New Classroom Addition for

# North Duplin Jr.-Sr. High School

Duplin County Schools

1388 NC-403, Mt Olive, North Carolina 28365

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#### **ABBREVIATIONS** ABOVE FINISH FLOOR JT JOINT ANCHOR BOLT MAS MASONRY B/B BACK TO BACK (CURB) BOARD BRICK COURSE MECHANICAL CONTRACTOR MT METAL THRESHOLD CAST IRON MT MARBLE THRESHOLD CATCH BASIN CEILING CEILING TILE NOT IN CONTRACT CHALKBOARD NTS NOT TO SCALE CONSTRUCTION JOINT OPG OPENING CORNER GUARD PC PLUMBING CONTRACTOR CORRUGATED METAL PIPE CONT. CONTINUOUS PL PLATE C & R CURTAIN & ROD PT PRESSURE TREATED C & T CURTAIN & TRACK RADIUS REF REFERENCE DIMENSION RENIF REINFORCED RCP REINFORCE CONCRETE PIPE DOWNSPOUT DRAWER EACH ELECTRICAL CONTRACTOR EWC ELECTRIC WATER COOLER ELEV ELEVATION EQ EQUAL EXISTING TO REMAIN SHTG SHEATHING EXPOSED, EXPANSION FACE TO FACE (CURB) FIRE EXTINGUISHER FIRE HOSE CABINET TYP TYPICAL TJC TYPICAL CONTROL JOINT FLOOR DRAIN UON UNLESS OTHERWISE NOTED VB VAPOR BARRIER

GENERAL CONTRACTOR

HM HOLLOW METAL

INSUL INSULATION

HORIZONTAL

VCT VINYL COMPOSITION TILE

IT-101

WC WATER CLOSET
WWF WELDED WIRE FABRIC

# DRAWING SYMBOLS DRAWING IDENTIFICATION MARKERS 201.1 DRAWING NUMBER SHEET NUMBER SECTION MARKER ELEVATION (DRAWINGS) 123 DOOR MARKER/NUMBER HIDDEN LINE OR ABSTRACT LINE LINE ABOVE

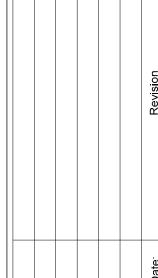
----- CENTERLINE

MA <sup>-</sup>	TERIAL SYMBOLS
	EARTH
	SAND
	MORTAR OR GROUT
	CONCRETE
	BRICK
	CONCRETE MASONRY UNIT
	STEEL
	ROUGH WOOD (CONTINUOUS)
	ROUGH WOOD (INTERMITTENT)
	FINISH WOOD
<i>4-1111-11</i> , <i>11-111</i> , <i>11-111</i> ,	PLYWOOD
	BATT OR BLOWN INSULATION
	RIGID INSULATION
	METAL STUD / GYPBOARD WALL

# DRAWING INDEX

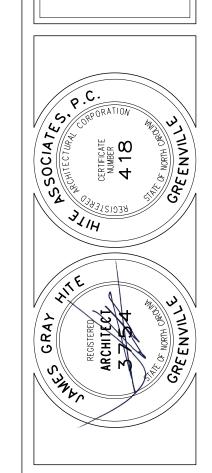
T-1	INDEX
BCS-001	BUILDING CODE SUMMARY
LS-001	LIFE SAFETY PLAN / ROOF PLAN
FRA-001	FIRE RATED ASSEMBLIES
FRA-002	FIRE RATED ASSEMBLIES
FRA-003	FIRE RATED ASSEMBLIES
A-001	SITE DEMOLITION PLAN
A-002	SITE PLAN
A-003	ROOF PLAN
A-101	FLOOR PLAN / FINISH SCHEDULES & DETAILS
A-102	INTERIOR - EXTERIOR ELEVATIONS
A-103	ENLARGED TOILET PLANS / INTERIOR ELEVATIONS
A-201	BUILDING SECTIONS
A-202	WALL SECTIONS
A-203	WALL SECTIONS
S-101	FOUNDATION PLAN
S-102	PLATFORM FRAMING PLAN / ROOF FRAMING PLAN
S-1101	STRUCTURAL DETAILS
S-1201	STRUCTURAL GENERAL NOTES
P-101	PLUMBING PLAN / SCHEDULES / NOTES
M - 0 0 1	MECHANICAL DETAILS / GENERAL NOTES
M - 101	MECHANICAL PLAN / SCHEDULES
E-001	ELECTRICAL GENERAL NOTES / SCHEDULES / DETAILS
E-101	POWER PLAN / LIGHTING PLAN / PANEL SCHEDULES
FA-101	FIRE ALARM PLAN / DETAILS / GENERAL NOTES

TECHNOLOGY PLAN / DETAILS / GENERAL NOTES









New Classroom Addition for hoplin Jr.-Sr. High School

Project No.
22253

Date:
6 March 2023

Drawing no.

# **Building Code Summary New Classroom Building**

			31119		
Name of Project: Ne	ew Classroom Addition	for North Duplin JrSr. Hid	gh School		
Address: 13	388 W. NC 403 Hwy., M	t. Olive, NC 28365			
Proposed Use: <u>Ec</u> Owner or Authorized A	ducation	Phone No. (252)	757-0333		00.00
Owned by:	X City/Cou				<u> </u>
Code Enforcement Jur	isdiction: City	X County	Sto	ıte	
LEAD DESIGN PR	ROFESSIONAL:	James G. Hite, AIA			
Designer	Firm	Name	License #	Telephone #	e-mail
Architectural	Hite Associates	James G. Hite, AIA		(252) 757-0333	jgh@hiteassoc.com
Civil	Rivers & Associates	Stephen J. Janowski, P.E.		(252) 714-3002	sjanowski@riversandassociates.com
Electrical Fire Alarm	Engineering Source Engineering Source	Wilson Pou, P.E. Wilson Pou, P.E.		(252) 439-0338 (252) 439-0338	Wilson@engrsource.com Wilson@engrsource.com
Plumbing	Engineering Source	Wilson Pou, P.E.		(252) 439-0338	Wilson@engrsource.com
Mechanical	Engineering Source	Wilson Pou, P.E.	NC 021993	(252) 439-0338	Wilson@engrsource.com
Sprinkler-Standpipe	NA				
Structural	Queen Engineering	Bruce Queen, P.E.	NC 018991	(919) 420-0480	bruce@qedpa.net
Retaining Walls>5' High Other	NA NA				
2018 NC BUILDING	G CODE:	X New Building Addition	Shell / Co	ore 1st Construction - She	Time Interior Completions
2018 NC EXISTING	BUILDING CODE:	Prescriptive	Alteration	Level I Hist	oric Property
		Repair Chapter 14	☐ Alteration☐ Alteration	<del></del>	nge of Use
CONSTRUCTED	CURRENT US	E			
RENOVATED	PROPOSED U	SE			
OCCUPANCY CATI	EGORY (TABLE 160	4.5): CURRENT:	P	ROPOSED:	
BUILDING DATA					
Construction Type:	☐ I-A ☐ II-A	□ III-A □ IV	V - A		
	☐ I-B ☐ II-B	□ III-B	X V-B		
Mixed Cor Sprinklers:	nstruction: X No	Yes Types			
Ground Floor	X No Yes	Partial NFPA 13	NFPA 13	R NFPA 13D	
Equipment Platform	☐ No <b>X</b> Yes	Partial NFPA 13	NFPA 13	R NFPA 13D	
Standpipes:	X No Yes	Class	□ III □ Wet	Dry	
Fire District:	No X Yes		rd Area: 🗶 No	Yes	
Building Height:	Feet: 16'	Number of Stories: 1			
Special Inspections Red	quired: No	X Yes			
Gross Building Area:					
Floor	Existing (SQ FT)	New (SQ FT)	Sub-Tot	<u>:al</u>	
Equipment Platform  Third Floor					
Second Floor					
First Floor		4,651			
		4,651			
		,,,,			
ALLOWABLE AREA Primary Occupancy:	4				
Assembly	A-1 A-2 Business	A-3 A-4	A-5		
	X Educational				
Factory	F-1 Moderate	F-2 Low			
Hazardous	H-1 Detonate		-3 Combust	H-4 Health	H-5 HPM
Institutional			4	5	
	Mercantile			_	
Residential	□ R-1 □ R-2	□ R-3 □ R-4			

Residential R-1 R-2 R-3 R-4

Accessory Occupancy Classification(s): <u>S-1</u>

Special Uses (Chapter 4 - List code Sections): NA Special Provisions (Chapter 5 - List code Sections): NA

Incidental Uses (Table 509): <u>NA</u>

Utility and Miscellaneous

This Separation is not exempt as a Non-Separated Use (see exceptions)

Storage S-1 Moderate S-2 Low High-Piled

For	oarated Use (5 each story, the each use divide	ne area o	f the occu	pancy shall b	e such tha	t the sum of t e shall not exce	the rated	ios of t	he actua	floor
Ac	tual Area of Oc	cupancy A	<u>Д</u> + -	Actual Area o	f Occupanc	у В <u> </u>	1			
Allow	able Area of C	)ccupancy	A All	owable Area	of Occupar	ncy B	·			
	0				0		0 <	1.00		
	0		·		0	-	0 7	1.00		
STOR'	/ DESCRIF		(A) BLDG AF PER ST( (ACTUA	DRY TABLI	(B) E 506.2 REA <sub>4</sub>	(C) AREA FOR OPEN SPACE INCREASE 1,5	AR	(D) OWABLE EA OR LIMITED 2	2,3	
1	Educat	ional	4,65		500	INONE/ISE /		,500	<u>.                                    </u>	
<ul><li>2 Unlim</li><li>3 Maxin</li><li>4 The tower</li></ul>	rs must comply	cable und rea = tot of parkir with 412	er conditio al number on ag garages 2.3.1.	ns of Section of stories in must comply	the building with 406	.5.4. The maxir	mum (	area of	air traffi	: conti
<ul><li>2 Unlim</li><li>3 Maxin</li><li>4 The tower</li><li>5 Front</li></ul>	ited area appli num Building A maximum area	cable undo rea = tot of parkin with 412 s based o	er conditio al number on ag garages 2.3.1.	0 (W)  ns of Section  of stories in  must comply  prinkled area	the building with 406 value in T	.5.4. The maxir	mum (			e conti
2 Unlim 3 Maxin 4 The tower 5 Front ALLC	ited area applionum Building Amaximum area rs must comply age increase i	cable under of parking with 412 s based of	er conditio al number on ng garages 2.3.1. on the uns	O (W)  ns of Section of stories in must comply prinkled area	the building with 406 value in T	SHOWN		cc	air traffi DDE RENCE	e contr
2 Unlim 3 Maxim 4 The tower 5 Front ALLC Build	ited area applionum Building Amaximum area is must comply age increase in age	cable under of parking with 412 s based of EIGHT	er conditional number of all numbers	O (W)  ns of Section of stories in must comply prinkled area  ALLOWA	the building with 406 value in T	SHOWN ON PLANS		cc	DDE	e conti
<ul><li>2 Unlim</li><li>3 Maxin</li><li>4 The tower</li><li>5 Front</li><li>ALLO</li><li>Build</li></ul>	ited area applionum Building Amaximum area rs must comply age increase i	cable under of parking with 412 s based of EIGHT	er conditional number of all numbers	O (W)  ns of Section of stories in must comply prinkled area	the building with 406 value in T	SHOWN		cc	DDE	e con
2 Unlim 3 Maxir 4 The tower 5 Front ALLO Build Buildi FIRE	ited area applionum Building Amaximum area is must comply age increase in age	cable under rea = tot of parkin with 412 s based of EIGHT	er conditional number of all numbers of all	0 (W) ns of Section of stories in must comply prinkled area  ALLOWA Feet Stories	the building with 406 value in T  BLE  75  3	SHOWN ON PLANS 16 1 DESIGN NO. FOR RATED	DESI	cc	DDE	c cont

Mixed Occupancy: No X Yes Separation:

BUILDING	FIRE	F	RATING	DETAIL NO.	DESIGN NO.	DESIGN NO.	DESIGN
ELEMENT	SEPARATION DISTANCE (FEET)	REQ'D	PROVIDED (W/ * REDUCTION)	AND SHEET NO.	FOR RATED ASSEMBLY	FOR RATED PENETRATION	NO. FOR RATED JOIST
Structural frame, including columns, girders, trusses		NA	NA	NA	NA	NA	NA
Bearing walls							
Exterior							
North	NA	NA	NA	NA	NA	NA	NA
East	NA	NA	NA	NA	NA	NA	NA
West	NA	NA	NA	NA	NA	NA	NA
South	NA	NA	NA	NA	NA	NA	NA
Interior	NA	NA	NA	NA	NA	NA	NA
Nonbearing walls and partitions Exterior							
North	NA	NA	NA	NA	NA	NA	NA
East	NA	NA	NA	NA	NA	NA	NA
West	NA	NA	NA	NA	NA	NA	NA
South	NA	NA	NA	NA	NA	NA	NA
Interior		NA	NA	NA	NA	NA	NA
Floor construction including support beams and joist		NA	NA	NA	NA	NA	NA
Above Corridor		1	1	A203.1	L501	NA	NA
Columns Supporting Floors							
Roof construction including support beams and joist		NA	NA	NA	NA	NA	NA
Roof Ceiling Assembly		NA	NA	NA	NA	NA	NA
Columns Supporting Roof		NA	NA	NA	NA	NA	NA
Shafts - Exit		NA	NA	NA	NA	NA	NA
Shafts - Other		NA	NA	NA	NA	NA	NA
Corridor Separation		1	1	A203.1	U305	NA	NA
Occupancy Separation		NA	NA	NA	NA	NA	NA
Party/Fire Wall Separation		NA	NA	NA	NA	NA	NA
Fire Barrier Separation		NA	NA	NA	NA	NA	NA
Smoke Partition		NA	NA	NA	NA	NA	NA
Tenant Separation		NA	NA	NA	NA	NA	NA
Incidental Use Separation		NA	NA	NA	NA	NA	NA

#### PERCENTAGE OF WALL AREA CALCULATIONS

FIRE SEPARATION DISTANCE FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA	ACTUAL SHOWN ON PLANS
NA×			

Section 705.8.1 exception 2

LIFE	SAFETY SYSTEM REQUIREMENTS
	Emergency Lighting: No X Yes
	Exit Signs: No X Yes
	Fire Alarm: No 🗶 Yes
	Smoke Detection Systems: No X Yes
	Carbon Monoxide Detection: No 🗶 Yes
Life So	afety Plan Sheet *: LS-001
	X Fire and/or smoke rated wall locations (Chapter 7)
	X Assumed and real property line locations
	Exterior wall opening area with respect to distance to assumed property lines (705.8)
	$\overline{\mathbf{X}}$ Occupancy types for each area as it relates to occupant load calculation (Table 1004.1.2)
	$oxed{X}$ Occupant loads for each area
	X Exit access travel distances (1017)
	X Common path of travel distances (Tables 1006.2.1 & 1006.3.2(1))
	Dead end lengths (1020.4)
	X Clear exit widths for each exit door
	$\overline{\mathbf{X}}$ Maximum calculated occupant load capacity each exit door can accommodate based on egress $\mathbf{v}$
	X Actual occupant load for each exit door
	A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is proven purposes of occupancy separation

X Actual occupant load for each exit door
A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided purposes of occupancy separation
X Location of doors with panic hardware (1010.1.10)
Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
Location of doors with electromagnetic egress locks (1010.1.9.9)
X Location of doors equipped with hold-open devices
X Location of emergency escape windows (1030)
igwedge The square footage of each fire area (202)
☐ The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
Note any code exceptions or table notes that may have been utilized regarding the items above

LUI OR	I	ACCESSIBLE UNITS		TYPE A UNITS	TYPE B UNITS	TYPE B UNITS	TOTAL ACCESSIBLE UNITS
PARKING AREA	REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED	PROVIDED

LOT OR		NO. OF SPACES	NO. OF ACCESSIBI	LE SPACES REQUIF	RED / PROVIDED	TOTAL NO.
PARKING AREA	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN SPA	CES WITH	ACCESSIBLE PROVIDED
			ACCESS AISEE	132" ACCESS AISLE	8' ACCESS AISLE	
Existing						
New						
TOTAL						

#### PLUMBING FIXTURE REQUIREMENTS - ENTIRE FACILITY

LICE		WATER	CLOSETS	URINALS	LAVA	TORIES	SHOWERS/	DRINKING	FOUNTAINS
USE		MALE	FEMALE		MALE	FEMALE	TUBS	REGULAR	ACCESSIBLE
	NEW	2	4	2	2	2		1	1
Educational	EXISTING								
	REQ'D	2	3	1	1	1		1	1
	NEW								
	EXISTING								
	REQ'D								
	NEW								
	EXISTING								
	REQ'D								

SPECIAL A	PPROVALS
Special approva	: (Local Jurisdiction, Department of Insurance, SBCCI, ICC, etc., describe below:

#### **ENERGY SUMMARY** ENERGY REQUIREMENTS: The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs. annual energy cost for the proposed design. Method of Compliance: X Prescriptive (Energy Code) Performance (Energy Code) Prescriptive (ASHRAE 90.1) Performance (ASHRAE 90.1) THERMAL ENVELOPE Roof/ceiling Assembly (each assembly) ASPHALT SHINGLES / ICE & WATER SHIELD / 3/4" OSB DECK / WOOD TRUSS / 6" SPRAY POLYURETHANE INSULATION Description of assembly U-Value of total assembly 40.8 R-Value of insulation Skylights in each assembly s width (1005.3) U-Value of skylight

Description of assembly	FIBER CEMENT SIDING / VAPOR BARRIER / 5/8" OSB / 4" SPRAY FOAM
U-Value of total assembly	0.034
R-Value of insulation	27.2
Openings (windows or doors with glazing)	Openings (windows)
U-Value of total assembly	0.33
solar heat gain coefficient	0.21
projection factor	0.32
Door R-Values	3.44

Description of assembly	N/A
U-Value of total assembly	N/A
R-Value of insulation	N/A
Openings (windows or doors with glazing)	Openings (windows
U-Value of total assembly	N/A
shading Coefficient	
projection factor	

total square footage of skylights in each assembly N/A

Description of assembly –	
U-Value of total assembly	
R-Value of insulation	
Floor over unconditioned space (each assembly) - NOT US	SED
Description of assembly -	
U-Value of total assembly -	

Door R-Values Walls below grade - NOT USED

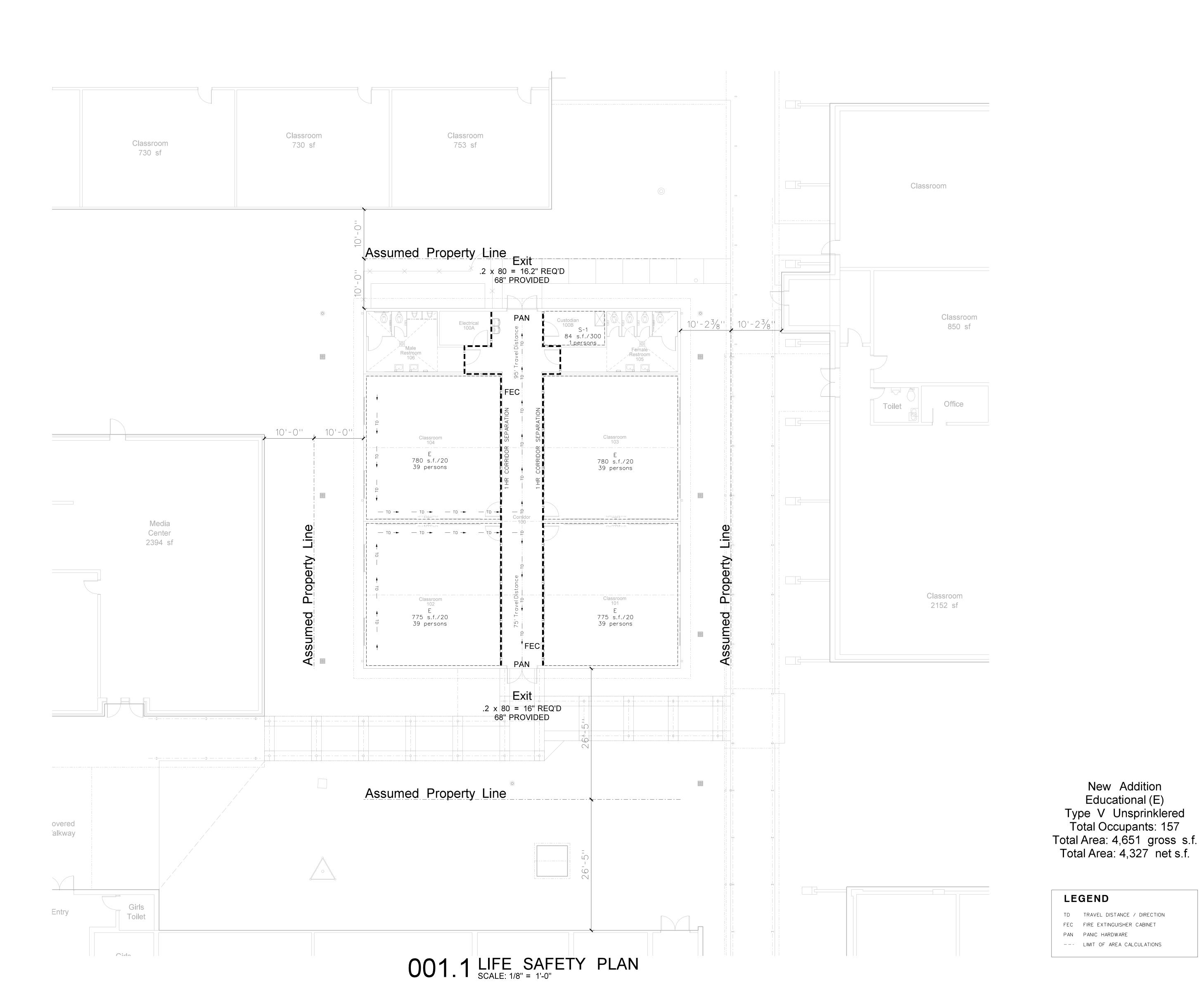
R-Value of insulation -		
Floor slab on grade		
Description of assembly = 5" thick of	concrete	slab
U-Value of total assembly = 0.21		

R-Value of insulation - N/A Horizontal/vertical requirement slab heated - NO

Project No. 22253

Date:
6 March 2023

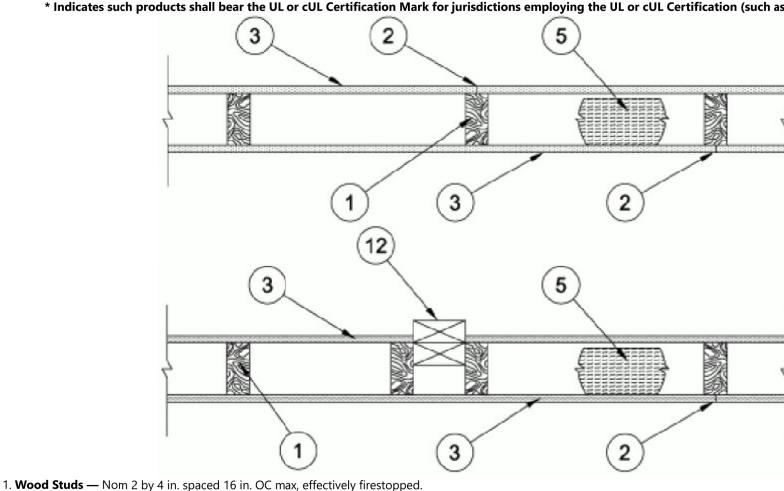
Drawing no.



#### Bearing Wall Rating — 1 Hr Finish Rating — See Items 3, 3A, 3D, 3E, 3F, 3G, 3H, 3J and 3L

STC Rating - 56 (See Item 9) This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



2. Joints and Nail-Heads — Joints covered with joint compound and paper tape. Joint compound and paper tape may be omitted when square edge boards are used. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard with the joints reinforced with paper tape. Nailheads

3. Gypsum Board\* — 5/8 in. thick paper or vinyl surfaced, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. When used in widths other than 48 in., gypsum panels are to be installed horizontally. For an alternate method of attachment of gypsum panels, refer to Items 6 through 6F, Steel Framing Members\*.

When Items 6, 6B, 6C, 6D, 6E, or 6F, Steel Framing Members\*, are used, gypsum panels attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC. When Item 6A, Steel Framing Members\*, is used, two layers of gypsum panels attached to furring channels. Base layer attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC. Face layer attached to furring channels with 1-5/8 in. long Type S bugle-head steel screws spaced 12 in. OC. All joints in face layers staggered with joints in base layers. One layer of gypsum board attached to opposite side of wood stud without furring channels as described in Item 3.

When Item 7, resilient channels are used, 5/8 in. thick, 4 ft wide gypsum panels applied vertically. Screw attached furring channels with 1 in. long, self-drilling, self-tapping Type S or S-12 steel screws spaced 8 in. OC, vertical joints located midway between studs.

AMERICAN GYPSUM CO — Types AGX-1(finish rating 23 min.), M-Glass (finish rating 23 min.), Type AGX-11 (finish rating 26 min), Type AGX-12 (finish rating 22 min), Type LightRoc (finish rating 27 min.) 23 min.) or Type AG-C

**BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO** — Type DBX-1 (finish rating 24 min)

CABOT MANUFACTURING ULC — Type X (finish rating 22 min), 5/8 Type X, Moisture Resistant Type X, Gypsum Sheathing Type X, Mold & Mildew Resistant Type X and Mold & Mildew Resistant Type X and Mold & Mildew Resistant Type X AR Type X, Type Blueglass Exterior Sheathing

CERTAINTEED GYPSUM INC — Type C, Type X-1 (finish rating 26 min); Type EGRG or GlasRoc (finish rating 23 min), GlasRoc-2, Type Habito (finish rating 26 min), Type LWTX (finish rating 18 min), Type LGFC6A (finish rating 34 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX (finish rating 21 min), Type CLLX (finish rating 24 min)

CGC INC — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IP-X1 (f rating 24 min), Type SCX (finish rating 24 min), Type SHX (finish rating 24 min), Type ULX (finish rating 22 min), Type WRC (finish rating 24 min), Type WRX (finish rating 24 min), Type ULIX (finish

GEORGIA-PACIFIC GYPSUM L L C — Type 5 (finish rating 26 min), Type 6 (finish rating 23 min), Type 9 (finish rating 26 min), Type C (finish rating 26 min), Type DGG (finish rating 20 min), Type GPFS1 (finish rating 20 min), Type GPFS2 (finish rating 20 min), Type GPFS6 (finish rating 26 min), Type DA, Ty min), Type X, Veneer Plaster Base - Type X, Water Rated - Type X, Sheathing - Type X, Soffit - Type X, Type LWX (finish rating 22 min), Veneer Plaster Base-Type LWX (finish rating 22 min), Water Rated-Type LWX (finish rating 22 min), Sheathing Type-LWX (finish rating 22 min), Soffit-Type LWX (finish rating 22 min), Type DGLW (finish rating 22 min), Water Rated-Type DGLW (finish rating 22 min), Type DGLW (finish rating 22 min), Water Rated-Type DGLW (finish rating 22 min), Type DGLW (finish rating 22 min), Water Rated-Type DGLW (finish rating 22 min), Type DGLW (finish rating 22 min), Type DGLW (finish rating 22 min), Water Rated-Type DGLW (finish rating 22 min), Type D min), Sheathing Type- DGLW (finish rating 22 min), Soffit-Type DGLW (finish rating 22 min), Type LWX (finish rating 22 min), Type LW2X (finish rating 22 min), Veneer Plaster Base - Type LW2X (finish rating 22 min), Type LW2X (finish rating 22 min), Veneer Plaster Base - Type LW2X (finish rating 22 min), Type LW2X (finish rating 22 min), Veneer Plaster Base - Type LW2X (finish rating 22 min), Type LW2X (finish rating 22 min), Veneer Plaster Base - Type LW2X (finish rating 22 min), Type LW2X (finish rating 22 min), Veneer Plaster Base - Type LW2X (finish rating 22 min), Type LW2X (finish rating 22 min), Veneer Plaster Base - Type LW2X (finish rating 22 min), Type LW2X (finish rating 22 min), Type LW2X (finish rating 22 min), Veneer Plaster Base - Type LW2X (finish rating 22 min), rating 22 min), Water Rated - Type LW2X (finish rating 22 min), Sheathing - Type LW2X (finish rating 22 min), Soffit - Type LW2X (finish rating 22 min), Type DGL2W (finish rating 22 min), Water Rated - Type DGL2W (finish rating 22 min), Sheathing - Type DGL2W (finish rating 22 min)

NATIONAL GYPSUM CO — Type FSK (finish rating 20 min), Type FSK-G (finish rating 20 min), Type FSW (finish rating 20 min), Type FSW-2 (finish rating 24 min), Type FSW-3 (finish rating 20 min), Type FSW-5 (finish rating 22 min), Type FSW-G (finish rating 20 min), Type FSK-C (finish rating 20 min), Type FSW-C (finish rating 20 min), Type FSM-C, Type FSW-6 (finish rating 20 min), Type FSL (finish rating 24 min), Type FSW-8, Type FSLX (finish rating 21 min), Type RSX (finish rating 26 min).

**NATIONAL GYPSUM CO** — Riyadh, Saudi Arabia — Type FR, or WR.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types C, PG-2 (finish rating 20 min), PG-3 (finish rating 20 min), Types PG-3W, PG-5W (finish rating 20 min), Type PG-4 (finish rating 20 min), Types PG-3W, PG-5W (finish rating 20 min), Types PG-4W, PG-5W (finish rating 20 min), Types PG-4W, PG-5W (finish rating 20 min), Types PG-4W, PG-5W (finish rating 20 min), PG-3W, PG-5W (finish rating 20 min), PG-5W (finish rating 20 20 min), Type PG-6 (finish rating 23 min), Types PG-3WS, PG-5WS, PGS-WRS (finish rating 20 min), Types PG-5, PG-9 (finish rating 26 min), PG-11 PG-13 (Nails increased to 2 in.), Type PG-C or PGI

PANEL REY S A — Type ARX, GREX, GRIX, PRX, PRC, PRC2; Types RHX, Guard Rey, MDX, ETX (finish rating 22 min), PRX2 (finish rating 21 min)

**SIAM GYPSUM INDUSTRY (SARABURI) CO LTD** — Type EX-1 (finish rating 26 min)

**THAI GYPSUM PRODUCTS PCL** — Type C, Type X (finish rating 26 min)

UNITED STATES GYPSUM CO — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type FRX-G (finish rating 29 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type SCX (finish rating 24 min), Type SGX (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type ULX (finish rating 22 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type ULIX (finish rating 20 min)

**USG BORAL DRYWALL SFZ LLC** — Type SGX (finish rating 24 min).

USG MEXICO S A DE C V — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Typ X2 (finish rating 24 min), Type SHX (finish rating 24 min), SCX (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (fi

3A. **Gypsum Board\*** — (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.

AMERICAN GYPSUM CO — Types AGX-1 (finish rating 25 min.), M-Glass (finish rating 25 min.), AG-C (finish rating 25 min.), LighttRoc (finish rating 25 min.)

**CERTAINTEED GYPSUM INC** — Type C, Type X-1 (finish rating 26 min), Type EGRG or GlasRoc, LWTX.

CGC INC — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IP-X1 (f rating 24 min), Type SCX (finish rating 24 min), Type SHX (finish rating 24 min), Type WRC (finish rating 24 min), Type WRX (finish rating 24 min)

**NATIONAL GYPSUM CO** — Type FSW (finish rating 24 min)

UNITED STATES GYPSUM CO — Type AR (finish rating 24 min), Type SCX (finish rating 24 min), Type SGX (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-AR (finish rating 24 min), Type SHX (finish rating 24 min), Type FRX-G (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min)

**USG BORAL DRYWALL SFZ LLC** — Types C, SCX, SGX (finish rating 24 min).

USG MEXICO S A DE C V — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type WRX (fi X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type SCX, Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min)

3B. **Gypsum Board\*** — (As an alternate to Item 3) — Nom 3/4 in. thick, installed with 1-7/8 in. long cement coated nails as described in Item 3 or 1-3/8 in. long Type W coarse thread gypsum panel steel screws as described in Item 3A. **CGC INC** — Types AR, IP-AR

**UNITED STATES GYPSUM CO** — Types AR, IP-AR

**USG MEXICO S A DE C V** — Types AR, IP-AR

3C. Gypsum Board\* — (As an alternate to Items 3, 3A and 3B) — 5/8 in. thick, 2 ft wide, tongue and groove edge, applied horizontally to one side of the assembly. Installed with 1-7/8 in. long cement coated nails as described in Item 3 or 1-1/4 in. long Type W coarse thread gypsum panel steel screws as described in Item 3A. Joint covering (Item 2) not **CGC INC** — Type SHX

**UNITED STATES GYPSUM CO** — Type SHX

**USG MEXICO S A DE C V** — Type SHX

#### UL Design No. U305

3D. **Gypsum Board\*** — (As an alternate to Items 3, 3A, 3B, or 3C — Not Shown) — For Direct Application to Studs Only- Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs or tabs may be used in lieu of or in addition to the lead batten strips or optional at other locations. Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards underneath screw locations prior to the installation of the screws. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". **RAY-BAR ENGINEERING CORP** — Type RB-LBG (finish rating 24 min)

3E. **Gypsum Board\*** — (As an alternate to Items 3, 3A, 3B, 3C, and 3D) — 5/8 in. thick gypsum panels, with square edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last 2 screws 1 and 4 in. from edge of board or nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. When used in widths of other than 48 in., gypsum boards are to be installed

**GEORGIA-PACIFIC GYPSUM L L C** — Type DGG (finish rating 20 min), GreenGlass Type X (finish rating 23 min)

3F. **Gypsum Board\*** — (As an alternate to Items 3, 3A, 3B, 3C, 3D, and 3E) — 5/8 in. glass-mat faced with square edges, applied either horizontally or vertically. Gypsum panels nailed 7 in. OC around the perimeter and in the field with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Nails shall be placed 1 inch and 3 inch from horizontal joints and 7 inch OC thereafter. **CGC INC** — Type USGX (finish rating 22 min)

**UNITED STATES GYPSUM CO** — Type USGX (finish rating 22 min.)

**USG BORAL DRYWALL SFZ LLC** — , Type USGX (finish rating 22 min.)

**USG MEXICO S A DE C V** — Type USGX (finish rating 22 min.)

(finish rating 24 min).

3G. **Gypsum Board\*** — (As an alternate to Items 3 through 3F) — 5/8 in. thick paper surfaced applied vertically. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. **GEORGIA-PACIFIC GYPSUM L L C** — Type X ComfortGuard Sound Deadening Gypsum Board (finish rating 27 min)

3H. **Gypsum Board\*** — (As an alternate to Items 3) — Not to be used with items 6 or 7. 5/8 in. thick paper surfaced applied vertically only. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. **NATIONAL GYPSUM CO** — Type SBWB

3I. **Gypsum Board\*** — (As an alternate to Items 3 through 3H, Not Shown) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically. Panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Panel joints covered with paper tape and two layers of joint compound. Nailheads covered with two layers of joint compound. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock ES (finish rating 20 min)

3J. **Gypsum Board\*** — (As an alternate to Item 3) — 5/8 in. thick paper surfaced applied vertically or horizontally. Gypsum panels secured with 1-1/4 in. Type W coarse thread gypsum panel steel screws spaced a maximum of 12 in. OC. **CERTAINTEED GYPSUM INC** — Type SilentFX

3K. **Gypsum Board\*** — (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 8 in. OC with the last screw 1 in. from the edge of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally. NATIONAL GYPSUM CO — Type FSK (finish rating 20 min), Type FSK-G (finish rating 20 min), Type FSW (finish rating 20 min), Type FSW-2 (finish rating 24 min), Type FSW-3 (finish rating 20 min), Type FSW-5 (finish rating 22 min), Type FSW-G (finish rating 20 min), Type FSK-C (finish rating 20 min), Type FSW-C (finish rating 20 min), Type FSMR-C, Type FSW-6 (finish rating 20 min), Type FSL

3L. **Gypsum Board\*** — (As an alternate to Item 3) — For Direct Application to Studs Only — Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 10 ft long with a max thickness of 0.140 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, max 5/16 in. diam by max 0.140 in. thick. compression fitted or adhered over the screw heads. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D".

3M. Gypsum Board\* — (As an alternate to Items 3) — For Direct Application to Studs Only — For use as the base layer or as the face layer. Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field when applied as the base layer. When applied as the face layer screw length to be increased to 2-1/2 in. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Fasteners for face layer gypsum panels (Items 4, 4A or 4B) when installed over lead backed board to be min 2-1/2 in. Type S-12 bugle head steel screws spaced as described in Item 4. **RADIATION PROTECTION PRODUCTS INC** — Type RPP - Lead Lined Drywall

3N. **Gypsum Board\*** — (As an alternate to Item 3) — 5/8 in. thick, 4 ft. wide, applied horizontally or vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Secured as described in Item 3 or 3A. **CERTAINTEED GYPSUM INC** — Easi-Lite Type X (finish rating 24 min), Easi-Lite Type X-2 (finish rating 24 min)

30. Wall and Partition Facings and Accessories\* — (As an alternate to Item 3, Not Shown) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically. Panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Panel joints covered with paper tape and two layers of joint compound. Nailheads covered PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527 (finish rating 24 min).

3P. **Gypsum Board\*** — (As an alternate to Item 3, Not Shown) — Two layers nom. 5/16 in. thick gypsum panels applied vertically or horizontally. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed by wood studs. Horizontal joints on the same side between face and base layers need not be staggered. Base layer gypsum panels fastened to studs with 1-1/4 in. long drywall nails spaced 8 in. OC. Face layer gypsum panels fastened to studs with 1-7/8 in. long drywall nails spaced 8 in. OC starting with a 4" stagger.

**NATIONAL GYPSUM CO** — Type FSW (finish rating 25 min)

MAYCO INDUSTRIES INC — "X-Ray Shielded Gypsum"

3Q. **Gypsum Board\*** — (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 10 in. OC with the last two screws 4 and 1 in. from the edges of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally. **CERTAINTEED GYPSUM INC** — Type LGFC6A (finish rating 21 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX

3R. **Gypsum Board\*** — (As an alternate to Item 3. For use with Item 5H) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 3 above. Applied either horizontally or vertically, and screwed to panels with 1-5/8 in. long Type W coarse thread steel screws at 8 in. OC at perimeter and in the field with the last two screws 4 and 3/4 in. from the edges of the board when applied as the base layer. When used in widths other than 48 in., gypsum panels are to be installed horizontally.

Item 3 with nail length increased to 2 in. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type PG-13 3T. Wall and Partition Facings and Accessories\* — (As an alternate to 5/8 in. thick board as outlined in Item 3) — Nominal 1-3/8 in. thick, 4 ft wide panels, applied vertically or

3S. **Gypsum Board\*** — 3/4 in. thick paper or vinyl surfaced, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels secured as described in

horizontally. Fastened with #6 x 2 in. long drywall screws spaced 8 in. OC along the perimeter and 12 in. OC in the field. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 545

3U. **Gypsum Board\*** — (As an alternate to Item 3 - For use with Foamed Plastic products, Item 5J) — 5/8 in. thick, 4 ft. wide, applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam **AMERICAN GYPSUM CO** — Types AGX-1

**BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO** — Type DBX-1

**CERTAINTEED GYPSUM INC** — Type X

**CABOT MANUFACTURING ULC** — Type X

**CGC INC** — Type SCX

PANEL REY S A — Type ARX, PRX

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1

THAI GYPSUM PRODUCTS PCL — Type X

**USG MEXICO S A DE C V** — Type SCX

**UNITED STATES GYPSUM CO** — Types SCX and SGX

**USG BORAL DRYWALL SFZ LLC** — Types SCX and SGX

3V. **Gypsum Board\*** — (As an alternate to Item 3. For use with Item 5K) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 3 above. Applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field.

3W. **Gypsum Board\*** — (As an alternate to Item 3. For use with Item 5L) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 3 above. Applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels secured to studs with 1-1/4 in. long Type W screws spaced 8 in. OC at perimeter and in the field.

4. Steel Corner Fasteners — (Optional) — For use at wall corners. Channel shaped, 2 in. long by 1 in. high on the back side with two 1/8 in. wide cleats protruding into the 5/8 in. wide channel, fabricated from 24 gauge galv steel. Fasteners applied only to the end or cut edge (not along tapered edges) of the gypsum board, no greater than 2 in. from corner of gypsum board, max spacing 16 in. OC. Nailed to adjacent stud through tab using one No. 6d cement coated nail per fastener. Corners of wall board shall be nailed to top and bottom plate using No. 6d cement coated nails.

#### UL Design No. U305

5. **Batts and Blankets\*** — (Optional — Required when Item 6A is used (RC-1)) — Glass fiber or mineral wool insulation. Placed to completely or partially fill the stud cavities. When Item 6A is used, glass fiber or mineral wool insulation shall be friction-fitted to completely fill the stud cavities. **CERTAINTEED CORP** 

#### **JOHNS MANVILLE**

**KNAUF INSULATION LLC** 

MANSON INSULATION INC

**ROCKWOOL** — Types Acoustical Fire Batts and Type AFB, min. density 1.69 pcf / 27.0 kg/m<sup>3</sup>

**ROCKWOOL MALAYSIA SDN BHD** — Type Acoustical Fire Batts

**ROCK WOOL MANUFACTURING CO** — Delta Board

#### **THERMAFIBER INC** — Type SAFB, SAFB FF

5A. **Fiber, Sprayed\*** — (Not Shown — Not for use with Item 6) — As an alternate to Batts and Blankets (Item 5) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft<sup>3</sup>. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft<sup>3</sup>, in accordance with the application instructions supplied with the product. When Item 6B is used, Fiber, Sprayed shall be INS735, INS745, INS750LD, INS765LD, INS773LD or SANCTUARY.

Applegate Greenfiber Acquisition LLC — INS735, INS745, INS750LD, Insulmax, and SANCTUARY for use with wet or dry application. INS515LD, INS541LD, INS541LD, INS735, INS765LD, and INS773LD are to

5B. **Fiber, Sprayed\*** — (Not Shown - Not for use with Item 6) — As an alternate to Batts and Blankets (Item 5) - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3

#### pounds per cubic ft. **NU-WOOL CO INC** — Cellulose Insulation

5C. Batts and Blankets\* — Required for use with resilient channels, Item 7, 3 in, thick mineral wool batts, friction-fitted to fill interior of wall. **THERMAFIBER INC** — Type SAFB, SAFB FF

5D. Glass Fiber Insulation — (As an alternate to Item 5C) — 3 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, frictionfitted to fill the interior of the wall. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.

5E. Batts and Blankets\* — (Required for use with Wall and Partition Facings and Accessories, Item 3D) — Glass fiber insulation, nom 3-1/2 in. thick, min. density of 0.80 pcf, with a flame spread of 25 or less and a smoke developed of 50 or less, friction-fitted to completely fill the stud cavities. See Batts and Blankets Category (BKNV) for names of manufacturers.

5F. **Fiber, Sprayed\*** — (Optional, Not Shown — Not for use with Items 6, 6A, 6B, 6C, or 6D) — As an alternate to Batts and Blankets (Item 5) and Item 5A - Spray applied granulated mineral fiber material. The fiber is applied with adhesive, at a minimum density of 4.0 pcf, to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. See **Fiber, Sprayed** (CCAZ). **AMERICAN ROCKWOOL MANUFACTURING, LLC** — Type Rockwool Premium Plus

5G. Fiber, Sprayed\* — (Optional, Not Shown — Not for use with Items 6, 6A, 6B, 6C, or 6D). — As an alternate to Batts and Blankets (Item 5) and Item 5A - Brown Colored Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed stud cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft<sup>3</sup>. INTERNATIONAL CELLULOSE CORP — Celbar-RL

5H. **Foamed Plastic\*** — (Optional -For use with Item 3R) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity. **SES FOAM INC** — Nexseal<sup>™</sup> 2.0 or Nexseal<sup>™</sup> 2.0 LE Spray Foam and Sucraseal Spray Foam.

51. Fiber, Sprayed\* — (Not Shown — Not for use with Item 6) — As an alternate to Batts and Blankets (Item 5) - Spray-applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. To facilitate the installation of the material, any thin, woven or nonwoven netting may be attached by any means possible to the outer face the studs. The material shall reach equilibrium moisture content before the installation of materials on either face of the studs. The minimum dry density shall be 5.79 lbs/ft<sup>3</sup>. **APPLEGATE HOLDINGS L L C** — Applegate Advanced Stabilized Cellulose Insulation

5J. **Foamed Plastic\*** — (Optional, Not Shown - For use with Item 3U) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity. GACO WESTERN L L C — Types GacoEZSpray F4500, GacoProFill FR6500R, Gaco 052N, GacoOnePass F1850, GacoOnePass Low GWP F1880, and Gaco WallFoam 183M

5K. Foamed Plastic\* — (Optional, Not Shown - For use with Item 3V) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity. CARLISLE SPRAY FOAM INSULATION — Types SealTite Pro Closed Cell (CC), SealTite Pro Open Cell (OC), SealTite Pro OCX, SealTite Pro No Trim 21, SealTite Pro One Zero, Foamsulate Closed Cell, Foamsulate OCX, Foamsulate 70, and Foamsulate HFO.

5L. Foamed Plastic\* - (Optional, Not Shown – For use with Item 3W) - Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity. BASF CORP - Types Enertite® NM, Enertite® G, FE178®, Spraytite® 178, Spraytite® 81206, Walltite® 200, Walltite® US, Walltite® US-N, Walltite® HP+, Spraytite® Comfort XL, and Walltite® XL.

6. Steel Framing Members\* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as

described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate,

ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one

b. Steel Framing Members\* — Used to attach furring channels (Item 6a) to studs. Clips spaced 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring

screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3.

PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75)

6A. Steel Framing Members\* — (Optional, Not Shown) — Furring channels and Steel Framing Members on one side of studs as described below: a. Furring Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. Batts and Blankets placed in stud cavity as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 3.

b. Steel Framing Members\* — Used to attach furring channels (Item 6Aa) to one side of studs only. Clips spaced 48 in. OC., and secured to studs with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips. **KINETICS NOISE CONTROL INC** — Type Isomax

6B. **Steel Framing Members\*** — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3.

b. Steel Framing Members\* — Used to attach furring channels (Item 6Ba) to studs. Clips spaced 48 in. OC. Genie clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. **PLITEQ INC** — Type Genie Clip

6C. **Steel Framing Members\*** — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 3.

b. Steel Framing Members\* — Used to attach furring channels (Item 6Ca) to studs. Clips spaced 48 in. OC., and secured to studs with No. 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips. **STUDCO BUILDING SYSTEMS** — RESILMOUNT Sound Isolation Clips - Type A237 or A237R

a. Furring Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with a double strand of No. 18 AWG twisted steel wire. Gypsum board attached to furring channels as described in Item 3.

b. Steel Framing Members\* — Used to attach furring channels (Item 6Da) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. **REGUPOL AMERICA** — Type SonusClip

6D. Steel Framing Members\* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:

6E. **Steel Framing Members\*** — (Optional, Not Shown) — Resilient channels and Steel Framing Members as described below: a. Resilient Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 3.

b. Steel Framing Members\* — Used to attach resilient channels (Item 6Ea) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw. **KEENE BUILDING PRODUCTS CO INC** - Type RC+ Assurance Clip

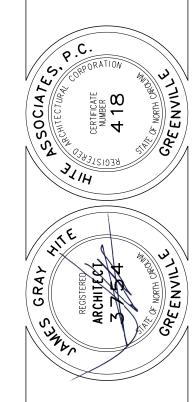
6F. **Steel Framing Members\*** — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel. 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3.

b. Steel Framing Members\* — Used to attach furring channels (Item 6Fa) to studs. Clips spaced 48 in. OC. Clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips. **CLARKDIETRICH BUILDING SYSTEMS** — Type ClarkDietrich Sound Clip

6G. Steel Framing Members\* — (Optional, Not Shown) — Used as an alternate method to attach resilient channels to wall studs. A resilient sound isolation accessory shall be used at each attachment point of the resilient channels and spaced max 16 in. O.C. Channel ends butted and centered under the structural members and attached with one accessory at each end. Additional accessories used to hold resilient channels that support the gypsum board end joints. The accessory envelops the mounting edge of the resilient channel. The accessory and resilient channel are fastened to the structural members with the screws supplied with the accessory and per the accessory manufacturer's installation PAC INTERNATIONAL L L C — Type RC-1 Boost

7. Furring Channel — Optional — Not Shown — For use on one side of the wall - Resilient channels, 25 MSG galv steel, spaced vertically 24 in. OC, flange portion screw attached to one side of studs with 1-1/4 in. long diamond shaped point, double lead Phillips head steel screws. When resilient channels are used, insulation, Items 5C or 5D is required.

8. Caulking and Sealants — (Not Shown, Optional) — A bead of acoustical sealant applied around the partition perimeter for sound control.



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6 March 2023

(Continued on next sheet)

B. Item 2, above — Joints As described, shall be covered with fiber tape and joint compound.

C. Item 5, above — Batts and Blankets\* The cavities formed by the studs shall be friction fit with R-19 unfaced fiberglass insulation batts measuring 6-1/4 in. thick and 15-1/4 in. wide.

D. Item 6, above — Steel Framing Members\* Type RSIC-1 clips shall be used to attach gypsum board to studs on either side of the wall assembly.

E. Item 8, above — Caulking and Sealants (Not Shown) A bead of acoustical sealant shall be applied around the partition perimeter for sound control.

F. Steel Corner Fasteners (Item 4), Fiber, Sprayed (Items 5A and 5B) and Steel Framing Members (Item 6A), not evaluated as alternatives for obtaining STC rating.

10. **Wall and Partition Facings and Accessories\*** — (Optional, Not Shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-500 or QR-510 panel is installed between the wood framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board. **PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM** — Type QuietRock QR-500 and QR-510

11. **Cementitious Backer Units\*** — (Optional Item Not Shown — For Use On Face Of 1 Hr Systems With All Standard Items Required) - 7/16 in., 1/2 in., 5/8 in., 3/4 in. or 1 in. thick, min. 32 in. wide. Applied vertically or horizontally with vertical joints centered over studs. Fastened to studs and runners with cement board screws of adequate length to penetrate stud by a minimum of 3/8 in. for steel framing members, and a minimum of 3/4 in. for wood framing members spaced a max of 8 in. OC. When 4 ft. wide boards are used, horizontal joints need not be backed by framing.

NATIONAL GYPSUM CO — Type DuraBacker, PermaBase, DuraBacker Plus, or PermaBase Plus

12. Non-Bearing Wall Partition Intersection — (Optional) —Two nominal 2 by 4 in. studs or nominal 2 by 6 in. studs nailed together with two 3 in. long 10d nails spaced a max.

12. **Non-Bearing Wall Partition Intersection** — (Optional) — Iwo nominal 2 by 4 in. studs or nominal 2 by 6 in. studs halled together with two 3 in. long 10d halls spaced a max. 16 in. OC. vertically and fastened to one side of the minimum 2 by 4 in. stud with 3 in. long 10d halls spaced a max. 16 in. OC. vertically. Intersection between partition wood studs to be flush with the 2 by 4 in. studs. The wall partition wood studs are to be framed by with a second 2 by 4 in. wood stud fastened with 3 in. long 10d halls spaced a max. 16 in. OC. vertically. Maximum one non-bearing wall partition intersection per stud cavity. Non-bearing wall partition stud depth shall be at a minimum equal to the depth of the bearing wall.

13. **Mesh Netting** — (Not Shown) — Any thin, woven or non-woven fibrous netting material attached with staples to the outer face of one row of studs to facilitate the installation of the sprayed fiber from the opposite row.

14. **Mineral and Fiber Board\*** — (Optional, Not Shown) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing with 2 in. long Type W steel screws, spaced 12 in. OC. The required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board. **HOMASOTE CO** — Homasote Type 440-32

14A. **Mineral and Fiber Board\*** — (Optional, Not Shown) — For use with Items 14B-14E) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing with minimum 1-3/8 in. long ring shanked nails or 1-1/4 in. long Type W steel screws, spaced 12 in. OC along board edges and 24 in. OC in field of board along intermediate framing. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board. **HOMASOTE CO** — Homasote Type 440-32

14B. **Glass Fiber Insulation** — (For use with Item 14A) — 3-1/2 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, placed to fill the interior of the wall. See Batts and Blankets (BKNV or BZJZ) categories for names of Classified companies.

14C. **Batts and Blankets\*** — (As an alternate to Item 14B, For use with Item 14A), 3 in. thick mineral wool batts, placed to fill interior of wall, attached to the 3-1/2 in. face of the studs with staples placed 24 in. OC. **THERMAFIBER INC** — Type SAFB, SAFB FF

14D. **Adhesive** — (For use with Item 14A) — Construction grade adhesive applied in vertical, serpentine, nominal 3/8 in. wide beads down the length of both vertical edges of Mineral and Fiber Board (Item 14A).

14E. **Gypsum Board\*** — (For use with Item 14A) — 5/8 in. thick, 4 ft wide, applied vertically over Mineral and Fiber Board (Item 14A) with vertical joints located anywhere over stud cavities. Secured to mineral and fiber boards with 1-1/2 in. Type G Screws spaced 8 in. OC along edges of each vertical joint and 12 in. OC in intermediate field of the Mineral and Fiber Board (Item 14A). Secured to outermost studs and bearing plates with 2 in. long Type S screws spaced 8 in. OC. Gypsum Board joints covered with paper tape and joint compound. Screw heads covered with joint compound. Finish Rating 30 Min. **AMERICAN GYPSUM CO** — Type AG-C

**CGC INC** — Types C, IP-X2, IPC-AR

CERTAINTEED GYPSUM INC — Type LGFC-C/A

**GEORGIA-PACIFIC GYPSUM L L C** — Types 5, DAPC, TG-C

NATIONAL GYPSUM CO — Types FSK-C, FSW-C

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type PG-C

PANEL REY S A — Type PRC

**THAI GYPSUM PRODUCTS PCL** — Type C

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR

14F. **Mineral and Fiber Board** — (Optional, Not Shown) — For optional use as an additional layer on one side of wall - Nom 1/2 in. thick, 4 ft wide, square edge fiber boards applied vertically to studs on one side of the wall in between the wood studs and the UL Classified Gypsum Board (Item 3). Fiber boards installed with 1-1/4 in. long, Type W, bugle head, coarse thread gypsum board screws spaced 12 in. OC max, with the last screws spaced 2 in. and 6 in. from edge of board. Gypsum board (Item 3) installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board. **BLUE RIDGE FIBERBOARD INC** — SoundStop

14G. **Building Units** – (Optional Item Not Shown – For use over Gypsum Board, Item 3) 1 in., 2 in. or 3 in. thick, 4 ft. wide – Applied vertically or horizontally with vertical joints centered over studs. Fastened to studs and runners with wafer head screws of adequate length to penetrate framing by a minimum of of <sup>3</sup>/<sub>4</sub> in., spaced a max 8 in. o.c.

NATIONAL GYPSUM CO – Type PBCI

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Last Updated on 2023-02-03

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#### UL Design No. L501

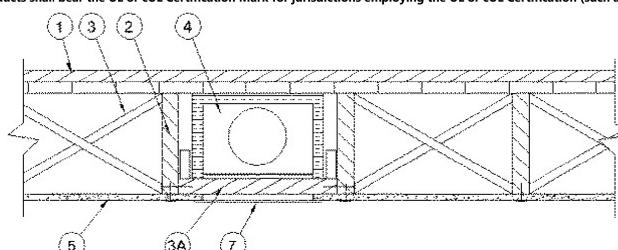
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Design No. **L501** 

Unrestrained Assembly Rating — 1 Hr.
Finish Rating — (See Items 5 and 5A)

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide <u>BXUV</u> or <u>BXUV7</u>

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



1. **Flooring Systems** — The flooring system shall consist of one of the following:

**Vapor Barrier** — Nom 0.010 in. thick commercial rosin-sized building paper.

**Subflooring** — Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick plywood or min 7/16 in. thick oriented strand board (OSB) wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered. Panels secured to joists with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each joist. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Finish Flooring — Min 1 by 4 in. T & G lumber installed perpendicular to joists, or min 19/32 in. thick wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to joists with joints staggered.

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered, secured as described in System No. 1

Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Floor Mat Materials\* — (Optional) — Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat

material.

UNITED STATES GYPSUM CO — Types SAM, LEVELROCK® Brand Sound Reduction Board, LEVELROCK® Brand Floor Underlayment SRM-25

Alternate Floor Mat Materials\* — (Optional) — Floor mat material loose laid over the subfloor.Refer to manufacturer's instructions regarding minimum thickness of floor topping over floor mat.

GRASSWORX L L C — SC Types

Finish Flooring — Floor Topping Mixture\* — Min 3/4 having a min compressive strength of 1800 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

UNITED STATES GYPSUM CO — Type CSD, LRK, HSLRK

LATICRETE SUPERCAP L L C — Types LRK, HSLRK

August 15, 2022

 ${\bf USG\; MEXICO\; S\; A\; DE\; C\; V} \ - \ {\bf Types\; LRK,\; HSLRK,\; CSD}$ 

**Subflooring** — Min 19/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered, secured as described in System No. 1.

Floor Mat Materials\* — (Optional) — Floor mat material nom 5/64 in. (2 mm) thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of floor-topping mixture. Floor topping thickness a min 1 in. over the floor mat.

HACKER INDUSTRIES INC — Type Hacker Sound-Mat

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/4 in. (6 mm) thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1-1/4 in. (32 mm) of floor-topping mixture.

HACKER INDUSTRIES INC — Type Hacker Sound-Mat II

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/8 in. (3 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 3/4 in. (19 mm).

HACKER INDUSTRIES INC — FIRM-FILL SCM 125

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 1/4 in. (6 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1 in. (25 mm).

HACKER INDUSTRIES INC — Type FIRM-FILL SCM 250, Quiet Qurl 55/025

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 3/8 in. (10 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/4 in. (32 mm) HACKER INDUSTRIES INC — FIRM-FILL SCM 400, Quiet Qurl 60/040

Alternate Floor Mat Materials — (Optional) — Floor mat material nom 3/4 in. (19 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/2 in. (38 mm).

HACKER INDUSTRIES INC — Type FIRM-FILL SCM 750, Quiet Qurl 65/075

Metal Lath (Optional) — For use with 3/8 in. (10 mm) floor mat materials, 3/8 in. expanded steel diamond mesh, 3.4 lbs/sq yd placed over the floor mat material. Hacker Floor Primer to be applied prior to the placement of the metal lath. When metal lath is used, floor topping thickness a nom 1-1/4 in. over the floor mat.

Finish Flooring — Floor Topping Mixture\* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1100 psi. Mixture shall consist of 6.8 gal of water to 80 lbs of floor topping mixture to 1.9 cu ft of sand.

HACKER INDUSTRIES INC — Firm-Fill Gypsum Concrete, Firm-Fill 2010, Firm-Fill 3310, Firm-Fill 4010, Firm-Fill High Strength, Gyp-Span Radiant

System N

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered, secured as described in System No. 1.

Vapor Barrier — (Optional) — Nom 0.030 in thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture\* — Min 1-1/2 in. thickness of floor topping mixture having a min compressive strength of 1000 psi and a cast density of 100 plus or minus 5 pcf. Foam

concentrate mixed 40:1 by volume with water and expanded at 100 psi through nozzle. Mixture shall consist of 1.4 cu feet of preformed foam concentrate to 94 lbs Type I Portland cement, 300 lbs of sand with 5-1/2 gal of water.

ELASTIZELL CORP OF AMERICA — Type FF

System No. 5
Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered, secured as described in System No. 1.

Vapor Barrier — (Optional) — Nom 0.030 in thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture\* — Min 1-1/2 in. thickness of floor topping mixture having a min compressive strength of 1000 psi and a cast density of 100 plus or minus 5 pcf. Foam concentrate mixed 40:1 by volume with water and expanded at 100 psi through nozzle. Mixture shall consist of 1.2 cu feet of preformed foam concentrate to 94 lbs Type I Portland cement, 300 lbs of sand with 5-1/2 gal of water.

AERIX INDUSTRIES — Floor Topping Mixture

accompanying the material for specific mix design.

System No. 6 leted.

**Subflooring** — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered, secured as described in System No. 1.

Finish Flooring — Floor Topping Mixture\* — Min 3/4 or 1 in. thickness of floor topping mixture for 19/32 or 15/32 in. thick wood structural panels respectively, having a min compressive strength of 1000 psi. Mixture shall consist of 5 to 8 gal of water to 80 lbs of floor topping mixture to 2.1 cu ft of sand.

ULTRA QUIET FLOORS — UQF-A, UQF-Super Blend, UQF-Plus 200

System No. 8

Subflooring — Min 15/32 in. wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to joists with joints staggered, secured

as described in System No. 1.

Vapor Barrier — (Optional) — Nom 0.030 in thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture\* — Min 3/4 in. thickness of floor topping mixture having a minimum compressive strength of 1500 psi. Refer to manufacturer's instructions

MAXXON CORP — Type Maxxon Standard and Maxxon High Strength

Floor Mat Materials\* — (Optional) — Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

MAXXON CORP — Type Encapsulated Sound Mat.

Floor Mat Reinforcement — (Optional) - Refer to manufacturer's instructions regarding minimum thickness of floor topping for use with floor mat reinforcement.

Metal Lath — (Optional) — 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd loose laid over the floor mat material.

Fiber Glass Reinforcement - (Optional, Not Shown) - 0.015 in. thick PVC coated non-woven fiberglass mesh, 0.368 lbs/sq yd loose laid over the floor mat material.

System No. 9

Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick plywood or min 7/16 in. thick oriented strand board (OSB) wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered, secured as described in System No. 1.

Finish Floor — Mineral and Fiber Board\* — Min 1/2 in. thick, supplied in sizes ranging from 3 ft by 4 ft to 8 ft by 12 ft. All joints to be staggered a min of 12 in. with adjacent sub-floor joints.

HOMASOTE CO — Type 440-32 Mineral and Fiber Board

#### UL Design No. L501

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System No. 10

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered, secured as described in System No. 1.

**Vapor Barrier** — **(Optional)** — Nom 0.030 in. thick commercial asphalt saturated felt.

**Finish Flooring** — **Floor Topping Mixture\*** — Min 3/4 or 1 in. thickness of floor topping mixture for 19/32 or 15/32 in. thick wood structural panels respectively, having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design. **ARCOSA SPECIALTY MATERIALS** — AccuCrete® Types NexGen, Green, Prime and PrePour, AccuRadiant®, AccuLevel® Types G40, G50 and SD30

Alternate Floor Mat Material\* — (Optional) - Floor mat material nominal 2 - 9.5 mm thick loose laid over the subfloor. Floor topping shall be a min of 3/4 in. or 1 in. thick for 19/32 or 15/32 in. thick wood structural panels respecitively.

**ARCOSA SPECIALTY MATERIALS** — AccuQuiet® D13, D-18, D25, DX38, EM.125, EM.125S, EM.250, EM.250S, EM.375, EM.375S, EM.750, and EM.750S.

System No. 11

**Subflooring** — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered, secured as described in System No. 1.

**Vapor Barrier** — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture\* — Min 3/4 in. thickness of floor topping mixture having a minimum compressive strength of 1500 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

**FORMULATED MATERIALS LLC** — Types FR-25, FR-30, and SiteMix.

Alternate Floor Mat Material\* — (Optional) — Floor mat material nominal 2 - 9.5 mm thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

FORMULATED MATERIALS LLC — Types M1, M2, M3, Elite, Duo, R1, and R2.

System No. 12

System No. 13

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered, secured as described in System No. 1.

Vapor Barrier — (Optional) — Commercial asphalt saturated felt, 0.030 in. thick.

Vapor Barrier - (Optional) - Nom 0.010 in. thick commercial rosin-sized building paper.

**Finish Flooring\*** — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies. Refer to the manufacturer's instructions accompanying the material and/or contact the manufacturer's technical support for specific mix design and minimum thickness recommended for use with eliqible floor mat(s).

Floor Mat Materials\* — (Optional) — Nom. 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 55/025 and Quiet Qurl 55/025 N

**KEENE BUILDING PRODUCTS CO INC** — Type Quiet Qurl 60/040 and Quiet Qurl 60/040 N

**KEENE BUILDING PRODUCTS CO INC** — Type Quiet Qurl 65/075, Quiet Qurl 65/075 N

Alternate Floor Mat Materials\* — (Optional) — Floor mat material Nom. 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

Alternate Floor Mat Materials\* — (Optional) — Floor mat material Nom. 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

**Alternate Floor Mat Materials\*** — (Optional) — Floor mat material Nom. 1/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

**KEENE BUILDING PRODUCTS CO INC** — Type Quiet Qurl 52/013 and Quiet Qurl 52/013 N

Alternate Floor Mat Materials\* — (Optional) — Floor mat material Nom. 1/4 in. entangled net core with a compressible fabric attached to the bottom loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

**KEENE BUILDING PRODUCTS CO INC** — Quiet Qurl 55/025 MT and Quiet Qurl 55/025 N MT

System No. 14

Subflooring — Min 23/32 in. thick T&G wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to the joists with end joints staggered, secured as described in System No. 1.

**Gypsum Board\*** — One layer of nom 5/8 in. thick, 4 ft wide gypsum board, installed with long dimension perpendicular to joists. Gypsum board secured with 1 in. long No. 6 Type W bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. The joints of the gypsum board are to be staggered a minimum of 12 inches from the joints of the subfloor. **GEORGIA-PACIFIC GYPSUM L L C** — Type DS

Floor Mat Materials\* — (As an alternate to the single layer gypsum board) — Floor mat material loose laid over the subfloor.

**MAXXON CORP** — Type Encapsulated Sound Mat.

**Gypsum Board\*** — (For use when floor mat is used) Two layers of nom 5/8 in. thick, 4 ft wide gypsum board, installed with long dimension perpendicular to joists on top of the floor mat material. Gypsum board secured to each other with 1 in. long No. 6 Type G bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. The joints of the gypsum board are to be staggered a minimum of 12 inches in between layers and from the joints of the subfloor.

**GEORGIA-PACIFIC GYPSUM L L C** — Type DS

System No. 15
Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered,

secured as described in System No. 1.

Finish Flooring — Floor Topping Mixture\* — Min 3/4 in. thickness of floor topping mixture for min 15/32 in. thick wood structural panels, having a min compressive strength of 2150 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

MAPEI CORP — Type Planitex SL 35

System No. 16
Subflooring — Min. 15/32 in. thick wood structural panels, min. grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to joists with joints staggered,

secured as described in System No. 1.

Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture\* — Min 3/4 in. thickness of floor topping mixture for 15/32 in. thick wood structural panels respectively, having a min compressive strength of 2100 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

**DEPENDABLE LLC** — GSL M3.4, GSL K2.6, GSL-CSD and GSL RH

THE STRONG CO INC — Type UltraLevel

System No. 17

**Subflooring** — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered, secured as described in System No. 1.

**KEENE BUILDING PRODUCTS CO INC** — Type Quiet Qurl 55/025 and Quiet Qurl 55/025 N

**KEENE BUILDING PRODUCTS CO INC** — Type Quiet Qurl 60/040 and Quiet Qurl 60/040 N

Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring — Floor Topping Mixture\*— Min 3/4 or 1 in. thickness of floor topping mixture for 19/32 or 15/32 in. thick wood structural panels respectively, having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

Floor Mat Materials\* — (Optional) — Nom. 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

Alternate Floor Mat Materials\* — (Optional) — Floor mat material Nom. 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

Alternate Floor Mat Materials\* — (Optional) — Floor mat material Nom. 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 65/075, Quiet Qurl 65/075 N

Alternate Floor Mat Materials\* — (Optional) — Floor mat material Nom. 1/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 52/013 and Quiet Qurl 52/013 N

Alternate Floor Mat Materials\* — (Optional) — Floor mat material Nom. 1/4 in. entangled net core with a compressible fabric attached to the bottom loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Quiet Qurl 55/025 MT and Quiet Qurl 55/025 N MT

System No. 18 9 mm (3/4 in.) thick tongue and gro

**Subflooring— Structural Cement-Fiber Units\*** — Nominal 19 mm (3/4 in.) thick tongue and groove structural cement-fiber units. Long dimension of panels to be perpendicular to joists with end joints staggered. Panels fastened to the joists with #10 self-drilling, self-tapping cement board screws 1-3/4 in. long. Screws shall be spaced 6 in. OC along the perimeter of each sheet and 12 in. OC in the field of each sheet. Screws shall be spaced 1/2 in. from end joints and 1 in. from side joints. **ECTEK INTERNATIONAL INC** — Armoroc Panel

**Subflooring (Alternate)** — **Building Units\*** — Nom 3/4 in. thick, tongue and grooved boards. Long dimension of boards to be perpendicular to joists with end joints staggered a min of 4 ft. and centered over the joists. Boards secured to joists with 1-1/4 in. long self-drilling, self- tapping screws or 2 in. x 0.113 in. Ring Shank nails spaced a max of 12 in. OC in the field with screws/nails located 1 in. from long edge, and max 8 in. OC along the end joints with screws/nails located 1/2 in. from end joint. **ECTEK INTERNATIONAL INC** — Type MegaBoard

**Vapor Barrier** — Nom 0.010 in. thick commercial rosin-sized building paper.

**Finish Flooring** — Min 1 by 4 in. T & G lumber installed perpendicular to joists, or min 19/32 in. thick wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to joists with joints staggered

(Continued on next sheet)

7-0333

HITE 3880 Greenville NC 27834 / Fel (2)



New Classroom Addition for Juplin Jr.-Sr. High Scho

Project No. 22253

6 March 2023

FRA 002

System No. 19

Finish Flooring\* — Floor Topping Materials — Min 3/4 in. to 1-1/2 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance with a minimum compressive strength of 1500 psi. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies. Refer to the manufacturer's instructions accompanying the material and/or contact the manufacturer's

Floor Mat Materials\* — (Optional) — Floor mat material nom 1/8 in. to 3/4 in. thick. Loose laid over the subfloor. When used, Acousti-flor CSM (Crack Suppression Mat) is loose laid over the floor mat material. Floor topping material thickness is dependent on thickness of floor mat used. **WALFLOR INDUSTRIES INC** — Type Acousti-flor, Acousti-flor CSM. Floor topping thickness depends on products used as follows:

Acousti-flor (1/8 in. thick) - Floor topping thickness shall be a minimum of 3/4 in. Acousti-flor (1/4 in. thick) - Floor topping thickness shall be a minimum of 1 in. Acousti-flor (3/8 in. thick) - Floor topping thickness shall be a minimum of 1 in.

Acousti-flor (3/4 in. thick) - Floor topping thickness shall be a minimum of 1-1/2 in.

Metal Lath — (Optional) — Expanded steel diamond mesh, 2.5 lb / sq yd loose laid over floor mat material.

technical support for specific mix design and minimum thickness recommended for use with eligible floor mat(s).

**Fiberglass Mesh Reinforcement** — (Optional) — Coated non-woven glass fiber mesh grid loose laid over floor mat material.

Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick plywood or min 7/16 in. thick oriented strand board (OSB) wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered, secured as described in System No. 1.

Finish Flooring - Floor Topping Mixture\* — Min 1 in. thickness of floor topping mixture having a min compressive strength of 4500 psi. Refer to manufacturer's instructions

accompanying the material for specific mix design. SIKA DEUTSCHLAND GMBH — Type SCHONOX AP Rapid Plus

the end joints.

**RSP INDUSTRIES INC** — SAP board

Subflooring - Building Units\* — Nom. 1-1/2 in. thick T & G laminated composite plywood sub-floor panels to be perpendicular to the trusses with end joints staggered 4 ft. End joints centered over top chord of trusses. Subfloor panels secured to trusses with construction adhesive and #8 by 3 in. wood screws spaced 12 in. OC in the field and 6 in. OC at

System No. 22

Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick plywood or min 7/16 in. thick oriented strand board (OSB) wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered, secured as described in System No. 1.

**Vapor Barrier** — (Optional) - Commercial asphalt saturated felt, 0.030 in. thick.

Vapor Barrier — Optional) - Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring - Floor Topping Mixture\* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies. Refer to the manufacturer's instructions accompanying the material and/or contact the manufacturer's technical support for specific mix design and minimum thickness recommended for use with eligible floor mat(s).

Floor Mat Materials\* — (Optional, Not Shown) - Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material. LOW & BONAR INC — EnkaSonic® by Colbond a member of the Low & Bonar group Types 125, 250, 250 Plus, 400, 400 Plus, 750, and 750 Plus.

Floor Mat Reinforcement — (Optional) - Refer to manufacturer's instructions regarding minimum thickness of floor topping for use with floor mat reinforcement.

**Metal Lath** — (Optional) — Expanded steel diamond mesh, 2.5 lb / sq yd loose laid over floor mat material.

**Fiberglass Mesh Reinforcement** — (Optional) — Coated non-woven glass fiber mesh grid loose laid over floor mat material.

System No. 23

Subflooring — Subflooring — Min 23/32 in. thick T&G wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to the joists with end joints staggered secured as described in System No. 1. Finish Floor - Building Units\* — Min 1/2 in. thick magnesium oxide panels installed parallel, perpendicular, or diagonally to trusses with panel edges offset a min of 4 in. between subfloor and

must be placed no closer than 1/2 in. from all panel edges and no closer than 2 in. from panel corners. **HUBER ENGINEERED WOODS L L C** — Type 1/2 in. Square Edge Exacor™ Board

magnesium oxide panels. Panels secured to subfloor with construction adhesive and corrosion resistant fasteners, spaced 12 in. OC around the perimeter and in the field of the panel. Fasteners

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered. **Vapor Barrier** — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Floor Mat Materials\* — (Optional) — Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat

**GRASSWORX L L C** — SC Types

Finish Flooring\* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies. Refer to the manufacturer's instructions accompanying the material and/or contact the manufacturer's technical support for specific mix design and minimum thickness recommended for use with eligible floor mat(s).

2. **Wood Joists** — Min 2 by 10, spaced 16 in. OC and effectively fireblocked in accordance with local codes.

3. **Cross Bridging** — Min 1 by 3 in. or min 2 by 10 solid blocking.

3A. Horizontal Bridging — Used in lieu of Item 3 in same joist bay as ceiling damper (Item 4), when ceiling damper is employed. Wood 2 by 4 in. secured between joists with nails.

4. Ceiling Damper\* — (Optional) — Max nom area shall be 198 sq in. Max rectangular size shall be 12 in. wide by 16-1/2 in. long. Max height of damper shall be 9-3/8 in. Aggregate damper openings shall not exceed 99 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 7) shall be installed in accordance with installation instructions. AIR BALANCE INC — Type 299 (See Item 5A)

AIR KING VENTILATION PRODUCTS — Series FRAS, Series FRAK, Series FRAKV

CENTRAL VENTILATION SYSTEMS CO L L C — Models C-S/R-HC(-A), C-RD-HC(-A)

**GREENHECK FAN CORP** — Model CRD-1WJ

METAL-FAB INC — Models MSCDHC, MRCDHC

METAL INDUSTRIES INC — Models CD-S/R-HC, CD-S/R-HC-A, CD-RD-HC, CD-RD-HC-A

NCA MFG INC — Models CD-S/R-HC, CD-S/R-HC-A, CD-RD-HC, CD-RD-HC-A

BRISK MFG INC — Model BMI-50-CRD-S/R-WT

PRICE INDUSTRIES LTD — Models CD-S/R-HC, CD-RD-HC

RUSKIN COMPANY — Model CFD7

**UNITED ENERTECH CORP** — Models C-S/R-HC(-A), C-RD-HC(-A)

UL Design No. L501

5. Gypsum Board\* — — Nom 5/8 in. thick, 48 in. wide gypsum board, installed with long dimension perpendicular to joists. Gypsum board secured with 1-7/8 in. long, 6d cement **AMERICAN GYPSUM CO** — Types AGX-1, AG-C, LightRoc

**BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO** — Type DBX-1

**CABOT MANUFACTURING ULC** — Type X, 5/8 Type X, Type Blueglass Exterior Sheathing

**CERTAINTEED GYPSUM INC** — Type C, Type X-1, Types LGFC6A, LGFC-C/A, LWTX

**CGC INC** — Types C, IP-X1, IP-X2, IPC-AR, SCX, WRX

GEORGIA-PACIFIC GYPSUM L L C — Types 5, 9, C, GPFS1, GPFS6, DA, DAP, DAPC, DGG, DS, Type X, Veneer Plaster Base-Type X, Water Rated-Type X, Sheathing Type-X, Soffit-Type X, TG-C, GreenGlass Type X, Type LWX (finish rating 22 min), Veneer Plaster Base-Type LWX (finish rating 22 min), Water Rated-Type LWX (finish rating 22 min), Sheathing Type-LWX (finish rating 22 min), Soffit-Type LWX (finish rating 22 min), Type LWX (finish rating 22 min), Type LW2X (finish rating 20 min), Veneer Plaster Base - Type LW2X (finish rating 20 min), Water Rated - Type LW2X (finish rating 20 min), Sheathing - Type LW2X (finish rating 20 min), Soffit - Type LW2X (finish rating 20 min)

NATIONAL GYPSUM CO — eXP-C, FSK, FSK-C, FSK-G, FSL, FSMR-C, FSW-2, FSW-3, FSW-C, FSW-G, FSW-8, RSX

**NATIONAL GYPSUM CO** — Riyadh, Saudi Arabia — Type FR or WR.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types C, PG-3, PG-4, PG-5, PG-6, PG-9, PG-7, PG-11, PGS-WRS (Finish Rating 21 minutes), Type PGI (Finish Rating 26 minutes).

PANEL REY S A — Types PRC, PRC2

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1

**THAI GYPSUM PRODUCTS PCL** — Type C, Type X

UNITED STATES GYPSUM CO — Types C, IP-X1, IP-X2, IPC-AR, SCX, WRX

**USG BORAL DRYWALL SFZ LLC** — Types C, SCX

**USG MEXICO S A DE C V** — Types C, IP-X1, IP-X2, IPC-AR, SCX, WRX

5A. **Gypsum Board\*** — (Finish Rating - 16 min.) Required when Air Balance Inc. Type 299 ceiling damper (Item 4) is installed. Nom 5/8 in. thick, 48 in. wide gypsum board, installed with long dimension perpendicular to joists. Gypsum board secured with 1-7/8 in. long, 6d cement coated nails spaced 6 in. OC with the first nails located 1/2 in. and 3 in. from the **UNITED STATES GYPSUM CO** — Type C

**USG BORAL DRYWALL SFZ LLC** — Types C, SCX

**USG MEXICO S A DE C V** — Type C

5B. **Gypsum Board\*** — Nom 3/4 in. thick, 48 in. wide gypsum board, installed as described in Item 5 with nails length increased to 2 in. PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type PG-13

5C. **Gypsum Board\* (As an alternative to Item 5)** — Nom 5/8 in. thick, 48 in. wide gypsum board, installed with long dimension perpendicular to joists. Gypsum board secured with 1 in. long Type S screws spaced 6 in. OC. UNITED STATES GYPSUM CO — ULIX

5D. Gypsum Board\* (As an alternative to Item 5A) — Required when Air Balance Inc. Type 299 ceiling damper (Item 4) is installed. Nom 5/8 in. thick, 48 in. wide gypsum board,

installed with long dimension perpendicular to joists. Gypsum board secured with 1-7/8 in. long Type S screws spaced 6 in. OC with the first screws located 1/2 in. and 3 in. from the board edges. UNITED STATES GYPSUM CO — ULIX

5E. **Gypsum Board\* (As an alternative to Item 5)** — Nom 5/8 in. thick, 48 in. wide gypsum board, installed with long dimension perpendicular to joists. Gypsum board secured with 2 in. long, No. 6 screws spaced 6 in. OC.

**NATIONAL GYPSUM CO** — FSW, FSW-6

6. Finishing System — (Not Shown) — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads. Nom 2 in. wide paper tape embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum board.

7. **Grille** — Steel grille, installed in accordance with the installation instructions provided with the ceiling damper.

8. Steel Corner Fasteners — (Optional, Not Shown) — Used to attach ends of gypsum board at wall intersection where joists run parallel to wall. Channel shaped, 2 in. long by 1 in. high on the back side with two 1/8 in. wide cleats protruding into the 5/8 in. wide channel, fabricated from 24 gauge galvanized steel. Fasteners nailed to face of wall bearing plate through fastener tab with one No. 6d cement coated nail, spaced not greater than 16 in. OC and 2 in. from edge of gypsum board. Fasteners covered with gypsum board facing applied to intersecting wall.

9. Discrete Products Installed in Air-handling Spaces\* — Automatic Balancing Valve/Damper — (Not Shown - Optional) — For use with item 4, Ruskin Company's Model CFD7 damper (CABS). Ceiling damper to be provided with plenum box per damper manufacturer's instructions with side outlet only. Entire assembly to be installed into any UL Class 0 or Class 1 flexible air duct in accordance with the instructions provided by the automatic balancing valve/damper manufacturer. METAL INDUSTRIES INC — Model ABV-4, ABV-5, ABV-6

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively. Last Updated on 2022-08-15

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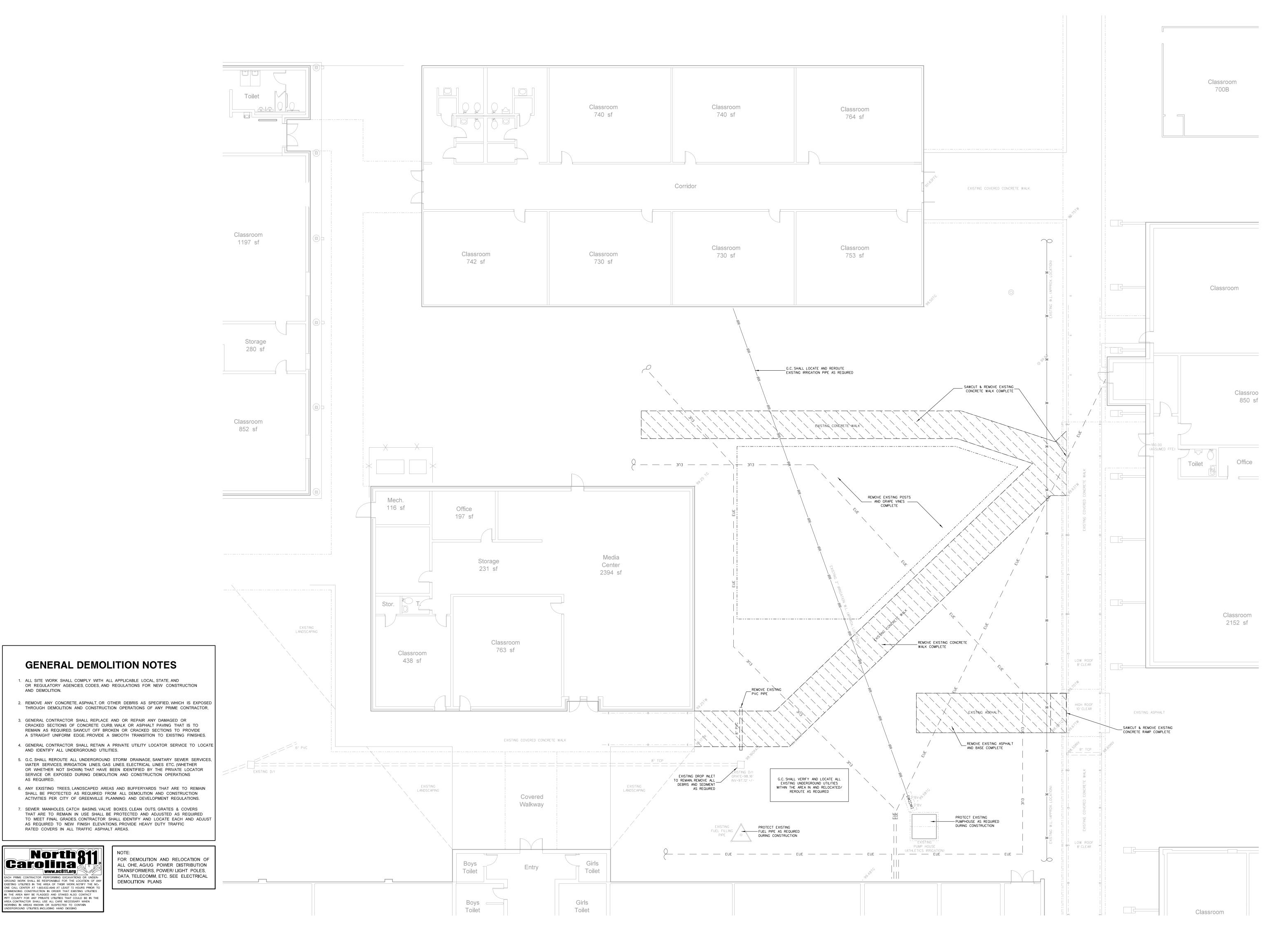
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FRA



001.1 SITE DEMOLITION PLAN SCALE: 1" = 10'-0"

HITE 3850 CIATES ARCHITECTURE / PLANNING / TECHNOLOGY

REGISTERED THE CONTRIBUTE OF SOUTH CONTRIBUTE OF SOUTH CONTRIBUTE OF SOUTH CONTRIBUTE OF SOUTH CROSSING CONTRIBUTE OF SOUTH CROSSING

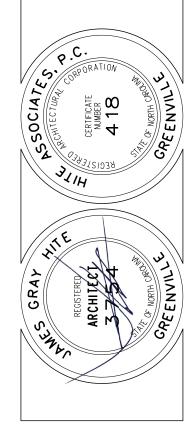
New Classroom Addition for North Duplin Jr.-Sr. High Schoo

Project No.
22253

Date:
6 March 2023

Drawing no.

Drawing no.



Project No. 22253 Dote: 6 March 2023 A

| INLINE DRAIN | GRATE=99.50' | INV=98.20'

DOWNSPOUT TO NEW U.G. RDL

TIE IN EXISTING

DOWNSPOUT TO

NEW U.G. RDL

TIE IN EXISTING

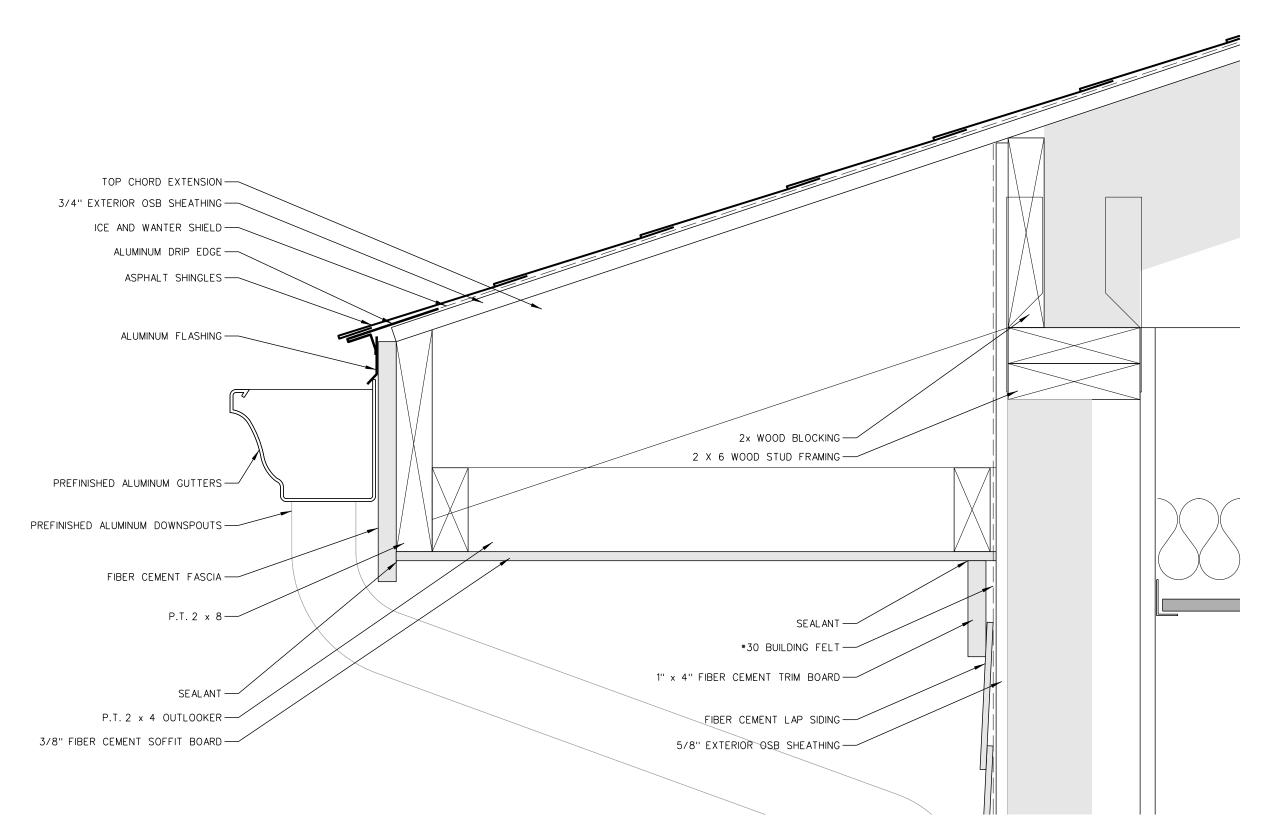
DOWNSPOUT TO

NEW U.G. RDL

\_\_CANOPY TO DRAIN
THIS SIDE

INLINE DRAIN GRATE=98.50' INV=97.20'

003.1 ROOF PLAN SCALE: 1/8" = 1'-0"



003.3 EAVE / SOFFIT DETAIL

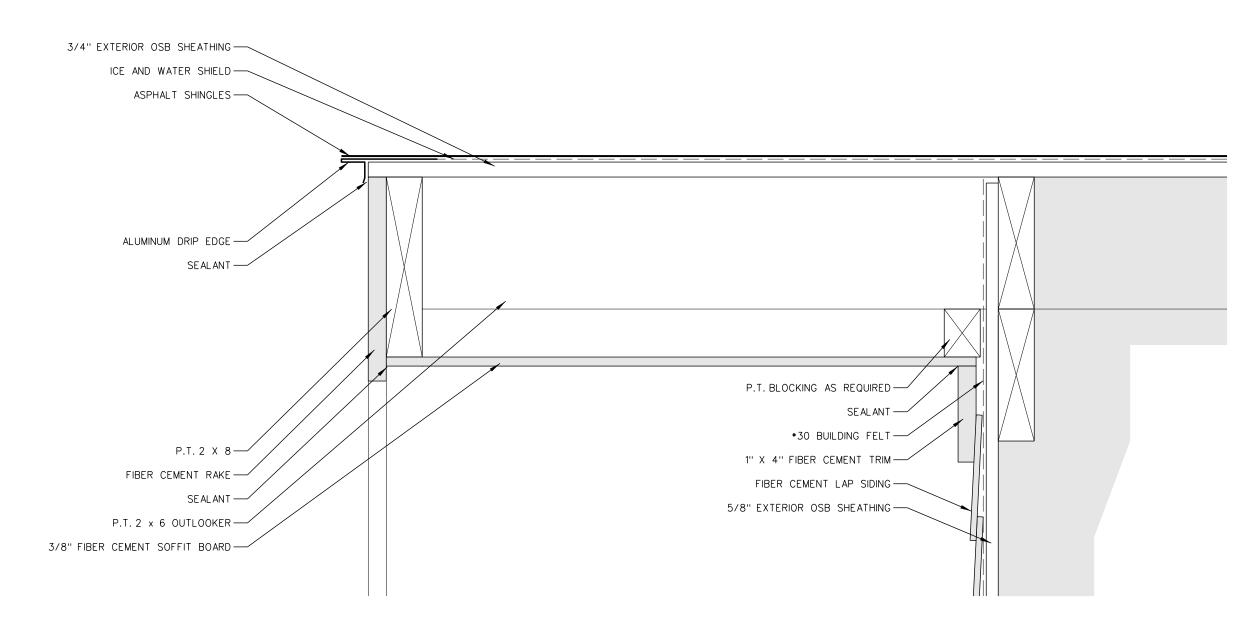
INLINE DRAIN
GRATE=99.00'
INV=97.70'

INLINE DRAIN
GRATE=99.00'
INV=97.50'

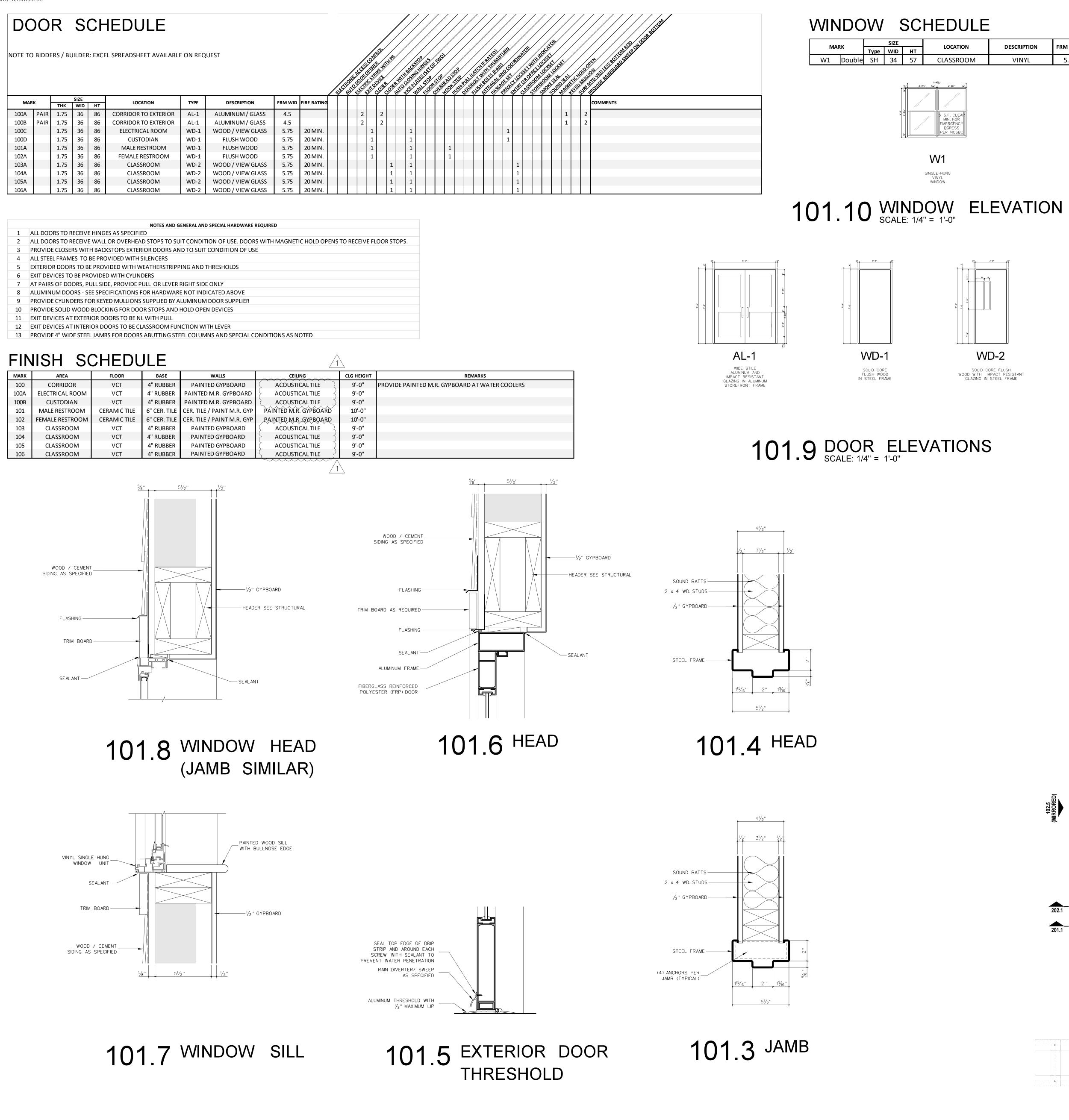
EXISTING
FUEL FILLING
PIPE
O

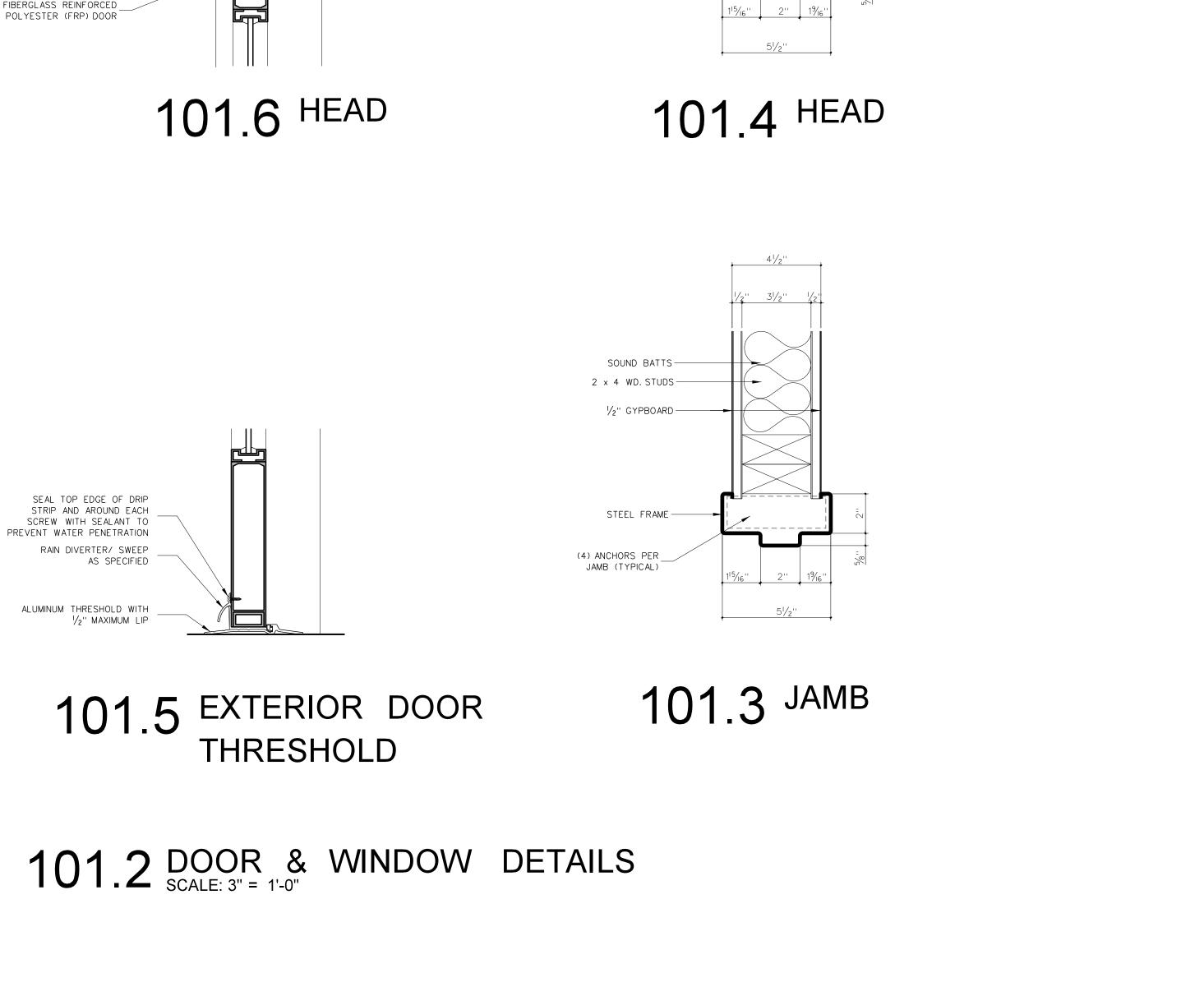
\_\_\_NEW ALUMINUM CANOPY AS SPECIFIED

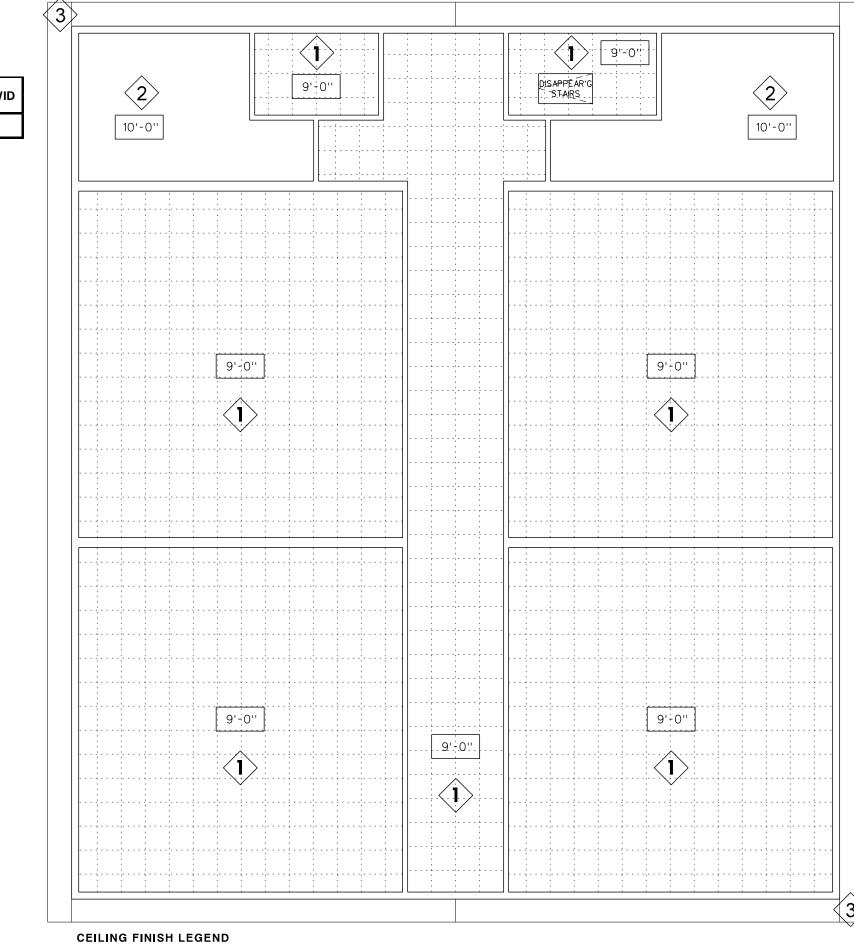
\_\_CANOPY TO DRAIN
THIS SIDE



003.2 RAKE DETAIL SCALE: 3" = 1'-0"







DESCRIPTION

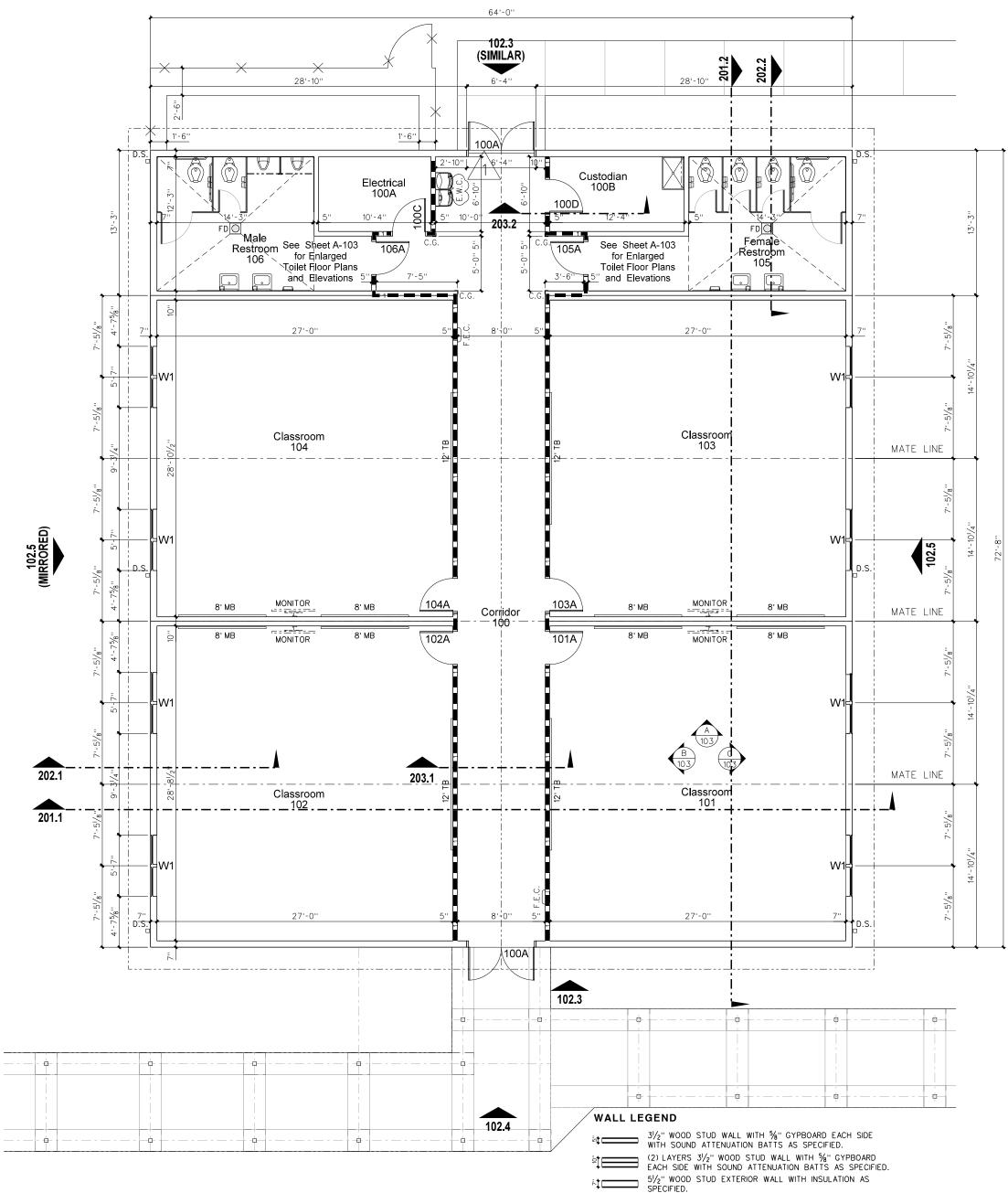
VINYL

WD-2

24"x24"x 5%" ARMSTRONG FINE FISSURED HUMIGUARD PLUS RH90 NO. 1728 / PRELUDE XL GRID. TYPE 2 5/8" MOISTURE RESISTANT GYPBOARD TYPE 3 3/8" HARDIE BOARD SOFFIT PANEL

NOTE: (1) PROVIDE TYPE 1 CEILING UNLESS OTHERWISE NOTED. (2) PROVIDE CEILING ACCESS DOOR IN EACH SPACE WITH DRYWALL CEILING.

# 101.10 REFLECTED CEILING PLAN SCALE: 1/8" = 1'-0"

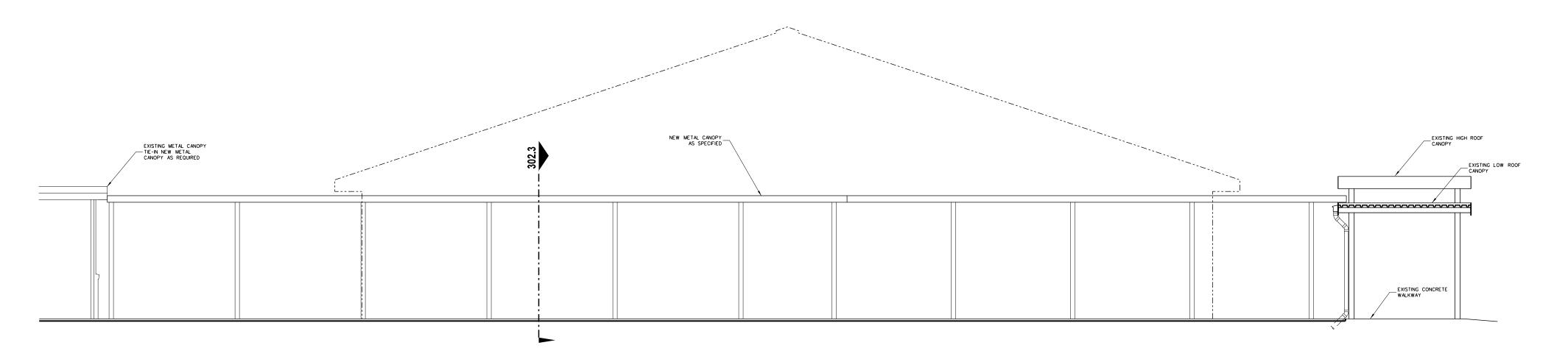


101.1 FLOOR PLAN (WITH RESTROOMS)

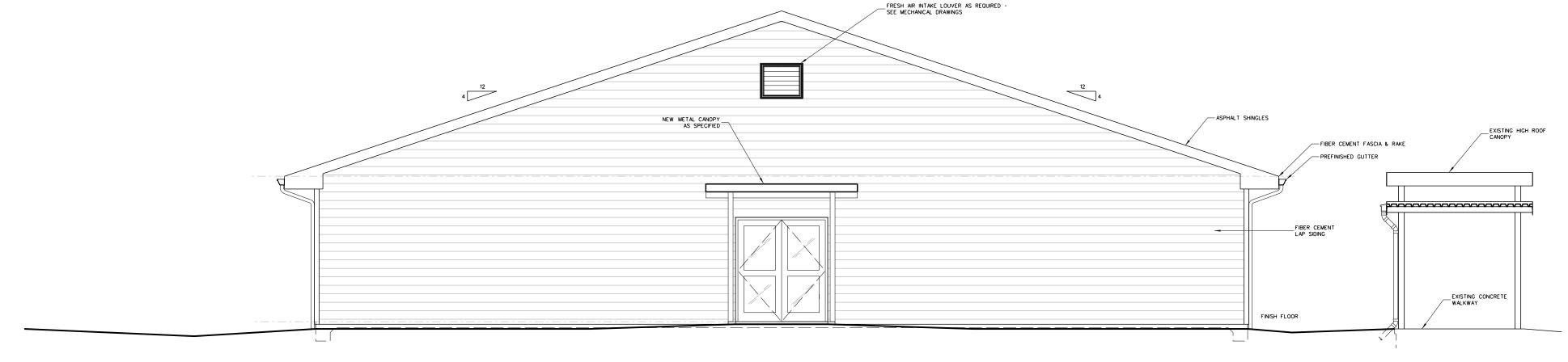
Project No. 22253 6 March 2023 Drawing no. A

2

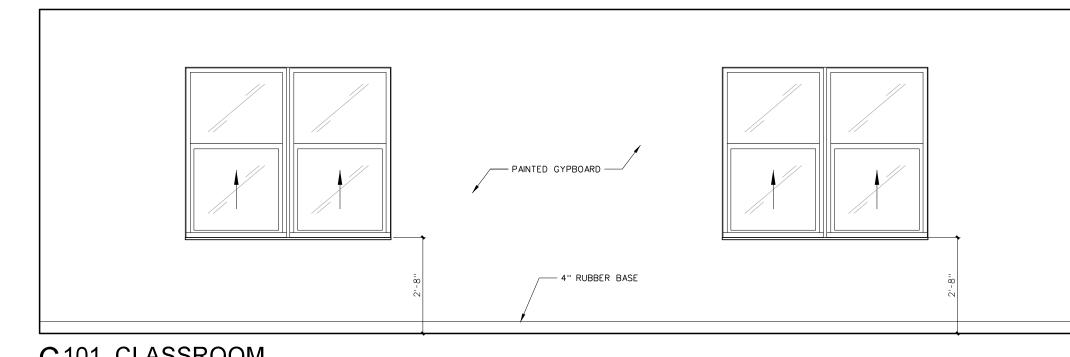
102.5 ELEVATION - SIDE WALL (MIRROR OPP. SIDE)



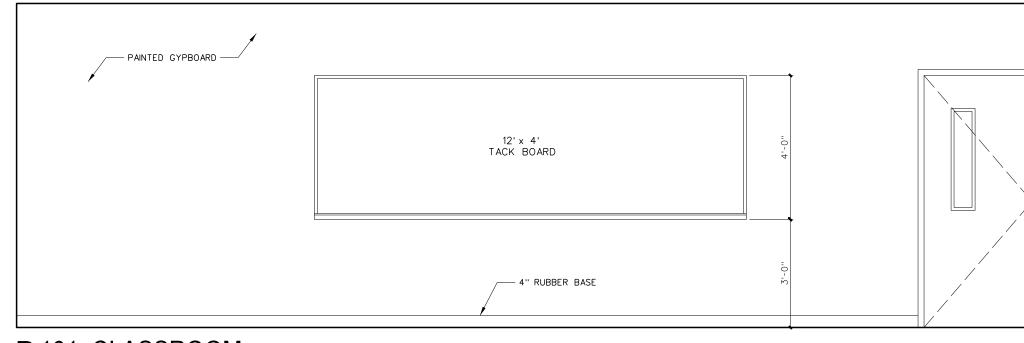
102.4 EXTERIOR ELEVATION - METAL CANOPY



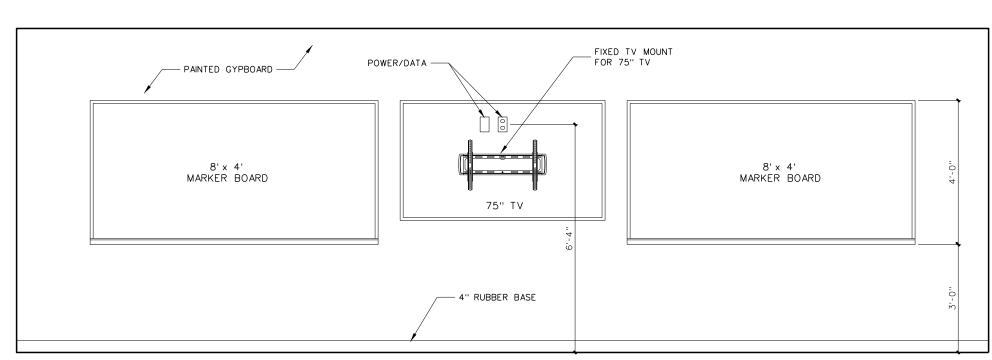
102.3 EXTERIOR ELEVATION - TYP. GABLE END



C101 CLASSROOM

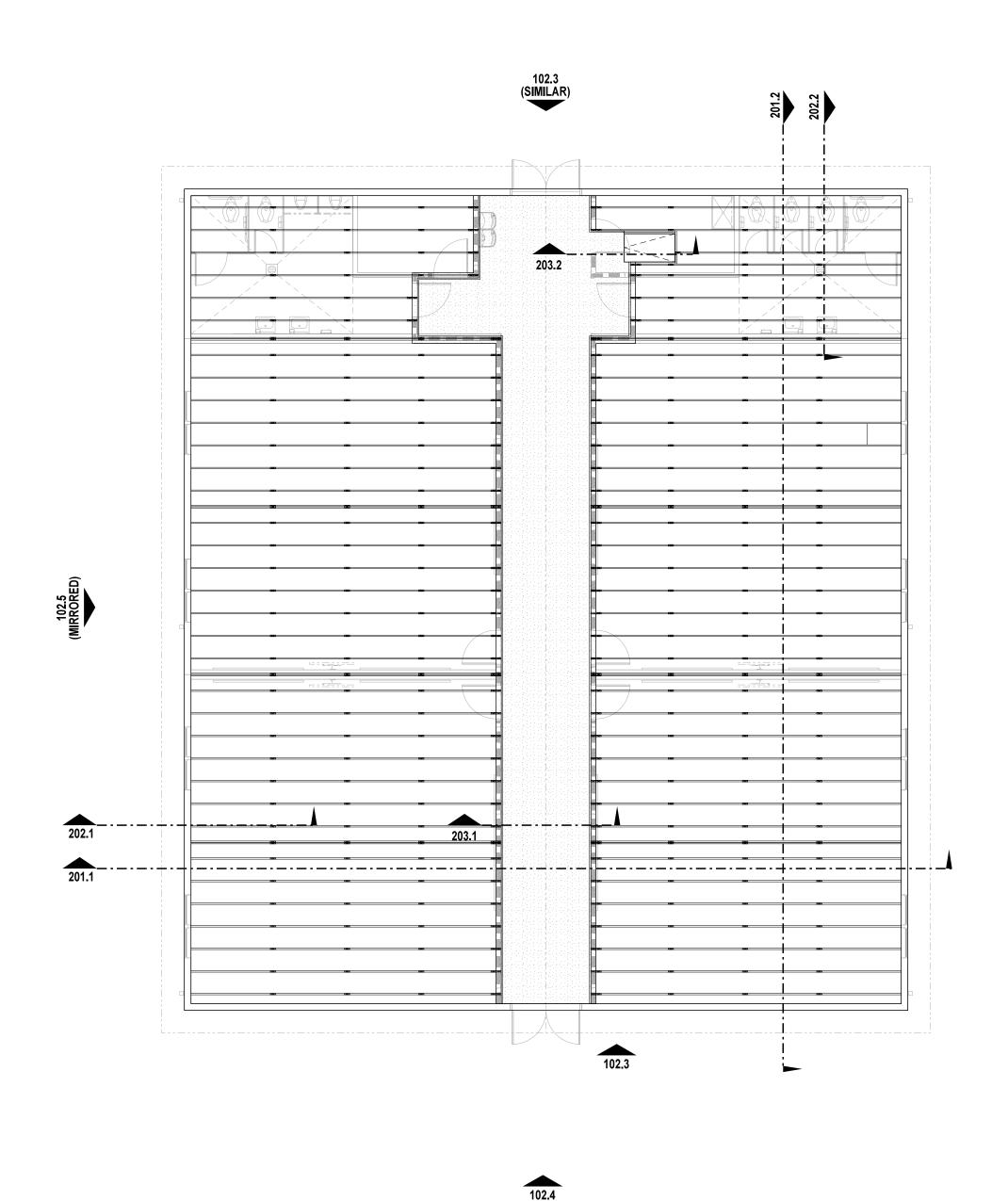


B 101 CLASSROOM



A 101 CLASSROOM

102.2 CLASSROOM INTERIOR ELEVATIONS



102.1 PLATFORM PLAN SCALE: 1/8" = 1'-0"



BY OWNER

PDC-R10

TPH2 OPTICORE 80300

FSS-1 (L/R) BOBRICK 5181

SSCR BOBRICK 6047

MPR BOBRICK 239x34

DESCRIPTION

LAVATORY

WATER CLOSET

ELECTRIC WATER COOLER

BOBRICK 4390

BOBRICK 7672

BY OWNER

GB18 BOBRICK 6806-18 18" GRAB BAR

GBV18 BOBRICK 6806-18 18" VERTICAL GRAB BAR

PAPER TOWEL DISPENSER

TOILET PAPER HOLDER

FOLDING SHOWER SEAT

SHOWER CURTAIN ROD

RECESSED SOAP DISH

DOUBLE ROBE HOOK

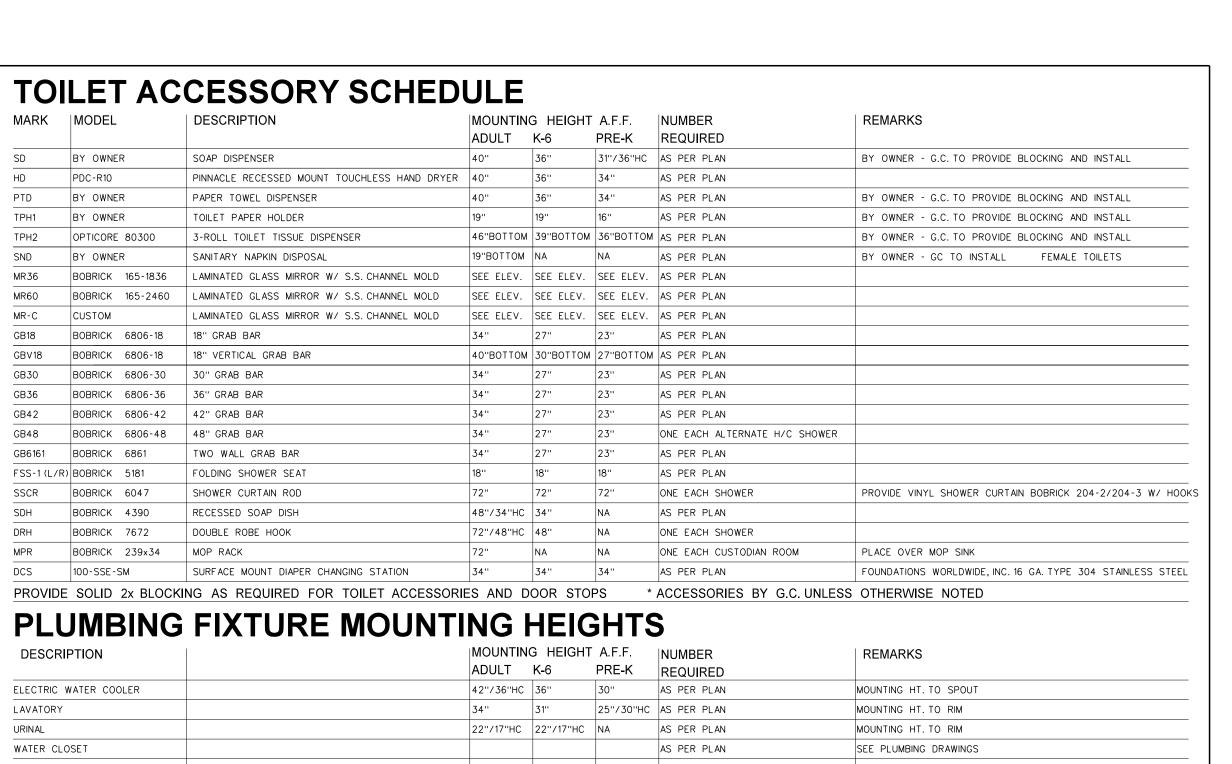
SURFACE MOUNT DIAPER CHANGING STATION

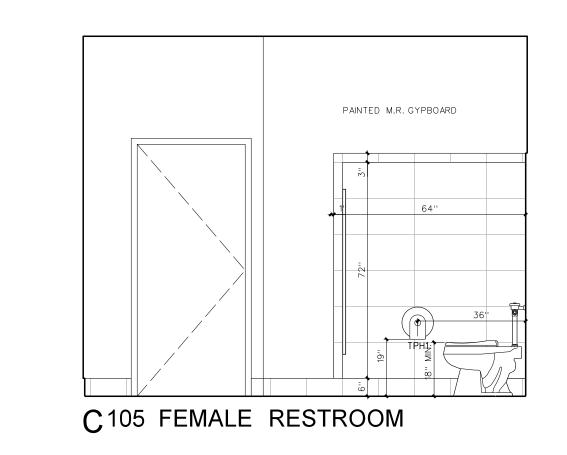
3-ROLL TOILET TISSUE DISPENSER

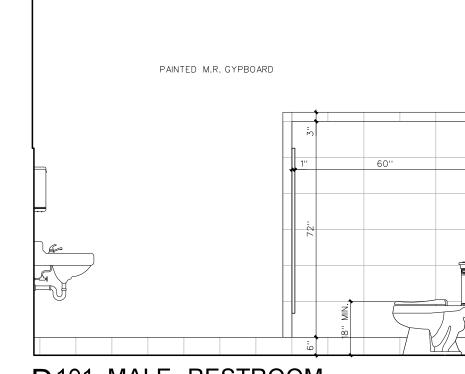
SANITARY NAPKIN DISPOSAL

PTD BY OWNER

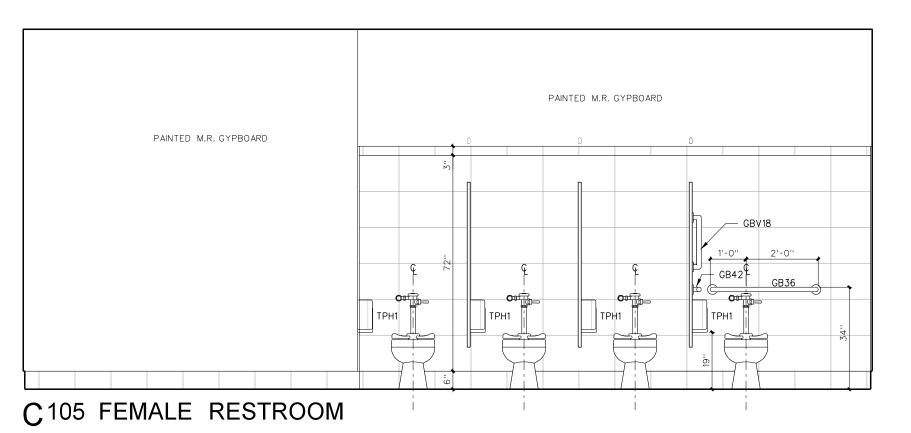
TPH1 BY OWNER

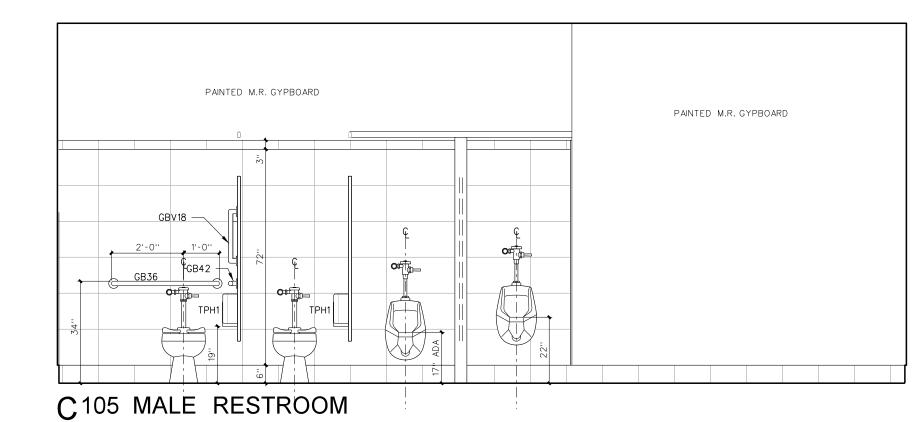


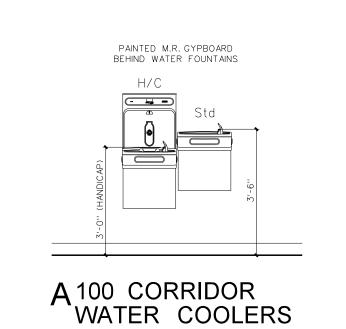


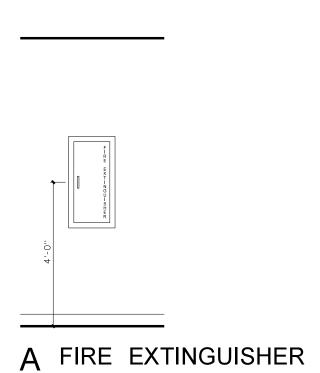


D101 MALE RESTROOM

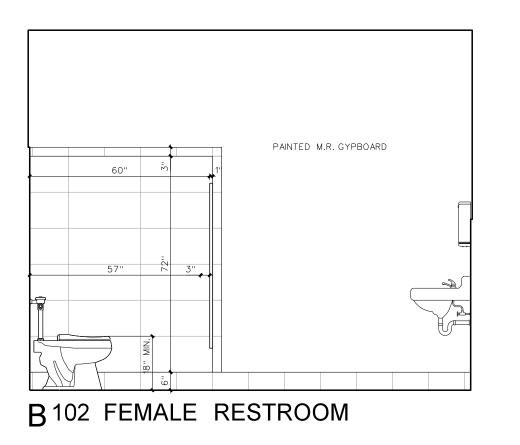


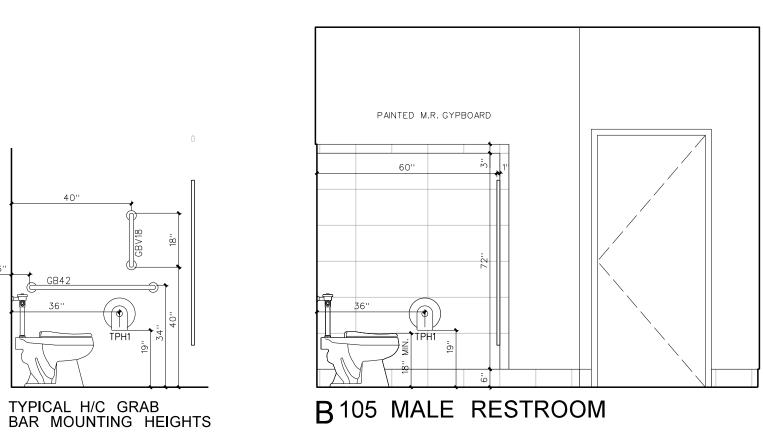


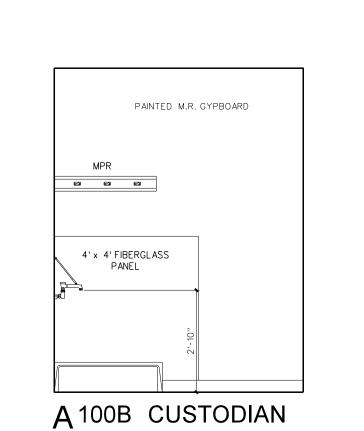


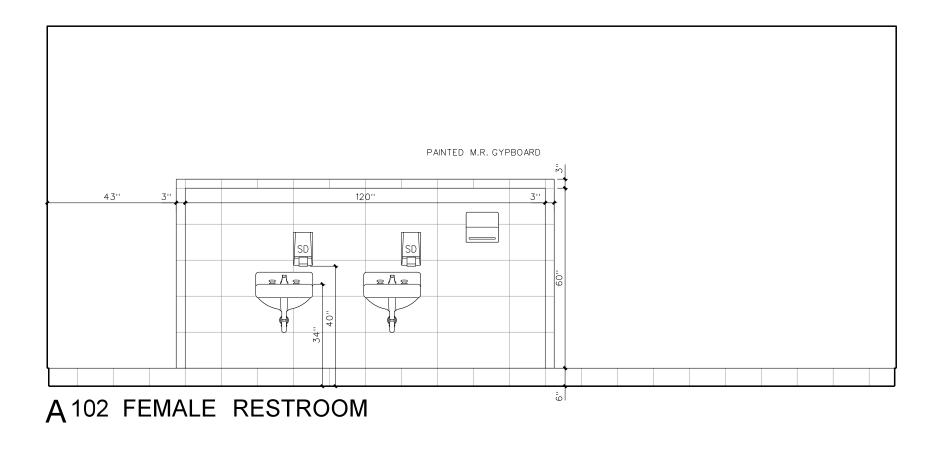


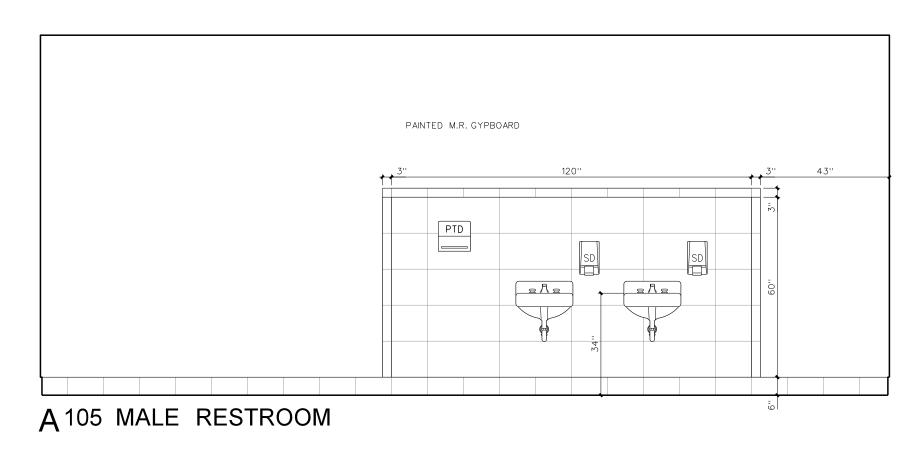
CABINET (TYPICAL)



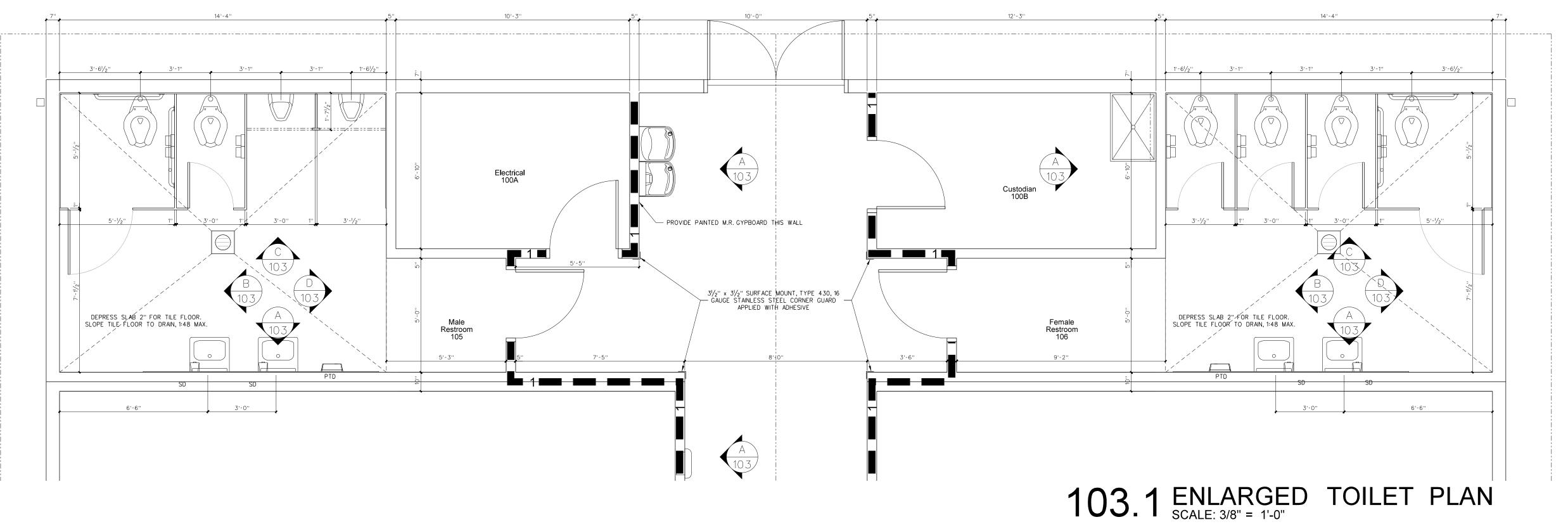




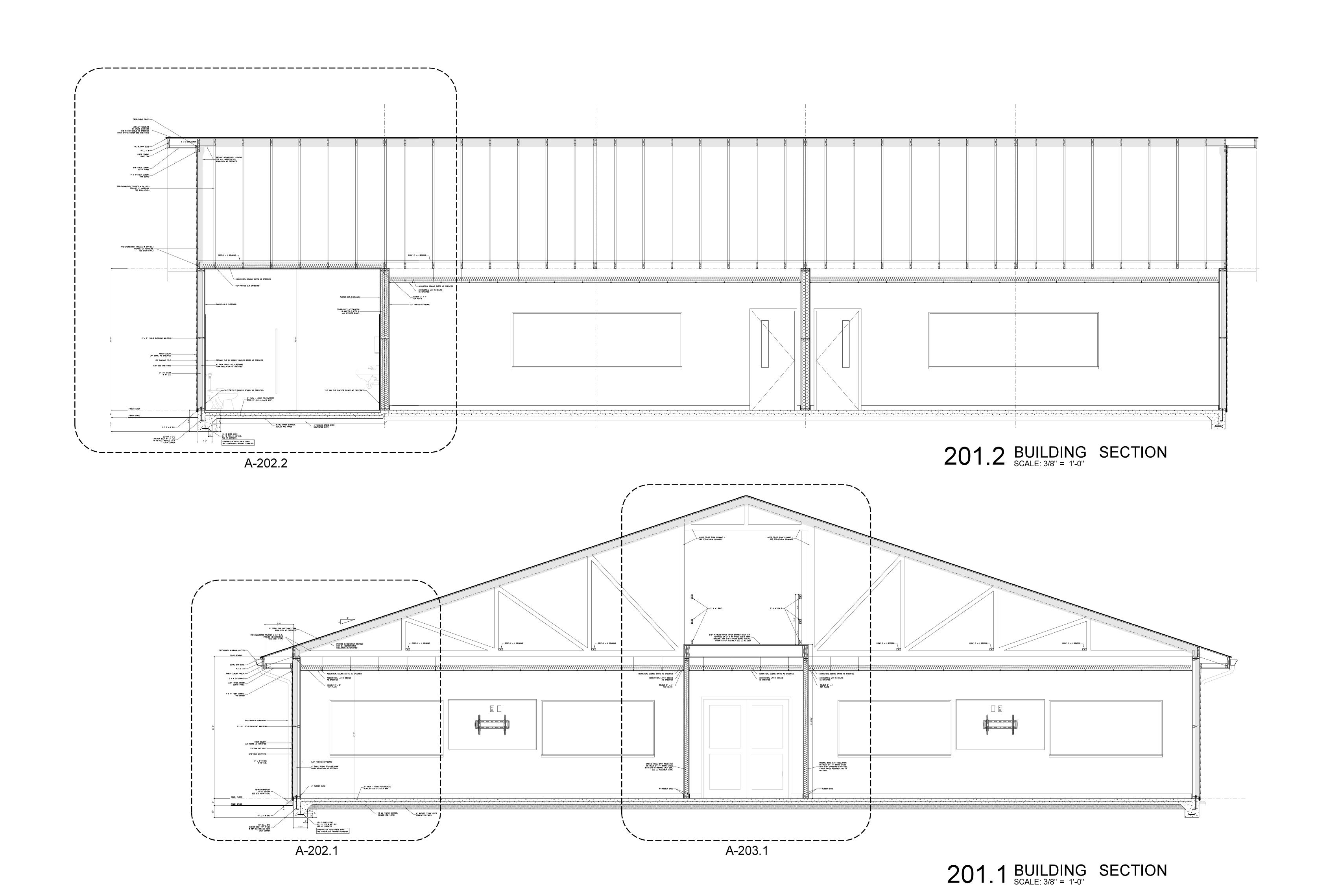






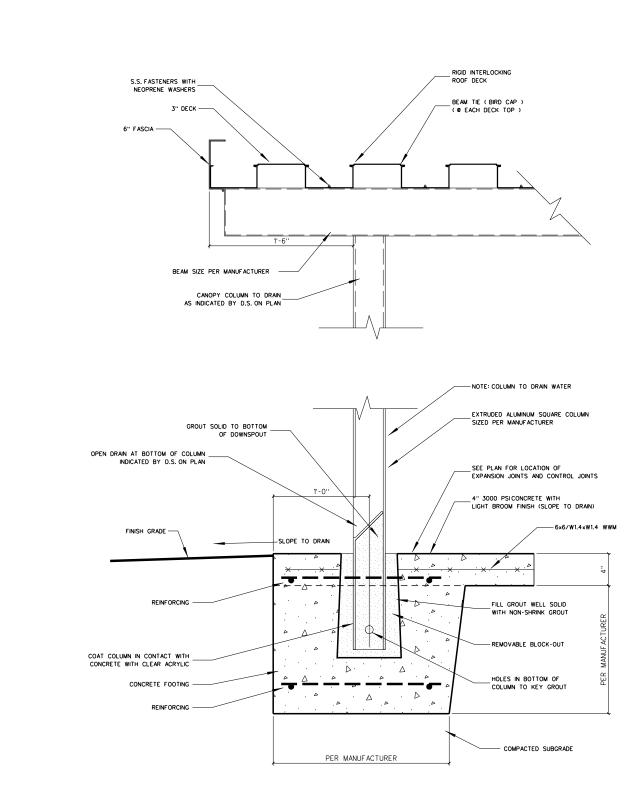




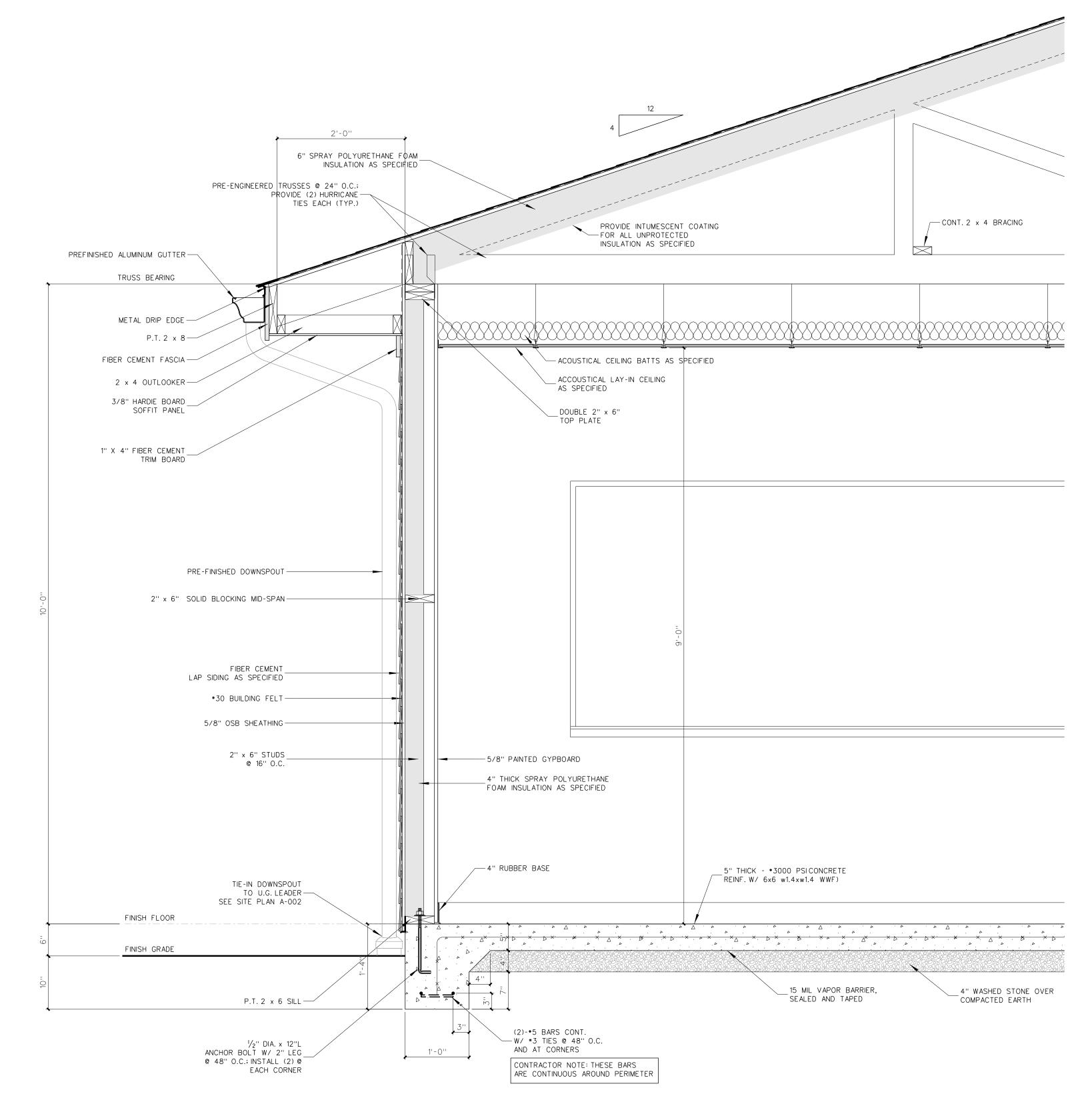


DROP-GABLE TRUSS —

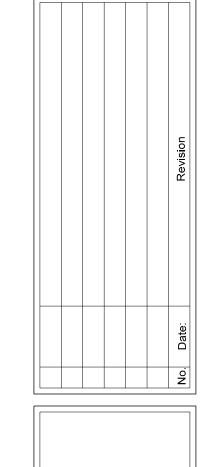
202.2 GABLE ENDWALL SECTION SCALE: 1" = 1'-0"



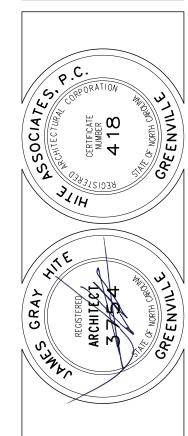
202.3 SECTION @ METAL CANOPY



202.1 WALL SECTION SCALE: 1" = 1'-0"



ITE ASSOCIATES INTECTURE / PLANNING / TECHNOLOGY



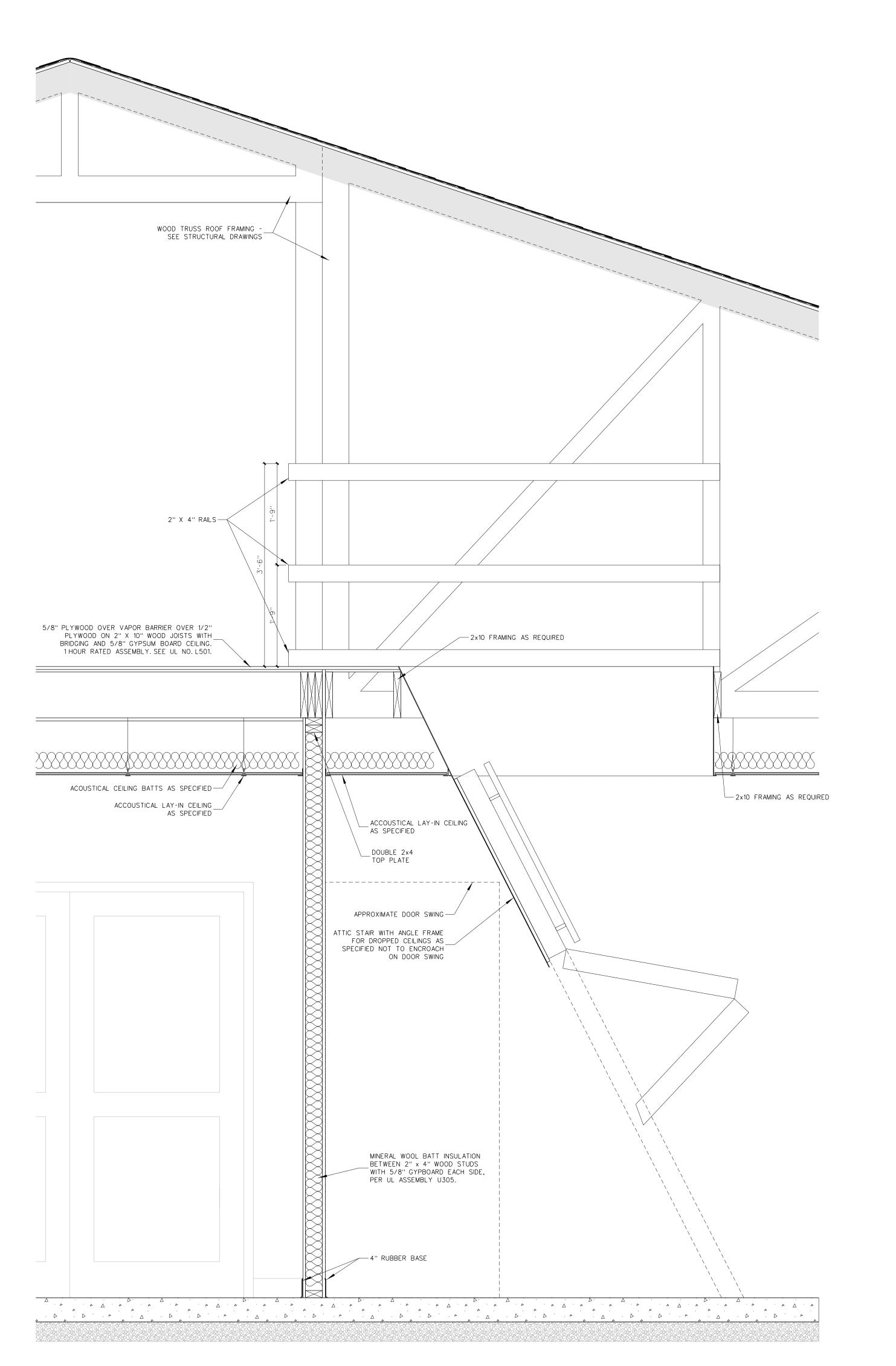
rth Duplin Jr.-Sr. High School

Project No.
22253

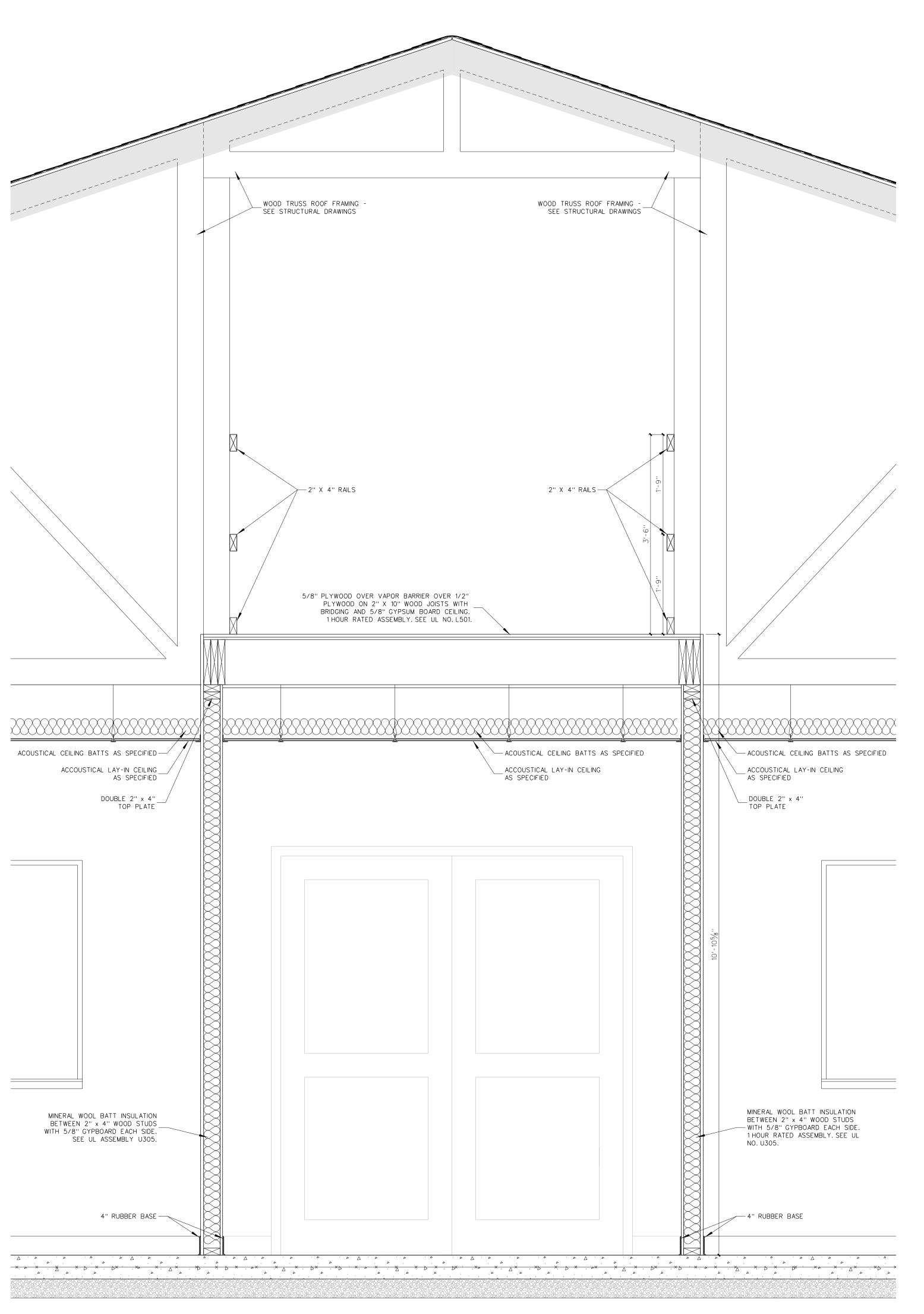
Date:
6 March 2023

Drawing no.

2



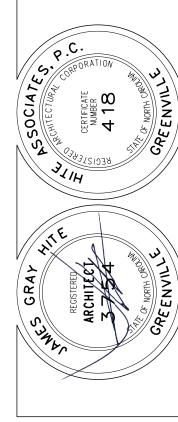
203.2 SECTION AT ATTIC ACCESS



203.1 SECTION AT CORRIDOR SCALE: 1" = 1'-0"

#NOLOGY / tel (252) 757-0333

HITE 3880 CIBATES ARCHITECTURE / PLANNING / TECHNOLOGY 2600 Meridian Drive / Greenville, NC 27834 / tel (252) 757-03



New Classroom Addition for North Duplin Jr.-Sr. High School 1388 NC-403, Mt Olive, NC 28365 Duplin County / North Carolina

Project No.
22253

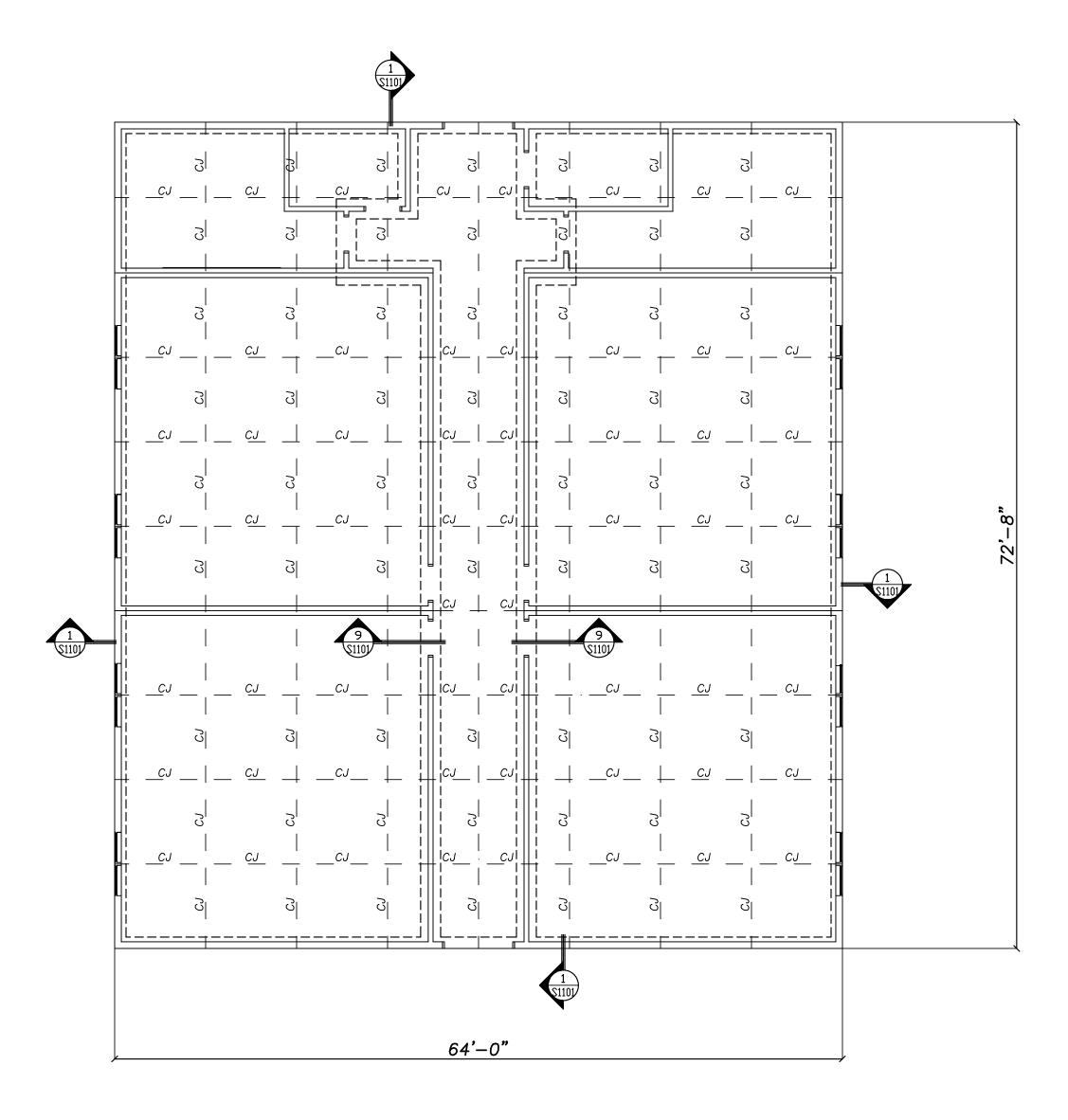
Date:
6. March, 2023

6 March 2023

Drawing no.

A

203



#### FOUNDATION PLAN

g" = 1'-0"

1.) FOOTING DESIGN BASED ON ASSUMED SOIL BRG. CAPACITY OF 2000 PSF.
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER OF RECORD
IF UNSTABLE, ORGANIC, WEAK OR OTHERWISE UNACCEPTABLE SOIL CONDITIONS ARE
ENCOUNTERED DURING EXCAVATIONS OR SUBSEQUENT GEOTECHNICAL INVESTIGATIONS.
2.) ELEV. NOTED (— ) ARE BELOW REFERENCE FINISHED FLOOR TO TOP OF FOOTING. (00.00)

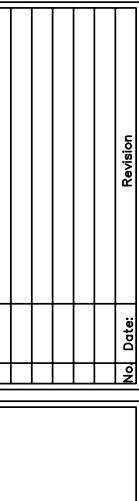
3.) SLAB ON GRADE IS NORMAL WEIGHT CONCRETE WITH REINFORCED WITH 6x6 W1.4 x W1.4 WWM ON A 4" WASHED STONE AND 15 MIL POLY VAPOR BARRIER, TYP. U.O.N.
4.) ALL CONCRETE SHALL BE A MINIMUM STRENGTH OF 3000 PSI MEETING ACI 301 AND ACI 318. ALL CONCRETE SHALL BE MIXED, HANDLED, SAMPLED, TESTED, AND PLACED IN ACCORDANCE WITH ACI STANDARDS. ALL SAMPLES SUBJECT TO PUMPING SHALL BE TAKEN AT THE EXIT END OF THE PUMP AT THE ELEVATION

OF PLACEMENT. (REFERENCE ACI MANUAL OF CONCRETE PRACTICE).

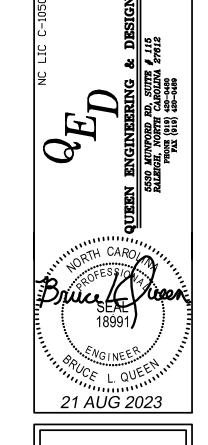
5.) ALL REINFORCING BARS SHALL BE GRADE 60 CONFORMING TO ASTM 615. LAP
BARS WHERE REQUIRED USING CLASS B TENSION LAP SPLICES, OR 40 BAR DIAMETERS.
DEVELOPMENT LENGTHS SHALL BE CRSI MINIMUM UON.

6.) REFERENCE ARCHITECTURAL AND PLUMBING DRAWINGS FOR COORDINATION OF SLOPED FLOORS AT FLOOR DRAINS, AND DEPRESSED FLOOR SLAB LOCATIONS.

7.) ARCHITECTURAL BACKGROUND IS SHOWN FOR REFERENCE ONLY. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF WALLS.



HITE 3890 B TECHNOLOGY ARCHITECTURE / Greenville, NC 27858 / tel (252) 757-0



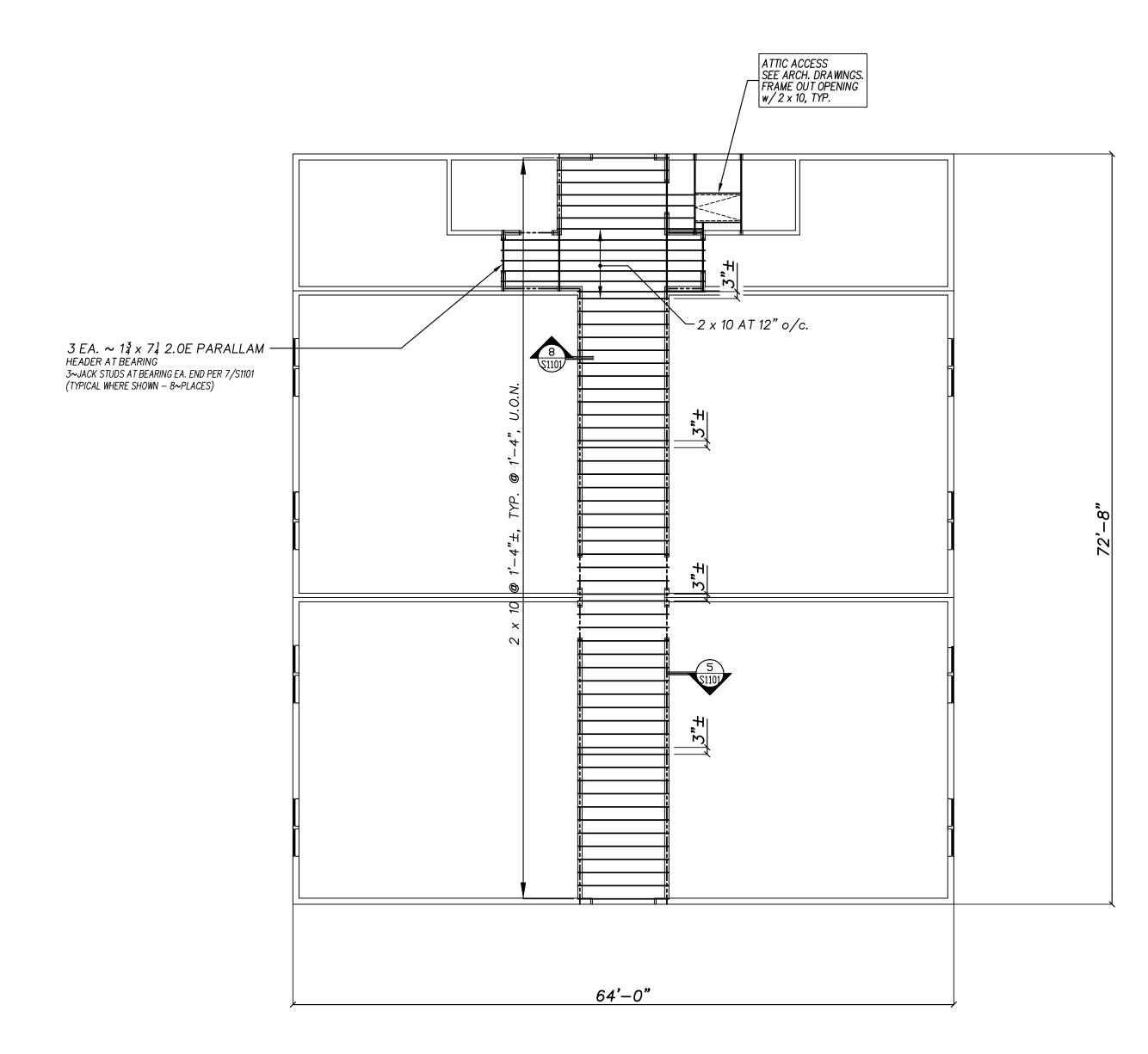
NEW CLASSROOM ADDITION FOR H DUPLIN JR.-SR. HIGH SCHO 1388 NC-403, MT. OLIVE, NC 28365 DUPLIN COUNTY / NORTH CAROLINA

Project No. 22253

Date: 21 AUG 2023

Drawing no. 1

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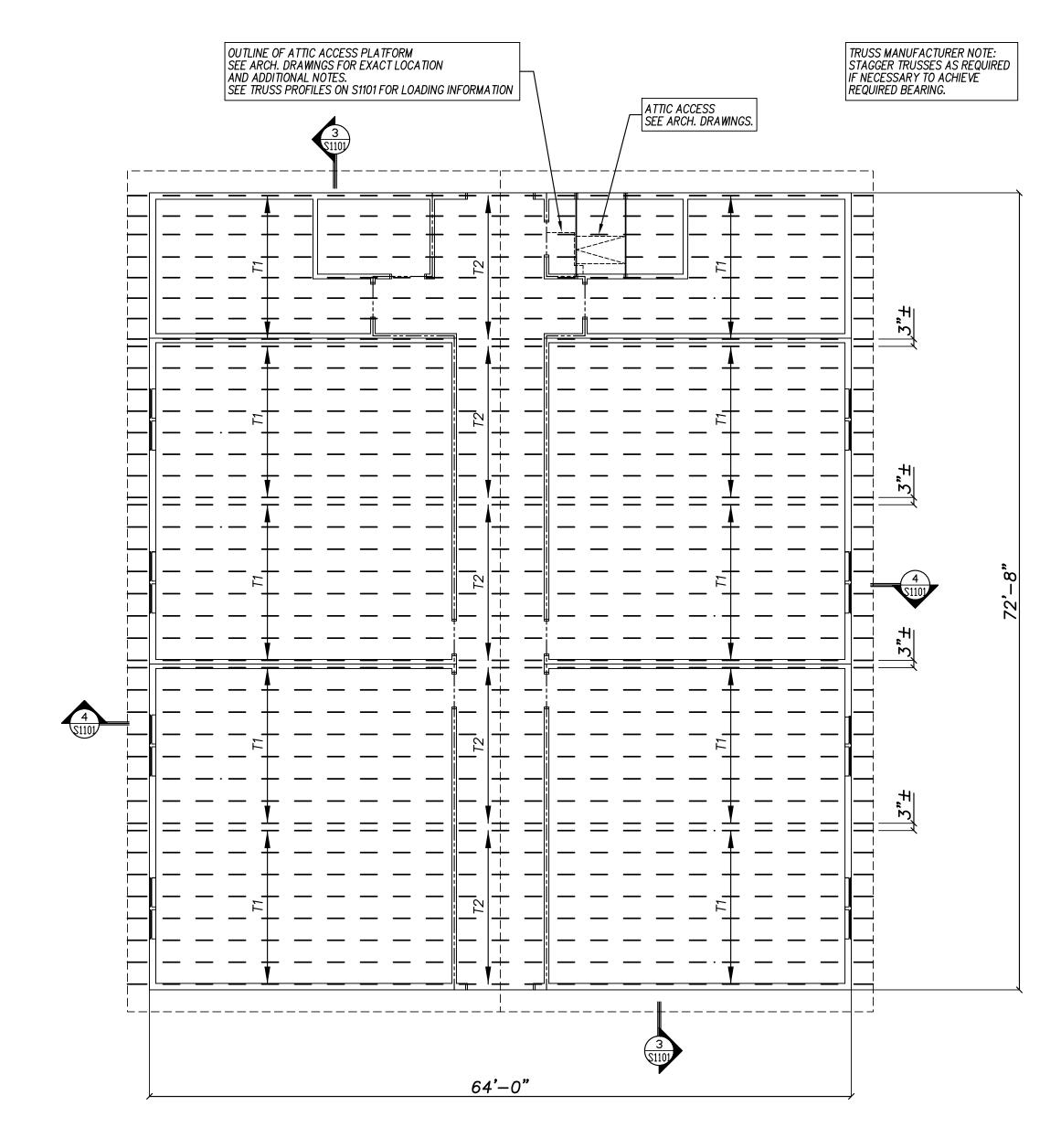
PLATFORM	FRAMING	PLAN	$\frac{1}{8}$ " = 1'-0"

1.) SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL PLATFORM CONSTRUCTION NOTES THAT APPLY.

2.) — -- — — INDICATES LINE OF INTERIOR CORRIDOR BEARING WALLS.

SEE ARCH. DRAWINGS AND DETAILS ON S1101 FOR ADDITIONAL NOTES THAT APPLY.

3.) ARCHITECTURAL BACKGROUND IS SHOWN FOR REFERENCE ONLY. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF WALLS. 4.) LOCATE ALL WALLS PER ARCHITECTURAL DRAWINGS.



ROOF FRAMING PLAN

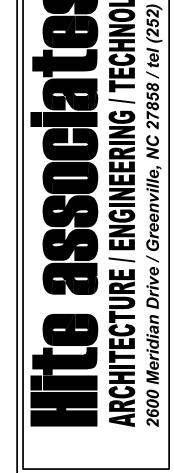
b''' = 1'-0"

- ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA. HANDLING AND ERECTION OF TRUSSES SHALL BE IN ACCORDANCE WITH AISI STANDARDS. ALL CONNECTIONS OF TRUSSES SHALL BE DESIGNED BY TRUSS SUPPLIER.
- 2.) SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL ROOF
- CONSTRUCTION NOTES THAT APPLY. 3.) TRUSS SPACING SHALL BE 2'-0" o/c., MAXIMUM.
- 4.) ————— INDICATES LINE OF INTERIOR CORRIDOR BEARING WALLS.

  SEE ARCH. DRAWINGS AND DETAILS ON S1101 FOR ADDITIONAL

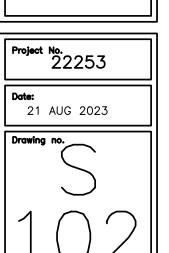
  NOTES THAT APPLY.

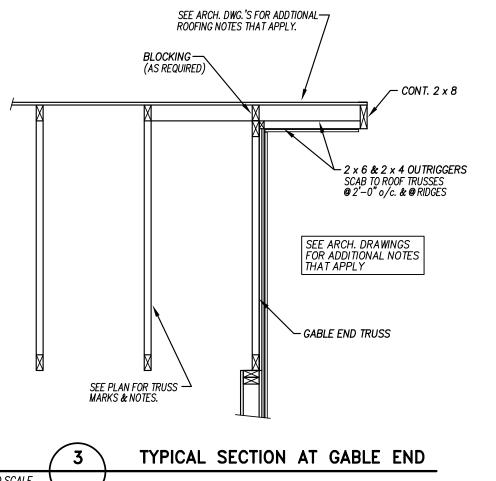
1.) TRUSS SHOP DRAWINGS SHALL BE SEALED BY A PROFESSIONAL

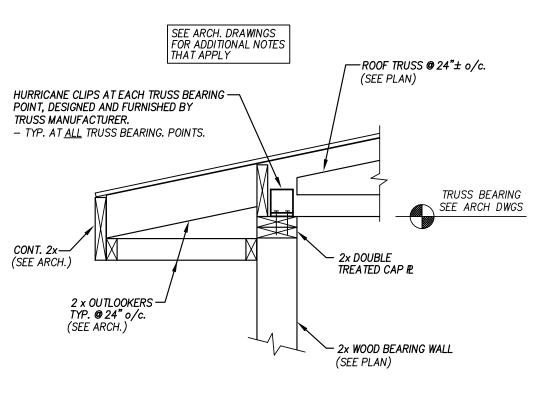




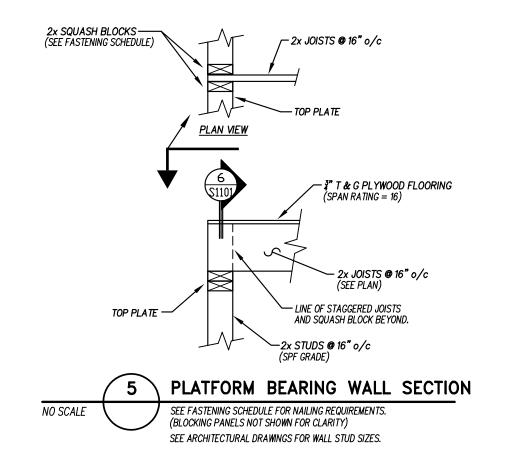
NORTH











4" WASHED STONE —

4" WASHED STONE —

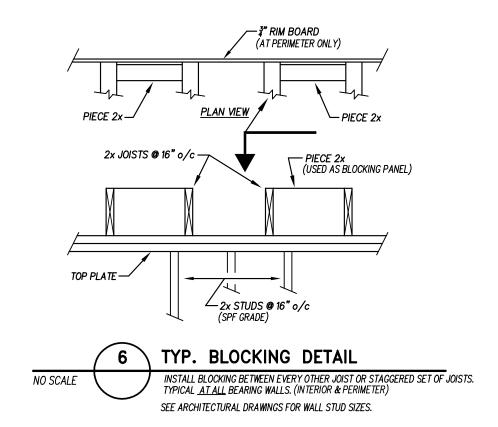
98% STD. PROCTOR

TYPICAL SLAB CONTROL JOINT

SHOWN THUS ON PLAN... \_\_\_\_ C.J. \_\_\_

TYPICAL STEPPED FOOTING DETAIL

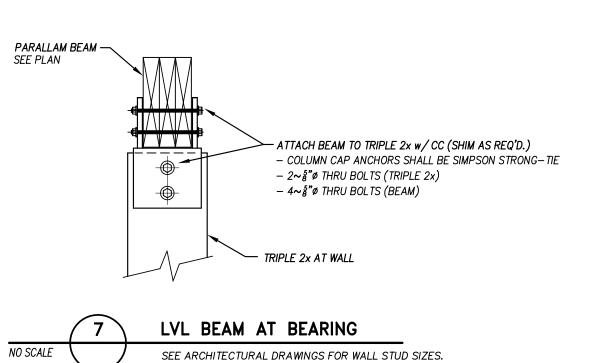
IF REQUIRED TO MEET EARTH COVER REQUIREMENTS

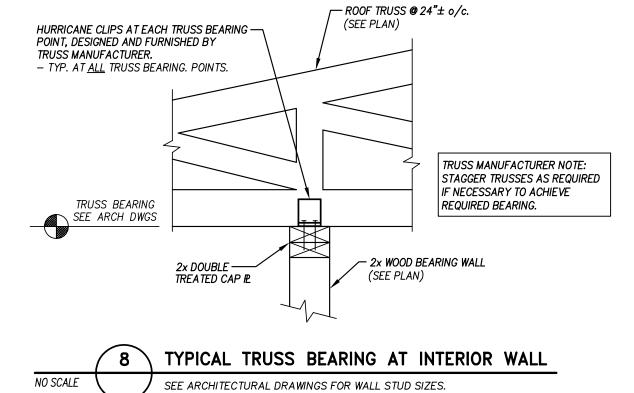


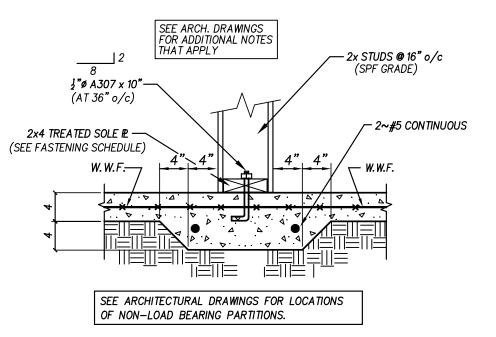
- COMPACTED SOIL

98% STD. PROCTOR

TYPICAL SLAB DETAIL







	9	THICKENED SLAB AT CORRIDOR
NO SCALE		NOTE: AT LOAD BEARING WALL PARTITIONS SEE ARCHITECTURAL DRAWINGS FOR WALL STUD SIZES.

2 x 6 TOP CHORD, MINIMUM -

TRUSS MANUFACTURER NOTE:

STAGGER TRUSSES AS REQUIRED IF NECESSARY TO ACHIEVE REQUIRED BEARING.



* ALL CONNECTIONS SHALL BE 18 GA. GANGNAIL PLATES BOTH SIDES OF EACH JOINT.  * ALL SPLICE LOCATIONS MUST BE APPROVED BY ENGINEER OF RECORD PRIOR TO CONSTRUCTION.  * EXACT WEB CONFIGURATIONS MAY VARY FROM THOSE SHOWN ABOVE. TRUSS MANUFACTURER SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO TRUSS MANFUACTURER.
 2 x 6 BOTTOM CHORD, MINIMUM  SEE ARCH.
ROOF TRUSS PROFILE - TYPE "T1"
* ALL CONNECTIONS SHALL BE 18 GA. GANGNAIL PLATES BOTH SIDES OF EACH JOINT.  * ALL SPLICE LOCATIONS MUST BE APPROVED BY ENGINEER OF RECORD PRIOR TO CONSTRUCTION.  * EXACT WEB CONFIGURATIONS MAY VARY FROM THOSE SHOWN ABOVE. TRUSS MANUFACTURER SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO TRUSS MANFUACTURER.

 $2 \times 6$  BOTTOM CHORD, MINIMUM $^{-1}$ 

SEE ARCH.

#### WOOD MEMBER FASTENER SCHEDULE

MEMBER	FASTENERS	
UPPER TOP PL TO LOWER	10d AT 16" o/c.	1
TRUSS TO TOP PL	8d (H25)	TRUSS GENERA
TRUSS BRACING	SEE MANUFACTURER'S DRAWINGS	1.) CONTRACTOR SHAL
WOOD & GYP. SHEATHING & WOOD DECKING	8d, 12" o/c. AT SUPPORTS, 6" o/c. AT EDGES	REQUIRED BEFORE
WOOD BLOCKING	4~8d TOE, 4~8d END	2.) ALL CONNECTIONS
		MANUFACTURER'S
TOP PLATE TO STUD	2 ~ 10d COMMON	3.) TRUSS MANUFACTU
STUD TO SOLE PLATE	4 ~ 8d COMMON OR (TOENAIL) 2 ~ 10d COMMON (ENDNAIL)	TRUSS LOADING
DOUBLE STUDS	16d @ 24" o/c.	
DOUBLE TOP PLATES	16d @ 16" o/c. (TYPICAL FACE NAIL) 8 ~ 16d COMMON (LAP SPLICE)	- DL = ACTUAL T - LL = 30 PSF
TOP PLATES, LAPS AND INTERSECTIONS	2 ~ 16d COMMON (FACE NAIL)	
CONTINUOUS HEADER, TWO PIECES	16d COMMON (16" o/c. ALONG EDGE)	│
CONTINUOUS HEADER TO STUD	4 ~ 8d COMMON	- ADDITIONAL LIVE
BUILT-UP CORNER STUDS	16d @ 24" o/c.	SEE ARCH. DRA

TRUSS	GENERAL	NOTES	

- CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY SUPPORT REQUIRED BEFORE PERMANENT DIAPHRAM AND BRACING MEMBERS ARE IN PLACE.
- ) ALL CONNECTIONS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. TRUSS MANUFACTURER SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION.

- DL = ACTUAL TRUSS WEIGHT + 3 PSF
- TRUSS LOADING
- LIVE LOAD REDUCTION DUE TO AREA SUPPORTED BY COMPONENT <u>IS NOT</u> PERMITTED. - LIVE LOAD REDUCTION DUE TO SLOPE OF ROOF TRUSS <u>IS</u> PERMITTED. - ADDITIONAL LIVE LOAD FOR ATTIC ACCESS PLATFORM = 40 PSF, WHERE REQ'D. SEE ARCH. DRAWINGS FOR ALL REQUIRED LOCATIONS.
- SEE S1201 FOR REQUIRED WIND LOAD ZONE, NOTES, AND ASCE VERSION. NORTH CAROLINA BUILDING CODE — LATEST RECOGNIZED VERSION — SHALL BE USED FOR WIND LOAD DETERMINATIONS.

21 AUG 2023



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## GENERAL

#### **FOUNDATIONS**

- 1. ASSUMED SOIL DESIGN NET BEARING VALUE SHALL BE 2000 PSF TO BE FIELD VERIFIED BY THE GEOTECHNICAL TESTING LABORATORY AT THE TIME OF CONSTRUCTION. 2000 PSF ALLOWABLE NET BEARING PRESSURE IS CONSIDERED TO BE BEARING SOIL THAT IS EITHER UNIMPROVED NATURAL SOIL STRATA OR SHALLOW IMPROVED BEARING SOIL STRATA. REFER TO THE 2000 PSF COLUMN FOOTING SCHEDULE FOR USE WITH THIS CRITERIA.
- 2. CONTINUOUS WALL FOOTINGS SHALL BE PLACED UPON BEARING SOIL THAT IS EITHER UNIMPROVED OR IMPROVED TO THE SAME ALLOWABLE NET BEARING VALUE AS THE CONTIGUOUS COLUMN FOOTINGS.
- 3. SITE CONDITIONS MAY DICTATE THAT THE SOIL IMPROVEMENT MEASURES BE TRANSITIONED OUT FROM THE AREAS OF UNIMPROVED OR SHALLOW IMPROVED DEPTHS. SUCH TRANSITIONING SHALL BE AS DIRECTED BY THE GEOTECHNICAL LABORATORY AT THE TIME OF
- 4. SITE PREPARATION AND PLACEMENT OF ENGINEERED COMPACTED FILL AND THE INTERMEDIATE SOIL IMPROVEMENT WORKS SHALL BE MONITORED BY THE GEOTECHNICAL LABORATORY. ALL NECESSARY PREPARATORY STRIPPING, CUTTING, PROOF ROLLING, AND FILLING AND IMPROVEMENT OPERATIONS SHALL BE SO MONITORED.
- 5. ALL FILL INSIDE THE BUILDING AND TO 10' OUTSIDE THE BUILDING INCLUDING RAMPS, STOOPS, AND STEPS SHALL BE CLEAN SELECT MATERIAL FREE OF DELETERIOUS MATERIALS SUCH AS WOOD, ROOTS, TRASH, OR OTHER EXTRANEOUS MATERIALS. PLACE FILL TO BE COMPACTED IN 9" LIFTS, MEASURED LOOSE, AND COMPACT EACH LIFT TO 95% MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT AS MEASURED BY ASTM D698. COMPACT THE TOP THREE 9" LIFTS TO 100% MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT AS MEASURED BY ASTM D698.
- 6. ALL FOOTING EXCAVATIONS SHALL BE APPROVED BY THE GEOTECHNICAL LABORATORY PRIOR TO PLACING FOOTING CONCRETE.
- 7. FOOTING ELEVATIONS SHALL NOT BE RAISED OR LOWERED UNLESS SPECIFICALLY APPROVED BY THE ARCHITECT.
- 8. FOOTINGS MAY BE CARRIED TO LOWER ELEVATION WHERE DIRECTED BY
- THE ARCHITECT. 9. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONAL LOCATIONS OF
- MONOLITHIC THICKENED SLAB FOOTINGS FOR SUPPORT. 10. CONSTRUCTION JOINTS IN CONTINUOUS WALL FOOTINGS SHALL BE MADE MIDWAY BETWEEN COLUMNS AND AT LEAST 4' FROM THE INTERSECTION
- OF ANOTHER WALL FOOTING. 11. STEPPED WALL FOOTINGS IF REQUIRED SHALL START OR TERMINATE AT LEAST 4' FROM A COLUMN FOOTING, WALL CORNER, OR WALL
- 12. FOUNDATIONS SHALL BE PLACED ONLY ON APPROVED NATURAL UNDISTURBED SOIL STRATA OR ON PROPERLY PLACED ENGINEERED CONTROLLED COMPACTED IMPROVED FILL UNDER THE SUPERVISION OF THE GEOTECHNICAL LABORATORY.

#### **CONCRETE**

INTERSECTIONS.

1. CONCRETE SHALL DEVELOP THE FOLLOWING MINIMUM COMPRESSIVE STRENGTHS AT 28 DAYS:

- A) FOOTINGS AND PEDESTALS INTERIOR SLABS ON GRADE OTHER INTERIOR CONCRETE
- 3000 PSI 3000 PSI 3000 PSI 4000 PSI EXPOSED EXTERIOR CONCRETE 2. CONCRETE FOR FOOTINGS AND SLABS ON GRADE SHALL BE REGULAR
- STONE CONCRETE. 3. CONCRETE TO BE PERMANENTLY EXPOSED TO WEATHER SHALL HAVE 5% (+/- 1%) AIR ENTRAINMENT.
- 4. CONCRETE NOT PERMANENTLY EXPOSED TO THE WEATHER SHALL NOT HAVE AIR ADDED BY ENTRAINMENT. THIS REQUIREMENT SHALL BE VERIFIED AND REPORTED BY LABORATORY TESTS.
- 5. ALL CONCRETE WORK SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE," ACI 318.
- 6. OBSERVE ALL AND STRICTLY FOLLOW ALL ACI 305 AND 306 REQUIREMENTS RESPECTIVELY FOR PROTECTION OF CONCRETE IN HOT AND COLD WEATHER.
- 7. ALL CONCRETE SLAB WORK SHALL BE PROPERLY CURED IN CONFORMANCE WITH ACI 308. EITHER WATER CURING, WATERPROOF PAPER CURING, PLASTIC SHEET, OR SPRAY-ON SEALING MATERIALS METHOD MAY BE USED PROVIDED THAT THE METHOD CHOSEN HAS NO DETRIMENTAL EFFECT ON THE FINAL FINISH SPECIFIED FOR THE RESPECTIVE AREAS. THE PROPOSED CURING METHOD TO BE USED SHALL BE APPROVED BY THE ARCHITECT.
- 8. BUILDING SLABS ON GRADE SHALL BE 4" MINIMUM THICKNESS.
- 9. PLACE 1/4" PRE-FORMED, IMPREGNATED EXPANSION JOINT FILLER FULL DEPTH OF SLAB ON GRADE AT ABUTTING WALL SURFACES UNLESS OTHERWISE NOTED.
- 10. PROVIDE CONSTRUCTION OR CONTROL JOINTS IN SLABS ON GRADE IN LOCATIONS AS SHOWN ON FOUNDATION PLAN OR AT OTHER LOCATIONS APPROVED OR REQUIRED BY THE ARCHITECT. BUT SPACING OF JOINTS SHALL NOT EXCEED 12' IN ANY DIRECTION.
- 11. THE TYPE OF JOINT USED WHETHER CONTROL JOINT OR CONSTRUCTION JOINT IS THE OPTION OF THE CONTRACTOR UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- 12. SAW JOINTS AT CONTROL JOINTS IN THE CONCRETE SLABS SHALL BE MADE AS SOON AS THE CONCRETE HAS SUFFICIENT STRENGTH TO PREVENT SPALLING OF THE JOINT DUE TO THE ACTION OF THE SAW BUT IN NO CASE GREATER THAN 4 HOURS AFTER INITIAL PLACEMENT OF THE CONCRETE.
- 13. SLAB JOINT FILLER SHALL BE OF THE TYPE COMPATIBLE WITH THE FINAL FLOOR COVERING USED. SLAB JOINTS UNDER PERMANENT PARTITIONS OR CASE WORK NEED NOT BE FILLED.

REQUIRED TO ACCEPT THE SPECIFIED FINAL FINISHES.

- 14. CHAMFER EXPOSED EDGES AND CORNERS OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.
- 15. SEE ARCHITECTURAL DRAWINGS FOR REQUIRED FLOOR FINAL FINISHES AND PROVIDE NECESSARY SLOPES, DEPRESSIONS, AND SLAB FINISH AS

#### REINFORCING STEEL

- 1. BARS SHALL BE ROLLED FROM NEW BILLET-STEEL CONFORMING TO "SPECIFICATION FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT," ASTM A615, GRADE 60.
- 2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185.
- 3. DETAIL AND FABRICATE REINFORCING STEEL IN ACCORDANCE WITH "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES," ACI 315.
- 4. REINFORCING STEEL SHALL BE IN PLACE AND REVIEWED BY THE ARCHITECT PRIOR TO PLACING CONCRETE.
- 5. PROVIDE WWF IN FLAT SHEETS. ROLLED WWF WILL NOT BE ACCEPTED ON THIS PROJECT.

6. LAP ALL WWF END SPLICES TWO FULL MESHES AND ALL SIDE LAP

- SPLICES ONE FULL MESH AND TIE OFF WITH STANDARD TIE WIRES. 7. FABRICATE REBARS IN CONTINUOUS FOOTINGS AND MONOLITHIC TURNED DOWN SLABS TO LONGEST PRACTICAL
- 8. LAP HORIZONTAL REBAR SPLICES A MINIMUM OF 40 BAR DIAMETERS BUT A MINIMUM OF 24" UNLESS OTHERWISE NOTED. PLAN REBAR SPLICES TO OCCUR AT POINTS OF MINIMUM STRESS UNLESS OTHERWISE
- 9. TERMINATE CONTINUOUS BARS IN WALL FOOTINGS AND TURNED DOWN SLABS, WITH A STANDARD 90 DEGREE HOOK AT
- DISCONTINUOUS ENDS, CORNERS, AND INTERSECTIONS. 10. ALL DOWELS SHALL TERMINATE IN THE FOOTING WITH A STANDARD ACI 90 OR 180 DEGREE HOOK AS APPROPRIATE UNLESS SPECIFICALLY SHOWN OTHERWISE. DOWELS SHALL LAP THEIR MATCHING VERTICAL REBAR 60 BAR DIAMETERS.
- 11. PROVIDE THE FOLLOWING CLEARANCES FROM REBARS TO CONCRETE FACE UNLESS OTHERWISE NOTED ON DRAWINGS: EARTH FORMS - 3" WALL FORMS - 2"
- TOP OF SLAB 3/4" SLAB FORMS - 1" 12. SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION.

#### QUALITY ASSURANCE WIND AND SEISMIC SUBMITTALS

- 1) MILL TEST REPORTS FOR ALL REINFORCING STEEL SHALL BE SUBMITTED WITH THE SHOP DRAWINGS.
- 2) TEST REPORTS FOR ALL CONCRETE SHALL BE SUBMITTED PRIOR TO CONSTRUCTION.

#### **EXISTING CONDITIONS**

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING ALL EXISTING JOB CONDITIONS. ANY ADVERSE EXISTING CONDITIONS AFFECTING WORK SHOWN ON THESE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR POSSIBLE CLARIFICATION OF RECONCILIATION.

#### **CONSTRUCTION SAFETY**

1. THESE DRAWINGS DO NOT CONTAIN THE REQUIREMENTS FOR JOB SAFETY. ALL PROVISIONS FOR SAFETY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

#### SPECIAL INSPECTIONS

- 1. SPECIAL INSPECTIONS SHALL BE PERFORMED CONTINUOUSLY OR PERIODICALLY AS REQUIRED BY CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE (IBC BUILDING CODE) AS SCHEDULED BELOW.
- 2. SPECIAL INSPECTORS SHALL BE DULY CERTIFIED TO INSPECT THE WORK REQUIRING THE INSPECTION AS SCHEDULED.
- SPECIAL INSPECTION NOTES:
- A) THE INSPECTOR SHALL MONITOR ALL SOIL CUTTING AND FILLING AREAS UNDER THE BUILDING AND TO 10' OUTSIDE THE BUILDING AREA IN ACCORDANCE WITH TABLE 1705.6 OF THE IBC BUILDING
- B) SPECIAL INSPECTORS SHALL BE IN DIRECT COMMUNICATION WITH THE ENGINEER OF RECORD DURING THE INSPECTION PROCESS.

C) FULL REPORTS OF ALL INSPECTIONS SHALL BE SUBMITTED TO THE

#### ENGINEER OF RECORD. **DIMENSIONS**

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING ALL DIMENSIONS IN THE DRAWINGS AND ADVISING THE ARCHITECT OF ANY DIFFERENCES IN THE DIMENSIONS ON THE DRAWINGS PRIOR TO COMMENCING CONSTRUCTION.

#### WOOD AND PLASTICS

- 1. ALL STRUCTURAL WOOD SHALL BE SYP #2 OR BETTER UNLESS OTHERWISE NOTED.
- 2. ALL TRUSSES SHALL BE DESIGNED BY AN ENGINEER LICENSED IN NORTH CAROLINA. 3. SUBMIT SHOP DRAWINGS FOR REVIEW BY ARCHITECT FOR APPROVAL.
- 4. ALL WOOD IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED, OR
- ISOLATED BY METAL FLASHING, IF PERMITTED BY THE ARCHITECT IN WRITING. 5. NO STUD OR FRAMING MEMBER SHALL BE CUT FOR PIPING, DUCT WORK, ETC.,
- WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ARCHITECT OR ENGINEER OF RECORD.
- 6. DOUBLE HEADERS OR DOUBLE TRIMMERS SHALL BE PUT AROUND ALL STAIRWAYS AND OTHER OPENINGS.
- 7. ALL FRAMING ANCHORS, METAL TIES, HANGERS AND STRAPS SHALL BE TECO, KANT-SAG, SIMPSON STRONG-TIE, OR APPROVED EQUAL. 8. APPLY MISCELLANEOUS FASTENERS USING ONLY FACTORY APPROVED HARDENED NAILS
- FOR WOOD TO WOOD CONNECTIONS. 9. PROVIDE FASTENERS IN SIZES, QUANTITIES, AND SPACING REQUIRED BY FASTENER
- SCHEDULE IN NORTH CAROLINA STATE BUILDING CODE, LATEST RECOGNIZED EDITION. 10. ALL EXTERIOR FASTENERS SHALL BE HOT-DIPPED GALVANIZED OR STAINLESS STEEL.
- PROVIDE FURRING AND BLOCKING AS REQUIRED FOR TOILET CABINETS, CURTAINS, TOWEL BARS, MIRROS, HAND RAILS, SPECIAL DECORATIVE ITEMS, AND INTERIOR TRIM. 12. ALL CONNECTIONS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH

MANUFACTURER'S WRITTEN INSTRUCTIONS.

#### DESIGN CODE DATA

1. IMPORTANCE FACTORS:

	SNOW SEISMIC	ls = 1.0 ls = 1.0 le = 1.0
2.	LIVE LOAD:	
	ROOF PLATFORMS	20 PSF 60 PSF
3.	SNOW LOAD: Pg Ct Ce Pf Ps	10 psf 1.0 psf 0.9 psf 8.5 psf 8.5 psf

4. WIND LOAD:  $V_{ULT}=125$  3 SEC PEAK GUST MPH (ASCE 7 - 10)  $V_{ASD}=97$  MPH

EXPOSURE INTERNAL PRES. COEFF. +/- 0.18 (ENCLOSED)

MWFRS DESIGN WIND PRES. 32 PSF WIND BASE SHEARS Vx = 40 K Vy = 25 K

5. SEISMIC DESIGN (ASCE 7 - 10): 0.168 0.079 0.269 0.189 0.18 0.126 SITE D (ASSUMED) A. BEARING WALL SYSTEM: 15. LIGHT-FRAME (WOOD) WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR

SHEAR RESISTANCE OR STEEL SHEETS BASE SHEAR Vx = 2.5 K Vy = 2.5 K

EQUIVALENT LATERAL FORCE

COMPONENTS ANCHORED LATERAL DESIGN CONTROL WIND

6. SOIL BEARING VALUE 2000 PSF (ASSUMED) 7. OCCUPANCY CATEGORY II

PROCEDURE

All bearing walls are considered shear walls, and are detailed as such in sections 2 & 5/S1101. Flat strapping does qualify as a lateral force resisting system, and is used as such by the structural engineer of record per NC Building Code section 2308.6.

#### <u>STATEMENT OF SPECIAL INSPECTIONS</u>

QUALITY ASSURANCE FOR WIND AND SEISMIC
EACH OF THE FOLLOWING COMPONENTS (STEEL, MASONRY, DESIGNATED SEISMIC)
ARE IN EITHER THE SEISMIC OR WIND FORCE RESISTING SYSTEMS OR BOTH.
EACH REQUIRES STRUCTURAL OBSERVATION IN ACCORDANCE WITH CH.17 OF THE IBC

\*VERIFY THAT THE LABEL, ANCHORAGE, OR MOUNTING CONFORMS TO THE

MANUFACTURER'S CERTIFICATE OF COMPLIANCE.

SEISMIC DESIGN CATEGORY B
DESIGNATED SEISMIC SYSTEM = BEARING WALL SYSTEM

LIGHT-FRAME (WOOD) WALLS SHEATHED WITH WOOD STRUCTURAL

PANELS RATED FOR SHEAR RESISTANCE OR STEEL SHEETS

SEC GUST MAIN WIND FORCE RESISTING SYSTEM = DIRECTIONAL (ENCLOSED)

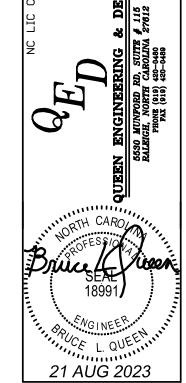
<u>ITEM</u>	OBSERVATION FREQUENCY	REFERENCE STANDARD	WIND OR SEISMIC
<u>SEISMIC</u>			
DESIGNATED SEISMIC SYSTEMS			
EXTERIOR WALL PANELS AND ANCHORAGE*	PERIODIC		SEISMIC
SUSPENDED CEILINGS SYSTEMS AND ANCHORAGE*	PERIODIC		SEISMIC
ANCHORAGE OF EMERGENCY ELECTRICAL EQUIPMENT*	PERIODIC		SEISMIC
SPRINKLER PIPE CONNECTIONS*	PERIODIC		SEISMIC
DUCTWORK SUPPORTS*	PERIODIC		SEISMIC
MECHANICAL EQUIPMENT SUPPORTS*	PERIODIC		SEISMIC

STATEMENT OF SPECIAL INSPECTIONS	INSPECTION	
CONCRETE	FREQUENCY	
1. INSPECTION OF REINFORCING STEEL, AND PLACEMENT.	PERIODIC	ACI 318: 3.5, 7.1–7.7
2. REINFORCING STEEL WELDING.	NOT PERMITTED	AWS D1.4, ACI 318: 3.5.2
3. INSPECTION OF BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE.	CONTINUOUS	ACI 318: 8.1.3, 21.2.8
4. INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE.	PERIODIC	ACI 318: 3.8.6, 8.1.3, 21.2.8
5. VERIFYING USE OF REQUIRED DESIGN MIX.	PERIODIC	ACI 318: CH.4, 5.2–5.4
6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	CONTINUOUS	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8
7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	CONTINUOUS	ACI 318: 5.9, 5,.10
8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	PERIODIC	ACI 318: 5.11–5.13
9. N/A		
10. N/A		
11. VERIFICATION OF IN—SITU CONCRETE STRENGTH, PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	PERIODIC	ACI 318: 6.2
12. INSPECT FORMWORK FOR SHAPE, LOCATOIN AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	PERIODIC	ACI 318: 6.1.1
SOILS		
<ol> <li>VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS     ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING     CAPACITY.</li> </ol>	PERIODIC	
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	PERIODIC	
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	PERIODIC	
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	CONTINUOUS	
<ol> <li>PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.</li> </ol>	PERIODIC	

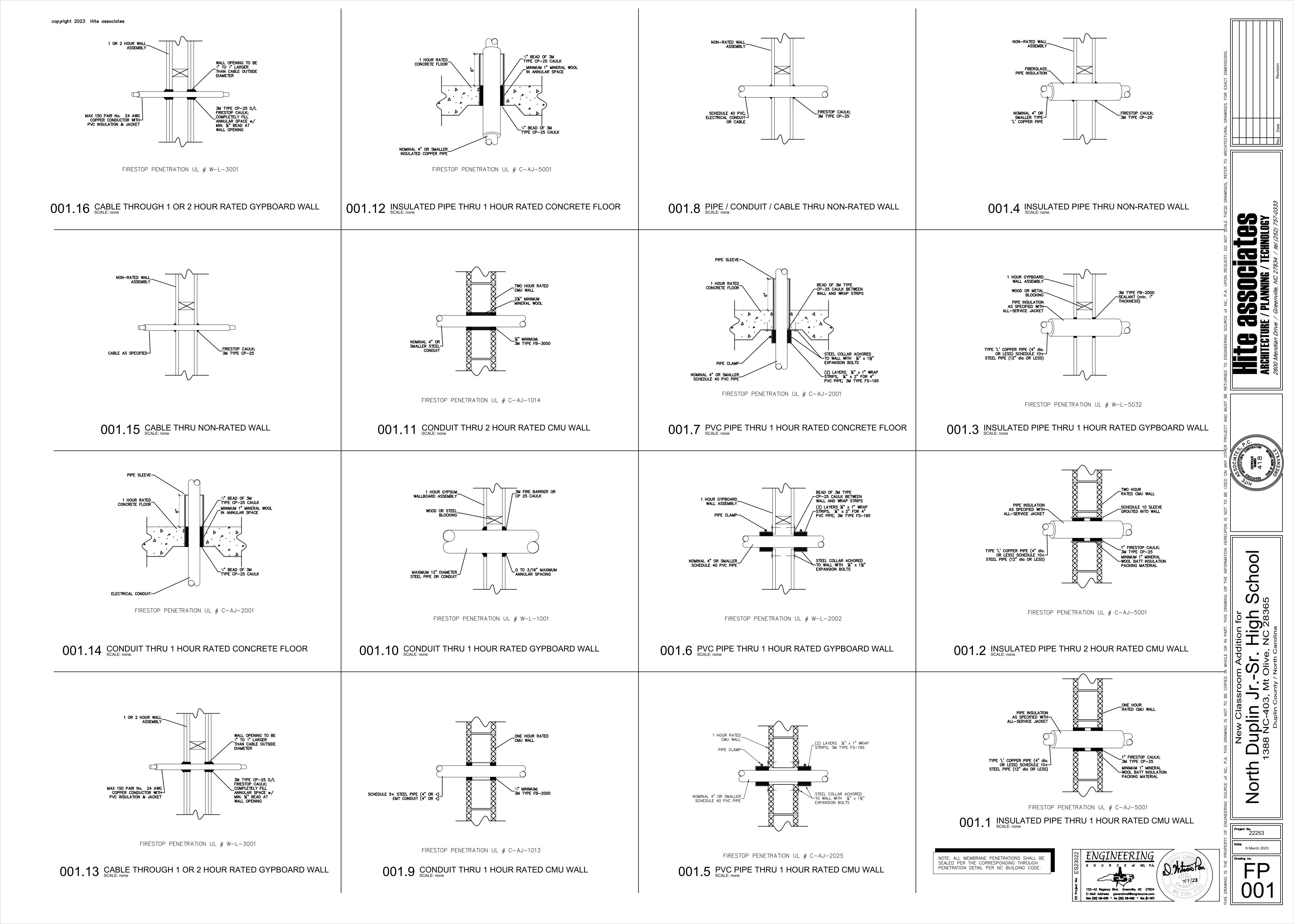
#### SUBMITTAL LIST

- 1.) SOIL COMPACTION TESTS AND FIELD REPORTS
- 2.) CONCRETE MIX DESIGNS AND ADMIXTURES
- 3.) CONCRETE CYLINDER BREAK REPORTS 4.) CONCRETE SLUMP TESTS
- 5.) CONCRETE FINISHING PRODUCTS AND METHODS
- 6.) ASTM GRAVEL / STONE CERTIFICATIONS

7.) STEEL REINFORCEMENT SHOP DRAWINGS 8.) WOOD TRUSS SHOP DRAWINGS



 $\overline{\phantom{a}}$ 



2. ALL WORK SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION. CONTRACTOR SHALL COORDINATE ROUTING OF ALL PIPING WITH EXISTING CONDITIONS AND SHALL PROVIDE ANY NECESSARY OFFSETS, TEES, REROUTING, ETC. REQUIRED FOR A COMPLETE AND COORDINATED INSTALLATION.

3. THESE PLANS ARE DIAGRAMMATIC. CONTRACTOR SHALL PROVIDE ALL NECESSARY OFFSETS, TEES, ELBOWS, ETC. FOR A COMPLETE WORKING PLUMBING SYSTEM.

4. THE CONTRACTOR SHALL OBTAIN AND PAY ALL FEES RELATED TO PERMITTING, INSPECTIONS, TAPS, ETC. (COST SHALL BE PASSED THROUGH TO OWNER).

5. CONTRACTOR SHALL COORDINATE ANY PLUMBING SYSTEM REQUIRING SHUTDOWN WITH THE OWNER 48 HOURS IN ADVANCE.

6. ALL DOMESTIC WATER PIPING SHOWN IS ABOVE BETWEEN FLOOR JOIST/WITHIN WALLS, AND IN CRAWL SPACES UNLESS OTHERWISE NOTED.

7. ALL DOMESTIC WATER PIPING (ABOVE SLAB) SHALL BE COPPER TUBING, CPVC OR FLEXIBLE PLASTIC TUBING (PEX). PIPING BELOW SLAB SHALL BE SOFT COPPER TUBING, 10'-0" MINIMUM, WITH NO JOINTS. COPPER TUBING BELOW GRADE SHALL BE UTILIZED AS THE ELECTRICAL SYSTEM GROUNDING ELECTRODE.

8. ALL WATER PIPING SHALL BE INSULATED WITH PREFORMED FIBERGLASS TYPE INSULATION WITH THE FLAME DENSITY RATING NOT EXCEEDING 25 & THE SMOKE DENSITY RATING NOT EXCEEDING 50. THICKNESS FOR COLD WATER PIPING SHALL BE 1/2" THICK. THICKNESS FOR HOT WATER & RETURN PIPING SHALL BE 1" THICK. INSTALL SADLES AS REQUIRED IN ALL LOCATIONS TO PREVENT COMPRESSION OF INSULATION.

9. ALL BRANCH LINES SHALL HAVE SHUT-OFF VALVES. ALL DOMESTIC WATER BALL VALVES SHALL BE BRASS BODY, FULL PORT, CHROME PLATED BALL. TEFLON SEATS 150 # WSP, FOR SIZES 1/2" THRU 2". PROVIDE VALVE HANDLE EXTENSIONS AS REQUIRED FOR INSULATION.

10. ALL SANITARY SEWER PIPING SHOWN IS BELOW SLAB/WITHIN WALLS UNLESS NOTED OTHERWISE. ALL SANITARY VENT PIPING SHOWN IS ABOVE CEILING/WITHIN WALLS UNLESS NOTED OTHERWISE.

11. ALL WASTE AND VENT PIPING SHALL BE SCHEDULE 40 PVC-DWV CONFORMING TO ASTM D 2665. ALL JOINTS SHALL BE SOLVENT WELDED TYPE CONFORMING TO ASTM D 2665/2949/3034, ASTM F 891, CSA B182.2,CSA CAN/CSA-B182.4

12. ALL PIPING SYSTEMS SHALL BE SUPPORTED AS REQUIRED BY NC PLUMBING CODE AND MANUFACTURERS RECOMMENDATIONS.

13. ALL PIPING PENETRATIONS THRU NEW AND EXISTING WALLS SHALL BE SEALED TO EQUAL RATING OF THE NEW/EXISTING WALL.

14. ALL PLUMBING SYSTEMS SHALL BE TESTED AS REQUIRED PER N.C. PLUMBING CODE.15. THE PLUMBING CONTRACTOR SHALL COORDINATE ALL

UNDER SLAB PIPING WITH ALL STRUCTURAL FOUNDATIONS, P.C. SHALL COORDINATE ALL UNDER SLAB PLUMBING WITH ELEVATION INVERTS WITH THE SITE UTILITY INVERTS.

16. ALL EXPOSED WATER SUPPLY AND WASTE LINES UNDER OPEN SINKS/LAVATORIES SHALL HAVE PROTECTIVE DEVICES INSTALLED TO MEET LATEST NCSBC AND ADA REQUIREMENTS.

17. THE ENTIRE PLUMBING SYSTEM SHALL BE DISINFECTED IN

18. ROOF DECKING SHALL NOT BE PENETRATED TO SUPPORT WASTE LINES, VENT LINES, AND WATER SUPPLY LINES.

ACCORDANCE WITH NC PLUMBING CODE.

ANTI-SCALD MIXING VALVES IF NECESSARY.

19. WATER HEATERS SHALL COMPLY WITH N.C ENERGY CODE SECTION 504 OF THE NC BUILDING CODE20. ALL FLOOR DRAINS, HUB DRAINS, AND FLOOR SINKS

SPECIFIED IN THE N.C. PLUMBING CODE SECTION 412.6.

21. P.C. SHALL VERIFY AND SET THE MAXIMUM OUTLET TEMPERATURES AT ALL NON—COMMERCIAL KITCHEN EQUIPMENT INCLUDING HAND SINKS LOCATED IN THE KITCHEN TO NOT EXCEED 120°F BY INSTALLATION OF POINT OF USE

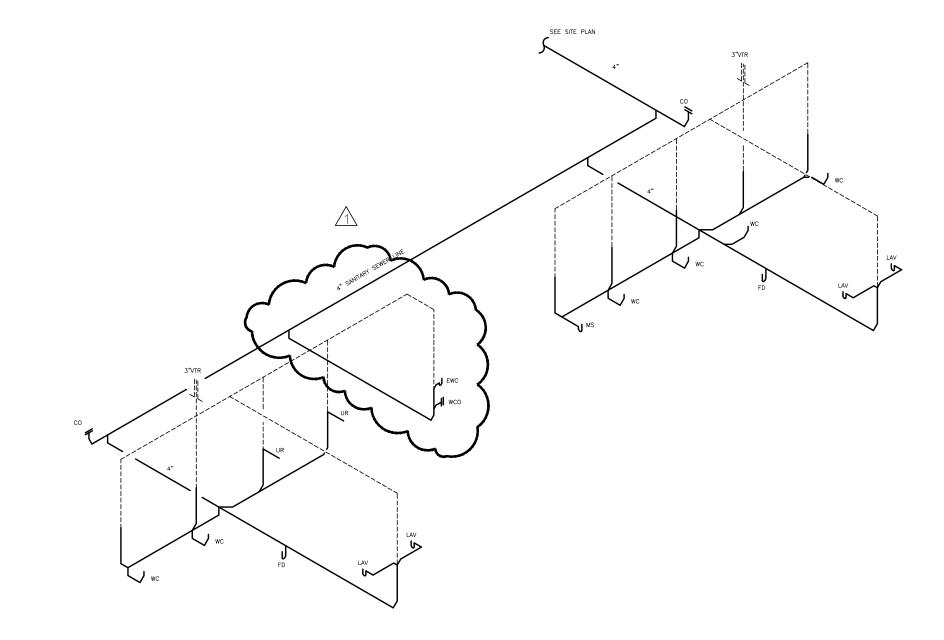
SHALL HAVE TRAP PRIMERS OR HOSE BIBBS, INSTALLED AS

22. ALL ACCESS COVERS INCLUDING BUT NOT LIMITED TO IN-GRADE CLEANOUTS, MANHOLES, AND WATER METER BOXES SHALL BE FLUSH WITH FINISHED GRADE UNLESS OTHERWISE SPECIFIED

23. P.C. SHALL PROTECT ALL PLUMBING PIPE AS IT COMES UP THROUGH CONCRETE PER SECTION 305.1 OF THE N.C. PLUMBING CODE.

FIXTURE UNI	T REQUIREMENTS
POTABLE WATER SUPPLY	42.0 GPM USE 2" SERVICE
WASTE	50.0 FU USE 4" SERVICE

\*MODEL NUMBERS ARE PROVIDED TO ESTABLISH A LEVEL OF QUALITY. EQUAL QUALITY PRODUCTS ARE ACCEPTABLE.

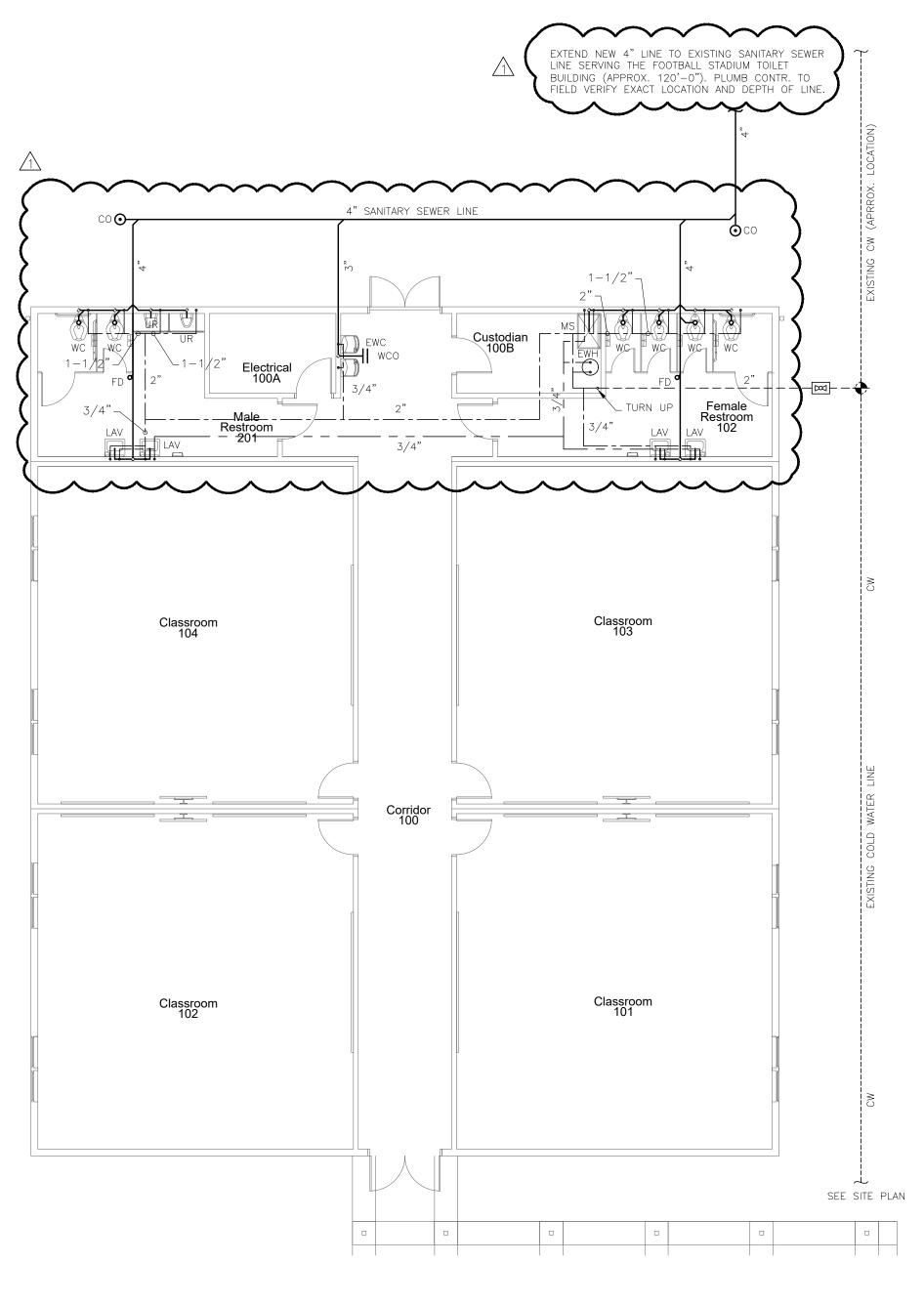


# DWV RISER DIAGRAM SCALE: NONE

FIXTURE CALCULATIONS JU	JSTIFICATION					
OCCUPANCY = EDUCATION	MINIMUM PLUMBING FIXTURES					
		FROM TABLE 403.	1			
NET AREA FOR OCCUPANT CALC.:		TOTAL REQUIRED	TOTAL PROVIDED			
CAPACITY OF MODULAR CLASSROOM = 112 PEOPLE	MALE	2 WC 1 LAVATORY - UR	2 WC 2 LAVATORY 2 UR			
DIVISION OF FACILITIES PER TABLE 403.4: MALE: 50% FEMALE: 50%	FEMALE	3 WC 1 LAVATORY	4 WC 2 LAVATORY			
112 x .5 = <b>56 FEMALE</b> 112 - 56 = <b>56 MALE</b>	DRINKING FOUNTAINS	O EWC	O EWC			

					SCHEDULE			
TAG	LOCATION	CAP	ELEMENT	TEMP	RCVY @ 60° RISE	MFR / MODEL no.	ELECT'L	NOTES
EWH	CUSTODIAN ROOM 100B	50	(2) 4500 W	110	40 GAL	A.O. SMITH No. DEN-52	208V 1ø 21.6A	1,3,4,5
2) 2) 3)	STATE INDUSTRIES, LOG SPECIFICATIONS ARE AC	CEPTABLE Y RECIRCU No. LR-15 N-SIMULTA	SUBSTITUTES LATION PUMP RA B OR EQUAL BY	TED FOR 8 ( TACO OR AF	GPM @ 10' HEAD, RMSTRONG.	ABBREVIATIONS:  CAP = STORAGE CAF ELEMENT = (qty) TEMP = HW OUTPU RCVY = RECOVERY POU = POINT OF US	) WATTAGÉ IT TEMPERATURE (c @ 100 deg F RIS	

	PLUMBING FIXTURE S	<u>CHE</u>	<u>DU</u>	LE			
ITEM	DESCRIPTION	FINISH	COLD	НОТ	VENT	WASTE	ADA
CO	CLEAN-OUT IN FLOOR - ZURN MODEL # ZN-1444-BP WITH INSIDE CAULK CONNECTION	BRONZE				3"	
	(OR EQUAL PRODUCT FROM MANUFACTURERS IN SPECIFICATIONS)						
WC	WATER CLOSET — KOHLER HIGHCLIFF UNIVERSAL HEIGHT EL 1.6 ELONGATED FLUSH VALVE WC	WHITE			2"	4"	YES
	SEAT - KOHLER K-4666-SA ANTI-MICROBIAL OPEN FRONT SEAT W/ SELF SUSTAINING CHECK HINGE	WHITE					YES
	FLUSH VALVE - HANDLE	CHROME	1"				
UR	URINAL — WHITE VITREOUS CHINA, WALL HUNG, KOHLER "FRESHMAN" K—4989—T—O	WHITE			1-1/2"	2"	YES
	FLUSH VALVE - ZURN Z6003AV-WS1	CHROME	3/4"				YES
LAV	LAVATORY — KOHLER "HUDSON" WALL HUNG LAVATORY MODEL NO. K—2867 ENAMELD CAST IRON	WHITE	_	_	1 1/2"	2"	YES
	FAUCET - MOEN NO. 8862 TWO-HANDLE METERING OR EQUAL BY KOHLER	CHROME	1/2"	1/2"			YES
	TRUEBRO HANDI LAV-GUARD INSULATION KIT M# 102W (OR EQUAL FROM MANUFACTURERS SPECIFICATIONS).	WHITE					
MS	MOP SINK - EL MUSTEE 24"X36" MOP SINK M# 63M				2"	3"	
	FAUCET — EL MUSTEE MOP SINK FAUCET M# 63.600A		3/4"	3/4"			
	(OR EQUAL PRODUCT FROM MANUFACTURERS IN SPECIFICATION.)						
FD	FLOOR DRAIN - ZURN M# ZN415B WITH TYPE "B" STRAINER	NICK-BRNZ					
	(OR EQUAL PRODUCT FROM MANUFACTURERS IN SPECIFICATION)					3"	
EWC	ELECTRIC WATER COOLER IN HIGH LOW CONFIGURATION WITH BOTTLE FILLER - OASIS P8ACSL	BY ARCH.	3/4"		1-1/2"	2"	YES
	8 GPH OF 50 ° F WATER @ 80° F INLET WATER AND 90° F ROOM TEMPERATURE.						
	(OR EQUAL PRODUCT FROM MANUFACTURERS IN SPECIFICATIONS).						

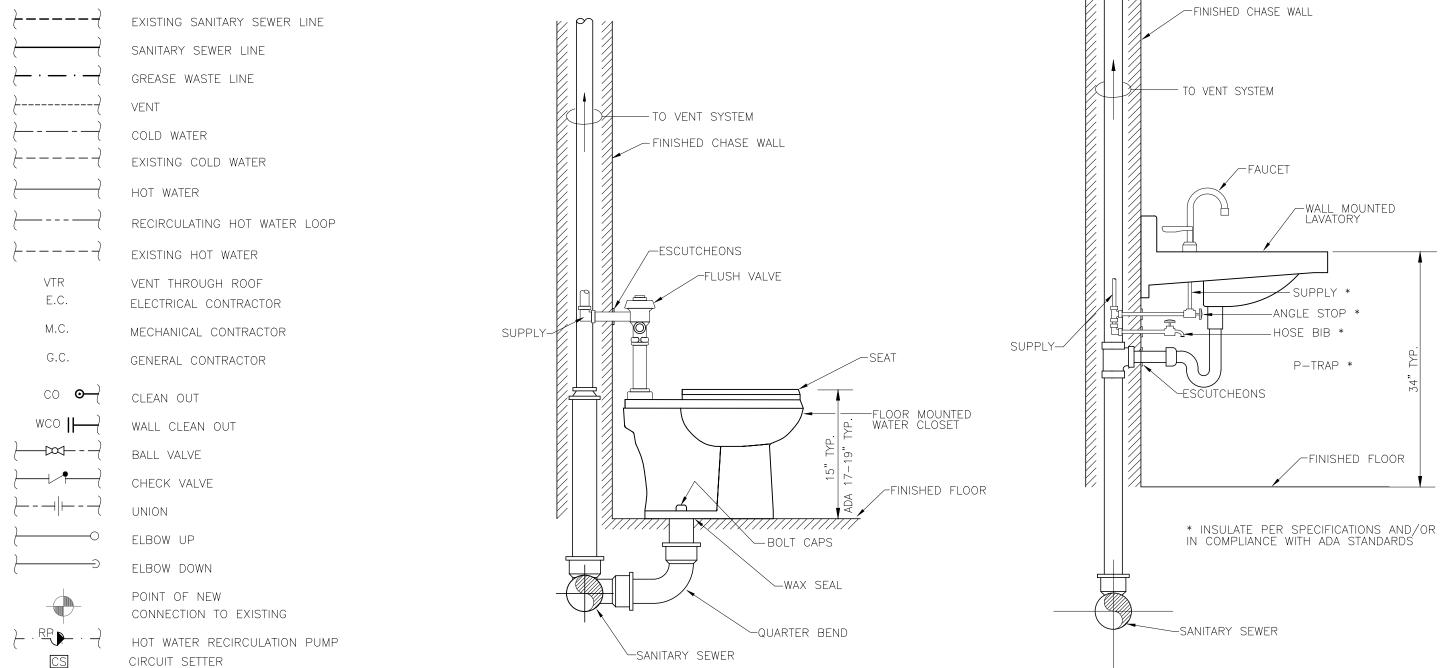


PLUMBING PLAN SCALE: 1/8" = 1'-0"

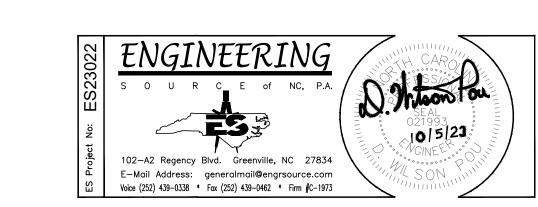
PLUMBING LEGEND

WATER HAMMER ARRESTOR (WHA)

AUTOMATIC AIR ADMITTANCE VALVE
THERMOSTATIC MIXING VALVE



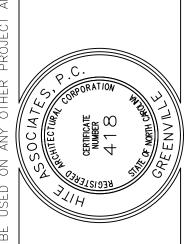
WATER CLOSET



LAVATORY - WALL MOUNTED

1 10/04/23 ADDENDUM # 1

HITE 3SSOBIETES ARCHITECTURE / PLANNING / TECHNOLOGY 2500 Meridian Drive / Greenville, NC 27834 / tel (252) 757-03.



New Classroom Addition for North Duplin Jr.-Sr. High School 1388 NC-403, Mt Olive, NC 28365

Project No.
22253

Date:
6 March 2023

Drawing no.

P 101

1. REFERENCE ARCHITECTURAL, STRUCTURAL, PLUMBING, & ELECTRICAL DRAWINGS, AND SPECIFICATIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL VISIT SITE PRIOR TO SUBMITTING BID.

2. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE NC BUILDING CODE & CONTR. SHALL NOTIFY ENGINEER IN WRITING REGARDING ANY CODE DISCREPANCIES FOUND ON PLANS. CONTR. IS RESPONSIBLE FOR PERMITS, INSPECTIONS AND FEES. THE CONTROLS CONTRACTOR (C.C.) SHALL PROVIDE ALL CONTROL VALVES, ACTUATORS, DAMPERS, FAN COIL COMBINATION STARTERS. C.C. SHALL PROVIDE ALL LOAD SIDE WIRING ASSOCIATED WITH ALL FAN COIL COMBINATION STARTERS. VALVE TAGS AND LABELING SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR

3. DO NOT SCALE THESE DRAWINGS; REFER TO LARGEST SCALE ARCHITECTURAL DRAWINGS. THESE DRAWINGS ARE DIAGRAMMATIC ONLY & ARE NOT INTENDED TO SHOW MINOR DETAILS & EXACT LOCATIONS. DESIGN ADJUSTMENTS SHALL BE ANTICIPATED BY THE CONTRACTORS TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.

4. "PROVIDE" IS DEFINED AS FURNISH & INSTALL AS PER MANUFACTURERS RECOMMENDATIONS.

5. THE MECHANICAL & CONTROLS CONTRACTOR SHALL COORDINATE THE INSTALLATION OF HVAC EQUIPMENT & CONTROLS WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION TO AVOID CONFLICT. CONTACT ARCHITECT IF ALTERNATE INSTALLATION METHOD IS REQUIRED.

6. SYSTEMS INDICATED ON PLANS ARE DIAGRAMMATIC IN NATURE. CONTRACTOR SHALL EXAMINE SITE CONDITIONS PRIOR TO DUCT CONSTRUCTION AND COORDINATE INSTALLATION WITH OTHER TRADES. CONTRACTOR SHALL PROVIDE NECESSARY HANGERS, FASTENERS ETC. TO PROVIDE A COMPLETE AND WORKING SYSTEM.

7. CONTRACTOR SHALL SEAL ALL DUCTWORK WITH A PAINT ON MASTIC. ALL WALL PENETRATIONS SHALL BE SEALED AIR TIGHT.

8. CONTRACTOR SHALL COORDINATE ALL DUCTWORK, DIFFUSER AND GRILLE LOCATION WITH OTHER CEILING MOUNTED DEVICES SHOWN ON THE ARCHITECTURAL REFLECTED CEILING PLAN.

9. CONTRACTOR SHALL INSTALL BALANCING DAMPERS IN EACH BRANCH DUCT TO PROVIDE PROPER AIRFLOW TO EACH ZONE.

10. LOCATE THERMOSTATS AND TEMPERATURE SENSORS AT 4'-0" A.F.F. (CENTER OF BOX FOR GYP BRD, TOP OF BOX FOR MASONRY) IN LOCATIONS INDICATED ON PLANS.

11. ALL DUCT DIMENSIONS ARE INSIDE CLEAR DIMENSIONS.

12. CONTRACTOR SHALL COORDINATE ALL ROOF AND FLOOR PENETRATION LOCATIONS AND SIZES.

13. FABRICATE AND INSTALL ALL DUCT WORK PER SMACNA 1.5" W.C. PRESSURE. ALL ELBOWS SHALL HAVE 1.5R CENTERLINE. ALL DUCT UNDER SLAB SHALL BE FIBERGLASS.

14. SUSPEND ALL CEILING MOUNT AIR DISTRIBUTION DEVICES FROM STRUCTURE WITH 12 GA. WIRE. ALL HANGERS AND SUPPORTS TO BE INSTALLED PRIOR TO FIREPROOFING OF ROOF STRUCTURE.

15. ALL FLEXIBLE ROUND DUCT SHALL BE PRE-INSULATED DOUBLE WALLED WITH SPIRAL METAL RIB, AND SHALL HAVE MIN. RESISTANCE VALUE OF R-6. MAXIMUM LENGTH SHALL BE 10'-0" UNLESS SHOWN SPECIFICALLY OTHERWISE IN PLAN. SECURE ENDS WITH NYLON BANDS AND TAPE.

16. ALL SUPPLY AND RETURN DUCT SHALL BE INSULATED WITH A MINIMUM OF 2-3/16" 3/4 LB. OR 2" OF 1.0 LB. DENSITY FIBERGLASS WRAP. INSULATED DOUBLE WALLED SPIRAL DUCT SHALL HAVE A MINIMUM INSULATION THICKNESS OF 2" OF 1.5 LB. DENSITY. PIPING INSULATION (REFRIGERANT OR WATER) SHALL BE A MINIMUM OF 1-1/2" THICK OR PER LATEST NC ENERGY CODE, WHICHEVER IS GREATER.

17. MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALUMINUM JACKET PROTECTIVE COVERING FOR ALL REFRIGERANT PIPE INSULATION INSTALLED ON THE BUILDING EXTERIOR.

18. CABLE TRAY HAS RIGHT-OF-WAY OVER DUCTWORK; SEE ELECTRICAL DRAWINGS FOR LOCATION.

19. SIDEWALL SUPPLY REGISTERS AND RETURN GRILLES ARE TO BE INSTALLED PLUMB AND LEVEL ALONG A COMMON ELEVATION. INSULATE BACK OF ALL LAY—IN CEILING SUPPLY REGISTERS AND DIFFUSERS.

20. PROVIDE FLEXIBLE CONNECTORS ON SUPPLY AND RETURN CONNECTIONS TO HVAC UNITS.

21. PROVIDE AUXILIARY CONDENSATE DRAIN PAN FOR ALL AIR HANDLING UNITS, FAN COIL UNITS, FURNACE WITH COOLING COIL, ETC. CONTRACTOR SHALL PROVIDE AND INSTALL WATER LEVEL FLOAT SWITCH IN AUXILIARY DRAIN PAN. FLOAT SWITCH SHALL SHUT DOWN INDOOR AND ASSOCIATED OUTDOOR UNIT WHEN ACTIVATED.

22. CONDENSATE PIPE SHALL BE SCHEDULE 40 PVC OR HARD DRAWN COPPER. INSTALL WITH PROPER SLOPE AND NO SAGS.

COPPER PIPE SHALL BE INSULATED WITH 1/2" THICK CLOSED CELL INSULATION. SCHEDULE 40 PVC PIPE SHALL BE INSULATED WITH 1/2" THICK CLOSED CELL INSULATION.

23. ALL DUCTWORK AND PIPING SHALL BE CONCEALED ABOVE CEILINGS, TRUSSES AND SOFFITS EXCEPT IN MECHANICAL ROOMS, UTILITY PLATFORMS, AREAS WITH EXPOSED STRUCTURE (NO CEILINGS), AND WHERE NOTED OTHERWISE.

24. CONTROLS CONTRACTOR IS RESPONSIBLE FOR ALL CONTROL WIRING AND CONNECTIONS TO MECHANICAL

25. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL EXTERNAL DISCONNECTS THAT ARE REQUIRED FOR EQUIPMENT PROVIDED UNDER THIS CONTRACT. MECHANICAL CONTRACTOR SHALL FURNISH ALL REQUIRED FUSES FOR ALL FUSED DISCONNECT SWITCHES. COORDINATE DISCONNECT AND FUSE INSTALLATION WITH ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING DISCONNECT SWITCHES AND FUSES. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL LINE SIDE WIRING AND CONDUIT TO EXTERNALLY OR INTERNALLY MOUNTED DISCONNECTS AND SHALL PROVIDE AND INSTALL LOAD SIDE WIRING AND CONDUIT FROM EXTERNALLY MOUNTED DISCONNECT SWITCHES TO MECHANICAL EQUIPMENT. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINAL ELECTRICAL CONNECTIONS TO MECHANICAL EQUIPMENT. SEE "MECHANICAL EQUIPMENT ELECTRICAL CONNECTION DETAIL".

26. MECHANICAL CONTRACTOR MAY USE ROUND DUCT OF EQUIV. AREA IN LIEU OF RECTANGULAR. COOR'D. ROUND DUCT SIZES W/ ENGINEER. USE INSULATED DOUBLE WALLED SPIRAL DUCT WITH PAINT GRIP FINISH WHERE DUCT IS TO BE EXPOSED.

27. MECHANICAL CONTRACTOR SHALL PROVIDE ENGR. WITH AN AIR BALANCE REPORT INDICATING INITIAL AND FINAL READINGS AT EACH DIFFUSER AND TOTAL CFM PER UNIT. INCLUDE IN DOCUMENTS PROVIDED TO OWNER AT JOB CLOSEOUT. SEE SPECIFICATIONS

28. MECHANICAL CONTRACTOR SHALL LABEL ALL EQUIPMENT WITH ENGRAVED PLASTIC LAMINATE, SCREWED TO PIECE OF EQUIPMENT.

29. M.C. SHALL PROVIDE 3'-0" MIN. SERVICE CLEARANCE BETWEEN ALL MECHANICAL EQUIPMENT.

30. UNIT CONTROLLER OR PROGRAMMABLE THERMOSTAT SHALL HAVE 7 DAY PROGRAMING, TIMED OVER—RIDE AND THE ABILITY TO RUN FANS IN OCCUP. MODE & CYCLE FANS IN UN—OCCUP. MODE.

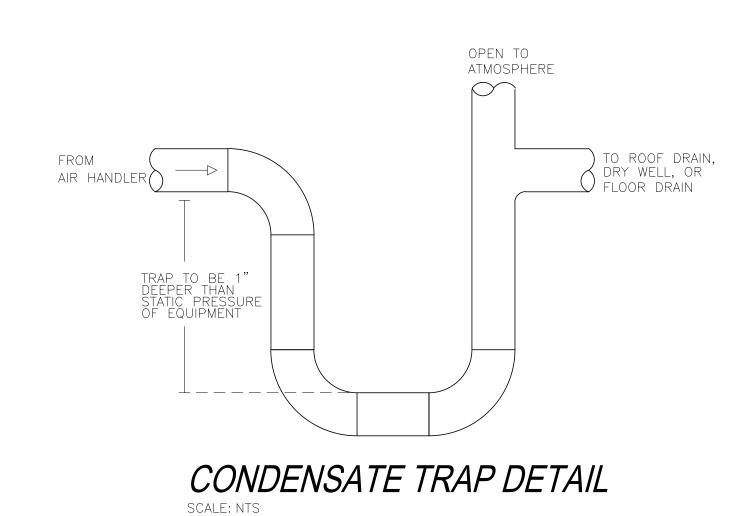
31. THE M.C. & C.C. SHALL PROTECT EQUIPMENT DURING CONSTRUCTION & BRAZING AS REQ'D. CLEAN ALL EQUIP. SURFACES OF GREASE, DIRT, DUST, & OTHER FOREIGN MATERIALS PRIOR TO PROJECT CLOSEOUT.

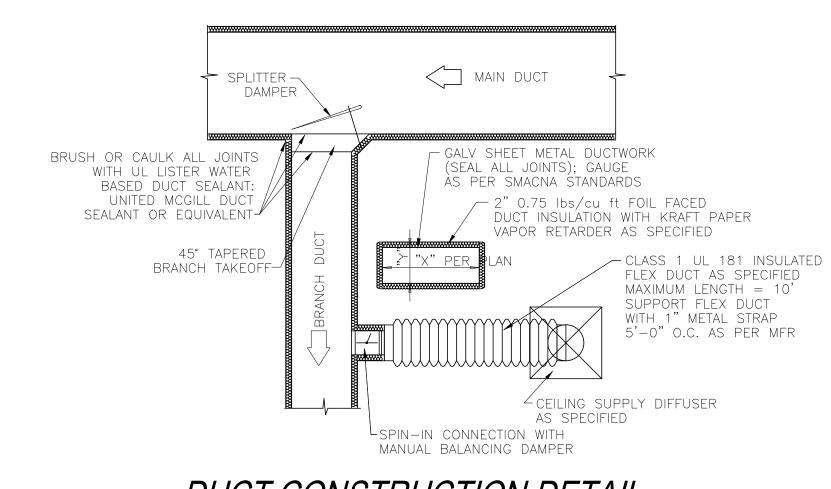
32. MECHANICAL CONTRACTOR SHALL CHANGE UNIT FILTERS AFTER EACH TWO WEEKS OF RUN TIME, AND SHALL LEAVE ONE CHANGE OF FILTERS FOR OWNER TO USE FOR NEXT FILTER CHANGE.

33. MECHANICAL CONTRACTOR SHALL NOT ALLOW DUCTWORK TO CONTACT LAY—IN LIGHT FIXTURES. ROUTE ACCORDINGLY.

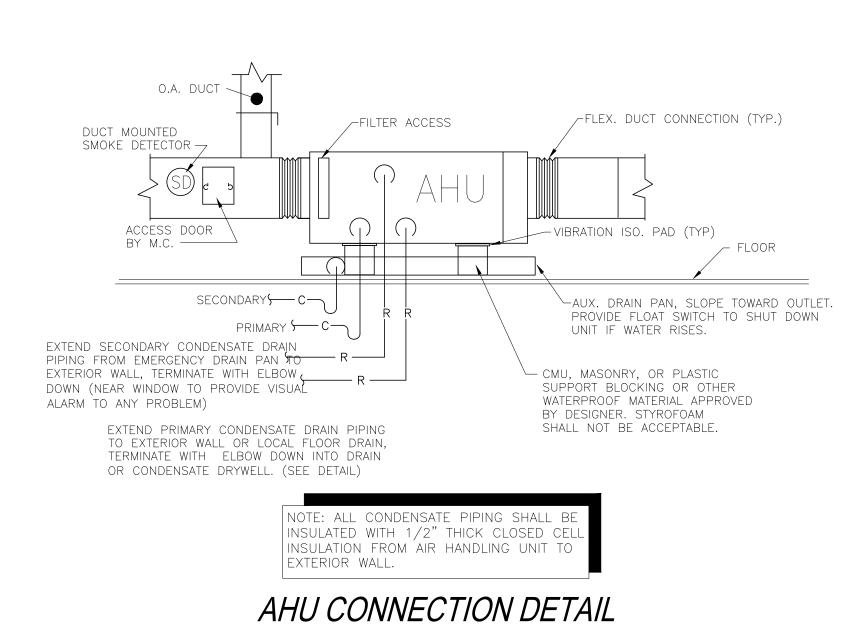
34. MECHANICAL CONTRACTOR SHALL INSTALL DUCT MOUNTED SMOKE DETECTORS WHERE INDICATED ON PLANS. IF AN EXISTING FIRE ALARM SYSTEM IS PRESENT, DUCT DETECTORS SHALL BE CONNECTED TO EXISTING FIRE ALARM SYSTEM. MECHANICAL CONTRACTOR SHALL COORDINATE CONNECTION TO FIRE ALARM SYSTEM WITH ELECTRICAL CONTRACTOR AND/OR FIRE ALARM CONTRACTOR. IF A FIRE ALARM SYSTEM IS NOT PRESENT, PROVIDE DETECTOR & ASSOCIATED HORN/STROBE ALARM (HONEYWELL RTS2—AOS MULTI—SIGNALING) AS REQUIRED BY N.C. MECHANICAL CODE SECTION 606.4.1. M.C. IS RESPONSIBLE FOR DUCT ACCESS DOORS UNDER ALL CIRCUMSTANCES.

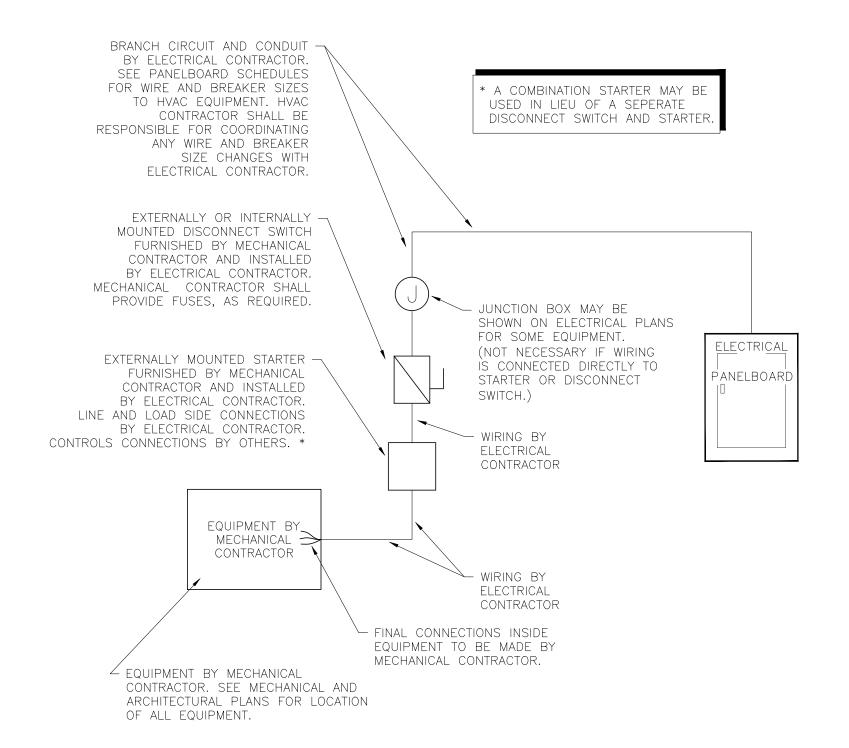
35. PROVIDE HEAT PUMP WITH CONTROLS TO PREVENT HEAT STRIP FROM OPERATING WHEN OUTSIDE AIR TEMP. IS ABOVE 50°F. (503.2.4.1.1 NCEC)



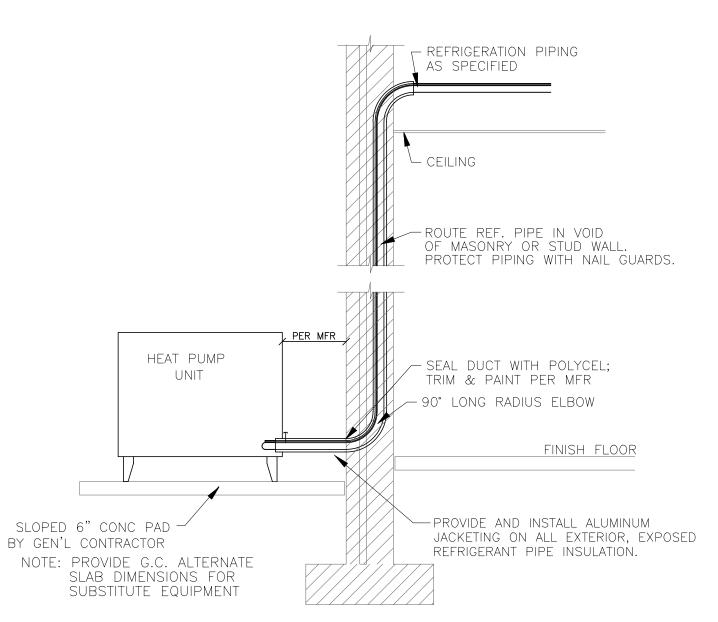


DUCT CONSTRUCTION DETAIL
SCALE: NTS





MECHANICAL EQUIPMENT
ELECTRICAL CONNECTION DETAIL
SCALE: N.T.S.



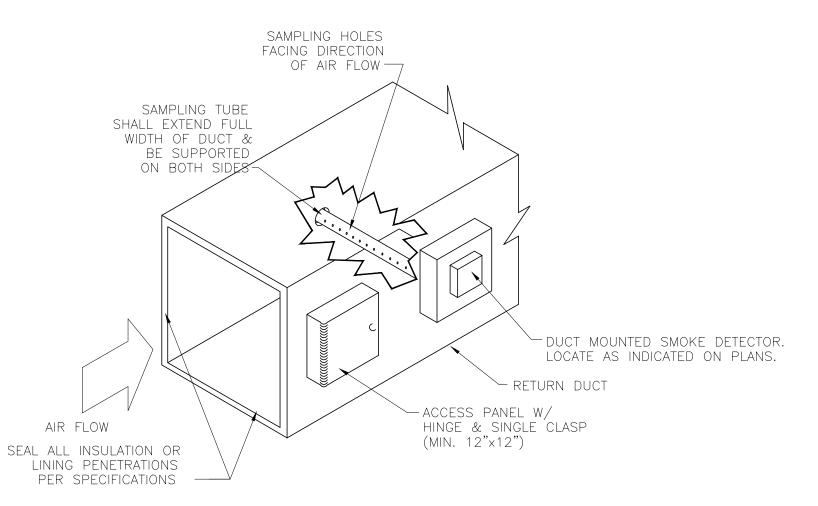
HEAT PUMP INSTALLATION DETAIL
SCALE: NTS

CONDITIONING UNIT CONTROL SEQUENCE:

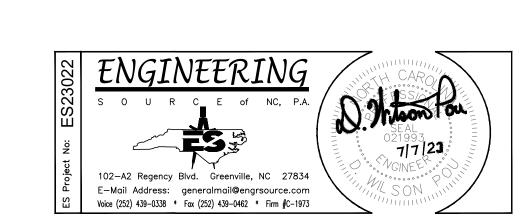
EXHAUST FAN CONTROL SEQUENCES:

SYSTEM SHALL BE A SELF CONTAINED AIR COOLED DX HEAT PUMP. AN HOURS AND DAYS OF OCCUPANCY SCHEDULE SHALL BE PROVIDED BY OWNER. UNIT SHALL BE CONTROLLED BY A SPACE MOUNTED PROGRAMMABLE THERMOSTAT. FAN SHALL RUN CONTINUOUSLY DURING OCCUPIED TIMES AND CYCLE WITH COMPRESSORS DURING UNOCCUPIED TIMES. COOLING MODE SET POINT SHALL BE 75°F AND HEATING MODE SET POINT SHALL BE 70°F DURING OCCUPIED TIMES. SET BACK TEMPERATURES SHALL BE 85°F FOR COOLING AND 55°F FOR HEATING DURING UNOCCUPIED TIMES. UNIT SHALL AUTOMATICALLY SWITCH MODES AS REQUIRED TO MAINTAIN SPACE TEMPERATURE BETWEEN HEATING AND COOLING SET POINTS FOR THE RESPECTIVE MODE OF OCCUPANCY BASED ON THE SCHEDULE PROVIDED BY OWNER.

OCCUPANCY CONTROL: EXHAUST FAN SHALL BE ENERGIZED UPON ACTIVATION OF THE OCCUPANCY SENSOR AND SHALL RUN FOR A MINIMUM OF 5 MINUTES AFTER SENSOR FAILS TO SENSE MOTION/OCCUPANCY. LIGHTS SHALL STAY ENERGIZED FOR 2 MINUTES AFTER OCCUPANT HAS EXITED SPACE.



DUCT MOUNTED SMOKE DETECTOR DETAIL SCALE: N.T.S.



HITE 3550 Meridian Drive / Greenville, NC

School 35

New Classroom Addition for North Duplin Jr.-Sr. High Sc 1388 NC-403, Mt Olive, NC 28365

Duplin County / North Carolina

							SPLIT-	SYSTEM I	HEAT PUMF	SCHE	EDULE					
				SUPPI	LY FAN							COOLING			HEATIN	G
			ESP									NOM.	NOM.	SEER	MIN.	STRIP
MARK	ОА	CFM	(IN. W.G.)	FAN HP	VOLT/PH	МСА	MOCP	MARK	VOLT/PH	МСА	MOCP	TC (BTUH)	SC (BTUH)	/ EER	BTUH	KW
AHU-1	300	1,400	.5	1/2	240/1	45.0	60	HP-1	240/1	22.0	35	42,000	29,400	16.0 SEER	24,600	7.20
AHU-2	300	1,400	.5	1/2	240/1	45.0	60	HP-2	240/1	22.0	35	42,000	29,400	16.0 SEER	24,600	7.20
AHU-3	300	1,200	.5	1/2	240/1	45.0	60	HP-3	240/1	18.0	30	36,000	25,200	16.0 SEER	24,600	7.20
AHU-4	300	1,200	.5	1/2	240/1	45.0	60	HP-4	240/1	18.0	30	36,000	25,200	16.0 SEER	24,600	7.20

1. HEATING AND COOLING CAPACITIES ARE MINIMUM ACCEPTABLE VALUES 2. PROVIDE WITH FILTERS AND FILTER FRAMES.

3. PROVIDE WITH SINGLE POINT OF CONNECTION KIT & "LOW-AMBIENT" KIT.

4. SPECIFICATIONS BASED UPON "TRANE", EQUALS BY "CARRIER" AND "LENNOX" ACCEPTABLE. 5. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH E.C. FUSES REQUIRED FOR EQUIPMENT PURCHASED.

6. AMP RATINGS GIVEN ARE MAXIMUM VALUES. 7. ESP INCLUDES .35" FOR DIRTY FILTER ALLOWANCE.

8. PROVIDE HEAT PUMP WITH CONTROLS TO PREVENT HEAT STRIP TO OPERATE WHEN OUTSIDE AIR TEMP. IS ABOVE 50°F.

				LC	DUVE	R SCH	EDULE			
MARK	SERVICE	SIZE	FREE	CFM	FPM	ELECT	CONTROL	COLOR	MODEL NO./DESCRIPTION	NOTES
LV-A	BLDG OUTSIDE AIR	30×24	2.4	1,200	489	24 VOLT	EMS	TO BE DETERMINED	RUSKIN ELF375DX	1-5

(1) LOUVERS AND DAMPERS MEETING OR EXCEEDING SPECIFIED DATA, MANUFACTURED BY VENT PRODUCTS, NCA OR CESCO
(2) PROVIDE EXTENDED SILL, CLIP ANGLES, & INSECT SCREEN. (3) SEE DETAILS

(4) PROVIDE FACTORY FINISH AS SPECIFIED - COLOR SELECTED BY ARCHITECT.

(5) PROVIDE WITH MANUFACTURERS B.D.D.

B.D.D. = BACKDRAFT DAMPER

ELECT/CONT'L = ELECTRICAL / CONTROL

COLOR NO. 1 = BRICK COLOR

COLOR NO. 2 = EIFS COLOR

	200		TION! 0.4! 0		
NC			TION CALC	CULATIONS	
OCCUPANCY TYPE	SQ. FT.	O.A. PER SQ. FT.	# OF OCCUPANTS	O.A. PER PERSON	TOTAL O.A. CFM
CLASSROOM	3,000	0.12	105	7.5	1148
CORRIDOR	466	0.06	_	İ	28
TOTAL REQUIRED FOR BUILDING					1,176
TOTAL PROVIDED FOR BUILDING					1,200

B-150	Electri 100/ C-50 150 CFM		Custodian 100B C-50		320 CFM  B-150 Female Restroom
A+250	A-250		X A	-250	A-250
A-225 A-225	14X14 A-225	4+ + + + +	7- 14X14 ++++++++++++++++++++++++++++++++++	12X12 12X12 -225	
A-225 Classroc 104	10"ø 		AHU-2 16X14	Classroon 103	A-250
A+250	AHU-	X14   -3 T	14X14 D AHU-4	<b>-9</b> 00	A-250
A-225 12X12	A-225	300 0 300 0 300 0	A+++++++++++++++++++++++++++++++++++++	Classroom 101 101 12X12	A-225
A-250	A-250	20×12	FD	-250	A-250

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

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT
METHOD OF COMPLIANCE:

PRESCRIPTIVE ☒ ENERGY COST BUDGET □

CLIMATE ZONE: IBC — 3A THERMAL ZONE

WINTER DRY BULB: 18°F SUMMER DRY BULB: 93°F

INTERIOR DESIGN CONDITIONS WINTER DRY BULB: 70°F SUMMER DRY BULB: 75°F RELATIVE HUMIDITY: 50%

BUILDING HEATING LOAD: 109.2 MBH

BUILDING COOLING LOAD: 156.0 MBH MECHANICAL SPACE CONDITIONING SYSTEM UNITARY

DESCRIPTION OF UNIT: SPLIT-SYSTEM HEAT-PUMP HEATING EFFICIENCY:

COOLING EFFICIENCY:

HEAT OUTPUT OF UNIT:

COOLING OUTPUT OF UNIT:

SEE SCHEDULE

TOTAL BOILER OUTPUT: (If oversized, state reason)

CHILLER
TOTAL CHILLER OUTPUT: (If oversized, state reason)

LIST EQUIPMENT EFFICIENCIES

EQUIPMENT SCHEDULES WITH MOTORS (Not used for mechanical systems) MOTOR HORSEPOWER: NUMBER OF PHASES:

MINIMUM EFFICIENCY: MOTOR TYPE: # OF POLES:

**DESIGNER STATEMENT:** 

To the best of my knowledge and belief, the design of this building complies with the mechanical systems, service systems and equipment requirements of the 2012 North Carolina energy conservation code.

NAME: <u>D. WILSON POU, P.E.</u>

TITLE: PRESIDENT

MECHANICAL LEGEND

G.C. GEN. CONTR. E.C. ELEC. CONTR. P.C. PLUMB. CONTR.

AFF ABOVE FINISH FLOOR AFG ABOVE FINISH GRADE

18x16 WRAPPED RIGID DUCT IIIIIIIII INSULATED FLEXIBLE DUCT

SUPPLY DIFFUSER

RETURN AIR GRILLE

CEILING EXHAUST GRILLE OR FAN  $\bigcirc$ AHU $_{-1}$  THERMOSTAT & UNIT SERVED.

H)AHU-1 HUMIDISTAT & UNIT SERVED.

A-400 DIFFUSER TYPE-CFM

MANUAL DAMPER DUCT MOUNTED SMOKE DETECTOR

CEILING MOUNTED SMOKE DETECTOR

FIRE ALARM HORN/STROBE (SEE GENERAL NOTES)

CONN. TO EXIST.

---- G ---- GAS PIPING

FD SPRING LOADED FIRE DAMPER C)AHU-1 & UNIT SERVED.

TWIST TIMER SWITCH

120V MOTORIZED DAMPER

CN CO & NO SENSOR & UNIT SERVED.
CONSPEC CN50-CON02

				FAN SCHED	ULE					
SYMBOL	AREA SERVED	MANUF./MODEL	SERVICE	TYPE ASSEMBLY	CFM	SP (IN. W.G.)	DRIVE TYPE	WATTS	VOLT/PH	REMARKS
EF-A	CUSTODIAN	GREENHECK/SP-A190	EXHAUST	CABINET	150	.125	DIRECT	113	120/1	1,2,3
EF-B	REST ROOM	GREENHECK/SP-A290	EXHAUST	CABINET	300	.125	DIRECT	80.7	120/1	1,2,4

1. BACKDRAFT DAMPER. 2. UNIT MOUNTED DISCONNECT SWITCH.

3. ROUTE 8"Ø DUCT TO WALL CAP. 4. ROUTE 10"Ø DUCT TO WALL CAP.

5. EQUALS BY CARNES, PENN, ILG AND BROAN ARE ACCEPTABLE.

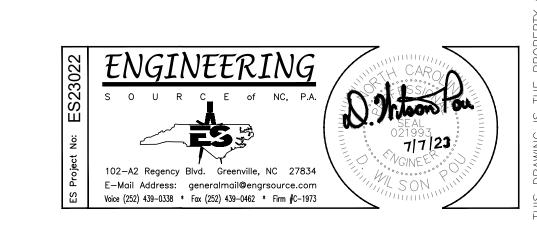
	AIR DISTRIBUTION					
MARK	MAX. CFM	FRAME	NECK SIZE	MODEL	MANUF.	REMARKS
А	400	T-BAR	10"ø	SMD	PRICE	1,2,3,5,7
BG	200	GYP BOARD	8"ø	SMD	PRICE	1,2,3,5,7,8
С	100	T-BAR	6"ø	SMD	PRICE	1,2,3,5,7
R1	550	T-BAR	12x12	80TB	PRICE	1,2,4,5,6
R2	1400	T-BAR	22×22	80TB	PRICE	1,2,4,5,6

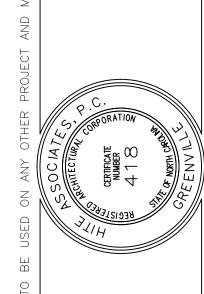
1. ALL GRILLES SHALL HAVE 24"x24" FACE. 2. NC SHALL NOT EXCEED NC 25. 3. MAX. SP SUPPLY — 0.10" W.G.

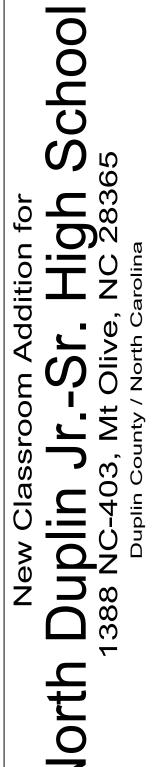
4. MAX. SP RETURN - 0.05" W.G.

5. ALL RUN-OUTS AND FLEX TO BE EQUAL TO NECK SIZE FOR GRILLE. 6. PAINT INSIDE PAN FLAT BLACK.

7. CONTRACTOR SHALL INSULATE BACK OF SUPPLY GRILLE PAN. 8. "G" FOLLOWING THE DIFFUSER DESIGNATION LETTER INDICATES THAT DIFFUSER WILL BE INSTALLD IN A GYP. BOARD CEILING







Project No. 22253

6 March 2023 Drawing no.

### 001.1 ELECTRICAL CONNECTION DETAIL

OF ALL EQUIPMENT.

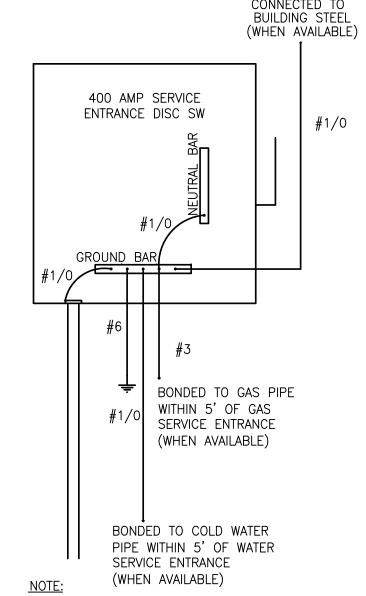
ELECTRICA	L SYSTEM AND EQUIPMENT
METHOD OF COM	PLIANCE:
ENERGY CODE: ASHRAE 90.1:	
NUMBER OF LAN BALLAST TYPE IN NUMBER OF BAL TOTAL WATTAGE TOTAL INTERIOR EXTERIOR LIGHTI	UIRED IN FIXTURE: VARIES (SEE LIGHT FIXTURE SCHEDULE THIS DRAWING)  MPS IN FIXTURE: VARIES (SEE LIGHT FIXTURE SCHEDULE THIS DRAWING)  N FIXTURE: VARIES (SEE LIGHT FIXTURE SCHEDULE THIS DRAWING)  LASTS IN FIXTURE: VARIES (SEE LIGHT FIXTURE SCHEDULE THIS DRAWING)  PER FIXTURE: VARIES (SEE LIGHT FIXTURE SCHEDULE THIS DRAWING)  WATTAGE SPECIFIED .VS. ALLOWED: 3,375W VS. 4,417W
	ESCRIPTIVE COMPLIANCE
C406.2 M	More Efficient HVAC Equipment Performance
X C406.3 R	reduced Lighting Power Density
C406.4 E	inhanced Digital Lighting Controls
	n-Site Renewable Energy
C406.6 D	edicated Outdoor Air System
C406.7 R	leduced Energy Use in Service Water Heating
DESIGNER STATEM	ENT:
	my knowledge and belief, the design of this building complies with to and equipment requirements of the North Carolina Building Code, tion Code.
SIGNED:	Internation for
NAME: D. WI	LSON POU, P.E.

OC	. SENSOR SCHEDULE
TYPE	DESCRIPTION
PIR	PASSIVE INFRARED  -WALL MOUNT - WATT STOPPER #PW-100  - HUBBLE #LH-IR  - LEVITON #ODW-IR  -CEILING MOUNT - WATT STOPPER #CI-305 W/BZ-150 PPAK  - HUBBLE OMNI-IR-UVPP  - LEVITON #ODC15-IDW
US	ULTRASONIC  -WALL MOUNT - WATT STOPPER #UW-100  - HUBBLE #LH-US  - LEVITON #ODW12-UDW  -CEILING MOUNT - WATT STOPPER #UT-305 W/BZ-150 PPAK  - HUBBLE #OMNI-US-UVPP  - LEVITON #ODC10-UDW
DT DT-DR	DUAL TECHNOLOGY  -WALL MOUNT - WATT STOPPER #DW-100  - HUBBLE #LH-MT  - LEVITON #ODW12-MDW  -WALL MOUNT DUAL RELAY - WATT STOPPER #DW-200  - HUBBLE #LH-MT-D2  - LEVITON #OSSMT-MDW-DR  -CEILING MOUNT - WATT STOPPER #DT-305 W/BZ-150 PPAK  - HUBBLE #OMNI-DT-UVPP  - LEVITON #ODC10-MDW  -CEILING MOUNT DUAL RELAY  - WATT STOPPER #DT-305 W/(2) BZ-150 PPAK  - HUBBLE #OMNI-DT- w/ (2) UVPP  - LEVITON #O2C15-IDW
TIME	PUSH BUTTON TIMER  -WALL MOUNT - WATT STOPPER #TS-400  - HUBBLE #TD-200  - LEVITON #TS300-DW
	PANCY SENSORS SPECIFICED USE 120/277V AC POWER. EQUALS

\* ALL OCCUPANCY SENSORS SPECIFICED USE 120/277V AC POWER. EQUALS ACCEPTED, MAKE AND MODEL USED TO SET STANDARD OF PERFORMANCE & QUALITY.

\* ALL OCCUPANCY SENSORS ARE INSTALLED AND CIRCUITED PER PLANS.

LI	GHT FIXTURE :	SCH	ED	ULE	<u>=</u>
TYPE	DESCRIPTION	LAMPS	VOLTS	WATTS	B.F.
A1	2'x4' RECESSED LED FLAT PANEL WITH ACRYLIC LENS. PROVIDE WITH HIGH LUMEN PACKAGE (6,000-7,000 LUMENS) AND 0-10v DIMMING. PROVIDE - LITHONIA#: EPANL-2X4-7000LM-80CRI-40K-MIN10-DIM-MVOLT COLUMBIA#: SRP24-70VWHE-G-DIM-U OR WILLIAMS#: LP-24-L70-8-40-DIM-UNV	LED	MULTI	50W	-
A2	2'x4' LAY-IN LED FLAT PANEL WITH ACRYLIC LENS. PROVIDE WITH LOW LUMEN PACKAGE (3,000-4,000 LUMENS). PROVIDE - COLUMBIA#: SRP24-40VWHE-G-ED-U LITHONIA#: EPANL-2X4-3000LM-80CRI-40K-MIN10-ZT-MVOLT OR WILLIAMS#: LP-24-L50-8-40-DIM-UNV	LED	MULTI	27W	I
WC	EXTERIOR LED CANOPY MOUNT CUT-OFF DOWN-LIGHT LUMINAIRE WITH ALUMINUM HOUSING, BRONZE FINISH, INSECT AND MOISTURE RESISTANT LENS ENCLOSURE, AND UL LISTED FOR WET LOCATIONS. PROVIDE RAB #: VANLED52N OR DECO #: D536-LED-40-40-UNV-BZ OR ATLAS #: VN1256LED	LED	UNV	52W	-
OR STATE OF THE ST	CEILING OR WALL MOUNTED LED EXIT LIGHT CONFORMING TO NFPA 101 STANDARDS, w/ BATTERY & SOLID STATE CHARGER, SELF DIAGNOSTICS w/ A TEST CYCLE EVERY 30 DAYS MINIMUM, SELF-CONTAINED, DOUBLE OR SINGLE WHITE FACE/BODY, ABS THERMOPLASTIC HOUSING, PILOT & STATUS INDICATING LIGHTS, TEST SWITCH, & 90 MIN. EMERGENCY RUN TIME; EXIT SIGN SHALL HAVE 5 YEAR WARRANTY. PROVIDE HUBBELL #: CER50 OR WILLIAMS #: EXIT-R-EM-WHT-SDT OR LITHONIA #: LQM-S-W-3-R-120/277-ELN-SD	RED LED	UNIV	3.5W	N/A
<b>₩</b>	AUTOMATIC, SELF—CONTAINED, SELF DIAGNOSTIC, MAINTENANCE FREE 2—HEAD EMERGENCY LIGHT. UL 924 LISTED AND NFPA 101 COMPLIANT, ABS THERMOPLASTIC HOUSING, PILOT & STATUS INDICATING LIGHTS. SELF DIAGNOSTICS SHALL INCLUDE CONTINUOS SELF CHECKS AND 30 MINUTE FULL LOAD TEST WITH CHARGER OFF EVERY 30 DAYS. PROVIDE HUBBELL #: CU2SD OR WILLIAMS #: EMER/LED—WHT—HL—SDT OR LITHONIA #: EU2—LED—M12	2-10W	UNIV	20W	N/A
484	CEILING OR WALL MOUNTED LED EXIT & 2—HEAD EMERGENCY LIGHT CONFORMING TO NFPA 101 STANDARDS, W/ BATTERY & SOLID STATE CHARGER, SELF DIAGNOSTICS W/ A TEST CYCLE EVERY 30 DAYS MINIMUM, SELF—CONTAINED, DOUBLE OR SINGLE WHITE FACE/BODY, ABS THERMOPLASTIC HOUSING, PILOT & STATUS INDICATING LIGHTS, TEST SWITCH, & 90 MIN. EMERGENCY RUN TIME, EXIT LIGHT SHALL CONTINUE TO OPERATE FOR 24 HOURS FOLLOWING POWER OUTAGE; EXIT SIGN SHALL HAVE 5 YEAR WARRANTY. PROVIDE HUBBELL #: CCRSD OR LITHONIA #: LHQM—LED—R—HO—SD OR WILLIAMS #: EXIT/EM/LED—SF—R—WHT—HL—SDT	2-10W HALOGEN	UNIV	20	N/A
46	WALL MOUNTED SCONCE LIGHT WITH PREMIUM MARINE GRADE DIE-CAST ALUMINUM HOUSING AND POLYCARBONATE GASKETED LENS TO WITHSTAND EXTREME WEATHER CONDITIONS. MOUNT ABOVE EXTERIOR DOOR. EMERGENCY LIGHT SHALL CONFORM WITH NFPA 101 STANDARDS AND NEC-700.16. PROVIDE HUBBELL #: CUWZ-PC OR WILLIAMS #: EMER/DECO-DBR-LT OR LITHONIA #: AFN-DB-EXT	2-6W	UNIV	12W	-

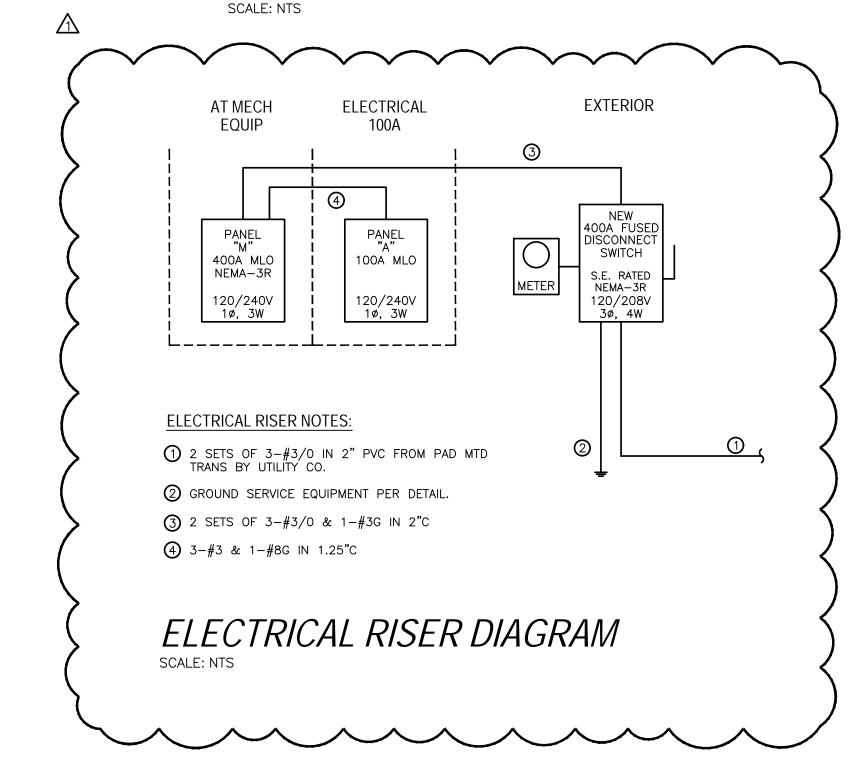


 THIS DRAWING ONLY SHOWS GROUNDING ELECTRODE CONDUCTORS AND BONDING JUMPERS. ALL CONDUITS SHALL ALSO HAVE EQUIPMENT GROUNDING CONDUCTORS SIZED PER NEC AND DRAWINGS.
 BONDING OF GAS PIPE IS TO EQUALIZE POTENTIAL

OF GAS PIPE ONLY. AS REQ'D BY N.E.C. &

#### 400A SERVICE ENTRANCE GROUNDING DETAIL

VOLUME VI OF NCBC.



	ELECTRICAL SYMBOL LEGEND
	ELECTRICAL SYMBOL LEGEND
SYMBOL P	DESCRIPTION  DUPLEX CONVENIENCE OUTLETS FOR GENERAL USE SHALL BE RATED 20 AMPERES, 125 VOLTS, DUPLEX, FOR STANDARD
	PARALLEL BLADE THREE-WIRE GROUNDED TYPE CAPS, HUBBELL NO. 5362 (BROWN) OR 5362-I (IVORY), OR EQUAL.  QUADRUPLEX OUTLET AS SPECIFIED
— <u>——</u> ●	240V OUTLET - AMPERAGE PER CIRCUIT BREAKER FED FROM
<b></b>	DUPLEX OUTLET — GFI AS SPECIFIED
₩P/GFI	DUPLEX OUTLET - GFI - EXTERIOR WATERPROOF AS SPECIFIED
Ф ногіз	DUPLEX OUTLET — INSTALL HORIZONTALLY
Ф т	TAMPER PROOF DUPLEX OUTLET AS SPECIFIED
TVSS	DUPLEX w/ TRANSIENT VOLTAGE SURGE SUPPRESSION w/ LIGHT (NEMA 5-15), EQUAL TO HUBBELL No. 5260
—	NEMA 5-20R ISOLATED GROUND RECEPTACLE  WATERTIGHT TWISTLOCK RECEPTACLE IN KITCHEN UTILITY DISTRIBUTION WALL
<u> </u>	DUAL COMPARTMENT ALUMINUM RACEWAY SYSTEM, WIREMOLD No. ALA4800 w/ TWIN COVER; COLOR SELECTED BY
•	ARCHITECT (SEE PLANS FOR RECEPTACLE & DATA OUTLET QUANITITES & LOCATIONS)  PECEPTACLES MOLINIED IN STEEL CITY CAR SERIES ARM RESET FLOOR ROY FACIL ROY CONTAINS (6) DURING PECEPTS
	RECEPTACLES MOUNTED IN STEEL CITY GAB SERIES AFM PRE SET FLOOR BOX. EACH BOX CONTAINS (6) DUPLEX RECEPTS (TYPICAL). SECURE SQUARE OF CARPET TO MATCH IN LID OF BOX (BY ELECT. CONTR., TYP)
•	DATA OUTLETS MOUNTED IN STEEL CITY GAB SERIES AFM PRE SET FLOOR BOX. EACH BOX CONTAINS (4) DUAL DATA OUTLETS (TYPICAL). ROUTE (2) 1 "C FROM EACH BOX BACK TO MDF ROOM. SECURE SQUARE OF CARPET TO MATCH IN LID OF BOX (BY ELECT. CONTR., TYP)
F,S,H	FIRE ALARM INITIATING DEVICES; SEE LEGEND SHEET E-004
<b>⋈</b> , ∐, <b>⋈</b>	FIRE ALARM NOTIFICATION DEVICES; SEE LEGEND SHEET E-004
$^{ee}\!$	VOICE/DATA DEVICES, SEE ICS LEGEND SHEETIC-101. E.C. RESPONSIBLE FOR ROUGH-IN AS INDICATED ON ELECTRICAL DRAWINGS
<b>⟨k</b> ⟩, <b>⟨0</b> ⟩	SECURITY DEVICES; SEE LEGEND THESE DWGS. E.C. RESPONSIBLE FOR ROUGH—IN AS INDICATED ON ELECTRICAL DRAWINGS
\$	SINGLE POLE SWITCH - 48" A.F.F. U.O.N., 20 AMP, 120/277 VOLT, SPECIFICATION GRADE
\$3,\$4	3 OR 4-WAY SWITCH - 48" A.F.F. U.O.N., SPECIFICATION GRADE, SEE SPECIFICATION SECTION 16140
\$ <b>k</b>	KEY-OPERATED SWITCH - 48" A.F.F. U.O.N.
\$ <sub>D</sub> _	DIMMER SWITCH RATED FOR LOAD — 48" A.F.F., LUTRON No. MAR OR APPROVED EQUAL  DOUBLE POLE SINGLE THROW SWITCH — 48" A.F.F.
<b>→ 15</b>	MASTER / SATELLITE OR SPLIT BALLAST WIRING — SEE DETAILS THESE DRAWINGS
 \$ <b>u</b>	ELECTRONIC LIGHTING CONTROLLER AS SPECIFIED
S <sub>M</sub>	MOTOR STARTER SWITCH w/ PILOT LIGHT, HUBBELL No. HBL3031PL OR EQUAL BY SQUARE D
T &(S)	VERTICAL J-BOX FOR THERMOSTATS & SENSORS - 54"AFF U.O.N ?" E.C. TO UTILITY PLATFORM; COORDINATE w/ M.C.
<u>-</u>	FUSED EQUIPMENT DISCONNECT U.O.N.— SEE SPECIFICATION SECTION 16400
LMS	COMBINATION MOTOR STARTER DISCONNECT
•	COMBINATION START/STOP BUTTON MOTOR STARTER- SQUARE D No. MBG2 FOR WELDING (EF-6D) & SQUARE D No. MCG3 FOR CARPENTRY (EF-6E)
•	EMERGENCY STOP BUTTON — STI No. 040 OR APPROVED EQUAL WITH STOPPER II WARNING ALARM COVER, INDICATOR LIGHT, KEY RESET, YELLOW COLOR, & "EMERGENCY" GRAPHIC MESSAGE
$\bigcup$ or $\bigcup$	JUNCTION BOX, FLUSH MOUNTED IN ALL FINISHED SPACES
	ELECTRICAL PANEL AS SPECIFIED — SEE SPECIFICATION SECTION 16400
<u>2 </u> =	GROUNDING ELECTRODE CONDUCTOR INSTALLED IN ACCORDANCE WITH 1999 NEC ARTICLES 250-26 &/or 250-81
-	REFER TO KEY NOTE No. 2
(SP)	CEILING MOUNT SPEAKER BY TECHNOLOGY CONTRACTOR UNDER DIVISION 17
(SP)	RECESSED WALL MOUNT SPEAKER BY TECHNOLOGY CONTRACTOR, FURNISH & INSTALL BACKBOX & RACEWAY TO UTILITY PLATFORM
EM SP WP	RECESSED WEATHER-PROOF WALL MOUNT SPEAKER BY TECHNOLOGY CONTRACTOR UNDER DIVISION 17; E.C. FURNISH & INSTALL BACKBOX & RACEWAY TO UTILITY PLATFORM
(OC)	CEILING MOUNTED SPACE OCCUPANCY SENSOR FOR LIGHTING CONTROL (SEE OC SENSOR LEGEND FOR TYPE DESCRIPTIONS.)
OC	WALL MOUNTED SPACE OCCUPANCY SENSOR FOR LIGHTING CONTROL (SEE OC SENSOR LEGEND FOR TYPE DESCRIPTIONS.)
₩	EMERGENCY LIGHTS AS SPECIFIED — SEE LIGHT FIXTURE SCHEDULE
<b>сстv</b>	FUTURE CCTV CAMERA BY OWNER UNDER SEPARATE CONTRACT — PROVIDE "C FROM BELOW UTILITY PLATFORM TO CABLE MANAGEMENT HOOK ABOVE; CABLE UNDER DIVISION 17
<u>(</u> 3	VIDEO STUDIO CAMERA BY OWNER
<b>→</b>	EVIT SIGN / DIDECTIONAL ADDOM/S) & DATTEDY DAGY LID SEE LIGHT SIXTUDE SCHEDULE
$\otimes$	EXIT SIGN w/ DIRECTIONAL ARROW(S) & BATTERY BACK-UP - SEE LIGHT FIXTURE SCHEDULE
EM	EXIT SIGN w/ BATTERY BACK-UP & EM LIGHTS - SEE LIGHT FIXTURE SCHEDULE
	DRY-TYPE TRANSFORMER AS SPECIFIED - SEE RISER DIAGRAMS, INSTALLATION DETAILS, & SPECIFICATION SECTION 16460
	SLEEVE ROUGH-INS UNDER PAVING/CONCRETE; 3" FOR FUTURE USE, & 2" FOR SITE LIGHTING BY CP&L
— UE —	UNDERGROUND PRIMARY ELECTRICAL FEEDERS BY ELECTRICAL UTILITY
— Е —	UNDERGROUND SECONDARY ELECTRICAL FEEDERS BY ELECTRICAL CONTRACTOR
— CATV —	TO FUTURE GROUND MOUNTED  TO FUTURE GROUND MOUNTED  SATELLITE BY OWNER CABLE TV CABLING BY OTHERS  OR EQUIVALENT NEMA 1 LOCKABLE CAB'T
— TELCOM —	AUSTIN CO. OR EQUAL TELECOMMUNICATIONS CABLING BY OTHERS
— F0 —	FIBER OPTIC CABLE BY TECHNOLOGY CONTRACTOR; WIRE MANAGEMENT BY E.C.
	RACEWAY AS SPECIFIED CONCEALED ABOVE CEILING
	RACEWAY AS SPECIFIED CONCEALED U.G.
# >	HOME-RUN TO PANEL w/ CONDUCTORS, NEUTRAL, & GROUND
	CABLE TRAY (CENTER SPLINE & LADDER TYPES), SEE DETAILS THESE DRAWINGS
ABBREVIA A.C. A	TIONS:  BOVE CEILING  C CONDUIT AS SPECIFIED
A.H.J. Al	BOVE FINISH FLOOR NL 24 HOUR NIGHT LIGHT UTHORITY HAVING JURISDICTION NTS NOT TO SCALE
EWC E	XHAUST FAN P.B. PUSH BUTTON  LECTRIC WATER HEATER  LECTRIC WATER HEATER  LECTRIC WATER HEATER
G G	LECTRIC WATER HEATER TP TAMPER—PROOF  ROUND CONDUCTOR U.O.N. UNLESS OTHERWISE NOTED  ENERAL CONTRACTOR U.G. UNDERGROUND
P.C. P	LUMBING CONTRACTOR WP WEATHERPROOF ENCLOSURE IECHANICAL CONTRACTOR U.P. UTILITY PLATFORM
	LECTRICAL CONTRACTOR OR EMPTY CONDUIT  YPICAL CIRCUIT DESIGNATION: PANEL 'B', BREAKER #2
NOTE:	LEGEND IS FOR REFERENCE ONLY - SYMBOLS/ABBREVIATIONS SHOWN DO NOT NECESSARILY APPLY TO THIS PROJECT

GENERAL ELECTRICAL NOTES:

\* "NEC" IS DEFINED AS BEING THE CURRENT NFPA-70 THAT HAS BEEN ADOPTED BY THE NC CODE COUNCIL AND THE NC DEPT OF INSURANCE.

1. DO NOT SCALE THESE DRAWINGS; REFER TO LARGEST SCALE ARCHITECTURAL PLANS.

2. THESE DRAWINGS ARE DIAGRAMMATIC ONLY AND ARE NOT INTENDED TO SHOW MINOR DETAILS AND EXACT LOCATIONS. DESIGN ADJUSTMENTS SHALL BE ANTICIPATED BY THE CONTRACTOR TO PROVIDE A COMPLETE AND

OPERATIONAL SYSTEM.

3. REFERENCE SPECIFICATIONS AND ARCHITECTURAL, STRUCTURAL, PLUMBING, & HVAC DRAWINGS PRIOR TO CONSTRUCTION.

5. CONTRACTOR SHALL INSTALL, GROUND AND BOND SYSTEM PER THE NEC WITH ALL NC MODIFICATIONS.

4. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH NEC/NFPA 70. CONTRACTOR SHALL NOTIFY ENGINEER REGARDING ANY CODE DISCREPANCIES SHOWN ON PLANS ANY PERMIT OR INSPECTION FEES ARE THE

ENGINEER REGARDING ANY CODE DISCREPANCIES SHOWN ON PLANS. ANY PERMIT OR INSPECTION FEES ARE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

6. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE METHOD & HAVE NOT BEEN VERIFIED; CONTRACTOR SHALL DETERMINE EXACT LOCATION OF UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK & IS RESPONSIBLE FOR ANY DAMAGE INCURRED BY FAILURE TO DO SO. EACH PRIME CONTRACTOR PERFORMING EXCAVATIONS OR UNDERGROUND WORK SHALL BE RESPONSIBLE FOR THE LOCATION OF ANY EXISTING UTILITIES IN THE AREA OF THEIR WORK. NOTIFY THE UTILITY LOCATOR SERVICE (1-800-632-4949) AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION IN ORDER THAT EXISTING UTILITIES IN THE AREA MAY BE FLAGGED AND CONTRACTOR SHALL USE ALL CARE NECESSARY WHEN WORKING IN AREAS KNOWN OR SUSPECTED TO CONTAIN UNDERGROUND UTILITIES, INCLUDING HAND DIGGING.

7. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ELECTRICAL FIXTURES AND EQUIPMENT WITH OTHER PRIME CONTRACTORS PRIOR TO INSTALLATION TO AVOID CONFLICTS. CONTACT ARCHITECT IF ALTERNATE INSTALLATION METHOD IS REQUIRED.

8. CONTRACTOR SHALL NOT PUT MORE THAN SIX (6) DUPLEX RECEPTACLES ON ANY GIVEN 1P-20A CIRCUIT UNLESS SHOWN OTHERWISE.

9. MINIMUM WIRE SIZE SHALL BE #12 AWG., MINIMUM CONDUIT SIZE SHALL BE 3/4".

10. CONTRACTOR SHALL COORDINATE TELEPHONE AND DATA OUTLETS REQUIRED WITH OWNER PRIOR TO GYP. BOARD BEING INSTALLED.

11. HALLWAY AND MAINTENANCE RECEPTACLES SHALL NOT BE CIRCUITED WITH OFFICE OR OTHER GENERAL PURPOSE RECEPTACLES.

12. ELECTRICAL CONTRACTOR SHALL PROVIDE HACR RATED CIRCUIT BREAKERS ON ALL HVAC EQUIPMENT.

13. CONDUCTORS SHALL BE TYPE THWN OR THW. BRANCH CIRCUIT CONDUCTOR SHALL NOT BE SMALLER THAN No. 12 AWG., EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE. HOME RUNS ORIGINATING MORE THAN 80' AT 120V FROM PANEL LOCATION SHALL BE No. 10 AWG MINIMUM SIZE. WIRES No. 10 AWG AND SMALLER SHALL BE SOLID; WIRES No. 8 AWG AND LARGER SHALL BE STRANDED. PROVISIONS OF NEC SECTION 210-5 COLOR CODE SHALL BE STRICTLY COMPLIED WITH AND BE CONSISTENT THROUGHOUT ENTIRE SYSTEM.

ACCORDANCE WITH NEC TABLE 250—122. HASHMARK FOR GROUNDING CONDUCTOR IS NOT INDICATED ON THESE DRAWINGS. RACEWAY SHALL NOT BE USED AS EQUIPMENT GROUND.

14. ALL CIRCUITS SHALL BE PROVIDED WITH AN INSULATED EQUIPMENT GROUND CONDUCTOR SIZED IN

15. IN ADDITION TO MECHANICAL FASTENING TO CEILING TRACK, SUPPORT LIGHT FIXTURES AT EACH CORNER INDEPENDENTLY OF SUSPENDED CEILING WITH 12 GAUGE WIRE. CONNECT TO STRUCTURAL SYSTEM OF BUILDING PRIOR TO FIRE—PROOFING APPLICATION.

16. ALL CONDUIT SHALL BE CONCEALED UNLESS OTHERWISE NOTED. ALL EMPTY CONDUIT SHALL HAVE A PULL

17. ALL CONDUIT SHALL BE ELECTRICAL METALLIC TUBING. EMT SHALL NOT BE INSTALLED WHERE IT MAY BE SUBJECT TO PHYSICAL DAMAGE, WHERE IT WILL BE SUBJECT TO SEVERE CORROSIVE INFLUENCE, WHERE THE SIZE IS LARGER THAN 2", OR WHERE TUBING, ELBOWS, COUPLINGS, AND FITTINGS WOULD BE IN CONCRETE OR IN DIRECT CONTACT WITH THE EARTH. SCHEDULE 40 PVC CONDUIT SHALL BE USED IN ALL CONCRETE FLOOR SLABS AND WHEN IN DIRECT CONTACT WITH THE EARTH. PVC CONDUIT SHALL BE USED FOR ALL CONDUIT INSTALLED IN MASONRY WALLS AND SHALL TRANSITION BACK TO EMT OR RIGID CONDUIT AT THE TOP OF THE MASONRY WALL. PVC CONDUIT IS NOT ALLOWED IN STUD WALLS.

18. CONDUIT SHALL NOT BE RUN EXPOSED IN FINISHED AREAS UNLESS APPROVED BY ARCHITECT / OWNER. CONDUIT SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO WALL & FLOOR CONSTRUCTION IN FIRST CLASS WORKMANSHIP MANNER. CONDUIT SHALL BE BENT IN ACCORDANCE WITH NEC MINIMUM RADIUS REQUIREMENTS. WHERE SCHD 40 PVC IS INSTALLED UNDER FLOOR SLABS, THE ELBOWS REQUIRED TO TURN THE RACEWAY UP INTO CABINETS, EQUIPMENT, ETC., WHERE SUBJECT TO DAMAGE, SHALL BE OF RIGID STEEL.

19. ALL CONDUIT FITTINGS SHALL BE COMPRESSION TYPE WITH INSULATED THROATS. ALL EXTERIOR CONDUIT FITTINGS SHALL BE LISTED FOR USE IN WET LOCATIONS PER NEC ARTICLE 314.

20. PROVIDE 3" WIDE RED MAGNETIC WARNING TAPE MARKED "BURIED ELECTRIC LINE BELOW" SIX INCHES BELOW FINISH GRADE FOR ALL U.G. CONDUIT. ENCASE ALL U.G. CONDUITS NOT UNDER BLDG SLAB IN 3" OF CONCRETE.

21. SERVICE ENTRANCE CONDUCTORS SHALL BE IN CONDUIT (RIGID OR PVC). EXTERIOR CONDUIT EXPOSED ABOVE SLAB SHALL BE RIGID. INTERIOR CONDUIT EXPOSED SHALL BE ELECTRICAL METALLIC TUBING (EMT). EMT SHALL BE COLD—ROLLED STEEL TUBING WITH A COATING ON THE OUTSIDE AND PROTECTED ON THE INSIDE BY A ZINC, ENAMEL, OR EQUIVALENT CORROSION RESISTANT COATING AND CONFORMING TO THE REQUIREMENTS OF ANSI C 80.3—1996 OR LATER EDITION. ALL UNDERGROUND CONDUIT SHALL BE UL LISTED SCHD 40 PVC CONFORMING TO ARTICLES 352 & 300 OF THE NEC. WHERE SCHD 40 PVC IS INSTALLED BELOW GRADE OR UNDER FLOOR SLABS, THE ELBOWS REQUIRED TO TURN THE RACEWAY UP INTO CABINETS, EQUIPMENT, ETC., SHALL BE OF RIGID STEEL AND SHALL CONTINUE AS RIGID STEEL TO THE CABINET, EQUIPMENT, ETC. FEEDER CIRCUITS SHALL BE IN CONDUIT. BRANCH FEEDERS MAY BE MC CABLE WHERE CONCEALED, ABOVE SLAB AND NOT IN MASONRY WALLS AS ALLOWED BY NEC ARTICLE 330.

22. ALL JUNCTION OR DEVICE BOXES SHALL HAVE A COVER; PROVIDE COVER PLATES AS SPECIFIED IN SECTION 16140.

23. ALL 1P-20A CIRCUITS SHALL BE 2-#12 & 1-#12G IN 3/4"C WITH NO SHARED NEUTRALS U.N.O.

24. WHERE DISTANCE TO FIRST OUTLET ON A 20 AMP CIRCUIT EXCEEDS 50 FEET, MINIMUM SIZE OF CONDUCTOR TO BE #10 AWG TO FIRST OUTLET

25. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH ALL VOLUMES OF THE NCSBC, INSPECTORS HAVING

JURISDICTION, AND ALL OTHER APPLICABLE CODES AND ORDINANCES.

26 FACH PIECE OF FLECTRICAL GEAR FOLLIPMENT FTC. SHALL BEAR A "LIL" LARFI

26. EACH PIECE OF ELECTRICAL GEAR, EQUIPMENT, ETC., SHALL BEAR A "UL" LABEL.

27. ALL HOLES CUT IN FLOOR, CEILING AND WALLS SHALL BE CORE—DRILLED OR SAWED.

28. ROOF DECKING SHALL NOT BE PENETRATED TO SUPPORT ELECTRICAL ITEMS.

29. ALL EMERGENCY AND EXIT LIGHTS SHALL BE CONNECTED TO THE UNINTERRUPTED SIDE OF THE LOCAL LIGHTING CIRCUIT.

30. PROVIDE AND INSTALL ENGRAVED PHENOLIC LABELS ON ALL ELECTRICAL GEAR, DISCONNECTS, ETC. FASTEN WITH SCREW FASTENERS.

31. E.C. SHALL INSTALL HEAVY DUTY NEMA-1 DISCONNECTS AT ALL INTERIOR LOCATIONS INDICATED AND HEAVY DUTY NEMA-3R DISCONNECTS AT ALL EXTERIOR LOCATIONS INDICATED ON THESE DRAWINGS.

32. VERIFY WITH OWNER LOCATION/TYPE OF ALL FIXTURES, PANEL BOXES, OUTLET PLACEMENT, ETC. BY HOLDING AN ELECTRICAL WALKTHROUGH ON THE BUILDING SITE ONCE FRAMING IS COMPLETED.

33. ELECTRICAL BOXES INSTALLED IN U.L. RATED WALLS SHALL BE LOCATED A MINIMUM OF 2'-0" FROM ANY OTHER ELECTRICAL BOX IN THAT WALL.

34. LIGHTING SWITCHES, RECEPTACLES AND/OR DATA OUTLETS SHALL NOT BE MOUNTED BACK TO BACK IN ANY WALL.

35. CABLE LOCATED IN PLENUMS SHALL BE PLENUM—RATED. ALL CABLE INSTALLED IN AREAS WITH EXPOSED STRUCTURE SHALL BE IN CONDUIT.

36. E.C. SHALL INSTALL COMPLY WITH ANSI A117.1 FOR OUTLET AND CONTROL SWITCH MOUNTING HEIGHTS FOR

ADA ACCESSIBILITY.

37. E.C. SHALL BE RESPONSIBLE FOR ALL LINE SIDE AND LOAD SIDE WIRING ON ALL EQUIPMENT REQUIRING

37. E.C. SHALL BE RESPONSIBLE FOR ALL LINE SIDE AND LOAD SIDE WIRING ON ALL EQUIPMENT REQUIRING ELECTRICAL POWER. EXTERNALLY MOUNTED DISCONNECT SWITCHES AND ALL REQUIRED FUSES SHALL BE FURNISHED BY THE CONTRACTOR PROVIDING THE EQUIPMENT. E.C. SHALL BE RESPONSIBLE FOR INSTALLING EXTERNALLY MOUNTED DISCONNECT SWITCHES AND PROVIDING LOAD SIDE WIRING AND CONDUIT TO EQUIPMENT. ALL FINAL CONNECTIONS TO EQUIPMENT SHALL BE DONE BY THE CONTRACTOR PROVIDING THE EQUIPMENT. SEE "ELECTRICAL CONNECTION DETAIL".

38. "PROVIDE" IS DEFINED AS FURNISH AND INSTALL AS PER MANUFACTURER'S RECOMMENDATIONS.

39. THE TERM "VERIFY" RELATIVE TO THESE DRAWINGS SHALL BE DEFINED AS OBTAINING EQUIPMENT INSTALLATION INSTRUCTIONS FROM EQUIPMENT SUPPLIER OR OBTAINED OWNER'S REPRESENTATIVE'S APPROVAL.

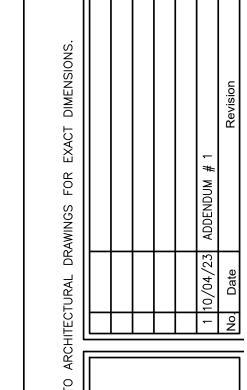
40. E.C. IS RESPONSIBLE FOR DEMOLITION OF EXISTING LIGHTS FIXTURES THAT ARE INDICATED TO BE REPLACED. E.C. SHALL FIELD VERIFY EXISTING SWITCH CIRCUITING AND REWORK SWITCH WIRING TO PROVIDE CONTROL OF LIGHTS AS INDICATED ON PLANS.

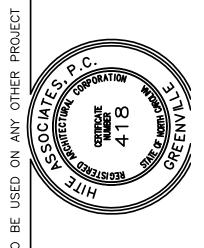
41. ALL 15 AND 20 AMP, 125V AND 250V NONLOCKING-TYPE RECEPTACLES SHALL BE TAMPER-RESISTANT IN THE FOLLOWING AREAS: (1) EDUCATION FACILITIES, (2) GUEST ROOMS AND GUEST SUITES OF HOTELS AND MOTELS AND THEIR COMMON AREAS, (3) BUSINESS OFFICES, CORRIDORS, WAITING ROOMS, EXAM ROOMS, AND THE LIKE IN CLINICS, MEDICAL AND DENTAL OFFICES, AND OUTPATIENT FACILITIES, (4) ALL ASSEMBLY OCCUPANCIES, (5) ALL OTHER AREAS LISTED IN THE RECEPTACLES ARTICLE OF THE NEC THAT REQUIRE TAMPER-RESISTANT RECEPTACLES.

42, ALL RECEPTACLES IN KITCHENS AND FOOD PREPARATION AREAS SHALL BE GFCI PROTECTED.

43. ALL RECEPTACLES WITHIN 6 FEET OF A SINK, BATHTUB, SHOWER, OR THE LIKE SHALL BE GFCI PROTECTED REGARDLESS OF WHETHER THEY ARE INDICATED ON THESE PLANS. E.C. SHALL BE RESPONSIBLE FOR FIELD VERIFYING EXACT DISTANCES AND PROVIDING THE GFCI PROTECTION AS REQUIRED.





146 associated associated and the second of 


New Classroom Addition for Duplin Jr.-Sr. High Sch 1388 NC-403, Mt Olive, NC 28365

Project No.
22253

Date:
6 March 2023

Drawing no.

Date: 6 March 2023

Drawing no.

E
001

101.1 CANOPY LIGHT INSTALLATION DETAIL SCALE: N.T.S.

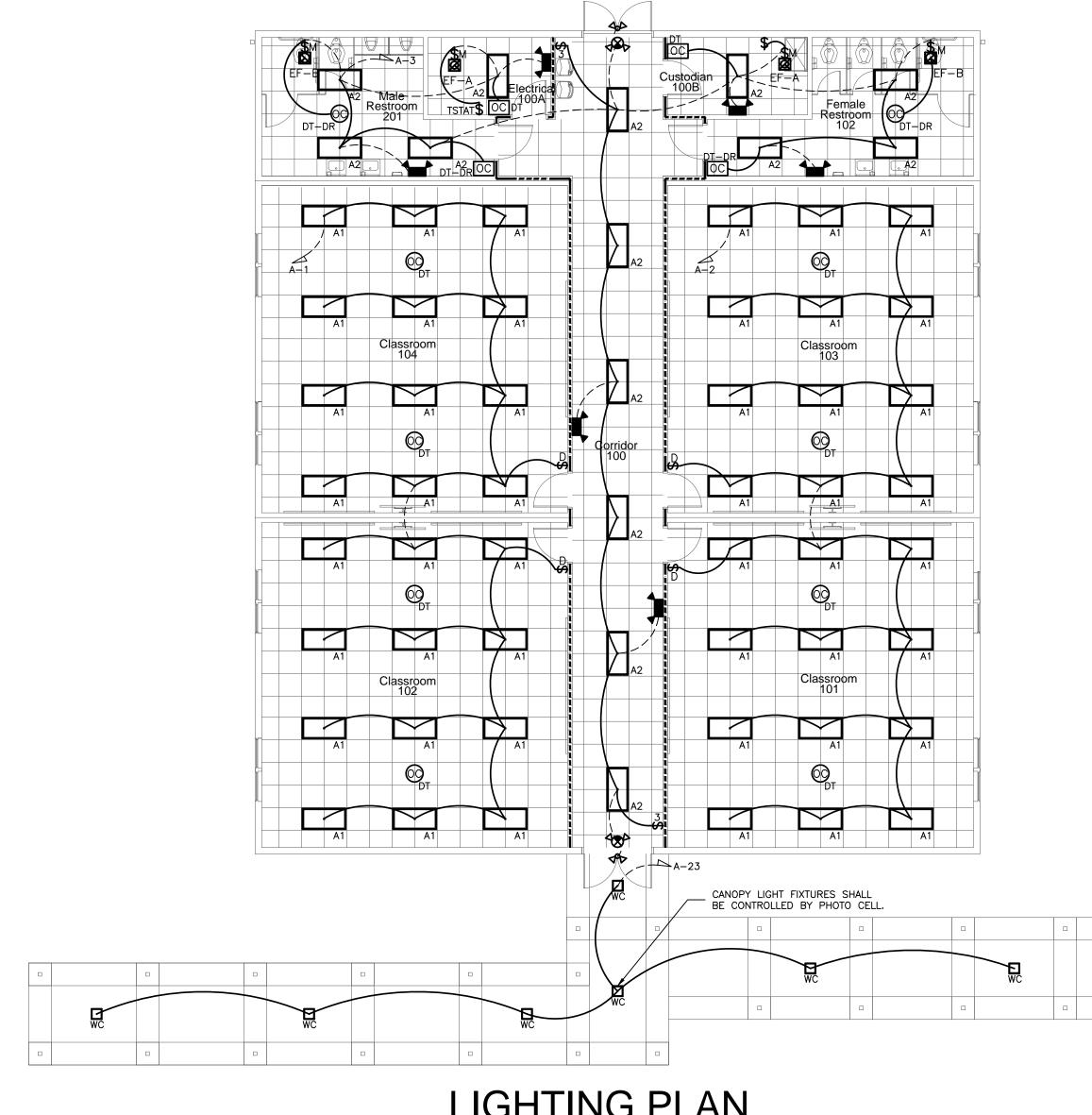
# REMOVED PANEL SCHEDULE

LIGHTING		3.74	KVA	X	125	%		4.7 KVA
RECEPTAC	TOTAL	9.00	KVA					
	1ST	10.00	KVA	X	100	%	=	9.0 KVA
	REMAIN	0.00	KVA	X	50	%	=	0.0 KVA
MOTORS		28.32	KVA	Х	100	%	=	28.3 KVA
	LARGEST	5.28	KVA	X	125	%	=	6.6 KVA
A/C		0.00	KVA	X	100	%	=	0.0 KVA
WATER HE	ATING	4.50	KVA	Χ	125	%	=	5.6 KVA
FUTURE			KVA	Χ	100	%	=	0.0 KVA
KITCHEN		0.00	KVA	Χ	65	%	=	0.0 KVA
MISCELLAN	IEOUS	32.80	KVA	Х	100	%	=	32.8 KVA

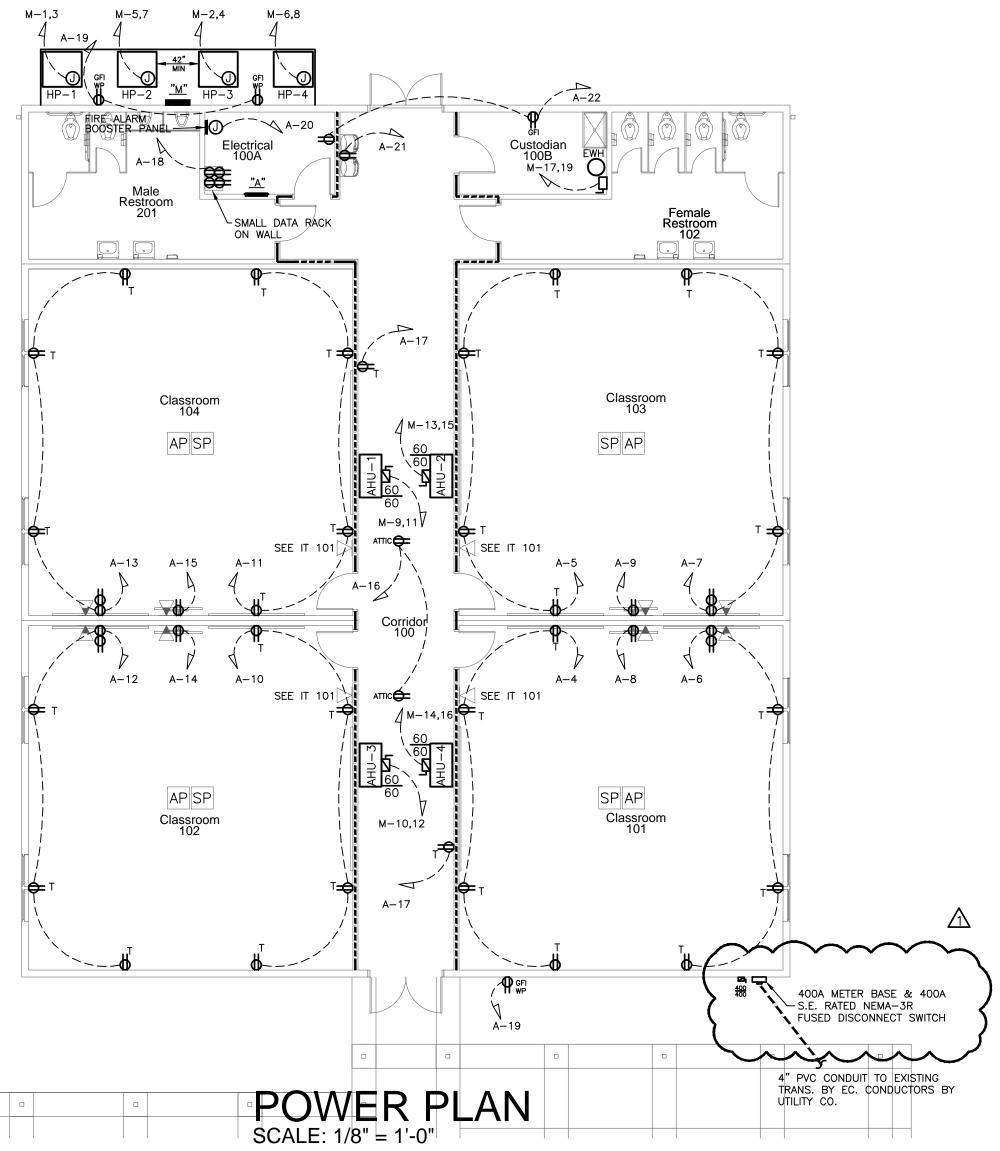
								Р	AN	ELB	SOA	ARD	SC	HE	DU	JLE	- "F	PAN	IEL	M"							
MAI	N: 400	MLO			VOLTAGE	240/120	P	HASE	: 1	V	VIRE:	3	N	MOUN	TING	SUR	FACE			AIC:	22,000	BUS BARS: COPPER	N.				
CKT	BKR	POLE	WIRE	COND	)				LC	DAD (K	VA)		5.81	PHAS			LC	AD (K		=: #2000			COND	WIRE	POLE	BKR	CK
#	TRIP	)	SIZE	SIZE	DESCRIP	NOIT	LTG	REC	MTR	A/C	HTG	KIT	MISC	A B	LTG	REC	MTR	A/C	HTG	KIT	MISC	DESCRIPTION	SIZE	SIZE		TRIP	#
1	35	2	8	3/4"	HP-1				2.6	100	14.						2.2					HP-3	3/4"	10	2	30	2
3	33		0	3/4	1115-1				2.6								2.2		111-5	III-S	3/4	10	2	30	4		
5	O.F.	_		0.40	шоо				2.6	1.5							2.2					нь и	0/40	40		00	6
7	35	2	8	3/4"	HP-2				2.6								2.2					HP-4	3/4"	10	2	30	8
9	-00	_							1.8				3.6				1.8				3.6	******	241124171400	77.00	_		10
11	60	2	4	1 1/4"	AHU-1			V-	1.8				3.6				1.8				3.6	AHU-3	1 1/4"	4	2	60	12
13	22			1102 20010001					1.8	19 15			3.6				1.8				3.6	Watton a		727	121		14
15	60	2	4	1 1/4"	AHU-2		1		1.8	1.5			3.6				1.8				3.6	AHU-4	1 1/4"	4	2	60	10
17		1000							1.0		2.3										T0 T	SPARE			1	20	18
19	30	2	10	3/4"	EWH						2.3											SPARE			1	20	20
21	20	1			SPARE					1	20											SPARE			1	20	22
23	20	1			SPARE																	SPACE			1	20	24
25	20	4			SPARE															-		SPACE			1		26
27	20	(,1,7	-		JI AIL		3.0	4.4	0.0	0.0	0.0	0.0	2.6	T								SPACE			4		28
29	100	1	3	1 1/4"	PANEL "A"		0.7	4.6					<del> </del>									SPACE			- 1		30
	i Ting (k	()//)-				3.7			0.0	0.0	0.0 4.5	0.0	1.4 18.4		0.0	0.0	15.8	0.0	0.0	0.0	111	CONNECTED LOAD (KVA):	0		1	c	33.6
	EPTAC	9.0	3.1	3.7 9.0 17.8 0.0 4.5 0.0 18.4							0.0	0.0	10.0	0.0	0.0	U.U	14.4	DEMAND LOAD (KVA):	)				37.0				
	10TORS (KVA): 33.6							PHASE A 40.2 334.9										DEIWIND LONG (RVVI).					1.0				
1207/101	/C (KVA): 0.0							PHASE B 43.5 362.1 CONNECTED LOAD (AMPS):										3	48.5								
7	TING (K	(VA):				4.5								KVA		MPS						DEMAND LOAD (AMPS):	75			30	62.6
	HEN (K					0.0									1000												
MISC	ELLAN	IEOUS	(KVA):			32.8																					

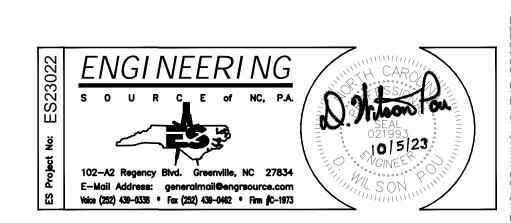
LIGHTING		3.74	KVA	X	125	%		4.7	KV/
RECEPTAC	TOTAL	9.00	KVA						
	1ST	10.00	<b>KVA</b>	X	100	%	=	9.0	KV/
	REMAIN	0.00	KVA	X	50	%	=	0.0	KV/
MOTORS		0.00	KVA	X	100	%	=	0.0	KV/
	LARGEST	P/1	KVA	X	125	%	=	0.0	KV/
A/C		0.00	KVA	Χ	100	%	=	0.0	KV
WATER HE	ATING	0.00	KVA	Χ	125	%	=	0.0	KV/
FUTURE		W-	KVA	Χ	100	%	=	0.0	KV
KITCHEN		0.00	KVA	Х	65	%	=	0.0	KV
MISCELLAN	NEOUS	4.00	KVA	X	100	%	=	4.0	KV
TOTAL	=	73.6	amps	•				17.7	KV/

MAIN	I: 100 N	<b>NLO</b>			VOLTAGE 240/120	PH	IASE			VIRE:						- "P				2,000	BUS BARS: COPPER					
KT	3KR	POLE	WIRE	COND	and the result of the second s				AD (K				PHAS		A CONTRACTOR OF THE STREET	LOA		A)				COND	WIRE	POLE	BKR	CK
#	TRIP		SIZE	SIZE	DESCRIPTION	LTG	REC	MTR	A/C	HTG	KIT	MISC	AB	LTG	REC	MTR A	/C H	TG k	(IT)	MISC	DESCRIPTION	SIZE	SIZE		TRIP	#
1	20	1	12	3/4"	LIGHTING - CLASS 102 104	1.5								1.5							LIGHTING - CLASS 103 101	3/4"	12	1	20	2
3	20	1	12	3/4"	LIGHTING - CORRIDOR/RR	0.4						0.2			0.8						RECEPT - CLASS 101	3/4"	12	1	20	4
5	20	1	12	3/4"	RECEPT - CLASS 103		8.0								1.0						RECEPT - CLASS 101 TS	3/4"	12	1	20	6
7	20	1	12	3/4"	RECEPT - CLASS 103 TS		1.0													0.5	MONITOR CLASS 101	3/4"	12	1	20	8
9	20	1	12	3/4"	MONITOR CLASS 103							0.5			0.8						RECEPT - CLASS 102	3/4"	12	1	20	10
11	20	1	12	3/4"	RECEPT - CLASS 104		8.0								1.0						RECEPT - CLASS 102 TS	3/4"	12	1	20	12
13	20	1	12	3/4"	RECEPT - CLASS 104 TS		1.0													0.5	MONITOR CLASS 102	3/4"	12	1	20	14
5	20	1	12	3/4"	MONITOR CLASS 104							0.5			0.4						RECEPT - HVAC ATTIC	3/4"	12	1	20	16
7	20	1	12	3/4"	RECEPT - CORRIDOR	2	0.4													0.8	DATA RACK	3/4"	12	1	20	18
19	20	1	12	3/4"	RECEPT - EXTERIOR		0.6													0.2	FA BOOSTER	3/4"	12	1	20	20
21	20	1	12	3/4"	EWC (GFI BREAKER)							0.8			0.4						RECEPT - ELEC 100A 100B	3/4"	12	1	20	22
23	20	1	12	3/4"	LIGHTING - CANOPY	0.4															SPARE	3/4"	12	1	20	24
25	20	1	12	3/4"	SPARE																SPARE	3/4"	12	4	20	26
27	20	1	12	3/4"	SPARE																SPARE	3/4"	12	1	20	28
29		1			SPACE																SPACE	11		1		30
31		1			SPACE										-5100-						SPACE			1		32
GH	ING (K	VA):	340		3.7	2.2	4.6	0.0	0.0	0.0	0.0	2.0		1.5	4.4	0.0 0	.0 0.	.0 0	0.0	2.0	CONNECTED LOAD (KVA):			· · · · · · · · · · · · · · · · · · ·		16.7
RECEPTACLES (KVA): 9.0																DEMAND LOAD (KVA):				1	17.7					
	RS (K)	/A):			0.0						PHAS	20102021 02 00	10.0		3.3											
A/C (KVA): 0.0 PHASE E										SE B	6.7		6.2						CONNECTED LOAD (AMPS)	):				9.7		
	NG (K				0.0								KVA	A	MPS						DEMAND LOAD (AMPS):				7	73.6
	EN (K)	· ·			0.0 4.0																					



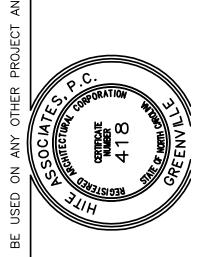






1 10/04/23 ADDENDUM # 1

HITE ASSOCIATES ARCHITECTURE / PLANNING / TECHNOLOGY



Project No. 22253

Date: 6 March 2023

Drawing no.

# FIRE ALARM DEVICE MOUNTING DETAIL SCALE: N.T.S.

FIRE ALARM SYMBOL LEGEND (SEE MOUNTING HEIGHT SCHEDULE FOR MOUN

INFORMATION UNLESS NOTED OTHERWISE)

P FIRE ALARM MANUAL PULL STATION

FIRE ALARM VOICE NOTIFICATION DEVICE

FIRE ALARM STROBE NOTIFICATION DEVICE

CEILING MOUNTED DEVICES

S SMOKE DETECTOR

DUCT MOUNTED SMOKE DETECTOR, PROVIDED AND WIRED BY E.C., INSTALLED BY M.C.

(H) HEAT DETECTOR, CEILING MOUNTED

M DOOR MAGNET

(CO) CARBON MON-OXIDE DETECTOR

FACP FIRE ALARM CONTROL PANEL, FLUSH MOUNTED

RA REMOTE ANNUNICATOR PANEL, FLUSH MOUNTED

KX KNOX BOX (COORDINATE WITH LOCAL FIRE MARSHALL)

BPS BOOSTER POWER SUPPLY

W WATER FLOW SENSOR

T TAMPER SWITCH

HKITCHEN HOOD RELAYMMONITOR MODULE

FAN SHUT DOWN RELAY

DUCT MOUNTED SMOKE DETECTOR REMOTE INDICATOR LIGHT MOUNTED IN CEILING PROVIDED AND INSTALLED BY E.C., LABEL ACCORDING TO MECHANICAL UNIT SERVED.

SALUNCTION BOX
WESTER

MESON

MESON

CENTEN

Classroom

Classroom

Classroom

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FIRE ALARM INSTALLATION NOTES:

1. FIRE ALARM SHALL BE INSTALLED BY A MANUFACTURER APPROVED INSTALLATION COMPANY.

2. E.C. OR E.C.'S REPRESENTATIVE SHALL PERFORM THOROUGH TRAINING WITH OWNER'S REPRESENTATIVES PRIOR TO OWNER OCCUPANCY OF THE BUILDING.

3. FIRE ALARM SYSTEM SHALL BE INSTALLED IN ACCORDANCE TO ALL APPLICABLE STATE AND LOCAL LAWS AND IN ACCORDANCE WITH THE LATEST EDITION OF NFPA 72.

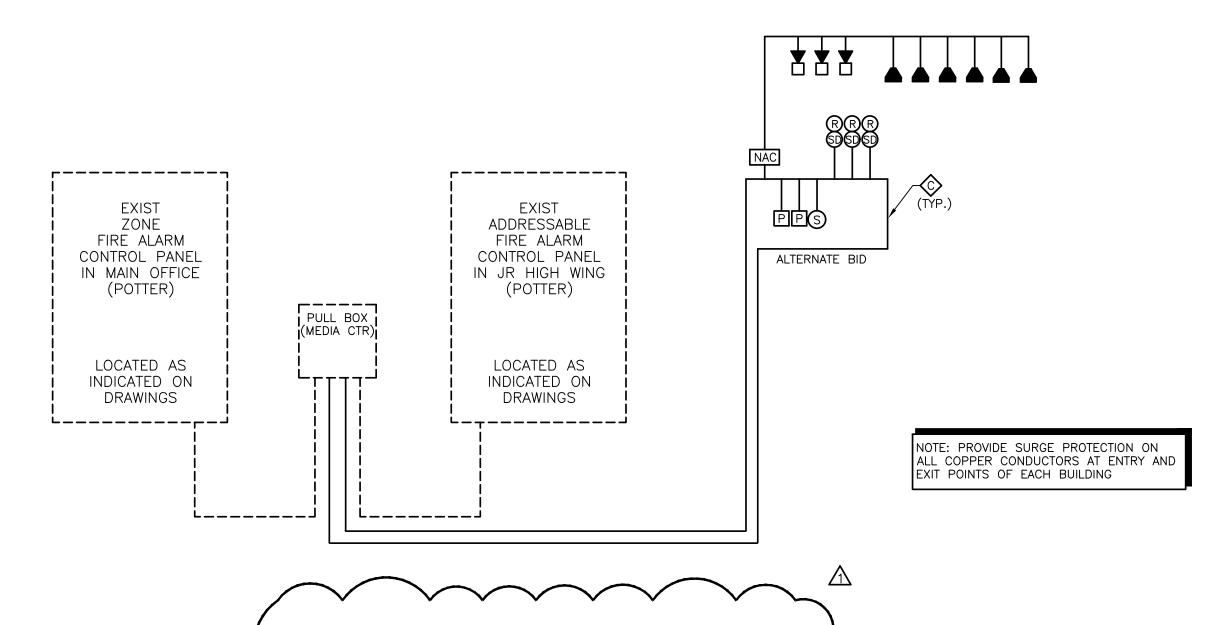
4. ALARM SHALL HAVE A SOUND LEVEL MEETING THE dB REQUIREMENTS OF 907.6.2.1.1 OF THE NC FIRE PREVENTION CODE AND NOT LESS THAN 20 dB ABOVE AMBIENT NOISE LEVELS. (TYPICALLY, 55 dB AMBIENT NOISE PER BUSINESS OCCUPANCY. ADJUST FOR NOISY ENVIRONMENTS).

5. ANY WIRING INSTALLED IN RETURN AIR PLENUM SHALL BE EITHER PLENUM-RATED CABLE OR IN CONDUIT.

6. FIRE ALARM CONTRACTOR SHALL PROVIDE A FULL SET OF SHOP DRAWINGS, INCLUDING BATTERY CALCULATIONS, WIRING DIAGRAMS, AND DEVICE PRODUCT DATA TO THE AHJ FOR REVIEW AND APPROVAL PRIOR TO STARTING ROUGH—INS.

7. E.C. SHALL PROVIDE FRAMED BUILDING LAYOUT NEXT TO REMOTE ANNUNCIATOR. BUILDING LAYOUT SHALL SHOW ALL FIRE ALARM DEVICE LOCATIONS AND THEIR RESPECTIVE ADDRESSES.

8. NEW DEVICES SHALL BE COMPATIBLE WITH THE EXISTING POTTER FIRE ALARM SYSTEM LOCATED IN THE MECHANICAL ROOM OF THE JUNIOR HIGH BUILDING. CONNECT TO SLC LOOP IN THE MECHANICAL ROOM LOCATED IN THE MEDIA CENTER AS INDICATED.



FIRE ALARM RISER SCALE: N.T.S.

FIRE ALARM		THROUGHOUT ENTIR	E BUILDING																		
SYSTEM ACTION MATRIX	ACTUATE COMMON ALARM SIGNAL INDICATOR	ACTUATE AUDIBLE ALARM SIGNAL	ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR	SUPERVISORY	ACTUATE COMMON TROUBLE SIGNAL INDICATOR	TROUBLE SIGNAL	ACTUATE APPROPRIATE LOCATION INDICATOR	ACTUATE ALL AUDIBLE EVACUATION SIGNALS	ACTUATE ALL VISIBLE EVACUATION SIGNALS	DISPLAY / PRINT CHANGE OF STATUS	TRANSMIT ALARM SIGNAL TO SUPERVISING STATION	SIGNAL TO SUPERVISING   SIGNAL TO	FAN SHUT DOWN (UNIVERSAL)	FAN SHUT DOWN (SPECIFIC UNIT)	OPEN ELEV VENT AND RETURN CAR TO PRIMARY FLR TO ALTERNA	CAR BREAKERS	FIREMAN'S HAT & ALARM IN ELEV. CAR	MUSIC & SPECIALTY LT SHUT DOWN	FIRE/SMOKE DAMPER SHUT	RELEASE MAGNETIC DOOR HOLDERS ON RATED DOORS	COMMENTS/REM
MANUAL ALARM STATION	Х	Х					Х	Х	X	Х	X		Х		X			Х	Х	Х	
SMOKE SENSOR / DETECTOR	Х	X					Χ	X	X	X	X		Χ		X			X	X	X	
ELEV SMOKE SENSOR PRIMARY FLOOR	Х	X					Χ	X	X	X	X		Χ		X		X	X	X	X	
ELEV SMOKE-HEAT EQUP RM OR SHAFT	Х	Х					Х	X	X	X	X		Х		X	X	X	Х	X	X	
ELEVATOR SMOKE SENSORS (ALT FLOORS)	Х	X					Х	X	Х	X	Х		Х		X	Х	X	Х	X	X	
DUCT SENSOR / DETECTOR			Х	Х			X					X		X							
KITCHEN HOOD SUPPRESSION SYS	Х	Х					Х	Х	Х	Х	X		X		X	Х	Х	X	X		
WATERFLOW SWITCH	Х	Х					Х	X	X	X	X		Χ		X		X	X	Х	X	
TAMPER SWITCH			Х	X			Х			X		X									
POST INDICATOR VALVE SWITCH			Х	X			Х			X		X									
FIRE ALARM AC POWER FAILURE					X	X				X		X									
FIRE ALARM SYSTEM LOW BATTERY					X	X				X		X									
OPEN CIRCUIT					X	X				Х		X									
GROUND FAULT					X	X				Х		X									
NOTIFICATION APPLIANCE CIRCUIT																					
WIRE-TO-WIRE SHORT					X	X				X											

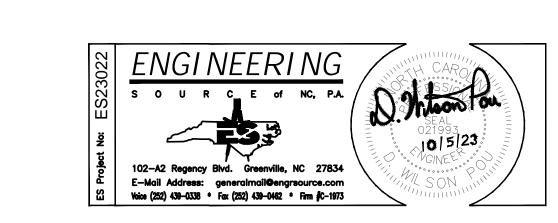
<b>VIRE</b>	LEGEND	

1 PAIR #16 SHIELDED CABLE

B 2 COND. #14 THHN

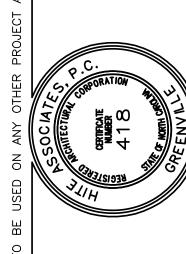
C 4 COND. #14 THHN

© 8 COND. #22



1 10/04/23 ADDENDUM # 1

HITE ASSOCIATES ARCHITECTURE / PLANNING / TECHNOLOGY



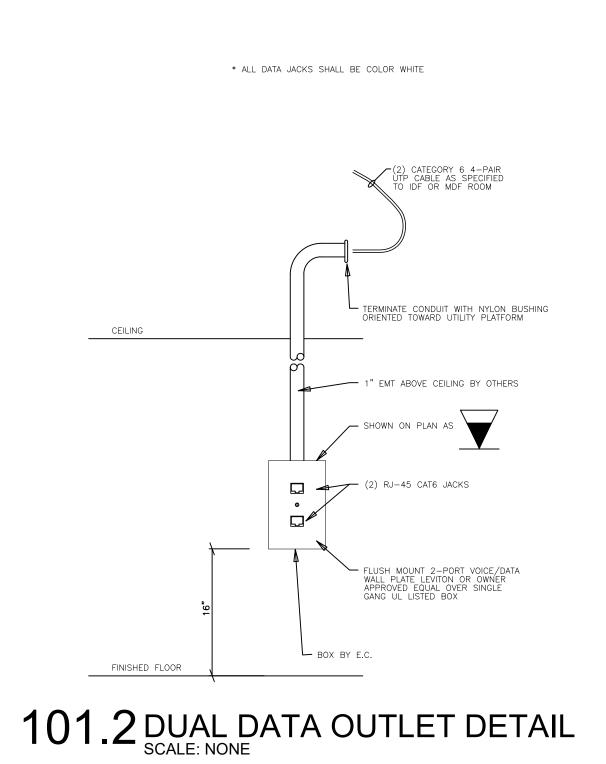
New Classroom Addition for North Duplin Jr.-Sr. High School 1388 NC-403, Mt Olive, NC 28365

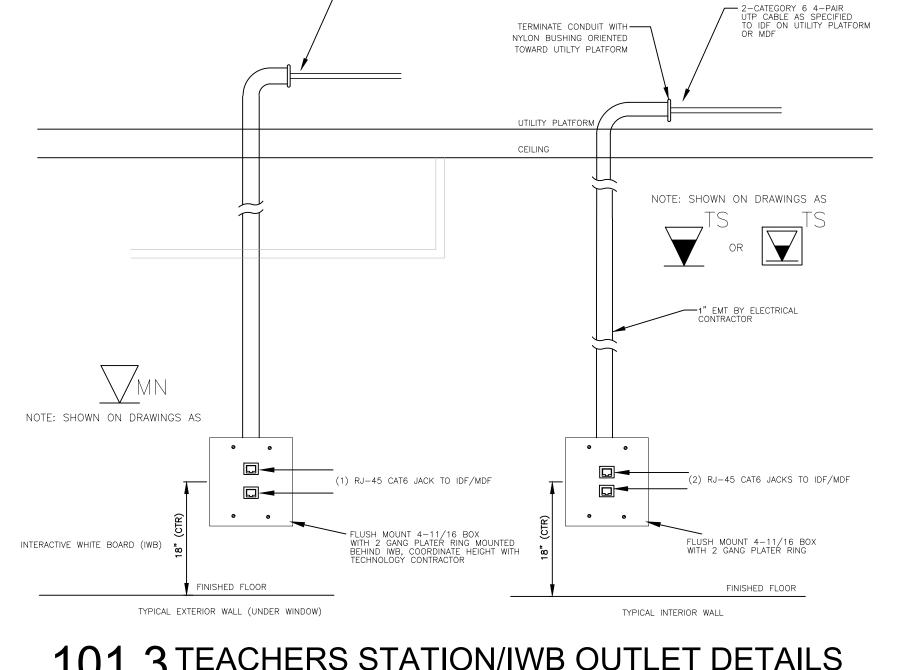
Project No.
22253

Date:
6 March 2023

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101

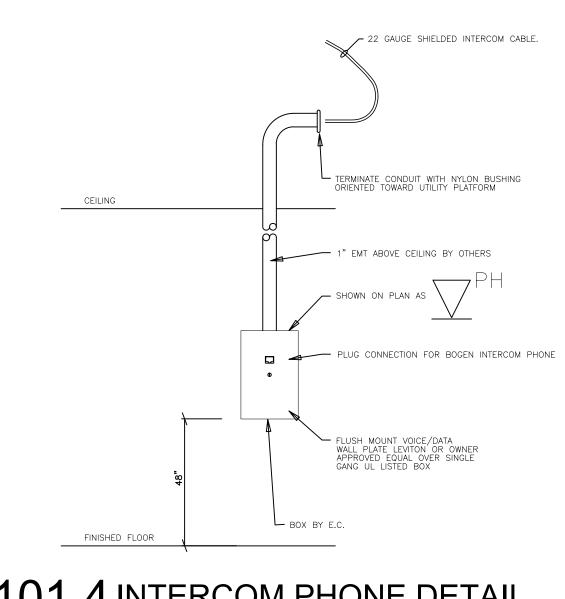
101.1 SPEAKER OUTLET DETAIL SCALE: NONE





2-CATEGORY 6 4-PAIR UTP CABLE TO IDF OR MDF





101.4 INTERCOM PHONE DETAIL

DATA/COM/SECURITY GENERAL NOTES:

1. ALL WORK SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION. CONTRACTOR SHALL COORDINATE ROUTING OF ALL CONDUIT AND RACEWAY WITH EXISTING CONDITIONS AND SHALL PROVIDE ANY NECESSARY OFFSETS, TEES, REROUTING, ETC. REQUIRED FOR A COMPLETE AND COORDINATED INSTALLATION.

3. THESE PLANS ARE DIAGRAMMATIC. CONTRACTOR SHALL PROVIDE ALL NECESSARY WIRING, TRANSFORMERS, POWER SUPPLIES, ETC. FOR A COMPLETE WORKING SYSTEM.

4. THE CONTRACTOR SHALL COORDINATE WITH THE G.C. TO OBTAIN AND PAY ALL FEES RELATED TO PERMITTING, INSPECTIONS, ETC. THAT MAY REQUIRED FOR A COMMERCIAL CONSTRUCTION PROJECT.

5. ALL CONDUIT AND RACEWAY SYSTEMS ARE INSTALLED BY THE ELECTRICAL CONTRACTOR AND SHALL BE SUPPORTED AS REQUIRED BY CODE AND MANUFACTURERS RECOMMENDATIONS.

6. ROOF DECKING SHALL NOT BE PENETRATED TO SUPPORT RACEWAY, CABLE TRAY, EQUIPMENT, ETC.

7. ALL CONDUIT PENETRATIONS THRU NEW AND EXISTING WALLS SHALL BE SEALED TO EQUAL RATING OF THE NEW/EXISTING WALL. 8. ALL LOW VOLTAGE DATA CABLING SHALL BE TESTED AND CERTIFIED PER SPECIFICATIONS.

DATA CONTRACTOR SHALL PROVIDE ALL CABLING, CAT6 & 6A AS INDICATED, FROM OUTLET BACK TO IDF OR MDF ROOM. PROVIDE CONNECTIONS AT OUTLETS AS DETAILED AND TERMINATE IN PATCH PANEL AT RACK. LABEL ALL CABLES WITH ROOM NUMBER AND FUNCTION (ex: CLASSROOM 103 - TEACHER STATION)

OWNER TO MAKE FINAL CONNECTIONS FROM EQUIPMENT TO PATCH

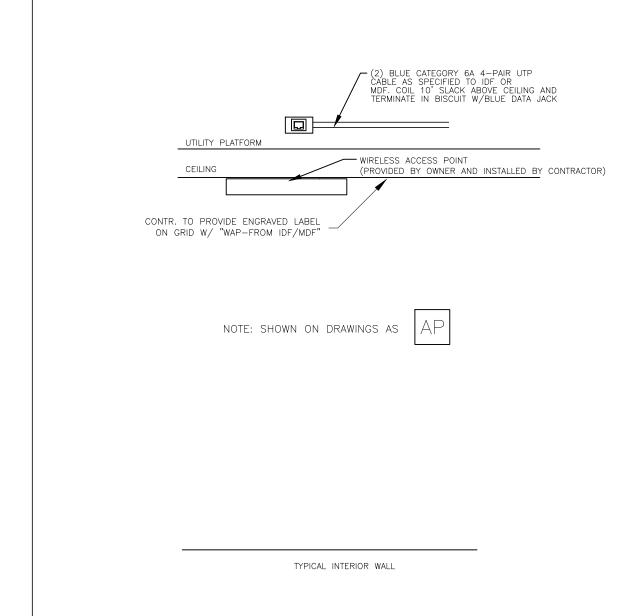
CABLE SHEATHING COLOR SCHEME SHALL BE AS FOLLOWS: DATA CABLE BLUE CAT6 COMMUNICATION BLUE CAT6 CAMERA CABLE BLUE DOOR ACCESS BLUE CAT6 HVAC CONTROLS BLUE CAT6

WIRELESS AP BLUE

CONTRACTOR TO PROVIDE AND INSTALL SECURITY CAMERAS, RECORDING EQUIPMENT/SOFTWARE, DOOR ACCESS CONTROL EQUIPMENT/SOFTWARE, INTERCOM EQUIPMENT & ASSOCIATED SPEAKERS. CONTRACTOR TO INSTALL RACEWAY, CABLES AND OUTLETS AS DETAILED.

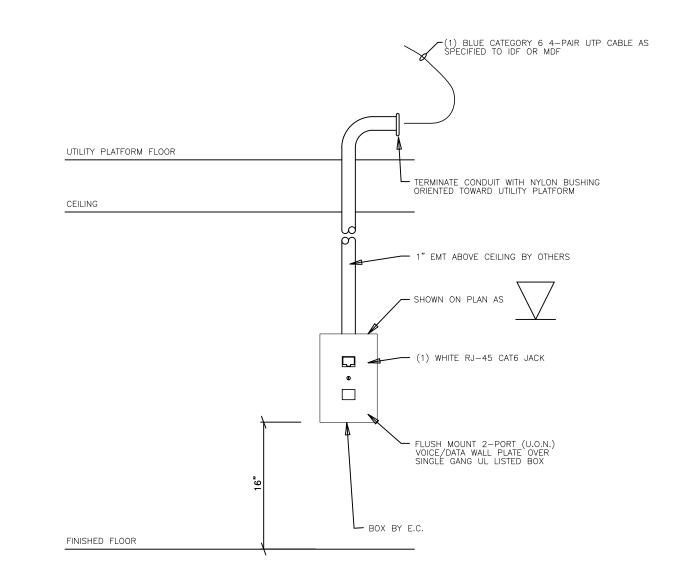
CAT6A

BASIS OF DESIGN TO MATCH EXISTING EQUIP IS AS FOLLOWS: CAMERAS & RECORDER WATCHDOG DOOR ACCESS INTERCOM BOGEN

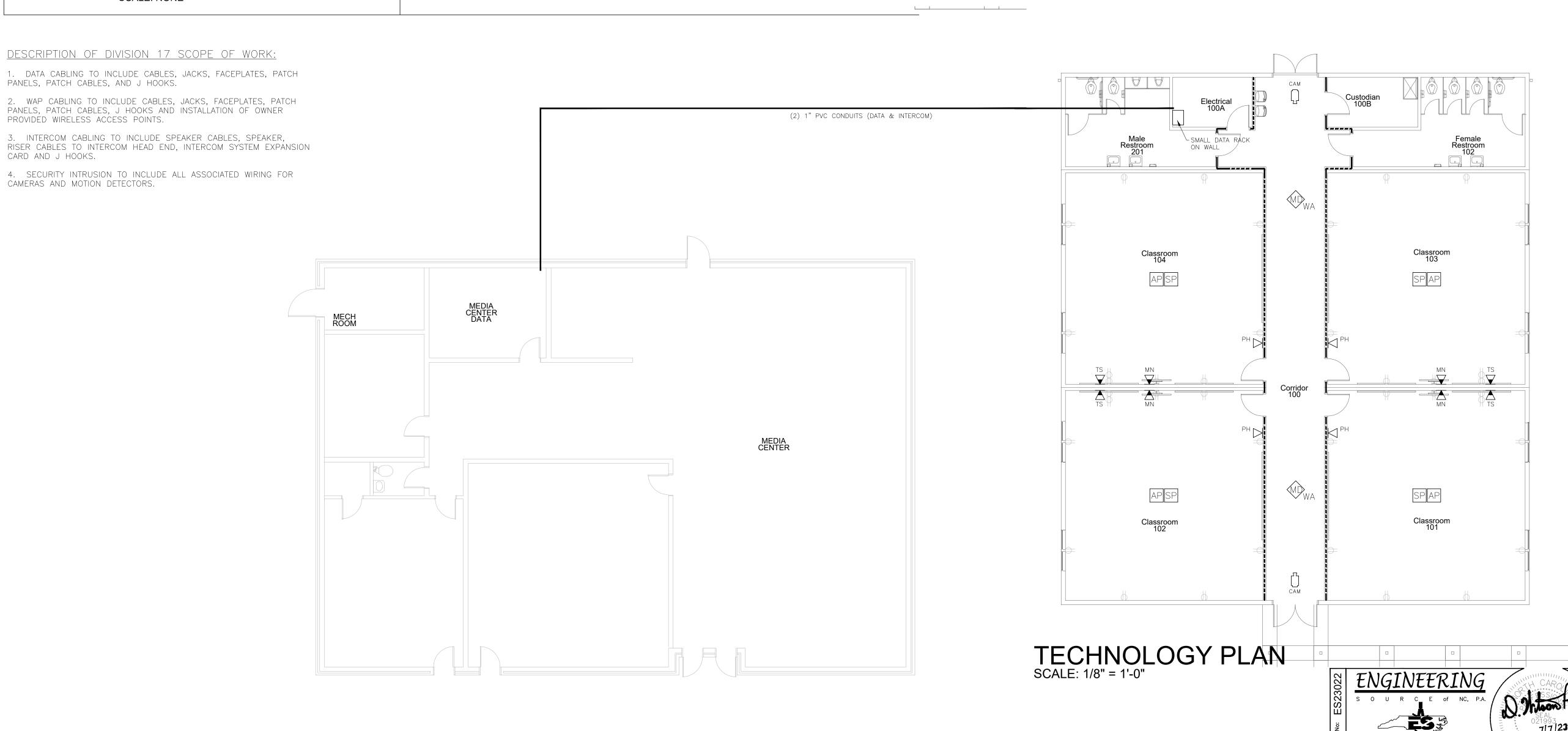


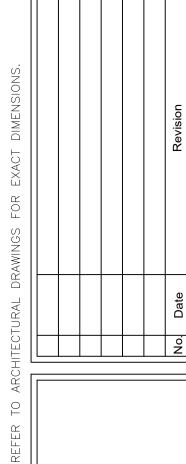
101.5 WAP OUTLET DETAIL SCALE: NONE

CARD AND J HOOKS.

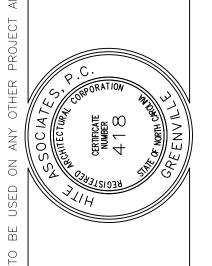


101.6 SINGLE DATA OUTLET DETAIL









Project No. 22253 6 March 2023 Drawing no.

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