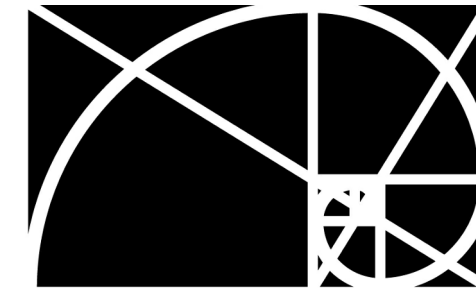


# Carolina Charter Academy Exp.

Angier, North Carolina

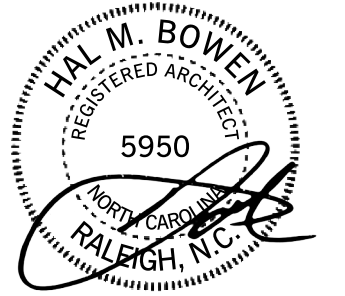


**RATIO**

PACKAGE

SEAL | DATE 4/9/2021

## Permit Revisions



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  
**4/9/2021**

PROJECT ADDRESS  
**8529 Highway 55  
Angier, North Carolina  
27501**

VOLUME

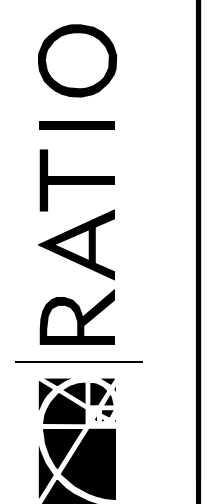
SET NO.

DATE  
**4/9/2021**

PACKAGE  
**Permit Revisions**

RATIO PROJECT NO.  
**20408.000**

PROJECT NAME  
**Carolina Charter Academy Exp.**









**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 RATING.
- D. REFER TO C-03 FOR BUILDING ADJACENCIES AND PROPERTY LINES.

**LIFE SAFETY PLAN LEGEND**

- RM NAME** — ROOM NAME, AREA & OCCUPANT CAPACITY
- 150 SF** — EXIT DIRECTION ARROW
- 20** — EXIT POPULATION
- 45** — EXIT CAPACITY (POPULATION)
- 120** — PATH OF TRAVEL
- — FIRE RATED WALL
- 2-2-2-** — 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.

**OCCUPANT LOAD SCHEDULE**

FLOOR LEVEL	OCCUPANT LOAD
FIRST FLOOR	1278
SECOND FLOOR	752
	2030

**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

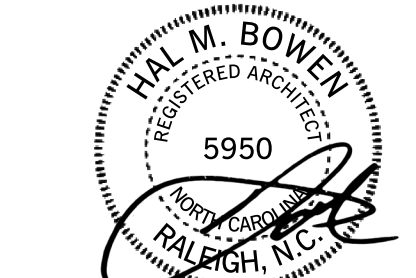
**Architect**  
**RATIO**  
 227 Fayetteville Street, Suite 301  
 Raleigh, North Carolina 27601  
 919-821-0805

**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 4/9/2021 | CODE CERT. I HEREBY CERTIFY THAT THE BUILDING CODE SUMMARY COMPLETED ON THIS PAGE IS ACCURATE FOR THE TYPE OF BUILDING AND OCCUPANCY AND 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
2	Permit Revisions 4/9/2021

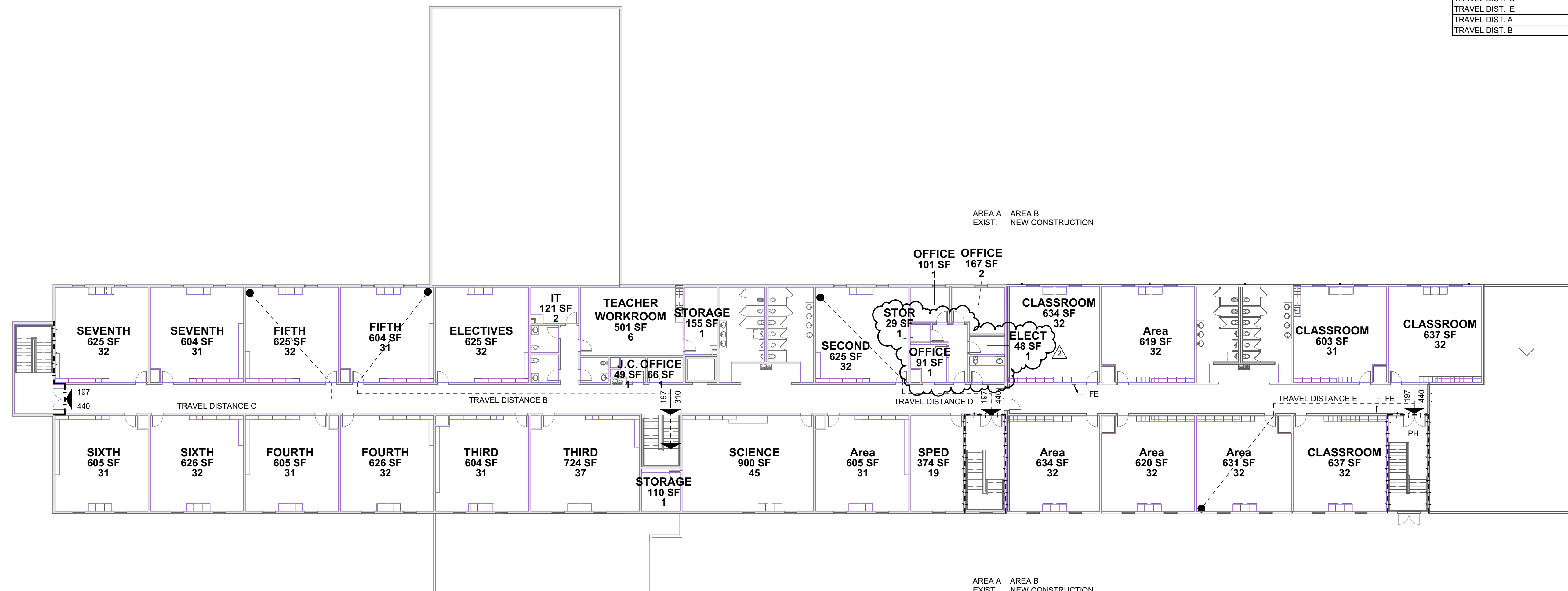


COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE, REPRODUCTION OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED.

PROJECT NO. 20408.000

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

SHEET NUMBER  
**G-104**



**A1**  
**G-104**  
**SECOND LEVEL LIFE SAFETY PLAN**  
 1/16" = 1'-0"

4/14/2021 6:12:13 PM



**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 DEVELOPMENT  
palcorn@highmarkschools.com (801)335-6514

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

LEAD DESIGN PROFESSIONAL: Harold M. Bowen, RATIO

DESIGNER	FIRM	NAME	LICENSE #	PHONE #	EMAIL
Architectural	RATIO	Harold M. Bowen	5950	(919)821-0805	hbowen@ratiodesign.com
Civil	TIMMONS	Blake Hall	38616	(919)866-4933	BLAKE.HALL@TIMMONSGROUP.COM
Electrical	--	--	--	--	--
Fire Alarm	--	--	--	--	--
Plumbing	--	--	--	--	--
Mechanical	--	--	--	--	--
Sprinkler/Standpipe	--	--	--	--	--
Structural	LYNCH MYKINS	JEFF MORRISON	027813	(919)782-1822	jmorrison@lynchmykins.com
Retaining Walls > 5' High	--	--	--	--	--
Other	--	--	--	--	--

2018 NC BUILDING CODE:  NEW BUILDING  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  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: (check all that apply)  I-A  II-A  III-A  IV  V-A  
 I-B  II-B  III-B  V-B

SPRINKLERS:  NO  PARTIAL  YES  NFPA 13  NFPA 13R  NFPA 13D

STANDPIPES:  NO  YES CLASS  I  II  III  WET  DRY

FIRE DISTRICT:  NO  YES (PRIMARY) FLOOD HAZARD AREA  NO  YES

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

BUILDING HEIGHT: (feet) 30'-0"

FLOOR	EXISTING (SQ. FT.)	NEW (SQ. FT.)	SUB-TOTAL
6th Floor	0 SF	0 SF	0 SF
5th Floor	0 SF	0 SF	0 SF
4th Floor	0 SF	0 SF	0 SF
3rd Floor	0 SF	0 SF	0 SF
2nd Floor	16071 SF	7618 SF	23689 SF
Mezzanine	0 SF	0 SF	0 SF
1st Floor	21901 SF	9770 SF	31671 SF
Basement	0 SF	0 SF	0 SF
<b>TOTAL:</b>	<b>37972 SF</b>	<b>17388 SF</b>	<b>55360 SF</b>

**ALLOWABLE AREA**

PRIMARY OCCUPANCY CLASSIFICATION(S):

ASSEMBLY:  A-1  A-2  A-3  A-4  A-5

BUSINESS:

EDUCATIONAL:

FACTORY:  F-1 MODERATE  F-2 LOW

HAZARDOUS:  H-1 DETONATE  H-2 DEFLAGRATE  H-3 COMBUST  
 H-4 HEALTH  H-5 HPM

INSTITUTIONAL:  I-1  I-2  I-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:  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  No SEPARATION: \_\_\_\_\_ HR EXCEPTION: \_\_\_\_\_

Non-Separated Use (508.3)

Separated Use (508.4) - See below for area calculations

For each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \geq 1.00$$

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 2.5)
FIRST	EDUCATION	31671 SF	28500 SF	7125 SF	36625 SF
SECOND	EDUCATION	23689 SF	28500 SF	7125 SF	36625 SF
		0 SF	0 SF	0 SF	0 SF

Notes:

- Frontage area increases from Section 506.2 are computed thus:
  - Perimeter which fronts a public way or open space having 20 feet minimum width =  $600'-0"$  (F)
  - Total Building Perimeter =  $800'-0"$  (P)
  - Ratio (F/P) =  $0.75$  (F/P)
  - W = Minimum width of public way =  $30'-0"$  (W)
  - Percent of frontage increase If =  $100 [F/P - 0.25] \times W/30 = 50.00$  (%)
- Unlimited area applicable under conditions of Section 507
- Maximum Building Area = total number of stories in the building x D (506.2)
- 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.
- Frontage increase is based on the unsprinklered 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

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet (Table 504.3)	40'-0"	30'-0"	504.2
Building Height in Stories (Table 504.4)	2	2	504.2

**FIRE PROTECTION REQUIREMENTS**

BUILDING ELEMENT	Fire Separation Distance (feet)	Req'd	Rating Provided (w/ Reduction) *	Detail No. / Sheet No.	Design No. for Rated Assembly	Design No. for Rated Penetration	Design No. for Rated Joints
Structural Frame, including columns, girders, trusses	0"	0					
Bearing Walls	0"	0					
Exterior	0"	0					
North	0"	0					
East	0"	0					
West	0"	0					
South	0"	0					
Interior	0"	0					
Nonbearing Walls and Partitions	0"	0					
Exterior	0"	0					
North	30'-0"	0					
East	30'-0"	0					
West	30'-0"	0					
South	30'-0"	0					
Interior partitions	0"	0					
Floor Construction including supporting beams and joists	0						
Floor Ceiling Assembly Columns Supporting Firs							
Roof Construction including supporting beams and joists	0						
Roof Ceiling Assembly Columns Supporting Rf							
Shaft Enclosures - Exit	1	1		2T-4.0	UL-U305		
Shaft Enclosures - Other	1	1		2T-4.0; 3T-4.0	UL-U305		
Corridor Separation	1						
Occupancy/Fire Barrier Separation							
Party/Fire Wall Separation	0						
Smoke Barrier Separation	0						
Smoke Partition	0						
Tenant Separation	0						
Incidental Use Separation	0						

**LIFE SAFETY SYSTEM REQUIREMENTS**

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

**LIFE SAFETY PLAN REQUIREMENTS**

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

USE	WATERCLOSETS (TOILETS)			URINALS ALLOWED	LAVATORIES (SINKS)			SHOWERS/ TUBS	DRINKING FOUNTAINS	
	MALE	FEMALE	UNISEX		REGULAR	ACCESSIBLE				
SPACE EXISTING	8	15	6	6	8	15	5			8
NEW	6	12	2	6	6	8	2			4
REQUIRED	22	27	8	*	9	9				10

**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  
HARNETT COUNTY 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 attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design.  
EXISTING BUILDING ENVELOPE COMPLIES WITH CODE:  No  Yes (If checked, the remainder of this section is not applicable)  
EXEMPT BUILDING:  No  Yes (Provide code or statutory reference):

CLIMATE ZONE:  3A  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"X8" 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)  
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 Mykins Structural Engineers, PC**  
301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-782-1833

Civil Engineer  
**Timmons Group**  
5140 Trinity Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938

SEAL | DATE 4/9/2021 | 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**

NO.	DESCRIPTION	DATE
1	100% Construction Documents	2/24/2021
2	Permit Revisions	4/9/2021

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

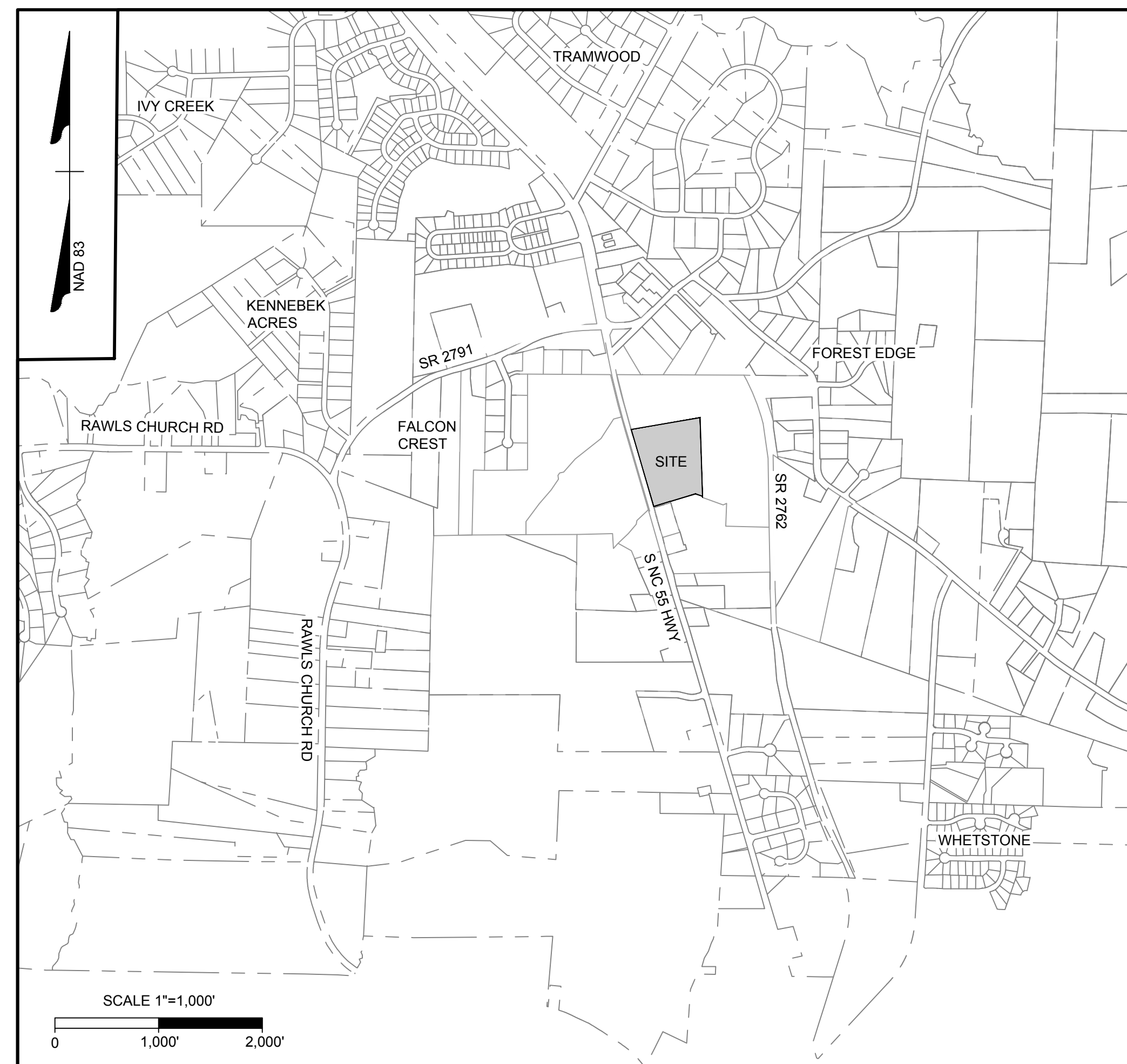
**Civil Engineer**  
Timmons Group  
5410 Trinity Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938

### 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	



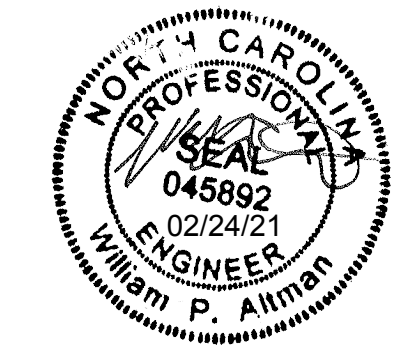
VICINITY MAP

**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



COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE, REPRODUCTION OR REPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED.

PROJECT NO. 20408.000

SHEET TITLE  
COVER SHEET

SHEET NUMBER

C0.0





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

ED: 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

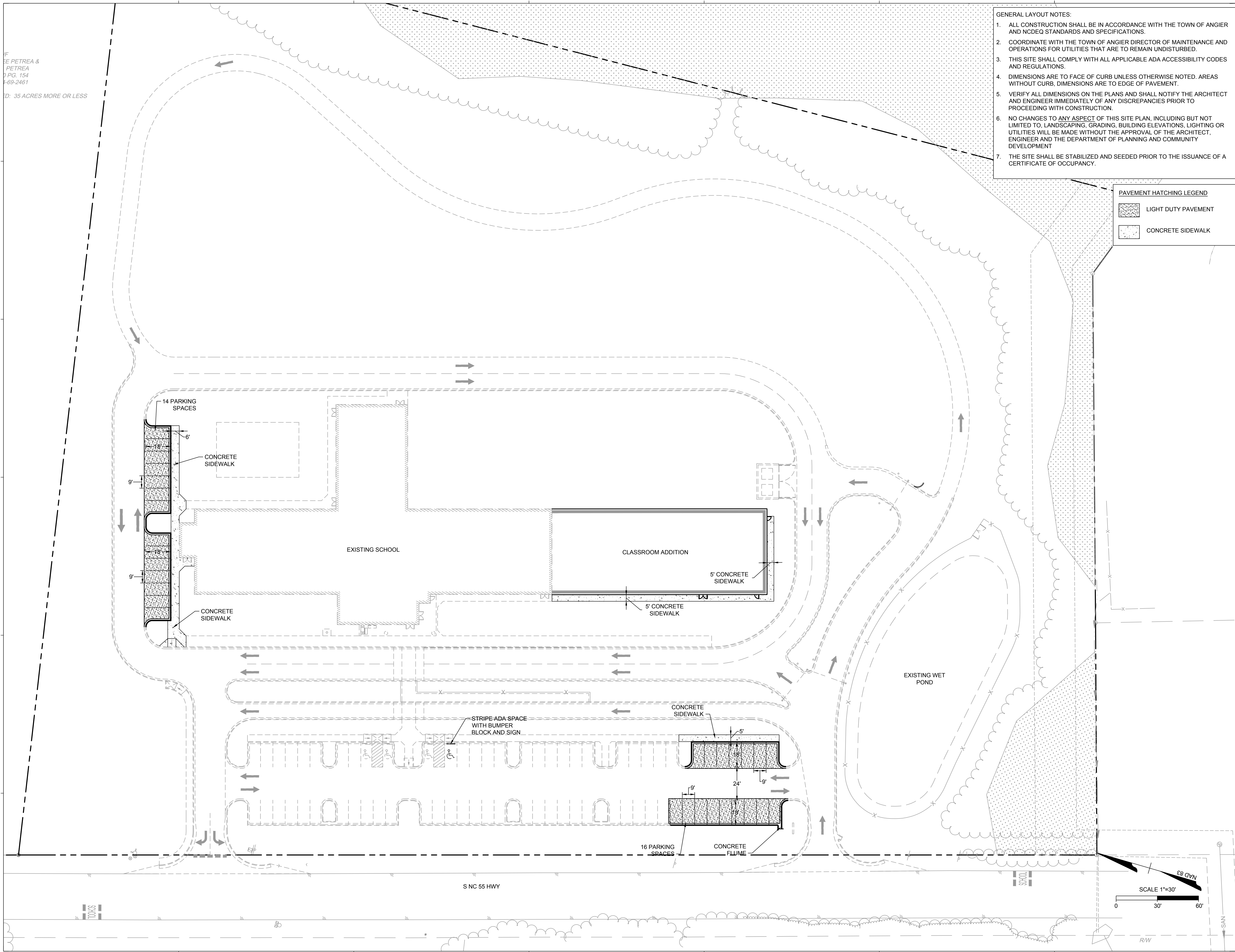
8529 S NC 55 HWY,  
 ANGIER NC 27501

**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

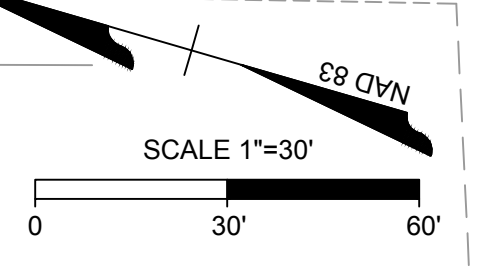
**RATIO**

COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE, REPRODUCTION OR REPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED.

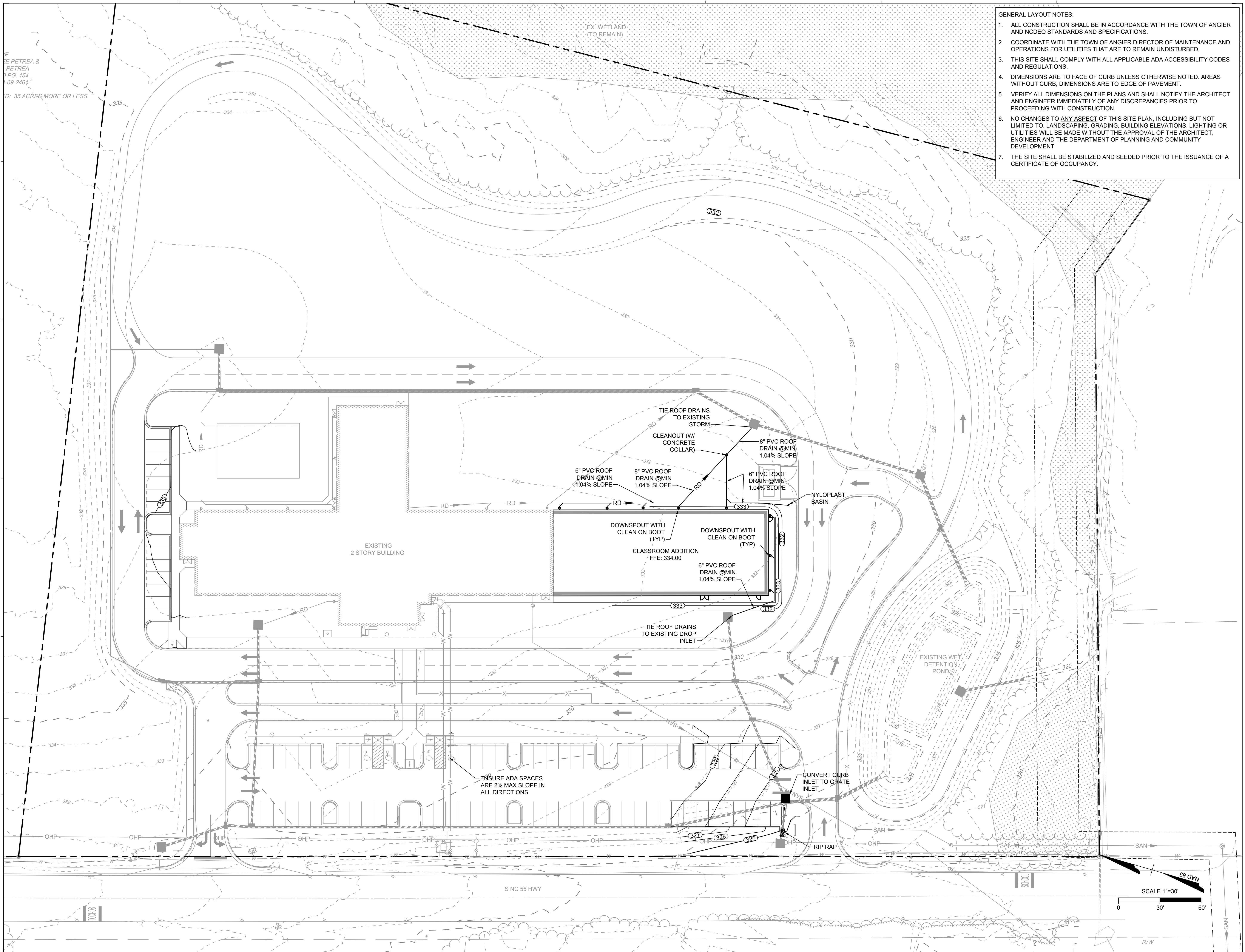
PROJECT NO. 20408.000

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 SEEDED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

# CAROLINA CHARTER ACADEMY ADDITION

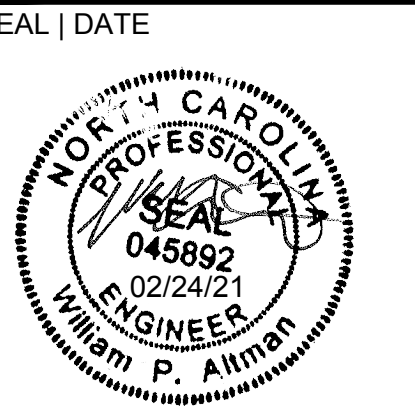
8529 S NC 55 HWY,  
ANGIER NC 27501

**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



SHEET ISSUE

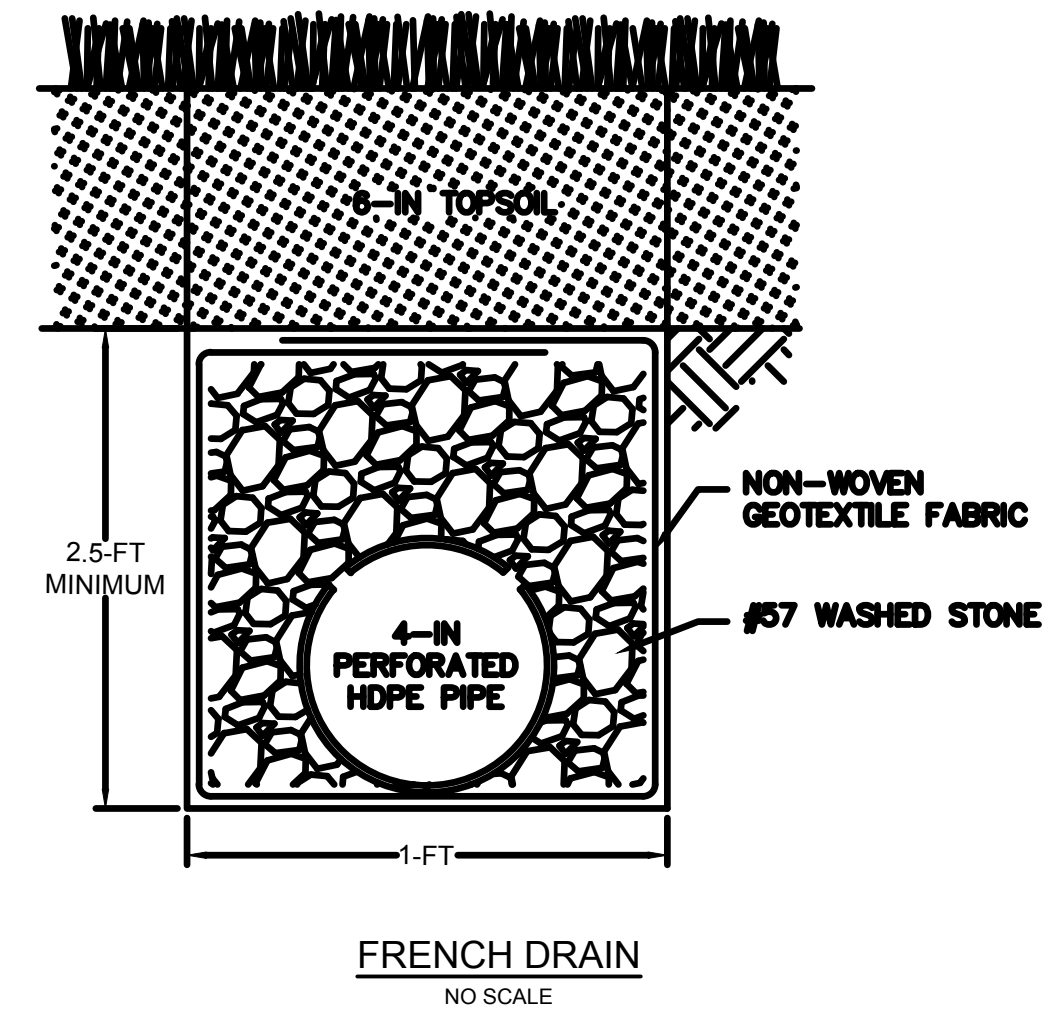
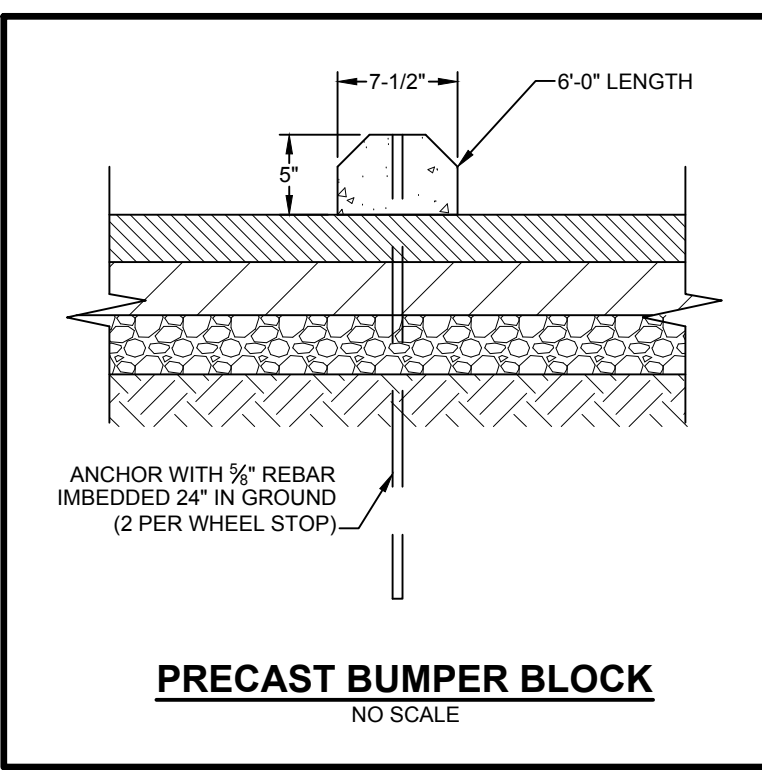
1	Schematic Design	11/24/2020
2	Town Of Angier-TRC	1/06/2021
3	Town Of Angier-TRC	1/28/2021
4	100% Construction Documents	2/24/2021

COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE, REPRODUCTION OR PUBLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED.

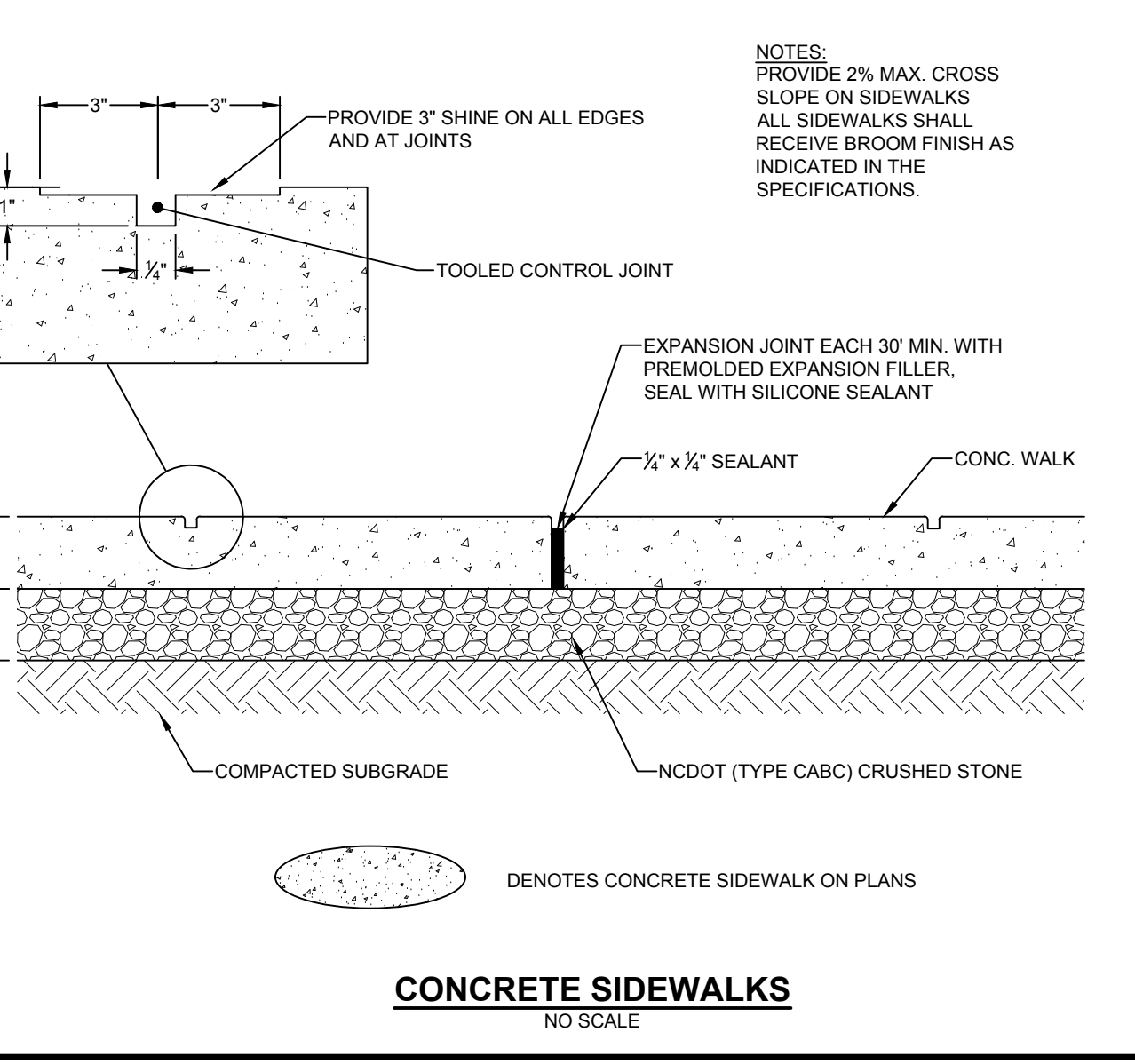
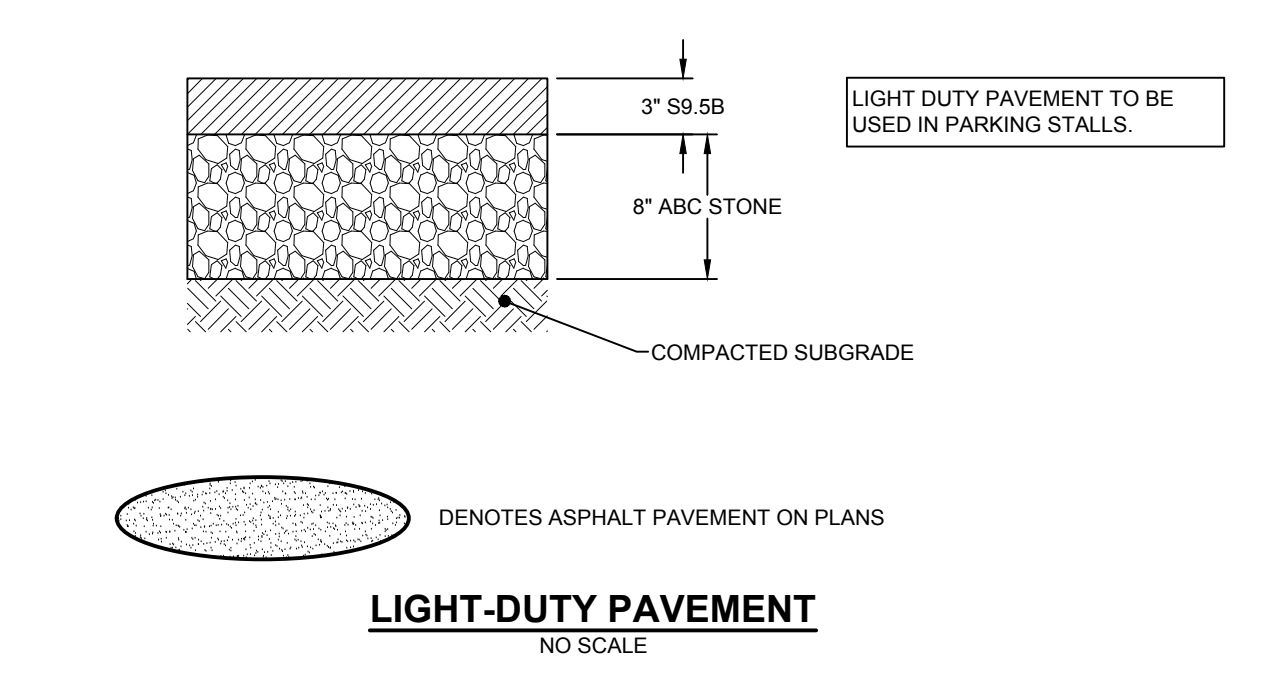
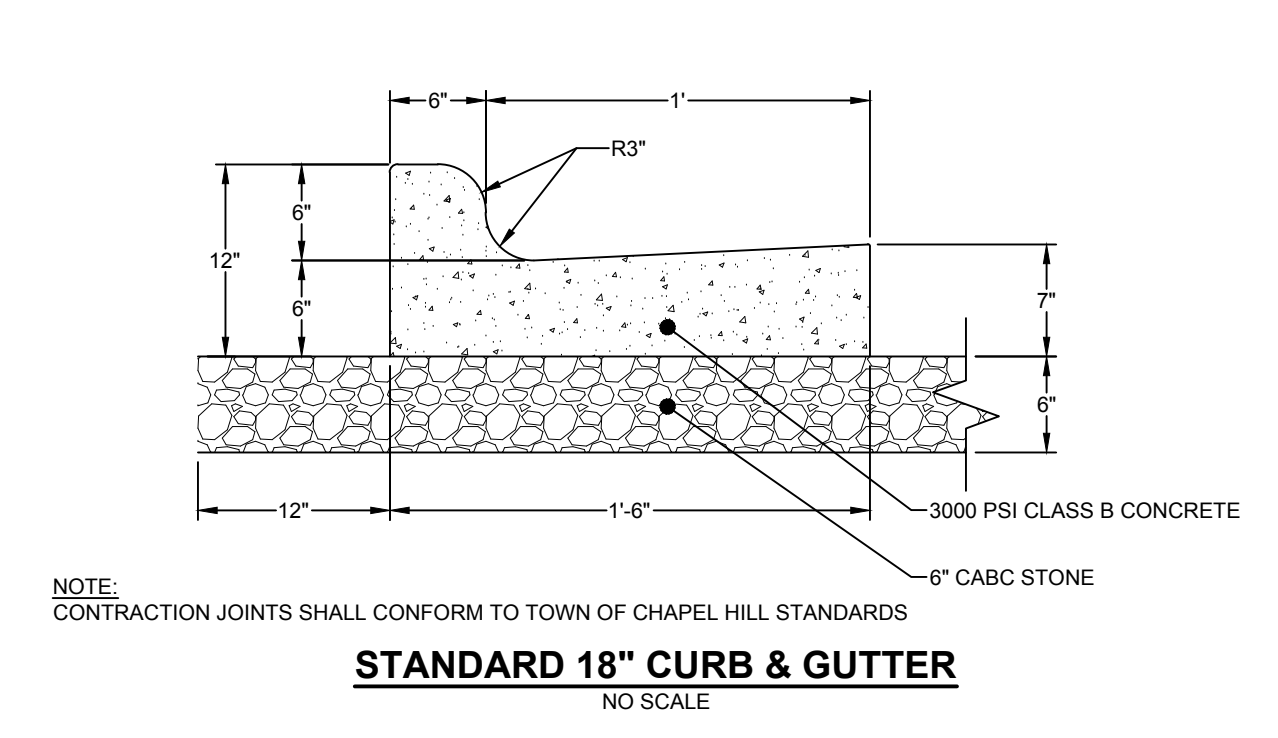
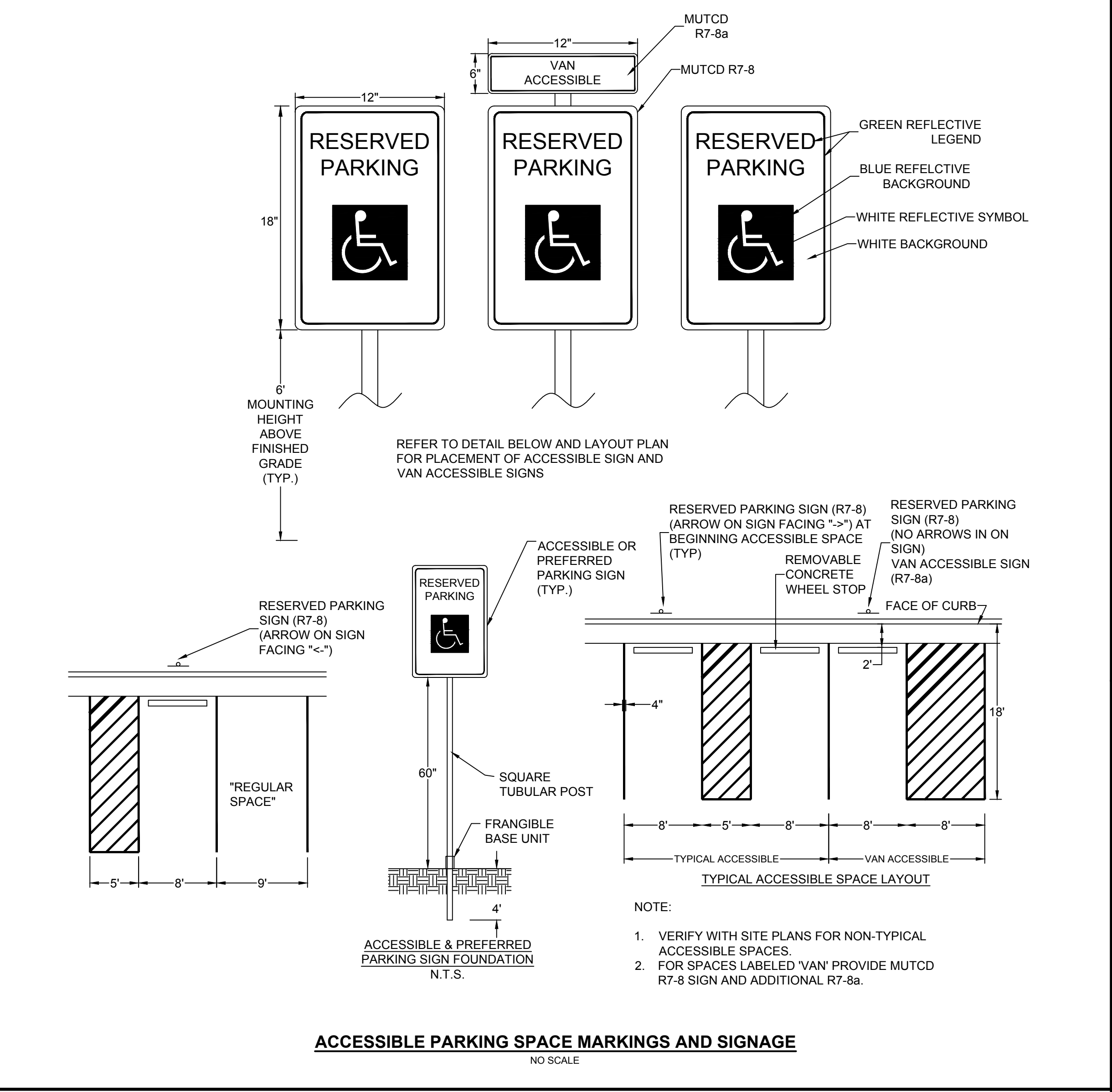
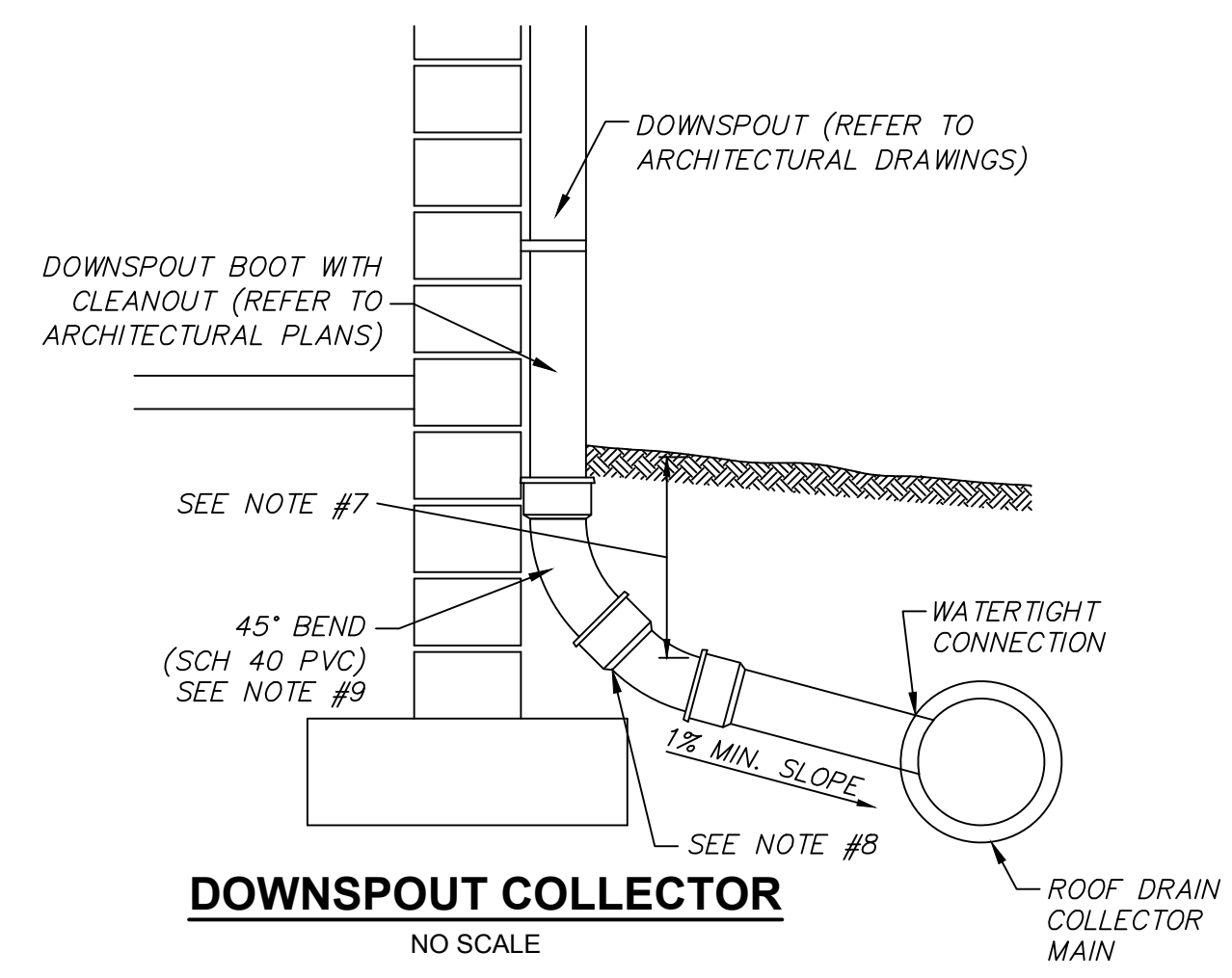
PROJECT NO. 20408.000

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.



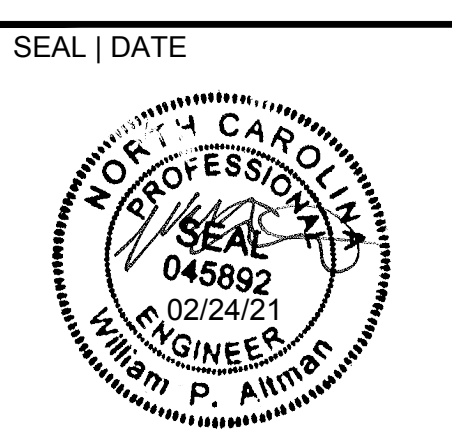
**CAROLINA CHARTER ACADEMY ADDITION**  
8529 S NC 55 HWY,  
ANGIER NC 27501

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

**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	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**

COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE, REPRODUCTION OR PUBLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED.

PROJECT NO. 20408.000

SHEET TITLE  
**NOTES & DETAILS**

SHEET NUMBER  
**C5.0**





















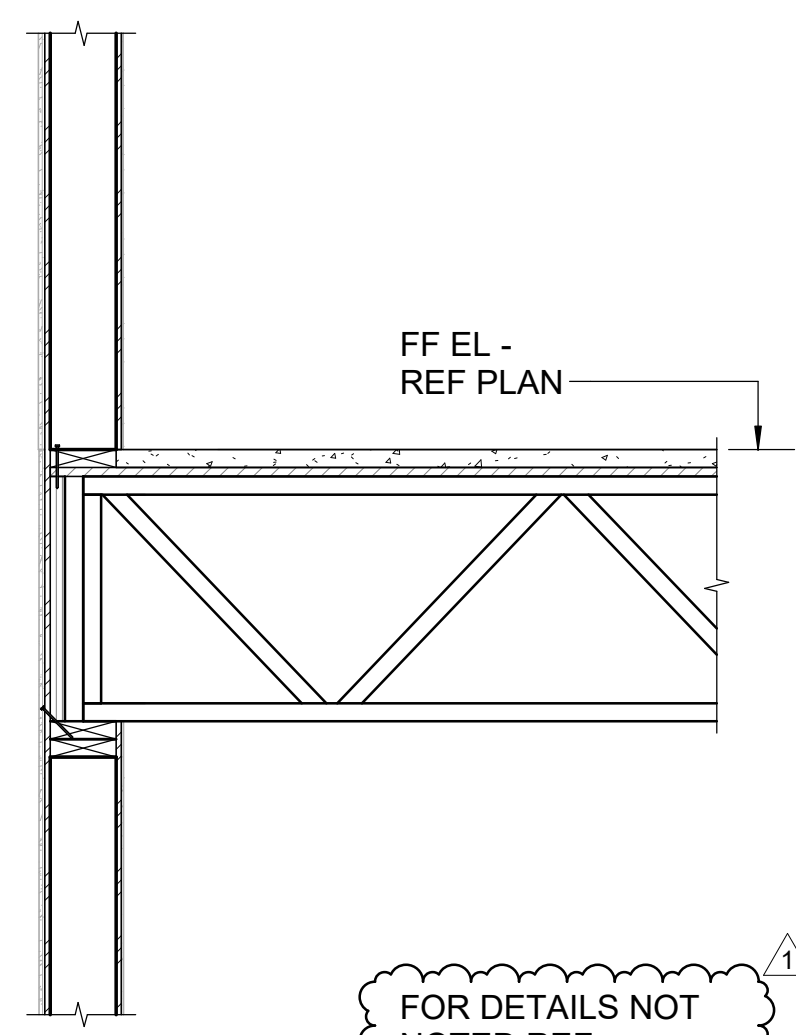
Carolina Charter Academy Exp.  
8529 Highway 55  
Angier, North Carolina 27501

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

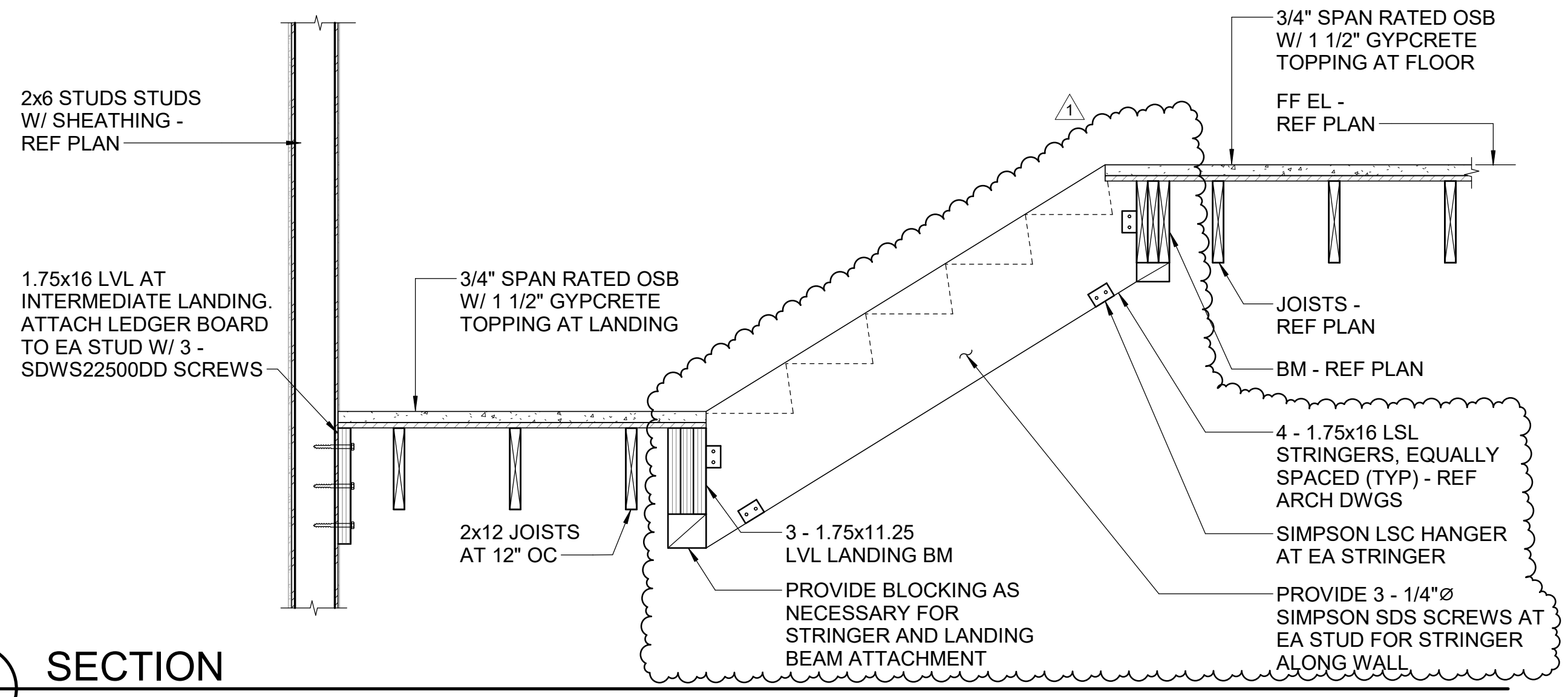
Architect  
RATIO  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

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

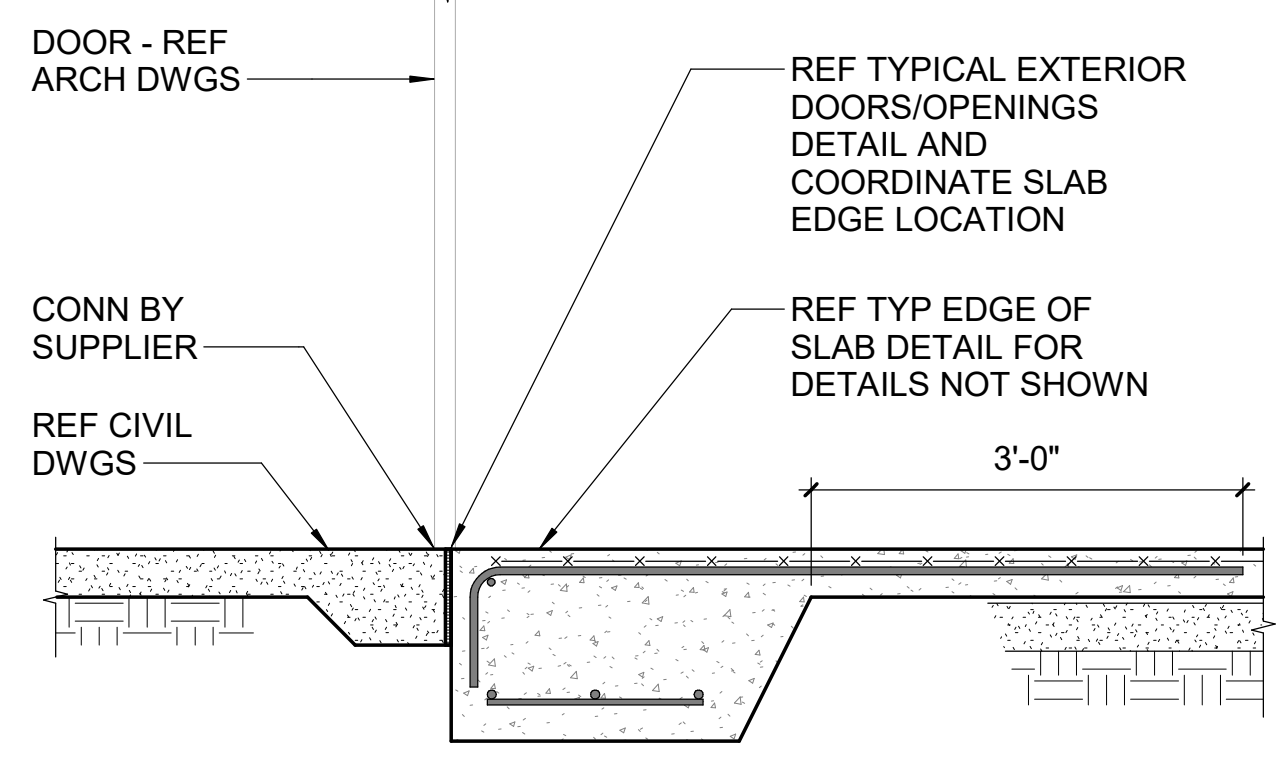
Civil Engineer  
Timmons Group  
5410 Trinity Road  
Suite 102  
Raleigh, North Carolina 27607  
919-866-4938



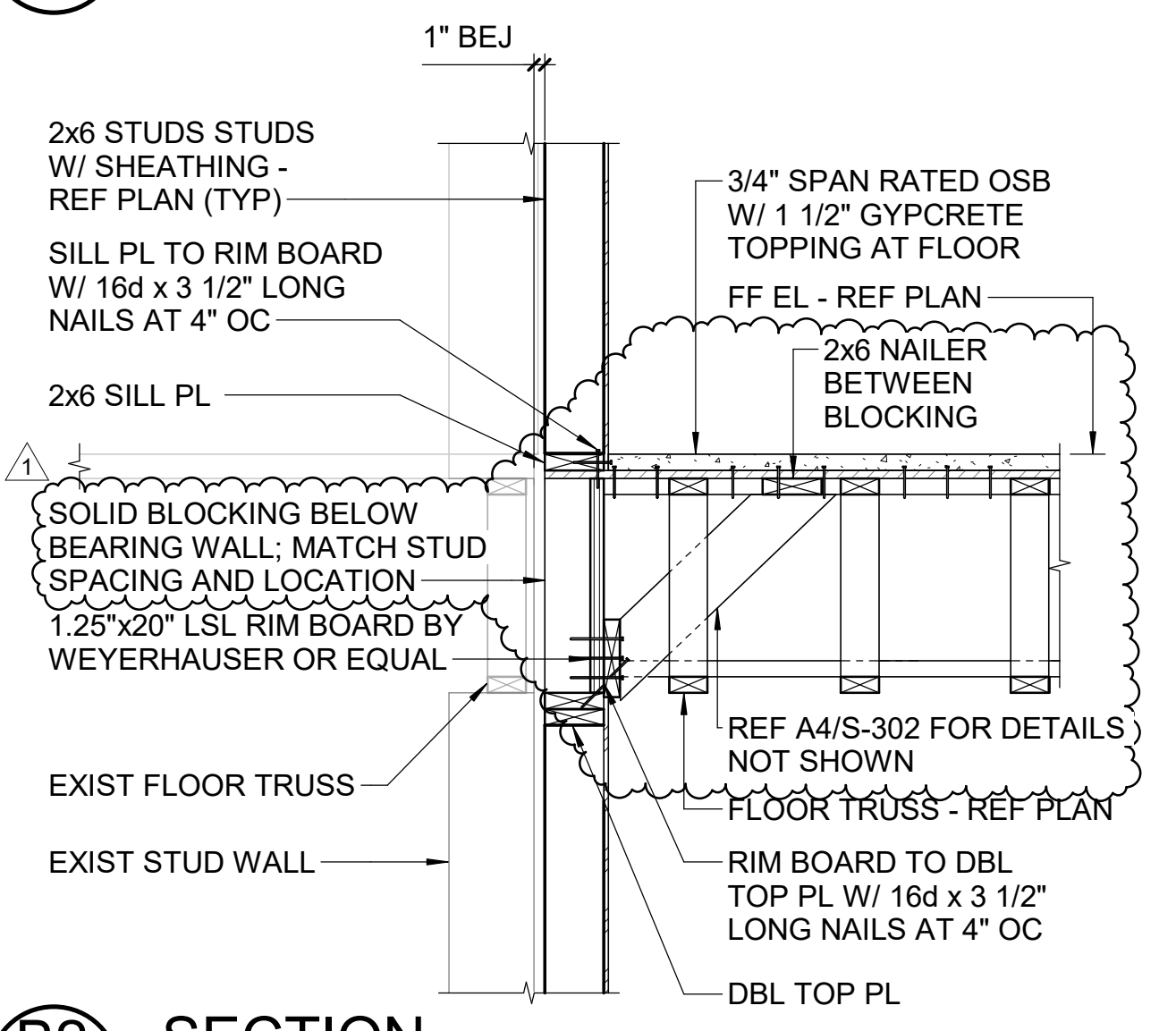
**D1 SECTION**  
S-301 3/4" = 1'-0"



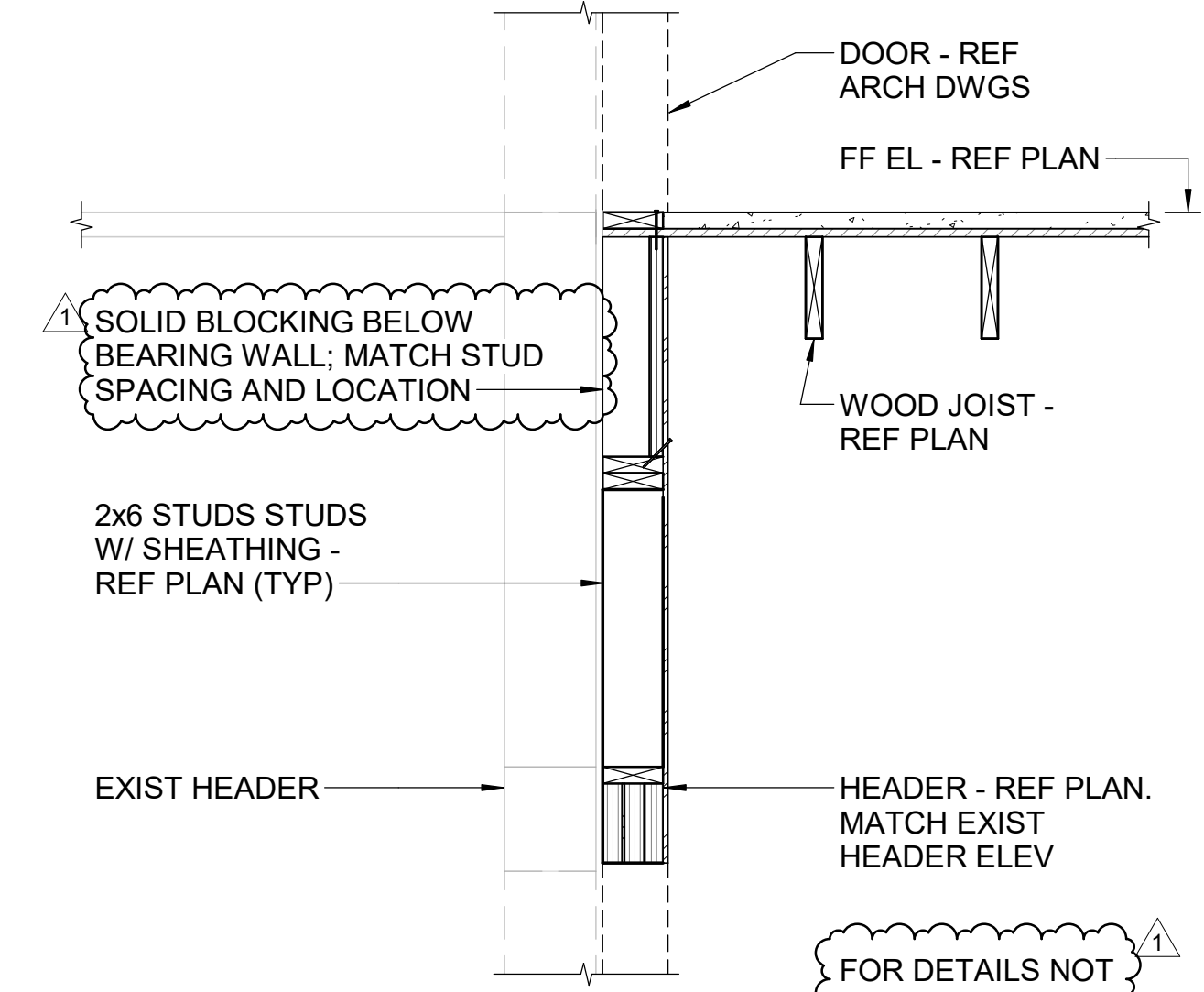
**D2 SECTION**  
S-301 3/4" = 1'-0"



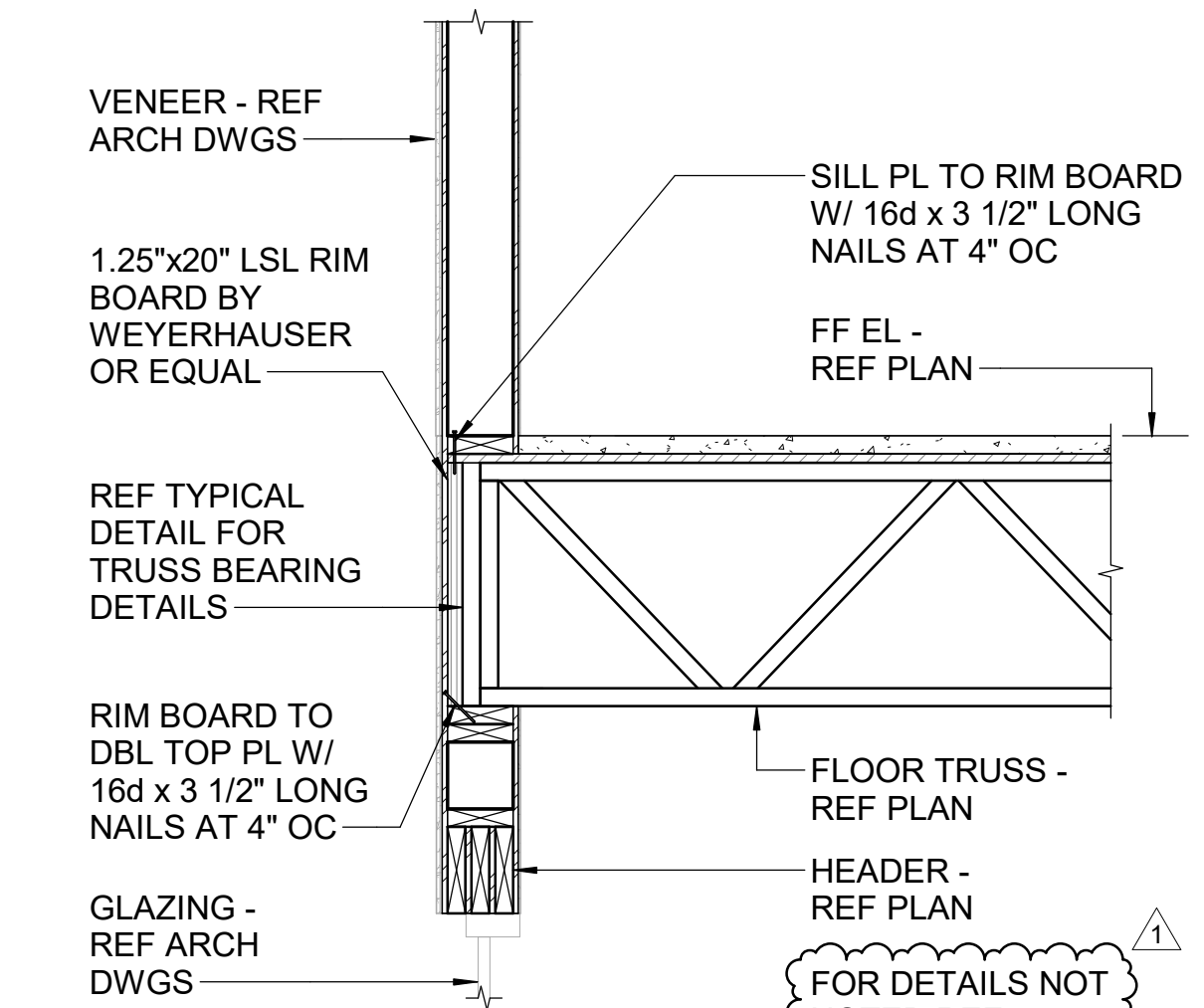
**B1 SECTION**  
S-301 3/4" = 1'-0"



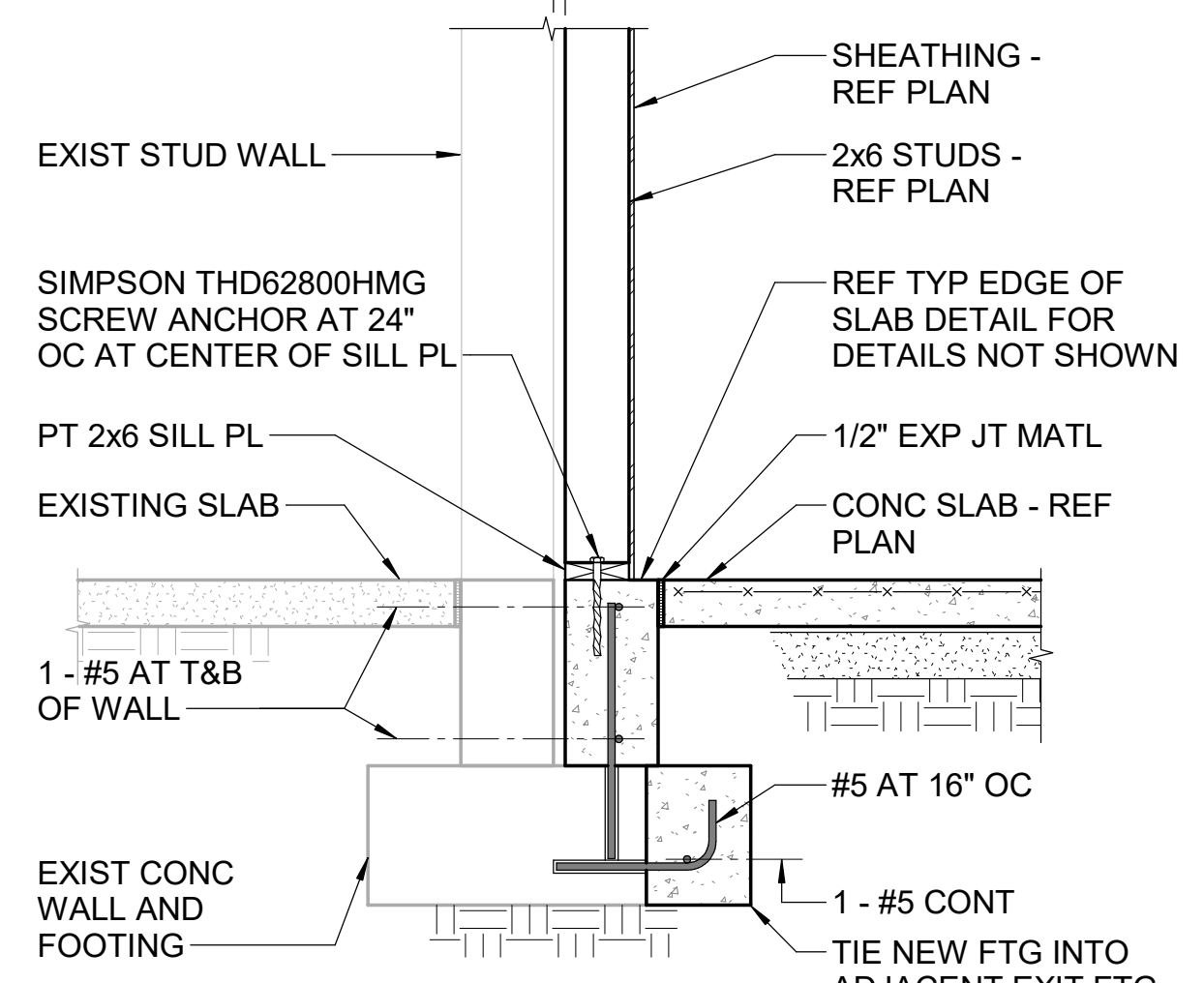
**B2 SECTION**  
S-301 3/4" = 1'-0"



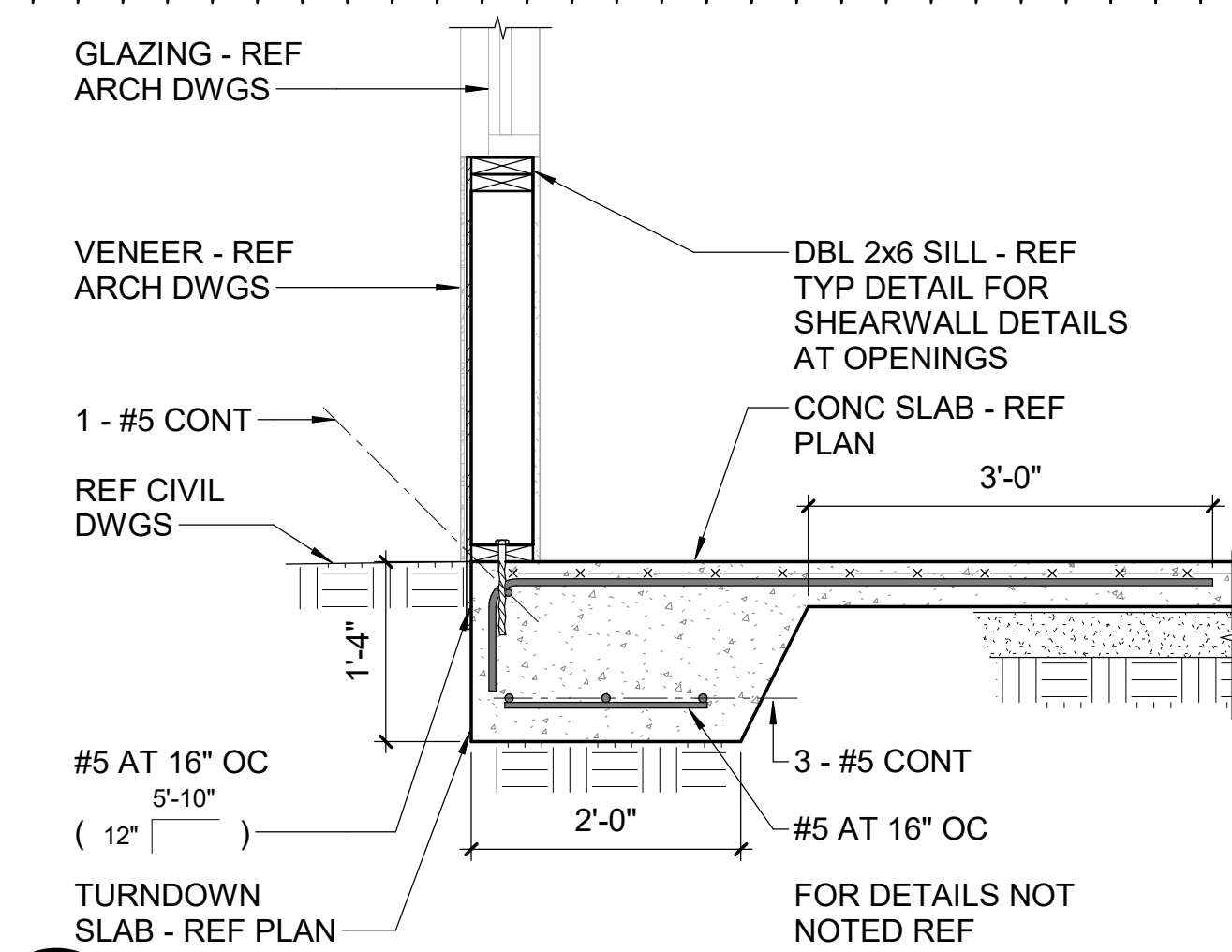
**B4 SECTION**  
S-301 3/4" = 1'-0"



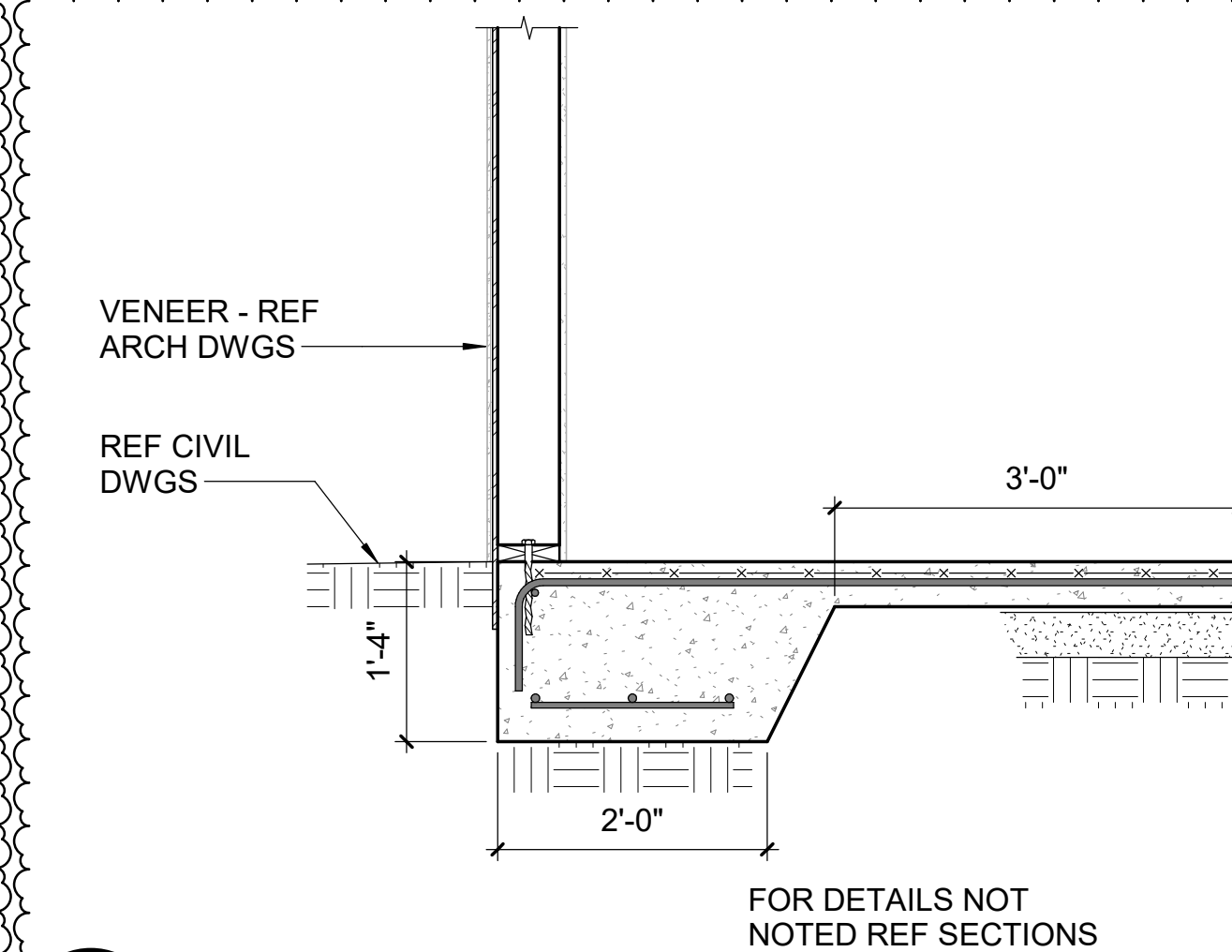
**B6 SECTION**  
S-301 3/4" = 1'-0"



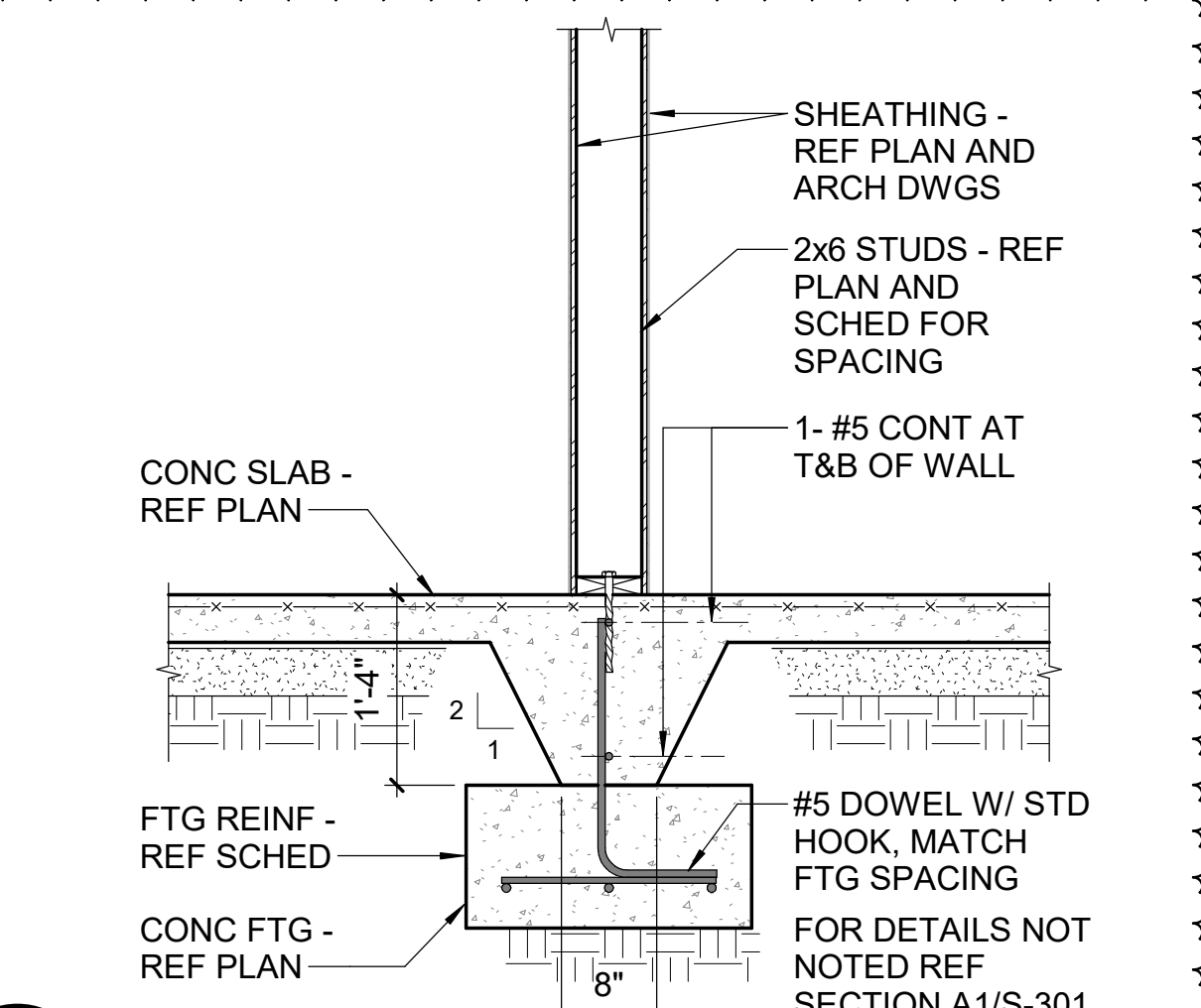
**A1 SECTION**  
S-301 3/4" = 1'-0"



**A2 SECTION**  
S-301 3/4" = 1'-0"

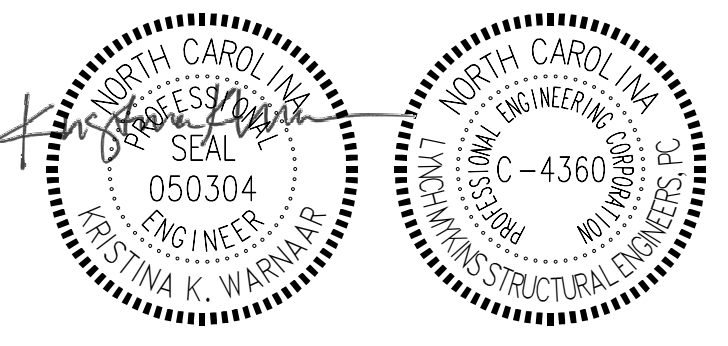


**A4 SECTION**  
S-301 3/4" = 1'-0"



**A6 SECTION**  
S-301 3/4" = 1'-0"

SEAL | DATE 03-15-21



SHEET ISSUE		02-24-21
1	ADDENDUM 1	03-15-21

**RATIO**  
PROJECT NO. 20408.000

SHEET TITLE  
**SECTIONS**  
SHEET NUMBER  
**S-301**

3/15/2021 7:44:15 PM











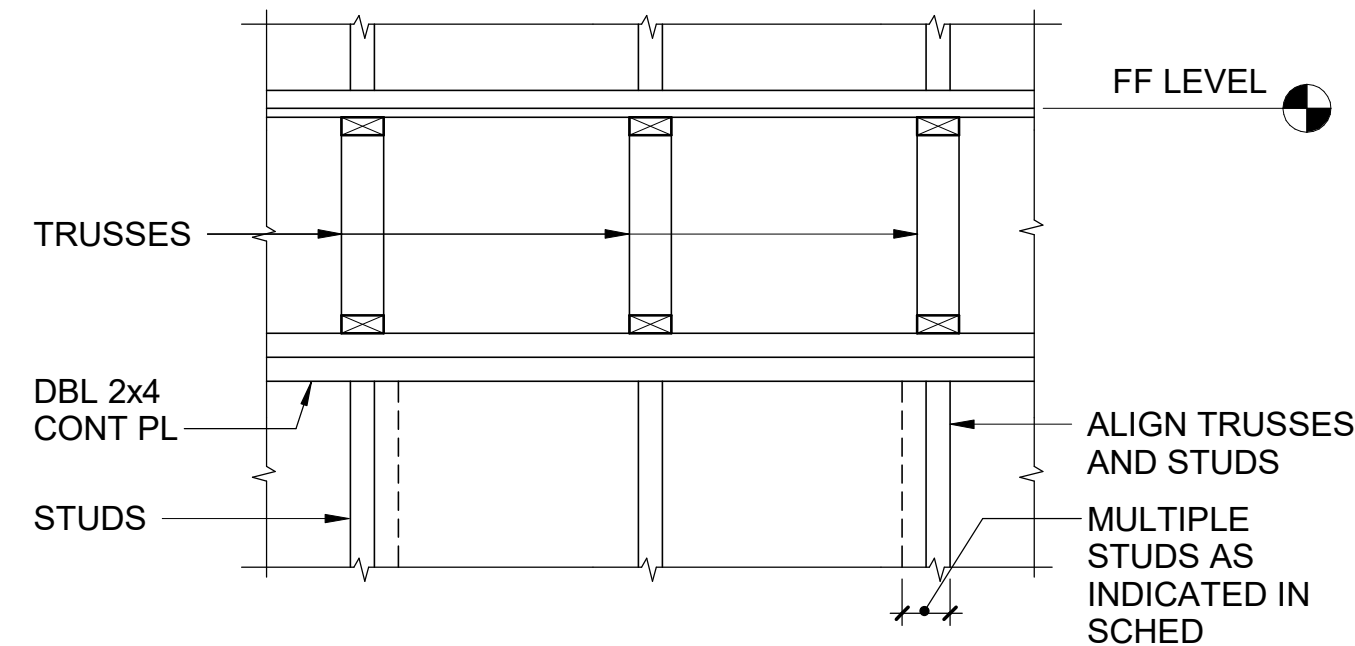
Carolina Charter Academy Exp.  
8529 Highway 55  
Angier, North Carolina 27501

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

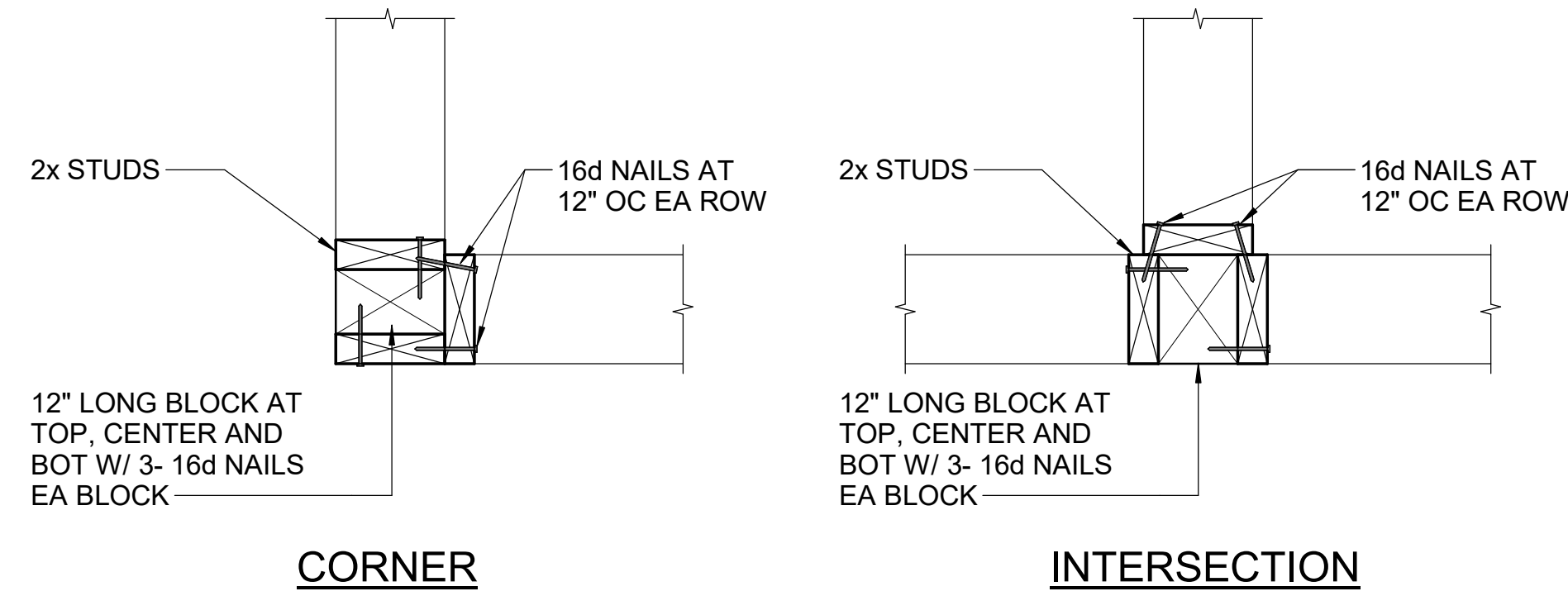
Structural Engineer  
**Lynch Mykins Structural Engineers, PC**  
301 North West Street  
Suite 105  
Raleigh, North Carolina 27603  
919-782-1833

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



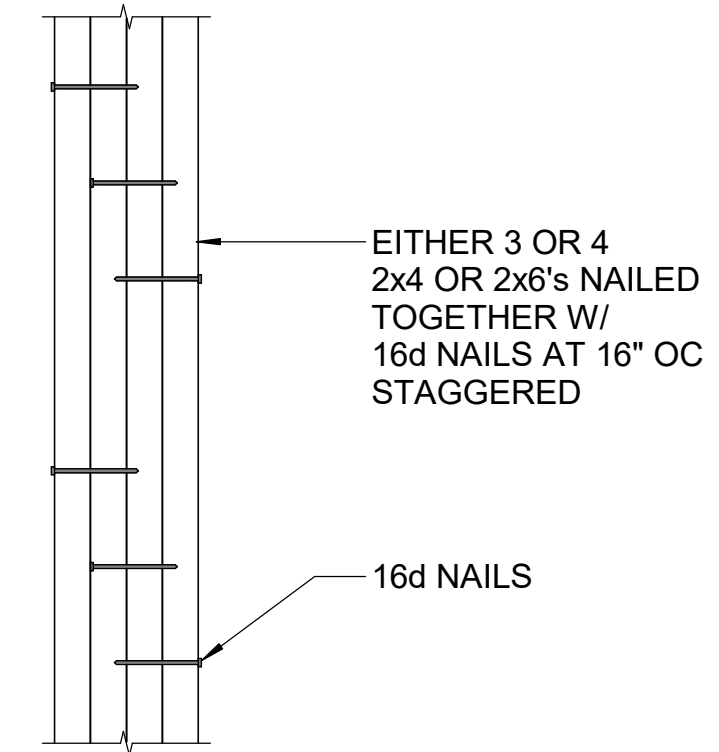
TYPICAL LOAD BEARING WALL DETAIL

NTS



TYPICAL WALL CORNERS AND INTERSECTIONS

NTS

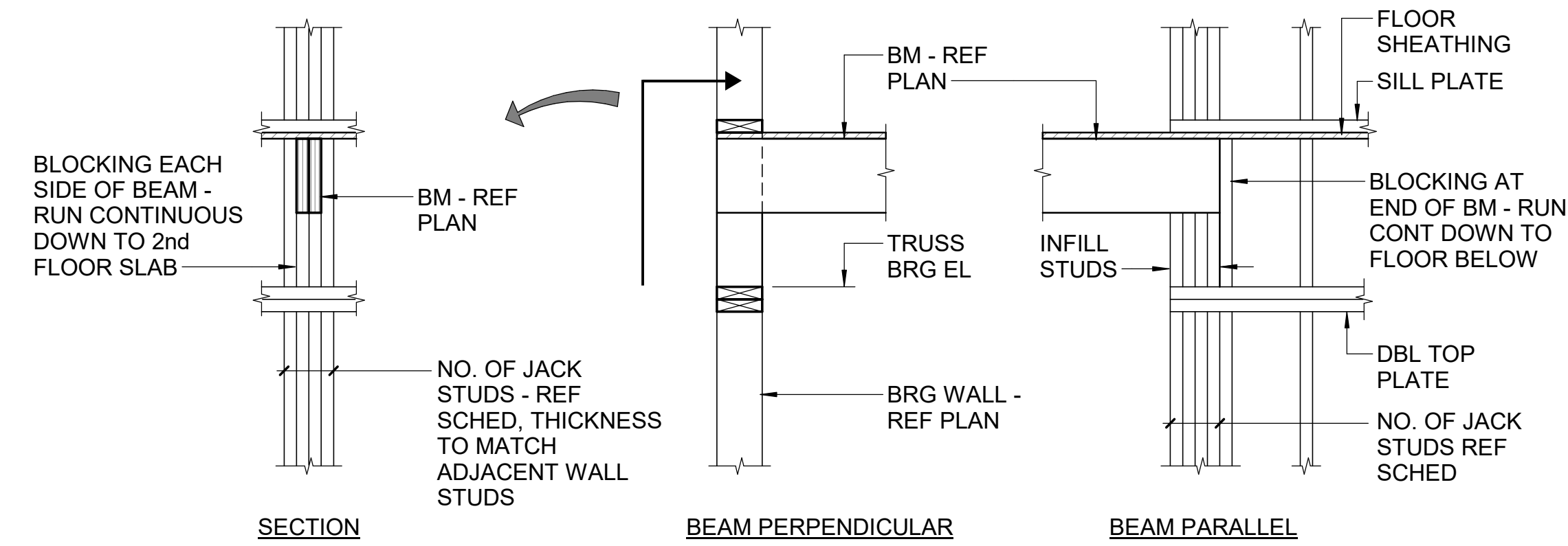


TYPICAL BUILT-UP COLUMN NAILING PATTERN DETAIL

NTS

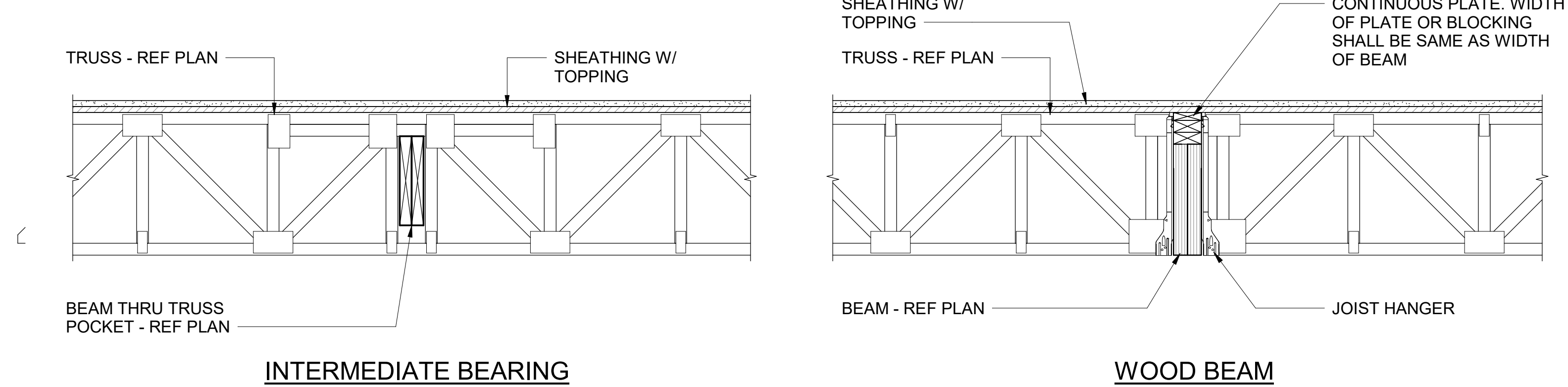
NOTES:

- REFER TO "ROUGH CARPENTRY NOTES" ON SHEET S0.02 FOR MATERIAL PROPERTY REQUIREMENTS.
- ATTACH MEMBERS OF MULTI-PLY BEAMS TOGETHER:
  - SAWN LUMBER - ATTACH PER TABLE 2304.9.1 OF THE BUILDING CODE.
  - 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

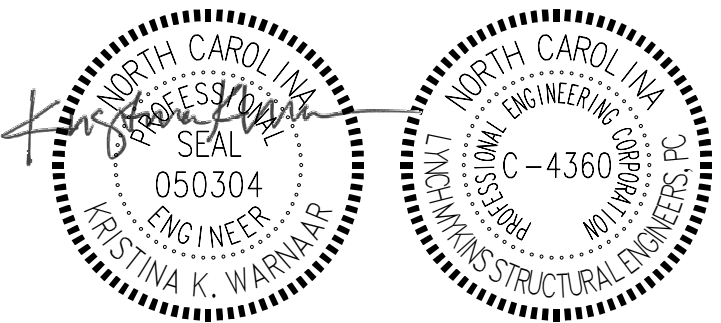
NTS



TYPICAL TRUSS TO BEAM CONNECTION DETAILS

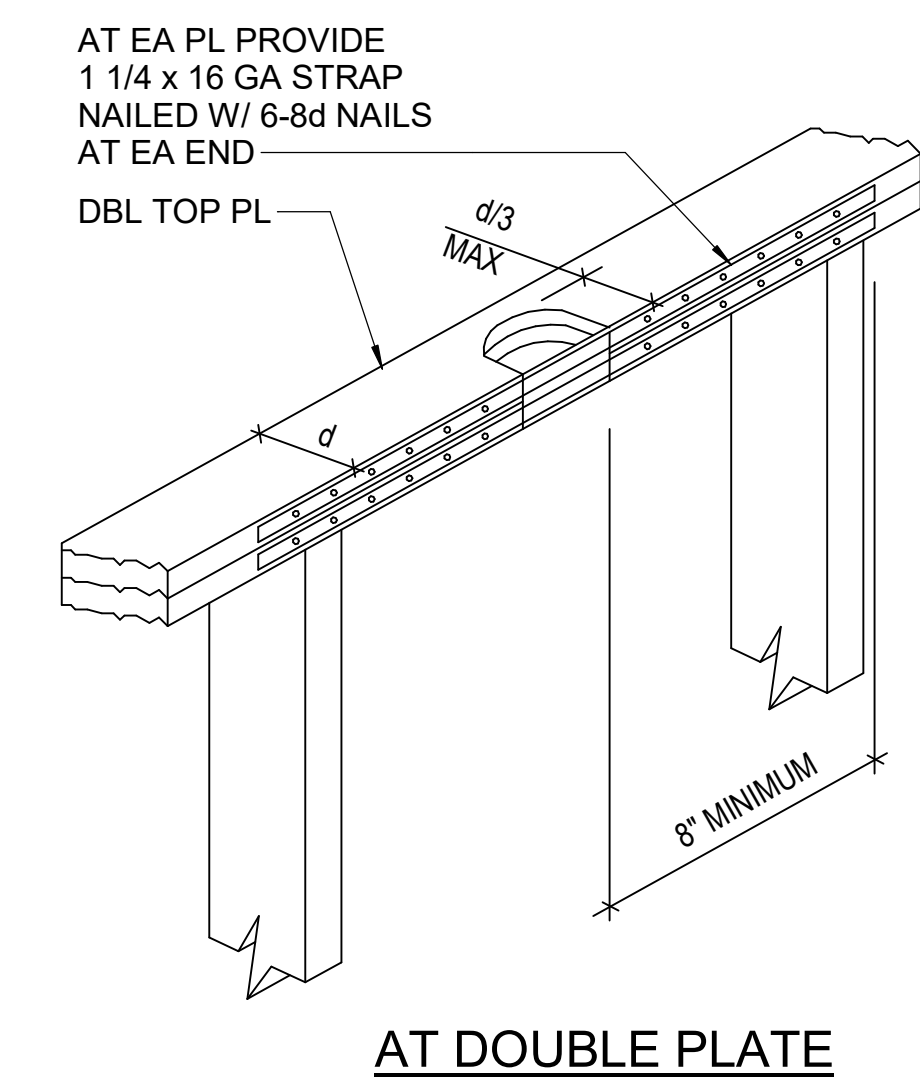
NTS

SEAL | DATE 02-24-21



SHEET ISSUE

100% CONSTRUCTION DOCUMENTS 02-24-21



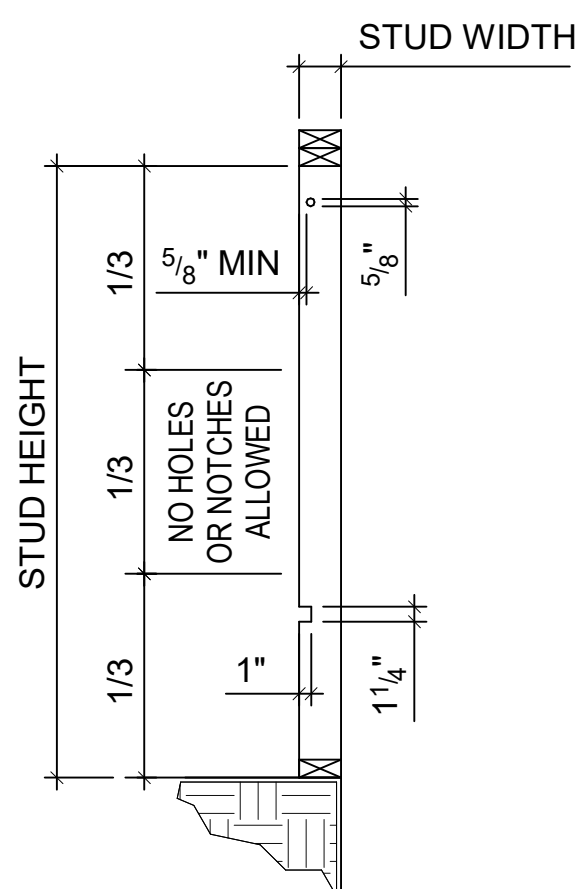
ALLOWABLE PENETRATIONS IN LIGHT FRAMED 2x LUMBER

NTS

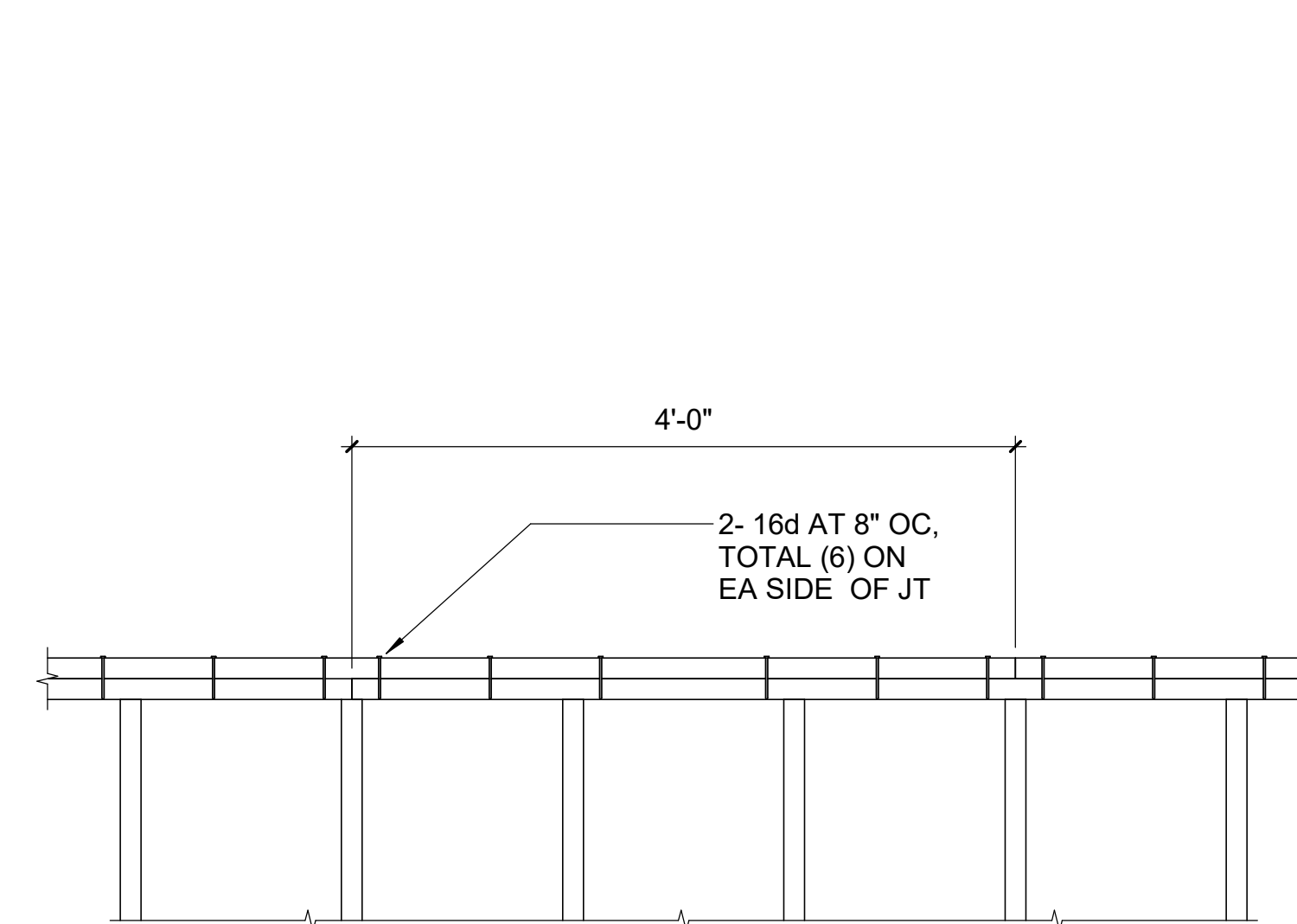
NOTCH AND HOLE BORING SCHEDULE			
MEMBER (d)	d/3	d/4	d/6
2x4	1 1/8"	7/8"	5/8"
2x6	1 3/4"	1 5/8"	7/8"
2x8	2 5/8"	1 3/4"	1 1/8"
2x10	3"	2 1/4"	1 1/2"
2x12	3 5/8"	2 3/4"	1 7/8"

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



COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE, DISSEMINATION OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED.

PROJECT NO. 20408.000

SHEET TITLE  
TYPICAL DETAILS

SHEET NUMBER

S-503











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

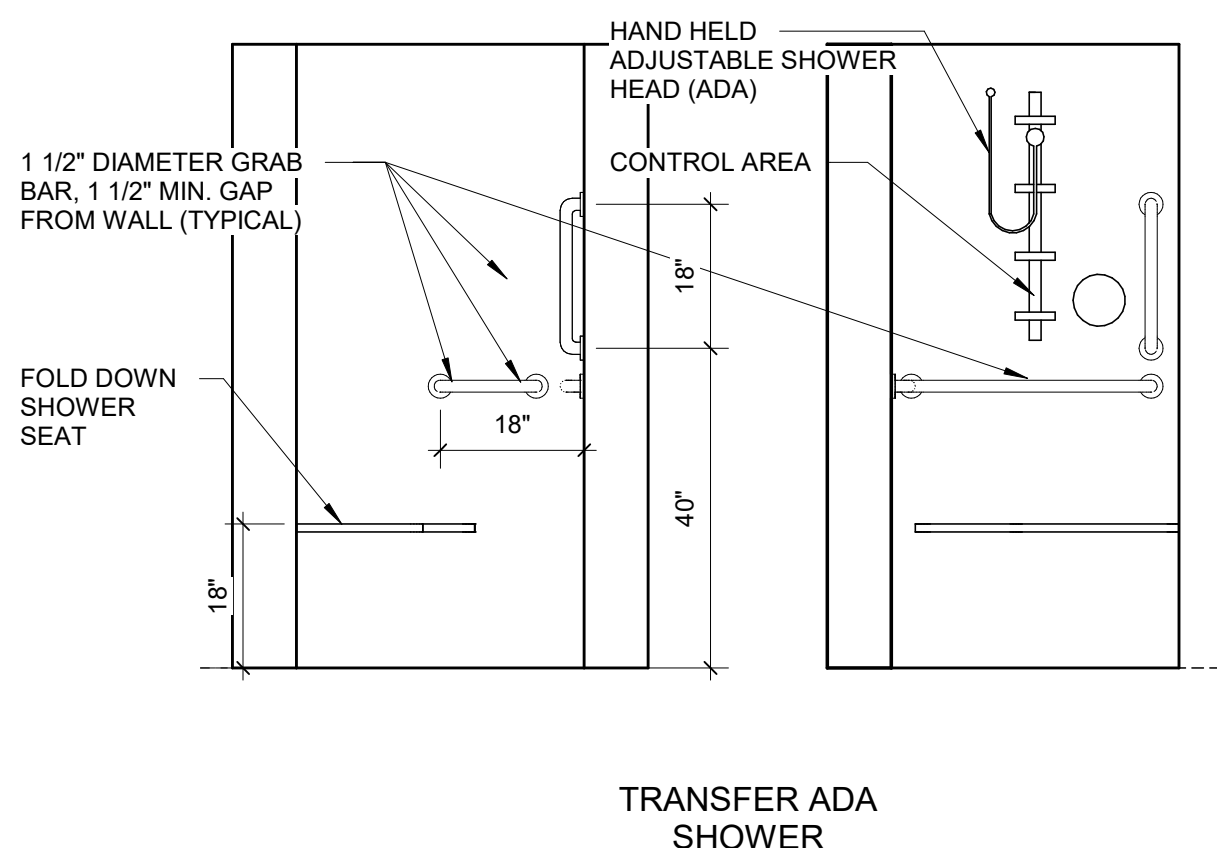
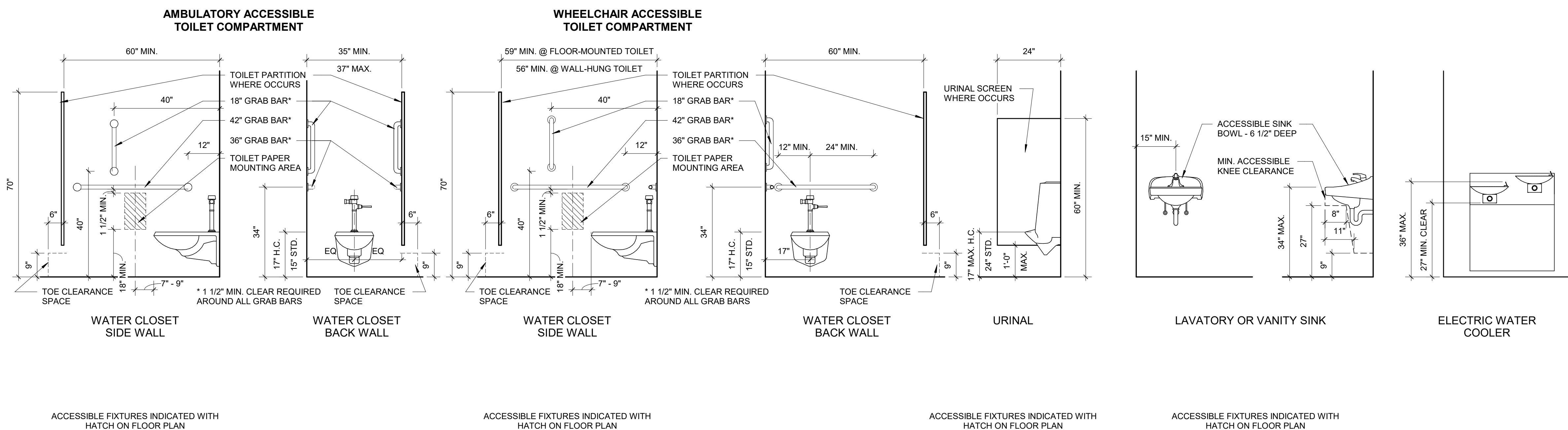
Architect  
**RATIO**  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

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

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.C. 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
CLOTHES 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 MANUFACTURER'S RECOMMENDATION

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



**STANDARD-PLUMBING FIXTURE REQUIREMENTS**  
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

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

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

**RATIO**

COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE, REPRODUCTION OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED.

PROJECT NO. 20408.000

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

SHEET NUMBER  
**A-002**











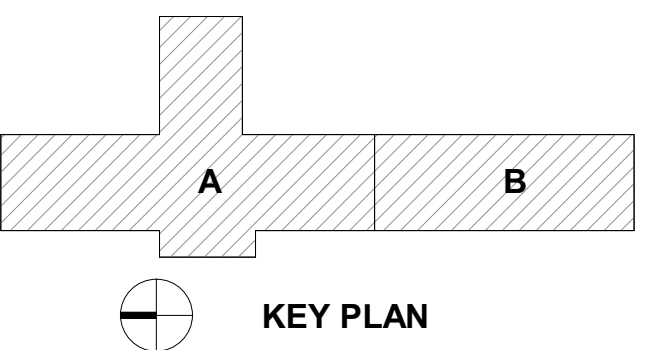
**Carolina Charter Academy Exp.**  
 8529 Highway 55  
 Angier, North Carolina 27501

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

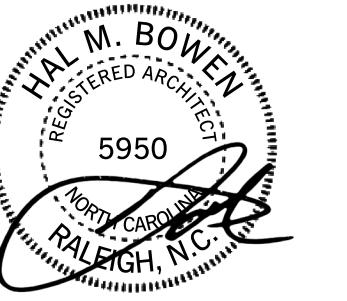
**Architect**  
**RATIO**  
 227 Fayetteville Street, Suite 301  
 Raleigh, North Carolina 27601  
 919-821-0805

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

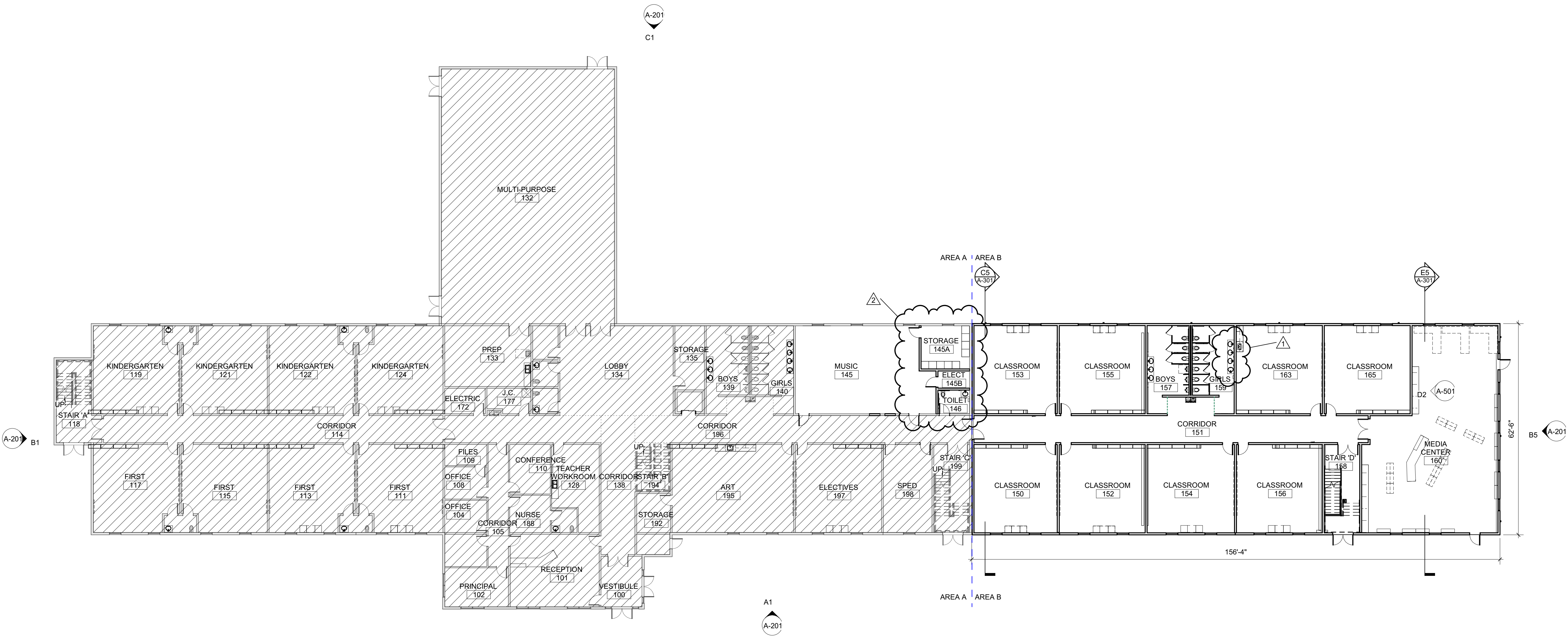
**Civil Engineer**  
**Timmons Group**  
 5410 Trinity Road  
 Suite 102  
 Raleigh, North Carolina 27607  
 919-866-4938



SEAL | DATE 4/9/2021 | 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
2	Permit Revisions	4/9/2021



4/14/2021 6:11:51 PM

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

**RATIO**  
COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE, REPRODUCTION OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED.

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

SHEET NUMBER  
**A-101**





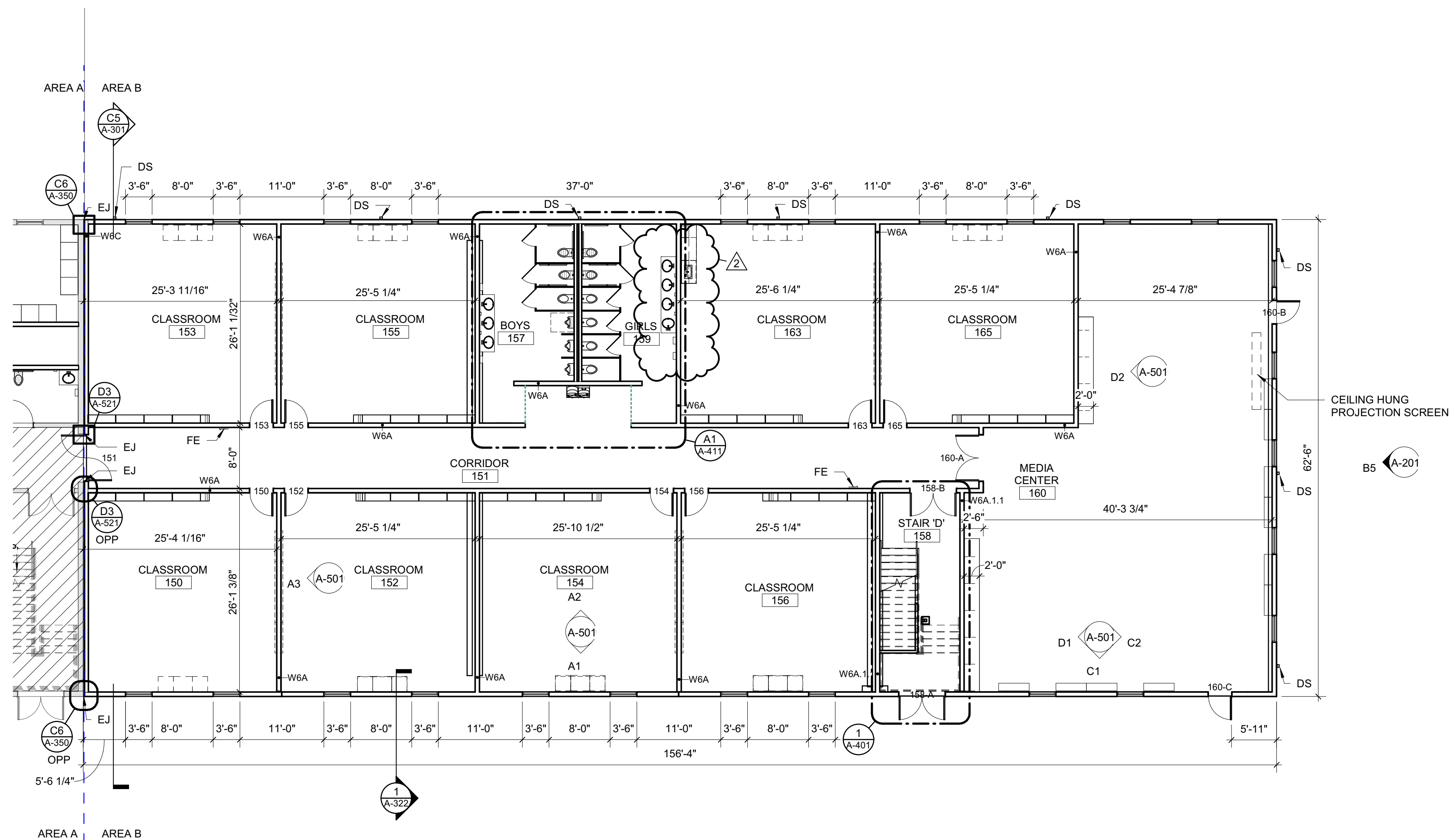
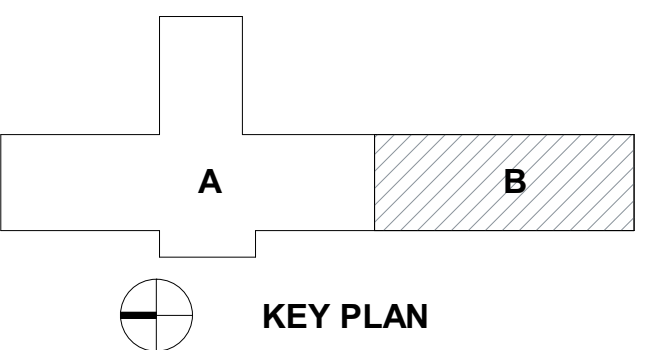
**Carolina Charter Academy Exp.**  
 8529 Highway 55  
 Angier, North Carolina 27501

**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

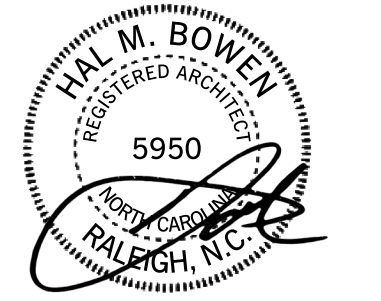
**Civil Engineer**  
**Timmons Group**  
 5410 Trinity Road  
 Suite 102  
 Raleigh, North Carolina 27607  
 919-866-4938



CEILING HUNG  
 PROJECTION SCREEN

B5 (A-201)

SEAL | DATE 4/9/2021 | 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	DATE
1 100% Construction Documents	2/24/2021
2 Permit Revisions	4/9/2021



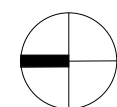
COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE, REPRODUCTION OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED.

PROJECT NO. 20408.000

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

SHEET NUMBER  
**A-101B**

4/14/2021 6:11:52 PM



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





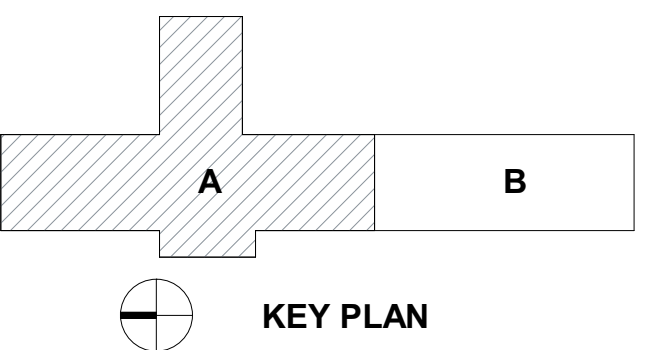
**Carolina Charter Academy Exp.**  
 8529 Highway 55  
 Angier, North Carolina 27501

**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



SEAL | DATE 4/9/2021 | 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
2	Permit Revisions 4/9/2021

SHEET TITLE	
SECOND FLOOR PLAN - AREA A	

**RATIO**  
COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE, DISSEMINATION OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED.

PROJECT NO. 20408.000

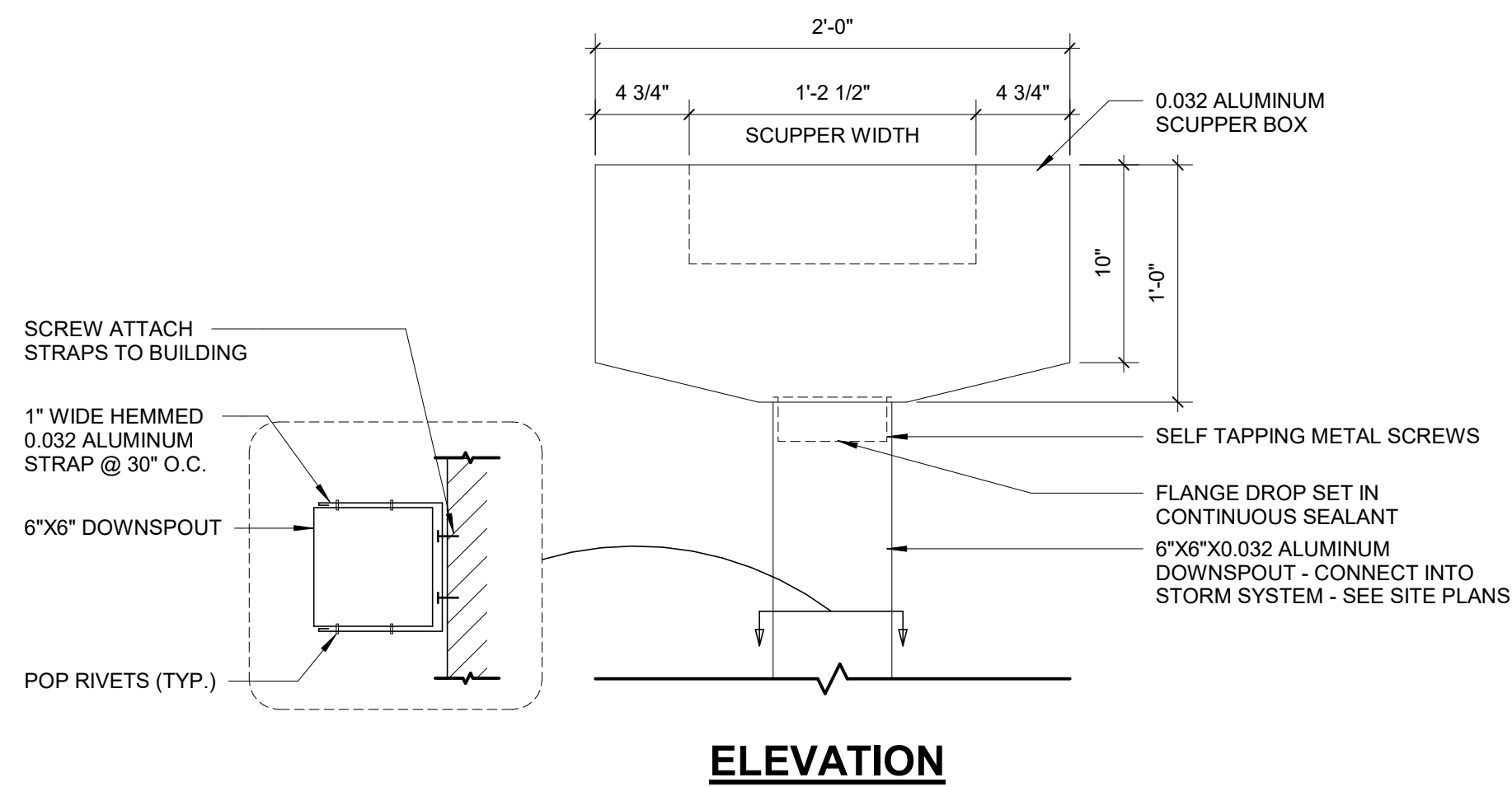
SHEET NUMBER  
**A-102A**

4/14/2021 6:11:54 PM

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

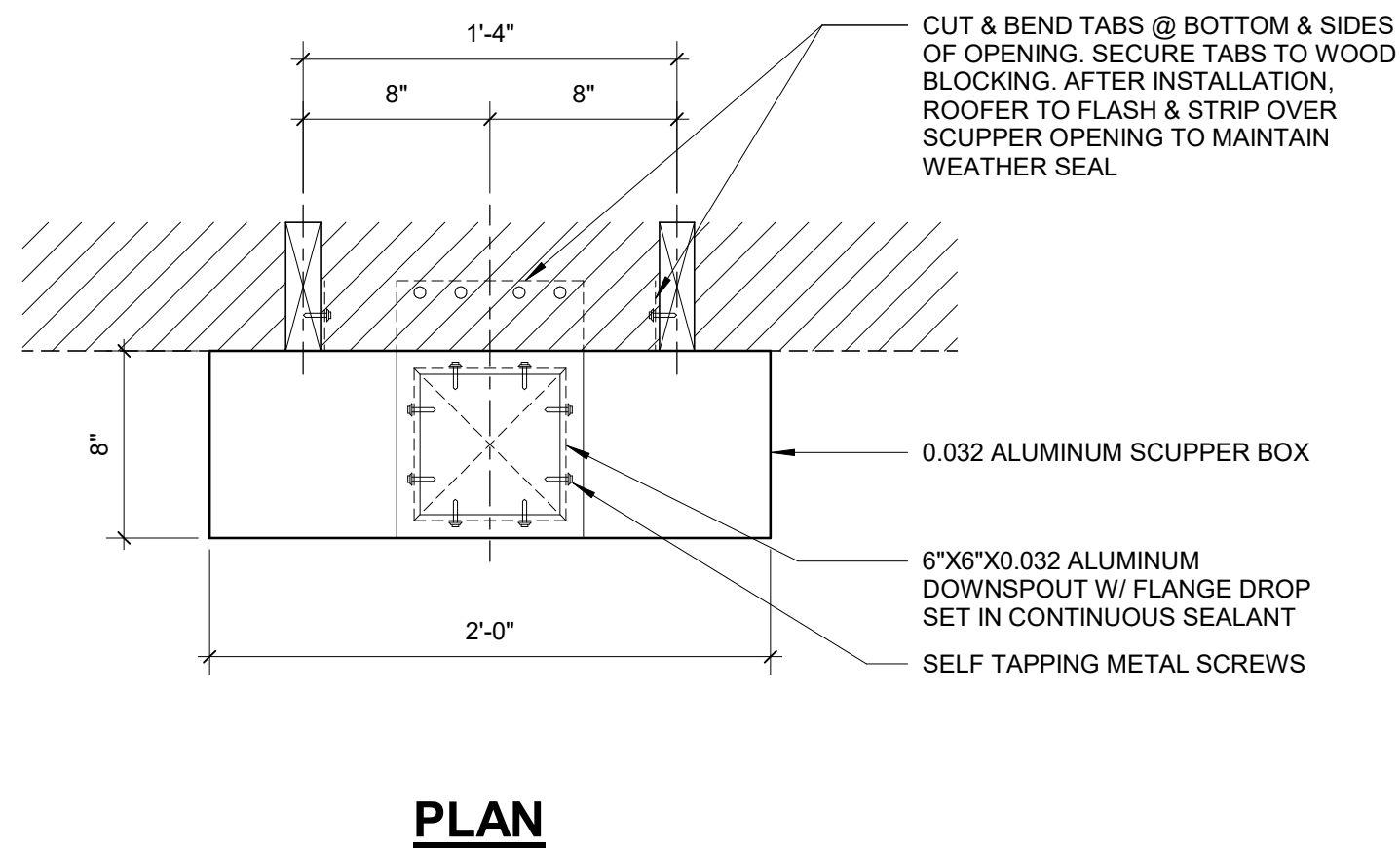
**SECOND FLOOR PLAN - AREA A**



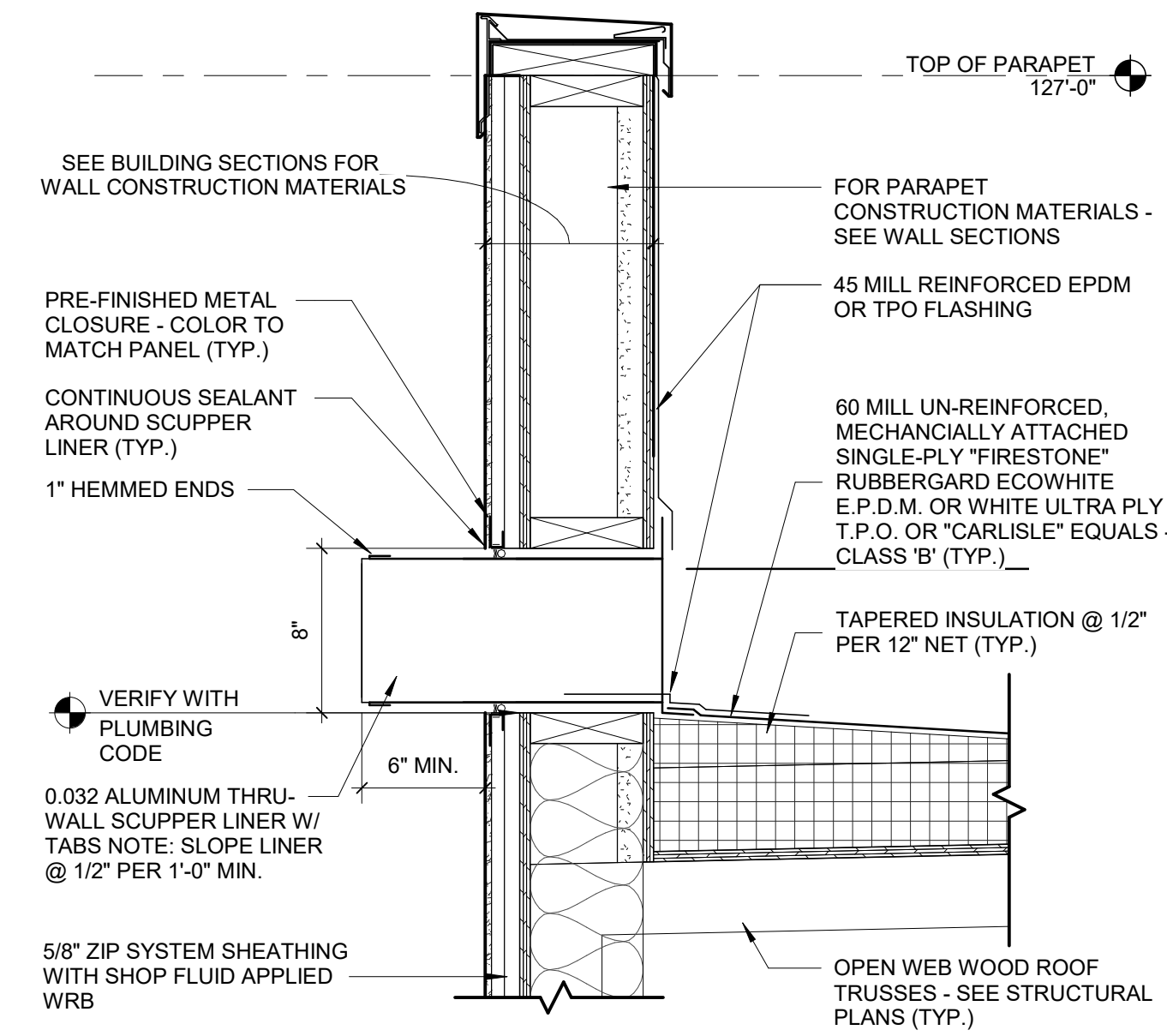


**ELEVATION**

**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.

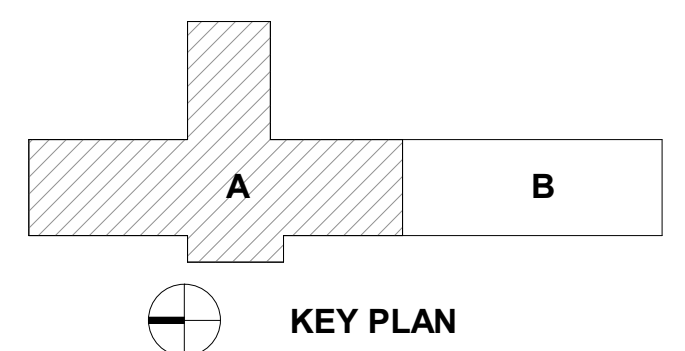
**Carolina Charter Academy Exp.**  
8529 Highway 55  
Angier, North Carolina 27501

**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

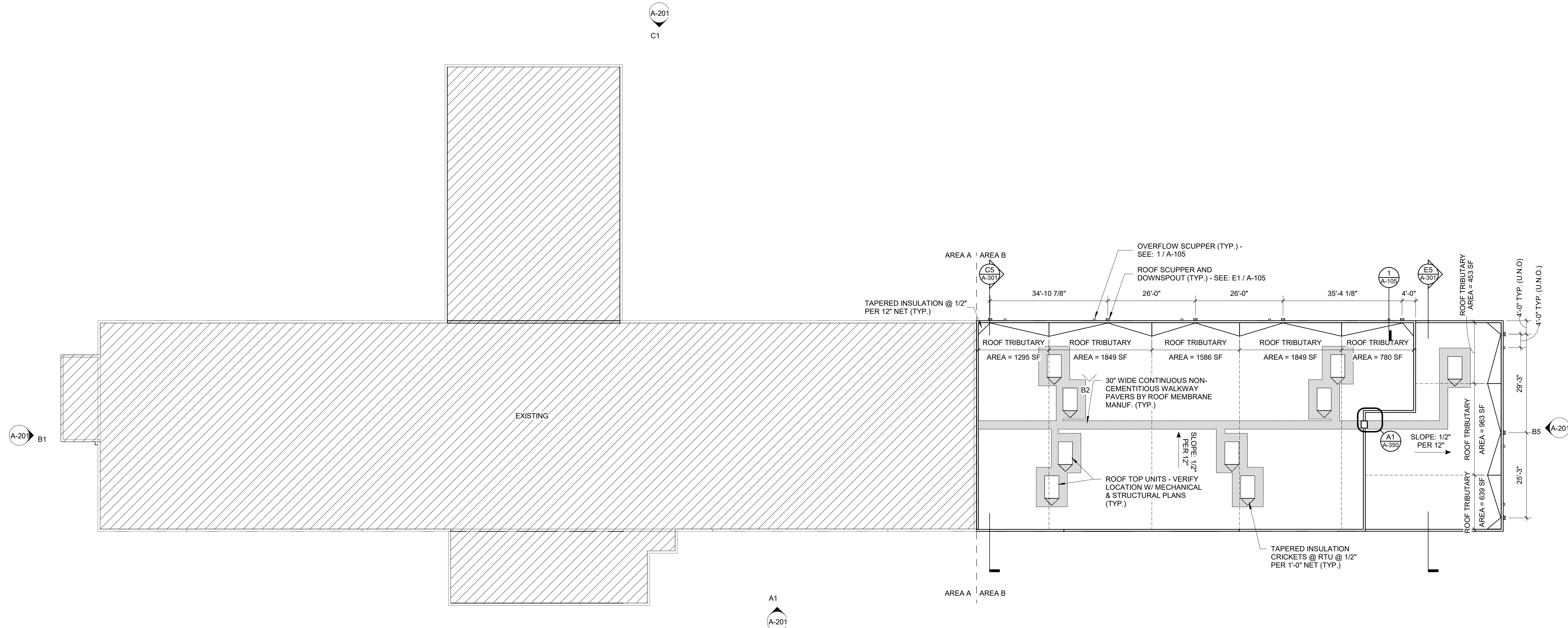


SEAL | DATE 2/24/2021



**SHEET ISSUE**

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



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



COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE, DISSEMINATION OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED.

PROJECT NO. 20408.000

SHEET TITLE  
**ROOF PLAN**

SHEET NUMBER  
**A-105**



**RCP LEGEND**

- CEILING TAG
- REFLECTED CEILING DRAWINGS.
- OTHERWISE. ALL CEILINGS TO BE ACT-01 UNLESS NOTED OTHERWISE.
- CENTER CEILING GRIDS WITHIN ROOMS EACH DIRECTION UNLESS NOTED OTHERWISE.
- LOCATE CEILING GRIDS WITHIN ROOMS SUCH THAT BORDERS CONTAIN NOT LESS THAN 1/2 TILE WIDTH, UNLESS OTHERWISE INDICATED.
- CENTER PENETRATIONS IN ACOUSTICAL CEILING SYSTEMS WITHIN INDIVIDUAL CEILING PANELS, SUCH AS SPRINKLER HEADS, DIFFUSERS, LIGHT FIXTURES, ETC., UNLESS OTHERWISE INDICATED.
- PAINT EXPOSED GYPSUM BOARD AND PLASTER CEILING SURFACES PT-02 UNLESS OTHERWISE INDICATED.
- 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.
- 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.
- REFER TO SERIES A-650 FINISH SCHEDULE FOR ADDITIONAL CEILING FINISH INFORMATION.
- REFER TO ELECTRICAL DRAWINGS FOR CEILING-MOUNTED LIGHT FIXTURE TYPES AND QUANTITIES.
- REFER TO MECHANICAL DRAWINGS FOR CEILING-MOUNTED DIFFUSERS, GRILLE TYPES AND QUANTITIES.
- REFER TO FIRE PROTECTION DRAWINGS FOR SPRINKLER HEAD TYPES AND QUANTITIES. HEADS HAVE BEEN INTENTIONALLY OMITTED FROM REFLECTED CEILING PLANS FOR CLARITY.
- 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.
- PROVIDE 4" AXIOM EDGE TRIM ON ALL EXPOSED EDGES OF CEILINGS UNLESS NOTED OTHERWISE.
- 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.

**GENERAL CEILING PLAN NOTES**

- A. THESE GENERAL NOTES APPLY TO SERIES A-130
- 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

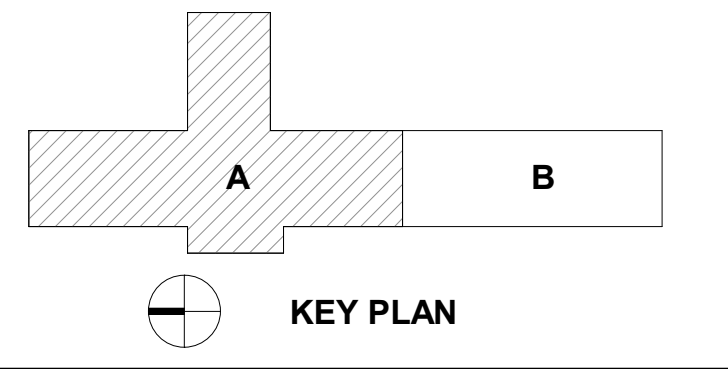
**Carolina Charter Academy Exp.**  
 8529 Highway 55  
 Angier, North Carolina 27501

**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  
 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

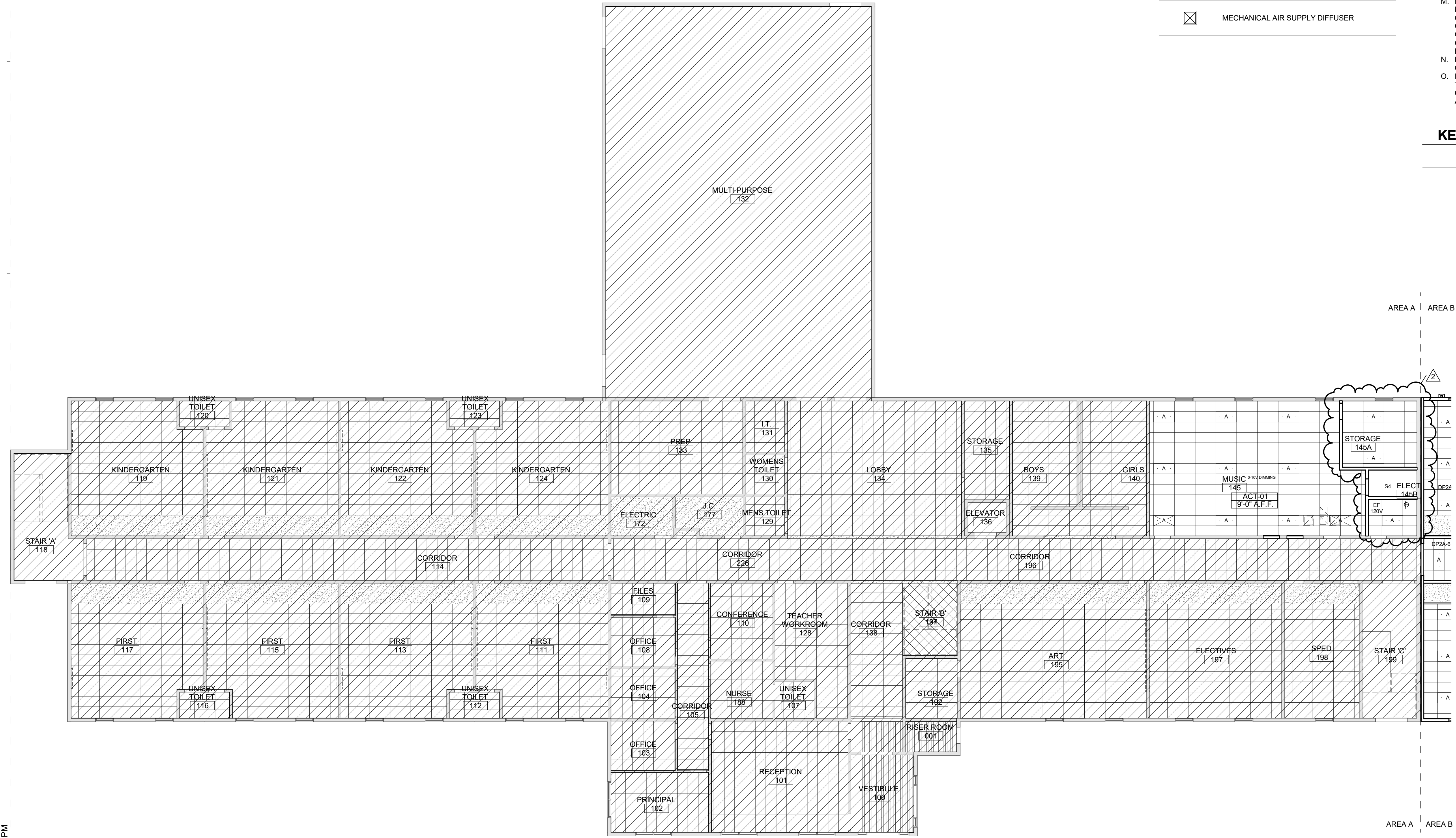


SEAL | DATE 4/9/2021 | CODE CERT. I HEREBY CERTIFY THAT THE BUILDING CODE SUMMARY COMPLETED ON THIS PAGE IS ACCURATE FOR THE TYPE OF BUILDING AND OCCUPANCY AND INTENDED FOR THIS PROJECT AND THAT THESE PLANS ARE COMPLETE AND COMPLY WITH ALL APPLICABLE STATE AND LOCAL BUILDING REGULATIONS

SHEET ISSUE	DATE	DESCRIPTION
1	2/24/2021	100% Construction Documents
2	4/9/2021	Permit Revisions

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

SHEET NUMBER  
**A-131A**





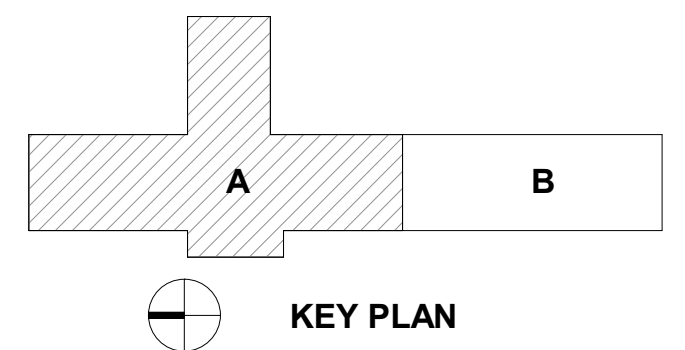
**Carolina Charter Academy Exp.**  
 8529 Highway 55  
 Angier, North Carolina 27501

**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



- 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 PANEL LAYOUTS OF ALL DUCTWORK, PIPING, CONDUIT, LIGHTING, ETC. FOR FINAL APPROVAL BY ARCHITECT PRIOR TO INSTALLATION.

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)

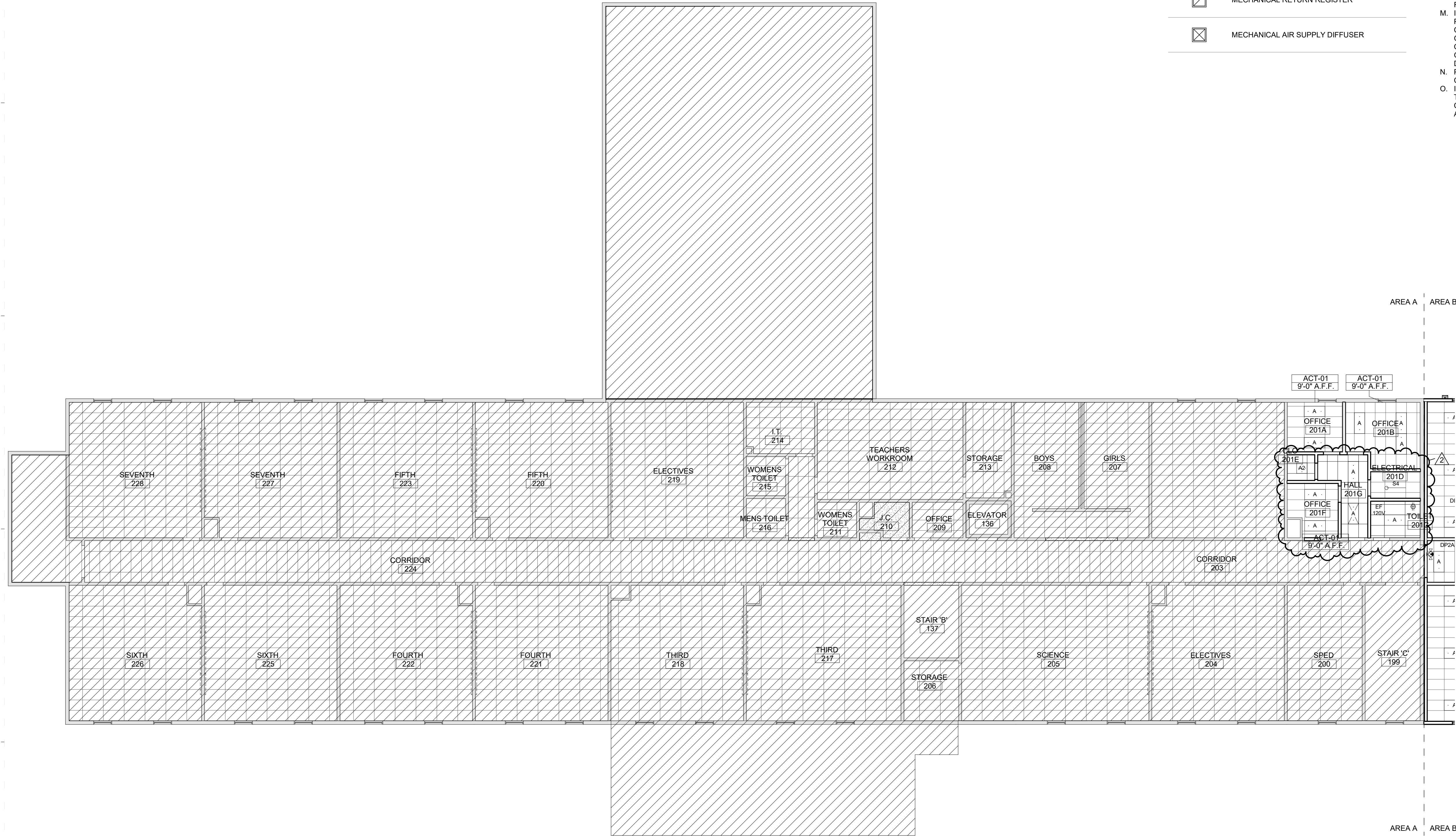
ACOUSTIC CEILING TILE ACT-01 24" X 48"

24" x 48" LIGHT FIXTURE (SEE ELECTRICAL PLANS FOR FURTHER INFORMATION)

DOWNLIGHT

MECHANICAL RETURN REGISTER

MECHANICAL AIR SUPPLY DIFFUSER



SEAL | DATE 4/9/2021 | 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

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

SHEET ISSUE	
1	100% Construction Documents 2/24/2021
2	Permit Revisions 4/9/2021

**RATIO**

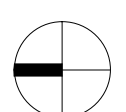
COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE, REPRODUCTION OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED.

PROJECT NO. 20408.000

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

SHEET NUMBER  
**A-132A**

4/15/2021 4:35:23 PM



A1  
A-132A

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

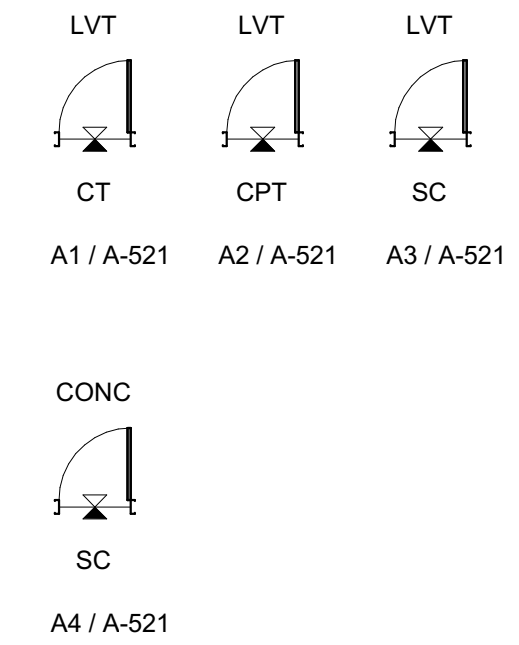




**KEYNOTES (ACTION/GENERAL)**

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

**FINISH TRANSITION AT DOORS**



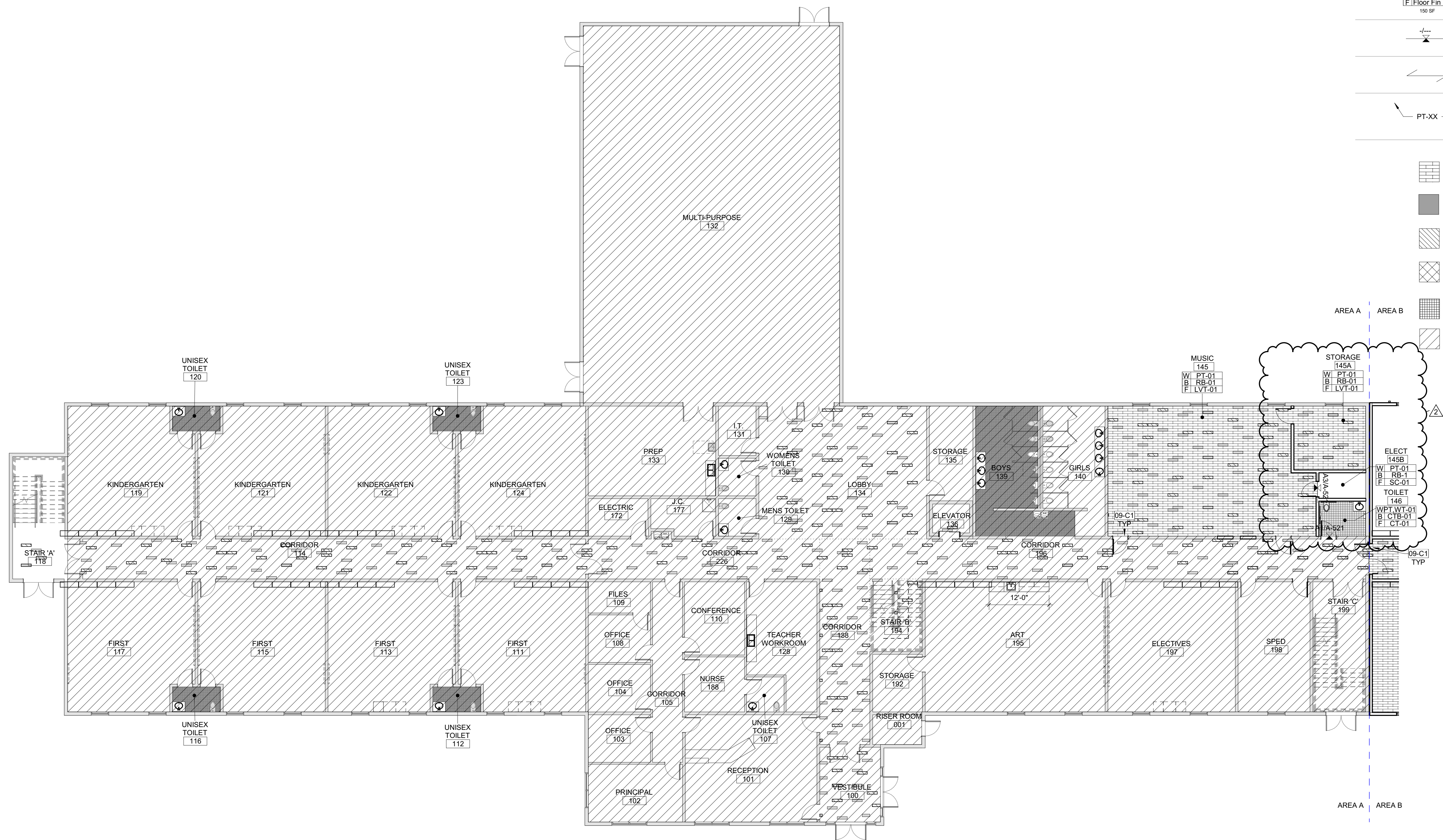
**FINISHES-SYMBOLS LEGEND**

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

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

**FLOOR TILE LEGEND**

[Symbol]	CT-01 (FIELD)
[Symbol]	CT-02 (ACCENT 'A')
[Symbol]	CT-03 (ACCENT 'B')



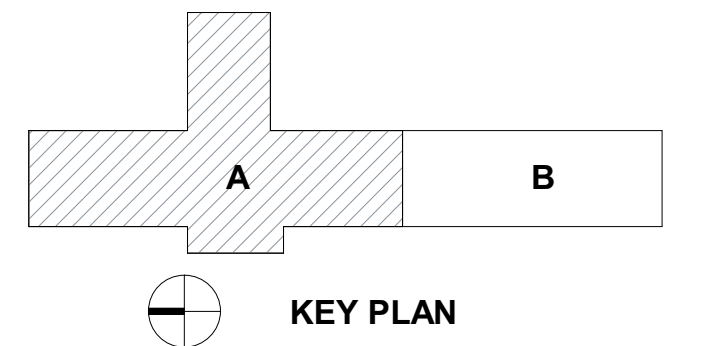
**Carolina Charter Academy Exp.**  
 8529 Highway 55  
 Angier, North Carolina 27501

**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 4/9/2021 | 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

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

<b>SHEET ISSUE</b>		
1	100% Construction Documents	2/24/2021
2	Permit Revisions	4/9/2021

**RATIO**

COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE, REPRODUCTION OR DISTRIBUTION OF THIS DRAWING OR ANY PART THEREOF IS PERMITTED WITHOUT THE WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED.

PROJECT NO. 20408.000

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

SHEET NUMBER  
**A-150A**

4/14/2021 6:11:56 PM



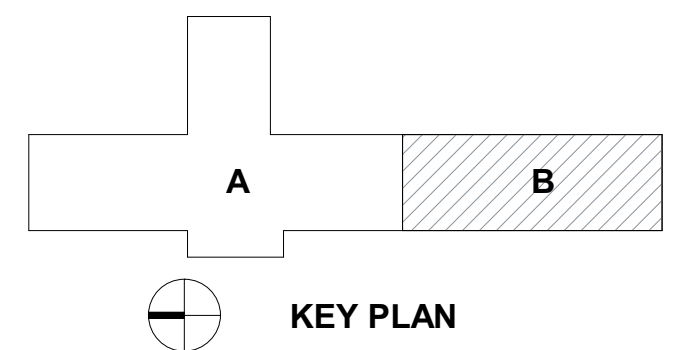
**Carolina Charter Academy Exp.**  
 8529 Highway 55  
 Angier, North Carolina 27501

**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



SEAL | DATE 4/9/2021 | 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
2	Permit Revisions	4/9/2021

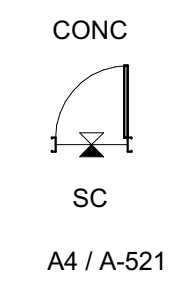
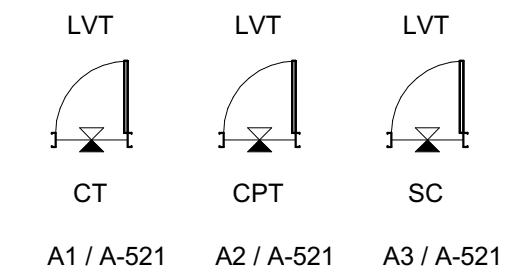
SHEET TITLE		
FIRST FLOOR FINISH PLAN - AREA B		

**RATIO**  
COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE, REPRODUCTION OR DISTRIBUTION OF THIS DRAWING OR ANY PART THEREOF IS PERMITTED WITHOUT THE WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED.

PROJECT NO. 20408.000

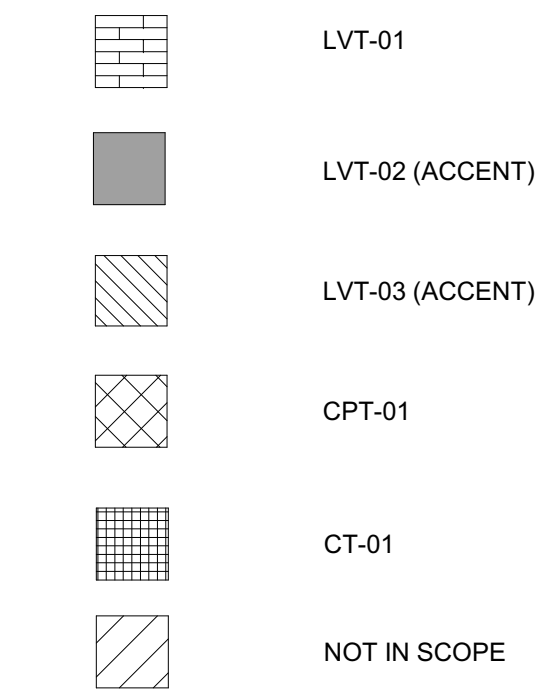
SHEET NUMBER  
**A-150B**

**FINISH TRANSITION AT DOORS**



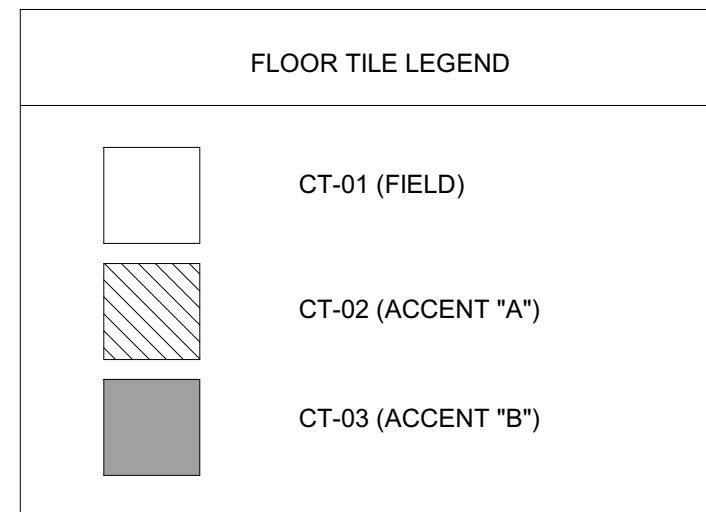
**FINISHES-SYMBOLS LEGEND**

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

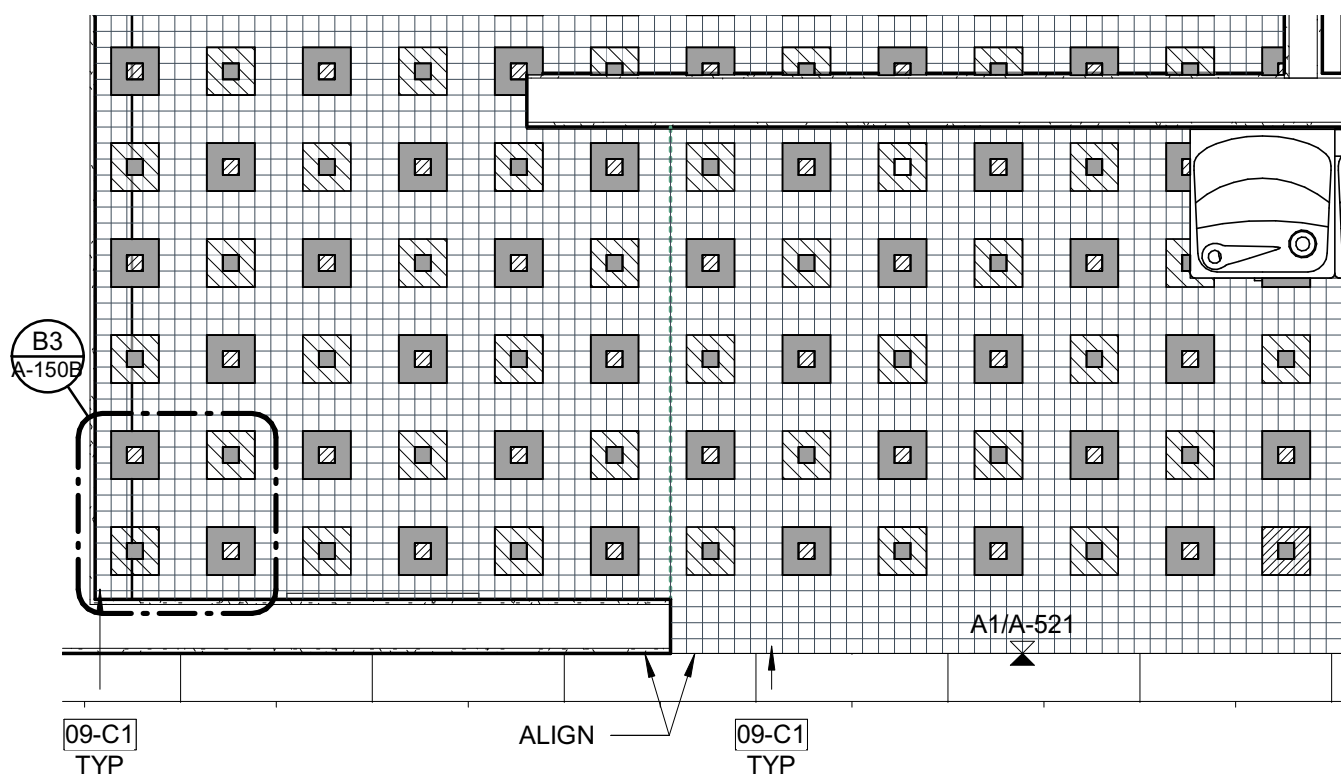


**KEYNOTES (ACTION/GENERAL)**

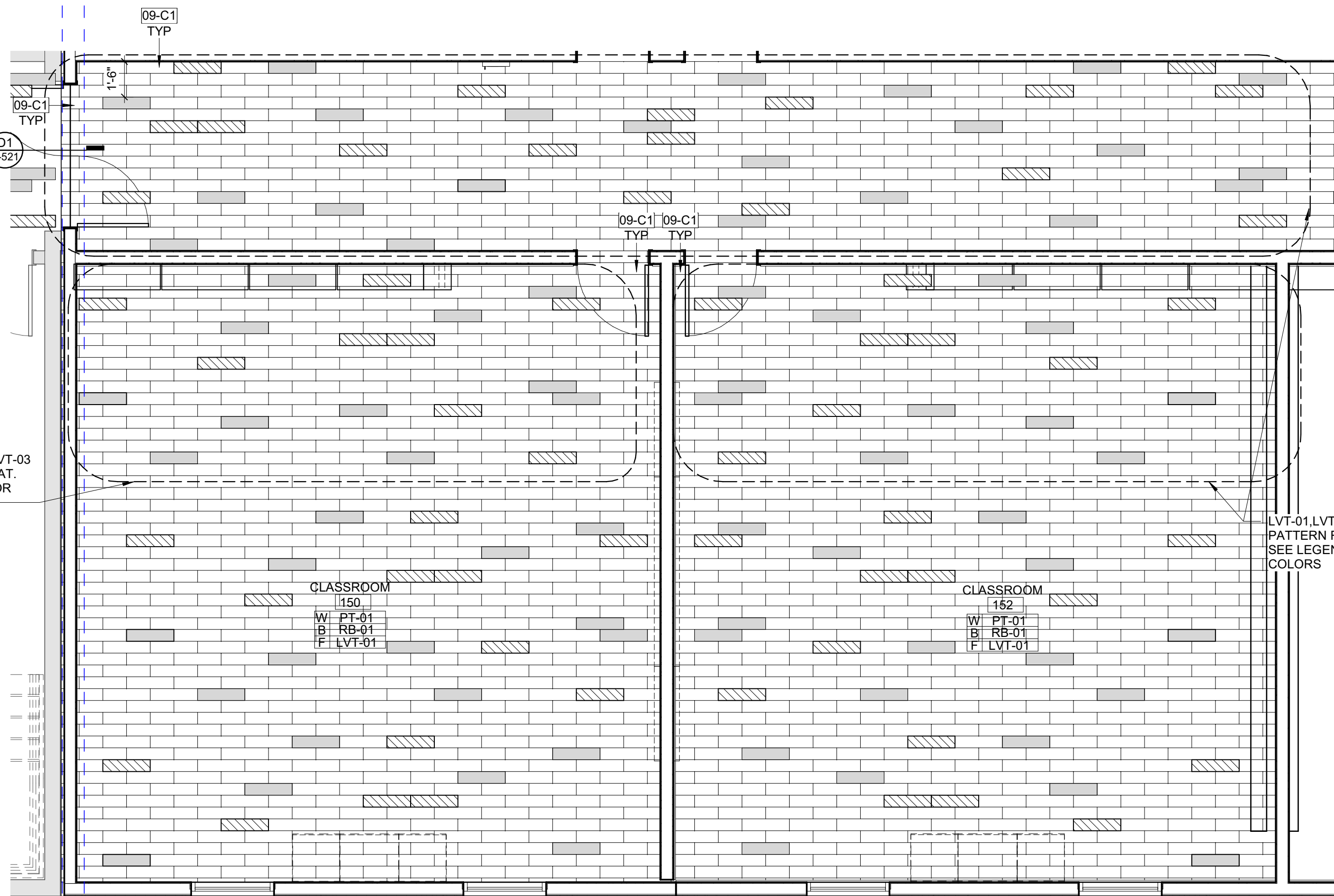
09-C1	START TILE PATTERN WITH FULL TILE, AT THIS LOCATION
-------	---



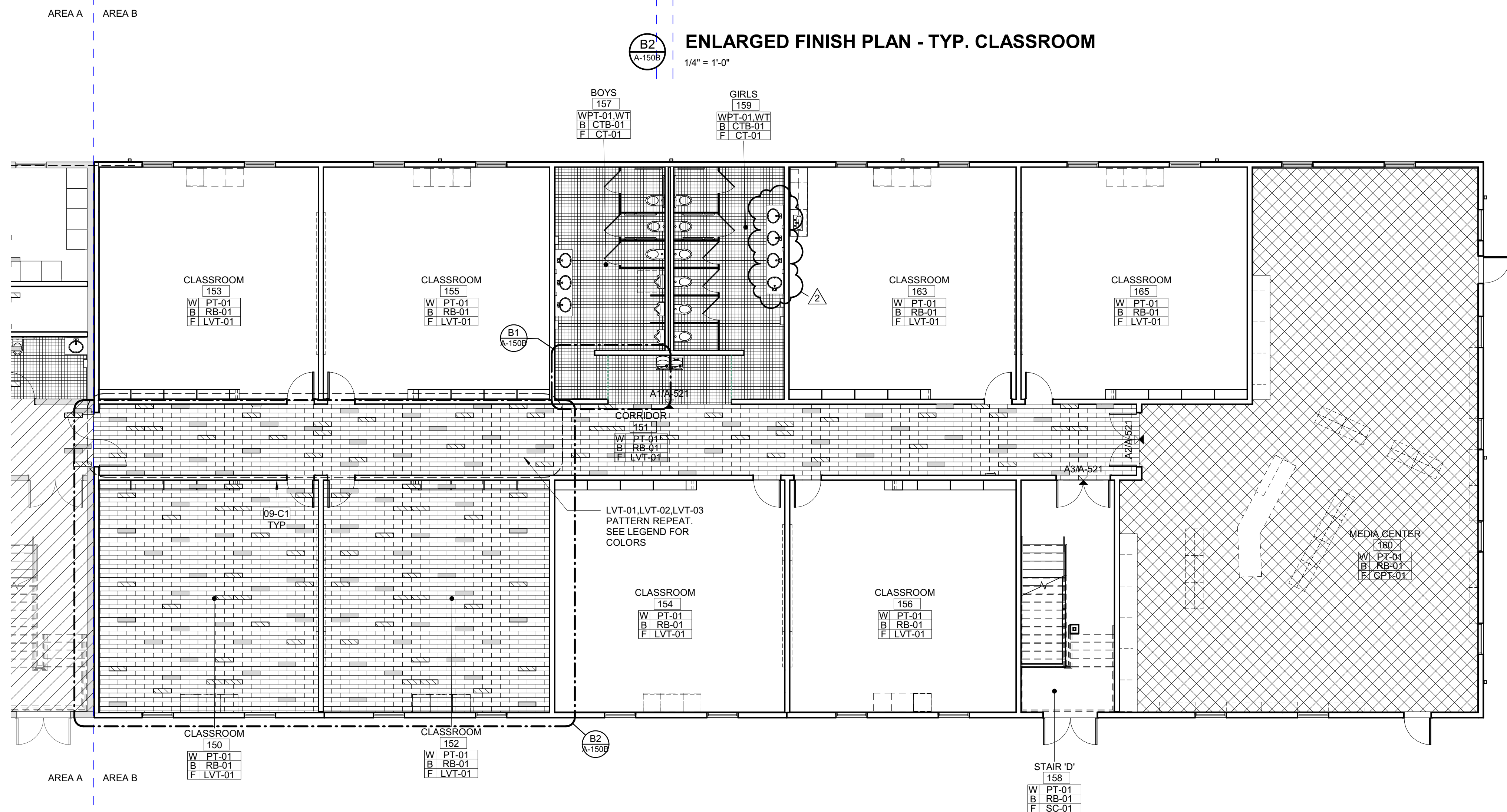
**TILE DETAIL**  
 1/2" = 1'-0"



**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

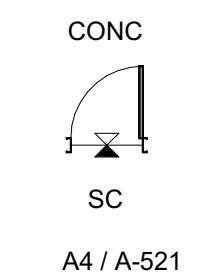
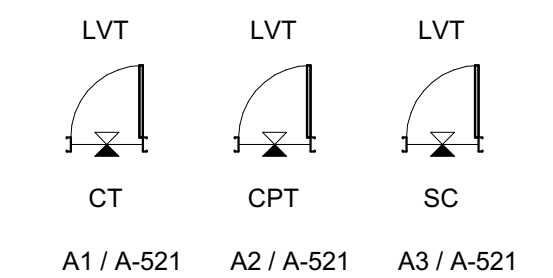
**Owner**  
**Highmark School Development**  
 746 East Winchester Street  
 Suite 150  
 Murray, Utah 84107  
 801-256-9550

**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  
 Suite 105  
 Raleigh, North Carolina 27603  
 919-782-1833

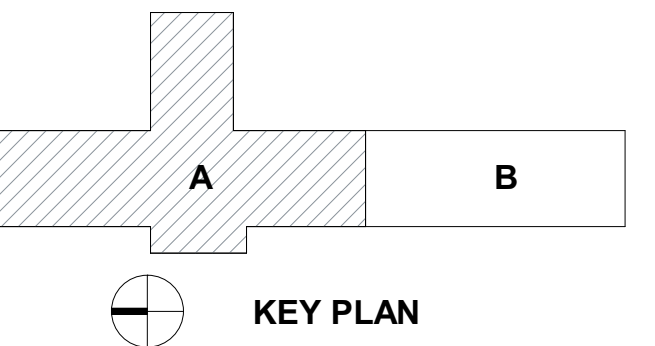
**Civil Engineer**  
**Timmons Group**  
 5410 Trinity Road  
 Suite 102  
 Raleigh, North Carolina 27607  
 919-866-4938

**FINISH TRANSITION AT DOORS**



**FINISHES-SYMBOLS LEGEND**

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



SEAL | DATE 4/9/2021  
 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
2	Permit Revisions 4/9/2021

SHEET ISSUE	
1	100% Construction Documents 2/24/2021
2	Permit Revisions 4/9/2021

**RATIO**  
 COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE, DISSEMINATION OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED.

PROJECT NO. 20408.000

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

SHEET NUMBER  
**A-151A**



4/14/2021 6:11:59 PM





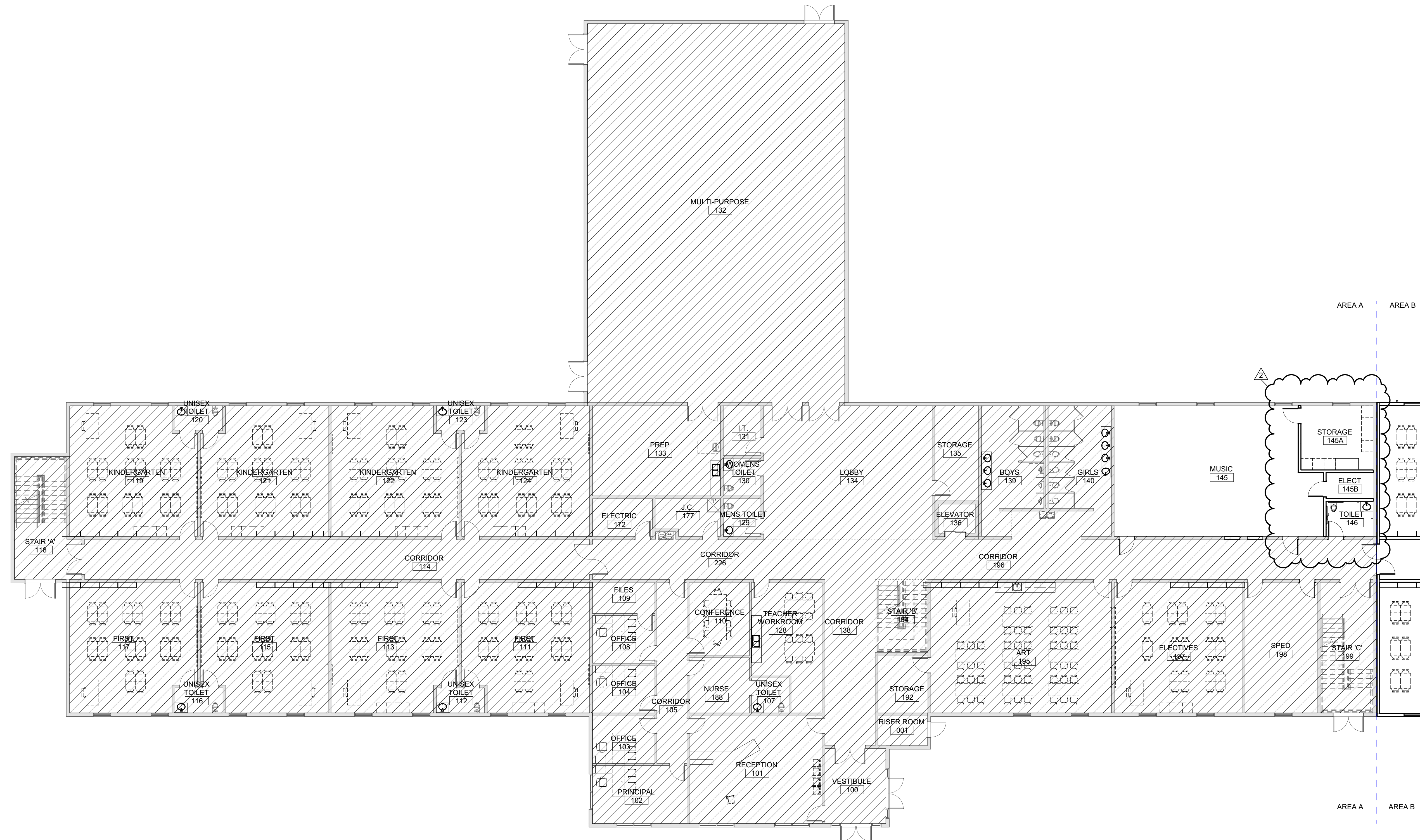
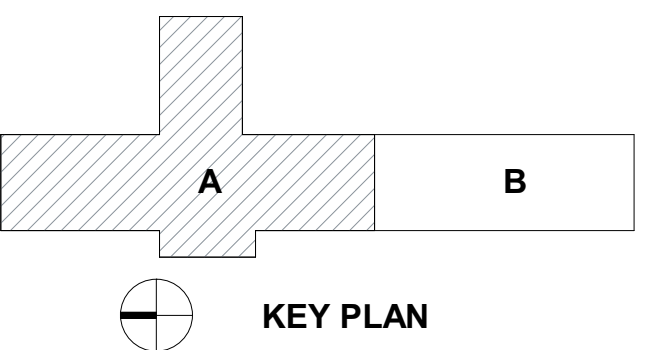
**Carolina Charter Academy Exp.**  
 8529 Highway 55  
 Angier, North Carolina 27501

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

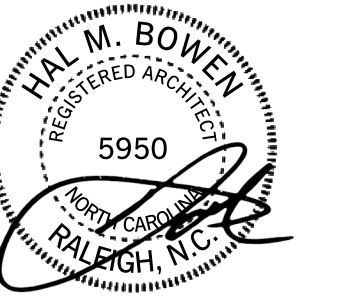
**Architect**  
**RATIO**  
 227 Fayetteville Street, Suite 301  
 Raleigh, North Carolina 27601  
 919-821-0805

**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



SEAL | DATE 4/9/2021 | 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
2	Permit Revisions 4/9/2021



COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE, REPRODUCTION OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED.

PROJECT NO. 20408.000

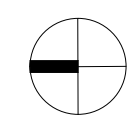
SHEET TITLE  
**FIRST FLOOR EQUIPMENT PLAN-AREA A**

SHEET NUMBER

**A-170A**

**FOR REFERENCE ONLY**

4/14/2021 6:12:01 PM



A1  
A-170A

**FIRST FLOOR EQUIPMENT PLAN-AREA A**

3/32" = 1'-0"





























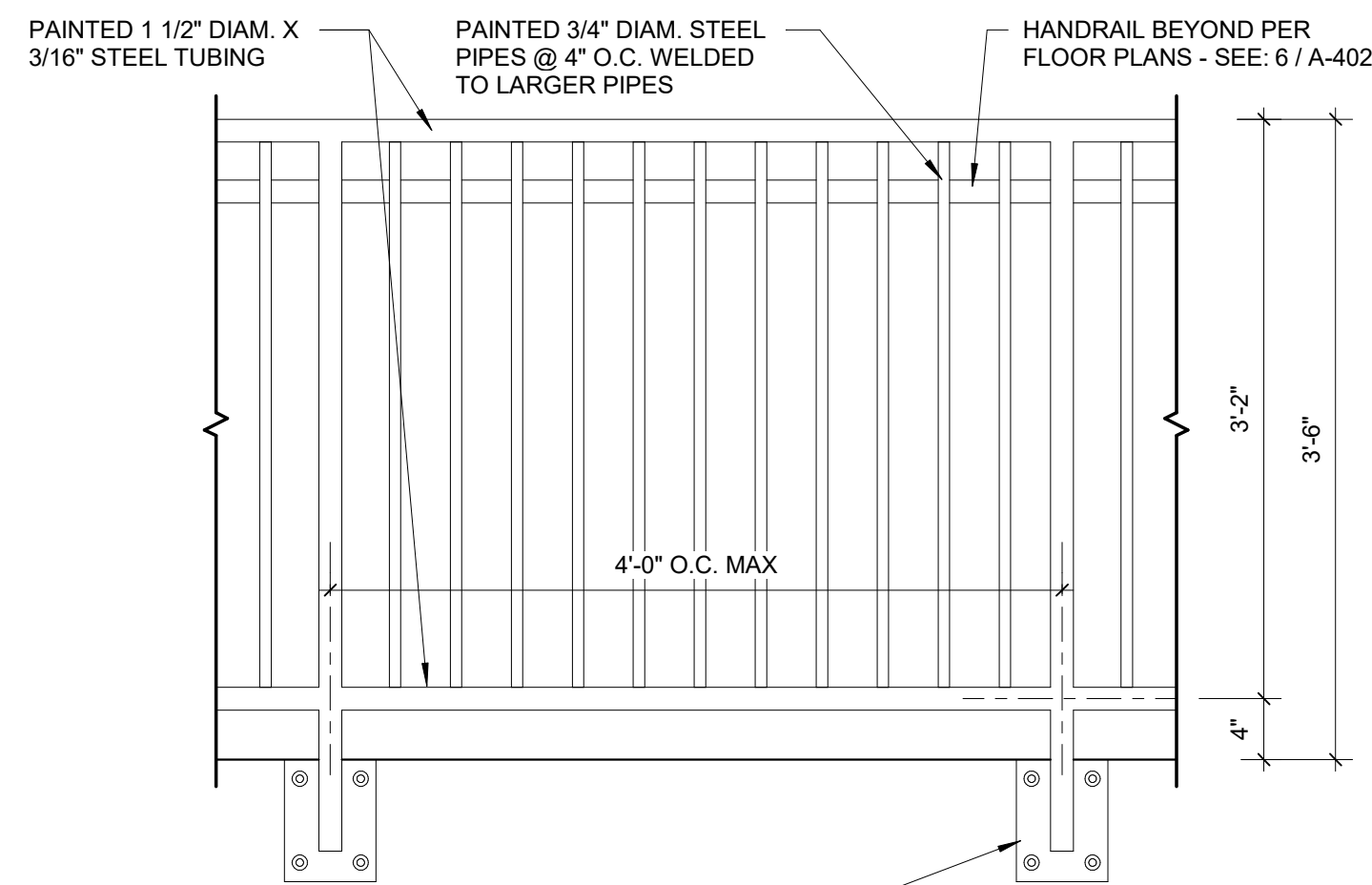
Carolina Charter Academy Exp.  
8529 Highway 55  
Angier, North Carolina 27501

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

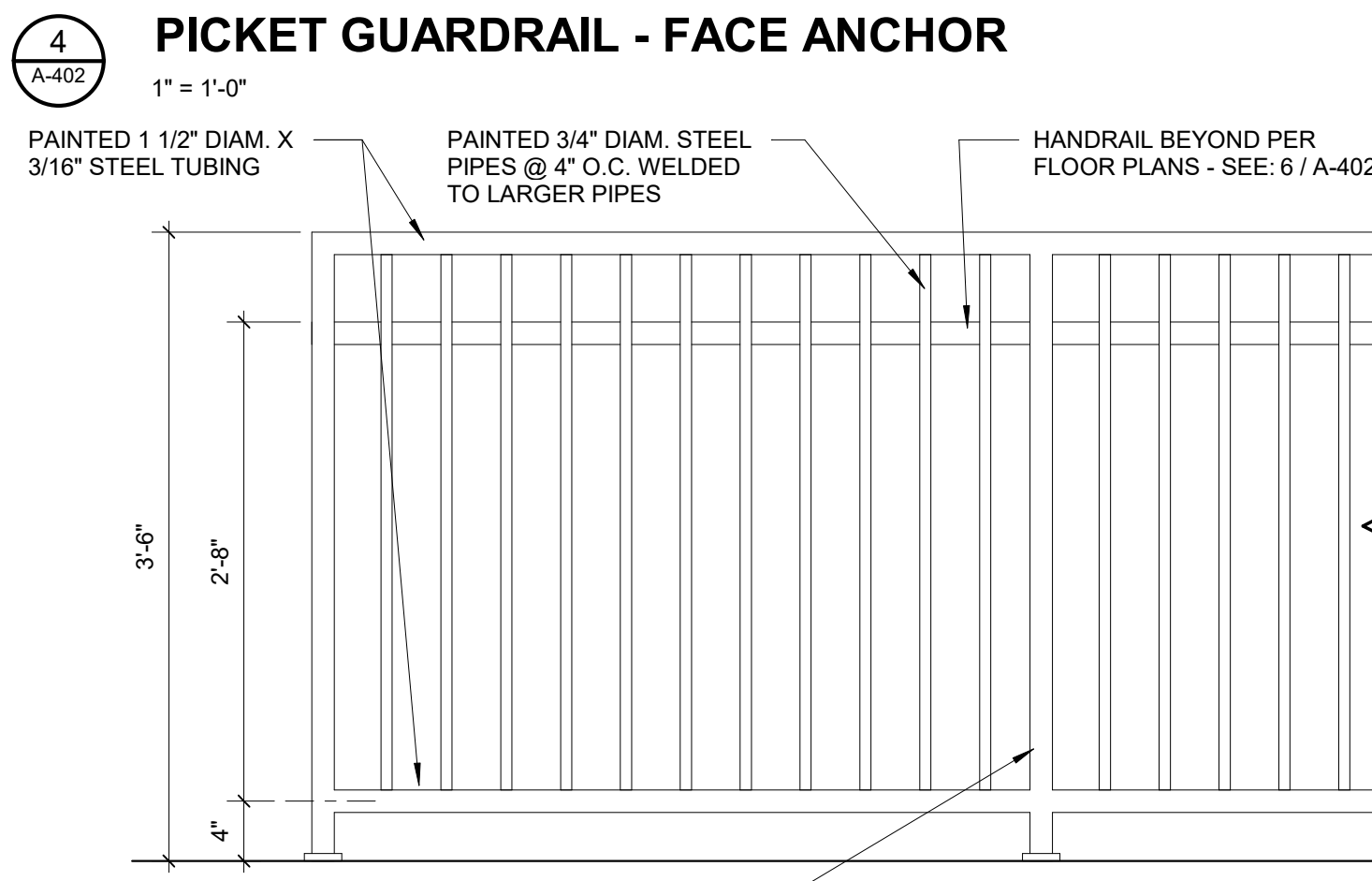
Architect  
**RATIO**  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

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

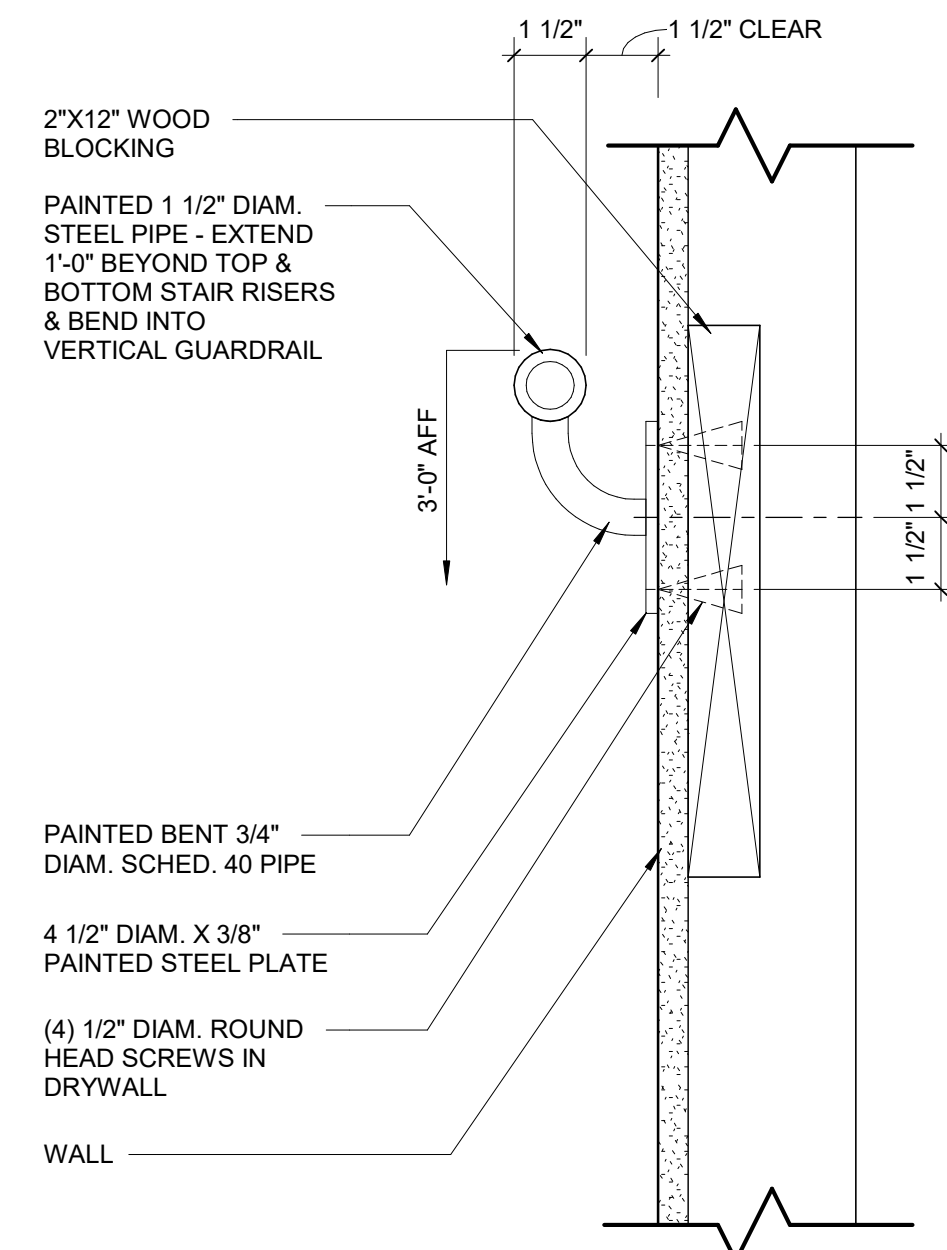


PAINTED STEEL BEARING PLATE: 6"x8"x1/4" THICK - WELD TO GUARDRAIL VERTICAL & ANCHOR THRU SKIRT BOARD AND STRINGER W/ 1/2" LAG BOLTS (TYP.)

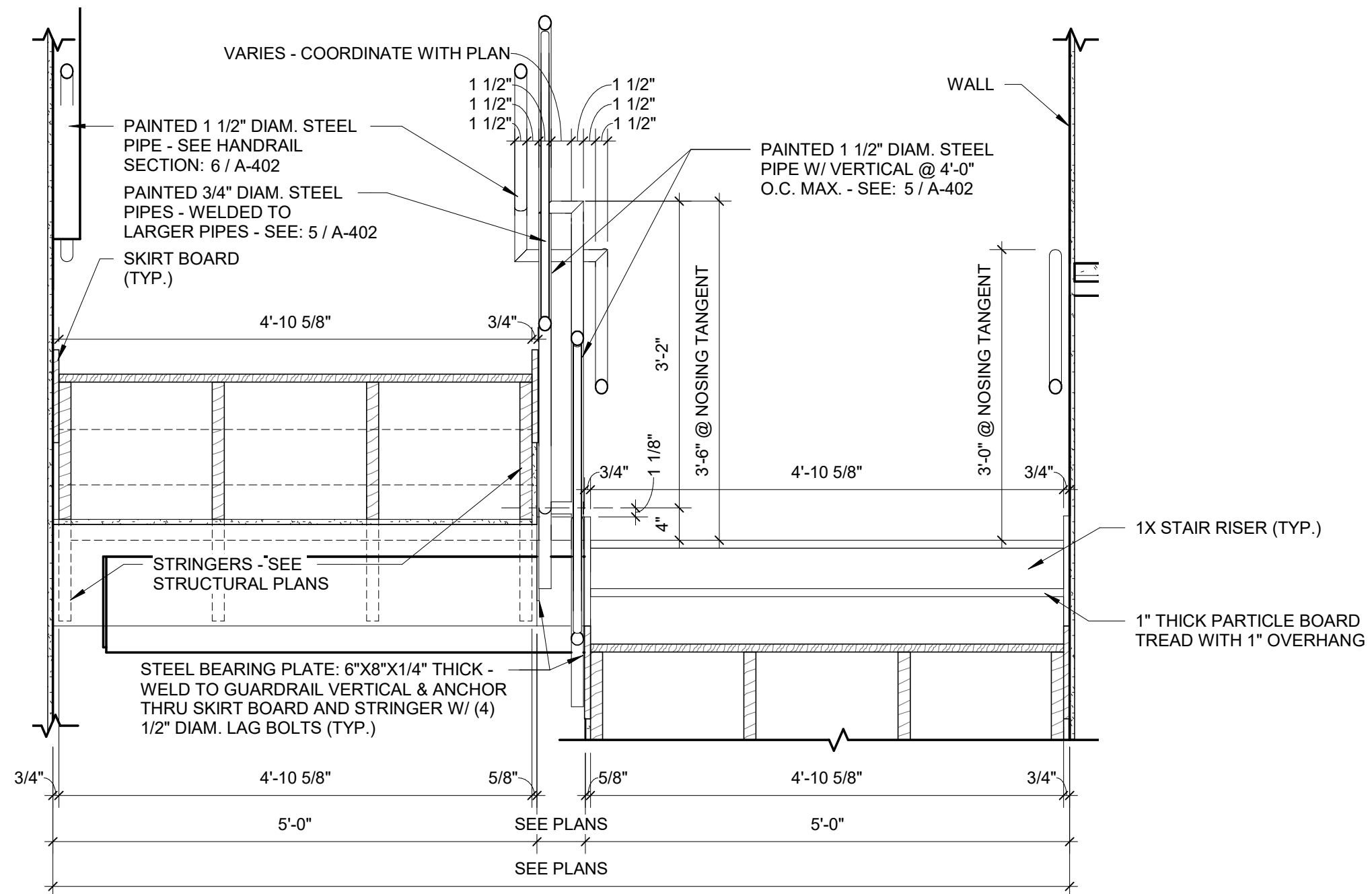


PAINTED 1 1/2" DIAM. X 3/16" STEEL TUBING VERTICALS @ 48" O.C. MAX. WITH 4"x4"x3/16" STEEL BASE PLATE EXPANSION ANCHORED TO CONCRETE

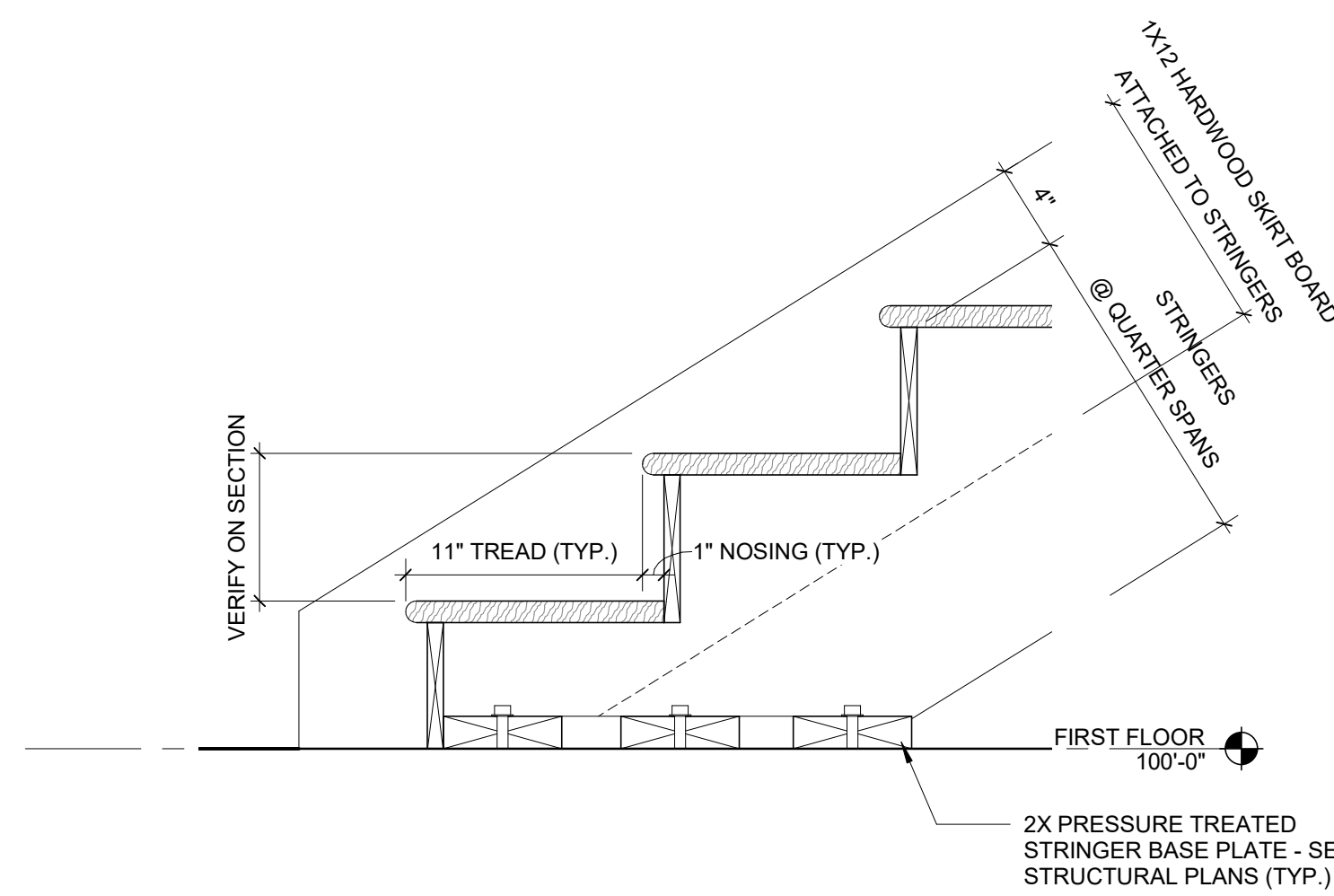
**5 PICKET GUARDRAIL - TOP ANCHOR**  
1" = 1'-0"



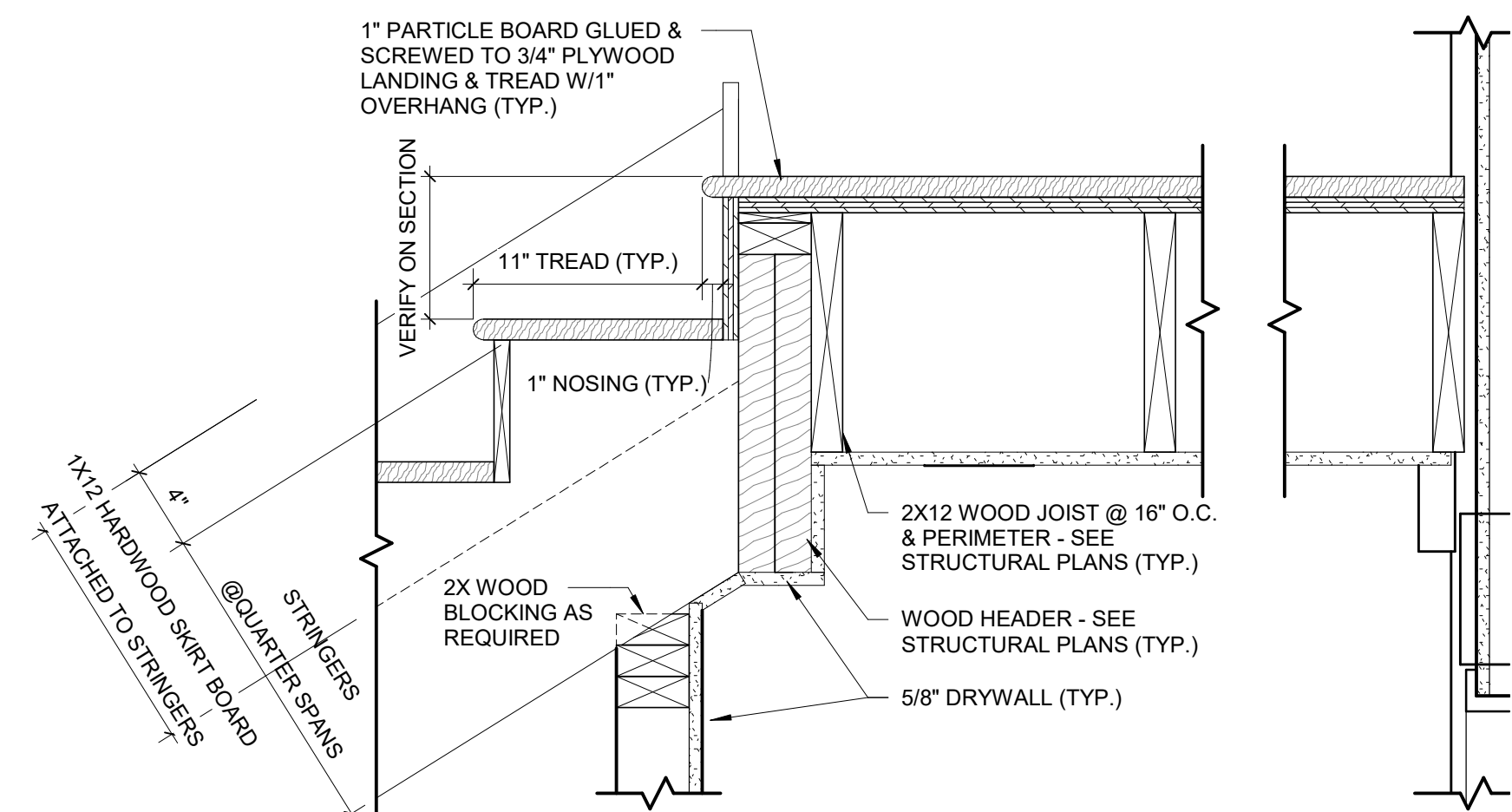
**6 WALL MOUNTED HANDRAIL DETAIL**  
3" = 1'-0"



**1 STAIR GUARDRAIL / HANDRAIL CROSS SECTION**  
3/4" = 1'-0"

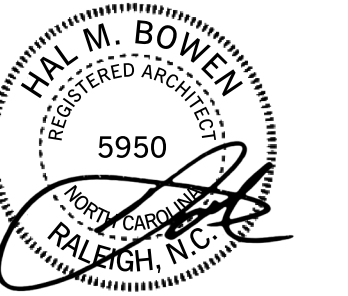


**2 STAIR DETAIL @ BOTTOM**  
1 1/2" = 1'-0"



**3 STAIR DETAIL @ LANDING**  
1 1/2" = 1'-0"

SEAL | DATE 2/24/2021



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

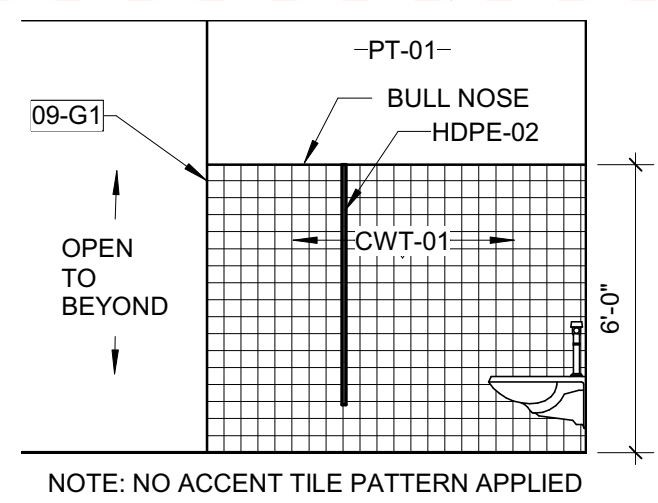


COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE, REPRODUCTION OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED.

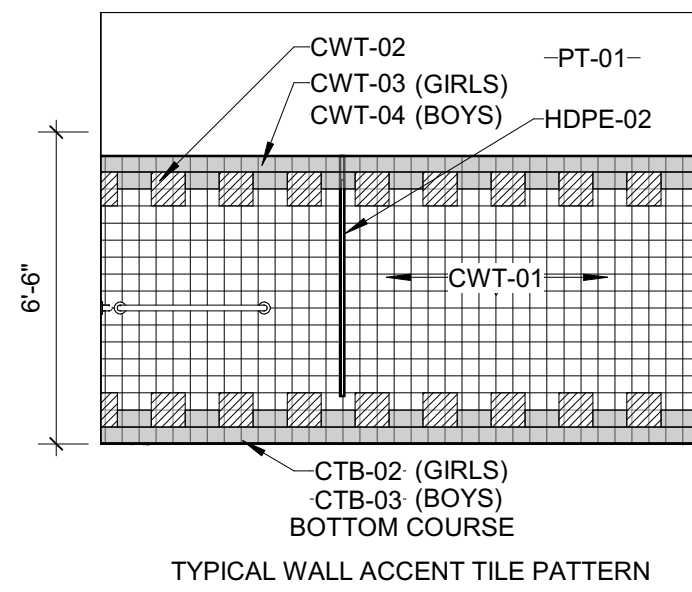
PROJECT NO. 20408.000

SHEET TITLE  
**STAIR DETAILS**

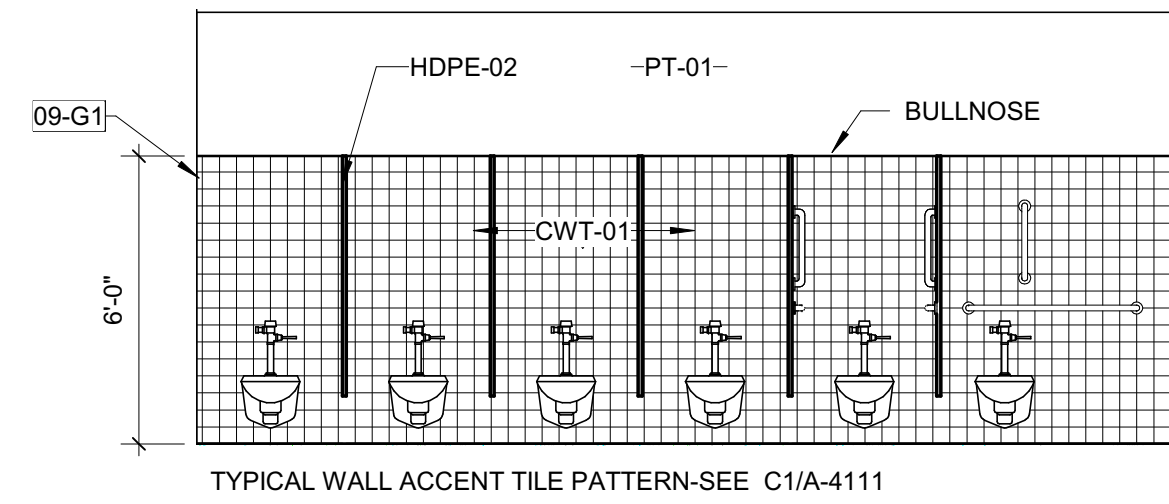
SHEET NUMBER  
**A-402**



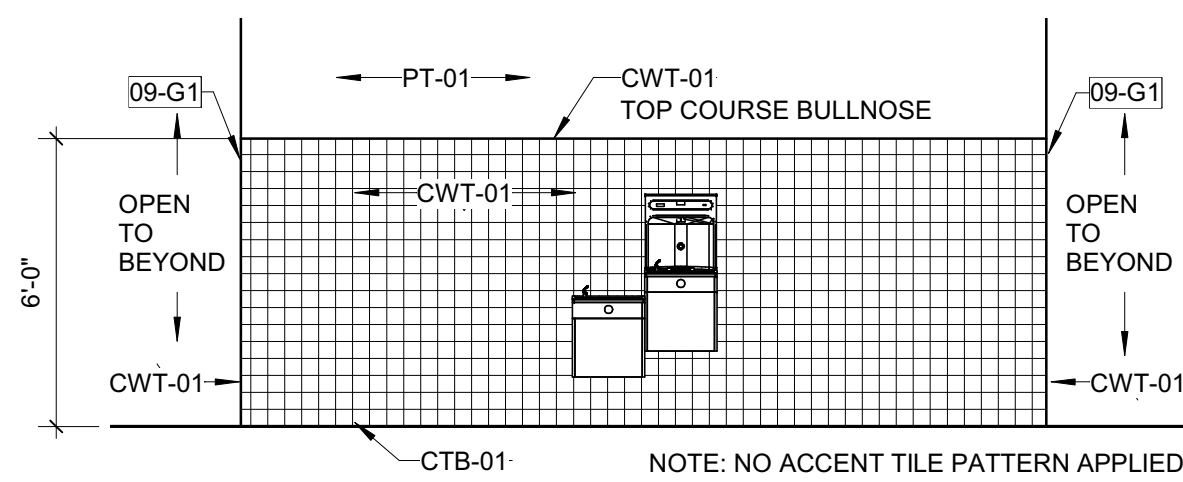
**D1 INTERIOR ELEVATION - TOILET ROOM**  
1/4" = 1'-0"



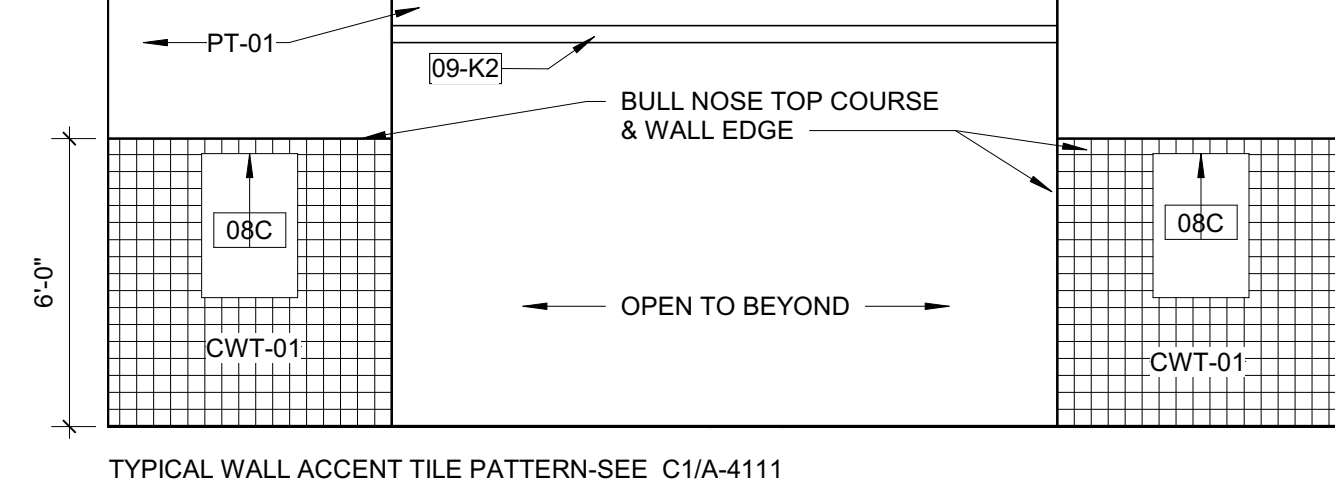
**C1 INTERIOR ELEVATION - TOILET ROOM NORTH**  
1/4" = 1'-0"



**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	
03A	TOILET TISSUE HOLDER, 2 STANDARD ROLL	BOBRICK	B-2888	
04A	SANITARY NAPKIN DISPOSAL, SURFACE MOUNTED	BOBRICK	B-270	
05A	GRAB BAR, 42"	BOBRICK	B-5806 x 42	
05B	GRAB BAR, 36"	BOBRICK	B-5806 x 36	
05D	GRAB BAR, 18"	BOBRICK	B-5806 x 18	
06B	SOAP DISPENSER, WALL MOUNTED	BOBRICK	B-2111	
08A	MIRROR, ABOVE COUNTERTOP	BOBRICK	B-290 2436	
08C	MIRROR, CUSTOM	PER SPECIFICATIONS	N/A	OWNER
09A	CLOTHES HOOK	BOBRICK	B-7672	

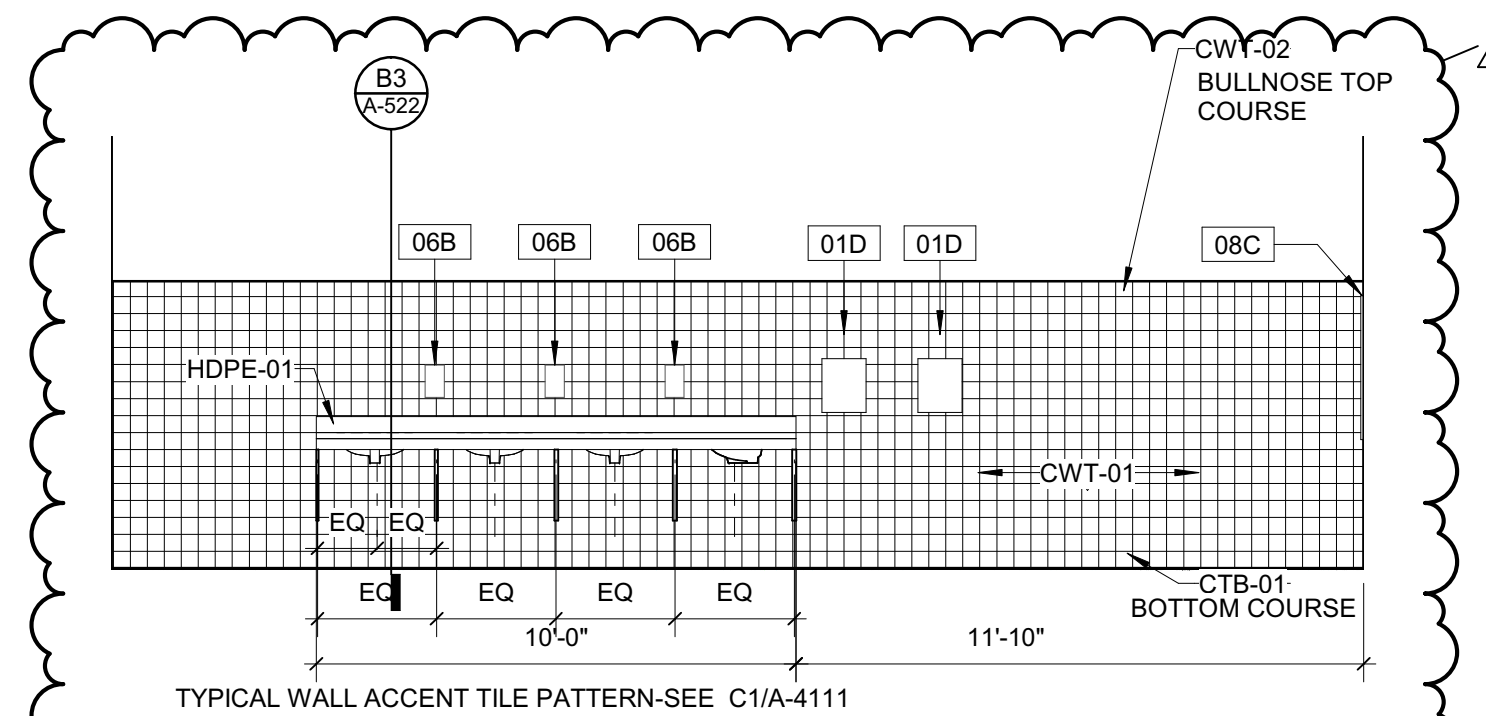
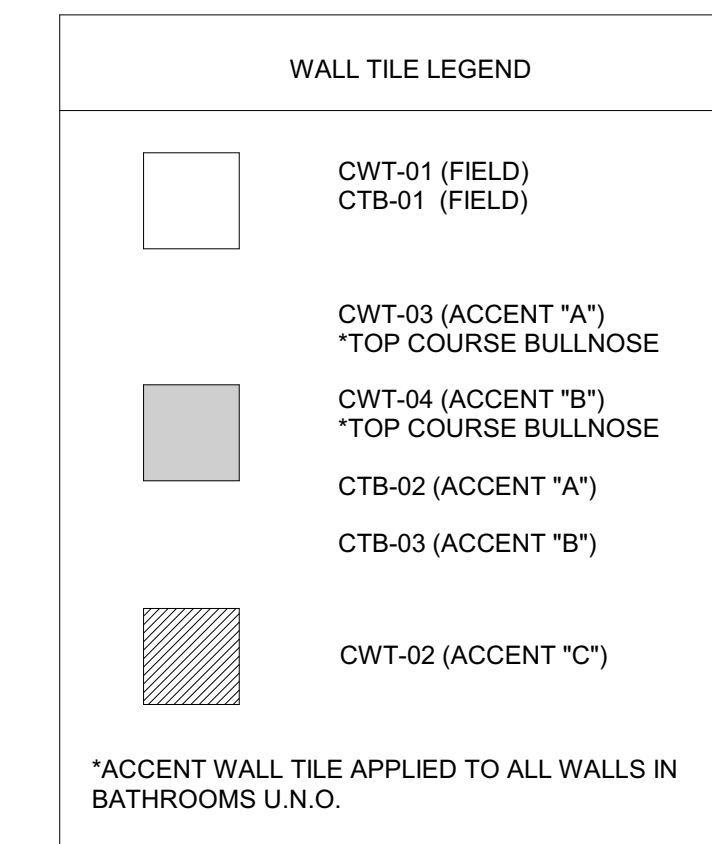
**KEYNOTES (SPEC BASED)**

**KEYNOTES (ACTION/GENERAL)**

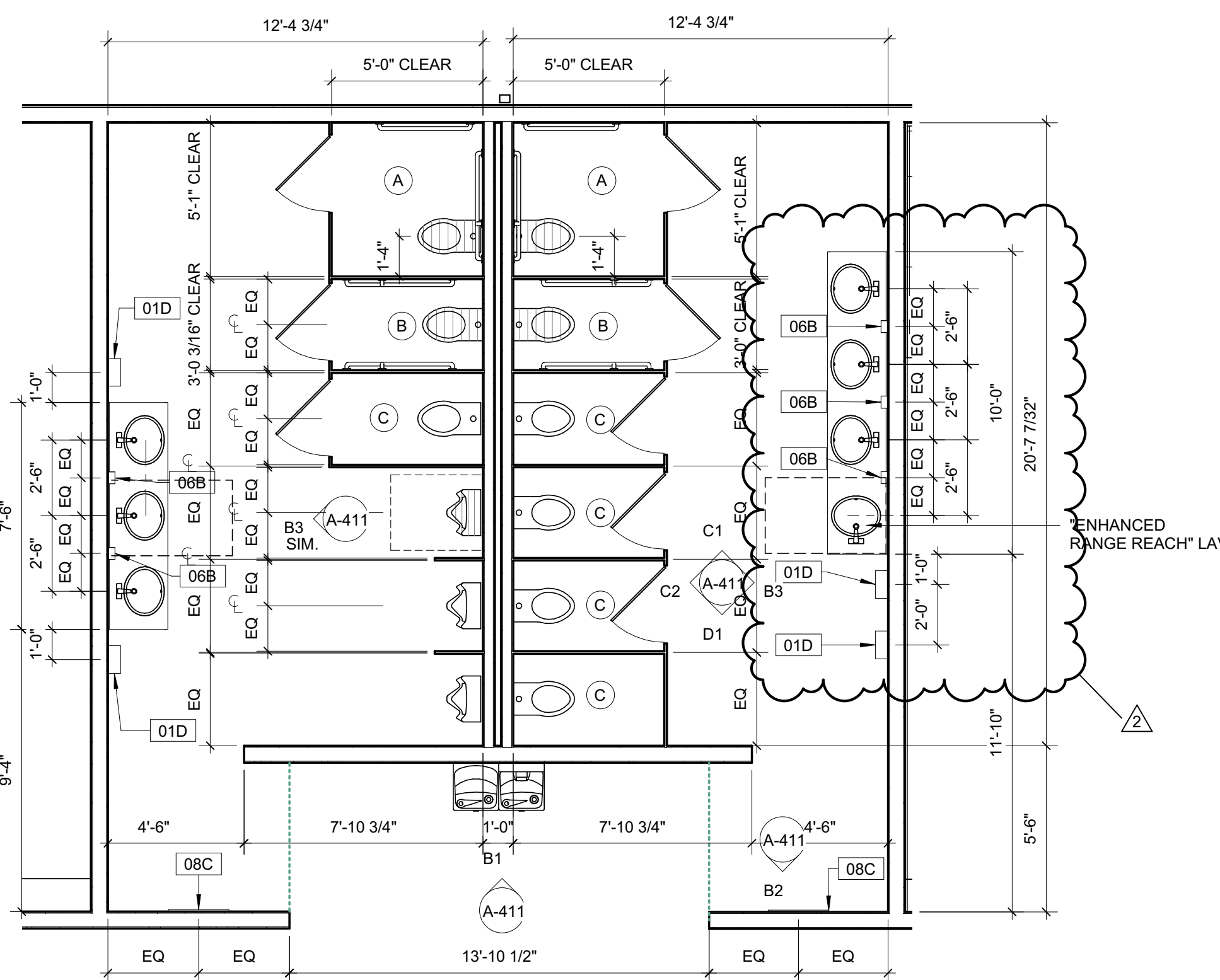
09-G1	WALL FINISH TO WRAP AROUND CORNER
09-K2	PAINTED, MATCH SURROUNDING ELEMENTS

**GENERAL TOILET ROOM NOTES**

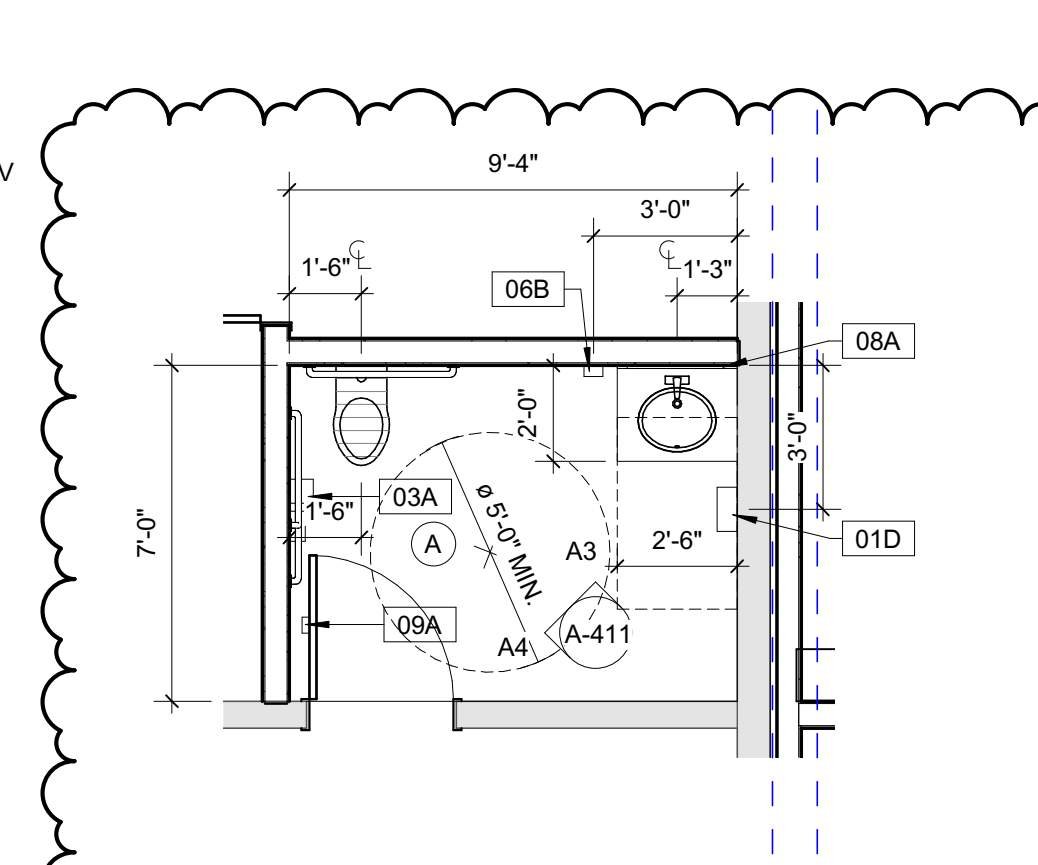
- REFERENCE STANDARD PLUMBING FIXTURE REQUIREMENTS AND STANDARD TOILET TOOM ACCESSORY MOUNTING HEIGHTS ON A-001 FOR ADDITIONAL INFORMATION UNLESS OTHERWISE NOTED.
- REFERENCE STANDARD TOILET COMPARTMENTS - TYPICAL ACCESSORIES ON A-002 FOR TOILET ROOM ACCESSORIES LOCATED IN STALLS.
- B1/A411 WALL TILE 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.



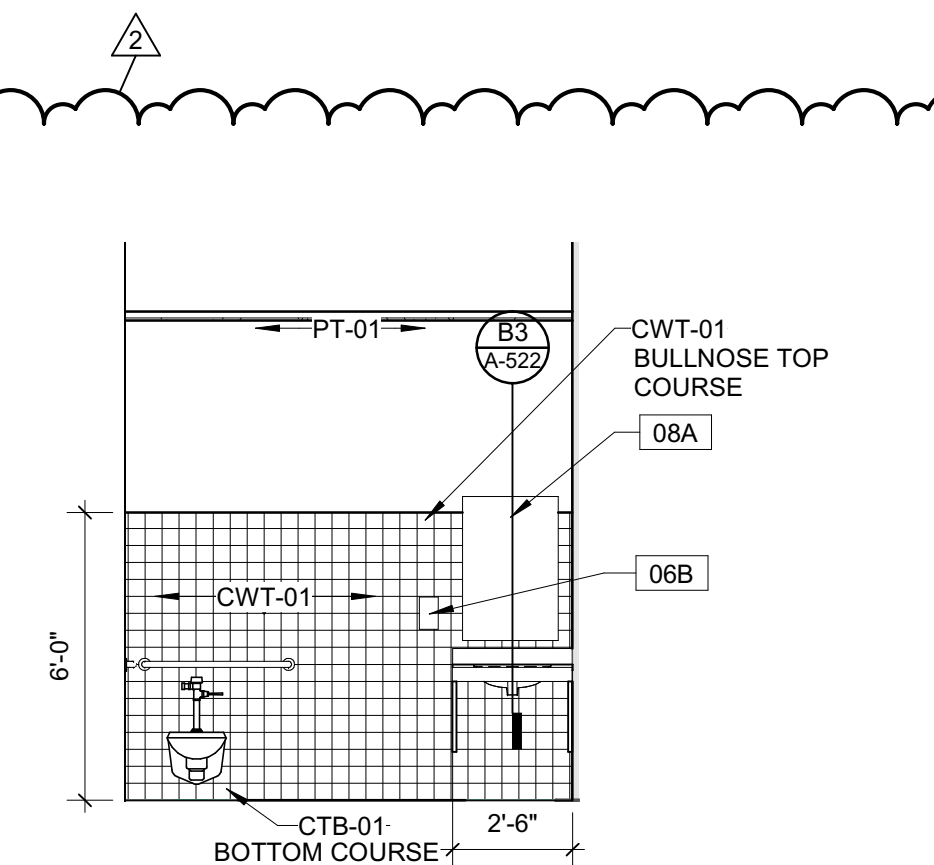
**B3 INTERIOR ELEVATION - TOILET ROOM EAST**  
1/4" = 1'-0"



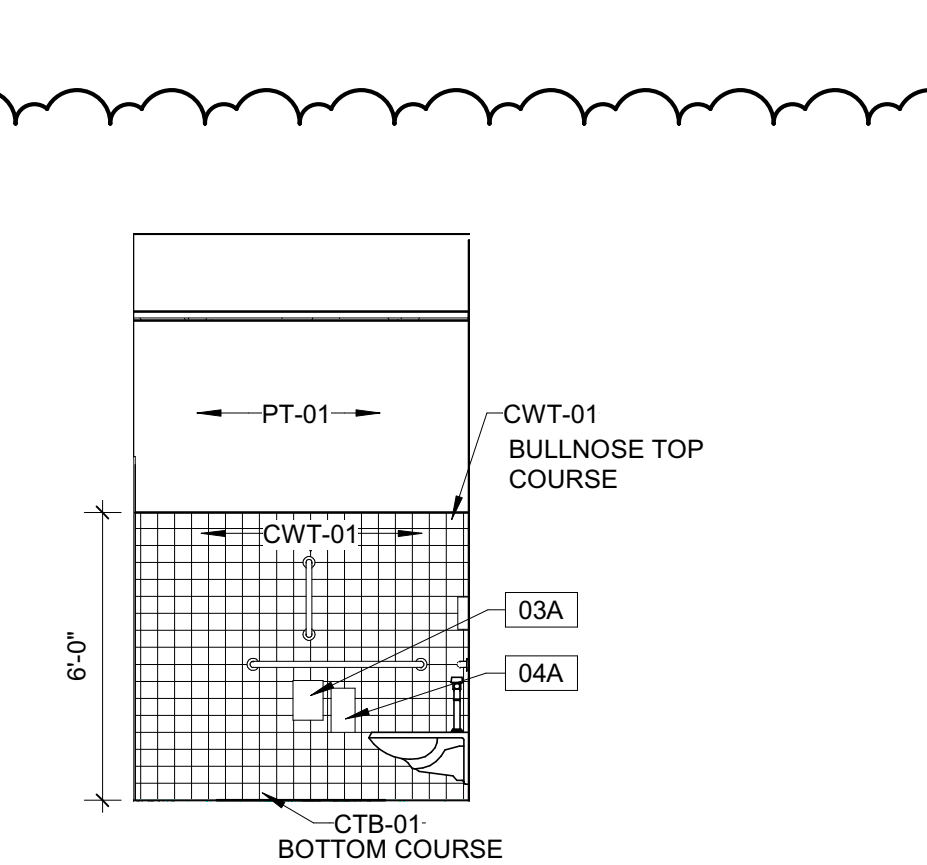
**A1 ENLARGED TOILET PLAN**  
1/4" = 1'-0"



**A2 ENLARGED STAFF TOILET PLAN**  
1/4" = 1'-0"



**A3 INTELEV-STAFF TOILET NORTH**  
1/4" = 1'-0"



**A4 INTELEV-STAFF TOILET WEST**  
1/4" = 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

SEAL | DATE 4/9/2021 | 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
2	Permit Revisions 4/9/2021

**RATIO**

COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE, REPRODUCTION OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED.

PROJECT NO. 20408.000

SHEET TITLE  
**ENLARGED TOILET PLANS**

SHEET NUMBER

**A-411**











DOOR HARDWARE SCHEDULE									
Door Hardware	Room Type	Hinges	Lockset / Exit Device	Cylinder	Floor Stop	Silencer	Closer	Other Parameters	
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 43-8804FXTB826 PULL	SARGENT, L-SECTION - US26D	NONE	ROCKWOOD, 608, GRAY	SARGENT 351, EN FINISH	REMOVABLE MULLIONS: SARGENT #980 WEATHERSTRIP SEAL: NATIONAL GUARD 180V-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 180V-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		
9	SINGLE EXTERIOR EGRESS DOORS	ROTON, 780-112HD OR MCKINNEY MCK-12HD CONTINUOUS HINGE	VON DUPRIN LD-98-NL	SARGENT, L-SECTION - US26D	NONE	NONE	SARGENT 351, EN FINISH	THRESHOLD: NATIONAL GUARD 424-36 SWEEP: NATIONAL GUARD D608A-36 WEATHER STRIP SEAL: NATIONAL GUARD 180V-3070 VISUAL STATUS INDICATOR/OCCUPANCY INDICATOR-SUPPLIER TO VERIFY MODEL	
10	TOILET ROOMS PRIVACY	MCKINNEY, MPB79 4.5X4.5, US26D	SARGENT, 28-10G05 LL, US26D	NONE	ROCKWOOD, 442	ROCKWOOD, 608, GRAY	YALE 3501 X SNB		

**DOOR SCHEDULE**

DOOR NUMBER	PAIR	DOOR				MTRL.	ELEV.	GLASS	HDWR. 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	F	-	1	HM	F1	A2 / A-601	A2 / A-601		NR	PH
145-B		3'-0"		7'-0"	1 3/4"	WD	F	-	3	HM	F1	A2 / A-601	A2 / A-601		NR	PH
145-A		3'-0"		7'-0"	1 3/4"	WD	F	-	3	HM	F1	A2 / A-601	A2 / A-601		NR	PH
145B		3'-0"		7'-0"	1 3/4"	WD	F	-	8	HM	F1	A2 / A-601	A2 / A-601		NR	PH
146		3'-0"		7'-0"	1 3/4"	WD	F	-	10	HM	F1	A2 / A-601	A2 / A-601		NR	PH
146-A		3'-0"		7'-0"	1 3/4"	WD	F	-	10	HM	F1	A2 / A-601	A2 / A-601		NR	PH
151	Yes	3'-0"	3'-0"	7'-0"	1 3/4"	WD	F	-	4	HM	F1	A2 / A-601	A2 / A-601		NR	PH
152		3'-0"		7'-0"	1 3/4"	WD	F	-	1	HM	F1	A2 / A-601	A2 / A-601		NR	PH
153		3'-0"		7'-0"	1 3/4"	WD	F	-	1	HM	F1	A2 / A-601	A2 / A-601		NR	PH
154		3'-0"		7'-0"	1 3/4"	WD	F	-	1	HM	F1	A2 / A-601	A2 / A-601		NR	PH
155		3'-0"		7'-0"	1 3/4"	WD	F	-	1	HM	F1	A2 / A-601	A2 / A-601		NR	PH
156		3'-0"		7'-0"	1 3/4"	WD	F	-	1	HM	F1	A2 / A-601	A2 / A-601		NR	PH
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
158-E		3'-0"		7'-0"	1 3/4"	HM	F	-		HM	F1				NR	
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	-	9	HM	F1	A3 / A-601	A3 / A-601		NR	PH, 2
160-C		3'-0"		7'-0"	1 3/4"	HM	F	-	9	HM	F1	A3 / A-601	A3 / A-601		NR	PH, 2
163		3'-0"		7'-0"	1 3/4"	WD	F	-	1	HM	F1	A2 / A-601	A2 / A-601		NR	
165		3'-0"		7'-0"	1 3/4"	WD	F	-	1	HM	F1	A2 / A-601	A2 / A-601		NR	
SECOND FLOOR																
169-C	Yes	3'-0"	3'-0"	7'-0"	1 3/4"	WD	F	-	1	HM	F1	A2 / A-601	A2 / A-601		45 MIN	PH, 20 MIN FIRE RATED
201		3'-0"		7'-0"	1 3/4"	WD	F	-	1	HM	F1	A2 / A-601	A2 / A-601		NR	PH
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	F	-	10	HM	F1	A2 / A-601	A2 / A-601		NR	PH
201D		3'-0"		7'-0"	1 3/4"	WD	HG	GL-11	2	HM	F1	A2 / A-601	A2 / A-601		NR	
201E		3'-0"		7'-0"	1 3/4"	WD	F	-		HM	F1				NR	
201A		3'-0"		7'-0"	1 3/4"	WD	F	-	1	HM	F1	A2 / A-601	A2 / A-601		NR	
250	Yes	3'-0"	3'-0"	7'-0"	1 3/4"	WD	F	-	4	HM	F1	A2 / A-601	A2 / A-601		NR	
251		3'-0"		7'-0"	1 3/4"	WD	F	-	1	HM	F1	A2 / A-601	A2 / A-601		NR	
252		3'-0"		7'-0"	1 3/4"	WD	F	-	1	HM	F1	A2 / A-601	A2 / A-601		NR	
253		3'-0"		7'-0"	1 3/4"	WD	F	-	1	HM	F1	A2 / A-601	A2 / A-601		NR	
254		3'-0"		7'-0"	1 3/4"	WD	F	-	1	HM	F1	A2 / A-601	A2 / A-601		NR	
255		3'-0"		7'-0"	1 3/4"	WD	F	-	1	HM	F1	A2 / A-601	A2 / A-601		NR	
256		3'-0"		7'-0"	1 3/4"	WD	F	-	1	HM	F1	A2 / A-601	A2 / A-601		NR	
261		3'-0"		7'-0"	1 3/4"	WD	F	-	1	HM	F1	A2 / A-601	A2 / A-601		NR	
263		3'-0"		7'-0"	1 3/4"	WD	F	-	1	HM	F1	A2 / A-601	A2 / A-601		NR	

**GENERAL DOOR SCHEDULE NOTES**

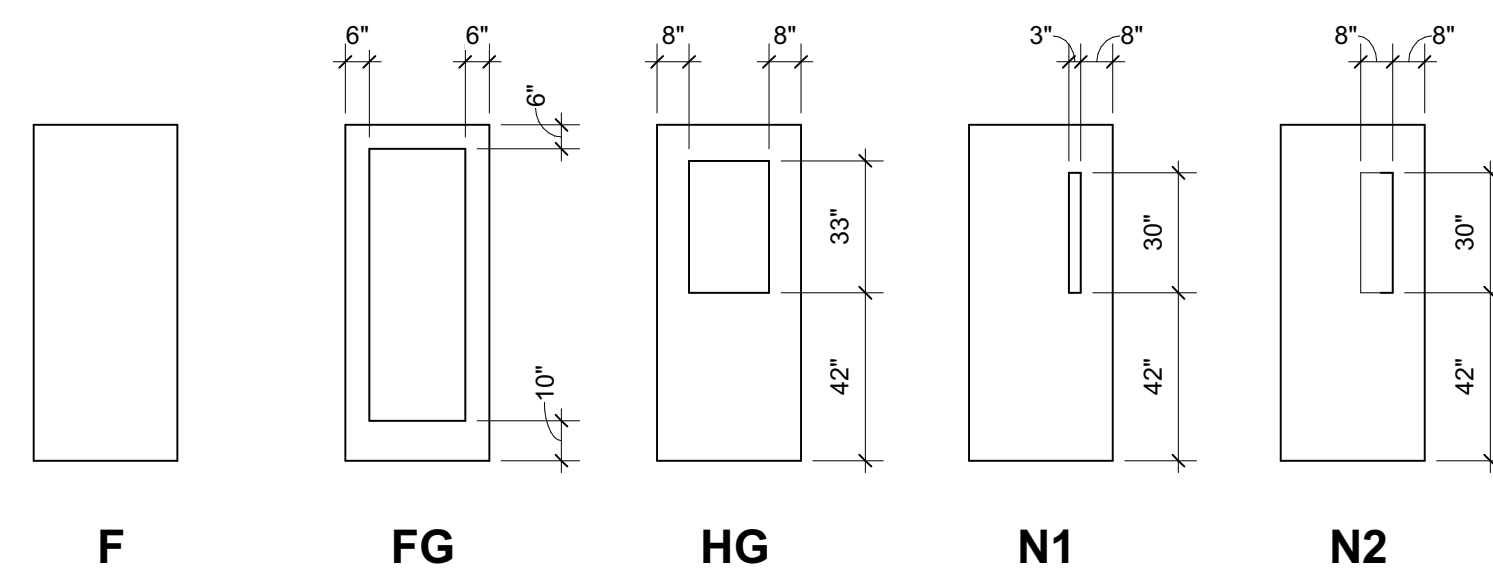
- A. THESE GENERAL NOTES APPLY TO SERIES 600 DOOR SCHEDULE DRAWINGS.
- B. UNDERCUT DOORS AS REQUIRED BY FINAL FLOOR FINISH.
- C. PROVIDE SEALANT BETWEEN HOLLOW METAL FRAME PERIMETERS AND SURROUNDING WALL CONSTRUCTION UNLESS OTHERWISE INDICATED.
- D. PROVIDE SEALANT BETWEEN INTERIOR AND EXTERIOR STOREFRONT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

**DOOR SCHEDULE REMARKS**

- 1. CASSED OPENING
- REV. 07/22/09
- 2. HOLLOW METAL DOORS AND FRAMES TO BE PAINTED PT-04

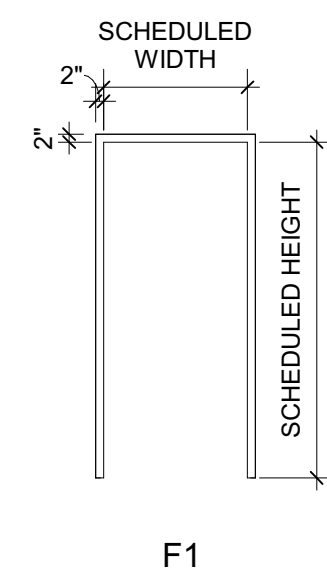
**GLAZING SCHEDULE**

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



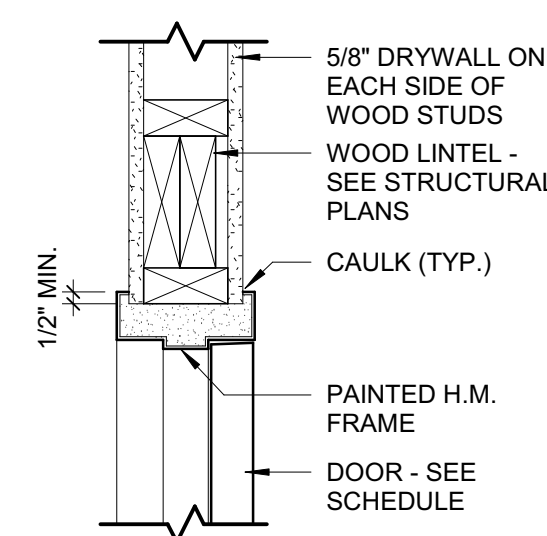
**DOOR PANEL LEGEND**

1/4" = 1'-0"

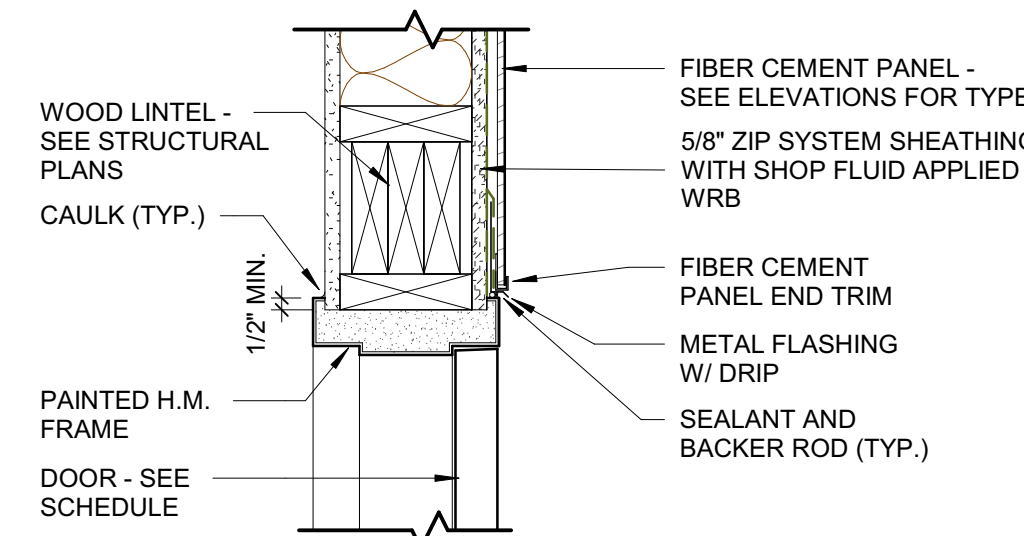


**DOOR FRAME LEGEND**

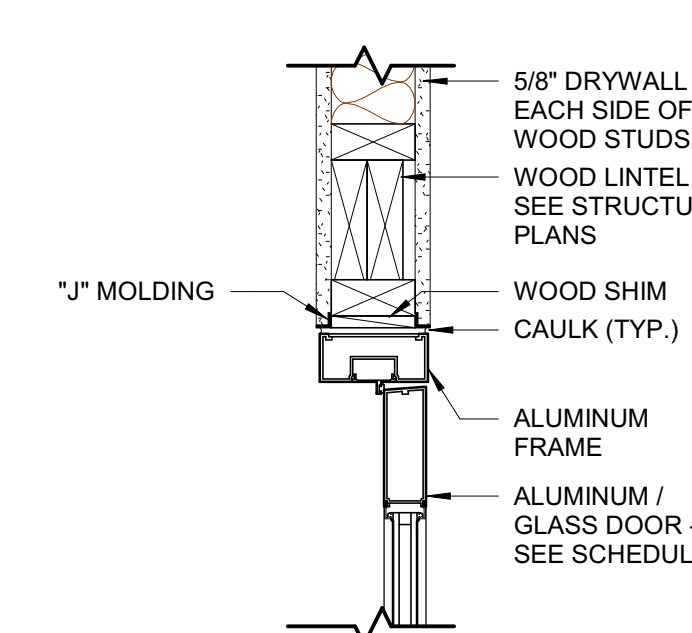
1/4" = 1'-0"



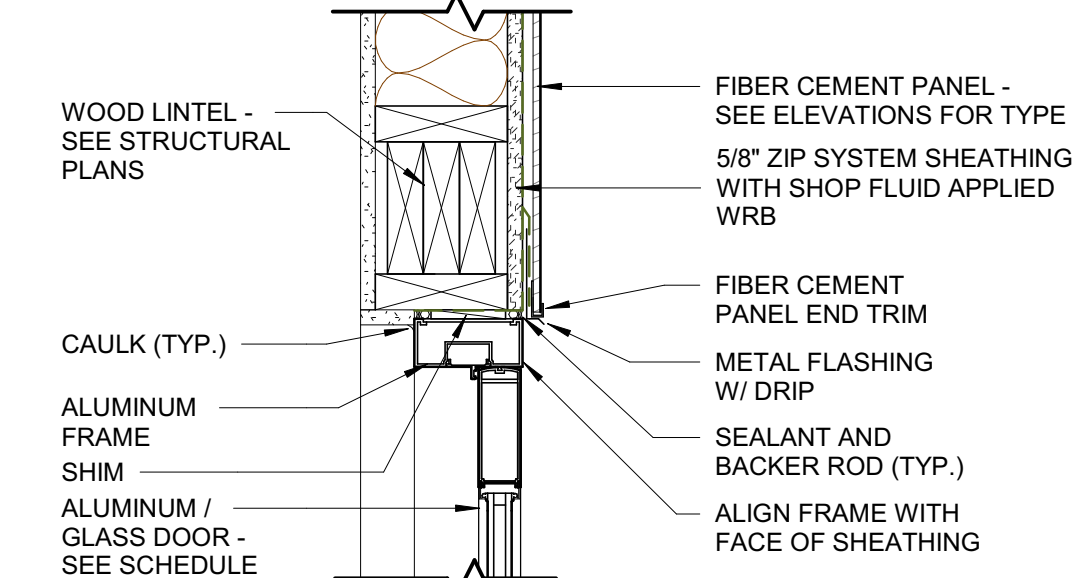
**HEAD DETAIL**



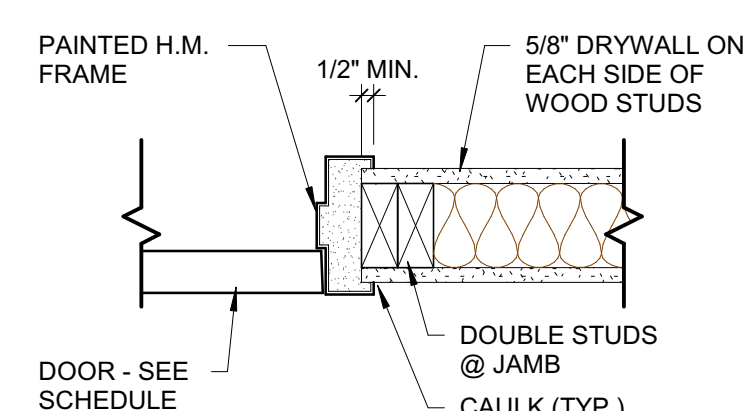
**HEAD DETAIL**



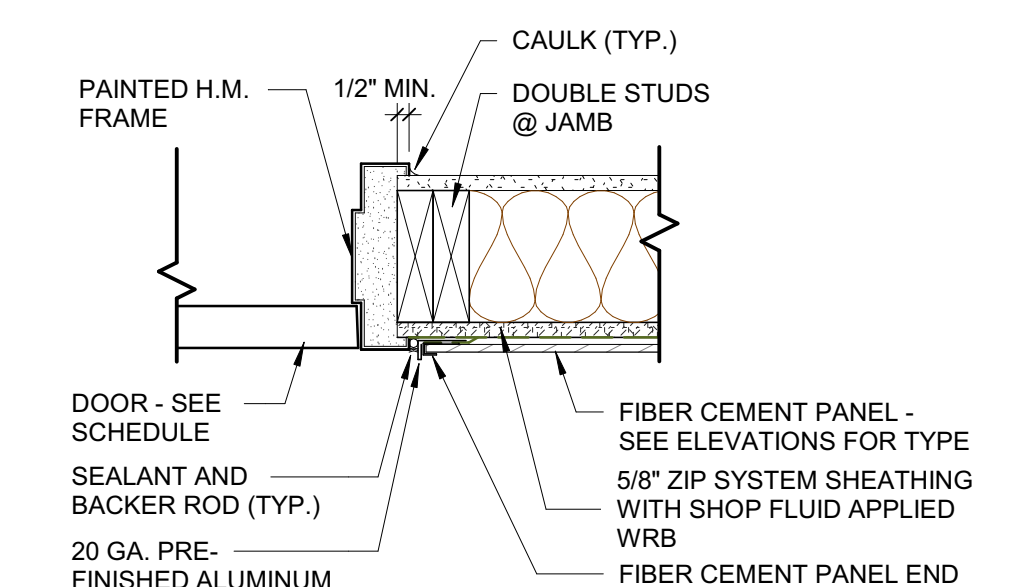
**HEAD DETAIL**



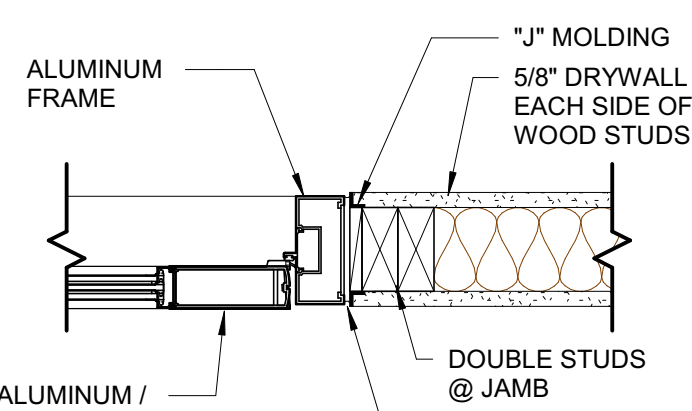
**HEAD DETAIL**



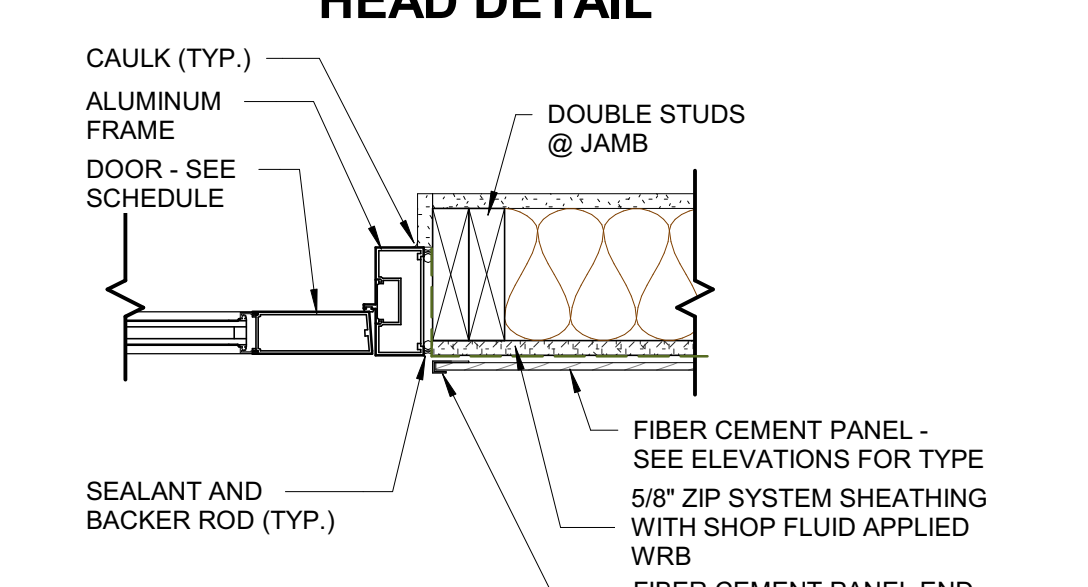
**JAMB DETAIL**



**JAMB DETAIL**



**JAMB DETAIL**



**JAMB DETAIL**

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

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

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

**A6** EXTERIOR WOOD STUD / ALUM FRAME  
1 1/2" = 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

SEAL | DATE 4/9/2021 | 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
2	Permit Revisions 4/9/2021

**RATIO**  
PROJECT NO. 20408.000  
SHEET TITLE  
**DOOR SCHEDULE AND DETAILS**

SHEET NUMBER  
**A-601**















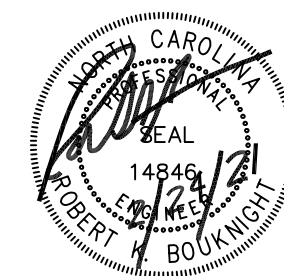












ROBERT BOUKNIGHT, PE  
1507 TALBOT RD  
PLEASANT  
GARDEN, NC 27313  
336-420-2686  
RKB@RKBENG.COM

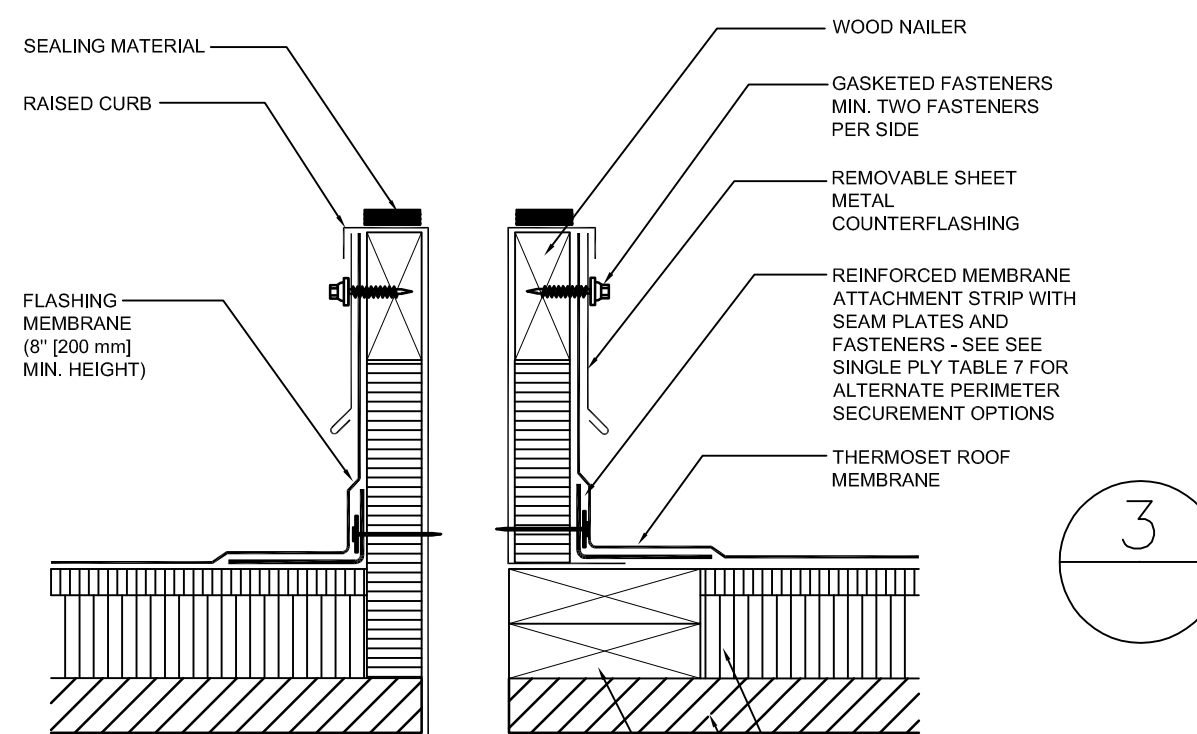
**GENERAL MECHANICAL NOTES:**

- ALL PIPING PENETRATIONS THRU SMOKE AND FIRE WALLS SHALL BE SEALED WITH APPROPRIATE UL RATED/LISTED SEALANT.
- ALL OUTSIDE AIR INTAKES SHALL BE LOCATED 10'-0" MIN. FROM ANY VENT/EXHAUST TERMINAL.
- BRANCH DUCT CONNECTION TO DIFFUSER OR GRILLE MAY HAVE 7'-0" LONG MAX. FLEX DUCT CONNECTOR
- 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.
- 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.
- INSULATE ALL INDOOR SUPPLY DUCTWORK WITH 2.2" FG BLANKET WITH SEALED FSK VAPOR BARRIER.
- BLANK OFF OPENINGS WHERE DUCTS TRAVEL DOWN TO FIRST LEVEL WITH SHEET METAL AND MINERAL WOOL AT SECOND FLOOR LEVEL.

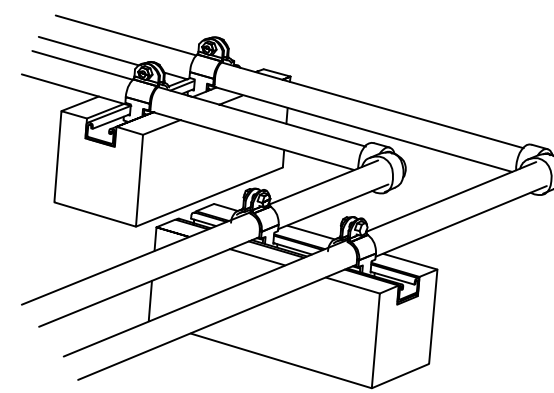
TAG	SUPPLY FAN				MIN. O/A	COOLING COIL			HEATING SECTION			UNIT		MANUF./MODEL	REMARKS	WEIGHTS (APPX)	
	CFM	ESP (IN. H <sub>2</sub> O)	BHP	RPM		TOT MBH (MIN)	SENS MBH (MIN)	COIL EAT DB/WB (°F)	TOT MBH INPUT	TOT MBH OUTPUT	COIL EAT DB (°F)	VOLTAGE	MCA				MOP
RTU-1-1	1841	1	X	X	400	60	48	80/67	60	49	60	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**

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



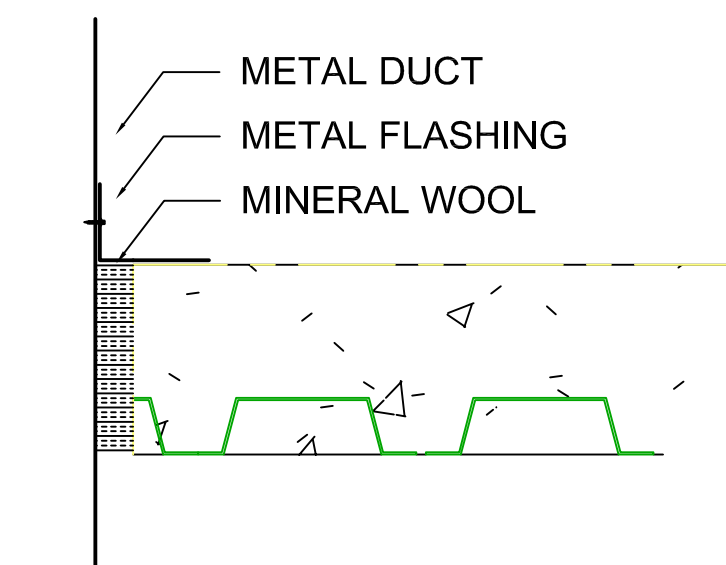
**3 ROOF PIPING SUPPORT**  
NOT TO SCALE



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

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

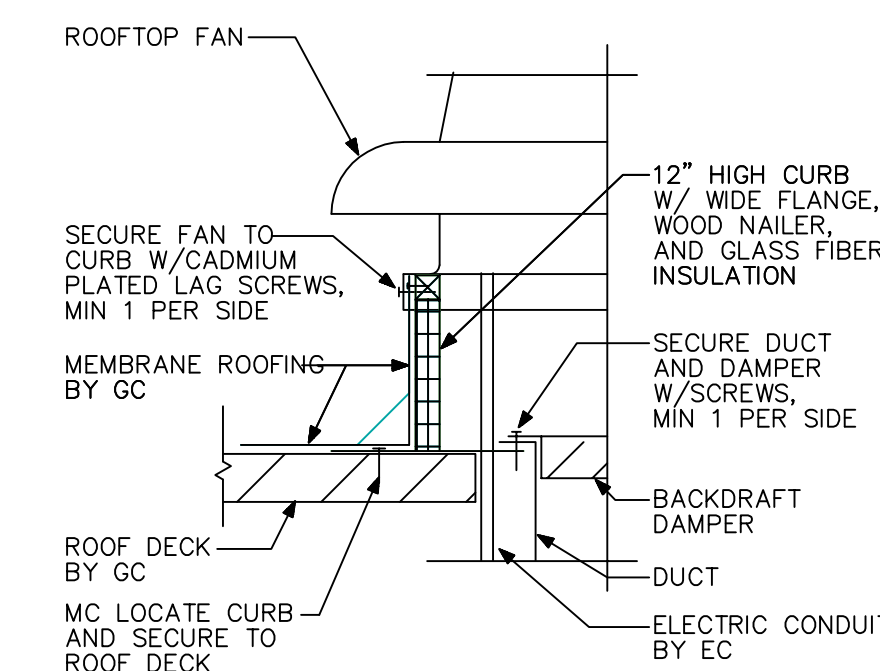
SIZES ON PLANS SHEETS SUPERCEDE SCHEDULE. PROVIDE MULTIPLES IF NECESSARY FOR ROOM AIRFLOW.



**2 DUCT FLOOR PENETRATION**  
NOT TO SCALE

TAG	SERVICE	TYPE	CFM	ESP (IN. H <sub>2</sub> O)	RPM	BHP	HP	MAX SOUND SONES	VOLTAGE	MANUFACTURER	MODEL	REMARKS
EF-1-1,2	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	G	1,3
EF-1-3	BATH EXH	CEILING	75	.375	-	-	-	7	120/1P	GREENHECK	SP	2,3
EF-2-2	BATH EXH	CEILING	75	.375	-	-	-	7	120/1P	GREENHECK	SP	2,3

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



**4 ROOF CURB DETAIL**  
NOT TO SCALE

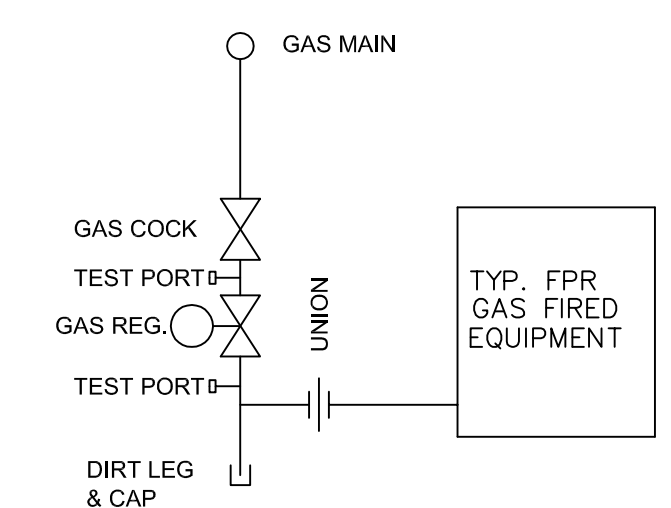
DEVICE	SYMBOL	MFG.	MODEL	DESCRIPTION	DAMPER	COLOR	REMARKS
CEILING DIFFUSER		NAILOR	RNS	SQUARE, LOUVERED FACE, STEEL CONSTRUCTION, ROUND NECK ADAPTOR 24x24 T-BAR MTD., INSULATED TOP	NO	WHITE	1,2,3
RETURN AIR REGISTER		NAILOR	4360	PREFORATED FACE RETURN REGISTER, STEEL CONSTRUCTION, REMOVABLE FACE, FOR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

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

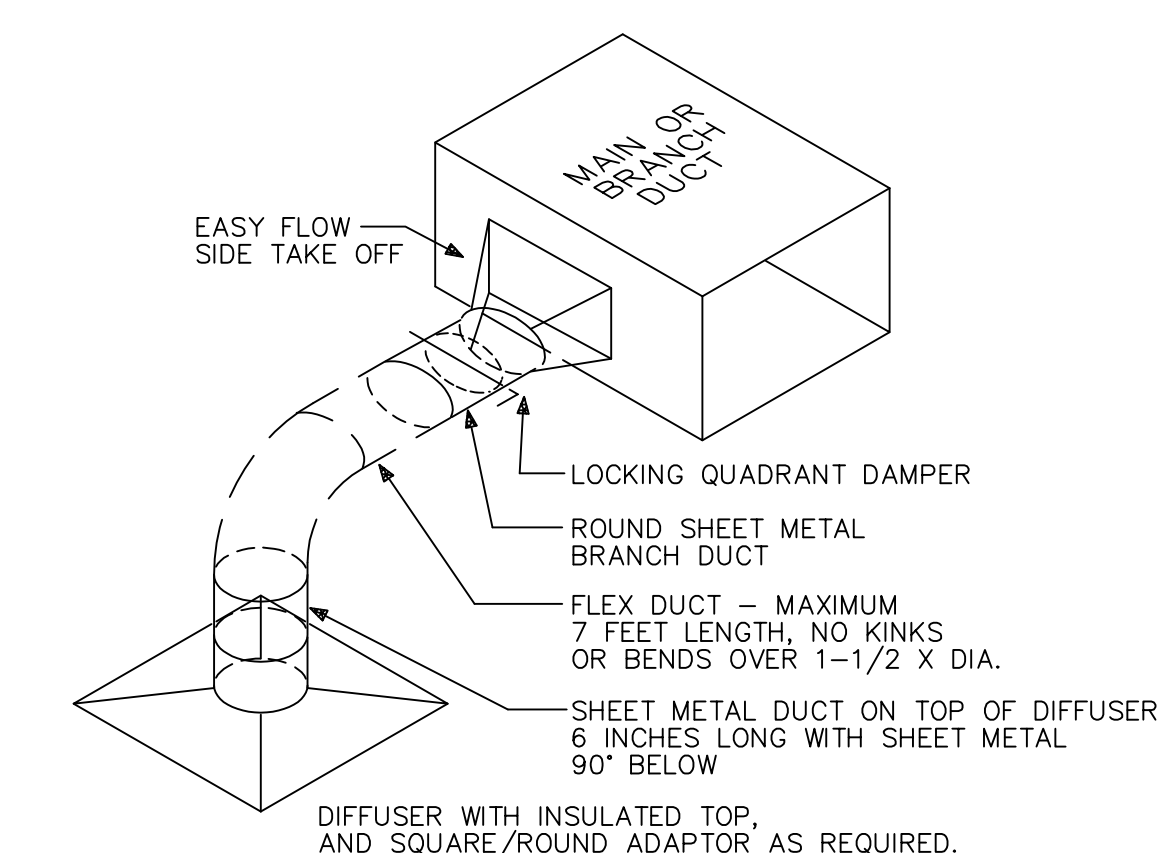
MARK	GENERAL DATA				COOLING CAPACITY				HEAT PUMP HEATING CAPACITY-NA					
	CFM TOTAL	CFM O.A.	SEER	COP	VOLTAGE	MCA	MOCP	TOTAL MBH	SENS. MBH	OAT °Fdb/°Fwb	TOTAL BTH/H	OAT °Fdb	TOTAL BTH/H	OAT °Fdb
MS-1	350	--	18	2.9	208/1P	7	15	12	10	95/75	NA	47	NA	17

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

**5 FAN CURB DETAIL**  
NOT TO SCALE



**6 TYPICAL GAS CONNECTION**  
NO SCALE



**1 TYPICAL DIFFUSER DETAIL**  
NOT TO SCALE

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

**REVISIONS**

REV. BY	DATE	DESCRIPTION
1	RB 4/12/21	

**REVISIONS**

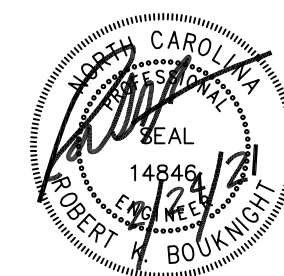
REV. BY	DATE	DESCRIPTION
1	RB 4/12/21	

**DESIGNED BY:** RKB  
**DRAWN BY:** RKB  
**CHECKED BY:**  
**APPROVED BY:** RKB  
**DRAWING NUMBER:** MO.1  
**SCHEDULES/DETAILS**

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

**CUSTOMER:** SWINERTON CONSTRUCTION  
**JOB No.:** [ ]  
**SHEET No.:** [ ]



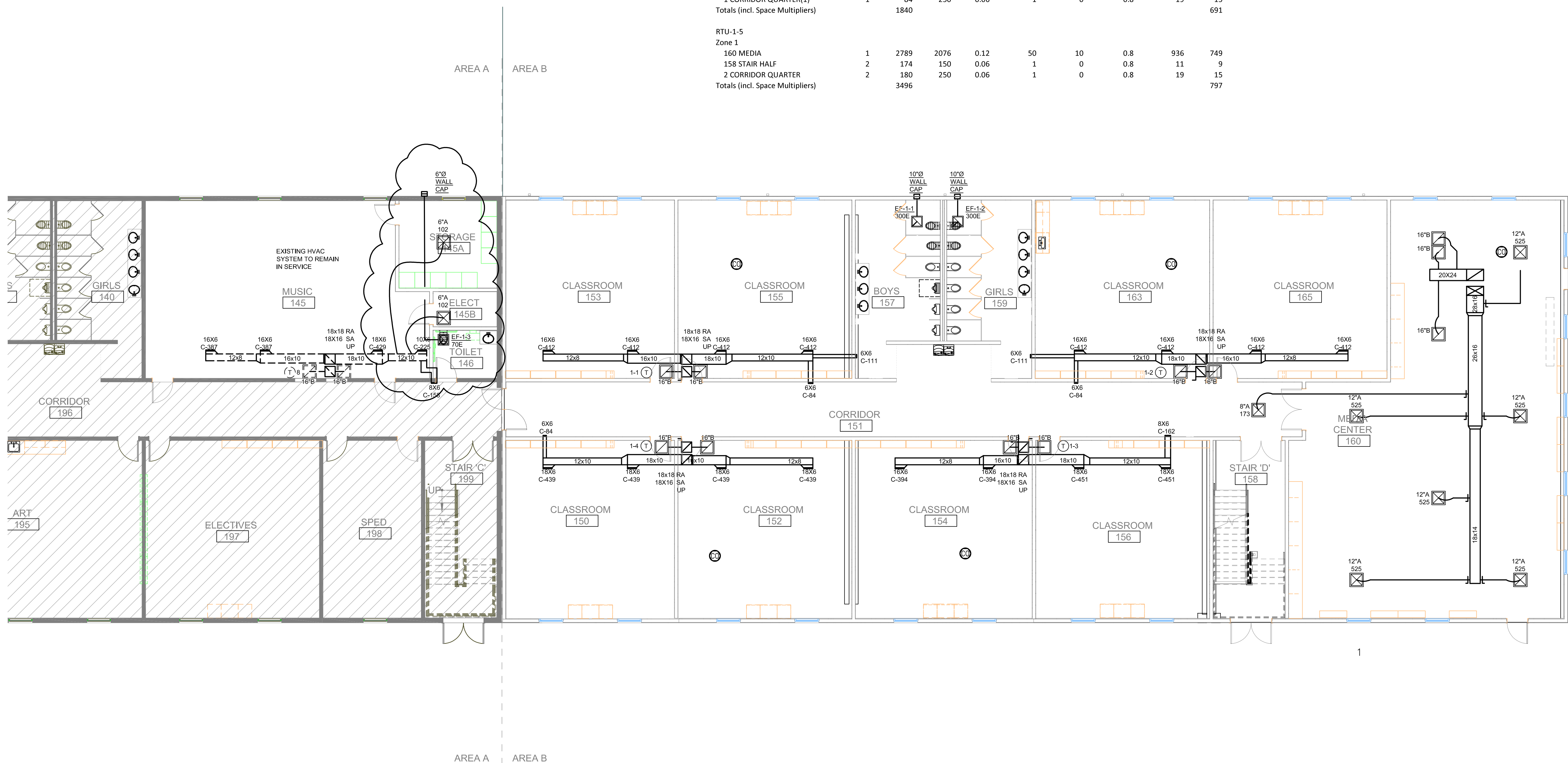


ROBERT BOUKNIGHT, PE  
 1507 TALBOT RD  
 PLEASANT  
 GARDEN, NC 27313  
 336-420-2686  
 RKB@RKBENG.COM

MECHANICAL TECHNOLOGIES &  
 SOLUTIONS, LLC.

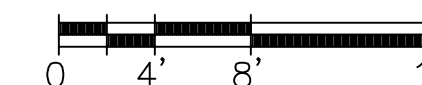
700 Magellan Drive  
 Winston-Salem, NC 27107  
 Phone (336) 395-5166 Fax (336) 890-7712  
 www.mtsinc.com

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



**HVAC FIRST FLOOR PLAN**

SCALE 1/8" = 1'-0"



**REVISIONS**

REV. BY DATE

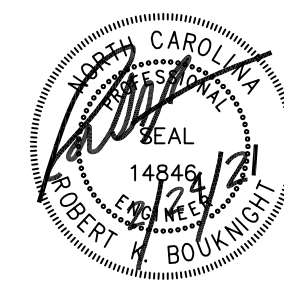
DESCRIPTION

1 RB 4/12/21 1

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

THIS DRAWING IS PRIVATE AND CONFIDENTIAL. ALL USE IS FORBIDDEN EXCEPT BY WRITTEN COMMENT OF MECHANICAL TECHNOLOGIES & SOLUTIONS, LLC.

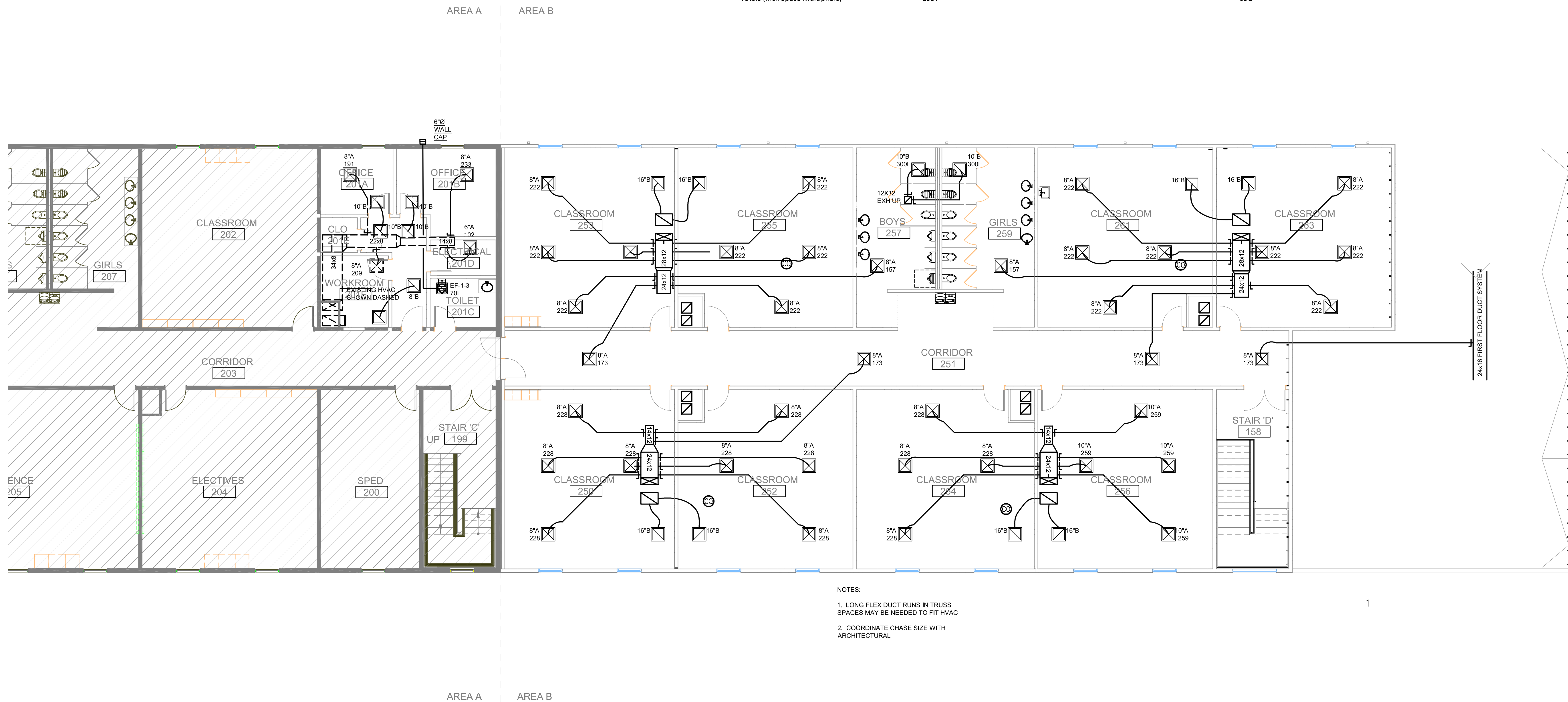


ROBERT BOUKNIGHT, PE  
 1507 TALBOT RD  
 PLEASANT  
 GARDEN, NC 27313  
 336-420-2686  
 RKB@RKBENG.COM

**MECHANICAL TECHNOLOGIES & SOLUTIONS, LLC.**

700 Magellan Drive  
 Winston-Salem, NC 27107  
 Phone (336) 395-5166 Fax (336) 894-7112  
 www.mtsinc.com

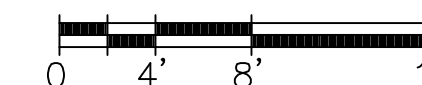
Zone Name / Space Name	Mult.	Supply Air (CFM)	Floor Area (ft <sup>2</sup> )	OA Floor Rate (CFM)	Timed Average Occupancy	People OA Rate (CFM/Person)	Air Dist Eff. (Ez)	Space Required OA (CFM) Voz	Breathing Zone OA (CFM) Vbz
<b>RTU-2-1</b>									
253 CLRM(1)	1	887	650	0.12	26	10	0.8	423	338
255 CLRM(2)	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



NOTES:  
 1. LONG FLEX DUCT RUNS IN TRUSS SPACES MAY BE NEEDED TO FIT HVAC  
 2. COORDINATE CHASE SIZE WITH ARCHITECTURAL

**HVAC 2ND FLOOR PLAN**

SCALE 1/8" = 1'-0"



**REVISIONS**

REV. BY DATE DESCRIPTION

**REVISIONS**

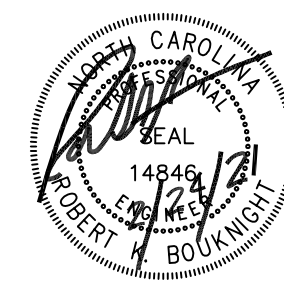
REV. BY DATE DESCRIPTION

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

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

THIS DRAWING IS PRIVATE AND CONFIDENTIAL. ALL USE IS FORBIDDEN EXCEPT BY WRITTEN COMMENT OF MECHANICAL TECHNOLOGIES & SOLUTIONS, LLC.

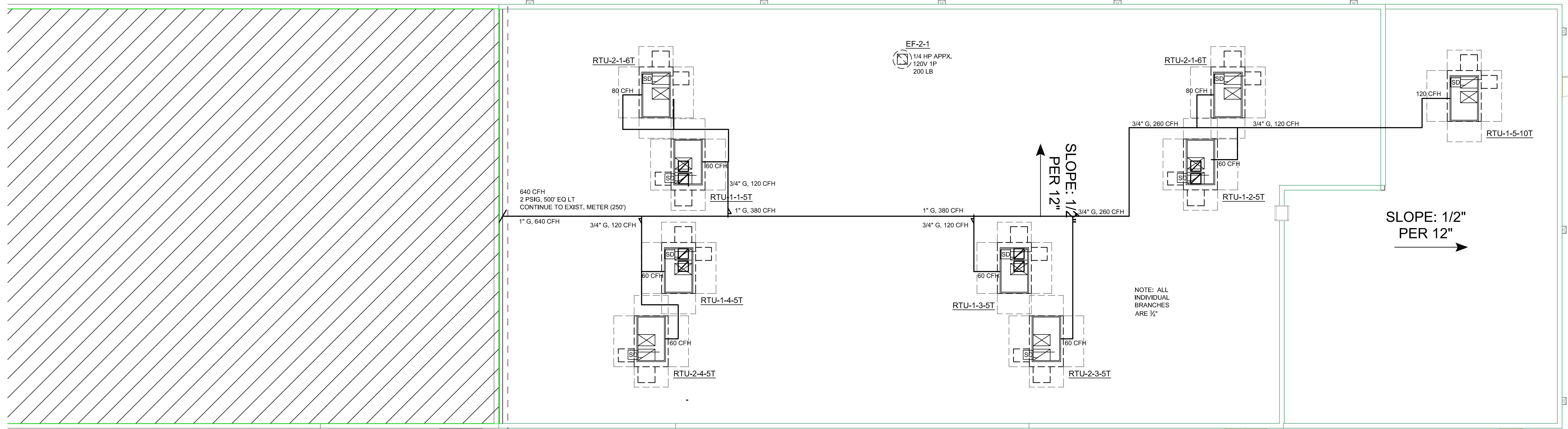




ROBERT BOUKNIGHT, PE  
 1507 TALBOT RD  
 PLEASANT  
 GARDEN, NC 27313  
 336-420-2686  
 RKB@RKBENG.COM

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

AREA A AREA B

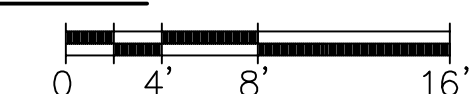


- NOTES:
1. SMOKE DETECTORS FURNISHED BY EC, MC TO INSTALL. SD TO STOP UNIT OPERATION UPON ALARM.
  2. GAS PIPING TO CONNECT TO EXISTING METER

AREA A AREA B

**HVAC ROOF PLAN**

SCALE 1/8" = 1'-0"



**REVISIONS**

REV. BY	DATE	DESCRIPTION

**REVISIONS**

REV. BY	DATE	DESCRIPTION

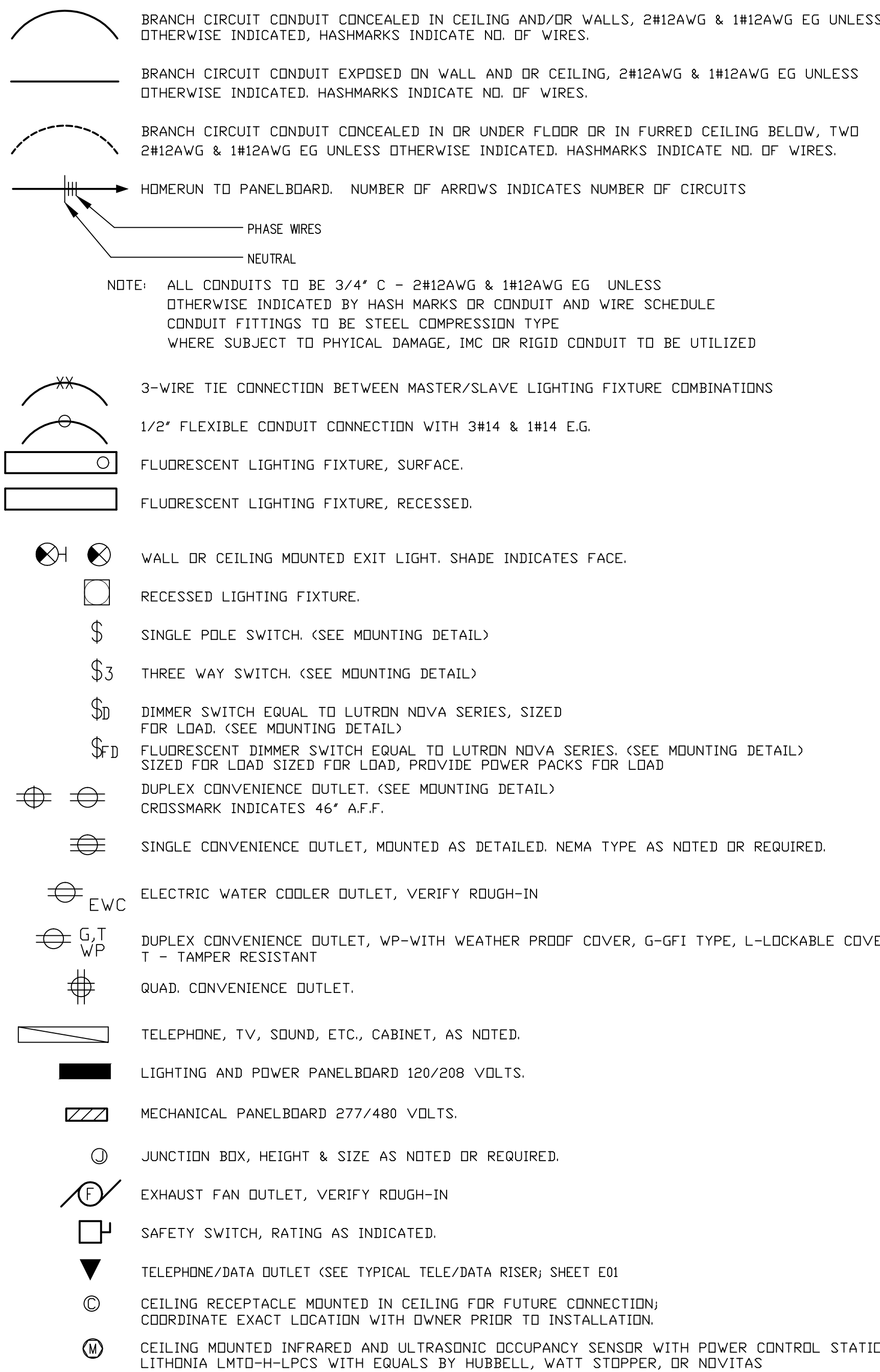
TITLE: CAROLINA CHARTER ACADEMY  
 2021 ADDITION  
 8529 NC-55  
 ANGLIER, NC  
 CUSTOMER: SWINERTON CONSTRUCTION

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

Job No. | SHEET No. | SCALE:

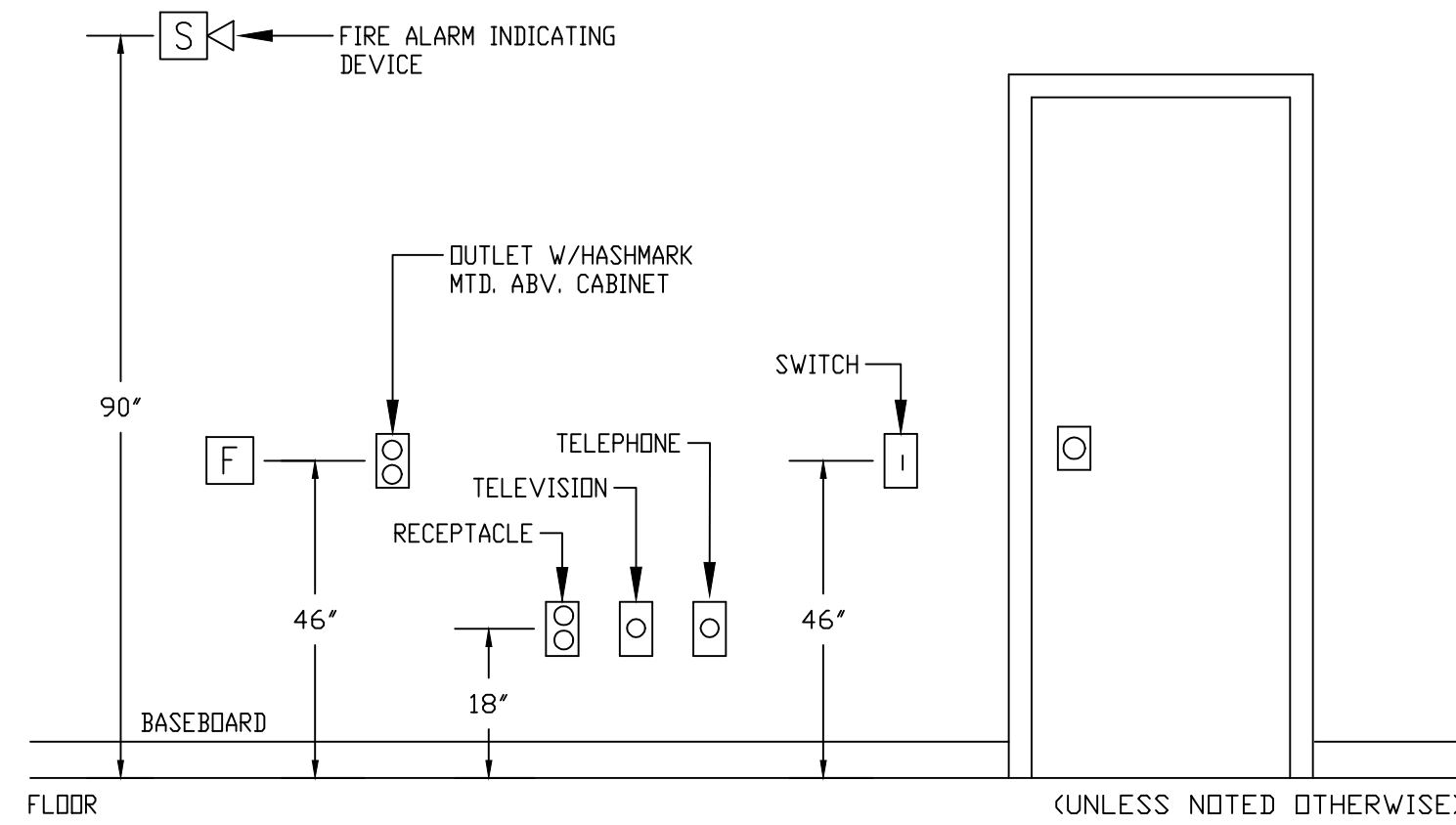
THIS DRAWING IS PRIVATE AND CONFIDENTIAL. ALL USE IS FORBIDDEN EXCEPT BY WRITTEN COMMENT OF MECHANICAL TECHNOLOGIES & SOLUTIONS, LLC.

# SYMBOLS & LEGEND



## 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

## 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.

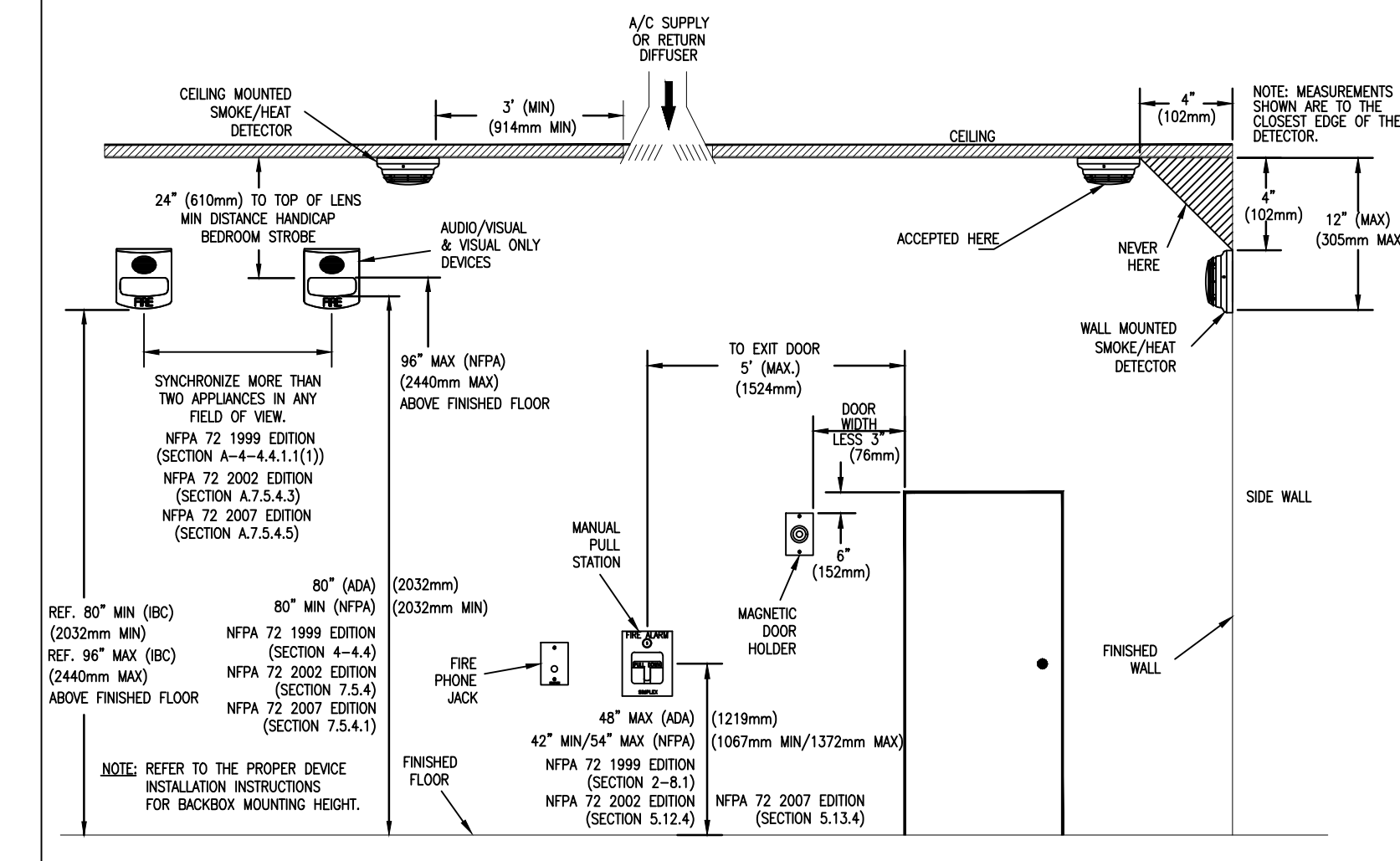
## FIRE ALARM NOTES

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

- [FACP] ANALOG ADDRESSABLE FIRE ALARM CONTROL PANEL
- [NAC] NOTIFICATION ALARM CIRCUIT PANEL W/BATTERIES
- [SS] FLUSH MOUNTED SPEAKER WITH LIGHT
- [F] DOUBLE ACTION ADDRESSABLE PULL STATION
- [HD] CEILING MOUNTED FIXED HEAT DETECTOR
- [ST] FLUSH MOUNTED STROBE LIGHT ONLY
- [SD] CEILING MOUNTED ADDRESSABLE PHOTO SMOKE DETECTOR  
"S" DENOTES SURFACE MOUNTED  
"E" DENOTES ELEVATOR RECALL  
CEILING MOUNTED STROBE LIGHT ONLY
- [SD] 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
- [R] REMOTE TEST STATION FOR DUCT MOUNTED SMOKE DETECTOR, 90"
- [DH] FIRE ALARM DOOR HOLDER OUTLET, 24 VOLT DC
- [FS] SPRINKLER WATER FLOW MONITORING DEVICE, COORDINATE EXACT LOCATION AND REQUIRED QUANTITIES
- [TS] SPRINKLER TAMPER MONITORING DEVICE, COORDINATE EXACT LOCATION AND REQUIRED QUANTITIES
- [SS] CEILING MOUNTED SPEAKER WITH LIGHT
- [ZAM] CONTROL ZAM; COMPATIBLE WITH DELAYED EGRESS HARDWARE  
MAG LOCKS/ACCESS CONTROL TO RELEASE UPON FIRE ALARM ACTIVATION
- [CC] CARBON MONOXIDE DETECTOR
- [BT] BEAM DETECTOR TRANSMITTER
- [BR] BEAM DETECTOR REFLECTOR

## DEVICE MOUNTING HEIGHTS (PBR NFPA 72)



## SAFETY SWITCH SCHEDULE

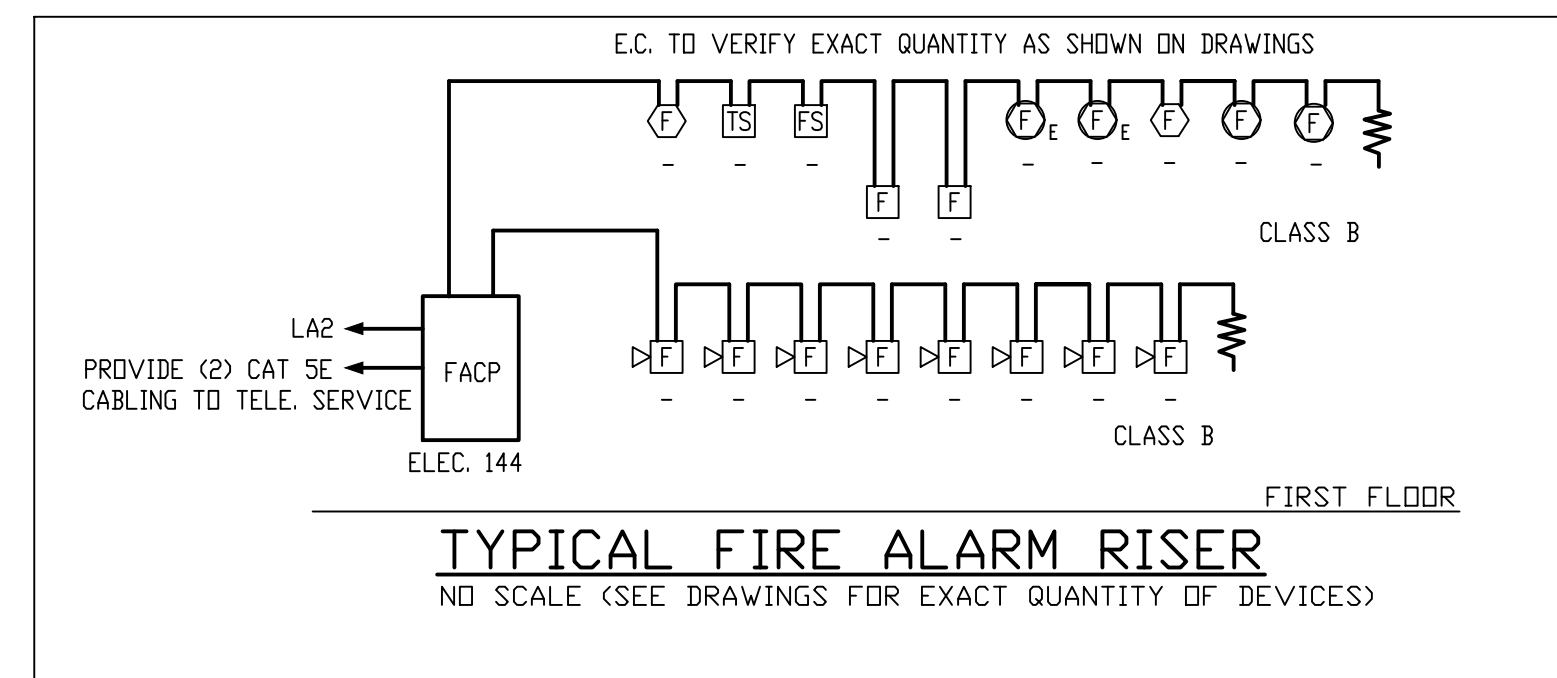
\* FUSE SIZE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS  
\* FUSE SIZE AS NOTED ON PLANS.  
NF NON-FUSED

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
1	●	●	●	●	●	●	●	●
2	●	●	●	●	●	●	●	●
3	●	●	●	●	●	●	●	●
4	●	●	●	●	●	●	●	●
5	●	●	●	●	●	●	●	●
6	●	●	●	●	●	●	●	●
7	●	●	●	●	●	●	●	●
8	●	●	●	●	●	●	●	●
9	●	●	●	●	●	●	●	●
10	●	●	●	●	●	●	●	●
11	●	●	●	●	●	●	●	●
12	●	●	●	●	●	●	●	●
13	●	●	●	●	●	●	●	●
14	●	●	●	●	●	●	●	●
15	●	●	●	●	●	●	●	●
16	●	●	●	●	●	●	●	●
17	●	●	●	●	●	●	●	●
18	●	●	●	●	●	●	●	●
19	●	●	●	●	●	●	●	●
20	●	●	●	●	●	●	●	●
21	●	●	●	●	●	●	●	●
22	●	●	●	●	●	●	●	●
23	●	●	●	●	●	●	●	●
24	●	●	●	●	●	●	●	●
25	●	●	●	●	●	●	●	●
26	●	●	●	●	●	●	●	●
27	●	●	●	●	●	●	●	●
28	●	●	●	●	●	●	●	●
29	●	●	●	●	●	●	●	●
30	●	●	●	●	●	●	●	●

## 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

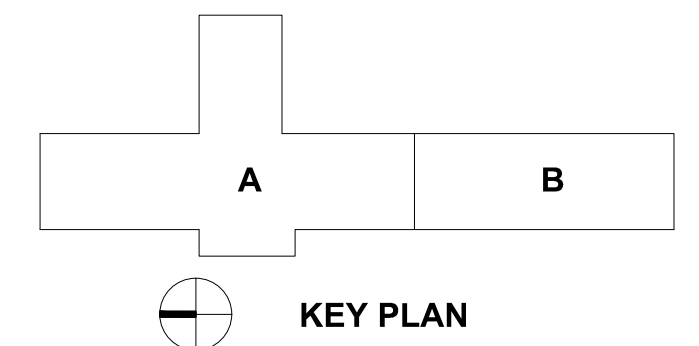
Architect  
**RATIO**  
227 Fayetteville Street, Suite 301  
Raleigh, North Carolina 27601  
919-821-0805

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

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

**NORTH CAROLINA PROFESSIONAL ENGINEERING**  
029468 2/24/21  
CHARLES B. LACKS

**GREENSBORO ENGINEERING PLLC**  
SEAL REGISTERED ARCHITECTURAL ENGINEERING CORPORATION  
P-0385 GREENSBORO, NC



SEAL | DATE 2/12/2021

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

NO.	DESCRIPTION	DATE
1	50% Construction Documents	2/8/2021
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

**RATIO**

COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE, REPRODUCTION OR DISSEMINATION MAY BE MADE WITHOUT THE WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED.

PROJECT NO. 20408.000

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

SHEET NUMBER

**E-01**

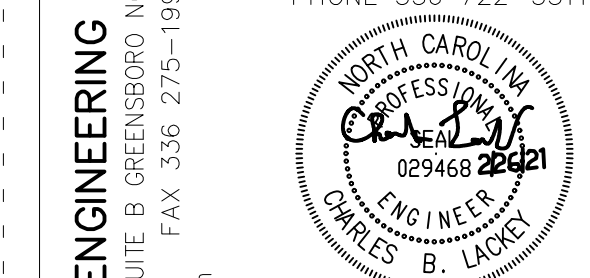


**Carolina Charter Academy Exp.**  
8529 Highway 55  
Angier, North Carolina 27501

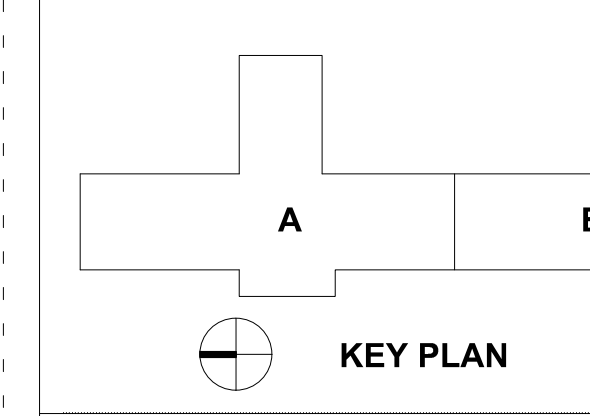
**Owner**  
Highmark School Development  
746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

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

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



GREENSBORO ENGINEERING PLLC  
1846 BARNARD STREET, SUITE B GREENSBORO, NC 27408  
PHONE 336-279-0000 FAX 336-279-1996  
www.gseengineering.com



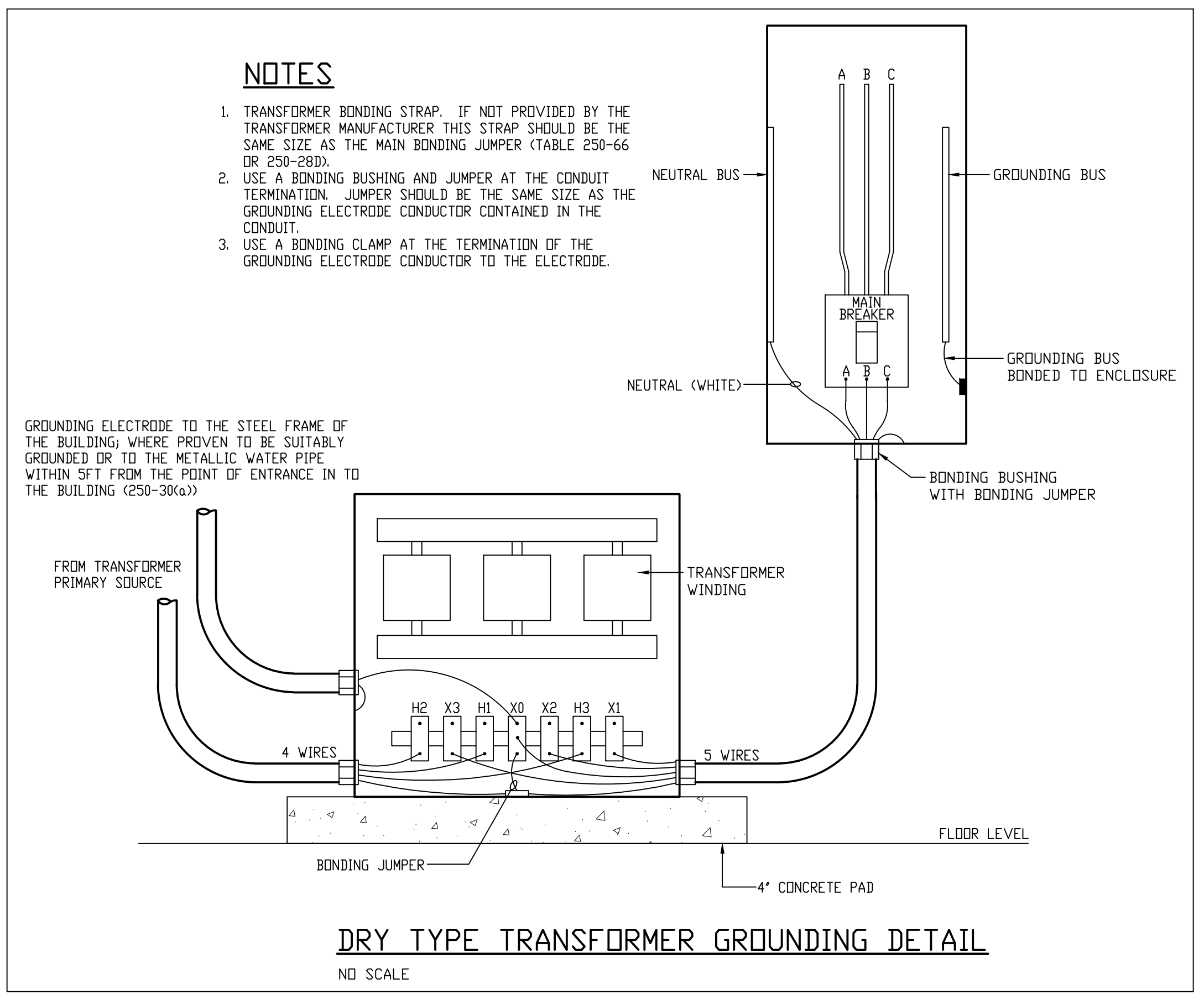
SEAL | DATE 2/12/2021

SHEET ISSUE	
1 100% Construction Documents	2/26/2021
INSPECTION REVIEW	3/17/2021

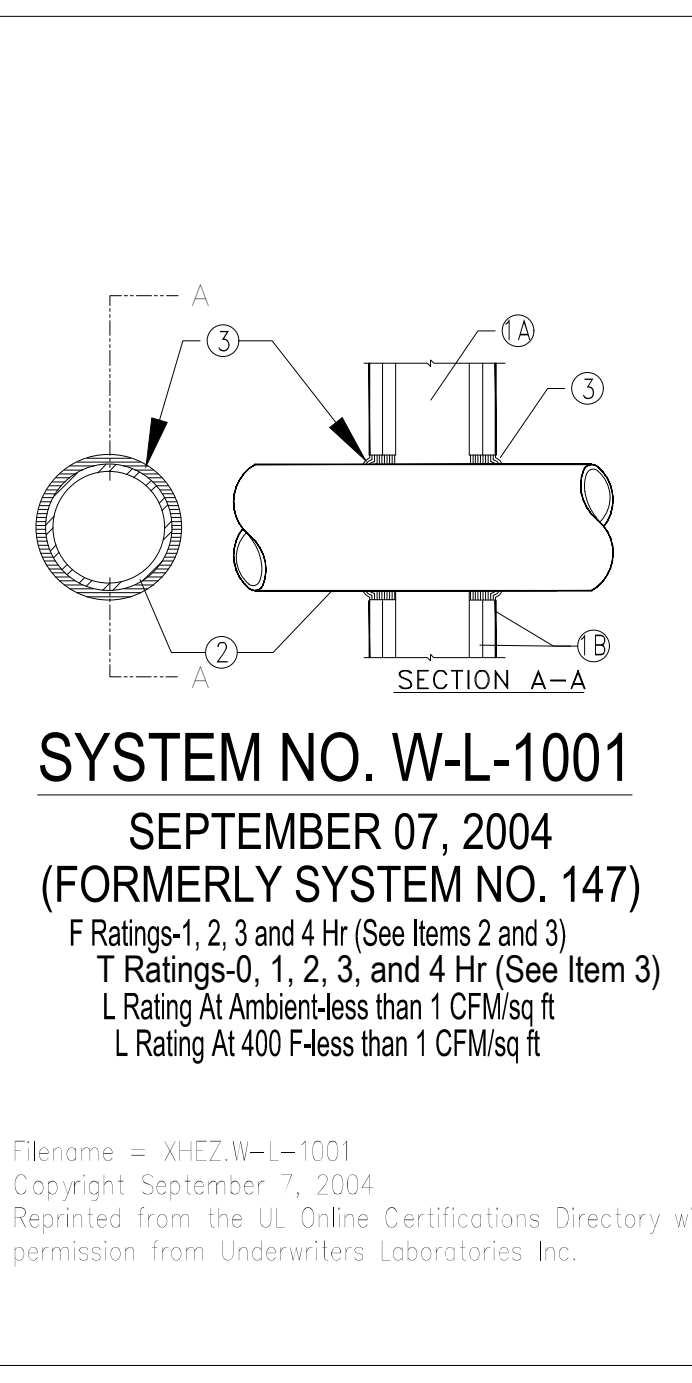
PROJECT NO.	20408.000
SHEET TITLE	Electrical - Power Riser, Schedules, Notes & Details
SHEET NUMBER	E-02

**RATIO**  
COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE, DISSEMINATION OR REPRODUCTION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED.

PROJECT NO. 20408.000  
SHEET TITLE Electrical - Power Riser, Schedules, Notes & Details  
SHEET NUMBER E-02

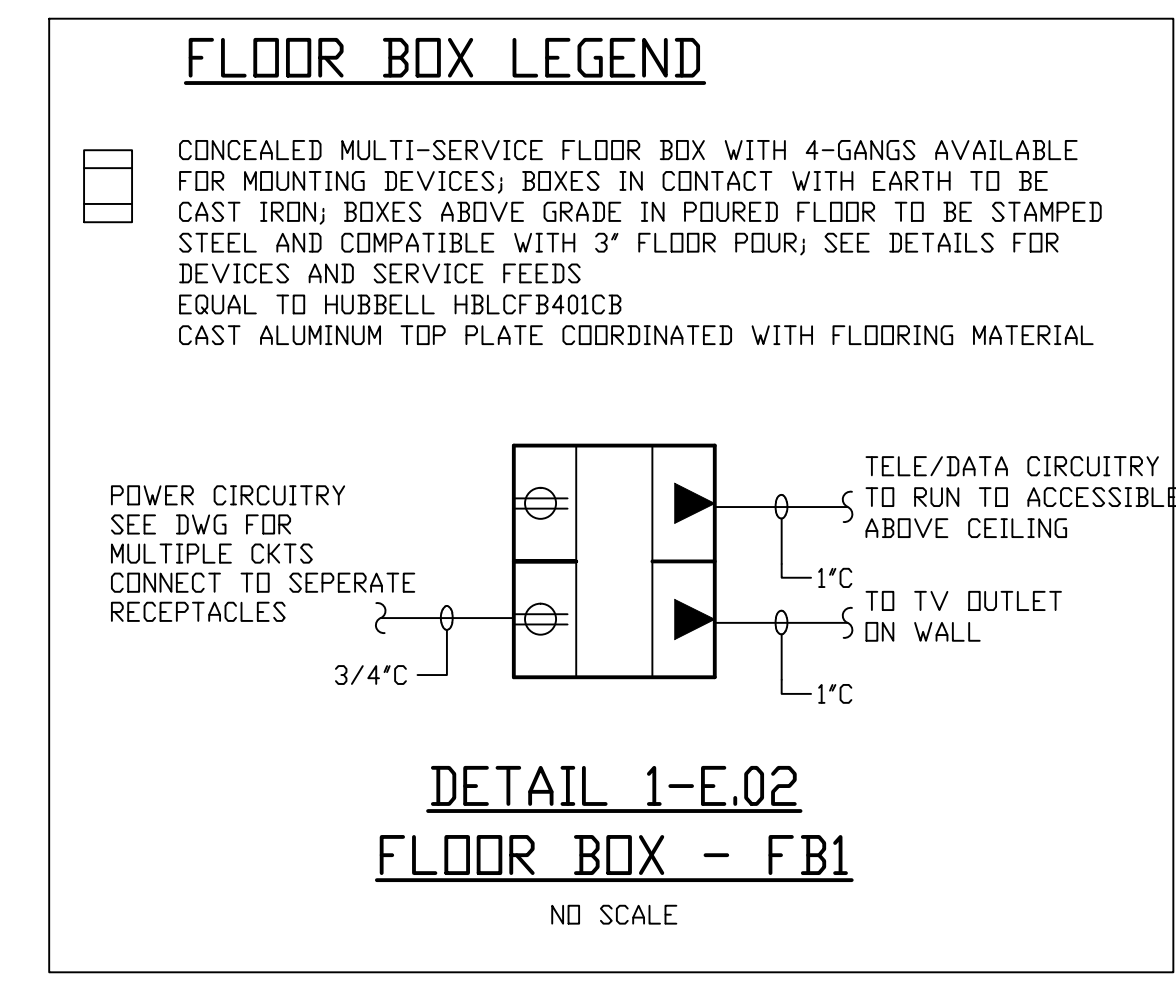
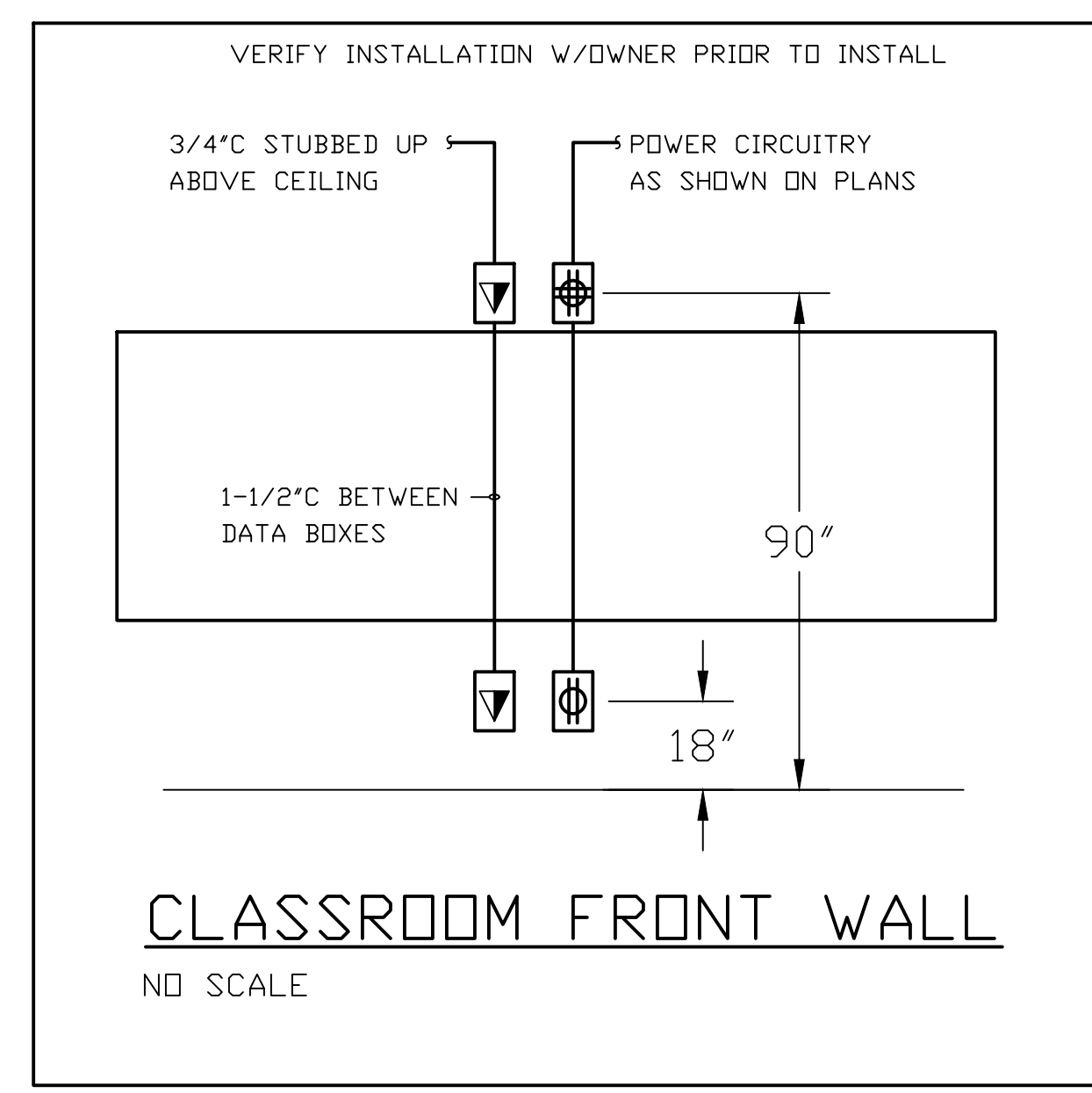


VOLTS	A-PH.	B-PH.	C-PH.	NU.	GROUND
120/240	BLACK	RED	BLUE	WHITE	GREEN
208Y/120	BLACK	RED	BLUE	WHITE	GREEN
480Y/277	BROWN	ORANGE	YELLOW	GRAY	GREEN OR BR.
575	BLACK	RED	BLUE		GREEN OR BR.



- Wall Assembly-The 1, 2, 3 or 4 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
  - Studs-Wall framing may consist of either wood studs (max 2 hr fire rated assemblies) or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC with nom 2 by 4 in. lumber end plates and cross braces. Steel studs to be min 3-5/8 in. wide by 1-3/8 in. deep channels spaced max 24 in. OC.
  - Gypsum Board-Nom 1/2 or 5/8 in. thick, 4 ft. wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 13-1/2 in.
  - Through-Penetration- One metallic pipe, conduit or tubing installed either concentrically or eccentrically within firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min of 0 in./point contact to max 2 in. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits, or tubing may be used:
    - Steel Pipe-Nom 24 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
    - Iron Pipe-Nom 24 in. diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in diam (or smaller) or Class 50 (or heavier) ductile iron pressure pipe.
    - Conduit-Nom 6 in. diam (or smaller) steel conduit or nom 4 in diam (or smaller) steel electrical metallic tubing.
    - Copper Tubing - Nom 6 in. diam (or smaller) Type L (or heavier) copper pipe.
    - Copper Pipe-Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.
    - Through Penetrating Product-Flexible Metal Piping The following types of steel flexible metal gas piping may be used:
      - Nom 2 in. diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may not be removed on both sides of floor or wall assembly.
      - Nom 1 in. diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may not be removed on both sides of floor or wall assembly.
- Fill, Void or Cavity Material-Caulk or Sealant - Min 5/8, 1-1/4, 1-7/8 and 2-1/2 in. thickness of caulk for 1,2,3 and 4 hr rated assemblies, respectively, applied within annulus, flush with both surfaces of wall. Min 1/4 in. diam bead of caulk applied to gypsum board/penetrant interface at point contact location on both sides of wall. The hourly F Rating of the firestop system is dependent upon the hourly fire rating of the wall assembly in which it is installed, as shown in the following table. The hourly T Rating of the firestop system is dependent upon the type or size of the pipe or conduit and the hourly fire rating of the wall assembly in which it is installed, as tabulated below:
 

Max Pipe or Conduit Diam, In	F Rating, Hr	T Rating, Hr
1	1 or 2	0+, 1 or 2
1	3 or 4	3 or 4
4	1 or 2	0
6	3 or 4	0
12	1 or 2	0



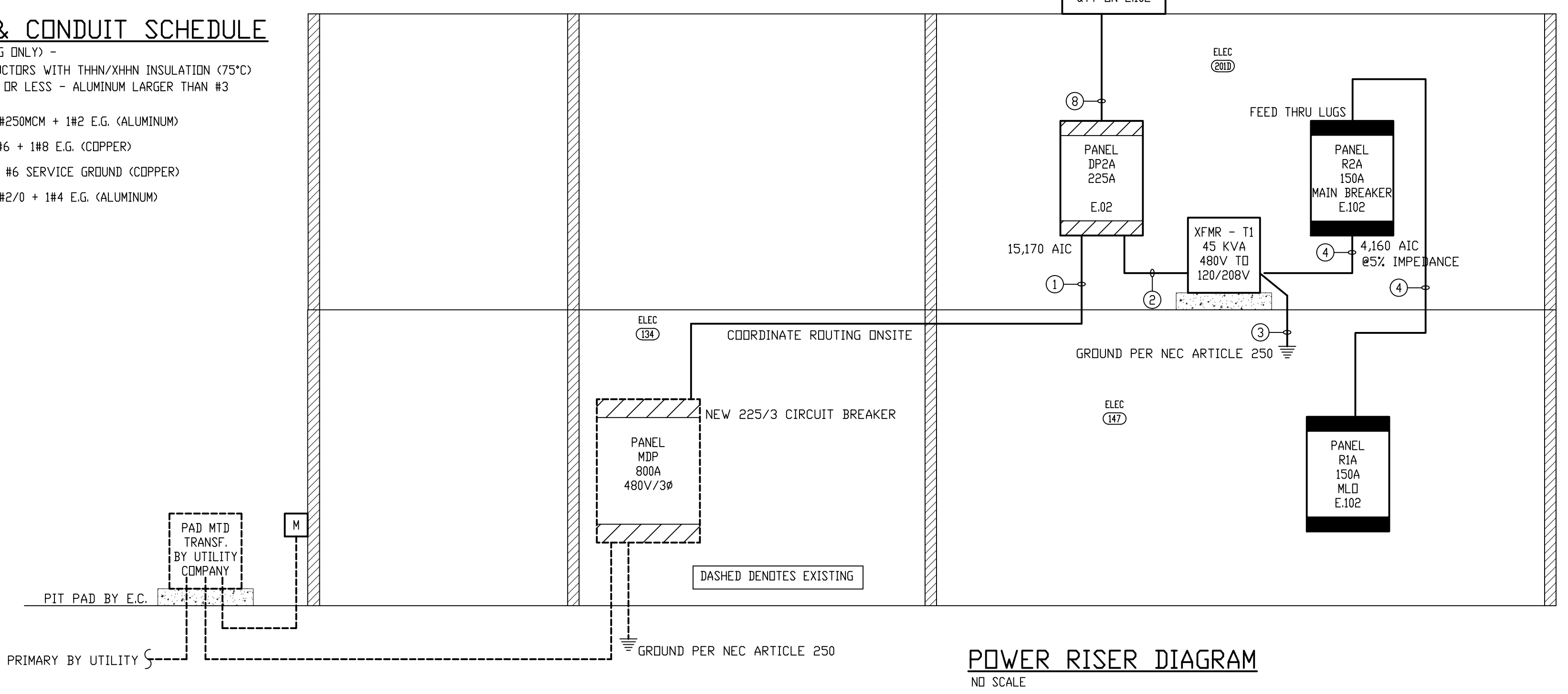
LOCATED IN ELEC #201A

FED FROM PANEL-MDP VIA 225A CIRCUIT BREAKER

LOAD SERVED	VA PER PHASE			CKT BRKR	NEUTRAL A B C	CKT NO.	MLO MAIN CIRCUIT BREAKER (FRAME)			LOAD SERVED	
	A	B	C				A	B	C		
LTC-STAIR 1B,1C	870			20/1	1	2	20/1	2230	1020	2270	LTC-219-223,225
LTC-WALL PAKS,EXTERIOR		440		20/1	3	4	20/1				LTC-155,231,232,227,228,217
LTC-128,130-135,127			2120	20/1	5	6	20/1				LTC-229,230,233,234,215,216
SPARE				20/1	7	8	20/1				SPARE
SPARE				20/1	9	10	20/1				SPARE
SPARE				20/1	11	12	20/1				SPARE
	3600			20/3	13	14		2800			
RTU-2-1		3600		15	15	16	15/3		2800		RTU-2-3
3/4" C - 3#12 + 1#12 E.G.			3600	17	17	18			2800		3/4" C - 3#12 + 1#12 E.G.
	2800			19	19	20		3600			
RTU-1-1		2800		21	21	22	20/3		3600		RTU-1-2
3/4" C - 3#12 + 1#12 E.G.			2800	23	23	24			3600		3/4" C - 3#12 + 1#12 E.G.
	2800			25	25	26		2800			
RTU-1-4		2800		27	27	28	15/3		2800		RTU-2-1
3/4" C - 3#12 + 1#12 E.G.			2800	29	29	30		2800			3/4" C - 3#12 + 1#12 E.G.
	2800			31	31	32		2800			
RTU-2-4		2800		33	33	34	25/3		2800		RTU-1-5
3/4" C - 3#12 + 1#12 E.G.			2800	35	35	36			2800		3/4" C - 3#10 + 1#10 E.G.
	2800			37	37	38		12480			
RTU-1-3		2800		39	39	40	70/3		12480		45 KVA XFMR-PNLS R2A,R1A
3/4" C - 3#12 + 1#12 E.G.			2800	41	41	42			12480		1" C - 3#6 + 1#8 E.G. (CU)
	17520	17580	16920	SUB-TOTAL "B"				26710	25500	26750	MIN. 35000 A.T.C.
				225 LUGS				17520	17580	16920	SYM. AMPERES
				225 S/N				44230	43080	43670	LUGS/PHASE (1) - #250MCM
				TOP FEED				160	156	158	LUGS/NEUT. (1) - #250MCM

**WIRE & CONDUIT SCHEDULE**  
(THIS DRAWING ONLY) -  
COPPER CONDUCTORS WITH THHN/XHNN INSULATION (75°C)  
FOR 100 AMPS OR LESS - ALUMINUM LARGER THAN #3

- 3" C - 4#250MCM + 1#2 E.G. (ALUMINUM)
- 1" C - 3#6 + 1#8 E.G. (COPPER)
- 3/4" C - #6 SERVICE GROUND (COPPER)
- 2" C - 4#2/0 + 1#4 E.G. (ALUMINUM)



LIGHTING VENDOR NOTES - EQUALS BY R.L. VANSTORY, EGI ASSOCIATES, AND COOPER LIGHTING

LUMINAIRE SCHEDULE												
MARK	MANUFACTURER	CATALOG NUMBER	LAMP(S)			BALLAST(S)			FIXTURE		MOUNTING	REMARKS
			#	TYPE	WATT.	#	TYPE	WATT.	WATT.	VOLTAGE		
A	LITHONIA	EPANL SERIES										2' X 4' RECESSED LED TROFFER; 120/277V; CURVED LINEAR PRISMS; 0-10V DIMMING DRIVER A - 4500 LUMENS - -
	DAY-BRITE	EQUAL		4500 LUMEN PACKAGE	-	0-10V DIMMING						
	COOPER	EQUAL		LED 3500° K MIN 85 CRI	39	DRIVER	39	39	120/277	CEILING RECESSED		
A2	LITHONIA	EPANL SERIES										2' X 2' RECESSED LED TROFFER; 120/277V; CURVED LINEAR PRISMS; 0-10V DIMMING DRIVER A - 3500 LUMENS - -
	DAY-BRITE	EQUAL		3500 LUMEN PACKAGE	-	0-10V DIMMING						
	COOPER	EQUAL		LED 3500° K MIN 85 CRI	39	DRIVER	39	39	120/277	CEILING RECESSED		
B	LITHONIA	EPANL SERIES										2' X 4' RECESSED LED TROFFER; 120/277V; CURVED LINEAR PRISMS; 0-10V DIMMING DRIVER A - 7200 LUMENS - -
	DAY-BRITE	EQUAL		7200 LUMEN PACKAGE	-	0-10V DIMMING						
	COOPER	EQUAL		LED 3500° K MIN 85 CRI	60	DRIVER	60	60	120/277	CEILING RECESSED		
S4	LITHONIA	ZLIN SERIES										4' LED STRIP LIGHT; 120/277V; 4,000 LUMEN PACKAGE; FACTORY CHAIN MOUNT * PLEASE VERIFY CEILINGS AS SOME S4 MAY NEED TO BE ADJUSTED TO WRAP AROUNDS (SURFACE MOUNTED); SEE PLANS FOR CONNECTED S4 - 8' LONG; ADJUST PER PLANS - 6K LUMENS FOR 8' UNIT
	DAY-BRITE	EQUAL		4,000 LUMEN	-	-						
	COOPER	EQUAL		LED MODULE PACKAGE	36	DRIVER	36	36	120/277	PENDANT MOUNT 8' AFF CHAIN HUNG		
W	LITHONIA	WPX2 SERIES										GENERAL PURPOSE WALL PAK 6000 LUMEN OUTPUT; DARK BRONZE COLOR BUILT IN PE CELL FINISH AND STYLE TO MATCH EXISTING (VERIFY PRIOR TO ORDERED)
	DAY-BRITE	EQUAL		6K LUMEN	-	-						
	PRESCOLITE	EQUAL	1	LED OUTLET	45	LED DRIVER	45	45	120/277	WALL MOUNTED 12" AFG SEE ARCH. ELEVATIONS		
EL	LITHONIA	ELM4L SERIES										TWO HEADED, SELF-CONTAINED EMERGENCY LIGHTING UNIT; 120/277 DUAL VOLTAGE INPUT; 9.6 VOLT, 3 WATT SEALED BEAM LED LAMPS; HIGH-IMPACT POLYCARBONATE HOUSING; MAINTENANCE FREE LEAD CALCIUM BATTERY; WHITE HOUSING 90 MINUTE BATTERY RUN TIME
	DAY-BRITE	EQUAL		9.6 VOLT	-	-						
	COOPER	EQUAL	2	2 WATT LED	12	-	-	-	12	120/277	WALL MOUNTED 8"-0" AFF	
EXIT	LITHONIA	QUANTUM SERIES										THERMOPLASTIC LED EXIT LIGHT WITH EMERGENCY 90 MINUTE BATTERY BACK-UP; WHITE HOUSING; GREEN LETTERS; 120/277V PROVIDE WIRE CAGE IN GYM #100 COMBINATION EXIT/EMERGENCY EQUAL TO LITHONIA THOM TWN LAMP EXTERIOR EMERGENCY LIGHT EQUAL LED ELA T Q WP
	SURE LITES	CCX SERIES		LED								
	McPHILBEN	CXXL SERIES			5					5	120/277	
	LITHONIA	QUANTUM COMBINATION EXIT/EMERGENCY										

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

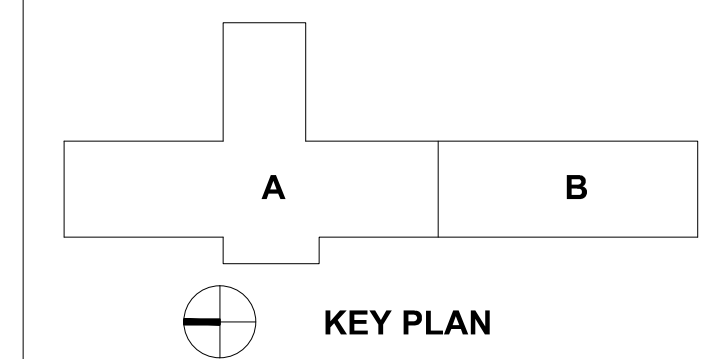
**Owner**  
Highmark School Development  
746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

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

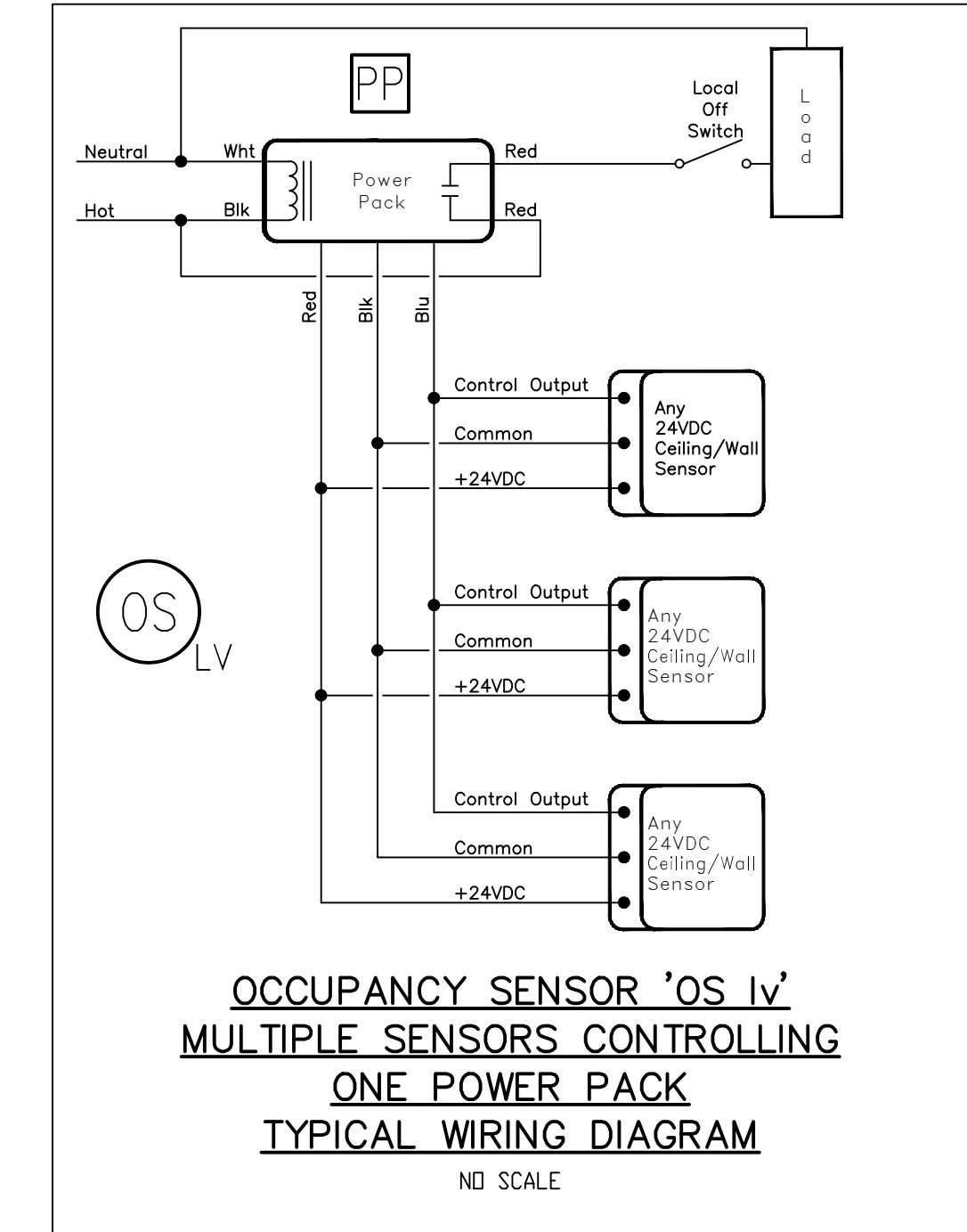
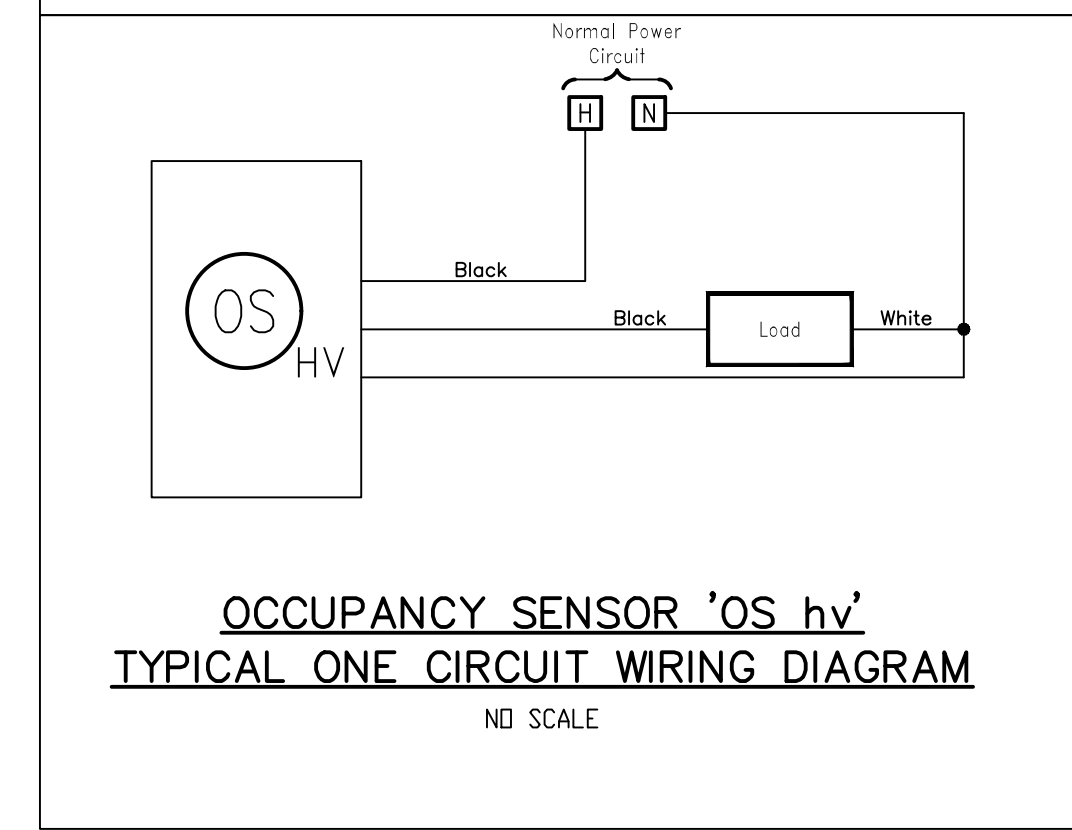
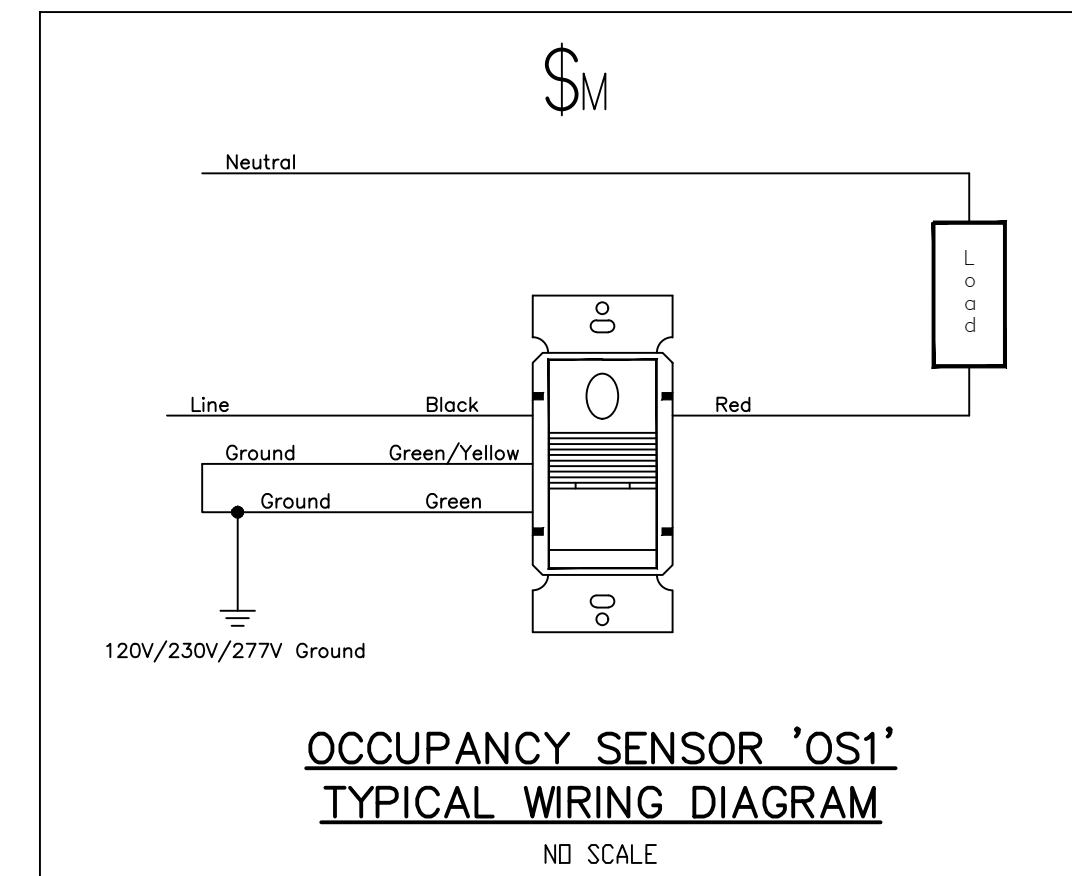
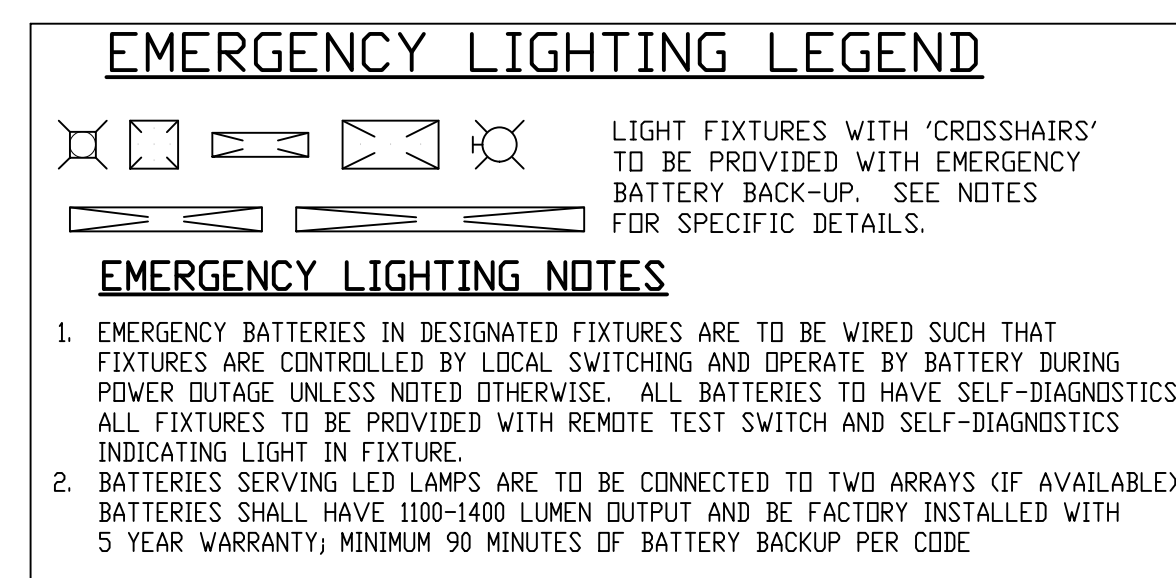
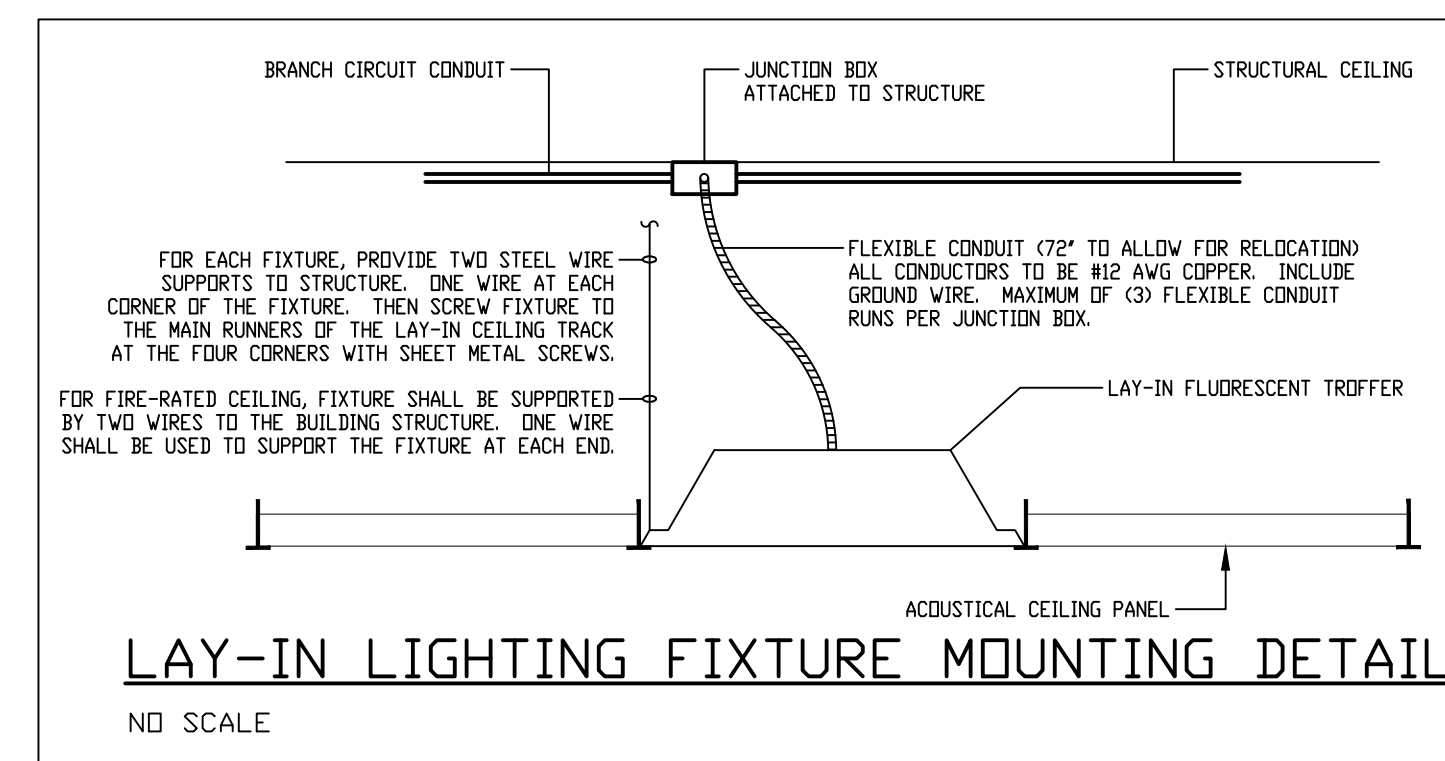
DESIGNED FOR  
**SAMMY PHILLIPS ELECTRIC**  
945 NORTHWEST BLVD.  
WINSTON-SALEM, NC  
PHONE 336 722-3311

**GREENSBORO ENGINEERING PLLC**  
1848 BANKING STREET, SUITE B GREENSBORO NC 27408  
PHONE 336 275-6360 FAX 336 275-1996  
www.gseengineering.com

**REGISTERED PROFESSIONAL ENGINEER**  
CHARLES B. LUCKY  
029468 2824  
NORTH CAROLINA  
ENGINEERING CORPORATION  
P-3385  
GREENSBORO, NC



SEAL | DATE 2/12/2021



**SHEET ISSUE**

1	100% Construction Documents	2/26/2021
	INSPECTION REVIEW COMMENTS	04/8/2021

**RATIO**

COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE, REPRODUCTION OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHER RIGHTS ARE HEREBY SPECIFICALLY RESERVED.

PROJECT NO. 20408.000  
SHEET TITLE  
**Electrical-  
Luminaire Schedule,  
Notes & Details**  
SHEET NUMBER  
**E-03**



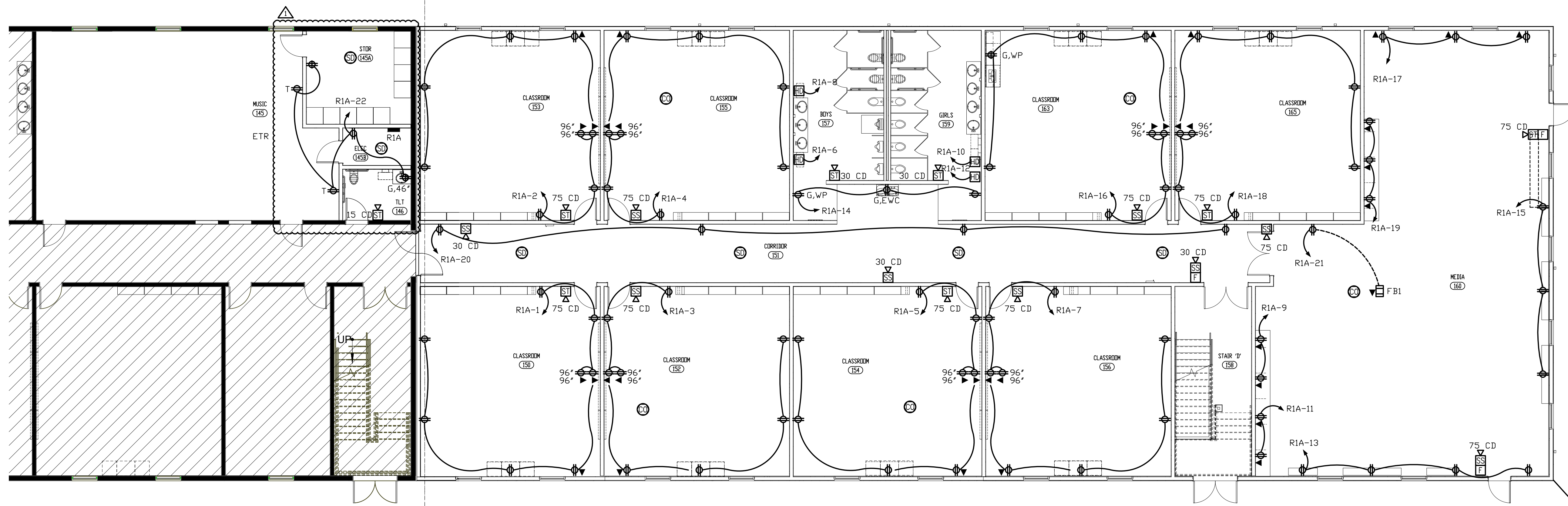
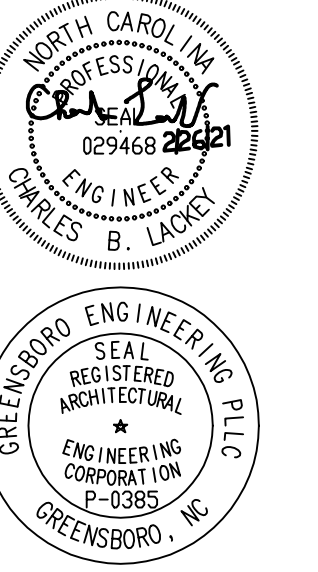
**Carolina Charter Academy Exp.**  
 8529 Highway 55  
 Angier, North Carolina 27501

**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  
 945 NORTHWEST BLVD.  
 WINSTON-SALEM, NC  
 PHONE 336 722-3311

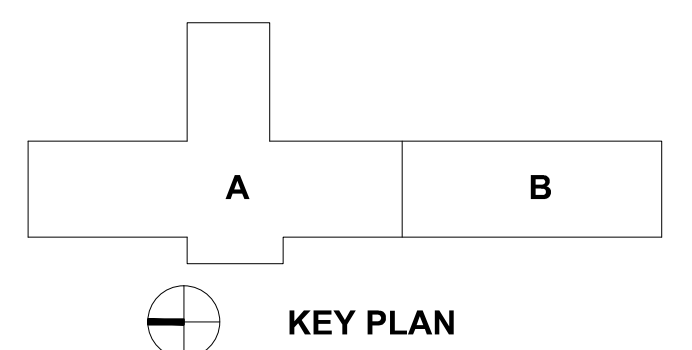
**GREENSBORO ENGINEERING PLLC**  
 1848 BANKING STREET, SUITE B GREENSBORO NC 27408  
 PHONE 336 275-6360 FAX 336 275-1996  
 www.gsoengineering.com



**GROUND FLOOR - POWER, TELE/DATA & FA**  
 SCALE 1/8" = 1'-0"



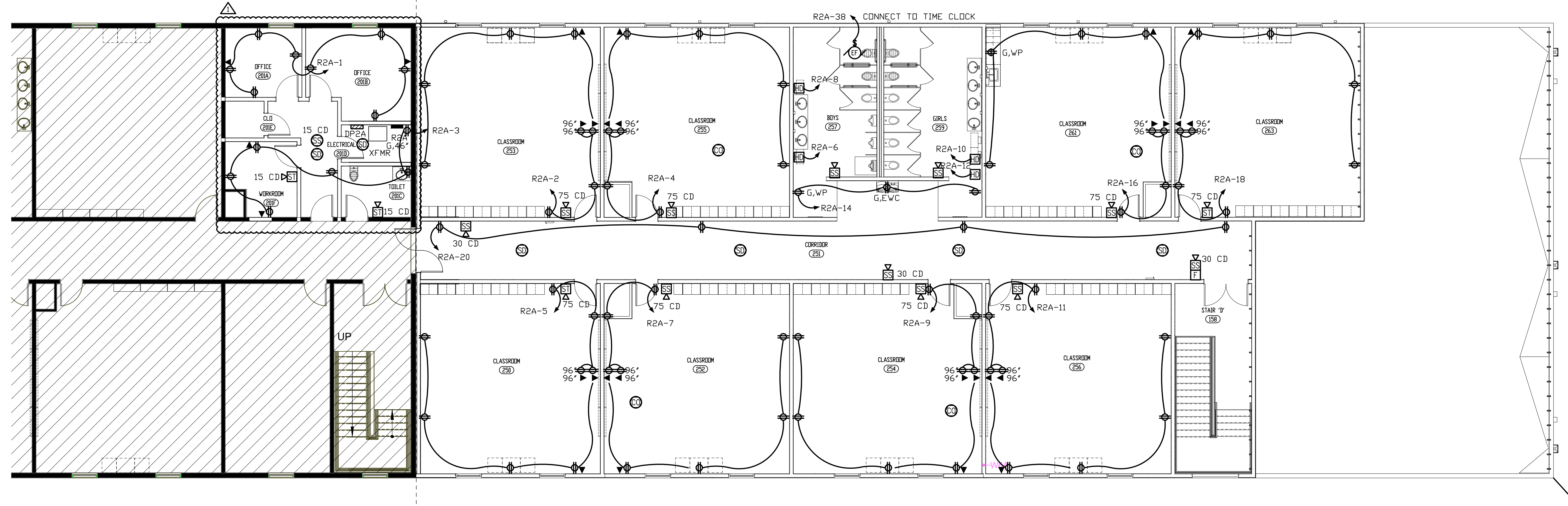
Ⓢ PROVIDE CARBON MONOXIDE DETECTOR TIED INTO FIRE ALARM SYSTEM  
 CO DETECTOR TO BE LOCATED BY AHJ AND MECHANICAL CONTRACTOR  
 PRIOR TO INSTALLATION. INTENT IS AT 1ST SUPPLY DIFFUSER LOCATION  
 VERIFY PRIOR TO INSTALLATION; TYPICAL OF (9) GAS ROOF TOP UNITS



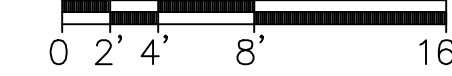
SEAL | DATE 2/12/2021

**GENERAL NOTES**

1. CONDUIT RACEWAYS SHOWN ARE DIAGRAMMATIC. CONTRACTOR IS RESPONSIBLE FOR PROVIDING APPROPRIATE WIRE COUNTS WITHIN RACEWAYS TO MAKE SYSTEM FUNCTION AS SHOWN/INDICATED ON PLANS. CONTRACTOR TO PROVIDE SEPARATE NEUTRALS PER NEC 2017.
2. ALL EXITS AND EMERGENCY LIGHTING UNITS SHALL BE CONNECTED TO UNSWITCHED LIGHTING CIRCUITRY IN AREA WHICH IT IS LOCATED. PROVIDE CIRCUITRY FOR COMPLETE INSTALLATION.
3. 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.
4. ALL CABLING ABOVE LAY-IN CEILING TO BE PLENUM RATED. ALL CABLING TO BE IN CONDUIT (3/4" MINIMUM).
5. ALL 120V HOMERUNS OVER 75 FEET IN LENGTH TO HAVE UPSIZED (ONE SIZE LARGER) WIRE FOR VOLTAGE DROP.
6. SEE ARCHITECTURAL SHEETS FOR RATED WALL ASSEMBLIES; E.C. TO PROVIDE PROPER UL APPROVED METHODS FOR MAINTAINING FIRE RATINGS.
7. E.C. TO PROVIDE ALL HARDWARE REQUIRED FOR SUPPORT/INSTALLATION OF LUMINAIRES.



**2ND FLOOR - POWER, TELE/DATA & FA**  
 SCALE 1/8" = 1'-0"



**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.

SHEET ISSUE	
1	100% Construction Documents 2/26/2021
INSPECTION REVIEW COMMENTS	04/8/2021



COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE, OBSERVATION OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHER RIGHTS ARE HEREBY SPECIFICALLY RESERVED.

PROJECT NO. 20408.000

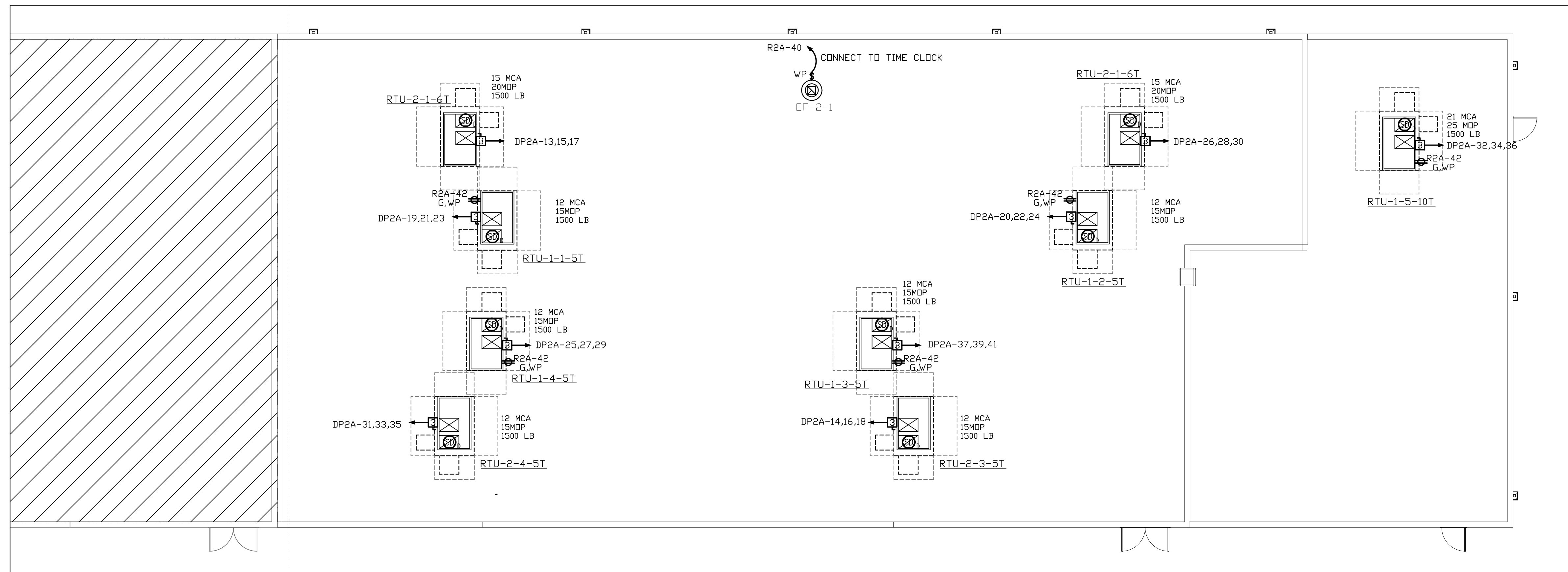
SHEET TITLE  
**Electrical - Power, Tele/Data & FA; Notes & Details**

SHEET NUMBER

**E-101**

**GENERAL NOTES**

- CONDUIT RACEWAYS SHOWN ARE DIAGRAMMATIC. CONTRACTOR IS RESPONSIBLE FOR PROVIDING APPROPRIATE WIRE COUNTS WITHIN RACEWAYS TO MAKE SYSTEM FUNCTION AS SHOWN/INDICATED ON PLANS.
- 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 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.
- 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 LUMINAIRES.



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

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

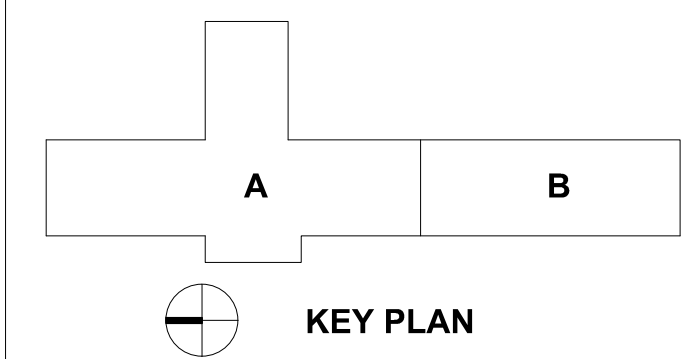
**Owner**  
Highmark School Development  
746 East Winchester Street  
Suite 150  
Murray, Utah 84107  
801-256-9550

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

**GREENSBORO ENGINEERING PLLC**  
1848 BANKING STREET, SUITE B GREENSBORO NC 27405  
PHONE 336-275-6060 FAX 336-275-1996  
www.gseengineering.com

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

**GREENSBORO ENGINEERING PLLC**  
SEAL REGISTERED ARCHITECTURAL ENGINEERING CORPORATION P-5385 GREENSBORO, NC



SEAL | DATE 2/12/2021

SHEET ISSUE		
1	100% Construction Documents	2/26/2021
2	INSPECTION REVIEW	3/17/2021

LOCATED IN ELEC# 147

FED FROM PANEL-R2A VIA FEED THRU LUGS

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								MOUNTING: SURFACE						
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		41					SPARE			
REMARKS	4320	4320	4320	SUB-TOTAL "B"			200A. BUS	SUB-TOTAL "A"			5040	5040	5040	MIN. 18,000 A.I.C. SYM. AMPERES	
* 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 LUGS/NEUT. (1) - #2/0		
				BOTL. FEED			AMPS / PHASE			78	78	78			

LOCATED IN ELEC # 201D

FED FROM PANEL-DP2 VIA 45 KVA XFMR

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								MOUNTING: SURFACE						
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			
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		41					SPARE			
REMARKS	4320	4320	4320	SUB-TOTAL "B"			200A. BUS	SUB-TOTAL "A"			5040	5040	5040	MIN. 18,000 A.I.C. SYM. AMPERES	
* 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 LUGS/NEUT. (1) - #2/0		
				BOTL. FEED			AMPS / PHASE			78	78	78			

**RATIO**

COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE, DISSEMINATION OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED.

PROJECT NO. 20408.000

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

SHEET NUMBER  
**E-102**



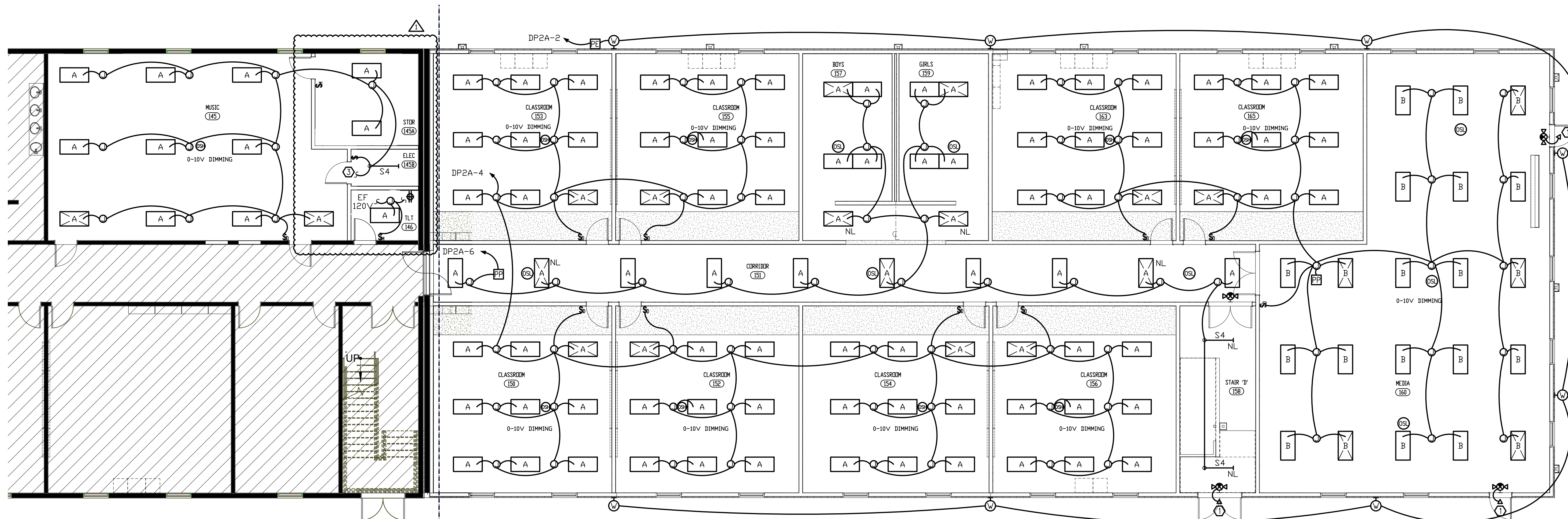
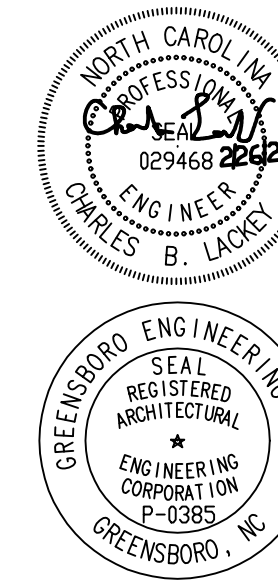
**Carolina Charter Academy Exp.**  
8529 Highway 55  
Angier, North Carolina 27501

**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  
945 NORTHWEST BLVD.  
WINSTON-SALEM, NC  
PHONE 336 722-3311

**GREENSBORO ENGINEERING PLLC**  
1848 BANKING STREET, SUITE B GREENSBORO NC 27408  
PHONE 336 275-6360 FAX 336 275-1996  
www.gseengineering.com



**GROUND FLOOR - LIGHTING PLAN**  
SCALE 1/8" = 1'-0"  
0 2' 4' 8' 16'

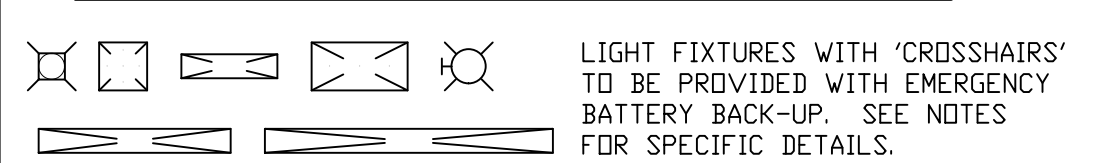
**GENERAL NOTES**

- CONDUIT RACEWAYS SHOWN ARE DIAGRAMMATIC. CONTRACTOR IS RESPONSIBLE FOR PROVIDING APPROPRIATE WIRE COUNTS WITHIN RACEWAYS TO MAKE SYSTEM FUNCTION AS SHOWN/INDICATED ON PLANS.
- 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 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.
- 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 LUMINAIRES.

**KEYED PLAN NOTES**

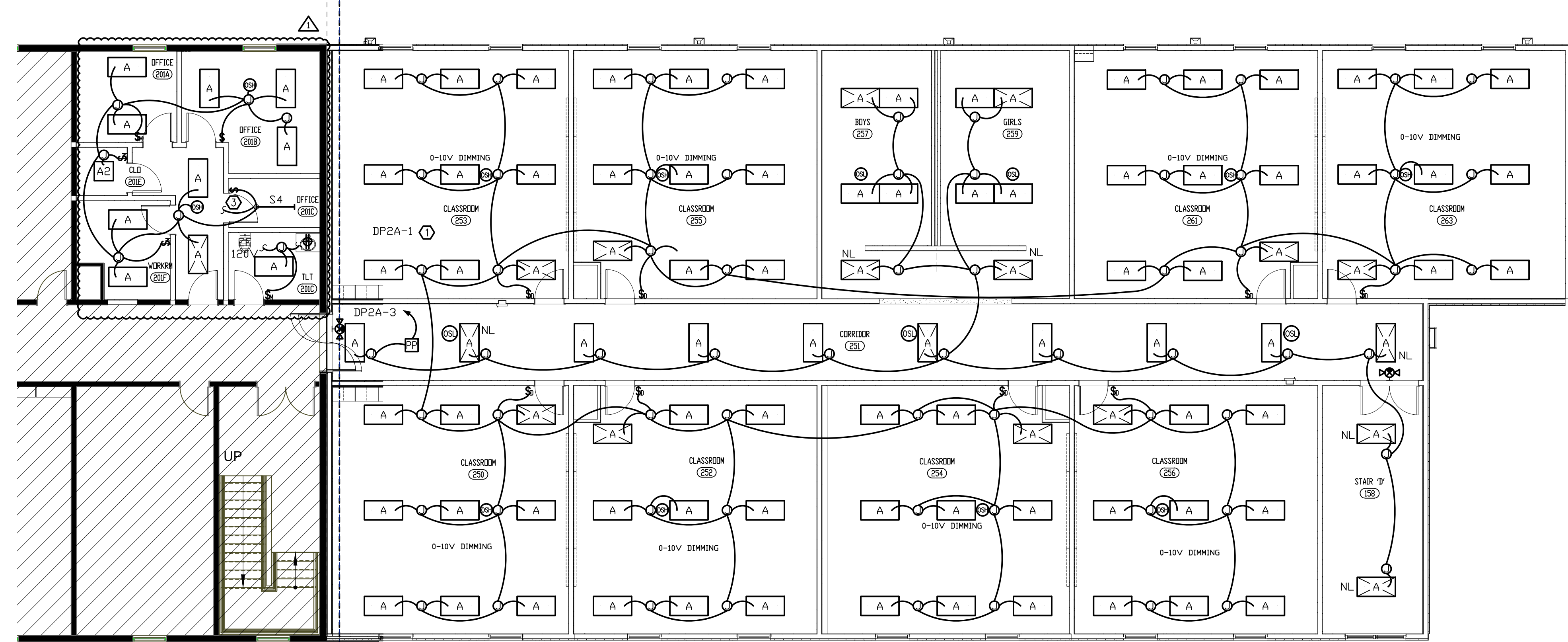
- FIXTURES SHOWN WITH CROSS HAIRS TO BE WIRED AS NITE LIGHTS; CONNECTED TO UNSWITCHED LIGHTING LEG SERVING SAME AREA; TYPICAL OF ALL
- ALL EXTERIOR LIGHTS CONNECTED TO PE CELL; PE CELL TO BE LED RATED AND MADE FOR LOAD; COORDINATE INSTALLATION.
- CONNECT TO EXISTING LIGHTING CIRCUITRY; COORDINATE WITH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

**EMERGENCY LIGHTING LEGEND**

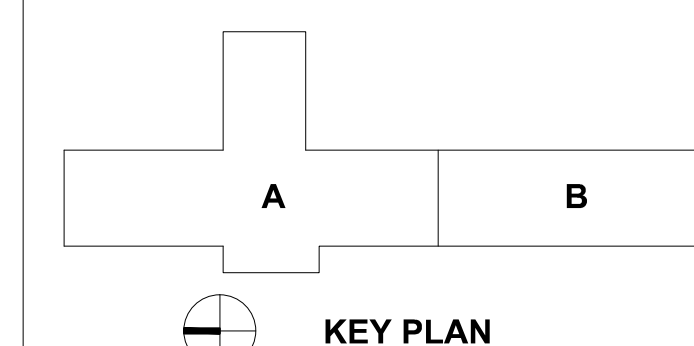


**EMERGENCY LIGHTING NOTES**

- EMERGENCY BATTERIES IN DESIGNATED FIXTURES ARE TO BE WIRED SUCH THAT FIXTURES ARE CONTROLLED BY LEGAL 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"  
0 2' 4' 8' 16'



SEAL | DATE 2/26/2021

SHEET ISSUE	
1	100% Construction Documents 2/26/2021
2	INSPECTION REVIEW COMMENTS 04/8/2021



COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE, REPRODUCTION OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHER RIGHTS ARE HEREBY SPECIFICALLY RESERVED.

PROJECT NO. 20408.000

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

SHEET NUMBER  
**E-201**