ADDENDUM 1

ADDENDUM DATE: March 3, 2023

PROJECT: Trexler Middle School Renovation & Site Improvements
112 E. Foy Street
Richlands, NC 28574

OWNER: Onslow County Schools
200 Broadhurst Road
Jacksonville, NC 28540

ARCHITECT: Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205
Raleigh, North Carolina 27607

BIDS DUE: **Tuesday**, **March 21st, 2023 at 2:00 p.m.**
Maintenance Meeting Room #4
Onslow County Schools Offices
200 Broadhurst Road
Jacksonville, NC 28540

Please note, Project Addendums and Bidders List are available at www.smithsinnett.com under the 'Documents' icon on the navigation bar.

Reminder: A mandatory Pre-Bid meeting was held at the project site on February 28, 2023 at 1:00pm

This Addendum shall be included in the contract for the above referenced project. All General, Supplementary and Special Conditions, etc., as originally specified or as modified below shall apply to these items.

General

1. Existing drawings of the existing building and associate site drawings are included as 'Exhibit Drawings'. The validity and accuracy of these original drawings cannot be verified at this time. These are provided for your reference only and are not part of the contract documents.

2. CLARIFICATION: The anticipated substantial completion date of **May 10th, 2024** as noted in the Supplementary General Conditions is correct. The number of days noted in the Supplementary General Conditions and Pre-Bid Agenda Notes listed as **265 days** is incorrect. This has been corrected to indicate **380 days** from anticipated Notice to Proceed to Substantial Completion date. Please disregard any reference to 265 days in relation to Contract Time.

Drawings

3. REPLACE: **Sheet G0-01 Cover Sheet**
Sheet revised to illustrate new numbering/grouping to the bid alternates.

4. REPLACE**:** **Sheet G0-02 Building Code Summary**

5. REPLACE**:** **Sheet G0-03 Wall Type Legend**
Sheet revised to provide clarification regarding the requirement for delegated design for load-bearing metal framing.
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6. REPLACE**:** **Sheet A0-01 Demolition Plan**
Demolition keyed note #5 revised to clarify scope of work.

7. REPLACE**:** **Sheet A1-01 Renovation Plan**
Sheet revised to clarify scope of work in Storage #110. No new windows will be installed, new shelving layout has been revised, and the new data rack is shown to coordinate the location with the shelving.

8. REPLACE**:** **Sheet A4-01 Enlarged Restroom Plans and Elevations**
Sheet revised to clarify finishes and wall type designations.

9. REPLACE**:** **Sheet A4-02 Enlarged Teacher's Restroom Plans and Elevations**
Sheet revised to clarify finishes and provide detail on proposed metal cove transition strip at tile wall base in Restroom #101B.

10. REPLACE**:** **Sheet A4-03 Casework Elevations and Details**
Sheet revised to illustrate new shelving layout.

11. REPLACE**:** **Sheet A7-01 Finish Plan**
Sheet revised to clarify finishes and provide detail on proposed metal edge trim and cove transition strip at tile wall base.

12. REPLACE**:** **Sheet A9-01 Floor Plans (Alternate 5)**
Sheet revised to clarify scope of work in Storage #110. No new windows will be installed, and existing windows will be infilled as shown. Alternate titles revised to coordinate with new numbering/grouping.

13. REPLACE**:** **Sheet A9-02 Reflected Ceiling Plans (Alternate 5)**
Sheet revised to clarify scope of work in Storage #110. No new windows will be installed, and existing windows will be infilled as shown.

14. REPLACE**:** **Sheet A9-03 Exterior Building Elevations (Alternate 2-5)**
West Elevation view revised to clarify scope of work in Storage #110. No new windows will be installed, and existing windows will be infilled as shown.

15. REPLACE**:** **Sheet A9-05 Wall Sections (Alternate 2-5)**
Detail 4/A9-05 revised to clarify scope of work in Storage #110. No new windows will be installed, and existing windows will be infilled as shown.

16. REPLACE**:** **Sheet A9-12 Window and Frame Elevations (Alternate 2-5)**
Sheet revised to clarify scope of work in Storage #110. No new windows will be installed, and existing windows will be infilled as shown.

Specifications

17. ADD: **Section 00 01 05 NOTICE TO BIDDERS**
18. REPLACE**: Section 00 01 10 TABLE OF CONTENTS**
19. REPLACE**: Section 00 42 00 PROPOSAL FORM**
20. REPLACE: **Section 00 73 00 SUPPLEMENTARY GENERAL CONDITIONS**
    Section revised to provide clarification on days from Notice to Proceed to Substantial Completion.

21. REPLACE**: Section 01 21 00 ALLOWANCES**
    a. REVISE **3.3.J Allowance No. A-10: Access Control and Security System**
        i. Revise allowance title "~~Access Control and Security System~~" to be replaced by "**Access Control, Intercom, Voice/Data, Cameras, and Security System**"
        ii. Revise **"**~~Lump Sum: $50,000.00~~**" to be replaced by "Lump Sum: $55,000.00"**

22. REPLACE**: Section 01 23 00 ALTERNATES**
    Section revised to provide new numbering/grouping to the bid alternates.

23. REPLACE**: Section 05 40 00 COLD-FORMED METAL FRAMING**
    Section revised to provide clarification regarding the requirement for delegated design for load-bearing metal framing.

24. REPLACE**: Section 09 29 00 GYPSUM BOARD**
    Section revised to provide clarification on locations for abuse-resistant and mold-resistant gypsum board.

25. REPLACE**: Section 09 30 00 TILING**
    Section revised to provide additional information on metal transition strips.

26. REPLACE**: Section 10 73 26 PROTECTIVE WALKWAY COVERS**
    Section revised to provide clarification on the requirement for delegated design related to canopy foundations.

Electrical

27. See attached Addendum #1 by Progressive Design Collaborative, Ltd. (18 Pages)

Attachments

PRE-BID NOTES
SIGN-IN SHEET FROM PRE-BID MEETING
Sheet G0-01 COVER SHEET
Sheet G0-02 BUILDING CODE SUMMARY
Sheet G0-03 WALL TYPE LEGEND
Sheet A0-01 DEMOLITION PLAN
Sheet A1-01 RENOVATION PLAN

Sheet A4-01 ENLARGED RESTROOM PLANS AND ELEVATIONS
Sheet A4-02 ENLARGED TEACHER'S RESTROOM PLANS AND ELEVATIONS

Sheet A4-03 CASEWORK ELEVATIONS AND DETAILS
Sheet A7-01 FINISH PLAN
Sheet A9-01 FLOOR PLANS (ALTERNATE 5)
Sheet A9-02 REFLECTED CEILING PLANS (ALTERNATE 5)
Sheet A9-03 EXTERIOR BUILDING ELEVATIONS (ALTERNATE 2-5)
Sheet A9-05 WALL SECTIONS (ALTERNATE 2-5)
Sheet A9-12 WINDOW AND FRAME ELEVATIONS (ALTERNATE 2-5)
Section 00 01 05 NOTICE TO BIDDERS (2 Pages)
Section 00 01 10 TABLE OF CONTENTS (4 Pages)
Section 00 42 00 PROPOSAL FORMS (6 Pages)
Section 00 73 00 SUPPLEMENTARY GENERAL CONDITIONS (24 Pages)
Section 01 21 00 ALLOWANCES (6 Pages)
Section 01 23 00 ALTERNATES (4 Pages)
Section 05 40 00 COLD-FORMED METAL FRAMING (6 Pages)
Section 09 29 00 GYPSUM BOARD (10 Pages)
Section 09 30 00 TILING (10 Pages)
Section 10 73 26 PROTECTIVE WALKWAY COVERS (4 Pages)
ADDENDUM #1 –ELECTRICAL, dated March 2nd, 2023 (18 Pages)
EXHIBIT DRAWINGS

End of Addendum 1

Trexler Middle School Renovation & Site Improvements
Project No. 2022017
Onslow County Schools
Pre-Bid Conference Agenda
February 28th, 2023 at 1:00 p.m.

MEETING NOTES IN RED

Owner: Onslow County Schools
200 Broadhurst Road
Jacksonville, NC 28540

Location: Trexler Middle School
112 E. Foy Street
Richlands, NC 28574

Architect: Smith Sinnett Architecture, P.A.
4600 Lake Boone Trail, Suite 205
Raleigh, NC 27607
Phone: (919) 781-8582
Fax: (919) 781-3979

Ed Gordon
Charlie Tennant

On behalf of the Owner and Smith Sinnett Architecture, we would like to thank you for your interest and attendance at this Mandatory Pre-Bid Conference.

I Bid:
Bids will be received until Tuesday, March 21st, 2023 by 2:00 p.m., for a Single Prime Contract at:

Onslow County Schools Offices
Maintenance Meeting Room #4
Onslow County Schools
200 Broadhurst Road
Jacksonville, NC 28540

*All bids will be held until **2:00 p.m. on March 21st, 2023** at which time the bids will then be opened and read aloud.*

II Bid Day Documents: Refer to Specifications

1. Proposal Form Pages 1 through 6
2. Bid Bond (5%) or Certified Check (5%)
3. Minority Business Guidelines (10% Goal)
4. Bid envelope should be sealed with the following information listed on the outside of the envelope.
   a. Bidder's Name and Address
   b. North Carolina Contractor's License Number
   c. Name of Project

5. The successful bidder must provide an executed Performance Bond and Payment Bond for 100% of the Contract by a company licensed in North Carolina **within 30 days of receipt**

of an Intent to Award Letter. Certificates of Insurance meeting the requirements indicated in the Specifications will also be required.

6. Any bids that have qualifying notes or comments will be rejected.
7. For mailed bids, it's the contractor's responsibility to ensure the bid arrives prior to the bid opening time. Place the bid in a double envelope with "Sealed Bid Do Not Open" written on the envelope.

NOTE: Contractor should make sure to look through and read all documents closely and make sure that all documents are properly filled out to avoid having the bid thrown out for incomplete documentation.

III Alternates / Allowances:

ALTERNATES

Alternate No. 1: Owner Preferred Manufacturer(s):

State the amount to be added to the Base Bid for providing all labor and materials indicated and required to accomplish Work involved in providing the Owner Preferred Manufacturers Listed Below for the indicated work. Base Bid to include one of the following or comparable product of any of the manufacturers listed in the individual section:

1. Mechanical
2. Electrical
3. Plumbing
4. Thermostat
5. Door Hardware

Alternate No. 2: ESSER Scope of Work:

State the amount to be added to the Base Bid for providing all labor and materials indicated and required for all work as described below and per the plans and specifications and as shown and noted in the Contract Documents.

2-1. Mechanical Upgrades
Base Bid: No upgrades to the existing mechanical system.
Alternate: Mechanical upgrades, including all removal and replacement, as indicated in the Construction Documents.

2-2. Electrical Upgrades
Base Bid: No upgrades to the existing electrical system. All new electrical equipment to be connected to existing system in place.
Alternate: Electrical upgrades, including all removal and replacement, as indicated in the Construction Documents.

2-3. Ceilings and Lighting Upgrades

Base Bid: Existing ceilings, lighting, and controls to remain in place, except where indicated in the Construction Documents in the Restrooms, Janitor Closet, and Teacher's Breakroom.
Alternate: Remove and replace all remaining existing ceilings, lighting, and controls as indicated in the Construction Documents.

2-4. Door Replacement and Transom Infill
Base Bid: Existing doors and transoms to remain in place, except where indicated in the Construction Documents to accommodate the reconfiguration for the new Restrooms, Janitor Closet, and Teacher's Breakroom.
Alternate: Removal and replacement of all remaining interior and exterior existing doors and infill of all interior transom windows as indicated in the Construction Documents.

2-5. Window Replacement
Base Bid: All existing exterior windows to remain in place.
Alternate: Removal and replacement of all existing exterior windows as indicated in the Construction Documents.

Alternate No. 3: Bus Parking:

State the amount to be added to the Base Bid for providing all labor and materials indicated and required to remove and replace all storefront glazing in the Commons Areas per the plans and specifications and as shown and noted in the Contract Documents.

3-1. Parking Lot, Drive, and Associated Sidewalks
Base Bid: No work to be performed.
Alternate: All work associated with the bus parking lot, drive, and associated sidewalks as indicated in the Construction Documents.

3-2. Canopy and Lighting
Base Bid: No work to be performed.
Alternate: All work associated with the installation of the canopy and lighting as indicated in the Construction Documents.

Alternate No. 4: Parent/Student Queue:

State the amount to be added to the Base Bid for providing all labor and materials indicated and required to repave the existing northeast parking lot to install the new parent/student queue and all associated sidewalks and site work as per the plans and specifications and as shown and noted in the Contract Documents.

ALLOWANCES
(Refer to Division 01 Section 01 21 00 – Allowances for amounts to be included in bid)

Allowance No. UP/A-1: Unsuitable soils removal and disposal off-site.
Quantity: 1000-cy.
- Unit of measurement: cubic yard measured before removal.

Allowance No. UP/A-2: Rock removal and disposal off-site.
Quantity: 100-cy.
- Unit of measurement: cubic yard measured before removal.

Allowance No. UP/A-3: Replacement of authorized excavation of unsuitable soils or rock with off-site imported fill material.
Quantity: 500-cy.
- Unit of measurement: cubic yard measured before removal.

Allowance No. UP/A-4: Replacement of authorized excavation of unsuitable soils or rock with Aggregate Base Course (ABC) material.
Quantity: 500-cy.
- Unit of measurement: cubic yard measured before removal.

Allowance No. UP/A-5: Geo-Grid in place.
Quantity: 100-sy.
- Unit of measurement: square yard measured before removal.

Allowance No. UP/A-6: Underground Sanitary Line.
Quantity: 250-lf.
- Unit of measurement: linear feet measured before installation.

NOTE: Base Bid shows the sanitary line coming out the front of the building toward existing school and tying into an existing line. It is currently unknown how deep the existing sanitary line is and if it is not deep enough (determined by engineer), then the line will need to be rerouted out same side of the building and turned north to another existing sanitary sewer line in the direction of the proposed modular building.

Allowance No. UP/A-7: Floor Leveling Compound.
Quantity: 5000-sf.
- Unit of measurement: square feet measured before installation.

Allowance No. UP/A-8: Topical Moisture Mitigation System.
Quantity: 5000-sf.
- Unit of measurement: square feet measured before installation.

Allowance No. UP/A-9: Abrasive Blast Floor Preparation.
Quantity: 5000-sf.
- Unit of measurement: square feet measured before process.

Allowance No. A-10: Access Control and Security System.
Lump Sum: $50,000.00

Allowance No. A-11: CONTINGENCY
Contingency allowance shall be provided as follows and the price shall be adjusted based on the actual cost of subcontracts, materials, and labor, excluding overhead and profit. Allowances for

overhead and profit shall be provided within the contract price. If there is unused allowance at the conclusion of the project, the allowance plus 5% will be deducted from the contract.
Lump Sum: $200,000

NOTE: Contractor should be sure to include Overhead & Profit for the Contingency Allowance as part of the Base Bid. If there is any unused allowance remaining at the end of the project, the remaining allowance amount *plus 5%* will be returned to the Owner by Change Order.

IV Open Meeting for Discussion of Preferred Alternates:

As per North Carolina General Statutes 133-3, preferred manufacturer alternates may be incorporated into the public bidding process when the following conditions are met:

1. The product will provide cost savings, maintain or improve the functioning of any process or system affected by the preferred item or items, or both.

2. A justification identifying these criteria is made available in writing to the public.

Alternate No. 1-1; Owner Preferred Manufacturer(s) – Mechanical: State the amount to be added.
- HVAC Wall Unit: Manufacturer - Bard as stated in the Drawings and Specifications.
- Note that equal products are allowed ONLY in the Base Bid.

These items will maintain the present mechanical system by integrating with the existing mechanical components presently incorporated in the Owner's facilities and maintenance regimen.

Alternate No. 1-2; Owner Preferred Manufacturer(s) - Electrical: State the amount to be added.
- Electrical Switches: Manufacturer – Square D as stated in the Drawings and Specifications.
- Note that equal products are allowed ONLY in the Base Bid.

These items will maintain the present electrical system by integrating with the existing electrical components presently incorporated in the Owner's facilities and maintenance regimen.

Alternate No. 1-3; Owner Preferred Manufacturer(s) - Plumbing: State the amount to be added.
- Water Cooler with Bottle Filler: Manufacturer – Elkay as stated in the Drawings and Specifications.
- Note that equal products are allowed ONLY in the Base Bid.

These items will maintain the present plumbing system by integrating with the plumbing components presently incorporated in the Owner's facilities and maintenance regimen.

Alternate No. 1-4; Owner Preferred Manufacturer(s) - Thermostat: State the amount to be added.

- Thermostat: Manufacturer – Venstar Explorer Smart Stat as stated in the Drawings and Specifications.
- Note that equal products are allowed ONLY in the Base Bid.

These items will maintain the present mechanical system by integrating with the existing mechanical components presently incorporated in the Owner's facilities and maintenance regimen.

Alternate No. 1-5; Owner Preferred Manufacturer(s) – Door Hardware: State the amount to be added.

- Door Locks: Manufacturer - Schlage Locks as stated in the Drawings and Specifications.
- Exit Devices: Manufacturer – Von Duprin as stated in the Drawings and Specifications.
- Closers: Manufacturer – LCN as stated in the Drawings and Specifications.
- Note that equal products are allowed ONLY in the Base Bid.

These items will maintain the door and security hardware systems presently incorporated in the Owner's facilities and maintenance regimen.

V Schedule:

The Contract time shall commence on a date to be specified in a written Notice to Proceed from the Architect. Substantial Completion shall occur on or before the dates listed below:

- **Notice of Intent to Award (Anticipated) – April 14th, 2023**
- **Notice to Proceed (anticipated) – April 25th, 2023**
- **Substantial Completion - May 10th, 2024 (265 days)**
- **Final Completion – June 10th, 2024 (30 days)**

NOTES:

a. ***The ESSER Alternate portion of the contract must be complete by the Substantial & Final Completion Dates*.**
b. **If the Notice of Intent to Award & Notice to Proceed dates are later than anticipated, then the Substantial and Complete dates will be extended out to match the actual dates.**

VI Liquidated Damages:

See Supplementary General Conditions: ***$250.00 each calendar day*** in excess of the stated completion time.

VII Examination of Bid Documents:

All Bidders are expected to fully examine and familiarize themselves with the Drawings, Specifications and Existing Conditions. All Bidders should read the scopes of the bid package. Any questions or clarifications should be directed to the Architect. No allowances will be made after the bids are received for any oversight due to failure to examine the documents. If you are an E-Procurement Vendor, pay special attention to the Special Conditions section of the specifications.

VIII Substitutions:
Substitutions or approvals of "Equals" will only be accepted if approved by the Architect in writing at least 10 days prior to the receipt of bids: March 10th, 2023.

IX Technical Questions:
Technical questions should be submitted to Architect as soon as possible by email.

Charlie Tennant
ctennant@smithsinnett.com

NOTE: All questions for clarification and additional information should be emailed to the Architect as soon as possible. No questions were answered during the meeting. All questions that were asked during the meeting need to be emailed to Smith Sinnett.

X Construction Documents:
This is a formal bid and construction documents and specifications are available in PDF format upon ShareFile link request. All addenda as well as the plan holders list will also be posted to the Smith Sinnett Architecture website under the "Documents" tab. If you have any issues or cannot download any of the documents, please let us know and we will work to make sure you can get them.

XI Addenda:
Addenda will be emailed to everyone on the Architect's plan holders list.

XII Architect's brief description of the project:
This bid package includes the interior renovation of a 9,500 square foot building on the campus of Trexler Middle School. Renovation will include but is not limited to reconfiguration of an existing classroom to accommodate new restrooms and a teacher's breakroom, utility infrastructure upgrades (mechanical, electrical, and plumbing), accessibility upgrades, and updated finishes. Site work includes a new bus parking lot, resurfaced parent/student queue, and associated canopies/sidewalks. Additional included is all other work as shown, indicated or reasonably implied on the drawings and/or specifications for a complete, first class job.

Note: After the initial meeting, contractors were allowed to walk the building and discuss any issues with the group.

SIGN IN SHEET

Trexler Middle School Renovation & Site Improvements

Project #: 2022017 Date: 2/28/2023

smithsinnett ARCHITECTURE

NAME	ORGANIZATION	PHONE	EMAIL
Bishop Williams	Waters Contracting	919-779-7265	bishop@watersconstructing.net
George Ward	IMEC Group LLC	252-670-2681	gward@imecgroupllc.com
John Berry	Berry Building	252 378-4123	JBerry@BerryBldg.com
Scott Thompson	Team Construction	910-320-8528	sthompson@TeamConstructionInc.com
Daniel Gray	OCS	(910)581-0467	Daniel.Gray@Onslow K12.nc.us
Dusty Oliver	OCS	910-340-5081	dusty.oliver@onslowk12.nc.us
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CHRISTINE PROCTOR	SSA	810-5253	
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JUSTIN FIFE	QUADRANT	910.372.3095	chrisWhaley@qcenc.com
Brandon Horne	TE Davis	910-393-3117	bhorne@tedavisconstruction.com
EG Gordon	SSA	919 810-5243	egordon@smithsinnett.com

ONSLOW COUNTY SCHOOLS

TREXLER MIDDLE SCHOOL RENOVATION & SITE IMPROVEMENTS

112 E FOY STREET RICHLANDS, NC 28574

DESIGN PROFESSIONALS

OWNER:
ONSLOW COUNTY SCHOOLS
200 BROADHURST ROAD
JACKSONVILLE, NC 28540
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910.455.0459 (F)
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CIVIL:
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POC: Sean Dolle
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STRUCTURAL:
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POC: Andrew Warnke
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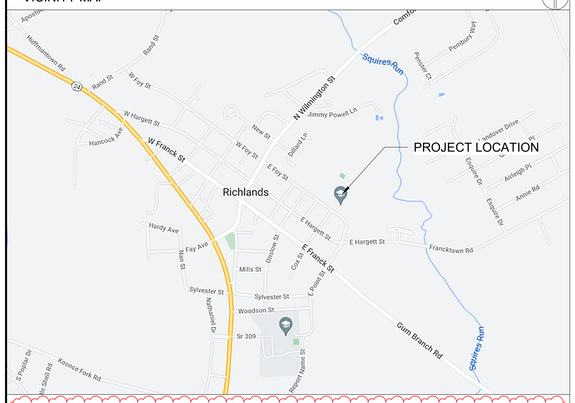
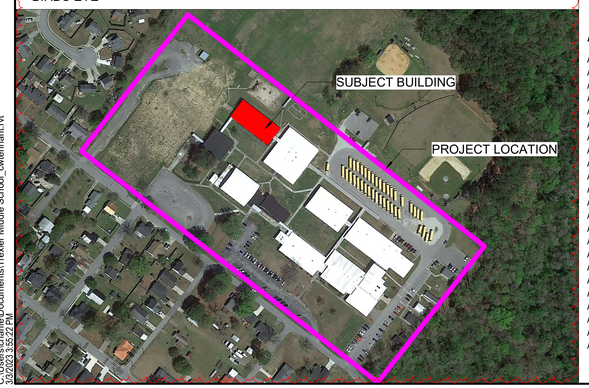
ARCHITECTURE:
SMITH SINNETT ARCHITECTURE
4600 LAKE BOONE TRAIL, SUITE 205
RALEIGH, NC 27607
919.781.8582 (P)
919.781.3979 (F)
POC: Charlie Tennant
ctennant@smithsinnett.com

PLUMBING, MECHANICAL, ELECTRICAL, FIRE SPRINKLER:
PROGRESSIVE DESIGN COLLABORATIVE LTD.
3101 POPLARWOOD COURT, SUITE 320
RALEIGH, NC 27604
919.790.9989 (P)
POC: Steve W. Campbell
scampbell@pdcengineers.com

VICINITY MAP



BIRDS EYE



INDEX OF DRAWINGS

BID ALTERNATES

A

ALT 1: OWNER PREFERRED MANUFACTURER(S)
- **1-1:** HVAC WALL UNIT - BARD
- **1-2:** SWITCHES - SQUARE D
- **1-3:** WATER COOLER WITH BOTTLE FILLER - ELKAY
- **1-4:** THERMOSTATS - VENSTAR EXPLORER SMART STAT
- **1-5:** DOOR HARDWARE:
  - **a.** DOOR LOCKS - SCHLAGE
  - **b.** EXIT DEVICES - VON DUPRIN
  - **c.** CLOSERS - LCN

ALT 2: ESSER SCOPE OF WORK
- **2-1:** MECHANICAL AND ASSOCIATED ELECTRICAL UPGRADES
- **2-2:** NOT USED
- **2-3:** NOT USED
- **2-4:** DOOR REPLACEMENT & TRANSOM INFILL
- **2-5:** WINDOW REPLACEMENT

ALT 3: BUS PARKING
- **3-1:** PARKING LOT, DRIVE, & ASSOCIATED SIDEWALKS
- **3-2:** CANOPY & LIGHTING

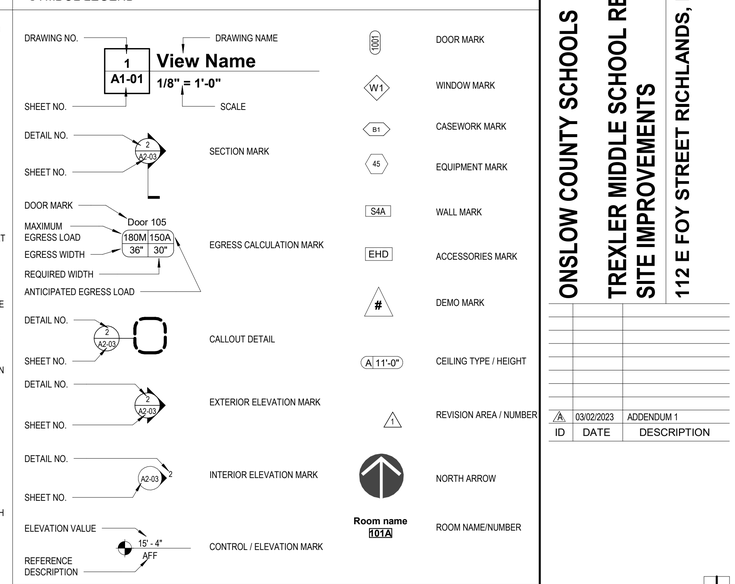
ALT 4: PARENT/STUDENT QUEUE
PARKING LOT, DRIVE, & ASSOCIATED SIDEWALKS

ALT 5: CEILINGS, LIGHTING, AND ELECTRICAL UPGRADES
REMOVAL & REPLACEMENT OF ALL CEILINGS, LIGHTING, CONTROLS, AND ELECTRICAL

ABBREVIATIONS

@	AT	EIP	EXISTING IRON PIPE	MTD	MOUNTED	ST	STEEL
AB	AREA DRAIN	ELEV	ELEVATION	MTL	METAL	ST&R	STAIR TREADS AND RISERS
ACC	ACCENT COLOR	EJ	EXPANSION JOINT	MWM	METAL WALK-OFF MAT	STD	STANDARD
ACT	ACOUSTICAL CEILING TILE	EN	ENAMEL	MWT	MARBLE WALL TILE	SUSP	SUSPENDED
ACOUS	ACOUSTIC	EPT	HIGH PERFORMANCE EPOXY PAINT	NIC	NOT IN CONTRACT	TC	TERRA COTTA
ACW	ACOUSTICAL WALL PANELS	EQ	EQUAL	NOM	NORMAL	T&G	TONGUE AND GROOVE
ADJ	ADJUSTABLE	EST	EXISTING	OC	ON CENTER	TCA	TILE COUNCIL OF AMERICA
AE	APPROVED EQUAL	EXT	EXTERIOR	OD	OUTSIDE DIAMETER	TELE	TELEPHONE
AFF	ABOVE FINISH FLOOR	EXP	EXPOSED CEILING	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED	TEMP	TEMPERED
AFL	ATHLETIC FLOORING	EWC	ELECTRIC WATER COOLER	OPP	OPPOSITE	TEXD	TEXTURED
AHU	AIR HANDLING UNIT	FC	FIRECODE	OZ	OUNCE	TFT	TERRAZZO FLOOR TILE
ALB	ALUMINUM BASE	FD	FLOOR DRAIN	P-LAM	PLASTIC LAMINATE	TOC	TOP OF CURB
ALT	ALUMINUM TILE	FEB	FIRE EXSTINGUISHER BRACKET	P-LAM WD	PLASTIC LAMINATE WOOD DOORS	TOS	TOP OF STEEL
ALUM	ALUMINUM	FEC	FIRE EXSTINGUISHER CABINET	PC	POLISHED CONCRETE	TP	TELEPHONE POLE
ANOD	ANODIZED	FF	FINISH FLOOR	PERF	PERFORATED	TVB	TELEVISION MOUNTING BRACKET
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	FH	FIRE HYDRANT	PFT	PORCELAIN FLOOR TILE	TYP	TYPICAL
ATTEN	ATTENUATION	FLU	FLOURESCENT	PIV	POST INDICATOR VALVE	UL	UNDERWRITERS LABORATORY
AWP	ACRYLIC WALL PANELS	FOF	FACE OF FRAME	PL	PLATE	U/L	UTILITY/LIGHTS
BBT	BIOBASED TILE	FOM	FACE OF MASONRY	PLYWD	PLYWOOD	UON	UNLESS OTHERWISE NOTED
BF	BLOCK FILL	FOW	FACE OF WALL	PNT	PAINT	VACT	VINYL ACOUSTICAL TILE
BFC	BROOMED FINISHED CONCRETE	FTG	FOOTING	PP	POWER POLE	VB	VAPOR BARRIER
BL	BLINDS	GC	GENERAL CONTRACTOR	PR	PAIR	VCT	VINYL COMPOSITION TILE
BLDG	BUILDING	GCT	GRANITE COUNTERTOP	PTB	PORCELAIN TILE BASE	VERT	VERTICAL
BLKG	BLOCKING	GA	GAGE	PTD	PAINTED	VIF	VERIFY IN FIELD
BOT	BOTTOM	GALV	GALVANIZED	PTP	PLASTIC TOILET PARTITIONS	VWC	VINYL WALL COVERING
BFG	BULLET PROOF GLASS	GEN	GENERATOR	PWT	PORCELAIN WALL TILE	W/	WITH
CB#	CATCH BASIN	GFT	GRANITE FLOOR TILE	PVC	POLYVINYL CHLORIDE	WC	WATER CLOSET
CEM	CEMENTIOUS SIDING	GL	GLASS	QS	QUARTZ SURFACE	WD	WOOD
CF	CORK FLOORING	GMT	GLASS MOSAIC TILE	QT	QUARRY TILE	WF	WOOD FLOORING
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED	GT	GROUT	QZT	QUARTZ TILE	WWF	WELDED WIRE FABRIC
CFT	CERAMIC FLOOR TILE	GYP	GYPSUM BOARD	R	RADIUS	WWM	WELDED WIRE MESH
CG	CURVED CEILING GRID	HC	HOLLOW CORE	R&S	ROD AND SHELF		
CI	CAST IRON	HB	HOSE BIB	RB	RUBBER BASE		
CI#	CURB INLET	HC	HANDICAPP	RBT	RUBBER TILE		
CJ	CONTROL JOINT	HDWD	HARDWOOD	RCP	REINFORCED CONCRETE		
CLG	CEILING	HM	HOLLOW METAL	RD	ROOF DRAIN		
CL	CENTERLINE	HORZ	HORIZONTAL	RDL	ROOF DRAIN LEADER		
CMU	CONCRETE MASONRY UNIT	HR	HOUR	RECEPT	RECEPTACLE		
CO	CLEAN OUT	ICF	INFECTION CONTROL FLOORING	RECYF	RECYCLED FLOORING		
COL	COLUMN	ID	INSIDE DIAMETER	REQD	REQUIRED		
CONC	CONCRETE	INSTAL	INSTALLATION	RES	RESILIENT		
CONSTR	CONSTRUCTION	INSUL	INSULATION	RM	RUBBER MAT		
CONTR	CONTRACTOR	INT	INTERIOR	ROW	RIGHT OF WAY		
CORR	CORRUGATED	INV	INVERT	RSF	RESINOUS FLOORING		
CPT	CARPET			RTF	RESILENT TILE FLOORING		
CPTT	CARPET TILE	JB	JOIST BEARING	SAT	SPRAYED ACOUSTICAL TREATMENT		
CTB	CERAMIC TILE BASE	JB#	JUNCTION BOX	SC	SEALED CONCRETE		
CRC	COLD ROLLED CHANNEL	JT	JOINT	SCH	SCHEDULE		
CRF	CORK RUBBER FLOORING	L	LONG	SCW	SOLID CORE WOOD		
CS	COUNTERSUNK	LFT	LINOLEUM FLOOR TILE	SDT	STATIC DISSIPATIVE TILE		
CWT	CERAMIC WALL TILE	LP	LIGHT POLE	SF	SQUARE FEET		
DET	DETAIL	LST	LINOLEUM SHEET FLOORING	SIM	SIMILAR		
DEPT	DRY FOG PAINT	LVT	LUXURY VINYL TILE	SLS	SOLID SURFACE		
DIA	DIAMETER			SP	SPACES		
DISP	DISPENSER	MATL	MATERIAL	SQ	SQUARE		
DN	DOWN	MAX	MAXIMUM	SS	STAINLESS STEEL		
DP	DEEP	MC	METAL CANOPY	SSC	STAINED SEALED CONCRETE		
DR	DOOR	MCT	METAL CEILING TILE	SRT	SLIP RESISTANT TILE		
DS	DOWNSPOUT	MB	MASONRY - BRICK				
E/W	EACH WAY	MECH	MECHANICAL				
EDG	EDGE BANDING	MFR	MANUFACTURER				
EES	EMERGENCY EYE WASH AND SHOWER	MFT	MARBLE FLOOR TILE				
EFC	EPOXY FLOOR COATING	MIN	MINIMUM				
EIFS	EXTERIOR INSULATION FINISH SYSTEM	MO	MASONRY OPENING				
		MTB	MARBLE TILE BASE				

SYMBOL LEGEND



SHEET NUMBERING LEGEND

SECTION

0	DEMOLITION / GENERAL
1	PLANS
2	EXTERIOR ELEVATIONS
3	BUILDING / WALL SECTIONS
4	ENLARGED PLANS, CASEWORK, INTERIOR ELEVATIONS & RELATED DETAILS
5	DETAILS
6	WINDOW & DOOR SCHEDULES
7	FINISH PLAN & SCHEDULES
8	VERTICAL CIRCULATION
9	BID ALTERNATES

DISCIPLINE

G	GENERAL
C	CIVIL
L	LANDSCAPE
S	STRUCTURAL
A	ARCHITECTURAL
Q	EQUIPMENT
P	PLUMBING
M	MECHANICAL
E	ELECTRICAL
FP	FIRE PROTECTION
X	MISCELLANEOUS

PAGE NUMBER

A1-01

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SMITH SINNETT ARCHITECTURE, PA — CERT. NO 50172 — RALEIGH

CHARLES TENNANT WHITMAN — REGISTERED ARCHITECT — 13798 — NORTH CAROLINA — RALEIGH

BID/PERMIT SET

THIS DRAWING IS FORMATTED TO BE PRINTED ON A 24" X 36" SHEET

ONSLOW COUNTY SCHOOLS
TREXLER MIDDLE SCHOOL RENOVATION & SITE IMPROVEMENTS
112 E FOY STREET RICHLANDS, NC 28574

ID	DATE	DESCRIPTION
A	03/02/2023	ADDENDUM 1

DRAWN BY: AC
CHECKED BY: CWT

COVER SHEET

2022017 — 20 Feb 2023

G0-01

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2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)

(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: TREXLER MIDDLE SCHOOL RENOVATION AND SITE IMPROVEMENTS

Address: 112 E. FOY STREET, RICHLANDS, NC Zip Code 28574

Owner/Authorized Agent: BRENDAN GARTNER Phone # (910) 455.2211 EXT.71310 E-Mail brendan.gartner@onslow.k12.nc.us

Owned By: ONSLOW COUNTY SCHOOLS ■ City/County ONSLOW ☐ Private _____ ☐ State _____

Code Enforcement Jurisdiction: ☐ City _____ ☐ County _____ ☐ State _____

CONTACT: CHARLIE TENNANT, SMITH SINNETT ARCHITECTURE

DESIGNER	FIRM	NAME	LICENSE#	TELEPHONE#	E-MAIL
Architectural	Smith Sinnett Architecture	Charlie Tennant	13798	(919) 781.8582	ctennant@smithsinnett.com
Civil	Grounded Engineering	Sean Dolle	026963	(919)438.3694	sean@grounded-engineering.com
Electrical	Progressive Design Collaborative	Steve Campbell	025020	(919)790.9989	scampbell@pdcengineering.com
Fire Alarm	Progressive Design Collaborative	Steve Campbell	025020	(919)790.9989	scampbell@pdcengineering.com
Plumbing	Progressive Design Collaborative	Steve Campbell	025020	(919)790.9989	scampbell@pdcengineering.com
Mechanical	Progressive Design Collaborative	Steve Campbell	025020	(919)790.9989	scampbell@pdcengineering.com
Sprinkler Standpipe	--	--	--	( )	
Structural	Kaydos-Daniels PLLC	Andrew Warnke	031467	(919)828.4966	andrew@kaydosdaniels.com
Retaining Walls >5' High	N/A			( )	
Other				( )	

("Other" should include firms and individuals such as truss, precast, pre-engineered, interior designers, etc.)

2018 NC BUILDING CODE: ☐ New Building ☐ Addition ☐ Renovation
☐ 1st Time Interior Completions ☐ Shell/Core* ☐ Phased Construction*
*Contact the local inspection jurisdiction for possiblitinal procedures and requirements.

2018 NC EXISTING BUILDING CODE: (check all that apply) ☐ Prescriptive ☐ Alteration Level I ☐ Historic Property ☐ Repair ■ Alteration Level II ☐ Change of Use ☐ Chapter 14 ☐ Alteration Level III

CONSTRUCTED: (date) -- **CURRENT OCCUPANCY(S)** (Ch.3): --

RENOVATED: (date) -- **PROPOSED OCCUPANCY(S)** (Ch.3): --

OCCUPANCY CATEGORY (Table 1604.5): **Current:** II **Proposed:** II

BASIC BUILDING DATA

Construction Type: ☐ I-A ☐ I-B ■ II-A ☐ II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ☐ V-B

Sprinklers: ■ No ☐ Partial ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D

Standpipes: ■ No Class ☐ I ☐ II ☐ III ☐ Wet ☐ Dry

Primary Fire District: ☐ No ☐ Yes **Flood Hazard Area:** ☐ No ☐ Yes

Special Inspections Required: ☐ Yes ■ No If special inspections are required, contact the local inspection jurisdiction for additional procedures and requirements.

Gross Building Area Table

FLOOR	EXISTING (SQ FT)	WORK AREA(SQ FT)	SUB-TOTAL
3rd Floor			
2nd Floor	-- SF	-- SF	
Mezzanine			
1st Floor	9,775 SF	9,775 SF	9,775 SF
Basement	-- SF	-- SF	
TOTAL	9,775 SF	9,775 SF	9,775 SF

ALLOWABLE AREA

Primary Occupancy Classification(s):

Assembly ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
Business ☐
Educational ■
Factory ☐ F-1 Moderate ☐ F-2 Low
Hazardous ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
Institutional ☐ I-1 ☐ I-2 I-1 & I-2 Condition ☐ 1 ☐ 2
☐ I-3 ☐ I-4 I-3 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Mercantile ☐
Residential ☐ R-1 ☐ R-2 R-3 ☐ R-4
Storage ☐ S-1 Moderate ☐ S-2 Low ☐ High-piled
☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage
Utility and Miscellaneous ☐

Accessory Occupancy Classification(s): _____

Incidental Uses (Table 509): _____

Special Uses (Chapter 4 - List Code Sections): _____

Special Provisions: (Chapter 5 - List Code Sections): _____

Mixed Occupancy: ■ No ☐ Yes Separation: ____ Hr. Exception: _____

☐ Non-Separated Use (508.3)

☐ Separated Use (508.4) - See below for area calculations for each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$

_____ + _____ + ... = _____ ≤1.00

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2[4] AREA	(C) AREA FOR FRONTAGE INCREASE[1,5]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED[2,3]
N/A	EXISTING				

[1] Frontage area increases from Section 506.2 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = _____ (F)
b. Total Building Perimeter = _____(P)
c. Ratio (F/P) = _____(F/P)
d. W = Minimum width of public way = _____ (W)
e. Percent of frontage increase $I_f = 100[F/P - 0.25] \times W/30$ = _____*(%)*

[2] Unlimited area applicable under conditions of Section 5.07 (506.2).
[3] Maximum Building Area = total number of stories in the building x D (maximum 3 stories)
[4] The maximum area of open parking garages must comply with Table 406.5.4 . The maximum area of air traffic control towers must comply with Table 412.3.1
[5] Frontage increase is based on the unsprinklered area value in Table 506.2.

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet (Table 504.3)	XX	XX	
Building Height in Stories (Table 504.4)	XX	XX	

EXISTING/ UNCHANGED

[1] Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	REQ'D	RATING PROVIDED (W/ * REDUCTION)	DETAIL# AND SHEET#	DESIGN# FOR RATED ASSEMBLY	SHEET# FOR RATED PENETRATION	SHEET# FOR RATED JOINTS
Structural Frame, including columns, girders, trusses		0					
Bearing Walls		0					
Exterior							
North							
East							
West							
South							
Interior							
Nonbearing Walls and Partitions							
Exterior walls		0					
North							
East							
West							
South							
Interior walls and partitions		0					
Floor Construction Including supporting beams and joists		0					
Floor Ceiling Assembly		0					
Columns Supporting Floors		0					
Roof Construction, including supporting beams and joists		0					
Roof Ceiling Assembly		0					
Columns Supporting Roof		0					
Shaft Enclosures- Exit		0					
Shaft Enclosures- Other		0					
Corridor Separation		0					
Occupancy/Fire Barrier Separation		0					
Party/Fire Wall Separation		0					
Smoke Barrier Separation		0					
Smoke Partition		0					
Tenant/Dwelling Unit/ Sleeping Unit Separation		0					
Incidental Use Separation		N/A					

* Indicate section number permitting reduction

PERCENTAGE OF WALL OPENING CALCULATIONS

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
N/A			

EXISTING/ UNCHANGED

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: ☐ No ■ Yes (WORK AREAS)
Exit Signs: ☐ No ■ Yes
Fire Alarm: ☐ No ■ Yes
Smoke Detection Systems: ☐ No ☐ Yes Partial (WORK AREAS)
Carbon Monoxide Detection: ☐ No ■ Yes (WORK AREAS)

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: G1-01

■ Fire and/or smoke rated wall locations (Chapter 7)
■ Assumed and real property line locations (if not on the site plan)
☐ Exterior wall opening area with respect to distance to assumed property lines (705.8)
■ Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2)
■ Occupant loads for each area
■ Exit access travel distances (1017)
■ Common path of travel distances (Tables 1006.2.1 & 1006.3.2(1))
☐ Dead end lengths (1020.4)
■ Clear exit widths for each exit door
■ Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
■ Actual occupant load for each exit door
☐ A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
■ 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 (1010.1.10)
■ Location of doors equipped with hold-open devices
☐ Location of emergency escape windows (1030)
■ 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

A

ACCESSIBLE DWELLING UNITS
(SECTION 1107)

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED
	N/A						

ACCESSIBLE PARKING
(SECTION 1106)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED			TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESSAISLE	VAN SPACES WITH 132" ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	
EXISTING		210	-	-	7	7
TOTAL		210	-	-	7	7

NOTE: SCOPE OF WORK WILL MAINTAIN EXISTING PARKING COUNTS

PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)

USE		WATERCLOSETS M	WATERCLOSETS F	WATERCLOSETS UNI	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	LAVATORIES UNISEX	SHOWERS /TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
STUDENT	EXISTING	0	0	8	0	0	0	8	0	2	0
	NEW (TOTAL)	4	4	0	0	2	2	0	0	1	1
	REQUIRED	4	4	0	0	2	2	0	0	1	1
	EXISTING	0	0	0	0	0	0	0	0	0	0
	NEW (TOTAL)	0	0	1	0	0	0	1	0	0	0
	REQUIRED	0	0	1	0	0	0	1	0	0	0

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, etc., describe below)

ONSLOW COUNTY, NCDPI

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.

Existing building envelope complies with code: ■ (If checked the remainder of this section is not applicable.)

Exempt Building: ☐ Provide code or statutory reference:

Climate Zone: ■ 3A ☐ 4A ☐ 5A

Method of Compliance:
Energy Code ☐ Performance ■ Prescriptive
ASHRAE 90.1 ☐ Performance ■ Prescriptive
Other ☐ Performance (specify source) _____

THERMAL ENVELOPE (Prescriptive method only)

Roof/ceiling Assembly (each assembly)
Description of assembly: N/A
U_o Value of total assembly: _____
R-Value of insulation: _____
Skylights in each assembly: _____
U-Value of skylight: _____
total square footage of skylights in each assembly: _____

Exterior Walls (each assembly)
Description of assembly: N/A (ALTERNATE) WINDOW INFILL
U_o Value of total assembly: N/A (ALTERNATE) 0.0345
R-Value of insulation: N/A (ALTERNATE) R-19 (6" BATT) + R-10ci
Openings (windows or doors with glazing)
U-Value of assembly: 0.53
Solar heat gain coefficient: 0.75
projection factor: 0.13
Door R-Values: 13

Walls below grade (each assembly)
Description of assembly: N/A
U-Value of total assembly: N/A
R-Value of total assembly: N/A

Floors over unconditioned space (each assembly)
Description of assembly: N/A
U-Value of total assembly: N/A
R-Value of total assembly: N/A

Floors slab on grade
Description of assembly: 4" CONCRETE OVER VAPOR BARRIER
U-Value of total assembly: 0.481
R-Value of insulation: NR
Horizontal/vertical requirement: NR
slab heated: N/A

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
STRUCTURAL DESIGN
(PROVIDE ON PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)

DESIGN LOADS:

Importance Factors: Wind (I_W) _____ Snow (I_S) _____ Seismic (I_E) _____

Live Loads: Roof _____ psf Mezzanine _____ psf Floor _____ psf

Ground Snow Load: _____ psf

Wind Load: Basic Wind Speed _____ mph (ASCE-7) Exposure Category _____

SEISMIC DESIGN CATEGORY: ☐ A ☐ B ☐ C ☐ D
Provide the following Seismic Design Parameters:
Occupancy Category (Table 1604.5) ☐ I ☐ II ☐ III ☐ IV
Spectral Response Acceleration S_S _____ %g S_1 _____ %g
Site Classification (ASCE 7) ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F
Data Source: ☐ Field Test ☐ Presumptive ☐ Historical Data
Basic structural system (check one)
☐ Bearing Wall ☐ Dual w/Special Moment Frame
☐ Building Frame ☐ Dual w/Intermediate R/C or Special Steel
☐ Moment Frame ☐ Inverted Pendulum
Analysis Procedure: ☐ Simplified ☐ Equivalent Lateral Force ☐ Dynamic
Architectural, Mechanical, Components anchored? ☐ Yes ☐ No

LATERAL DESIGN CONTROL: Earthquake ☐ Wind ☐

SOIL BEARING CAPACITIES:
Field Test (provide copy of test report) _____ psf
Presumptive Bearing capacity _____ psf
Pile size, type, and capacity _____

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
MECHANICAL DESIGN
(PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)
~~MECHANICAL SUMMARY~~

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone
winter dry bulb: _____
summer dry bulb: _____

Interior design conditions
winter dry bulb: _____
summer dry bulb: _____
relative humidity: _____

Building heating load: _____

Building cooling load: _____

Mechanical Spacing Conditioning System
Unitary
description of unit: _____
heating efficiency: _____
cooling efficiency: _____
size category of unit: _____
Boiler
Size category If oversized, state reason.: _____
Chiller
Size category If oversized, state reason.: _____

List equipment efficiencies: _____

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ~~ALL~~ COMMERCIAL PROJECTS
ELECTRICAL DESIGN
(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)
~~ELECTRICAL SUMMARY~~

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance:
Energy Code: ☐ Prescriptive ☐ Performance
ASHRAE 90.1: ☐ Prescriptive ☐ Performance

Lighting schedule (each fixture type)
lamp type required in fixture
number of lamps in fixture
ballast type used in the fixture
number of ballasts in fixture
total wattage per fixture
total interior wattage specified vs. allowed (whole building or space by space)
total exterior wattage specified vs. allowed

Additional Efficiency Package Options
(When using the 2018 NCECC; not required for ASHRAE 90.1)

☐ C406.2 More Efficient HVAC Equipment Performance
☐ C406.3 Reduced Lighting Power Density
☐ C406.4 Enhanced Digital Lighting Controls
☐ C406.5 On-Site Renewable Energy
☐ C406.6 Dedicated Outdoor Air System
☐ C406.7 Reduced Energy Use in Service Water Heating

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BID/PERMIT SET

ONSLOW COUNTY SCHOOLS
TREXLER MIDDLE SCHOOL RENOVATION & SITE IMPROVEMENTS
112 E FOY STREET RICHLANDS, NC 28574

ID	DATE	DESCRIPTION
A	03/02/2023	ADDENDUM 1

DRAWN BY: AC
CHECKED BY: CWT

BUILDING CODE SUMMARY

2022017 20 Feb 2023

G0-02

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WALL TYPE NAMING CONVENTION

M8UA

TYPE OF CORE
- C CONCRETE
- F FURRING
- M MASONRY
- S METAL STUD
- W WOOD

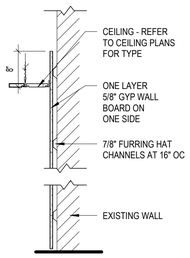
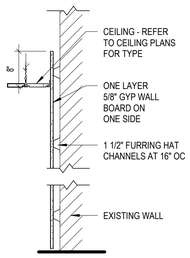
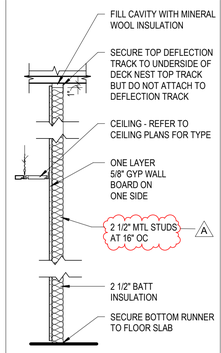
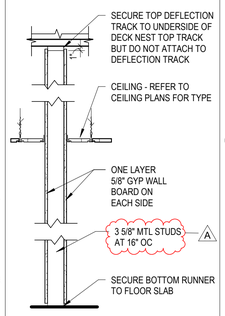
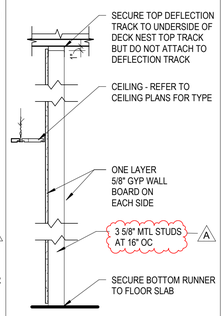
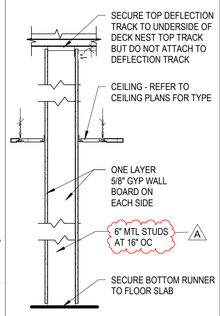
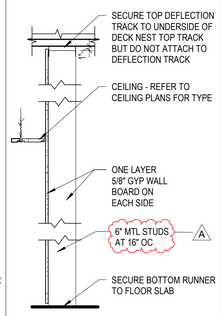
WIDTH OF CORE
- 4 4" MASONRY, 3 5/8" METAL STUD
- 5 4" METAL STUD
- 6 6" MASONRY, 6" METAL STUD
- 8 8" MASONRY, 8" METAL STUD
- 10 10" MASONRY
- 12 12" MASONRY, 12" METAL STUD

HEIGHT OF WALL
- C UP TO CEILING
- D DETACHED - SEE DRAWINGS FOR HEIGHT
- J UP TO JOIST BEARING
- P 8" ABOVE CEILING
- U UP TO DECK ABOVE

ITERATION - SEE WALL TYPES LEGEND
- NONE IF NO LAYERS OR FINISHES
- A (EX: 1 LAYER GWB ON EACH SIDE)
- B (EX: 1 LAYER GWB ON ONE SIDE)
- C ...

NOTE:
1. SEE WALL SECTIONS FOR EXTERIOR WALL CONSTRUCTION.
2. SEE WALL TYPE LEGEND FOR CONSTRUCTION OF ASSEMBLIES AND FIRE RATINGS UL LISTING.

WALL TYPE LEGEND

MARKER	F1PB	F1.5PB	S2UB	S4UA	S4UB	S6UA	S6UB
SYMBOL							
							
DESCRIPTION	7/8" HAT CHANNEL UP TO MIN. 8" ABOVE CEILING WITH 5/8" GYP BOARD ON ONE SIDE	1 1/2" HAT CHANNEL UP TO MIN. 8" ABOVE CEILING WITH 5/8" GYP BOARD ON ONE SIDE	2 1/2" METAL STUD UP TO BOTTOM OF DECK WITH BATT INSULATION AND 5/8" GYP BOARD ON ONE SIDE	3 5/8" METAL STUD UP BOTTOM OF DECK WITH 5/8" GYP BOARD EACH SIDE	3 5/8" METAL STUD UP TO BOTTOM OF DECK WITH 5/8" GYP BOARD ON ONE SIDE	6" METAL STUD UP BOTTOM OF DECK WITH 5/8" GYP BOARD EACH SIDE	6" METAL STUD UP TO BOTTOM OF DECK WITH 5/8" GYP BOARD ON ONE SIDE
UL DESIGN # HEAD	NON-RATED	NON-RATED	NON-RATED	NON-RATED	NON-RATED	NON-RATED	NON-RATED
WALL	NON-RATED	NON-RATED	NON-RATED	NON-RATED	NON-RATED	NON-RATED	NON-RATED
BASE	NON-RATED	NON-RATED	NON-RATED	NON-RATED	NON-RATED	NON-RATED	NON-RATED
PENETRATIONS	REFERENCE MEP	REFERENCE MEP	REFERENCE MEP	REFERENCE MEP	REFERENCE MEP	REFERENCE MEP	REFERENCE MEP

NOTES:
1. ALL CMU WALLS GOING UP TO BOTTOM OF DECK ARE TO PROVIDE A 1" GAP FOR DEFLECTION.
2. FILL 1" GAP WITH MINERAL WOOL INSULATION ALONG THE ENTIRE LENGTH OF WALL
3. AT ALL METAL STUD WALLS TERMINATING AT BOTTOM OF DECK PROVIDE A DEFLECTION TRACK SECURED TO THE UNDERSIDE OF THE DECKING. NEST TOP TRACK BUT DO NOT ATTACH TO DEFLECTION TRACK.
4. SEE FINISH SCHEDULE FOR WALL, FLOOR BASE AND CEILING TYPES AND FINISHES
5. REFER TO STRUCTURAL DRAWINGS FOR LOCATION OF REINFORCING, BOND BEAMS, BRACING, ETC.
6. PROVIDE ABUSE-RESISTANT GWB IN ALL CLASSROOMS, CORRIDORS AND BULKHEADS
7. CONTRACTOR TO PROVIDE DELEGATED DESIGN FOR ALL METAL FRAMING SIZING AND SPACING. REFER TO SPECIFICATIONS. A

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CHARLES WHITMAN TENNANT REGISTERED ARCHITECT 13798 NORTH CAROLINA RALEIGH 3/2/23

BID/PERMIT SET

ONSLOW COUNTY SCHOOLS
TREXLER MIDDLE SCHOOL RENOVATION & SITE IMPROVEMENTS
112 E FOY STREET RICHLANDS, NC 28574

ID	DATE	DESCRIPTION
A	03/02/2023	ADDENDUM 1

DRAWN BY: AC
CHECKED BY: CWT

WALL TYPE LEGEND

2022017 20 Feb 2023

G0-03

GENERAL DEMOLITION NOTES:

1. ALL CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR WHERE DEMOLITION IS TO OCCUR. THE CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY INCONSISTANCIES IN WRITING PRIOR TO STARTING ANY WORK.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WEEKLY AND/OR DAILY REMOVAL AND PROPER DISPOSAL OF ALL DEBRIS ACCUMULATED DURING DEMOLITION AND CONSTRUCTION.

3. REMOVAL OF HAZARDOUS MATERIAL AND DEBRIS SHALL BE AS FOLLOWS:
   - A. ALL HAZARDOUS SHALL BE REMOVED BY THE CONTRACTOR PRIOR TO PROJECT COMPLETION. CONTRACTOR SHALL FOLLOW ALL THE REQUIREMENTS TO LEGALLY DISPOSE OF ALL HAZARDOUS MATERIALS.
   - B. THE CONTRACTOR IS REQUIRED TO PERFORM ABATEMENT AND REMEDIATION ACTIVITIES INSIDE NEGATIVEAIR PRESSURIZED ENCLOSURES.
   - C. ABATEMENT OF ALL HAZARDOUS MATERIALS SHALL OCCUR PRIOR TO BUILDING DEMOLITION. BOTH ACTIVITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE PROJECT SHALL BE PHASED SUCH THAT DEMOLITION CAN FOLLOW ABATEMENT IN THE FIRST AREA OF THE BUILDING WHILE ABATEMENT IS OCCURING IN THE NEXT AREA OF THE BUILDING.

   ASBESTOS - REFER TO ASBESTOS REMOVAL DESIGN AND SPECIFICATIONS
   LEAD - REFER TO LEAD CLEANING DESIGN AND SPECIFICATIONS
   BULBS - FLUORESCENT, MERCURY VAPOR, SODIUM, ETC. BULBS WILL BE HANDLED AS UNIVERSAL WASTE. UPON REMOVAL FROM LIGHTING DEVICES, THEY IMMEDIATELY MUST BE PUT INTO APPROPRIATE CONTAINERS AND LABELED ASUSED LAMPS. A UNIVERSAL WASTE LABEL WILL BE ATTACHED AND ACCUMULATION DATE FILLED IN ON THE LABEL. BOX MUST BE CLOSED AND TAPED SHUT AT ALL TIMES UNLESS BULBS ARE BEING ADDED. BULBS UNLESS BROKEN SHALL BE RECYCLED. ANY BROKEN OR DAMAGEDD BULBS WILL BE CONTAINERIZED IN PLASTIC OR METAL CONTAINERS FOR DISPOSAL AS HAZARDOUS WASTE
   BALLAST - ALL BALLAST WILL BE CONTAINERIZED AND RECYCLED

4. ANY FLOOR, CEILING, WALL OR OTHER MATERIALS INCLUDING FINISHES IN AREAS TO REMAIN ARE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT. ANY MATERIALS DAMAGED DURING CONSTRUCTION OR DEMOLITION, SHALL BE RETURNED TO THEIR ORIGINAL STATE, OR IMPROVED AS INDICATED BY THE OWNER OR ARCHITECT, OR REPLACED WITH A NEW MATERIAL TO MATCH ADJACENT MATERIALS, TYPICAL.

5. CONTRACTOR SHALL PATCH AND REPAIR ALL EXISTING SURFACES TO REMAIN AND MATERIALS EXPOSED TO VIEW WHERE OTHER ITEMS OR MATERIALS HAVE BEEN REMOVED.

6. REFER TO PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL AND COMPLETE SCOPE OF DEMOLITION THAT MAY OR MAY NOT BE NOTED ON THE ARCHITECTURAL DEMOLITION PLAN AND NOTES.

7. CONTRACTOR SHALL REMOVE ALL WALL MOUNTED FIXTURES OR ITEMS UNLESS OTHERWISE NOTED. ALL WALLS SHALL BE REPAIRED, AND VOIDS FILLED AFTER FIXTURE REMOVAL. ALL FINISHES SHALL MATCH ADJACENT SURFACES. REMOVE ALL FOREIGN MATTER, SHELVING, LOOSE DEBRIS INCLUDING TAPE, ADHESIVE, NAILS, SCREWS, ETC. FROM WALLS. SCRAPE, WIRE BRUSH, AND SAND SMOOTH. WASH ALL PAINTED SURFACES TO REMOVE ANY "FILM OR RESIDUE". PREPARE SURFACES TO PROVIDE A MAXIMUM DEGREE OF NEW PAINT ADHESION. PATCH AND REPAIR ALL VOIDS IN PREPARATION FOR NEW FINISHES.

8. ALL FIXTURES, WALLS AND PORTIONS OF WALLS SHOWN AS DASHED LINES OR LABELED SHALL BE DEMOLISHED UNLESS ELEMENTS REMOVED OR REPLACED. CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND BRACING AND IS RESPONSIBLE FOR ANY FAILURE DUE TO LACK OF PROPER BRACING.

9. DURING THE BIDDING PROCESS, CONTRACTORS SHALL TAKE NOTE OF EXISTING PLUMBING MECHANICAL, AND ELECTRICAL ITEMS IN AREAS TO BE RENOVATED. ITEMS INCLUDE BUT ARE NOT LIMITED TO WIRES, CONDUITS, PIPES, THERMOSTATS, FIRE ALARM DEVICES, PANEL CANS, ETC. THESE HAVE BEEN IDENTIFIED IN THE DEMOLITION DRAWINGS FOR ARCHITETURE, PLUMBING, MECHANICAL, AND/OR ELECTRICAL. FOR ITEMS NOT SHOWN, CONTRACTOR SHALL WORK WITH THE ARCHITECT AND OWNER TO DETERMINE IF THE ITEM IS STILL IN USE ITEMS WHICH ARE NOTED TO BE REMOVED AND STORED FOR LATER REINSTALLATION SHALL BE TAGGED AND LISTED ON AN ITEMIZED LIST GIVEN TO THE OWNER AND ARCHITECT.

10. THE GENERAL CONTRACTOR SHALL COORDINATE THE DEMOLITION OF THE EXISTING BUILDING AREAS WITH THE ARCHITECT AND OWNER. THE CONTRACTOR SHALL COORDINATE AFTER HOURS WORK AND OBTAIN WRITTEN OWNER PERMISSION FOR NIGHT AND WEEKEND WORK.

11. CONTRACTOR SHALL ENSURE WATER-TIGHT INTEGRITY OF THE TEMPORARY ENCLOSURE SYSTEMS AND MAINTAIN THEM THROUGH THE ENTIRETY OF CONSTRUCTION TO PREVENT THE INTRUSION OF WATER AND THE ELEMENTS INTO THE BUILDING.

12. ALL EXISTING FIRE EXTINGUISHER AND BRACKETS SHALL REMAIN AND BE INSTALLED IN THEIR CURRENT LOCATION UNLESS SHOWN ON THE PLANS TO RELOCATE.

13. CONTRACTOR SHALL PATCH AND FILL IN ANY VOIDS LEFT FROM THE DEMOLITION OF ANY PLUMBING, MECHANICAL, OR ELECTRICAL ITEMS. REFER TO PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS FOR COMPLETE SCOPE OF DEMOLITION.

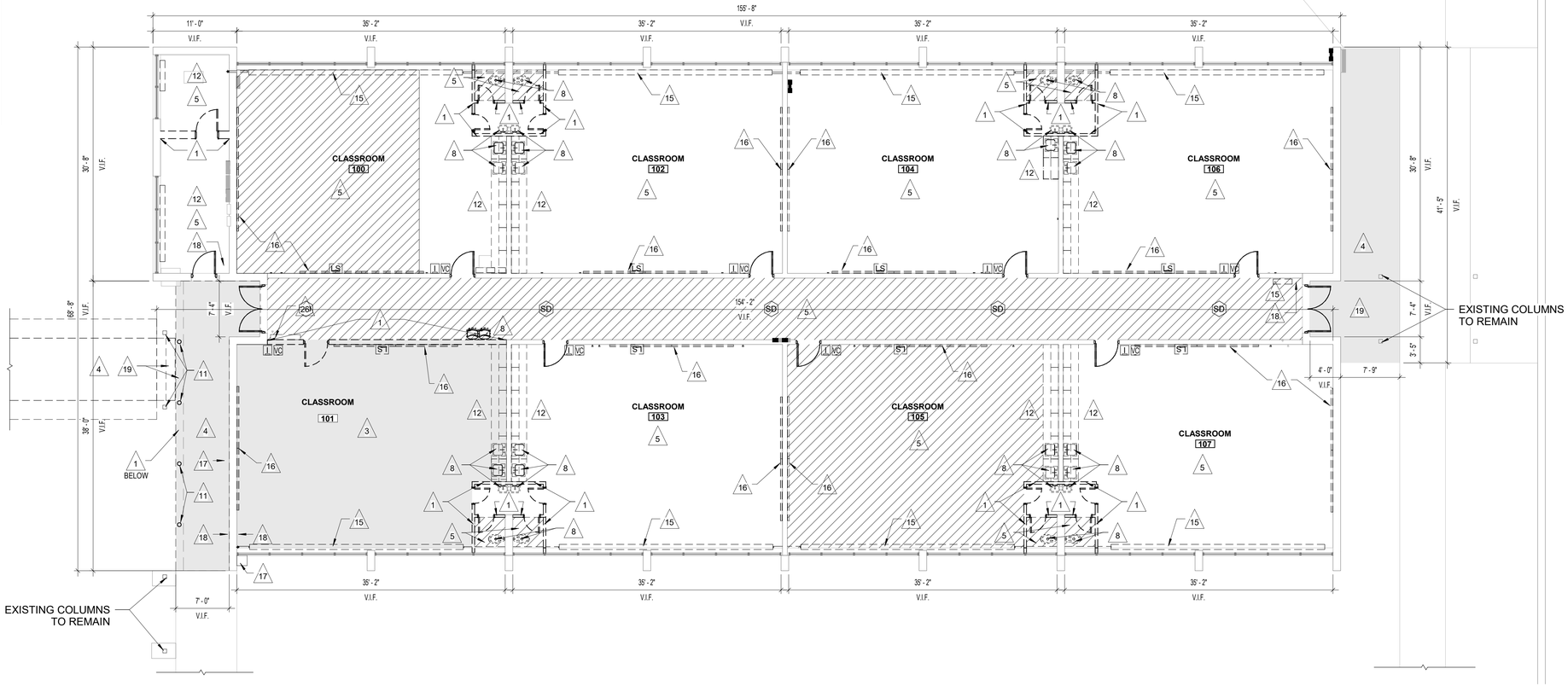
DEMOLITION SPECIFIC AREA NOTES:

1	REMOVE EXISTING CMU WALL, FRAMING, AND ASSOCIATED PARTS IN ITS ENTIRETY. ASSOCIATED PARTS INCLUDE BUT NOT LIMITED TO DOOR, DOOR FRAME, HARDWARE, TRACK AND SUPPORTS. PREPARE SURROUNDING AREA TO RECEIVE NEW STUD WALL
2	CUT OPENING IN EXISTING CMU WALL TO THE EXTENTS SHOWN. DEMOLITION SHALL BE SUFFICIENT ENOUGH TO INSTALL A LINTEL OVER THE OPENINGS. PATCH AND REPAIR SURROUNDING MASONRY AS NECESSARY. REFER TO STRUCTURAL FOR LINTEL DETAIL. PREPARE EXISTING WALL TO RECEIVE A NEW FRAME AND PREPARE SURROUNDING AREA TO RECEIVE NEW FINISH SPECIFIED OR IF NO FINISH IS SPECIFIED MATCH EXISTING. PROVIDE DEMOLITION MASONRY TOOTHING AS NECESSARY TO INSTALL NEW FRAME.
3	REMOVE EXISTING CONCRETE FLOOR SLAB TO EXTENTS SHOWN. PREP AREA TO RECEIVE NEW CONCRETE SLAB. COORDINATE FINAL LOCATION OF CUT WITH STRUCTURAL, PLUMBING, AND ELECTRICAL AND OTHER TRADES AS REQUIRED. CONCRETE CUT IS DIAGRAMMATIC. CONTRACTOR SHALL CUT AS REQURIED FOR NEW WORK SHOWN. COORDINATE WITH ALL TRADES FOR COMPLETE SIZE, LOCATION, AND EXTENTS OF SLAB CUTS.
4	REMOVE EXISTING CONCRETE PAVING, SIDEWALK, CURB, AND GUTTER IN ITS ENTIRETY TO THE EXTENTS SHOWN. CONTRACTOR TO PROTECT EXISTING COLUMNS TO REMAIN WHERE APPLICABLE, UNLESS OTHERWISE NOTED. REFER TO CIVIL DRAWINGS FOR COMPLETE SCOPE OF DEMOLITION.
5	REMOVE EXISTING FLOOR FINISH & BASE IN ITS ENTIRETY FOR AREA NOTED. REMOVE EXISTING CONCRETE SEALER AS NECESSARY OR REQUIRED AND CLEAN EXISTING SLAB AS NECESSARY OR REQUIRED FOR INSTALLATION OF NEW FLOOR FINISHES. LEVEL FLOOR AND FILL ANY VOIDS AS NECESSARY. PREPARE FLOOR TO RECEIVE NEW FINISHES PER SPECIFICATION AND THESE CONSTRUCTION DRAWINGS. A
6	REMOVE EXISTING DOOR, FRAME, TRANSOM, & HARDWARE IN ITS ENTIRETY. PREPARE EXISTING WALL TO RECEIVE A NEW FRAME AND PREPARE SURROUNDING AREA TO RECEIVE NEW FINISH SPECIFIED OR IF NO FINISH IS SPECIFIED MATCH EXISTING. PROVIDE DEMOLITION MASONRY TOOTHING AS NECESSARY TO INSTALL NEW FRAME.
7	REMOVE EXISTING CEILING TILE, GRID, HANGERS AND ASSOCIATED PARTS IN ITS ENTIRETY, INCLUDING SECONDARY CEILING WHERE APPLICABLE. PREP AREA TO RECIEVE NEW CEILING.
8	REMOVE EXISTING PLUMBING FIXTURE, SINK, FLOOR DRAIN, TOILET ACCESSORIES, OR WATER COOLER IN ITS ENTIRETY. CAP ALL UTILITIES BELOW SLAB. PATCH AND REPAIR SLAB OR WALL AS NECESSARY. REFER TO PLUMBING FOR COMPLETE SCOPE OF PLUMBING DEMOLITION. ITEM SHALL BE OFFERED TO THE OWNER AND STORED IN AN APPROVED LOCATION DESIGNATED BY THE OWNER. IF THE OWNER DECLINES, THE CONTRACTOR SHALL DISPOSE OF THE ITEM.
9	REMOVE EXISTING WINDOW, GLAZING, BLINDS, FRAME AND ITS ASSOCIATED PARTS IN ITS ENTIRETY. REFER TO ASBESTOS REMOVAL DESIGN AND SPECIFICATIONS FOR INSTRUCTIONS ON THE ASBESTOS WINDOW GLAZING AND FRAME CAULK. PREPARE EXISTING WALL TO RECIEVE A NEW FRAME OR METAL PANEL INFILL ASSEMBLY. PREPARE SURROUNGING AREA TO RECIEVE NEW FINISH SPECIFIED OR IF NO FINISH SPECIFIED, MATCH EXISTING. WINDOW OPENING SHALL BE SECURED WITH EITHER A WEATHER PROOF TEMPORARY PARTITION OR THE PERMANENT FRAME AND GLAZING. REFER TO ALLOWANCE NO. ??
10	REMOVE EXISTING WINDOW, GLAZING, FRAME AND ITS ASSOCIATED PARTS IN ITS ENTIRETY. PREP EXISTING WALL TO BE INFILLED WITH STUD WALL.
11	REMOVE EXISTING METAL COLUMNS AND ASSOCIATED PARTS SUPPORTING CANOPY ABOVE.
12	REMOVE EXISTING CASEWORK, COUNTERS, AND SHELVING AND ALL ASSOCIATED PARTS IN ITS ENTIRETY. PATCH AND REPAIR ALL SURFACES TO REMAIN AS REQUIRED FOR SCOPE OF NEW PROJECT WORK AND FINISHES.
13	REMOVE ALL EXISTING LIGHTING FIXTURES, CEILING FANS, AND ALL ASSOCIATED PARTS IN ITS ENTIRETY, INCLUDING BUT NOT LIMITED TO CONNECTING CONDUIT. RETURN CEILING FANS TO OWNER . REFER TO ELECTRICAL FOR COMPLETE SCOPE OF DEMOLITION. REFER TO GENERAL DEMO NOTES FOR REQUIREMENTS ON BULB AND BALLAST DISPOSAL.
14	REMOVE EXISTING MECHANICAL SYSTEM AND ASSOCIATED PARTS. COMPONENTS INCLUDE BUT NOT LIMITED TO ROOF TOP UNIT, DUCTS, AND ASSOCIATED PARTS. REFER TO MECHANICAL COMPLETE SCOPE OF DEMOLITION.
15	REMOVE EXISTING RADIATOR AND ALL ASSOCIATED PARTS IN ITS ENTIRETY. REFER TO MECHANICAL DRAWINGS FOR COMPLETE SCOPE OF DEMOLITION.
16	REMOVE ALL EXISTING MARKER BOARDS, TACK BOARDS, OR ANY WALL-MOUNTED DISPLAY. PREPARE SURFACE TO RECEIVE NEW FINISH AND IF NO FINISH IS SPECIFIED, MATCH EXISTING.
17	REMOVE EXISTING WOOD FRAMING, SHEATHING, AND ALL ASSOCIATED PARTS AND FASTENERS. PATCH AND REPAIR SURFACE TO REMAIN AS REQUIRED TO RECEIVE NEW FINISH SPECIFIED OR IF NO FINISH IS SPECIFIED MATCH EXISTING SURROUNDING SURFACES.
18	REMOVE EXISTING PIPING AND ALL ASSOCIATED PARTS IN ITS ENTIRETY. PATCH AND REPAIR SURFACE TO REMAIN AS REQUIRED TO RECEIVE NEW FINISH SPECIFIED OR IF NO FINISH IS SPECIFIED MATCH EXISTING SURROUNDING SURFACES. PROVIDE DEMOLITION MASONRY TOOTHING AS NECESSARY TO INFILL EXISTING MASONRY WALLS TO REMAIN.
19	REMOVE EXISTING CONCRETE STAIR AND/OR RAMP SYSTEM, LANDINGS, MASONRY WALLS, AND ASSOCIATED PARTS IN THEIR ENTIRETY. ASSOCIATED PARTS INCLUDE BUT NOT LIMITED TO HANDRAIL, GUARDRAIL, AND INTERNAL STRUCTURE. CLEAR SOILS AND DEBRIS LEVEL WITH ADJACENT GRADE. PREPARE SURROUNDING AREA TO RECIEVE NEW WORK AS SPECIFIED. REFER TO CIVIL DRAWINGS FOR COMPLETE SCOPE OF DEMOLITION.

DEMOLITION LEGEND:

SYMBOL	DESCRIPTION
	EXISTING CONCRETE SLAB TO BE REMOVED. SEE KEYED NOTE 9.
	EXISTING FLOORING TO BE REMOVED
	NOTE THE PRESENCE OF ASBESTOS CONTAINING ITEMS. REFER TO ASBESTOS REMOVAL DESIGN & SPECIFICATIONS FOR REMOVAL INSTRUCTIONS.

SYMBOL	DESCRIPTION
#	DEMOLITION KEYED NOTE
———	EXISTING TO REMAIN
- - - - - - -	EXISTING TO BE REMOVED DURING DEMOLITION



1 A0-01 DEMO PLAN
1/8" = 1'-0"

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SMITH SINNETT ARCHITECTURE, PA CERT. NO. 50172 NORTH CAROLINA RALEIGH
REGISTERED WHITMAN TENNANT ARCHITECT 13798 NORTH CAROLINA RALEIGH 10/27

BID/PERMIT SET

THIS DRAWING IS FORMATTED TO BE PRINTED ON A 24" X 36" SHEET

ONSLOW COUNTY SCHOOLS
TREXLER MIDDLE SCHOOL RENOVATION & SITE IMPROVEMENTS
112 E FOY STREET RICHLANDS, NC 28574

ID	DATE	DESCRIPTION
A	03/02/2023	ADDENDUM 1

DRAWN BY: AC
CHECKED BY: CWT

DEMOLITION PLAN

2022017 20 Feb 2023

A0-01

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NOTES:

1. ALL INTERIOR WALL TYPES TO BE 'S4UA' UNLESS OTHERWISE NOTED.
2. WALL DIMENSIONS ARE TO FACE OF METAL STUD, FACE OF CONCRETE MASONRY UNIT (CMU), OR CENTERLINE OF COLUMN.
3. ALL METAL STUD WALLS TERMINATING AT BOTTOM OF DECK ARE TO PROVIDE A DEFLECTION TRACK SECURED TO THE UNDERSIDE OF THE DECKING, NEST TOP TRACK BUT DO NOT ATTACH TO DEFLECTION TRACK. FILL FLUTE IN METAL DECK WHERE REQUIRED.
4. ALL WALLS EXTEND TO DECK AND ARE BRACED TO DECK AT HEAD ON ALTERNATE STUDS OR 32" OC FOR CMU WALLS, UNLESS OTHERWISE NOTED.
5. CONTROL JOINTS SHALL BE AS SHOWN ON PLANS AND ELEVATIONS OR SPACED AT A MINIMUM OF 20'-0" OC AND A MAXIMUM OF 32'-0" OC WITH ONE CONTROL JOINT LOCATED WITHIN 3'-4" OF ANY CORNER. FOR INTERIOR GYPSUM WALL CONTROL JOINTS SEE DETAIL
6. SEE FINISH SCHEDULE FOR WALL, FLOOR, BASE, AND CEILING TYPES AND FINISHES.
7. REFER TO STRUCTURAL DRAWINGS FOR LOCATION OF REINFORCING, BOND BEAMS, BRACING, ETC.
8. ALL EXTERIOR SIDEWALKS SHALL SLOPE AWAY FROM THE BUILDING AT 1/4" PER FOOT, MINIMUM.
9. ALL EXTERIOR WINDOWS TO HAVE ROLLER SHADE BLINDS UNLESS OTHERWISE NOTED, REFER TO SPECIFICATIONS.
10. FURNITURE AND EQUIPMENT SHOWN DASHED ON PLANS IS NOT IN CONTRACT (NIC). GC TO PROVIDE WOOD BLOCKING FOR ALL WALL/CEILING MOUNTED ACCESSORIES.
11. FIELD VERIFY FINAL ROOM DIMENSIONS PRIOR TO CASEWORK FABRICATION.
12. NOT USED
13. ALL CERAMIC TILE TO HAVE CONTROL JOINTS THAT ALIGN WITH CONTROL JOINTS IN CONCRETE SLAB.
14. THERE SHALL BE NO PENETRATIONS IN THROUGH WALL FLASHING.
15. DOOR JAMB FROM INTERSECTING WALLS: STUD - 4" UNLESS OTHERWISE NOTED

GENERAL EQUIPMENT SCHEDULE

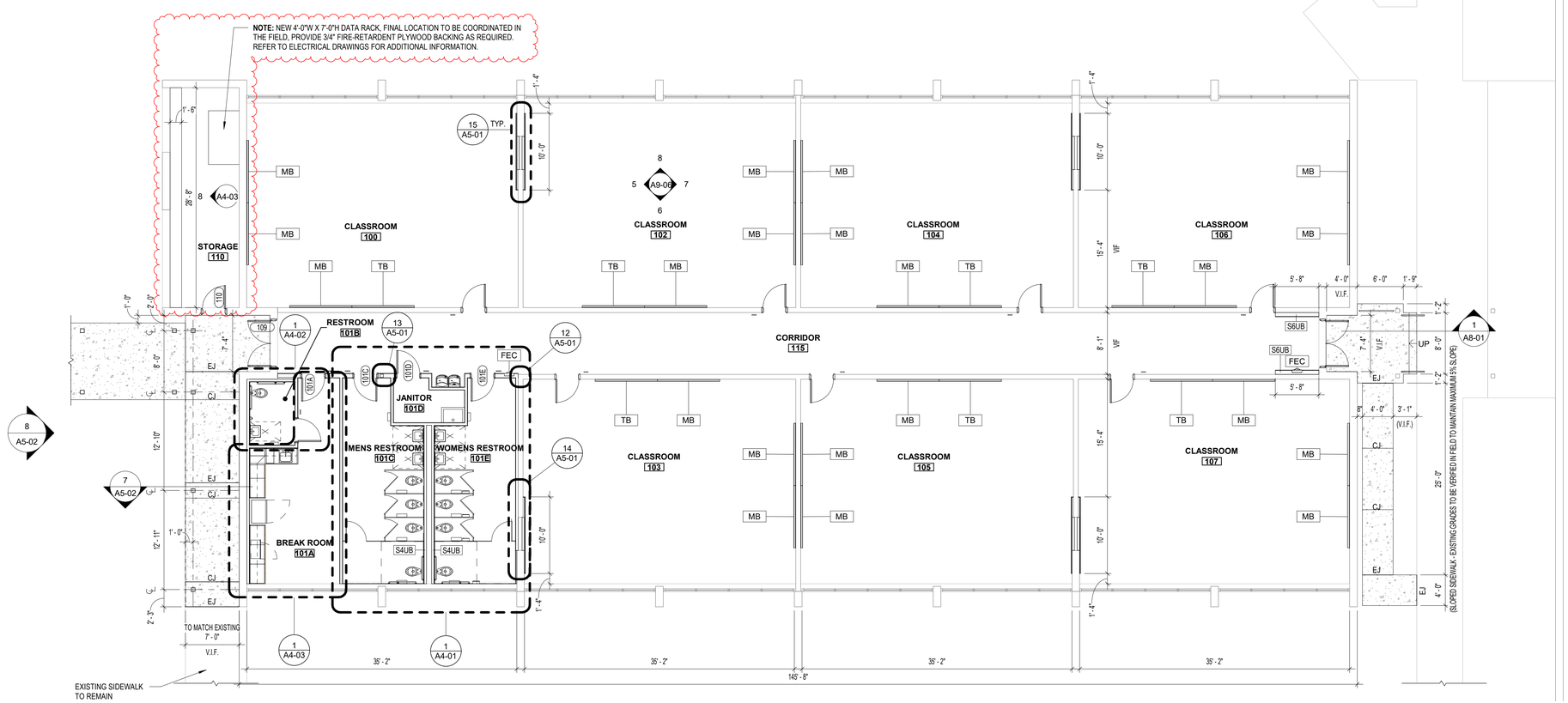
MARK	MODEL	DESCRIPTION	FURNISHED BY/INSTALLED BY	MOUNTING HEIGHT	MANUFACTURER	REMARKS
FEC	REFER TO SPECIFICATIONS	FIRE EXTENGUISHER AND SEMI-RECESSED FIRE EXTENGUISHER CABINET	CFCI	2' - 2" A.F.F. TO BOTTOM OF CASE	REFER TO SPECIFICATIONS	
MB	REFER TO SPECIFICATIONS	48"X96" MAGNETIC MARKER BOARD	OFCI	6' - 8" A.F.F. TO TOP OF MARKER BOARD	REFER TO SPECIFICATIONS	
SH	REFER TO SPECIFICATIONS	SHELVING	CFCI	VARIES, SEE 7/A4-03	REFER TO SPECIFICATIONS	
TB	REFER TO SPECIFICATIONS	48"X96" TACK BOARD	OFCI	6' - 8" A.F.F. TO TOP OF TACK BOARD	REFER TO SPECIFICATIONS	

SCHEDULE ABBREVIATIONS

CFCI - CONTRACTOR FURNISHED / CONTRACTOR INSTALLED
OFCI - OWNER FURNISHED / CONTRACTOR INSTALLED
OFOI - OWNER FURNISHED / OWNER INSTALLED

NOTES

1. G.C. TO PROVIDE 3/4" FIRE RETARDANT PLYWOOD PANEL TO MOUNT EQUIPMENT. COORDINATION LOCATIONS WITH OWNER / ARCHITECT FOR OWNER FURNISHED EQUIPMENTS.
2. G.C. TO PROVIDE NECESSARY BLOCKING & REINFORCING PLATES IN GWB WALLS & REINFORCING IN CMU WALLS. COORDINATE WITH OWNER/ARCHITECT FOR OWNER FURNISHED EQUIPMENTS.



1 A1-01 **FIRST FLOOR PLAN**
1/8" = 1'-0"

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ID	DATE	DESCRIPTION
A.	03/02/2023	ADDENDUM 1

DRAWN BY: AC
CHECKED BY: CWT

RENOVATION PLAN

2022017 20 Feb 2023

A1-01

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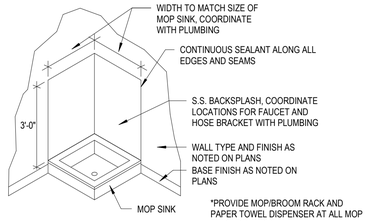
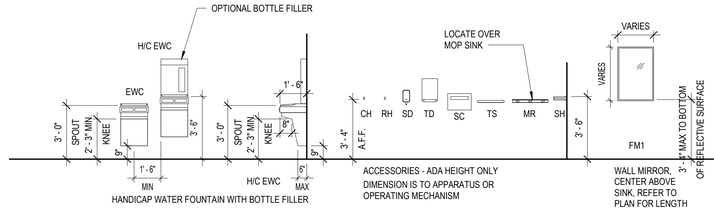
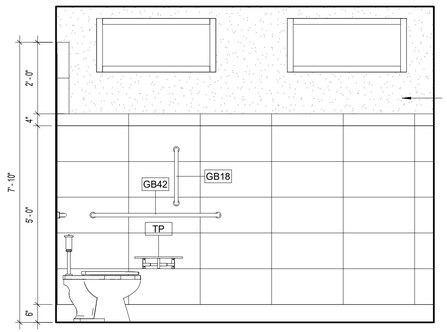
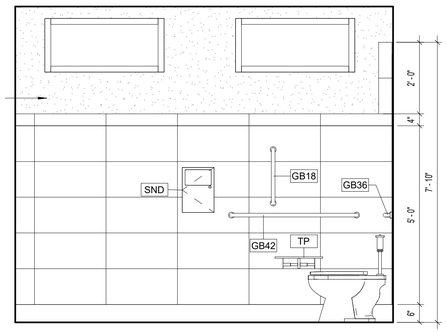


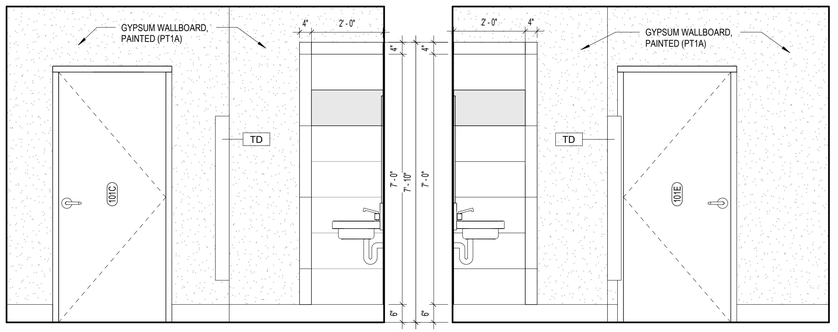




8 / A4-01 ELEVATION AT MEN'S RESTROOM
1/2" = 1'-0"

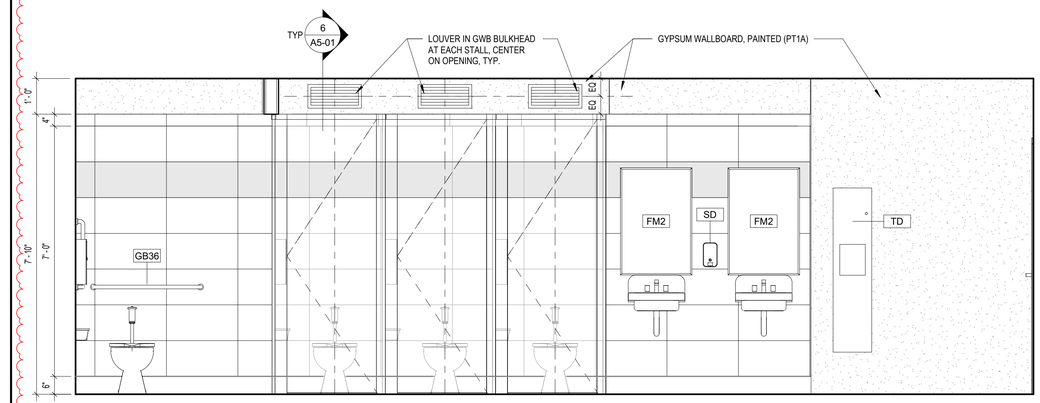


7 / A4-01 ELEVATION AT WOMEN'S RESTROOM
1/2" = 1'-0"

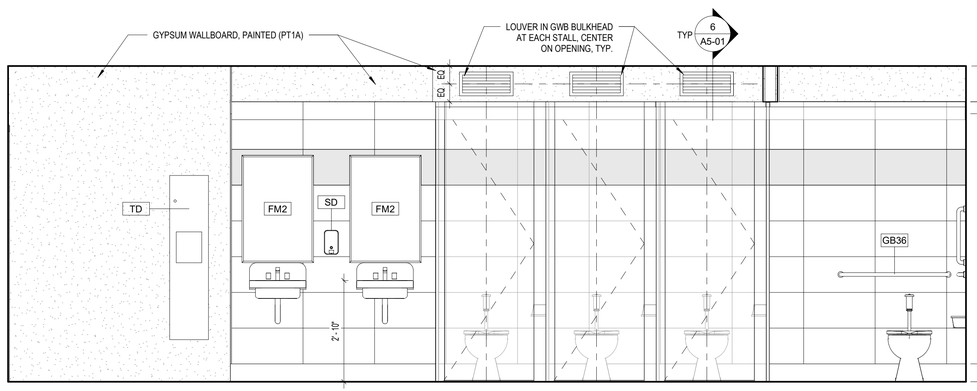


6 / A4-01 ELEVATION AT MEN'S RESTROOM
1/2" = 1'-0"

5 / A4-01 ELEVATION AT WOMEN'S RESTROOM
1/2" = 1'-0"



4 / A4-01 ELEVATION AT WOMEN'S RESTROOM
1/2" = 1'-0"



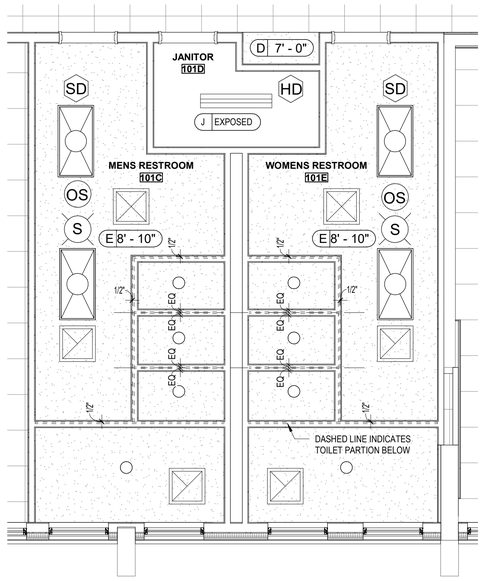
3 / A4-01 ELEVATION AT MEN'S RESTROOM
1/2" = 1'-0"

ACCESSORY SCHEDULE - GROUP TOILETS

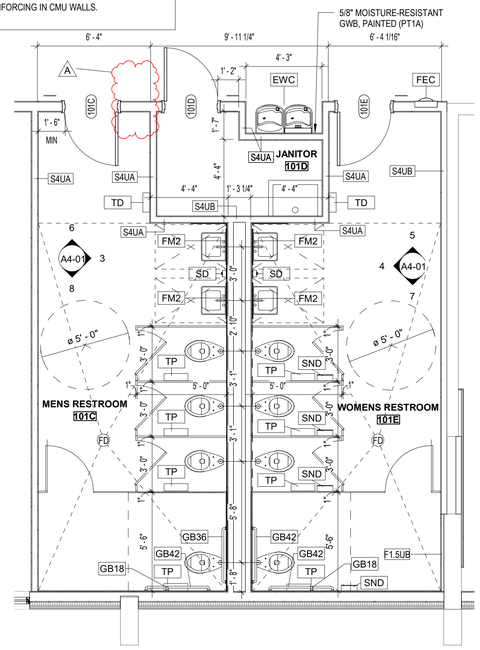
MARK	MODEL	DESCRIPTION	FURNISHED BY/INSTALLED BY	MOUNTING HEIGHT	MANUFACTURER	REMARKS
FM2	B-165 2436	TEMPERED GLASS CHANNEL FRAME MIRROR	CFCI	40" A.F.F. TO BOTTOM OF REFLECTIVE SURFACE	BOBRICK	
GB18	B-6806	1 1/2" DIA. X 18" S.S. VERTICAL GRAB BAR - PEENED	CFCI	34" A.F.F. TO CENTER OF FIXTURE	BOBRICK	
GB36	B-6806	1 1/2" DIA. X 36" S.S. GRAB BAR - PEENED	CFCI	34" A.F.F. TO CENTER OF FIXTURE	BOBRICK	
GB42	B-6806	1 1/2" DIA. X 42" S.S. GRAB BAR - PEENED	CFCI	34" A.F.F. TO CENTER OF FIXTURE	BOBRICK	
SD	TBD	SURFACE-MOUNTED SOAP DISPENSER	OFOI	40" A.F.F. TO POINT OF DISPENSION	TBD	
SND	B-254	SURFACE MOUNTED SANITARY NAPKIN DISPOSAL	OFOI	24" MAX TO POINT OF DISPENSION	TBD	
TD	TBD	SURFACE MOUNTED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE	OFOI	40" A.F.F. TO POINT OF DISPENSION	TBD	
TP	TBD	SURFACE MOUNTED TOILET TISSUE DISPENSER	OFOI	20" TO POINT OF DISPENSION	TBD	

SCHEDULE ABBREVIATIONS
CFCI - CONTRACTOR FURNISHED / CONTRACTOR INSTALLED
OFCI - OWNER FURNISHED / CONTRACTOR INSTALLED
OFOI - OWNER FURNISHED / OWNER INSTALLED

NOTES
1. G.C. TO PROVIDE 3/4" FIRE RETARDANT PLYWOOD PANEL TO MOUNT EQUIPMENT. COORDINATION LOCATIONS WITH OWNER / ARCHITECT FOR OWNER FURNISHED EQUIPMENTS.
2. G.C. TO PROVIDE NECESSARY BLOCKING & REINFORCING PLATES IN GWB WALLS & REINFORCING IN CMU WALLS. COORDINATE WITH OWNER/ARCHITECT FOR OWNER FURNISHED EQUIPMENTS.



2 / A4-01 ENLARGED RESTROOM RCP
1/4" = 1'-0"



1 / A4-01 ENLARGED RESTROOM PLAN
1/4" = 1'-0"

REFLECTED CEILING LEGEND AND NOTES

A 10'-0" — A: CEILING TYPE; 10'-0": CEILING HEIGHT

SYMBOL	TYPE	DESCRIPTION
	A	ACT-1, 2x2 CEILING TILE, WHITE FINISH
	B	NOT USED
	C	NOT USED
	D	GYPSUM WALLBOARD CEILING SYSTEM
	E	MOISTURE RESISTANT GYP WALLBOARD
	F	NOT USED
	G	METAL SOFFIT PANEL - PERFORATED
	H	NOT USED
	J	EXPOSED

SYMBOL	DESCRIPTION
	2 X 4 LED FIXTURE
	CAN STYLE FIXTURE
	EXHAUST AIR GRILLE
	SUPPLY AIR DIFFUSER
	HANGING LED FIXTURE
OS	OCCUPANCY SENSOR
	WIRELESS ACCESS POINT
	EXIT SIGN - CEILING MOUNTED
	CAMERA
SD HD	CEILING MOUNTED SMOKE/HEAT DETECTOR
S	FIRE ALARM WITH STROBE ONLY
H	FIRE ALARM WITH HORN AND STROBE
H S	WALL MOUNTED FIRE ALARM WITH HORN AND STROBE

1. REFER TO PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS FOR COMPLETE SCOPE OF CEILING PENETRATIONS AND FIXUTRES.
2. REFER TO PROJECT SPECIFICATIONS FOR COMPLETE DESCRIPTION OF CEILING MATERIAL

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SMITH SINNETT ARCHITECTURE, P.A. CERT. NO. 50172 RALEIGH NORTH CAROLINA CORPORATION

CHARLES TENNANT REGISTERED ARCHITECT 13798 NORTH CAROLINA RALEIGH 4/27

BID/PERMIT SET

THIS DRAWING IS FORMATTED TO BE PRINTED ON A 24" X 36" SHEET

ONSLOW COUNTY SCHOOLS
TREXLER MIDDLE SCHOOL RENOVATION & SITE IMPROVEMENTS
112 E FOY STREET RICHLANDS, NC 28574

ID	DATE	DESCRIPTION
A	03/02/2023	ADDENDUM 1

DRAWN BY: AC
CHECKED BY: CWT

ENLARGED RESTROOM PLANS AND ELEVATIONS

2022017 20 Feb 2023

A4-01

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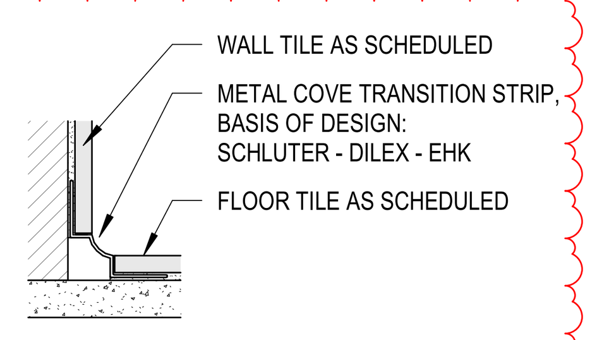
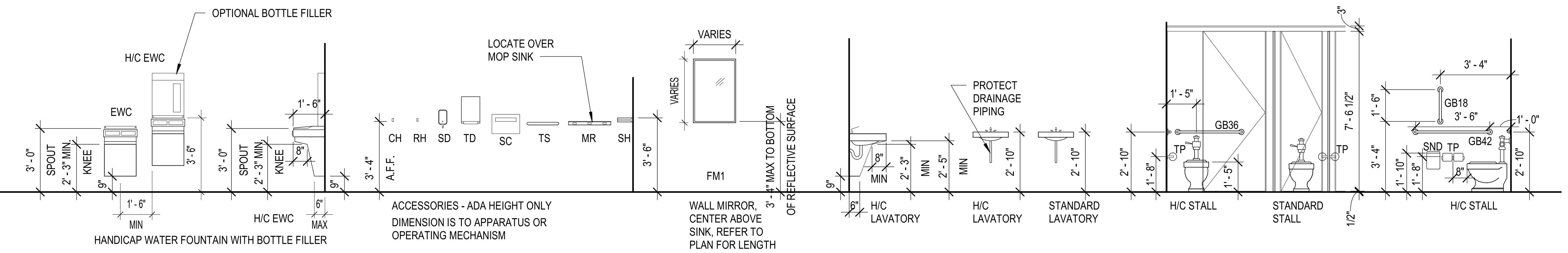


6 A4-02 SCHLUTER DETAIL
3" = 1'-0"



ACCESSORY SCHEDULE						
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SD	TBD	SURFACE-MOUNTED SOAP DISPENSER	OFOI	40" A.F.F. TO POINT OF DISPENSION	TBD	
TD	TBD	SURFACE MOUNTED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE	OFOI	40" A.F.F. TO POINT OF DISPENSION	TBD	
TP	TBD	SURFACE MOUNTED TOILET TISSUE DISPENSER	OFOI	20" TO POINT OF DISPENSION	TBD	

SCHEDULE ABBREVIATIONS

CFCI - CONTRACTOR FURNISHED / CONTRACTOR INSTALLED
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NOTES

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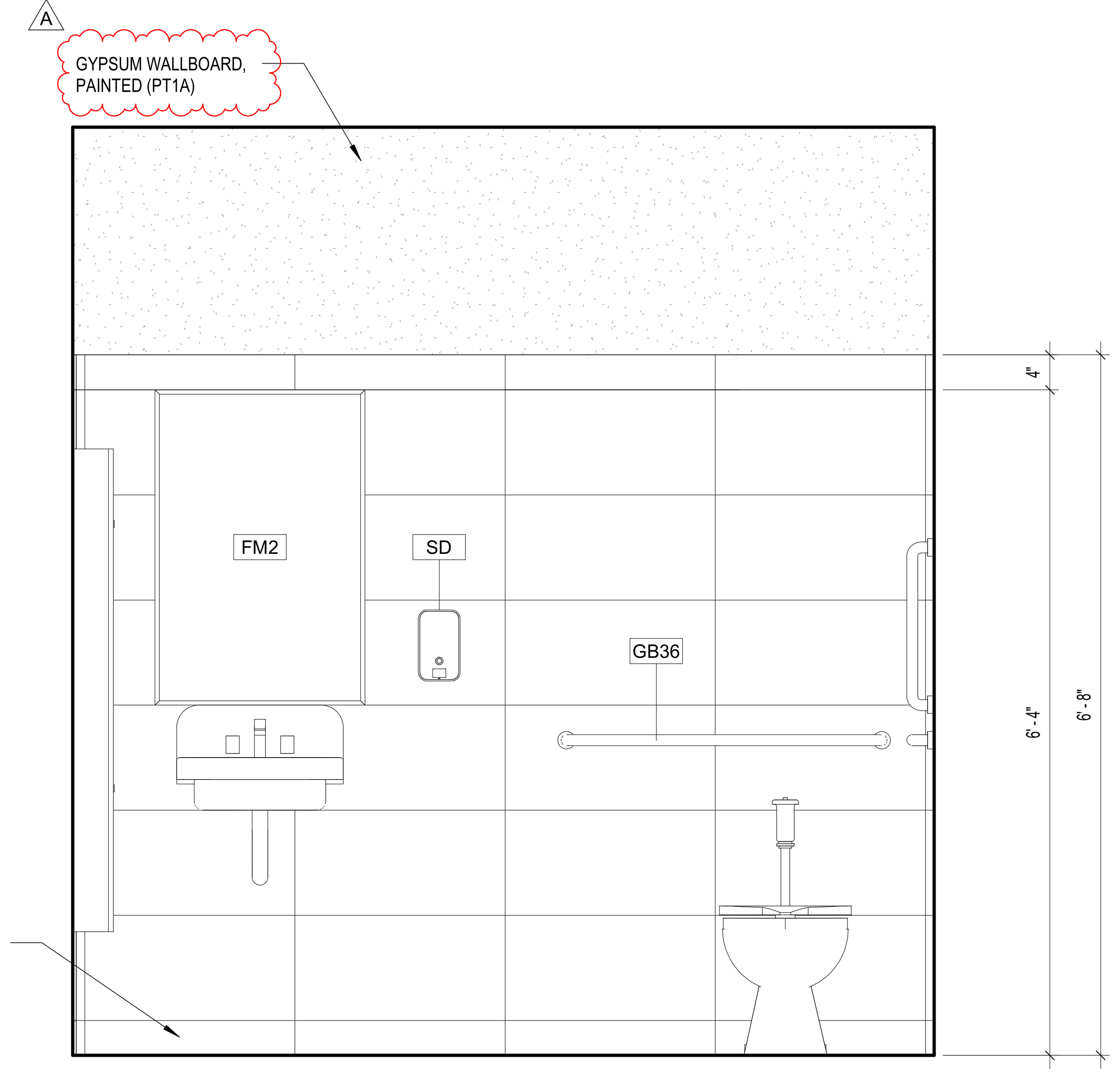
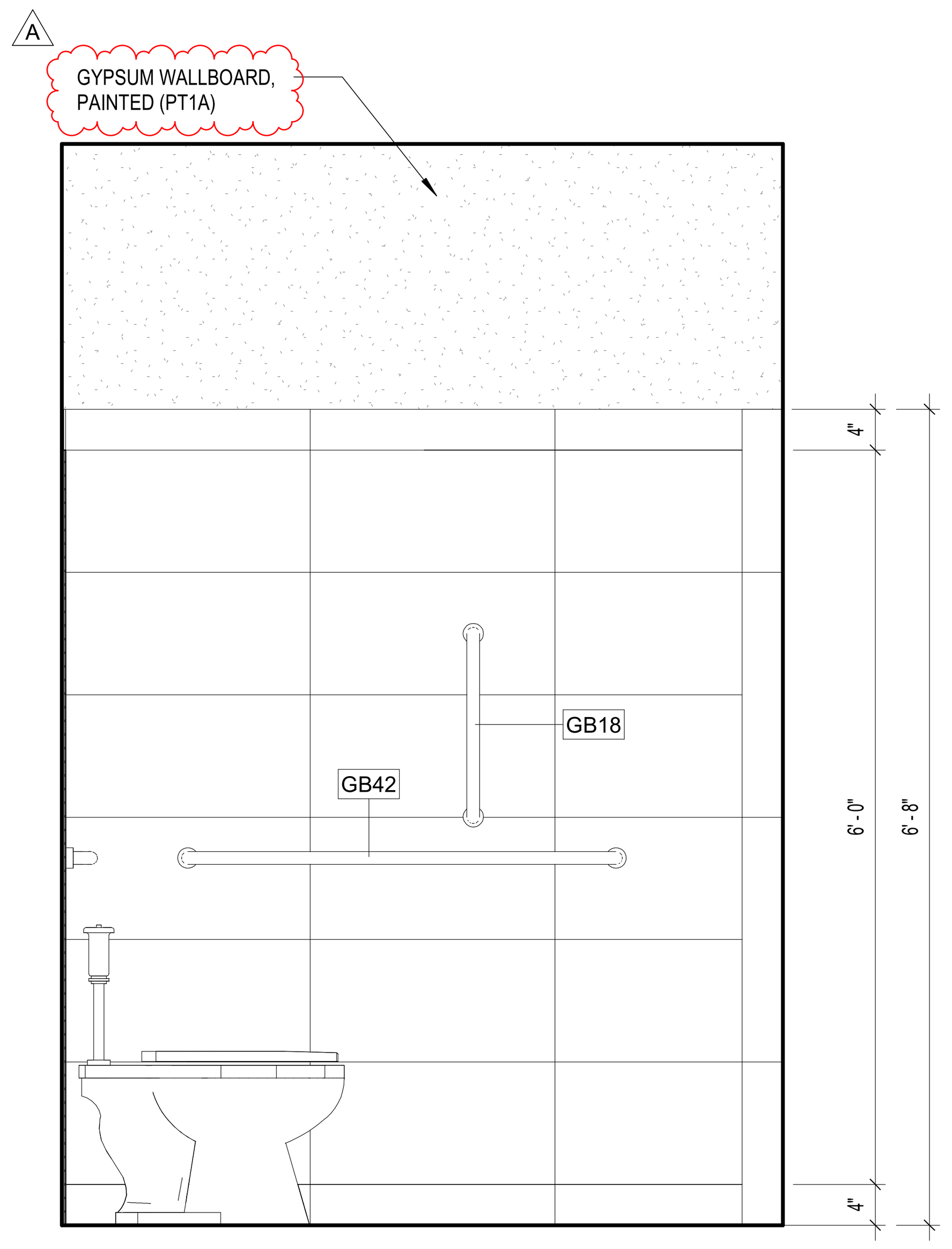
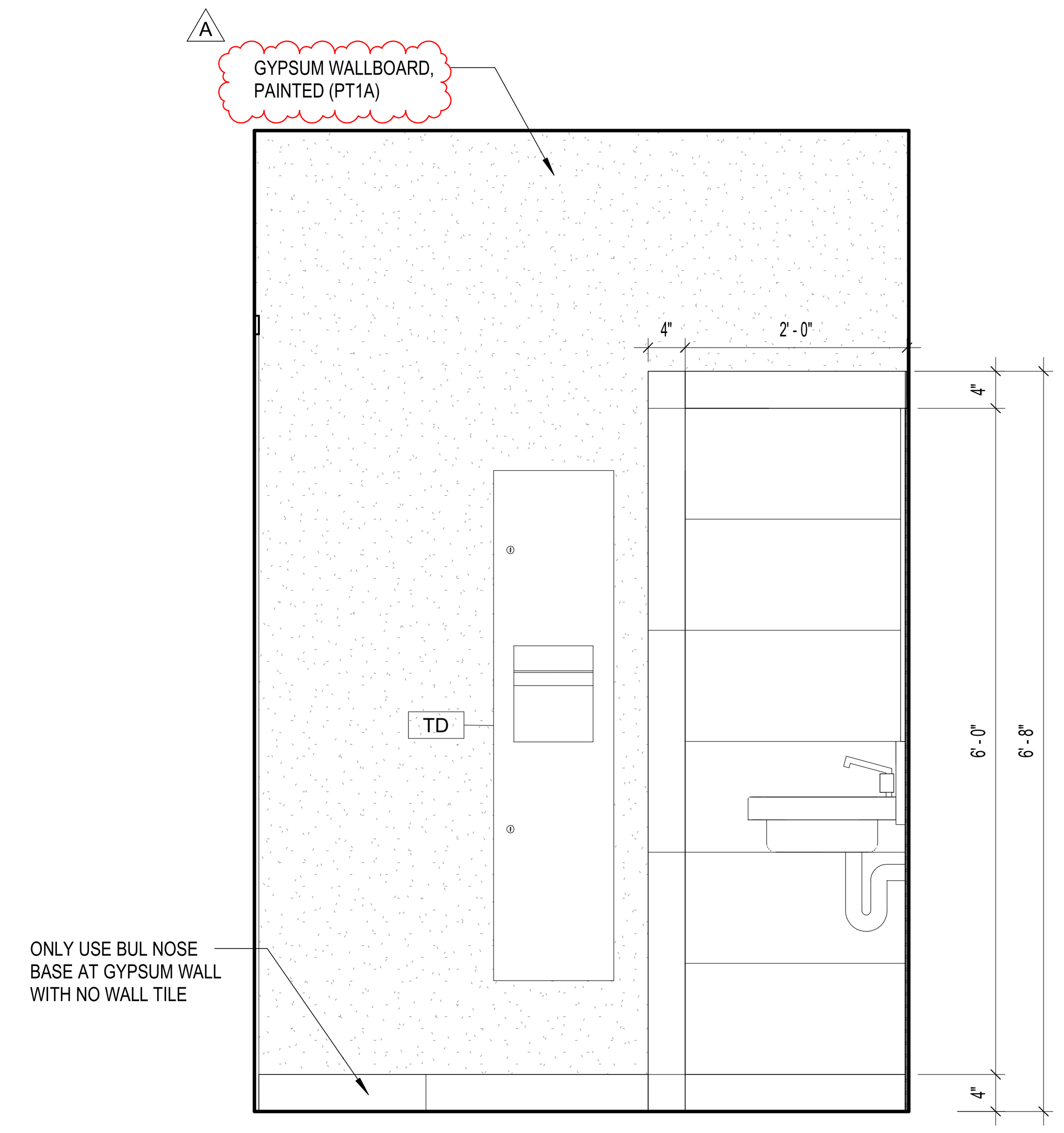


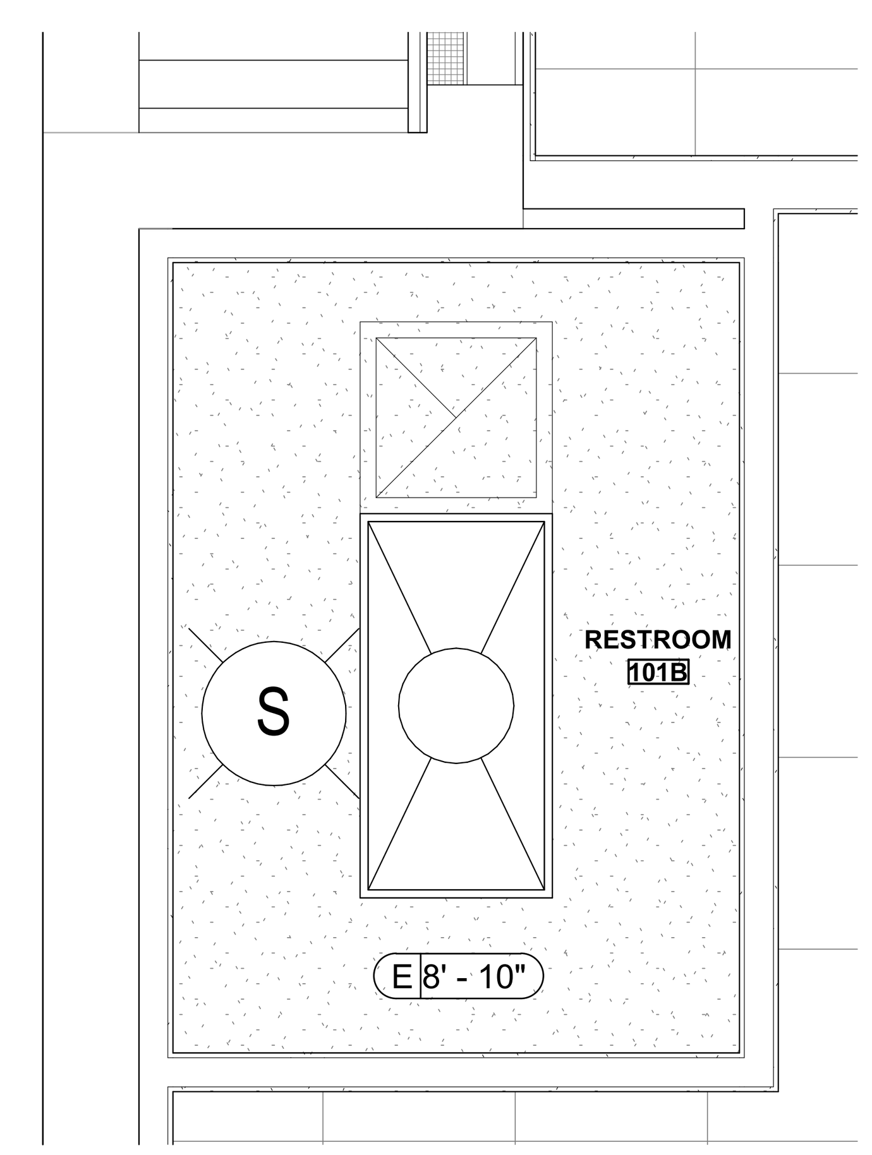
5 A4-02 ELEVATION OF TEACHER'S RESTROOM
3/4" = 1'-0"



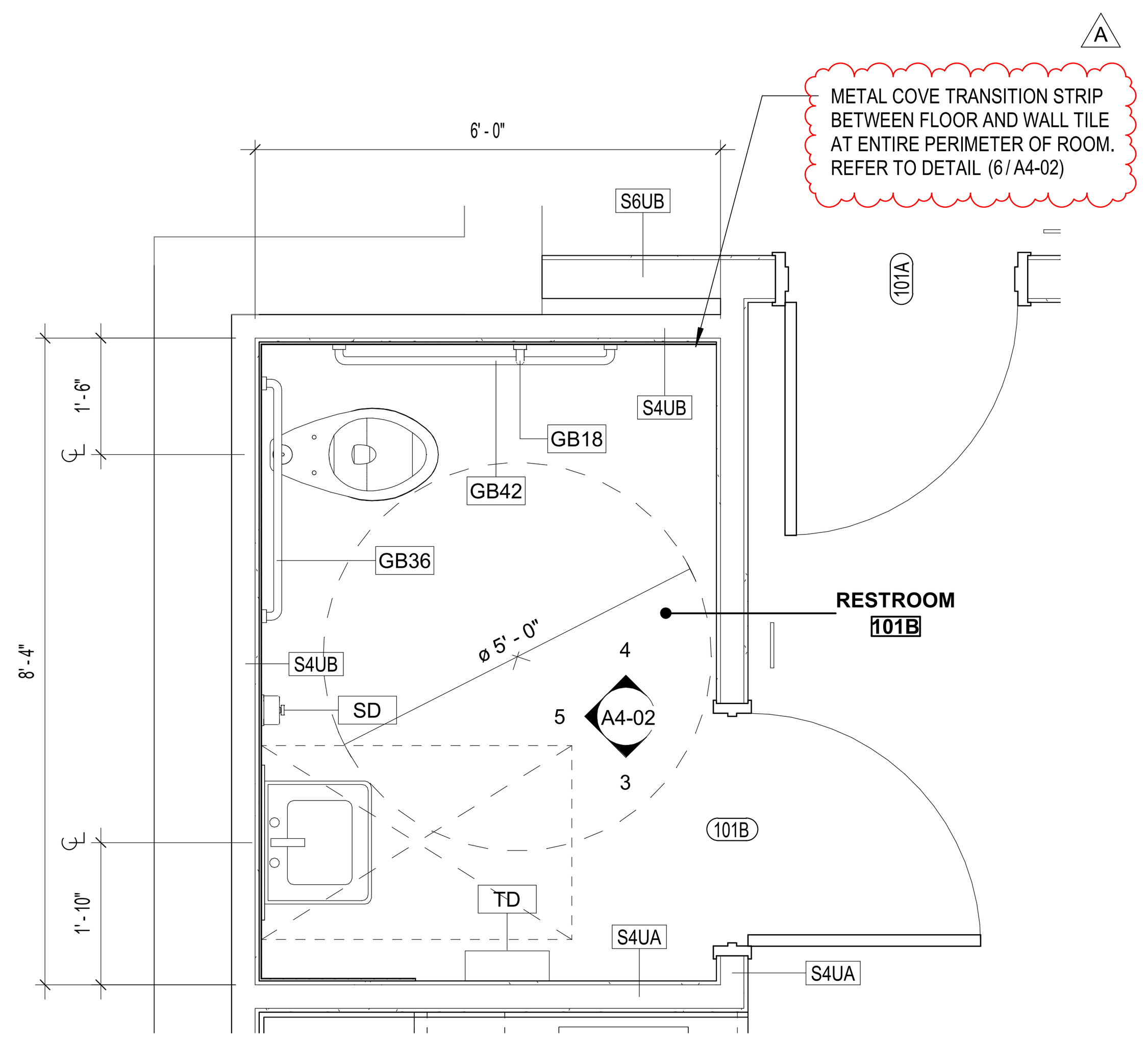
4 A4-02 ELEVATION OF TEACHER'S RESTROOM
3/4" = 1'-0"



3 A4-02 ELEVATION OF TEACHER'S RESTROOM
3/4" = 1'-0"



2 A4-02 TEACHER'S RESTROOM RCP
1/2" = 1'-0"



1 A4-02 TEACHER'S RESTROOM
1/2" = 1'-0"

REFLECTED CEILING LEGEND AND NOTES

A 10'-0" — CEILING TYPE / CEILING HEIGHT

SYMBOL	TYPE	DESCRIPTION
	A	ACT-1, 2x2 CEILING TILE, WHITE FINISH
	B	NOT USED
	C	NOT USED
	D	GYPSUM WALLBOARD CEILING SYSTEM
	E	MOISTURE RESISTANT GYP WALLBOARD
	F	NOT USED
	G	METAL SOFFIT PANEL - PERFORATED
	H	NOT USED
	J	EXPOSED

SYMBOL	DESCRIPTION
	2 X 4 LED FIXTURE
	CAN STYLE FIXTURE
	EXHAUST AIR GRILLE
	SUPPLY AIR DIFFUSER
	HANGING LED FIXTURE
OS	OCCUPANCY SENSOR
	WIRELESS ACCESS POINT
	EXIT SIGN - CEILING MOUNTED
	CAMERA
SD HD	CEILING MOUNTED SMOKE/HEAT DETECTOR
S	FIRE ALARM WITH STROBE ONLY
H	FIRE ALARM WITH HORN AND STROBE
H	WALL MOUNTED FIRE ALARM WITH HORN AND STROBE

1. REFER TO PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS FOR COMPLETE SCOPE OF CEILING PENETRATIONS AND FIXTRES.
2. REFER TO PROJECT SPECIFICATIONS FOR COMPLETE DESCRIPTION OF CEILING MATERIAL

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SMITH SINNETT ARCHITECTURE, PA — ARCHITECTURAL CORPORATION — CERT. NO. 50172 — RALEIGH — NORTH CAROLINA

CHARLES WHITMAN TENNANT — REGISTERED ARCHITECT — 13798 — RALEIGH, NORTH CAROLINA — 2/20/23

BID/PERMIT SET

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ID	DATE	DESCRIPTION
A	03/02/2023	ADDENDUM 1

DRAWN BY: AC
CHECKED BY: CWT

ENLARGED TEACHER'S RESTROOM PLANS AND ELEVATIONS

2022017 20 Feb 2023

A4-02

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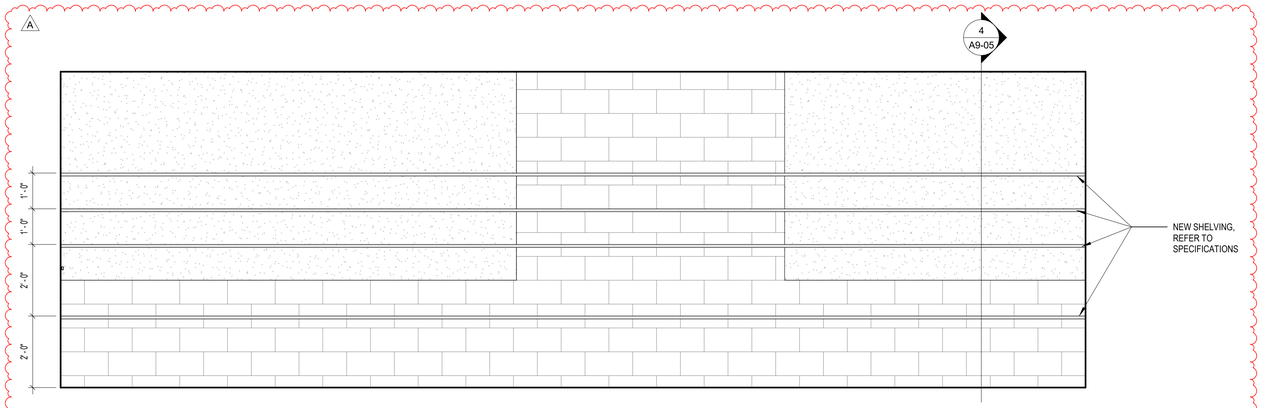

8 / A4-03 ELEVATION OF SHELVING IN STORAGE ROOM
1/2" = 1'-0"

CASEWORK NOTES AND LEGEND:

MARK	DESCRIPTION
B1	2'-0" DEEP BASE CABINET; TWO HINGED DOORS AND TWO 6" HIGH DRAWERS AND ONE ADJUSTABLE SHELF. PROVIDE FIXED VERTICAL DIVIDER IN UNITS MORE THAN 3'-0" WIDE. HEIGHT/WIDTH VARIES.
B4	2'-0" DEEP BASE CABINET; ONE HINGED DOOR WITH ONE ADJUSTABLE SHELF, ONE 6" HIGH DRAWER. HEIGHT/WIDTH VARIES.
B7	LAMINATED PARTICLE BOARD PANELS TO MATCH ADJACENT CASEWORK. ATTACH WITH FINISH SCREWS TO 2X2 BLOCKING. ATTACHED TO SIDE OF CASEWORK OR PROVIDE FINISHED END PANEL TO FLOOR. CLEAR WIDTH NO LESS THAN 30 INCHES FOR ADA SINK ACCESS. SEE SECTION THROUGH ADA LAVATORY.
B8	2'-0" DEEP BASE CABINET; FOUR DRAWERS. HEIGHT/WIDTH VARIES.
W1	1'-0" DEEP WALL CABINET; TWO HINGED DOORS AND TWO ADJUSTABLE SHELVES. PROVIDE FIXED VERTICAL DIVIDER IN UNITS MORE THAN 3'-0" WIDE. HEIGHT/WIDTH VARIES. FOR HEIGHTS OVER 4'-0" INCREASE TO THREE ADJUSTABLE SHELVES.
W5	1'-0" DEEP, OPEN SHELVING; TWO ADJUSTABLE SHELVES. HEIGHT/WIDTH VARIES. FOR HEIGHTS OVER 4'-0" INCREASE TO THREE ADJUSTABLE SHELVES.
W6	1'-0" DEEP CORNER WALL CABINET; ONE HINGED DOOR & TWO ADJUSTABLE SHELVES. HEIGHT VARIES. FOR HEIGHTS OVER 4'-0" INCREASE TO THREE ADJUSTABLE SHELVES. FOR HEIGHTS LESS THAN 2'-0" REDUCE TO ONE ADJUSTABLE SHELF.

1. ALL CASEWORK SHOWN IS MANUFACTURED PLASTIC LAMINATE CASEWORK, TYPICAL UNLESS NOTED OTHERWISE.
2. G.C. TO PROVIDE NECESSARY BLOCKING AND REINFORCING PLATES IN GWB WALLS.

REFLECTED CEILING LEGEND AND NOTES

A 10'-0" — A: CEILING TYPE; 10'-0": CEILING HEIGHT

SYMBOL	TYPE	DESCRIPTION
	A	ACT-1, 2x2 CEILING TILE, WHITE FINISH
	B	NOT USED
	C	NOT USED
	D	GYPSUM WALLBOARD CEILING SYSTEM
	E	MOISTURE RESISTANT GYP WALLBOARD
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	H	NOT USED
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SYMBOL	DESCRIPTION
	2 X 4 LED FIXTURE
	CAN STYLE FIXTURE
	EXHAUST AIR GRILLE
	SUPPLY AIR DIFFUSER
	HANGING LED FIXTURE
OS	OCCUPANCY SENSOR
	WIRELESS ACCESS POINT
	EXIT SIGN - CEILING MOUNTED
	CAMERA
SD HD	CEILING MOUNTED SMOKE/HEAT DETECTOR
S	FIRE ALARM WITH STROBE ONLY
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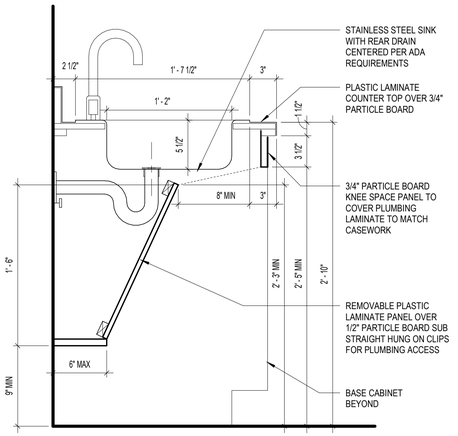
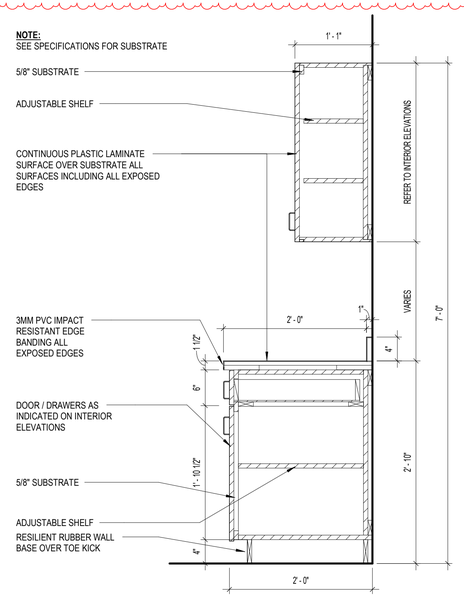
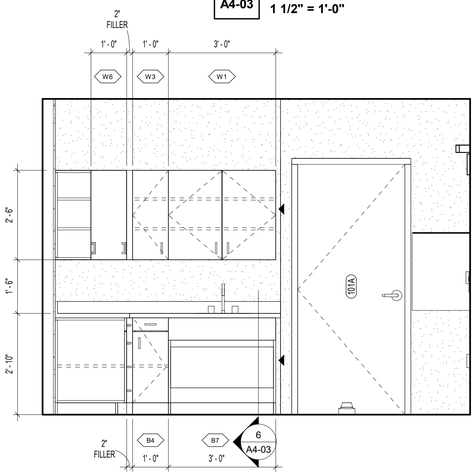


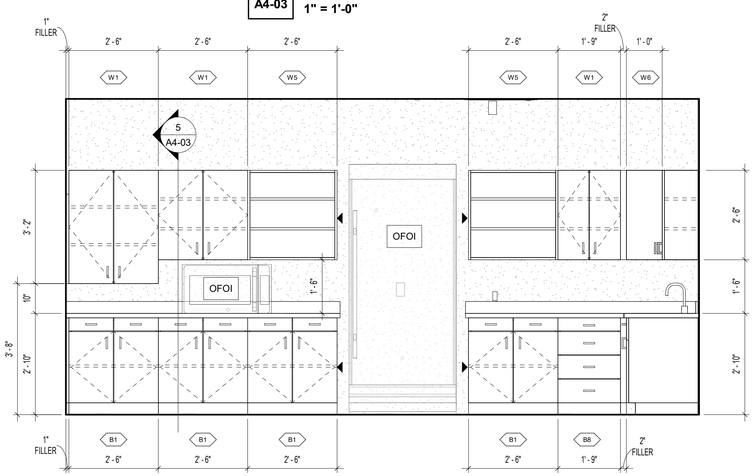
6 / A4-03 ADA LAVATORY SECTION DETAIL
1 1/2" = 1'-0"



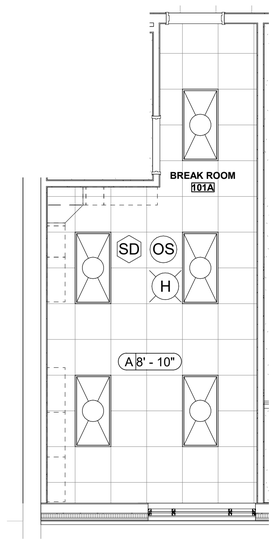
5 / A4-03 TYPICAL CABINET SECTION
1" = 1'-0"



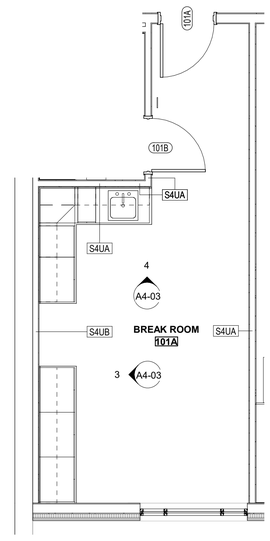
4 / A4-03 SIDE ELEVATION AT TEACHER'S BREAKROOM
1/2" = 1'-0"



3 / A4-03 ELEVATION AT TEACHER'S BREAKROOM
1/2" = 1'-0"



2 / A4-03 TEACHER'S BREAKROOM RCP
1/4" = 1'-0"



1 / A4-03 ENLARGED PLAN - TEACHER'S BREAKROOM
1/4" = 1'-0"

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CHARLES WHITMAN TENNANT NORTH CAROLINA REGISTERED ARCHITECT 13798 RALEIGH

BID/PERMIT SET

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112 E FOY STREET RICHLANDS, NC 28574

ID	DATE	DESCRIPTION
A	03/02/2023	ADDENDUM 1

DRAWN BY: AC
CHECKED BY: CWT

CASEWORK ELEVATIONS AND DETAILS

2022017 — 20 Feb 2023

A4-03

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GENERAL FINISH NOTES:

1. ALL GWB CEILINGS AND BULKHEADS TO BE PT-1, U.O.N.
2. FINISH MATERIALS SUBMITTED AS EQUALS TO THE BASIS OF DESIGN WILL BE APPROVED OR REJECTED BASED ON COLOR INTEGRITY AND TACTILE CHARACTERISTICS IN ADDITION TO TECHNICAL SPECIFICATIONS.
3. ROOMS THAT HAVE MILLWORK WITH MORE THAN THREE LAMINATE COLORS. EXACT LOCATION OF EACH TYPE TO BE DETERMINED DURING SHOP DRAWING PHASE.
4. FINISHES ARE CONTINGENT ON FINAL OWNER AND ARCHITECT APPROVAL.
5. SEE INTERIOR ELEVATIONS (A4-##, A4-##, & A4-##) FOR WALL PAINT LOCATIONS.
6. METAL FINISHING STRIPS TO BE USED ON ALL VERTICAL OUTSIDE EDGES & CORNERS OF WALL TILE.
7. FINISHED-EDGE TILE TO BE USED AT TOP COURSE OF WALL TILE.
8. ALL WALLS TO BE PAINTED WITH PT3 CHALKBOARD PAINT TO RECEIVE A LEVEL 5 GWB FINISH.
9. GC TO ENSURE LEVEL FLOOR FINISH AT ALL TILE TRANSITIONS.
10. PT1A TO BE USED ON ALL RESTROOM WALLS ABOVE AND ADJACENT TO WALL TILE.

FINISH LEGEND

WALL FINISHES BASED ON PLAN LOCATION — ROOM NAME / ROOM NUMBER (NORTH, EAST, SOUTH, WEST: FLOOR, BASE, SIGNAGE)

INDICATES ACCENT PAINT OR WALL TILE

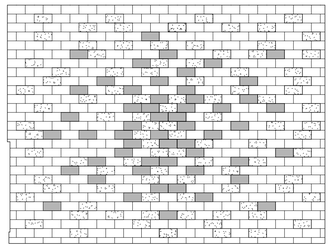
INDICATES WALL TO RECEIVE LEVEL 5 GWB FINISH

WALL FINISH		FLOOR FINISH	
PT1	INTERIOR FIELD PAINT	SC	SEALED CONCRETE
PT1A	INTERIOR FIELD EPOXY PAINT	VCT1	VINYL COMPOSITE TILE 1
PT2	ACCENT PAINT	VCT2	VINYL COMPOSITE TILE 2
PT3	CEILING PAINT	VCT3	VINYL COMPOSITE TILE 3
PT4	HM FRAME/DOOR PAINT	VCT4	VINYL COMPOSITE TILE 4
		VCTA	VINYL COMPOSITE TILE PATTERN
WT1	WALL TILE 1	FT1	FLOOR TILE 1
WT2	WALL TILE 2	REF	RESINOUS EPOXY
WT3	WALL TILE 3		

NOTE: CORRIDOR AND CLASSROOM BULKHEADS TO RECEIVE A LEVEL 5 GWB FINISH

WALL BASE		SURFACE FINISH	
RB	RUBBER BASE	PL1	PLASTIC LAMINATE
TB	TILE COVE BASE	PL2	PLASTIC LAMINATE
REB	INTEGRATED EPOXY RESIN BASE	SS1	SOLID SURFACE (WINDOW STOOL ONLY)
		WINDOW TREATMENT	
		RS	ROLLER SHADES

TYPICAL VCTA PATTERN

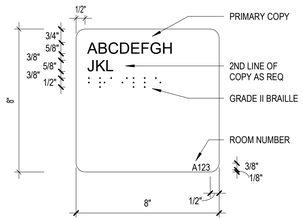


VCT 1 (12"x24") 60%

VCT 4 (12"x24") 25%

VCT 3 (12"x24") 15%

SIGN TYPE A



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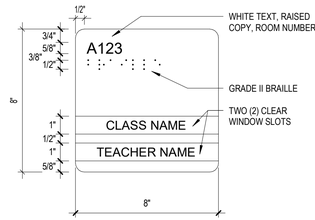

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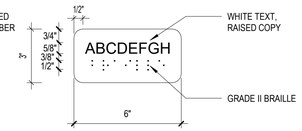

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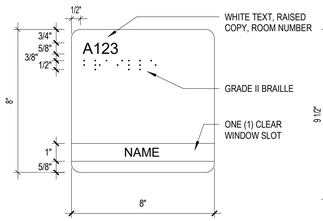
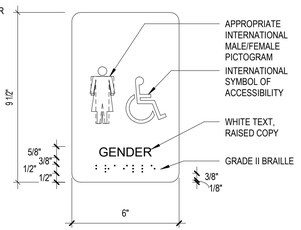
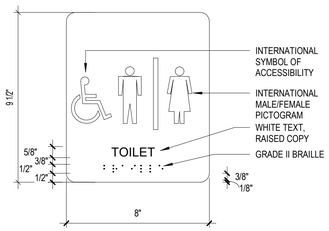


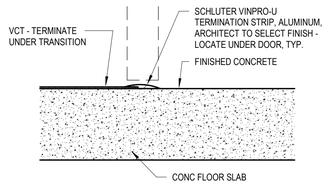
SIGN TYPE E



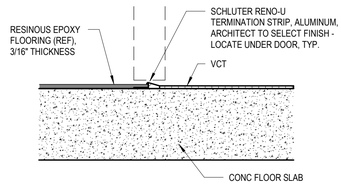
SIGN TYPE F



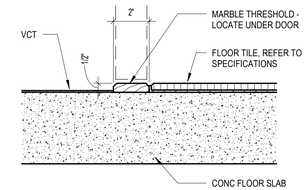
8 / A7-01 — 7-002 SIGNAGE LEGEND / ELEVATIONS — 3" = 1'-0"



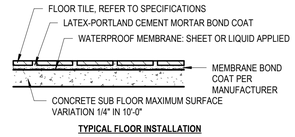
7 / A7-01 — VCT TO SEALED CONCRETE — 3" = 1'-0"



5 / A7-01 — VCT TO EPOXY — 3" = 1'-0"

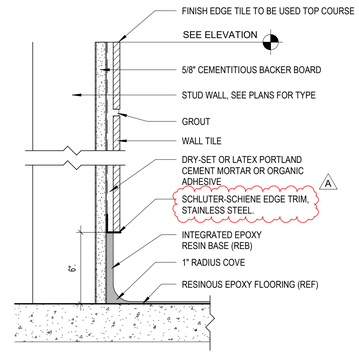


6 / A7-01 — VCT TO THIN SET PCT — 3" = 1'-0"

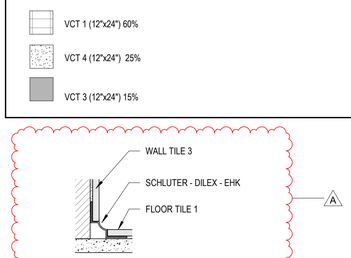


TYPICAL FLOOR INSTALLATION

4 / A7-01 — FLOOR TILE INSTALLATION — 3" = 1'-0"

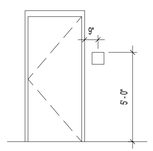


3 / A7-01 — TILE INSTALLATION @ RESINOUS FLOORING — 3" = 1'-0"

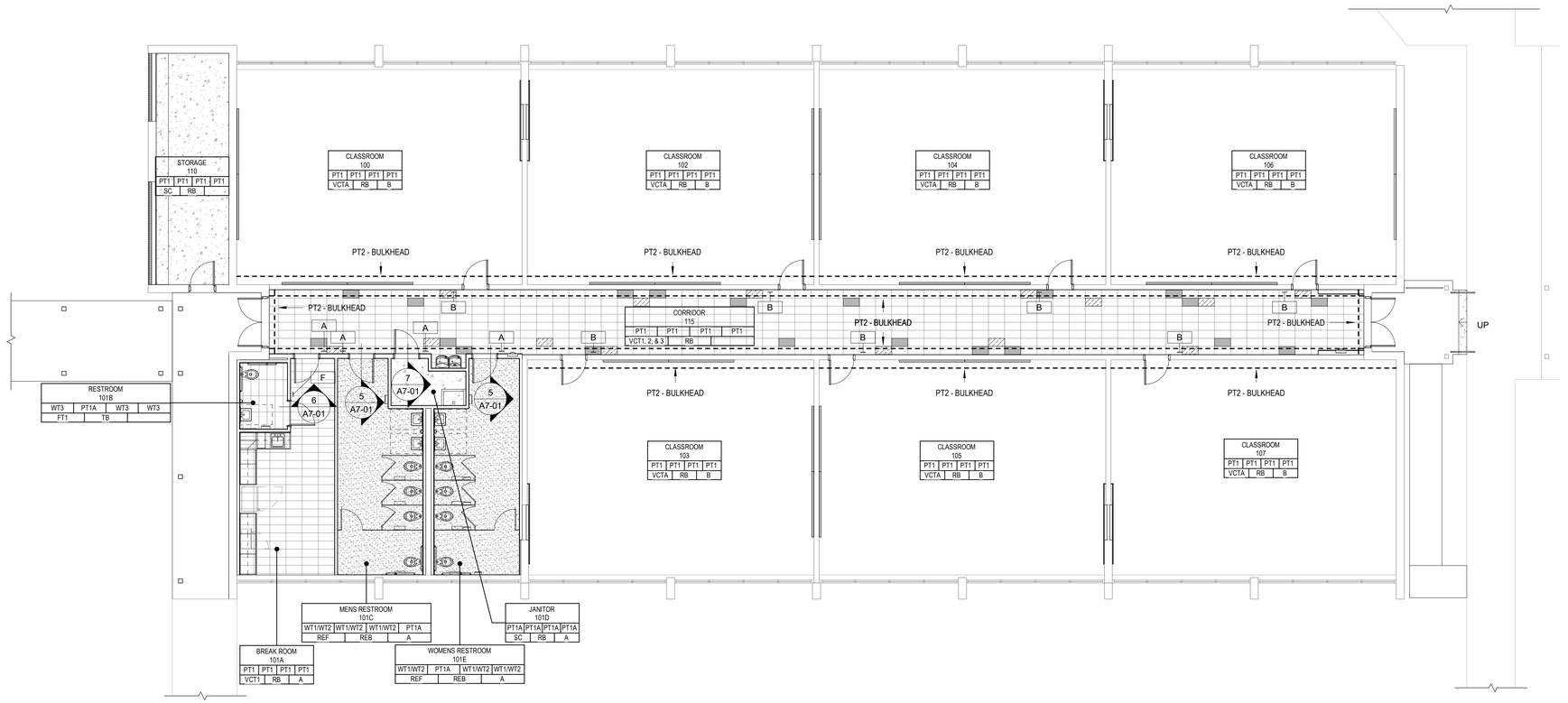


9 / A7-01 — SCHLUTER DETAIL — 3" = 1'-0"

SIGNAGE ELEVATION & NOTES



2 / A7-01 — SIGNAGE ELEV & NOTES — 1/4" = 1'-0"



1 / A7-01 — 1ST FLOOR FINISH PLAN — 1/8" = 1'-0"

smith sinnett ARCHITECTURE

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info@smithsinnett.com

BID/PERMIT SET

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ONSLOW COUNTY SCHOOLS
TREXLER MIDDLE SCHOOL RENOVATION & SITE IMPROVEMENTS
112 E FOY STREET RICHLANDS, NC 28574

ID	DATE	DESCRIPTION
A	03/02/2023	ADDENDUM 1

DRAWN BY: AC
CHECKED BY: CWT

FINISH PLAN

2022017 — 20 Feb 2023

A7-01

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GENERAL DEMOLITION NOTES:

1. ALL CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR WHERE DEMOLITION IS TO OCCUR. THE CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY INCONSISTANCIES IN WRITING PRIOR TO STARTING ANY WORK.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WEEKLY AND/OR DAILY REMOVAL AND PROPER DISPOSAL OF ALL DEBRIS ACCUMULATED DURING DEMOLITION AND CONSTRUCTION.

3. REMOVAL OF HAZARDOUS MATERIAL AND DEBRIS SHALL BE AS FOLLOWS:
   A. ALL HAZARDOUS SHALL BE REMOVED BY THE CONTRACTOR PRIOR TO PROJECT COMPLETION. CONTRACTOR SHALL FOLLOW ALL THE REQUIREMENTS TO LEGALLY DISPOSE OF ALL HAZARDOUS MATERIALS.
   B. THE CONTRACTOR IS REQUIRED TO PERFORM ABATEMENT AND REMEDIATION ACTIVITIES INSIDE NEGATIVEAIR PRESSURIZED ENCLOSURES.
   C. ABATEMENT OF ALL HAZARDOUS MATERIALS SHALL OCCUR PRIOR TO BUILDING DEMOLITION. BOTH ACTIVITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE PROJECT SHALL BE PHASED SUCH THAT DEMOLITION CAN FOLLOW ABATEMENT IN THE FIRST AREA OF THE BUILDING WHILE ABATEMENT IS OCCURING IN THE NEXT AREA OF THE BUILDING.

   ASBESTOS - REFER TO ASBESTOS REMOVAL DESIGN AND SPECIFICATIONS
   LEAD - REFER TO LEAD CLEANING DESIGN AND SPECIFICATIONS
   BULBS - FLUORESCENT, MERCURY VAPOR, SODIUM, ETC. BULBS WILL BE HANDLED AS UNIVERSAL WASTE. UPON REMOVAL FROM LIGHTING DEVICES, THEY IMMEDIATELY MUST BE PUT INTO APPROPRIATE CONTAINERS AND LABELED ASUSED LAMPS. A UNIVERSAL WASTE LABEL WILL BE ATTACHED AND ACCUMULATION DATE FILLED IN ON THE LABEL. BOX MUST BE CLOSED AND TAPED SHUT AT ALL TIMES UNLESS BULBS ARE BEING ADDED. BULBS UNLESS BROKEN SHALL BE RECYCLED. ANY BROKEN OR DAMAGED BULBS WILL BE CONTAINERIZED IN PLASTIC OR METAL CONTAINERS FOR DISPOSAL AS HAZARDOUS WASTE
   BALLAST - ALL BALLAST WILL BE CONTAINERIZED AND RECYCLED

4. ANY FLOOR, CEILING, WALL OR OTHER MATERIALS INCLUDING FINISHES IN AREAS TO REMAIN ARE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT. ANY MATERIALS DAMAGED DURING CONSTRUCTION OR DEMOLITION, SHALL BE RETURNED TO THEIR ORIGINAL STATE, OR IMPROVED AS INDICATED BY THE OWNER OR ARCHITECT, OR REPLACED WITH A NEW MATERIAL TO MATCH ADJACENT MATERIALS, TYPICAL.

5. CONTRACTOR SHALL PATCH AND REPAIR ALL EXISTING SURFACES TO REMAIN AND MATERIALS EXPOSED TO VIEW WHERE OTHER ITEMS OR MATERIALS HAVE BEEN REMOVED.

6. REFER TO PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL AND COMPLETE SCOPE OF DEMOLITION THAT MAY OR MAY NOT BE NOTED ON THE ARCHITECTURAL DEMOLITION PLAN AND NOTES.

7. CONTRACTOR SHALL REMOVE ALL WALL MOUNTED FIXTURES OR ITEMS UNLESS OTHERWISE NOTED. ALL WALLS SHALL BE REPAIRED, AND VOIDS FILLED AFTER FIXTURE REMOVAL. ALL FINISHES SHALL MATCH ADJACENT SURFACES. REMOVE ALL FOREIGN MATTER, SHELVING, LOOSE DEBRIS INCLUDING TAPE, ADHESIVE, NAILS, SCREWS, ETC. FROM WALLS. SCRAPE, WIRE BRUSH, AND SAND SMOOTH. WASH ALL PAINTED SURFACES TO REMOVE ANY "FILM OR RESIDUE". PREPARE SURFACES TO PROVIDE A MAXIMUM DEGREE OF NEW PAINT ADHESION. PATCH AND REPAIR ALL VOIDS IN PREPARATION FOR NEW FINISHES.

8. ALL FIXTURES, WALLS AND PORTIONS OF WALLS SHOWN AS DASHED LINES OR LABELED SHALL BE DEMOLISHED UNLESS ELEMENTS REMOVED OR REPLACED. CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND BRACING AND IS RESPONSIBLE FOR ANY FAILURE DUE TO LACK OF PROPER BRACING.

9. DURING THE BIDDING PROCESS, CONTRACTORS SHALL TAKE NOTE OF EXISTING PLUMBING MECHANICAL, AND ELECTRICAL ITEMS IN AREAS TO BE RENOVATED. ITEMS INCLUDE BUT ARE NOT LIMITED TO WIRES, CONDUITS, PIPES, THERMOSTATS, FIRE ALARM DEVICES, PANEL CANS, ETC. THESE HAVE BEEN IDENTIFIED IN THE DEMOLITION DRAWINGS FOR ARCHITETURE, PLUMBING, MECHANICAL, AND/OR ELECTRICAL. FOR ITEMS NOT SHOWN, CONTRACTOR SHALL WORK WITH THE ARCHITECT AND OWNER TO DETERMINE IF THE ITEM IS STILL IN USE ITEMS WHICH ARE NOTED TO BE REMOVED AND STORED FOR LATER REINSTALLATION SHALL BE TAGGED AND LISTED ON AN ITEMIZED LIST GIVEN TO THE OWNER AND ARCHITECT.

10. THE GENERAL CONTRACTOR SHALL COORDINATE THE DEMOLITION OF THE EXISTING BUILDING AREAS WITH THE ARCHITECT AND OWNER. THE CONTRACTOR SHALL COORDINATE AFTER HOURS WORK AND OBTAIN WRITTEN OWNER PERMISSION FOR NIGHT AND WEEKEND WORK.

11. CONTRACTOR SHALL ENSURE WATER-TIGHT INTEGRITY OF THE TEMPORARY ENCLOSURE SYSTEMS AND MAINTAIN THEM THROUGH THE ENTIRETY OF CONSTRUCTION TO PREVENT THE INTRUSION OF WATER AND THE ELEMENTS INTO THE BUILDING.

12. ALL EXISTING FIRE EXTINGUISHER AND BRACKETS SHALL REMAIN AND BE INSTALLED IN THEIR CURRENT LOCATION UNLESS SHOWN ON THE PLANS TO RELOCATE.

13. CONTRACTOR SHALL PATCH AND FILL IN ANY VOIDS LEFT FROM THE DEMOLITION OF ANY PLUMBING, MECHANICAL, OR ELECTRICAL ITEMS. REFER TO PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS FOR COMPLETE SCOPE OF DEMOLITION.

DEMOLITION SPECIFIC AREA NOTES:

6	REMOVE EXISTING DOOR, FRAME, TRANSOM, & HARDWARE IN ITS ENTIRETY. PREPARE EXISTING WALL TO RECEIVE A NEW FRAME AND PREPARE SURROUNDING AREA TO RECEIVE NEW FINISH SPECIFIED OR IF NO FINISH IS SPECIFIED MATCH EXISTING. PROVIDE DEMOLITION MASONRY TOOTHING AS NECESSARY TO INSTALL NEW FRAME.
9	REMOVE EXISTING WINDOW, GLAZING, BLINDS, FRAME AND ITS ASSOCIATED PARTS IN ITS ENTIRETY. REFER TO ASBESTOS REMOVAL DESIGN AND SPECIFICATIONS FOR INSTRUCTIONS ON THE ASBESTOS WINDOW GLAZING AND FRAME CAULK. PREPARE EXISTING WALL TO RECIEVE A NEW FRAME OR METAL PANEL INFILL ASSEMBLY. PREPARE SURROUNGING AREA TO RECIEVE NEW FINISH SPECIFIED OR IF NO FINISH SPECIFIED, MATCH EXISTING. WINDOW OPENING SHALL BE SECURED WITH EITHER A WEATHER PROOF TEMPORARY PARTITION OR THE PERMANENT FRAME AND GLAZING.

DEMOLITION LEGEND:

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
#	DEMOLITION KEYED NOTE	- - - - - - - -	EXISTING TO BE REMOVED DURING DEMOLITION
———	EXISTING TO REMAIN		

NOTES:

1. ALL INTERIOR WALL TYPES TO BE 'S4UA' UNLESS OTHERWISE NOTED.
2. WALL DIMENSIONS ARE TO FACE OF METAL STUD, FACE OF CONCRETE MASONRY UNIT (CMU), OR CENTERLINE OF COLUMN.
3. ALL METAL STUD WALLS TERMINATING AT BOTTOM OF DECK ARE TO PROVIDE A DEFLECTION TRACK SECURED TO THE UNDERSIDE OF THE DECKING, NEST TOP TRACK BUT DO NOT ATTACH TO DEFLECTION TRACK. FILL FLUTE IN METAL DECK WHERE REQUIRED.
4. ALL WALLS EXTEND TO DECK AND ARE BRACED TO DECK AT HEAD ON ALTERNATE STUDS OR 32" OC FOR CMU WALLS, UNLESS OTHERWISE NOTED.
5. CONTROL JOINTS SHALL BE AS SHOWN ON PLANS AND ELEVATIONS OR SPACED AT A MINIMUM OF 20'-0" OC AND A MAXIMUM OF 32'-0" OC WITH ONE CONTROL JOINT LOCATED WITHIN 3'-4" OF ANY CORNER. FOR INTERIOR GYPSUM WALL CONTROL JOINTS SEE DETAIL
6. SEE FINISH SCHEDULE FOR WALL, FLOOR, BASE, AND CEILING TYPES AND FINISHES.
7. REFER TO STRUCTURAL DRAWINGS FOR LOCATION OF REINFORCING, BOND BEAMS, BRACING, ETC.
8. ALL EXTERIOR SIDEWALKS SHALL SLOPE AWAY FROM THE BUILDING AT 1/4" PER FOOT, MINIMUM.
9. ALL EXTERIOR WINDOWS TO HAVE ROLLER SHADE BLINDS UNLESS OTHERWISE NOTED, REFER TO SPECIFICATIONS.
10. FURNITURE AND EQUIPMENT SHOWN DASHED ON PLANS IS NOT IN CONTRACT (NIC). GC TO PROVIDE WOOD BLOCKING FOR ALL WALL/CEILING MOUNTED ACCESSORIES.
11. FIELD VERIFY FINAL ROOM DIMENSIONS PRIOR TO CASEWORK FABRICATION.
12. NOT USED
13. ALL CERAMIC TILE TO HAVE CONTROL JOINTS THAT ALIGN WITH CONTROL JOINTS IN CONCRETE SLAB.
14. THERE SHALL BE NO PENETRATIONS IN THROUGH WALL FLASHING.
15. DOOR JAMB FROM INTERSECTING WALLS: STUD - 4" UNLESS OTHERWISE NOTED

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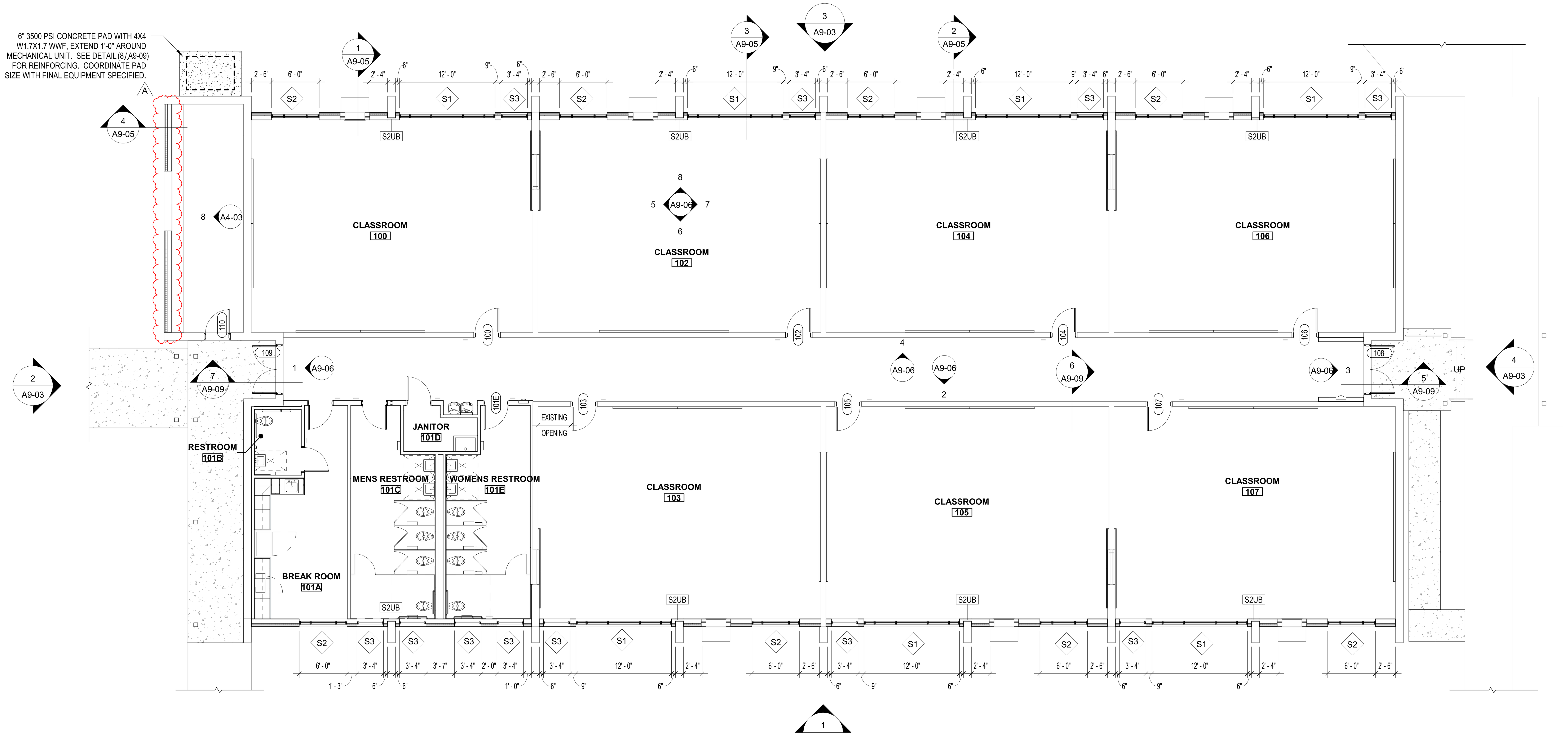
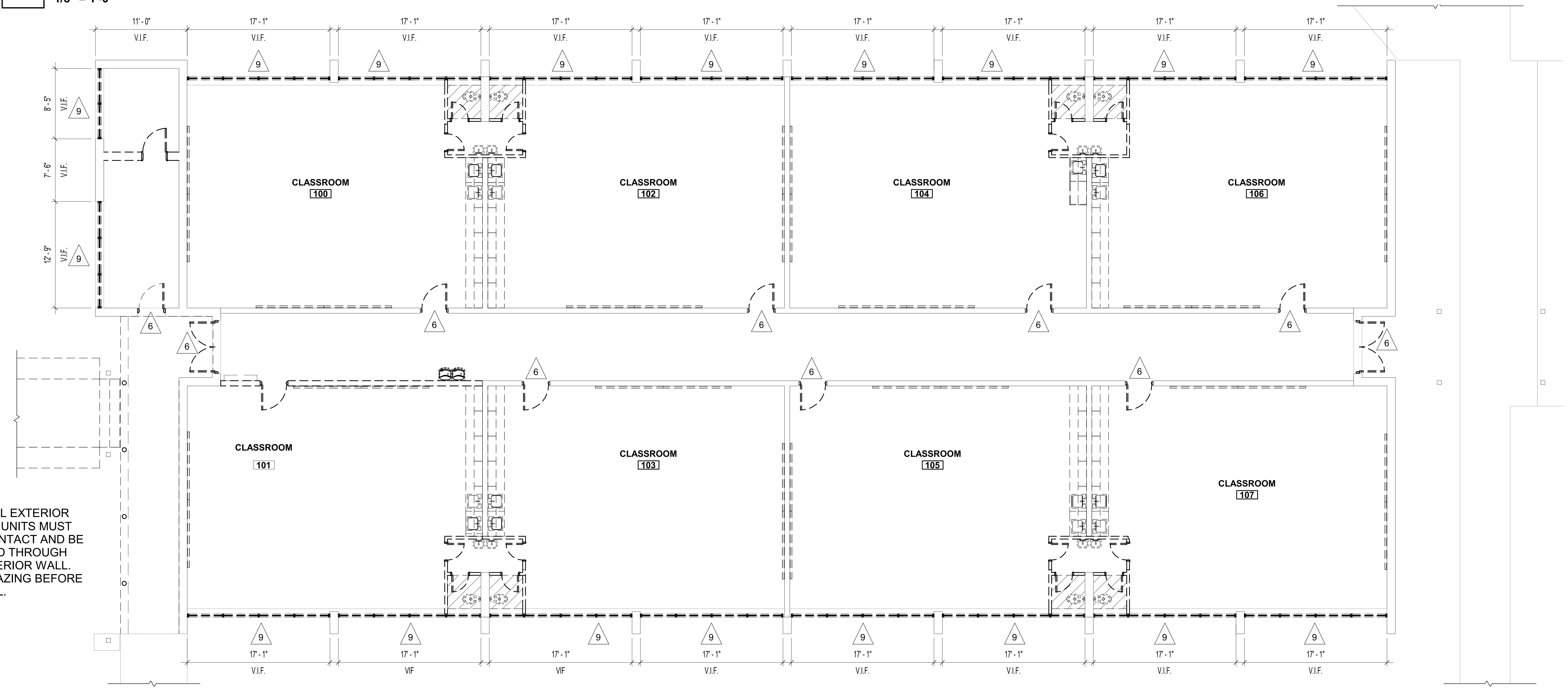


2 / A9-01 RENOVATION PLAN - ALT 2
1/8" = 1'-0"



NOTE: ALL EXTERIOR GLAZING UNITS MUST REMAIN INTACT AND BE REMOVED THROUGH THE EXTERIOR WALL. TAPE GLAZING BEFORE REMOVAL.

1 / A9-01 DEMO PLAN - ALT 2
1/8" = 1'-0"

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SMITH SINNETT ARCHITECTURE, PA — REGISTERED ARCHITECTURAL CORPORATION — NORTH CAROLINA — CERT. NO. 50172 — RALEIGH

CHARLES WHITMAN TENNANT — REGISTERED ARCHITECT — 13798 — RALEIGH, NORTH CAROLINA, N.C. — 2/20/23

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ONSLOW COUNTY SCHOOLS
TREXLER MIDDLE SCHOOL RENOVATION & SITE IMPROVEMENTS
112 E FOY STREET RICHLANDS, NC 28574

ID	DATE	DESCRIPTION
A	03/02/2023	ADDENDUM 1

DRAWN BY: AC
CHECKED BY: CWT

FLOOR PLANS (ALTERNATE 2)

2022017
20 Feb 2023

A9-01

GENERAL DEMOLITION NOTES:

1. ALL CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR WHERE DEMOLITION IS TO OCCUR. THE CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY INCONSISTANCIES IN WRITING PRIOR TO STARTING ANY WORK.
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   ASBESTOS - REFER TO ASBESTOS REMOVAL DESIGN AND SPECIFICATIONS
   LEAD - REFER TO LEAD CLEANING DESIGN AND SPECIFICATIONS
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   BALLAST - ALL BALLAST WILL BE CONTAINERIZED AND RECYCLED
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DEMOLITION SPECIFIC AREA NOTES:

7	REMOVE EXISTING CEILING TILE, GRID, HANGERS AND ASSOCIATED PARTS IN ITS ENTIRETY, INCLUDING SECONDARY CEILING WHERE APPLICABLE. PREP AREA TO RECIEVE NEW CEILING.
10	REMOVE EXISTING WINDOW, GLAZING, FRAME AND ITS ASSOCIATED PARTS IN ITS ENTIRETY. PREP EXISTING WALL TO BE INFILLED WITH STUD WALL.
13	REMOVE ALL EXISTING LIGHTING FIXTURES, CEILING FANS, AND ALL ASSOCIATED PARTS IN ITS ENTIRETY, INCLUDING BUT NOT LIMITED TO CONNECTING CONDUIT. RETURN CEILING FANS TO OWNER . REFER TO ELECTRICAL FOR COMPLETE SCOPE OF DEMOLITION. REFER TO GENERAL DEMO NOTES FOR REQUIREMENTS ON BULB AND BALLAST DISPOSAL.

DEMOLITION LEGEND:

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
#	DEMOLITION KEYED NOTE	- - - - - -	EXISTING TO BE REMOVED DURING DEMOLITION
———	EXISTING TO REMAIN		

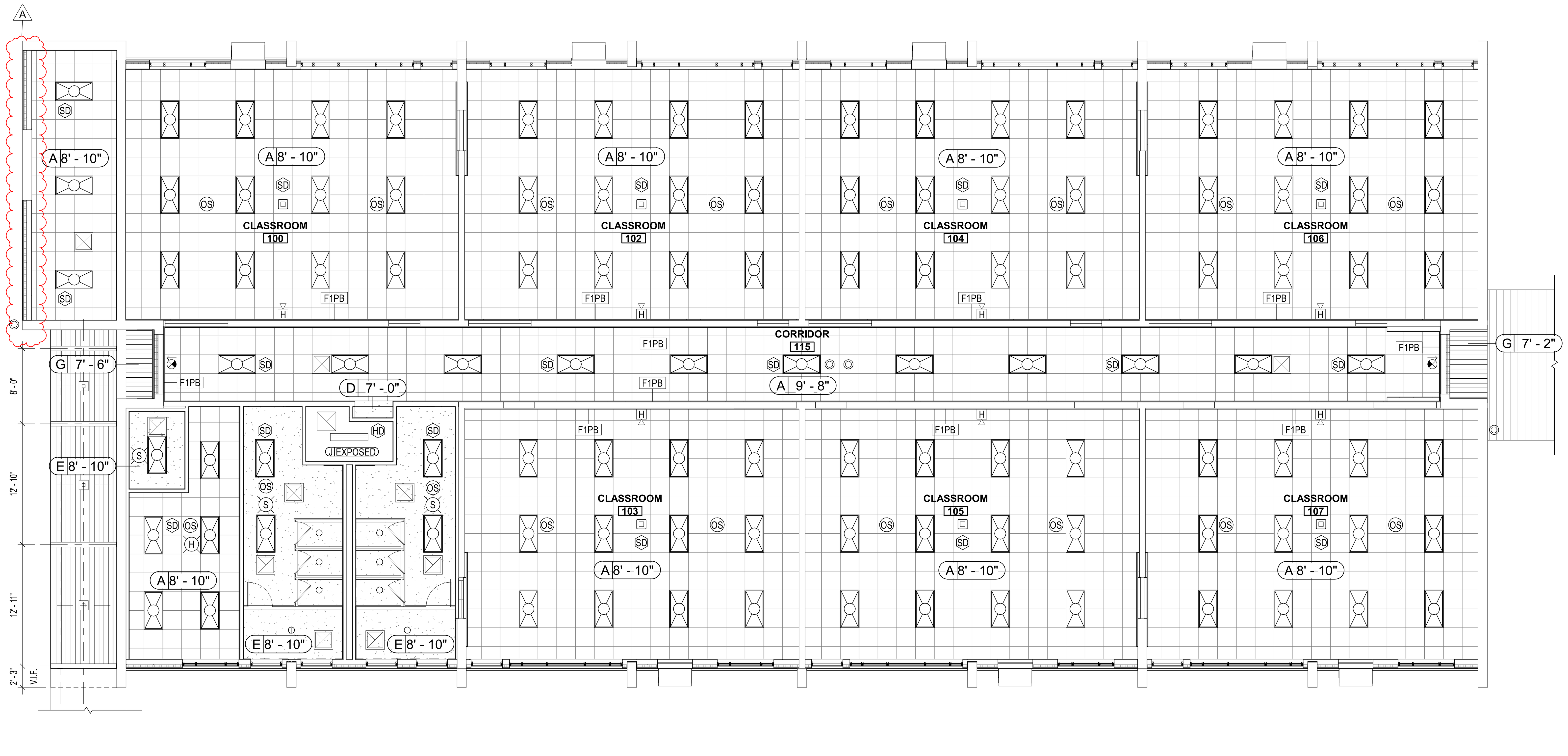
REFLECTED CEILING LEGEND AND NOTES

A 10'-0" — CEILING TYPE / CEILING HEIGHT

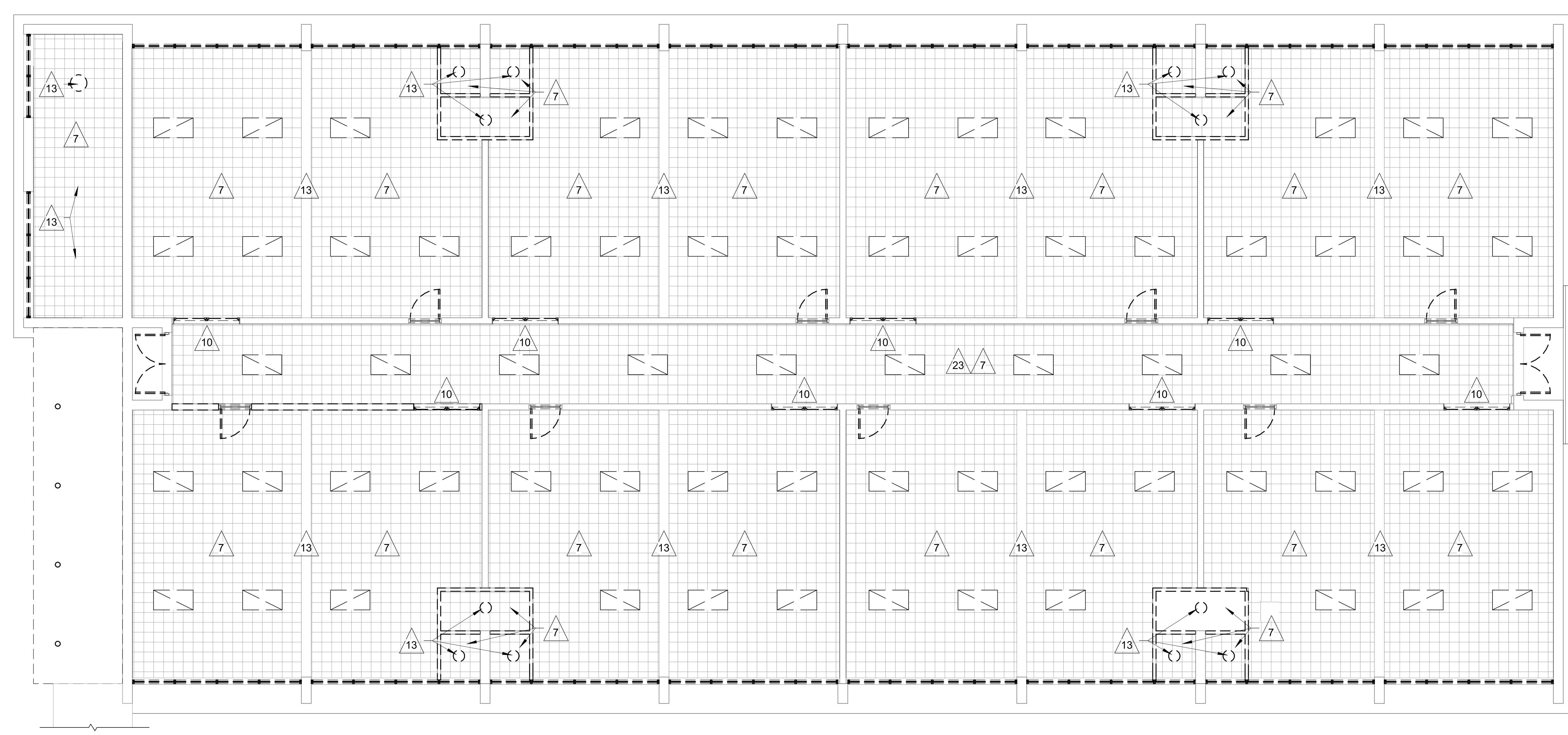
SYMBOL	TYPE	DESCRIPTION
	A	ACT-1, 2x2 CEILING TILE, WHITE FINISH
	B	NOT USED
	C	NOT USED
	D	GYPSUM WALLBOARD CEILING SYSTEM
	E	MOISTURE RESISTANT GYP WALLBOARD
	F	NOT USED
	G	METAL SOFFIT PANEL - PERFORATED
	H	NOT USED
	J	EXPOSED

SYMBOL	DESCRIPTION
	2 X 4 LED FIXTURE
	CAN STYLE FIXTURE
	EXHAUST AIR GRILLE
	SUPPLY AIR DIFFUSER
	HANGING LED FIXTURE
OS	OCCUPANCY SENSOR
	WIRELESS ACCESS POINT
	EXIT SIGN - CEILING MOUNTED
	CAMERA
SD HD	CEILING MOUNTED SMOKE/HEAT DETECTOR
S	FIRE ALARM WITH STROBE ONLY
H	FIRE ALARM WITH HORN AND STROBE
H	WALL MOUNTED FIRE ALARM WITH HORN AND STROBE

1. REFER TO PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR COMPLETE SCOPE OF CEILING PENETRATIONS AND FIXTURES.
2. REFER TO PROJECT SPECIFICATIONS FOR COMPLETE DESCRIPTION OF CEILING MATERIAL



2 A9-02 **REFLECTED CEILING PLAN - ALT 5**
1/8" = 1'-0"



1 A9-02 **DEMO REFLECTED CEILING PLAN - ALT 5**
1/8" = 1'-0"

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CHARLES WHITMAN TENNANT — REGISTERED ARCHITECT — 13798 — RALEIGH, N.C. — NORTH CAROLINA — 2/20/23

BID/PERMIT SET

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112 E FOY STREET RICHLANDS, NC 28574

ID	DATE	DESCRIPTION
A	03/02/2023	ADDENDUM 1

DRAWN BY: AC
CHECKED BY: CWT

REFLECTED CEILING PLANS (ALTERNATE 5)

2022017 20 Feb 2023

A9-02

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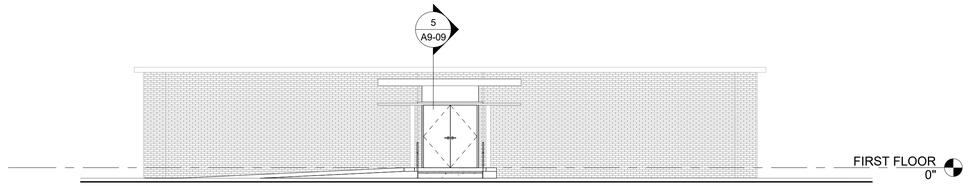
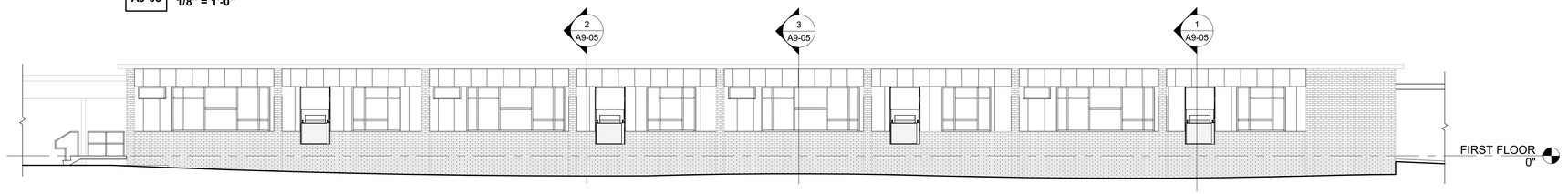
NOTES:

1. ALL INTERIOR WALL TYPES TO BE 'S4UA' UNLESS OTHERWISE NOTED.
2. WALL DIMENSIONS ARE TO FACE OF METAL STUD, FACE OF CONCRETE MASONRY UNIT (CMU), OR CENTERLINE OF COLUMN.
3. ALL METAL STUD WALLS TERMINATING AT BOTTOM OF DECK ARE TO PROVIDE A DEFLECTION TRACK SECURED TO THE UNDERSIDE OF THE DECKING, NEST TOP TRACK BUT DO NOT ATTACH TO DEFLECTION TRACK. FILL FLUTE IN METAL DECK WHERE REQUIRED.
4. ALL WALLS EXTEND TO DECK AND ARE BRACED TO DECK AT HEAD ON ALTERNATE STUDS OR 32" OC FOR CMU WALLS, UNLESS OTHERWISE NOTED.
5. CONTROL JOINTS SHALL BE AS SHOWN ON PLANS AND ELEVATIONS OR SPACED AT A MINIMUM OF 20'-0" OC AND A MAXIMUM OF 32'-0" OC WITH ONE CONTROL JOINT LOCATED WITHIN 3'-4" OF ANY CORNER. FOR INTERIOR GYPSUM WALL CONTROL JOINTS SEE DETAIL
6. SEE FINISH SCHEDULE FOR WALL, FLOOR, BASE, AND CEILING TYPES AND FINISHES.
7. REFER TO STRUCTURAL DRAWINGS FOR LOCATION OF REINFORCING, BOND BEAMS, BRACING, ETC.
8. ALL EXTERIOR SIDEWALKS SHALL SLOPE AWAY FROM THE BUILDING AT 1/4" PER FOOT, MINIMUM.
9. ALL EXTERIOR WINDOWS TO HAVE ROLLER SHADE BLINDS UNLESS OTHERWISE NOTED, REFER TO SPECIFICATIONS.
10. FURNITURE AND EQUIPMENT SHOWN DASHED ON PLANS IS NOT IN CONTRACT (NIC). GC TO PROVIDE WOOD BLOCKING FOR ALL WALL/CEILING MOUNTED ACCESSORIES.
11. FIELD VERIFY FINAL ROOM DIMENSIONS PRIOR TO CASEWORK FABRICATION.
12. NOT USED
13. ALL CERAMIC TILE TO HAVE CONTROL JOINTS THAT ALIGN WITH CONTROL JOINTS IN CONCRETE SLAB.
14. THERE SHALL BE NO PENETRATIONS IN THROUGH WALL FLASHING.
15. DOOR JAMB FROM INTERSECTING WALLS: STUD - 4" UNLESS OTHERWISE NOTED



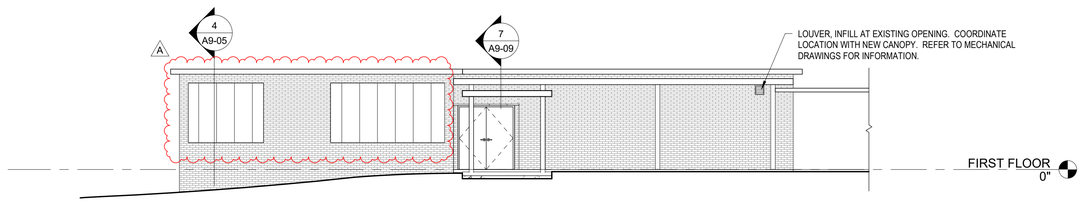
4 / A9-03 **EAST ELEVATION - ALT 2**

1/8" = 1'-0"



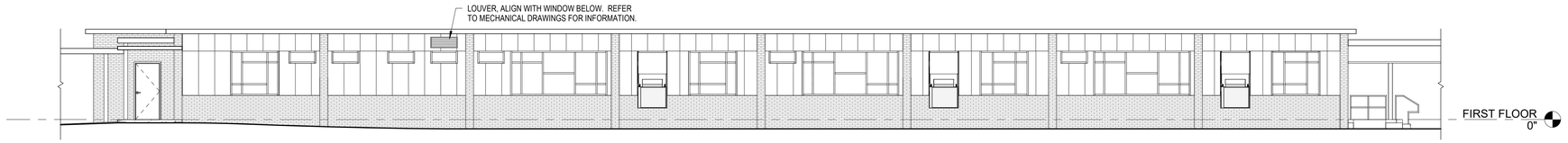
3 / A9-03 **NORTH ELEVATION - ALT 2**

1/8" = 1'-0"



2 / A9-03 **WEST ELEVATION - ALT 2**

1/8" = 1'-0"



1 / A9-03 **SOUTH ELEVATION - ALT 2**

1/8" = 1'-0"

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smith sinnett ARCHITECTURE

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Suite 205
Raleigh, NC 27607

info@smithsinnett.com

SMITH SINNETT ARCHITECTURE PA CERT. NO. 50172 RALEIGH NORTH CAROLINA CORPORATION

CHARLES WHITMAN TENNANT REGISTERED ARCHITECT 13798 NORTH CAROLINA RALEIGH

BID/PERMIT SET

THIS DRAWING IS FORMATTED TO BE PRINTED ON A 24" X 36" SHEET

ONSLOW COUNTY SCHOOLS
TREXLER MIDDLE SCHOOL RENOVATION & SITE IMPROVEMENTS
112 E FOY STREET RICHLANDS, NC 28574

ID	DATE	DESCRIPTION
A	03/02/2023	ADDENDUM 1

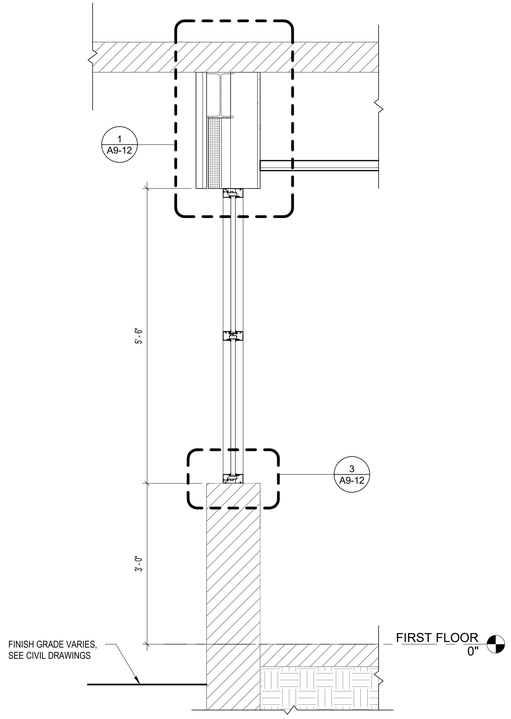
DRAWN BY: AC
CHECKED BY: CWT

EXTERIOR BUILDING ELEVATIONS (ALTERNATE 2)

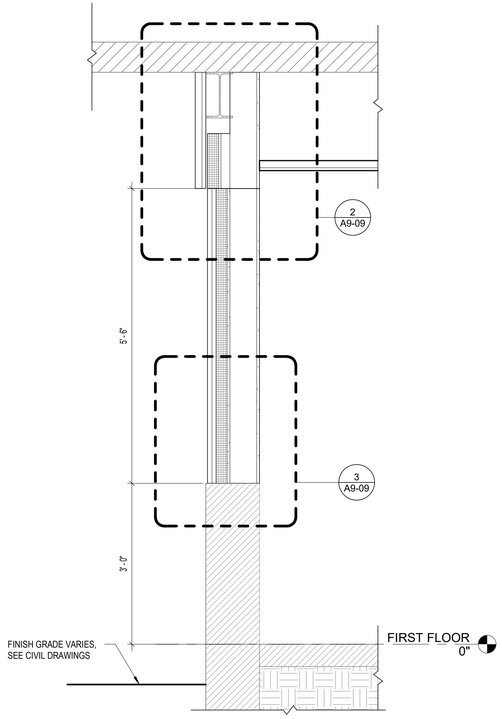
2022017 20 Feb 2023

A9-03

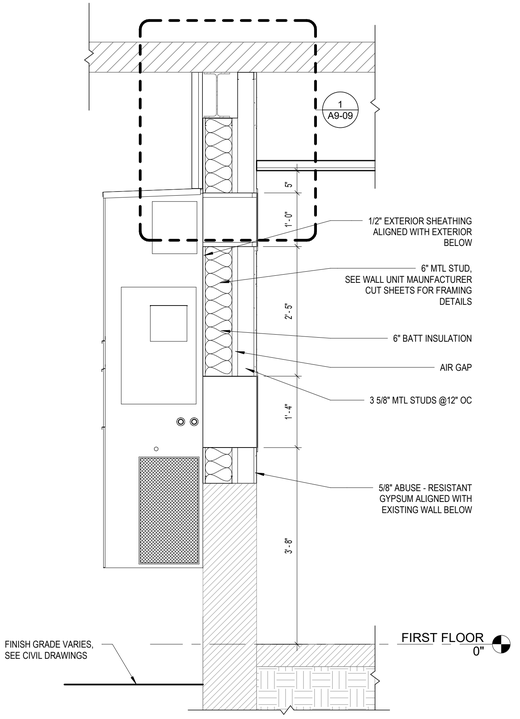
4 / A9-05 EXT. RECESSED WALL SECTION
3/4" = 1'-0"



3 / A9-05 EXT. WINDOW SECTION
3/4" = 1'-0"



2 / A9-05 EXTERIOR WALL SECTION
3/4" = 1'-0"



1 / A9-05 EXT. WALL BARD UNIT SECTION
3/4" = 1'-0"

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SMITH SINNETT ARCHITECTURE PA CERT. NO 50172 RALEIGH

CHARLES WHITMAN TENNANT REGISTERED ARCHITECT 13798 NORTH CAROLINA RALEIGH

BID/PERMIT SET

THIS DRAWING IS FORMATTED TO BE PRINTED ON A 24" X 36" SHEET

ONSLOW COUNTY SCHOOLS
TREXLER MIDDLE SCHOOL RENOVATION & SITE IMPROVEMENTS
112 E FOY STREET RICHLANDS, NC 28574

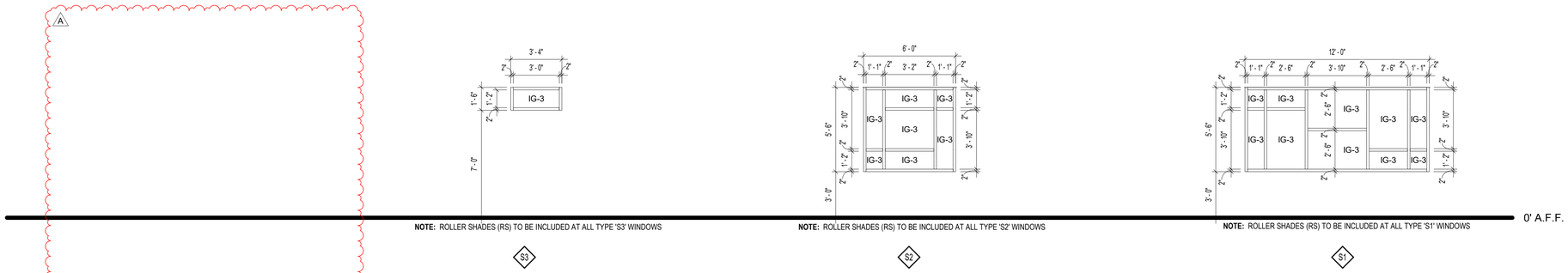
ID	DATE	DESCRIPTION
A	03/02/2023	ADDENDUM 1

DRAWN BY: AC
CHECKED BY: CWT

WALL SECTIONS (ALTERNATE 2)

2022017 20 Feb 2023

A9-05



NOTE: ROLLER SHADES (RS) TO BE INCLUDED AT ALL TYPE 'S3' WINDOWS

NOTE: ROLLER SHADES (RS) TO BE INCLUDED AT ALL TYPE 'S2' WINDOWS

NOTE: ROLLER SHADES (RS) TO BE INCLUDED AT ALL TYPE 'S1' WINDOWS

LEGEND:

W__ - HM FRAME DESIGNATION

S__ - ALUMINUM STOREFRONT

GLAZING:

IG: INSULATED GLASS
DP: DOUBLE PANE

IG - 1: CLEAR
IG - 2: CLEAR TEMPERED
IG - 3: TINTED

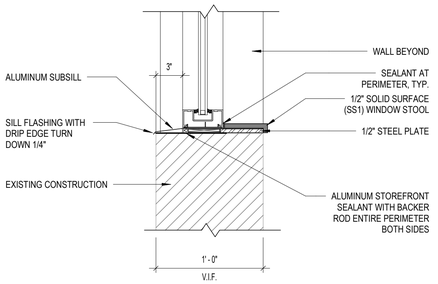
NOTES

FINISH: PAINTED METAL
REFER TO THE FOLLOWING DETAILS U.O.N.

HEAD: 1/A9-09

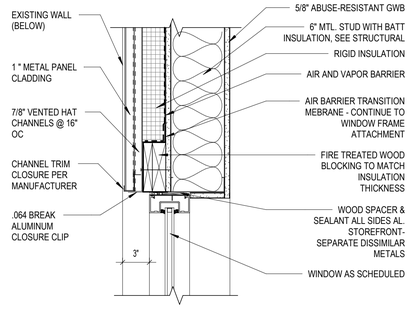
JAMB: 2/A9-09

THRESHOLD: 3/A9-09



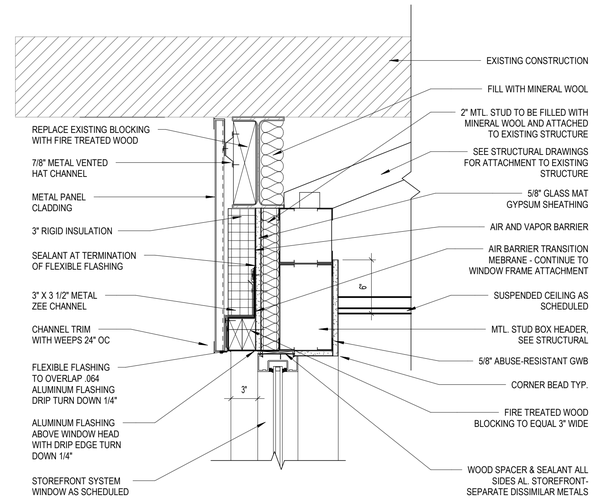
3 / A9-12 **TYP. STOREFRONT SILL - @ CMU/BRICK WALL**

1 1/2" = 1'-0"



2 / A9-12 **TYP. STOREFRONT JAMB**

1 1/2" = 1'-0"



1 / A9-12 **TYP. STOREFRONT HEAD @ MTL. PANEL WALL**

1 1/2" = 1'-0"

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SMITH SINNETT ARCHITECTURE, PA CERT. NO. 50172 RALEIGH, NORTH CAROLINA CORPORATION

CHARLES WHITMAN TENNANT REGISTERED ARCHITECT 13798 NORTH CAROLINA RALEIGH

BID/PERMIT SET

ONSLOW COUNTY SCHOOLS
TREXLER MIDDLE SCHOOL RENOVATION & SITE IMPROVEMENTS
112 E FOY STREET RICHLANDS, NC 28574

ID	DATE	DESCRIPTION
A	03/02/2023	ADDENDUM 1

DRAWN BY: AC
CHECKED BY: CWT

WINDOW AND FRAME ELEVATIONS (ALTERNATE 2)

2022017 20 Feb 2023

A9-12

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SECTION 00 01 05 – NOTICE TO BIDDERS

NOTICE TO BIDDERS

Sealed proposals will be received by the *Onslow County School Board* in *Jacksonville* NC, at the Onslow County Schools Offices, 200 Broadhurst Road, Jacksonville, NC 28540 up to 2:00pm *March 21, 2023* and immediately thereafter publicly opened and read for the furnishing of labor, material and equipment entering into the construction of

Trexler Middle School Renovation & Site Improvements
Richlands, NC

This bid package includes the interior renovation of a 9,500 square foot building on the campus of Trexler Middle School. Renovation will includes but is not limited to reconfiguration of an existing classroom to accommodate new restrooms and a teacher's breakroom, utility infrastructure upgrades (mechanical, electrical, and plumbing), accessibility upgrades, and updated finishes. Site work includes a new bus parking lot, resurfaced parent/student queue, and associated canopies/sidewalks. Additional included is all other work as shown, indicated or reasonably implied on the drawings and/or specifications for a complete, first class job.

Bids will be received *for Single Prime.* All proposals shall be lump sum.

Pre-Bid Meeting

A mandatory pre-bid meeting will be held on *February 28, 2022 --- 1:00pm ---- Trexler Middle School, 112 E. Foy Street, Richlands, NC 28574.* The meeting will address project specific questions, issues, bidding procedures and bid forms.

Complete plans, specifications and contract documents will be open for inspection in the offices of *Director of Maintenance and are available upon request from Smith Sinnett Architecture, 4600 Lake Boone Trail, Suite 205, Raleigh, NC 27607, Phone: 919-781-8582 or email Charlie Tennant at ctennant@smithsinnett.com.*

NOTE: The bidder shall include with the bid proposal the form *Identification of Minority Business Participation* identifying the minority business participation it will use on the project and shall include either *Affidavit **A*** or *Affidavit **B*** as applicable. Forms and instructions are included within the Proposal Form in the bid documents. Failure to complete these forms is grounds for rejection of the bid. (GS143-128.2c Effective 1/1/2002.)

All contractors are hereby notified that they must have proper license as required under the state laws governing their respective trades. General contractors are notified that Chapter 87, Article 1, General Statutes of North Carolina, will be observed in receiving and awarding general contracts. General contractors submitting bids on this project must have license classification for "Unlimited Building" or "Unclassified," required by the NC General Contractors Licensing Board under G.S. 87-1.)

> NOTE: SINGLE PRIME CONTRACTS: Under GS 87-1, a contractor that superintends or manages construction of any building, highway, public utility, grading, structure or improvement shall be deemed a "general contractor" and shall be so licensed. Therefore a single prime project that involves other trades will require the single prime contractor to hold a proper General Contractors license. EXCEPT: On public buildings being bid single prime, where the total value of the general construction does not exceed 25% of the total construction value, contractors under GS87- Arts 2 and 4 (Plumbing, Mechanical & Electrical) may bid and contract directly with the Owner as the SINGLE PRIME CONTRACTOR and may subcontract to other properly licensed trades. GS87-1.1- Rules .0210

Each proposal shall be accompanied by a cash deposit or a certified check drawn on some bank or trust company, insured by the Federal Deposit Insurance Corporation, of an amount equal to not less than five percent (5%) of the proposal, or in lieu thereof a bidder may offer a bid bond of five percent (5%) of the bid executed by a surety

company licensed under the laws of North Carolina to execute the contract in accordance with the bid bond. Said deposit shall be retained by the owner as liquidated damages in event of failure of the successful bidder to execute the contract within ten days after the award or to give satisfactory surety as required by law.

A performance bond and a payment bond will be required for one hundred percent (100%) of the contract price.

Payment will be made based on ninety-five percent (95%) of monthly estimates and final payment made upon completion and acceptance of work.

No bid may be withdrawn after the scheduled closing time for the receipt of bids for a period of **60** days.

The Owner reserves the right to reject any or all bids and to waive informalities.

Designer:	Owner:
Charlie Tennant, AIA	*Daniel Gray,*
	Maintenance Director
Smith Sinnett Architecture .	*Onslow County Schools*
(Name)	*(Agency/Institution)*
4600 Lake Boone Trail, Suite 205	*200 Broadhurst Road*
Raleigh, North Carolina 27607	*Jacksonville, North Carolina 28540*
(Address)	*(Address)*
(919) 781-8582	*(910) 455-2211*
(Phone)	*(Phone)*

END OF SECTION 00 01 05

SECTION 00 01 10 - TABLE OF CONTENTS

PROJECT: Trexler Middle School Renovation & Site Improvements
112 E. Foy Street
Richlands, NC 28574

END OF SECTION 00 01 10

SECTION 00 42 00 - PROPOSAL FORM

PROJECT: Trexler Middle School Renovation & Site Improvements
112 E. Foy Street
Richlands, NC 28574

OWNER: Onslow County School Board
200 Broadhurst Road
Jacksonville, North Carolina 28540

ARCHITECT: Smith Sinnett Architecture
4600 Lake Boone Trail, Suite 205
Raleigh, North Carolina 27607

The undersigned, as bidder, hereby declares that the only person or persons interested in this proposal as principal or principals is or are named herein and that no other person than herein mentioned has any interest in this proposal or in the contract to be entered into; that this proposal is made without connection with any other person, company or parties making a bid or proposal; and that it is in all respects fair and in good faith without collusion or fraud. The bidder further declares that he has examined the site of the work and the contract documents relative thereto, and has read all special provisions furnished prior to the opening of bids; that he has satisfied himself relative to the work to be performed.

The Bidder proposes and agrees if this proposal is accepted to contract with *Onslow County Board of Education* in the form of contract specified below, to furnish all necessary materials, equipment, machinery, tools, apparatus, means of transportation and labor necessary to complete the construction of

Trexler Middle School Renovation & Site Improvements

in full in complete accordance with the plans, specifications and contract documents, to the full and entire satisfaction of the Onslow County Board of Education, and Smith Sinnett Architecture with a definite understanding that no money will be allowed for extra work except as set forth in the General Conditions and the contract documents.

The low Bidder will be determined by the total cost of the Contract with the lump sum prices of the alternates accepted being added to or deducted from the Base Bid to give the total cost of the Contract. Bidders are required to give a price for Base Bid, all Alternates, and all Unit Prices as applicable to their Contract. All Bidders are required to be licensed and in good standing with their respective North Carolina Licensing Board.

SINGLE PRIME CONTRACT:

BASE BID

Amount: _____ Dollars ($_____)

ALTERNATE 1-1: Preferred Alternate – Provide HVAC Wall Unit by single brand Bard

Amount: _____ Dollars ($_____)

ALTERNATE 1-2: Preferred Alternate – Provide Electrical Switches by single brand Square D

Amount: _____ Dollars ($_____)

ALTERNATE 1-3: Preferred Alternate – Provide Water Cooler with Bottle Filler by single brand Elkay

Amount: _____ Dollars ($_____)

ALTERNATE 1-4: Preferred Alternate – Provide Thermostat by single brand Venstar Explorer Smart Stat

Amount: _____ Dollars ($_____)

ALTERNATE 1-5a: Preferred Alternate – Provide Door Hardware: Door Locks by single brand Schlage

Amount: _____ Dollars ($_____)

ALTERNATE 1-5b: Preferred Alternate –Provide Door Hardware: Exit Devices by single brand Von Duprin

Amount: _____ Dollars ($_____)

ALTERNATE 1-5c: Preferred Alternate – Provide Door Hardware: Closers by single brand LCN

Amount: _____ Dollars ($_____)

ALTERNATE 2-1: ESSER Scope of Work – Mechanical and Associated Electrical Upgrades

Amount: _____ Dollars ($_____)

~~**ALTERNATE 2-2:**~~ **NOT USED**

Amount: _____ Dollars ($_____)

~~**ALTERNATE 2-3:**~~ **NOT USED**

Amount: _____ Dollars ($_____)

ALTERNATE 2-4: ESSER Scope of Work – Door Replacement and Transom Infill

Amount: _____ Dollars ($_____)

ALTERNATE 2-5: ESSER Scope of Work – Window Replacement

Amount: _____ Dollars ($_____)

ALTERNATE 3-1: Bus Parking – Parking Lot, Drive, and Associated Sidewalks

Amount: _____ Dollars ($_____)

ALTERNATE 3-2: Bus Parking – Canopy and Lighting

Amount: _____ Dollars ($_____)

ALTERNATE 4: Parent / Student Queue

Amount: _____ Dollars ($_____)

ALTERNATE 5: Ceilings, Lighting, and Electrical Upgrades

Amount: _____ Dollars ($_____)

ALLOWANCES - (Refer to Division 01 Section 01 21 00 – Allowances for amounts to be included in bid shall be based on the Unit Prices provided as part of Section 01 22 00) Acknowledge Allowances have been included with in the Base Bid.

UP/A-1 _____ UP/A-2 _____ UP/A-3 _____ UP/A-4 _____ UP/A-5 _____ UP/A-6 _____

UP/A-7 _____ UP/A-8 _____ UP/A-9 _____ A-10 _____ A-11 _____

UNIT PRICES - (Refer to Division 01 Section 01 22 00 - Unit Prices for Quantities)
Unit prices quoted and accepted shall apply throughout the life of the contract, except as otherwise specifically noted. Unit prices shall be applied, as appropriate, to compute the total value of changes in the base bid quantity of the work and in the given Allowances all in accordance with the contract documents.

Unit Price No. UP/A-1; Unsuitable Soils Removal and Disposal Off-Site: per cy. Unit Price ($)_____

Unit Price No. UP/A-2; Rock Removal and Disposal Off-Site: per cy. Unit Price ($)_____

Unit Price No. UP/A-3; Replacement of Authorized Excavation of Unsuitable Soils or Rock with Off-Site Imported Fill: per cy. Unit Price ($)_____

Unit Price No. UP/A-4; Replacement of Authorized Excavation of Unsuitable Soils/Rock with (ABC) Stone Material: per cy. Unit Price ($)_____

Unit Price No. UP/A-5; Geo-Grid in Place: per square yard. Unit Price ($)_____

Unit Price No. UP/A-6; Underground Sanitary Line: per linear foot. Unit Price ($)_____

Unit Price No. UP/A-7; Floor Leveling Compound: per square foot. Unit Price ($)_____

Unit Price No. UP/A-8; Topical Moisture Mitigation System: per square foot. Unit Price ($)_____

Unit Price No. UP/A-9; Abrasive Blast Floor Preparation: per square foot. Unit Price ($)_____

The bidder further proposes and agrees hereby to commence work under this contract on a date to be specified in a written order of the designer and shall fully complete all work thereunder within the time specified in the Supplementary General Conditions Article 9. Applicable liquidated damages amount is also stated in the Supplementary General Conditions Article 9.

MAJOR SUBCONTRACTORS if any (Name, City & State)

General Subcontractor:

_____Lic_____

Mechanical Subcontractor:

_____Lic_____

Electrical Subcontractor:

_____Lic_____

Plumbing Subcontractor:

_____Lic_____

GS143-128(d) requires all single prime bidders to identify their subcontractors for the above subdivisions of work. A contractor whose bid is accepted shall not substitute any person as subcontractor in the place of the subcontractor listed in the original bid, except (i) if the listed subcontractor's bid is later determined by the contractor to be non-responsible or non-responsive or the listed subcontractor refuses to enter into a contract for the complete performance of the bid work, or (ii) with the approval of the awarding authority for good cause shown by the contractor.

ADDENDUM
(Addendum received and used in computing bid)

Addendum No. 1 _____ Addendum No. 3 _____ Addendum No. 5_____

Addendum No. 2 _____ Addendum No. 4 _____ Addendum No. 6 _____

Proposal Signature Page

The undersigned further agrees that in the case of failure on his part to execute the said contract and the bonds within ten (10) consecutive calendar days after being given written notice of the award of contract, the certified check, cash or bid bond accompanying this bid shall be paid into the funds of the owner's account set aside for the project, as liquidated damages for such failure; otherwise the certified check, cash or bid bond accompanying this proposal shall be returned to the undersigned. No proposal may be withdrawn after the scheduled closing time for the receipt of Bids for a period of **sixty (60) days**.

Respectfully submitted this day of _____

_____
(Name of firm or corporation making bid)

WITNESS:

By:_____
Signature

_____
(Proprietorship or Partnership)

Name: _____
Print or type

Title:_____
(Owner/Partner/Pres./V.Pres)

Address:_____

ATTEST:

_____

By:_____

License No._____

Title:_____
(Corp. Sec. or Asst. Sec. only)

Federal I.D. No. _____

(CORPORATE SEAL)

MINORITY BUSINESS PARTICIPATION REQUIREMENTS

Provide with the bid - Under GS 143-128.2(c) the undersigned bidder shall identify **on its bid** (Identification of Minority Business Participation Form) the minority businesses that it will use on the project with the total dollar value of the bids that will be performed by the minority businesses. **Also** list the good faith efforts (Affidavit **A**) made to solicit minority participation in the bid effort.

NOTE: A contractor that performs all of the work with its own workforce may submit an Affidavit (**B)** to that effect in lieu of Affidavit (**A)** required above. The MB Participation Form must still be submitted even if there is zero participation.

After the bid opening - The Owner will consider all bids and alternates and determine the lowest responsible, responsive bidder. Upon notification of being the apparent low bidder, the bidder shall then file within 72 hours of the notification of being the apparent lowest bidder, the following:

An Affidavit (**C**) that includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, which is equal to or more than the 10% goal established. This affidavit shall give rise to the presumption that the bidder has made the required good faith effort and Affidavit **D** is not necessary;

*** OR ***

If less than the 10% goal, Affidavit (**D**) of its good faith effort to meet the goal shall be provided. The document must include evidence of all good faith efforts that were implemented, including any advertisements, solicitations and other specific actions demonstrating recruitment and selection of minority businesses for participation in the contract.

Note: Bidders must always submit **with their bid** the Identification of Minority Business Participation Form listing all MB contractors, vendors and suppliers that will be used. If there is no MB participation, then enter none or zero on the form. Affidavit A **or** Affidavit B, as applicable, also must be submitted with the bid. Failure to file a required affidavit or documentation with the bid or after being notified apparent low bidder is grounds for rejection of the bid.

END OF SECTION 00 42 00

SECTION 00 73 00 - SUPPLEMENTARY GENERAL CONDITIONS

The following supplements modify, change, delete from or add to the "General Conditions of the Contract for Construction," AIA Document A201-2017. Where any article of the General Conditions is modified or any paragraph, subparagraph or clause thereof is modified or deleted by these Supplementary Conditions, the unaltered provisions of that article, paragraph, subparagraph or clause shall remain in effect.

ARTICLE 1 GENERAL PROVISIONS

Paragraph 1.1 Basic Definitions:

For further clarification of definitions refer to the following:

Owner: Onslow County Board of Education

Architect: Smith Sinnett Architecture, P.A., or an official representative thereof.

Project Manual: The Project Manual is the volume generally referred to as the "Specifications" and consists of the bidding requirements, sample forms and certain Contract Documents such as the Conditions of the Contract, and the Specifications.

ARTICLE 2 OWNER

Paragraph 2.2 Information and Services Required of the Owner:

Delete Subparagraph 2.2.5 and substitute the following:

2.2.5 Construction Documents are provided as electronic files. The Contractor is responsible for printing hard copies of the Drawings and Project Manuals in the quantities necessary for construction.

ARTICLE 3 CONTRACTOR

Paragraph 3.12 Shop Drawings, Product Data and Samples:

Add the following subparagraphs 3.12.7.1

3.12.7.1 No submittal involving the selection of a color will be released until all colors are selected and approved by the Owner.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

Clarification: References to “separate contractors” and “separate contracts” do not apply to the Prime Contract of the Work covered in this Project Manual or Drawings, but only to other contractors or other contracts undertaken by the Owner prior to, concurrent with, or subsequent to the Work of this Project. The Work of the Prime Contractor bidding on and constructing this Project are not considered “separate contractors” or separate contracts” as identified in this Article.

The Owner has no responsibility to coordinate the work or activities of the Prime Contractor on this Project, but only to coordinate the work of his own forces or his “separate contractors” with the Prime Contractor for this Project.

ARTICLE 7 CHANGES IN THE WORK

Paragraph 7.1 General:

Add the following subparagraph 7.1.4:

7.1.4 Allowance for combined overhead and profit on changes, whether by Change Order or Construction Change Directive shall be limited in accordance with the following:

.1) For the Contractor, for Work performed by the Contractor's own forces, **15** percent of the cost.

.2) For the Contractor, for Work performed by the Contractor's Subcontractor, **7.5** percent of the amount due the Subcontractor.

.3) For each Subcontractor or Sub-subcontractor involved, for Work performed by that Subcontractor's or Sub- subcontractor's own forces, **7.5** percent of the cost.

.4) For each Subcontractor, for Work performed by the Subcontractor's Sub-subcontractor, **7.5** percent of the amount due the Sub-subcontractor.

.5) Cost to which overhead and profit is to be applied shall be determined in accordance with Subparagraph 7.3.8.

.6) In the case of deductive changes, the Contractor shall include not less than **15** percent of the cost.

.7) In order to facilitate checking quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs including, labor, materials, and Subcontracts. Labor and materials shall be itemized in the manner prescribed above. Where major cost items are Subcontracts, they shall be itemized also. In no case will a change over $250.00 be approved without such itemization.

ARTICLE 8 TIME

Paragraph 8.2 Progress and Completion:

Add the following Clauses 8.2.3.1 and 8.2.3.2 to Subparagraph 8.2.3:

8.3.2.1 The Contract time shall commence on a date to be specified in a written Notice to Proceed from the Architect, anticipated to be about **April 26, 2023**, and the Substantial Completion shall be **380** days from the NTP which is on or about **May 10, 2024**.

8.3.2.2 Final Completion shall occur on or before **30 days after Substantial Completion**.

ARTICLE 9 PAYMENTS AND COMPLETION

Paragraph 9.3 Applications for Payment:

Add the following sentence to Subparagraph 9.3.1:

The form of Application for payment shall be a notarized AIA Document G702, Application and Certification for Payment, supported by AIA Document G703, Continuation Sheet. Certificate of Release of Liens shall be submitted with each pay application.

Add the following to Subparagraph 9.3.l:

Until Substantial Completion, the Owner will pay 95% of the amount due the Contractor on account of progress payments. If at 50% of the contractor's work, the work has been satisfactorily completed on schedule and with approval of the Owner, Engineer/ Architect, and written consent of the surety, further requirements for retainage will be waived only so long as the work continues to be completed satisfactorily and on schedule.

The full Contract retainage may be reinstated if the manner of completion of the Work and its progress do not remain satisfactory to the Owner and Engineer/ Architect, or if the Surety withholds its consent, or for other good and sufficient reasons

Add the following Clause 9.3.2.l to Subparagraph 9.3.2:

9.3.2.l Responsibility for such stored materials and equipment shall remain with the Contractor regardless of ownership title.

Paragraph 9.8 Substantial Completion:

Add the following sentence to Subparagraph 9.8.3:

The payment shall be sufficient to increase the total payments to 95% of the Contract Sum, less such amounts as the Engineer/ Architect shall determine for incomplete Work and unsettled claims.

Paragraph 9.11 Liquidated Damages:

Add the following Paragraph 9.11 to Article 9:

9.11 Liquidated Damages

9.11.1 The Contractor and the Contractor's surety's shall be liable for and shall pay the Owner the sum of **Two Hundred Fifty Dollars ($250.00),** herein stipulated as liquidated damages, for each calendar day of delay until the Work is substantially complete.

Paragraph 9.12 Final Completion:

Add the following Paragraph 9.12 to Article 9

9.12 Time for Completion of final inspection items after Substantial Completion shall be thirty (30) Days after final inspection list is received by the Contractor. After thirty (30) days, upon seven (7) days written notice, the Owner shall have the option to correct or conclude any and all final inspection items not completed by the Contractor to the satisfaction of the Engineer/ Architect and the Owner within thirty (30) days from the actual date of substantial completion by utilizing its own forces or hiring others. The cost of correcting such remaining final inspection items by the Owner or others shall be deducted from the final payment to the Contractor.

For each consecutive calendar day that the Work remains incomplete after the date established for Final Completion, the Owner will retain from compensation otherwise to be paid to the

Contractor the sum of **Two Hundred Fifty Dollars ($250.00).** This amount is the minimum measure of damages the Owner will sustain by failure of the Contractor to complete all remedial work, correct deficient work, clean up the project and other miscellaneous tasks as required to complete all work specified. This amount is separate from the liquidated damages prescribed above under paragraph 9.11.

ARTICLE 11 INSURANCE AND BONDS

Paragraph 11.1 Contractor's Liability Insurance:

Modify Clause 11.1.1.1 as follows:

Delete the semicolon at the end of Clause 11.1.1.1 and add: ", including private entities performing Work at the site and exempt from the coverage on account of number of employees or occupation, which entities shall maintain voluntary compensation coverage at the same limits specified for mandatory coverage for the duration of the Project;".

Modify Clause 11.1.1.2 as follows:

Delete the semicolon at the end of Clause 11.1.1.2 and add: "or persons or entities excluded by statute from the requirements of Clause 11.1.1.1 but required by the Contract Documents to provide the insurance required by that Clause;".

To Subparagraph 11.1.1, add the following Clauses 11.1.1.9 and 11.1.1.10:

.9) Liability Insurance shall include all major divisions of coverage and be on a comprehensive basis including:

1. Premises Operations (including X, C and U coverages as applicable).
2. Independent Contractors' Protective.
3. Products and Completed Operations.
4. Personal Injury Liability with Employment Exclusion deleted.
5. Contractural, including specified provision for Contractor's obligation under Paragraph 3.18.
6. Owned, non-owned and hired motor vehicles.
7. Broad Form Property Damage including Completed Operations.

.10) If the General Liability coverages are provided by a Commercial General Liability Policy on a claims-made basis, the policy date or Retroactive Date shall predate the Contract; the termination date of the policy or applicable extended reporting period shall be no earlier than the termination date of coverages required to be maintained after final payment, certified in accordance with Subparagraph 9.10.2.

To Subparagraph 11.1.2, add the following Clause 11.1.2.1:

11.1.2.1 The insurance required by Subparagraph 11.1.1 shall be written for not less than the following, or greater if required by law:

l. Workers' Compensation:

a)	State	Statutory	
b)	Applicable Federal	Statutory	
c)	Employer's Liability	$100,000	per Accident

$100,000 Disease, Policy Limit
$100,000 Disease, Each Employee

d) Contractor must evidence worker's compensation as statutorily required for both all general contractor employees and all sub contractor employees for the duration of the project.

2. Comprehensive or Commercial General Liability (including Premises Operations; Independent Contractor's Protective; Products and Completed Operations; Broad Form Property Damage):
   a) Bodily Injury: $ 100,000 Each Occurrence
      $1,000,000 Aggregate

   b) Property Damage: $ 100,000 Each Occurrence
      $ 300,000 Aggregate

   c) Products and Complete Operations to be maintained for 1 year after final payment: $1,000,000 Aggregate

   d) Property Damage Liability Insurance will provide X, C, and U coverage.

   e) Broad Form Property Damage Coverage shall include Completed Operations.

   f) Contractor must name **Onslow County** as named insured on general liability insurance for the duration of the project.

   g) Contractor must evidence general liability insurance for both all general contractor employees and all sub contractor employees for the duration of the project.

3. Contractual Liability:
   a) Bodily Injury: $ 100,000 Each Occurrence
      $1,000,000 Aggregate

   b) Property Damage: $ 100,000 Each Occurrence
      $ 300,000 Aggregate

4. Personal Injury, with Employment Exclusion deleted:
   $ 300,000 Aggregate

5. Business Automobile Liability (including owned, non- owned and hired vehicles):
   a) Bodily Injury: $ 200,000 Each Person
      $ 500,000 Each Occurrence

   b) Property Damage: $ 100,000 Each Occurrence

   c) Contractor must maintain automobile insurance for both property damage and personal injury for all vehicles which would be used in conjunction with the project.

6. If General Liability coverages are provided by a Commercial Liability policy, the:

   a) General Aggregate shall be not less than $1,000,000 and it shall apply, in total to this Project only.

b) Fire Damage Limit shall be not less than $100,000 on any one Fire.

c) Medical Expense Limit shall be not less than $5,000 on any one person.

7. Umbrella Excess Liability: $1,000,000 over primary insurance
$10,000 for self-insured hazards each occurrence.

To Subparagraph 11.1.3 add the following sentence:

If this insurance is written on the Comprehensive Liability policy form, the Certificates shall be AIA Document G-705, Certificate of Insurance. If this insurance is written on a Commercial General Liability policy form, ACORD form 25S will be acceptable.

Paragraph 11.3 Property Insurance

Modify Subparagraph 11.3.1 as follows:

11.3.1 In the first sentence, delete "Unless otherwise provided, the Owner..." and substitute "The Contractor...".

Add the following sentences:

Builder's risk insurance policy shall be required in the full amount of the Completed Value of the project with Onslow County.as the named insured entities on the policy.

If the Owner is damaged by the failure of the Contractor to maintain such insurance, then the Contractor shall bear all reasonable costs properly attributable thereto.

11.3.1.2 Delete Clause 11.3.1.2.

11.3.1.3 Delete Clause 11.3.1.3.

Delete Subparagraph 11.3.4.

Delete Subparagraph 11.3.6 and substitute the following:

11.3.6 Before an exposure to loss may occur, the Contractor shall file with the Owner, for each copy of the Construction Contract prepared, one certified copy of the policy or policies providing this Property Insurance coverage, each containing those endorsements specifically related to the Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Contractor.

Modify Subparagraph 11.3.7 as follows:

11.3.7 Substitute "Contractor" for "Owner" at the end of the first sentence.

Modify Subparagraph 11.3.8 as follows:

11.3.8 Substitute "Contractor" for "Owner" as fiduciary; except that at the first reference to "Owner" in the first sentence, the word "this" should be substituted for "Owner's".

Modify Subparagraph 11.3.9 as follows:

11.3.9 Substitute "Contractor" for "Owner" each time the latter word appears.

Modify Subparagraph 11.3.10 as follows:

11.3.10 Substitute "Contractor" for "Owner" each time the latter word appears.

Paragraph 11.4 Performance Bond and Payment Bond

Delete Subparagraph 11.4.1 and substitute the following:

11.4.1 The Contractor shall furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder. Bonds may be obtained through the Contractor's usual source and the cost thereof shall be included in the Contract Sum. The amount of each bond shall be equal to 100% of the Contract Sum.

11.4.1.1 The Contractor shall deliver the required bonds to the Owner not later than three days following the date the Agreement is entered into, or if the Work is to be commenced prior thereto in response to a letter of intent, the Contractor shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished.

11.4.1.2 The Contractor shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current power of attorney.

11.4.1.3 The Contractor shall require the Surety and/or their Attorney-in-fact who executes the required bonds to provide along with the bonds the following:

1. Complete information data sheet concerning the Company acting as the agent for the Surety, including:
   a) Company name, street and mailing addresses, telephone and fax numbers.
   b) Name of principle contact involved in administering these bonds.

2. Complete information data sheet concerning the Surety, including:
   a) Company name, street and mailing addresses, telephone and fax numbers.
   b) Name of principle contact involved in administering these bonds.

3. Information regarding any requirements or privileges the Surety has or believes it is due in the way of protections of its rights and privileges from activities of the Owner and its agents, including the Engineer/Architect and his consultants, in the performance of their normal functions or duties under this Contract.

11.4.1.4 The Surety shall be aware and acknowledge that payments made on this project will be made based on the appropriateness of percentages of work completed per categories indicated on the Contractor's Application for Payment. Further that the amounts authorized, certified or released by the Owner or its agents, including the Engineer and their consultants, are based on estimates of the percentages of work completed in each particular category based on that breakdown only. The appropriateness of the bid amount and these categories, established by the Contractor, is not the responsibility of the Owner and its agents, and the Owner and its agents therefore accept no responsibility for protecting the Surety from releases of funds on this Contract due to the inappropriateness of the bid or the breakdown categories established by the Contractor. In that regard note the following:

a) Inappropriateness of the bid amount refers to an amount bid which was not sufficient to accomplish the work.

b) Common practices such as "front end loading" of the request (assigning higher costs or heavier profit and overhead amounts to early work categories), "material heavy

loading" of the request (assigning higher costs or heavier profit and overhead amounts to material categories), and heavier than appropriate loading of "mobilization", "general condition" or "general requirements" categories cannot normally be detected by the Owner and its agents and are therefore not their responsibility.

11.4.1.5 The Surety shall be responsible to take an active roll in protecting its rights and privileges during the course of the Work of this Contract through more direct involvement with and management of its bonded Contractor, and establish and execute whatever protective measures it deems appropriate in protecting itself from what it deems inappropriate releases of funds on the Contract. These measures shall be the responsibility of the Surety and its agents exclusively and will not be the responsibility of the Owner or its agents.

ARTICLE 16 FEDERAL CONTRACTING REQUIREMENTS

Paragraph 16.1 Federal Funds:

16.1 If the source of funds for this contract is federal funds, the following federal provisions apply pursuant to 2 C.F.R. § 200.326 and 2 C.F.R. Part 200, Appendix II (as applicable):

Equal Employment Opportunity (41 C.F.R. Part 60); Davis-Bacon Act (40 U.S.C. 3141-3148); Copeland "Anti-Kickback" Act (40 U.S.C. 3145); Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708); Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387); Debarment and Suspension (Executive Orders 12549 and 12689); Byrd Anti-Lobbying Amendment (31 U.S.C. 1352); Procurement of Recovered Materials (2 C.F.R. § 200.322); and Record Retention Requirements (2 CFR § 200.324).

Paragraph 16.2 Uniform Guidance Attachment:

16.2 This ***Uniform Guidance Attachment,*** heretofore referenced as "***UG Attachment***" is incorporated into the Service Contract between Onslow County Schools and the Contractor. Capitalized terms not defined in this Attachment shall have the meanings assigned to such terms in the Contract. All references to the "Contractor" or "Company" or "Vendor" or "Provider" shall be deemed to mean the Contractor.

This Contract will be financed in whole or in part with federal funding. As such, federal laws, regulations, policies and related administrative practices apply to this Contract. The most recent of such federal requirements, including any amendments made after the execution of this Contract shall govern the Contract, unless the federal government determines otherwise. This ***UG Attachment*** identifies the federal requirements that may be applicable to this contract. The Contractor is responsible for complying with all applicable provisions.

To the extent possible, the federal requirements contained in the most recent version of the Uniform Administrative Requirements for federal awards (Uniform Rules) codified at 2.C.F.R., Part 200, including any certifications and contractual provisions required by any federal statutes or regulation referenced therein to be included in this contract are deemed incorporated into this contract by reference and shall be incorporated into any subagreement or subcontract executed by the Contractor pursuant to its obligations under this Contract. The Contractor and its subcontractors, if any, hereby represent and covenant that they are have complied and shall comply in the future with the applicable provisions of the original contract

then in effect and with all applicable federal, state, and local laws, regulations, and rules and local policies and procedures, as amended from time to time, relating to Work to be performed under this contract.

Energy Conservation

The Contractor and Subcontractors agrees to comply with the mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act, 42 U.S.C. § 6321, et seq.

Federal Water Pollution Control Act

For contracts in excess of $150,000, the Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.

The Contractor agrees to report each violation to Onslow County Schools and understands and agrees that Onslow County Schools will, in turn, report each violation as required to assure notification to Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

The Contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by FEMA."

Clean Air Act

For contracts in excess of $150,000, the Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq. and the Federal Water Pollution Act as amended (33 USC § 1251-1387).

The Contractor agrees to report any violation to Onslow County Schools immediately upon discovery. The Contractor understands and agrees that Onslow County Schools will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency (EPA) Regional Office. Contractor must include this requirement in all subcontracts that exceed $50,000.

The Contractor agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by FEMA.

Access to Records and Reports

The Contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide Onslow County Schools, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives' access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.

The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

The Contractor agrees to provide the FEMA Administrator or his authorized representatives' access to construction or other work sites pertaining to the work being completed under the contract.

All Contractors and their successors, transferees, assignees, and subcontractors acknowledge and agree to comply with applicable provisions governing Department and FEMA access to records, accounts, documents, information, facilities, and staff.

No Obligation by Federal Government

Onslow County Schools and the Contractor acknowledge and agree that , notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the underlying contract, absent the express written consent by the Federal Government, the Federal Government is not a party to this contract and shall not be subject to any obligations or liabilities to Onslow County Schools, the Contractor, or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying contract.

The Contractor agrees to include the above clause in each subcontract financed in whole or in part with federal assistance. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.

Program Fraud and False or Fraudulent Statements or Related Acts

The Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the contractor's actions pertaining to this contract. Upon execution of the underlying contract, the Contractor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the underlying contract or the Federally assisted project for which this contract work is being performed. In addition to other penalties that may be applicable, the Contractor further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Contractor to the extent the Federal Government deems appropriate.
The Contractor also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance, the Government reserves the right to impose the penalties of 18 U.S.C. § 1001 and 49 U.S.C. § 5307(n)(1) on the Contractor, to the extent the Federal Government deems appropriate.

The Contractor agrees to include the above two clauses in each subcontract financed in whole or in part with Federal assistance. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions.

Changes

Any change in the contract cost, modification, change order, or constructive change must be allowable, allocable, within the scope of its funding, grant or cooperative agreement, and reasonable for the completion of project scope. All changes and/or amendments to the contract will be outlined in detail, formalized in writing, and signed by the authorized representative of each party. Contractor's failure to do so shall constitute a material breach of the contract.

Termination

Termination Without Cause. Onslow County Schools may terminate this Agreement at any time without cause by giving thirty (30) days written notice to the Contractor.

Termination for Default by Either Party. By giving written notice to the other party, either party may terminate this Agreement upon the occurrence of one or more of the following events:

The other party violates or fails to perform any covenant, provision, obligation, term or condition contained in this Agreement, provided that, unless otherwise stated in this Agreement, such failure or violation shall not be cause for termination if both of the following conditions are satisfied: (i) such default is reasonably susceptible to cure; and (ii) the other party cures such default within thirty (30) days of receipt of written notice of default from the non-defaulting party; or

The other party attempts to assign, terminate or cancel this Agreement contrary to the terms hereof; or

The other party ceases to do business as a going concern, makes an assignment for the benefit of creditors, admits in writing its inability to pay debts as they become due, files a petition in bankruptcy or has an involuntary bankruptcy petition filed against it (except in connection with a reorganization under which the business of such party is continued and performance of all its obligations under this Agreement shall continue), or if a receiver, trustee or liquidator is appointed for it or any substantial part of other party's assets or properties.

Any notice of default pursuant to this Section shall identify and state the party's intent to terminate this Agreement if the default is not cured within the specified period.

Additional Grounds for Default Termination by Onslow County Schools. By giving written notice to the Contractor, Onslow County Schools may also terminate this Agreement upon the occurrence of one or more of the following events (which shall each constitute grounds for termination without a cure period and without the occurrence of any of the other events of default previously listed):

The Contractor makes or allows to be made any material written misrepresentation or provides any materially misleading written information in connection with this Agreement, Contractor's Proposal, or any covenant, agreement, obligation, term or condition contained in this Agreement; or

The Contractor takes or fails to take any action which constitutes grounds for immediate termination under the terms of this Agreement, including but not limited to failure to obtain or maintain the insurance policies and endorsements as required by this Agreement, or failure to provide the proof of insurance as required by this Agreement.

Cancellation of Orders and Subcontracts. In the event this Agreement is terminated by Onslow County Schools for any reason prior to the end of the term, the Contractor shall upon termination immediately discontinue all service in connection with this Agreement and promptly cancel all existing orders and subcontracts, which are chargeable to this Agreement. As soon as practicable after receipt of notice of termination, the Contractor shall submit a statement to Onslow County Schools showing in detail the services performed under this Agreement to the date of termination.

No Effect on Taxes, Fees, Charges, or Reports. Any termination of the Agreement shall not relieve the Contractor of the obligation to pay any fees, taxes or other charges then due to Onslow County Schools, nor relieve the Contractor of the obligation to file any daily, monthly, quarterly or annual reports covering the period to termination nor relieve the Contractor from any claim for damages previously accrued or then accruing against the Contractor.

Obligations upon Expiration or Termination. Upon expiration or termination of this Agreement, the Contractor shall promptly (a) return to Onslow County Schools all computer programs, files, documentation, data, media, related material and any other recording devices, information, or compact discs that are owned by Onslow County Schools; (b) deliver to Onslow County Schools all Work Product; (c) allow Onslow County Schools or a new vendor access to the systems, software, infrastructure, or processes of the Contractor that are necessary to migrate the Services to a new vendor; and (d) refund to Onslow County Schools all pre-paid sums for Products or Services that have been cancelled and will not be delivered.

No Suspension. In the event that Onslow County Schools disputes in good faith an allegation of default by the Contractor, notwithstanding anything to the contrary in this Agreement, the Contractor agrees that it will not terminate this Agreement or suspend or limit the delivery of Products or Services or any warranties or repossess, disable or render unusable any Software supplied by the Contractor, unless (i) the parties agree in writing, or (ii) an order of a court of competent jurisdiction determines otherwise.
Authority to Terminate. Onslow County Schools Superintendent or their designee is authorized to terminate this Agreement on behalf of Onslow County Schools.

Audit. During the term of the Agreement and for a period of one (1) year after termination or expiration of this Agreement for any reason, Onslow County Schools shall have the right to audit, either itself or through a third party, all books and records (including but not limited to the technical records) and facilities of the Contractor necessary to evaluate Contractor's compliance with the terms and conditions of the Agreement or Onslow County Schools' payment obligations. Onslow County Schools shall pay its own expenses, relating to such audits, but shall not have to pay any expenses or additional costs of the Contractor. However, if non-compliance is found that would have cost Onslow County Schools in excess of $5,000 but for the audit, then the Contractor shall be required to reimburse Onslow County Schools for the cost of the audit.

Remedies

Liquidated Damages*:* Onslow County Schools and the Contractor acknowledge and agree that Onslow County Schools may incur costs if the Contractor fails to meet the delivery times set forth in the ITB for the Products and Services. The parties further acknowledge and agree that: (a) Onslow County Schools may be damaged by such failures, including loss of goodwill and administrative costs; but that (b) the costs that Onslow County Schools might reasonably be anticipated to accrue as a result of such failures are difficult to ascertain due to their indefiniteness and uncertainty. Accordingly, the Contractor agrees to pay liquidated damages at the rates set forth in the ITB. The parties agree that the liquidated damages set forth in the ITB shall be Onslow County Schools' exclusive remedy for loss of goodwill and administrative costs, attributable to a failure by the Contractor to meet such delivery times, but shall not be the remedy for the cost to cover or other direct damages.

Right to Cover: If the Contractor fails to meet any completion date or resolution time set forth in this Agreement (including the Exhibits), and it fails to cure such default within one (1) business day after receiving written notice from Onslow County Schools of such failure, Onslow County Schools may take any of the following actions with or without terminating this Agreement, and in addition to and without limiting any other remedies it may have:

Employ such means as it may reasonably deem advisable and appropriate to perform itself or obtain the Services from a third party until the matter is resolved and the Contractor is again able to resume performance under this Agreement; and

Deduct any and all reasonable expenses incurred by Onslow County Schools in obtaining or performing the Services from any money then due or to become due the Contractor and, should

Onslow County Schools' reasonable cost of obtaining or performing the services exceed the amount due the Contractor, collect the difference from the Contractor.

Right to Withhold Payment. If the Contractor materially breaches any provision of this Agreement, Onslow County Schools shall have a right to withhold all payments due to the Contractor with respect to the services that are the subject of such breach until such breach has been fully cured.

Specific Performance and Injunctive Relief. The Contractor agrees that due to the potential impact on public health, monetary damages may not be an adequate remedy for the Contractor's failure to provide the Services required by this Agreement, and monetary damages may not be the equivalent of the performance of such obligation. Accordingly, the Contractor hereby agrees that Onslow County Schools may seek an order granting specific performance of such obligations of the Contractor in a court of competent jurisdiction within the State of North Carolina. The Contractor further consents to Onslow County Schools seeking injunctive relief (including a temporary restraining order) to assure performance in the event the Contractor breaches the Agreement in any material respect.

Setoff. Each party shall be entitled to setoff and deduct from any amounts owed to the other party pursuant to this Agreement all damages and expenses incurred as a result of the other party's breach of this Agreement, following any applicable cure periods, and provided such party has given notice of its intention to apply a setoff prior to making the payment deduction, together with documentary evidence demonstrating that such party has actually incurred the damages and/or expenses being setoff.

Other Remedies. Except as specifically set forth in the main body of this Agreement, the remedies set forth above shall be deemed cumulative and not exclusive and may be exercised successively or concurrently, in addition to any other available remedy

Debarment and Suspension

This contract is a covered transaction for purposes of 2 C.F.R. Part 180 and 2 C.F.R. Part. 3000. As such, the Contractor is required to verify that none of the contractor, its principals (defined at 2 C.F.R. § 180.995), or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R.§ 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

The Contractor is required to comply with 2 C.F.R. Part 180, Subpart C and 2 C.F.R. pt. 3000, Subpart C and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into. By signing and submitting its bid or proposal, the bidder or proper certifies that:

This certification in this clause is a material representation of fact relied upon by Onslow County Schools. If it is later determined that the bidder or proposer knowingly rendered an erroneous certification, in addition to remedies available by Onslow County Schools, the federal government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 2 C.F.R. Part 180, Subpart C and 2 C.F.R. Part 3000, Subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions."

Equal Employment Opportunity

During the performance of this contract, the Contractor agrees as follows:

1. The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.

3. The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

4. The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, as amended by executive Order 11375, and with the rules, regulations, and relevant orders of the Secretary of Labor.

5. The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

6. In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions as may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the contractor may request the United States to enter into such litigation to protect the interests of the United States

Davis-Bacon Requirements

1. ***Minimum Wages***.

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalent thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of

any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided* that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can easily be seen by the workers.

(ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination;

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the Contractor, the laborers, or mechanics to be employed in the classification, or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii) (B) or (C) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program: *Provided* that the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. ***Withholding***.

The Sponsor shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of work, all or part of the wages required by the contract, the Sponsor may, after written notice to the Contractor, Sponsor, Applicant, or Owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. ***Payrolls and Basic Records***.

(i) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 1(b) (2) (B) of the Davis-Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records that show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and that show the costs anticipated or the actual costs incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Sponsor if the agency is a party to the contract, but if the agency is not such a party, the Contractor will submit the payrolls to the applicant, Sponsor, or Owner, as the case may be, for transmission to the Sponsor. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (*e.g.* the last four digits of

the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at *www.dol.gov/whd/forms/wh347instr.htm* or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker and shall provide them upon request to the Sponsor if the agency is a party to the contract, but if the agency is not such a party, the Contractor will submit them to the applicant, sponsor, or Owner, as the case may be, for transmission to the Sponsor, the Contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, Sponsor, or Owner).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) The payroll for the payroll period contains the information required to be provided under 29 CFR § 5.5(a) (3) (ii), the appropriate information is being maintained under 29 CFR § 5.5 (a) (3) (i), and that such information is correct and complete;

(2) Each laborer and mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations 29 CFR Part 3;

(3) Each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The Contractor or subcontractor shall make the records required under paragraph (3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the sponsor, the Sponsor, or the Department of Labor and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the Contractor, Sponsor, applicant, or Owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. ***Apprentices and Trainees.***

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary

employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination that provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate that is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal Employment Opportunity. The utilization of apprentices, trainees, and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. ***Compliance with Copeland Act Requirements.***

The Contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

6. ***Subcontracts***.

The Contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR Part 5.5(a)(1) through (10) and such other clauses as the Sponsor may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.

7. ***Contract Termination: Debarment***.

A breach of the contract clauses in paragraph 1 through 10 of this section may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. ***Compliance with Davis-Bacon and Related Act Requirements***.

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. ***Disputes Concerning Labor Standards.***

Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the Contractor (and any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. ***Certification of Eligibility.***

(i) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 USC 1001

Copeland "Anti-Kickback" Act

Contractor. The Contractor must comply with the requirements of the Copeland "Anti-Kickback" Act (18 U.S.C. § 874 and 40 U.S.C. § 3145) as supplemented by Department of Labor regulation 29 C.F.R. Part 3 *as may be applicable*, which are incorporated by reference into this contract.

Contractor and subcontractors are prohibited from inducing, by any means, any person employed on the project to give up any part of the compensation to which the employee is entitled. The Contractor and each Subcontractor must submit to the Owner, a weekly statement on the wages paid to each employee performing on covered work during the prior week

Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as FEMA may require and also a clause requiring the subcontractors to include these clauses in

any lower tier subcontracts. The prime Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.

Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a Contractor and subcontractor as provided in 29 C.F.R. § 5.12."

Contract Work Hours and Safety Standards Act (all contracts in excess of $100,000)\

1. Overtime requirements. No Contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.

3. Subcontractors. The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this.section."

Rights to Inventions Made Under a Contract or Agreement

Patent and Rights in Data

CONTRACTS INVOLVING EXPERIMENTAL, DEVELOPMENTAL, OR RESEARCH WORK.

Rights in Data - The following requirements apply to each contract involving experimental, developmental or research work:

The term "subject data" used in this clause means recorded information, whether or not copyrighted, that is delivered or specified to be delivered under the contract. The term includes graphic or pictorial delineation in media such as drawings or photographs; text in specifications or related performance or design-type documents; machine forms such as punched cards, magnetic tape, or computer memory printouts; and information retained in computer memory. Examples include, but are not limited to: computer software, engineering drawings and associated lists, specifications, standards, process sheets, manuals, technical reports, catalog item identifications, and related information. The term "subject data" does not include financial reports, cost analyses, and similar information incidental to contract administration.

The following restrictions apply to all subject data first produced in the performance of the contract to which this Attachment has been added:

Except for its own internal use, the Purchaser or Contractor may not publish or reproduce subject data in whole or in part, or in any manner or form, nor may the Purchaser or Contractor authorize others to do so, without the written consent of the Federal Government, until such time as the Federal Government may have either released or approved the release of such data to the public; this restriction on publication, however, does not apply to any contract with an academic institution.

In accordance with 49 C.F.R. § 18.34 and 49 C.F.R. § 19.36, the Federal Government reserves a royalty-free, non-exclusive and irrevocable license to reproduce, publish, or otherwise use, and to authorize others to use, for "Federal Government purposes," any subject data or copyright described in subsections (2)(b)(i) and (2)(b)(ii) of this clause below. As used in the previous sentence, "for Federal Government purposes," means use only for the direct purposes of the Federal Government. Without the copyright owner's consent, the Federal Government may not extend its Federal license to any other party.

Any subject data developed under that contract, whether or not a copyright has been obtained; and

Any rights of copyright purchased by the Purchaser or Contractor using Federal assistance in whole or in part.

When federal assistance is awarded for experimental, developmental, or research work, it is the general intention to increase knowledge available to the public rather than to restrict the benefits resulting from the work to participants in that work. Therefore, unless determined otherwise, the Purchaser and the Contractor performing experimental, developmental, or research work required by the underlying contract to which this Attachment is added agree to make available to the public, either the license in the copyright to any subject data developed in the course of that contract or a copy of the subject data first produced under the contract for which a copyright has not been obtained. If the experimental, developmental, or research work, which is the subject of the underlying contract, is not completed for any reason whatsoever, all data developed under that contract shall become subject data as defined in subsection (a) of this clause and shall be delivered as the Federal Government may direct. This subsection (c), however, does not apply to adaptations of automatic data processing equipment or programs for the Purchaser or Contractor's use whose costs are financed in whole or in part with Federal assistance.

Unless prohibited by state law, upon request by the Federal Government, the Purchaser and the Contractor agree to indemnify, save, and hold harmless the Federal Government, its officers, agents, and employees acting within the scope of their official duties against any liability, including costs and expenses, resulting from any willful or intentional violation by the Purchaser or Contractor of proprietary rights, copyrights, or right of privacy, arising out of the publication, translation, reproduction, delivery, use, or disposition of any data furnished under that contract. Neither the Purchaser nor the Contractor shall be required to indemnify the Federal Government for any such liability arising out of the wrongful act of any employee, official, or agents of the Federal Government.
Nothing contained in this clause regarding rights in data shall imply a license to the Federal Government under any patent or be construed as affecting the scope of any license or other right otherwise granted to the Federal Government under any patent.

Data developed by the Purchaser or Contractor and financed entirely without the use of Federal assistance that has been incorporated into work required by the underlying contract to which this Attachment has been added is exempt from the requirements of subsections (b), (c), and (d) of this clause, provided that the Purchaser or Contractor identifies that data in writing at the time of delivery of the contract work.

Unless determined otherwise, the Contractor agrees to include these requirements in each subcontract for experimental, developmental, or research work financed in whole or in part with Federal assistance.

Unless the Federal Government later makes a contrary determination in writing, irrespective of the Contractor's status (i.e., a large business, small business, state government or state instrumentality, local government, nonprofit organization, institution of higher education, individual, etc.), the Purchaser and the Contractor agree to take the necessary actions to provide those rights in that invention due the Federal

Government as described in U.S. Department of Commerce regulations, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," 37 C.F.R. Part 401.

The Contractor also agrees to include these requirements in each subcontract for experimental, developmental, or research work financed in whole or in part with Federal assistance.

Patent Rights - The following requirements apply to each contract involving experimental, developmental, or research work:

General - If any invention, improvement, or discovery is conceived or first actually reduced to practice in the course of or under the contract to which this Attachment has been added, and that invention, improvement, or discovery is patentable under the laws of the United States of America or any foreign country, the Purchaser and Contractor agree to take actions necessary to provide immediate notice and a detailed report to the party at a higher tier.

Unless the Federal Government later makes a contrary determination in writing, irrespective of the Contractor's status (a large business, small business, state government or state instrumentality, local government, nonprofit organization, institution of higher education, individual), the Purchaser and the Contractor agree to take the necessary actions to provide those rights in that invention due the Federal Government as described in U.S. Department of Commerce regulations, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," 37 C.F.R. Part 401.

The Contractor also agrees to include the requirements of this clause in each subcontract for experimental, developmental, or research work financed in whole or in part with Federal assistance.

Procurement of Recovered Materials

Contractor and subcontractor agree to comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, and the regulatory provisions of 40 CFR Part 247. In the performance of this contract and to the extent practicable, the Contractor and subcontractors are to use products containing the highest percentage of recovered materials for items designated by the Environmental Protection Agency (EPA) under 40 CFR Part 247 whenever:

1. The contract requires procurement of $10,000 or more of a designated item during the fiscal year; or
2. The contractor has procured $10,000 or more of a designated item using Federal funding during the previous fiscal year.

Section 6002(c) establishes exceptions to the preferences for recovery EPA-Designed products if the contractor can demonstrate the item is:

- Not reasonably available within a timeframe providing for compliance with the contract performance schedule;
- Fails to meet reasonable contract performance requirements; or
- Is only available at an unreasonable price.

Information about this requirement, along with the list of EPA- designate items, is available at EPA's Comprehensive Procurement Guidelines web site, https://www.epa.gov/smm/comprehensive- procurement-guideline-cpg-program."

DHS Seal, Logo, and Flags

The Contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without pre-approval by the specific federal agency.

END OF SECTION 00 73 00

SECTION 01 21 00 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements governing allowances.
   1. Certain items are specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when additional information is available for evaluation. If necessary, additional requirements will be issued by Change Order.
   2. The Contractor shall include in the Contract Sum all allowances states in the Contract Documents. The Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for the original allowance shall be included in the Contract Sum and not in the allowance, unless indicated otherwise herein. Coordinate allowance work with related work to ensure that each selection in completely integrated and interfaced with related work. Include all allowance amounts as a separate line item amount on each application for payment.

B. Types of allowances include the following:
   1. Unit-cost allowances.
   2. Quantity allowances.
   3. Contingency Allowances.

C. Related Sections include the following:
   1. Division 01 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders for allowances.
   2. Division 01 Section "Unit Prices" for procedures for using unit prices as bases to establish allowance value.
   3. Divisions 02 through 49 Sections for items of Work covered by allowances.
   4. Division 31 Section 'Earth Moving for Sites" for procedures for measurements and payment for Unsuitable Soil Replacement.

1.3 SELECTION AND PURCHASE

A. At the earliest practical date after award of the Contract, advise the Engineer of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.

B. At Engineer's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work. **Provide a minimum of three (3) proposals for each allowance** for use in making final selections, unless instructed otherwise by the Engineer. Furnish proposals in time so as not to delay the project. Include recommendations that are relevant to performing the Work.

C. Purchase products and systems selected by Engineer from the designated supplier.

1.4 SUBMITTALS

A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.
B. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.5 COORDINATION

A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.6 ALLOWANCES

A. Refer to Schedule of Allowances for Amounts and Quantities
B. Quantity & Lump Sum Allowances
   1. Allowance shall include cost to Contractor of specific products and materials ordered by Owner under allowance and shall include taxes, freight, and delivery to Project site.
   2. Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner under allowance shall be included as part of the Contract Sum and not part of the allowance.
C. Unit-Cost Allowances
   1. Each change order amount for unit-cost type allowances shall be based solely on the difference between the actual unit purchase amount and the unit allowance, multiplied by the final measure or count of work-in-place, with reasonable allowances, where applicable, for cutting losses, tolerances, mixing wastes, normal product imperfections and similar margins.
   2. Include installation costs in the purchase amount only where indicated as a part of the allowance. When requested, prepare explanations and documentation to substantiate the margins as claimed. Prepare and submit substantiation of a change in the scope of work (if any) claimed in the change orders related to unit-cost type allowances. The Owner reserves the right to establish the actual quantity of work- in-place by an independent quantity survey, measure or count.
   3. Unit-Cost Allowances shall be based on the Unit Price value established.
D. Contingency Allowances
   1. Use the contingency allowance only as directed by Engineer for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.
   2. Allowances for overhead and profit shall be provided within the contract price and not included as part of any change order till the allowance amount has been spent.

1.7 CHANGE ORDER MARK-UP

A. Except as otherwise indicated, comply with provisions of General Conditions and other requirements stated in this section. For each allowance, Contractor's claims for increased costs (for either purchase order amount or Contractor's handling, labor, installation, overhead, and profit), because of a change in scope or nature of the allowance work as described in contract documents, must be submitted within 60 days of initial change order authorizing work to proceed on that allowance; otherwise, such claims will be rejected.
B. As a procedural restriction no mark-up (increase or decrease) shall be included in the change order amount for Contractor's increase or decrease in handling, labor, installation, overhead or profit unless purchase order amount varies by more than 15% from allowance amount.

1.8 UNUSED MATERIALS

A. Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
   1. If requested by Engineer, prepare unused material for storage by Owner when it is not economically practical to return the material for credit. If directed by Engineer, deliver unused material to Owner's storage space. Otherwise, disposal of unused material is Contractor's responsibility.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

A. **Allowance No. UP/A-1**: Unsuitable soils removal and disposal off-site.
   1. Purpose: To adjust the contract sum in case a quantity different from that indicated in the allowance is required.
   2. Unit of measurement: cubic yard in place prior to excavation.
   3. Include the following in the unit price:
      a. Excavation, loading, transport and disposal of all materials.
      b. Overhead and profit.
      c. Allowance shall be based on the unit price quoted in the Proposal.
   4. Include all other related costs in the contract sum.
   5. Method of measurement: Quantities will be verified by a soils and materials engineer employed by the Owner.
   6. **Allowance Quantity: 1000-cy.**

B. **Allowance No. UP/A-2**: Rock removal and disposal off-site.
   1. Purpose: To adjust the contract sum in case a quantity different from that indicated in the allowance is required.
   2. Unit of measurement: cubic yard in place prior to excavation.
   3. Include the following in the unit price:
      a. Excavation, loading, transport, placement and compaction of all materials to a location to be determined on the school tract.
      b. Overhead and profit.
      c. Allowance shall be based on the unit price quoted in the Proposal.

4. Include all other related costs in the contract sum.
5. Method of measurement: Quantities will be verified by a soils and materials engineer employed by the Owner.
6. **Allowance Quantity: 100-cy.**

C. **Allowance No. UP/A-3**: Replacement of authorized excavation of unsuitable soils or rock with off-site imported fill material.
1. Purpose: To adjust the contract sum in case a quantity different from that indicated in the allowance is required.
2. Unit of measurement: cubic yard, compacted in place.
3. Include the following in the unit price:
   a. Suitable soil materials from Contractor's off-site source.
   b. Excavation, loading, transport, placement, moisture control and compaction of suitable soil materials.
   c. Overhead and profit.
   d. Allowance shall be based on the unit price quoted in the Proposal.
4. Include all other related costs in the contract sum. Unit price shall not include the excavation of unsuitable soil or rock.
5. Method of measurement: Quantities will be verified by a soils and materials engineer employed by the Owner.
6. **Allowance Quantity: 500-cy.**

D. **Allowance No. UP/A-4**: Replacement of authorized excavation of unsuitable soils or rock with Aggregate Base Course (ABC) stone material.
1. Purpose: To adjust the contract sum in case a quantity different from that indicated in the allowance is required.
2. Unit of measurement: cubic yard, compacted in place.
3. Include the following in the unit price:
   a. ABC materials from Contractor's off-site source.
   b. Excavation, loading, transport, placement, moisture control and compaction of materials.
   c. Overhead and profit.
   d. Allowance shall be based on the unit price quoted in the Proposal.
4. Include all other related costs in the contract sum. Unit price shall not include the excavation of unsuitable soil or rock.
5. Method of measurement: Quantities will be verified by a soils and materials engineer employed by the Owner.
6. **Allowance Quantity: 500-cy.**

E. **Allowance No. UP/A-5**: Geo-Grid in place.
1. Purpose: To adjust the contract sum in case a quantity different from that indicated in the allowance is required.
2. Unit of measurement: square yard of ground surface covered. Overlap, waste or excess shall not be included in payment measurements.
3. Include the following in the unit price:
   a. Materials and transport to site.
   b. Unloading, handling, and placement.
   c. Overhead and profit.
   d. Allowance shall be based on the unit price quoted in the Proposal.
4. Include all other related costs in the contract sum.
5. Method of measurement: Quantities will be verified by a soils and materials engineer employed by the Owner.
6. **Allowance Quantity: 100-sy.**

F. **Allowance No. UP/A-6**: Underground Sanitary Line.
1. Purpose: To adjust the contract sum in case a quantity different from that indicated in the allowance is required.
2. Unit of measurement: linear feet of pipe installed as needed to connect to existing sanitary line in excess of scope as indicated on Drawings. Overlap, waste or excess shall not be included in payment measurements.
3. Include the following in the unit price:
   a. Materials and transport to site.
   b. Include **(1) cleanout per 75-lf of sanitary line**
   c. Unloading, handling, and placement.
   d. Overhead and profit.
   e. Allowance shall be based on the unit price quoted in the Proposal.
4. Include all other related costs in the contract sum.
5. Method of measurement: Length will be verified by Architect and/or Engineer.
6. **Allowance Quantity: 250-lf.**

G **Allowance No. UP/A-7**: Floor Leveling Compound.
1. Purpose: Include sufficient Floor Leveling Compound to provide ¼" thickness leveling for the existing building as an Allowance in the Base Bid. Note that this Allowance is in addition to routine leveling required for floor finishes. Allowance shall be based on the unit price quoted in the Proposal.
2. Unit of measurement: Square Foot.
3. **Allowance Quantity: 5,000-sf.**

H **Allowance No. UP/A-8**: Topical Moisture Mitigation System.
1. Purpose: Include sufficient moisture vapor mitigation system to be applied to the building's concrete slab as an Allowance in the Base Bid where moisture emissions exceed 5 lbs/1000sf in 24 hours. Allowance shall be based on the unit price quoted in the Proposal.
2. Unit of measurement: Square Foot.
3. **Allowance Quantity: 5,000-sf.**

I **Allowance No. UP/A-9**: Abrasive Blast Floor Preparation.
1. Purpose: Include sufficient Abrasive Blast Floor Preparation of the existing building as an Allowance in the Base Bid. Note that this Allowance is in addition to the routine floor preparation required for the floor finishes. Allowance shall be based on the unit price quoted in the Proposal.
2. Unit of measurement: Square Foot.
3. **Allowance Quantity: 5,000-sf.**

J **Allowance No. A-10**: Access Control, Intercom, Voice/Data, Cameras, and Security System.
1. Allow a lump sum for purchase and installation of a complete Access Control and Security Systems, as required by the Owner for connections between existing system and new addition and renovations, and as defined by and specified in contract documents.
3. **Lump Sum: $55,000.00**

K. **Allowance No. 11**: Contingency
1. Contingency allowance shall be provided as follows and the price shall be adjusted based on the actual cost of subcontracts, materials, and labor, excluding overhead and profit. Allowances for overhead and profit shall be provided within the contract price. If there is unused allowance at the conclusion of the project, the allowance plus 5% profit will be deducted from the contract.
2. **Contingency: $200,00.00**

Refer to Addendum #1 for revisions to this section.

END OF SECTION 01 21 00

SECTION 01 23 00 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
   1. The cost or credit for each alternate is the net addition to the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
B. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
C. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
D. Execute accepted alternates under the same conditions as other work of the Contract.
E. Schedule: A Schedule of Alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. **Alternate No. 1; Owner Preferred Manufacturer(s)**
Include the amount to be added to the Base Bid for providing all labor and materials indicated and required to accomplish Work involved in providing the Owner Preferred Manufacturers Listed Below for the indicated work. Base Bid to include one of the following or comparable product of any of the manufacturers listed in the individual section.

1-1. HVAC Wall Unit: Manufacturer – Bard as stated in the Drawings and Specifications.
1-2. Electrical Switches: Manufacturer – Square D as stated in the Drawings and Specifications.
1-3. Water Cooler with Bottle Filler: Manufacturer – Elkay as stated in the Drawings and Specifications.
1-4. Thermostat: Manufacturer – Venstar Explorer Smart Stat as stated in the Drawings and Specifications.
1-5. Door Hardware
a. Door Locks: Manufacturer – Schlage as stated in the Drawings and Specifications.
b. Exit Devices: Manufacturer – Von Duprin as stated in the Drawings and Specifications.
c. Closers: Manufacturer – LCN as stated in the Drawings and Specifications.

B. **Alternate No. 2; ESSER Scope of Work**
State the amount to be added to the Base Bid for providing all labor and materials indicated and required for all work as described below and per the plans and specifications and as shown and noted in the Contract Documents.

2-1. Mechanical and Associated Electrical Upgrades
a. Base Bid: No upgrades to the existing mechanical or electrical system. All new electrical equipment to be connected to existing system in place.
b. Alternate: Mechanical and associated electrical upgrades, including all removal and replacement, as indicated in the Construction Documents.
2-2. NOT USED
2-3. NOT USED
2-4. Door Replacement and Transom Infill
a. Base Bid: Existing doors and transoms to remain in place, except where indicated in the Construction Documents to accommodate the reconfiguration for the new Restrooms, Janitor Closet, and Teacher's Breakroom.
b. Alternate: Removal and replacement of all remaining interior and exterior existing doors and infill of all interior transom windows as indicated in the Construction Documents.
2-5. Window Replacement
a. Base Bid: All existing exterior windows to remain in place.
b. Alternate: Removal and replacement of all existing exterior windows as indicated in the Construction Documents.

C. **Alternate No. 3; Bus Parking**
State the amount to be added to the Base Bid for providing all labor and materials indicated and required to complete the full scope of work related to the Bus Parking Lot as described below, as well as site work per the plans and specifications and as shown and noted in the Contract Documents.

3-1. Parking Lot, Drive, and Associated Sidewalks
a. Base Bid: No work to be performed.
b. Alternate: All work associated with the bus parking lot, drive, and associated sidewalks as indicated in the Construction Documents.
3-2. Canopy and Lighting
a. Base Bid: No work to be performed.

b. Alternate: All work associated with the installation of the canopy and lighting as indicated in the Construction Documents.

D. **Alternate No. 4; Parent/Student Queue**

State the amount to be added to the Base Bid for providing all labor and materials indicated and required to repave the existing northeast parking lot to install the new parent/student queue and all associated sidewalks and site work as per the plans and specifications and as shown and noted in the Contract Documents.

E. **Alternate No. 5; Ceilings, Lighting, and Electrical Upgrades**

1. Base Bid: Existing ceilings, lighting, controls, and electrical to remain in place, except where indicated in the Construction Documents in the Restrooms, Janitor Closet, and Teacher's Breakroom.
2. Alternate: Remove and replace all remaining existing ceilings, lighting, controls, and electrical as indicated in the Construction Documents

END OF SECTION 01 23 00

SECTION 054000 - COLD-FORMED METAL FRAMING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Exterior non-load-bearing curtain wall and soffit framing.
2. Interior non-load bearing partition framing.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of cold-formed steel framing product and accessory.

B. Shop Drawings:

1. Include layout, spacings, sizes, thicknesses, and types of cold-formed steel framing; fabrication; and fastening and anchorage details, including mechanical fasteners.
2. Indicate reinforcing channels, opening framing, supplemental framing, strapping, bracing, bridging, splices, accessories, connection details, and attachment to adjoining work.
3. Delegated Design: For cold-formed metal framing indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional structural engineer responsible for their preparation. Engineer to be licensed in the state of North Carolina.

1.3 INFORMATIONAL SUBMITTALS

A. Qualification Data: For testing agency.

B. Welding certificates.

C. Product test reports.

D. Research reports.

1.4 QUALITY ASSURANCE

A. Engineering Responsibility: Preparation of Shop Drawings, design calculations and other structural data by a qualified professional engineer.

B. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of cold-formed metal framing that are similar to those indicated for this Project in material, design, and extent.

C. Product Tests: Mill certificates or data from a qualified independent testing agency.

D. Welding Qualifications: Qualify procedures and personnel according to AWS D1.3/D1.3M, "Structural Welding Code - Sheet Steel."

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following

1. AllSteel & Gypsum Products, Inc.
2. California Expanded Metal Products Company.
3. ClarkWestern Building Systems, Inc.
4. Consolidated Fabricators Corp.; Building Products Division.
5. Craco Mfg., Inc.
6. Custom Stud Inc.
7. Design Shapes in Steel.
8. Dietrich Metal Framing; a Worthington Industries company.
9. Formetal Co. Inc. (The).
10. MarinoWARE.
11. MBA Building Supplies, Inc.
12. Nuconsteel; a Nucor Company.
13. Olmar Supply, Inc.
14. Quail Run Building Materials, Inc.
15. SCAFCO Corporation.
16. Southeastern Stud & Components, Inc.
17. State Building Products, Inc.
18. Steel Construction Systems.
19. Steel Network, Inc. (The).
20. Steel Structural Systems.
21. Steeler, Inc.
22. Super Stud Building Products, Inc.
23. Telling Industries, LLC.
24. United Metal Products, Inc.
25. United Steel Manufacturing.

2.2 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide cold-formed metal framing capable of withstanding design loads within limits and under conditions indicated.
   1. Design Loads: NC Building Code
   2. Deflection Limits: Design framing systems to withstand design loads without deflections greater than the following:
      a. Exterior non-load bearing framing: Horizontal deflection of 1/600 of the wall height
      b. Interior non-load bearing partition framing: Horizontal deflection of 1/360 of the wall height

B. AISI Specifications and Standards: Unless more stringent requirements are indicated, comply with AISI S100 and AISI S200.

2.3 COLD-FORMED STEEL FRAMING, GENERAL

A. Steel Sheet: ASTM A 1003/A 1003M, Structural Grade, Type H, metallic coated, of grade and coating weight as follows:

1. Grade: As required by structural performance
2. Coating: G90

B. Steel Sheet for Vertical Deflection Clips: ASTM A 653/A 653M, structural steel, zinc coated, of grade and coating as follows:

1. Grade: As required by structural performance.
2. Coating: G90.

2.4 EXTERIOR NON-LOAD-BEARING WALL FRAMING

A. Steel Studs: Manufacturer's standard C-shaped steel studs, of web depths indicated, punched, with stiffened flanges, and as follows:

1. Minimum Base-Metal Thickness: 0.0538 inch
2. Flange Width: 1-5/8 inches

B. Steel Track: Manufacturer's standard U-shaped steel track, of web depths indicated, unpunched, with unstiffened flanges, and matching minimum base-metal thickness of steel studs.

C. Vertical Deflection Clips: Manufacturer's standard bypass or head clips, capable of accommodating upward and downward vertical displacement of primary structure through positive mechanical attachment to stud web.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. AllSteel & Gypsum Products, Inc.
b. ClarkWestern Building Systems, Inc.
c. Dietrich Metal Framing; a Worthington Industries company.
d. MarinoWARE.
e. SCAFCO Corporation.
f. Steel Network, Inc. (The).

D. Single Deflection Track: Manufacturer's single, deep-leg, U-shaped steel track; unpunched, with unstiffened flanges, of web depth to contain studs while allowing free vertical movement, with flanges designed to support horizontal loads and transfer them to the primary structure.

E. Double Deflection Tracks: Manufacturer's double, deep-leg, U-shaped steel tracks, consisting of nested inner and outer tracks; unpunched, with unstiffened flanges.

2.5 FRAMING ACCESSORIES

A. Fabricate steel-framing accessories from steel sheet, ASTM A 1003/A 1003M, Structural Grade, Type H, metallic coated, of same grade and coating weight used for framing members.

B. Provide accessories of manufacturer's standard thickness and configuration.

2.6 ANCHORS, CLIPS, AND FASTENERS

A. Steel Shapes and Clips: ASTM A 36/A 36M, zinc coated by hot-dip process according to ASTM A 123/A 123M.

B. Anchor Bolts: ASTM F 1554, Grade 36 or Grade 55

C. Expansion Anchors: Fabricated from corrosion-resistant materials, with allowable load or strength design capacities calculated according to ICC-ES AC193 and ACI 318 greater than or equal to the design load, as determined by testing per ASTM E 488 conducted by a qualified testing agency.

D. Power-Actuated Anchors: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with allowable load capacities calculated according to ICC-ES AC70, greater than or equal to the design load, as determined by testing per ASTM E 1190 conducted by a qualified testing agency.

E. Mechanical Fasteners: ASTM C 1513, corrosion-resistant-coated, self-drilling, self-tapping, steel drill screws.

1. Head Type: Low-profile head beneath sheathing, manufacturer's standard elsewhere.

2.7 MISCELLANEOUS MATERIALS

A. Galvanizing Repair Paint: SSPC-Paint 20 or MIL-P-21035B

B. Cement Grout: Portland cement, ASTM C 150, Type I; and clean, natural sand, ASTM C 404. Mix at ratio of 1 part cement to 2-1/2 parts sand, by volume, with minimum water required for placement and hydration.

C. Nonmetallic, Nonshrink Grout: Premixed, nonmetallic, noncorrosive, non-staining grout containing selected silica sands, portland cement, shrinkage-compensating agents, and plasticizing and water-reducing agents, complying with ASTM C 1107/C 1107M, with fluid consistency and 30-minute working time.

D. Shims: Load bearing, high-density multi-monomer plastic, and non-leaching; or of cold-formed steel of same grade and coating as framing members supported by shims.

E. Sealer Gaskets: Closed-cell neoprene foam, 1/4 inch thick, selected from manufacturer's standard widths to match width of bottom track or rim track members.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine supporting substrates and abutting structural framing for compliance with requirements for installation tolerance and other conditions affecting performance.

3.2 PREPARATION

A. Install sealer gaskets at the underside of wall bottom track or rim track and at the top of foundation wall or slab at stud or joist locations.

3.3 INSTALLATION, GENERAL

A. Cold-formed steel framing may be shop or field fabricated for installation, or it may be field assembled.

B. Install cold-formed steel framing according to AISI S200 and to manufacturer's written instructions unless more stringent requirements are indicated.

C. Install cold-formed steel framing and accessories plumb, square, and true to line, and with connections securely fastened.

D. Install framing members in one-piece lengths.

E. Install temporary bracing and supports to secure framing and support loads comparable in intensity to those for which structure was designed. Maintain braces and supports in place, undisturbed, until entire integrated supporting structure has been completed and permanent connections to framing are secured.

F. Do not bridge building expansion joints with cold-formed steel framing. Independently frame both sides of joints.

G. Install insulation, specified in Division 07 Section "Thermal Insulation," in built-up exterior framing members, such as headers, sills, boxed joists, and multiple studs at openings, that are inaccessible on completion of framing work.

H. Fasten hole reinforcing plate over web penetrations that exceed size of manufacturer's approved or standard punched openings.

I. Erection Tolerances: Install cold-formed steel framing level, plumb, and true to line to a maximum allowable tolerance variation of 1/8 inch in 10 feet and as follows:

1. Space individual framing members no more than plus or minus 1/8 inch from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.

3.4 EXTERIOR NON-LOAD-BEARING WALL INSTALLATION

A. Install continuous tracks sized to match studs. Align tracks accurately and securely anchor to supporting structure as indicated.

B. Fasten both flanges of studs to top and bottom track unless otherwise indicated. Space studs as follows:

1. Stud Spacing: As required by design, 16 inches

C. Set studs plumb, except as needed for diagonal bracing or required for non-plumb walls or warped surfaces and similar requirements.

D. Isolate non-load-bearing steel framing from building structure to prevent transfer of vertical loads while providing lateral support.
   1. Connect vertical deflection clips to infill studs and anchor to building structure.

E. Install horizontal bridging in wall studs, spaced vertically in rows indicated on Shop Drawings but not more than 48 inches apart. Fasten at each stud intersection.

   1. Bridging: Cold-rolled steel channel, welded or mechanically fastened to webs of punched studs.
   2. Bridging: Combination of flat, taut, steel sheet straps of width and thickness indicated and stud-track solid blocking of width and thickness to match studs. Fasten flat straps to stud flanges and secure solid blocking to stud webs or flanges.
   3. Bridging: Proprietary bridging bars installed according to manufacturer's written instructions.

F. Install miscellaneous framing and connections, including stud kickers, web stiffeners, clip angles, continuous angles, anchors, and fasteners, to provide a complete and stable wall-framing system.

3.5 FIELD QUALITY CONTROL

A. Testing: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.

B. Field and shop welds will be subject to testing and inspecting.

C. Testing agency will report test results promptly and in writing to Contractor and Architect.

D. Remove and replace work where test results indicate that it does not comply with specified requirements.

E. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.6 REPAIRS AND PROTECTION

A. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on fabricated and installed cold-formed steel framing with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.

B. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer that ensure that cold-formed steel framing is without damage or deterioration at time of Substantial Completion.

END OF SECTION 054000

SECTION 09 29 00 - GYPSUM BOARD

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
   1. Interior gypsum board
   2. Exterior sheathing
   3. Cement board panels.
   4. Interior wall and ceiling framing
   5. Reveal and Trim Moldings

B. Related Sections include the following:
   1. Division 06 Section "Rough Carpentry" for wood framing and furring that supports gypsum board.
   2. Division 07 Section "Thermal Insulation" for insulation and vapor retarders installed in assemblies that incorporate gypsum board.
   3. Division 09 Section "Tiling" for cementitious backer units installed as substrates for ceramic tile.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

1.4 QUALITY ASSURANCE

A. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.

B. Fire-Test-Response Characteristics: Where fire-resistance-rated gypsum board assemblies are indicated, provide gypsum board assemblies that comply with the following requirements:
   1. Fire-Resistance Ratings: As indicated by GA File Numbers in GA-600 "Fire Resistance Design Manual" or design designations in UL "Fire Resistance Directory" or in the listing of another testing and inspecting agency acceptable to authorities having jurisdiction.
   2. Gypsum board assemblies indicated are identical to assemblies tested for fire resistance according to ASTM E 119 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.
   3. Deflection and Firestop Track: Top runner provided in fire-resistance-rated assemblies indicated is labeled and listed by UL, Warnock Hersey, or another testing and inspecting agency acceptable to authorities having jurisdiction.

C. **Above-Ceiling Observation:** Architect will conduct an above-ceiling observation prior to installation of gypsum board ceilings and report any deficiencies in the Work observed. Do not proceed with installation of gypsum board to ceiling support framing until deficiencies have been corrected.
   1. Notify Architect one week in advance of the date and the time when the Project, or part of the Project, will be ready for an above-ceiling observation.

1.5 STORAGE AND HANDLING

A. Store materials inside under cover and keep them dry and protected against damage from weather, condensation, direct sunlight, construction traffic, and other causes. Stack panels flat to prevent sagging.

1.6 PROJECT CONDITIONS

A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.
B. Do not install interior products until installation areas are enclosed and conditioned.
C. Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.
   1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
   2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 PANELS, GENERAL

A. Size: Provide in maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

2.2 STEEL FRAMING AND FURRING

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
   1. Steel Framing and Furring:
      a. Clark Steel Framing, Inc.
      b. Consolidated Systems, Inc.
      c. Dale Industries, Inc.
      d. Dietrich Industries, Inc.
      e. Marino/Ware (formerly Marino Industries Corp.).
      f. National Gypsum Co.; Gold Bond Building Products Division.
      g. Unimast, Inc.
B. Steel Framing Components for Suspended and Furred Ceilings:
   1. General: Provide components complying with ASTM C 754 for conditions indicated.
   2. Wire Ties: ASTM A 641, Class 1 zinc coating, soft temper, 0.062 inch thick.
   3. Wire Hangers: ASTM A 641, Class 1 zinc coating, soft temper, 0.162-inch diameter.
   4. Channels: Cold-rolled steel, 0.0598-inch minimum thickness of base (uncoated) metal and 7/16-inch- wide flanges, and as follows:
      a. Carrying Channels: 1-1/2 inches deep, 475 lb/1000 feet, unless otherwise indicated.
      b. Furring Channels: 3/4 inch deep, 300 lb/1000 feet, unless otherwise indicated.
      c. Finish: ASTM A 653, G 60 hot-dip galvanized coating for framing for exterior soffits and where indicated.
   5. Steel Rigid Furring Channels: ASTM C 645, hat shaped, depth of 7/8 inch, and minimum thickness of base (uncoated) metal as follows:
      a. Thickness: 0.0179 inch, unless otherwise indicated.
      b. Protective Coating: ASTM A 653, G 40 hot-dip galvanized coating.
C. Steel Framing for Walls and Partitions:

1. General: Provide steel framing members complying with the following requirements:
   a. Protective Coating: ASTM A 653, G 40 hot-dip galvanized coating.
2. Steel Studs and Runners: ASTM C 645, with flange edges of studs bent back 90 degrees and doubled over to form 3/16-inch- wide minimum lip (return), and complying with the following requirements for minimum thickness of base (uncoated) metal and for depth:
   a. Thickness: minimum 24 gauge.
   b. Depth: 3-5/8 inches, unless otherwise indicated. Provide 7/8", 1-1/2", 2-1/2", 4", 6", 8" and other sizes indicated on drawings.
3. Steel Rigid Furring Channels: ASTM C 645, hat shaped, depth and minimum thickness of base (uncoated) metal as follows:
   a. Thickness: 0.0179 inch, unless otherwise indicated.
   b. Depth: 7/8 inch.
4. Fasteners for Metal Framing: Provide fasteners of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel framing and furring members securely to substrates involved; complying with the recommendations of gypsum board manufacturers for applications indicated.

2.3 INTERIOR GYPSUM BOARD

A. General: Complying with ASTM C 36/C 36M or ASTM C 1396/C 1396M, as applicable to type of gypsum board indicated and whichever is more stringent. Provide gypsum board of types indicated in maximum lengths available that will minimize end-to-end butt joints in each area indicated to receive gypsum board application.
   1. Widths: Provide gypsum board in widths of 48 inches.
   2. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   3. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      a. American Gypsum Co.
      b. BPB America Inc.
      c. G-P Gypsum.
      d. Lafarge North America Inc.
      e. National Gypsum Company.
      f. PABCO Gypsum.
      g. Temple.
      h. USG Corporation.

B. Regular Type:
   1. Thickness: 5/8 inch.
   2. Long Edges: Tapered.

C. Type C:
   1. Thickness: As required by fire-resistance-rated assembly indicated on Drawings.
   2. Long Edges: Tapered

D. Type X:
   1. Thickness: 5/8 inch.
   2. Long Edges: Tapered.
   3. Abuse-Resistant Type: Manufactured to produce greater resistance to surface indentation, through-penetration (impact resistance), and abrasion than standard.
   4. Core: 5/8" inch,
   5. Long Edges: Tapered

E. Mold-Resistant Gypsum Board: ASTM C1396/C1396M. With moisture- and mold-resistant core and paper surfaces.
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. CertainTeed Corporation.
b. Georgia-Pacific Gypsum LLC.
c. National Gypsum Company.
d. Continental Building Products, LLC.
e. USG Corporation.

2. Core: 5/8 inch, Type X.
3. Long Edges: Tapered.
4. Mold Resistance: ASTM D3273, score of 10 as rated according to ASTM D3274.

2.4 EXTERIOR SHEATHING

A. Glass Mat Faced Gypsum Sheathing: Gypsum glass mat sheathing shall comply with ASTM C1177.
1. Type and Thickness: Type X, 5/8" Primed
a. Size: 48" X 120"
B. Sheathing Fasteners: ASTM C 954, steel drill screws, Type S-12 fluted tip, a minimum of 1-1/4 inches long, with organic-polymer coating or other corrosion-protective coating.
C. Sealant: Dow Corning 795 Building Sealant or equal: Install at all sheathing joints, and apply tape recommended by the manufacturer to all joints.

2.5 CEMENT BOARD PANELS

A. Cementitious Backer Units: ANSI A118.9.
1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
2. Products: Subject to compliance with requirements, provide one of the following:
a. Custom Building Products; Wonderboard.
b. FinPan, Inc.; Util-A-Crete Concrete Backer Board.
c. USG Corporation; DUROCK Cement Board.
3. Thickness: As indicated on Drawings.

2.6 TRIM ACCESSORIES

A. Interior Trim: ASTM C 1047.
1. Material: Galvanized or aluminum-coated steel sheet or rolled zinc.
2. Shapes:
a. Cornerbead on outside corners.
b. L-Bead: L-shaped; exposed long flange receives joint compound. Use L-bead unless otherwise indicated. Provide at all locations where gypsum board abuts dissimilar materials.
c. Expansion (control) joint.
B. Exterior Trim: ASTM C 1047.
1. Material: Hot-dip galvanized steel sheet, plastic, or rolled zinc.
2. Shapes:
a. Cornerbead.
C. Reveal Molding
1. Where indicated on drawings, provide Fry Reglet Reveal Molding as manufactured by Fry Reglet Corp. or equal shall be installed. Aluminum shall be extruded alloy 6063 T5, with chemical conversion coating. Size 5/8” x 1/2”.
a. Reveal Molding - Product #DRM-625-50 where indicated on drawings.
b. “Z” Reveal Molding – Product #DRMZ-625-50 where indicated on drawings.

2.7 JOINT TREATMENT MATERIALS

A. General: Comply with ASTM C 475/C 475M.
B. Joint Tape:
   1. Interior Gypsum Wallboard: Paper.
   2. Glass-Mat Gypsum Sheathing Board: 10-by-10 glass mesh.
   3. Tile Backing Panels: As recommended by panel manufacturer.
C. Joint Compound for Interior Gypsum Wallboard (EXCEPT SHOWER ROOMS): For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.
   1. Prefilling: At open joints, rounded or beveled panel edges, and damaged surface areas, use setting-type taping compound.
   2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use drying-type, all-purpose compound.
      a. Use setting-type compound for installing paper-faced metal trim accessories.
   3. Fill Coat: For second coat, use drying-type, all-purpose compound.
   4. Finish Coat: For third coat, use drying-type, all-purpose compound.
   5. Skim Coat: For final coat of Level 5 finish, use drying-type, all-purpose compound.
D. Joint Compound for Shower Room Applications:
   1. Shower Room Ceilings: Use setting-type taping compound and setting-type, sandable topping compound.
E. Joint Compound for Cementitious Backer Units panels:
   1. Cementitious Backer Units: As recommended by backer unit manufacturer.

2.8 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.
B. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.
   1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch thick.
   2. For fastening cementitious backer units, use screws of type and size recommended by panel manufacturer.
C. Acoustical Sealant: As specified in Division 07 Section "Joint Sealants."
   1. Acoustical Sealant for Exposed and Concealed Joints: Manufacturer's standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 834 and the following requirements:
      a. Product is effective in reducing airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.
   2. Available Products: Subject to compliance with requirements, acoustical sealants that may be incorporated in the Work include, but are not limited to, the following:
      a. Acoustical Sealant for Exposed and Concealed Joints:
         1) PL Acoustical Sealant; ChemRex, Inc.; Contech Brands.
         2) AC-20 FTR Acoustical and Insulation Sealant; Pecora Corp.
         3) SHEETROCK Acoustical Sealant; United States Gypsum Co.
D. Thermal Insulation: As specified in Division 07 Section "Thermal Insulation."
E. Vapor Retarder: As specified in Division 07 Section "Thermal Insulation."

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames and framing, for compliance with requirements and other conditions affecting performance.
B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.
C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLING STEEL FRAMING GENERAL

A. Steel Framing Installation Standard: Install steel framing to comply with ASTM C 754 and with ASTM C 840 requirements that apply to framing installation.
B. Install supplementary framing, blocking, and bracing at terminations in gypsum board assemblies to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction. Comply with details indicated and with recommendations of gypsum board manufacturer or, if none available, with United States Gypsum Co.'s "Gypsum Construction Handbook."
C. Do not bridge building control and expansion joints with steel framing or furring members. Independently frame both sides of joints with framing or furring members as indicated.

3.3 INSTALLING STEEL FRAMING FOR SUSPENDED AND FURRED CEILINGS

A. Suspend ceiling hangers from building structural members and as follows:
   1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structural or ceiling suspension system. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
   2. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with the location of hangers required to support standard suspension system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards.
   3. Secure wire hangers by looping and wire-tying, either directly to structures or to inserts, eye screws, or other devices and fasteners that are secure and appropriate for substrate, and in a manner that will not cause them to deteriorate or otherwise fail.
   4. Secure flat, angle, and rod hangers to structure, including intermediate framing members, by attaching to inserts, eye screws, or other devices and fasteners that are secure and appropriate for structure as well as for type of hanger involved, and in a manner that will not cause them to deteriorate or otherwise fail.
   5. Do not attach hangers to steel roof deck. Attach hangers to structural members.
   6. Do not connect or suspend steel framing from ducts, pipes, or conduit.
B. Sway-brace suspended steel framing with hangers used for support.
C. Install suspended steel framing components in sizes and at spacings indicated, but not less than that required by the referenced steel framing installation standard.
   1. Wire Hangers: 48 inches o.c.
   2. Carrying Channels (Main Runners): 48 inches o.c.
   3. Furring Channels (Furring Members): 16 inches o.c.
D. Installation Tolerances: Install steel framing components for suspended ceilings so that cross-furring or grid suspension members are level to within 1/8 inch in 12 feet (3 mm in 3.6 m) as measured both lengthwise on each member and transversely between parallel members.
E. Wire-tie or clip furring members to main runners and to other structural supports as indicated.

3.4 INSTALLING STEEL FRAMING FOR WALLS AND PARTITIONS

A. Install runners (tracks) at floors, ceilings, and structural walls and columns where gypsum board stud assemblies abut other construction.
   1. Where studs are installed directly against exterior walls, install asphalt felt strips or foam gaskets between studs and wall.

B. Installation Tolerances: Install each steel framing and furring member so that fastening surfaces do not vary more than 1/8 inch from the plane formed by the faces of adjacent framing.

C. Extend partition framing full height to structural supports or substrates above suspended ceilings, except where partitions are indicated to terminate at suspended ceilings. Continue framing over frames for doors and openings and frame around ducts penetrating partitions above ceiling to provide support for gypsum board.
   1. Cut studs ½ inch short of full height to provide perimeter relief.
   2. For STC-rated and fire-resistance-rated partitions that extend to the underside of floor/roof slabs and decks or other continuous solid structural surfaces to obtain ratings, install framing around structural and other members extending below floor/roof slabs and decks, as needed, to support gypsum board closures needed to make partitions continuous from floor to underside of solid structure.

D. Install steel studs and furring in sizes and at spacings indicated.
   1. Single-Layer Construction: Space studs 16 inches o.c., unless otherwise indicated.
   2. Multilayer Construction: Space studs 16 inches o.c., unless otherwise indicated.

E. Install steel studs so flanges point in the same direction and leading edge or end of each gypsum board panel can be attached to open (unsupported) edges of stud flanges first.

F. For curved partitions, install steel framing as follows:
   1. Cut top and bottom runners through leg and web at 2-inch intervals for arc length. In cutting lengths of runners, allow for uncut straight lengths of not less than 12 inches at ends of arcs.
   2. Bend runners to uniform curve of radius indicated and locate straight lengths so they are tangent to arcs.
   3. Support outside (cut) leg of runners by clinching a 1-inch- high-by-0.0209-inch- thick steel sheet strip to inside of cut legs using metal lock fasteners.
   4. Attach runners to structural elements at floor and ceiling with fasteners located 2 inches from ends and spaced 24 inches o.c.

G. Frame door openings to comply with GA-219, and with applicable published recommendations of gypsum board manufacturer, unless otherwise indicated. Attach vertical studs at jambs with screws either directly to frames or to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.
   1. Install double 20-gage studs at each jamb, unless otherwise indicated.
   2. Install cripple studs at head adjacent to each jamb stud, with a minimum ½-inch clearance from jamb stud to allow for installation of control joint.

H. Frame openings other than door openings to comply with details indicated or, if none indicated, as required for door openings. Install framing below sills of openings to match framing required above door heads.

3.5 APPLYING AND FINISHING PANELS, GENERAL

A. Comply with ASTM C 840.

B. Install ceiling panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.

C. Install sound-attenuation blankets, where indicated, prior to installing gypsum panels unless blankets are readily installed after panels have been installed on one side.

D. Attach gypsum panels to steel studs so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.

E. Attach gypsum panels to framing provided at openings and cutouts.

F. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch of open space between panels. Do not force into place.

G. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.

H. Form control and expansion joints with space between edges of adjoining gypsum panels.

I. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.
   1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. in area.
   2. Fit gypsum panels around ducts, pipes, and conduits.
   3. Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow 1/4- to 3/8-inch- wide joints to install sealant.

J. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide 1/4- to 1/2-inch- wide spaces at these locations, and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.

K. Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.

L. Space fasteners in gypsum panels according to referenced gypsum board application and finishing standard and manufacturer's recommendations.
   1. Space screws a maximum of 12 inches o.c. for vertical applications.

3.6 APPLYING INTERIOR GYPSUM BOARD

A. Install interior gypsum board in the following locations:
   1. Regular Type: As indicated on Drawings.
   2. Type X / Abuse-Resistant: In corridors, on bulkheads, and as indicated on Drawings.
   3. Type C: Where required for specific fire-resistance-rated assembly indicated.
   4. Mold-Resistant Gypsum Board: Where exposed in Restrooms & Janitor closets, and as indicated on Drawings

B. Single-Layer Application:
   1. On ceilings, apply gypsum panels before wall/partition board application to greatest extent possible and at right angles to framing, unless otherwise indicated.
   2. On partitions/walls, apply gypsum panels vertically (parallel to framing), unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.
      a. Stagger abutting end joints not less than one framing member in alternate courses of panels.
   3. On Z-furring members, apply gypsum panels vertically (parallel to framing) with no end joints. Locate edge joints over furring members.
   4. Fastening Methods: Apply gypsum panels to supports with steel drill screws.

3.7 GYPSUM SHEATHING INSTALLATION

A. General: Install sheathing board according to manufacturer's instructions and GA-253 "Application of Gypsum Sheathing." Cut boards at penetrations, edges, and other obstructions of the work, fit tight against abutting construction, except provide a 3/8" setback where non load bearing elements abut structural elements. Coordinate sheathing with flashing and joint installation so these materials are installed in sequence and manner that prevent moisture from passing through the completed exterior wall assembly, Apply fasteners so screw heads bear tightly against face of sheathing boards but do not cut into

facing. Do not bridge building expansion joints with sheathing, cut and space edges to match spacing of structural support elements.

B. Install sheathing boards vertical edges centered over flanges of steel studs. Screw attach boards at perimeter and within field of board to each stud at approximately 8 inches on center and set back a minimum of 3.8" from edges and ends of boards.

C. Apply joint sealant with a continuous 3/8" bead and trowel flat. Apply enough sealant to each fastener to cover completely when trowel flat.

3.8 APPLYING CEMENTITIOUS BACKER PANELS

A. Cementitious Backer Units: ANSI A108.11, at locations indicated.

3.9 INSTALLING TRIM ACCESSORIES

A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.

B. Exterior Trim: Install in the following locations:
   1. Cornerbead: Use at outside corners.

3.10 FINISHING GYPSUM BOARD

A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.

B. Prefill open joints, rounded or beveled edges, and damaged surface areas.

C. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.

D. Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C 840:
   1. Level 1: Ceiling plenum areas, concealed areas, and where indicated.
   2. Level 4: Gypsum board surfaces, unless otherwise indicated
      a. Primer and its application to surfaces are specified in other Division 09 Sections.

E. Glass-Mat Gypsum Sheathing Board: Finish according to manufacturer's written instructions for use as exposed soffit board.

F. Cementitious Backer Units: Finish according to manufacturer's written instructions.

G. Use the following joint compound combination as applicable to the finish levels specified:
   1. Embedding and First Coat: Ready-mixed, drying-type, all-purpose or taping compound. Fill (Second) Coat: Ready-mixed, drying-type, all-purpose or topping compound. Finish (Third) Coat: Ready-mixed, drying-type, all-purpose or topping compound.

H. For Level 4 gypsum board finish, embed tape in joint compound and apply first, fill (second), and finish (third) coats of joint compound over joints, angles, fastener heads, and accessories. Touch up and sand between coats and after last coat as needed to produce a surface free of visual defects and ready for decoration. Install Level 5 finish in Corridors.
   1. Where Level 1 gypsum board finish is indicated, embed tape in joint compound.

I. For Level 5 gypsum board finish, Apply skim coat of all-purpose (conventional weight) drying-type compound or spray-applied Primer-Surfacer over exposed surfaces of gypsum board. After skim coat has dried, touch-up and sand to provide surface free of visual defects, tool marks, and ridges, and ready for application of finish.

3.11 PROTECTION

A. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.
B. Remove and replace panels that are wet, moisture damaged, and mold damaged.
   1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
   2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 09 29 00

SECTION 09 30 00 - TILING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
   1. Porcelain Tile (floor and wall).
   2. Stone thresholds installed as part of tile installations.
   3. Waterproof membrane for thin-set tile installations.
   4. Crack-suppression membrane for thin-set tile installations.
   5. Cementitious backer units installed as part of tile installations.
   6. Metal Trim and Transition Strips

B. Related Sections include the following:
   1. Division 03 Section "Cast-in-Place Concrete" for monolithic slab finishes specified for tile substrates.
   2. Division 07 Section "Joint Sealants" for sealing of expansion, contraction, control, and isolation joints in tile surfaces.
   3. Division 09 Section "Gypsum Board" for cementitious backer units.

1.3 DEFINITIONS

A. Module Size: Actual tile size (minor facial dimension as measured per ASTM C 499) plus joint width indicated.
B. Facial Dimension: Actual tile size (minor facial dimension as measured per ASTM C 499).
C. Facial Dimension: Nominal tile size as defined in ANSI A137.1.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.
B. Shop Drawings: Provide Tile shop drawing layout. Show the following:
   1. Columns, doorways, enclosing walls, or partitions, built-in casework.
   2. Existing flooring materials to be removed.
   3. Existing flooring materials to remain.
   4. Type of subfloor.
   5. Type of installation.
   6. Pattern of installation.
   7. Type, color, and location of insets and borders.
   8. Type, color, and location of edge, transition, and other accessory strips.
   9. Transition details to other flooring materials.

C. Samples: For each of the following products and for each

D. Samples for Initial Selection: For each type of tile and grout indicated. Include Samples of accessories involving color selection.
E. Samples for Verification:
   1. Full-size units of each type and composition of tile and for each color and finish required.
F. Master Grade Certificates: For each shipment, type, and composition of tile, signed by tile manufacturer and Installer.
G. Product Certificates: For each type of product, signed by product manufacturer.
H. Qualification Data: For Installer.
I. Material Test Reports: For each tile-setting and -grouting product.

1.5 QUALITY ASSURANCE

A. Source Limitations for Tile: Obtain all tile of same type and color or finish from one source or producer.
   1. Obtain tile from same production run and of consistent quality in appearance and physical properties for each contiguous area.
B. Source Limitations for Setting and Grouting Materials: Obtain ingredients of a uniform quality for each mortar, adhesive, and grout component from a single manufacturer and each aggregate from one source or producer.
C. Source Limitations for Other Products: Obtain each of the following products specified in this Section through one source from a single manufacturer for each product:
   1. Stone thresholds.
   2. Waterproofing.
   3. Joint sealants.
   4. Cementitious backer units.
D. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Comply with requirement in ANSI A137.1 for labeling sealed tile packages.
B. Store tile and cementitious materials on elevated platforms, under cover, and in a dry location.
C. Store aggregates where grading and other required characteristics can be maintained, and contamination avoided.
D. Store liquid latexes and emulsion adhesives in unopened containers and protected from freezing.
E. Handle tile that has temporary protective coating on exposed surfaces to prevent coated surfaces from contacting backs or edges of other units. If coating does contact bonding surfaces of tile, remove coating from bonding surfaces before setting tile.

1.7 PROJECT CONDITIONS

A. Environmental Limitations: Do not install tile until construction in spaces is complete and ambient temperature and humidity conditions are maintained at the levels indicated in referenced standards and manufacturer's written instructions.

1.8 EXTRA MATERIALS

A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Tile and Trim Units: Furnish quantity of full-size units equal to 3 percent of amount installed, for each type, composition, color, pattern, and size indicated.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply for product selection:
   1. Products: Subject to compliance with requirements, provide one of the products specified.
   2. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the manufacturers specified.

2.2 PRODUCTS, GENERAL

A. ANSI Ceramic Tile Standard: Provide tile that complies with ANSI A137.1, "Specifications for Ceramic Tile," for types, compositions, and other characteristics indicated.
   1. Provide tile complying with Standard grade requirements, unless otherwise indicated.
   2. For facial dimensions of tile, comply with requirements relating to tile sizes specified in Part 1 "Definitions" Article.
B. ANSI Standards for Tile Installation Materials: Provide materials complying with ANSI standards referenced in "Setting and Grouting Materials" Article.
C. Colors, Textures, and Patterns: Where manufacturer's standard products are indicated for tile, grout, and other products requiring selection of colors, surface textures, patterns, and other appearance characteristics, provide specific products or materials complying with the following requirements:
   1. As selected by Architect from manufacturer's full range.
D. Factory Blending: For tile exhibiting color variations within ranges selected during Sample submittals, blend tile in factory and package so tile units taken from one package show same range in colors as those taken from other packages and match approved Samples.
E. Mounting: For factory-mounted tile, provide back- or edge-mounted tile assemblies as standard with manufacturer, unless otherwise indicated.

2.3 TILE PRODUCTS

A. Approved Manufacturers:
   1. Daltile International
   2. American Olean
   3. American Marazzi Tile, Inc.
   4. Crossville Ceramics Company, L.P.
   5. Florida Tile Industries, Inc.

B. Porcelain Floor Tile - FT-1:
   1. Basis of Design: provide Daltile – Median Colorbody Porcelain Tile, or equal by American Olean or from other approved Manufacturer.
   2. Selection from Manufacturers full range of colors.
   3. Finish: Matte
   4. Composition: Colorbody Porcelain.
   5. Module size: 12 inches by 24 inches
   6. Nominal Thickness: 3/8 inch

7. Porcelain Tile Trim Units: Matching characteristics of adjoining flat tile and coordinated with sizes and coursing of adjoining flat tile where applicable.
   a. Grout color: As selected by Architect from manufacturer's full range.
   b. Grout Joint Size: 1/8 inch (3/16 inch when installing tile with a length 15 inches or greater in staggered brick-joint pattern, overlap should not exceed 33%.

C. Porcelain Wall Tile - WT-1:
1. Basis of Design: provide Daltile – Median Colorbody Porcelain Tile, or equal by American Olean or from other approved Manufacturer.
2. Selection from Manufacturers full range of colors.
3. Finish: Matte
4. Composition: Colorbody Porcelain.
5. Module size: 12 inches by 24 inches
6. Nominal Thickness: 3/8 inch
7. Porcelain Tile Trim Units: Matching characteristics of adjoining flat tile and coordinated with sizes and coursing of adjoining flat tile where applicable.
   a. Grout color: As selected by Architect from manufacturer's full range.
      Grout Joint Size: 1/8 inch (3/16 inch when installing tile with a length 15 inches or greater in staggered brick-joint pattern, overlap should not exceed 33%.

D. Porcelain Wall Tile - WT-2:
1. Basis of Design: provide Daltile – Median Colorbody Porcelain Tile, or equal by American Olean or from other approved Manufacturer.
2. Selection from Manufacturers full range of colors.
3. Finish: Polished
4. Composition: Colorbody Porcelain.
5. Module size: 12 inches by 24 inches
6. Nominal Thickness: 3/8 inch
7. Porcelain Tile Trim Units: Matching characteristics of adjoining flat tile and coordinated with sizes and coursing of adjoining flat tile where applicable.
   a. Grout color: As selected by Architect from manufacturer's full range.
   b. Grout Joint Size: 1/8 inch (3/16 inch when installing tile with a length 15 inches or greater in staggered brick-joint pattern, overlap should not exceed 33%.

E. Porcelain Wall/Floor Trim and Base:
1. Use matching porcelain tile series for bullnose trim.
2. Use 4x24 bullnose trim pieces along top of wall tile perimeter.
3. Use 4x24 bullnose trim pieces where wall tile stops short at drywall and requires a finished tile end. At wall tile end locations bullnose trim pieces are to run vertically.
4. At Restroom 101B ONLY at gypsum wall board locations (**where there is no wall tile**) use 4x24 bullnose trim as the floor tile base.
5. At Restroom 101B ONLY at specified wall tile location cut 12x24 porcelain tile to 4x24 custom size for base tile. Refer to drawings.
6. For Mens Restroom 101C, Janitor 101D, and Womens Restroom 101E refer to specification 096723 Resinous Flooring Flake for 6 inch epoxy base.

2.4 ACCESSORY PRODUCTS

A. Metal Base Trim:
1. Basis of Design: SCHIENE by Schluter or approved equal for metal transition finish edge.
   a. Description: Edge protection profile for outside surfaces on walls.
   b. Metal base trim is to be used along bottom of wall tile perimeter.

c. Metal Trim Finish: Stainless Steel.
d. Height: Suitable for thickness of specified tile.
e. To be used at the bottom of wall tile in the following locations: Mens Restroom 101C and Womens Restroom 101E.

2. Basis of Design: DILEX-EHK by Schluter for metal cove protection.
a. Description: Stainless steel, cove-shaped profile for sanitary wall/floor transition.
b. In Restroom 101B used Schluter metal cove base – DILEX-EHK at all field wall tile and floor tile locations. Metal cove base to be installed at entire perimeter of room.
c. Metal Trim Finish: Stainless steel.
d. Height: Suitable for thickness of specified tile.
e. Provide necessary inside and outside corner pieces for uniform finish.

2.5 THRESHOLDS

A. Porcelain Floor Tile to VCT – Marble Threshold Transition Strip:
1. General: Fabricate to sizes and profiles indicated or required to provide transition between adjacent floor finishes.
2. Bevel edges at 1:2 slope, aligning lower edge of bevel with adjacent floor finish. Limit height of bevel to 1/2 inch or less, and finish bevel to match face of threshold.
3. Marble Thresholds: ASTM C 503 with a minimum abrasion resistance of [**10**] [**12**] per ASTM C 1353 or ASTM C 241 and with honed finish.
4. Description: Uniform, fine- to medium-grained white stone with gray veining.
5. Provide 4" x 1" thick white, honed marble with 1/2"W x 1/4"H bevels, complying with MIA Group "A" requirements for soundness.
6. Marble threshold by Daltile or approved equal.

B. For additional thresholds transition strips refer to specification Division 096513 Resilient Base and Accessories.

C. Metal Base Trim: Basis of Design: DILEX-EHK by Schluter for metal cove protection.
1. Description: Stainless steel, cove-shaped profile for sanitary wall/floor transition.
a. In Restroom 101B used Schluter metal cove base – DILEX-EHK at all field wall tile and floor tile locations. Metal cove base to be installed at entire perimeter of room.
2. Metal Trim Finish: Stainless steel.
3. Height: Suitable for thickness of specified tile.
4. Provide necessary inside and outside corner pieces for uniform finish.

2.6 SETTING AND GROUTING MATERIALS

A. Manufacturers:
1. Atlas Minerals & Chemicals, Inc.
2. Boiardi Products Corporation.
3. Bonsal, W. R., Company.
4. Bostik.
5. C-Cure.
6. Custom Building Products.
7. DAP, Inc.
8. Jamo Inc.
9. LATICRETE International Inc.
10. MAPEI Corporation.
11. Southern Grouts & Mortars, Inc.
12. TEC Specialty Products Inc.

2.7 LATEX-PORTLAND CEMENT MORTAR (THIN SET): ANSI A118.4, consisting of the following:

A. Prepackaged dry-mortar mix containing dry, redispersible, ethylene vinyl acetate additive to which only water must be added at Project site.
   1. For wall applications, provide nonsagging mortar that complies with Paragraph F-4.6.1 in addition to the other requirements in ANSI A118.4.

B. Sand-Portland Cement Grout: ANSI A108.10, composed of white or gray cement and white or colored aggregate as required to produce color indicated.

C. Standard Sanded Cement Grout: ANSI 118.7 Polymer Modified Cement Grouts, color as indicated.

D. Standard Unsanded Cement Grout: ANSI 118.7 Polymer Modified Cement Grouts, color as indicated.
   1. Polymer Type: Either ethylene vinyl acetate, in dry, redispersible form, prepackaged with other dry ingredients, or acrylic resin or styrene-butadiene rubber in liquid-latex form for addition to prepackaged dry-grout mix.
      a. Unsanded grout mixture for joints 3/16 inch and narrower.
      b. Sanded grout mixture for joints 1/8 inch and wider.

2.8 ELASTOMERIC SEALANTS

A. General: Provide manufacturer's standard chemically curing, elastomeric sealants of base polymer and characteristics indicated that comply with applicable requirements in Division 07 Section "Joint Sealants."
   1. Use sealants that have a VOC content of **250** g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

B. Colors: Provide colors of exposed sealants to match colors of grout in tile adjoining sealed joints, unless otherwise indicated.

C. One-Part, Mildew-Resistant Silicone Sealant: ASTM C 920; Type S; Grade NS; Class 25; Uses NT, G, A, and, as applicable to nonporous joint substrates indicated, O; formulated with fungicide, intended for sealing interior ceramic tile joints and other nonporous substrates that are subject to in-service exposures of high humidity and extreme temperatures.
   1. Available Products:
      a. Dow Corning Corporation; Dow Corning 786.
      b. GE Silicones; Sanitary 1700.
      c. Pecora Corporation; Pecora 898 Sanitary Silicone Sealant.
      d. Tremco, Inc.; Tremsil 600 White.

D. Multipart, Pourable Urethane Sealant for Use T: ASTM C 920; Type M; Grade P; Class 25; Uses T, M, A, and, as applicable to joint substrates indicated, O.
   1. Available Products:
      a. Bostik; Chem-Calk 550.
      b. Mameco International, Inc.; Vulkem 245.
      c. Pecora Corporation; NR-200 Urexpan.
      d. Tremco, Inc.; THC-900.

2.9 CEMENTITIOUS BACKER UNITS

A. Provide cementitious backer units complying with ANSI A118.9 in maximum lengths available to minimize end-to-end butt joints.
   1. Thickness: 1/2 inch
   2. Width: 48 inches

B. Available Products:
   1. C-Cure; C-Cure Board 990.
   2. Custom Building Products; Wonderboard.
   3. FinPan, Inc.; Util-A-Crete Concrete Backer Board.
   4. USG Corporation; DUROCK Cement Board.

2.10 MISCELLANEOUS MATERIALS

A. Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials for installations indicated.
B. Tile Cleaner: A neutral cleaner capable of removing soil and residue without harming tile and grout surfaces, specifically approved for materials and installations indicated by tile and grout manufacturers.
C. Grout Sealer: Manufacturer's standard product for sealing grout joints that does not change color or appearance of grout.
    1. Available Products:
        a. Bonsal, W. R., Company; Grout Sealer.
        b. Bostik; CeramaSeal Grout Sealer.
        c. C-Cure; Penetrating Sealer 978.
        d. Custom Building Products; Surfaceguard Grout and Tile Grout Sealer.
        e. Jamo Inc.; Matte FinishPenetrating Sealer.
        f. MAPEI Corporation; KER 003, Silicone Spray Sealer for Cementitious Tile Grout 004, Keraseal Penetrating Sealer for Unglazed Grout and Tile.
        g. Southern Grouts & Mortars, Inc.; Silicone Grout Sealer.
        h. TEC Specialty Products Inc.; TA-256 Penetrating Silicone TA-257 Silicone Grout Sealer.

2.11 MIXING MORTARS AND GROUT

A. Mix mortars and grouts to comply with referenced standards and mortar and grout manufacturers' written instructions.
B. Add materials, water, and additives in accurate proportions.
C. Obtain and use type of mixing equipment, mixer speeds, mixing containers, mixing time, and other procedures to produce mortars and grouts of uniform quality with optimum performance characteristics for installations indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions where tile will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of installed tile.
    1. Verify that substrates for setting tile are firm; dry; clean; free of oil, waxy films, and curing compounds; and within flatness tolerances required by referenced ANSI A108 Series of tile installation standards for installations indicated.
    2. Verify that installation of grounds, anchors, recessed frames, electrical and mechanical units of work, and similar items located in or behind tile has been completed before installing tile.
    3. Verify that joints and cracks in tile substrates are coordinated with tile joint locations; if not coordinated, adjust joint locations in consultation with Architect.
B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Remove coatings, including curing compounds and other substances that contain soap, wax, oil, or silicone, that are incompatible with tile-setting materials.
B. Provide concrete substrates for tile floors installed with **thick-set mortar** that comply with flatness tolerances specified in referenced ANSI A108 Series of tile installation standards.

1. Fill cracks, holes, and depressions with trowelable leveling and patching compound according to tile-setting material manufacturer's written instructions. Use product specifically recommended by tile-setting material manufacturer.
2. Remove protrusions, bumps, and ridges by sanding or grinding.

C. Blending: For tile exhibiting color variations within ranges selected during Sample submittals, verify that tile has been factory blended and packaged so tile units taken from one package show same range of colors as those taken from other packages and match approved Samples. If not factory blended, either return to manufacturer or blend tiles at Project site before installing.

3.3 INSTALLATION, GENERAL

A. ANSI Tile Installation Standards: Comply with parts of ANSI A108 Series "Specifications for Installation of Ceramic Tile" that apply to types of setting and grouting materials and to methods indicated in ceramic tile installation schedules.

B. TCNA Installation Guidelines: TCNA's "Handbook for Ceramic Tile Installation." Comply with TCNA installation methods indicated in ceramic tile installation schedules.

C. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions, unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.

D. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.

E. Jointing Pattern: Lay tile in grid pattern, unless otherwise indicated. Align joints when adjoining tiles on floor, base, walls, and trim are same size. Lay out tile work and center tile fields in both directions in each space or on each wall area. Adjust to minimize tile cutting. Provide uniform joint widths, unless otherwise indicated.
1. For tile mounted in sheets, make joints between tile sheets same width as joints within tile sheets so joints between sheets are not apparent in finished work.

F. Lay out tile wainscots to next full tile beyond dimensions indicated.

G. Expansion Joints: Locate expansion joints and other sealant-filled joints, including control, contraction, and isolation joints, where indicated during installation of setting materials, mortar beds, and tile. Do not saw-cut joints after installing tiles.
1. Locate joints in tile surfaces directly above joints in concrete substrates.
2. Prepare joints and apply sealants to comply with requirements in Division 07 Section "Joint Sealants."

H. Grout tile to comply with requirements of the following tile installation standards:
1. For ceramic tile grouts (sand-portland cement; dry-set, commercial portland cement; and latex-portland cement grouts), comply with ANSI A108.10.
2. For chemical-resistant epoxy grouts, comply with ANSI A108.6.
3. For chemical-resistant furan grouts, comply with ANSI A108.8.

3.4 FLOOR TILE INSTALLATION

A. General: Install tile to comply with requirements in the Floor Tile Installation Schedule, including those referencing TCNA installation methods (latest edition) and ANSI A108 Series of tile installation standards.
1. For installations indicated below, follow procedures in ANSI A108 Series tile installation standards for providing 95 percent mortar coverage.
   a. Tile floors in wet areas.
   b. Tile floors composed of tiles 6 by 6 inches or larger.

B. Refer to **TCNA Installation Standard F121-18 for floor tile installation**.

C. Stone Thresholds: Install stone thresholds at locations indicated; set in same type of setting bed as abutting field tile, unless otherwise indicated.
   1. Set thresholds in latex-portland cement mortar for locations where mortar bed would otherwise be exposed above adjacent nontile floor finish.

D. Grout Sealer: Apply grout sealer to grout joints according to grout-sealer manufacturer's written instructions. As soon as grout sealer has penetrated grout joints, remove excess sealer and sealer that has gotten on tile faces by wiping with soft cloth.

3.5 WALL TILE INSTALLATION

A. Install types of tile designated for wall installations to comply with requirements in the Wall Tile Installation Schedule, including those referencing TCNA installation methods (latest edition) and ANSI setting-bed standards.

B. Refer to **TCNA Installation Standard W244C-18 for wall tile installation**. Waterproof membrane shall be provided in the wall tile installation for the shower as reference in the noted TCNA standard.

C. Install metal lath and scratch coat for walls to comply with ANSI A108.1A, Section 4.1.

3.6 CLEANING AND PROTECTING

A. Cleaning: On completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter.

B. Protect installed tile work with kraft paper or other heavy covering during construction period to prevent staining, damage, and wear.

C. Prohibit foot and wheel traffic from tiled floors for at least seven days after grouting is completed.

D. Before final inspection, remove protective coverings and rinse neutral cleaner from tile surfaces.

END OF SECTION 09 30 00

SECTION 10 73 26 – PROTECTIVE WALKWAY COVERINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

1.2 DESCRIPTION OF WORK

A. Extent of pre-engineered walkway canopy work is shown on drawings.
   1. Work includes design, fabrication and installation of a complete welded, extruded aluminum protective cover system.

B. Related Sections: The following Sections contain requirements that relate to this Section:
   1. Division 01 Section “Alternates” for alternates associated with this section.
   2. Division 03 Section “Cast-In-Place Concrete” for concrete foundations.

1.3 SUBMITTALS

A. Product Data: Submit manufacturer's product information, specifications and installation instructions for canopy components and accessories.

B. Shop Drawings: Submit complete erection and shop drawings sealed by an engineer registered in North Carolina showing anchor bolts settings and roof framing, transverse cross sections, covering and trim details, concrete foundations, and accessory installation details to clearly indicate proper assembly of canopy components.

C. Samples: Submit samples of the following items. Architect's review will be for color and texture only. Compliance with other requirements is the responsibility of the Contractor.
   1. 12" long by actual width of roofing panels, with required finishes.
   2. Fasteners for application of roofing panels.
   3. Sealants and closures.

D. Certification: Submit written Certification prepared and signed by a Professional Engineer, registered to practice in the State where walkway is to be erected, verifying that walkway design meets indicated loading requirements and codes of authorities having jurisdiction.

1.4 QUALITY ASSURANCE

A. Design Criteria:
   1. Structural Framing: Design primary and secondary structural members and exterior covering materials for applicable loads and combinations of loads in accordance with the Metal Building Manufacturers Association's (MBMA) "Design Practices Manual".
   2. Welded connections: Comply with requirements of the American Welding Society's (AWS) "Standard Code for Arc and Gas Welding in Building Construction" for welding procedures.

B. Engineered Structural Design: Provide design calculations and drawings prepared by a Professional Engineer, licensed in the State of N.C., for the design of the pre-engineered walkway canopy and concrete foundations.
   1. Structure shall be engineered to meet the required structural loads including but not limited to a design wind speed of 143mph.

C. Manufacturer's Qualifications: Provide pre-engineered walkway canopy system as produced by a manufacturer with not less than 5 years successful experience in the fabrication of pre-engineered canopies of the type and quality required.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store prefabricated components, sheets, panels, and other manufactured items so they will not be damaged or deformed.
   1. Stack materials on platforms or pallets, covered with tarpaulins or other suitable weathertight ventilated covering. Store metal sheets or panels so that water accumulations will drain freely. Do not store sheets or panels in contact with other materials which might cause staining.

PART 2 - PRODUCTS

2.1 PRE-ENGINEERED ALUMINUM CANOPY WALKWAY SYSTEM

A. Provide a complete aluminum walkway cover system with columns, beams, roofing, fascias, gutters, downspouts, etc. as indicated on the drawings and describe herein.
   1. System shall be entirely of extruded aluminum. Understructure shall consist of heli-arc welded one-piece bents and the deck of interlocking extruded aluminum. Structure shall be capable of sustaining severe icing, hail, hurricane winds, and being walked upon.

B. Subject to compliance with the requirements, comparable and equal products of the following companies, but not limited too, are acceptable:
   1. E.L. Burns Company, Shreveport, LA
   2. Dittmer Architectural Aluminum, Winter Springs, FL
   3. Peachtree Products
   4. Mason-Florida, LLC

2.2 MATERIALS

A. Aluminum Sections: All aluminum sections shall be 6063 alloy heat-treated to a T-6 temper.

B. Fasteners: All deck screws shall be type 18-8 stainless steel, sealed with neoprene "O" ring beneath stainless steel. Trim rivets may be aluminum.

C. Grout: Grout shall be 3:1 Portland cement to masonry sand, 2,000 psi compressive strength.

D. Gaskets: Dry seal santoprene pressure type

2.3 FABRICATION

A. General: Assemble components in shop to greatest extent possible to minimize field assembly.

B. Bent Construction: Beams and columns shall be heli-arc welded into rigid, one-piece units in the manufacturer's plant. Column ends shall be pierced to "key" grout to bent for maximum uplift protection.

C. Roof Deck: Extruded, self-flashing deck sections interlocked into a composite unit spanning double bays for positive locking. Deck shall be staked into a camber sufficient to off-set deadload deflection and

cause positive drainage on spans over 15'-0". Staking shall consist of an abrupt local deformation of deadlock metal, each stake having a shear value in excess of 350 lbs and shall occur as detailed.

1. All aluminum roof decks shall have a profile similar to Peachtree canopy 300 series, 6" rib spacing, minimum 3" rib height.

D. Aluminum Suspended Canopies

1. Decks span over at least one support beam and drain to gutter beams that convey water to downspout attached to wall.

E. Internal Drainage: Internal gutter system integral with the system to direct water from deck to columns for discharge into the underground site drainage system. Include weepholes above ground level for emergency overflow.

2.4 FINISH

A. Baked-Enamel or Powder-Coat Finish: Manufacturer's standard baked-on finish consisting of prime coat and thermosetting topcoat. Comply with coating manufacturer's written instructions for cleaning, pretreatment, application, and minimum dry film thickness. Color to be selected by Architect from manufacturer’s standard color selection.

2.5 ACCESSORIES

A. Provide the following sheet metal accessories factory formed of the same material and finish as the roofing and siding.

1. Flashings.
2. Closers.
3. Fascia/gutter.

B. Flexible Closure Strips: Provide closed-cell, expanded cellular rubber, self- extinguishing flexible closure strips. Cut or premold closure strips to match corrugation configuration of roofing and siding sheets. Provide closure strips where indicated or necessary to ensure weathertight construction.

C. Sealing Tape: Provide pressure sensitive 100 percent solids grey polyisobutylene compound sealing tape with release paper backing. Provide permanently elastic, non-sag, non toxic, non staining tape not less than 1/2" wide and 1/8" thick.

D. Joint Sealant: Provide one-part elastomeric polyurethane, polysulfide or silicone rubber sealant as recommended by the building manufacturer.

PART 3 - EXECUTION

3.1 INSTALLATION AND ERECTION

A. Install and/or erect the system in accordance with the manufacturer's instructions and recommendations and approved installation/erection drawings.

1. Install and erect all members straight and true to line as required and as acceptable to Architect.
2. Set posts in concrete as indicated and/or required.
3. Install screw fasteners with power tool having controlled torque adjusted to compress neoprene washer tightly without damage to washer, screw threads, or panels. Install screws in predrilled holes.

3.2 PROTECTION

A. Protect work of other trades. Correct painting related damages by cleaning, repairing or replacing, and refinishing, as directed by the Architect.

END OF SECTION 10 73 26

Progressive Design Collaborative, Ltd
3101 Poplarwood Court, Suite 320
Raleigh, North Carolina 27604
919-790-9989

3/2/23

ADDENDUM 01 – Electrical

DATE: March 2, 2023

PROJECT: Trexler Middle School Renovation and Site Improvements – Onslow County Schools
PDC Project No. 22017

This Addendum, applicable to the work designed below, shall be understood to be and is a change to the bid documents and shall be part of and included in the contract for the above referenced project. All General, Supplementary and Special Conditions, etc., as originally specified or as modified below shall apply to these items.

Changes to Electrical Drawings:

1. Drawing E0-00
   a. Sheet title revisions

2. Drawing E0-02
   a. Sheet title revisions

3. Drawing E1-02
   a. Sheet title revisions

4. Drawing E2-01
   a. Intercom volume control removed
   b. Conduit sleeves added
   c. Notes revised for conduit sleeves
   d. Additional wireless access points added

5. Drawing E2-02
   a. Sheet title revisions
   b. Intercom volume control removed
   c. Conduit sleeves added
   d. Notes revised for conduit sleeves
   e. Receptacle notes added
   f. Additional wireless access points added

6. Drawing E4-01
   a. Camera locations revised
   b. Camera conduit sleeves added
   c. Notes for conduit sleeves added

7. Drawing E4-02
    a. Sheet title revisions
    b. Camera locations revised
    b. Camera conduit sleeves added
    c. Notes for conduit sleeves added

8. Drawing E6-04
    a. Telecommunications riser updated

END OF ADDENDUM 01 – ELECTRICAL

Attachments: Sheets E0-00, E0-02, E1-02, E2-01, E2-02, E4-01, E4-02, E6-04

GENERAL NOTES

1. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ANY AND ALL WORK WITH OTHER TRADES INVOLVED IN THE PROJECT, PRIOR TO THE INSTALLATION OF HIS EQUIPMENT SO AS TO AVOID CONFLICTS DURING CONSTRUCTION AND ALLOW FOR OPTIMUM MAINTENANCE AND WORKING SPACE.

2. ALL LIGHT FIXTURES SHALL BE SUPPORTED INDEPENDENTLY OF THE SUSPENDED CEILING SYSTEM. REFER TO THE SPECIFICATIONS FOR MORE DETAILED INFORMATION.

3. USE OF THE CONDUIT SYSTEM FOR EQUIPMENT GROUNDING SHALL NOT BE ACCEPTABLE. A SEPARATE GREEN GROUND WIRE SHALL RUN WITH THE CIRCUIT CONDUCTORS IN EACH CIRCUIT.

4. ALL FUSES, DISCONNECT SWITCHES, AND BREAKER SIZES SHOWN FOR MECHANICL EQUIPMENT SHALL BE VERIFIED BEFORE THE PURCHASE OR INSTALLATION OF SAID EQUIPMENT, WITH THE EQUIPMENT SUPPLIER AND MECHANICAL CONTRACTOR.

5. ALL WORK AND MATERIAL SHALL BE PROVIDED IN ACCORDANCE WITH STATE, LOCAL AND NATIONAL CODES AND ORDINANCES.

6. THE NEW FIRE ALARM EQUIPMENT SHOWN SHALL BE PROVIDED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. PROVIDE ALL WIRING AS REQUIRED FOR A COMPLETE SYSTEM.

7. THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL CEILING TYPES AND FINISHES BEFORE PURCHASE OF ANY LIGHT FIXTURES SO THAT THE PROPER TRIM WILL BE PROVIDED FOR THE CEILING TO BE INSTALLED. ANY DIFFERENCES SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

8. EACH CONTRACTOR SHALL PROVIDE HIS OWN SUPPORT OF ALL DEVICES AND EQUIPMENT PROVIDED BY HIM AND SHALL SUPPORT SUCH EQUIPMENT PER APPROVED GOVERNING CODES OR PER APPROVAL OF THE ENGINEER. UNACCEPTABLE WORKMANSHIP OR MATERIALS SHALL BE REPLACED AT THE REQUEST OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.

9. ALL JUNCTION BOXES AND CONDUIT RUNS (WITH OR WITHOUT WIRES) SHALL BE COLOR CODED WITH PAINT, IN ACCORDANCE WITH ELECTRICAL GENERAL PROVISIONS.

10. ALL WIRE AND CONDUIT SIZES ARE BASED ON 75°C THHN OR THWN WIRE UNLESS OTHERWISE NOTED.

11. THE LOCATION OF ALL WALL MOUNTED DEVICES, INCLUDING MOUNTING HEIGHTS, SHALL BE FIELD VERIFIED WITH THE ARCHITECT PRIOR TO INSTALLATION.

12. WHERE MULTIPLE SWITCHES ARE SHOWN IN THE SAME LOCATION THEY SHALL BE GANGED TOGETHER IN ONE MULTIPLE GANG BOX WITH MATCHING COVER AND PARTITION (IF REQUIRED). THE ELECTRICAL CONTRACTOR SHALL LOOK AT BOTH POWER AND LIGHTING PLAN TO DETERMINE WHICH SWITCH IS APPLICABLE.

13. WHERE ELECTRICAL EQUIPMENT PENETRATES EXTERIOR WALLS OR THE ROOF, THEY SHALL BE PROPERLY SEALED WITH METHODS APPROVED BY THE ENGINEER. SUBMIT DETAIL OF PROPOSED SEALING METHODS.

14. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL CHAIN HUNG FIXTURES LOCATED IN MECHANICAL OR OTHER SPACES WITH OTHER TRADES, SO AS NOT TO CONFLICT WITH OTHER EQUIPMENT.

15. WHERE CONDUIT OR OUTLET BOXES CANNOT BE INSTALLED IN EXISTING WALLS FOR NEW DEVICES, THEN PROVIDE AND INSTALL SURFACE MOUNTED WIREMOLD RACEWAYS. CONFIRM ALL WIREMOLD WITH ARCHITECT PRIOR TO INSTALLATION.

16. OUTLET BOXES ON OPPOSITE SIDES OF THE FIRE RESISTANT WALL OR SHAFT ENCLOSURE RATED TWO HOURS OR LESS SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24" AS REQUIRED BY NCSBC VOL 1 PARAGRAPH 705.4.3.

17. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL ACCESS PANELS AS REQUIRED FOR ELECTRICAL CODE COMPLIANCE AND TO ACCESS ANY INSTALLATION THAT WILL REQUIRE FUTURE MAINTENANCE. THESE DOORS SHALL BE 20" X 20". EACH ROOM WITH A DRYWALL CEILING SHALL HAVE A MINIMUM OF ONE ACCESS DOOR PROVIDED BY THE ELECTRICAL CONTRACTOR. THE DRYWALL SUBCONTRACTOR WILL PROVIDE THE REQUIRED FRAMED OPENING AND INSTALL THE ACCESS DOORS.

18. CONDUCTORS FOR BRANCH CIRCUITS SHALL BE SIZED TO PREVENT VOLTAGE DROP EXCEEDING 3% AT THE FARTHEST OUTLET OF POWER, HEATING AND LIGHTING LOADS, OR ANY COMBINATION OF SUCH LOADS. THE MAXIMUM TOTAL VOLTAGE DROP ON BOTH FEEDERS AND BRANCH CIRCUITS TO THE FARTHEST OUTLET SHALL NOT EXCEED 5%.

    A. WHERE THE CONDUCTOR LENGTH FROM THE PANEL TO THE FIRST OUTLET ON A 120V CIRCUIT EXCEED 50'-0" THE BRANCH CIRCUIT CONDUCTORS FROM THE PANEL TO THE FIRST OUTLET SHALL NOT BE SMALLER THAN #10AWG. INCREASE THE BRANCH CIRCUIT CONDUCTOR SIZE AN ADDITIONAL WIRE SIZE FOR EACH ADDITIONAL 125' FOR THE ENTIRE CIRCUIT. THE GROUND CONDUCTOR SIZE SHALL BE INCREASED PROPORTIONALLY TO THE INCREASED PHASE CONDUCTORS AS PER NEC 2011 250.122 (B).

    B. WHERE THE CONDUCTOR LENGTH FROM THE PANEL TO THE FIRST OUTLET ON A 277V CIRCUIT EXCEEDS 125'-0", THE BRANCH CIRCUIT CONDUCTORS FROM THE PANEL TO THE FIRST OUTLET SHALL NOT BE SMALLER THAN #10 AWG. CONDUCTOR SIZE OF REMAINING BRANCH CIRCUIT SHALL INCREASE AS NEEDED TO MEET ABOVE VOLTAGE DROP LIMITATIONS. THE GROUND CONDUCTOR SIZE SHALL BE INCREASED PROPORTIONALLY TO THE INCREASED PHASE CONDUCTORS AS PER NEC 2017 250.122(B).

19. ELECTRICAL CONTRACTOR SHALL VISIT SITE PRIOR TO BID. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL ELECTRICAL WORK (IE RELOCATING/MOVING CONDUITS/WIRING, LIGHT FIXTURES, ETC.) TO ACCOMODATE THE REPLACEMENT OF MECHANCIAL EQUIPMENT AND PIPING. CLOSE COORDINATION WITH MECHANCIAL CONTRACTOR IS REQUIRED.

ELECTRICAL SYSTEM AND EQUIPMENT

METHOD OF COMPLIANCE:

ENERGY CODE: PRESCRIPTIVE__X__ PERFORMANCE_____
ASHRAE 90.1: PRESCRIPTIVE_____ PERFORMANCE_____

LIGHTING SCHEDULE

Lamp type required in fixture - See Fixture Schedule.
Number of lamps in fixture - See Fixture Schedule.
Ballast type used in the fixture - See Specifications.
Number of ballasts in fixture - See Specifications.
Total wattage per fixture - Varies - See Fixture Schedule
Total interior wattage specified versus allowed: 5200 watts versus 12600 watts (whole building)
Total exterior wattage specified versus allowed: 1500 watts versus 3000 watts

ADDITIONAL PRESCRIPTIVE COMPLIANCE

___ 406.2 More Efficient HVAC Performance
_X_ 406.3 Reduced Lighting Power Density
___ 406.4 Enhanced Lighting Controls
___ 406.5 On-Site Supply of Renewable Energy
___ 406.6 Provision of Dedicated Outdoor HVAC Air System
___ 406.7 High Efficiency Service Water Heating

DESIGNER STATEMENT:
To the best of my knowledge and belief, the design of this building complies with the electrical system and equipment requirements of the 2018 North Carolina State Building Code, Energy Conservation Code.

SHEET INDEX - ELECTRICAL

SYMBOL LEGEND (CONTINUED)

SYMBOL	DESCRIPTION	REMARKS
	4' X 4' X 3/4" FIRE RETARDANT PLYWOOD EQUIPMENT BACKBOARD COORDINATE LOCATION, PLACEMENT WITH OWNER.	
	CONDUIT UP OR DOWN AS INDICATED ON PLANS	
PT	RECESS ACTIVATED FIRE RATED POKE-THROUGH FLOOR BOX	
	FACELESS GFI FOR UNDERCOUNTER REFRIGERATOR - MOUNT AT +42" AFF.	
DDC	DIGITAL DIRECT CONTROLS FOR HVAC BY HVAC CONTRACTOR	
	SIMPLEX RECEPTACLE FOR SUMP PUMP	
VFD	VARIABLE FREQUENCY DRIVE FOR HVAC EQUIPMENT FURNISHED BY MECHANICAL CONTRACTOR AND WIRED BY THE ELECTRICAL CONTRACTOR.	
	CONDUIT SLEEVES - SIZE AND QUANTITY AS SHOWN ON PLANS	
J	JUNCTION BOX WITH REMOVABLE COVER - SIZE PER NATIONAL ELECTRICAL CODE	
	VIDEO SURVEILLANCE CAMERA	
D	DATA RACK PROVIDED AND INSTALLED BY OWNER/OTHERS	
TMGB	MDF ROOM MAIN GROUND BAR. REFER TO SPECIFICATIONS AND REFER TO DETAILS.	
TGB	IDF ROOM GROUND BAR. REFER TO SPECIFICATIONS AND REFER TO DETAILS.	
MGB	MAIN GROUND BAR. REFER TO SPECIFICATIONS AND REFER TO DETAILS.	
KP	NUMERICAL REMOTE SECURITY KEYPAD. LOCATE AT 60" AFF.	
CR	SECURITY CARD READER. LOCATE +48" TO TOP OF OUTLET.	
	120/208 VOLT PANELBOARD WITH NEUTRAL AND GROUND BUS ACCESSORIES.	
SPD	SURGE PROTECTIVE DEVICE	
TX	DRY TYPE STEP DOWN TRANSFORMER 480-120/208 3 PHASE.	
	DISCONNECT SWITCH, HEAVY DUTY	
	WIRING AND CONDUIT INSTALLED CONCEALED IN WALL SPACE OR ABOVE FINISHED CEILING	
	UNSWITCHED WIRING AND CONDUIT LEG ON LIGHTING PLANS. UNDER FLOOR WIRING AND CONDUIT ON POWER PLANS. UNDER GROUND WIRING AND CONDUIT ON SITE PLANS.	
	HOME RUN CIRCUIT TO PANELBOARD	

SYMBOL LEGEND

SYMBOL	DESCRIPTION	REMARKS
OR	LUMINAIRE - LETTER DESIGNATES TYPE	SEE FIXTURE SCHEDULE
OR	NIGHT LIGHT / EMERGENCY LIGHT FIXTURE - LETTER DESIGNATES TYPE	SEE FIXTURE SCHEDULE
	LIGHT FIXTURE - LETTER DESIGNATES TYPE	SEE FIXTURE SCHEDULE
	EMERGENCY LIGHT FIXTURE - LETTER DESIGNATES TYPE	SEE FIXTURE SCHEDULE
	BATTERY POWERED EMERGENCY FIXTURE - WALL MOUNTED	SEE FIXTURE SCHEDULE
	EXIT LIGHT - ARROW INDICATES DIRECTION & SHADING INDICATES ILLUMINATED FACE(S).	SEE FIXTURE SCHEDULE
LC#	MECHANICALLY HELD LIGHTING CONTACTOR. # INDICATES CONTACTOR NUMBER. PROVIDE NUMBER OF CONTACTS AS REQUIRED. PROVIDE HAND OFF AUTO SWITCH FOR EACH LIGHTING CONTACTOR.	SQUARE D CLXGXXXX PROVIDE # CONTACTS AS NEEDED
OS	WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR WITH ISOLATED RELAY AND WIDE ANGLE LENS. TIME DELAYS OF NO LESS THAN 15 MINUTES. INSTALL AS PER MANUFACTURER'S INSTRUCTIONS.	WATTSTOPPER DT200 OR APPROVED EQUAL BY P&S OR LEVITON.
OS	CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR WITH ISOLATED RELAY AND WIDE ANGLE LENS. TIME DELAYS OF NO LESS THAN 15 MINUTES. INSTALL AS PER MANUFACTURER'S INSTRUCTIONS.	WATTSTOPPER DT300 OR APPROVED EQUAL BY P&S OR LEVITON.
OS_U	CEILING MOUNTED ULTRASONIC OCCUPANCY SENSOR WITH 1100 SQ. FT.,, 360°, TWO SIDED COVERAGE. IN GANG TOILETS, MOUNT CENTRAL TO THE STALL AREA WITH RECEIVER AIMED TOWARD THE ENTRANCE. TIME DELAYS OF NO LESS THAN 15 MINUTES. INSTALL AS PER MANUFACTURER'S INSTRUCTIONS.	WATTSTOPPER WT1105 OR APPROVED EQUAL BY P&S OR LEVITON.
S_{OS}	DUAL TECHNOLOGY WALL SWITCH SENSOR - COVERAGE: MAJOR MOTION 35'x30', MINOR MOTION 20'x15'. TIME DELAYS OF NO LESS THAN 15 MINUTES. MOUNT AT +48" TO TOP OF OUTLET BOX. INSTALL AS PER MANUFACTURER'S INSTRUCTIONS.	WATTSTOPPER DSW-301 OR APPROVED EQUAL BY P&S OR LEVITON.
S	SINGLE POLE TOGGLE SWITCH - 48" ABOVE FINISHED FLOOR TO TOP OF OUTLET, UNLESS OTHERWISE NOTED.	
S_3	3-WAY SWITCH - INSTALL AT 48" ABOVE FINISHED FLOOR TO TOP OF OUTLET. SWITCH COLOR SELECTED BY ARCHITECT.	
S_4	4-WAY SWITCH - INSTALL AT 48" ABOVE FINISHED FLOOR TO TOP OF OUTLET SWITCH COLOR SELECTED BY ARCHITECT.	
S_D	SLIDE TYPE DIMMER SWITCH FOR 0-10V LED AS NEEDED. VERIFY WITH FIXTURE PROVIDER FOR COMPATIBLE SWITCH TYPES.	
S_T	DIGITAL TIMER SWITCH WITH AUDIO/VISUAL CAPABILITY TO MEET 2018 NCSBC ENERGY CODE	
WP S_M	120 VOLT MOTOR RATED TOGGLE DISCONNECT SWITCH WITH JUNCTION BOX. WP INDICATES TO PROVIDE NEMA-3R SWITCH.	
	DUPLEX GROUNDING TYPE RECEPTACLE - AT 16" ABOVE FINISHED FLOOR TO BOTTOM OF OUTLET, UNLESS OTHERWISE NOTED	HUBBELL 5362-X WITH 97101 COVER
GFI	DUPLEX RECEPTACLE - GROUND FAULT INTERRUPTION TYPE - INSTALL AT 16" ABOVE FINISHED FLOOR TO BOTTOM OF OUTLET, UNLESS OTHERWISE NOTED.	HUBBELL GF-5362-X WITH STAINLESS STEEL S26 WALLPLATE
GFI WP	WEATHERPROOF DUPLEX GROUNDING TYPE RECEPTACLE - +16" ABOVE GRADE TO BOTTOM OF OUTLET BOX, UNLESS OTHERWISE NOTED.	HUBBELL GF-5362-X WITH TAYMAC HEAVY DUTY IN-USE COVER
	QUADRUPLEX GROUNDING TYPE RECEPTACLES IN A DOUBLE GANG BOX. MOUNT AT 16" AFF TO BOTTOM OF OUTLET UNLESS OTHERWISE NOTED.	HUBBELL 5362-X WITH 97101 COVER
	SPECIAL PURPOSE RECEPTACLE - SIZE TO MATCH EQUIPMENT FURNISHED - NEMA CONFIGURATION TO MATCH EQUIPMENT FURNISHED - REFER TO PLANS - VERIFY WITH EQUIPMENT MANUFACTURER. MOUNT AT 16" ABOVE FINISHED FLOOR TO BOTTOM OF OUTLET UNLESS OTHERWISE NOTED.	PASS & SEYMORE - PROVIDE TO MATCH EQUIPMENT WITH COVER EQUALS: HUBBLE, LEVITON
TV	TELEVISION OUTLET AND DUPLEX RECEPTACLE - REFER TO DETAIL E003-07. CONFIRM LOCATION AND MOUNTING HEIGHT WITH OWNER AND ARCHITECT PRIOR TO ROUGH-IN.	
#	DATA OUTLET - TWO GANG OUTLET WITH SINGLE GANG PLASTER FLANGE WITH 1 1/4" CONDUIT TO ABOVE ACCESSIBLE CEILING.	
R	FIRE ALARM RELAY FOR HVAC EQUIPMENT SHUTDOWN	
H #CD	WALL MOUNTED FIRE ALARM HORN/STROBE - #CD INDICATES CANDELA RATING OF STROBE	
H #CD	CEILING MOUNTED FIRE ALARM HORN/STROBE - #CD INDICATES CANDELA RATING OF STROBE	
F	WALL MOUNTED FIRE ALARM PULL STATION - MOUNT AT +4'-0" TO TOP OF OUTLET BOX. PROVIDE LEXAN STOPPER II COVER.	
RM	FIRE ALARM RELAY MODULE	
MM	FIRE ALARM MONITOR MODULE	
S #CD	CEILING MOUNTED FIRE ALARM STROBE ONLY - #CD INDICATES CANDELA RATING OF STROBE	
S #CD	WALL MOUNTED FIRE ALARM STROBE ONLY - #CD INDICATES CANDELA RATING OF STROBE	
SD	CEILING MOUNTED FIRE ALARM SMOKE DETECTOR	
HD	CEILING MOUNTED FIRE ALARM HEAT DETECTOR	
CO	CARBON MONOXIDE DETECTOR	
FACP	FIRE ALARM CONTROL PANEL	
RACP	REMOTE FIRE ALARM CONTROL PANEL	
	FIRE ALARM NAC PANEL	
	REMOTE ALARM INDICATOR - MOUNT 88" AFF.	
TP	FIRE ALARM TAMPER SWITCH	
FS	FIRE ALARM WATER FLOW SWITCH	

ABBREVIATIONS

ABBREV.	DEFINITION
A	AMPS, AMPERE, AMPERAGE
AC	ABOVE COUNTER
A/C	ALTERNATING CURRENT
ADA	AMERICANS WITH DISABILITIES ACT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CURRENT
AL	ALUMINUM
ANSI	AMERICAN NATIONAL STANDARD INSTITUTE
ATSC	AUTOMATIC TRANSFER SWITCH CONTROL
ATS	AUTOMATIC TRANSFER SWITCH
A/V	AUDIO/VISUAL
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUOTMATION SYSTEM
BFC	BELOW FINISHED CEILING
C	CONDUIT
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CT	CURRENT TRANSFORMER
CU	COPPER
D	DIMMING OR DIMMER
DB	DISTRIBUTION BOARD
DC	DIRECT CURRENT
DL	DAY-LIGHTING
DISC	DISCONNECT SWITCH
E	EMERGENCY
ECB	ENCLOSED CIRCUIT BREAKER
EWC	ELECTRIC WATER COOLER
EX	EXISTING
FUT	FUTURE
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FATC	FIRE ALARM TERMINAL CABINET
FDR	FEEDER
GAA	GENERATOR ALARM ANNUNCIATOR
GAP	GENERATOR ALARM PANEL
GEN	GENERATOR
GEC	GROUNDING ELECTRODE CONDUCTOR
GFI	GROUND FAULT INTERRUPTER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFEP	GROUND FAULT EQUIPMENT PROTECTION
GFP	GROUND FAULT PROTECTION
GND	GROUND
GRS	GALVANIZED RIGID STEEL
HH	HAND HOLE
HOA	HAND-OFF AUTOMATIC
HP	HORSEPOWER
IEEE	INSTITUE OF ELECTRICAL AND ELECTRONICS ENGINEERS
IG	ISOLATED GROUND
KCMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLT
KVA	KILOVOLT AMPS
KW	KILOWATT
KWH	KILOWATT HOURS
LC	LIGHTING CONTACTOR
LS	LOUD SPEAKER
LSIG	LONG TIME, SHORT TIME, INSTANTANEOUS AND GROUND FAULT PROTECTION
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MIN	MINIMUM
MH	MAN HOLE
MLO	MAIN LUGS ONLY
MTS	MANUAL TRANSFER SWITCH
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
N or NEUT	NEUTRAL
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
O/H	OVER HEAD
P	POLE
PA	PUBLIC ADDRESS
PB	PULL BOX
PC	PHOTOCELL
PH	PHASE POTENTIAL TRANSFORMER
PT	POTENTIAL TRANSFORMER
RC	RECEPTACLE CONTACTOR
RSC	RIGID STEEL CONDUIT
SEC	SECURITY
SPD	SURGE PROTECTIVE DEVICE
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TC	TIME CLOCK
TEMP	TEMPORARY
TGB	TECHNOLOGY GROUND BAR
TGMB	TECHNOLOGY MAIN GROUND BAR
TTB	TELEPHONE TERMINAL BOARD
TV	TELEVISION
TYP.	TYPICAL
U/C	UNDER COUNTER
U/G	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
UL	UNDERWRITERS' LABORATORIES
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTABLE POWER SUPPLY
V	VOLTS, VOLTAGE
VFD	VARIABLE FREQUENCY DRIVE
WG	WIRE GUARD
WP	WEATHERPROOF
XFER	TRANSFER
XFMR	TRANSFORMER

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NORTH CAROLINA PROFESSIONAL SEAL 024651 ENGINEER JAMES T. BUTKOVICH

BID/PERMIT SET
03/02/2023

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ONSLOW COUNTY SCHOOLS
TREXLER MIDDLE SCHOOL RENOVATION & SITE IMPROVEMENTS
112 E FOY STREET RICHLANDS, NC 28574

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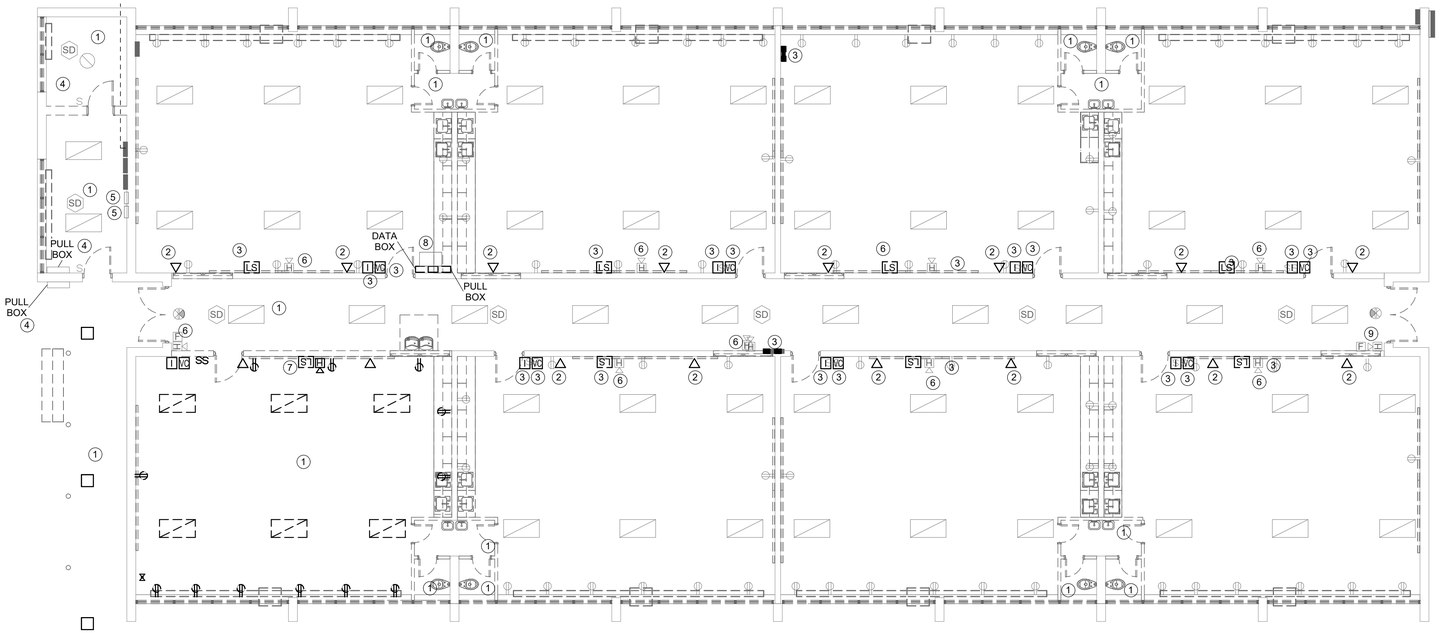
ELECTRICAL LEAD SHEET

2022017 20 FEB 2023

E0-00

KEY NOTES:

1. DISCONNECT ALL LIGHTS, SWITCHES, RECEPTACLES, DATA OUTLETS, AND ANY OTHER DEVICES FROM THIS AREA. REMOVE ALL WIRING BACK TO SOURCE, AND DEMOLISH ALL CONDUIT BACK TO SOURCE UNLESS OTHERWISE NOTED.
2. DISCONNECT AND DEMOLISH EXISTING DATA DEVICE. REMOVE CONDUIT AND CABLING BACK TO SOURCE.
3. DISCONNECT AND DEMOLISH EXISTING INTERCOM SYSTEM DEVICE. REMOVE CONDUIT AND CABLING BACK TO SOURCE.
4. EXISTING PULL BOX FOR DATA AND FIRE ALARM TO REMAIN IN PLACE. RETAIN ALL CONDUIT AND CABLING INCOMING TO BUILDING AT THESE POINTS.
5. FIRE ALARM TERMINAL CABINET AND PULL BOX ARE EXISTING TO REMAIN.
6. ALL FIRE ALARM DEVICES AND WIRING/CONDUIT IS TO REMAIN IN PLACE. PROTECT EXISTING DEVICES DURING DEMOLITION. REMOVE DEVICES IF REQUIRED FOR PAINTING OR DEMOLITION OF OTHER ITEMS AND PLACE TO THE SIDE FOR REINSTALLATION DURING NEW WORK PHASE.
7. EXISTING FIRE ALARM DEVICE IS TO BE REMOVED. REWORK EXISTING BOX AND CONDUIT AND WIRING FOR NEW LOCATION IN NEW RESTOOMS.
8. EXISTING WALL MOUNTED DATA RACK TO BE DISCONNECTED AND RELOCATED TO NEW LOCATION IN STORAGE 110. RE-ROUTE EXISTING DATA CABLING FROM PULL BOX HEAD-IN TO NEW LOCATION AND PREPARE FOR RECONNECTION.
9. DISCONNECT AND REMOVE EXISTING FIRE ALARM DEVICE AND PULL STATION AND SET ASIDE. PREPARE FOR REINSTALLATION IN FURRED OUT WALL UNDER NEW CONSTRUCTION.



1 Electrical Demolition Plan

0 4' 8' 16'

1/8" = 1'-0"

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DEMOLITION PLAN - BASE BID

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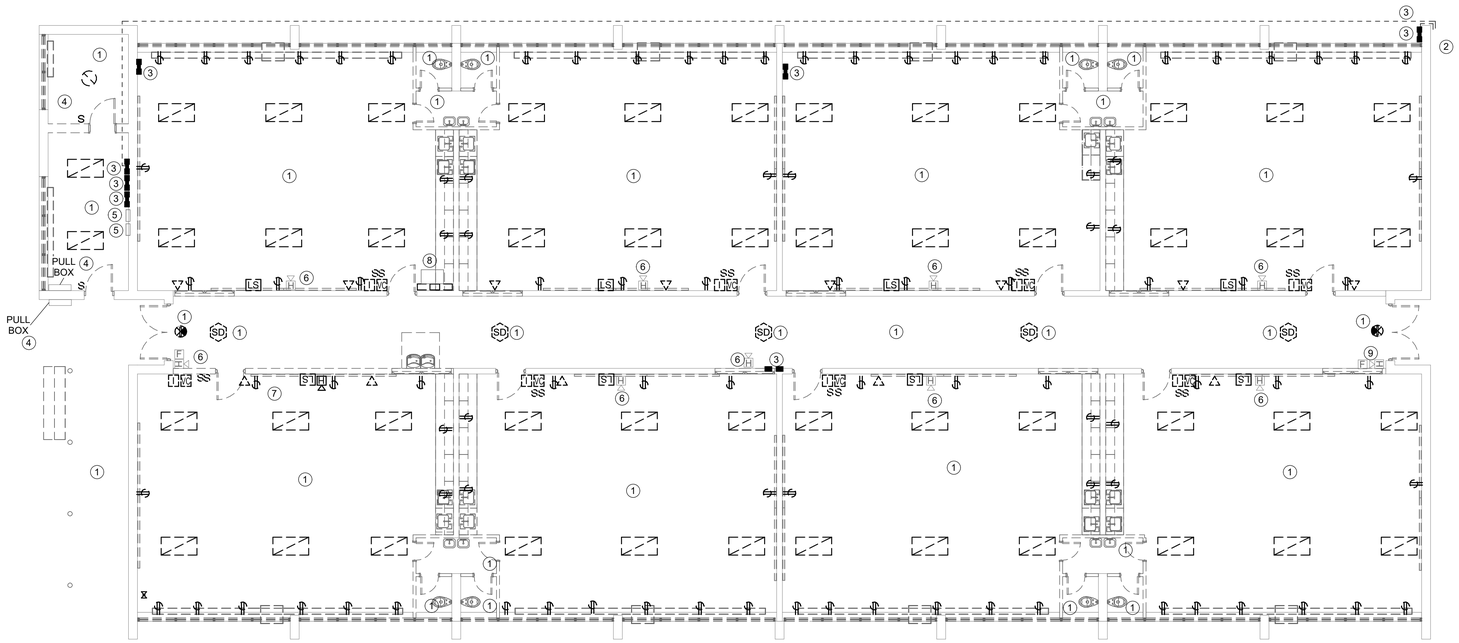
GENERAL NOTES:

A. ALL DEVICES IN BUILDING UNLESS OTHERWISE NOTED ARE BEING DEMOLISHED. DEVICE COUNTS SHOWN ARE AN APPROXIMATION.

KEY NOTES:

1. DISCONNECT ALL LIGHTS, SWITCHES, RECEPTACLES, DATA OUTLETS, AND ANY OTHER DEVICES FROM THIS AREA. REMOVE ALL WIRING BACK TO SOURCE, AND DEMOLISH ALL CONDUIT BACK TO SOURCE UNLESS OTHERWISE NOTED.
2. EXISTING EXTERIOR MDP TO BE DEMOLISHED. REMOVE WIRING AND CONDUIT BACK TO TRANSFORMER SECONDARY AND PREPARE FOR NEW SERVICE SECONDARIES OFF OF EXISTING UTILITY TRANSFORMER.
3. REMOVE EXISTING PANEL AND ALL FEEDERS/CONDUIT BACK TO SOURCE.
4. EXISTING PULL BOX FOR DATA AND FIRE ALARM TO REMAIN IN PLACE. RETAIN ALL CONDUIT AND CABLING INCOMING TO BUILDING AT THESE POINTS.
5. FIRE ALARM TERMINAL CABINET AND PULL BOX ARE EXISTING TO REMAIN.
6. ALL FIRE ALARM DEVICES AND WIRING/CONDUIT IS TO REMAIN IN PLACE. PROTECT EXISTING DIEVICES DURING DEMOLITION. REMOVE DEVICES IF REQUIRED FOR PAINTING OR DEMOLITION OF OTHER ITEMS AND PLACE TO THE SIDE FOR REINSTALLATION DURING NEW WORK PHASE.
7. EXISTING FIRE ALARM DEVICE IS TO BE REMOVED. REWORK EXISTING BOX AND CONDUIT AND WIRING FOR NEW LOCATION IN NEW RESTOOMS.
8. EXISTING WALL MOUNTED DATA RACK TO BE DISCONNECTED AND RELOCATED TO NEW LOCATION IN STORAGE 110. RE-ROUTE EXISTING DATA CABLING FROM PULL BOX HEAD-IN TO NEW LOCATION AND PREPARE FOR RECONNECTION.
9. DISCONNECT AND REMOVE EXISTING FIRE ALARM DEVICE AND PULL STATION AND SET ASIDE. PREPARE FOR REINSTALLATION IN FURRED OUT WALL UNDER NEW CONSTRUCTION.



A

1 Electrical Demolition Plan Alternates 2-1 and 5

0 4' 8' 16'

1/8" = 1'-0"

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A DEMOLITION PLAN ALTERNATES 2-1 and 5

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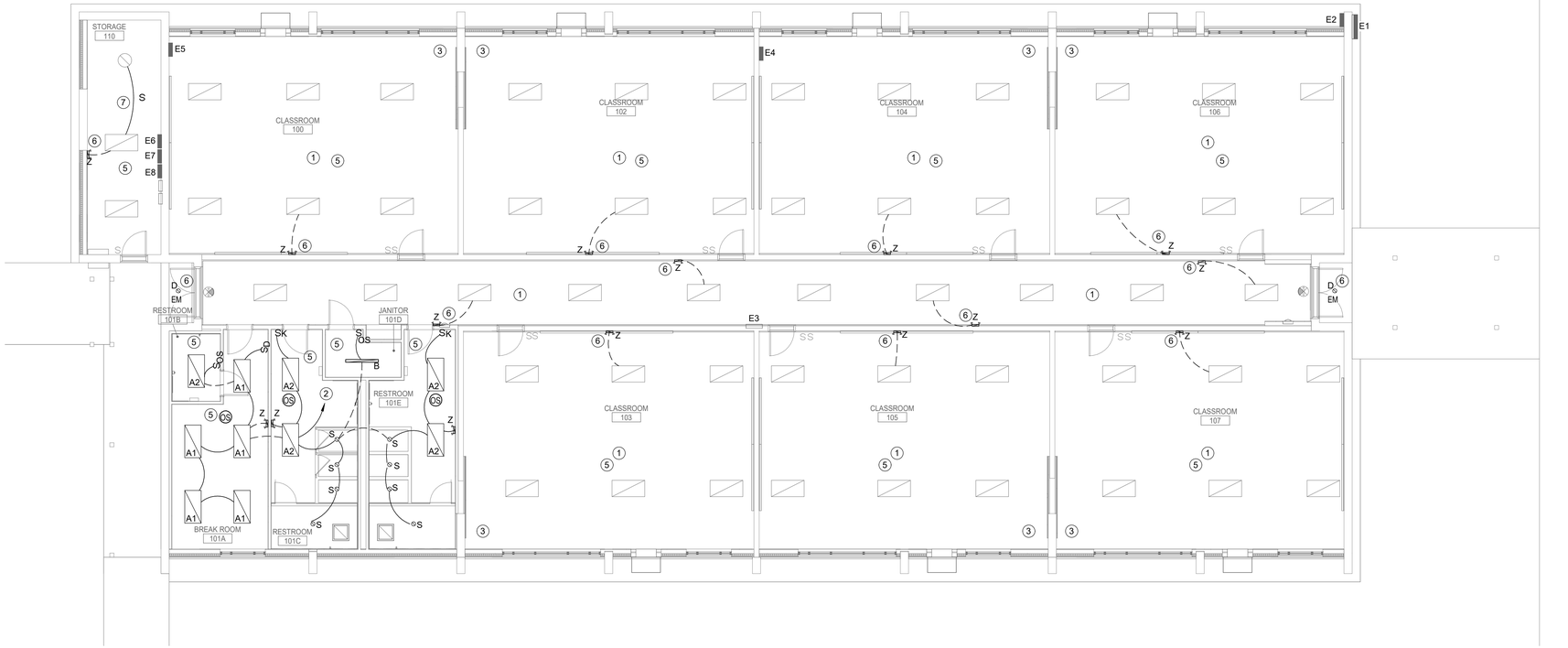
KEYNOTES:

1. CLEAN AND RELAMP EXISTING LIGHTING FIXTURES IN THIS AREA.
2. CONNECT NEW LIGHTING FIXTURES IN THIS AREA TO EXISTING LOCAL LIGHTING CIRCUIT LEFT AS SPARE FROM DEMOLITION.
3. PATCH AND REPAIR CEILING FROM DEMOLITION OF EXISTING BATHROOM WALLS, CEILINGS, AND LIGHTS.
4. ALL NEW EXIT AND EMERGENCY LIGHTING FIXTURES ARE CONNECTED TO LOCAL LIGHTING CIRCUIT UNSWITCHED.
5. ALL NEW CONDUIT IS TO BE RUN SURFACE MOUNTED WITH BOXES SURFACE MOUNTED FOR SWITCHES, ETC..
6. CONNECT NEW EM LIGHTING FIXTURES TO EXISTING LOCAL LIGHTING CIRCUIT UNSWITCHED.
7. REWORK CIRCUIT AND SWITCHING OF LIGHT FIXTURE SHOWN IN STORAGE 110 DUE TO REMOVAL OF EXISTING WALL. FIXTURE SHALL NOW SWITCH ON AND OFF WITH 2X4 FIXTURES AND EXISTING SWITCH LOCATED AT EXTERIOR DOOR.



1 Lighting Plan - Base Bid

0 4' 8' 16'

1/8" = 1'-0"

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LIGHTING PLAN - BASE BID

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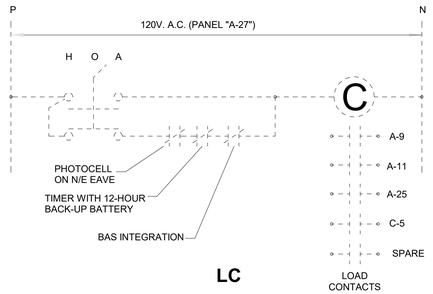
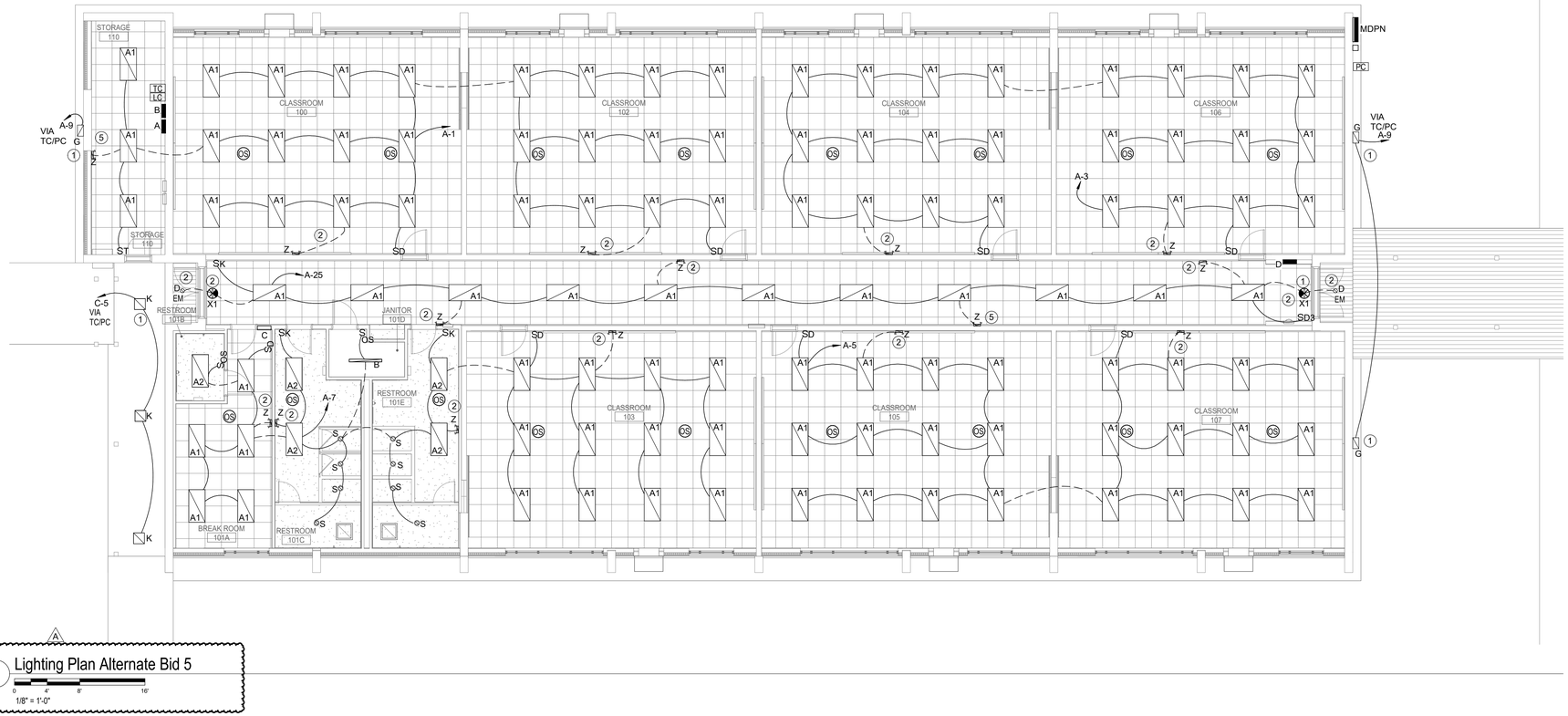


2 LIGHTING CONTACTOR DETAIL

NOT TO SCALE

KEYNOTES:

1. EXTERIOR LIGHTING TO BE CONTROLLED VIA PHOTCELL THROUGH LIGHTING CONTACTOR AND TIME CLOCK AND INTERFACED WITH EXISTING SCHOOL CAMPUS SYSTEMS.
2. ALL NEW EXIT AND EMERGENCY LIGHTING FIXTURES ARE CONNECTED TO LOCAL LIGHTING CIRCUIT UNSWITCHED.
3. ALL NEW CONDUIT IS TO BE RUN SURFACE MOUNTED WITH BOXES SURFACE MOUNTED FOR SWITCHES, ETC..



1 Lighting Plan Alternate Bid 5

1/8" = 1'-0"

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LIGHTING PLAN ALTERNATE BID 5

A

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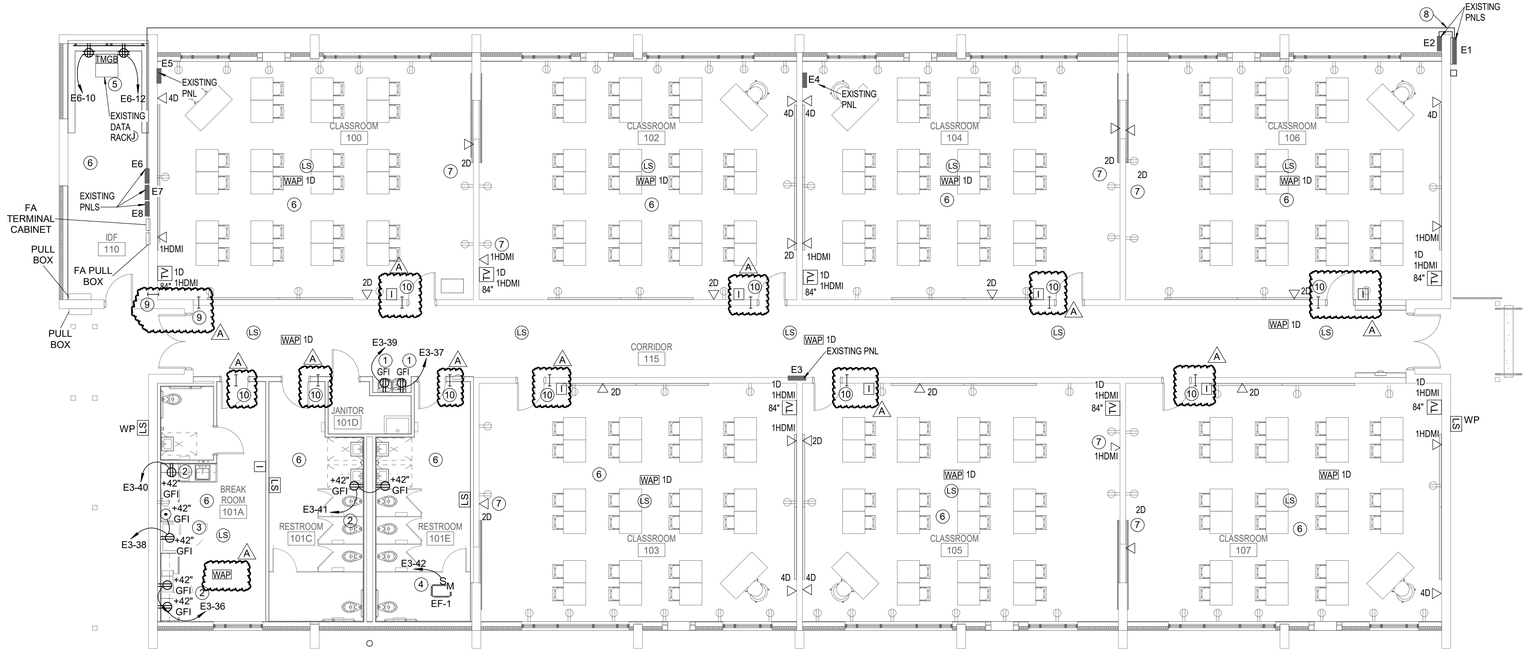
KEYNOTES:

1. PROVIDE NEW 20A, 1P, SQUARE D BREAKER IN EXISTING PANEL FOR NEW WATER COOLER CIRCUIT AND CONNECT TO NEW GFI RECEPTACLE SHOWN. REFER TO PANEL SCHEDULE FOR FEEDER AND CONDUIT SIZING. COORDINATE RECEPTACLE LOCATION WITH EQUIPMENT PRIOR TO ROUGH-IN
2. PROVIDE NEW 20A, 1P, SQUARE D BREAKER IN EXISTING PANEL FOR NEW RECEPTACLE CIRCUIT AND CONNECT TO NEW GFI RECEPTACLE SHOWN. REFER TO PANEL SCHEDULE FOR FEEDER AND CONDUIT SIZING.
3. PROVIDE NEW 20A, 1P, SQUARE D BREAKER IN EXISTING PANEL FOR NEW REFRIGERATOR RECEPTACLE CIRCUIT AND CONNECT TO NEW GFI RECEPTACLE AND REMOTE GFI TRIP SWITCH SHOWN. REFER TO PANEL SCHEDULE FOR FEEDER AND CONDUIT SIZING.
4. PROVIDE 20A, 240V, 1P, MOTOR RATED SWITCH FOR EXHAUST FAN. PROVIDE NEW 20A, 1P, SQUARE D BREAKER IN EXISTING PANEL FOR CONNECTION TO EXHAUST FAN. REFER TO PANEL SCHEDULE FOR FEEDER AND CONDUIT SIZING.
5. RELOCATE EXISTING DATA/COMM RACK AND ASSOCIATED MAIN DATA WIRING FROM ORGINAL LOCATION IN BUILDING TO LOCATION SHOWN. ROUTE NEW DATA WIRING FROM CLASSROOMS BACK TO NEW LOCATION IN EXPOSED CONDUIT AND SURFACE MOUNT BOXES.
6. ALL NEW CONDUIT RUN IN BUILDING IS TO BE SURFACE MOUNTED WITH EXPOSED CONDUIT AND SURFACE MOUNTED BOXES FOR ALL NEW DEVICES
7. MOUNT DATA OUTLET BOX AT SAME HEIGHT AS RECEPTACLES ON THIS WALL.
8. REPAIR CONDUIT BREAK FOR FEEDER FROM EXISTING PANEL E1 TO EXISTING PANEL E6.

A
9. (1) 3" CONDUIT SLEEVE WITH BUSHINGS RUN TIGHT TO CEILING THROUGH WALL FOR DATA CABLE ROUTING.
10. (1) 2" CONDUIT SLEEVE WITH BUSHINGS RUN TIGHT TO CEILING THROUGH WALL FOR DATA CABLE ROUTING.



1 Power Plan - Base Bid

1/8" = 1'-0"

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POWER PLAN - BASE BID

2022017 20 FEB 2023

E2-01

A

GENERAL NOTE:

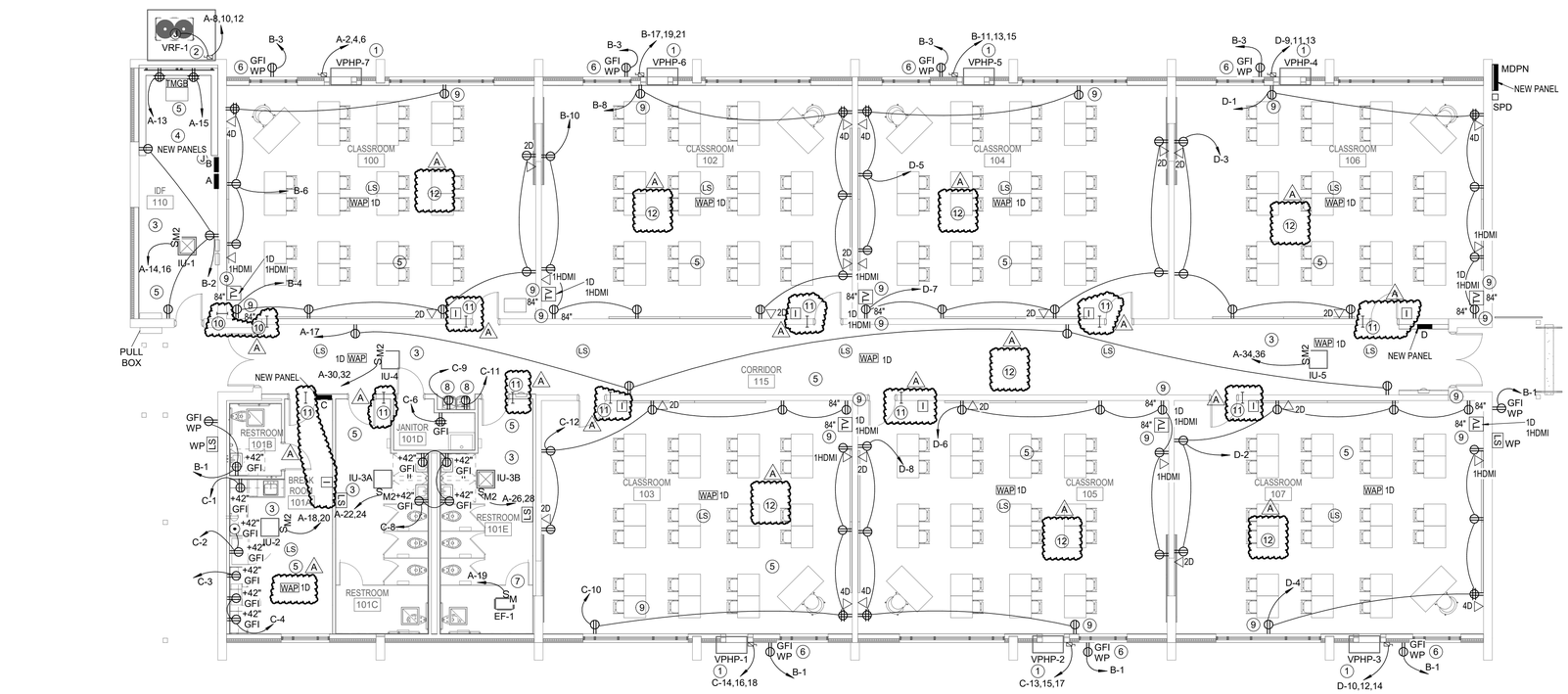
A. ALL WORK SHOWN IS FOR ALTERNATE BID 2-1 UNLESS OTHERWISE NOTED IN KEYNOTES

KEYNOTES:

1. PROVIDE 60A, 240V, 3P, NEMA-3R, FUSED DISCONNECT SWITCH FOR NEW BARD UNIT. SEE PANEL SCHEDULE FOR FEEDER AND CONDUIT SIZING. FUSE PER MANUFACTURER'S RECOMMENDATIONS.
2. PROVIDE 60A, 240V, 3P, NEMA-3R, FUSED DISCONNECT SWITCH FOR NEW VRF UNIT. SEE PANEL SCHEDULE FOR FEEDER AND CONDUIT SIZING. FUSE PER MANUFACTURER'S RECOMMENDATIONS.
3. PROVIDE 20A, 240V, 2P, MOTOR RATED SWITCH FOR INTERIOR VRF UNITS. SEE PANEL SCHEDULE FOR FEEDER AND CONDUIT SIZING.
4. RELOCATE EXISTING DATA/COMM RACK AND ASSOCIATED MAIN DATA WIRING FROM SCHOOL MDF TO LOCATION SHOWN. ROUTE NEW DATA WIRING FROM CLASSROOMS BACK TO NEW LOCATION IN EXPOSED CONDUIT AND SURFACE MOUNT WIREMOLD.
5. ALL NEW CONDUIT RUN IN BUILDING IS TO BE SURFACE MOUNTED WITH WIREMOLD MOUNTED INLINE FOR RECEPTACLES AND DATA USE IN CLASSROOMS, DATA, AND BREAKROOMS AND SURFACE MOUNTED BOXES IN RESTROOMS.
6. PROVIDE WEATHER PROOF GFI RECEPTACLE AT UNIT SHOWN FOR SERVICE RECEPTACLE POWER. SEE PANEL SCHEDULE FOR FEEDER AND WIRE SIZE. CONNECT 120V, 1P CIRCUIT IN PANEL AS SHOWN.
7. PROVIDE 20A, 120V, 1P, MOTOR RATED SWITCH FOR EXHAUST FAN. SEE PANEL SCHEDULE FOR FEEDER AND CONDUIT SIZING.
8. COORDINATE PLACEMENT WITH EQUIPMENT FINAL LOCATION PRIOR TO ROUGH-IN.
9. IN CLASSROOMS ONLY THIS DEVICE IS IN A SURFACE MOUNTED BOX AT THIS LOCATION.

A

10. (1) 3" CONDUIT SLEEVE WITH BUSHINGS RUN ABOVE CEILING THROUGH WALL FOR DATA CABLE ROUTING.
11. (1) 2" CONDUIT SLEEVE WITH BUSHINGS RUN ABOVE CEILING THROUGH WALL FOR DATA CABLE ROUTING.
12. RECEPTACLES INSTALLED IN THIS AREA FALL UNDER BID ALTERNATE 5



A

1 Power Plan Alternates 2-1 & 5

1/8" = 1'-0"

smith sinnett ARCHITECTURE

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PDC #21007

NORTH CAROLINA PROFESSIONAL SEAL 024651 ENGINEER JAMES T. BUTKOVICH

BID/PERMIT SET 03/02/2023

ONSLOW COUNTY SCHOOLS
TREXLER MIDDLE SCHOOL RENOVATION & SITE IMPROVEMENTS
112 E FOY STREET RICHLANDS, NC 28574

ID	DATE	DESCRIPTION
A	03/02/23	Addendum 01

DRAWN BY: GS
CHECKED BY: JTB

POWER PLAN - ALTERNATES 2-1 AND 5 A

2022017 20 FEB 2023

E2-02

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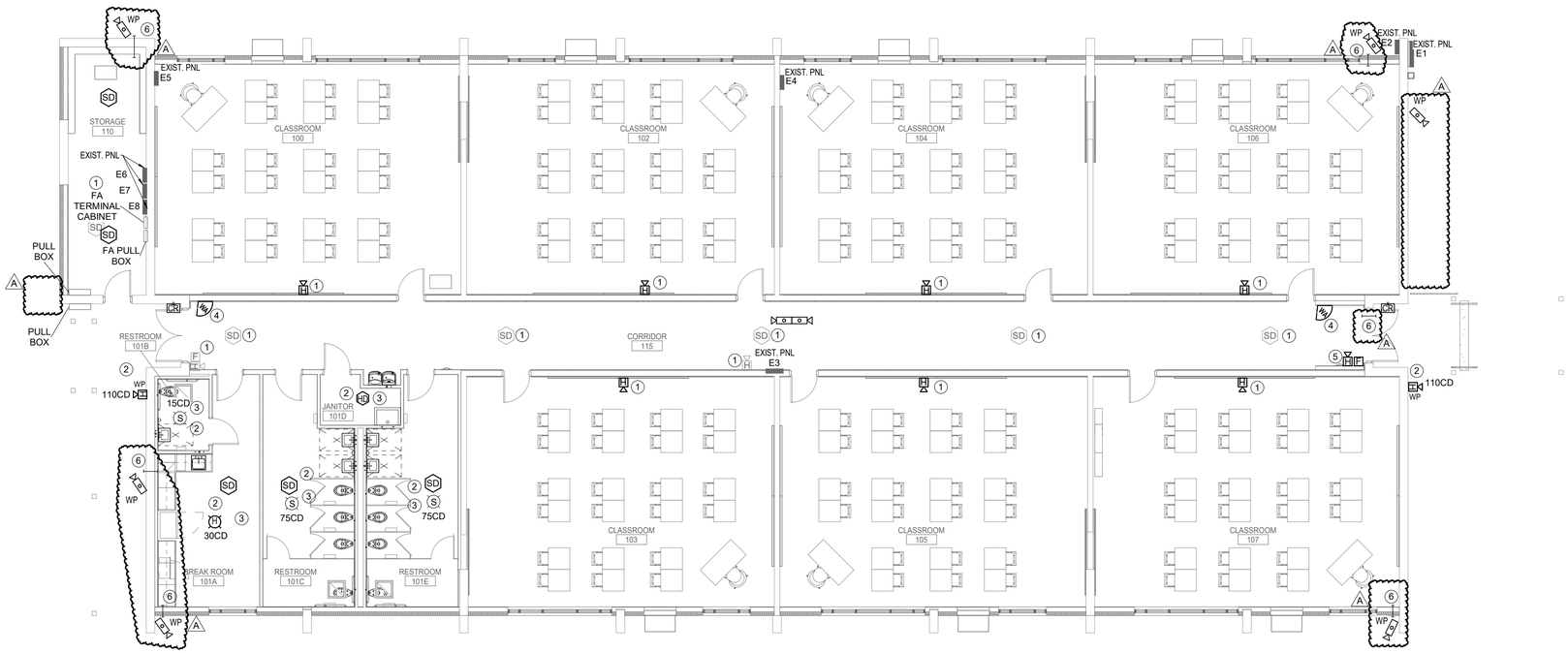
GENERAL NOTES:

A. FIRE ALARM CONTRACTOR IS TO TEST AND VEIRFY ENTIRE SYSTEM IN THIS BUILDING BEFORE TURNOVER TO ONSLOW COUNTY SCHOOLS.

KEY NOTES:

1. EXISTING FIRE ALARM DEVICES ARE TO REMAIN. ANY DEVICE THAT REMAINS WITH A STROBE SHALL BY SYNCRONIZED WITH ALL NEW DEVICES ADDED.
2. ANY NEW DEVICES ADDED TO SYSTEM ARE TO MATCH MANUFACTURER AND STYLE OF EXISTING DEVICES (NOTIFIER 500 BASED SYSTEM LOCATED IN MAIN BUILDING ELECTRICAL ROOM)
3. NEW DEVICES ARE SURFACE MOUNTED WHERE NOTED. ALL CONDUIT IS TO BE SURFACE ROUTED. PROVIDE NEW POWER PACKS TO SUPPORT ALL NEW DEVICES.
4. MOUNT MOTION SENSORS AT 10'-0" AFF TO TOP OF SENSOR.
5. EXISTING FIRE ALARM DEVICES TO BE RELOCATED PER NEW WALL FURR-OUT. MOUNT DEVICES FLUSH IN NEW FURRED OUT WALL AND RECONNECT EXISTING WIRING.
6. (1) 3/4" CONDUIT SLEEVE WITH BUSHINGS RUN TIGHT TO CEILING THROUGH WALL FOR CAMERA CABLE ROUTING.



1 Base Bid - Fire Alarm & Security Plan

1/8" = 1'-0"

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PDC #21007

NORTH CAROLINA PROFESSIONAL SEAL 024651 ENGINEER JAMES T. BUTKOVICH

BID/PERMIT SET
03/02/2023

THIS DRAWING IS FORMATTED TO BE PRINTED ON A 24" X 36" SHEET

ONSLOW COUNTY SCHOOLS
TREXLER MIDDLE SCHOOL RENOVATION & SITE IMPROVEMENTS
112 E FOY STREET RICHLANDS, NC 28574

ID	DATE	DESCRIPTION
A	03/02/23	Addendum 01

DRAWN BY: GS
CHECKED BY: JTB

FIRE ALARM/SECURITY PLAN - BASE BID

2022017 20 FEB 2023

E4-01

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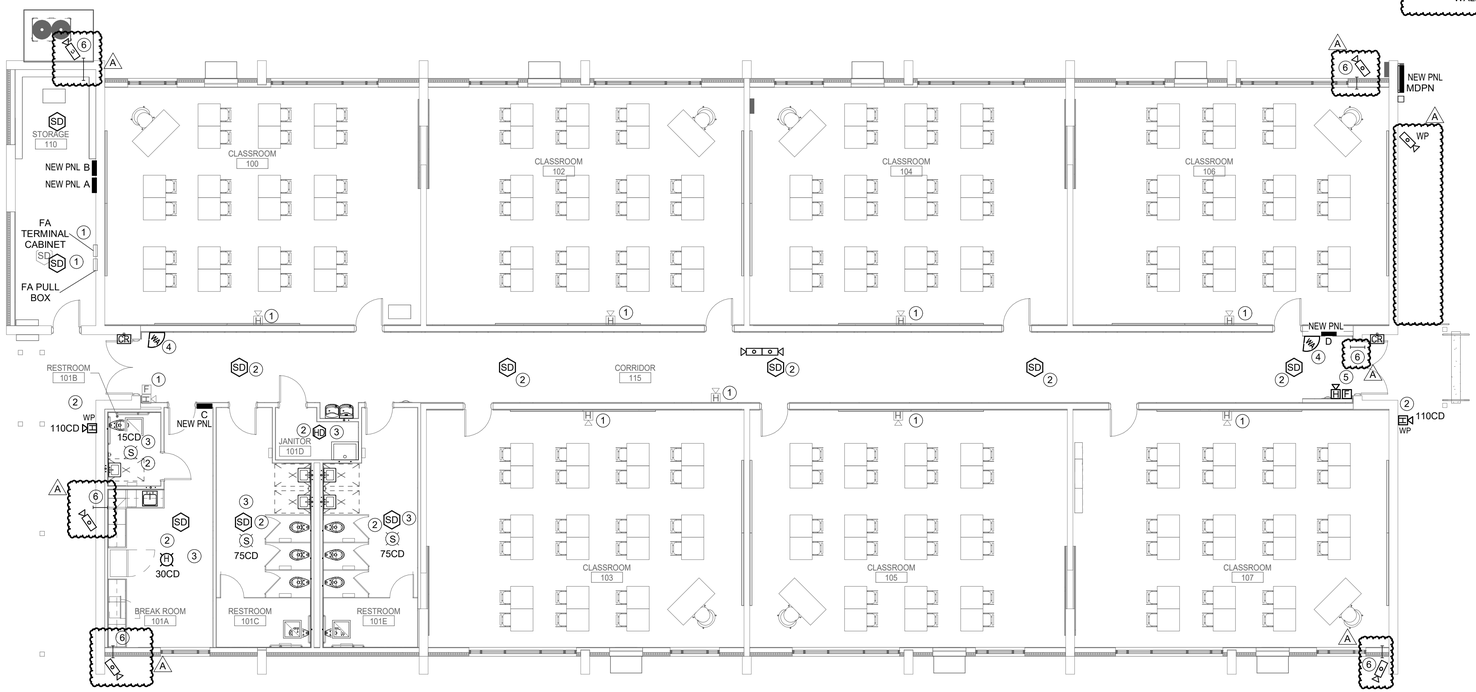
GENERAL NOTES:

A. FIRE ALARM CONTRACTOR IS TO TEST AND VEIRFY ENTIRE SYSTEM IN THIS BUILDING BEFORE TURNOVER TO ONSLOW COUNTY SCHOOLS.

KEY NOTES:

1. EXISTING FIRE ALARM DEVICES ARE TO REMAIN. ANY DEVICE THAT REMAINS WITH A STROBE SHALL BY SYNCRONIZED WITH ALL NEW DEVICES ADDED.
2. ANY NEW DEVICES ADDED TO SYSTEM ARE TO MATCH MANUFACTURER AND STYLE OF EXISTING DEVICES (NOTIFIER 500 BASED SYSTEM LOCATED IN MAIN BUILDING ELECTRICAL ROOM)
3. NEW DEVICES ARE SURFACE MOUNTED WHERE NOTED. ALL CONDUIT IS TO BE SURFACE ROUTED. PROVIDE NEW POWER PACKS TO SUPPORT ALL NEW DEVICES.
4. MOUNT MOTION SENSORS AT 10'-0" AFF TO TOP OF SENSOR.
5. EXISTING FIRE ALARM DEVICES TO BE RELOCATED PER NEW WALL FURR-OUT. MOUNT DEVICES FLUSH IN NEW FURRED OUT WALL AND RECONNECT EXISTING WIRING.
6. (1) 3/4" CONDUIT SLEEVE WITH BUSHINGS RUN ABOVE CEILING THROUGH WALL FOR CAMERA CABLE ROUTING.



1 Alternate Bid - Fire Alarm & Security Plan

1/8" = 1'-0"

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PDC #21007

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 024651 JAMES T. BUTKOVICH

BID/PERMIT SET 03/02/2023

THIS DRAWING IS FORMATTED TO BE PRINTED ON A 24" X 36" SHEET

ONSLOW COUNTY SCHOOLS
TREXLER MIDDLE SCHOOL RENOVATION & SITE IMPROVEMENTS
112 E FOY STREET RICHLANDS, NC 28574

ID	DATE	DESCRIPTION
A	03/02/23	Addendum 01

DRAWN BY: GS
CHECKED BY: JTB

FIRE ALARM/SECURITY PLAN - ALTERNATE BIDS

2022017 20 FEB 2023

E4-02

PANELBOARD: A

STATUS:

LOCATION: STORAGE 110
MOUNTING: Surface
ENCL NEMA: Type 1
MIN AIC: 22,000
NOTES: NEW PANEL UNDER ALTERNATE BID 2-1

MAINS: 200 A
VOLTS: 120/208 Wye
PHASE: 3
WIRES: 4

PANEL RATING: 200 A
MCB RATING: 200 A MLO
FED FROM: MDPN

PANEL NOTES: PROVIDE DOOR WITH LOCK AND HINGED TRIM
PROVIDE COPPER GROUND AND NEUTRAL BUS
PROVIDE FULL SIZE NEUTRAL BUS, U.O.N.

CKT	LOAD TYPE	LOAD DESCRIPTION	WIRE SIZE	CONDUIT	POLES	TRIP AMPS	A		B		C		TRIP AMPS	POLES	CONDUIT	WIRE SIZE	LOAD DESCRIPTION	LOAD TYPE	CKT
1	L	LIGHTING	2#12 & 1#12G	3/4"	1	20 A	1.08	6.01											2
3	L	LIGHTING	2#12 & 1#12G	3/4"	1	20 A			0.96	6.01			60 A	3	1"	4#6 & 1#10G	VPHP-7	HVAC	4
5	L	LIGHTING	2#12 & 1#12G	3/4"	1	20 A					0.96	6.01							6
7	L	LIGHTING	2#12 & 1#12G	3/4"	1	20 A	0.87	3.53											8
9	L	EXTERIOR LIGHTING (PC/TC)	2#12 & 1#12G	3/4"	1	20 A			0.15	3.53			35 A	3	3/4"	4#8 & 1#10G	VRF-1	HVAC	10
11	L	BUS CANOPY LIGHTING (PC/TC)	2#10 & 1#10G	3/4"	1	20 A					0.75	3.53							12
13	R	DATA RACK REC STORAGE 108D	2#12 & 1#12G	3/4"	1	20 A	0.36	0.08					20 A	2	3/4"	3#12 & 1#12G	IU-1 INTERIOR VRF UNIT	HVAC	14
15	R	DATA RACK REC STORAGE 108D	2#12 & 1#12G	3/4"	1	20 A			0.36	0									16
17	R	COORDOR RECEPTACLES	2#12 & 1#12G	3/4"	1	20 A					0.72	0.08	20 A	2	3/4"	3#12 & 1#12G	IU-2 INTERIOR VRF UNIT	HVAC	18
19	M	EF-1	2#12 & 1#12G	3/4"	1	20 A	0.01	0											20
21	R	HOT BOX RECEPTACLE	2#10 &1#10G	3/4"	1	20 A			0.18	0.04			20 A	2	3/4"	3#12 & 1#12G	IU-3A INTERIOR VRF UNIT	HVAC	22
23	R	HOT BOX RECEPTACLE FOR MOD....	2#10 &1#10G	3/4"	1	20 A					0.18	0							24
25	L	CORRIDOR LIGHTING	2#12 & 1#12G	3/4"	1	20 A	0.5	0.04					20 A	2	3/4"	3#12 & 1#12G	IU-3B INTERIOR VRF UNIT	HVAC	26
27	L	LIGHTING CONTACTOR	2#12 & 1#12G	3/4"	1	20 A			0.01	0									28
29		SPACE	--		1	--					--	0.06	20 A	2	3/4"	3#12 & 1#12G	IU-4 INTERIOR VRF UNIT	HVAC	30
31		SPACE	--		1	--	--	0											32
33		SPACE	--		1	--			--	0.06			20 A	2	3/4"	3#12 & 1#12G	IU-5 INTERIOR VRF UNIT	HVAC	34
35		SPACE	--		1	--					--	0							36
37		SPACE	--		1	--	--	--					--	1		--	SPACE		38
39		SPACE	--		1	--			--	--			--	1		--	SPACE		40
41		SPACE	--		1	--					--	--	--	1		--	SPACE		42
						TOTAL LOAD:	12.39 kVA		11.25 kVA		12.24 kVA								

BREAKER TYPES: **LO - INDICATES "LOCK-ON"...** **ST - INDICATES SHUNT TRIP DEVICE** **AFCI - INDICATES ARC FAULT PROTECTED DEVICE**
GFCI - INDICATES GROUND FAULT DEVICE **GFPE - INDICATES GROUND FAULT FOR EQUIPMENT**

Load Classification	Connected Load (VA)	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	2 kVA	100.00%	2 kVA		
Motor	0 kVA	0.00%	0 kVA	**Total Connected Load:**	35.88 kVA
HVAC	0 kVA	0.00%	0 kVA	**Total Connected Amps:**	99.60 A
Lighting	5 kVA	125.00%	7 kVA	**Total Estimated Demand:**	37.16 kVA
Equipment	0 kVA	0.00%	0 kVA	**Total Estimated Demand Amps:**	103.16 A
Kitchen Equipment	0 kVA	0.00%	0 kVA		

PANELBOARD: B

STATUS:

LOCATION: STORAGE 110
MOUNTING: Surface
ENCL NEMA: Type 1
MIN AIC: 22,000
NOTES: NEW PANEL UNDER ALTERNATE BID 2-1

MAINS: 200 A
VOLTS: 120/208 Wye
PHASE: 3
WIRES: 4

PANEL RATING: 200 A
MCB RATING: 200 A MLO
FED FROM: MDPN

PANEL NOTES: PROVIDE DOOR WITH LOCK AND HINGED TRIM
PROVIDE COPPER GROUND AND NEUTRAL BUS
PROVIDE FULL SIZE NEUTRAL BUS, U.O.N.

CKT	LOAD TYPE	LOAD DESCRIPTION	WIRE SIZE	CONDUIT	POLES	TRIP AMPS	A		B		C		TRIP AMPS	POLES	CONDUIT	WIRE SIZE	LOAD DESCRIPTION	LOAD TYPE	CKT
1	R	EXTERIOR RECEPTACLES	2#12 & 1#12G	3/4"	1	20 A	1.08	0.54					20 A	1	3/4"	2#12 & 1#12G	RECEPTACLES STORAGE 108D	R	2
3	R	EXTERIOR RECEPTACLES	2#12 & 1#12G	3/4"	1	20 A			0.72	0.9			20 A	1	3/4"	2#12 & 1#12G	RECEPTACLES CLASSROOM 101	R	4
5												0.9	20 A	1	3/4"	2#12 & 1#12G	RECEPTACLES CLASSROOM 101	R	6
7								1.08					20 A	1	3/4"	2#12 & 1#12G	RECEPTACLES 102	R	8
9										0.72			20 A	1	3/4"	2#12 & 1#12G	RECEPTACLES 100A, 102	R	10
11											6.01	0	20 A	1		--	SPARE		12
13	H	VPHP-5	4#6 & 1#10G	1"	3	60 A	6.01	0					20 A	1		--	SPARE		14
15									6.01	0			20 A	1		--	SPARE		16
17											6.01	0	20 A	1		--	SPARE		18
19	H	VPHP-6	4#6 & 1#10G	1"	3	60 A	6.01	0					20 A	1		--	SPARE		20
21									6.01	--			--	1		--	SPACE		22
23		SPACE	--		1	--					--	--	--	1		--	SPACE		24
25		SPACE	--		1	--	--	--					--	1		--	SPACE		26
27		SPACE	--		1	--			--	--			--	1		--	SPACE		28
29		SPACE	--		1	--					--	--	--	1		--	SPACE		30
						TOTAL LOAD:	14.72 kVA		14.36 kVA		12.92 kVA								

BREAKER TYPES: **LO - INDICATES "LOCK-ON"...** **ST - INDICATES SHUNT TRIP DEVICE** **AFCI - INDICATES ARC FAULT PROTECTED DEVICE**
GFCI - INDICATES GROUND FAULT DEVICE **GFPE - INDICATES GROUND FAULT FOR EQUIPMENT**

Load Classification	Connected Load (VA)	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	6 kVA	100.00%	6 kVA		
Motor	0 kVA	0.00%	0 kVA	**Total Connected Load:**	42.00 kVA
HVAC	0 kVA	0.00%	0 kVA	**Total Connected Amps:**	116.58 A
Lighting	0 kVA	0.00%	0 kVA	**Total Estimated Demand:**	42.00 kVA
Equipment	0 kVA	0.00%	0 kVA	**Total Estimated Demand Amps:**	116.58 A
Kitchen Equipment	0 kVA	0.00%	0 kVA		

PANELBOARD: MDPN

STATUS:

LOCATION: BLDG EXTERIOR
MOUNTING: Surface
ENCL NEMA: TYPE 3R
MIN AIC: 22,000
NOTES: NEW PANEL UNDER ALTERNATE BID 2-1

MAINS: 800 A
VOLTS: 120/208 Wye
PHASE: 3
WIRES: 4

PANEL RATING: 800 A
MCB RATING: 800 A MCB
FED FROM: UTILITY TX

PANEL NOTES: PROVIDE DOOR WITH LOCK AND HINGED TRIM
PROVIDE COPPER GROUND AND NEUTRAL BUS
PROVIDE FULL SIZE NEUTRAL BUS, U.O.N.

CKT	LOAD TYPE	LOAD DESCRIPTION	WIRE SIZE	CONDUIT	POLES	TRIP AMPS	A		B		C		TRIP AMPS	POLES	CONDUIT	WIRE SIZE	LOAD DESCRIPTION	LOAD TYPE	CKT
1							12.39	14.72											2
3		NEW PANEL A	4#3/0 & 1#6G	2.5"	3	200 A			11.25	14.36			200 A	3	2.5"	4#3/0 & 1#6G	NEW PANEL B		4
5											12.24	12.92							6
7							14.8	16.15											8
9		NEW PANEL C	4#3/0 & 1#6G	2.5"	3	200 A			14.98	13.99			200 A	3	2.5"	4#3/0 & 1#6G	NEW PANEL D		10
11											14.36	14.17							12
13		NEW PANEL MB (FUTURE MODULAR BUILDING)	4#1/0 & 1#6G (SIZED FOR VOLTAGE...	2"	3	100 A	7	0											14
15									8	0			20 A	3		--	SPARE		16
17											8	0							18
19		SPARE	--		3	20 A	0	--											20
21									0	--			--	3		--	SPACE		22
23											0	--							24
25		SPACE	--		3	--	--	--											26
27									--	--			--	3		--	SPACE		28
29											--	--							30
						TOTAL LOAD:	65.05 kVA		62.58 kVA		61.69 kVA								

BREAKER TYPES: **LO - INDICATES "LOCK-ON"...** **ST - INDICATES SHUNT TRIP DEVICE** **AFCI - INDICATES ARC FAULT PROTECTED DEVICE**
GFCI - INDICATES GROUND FAULT DEVICE **GFPE - INDICATES GROUND FAULT FOR EQUIPMENT**

Load Classification	Connected Load (VA)	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	21 kVA	74.13%	15 kVA		
Motor	0 kVA	0.00%	0 kVA	**Total Connected Load:**	189.31 kVA
HVAC	0 kVA	0.00%	0 kVA	**Total Connected Amps:**	525.48 A
Lighting	5 kVA	125.00%	7 kVA	**Total Estimated Demand:**	185.28 kVA
Equipment	0 kVA	0.00%	0 kVA	**Total Estimated Demand Amps:**	514.28 A
Kitchen Equipment	0 kVA	0.00%	0 kVA		

GENERAL NOTES:

A. ELECTRICAL CONTRACTOR SHALL COORDINATE CLOSELY WITH UTILITY COMPANY PRIOR TO COMMENCING WORK.

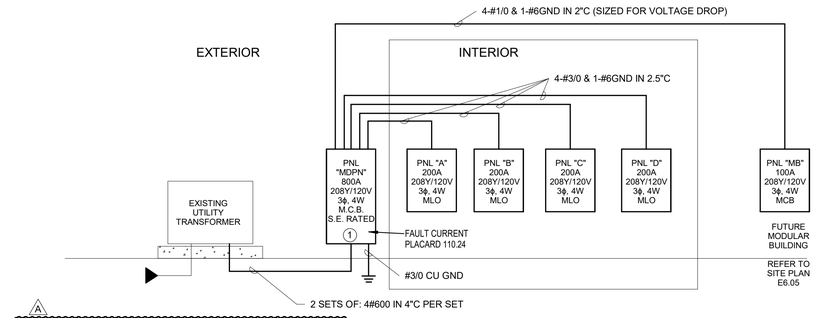
B. NEW WORK SHOWN IN BOLD LINEWEIGHT, EXISTING SHOWN IN HALFTONE/LIGHT LINEWEIGHT.

KEYNOTES:

1. PROVIDE NEW 800A, NEMA-3R 208V I-LINE PANEL TO REPLACE SERVICE ENTRANCE PANEL "MDPN" LOCATED AT BLDG EXTERIOR.

LEGEND

———	EXISTING TO REMAIN
———	NEW
M.C.B.	MAIN CIRCUIT BREAKER
M.L.O.	MAIN LUGS ONLY
GEC	GROUNDING ELECTRODE CONDUCTOR
	RECONNECTION OF EXISTING



A
1 ALTERNATE BID 2-1 POWER RISER
NOT TO SCALE

smith sinnett ARCHITECTURE

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NORTH CAROLINA PROFESSIONAL SEAL 024657 ENGINEER JAMES T. BUTKOVICH

BID/PERMIT SET
03/02/2023

ONSLOW COUNTY SCHOOLS
TREXLER MIDDLE SCHOOL RENOVATION & SITE IMPROVEMENTS
112 E FOY STREET RICHLANDS, NC 28574

ID	DATE	DESCRIPTION
A	03/02/23	Addendum 01

DRAWN BY: GS
CHECKED BY: JTB

PANEL SCHEDULES AND RISER DIAGRAM

2022017 20 FEB 2023

E5-01

PANELBOARD: D

STATUS:

LOCATION: CORRIDOR 115
MOUNTING: Recessed
ENCL NEMA: Type 1
MIN AIC: 22,000
NOTES: NEW PANEL UNDER ALTERNATE BID 2-1

MAINS: 200 A
VOLTS: 120/208 Wye
PHASE: 3
WIRES: 4

PANEL RATING: 200 A
MCB RATING: 200 A MLO
FED FROM: MDPN

PANEL NOTES: PROVIDE DOOR WITH LOCK AND HINGED TRIM
PROVIDE COPPER GROUND AND NEUTRAL BUS
PROVIDE FULL SIZE NEUTRAL BUS, U.O.N.

CKT	LOAD TYPE	LOAD DESCRIPTION	WIRE SIZE	CONDUIT	POLES	TRIP AMPS	A		B		C		TRIP AMPS	POLES	CONDUIT	WIRE SIZE	LOAD DESCRIPTION	LOAD TYPE	CKT
1	R	RECEPTACLES CLASSROOM 106	2#12 & 1#12G	3/4"	1	20 A	1.08	0.9					20 A	1	3/4"	2#12 & 1#12G	RECEPTACLES CLASSROOM 107	R	2
3	R	RECEPTACLES 104A, 106	2#12 & 1#12G	3/4"	1	20 A			0.72	0.9			20 A	1	3/4"	2#12 & 1#12G	RECEPTACLES 107, 108X	R	4
5	R	RECEPTACLES 104	2#12 & 1#12G	3/4"	1	20 A					0.9	0.9	20 A	1	3/4"	2#12 & 1#12G	RECEPTACLES CLASSROOM 100	R	6
7	R	RECEPTACLES CLASSROOM 104	2#12 & 1#12G	3/4"	1	20 A	0.9	0.9					20 A	1	3/4"	2#12 & 1#12G	RECEPTACLES CLASSROOM 100	R	8
9									6.01	6.36									10
11	HVAC	VPHP-4	4#6 & 1#10G	1.25"	3	60 A					6.01	6.36	60 A	3	1.25"	4#6 & 1#10G	VPHP-3	HVAC	12
13							6.01	6.36											14
15		SPARE	--		1	20 A			0	0			20 A	1		--	SPARE		16
17		SPARE	--		1	20 A					0	0	20 A	1		--	SPARE		18
19		SPARE	--		1	20 A	0	0					20 A	1		--	SPARE		20
21		SPARE	--		1	20 A			0	0			20 A	1		--	SPARE		22
23		SPARE	--		1	20 A					0	0	20 A	1		--	SPARE		24
25		SPARE	--		1	20 A	0	0					20 A	1		--	SPARE		26
27		SPACE	--		1	--			--	--			--	1		--	SPACE		28
29		SPACE	--		1	--					--	--	--	1		--	SPACE		30
						TOTAL LOAD:	16.15 kVA		13.99 kVA		14.17 kVA								

BREAKER TYPES: LO - INDICATES "LOCK-ON"... ST - INDICATES SHUNT TRIP DEVICE AFCI - INDICATES ARC FAULT PROTECTED DEVICE
GFCI - INDICATES GROUND FAULT DEVICE GFPE - INDICATES GROUND FAULT FOR EQUIPMENT

Load Classification	Connected Load (VA)	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	7 kVA	100.00%	7 kVA		
Motor	0 kVA	0.00%	0 kVA	Total Connected Load:	44.31 kVA
HVAC	0 kVA	0.00%	0 kVA	Total Connected Amps:	122.99 A
Lighting	0 kVA	0.00%	0 kVA	Total Estimated Demand:	44.31 kVA
Equipment	0 kVA	0.00%	0 kVA	Total Estimated Demand Amps:	122.99 A
Kitchen Equipment	0 kVA	0.00%	0 kVA		

PANELBOARD: E3

STATUS:

LOCATION: CORRIDOR
MOUNTING: Recessed
ENCL NEMA: Type 1
MIN AIC: 22,000
NOTES: EXISTING PANEL TO REMAIN UNDER BASE BID ONLY. ALL LOADS ARE BASED ON AS BUILT DRAWINGS AND FIELD VERIFICATION

MAINS: 200 A MLO
VOLTS: 120/208 Wye
PHASE: 3
WIRES: 4

PANEL RATING: 200 A
MCB RATING:
FED FROM: E6

PANEL NOTES: PROVIDE DOOR WITH LOCK AND HINGED TRIM
PROVIDE COPPER GROUND AND NEUTRAL BUS
PROVIDE FULL SIZE NEUTRAL BUS, U.O.N.

CKT	LOAD TYPE	LOAD DESCRIPTION	WIRE SIZE	CONDUIT	POLES	TRIP AMPS	A		B		C		TRIP AMPS	POLES	CONDUIT	WIRE SIZE	LOAD DESCRIPTION	LOAD TYPE	CKT
1	E	EXISTING LIGHTING	--		1	20 A	1	1					20 A	1		--	EXISTING LIGHTING	E	2
3	E	EXISTING LIGHTING	--		1	20 A			1	1			20 A	1		--	EXISTING LIGHTING	E	4
5	E	EXISTING LIGHTING	--		1	20 A					1	1	20 A	1		--	EXISTING LIGHTING	E	6
7	E	EXISTING LIGHTING	--		1	20 A	1	1					20 A	1		--	EXISTING LIGHTING	E	8
9	E	EXISTING LIGHTING	--		1	20 A			1	1			20 A	1		--	EXISTING LIGHTING	E	10
11	E	EXISTING LIGHTING	--		1	20 A					1	1	20 A	1		--	EXISTING LIGHTING	E	12
13	E	EXSITING RECEPTACLES	--		1	20 A	1	1					20 A	1		--	EXISTING LIGHTING	E	14
15	E	EXSITING RECEPTACLES	--		1	20 A			1	1			20 A	1		--	EXISTING LIGHTING	E	16
17	E	EXISTING LIGHTING	--		1	20 A					1	1	20 A	1		--	EXISTING LIGHTING	E	18
19	E	EXISTING LIGHTING	--		1	20 A	1	1					20 A	1		--	EXISTING RECEPTACLES	E	20
21	E	EXSITING RECEPTACLES	--		1	20 A			1	1			20 A	1		--	EXISTING RECEPTACLES	E	22
23	E	EXSITING RECEPTACLES	--		1	20 A					1	1	20 A	1		--	EXISTING RECEPTACLES	E	24
25	E	EXSITING RECEPTACLES	--		1	20 A	1	1					20 A	1		--	EXISTING RECEPTACLES	E	26
27	E	EXSITING RECEPTACLES	--		1	20 A			1	1			20 A	1		--	EXISTING LIGHTING	E	28
29	E	PANEL E4	--		2	100 A					10	1	20 A	1		--	EXISTING RECEPTACLES	E	30
31							10	0					20 A	1		--	EXISTING RECEPTACLES	E	32
33	E	EXISTING W/H	--		1	20 A			1	1			20 A	1		--	EXISTING RECEPTACLES	E	34
35	E	EXISTING W/H	--		1	20 A					1	**0.36**	**20 A**	**1**	**3/4"**	**2#12 & 1#12G**	**NEW RECEPTACLE BREAK ROOM...**	**R**	**36**
37	**R**	**NEW EWC/GFI**	**2#12 & 1#12G**	**3/4"**	**1**	**20 A**	**0.9**	**1**					**20 A**	**1**	**3/4"**	**2#12 & 1#12G**	**NEW REFRIGERATOR BREAK ROOM...**	**R**	**38**
39	**R**	**NEW EWC/GFI**	**2#12 & 1#12G**	**3/4"**	**1**	**20 A**			**0.9**	**0.18**			**20 A**	**1**	**3/4"**	**2#12 & 1#12G**	**NEW RECEPTACLE BREAK ROOM...**	**R**	**40**
41	**R**	**NEW RESTROOM RECEPTACLES**	**2#12 & 1#12G**	**3/4"**	**1**	**20 A**					**0.36**	**0.45**	**20 A**	**1**	**3/4"**	**2#12 & 1#12G**	**NEW EF-1, RESTROOM 101E**		**42**
						TOTAL LOAD:	21.90 kVA		13.08 kVA		21.17 kVA								

BREAKER TYPES: LO - INDICATES "LOCK-ON"... ST - INDICATES SHUNT TRIP DEVICE AFCI - INDICATES ARC FAULT PROTECTED DEVICE
GFCI - INDICATES GROUND FAULT DEVICE GFPE - INDICATES GROUND FAULT FOR EQUIPMENT

Load Classification	Connected Load (VA)	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	4 kVA	100.00%	4 kVA		
Motor	0 kVA	0.00%	0 kVA	Total Connected Load:	56.15 kVA
HVAC	0 kVA	0.00%	0 kVA	Total Connected Amps:	155.86 A
Lighting	0 kVA	0.00%	0 kVA	Total Estimated Demand:	56.15 kVA
Equipment	0 kVA	0.00%	0 kVA	Total Estimated Demand Amps:	155.86 A
Kitchen Equipment	0 kVA	0.00%	0 kVA		

PANELBOARD: C

STATUS:

LOCATION: BREAK ROOM 101A
MOUNTING: Recessed
ENCL NEMA: Type 1
MIN AIC: 22,000
NOTES: NEW PANEL UNDER ALTERNATE BID 2-1

MAINS: 200 A
VOLTS: 120/208 Wye
PHASE: 3
WIRES: 4

PANEL RATING: 200 A
MCB RATING: 200 A MLO
FED FROM: MDPN

PANEL NOTES: PROVIDE DOOR WITH LOCK AND HINGED TRIM
PROVIDE COPPER GROUND AND NEUTRAL BUS
PROVIDE FULL SIZE NEUTRAL BUS, U.O.N.

CKT	LOAD TYPE	LOAD DESCRIPTION	WIRE SIZE	CONDUIT	POLES	TRIP AMPS	A		B		C		TRIP AMPS	POLES	CONDUIT	WIRE SIZE	LOAD DESCRIPTION	LOAD TYPE	CKT
1	R	RECEPTACLE BREAK ROOM 105D	2#12 & 1#12G	3/4"	1	20 A	0.18	1.18					20 A	1	3/4"	2#12 & 1#12G	REFRIGERATOR BREAK ROOM 105D	R	2
3	R	MICROWAVE BREAK ROOM 105D	2#12 & 1#12G	3/4"	1	20 A			1	0.18			20 A	1	3/4"	2#12 & 1#12G	RECEPTACLES BREAK ROOM 105D	R	4
5	L	CANOPY LIGHTING (VIA PC/LC)	2#12 & 1#12G	3/4"	1	20 A					0.2	0.36	20 A	1	3/4"	2#12 & 1#12G	RECEPTACLE JANITOR 105C	R	6
7								0.72					20 A	1	3/4"	2#12 & 1#12G	RECEPTACLES RESTROOM 105B	R	8
9	R	EWC/GFI (CORRIDOR)	2#12 & 1#12G	3/4"	1	20 A			0.18	0.9			20 A	1	3/4"	2#12 & 1#12G	RECEPTACLES 101A, 103	R	10
11	R	EWC/GFI (CORRIDOR)	2#12 & 1#12G	3/4"	1	20 A					0.18	0.9	20 A	1	3/4"	2#12 & 1#12G	RECEPTACLES CLASSROOM 103	R	12
13							6.36	6.36											14
15	HVAC	VPHP-2	4#6 & 1#10G	1.25"	3	60 A			6.36	6.36			60 A	3	1.25"	4#6 & 1#10G	VPHP-1	HVAC	16
17											6.36	6.36							18
19		SPARE	--		1	20 A	0	0					20 A	1		--	SPARE		20
21		SPARE	--		1	20 A			0	0			20 A	1		--	SPARE		22
23		SPACE	--		1	--					--	0	20 A	1		--	SPARE		24
25		SPACE	--		1	--	--	0					20 A	1		--	SPARE		26
27		SPACE	--		1	--			--	0			20 A	1		--	SPARE		28
29		SPACE	--		1	--					--	0	20 A	1		--	SPARE		30
						TOTAL LOAD:	14.80 kVA		14.98 kVA		14.36 kVA								

BREAKER TYPES: LO - INDICATES "LOCK-ON"... ST - INDICATES SHUNT TRIP DEVICE AFCI - INDICATES ARC FAULT PROTECTED DEVICE
GFCI - INDICATES GROUND FAULT DEVICE GFPE - INDICATES GROUND FAULT FOR EQUIPMENT

Load Classification	Connected Load (VA)	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	6 kVA	100.00%	6 kVA		
Motor	0 kVA	0.00%	0 kVA	Total Connected Load:	44.14 kVA
HVAC	0 kVA	0.00%	0 kVA	Total Connected Amps:	122.52 A
Lighting	0 kVA	125.00%	0 kVA	Total Estimated Demand:	44.19 kVA
Equipment	0 kVA	0.00%	0 kVA	Total Estimated Demand Amps:	122.66 A
Kitchen Equipment	0 kVA	0.00%	0 kVA		

PANELBOARD: E6

STATUS:

LOCATION: STORAGE 110
MOUNTING: Surface
ENCL NEMA: Type 1
MIN AIC:
NOTES: EXISTING PANEL TO REMAIN UNDER BASE BID ONLY. ALL LOADS ARE BASED ON AS BUILT DRAWINGS AND FIELD VERIFICATION

MAINS: 400A
VOLTS: 120/208 Wye
PHASE: 3
WIRES: 4

PANEL RATING: 400 A
MCB RATING:
FED FROM: E1

PANEL NOTES: PROVIDE DOOR WITH LOCK AND HINGED TRIM
PROVIDE COPPER GROUND AND NEUTRAL BUS
PROVIDE FULL SIZE NEUTRAL BUS, U.O.N.

CKT	LOAD TYPE	LOAD DESCRIPTION	WIRE SIZE	CONDUIT	POLES	TRIP AMPS	A		B		C		TRIP AMPS	POLES	CONDUIT	WIRE SIZE	LOAD DESCRIPTION	LOAD TYPE	CKT
1							21.9	0					60 A	2		--	PANEL E5		2
3		EXISITNG PANEL E3			3	200 A			13.08	0									4
5											21.17	0	20 A	2		--	EXISITNG A/C UNIT		6
7							0	0											8
9		PANEL E7	--		2	40 A			0	**0.36**			**20 A**	**1**	**3/4"**	**2#12 $ 1#12G**	**NEW RECEPTACLE - DATA RACK - 110**	**R**	**10**
11		SPARE	--		1	--					--	**0.36**	**20 A**	**1**	**3/4"**	**2#12 $ 1#12G**	**NEW RECEPTACLE - DATA RACK - 110**	**R**	**12**
						TOTAL LOAD:	21.90 kVA		13.44 kVA		21.53 kVA								

BREAKER TYPES: LO - INDICATES "LOCK-ON"... ST - INDICATES SHUNT TRIP DEVICE AFCI - INDICATES ARC FAULT PROTECTED DEVICE
GFCI - INDICATES GROUND FAULT DEVICE GFPE - INDICATES GROUND FAULT FOR EQUIPMENT

Load Classification	Connected Load (VA)	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	5 kVA	100.00%	5 kVA		
Motor	0 kVA	0.00%	0 kVA	Total Connected Load:	56.87 kVA
HVAC	0 kVA	0.00%	0 kVA	Total Connected Amps:	157.86 A
Lighting	0 kVA	0.00%	0 kVA	Total Estimated Demand:	56.87 kVA
Equipment	0 kVA	0.00%	0 kVA	Total Estimated Demand Amps:	157.86 A
Kitchen Equipment	0 kVA	0.00%	0 kVA		

GENERAL NOTES:

A. ELECTRICAL CONTRACTOR SHALL COORDINATE CLOSELY WITH UTILITY COMPANY PRIOR TO COMMENCING WORK.

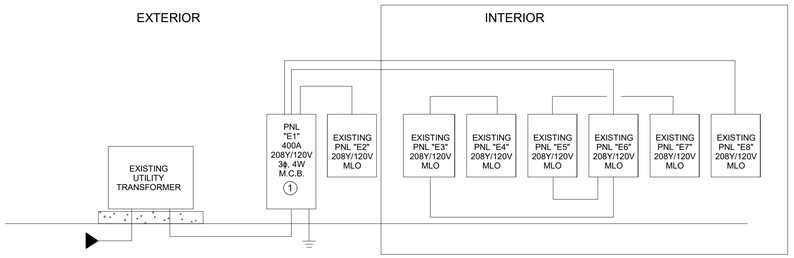
B. NEW WORK SHOWN IN BOLD LINEWEIGHT, EXISTING SHOWN IN HALFTONE/LIGHT LINEWEIGHT.

KEYNOTES:

1. EXISTING ELECTRICAL SERVICE TO REMAIN UNDER BASE BID PACKAGE
2. THIS RISER IS DEMOLISHED UNDER ALTERNATE BIDS 2-1 - 2-3.

LEGEND

———	EXISTING TO REMAIN
———	NEW
M.C.B.	MAIN CIRCUIT BREAKER
M.L.O.	MAIN LUGS ONLY
GEC	GROUNDING ELECTRODE CONDUCTOR
	RECONNECTION OF EXISTING



2 BASE BID POWER RISER
NOT TO SCALE

LIGHTING FIXTURE SCHEDULE

SYMBOL	MOUNTING	VOLT	MANUFACTURER AND MODEL NO.	EQUALS	DESCRIPTION	LAMP	WATTS	SYMBOL
A1	RECESSED	MVOLT	LITHONIA EPANL-2X2-2000LMHE-80CRI-40K-MIN10-ZT-MVOLT	SIGNIFY WILLIAMS HUBBELL	2'X2' LED FLAT PANEL FIXTURE WITH DIMING DOWN TO 10%	LED 4000K 2000 LUMENS	20	A1
A2	RECESSED	MVOLT	LITHONIA EPANL-2X4-4000LMHE-80CRI-40K-MIN10-ZT-MVOLT	SIGNIFY WILLIAMS HUBBELL	2'X4' LED FLAT PANEL FIXTURE WITH DIMING DOWN TO 10%	LED 4000K 4000 LUMENS	31	A2
B	SURFACE/ PENDANT	MVOLT	LITHONIA ZL1D-L48-5000LM-FST-MVOLT-40K-80CRI-WH-ZACHV M100	SIGNIFY WILLIAMS HUBBELL	4' LED STRIP LIGHT WITH FROSTED LENS AND ADJUSTABLE AIR CRAFT CABLE HANGERS	LED 4000K 5500 LUMENS	41	B
D	RECESSED	MVOLT	PRESCOLITE LTR-6RD-H-SL10L-DM01-EM/LTR-6RD-T-SL-40K-8-MD-SS-WT-EM	SIGNIFY WILLIAMS HUBBELL	6" LED DOWNLIGHT WITH EMERGENCY BATTERY, FINAL FINISH AND TRIM OPTIONS TO BE SELECTED BY ARCHITECT	LED 4000K 1100 LUMENS	12	D
G	SURFACE	MVOLT	LITHONIA ARC2 LED P3 40K MVOLT PE DDBXD	SIGNIFY WILLIAMS HUBBELL	LED EXTERIOR WALL PACK, ARCHITECT TO SELECT COLOR	LED 4000K 3000 LUMENS	24	G
K	SURFACE	MVOLT	LITHONIA CNY LED P1 40K MVOLT	SIGNIFY WILLIAMS HUBBELL	LED EXTERIOR CANOPY FIXTURE , ARCHITECT TO SELECT COLOR	LED 4000K 4500 LUMENS	12	K
S	RECESSED	MVOLT	PRESCOLITE LTR-6RD-H-SL10L-DM01/LTR-6RD-T-SL-40K-8-XW-SS-WT	SIGNIFY WILLIAMS HUBBELL	6" LED DOWNLIGHT, FINAL FINISH AND TRIM OPTIONS TO BE SELECTED BY ARCHITECT	LED 4000K 1100 LUMENS	12	S
X1	SURFACE	MVOLT	LITHONIA EDG-W-1-RW-EL	SIGNIFY WILLIAMS HUBBELL	LED EDGE LIT SINGLE FACE EXIT SIGN WITH BATTERY BACK OF 90 MINUTES	LED	3.1	X1
Z	SURFACE	MVOLT	LITHONIA ELM2L	SIGNIFY WILLIAMS HUBBELL	LED EM WALL MOUNT FIXTURE WITH BATTERY BACK OF 90 MINUTES	LED	3.1	Z

* ALL INDOOR LIGHT FIXTURES ARE TO BE RATED FOR 2.5KA SURGE PROTECTION MINIMUM.
* ALL EXTERIOR LIGHT FIXTURES ARE TO BE RATED FOR 10KA SURGE PROTECTION MINIMUM.

*THIS FIXTURE SCHEDULE IDENTIFIES A FIXTURE THAT MEETS THE SPECIFIED PERFORMANCE REQUIREMENTS AND A LEVEL OF QUALITY REQUIRED FOR THE PROJECT. MANUFACTURER'S NAMES AND FIXTURE MODEL NUMBERS IN THE SCHEDULE ARE NOT A NAME BRAND SPECIFICATION. EQUIVALENT FIXTURES BY MANUFACTURERS OTHER THAN THOSE LISTED MAY BE SUBMITTED FOR THIS PROJECT.

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 024657 JAMES T. BUTKOVICH
03/02/2023
BID/PERMIT SET

THIS DRAWING IS FORMATTED TO BE PRINTED ON A 24" X 36" SHEET

ONSLOW COUNTY SCHOOLS
TREXLER MIDDLE SCHOOL RENOVATION & SITE IMPROVEMENTS
112 E FOY STREET RICHLANDS, NC 28574

ID	DATE	DESCRIPTION

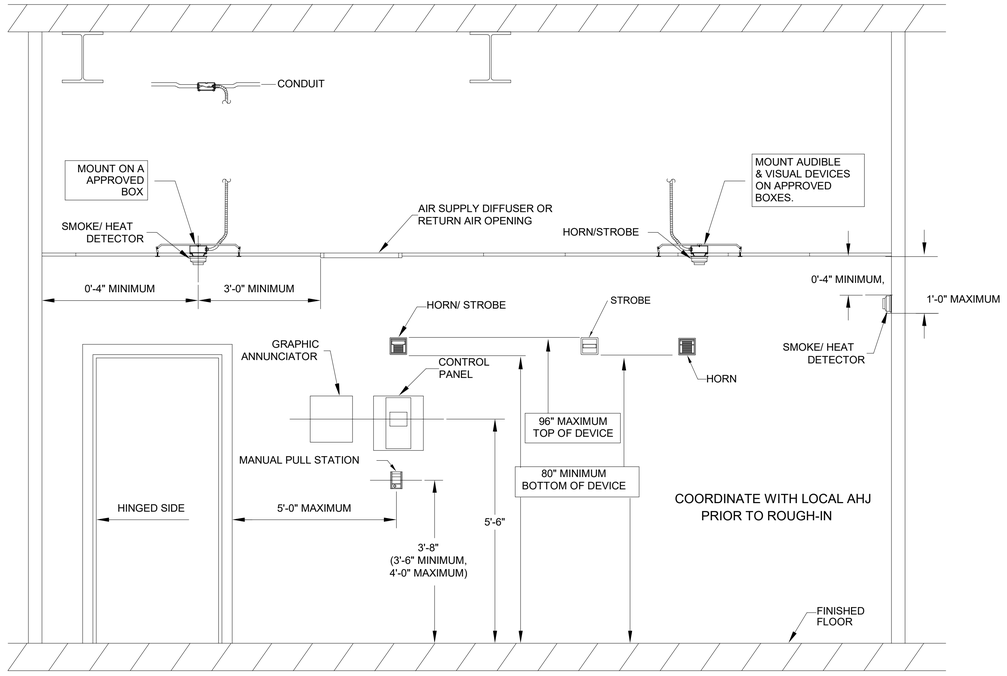
DRAWN BY: GS
CHECKED BY: JTB

PANEL SCHEDULES AND DETAILS

2022017 20 FEB 2023

E5-02

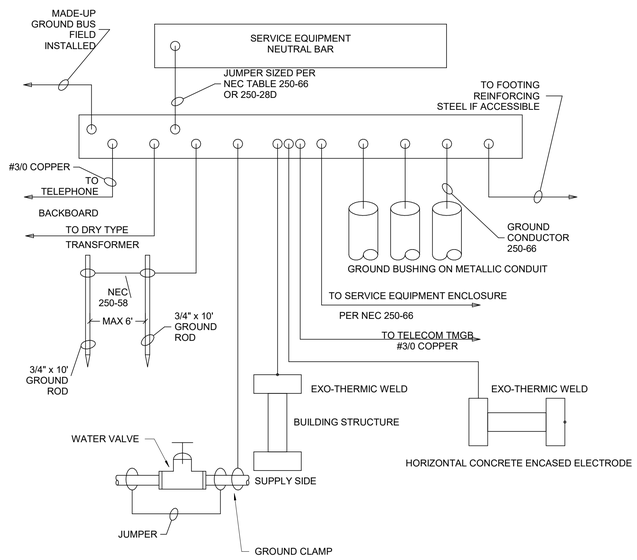
NFPA 72 AND ADA DEVICE INSTALLATION REQUIREMENTS



FIRE ALARM DEVICE MOUNTING

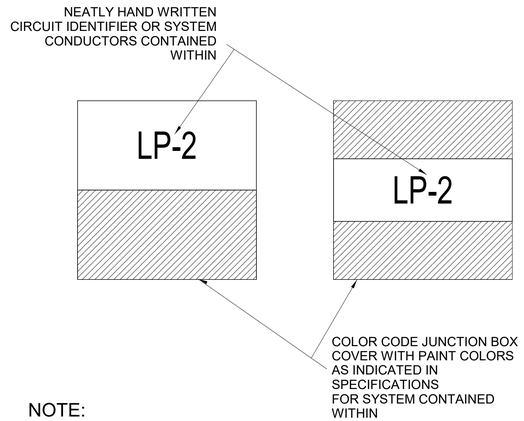
4 F/A DEVICE MOUNTING

NOT TO SCALE



5 SERVICE EQUIPMENT GROUNDING

NOT TO SCALE



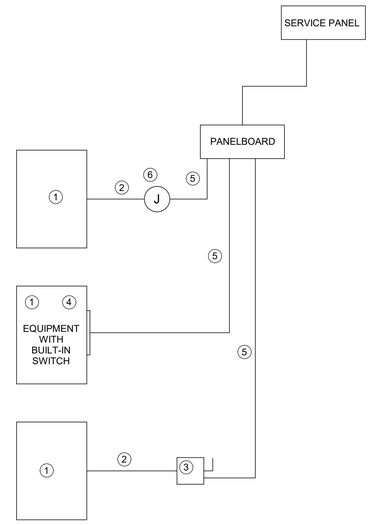
NOTE:

CONTRACTOR SHALL IDENTIFY JUNCTION BOX COVERS WITH ONE OF THE TWO METHODS SHOW ABOVE, BUT NOT BOTH. ALL JUNCTION BOX COVERS SHALL BE CONSISTENTLY IDENTIFIED ACROSS THE ENTIRE PROJECT.

JUNCTION BOX LABELING

3 JUNCTION BOX LABELING

NOT TO SCALE



GENERAL NOTES:

A. IN A SINGLE PRIME CONTRACT IT IS THE RESPONSIBILY OF THE PRIME CONTRACTOR TO COORDINATE BETWEEN THE ELECTRICAL AND OTHER TRADES.

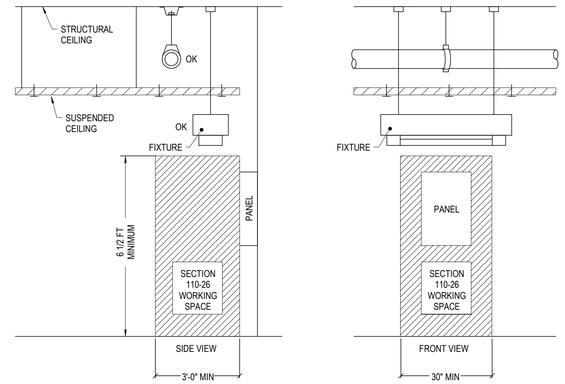
B. IN ALL CASES, THE EQUIPMENT CONTRACTOR SHALL MAKE THE FINAL CONNECTIONS, START UP, AND TEST AND COMMISSION THE EQUIPMENT.

KEYNOTES:

1. EQUIPMENT OF TRADES OTHER THAN ELECTRICAL.
2. CONDUIT AND WIRING BY HVAC, PLUMBING CONTRACTOR OR TRADES.
3. IF AN ADDITIONAL DISCONNECT IS REQUIRED BY NEC, IT SHALL BE PROVIDED AND INSTALLED BY THE EQUIPMENT CONTRACTOR.
4. IF THE EQUIPMENT IS NOT PROVIDED WITH A BUILT-IN DISCONNECT SWITCH, THE ELECTRICAL CONTRACTOR SHALL PROVIDE A DISCONNECT SWITCH.
5. FEEDER CIRCUIT WIRING AND CONDUIT PROVIDED IN ELECTRICAL WORK. REFER TO PANELBOARD SCHEDULES FOR WIRE AND BREAKER SIZES.
6. JUNCTION BOX MAY BE INDICATED ON THE ELECTRICAL DRAWINGS FOR SOME EQUIPMENT. IF NO STARTER OR DISCONNECT IS FURNISHED BY THE EQUIPMENT MANUFACTURER, A JUNCTION BOX SHALL BE INSTALLED ADJACENT TO THE EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL PROVIDE LINE SIDE WIRING TO THE JUNCTION BOX. LOAD SIDE WIRING SHALL BE PROVIDED BY MECHANICAL CONTRACTOR OR OTHER TRADES.

1 ELECTRICAL EQUIPMENT CONNECTIONS

NOT TO SCALE



N.E.C ARTICLE 110-26

2 WORKING CLEARANCE FOR ELECTRICAL EQUIPMENT

NOT TO SCALE

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NORTH CAROLINA REGISTERED PROFESSIONAL SEAL 024651 ENGINEER JAMES T. BUTKOVICH

BID/PERMIT SET
03/02/2023

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ONSLOW COUNTY SCHOOLS
TREXLER MIDDLE SCHOOL RENOVATION & SITE IMPROVEMENTS
112 E FOY STREET RICHLANDS, NC 28574

ID	DATE	DESCRIPTION

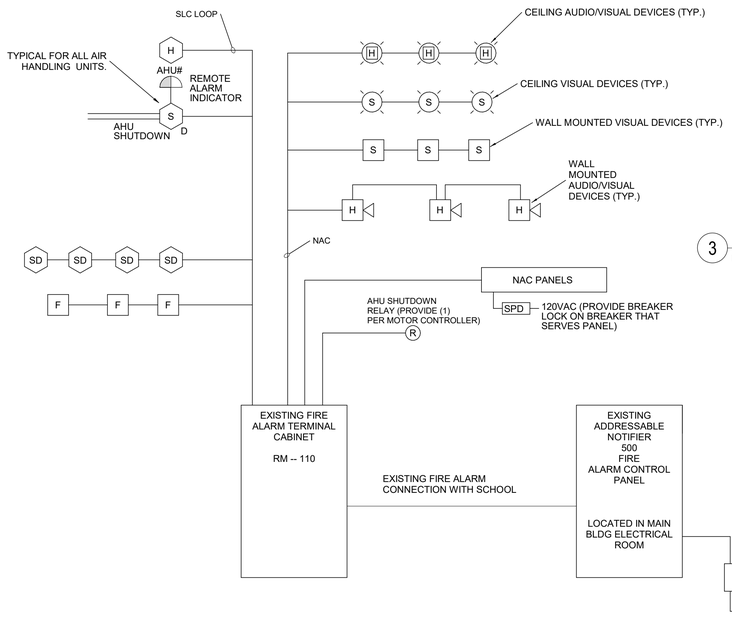
DRAWN BY: GS
CHECKED BY: JTB

DETAILS

2022017 20 FEB 2023

E6-01

FIRE ALARM SIGNAL LINE CIRCUITS SHALL BE WIRED CLASS "A" AND NOTIFICATION CIRCUITS SHALL BE WIRED CLASS "B" WITH THE END OF LINE RESISTOR CLEARLY AND PERMANENTLY MARKED ON THE LAST DEVICE.



FIRE ALARM SYSTEM AT SCHOOL IS EXISTING TO REMAIN. ALL NEW DEVICES ARE TO BE FED TO EXISTING TERMINAL CABINET AND PROGRAMMING DONE AT SCHOOL MAIN FIRE ALARM CONTROL PANEL

GENERAL FIRE ALARM RISER NOTES:

A. SEE PLANS FOR LOCATIONS AND QUANTITIES OF ALL DEVICES.

B. ALL WIRING SHALL BE IN MINIMUM 3/4" CONDUIT.

C. BATTERY CALCULATIONS ARE REQUIRED WITH ALL SUBMITTALS.

D. TEST RESULTS ARE REQUIRED FOR ALL DEVICES.

E. PROVIDE SHUT-DOWN DEVICES FOR NEW AIR HANDLERS, FAN COIL UNITS AND SUPPLY FANS OF ALL MECHANICAL EQUIPMENT.

F. VERIFY ROOM NUMBERS WITH ARCHITECT PRIOR TO PROGRAMMING SYSTEM.

G. ALL NAC PANELS AND AMPLIFIER PANELS SHALL HAVE A SMOKE DETECTOR MOUNTED WITHIN 15'-0" OF PANEL.

H. A SMOKE DETECTOR SHALL BE MOUNTED WITHIN 15'-0" OF FACP AND NAC PANELS.

I. IF ANY ARCHITECTURAL CHANGES ARE MADE THAT SHALL AFFECT ANY DEVICE PLACEMENT, THIS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO INSTALLATION.

J. THE MANUFACTURER'S AUTHORIZED REPRESENTATIVE SHALL BE NICET LEVEL 3 CERTIFIED AND HAVE AT LEAST 2 YEARS OF EXPERIENCE INSTALLING FIRE ALARM SYSTEMS.

K. THE PROJECT MANAGER SHALL BE NICET LEVEL 4 CERTIFIED AND HAVE AT LEAST 5 YEARS OF EXPERIENCE INSTALLING FIRE ALARM SYSTEMS.

L. THE SHOP DRAWINGS SUBMITTALS FOR DEVICE LOCATIONS SHALL BE SUBMITTED TO ENGINEER AND LOCAL (AHJ) FIRE MARSHALL PRIOR TO ANY INSTALLATION/ROUGH-IN FOR FIRE ALARM DEVICES.

M. WIRING DIAGRAMS. LOCATION DRAWINGS, DEVICE CUT SHEETS AND VOLTAGE DROP CALCULATIONS ARE REQUIRED WITH ALL SUBMITTALS.

N. THE FIRE ALARM SYSTEM PROVIDER SHALL PROVIDE ALL DOCUMENTATION AS SPECIFIED IN THE INTERNATIONAL FIRE CODE SECTION 907 REQUIREMENTS AS PART OF HIS SHOP DRAWING SUBMITTALS.

THIS INCLUDES:

1. LOCATION DRAWINGS OF ALARM INITIATING AND NOTIFICATION DEVICES.
2. WIRING DIAGRAMS WITH CONDUCTOR TYPE AND SIZES.
3. LOCATIONS OF ALARM CONTROL AND TROUBLE SIGNALING EQUIPMENT.
4. POWER CONNECTION DETAILS AND WIRING SCHEMATICS.
5. BATTERY CALCULATIONS.
6. VOLTAGE DROP CALCULATIONS.
7. MANUFACTURER'S MODEL NUMBERS, LISTING INFORMATION FOR EQUIPMENT, DEVICES AND MATERIALS.
8. THE INTERFACE OF FIRE SAFETY CONTROL FUNCTIONS.

O. REFER TO DIVISION 28 SPECIFICATIONS.

P. FIRE ALARM SIGNAL LINE CIRCUITS SHALL BE WIRED CLASS "A" AND NOTIFICATION CIRCUITS SHALL BE WIRED CLASS "B" WITH THE END OF LINE RESISTOR CLEARLY AND PERMANENTLY MARKED ON THE LAST DEVICE.

Q. PROVIDE SPARE PARTS AS DEFINED IN SPECIFICATIONS.

R. ALL FIRE ALARM SYSTEM WORK SHALL BE APPROVED BY THE LOCAL FIRE MARSHAL PRIOR TO COMMENCING ANY FIRE ALARM WORK.

S. ALL RACPs SHALL BE SEMI RECESSED WITH INTEGRAL PUSH TO TALK MICROPHONES AND ZONE SELECTION SWITCHES.

T. FIRE ALARM SYSTEM SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH NFPA 72, 2013.

U. COORDINATE WITH THE FIRE PROTECTION CONTRACTOR FOR VOLTAGE, RELAY, ETC. FOR CONNECTIONS OF SPRINKLER BELL. ALL WIRING, CONDUIT, RELAY, AND INTERCONNECTIONS SHALL BE BY THE ELECTRICAL & FIRE ALARM CONTRACTORS.

V. NOTIFICATION APPLANCE CABINETS(NAC) SHALL BE ADDED AS NEEDED. ALL 120VAC POWER FOR CABINET SHALL BE PROVIDED FROM THE NEAREST 120V PANEL. BREAKER HASPS SHALL BE PROVIDED ON BREAKER SERVING CABINET.

W. ELECTRICAL CONTRACTOR SHALL COORDINATE CLOSELY WITH FIRE ALARM SUB-CONTRACTOR FOR ALL 120V AC POWER REQUIRED FOR THIS SYSTEM. IF ANY ADDITIONAL CIRCUITS ARE REQUIRED THAT ARE NOT IDENTIFIED ON PLANS THE ELECTRICAL CONTRACTOR SHALL PROVIDE THAT CIRCUIT FROM THE NEAREST 120V PANEL, AS-BUILTS SHALL BE UPDATED TO REFLECT THE INSTALLED CONDITION. THIS SHALL BE DONE AT NO ADDITIONAL COST TO THE PROJECT.

X. THE FIRE ALARM SYSTEM SHALL BE INTERCONNECTED WITH ALL SOUND SYSTEMS SUCH THAT UPON ALARM CONDITION THE SOUND SYSTEM MUTES. REFER TO PLANS FOR SOUND SYSTEM LOCATIONS.

Y. ELECTRICAL CONTRACTORS (FIRE ALARM SUB-CONTRACTOR) SHALL COORDINATE CLOSELY WITH THE HVAC CONTROLS CONTRACTOR.

4 FIRE ALARM NETWORK RISER Copy 1

NOT TO SCALE

GENERAL NOTES:

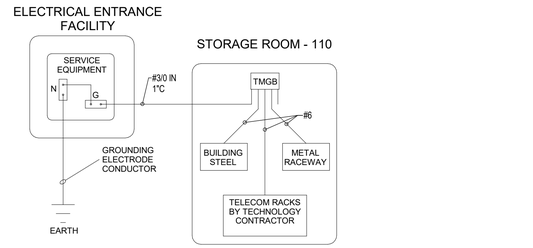
A. VERIFY OPERATION WITH LOCAL AHJ PRIOR TO PROGRAMMING.

SYSTEM INPUTS

		ACTUATE GENERAL ALARM SPEAKERS/STROBES	ACTUATE AUDIBLE ALARM SIGNAL	ACTUATE SUPERVISORY SIGNAL INDICATOR	ACTUATE AUDIBLE SUPERVISORY SIGNAL	ACTUATE COMMON TROUBLE SIGNAL INDICATOR	ACTUATE AUDIBLE COMMON TROUBLE SIGNAL	ACTUATE ALL EVACUATION SIGNALS	TRANSMIT FIRE ALARM SIGNAL TO SUPERVISING STATION	TRANSMIT TROUBLE SIGNAL TO SUPERVISING STATION	TRANSMIT SUPERVISORY SIGNAL TO SUPERVISING STATION	DISPLAY CHANGE OF STATUS AT FACP	SHUTDOWN ALL AIR HANDLING UNITS	TRANSMIT CO TROUBLE SIGNAL TO SUPERVISING STATION	ACTUATE CARBON MONOXIDE TROUBLE SIGNAL	UNLOCK ACCESS CONTROLLED EGRESS DOORS	MUTE ALL SOUND SYSTEMS	RELEASE MAGNETICALLY HELD DOOR OPENS	
		A	B	C	D	E	F	G	H	I	J	K	L	M	O	P	Q	R	
1	MANUAL PULL STATIONS	o	o					o	o			o	o			o	o	o	1
2	SMOKE DETECTORS	o	o					o	o			o	o			o	o	o	2
3	HEAT DETECTORS	o	o					o	o			o	o			o	o	o	3
4																		o	4
5	AHU OVERRIDE SWITCH			o	o						o	o							5
6																			6
7																			7
8																			8
9	FIRE ALARM SYSTEM AC POWER FAILURE					o	o			o		o							9
10	FIRE ALARM SYSTEM LOW BATTERY					o	o			o		o							9
11	NAC PANELS LOW BATTERY					o	o			o		o							10
12	OPEN CIRCUIT					o	o			o		o							11
13	GROUND FAULT					o	o			o		o							12
14	NOTIFICATION APPLIANCE SHORT CIRCUIT					o	o			o		o							13
15																			14
16																			15

3 FIRE ALARM MATRIX

NOT TO SCALE



NOTES:

A. IT IS THE INTENT FOR THE TELECOMMUNICATION GROUNDING SYSTEM TO UTILIZE THE "GROUND ELECTRODE CONDUCTOR (GEC)" ASSOCIATED WITH THE ELECTRICAL SERVICE ENTRANCE TO THE PROJECT SITE.

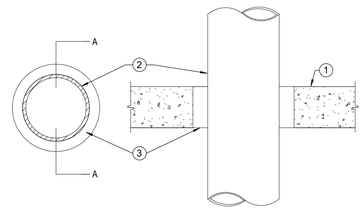
B. FROM THE GEC, THE ELECTRICAL CONTRACTOR WILL INSTALL A BONDING CONDUCTOR WHICH WILL CONNECT THE GEC TO A TELECOMMUNICATIONS MAIN GROUNDING BUS BAR (TMGB) LOCATED IN STORAGE ROOM 110. THE BONDING CONDUCTOR WILL BE BONDED TO THE GEC AND THE TMGB. ADDITIONALLY, THE TMGB WILL BE BONDED TO THE CLOSEST PART OF THE BUILDING STEEL AND STEEL CONDUIT RACEWAY OR CABLE TRAY DESIGNATED FOR TELECOMMUNICATIONS USE.

D. COMPONENTS CRITERIA:
1. BUSBARS
   A. PREDRILLED ELECTROTIN PLATED COPPER BUSBAR PROVIDED WITH STANDARD NEMA BOLT HOLE SIZING AND SPACING FOR TWO HOLE COMPRESSION CONNECTORS OR EXOTHERMIC TYPE WELDED CONNECTORS.
   B. SIZE WILL BE A MINIMUM OF 6mm THICK, 50mm WIDE AND 200mm LONG.
   C. THE BUSBAR WILL BE INSULATED FROM ITS SUPPORT. MINIMUM 50mm SEPARATION IS RECOMMENDED.

TELECOMMUNICATIONS GROUNDING SYSTEM TO BE INSTALLED BY THE ELECTRICAL CONTRACTOR

2 TECHNOLOGY GROUNDING

NOT TO SCALE



SECTION A-A

KEYED NOTES:

1. NON-RATED FLOOR OR WALL.
2. THROUGH PENETRANTS - ONE PIPE, OR CONDUIT.
3. FILL, VOID, OR CAVITY MATERIAL: SILICON CAULK.

1 NON-RATED WALL PIPE PENETRATION

NOT TO SCALE

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PDC #21007

NORTH CAROLINA PROFESSIONAL SEAL 024651 ENGINEER JAMES T. BUTKOVICH

BID/PERMIT SET
03/02/2023

ONSLOW COUNTY SCHOOLS
TREXLER MIDDLE SCHOOL RENOVATION & IMPROVEMENTS
112 E FOY STREET RICHLANDS, NC 28574

ID	DATE	DESCRIPTION

DRAWN BY: GS
CHECKED BY: JTB

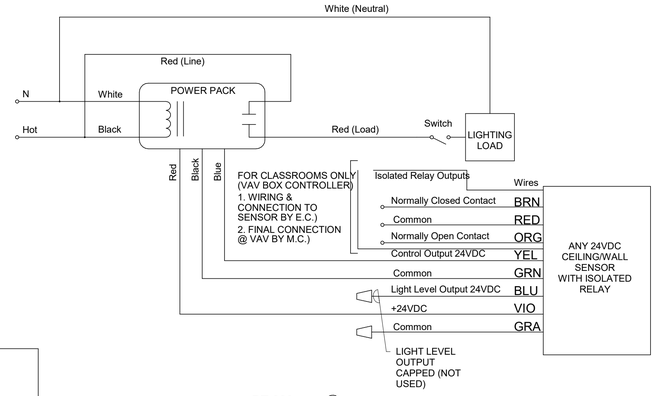
DETAILS

2022017 20 FEB 2023

E6-02

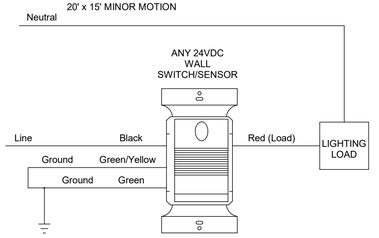
GENERAL NOTES:

1. ALL SENSOR LOCATIONS ARE APPROXIMATE. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS PRIOR TO INSTALLATION.
2. ULTRASONIC CEILING MOUNTED SENSORS SHALL NOT BE LOCATED WITHIN 6'-0" OF SUPPLY/RETURN GRILLES.
3. CONTRACTOR IS RESPONSIBLE FOR PROPER SENSITIVITY AND TIME DELAY SETTINGS, VERIFICATION OF MANUFACTURER'S RECOMMENDED PLACEMENT AND FIELD VERIFICATION OF CIRCUITS WITH RESPECT TO POWER PACK PLACEMENT.
4. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF REQUIRED NUMBER OF POWER PACKS.
5. ONE POWER PACK IS REQUIRED FOR EACH CIRCUIT THAT IS TO BE CONTROLLED.
6. MAXIMUM NUMBER OF SENSORS THAT CAN BE WIRED IN PARALLEL TO A SINGLE POWER PACK IS DEPENDENT ON SENSOR MODEL. (SEE INDIVIDUAL DATA SHEETS FOR mA CONSUMPTION.)
7. SENSOR LAYOUT DRAWINGS AND PRODUCT DATA SHEETS ARE REQUIRED AS PART OF SHOP DRAWING SUBMITTALS.
8. ALL OCCUPANCY SENSOR WIRING SHALL BE WIRED IN ACCORDANCE WITH MANUFACTURERS INSTALLATION INSTRUCTIONS.
9. ALL CLASSROOM OCCUPANCY SENSORS SHALL BE PROVIDED WITH ISOLATION RELAY, THE ISOLATION RELAY SHALL BE CONNECTED TO THE VAV CONTROLLER FOR THAT CLASSROOM, COORDINATE CLOSELY WITH MECHANICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL THE WIRING BETWEEN THE SENSOR AND THE VAV CONTROLLER, TERMINATING IN THE SENSOR. THE MECHANICAL CONTRACTOR SHALL MAKE FINAL TERMINATIONS AT THE VAV CONTROLLER.
10. REFER TO SPECIFICATION 260923.
11. ALL EXPPOSED WIRING SHALL BE PLENUM RATED.



PW-100 (S$_{SW}$)

PASSIVE INFRARED WALL SWITCH SENSOR
35' x 30' MAJOR COVERAGE
20' x 15' MINOR MOTION



OCCUPANCY SENSOR SINGLE LEVEL WIRING DIAGRAM
(EQUALS: WATTSTOPPER, HUBBELL, SENSOR SWITCH)

DT-300 (OS)

DUAL TECHNOLOGY OCCUPANCY SENSOR, 2000 SQ. FT. COVERAGE,
WITH ISOLATED RELAY, WIDE ANGLE LENS

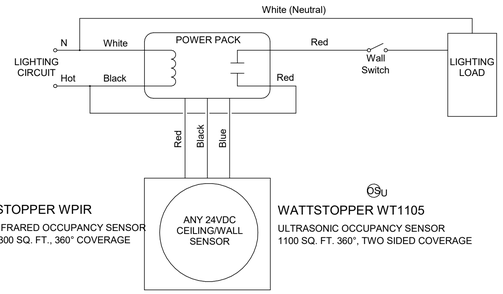
WT1100 (OS)U

ULTRASONIC OCCUPANCY SENSOR
1100 SQ. FT. 360°, TWO SIDED COVERAGE,
WITH ISOLATED REALY, WIDE ANGLE LENS

CX-100

PASSIVE INFRARED OCCUPANCY SENSOR, 2000 SQ. FT.
COVERAGE, WITH ISOLATED RELAY, WIDE ANGLE LENS

OCCUPANCY SENSOR WITH ISOLATED RELAY WIRING DIAGRAM
(EQUALS: WATTSTOPPER, HUBBELL, PASS & SEYMOUR, LEVITON)



OCCUPANCY SENSORS WITHOUT ISOLATED RELAY WIRING DIAGRAM
(EQUALS: HUBBELL, SENSOR SWITCH)

TWO OCCUPANCY SENSORS ON ONE CIRCUIT WIRING DIAGRAM
(EQUALS: WATTSTOPPER, HUBBELL, PASS & SEYMOUR)

DT-300 (OS)

DUAL TECHNOLOGY OCCUPANCY SENSOR, 2000 SQ. FT. COVERAGE,
WITH ISOLATED RELAY, WIDE ANGLE LENS

1 DETAIL - OCCUPANCY SENSOR WIRING DIAGRAM
NOT TO SCALE

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NORTH CAROLINA PROFESSIONAL SEAL 024651 ENGINEER JAMES T. BUTKOVICH

BID/PERMIT SET
03/02/2023

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ONSLOW COUNTY SCHOOLS
TREXLER MIDDLE SCHOOL RENOVATION & SITE IMPROVEMENTS
112 E FOY STREET RICHLANDS, NC 28574

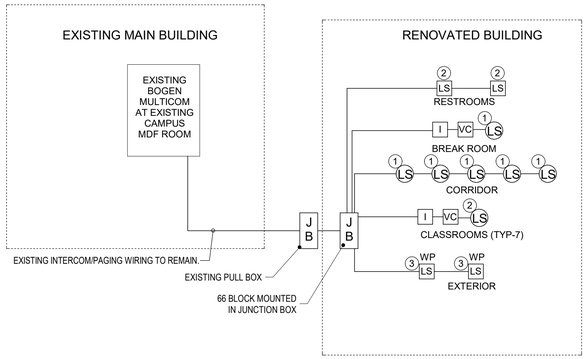
ID	DATE	DESCRIPTION

DRAWN BY: GS
CHECKED BY: JTB

DETAILS

2022017 20 FEB 2023

E6-03



GENERAL NOTES:

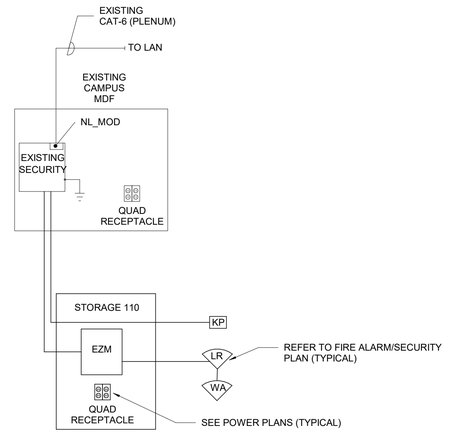
A. REFER TO SPECIFICATION 275113.
B. ALL SPEAKER BACK BOXES AND SUPPORTS SHALL BE PROVIDED AND INSTALLED BY THE PA SYSTEM CONTRACTOR.
C. ALL WIRING SHALL BE PLENUM RATED AND ALL INCLUSIVE FOR A COMPLETE SYSTEM.
D. SEE PLANS FOR QUANTITIES AND LOCATIONS.
E. ALL DEVICES/COMPONENTS THAT ARE LOCATED IN THE PLENUM ENVIRONMENT SHALL BE PLENUM RATED.
F. PAGING/INTERCOM SYSTEM SHALL MUTE UPON ACTIVATION OF FIRE ALARM SYSTEM.
G. ANY WIRING ROUTED EXTERIOR OF BUILDING SHALL HAVE LIGHTNING PROTECTION AT BOTH BUILDING ENTRANCES.

KEYNOTES:

1. CEILING MOUNTED SPEAKERS.
2. WALL MOUNT SURFACE BOX SPEAKERS.
3. EXTERIOR WEATHER PROOF LOUD SPEAKERS.

5 INTERCOM RISER

NOT TO SCALE



PASSIVE INFRA-RED DETECTORS
MED RANGE - ARITECH AP-663
LONG RANGE - ARITECH AP-633
SHORT RANGE- BRAVO 6 DUAL
OR APPROVED EQUALS

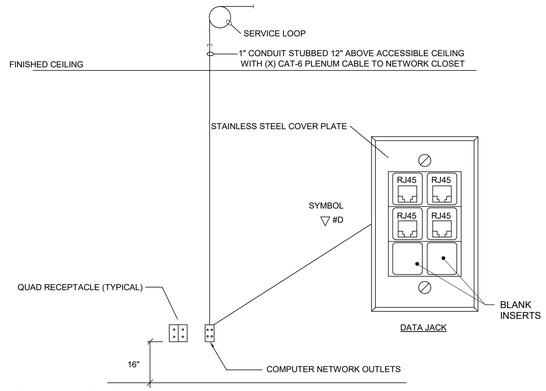
NOTE: SEE PLANS FOR LOCATIONS AND QUANTITIES.

GENERAL NOTES:

A. COMPLY WITH SPECIFICATION 281600.
B. ALL WORK SHALL BE PERFORMED BY A LICENSED SECURITY SYSTEM CONTRACTOR.
C. WHEN COMPLETE, SYSTEM SHALL BE 100% OPERATIONAL AND APPROVED BY JOHNSTON COUNTY PUBLIC SCHOOLS.
D. ALL WIRING AND DEVICE HEIGHT/MOUNTING SHALL BE PER MANUFACTURER'S SPECIFICATIONS.
E. PROVIDE A MINIMUM OF FOUR HOURS OF OWNER TRAINING FOR OPERATION AND MAINTENANCE PROCEDURES.
F. FINAL ZONING OF SYSTEM SHALL BE COORDINATED WITH JCSS SECURITY DEPARTMENT.
G. WALL MOUNT DETECTORS AT CEILING HEIGHT OR 12'-0" MAX.
H. JCSS PREFERRED MANUFACTURER IS NAPCO. REFER TO ARCHITECTS' ALTERNATES SECTION 01 23 00.
I. ALL RECEPTACLE POWER FOR SECURITY COMPONENTS SHALL BE COORDINATED CLOSELY BETWEEN ELECTRICAL AND SECURITY CONTRACTORS PRIOR TO ROUGH-IN.
J. GROUND IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
K. ALL WIRING SHALL BE PLENUM RATED.

4 DETAIL - INTRUSION DETECTION RISER

NOT TO SCALE

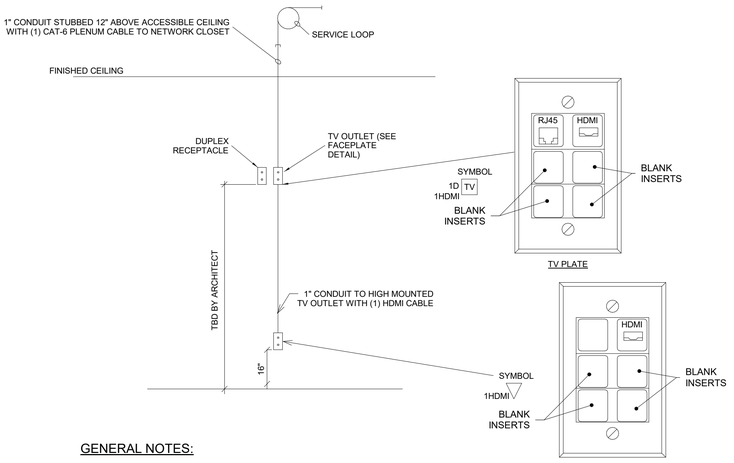


GENERAL NOTES:

A. CONTRACTOR SHALL PROVIDE ALL CONDUIT, BOXES AND RECEPTACLES.
B. CONTRACTOR SHALL PROVIDE ALL CAT-6 WIRING, FACEPLATES AND RJ45 CONNECTORS.
C. CONTRACTOR SHALL UTILIZE CONDUIT AND TRAY SYSTEM FOR EASE OF ROUTING WHERE APPLICABLE. WHERE CONDUIT OR TRAY IS NOT AVAILABLE, CONTRACTOR SHALL PROVIDE J-HOOK SUPPORTS ON 36" CENTERS.
D. CONTRACTOR SHALL VERIFY LOCATIONS OF CASEWORK, CHALK BOARDS AND TACK BOARDS PRIOR TO INSTALLATION.
E. ALL COMPUTER NETWORK OUTLETS SHALL HAVE THE QUANTITY CAT-6 DROPS AS INDICATED WITH THE NUMBER NEXT TO THE DROP. (I.E. 4D▽) WHERE NO QUANTITY IS SHOWN, PROVIDE AN EMPTY CONDUIT WITH BLANK FACEPLATE AND PULL STRING.

3 TYPICAL NETWORK OUTLET

NOT TO SCALE

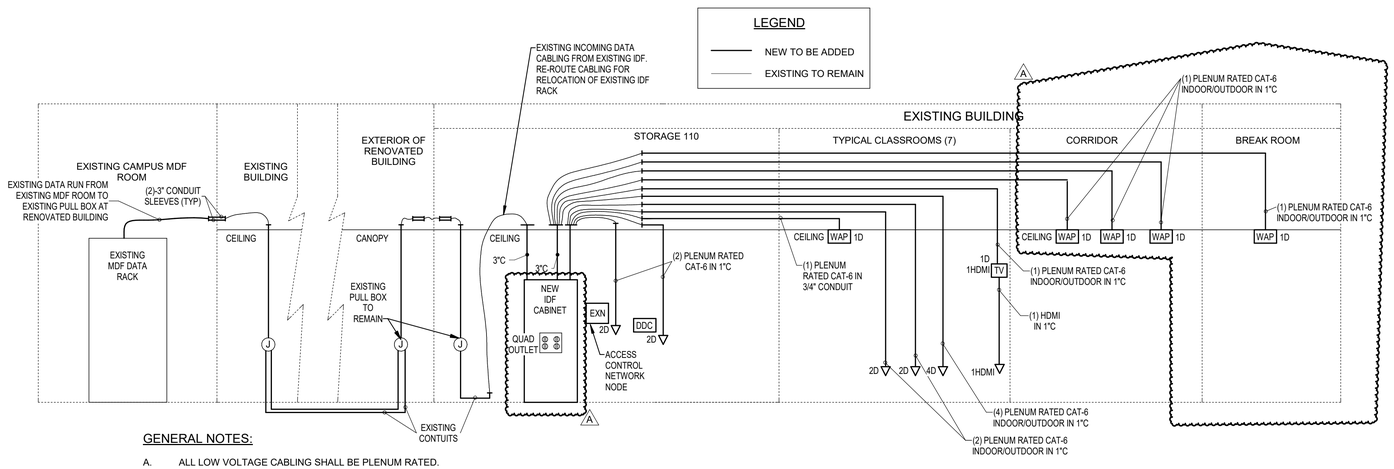


GENERAL NOTES:

A. CONTRACTOR SHALL PROVIDE AND INSTALL ALL CONDUIT, BOXES AND RECEPTACLES.
B. CONTRACTOR SHALL PROVIDE AND INSTALL ALL CAT-6, FACEPLATES AND ASSOCIATED RJ45 CONNECTORS.
C. CONTRACTOR SHALL UTILIZE CONDUIT AND TRAY SYSTEM FOR EASE OF ROUTING, WHERE APPLICABLE. WHERE CONDUIT OR TRAY IS NOT AVAILABLE, CONTRACTOR SHALL PROVIDE J-HOOK SUPPORTS ON 36" CENTERS.
D. CONTRACTOR SHALL VERIFY LOCATIONS OF TVs WITH ARCHITECTURAL PLANS PRIOR TO LOCATING OUTLETS.

2 TV OUTLET LOCATION

NOT TO SCALE



GENERAL NOTES:

A. ALL LOW VOLTAGE CABLING SHALL BE PLENUM RATED.
B. PROVIDE BLUE PLENUM RATED CAT-6 CABLES IN QUANTITY INDICATED AND ASSOCIATED RJ45 CONNECTORS AND FACEPLATES, ALL TERMINATED AT BOTH ENDS. BASE BID ALL DATA OUTLETS ARE TO BE SURFACE MOUNTED BOXES. IN ALTERNATE BID 2-2, ALL DATA OUTLET LOCATIONS ARE TO BE RUN IN SURFACE MOUNTED WIREMOLD WITH RECEPTACLES.
C. ALL CABLING SHALL BE TESTED PER BICSI FOR REQUIREMENTS AND TURNED OVER TO ENGINEER FOR FINAL APPROVAL.
D. COORDINATE WITH OWNER FOR LABELING AND TERMINATION STANDARDS.
E. ALL WORK SHALL BE NEAT. WHERE NO CONDUIT IS UTILIZED, PROVIDE J-HOOK SUPPORTS 36" ON CENTER. IF CABLING IS IN EXPOSED AREAS, CONDUIT SHALL BE UTILIZED. NO J-HOOKS IN OPEN AREAS.
F. PROVIDE FIBER ENCLOSURES AND SC CONNECTIONS AT BOTH ENDS.
G. CONTRACTOR SHALL PERFORM SITE VISIT PRIOR TO BID TO REVIEW EXISTING CONDITIONS.
H. COORDINATE ALL WORK PRIOR TO EQUIPMENT PLACEMENT WITH ENGINEER/ARCHITECT/OWNER.
I. PROVIDE FIRE RATED BACK BOARDS FOR MOUNTING EQUIPMENT IN IDF ROOMS.

1 TELECOMMUNICATIONS RISER

NOT TO SCALE

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PDC #21007

BID/PERMIT SET
03/02/2023

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ONSLOW COUNTY SCHOOLS
TREXLER MIDDLE SCHOOL RENOVATION & SITE IMPROVEMENTS
112 E FOY STREET RICHLANDS, NC 28574

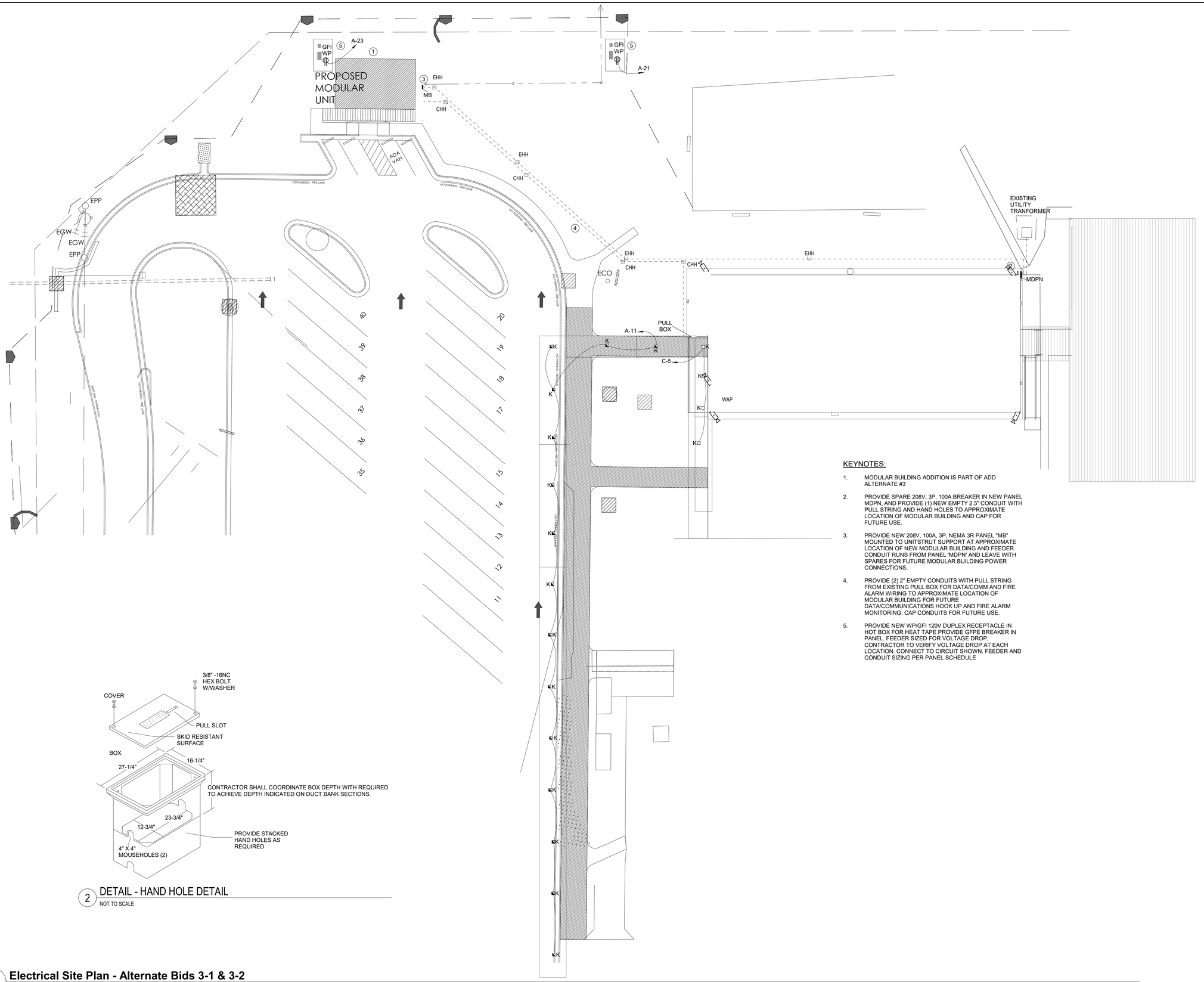
ID	DATE	DESCRIPTION
A	03/02/23	Addendum 01

DRAWN BY: GS
CHECKED BY: JTB

DETAILS

2022017 20 FEB 2023

E6-04



KEYNOTES:

1. MODULAR BUILDING ADDITION IS PART OF ADD ALTERNATE #3
2. PROVIDE SPARE 208V, 3P, 100A BREAKER IN NEW PANEL MDPN, AND PROVIDE (1) NEW EMPTY 2.5" CONDUIT WITH PULL STRING AND HAND HOLES TO APPROXIMATE LOCATION OF MODULAR BUILDING AND CAP FOR FUTURE USE.
3. PROVIDE NEW 208V, 100A, 3P, NEMA 3R PANEL "MB" MOUNTED TO UNITSTRUT SUPPORT AT APPROXIMATE LOCATION OF NEW MODULAR BUILDING AND FEEDER CONDUIT RUNS FROM PANEL 'MDPN' AND LEAVE WITH SPARES FOR FUTURE MODULAR BUILDING POWER CONNECTIONS.
4. PROVIDE (2) 2" EMPTY CONDUITS WITH PULL STRING FROM EXISTING PULL BOX FOR DATA/COMM AND FIRE ALARM WIRING TO APPROXIMATE LOCATION OF MODULAR BUILDING FOR FUTURE DATA/COMMUNICATIONS HOOK UP AND FIRE ALARM MONITORING. CAP CONDUITS FOR FUTURE USE.
5. PROVIDE NEW WP/GFI 120V DUPLEX RECEPTACLE IN HOT BOX FOR HEAT TAPE PROVIDE GFPE BREAKER IN PANEL. FEEDER SIZED FOR VOLTAGE DROP. CONTRACTOR TO VERIFY VOLTAGE DROP AT EACH LOCATION. CONNECT TO CIRCUIT SHOWN. FEEDER AND CONDUIT SIZING PER PANEL SCHEDULE

2 DETAIL - HAND HOLE DETAIL
NOT TO SCALE

1 **Electrical Site Plan - Alternate Bids 3-1 & 3-2**
1" = 20'-0"

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NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER SEAL 024651 ENGINEER JAMES T. BUTKOVICH

BID/PERMIT SET
03/02/2023

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CHECKED BY: JTB

ELECTRICAL SITE PLAN - ALTERNATE BIDS 3-1 & 3-2

2022017 20 FEB 2023

E6-05

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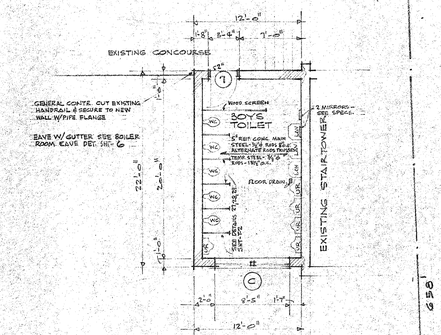
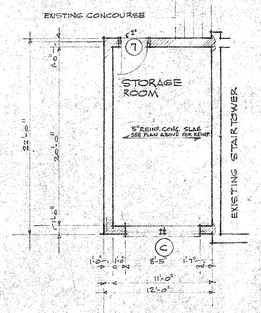
TREXLER MIDDLE SCHOOL - EXHIBIT DRAWINGS (FOR REFERENCE ONLY)



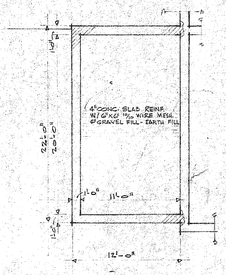
SECOND FLOOR PLAN

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



FIRST FLOOR PLAN

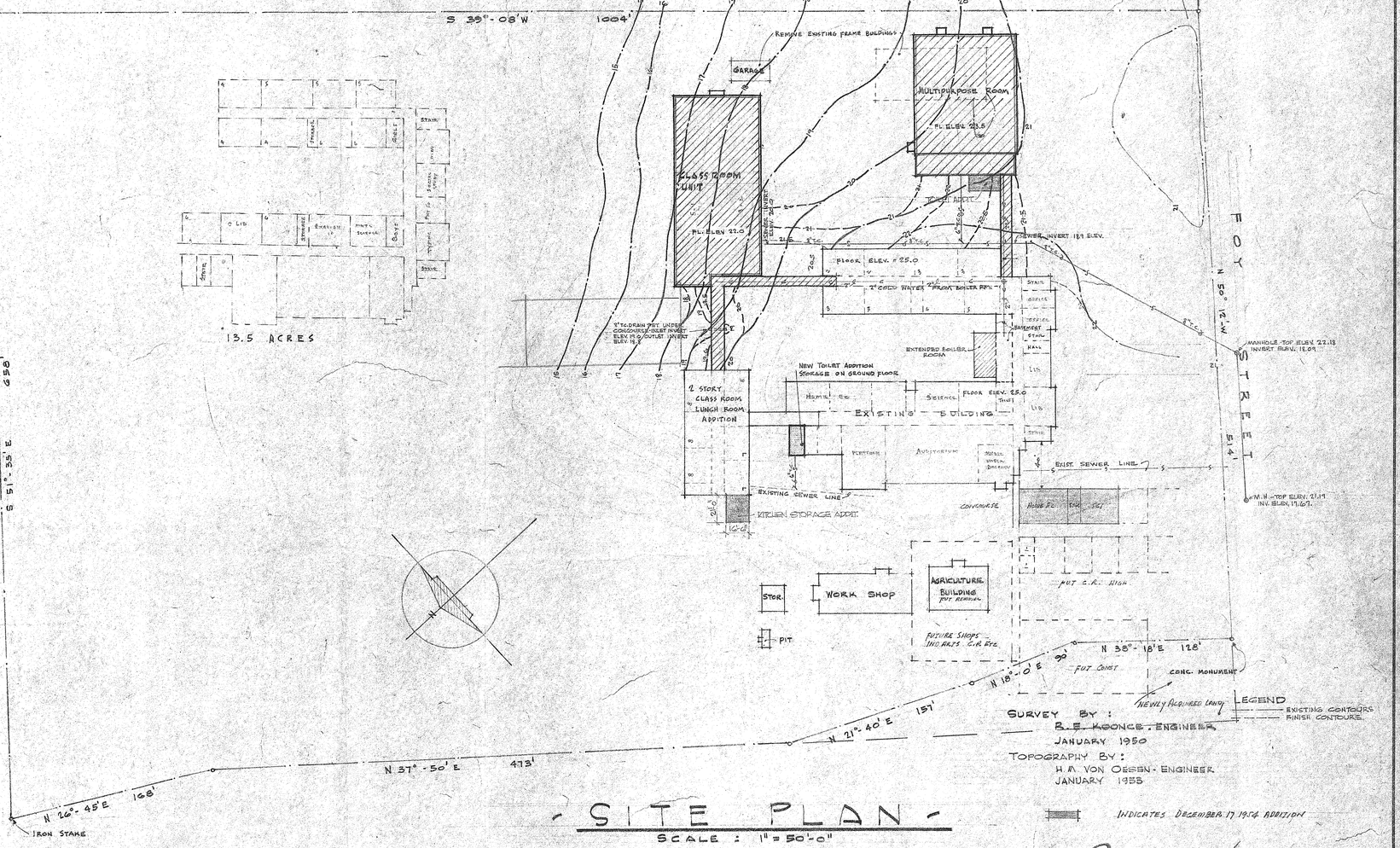
SCALE: 1/8" = 1'-0"



FOUNDATION PLAN

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

13.5 ACRES



- SITE PLAN -

SCALE : 1" = 50'-0"

SURVEY BY :
B. E. KOONCE, ENGINEER
JANUARY 1950

TOPOGRAPHY BY :
H. A. VON OESEN - ENGINEER
JANUARY 1955

INDICATES DECEMBER 17 1954 ADDITION

RICHLAND'S
3 PROJECTS

REVISION NO.	DESCRIPTION	DATE	BY
3	HOME EC. SC.; KIT. STOR.; GYM TOILETS ADDED	17 DEC 54	L.N.B. JR.
2	FUTURE PLANS - PLAN OLD BLDG. SHOWN	1 OCT 54	L.B. JR.
1	NOTE: RE. EAVE ADDED	22 JAN 53	H.P.M.

MULTIPURPOSE ROOM & CLASS ROOM ADDITION

- RICHLANDS HIGH SCHOOL -

RICHLANDS · NORTH CAROLINA

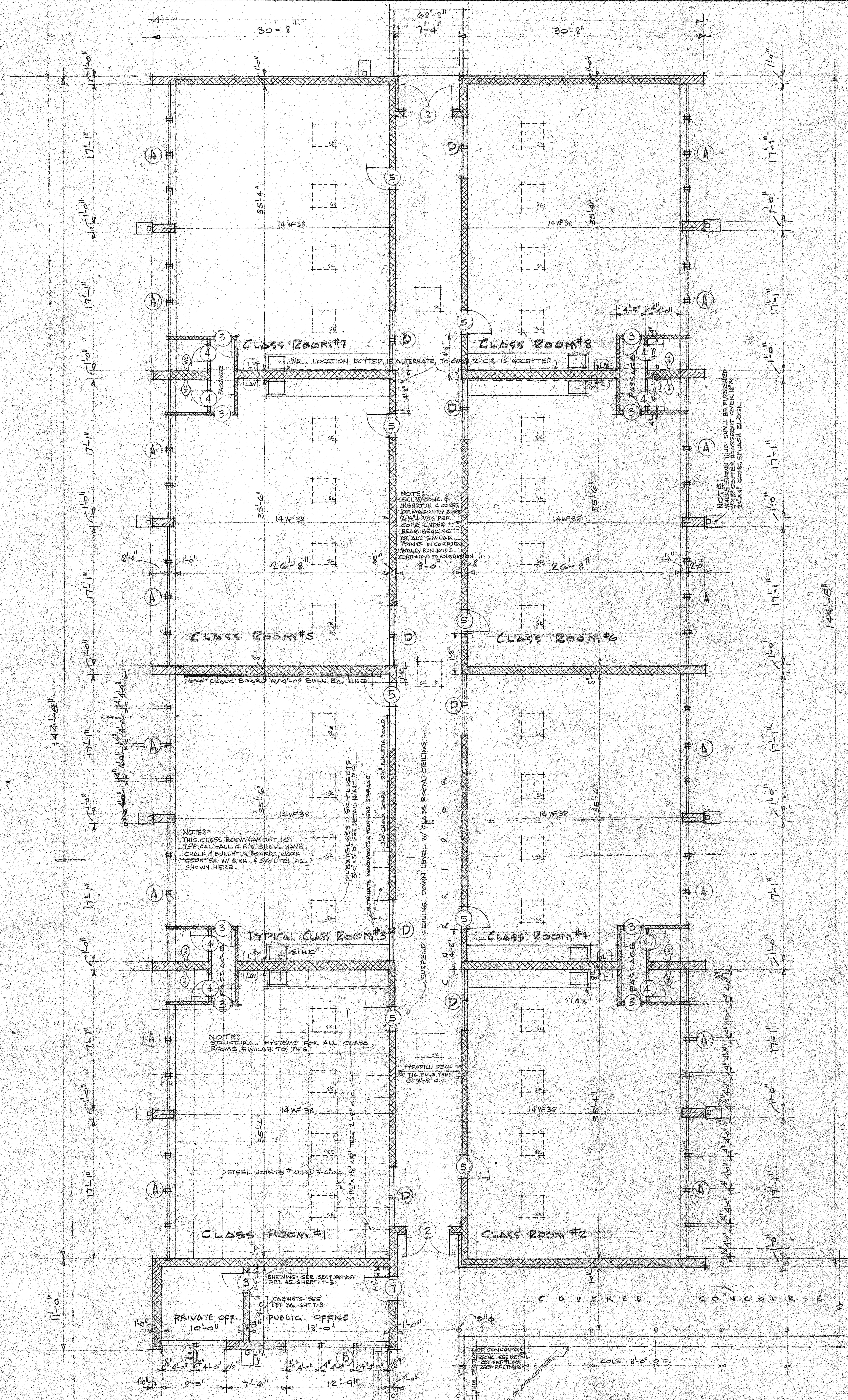
ONSLOW COUNTY · BOARD OF EDUCATION

J. PARSONS BROWN · CHAIRMAN · I. B. HUDSON · SUPERINTENDENT

DESIGNED BY CHB
DRAWN BY CHB
CHECKED BY
30 DEC 1952

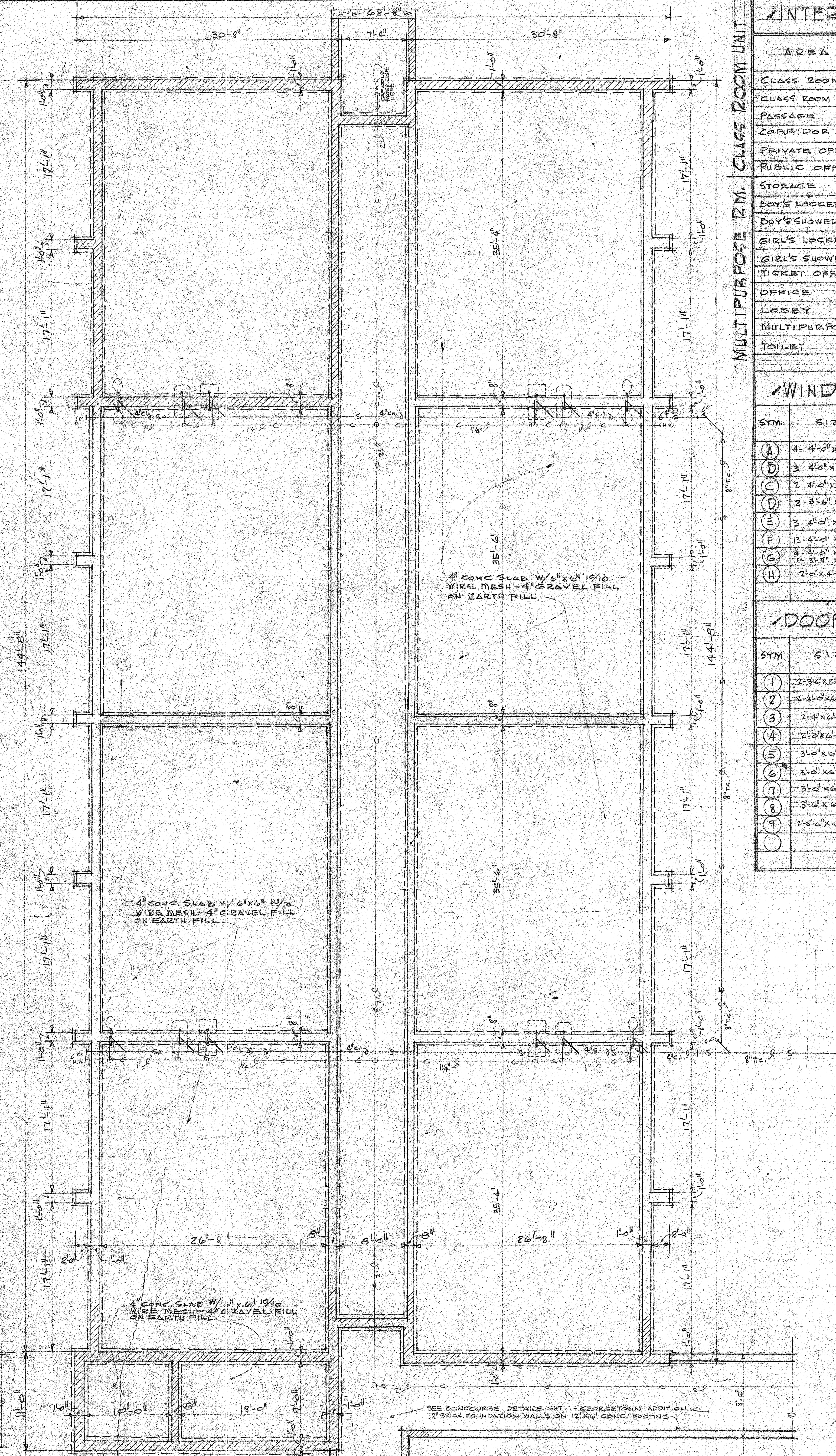
LESLIE N BONEY ARCHITECT
WILMINGTON NORTH CAROLINA

SHEET



- FLOOR PLAN - PRIMARY CLASS ROOM UNIT -

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



·FOUNDATION PLAN·

SCALE 1/8" = 1'-0"

·INTERIOR FINISH SCHEDULE·

	AREA	FLOOR	BASE	WALL	CEILING	REMARKS
CLASS ROOM UNIT	CLASS ROOMS	ASPHALT TILE	WOOD	MASONRY	ACOUSTICAL TILE	
	CLASS ROOM TOILETS	QUARRY TILE	QUARRY TILE	DO	DO	
	PASSAGE	ASPHALT TILE	WOOD	DO	DO	
	CORRIDOR	DO	DO	DO	DO	
	PRIVATE OFFICE	DO	DO	DO	DO	
	PUBLIC OFFICE	DO	DO	DO	DO	
MULTIPURPOSE RM.	STORAGE	CONCRETE	DO	DO	DO	
	BOY'S LOCKER RM.	QUARRY TILE	QUARRY TILE	DO	PLASTER	
	BOY'S SHOWER RM.	CERAMIC TILE	CERAMIC TILE	CERAMIC TILE	DO	
	GIRL'S LOCKER RM.	QUARRY TILE	QUARRY TILE	MAS. BLOCK	DO	
	GIRL'S SHOWER RM.	CERAMIC TILE	CERAMIC TILE	CERAMIC TILE	DO	
	TICKET OFFICE	ASPHALT TILE	WOOD	MAS. BLOCK	ACOUSTICAL TILE	
	OFFICE	DO	DO	DO	DO	
	LOBBY	DO	DO	DO	DO	
	MULTIPURPOSE RM.	WOOD	DO	DO	EXPOSED	
	TOILET	QUARRY TILE	QUARRY TILE	EXPOSED BRICK	PLASTER	

·WINDOW SCHEDULE·

SYM.	SIZE	TYPE	NUMBER	LINTEL	REMARKS
(A)	4- 4'-0" x 6'-8"	ARCH PROJ.	226	SEE WALL SECTION SHT-T-1 DETS. 8 THRU 13	OBSCURE GLAZING IN TOILETS
(B)	3 4'-0" x 6'-8"	DO	DO	8WF17+10"x5/16" PL+1½"x1½"x¼" L	
(C)	2 4'-0" x 6'-8"	DO	DO	DO	
(D)	2 3'-6" x 3'-4"	WOOD	NONE		
(E)	3- 4'-0" x 8'-0"	ARCH PROJ	228R	SEE DET. 18 SHT- T-2	
(F)	13- 4'-0" x 4'-0"	DO	223	SEE DET. 77 SHT - T-6	
(G)	4- 4'-0" x 6'-8" 1- 3'-4" x 6'-8"	DO	226 216	DO	
(H)	2'-0" x 4'-0"	D.H. WOOD	NONE		

·DOOR SCHEDULE·

SYM	SIZE	TYPE	LINTEL	REMARKS
(1)	2-3'-6" x 6'-10" x 1¾"	METAL	SEE DETAIL ON SHEET 4	
(2)	2-3'-0" x 6'-10" x 1¾"	DO	NONE. TRANSOM RUNS TO CEILING	LINTEL CONC. WHEN IN CONJUNCTION W/(8) DOOR
(3)	2-4" x 6'-10" x 1¾"	WOOD	MASONRY BLOCK - SEE LINTEL SCHEDULE GEORGETOWN SHT. 8	
(4)	2'-0" x 6'-10" x 1¾"	DO	DO	
(5)	3'-0" x 6'-10" x 1¾"	DO	DO	
(6)	3'-0" x 6'-10" x 1¾"	DO	DO	
(7)	3'-0" x 6'-10" x 1¾"	METAL	MASONRY BLOCK + 2½" x 2½" x ¼" L	
(8)	3'-6" x 6'-10" x 1¾"	DO	CONC. HOOD	
(9)	2-3'-6" x 6'-10" x 1¾"	WOOD	8WF17 + 10" x 5/16" PL	
( )				

REVISION No.	DESCRIPTION	DATE	BY

MULTIPURPOSE ROOM & CLASS ROOM ADDITIONS

- RICHLANDS HIGH SCHOOL -

RICHLANDS - NORTH CAROLINA

ONSLOW COUNTY - BOARD OF EDUCATION

J. PARSONS BROWN - CHAIRMAN - I. B. HUDSON . SUPT.

DESIGNED BY CHB

DRAWN BY LMF

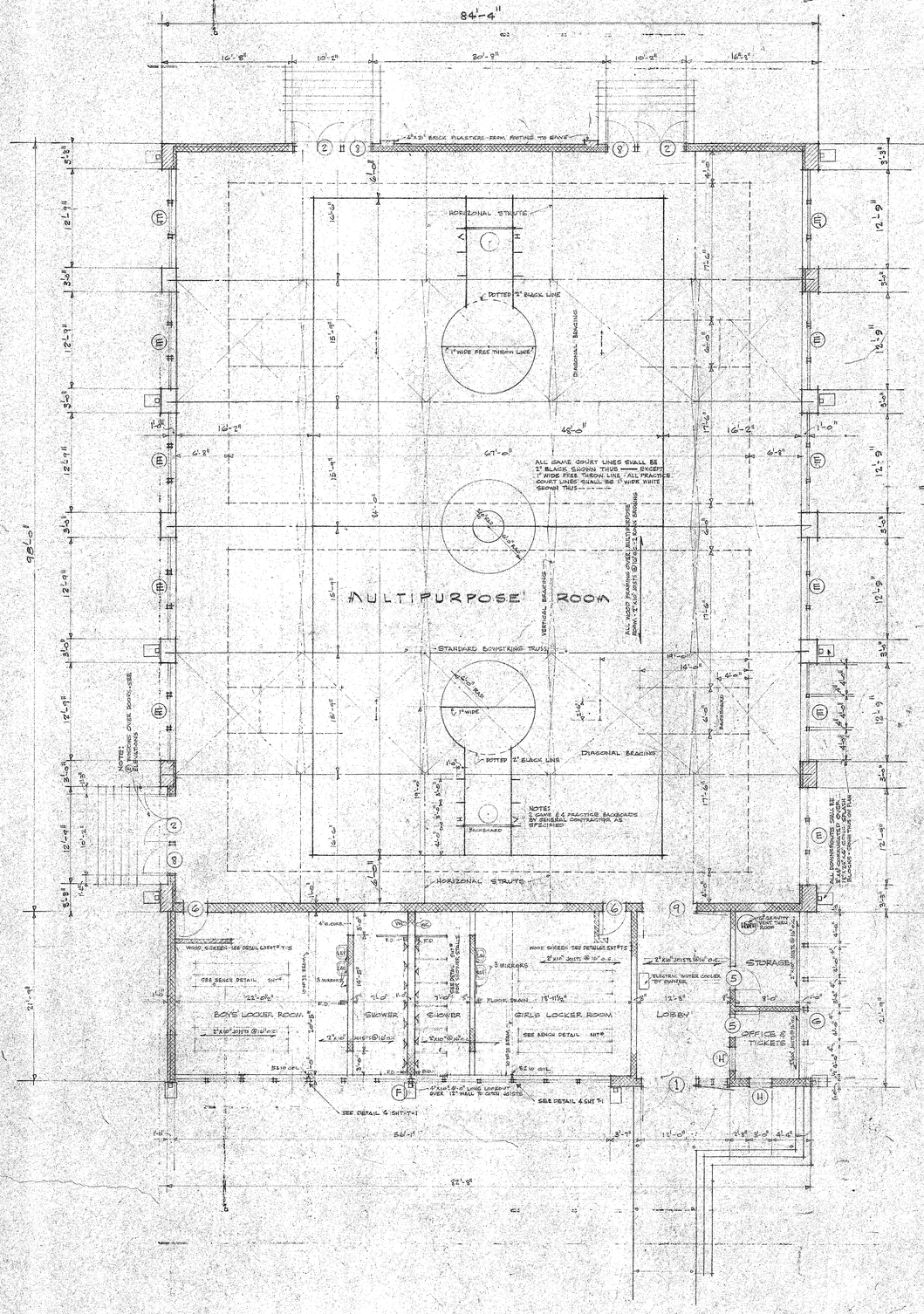
CHECKED BY Charles H. Boney

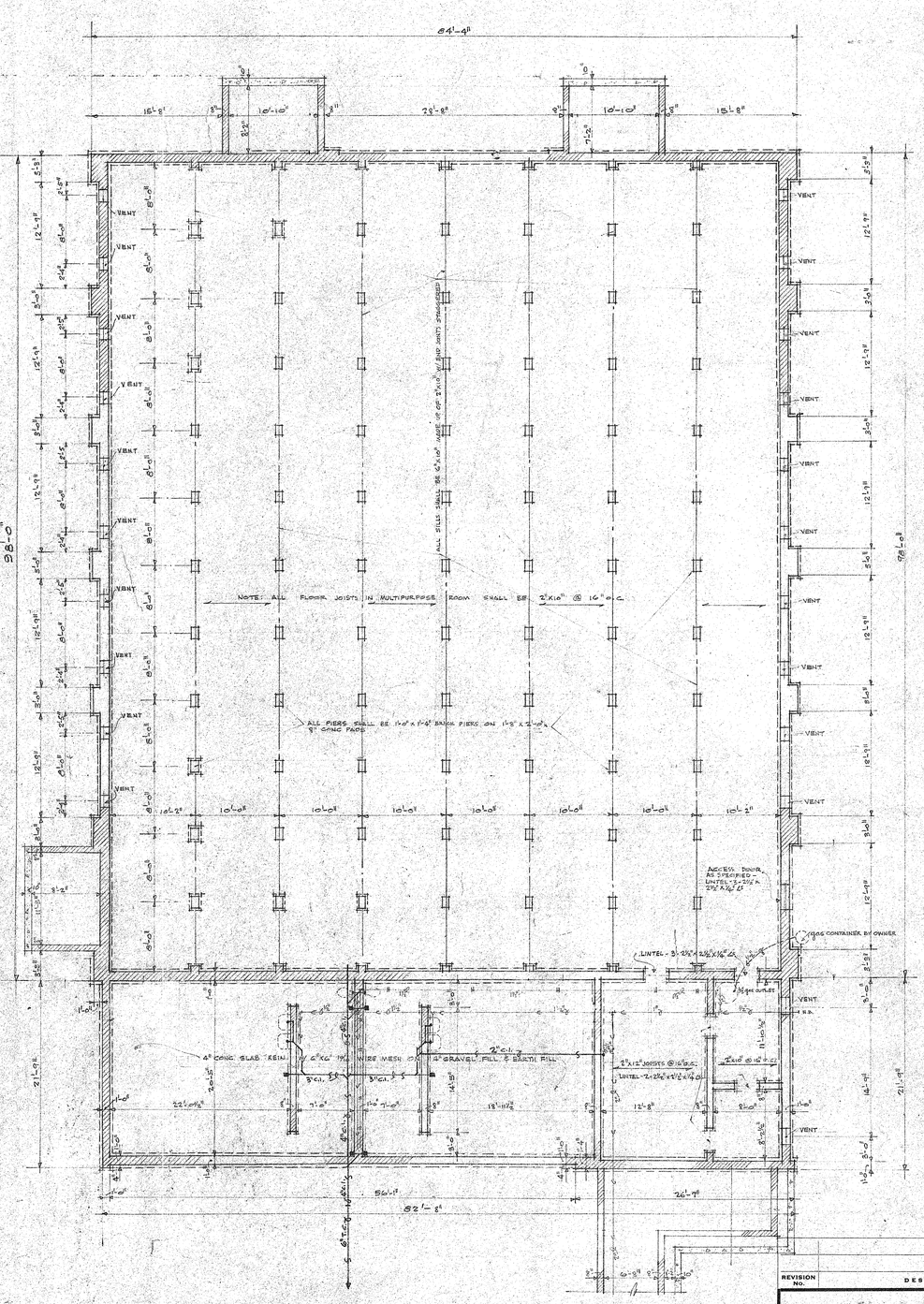
30 DEC 1952

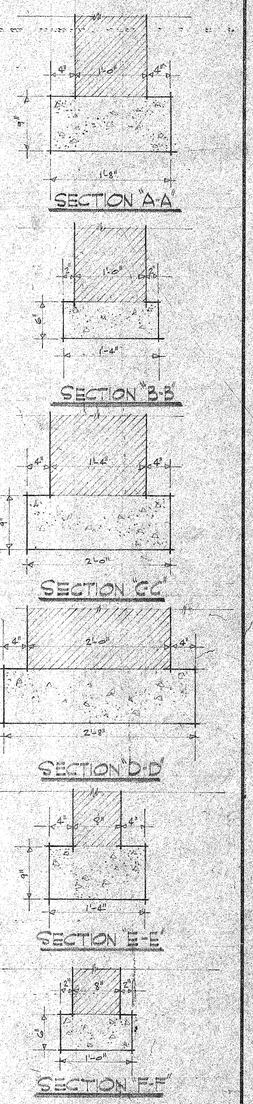
LESLIE N BONEY ARCHITECT

WILMINGTON NORTH CAROLINA

SHEET 2







REVISION NO.	DESCRIPTION	DATE	BY

MULTIPURPOSE ROOM & CLASS ROOM ADDITION

- RICHLANDS HIGH SCHOOL -

RICHLANDS - NORTH CAR.

ONSLOW COUNTY - BOARD OF EDUCATION

J. PARSONS BROWN - CHAIRMAN - I.B. HUDSON - SUPERINTENDENT

DESIGNED BY CHB

DRAWN BY HPM

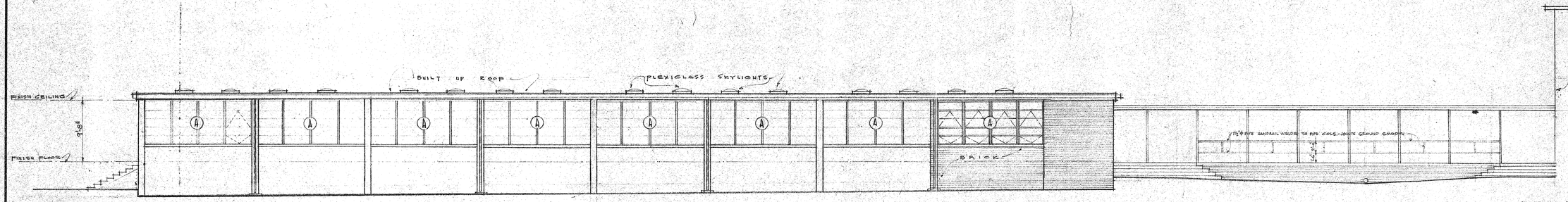
CHECKED BY Harold A. Jones

30 DEC 1952

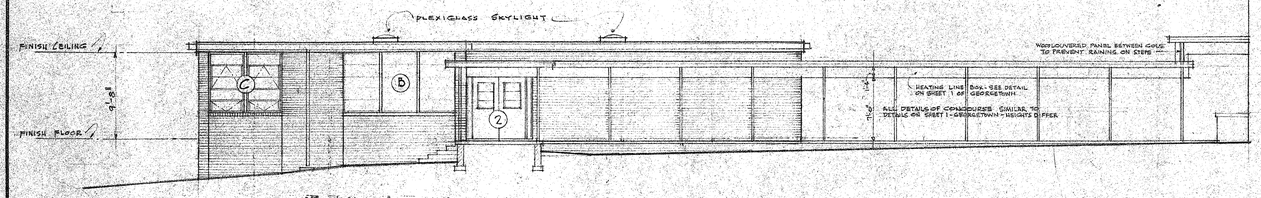
LESLIE N BONEY ARCHITECT

WILMINGTON NORTH CAROLINA

SHEET 3

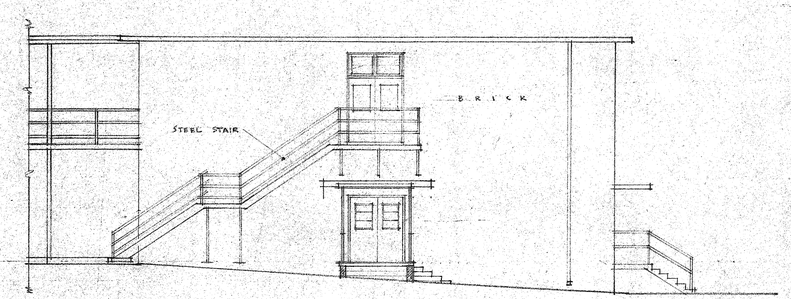


- NORTH - EAST ELEVATION -

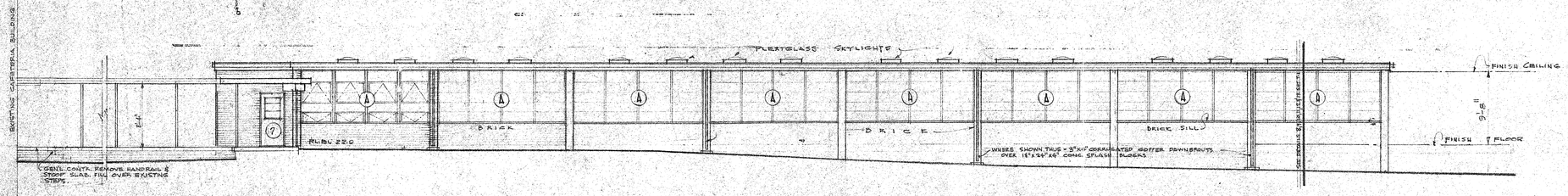


- NORTH - WEST ELEVATION -

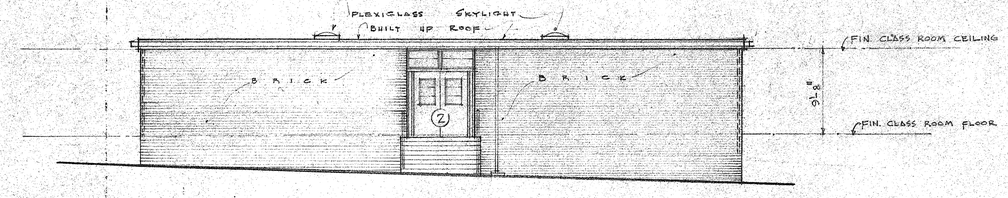
SCALE : 1/8" = 1'-0"



EXISTING LUNCH ROOM BUILDING ELEV.



- SOUTH - WEST ELEVATION -



- SOUTH - EAST ELEVATION -

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

REVISION NO.	DESCRIPTION	DATE	BY

MULTIPURPOSE ROOM & CLASS ROOM ADDITIONS

- RICHLANDS HIGH SCHOOL -

RICHLANDS - NORTH CAROLINA

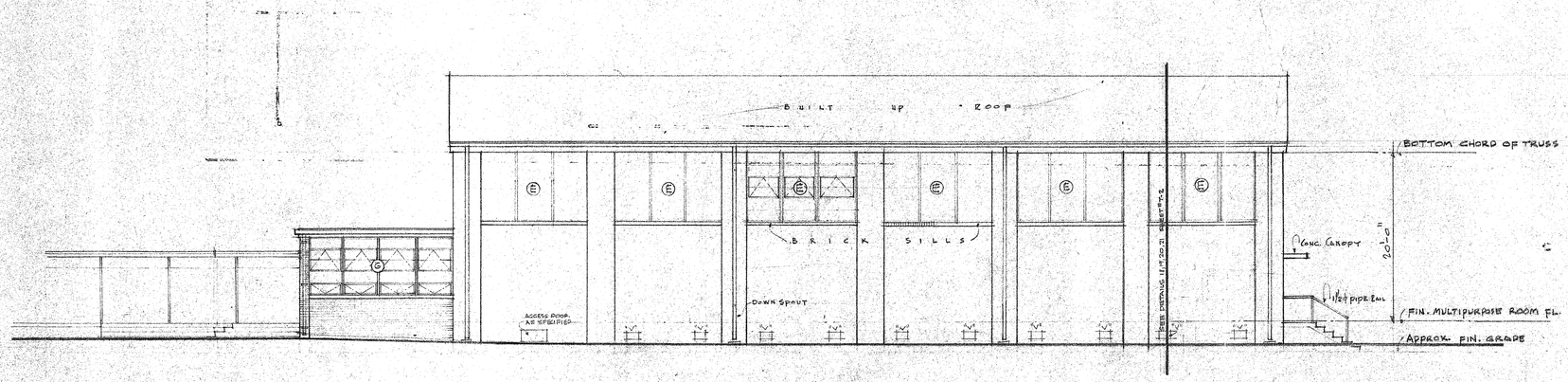
ONSLOW COUNTY - BOARD OF EDUCATION

J. PARSONS BROWN - CHAIRMAN - I. B. HUDSON - SUPT.

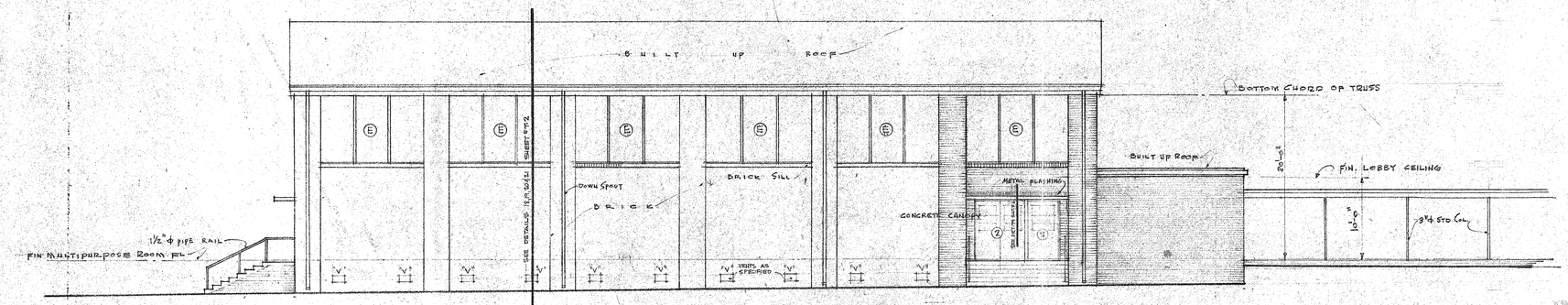
DESIGNED BY CHD
DRAWN BY CHB LNF
CHECKED BY
30 DEC 1952

LESLIE N BONEY ARCHITECT
WILMINGTON NORTH CAROLINA

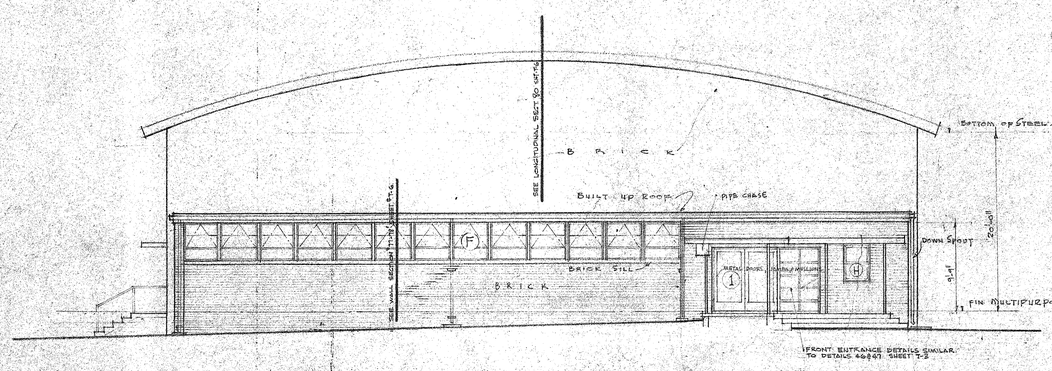
SHEET 4



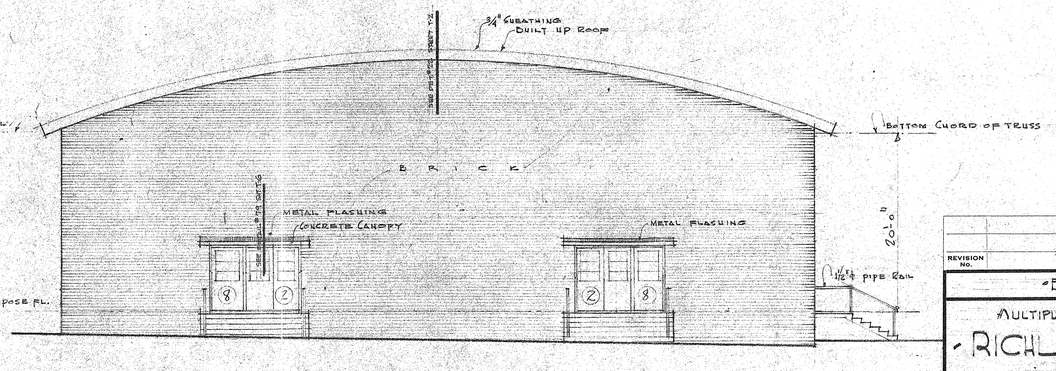
- SOUTH - WEST ELEVATION -



- NORTH - EAST ELEVATION -



- NORTH - WEST ELEVATION -



- SOUTH - EAST ELEVATION -

REVISION No.	DESCRIPTION	DATE	BY

- ELEVATIONS -

MULTIPURPOSE ROOM & CLASS ROOM ADDITION

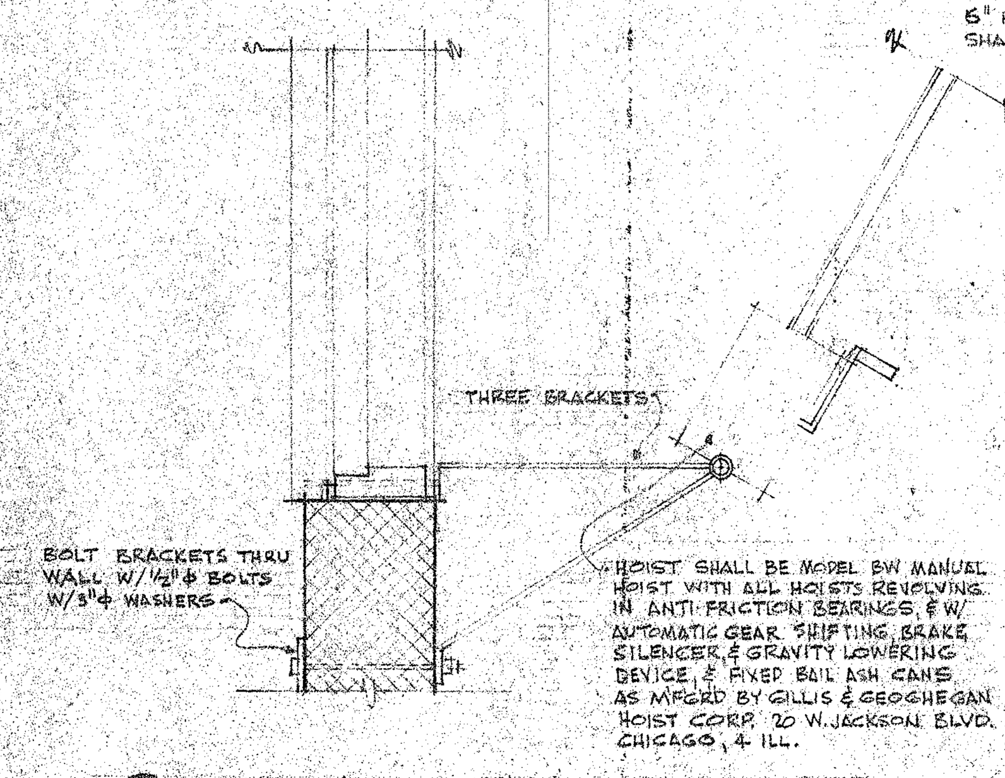
- RICHLANDS HIGH SCHOOL -

RICHLANDS - NORTH CAR.

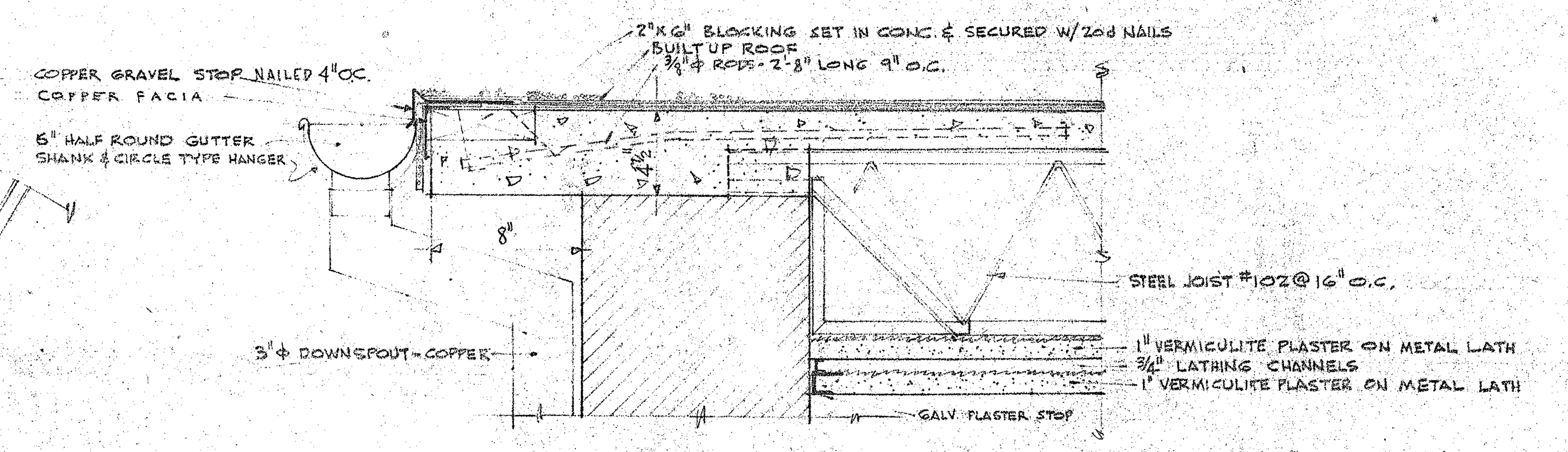
ONSLOW COUNTY - BOARD OF EDUCATION

J. PARSONS BROWN - CHAIRMAN - I.B. HUDSON - SUPERINTENDENT

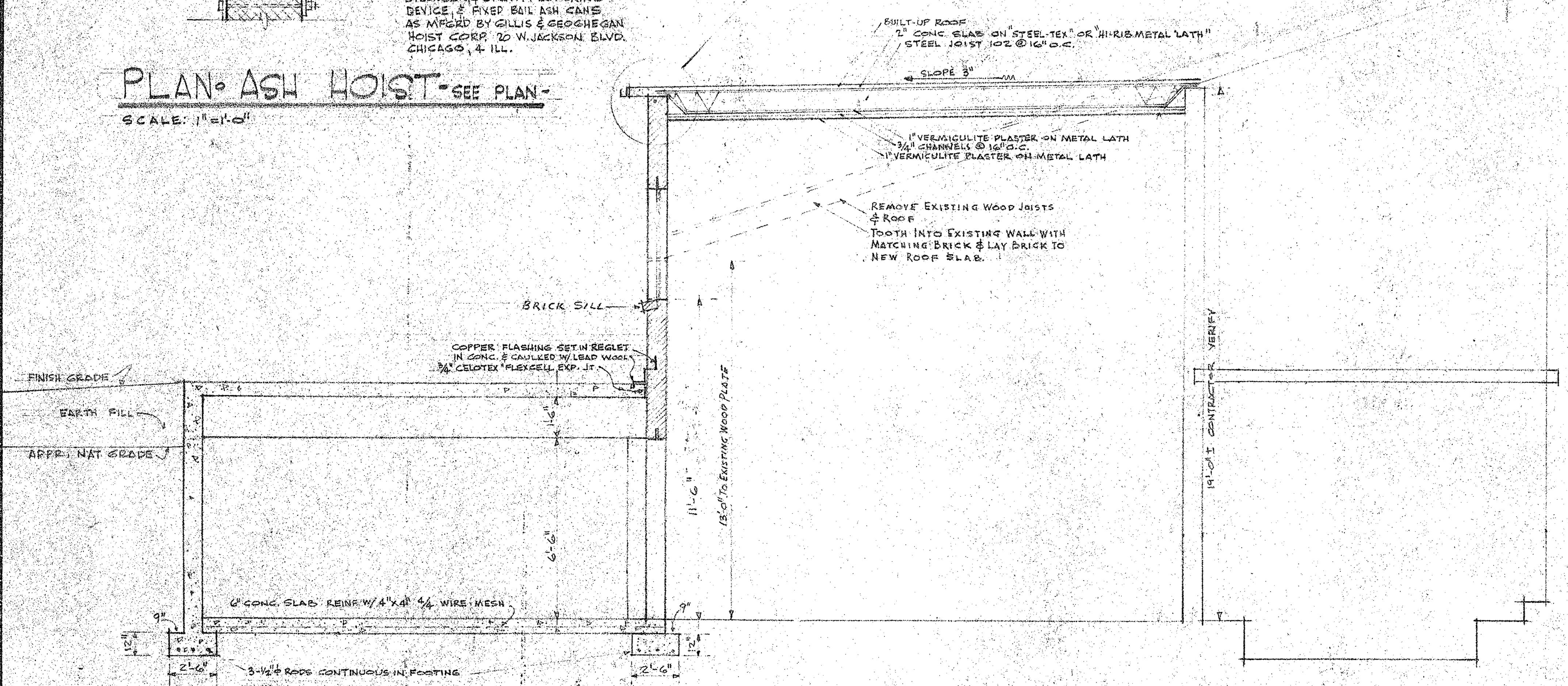
DESIGNED BY CJD	LESLIE N BONEY ARCHITECT
DRAWN BY LMF	WILMINGTON NORTH CAROLINA
CHECKED BY [illegible]	SHEET 5
30 DEC 1962	



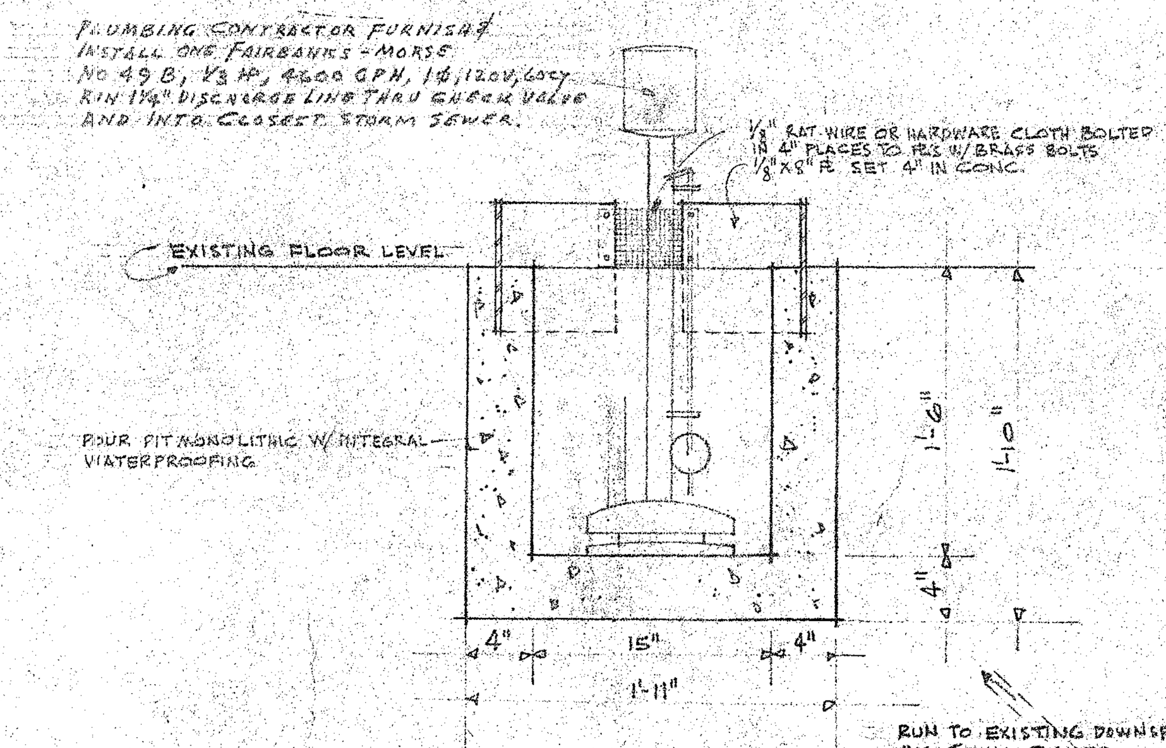
PLAN· ASH HOIST - SEE PLAN -
SCALE: 1"=1'-0"



EAVE SECTION
SCALE: 1/2"=1'-0"

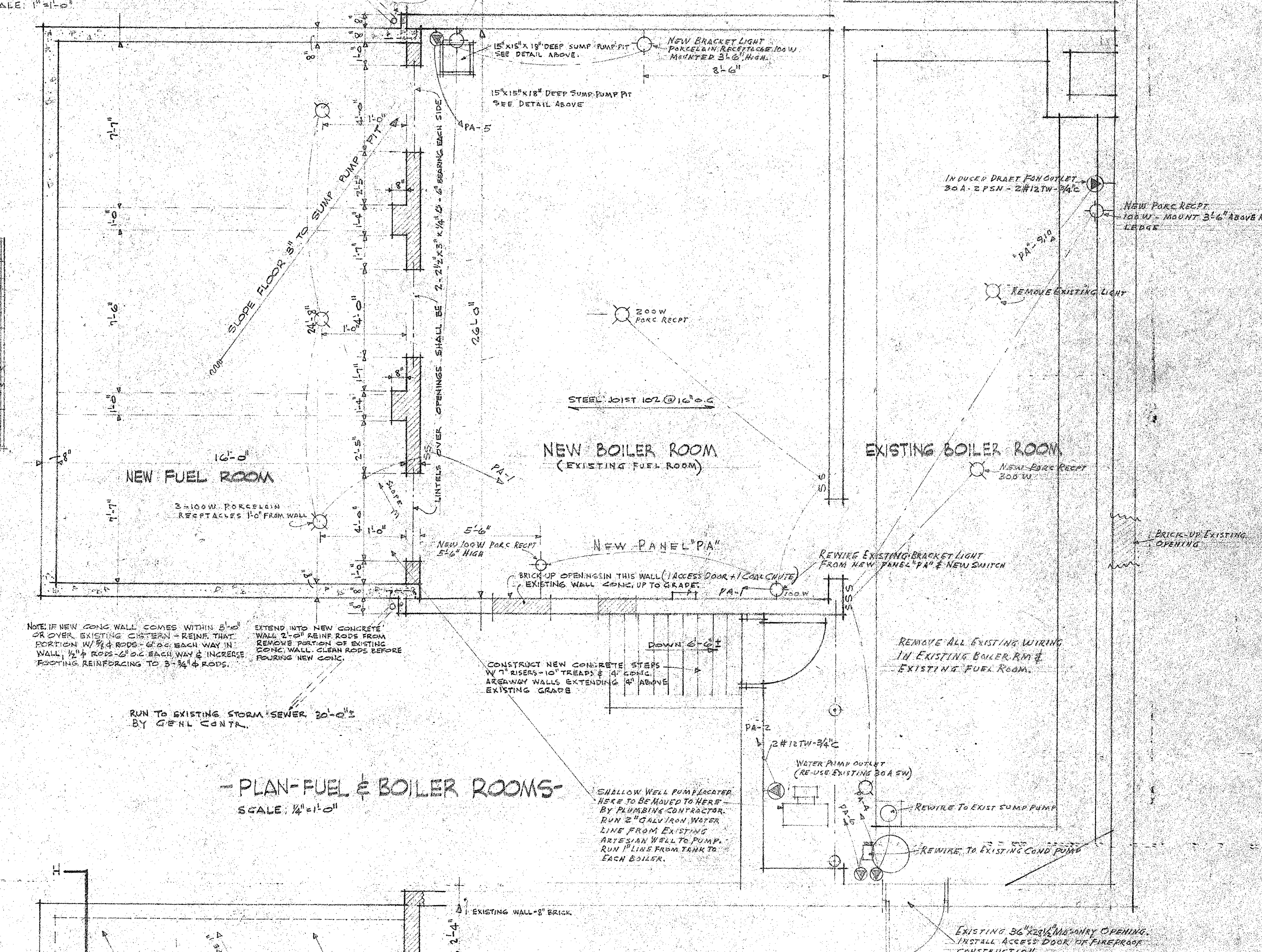


- SECTION THRU FUEL & BOILER ROOMS -
SCALE: 1/4"=1'-0"

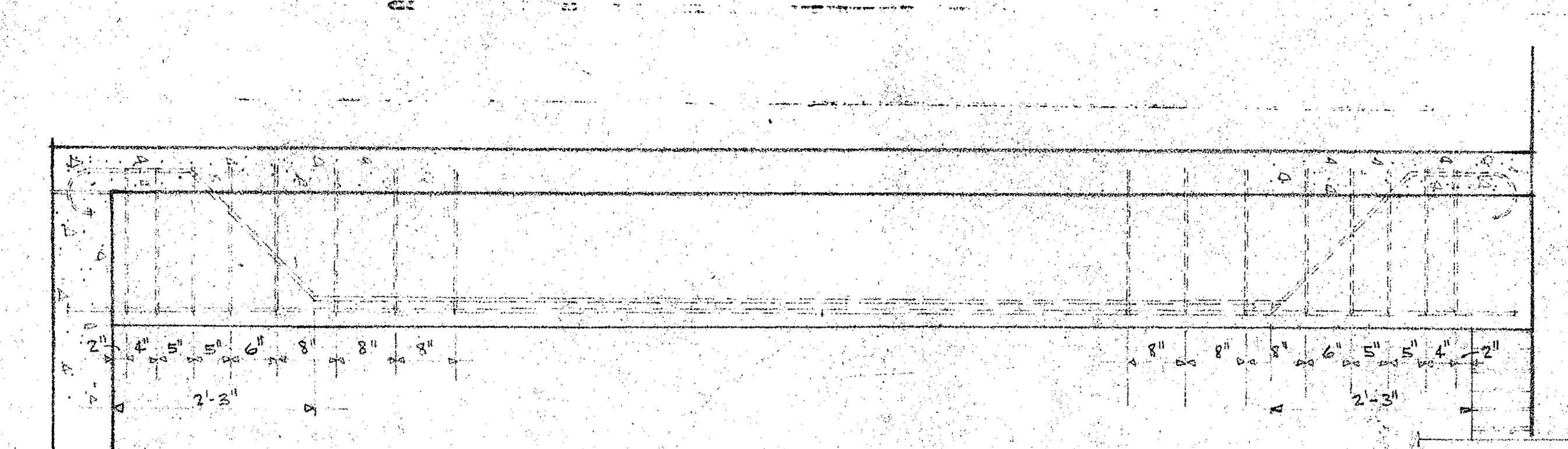


SECTION: SUMP PIT
SCALE: 1"=1'-0"

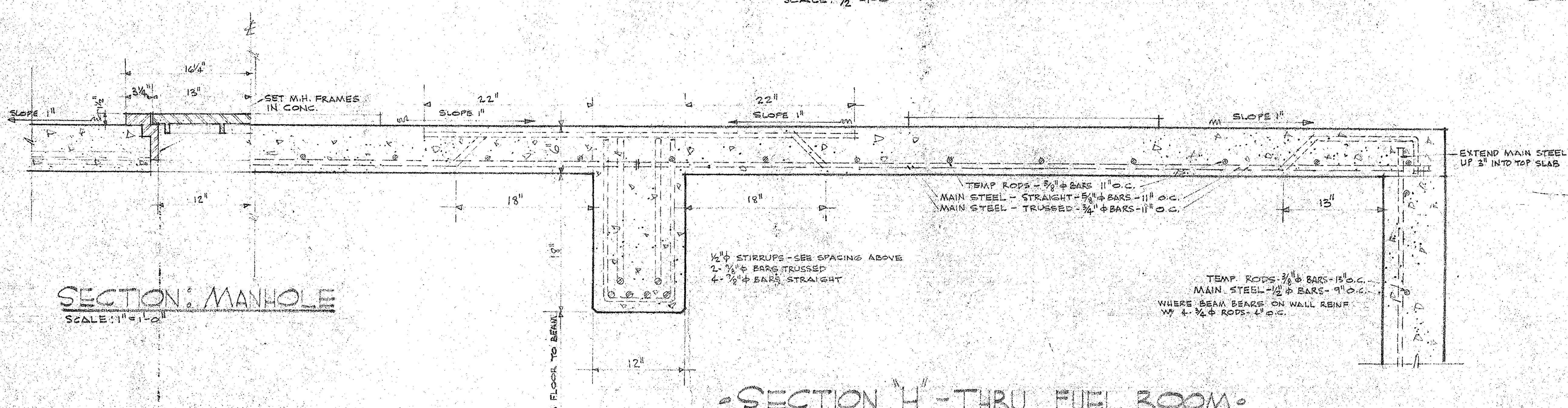
PANEL "PA" SCHEDULE (IN BOILER ROOM)					
CIRC.	AMP	POLES	VOLTS	WIRE & CONDUIT	REMARKS
1	20	1	120	12TW - 3/4"	LTS IN FUEL RM & NEW BOILER RM.
2	20	1	120	12TW - 3/4"	WATER PUMP
3	20	1	120	12TW - 3/4"	LTS. IN EXISTING BOILER ROOM.
4	20	1	120	12TW - 3/4"	SUMP PUMP IN EXIST BOILER RM.
5	20	1	120	12TW - 3/4"	" " " NEW " "
6	20	1	120	12TW - 3/4"	EXIST COND PUMP IN EXIST BOILER RM
7, 8	20	2	240	12TW - 3/4"	NEW COND PUMP IN NEW BOILER RM
9, 10	20	2	240	12TW - 3/4"	INDUCED DRAFT FAN
11, 12	30	2	240	—	SPARE FOR FUTURE STOKER
13, 14	30	2	240	—	" " " "



- PLAN - FUEL & BOILER ROOMS -
SCALE: 1/4"=1'-0"

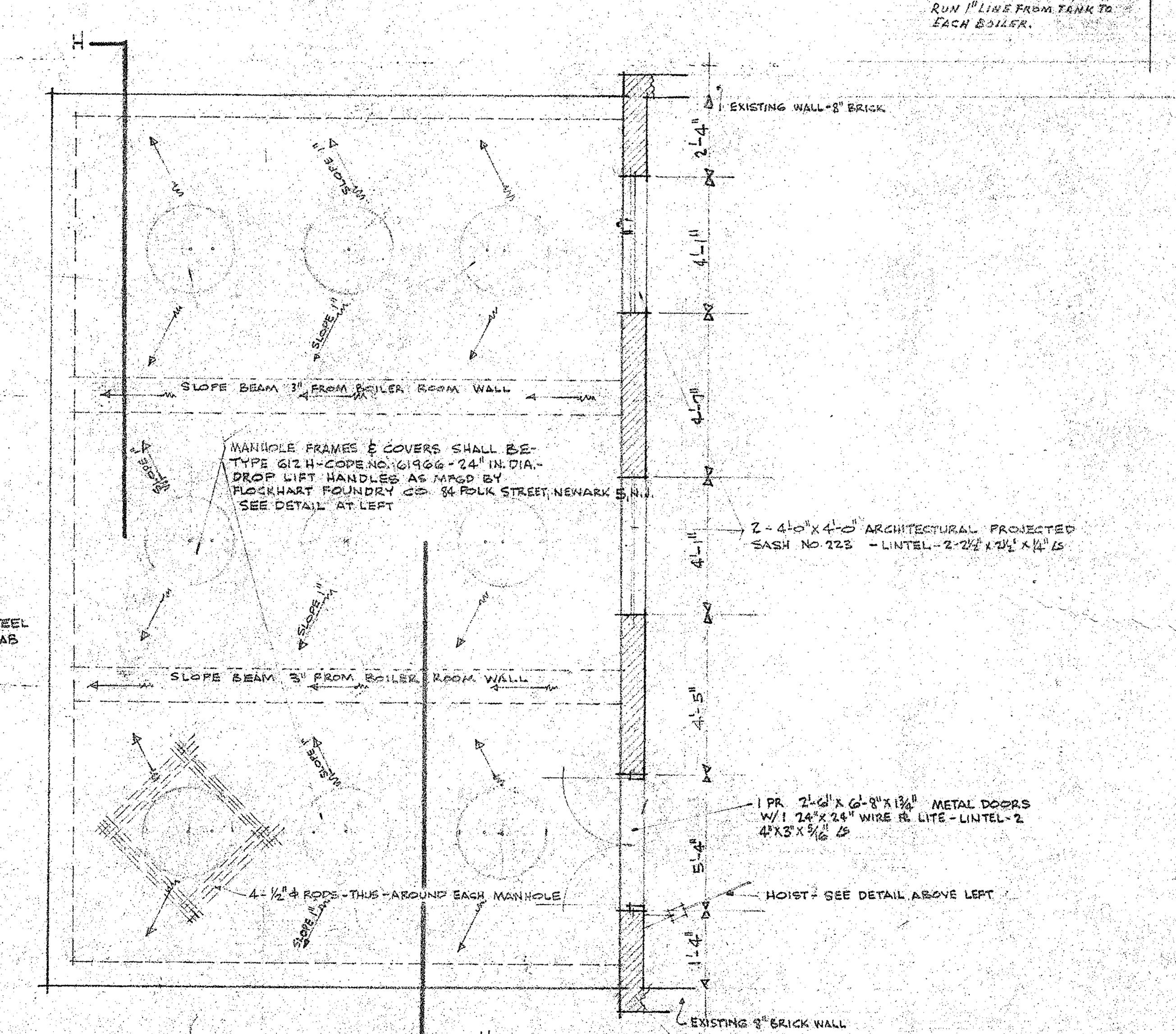


ELEVATION: W/ STIRRUP SPACING
SCALE: 1/2"=1'-0"



SECTION: MANHOLE
SCALE: 1"=1'-0"

- SECTION "H" - THRU FUEL ROOM -
SCALE: 1"=1'-0"



PLAN - ROOF OF FUEL ROOM -
SCALE: 1/2"=1'-0"

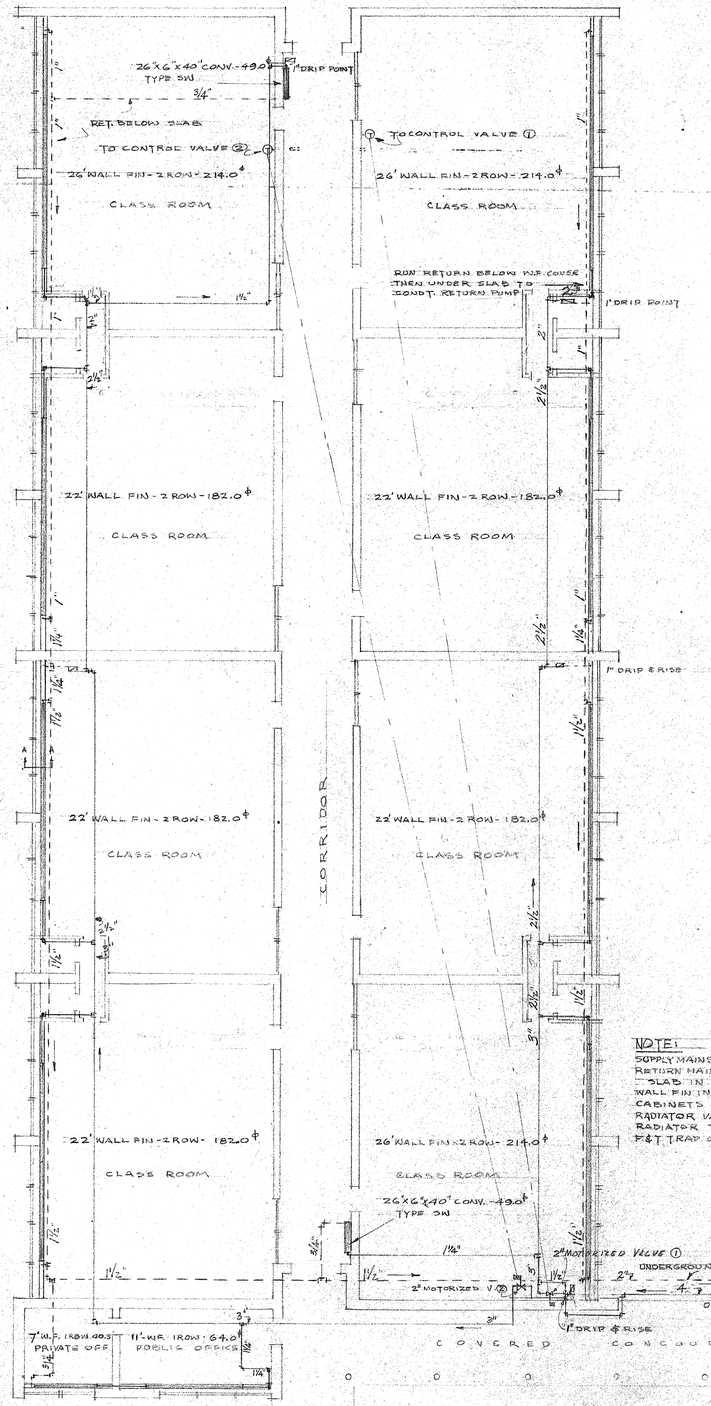
REVISION No.	DESCRIPTION	DATE	BY

MULTIPURPOSE ROOM & CLASS ROOM ADDITION
- RICHLANDS HIGH SCHOOL -
RICHLANDS - NORTH CAROLINA
ONSLOW COUNTY - BOARD OF EDUCATION
J. PARSONS BROWN · CHAIRMAN - I. B. HUDSON · SUPERINTENDENT

DESIGNED BY W.J.B.
DRAWN BY HPM WJB
CHECKED BY [signature]
30 DEC. 1952

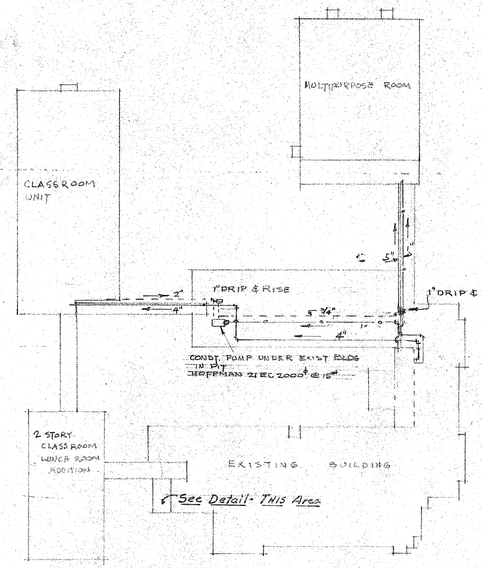
LESLIE N BONEY ARCHITECT
WILMINGTON NORTH CAROLINA

SHEET 6

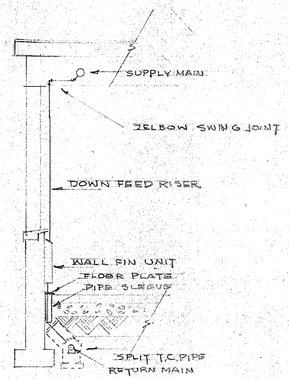


NOTE:
SUPPLY MAINS & RUNOUTS ABOVE CEILING OR AS NOTED
RETURN MAINS & RUNOUTS BELOW FLOOR
SLAB IN SPLIT T.C. PIPE, OR AS NOTED
WALL FIN IN STD 24⅜ CABINETS OR BARE-1 OR 2 ROWS.
CABINETS WALL TO WALL WHERE SHOWN
RADIATOR VALVE ON EACH SUPPLY RISER
RADIATOR TRAP ON EACH RETURN RISER
F&T TRAP ON ALL DRIP POINTS

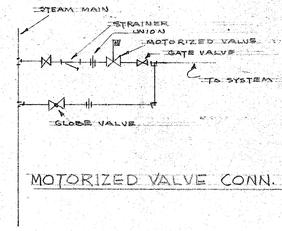
FLOOR PLAN-HEATING
PRIMARY CLASS ROOM UNIT SCALE ⅛"=1'-0"



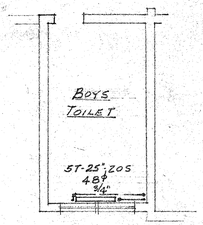
SITE PLAN SCALE 1"=50'-0"



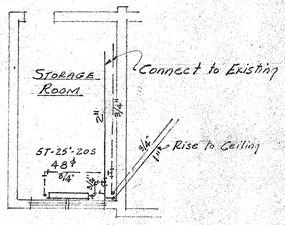
SECTION AT A-A NO SCALE



MOTORIZED VALVE CONN. NO SCALE

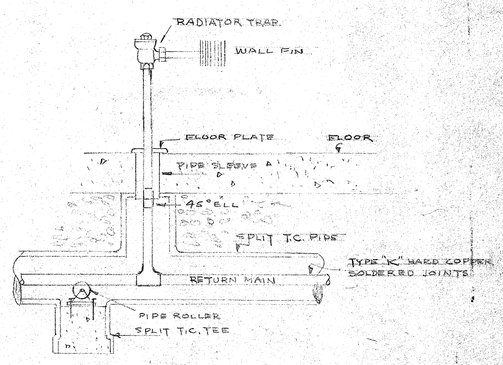


SECOND FLOOR PLAN



FIRST FLOOR PLAN

DETAIL STORAGE ROOM & BOYS TOILET ADDN. TO EXISTING BUILDING



RETURN CONNECTION DETAIL NO SCALE

REVISION NO.	DESCRIPTION	DATE	BY

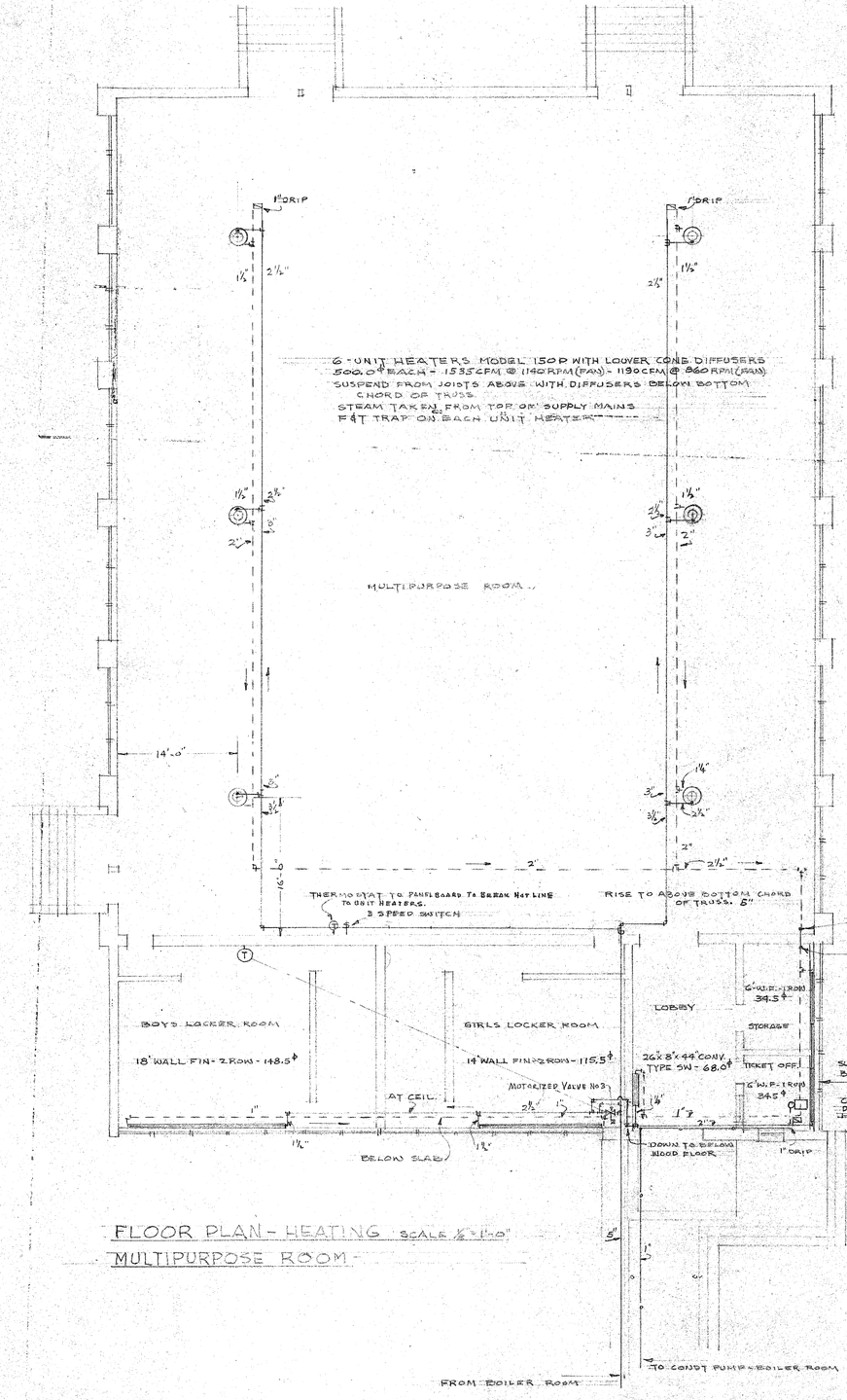
HEATING CLASSROOM WING
MULTIPURPOSE ROOM & CLASS ROOM ADDITIONS
RICHLANDS HIGH SCHOOL
RICHLANDS - NORTH CAROLINA
ONSLOW COUNTY - BOARD OF EDUCATION
J. PARSONS BROWN-CHAIRMAN - I.B. HUDSON SUPT.

DESIGNED BY T.C.P. JR.
DRAWN BY T.C.P. JR.
CHECKED BY R.H. Hoadley
30 DEC 1952

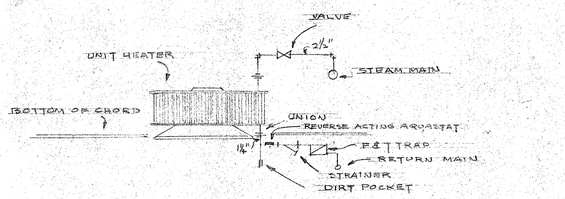
LESLIE N. BONEY ARCHITECT
WILMINGTON NORTH CAROLINA

SHEET 7

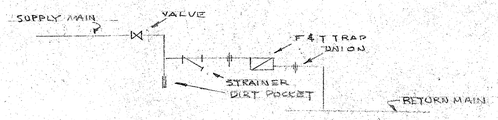
THOMAS COX POWELL, JR.
CONSULTING ENGINEER
RALEIGH, N.C.



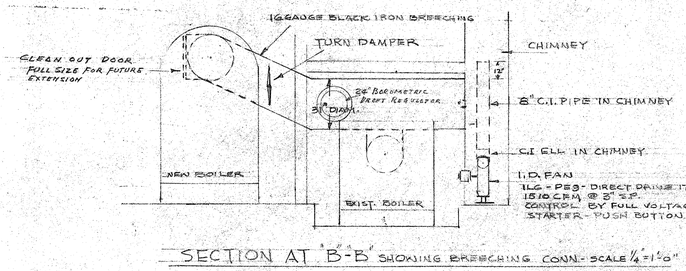
FLOOR PLAN - HEATING SCALE 1/4"=1'-0"
MULTIPURPOSE ROOM -



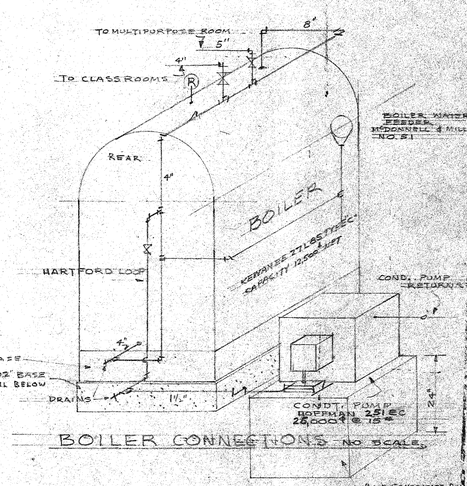
UNIT HEATER CONNECTIONS NO SCALE



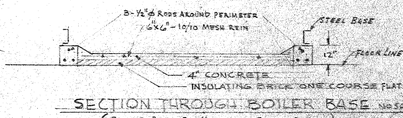
DRIP POINT DETAIL NO SCALE



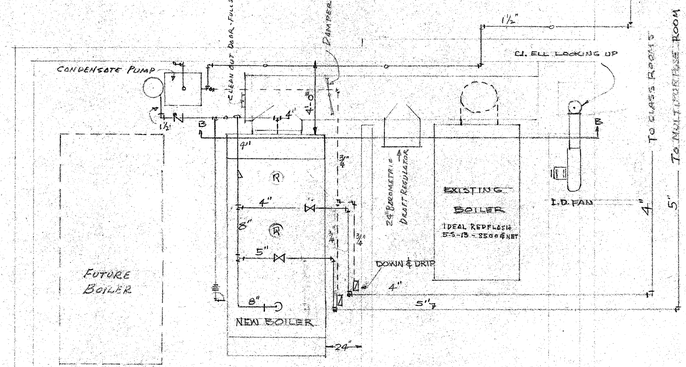
SECTION AT "B-B" SHOWING BREECHING CONN - SCALE 1/4"=1'-0"



BOILER CONNECTIONS NO SCALE



SECTION THROUGH BOILER BASE NO SCALE
(ENTIRE BASE BY HEATING CONTRACTOR)



PLAN OF BOILER ROOM SCALE 1/4"=1'-0"

EXISTING BOILER IDEAL REDFLAME 5-13 3500#

SUMMARY NOTES

BOILER - NEW - KEWANEE 27L85 TYPE C - 12,500#
BOILERS - EXIST. - 2 - REDFLAME #5 - 13 SECTIONS
CAPACITY EACH - 3500#
NEW LOAD -
CLASSROOM WING 1955#
MULTIPURPOSE ROOM 3401#
TOTAL - 5,356#

ALTERNATE

BOILER - NEW - KEWANEE 27L84 TYPE C - 10,420#

REVISION NO.	DESCRIPTION	DATE	BY

HEATING - MULTIPURPOSE ROOM

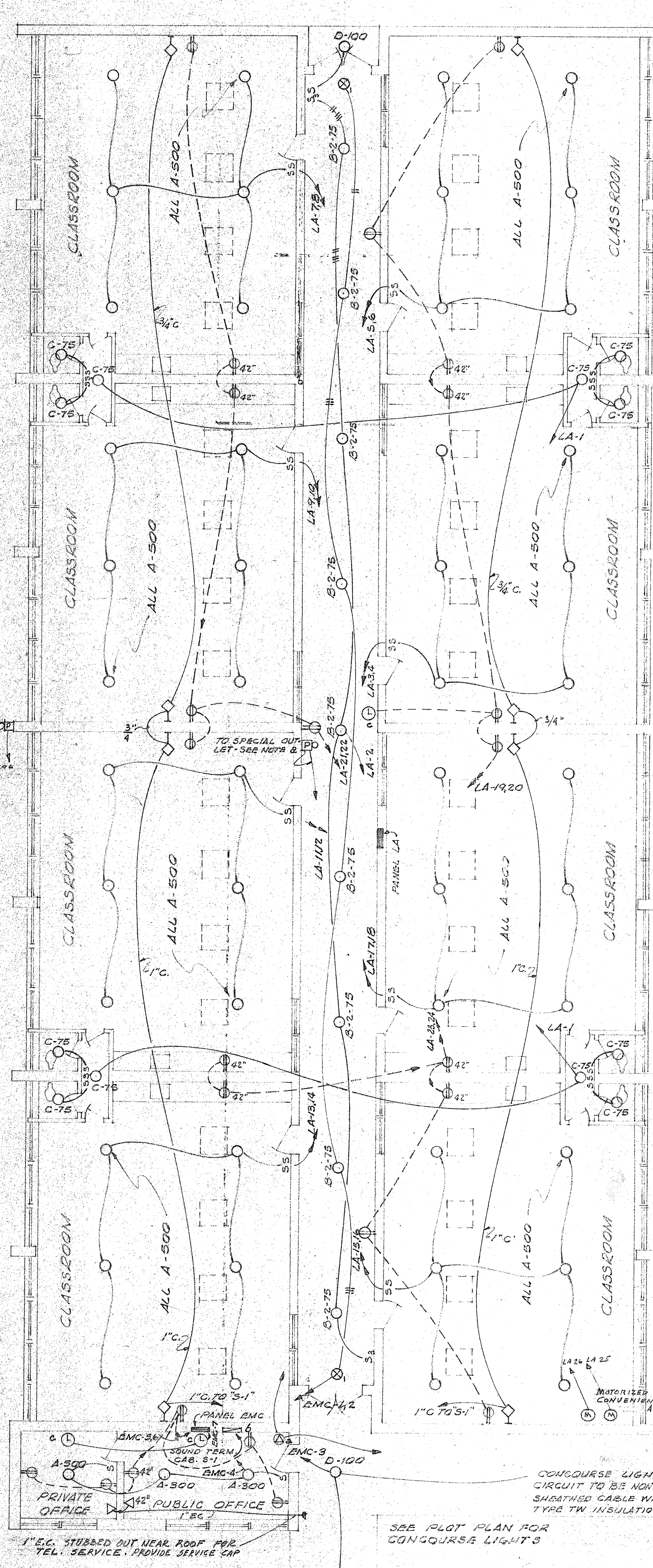
MULTIPURPOSE ROOM & CLASS ROOM ADDITION
- RICHLANDS HIGH SCHOOL -
RICHLANDS - NORTH CAR.
ONSLOW COUNTY - BOARD OF EDUCATION
J. PARSONS BROWN - CHAIRMAN - T.B. HUDSON - SUPT.

DESIGNED BY TCP JR.
DRAWN BY TCP JR.
CHECKED BY [illegible]
30 Dec 1952

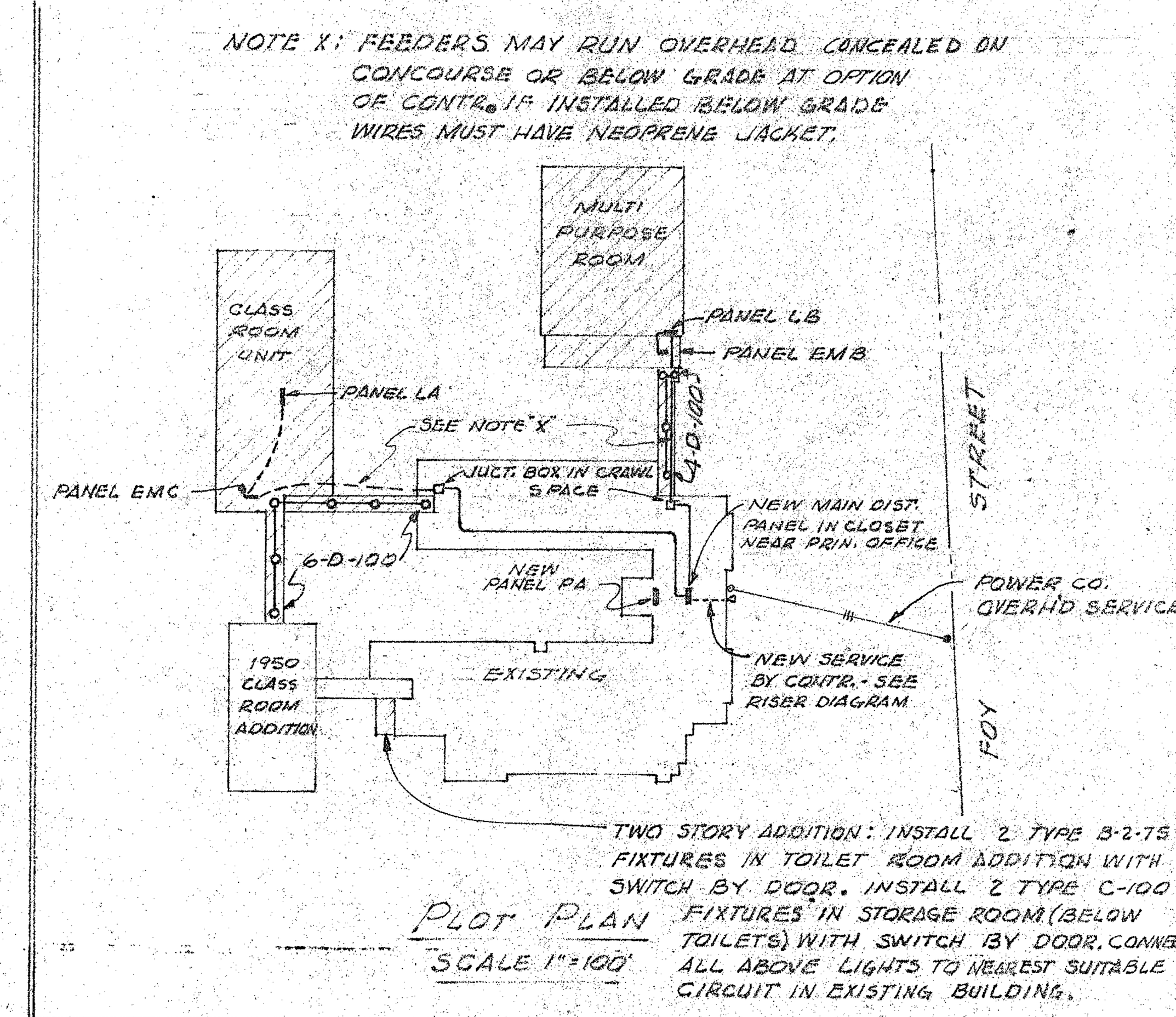
THOMAS COX POWELL JR
CONSULTING ENGINEER
RALEIGH N.C.

LESLIE N BONEY - ARCHITECT
WILMINGTON NORTH CAROLINA

SHEET 8

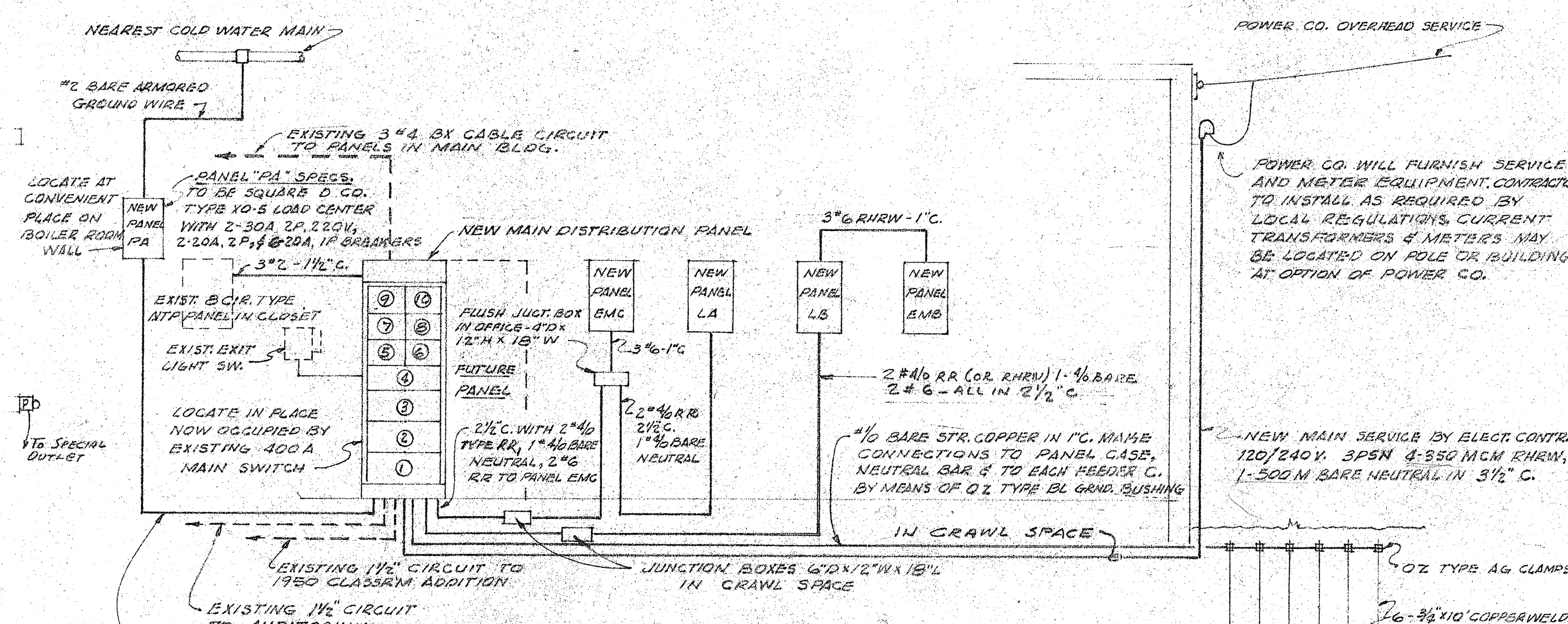


FLOOR PLAN
CLASS ROOM UNIT
SCALE 1/8"=1'0"



PLOT PLAN
SCALE 1"=100'

CIRCUIT	AMPS	POLES	VOLTS	WIRE & CONDUIT	REMARKS
PANEL LA SCHEDULE					
1	20	1	120	#12 - 1/2" & 3/4"	TOILETS
2	20	1	120	Do	CORRIDOR
3-18	20	1	120	Do	CLASS ROOMS
19-24	20	1	120	#12 - 3/4"	RECEPTACLES
25-26	20	1	120	2 #12 - 3/4"	MOTORIZED VALVE OUTLETS
27-34	20	1	120	—	SPARES
PANEL LB SCHEDULE					
1-4	20	1	120	—	SPARES
5-8	30	1	120	#10TW - 3/4" & 1"	END LTS - GAME COURT
9-12	30	1	120	Do	PRACTICE COURT LTS.
13-18	30	1	120	Do	GAME COURT LIGHTS
19-21	20	1	120	#12TW - 3/4"	RECEPTACLES
22,23	20	1	120	Do	UNIT HEATERS & MOTORIZED VALVES
24	20	2	120	Do	CONDENSATE PUMP
PANEL EMB SCHEDULE					
1	20	1	120	#12 - 1/2" & 3/4"	EXIT LIGHTS
2	20	1	120	Do	SIDE & REAR ENTRANCE
3	20	1	120	Do	LOBBY & OFFICE LTS
4,5	20	1	120	Do	BOYS & GIRLS TOILET
6	20	1	120	Do	CONCOURSE LTS
7	20	1	120	#12 - 3/4"	RECEPTACLES
8-12	20	1	120	#12	SPARES & LIGHTS
PANEL EMC SCHEDULE					
1	20	1	120	#12 - 1/2" & 3/4"	EXIT LIGHTS
2	20	1	120	Do	CORRIDOR
3	20	1	120	Do	CONCOURSE
4	20	1	120	Do	OFFICE
5,6	20	1	120	#12 - 3/4"	RECEPTACLES
7	20	1	120	#12 - 1/2"	CLOCKS
8-12	20	1	120		SPARES



RISER DIAGRAM
NO SCALE

KEY TO MAIN DISTRIBUTION PANEL

						FEEDS
(1)	MAIN SWITCH	600 A	3PSN	230V	FUSE 600A	
(2)	SWITCH UNIT	200 A	3PSN	230V	FUSE 200A	NEW GYMNASIUM
(3)	SWITCH UNIT	200 A	3PSN	230V	FUSE 200A	NEW C.R. UNIT
(4)	SWITCH UNIT	200 A	3PSN	230V	FUSE 150A	1950 C.R. & L.R. ADDITION
(5)	SWITCH UNIT	100 A	3PSN	230V	FUSE 100A	AUDITORIUM PANEL
(6)	SWITCH UNIT	100 A	3PSN	230V	FUSE 100A	EXISTING MAIN BLDG. PANELS
(7)&(8)	SWITCH UNITS	100 A	3PSN	230V	FUSE 100A	SPARES
(9)*	SWITCH UNIT	100 A	3PSN	230V	FUSE 60A	ALL EXIT-PANELS
(10)	SWITCH UNIT	100 A	3PSN	230V	FUSE 100A	BOILER ROOM PANEL PA

* EXIT LIGHT SWITCH TO BE CONNECTED AHEAD OF THE MAIN SWITCH

FIXTURE SCHEDULE					
TYPE	WATTS	DESCRIPTION	MFGR.	CAT. NO.	MOUNTING
A	300/500	3 CONCENTRIC RING WITH SILVER BOWL LAMP	KURT VERSEN	3-5-523	PENDANT
B	UP TO 2-100	DRUM TYPE CEILING PAN, VENTILATED	McPHILBEN	5212 T	CEILING
C	UP TO 100	GLASS BOWL WITH ALUMINUM CEILING HOLDER	ART METAL	3024	CEILING
D	100	RECESSED SQUARE WITH LENS, STAINLESS STEEL DOOR	KIRLIN	508	RECESSED
E	UP TO 2-100	DRUM TYPE CEILING UNIT WITH GUARD	GRUBER	6733	CEILING
F	100	VAPORTIGHT WITH GLOBE	PRESCOLITE	CF-2	CL. MTD. ON 3¼" BOX
G	750	MED. HI-BAY UNIT WITH GLASS COVER	REVERE	6606	PENDANT
H	300	R.L.M. DOME REFL. WITH WIRE GUARD	WHEELER	RES-500 4428	PENDANT
⊗1	2-40	RED GLASS WITH METAL STENCIL	DAYBRITE	3126	TOP MOUNT
⊗2	2-40	SINGLE FACE WITH RED GLASS AND METAL STENCIL	DAYBRITE	3116	WALL MOUNT

SPECIAL NOTES

a. A 4" SQ. JUNCTION BOX WITH BLANK COVER - 4'-0" ABOVE FLOOR. RUN 2 #12TW - 1/2" C. TO PROGRAM BELL. RUN A 2 C #2 ROMEX CABLE BACK TO PROGRAM CLOCK IN OFFICE. PROGRAM BELL TO BE SIMILAR TO EDWARDS #340-4" FOR 24 V OPERATION WITH EXISTING PROGRAM CLOCK.

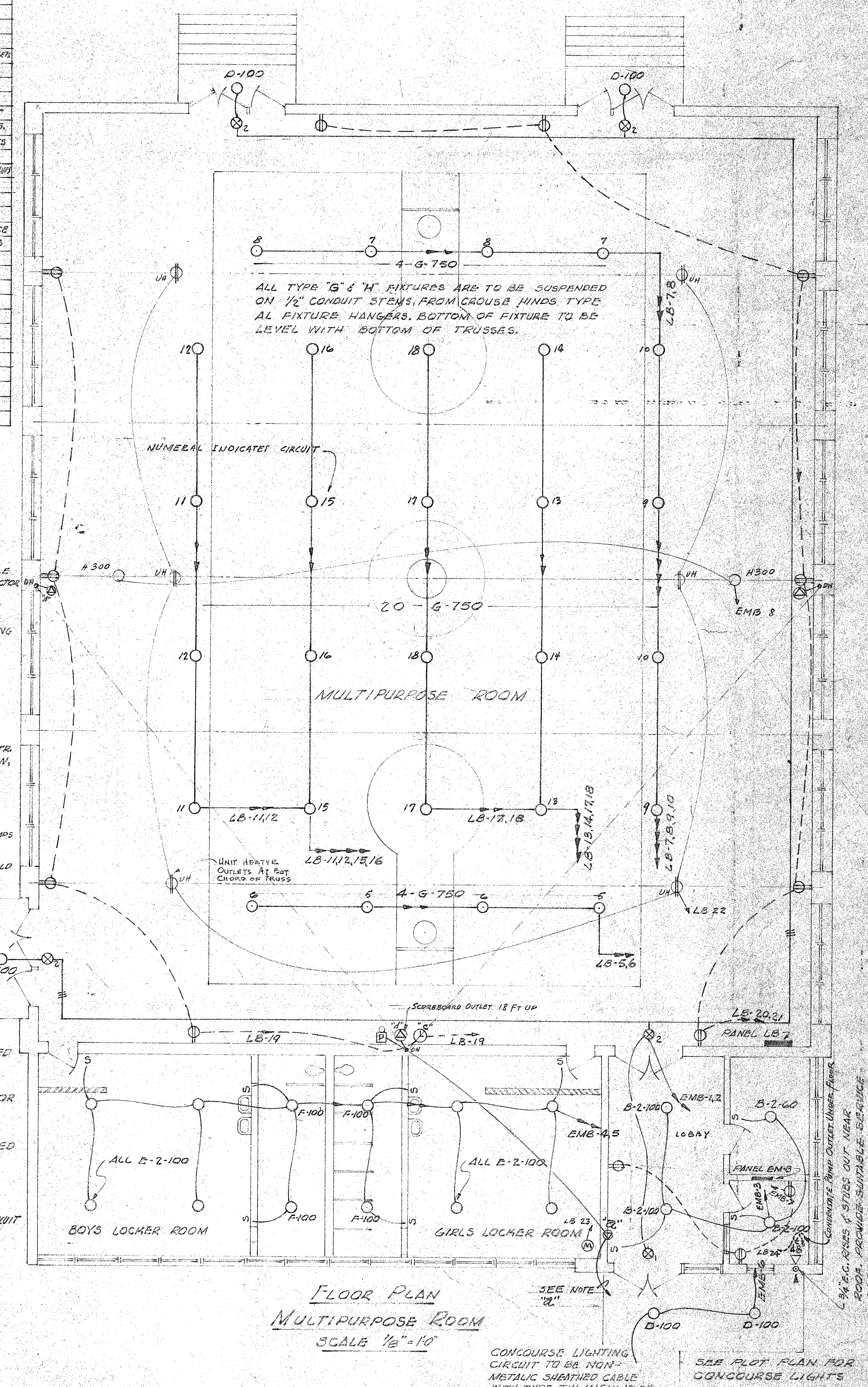
b. SOUND TERMINAL CABINET 4"×12"×24".

c CLOCK HANGER OUTLET - BRYANT #2828 OR EQ.

d 4 11/16" SQ BOX WITH BLANK COVER 4'-0" ABOVE FLOOR (OR AS NOTED). CONNECT BOXES WITH 1¼" E.C. FOR FUTURE SCORE BOARD SYSTEM.

SYMBOLS AND LEGEND

- CEILING LIGHT OUTLET
- BRACKET LIGHT OUTLET
- EXIT LIGHT OUTLET
- DUPLEX CONVENIENCE OUTLET - 16" ABV. FL. OR NOTED
- SPECIAL OUTLET AS NOTED
- PROGRAM BELL AS SPECIFIED - 8'-0" UP
- TIME CLOCK OUTLET - SINGLE FACE - & 8'-0" ABOVE FLOOR
- INTER-COM OUTLET - 8'-0" ABOVE FLOOR
- LIGHTING PANELBOARD
- S WALL TOGGLE SWITCH SINGLE POLE AS SPECIFIED
- S_3 WALL TOGGLE SWITCH 3 WAY AS SPECIFIED
- CONDUIT CONCEALED IN WALLS & CEILING
- CONDUIT IN OR UNDER FLOOR OR BELOW GRADE
- RACEWAY EXPOSED ON WALL OR CEILING
- "HOMERUN" TO PANELBOARD - EA. ARROW INDICATES CIRCUIT
- TELEPHONE OUTLET - 24" ABOVE FLOOR OR AS NOTED
- TERMINAL CABINET - INTER-COM SYSTEM
- MOTORIZED VALVE OUTLET



FLOOR PLAN
MULTIPURPOSE ROOM
SCALE 1/8"=1'0"

NOTE - SEE SHEET 6 OF ARCHITECTURAL DWG. FOR NEW BOILER ROOM LIGHTING & PANEL SCHEDULE, ETC.

REVISION No.	DESCRIPTION	DATE	BY

ELECTRICAL

MULTIPURPOSE ROOM & CLASS ROOM ADDITION

RICHLANDS HIGH SCHOOL

RICHLANDS, NORTH CAR.

ONSLOW COUNTY · BOARD OF EDUCATION

J. PARSONS BROWN - CHAIRMAN - I.B. HUDSON - SUPERINTENDENT

ROTTMAN & LELAND
ENGINEERING ASSOCIATES
GREENSBORO, N.C.

DESIGNED BY LELAND
DRAWN BY MACKENZIE
CHECKED BY W.B.L.
30 DEC 1952

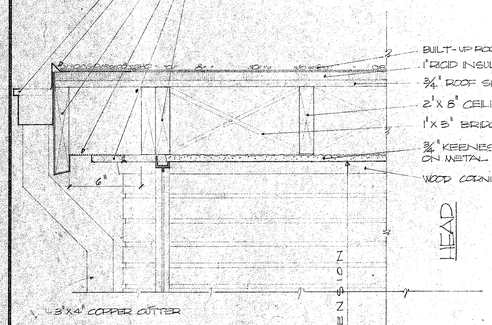
LESLIE N BONEY ARCHITECT
WILMINGTON NORTH CAROLINA

SHEET 9
E-1 OF 1

ROOM FINISH SCHEDULE								
AREA	FLOOR	BASE	WAINSCOT	WALLS	CORNICE	CEILING	REMARKS	
MEN	CERAMIC TILE	CERAMIC TILE	CERAMIC TILE	EXPOSED BRICK	WOOD	KEENE'S CEMT. PLAS.		
WOMEN	DO	DO	DO	DO	DO	DO		
LOBBY	ASPHALT TILE	WOOD	NONE	DO	DO	ACOUSTICAL TILE		

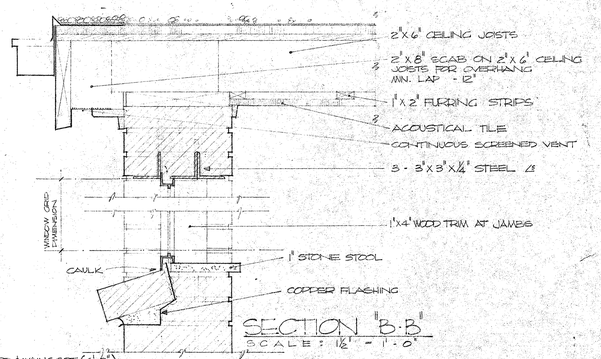
GENERAL NOTES

1 - ROOF OF TOILET ADDITION TO BE LEVEL AND FLUSH WITH ROOF OF EXISTING OPEN CONCOURSE

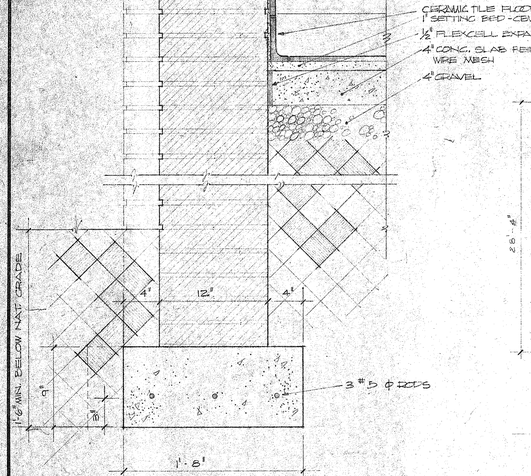


DOORS:
① 3'-0" X 6'-10" X 1 3/4" WOOD FLUSH - 1'-0" X 2'-0" LOUVERED PANEL AT BOTTOM
② 2'-6" X 6'-10" X 1 3/4" WOOD FLUSH - 1'-0" X 1'-6" LOUVERED PANEL AT BOTTOM

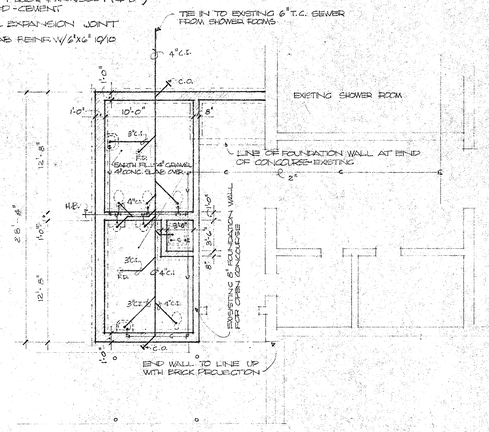
WINDOWS:
Ⓐ 2'-8" X 4'-0" ARCH. PROJECTED TRUSCON #2228
Ⓑ 4'-0" X 5'-4" ARCH. PROJECTED TRUSCON #225



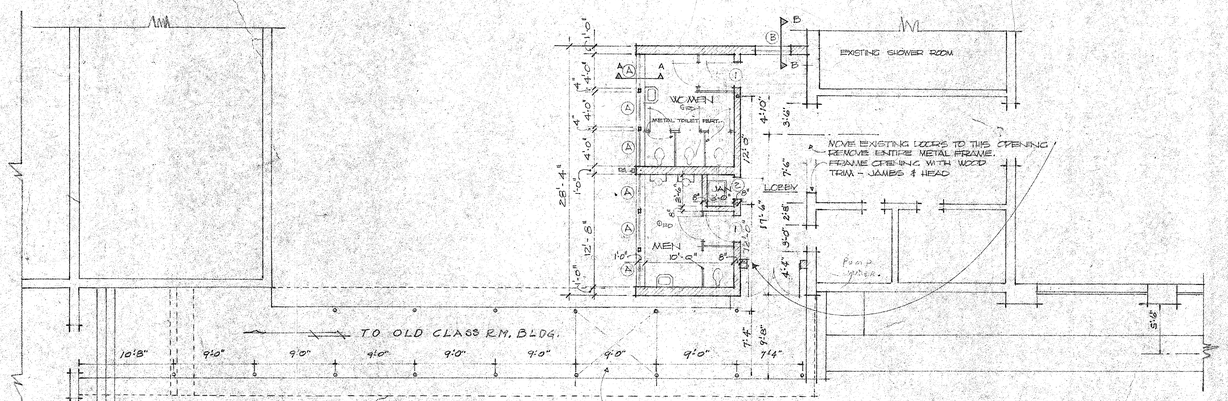
SECTION "B-B"
SCALE: 1 1/2" = 1'-0"



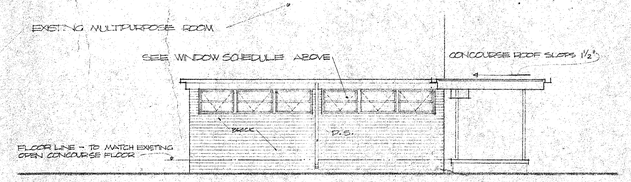
WALL SECTION "A-A"
SCALE: 1 1/2" = 1'-0"



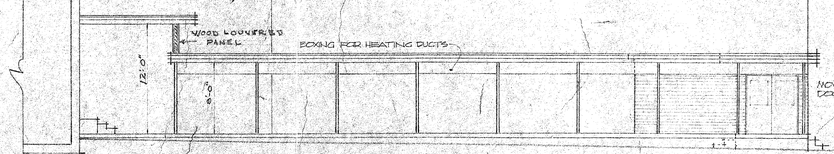
FOUNDATION PLAN
PLUMBING PLAN
SCALE: 1/8" = 1'-0"



PLAN 1/8"



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



CONCOURSE CONNECTING MULTIPURPOSE ROOM & OLD CLASS RM. BLDG.

REVISION NO.	DESCRIPTION	DATE	BY
1	ADDITION OF TWO TOILETS	12 MAY 1954	RTM

"REVISED - CONCOURSE PLANS

MULTIPURPOSE ROOM & CLASS ROOM ADDITIONS

- RICHLANDS HIGH SCHOOL -

RICHLANDS - NORTH CAROLINA.

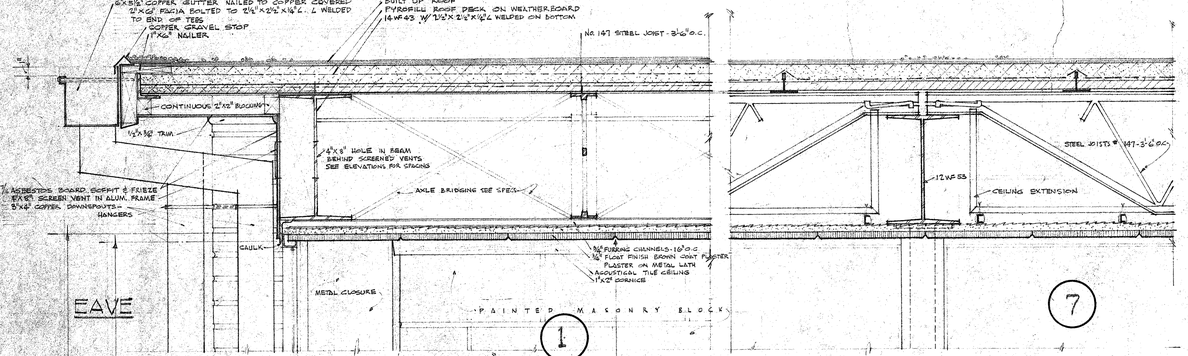
ONSLOW COUNTY - BOARD OF EDUCATION

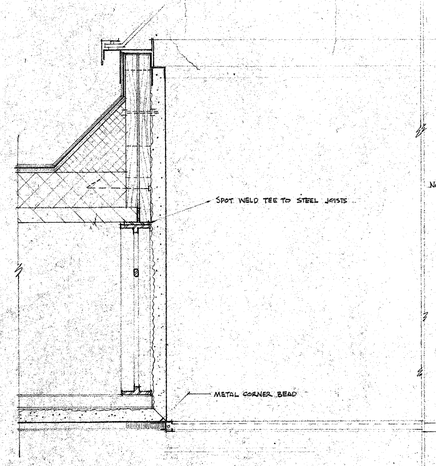
J. PARSONS BROWN-CHAIRMAN - I. B. HUDSON - SUPT.

DESIGNED BY C.H.B. G.M.J.
DRAWN BY G.M.J.
CHECKED BY CHARLES H. BONEY
27 MAR 1953

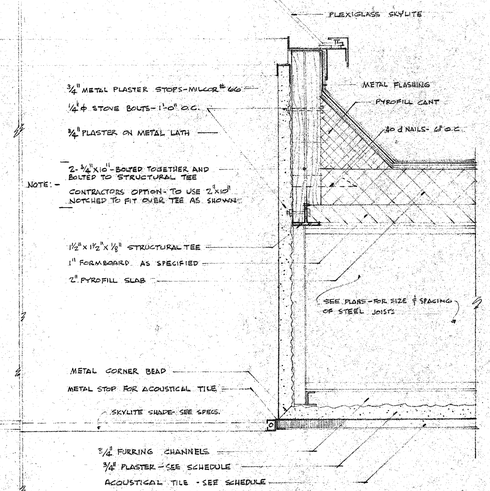
LESLIE N BONEY ARCHITECT
WILMINGTON NORTH CAROLINA

SHEET 10





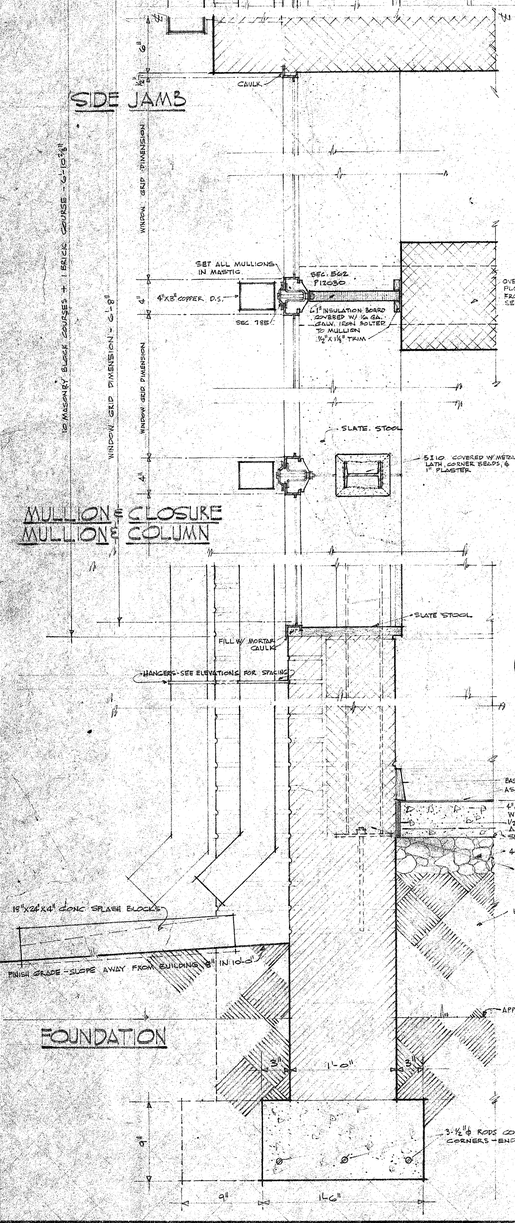
SECTION PARALLEL TO JOISTS

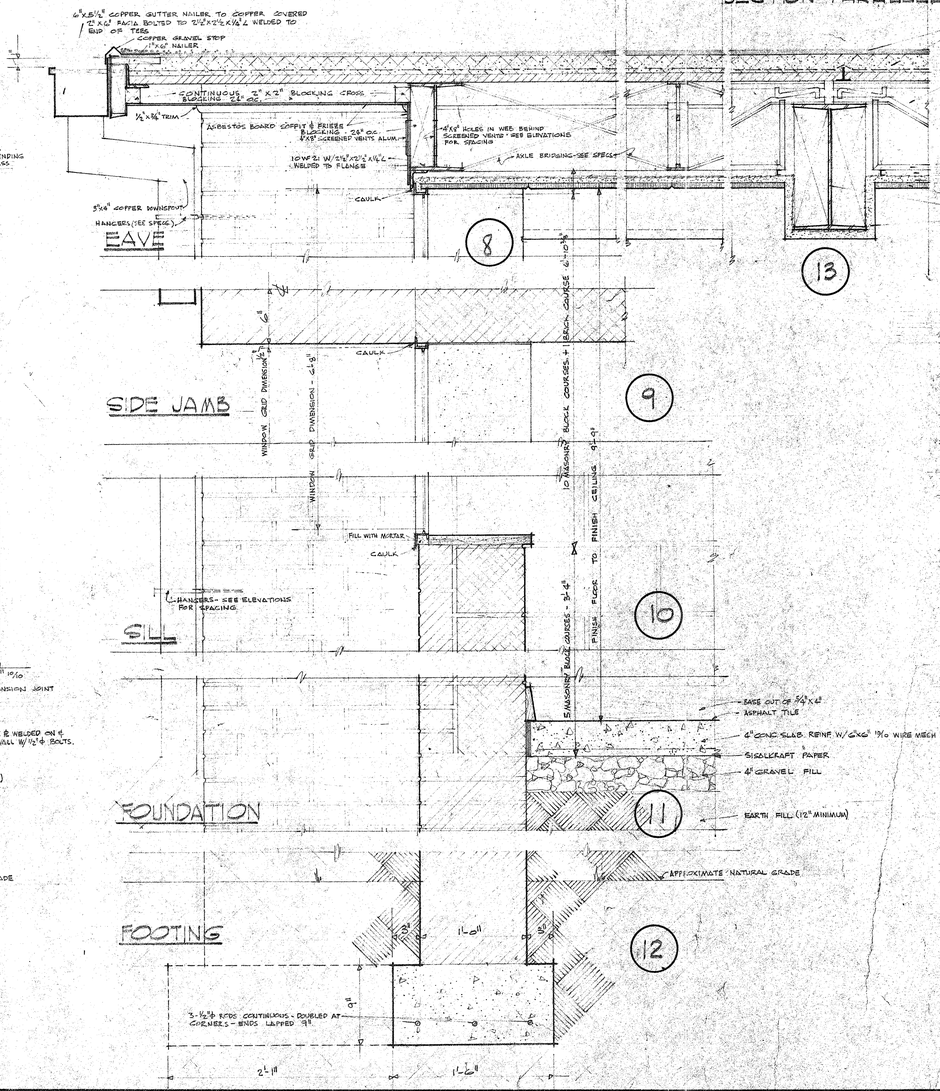


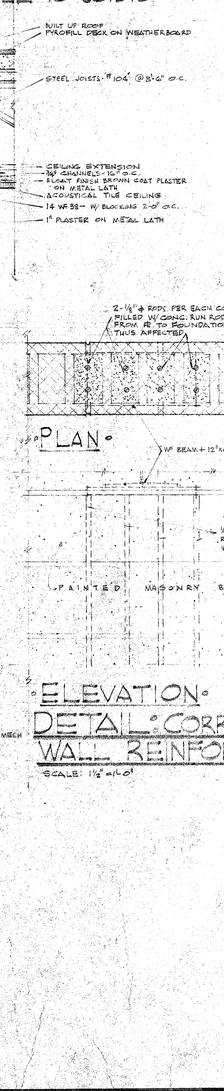
SECTION PERPENDICULAR TO JOISTS (14)

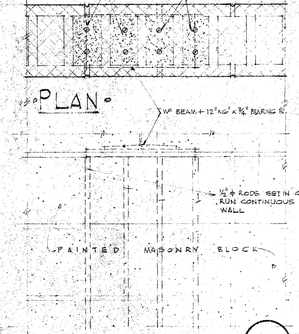
SKYLITE DETAILS - IN STEEL JOISTS

SCALE: 3" = 1'-0"



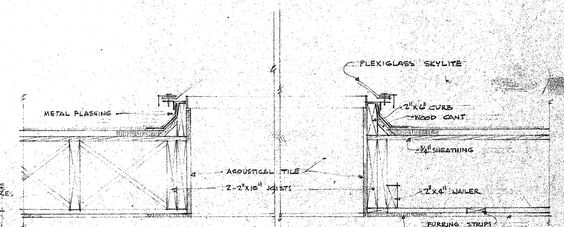






DETAIL - CORRIDOR WALL REINFORING

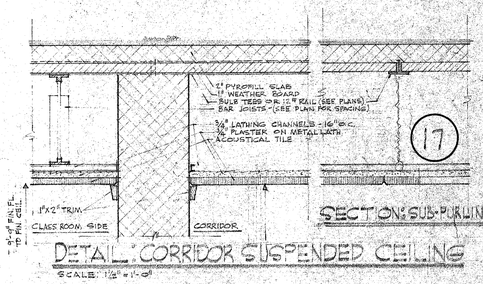
SCALE: 1½" = 1'-0"



SECTION PARALLEL TO JOISTS SECTION PERPENDICULAR TO JOISTS

SKYLITE DETAILS - IN WOOD JOISTS (16)

SCALE: 1" = 1'-0"



DETAIL - CORRIDOR SUSPENDED CEILING

SCALE: 1½" = 1'-0"

REVISION No.	DESCRIPTION	DATE	BY

TYPICAL DETAILS (1) THRU (17)

ONSLOW COUNTY SCHOOLS

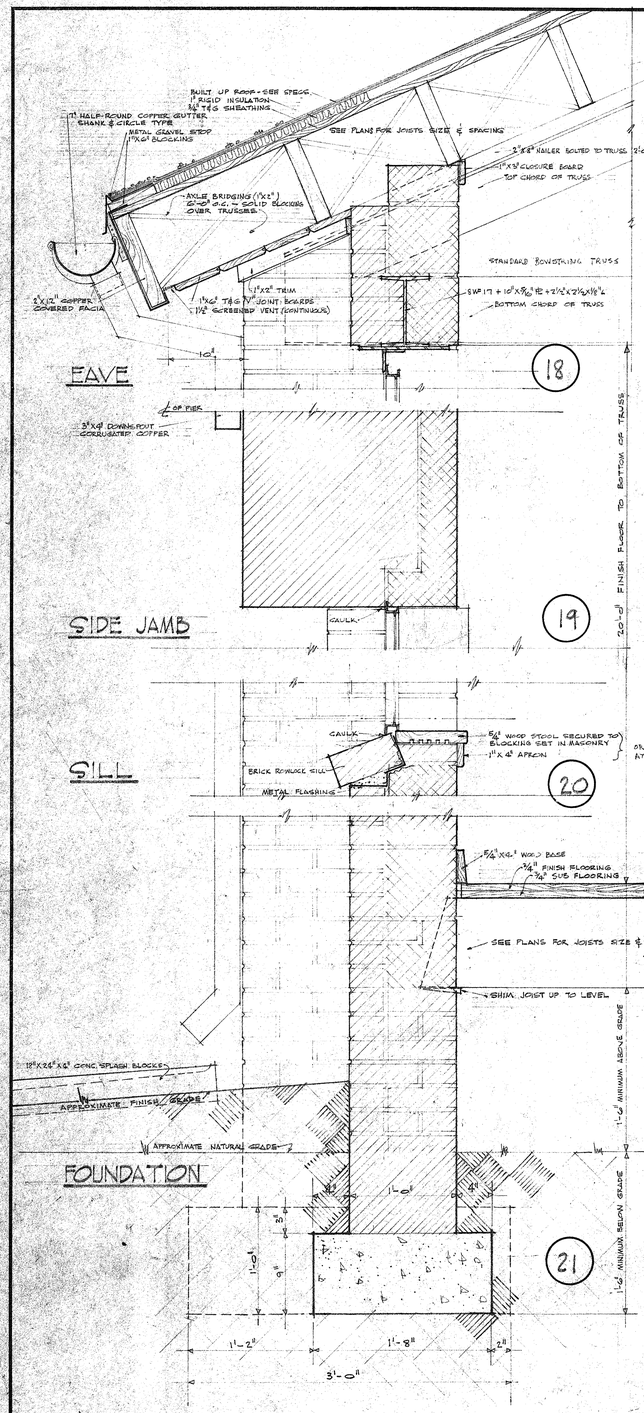
BOARD OF EDUCATION — ONSLOW COUNTY

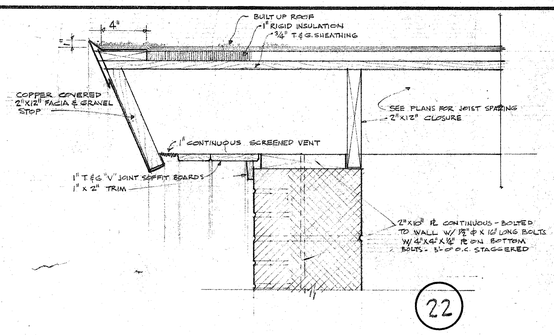
L. PARSONS BROWN, CH'MN. - ISHAM B. HUDSON, SUPT.

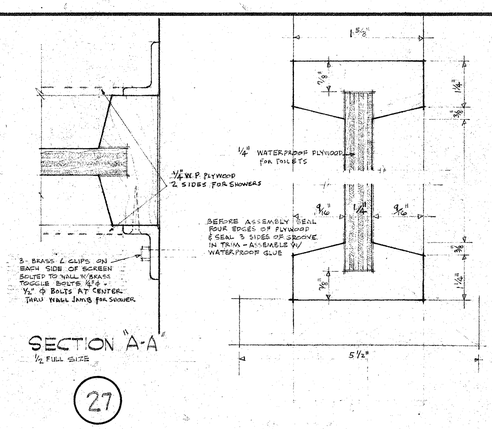
DESIGNED BY	HPH
DRAWN BY	HPH
CHECKED BY	
DATE	30 DEC 1952

LESLIE N BONEY ARCHITECT
WILMINGTON NORTH CAROLINA

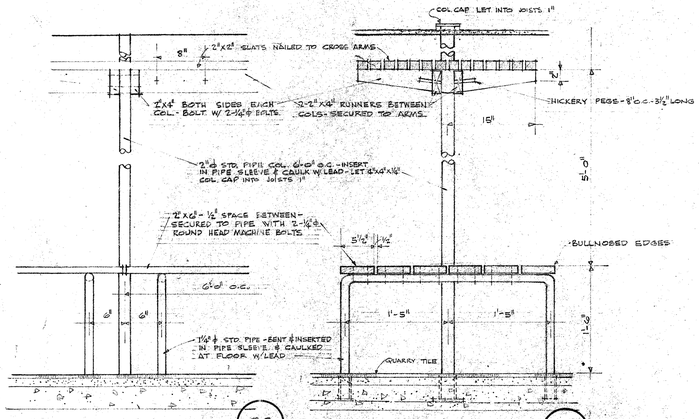
SHEET T1

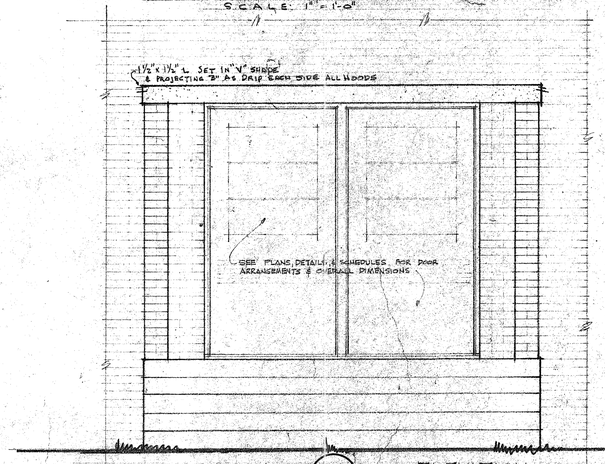


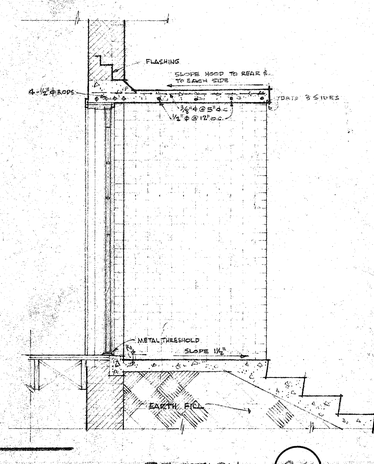




TOILET - SHOWER ROOM STALL DETAILS







CONCRETE HOOD DETAILS

SCALE: ½" = 1'-0"

REVISION NO.	DESCRIPTION	DATE	BY

TYPICAL DETAILS (18) THRU (30)

ONSLOW COUNTY SCHOOLS

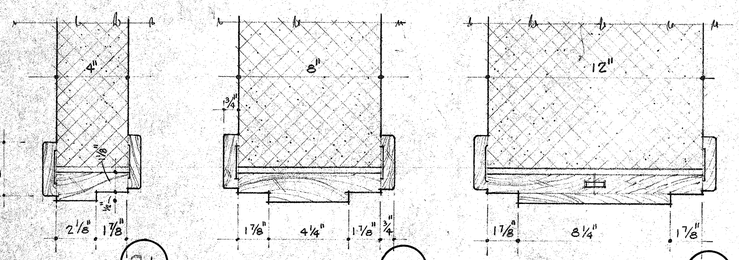
BOARD OF EDUCATION ONSLOW COUNTY

L. PARSONS BROWN CHMN. - ISHAM B. HUDSON SUPT.

DESIGNED BY NPM
DRAWN BY NPM
CHECKED BY Boney L
30 DEC 1952

LESLIE N BONEY ARCHITECT
WILMINGTON NORTH CAROLINA

SHEET T2

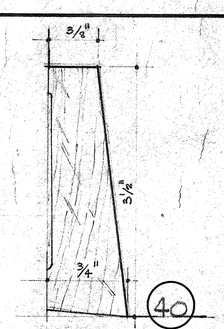


31 32 33

TYPICAL DOOR JAMB DETAILS - INTERIOR

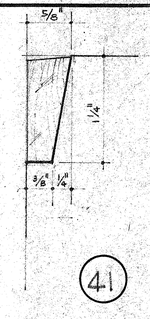
SCALE : 3"= 1'-0"

MASONRY BLOCK WALLS ARE ASSUMED FULL 4", 8", & 12" ANY VARIATION IN BLOCK SIZE MUST BE REFLECTED IN WIDTH OF WOOD JAMB & HEAD . PROVIDE SOLID BLOCKING BEHIND ALL HINGES .



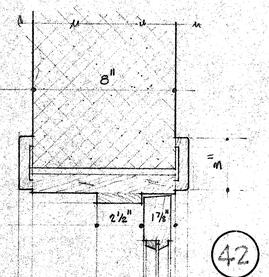
40

F.S. WOOD BASE



41

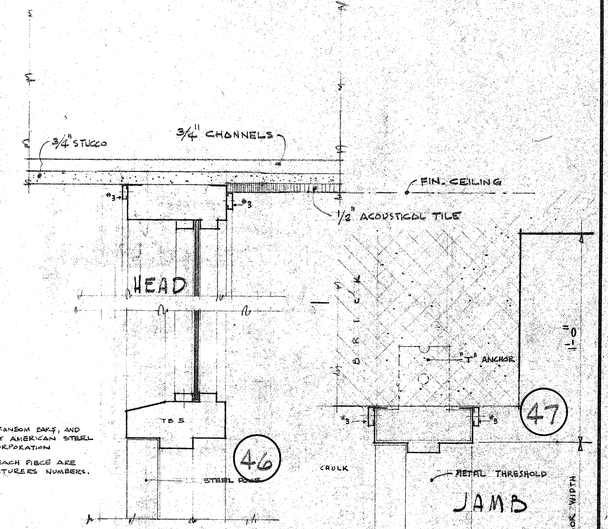
F.S. WOOD CORNICE



42

BREEZE SASH DETAIL

SCALE : 3"=1'-0"
INTERIOR DOOR TRANSOM BAR SIMILAR

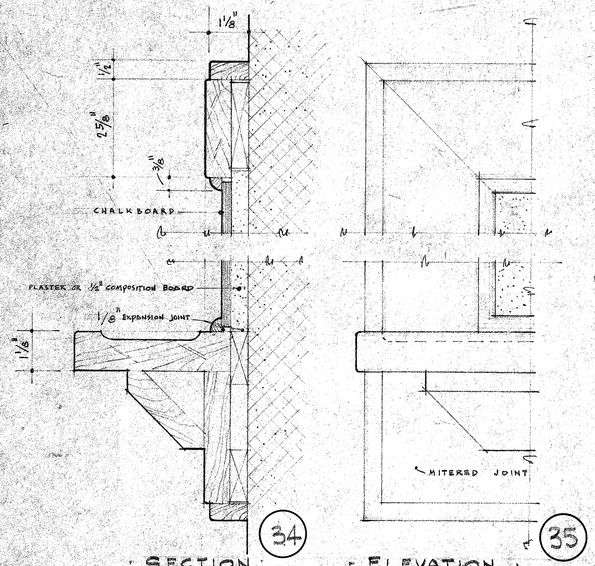


DOORS, TRANSOM BARS, AND BUCKS BY AMERICAN STEEL BUCK CORPORATION

NOS. OF EACH PIECE ARE MANUFACTURERS NUMBERS.

46 47

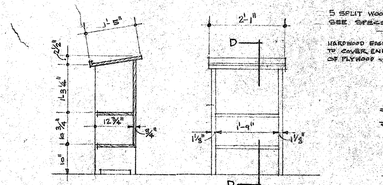
- EXTERIOR DOOR DETAILS -



34 35

SECTION · ELEVATION ·

- TYPICAL CHALK BOARD DETAILS -

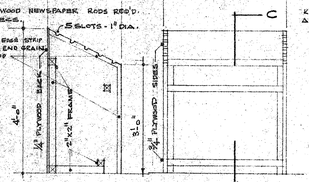


SECTION D-D ONE REQUIRED ELEVATION

'DICTIONARY STAND DETAIL'

½" SCALE

43

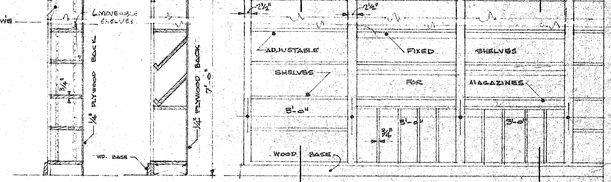


SECTION G-C ONE REQUIRED ELEVATION

'NEWSPAPER RACK DETAIL'

½" SCALE

44



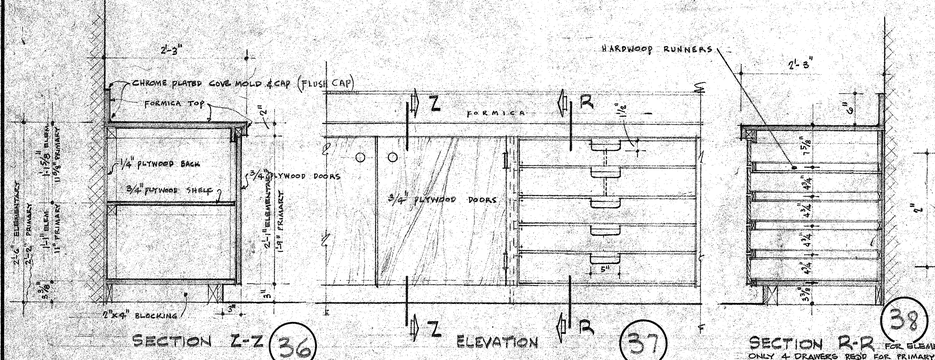
SECTION A-A SECTION B-B A ELEVATION B

'LIBRARY SHELVING DETAILS'

½" SCALE

45

HALF-FULL-SIZE



SECTION Z-Z 36

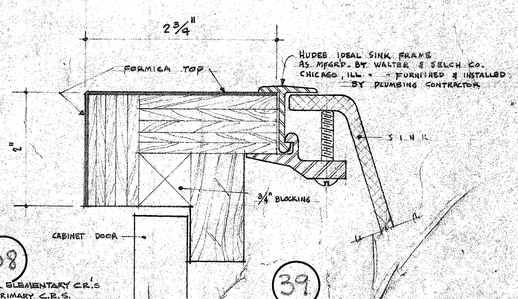
ELEVATION 37

SECTION R-R FOR ELEMENTARY CR.'S ONLY 4 DRAWERS REQ'D FOR PRIMARY C.R.'S. 38

- TYPICAL CLASS ROOM CABINET DETAILS -

SCALE : 1"= 1'-0"

CABINET & SHELVING HARDWARE BY MILLWORK MFGR. - SEE SPECIFICATIONS



39

F.S. SINK FRAME DETAIL

REVISION No.	DESCRIPTION	DATE	BY

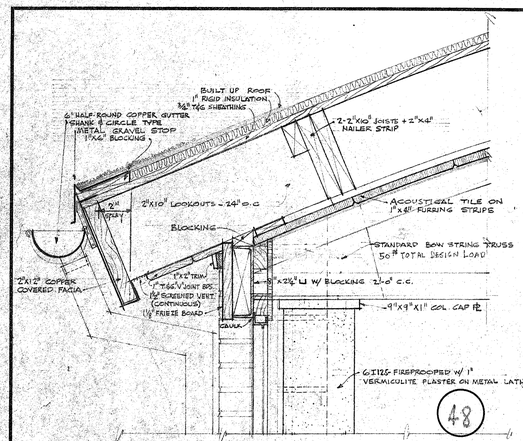
'MILLWORK DETAILS' 31 THRU 47

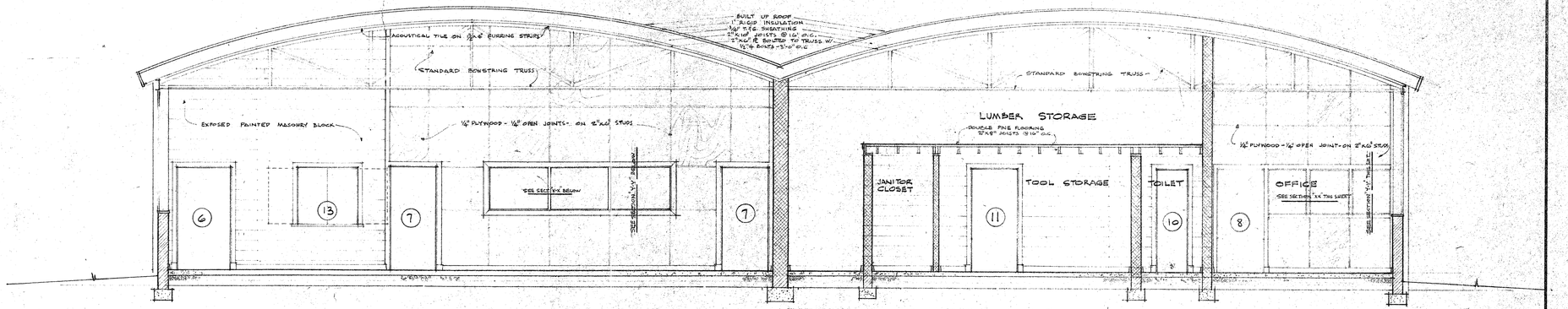
ONSLOW COUNTY SCHOOLS

BOARD OF EDUCATION - ONSLOW COUNTY
L. PARSONS BROWN, CHMN - ISHAM B. HUDSON, SUPT

DESIGNED BY WPH	LESLIE N BONEY ARCHITECT
DRAWN BY GBM	WILMINGTON NORTH CAROLINA
CHECKED BY	
30 DEC 1952	

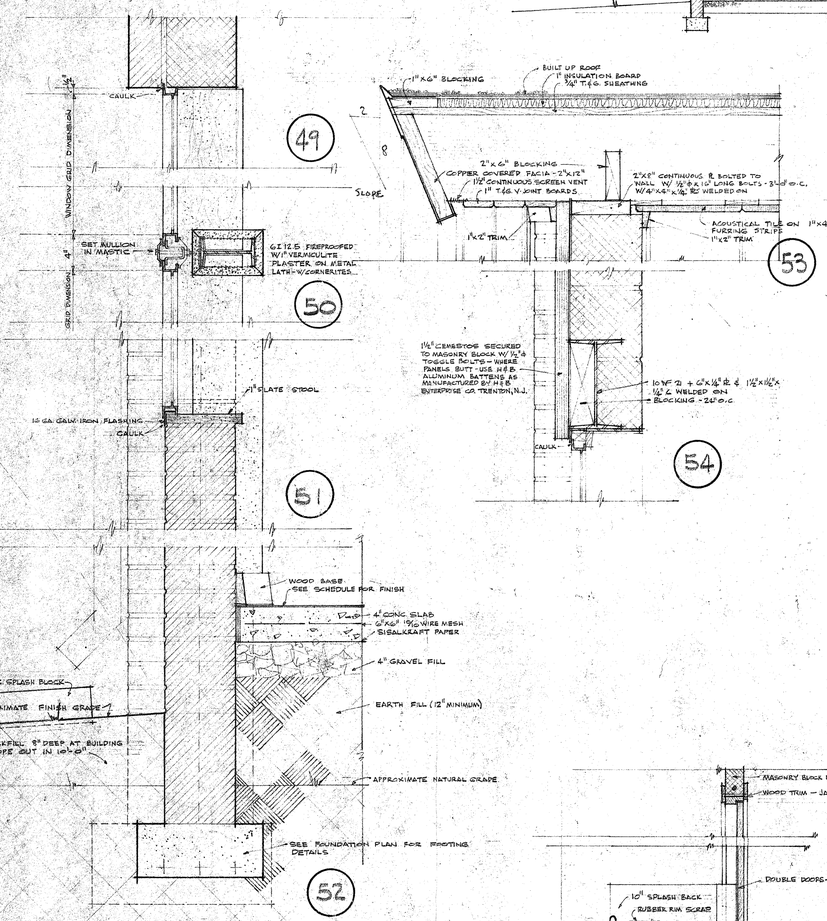
SHEET T3

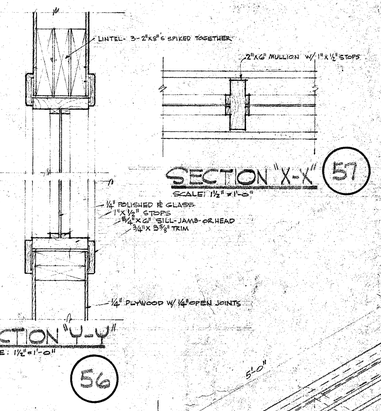




CROSS SECTION - LUNCH ROOM & SHOP

SCALE: ½"=1'-0" 61



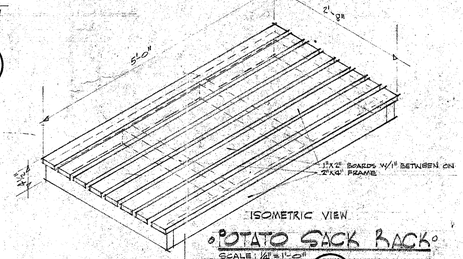


SECTION "X-X"

SCALE: 1½"=1'-0" 57

SECTION "Y-Y"

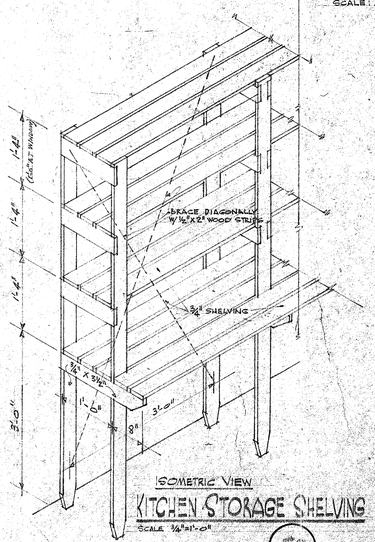
SCALE: 1½"=1'-0" 56



ISOMETRIC VIEW

POTATO SACK RACK

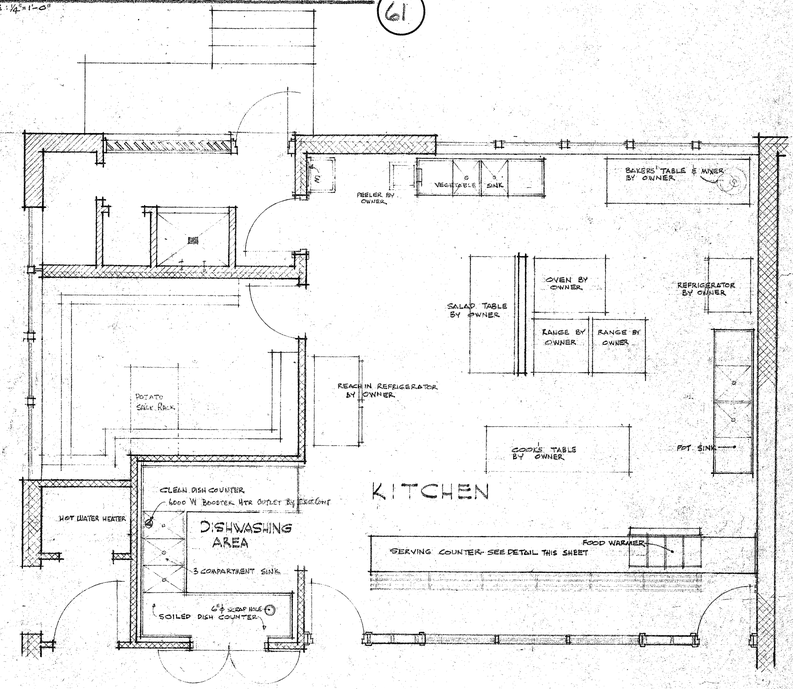
SCALE: 1½"=1'-0" 58



ISOMETRIC VIEW

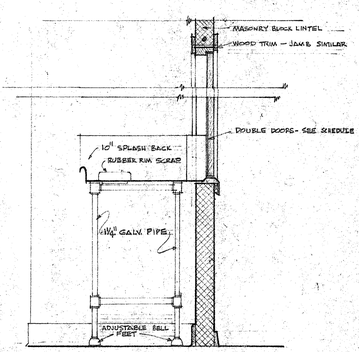
KITCHEN STORAGE SHELVING

SCALE: ¾"=1'-0" 59



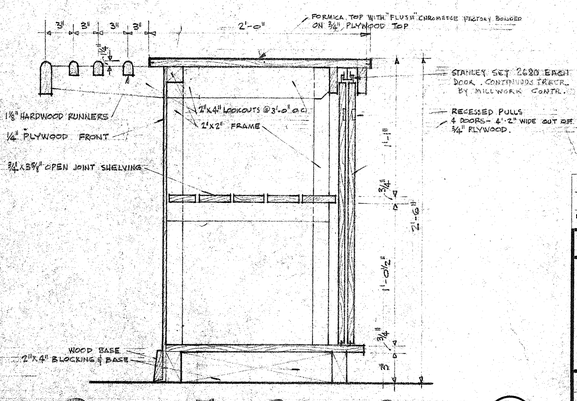
KITCHEN PLAN

SCALE: ⅛"=1'-0" 62



SECTION: SOILED DISH COUNTER

SCALE: ¾"=1'-0" 55



SECTION THRU SERVING COUNTER

SCALES: 1½"=1'-0" 60

REVISION NO.	DESCRIPTION	DATE	BY

TYPICAL DETAILS (48 THRU 62)

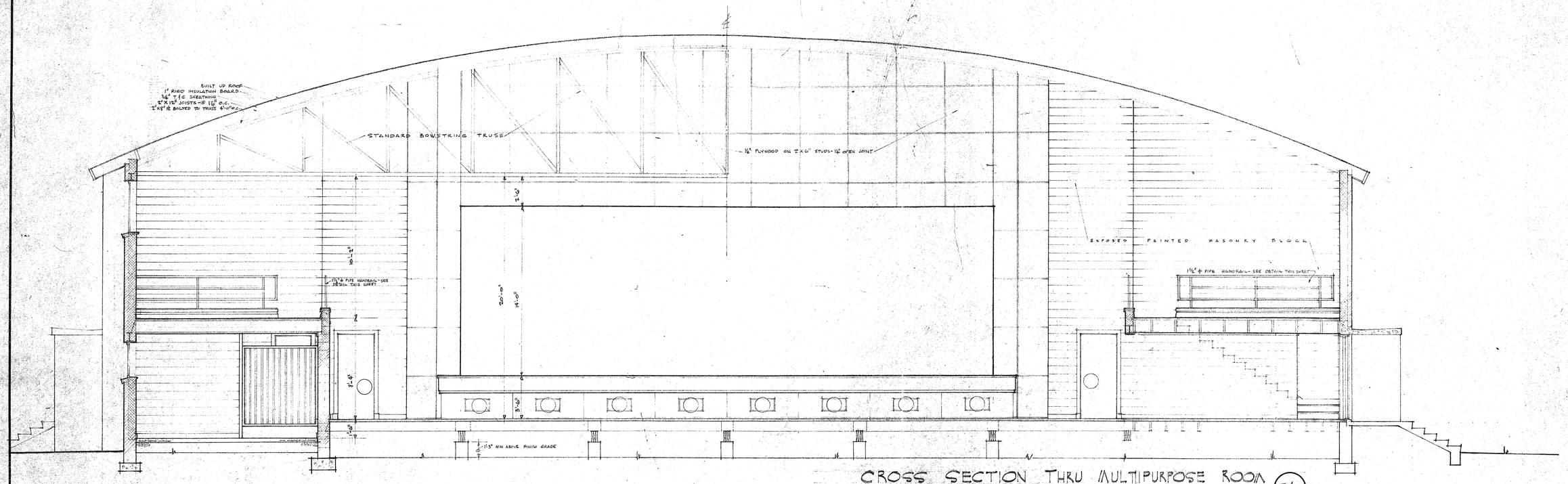
ONSLOW COUNTY SCHOOLS

BOARD OF EDUCATION ONSLOW COUNTY
L. PARSONS BROWN, CH'MN. - ISHAM B. HUDSON SUPT

DESIGNED BY LPM
DRAWN BY LPM
CHECKED BY
30 DEC 1952

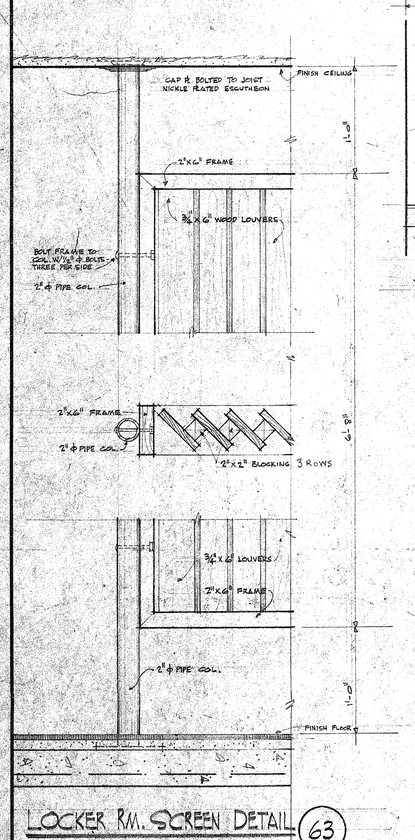
LESLIE N BONEY ARCHITECT
WILMINGTON NORTH CAROLINA

SHEET T4



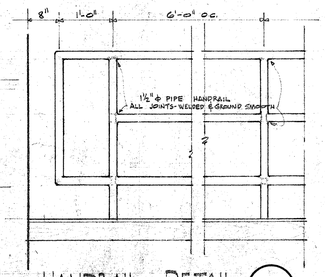
CROSS SECTION THRU MULTIPURPOSE ROOM (74)

SCALE: ⅛"=1'-0"



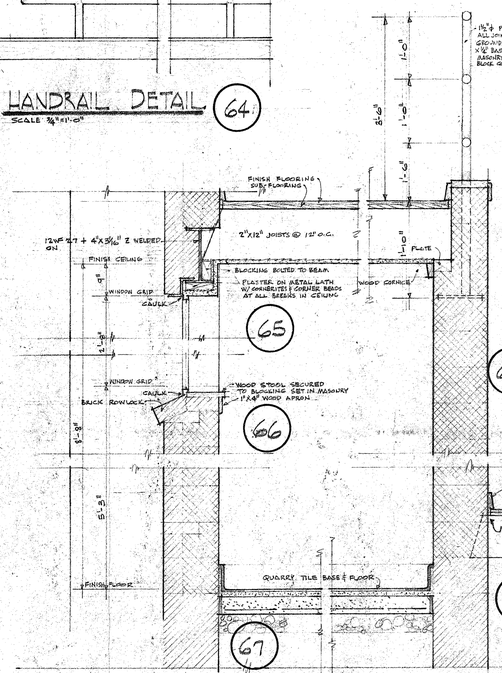
LOCKER RM. SCREEN DETAIL (63)

SCALE: 1½"=1'-0"



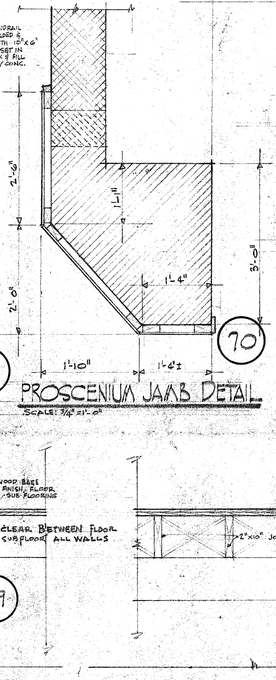
HANDRAIL DETAIL (64)

SCALE: ⅜"=1'-0"



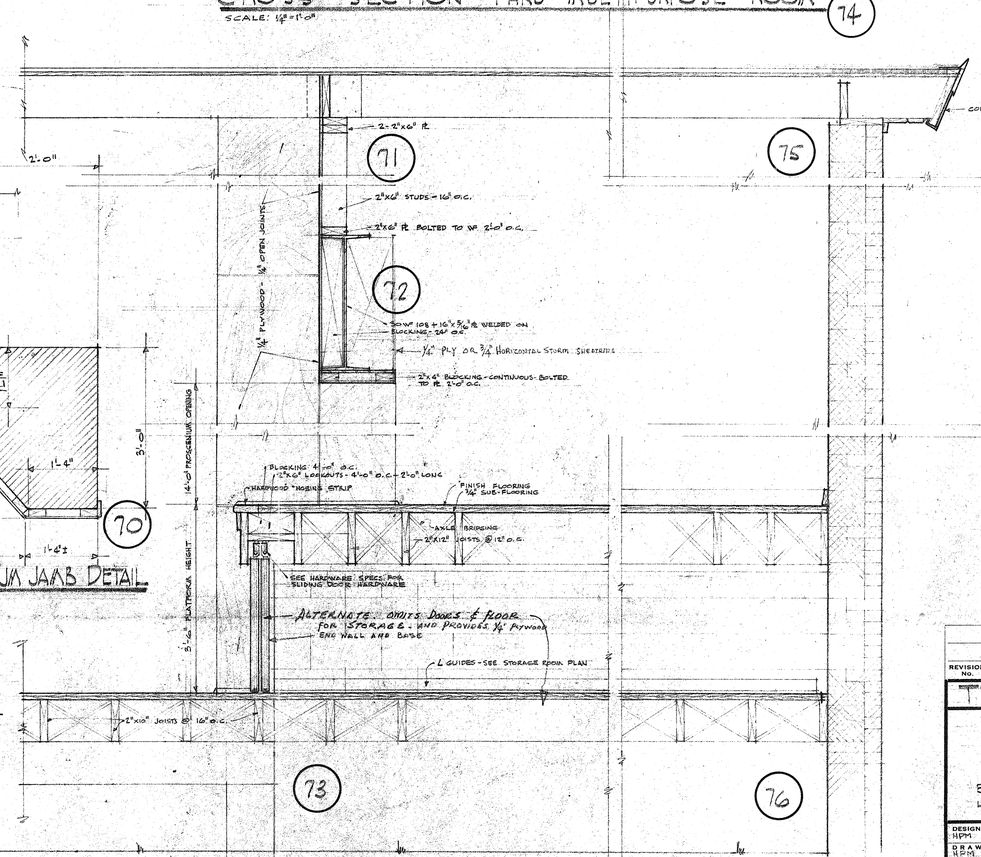
SECTION THRU LOCKER ROOM

SCALE: ¾"=1'-0"



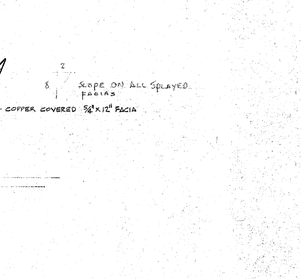
PROSCENIUM JAMB DETAIL (70)

SCALE: ¾"=1'-0"



SECTION THRU PLATFORM

SCALE: ¾"=1'-0"



71 72 73 75 76

REVISION NO.	DESCRIPTION	DATE	BY

TYPICAL DETAILS (63 THRU 76)

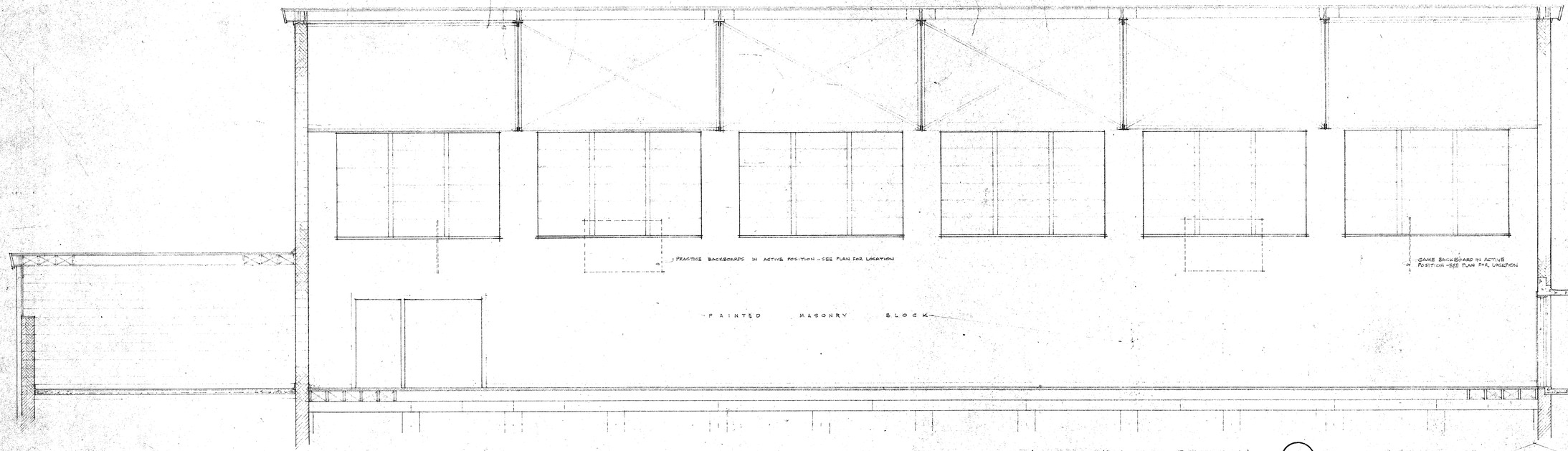
ONSLOW COUNTY SCHOOLS

BOARD OF EDUCATION ONSLOW COUNTY
L. PARSONS BROWN, CH'MN - ISHAM B HUDSON SUPT

DESIGNED BY HPM CWB
DRAWN BY HPM
CHECKED BY
30 DEC 1952

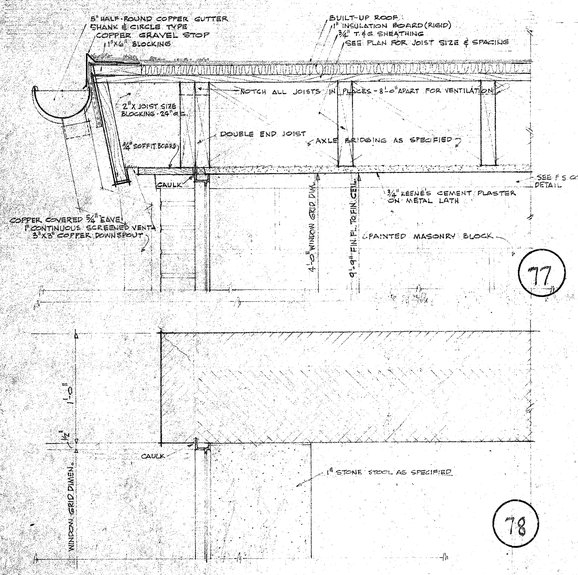
LESLIE N BONEY ARCHITECT
WILMINGTON NORTH CAROLINA

SHEET T5



LONGITUDINAL SECTION (80)

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



NOTE: FOR SILL CONDITION SEE DETAIL #5 SHT. # T-1
FOR FOUNDATION SEE DETAIL #67 SHT # T-5

WALL SECTION "77-78"

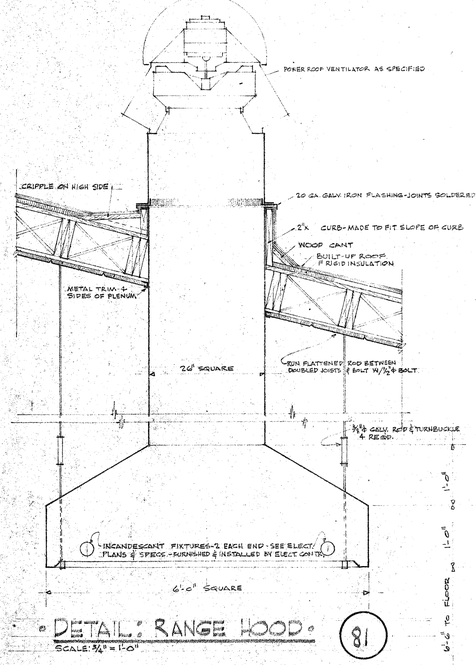
SCALE: 1 1/2" = 1'-0"

(77)

(78)

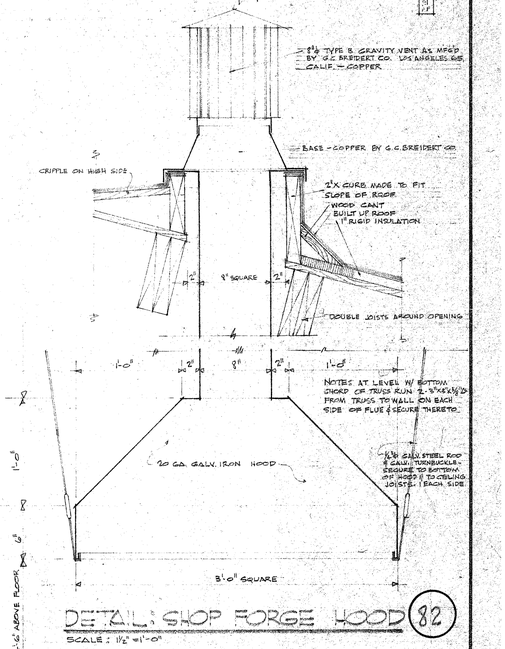
CONCRETE HOOD DETAIL (79)

SCALE: 1 1/2" = 1'-0"



DETAIL: RANGE HOOD (81)

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



DETAIL: SHOP FORGE HOOD (82)

SCALE: 1 1/2" = 1'-0"

REVISION NO.	DESCRIPTION	DATE	BY

TYPICAL DETAILS (77 THRU 82)

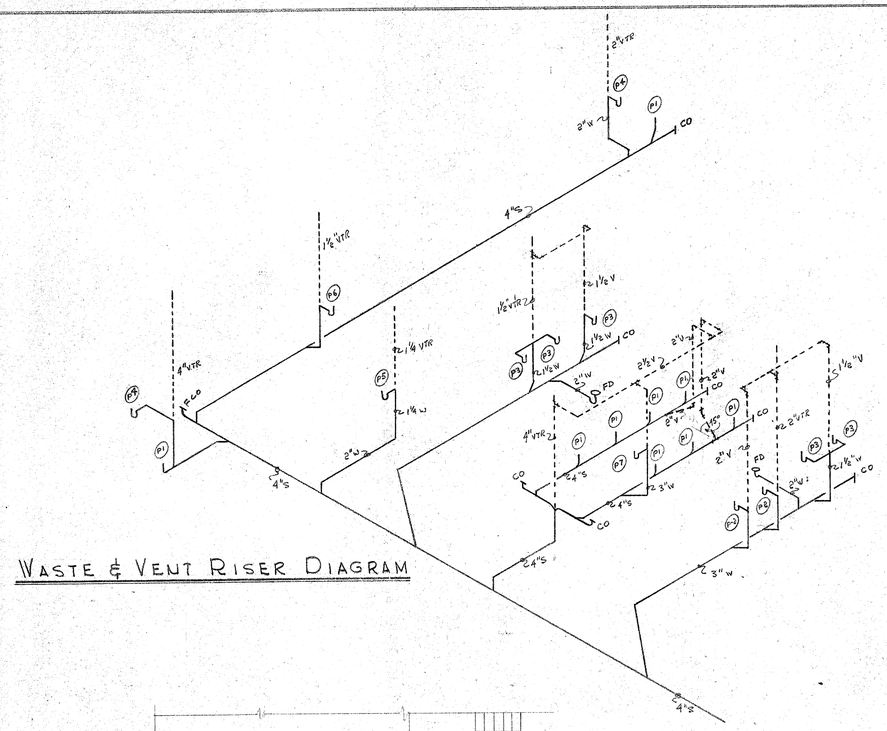
ONSLOW COUNTY SCHOOLS

BOARD OF EDUCATION - ONSLOW COUNTY
L. PARSONS BROWN, CH'MN - ISHAM B. HUDSON - SUPT

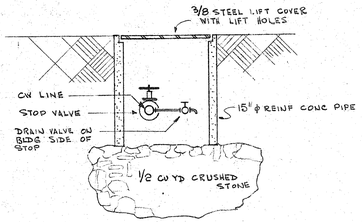
DESIGNED BY	LPM
DRAWN BY	LPM
CHECKED BY	[illegible]
	30 DEC 1952

LESLIE N BONEY ARCHITECT
WILMINGTON NORTH CAROLINA

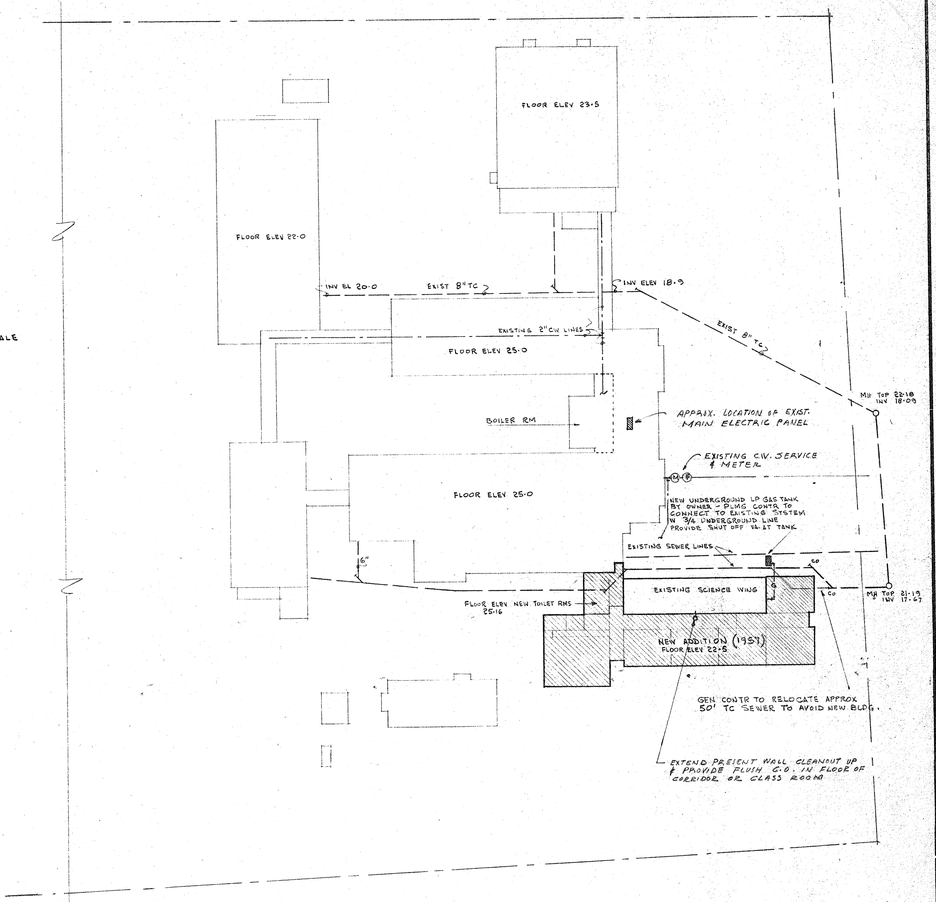
SHEET 16



WASTE & VENT RISER DIAGRAM

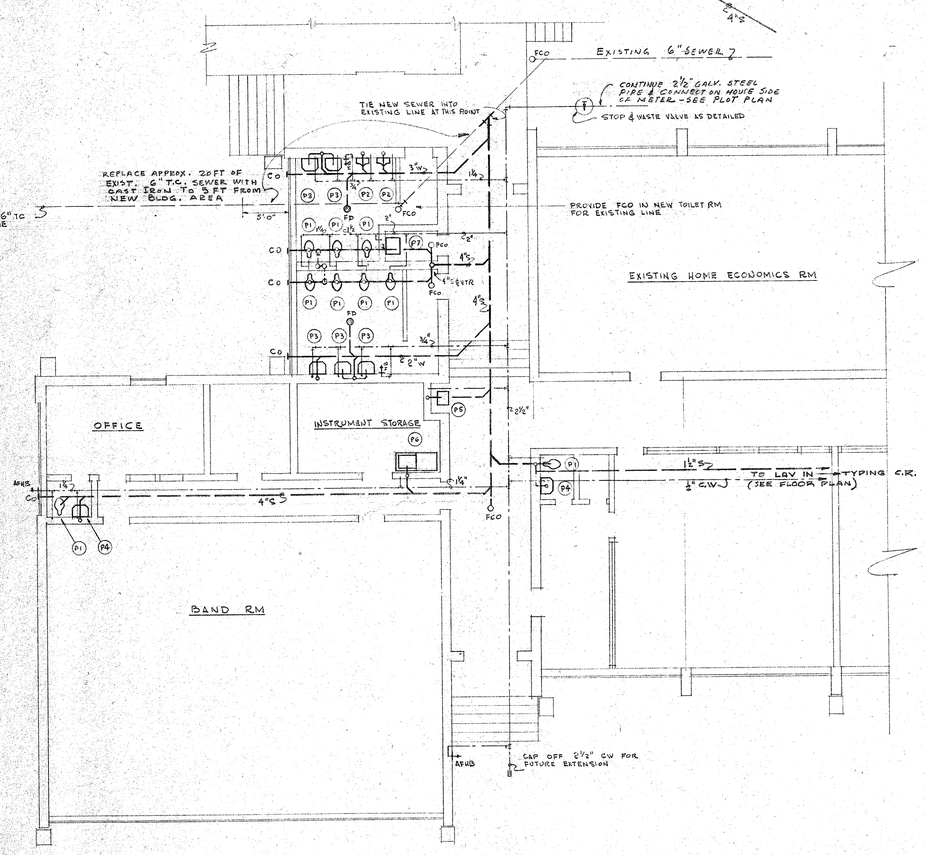


DETAIL OF STOP & WASTE VALVE NO SCALE



SITE PLAN

SCALE 1"=50'



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

FIXTURE SCHEDULE

SYMBOL	BRIEF DESCRIPTION	MOUNTING HT	CW	HW	WASTE
P-1	FLUSH VALVE WATER CLOSET	15" TO RIM	1"		4"
P-2	FLUSH VALVE URINAL	24" TO RIM	3/4"		2"
P-3	LAVATORY	30" TO RIM	1/2"		1¼"
P-4	LAVATORY	30" TO RIM	1/2"		1¼"
P-5	ELECTRIC WATER COOLER	36" TO NOZZLE	1/2"		1¼"
P-6	INSTRUMENT WASHING SINK FURNISHED BY GEN CONT.	SEE ARCH DWG	1/2"		1½"
P-7	SERVICE SINK	31" TO RIM	3/4"		3"

LEGEND

- SOIL OR WASTE LINE
- VENT LINE
- COLD WATER
- GATE VALVES
- GLOBE VALVE
- HB HOSE BIBB
- AFHB ANTI-FREEZE HOSE BIBB
- FCO FLUSH CLEAN OUT
- FD FLOOR DRAIN

REVISION NO.	DESCRIPTION	DATE	BY

PLUMBING & PLOT PLAN FOR ELEC. & PLBG.

BAND ROOM & FIVE CLASSROOMS ADDITION

RICHLANDS HIGH SCHOOL

RICHLANDS, N. C.

BOARD OF EDUCATION: ONSLOW COUNTY

CLYDE F. HURST, CHAIRMAN - ISHAM B. HUDSON, SUPT.

WILLIAM B. LELAND
ENGINEER
CHARLESTON, S. C.

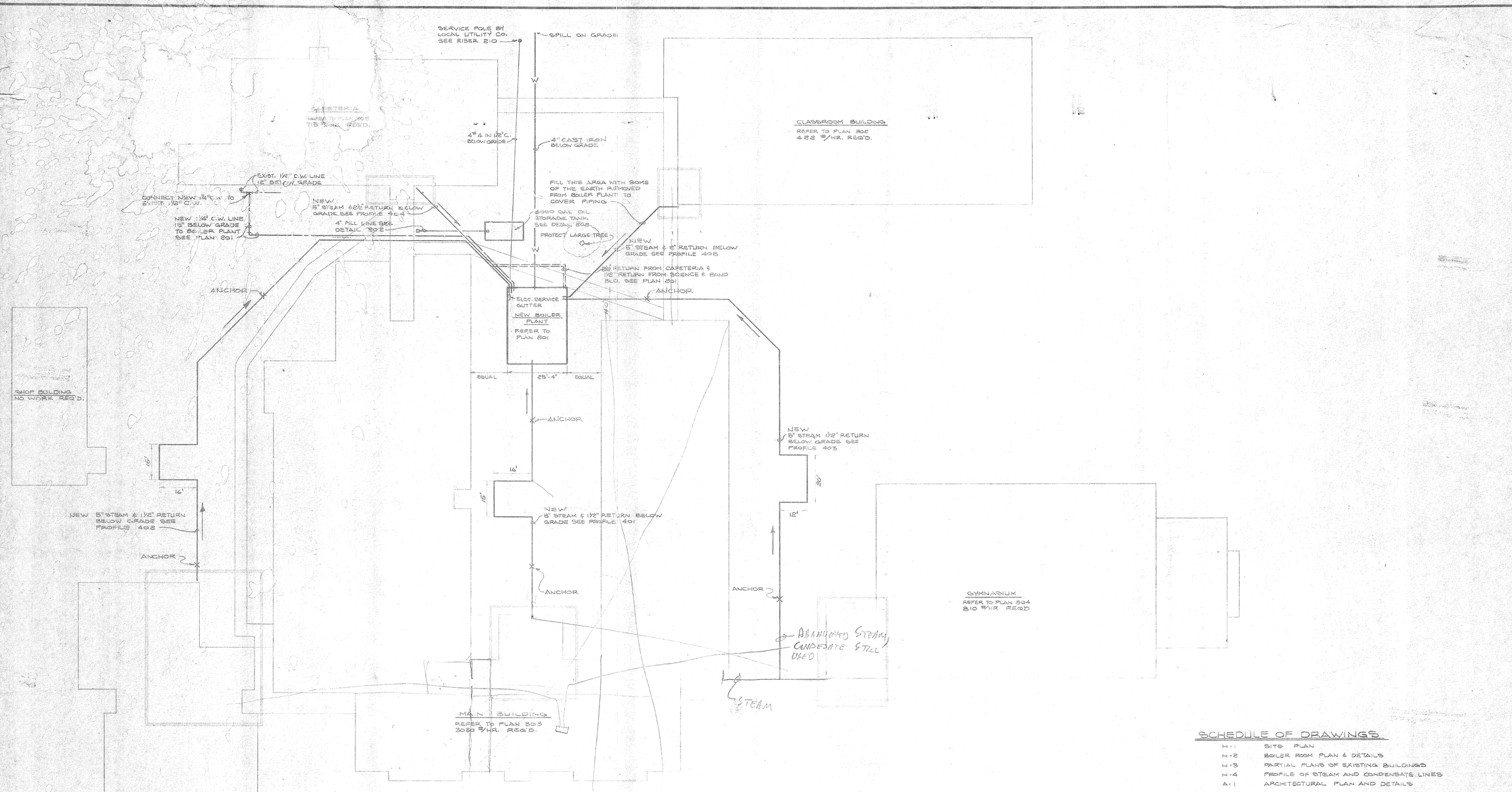
N.C. REG. NO. 1051
JOB No 4057
SHEET No EP-1
DATE: AUG 1957

DESIGNED BY: ECH
DRAWN BY: ECH
CHECKED BY: W&L CWG

5 NOV. 1957

LESLIE N BONEY ARCHITECT
WILMINGTON NORTH CAROLINA

SHEET 6



101 SITE PLAN SCALE: 1" = 20'-0"

LEGEND

- STEAM SUPPLY PIPING
- CONDENSATE RETURN PIPING
- COLD WATER PIPING
- W — WASTE PIPING
- GATE VALVE
- GLOBE VALVE
- CHAIN OPERATED GATE VALVE
- FLOAT OPERATED VALVE
- CHECK VALVE
- STRAINER
- UNION
- DIRECTION OF FLOW
- GRADE DIRECTION
- INCANDESCENT FIXTURE
- S — SWITCH
- 120 VOLT DUPLEX RECEPTACLE

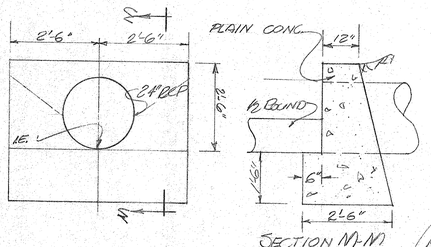
SCHEDULE OF DRAWINGS

REVISIONS

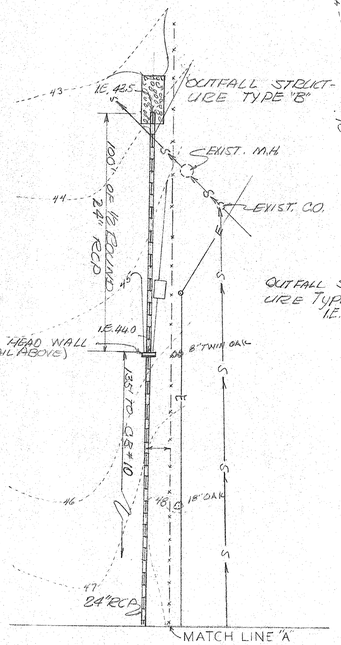
H. L. BUFFALOE & ASSOCIATES, CONSULTING ENGINEERS
RALEIGH, NORTH CAROLINA

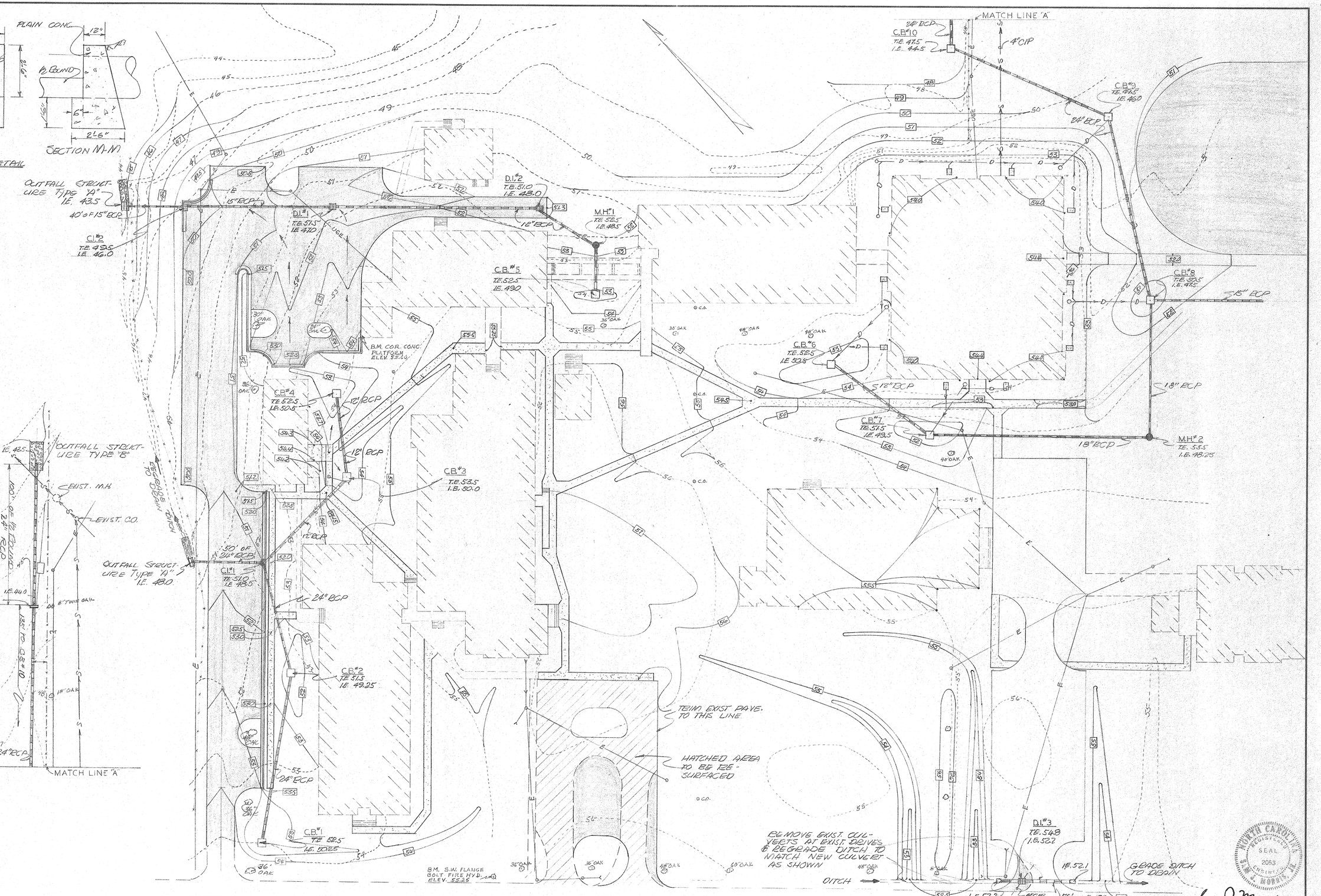
PROJECT
CENTRAL HEATING PLANT
RICHLANDS HIGH SCHOOL

DRAWN BY W.L.B.
CHECKED BY R.E.N. H.L.B.
JOB NO. 1840
DATE APRIL 1, 1962
SHEET NO. 1
OF TOTAL 4



HEAD WALL DETAIL
SCALE: ½"=1'-0





PLAN
SCALE: 1"=30'

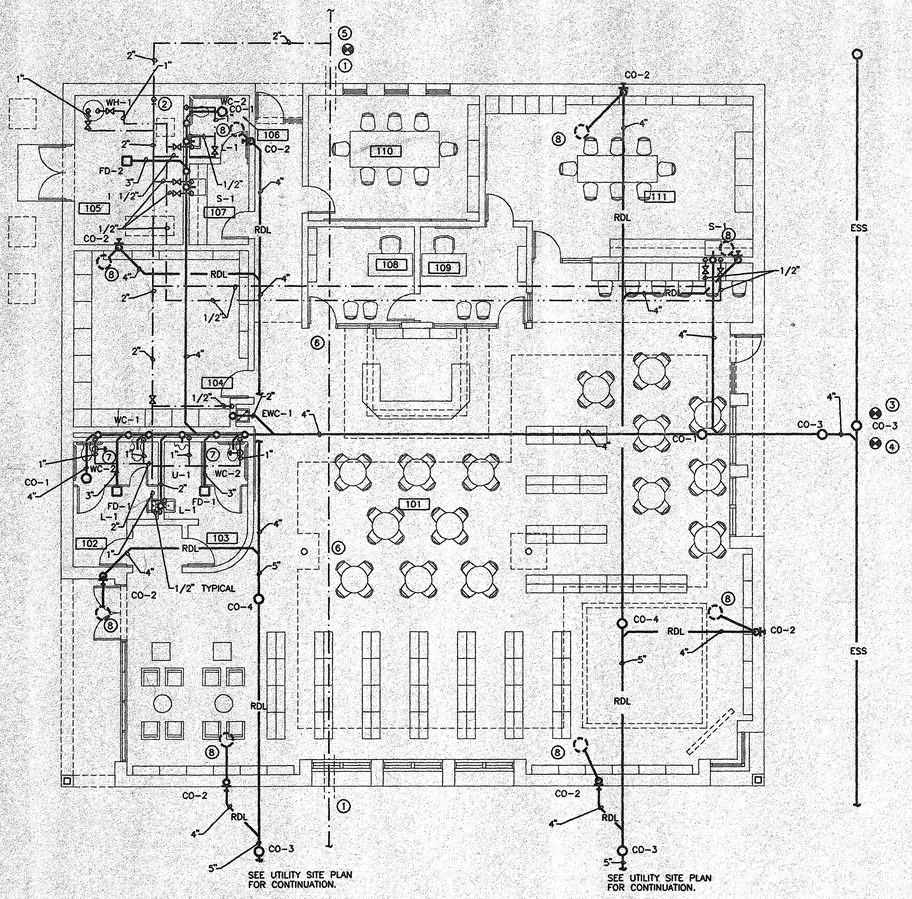
NORTH CAROLINA REGISTERED SEAL 2053 ARCHITECT SAM J. MORRIS JR.

Sam J. Morris Jr.

PROJ. NO: 7725	RENOVATIONS AND SITE IMPROVEMENTS TO RICHLANDS ELEMENTARY SCHOOL ONSLOW COUNTY BOARD OF EDUCATION
DATE: 2/22/77	
DRAWN BY: H.H.S.M.	

S2

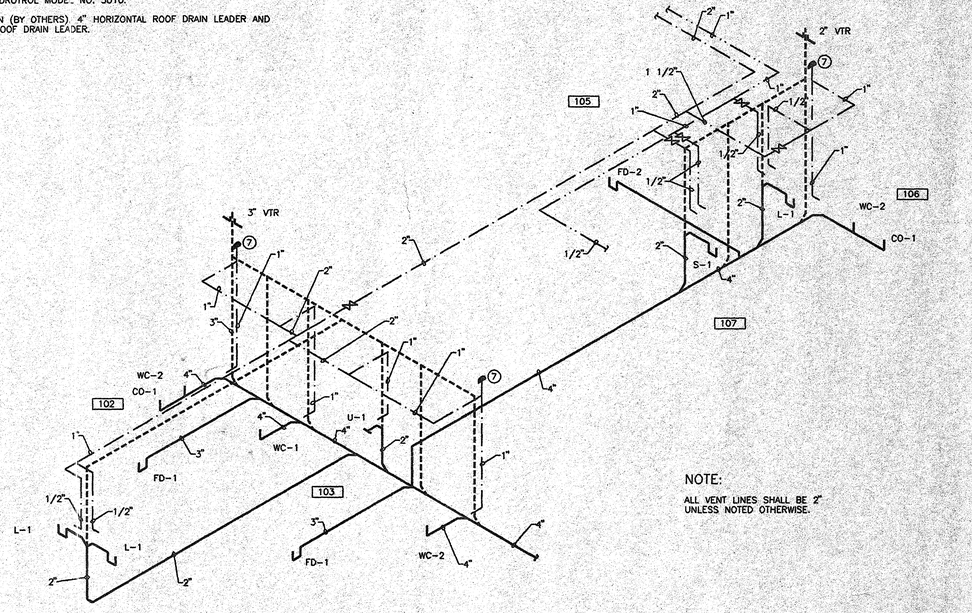
THEODORE J. PETERS ARCHITECT JACKSONVILLE NORTH CAROLINA



1 / P-2 PLUMBING PLAN
1/8" = 1'-0"

NOTES: (AS INDICATED ON THIS PLAN BY A NUMBER IN A ◯)

1. THE PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL A DUCTILE IRON PIPE SLEEVE IN THE EXISTING COLD WATER LINE WHERE IT PASSES BELOW THE BUILDING FOUNDATION.
2. MAIN COLD WATER RISER WITH MAIN CUT-OFF VALVE.
3. PROVIDE AND INSTALL A NEW CLEANOUT (CO-3) ON THE EXISTING WASTE LINE AS SHOWN.
4. THE PLUMBING CONTRACTOR SHALL CONNECT TO THE EXISTING WASTE LINE AS SHOWN.
5. THE PLUMBING CONTRACTOR SHALL CONNECT TO THE EXISTING COLD WATER LINE AS SHOWN.
6. THE PLUMBING CONTRACTOR SHALL REROUTE THE EXISTING COLD WATER LINE IF REQUIRED TO MISS FOOTING.
7. THE PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL A SMITH, OR EQUAL, HYDROTROL MODEL NO. 5010.
8. 4" ROOF DRAIN (BY OTHERS) 4" HORIZONTAL ROOF DRAIN LEADER AND 4" VERTICAL ROOF DRAIN LEADER.



2 / P-2 PLUMBING RISER
NOT TO SCALE

NOTE:
ALL VENT LINES SHALL BE 2" UNLESS NOTED OTHERWISE.

SHULLER FERRIS ASSOCIATES
ARCHITECTS
119 1/2 Broadfoot Ave
Fayetteville, NC 28305
919 484-4966 Phone
919 484-1466 Fax

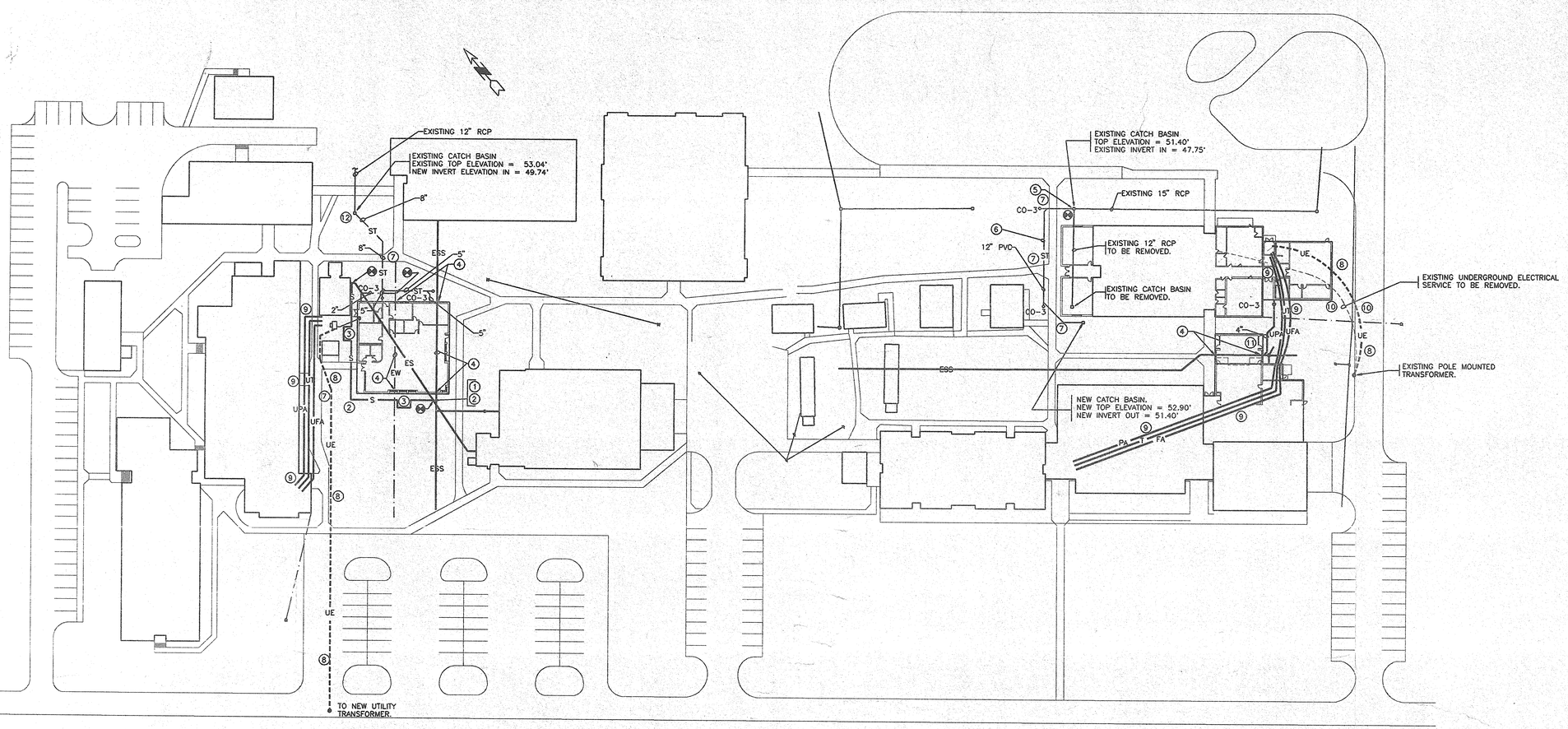
Project #: 95039
Drawn By: TMB
Checked By: SDS
Issue Date: 16 NOV 1995
Revisions:

pdc
CONSULTING ENGINEERS
PROGRESSIVE DESIGN COLLABORATIVE, Ltd.
POST OFFICE BOX 61249
RALEIGH, N. C. 27661-1249
TELEPHONE 919-790-9989

NORTH CAROLINA PROFESSIONAL SEAL 5040 ENGINEER MARK G. HOOMAN
11/10/95

NEW MEDIA CENTER FOR RICHLANDS ELEMENTARY SCHOOL
ONSLOW COUNTY BOARD OF EDUCATION
ONSLOW COUNTY, N.C.

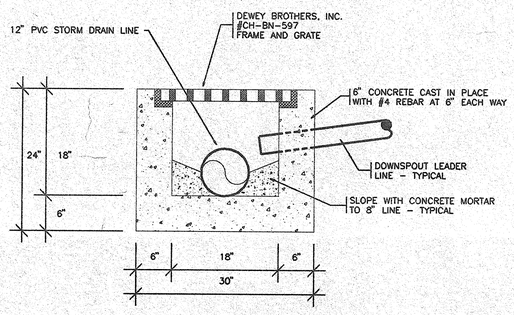
P-2



1 U-1 UTILITY SITE PLAN
1" = 50'

NOTES: (AS INDICATED ON THIS PLAN BY A NUMBER IN A ◯)

1. CONNECT NEW 5" ACTIVE STEAM LINES AND 1 1/2" ACTIVE CONDENSATE LINES TO EXISTING LINES. REMOVE THE EXISTING LINES BETWEEN THE CONNECTION POINTS. FIELD VERIFY LOCATION OF PIPES. COORDINATE ROUTING WITH OTHER PRIME CONTRACTORS.
2. INSTALL PIPE ANCHOR AT ELBOW JOINT.
3. INSTALL A 6' x 6' x 6' EXPANSION LOOP IN THE PIPING.
4. THE PLUMBING CONTRACTOR SHALL SLEEVE THE EXISTING WASTE AND WATER LINES WITH A SCHEDULE 40 BLACK STEEL SLEEVE WHERE THEY CROSS BELOW THE BUILDING FOOTING OR PASS THROUGH THE FOUNDATION WALL. SLEEVE SHALL EXTEND FOR A MINIMUM OF 2'-0" ON EITHER SIDE OF THE FOOTING OR FOUNDATION WALL.
5. THE PLUMBING CONTRACTOR SHALL CONNECT THE NEW 12" PVC STORM SEWER PIPING TO THE EXISTING CATCH BASIN. HE SHALL SEAL THE HOLE CREATED BY REMOVAL OF THE EXISTING 12" RCP WITH CONCRETE. REWORK EXISTING INVERT FOR A SMOOTH FLOW.
6. MINIMUM SLOPE OF NEW 12" DUCTILE IRON PIPE = 1/2% OR .005 FEET OF FALL FOR EACH 1'-0" OF RUN.
7. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND PATCHING THE SIDEWALK WHERE REQUIRED.
8. PROPOSED PRIMARY CONDUCTOR LOCATION. SEE GENERAL NOTES FOR ADDITIONAL INFORMATION.
9. NEW 2" CONDUITS FOR FIRE ALARM, TELEPHONE AND PUBLIC ADDRESS SYSTEMS ARE TO BE CONNECTED FROM THE JUNCTION BOXES SHOWN ON THE ELECTRICAL DRAWING E-1 TO THE RELATED SYSTEM IN THE ADMINISTRATION AREA. MASTER TIME CLOCK CAN USE ANY ONE OF THE 2" CONDUITS INDICATED.
10. SEE ELECTRICAL RISER, SHEET E-4, FOR ADDITIONAL INFORMATION.
11. CONNECT THE NEW WASTE LINE FROM THE BUILDING ADDITION TO THE EXISTING SANITARY SEWER ON THE OUTFALL SIDE OF THE GREASE INTERCEPTOR.
12. THE PLUMBING CONTRACTOR SHALL CONNECT THE NEW 8" PVC STORM SEWER PIPING TO THE EXISTING CATCH BASIN. REWORK EXISTING INVERT FOR A SMOOTH FLOW.



SECTION AT CATCH BASIN
30" x 30" x 24" DEEP

2 U-1 DETAIL
NOT TO SCALE

GENERAL NOTES

1. IT IS EACH CONTRACTORS RESPONSIBILITY TO FIELD LOCATE ALL UNDERGROUND UTILITIES, STORM DRAINS, ETC. WHICH MAY OR MAY NOT BE SHOWN ON THESE DRAWINGS, AND TO AVOID CONFLICT OF HIS INSTALLATION WITH SAME. REPAIR OF DAMAGE SHALL BE AT NO EXTRA COST TO THE OWNER. ALL REPAIRS SHALL BE MADE TO THE SATISFACTION OF THE ENGINEER.
2. MARKER TAPES SHALL BE USED IN ALL TRENCHES.
3. THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS.
4. THE CONTRACTOR SHALL MAKE A COMPLETE REVIEW OF THE PLANS, SCHEDULES, AND DETAILS PRIOR TO INSTALLATION AND REVIEW ANY CONFLICTS WITH THE ENGINEER.
5. SEE THE ARCHITECTURAL SITE PLANS FOR GROUND CONTOURS AND WORK BY THE GENERAL CONTRACTOR.
6. THE CONTRACTOR SHALL FILL ALL TRENCHES LEVEL WITH EXISTING GRADE. FINAL GRADING RE-SEEDING ETC. SHALL BE BY THE GENERAL CONTRACTOR.
7. THE PLUMBING CONTRACTOR SHALL SEE SHEET P-1 FOR ADDITIONAL NOTES PERTAINING TO SITE WORK.
8. ALL STEAM AND CONDENSATE WORK IS BY THE MECHANICAL CONTRACTOR. REFER TO THE MECHANICAL PLANS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
9. THE ELECTRICAL CONTRACTOR SHALL PAY ANY ADDITIONAL CHARGES NOT COVERED BY THE UTILITY COMPANY FOR THE INSTALLATION OF NEW UNDERGROUND PRIMARY CONDUCTORS.
10. ALL STORM AND SANITARY SEWER INVERTS ARE BASED ON INFORMATION PROVIDED BY THE ARCHITECT AND ARE ASSUMED CORRECT. THE PLUMBING CONTRACTOR SHALL FIELD VERIFY ALL STORM AND WASTE CONNECTIONS PRIOR TO INSTALLATION AND ADJUST PIPE AS REQUIRED.

SYMBOL LEGEND

SYMBOL	DESCRIPTION
ESS	EXISTING SANITARY SEWER PIPING
SS	SANITARY SEWER PIPING
EW	EXISTING COLD WATER PIPING
	COLD WATER PIPING
ES	EXISTING STEAM AND CONDENSATE PIPING
S	STEAM AND CONDENSATE PIPING
	EXISTING STORM SEWER PIPING
ST	STORM SEWER PIPING
	POINT OF CONNECTION.
UE	NEW UNDERGROUND PRIMARY CONDUCTORS. (BY LOCAL UTILITY COMPANY)
UPA	NEW UNDERGROUND 2" CONDUIT FOR PUBLIC ADDRESS
UT	NEW UNDERGROUND 2" CONDUIT FOR TELEPHONE
UFA	NEW UNDERGROUND 2" CONDUIT FOR FIRE ALARM

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NORTH CAROLINA PROFESSIONAL SEAL 5040 ENGINEER TIMOTHY S. HOOGHKIRK
11/30/95

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ONSLOW COUNTY, N.C.

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