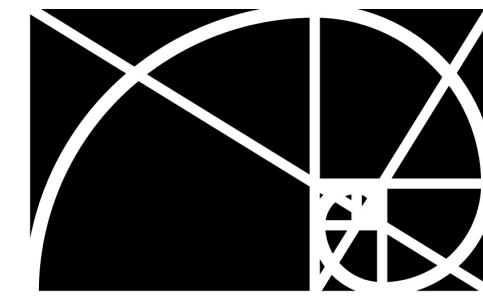


# Carolina Charter Academy Exp.

Angier, North Carolina



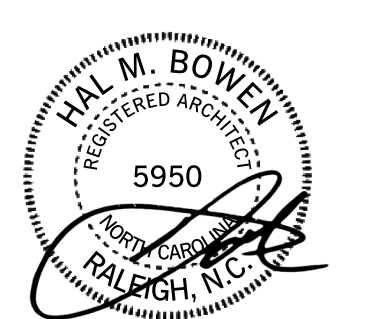
**RATIO**

Reviewed For Code Compliance By:  
D. Banks Wallace  
Chief Deputy Fire Marshal  
03/11/2021 9:39:00 AM

PACKAGE

## 100% Construction Documents

SEAL | DATE



OWNER

**HIGHMARK**

746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

ARCHITECT

**RATIO**

227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
(919) 821-0805

STRUCTURAL ENGINEER

**Lynch Mykins Structural Engineers**

301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-782-1833

CIVIL ENGINEER

**Timmons Group**

5410 Trinity Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938

CONTRACTOR

**Swinerton**

5 West Hargett Street  
Suite 800, Raleigh, NC 27601  
(919) 867-4780

VOLUME

1

RATIO PROJECT NO.

20408.000

DATE

2/24/2021

PROJECT ADDRESS

8529 Highway 55  
Angier, North Carolina  
27501

VOLUME

1

SET NO.

2/24/2021

DATE

PACKAGE

100% Construction Documents

RATIO PROJECT NO.

20408.000

PROJECT NAME

Carolina Charter Academy Exp.



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Carolina Charter Academy Exp.
8529 Highway 55
Angier, North Carolina 27501

Owner
Highmark School Development
746 East Winchester Street
Suite 150
Murray, Utah 84107
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Architect
RATIO
227 Fayetteville Street, Suite 301
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919-821-0805

Structural Engineer
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Suite 105
Raleigh, North Carolina 27603
919-782-1833

Civil Engineer
Timmons Group
5410 Trinity Road
Suite 102
Raleigh, North Carolina 27607
919-866-4938

GENERAL PROJECT NOTES

- A. THE FOLLOWING GENERAL NOTES APPLY TO THESE CONTRACT DOCUMENTS AND ARE NOT SPECIFIC TO ANY ONE DISCIPLINE.
B. IT IS THE CONTRACTORS RESPONSIBILITY TO REVIEW AND COORDINATE THE WORK OF ALL SUB-CONTRACTORS, TRADES AND SUPPLIERS WITH THE REQUIREMENTS OF THE CONTRACT BEFORE COMMENCING CONSTRUCTION, AND TO ASSURE THAT ALL PARTIES ARE AWARE OF ALL REQUIREMENTS, REGARDLESS OF WHERE THE REQUIREMENTS OCCUR IN THE CONTRACT DOCUMENTS, WHICH MIGHT AFFECT THE WORK OF THAT PARTY.
C. PARTIAL SETS OF DRAWINGS ARE INCOMPLETE AND SHOULD NOT BE DISTRIBUTED OR UTILIZED BY THE CONTRACTOR.
D. THE CONSTRUCTION DOCUMENTS ESTABLISH DETAILED MINIMUM REQUIREMENTS FOR THE CONSTRUCTION OF THE PROJECT.
E. THE GENERAL NOTES, SYMBOLS AND DEFINITIONS APPLICABLE ONLY TO EACH DISCIPLINE CAN BE FOUND AT THE FRONT OF EACH DISCIPLINES PORTION OF THE SET OF DRAWINGS AND IS LISTED AS PART OF THE OVERALL PROJECT INDEX OF DRAWINGS.
F. BASIC FIRE PROTECTION AND THE EXITING SCHEME ARE ILLUSTRATED BY THE LIFE SAFETY PLAN(S) AND APPLICABLE FIRE AND BUILDING CODE SUMMARY ON SHEET G-003.
G. THE ARCHITECTURAL DRAWINGS ESTABLISH, COORDINATE, AS WELL AS TAKE PRECEDENCE FOR THE FINISH APPEARANCE OF ALL EXPOSED ELEMENTS OF THE WORK OF ALL TRADES INCLUDING THAT WORK WHICH IS ILLUSTRATED PRIMARILY ON DRAWINGS OF OTHER DISCIPLINES. IF THERE IS A DISCREPANCY IN THE NUMBER OF FIXTURES, DEVICES, ETC. SHOWN ON ARCHITECTURAL DOCUMENTS AND THE DOCUMENTS OF OTHER DISCIPLINES CONTRACTOR'S PRICING SHALL ACCOUNT FOR THE GREATER QUANTITY SHOWN.
H. THE DRAWINGS MAY MAKE REFERENCE TO AND/OR ILLUSTRATE ITEMS WHICH ARE NOT PART OF THE WORK OF THE CONTRACT. THESE NOT IN CONTRACT ITEMS ARE REFERENCED AND/OR ILLUSTRATED FOR THE CONTRACTORS REFERENCE, INFORMATION, AND COORDINATION ONLY.
I. THE CONTRACTOR IS RESPONSIBLE TO COMPLY WITH APPLICABLE LAWS, CODES, REGULATIONS, AND ORDINANCES OF THE PLACE (CITY, COUNTY, DISTRICT AND STATE) WHERE THE PROJECT IS LOCATED. SUCH REQUIREMENTS MAY NOT BE REFLECTED BY THESE CONTRACT DOCUMENTS.
J. EXISTING CONDITIONS SHOWN ARE FROM AVAILABLE RECORD DRAWINGS AND OR VISUAL FIELD SURVEYS. THE CONTRACTOR SHALL VERIFY ACTUAL EXISTING CONDITIONS AT THE SITE PRIOR TO SUBMITTING A BID. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
K. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AND SIMILAR RELEASES REQUIRED FOR THE CONSTRUCTION AND OCCUPANCY OF THE PROJECT. THE CONTRACTOR SHALL FURNISH COPIES OF ALL SUCH ITEMS TO THE OWNER AND ARCHITECT WITHIN 10 DAYS OF RECEIPT OF SUCH ITEMS. IF PERMITS ARE ISSUED SUBJECT TO CERTAIN CONDITIONS OR REVISIONS TO THE WORK OR IF PERMITS ARE DELAYED FOR ANY REASON, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ARCHITECT.
L. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO MAINTAIN AND PROTECT NEW WORK AS WELL AS EXISTING SYSTEMS AND ELEMENTS WHICH ARE TO REMAIN. ANY DAMAGE TO SUCH SYSTEMS AND ELEMENTS SHALL BE IMMEDIATELY REPAIRED IN A MANNER ACCEPTABLE TO THE ARCHITECT. IF SATISFACTORY REPAIRS CANNOT BE MADE, THE CONTRACTOR SHALL REPLACE SYSTEMS AND ELEMENTS WITH LIKE NEW QUALITY ACCEPTABLE TO THE ARCHITECT. ALL REPAIRS AND REPLACEMENT COST SHALL BE THE FINANCIAL RESPONSIBILITY OF THE CONTRACTOR.

REGION MAP



PROJECT LOCATION



SEAL | DATE 2/24/2021 | CODE CERT.

Professional seal for Hal M. Bowen, Registered Architect, No. 5950, State of North Carolina, Raleigh, NC. Includes text: I HEREBY CERTIFY THAT THE BUILDING CODE SUMMARY COMPLETED ON THIS PAGE IS ACCURATE FOR THE TYPE OF BUILDING AND OCCUPANCY INTENDED FOR THIS PROJECT AND THAT THESE PLANS ARE COMPLETE AND COMPLY WITH ALL APPLICABLE STATE AND LOCAL BUILDING REGULATIONS.

SHEET ISSUE

Table with 3 columns: Issue No., Description, Date. Row 1: 1, 100% Construction Documents, 2/24/2021.



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PROJECT NO. 20408.000

SHEET TITLE
SHEET INDEX, PROJ LOCATION

SHEET NUMBER

G-102

**GENERAL LIFE SAFETY PLAN NOTES**

- A. REFER TO SHEET G-104 FOR CODE SUMMARY.
- B. REFER TO DOOR SCHEDULE FOR REQUIRED DOOR RATING.
- C. REFER TO INTERIOR PARTITION TYPES AND FLOOR PLAN FOR ADDITIONAL PARTITION REQUIREMENTS INCLUDING WALL HEIGHT, UL DESIGN, AND FIRE RATINGS.
- D. REFER TO C-03 FOR BUILDING ADJACENCIES AND PROPERTY LINES.

**LIFE SAFETY PLAN LEGEND**

- RM NAME** — ROOM NAME, AREA & OCCUPANT CAPACITY
- 150 SF — OCCUPANT CAPACITY
- 20 — EXIT DIRECTION ARROW
- 45 — EXIT POPULATION
- 120 — EXIT CAPACITY [POPULATION]
- — PATH OF TRAVEL
- 2-2-2- — FIRE RATED WALL
- RATING REQUIRED..30-MIN, 1-HR, 2-HR, ETC.
- \*35\*35\*35\* — SMOKE BARRIER
- RATING IF REQUIRED..1-HR, 2-HR, ETC.
- — FIRE RATED WALL
- PATTERN INDICATES CODE REQUIRED SEPARATION AS NOTED
- — FIRE SEPARATION AND OTHER ANNOTATION SO NOTED
- 1-HR — FIRE RATED CEILING. RATING AS NOTED...1-HR, 2-HR, ETC.

**OCCUPANT LOAD SCHEDULE**

FLOOR LEVEL	OCCUPANT LOAD
FIRST FLOOR	1278
SECOND FLOOR	755
	2033

**TRAVEL DISTANCE SCHEDULE**

EXIT ROUTE	DISTANCE
TRAVEL DIST. C	125' - 9"
TRAVEL DIST. D	65' - 7"
TRAVEL DIST. E	77' - 3"
TRAVEL DIST. A	114' - 8"
TRAVEL DIST. B	226' - 5"

**Carolina Charter Academy Exp.**  
 8529 Highway 55  
 Angier, North Carolina 27501

**Owner**  
 Highmark School Development  
 746 East Winchester Street  
 Suite 150  
 Murray, Utah 84107  
 801-256-9550

**Architect**  
 RATIO  
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**Civil Engineer**  
 Timmons Group  
 5410 Trinity Road  
 Suite 102  
 Raleigh, North Carolina 27607  
 919-866-4938

SEAL | DATE 2/24/2021 | CODE CERT. I HEREBY CERTIFY THAT THE BUILDING CODE SUMMARY COMPLETED ON THIS PAGE IS ACCURATE FOR THE TYPE OF BUILDING AND OCCUPANCY INTENDED FOR THIS PROJECT AND THAT THESE PLANS ARE COMPLETE AND COMPLY WITH ALL APPLICABLE STATE AND LOCAL BUILDING REGULATIONS

**HAI M. BOWEN**  
 REGISTERED ARCHITECT  
 5950  
 RALEIGH, N.C.

**SHEET ISSUE**

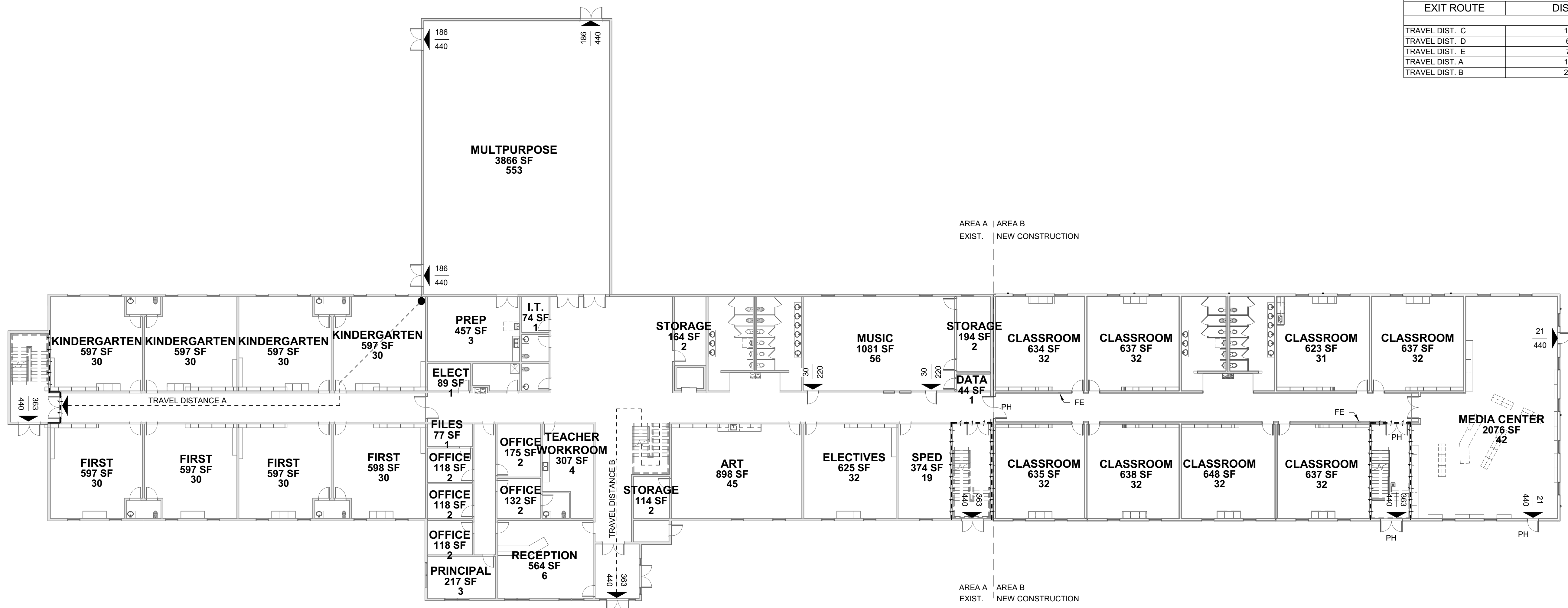
ISSUE NO.	DESCRIPTION	DATE
1	100% Construction Documents	2/24/2021

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PROJECT NO. 20408.000

SHEET TITLE  
**LIFE SAFETY PLANS AND CODE SUMMARY**

SHEET NUMBER  
**G-103**



**A1 FIRST FLOOR LIFE SAFETY PLAN**  
 1/16" = 1'-0"

**GENERAL LIFE SAFETY PLAN NOTES**

- A. REFER TO SHEET G-104 FOR CODE SUMMARY.
- B. REFER TO DOOR SCHEDULE FOR REQUIRED DOOR RATING.
- C. REFER TO INTERIOR PARTITION TYPES AND FLOOR PLAN FOR ADDITIONAL PARTITION REQUIREMENTS INCLUDING WALL HEIGHT, UL DESIGN, AND FIRE RATINGS.
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**Carolina Charter Academy Exp.**  
 8529 Highway 55  
 Angier, North Carolina 27501

**LIFE SAFETY PLAN LEGEND**

- RM NAME 150 SF 20 — ROOM NAME, AREA & OCCUPANT CAPACITY
- ← 45 120 — EXIT DIRECTION ARROW
- ← 45 120 — EXIT POPULATION
- ← 45 120 — EXIT CAPACITY [POPULATION]
- — PATH OF TRAVEL
- 2-2-2- — FIRE RATED WALL
- RATING REQUIRED...30-MIN, 1-HR, 2-HR, ETC.
- 3S-3S-3S- — SMOKE BARRIER
- RATING IF REQUIRED...1-HR, 2-HR, ETC.
- FIRE RATED WALL
- PATTERN INDICATES CODE REQUIRED SEPARATION AS NOTED
- — FIRE SEPARATION AND OTHER ANNOTATION SO NOTED
- 1-HR — FIRE RATED CEILING. RATING AS NOTED...1-HR, 2-HR, ETC.

**Owner**  
 Highmark School Development  
 746 East Winchester Street  
 Suite 150  
 Murray, Utah 84107  
 801-256-9550

**Architect**  
 RATIO  
 227 Fayetteville Street, Suite 301  
 Raleigh, North Carolina 27601  
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**Structural Engineer**  
 Lynch Mykins Structural Engineers, PC  
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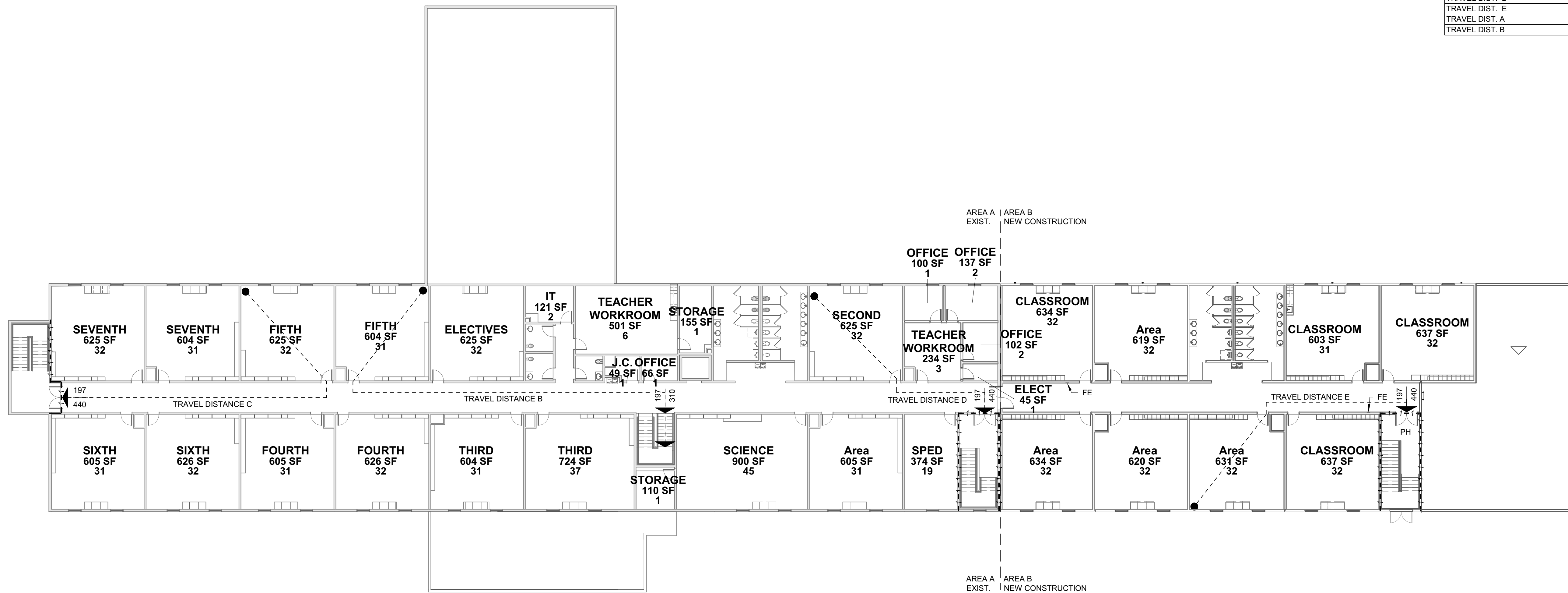
**Civil Engineer**  
 Timmons Group  
 5410 Trinity Road  
 Suite 102  
 Raleigh, North Carolina 27607  
 919-866-4938

**OCCUPANT LOAD SCHEDULE**

FLOOR LEVEL	OCCUPANT LOAD
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**TRAVEL DISTANCE SCHEDULE**

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TRAVEL DIST. A	114' - 8"
TRAVEL DIST. B	226' - 5"



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 AND OCCUPANCY  
 INTENDED FOR THIS  
 PROJECT AND THAT  
 THESE PLANS ARE  
 COMPLETE AND  
 COMPLY WITH ALL  
 APPLICABLE STATE  
 AND LOCAL  
 BUILDING  
 REGULATIONS

HAI M. BOWEN  
 REGISTERED ARCHITECT  
 5950  
 RALEIGH, NC

**SHEET ISSUE**

ISSUE NO.	DESCRIPTION	DATE
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PROJECT NO. 20408.000

SHEET TITLE  
**LIFE SAFETY PLANS AND CODE SUMMARY**

SHEET NUMBER  
**G-104**

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

Name of Project: Carolina Charter Academy Exp.
Address: 8529 Highway 55
Angier, North Carolina 27501

Owner/Authorized Agent: PATRICK ALCORN -DIRECTOR OF FACILITY DEVELOPEMENT
palcorn@highmarkschools.com (801)335-6514

Owned by: [ ] CITY/COUNTY [X] PRIVATE [ ] STATE
Code Enforcement Jurisdiction: [X] CITY: ANGIER, NC [ ] COUNTY: HARNETT [ ] STATE

LEAD DESIGN PROFESSIONAL: Harold M Bowen, RATIO

GROSS BUILDING AREA:

Table with columns: DESIGNER, FIRM, NAME, LICENSE #, PHONE #, EMAIL. Rows include Architectural (RATIO), Civil (TIMMONS), Electrical, Fire Alarm, Plumbing, Mechanical, Sprinkler/Standpipe, Structural (LYNCH MYKINS), Retaining Walls > 5' High, Other.

2018 NC BUILDING CODE: [ ] NEW BUILDING [X] ADDITION [ ] 1st TIME INTERIOR COMPLETIONS
[ ] SHELL/CORE\* [ ] PHASED CONSTRUCTION\*

\*CONTACT THE LOCAL INSPECTION JURISDICTION FOR POSSIBLE PROCEDURES AND REQUIREMENTS

2018 NC EXISTING BUILDING CODE: [ ] PRESCRIPTIVE [ ] ALTERATION LEVEL I [ ] HISTORIC PROPERTY
[ ] REPAIR [X] 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: \_\_\_\_\_ PROPOSED: \_\_\_\_\_

BASIC BUILDING DATA

CONSTRUCTION TYPE: [ ] I-A [ ] II-A [ ] III-A [ ] IV [ ] V-A
[ ] I-B [ ] II-B [ ] III-B [ ] V-B

SPRINKLERS: [ ] NO [X] PARTIAL [ ] YES [X] NFPA 13 [ ] NFPA 13R [ ] NFPA 13D

STANDPIPES: [ ] NO [ ] YES CLASS [ ] I [ ] II [ ] III [ ] WET [ ] DRY

FIRE DISTRICT: [X] NO [ ] YES (PRIMARY) FLOOD HAZARD AREA [X] NO [ ] YES

SPECIAL INSPECTIONS REQUIRED: [ ] YES [ ] NO IF SPECIAL INSTRUCTIONS ARE REQUIRED, CONTACT THE LOCAL JURISDICTION

BUILDING HEIGHT: (feet) 30'-0"

GROSS BUILDING AREA:

Table with columns: FLOOR, EXISTING (SQ. FT.), NEW (SQ. FT.), SUB-TOTAL. Rows include 6th Floor, 5th Floor, 4th Floor, 3rd Floor, 2nd Floor, Mezzanine, 1st Floor, Basement, and TOTAL.

ALLOWABLE AREA

PRIMARY OCCUPANCY CLASSIFICATION(S):

ASSEMBLY: [ ] A-1 [ ] A-2 [ ] A-3 [X] A-4 [ ] A-5

BUSINESS: [ ]

EDUCATIONAL: [X]

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-3 [ ] I-4

I-1 AND I-2 CONDITION: [ ] 1 [ ] 2

I-3 CONDITION: [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5

MERCANTILE: [ ]

RESIDENTIAL: [ ] R-1 [ ] R-2 [ ] R-3 [ ] R-4

STORAGE: [X] S-1 MODERATE [ ] S-2 LOW [ ] HIGH-PILED
[ ] PARKING GARAGE [ ] OPEN [ ] ENCLOSED [ ] REPAIR GARAGE

UTILITY AND MISCELLANEOUS: [ ]

ACCESSORY OCCUPANCY CLASSIFICATION(S): BUSINESS

INCIDENTAL USES: (TABLE 509) \_\_\_\_\_

SPECIAL USES (CHAPTER 4 - LIST CODE SECTION): \_\_\_\_\_

SPECIAL PROVISIONS (CHAPTER 5 - LIST CODE SECTION): \_\_\_\_\_

MIXED OCCUPANCY:

[ ] Yes [X] No SEPARATION: \_\_\_\_\_ HR EXCEPTION: \_\_\_\_\_

[X] 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.

Actual Area of Occupancy A / Allowable Area of Occupancy A + Actual Area of Occupancy B / Allowable Area of Occupancy B >= 1.00

Table with columns: Story No., Description and Use, (A) Bldg Area Per Story (Actual), (B) Table 506.2 Area (Note 4), (C) Area for Frontage Increase (note 1,5), (D) Allowable Area or Unlimited (note 2,3). Rows include FIRST and SECOND EDUCATION.

Notes:

- 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 = 600'-0" (F)
b. Total Building Perimeter = 800'-0" (P)
c. Ratio (F/P) = 0.75 (F/P)
d. W = Minimum width of public way = 30'-0" (W)
e. Percent of frontage increase If = 100 [(F/P - 0.25) x W/30 = 50.00 (%)
2. Unlimited area applicable under conditions of Section 507
3. Maximum Building Area = total number of stories in the building x D (506.2)
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 unspinklered area value in Table 506.2

ALLOWABLE HEIGHT Provide code reference if "Shown on Plans" quantity is not based on Table 504.3 or 504.4

Table with columns: ALLOWABLE, SHOWN ON PLANS, CODE REFERENCE. Rows include Building Height in Feet (Table 504.3) and Building Height in Stories (Table 504.4).

FIRE PROTECTION REQUIREMENTS

Table with columns: BUILDING ELEMENT, Fire Separation Distance (feet), Rating, Detail No. / Sheet No., Design No. for Rated Assembly, Design No. for Rated Penetration, Design No. for Rated Joints. Rows include Structural Frame, Bearing Walls, Exterior, North, East, West, South, Interior, Nonbearing Walls and Partitions, Floor Construction, Floor Ceiling Assembly, Roof Construction, Roof Ceiling Assembly, Shaft Enclosures, Corridor Separation, Party/Fire Wall Separation, Smoke Barrier Separation, Smoke Partition, Tenant Separation, Incidental Use Separation.

LIFE SAFETY SYSTEM REQUIREMENTS

EMERGENCY LIGHTING: [ ] NO [X] YES
EXIT SIGNS: [ ] NO [X] YES
FIRE ALARM: [ ] NO [X] YES
SMOKE DETECTION SYSTEMS: [ ] NO [ ] YES [X] PARTIAL DUCT & ELEVATOR DETECTION
PANIC HARDWARE: [ ] NO [X] YES

LIFE SAFETY PLAN REQUIREMENTS

LIFE SAFETY PLAN SHEET #G-004
[X] FIRE AND/OR SMOKE RATED WALL LOCATIONS (CHAPTER 7)
[X] ASSUMED AND REAL PROPERTY LINE LOCATIONS (IF NOT ON THE SITE PLAN)
[X] EXTERIOR WALL OPENING AREA WITH RESPECT TO DISTANCE TO ASSUMED PROPERTY LINES (705.8)
[X] OCCUPANCY USE FOR EACH AREA AS IT RELATES TO OCCUPANT LOAD CALCULATION (TABLE 1004.1.2)
[X] EXISTING STRUCTURES WITHIN 30' OF THE PROPOSED BUILDING
[X] OCCUPANCY TYPES FOR EACH AREA AS IT RELATES TO OCCUPANT LOAD CALCULATION (TABLE 1004.1.1)
[X] OCCUPANT LOADS FOR EACH AREA
[X] EXIT ACCESS TRAVEL DISTANCES (1017)
[X] COMMON PATH OF TRAVEL DISTANCES (1006.2.1, 1006.3.2(1))
[X] DEAD END LENGTHS (1020.4)
[X] CLEAR EXIT WIDTHS FOR EACH EXIT DOOR
[X] MAXIMUM CALCULATED OCCUPANT LOAD CAPACITY EACH EXIT DOOR CAN ACCOMMODATE BASED ON EGRESS WIDTH (1005.3)
[X] ACTUAL OCCUPANT LOAD FOR EACH EXIT DOOR
[X] A SEPARATE SCHEMATIC PLAN INDICATING WHERE FIRE RATED FLOOR/CEILING AND/OR ROOF STRUCTURE IS PROVIDED FOR PURPOSES OF OCCUPANCY SEPARATION
[X] LOCATION OF DOORS WITH PANIC HARDWARE (1010.1.10)
[ ] LOCATION OF DOORS WITH DELAYED EGRESS LOCKS AND THE AMOUNT OF DELAY (1010.1.9.7)
[ ] LOCATION OF DOORS WITH ELECTROMAGNETIC EGRESS LOCKS (1010.1.9.9)
[X] LOCATION OF DOORS EQUIPPED WITH HOLD-OPEN DEVICES
[ ] LOCATION OF EMERGENCY ESCAPE WINDOWS (1030)
[ ] THE SQUARE FOOTAGE OF EACH FIRE AREA (202)
[X] THE SQUARE FOOTAGE OF EACH SMOKE COMPARTMENT FOR OCCUPANCY CLASSIFICATION 1-2 (407.5)
[ ] NOTE ANY CODE EXCEPTIONS OR TABLE NOTES THAT MAY HAVE BEEN UTILIZED REGARDING THE ITEMS ABOVE

SEE SHEET C-0.0 FOR PARKING REQUIREMENTS

PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)

Table with columns: USE, WATERCLOSETS (TOILETS), URINALS, LAVATORIES (SINKS), SHOWERS/TUBS, DRINKING FOUNTAINS. Rows include EXISTING, NEW, and REQUIRED fixtures.

SPECIAL APPROVALS

Special Approvals: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, ICC, etc., describe below)
TOWN OF ANGIER 0 0 0 0 0 0 0 0 0 0 0 0
HARNETT COUNTY 0 0 0 0 0 0 0 0 0 0 0 0

ENERGY SUMMARY

ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attributes 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 COMPLES WITH CODE: [ ] No [X] Yes (If checked, the remainder of this section is not applicable)

EXEMPT BUILDING: [ ] No [ ] Yes (Provide code or statutory reference):

CLIMATE ZONE: [ ] 3A [X] 4A [ ] 5A

METHOD OF COMPLIANCE: [ ] Prescriptive (Energy Code) [ ] Performance (Energy Code) [ ] Other, Specify Source Here:
[ ] Prescriptive (ASHRAE 90.1) [ ] Performance (ASHRAE 90.1)

THERMAL ENVELOPE (Prescriptive Method Only):

ROOF/CEILING ASSEMBLY (each assembly) T.P.O. MEMBRANE; POLYISO INSULATION; 1/2" SHEATHING ON OPEN WEB WOOD TRUSSES
Description of assembly:
U-Value of total assembly: 0.039
R-Value of insulation: 25
Skylights in each assembly:
U-Value of Skylight: 0
Total square footage of skylights in each assembly: 0 SF

EXTERIOR WALLS (each assembly) 5/8" GWB, 2"x6" WOOD STUD WITH BATT INSULATION; OSB SHEATHING; FIBER CEMENT BOARD SIDING
Description of assembly:
U-Value of total assembly: 0.037
R-Value of insulation: 19
Openings (windows or doors with glazing)
U-Value of Assembly: 0.28
Solar heat gain coefficient: 0.32
Projection Factor: 0
Door R-Values: 8

WALLS BELOW GRADE (each assembly)
Description of assembly: N/A
U-Value of total assembly: 0
R-Value of insulation: 0

FLOORS OVER UNCONDITIONED SPACE (each assembly)
Description of assembly: N/A
U-Value of total assembly: 0
R-Value of insulation: 0

FLOORS SLAB ON GRADE 4" CONCRETE SLAB OVER VAPOR RETARDER; 4" DEPTH OF POROUS FILL
Description of assembly:
U-Value of total assembly: 0.1
R-Value of insulation: 10
Horizontal/Vertical Requirement:
Slab Heated:

SEE SHEET S-001 FOR STRUCTURAL DESIGN LOADS

SEE SHEET S-011 FOR SPECIAL INSPECTIONS

Carolina Charter Academy Exp.
8529 Highway 55
Angier, North Carolina 27501

Owner Highmark School Development

746 East Winchester Street
Suite 150
Murray, Utah 84107
801-256-9550

Architect RATIO

227 Fayetteville Street, Suite 301
Raleigh, North Carolina 27601
919-821-0805

Structural Engineer

Lynch Mykns Structural Engineers, PC

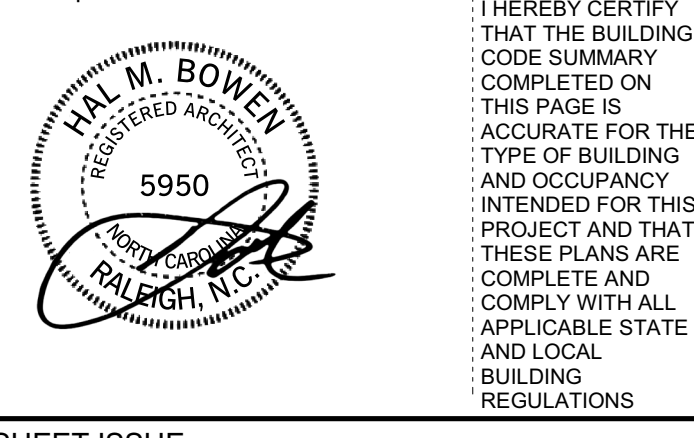
301 North West Street
Suite 105
Raleigh, North Carolina 27603
919-782-1833

Civil Engineer

Timmons Group

5410 Trinity Road
Suite 102
Raleigh, North Carolina 27607
919-866-4938

SEAL | DATE 2/24/2021



CODE CERT. I HEREBY CERTIFY THAT THE BUILDING CODE SUMMARY COMPLETED ON THIS PAGE IS ACCURATE FOR THE TYPE OF BUILDING AND OCCUPANCY INTENDED FOR THIS PROJECT AND THAT THESE PLANS ARE COMPLETE AND COMPLY WITH ALL APPLICABLE STATE AND LOCAL BUILDING REGULATIONS

SHEET ISSUE

Table with columns: Issue No., Description, Date. Row 1: 100% Construction Documents, 2/24/2021.



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PROJECT NO. 20408.000

SHEET TITLE APPENDIX B 2018

SHEET NUMBER G-105

# 100% CONSTRUCTION DOCUMENTS

# CAROLINA CHARTER ACADEMY ADDITION

8529 S NC 55 HWY ANGIER, NC

CAROLINA  
CHARTER  
ACADEMY  
ADDITION  
8529 S NC 55 HWY,  
ANGIER NC 27501

**Owner**  
Highmark School Development  
746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

**Architect**  
RATIO  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

**Structural Engineer**  
Lynch Mykins Structural Engineers, PC  
301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-782-1833

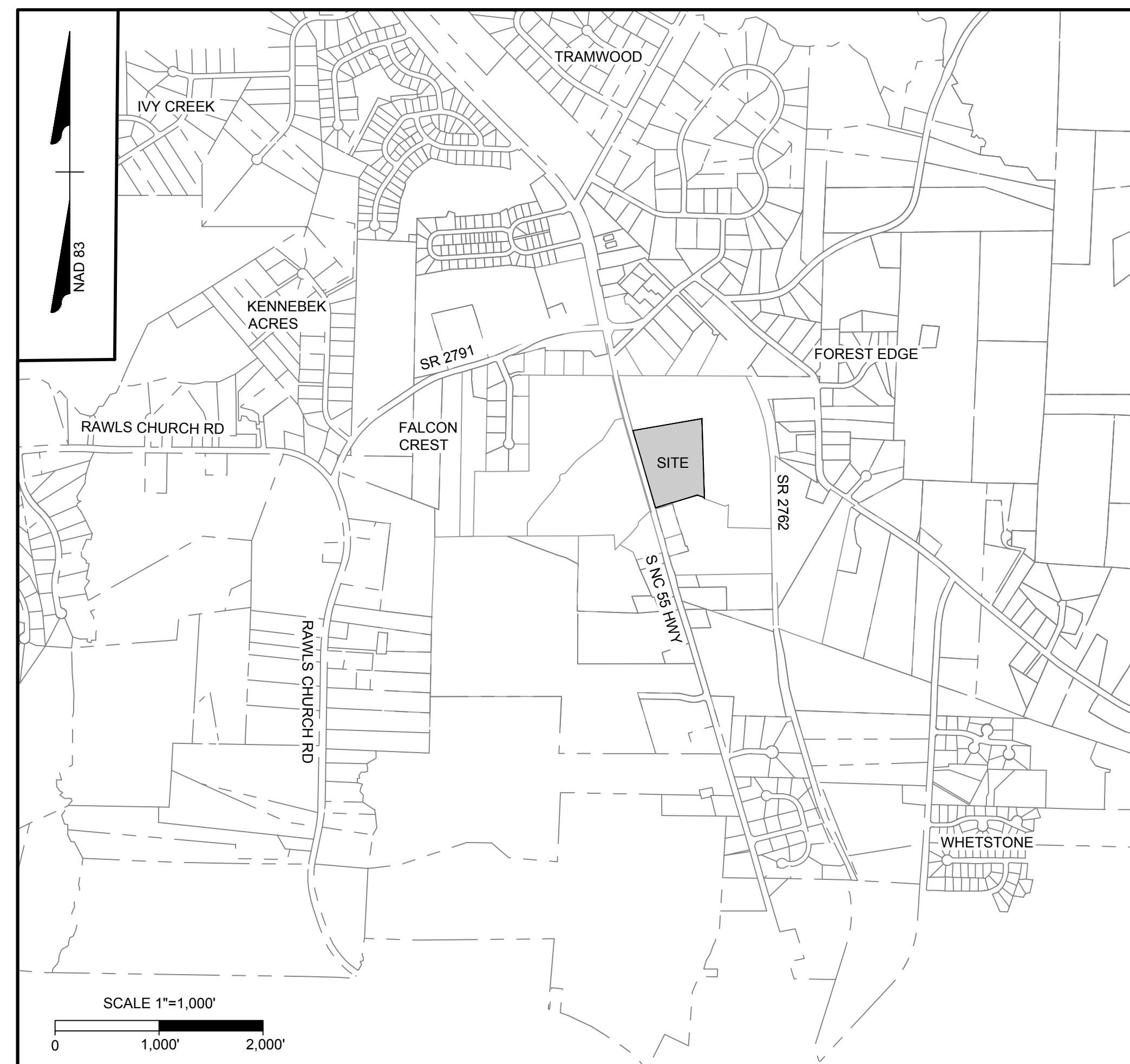
**Civil Engineer**  
Timmons Group  
5410 Trinity Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938

### SHEET LIST

SHEET NUMBER	SHEET TITLE
C0.0	COVER SHEET
C1.0	EXISTING CONDITIONS & DEMOLITION PLAN
C3.0	SITE PLAN
C4.0	GRADING & DRAINAGE PLAN
C5.0	NOTES & DETAILS

### SITE DATA

PROJECT:	CAROLINA CHARTER ACADEMY
PROJECT #:	42087
PROJECT ADDRESS:	8529 S NC 55 HWY ANGIER, NC
PIN:	0674690126
CURRENT ZONING:	RA-30
TOTAL TRACT AREA:	10 ACRES
DISTURBED AREA:	0.95 ACRES
<b>PARKING: SCHOOLS (PUBLIC AND PRIVATE ELEMENTARY AND MIDDLE) - 2 SPACE PER CLASSROOM</b>	
<b>TOTAL NUMBER OF CLASSROOMS:</b>	
EXISTING:	27 CLASSROOMS (K-8TH GRADE)
PROPOSED:	16 CLASSROOMS (K-8TH GRADE)
<b>PARKING SPACES REQUIRED:</b>	
EXISTING:	54 PARKING SPACES
PROPOSED ADDITION:	32 PARKING SPACES
<b>PARKING SPACES PROVIDED:</b>	
EXISTING:	56 PARKING SPACES
PROPOSED:	30 PARKING SPACES
H/C SPACES REQ'D:	4 (WITH 1 BEING VAN ACCESSIBLE)
H/C SPACES PROVIDED:	4 (WITH 1 BEING VAN ACCESSIBLE)
TOTAL PARKING SPACES PROVIDED:	86 SPACES (INCLUDING 4 H/C)
<b>IMPERVIOUS:</b>	
EXISTING IMPERVIOUS:	2.96 ACRES
PROPOSED IMPERVIOUS:	0.41 ACRES
TOTAL IMPERVIOUS:	2.96 AC (EXISTING) - 0.04 AC (DEMO) +0.41 AC (PROPOSED) = 3.33 AC
*THE EXISTING STORMWATER CONTROL MEASURE WAS DESIGNED TO TREAT 3.54 ACRES OF IMPERVIOUS AREA	



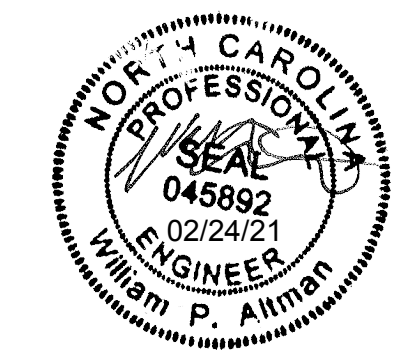
VICINITY MAP

**OWNER:** RM CAROLINA NC LLC  
810 7TH AVE FL 27  
NEW YORK, NY 10019-5818

**ENGINEER:** WILL ALTMAN, PE  
TIMMONS GROUP  
5410 TRINITY ROAD; SUITE 102  
RALEIGH, NC 27607  
PHONE: 919-866-4938  
FAX: 919-859-5663  
EMAIL: WILLIAM.ALTMAN@TIMMONS.COM

**ARCHITECT:** BRENT COVINGTON  
RATIO DESIGN  
227 FAYETTEVILLE STREET; SUITE 301  
RALEIGH, NC 27601  
919-256-4994  
EMAIL: BCOVINGTON@RATIODESIGN.COM

SEAL | DATE



SHEET ISSUE

1	Schematic Design	11/24/2020
2	Town Of Angier-TRC	1/06/2021
3	Town Of Angier-TRC	1/28/2021
4	100% Construction Documents	2/24/2021

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PROJECT NO. 20408.000

SHEET TITLE  
COVER SHEET

SHEET NUMBER

C0.0

# CAROLINA CHARTER ACADEMY ADDITION

8529 S NC 55 HWY,  
ANGIER NC 27501

**Owner**  
Highmark School Development  
746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

**Architect**  
RATIO  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805


**Structural Engineer**  
Lynch Mykins Structural Engineers, PC  
301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-782-1833

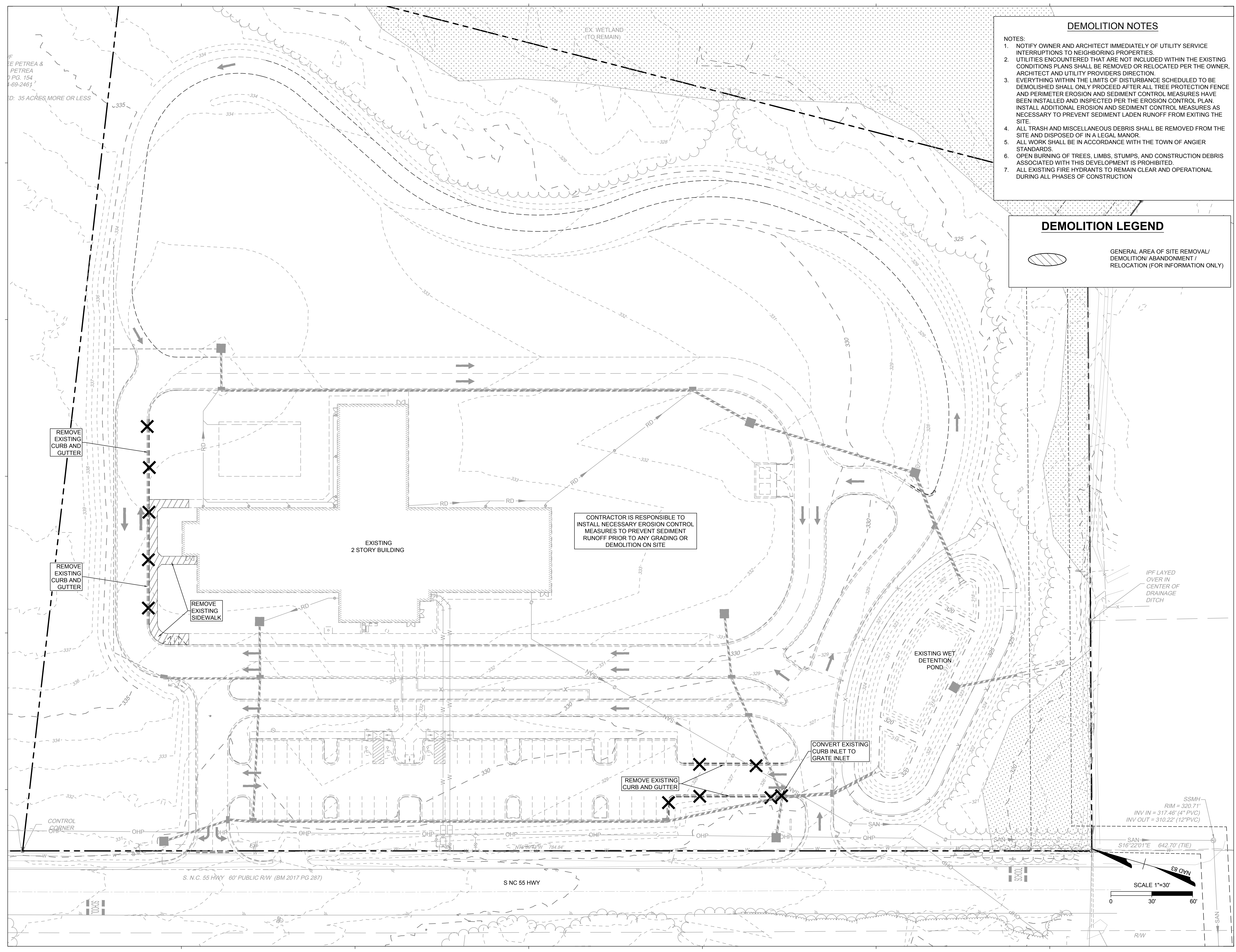
**Civil Engineer**  
Timmons Group  
5410 Trinity Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938

## DEMOLITION NOTES

- NOTES:
1. NOTIFY OWNER AND ARCHITECT IMMEDIATELY OF UTILITY SERVICE INTERRUPTIONS TO NEIGHBORING PROPERTIES.
  2. UTILITIES ENCOUNTERED THAT ARE NOT INCLUDED WITHIN THE EXISTING CONDITIONS PLANS SHALL BE REMOVED OR RELOCATED PER THE OWNER, ARCHITECT AND UTILITY PROVIDERS DIRECTION.
  3. EVERYTHING WITHIN THE LIMITS OF DISTURBANCE SCHEDULED TO BE DEMOLISHED SHALL ONLY PROCEED AFTER ALL TREE PROTECTION FENCE AND PERIMETER EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND INSPECTED PER THE EROSION CONTROL PLAN. INSTALL ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES AS NECESSARY TO PREVENT SEDIMENT LADEN RUNOFF FROM EXITING THE SITE.
  4. ALL TRASH AND MISCELLANEOUS DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LEGAL MANOR.
  5. ALL WORK SHALL BE IN ACCORDANCE WITH THE TOWN OF ANGIER STANDARDS.
  6. OPEN BURNING OF TREES, LIMBS, STUMPS, AND CONSTRUCTION DEBRIS ASSOCIATED WITH THIS DEVELOPMENT IS PROHIBITED.
  7. ALL EXISTING FIRE HYDRANTS TO REMAIN CLEAR AND OPERATIONAL DURING ALL PHASES OF CONSTRUCTION

## DEMOLITION LEGEND

 GENERAL AREA OF SITE REMOVAL/ DEMOLITION/ ABANDONMENT / RELOCATION (FOR INFORMATION ONLY)



SEAL | DATE



SHEET ISSUE		
1	Schematic Design	11/24/2020
2	Town Of Angier-TRC	1/06/2021
3	Town Of Angier-TRC	1/28/2021
4	100% Construction Documents	2/24/2021



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PROJECT NO. 20408.000

SHEET TITLE  
**EXISTING CONDITIONS & DEMOLITION PLAN**

SHEET NUMBER  
**C1.0**

JE PETREA &  
 PETREA  
 P.O. 154  
 469-2461

35 ACRES MORE OR LESS

- GENERAL LAYOUT NOTES:
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF ANGIER AND NCDEQ STANDARDS AND SPECIFICATIONS.
  2. COORDINATE WITH THE TOWN OF ANGIER DIRECTOR OF MAINTENANCE AND OPERATIONS FOR UTILITIES THAT ARE TO REMAIN UNDISTURBED.
  3. THIS SITE SHALL COMPLY WITH ALL APPLICABLE ADA ACCESSIBILITY CODES AND REGULATIONS.
  4. DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED. AREAS WITHOUT CURB, DIMENSIONS ARE TO EDGE OF PAVEMENT.
  5. VERIFY ALL DIMENSIONS ON THE PLANS AND SHALL NOTIFY THE ARCHITECT AND ENGINEER IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH CONSTRUCTION.
  6. NO CHANGES TO ANY ASPECT OF THIS SITE PLAN, INCLUDING BUT NOT LIMITED TO, LANDSCAPING, GRADING, BUILDING ELEVATIONS, LIGHTING OR UTILITIES WILL BE MADE WITHOUT THE APPROVAL OF THE ARCHITECT, ENGINEER AND THE DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT.
  7. THE SITE SHALL BE STABILIZED AND SEEDED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

PAVEMENT HATCHING LEGEND

	LIGHT DUTY PAVEMENT
	CONCRETE SIDEWALK

# CAROLINA CHARTER ACADEMY ADDITION

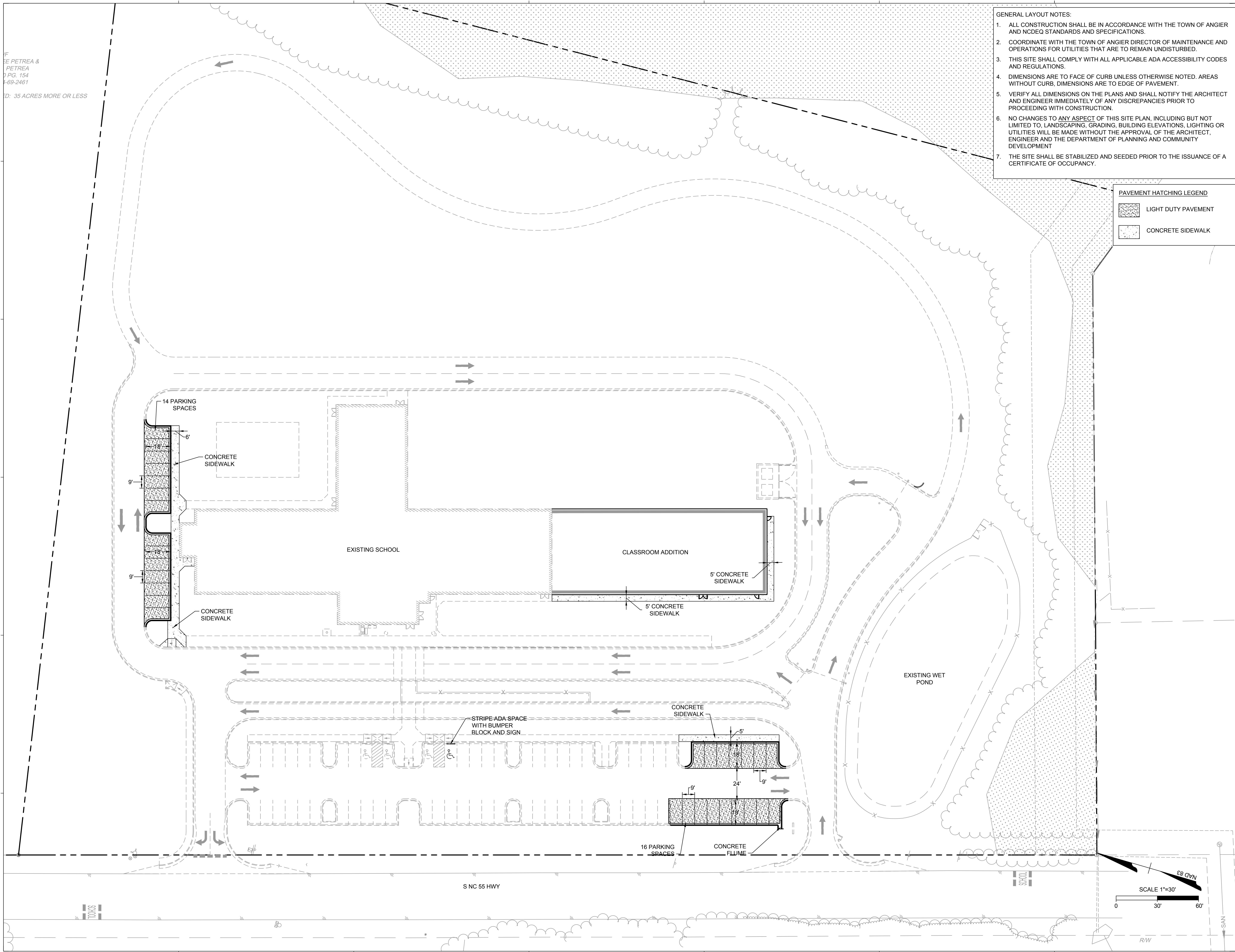
8529 S NC 55 HWY,  
 ANGIER NC 27501

**Owner**  
 Highmark School Development  
 746 East Winchester Street  
 Suite 150  
 Murray, Utah 84107  
 801-256-9550

**Architect**  
 RATIO  
 227 Fayetteville Street, Suite 301  
 Raleigh, North Carolina 27601  
 919-821-0805

**Structural Engineer**  
 Lynch Mykins Structural Engineers, PC  
 301 North West Street  
 Suite 105  
 Raleigh, North Carolina 27603  
 919-782-1833

**Civil Engineer**  
 Timmons Group  
 5410 Trinity Road  
 Suite 102  
 Raleigh, North Carolina 27607  
 919-866-4938



SEAL | DATE

SHEET ISSUE

1	Schematic Design	11/24/2020
2	Town Of Angier-TRC	1/06/2021
3	Town Of Angier-TRC	1/28/2021
4	100% Construction Documents	2/24/2021

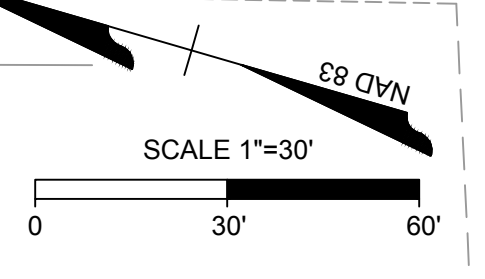
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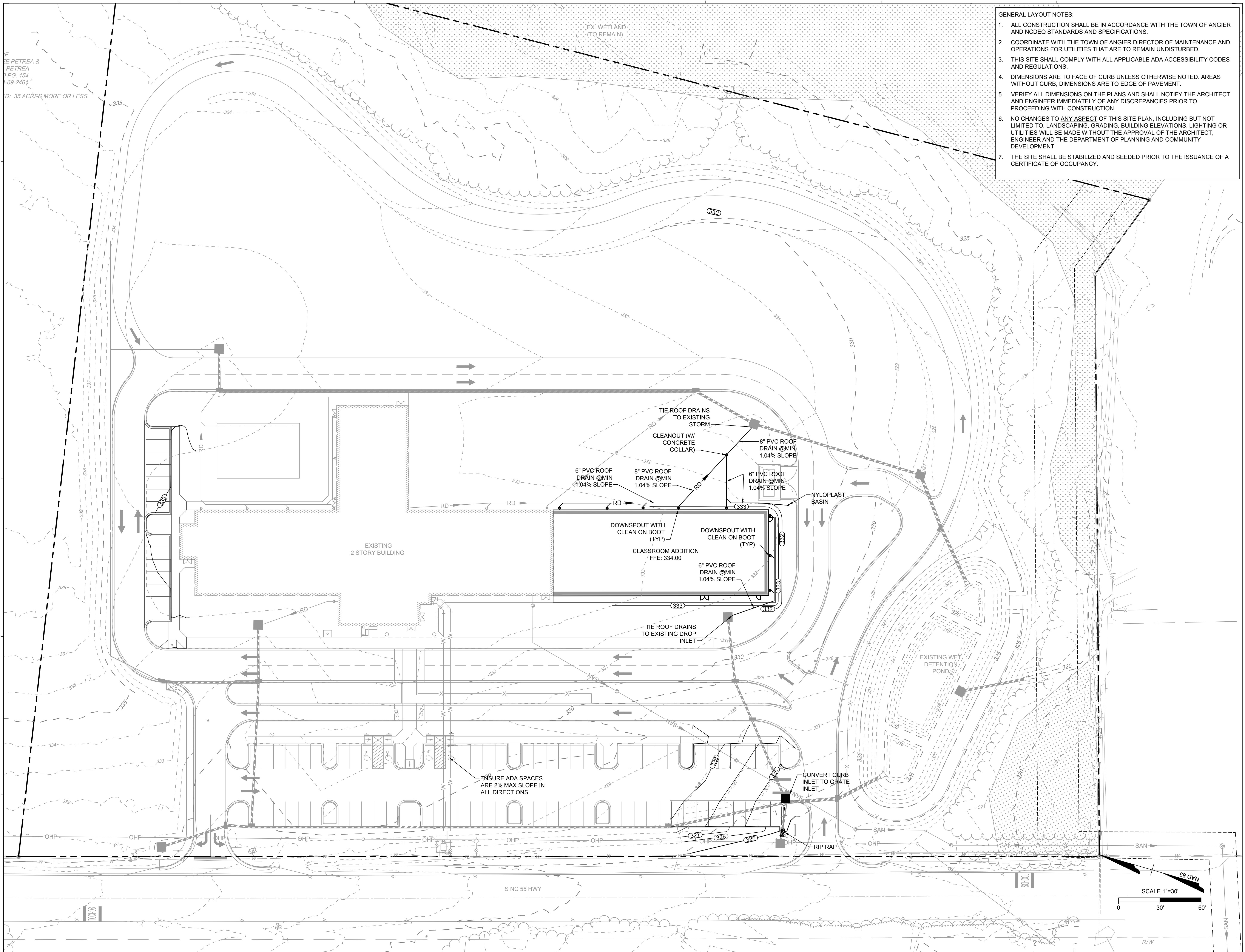
PROJECT NO. 20408.000

SHEET TITLE  
**SITE PLAN**

SHEET NUMBER  
**C3.0**







- GENERAL LAYOUT NOTES:
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF ANGIER AND NCDEQ STANDARDS AND SPECIFICATIONS.
  2. COORDINATE WITH THE TOWN OF ANGIER DIRECTOR OF MAINTENANCE AND OPERATIONS FOR UTILITIES THAT ARE TO REMAIN UNDISTURBED.
  3. THIS SITE SHALL COMPLY WITH ALL APPLICABLE ADA ACCESSIBILITY CODES AND REGULATIONS.
  4. DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED. AREAS WITHOUT CURB, DIMENSIONS ARE TO EDGE OF PAVEMENT.
  5. VERIFY ALL DIMENSIONS ON THE PLANS AND SHALL NOTIFY THE ARCHITECT AND ENGINEER IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH CONSTRUCTION.
  6. NO CHANGES TO ANY ASPECT OF THIS SITE PLAN, INCLUDING BUT NOT LIMITED TO, LANDSCAPING, GRADING, BUILDING ELEVATIONS, LIGHTING OR UTILITIES WILL BE MADE WITHOUT THE APPROVAL OF THE ARCHITECT, ENGINEER AND THE DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT
  7. THE SITE SHALL BE STABILIZED AND SEEDDED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

# CAROLINA CHARTER ACADEMY ADDITION

8529 S NC 55 HWY,  
ANGIER NC 27501

**Owner**  
**Highmark School Development**  
 746 East Winchester Street  
 Suite 150  
 Murray, Utah 84107  
 801-256-9550

**Architect**  
**RATIO**  
 227 Fayetteville Street, Suite 301  
 Raleigh, North Carolina 27601  
 919-821-0805

**Structural Engineer**  
**Lynch Mykins Structural Engineers, PC**  
 301 North West Street  
 Suite 105  
 Raleigh, North Carolina 27603  
 919-782-1833

**Civil Engineer**  
**Timmons Group**  
 5410 Trinity Road  
 Suite 102  
 Raleigh, North Carolina 27607  
 919-866-4938

SEAL | DATE

SHEET ISSUE

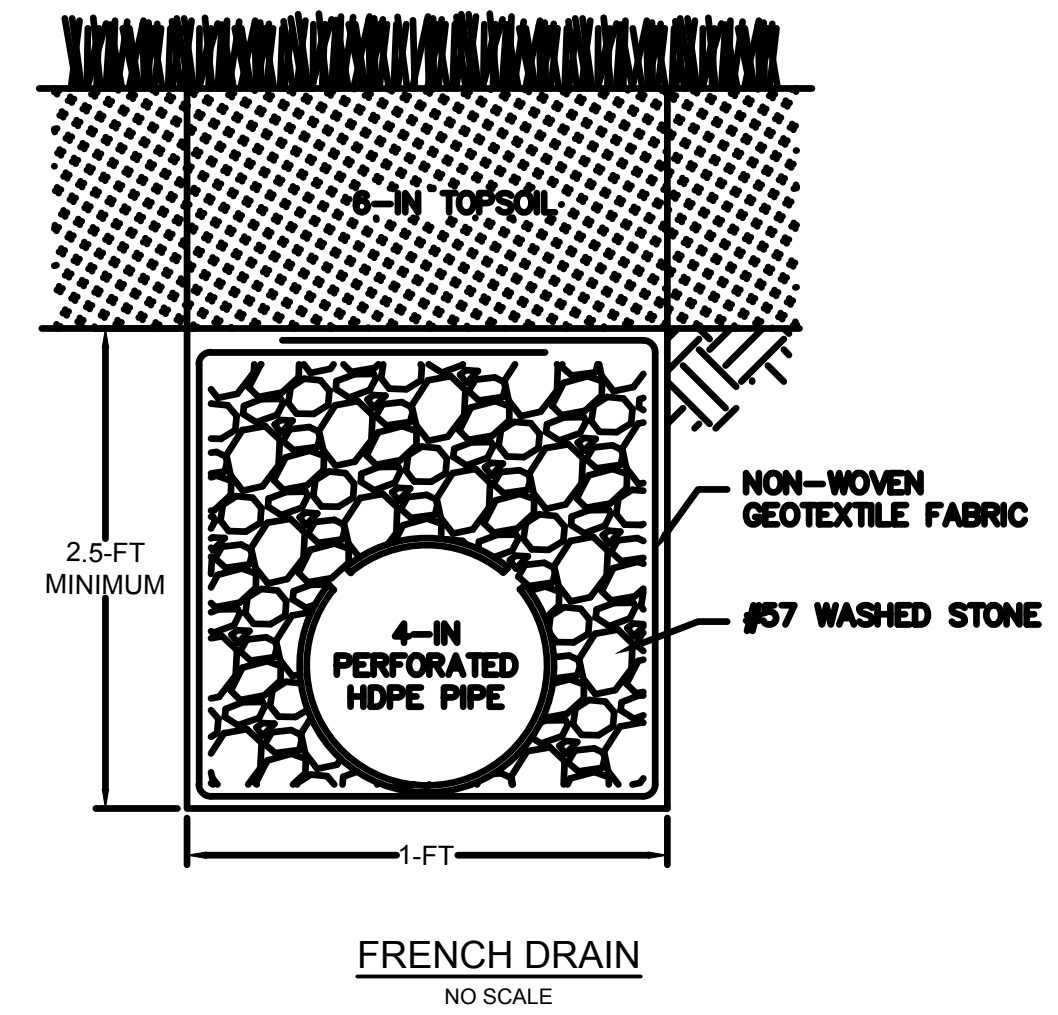
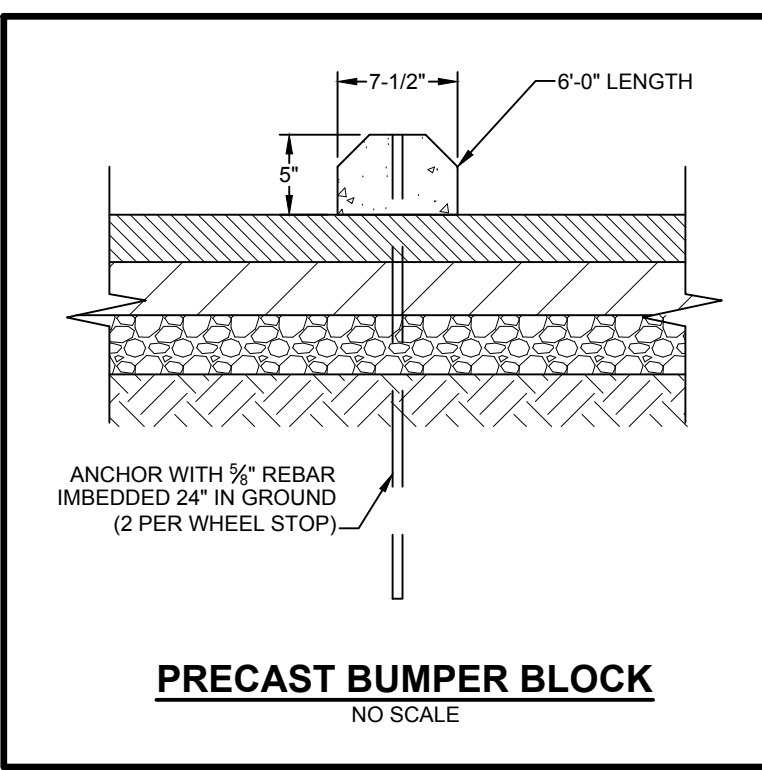
Issue No.	Description	Date
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PROJECT NO. 20408.000

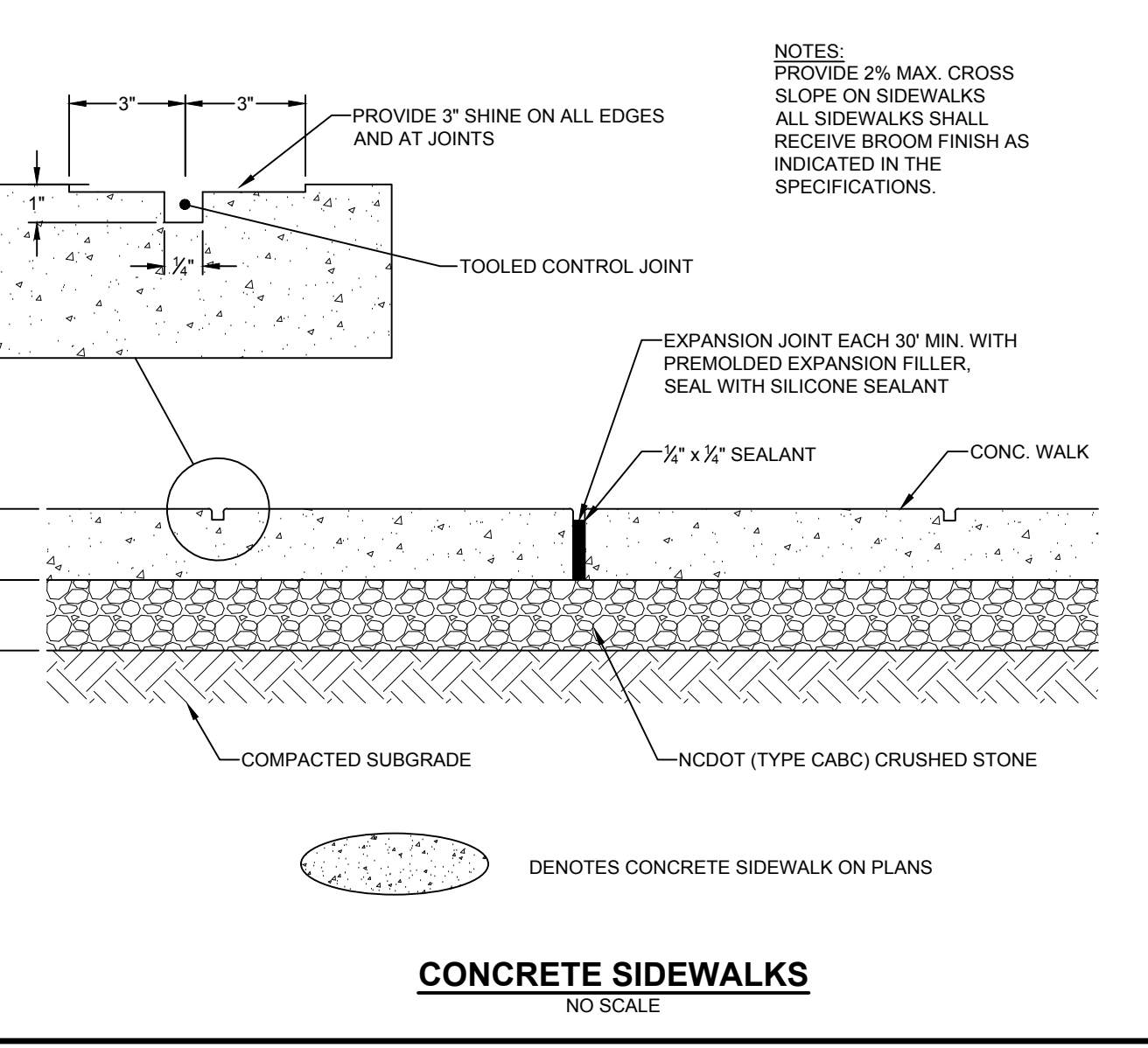
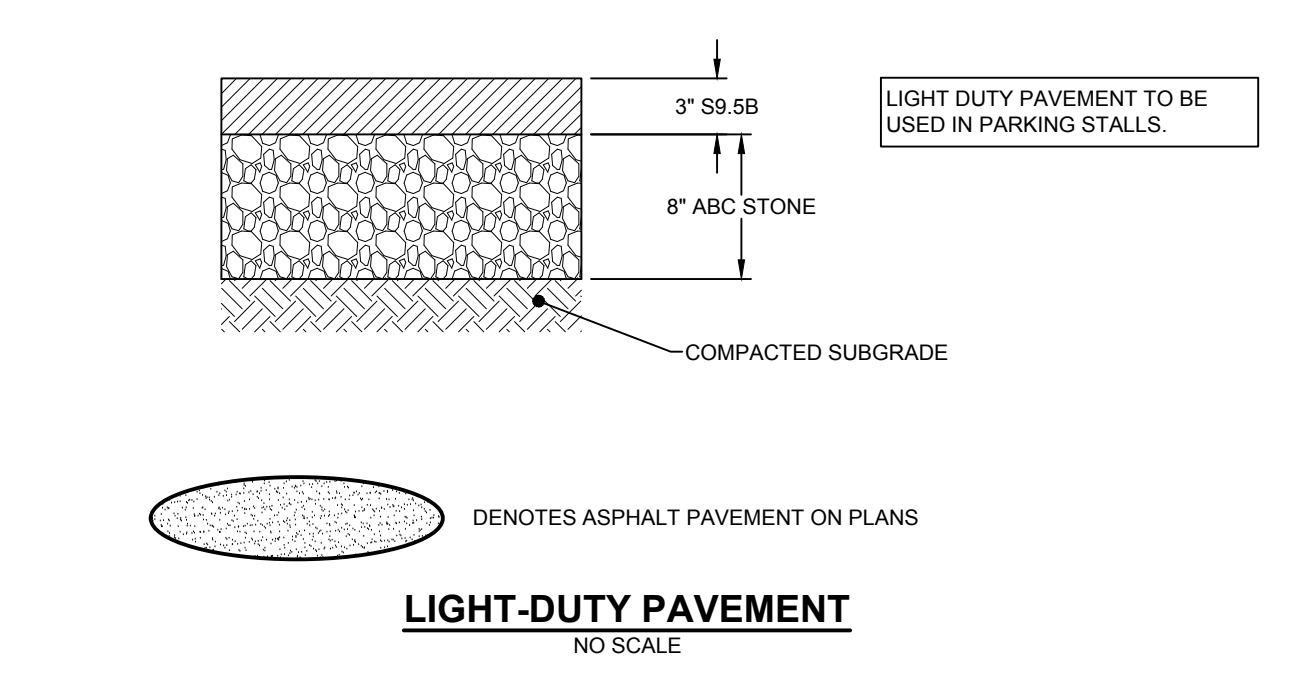
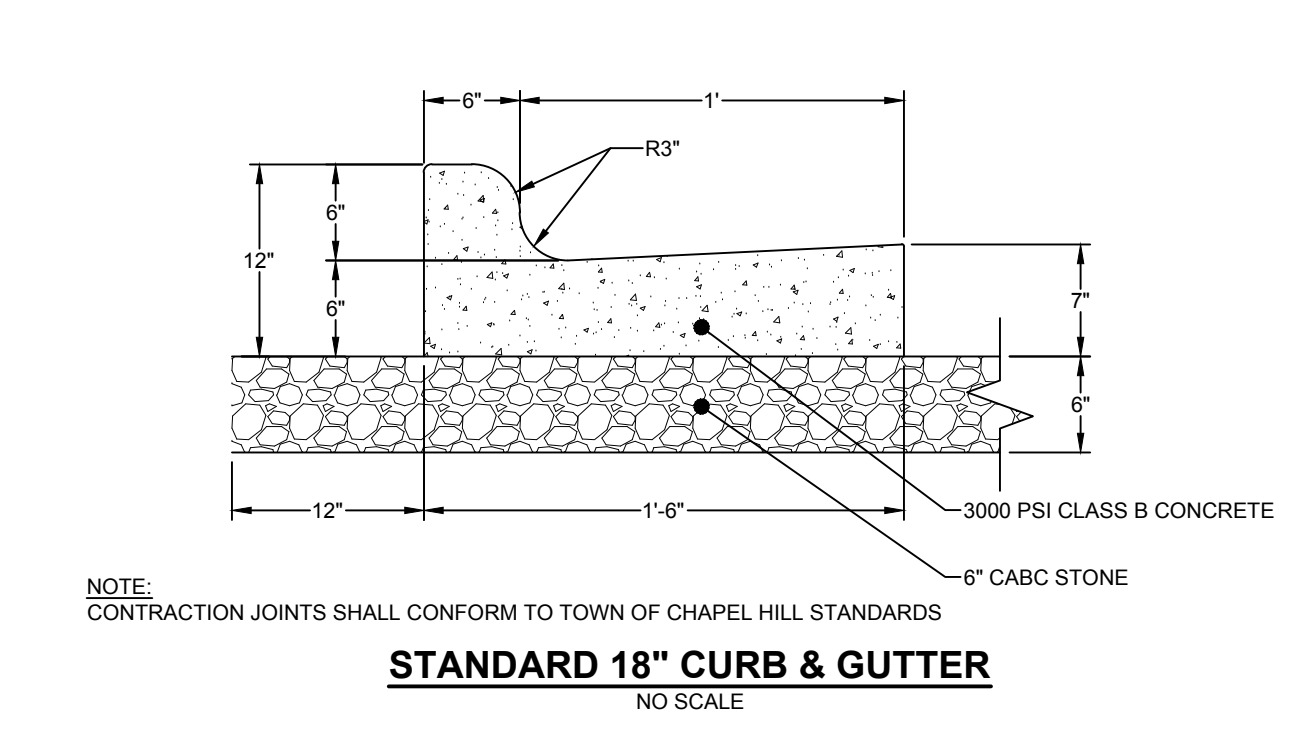
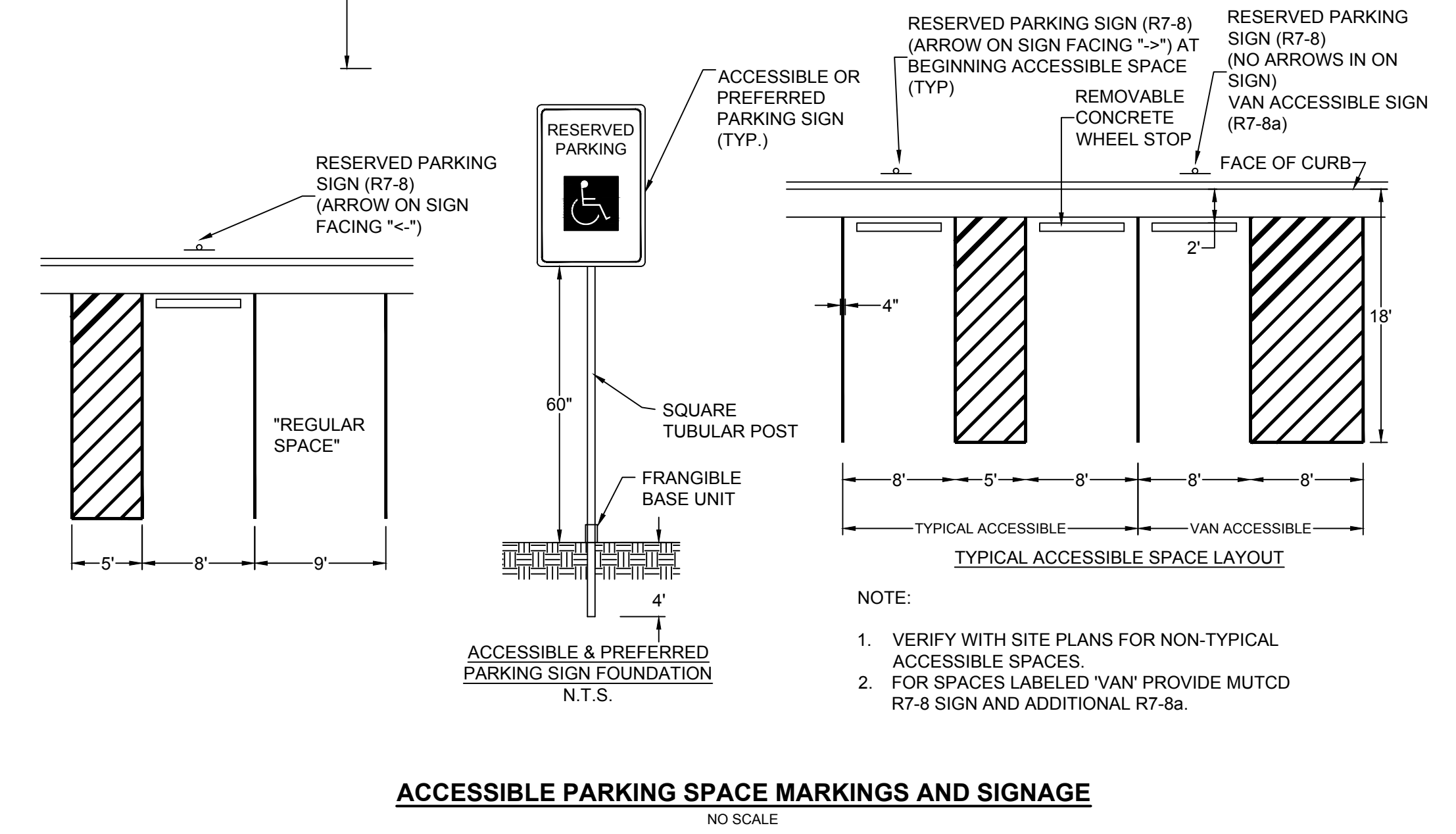
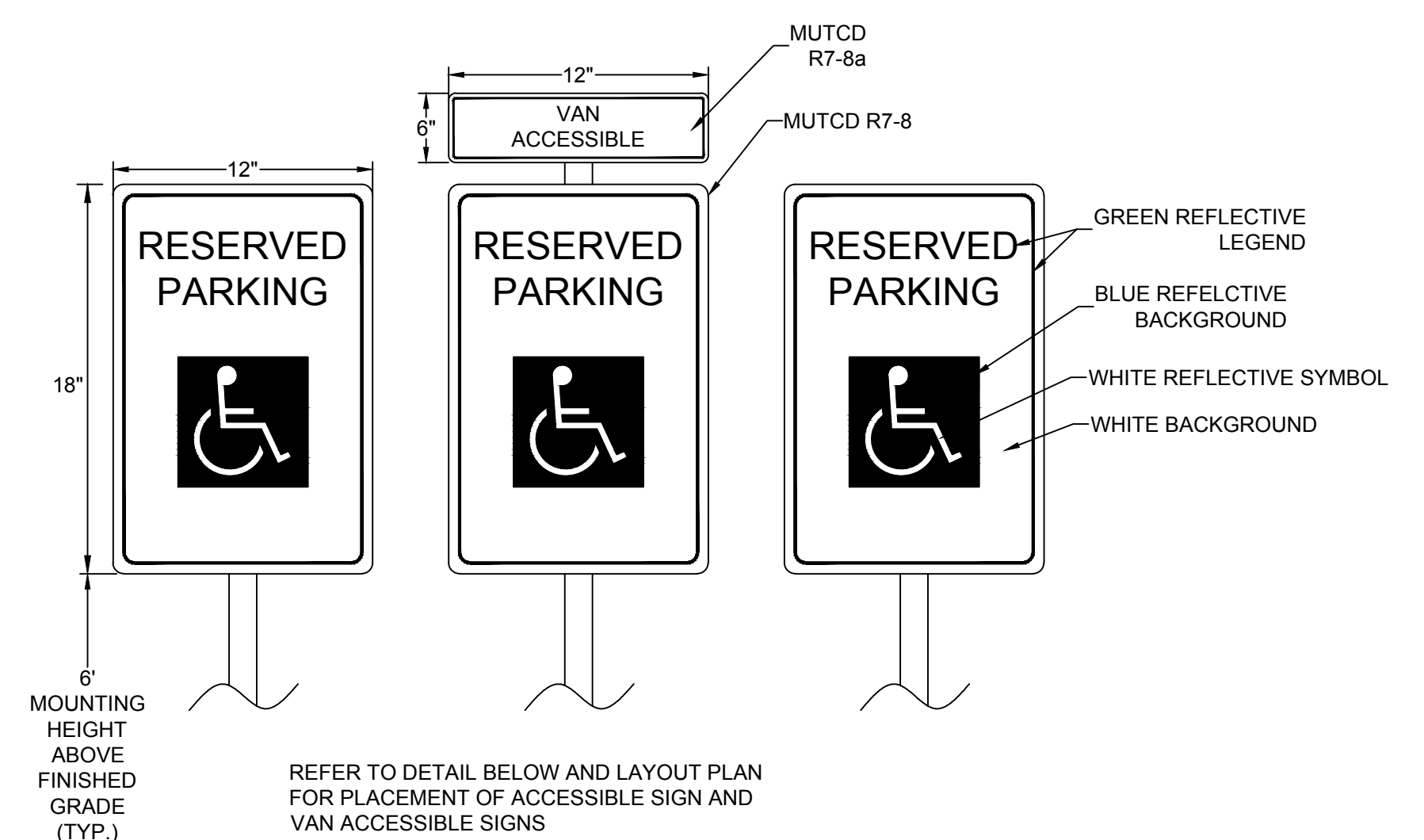
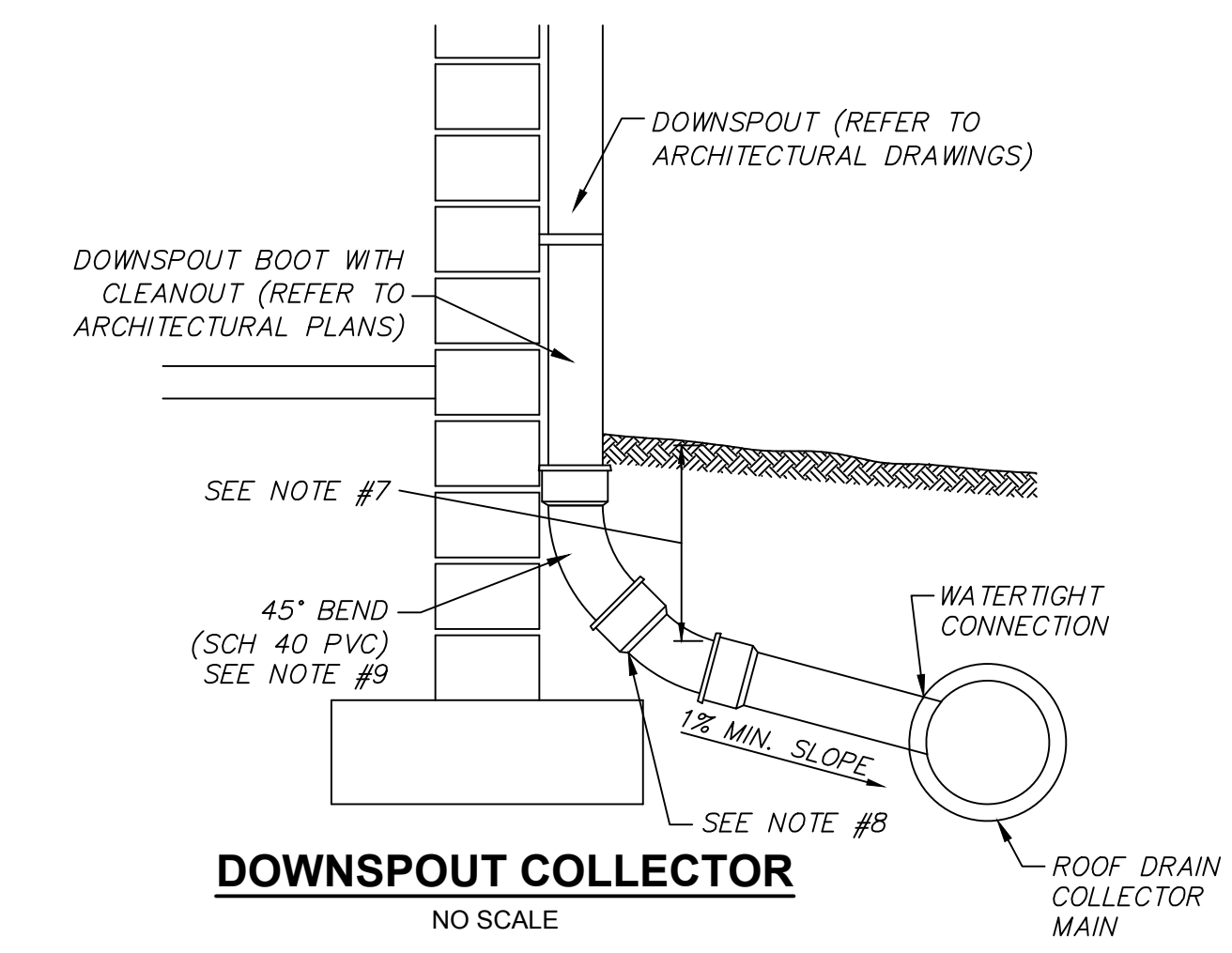
SHEET TITLE  
**GRADING & DRAINAGE PLAN**

SHEET NUMBER  
**C4.0**



**DOWNSPOUT COLLECTOR NOTES:**

- CONNECT ALL BUILDING DOWNSPOUTS INTO THE ROOF DRAIN COLLECTOR SYSTEM OR DIRECTLY INTO THE STORM SEWER SYSTEM.
- THE ROOF DRAIN COLLECTOR SYSTEM IS SMOOTH-LINED, CORRUGATED POLYETHYLENE PIPE LAID AT MINIMUM SLOPES AS INDICATED.
- PIPES CONNECTING TO INDIVIDUAL DOWNSPOUTS ARE 6" PROVIDE MINIMUM 6" PIPE SIZE 5' OUTSIDE BUILDING. ALL OTHER DRAIN PIPES ARE SIZED AS INDICATED INCREASING IN SIZE FROM UPSTREAM TO DOWNSTREAM.
- PROVIDE CLEANOUTS AS INDICATED AND AS REQUIRED BY LOCAL BUILDING CODE.
- MAKE CONNECTIONS INTO CONCRETE PIPES WITH A FLEXIBLE WATERTIGHT TEE CONNECTOR THAT IS MECHANICALLY EXPANDED INTO A CORDED OPENING. CONNECTOR SHALL BE KOR-N-TEE OR APPROVED EQUAL.
- MAINTAIN ADEQUATE OUTFALL FOR ROOF DRAIN DURING AND AFTER THE COMPLETION OF CONSTRUCTION.
- MINIMUM DEPTH OF COVER SHALL BE ONE (1) FOOT. FOR ALL DEPTHS OF COVER LESS THAN TWO (2) FEET, PIPE MUST BE SCHEDULE 40 PVC. FOR DEPTHS OF COVER GREATER THAN TWO (2) FEET, FLEXIBLE PIPE MAY BE USED. REFER TO SPECIFICATIONS FOR ALLOWABLE PIPE TYPES.
- MAINTAIN A WATERTIGHT CONNECTION AT ALL PIPE CONNECTIONS BELOW GRADE.
- INSTALL THE DOWNSPOUT COLLECTOR DRAIN BEFORE THE DOWNSPOUTS ARE INSTALLED ON THE BUILDING. THE SITE WORK CONTRACTOR IS RESPONSIBLE FOR ALL WORK TO AND INCLUDING THE 45° BEND. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF DOWNSPOUTS ON BUILDING EXTERIOR WALLS.



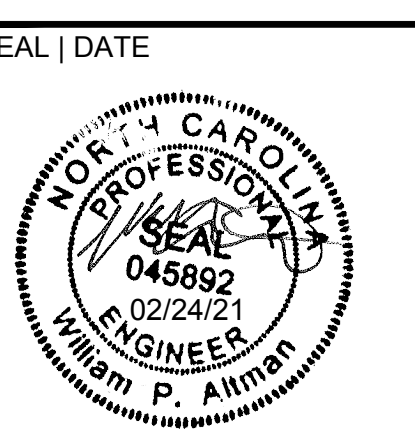
**CAROLINA CHARTER ACADEMY ADDITION**  
8529 S NC 55 HWY,  
ANGIER NC 27501

**Owner**  
Highmark School Development  
748 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

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**Civil Engineer**  
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**SHEET ISSUE**

Issue No.	Description	Date
1	Schematic Design	11/24/2020
2	Town Of Angier-TRC	1/06/2021
3	Town Of Angier-TRC	1/28/2021
4	100% Construction Documents	2/24/2021

**RATIO**

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PROJECT NO. 20408.000

SHEET TITLE  
**NOTES & DETAILS**

SHEET NUMBER  
**C5.0**





STATEMENT OF SPECIAL INSPECTION SERVICES

PROJECT: CAROLINA CHARTER ACADEMY ADDITION  
 LOCATION: 8529 HIGHWAY 55, ANGER, NORTH CAROLINA 27501  
 OWNER'S REPRESENTATIVE:  
 OWNER'S ADDRESS:

THIS STATEMENT OF SPECIAL INSPECTIONS IS SUBMITTED AS A CONDITION FOR PERMIT ISSUANCE IN ACCORDANCE WITH THE SPECIAL INSPECTION REQUIREMENTS OF THE 2018 NORTH CAROLINA STATE BUILDING CODE. IT INCLUDES A SCHEDULE OF SPECIAL INSPECTION SERVICES APPLICABLE TO THIS PROJECT. THE NAME OF THE SPECIAL INSPECTOR, THE IDENTITY OF OTHER APPROVED AGENCIES RETAINED FOR CONDUCTING SPECIAL INSPECTIONS, AND THE REQUIRED INSPECTOR QUALIFICATIONS. THIS STATEMENT OF SPECIAL INSPECTIONS WAS PREPARED BY THE FOLLOWING DESIGNERS OF RECORD:

STRUCTURAL	KRISTINA K. WARNAAR, P.E.	(Signature)	02/24/2021
ARCHITECTURAL		(Signature)	
MECHANICAL		(Signature)	
OTHER		(Signature)	

THE SPECIAL INSPECTOR MUST KEEP RECORDS OF ALL SPECIAL INSPECTIONS AND TESTS AND MUST FURNISH REPORTS TO THE STATE CONSTRUCTION OFFICE AND THE DESIGNERS OF RECORD. REPORTS MUST INDICATE IF THE WORK INSPECTED OR TESTED WAS OR WAS NOT COMPLETED IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. DISCOVERED DISCREPANCIES MUST BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF SUCH DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES MUST BE BROUGHT TO THE ATTENTION OF THE STATE CONSTRUCTION OFFICE AND THE DESIGNERS OF RECORD. THE SPECIAL INSPECTIONS PROGRAM DOES NOT RELIEVE THE CONTRACTOR OF HIS OR HER RESPONSIBILITIES.

INTERIM REPORTS MUST BE SUBMITTED TO THE STATE CONSTRUCTION OFFICE, OWNER, AND THE DESIGNERS OF RECORD.

INTERIM REPORT FREQUENCY: MONTHLY

A FINAL REPORT OF SPECIAL INSPECTIONS DOCUMENTING COMPLETION OF ALL REQUIRED SPECIAL INSPECTIONS, TESTING, AND CORRECTION OF ANY DISCREPANCIES SHOULD BE SUBMITTED PRIOR TO ISSUANCE OF A CERTIFICATE OF USE AND OCCUPANCY.

JOB SITE SAFETY AND MEANS AND METHODS OF CONSTRUCTION ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.

OWNER'S AUTHORIZATION ACCEPTED FOR THE SCO BY:

(Signature) (Date) (Signature) (Date)

SCHEDULE OF SPECIAL INSPECTION SERVICES

THE FOLLOWING COMPRISES THE REQUIRED SCHEDULE OF SPECIAL INSPECTIONS FOR THIS PROJECT. THE CONSTRUCTION DIVISIONS WHICH REQUIRE SPECIAL INSPECTIONS FOR THIS PROJECT ARE AS FOLLOWS.

STRUCTURAL STEEL & HIGH STRENGTH BOLTING WELDING OF STRUCTURAL STEEL COLDFORMED STEEL DECK OPEN-WEB STEEL JOISTS & JOIST GIRDERS COLDFORMED STEEL FRAMING CONCRETE CONSTRUCTION MASONRY CONSTRUCTION WOOD CONSTRUCTION SOILS DRIVEN DEEP FOUNDATIONS CAST-IN-PLACE DEEP FOUNDATIONS	<input type="checkbox"/> HELICAL PILE FOUNDATIONS <input type="checkbox"/> RAMMED AGGREGATE PIERS & STONE COLUMNS <input type="checkbox"/> SPRAYED FIRE-RESISTANT MATERIAL <input checked="" type="checkbox"/> MASTIC & INTUMESCENT FIRE-RESISTANT COATINGS <input type="checkbox"/> EXTERIOR INSULATION & FINISH SYSTEM <input checked="" type="checkbox"/> FIRE-RESISTANT PENETRATIONS & JOINTS <input type="checkbox"/> SMOKE CONTROL <input type="checkbox"/> RETAINING WALL & SYSTEMS > 5 FEET <input type="checkbox"/> SPECIAL INSPECTIONS FOR WIND RESISTANCE <input type="checkbox"/> SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE
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A. THE INSPECTION FREQUENCY INDICATED ON THE FOLLOWING INSPECTION TABLES ARE "C" CONTINUOUS, "F" PERIODIC, & "D" RANDOM ON A DAILY BASIS.  
 B. LEVEL A IS THE MINIMUM INSPECTION PROGRAM FOR EMPIRICALLY / PRESCRIPTIVELY DESIGNED MASONRY IN RISK CATEGORY I, II OR III STRUCTURES. LEVEL B IS THE MINIMUM INSPECTION PROGRAM FOR EMPIRICALLY / PRESCRIPTIVELY DESIGNED MASONRY IN RISK CATEGORY IV STRUCTURES AND ENGINEERED MASONRY IN RISK CATEGORY I, II OR III STRUCTURES. LEVEL C IS THE MINIMUM INSPECTION PROGRAM FOR ENGINEERED MASONRY IN RISK CATEGORY IV STRUCTURES. ENGINEERED MASONRY STRUCTURES ARE THOSE DESIGNED IN ACCORDANCE WITH PORTIONS OF THE TMS 402-13 / ACI 530-13/ASCE 5-13 OTHER THAN PART 4 OR APPENDIX A.

INSPECTION AGENTS	FIRM NAME & POINT OF CONTACT	ADDRESS / PHONE / EMAIL
1. SPECIAL INSPECTOR (SI-1)		
2. TESTING AGENCY (TA-1)		
3. TESTING AGENCY (TA-2)		
4. GEOTECHNICAL ENGINEER (GE-1)		
5. OTHER (O-1)		

NOTE: THE INSPECTION AND TESTING AGENT(S) MUST BE ENGAGED BY THE OWNER OR THE REGISTERED DESIGN PROFESSIONAL OF RECORD ACTING AS THE OWNER'S AGENT, AND NOT BY THE CONTRACTOR OR SUBCONTRACTOR WHOSE WORK IS TO BE INSPECTED OR TESTED. ANY CONFLICT OF INTEREST MUST BE DISCLOSED TO THE STATE CONSTRUCTION OFFICE, PRIOR TO COMMENCING WORK.

SEISMIC DESIGN CATEGORY:	<input type="checkbox"/> A	<input checked="" type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D
BASIC WIND SPEED (V <sub>50</sub> ):	<input checked="" type="checkbox"/> 90-109 MPH	<input type="checkbox"/> 110-119 MPH	<input type="checkbox"/> >120 MPH	
WIND EXPOSURE CATEGORY:	<input type="checkbox"/> B	<input checked="" type="checkbox"/> C	<input type="checkbox"/> D	

WOOD CONSTRUCTION				
INSPECTION TASK	TASK RECD	FREQ	REFERENCE FOR CRITERIA	
			STANDARD	NCBC
1. FABRICATOR CERTIFICATION / VERIFICATION OF QUALITY CONTROL PROCEDURES FOR PREFABRICATED WOOD STRUCTURAL ELEMENTS AND ASSEMBLIES				
a. VERIFY FABRICATOR QUALIFICATIONS	<input checked="" type="checkbox"/>	C	1704.2.5.1, 1705.5	
b. COLLECT CERTIFICATES OF COMPLIANCE FROM THE FABRICATOR AT COMPLETION OF PANEL	<input checked="" type="checkbox"/>	C	1704.5, 1705.5	
2. HIGH-LOAD DIAPHRAGMS			2306.2	
a. VERIFY THAT WOOD STRUCTURAL PANEL SHEATHING IS THE CORRECT GRADE AND THICKNESS	<input checked="" type="checkbox"/>	P	1705.5.1	
b. VERIFY NOMINAL SIZE OF FRAMING MEMBERS AND BLOCKING AT ADJOINING PANEL EDGES	<input checked="" type="checkbox"/>	P	AWC-SDPM 4.2.7.1.2	1705.5.1
c. NAIL AND OR STAPLE DIAMETER, LENGTH, QUANTITY AND SPACING COMPLY WITH THE CONTRACT DOCUMENTS	<input checked="" type="checkbox"/>	P	1705.5.1	
3. FOR METAL-PLATE-CONNECTED TRUSSES CLEAR SPANNING 60 FEET OR MORE, VERIFY THAT BOTH TEMPORARY AND PERMANENT RESTRAINTS AND BRACES ARE INSTALLED IN ACCORDANCE WITH THE APPROVED TRUSS SUBMITTAL PACKAGE	<input checked="" type="checkbox"/>	P	1705.5.2	

MASTIC AND INTUMESCENT FIRE-RESISTANT COATINGS				
INSPECTION TASK	TASK RECD	FREQ	REFERENCE FOR CRITERIA	
			STANDARD	NCBC
1. PRIOR TO APPLICATION, VERIFY PREPARATION OF SUBSTRATE AND SUITABILITY OF PRIMERS, IF PRESENT, ARE IN ACCORDANCE WITH APPROVED FIRE RESISTANCE DESIGN, APPROVED MANUFACTURER'S WRITTEN INSTRUCTIONS, AND THE REQUIREMENTS OF AWC1 12-B	<input checked="" type="checkbox"/>	P	AWCI 12-B	1705.15
2. OBSERVE THE APPLICATION OF FIRE-RESISTANT COATINGS ENSURING COMPLIANCE WITH APPROVED FIRE RESISTANCE DESIGN, APPROVED MANUFACTURER'S WRITTEN INSTRUCTIONS, AND THE REQUIREMENTS OF AWC1 12-B	<input checked="" type="checkbox"/>	P	AWCI 12-B	1705.15
3. AFTER ADEQUATE DRYING BUT PRIOR TO THE APPLICATION OF ANY TOPCOAT, MEASURE THE FINAL MASTIC / INTUMESCENT MATERIAL THICKNESS ENSURING COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS AND APPROVED MATERIAL / INSTALLATION SUBMITTALS. MEASUREMENTS MUST CONSIDER THE THICKNESS OF PRIMERS OR OTHER EXISTING COATINGS ON THE SURFACE OF THE SUBSTRATE.	<input checked="" type="checkbox"/>	P	AWCI 12-B	1705.15

FIRE-RESISTANT PENETRATIONS AND JOINTS				
INSPECTION TASK	TASK RECD	FREQ	REFERENCE FOR CRITERIA	
			STANDARD	NCBC
1. INSPECT THROUGH-PENETRATION FIRESTOP SYSTEMS AT FIRE WALLS, FIRE BARRIERS, SMOKE BARRIERS AND FIRE PARTITION WALLS IN ACCORDANCE WITH ASTM E2174	<input checked="" type="checkbox"/>	P	1705.17.1, 714.3.1.2	
2. INSPECT PENETRATION FIRESTOP SYSTEMS AT PENETRATIONS THROUGH MEMBRANES THAT ARE PART OF A HORIZONTAL ASSEMBLY IN ACCORDANCE WITH ASTM E2174	<input checked="" type="checkbox"/>	P	1705.17.1, 714.4.2	
3. INSPECT FIRE-RESISTANT JOINT SYSTEMS IN ACCORDANCE WITH ASTM 2383	<input checked="" type="checkbox"/>	P	1705.17.2, 715.3, 715.4	

A. THE INSPECTION OF FIRE-RESISTANT PENETRATIONS AND JOINTS APPLIES ONLY TO HIGH-RISE BUILDINGS OR BUILDINGS ASSIGNED TO RISK CATEGORY III OR IV.

CONCRETE CONSTRUCTION				
INSPECTION TASK	TASK RECD	FREQ	REFERENCE FOR CRITERIA	
			STANDARD	NCBC
1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT	<input checked="" type="checkbox"/>	P	ACI CH.20, 25.2, 25.3, 26.6, 26.6.3	1908.4
2. REINFORCING BAR WELDING:			AWG D1.4	
a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706 AND COLLECT REPORTS	<input type="checkbox"/>	P	ACI 26.6.4	1704.5
b. INSPECT SINGLE-PASS FILLET WELDS ≤ 5/16"	<input type="checkbox"/>	P	ACI 26.6.4	
c. INSPECT ALL WELDS OTHER THAN SINGLE-PASS FILLET WELDS ≤ 5/16"	<input type="checkbox"/>	C	ACI 26.6.4	
3. CONCRETE ANCHORS:				
a. INSPECT ANCHORS CAST IN CONCRETE	<input checked="" type="checkbox"/>	P	ACI 17.8.2	
b. INSPECT ADHESIVE ANCHORS INSTALLED IN HARDENED CONCRETE WITH HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS THAT RESIST SUSTAINED TENSION LOADS	<input checked="" type="checkbox"/>	C	ACI 17.8.2.4	
c. INSPECT ADHESIVE ANCHORS INSTALLED IN HARDENED CONCRETE WITH ORIENTATIONS DIFFERENT FROM ITEM 3.B	<input checked="" type="checkbox"/>	P	ACI 17.8.2	
d. INSPECT MECHANICAL ANCHORS INSTALLED IN HARDENED CONCRETE	<input checked="" type="checkbox"/>	P	ACI 17.8.2	
4. COLLECT MIX DESIGNS AND VERIFY THE CORRECT MIX USED DURING INSTALLATION	<input checked="" type="checkbox"/>	P	ACI CH 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
5. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	<input checked="" type="checkbox"/>	C	ASTM C172, ASTM C31, ACI 26.4, 26.5.2	1908.10
6. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	<input checked="" type="checkbox"/>	C	ACI 26.5	1908.6, 1908.7, 1908.8
7. COLLECT REPORTS OF PRECONSTRUCTION TESTS FOR SHOTCRETE WHEN PRECONSTRUCTION TESTS ARE REQUIRED BY NCBC SECTION 1908.4	<input checked="" type="checkbox"/>	C		1704.5, 1908.5
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	<input checked="" type="checkbox"/>	P	ACI 26.5.3-26.5.5	1908.9
9. INSPECTIONS FOR PRESTRESSED CONCRETE:				
a. OBSERVE APPLICATION OF PRESTRESSING FORCE	<input type="checkbox"/>	C	ACI 26.10	
b. INSPECT GROUTING OF BONDED PRESTRESSING TENDONS	<input type="checkbox"/>	C	ACI 26.10	
10. VERIFY CONCRETE STRENGTH PRIOR TO STRESSING OF PT TENDONS AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM PT & MLD BEAMS AND STRUCTURAL SLABS	<input type="checkbox"/>	P	ACI 26.11.2	
11. INSPECT ERECTION OF PRECAST MEMBERS	<input type="checkbox"/>	P	ACI 26.8	
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	<input checked="" type="checkbox"/>	P	ACI 26.11.1(B)	
13. COLLECT MILL TEST REPORTS FOR ASTM A615 REBAR USED BY SFRS SPECIAL MOMENT FRAMES, SPECIAL STRUCTURAL WALLS OR COUPLING BEAMS	<input type="checkbox"/>	C	ACI 30.2.2.5	1704.5

A. REFERENCES TO "ACI" IN THIS TABLE ARE TO THE ACI 318-14.

SOILS				
INSPECTION TASK	TASK RECD	FREQ	REFERENCE FOR CRITERIA	
			STANDARD	NCBC
1. VERIFY MATERIALS BELOW MUSTOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	<input checked="" type="checkbox"/>	P		1705.6
2. VERIFY EXCAVATIONS EXTEND TO PROPER DEPTH AND HAVE REACHED THE CORRECT SOIL MATERIAL	<input checked="" type="checkbox"/>	P		1705.6
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	<input checked="" type="checkbox"/>	P		1705.6
4. VERIFY THAT MATERIALS USED, DENSITIES, LIFT THICKNESS AND PROCEDURES USED DURING PLACEMENT AND COMPACTION OF COMPACTED FILL ARE IN ACCORDANCE WITH THE APPROVED SOILS REPORT AND THE CONSTRUCTION DOCUMENTS	<input checked="" type="checkbox"/>	C		1705.6
5. PRIOR TO PLACEMENT OF COMPACTED FILL, VERIFY THAT THE SURGRADE HAS BEEN PREPARED IN ACCORDANCE WITH THE APPROVED SOILS REPORT AND THE CONSTRUCTION DOCUMENTS	<input checked="" type="checkbox"/>	P		1705.6

Carolina Charter Academy Exp. 8529 Highway 55 Angier, North Carolina 27501

Owner  
 Highmark School Development  
 745 East Winchester Street  
 Suite 150  
 Murray, Utah 84107  
 801-296-9550

Architect  
 RATIO  
 227 Fayetteville Street, Suite 301  
 Raleigh, North Carolina 27601  
 919-842-1805

Structural Engineer  
 Lynch Mykims Structural Engineers, PC  
 301 North West Street  
 Suite 105  
 Raleigh, North Carolina 27603  
 919-760-1933

Civil Engineer  
 Timmons Group  
 5410 Trinity Road  
 Suite 102  
 Raleigh, North Carolina 27607  
 919-866-4938

SEAL DATE 02-24-21



SHEET ISSUE

100% CONSTRUCTION DOCUMENTS 02-24-21

RATIO  
 PROJECT NO. 20408.000

SHEET TITLE  
 SPECIAL INSPECTIONS

SHEET NUMBER  
 S-011









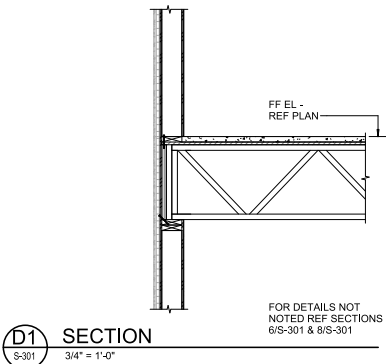
**Carolina Charter Academy Exp.**  
 8529 Highway 55  
 Angier, North Carolina 27501

**Owner:**  
 Highmark School Development  
 746 East Winchester Street  
 Suite 150  
 Murray, Utah 84107  
 801-296-9590

**Architect:**  
**RATIO**  
 227 Fayetteville Street, Suite 301  
 Raleigh, North Carolina 27601  
 919-921-0806

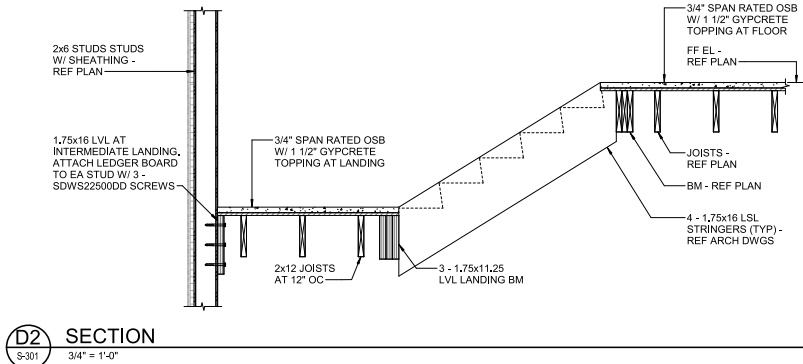
**Structural Engineer:**  
**Lynch Mykims Structural Engineers, PC**  
 301 North West Street  
 Suite 105  
 Raleigh, North Carolina 27603  
 919-762-1833

**Civil Engineer:**  
**Timmons Group**  
 5410 Trinity Road  
 Suite 102  
 Raleigh, North Carolina 27607  
 919-866-4938

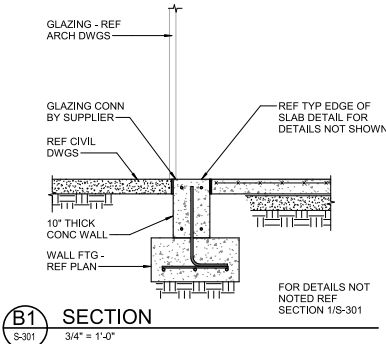


**D1 SECTION**  
 3/4" = 1'-0"

FOR DETAILS NOT NOTED REF SECTIONS 6/S-301 & 8/S-301

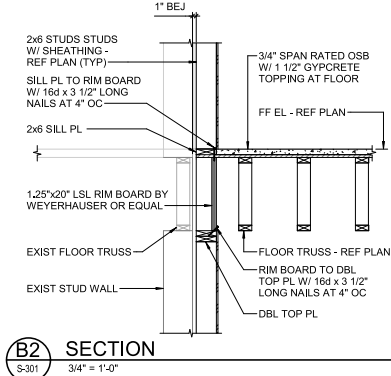


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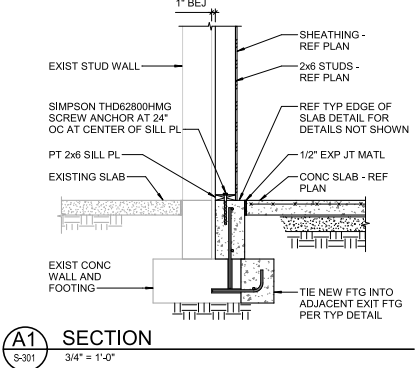


**B1 SECTION**  
 3/4" = 1'-0"

FOR DETAILS NOT NOTED REF SECTION 1/S-301

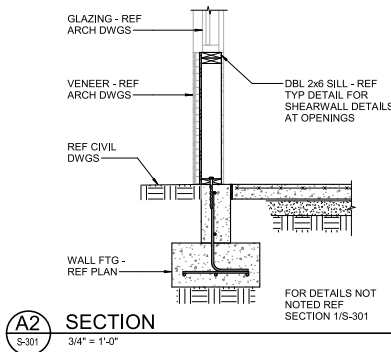


**B2 SECTION**  
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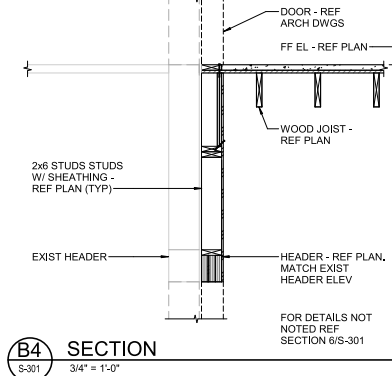
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 3/4" = 1'-0"

TIE NEW FTG INTO ADJACENT EXIT FTG PER TYP DETAIL



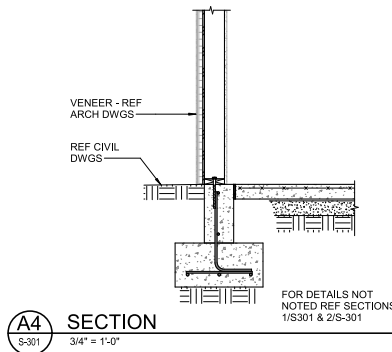
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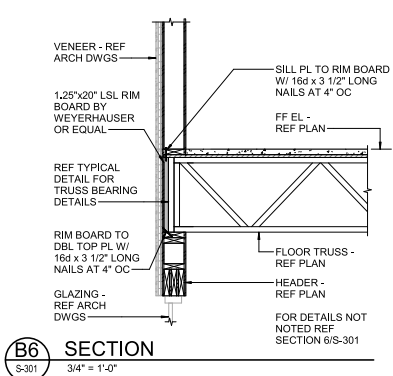
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FOR DETAILS NOT NOTED REF SECTION 6/S-301



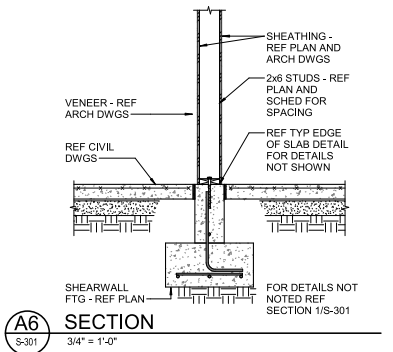
**A4 SECTION**  
 3/4" = 1'-0"

FOR DETAILS NOT NOTED REF SECTIONS 1/S-301 & 2/S-301



**B6 SECTION**  
 3/4" = 1'-0"

FOR DETAILS NOT NOTED REF SECTION 6/S-301



**A6 SECTION**  
 3/4" = 1'-0"

FOR DETAILS NOT NOTED REF SECTION 1/S-301

SEAL DATE 02-24-21



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PROJECT NO. 20408.000  
**SECTIONS**

SHEET NUMBER **S-301**

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**Carolina Charter Academy Exp.**  
8529 Highway 55  
Angier, North Carolina 27501

**Owner**  
Highmark School Development  
746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

**Architect**  
**RATIO**  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

**Structural Engineer**  
**Lynch Mykims Structural Engineers, PC**  
301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-750-1833

**Civil Engineer**  
**Timmons Group**  
5410 Trinity Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938

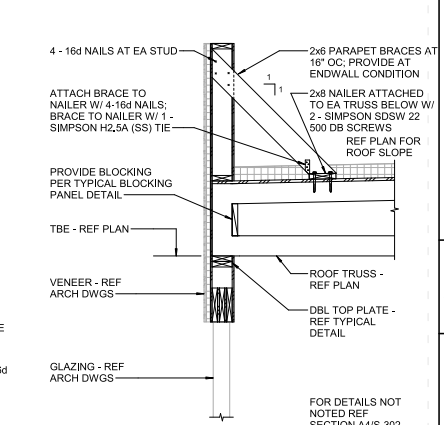
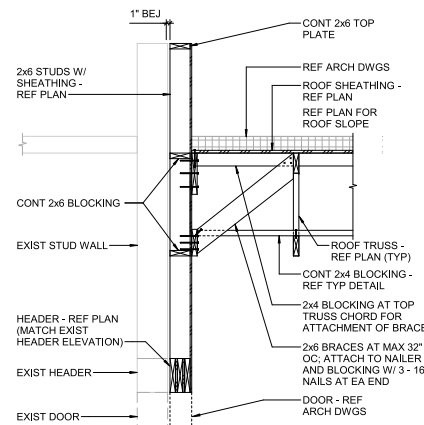
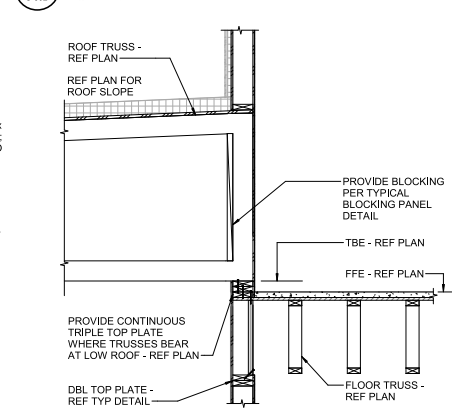
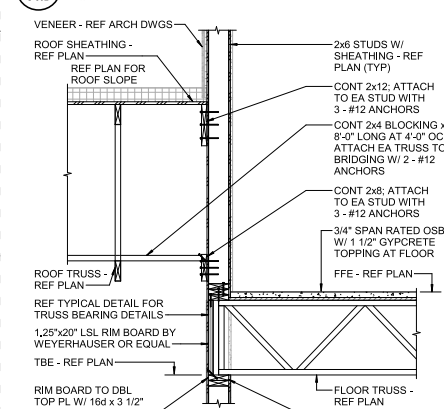
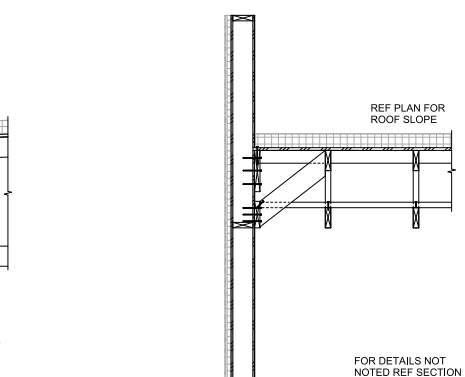
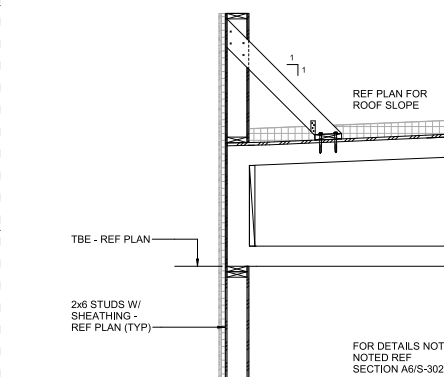
SEAL DATE 02-24-21



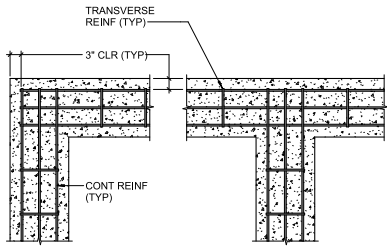
SHEET ISSUE	
100% CONSTRUCTION DOCUMENTS	02-24-21

**RATIO**  
CORPORATE OFFICE: 227 FAYETTEVILLE STREET, SUITE 301, RALEIGH, NC 27601  
REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NORTH CAROLINA  
LICENSE NO. 24587  
PROJECT NO. 20408.000  
**SHEET TITLE**  
**SECTIONS**

**SHEET NUMBER**  
**S-302**

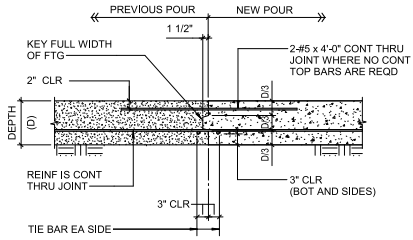


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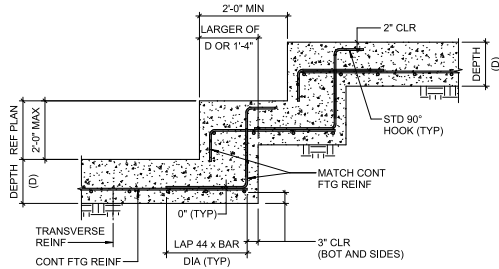
**TYPICAL WALL FOOTING CORNER AND INTERSECTION DETAILS**

NTS



**TYPICAL WALL FOOTING CONSTRUCTION JOINT DETAIL**

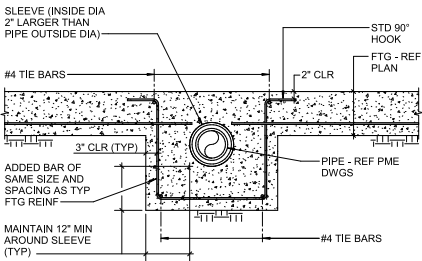
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**TYPICAL STEPPED FOOTING DETAIL**

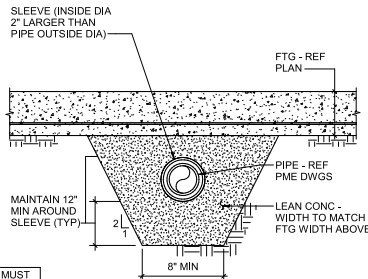
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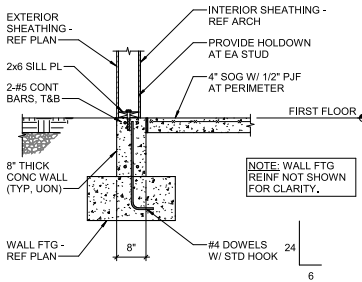


**THROUGH FOOTING**

NOTE: SLEEVES MUST NOT BE LOCATED IN OR UNDER COL FTGS.



**BELOW FOOTING**

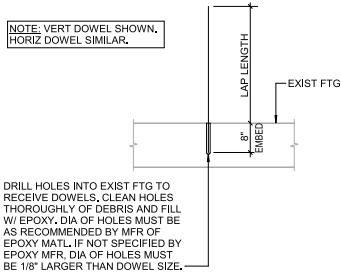


**TYPICAL EDGE OF SLAB**

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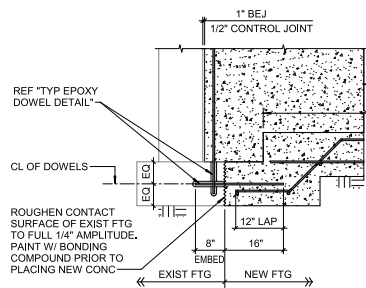
**TYPICAL PIPE SLEEVE DETAILS**

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**TYPICAL EPOXY DOWEL DETAIL**

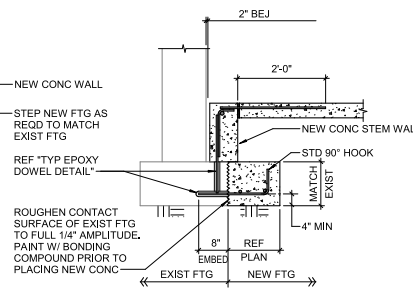
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**PERPENDICULAR**

**TYPICAL DETAIL AT INTERSECTION OF NEW AND EXISTING FOOTINGS**

NTS



**PARALLEL**

**Carolina Charter Academy Exp.**  
8529 Highway 55  
Angier, North Carolina 27501

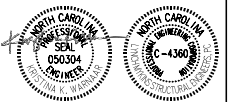
**Owner**  
Highmark School Development  
745 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-296-9590

**Architect**  
**RATIO**  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-862-1805

**Structural Engineer**  
Lynch Mykins Structural Engineers, PC  
301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-782-1833

**Civil Engineer**  
Timmons Group  
5410 Trinity Road  
Suite 102  
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919-866-4938

SEAL DATE 02-24-21



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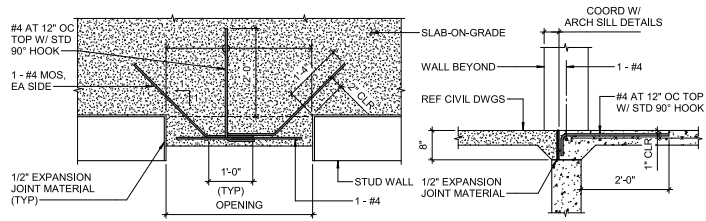
**RATIO**  
CORPORATE OFFICE: 227 FAYETTEVILLE STREET, SUITE 301  
RALEIGH, NC 27601  
PHONE: 919-862-1805  
FAX: 919-862-1833  
WWW.RATIO-ENGINEERS.COM

PROJECT NO. 20408.000

SHEET TITLE  
**TYPICAL DETAILS**

SHEET NUMBER  
**S-501**

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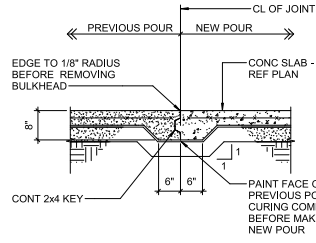


PLAN

SECTION

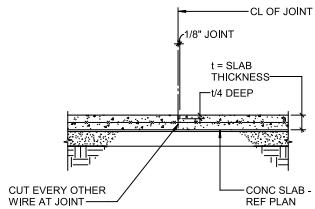
TYPICAL EXTERIOR DOORS / OPENINGS DETAIL

NTS



TYPICAL KEYED CONSTRUCTION JOINT DETAIL

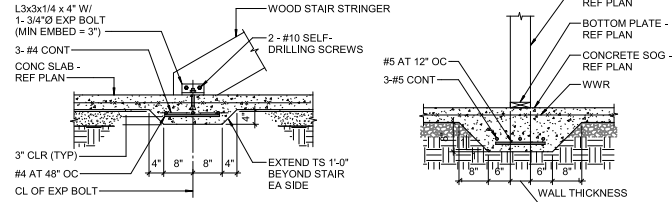
(DENOTED KCJ ON PLAN)



TYPICAL SAWED JOINT DETAIL

NTS

(DENOTED SJ ON PLAN)

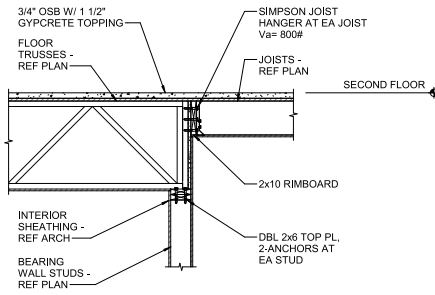


TYPICAL THICKENED SLAB AT STAIR STRINGER DETAIL

NTS (DENOTED TS/SR ON PLAN)

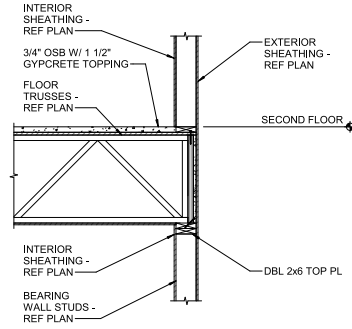
TYPICAL THICKENED SLAB AT INTERIOR BEARING WALLS

3/4" = 1'-0"



TYPICAL CORRIDOR FRAMING

NTS



TYPICAL TRUSS BEARING

NTS

**Carolina Charter Academy Exp.**  
 8529 Highway 55  
 Angier, North Carolina 27501

**Owner**  
 Highmark School Development  
 745 East Winchester Street  
 Suite 150  
 Murray, Utah 84107  
 801-256-9550

**Architect**  
 RATIO  
 227 Fayetteville Street, Suite 301  
 Raleigh, North Carolina 27601  
 919-821-0805

**Structural Engineer**  
 Lynch Mykins Structural Engineers, PC  
 301 North West Street  
 Suite 105  
 Raleigh, North Carolina 27603  
 919-760-1833

**Civil Engineer**  
 Timmons Group  
 5410 Trinity Road  
 Suite 102  
 Raleigh, North Carolina 27607  
 919-866-4938

SEAL / DATE 02-24-21



SHEET ISSUE		
NO.	DESCRIPTION	DATE
100%	CONSTRUCTION DOCUMENTS	02-24-21

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 PROJECT NO. 20408.000

SHEET TITLE  
 TYPICAL DETAILS

SHEET NUMBER  
 S-502

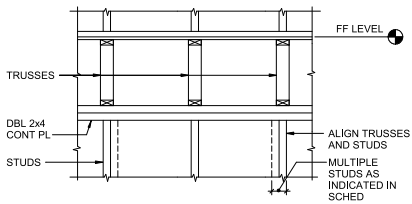
**Carolina Charter Academy Exp.**  
8529 Highway 55  
Angier, North Carolina 27501

Owner  
**Highmark School Development**  
745 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9590

Architect  
**RATIO**  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

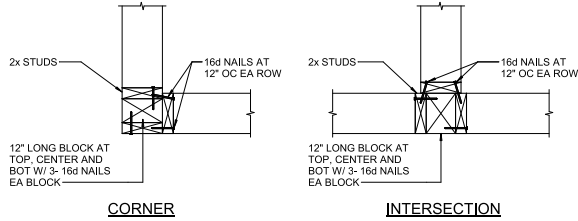
Structural Engineer  
**Lynch Mykys Structural Engineers, PC**  
301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-782-1833

Civil Engineer  
**Timmons Group**  
5410 Trinely Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938



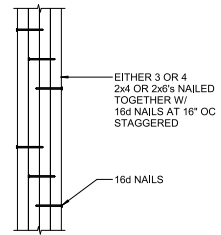
**TYPICAL LOAD BEARING WALL DETAIL**

NTS



**TYPICAL WALL CORNERS AND INTERSECTIONS**

NTS

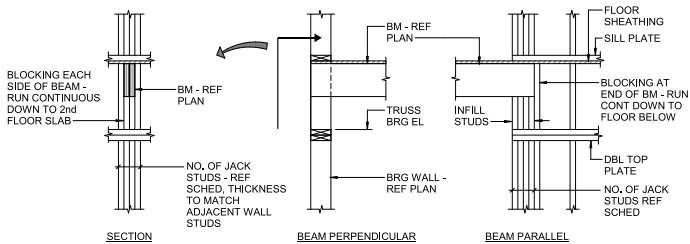


**TYPICAL BUILT-UP COLUMN NAILING PATTERN DETAIL**

NTS

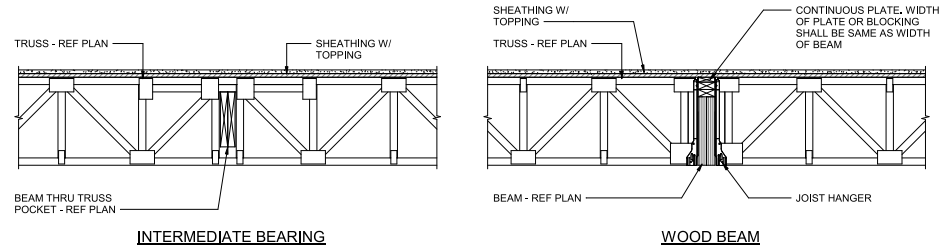
**NOTES:**

- REFER TO "ROUGH CARPENTRY NOTES" ON SHEET S0.02 FOR MATERIAL PROPERTY REQUIREMENTS.
- ATTACH MEMBERS OF MULTI-PLY BEAMS TOGETHER.
  - A. SAWN LUMBER - ATTACH PER TABLE 2304.8.1 OF THE BUILDING CODE.
  - B. LVL - ATTACH PER MANUFACTURER'S REQUIREMENTS.
- JACK STUDS AT BEAM BEARING SHALL BE CONTINUOUS TO LEVEL 2.
- JACK STUDS ARE AS NOTED IN SCHEDULE UNLESS NOTED OTHERWISE ON PLAN.



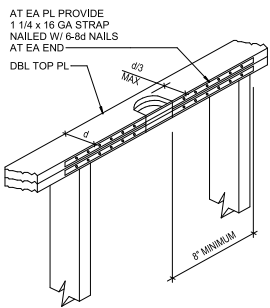
**TYPICAL WOOD BEAM BEARING DETAILS**

NTS



**TYPICAL TRUSS TO BEAM CONNECTION DETAILS**

NTS



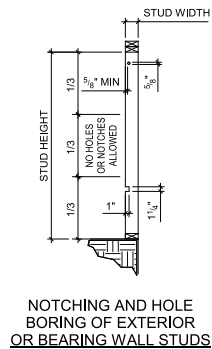
**ALLOWABLE PENETRATIONS IN LIGHT FRAMED 2x LUMBER**

NTS

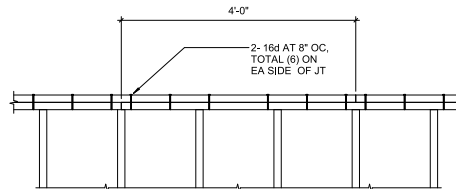
**NOTCH AND HOLE BORING SCHEDULE**

MEMBER (d)	d/3	d/4	d/6
2x4	1 1/8"	7/8"	5/8"
2x6	1 3/4"	1 5/8"	7/8"
2x8	2 5/8"	1 3/4"	1 1/8"
2x10	3"	2 1/4"	1 1/2"
2x12	3 5/8"	2 3/4"	1 7/8"

- NOTE:**
- HOLES AND NOTCHES IN BEAMS ARE NOT ALLOWED UNLESS OTHERWISE APPROVED IN WRITING BY THE ENGINEER.



**NOTCHING AND HOLE BORING OF EXTERIOR OR BEARING WALL STUDS**



**DOUBLE TOP PLATE LAP**

NTS

SEAL DATE: 02-24-21



SHEET ISSUE

100% CONSTRUCTION DOCUMENTS	02-24-21

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PROJECT NO: 20408.000

SHEET TITLE: **TYPICAL DETAILS**

SHEET NUMBER: **S-503**

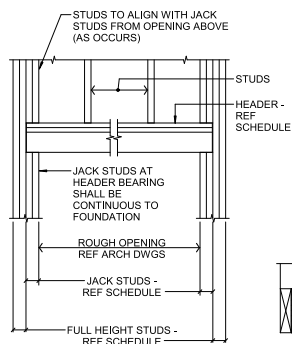
SHEAR WALL SCHEDULE					
TYPE	FLOOR	COMMON WIRE NAILS - 8d (TYP)	CHORD STUDS NO. 2 SPF (TYP)	HOLDOWN	BLOCKING NAILS AND HEADED ANCHOR RODS (7' EMBED)
		SPACING EDGE / FIELD	6" STUD WALL ENDS		
SW1	ROOF	6" / 12"	2	HD3BDF	16d AT 6" OC
	2	4" / 12"	3	HD7BDF	1/2"Ø AT 12" OC

- NOTES:**
- SHEATHING IS 7/16" STRUCTURAL SHEATHING, AT EXTERIOR WALLS. APPLY TO EXTERIOR, AT SINGLE STUD WALLS. APPLY TO CORRIDOR OR COORDINATE WITH MEP UTILITIES.
  - NAIL ALL MULTI-PLY MEMBERS TOGETHER PER NOTE 12 UNDER ROUGH CARPENTRY NOTES ON S-002.
  - PROVIDE CHORD STUDS AT WALL ENDS AND AT OPENINGS, EXCEPT AT EXTERIOR. REF "TYPICAL FRAMED OPENING DETAIL AND SCHEDULE" THIS SHEET.
  - BLOCKING NAILS CONNECT THE SILL PLATE ABOVE THE FLOOR SHEATHING TO THE BLOCKING BELOW THE FLOOR SHEATHING WITHIN THE FLOOR FRAMING DEPTH.
  - WHERE NAILING IS 3" OC OR LESS. PROVIDE 3" THICK MEMBERS (MIN) AT ALL SHEATHING PANEL EDGES. IT IS ACCEPTABLE TO USE MULTIPLE MEMBERS AT VERTICAL JOINTS AND 2x4 BLOCKING ON THE FLAT AT HORIZONTAL JOINTS.
  - PROVIDE HOLDOWN ON EACH SIDE OF CHORD STUD (4 HOLDOWNS TOTAL PER SHEAR WALL AT LEVEL INDICATED), UON.

WOOD BEAM SCHEDULE				
MARK	SIZE	NUMBER OF JACK STUDS AT EACH LEVEL		FULL HEIGHT STUDS
		2nd	ROOF	
B1	3 - 1.75x14 LVL	5	N/A	2
B2	3 - 1.75x9.25 LVL	N/A	3	2
B3	3-2x12	N/A	N/A	N/A
B4	4-2x12	2	N/A	1

HOLDOWN SCHEDULE	
MARK	HOLDOWN BOLT DIA
HD3BDF	2 - 5/8"Ø
HD7BDF	3 - 3/4"Ø

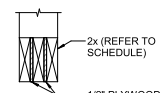
- NOTES:**
- AT CORNERS OF 2 SHEAR WALLS. OFFSET CHORDS AND HOLDOWNS WITHOUT REDUCING SHEAR WALL LENGTH.
  - PROVIDE CHORD STUDS AT WALL ENDS. HOLDOWN ANCHORS ARE BASED ON THE STANDARD PRODUCTS OF SIMPSON STRONG-TIE COMPANY, INC. INSTALLATION MUST CONFORM TO THE RECOMMENDED DETAILS OF THE MANUFACTURER. ALTERNATIVE PRODUCTS MAY BE SUBMITTED FOR APPROVAL.



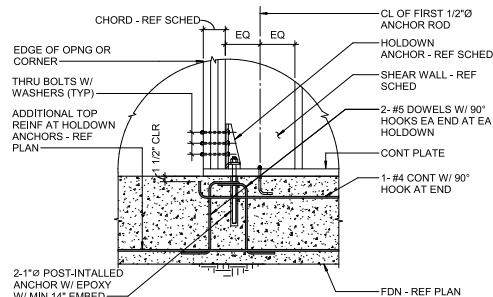
**TYPICAL FRAMED OPENING DETAIL AND SCHEDULE**

NTS

WOOD HEADER SCHEDULE				
MARK	SIZE	NUMBER OF JACK STUDS AT EACH LEVEL		FULL HEIGHT STUDS
		2nd	ROOF	
H-1	3-2x8	2	N/A	1
H-2	3 - 1.75x7.25 LVL	3	2	2
H-3	3-2x6	N/A	1	1
H-4	3-2x10	2	1	1

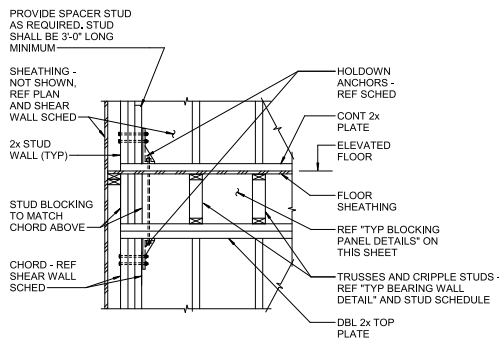


**SECTION**



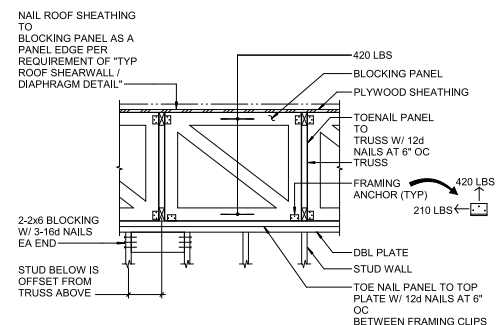
**TYPICAL HOLDOWN ANCHOR DETAIL**

NTS



**TYPICAL HOLDOWN ANCHOR DETAIL**

NTS



**TYPICAL BLOCKING PANEL DETAIL**

NTS

Carolina Charter Academy Exp. 8529 Highway 55 Angier, North Carolina 27501

Owner  
Highmark School Development  
746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

Architect  
RATIO  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-921-0806

Structural Engineer  
Lynch Mykims Structural Engineers, PC  
301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-760-1833

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919-866-4938

SEAL / DATE 02-24-21



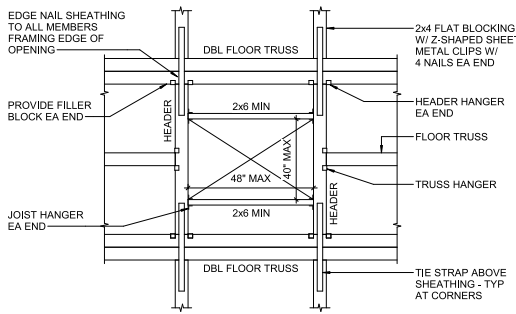
SHEET ISSUE

100% CONSTRUCTION DOCUMENTS	02-24-21

**RATIO**  
CORPORATE OFFICE: 227 FAYETTEVILLE STREET, SUITE 301, RALEIGH, NC 27601  
REGIONAL OFFICE: 5410 TRINELY ROAD, SUITE 102, RALEIGH, NC 27607  
PROJECT NO. 20408.000

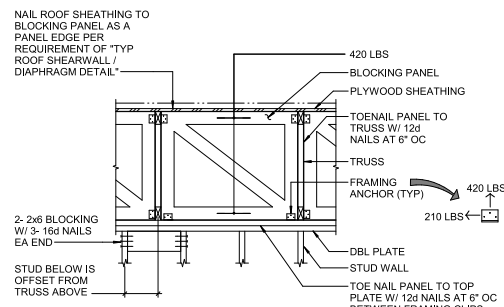
SHEET TITLE  
**TYPICAL DETAILS**

SHEET NUMBER  
**S-504**



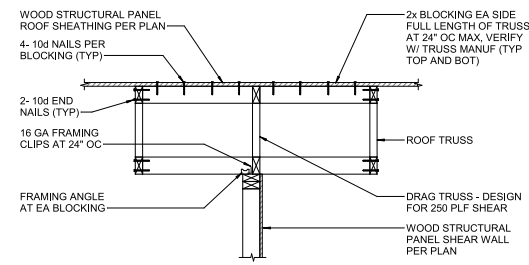
**TYPICAL SHAFT OPENING AT TRUSS OR JOIST DETAIL**

NTS



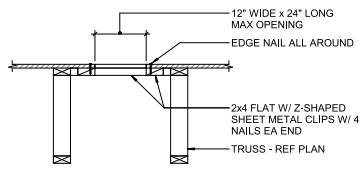
**TYPICAL BLOCKING PANEL DETAIL**

NTS



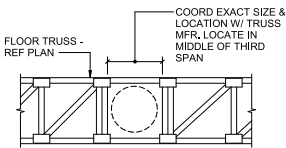
**TYPICAL SHEAR TRANSFER PARALLEL TO TRUSS DETAIL**

NTS



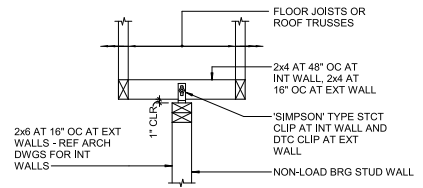
**TYPICAL SMALL OPENING BETWEEN TRUSS OR JOIST DETAIL**

NTS



**TYPICAL MECHANICAL DUCT OPENING DETAIL**

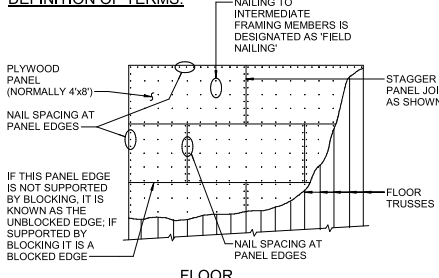
NTS



**TYPICAL NON-LOAD BEARING WALL TOP BRACE DETAIL**

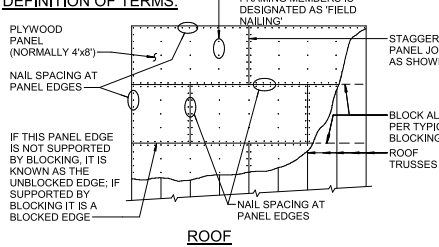
NTS

**DEFINITION OF TERMS:**



**FLOOR**

**DEFINITION OF TERMS:**

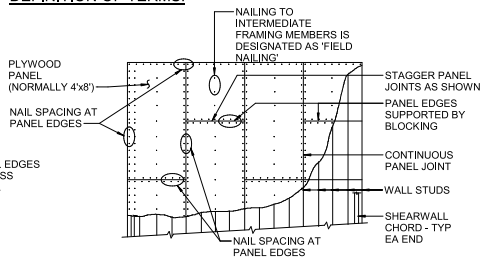


**ROOF**

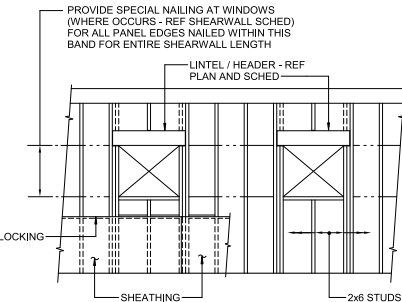
**TYPICAL SHEATHING NAILING DETAILS**

NTS

**DEFINITION OF TERMS:**



**EXTERIOR WALLS AND SHEARWALLS**



**TYPICAL SHEARWALL ELEVATION DETAIL AT WINDOWS**

NTS

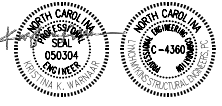
**Owner**  
Highmark School Development  
745 East Winchester Street  
Suite 150  
Murray, Utah 84107  
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**Architect**  
RATIO  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-862-0805

**Structural Engineer**  
Lynch Mykims Structural Engineers, PC  
301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-762-1833

**Civil Engineer**  
Timmons Group  
5410 Trinnly Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938

SEAL / DATE 02-24-21



SHEET ISSUE	
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**RATIO**  
REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NORTH CAROLINA  
 EXERCISE NO. 050304  
 EXPIRES 12/31/2023  
 EXPIRES 12/31/2023

SHEET NO. 20408.000  
**SHEET TITLE**  
 TYPICAL DETAILS

SHEET NUMBER  
**S-505**

### ABBREVIATIONS

A/C	AIR CONDITIONING
ACOUS.	ACOUSTICAL
A.C.T.	ACOUSTICAL CEILING TILE
ACP	ACOUSTICAL CEILING PANEL
ADA	AMERICANS W/DISABILITIES ACT
ADAAG	AMERICANS W/DISABILITIES ACCESSIBILITY GUIDELINES
ADJ.	ADJUSTABLE
A/E	ARCHITECT/ENGINEER
A.F.F.	ABOVE FINISHED FLOOR
ALT.	ALTERNATE
ALUM.	ALUMINUM
A.P.	ACCESS PANEL
ARCH.	ARCHITECT/ARCHITECTURAL
A.V.	AUDIOVISUAL

B	
BD.	BOARD
BITUM.	BITUMINOUS
BLDG.	BUILDING
B/O	BOTTOM OF
B.O.W.	BOTTOM OF WALL
BSMT.	BASEMENT

C	
CAB.	CABINET
C.F.C.I.	CONTRACTOR FURNISHED-CONTRACTOR INSTALLED
C.G.	CORNER GUARD
C.I.P.	CAST-IN-PLACE
C.J.	CONTROL JOINT
CL	CENTERLINE
CLG.	CEILING
CLR	CLEAR(ANCE)
C.M.	CONSTRUCTION MANAGER
CMP	COMPOSITE METAL PANEL
C.M.U.	CONCRETE MASONRY UNIT
COL.	COLUMN
CONC.	CONCRETE
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
CONTR.	CONTRACTOR
COORD.	COORDINATE
CPT.	CARPET
C.T.	CERAMIC TILE
C.W.	COLD WATER

D	
D.E.F.S.	DIRECT APPLIED EXTERIOR FINISH SYSTEM
DEPT.	DEPARTMENT
DET.	DETAIL
D.F.	DRINKING FOUNTAIN
DIA.	DIAMETER
DIM.	DIMENSION
DISP.	DISPENSER
D.M.B.	DRY MARKER BOARD
DN	DOWN
DS	DOWNSPOUT
DWG.	DRAWING

E	
EA.	EACH
E.C.	ELECTRICAL CONTRACTOR
E.I.F.S.	EXTERIOR INSULATION FINISH SYSTEM
E.J.	EXPANSION JOINT
EL	ELEVATION
ELEC.	ELECTRICAL/ELECTRICAL
ELEV.	ELEVATOR/ELEVATION
ENGR.	ENGINEER
E.P.	ELECTRICAL PANEL
EQ.	EQUAL
EQUIP.	EQUIPMENT
E.W.C.	ELECTRIC WATER COOLER
EXIST.	EXISTING
EXP.	EXPOSED
EXT.	EXTERIOR

F	
F-R	FIRE RESISTIVE
FAB.	FABRICATE/FABRICATOR
F.C.U.	FAN COIL UNIT
F.D.	FLOOR DRAIN
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXTINGUISHER CABINET
F.F.E.	FINISH FLOOR ELEVATION
F.F.&E.	FURNISHINGS, FIXTURES AND EQUIPMENT
F.H.C.	FIRE HOSE CABINET
FIN.	FINISH(ED)
FLR.	FLOOR
FLUOR.	FLUORESCENT
F/O	FACE OF
F.O.	FINISH OPENING
F.O.B.	FACE OF BLOCK
F.O.BR.	FACE OF BRICK
F.O.C.	FACE OF CONCRETE
F.O.F.	FACE OF FINISH
F.O.G.	FACE OF GYPSUM BD.
F.O.S.	FACE OF STUD
FFRF.	FIREPROOF
FT.	FOOT/FEET
F.V.	FIELD VERIFY

G	
G.A.	GAUGE
G.C.	GENERAL CONTRACTOR
GEN.	GENERAL
GL	GLASS
G.W.B./GWB	GYPSUM WALL BOARD

H	
H.	HEIGHT
HB	HOSE BIBB
HDWR.	HARDWARE
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL
HT.	HEIGHT
HVAC.	HEATING, VENTILATION & A.C.
H.W.	HOT WATER

I	
I.D.	INSIDE DIAMETER
INCAN.	INCANDESCENT
INFO.	INFORMATION
INSUL.	INSULATION
INT.	INTERIOR

J	
JAN.	JANITOR
J.C.	JANITOR CLOSET
JST. BRG.	JOIST BEARING
JT.	JOINT

L	
L	LENGTH
LAV.	LAVATORY
LB.	POUND
L.H.	LEFT HAND
L.L.H.	LONG LEG HORIZONTAL
L.L.O.	LONG LEG OUT
L.L.V.	LONG LEG VERTICAL

M	
MAX.	MAXIMUM
MB	MARKER BOARD
M.C.	MECHANICAL CONTRACTOR
M.D.F.	MEDIUM DENSITY FIBERBOARD
MECH.	MECHANICAL
M.E.P.	MECH./ELECT./PLUMBING
MFR.	MANUFACTURER(ING)
M.H.	MANHOLE
MIN.	MINIMUM
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
MTL.	METAL

N	
N.A.F.	NO APPLIED FINISH
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
N.T.S.	NOT TO SCALE

O	
O.A.	OVER ALL
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.F.C.I.	OWNER FURNISHED-CONTRACTOR INSTALLED
O.F.O.I.	OWNER FURNISHED-OWNER INSTALLED
O.H.	OPPOSITE HAND
OPG.	OPENING
OPP.	OPPOSITE

P	
P.L.	PROPERTY LINE
P.LAM.	PLASTIC LAMINATE
PLAS.	PLASTER
PR.	PAIR
PREFAB.	PREFABRICATED
PT. BD.	PARTICLE BOARD
PTD.	PAINTED
PWD.	PLYWOOD

Q	
Q.T.	QUARRY TILE

R	
R.	RADIUS
R.C.P.	REFLECTED CEILING PLAN
R.D.	ROOF DRAIN
REF.	REFERENCE
REFL.	REFLECTED
REINF.	REINFORCED
RESIL.	RESILIENT
R.H.	RIGHT HAND
RM	ROOM
R.O.	ROUGH OPENING

S	
SCHED.	SCHEDULE
S.D.	SOAP DISPENSER
SECT.	SECTION
S.F.	SQUARE FEET
SHT.	SHEET
SIM.	SIMILAR
SPEC.	SPECIFICATION
SQ.	SQUARE
S.S.	STAINLESS STEEL
STD.	STANDARD
STL.	STEEL
STOR.	STORAGE
STRUCT.	STRUCTURAL
SUSP.	SUSPENDED
SYM.	SYMMETRICAL

T	
T.	THICKNESS
T.B.	TACK BOARD
TBD	TO BE DETERMINED
T.C.	TOP OF CURB
T.D.	TOP OF DECK
TECH.	TECHNICAL
TEL.	TELEPHONE
TEMP.	TEMPORARY
T&G	TONGUE AND GROOVE
T.M.	TOP OF MASONRY
TMPRD.	TEMPERED
T/O	TOP OF
T.P.	TOP OF PAVEMENT
T.S.	TOP OF STEEL
T.W.	TOP OF WALL
TYP.	TYPICAL

U	
U.N.O.	UNLESS NOTED OTHERWISE
UTIL.	UTILITY
U.V.	UNIT VENTILATOR

V	
VCT	VINYL COMPOSITION TILE
VERT.	VERTICAL
VEST.	VESTIBULE
VIF	VERIFY IN FIELD

W	
W	WIDE/WIDTH
WI	WITH
W.C.	WATER CLOSET
WD	WOOD
W.H.	WATER HEATER
W/O	WITHOUT
WT.	WEIGHT
W.W.F.	WELDED WIRE FABRIC

### ARCHITECTURAL SYMBOLS LEGEND

- COLUMN GRIDS**
  - EXISTING
  - NEW
- ELEVATION DATUM REFERENCE**
  -
- ENLARGED DRAWING REFERENCE**
  -
- BUILDING SECTION CUT REFERENCE**
  -
- WALL SECTION CUT REFERENCE**
  -
- ELEVATION REFERENCE**
  -
- DOOR / DOOR NUMBER**
  -
- KEY NOTE (SHAPE VARIES)**
  -
- WINDOW NUMBER**
  -
- ALIGN DESIGNATED SURFACES**
  -
- NORTH ARROW**
  -
- INDICATES NORTH DIRECTION**
  -
- REVISION REFERENCE**
  -
- ROOF SLOPE - ARROW POINTS TOWARD DRAIN**
  -
- ROOM NAME AND NUMBER**
  -
- PARTITION TYPE SYMBOL\***
  -
- ACCESSIBLE PLUMBING FIXTURES INDICATED WITH HATCH ON FLOOR PLANS**
  -
- MISCELLANEOUS**
  - 
  - 
  -

### ARCHITECTURAL MATERIAL LEGEND

- EARTH**
- GRANULAR FILL**
- SAND, GROUT AS NOTED**
- CAST-IN-PLACE CONCRETE**
- PRECAST CONCRETE, CAST STONE**
- CONCRETE MASONRY UNIT**
- BRICK MASONRY**
- STONE: LIMESTONE, GRANITE, MARBLE OR AS NOTED**
- TERRA COTTA, STRUCTURAL CLAY TILE**
- METAL: TYPE AS NOTED**
- METAL: ROLLED SHAPES**
- WOOD FRAMING / BLOCKING: CONTINUOUS**
- WOOD SHIM**
- FINISHED WOOD SHOWN CUT AND ELEVATION**
- ENGINEERED WOOD: GLUE LAMINATED**
- WOOD FLOOR, WOOD SHINGLES, OR SIDING**
- PLYWOOD**
- GLASS FIBER REINFORCED CONCRETE SIDING OR TRIM**
- EIFS**
- SPRAYED FIREPROOFING SHOWN ON ROLLED SHAPE**
- BATT INSULATION: THERMAL OR ACOUSTICAL, UNO**
- RIGID INSULATION: THERMAL, ACOUSTICAL, OR SAFING**
- GYPSUM BOARD**
- PLASTER ON METAL LATH**
- SHEATHING: GYPSUM, OR AS NOTED**
- ACOUSTICAL CEILING TILE**
- RESINOUS FLOORING: TERRAZO, TROWEL-ON, UNO**
- TILE: CERAMIC, QUARRY, UNO**
- CARPET, CARPET TILE (DETAIL)**
- GRATING SHOWN IN PLAN**
- GRATING**
- INSULATED GLASS: (SMALL SCALE)**
- INSULATED GLASS: (DETAIL)**
- MEMBRANE: WATERPROOF, ROOF, DAMPPROOFING**
- AIR BARRIER SYSTEM**

NOTE: PATTERNS SHOWN REPRESENT CUT MATERIALS IN PLAN OR SECTION, UNLESS NOTED OTHERWISE ABOVE.

### GENERAL ARCHITECTURAL NOTES

- THESE GENERAL NOTES APPLY TO ARCHITECTURAL DRAWINGS.
- WORK SHOWN ON THE DRAWINGS SHALL BE BASE BID UNLESS SPECIFICALLY NOTED TO BE BY ALTERNATE BID.
- FIELD VERIFY EXISTING FINISH FLOOR ELEVATIONS PRIOR TO STARTING CONSTRUCTION. MATCH NEW FLOOR ELEVATIONS WITH EXISTING UNLESS NOTED OTHERWISE.
- DIMENSIONS TO EXISTING CONSTRUCTION ARE TO FINISH SURFACE. DIMENSIONS TO NEW CONSTRUCTION ARE TO STRUCTURAL CENTERLINE, FACE OF CONCRETE, FACE OF MASONRY CONSTRUCTION, OR TO FACE OF EXTERIOR OF INTERIOR PARTITION TYPE UNLESS NOTED OTHERWISE. FIELD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO STARTING WORK AND NOTIFY ARCHITECT IMMEDIATELY IF DISCREPANCIES ARE FOUND BETWEEN CONTRACT DOCUMENTS AND ACTUAL FIELD CONDITIONS.
- DO NOT SCALE DRAWINGS. REFER DIMENSION QUESTIONS TO ARCHITECT FOR INTERPRETATION.
- DOOR AND FRAME NUMBERS CORRESPOND TO RESPECTIVE ROOM NUMBERS. IN ROOMS WITH MULTIPLE OPENINGS, A SUFFIX HAS BEEN ADDED TO DOOR NUMBERS, I.E., A101-B.
- LOCATE INSIDE FACE OF DOOR FRAME JAMBS 6 INCHES FROM FINISH FACE OF ADJACENT WALLS UNLESS NOTED OTHERWISE.
- COORDINATE EQUIPMENT WORK WITH MANUFACTURERS AND SUPPLIERS TO INSURE PROPER ROUGH-IN CLEARANCES FOR INSTALLATION, USE AND MAINTENANCE.
- PROTECT EXISTING SURFACES THAT ARE NOT INCLUDED IN SCOPE OF WORK BUT THAT ARE WITHIN AREAS OF CONSTRUCTION ACTIVITY.
- PATCH, REPAIR AND RESTORE EXISTING FINISHES AND SURFACES TO AS NEW CONDITION AS REQUIRED TO MATCH SURROUNDING MATERIALS OR TO PROVIDE APPROPRIATE SUBSTRATE PRIOR TO INSTALLING NEW FINISHES. AREAS NOTED TO BE PATCHED OR REPAIRED ON THE DRAWINGS ARE GIVEN FOR REFERENCE AND SHALL NOT BE INTERPRETED TO LIMIT THE SCOPE OF WORK.
- VERTICAL COURSING FOR NEW MASONRY WALL CONSTRUCTION SHALL EQUAL EIGHT INCHES (8") FOR ONE CONCRETE MASONRY UNIT PLUS ONE MORTAR JOINT AND THREE BRICK COURSES PLUS THREE MORTAR JOINTS, UNLESS NOTED OTHERWISE.
- TOOTH NEW MASONRY INTO EVERY OTHER COURSE OF EXISTING MASONRY UNLESS OTHERWISE INDICATED. PROVIDE HORIZONTAL ANCHORS BETWEEN NEW AND EXISTING MASONRY AT CONDITIONS THAT PROHIBIT TOOTHED-TYPE CONSTRUCTION. HORIZONTAL JOINTS OF NEW MASONRY SHALL MATCH EXISTING UNLESS OTHERWISE INDICATED. NEW MASONRY BOND SHALL MATCH EXISTING UNLESS OTHERWISE INDICATED.
- PROVIDE CONTROL JOINTS (C.J.) IN MASONRY CONSTRUCTION AS INDICATED. WHERE NOT SHOWN, PROVIDE MAXIMUM SPACING BETWEEN VERTICAL JOINTS OF 30'-0" AND MAXIMUM DISTANCE BETWEEN OUTSIDE CORNERS AND JOINTS OF 8'-0". PROVIDE JOINTS BETWEEN INTERIOR LOAD BEARING AND NON-LOAD BEARING PARTITIONS, AT ALL ABRUPT CHANGES IN WALL HEIGHT, AT CHANGES IN PARTITION THICKNESS AND AT PILASTER LOCATIONS. VERIFY FINAL CONTROL JOINT LOCATIONS WITH ARCHITECT PRIOR TO STARTING WORK.
- PROVIDE CONTROL JOINTS (C.J.) IN GYPSUM BOARD WALL CONSTRUCTION AS INDICATED. VERIFY FINAL CONTROL JOINT LOCATIONS WHETHER OR NOT INDICATED ON THE DRAWINGS WITH ARCHITECT PRIOR TO STARTING WORK. PROVIDE MAXIMUM SPACING BETWEEN JOINTS AS FOLLOWS:
  - CEILING: INSTALL CONTROL JOINTS IN CEILINGS PER ASTM C840 IN ALL CEILINGS WITH AREA EXCEEDING 250 S.F., SPACED 50'-0" O.C. MAXIMUM. CONTROL JOINTS ALSO TO BE INSTALLED WHERE FRAMING OR FURRING CHANGES DIRECTION. REFER TO REFLECTED CEILING PLANS FOR DESIRED LOCATIONS.
  - WALLS: INSTALL CONTROL JOINTS IN INTERIOR PARTITIONS AND FURRING PER ASTM C840 IN AREAS EXCEEDING 30'-0" O.C. MAXIMUM. CONTROL JOINTS TO INTERIOR ELEVATIONS FOR DESIRED LOCATIONS.
- WOOD OR METAL STUD SPACING SHALL BE 16" ON CENTER MAXIMUM UNLESS OTHERWISE REQUIRED BY DELEGATED DESIGN OR NOTED OTHERWISE.
- VERIFY MOUNTING HEIGHTS OF ACCESSORIES, EQUIPMENT, DOOR HARDWARE, CASEWORK, ETC., AND PROVIDE SOLID BLOCKING BEHIND ITEMS REQUIRING ANCHORAGE. PROVIDE FIRE TREATED WOOD BLOCKING OR METAL STRAPS BETWEEN FRAMING MEMBERS AS REQUIRED TO SUPPORT WEIGHT AND USE OF ITEMS TO BE SUPPORTED. WHERE MOUNTING HEIGHTS ARE NOT INDICATED, MOUNT ITEMS IN ACCORDANCE WITH RECOGNIZED INDUSTRY STANDARDS, COORDINATE LOCATIONS WITH MANUFACTURER OR SUPPLIER AND REFER MOUNTING HEIGHT QUESTIONS TO ARCHITECT FOR INTERPRETATION.
- PROVIDE SEALANT AT PERIMETERS OF METAL FRAMES AT OPENINGS AND AT JOINTS BETWEEN DISSIMILAR MATERIALS SUCH AS GYPSUM BOARD AND MASONRY, MASONRY AND CONCRETE. CASEWORK AND WALLS, ETC. UNLESS OTHERWISE INDICATED.
- STAIRWELLS, ELEVATOR HOISTWAYS, AND SHAFT WALLS SHALL BE ONE-HOUR FIRE-RATED CONSTRUCTION UNLESS OTHERWISE INDICATED.
- REPAIR AND PATCH SPRAYED FIRE-RESISTIVE AND FIRESTOP MATERIALS WHERE DAMAGED DUE TO INSTALLATION OF NEW MATERIALS TO RESTORE SPECIFIED FIRE RATING.
- THESE NOTES ARE APPLICABLE TO THIS BID PACKAGE ONLY AND MAY NOT BE APPLICABLE TO FUTURE BID PACKAGES. SOME WORK WHICH WAS INCLUDED IN PREVIOUS BID PACKAGES OR WILL BE INCLUDED IN FUTURE BID PACKAGES IS SHOWN ON THESE CONSTRUCTION DOCUMENTS FOR REFERENCE PURPOSES ONLY AND IS IDENTIFIED AS SUCH.
- DO NOT BEGIN WORK THAT MAY REQUIRE COORDINATION, SUCH AS CEILING INSTALLATION, PRIOR TO FINAL SUBMITTAL TO ARCHITECT OF COORDINATION DRAWINGS FOR MEP ITEMS BOTH ABOVE CEILING AND IN CEILING. NOR PRIOR TO RESOLUTION AND APPROVAL OF COORDINATION ISSUES.
- REFER TO LIFE SAFETY PLAN DRAWINGS AND CODE SUMMARY FOR FIRE-RATED FLOOR, WALL, CEILING AND ROOF LOCATIONS. INSTALL FIRESTOPPING AT PENETRATIONS IN RATED CONSTRUCTION AND AT TOPS OF RATED WALLS. REFER TO STRUCTURAL DRAWINGS FOR FOOTING AND FOUNDATION DRAINS, UNDERSLAB DRAINAGE AND BACKFILL REQUIREMENTS.
- REFER TO LANDSCAPE AND CIVIL DRAWINGS FOR SITE ELEMENTS AND IMPROVEMENTS ADJACENT TO BUILDING EXTERIOR.
- REFER TO CIVIL DRAWINGS FOR FINISH FLOOR ELEVATIONS.
- REFER TO A-003 FOR PARTITION CONSTRUCTION TYPE.

**Carolina Charter Academy Exp.**  
8529 Highway 55  
Angier, North Carolina 27501

**Owner**  
**Highmark School Development**  
746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

**Architect**  
**RATIO**  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

**Structural Engineer**  
**Lynch Mykins Structural Engineers, PC**  
301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-782-1833

**Civil Engineer**  
**Timmons Group**  
5410 Trinity Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938

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SHEET ISSUE		
1	100% Construction Documents	2/24/2021

**RATIO**

PROJECT NO. 20408.000

SHEET TITLE  
**GENERAL NOTES, SYMBOLS, AND STANDARD MOUNTING HEIGHTS**

SHEET NUMBER  
**A-001**



**Owner**  
**Highmark School Development**  
746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

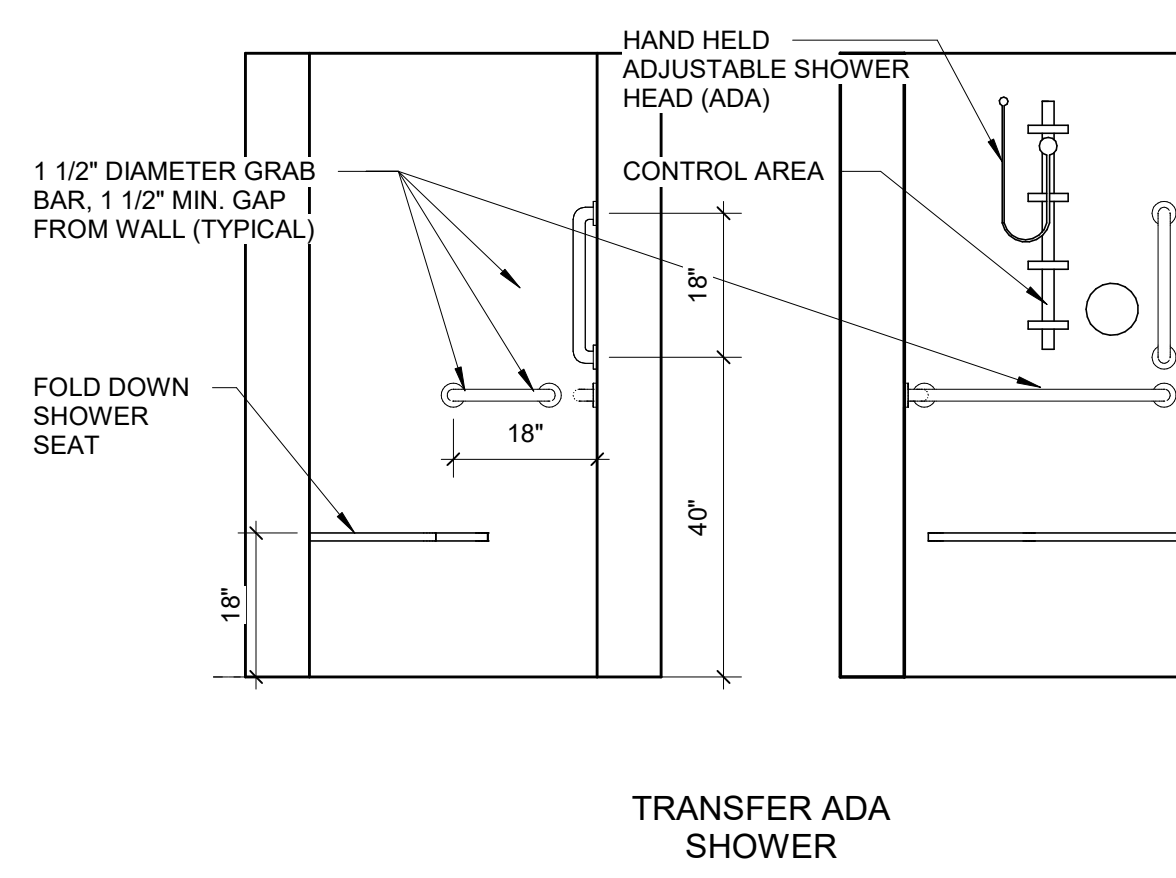
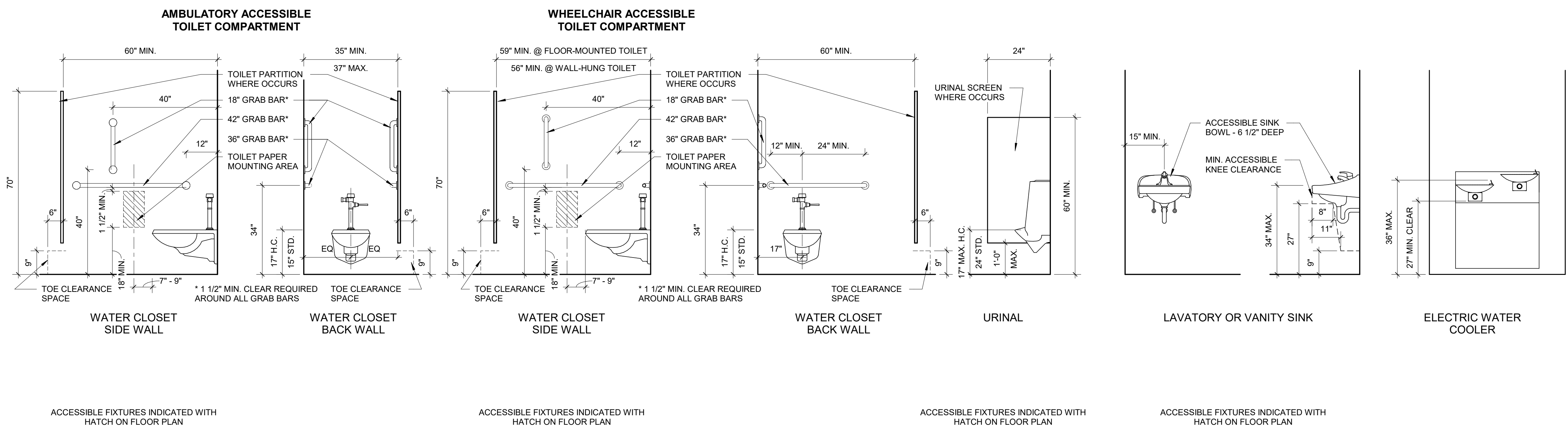
**Architect**  
**RATIO**  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

**Structural Engineer**  
**Lynch Mykns Structural Engineers, PC**  
301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-782-1833

**Civil Engineer**  
**Timmons Group**  
5410 Trinity Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938

ITEM:	MOUNTING HEIGHT:	DIMENSION FROM FINISH FLOOR TO:
PAPER TOWEL DISPENSER/ WASTE RECEPTACLE	MAX. 48"	CL OF SLOT
PAPER TOWEL DISPENSER	MAX. 48"	TOP OF HANDLE
RECESSED PAPER TOWEL DISPENSER		COORDINATE WITH B.G. MIRROR
WARM AIR HAND DRYER	MAX. 40"	TOP OF CONTROL
SANITARY NAPKIN/ TAMPON VENDOR	MAX. 48"	TOP OF UNIT
SANITARY NAPKIN DISPOSAL	30"	TOP OF UNIT
TOILET PAPER DISPENSER	24" 15" MIN.	BOTTOM OF UNIT
TOILET PAPER HOLDER	25" 15" MIN.	BOTTOM OF UNIT
TOILET TISSUE/ SEAT COVER DISPENSER	34"	TOP OF UNIT
TOILET TISSUE/ SANITARY NAPKIN DISPOSAL/ SEAT COVER DISPENSER	34"	TOP OF UNIT
GRAB BAR	34"	CL OF BAR
SOAP DISPENSER	34"	TOP OF COUNTER SURFACE
JANITOR'S CLOSET SELF	42"	CL OF UNIT
MIRROR @ COUNTER & LAVS	70" 40"	TOP OF SHELF BOTTOM EDGE OF REFLECTIVE SURFACE
COAT HOOK/ DOOR BUMPER	48" ADA 60" TYP.	CL OF HOOK
CLOTHE S HOOK	54"	TOP OF HOOK
CHANGING STATION	33 1/2" MAX.	TOP OF CHANGING SURFACE
FOLDING UTILITY SHELF	42"	TOP OF SHELF WHEN IN USE
WARM-AIR HAND DRYER	40"	CL OF PUSH BUTTON OR MANUFACTURERS RECOMMENDATION

**STANDARD TOILET ROOM ACCESSORY MOUNTING HEIGHTS**  
1/4" = 1'-0"



**STANDARD-PLUMBING FIXTURE REQUIREMENTS**  
1/2" = 1'-0"

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SHEET ISSUE	DATE
1 100% Construction Documents	2/24/2021

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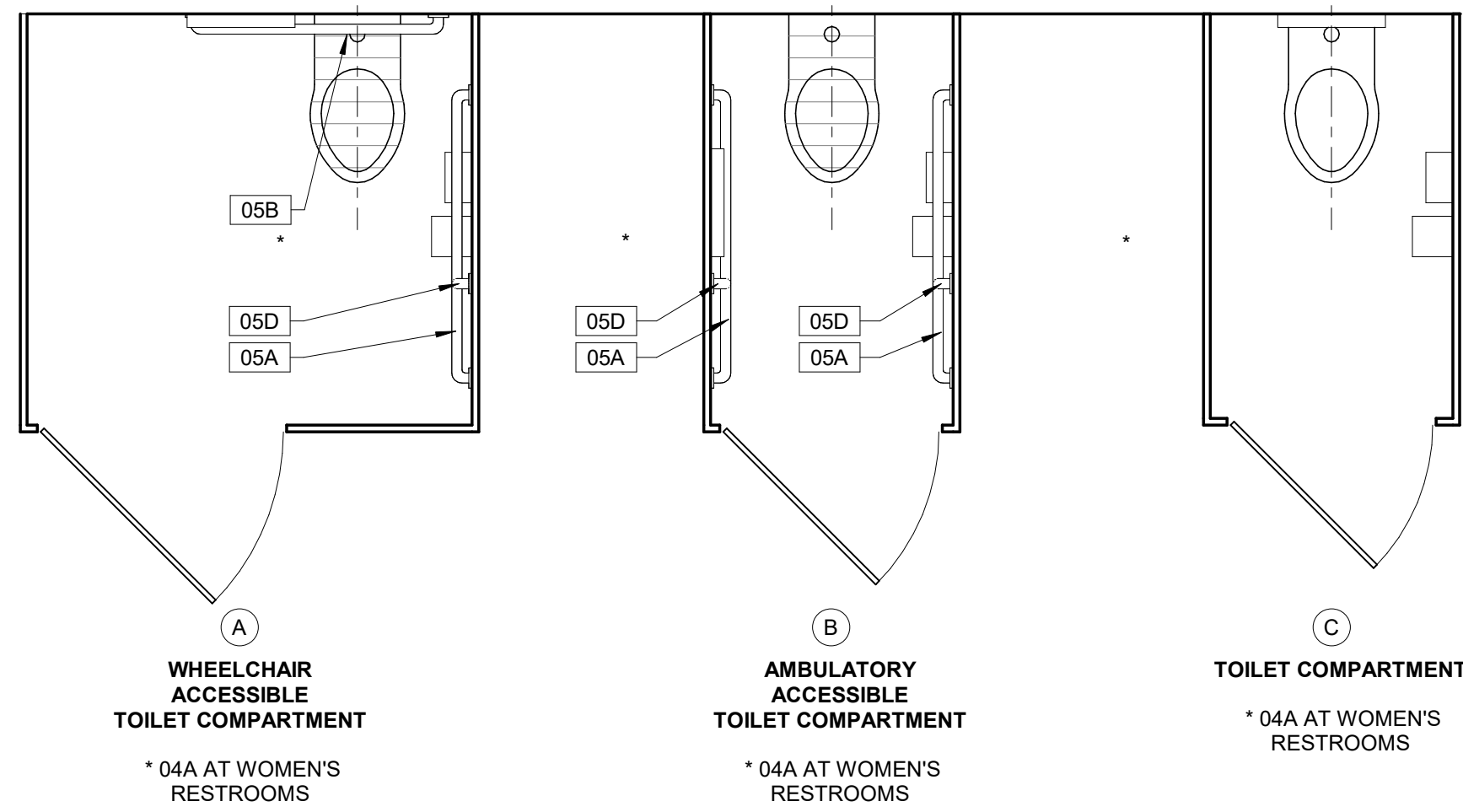
PROJECT NO. 20408.000

SHEET TITLE  
**GENERAL NOTES, SYMBOLS, AND STANDARD MOUNTING HEIGHTS**

SHEET NUMBER  
**A-002**

**STANDARD TOILET COMPARTMENT TYPES - TYPICAL ACCESSORIES**

REFERENCE STANDARD PLUMBING FIXTURE REQUIREMENTS AND STANDARD TOILET TOOM ACCESSORY MOUNTING HEIGHTS ON A-001 FOR ADDITIONAL INFORMATION UNLESS OTHERWISE NOTED. \*ACCESSORIES NOT TAGGED PROVIDED BY OWNER.



**A WHEELCHAIR ACCESSIBLE TOILET COMPARTMENT**  
\* 04A AT WOMEN'S RESTROOMS

**B AMBULATORY ACCESSIBLE TOILET COMPARTMENT**  
\* 04A AT WOMEN'S RESTROOMS

**C TOILET COMPARTMENT**  
\* 04A AT WOMEN'S RESTROOMS

**INTERIOR PARTITION TYPES**

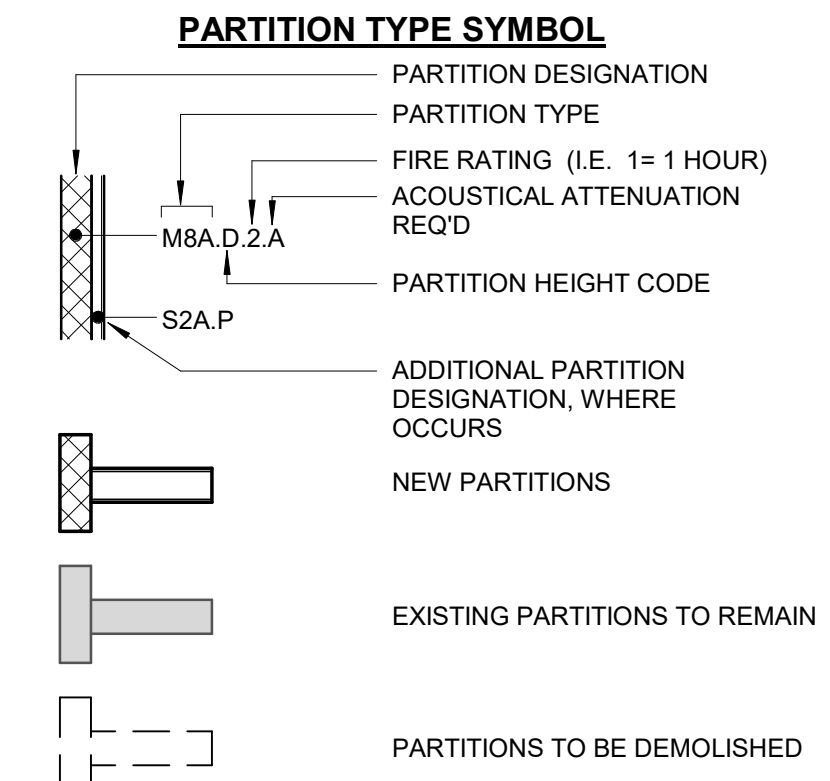
\* FIRE RATING AND ACOUSTICAL ATTENUATION WHEN REQUIRED BY PARTITION SYMBOL

W4C	2x4 WOOD STUDS WITH (1) LAYER 5/8" GYPSUM WALL BOARD ONE SIDE	4 1/8"
W4A	2x4 WOOD STUDS WITH (1) LAYER 5/8" GYPSUM WALL BOARD EACH SIDE	4 3/4"
W4A.A	2x4 WOOD STUDS WITH (1) LAYER 5/8" GYPSUM WALL BOARD EACH SIDE * ACOUSTIC ATTN. COMPONENTS STC-44	4 3/4"
W4A.1	2x4 WOOD STUDS WITH (1) LAYER 5/8" GYPSUM WALL BOARD EACH SIDE * 1 HR RATED U305	4 3/4"
W6C	2x6 WOOD STUDS WITH (1) LAYER 5/8" GYPSUM WALL BOARD ONE SIDE	6 1/8"
W6A	2x6 WOOD STUDS WITH (1) LAYER 5/8" GYPSUM WALL BOARD EACH SIDE	6 3/4"
W6A.A	2x6 WOOD STUDS WITH (1) LAYER 5/8" GYPSUM WALL BOARD EACH SIDE * ACOUSTIC ATTN. COMPONENTS STC-44	6 3/4"
W6A.1	2x6 WOOD STUDS WITH (1) LAYER 5/8" GYPSUM WALL BOARD EACH SIDE * 1 HR RATED U379	6 3/4"

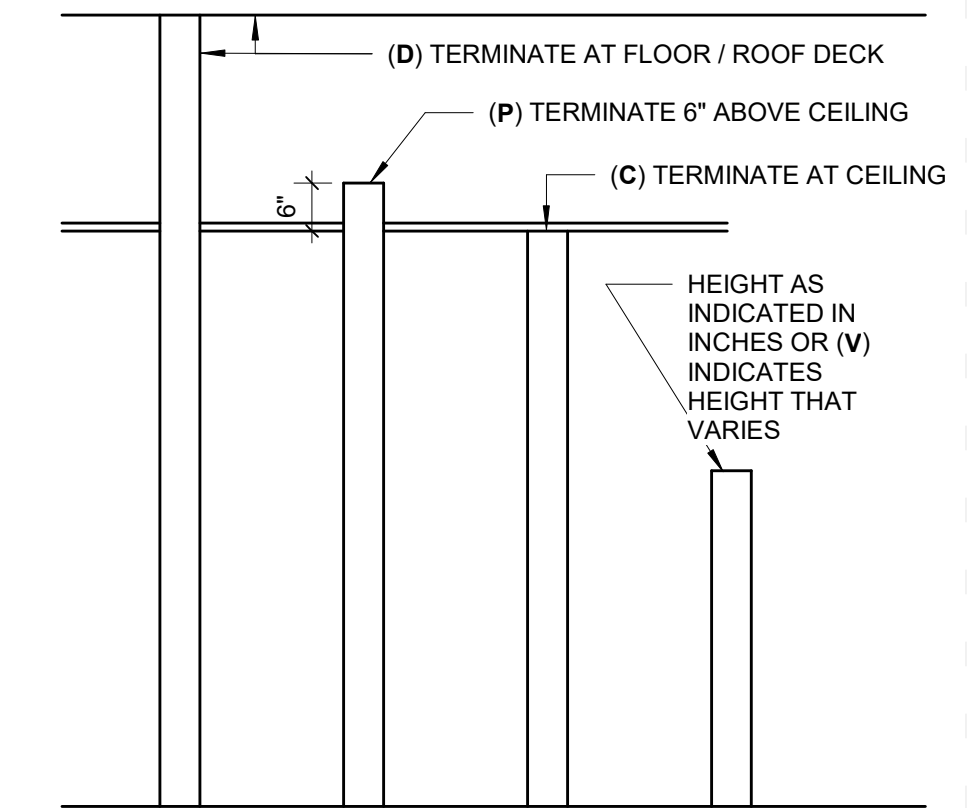
**INTERIOR PARTITION NOTES**

- ALL WALLS ARE TYPE W6A.D UNLESS NOTED OTHERWISE.
- PARTITION SYMBOLS APPEAR ON THE 1/8" = 1'-0" SCALE FLOOR PLANS.
- REFER TO FINISH AND CEILING PLANS FOR WALL FINISH, WALL BASE, AND CEILING INFORMATION.
- REFER TO WALL SECTIONS FOR EXTERIOR WALL CONSTRUCTION.
- PROVIDE MOLD AND MOISTURE RESISTANT GYPSUM BOARD IN ALL ROOMS CONTAINING OPERABLE PLUMBING FIXTURES AND WITHIN 4'-0" OF DRINKING FOUNTAINS / WATER COOLERS, UNLESS NOTED OTHERWISE.
- PROVIDE LATERAL BRACING AT 48" ON CENTER FOR NON-STRUCTURAL METAL FRAMED PARTITIONS WHICH EXTEND ABOVE THE CEILING UNLESS NOTED OTHERWISE. LATERAL BRACING NOT REQUIRED FOR PARTITIONS THAT EXTEND TO THE DECK ABOVE UNLESS NOTED OTHERWISE.
- PROVIDE FIRE RESISTIVE RATED GYPSUM BOARD AT ALL RATED ASSEMBLIES TO MEET ASSEMBLY REQUIREMENTS.
- PROVIDE FIRE RESISTIVE JOINT SYSTEMS EQUAL TO WALL RATING AT ALL PENETRATIONS AND AT HEAD / FLOOR INTERSECTIONS WITH RATED ASSEMBLIES.
- PROVIDE ACOUSTICAL SEALANT AT WALL SILL, HEAD, PENETRATIONS AND ADDITIONAL SPECIFIED SOUND ATTENUATION COMPONENTS AT SOUND RATED WALLS.
- PROVIDE SPECIFIED TILE BACKER BOARD AT ALL WALLS INDICATED TO HAVE CERAMIC TILE, REFER TO FINISH PLANS.
- ISOLATE NON-LOAD-BEARING STUD FRAMING FROM BUILDING STRUCTURE TO PREVENT TRANSFER OF VERTICAL LOADS WHILE PROVIDING LATERAL SUPPORT AS SPECIFIED.
- WOOD OR METAL STUD SPACING SHALL BE 16" ON CENTER MAXIMUM UNLESS OTHERWISE REQUIRED BY DELEGATED DESIGN OR NOTED OTHERWISE.

**INTERIOR PARTITION LEGEND**

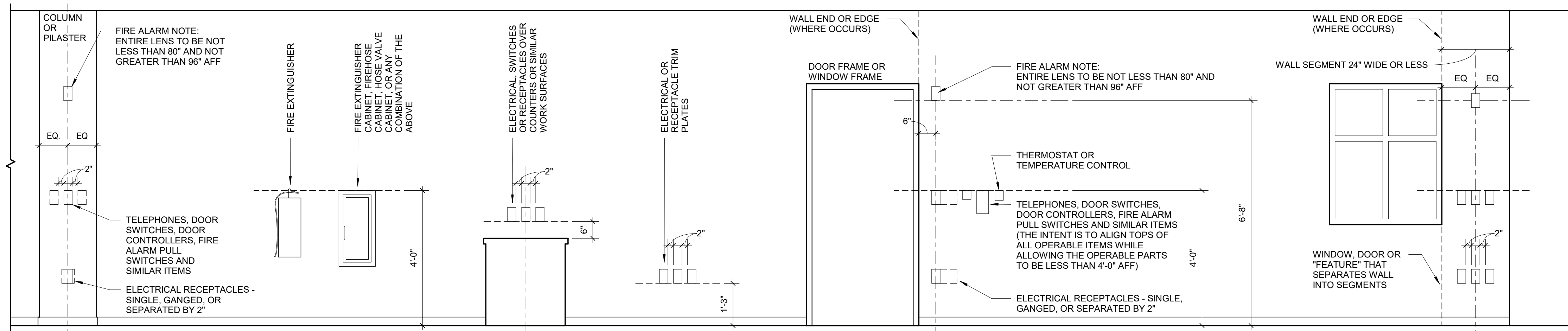


**INTERIOR PARTITION HEIGHT CODES**



**STANDARD-DEVICE MOUNTING GUIDELINES**

- NOTES:**
- USE THIS DETAIL TO LOCATE DEVICES THAT ARE INDICATED ON THE DRAWINGS BUT NOT LOCATED BY DIMENSION, OR TO LOCATE REQUIRED DEVICES THAT ARE NOT INDICATED ON THE DRAWINGS.
  - ALIGN MULTIPLE DEVICES HORIZONTALLY AND/OR VERTICALLY AS DETAILED.
  - ITEMS OTHER THAN ELECTRICAL RECEPTACLES SHALL BE MOUNTED NEAR DOORWAYS OR INTERSECTING WALLS AS DETAILED SO AS NOT TO INTERFERE WITH THE PLACEMENT OF ART OR FURNITURE - EXCEPT THAT WHERE THE WALL SEGMENT IS LESS THAN 24" WIDE, CENTER THE DEVICES AS DETAILED.



**Carolina Charter Academy Exp.**  
8529 Highway 55  
Angier, North Carolina 27501

**Owner**  
Highmark School Development  
746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

**Architect**  
**RATIO**  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

**Structural Engineer**  
Lynch Mykins Structural Engineers, PC  
301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-782-1833

**Civil Engineer**  
Timmons Group  
5410 Trinity Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938

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SHEET TITLE  
**INTERIOR PARTITION TYPES AND STANDARD PARTITION DETAILS**

SHEET NUMBER  
**A-003**

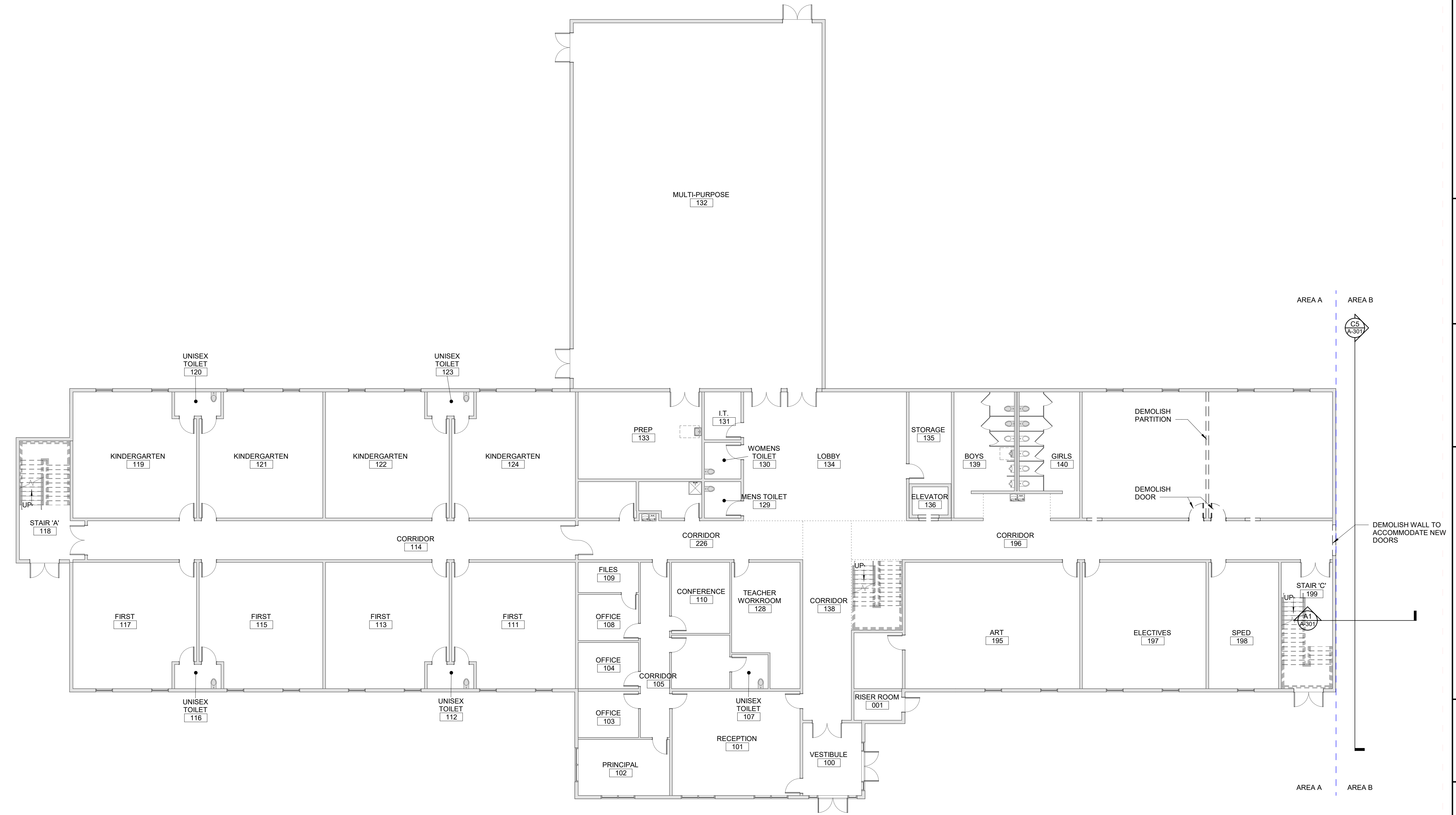
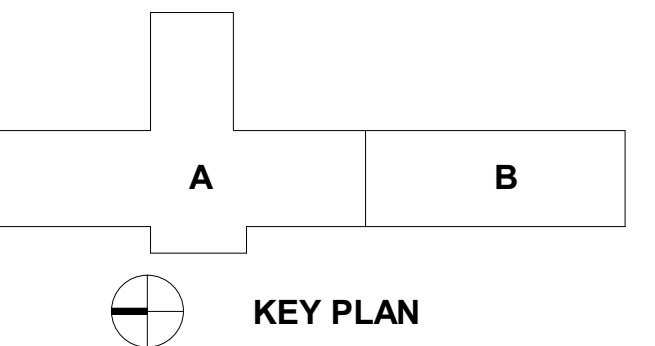
**Carolina Charter Academy Exp.**  
8529 Highway 55  
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**Owner**  
Highmark School Development  
746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

**Architect**  
RATIO  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
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Lynch Mykins Structural Engineers, PC  
301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-782-1833

**Civil Engineer**  
Timmons Group  
5410 Trinity Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938



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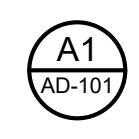
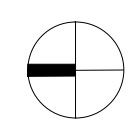
**SHEET ISSUE**

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PROJECT NO. 20408.000  
SHEET TITLE **FIRST FLOOR DEMO PLAN**

SHEET NUMBER **AD-101**

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**FIRST LEVEL DEMOLITION PLAN**  
3/32" = 1'-0"

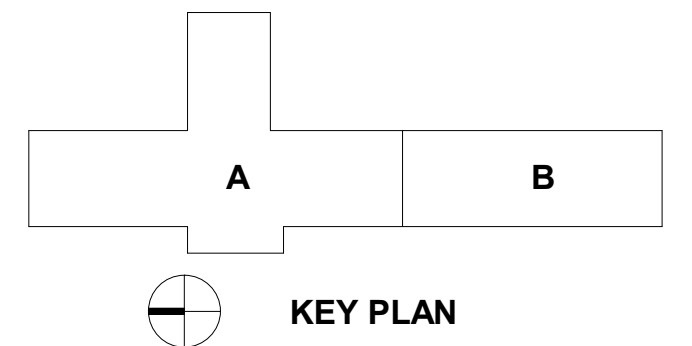
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8529 Highway 55  
Angier, North Carolina 27501

**Owner**  
**Highmark School Development**  
746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

**Architect**  
**RATIO**  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

**Structural Engineer**  
**Lynch Mykins Structural Engineers, PC**  
301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-782-1833

**Civil Engineer**  
**Timmons Group**  
5410 Trinity Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938



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SHEET TITLE  
**SECOND FLOOR DEMO PLAN**

SHEET NUMBER  
**AD-102**



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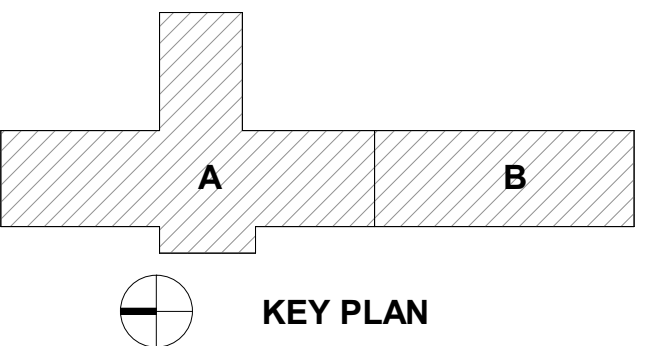
**Carolina Charter Academy Exp.**  
 8529 Highway 55  
 Angier, North Carolina 27501

**Owner**  
**Highmark School Development**  
 746 East Winchester Street  
 Suite 150  
 Murray, Utah 84107  
 801-256-9550

**Architect**  
**RATIO**  
 227 Fayetteville Street, Suite 301  
 Raleigh, North Carolina 27601  
 919-821-0805

**Structural Engineer**  
**Lynch Mykins Structural Engineers, PC**  
 301 North West Street  
 Suite 105  
 Raleigh, North Carolina 27603  
 919-782-1833

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**Timmons Group**  
 5410 Trinity Road  
 Suite 102  
 Raleigh, North Carolina 27607  
 919-866-4938



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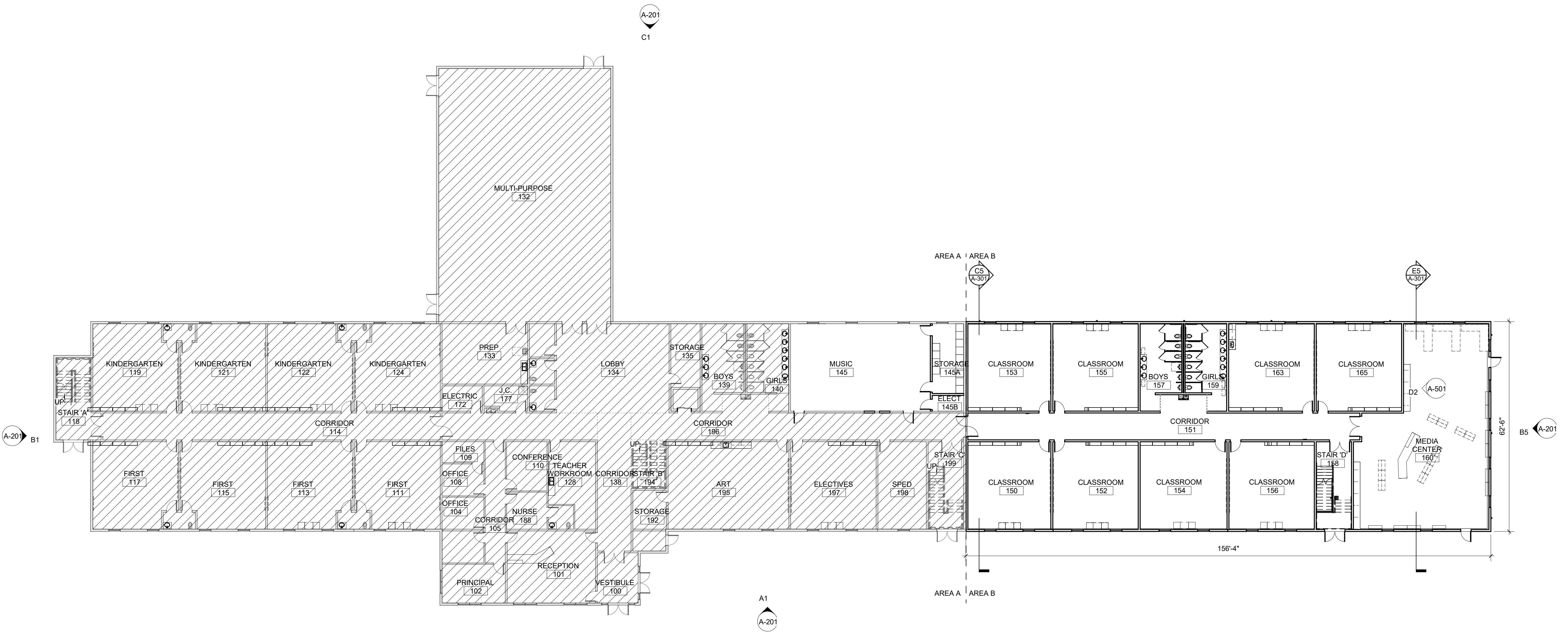
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1	100% Construction Documents	2/24/2021

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PROJECT NO. 20408.000  
 SHEET TITLE  
**FIRST FLOOR PLAN**

SHEET NUMBER  
**A-101**



2/24/2021 4:34:47 PM

**FIRST FLOOR PLAN - COMPOSITE**  
 1/16" = 1'-0"

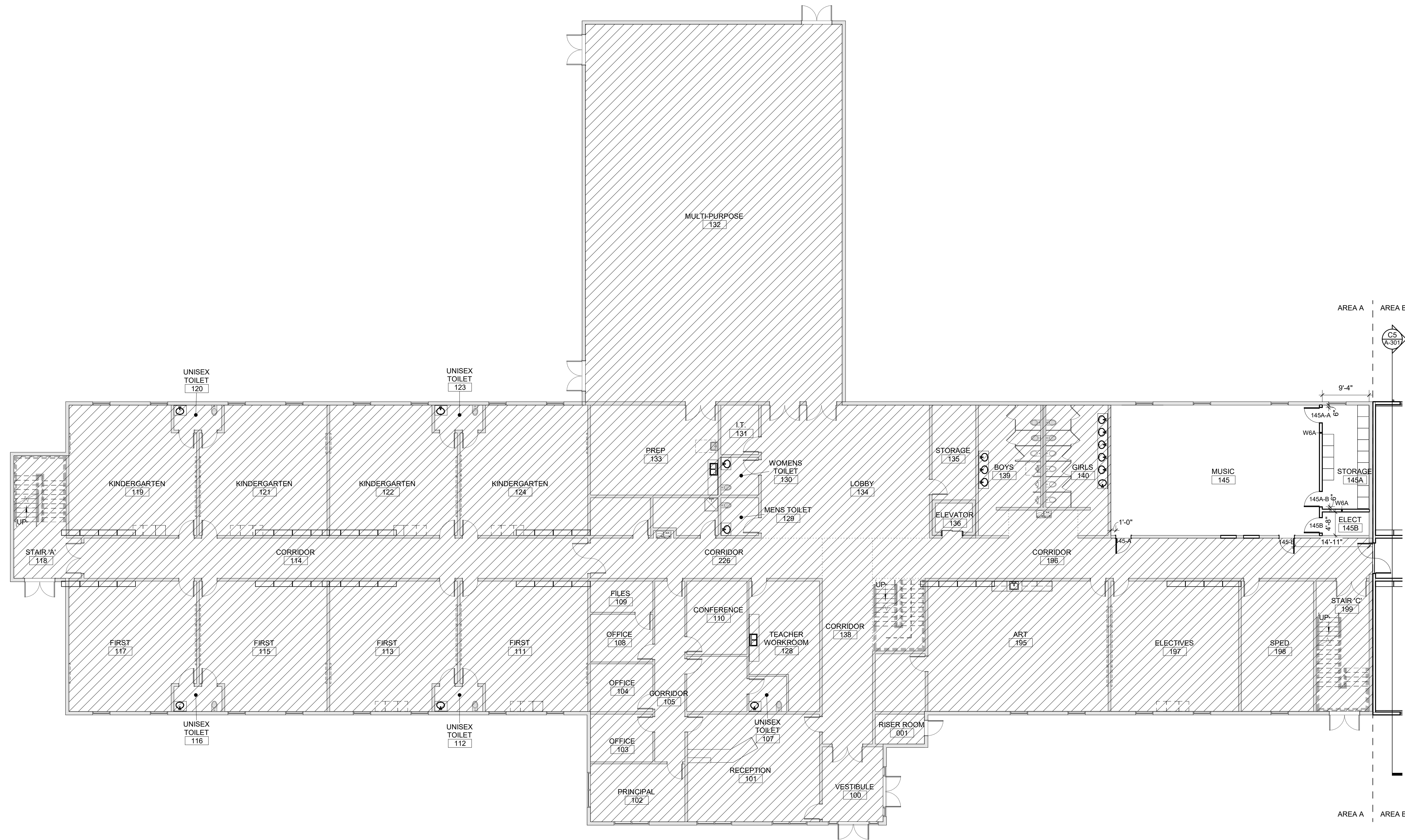
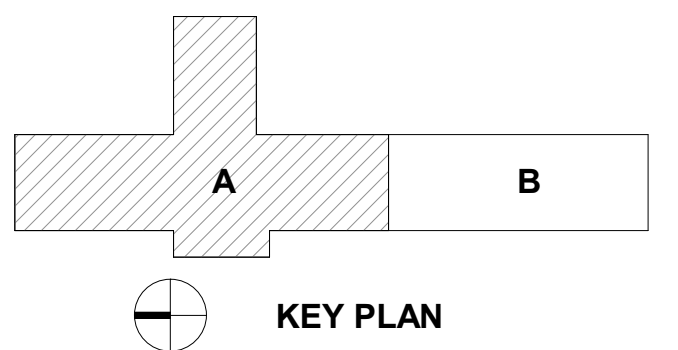
**Carolina Charter Academy Exp.**  
8529 Highway 55  
Angier, North Carolina 27501

**Owner**  
**Highmark School Development**  
746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

**Architect**  
**RATIO**  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

**Structural Engineer**  
**Lynch Mykins Structural Engineers, PC**  
301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
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**SHEET ISSUE**

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1	50% Construction Documents	2/8/2021

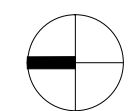


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PROJECT NO. 20408.000

SHEET TITLE  
**FIRST FLOOR PLAN  
-AREA A**

SHEET NUMBER  
**A-101A**



**A1**  
A-101A

**FIRST FLOOR PLAN - AREA A**

3/32" = 1'-0"

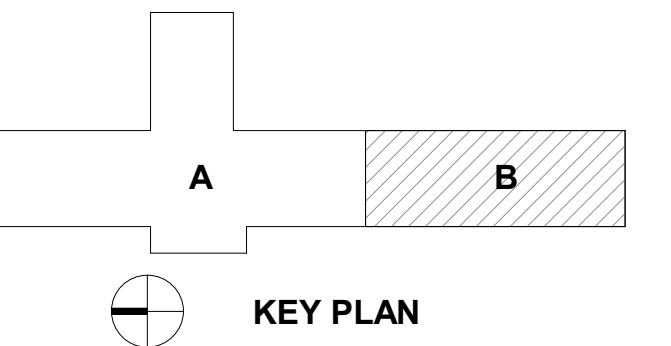
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**Owner**  
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746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

**Architect**  
RATIO  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

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Lynch Mykins Structural Engineers, PC  
301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-782-1833

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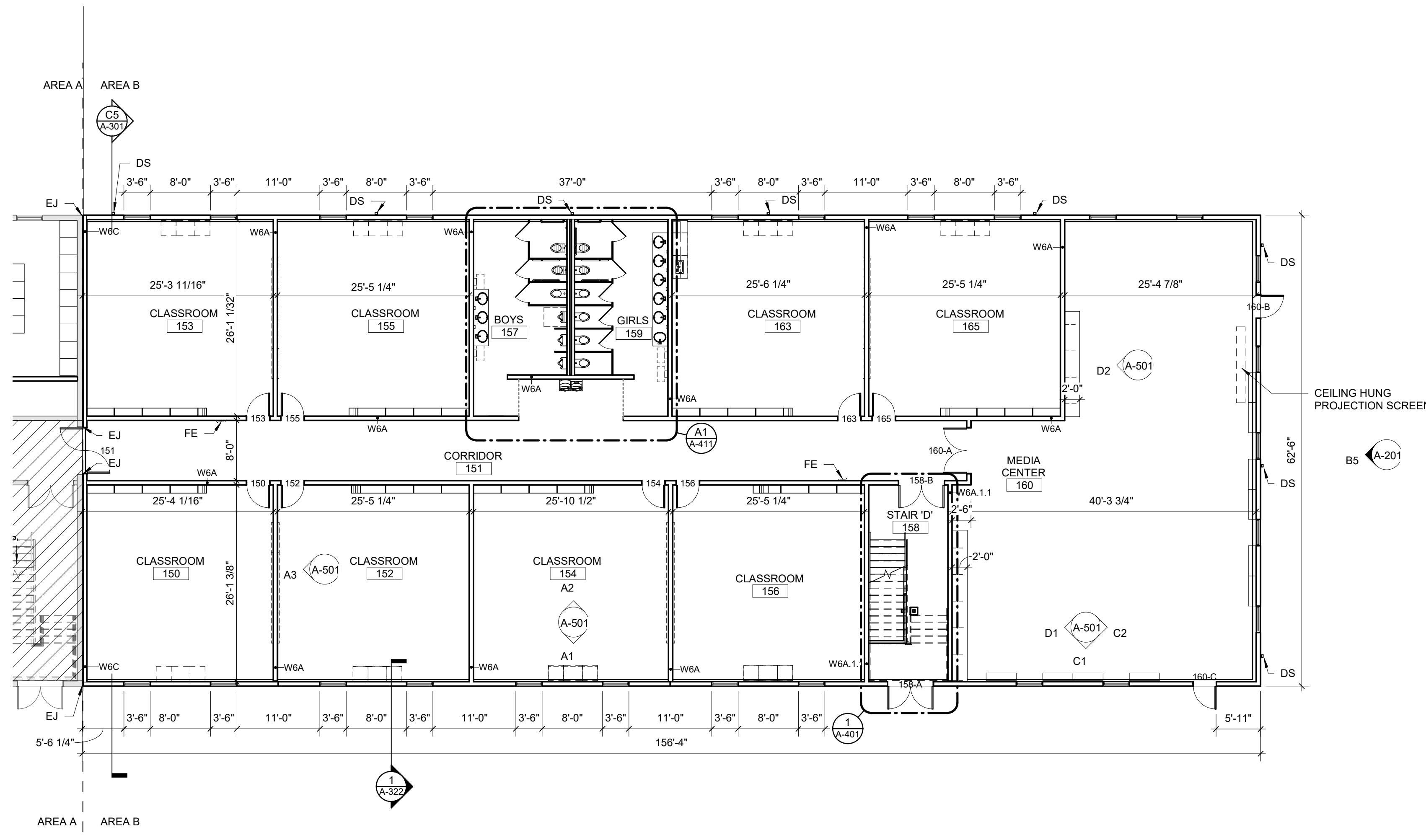
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PROJECT NO. 20408.000

SHEET TITLE  
**FIRST FLOOR PLAN - AREA B**

SHEET NUMBER  
**A-101B**



**FIRST FLOOR PLAN - AREA B**  
3/32" = 1'-0"

2/24/2021 4:34:54 PM

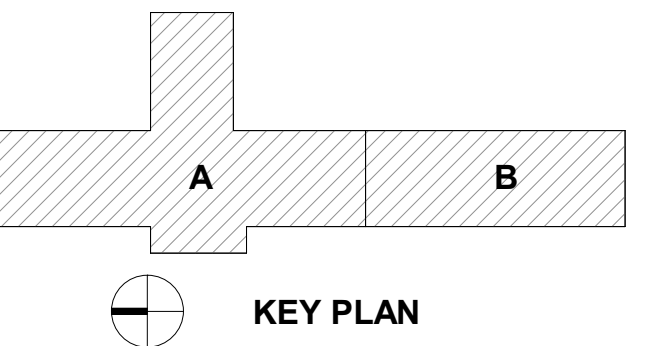
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27501

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Murray, Utah 84107  
801-256-9550

Architect  
**RATIO**  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

Structural Engineer  
**Lynch Mykins Structural Engineers, PC**  
301 North West Street  
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SHEET ISSUE

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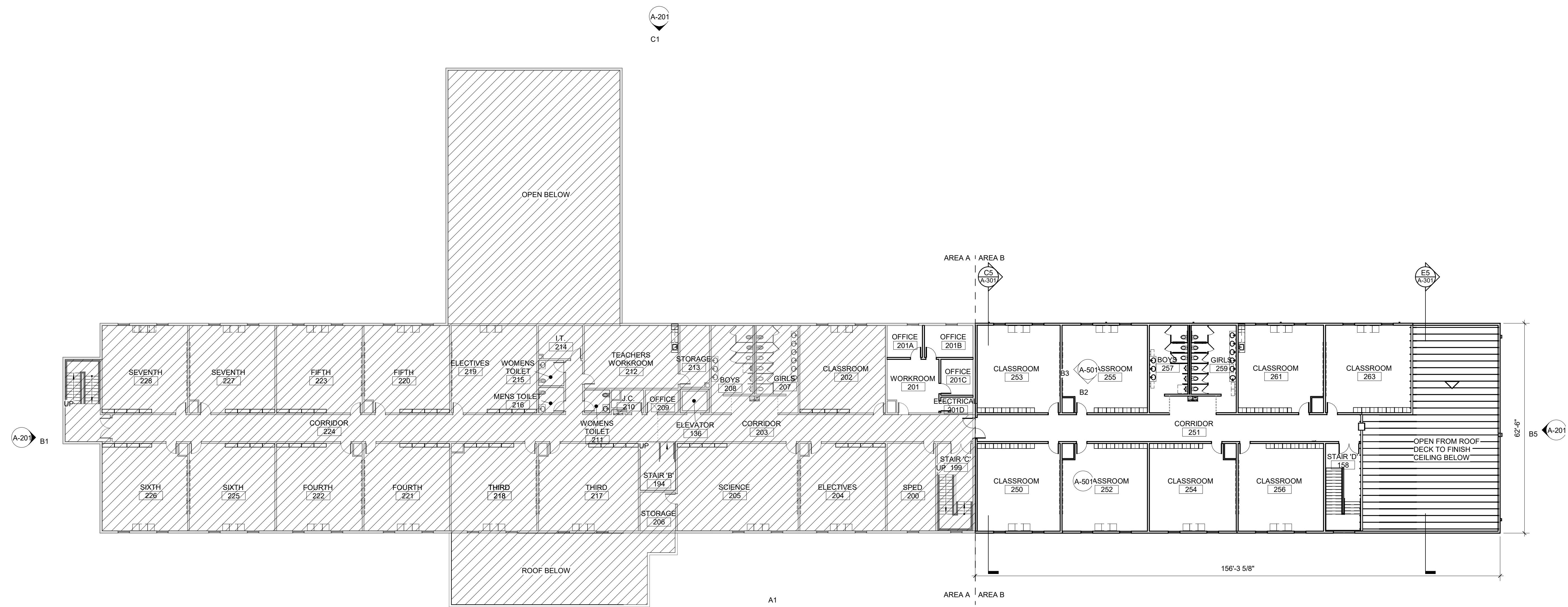
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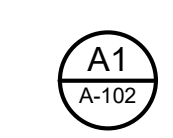
PROJECT NO. 20408.000

SHEET TITLE  
**SECOND FLOOR PLAN**

SHEET NUMBER  
**A-102**



2/24/2021 4:34:59 PM



**SECOND FLOOR PLAN - COMPOSITE**  
1/16" = 1'-0"



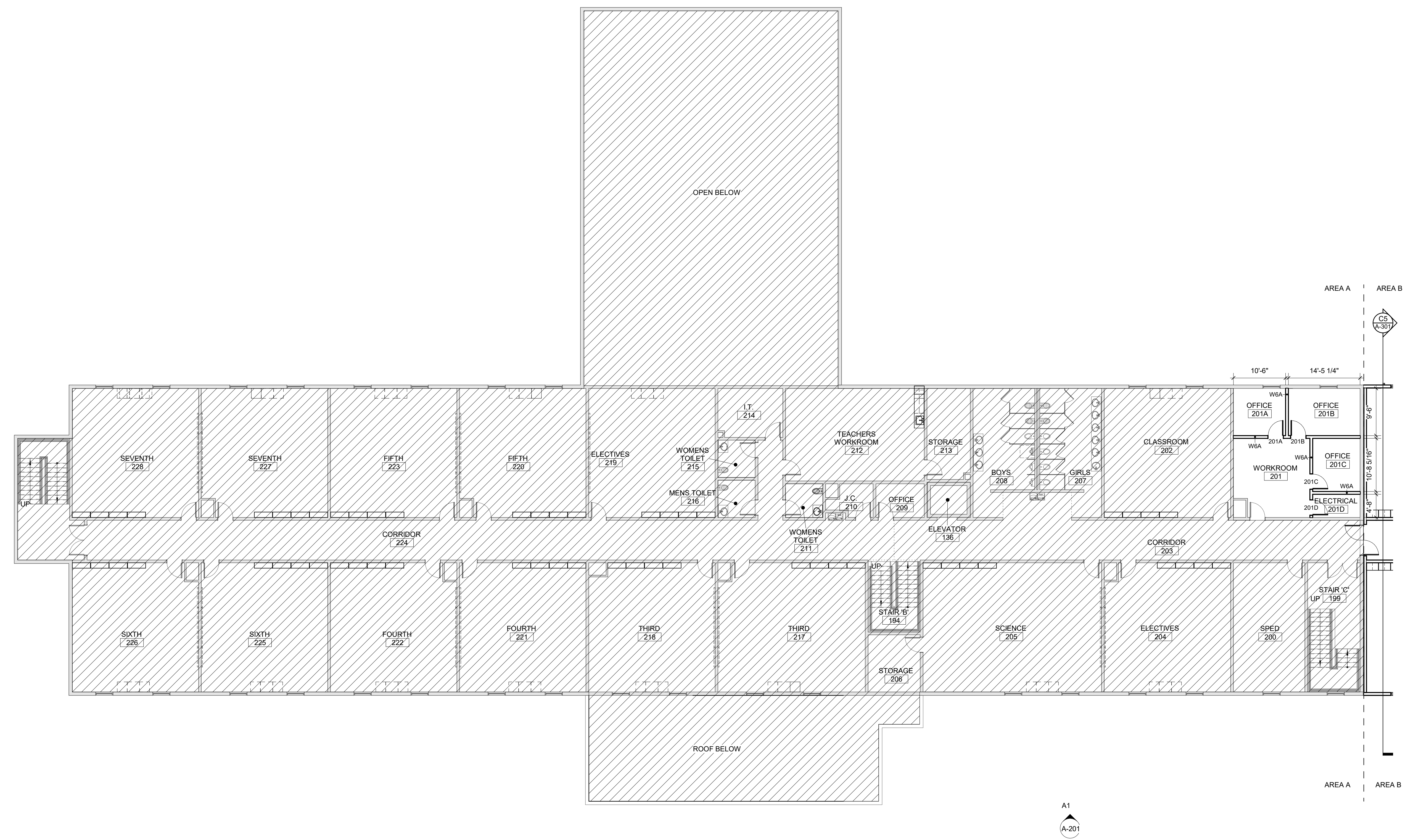
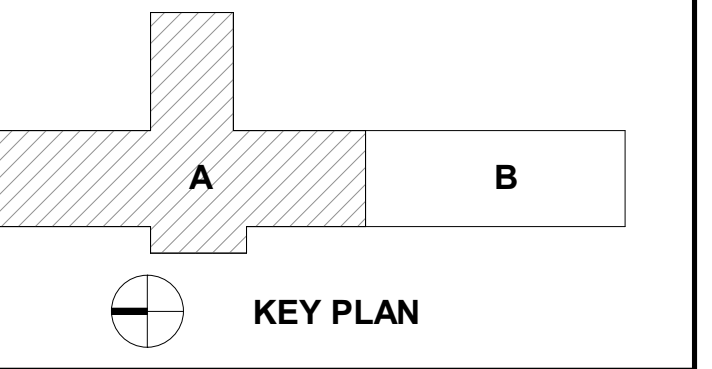
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 801-256-9550

**Architect**  
**RATIO**  
 227 Fayetteville Street, Suite 301  
 Raleigh, North Carolina 27601  
 919-821-0805

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**Lynch Mykins Structural Engineers, PC**  
 301 North West Street  
 Suite 105  
 Raleigh, North Carolina 27603  
 919-782-1833

**Civil Engineer**  
**Timmons Group**  
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**M. BOWEN**  
 REGISTERED ARCHITECT  
 5950  
 NORTH CAROLINA  
 RALEIGH, N.C.

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PROJECT NO. 20408.000

SHEET TITLE  
**SECOND FLOOR PLAN - AREA A**

SHEET NUMBER  
**A-102A**

2/24/2021 4:35:03 PM

**A1**  
**A-102A**  
 3/32" = 1'-0"

**SECOND FLOOR PLAN - AREA A**

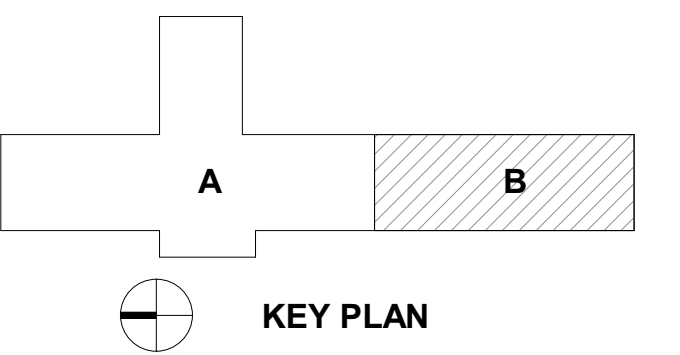
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Suite 150  
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**Architect**  
RATIO  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

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Lynch Mykins Structural Engineers, PC  
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SHEET ISSUE		
1	100% Construction Documents	2/24/2021

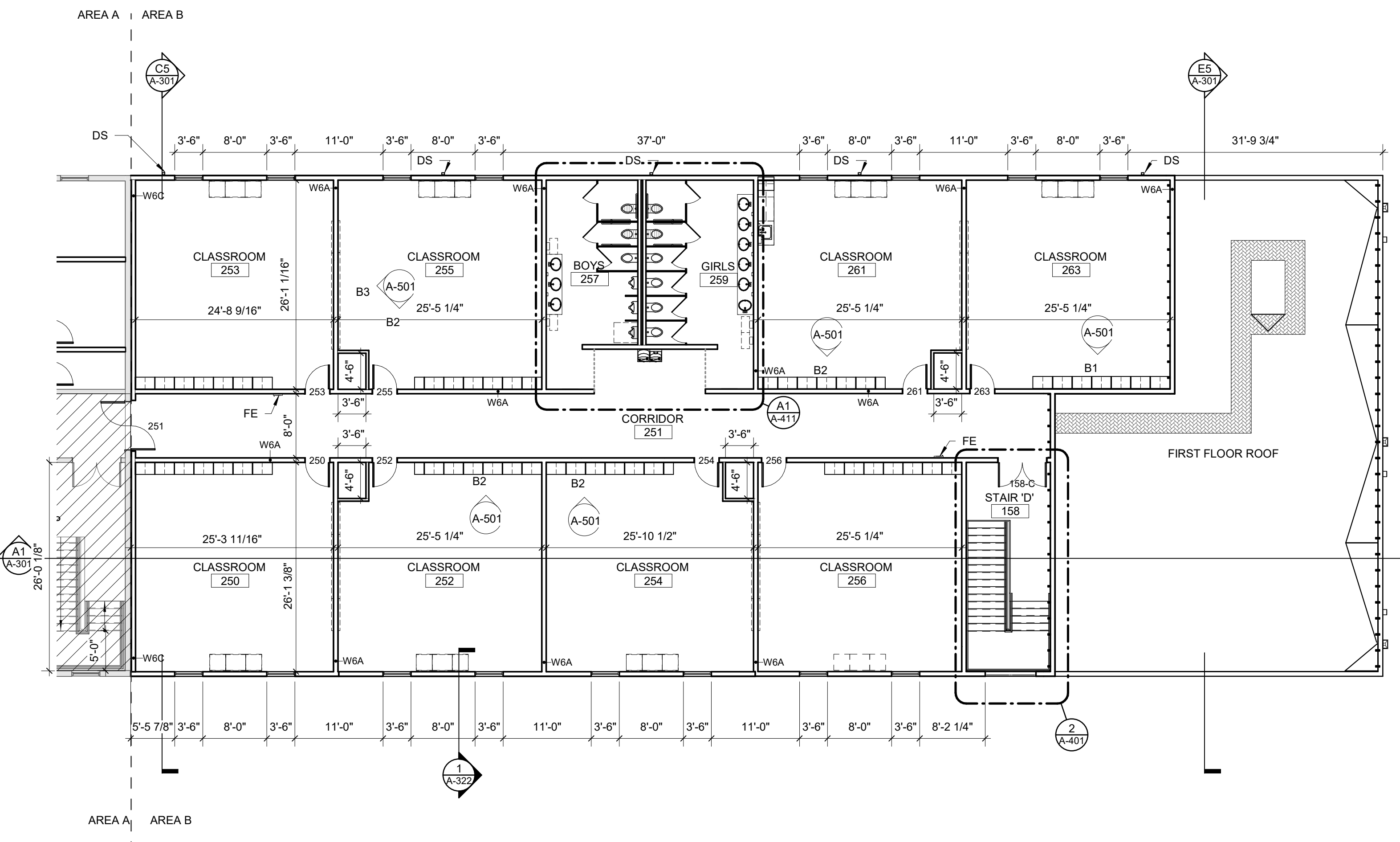


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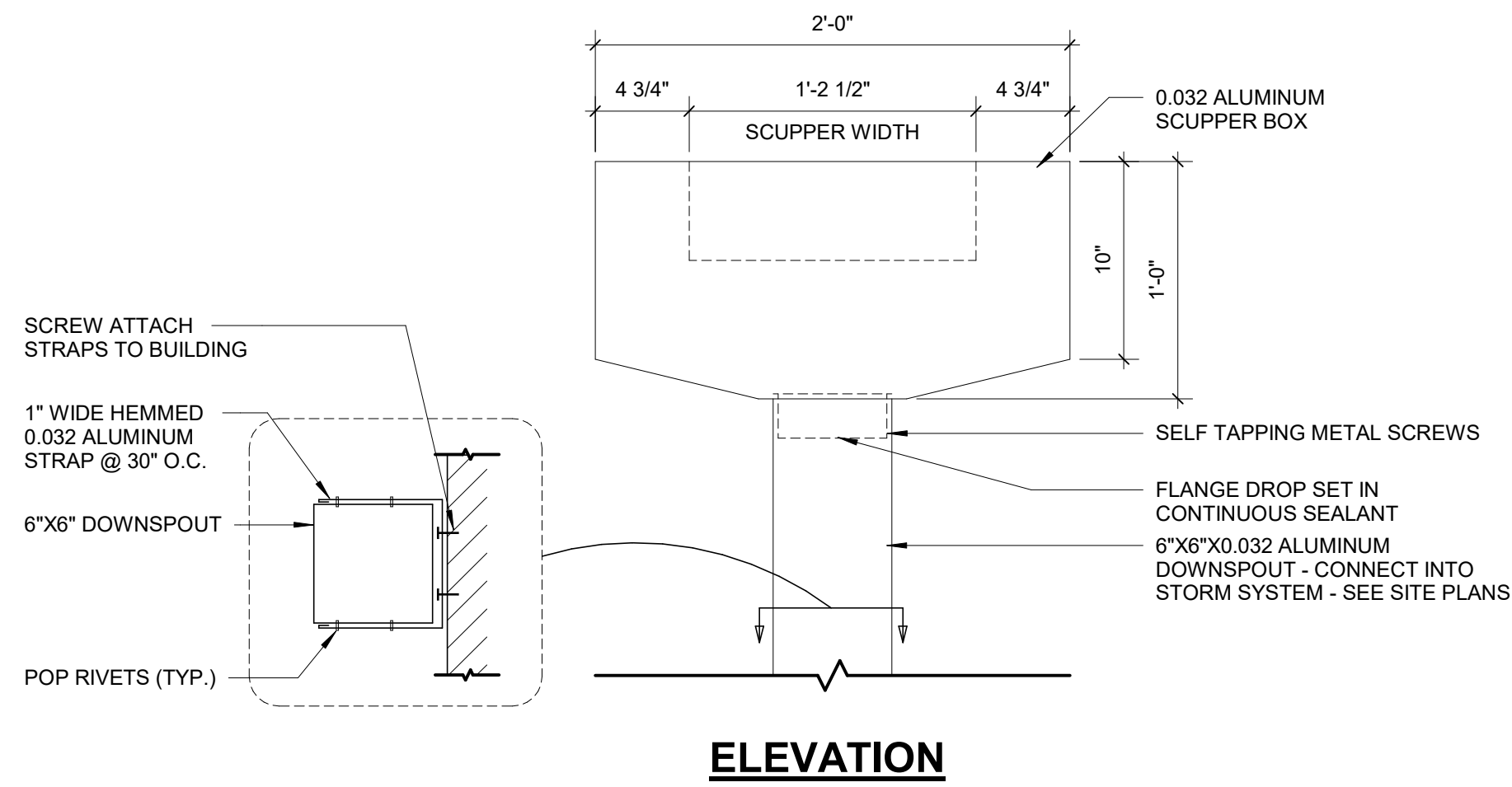
PROJECT NO. 20408.000

SHEET TITLE  
**SECOND FLOOR PLAN - AREA B**

SHEET NUMBER  
**A-102B**

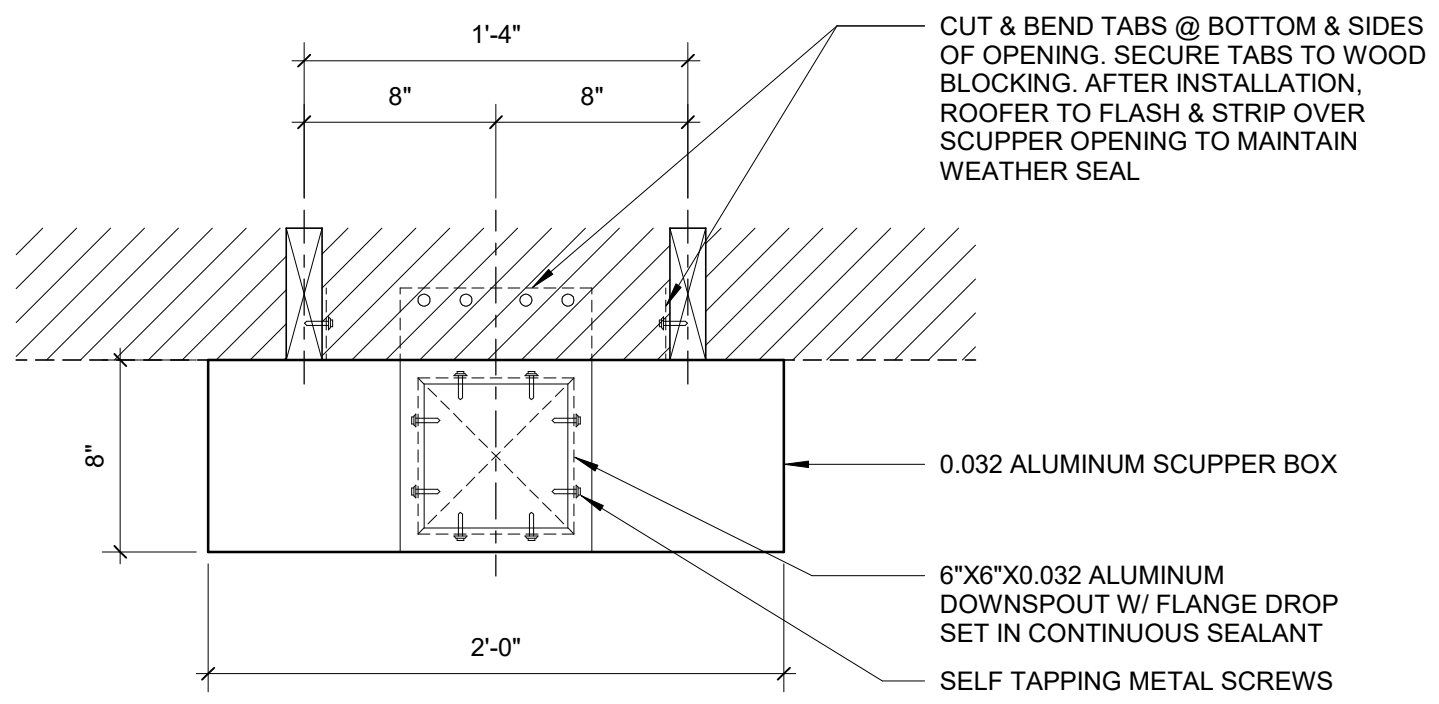


2/24/2021 4:35:06 PM  
A1 A-102B  
**SECOND FLOOR PLAN - AREA B**  
3/32" = 1'-0"

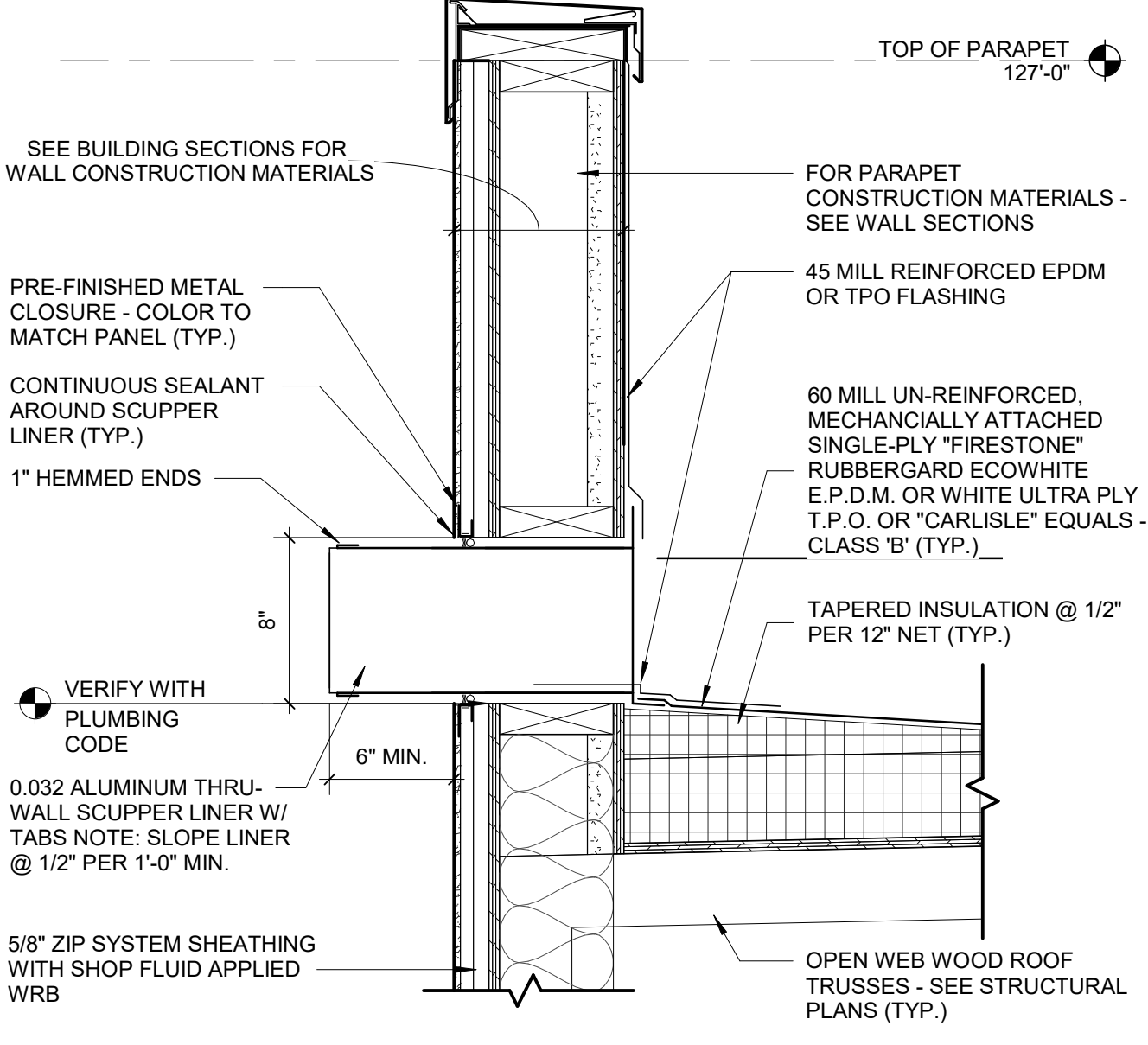


**ELEVATION**

**E1**  
**A-105** **SCUPPER DETAILS**  
1 1/2" = 1'-0"



**PLAN**



**1**  
**A-105** **SECTION DETAIL - OVERFLOW SCUPPER**  
1 1/2" = 1'-0"

**GENERAL ROOFING NOTES**

- A. THESE GENERAL NOTES APPLY TO ROOF DRAWINGS.
- B. VERIFY SIZE, LOCATION AND NUMBER OF ROOF PENETRATIONS INCLUDING VENTS, PIPES, CURBS, ROOF DRAINS, CONDUITS, ETC. PROVIDE NEW FLASHING AND SEAL PENETRATIONS WHETHER OR NOT INDICATED ON THE DRAWINGS.
- C. COMPLETE WORK ABOVE ROOF, SUCH AS MASONRY, WELDING, MASONRY RESTORATION, ETC., PRIOR TO STARTING ROOFING WORK.
- D. VERIFY AND MAINTAIN ROOF SLOPES AND DRAINAGE PATTERNS. TEST FOR AND CORRECT ANY PONDING CONDITIONS.
- E. REPAIR AND REPLACE ROOFING SYSTEM OR STRUCTURE DAMAGED BY IMPROPER STORAGE, CONSTRUCTION ACTIVITIES, OR LACK OF ADEQUATE TEMPORARY PROTECTION. THIS ALSO INCLUDES INTERIOR DAMAGE TO FINISHES, EQUIPMENT, FURNISHINGS, ETC., RESULTING FROM LEAKS.
- F. NEW BLOCKING SHALL BE PRESERVATIVE-TREATED WOOD.
- G. PAINT EXTERIOR LADDERS, BRACKETS, ETC., UNLESS NOTED OTHERWISE.
- H. CAP FASTENERS THAT PENETRATE ROOF DECK IN AREAS NOT CONCEALED BY CEILINGS WITH WIRE NUTS OR OTHER MEANS ACCEPTABLE TO ARCHITECT UNLESS OTHERWISE INDICATED. AREAS SUCH AS JANITOR CLOSETS, STORAGE ROOMS, MECHANICAL AND ELECTRICAL EQUIPMENT ROOMS, ETC., ARE EXEMPT FROM THIS REQUIREMENT UNLESS OTHERWISE INDICATED.
- I. REFER TO WALL SECTIONS NOTED ON ROOF PLANS FOR INFORMATION.
- J. REFER TO MECHANICAL DRAWINGS TO COORDINATE ROOF CONDUCTOR LOCATIONS.

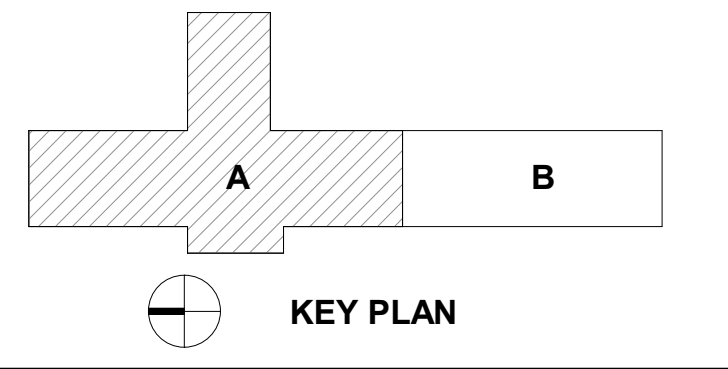
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**Architect**  
**RATIO**  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

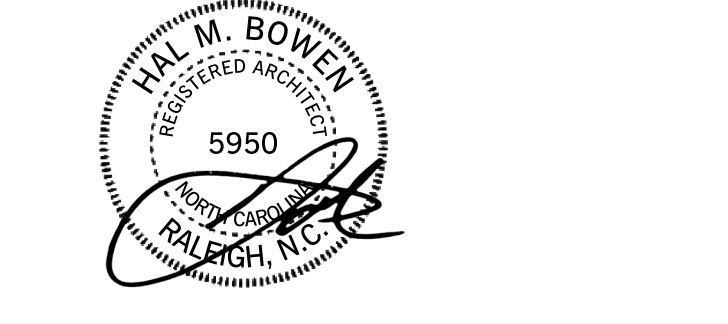
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**KEY PLAN**

SEAL | DATE 2/24/2021



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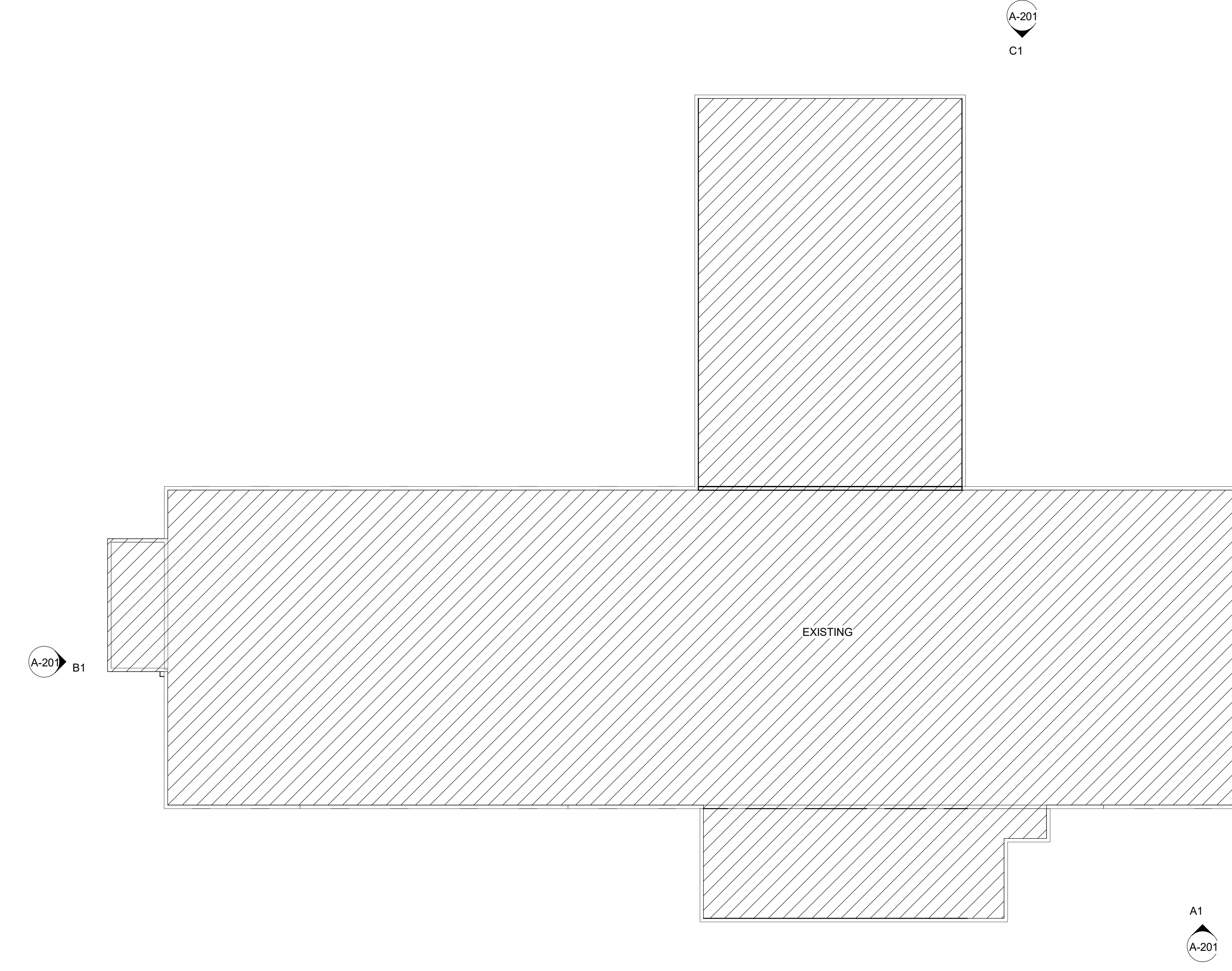
PROJECT NO. 20408.000

SHEET TITLE

**ROOF PLAN**

SHEET NUMBER

**A-105**



**A1**  
**A-105** **ROOF PLAN**  
1/16" = 1'-0"

2/24/2021 4:35:11 PM

**RCP LEGEND**

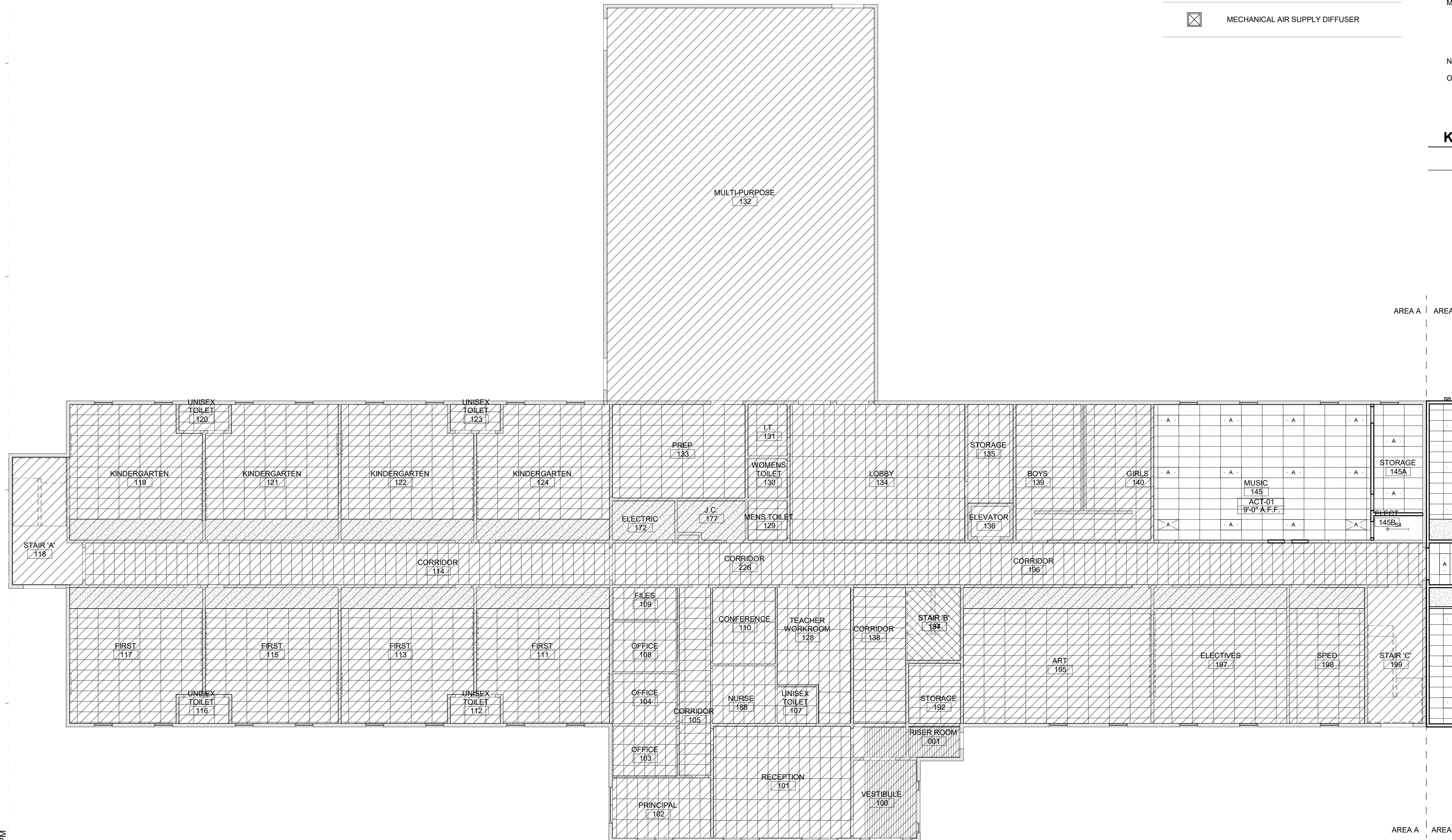
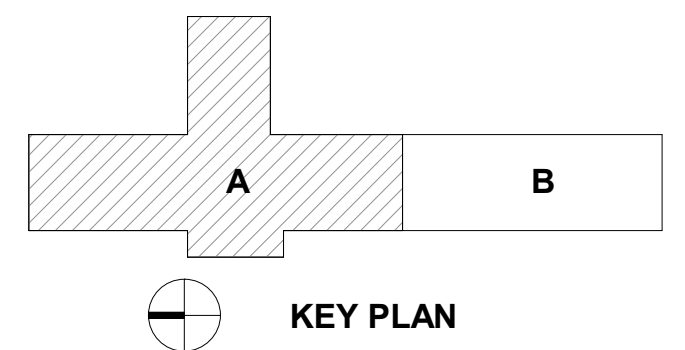
- CEILING TAG  
 XXX-01  
 10'-10" A.F.F.  
 CEILING TYPE  
 CEILING HEIGHT (ABOVE FINISH FLOOR)
- SPOT ELEVATION MARKER
- GYB BOARD CEILING, PAINTED PT-02 (REFER TO PLAN FOR SUSPENSION TYPE)
- ACOUSTIC CEILING TILE ACT-01 24" X 48"
- 24" x 48" LIGHT FIXTURE (SEE ELECTRICAL PLANS FOR FURTHER INFORMATION)
- DOWNLIGHT
- MECHANICAL RETURN REGISTER
- MECHANICAL AIR SUPPLY DIFFUSER

**GENERAL CEILING PLAN NOTES**

- A. THESE GENERAL NOTES APPLY TO SERIES A-130 REFLECTED CEILING DRAWINGS.
- B. INSTALL NEW CEILINGS AT +9'-0" A.F.F. UNLESS NOTED OTHERWISE. ALL CEILINGS TO BE ACT-01 UNLESS NOTED OTHERWISE.
- C. CENTER CEILING GRIDS WITHIN ROOMS EACH DIRECTION UNLESS NOTED OTHERWISE.
- D. LOCATE CEILING GRIDS WITHIN ROOMS SUCH THAT BORDERS CONTAIN NOT LESS THAN 1/2 TILE WIDTH, UNLESS OTHERWISE INDICATED.
- E. CENTER PENETRATIONS IN ACOUSTICAL CEILING SYSTEMS WITHIN INDIVIDUAL CEILING PANELS, SUCH AS SPRINKLER HEADS, DIFFUSERS, LIGHT FIXTURES, ETC., UNLESS OTHERWISE INDICATED.
- F. PAINT EXPOSED GYPSUM BOARD AND PLASTER CEILING SURFACES PT-02 UNLESS OTHERWISE INDICATED.
- G. PROVIDE CONTROL JOINTS (C.J.) IN GYPSUM BOARD CEILING CONSTRUCTION AS INDICATED. WHERE NOT SHOWN, PROVIDE MAXIMUM SPACING BETWEEN JOINTS OF 30'-0". VERIFY FINAL CONTROL JOINT LOCATIONS WITH ARCHITECT PRIOR TO STARTING WORK WHETHER OR NOT INDICATED ON THE DRAWINGS.
- H. CEILING ACCESS PANELS INDICATED ARE NOT INTENDED TO LIMIT NUMBER OF PANELS REQUIRED. PANEL QUANTITY SHALL BE SUFFICIENT TO PROVIDE REQUIRED ACCESS WHETHER OR NOT INDICATED ON THE DRAWINGS. VERIFY FINAL LOCATIONS WITH ARCHITECT PRIOR TO STARTING WORK.
- I. REFER TO SERIES A-650 FINISH SCHEDULE FOR ADDITIONAL CEILING FINISH INFORMATION.
- J. REFER TO ELECTRICAL DRAWINGS FOR CEILING-MOUNTED LIGHT FIXTURE TYPES AND QUANTITIES.
- K. REFER TO MECHANICAL DRAWINGS FOR CEILING-MOUNTED DIFFUSERS, GRILLE TYPES AND QUANTITIES.
- L. REFER TO FIRE PROTECTION DRAWINGS FOR SPRINKLER HEAD TYPES AND QUANTITIES. HEADS HAVE BEEN INTENTIONALLY OMITTED FROM REFLECTED CEILING PLANS FOR CLARITY.
- M. INSTALLATION OF CEILING SYSTEMS SHALL NOT BEGIN PRIOR TO SUBMITTAL AND REVIEW OF CEILING COORDINATION DRAWINGS SHOWING LAYOUT OF CEILING GRIDS OR CONTROL JOINTS AND ITEMS TO BE INSTALLED IN OR ON CEILINGS SUCH AS SPRINKLER HEADS, DIFFUSERS, GRILLES, LIGHT FIXTURES, FIRE DETECTION AND ALARM DEVICES, ACCESS PANELS, ETC.
- N. PROVIDE 4" AXIOM EDGE TRIM ON ALL EXPOSED EDGES OF CEILINGS UNLESS NOTED OTHERWISE.
- O. IN AREAS WHERE STRUCTURE IS EXPOSED, CONTRACTOR TO PROVIDE FANAL LAYOUTS OF ALL DUCTWORK, PIPING, CONDUIT, LIGHTING, ETC. FOR FINAL APPROVAL BY ARCHITECT PRIOR TO INSTALLATION.

**KEYNOTES (ACTION/GENERAL)**

-00-A1



**Carolina Charter Academy Exp.**  
 8529 Highway 55  
 Angier, North Carolina 27501

**Owner**  
 Highmark School Development  
 746 East Winchester Street  
 Suite 150  
 Murray, Utah 84107  
 801-256-9550

**Architect**  
 RATIO  
 227 Fayetteville Street, Suite 301  
 Raleigh, North Carolina 27601  
 919-821-0805

**Structural Engineer**  
 Lynch Mykins Structural Engineers, PC  
 301 North West Street  
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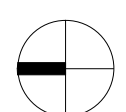
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PROJECT NO. 20408.000  
 SHEET TITLE  
**FIRST FLOOR REFLECTED CEILING PLAN - AREA A**

SHEET NUMBER  
**A-131A**

2/24/2021 4:44:21 PM



A1  
A-131A

**RCP - FIRST FLOOR - AREA A**  
 3/32" = 1'-0"

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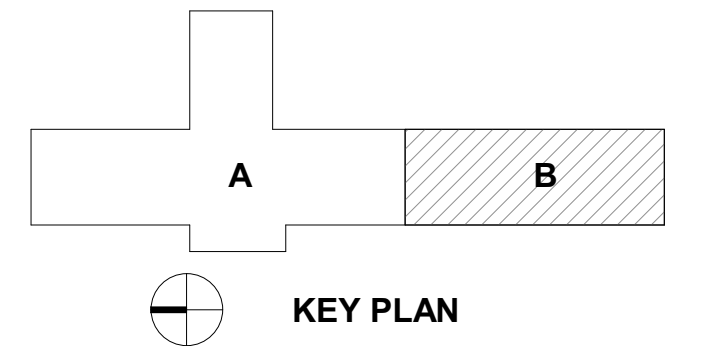
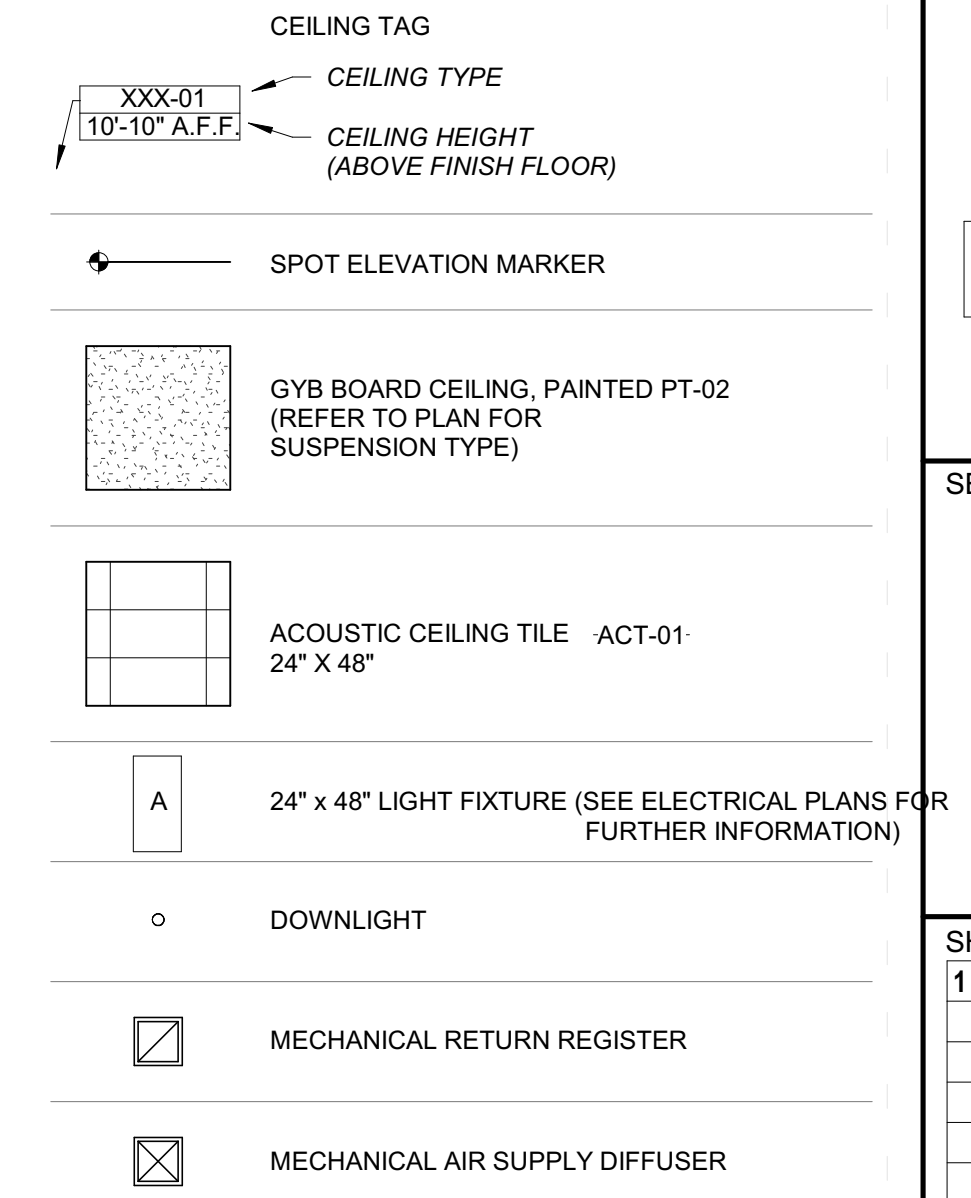
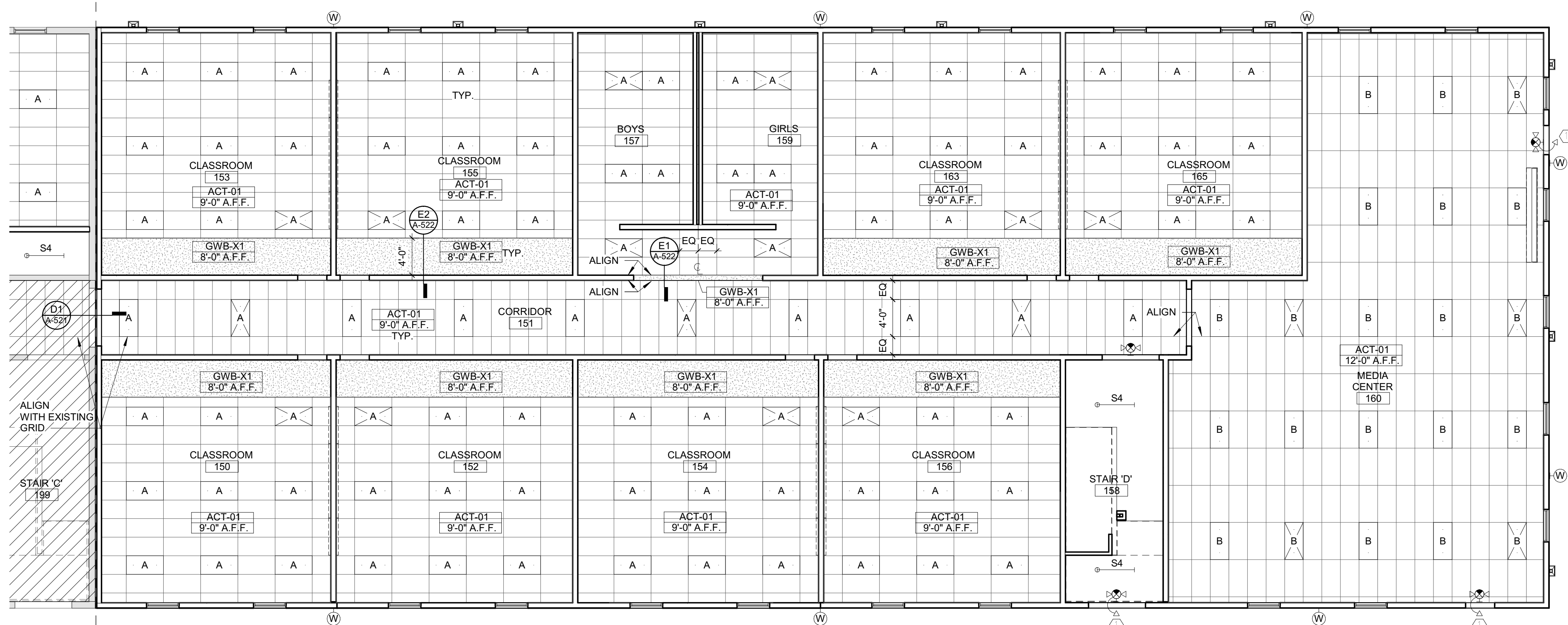
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**Architect**  
 RATIO  
 227 Fayetteville Street, Suite 301  
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 919-821-0805

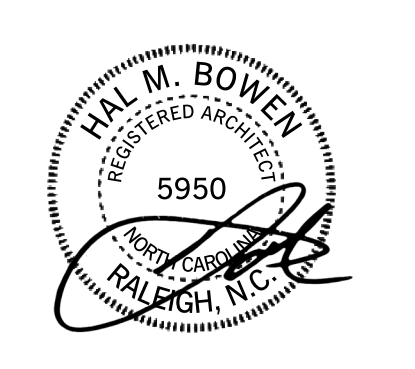
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 Lynch Mykins Structural Engineers, PC  
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- A. THESE GENERAL NOTES APPLY TO SERIES A-130 REFLECTED CEILING DRAWINGS.
- B. INSTALL NEW CEILINGS AT +9'-0" A.F.F. UNLESS NOTED OTHERWISE. ALL CEILINGS TO BE ACT-01 UNLESS NOTED OTHERWISE.
- C. CENTER CEILING GRIDS WITHIN ROOMS EACH DIRECTION UNLESS NOTED OTHERWISE.
- D. LOCATE CEILING GRIDS WITHIN ROOMS SUCH THAT BORDERS CONTAIN NOT LESS THAN 1/2 TILE WIDTH, UNLESS OTHERWISE INDICATED.
- E. CENTER PENETRATIONS IN ACOUSTICAL CEILING SYSTEMS WITHIN INDIVIDUAL CEILING PANELS. SUCH AS SPRINKLER HEADS, DIFFUSERS, LIGHT FIXTURES, ETC., UNLESS OTHERWISE INDICATED.
- F. PAINT EXPOSED GYPSUM BOARD AND PLASTER CEILING SURFACES PT-02 UNLESS OTHERWISE INDICATED.
- G. PROVIDE CONTROL JOINTS (C.J.) IN GYPSUM BOARD CEILING CONSTRUCTION AS INDICATED. WHERE NOT SHOWN, PROVIDE MAXIMUM SPACING BETWEEN JOINTS OF 30'-0". VERIFY FINAL CONTROL JOINT LOCATIONS WITH ARCHITECT PRIOR TO STARTING WORK WHETHER OR NOT INDICATED ON THE DRAWINGS.
- H. CEILING ACCESS PANELS INDICATED ARE NOT INTENDED TO LIMIT NUMBER OF PANELS REQUIRED. PANEL QUANTITY SHALL BE SUFFICIENT TO PROVIDE REQUIRED ACCESS WHETHER OR NOT INDICATED ON THE DRAWINGS. VERIFY FINAL LOCATIONS WITH ARCHITECT PRIOR TO STARTING WORK.
- I. REFER TO SERIES A-650 FINISH SCHEDULE FOR ADDITIONAL CEILING FINISH INFORMATION.
- J. REFER TO ELECTRICAL DRAWINGS FOR CEILING-MOUNTED LIGHT FIXTURE TYPES AND QUANTITIES.
- K. REFER TO MECHANICAL DRAWINGS FOR CEILING-MOUNTED DIFFUSERS, GRILLE TYPES AND QUANTITIES.
- L. REFER TO FIRE PROTECTION DRAWINGS FOR SPRINKLER HEAD TYPES AND QUANTITIES. HEADS HAVE BEEN INTENTIONALLY OMITTED FROM REFLECTED CEILING PLANS FOR CLARITY.
- M. INSTALLATION OF CEILING SYSTEMS SHALL NOT BEGIN PRIOR TO SUBMITTAL AND REVIEW OF CEILING COORDINATION DRAWINGS SHOWING LAYOUT OF CEILING GRIDS OR CONTROL JOINTS AND ITEMS TO BE INSTALLED IN OR ON CEILINGS SUCH AS SPRINKLER HEADS, DIFFUSERS, GRILLES, LIGHT FIXTURES, FIRE DETECTION AND ALARM DEVICES, ACCESS PANELS, ETC.
- N. PROVIDE 4" AXIOM EDGE TRIM ON ALL EXPOSED EDGES OF CEILINGS UNLESS NOTED OTHERWISE.
- O. IN AREAS WHERE STRUCTURE IS EXPOSED, CONTRACTOR TO PROVIDE FANAL LAYOUTS OF ALL DUCTWORK, PIPING, CONDUIT, LIGHTING, ETC. FOR FINAL APPROVAL BY ARCHITECT PRIOR TO INSTALLATION.



SEAL | DATE 2/24/2021 | CODE CERT. I HEREBY CERTIFY THAT THE BUILDING CODE SUMMARY COMPLETED ON THIS PAGE IS ACCURATE FOR THE TYPE OF BUILDING AND OCCUPANCY INTENDED FOR THIS PROJECT AND THAT THESE PLANS ARE COMPLETE AND COMPLY WITH ALL APPLICABLE STATE AND LOCAL BUILDING REGULATIONS.



SHEET ISSUE  
 1 100% Construction Documents 2/24/2021

<input type="checkbox"/>	MECHANICAL RETURN REGISTER
<input type="checkbox"/>	MECHANICAL AIR SUPPLY DIFFUSER

**RATIO**  
 PROJECT NO. 20408.000  
 SHEET TITLE  
**FIRST FLOOR REFLECTED CEILING PLAN -AREA B**

SHEET NUMBER  
**A-131B**

2/26/2021 5:18:35 PM

**Carolina Charter Academy Exp.**  
 8529 Highway 55  
 Angier, North Carolina 27501

**Owner**  
 Highmark School Development  
 746 East Winchester Street  
 Suite 150  
 Murray, Utah 84107  
 801-256-9550

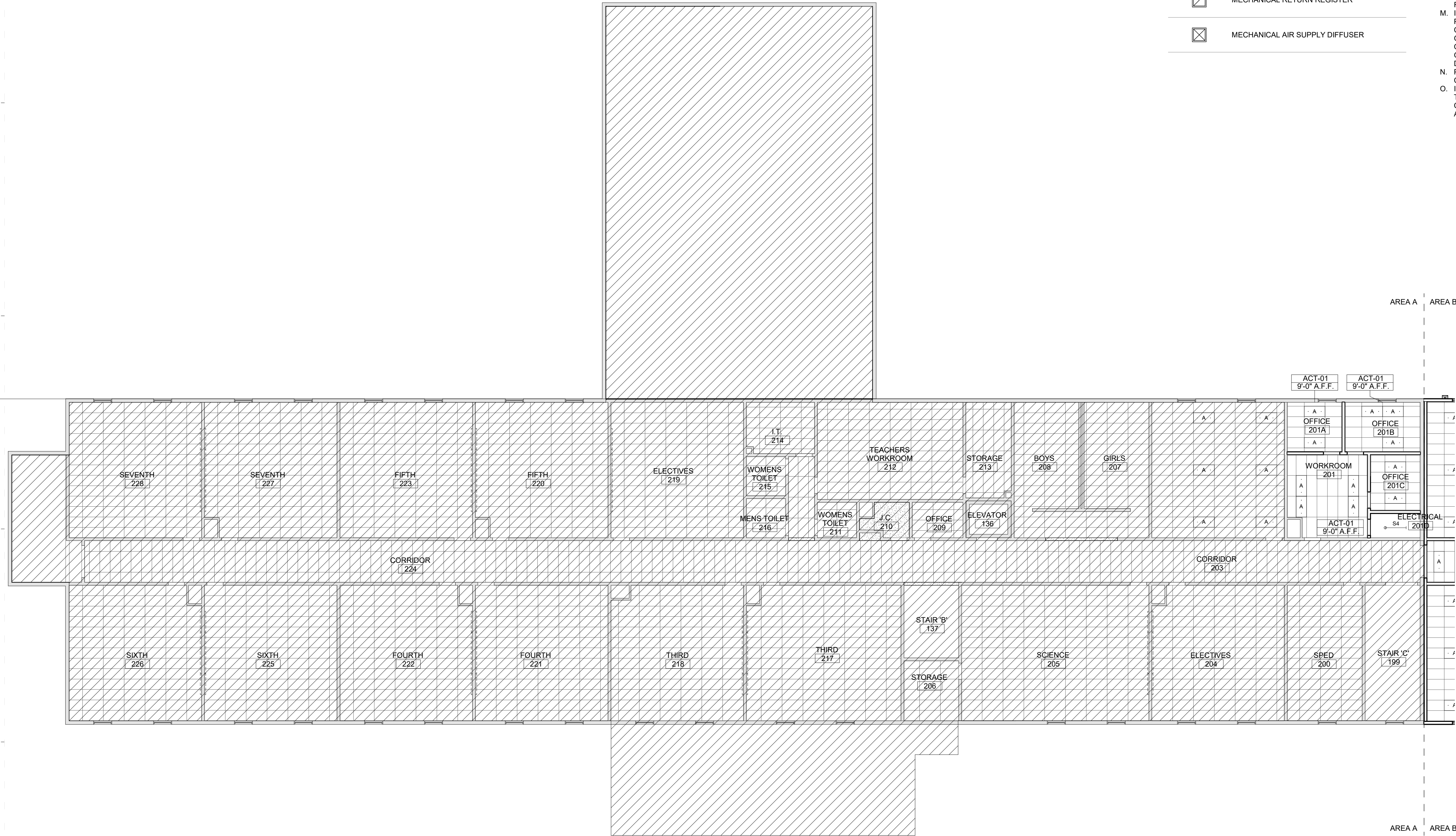
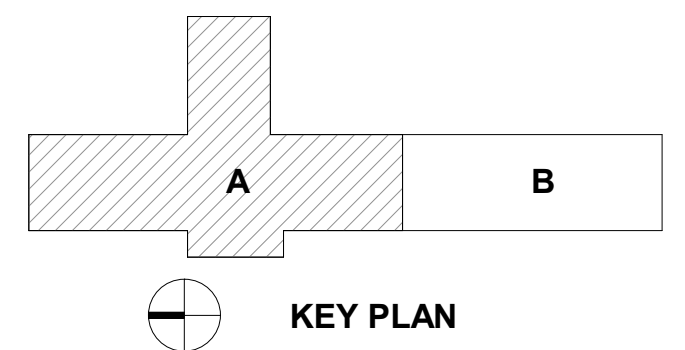
**Architect**  
 RATIO  
 227 Fayetteville Street, Suite 301  
 Raleigh, North Carolina 27601  
 919-821-0805

**Structural Engineer**  
 Lynch Mykins Structural Engineers, PC  
 301 North West Street  
 Suite 105  
 Raleigh, North Carolina 27603  
 919-782-1833

**Civil Engineer**  
 Timmons Group  
 5410 Trinity Road  
 Suite 102  
 Raleigh, North Carolina 27607  
 919-866-4938

- CEILING TAG
- XXX-01  
10'-10" A.F.F.  
CEILING TYPE
- CEILING HEIGHT (ABOVE FINISH FLOOR)
- SPOT ELEVATION MARKER
- GYB BOARD CEILING, PAINTED PT-02 (REFER TO PLAN FOR SUSPENSION TYPE)
- ACOUSTIC CEILING TILE ACT-01 24" X 48"
- 24" x 48" LIGHT FIXTURE (SEE ELECTRICAL PLANS FOR FURTHER INFORMATION)
- DOWNLIGHT
- MECHANICAL RETURN REGISTER
- MECHANICAL AIR SUPPLY DIFFUSER

- A. THESE GENERAL NOTES APPLY TO SERIES A-130 REFLECTED CEILING DRAWINGS.
- B. INSTALL NEW CEILINGS AT +9'-0" A.F.F. UNLESS NOTED OTHERWISE. ALL CEILINGS TO BE ACT-01 UNLESS NOTED OTHERWISE.
- C. CENTER CEILING GRIDS WITHIN ROOMS EACH DIRECTION UNLESS NOTED OTHERWISE.
- D. LOCATE CEILING GRIDS WITHIN ROOMS SUCH THAT BORDERS CONTAIN NOT LESS THAN 1/2 TILE WIDTH, UNLESS OTHERWISE INDICATED.
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SHEET ISSUE	DATE
1 100% Construction Documents	2/24/2021

SHEET TITLE	PROJECT NO.
SECOND FLOOR REFLECTED CEILING PLAN - AREA A	20408.000

**RATIO**  
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SHEET NUMBER  
**A-132A**

# Carolina Charter Academy Exp. 8529 Highway 55 Angier, North Carolina 27501

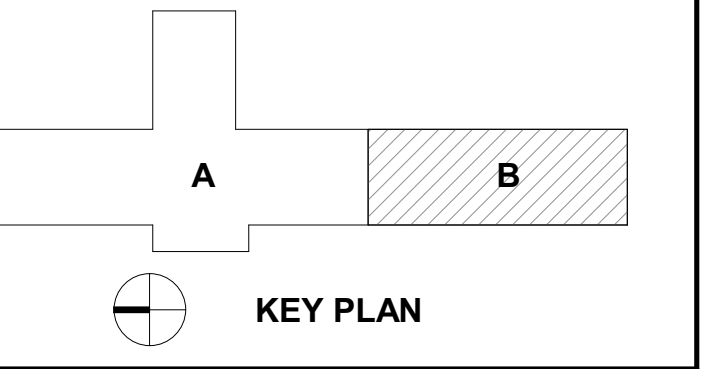
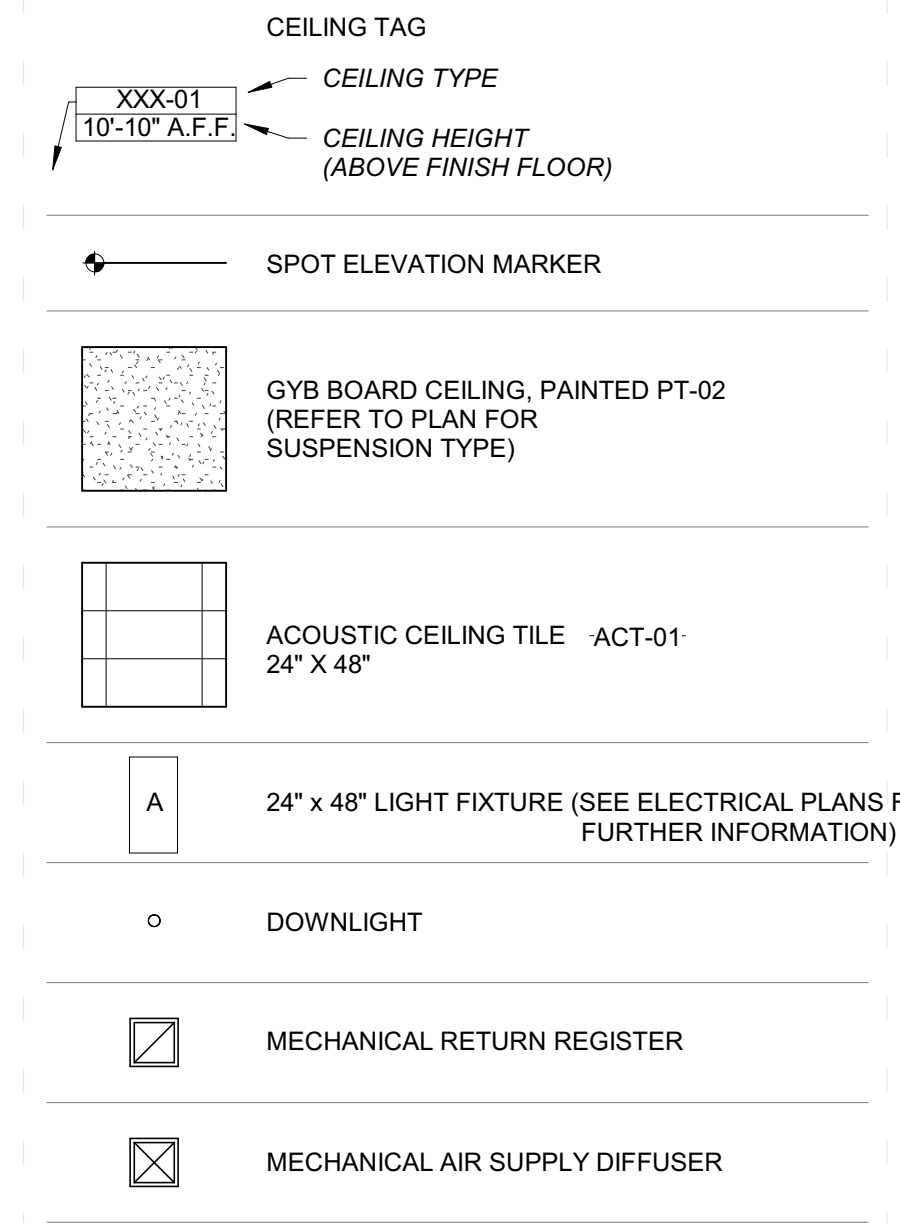
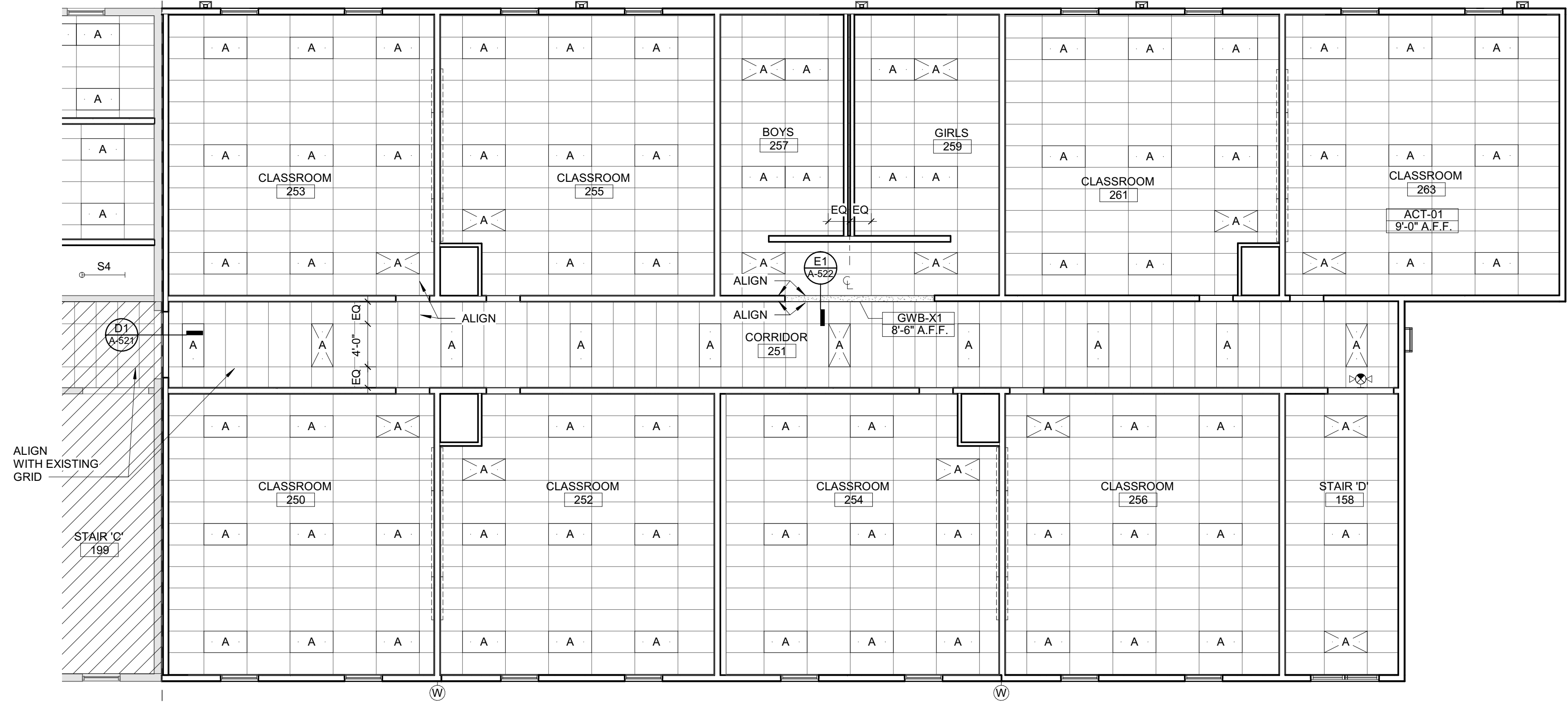
**Owner**  
**Highmark School Development**  
 746 East Winchester Street  
 Suite 150  
 Murray, Utah 84107  
 801-256-9550

**Architect**  
**RATIO**  
 227 Fayetteville Street, Suite 301  
 Raleigh, North Carolina 27601  
 919-821-0805

**Structural Engineer**  
**Lynch Mykins Structural Engineers, PC**  
 301 North West Street  
 Suite 105  
 Raleigh, North Carolina 27603  
 919-782-1833

**Civil Engineer**  
**Timmons Group**  
 5410 Trinity Road  
 Suite 102  
 Raleigh, North Carolina 27607  
 919-866-4938

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SEAL | DATE 2/8/2021 | CODE CERT. I HEREBY CERTIFY THAT THE BUILDING CODE SUMMARY COMPLETED ON THIS PAGE IS ACCURATE FOR THE TYPE OF BUILDING AND OCCUPANCY INTENDED FOR THIS PROJECT AND THAT THESE PLANS ARE COMPLETE AND COMPLY WITH ALL APPLICABLE STATE AND LOCAL BUILDING REGULATIONS.

**HAL M. BOWEN**  
 REGISTERED ARCHITECT  
 5950  
 RALEIGH, N.C.

SHEET ISSUE	NO.	DESCRIPTION	DATE
1	50% Construction Documents		2/8/2021

**RATIO**

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PROJECT NO. 20408.000

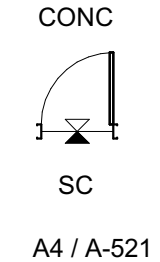
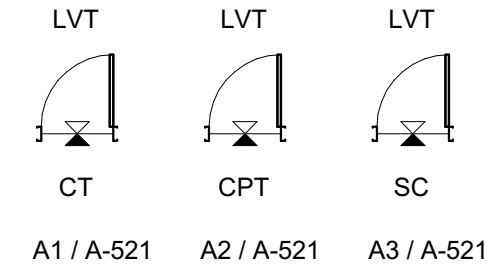
SHEET TITLE  
**SECOND FLOOR REFLECTED CEILING PLAN -AREA B**

SHEET NUMBER  
**A-132B**

**KEYNOTES (ACTION/GENERAL)**

09-C1 START TILE PATTERN WITH FULL TILE, AT THIS LOCATION

**FINISH TRANSITION AT DOORS**



**FINISHES-SYMBOLS LEGEND**

Room name XXXXX W Wall Fin B Base Fin F Floor Fin 100 SF	ROOM NAME AND ROOM FINISHES
--- ---	FLOORING MATERIAL TRANSITION VIEW REFERENCE
→	FLOORING DIRECTION
PT-XX	ACCENT WALL FINISH DESIGNATION

[Pattern]	LVT-01
[Pattern]	LVT-02 (ACCENT)
[Pattern]	LVT-03 (ACCENT)
[Pattern]	CPT-01
[Pattern]	CT-01
[Pattern]	NOT IN SCOPE

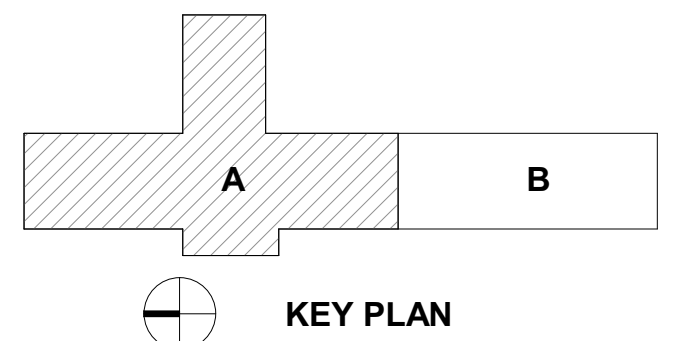
**Carolina Charter Academy Exp.**  
8529 Highway 55  
Angier, North Carolina 27501

**Owner**  
Highmark School Development  
746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

**Architect**  
RATIO  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

**Structural Engineer**  
Lynch Mykins Structural Engineers, PC  
301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-782-1833

**Civil Engineer**  
Timmons Group  
5410 Trinity Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938



SEAL | DATE 2/24/2021 | CODE CERT. I HEREBY CERTIFY THAT THE BUILDING CODE SUMMARY COMPLETED ON THIS PAGE IS ACCURATE FOR THE TYPE OF BUILDING AND OCCUPANCY INTENDED FOR THIS PROJECT AND THAT THESE PLANS ARE COMPLETE AND COMPLY WITH ALL APPLICABLE STATE AND LOCAL BUILDING REGULATIONS

**SHEET ISSUE**

1	100% Construction Documents	2/24/2021
---	-----------------------------	-----------

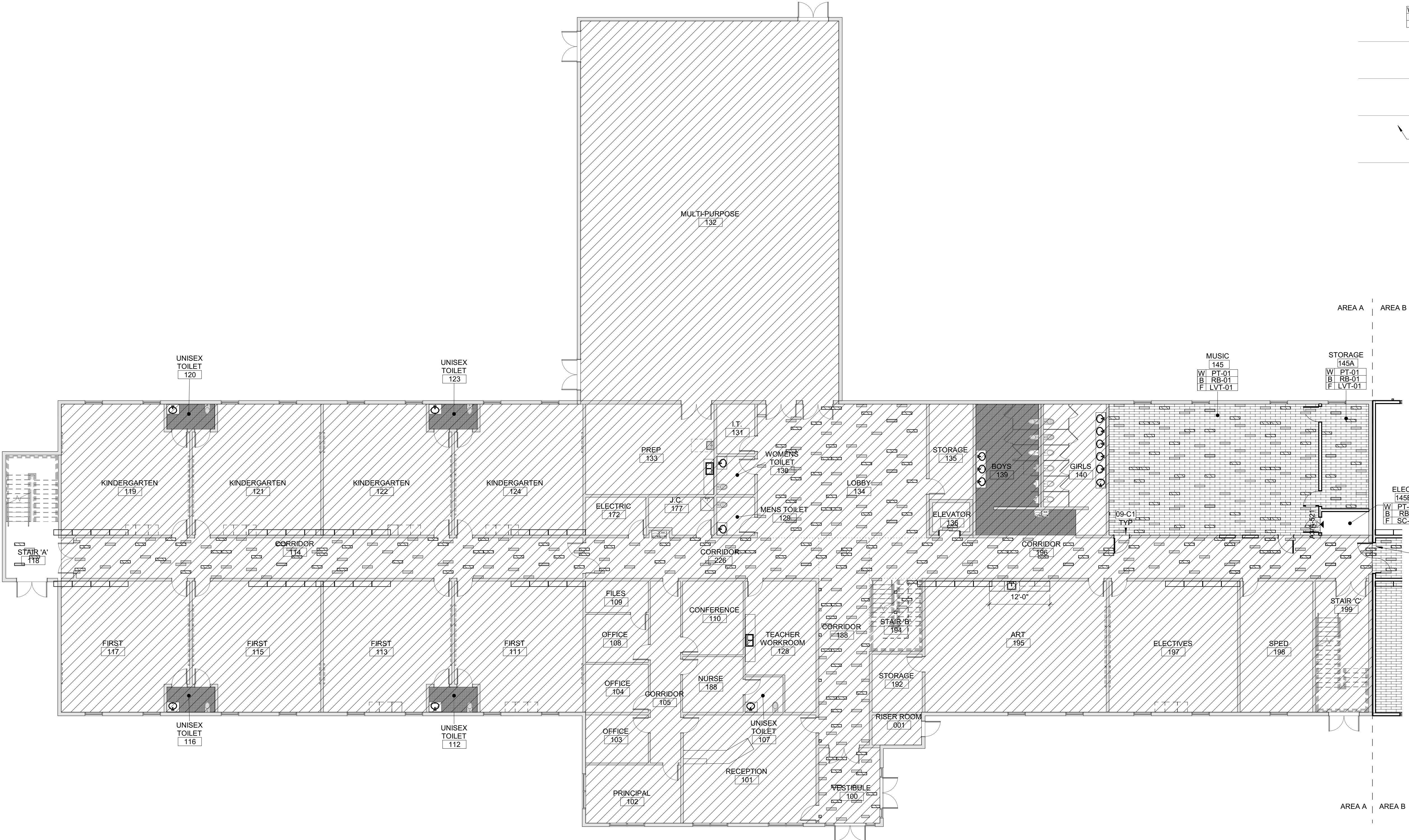


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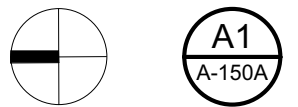
PROJECT NO. 20408.000

SHEET TITLE  
**FIRST FLOOR FINISH PLAN - AREA A**

SHEET NUMBER  
**A-150A**



2/26/2021 5:18:38 PM



**FIRST FLOOR FINISH PLAN - AREA A**  
3/32" = 1'-0"



**Carolina Charter Academy Exp.**  
8529 Highway 55  
Angier, North Carolina 27501

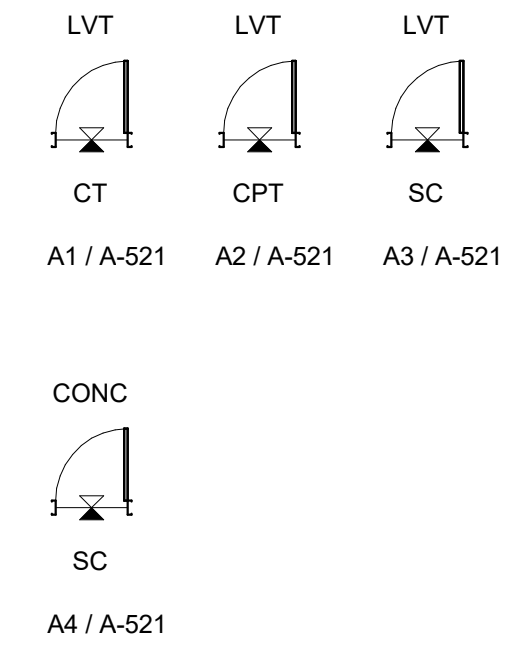
**Owner**  
Highmark School Development  
746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

**Architect**  
RATIO  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

**Structural Engineer**  
Lynch Mykins Structural Engineers, PC  
301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-782-1833

**Civil Engineer**  
Timmons Group  
5410 Trinity Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938

**FINISH TRANSITION AT DOORS**



**FINISHES-SYMBOLS LEGEND**

Room name XXXXXX W Wall Fin B Base Fin F Floor Fin 150 SF	ROOM NAME AND ROOM FINISHES
---	FLOORING MATERIAL TRANSITION VIEW REFERENCE
---	FLOORING DIRECTION
PT-XX	ACCENT WALL FINISH DESIGNATION

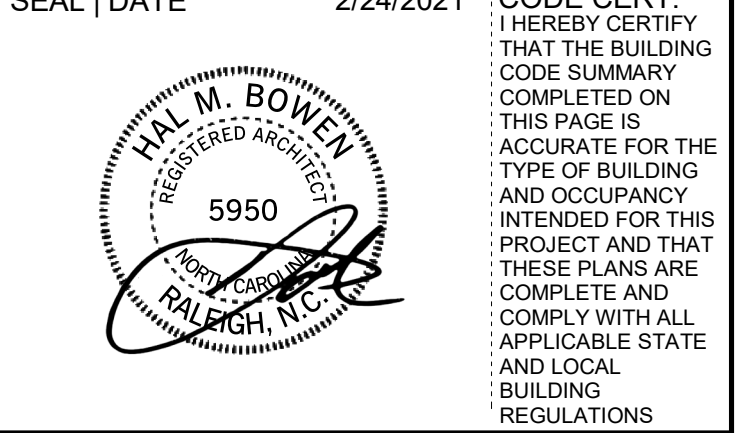
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[Symbol]	LVT-02 (ACCENT)
[Symbol]	LVT-03 (ACCENT)
[Symbol]	CPT-01
[Symbol]	CT-01
[Symbol]	NOT IN SCOPE

**KEYNOTES (ACTION/GENERAL)**

09-C1	START TILE PATTERN WITH FULL TILE, AT THIS LOCATION
-------	---

SEAL | DATE 2/24/2021

CODE CERT. I HEREBY CERTIFY THAT THE BUILDING CODE SUMMARY COMPLETED ON THIS PAGE IS ACCURATE FOR THE TYPE OF BUILDING AND OCCUPANCY INTENDED FOR THIS PROJECT AND THAT THESE PLANS ARE COMPLETE AND COMPLY WITH ALL APPLICABLE STATE AND LOCAL BUILDING REGULATIONS



SHEET ISSUE

1	100% Construction Documents	2/24/2021

PROJECT NO. 20408.000

SHEET TITLE

**FIRST FLOOR FINISH PLAN - AREA B**

SHEET NUMBER

**A-150B**

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PROJECT NO. 20408.000

SHEET TITLE

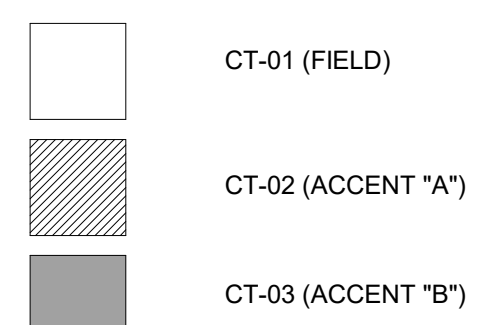
**FIRST FLOOR FINISH PLAN - AREA B**

SHEET NUMBER

**A-150B**

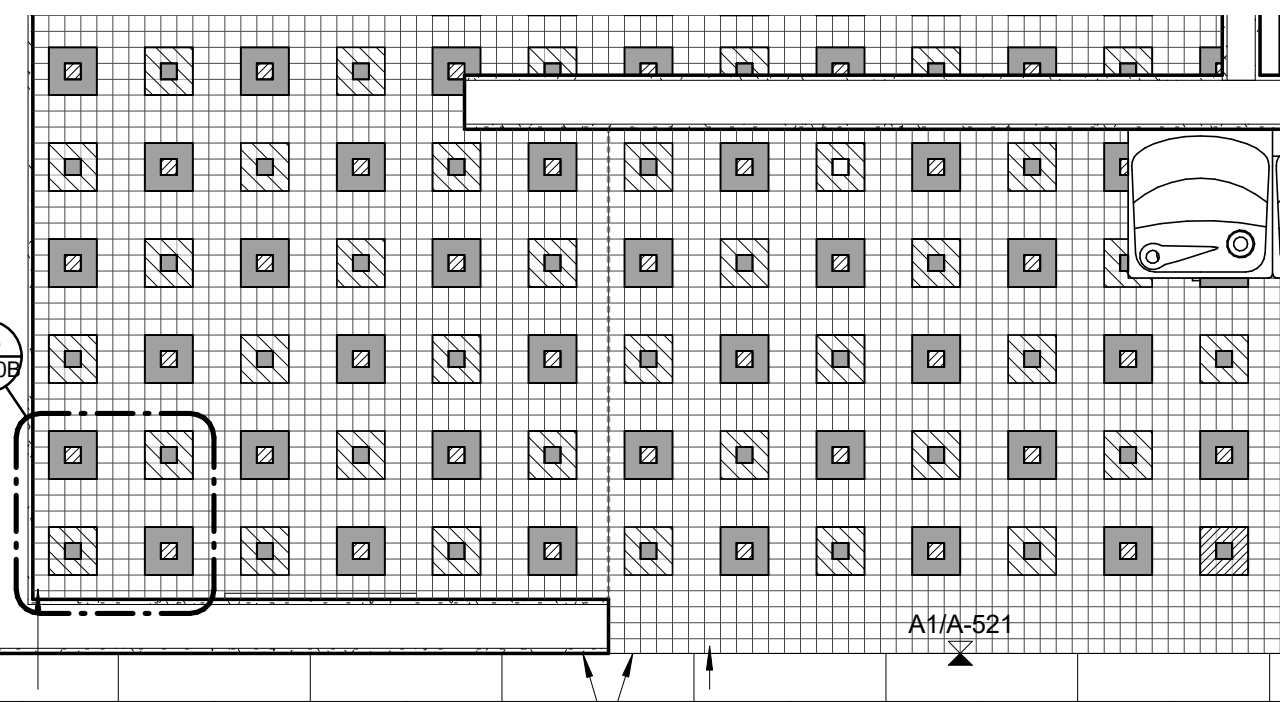
2/24/2021 5:20:53 PM

**FLOOR TILE LEGEND**



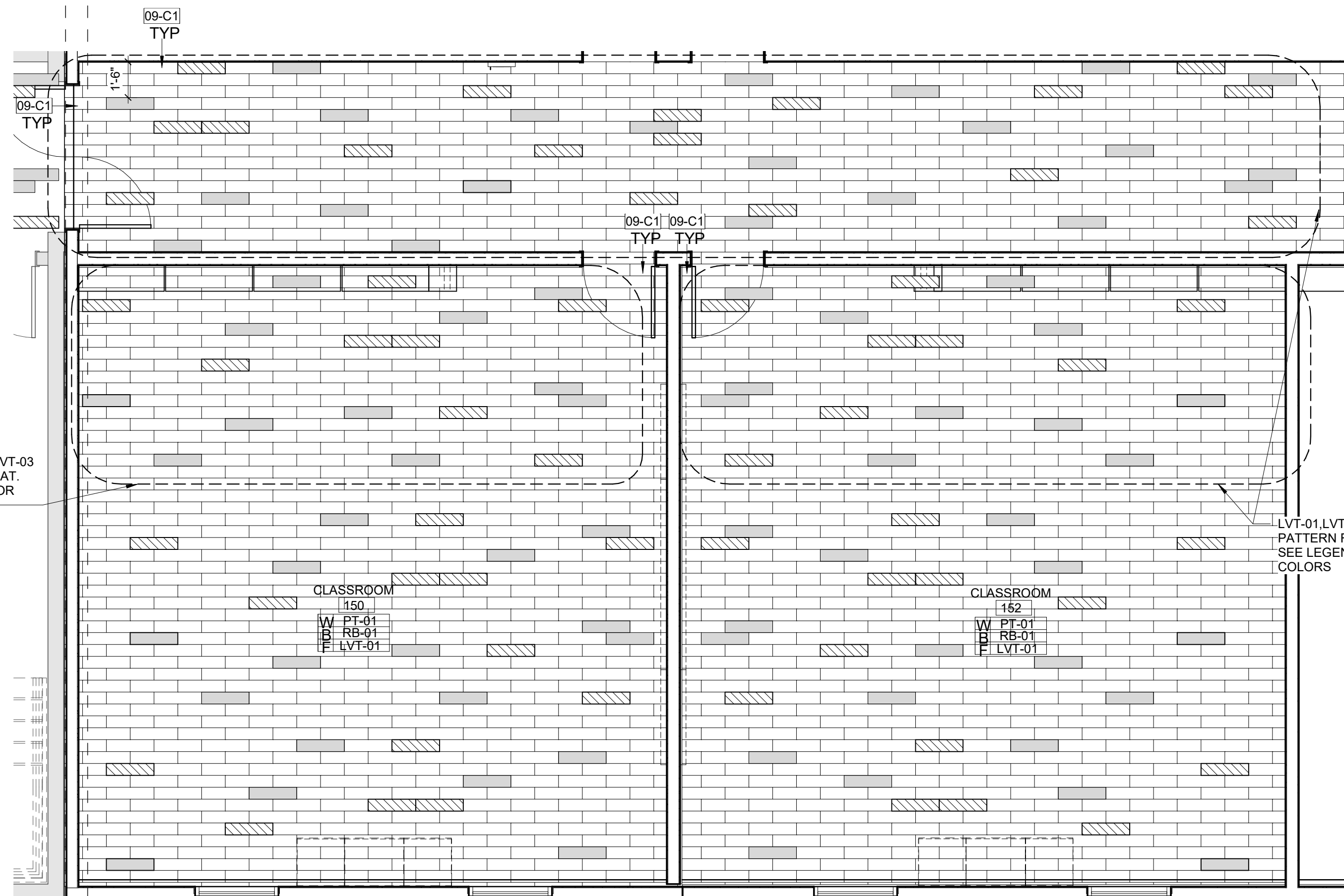
**TILE DETAIL**

1/2" = 1'-0"



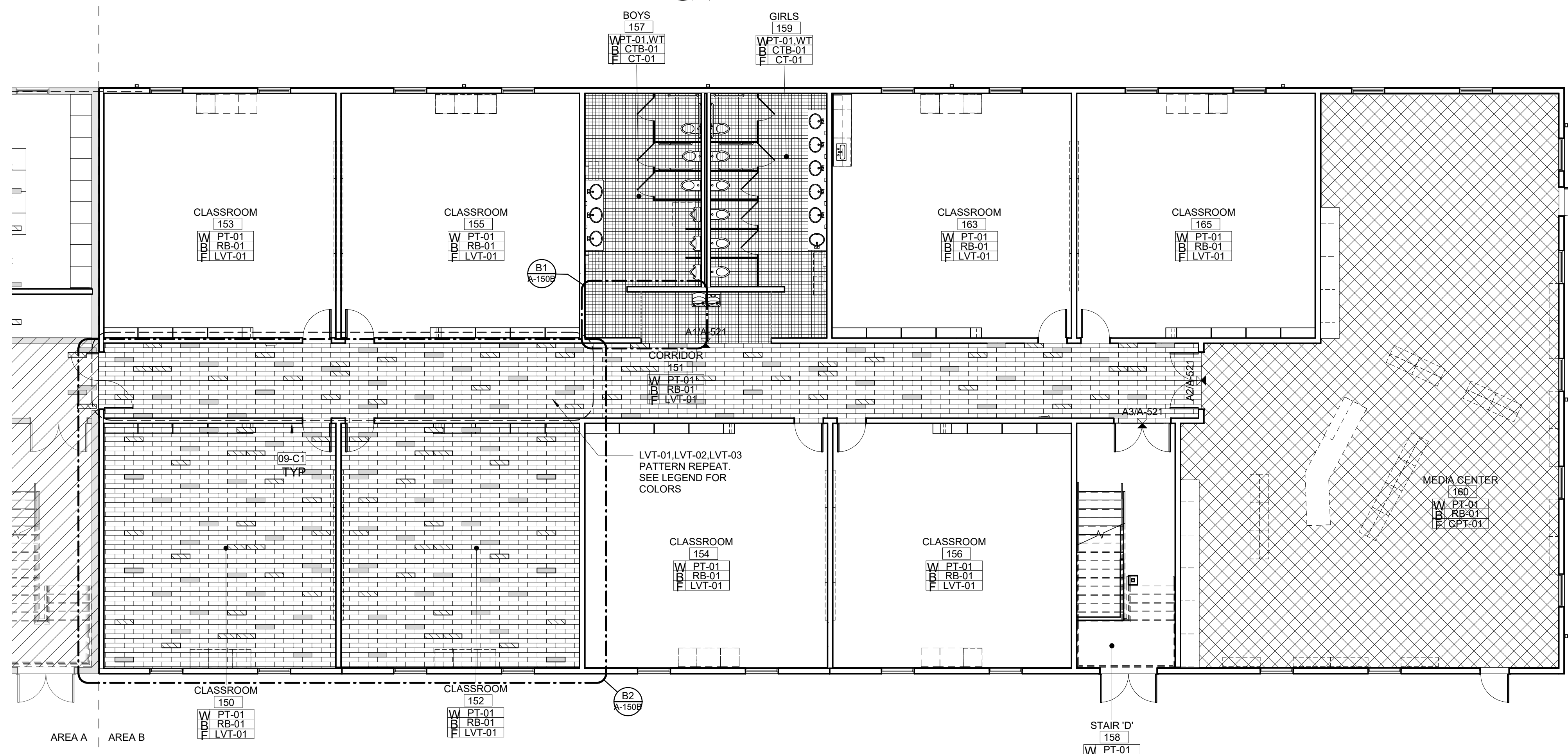
**ENLARGED FINISH PLAN - TYP. RESTROOM**

1/2" = 1'-0"



**ENLARGED FINISH PLAN - TYP. CLASSROOM**

1/4" = 1'-0"



**FIRST FLOOR FINISH PLAN - AREA B**

1/8" = 1'-0"

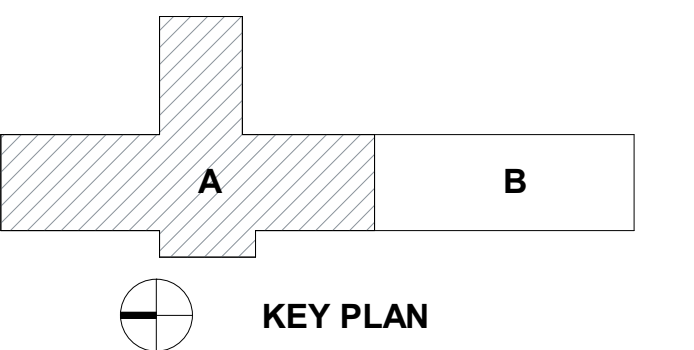
Carolina Charter Academy Exp.  
8529 Highway 55  
Angier, North Carolina  
27501

**Owner**  
Highmark School Development  
746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

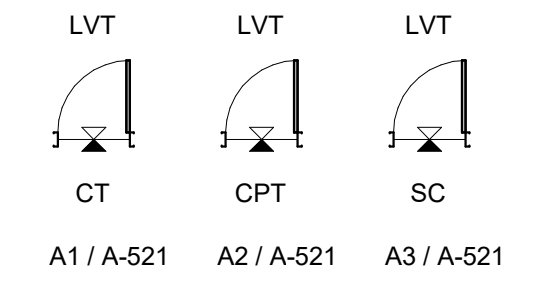
**Architect**  
RATIO  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

**Structural Engineer**  
Lynch Mykins Structural Engineers, PC  
301 North West Street  
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Raleigh, North Carolina 27603  
919-782-1833

**Civil Engineer**  
Timmons Group  
5410 Trinity Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938



**FINISH TRANSITION AT DOORS**



**FINISHES-SYMBOLS LEGEND**

Room name XXXXX	ROOM NAME AND ROOM FINISHES
W Wall Fin B Base Fin F Floor Fin 150 SF	
	FLOORING MATERIAL TRANSITION VIEW REFERENCE
	FLOORING DIRECTION
	ACCENT WALL FINISH DESIGNATION PT-XX
	LVT-01
	LVT-02 (ACCENT)
	LVT-03 (ACCENT)
	CPT-01
	CT-01
	NOT IN SCOPE

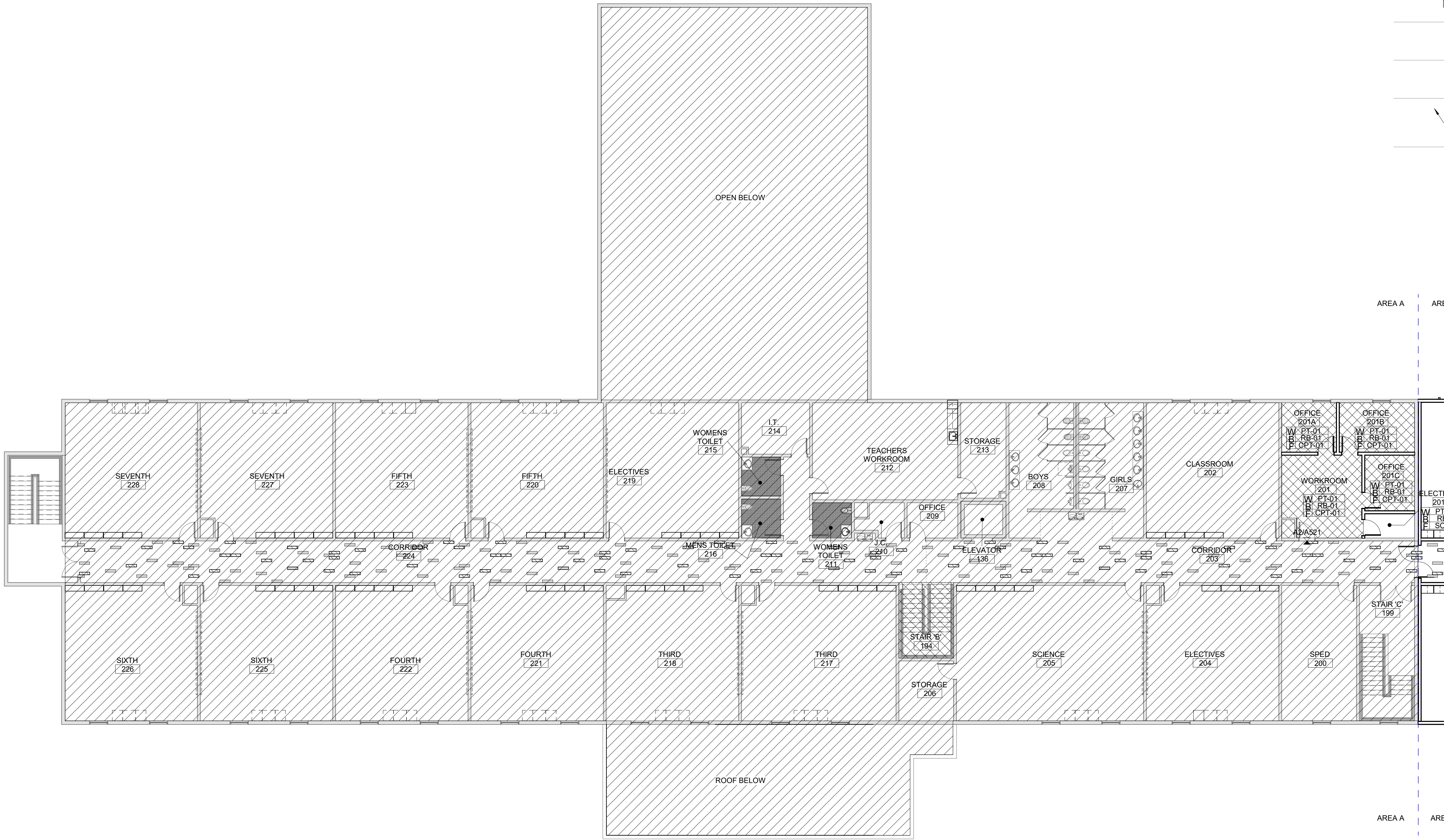
SEAL | DATE 2/24/2021 | CODE CERT.  
I HEREBY CERTIFY  
THAT THE BUILDING  
CODE SUMMARY  
COMPLETED ON  
THIS PAGE IS  
ACCURATE FOR THE  
TYPE OF BUILDING  
AND OCCUPANCY  
INTENDED FOR THIS  
PROJECT AND THAT  
THESE PLANS ARE  
COMPLETE AND  
COMPLY WITH ALL  
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AND LOCAL  
BUILDING  
REGULATIONS

**SHEET ISSUE**

NO	DESCRIPTION	DATE
1	100% Construction Documents	2/24/2021

**RATIO**  
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PROJECT NO. 20408.000  
SHEET TITLE  
**SECOND FLOOR  
FINISH PLAN - AREA  
A**

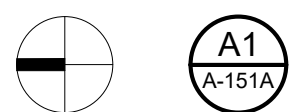
SHEET NUMBER  
**A-151A**



**SECOND FLOOR FINISH PLAN - AREA A**

3/32" = 1'-0"

2/24/2021 4:39:37 PM



**Carolina Charter Academy Exp.**  
 8529 Highway 55  
 Angier, North Carolina  
 27501

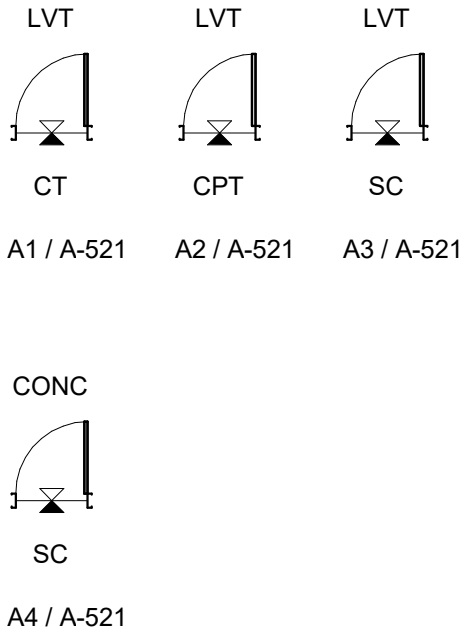
**Owner**  
**Highmark School Development**  
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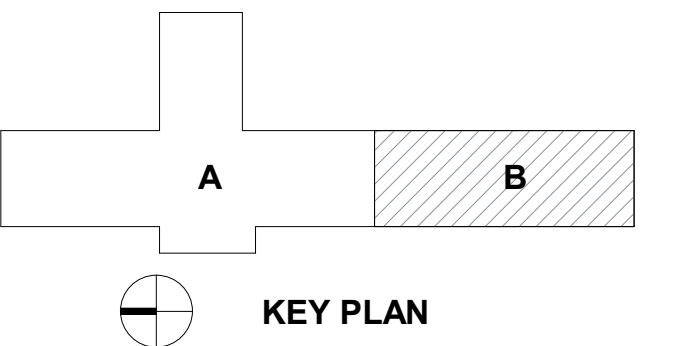
**FINISH TRANSITION AT DOORS**



**FINISHES-SYMBOLS LEGEND**

Room name XXXXX	ROOM NAME AND ROOM FINISHES
W Wall Fin B Base Fin F Floor Fin 150 SF	
---	FLOORING MATERIAL TRANSITION VIEW REFERENCE
---	FLOORING DIRECTION
PT-XX	ACCENT WALL FINISH DESIGNATION

[Pattern]	LVT-01
[Pattern]	LVT-02 (ACCENT)
[Pattern]	LVT-03 (ACCENT)
[Pattern]	CPT-01
[Pattern]	CT-01
[Pattern]	NOT IN SCOPE



SEAL | DATE 2/24/2021 | CODE CERT. I HEREBY CERTIFY THAT THE BUILDING CODE SUMMARY COMPLETED ON THIS PAGE IS ACCURATE FOR THE TYPE OF BUILDING AND OCCUPANCY INTENDED FOR THIS PROJECT AND THAT THESE PLANS ARE COMPLETE AND COMPLY WITH ALL APPLICABLE STATE AND LOCAL BUILDING REGULATIONS

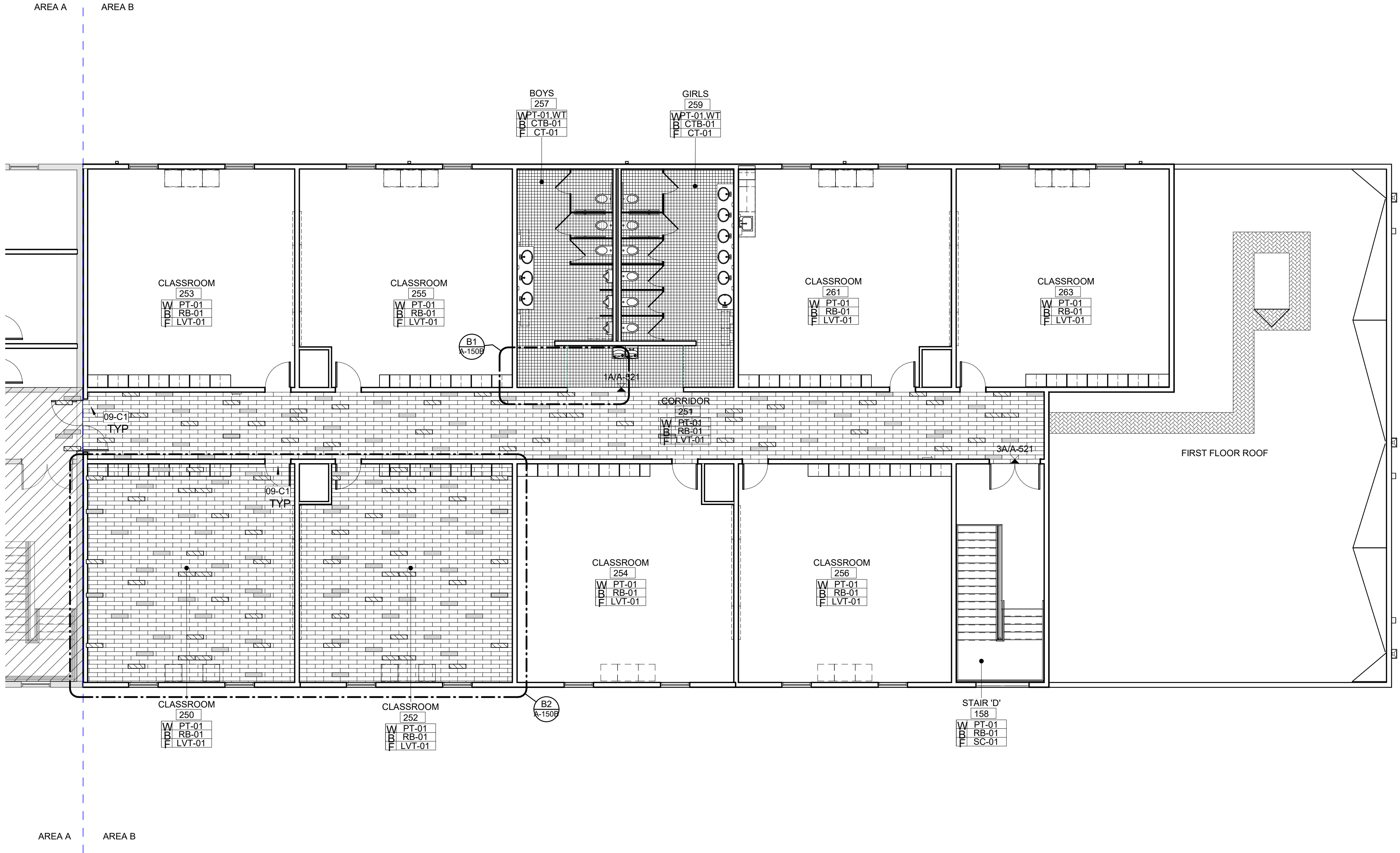
SHEET ISSUE	100% Construction Documents	2/24/2021

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PROJECT NO. 20408.000

SHEET TITLE  
**SECOND FLOOR FINISH PLAN - AREA B**

SHEET NUMBER  
**A-151B**



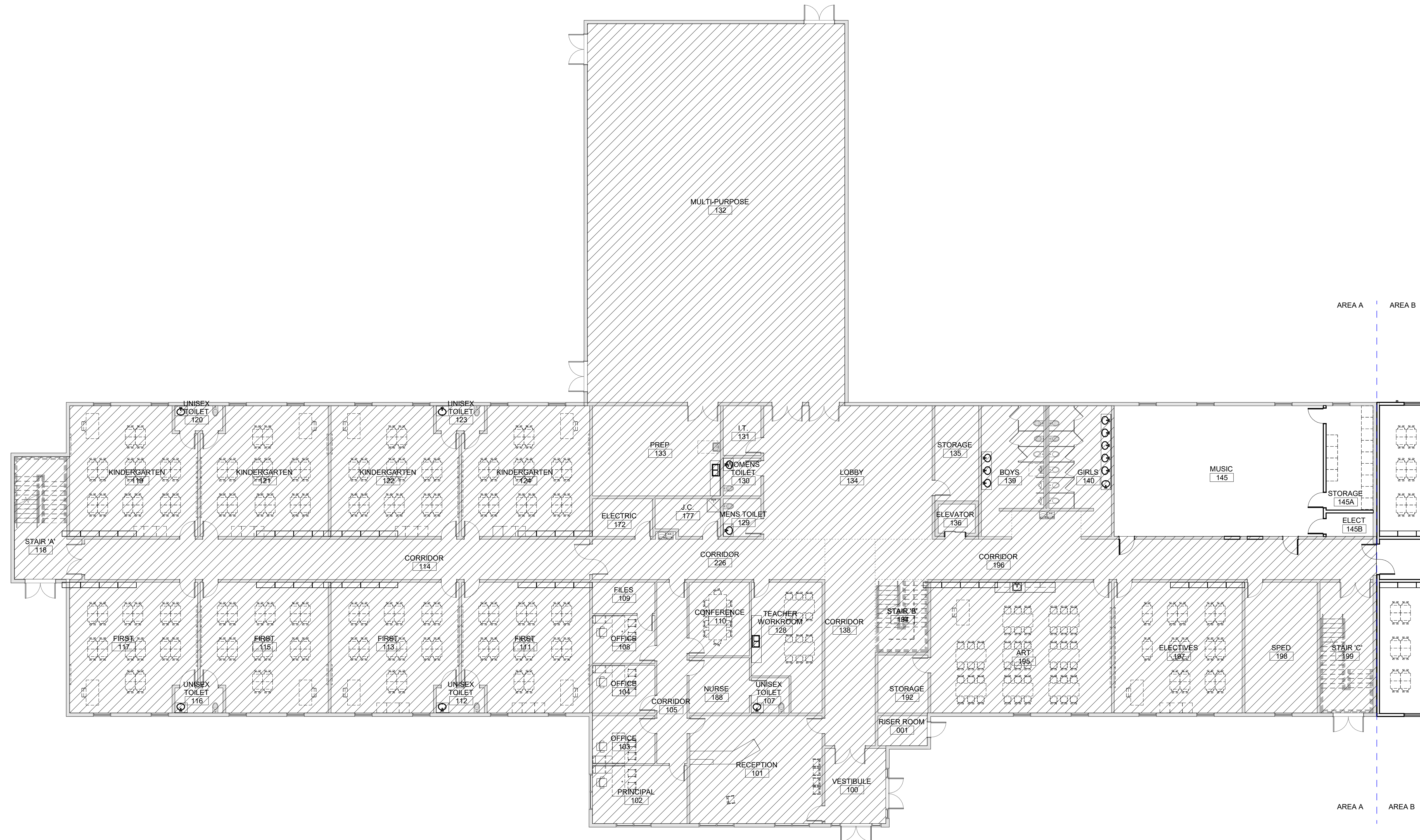
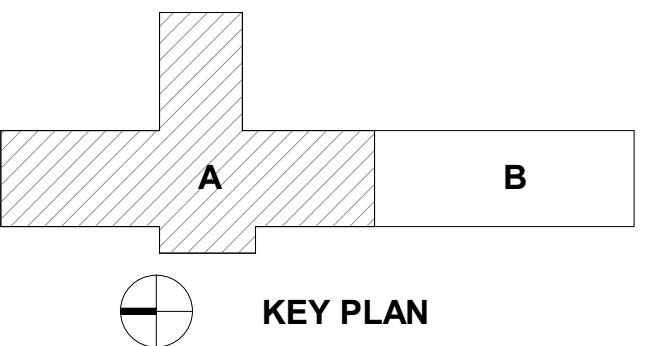
**Carolina Charter Academy Exp.**  
8529 Highway 55  
Angier, North Carolina 27501

**Owner**  
**Highmark School Development**  
746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

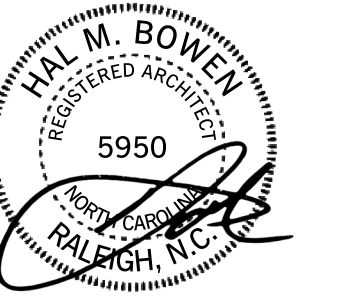
**Architect**  
**RATIO**  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

**Structural Engineer**  
**Lynch Mykins Structural Engineers, PC**  
301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-782-1833

**Civil Engineer**  
**Timmons Group**  
5410 Trinity Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938



SEAL | DATE 2/24/2021 CODE CERT.  
I HEREBY CERTIFY  
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CODE SUMMARY  
COMPLETED ON  
THIS PAGE IS  
ACCURATE FOR THE  
TYPE OF BUILDING  
AND OCCUPANCY  
INTENDED FOR THIS  
PROJECT AND THAT  
THESE PLANS ARE  
COMPLETE AND  
COMPLY WITH ALL  
APPLICABLE STATE  
AND LOCAL  
BUILDING  
REGULATIONS



**SHEET ISSUE**

Issue No.	Description	Issue Date
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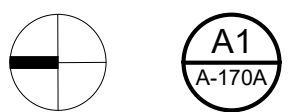
PROJECT NO. 20408.000

SHEET TITLE  
**FIRST FLOOR  
EQUIPMENT  
PLAN-AREA A**

SHEET NUMBER

**A-170A**

**FOR REFERENCE ONLY**









**KEYNOTES (SPEC BASED)**

07 71 00.B3	
074646.A00	FIBER-CEMENT SIDING
074646.B02	FIBER-CEMENT SIDING, FASCIA

**GLAZING SCHEDULE**

GL-01	1" CLEAR INSULATING GLASS, LOW-E COATED, TEMPERED - EXTERIOR APPLICATIONS
GL-11	1/4" CLEAR TEMPERED GLASS - INTERIOR APPLICATIONS, WINDOWS AND DOORS
GL-12	3/16" LAMINATED CERAMIC GLASS

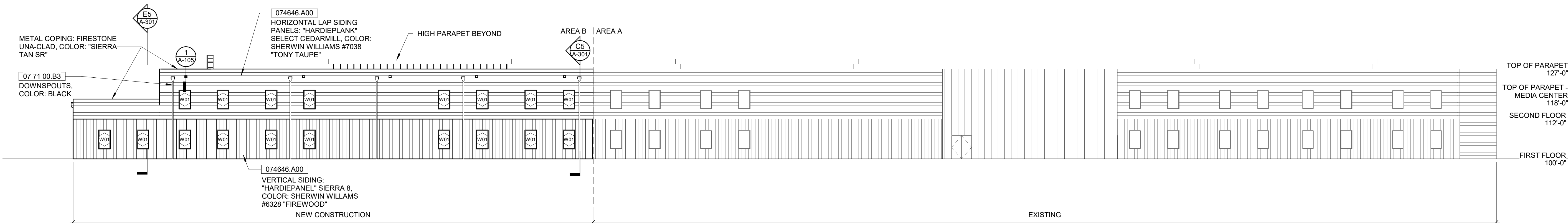
**Carolina Charter Academy Exp.**  
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 Angier, North Carolina 27501

**Owner**  
**Highmark School Development**  
 746 East Winchester Street  
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 Murray, Utah 84107  
 801-256-9550

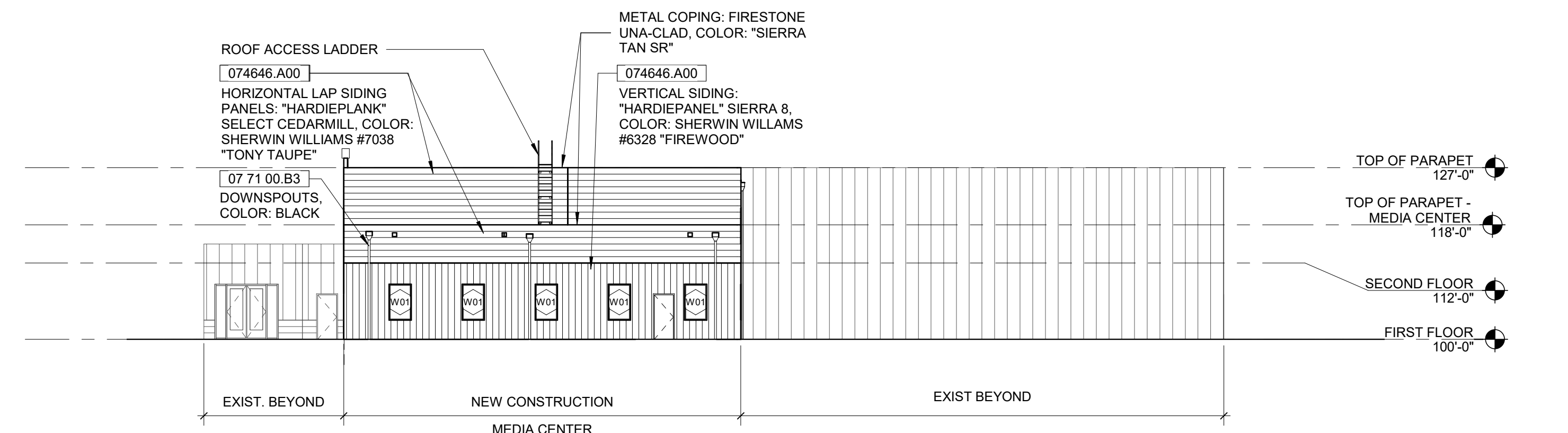
**Architect**  
**RATIO**  
 227 Fayetteville Street, Suite 301  
 Raleigh, North Carolina 27601  
 919-821-0805

**Structural Engineer**  
**Lynch Mykins Structural Engineers, PC**  
 301 North West Street  
 Suite 105  
 Raleigh, North Carolina 27603  
 919-782-1833

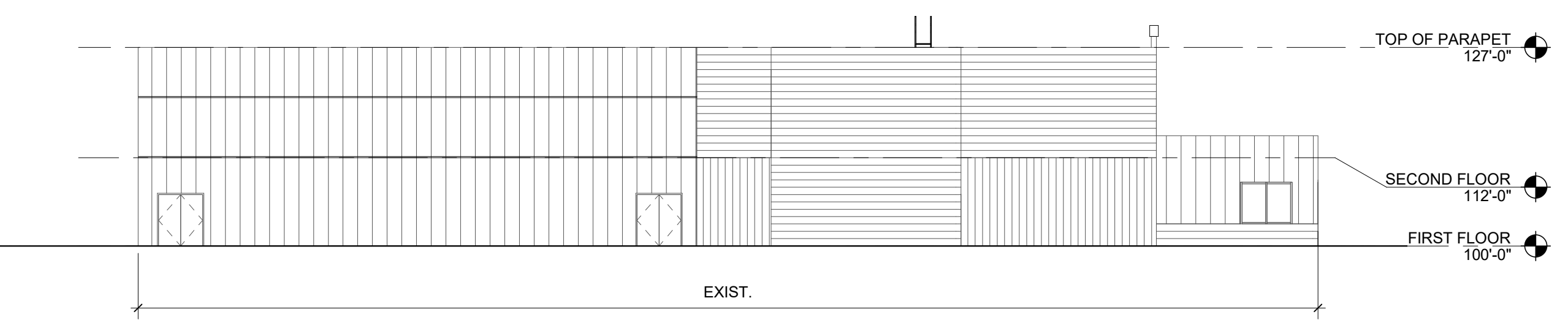
**Civil Engineer**  
**Timmons Group**  
 5410 Trinity Road  
 Suite 102  
 Raleigh, North Carolina 27607  
 919-866-4938



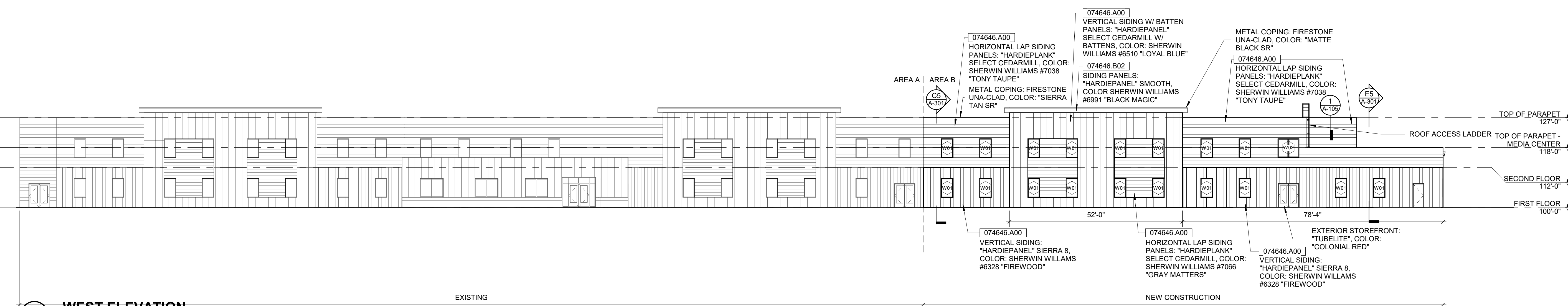
**C1 EAST ELEVATION**  
 1/16" = 1'-0"



**B5 SOUTH ELEVATION**  
 1/16" = 1'-0"



**B1 NORTH ELEVATION**  
 1/16" = 1'-0"



**A1 WEST ELEVATION**  
 1/16" = 1'-0"

SEAL | DATE 2/24/2021



**SHEET ISSUE**

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---	-----------------------------	-----------

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PROJECT NO. 20408.000  
 SHEET TITLE  
**EXTERIOR ELEVATIONS**

SHEET NUMBER  
**A-201**

2/24/2021 4:47:50 PM



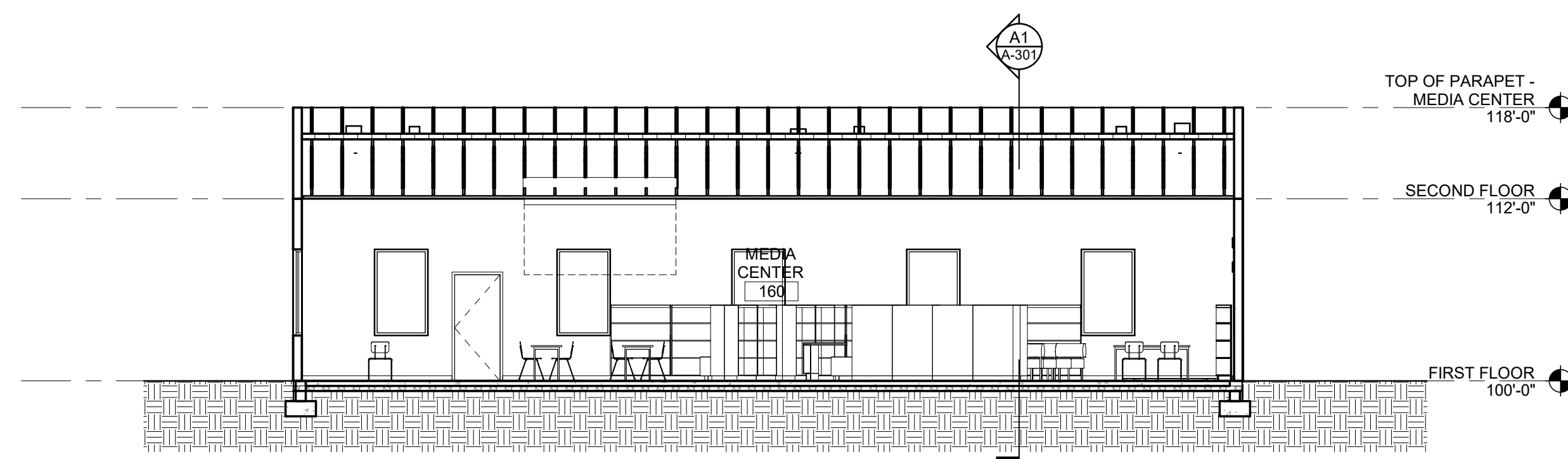
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**Highmark School Development**  
 746 East Winchester Street  
 Suite 150  
 Murray, Utah 84107  
 801-256-9550

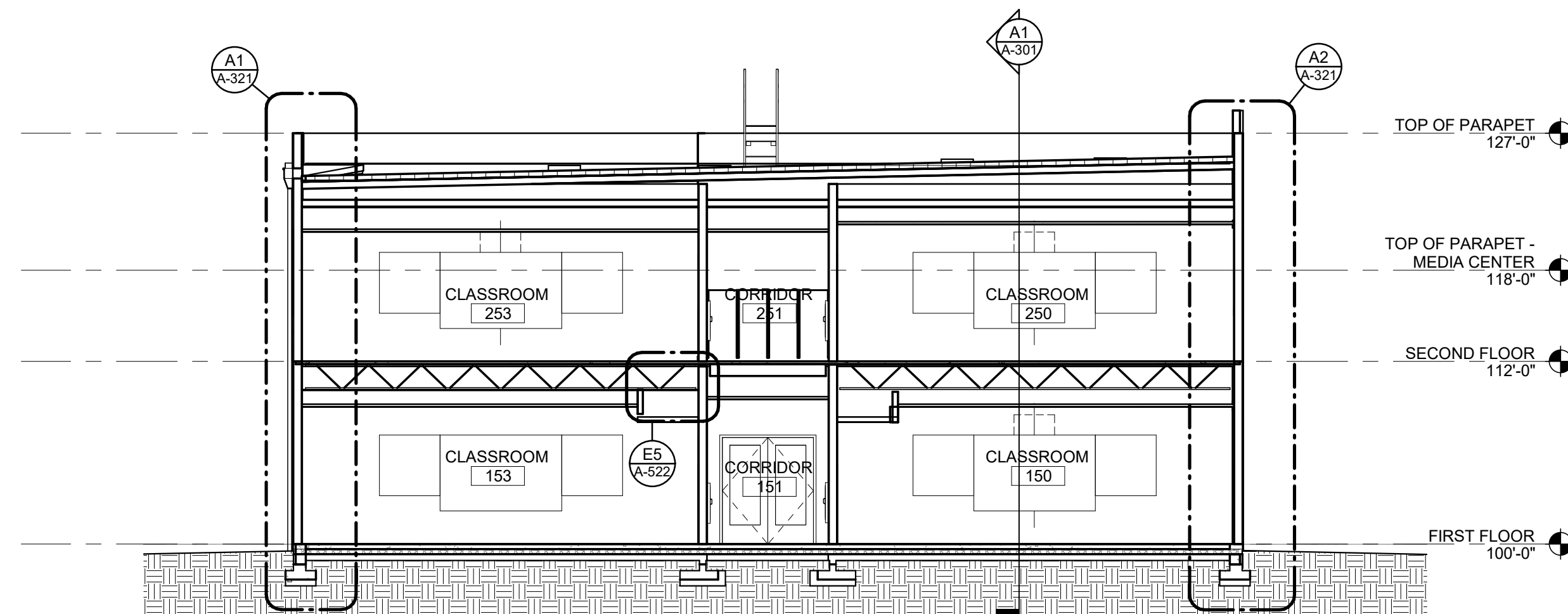
**Architect**  
**RATIO**  
 227 Fayetteville Street, Suite 301  
 Raleigh, North Carolina 27601  
 919-821-0805

**Structural Engineer**  
**Lynch Mykins Structural Engineers, PC**  
 301 North West Street  
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 Raleigh, North Carolina 27603  
 919-782-1833

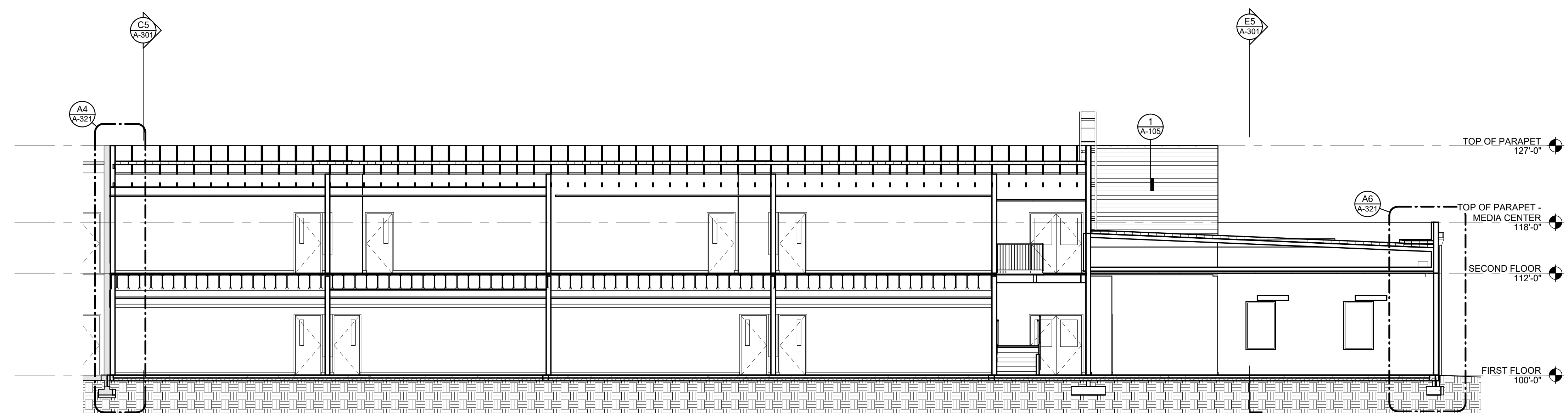
**Civil Engineer**  
**Timmons Group**  
 5410 Trinity Road  
 Suite 102  
 Raleigh, North Carolina 27607  
 919-866-4938



**E5 BS-Classroom Wing 2**  
 1/8" = 1'-0"

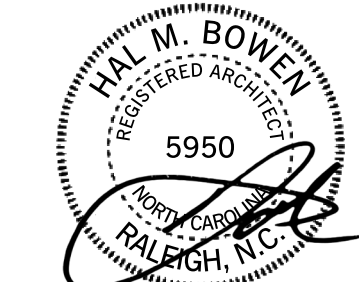


**C5 BS-Classroom Wing 1**  
 1/8" = 1'-0"



**A1 BS-Classroom Wing 3**  
 1/8" = 1'-0"

SEAL | DATE 2/24/2021



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1	100% Construction Documents	2/24/2021

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PROJECT NO. 20408.000

SHEET TITLE  
**BUILDING SECTIONS**

SHEET NUMBER  
**A-301**

**Carolina Charter Academy Exp.**  
8529 Highway 55  
Angier, North Carolina 27501

**Owner**  
Highmark School Development  
746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

**Architect**  
RATIO  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

**Structural Engineer**  
Lynch Mykins Structural Engineers, PC  
301 North West Street  
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Raleigh, North Carolina 27603  
919-782-1833

**Civil Engineer**  
Timmons Group  
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Suite 102  
Raleigh, North Carolina 27607  
919-866-4938

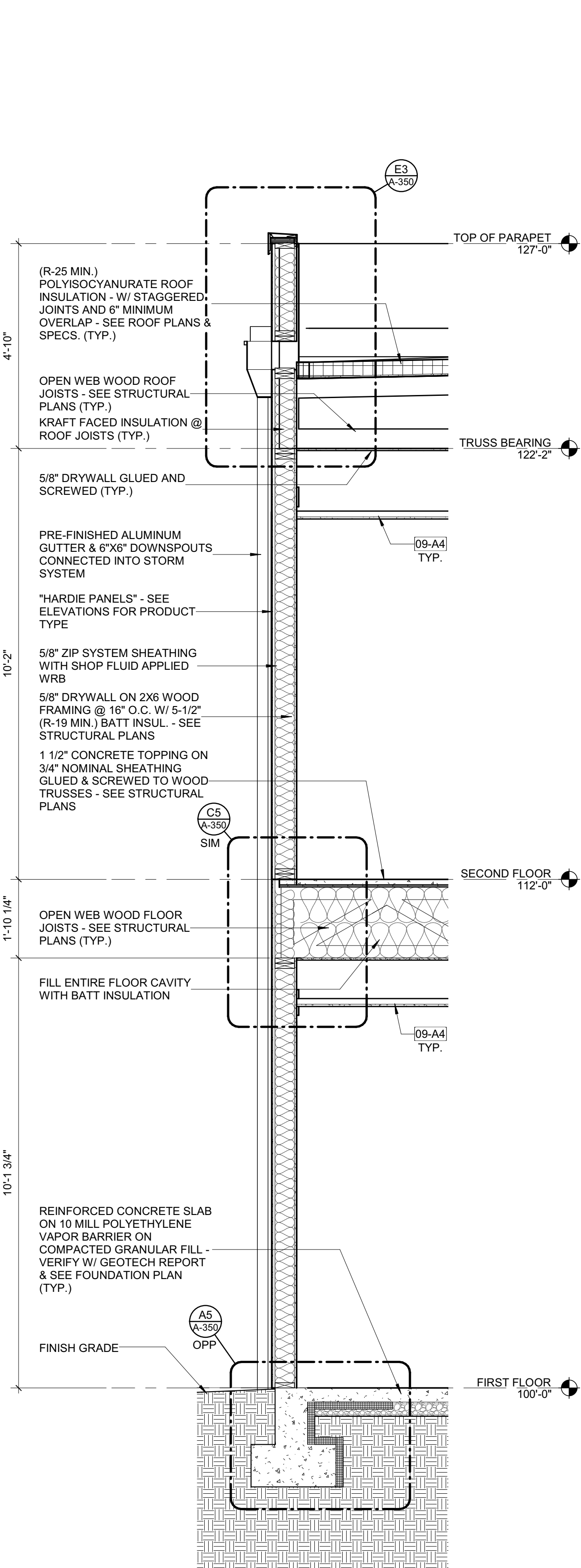
**KEYNOTES (SPEC BASED)**

061600 A00

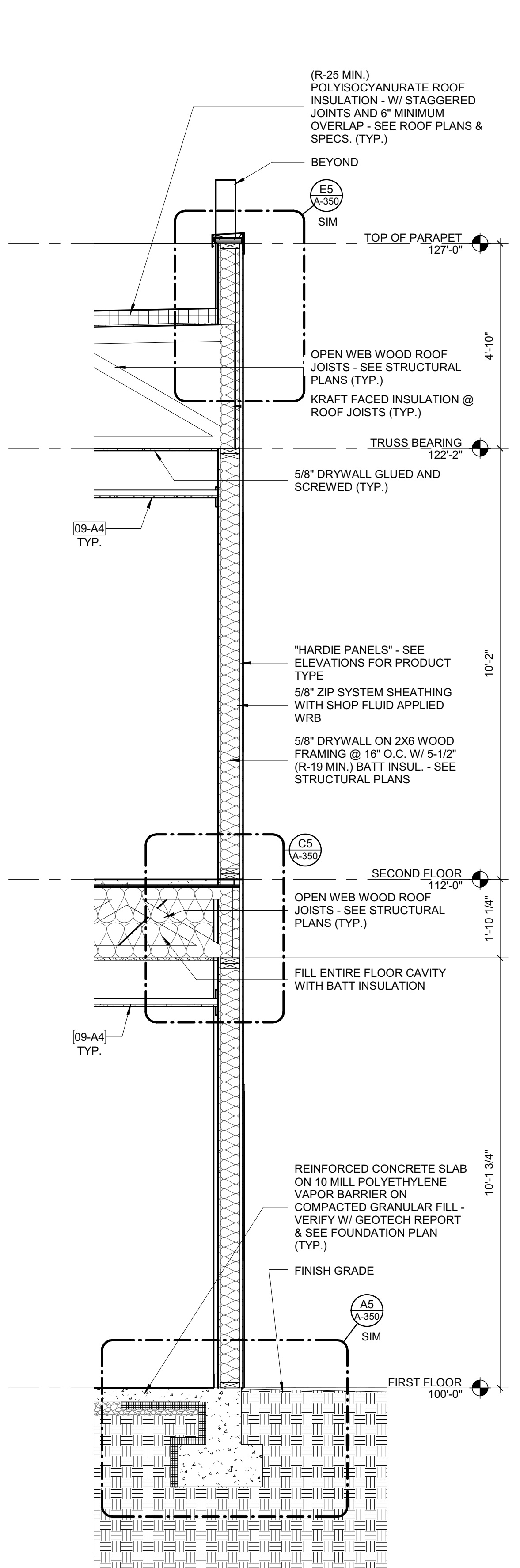
**KEYNOTES (ACTION/GENERAL)**

00-D3	REFER TO EQUIPMENT PLAN FOR EQUIPMENT TYPE
09-A4	CEILING, REFER TO REFLECTED CEILING PLAN FOR TYPE

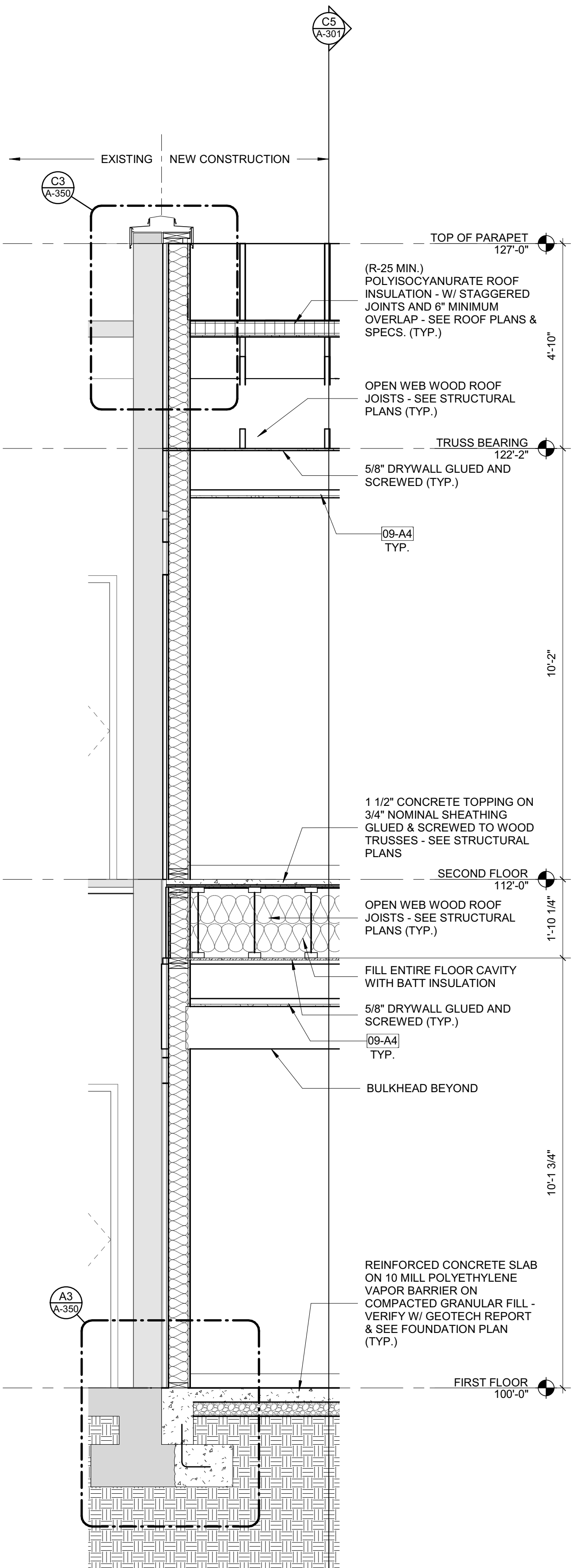
00-A1



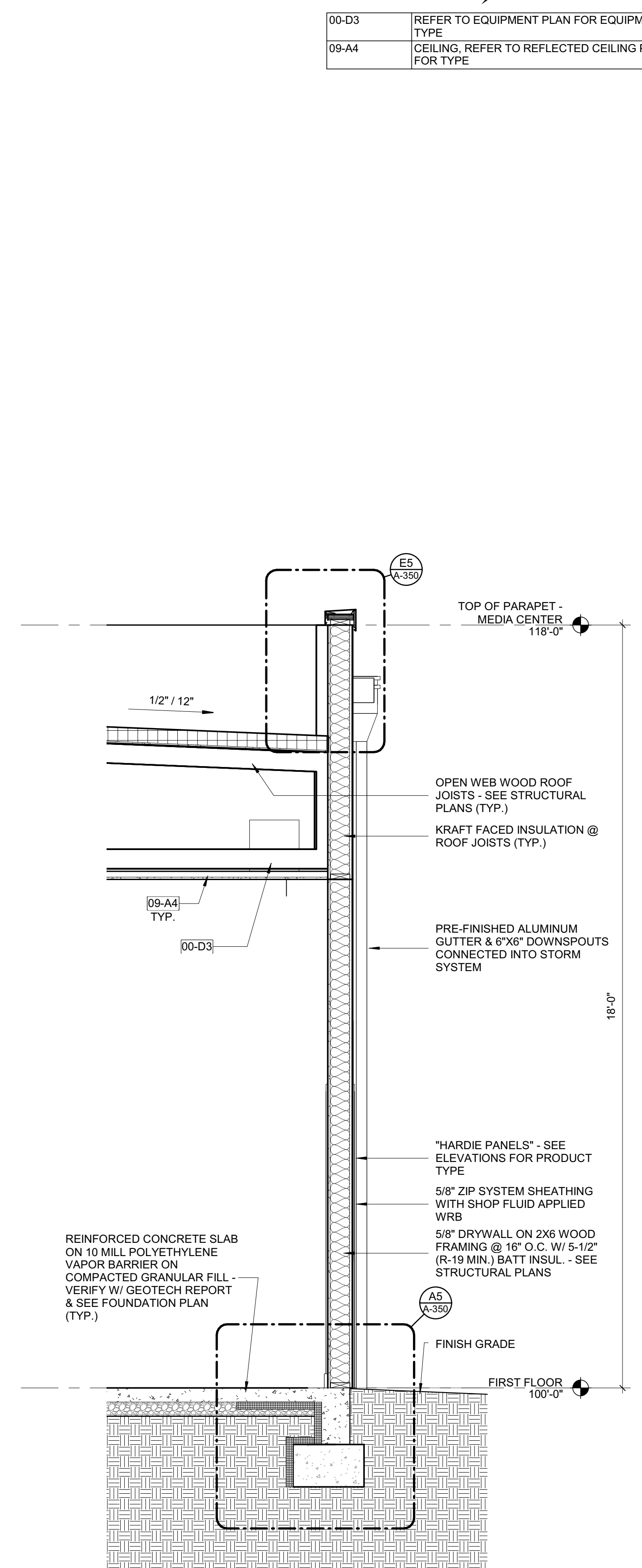
**A1 WALL SECTION @ CLASSROOM ADDITION**  
1/2" = 1'-0"



**A2 WALL SECTION @ CLASSROOM ADDITION**  
1/2" = 1'-0"



**A4 WALL SECTION @ EXIST. WALL**  
1/2" = 1'-0"



**A6 WALL SECTION @ MEDIA CENTER**  
1/2" = 1'-0"

SEAL | DATE 2/24/2021



**SHEET ISSUE**

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**RATIO**  
REGISTERED ARCHITECT  
5950  
RALEIGH, N.C.

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PROJECT NO. 20408.000

SHEET TITLE **WALL SECTIONS**

SHEET NUMBER **A-321**

2/25/2021 3:07:21 PM

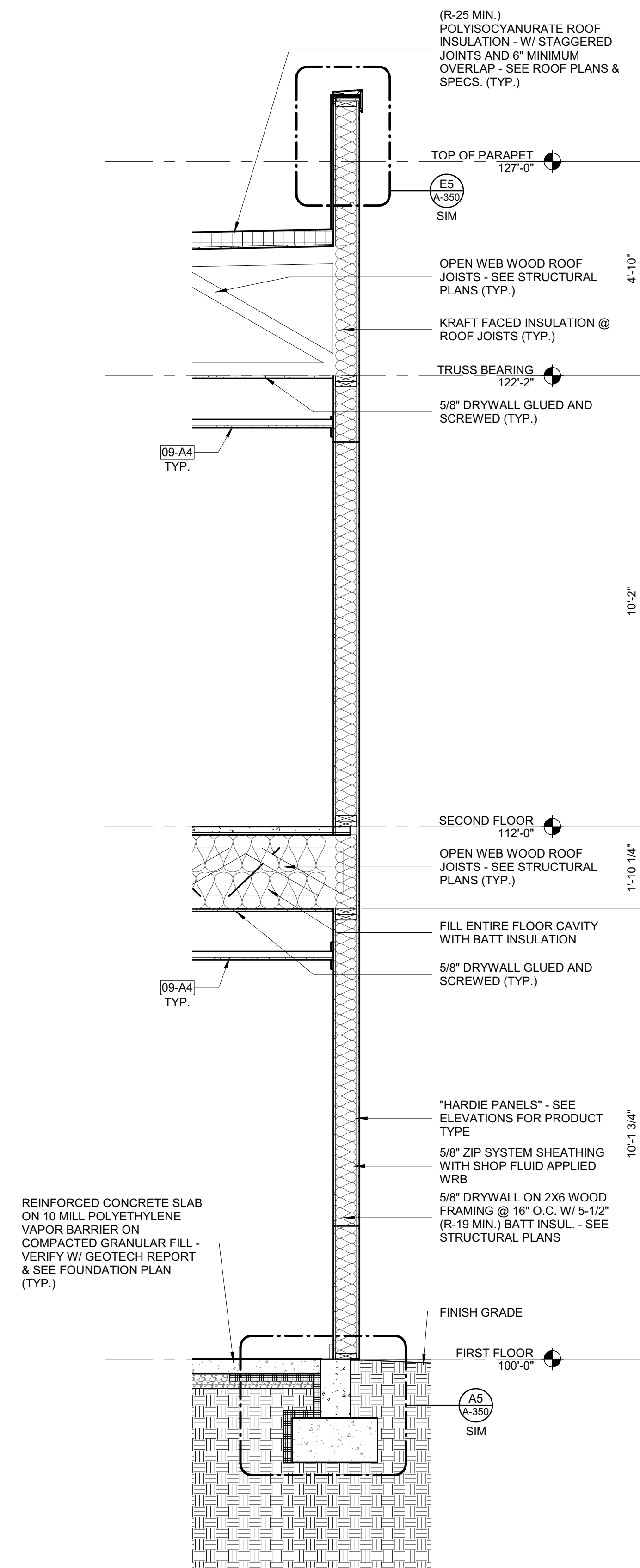
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 Angier, North Carolina 27501

**Owner**  
**Highmark School Development**  
 746 East Winchester Street  
 Suite 150  
 Murray, Utah 84107  
 801-256-9550

**Architect**  
**RATIO**  
 227 Fayetteville Street, Suite 301  
 Raleigh, North Carolina 27601  
 919-821-0805

**Structural Engineer**  
**Lynch Mykins Structural Engineers, PC**  
 301 North West Street  
 Suite 105  
 Raleigh, North Carolina 27603  
 919-782-1833

**Civil Engineer**  
**Timmons Group**  
 5410 Trinity Road  
 Suite 102  
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**1 WALL SECTION**  
 1/2" = 1'-0"

SEAL | DATE 2/24/2021



**SHEET ISSUE**

**1 100% Construction Documents 2/24/2021**

NO.	DESCRIPTION	DATE
1	100% Construction Documents	2/24/2021



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PROJECT NO. 20408.000

SHEET TITLE  
**WALL SECTIONS**

SHEET NUMBER  
**A-322**

KEYNOTES (SPEC BASED)

055000.H01 | 061600.A00

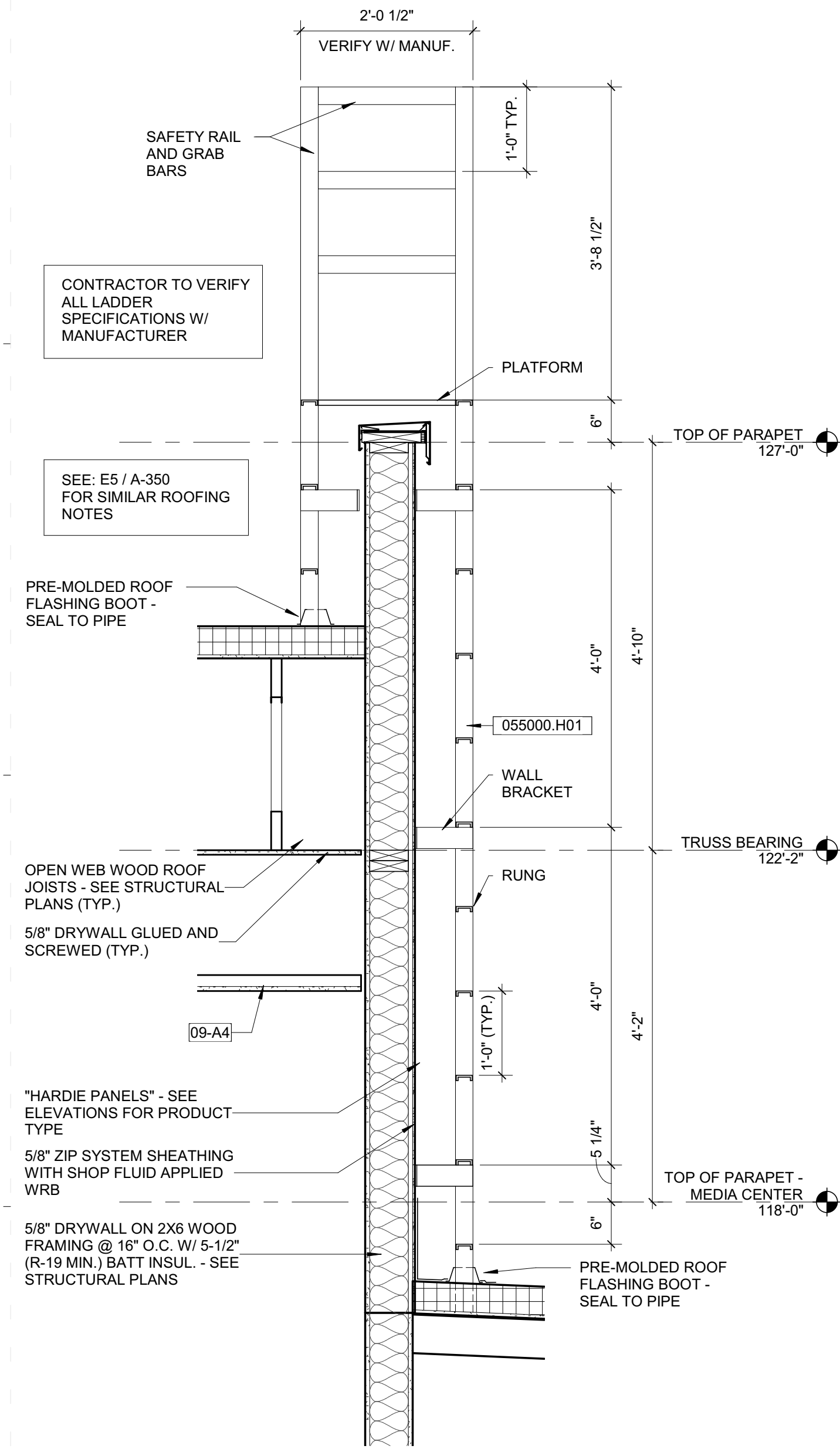
Carolina Charter Academy Exp.  
8529 Highway 55  
Angier, North Carolina 27501

Owner  
Highmark School Development  
746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

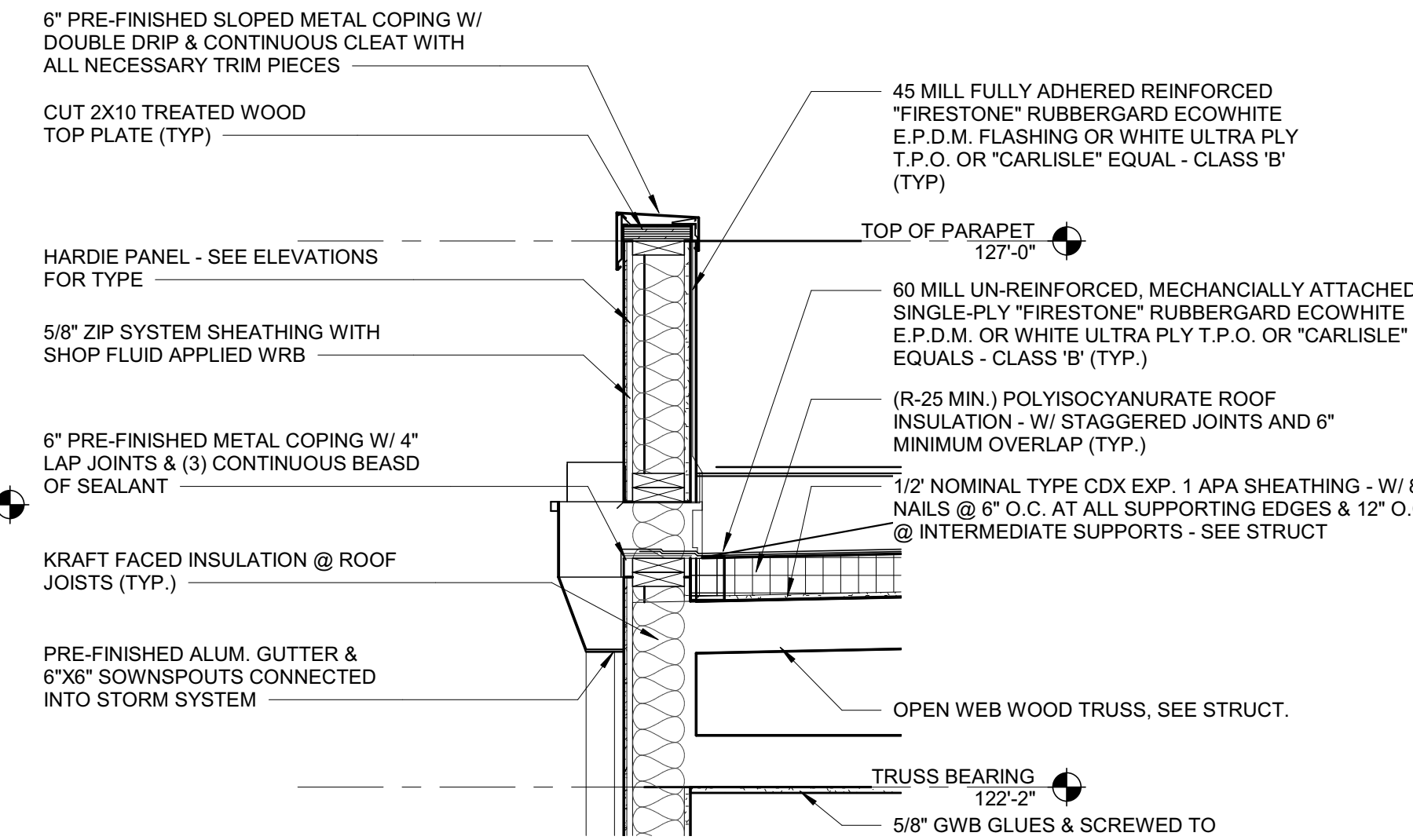
Architect  
RATIO  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

Structural Engineer  
Lynch Mykins Structural Engineers, PC  
301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-782-1833

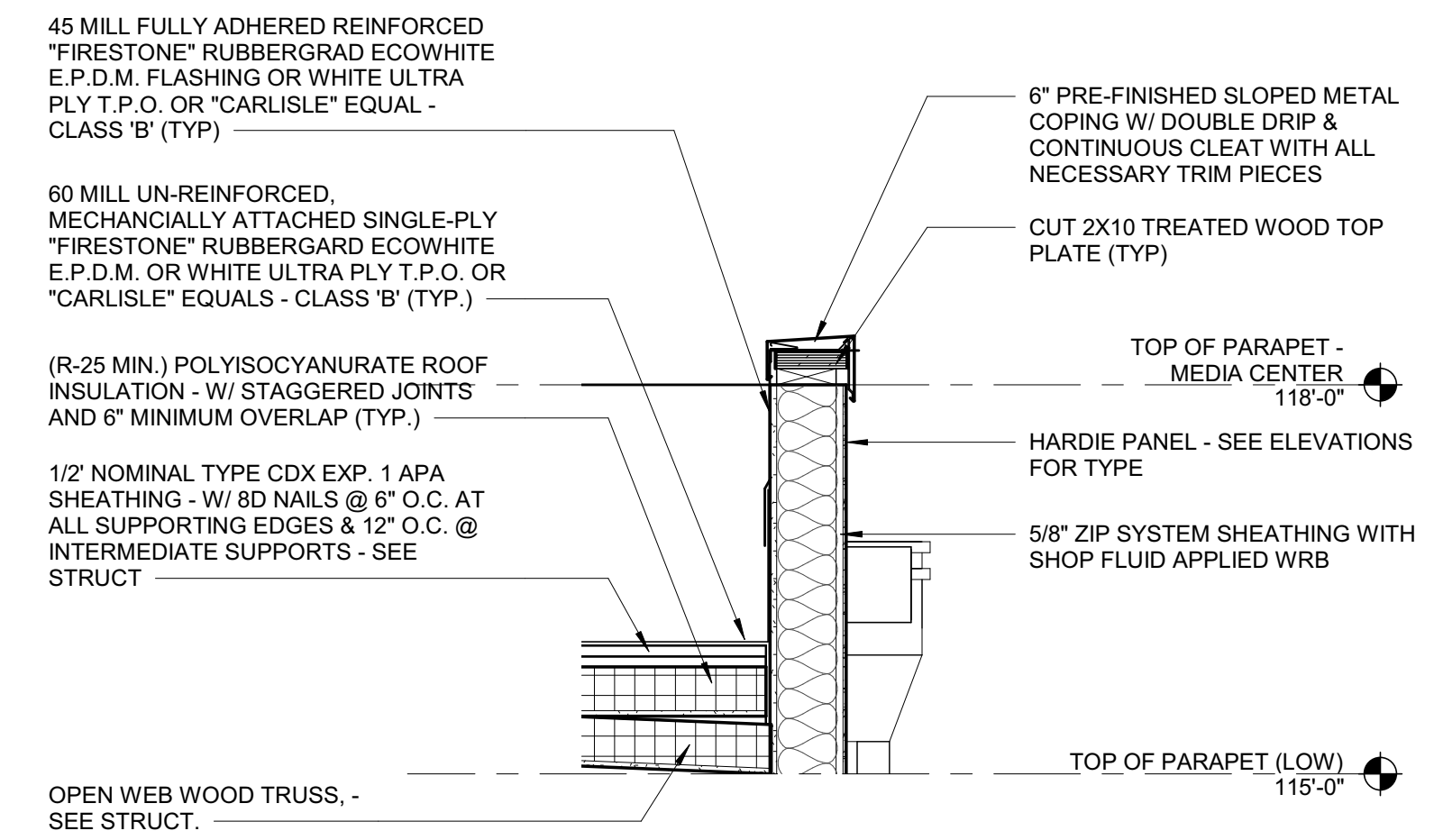
Civil Engineer  
Timmons Group  
5410 Trinity Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938



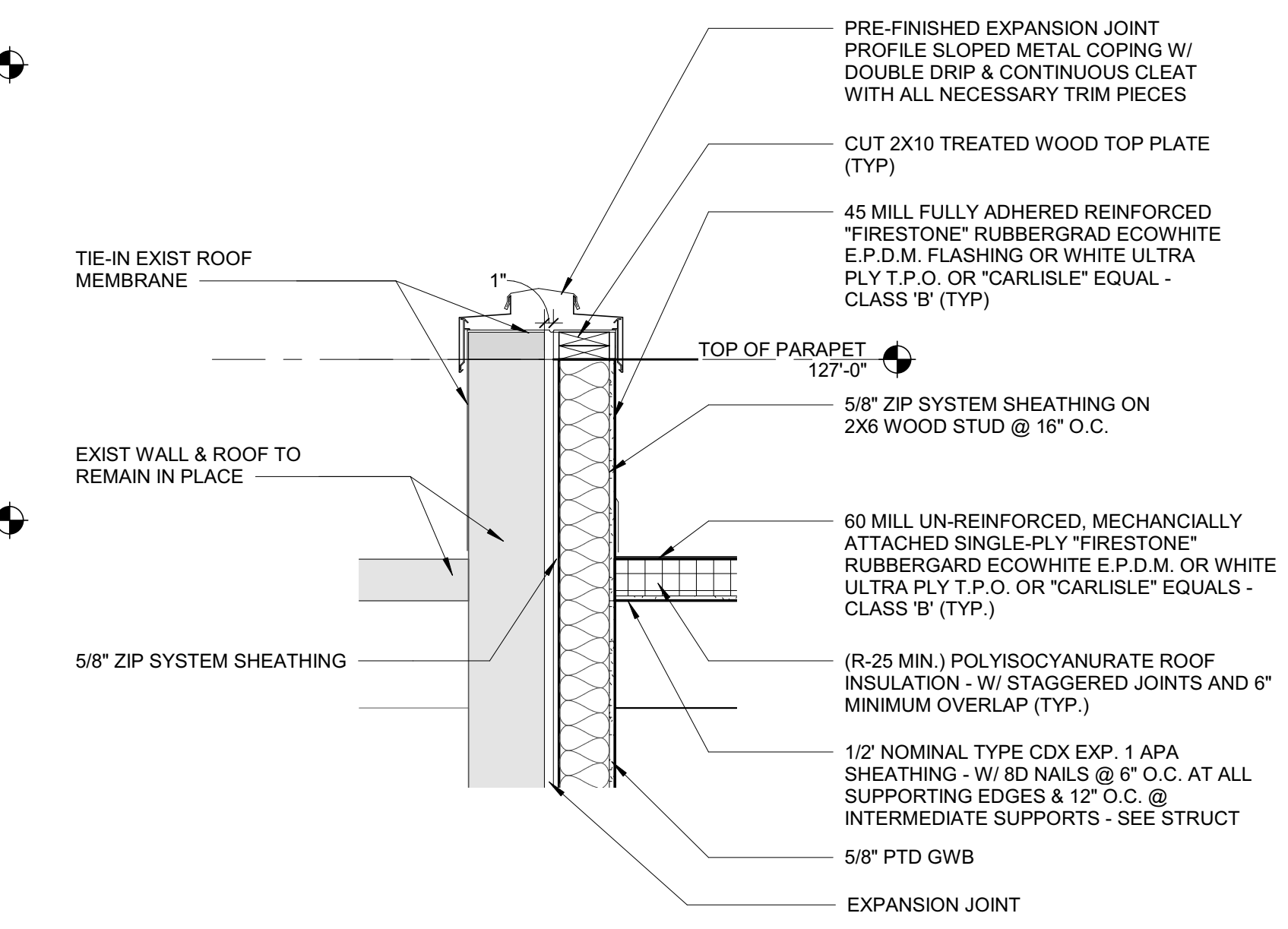
C1 3/4" = 1'-0" SECTION DETAIL - ROOF LADDER



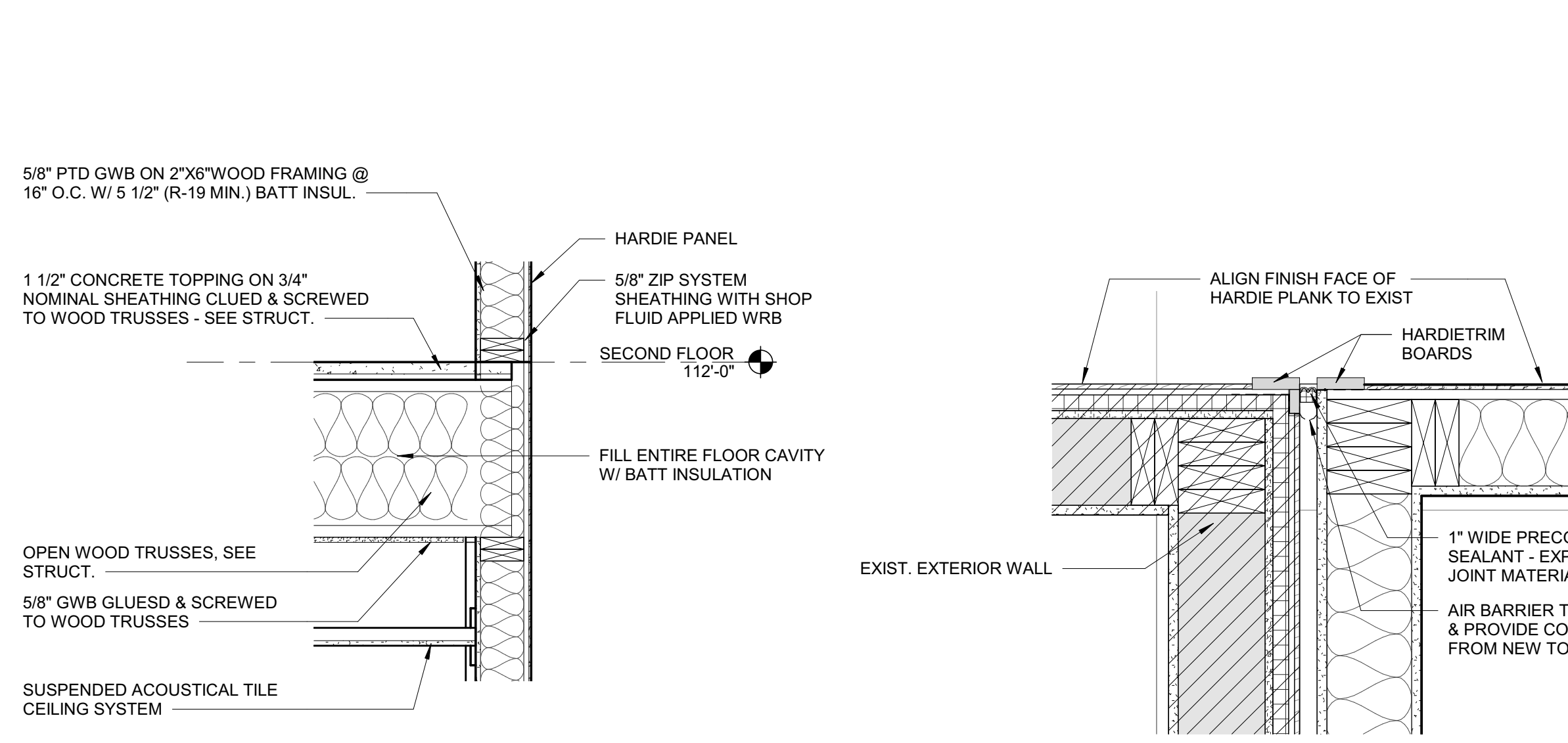
E3 3/4" = 1'-0" DETAIL @ DOWNSPOUT



E5 3/4" = 1'-0" DETAIL @ PARAPET COPING, TYP.

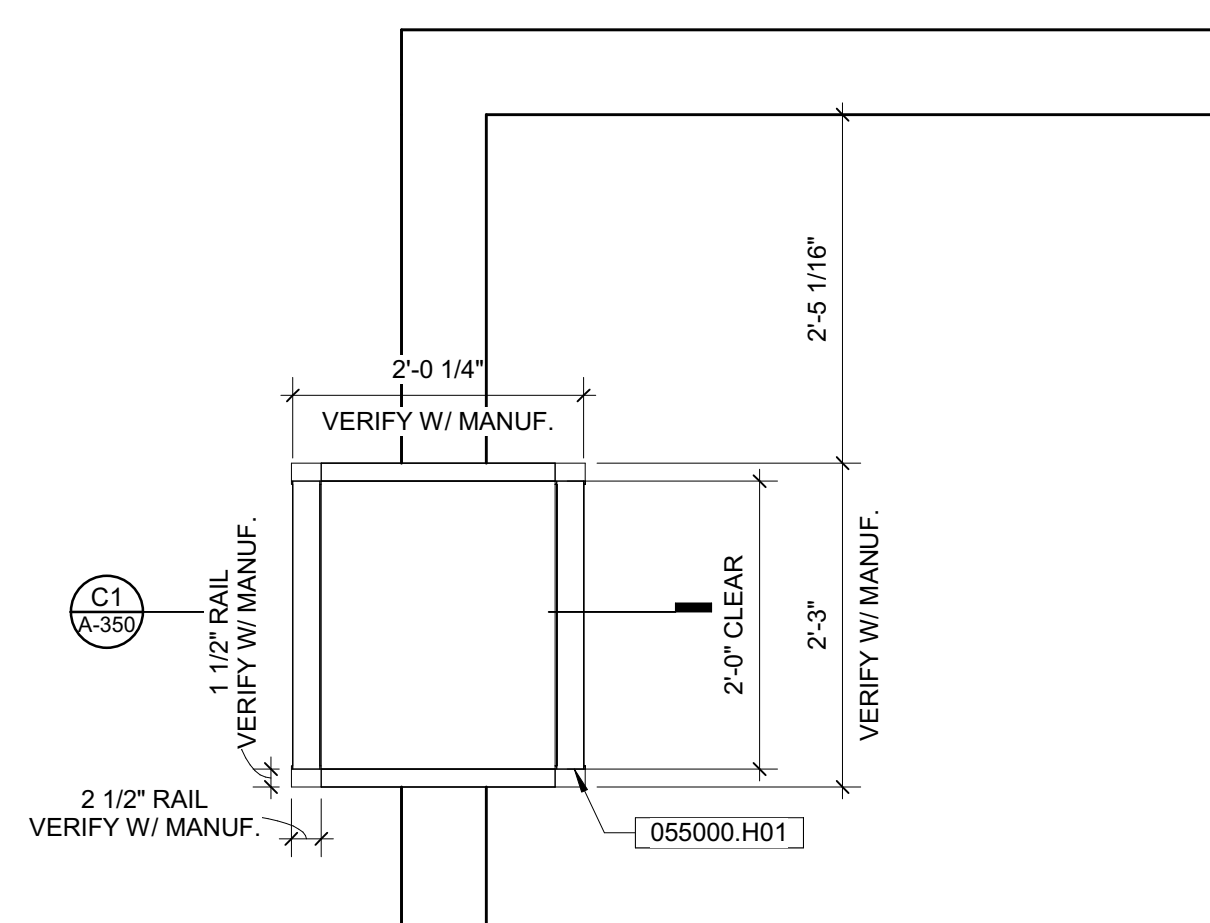


C3 3/4" = 1'-0" DETAIL @ EXIST. COPING

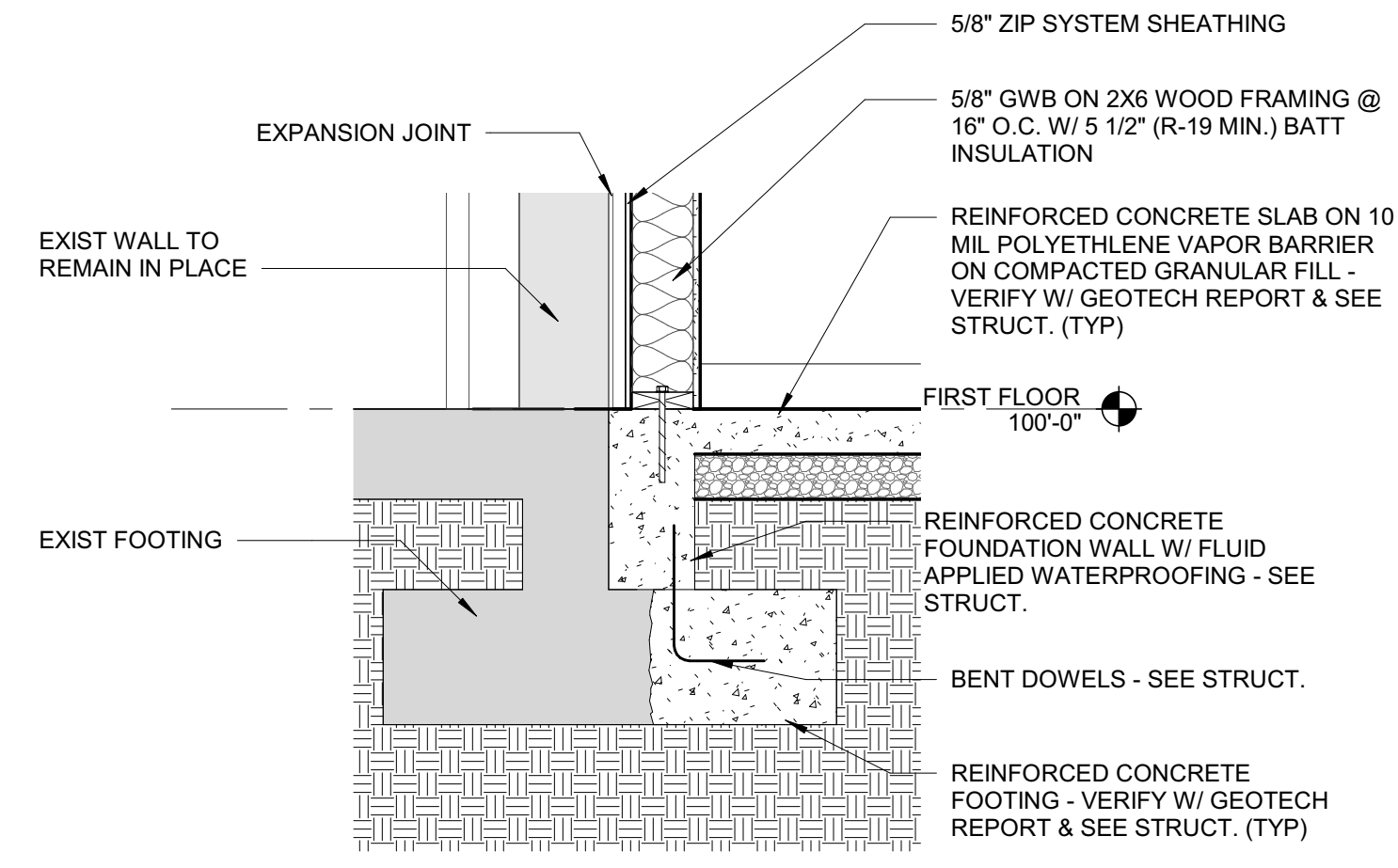


C5 3/4" = 1'-0" DETAIL @ SECOND FLOOR, TYP.

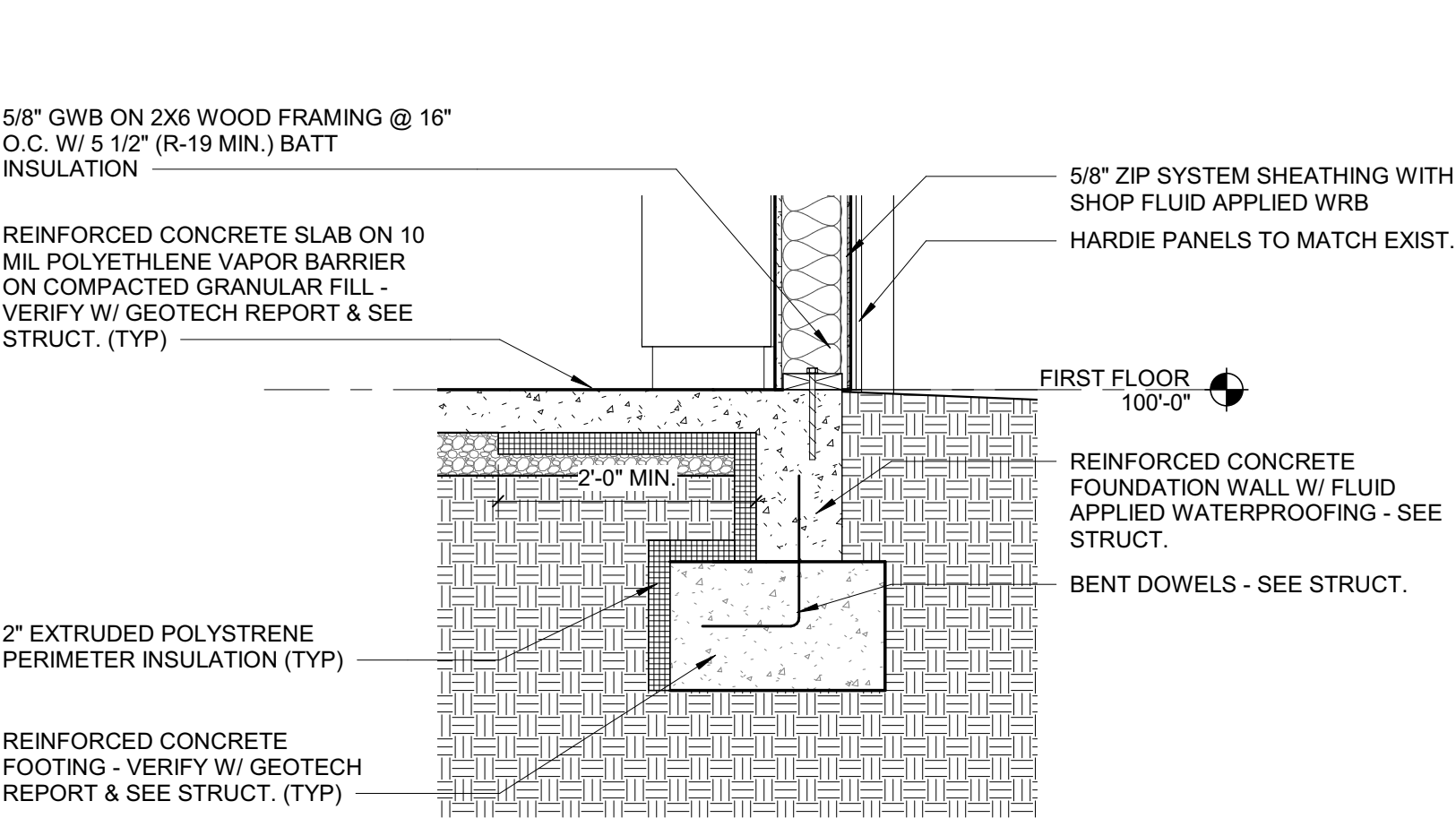
C6 1 1/2" = 1'-0" EXPANSION JOINT DETAIL



A1 3/4" = 1'-0" PLAN DETAIL - ROOF LADDER

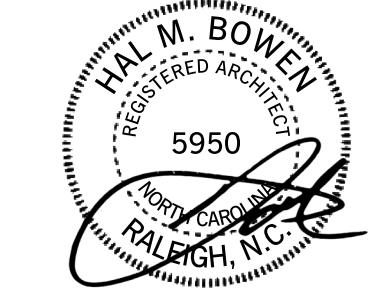


A3 3/4" = 1'-0" DETAIL @ EXIST. FOOTING



A5 3/4" = 1'-0" DETAIL @ FOOTING, TYP.

SEAL | DATE 2/24/2021



SHEET ISSUE

ISSUE NO	DESCRIPTION	DATE
1	100% Construction Documents	2/24/2021

NO	REVISION	DATE



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PROJECT NO. 20408.000

SHEET TITLE  
EXTERIOR DETAILS

SHEET NUMBER  
A-350

2/25/2021 3:05:48 PM

Carolina Charter Academy Exp.  
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Angier, North Carolina 27501

Owner  
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746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

Architect  
**RATIO**  
227 Fayetteville Street, Suite 301  
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919-821-0805

Structural Engineer  
**Lynch Mykins Structural Engineers, PC**  
301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-782-1833

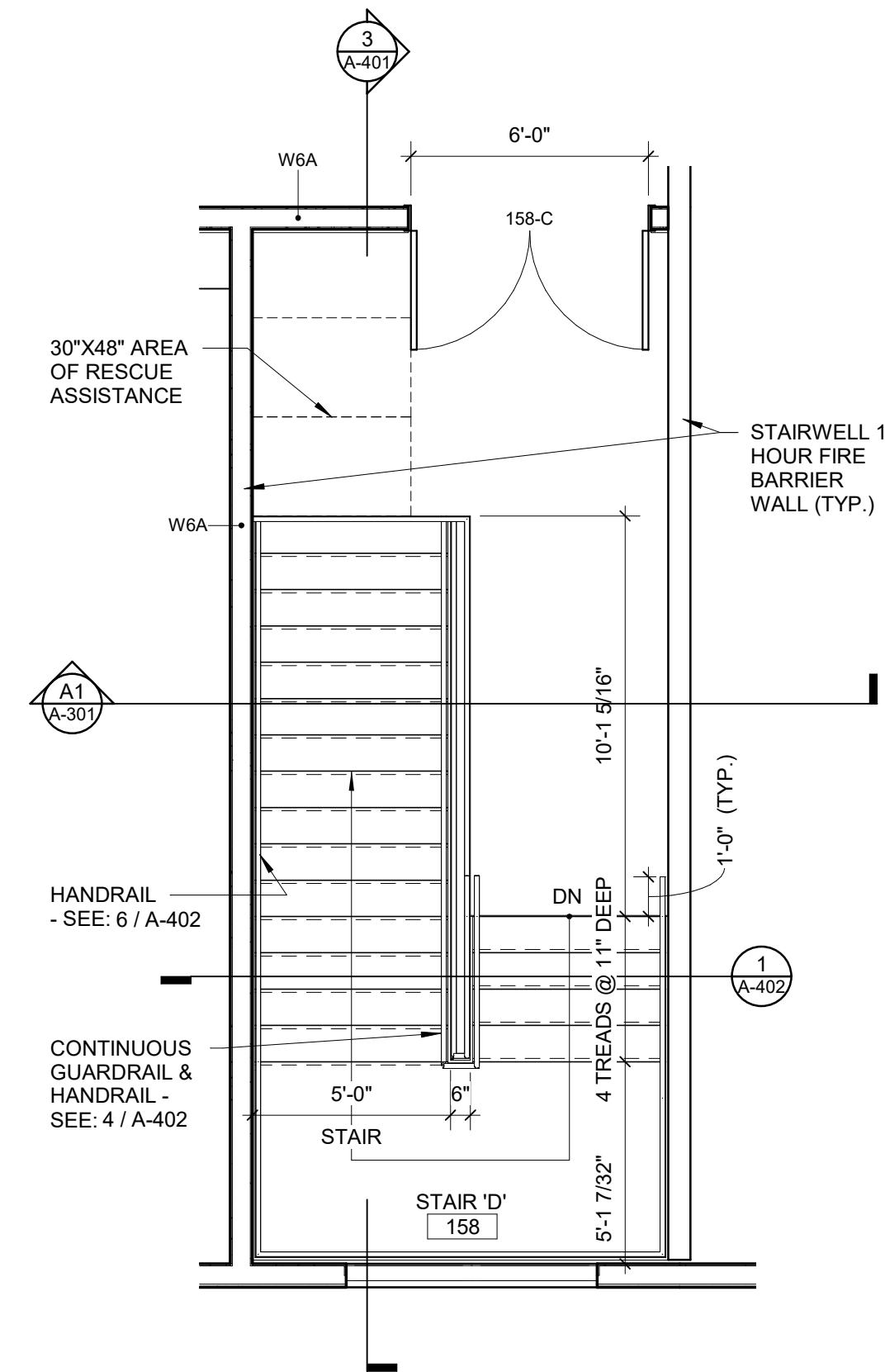
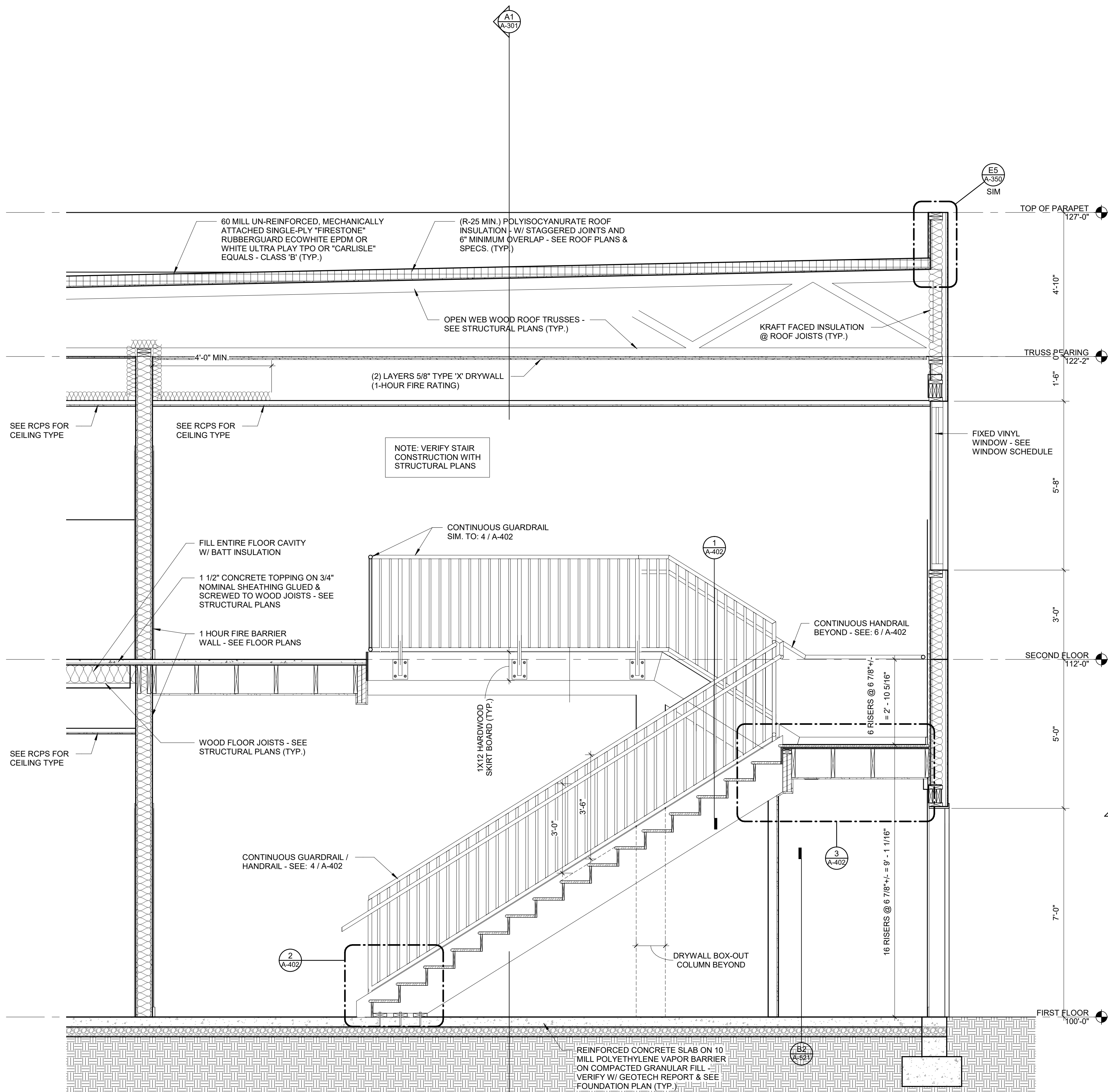
Civil Engineer  
**Timmons Group**  
5410 Trinity Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938

SEAL | DATE 2/8/2021

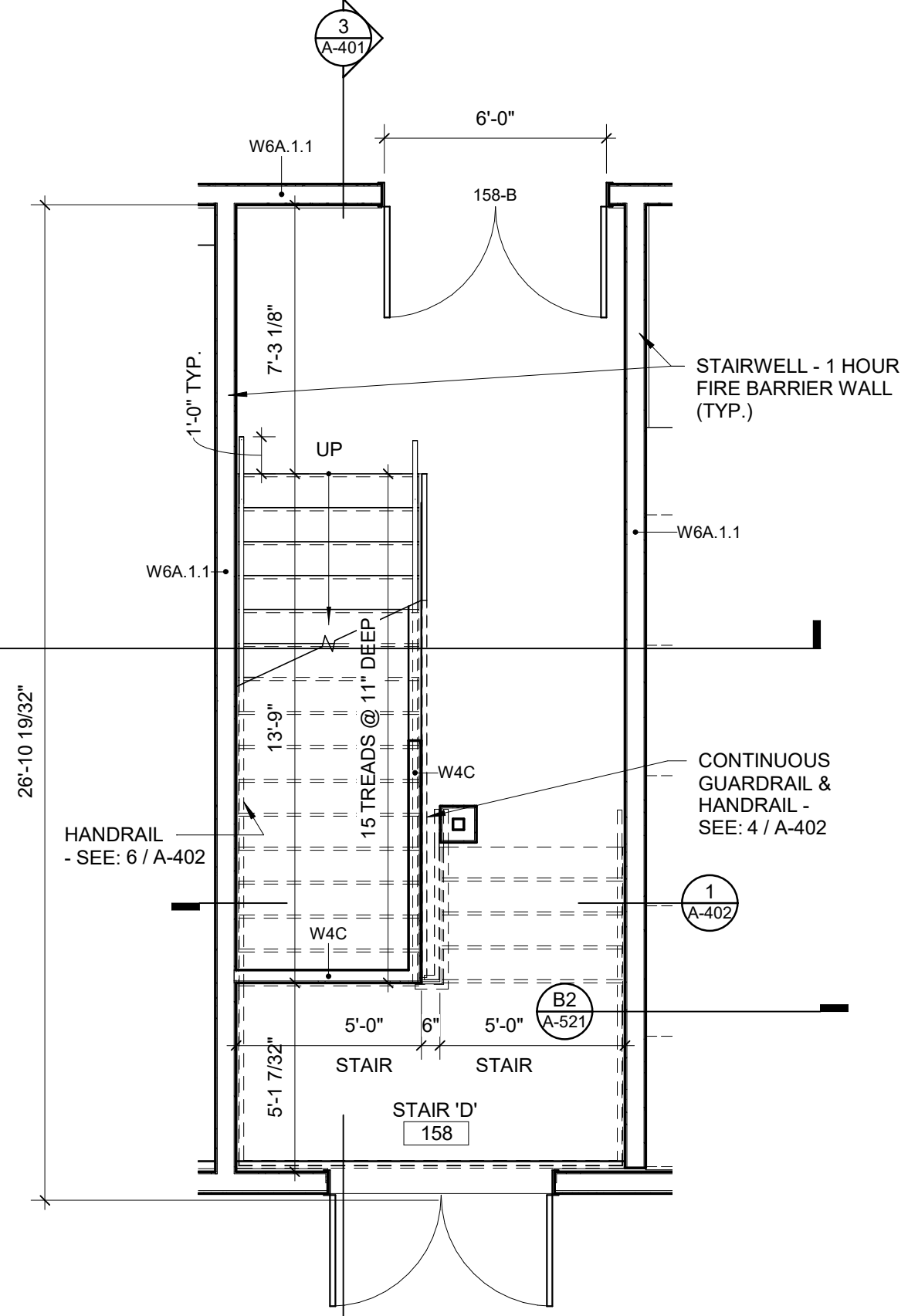


SHEET ISSUE  
1 50% Construction Documents 2/8/2021

**RATIO**  
PROJECT NO. 20408.000  
SHEET TITLE ENLARGED STAIR PLANS AND SECTIONS  
SHEET NUMBER A-401



2 STAIR D - SECOND FLOOR  
1/4" = 1'-0"



1 STAIR D - FIRST FLOOR  
1/4" = 1'-0"

Carolina Charter Academy Exp.  
8529 Highway 55  
Angier, North Carolina 27501

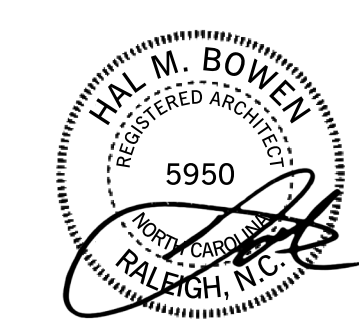
Owner  
**Highmark School Development**  
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Suite 150  
Murray, Utah 84107  
801-256-9550

Architect  
**RATIO**  
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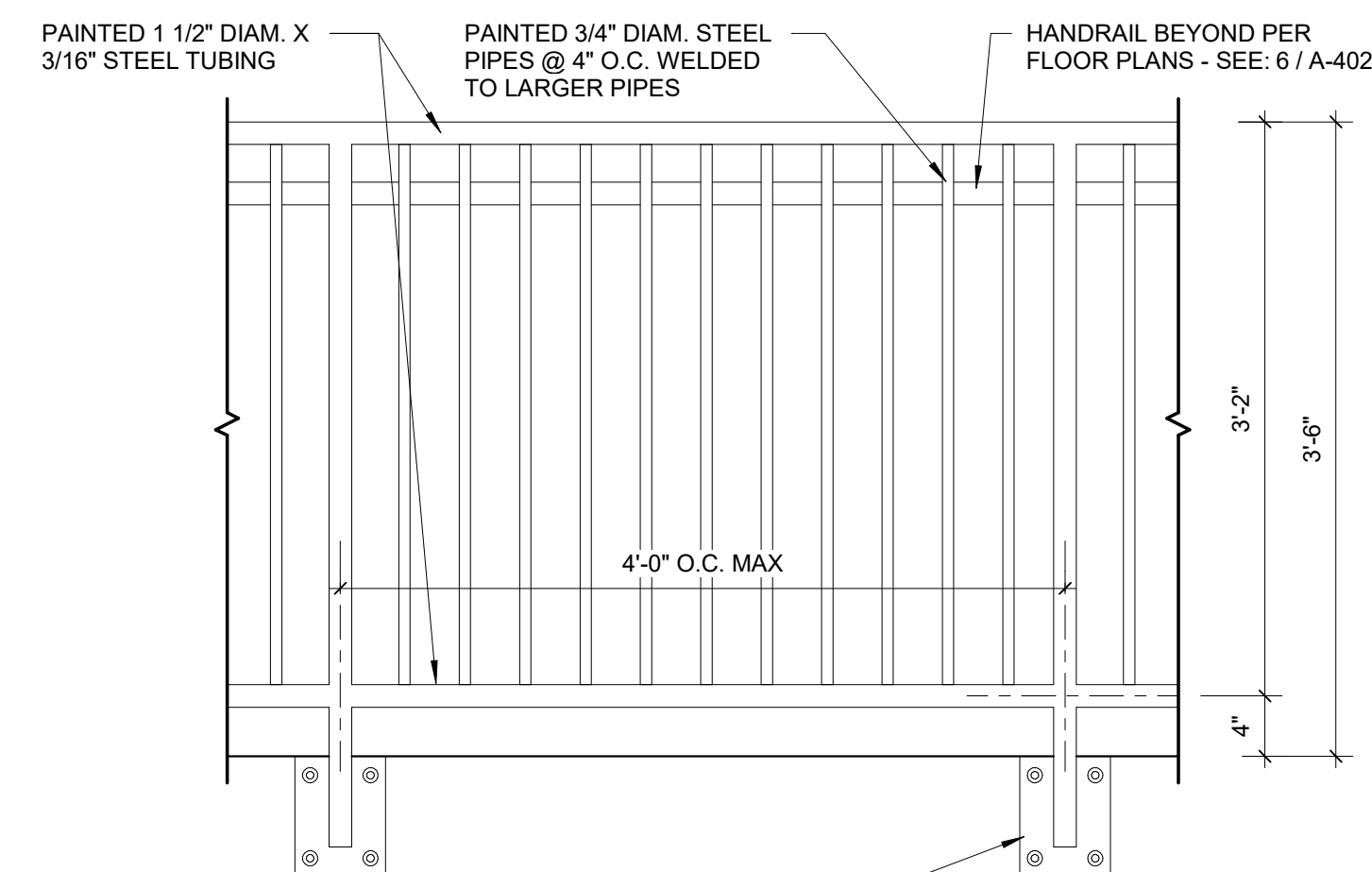
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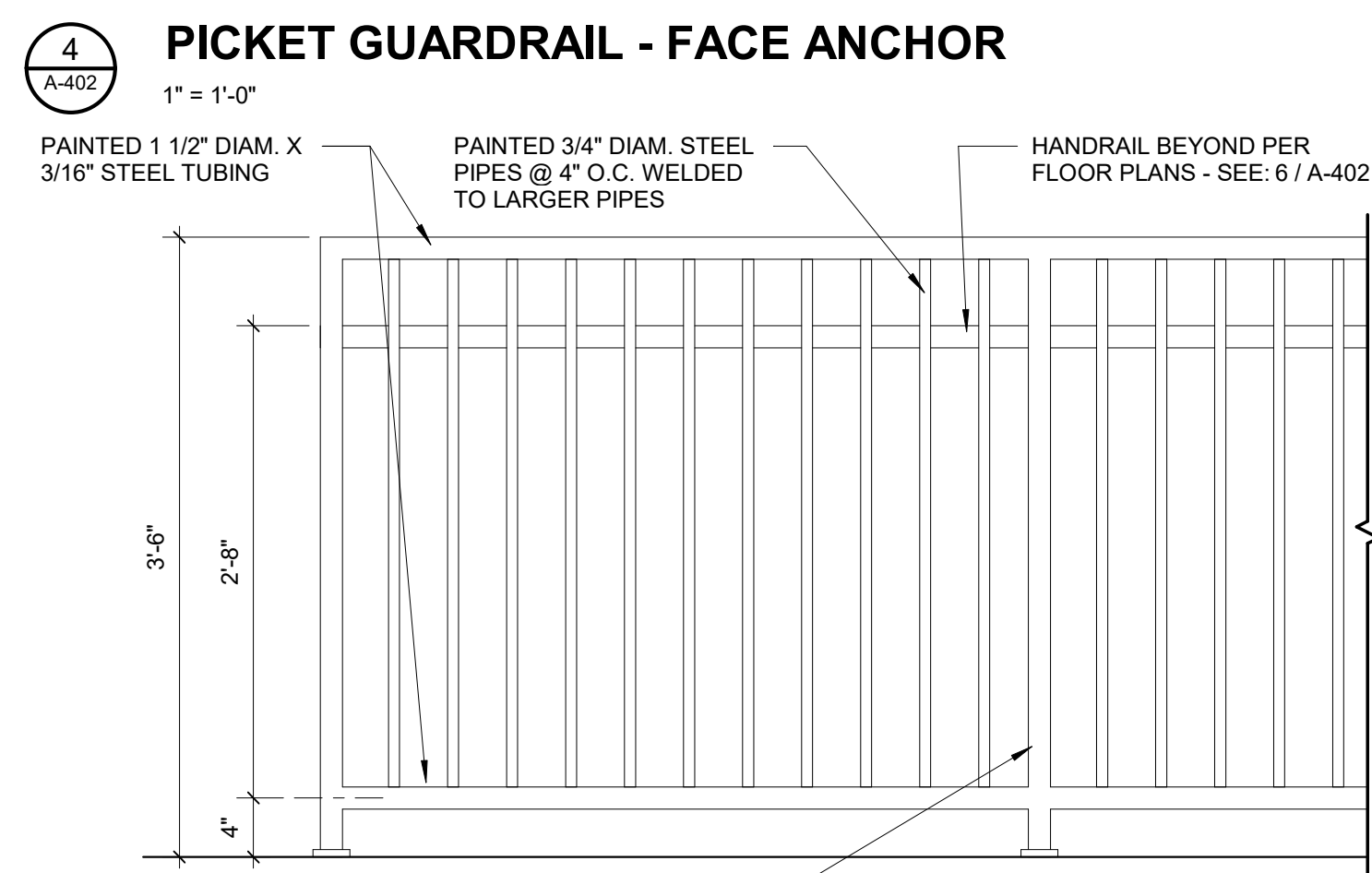
PROJECT NO. 20408.000

SHEET TITLE  
**STAIR DETAILS**

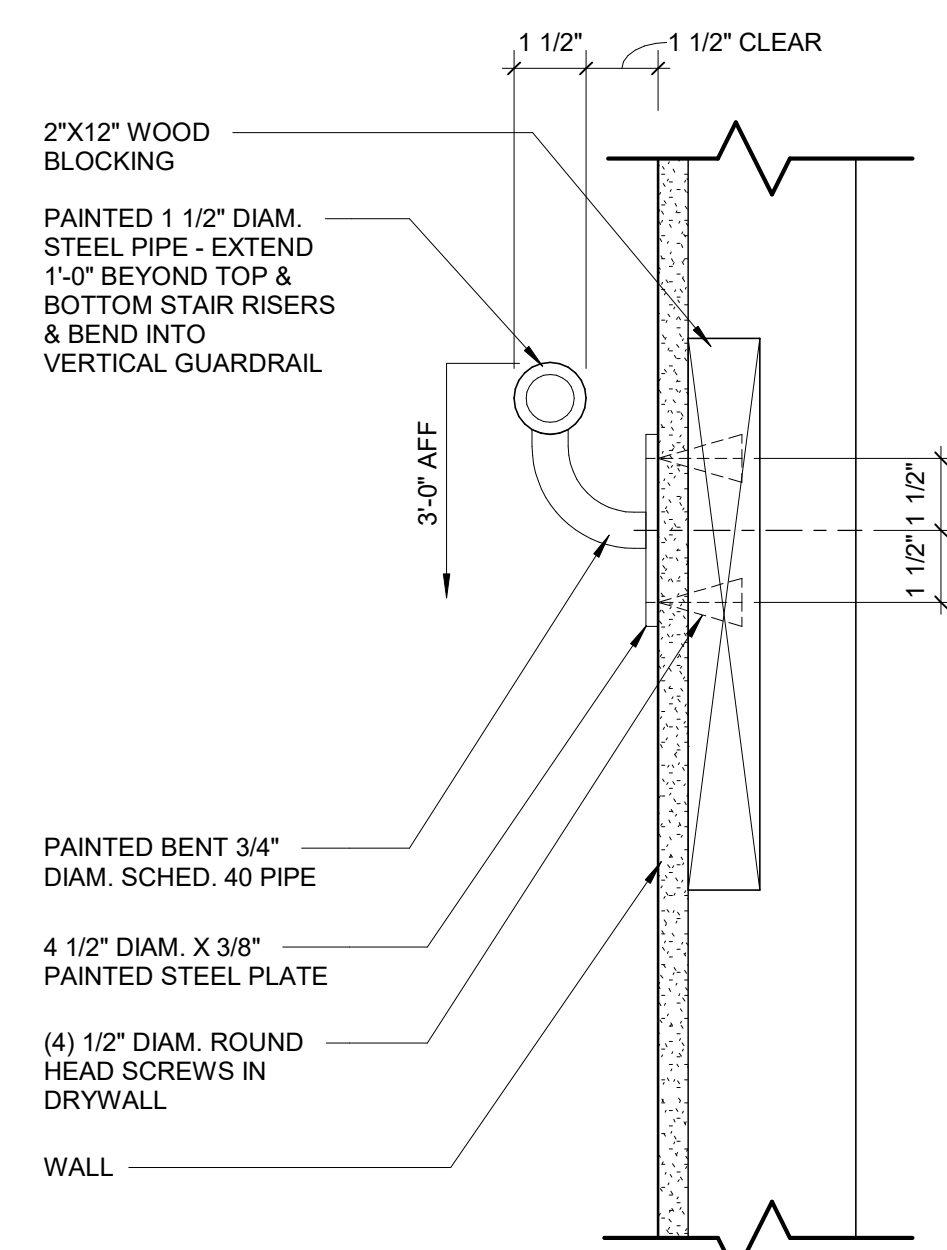
SHEET NUMBER  
**A-402**



PAINTED STEEL BEARING PLATE: 6"x8"x1/4" THICK - WELD TO GUARDRAIL VERTICAL & ANCHOR THRU SKIRT BOARD AND STRINGER W/ 1/2" LAG BOLTS (TYP.)

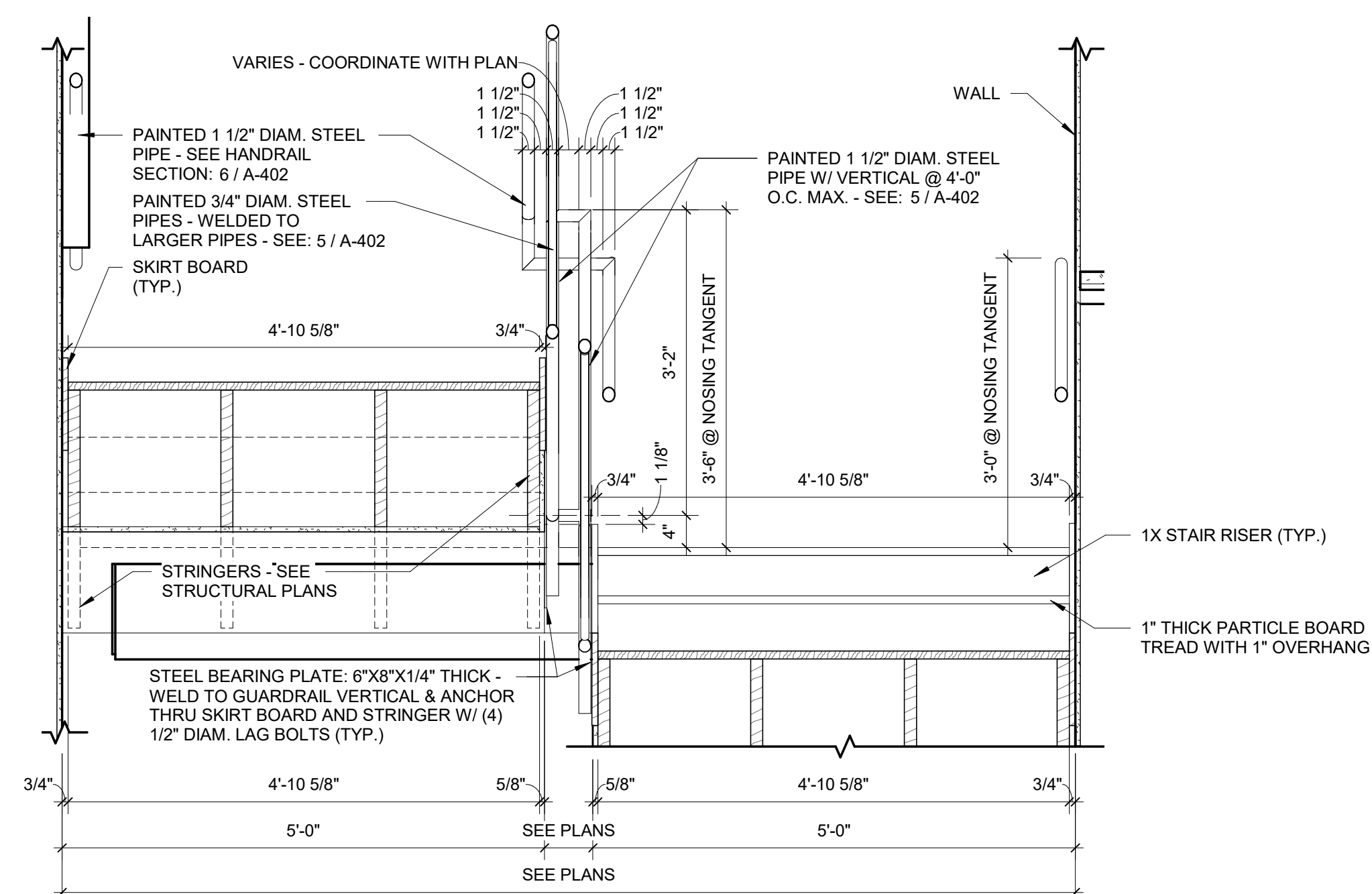


PAINTED 1 1/2" DIAM. X 3/16" STEEL TUBING VERTICALS @ 48" O.C. MAX. WITH 4"x4"x3/16" STEEL BASE PLATE EXPANSION ANCHORED TO CONCRETE



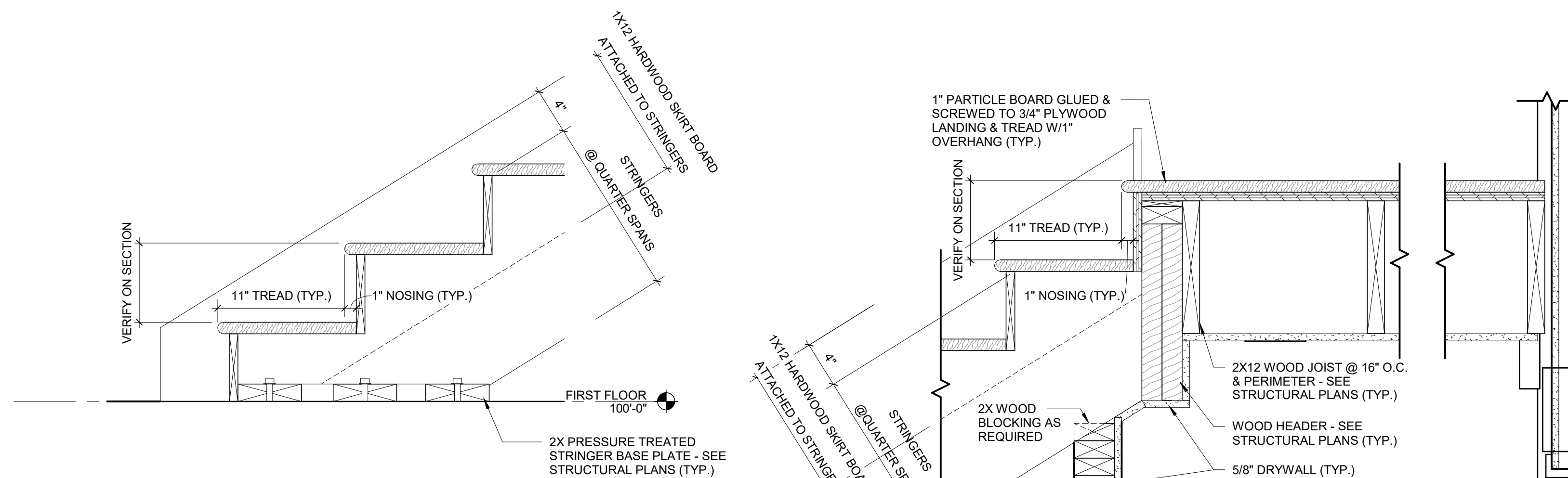
**6 WALL MOUNTED HANDRAIL DETAIL**

3" = 1'-0"



**1 STAIR GUARDRAIL / HANDRAIL CROSS SECTION**

3/4" = 1'-0"

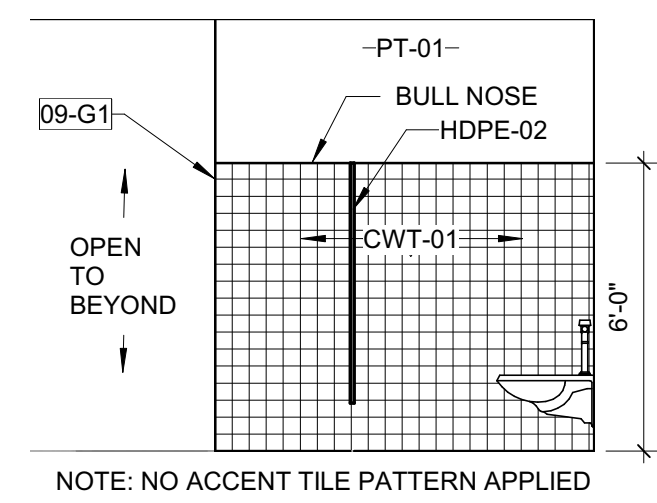


**2 STAIR DETAIL @ BOTTOM**

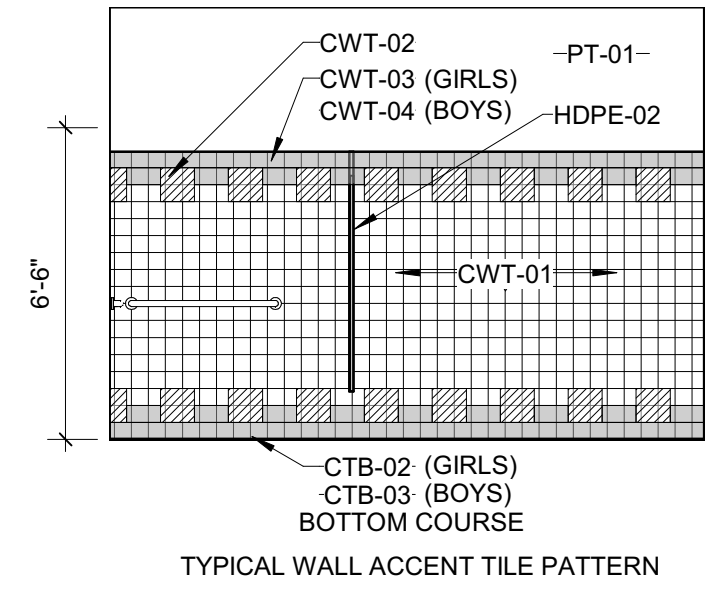
1 1/2" = 1'-0"

**3 STAIR DETAIL @ LANDING**

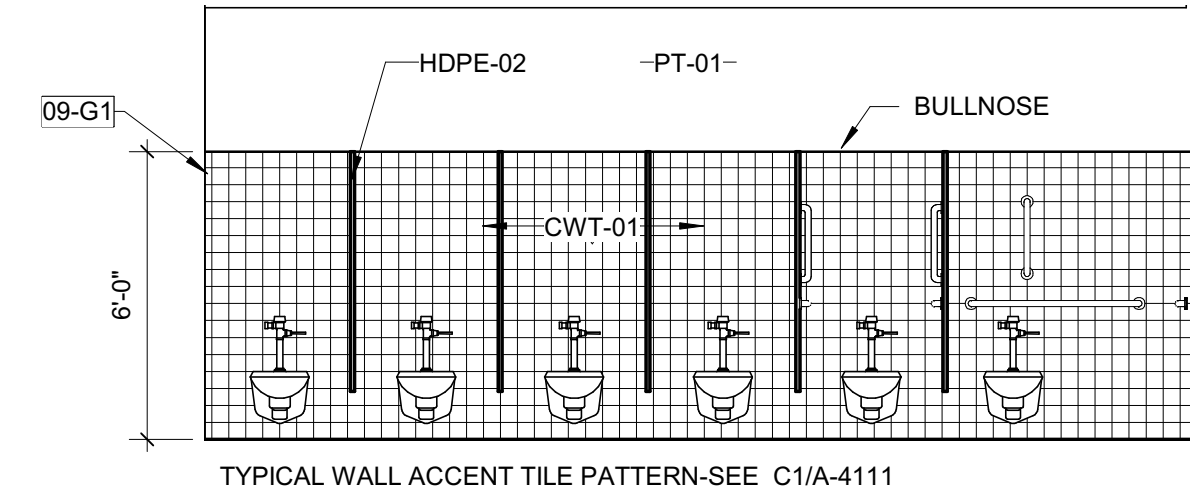
1 1/2" = 1'-0"



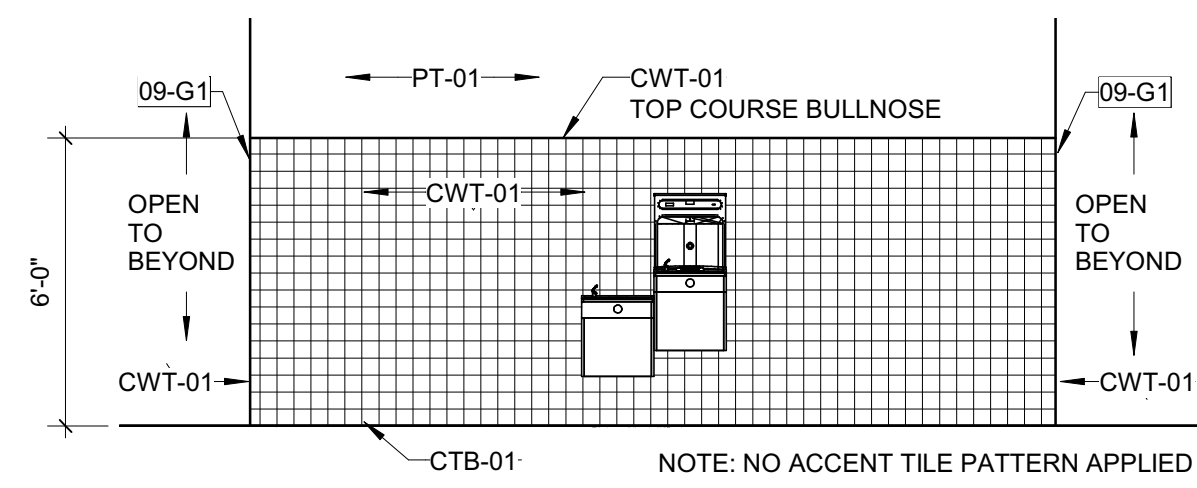
**D1 INTERIOR ELEVATION - TOILET ROOM**  
1/4" = 1'-0"



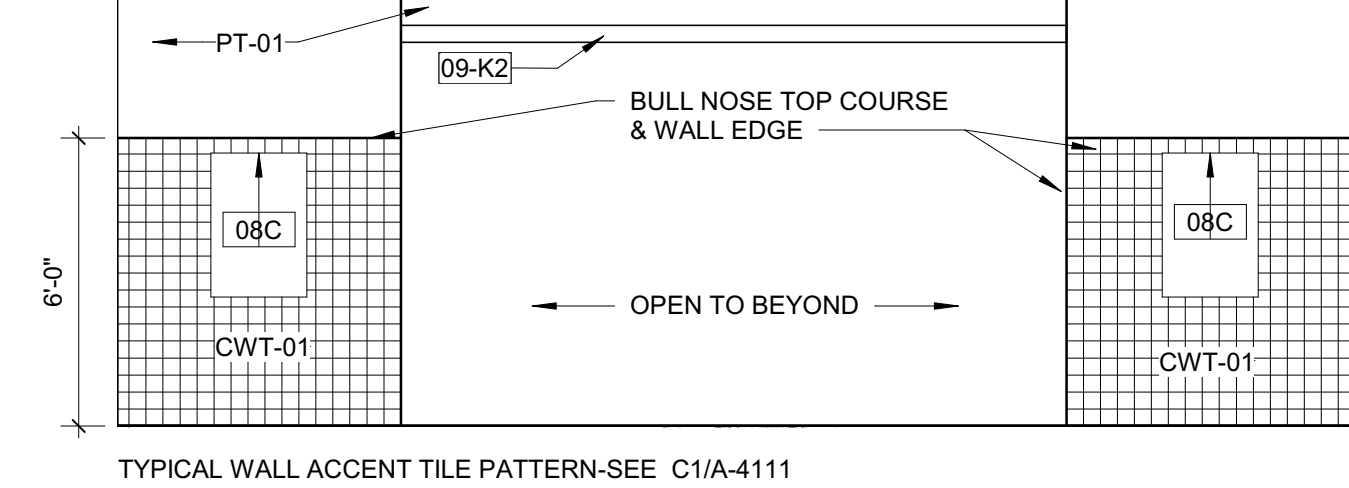
**C1 INTERIOR ELEVATION - TOILET ROOM NORTH**  
1/4" = 1'-0"



**C2 INTERIOR ELEVATION - TOILET TOOM**  
1/4" = 1'-0"



**B1 INTERIOR ELEVATION - TOILET ROOM ENTRY**  
1/4" = 1'-0"



**B2 INTERIOR ELEVATION - TOILET ROOM AT MIRROR**  
1/4" = 1'-0"

**TOILET ROOM ACCESSORIES**

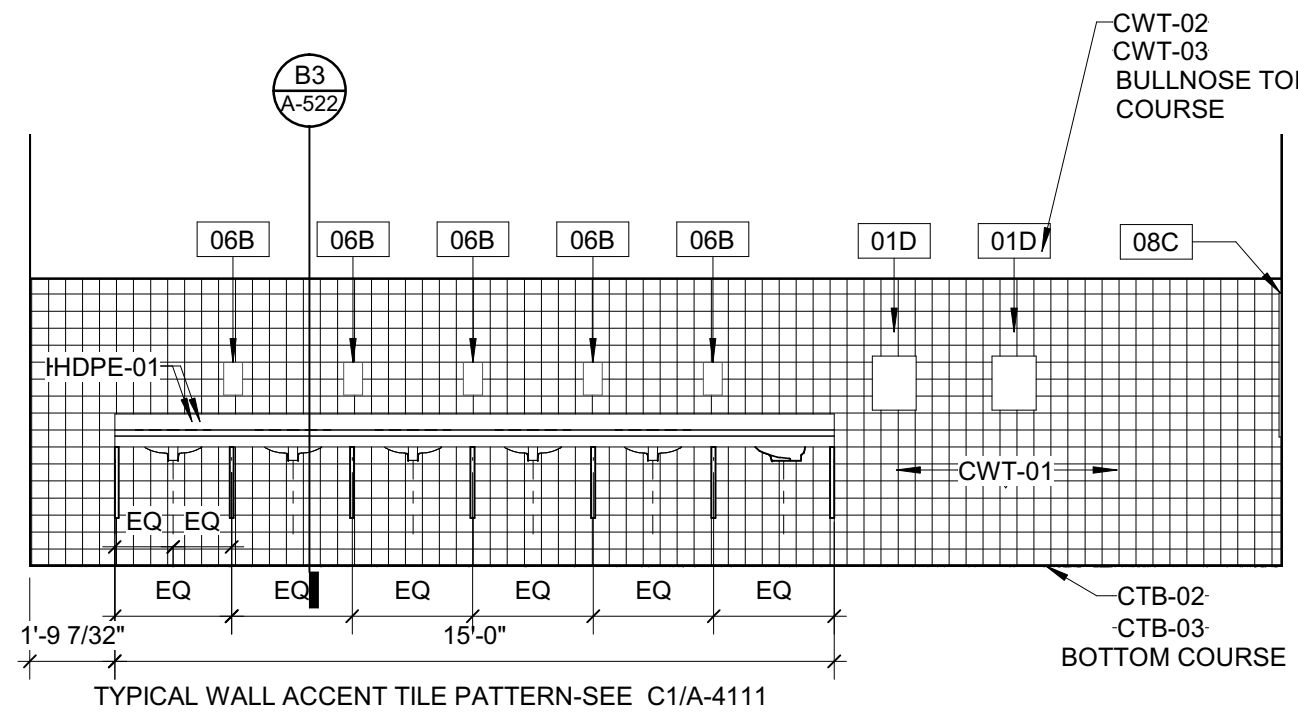
REFER TO SHEET A-002 FOR TOILET COMPARTMENT TYPES AND ACCESSORIES

TAG	DESCRIPTION	MFR	MODEL NO.	PROVIDED AND INSTALLED BY
01D	PAPER TOWEL DISPENSER, SURFACE MOUNTED	BOBRICK	B-4262	OWNER
05A	GRAB BAR, 42"	BOBRICK	B-5806 x 42	CONTRACTOR
05B	GRAB BAR, 36"	BOBRICK	B-5806 x 36	CONTRACTOR
05D	GRAB BAR, 18"	BOBRICK	B-5806 x 18	CONTRACTOR
06B	SOAP DISPENSER, WALL MOUNTED	BOBRICK	B-2111	OWNER
08C	MIRROR, CUSTOM	PER SPECIFICATIONS	N/A	OWNER

**WALL TILE LEGEND**

	CWT-01 (FIELD) CTB-01 (FIELD)
	CWT-03 (ACCENT "A") *TOP COURSE BULLNOSE
	CWT-04 (ACCENT "B") *TOP COURSE BULLNOSE
	CTB-02 (ACCENT "A")
	CTB-03 (ACCENT "B")
	CWT-02 (ACCENT "C")

\*ACCENT WALL TILE APPLIED TO ALL WALLS IN BATHROOMS U.N.O.



**B3 INTERIOR ELEVATION - TOILET ROOM EAST**  
1/4" = 1'-0"

**KEYNOTES (SPEC BASED)**

09-G1	WALL FINISH TO WRAP AROUND CORNER
09-K2	PAINTED, MATCH SURROUNDING ELEMENTS

**KEYNOTES (ACTION/GENERAL)**

**GENERAL TOILET ROOM NOTES**

- REFERENCE STANDARD PLUMBING FIXTURE REQUIREMENTS AND STANDARD TOILET TOOM ACCESSORY MOUNTING HEIGHTS ON A-001 FOR ADDITIONAL INFORMATION UNLESS OTHERWISE NOTED.
- REFERENCE STANDARD TOILET COMPARTMENTS - TYPICAL ACCESSORIES ON A-002 FOR TOILET ROOM ACCESSORIES LOCATED IN STALLS.
- B1/A411 WALL TILE PATTERN TO BE APPLIED IN BOTH BATHROOMS. SEE WALL TILE LEGEND FOR FINISH TAG/COLORS.
- SEE NOTES IN TOILET ACCESSORY SCHEDULE FOR PROVIDED AND INSTALLED BY INFORMATION.

**Carolina Charter Academy Exp.**  
8529 Highway 55  
Angier, North Carolina 27501

**Owner**  
Highmark School Development  
746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

**Architect**  
RATIO  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

**Structural Engineer**  
Lynch Mykins Structural Engineers, PC  
301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-782-1833

**Civil Engineer**  
Timmons Group  
5410 Trinity Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938

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**M. M. BOWEN**  
REGISTERED ARCHITECT  
5950  
RALEIGH, N.C.

**SHEET ISSUE**

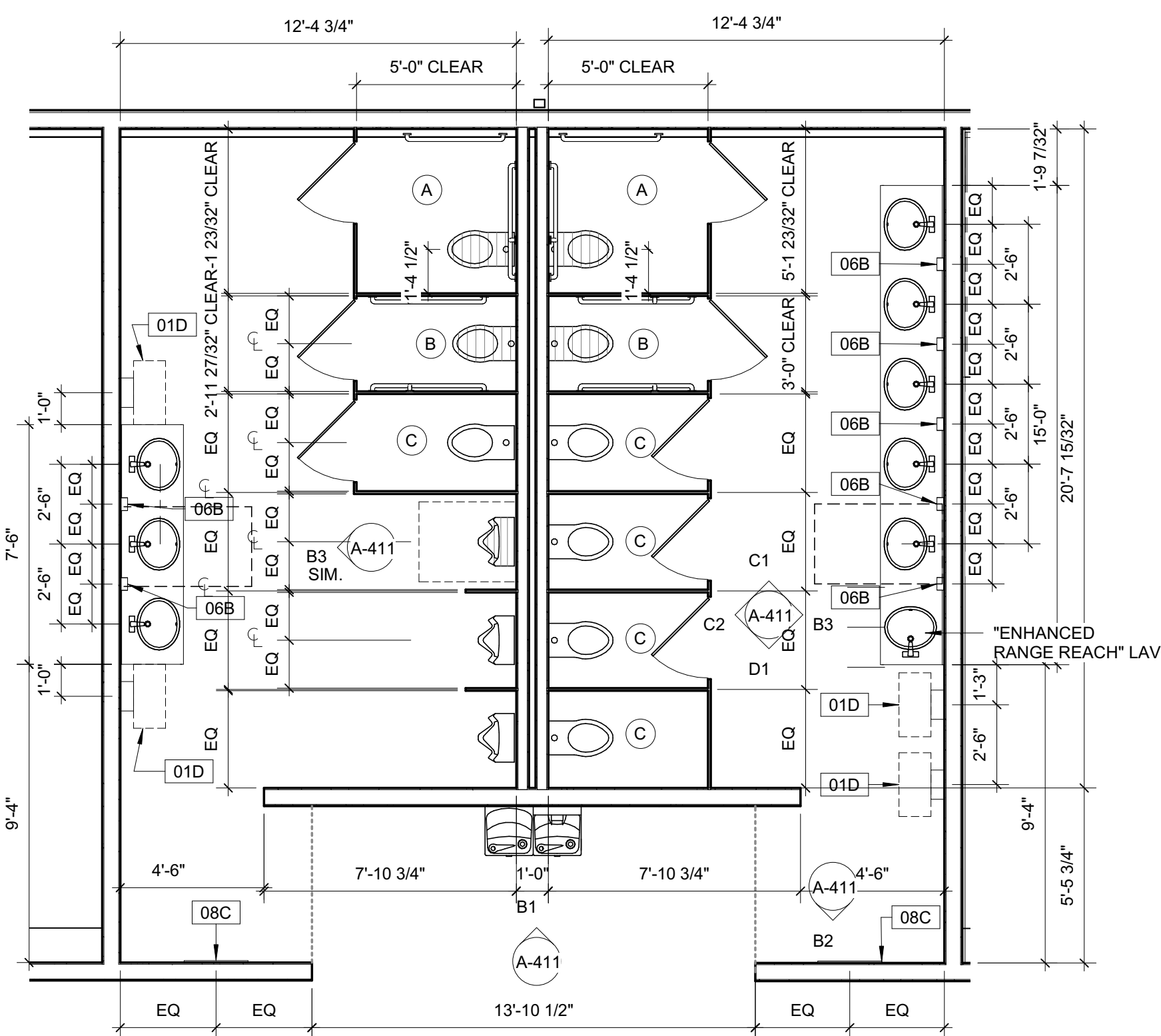
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1	100% Construction Documents	2/24/2021

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PROJECT NO. 20408.000

SHEET TITLE  
**ENLARGED TOILET PLANS**

SHEET NUMBER  
**A-411**



**A1 ENLARGED TOILET PLAN**  
1/4" = 1'-0"

KEYNOTES (SPEC BASED)

061600.A001

KEYNOTES (ACTION/GENERAL)

06-B2	PROVIDE FINISHED END PANEL AT EXPOSED CASEWORK END
09-A1	WALL BASE, REFER TO FINISH PLAN FOR TYPE

GENERAL CASEWORK NOTES

- A. PROVIDE FINISHED END PANELS AT ALL EXPOSED CABINET ENDS.
- B. PROVIDE FILLER PANELS BETWEEN CORNER CABINETS AND BETWEEN CABINETS AND WALLS, UNLESS NOTED OTHERWISE.
- C. PROVIDE SEALANT BETWEEN BACKSPLASH AND COUNTER AT PERIMETER WALLS.
- D. PROVIDE COUNTERTOP SUPPORT BRACKETS AS REQUIRED UNLESS NOTED OTHERWISE ON ELEVATIONS. BRACKETS TO BE SPACED 48" ON CENTER, MINIMUM.
- E. COORDINATE FINAL ELECTRICAL AND DATA OUTLET LOCATIONS IN CASEWORK/MILLWORK WITH OWNER PRIOR TO INSTALLATION.
- F. PROVIDE FINISHED END PANELS, FILLERS, SUPPORTS, ETC. REQUIRED FOR A COMPLETE CABINETRY INSTALLATION.
- G. PROVIDE CUTOUPS, ACCESS PANELS AND REMOVABLE COMPONENTS AS REQUIRED BY NEW OR EXISTING CONDITIONS SUCH AS ELECTRICAL OUTLETS, JUNCTION BOXES, CLEANOUTS, ETC.
- H. MOUNT TOP OF WALL CABINETS AT +7'-0" A.F.F. UNLESS NOTED OTHERWISE.
- I. PROVIDE GROMMETS IN COUNTERTOPS WHERE ELECTRICAL OR COMMUNICATIONS OUTLETS ARE INDICATED IN KNEE SPACE BELOW. GROMMETS TO BE INSTALLED IN FIELD. VERIFY ALL LOCATIONS WITH OWNER PRIOR TO INSTALL.
- J. ALL TOE KICKS TO BE 4" HIGH AFF AND 3" DEEP, UNLESS NOTED OTHERWISE.
- K. ALL CABINET INTERIORS TO BE WHITE MELAMINE UNLESS NOTED OTHERWISE. TRASH AND RECYCLE CABINET INTERIORS SHALL BE BLACK MELAMINE, UNLESS NOTED OTHERWISE.
- L. FINAL KEYING TO CABINET DOORS AND DRAWERS TO BE PROVIDED BY OWNER, PRIOR TO MANUFACTURING.

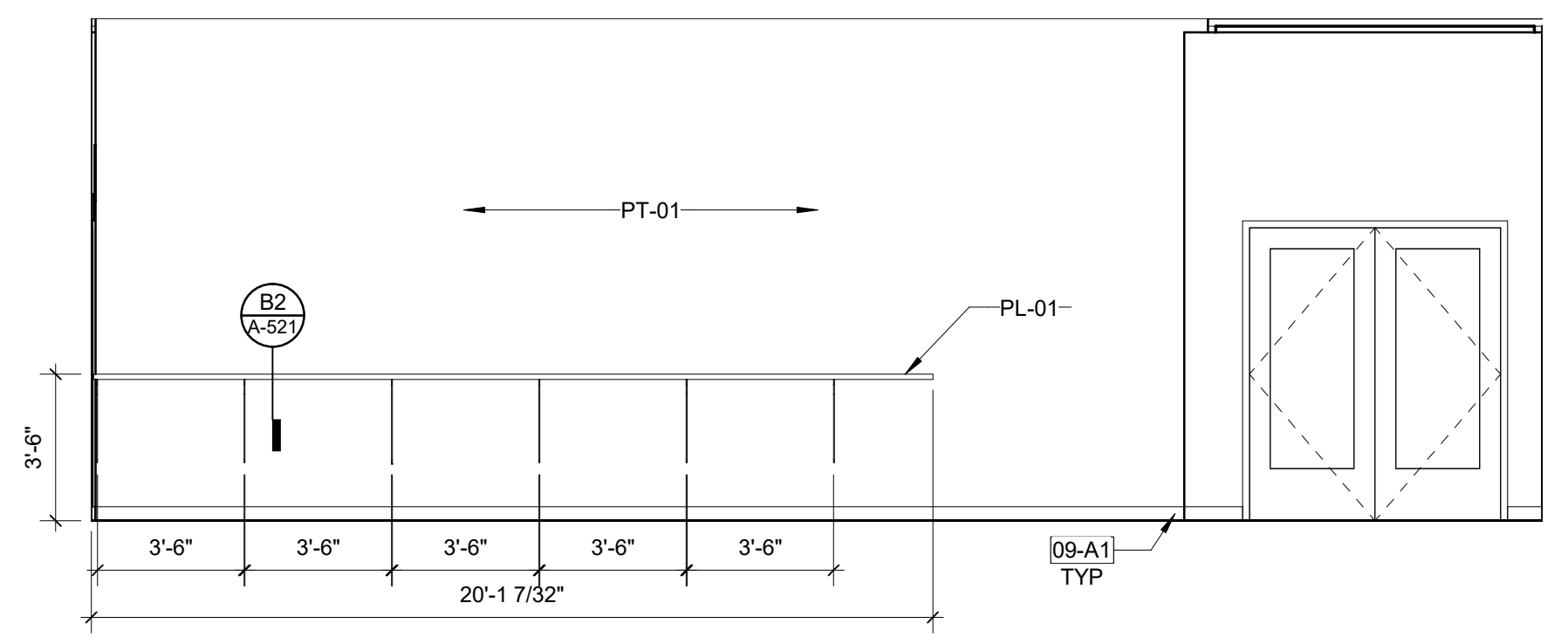
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 8529 Highway 55  
 Angier, North Carolina 27501

**Owner**  
 Highmark School Development  
 746 East Winchester Street  
 Suite 150  
 Murray, Utah 84107  
 801-256-9550

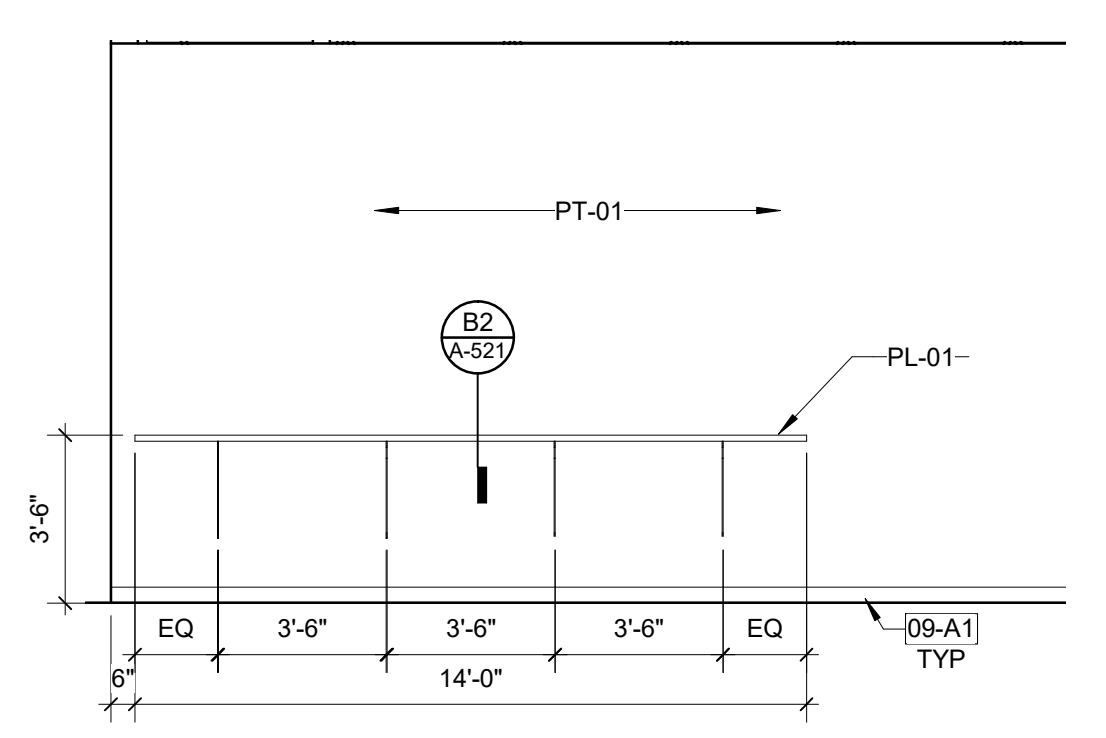
**Architect**  
**RATIO**  
 227 Fayetteville Street, Suite 301  
 Raleigh, North Carolina 27601  
 919-821-0805

**Structural Engineer**  
**Lynch Mykins Structural Engineers, PC**  
 301 North West Street  
 Suite 105  
 Raleigh, North Carolina 27603  
 919-782-1833

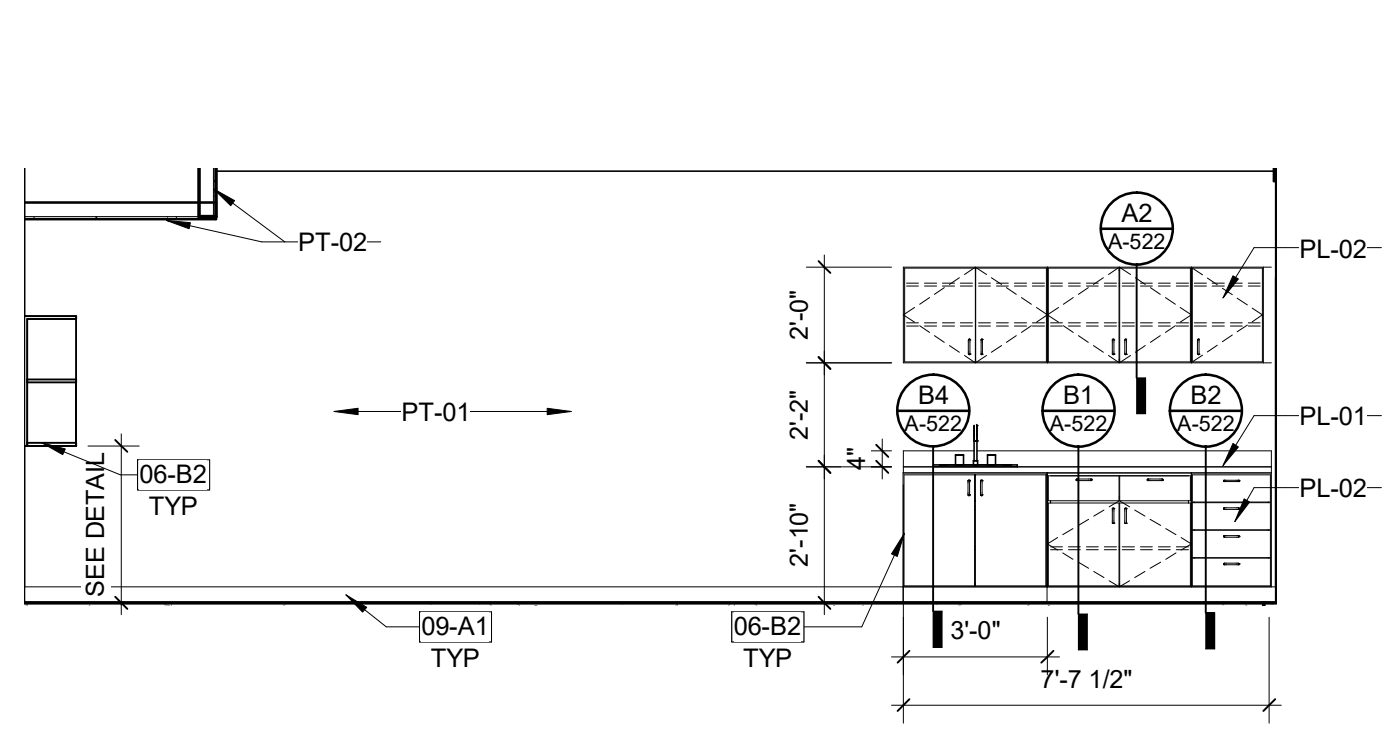
**Civil Engineer**  
**Timmons Group**  
 5410 Trinity Road  
 Suite 102  
 Raleigh, North Carolina 27607  
 919-866-4938



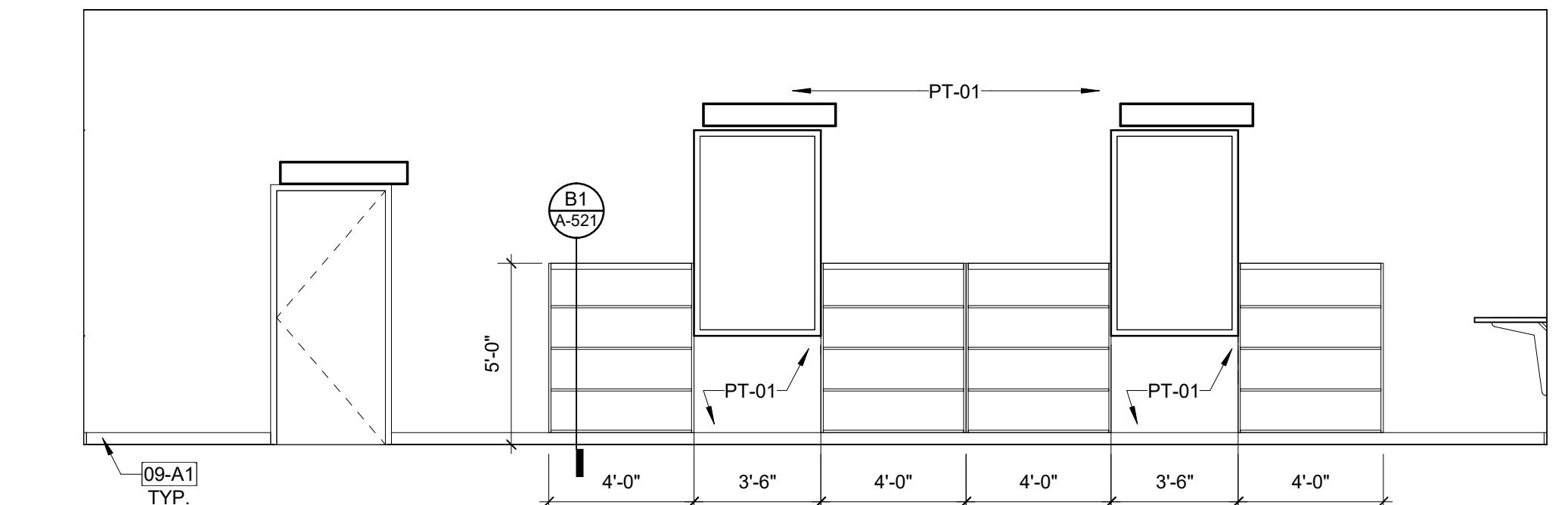
**D1**  
**A-501**  
**INTELEV-MEDIA CENTER WEST**  
 1/4" = 1'-0"



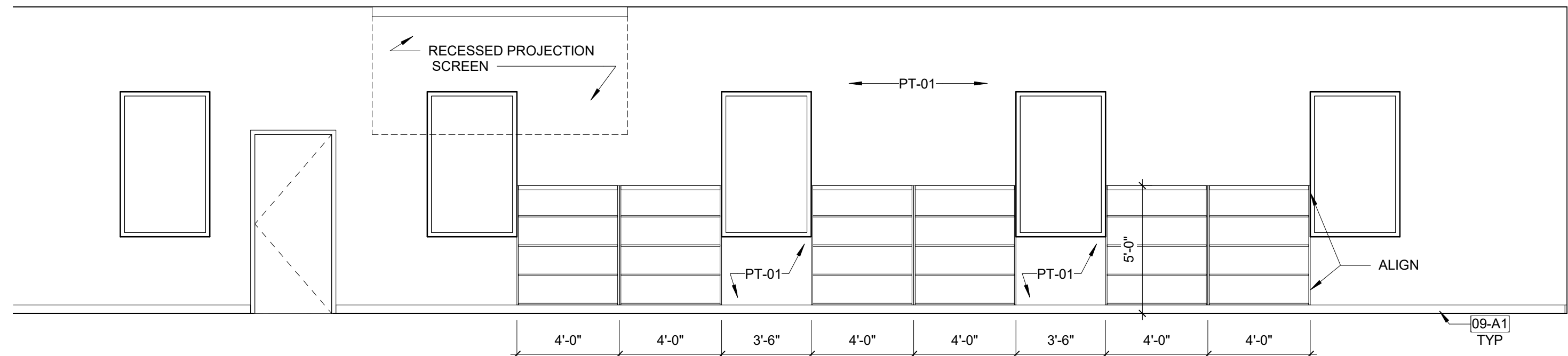
**D2**  
**A-501**  
**INTELEV-MEDIA COUNTER WEST 2**  
 1/4" = 1'-0"



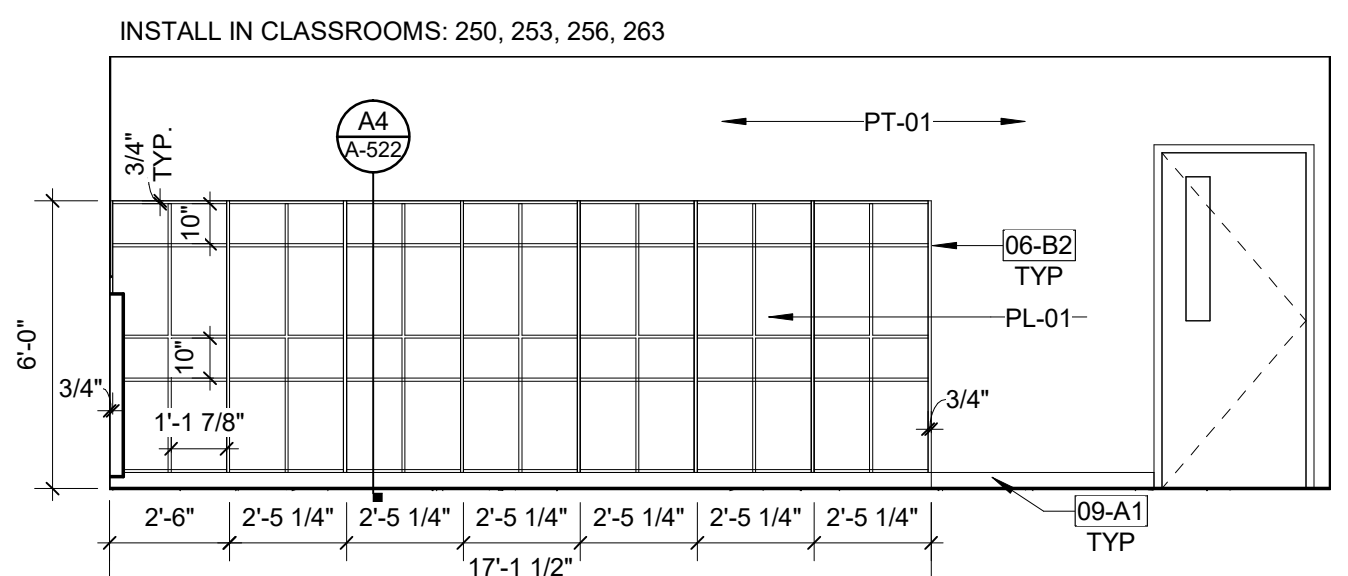
**D3**  
**A-501**  
**INTELEV-CLASSROOM 163/263**  
 1/4" = 1'-0"



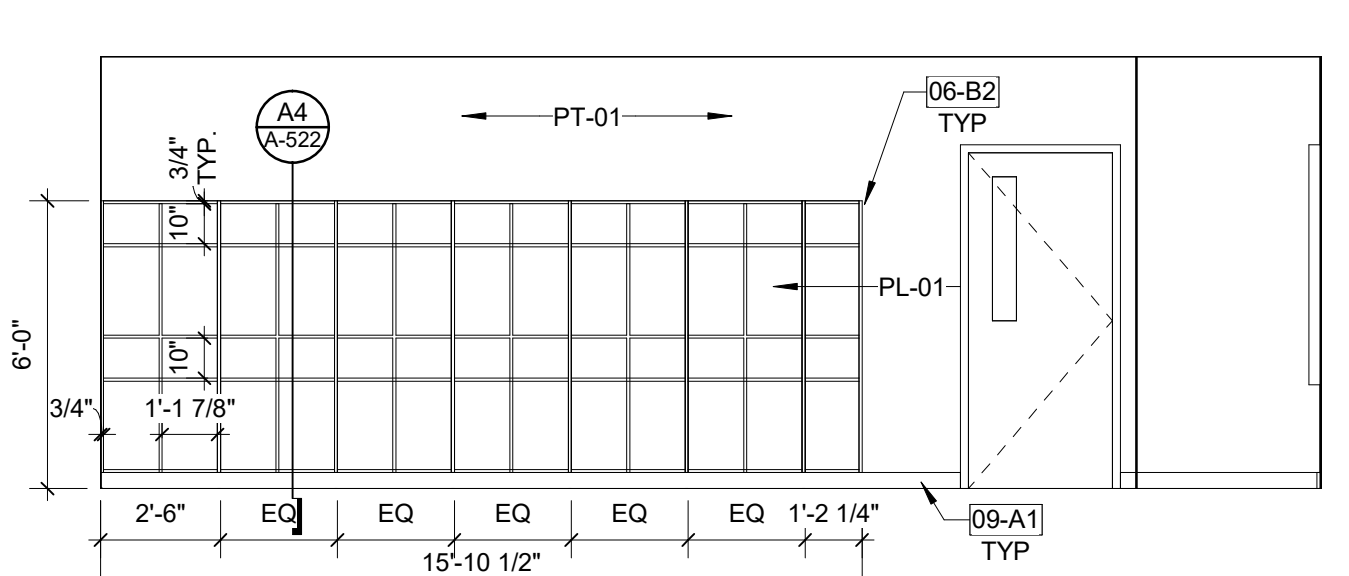
**C1**  
**A-501**  
**INTELEV-MEDIA CENTER**  
 1/4" = 1'-0"



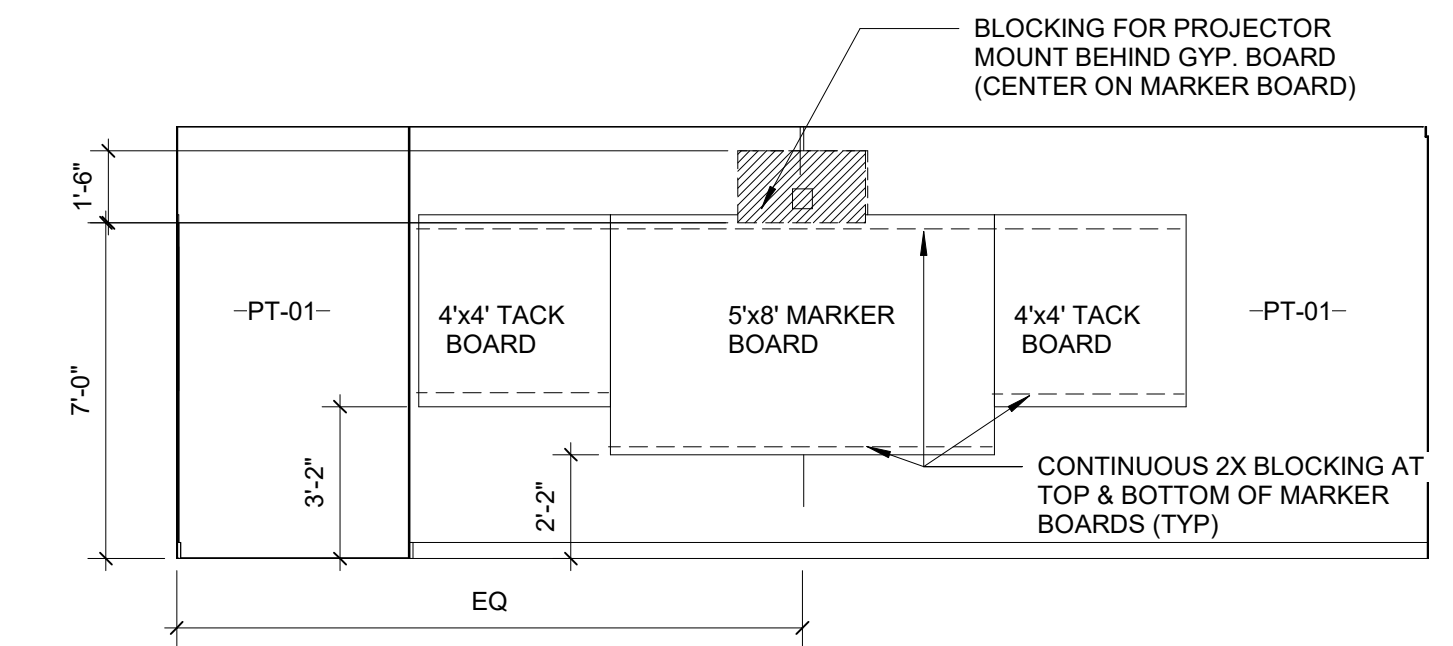
**C2**  
**A-501**  
**INTELEV-MEDIA CENTER EAST**  
 1/4" = 1'-0"



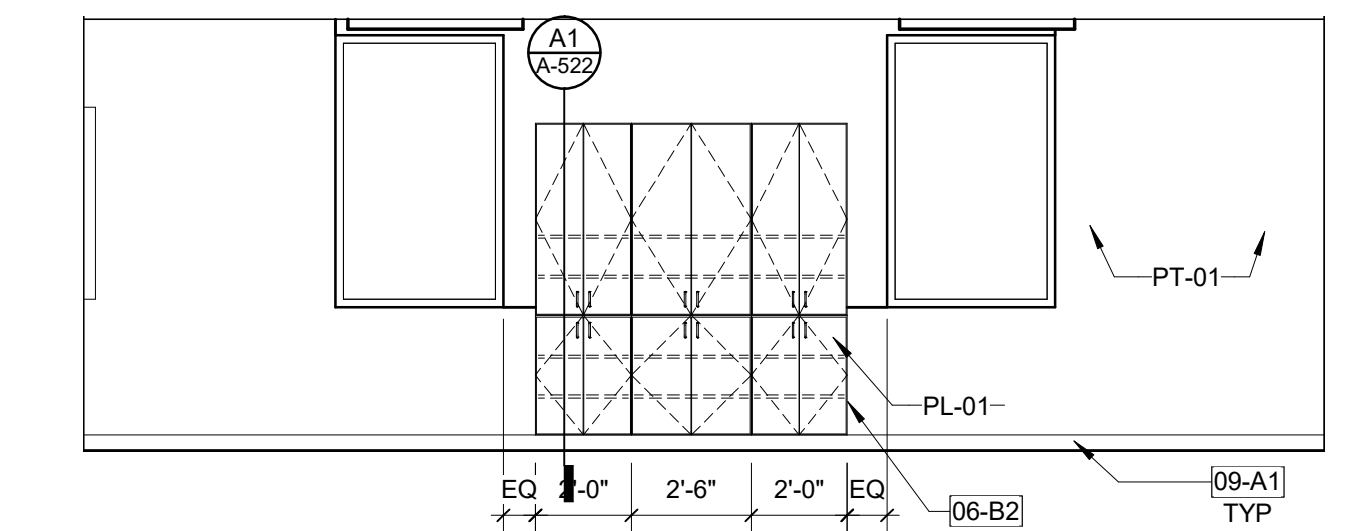
**B1**  
**A-501**  
**INTELV-TYP CLASSROOM CUBBIES -UPPER GRADES**  
 1/4" = 1'-0"



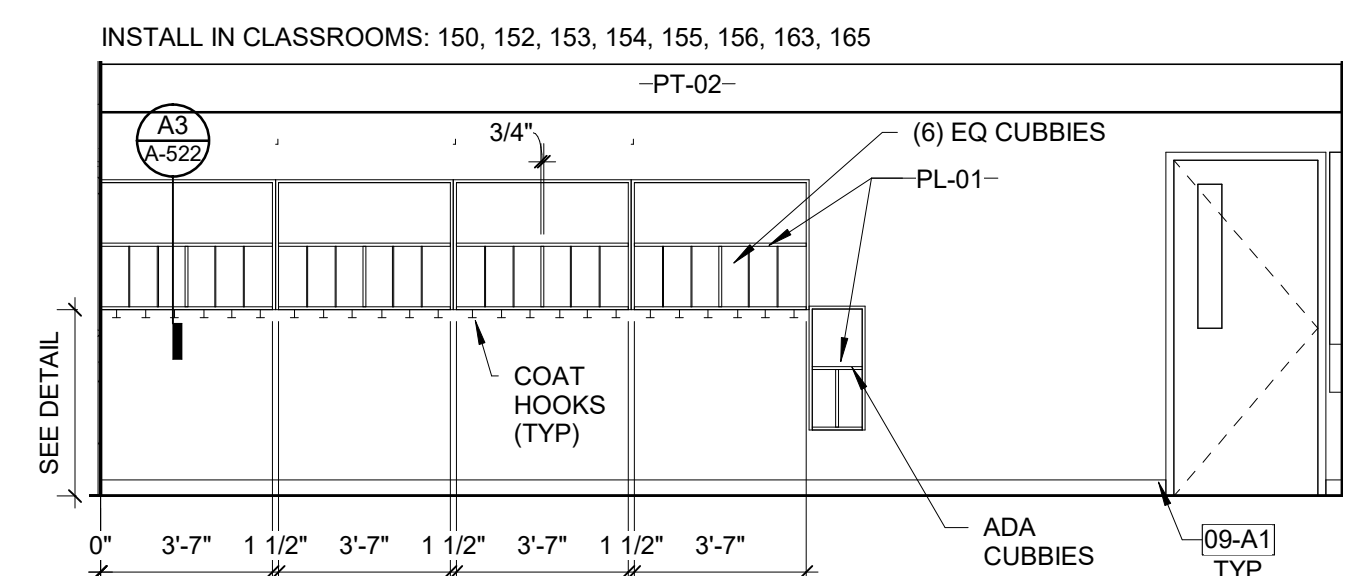
**B2**  
**A-501**  
**INTELEV-MIDDLE SCHOOL CUBBIES WITH CHASE**  
 1/4" = 1'-0"



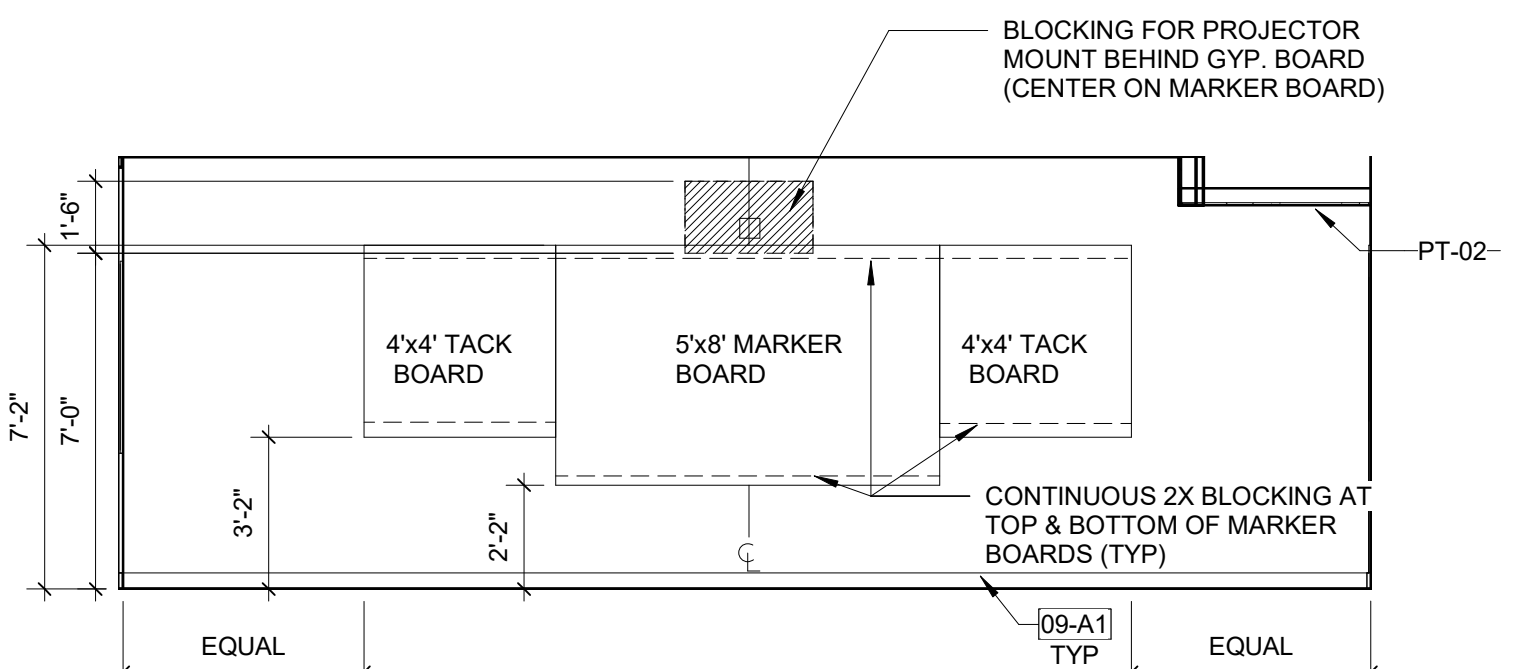
**B3**  
**A-501**  
**INTELEV-2ND FLOOR TEACHING WALL WITH CHASE**  
 1/4" = 1'-0"



**A1**  
**A-501**  
**INTELEV-TYP CLASSROOM CASE**  
 1/4" = 1'-0"



**A2**  
**A-501**  
**INTELV-TYP CLASSROOM CUBBIES**  
 1/4" = 1'-0"



**A3**  
**A-501**  
**INTELEV-PRIMARY TEACHING WALL**  
 1/4" = 1'-0"

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PROJECT NO. 20408.000

SHEET TITLE  
**INTERIOR ELEVATIONS**

SHEET NUMBER  
**A-501**



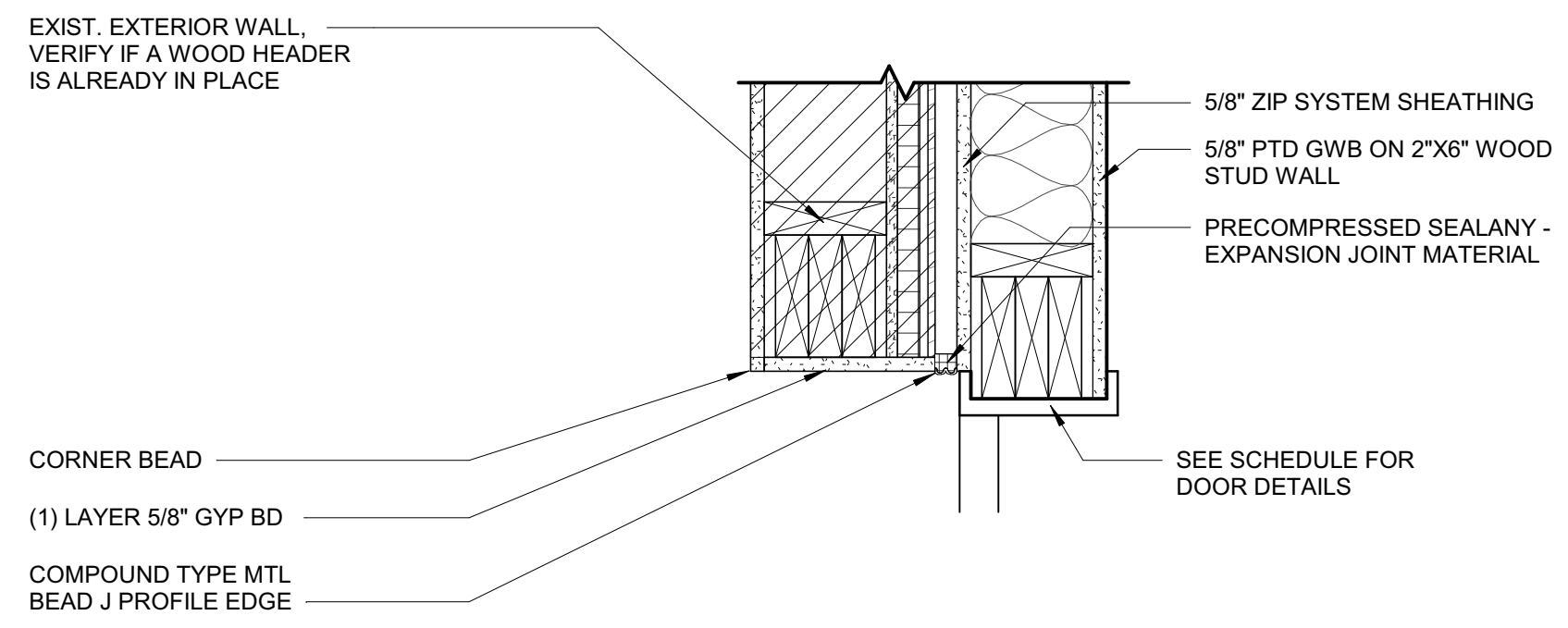
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Angier, North Carolina 27501

**Owner**  
Highmark School Development  
746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

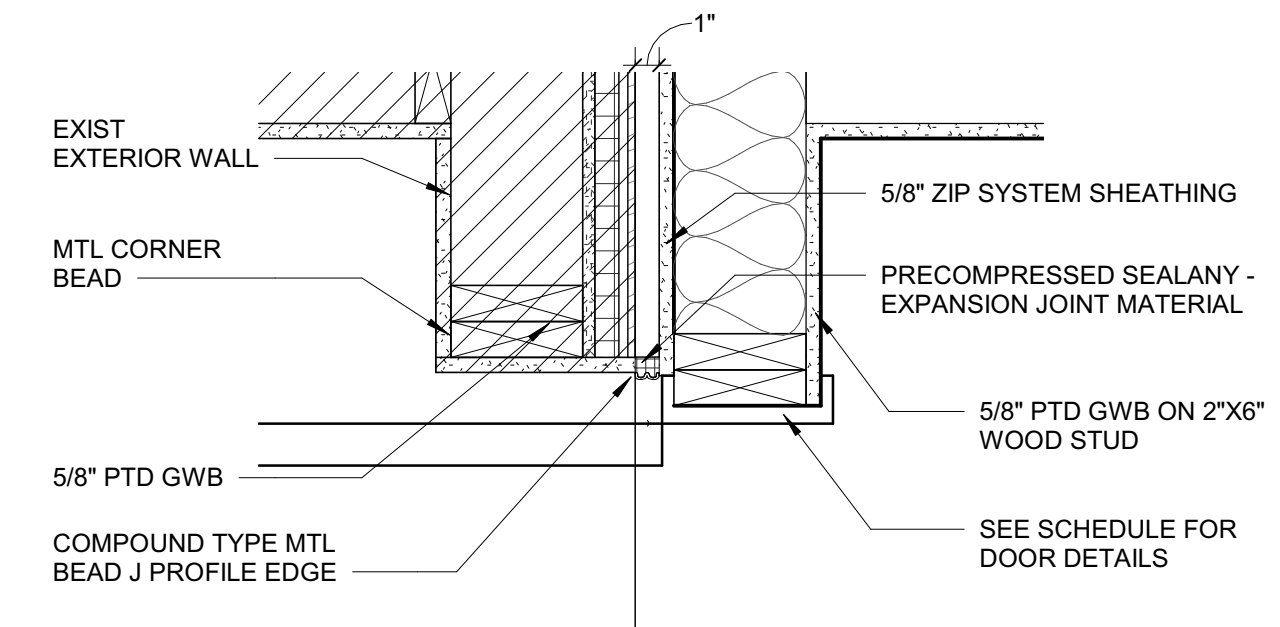
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RATIO  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

**Structural Engineer**  
Lynch Mykins Structural Engineers, PC  
301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-782-1833

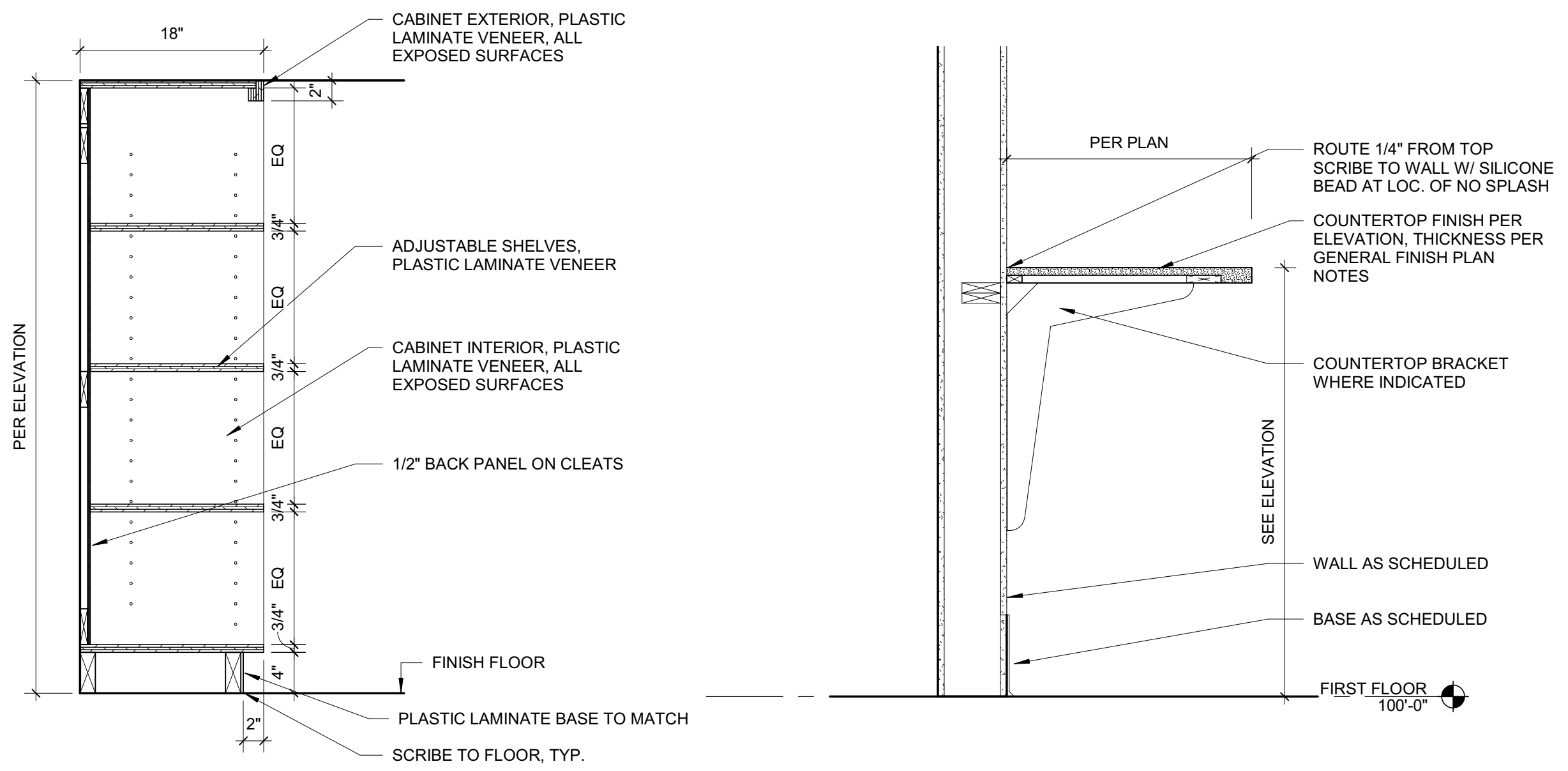
**Civil Engineer**  
Timmons Group  
5410 Trinity Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938



**D1 EXPANSION JOINT DETAIL AT DOOR HEAD CONDITION**  
1 1/2" = 1'-0"

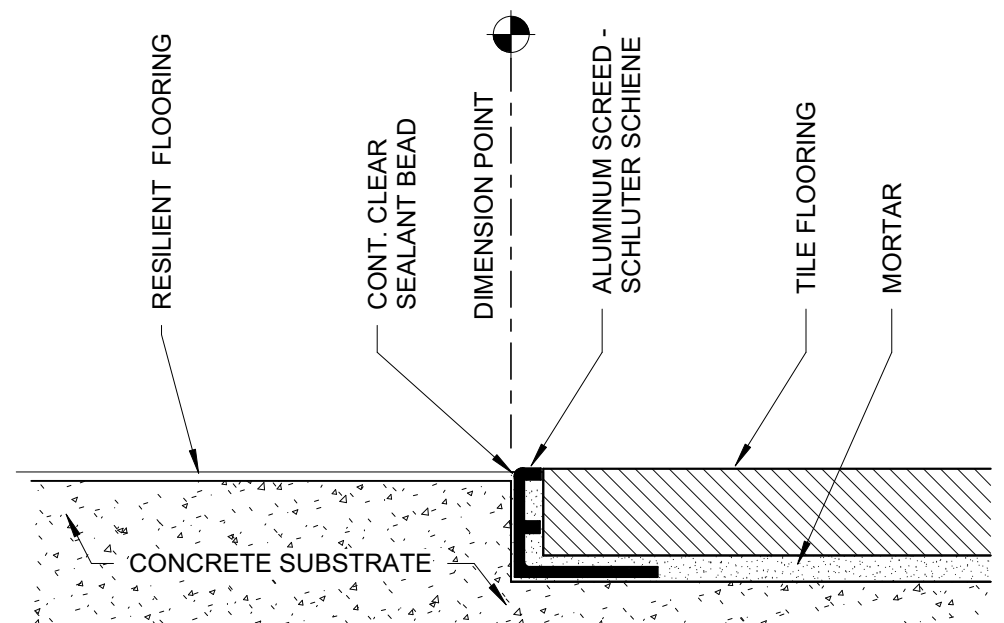


**D3 EXPANSION JOINT DETAIL AT JAMB CONDITION**  
1 1/2" = 1'-0"

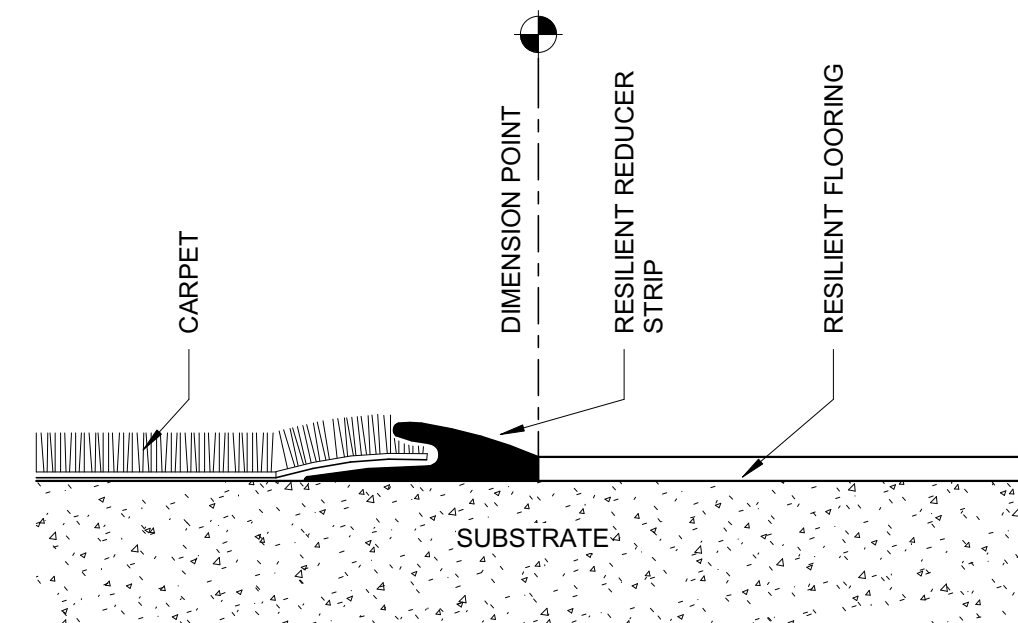


**B1 SECTION-MEDIA CENTER SHELVING**  
1" = 1'-0"

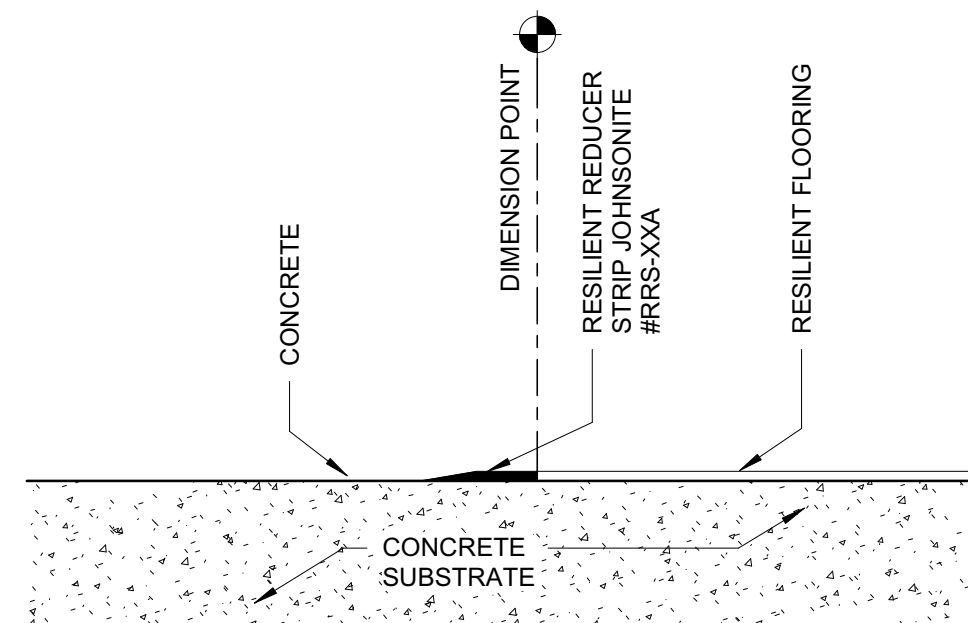
**B2 SECDDL-COUNTERTOP BRACKET SUPPORT**  
1" = 1'-0"



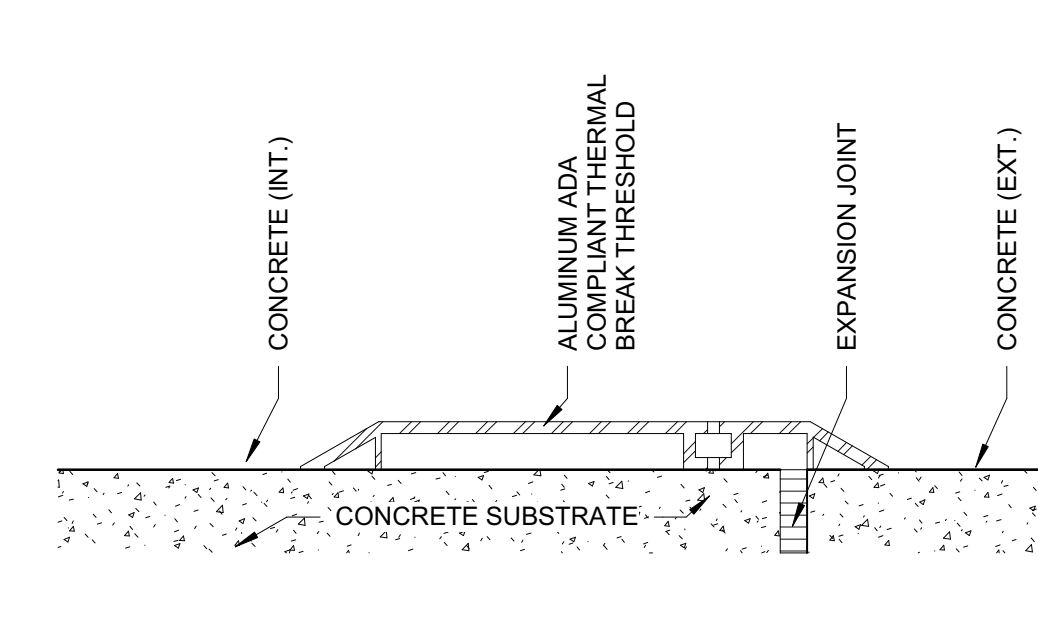
**A1 RESILIENT TO TILE**  
12" = 1'-0"



**A2 CARPET TO RESILIENT**  
12" = 1'-0"



**A3 CONCRETE TO RESILIENT**  
12" = 1'-0"



**A4 CONCRETE (INT.) TO CONCRETE (EXT.)**  
6" = 1'-0"

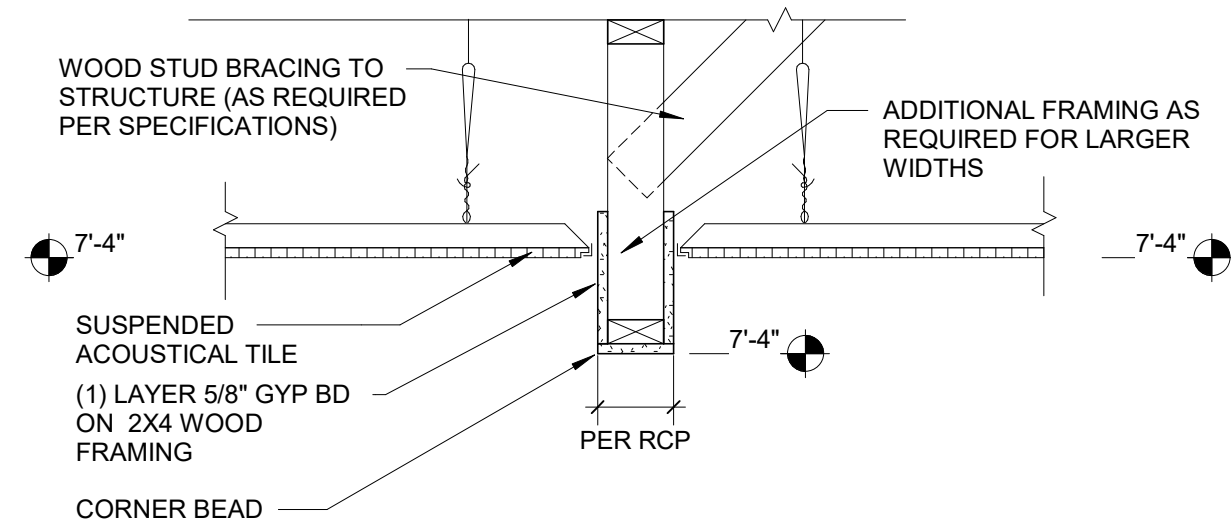
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PROJECT NO. 20408.000  
SHEET TITLE  
**INTERIOR DETAILS**  
SHEET NUMBER  
**A-521**

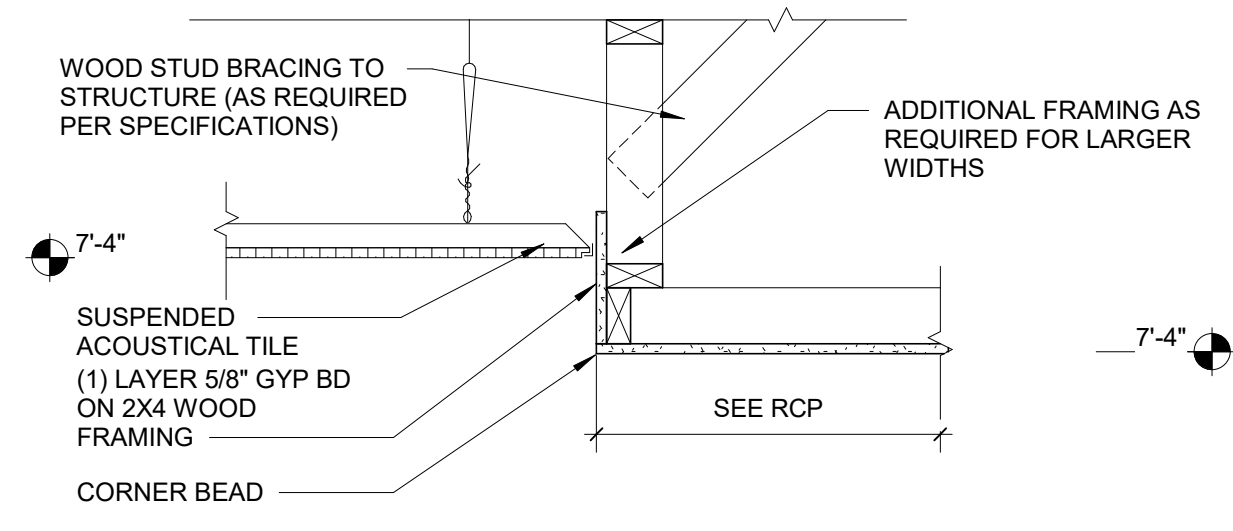
KEYNOTES (SPEC BASED)

061600.A00



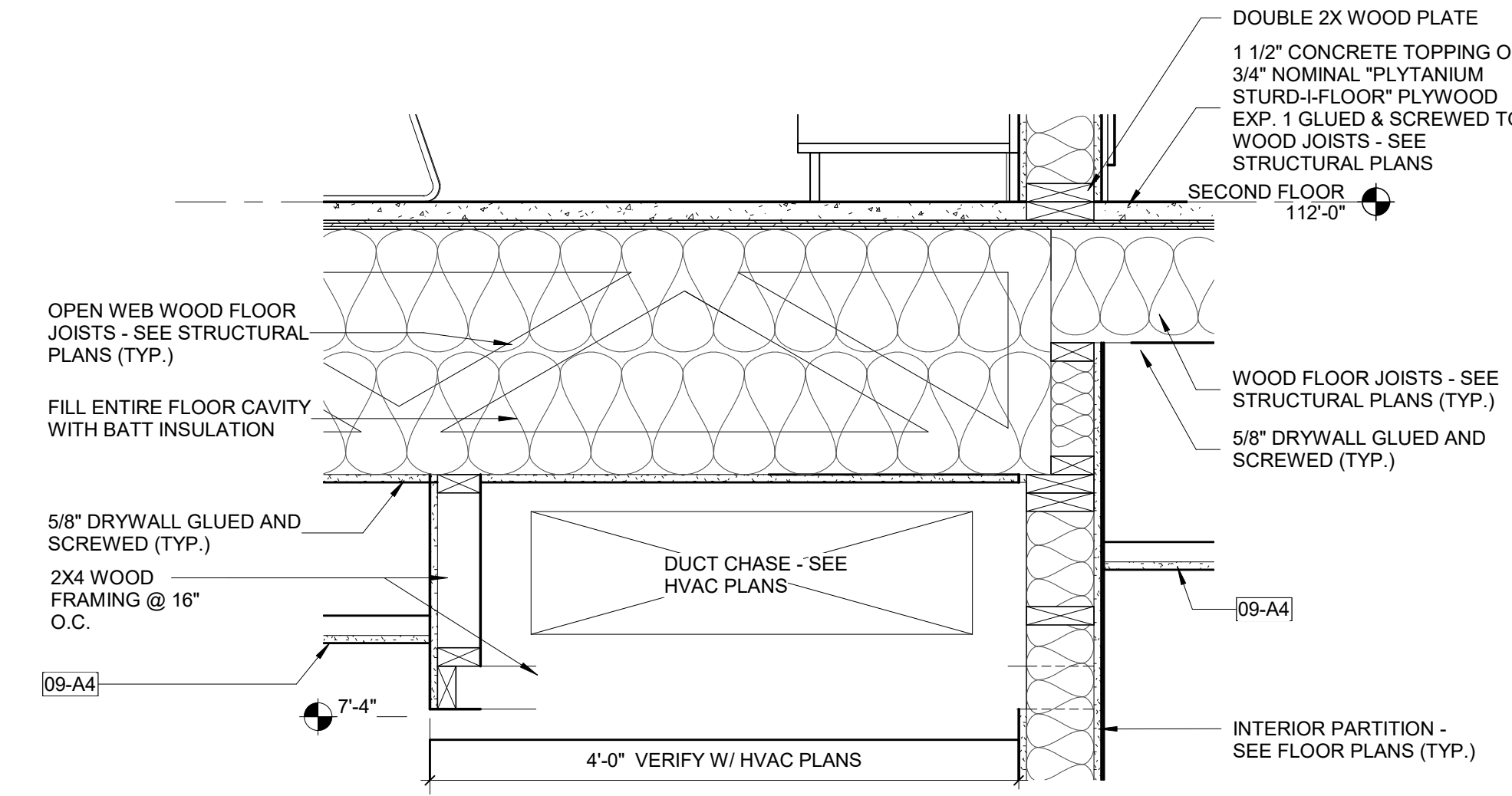
E1 CEILING AT BULKHEAD

1" = 1'-0"



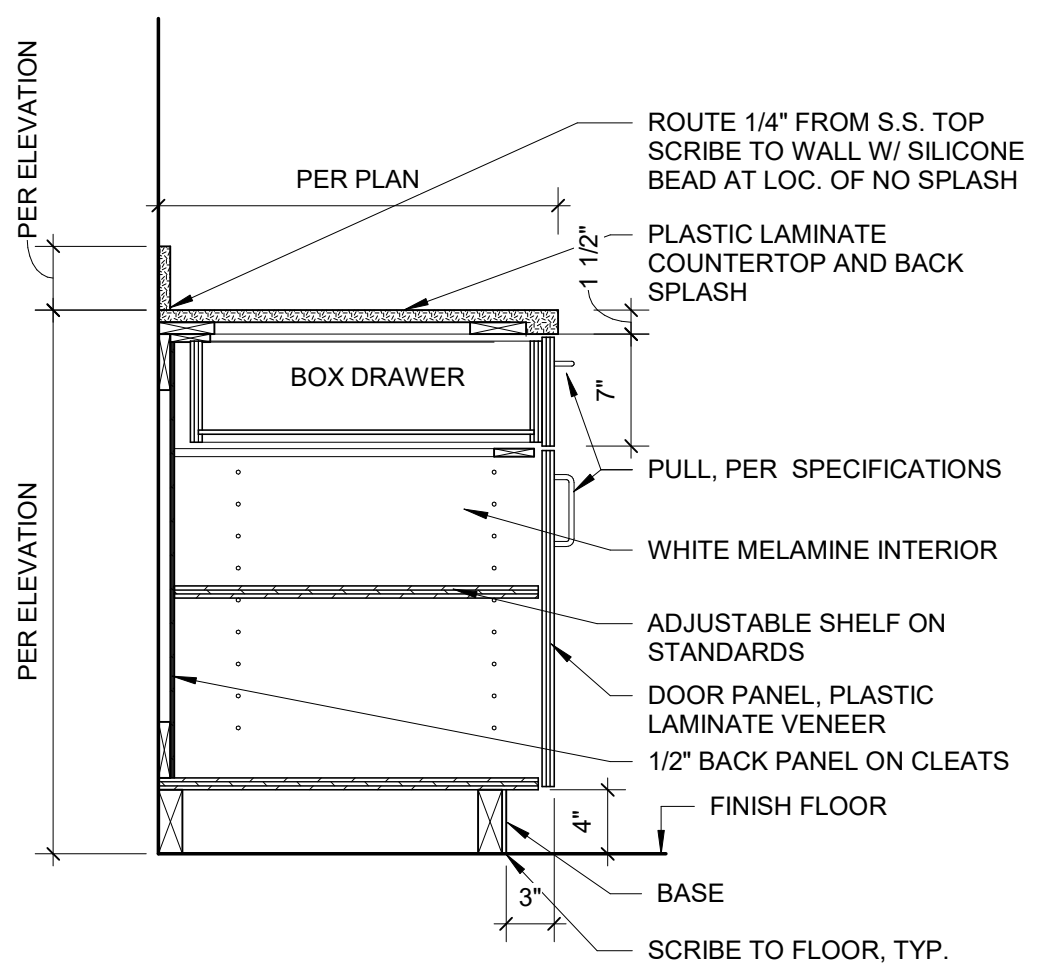
E2 CEILING AT BULKHEAD

1" = 1'-0"



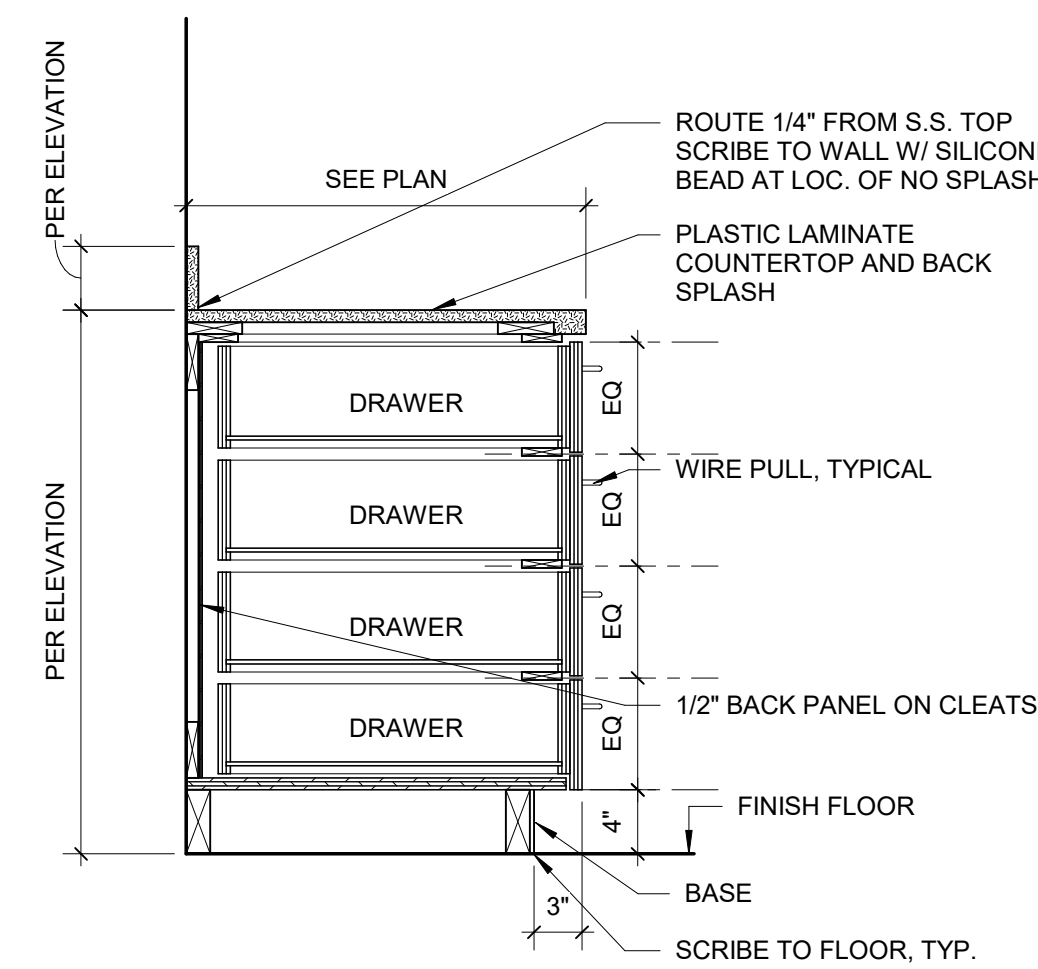
E5 SECTION DETAIL - DUCT BULKHEAD

1" = 1'-0"



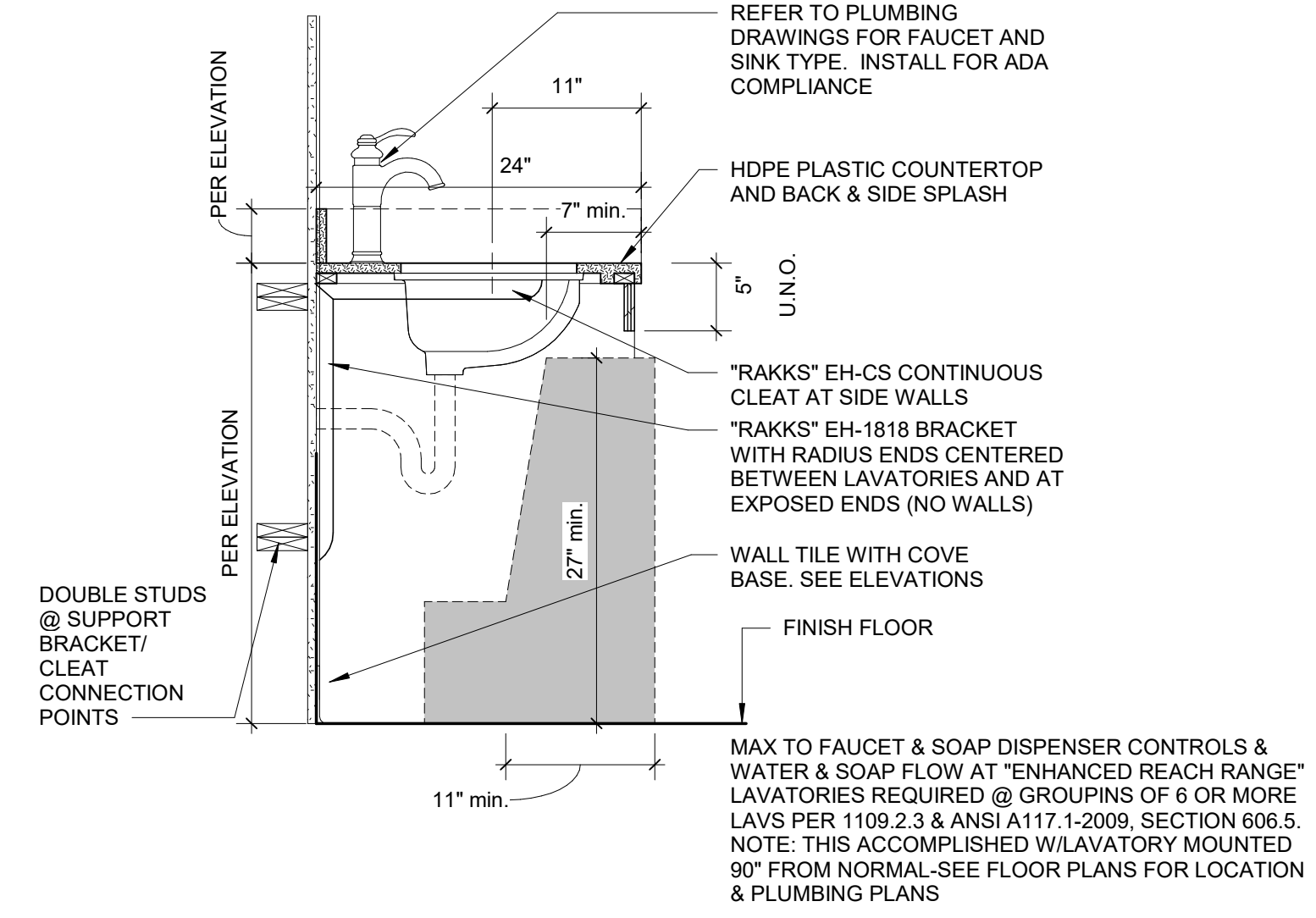
B1 BASE CABINET - ONE DRAWER

1" = 1'-0"



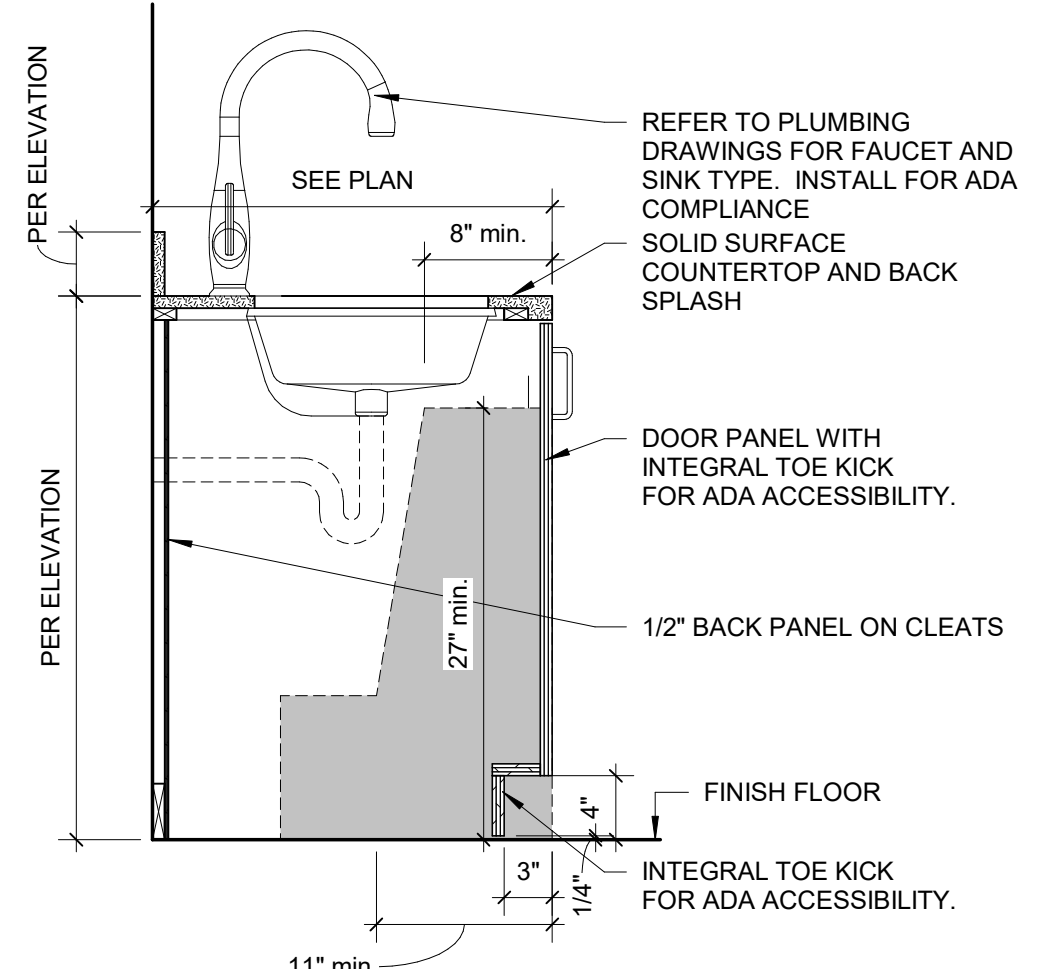
B2 DRAWER BASE CABINET

1" = 1'-0"



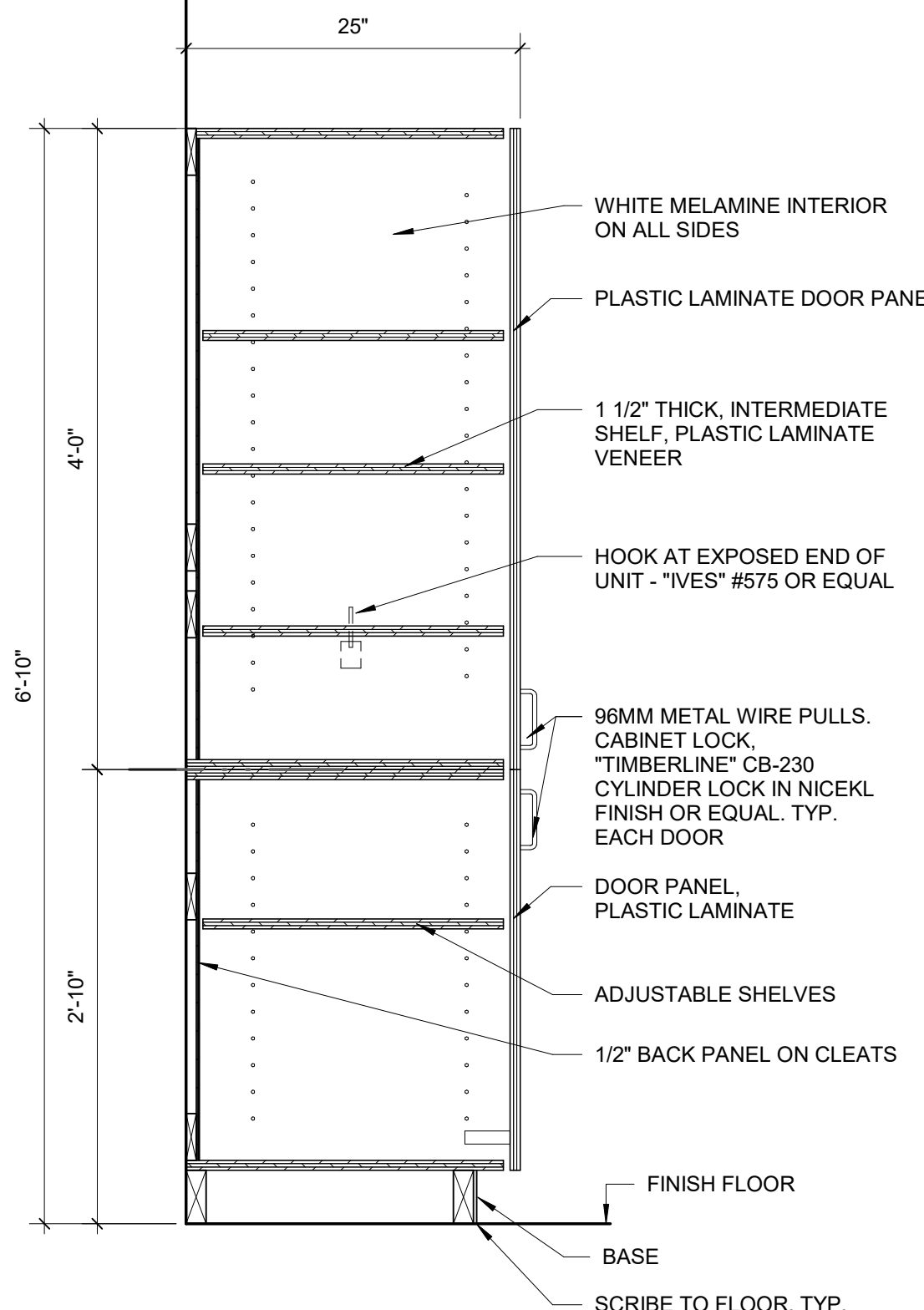
B3 TYP. RESTROOM SINK BASE ADA

1" = 1'-0"



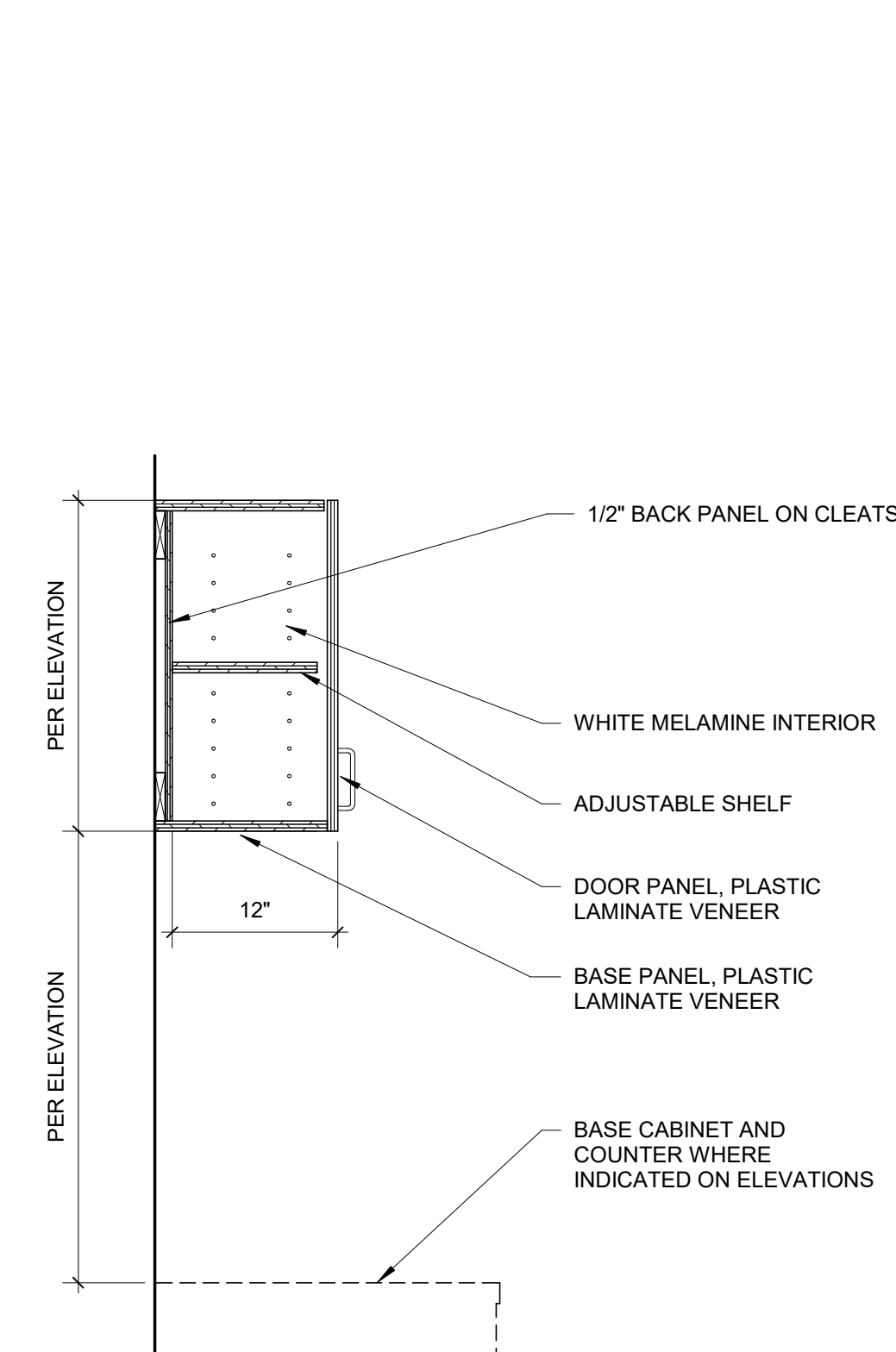
B4 TYP. KITCHEN SINK BASE ADA

1" = 1'-0"



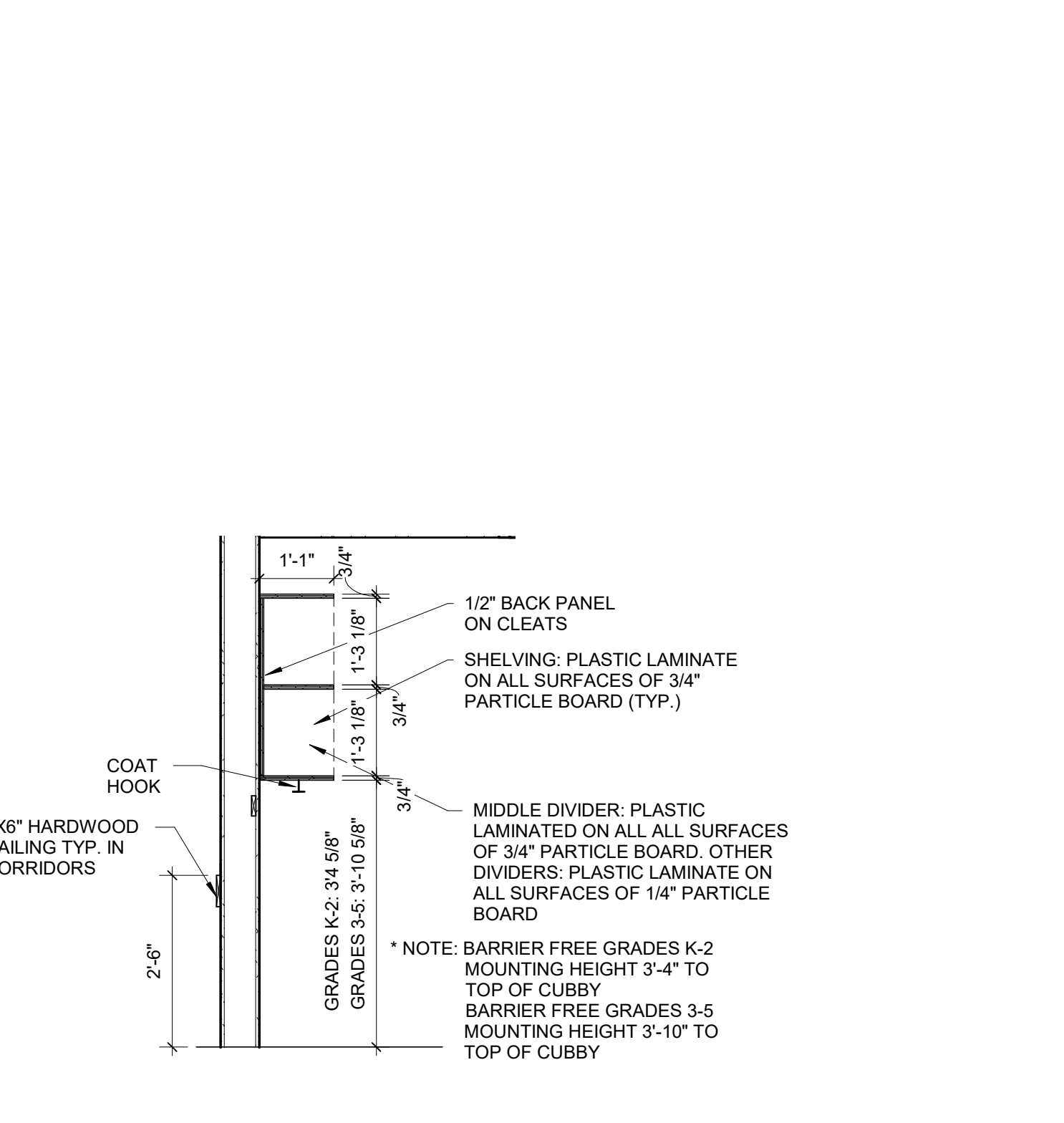
A1 SUPPLY CABINET

1" = 1'-0"



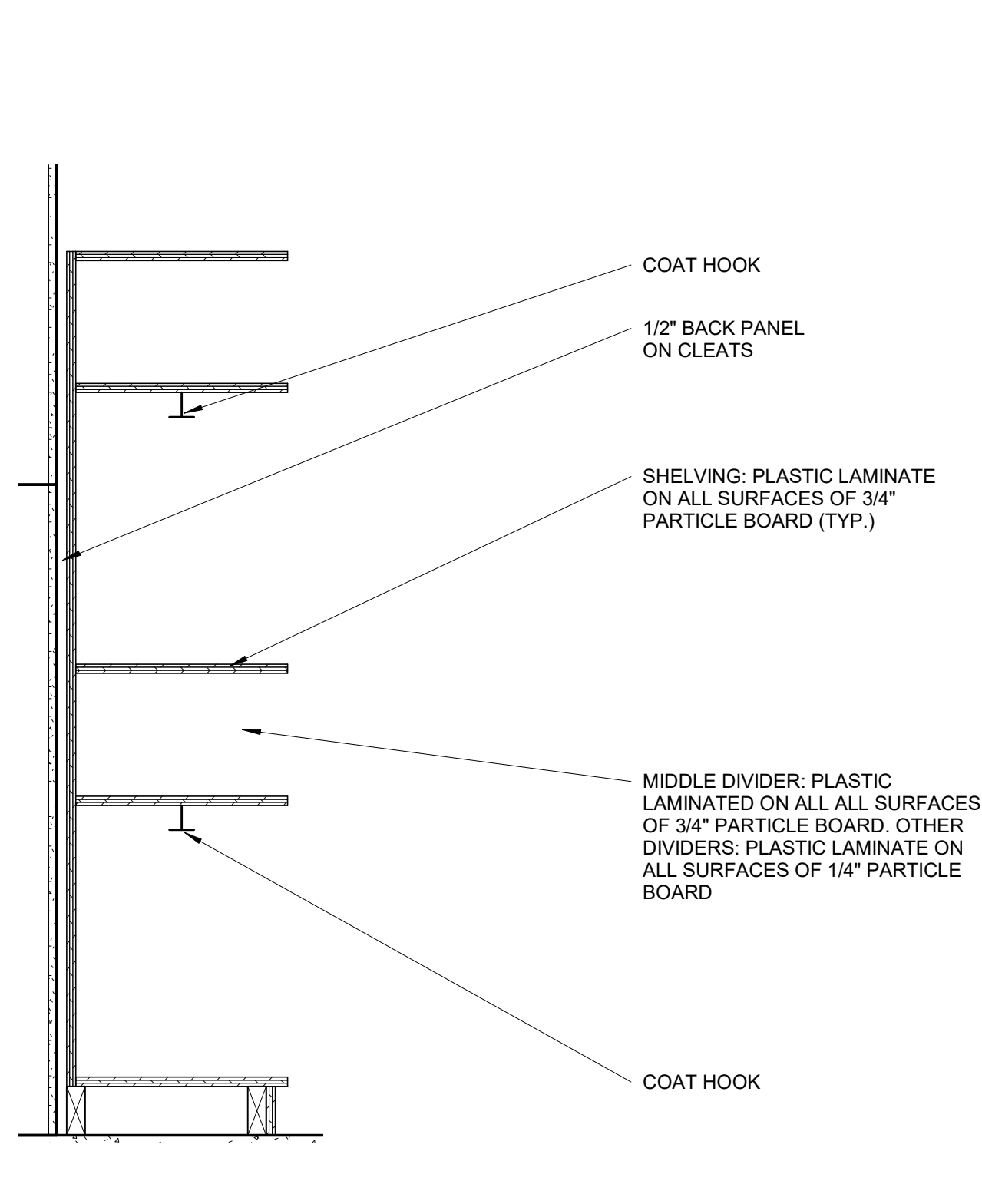
A2 UPPER CABINET

1" = 1'-0"



A3 1ST FLOOR CUBBIES

1/2" = 1'-0"



A4 SECDDL-2ND FLOOR CUBBIES

1" = 1'-0"

Carolina Charter Academy Exp. 8529 Highway 55 Angier, North Carolina 27501

Owner Highmark School Development 746 East Winchester Street Suite 150 Murray, Utah 84107 801-256-9550

Architect RATIO 227 Fayetteville Street, Suite 301 Raleigh, North Carolina 27601 919-821-0805

Structural Engineer Lynch Mykins Structural Engineers, PC 301 North West Street Suite 105 Raleigh, North Carolina 27603 919-782-1833

Civil Engineer Timmons Group 5410 Trinity Road Suite 102 Raleigh, North Carolina 27607 919-866-4938

Professional seal and stamp for M. Bowen, Registered Architect, No. 5950, Raleigh, N.C.

Table with columns for SHEET ISSUE, 100% Construction Documents, and date 2/24/2021.

Large empty table grid for project details.

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PROJECT NO. 20408.000

SHEET TITLE INTERIOR DETAILS

SHEET NUMBER A-522

Door Hardware	Room Type	Hinges	Lockset / Exit Device	Cylinder	Floor Stop	Silencer	Closer	Doors_Hardware_OtherParameters
1	CLASSROOMS	MCKINNEY, MPB79 4.5X4.5, US26D	SARGENT, 28-10G05 LL, LESS CYLINDER US26D	SARGENT, L-SECTION - KEYED BY OWNER, US26D	ROCKWOOD, 442	ROCKWOOD, 608, GRAY	NONE	
2	OFFICE	MCKINNEY, T2714 4.5X4.5, US26D	SARGENT, 28-10G05 LL	SARGENT, L-SECTION - US26D	ROCKWOOD, 442	ROCKWOOD, 608, GRAY	NONE	
3	STORAGE	MCKINNEY, T2714 4.5X4.5, US26D	SARGENT, 28-10G04 LL, US26D	SARGENT, L-SECTION - US26D	ROCKWOOD, 442	ROCKWOOD, 608, GRAY	SARGENT 351, EN FINISH	
4	BI-PARTING DOORS	MCKINNEY, T2714 US26D	SURFACE VERTICAL ROD EXIT DEVICE: SARGENT 12-43-8710F EOXTB, US32D	NONE	NONE	ROCKWOOD, 608, GRAY	SARGENT, 1431 RUO X TB (PA), EN	INTERCHANGEABLE MULLION
5	PAIR EXTERIOR EGRESS DOORS	MCKINNEY, T2714 4.5X4.5 NRP	RIM EXIT DEVICE: SARGENT 43-8804FTXB826 PULL	SARGENT, L-SECTION - US26D	NONE	ROCKWOOD, 608, GRAY	SARGENT 351, EN FINISH	REMOVABLE MULLIONS: SARGENT #980 WEATHERSTRIP SEAL: NATIONAL GUARD 160V-3070 SWEEP: NATIONAL GUARD D608A-36 THRESHOLD: NATIONAL GUARD 424-36 (NOTE: 1/2" HIGH MAX.)
6	PAIR ALUMINUM INTERIOR DOORS	ROTON, 780-112HD OR MCKINNEY MCK-12HD CONTINUOUS HINGE	NONE	NONE	NONE	NONE	LCN, 4110, GRAY	PULLS: ROCKWOOD, BF157, US26D OR EQUAL PUSH: ROCKWOOD #70F OR EQUAL
7	PAIR ALUMINUM EXTERIOR EGRESS DOORS	ROTON, 780-112HD OR MCKINNEY MCK-12HD CONTINUOUS HINGE	DOR-O-MATIC, 1690 EO, US26D	SARGENT, L-SECTION - US26D	NONE	NONE	LCN, 4110, GRAY	PULLS: ROCKWOOD, BF157, US26D REMOVABLE MULLION: DOR-O-MATIC, RM150 WEATHER STRIP SEAL: NATIONAL GUARD 160V-3070 SWEEP: NATIONAL GUARD D608A-36 THRESHOLD: NATIONAL GUARD 424-36 (NOTE: 1/2" HIGH MAX.)
8	MECHANICAL / ELECTRICAL, JANITOR CLOSET	MCKINNEY, MPB79 4.5X4.5	SARGENT, 28-10G04 LL, 26D	SARGENT, L-SECTION - KEYED BY OWNER, US26D	ROCKWOOD, 442	ROCKWOOD, 608, GRAY	YALE 3501 X SNB	

### GENERAL DOOR SCHEDULE NOTES

- THESE GENERAL NOTES APPLY TO SERIES 600 DOOR SCHEDULE DRAWINGS.
- UNDERCUT DOORS AS REQUIRED BY FINAL FLOOR FINISH.
- PROVIDE SEALANT BETWEEN HOLLOW METAL FRAME PERIMETERS AND SURROUNDING WALL CONSTRUCTION UNLESS OTHERWISE INDICATED.
- PROVIDE SEALANT BETWEEN INTERIOR AND EXTERIOR STOREFRONT FRAME PERIMETERS AND SURROUNDING WALL CONSTRUCTION UNLESS OTHERWISE INDICATED.
- GROUT FULL NEW HOLLOW METAL DOOR FRAMES IN MASONRY WALL CONSTRUCTION.
- SPOT GROUT NEW HOLLOW METAL DOOR FRAMES IN GYPSUM BOARD WALL CONSTRUCTION.
- WHERE A FIRE RATING IS INDICATED ON THE DOOR SCHEDULE, HARDWARE AND DOOR ASSEMBLY COMPONENTS SHALL MEET THE REQUIREMENTS OF THAT LABEL.
- WHERE ACOUSTICAL RATING IS INDICATED ON THE DOOR SCHEDULE, HARDWARE AND DOOR ASSEMBLY COMPONENTS SHALL MEET THE REQUIREMENTS OF THAT RATING.
- INSTALL DOOR GLASS USING WET-GLAZING METHOD.
- REFER TO PROJECT MANUAL DIVISION 08 FOR GLAZING.
- REFER TO PROJECT MANUAL DIVISION 08 FOR HARDWARE SCHEDULE.

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**Owner**  
Highmark School Development  
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Timmons Group  
5410 Trinity Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938

### DOOR SCHEDULE REMARKS

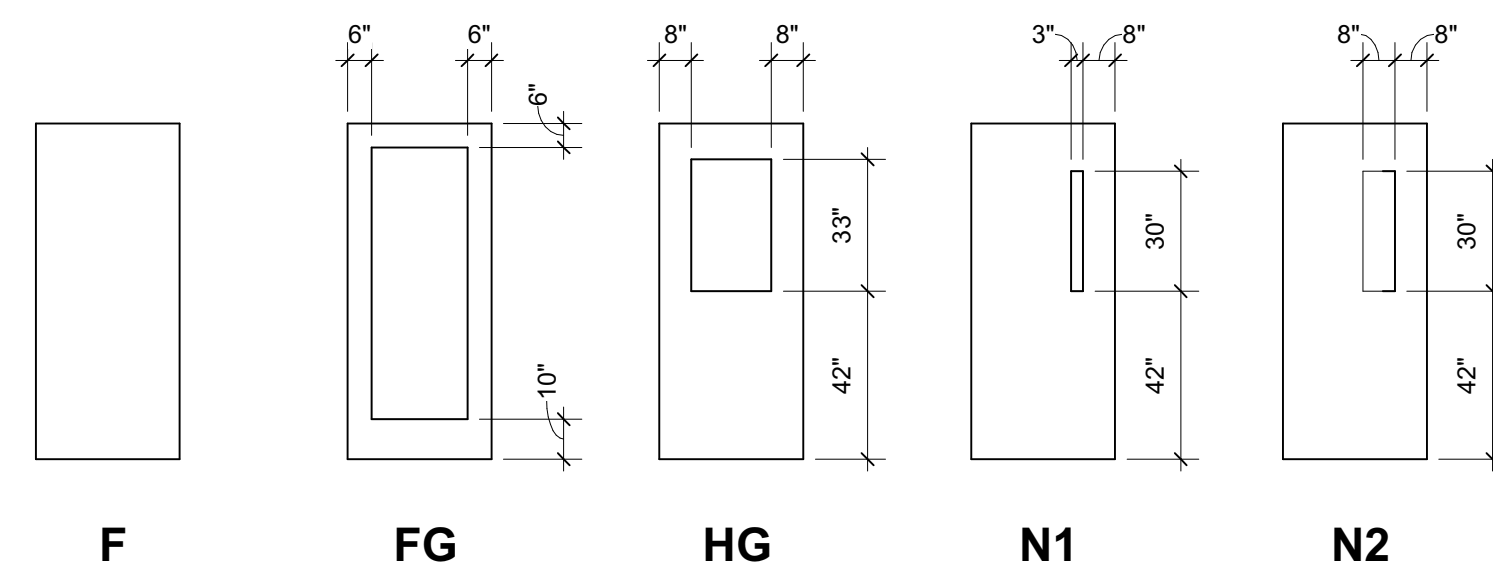
- CASED OPENING
- HOLLOW METAL DOORS AND FRAMES TO BE PAINTED PT-04

### GLAZING SCHEDULE

GLAZING TYPE	DESCRIPTION
GL-01	1" CLEAR INSULATING GLASS, LOW-E COATED, TEMPERED - EXTERIOR APPLICATIONS
GL-11	1/4" CLEAR TEMPERED GLASS - INTERIOR APPLICATIONS, WINDOWS AND DOORS
GL-12	3/16" LAMINATED CERAMIC GLASS

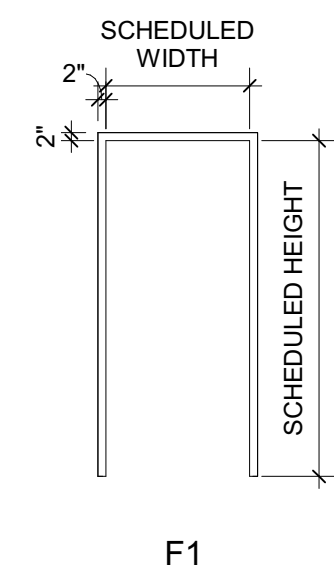
### DOOR SCHEDULE

DOOR NUMBER	PAIR	SIZE				MTRL.	ELEV.	GLASS	HWDR. SET	MTRL.	ELEV.	FRAME			FIRE RATING	REMARKS
		W	W2	H	T							HEAD	JAMB	THRESHOLD		
FIRST FLOOR																
145-A		3'-0"		7'-0"	1 3/4"	WD	N2	GL-11	1	HM	F1	A2 / A-601	A2 / A-601		NR	PH
145-B		3'-0"		7'-0"	1 3/4"	WD	N2	GL-11	1	HM	F1	A2 / A-601	A2 / A-601		NR	PH
145A-A		3'-0"		7'-0"	1 3/4"	WD	F	--	3	HM	F1	A2 / A-601	A2 / A-601		NR	
145A-B		3'-0"		7'-0"	1 3/4"	WD	F	--	3	HM	F1	A2 / A-601	A2 / A-601		NR	
145B		3'-0"		7'-0"	1 3/4"	WD	F	--	8	HM	F1	A2 / A-601	A2 / A-601		NR	
150		3'-0"		7'-0"	1 3/4"	WD	N2	GL-11	1	HM	F1	A2 / A-601	A2 / A-601		NR	
151	Yes	3'-0"	3'-0"	7'-0"	1 3/4"	WD	F	--	4	HM	F1				NR	PH
152		3'-0"		7'-0"	1 3/4"	WD	N2	GL-11	1	HM	F1	A2 / A-601	A2 / A-601		NR	
153		3'-0"		7'-0"	1 3/4"	WD	N2	GL-11	1	HM	F1	A2 / A-601	A2 / A-601		NR	
154		3'-0"		7'-0"	1 3/4"	WD	N2	GL-11	1	HM	F1	A2 / A-601	A2 / A-601		NR	
155		3'-0"		7'-0"	1 3/4"	WD	N2	GL-11	1	HM	F1	A2 / A-601	A2 / A-601		NR	
156		3'-0"		7'-0"	1 3/4"	WD	N2	GL-11	1	HM	F1	A2 / A-601	A2 / A-601		NR	
158-A	Yes	3'-0"	3'-0"	7'-0"	1 3/4"	AL	FG	GL-01	7	AL	F1	A6 / A-601	A6 / A-601		NR	PH
158-B	Yes	3'-0"	3'-0"	7'-0"	1 3/4"	WD	N1	GL-12	5	HM	F1	A2 / A-601	A2 / A-601	45 MIN	PH, 20 MIN FIRE RATED	
160-A	Yes	3'-0"	3'-0"	7'-0"	1 3/4"	AL	FG	GL-11	6	AL	F1	A5/A-601	A5/A-601		NR	
160-B		3'-0"		7'-0"	1 3/4"	HM	F	--	7	HM	F1	A3 / A-601	A3 / A-601		NR	PH, 2
160-C		3'-0"		7'-0"	1 3/4"	HM	F	--	7	HM	F1	A3 / A-601	A3 / A-601		NR	PH, 2
163		3'-0"		7'-0"	1 3/4"	WD	N2	GL-11	1	HM	F1	A2 / A-601	A2 / A-601		NR	
165		3'-0"		7'-0"	1 3/4"	WD	N2	GL-11	1	HM	F1	A2 / A-601	A2 / A-601		NR	
SECOND FLOOR																
158-C	Yes	3'-0"	3'-0"	7'-0"	1 3/4"	WD	N1	GL-12	5	HM	F1	A2 / A-601	A2 / A-601	45 MIN	PH, 20 MIN FIRE RATED	
201A		3'-0"		7'-0"	1 3/4"	WD	HG	GL-11	2	HM	F1	A2 / A-601	A2 / A-601		NR	
201B		3'-0"		7'-0"	1 3/4"	WD	HG	GL-11	2	HM	F1	A2 / A-601	A2 / A-601		NR	
201C		3'-0"		7'-0"	1 3/4"	WD	HG	GL-11	2	HM	F1	A2 / A-601	A2 / A-601		NR	
201D		3'-0"		7'-0"	1 3/4"	WD	F	--	8	HM	F1	A2 / A-601	A2 / A-601		NR	
250		3'-0"		7'-0"	1 3/4"	WD	N2	GL-11	1	HM	F1	A2 / A-601	A2 / A-601		NR	
251	Yes	3'-0"	3'-0"	7'-0"	1 3/4"	WD	F	--	4	HM	F1				NR	
252		3'-0"		7'-0"	1 3/4"	WD	N2	GL-11	1	HM	F1	A2 / A-601	A2 / A-601		NR	
253		3'-0"		7'-0"	1 3/4"	WD	N2	GL-11	1	HM	F1	A2 / A-601	A2 / A-601		NR	
254		3'-0"		7'-0"	1 3/4"	WD	N2	GL-11	1	HM	F1	A2 / A-601	A2 / A-601		NR	
255		3'-0"		7'-0"	1 3/4"	WD	N2	GL-11	1	HM	F1	A2 / A-601	A2 / A-601		NR	
256		3'-0"		7'-0"	1 3/4"	WD	N2	GL-11	1	HM	F1	A2 / A-601	A2 / A-601		NR	
261		3'-0"		7'-0"	1 3/4"	WD	N2	GL-11	1	HM	F1	A2 / A-601	A2 / A-601		NR	
263		3'-0"		7'-0"	1 3/4"	WD	N2	GL-11	1	HM	F1	A2 / A-601	A2 / A-601		NR	



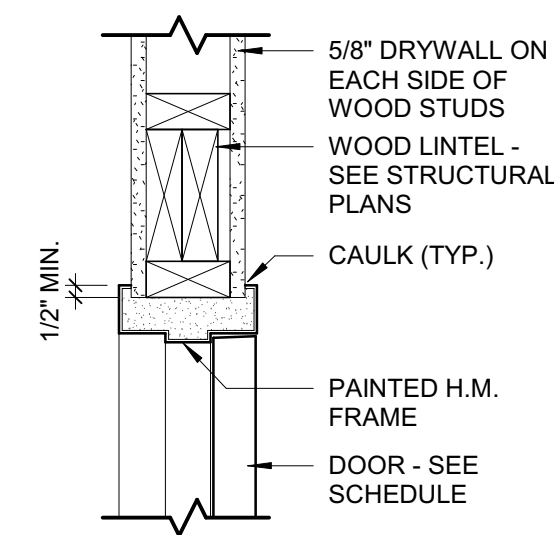
### DOOR PANEL LEGEND

1/4" = 1'-0"

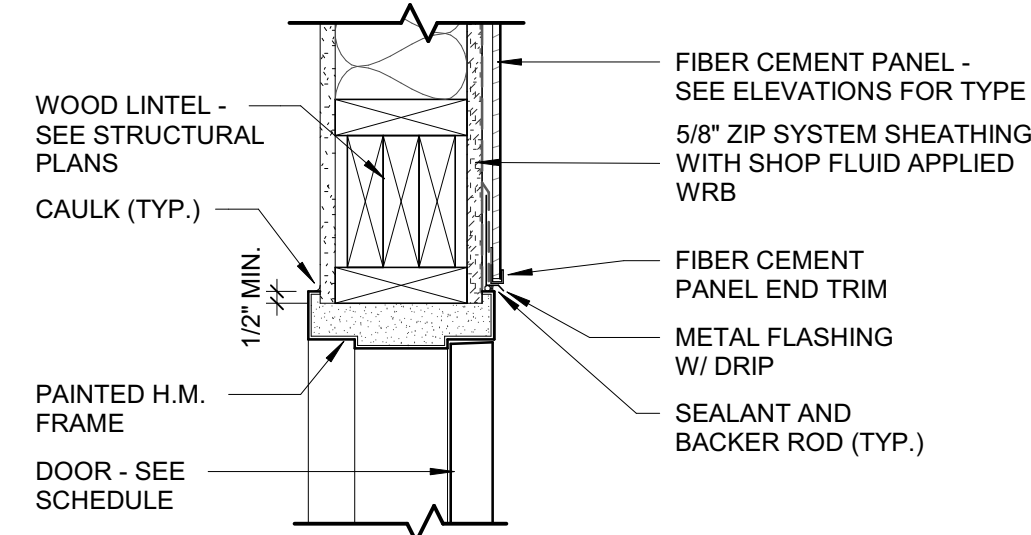


### DOOR FRAME LEGEND

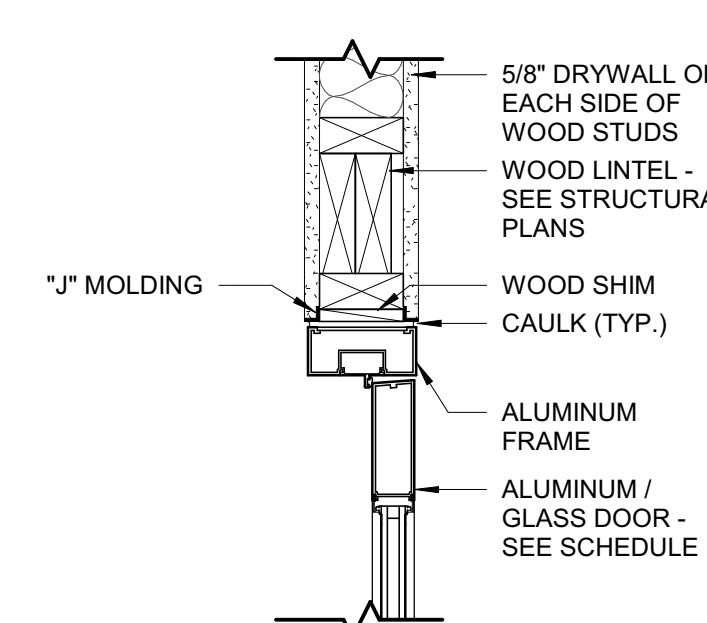
1/4" = 1'-0"



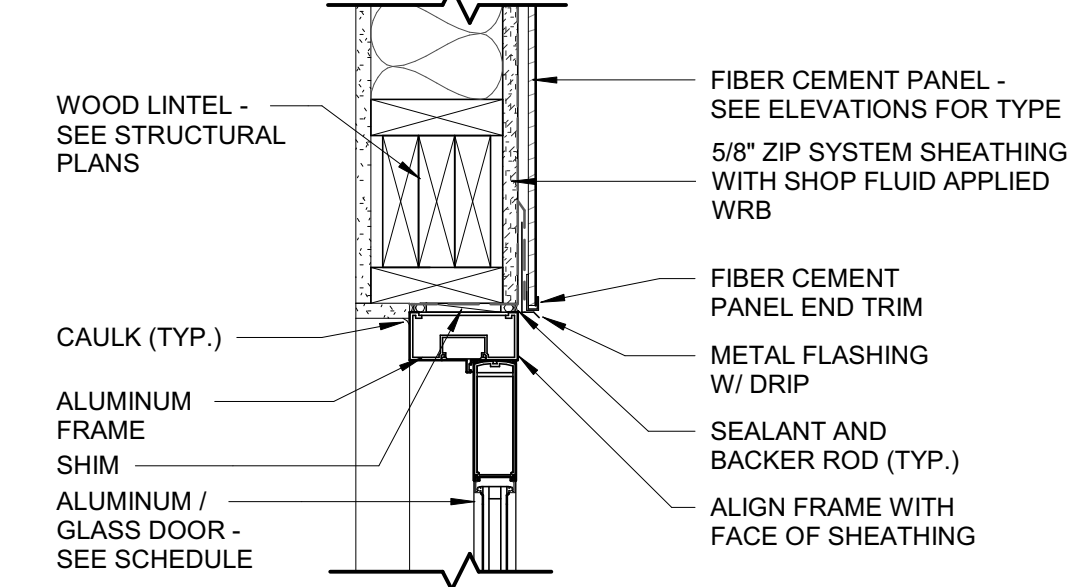
HEAD DETAIL



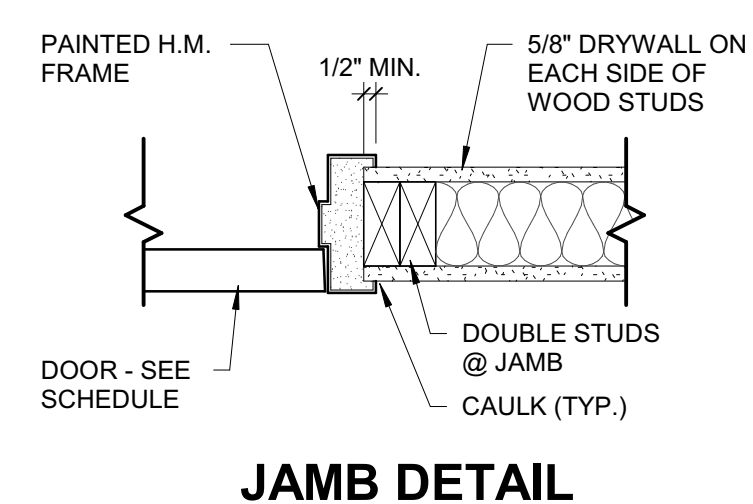
HEAD DETAIL



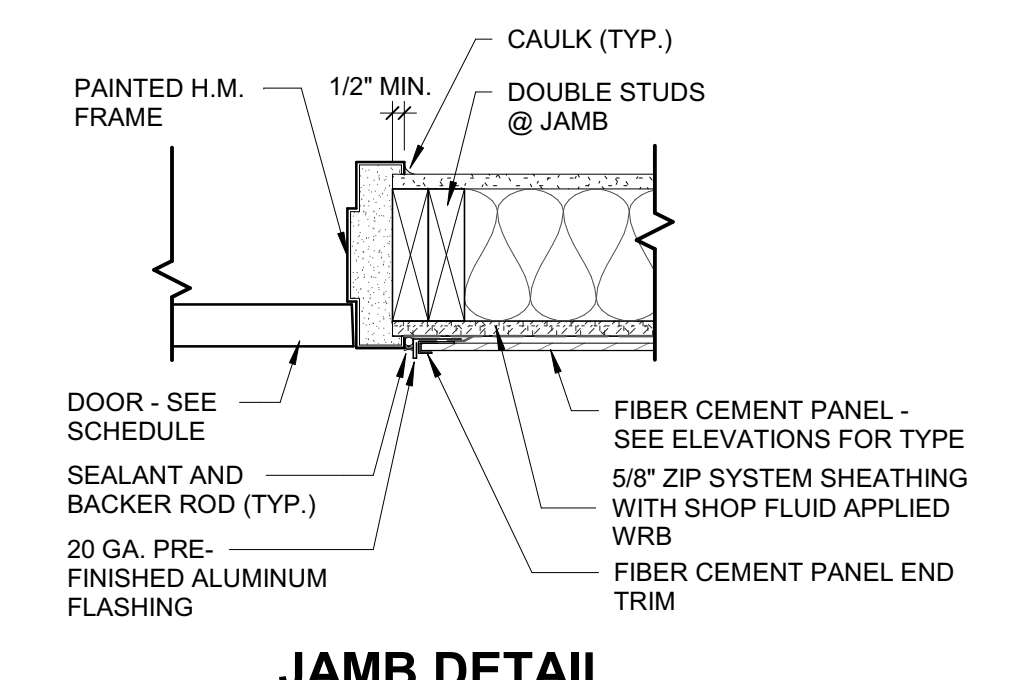
HEAD DETAIL



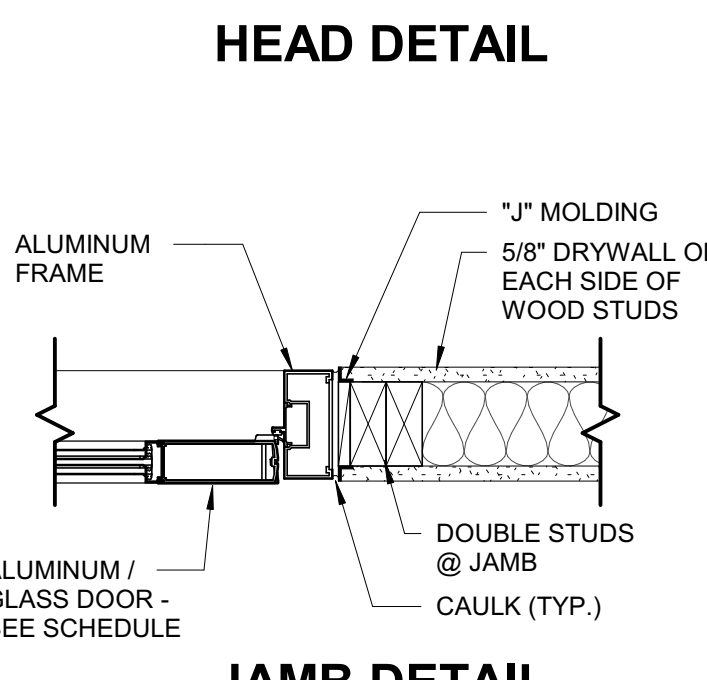
HEAD DETAIL



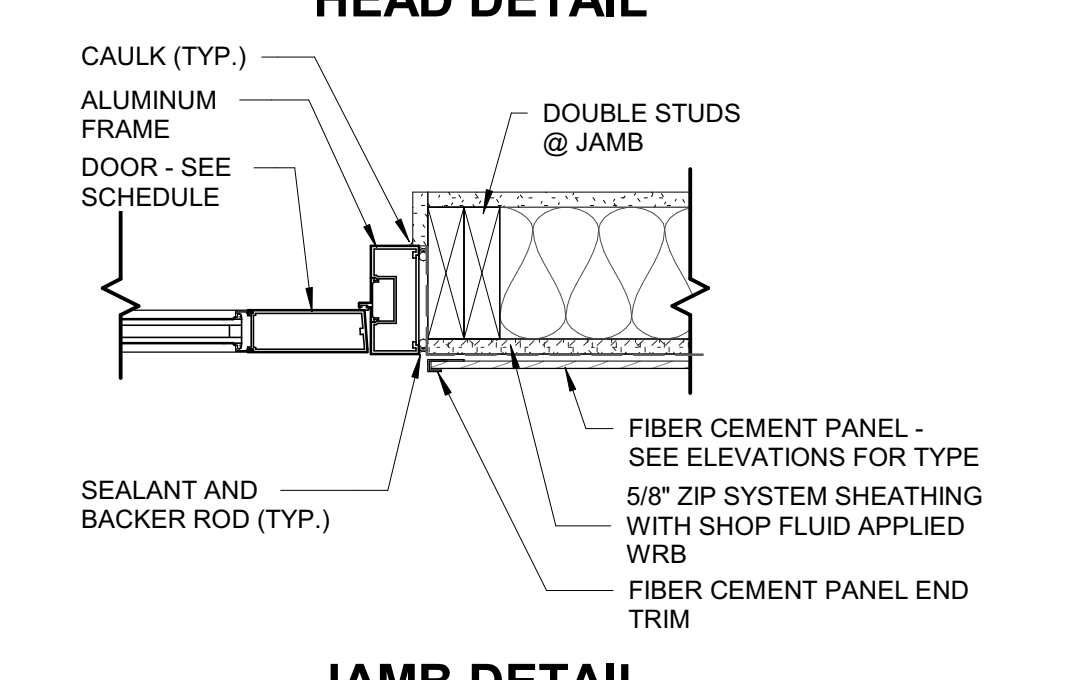
JAMB DETAIL



JAMB DETAIL



JAMB DETAIL



JAMB DETAIL

**A2**  
A-601  
INTERIOR WOOD STUD / HM FRAME  
1 1/2" = 1'-0"

**A3**  
A-601  
EXTERIOR WOOD STUD / HM FRAME  
1 1/2" = 1'-0"

**A5**  
A-601  
INTERIOR WOOD STUD / ALUM FRAME  
1 1/2" = 1'-0"

**A6**  
A-601  
EXTERIOR WOOD STUD / ALUM FRAME  
1 1/2" = 1'-0"

SEAL | DATE 2/24/2021 | CODE CERT. I HEREBY CERTIFY THAT THE BUILDING CODE SUMMARY COMPLETED ON THIS PAGE IS ACCURATE FOR THE TYPE OF BUILDING AND OCCUPANCY INTENDED FOR THIS PROJECT AND THAT THESE PLANS ARE COMPLETE AND COMPLY WITH ALL APPLICABLE STATE AND LOCAL BUILDING REGULATIONS



SHEET ISSUE  
1 100% Construction Documents 2/24/2021

**RATIO**  
PROJECT NO. 20408.000  
SHEET TITLE  
**DOOR SCHEDULE AND DETAILS**  
SHEET NUMBER  
**A-601**



## FINISH SCHEDULE

CT-01

LOCATION	FINISH TYPE	TAG	MANUFACTURER	FINISH DESCRIPTION					INSTALL NOTES	COMMENTS
				STYLE	SIZE	PRODUCT NUMBER	COLOR			
WALL	PAINT	PT-01	SHERWIN WILLIAMS	PER SPECIFICATION	N/A		SW7063 NEBULOUS WHITE			
CEILING	PAINT	PT-02	SHERWIN WILLIAMS	PER SPECIFICATION	N/A		SW7007 CEILING BRIGHT WHITE			CEILING PAINTED STRUCTURE/DRYWALL
GAURDRAILS AND HANDRAILS	EPOXY PAINT	PT-03	SHERWIN WILLIAMS	PER SPECIFICATION	N/A		SW6531 INDIGO			GAURDRAILS AND HANDRAILS
HOLLOW METAL DOORS AND FRAMES	EPOXY PAINT	PT-04	SHERWIN WILLIAMS	PER SPECIFICATION, SEMI-GLOSS	N/A		SW6321 RED BAY			HOLLOW METAL DOORS AND FRAMES
WALL	CERAMIC TILE	CTB-01	DALTILE	BRIGHT GLAZED CERAMIC WALL	4 1/4" X 4 1/4"	A-3401, ACR/L-3401, SCR/L-3401	0042 LIGHT SMOKE	BOTTOM COURSE COVE BASE		
WALL	CERAMIC TILE	CTB-02	DALTILE	BRIGHT GLAZED CERAMIC WALL	4 1/4" X 4 1/4"	A-3401, ACR/L-3401, SCR/L-3401	0121 RUBY RED	BOTTOM COURSE COVE BASE		GIRLS/WOMENS RESTROOMS
WALL	CERAMIC TILE	CTB-03	DALTILE	BRIGHT GLAZED CERAMIC WALL	4 1/4" X 4 1/4"	A-3401, ACR/L-3401, SCR/L-3401	A0070 SAPPHIRE SKY	BOTTOM COURSE COVE BASE		BOYS/MENS RESTROOMS
WALL	CERAMIC TILE	CWT-01	DALTILE	BRIGHT GLAZED CERAMIC WALL	4 1/4" X 4 1/4"		0091 BISCUIT			WALL FIELD TILE
WALL	CERAMIC TILE	CWT-02	DALTILE	BRIGHT GLAZED CERAMIC WALL	4 1/4" X 4 1/4"		0042 LIGHT SMOKE			
WALL	CERAMIC TILE	CWT-03	DALTILE	BRIGHT GLAZED CERAMIC WALL	4 1/4" X 4 1/4"		0121 RUBY RED	TOP COURSE BULLNOSE TILE,S-4449,SCR/L-4449		GIRLS/WOMENS RESTROOMS
WALL	CERAMIC TILE	CWT-04	DALTILE	BRIGHT GLAZED CERAMIC WALL	4 1/4" X 4 1/4"		0070 SAPHIRE SKY	TOP COURSE BULLNOSE TILE,S-4449,SCR/L-4449		BOYS/MENS RESTROOMS
BASE	WALL BASE-RUBBER	RB-01	JOHNSONITE	ROLLED GOODS, COVE	4"H		#18 NAVY BLUE			
FLOOR	CARPET TILE	CPT-01	PATCRAFT	EXPERIENCE MODERN	2x2		0042S SOLUTION (BLUE)			
FLOOR	PORCELAIN TILE	CT-01	DALTILE	KEYSTONES	2"x2"		D037 PEPPER WHITE			FLOOR FIELD TILE
FLOOR	PORCELAIN TILE	CT-02	DALTILE	KEYSTONES	2"x2"		D208 SUEDE GRAY SPECKLE			FLOOR ACCENT TILE "A"
FLOOR	PORCELAIN TILE	CT-03	DALTILE	KEYSTONES	2"x2"		D209 NAVY SPECKLE			FLOOR ACCENT TILE "B"
FLOOR	LUXURY VINYL TILE	LVT-01	PATCRAFT	STRATIFIED 20 MIL	6" X 24"		00500 FROST			FIELD TILE
FLOOR	LUXURY VINYL TILE	LVT-02	PATCRAFT	STRATIFIED 20 MIL	6" X 24"		00880 GARNET (RED)			ACCENT TILE "A"
FLOOR	LUXURY VINYL TILE	LVT-03	PATCRAFT	STRATIFIED 20 MIL	6" X 24"		00480 SAPPHIRE (BLUE)			ACCENT TILE "B"
FLOOR	SEALED CONCRETE	SC		ENVIROSEAL 20						
CEILING	ACOUSTICAL CEILING	ACT-01	USG		24"X48"X3/4"	2410 RADAR PLUS	FLAT WHITE			
MILLWORK/ CASEWORK	HIGH DENSITY POLYETHYLENE	HDPE-01	HINY HIDERS				LINEN			RESTROOM COUNTERTOPS
MILLWORK/ CASEWORK	HIGH DENSITY POLYETHYLENE	HDPE-02	HINY HIDERS				BLUEBERRY			TOILET PARTITIONS
MILLWORK/ CASEWORK	PLASTIC LAMINATE	PL-01	WILSONART				4942-38 CRISP LINEN			COUNTERTOPS
MILLWORK/ CASEWORK	PLASTIC LAMINATE	PL-02	WILSONART				4879-38 STEEL MESH			WINDOW SILLS, CABINET FACES

**Carolina Charter Academy Exp.**  
8529 Highway 55  
Angier, North Carolina 27501

**Owner**  
Highmark School Development

746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

**Architect**

RATIO  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

**Structural Engineer**

Lynch Mykins Structural Engineers, PC

301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-782-1833

**Civil Engineer**

Timmons Group

5410 Trinity Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938

SEAL | DATE 2/24/2021



CODE CERT.  
I HEREBY CERTIFY  
THAT THE BUILDING  
CODE SUMMARY  
COMPLETED ON  
THIS PAGE IS  
ACCURATE FOR THE  
TYPE OF BUILDING  
AND OCCUPANCY  
INTENDED FOR THIS  
PROJECT AND THAT  
THESE PLANS ARE  
COMPLETE AND  
COMPLY WITH ALL  
APPLICABLE STATE  
AND LOCAL  
BUILDING  
REGULATIONS

SHEET ISSUE

1	100% Construction Documents	2/24/2021
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PROJECT NO. 20408.000

SHEET TITLE  
**FINISH SCHEDULE**

SHEET NUMBER

**A-650**



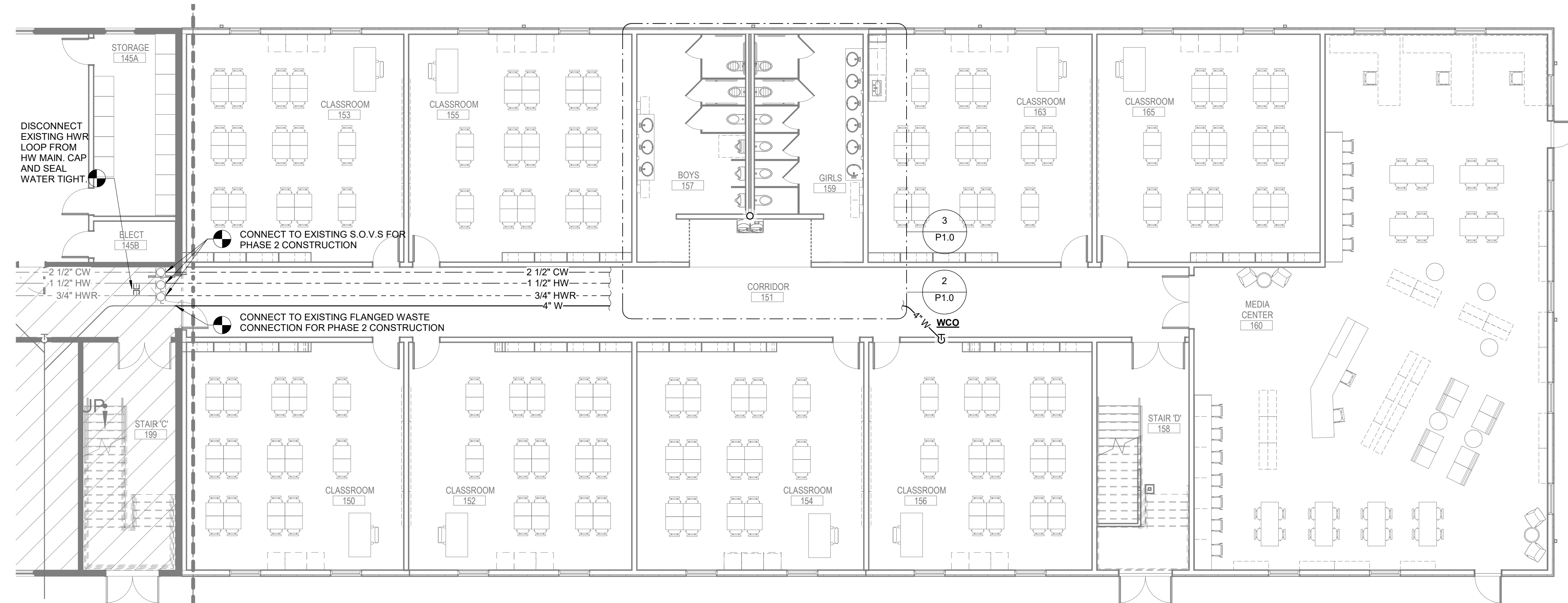
**Carolina Charter Academy Exp.**  
 8529 Highway 55  
 Angier, North Carolina 27501

**Owner**  
**Highmark School Development**  
 746 East Winchester Street  
 Suite 150  
 Murray, Utah 84107  
 801-256-9550

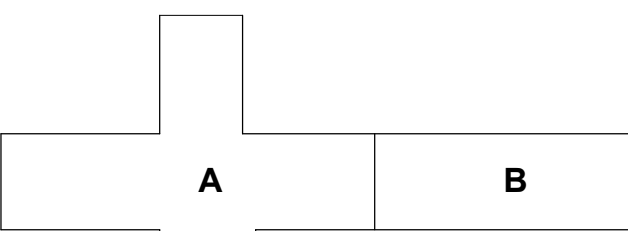
**Architect**  
**RATIO**  
 227 Fayetteville Street, Suite 301  
 Raleigh, North Carolina 27601  
 919-821-0805

**Structural Engineer**  
**Lynch Mykins Structural Engineers, PC**  
 301 North West Street  
 Suite 105  
 Raleigh, North Carolina 27603  
 919-782-1833

**Civil Engineer**  
**Timmons Group**  
 5410 Trinity Road  
 Suite 102  
 Raleigh, North Carolina 27607  
 919-866-4938



1 LEVEL 1 - PLUMBING PLAN - AREA B  
 P1.0 1/8" = 1'-0"



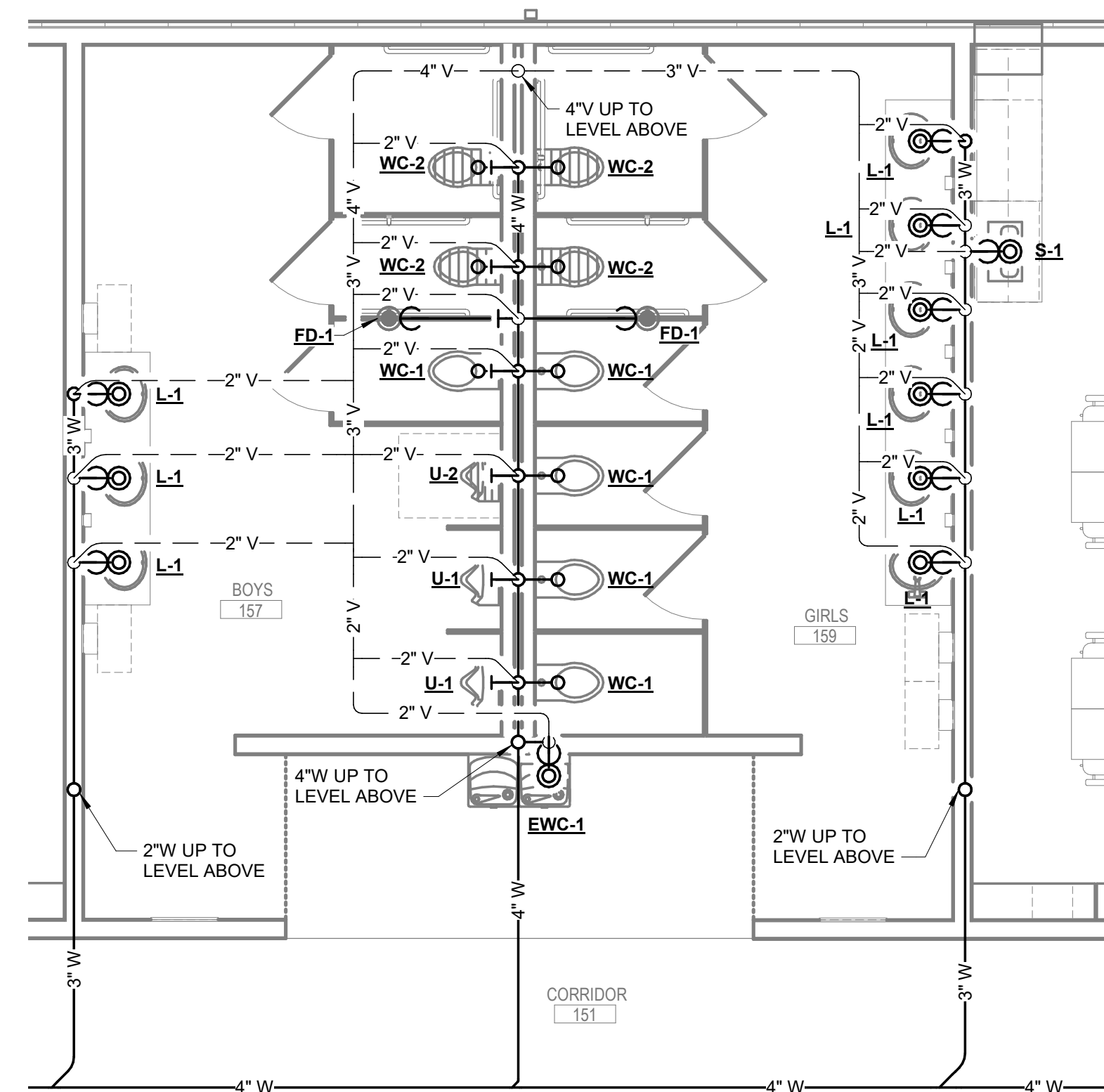
KEY PLAN

SEAL | DATE

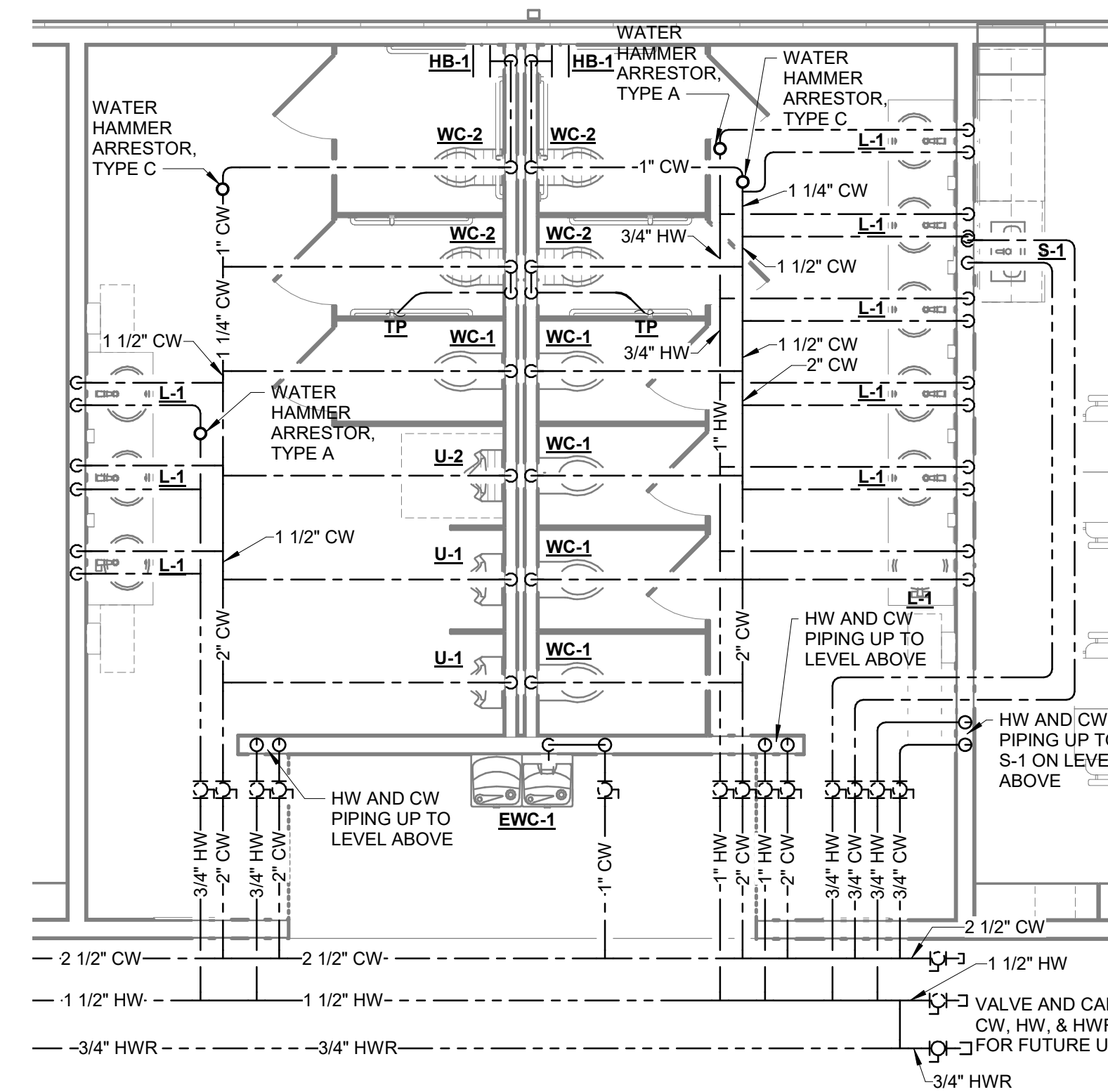


SHEET ISSUE

NO.	DESCRIPTION	DATE
1	PERMIT SUBMITTAL	02/22/21



2 LEVEL 1 - ENLARGED DRAINAGE PLAN  
 P1.0 1/4" = 1'-0"



3 LEVEL 1 - ENLARGED SUPPLY PLAN  
 P1.0 1/4" = 1'-0"



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PROJECT NO. 20408.000

SHEET TITLE  
**PLUMBING PLAN - LEVEL 1**

SHEET NUMBER

**P1.0**

**peak systems engineering**

1513 WALNUT ST.  
 SUITE 250  
 CARY, NC 27511  
 LICENSE NO: #C-4704  
 PROJECT NO: 121006

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746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

**Architect**

**RATIO**

227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

**Structural Engineer**

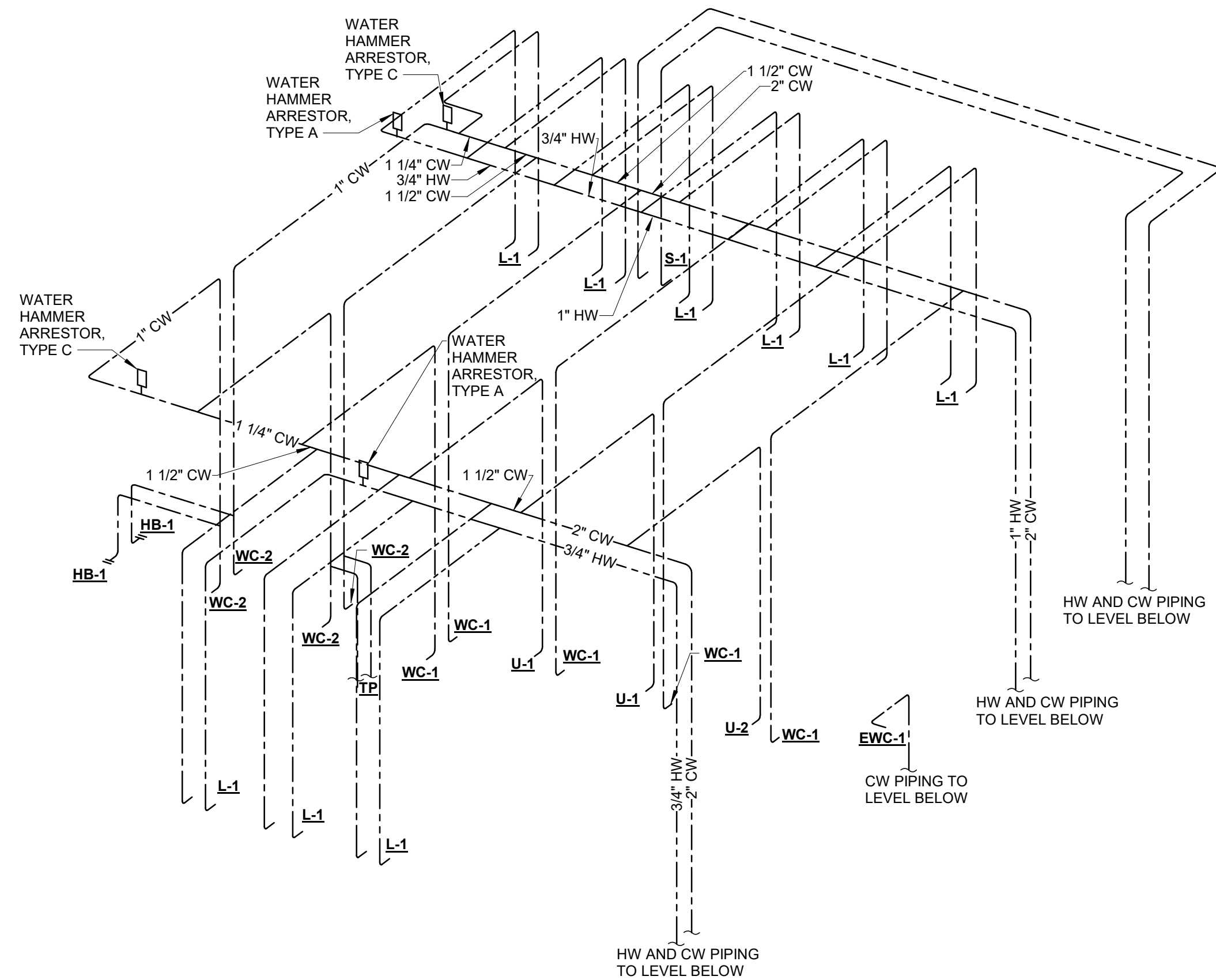
**Lynch Mykins Structural Engineers, PC**

301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-782-1833

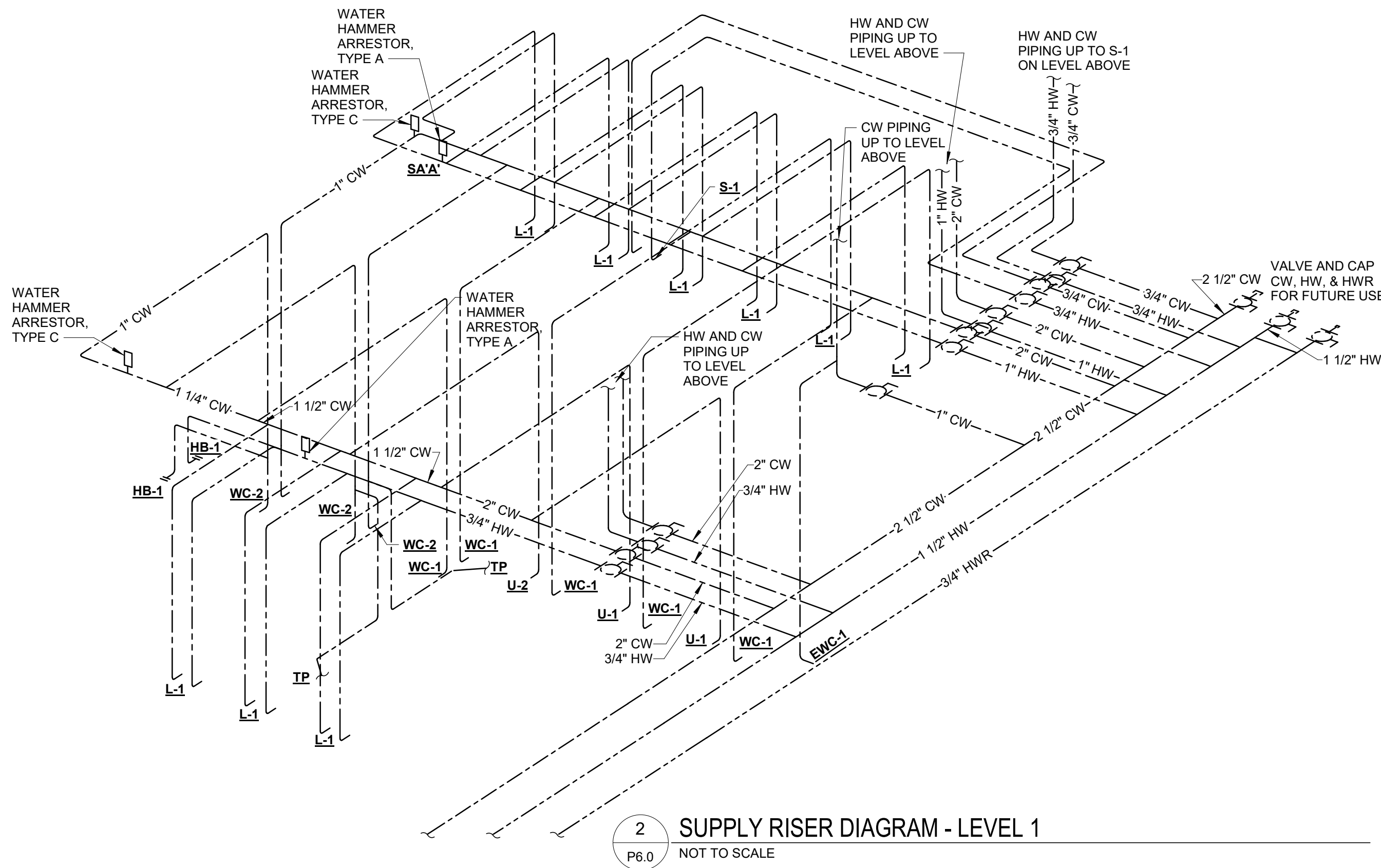
**Civil Engineer**

**Timmons Group**

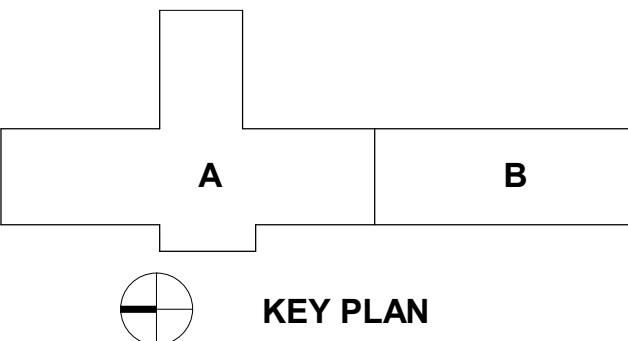
5410 Trinity Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938



**1 SUPPLY RISER DIAGRAM - LEVEL 2**  
P6.0 NOT TO SCALE



**2 SUPPLY RISER DIAGRAM - LEVEL 1**  
P6.0 NOT TO SCALE



SEAL | DATE



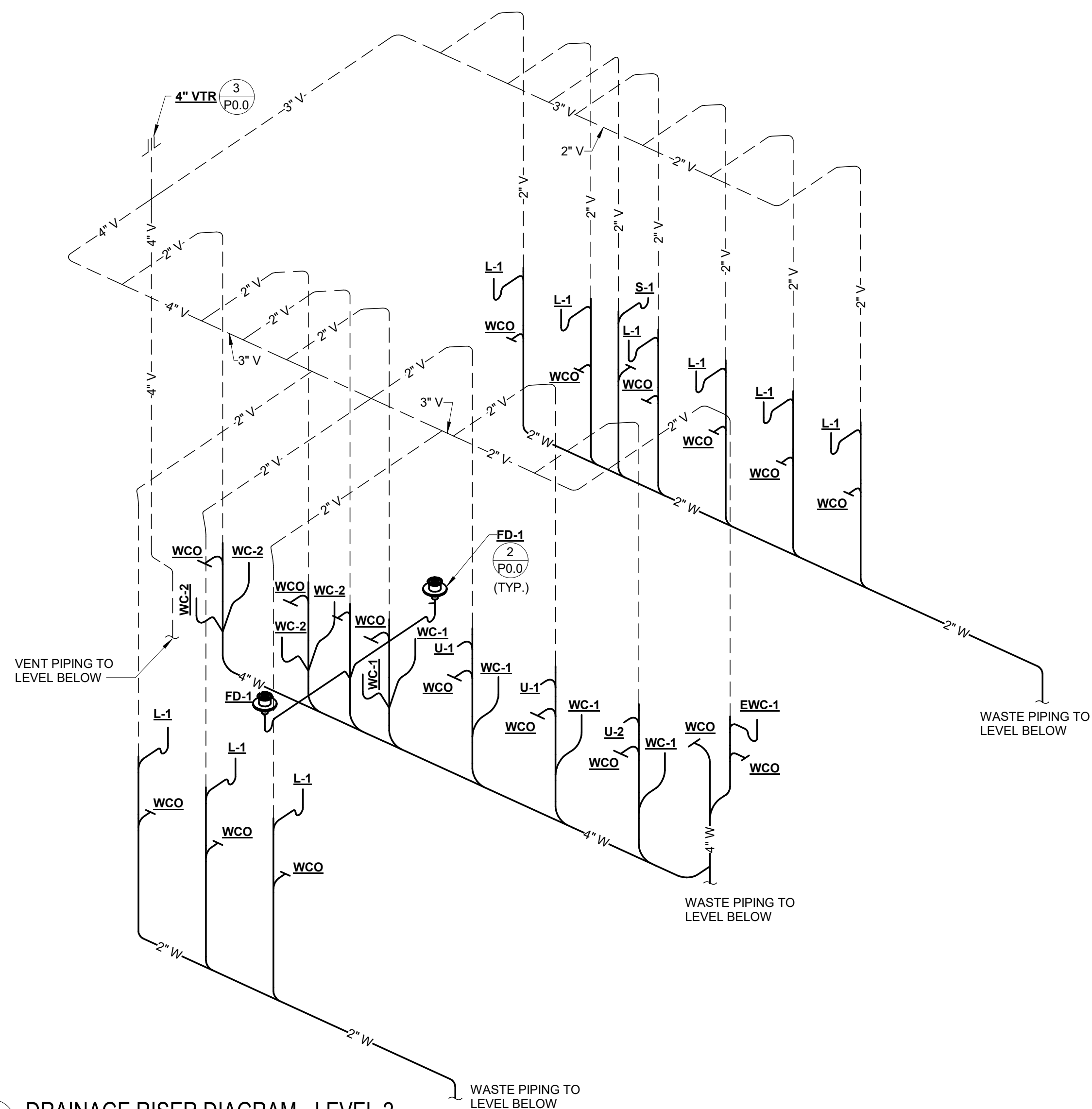
SHEET ISSUE

NO.	DESCRIPTION	DATE
1	PERMIT SUBMITTAL	02/22/21

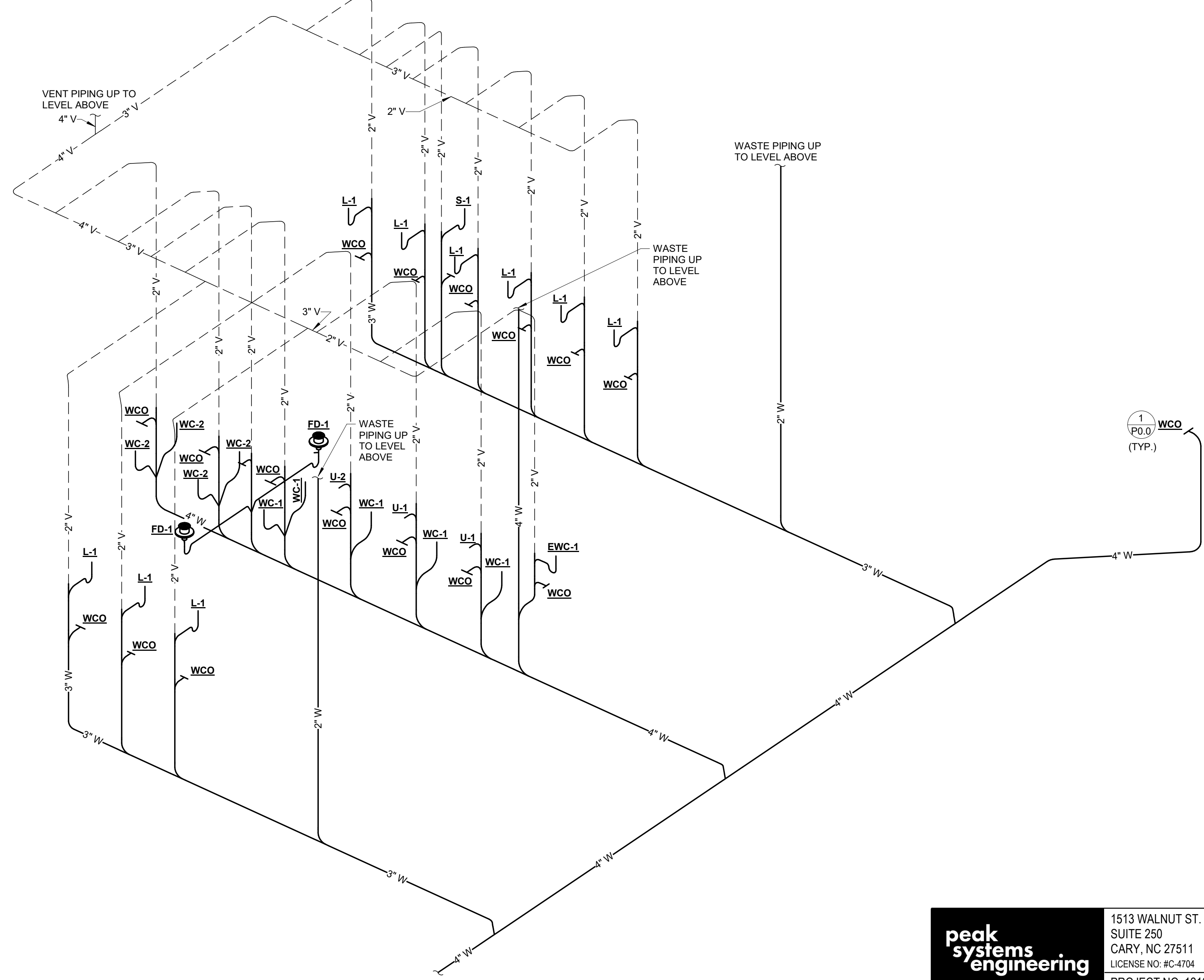
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PROJECT NO. 20408.000

SHEET TITLE  
**PLUMBING RISER DIAGRAMS**



**3 DRAINAGE RISER DIAGRAM - LEVEL 2**  
P6.0 NOT TO SCALE



**4 DRAINAGE RISER DIAGRAM - LEVEL 1**  
P6.0 NOT TO SCALE

1513 WALNUT ST.  
SUITE 250  
CARY, NC 27511  
LICENSE NO: #C-4704  
PROJECT NO: 121006

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SHEET NUMBER

**P6.0**



ROBERT BOUKNIGHT, PE  
 1507 TALBOT RD  
 PLEASANT  
 GARDEN, NC 27313  
 336-420-2686  
 RKB@RKBENG.COM

**GENERAL MECHANICAL NOTES:**

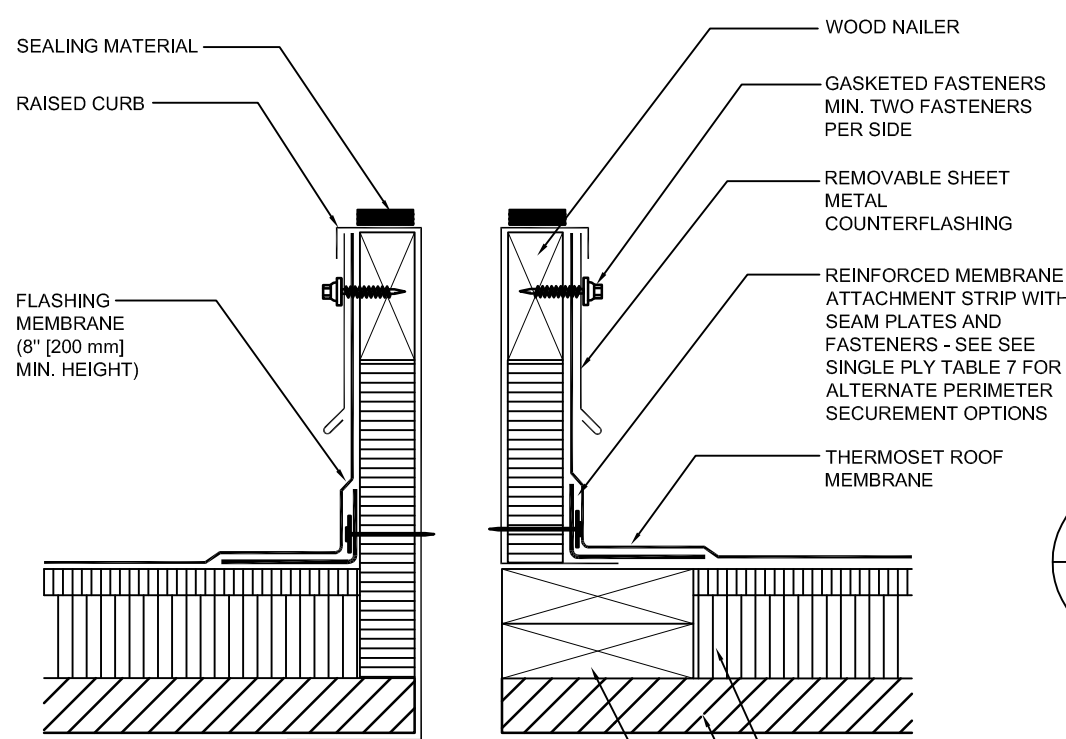
1. ALL PIPING PENETRATIONS THRU SMOKE AND FIRE WALLS SHALL BE SEALED WITH APPROPRIATE UL RATED/LISTED SEALANT.
2. ALL OUTSIDE AIR INTAKES SHALL BE LOCATED 10'-0" MIN. FROM ANY VENT/EXHAUST TERMINAL.
3. BRANCH DUCT CONNECTION TO DIFFUSER OR GRILLE MAY HAVE 7'-0" LONG MAX. FLEX DUCT CONNECTOR
4. COORDINATE DUCTWORK AND PIPING INSTALLATIONS WITH BUILDING ELEMENTS AND OTHER TRADES. DUCT AND PIPING ROUTING ON PLANS ARE DIAGRAMATIC. ADDITIONAL DUCTWORK AND OFFSETS MAY BE REQUIRED TO INSTALL DUCTWORK AND PIPING IN ACTUAL FIELD CONDITIONS. MAINTAIN MANUFACTURERS SERVICE CLEARANCES FOR ALL EQUIPMENT.
5. PROVIDE TEST AND BALANCE. BALANCE ALL FAN AND AIR CONDITIONING SYSTEM TO CFM'S INDICATED ON PLANS. PROVIDE NEW SHEAVES AS REQ'D. & FURNISH BALANCE REPORT TO ENGINEER. PROVIDE "COMFORT BALANCE" TO AIRFLOWS TO ACCOMMODATE OCCUPANT COMFORT AFTER OCCUPANCY.
6. INSULATE ALL INDOOR SUPPLY DUCTWORK WITH 2.2" FG BLANKET WITH SEALED FSK VAPOR BARRIER.
7. BLANK OFF OPENINGS WHERE DUCTS TRAVEL DOWN TO FIRST LEVEL WITH SHEET METAL AND MINERAL WOOL AT SECOND FLOOR LEVEL.

**PACKAGE ROOFTOP SCHEDULE**

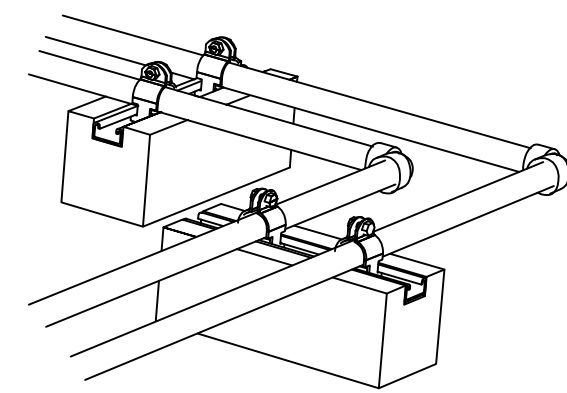
TAG	SUPPLY FAN				MIN. O/A	COOLING COIL			HEATING SECTION			UNIT			MANUF./MODEL	REMARKS	WEIGHTS (APPX)
	CFM	ESP (IN. H <sub>2</sub> O)	BHP	RPM		TOT MBH (MIN)	SENS MBH (MIN)	COIL EAT DB/WB (°F)	TOT MBH INPUT	TOT MBH OUTPUT	COIL EAT DB (°F)	VOLTAGE	MCA	MOP			
RTU-1-1	1841	1	X	X	400	60	48	80/67	60	49	60	480/3P	12	15	TRANE	1-B	1200
RTU-1-2	1841	1	X	X	400	60	48	80/67	60	49	60	480/3P	12	15		1-B	1200
RTU-1-3	1853	1	X	X	400	60	48	80/67	60	49	60	480/3P	12	15		1-B	1200
RTU-1-4	1840	1	X	X	400	60	48	80/67	60	49	60	480/3P	12	15		1-B	1200
RTU-1-5	3496	1	X	X	425	120	90		120	96	60	480/3P	22	25		1-B	1600
RTU-2-1	2277	1	X	X	430	72	58	80/67	80	64	60	480/3P	15	20		1-B	1400
RTU-2-2	2277	1	X	X	430	72	58	80/67	80	64	60	480/3P	15	20		1-B	1400
RTU-1-1	1947	1	X	X	400	60	48	80/67	60	49	60	480/3P	12	15		1-B	1200
RTU-1-1	1997	1	X	X	400	60	48	80/67	60	49	60	480/3P	12	15		1-B	1200

**REMARKS / ACCESSORIES**

1. PROVIDE INTEGRATED HOT GAS REHEAT COIL AND DEHUMIDIFICATION CYCLE.
2. PROVIDE HUMIDITY SENSORS INTEGRAL TO PROGRAMMABLE THERMOSTATS.
3. PROVIDE NEW SHEAVES AS REQUIRED TO MEET REQUIRED AIRFLOW, CFM'S. PROVIDE TEST & BALANCE REPORT.
4. PROVIDE 30% 2" PLEATED FILTERS.
5. PROVIDE DDC INTERNAL CONTROLS AND PROGRAMMABLE THERMOSTATS. WHERE INDICATED, PROVIDE AN ADDITIONAL SENSOR AND AVERAGE TWO ROOMS.
6. PROVIDE ECONOMIZER WITH FAN POWERED RELIEF.
7. PROVIDE CO2 SENSOR, DEMAND CONTROL VENTILATION OA DAMPER OPERATION. SET OA AIRFLOW AT 75% OA CALCULATED ABOVE.
8. STOP OPERATION IF FIRE ALARM (SMOKE DETECTORS AND CO SENSORS BY EC) DETECTS PRODUCTS OF COMBUSTION OR CO



**3 ROOF PIPING SUPPORT**  
NOT TO SCALE



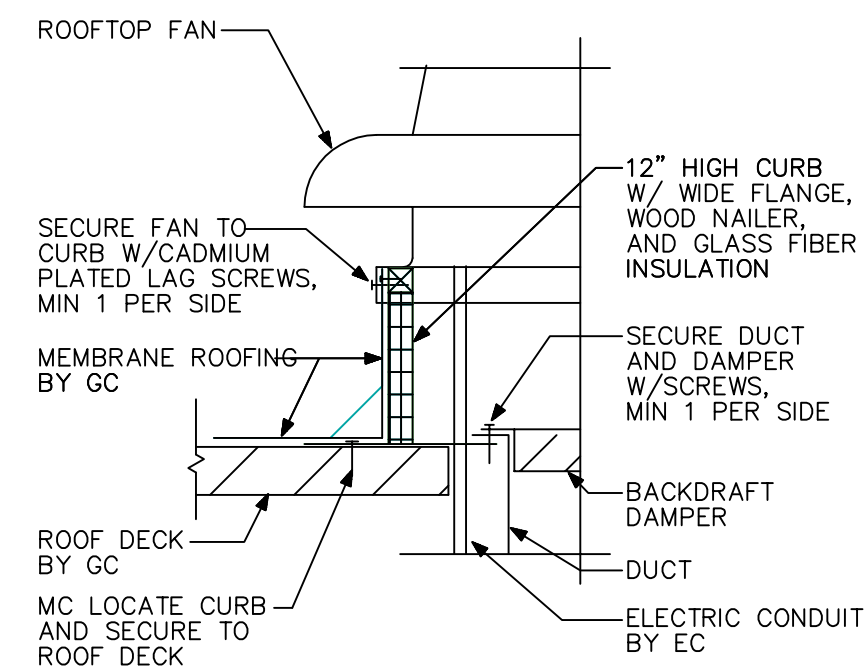
**RETURN SIZE SCHEDULE**

AIRFLOW RANGE, CFM	ROUND DUCT AND FLEX SIZE
8"	0-180
10"	181-280
12"	281-400
14"	401-580
16"	581-725
18"	726-925

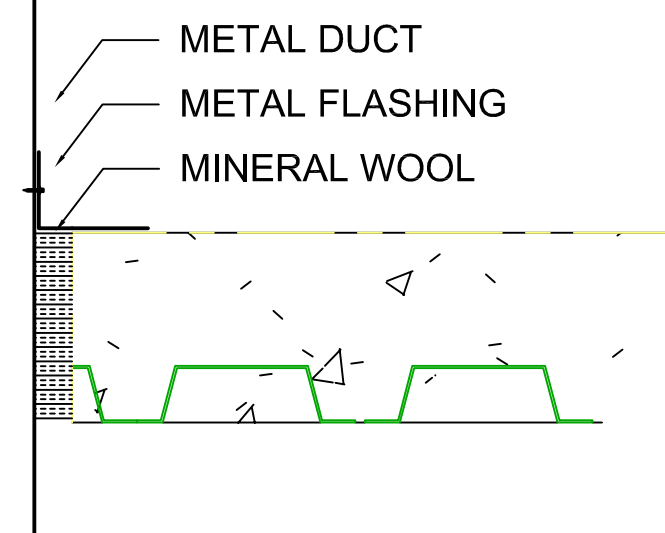
**AIR RUNOUT SCHEDULE**

AIRFLOW RANGE, CFM	ROUND DUCT AND FLEX SIZE
4"	0-40
5"	41-70
6"	71-120
7"	121-165
8"	166-225
10"	226-325
12"	326-500
14"	501-1000

SIZES ON PLANS SHEETS SUPERCEDE SCHEDULE. PROVIDE MULTIPLES IF NECESSARY FOR ROOM AIRFLOW.



**4 ROOF CURB DETAIL**  
NOT TO SCALE



**2 DUCT FLOOR PENETRATION**  
NOT TO SCALE

**FAN SCHEDULE**

TAG	SERVICE	TYPE	CFM	ESP (IN. H <sub>2</sub> O)	RPM	BHP	HP	MAX SOUND SONES	VOLTAGE	MANUFACTURER	MODEL	REMARKS
EF-1-1	BATH EXH	CEILING	300	.5	-	-	-	7	120/1P	GREENHECK	SP	2,3
EF-1-2	BATH EXH	CEILING	300	.5	-	-	-	7	120/1P	GREENHECK	SP	2,3
EF-1-2	BATH EXH	ROOF DB DD	600	.5	-	-	-	7	120/1P	GREENHECK	SP	1,3

1. PROVIDE CURB, INT. DISCONNECT, BIRD SCREEN, SPEED SWITCH, SS FASTENERS, BD DAMPER.
2. PROVIDE WITH SPEED SWITCH, BACKDRAFT DAMPER, WALL CAP.
3. CONTROL WITH TIME CLOCK.

**AIR TERMINAL SCHEDULE**

DEVICE	SYMBOL	MFG.	MODEL	DESCRIPTION	DAMPER	COLOR	REMARKS
CEILING DIFFUSER	HxW A-CFM ← NECK SIZE ← A-AIR FLOW	NAILOR	RNS	SQUARE, LOUVERED FACE, STEEL CONSTRUCTION, ROUND NECK ADAPTOR 24x24 T-BAR MTD., INSULATED TOP	NO	WHITE	1,2,3
RETURN AIR REGISTER	HxW B-CFM ← NECK SIZE ← B-AIR FLOW	NAILOR	4360	PREFORATED FACE RETURN REGISTER, STEEL CONSTRUCTION, REMOVABLE FACE, FOR 24x24 LAY-IN TBAR FRAME	NO	WHITE	1,3,4
SIDEWALL DIFFUSER	HxW C-CFM ← NECK SIZE ← C-AIR FLOW	NAILOR	51DH	RECTANGLE SIDEWALL TYPE, STEEL CONSTRUCTION WITH ADAPTOR DOUBLE DEFLECTION, ADJUSTABLE	NO	WHITE	
RETURN SIDEWALL DIFFUSER	HxW D-CFM ← NECK SIZE ← D-AIR FLOW	NAILOR	6145	35° FIXED DEFLECTION, BLADES SPACED AT 3/4". STEEL, RECTANGULAR NECK FLANGE FRAME, SEE PLANS FOR SIZES	NO	WHITE	
RND SUPPLY DIFFUSER	HxW E-CFM ← NECK SIZE ← E-AIR FLOW	NAILOR	RNR	ROUND CEILING DIFFUSER WITH OBD 24x24 CEILING, INSULATED TOP	NO	WHITE	
MODULATING DIFFUSER	HxW F-CFM ← NECK SIZE ← F-AIR FLOW	RICKARD	-	HEATING-COOLING MODULATING DIFFUSER WITH ACTION CHANGE OVER, HEAT MODULATION 24x24 CEILING, INSULATED TOP	NO	WHITE	

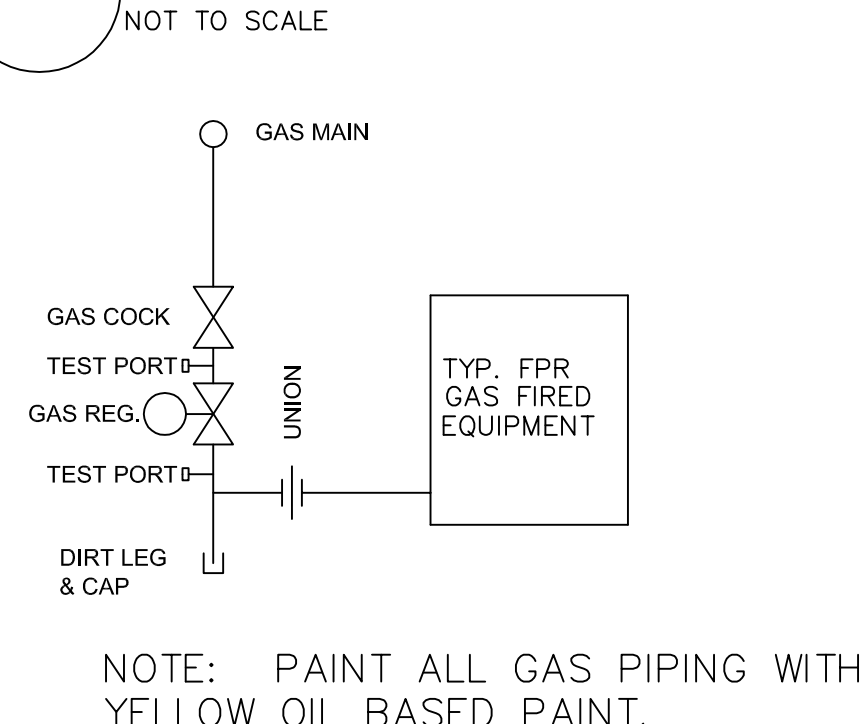
- REMARKS/ACCESSORIES:**
1. PROVIDE PLASTER FRAMES FOR DIFFUSERS MOUNTED IN HARD SURFACES
  2. ARROWS INDICATE DIFFUSERS OTHER THAN 4-WAY BLOW. PROVIDE DIFFUSERS WITH INDICATED BLOW DIRECTIONS.
  3. WHERE PLANS INDICATE, FURNISH 12x12 FACE SIZE DIFFUSERS.
  4. PROVIDE SOUND TRAP ELBOW FOR ALL PLENUM RETURN DIFFUSERS - TAG B

**SPLIT SYSTEM SCHEDULE**

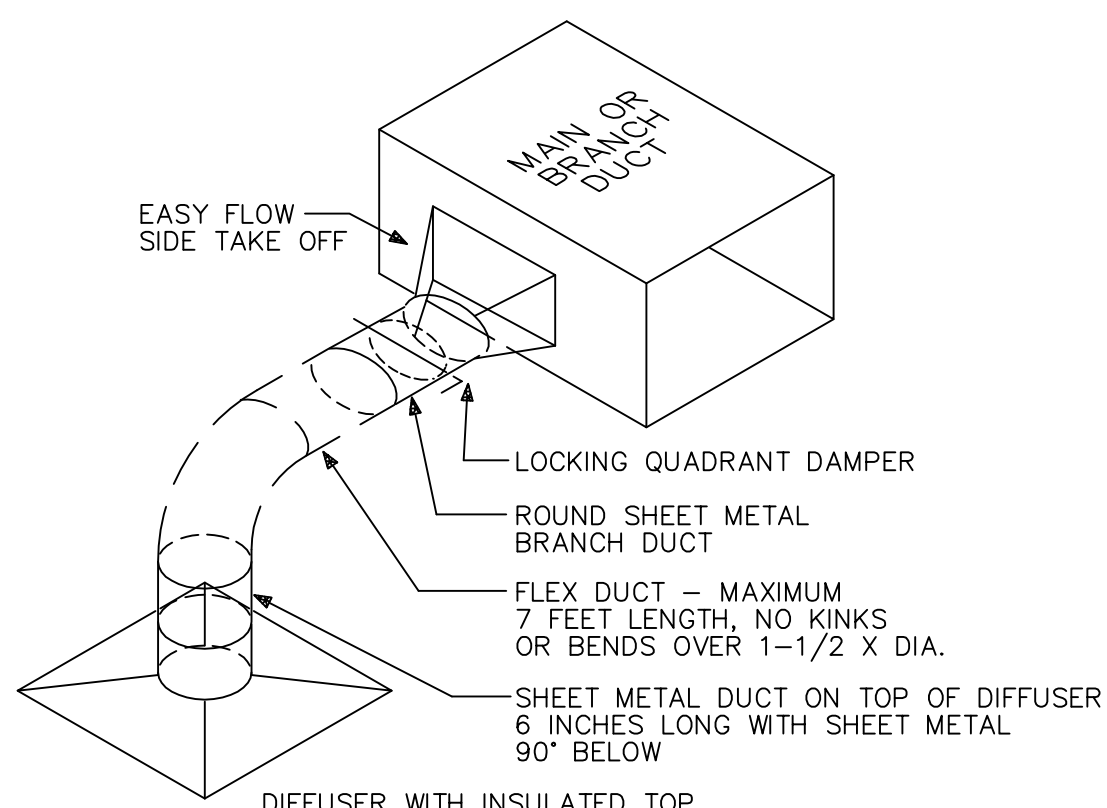
MARK	GENERAL DATA				COOLING CAPACITY				HEAT PUMP HEATING CAPACITY-NA					
	CFM TOTAL	CFM O.A.	SEER	COP	VOLTAGE	MCA	MOCP	TOTAL MBH	SENS. MBH	OAT °Fdb/Fwb	TOTAL BTH/H	OAT °Fdb	TOTAL BTH/H	OAT °Fdb
MS-1	350	--	18	2.9	208/1P	7	15	12	10	95/75	NA	47	NA	17

- REMARKS/ACCESSORIES:**
1. RUN LIQUID AND SUCTION LINES IN MOST INCONSPICUOUS ROUTE TO CONDENSING UNIT
  2. PROVIDE PROGRAMMABLE TSTATS BY UNIT MANUFACTURER, MOUNTED 54" TO 60" A.F.F. PROVIDE WIRING FROM INDOOR TO OUTDOOR UNIT.
  3. PROVIDE LOW AMBIENT OPERATION. FLOAT SWITCH TO STOP OPERATION IF CONDENSATE DRAIN FAILS. PROVIDE CONDENSATE PUMP

**5 FAN CURB DETAIL**



**5 FAN CURB DETAIL**  
NOT TO SCALE



**1 TYPICAL DIFFUSER DETAIL**  
NOT TO SCALE

**MECHANICAL TECHNOLOGIES & SOLUTIONS, LLC.**  
 700 Magheart Drive  
 Winston-Salem, NC 27107  
 Phone (336) 394-5166 Fax (336) 654-7112  
 www.mtsinc.com

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**REVISIONS**

REV. BY	DATE	DESCRIPTION

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**REVISIONS**

REV. BY	DATE	DESCRIPTION

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TITLE: CAROLINA CHARTER ACADEMY  
 2021 ADDITION  
 8529 NC-55  
 ANGIER, NC

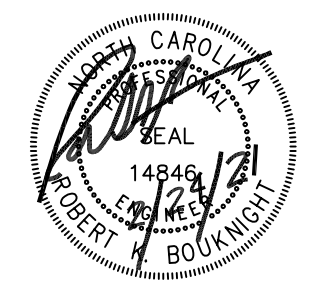
CUSTOMER: SWINERTON CONSTRUCTION

DESIGNED BY: RKB  
 DRAWN BY: RKB  
 CHECKED BY: RKB  
 APPROVED BY: RKB  
 DRAWING NUMBER: MO.1  
 SHEET NO.: [SCALE]

JOB NO.: [SCALE]

SCHEDULES/DETAILS

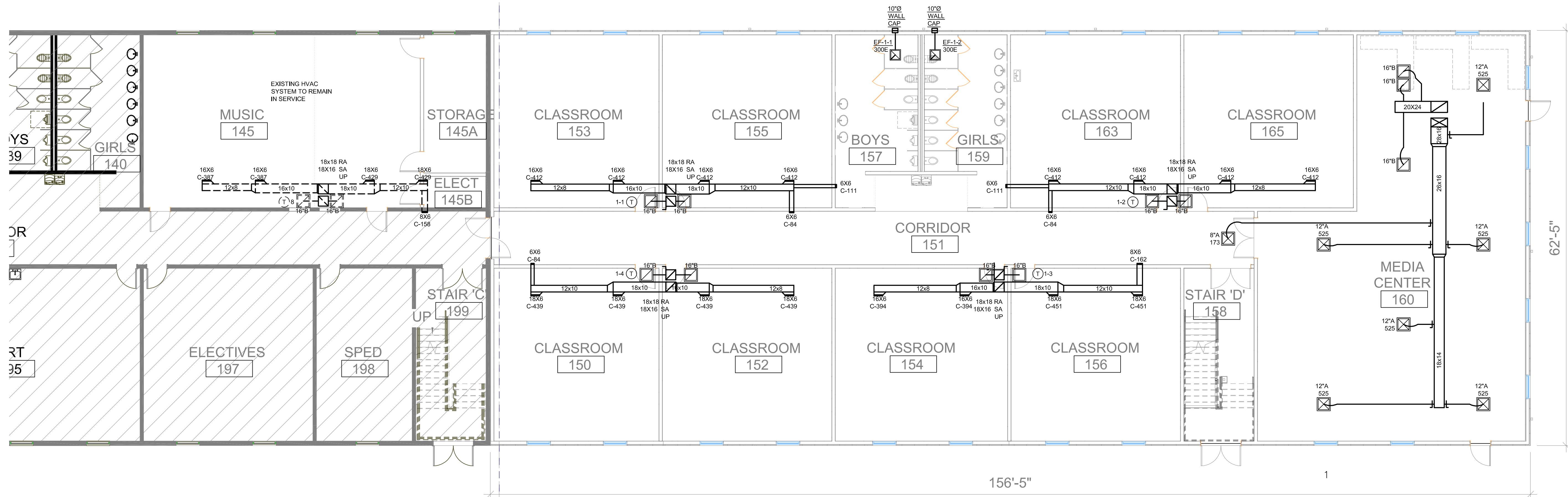
AREA A AREA B



ROBERT BOUKNIGHT, PE  
1507 TALBOT RD  
PLEASANT  
GARDEN, NC 27313  
336-420-2686  
RKB@RKBENG.COM

MECHANICAL TECHNOLOGIES &  
SOLUTIONS, LLC.  
700 McQueen Drive  
Winston-Salem, NC 27107  
Phone (336) 395-5166 Fax (336) 894-7712  
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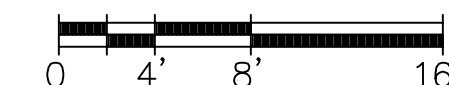
Zone Name / Space Name	Mult.	Supply Air (CFM)	Floor Area (ft <sup>2</sup> )	OA Floor Rate (CFM)	Timed Average Occupancy	People OA Rate (CFM/Person)	Air Dist. Eff. (Ez)	Space Required OA (CFM) Voz	Breathing Zone OA (CFM) Vz
<b>RTU-1-1</b>									
153 CLRM	1	823	650	0.12	26	10	0.8	423	338
155 CLRM(1)	1	823	650	0.12	26	10	0.8	423	338
157 BATH	1	111	288	0.06	1	0	0.8	22	17
1 CORRIDOR QUARTER(1)	1	84	250	0.06	1	0	0.8	19	15
Totals (incl. Space Multipliers)		1841							708
<b>RTU-1-2</b>									
163 CLRM(1)	1	823	650	0.12	26	10	0.8	423	338
165 CLRM(2)	1	823	650	0.12	26	10	0.8	423	338
157 BATH	1	111	288	0.06	1	0	0.8	22	17
1 CORRIDOR QUARTER(1)	1	84	250	0.06	1	0	0.8	19	15
Totals (incl. Space Multipliers)		1841							708
<b>RTU-1-3</b>									
154 CLRM(3)	1	788	650	0.12	26	10	0.8	423	338
156 CLRM(2)	1	902	650	0.12	26	10	0.8	423	338
158 STAIR HALF	1	162	150	0.06	1	0	0.8	11	9
Totals (incl. Space Multipliers)		1853							685
<b>RTU-1-4</b>									
150 CLRM(1)	1	878	650	0.12	26	10	0.8	423	338
152 CLRM(2)	1	878	650	0.12	26	10	0.8	423	338
1 CORRIDOR QUARTER(1)	1	84	250	0.06	1	0	0.8	19	15
Totals (incl. Space Multipliers)		1840							691
<b>RTU-1-5</b>									
Zone 1									
160 MEDIA	1	2789	2076	0.12	50	10	0.8	936	749
158 STAIR HALF	2	174	150	0.06	1	0	0.8	11	9
2 CORRIDOR QUARTER	2	180	250	0.06	1	0	0.8	19	15
Totals (incl. Space Multipliers)		3496							797



AREA A AREA B

**HVAC FIRST FLOOR PLAN**

SCALE 1/8" = 1'-0"



**REVISIONS**

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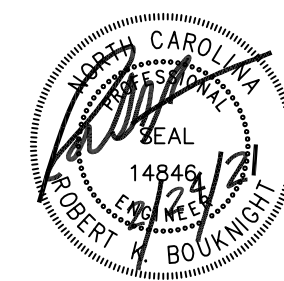
**REVISIONS**

REV. BY DATE DESCRIPTION

TITLE: CAROLINA CHARTER ACADEMY  
2021 ADDITION  
8529 NC-55  
ANGIER, NC  
CUSTOMER: SWINERTON CONSTRUCTION  
JOB No. SHEET No. SCALE

DESIGNED BY: RKB  
DRAWN BY: RKB  
CHECKED BY: RKB  
APPROVED BY: RKB  
DRAWING NUMBER: **M1.1A**  
HVAC 1ST LEV PLAN

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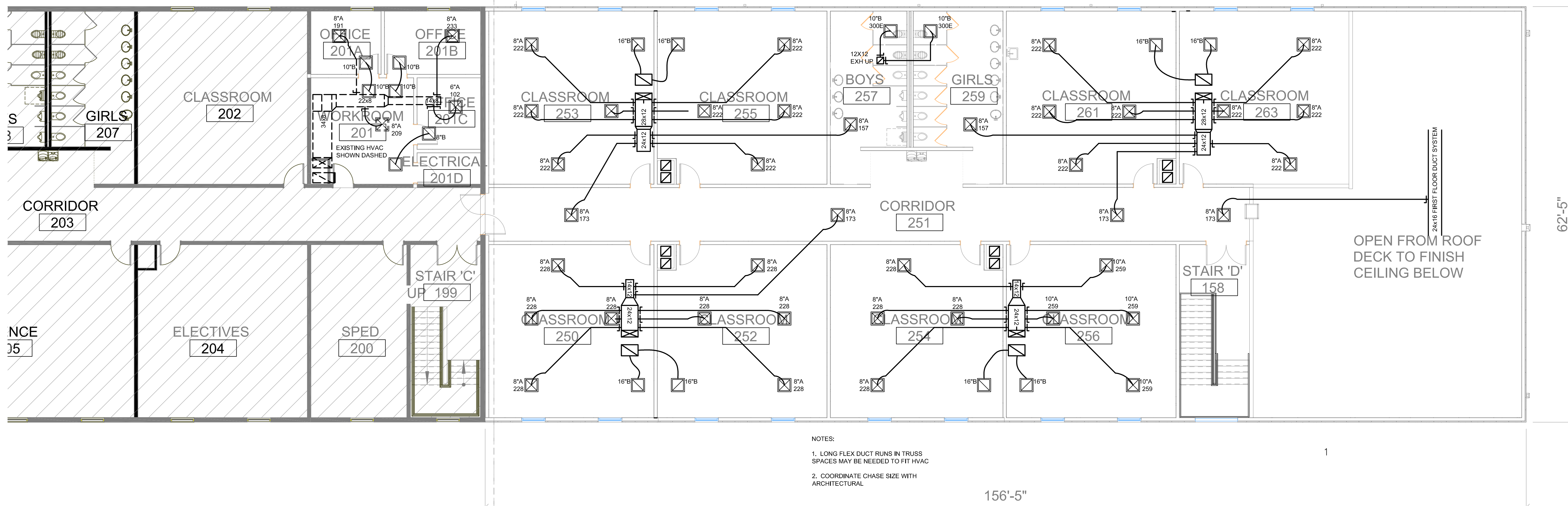


ROBERT BOUKNIGHT, PE  
 1507 TALBOT RD  
 PLEASANT  
 GARDEN, NC 27313  
 336-420-2686  
 RKB@RKBENG.COM

**MECHANICAL TECHNOLOGIES & SOLUTIONS, LLC.**  
 750 McGehee Drive  
 Winston-Salem, NC 27107  
 Phone (336) 395-5166 Fax (336) 894-7112  
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AREA A AREA B

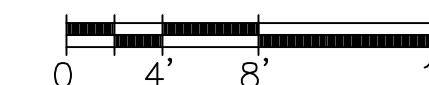
Zone Name / Space Name	Mult.	Supply Air	Floor Area	OA Floor	Timed	People OA	Air Dist Eff.	Space	Breathing
		(CFM)	(ft <sup>2</sup> )	Rate (CFM)	Average Occupancy	Rate (CFM/Person)	(Ez)	Required OA (CFM) Voz	Zone OA (CFM) Vbz
<b>RTU-2-1</b>									
253 CLRM(1)	1	887	650	0.12	26	10	0.8	423	338
255 CLRM(2)	1	887	650	0.12	26	10	0.8	423	338
257 BATH(1)	1	157	288	0.06	1	0	0.8	22	17
2 CORRIDOR QUARTER	2	173	250	0.06	1	0	0.8	19	15
Totals (incl. Space Multipliers)		2277							723
<b>RTU-2-2</b>									
261 CLRM(3)	1	887	650	0.12	26	10	0.8	423	338
263 CLRM(4)	1	887	650	0.12	26	10	0.8	423	338
257 BATH(1)	1	157	288	0.06	1	0	0.8	22	17
2 CORRIDOR QUARTER	2	173	250	0.06	1	0	0.8	19	15
Totals (incl. Space Multipliers)		2277							723
<b>RTU-2-3</b>									
254 CLRM(4)	1	912	650	0.12	26	10	0.8	423	338
256 CLRM(5)	1	1035	650	0.12	26	10	0.8	423	338
Totals (incl. Space Multipliers)		1947							676
<b>RTU-2-4</b>									
250 CLRM(2)	1	912	650	0.12	26	10	0.8	423	338
252 CLRM(3)	1	912	650	0.12	26	10	0.8	423	338
2 CORRIDOR QUARTER	1	173	250	0.06	1	0	0.8	19	15
Totals (incl. Space Multipliers)		1997							691



AREA A AREA B

**HVAC 2ND FLOOR PLAN**

SCALE 1/8" = 1'-0"



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REV. BY	DATE	DESCRIPTION

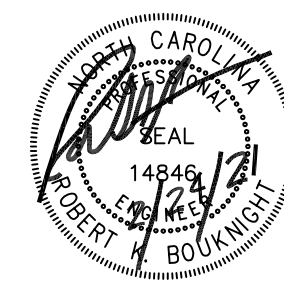
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REV. BY	DATE	DESCRIPTION

DESIGNED BY: RKB  
 DRAWN BY: RKB  
 CHECKED BY: RKB  
 APPROVED BY: RKB  
 DRAWING NUMBER: **M1.2**  
 HVAC 2ND LEV PLAN

TITLE: CAROLINA CHARTER ACADEMY  
 2021 ADDITION  
 8529 NC-55  
 ANGLIER, NC  
 CUSTOMER: SWINERTON CONSTRUCTION  
 JOB No. [ ] SHEET No. [ ] SCALE: [ ]

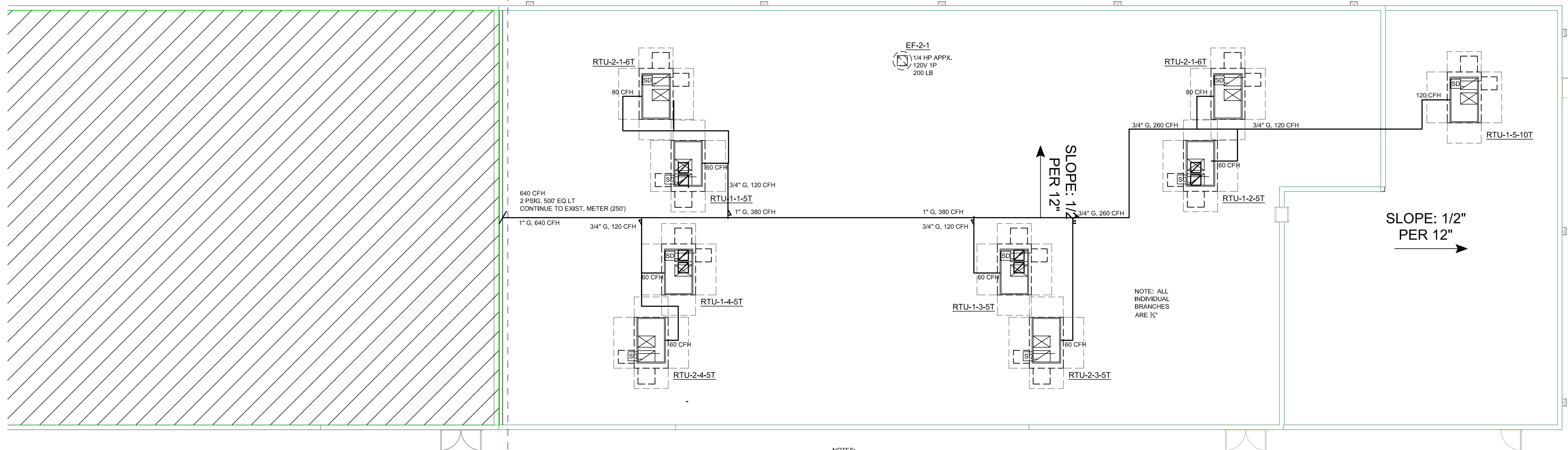
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ROBERT BOUKNIGHT, PE  
1507 TALBOT RD  
PLEASANT  
GARDEN, NC 27313  
336-420-2686  
RKB@RKBENG.COM

**MECHANICAL TECHNOLOGIES & SOLUTIONS, LLC.**  
700 McGehee Drive  
Winston-Salem, NC 27107  
Phone (336) 395-5166 Fax (336) 890-7712  
www.mtsinc.com

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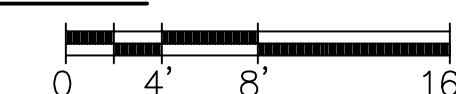


- NOTES:
1. SMOKE DETECTORS FURNISHED BY EC, MC TO INSTALL. SD TO STOP UNIT OPERATION UPON ALARM.
  2. GAS PIPING TO CONNECT TO EXISTING METER

AREA A AREA B

**HVAC ROOF PLAN**

SCALE 1/8" = 1'-0"



**REVISIONS**

REV. BY	DATE	DESCRIPTION

**REVISIONS**

REV. BY	DATE	DESCRIPTION

TITLE: CAROLINA CHARTER ACADEMY  
2021 ADDITION  
8529 NC-55  
ANGIER, NC  
CUSTOMER: SWINERTON CONSTRUCTION

DESIGNED BY: RKB  
DRAWN BY: RKB  
CHECKED BY: RKB  
APPROVED BY: RKB  
DRAWING NUMBER: M1.3  
HVAC ROOF LEV PLAN

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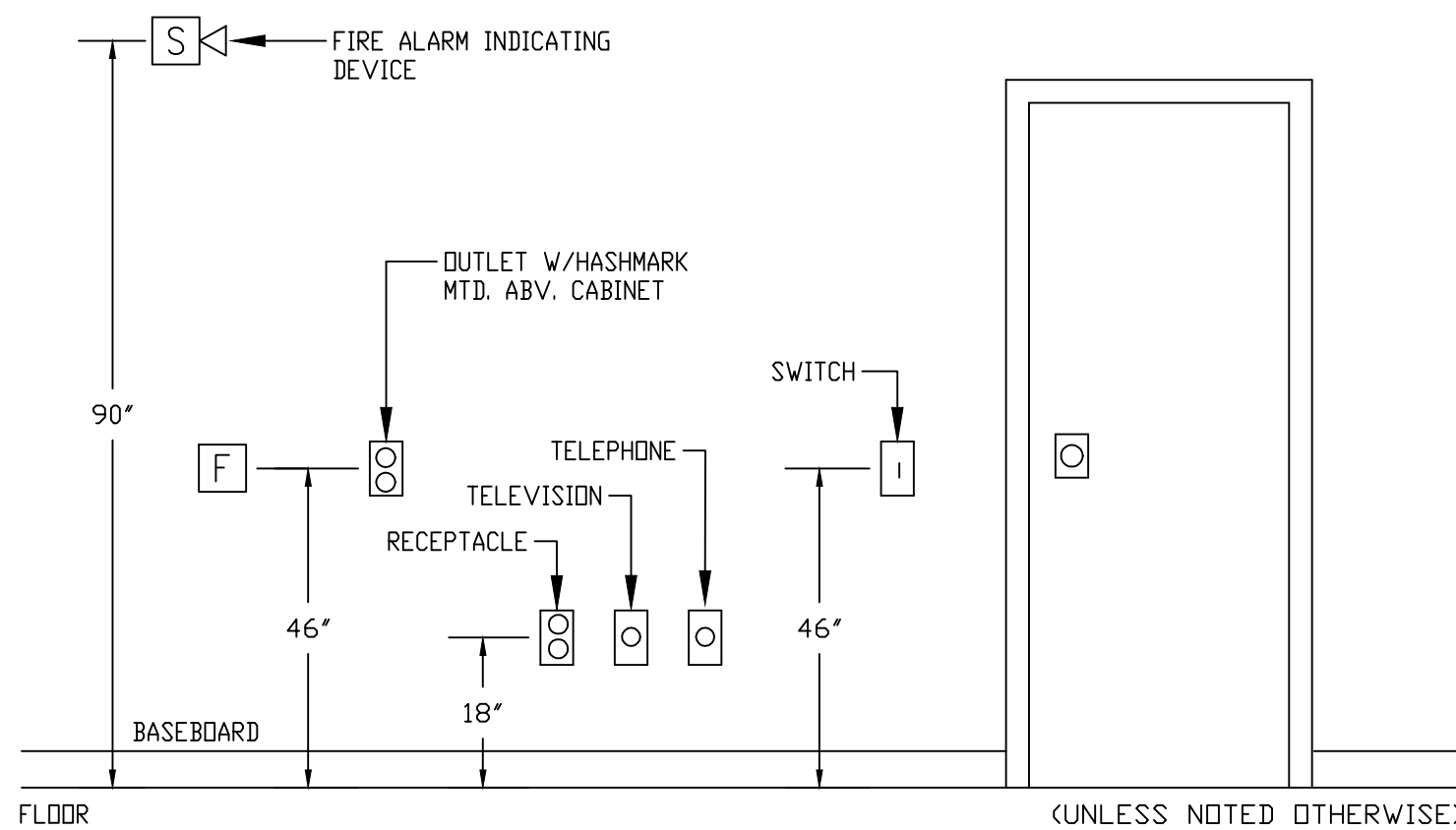
SHEET NO. 1 OF 1

# SYMBOLS & LEGEND

- BRANCH CIRCUIT CONDUIT CONCEALED IN CEILING AND/OR WALLS, 2#12AWG & 1#12AWG EG UNLESS OTHERWISE INDICATED. HASHMARKS INDICATE NO. OF WIRES.
- BRANCH CIRCUIT CONDUIT EXPOSED ON WALL AND/OR CEILING, 2#12AWG & 1#12AWG EG UNLESS OTHERWISE INDICATED. HASHMARKS INDICATE NO. OF WIRES.
- BRANCH CIRCUIT CONDUIT CONCEALED IN OR UNDER FLOOR OR IN FURRED CEILING BELOW, TWO 2#12AWG & 1#12AWG EG UNLESS OTHERWISE INDICATED. HASHMARKS INDICATE NO. OF WIRES.
- HOMERUN TO PANELBOARD. NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS
- PHASE WIRES  
NEUTRAL
- NOTE:** ALL CONDUITS TO BE 3/4" C - 2#12AWG & 1#12AWG EG UNLESS OTHERWISE INDICATED BY HASH MARKS OR CONDUIT AND WIRE SCHEDULE CONDUIT FITTINGS TO BE STEEL COMPRESSION TYPE WHERE SUBJECT TO PHYSICAL DAMAGE, IMC OR RIGID CONDUIT TO BE UTILIZED
- 3-WIRE TIE CONNECTION BETWEEN MASTER/SLAVE LIGHTING FIXTURE COMBINATIONS
- 1/2" FLEXIBLE CONDUIT CONNECTION WITH 3#14 & 1#14 E.G.
- FLUORESCENT LIGHTING FIXTURE, SURFACE.
- FLUORESCENT LIGHTING FIXTURE, RECESSED.
- WALL OR CEILING MOUNTED EXIT LIGHT. SHADE INDICATES FACE.
- RECESSED LIGHTING FIXTURE.
- SINGLE POLE SWITCH. (SEE MOUNTING DETAIL)
- THREE WAY SWITCH. (SEE MOUNTING DETAIL)
- DIMMER SWITCH EQUAL TO LUTRON NOVA SERIES, SIZED FOR LOAD. (SEE MOUNTING DETAIL)
- FLUORESCENT DIMMER SWITCH EQUAL TO LUTRON NOVA SERIES. (SEE MOUNTING DETAIL) SIZED FOR LOAD SIZED FOR LOAD, PROVIDE POWER PACKS FOR LOAD
- DUPLEX CONVENIENCE OUTLET. (SEE MOUNTING DETAIL)
- CROSSMARK INDICATES 46" A.F.F.
- SINGLE CONVENIENCE OUTLET, MOUNTED AS DETAILED. NEMA TYPE AS NOTED OR REQUIRED.
- ELECTRIC WATER COOLER OUTLET, VERIFY ROUGH-IN
- DUPLEX CONVENIENCE OUTLET, WP-WITH WEATHER PROOF COVER, G-GFI TYPE, L-LOCKABLE COVER. T - TAMPER RESISTANT
- QUAD. CONVENIENCE OUTLET.
- TELEPHONE, TV, SOUND, ETC., CABINET, AS NOTED.
- LIGHTING AND POWER PANELBOARD 120/208 VOLTS.
- MECHANICAL PANELBOARD 277/480 VOLTS.
- JUNCTION BOX, HEIGHT & SIZE AS NOTED OR REQUIRED.
- EXHAUST FAN OUTLET, VERIFY ROUGH-IN
- SAFETY SWITCH, RATING AS INDICATED.
- TELEPHONE/DATA OUTLET (SEE TYPICAL TELE/DATA RISER) SHEET E01
- CEILING RECEPTACLE MOUNTED IN CEILING FOR FUTURE CONNECTION; COORDINATE EXACT LOCATION WITH OWNER PRIOR TO INSTALLATION.
- CEILING MOUNTED INFRARED AND ULTRASONIC OCCUPANCY SENSOR WITH POWER CONTROL STATION LITHONIA LMTD-H-LPCS WITH EQUALS BY HUBBELL, WATT STOPPER, OR NOVITAS

## ELECTRICAL DEVICE NOTES

PRIOR TO PLACING ORDER FOR ELECTRICAL DEVICES; E.C. TO CONFIRM WITH ARCHITECT AND OWNER ON EXACT DEVICE COLOR & FACE PLATE; ALL CEILING MOUNTED DEVICES TO HAVE DEVICE PLATE THAT MATCH CEILING; ALL OTHERS TO BE PRICED WITH GREY DEVICES AND STAINLESS COVER PLATE; FINAL COLOR & DEVICE SELECTION BY OWNER/ARCHITECT. ALL DEVICES TO BE SPEC INDUSTRIAL GRADE, MATCH EXISTING



### OUTLET LOCATION DETAIL

NO SCALE. D-MOUNT  
NOTE: HASHMARK INDICATES TO BE MTD. AT 46" ABOVE FLOOR

## COORDINATION NOTES

- MOUNTING HEIGHTS SHOWN ARE FROM THE FINISHED FLOOR TO THE CENTER OF DEVICE UNLESS OTHERWISE NOTED (SEE DETAIL).
- ELECTRICAL DEVICES SHALL BE ALIGNED WITH THE ARCHITECTURAL FEATURES OF THE BUILDING. DEVICES FOR VARIOUS SYSTEMS (LIGHT SWITCHES, RECEPTACLES, FIRE ALARM HORNS, THERMOSTATS, ETC.) LOCATED IN THE SAME GENERAL AREA SHALL BE ALIGNED AT THEIR RESPECTIVE MOUNTING HEIGHTS. THE E.C. SHALL COORDINATE WITH THE OTHER TRADES TO ENSURE ALIGNMENT OF ALL DEVICES, BACK BOXES SHALL BE MOUNTED ON THE SAME SIDE OF THE SAME WALL STUD TO PRESENT AN ALIGNED APPEARANCE. ANY DIMENSIONING SHOWN ON THE DRAWING SHALL SUPERSEDE THIS GUIDANCE.
- WHERE A MULTIPLE GANG BOX HAS CIRCUITS OF DIFFERENT VOLTAGES OR SYSTEMS WHICH ARE REQUIRED TO BE SEPARATED. THE BOX SHALL BE PROVIDED WITH THE CODE REQUIRED SEPARATION USING A FULL HEIGHT AND DEPTH BARRIER PLATE.
- MECHANICAL EQUIPMENT WILL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR. THE LOCATION SHOWN ON THE ELECTRICAL PLANS ARE APPROXIMATE. THE E.C. SHALL FULLY COORDINATE WITH THE M.C. TO DETERMINE THE EXACT LOCATION OF EACH PIECE OF EQUIPMENT, PRIOR TO ANY INSTALLATION.
- WHERE COVER PLATES FOR LIGHT SWITCHES OR RECEPTACLES CONFLICT WITH CASEWORK OR MILLWORK, THE MOUNTING HEIGHTS OF THE WIRING DEVICES SHALL BE ADJUSTED SLIGHTLY SO THAT THE COVER PLATES CLEAR THE BACK SPLASH BY 1/4". THE ELECTRICAL CONTRACTOR SHALL THOROUGHLY REVIEW THE CASEWORK DRAWINGS AND ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH INS.
- FOR ANY WALL OR FLOOR PENETRATIONS, E.C. TO SHALL PROVIDE FIRE PROOFING TO SEAL ALL THE PENETRATIONS AFTER THE CONDUIT AND WIRING HAS BEEN INSTALLED. E.C. TO USE U.L. SYSTEMS PER PENETRATION MADE. REFER TO ARCHITECTURAL SHEETS FOR LOCATIONS OF RATED WALLS AND PARTITIONS.
- ALL ROUGH-INS BOXES TO BE INSTALLED SO THAT NO BOX EXTENSION ARE UTILIZED.

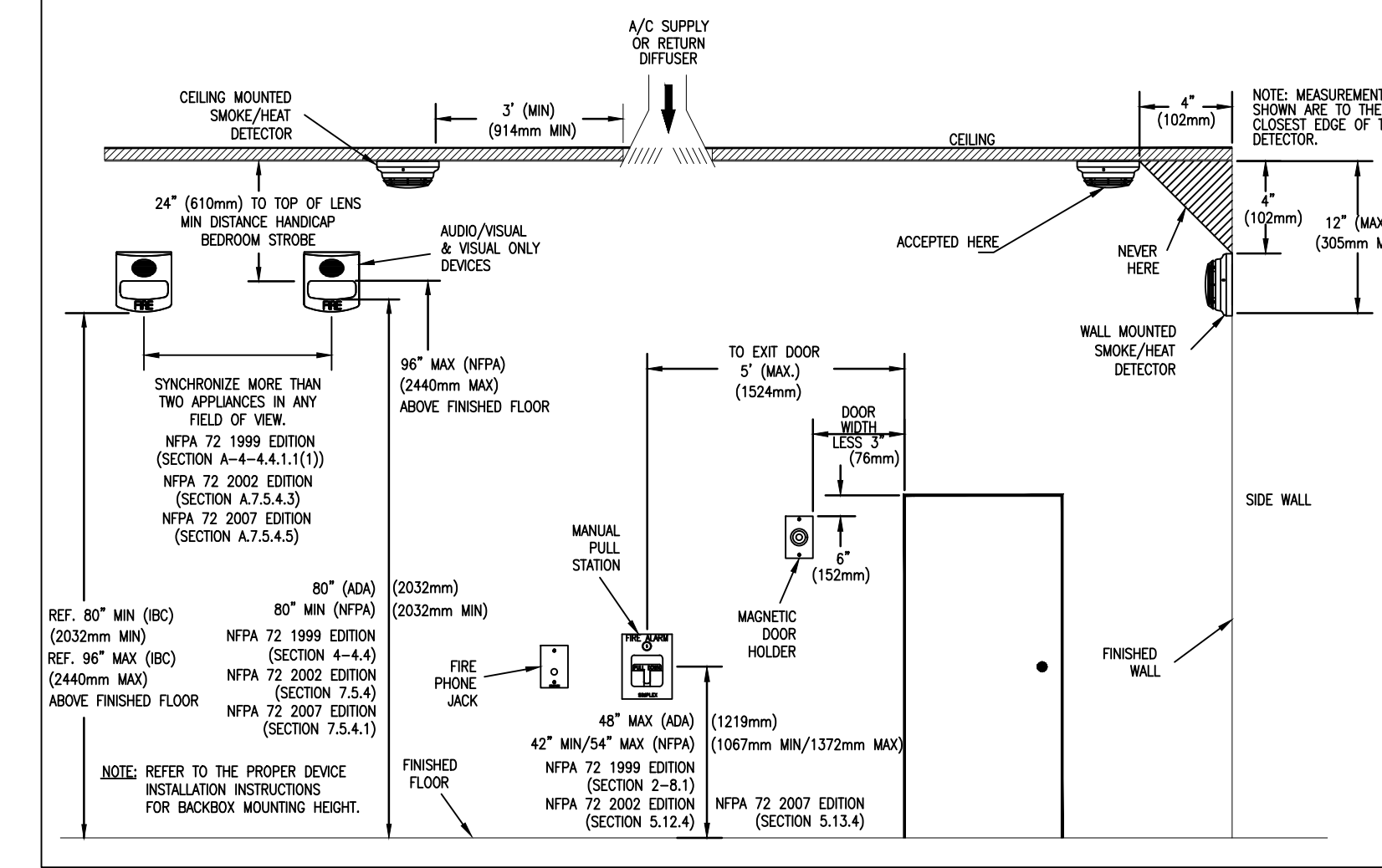
## FIRE ALARM NOTES

NEW FIRE ALARM SYSTEM (VOICE EVAC); E.C. TO PROVIDE ALL DEVICES TO MEET NFPA 72  
PROVIDE ALL CIRCUITRY AND PROGRAMMING FOR A COMPLETE INSTALLATION  
DUCT TO BE INTEGRAL ADDRESSABLE POINT REPORTING TYPE.  
IF ACCEPTABLE WITH FIRE MARSHAL, ALL STROBES AND HORN/STROBES TO HAVE RED FINISH; PROVIDE FIRE MAP AT ANNUNCIATOR

## FIRE ALARM LEGEND

- ANALOG ADDRESSABLE FIRE ALARM CONTROL PANEL
- NOTIFICATION ALARM CIRCUIT PANEL W/BATTERIES
- FLUSH MOUNTED SPEAKER WITH LIGHT
- DOUBLE ACTION ADDRESSABLE PULL STATION
- CEILING MOUNTED FIXED HEAT DETECTOR
- FLUSH MOUNTED STROBE LIGHT ONLY
- CEILING MOUNTED ADDRESSABLE PHOTO SMOKE DETECTOR  
"S" DENOTES SURFACE MOUNTED  
"E" DENOTES ELEVATOR RECALL  
CEILING MOUNTED STROBE LIGHT ONLY
- DUCT MOUNTED SMOKE DETECTOR WITH DUCT HOUSING ASSEMBLY PROVIDED BY ELEC. CONTRACTOR  
1- THE MECHANICAL CONTRACTOR WILL MOUNT THE DETECTOR & WIRE FROM FAM TO AHU SHUT DOWN  
2- THE ELECTRICAL CONTRACTOR SHALL WIRE INTO FIRE ALARM SYSTEM
- REMOTE TEST STATION FOR DUCT MOUNTED SMOKE DETECTOR, 90'
- FIRE ALARM DOOR HOLDER OUTLET, 24 VOLT DC
- SPRINKLER WATER FLOW MONITORING DEVICE, COORDINATE EXACT LOCATION AND REQUIRED QUANTITIES
- SPRINKLER TAMPER MONITORING DEVICE, COORDINATE EXACT LOCATION AND REQUIRED QUANTITIES
- CEILING MOUNTED SPEAKER WITH LIGHT
- CONTROL ZAM; COMPATIBLE WITH DELAYED EGRESS HARDWARE MAG LOCKS/ACCESS CONTROL TO RELEASE UPON FIRE ALARM ACTIVATION
- CARBON MONOXIDE DETECTOR
- BEAM DETECTOR TRANSMITTER
- BEAM DETECTOR REFLECTOR

## DEVICE MOUNTING HEIGHTS (PBR NFPA 72)



## SAFETY SWITCH SCHEDULE

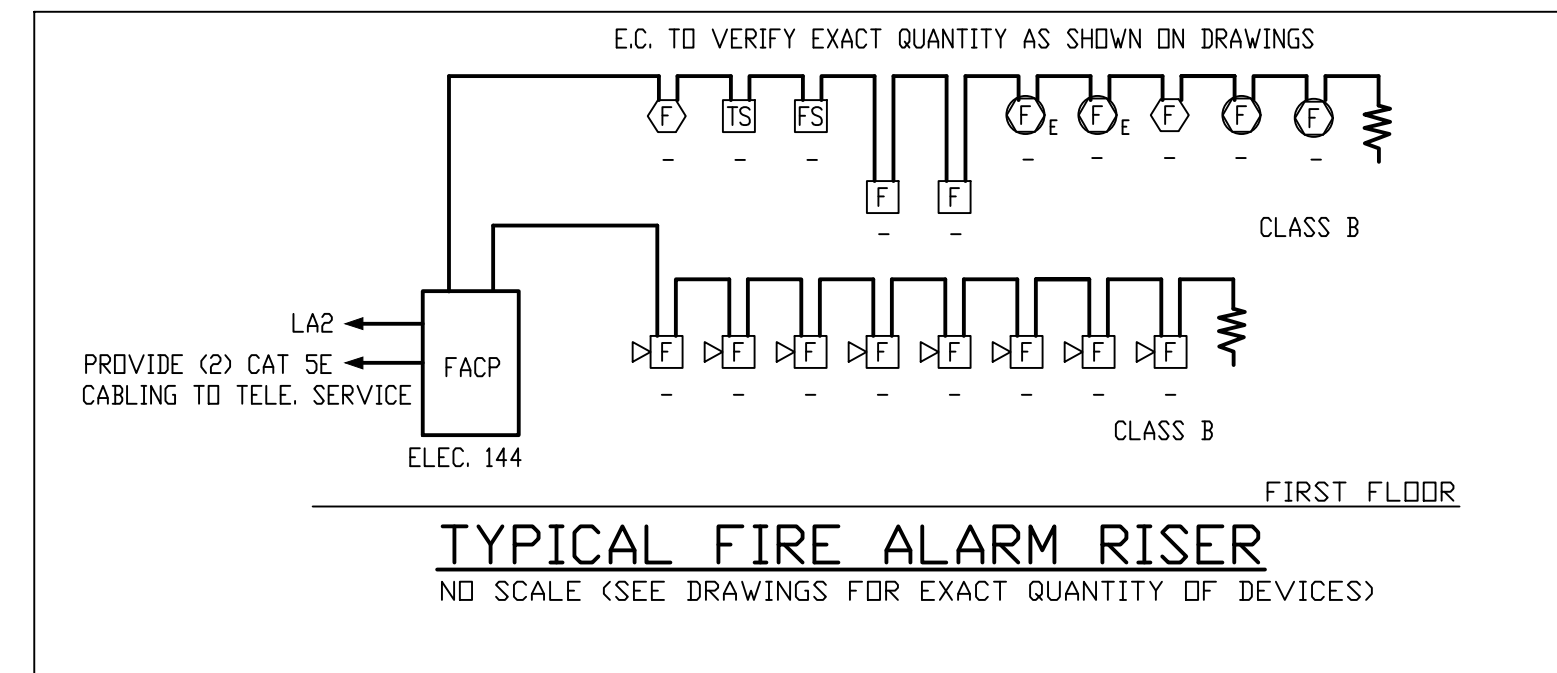
\* FUSE SIZE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS  
\* FUSE SIZE AS NOTED ON PLANS.  
NF NON-FUSED

MARK	POLE	AMPS	VOLTS	NEMA	FUSE	GROUND BAR	COMMENTS
1	2	30	240	3R	*	YES	HEAVY DUTY
2	3	100	600	3R	*	YES	HEAVY DUTY
3	3	30	600	3R	*	YES	HEAVY DUTY
4	3	60	600	3R	*	YES	HEAVY DUTY
5	3	200	600	3R	*	YES	HEAVY DUTY

## TRANSFORMER SCHEDULE

MARK	KVA	PHASE	WIRE	VOLTAGE		ENCLOSURE	MOUNTING
				PRI.	SEC.		
1	45*	3	4	480	120/208	NEMA 1	FLOOR
2	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-

\* NEMA TP-1, 150° RISE, AL WINDINGS



## System Outputs

	Control Unit Annunciation		Notification		Required Fire Safety Control		Supplementary																											
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF	GG	
1 Manual fire alarm boxes	•																																	
2 In-duct smoke detector for damper		•																																
3 In-duct smoke detector			•																															
4 Smoke detectors - general		•	•	•	•	•	•	•																										
5 Heat detectors - general		•	•	•	•	•	•	•																										
6 Smoke detectors - door holders																																		
7 Smoke detectors - elevator 2 floor																																		
8 Smoke detectors - elevator equipment room																																		
9 Smoke detectors - elevator shaft																																		
10 Heat detectors - elevator equipment room																																		
11 Heat detectors - elevator shaft, pit																																		
12 Fire alarm system low battery																																		
13 Open circuit																																		
14 Ground fault																																		
15 Notification appliance circuit short																																		
16 Signaling Line circuit short																																		
17 Initiating device circuit open																																		
18 Fire Alarm AC failure																																		
19 Amplifier AC failure																																		
20 SNAC AC failure																																		
21 CO detectors		•	•																															

## FIRE ALARM SYSTEM MATRIX

NO SCALE

**Carolina Charter Academy Exp.**  
8529 Highway 55  
Angier, North Carolina 27501

**Owner**  
Highmark School Development  
746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

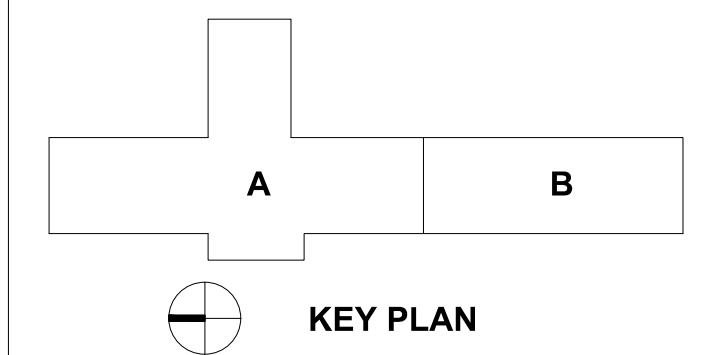
**Architect**  
RATIO  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

DESIGNED FOR  
**SAMMY PHILLIPS ELECTRIC**  
345 NORTHWEST BLDG.  
WINSTON-SALEM, NC  
PHONE 336 722-3311

**GREENSBORO ENGINEERING PLLC**  
1618 BRINKING STREET, SUITE B GREENSBORO, NC 27408  
PHONE 336 279-6360 FAX 336 279-1996  
www.gsoengineering.com

**NORTH CAROLINA PROFESSIONAL ENGINEERING**  
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CHARLES B. LACKS

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SEAL | DATE 2/12/2021

**SHEET ISSUE**

1	50% Construction Documents	2/8/2021
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PROJECT NO. 20408.000

SHEET TITLE  
**Electrical - Symbols & Legends, Notes & Details**

SHEET NUMBER

**E-01**





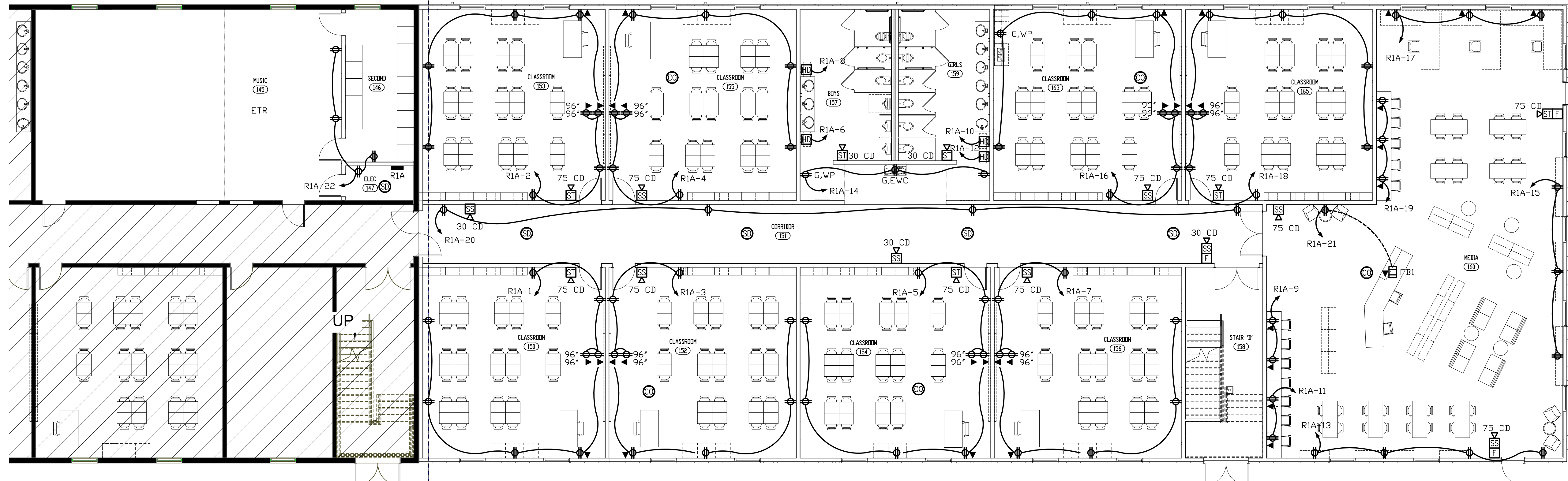
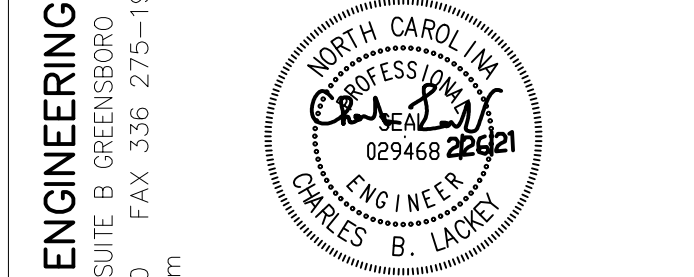


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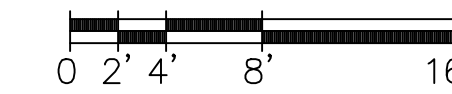


**GENERAL NOTES**

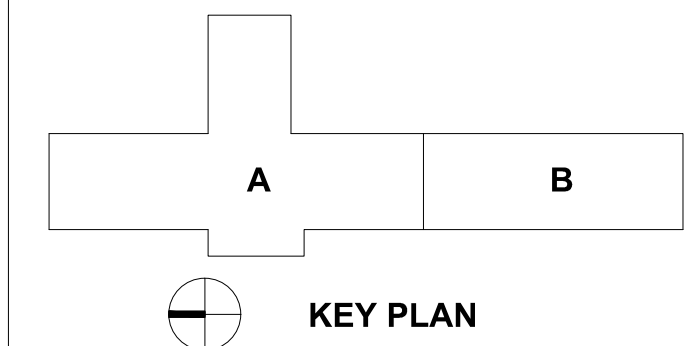
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2. CONTRACTOR TO PROVIDE SEPARATE NEUTRALS PER NEC 2017.
3. ALL EXITS AND EMERGENCY LIGHTING UNITS SHALL BE CONNECTED TO UNSWITCHED LIGHTING CIRCUITRY IN AREA WHICH IT IS LOCATED. PROVIDE CIRCUITRY FOR COMPLETE INSTALLATION.
4. ALL STAND ALONE WALL BOX DIMMERS TO BE LUTRON NOVA SERIES MATCHED TO LOAD TYPE AND CAPACITY CONTROLLING. E.C. TO VERIFY CAPABILITY OF DIMMER WITH LUMINAIRES; SOME FIXTURES MAY BE LINE VOLTAGE AND SOME MAY REQUIRE 0-10V; E.C. TO VERIFY WITH LIGHTING SUPPLIER/CUT SHEETS PRIOR TO PLACING ORDER.
5. ALL CABLING ABOVE LAY-IN CEILING TO BE PLENUM RATED. ALL CABLING TO BE IN CONDUIT (3/4" MINIMUM).
6. ALL 120V HOMERUNS OVER 75 FEET IN LENGTH TO HAVE UPSIZED (ONE SIZE LARGER) WIRE FOR VOLTAGE DROP.
7. SEE ARCHITECTURAL SHEETS FOR RATED WALL ASSEMBLIES; E.C. TO PROVIDE PROPER UL APPROVED METHODS FOR MAINTAINING FIRE RATINGS.
8. E.C. TO PROVIDE ALL HARDWARE REQUIRED FOR SUPPORT/INSTALLATION OF LUMINAIRES.

**GROUND FLOOR - POWER, TELE/DATA & FA**

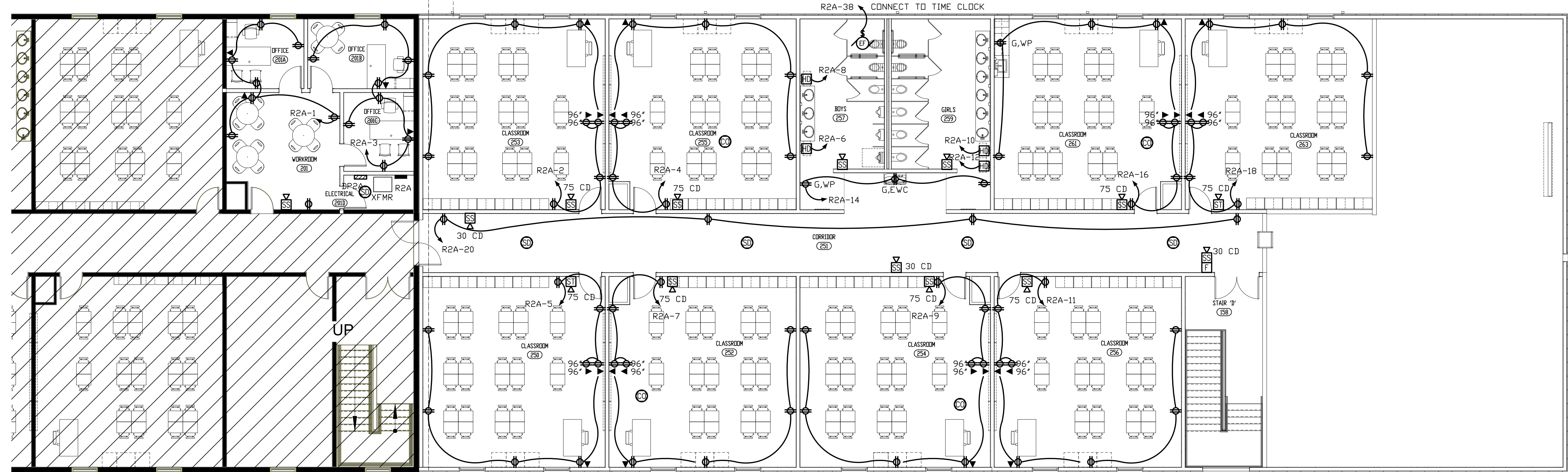
SCALE 1/8" = 1'-0"



Ⓢ PROVIDE CARBON MONOXIDE DETECTOR TIED INTO FIRE ALARM SYSTEM CD DETECTOR TO BE LOCATED BY AHJ AND MECHANICAL CONTRACTOR PRIOR TO INSTALLATION; INTENT IS AT 1ST SUPPLY DIFFUSER LOCATION VERIFY PRIOR TO INSTALLATION; TYPICAL OF (8) GAS ROOF TOP UNITS



SEAL | DATE 2/12/2021

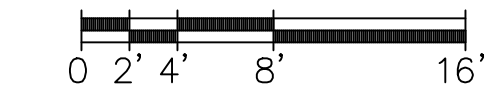


**KEYED PLAN NOTES**

1. ALL CLASSROOM RECEPTACLES TO BE TAMPER RESISTANT.
2. COORDINATE HEIGHT OF RECEPTACLES AT CLASSROOM WHITE BOARD/PROJECT; COORDINATE WITH OWNER PROVIDED EQUIPMENT.
3. PROVIDE ALTERNATE FOR DOOR CONTROL SYSTEM TIED INTO MAG LOCKS (PROVIDED BY DOOR HARDWARE PROVIDER); E.C. TO WIRE INSTALL RACEWAYS ONLY; COORDINATE EXACT LOCATION WITH OWNER PRIOR TO INSTALLATION. FIRE ALARM TO TIE INTO ACCESS CONTROL AND RELEASE ALL DOORS IF FA ACTIVATED.

**2ND FLOOR - POWER, TELE/DATA & FA**

SCALE 1/8" = 1'-0"



**SHEET ISSUE**

NO.	DESCRIPTION	DATE
1	50% Construction Documents	2/8/2021

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PROJECT NO. 20408.000

SHEET TITLE

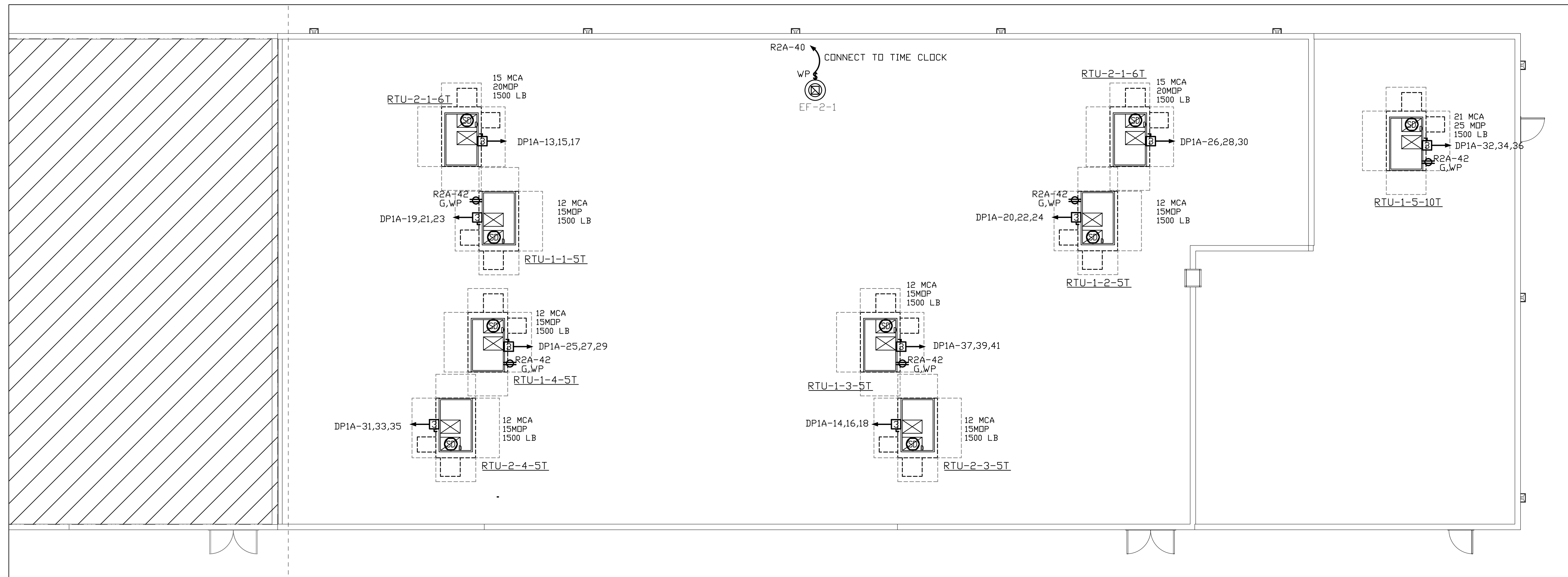
**Electrical - Power, Tele/Data & FA; Notes & Details**

SHEET NUMBER

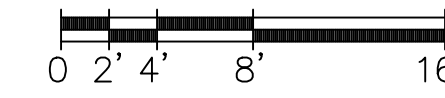
**E-101**

**GENERAL NOTES**

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8. E.C. TO PROVIDE ALL HARDWARE REQUIRED FOR SUPPORT/INSTALLATION OF LUMINAIRES.



**ROOF ELECTRICAL - POWER & FA**  
SCALE 1/8" = 1'-0"



**Carolina Charter Academy Exp.**  
8529 Highway 55  
Angier, North Carolina 27501

**Owner**  
Highmark School Development  
746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
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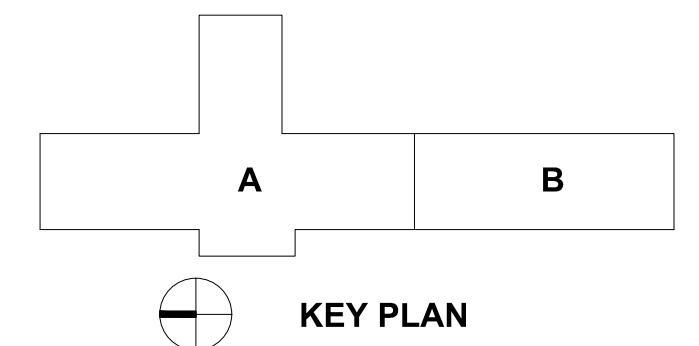
**Architect**  
RATIO  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

DESIGNED FOR  
**SAMMY PHILLIPS ELECTRIC**  
345 NORTHWEST BLVD.  
WINSTON-SALEM, NC  
PHONE 336 722-3311

**GREENSBORO ENGINEERING PLLC**  
1648 BRINKING STREET, SUITE B GREENSBORO NC 27408  
PHONE 336 279-6360 FAX 336 275-1996  
www.gsoengineering.com

**REGISTERED PROFESSIONAL ENGINEER**  
NORTH CAROLINA  
CHARLES B. LACKS  
029468 24921

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GREENSBORO, NC  
P-0385



SEAL | DATE 2/12/2021

SHEET ISSUE		
1	50% Construction Documents	2/8/2021

LOCATED IN ELEC# 147

LOAD SERVED	VA PER PHASE			CKT BRKR	CKT NO.	NEUTRAL	CKT NO.	CKT BRKR	VA PER PHASE			LOAD SERVED						
	A	B	C						A	B	C							
	MOUNTING: SURFACE								EQUIPMENT GROUND BUS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO									
REC-CLASSROOM 150	720			20/1	1		2	20/1				REC-CLASSROOM 153						
REC-CLASSROOM 152		720		20/1	3		4	20/1				REC-CLASSROOM 155						
REC-CLASSROOM 154			720	20/1	5		6	20/1	GFCI		720	HAND DRYER 157						
REC-CLASSROOM 156	720			20/1	7		8	20/1	GFCI	720		HAND DRYER 157						
REC-MEDIA 160		720		20/1	9		10	20/1	GFCI		720	HAND DRYER 159						
REC-MEDIA 160			720	20/1	11		12	20/1	GFCI		1200	HAND DRYER 159						
REC-MEDIA 160	720			20/1	13		14	20/1		720		REC-TLT 157,159, EWC						
REC-MEDIA 160		720		20/1	15		16	20/1			720	REC-CLASSROOM 163						
REC-MEDIA 160			720	20/1	17		18	20/1			720	REC-CLASSROOM 165						
REC-MEDIA 160	720			20/1	19		20	20/1		720		REC-CORRIDOR 151						
REC-MEDIA 160		720		20/1	21		22	20/1			720	REC-MUSIC 145, 146, 147						
SPARE				20/1	23		24	20/1				SPARE						
SPARE				20/1	25		26	20/1				SPARE						
SPARE				20/1	27		28	20/1				SPARE						
SPARE				20/1	29		30	20/1				SPARE						
SPARE				20/1	31		32	30/2				SPARE						
SPARE				20/1	33		34					SPARE						
SPARE				20/1	35		36	30/2				SPARE						
SPARE				GFCI	20/1		38					SPARE						
SPARE				GFCI	20/1		40	30/2				SPARE						
FIRE NAC				*	20/1		42					SPARE						
REMARKS	4320	4320	4320	SUB-TOTAL "B"				200A	BUS			SUB-TOTAL "A"	5040	5040	5040	MIN.	18,000	A.I.C.
* DENOTES RED CIRCUIT BREAKER LOCKING DEVICE																		
				200A	LUGS			SUB-TOTAL "B"			4320	4320	4320					
GFCI - GROUND FAULT INTERRUPTER CIRCUIT BREAKER				200A	S/N			GRAND TOTAL			9360	9360	9360	LUGS/PHASE (1) - #2/0				
				BQTL	FEED			AMPS / PHASE			78	78	78	LUGS/NEUT. (1) - #2/0				

LOCATED IN ELEC # 201D

LOAD SERVED	VA PER PHASE			CKT BRKR	CKT NO.	NEUTRAL	CKT NO.	CKT BRKR	VA PER PHASE			LOAD SERVED						
	A	B	C						A	B	C							
	MOUNTING: SURFACE								EQUIPMENT GROUND BUS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO									
REC-201,201A	720			20/1	1		2	20/1				REC-CLASSROOM 253						
REC-OFFICE 201B, 201C, 201D		720		20/1	3		4	20/1			720	REC-CLASSROOM 255						
REC-CLASSROOM 250			720	20/1	5		6	20/1		1200		HAND DRYER 257						
REC-CLASSROOM 252	720			20/1	7		8	20/1		720		HAND DRYER 257						
REC-CLASSROOM 254		720		20/1	9		10	20/1		1200		HAND DRYER 259						
REC-CLASSROOM 256			720	20/1	11		12	20/1		1200		HAND DRYER 259						
SPARE				20/1	13		14	20/1		720		REC-257,259						
SPARE				20/1	15		16	20/1		720		REC-CLASSROOM 261						
SPARE				20/1	17		18	20/1			720	REC-CLASSROOM 263						
SPARE				20/1	19		20	20/1		720		REC-CORRIDOR 251						
SPARE				20/1	21		22	20/1				SPARE						
SPARE				20/1	23		24	20/1				SPARE						
SPARE				20/1	25		26	20/1				SPARE						
SPARE				20/1	27		28	20/1				SPARE						
SPARE				20/1	29		30	20/1				SPARE						
SPARE				20/1	31		32	30/2				SPARE						
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SPARE				GFCI	20/1		38					SPARE						
SPARE				GFCI	20/1		40	30/2				SPARE						
FIRE NAC				*	20/1		42					SPARE						
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PROJECT NO. 20408.000

SHEET TITLE  
**Electrical - Roof Power & FA Plan; Panel Schedules**

SHEET NUMBER

**E-102**

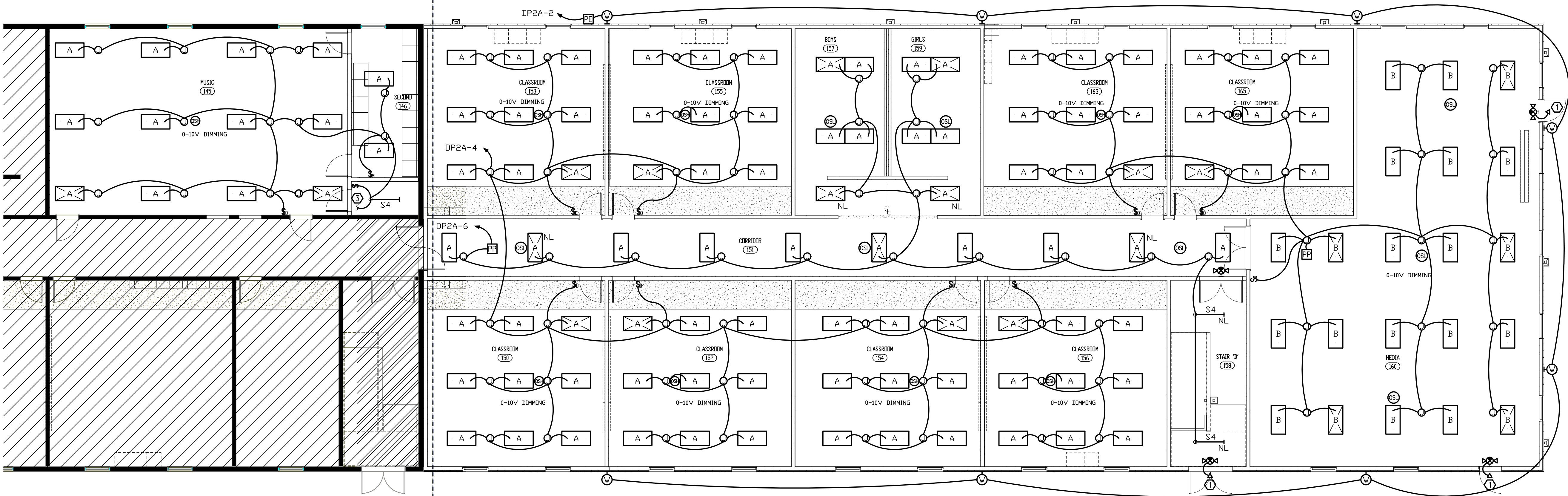
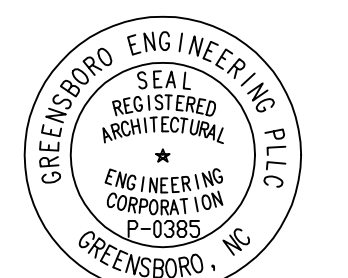
**Carolina Charter Academy Exp.**  
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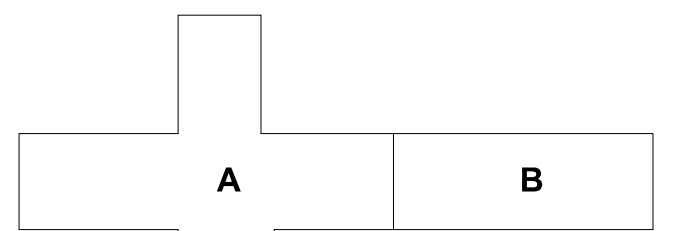
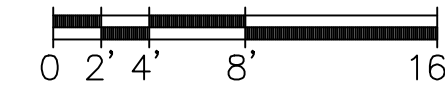
DESIGNED FOR  
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 WINSTON-SALEM, NC  
 PHONE 336 722-6360 FAX 336 275-1996

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 www.gseengineering.com



**GROUND FLOOR - LIGHTING PLAN**

SCALE 1/8" = 1'-0"



**KEY PLAN**

SEAL | DATE 2/12/2021

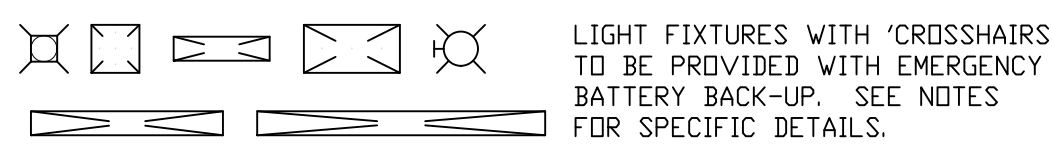
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- CONTRACTOR TO PROVIDE SEPARATE NEUTRALS PER NEC 2017.
- ALL EXITS AND EMERGENCY LIGHTING UNITS SHALL BE CONNECTED TO UNSWITCHED LIGHTING CIRCUITRY IN AREA WHICH IT IS LOCATED. PROVIDE CIRCUITRY FOR COMPLETE INSTALLATION.
- ALL STAND ALONE WALL BOX DIMMERS TO BE LUTRON NOVA SERIES MATCHED TO LOAD TYPE AND CAPACITY CONTROLLING. E.C. TO VERIFY CAPABILITY OF DIMMER WITH LUMINAIRE(S). SOME FIXTURES MAY BE LINE VOLTAGE AND SOME MAY REQUIRE 0-10V; E.C. TO VERIFY WITH LIGHTING SUPPLIER/CUT SHEETS PRIOR TO PLACING ORDER.
- ALL CABLING ABOVE LAY-IN CEILING TO BE PLENUM RATED. ALL CABLING TO BE IN CONDUIT (3/4" MINIMUM).
- ALL 120V HOMERUNS OVER 75 FEET IN LENGTH TO HAVE UPSIZED (ONE SIZE LARGER) WIRE FOR VOLTAGE DROP.
- SEE ARCHITECTURAL SHEETS FOR RATED WALL ASSEMBLIES; E.C. TO PROVIDE PROPER UL APPROVED METHODS FOR MAINTAINING FIRE RATINGS.
- E.C. TO PROVIDE ALL HARDWARE REQUIRED FOR SUPPORT/INSTALLATION OF LUMINAIRE(S).

**KEYED PLAN NOTES**

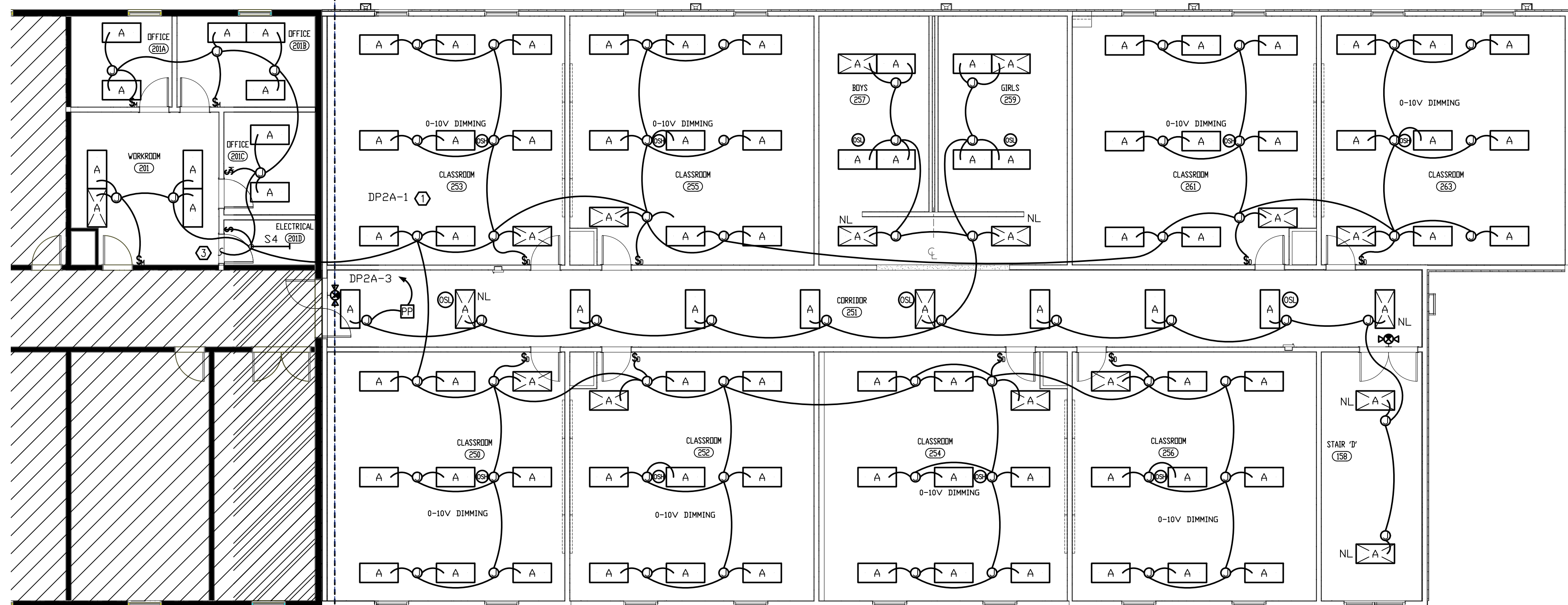
- FIXTURES SHOWN WITH CROSS HAIRS TO BE WIRED AS NITE LIGHTS; CONNECTED TO UNSWITCHED LIGHTING LEG SERVING SAME AREA; TYPICAL OF ALL
- ALL EXTERIOR LIGHTS CONNECTED TO PE CELL; PE CELL TO BE LED RATED AND MADE FOR LOAD; COORDINATE INSTALLATION.
- CONNECT TO EXISTING LIGHTING CIRCUITRY; COORDINATE WITH EXISTING CONDITIONS.

**EMERGENCY LIGHTING LEGEND**



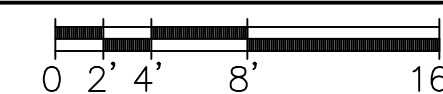
**EMERGENCY LIGHTING NOTES**

- EMERGENCY BATTERIES IN DESIGNATED FIXTURES ARE TO BE WIRED SUCH THAT FIXTURES ARE CONTROLLED BY LOCAL SWITCHING AND OPERATE BY BATTERY DURING POWER OUTAGE UNLESS NOTED OTHERWISE. ALL BATTERIES TO HAVE SELF-DIAGNOSTICS. ALL FIXTURES TO BE PROVIDED WITH REMOTE TEST SWITCH AND SELF-DIAGNOSTICS INDICATING LIGHT IN FIXTURE.
- BATTERIES SERVING LED LAMPS ARE TO BE CONNECTED TO TWO ARRAYS (IF AVAILABLE) BATTERIES SHALL HAVE 1100-1400 LUMEN OUTPUT AND BE FACTORY INSTALLED WITH 5 YEAR WARRANTY; MINIMUM 90 MINUTES OF BATTERY BACKUP PER CODE.



**2ND FLOOR - LIGHTING PLAN**

SCALE 1/8" = 1'-0"



**SHEET ISSUE**

1	50% Construction Documents	2/8/2021
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PROJECT NO. 20408.000

SHEET TITLE  
**Electrical -  
 1st and 2nd Floor  
 Lighting Plans; Notes**

SHEET NUMBER

**E-201**