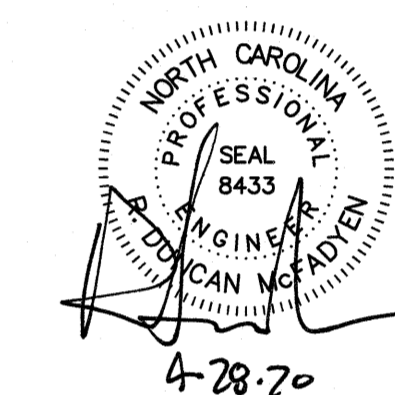
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**Hurricane
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Fire Station 12**
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Construction Drawings
23 April, 2020

Revisions:

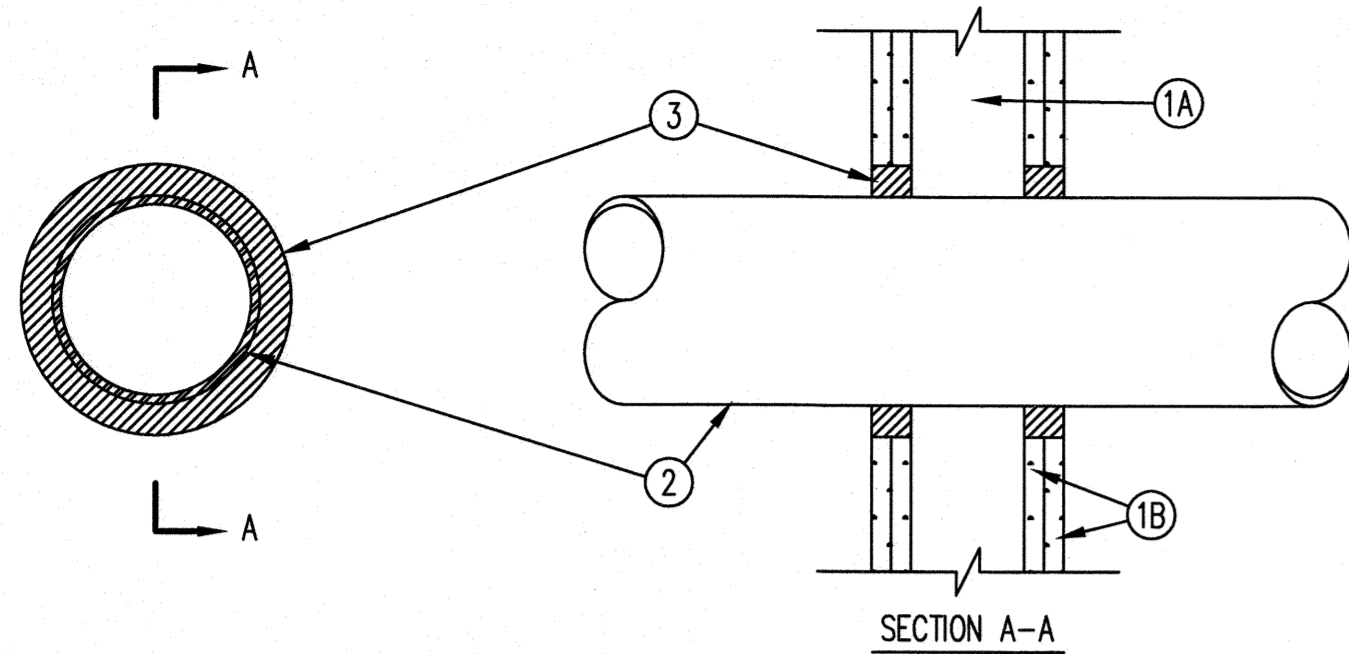
**New Hanover
County Telecom
Cabling
Guidelines**

E0.3

4 of 10

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System No. W-L-1054
 December 04, 2002
 F Ratings - 1 and 2 Hr (See Items 1 and 3)
 T Rating - 0 Hr
 L Rating At Ambient - Less Than 1 CFM/Sq Ft
 L Rating At 400 F - 4 CFM/Sq Ft



1. Wall Assembly - The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC. When steel studs are used and the diam of opening exceeds the width of stud cavity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw-attached to the steel studs at each end. The framed opening in the wall shall be 4 to 6 in. wider and 4 to 6 in. higher than the diam of the penetrating item such that, when the penetrating item is installed in the opening, a 2 to 3 in. clearance is present between the penetrating item and the framing on all four sides.

B. Gypsum Board - 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 32-1/4 in. for steel stud walls. Max diam of opening is 14-1/2 in. for wood stud walls.

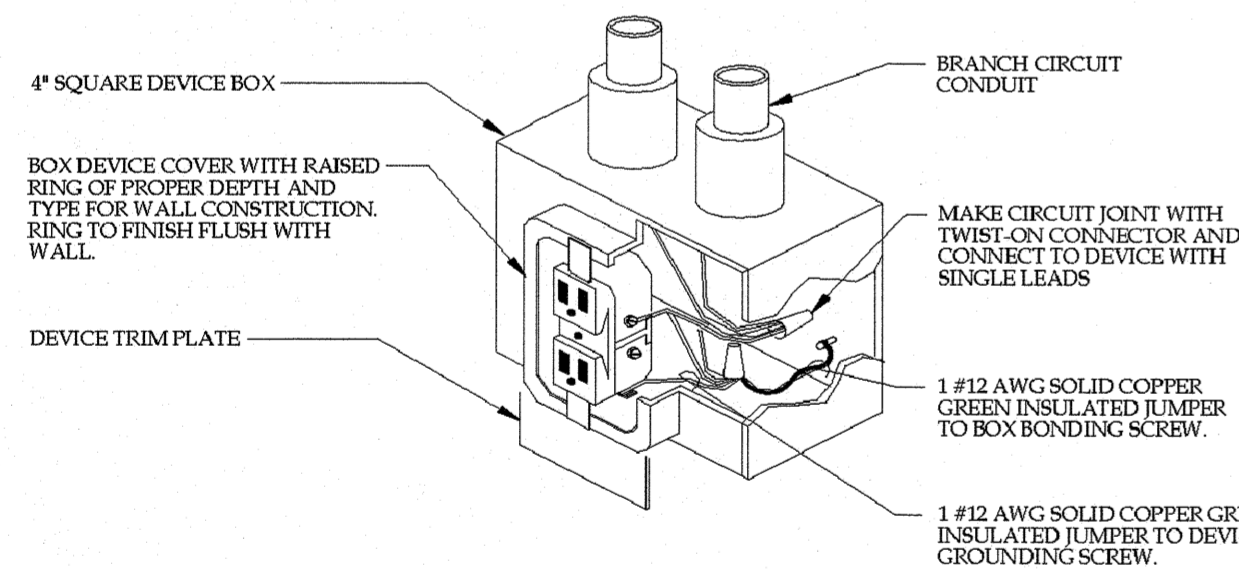
The F Rating of the firestop system is equal to the fire rating of the wall assembly.
 2. Through-Penetrants - One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space shall be min 0 in. to max 2-1/4 in. Pipe may be installed with continuous point contact. Pipe, conduit or tubing may be installed at an angle not greater than 45 degrees from perpendicular. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

- A. Steel Pipe - Nom 30 in diam (or smaller) Schedule 10 (or heavier) steel pipe.
- B. Iron Pipe - Nom 30 in. diam (or smaller) cast or ductile iron pipe.
- C. Conduit - Nom 4 in diam (or smaller) steel electrical metallic tubing or 6 in. diam steel conduit.
- D. Copper Tubing - Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.
- E. Copper Pipe - Nom 6 in. diam (or smaller) regular (or heavier) copper pipe.

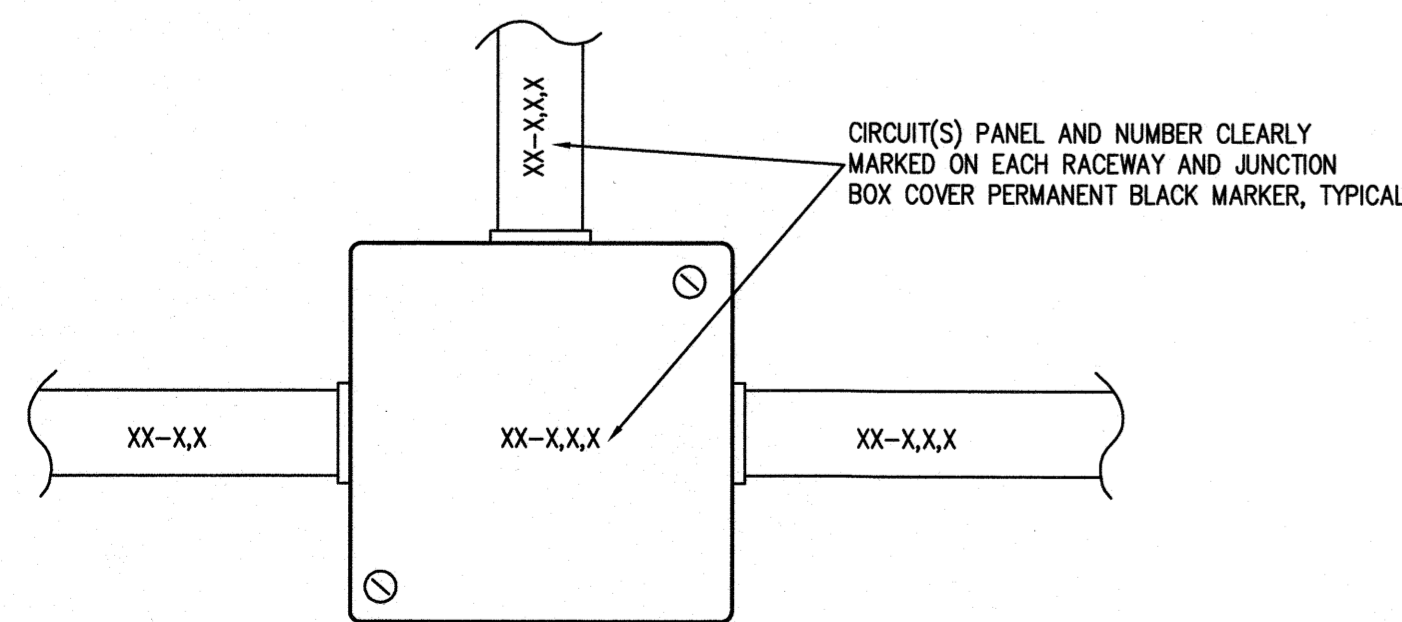
3. Fill, Void or Cavity Material - Sealant - Min 5/8 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. At the point or continuous contact locations between pipe and wall, a min 1/2 in. diam bead of fill material shall be applied at the pipe wall interface on both surfaces of wall.
 HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC - FS-One Sealant

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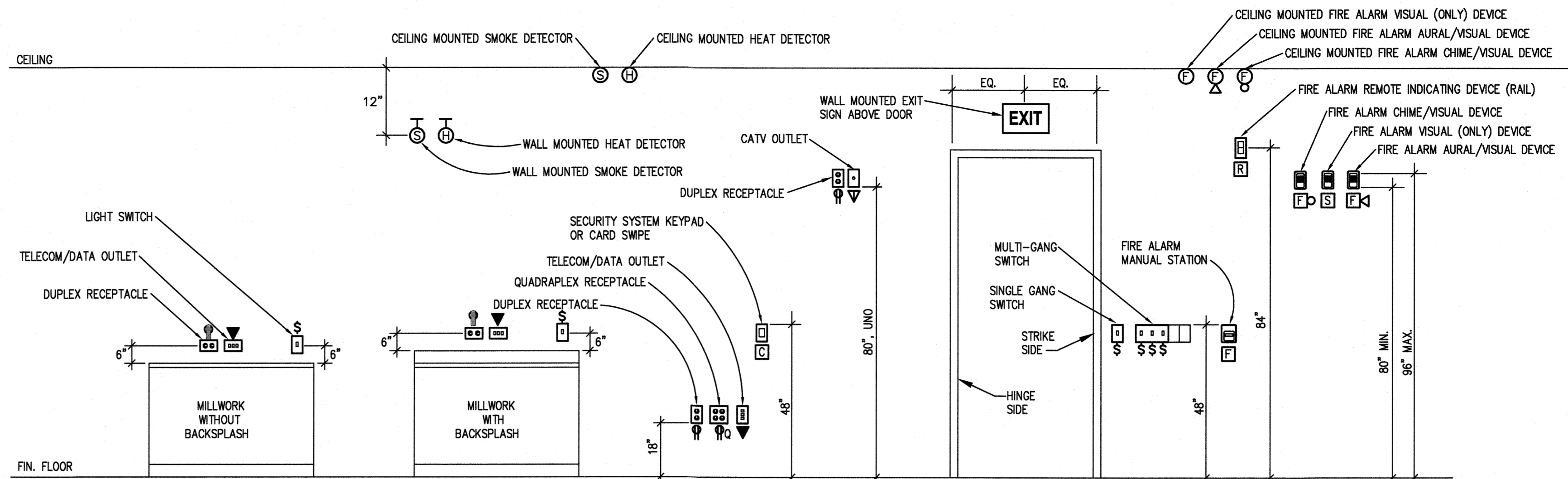
2 - 1 and 2 Hour Firewall Penetration Detail
 Not to Scale



3 - Receptacle Grounding Detail
 Not to Scale

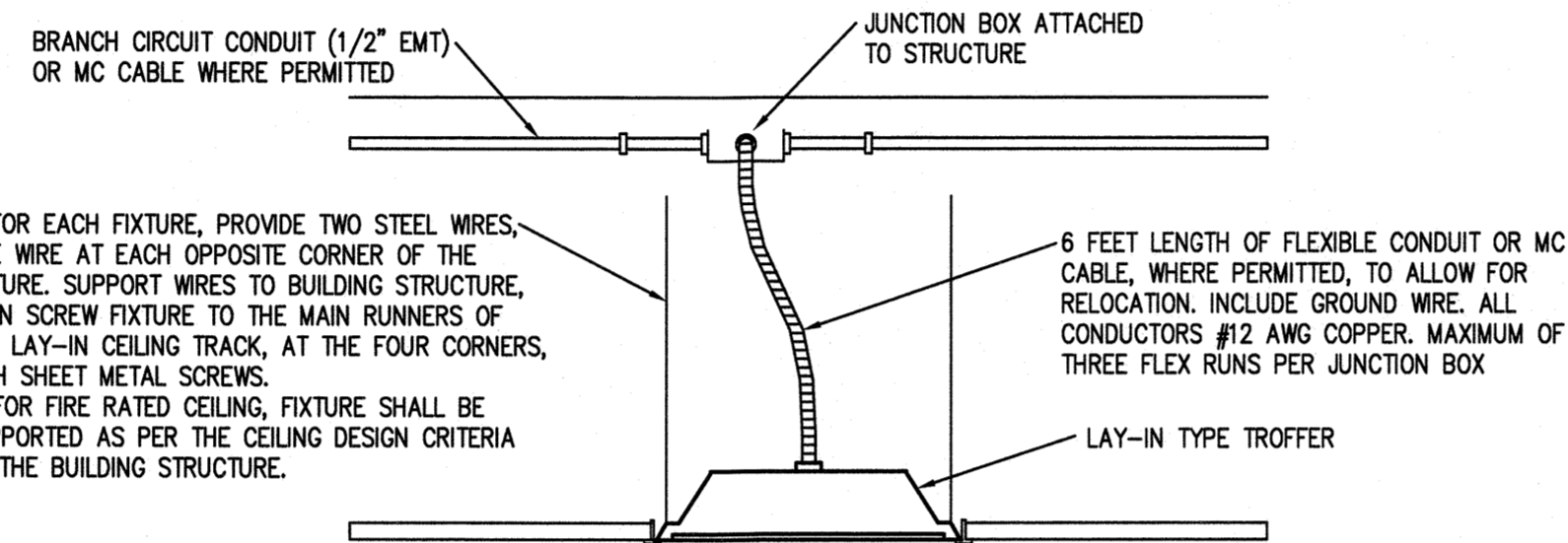


5 - Circuit Identification Detail
 NOT TO SCALE



NOTE: TELECOM/DATA OUTLETS ARE TO BE INSTALLED AT THE SAME HEIGHT AS ADJACENT RECEPTACLE, UNO

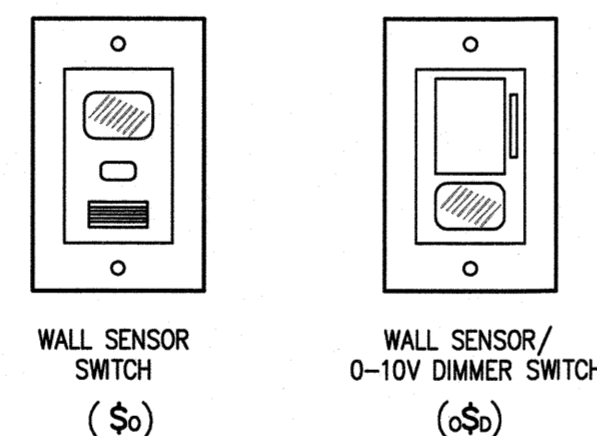
1 - Standard Device Mounting Height Detail
 Not to Scale



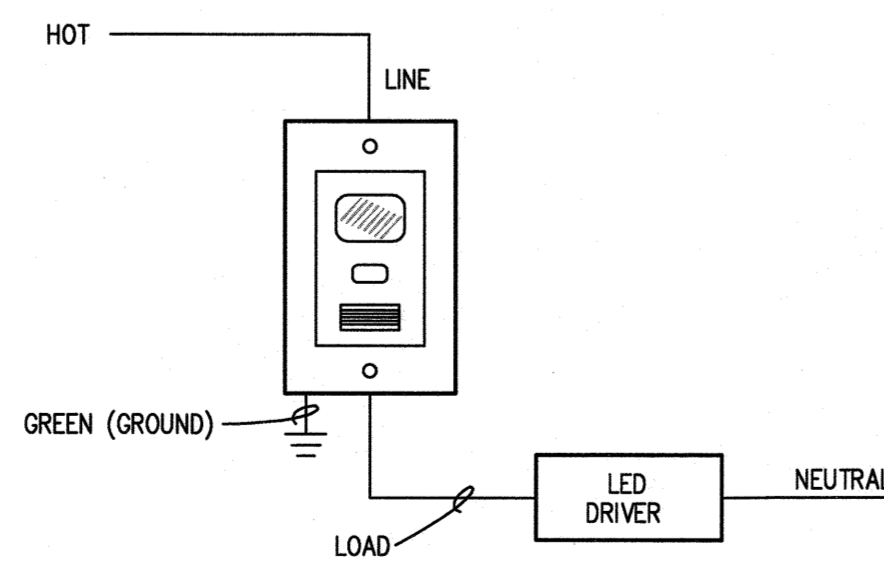
1. FOR EACH FIXTURE, PROVIDE TWO STEEL WIRES, ONE WIRE AT EACH OPPOSITE CORNER OF THE FIXTURE. SUPPORT WIRES TO BUILDING STRUCTURE, THEN SCREW FIXTURE TO THE MAIN RUNNERS OF THE LAY-IN CEILING TRACK, AT THE FOUR CORNERS, WITH SHEET METAL SCREWS.
2. FOR FIRE RATED CEILING, FIXTURE SHALL BE SUPPORTED AS PER THE CEILING DESIGN CRITERIA TO THE BUILDING STRUCTURE.

4 - Lighting Fixture Mounting and Installation Detail
 Not to Scale

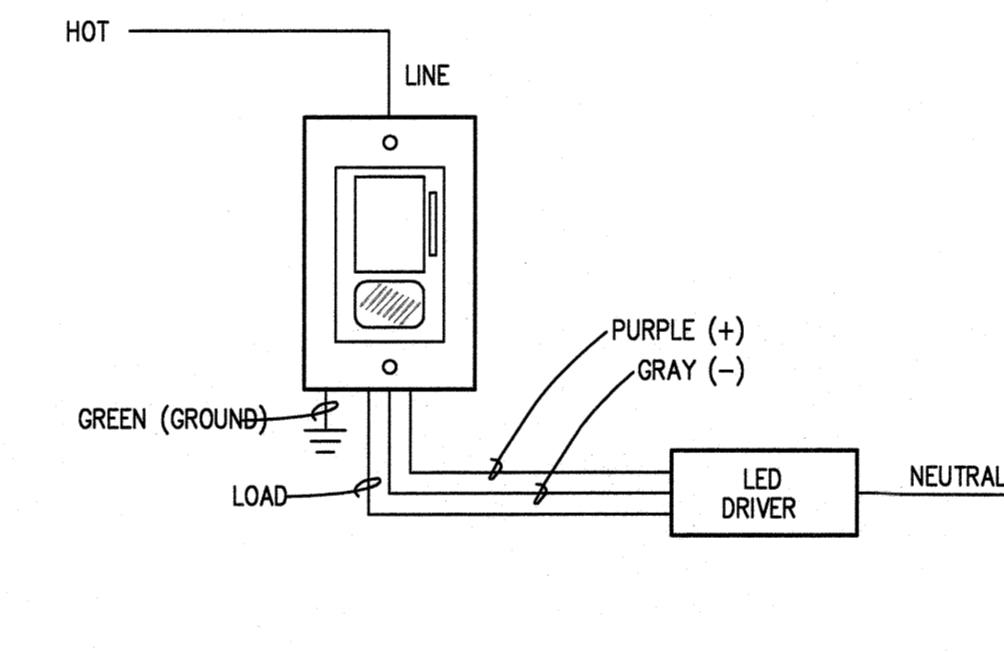
NOTE: OCCUPANCY SENSOR WIRING SCHEMATICS ARE PROVIDED TO INDICATE SWITCHING FUNCTION(S) REQUIRED. COMPONENTS AND CONNECTIONS BETWEEN COMPONENTS ARE REPRESENTATIVE ONLY AND MAY NOT BE APPLICABLE FOR ALL MANUFACTURER'S DEVICES. CONSULT ACTUAL APPROVED DEVICE MANUFACTURER APPLICATION INFORMATION AND INSTALLATION INSTRUCTIONS FOR COMPONENTS AND WIRING REQUIRED BEFORE ROUGHING IN AND INSTALLING SYSTEMS.



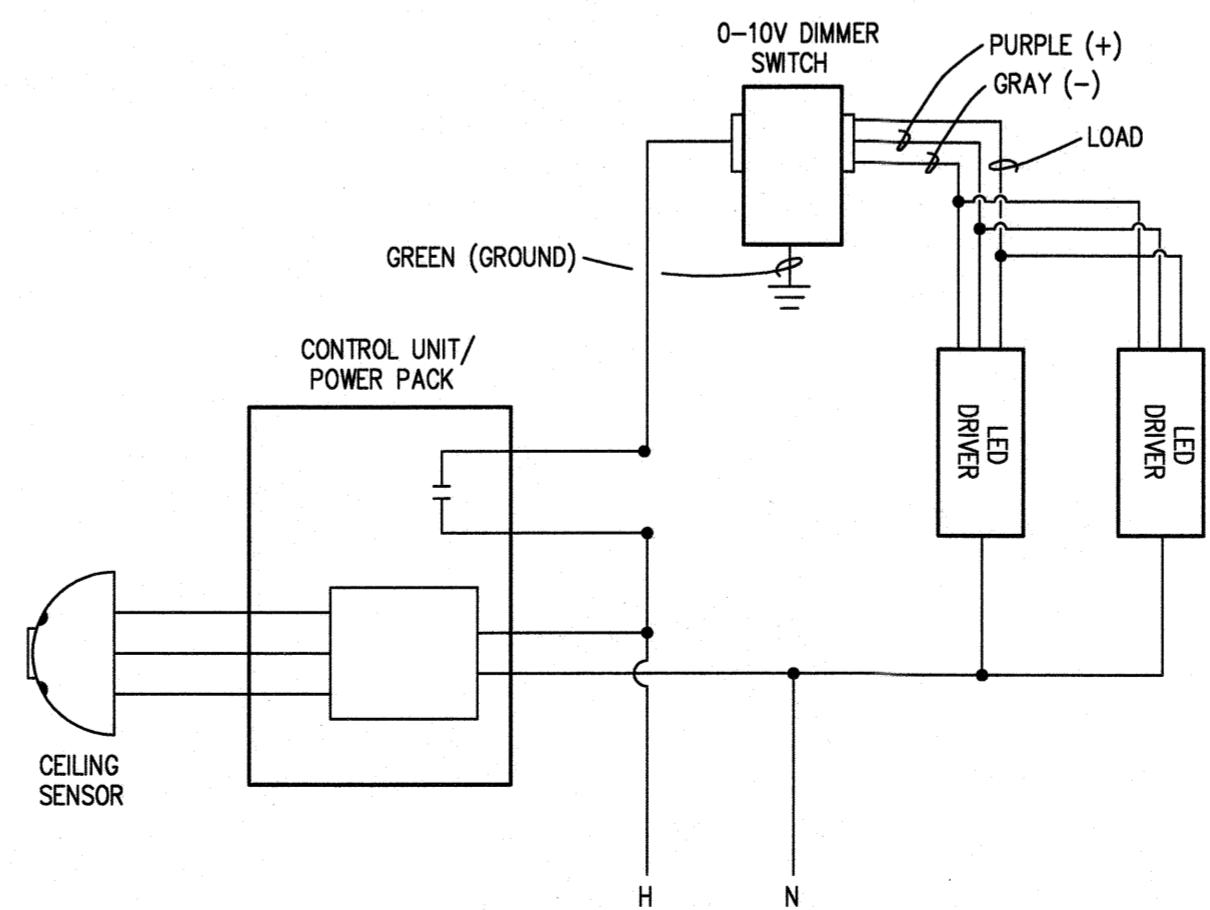
6 - Occupancy Sensor Wall Switch Plate Detail
 NOT TO SCALE



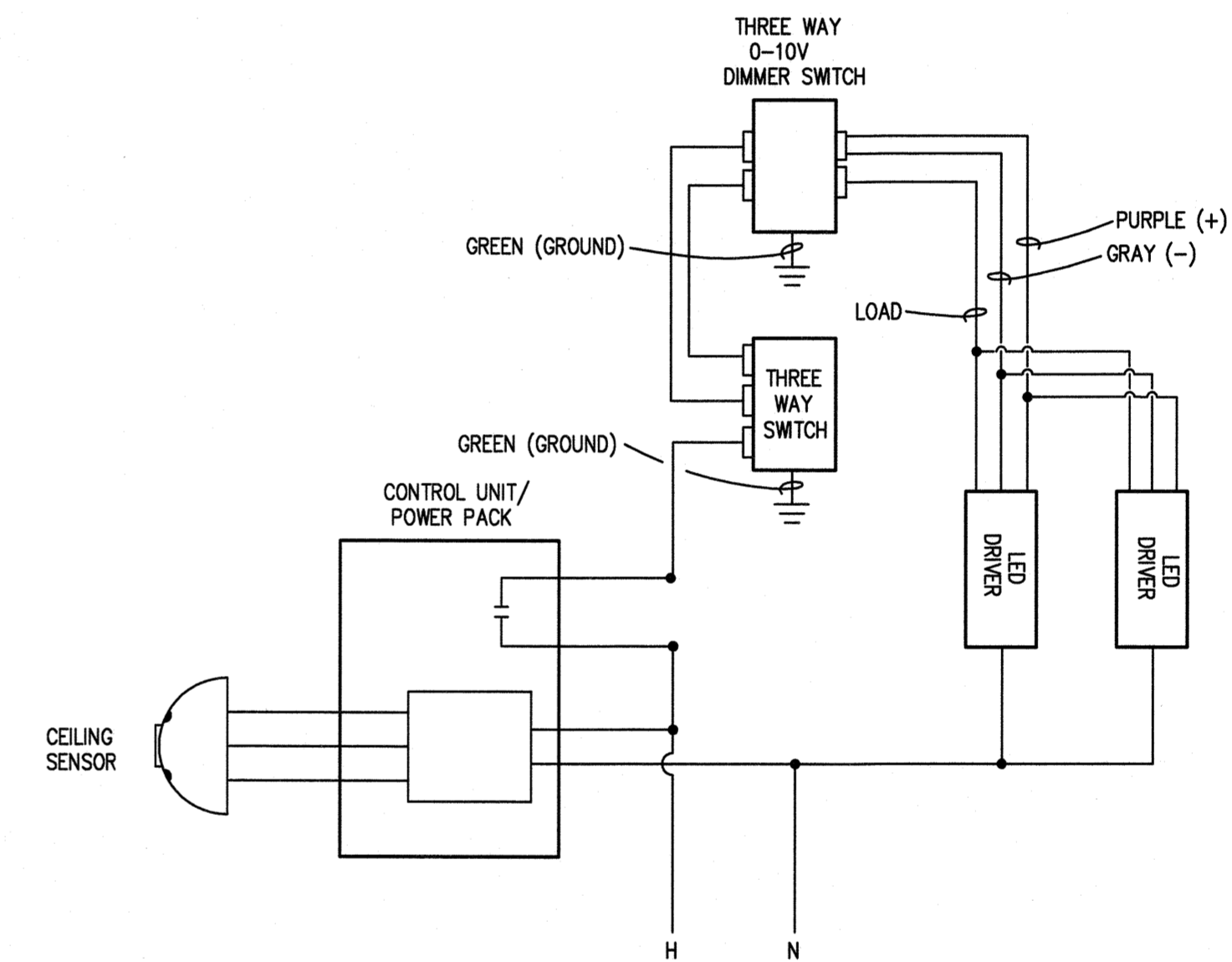
7 - Wall Box Occupancy Sensor Switch Wiring Diagram (S) (S)
 NOT TO SCALE



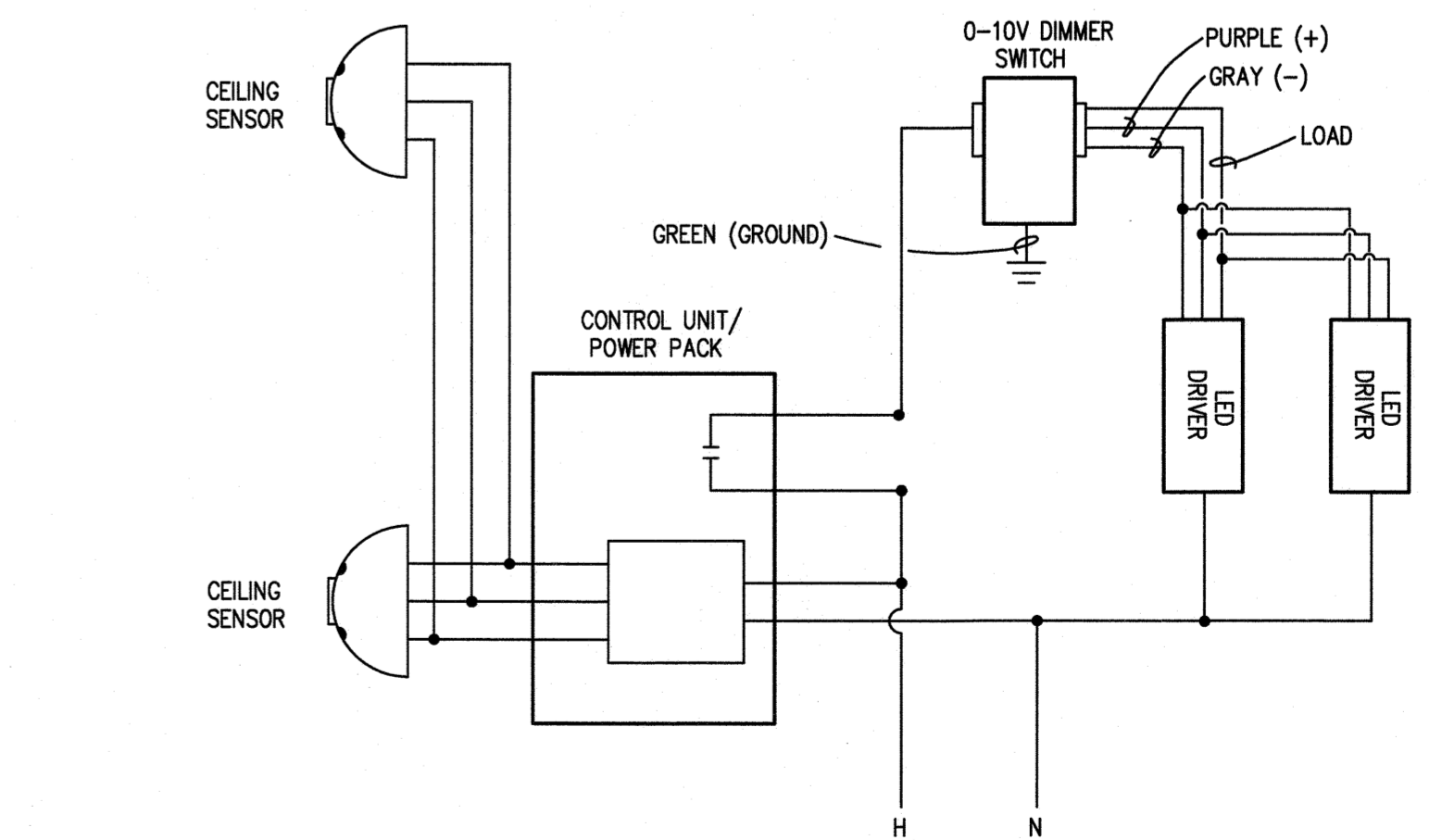
8 - Wall Box Combination Occupancy Sensor/0-10 Volt Dimmer Switch, Single Circuit Wiring Diagram (S) (S)
 NOT TO SCALE



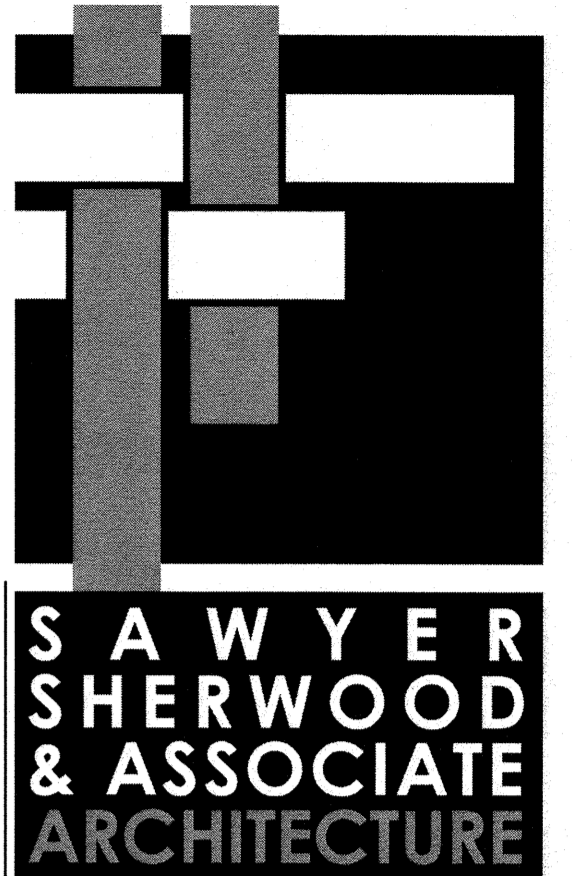
9 - Ceiling Mounted Occupancy Sensor, Wall Mounted 0-10 Volt Dimmer Switch, Single Circuit Wiring Diagram (S) (S)
 NOT TO SCALE



10 - Ceiling Mounted Occupancy Sensor, Wall Mounted Three Way, 0-10 Volt Dimmer Switch, Single Circuit Wiring Diagram (S) (S)
 NOT TO SCALE

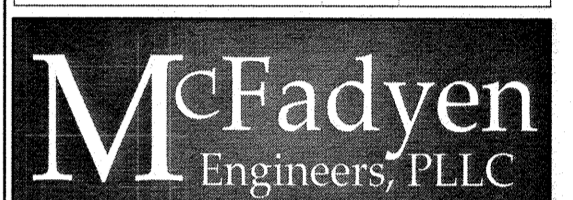


11 - Multiple Ceiling Mounted Occupancy Sensor, Wall Mounted 0-10 Volt Dimmer Switch, Single Circuit Wiring Diagram (S) (S)
 NOT TO SCALE

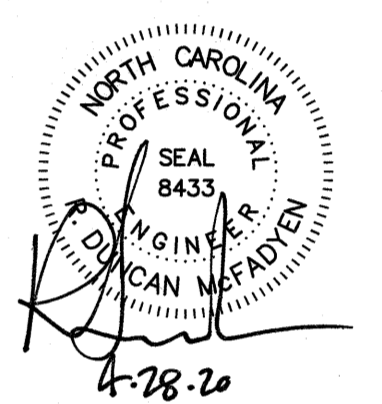


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 910 762-0892 s2a3.com

WD JONES ENGINEERING, PLLC
 Structural Engineering Services
 100 B Old Eastwood Road, Unit 24, Wilmington, NC 28403
 Office: (910) 523-3381 Email: wjeng@wdjones.com



4411 Peachtree Avenue, Suite 200
 Wilmington, NC 28403
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 23 April, 2020

Revisions:

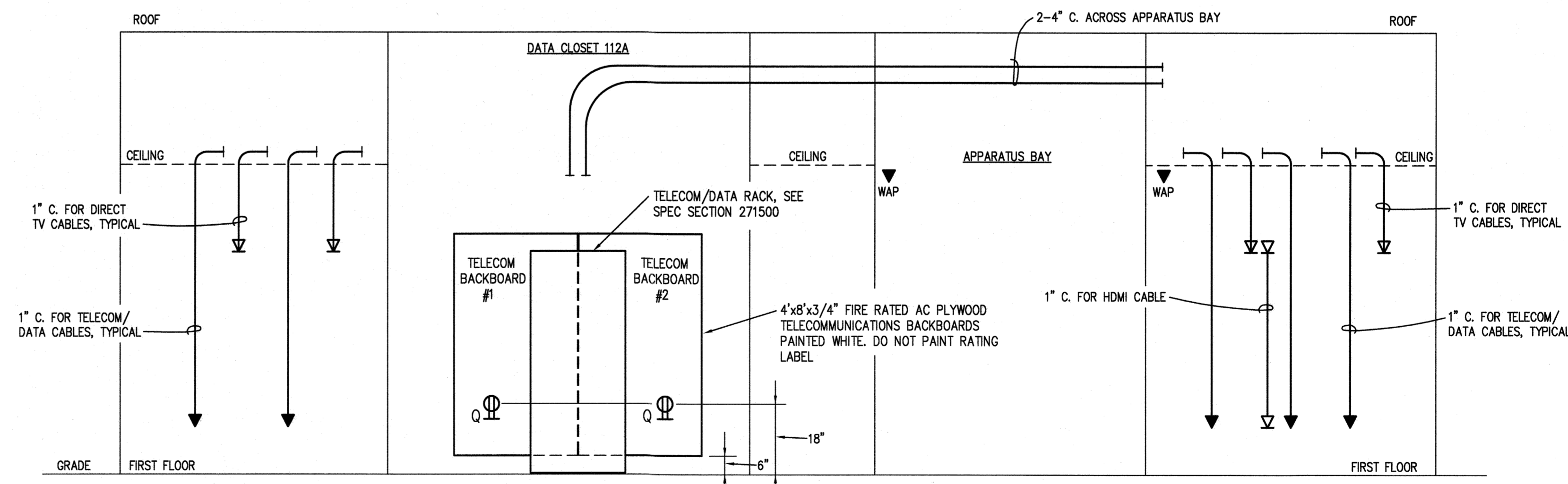
Electrical Details

E0.5

LIGHTING FIXTURE SCHEDULE

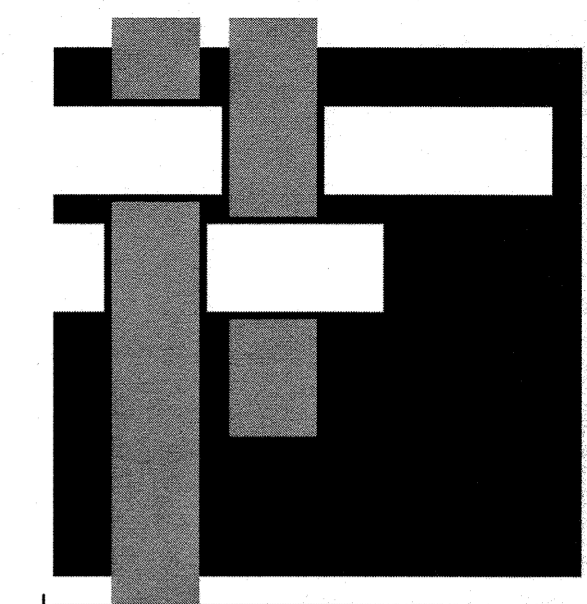
MARK	DESCRIPTION	SIZE/APERTURE	VOLTS	LAMPS	WATTS	LENS	TRIM/DOOR	TRIM COLOR	MOUNTING HEIGHT	REMARKS	MANUFACTURER
L1	LAY-IN GRID LED	2'x4'	UNIV.	8500 LUMEN 4000K LED	64	ADP DIFFUSER	FLUSH STEEL	WHITE	RECESSED GRID MOUNTED	10%, 0-10V DIMMING DRIVER	LITHONIA "2BLT" SERIES
L2	LAY-IN GRID LED	2'x4'	UNIV.	6000 LUMEN 4000K LED	36	0.125" ACRYLIC PRISMATIC	FLUSH STEEL	WHITE	RECESSED GRID MOUNTED	10%, 0-10V DIMMING DRIVER	LITHONIA "2GTL" SERIES
L3	LAY-IN GRID LED	2'x4'	UNIV.	4000 LUMEN 4000K LED	30	0.125" ACRYLIC PRISMATIC	FLUSH STEEL	WHITE	RECESSED GRID MOUNTED	10%, 0-10V DIMMING DRIVER	LITHONIA "2GTL" SERIES
L4	SURFACE MOUNTED LED WRAPAROUND	4'	UNIV.	4800 LUMEN 4000K LED	41	ACRYLIC	STEEL	WHITE	SURFACE CEILING	10%, 0-10V DIMMING, 80 CRI	LITHONIA "LBL4" SERIES
L5	RECESSED LED DOWNLIGHT	4"	UNIV.	4000 LUMEN 4000K LED	43	---	ALUMINUM	WHITE	RECESSED CEILING	L04 DOWNLIGHT APERTURE, MATTE DIFFUSE REFLECTOR, WHITE TRIM RING, 10%, 0-10V DIMMING DRIVER	LITHONIA "LDN4" SERIES
L6	RECESSED LED DOWNLIGHT	4"	UNIV.	2500 LUMEN 2700K LED	26	---	ALUMINUM	WHITE	RECESSED CEILING	L04 DOWNLIGHT APERTURE, MATTE DIFFUSE REFLECTOR, WHITE TRIM RING, 10%, 0-10V DIMMING DRIVER, WET LOCATION LISTING	LITHONIA "LDN4" SERIES
L7	RECESSED LED DOWNLIGHT	4"	UNIV.	2500 LUMEN 2700K LED	26	---	ALUMINUM	WHITE	RECESSED CEILING	L04 DOWNLIGHT APERTURE, MATTE DIFFUSE REFLECTOR, WHITE TRIM RING, 1%, 0-10V DIMMING DRIVER	LITHONIA "LDN4" SERIES
L8	WALL MOUNTED LED VANITY LIGHT	2'	UNIV.	2439 LUMEN 2700K LED	21	FROSTED ACRYLIC	EXTRUDED ALUMINUM	WHITE	SURFACE WALL OVER VANITY	FA FLAT ALUMINUM END CAPS, FIXED OUTPUT DRIVER,	COLUMBIA "CMM" SERIES
L10	RECESSED INCANDESCENT DOWNLIGHT	4"	120	60 LUMEN MIN. 3000K LED	8	---	ALUMINUM	"PF" WHITE FLANGE	RECESSED CEILING	"ORA19" OPEN REFLECTOR, "CD" CLEAR DIFFUSE REFLECTOR. PROVIDE WITH RED A19, MEDIUM SCREW BASE LED LAMP, 60 LUMEN, 3000K, 8 WATT, 60 WATT INCANDESCENT EQUIVALENT VR STYLE, INTEGRAL PHOTO CONTROL, SET AT 25% LUMEN OUTPUT, WET LOCATION LISTING	INDY "A4" SERIES
L11	RECESSED WALL MOUNTED LED NIGHT LIGHT	5.6" x 3.7"	UNIV.	38 LUMEN LED AMBER 600 nm LED	3.3	PEARLESCENT POLYCARBONATE	DIE CAST ALUMINUM	MATTE WHITE	RECESSED WALL, 14" AFF	---	KENALL "MCSL" SERIES
L12	WALL MOUNTED LED	4"	UNIV.	4146 LUMEN 3500K LED	38	ACRYLIC PRISMATIC	---	WHITE	WALL OVER DOOR	---	LITHONIA "ODS" SERIES
L13	WALL MOUNTED LED	7.5" x 8"	UNIV.	1289 LUMEN 5000K LED	14	GLASS	CAST ALUMINUM	BRONZE	WALL, FIELD VERIFY MOUNTING HEIGHT	WET LOCATION LISTING	LITHONIA "OLWX1" SERIES
X1	EXIT LIGHT	---	UNIV.	RED LED	5	---	POLYCARBONATE	WHITE	FLUSH CEILING	RED LED, 6" LETTERS, SINGLE OR DOUBLE FACE UNITS AND CHEVRONS AS INDICATED, INTERNAL 90 MINUTE BATTERY BACKUP, SELF DIAGNOSTICS	LITHONIA "LOM" SERIES
E1	EMERGENCY LIGHT	---	UNIV.	2 - 1.5W LED	3	---	POLYCARBONATE	WHITE	WALL / 7'-6"	INTERNAL 90 MINUTE BATTERY BACKUP, SELF DIAGNOSTICS	LITHONIA "ELM2 LED" SERIES

NOTES:
 1. ACRYLIC PRISMATIC LENSES SHALL BE 0.125" NOMINAL MINIMUM THICKNESS.
 2. ALL EXIT AND EMERGENCY FIXTURES SHALL COMPLY WITH NCSBC STANDARDS AND HAVE AUTOMATIC TESTING DEVICES.
 3. SEE SPECIFICATIONS SECTIONS 265100 AND 265200 FOR ADDITIONAL REQUIREMENTS.
 4. LIGHTING FIXTURES HAVE BEEN SELECTED AND SPECIFIED TO ACHIEVE REQUIRED/DESIRED ILLUMINATION LEVELS AND OTHER CHARACTERISTICS IN THEIR RESPECTIVE AREAS. SPECIFIED FIXTURES HAVE SPECIFIC CHARACTERISTICS WHICH MAY CREATE UNIQUE ILLUMINATION RESULTS ESSENTIAL TO THE PROJECT. LIGHTING FIXTURES PROVIDED SHALL MEET THE AESTHETICS, DETAILS, AND SPECIFICATIONS STATED ABOVE AND IN THE DIVISION 26 SPECIFICATIONS, AND MOUNTING HEIGHTS AND SPACINGS SHOWN ON THE DRAWINGS. ANY DEVIATIONS FROM THE SPECIFIED FIXTURES SHALL DEEM ALL PARTIES IN THE SUPPLY CHAIN AND CONTRACTOR RESPONSIBLE FOR PROVIDING DETAILED COMPARISONS OF THE SPECIFIED FIXTURE AND THE PROPOSED FIXTURE FOR ARCHITECT AND ENGINEER REVIEW IN DETERMINING EQUALITY. PROVIDE COMPLETE POINT BY POINT ILLUMINATION STUDIES FOR ALL SUBSTITUTIONS.
 5. SUBSTITUTIONS MAY BE APPROVED BY THE ARCHITECT AND ENGINEER IF THEY ARE JUDGED TO BE EQUAL TO THE SPECIFIED FIXTURES. "EQUAL" MAY INCLUDE, AT THE SOLE DISCRETION OF THE ARCHITECT AND ENGINEER, LENS MATERIAL AND CHARACTERISTICS, COLORS, REFLECTORS, HOUSING MATERIAL AND CONFIGURATION, FINISHES, PHOTOMETRICS, EFFICIENCY, OPTIONS, FUNCTIONALITY, ETC.



NOTES: 1. RISER DIAGRAM IS DEPICTIVE (FUNCTIONAL) ONLY. ALL DEVICES ARE NOT SHOWN.
 2. TELECOM/DATA, DIRECT TV AND HDMI CABLES ARE NOT SHOWN FOR CLARITY

1 - Functional Telecommunications/CATV Riser Diagram
 NOT TO SCALE



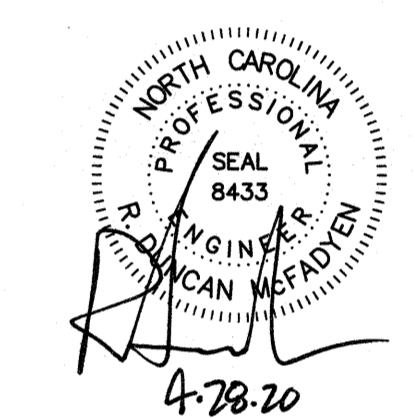
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 910 762-0892 s2a3.com

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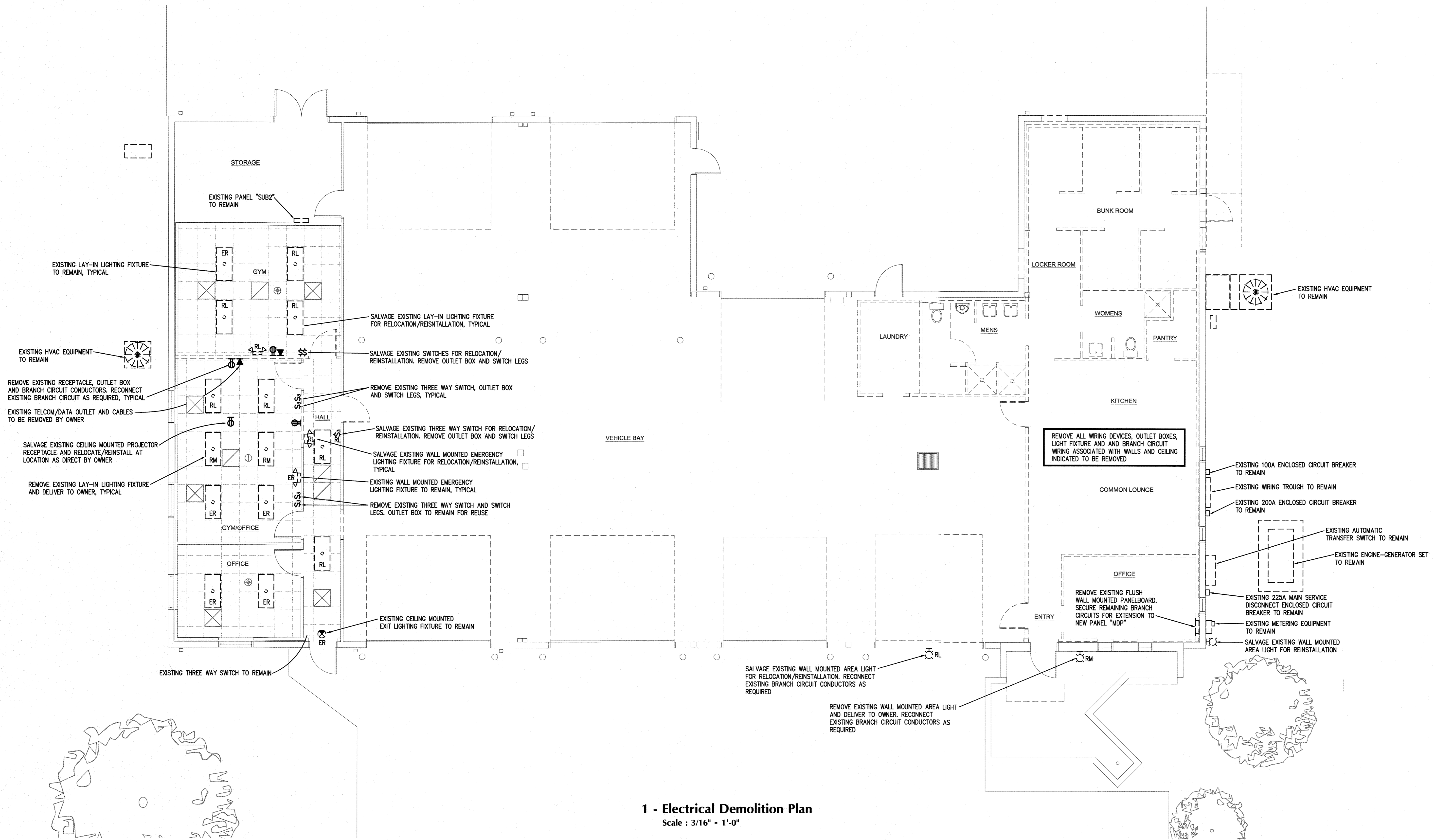
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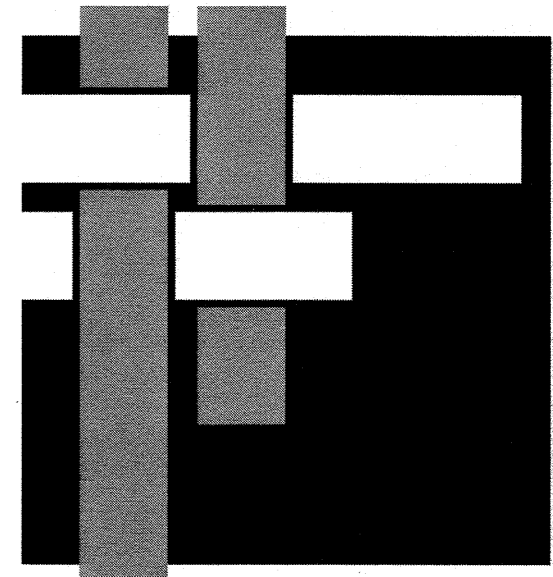
Revisions:

Lighting Fixture
 Schedule and
 Electrical Details

E0.6



1 - Electrical Demolition Plan
Scale : 3/16" = 1'-0"



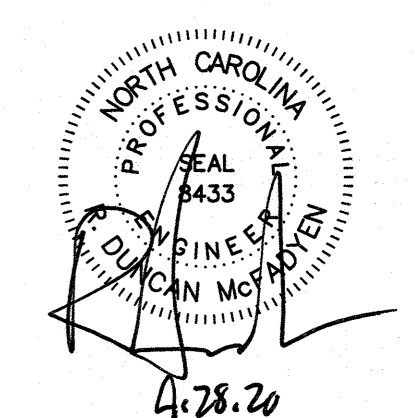
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McFadyen
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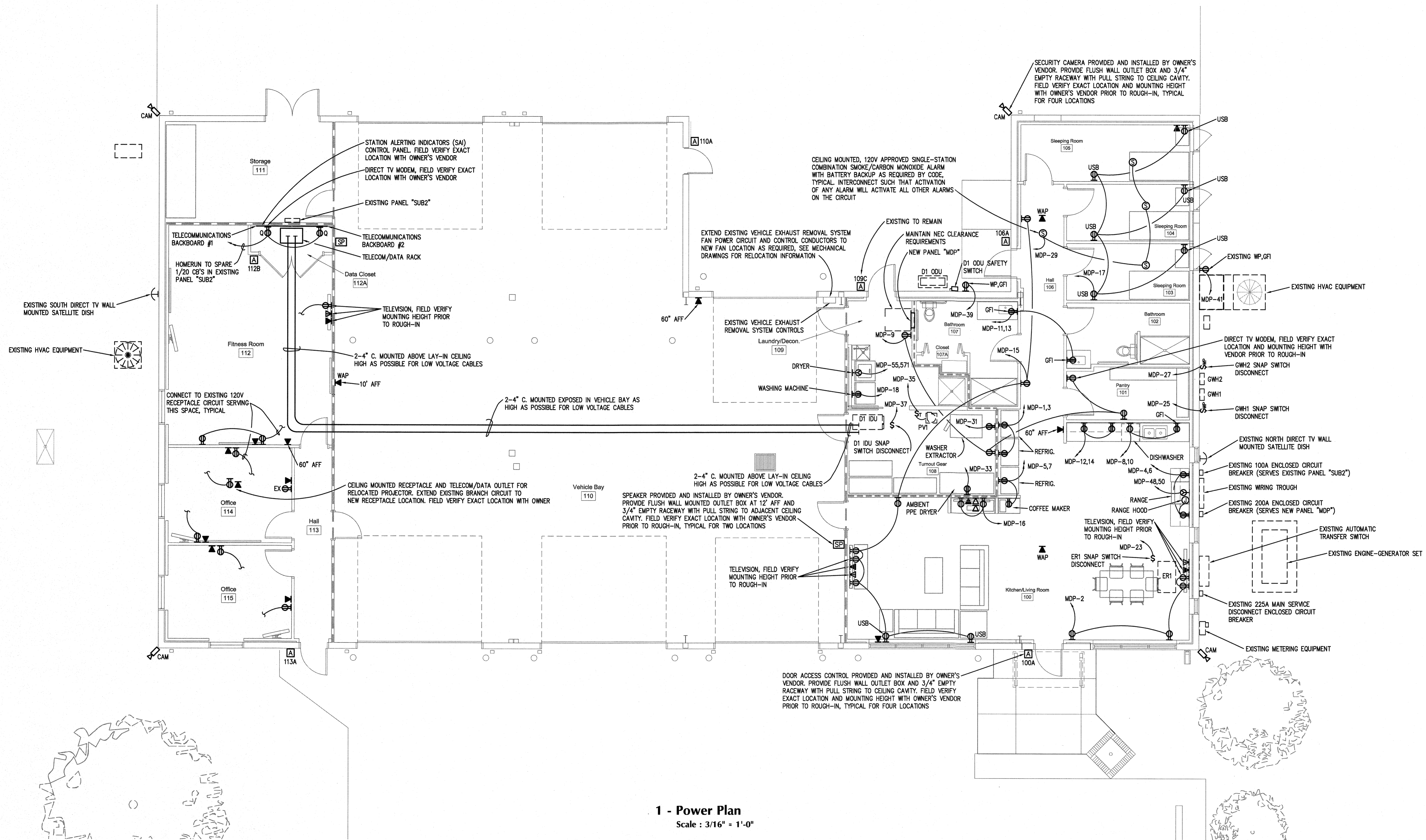
**Hurricane
Florence Repairs
New Hanover
County
Fire Station 12**
3805 US-421
Wilmington, NC

Construction Drawings
23 April, 2020

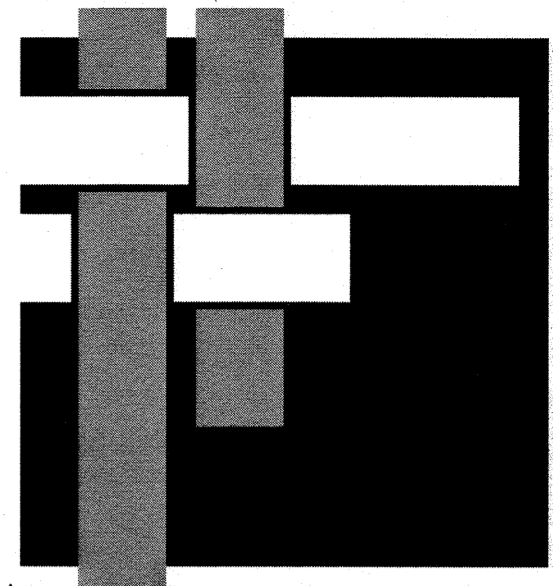
Revisions:

Electrical
Demolition Plan

E1.0



1 - Power Plan
Scale : 3/16" = 1'-0"



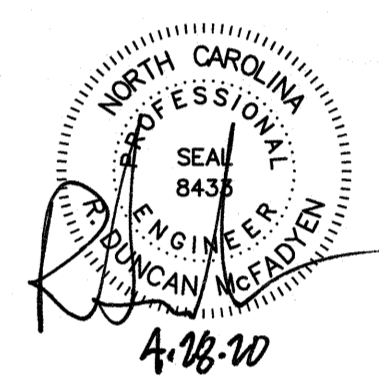
**SAWYER
SHERWOOD
& ASSOCIATE
ARCHITECTURE**

124 Market St, Wilmington, NC 28401
910 762-0892 s2a3.com

WD JONES ENGINEERING, PLLC
Structural Engineering Service
100 B Old Eastwood Road, Unit 24, Wilmington, NC 28403
Office: (910) 523-5381 Email: wdjones@wdjones.com

McFadyen
Engineers, PLLC

4411 Peachtree Avenue, Suite 200
Wilmington, NC 28403
Office: (910) 399-1123



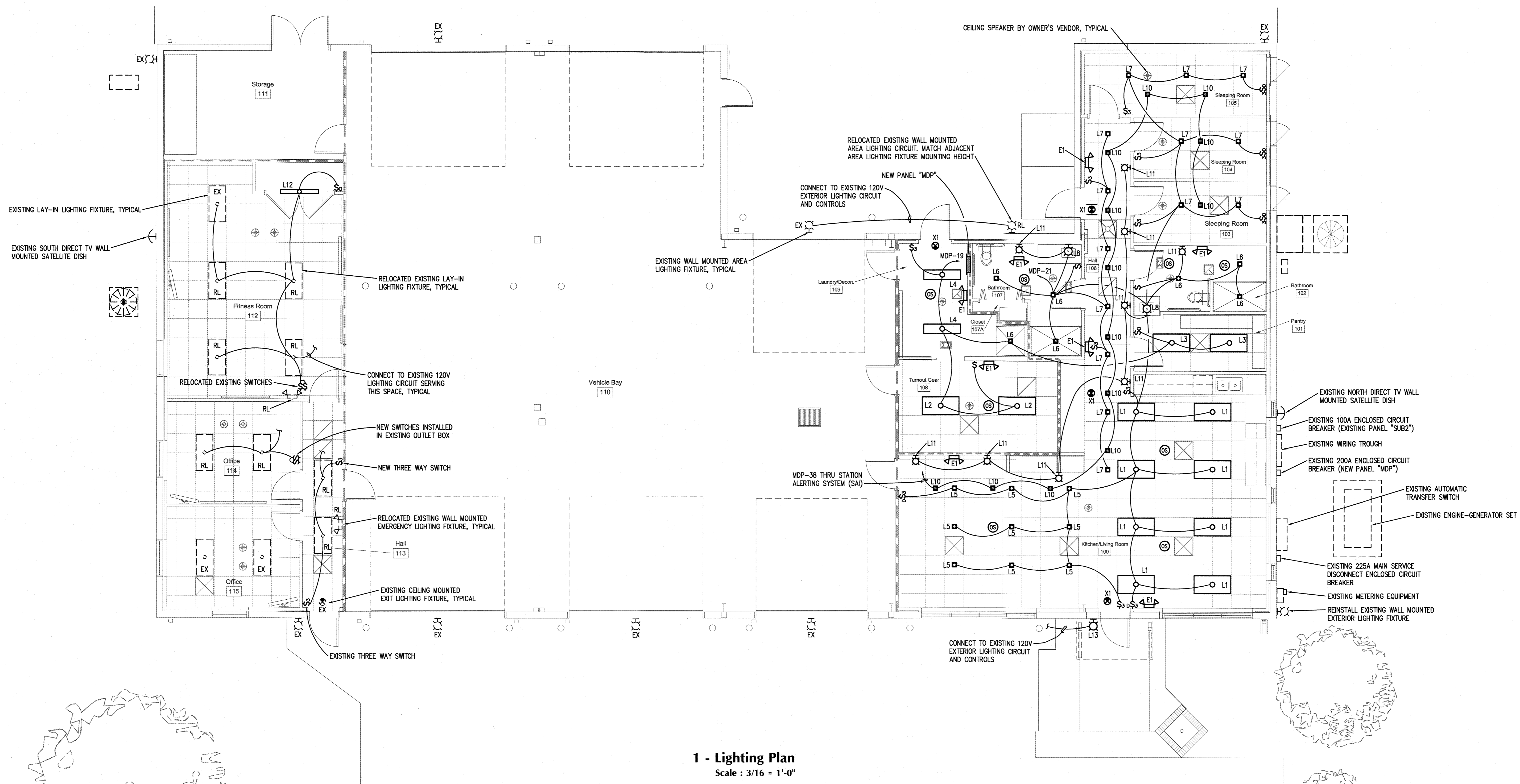
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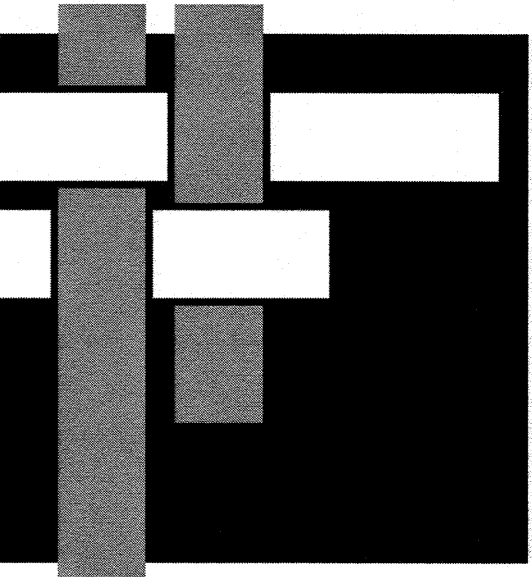
Revisions:

Power Plan

E2.0



1 - Lighting Plan
 Scale : 3/16 = 1'-0"



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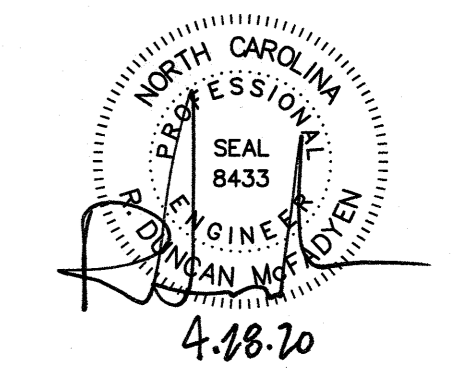
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 Office: (910) 599-1123



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Construction Drawings
 23 April, 2020

Revisions:

Lighting Plan

E3.0