	Charter Acade	my Exp.		SET NO. VOLUME	
Angier, North Caro	lina			DATE	4/9/2021
				PACKAGE	Permit Revisions
PACKAGE			SEAL DATE 4/9/202	RATIO PROJECT NO.	20408.000
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	PROJECT NAME	RATIO Carolina Charter Academy Exp.

RATIO

DRAWING INDEX GENERAL G-001 COVER G-102 SHEET INDEX, PROJ LOCATION G-103 LIFE SAFETY PLANS AND CODE SUMMARY LIFE SAFETY PLANS AND CODE SUMMARY G-105 APPENDIX B 2018 CIVIL C- 0.0 COVER C- 1.0 EXISTING CONDITIONS PLAN C- 3.0 SITE PLAN **GRADING & DRAINAGE PLAN NOTES & DETAILS** STRUCTURAL S-001 GENERAL NOTES S-002 GENERAL NOTES S-011 SPECIAL INSPECTIONS S-101B FOUNDATION PLAN - AREA B SECOND FLOOR FRAMING PLAN - AREA B **ROOF FRAMING PLAN - AREA B** S-301 SECTIONS SECTIONS S-302 TYPICAL DETAILS S-502 TYPICAL DETAILS TYPICAL DETAILS TYPICAL DETAILS S-505 TYPICAL DETAILS

DRAWING INDEX (CONT)

ARCHITECTURAL

A-001 GENERAL NOTES, SYMBOLS, AND STANDARD MOUNTING HEIGHTS GENERAL NOTES, SYMBOLS, AND STANDARD MOUNTING HEIGHTS

INTERIOR PARTITION TYPES AND STANDARD PARTITION DETAILS

AD-101 FIRST FLOOR DEMO PLAN

A-102 SECOND FLOOR PLAN

AD-102 SECOND FLOOR DEMO PLAN

A-101 FIRST FLOOR PLAN

A-101A FIRST FLOOR PLAN -AREA A

A-101B FIRST FLOOR PLAN - AREA B

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A-131A FIRST FLOOR REFLECTED CEILING PLAN - AREA A

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A-150A FIRST FLOOR FINISH PLAN - AREA A

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A-170B FIRST FLOOR EQUIPMENT PLAN -AREA B

A-171A SECOND FLOOR EQUIPMENT PLAN - AREA A

GENERAL PROJECT NOTES

AND ARE NOT SPECIFIC TO ANY ONE DISCIPLINE.

DISTRIBUTED OR UTILIZED BY THE CONTRACTOR.

A. THE FOLLOWING GENERAL NOTES APPLY TO THESE CONTRACT DOCUMENTS

B. IT IS THE CONTRACTORS RESPONSIBILITY TO REVIEW AND COORDINATE THE WORK OF ALL SUB-CONTRACTORS, TRADES AND SUPPLIERS WITH THE REQUIREMENTS OF THE CONTRACT BEFORE COMMENCING CONSTRUCTION, AND TO ASSURE THAT ALL PARTIES ARE AWARE OF ALL REQUIREMENTS, REGARDLESS OF WHERE THE REQUIREMENTS OCCUR IN THE CONTRACT

E. THE GENERAL NOTES, SYMBOLS AND DEFINITIONS APPLICABLE ONLY TO EACH DISCIPLINE CAN BE FOUND AT THE FRONT OF EACH DISCIPLINES PORTION OF THE SET OF DRAWINGS AND IS LISTED AS PART OF THE OVERALL PROJECT

F. BASIC FIRE PROTECTION AND THE EXITING SCHEME ARE ILLUSTRATED BY THE

G. THE ARCHITECTURAL DRAWINGS ESTABLISH, COORDINATE, AS WELL AS TAKE

DESCREPANCY IN THE NUMBER OF FIXTURES, DEVICES, ETC. SHOWN ON

CONTRACTOR'S PRICING SHALL ACCOUNT FOR THE GREATER QUANTITY

H. THE DRAWINGS MAY MAKE REFERENCE TO AND/OR ILLUSTRATE ITEMS WHICH

ITEMS ARE REFERENCED AND/OR ILLUSTRATED FOR THE CONTRACTORS

CODES, REGULATIONS, AND ORDINANCES OF THE PLACE (CITY, COUNTY,

REQUIREMENTS MAY NOT BE REFLECTED BY THESE CONTRACT DOCUMENTS. J. EXISTING CONDITIONS SHOWN ARE FROM AVAILABLE RECORD DRAWINGS AND OR VISUAL FIELD SURVEYS. THE CONTRACTOR SHALL VERIFY ACTUAL EXISTING CONDITIONS AT THE SITE PRIOR TO SUBMITTING A BID. THE CONTRACTOR

I. THE CONTRACTOR IS RESPONSIBLE TO COMPLY WITH APPLICABLE LAWS.

K. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AND SIMILAR RELEASES REQUIRED FOR THE CONSTRUCTION AND OCCUPANCY OF THE PROJECT. THE CONTRACTOR SHALL FURNISH COPIES OF ALL SUCH ITEMS TO THE OWNER AND ARCHITECT WITHIN 10 DAYS OF RECEIPT OF SUCH ITEMS. IF PERMITS ARE ISSUED SUBJECT TO CERTAIN CONDITIONS OR REVISIONS TO THE WORK OR IF PERMITS ARE DELAYED FOR ANY REASON, THE CONTRACTOR

L. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO MAINTAIN AND PROTECT NEW WORK AS WELL AS EXISTING SYSTEMS AND ELEMENTS WHICH ARE TO

REMAIN. ANY DAMAGE TO SUCH SYSTEMS AND ELEMENTS SHALL BE IMMEDIATELY REPAIRED IN A MANNER ACCEPTABLE TO THE ARCHITECT. IF SATISFACTORY REPAIRS CANNOT BE MADE, THE CONTRACTOR SHALL

REPLACE SYSTEMS AND ELEMENTS WITH LIKE NEW QUALITY ACCEPTABLE TO THE ARCHITECT. ALL REPAIRS AND REPLACEMENT COST SHALL BE THE

DISTRICT AND STATE) WHERE THE PROJECT IS LOCATED. SUCH

ARE NOT PART OF THE WORK OF THE CONTRACT. THESE NOT IN CONTRACT

PRIMARILY ON DRAWINGS OF OTHER DISCIPLINES. IF THERE IS A

REFERENCE, INFORMATION, AND COORDINATION ONLY.

SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.

SHALL NOTIFY THE OWNER AND ARCHITECT.

FINANCIAL RESPONSIBILITY OF THE CONTRACTOR.

PRECEDENCE FOR THE FINISH APPEARANCE OF ALL EXPOSED ELEMENTS OF

ARCHITECTURAL DOCUMENTS AND THE DOCUMENTS OF OTHER DISCIPLINES

THE WORK OF ALL TRADES INCLUDING THAT WORK WHICH IS ILLUSTRATED

LIFE SAFETY PLAN(S) AND APPLICABLE FIRE AND BUILDING CODE SUMMARY ON

DOCUMENTS, WHICH MIGHT AFFECT THE WORK OF THAT PARTY. C. PARTIAL SETS OF DRAWINGS ARE INCOMPLETE AND SHOULD NOT BE

D. THE CONSTRUCTION DOCUMENTS ESTABLISH DETAILED MINIMUM REQUIREMENTS FOR THE CONSTRUCTION OF THE PROJECT.

A-171B SECOND FLOOR EQUIPMENT PLAN-AREA B

EXTERIOR ELEVATIONS

BUILDING SECTIONS

SHEET G-003

WALL SECTIONS

A-322 WALL SECTIONS

A-350

ENLARGED STAIR PLANS AND SECTIONS

EXTERIOR DETAILS

A-402 STAIR DETAILS

A-411 ENLARGED TOILET PLANS

INTERIOR ELEVATIONS

INTERIOR DETAILS **INTERIOR DETAILS**

DOOR SCHEDULE AND DETAILS

WINDOW ELEVATIONS AND DETAILS FINISH SCHEDULE

PLUMBING

P 0.0 PLUMBING SPECIFICATIONS & LEGEND

PLUMBING PLAN LEVEL 1

P 1.1 PLUMBING PLAN LEVEL 2

P 6.0 PLUMBING RISER DIAGRAMS

MECHANICAL

SCHEDULES, DETAILS

M-1.1A HVAC 1ST LEV PLAN M-1.2 HVAC 2ND LEV PLAN

M-1.3 ROOF LEV PLAN

ELECTRICAL

ELECTRICAL - SYMBOLS & LEGENDS. NOTES & DETAILS

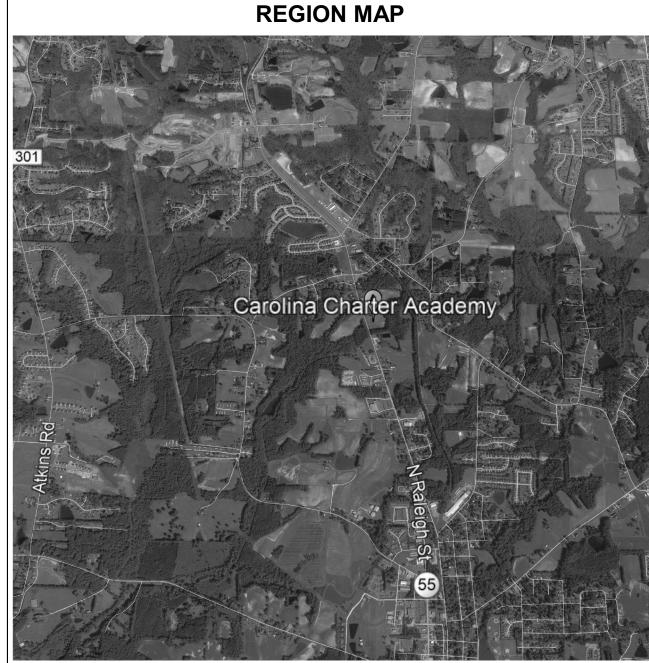
ELECTRICAL - POWER RISER, SCHEDULES, NOTES & DETAILS

ELECTRICAL - LUMINAIRE SCHEDULE, NOTES & DETAILS

ELECTRICAL - POWER, TELE, DATA, & FA, NOTES & DETAILS

ELECTRICAL - ROOF PLAN & FA PLAN, PANEL SCHEDULES

ELECTRICAL - 1ST AND 2ND FLOOR LIGHTING PLANS, NOTES



PROJECT LOCATION



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

Owner **Highmark School Development** 746 East Winchester Street Suite 150 Murray, Utah 84107

Architect RATIO

801-256-9550

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

CODE CERT 2/24/2021 THAT THE BUILDING CODE SUMMARY THIS PAGE IS ACCURATE FOR T

TYPE OF BUILDING AND OCCUPANCY INTENDED FOR TH PROJECT AND THAT THESE PLANS ARE COMPLETE AND COMPLY WITH ALL APPLICABLE STATE

2/24/2021

20408.000

AND LOCAL BUILDING REGULATIONS SHEET ISSUE

100% Construction Documents

	·

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PROJECT NO.

SHEET INDEX, PROJ **LOCATION**

SHEET NUMBER

G-102

GENERAL LIFE SAFETY PLAN NOTES

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

LIFE SAFETY PLAN LEGEND

150 SF	ROOM NAME, AREA & OCCUPANT CAPACITY
20	EXIT DIRECTION ARROW
45	EXIT POPULATION
120	EXIT CAPACITY [POPULATION]
• -)	PATH OF TRAVEL
-2-2-2-	FIRE RATED WALL
	RATING REQUIRED30-MIN, 1-HR, 2-HR, ETC.
-3S-3S-3S- -	SMOKE BARRIER
<u> </u>	RATING IF REQUIRED1-HR, 2-HR, ET
<i>HXHXHXH</i> . -	FIRE RATED WALL
	PATTERN INDICATES CODE REQUIRE SEPARATION AS NOTED
✓ FIRE BA	FIRE SEPARATION AND OTHER ANNOTATION SO NOTED
1448	FIRE RATED CEILING. RATING AS NOTED1-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"	
TDAY/EL DICT D	2261 E"	

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

Structural Engineer Lynch Mykins Structural Engineers, PC 301 North West Street

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

919-821-0805

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

4/9/2021 | CODE CERT. SEAL | DATE

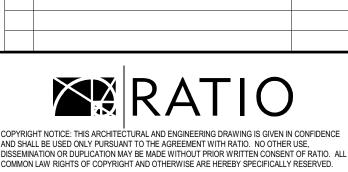
THAT THE BUILDING

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

20408.000

COMPLETED ON THIS PAGE IS ACCURATE FOR THE TYPE OF BUILDING

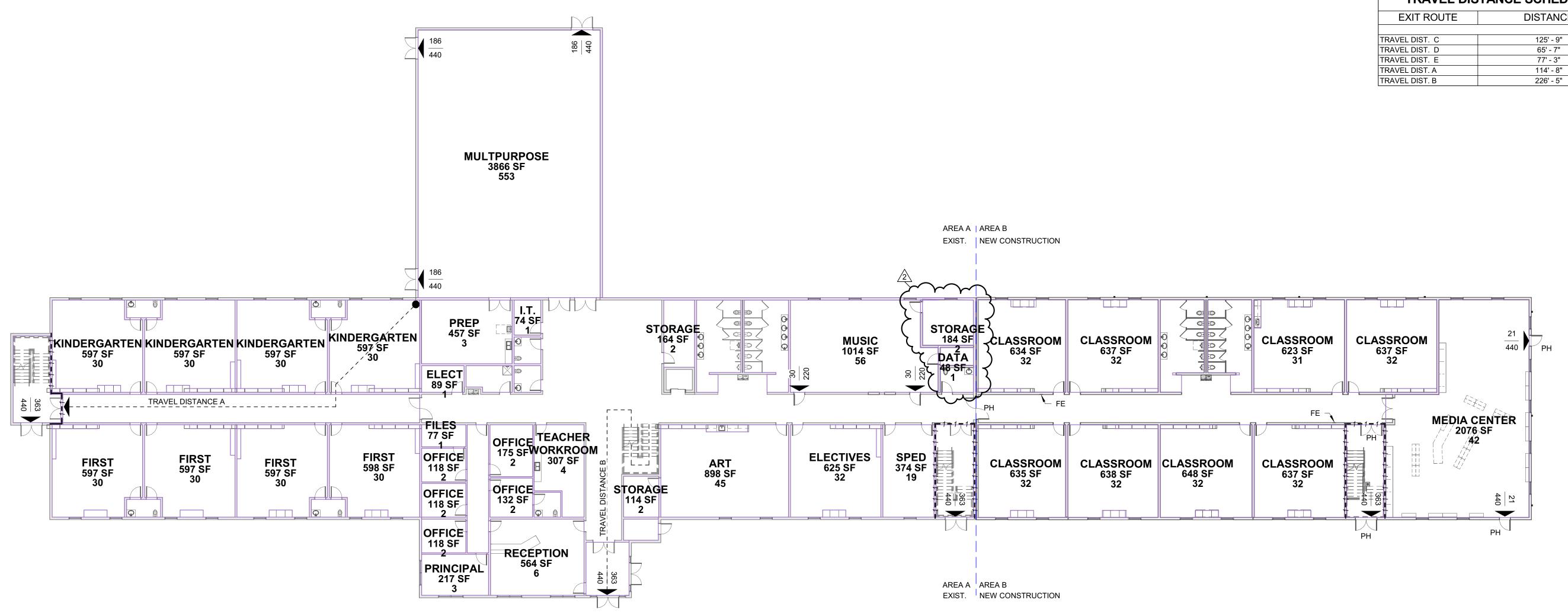
REGULATIONS SHEET ISSUE 100% Construction Documents 2/24/2021 2 Permit Revisions 4/9/2021



PROJECT NO.

LIFE SAFETY PLANS AND CODE SUMMARY

G-103



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

150 SF	ROOM NAME, AREA & OCCUPANT CAPACITY
20	EXIT DIRECTION ARROW
45 -	- EXIT POPULATION
120	EXIT CAPACITY [POPULATION]
•	PATH OF TRAVEL
-2-2-2-	FIRE RATED WALL
4	RATING REQUIRED30-MIN, 1-HR, 2-HR, ETC.
-3S-3S-3S- -	SMOKE BARRIER
	RATING IF REQUIRED1-HR, 2-HR, ETG
<i>:#X#X#X#</i> : -	FIRE RATED WALL
<u> </u>	PATTERN INDICATES CODE REQUIRE SEPARATION AS NOTED
FIRE BA	- FIRE SEPARATION AND OTHER ANNOTATION SO NOTED
	FIRE RATED CEILING. RATING AS NOTED1-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

Structural Engineer Lynch Mykins Structural Engineers, PC 301 North West Street

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

919-821-0805

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

SEAL | DATE



4/9/2021 | CODE CERT. THAT THE BUILDING COMPLETED ON THIS PAGE IS ACCURATE FOR THE TYPE OF BUILDING 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

20408.000

1	100% Construction Documents	2/24/202
2	Permit Revisions	4/9/202

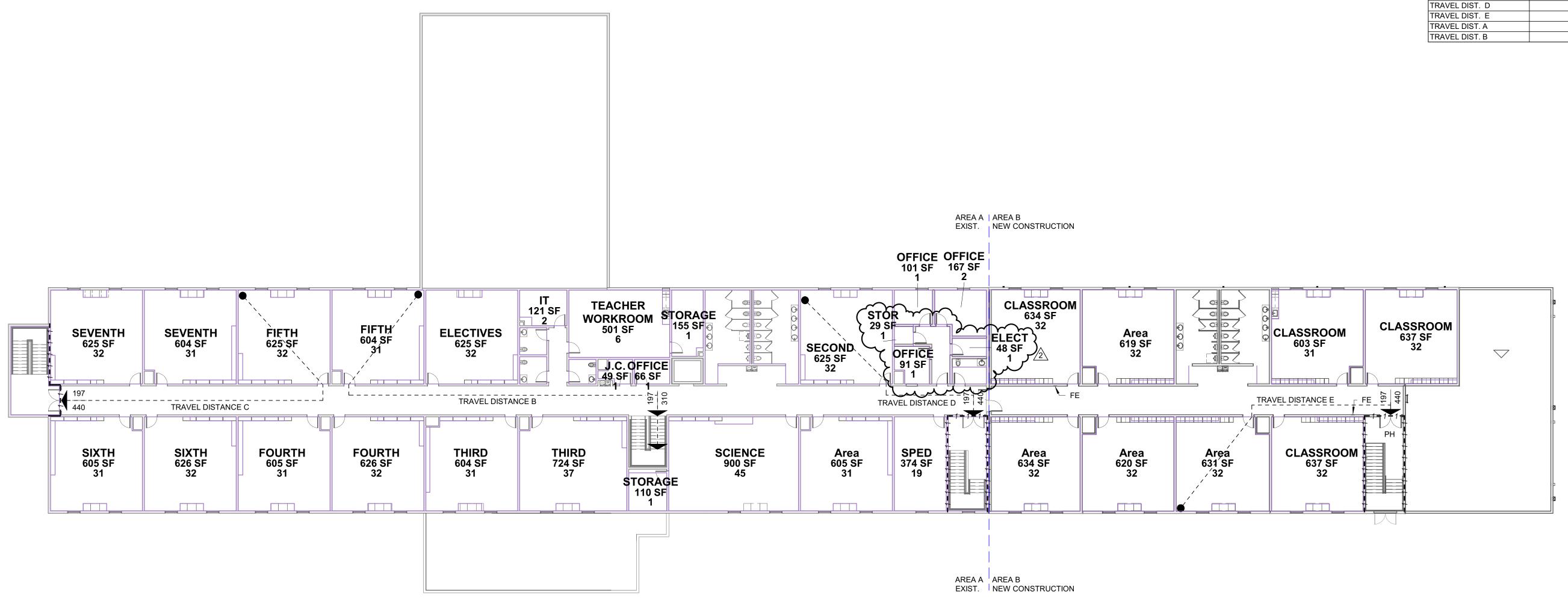


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PROJECT NO.

LIFE SAFETY PLANS AND CODE SUMMARY

G-104



Name of Project: Carolina Charter Academy Exp. 8529 Highway 55

Angier, N	orth Carolina 27501				
Owner/Authorized Agent: F				ELOPEMENT	
р	oalcorn@highmarkso	chools.com (80	1)335-6514		
					_
Owned by: Code Enforcement Jur		COUNTY $igwedge$ PF: ANGIER, NC $igwidge$ C(RIVATE	STAT ∐ RNETT □ STAT	
Code Efficicement 3di		. ANGILIT, NC C	JUNTI. HA	INILII JIAI	<u> </u>
LEAD DESIGN PROFE	ESSIONAL: Harold	M Bowen, RATIO			
GROSS BUILDING AR	REA:				
DESIGNER	FIRM	NAME		# PHONE #	EMAIL
Architectural	RATIO	Harold M Bowen	5950	(919)821-0805	hbowen@ratiodesign.com
<u>Civil</u> Electrical	TIMMONS 	Blake Hall	38616	(919)866-4933	BLAKE.HALL@TIMMONSGROUP.C
Fire Alarm					
Plumbing					
Mechanical					
Sprinkler/Standpipe					
Structural	LYNCH MYKINS	JEFF MORRISON	027813	(919)782-1822	jmorrison@lynchmykins.com
Retaining Walls>5' High	h				
Other					
Other					
	ΓΕ)	REPAIR S CHAPTER 14 CURRENT OCCI	ALTERATI ALTERATI ALTERATI UPANCY(S) CUPANCY(ON LEVEL II ON LEVEL III (CH. 3) S): (CH. 3)	HISTORIC PROPERTY CHANGE OF USE D:
BASIC BUILDING DAT					
(check all that apply)	PE: I-A	II-A 🔲 III-A	□IV	☐ V-A	
(encontain unat apply)	☐ I-B] II-B		⊠ V-B	
SPRINKLERS: NO	D ⊠ PARTIAL □	YES NFPA	13 🗌 NFF	PA 13R 🔲 NFI	PA 13D
STANDPIPES: NC	YES C	LASS 🗆 I 🖂 II 🧲	III WE	T DRY	
FIRE DISTRICT: NO	— D YES (PRIM		AZARD AR	EA 🛛 NO	□YES
SPECIAL INSPECTION	_ ` _			STRUCTIONS A	
BUILDING HEIGHT: (fe				LOCAL JURISE	· · · · · · · · · · · · · · · · · · ·
·	•				
GROSS BUILDING AR		T) NEW (80 E	т\	CLID TOTAL	
FLOOR 6th Floor	EXISTING (SQ F 0 SF	T) NEW (SQ F [*] 0 SF	1)	0 SF	
5th Floor	0 SF	0 SF		0.05	
4th Floor	0 SF	0 SF		2.25	
3rd Floor	0 SF	0 SF		2.25	
2nd Floor	16071 SF	7618 SF			
Mezzanine	0 SF	0 SF		0.05	
1st Floor	21901 SF	9770 SF		31671 SF	
Basement	0 SF	0 SF		0 SF	
TOTA	L: 37972 SF	17388 SF		55360 SF	

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	
ТОТ	AL: 37972 SF	17388 SF	55360 SF	
ALLOWABLE AREA				
PRIMARY OCCUPAN	CY CLASSIFICATION(S			
ASSEMBLY:	☐ A-1 ☐ A-2	☐ A-3	☐ A-5	
BUSINESS:				
EDUCATIONAL:	\boxtimes			
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	☐ 1-3 ☐ I-4		
I-1 AND I-2 CO	NDITION: 1	2		
I-3 CONDITION	:	3		
MERCANTILE:				
RESIDENTIAL:	☐ R-1 ☐ R-2	☐ R-3 ☐ R-4		
STORAGE:	⊠ S-1 MODERATE	☐ S-2 LOW	☐ HIGH-PILED	
	☐ PARKING GARAGE	☐ OPEN ☐ ENCLO	SED REPAIR GARAGE	
UTILITY AND MISCELLANEOUS:				
ACCESSORY OCCUR	PANCY CLASSIFICATIO	N(S): BUSINESS		
INCIDENTAL USES:	(TABLE 509)			
SPECIAL USES (CHA	APTER 4 - LIST CODE S	ECTION):		

SPECIAL PROVISIONS (CHAPTER 5 - LIST CODE SECTION):

Yes	⊠ No	SEPARAT	ION:	H	IR EXC	CEPTION: _					
⊠ Non-Sei	parated Use		_			_					
	'	,	olovy for	oroo	calculation						
For eacl	h story, the a		cupand	y sha	ll be such t	hat the sum of shall not exce		os of the	actua	l floor	area
Ac	tual Area of	Occupancy A	4 .	Acti	ual Area of	Occupancy B	> 1.0	00			
Allov	vable Alea o	п Оссирансу	+	AllOwe	able Alea C	л Оссирансу і	+	:	= ≥1	.00	
Story No.	De	escription	-		(A)	(B)	(C)		(D))	
Story 116.		and Use		Bldo Per	g Area Story ctual)	Table 506.2 Area (Note 4)	Area Fronta Increa (note	for age ase	Allowa Area Unlim (note	able or ited	$\langle 2 \rangle$
FIRST	EDUCATION			316	371 SF	28500 SF	7125	SE(35625		7
	EDUCATION			236	689 SF	28500 SF	7125 S	SF 🔪	35625	SF	مر
) SF	0 SF	0 SF	_	0 SI 0 SI		
b. Total E c. Ratio (d. W = M e. Percer 2. Unlimited 3. Maximum 4. The maxir traffic control	Building Perir F/P) = linimum widt nt of frontage area applica Building Are num area of towers must	meter =	800'-0' f/P) ay = _ f = 100 nditions ber of s g garage Table 4	(P) 3 [F/P of Se stories es mu 412.3.	0'-0" (W) - 0.25] x W ection 507 s in the buil est comply v 1.	V/30 = 50.0 Iding x D (506) with Table 406	00 (%) .2). i.5.4. Th				air
5. Frontage i			· 		f "Shown o	e in Table 506. n Plans" quant	ity is no			ole 504	.3 о
					ALL	OWABLE	SH	HOWN C	N	RE	CO FEF
		abla E04.2)			40'-0"		30'-0			504.	
Ruilding Heig	ht in Feet (I:										
Building Heig Building Heig	•	•	.)		2		2			504.	.2
	•	•	.)		2		2			504.	.2
	ht in Stories	(Table 504.4			2		2			504.	.2
Building Heig	ht in Stories	(Table 504.4				Detail No Sheet No	. / De	esign No or Rated ssembly	for F		De fo
FIRE PROTE BUILDING EI Structural Fraincluding colu	ECTION RECLEMENT	CTable 504.4 QUIREMENT Fire Separation Distance (feet)	S Req'd	F	ing	Sheet No	. / De	or Rated	for F	gn No. Rated	De fo
FIRE PROTE BUILDING EI Structural Fraincluding colugirders, truss	ECTION REC	CTable 504.4 QUIREMENT Fire Separation Distance (feet) 0"	S Req'd	F	ing	Sheet No	. / De	or Rated	for F	gn No. Rated	De fo
FIRE PROTE BUILDING EI Structural Fraincluding colugirders, truss Bearing Walls	ECTION REC	Fire Separation Distance (feet) 0" 0"	Req'd	F	ing	Sheet No	. / De	or Rated	for F	gn No. Rated	De fo
FIRE PROTE BUILDING EI Structural Fraincluding colugirders, truss	ECTION REC	CTable 504.4 QUIREMENT Fire Separation Distance (feet) 0"	S Req'd	F	ing	Sheet No	. / De	or Rated	for F	gn No. Rated	De fo
FIRE PROTE BUILDING EI Structural Fraincluding colugirders, truss Bearing Walls Exterior	ECTION REC	Fire Separation Distance (feet) 0" 0" 0"	Req'd	F	ing	Sheet No	. / De	or Rated	for F	gn No. Rated	De fo
FIRE PROTE BUILDING EI Structural Fraincluding colugirders, truss Bearing Walls Exterior North East West	ECTION REC	Fire Separation Distance (feet) 0" 0" 0" 0" 0" 0"	S Req'd	F	ing	Sheet No	. / De	or Rated	for F	gn No. Rated	De fo
FIRE PROTE BUILDING EI Structural Fraincluding colugirders, truss Bearing Walls Exterior North East West South	ECTION REC	CTable 504.4 PUIREMENT Fire Separation Distance (feet) 0" 0" 0" 0" 0" 0" 0"	S Req'd 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	F	ing	Sheet No	. / De	or Rated	for F	gn No. Rated	De fo
FIRE PROTE BUILDING EI Structural Fraincluding colugirders, truss Bearing Walls Exterior North East West South Interior	ECTION REC	Fire Separation Distance (feet) 0" 0" 0" 0" 0" 0"	S Req'd	F	ing	Sheet No	. / De	or Rated	for F	gn No. Rated	De fo
FIRE PROTE BUILDING EI Structural Fraincluding colugirders, truss Bearing Walls Exterior North East West South	ECTION REC	CTable 504.4 PUIREMENT Fire Separation Distance (feet) 0" 0" 0" 0" 0" 0" 0"	S Req'd 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	F	ing	Sheet No	. / De	or Rated	for F	gn No. Rated	De fo
Building Heig FIRE PROTE BUILDING EI Structural Fraincluding colugirders, truss Bearing Walls Exterior North East West South Interior Nonbearing V	ECTION REC	CTable 504.4 PUIREMENT Fire Separation Distance (feet) 0" 0" 0" 0" 0" 0" 0"	S Req'd	F	ing	Sheet No	. / De	or Rated	for F	gn No. Rated	De fo
Structural Fraincluding colugirders, truss Bearing Walls Exterior North East West South Interior Nonbearing V Partitions	ECTION REC	CTable 504.4 PUIREMENT Fire Separation Distance (feet) 0" 0" 0" 0" 0" 0" 0" 0" 0"	S Req'd 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	F	ing	Sheet No	. / De	or Rated	for F	gn No. Rated	De fo
Structural Fraincluding colugirders, truss Bearing Walls Exterior North East West South Interior Nonbearing V Partitions Exterior North East	ECTION REC	CTable 504.4 PUIREMENT Fire Separation Distance (feet) 0" 0" 0" 0" 0" 0" 0" 0" 0" 0" 30'-0"	S Req'd 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	F	ing	Sheet No	. / De	or Rated	for F	gn No. Rated	De fo
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Smoke Barrier

Separation Smoke Partition Tenant Separation Incidental Use Separation

	ENCY LIGHTIN	G.		N		YES						
EXIT SIG	GNS:			N	0 🛭	YES						
FIRE AL	ARM:			\square N	o	YES						
SMOKE	DETECTION S	YSTEM	S:	\square N	0 [YES		⊠ P	ARTIAL	DUC	CT & ELEVATO	R DETECTIO
PANIC F	HARDWARE:			□N	o 🛭	YES						
LIFE SA	FETY PLAN RE	QUIRE	MEN [.]	TS								
	FETY PLAN SH											
⊠ FIRE	AND/OR SMO	KE RAT	ED W	/ALL L	.OCATIOI	NS (CH	IAPTE	R 7)				
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	UPANCY USE I											•
	TING STRUCT										`	
⊠ occ	UPANCY TYPE LE 1004.1.1)									LOAE	CALCULATIO	N
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⊠ COM	IMON PATH OF	TRAVE	EL DIS	STANC	CES (100	6.2.1, 1	006.3	.2(1))				
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⊠ LOC	ATION OF DOC	RS WIT	H PA	NIC H	IARDWAI	RE (10	10.1.1	0)				
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PLUMBI		WATE (TO	RCLO:	S)			(SINKS)	1	8	REGULAR	ACCESSIBLI
PLUMBI	USE	MALE (TO	ROLOS TEJIC		*ALLOWED	MALE	FEMALE SANIS	ONISEX	TUBS	5	REGULAR	
PLUMBI	USE	WATE (TO	RCLOS DILETS LEWALE 15	ONISEX (S	9 *ALLOWED	ω MALE	SINKS SHAPE 15	ONISEX 5	1	5	REGULAR	8
PLUMBI	USE	WATE (TO 8 8	ROLOS TEJIC	S)	*ALLOWED	MALE	SINKS SAMIE 15 8	ONISEX	TUBS	5	REGULAR	
PLUMBI	EXISTING NEW	WATE (TO	RCLO DILETS 3 15 12	ONISEX (S	9 % *ALLOWED	a MALE	SINKS SHAPE 15	ONISEX 5	TUBS	5	REGULAR	8 4
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SPACE SPECIA Special Ap TOWN 0	EXISTING NEW REQUIRED	WATE (TO	RCLOODILETS TO STATE OF THE PROPERTY OF THE P	XESIND	G 6 6 *	8 6 9	SINKS 15 8 9	SHS, ICC	TUBS		below)	8 4 10

LIFE SAFETY SYSTEM REQUIREMENTS

ENERGY SUMMAI							
The following dat also be provided.	a shall be Each Deance meth	considere signer sha lod, state t	III furnish	the requ	ired portion	attribute required to meet the energy code so as of the project information for the plan data e standard reference design vs annual ener	а
EXISTING BUILD		ELOPE	□No	⊠ Ye	es (If check	red, the remainder of this section is not appl	licable)
EXEMPT BUILDI	ING:	□No	Yes	(Provide	e code or st	atutory reference):	
CLIMATE ZO	ONE:	☐ 3A	⊠ 4A	<u> </u>	4		
METHOD OI	Prescr		_	Performa (Energy		Other, Specify Source Here:	
	☐ Prescr (ASHR	iptive RAE 90.1)		Perform (ASHRA			
THERMAL ENVEL	.OPE (Pre	scriptive	Method (Only):			
ROOF/CEILI		MBLY (ea on of asse		nbly)		EMBRANE; POLYISO INSULATION; 1/2" NG ON OPEN WEB WOOD TRUSSES	
	U-Value o	of total ass	embly:		0.039		
	R-Value o	of insulatio	n:		25		
		in each as J-Value of	-		0		
	Т	otal squar kylights in	e footage		0 SF		
EXTERIOR \	•	ach asser on of asse				s, 2"X6" WOOD STUD WITH BATT INSULA EATHING; FIBER CEMENT BOARD SIDING	
	U-Value c	of total ass	embly:		0.037		
	R-Value o	of insulatio	n:		<u>19</u>		
	Ĺ	(windows J-Value of	Assembly	y:	0.28		
		Solar heat : Projection I	_	ficient:	0		
		oor R-Val			0		
WALLS BEL		DE (each on of asse	-)	N/A		
	-	of total ass	-		•		
		of insulatio	•				
FLOORS OV		ONDITION on of asset		CE (eac	NI/A		
	-	of total ass	-		•		
		of insulatio	-		0		
FLOORS SL		RADE on of asse	mbly:			RETE SLAB OVER VAPOR RETARDER; 4 F POROUS FILL	ļ "
	U-Value o	of total ass	embly:		0.1		
		of insulatio	-		10		
	Horizonta	I/Vertical F	Requirem	ent:			
	Slab Heat						
SEE SHEET	S-001 FC	OR STRUC	CTURAL I	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
RATIO
227 Favottovilla Stroot Suita 201

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

> 4/9/2021 CODE CERT.
> I HEREBY CERTIFY
> THAT THE BUILDING COMPLETED ON THIS PAGE IS ACCURATE FOR THE TYPE OF BUILDING

	5950 CAROLLAND	AND OCINTENDE PROJECTHESE FOMPLE	WITH ALL ABLE STATE CAL G
SHE	ET ISSUE		
1	100% Construction Documents		2/24/2021
2	Permit Revisions		4/9/2021

		RATIO	
AND SHAL	LL BE USED ONLY PURSUA IATION OR DUPLICATION M	TURAL AND ENGINEERING DRAWING IS GIVEN IN NT TO THE AGREEMENT WITH RATIO. NO OTHER AY BE MADE WITHOUT PRIOR WRITTEN CONSENT HT AND OTHERWISE ARE HEREBY SPECIFICALLY	USE, OF RATIO. ALL

20408.000

PROJECT NO.

APPENDIX B 2018

100% CONSTRUCTION DOCUMENTS

CAROLINA CHARTER ACADEMY ADDITION

8529 S NC 55 HWY ANGIER, NC

OWNER:

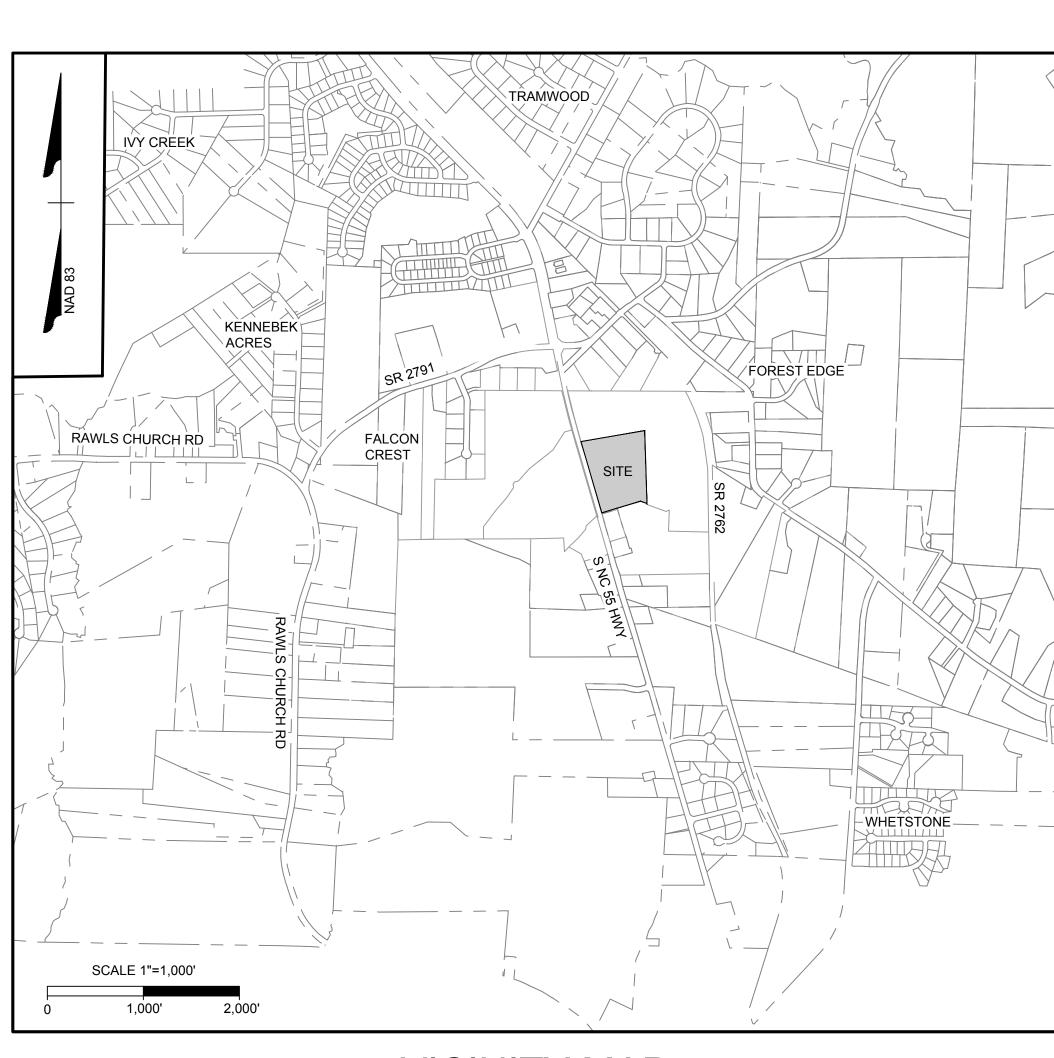
RM CAROLINA NC LLC
810 7TH AVE FL 27
NEW YORK, NY 10019-5818

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



VICINITY MAP

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

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
PARKING: SCHOOLS (PUBLIC AND PRIVAT TOTAL NUMBER OF CLASSROOMS: EXISTING: PROPOSED:	27 CLASSROOMS (K-8TH GRADE) 16 CLASSROOMS (K-8TH GRADE)
	TO GENERALIZATION (IN STITL GIVIDE)
<u>PARKING SPACES REQUIRED:</u> EXISTING:	54 PARKING SPACES
PROPOSED ADDITION:	32 PARKING SPACES
PARKING SPACES PROVIDED:	
EXISTING: PROPOSED:	56 PARKING SPACES 30 PARKING SPACES
H/C SPACES REQ'D: H/C SPACES PROVIDED: TOTAL PARKING SPACES PROVIDED:	4 (WITH 1 BEING VAN ACCESSIBLE) 4 (WITH 1 BEING VAN ACCESSIBLE) 86 SPACES (INCLUDING 4 H/C)
IMPERVIOUS:	
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
***************************************	MEASURE WAS DESIGNED TO TREAT 3.54 ACRES OF IMPERVIOUS ARE

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

OFESSION OF A STANDARD OF A ST

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



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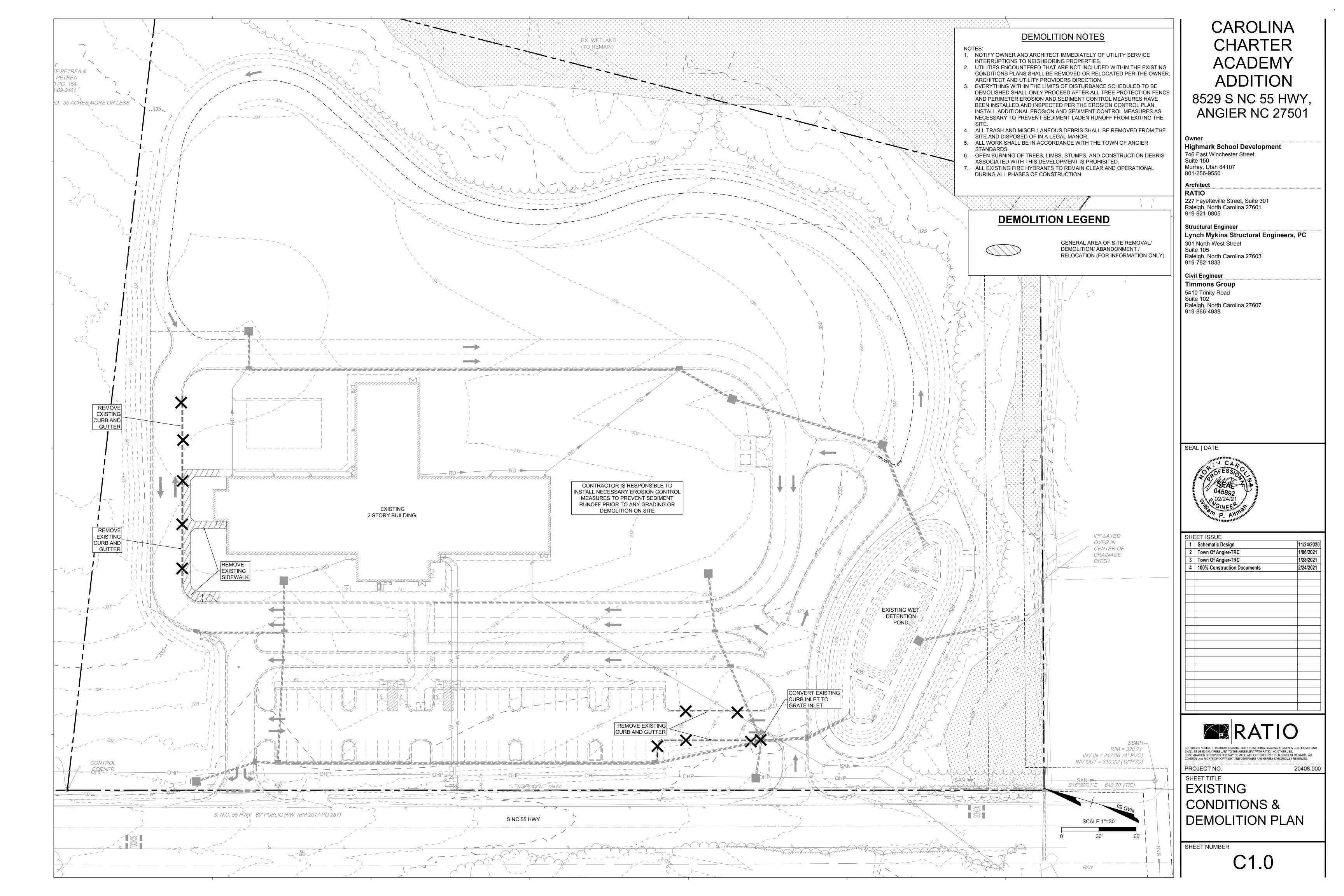
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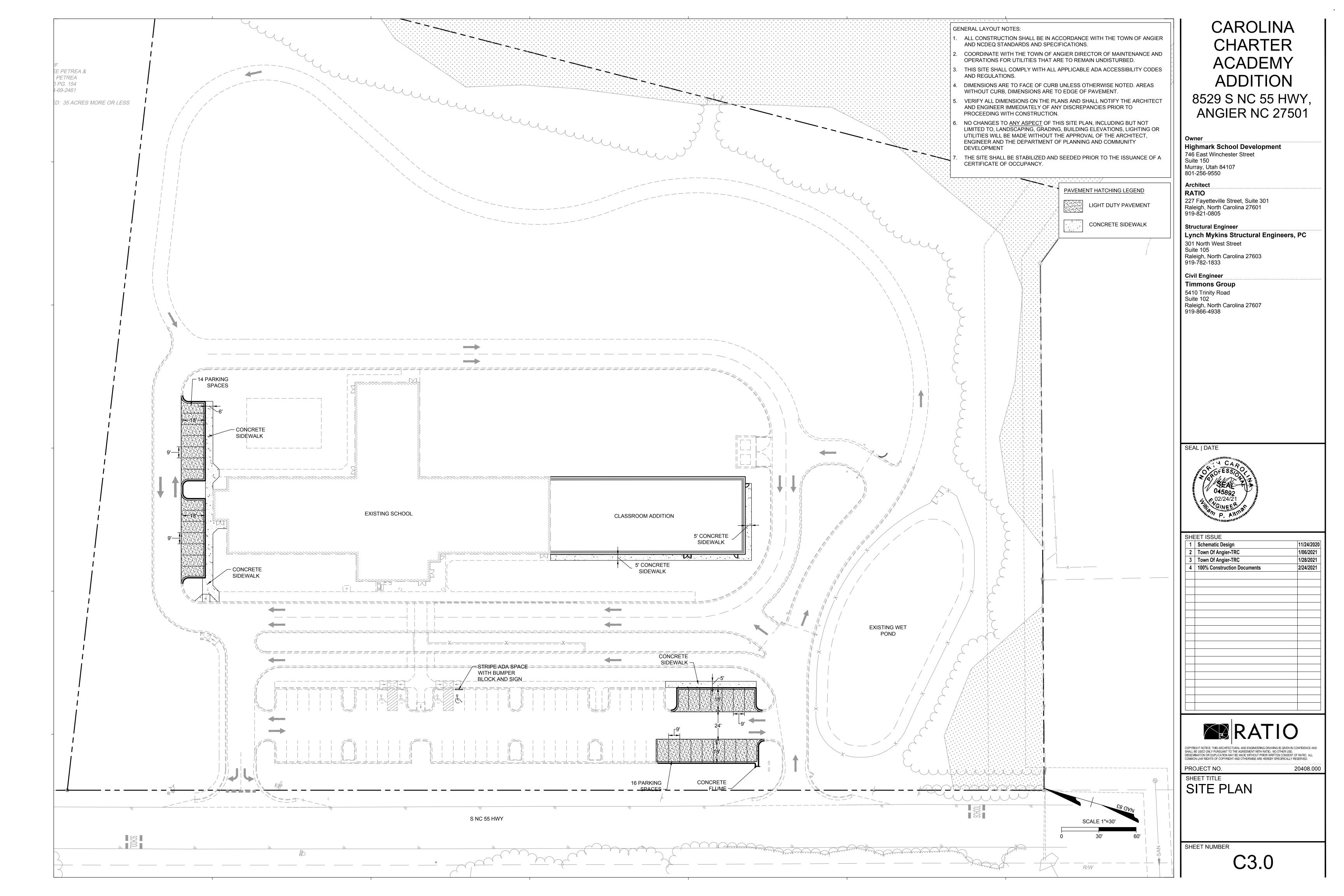
EET TITLE

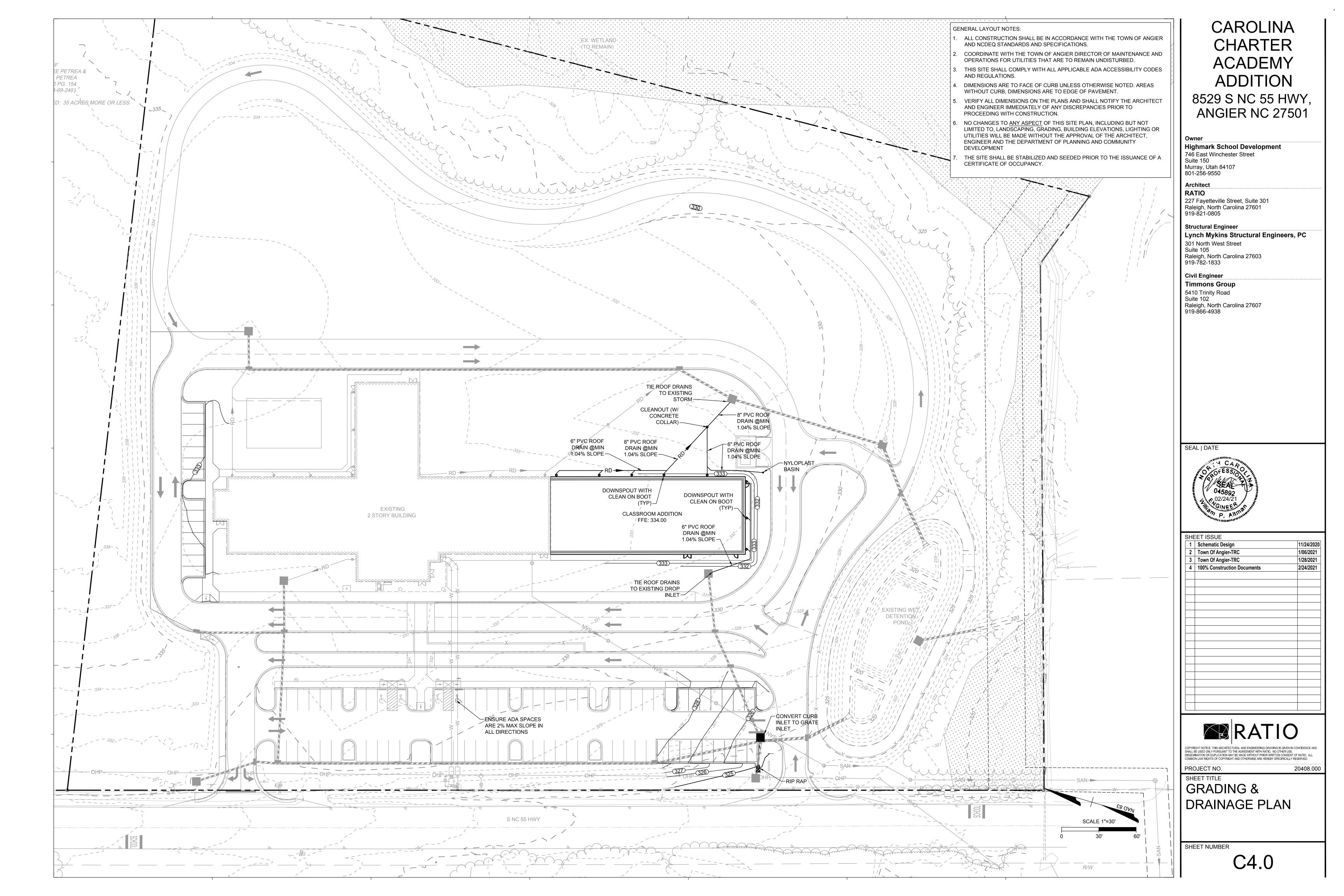
COVER SHEET

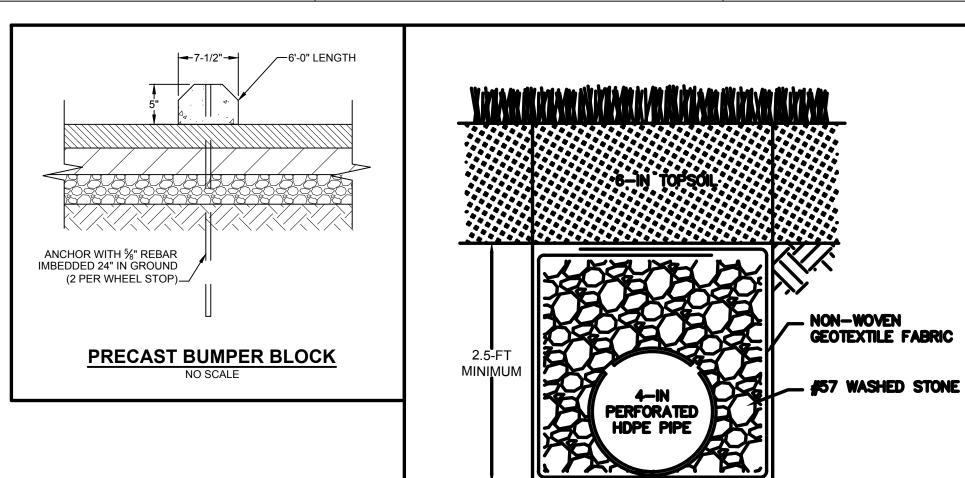
HEET NUMBER

C0.0



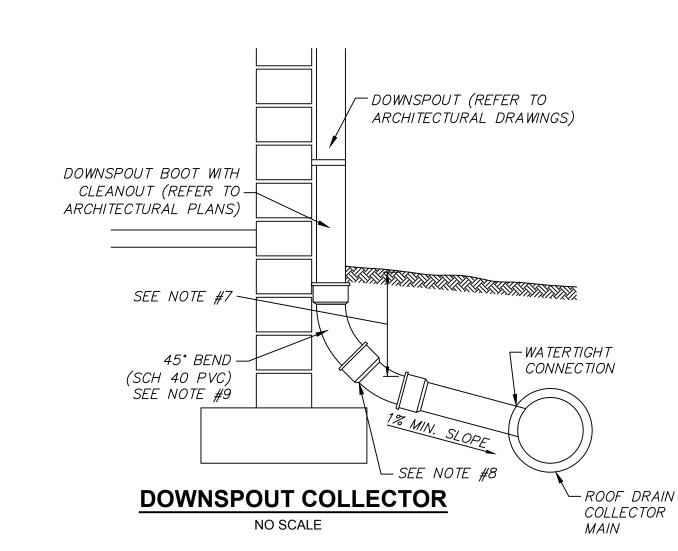


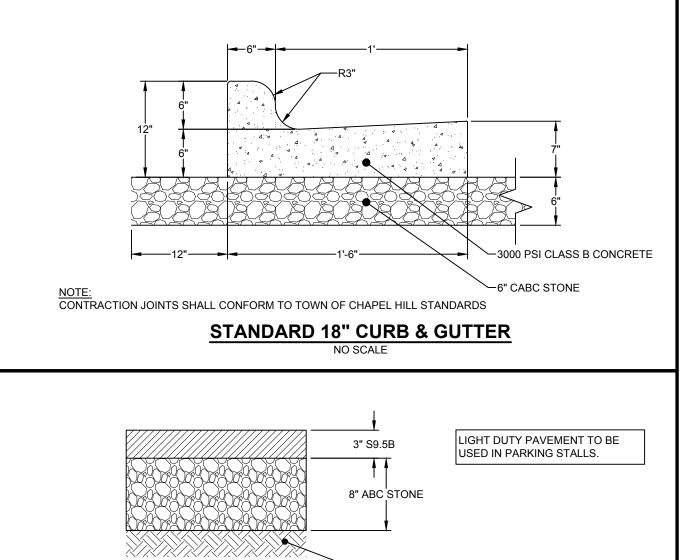




DOWNSPOUT COLLECTOR NOTES:

- 1. CONNECT ALL BUILDING DOWNSPOUTS INTO THE ROOF DRAIN COLLECTOR SYSTEM OR DIRECTLY INTO THE STORM SEWER SYSTEM.
- 2. THE ROOF DRAIN COLLECTOR SYSTEM IS SMOOTH-LINED, CORRUGATED POLYETHYLENE PIPE LAID AT MINIMUM SLOPES AS INDICATED.
- 3. 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.
- 4. PROVIDE CLEANOUTS AS INDICATED AND AS REQUIRED BY LOCAL BUILDING CODE.
- 5. 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.
- 6. 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.
- 8. MAINTAIN A WATERTIGHT CONNECTION AT ALL PIPE CONNECTIONS BELOW GRADE.
- 9. 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.



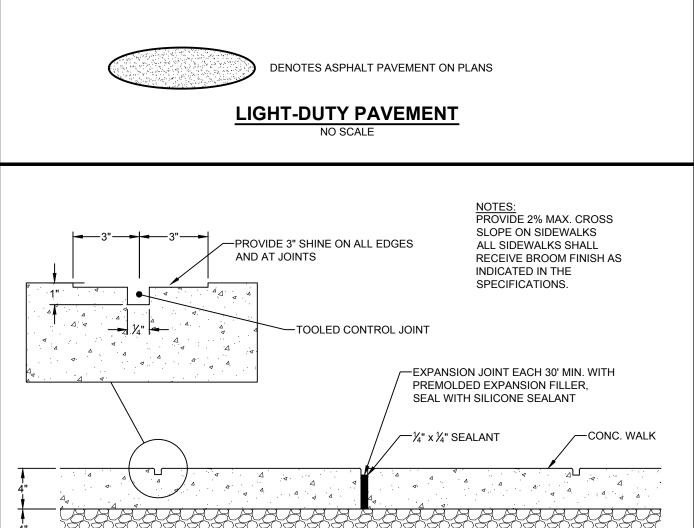


COMPACTED SUBGRADE

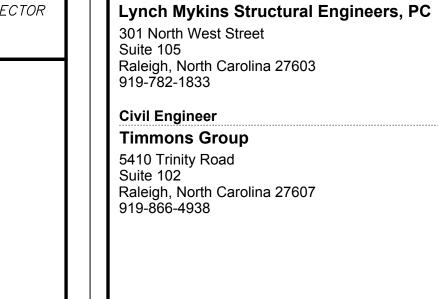
►NCDOT (TYPE CABC) CRUSHED STONE

DENOTES CONCRETE SIDEWALK ON PLANS

CONCRETE SIDEWALKS



COMPACTED SUBGRADE



CAROLINA

CHARTER

ACADEMY

ADDITION

8529 S NC 55 HWY,

ANGIER NC 27501

Highmark School Development

746 East Winchester Street

227 Fayetteville Street, Suite 301

Raleigh, North Carolina 27601

Murray, Utah 84107

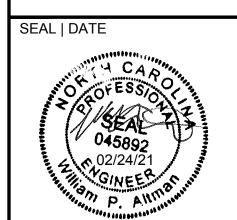
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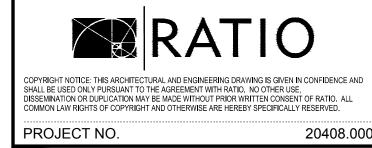
Structural Engineer

Architect

RATIO



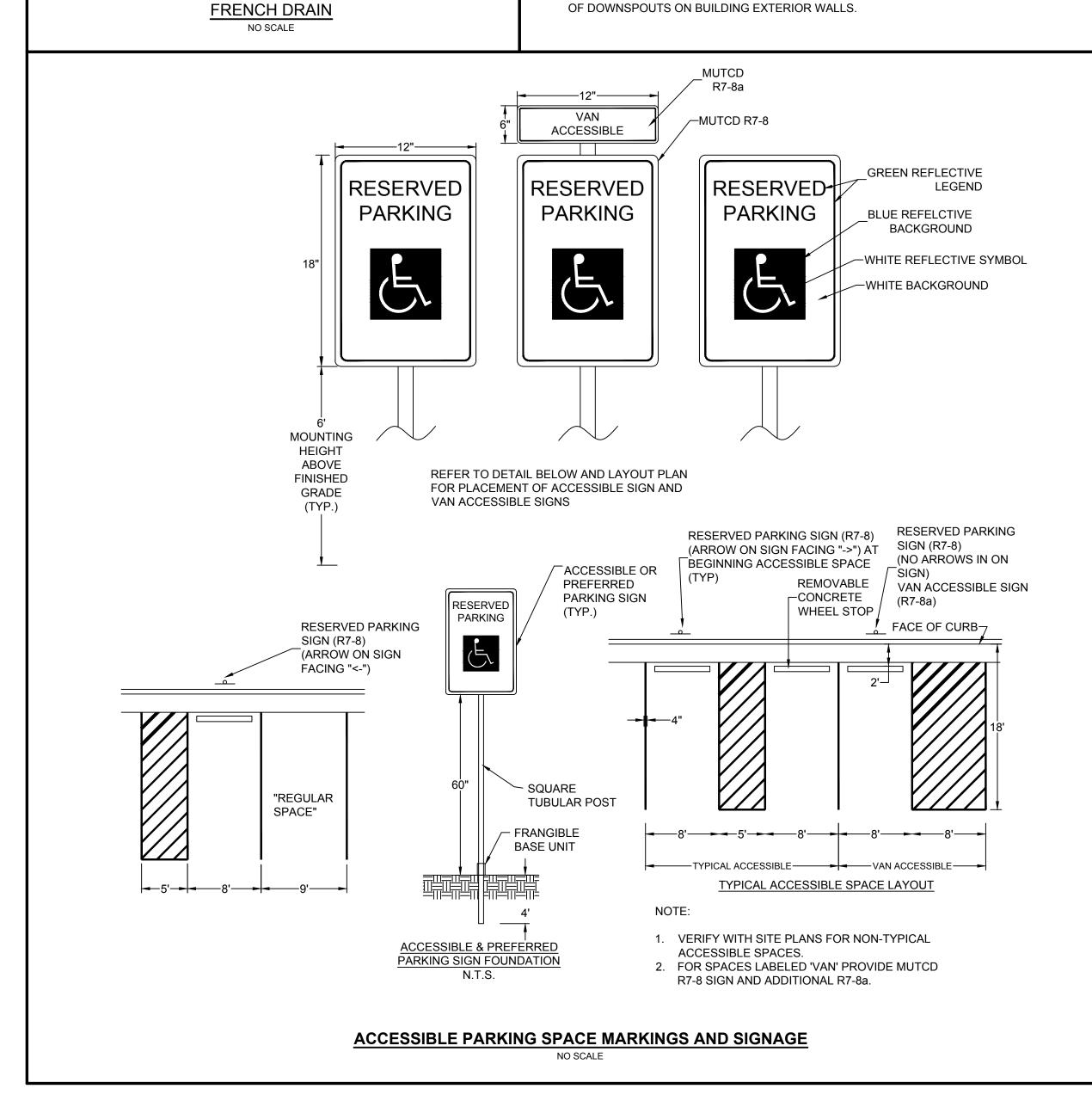
2 Town Of Angier-TRC 1/0	/24/2020 06/2021 28/2021
2 Town Of Angier-TRC 1/0	06/2021
3 Town Of Angier-TRC 1/2	28/2021
4 100% Construction Documents 2/2	24/2021



NOTES & DETAILS

SHEET NUMBER

C5.0



GENERAL NOTES:

- 1. THE STRUCTURAL DRAWINGS MUST BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS, AND THE SPECIFICATIONS. THE CONTRACTOR MUST VERIFY THE REQUIREMENTS OF OTHER TRADES AS TO SLEEVES, CHASES, HANGERS, INSERTS, ANCHORS, HOLES, AND ADDITIONAL ITEMS TO BE PLACED OR SET IN THE STRUCTURAL WORK.
- 2. THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE PROVISIONS OF THE NORTH CAROLINA STATE BUILDING CODE, 2018 EDITION AND THE NORTH CAROLINA EXISTING BUILDING CODE, 2018 EDITION.
- 3. THE WORK OUTLINED IN SPECIFICATION SECTION 014100 IS SUBJECT TO SPECIAL INSPECTIONS AS DESCRIBED IN THE TECHNICAL SPECIFICATIONS AND BUILDING CODE.
- 4. THE CONTRACTOR MUST PROVIDE TEMPORARY SHORING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT UNTIL PERMANENT SUPPORTS AND LATERAL BRACING ARE IN PLACE.
- 5. PORTIONS OF THE STRUCTURE NOT ALTERED AND NOT AFFECTED BY THE ALTERATION HAVE NOT BEEN REVIEWED FOR COMPLIANCE WITH THE CODE REQUIREMENTS FOR A NEW STRUCTURE.
- 6. THE CONTRACTOR MUST SUBMIT A DETAILED PLAN, INCLUDING WORK SEQUENCE, PREPARED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA FOR SHORING, BRACING, AND OTHER SAFEGUARDS TO MAINTAIN ALL PARTS OF THE STRUCTURE IN A SAFE CONDITION AT ALL TIMES DURING THE PROCESS OF DEMOLITION AND CONSTRUCTION AND TO PROTECT FROM DAMAGE THOSE PORTIONS OF THE EXISTING STRUCTURE WHICH ARE TO REMAIN. SUBMIT PLAN PRIOR TO BEGINNING WORK.
- 7. THE CONTRACTOR MUST FIELD VERIFY THE DIMENSIONS, ELEVATIONS, AND OTHER REQUIREMENTS NECESSARY FOR THE PROPER CONSTRUCTION AND ALIGNMENT OF THE NEW PORTIONS OF THE STRUCTURE TO THE EXISTING. ANY DIMENSIONS SHOWN OF EXISTING STRUCTURES MUST BE CONSIDERED AS APPROXIMATE AND ADEQUATE FOR BIDDING PURPOSES ONLY. THE CONTRACTOR MUST MAKE ALL MEASUREMENTS NECESSARY FOR THE FABRICATION AND ERECTION OF STRUCTURAL MEMBERS. DISCREPANCIES MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- 8. IF INCONSISTENCIES, DISCREPANCIES OR CONTRADICTIONS IN THE CONTRACT DOCUMENTS ARE DISCOVERED AFTER THE CLOSE OF BIDDING QUESTIONS, THE CONTRACTOR SHALL BE DEEMED BY SUBMITTAL OF THEIR BID, TO HAVE BID THE MOST COSTLY AS TO LABOR, MATERIALS, DURATION, SEQUENCE AND METHOD OF CONSTRUCTION TO PROVIDE THE WORK.

DESIGN CRITERIA: <u>CLASSIFICATION OF BUILDING</u> RISK CATEGORY	
SUPER IMPOSED ROOF DEAD LOADS - UNIFORM: 1 1/2" INSULATION AND ROOF MEMBRANE CEILING SPRINKLERS DUCTS, LIGHTS, MISC. MECHANICAL SHEATHING	2 PSF 1.5 PSF 5 PSF
SUPER IMPOSED FLOOR DEAD LOADS - UNIFORM: FLOOR FINISH CEILING. SPRINKLERS. DUCTS, LIGHTS, MISC. MECHANICAL COLLATERAL 1 1/2" GYPCRETE SHEATHING	2 PSF 3 PSF 3 PSF 2 PSF 13 PSF
LIVE LOADS - UNIFORM: SLAB ON GRADE ROOF CLASSROOMS PARTITION ALLOWANCE CORRIDORS (FIRST FLOOR) CORRIDORS (SERVING PUBLIC SPACES) STAIRWAYS	20 PSF 40 PSF 15 PSF 100 PSF 100 PSF
LIVE LOADS - CONCENTRATED: FLOORS _ ROOFS	
UNLESS OTHERWISE NOTED, CONCENTRATED LOADS AF UNIFORMLY OVER 2'-6" x 2'-6" AREA.	RE APPLIED

WIND	LOADS:	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
	LOADS: (ULTIMATE DESIGN (VULT) WIND SPEED NOMINAL DESIGN (VASD) WIND SPEED	122 MPH 3
	MOMINAL DESIGN (VASD) WIND SPEED.	96 MPH
	EXPOSURE CATEGORY	
		±0.18
	COMPONENT AND CLADDING PRESSURE	<u>S:</u>
	WALLS, ZONE 5 (10 SF)	+22/-29 PSF
	ROOF, ZONE 3 (10 SF)	+22/-40 PSF
	PARAPET, END/CORNER (10 SF) PÓSÍTIVE PRÉSSURES INDICATE	
	POSITIVE PRESSURES INDICATE	IOWARDS SURFACE,
	NEGATIVE PRESSURES INDICATE	AWAY FROM SURFACE
	ULTIMATE WIND BASE SHEARS (FOR MW	FRS): (_59 KIPS)
	Vx	\$
	Vy	146 KIPS
SEISM	IC LOADS:	
<u>OLIOIV</u>	SITE CLASSIFICATION_	D(ASSUMED)
	SEISMIC DESIGN CATEGORY	B
	IMPORTANCE FACTOR (JE)	
	SPECTRAL RESPONSE ACCELERATIONS:	
	S_{S}	S ₁ 0.082
	S _{MS-} 0.274	$S_{M1}^{'}$
	S _{DS} 0.182	S _{D1} 0.131
	ANALYSIS PROCEDURE EQUIV	VALENT LATERAL FORCE
	LATERAL FORCE RESISTING SYSTEM	_ LIGHT-FRAMED WALLS
		SHEATHED WITH WOOD
		STRUCTURAL PANELS
		RATED FOR SHEAR
	RESPONSE MODIFICATION COEFFICIENT	
	SEISMIC RESPONSE COEFFICIENT (Cs)	
	ULTIMATE SEISMIC BASE SHEAR (V)	
ΙΔΤΕΡ	RAL DESIGN CONTROL	
	OONTROLLING LATERAL LOADS	MANAGE

FOUNDATION NOTES:

FOUNDATIONS HAVE BEEN DESIGNED FOR AN ASSUMED NET ALLOWABLE SOIL BEARING PRESSURE OF 3000 PSF. BASED ON CONDITIONS FOR EXISTING BUILDING. IF THIS BEARING PRESSURE FOR FOOTINGS AND SLAB ON GRADE CANNOT BE ACHIEVED, CONTACT STRUCTURAL ENGINEER OF RECORD IMMEDIATELY FOR FURTHER INSTRUCTION.

- 2. PRIOR TO PLACING FOUNDATION CONCRETE, ALL FOUNDATION EXCAVATIONS MUST BE INSPECTED BY THE SPECIAL INSPECTOR TO EXPLORE THE EXTENT OF LOOSE, SOFT, EXPANSIVE, OR OTHERWISE UNSATISFACTORY SOIL MATERIAL AND TO VERIFY DESIGN BEARING PRESSURE. DIRECTION FOR CORRECTIVE ACTION WILL BE PROVIDED WHERE REQUIRED.
- 3. NO UNBALANCED BACKFILLING MUST BE DONE AGAINST MASONRY OR CONCRETE WALLS UNLESS WALLS ARE SECURELY BRACED AGAINST OVERTURNING, EITHER BY TEMPORARY CONSTRUCTION BRACING OR BY PERMANENT CONSTRUCTION.
- 4. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONTROL OF GROUNDWATER AND SURFACE RUNOFF THROUGHOUT THE CONSTRUCTION PROCESS. INUNDATION AND LONG TERM EXPOSURE OF BEARING SURFACES WHICH RESULT IN DETERIORATION OF BEARING MUST BE PREVENTED.

CAST-IN-PLACE CONCRETE NOTES:

- 1. CONCRETE MUST BE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301 AND 318.
- A. REINFORCING BARS ASTM A 615, GRADE 60, DEFORMED.B. WELDED REINFORCING BARS ASTM A 706, GRADE 60.
 - C. WELDED WIRE REINFORCEMENT ASTM A1064, WELDED STEEL WIRE REINFORCEMENT; PROVIDE SHEET TYPE, ROLL TYPE IS NOT ACCEPTABLE.
- 4. ALL REINFORCING STEEL AND EMBEDDED ITEMS SUCH AS ANCHOR RODS AND WELD PLATES MUST BE ACCURATELY PLACED AND ADEQUATELY TIED AND SUPPORTED BEFORE CONCRETE IS PLACED TO PREVENT DISPLACEMENT BEYOND PERMITTED TOLERANCES.
- 5. CONCRETE COVER TO REINFORCING STEEL MUST CONFORM TO THE MINIMUM COVER RECOMMENDATIONS IN ACI 318, UNLESS THE DRAWINGS SHOW GREATER COVER REQUIREMENTS.
- 6. LAP CONTINUOUS REINFORCING STEEL 57 X BAR DIAMETER, TYPICAL UNLESS OTHERWISE NOTED.

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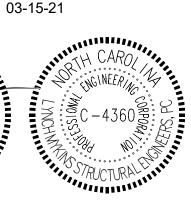
Civil Engineer
Timmons Group
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Suite 102 Raleigh, North Carolina 27607 919-866-4938

SEAL | DATE



SHEET ISSUE



	100% CONSTRUCTION DOCUMENTS	02-24-21
1	ADDENDUM 1	03-15-21



PROJECT NO.

ECT NO. 20408.000

GENERAL NOTES

SHEET NUMBER

S-001

SNOW LOADS:

GROUND SNOW LOAD.

THERMAL FACTOR (Ct) EXPOSURE FACTOR (Ce)

DRIFT SURCHARGE (Pd)_

IMPORTANCE FACTOR (Is)

FLAT ROOF LOAD

ROUGH CARPENTRY NOTES:

- ROUGH CARPENTRY MUST BE IN ACCORDANCE WITH THE AMERICAN WOOD COUNCIL (AWC) "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION."
- UNLESS OTHERWISE NOTED. USE 'COMMON' NAILS AND ALL NAILING MUST CONFORM TO THE "FASTENING SCHEDULE" TABLE 2304.10.1 OF THE BUILDING
- WOOD FRAMING MEMBERS MUST COMPLY WITH PS 20 "AMERICAN SOFTWOOD LUMBER STANDARD" AND THE FOLLOWING REQUIREMENTS:
- A. MOISTURE CONTENT SEASONED, WITH 19 PERCENT MAXIMUM MOISTURE
- B. GRADE NO. 2, OR BETTER UNLESS OTHERWISE NOTED.
- C. SPECIES SPRUCE-PINE-FIR UNDER NLGA RULES.
- WOOD STRUCTURAL PANELS (WSP) MUST COMPLY WITH PS 1 "U.S. PRODUCT STANDARD FOR CONSTRUCTION AND INDUSTRIAL PLYWOOD" FOR PLYWOOD CONSTRUCTION PANELS AND THE FOLLOWING REQUIREMENTS:
- A. EXTERIOR WALL AND SHEARWALL SHEATHING: 7/16" INCH, APA RATED SHEATHING, EXPOSURE 1 DURABILITY CLASSIFICATION
- B. FLOOR SHEATHING: 3/4" INCH. TONGUE AND GROOVE. APA RATED SHEATHING, EXPOSURE 1 DURABILITY CLASSIFICATION.
- ROOF SHEATHING: 7/16" INCH, APA RATED SHEATHING, EXTERIOR EXPOSURE DURABILITY CLASSIFICATION. PROVIDE TONGUE-AND-GROOVE EDGES OR USE "PLY-CLIPS" AT MID-SPAN BETWEEN EACH SUPPORT.
- ALL WOOD FRAMING MEMBERS PERMANENTLY EXPOSED TO THE WEATHER AND ALL SILL PLATES IN CONTACT WITH CONCRETE MUST BE PRESERVATIVE-TREATED. REFER TO THE SPECIFICATIONS.
- STEEL PLATE CONNECTORS MUST COMPLY WITH ASTM A 36 SPECIFICATIONS (Fv= 36 KSI). BOLTS CONNECTING WOOD MEMBERS MUST COMPLY WITH ASTM A 307 COMMON STEEL BOLTS. AND MUST BE 3/4 INCH DIAMETER. UNLESS OTHERWISE NOTED.
- METAL FRAMING ANCHORS, HOLD DOWNS, HURRICANE TIES, HANGERS, ETC. MUST COMPLY WITH ASTM A 653 AND BE CAPABLE OF SUPPORTING THE REACTIONS SHOWN. WHERE PRODUCTS OF A SPECIFIC MANUFACTURER ARE SHOWN, EQUAL PRODUCTS OF ANOTHER MANUFACTURER MAY BE USED IF APPROVED.
- PROVIDE BRIDGING FOR ALL FLOOR JOISTS AND ROOF RAFTERS. MAXIMUM SPACING MUST BE 4'-0", UNLESS OTHERWISE NOTED
- 9. PROVIDE DOUBLE JOISTS UNDER ALL PARTITIONS WHICH RUN PARALLEL WITH JOISTS, AND UNDER ALL CONCENTRATED LOADS FROM FLOORS ABOVE UNLESS OTHERWISE INDICATED. PROVIDE MULTIPLE STUDS WHERE INDICATED ON THE PLANS.
- 10. PROVIDE HEADERS OF THE SAME CROSS SECTION AS JOISTS OR RAFTERS TO FRAME AROUND ALL OPENINGS TO SUPPORT SHEATHING. UNLESS OTHERWISE NOTED OR DETAILED ON THE DRAWINGS.
- 11. WHERE MULTIPLE FRAMING MEMBERS ARE INDICATED, SCAB CONTINGENT MEMBERS TOGETHER WITH 16d NAILS AT 12 INCHES ON CENTER, ALTERNATING AT 2 INCHES FROM EACH EDGE.
- 12. ALL CONNECTION HARDWARE IN CONTACT WITH PRESERVATIVE TREATED WOOD MUST BE HOT-DIP GALVANIZED COATED
- 13. POWDER ACTUATED FASTENERS (PAF) MUST HAVE A MINIMUM ALLOWABLE CAPACITY INTO THE BASE MATERIAL AS FOLLOWS UNLESS OTHERWISE NOTED: A. STEEL: SHEAR = 600 LBS
 - TENSION = 250 LBS B. CONCRETE: SHEAR = 260 LBS TENSION = 255 LBS
- 14. LAMINATED VENEER LUMBER (LVL) MUST BE WEYERHAEUSER OR EQUAL AND CONFORM TO THE FOLLOWING MINIMUM STANDARD:

Fb	2800 PSI
FC, PERP	750 PSI
Fv	285 PSI
E BEND	2.0 E 6 PSI
E BEND	2.0 E 6 PSI

PREFABRICATED METAL-PLATE-**CONNECTED WOOD TRUSS NOTES:**

- PREFABRICATED METAL-PLATE-CONNECTED WOOD TRUSSES MUST BE IN ACCORDANCE WITH THE AMERICAN FOREST AND PAPER ASSOCIATION (AF&PA) "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" AND THE TRUSS PLATE INSTITUTE (TPI) "NATIONAL DESIGN STANDARDS FOR METAL-PLATE-CONNECTED WOOD TRUSS CONSTRUCTION".
- SUBMIT SHOP DRAWINGS SIGNED AND SEALED BY A NORTH CAROLINA LICENSED PROFESSIONAL ENGINEER RESPONSIBLE FOR THE DESIGN OF PREFABRICATED METAL-PLATE-CONNECTED WOOD TRUSSES. SHOP DRAWINGS MUST INCLUDE DESIGN LOADINGS AND REACTIONS APPLIED TO THE SUPPORTING STRUCTURE INCLUDE ALL TRUSS SPLICE DETAILS AND TRUSS-TO-TRUSS CONNECTION DETAILS. SECONDARY BENDING STRESSES IN TRUSS TOP AND BOTTOM CHORDS DUE TO MEMBER LOADS MUST BE CONSIDERED IN THE DESIGN
- WOOD TRUSS FRAMING MEMBERS MUST COMPLY WITH PS 20 "AMERICAN SOFTWOOD LUMBER STANDARD" AND MUST BE SIZED BY THE MANUFACTURER FOR THE LOADS INDICATED.
- METAL CONNECTOR PLATES MUST COMPLY WITH ASTM A 653, GRADE A WITH COATING AS SPECIFIED.
- \sim WOOD TRUSS DESIGN LOADS MUST BE AS INDICATED IN "GENERAL NOTES" OR AS FOLLOWS: WHICHEVER GOVERNS:
- A. TOP CHORD DEAD LOAD: 25 PSF AT FLOORS. AND 20 PSF AT ROOF FRAMING AREAS.
- RESISTING DEAD LOAD = 5 PSF ON TOP CHORD AND 0 PSF ON BOTTOM CHORD
- BOTTOM CHORD DEAD LOAD: 10 PSF.
- OF THE TRUSSES, OR AS RECOMMENDED BY THE MANUFACTURER. THE WOOD TRUSSES. COMMENTARY AND RECOMMENDATIONS" MUST BE CONSIDERED AS MINIMUM REQUIREMENTS.
- TRUSSES MUST BE DESIGNED ASSUMING THAT THE BOTTOM CHORD IS NOT BRACED BY THE CEILING. PROVIDE ALL ADDITIONAL BRACING OF BOTH WEB AND CHORD MEMBERS REQUIRED BY THE TRUSS SHOP DRAWINGS.
- TRUSS MANUFACTURER MAY USE ALTERNATIVE TRUSS WEB CONFIGURATIONS SUBJECT TO APPROVAL OF THE ENGINEER.
- 10. ALL CONNECTION HARDWARE FOR TRUSS-TO-TRUSS CONNECTIONS AND TRUSS TO SUPPORTING STRUCTURE CONNECTIONS MUST BE SUPPLIED BY THE MANUFACTURER.
- 11. FOR ADJACENT TRUSSES WHERE THE WEB CONFIGURATION IS CAPABLE OF CONTAINING A RECTANGLE 42 INCHES HIGH BY 24 INCHES WIDE OR GREATER BETWEEN TOP OF THE BOTTOM CHORD AND THE BOTTOM OF ANY OTHER TRUSS MEMBER, SUCH AREAS MUST HAVE THE BOTTOM CHORD DESIGNED FOR A LIVE LOAD OF 20 PSF IN ADDITION TO ANY OTHER LOADS SHOWN.

POST-INSTALLED ANCHOR NOTES:

- 1. ALL POST INSTALLED ANCHORS INDICATED ON THE DRAWINGS ARE BY HILTI, INC, AND MUST BE CONSIDERED THE BASIS OF DESIGN PRODUCT. WHERE NOT EXPLICTLY INDICATED IN THE DRAWINGS. THE FOLLOWING
 - ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE: a. HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT (TE-CD OR TE-YD) AND VC 20/40 VACUUM SYSTEM (VC 20-U OR
 - a. HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT (TE-CD OR TE-YD) AND VC 20/40 VACUUM SYSTEM (VC 20-U OR VC 40-U) WITH CONTINUOUSLY DEFORMED REBAR PER ICC ESR-3187.
- 2. ALTERNATE POST INSTALLED ANCHOR PRODUCTS MAY BE SUBMITTED TO THE ENGINEER FOR REVIEW AND POSSIBLE APPROVAL. ALL SUBSTITUTION REQUESTS MUST BE ACCOMPANIED BY AN ICC ESR SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY, AND COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE. ALTERNATE PRODUCTS MAY REQUIRE MODIFICATIONS TO ANCHOR DIAMETER, SPACING, AND EMBEDMENT.
- 3. INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS, AS INCLUDED IN THE ANCHOR PACKAGING.
- 4. THE CONTRACTOR MUST ARRANGE FOR AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE THE COMMENCEMENT OF ANCHOR INSTALLATION.
- ANCHOR CAPACITY IS DEPENDANT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL
- EXISTING REINFORCING BARS IN THE CONCRETE STRUCTURE MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS. UNLESS NOTED ON THE DRAWINGS THAT THE BARS CAN BE CUT. THE CONTRACTOR MUST LOCATE THE POSITION OF THE REINFORCING BARS AT THE LOCATIONS OF THE CONCRETE ANCHORS, BY FERROSCAN OR GPR.
- ALL POST INSTALLED ANCHORS REQUIRE CONTINUOUS SPECIAL INSPECTIONS TO VERIFY INSTALLATION HAS BEEN PERFORMED IN ACCORDANCE WITH THE SCHEDULE OF SPECIAL INSPECTIONS FOR ADDITIONAL INFORMATION.

PLAN LEGEND:

(-X'-X")

X

SX

CFX

BOTTOM OF DECK ELEVATION MEASURED BOD = +X'-X'' =FROM REFERENCED FINISHED FIRST FLOOR ELEVATION = 0'-0"

> XXX# MECHANICAL UNIT SUPPORTED ABOVE FRAMING (WEIGHT IN POUNDS) -

COORDINATE W/ MECH DWGS

= FLOOR / ROOF OPENING

= TOP OF FOOTING ELEVATION MEASURED FROM REFERENCED FINISHED FIRST FLOOR ELEVATION = 0'-0"

SECTION/DETAIL NUMBER/LETTER

SECTION/DETAIL MARK IS DRAWN

= SECTION/DETAIL MARK

= WALL FOOTING MARK

= FIELD VERIFY

= COLUMN FOOTING MARK

SHEET NUMBER WHERE

TOP OF EXISTING FOOTING ELEVATION <-X'-X"> MEASURED FROM REFERENCED FINISHED FIRST FLOOR ELEVATION = 0'-0"

= DIRECTION OF SLOPE KCJ. CJ. OR SJ LINE ON PLAN

 $\langle x \rangle$ or |x|PLAN KEY NOTE MARK

COLUMN GRID MARK B. WIND LOAD: WHEN CALCULATING NET UPLIFT REACTIONS. USE MAXIMUM

WHERE MULTIPLE TRUSSES ARE INDICATED, SCAB CONTINGENT TRUSS MEMBERS TOGETHER WITH 16d NAILS AT 12 INCHES ON CENTER.

- IN ADDITION TO THE TRUSS BRACING SHOWN, THE CONTRACTOR MUST PROVIDE ALL TEMPORARY AND PERMANENT BRACING AS REQUIRED FOR SAFE ERECTION GUIDELINES SET FORTH IN THE TRUSS PLATE INSTITUTE PUBLICATION "BRACING

\cdot

ANCHORS/ADHESIVES MUST BE USED:

ANCHORAGE TO CONCRETE

VC40U) WITH STEEL THREADED ROD PER ICC ESR-3187. SCREW ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE: a. HILTI KWIK HUS EZ SCREW ANCHORS PER ICC ESR-3027.

B. REBAR DOWELING INTO CONCRETE 1. ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:

- CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO
- ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.
- MANUFACTURER'S WRITTEN INSTRUCTIONS. REFERENCE THE STATEMENT AND

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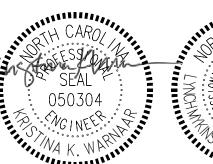
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ABBREVIATIONS:

BOD BOTTOM OF DECK FO FACE OF PAR BOT, B BOTTOM FERM C CONTROL JOINT FOB FACE OF BUILDING PT CL CENTERLINE FOC FACE OF CONCRETE REF CLR CLEAR FOS FACE OF SLAB/STUD REINF COL COLUMN FRMG FRAMING CONC CONCRETE FTG FOOTING REQD CONN CONNECTION FV, ± FIELD VERIFY REQMT CONSTR CONSTRUCTION GEN GENERAL SCHED CONT CONTINUOUS H HIGH SF COORD COORDINATE HK HOOK CTR CENTER HORIZ HORIZONTAL SJ CTRD CENTERED INT INTERIOR SL DBL DOUBLE JOBLE JBE JOIST BEARING ELEVATION SOG DCJ DOWELED CONSTRUCTION JT JOINT TBE DIA, Ø DIAMETER L LOW T&B DJ DOUBLE JOIST LWC LIGHTWEIGHT CONCRETE THK DT DRAG TRUSS MATL MATERIAL TOC DWGS DRAWINGS MAX MAXIMUM TOF EA EACH MECH MECHANICAL TS EF EACH FACE MFR MANUFACTURER TYP EJ EXPANSION JOINT MID MIDDLE UON EL ELEVATION MIN MINIMUM VERT EMBED EMBEDMENT MOD MODIFY EOD EDGE OF DECK NOM NOMINAL WSP EOS EDGE OF SLAB	REINFORCE, REINFORCED, REINFORCING REQUIRED
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SEAL | DATE



03-15-21

E	ET ISSUE	
	100% CONSTRUCTION DOCUMENTS	02-24-2
	ADDENDUM 1	03-15-2

RATIO

PROJECT NO.

ND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE ISSEMINATION OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF RATIO. AL

20408.000

SHEET TITLE **GENERAL NOTES**

SHEET NUMBER

STATEMENT OF SPECIAL INSPECTION SERVICES

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

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

STRUCTURAL	KRISTINA K. WARNAAR, P.E.		02/24/2021
	(Type or print name)	(Signature)	(Date)
ARCHITECTURAL			
	(Type or print name)	(Signature)	(Date)
MECHANICAL			
	(Type or print name)	(Signature)	(Date)
OTHER			
	(Type or print name)	(Signature)	(Date)

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

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

INTERIM REPORT FREQUENCY: MONTHLY

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

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

(9	(=)	(9	(=
(Signature)	(Date)	(Signature)	(Dat
OWNER'S AUTHORIZATION		AC	CCEPTED FOR THE SCO BY:

SCHEDULE OF SPECIAL INSPECTION SERVICES A

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

☐ STRUCTURAL STEEL & HIGH STRENGTH BOLTING ☐ HELICAL PILE FOUNDATIONS WELDING OF STRUCTURAL STEEL COLD-FORMED STEEL DECK OPEN-WEB STEEL JOISTS & JOIST GIRDERS COLD-FORMED STEEL FRAMING CONCRETE CONSTRUCTION MASONRY CONSTRUCTION B WOOD CONSTRUCTION

DRIVEN DEEP FOUNDATIONS

☐ CAST-IN-PLACE DEEP FOUNDATIONS

RAMMED AGGREGATE PIERS & STONE COLUMNS SPRAYED FIRE-RESISTANT MATERIAL MASTIC & INTUMESCENT FIRE-RESISTANT COATINGS EXTERIOR INSULATION & FINISH SYSTEM FIRE-RESISTANT PENETRATIONS & JOINTS SMOKE CONTROL RETAINING WALL & SYSTEMS > 5 FEET SPECIAL INSPECTIONS FOR WIND RESISTANCE ☐ SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE

A. THE INSPECTION FREQUENCY INDICATED ON THE FOLLOWING INSPECTION TABLES ARE "C"

CONTINUOUS, "P" PERIODIC, & "O" RANDOM ON A DAILY BASIS. LEVEL A IS THE MINIMUM INSPECTION PROGRAM FOR EMPIRICALLY / PRESCRIPTIVELY DESIGNED MASONRY IN RISK CATEGORY I, II OR III STRUCTURES. LEVEL B IS THE MINIMUM INSPECTION PROGRAM FOR EMPIRICALLY / PRESCRIPTIVELY DESIGNED MASONRY IN RISK CATEGORY IV STRUCTURES AND ENGINEERED MASONRY IN RISK CATEGORY I, II OR III STRUCTURES. LEVEL C IS THE MINIMUM INSPECTION PROGRAM FOR ENGINEERED MASONRY IN RISK CATEGORY IV STRUCTURES. ENGINEERED MASONRY STRUCTURES ARE THOSE DESIGNED IN ACCORDANCE WITH PORTIONS OF THE TMS 402-13 / ACI 530-13/ASCE 5-13 OTHER THAN PART 4 OR APPENDIX A.

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

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

SEISMIC DESIGN CATEGORY: X 90-109 MPH ☐ 110-119 MPH ☐ >120 MPH BASIC WIND SPEED (V_{ASD}):

WIND EXPOSURE CATEGORY:

	WOOD CONSTRUC	TION			
	INODECTION TACK	TASK	FDFO	REFERENCE I	OR CRITERIA
	INSPECTION TASK	REQD	FREQ	STANDARD	NCBC
1.	FABRICATOR CERTIFICATION / VERIFICATION OF QUALITY CONTROL PROCEDURES FOR PREFABRICATED WOOD STRUCTURAL ELEMENTS AND ASSEMBLIES				
	a. VERIFY FABRICATOR QUALIFICATIONS	X	С		1704.2.5.1, 1705.5
	b. COLLECT CERTIFICATES OF COMPLIANCE FROM THE FABRICATOR AT COMPLETION OF FABRICATION	X	С		1704.5, 1705.5
2.	HIGH-LOAD DIAPHRAGMS				2306.2
	a. VERIFY THAT WOOD STRUCTURAL PANEL SHEATHING IS THE CORRECT GRADE AND THICKNESS	X	Р		1705.5.1
	b. VERIFY NOMINAL SIZE OF FRAMING MEMBERS AND BLOCKING AT ADJOINING PANEL EDGES	X	Р	AWC- SDPWS 4.2.7.1.2	1705.5.1
	c. NAIL AND OR STAPLE DIAMETER, LENGTH, QUANTITY AND SPACING COMPLY WITH THE CONTRACT DOCUMENTS	X	Р		1705.5.1
3.	FOR METAL-PLATE-CONNECTED TRUSSES CLEAR SPANNING 60 FEET OR MORE, VERIFY THAT BOTH TEMPORARY AND PERMANENT RESTRAINTS AND BRACES ARE INSTALLED IN ACCORDANCE WITH THE APPROVED TRUSS SUBMITTAL PACKAGE		Р		1705.5.2

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

	FIRE-RESISTANT PENETRATIONS AND JOINTS _A					
	INSPECTION TASK	TASK	EBEO	REFERENCE I	OR CRITERIA	
	INSPECTION TASK	REQD	FREQ	STANDARD	NCBC	
1.	INSPECT THROUGH-PENETRATION FIRESTOP SYSTEMS AT FIRE WALLS, FIRE BARRIERS, SMOKE BARRIERS AND FIRE PARTITION WALLS IN ACCORDANCE WITH ASTM E2174	X	Р		1705.17.1, 714.3.1.2	
2.	INSPECT PENETRATION FIRESTOP SYSTEMS AT PENETRATIONS THROUGH MEMBRANES THAT ARE PART OF A HORIZONTAL ASSEMBLY IN ACCORDANCE WITH ASTM E2174	X	Р		1705.17.1, 714.4.2	
3.	INSPECT FIRE-RESISTANT JOINT SYSTEMS IN ACCORDANCE WITH ASTM 2393	X	Р		1705.17.2, 715.3, 715.4	

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

		INODECTION TACK	TASK	FDFO	REFERENCE FO	OR CRITERIA
		INSPECTION TASK	REQD	FREQ	STANDARDA	NCBC
1.		PECT REINFORCEMENT, INCLUDING PRESTRESSING IDONS, AND VERIFY PLACEMENT	X	Р	ACI CH.20, 25.2, 25.3, 26.6.1-26.6.3	1908.4
2.	REII	NFORCING BAR WELDING:			AWS D1.4	
	a.	VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706 AND COLLECT REPORTS		Р	ACI 26.6.4	1704.5
	b.	INSPECT SINGLE-PASS FILLET WELDS ≤ 5/16"		Р	ACI 26.6.4	
	C.	INSPECT ALL WELDS OTHER THAN SINGLE-PASS FILLET WELDS ≤ 5/16"		С	ACI 26.6.4	
3.	CON	NCRETE ANCHORS:				
	a.	INSPECT ANCHORS CAST IN CONCRETE	X	Р	ACI 17.8.2	
	b.	INSPECT ADHESIVE ANCHORS INSTALLED IN HARDENED CONCRETE WITH HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS THAT RESIST SUSTAINED TENSION LOADS	X	С	ACI 17.8.2.4	
	C.	INSPECT ADHESIVE ANCHORS INSTALLED IN HARDENED CONCRETE WITH ORIENTATIONS DIFFERENT FROM ITEM 3.B	X	Р	ACI 17.8.2	
	d.	INSPECT MECHANICAL ANCHORS INSTALLED IN HARDENED CONCRETE	X	Р	ACI 17.8.2	
4.		LECT MIX DESIGNS AND VERIFY THE CORRECT MIX USED RING INSTALLATION	X	Р	ACI CH 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
5.	FOF TES	OR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS R STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT STS, AND DETERMINE THE TEMPERATURE OF THE NCRETE	X	С	ASTM C172, ASTM C31, ACI 26.4, 26.12	1908.10
6.		PECT CONCRETE AND SHOTCRETE PLACEMENT FOR OPER APPLICATION TECHNIQUES	X	С	ACI 26.5	1908.6, 1908.7, 1908.8
7.	SHC	LECT REPORTS OF PRECONSTRUCTION TESTS FOR DTCRETE WHEN PRECONSTRUCTION TESTS ARE QUIRED BY NCBC SECTION 1908.4	X	С		1704.5, 1908.5
8.		RIFY MAINTENANCE OF SPECIFIED CURING MPERATURE AND TECHNIQUES	X	Р	ACI 26.5.3-26.5.5	1908.9
9.	INSI	PECTIONS FOR PRESTRESSED CONCRETE				
	a.	OBSERVE APPLICATION OF PRESTRESSING FORCE		С	ACI 26.10	
	b.	INSPECT GROUTING OF BONDED PRESTRESSING TENDONS		С	ACI 26.10	
10.	TEN	RIFY CONCRETE STRENGTH PRIOR TO STRESSING OF PT IDONS AND PRIOR TO REMOVAL OF SHORES AND FORMS OM PT & MILD BEAMS AND STRUCTURAL SLABS		Р	ACI 26.11.2	
11.	INSI	PECT ERECTION OF PRECAST MEMBERS		Р	ACI 26.8	
12.		PECT FORMWORK FOR SHAPE, LOCATION AND ENSIONS OF THE CONCRETE MEMBER BEING FORMED	X	Р	ACI 26.11.1.2(B)	
13.	BY S	LECT MILL TEST REPORTS FOR ASTM A615 REBAR USED SFRS SPECIAL MOMENT FRAMES, SPECIAL STRUCTURAL LLS OR COUPLING BEAMS		С	ACI 20.2.2.5	1704.5

	SOILS					
TACK				REFERENCE F	EFERENCE FOR CRITERIA	
	INSPECTION TASK	REQD FREQ		STANDARD	NCBC	
1.	VERIFY MATERIALS BELOW MUSTOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	X	Р		1705.6	
2.	VERIFY EXCAVATIONS EXTEND TO PROPER DEPTH AND HAVE REACHED THE CORRECT SOIL MATERIAL	X	Р		1705.6	
3.	PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	X	Р		1705.6	
4.	VERIFY THAT MATERIALS USED, DENSITIES, LIFT THICKNESS AND PROCEDURES USED DURING PLACEMENT AND COMPACTION OF COMPACTED FILL ARE IN ACCORDANCE WITH THE APPROVED SOILS REPORT AND THE CONSTRUCTION DOCUMENTS	X	С		1705.6	
5.	PRIOR TO PLACEMENT OF COMPACTED FILL, VERIFY THAT THE SUBGRADE HAS BEEN PREPARED IN ACCORDANCE WITH THE APPROVED SOILS REPORT AND THE CONSTRUCTION DOCUMENTS	X	Р		1705.6	

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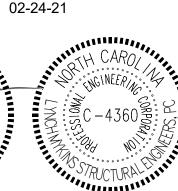
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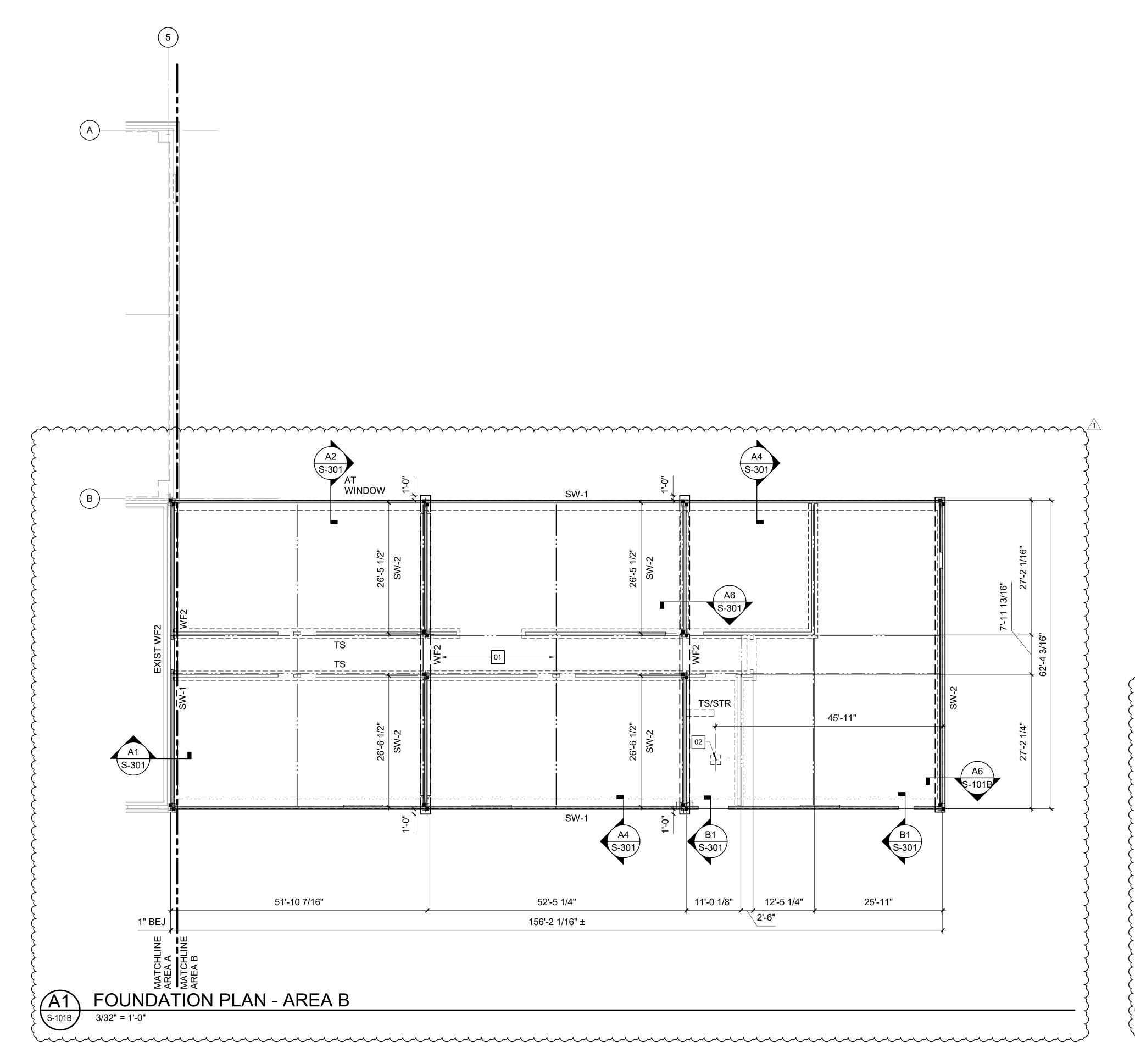
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PROJECT NO.

SPECIAL **INSPECTIONS**

SHEET NUMBER

WALL FOOTING SCHEDULE							
	SIZE		SIZE REINFORCING		NFORCING		
MARK	WIDTH	DEPTH	CONTINUOUS	TRANSVERSE	REMARKS		
WF2	2' - 0"	1'-0"	3 - #5 BOT	(#5 AT 16" OC BOT)	-		



FOUNDATION / SLAB-ON-GRADE PLAN NOTES

REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS TO)

NONBEARING WALL AND OPENINGS.

2. UNLESS OTHERWISE NOTED, ALL ELEVATIONS ARE BASED ON A FINISHED FIRST FLOOR REFERENCE OF 100'-0". ACTUAL FINISHED FLOOR ELEVATION IS 334.00'. REFER TO ARCHITECTURAL DRAWINGS FOR FINISHED FLOOR MATERIAL.

TOP OF ALL FOOTINGS SHALL BE AT ELEVATION 98'-8" UNLESS

OTHERWISE NOTED.

UTILITY LOCATIONS ARE NOT SHOWN ON PLAN. THE CONTRACTOR MUST COORDINATE THE LOCATIONS, SIZES, AND INVERTS OF UTILITIES. AT LOCATIONS WHERE UTILITIES PASS BELOW THE TOP OF FOOTING ELEVATION, STEP THE TOP OF FOOTING DOWN ON EACH SIDE PER THE "STEPPED FOOTING DETAIL" AND SLEEVE THE UTILITY THROUGH THE FOUNDATION WALL. THE CONTRACTOR MAY, AT HIS OPTION, SLEEVE THE UTILITY THROUGH THE FOUNDATION PER THE "UTILITY SLEEVE DETAIL."
UNLESS OTHERWISE INDICATED, EXTEND WALL FOOTINGS A MINIMUM OF 6 INCHES BEYOND ENDS OF WALLS.

SLAB-ON-GRADE JOINTS MUST BE SAWED CONTROL JOINTS OR KEYED CONSTRUCTION JOINTS UNLESS SPECIFICALLY DENOTED TO BE KEYED ? CONSTRUCTION JOINTS. CONTRACTOR SHALL COORDINATE ALL SLAB JOINTS WITH JOINTS IN BONDED FLOOR FINISHES. REFER TO ARCHITECTURAL DRAWINGS FOR FLOOR FINISH JOINT LOCATIONS. PLACE 1 - #4 x 3'-0" IN MIDDLE OF SLAB AT REENTRANT CORNERS WHERE

A SLAB CONTROL JOINT DOES NOT OCCUR. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LIMITS OF SLAB

DEPRESSIONS. FLOOR DRAINS AND FLOOR SINKS ARE NOT SHOWN ON PLAN. REFER TO PLUMBING DRAWINGS FOR LOCATIONS.

REFER TO CIVIL DRAWINGS FOR EXTERIOR CONCRETE SLABS AND PAVING.

KEY NOTES

4" CONCRETE SLAB-ON-GRADE OVER VAPOR RETARDER AND 4" DEPTH OF POROUS FILL UNLESS OTHERWISE INDICATED. REINFORCE SLAB WITH 6x6 W2.9xW2.9 WELDED WIRE REINFORCING PLACED 1" CLEAR BELOW TOP OF SLAB. MAINTAIN REINFORCEMENT IN POSITION ON BOLSTERS, CHAIRS OR SPACERS DURING CONCRETE PLACEMENT.

(02 4x4 WOOD POST WITH SIMPSON POST CAP AND BASE.)

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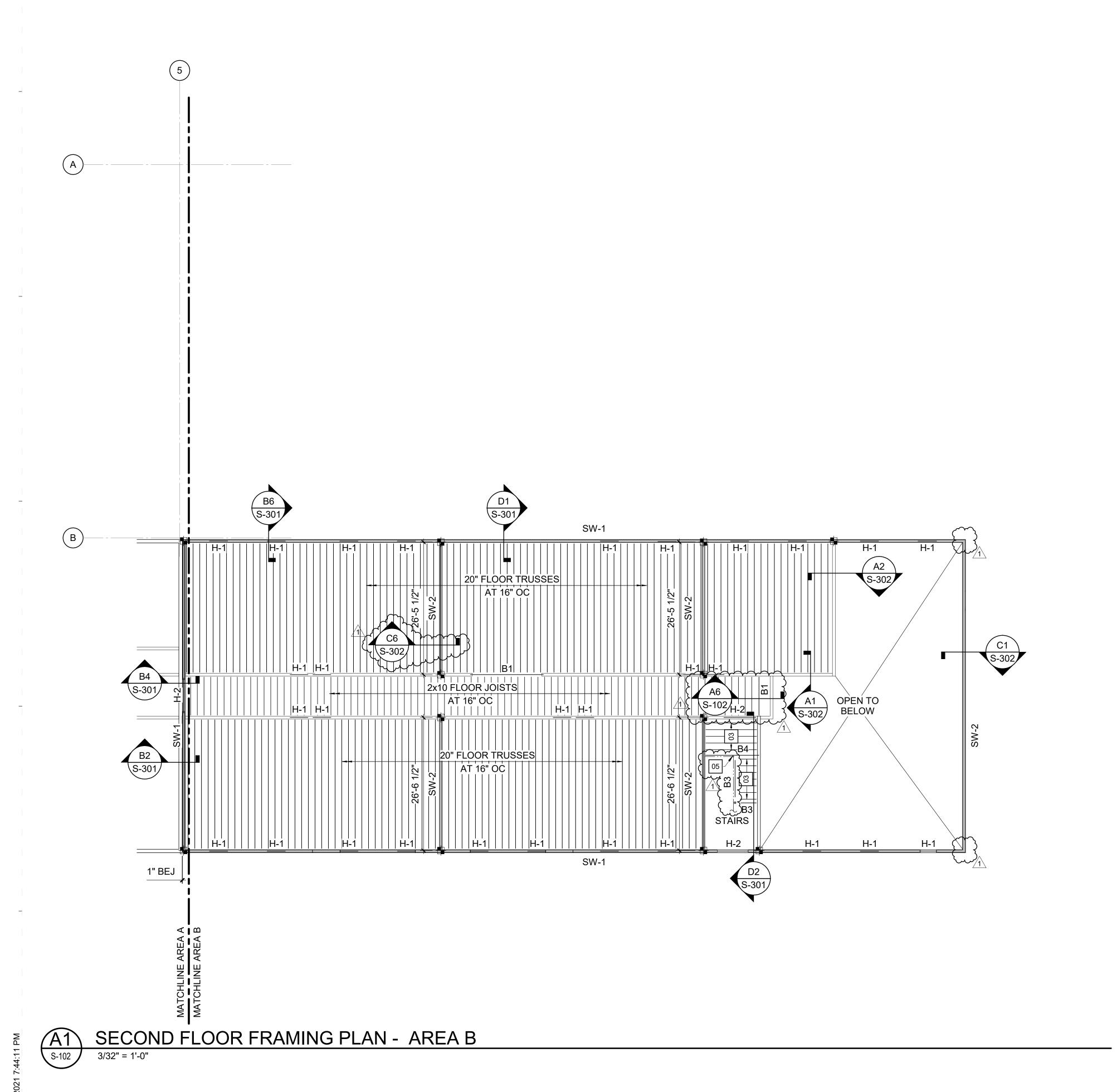
FOUNDATION PLAN -AREA B

20408.000

SHEET NUMBER

S-101B

SHEATHING - REF PLAN –2x6 STUDS -REF PLAN SIMPSON THD62800HMG SCREW ANCHOR AT 24" OC AT CENTER OF SILL PL-PT 2x6 SILL PL-CONC SLAB - REF REF CIVIL DWGS-CONC FTG -REF PLAN-<u>A6</u> SECTION



FRAMING PLAN NOTES

REFER TO FOUNDATION PLAN AND ARCHITECTURAL DRAWINGS FOR

DIMENSIONS NOT SHOWN.

TOP OF FINISHED FLOOR ELEVATION MUST BE: SECOND FLOOR

\[
\] ELEVATION = +112'-0.

FLOOR JOISTS MUST BE EQUALLY SPACED NOT TO EXCEED 1'-4" OC TO

SUPPORT FLOOR SHEATHING.

COORDINATE AND VERIFY ALL MEMBER LOCATIONS, DIMENSIONS, WEIGHTS, OPENING SIZES, AND CURB DIMENSIONS FOR ALL MECHANICAL EQUIPMENT WITH THE ACTUAL EQUIPMENT FURNISHED. INCLUD THIS INFORMATION ON THE JOIST AND STRUCTURAL STEEL SHOP DRAWINGS.

5 ALL WALLS ARE 2x6 STUDS AT 16" OC, UNLESS OTHERWISE NOTED

6. REFERENCE GENERAL NOTES FOR FLOOR AND ROOF SHEATHING REQUIREMENTS. FLOOR SHEATHING TO RECEIVE 1-1/2" GYPCRETE TOPPING.

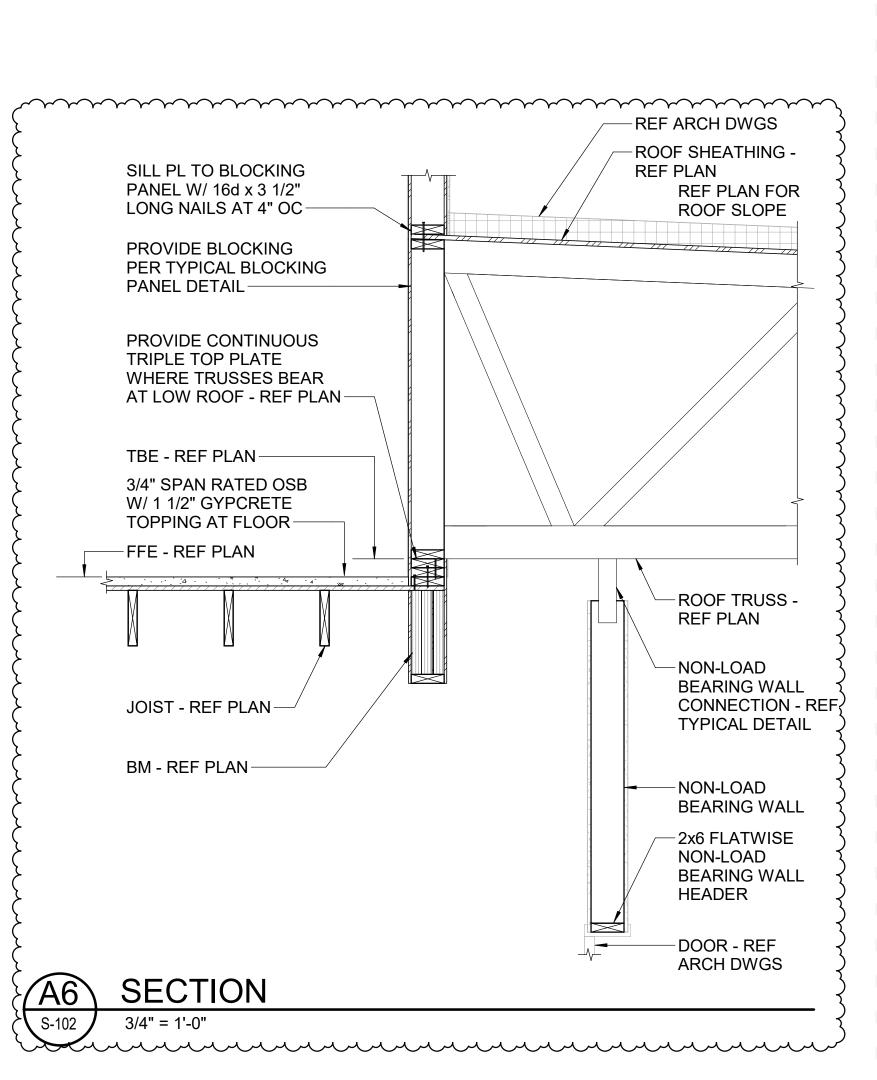
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# **KEY NOTES**

2x12 FLOOR JOISTS AT 16" OC.

REFERENCE ARCHITECTURAL DRAWINGS FOR GUARDRAIL SUPPORT TO

BEAMS AND STRINGERS.



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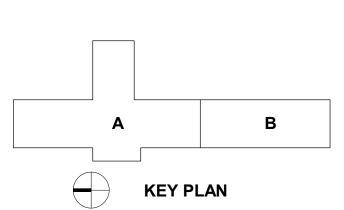
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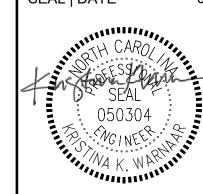
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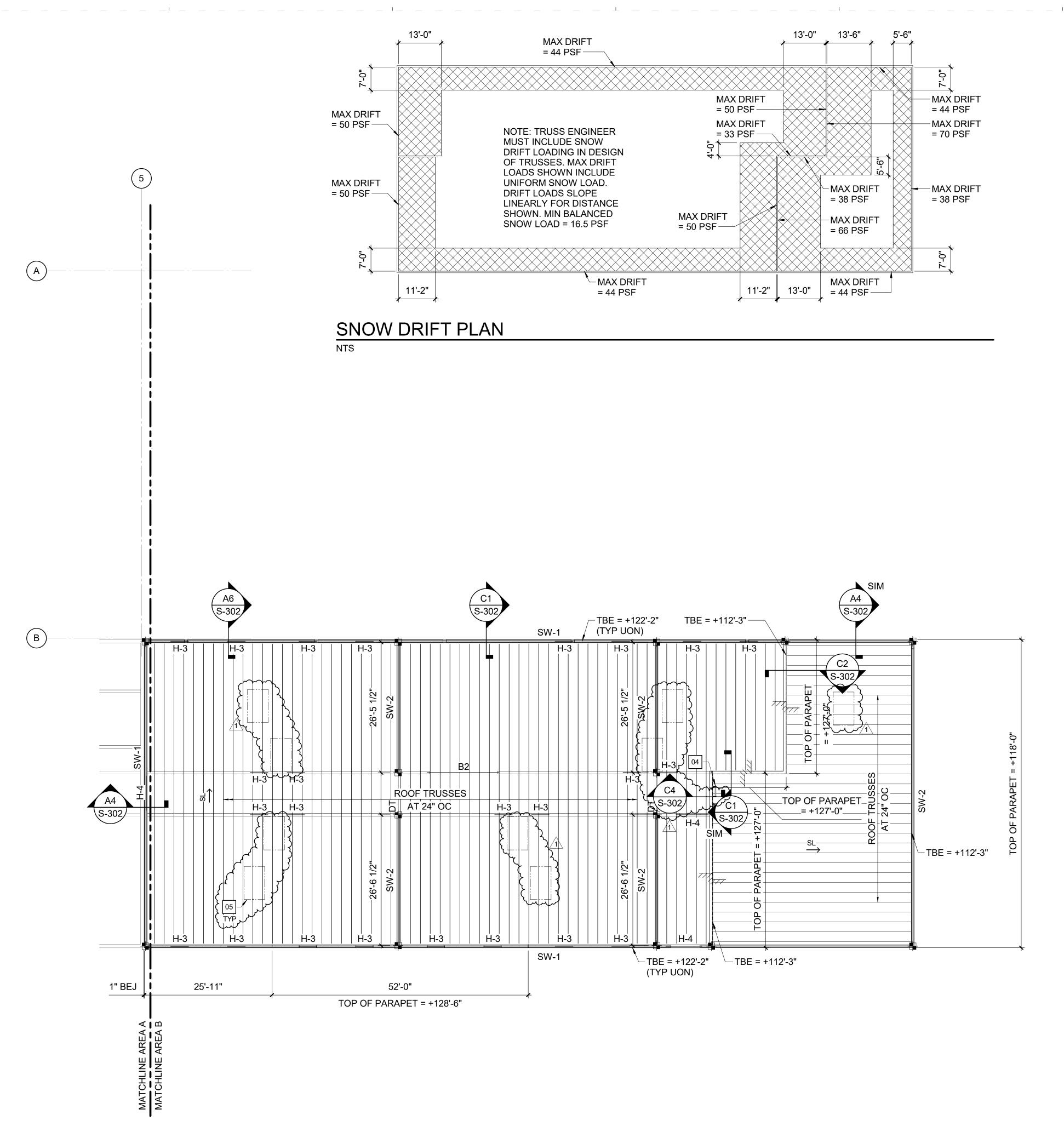
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SHEET TITLE SECOND FLOOR

FRAMING PLAN -AREA B

SHEET NUMBER



ROOF FRAMING PLAN - AREA B
3/32" = 1'-0"

**ROOF FRAMING PLAN NOTES** 

REFER TO FOUNDATION PLAN AND ARCHITECTURAL DRAWINGS
FOR DIMENSIONS NOT SHOWN.

TRUSS BEARING ELEVATIONS ARE SHOWN ON PLAN.
INTERMEDIATE ELEVATIONS MUST BE STRAIGHT LINES BETWEEN
GIVEN ELEVATIONS. INTERPOLATE AS REQUIRED FOR
INTERMEDIATE BEARING ELEVATIONS, UNLESS OTHERWISE
NOTED.

3. TOP OF PARAPET = +127'-0" UNLESS OTHERWISE NOTED.

4. COORDINATE AND VERIFY ALL MEMBER LOCATIONS, DIMENSION WEIGHTS, OPENING SIZES, AND CURB DIMENSIONS FOR ALL MECHANICAL EQUIPMENT WITH THE ACTUAL EQUIPMENT FURNISHED. INCLUDE THIS INFORMATION ON THE JOIST AND STRUCTURAL STEEL SHOP DRAWINGS.

5. PREFABRICATED WOOD TRUSSES AND FRAMING SHALL BE EQUALLY SPACED NOT TO EXCEED 24" OC TO SUPPORT ROOF SHEATHING.

SHEATHING.

REFERENCE GENERAL NOTES FOR FLOOR AND ROOF SHEATHING
REQUIREMENTS. FLOOR SHEATHING TO RECEIVE 1-1/2" GYPCRETES
TOPPING.

PROVIDE BLOCKING ABOVE AND BELOW SCUPPERS BETWEEN PARAPET STUDS. REFERENCE ARCHITECTURAL DRAWINGS FOR

# **KEY NOTES**

ACCESS LADDER. REFERENCE ARCHITECTURAL DRAWINGS.

05 REFERENCE ARCHITECTURAL DRAWINGS FOR GUARDRAIL SUPPORT TO BEAMS AND STRINGERS.

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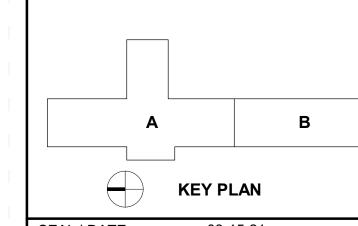
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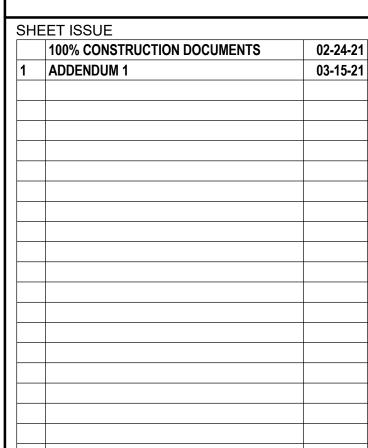
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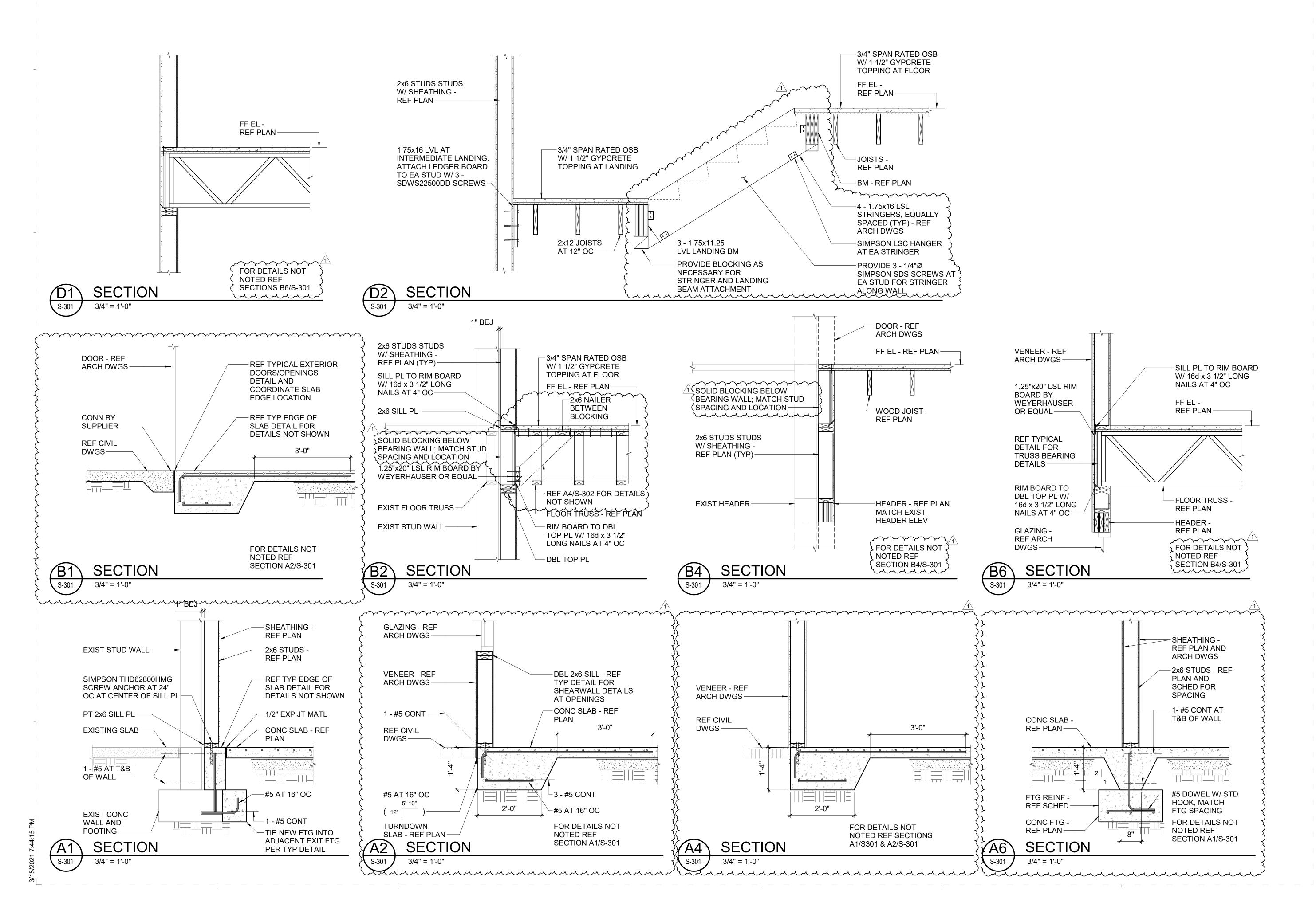
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PROJECT NO.

ROOF FRAMING

PLAN - AREA B

SHEET NUMBER



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| 1 | ADDENDUM 1                  | 03-15-2  |
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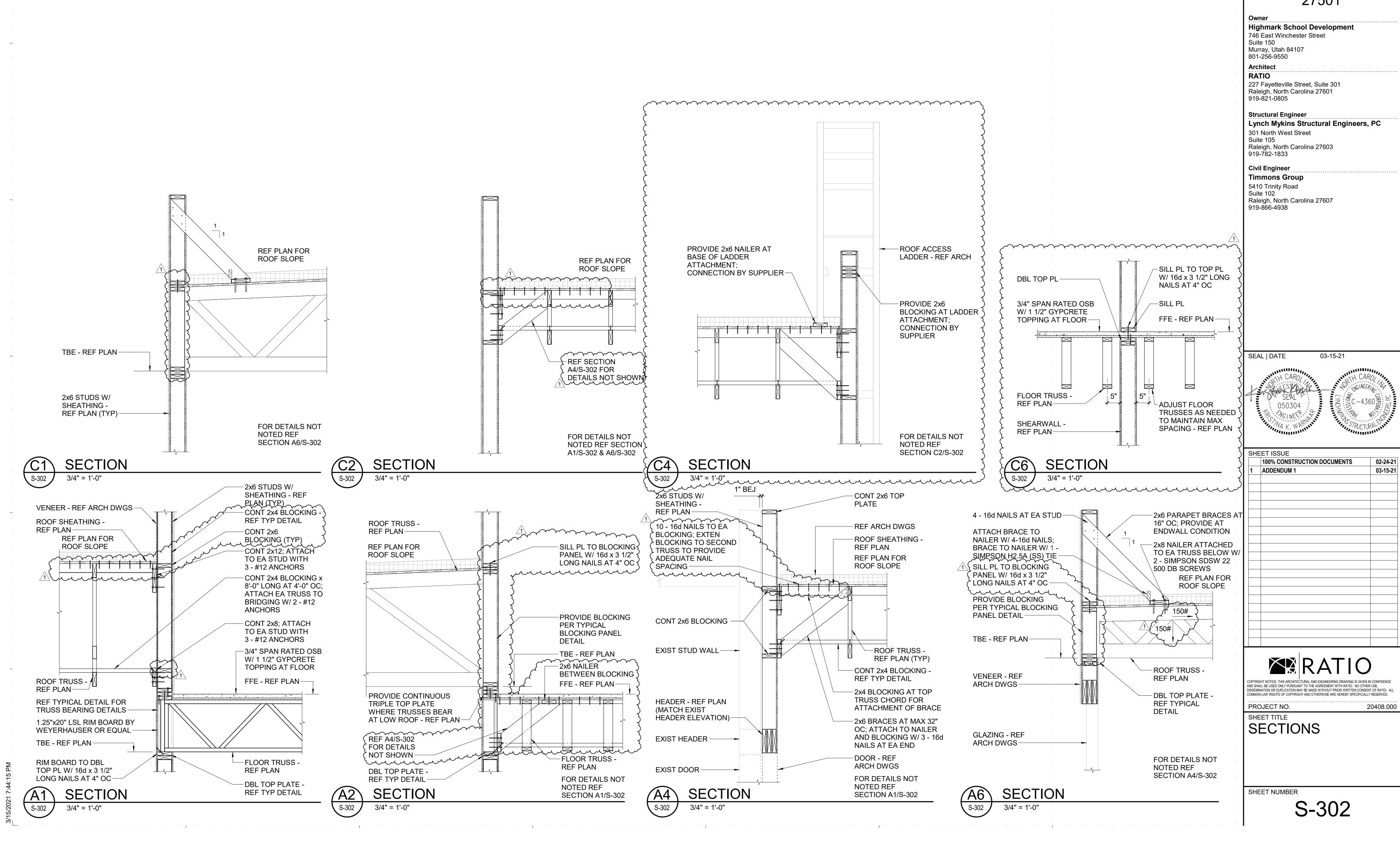
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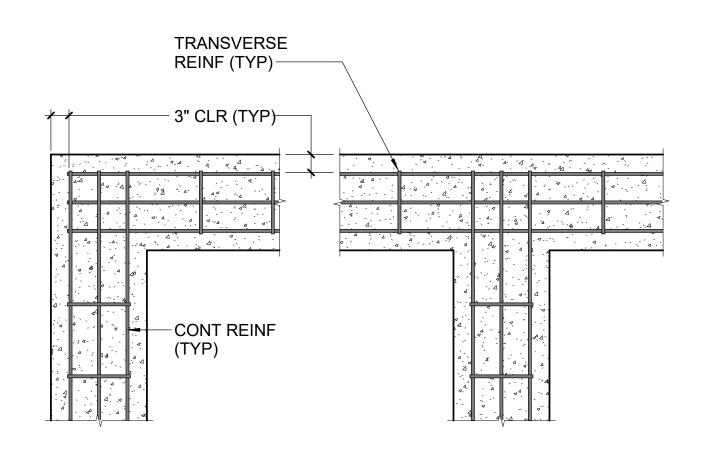
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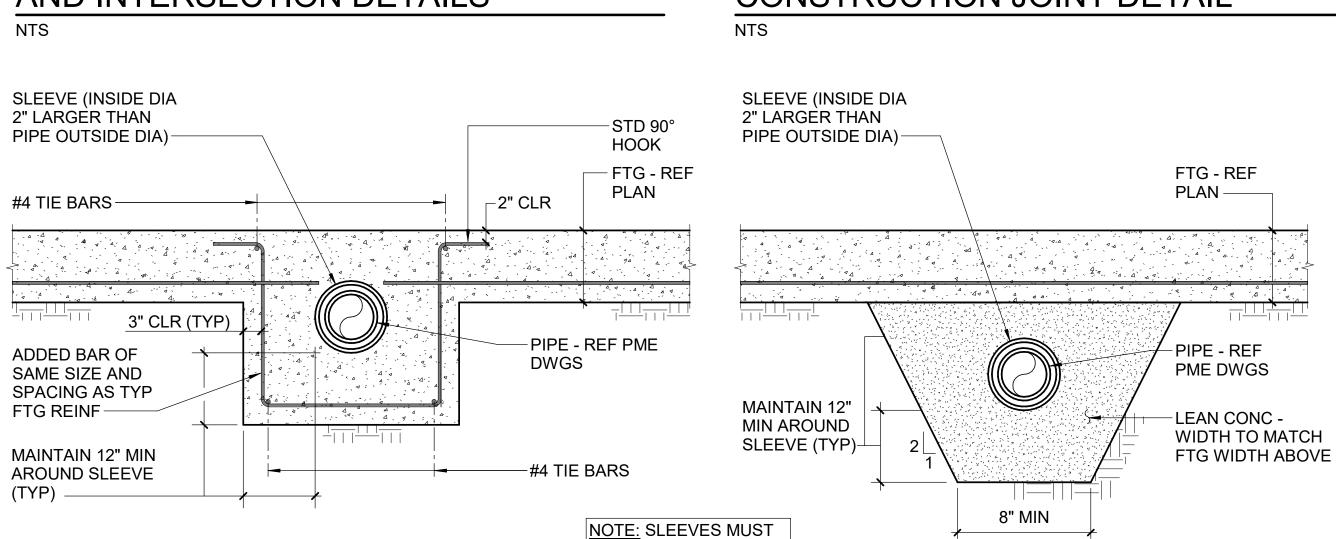
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# TYPICAL WALL FOOTING CORNER AND INTERSECTION DETAILS

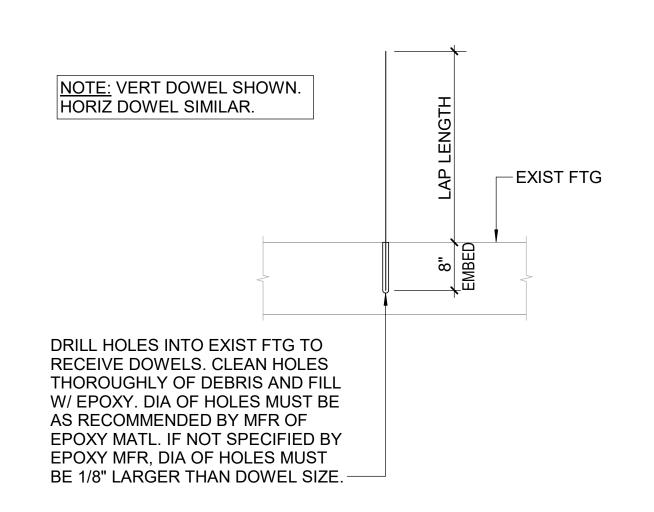
NTS



NOT BE LOCATED IN OR

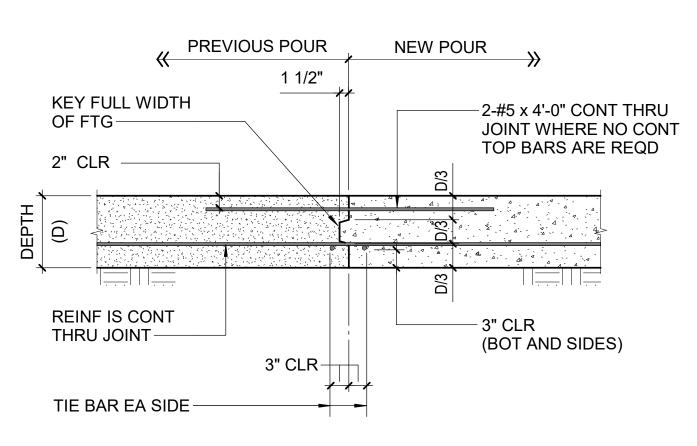
UNDER COL FTGS.

# TYPICAL PIPE SLEEVE DETAILS



THROUGH FOOTING

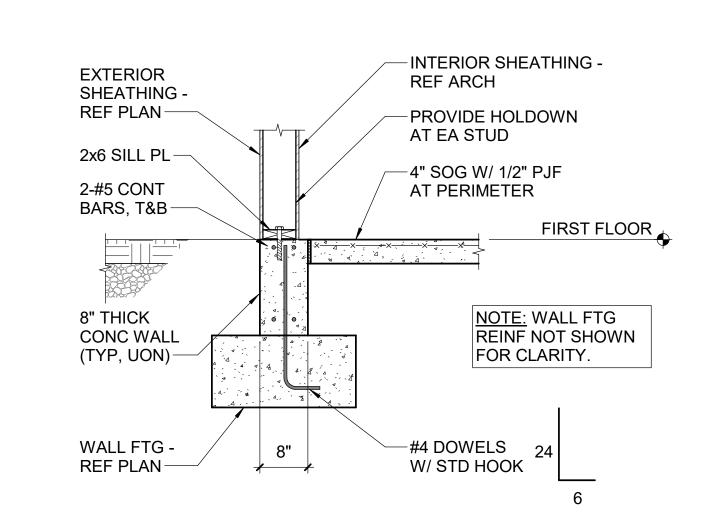
# TYPICAL EPOXY DOWEL DETAIL



# TYPICAL WALL FOOTING

CONSTRUCTION JOINT DETAIL

**BELOW FOOTING** 



2'-0" MIN

LARGER OF

D OR 1'-4"

0" (TYP)

LAP 44 x BAR

TYPICAL STEPPED FOOTING DETAIL

– 2" CLR

STD 90°

-MATCH CONT

(BOT AND SIDES)

FTG REINF

-3" CLR

(DENOTED SF ON PLAN)

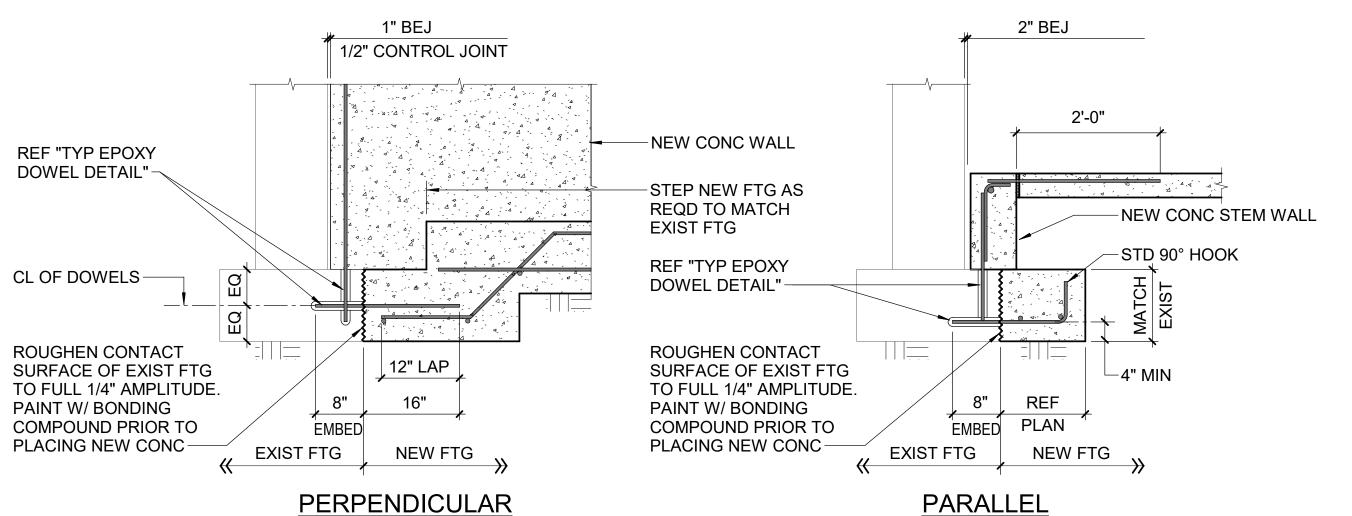
HOOK (TYP)

# TYPICAL EDGE OF SLAB

<u>O</u>

TRANSVERSE REINF

**CONT FTG REINF** 



TYPICAL DETAIL AT INTERSECTION OF NEW AND EXISTING FOOTINGS

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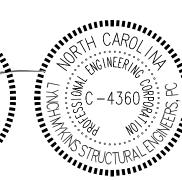
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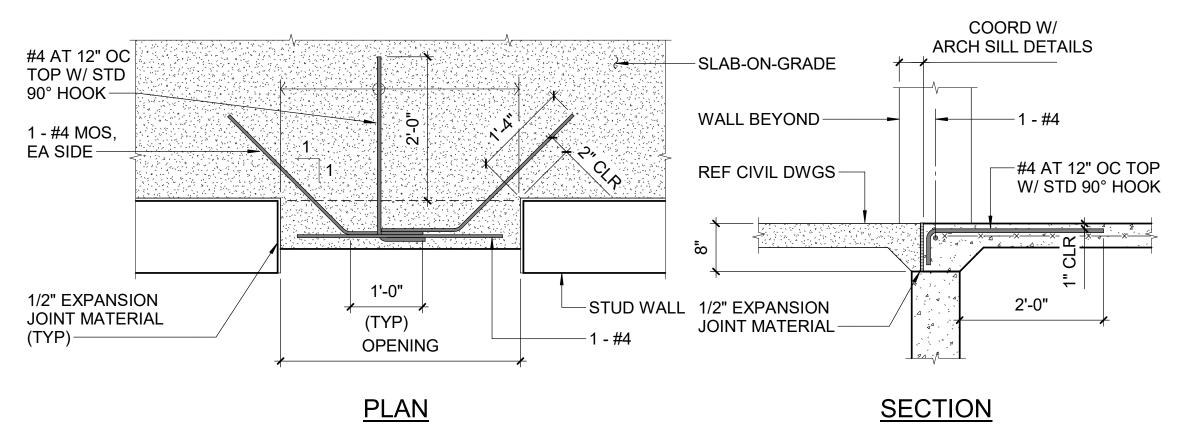
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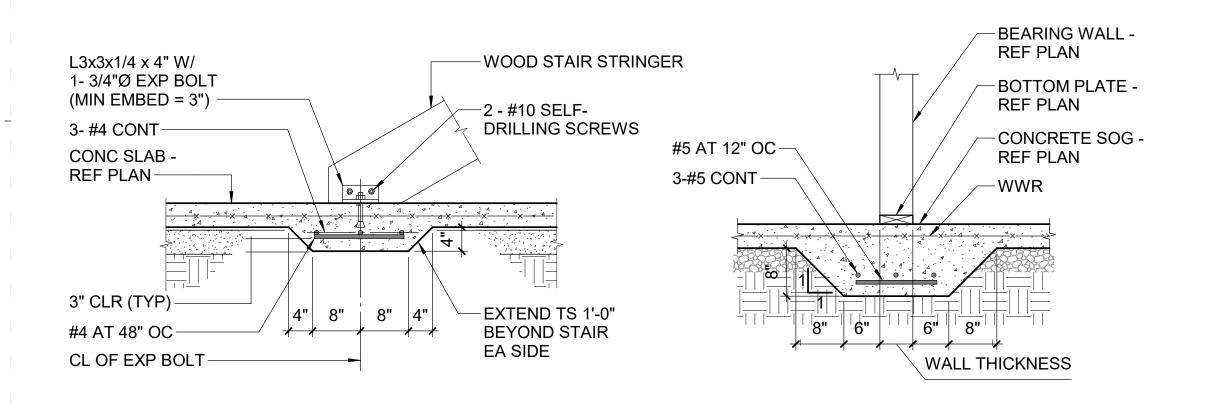
TYPICAL DETAILS

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# TYPICAL EXTERIOR DOORS / OPENINGS DETAIL

NTS

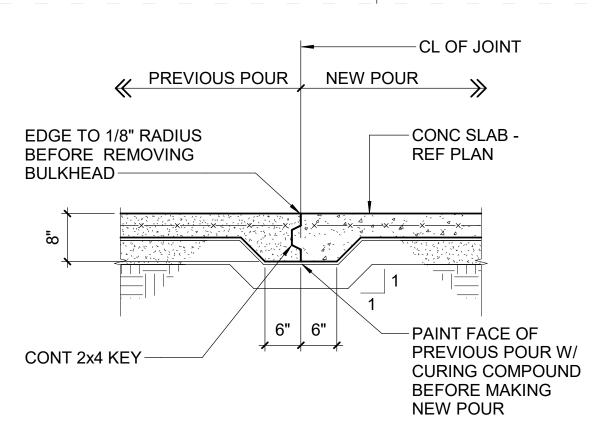


3/4" = 1'-0"

# TYPICAL THICKENED SLAB AT STAIR STRINGER DETAIL

NTS (DENOTED TS/STR ON PLAN)

TYPICAL THICKENED SLAB AT INTERIOR BEARING WALLS

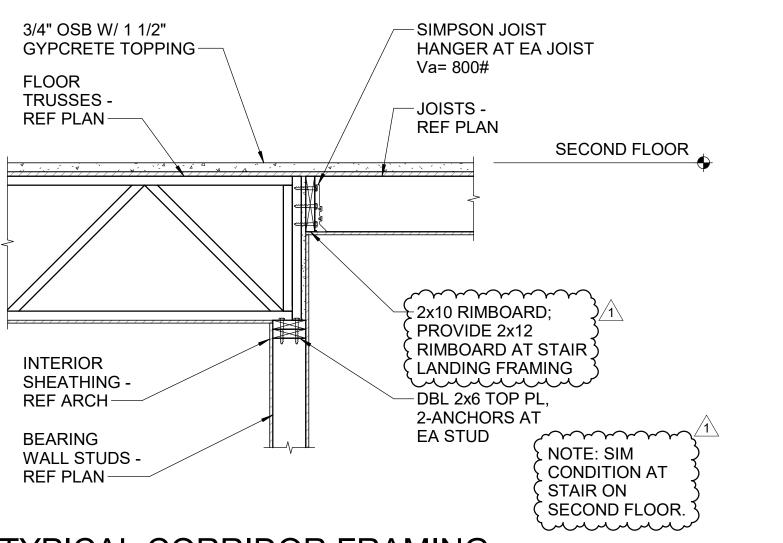


# TYPICAL KEYED CONSTRUCTION JOINT DETAIL

TYPICAL SAWED JOINT DETAIL

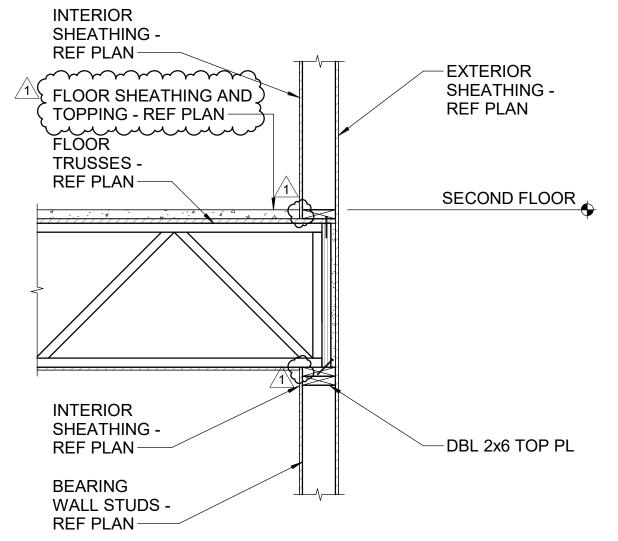
NTS (DENOTED SJ ON PLAN)

CUT EVERY OTHER WIRE AT JOINT——



(DENOTED KCJ ON PLAN)

TYPICAL CORRIDOR FRAMING



-CL OF JOINT

-CONC SLAB -REF PLAN

\_1/8" JOINT

t = SLAB

─t/4 DEEP

THICKNESS-

TYPICAL TRUSS BEARING

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919-866-4938

**Timmons Group** 

5410 Trinity Road Suite 102

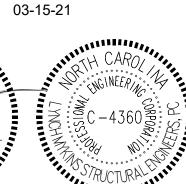
**Structural Engineer** 

301 North West Street

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

Raleigh, North Carolina 27607

RATIO



|   | 100% CONSTRUCTION DOCUMENTS | 02-24-21 |
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| 1 | ADDENDUM 1                  | 03-15-21 |
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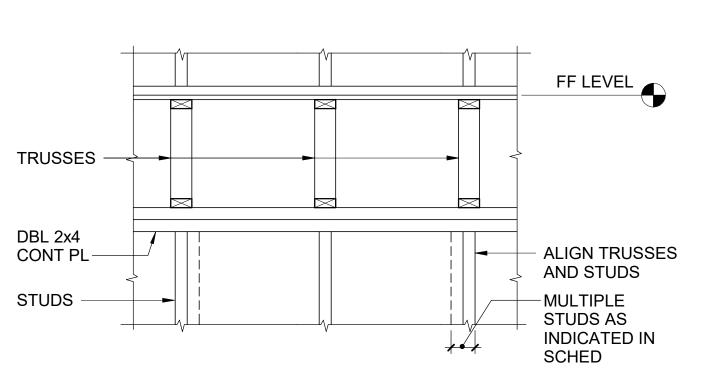
PROJECT NO.

TYPICAL DETAILS

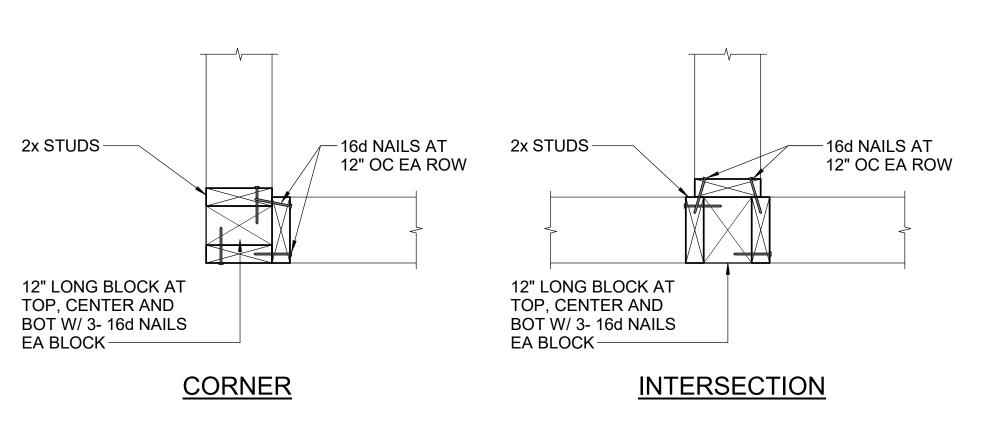
HEET NUMBER

S-502

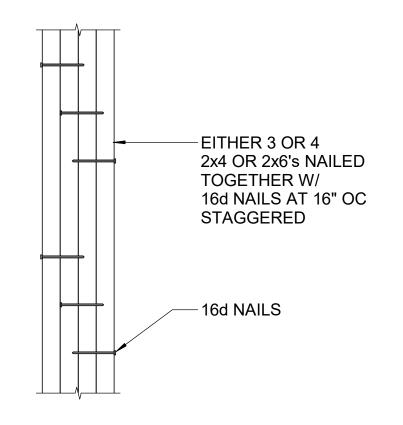
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TYPICAL LOAD BEARING WALL DETAIL NTS



TYPICAL WALL CORNERS AND INTERSECTIONS NTS

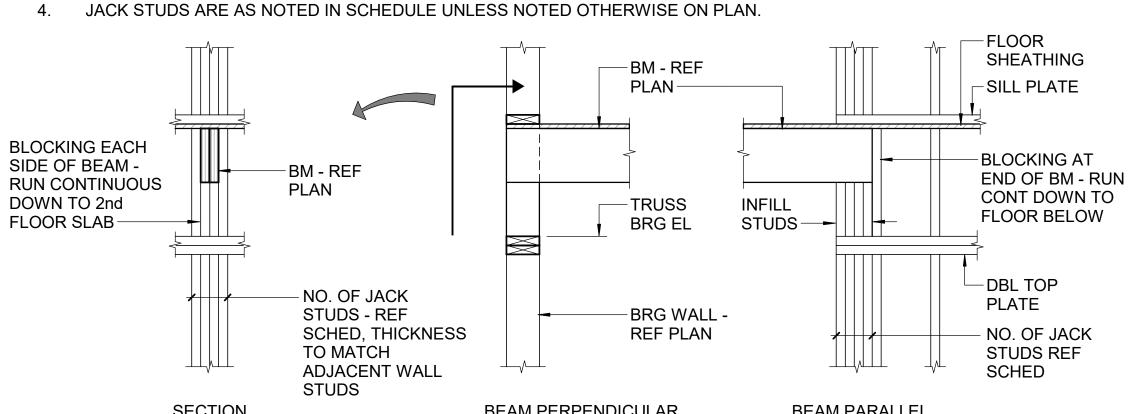


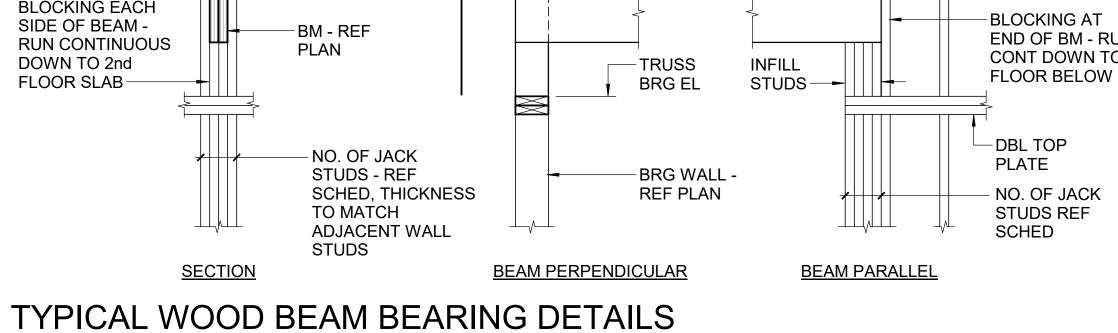
TYPICAL BUILT-UP COLUMN NAILING PATTERN DETAIL

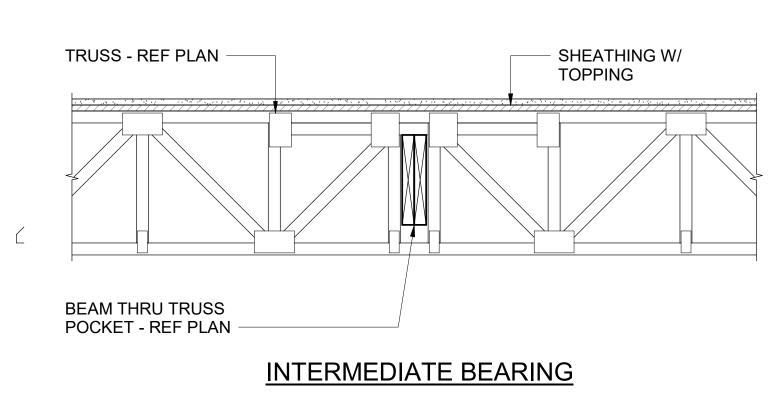
NTS

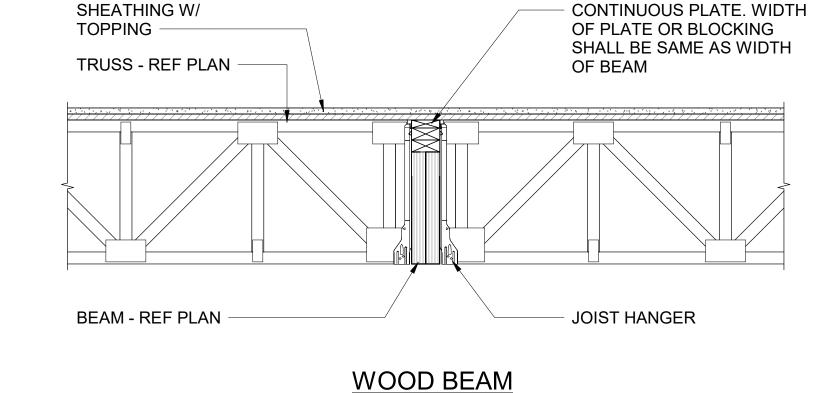
# NOTES:

- 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.



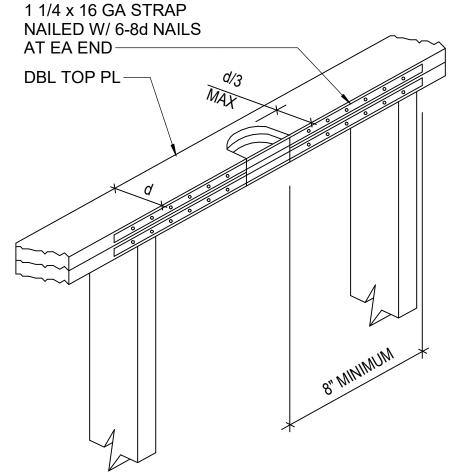






# TYPICAL TRUSS TO BEAM CONNECTION DETAILS

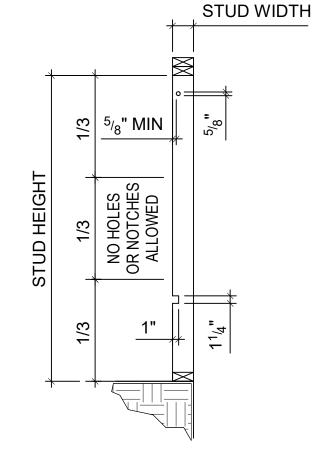
AT EA PL PROVIDE



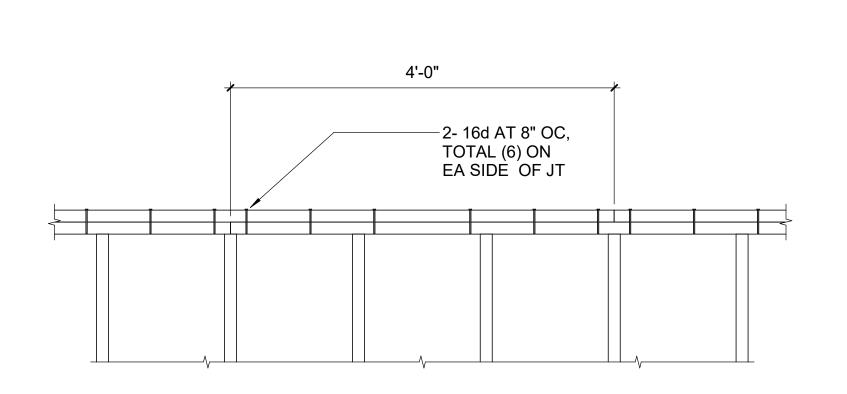
AT DOUBLE PLATE

| NOTCH AND HOLE<br>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" |  |

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

# ALLOWABLE PENETRATIONS IN LIGHT FRAMED 2x LUMBER

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

**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

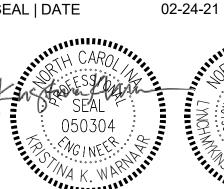
**Structural Engineer** 

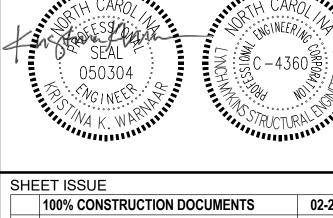
Lynch Mykins Structural Engineers, PC 301 North West Street Suite 105 Raleigh, North Carolina 27603 919-782-1833

Civil Engineer **Timmons Group** 

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

SEAL | DATE





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TYPICAL DETAILS

|      | SHEAR WALL SCHEDULE |                                 |                                |                          |  |  |
|------|---------------------|---------------------------------|--------------------------------|--------------------------|--|--|
| TYPE | FLOOR               | COMMON WIRE<br>NAILS - 8d (TYP) | CHORD STUDS<br>NO. 2 SPF (TYP) | HOLDOWN                  |  |  |
|      |                     | SPACING<br>EDGE / FIELD         | 6" STUD<br>WALL ENDS           | HOLDOWN                  |  |  |
| CWA  | ROOF                | 6" / 12"                        | 2                              | 2 - HD3BDF               |  |  |
| SWI  | 2                   | 6"/ 12"                         | 2                              | 1 - HD3BDF               |  |  |
| CWA  | ROOF                | 6" / 12"                        | 3                              | 1 - HD7BDF               |  |  |
| 3001 | 2                   | 4"/ 12"                         | 3                              | 1 - HD3BDF               |  |  |
| SW1  | 2<br>ROOF           | 6" / 12"                        | 3                              | 1 - HD3BDF<br>1 - HD7BDF |  |  |

 $\gamma$ 

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

BLOCKING ON THE FLAT AT HORIZONTAL JOINTS. PROVIDE INDICATED NUMBER OF HOLDOWNS AT EACH CHORD STUD, UON.

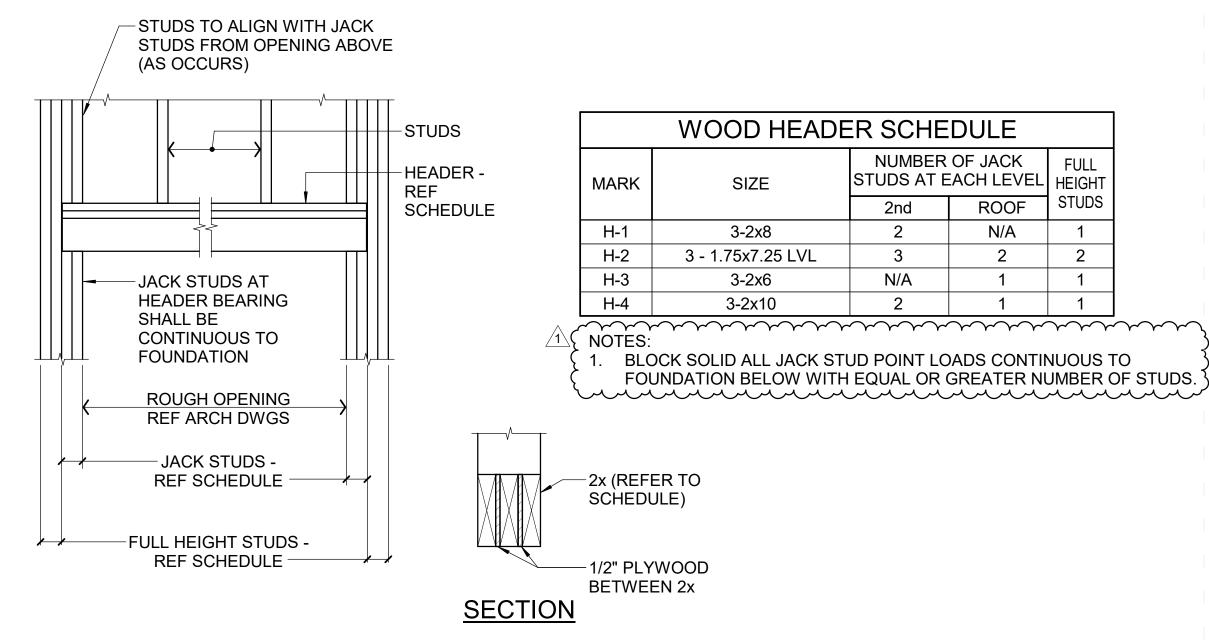
| CHORD - REF SCHED EQ EQ                                    | CL OF FIRST 1/2"Ø<br>ANCHOR ROD                      |
|------------------------------------------------------------|------------------------------------------------------|
| EDGE OF OPNG OR CORNER                                     | HOLDOWN<br>ANCHOR - REF SCHED                        |
| THRU BOLTS W/<br>WASHERS (TYP)                             | SHEAR WALL - REF<br>SCHED                            |
| ADDITIONAL TOP REINF AT HOLDOWN ANCHORS - REF              | 2- #5 DOWELS W/ 90°<br>HOOKS EA END AT EA<br>HOLDOWN |
| PLAN                                                       | CONT PLATE                                           |
|                                                            | 1- #4 CONT W/ 90°<br>HOOK AT END                     |
|                                                            |                                                      |
| { POST-INTALLED   ANCHOR W/ EPOXY W/ } (MIN EMBED PER MFR) | FDN - REF PLAN                                       |
| TYPICAL HOLDOWN ANCHOR D                                   | ETAIL                                                |

| WOOD BEAM SCHEDULE |                   |                      |                |       |  |
|--------------------|-------------------|----------------------|----------------|-------|--|
| MARK               | SIZE              | NUMBER<br>STUDS AT E | FULL<br>HEIGH1 |       |  |
|                    |                   | 2nd                  | ROOF           | STUDS |  |
| B1                 | 3 - 1.75x14 LVL   | 5                    | N/A            | 2     |  |
| B2                 | 3 - 1.75x9.25 LVL | N/A                  | 3              | 2     |  |
| В3                 | 3-2x12            | N/A                  | N/A            | N/A   |  |
| B4                 | 4-2x12            | 2                    | N/A            | 1     |  |

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

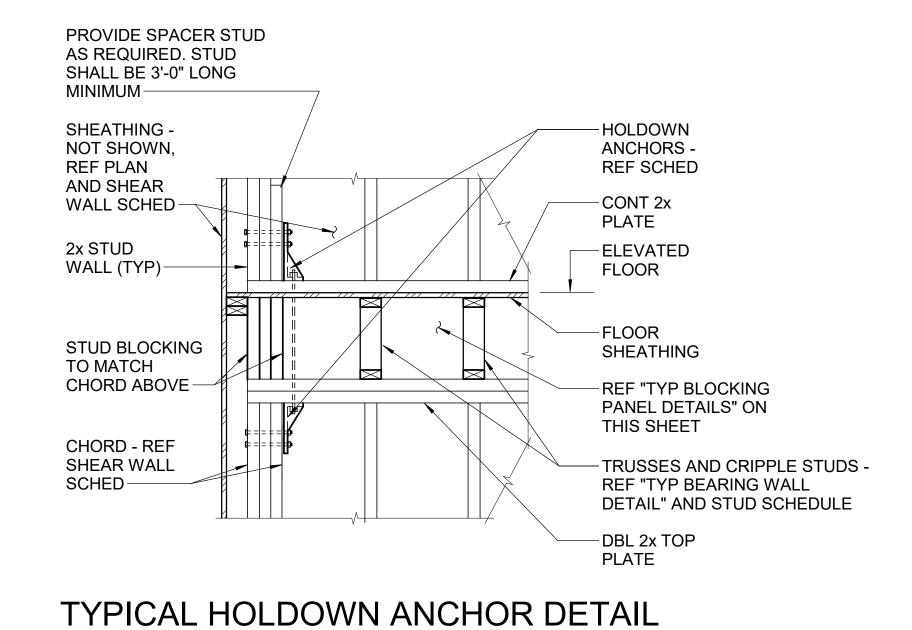
#### NOTES:

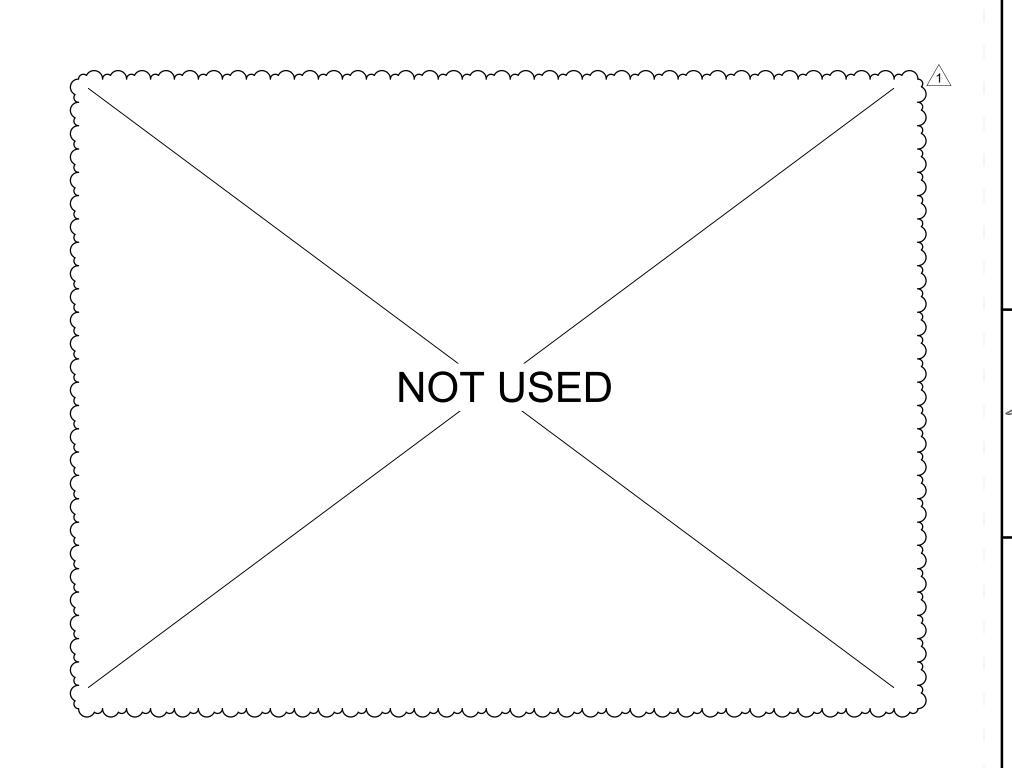
- AT CORNERS OF 2 SHEAR WALLS, OFFSET CHORDS AND HOLDOWNS WITHOUT REDUCING SHEAR WALL LENGTH.
- PROVIDE CHORD STUDS AT WALL ENDS. HOLDOWN ANCHORS ARE BASED ON THE STANDARD PRODUCTS OF SIMPSON STRONG-TIE COMPANY, INC. INSTALLATION MUST CONFORM TO THE RECOMMENDED DETAILS OF THE MANUFACTURER. ALTERNATIVE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



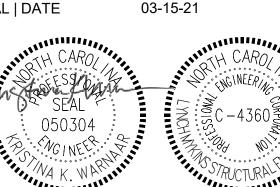
# TYPICAL FRAMED OPENING DETAIL AND SCHEDULE

NTS





SEAL | DATE



Carolina Charter

Academy Exp.

8529 Highway 55 Angier, North Carolina

27501

**Highmark School Development** 

746 East Winchester Street

227 Fayetteville Street, Suite 301

**Lynch Mykins Structural Engineers, PC** 

Raleigh, North Carolina 27601

Raleigh, North Carolina 27603

Raleigh, North Carolina 27607

Murray, Utah 84107

Owner

Suite 150

**Architect** 

**RATIO** 

801-256-9550

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Suite 105

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Civil Engineer

919-866-4938

Suite 102

**Timmons Group** 

5410 Trinity Road

**Structural Engineer** 

301 North West Street

| SHI | EET ISSUE                   |         |
|-----|-----------------------------|---------|
|     | 100% CONSTRUCTION DOCUMENTS | 02-24-2 |
| 1   | ADDENDUM 1                  | 03-15-2 |
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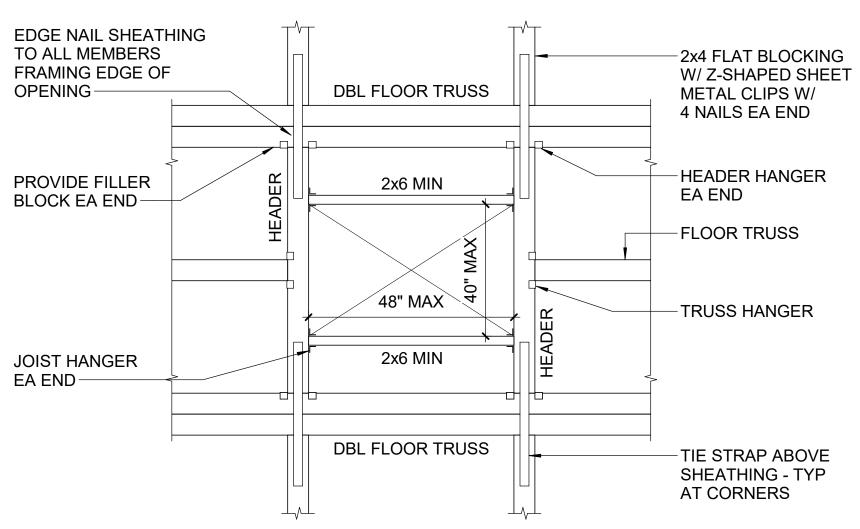
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TYPICAL DETAILS

S-504

| CHORD - RE                                                | EF SCHED EQ EQ | CL OF FIRST 1/2"Ø ANCHOR ROD HOLDOWN                 |
|-----------------------------------------------------------|----------------|------------------------------------------------------|
| EDGE OF OPNG OR CORNER——————————————————————————————————— |                | ANCHOR - REF SCHED                                   |
| THRU BOLTS W/<br>WASHERS (TYP)                            |                | SHEAR WALL - REF<br>SCHED                            |
| ADDITIONAL TOP REINF AT HOLDOWN ANCHORS - REF             | Y Y            | 2- #5 DOWELS W/ 90°<br>HOOKS EA END AT EA<br>HOLDOWN |
| PLAN                                                      |                | CONT PLATE                                           |
|                                                           |                | 1- #4 CONT W/ 90°<br>HOOK AT END                     |
|                                                           |                |                                                      |
| 1                                                         |                |                                                      |
| (POST-INTALLED (ANCHOR W/ EPOXY W/ ) (MIN EMBED PER MFR   |                | FDN - REF PLAN                                       |

NTS



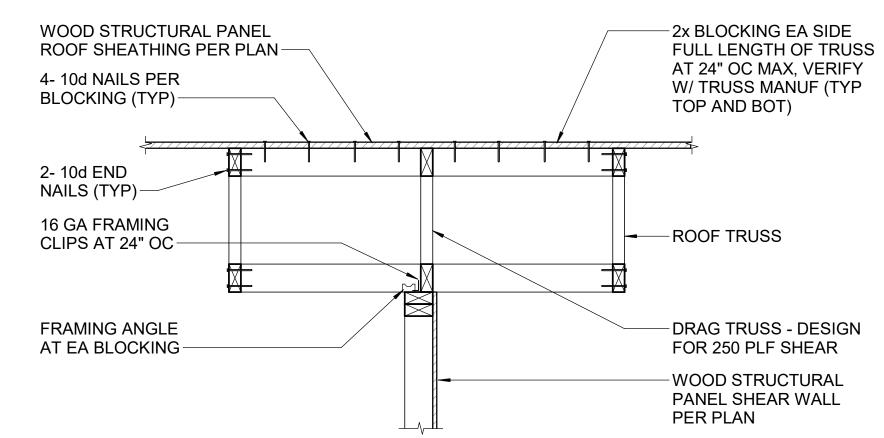
# TYPICAL SHAFT OPENING AT TRUSS OR JOIST DETAIL

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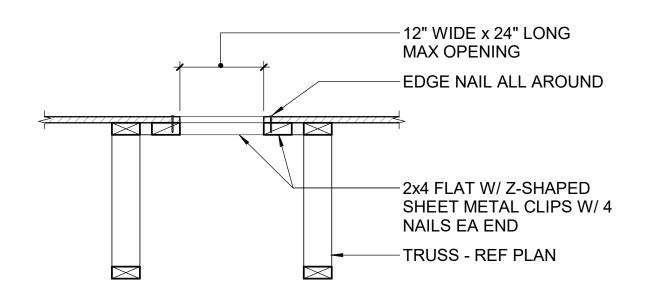
NAIL ROOF SHEATHING TO BLOCKING PANEL AS A PANEL EDGE PER REQUIREMENT OF "TYP - 560 LBS)/<sub>1</sub> ROOF SHEARWALL / DIAPHRAGM DETAIL"-BLOCKING PANEL -PLYWOOD SHEATHING TOENAIL PANEL TO TRUSS W/ 12d NAILS AT 6" OC  $\sim\sim\sim\sim\sim\sim$ FRAMING > 📖 ANCHOR (TYP) 280 LBS←<u>∴</u> \_\_\_\_ 2- 2x6 BLOCKING W/ 3- 16d NAILS EA END--DBL PLATE STUD BELOW IS STUD WALL OFFSET FROM TOE NAIL PANEL TO TOP TRUSS ABOVE PLATE W/ 12d NAILS AT 6" OC BETWEEN FRAMING CLIPS

NTS

TYPICAL BLOCKING PANEL DETAIL



# TYPICAL SHEAR TRANSFER PARALLEL TO TRUSS DETAIL

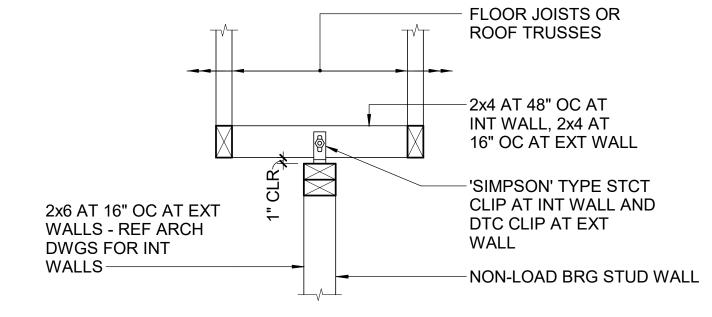


TYPICAL SMALL OPENING BETWEEN TRUSS OR JOIST DETAIL

COORD EXACT SIZE & **LOCATION W/ TRUSS** MFR. LOCATE IN FLOOR TRUSS -MIDDLE OF THIRD **REF PLAN** SPAN

NTS

TYPICAL MECHANICAL **DUCT OPENING DETAIL** 



TYPICAL NON-LOAD BEARING WALL TOP BRACE DETAIL

STAGGER PANEL

JOINTS AS SHOWN

**DEFINITION OF TERMS:** - NAILING TO INTERMEDIATE FRAMING MEMBERS IS **DESIGNATED AS 'FIELD** NAILING' PLYWOOD PANEL (NORMALLY 4'x8') **NAIL SPACING AT** PANEL EDGES -

STAGGER PANEL JOINTS AS SHOWN IF THIS PANEL EDGE IS NOT SUPPORTED -FLOOR BY BLOCKING, IT IS **TRUSSES** KNOWN AS THE UNBLOCKED EDGE; IF SUPPORTED BY -NAIL SPACING AT **BLOCKING IT IS A** BLOCKED EDGE-PANEL EDGES

**FLOOR** 

**DEFINITION OF TERMS:** 

PLYWOOD

- NAILING TO INTERMEDIATE

<u>NAILING'</u>

FRAMING MEMBERS IS

DESIGNATED AS 'FIELD

**EXTERIOR SHEATHING:** LAP ALL EXTERIOR SHEATHING MIN 12" ABOVE AND BELOW EA. FLOOR SYSTEM AND ROOF

**DEFINITION OF TERMS:** 

ALL SHEARWALL PANEL EDGES SHALL BE BRACED BY 2 INCH NOMINAL OR WIDER FRAMING.

ROOF/ FLOOR DIAPHRAGM NAILING SCHEDULE: EXCEPT WHERE OTHERWISE NOTED OR DETAILED, PLYWOOD ROOF SHEATHING SHALL BE NAILED W/8dx1-3/8" NAILS AT 6" OC AT PANEL EDGES, 12" OC FIELD.

**EXTERIOR WALLS AND SHEARWALLS** 

- NAILING TO INTERMEDIATE FRAMING MEMBERS IS DESIGNATED AS 'FIELD <u>NAILING'</u> **PLYWOOD PANEL** (NORMALLY 4'x8')-

**PANEL** PANEL JOINTS (NORMALLY 4'x8') PANEL EDGES **AS SHOWN** NAIL SPACING AT SUPPORTED BY PANEL EDGES NAIL SPACING AT BLOCKING PANEL EDGES -CONTINUOUS BLOCK ALL PANEL EDGES PANEL JOINT PER TYPICAL TRUSS IF THIS PANEL EDGE **BLOCKING DETAIL** -WALL STUDS IS NOT SUPPORTED -ROOF BY BLOCKING, IT IS **TRUSSES** SHEARWALL KNOWN AS THE CHORD - TYP UNBLOCKED EDGE; IF EA END -NAIL SPACING AT SUPPORTED BY PANEL EDGES **BLOCKING IT IS A** -NAIL SPACING AT PANEL EDGES **BLOCKED EDGE** 

STAGGER

FOR ALL PANEL EDGES NAILED WITHIN THIS BAND FOR ENTIRE SHEARWALL LENGTH LINTEL / HEADER - REF PLAN AND SCHED BLOCKING--2x6 STUDS -SHEATHING-

PROVIDE SPECIAL NAILING AT WINDOWS

(WHERE OCCURS - REF SHEARWALL SCHED)

TYPICAL SHEARWALL ELEVATION **DETAIL AT WINDOWS** 

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

Owner **Highmark School Development** 746 East Winchester Street 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

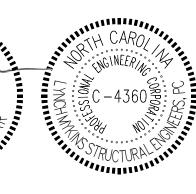
Civil Engineer **Timmons Group** 5410 Trinity Road Suite 102 Raleigh, North Carolina 27607 919-866-4938

Raleigh, North Carolina 27603

919-782-1833

SEAL | DATE 03-15-21





|   | 100% CONSTRUCTION DOCUMENTS | 02-24-21 |
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| 1 | ADDENDUM 1                  | 03-15-21 |
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**PROJECT NO** 

SHEET TITLE TYPICAL DETAILS

SHEET NUMBER

S-505

**ROOF** 

# **ABBREVIATIONS**

| Α        |                                                   |         |
|----------|---------------------------------------------------|---------|
| A/C      | AIR CONDITIONING                                  | F       |
| ACOUS.   | ACOUSTICAL                                        | F-R     |
| A.C.T.   | ACOUSTICAL CEILING TILE                           | FAB.    |
| ACP      | ACOUSTICAL CEILING PANEL                          | F.C.U.  |
| ADA      | AMERICANS W/DISABILITIES ACT                      | F.D.    |
| ADAAG    | AMERICANS W/DISABILITIES ACCESSIBILITY GUIDELINES | F.E.    |
| ADJ.     | ADJUSTABLE                                        | F.F.E.  |
| A/E      | ARCHITECT/ENGINEER                                | F.F.&E. |
| A.F.F.   | ABOVE FINISHED FLOOR                              |         |
| ALT.     | ALTERNATE                                         | F.H.C.  |
| ALUM.    | ALUMINUM                                          | FIN.    |
| A.P.     | ACCESS PANEL                                      | FLR.    |
| ARCH.    | ARCHITECT/ARCHITECTURAL                           | FLUOR.  |
| A.V.     | AUDIO/VISUAL                                      | F/O     |
|          |                                                   | F.O.    |
| В        |                                                   | F.O.B.  |
| BD.      | BOARD                                             | F.O.BR. |
| BITUM.   | BITUMINOUS                                        | F.O.C.  |
| BLDG.    | BUILDING                                          | F.O.F.  |
| B/O      | BOTTOM OF                                         | F.O.G.  |
| B.O.W.   | BOTTOM OF WALL                                    | F.O.S.  |
| BSMT.    | BASEMENT                                          | FPRF.   |
|          |                                                   | FT.     |
| С        |                                                   | F.V.    |
| CAB.     | CABINET                                           |         |
| C.F.C.I. | CONTRACTOR<br>FURNISHED-CONTRACTOR INSTALLED      | G       |
| 0.0      | FURNISHED-CONTRACTOR INSTALLED                    | GA.     |

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

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

EQUIPMENT

EXISTING

EXPOSED

EXTERIOR

EXIST.

ELECTRIC WATER COOLER

| CLG.     | CEILING                           |   | GWB       |                      |
|----------|-----------------------------------|---|-----------|----------------------|
| CLR      | CLEAR(ANCE)                       | L |           |                      |
| C.M.     | CONSTRUCTION MANAGER              |   | Н         |                      |
| CMP      | COMPOSITE METAL PANEL             |   | Н.        | HEIGHT               |
| C.M.U.   | CONCRETE MASONRY UNIT             |   | HB        | HOSE BIBB            |
| COL.     | COLUMN                            | Ī | HDWR.     | HARDWARE             |
| CONC.    | CONCRETE                          |   | H.M.      | HOLLOW METAL         |
| CONST.   | CONSTRUCTION                      |   | HORIZ.    | HORIZONTAL           |
| CONT.    | CONTINUOUS                        |   | HT.       | HEIGHT               |
| CONTR.   | CONTRACTOR                        |   | HVAC.     | HEATING, VENTILATION |
| COOR.    | COORDINATE                        |   | H.W.      | HOT WATER            |
| PT.      | CARPET                            | _ |           |                      |
| C.T.     | CERAMIC TILE                      |   | I         |                      |
| C.W.     | COLD WATER                        |   | I.D.      | INSIDE DIAMETER      |
|          |                                   |   | INCAN.    | INCANDESCENT         |
| )        |                                   |   | INFO.     | INFORMATION          |
| D.E.F.S. | DIRECT APPLIED EXTERIOR FINISH    |   | INSUL.    | INSULATION           |
|          | SYSTEM                            |   | INT.      | INTERIOR             |
| DEPT.    | DEPARTMENT                        | _ |           |                      |
| DET.     | DETAIL                            | _ | J         |                      |
| ).F.     | DRINKING FOUNTAIN                 |   | JAN.      | JANITOR              |
| DIA.     | DIAMETER                          |   | J.C.      | JANITOR CLOSET       |
| DIM.     | DIMENSION                         |   | JST. BRG. | JOIST BEARING        |
| DISP.    | DISPENSER                         |   | JT.       | JOINT                |
| D.M.B.   | DRY MARKER BOARD                  |   |           |                      |
| N        | DOWN                              | _ | L         |                      |
| os       | DOWNSPOUT                         |   | L         | LENGTH               |
| WG.      | DRAWING                           |   | LAV.      | LAVATORY             |
|          |                                   |   | LB.       | POUND                |
|          | I                                 |   | L.H.      | LEFT HAND            |
| A.       | EACH                              |   | L.L.H.    | LONG LEG HORIZONT    |
| .C.      | ELECTRICAL CONTRACTOR             |   | L.L.O.    | LONG LEG OUT         |
| I.F.S.   | EXTERIOR INSULATION FINISH SYSTEM |   | L.L.V.    | LONG LEG VERTICAL    |
| .J.      | EXPANSION JOINT                   |   |           |                      |
| <u>L</u> | ELEVATION                         |   |           |                      |
| LEC.     | ELECTRIC/ELECTRICAL               |   |           |                      |
| LEV.     | ELEVATOR/ELEVATION                |   |           |                      |
| NGR.     | ENGINEER                          |   |           |                      |
| .P.      | ELECTRICAL PANEL                  |   |           |                      |
| Q.       | EQUAL                             |   |           |                      |

|    | FIRE RESISTIVE                      |
|----|-------------------------------------|
|    | FABRICATE/FABRICATOR                |
|    | FAN COIL UNIT                       |
|    | FLOOR DRAIN                         |
|    | FIRE EXTINGUISHER                   |
|    | FIRE EXTINGUISHER CABINET           |
|    | FINISH FLOOR ELEVATION              |
| •  | FURNISHINGS, FIXTURES AND EQUIPMENT |
|    | FIRE HOSE CABINET                   |
|    | FINISH(ED)                          |
|    | FLOOR                               |
| ₹. | FLUORESCENT                         |
|    | FACE OF                             |
|    | FINISH OPENING                      |
|    | FACE OF BLOCK                       |
| ₹. | FACE OF BRICK                       |
|    | FACE OF CONCRETE                    |
|    | FACE OF FINISH                      |
|    | FACE OF GYPSUM BD.                  |
|    | FACE OF STUD                        |
|    | FIREPROOF                           |
|    | FOOT/FEET                           |
|    | FIELD VERIFY                        |
|    |                                     |
|    |                                     |

| G              |                    |
|----------------|--------------------|
| GA.            | GAUGE              |
| G.C.           | GENERAL CONTRACTOR |
| GEN.           | GENERAL            |
| GL.            | GLASS              |
| G.W.B./<br>GWB | GYPSUM WALL BOARD  |
|                |                    |
| Н              |                    |

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

| 1.0.   | INOIDE DI WILLEN |
|--------|------------------|
| INCAN. | INCANDESCENT     |
| INFO.  | INFORMATION      |
| INSUL. | INSULATION       |
| INT.   | INTERIOR         |
|        |                  |
| J      |                  |
| JAN.   | JANITOR          |

| L      |                     |
|--------|---------------------|
| L      | LENGTH              |
| LAV.   | LAVATORY            |
| LB.    | POUND               |
| L.H.   | LEFT HAND           |
| L.L.H. | LONG LEG HORIZONTAL |
|        | LONGLEGICA          |

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

| N      |                    |
|--------|--------------------|
| N.A.F. | NO APPLIED FINNISH |
| N.I.C. | NOT IN CONTRACT    |
| NO.    | NUMBER             |
| N.T.S. | NOT TO SCALE       |
|        |                    |
| 0      |                    |

| 0        |                                      |
|----------|--------------------------------------|
| O.A.     | OVER ALL                             |
| O.C.     | ON CENTER                            |
| O.D.     | OUTSIDE DIAMETER                     |
| O.F.C.I. | OWNER FURNISHED-CONTRACTOR INSTALLED |
| O.F.O.I. | OWNER FURNISHED-OWNER INSTALLED      |
| O.H.     | OPPOSITE HAND                        |
| OPG.     | OPENING                              |
| OPP.     | OPPOSITE                             |
|          |                                      |

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

| R      |                        |
|--------|------------------------|
| R      | RADIUS                 |
| R.C.P. | REFLECTED CEILING PLAN |
| R.D.   | ROOF DRAIN             |
| REF.   | REFERENCE              |
| REFL.  | REFLECTED              |
| REINF. | REINFORCED             |
| RESII  | RESILIENT              |

RIGHT HAND

ROUGH OPENING

SYMMETRICAL

ROOM

QUARRY TILE

| S       |                 |
|---------|-----------------|
| SCHED.  | SCHEDULE        |
| S.D.    | SOAP DISPENSER  |
| SECT.   | SECTION         |
| S.F.    | SQUARE FEET     |
| SHT.    | SHEET           |
| SIM.    | SIMILAR         |
| SPEC.   | SPECIFICATION   |
| SQ.     | SQUARE          |
| S.S.    | STAINLESS STEEL |
| STD.    | STANDARD        |
| STL.    | STEEL           |
| STOR.   | STORAGE         |
| STRUCT. | STRUCTURAL      |
| SUSP.   | SUSPEND(ED)     |

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

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

TYPICAL

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

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

**COLUMN GRIDS** 

- EXISTING

**ELEVATION DATUM** 

DRAWING NUMBER

WALL SECTION CUT REFERENCE

DRAWING NUMBER

- DRAWING NUMBER

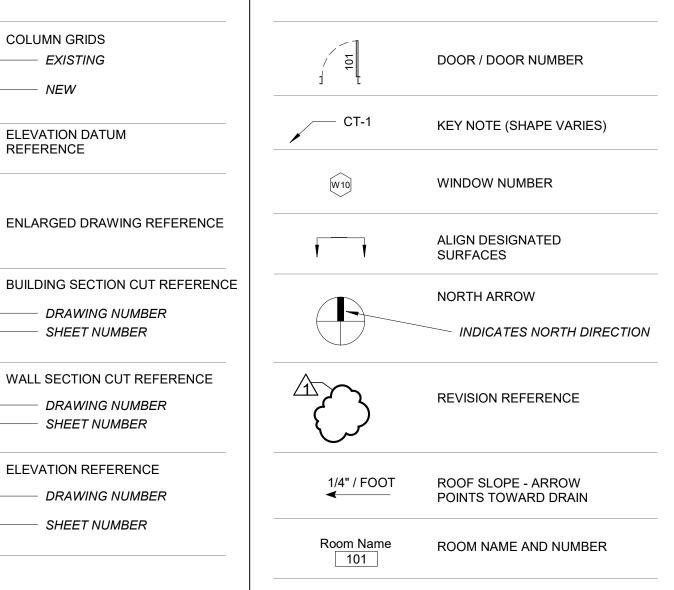
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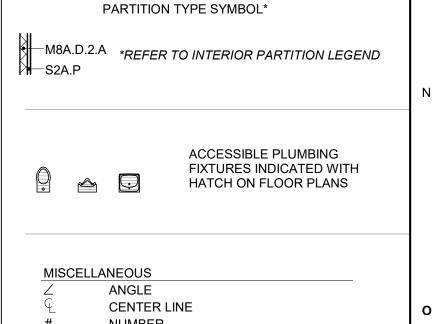
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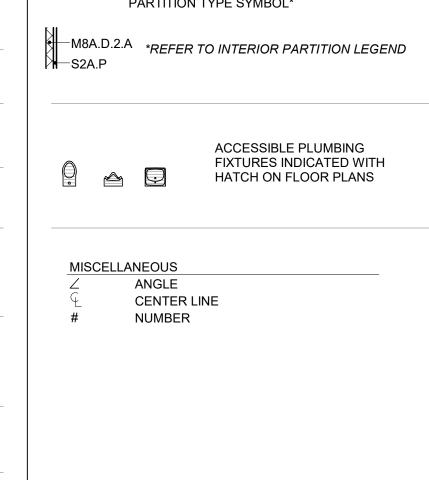
**ELEVATION REFERENCE** 

REFERENCE

# ARCHITECTURAL SYMBOLS LEGEND







ARCHITECTURAL MATERIAL LEGEND

|         | EARTH                                            |
|---------|--------------------------------------------------|
|         | GRANULAR FILL                                    |
|         | SAND, GROUT<br>AS NOTED                          |
| 4 4 4 4 | CAST-IN-PLACE CONCRETE                           |
|         | PRECAST CONCRETE, CAST<br>STONE                  |
|         | CONCRETE MASONRY UNIT                            |
|         | BRICK MASONRY                                    |
|         | STONE: LIMESTONE, GRANITE,<br>MARBLE OR AS NOTED |
|         | TERRA COTTA, STRUCTURAL<br>CLAY TILE             |
|         | METAL: TYPE AS NOTED                             |
|         | METAL: ROLLED SHAPES                             |
|         | WOOD FRAMING / BLOCKING:<br>CONTINOUS            |
|         | WOOD SHIM                                        |

SHOWN CUT AND ELEVATION ENGINEERED WOOD: GLUE LAMINATED WOOD FLOOR, WOOD SHINGLES, OR SIDING PLYWOOD GLASS FIBER REINFORCED CONCRETE SIDING OR TRIM SPRAYED FIREPROOFING SHOWN ON ROLLED SHAPE BATT INSULATION: THERMAL OR ACOUSTICAL, UNO RIGID INSULATION: THERMAL, ACOUSTICAL, OR SAFING GYPSUM BOARD PLASTER ON METAL LATH SHEATHING: GYPSUM, OR AS NOTED

ACOUSTICAL CEILING TILE RESINOUS FLOORING: TERRAZO, TROWEL-ON, UNO TILE: CERAMIC, QUARRY, UNO CARPET, CARPET TILE (DETAIL) GRATING SHOWN IN PLAN GRATING **INSULATED GLASS:** (SMALL SCALE) **INSULATED GLASS:** (DETAIL) MEMBRANE: WATERPROOF, ROOF, DAMPPROOFING AIR BARRIER SYSTEM

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

# GENERAL ARCHITECTURAL NOTES

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

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

Highmark School Development 746 East Winchester Street Suite 150 Murray, Utah 84107

Architect **RATIO** 

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**Structural Engineer** 

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SEAL | DATE M. BOW 5950

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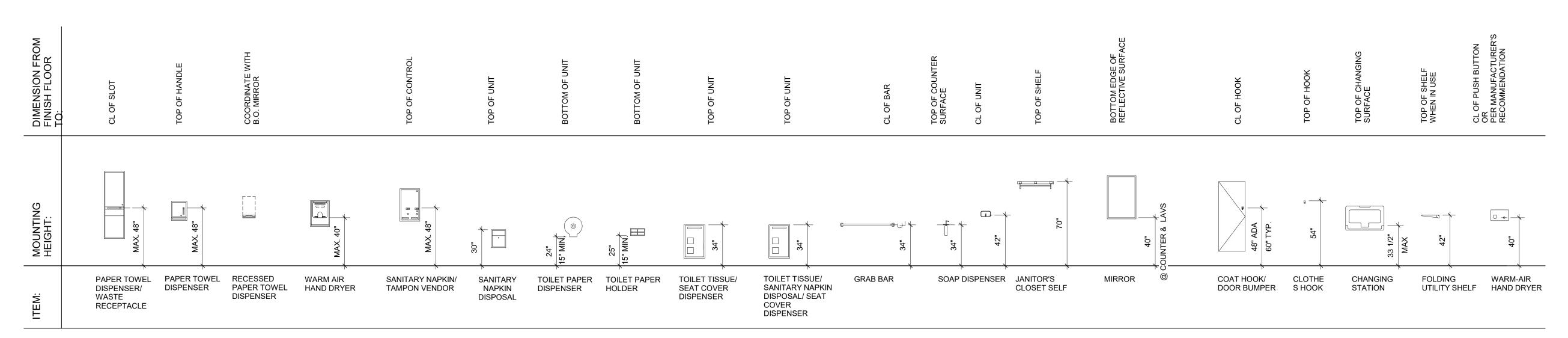
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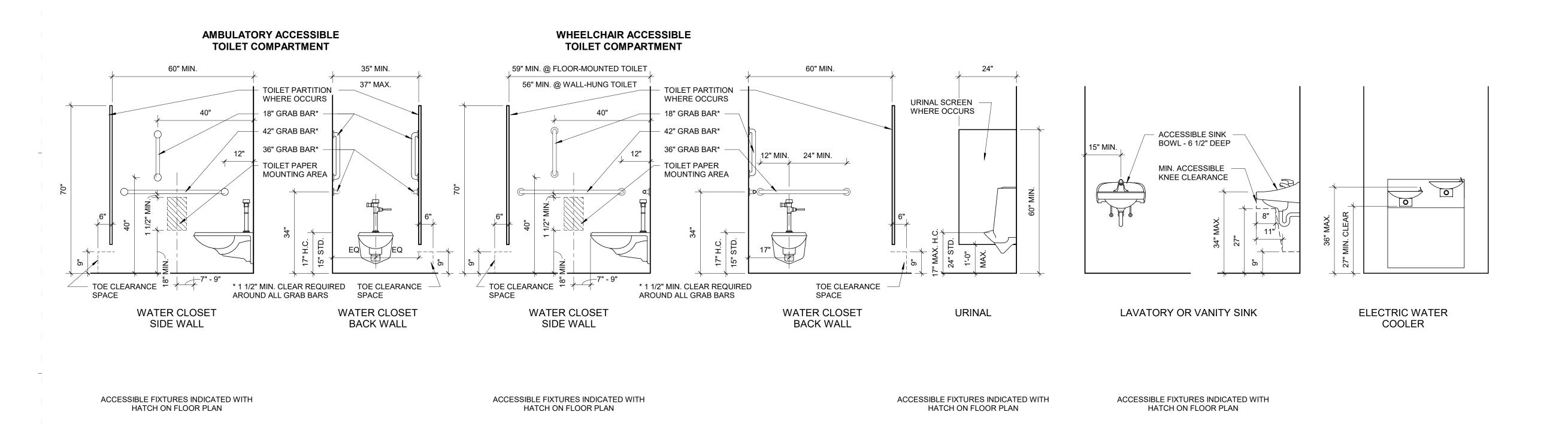
GENERAL NOTES, SYMBOLS, AND STANDARD

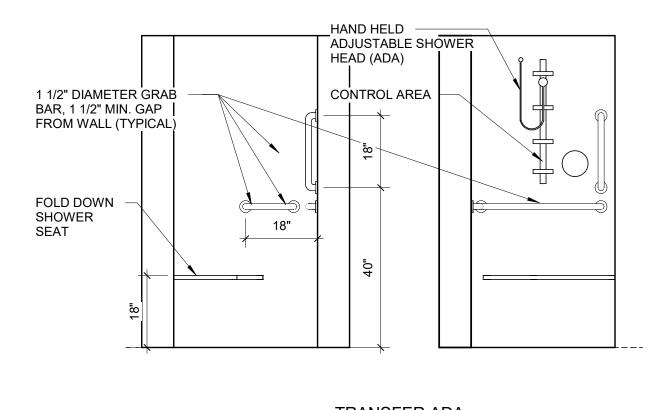
MOUNTING HEIGHTS

SHEET NUMBER



STANDARD TOILET ROOM ACCESSORY MOUNTING HEIGHTS





TRANSFER ADA SHOWER

STANDARD-PLUMBING FIXTURE REQUIREMENTS 1 A-002

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

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GENERAL NOTES,

SYMBOLS, AND STANDARD MOUNTING HEIGHTS

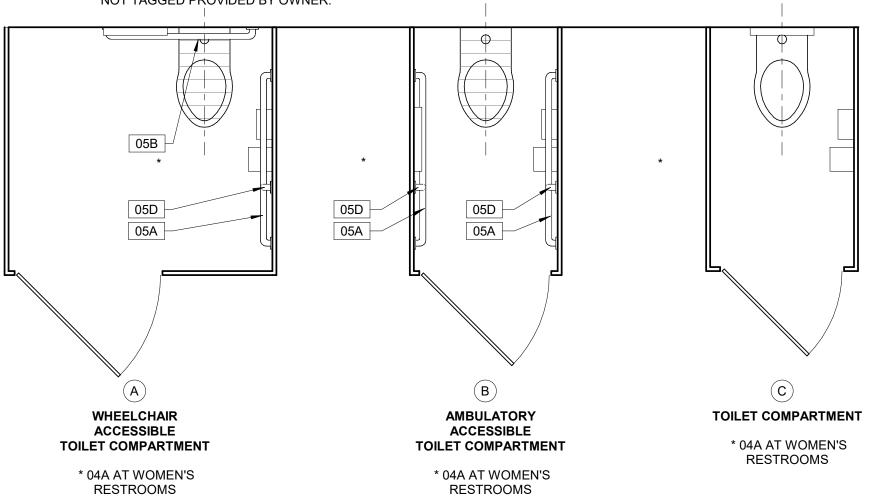
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SHEET NUMBER

A-002

## STANDARD TOILET COMPARTMENT TYPES -TYPICAL ACCESSORIES-

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



### **INTERIOR PARTITION TYPES**

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

| W4C   | 2x4 WOOD STUDS WITH (1) LAYER 5/8"<br>GYPSUM WALL BOARD ONE SIDE                                            |                                         |
|-------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| W4A   | 2x4 WOOD STUDS WITH (1) LAYER 5/8"<br>GYPSUM WALL BOARD EACH SIDE                                           | 4 × × × × × × × × × × × × × × × × × × × |
| W4A.A | 2x4 WOOD STUDS WITH (1) LAYER 5/8"<br>GYPSUM WALL BOARD EACH SIDE<br>* ACOUSTIC ATTEN. COMPONENTS<br>STC-44 | 4.3/4"                                  |
| W4A.1 | 2x4 WOOD STUDS WITH (1) LAYER 5/8"<br>GYPSUM WALL BOARD EACH SIDE<br>* 1 HR RATED U305                      | 4 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 |
| W6C   | 2x6 WOOD STUDS WITH (1) LAYER 5/8"<br>GYPSUM WALL BOARD ONE SIDE                                            | , w                                     |
| W6A   | 2x6 WOOD STUDS WITH (1) LAYER 5/8"<br>GYPSUM WALL BOARD EACH SIDE                                           | 6.3/4"                                  |

W6A.A 2x6 WOOD STUDS WITH (1) LAYER 5/8" GYPSUM WALL BOARD EACH SIDE

W6A.1 2x6 WOOD STUDS WITH (1) LAYER 5/8"

\* 1 HR RATED U379

STC-44

\* ACOUSTIC ATTEN. COMPONENTS

GYPSUM WALL BOARD EACH SIDE

# **INTERIOR PARTITION NOTES**

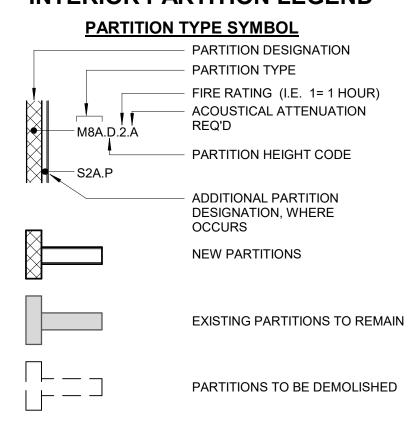
- A. ALL WALLS ARE TYPE W6A.D UNLESS NOTED OTHERWISE. B. PARTITION SYMBOLS APPEAR ON THE 1/8" = 1'-0" SCALE
- FLOOR PLANS. C. REFER TO FINISH AND CEILING PLANS FOR WALL FINISH,
- WALL BASE, AND CEILING INFORMATION.
- D. REFER TO WALL SECTIONS FOR EXTERIOR WALL CONSTRUCTION.
- E. PROVIDE MOLD AND MOISTURE RESISTANT GYPSUM BOARD IN ALL ROOMS CONTAINING OPERABLE PLUMBING FIXTURES AND WITHIN 4'-0" OF DRINKING FOUNTAINS / WATER COOLERS, UNLESS NOTED OTHERWISE.
- F. PROVIDE LATERAL BRACING AT 48" ON CENTER FOR NON-STRUCTURAL METAL FRAMED PARTITIONS WHICH EXTEND ABOVE THE CEILING UNLESS NOTED OTHERWISE. LATERAL BRACING NOT REQUIRED FOR PARTITIONS THAT EXTEND TO THE DECK ABOVE UNLESS NOTED OTHERWISE.
- G. PROVIDE FIRE RESISTIVE RATED GYPSUM BOARD AT ALL RATED ASSEMBLIES TO MEET ASSEMBLY REQUIREMENTS. H. PROVIDE FIRE RESISTIVE JOINT SYSTEMS EQUAL TO WALL RATING AT ALL PENETRATIONS AND AT HEAD / FLOOR
- INTERSECTIONS WITH RATED ASSEMBLIES. I. PROVIDE ACOUSTICAL SEALANT AT WALL SILL, HEAD PENETRATIONS AND ADDITIONAL SPECIFIED SOUND ATTENUATION COMPONENTS AT SOUND RATED WALLS
- J. PROVIDE SPECIFIED TILE BACKER BOARD AT ALL WALLS INDICATED TO HAVE CERAMIC TILE, REFER TO FINISH K. ISOLATE NON-LOAD-BEARING STUD FRAMING FROM

BUILDING STRUCTURE TO PREVENT TRANSFER OF

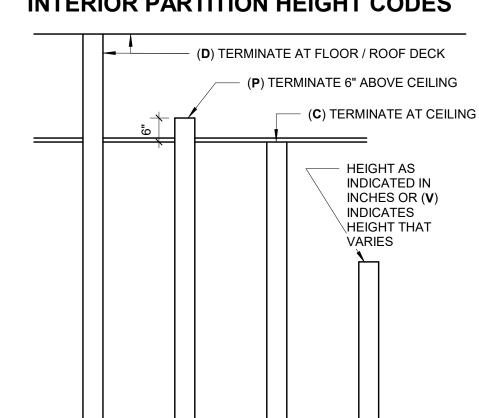
SPECIFIED. L. WOOD OR METAL STUD SPACING SHALL BE 16" ON CENTER MAXIMUM UNLESS OTHERWISE REQUIRED BY DELEGATED DESIGN OR NOTED OTHERWISE.

VERTICAL LOADS WHILE PROVIDING LATERAL SUPPORT AS

# INTERIOR PARTITION LEGEND



### **INTERIOR PARTITION HEIGHT CODES**



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20408.000

Carolina Charter

Academy Exp.
8529 Highway 55
Angier, North Carolina

27501

Highmark School Development

746 East Winchester Street

227 Fayetteville Street, Suite 301

Lynch Mykins Structural Engineers, PC

Raleigh, North Carolina 27601

Raleigh, North Carolina 27603

Raleigh, North Carolina 27607

Murray, Utah 84107

Suite 150

Architect

**RATIO** 

Suite 105

Suite 102

919-782-1833

Civil Engineer

919-866-4938

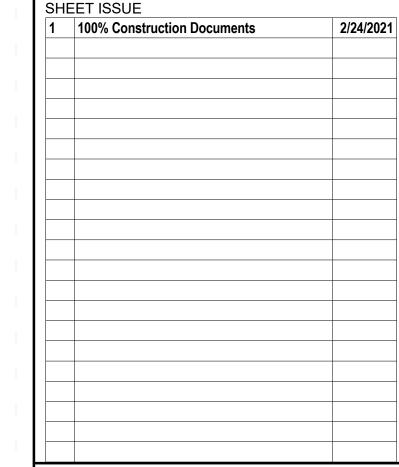
801-256-9550

919-821-0805

Structural Engineer

301 North West Street

**Timmons Group** 5410 Trinity Road





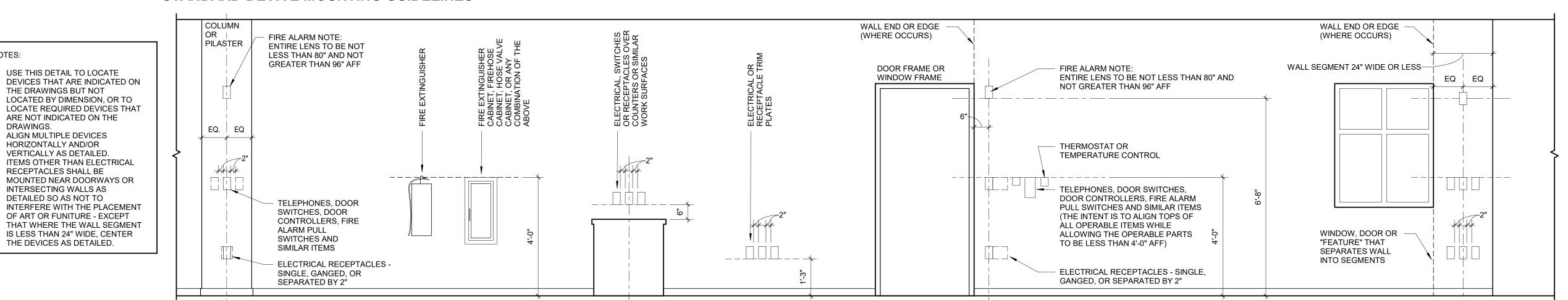
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PROJECT NO.

INTERIOR PARTITION

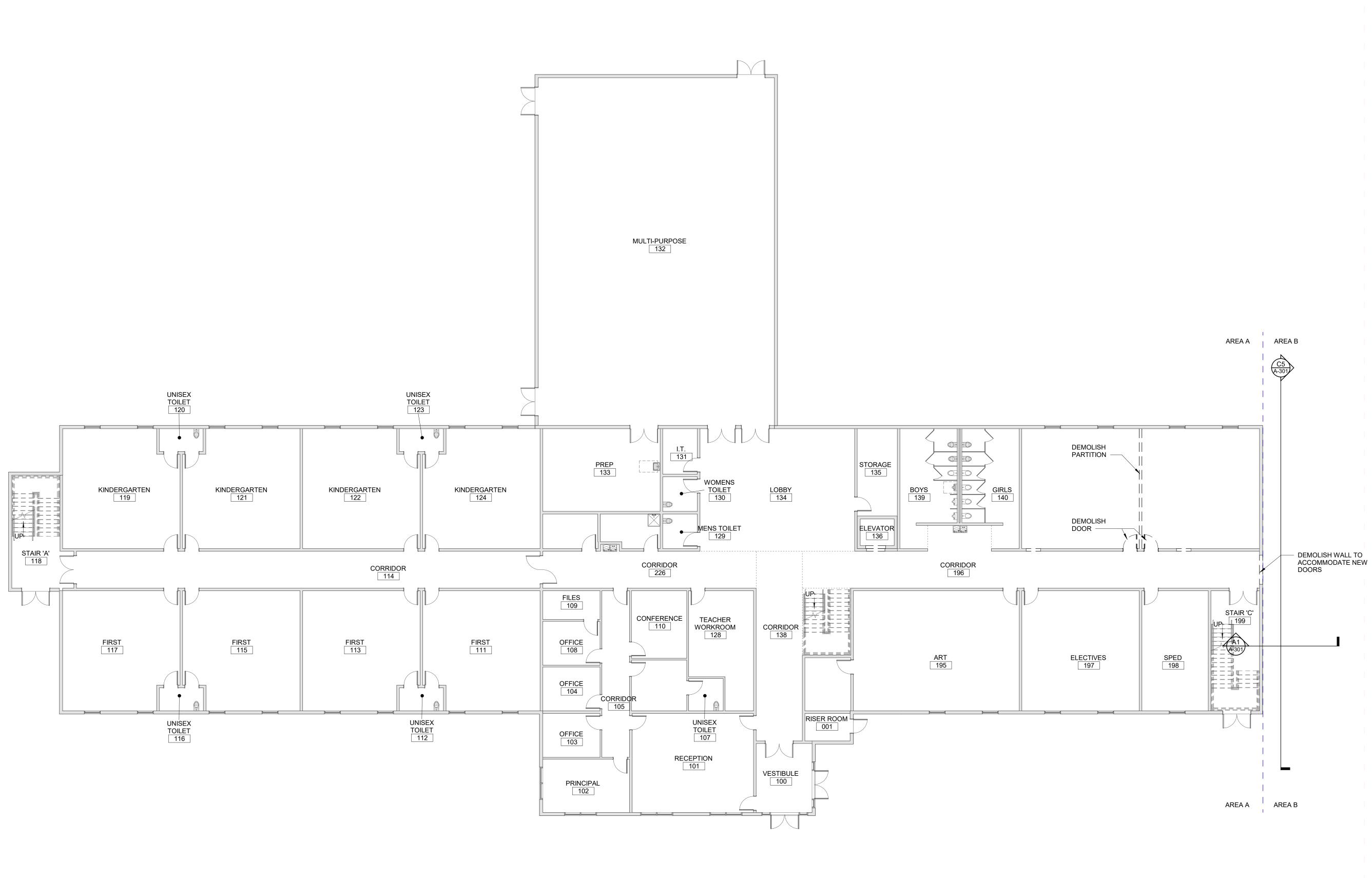
TYPES AND STANDARD PARTITION DETAILS

### STANDARD-DEVICE MOUNTING GUIDELINES



NOTES:

DRAWINGS.



Highmark School Development

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Architect RATIO

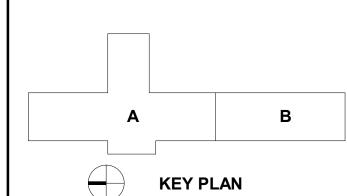
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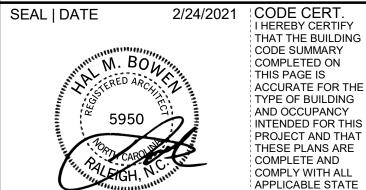
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Civil Engineer **Timmons Group** 

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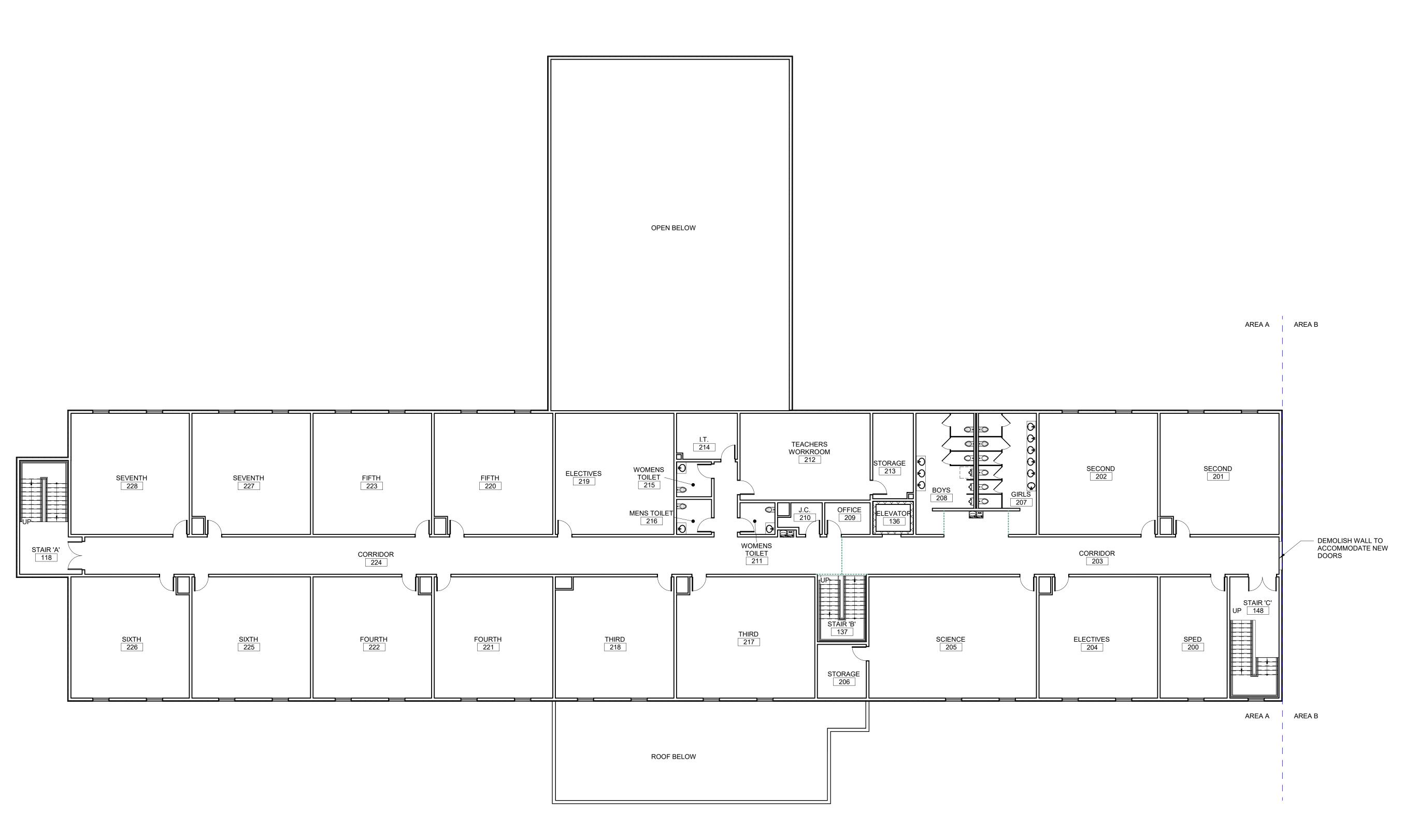
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FIRST FLOOR DEMO PLAN

AD-101



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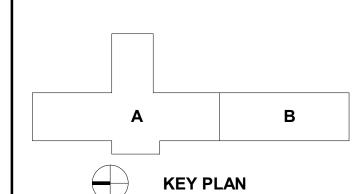
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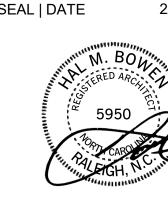
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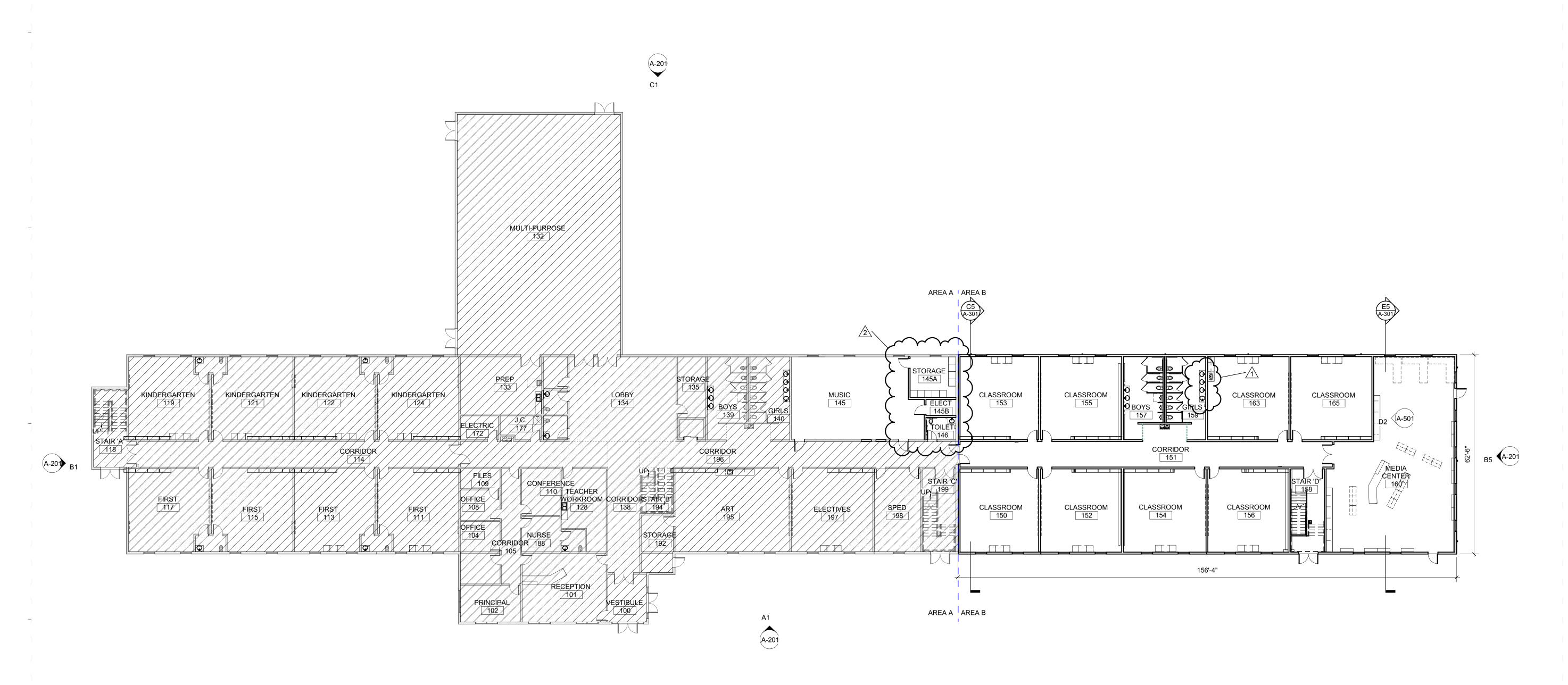
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PROJECT NO.

SECOND FLOOR DEMO PLAN

AD-102



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Architect

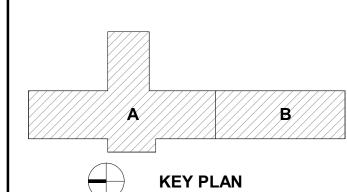
RATIO 227 Fayetteville Street, Suite 301 Raleigh, North Carolina 27601 919-821-0805

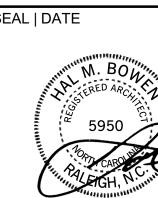
Structural Engineer Lynch Mykins Structural Engineers, PC

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Civil Engineer

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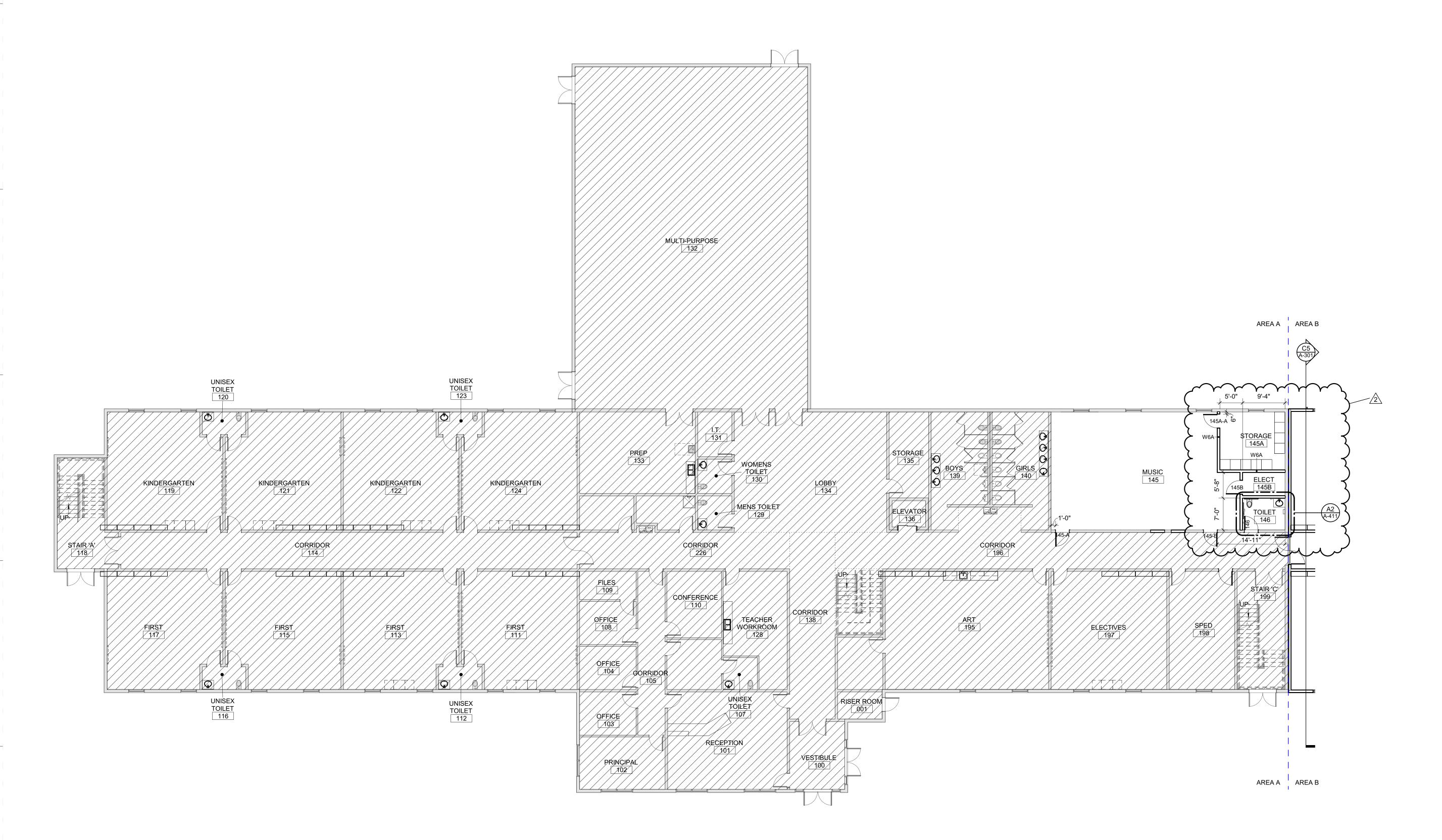
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FIRST FLOOR PLAN

A-101

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





FIRST FLOOR PLAN - AREA A

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

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

Architect RATIO

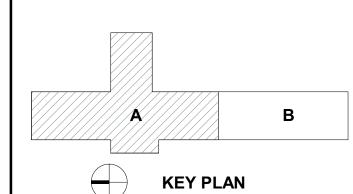
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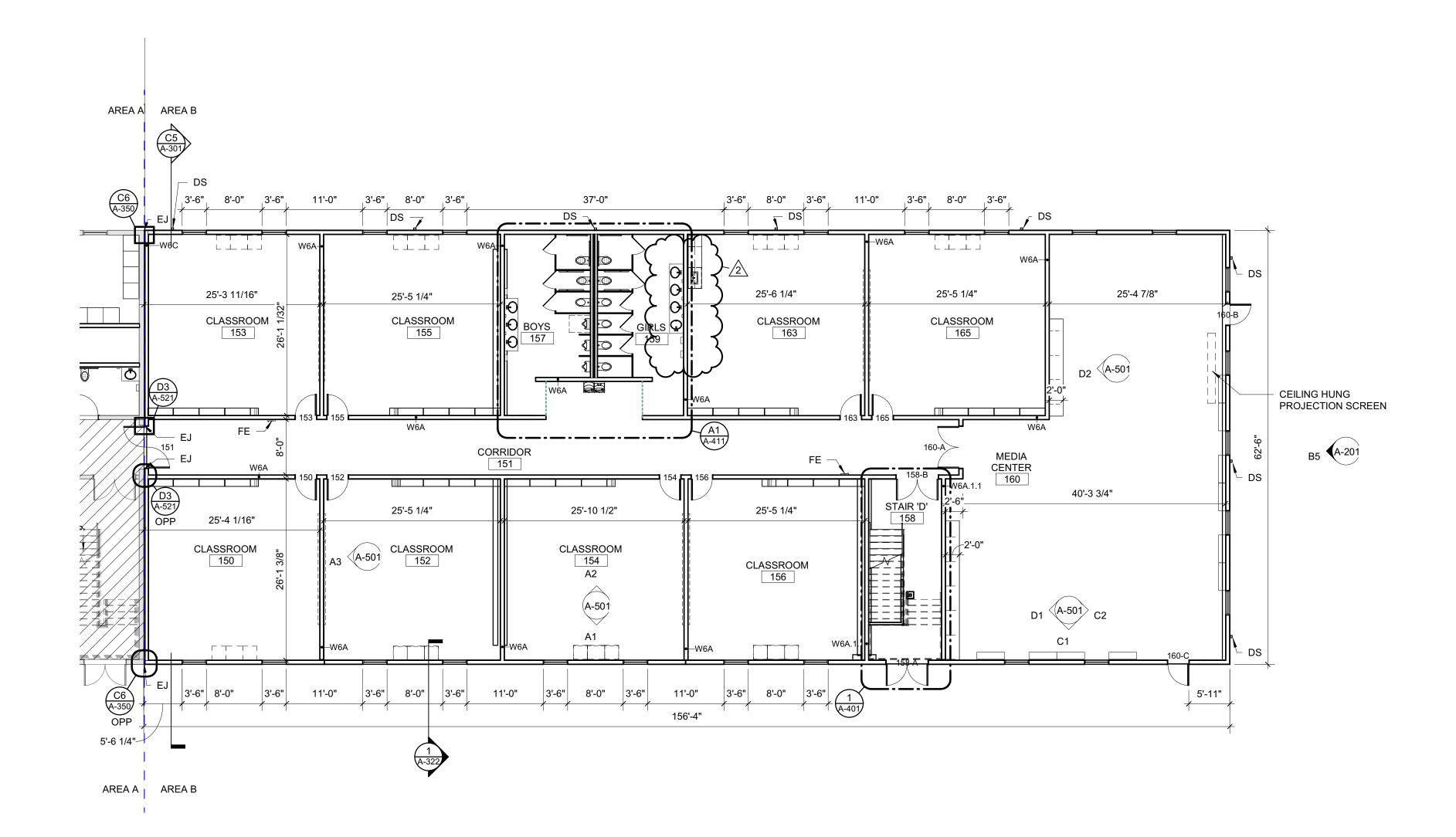
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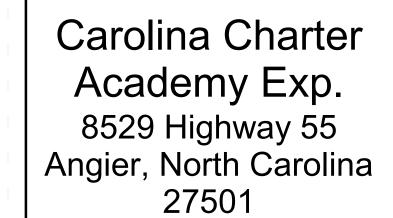
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FIRST FLOOR PLAN -AREA A

A-101A





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801-256-9550

Architect RATIO

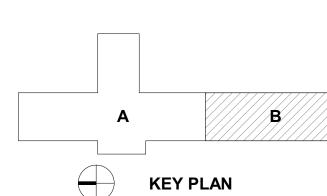
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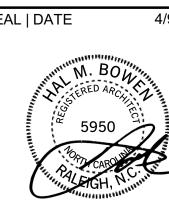
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Raleigh, North Carolina 27603
919-782-1833

Civil Engineer

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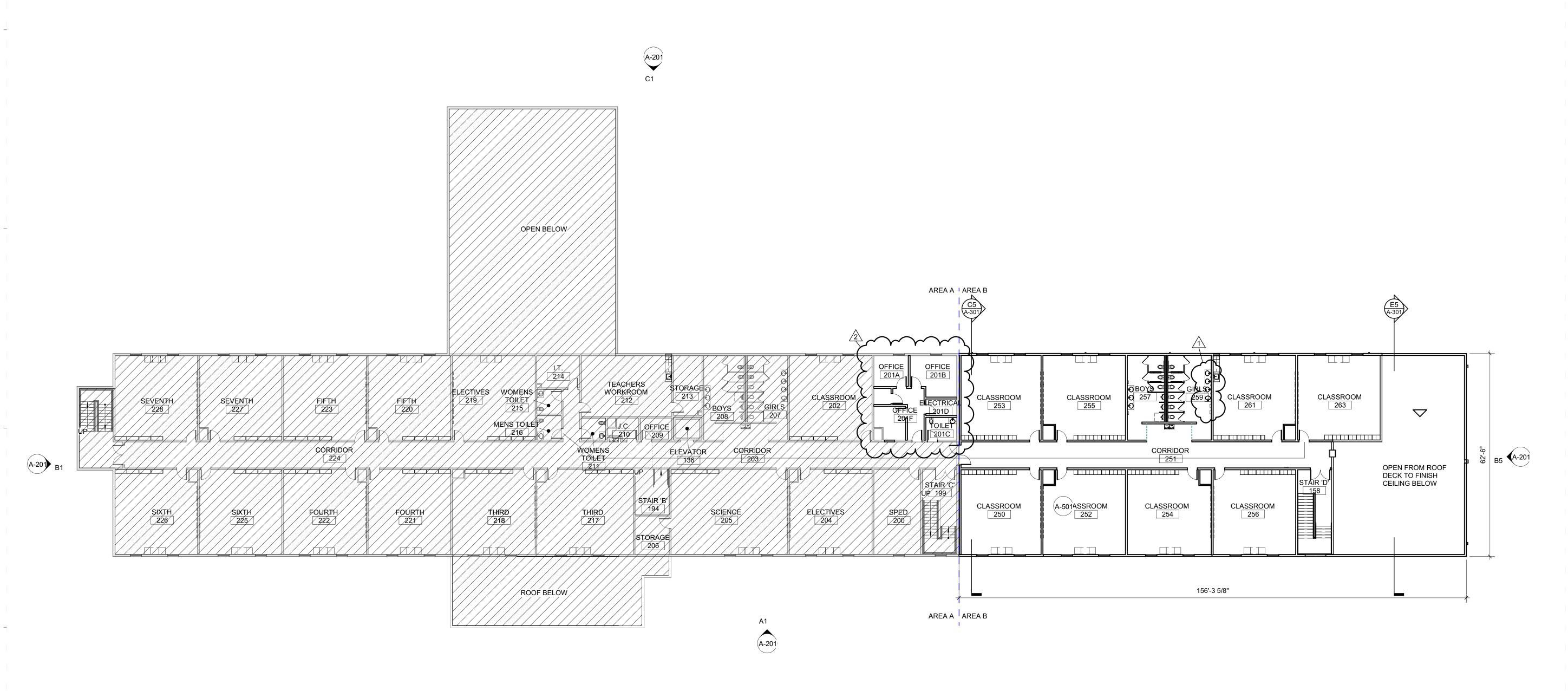
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FIRST FLOOR PLAN -AREA B

A-101B





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Architect RATIO

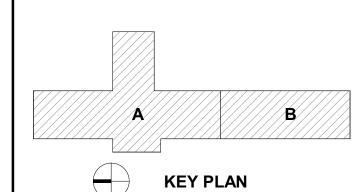
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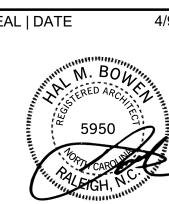
Structural Engineer Lynch Mykins Structural Engineers, PC

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

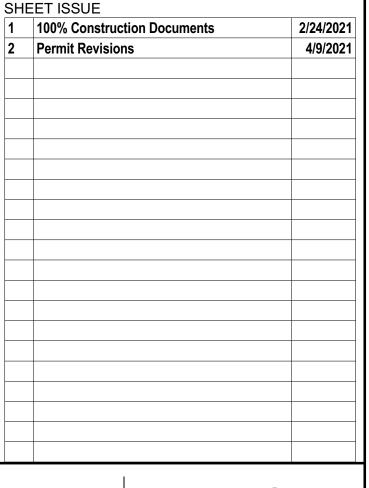
Civil Engineer Timmons Group

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





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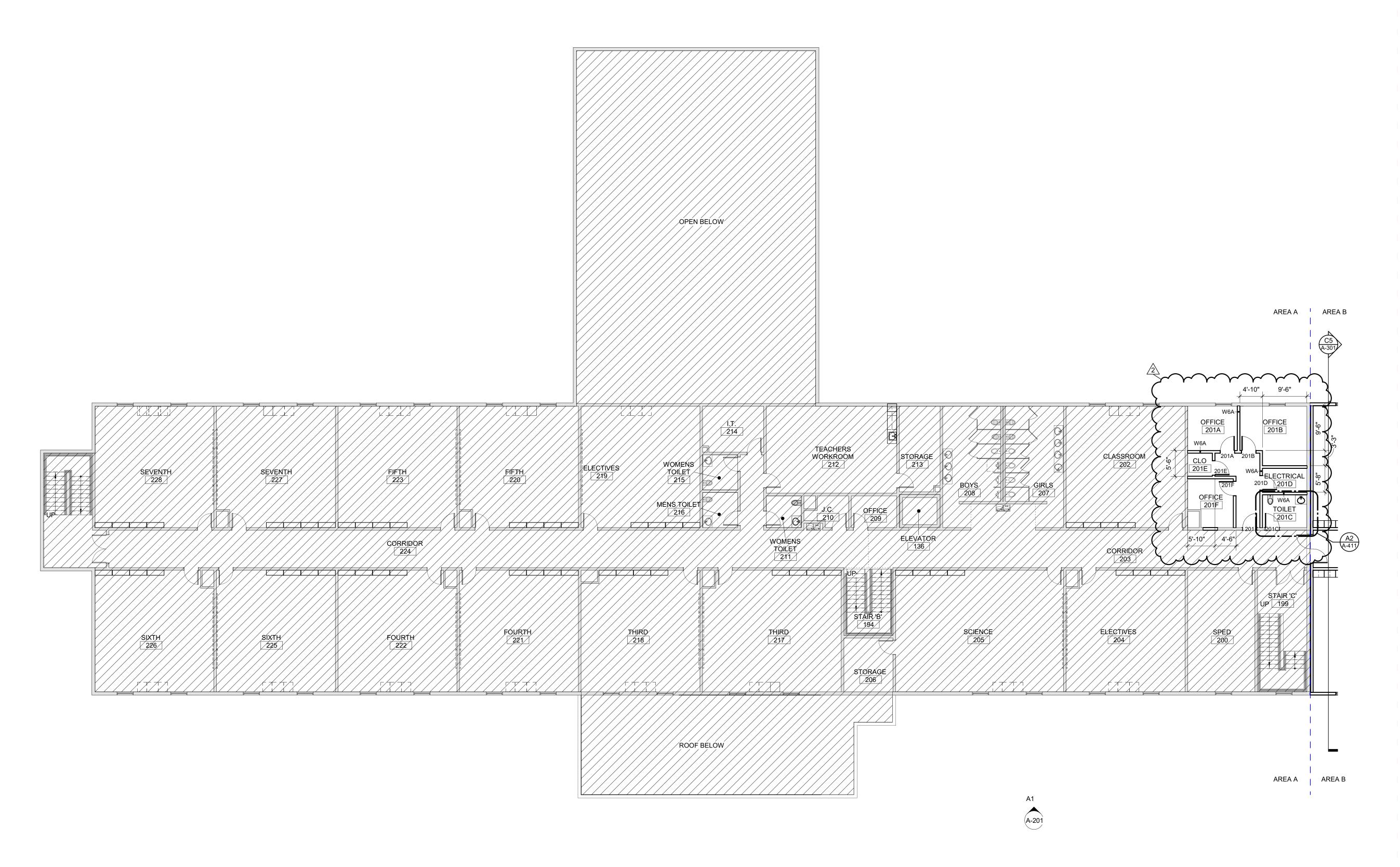


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20408.000

SECOND FLOOR PLAN

A-102



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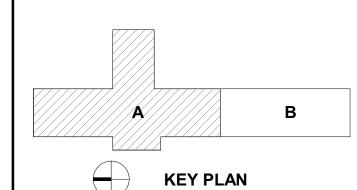
Architect RATIO 227 Fayetteville Street, Suite 301 Raleigh, North Carolina 27601 919-821-0805

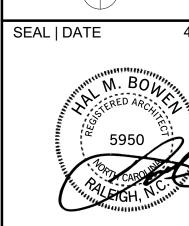
Structural Engineer Lynch Mykins Structural Engineers, PC

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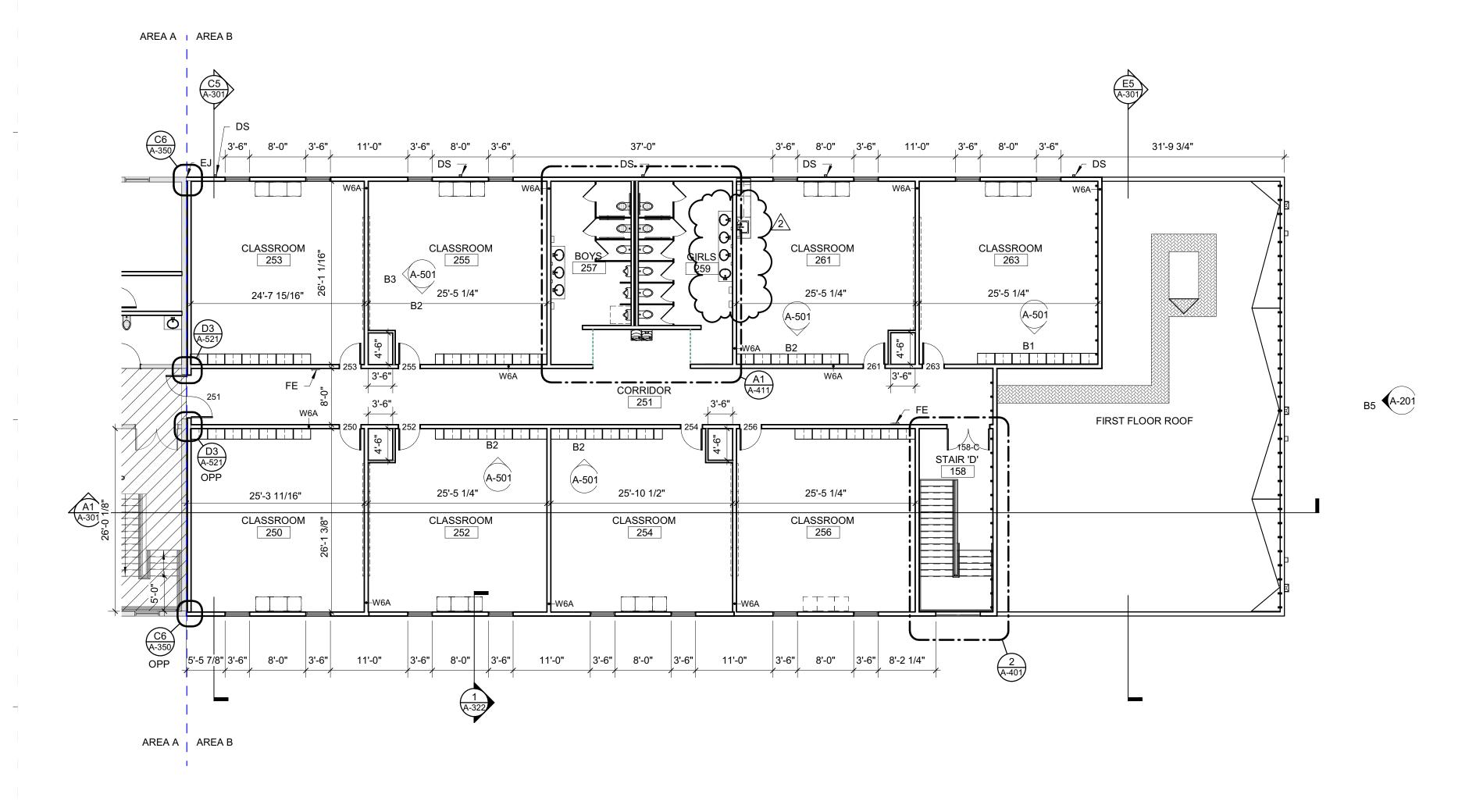


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SECOND FLOOR PLAN - AREA A

A-102A



# **SECOND FLOOR PLAN - AREA 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

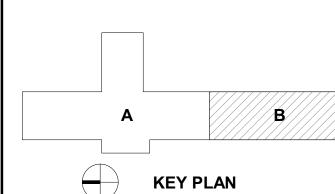
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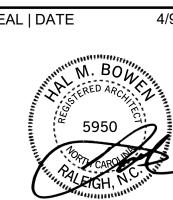
Structural Engineer Lynch Mykins Structural Engineers, PC

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

Civil Engineer Timmons Group

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





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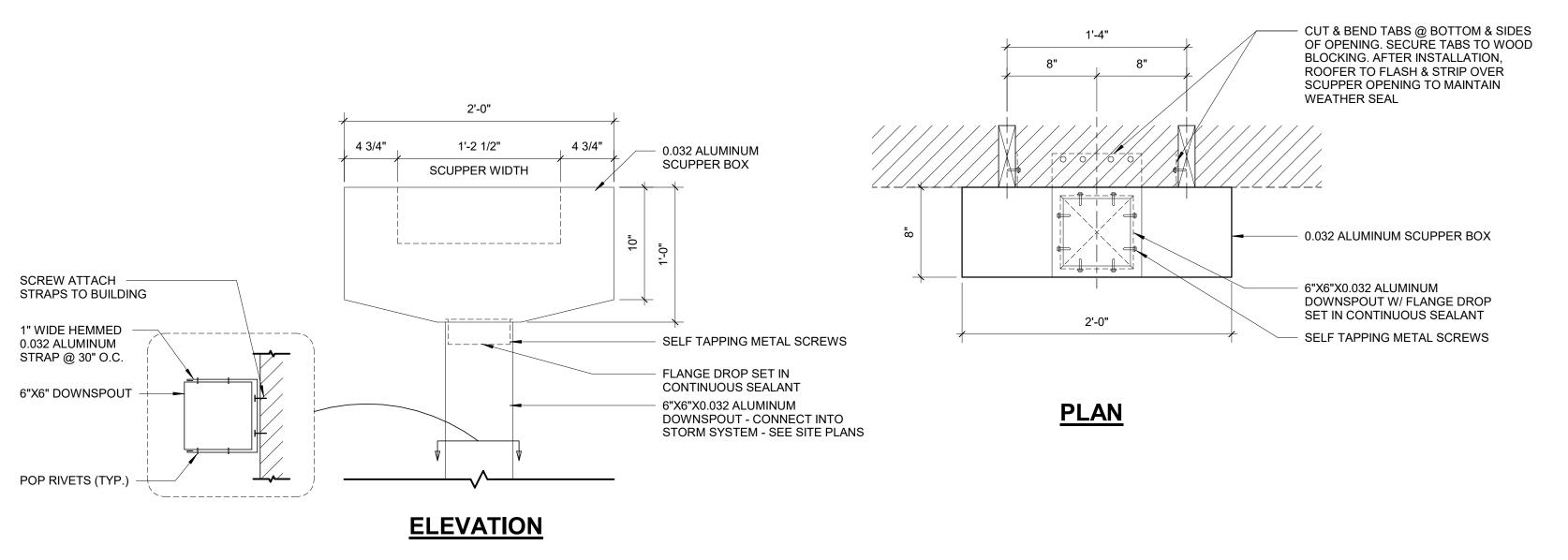


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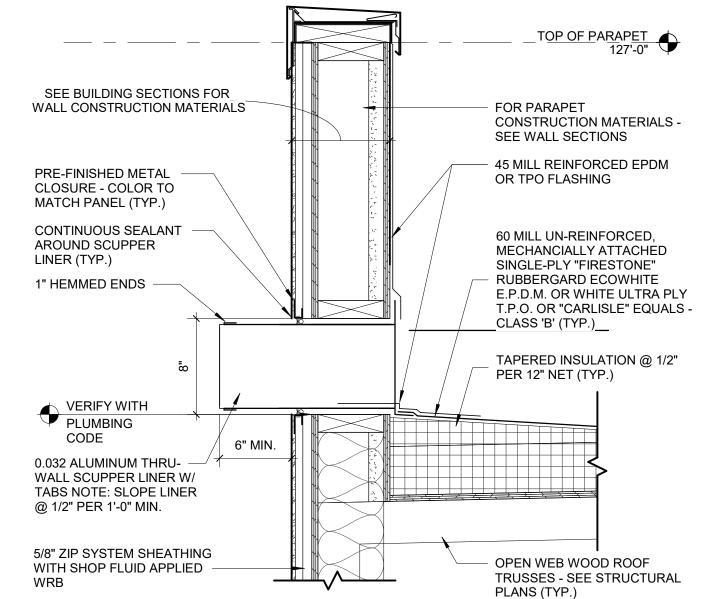
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SHEET TITLE SECOND FLOOR PLAN - AREA B

A-102B



**SCUPPER DETAILS** 



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

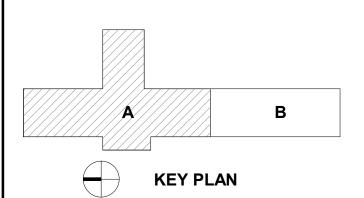
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919-782-1833

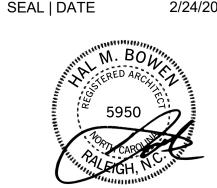
Civil Engineer

Timmons Group

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ATE 2/24/2021



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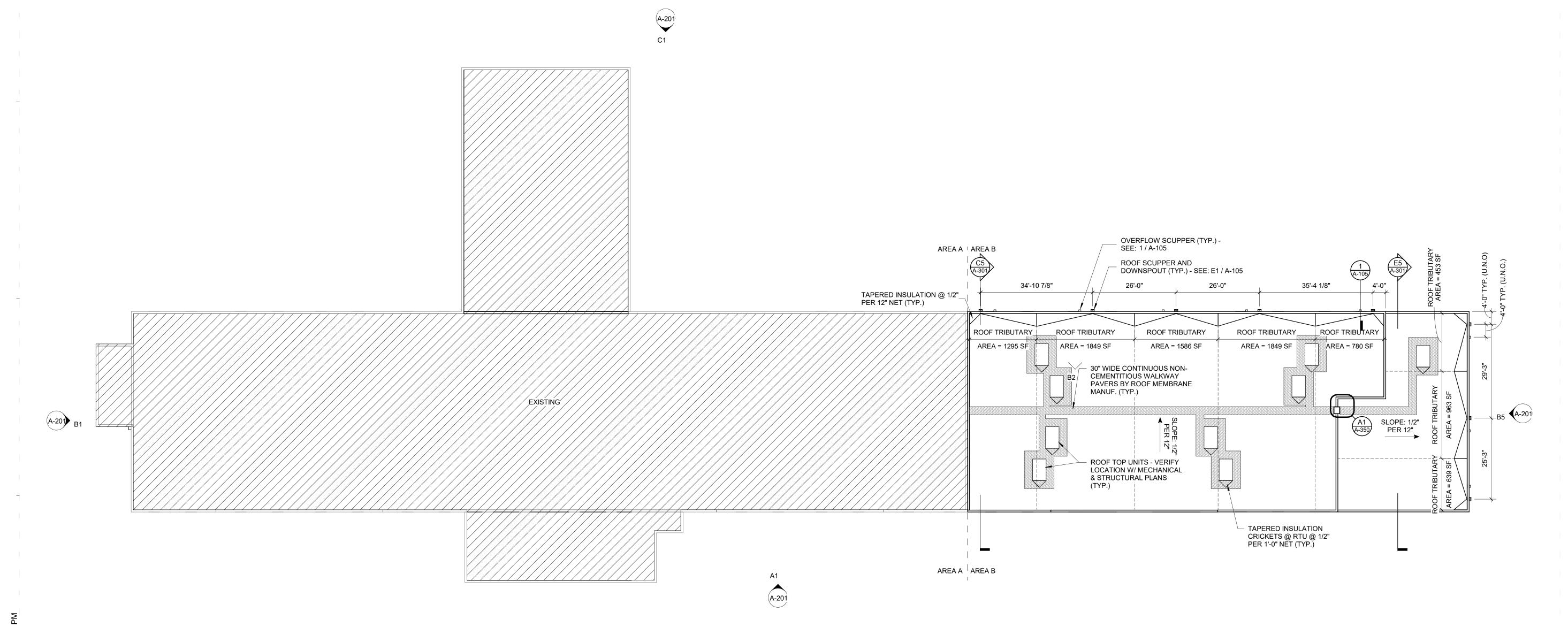
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PROJECT NO.

ROOF PLAN

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A-105







### **GENERAL CEILING PLAN NOTES**

A. THESE GENERAL NOTES APPLY TO SERIES A-130 REFLECTED CEILING DRAWINGS.

**RCP LEGEND** 

**CEILING TAG** 

CEILING TYPE

- 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. 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 REFER TO SERIES A-650 FINISH SCHEDULE FOR ADDITIONAL
- CEILING FINISH INFORMATION. J. REFER TO ELECTRICAL DRAWINGS FOR CEILING-MOUNTED
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# **KEYNOTES (ACTION/GENERAL)**

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

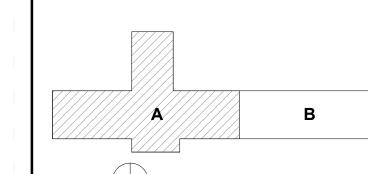
**Lynch Mykins Structural Engineers, PC** 301 North West Street

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

Civil Engineer

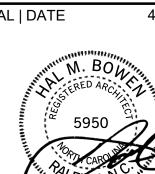
Timmons Group 5410 Trinity Road Suite 102 Raleigh, North Carolina 27607

919-866-4938



**KEY PLAN** 

SEAL | DATE



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BUILDING

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



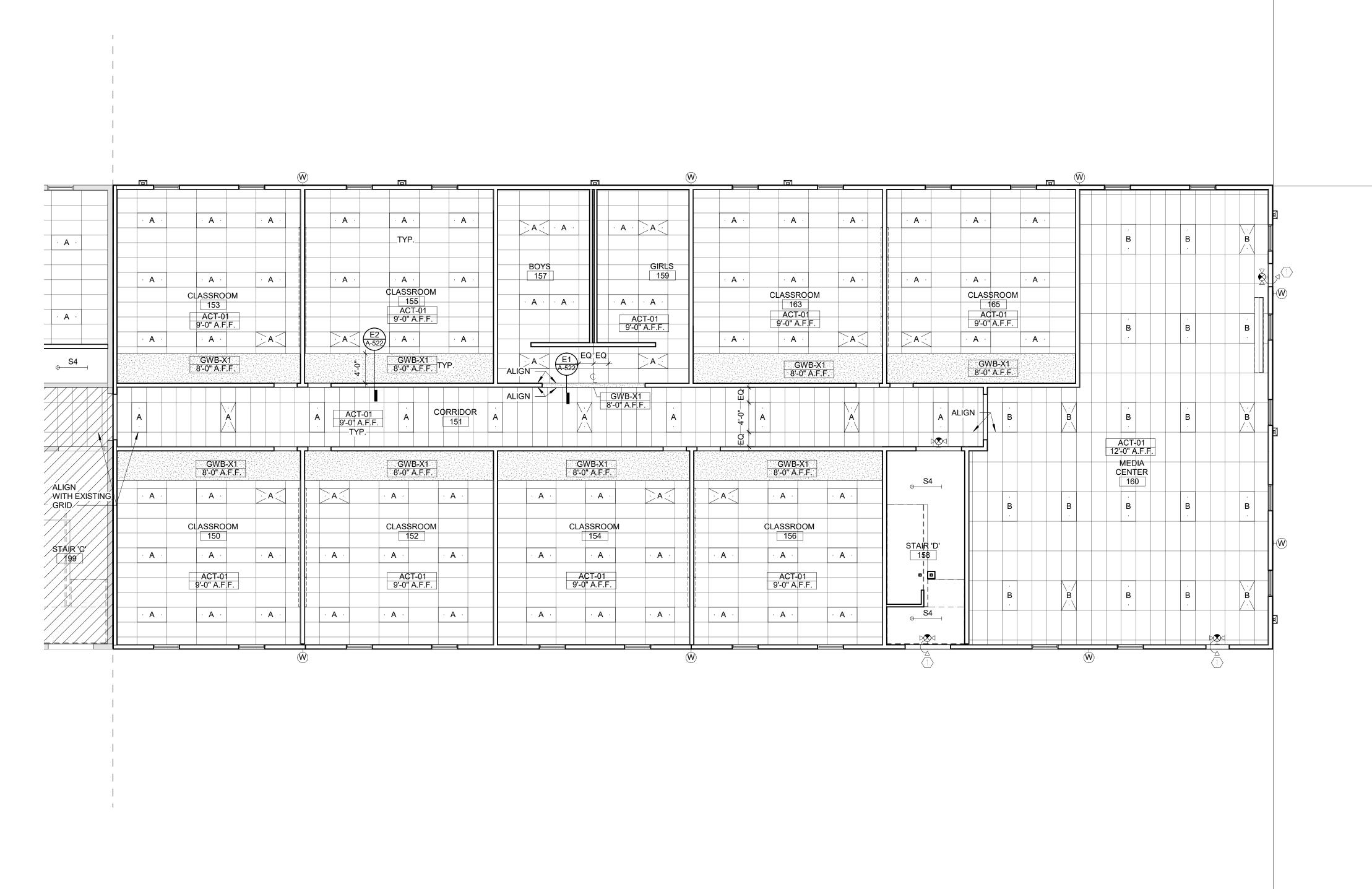
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PROJECT NO. SHEET TITLE

FIRST FLOOR REFLECTED CEILING PLAN - AREA A

20408.000

A-131A



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.

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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

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(ABOVE FINISH FLOOR)

GYB BOARD CEILING, PAINTED PT-02

ACOUSTIC CEILING TILE -ACT-01-

MECHANICAL RETURN REGISTER

MECHANICAL AIR SUPPLY DIFFUSER

24" x 48" LIGHT FIXTURE (SEE ELECTRICAL PLANS F

FURTHER INFORMATION)

**CEILING TAG** 

SPOT ELEVATION MARKER

24" X 48"

DOWNLIGHT

(REFER TO PLAN FOR SUSPENSION TYPE)

10'-10" A.F.F. CEILING HEIGHT

CEILING TYPE

Carolina Charter

Academy Exp.
8529 Highway 55
Angier, North Carolina 27501

Highmark School Development 746 East Winchester Street Suite 150

801-256-9550 Architect

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

**Structural Engineer** 

Murray, Utah 84107

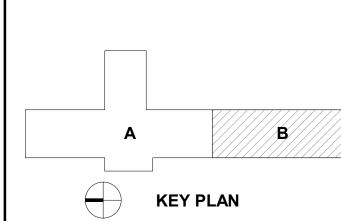
Lynch Mykins Structural Engineers, PC

301 North West Street Suite 105 Raleigh, North Carolina 27603

919-782-1833 Civil Engineer

**Timmons Group** 5410 Trinity Road Suite 102 Raleigh, North Carolina 27607

919-866-4938



SEAL | DATE

2/24/2021 | CODE CERT.

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AND LOCAL BUILDING REGULATIONS SHEET ISSUE

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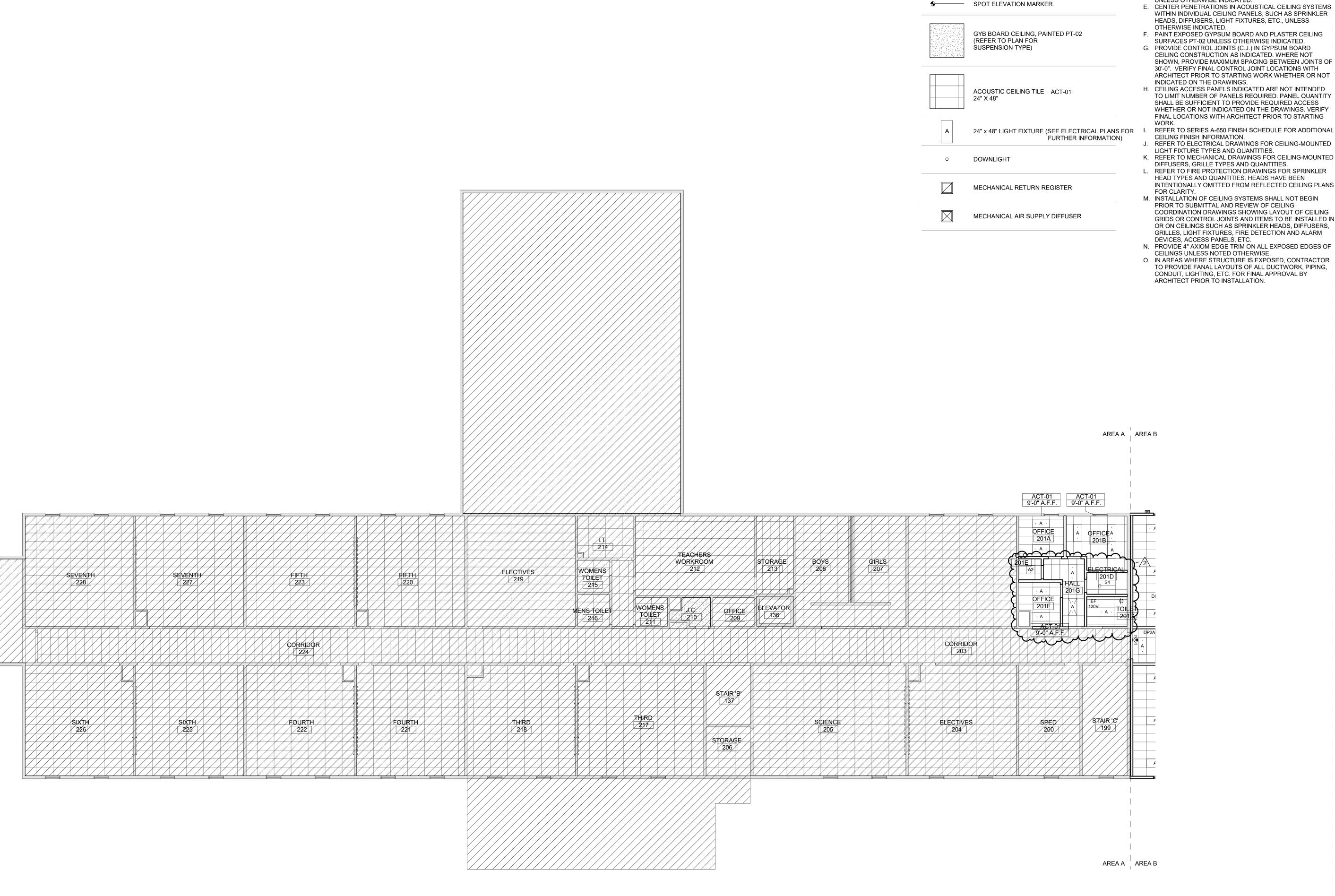
FIRST FLOOR

20408.000

REFLECTED CEILING PLAN -AREA B

A-131B

RCP- FIRST FLOOR-AREA B A1 A-131B



A. THESE GENERAL NOTES APPLY TO SERIES A-130 REFLECTED CEILING DRAWINGS.

**CEILING TAG** 

(ABOVE FINISH FLOOR)

XXX-01 CEILING TYPE

10'-10" A.F.F. CEILING HEIGHT

- B. INSTALL NEW CEILINGS AT +9'-0" A.F.F. UNLESS NOTED OTHERWISE. ALL CEILINGS TO BE ACT-01 UNLESS NOTED
- OTHERWISE. C. CENTER CEILING GRIDS WITHIN ROOMS EACH DIRECTION
- UNLESS NOTED OTHERWISE. D. LOCATE CEILING GRIDS WITHIN ROOMS SUCH THAT BORDERS CONTAIN NOT LESS THAN 1/2 TILE WIDTH, UNLESS OTHERWISE INDICATED.
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Carolina Charter Academy Exp.
8529 Highway 55
Angier, North Carolina 27501

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** 

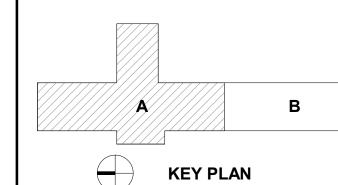
Lynch Mykins Structural Engineers, PC

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



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

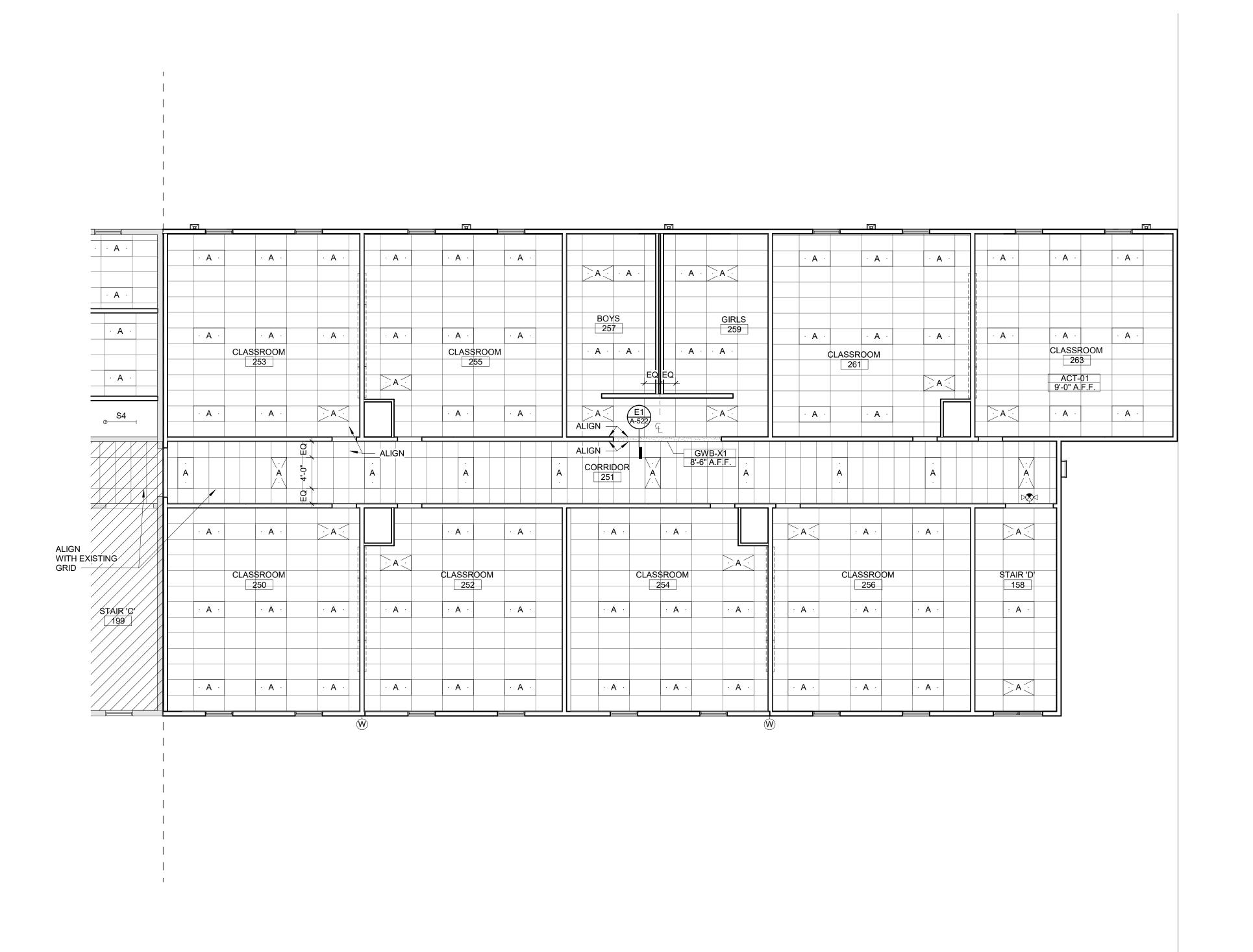
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PROJECT NO.

20408.000

SECOND FLOOR REFLECTED CEILING PLAN -AREA A

A-132A



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.

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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

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ARCHITECT PRIOR TO INSTALLATION.

**CEILING TAG** 

SPOT ELEVATION MARKER

CEILING TYPE

- CEILING HEIGHT

(ABOVE FINISH FLOOR)

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

**KEY PLAN** 

2/8/2021 | CODE CERT.

THAT THE BUILDING

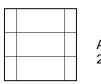
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2/8/2021

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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 F FURTHER INFORMATION)

DOWNLIGHT

MECHANICAL RETURN REGISTER

MECHANICAL AIR SUPPLY DIFFUSER

THESE PLANS ARE
COMPLETE AND
COMPLY WITH ALL
APPLICABLE STATE AND LOCAL BUILDING REGULATIONS 50% Construction Documents

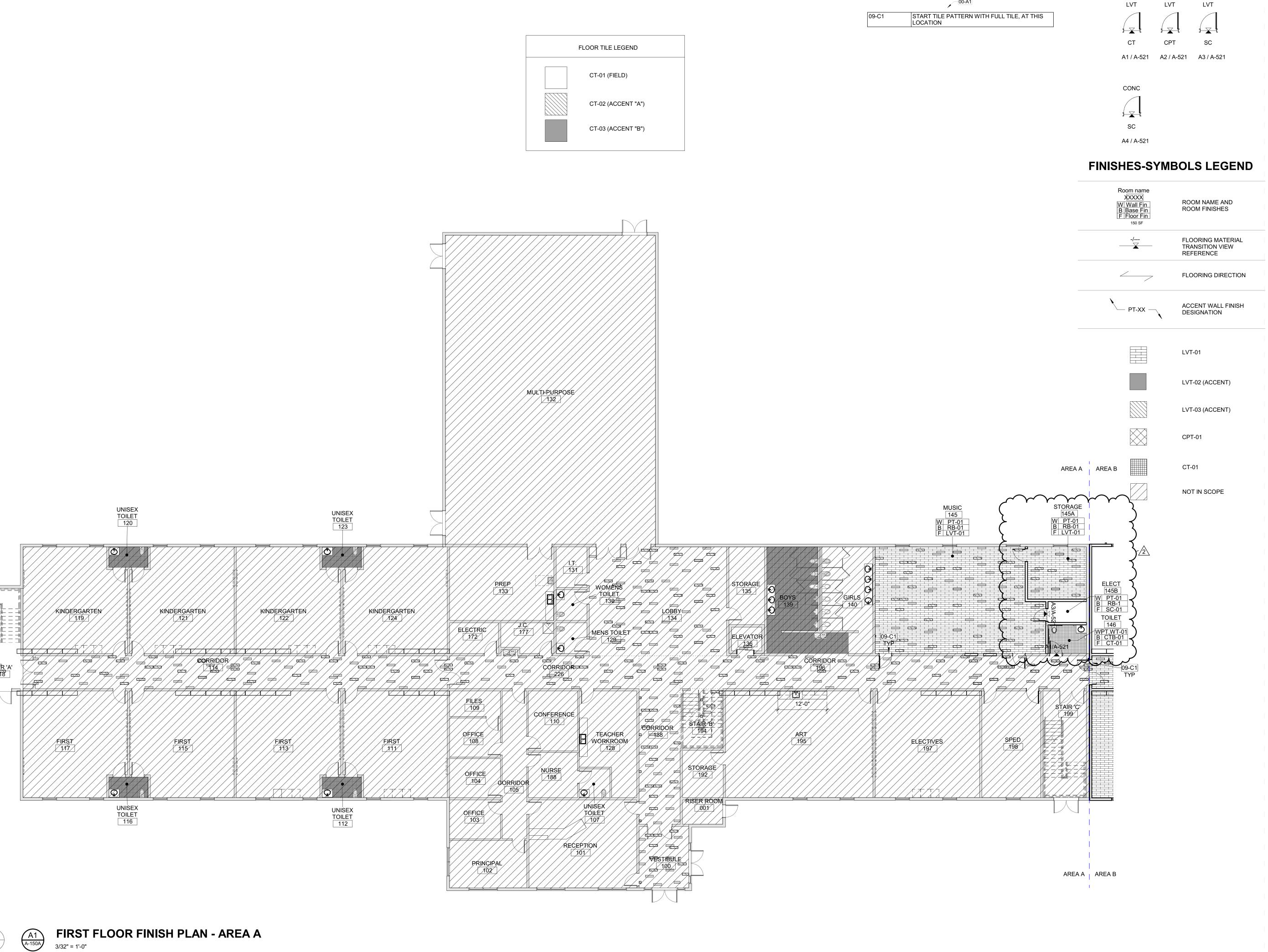


PROJECT NO.

20408.000

SECOND FLOOR REFLECTED CEILING PLAN -AREA B

A-132B



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

Architect RATIO

FINISH TRANSITION AT DOORS

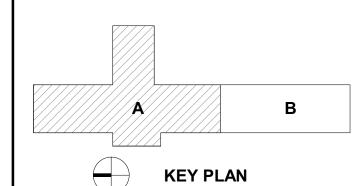
**KEYNOTES (ACTION/GENERAL)** 

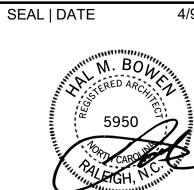
227 Fayetteville Street, Suite 301 Raleigh, North Carolina 27601 919-821-0805

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

Civil Engineer **Timmons Group** 

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





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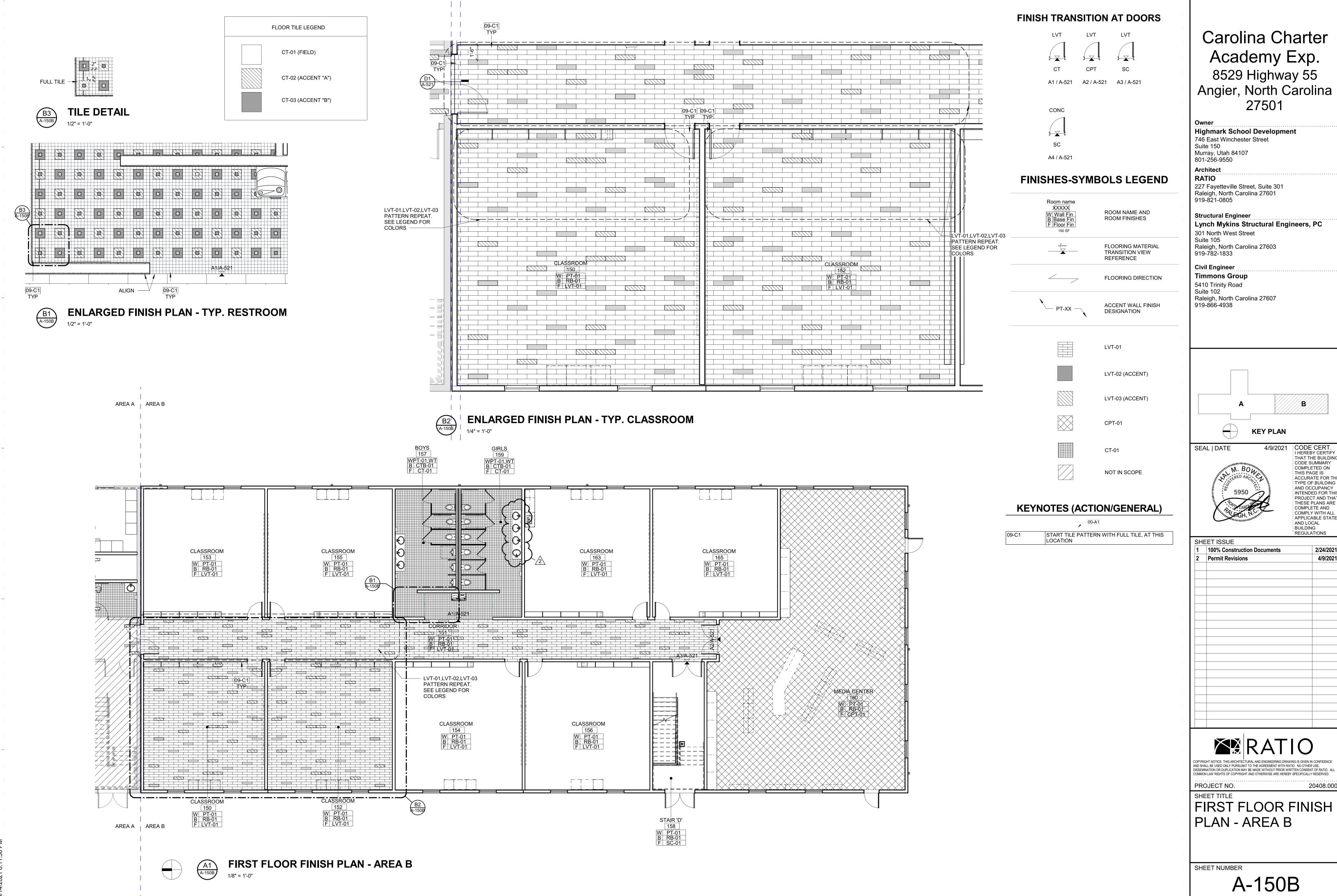
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PROJECT NO.

FIRST FLOOR FINISH PLAN - AREA A

20408.000

A-150A



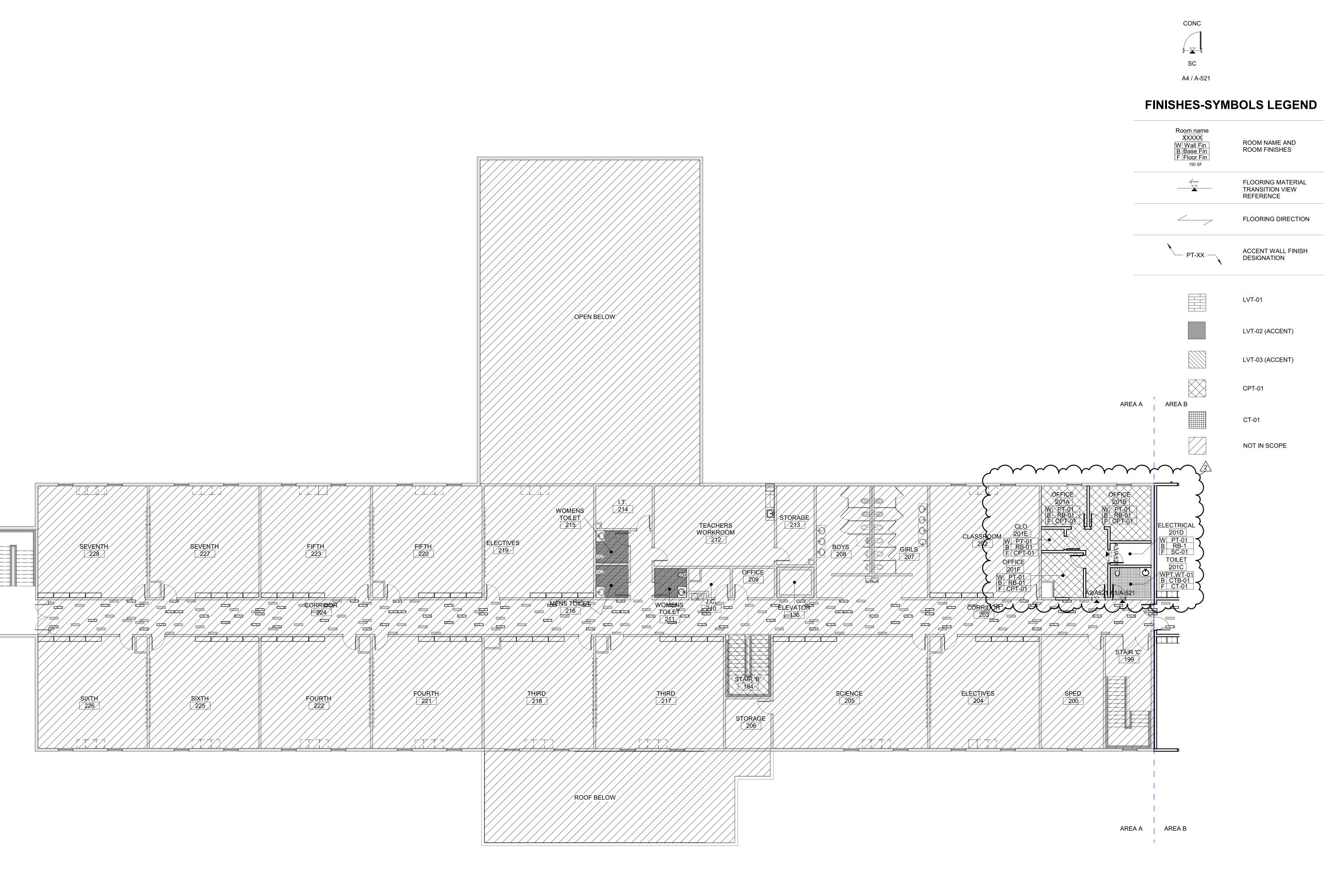
Lynch Mykins Structural Engineers, PC

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2/24/2021 4/9/2021

20408.000

FIRST FLOOR FINISH



Owner Highmark School Development 746 East Winchester Street Suite 150

Murray, Utah 84107 801-256-9550 Architect

**FINISH TRANSITION AT DOORS** 

LVT

CPT

LVT

LVT

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

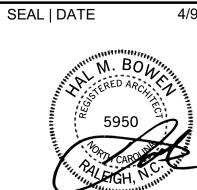
Structural Engineer

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

**KEY PLAN** 



4/9/2021 CODE CERT.
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PROJECT NO.

SECOND FLOOR FINISH PLAN -AREA

A-151A

#### FINISH TRANSITION AT DOORS

LVT LVT

A2 / A-521 A3 / A-521

CONC A4 / A-521

#### FINISHES-SYMBOLS LEGEND

| Room name  XXXXX  W Wall Fin  B Base Fin  F Floor Fin  150 SF | ROOM NAME AND<br>ROOM FINISHES                    |
|---------------------------------------------------------------|---------------------------------------------------|
| -/<br><del></del>                                             | FLOORING MATERIAL<br>TRANSITION VIEW<br>REFERENCE |
|                                                               | FLOORING DIRECTION                                |
| PT-XX —                                                       | ACCENT WALL FINISH<br>DESIGNATION                 |
|                                                               | LVT-01                                            |
|                                                               | LVT-02 (ACCENT)                                   |
|                                                               | LVT-03 (ACCENT)                                   |
|                                                               | CPT-01                                            |
|                                                               | CT-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

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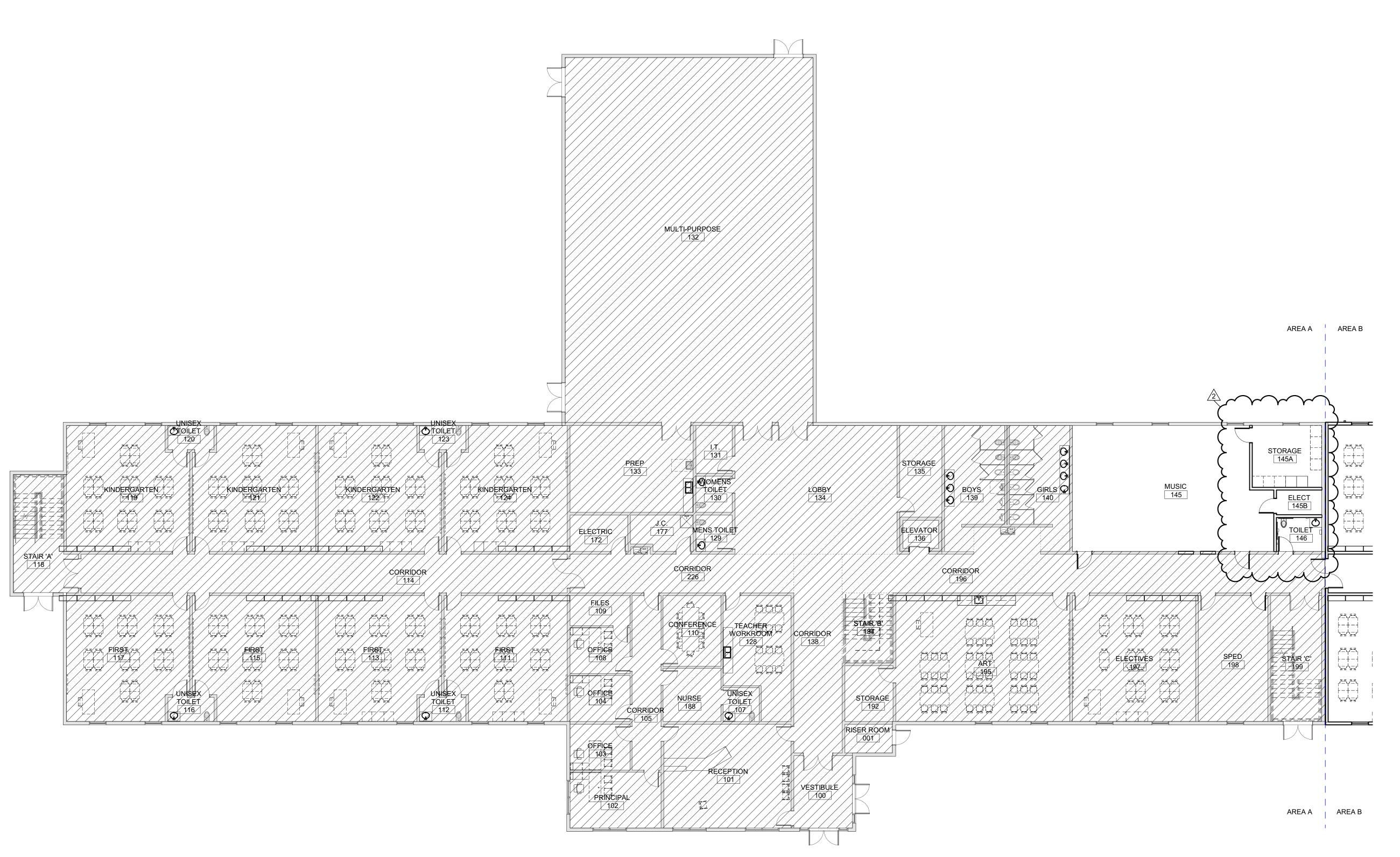
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PROJECT NO.

SECOND FLOOR FINISH PLAN - AREA

A-151B



Owner

Highmark School Development
746 East Winchester Street
Suite 150

Murray, Utah 84107 801-256-9550

Architect RATIO

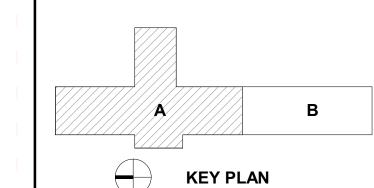
227 Fayetteville Street, Suite 301 Raleigh, North Carolina 27601 919-821-0805

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 | DAT



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
PEGULATIONS

20408.000

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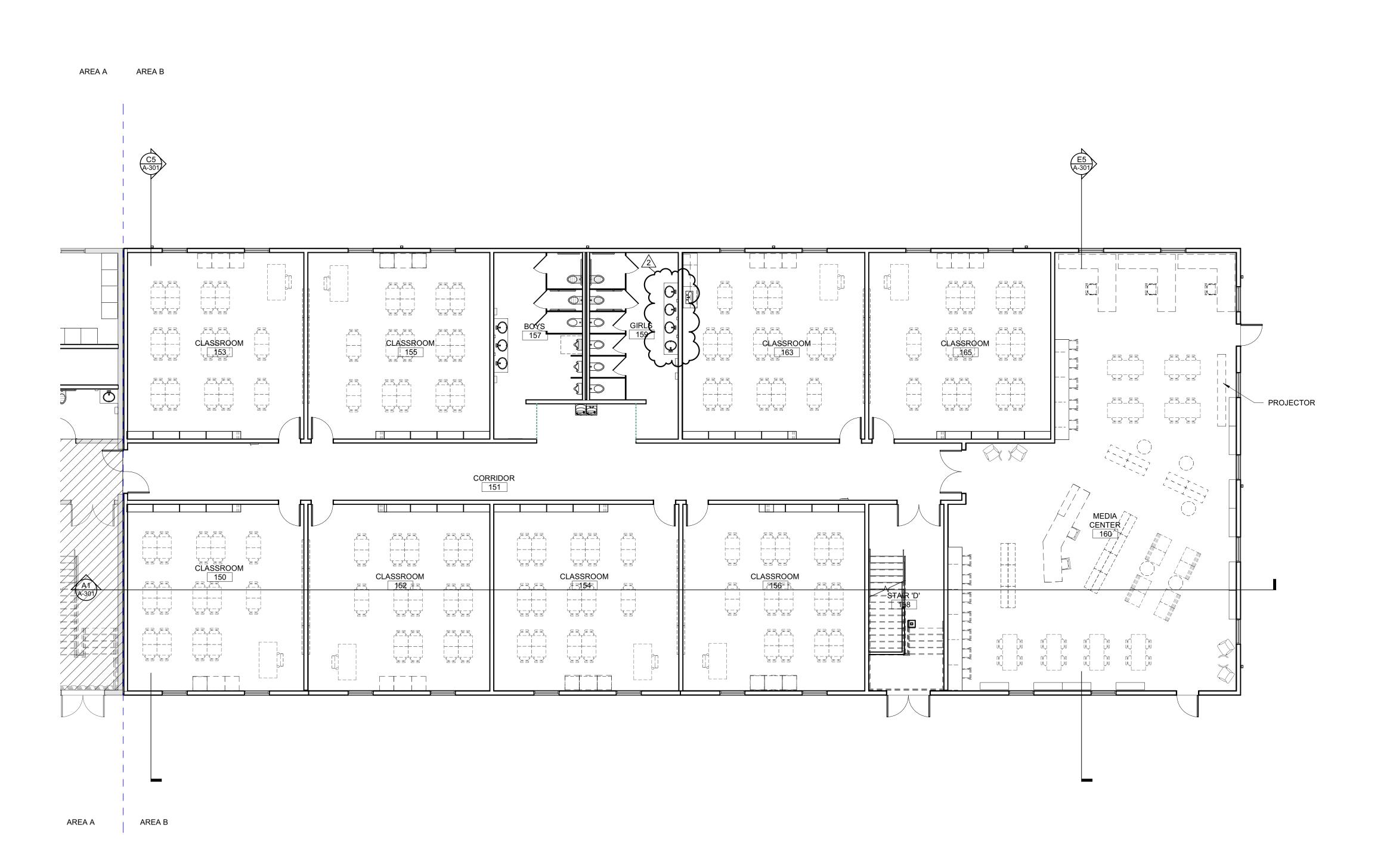
PROJECT NO.

FIRST FLOOR
EQUIPMENT

PLAN-AREA A

SHEET NUMBER

A-170A



**Highmark School Development** 746 East Winchester Street Suite 150 Murray, Utah 84107

801-256-9550 **Architect** 

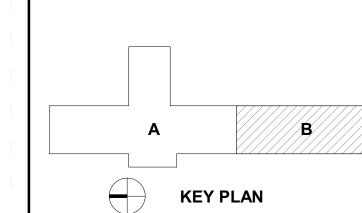
RATIO 227 Fayetteville Street, Suite 301 Raleigh, North Carolina 27601 919-821-0805

**Structural Engineer** 

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

Civil Engineer **Timmons Group** 

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





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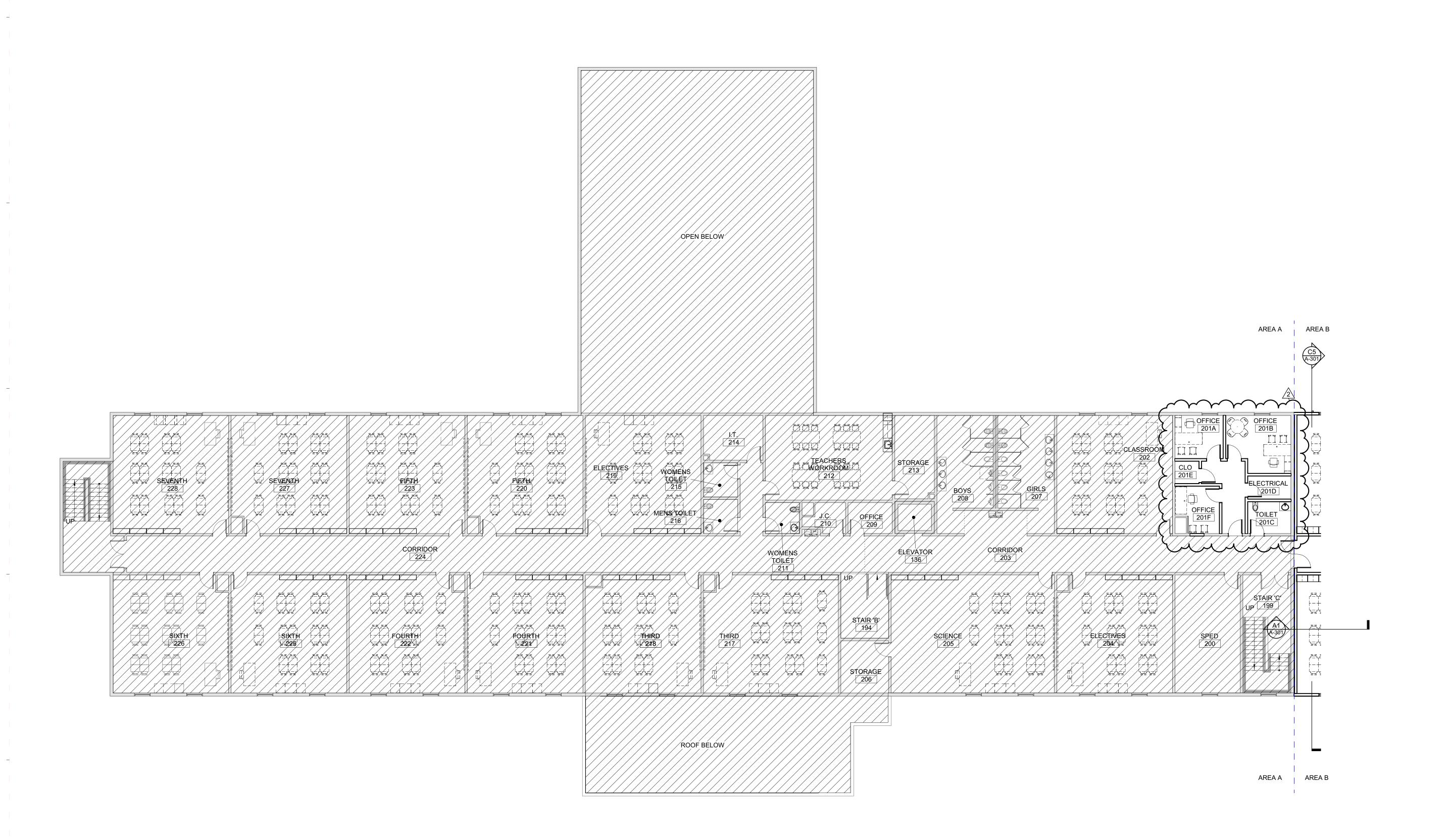


PROJECT NO.

20408.000 SHEET TITLE

FIRST FLOOR **EQUIPMENT PLAN** -AREA B

A-170B



**Highmark School Development** 746 East Winchester Street Suite 150 Murray, Utah 84107

**Architect** RATIO

801-256-9550

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

Structural Engineer

Lynch Mykins Structural Engineers, PC 301 North West Street

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

Civil Engineer Timmons Group

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



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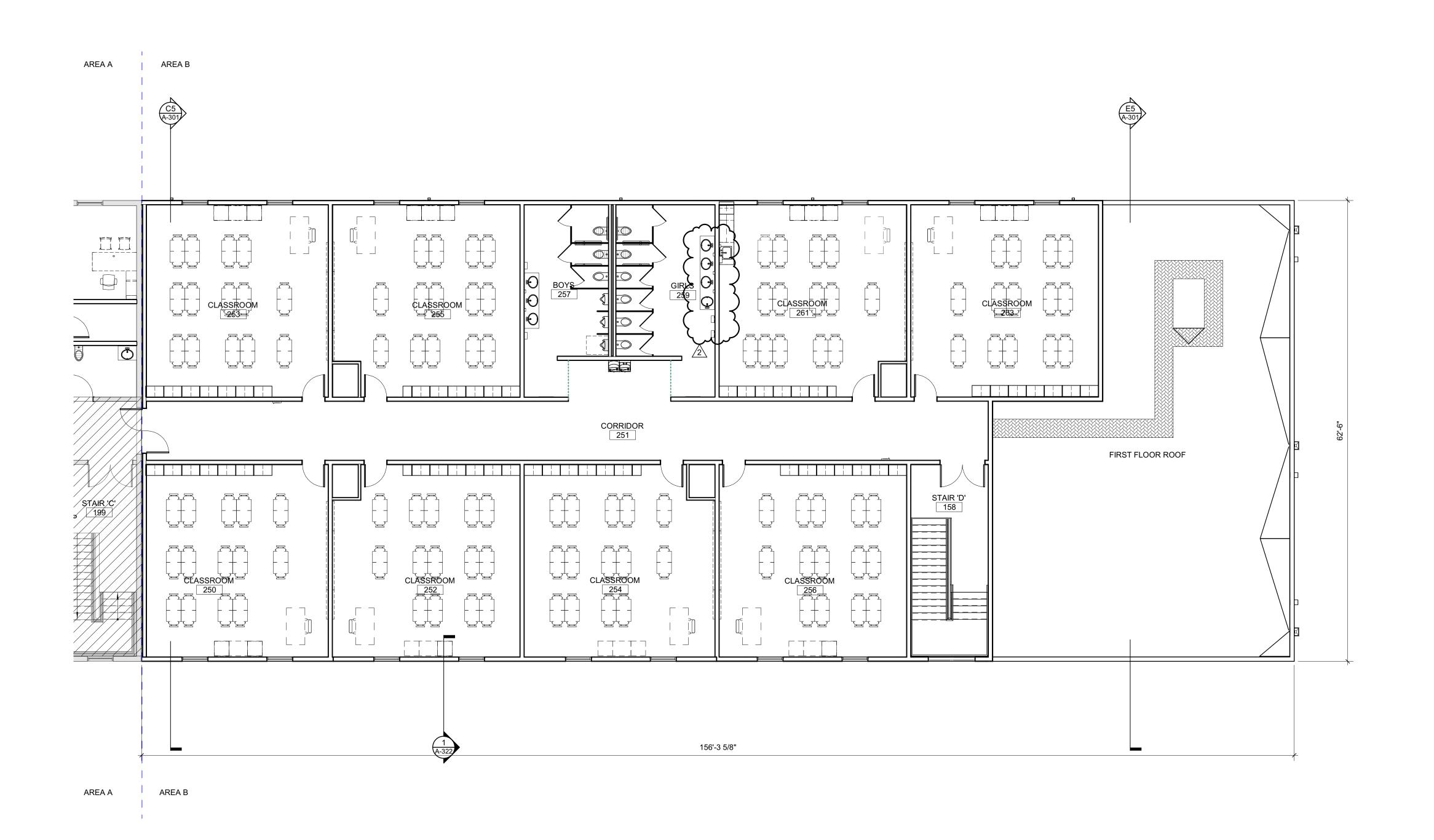
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SECOND FLOOR **EQUIPMENT PLAN -**AREA A

A-171A



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

Architect

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

Structural Engineer

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

Civil Engineer

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



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AND LOCAL
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REGULATIONS

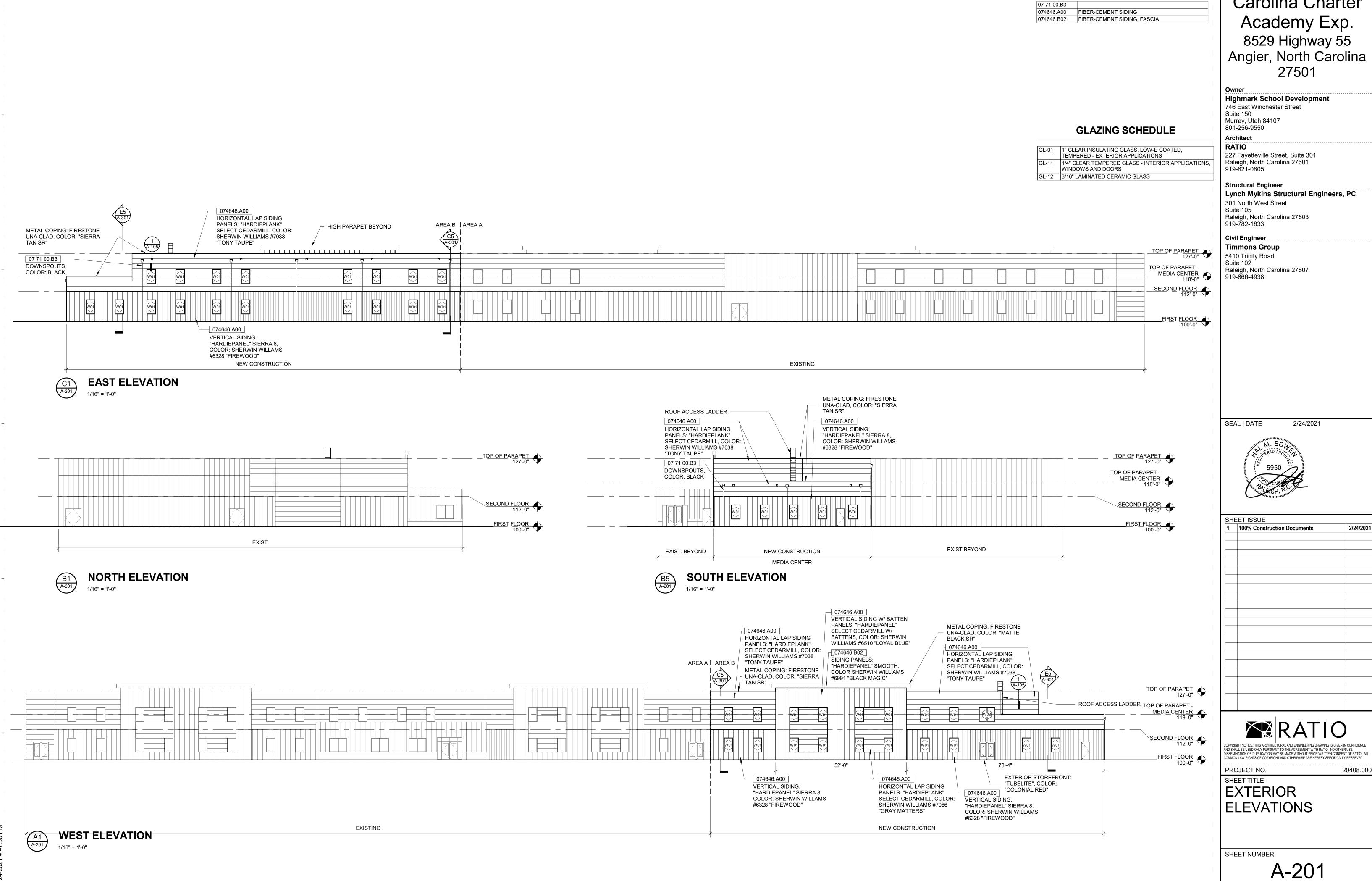
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SECOND FLOOR EQUIPMENT PLAN-AREA B



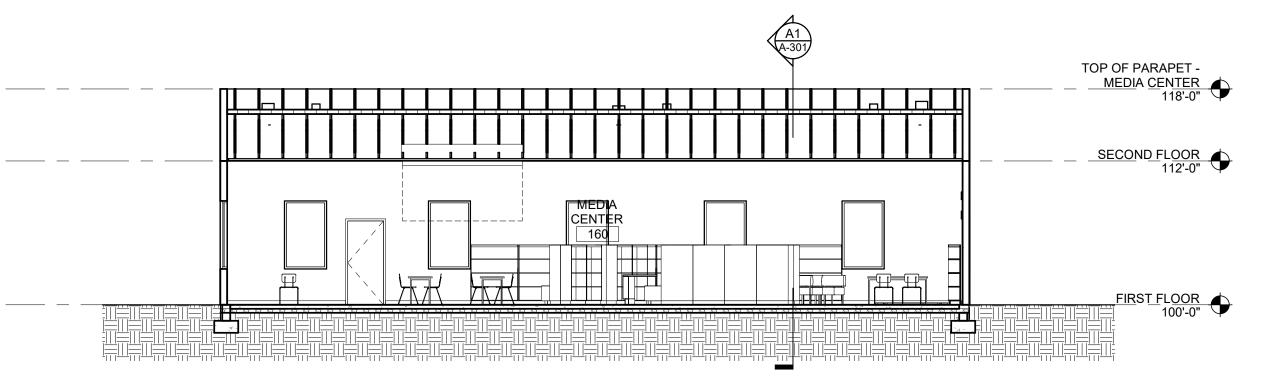
Carolina Charter

**KEYNOTES (SPEC BASED)** 

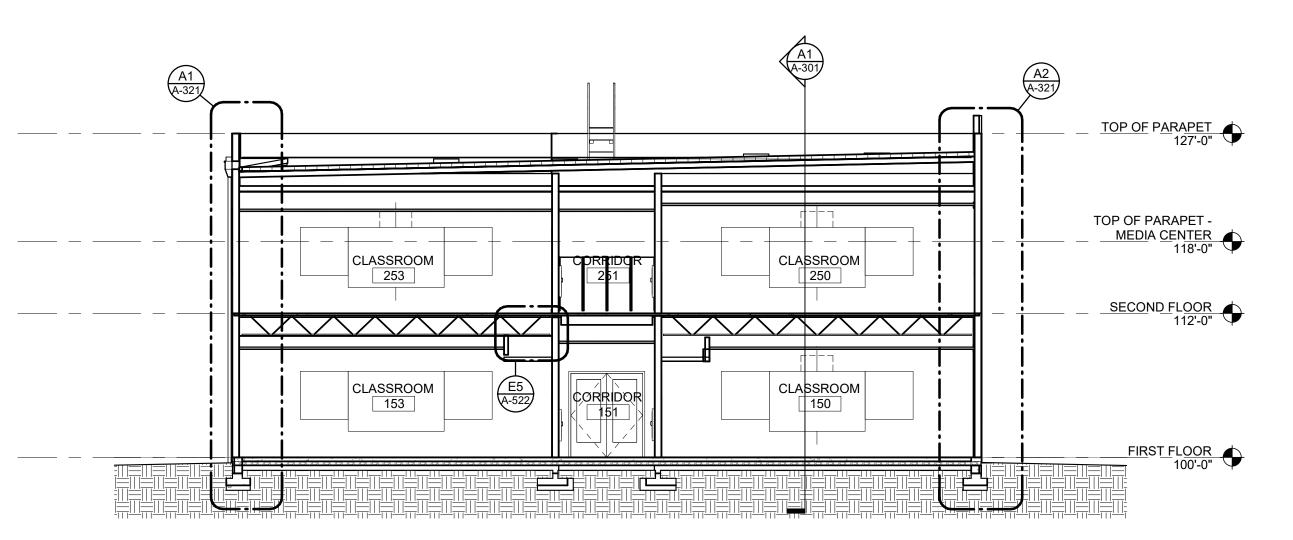
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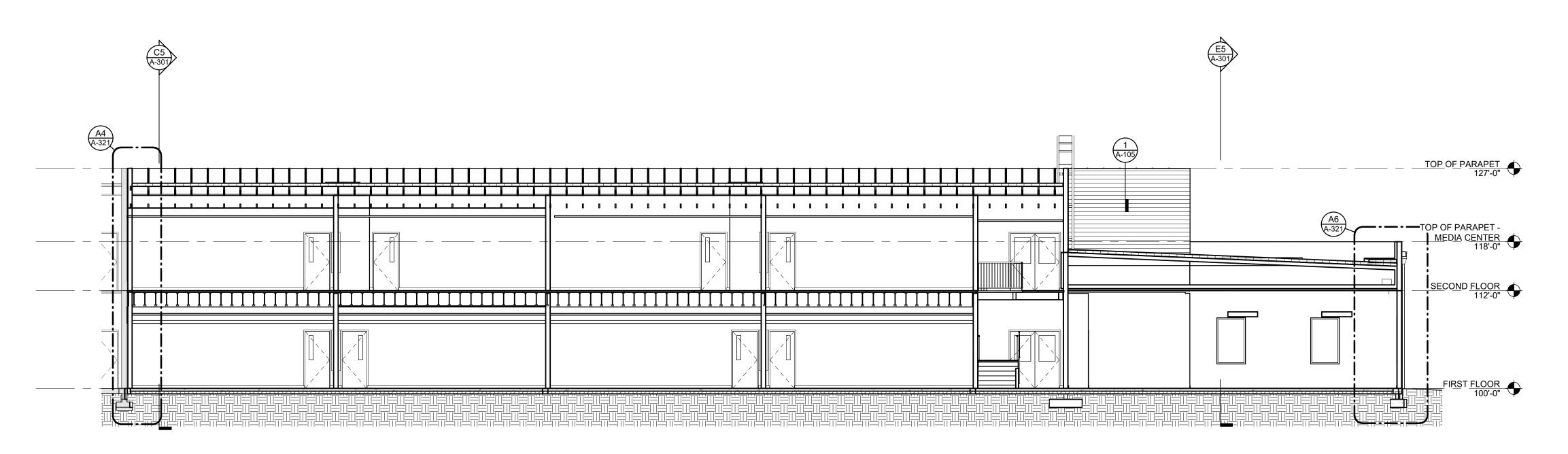


BS -Classroom Wing 2



BS -Classroom Wing 1

1/8" = 1'-0"



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

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

2/24/2021



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PROJECT NO.

BUILDING SECTIONS

20408.000

### **KEYNOTES (SPEC BASED)**

061600.A00

#### **KEYNOTES (ACTION/GENERAL)**

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

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

Owner

**Highmark School Development** 746 East Winchester Street Suite 150

801-256-9550 **Architect** 

Murray, Utah 84107

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

Structural Engineer

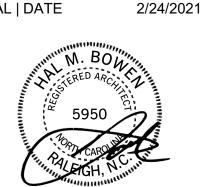
Lynch Mykins Structural Engineers, PC 301 North West Street

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

Civil Engineer **Timmons Group** 

919-866-4938

5410 Trinity Road Suite 102 Raleigh, North Carolina 27607



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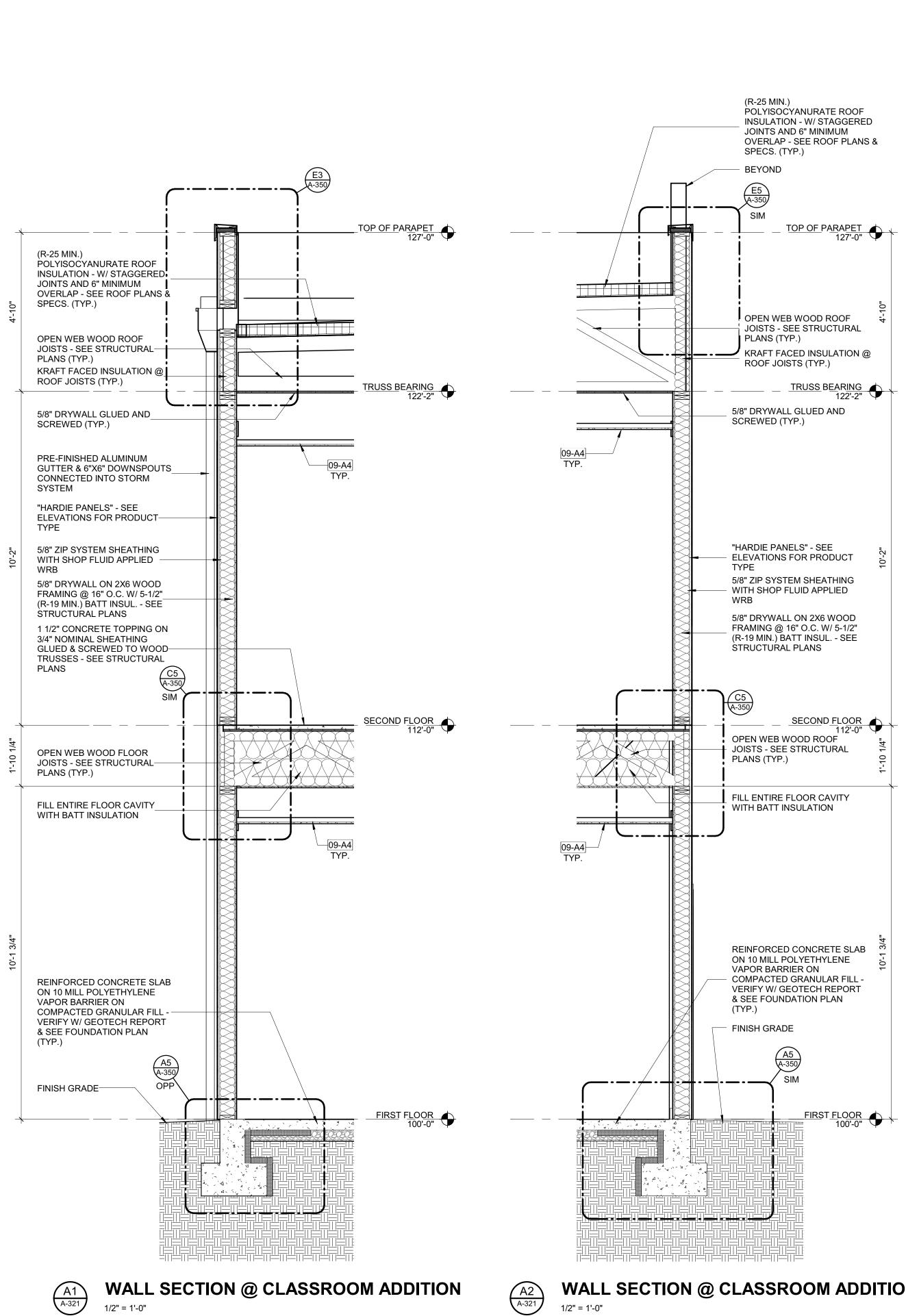
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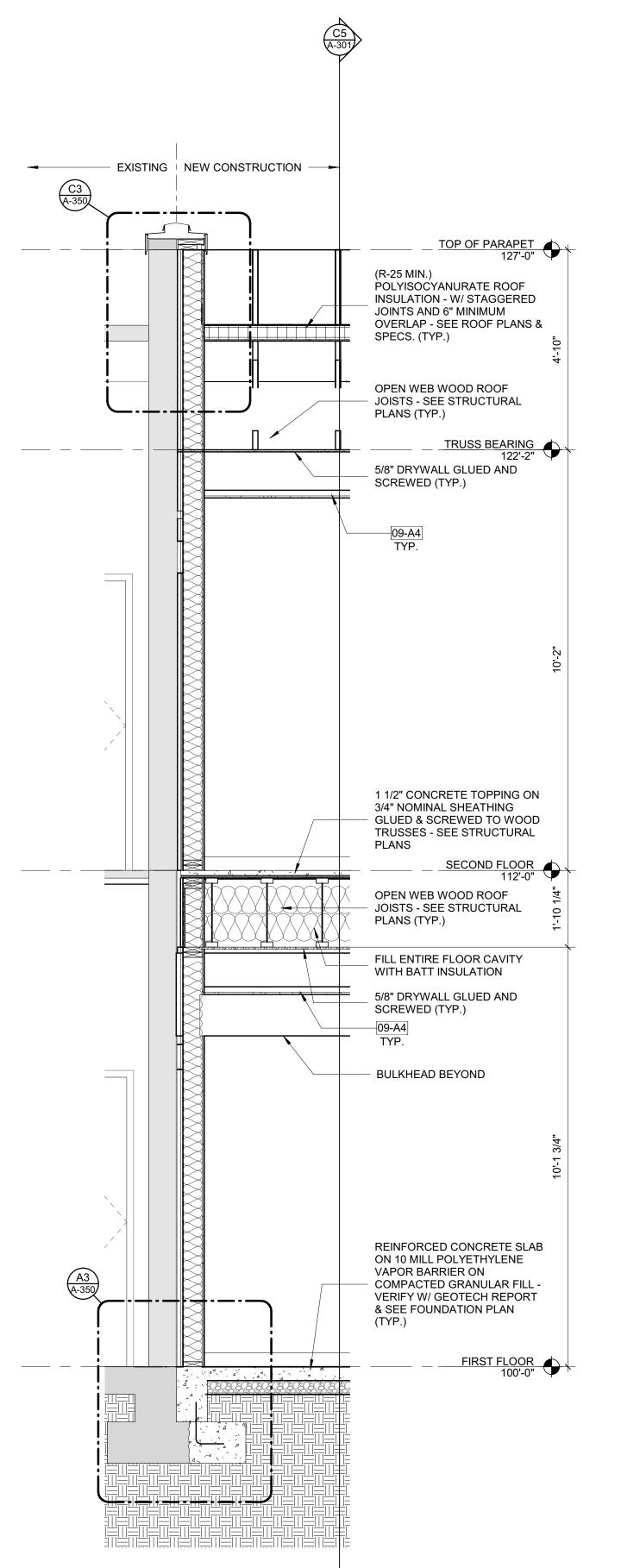
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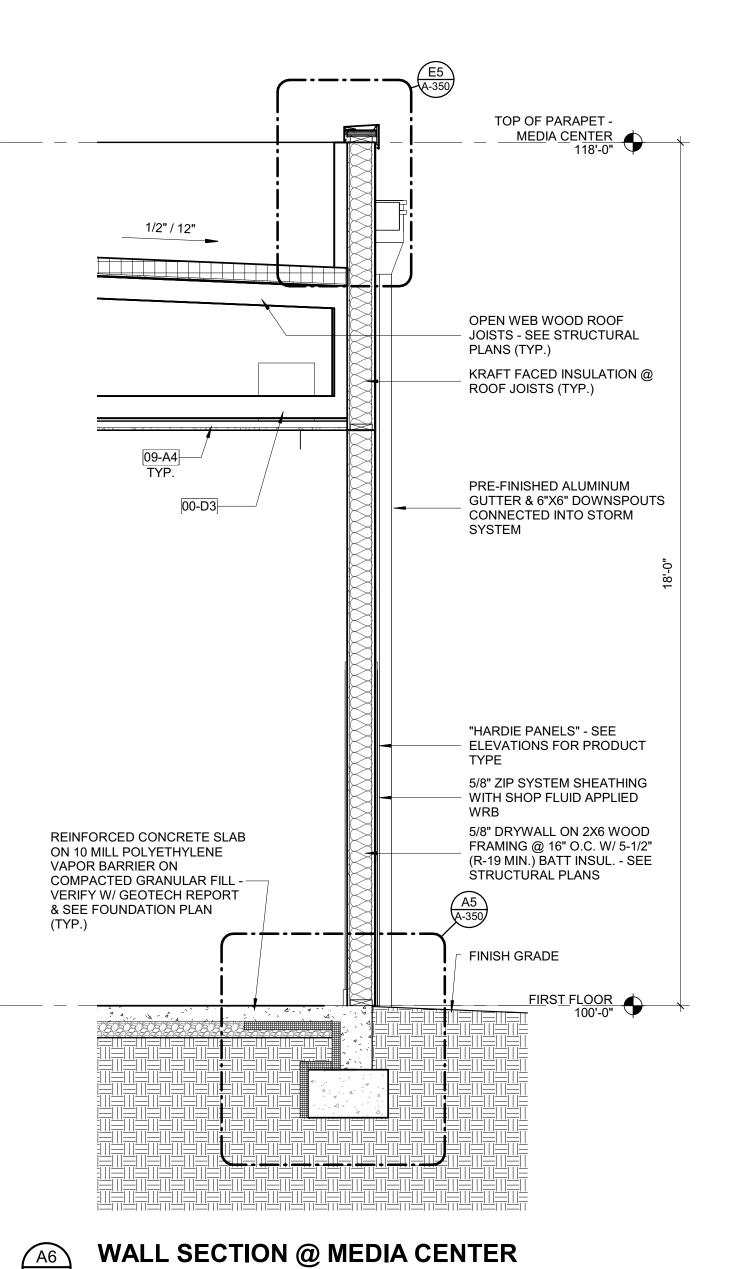
WALL SECTIONS

SHEET NUMBER

A-321



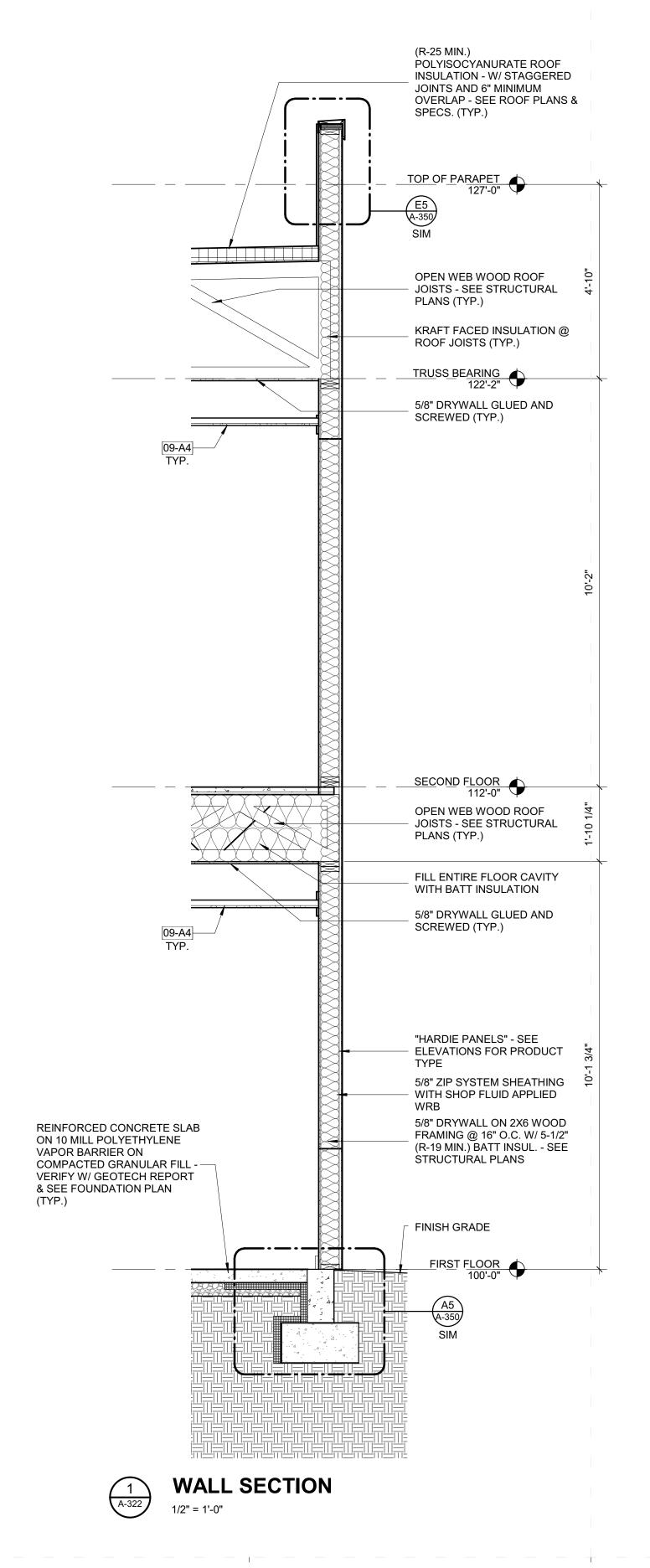




WALL SECTION @ CLASSROOM ADDITION
1/2" = 1'-0" A-321

WALL SECTION @ EXIST. WALL

A-321



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

2/24/2021



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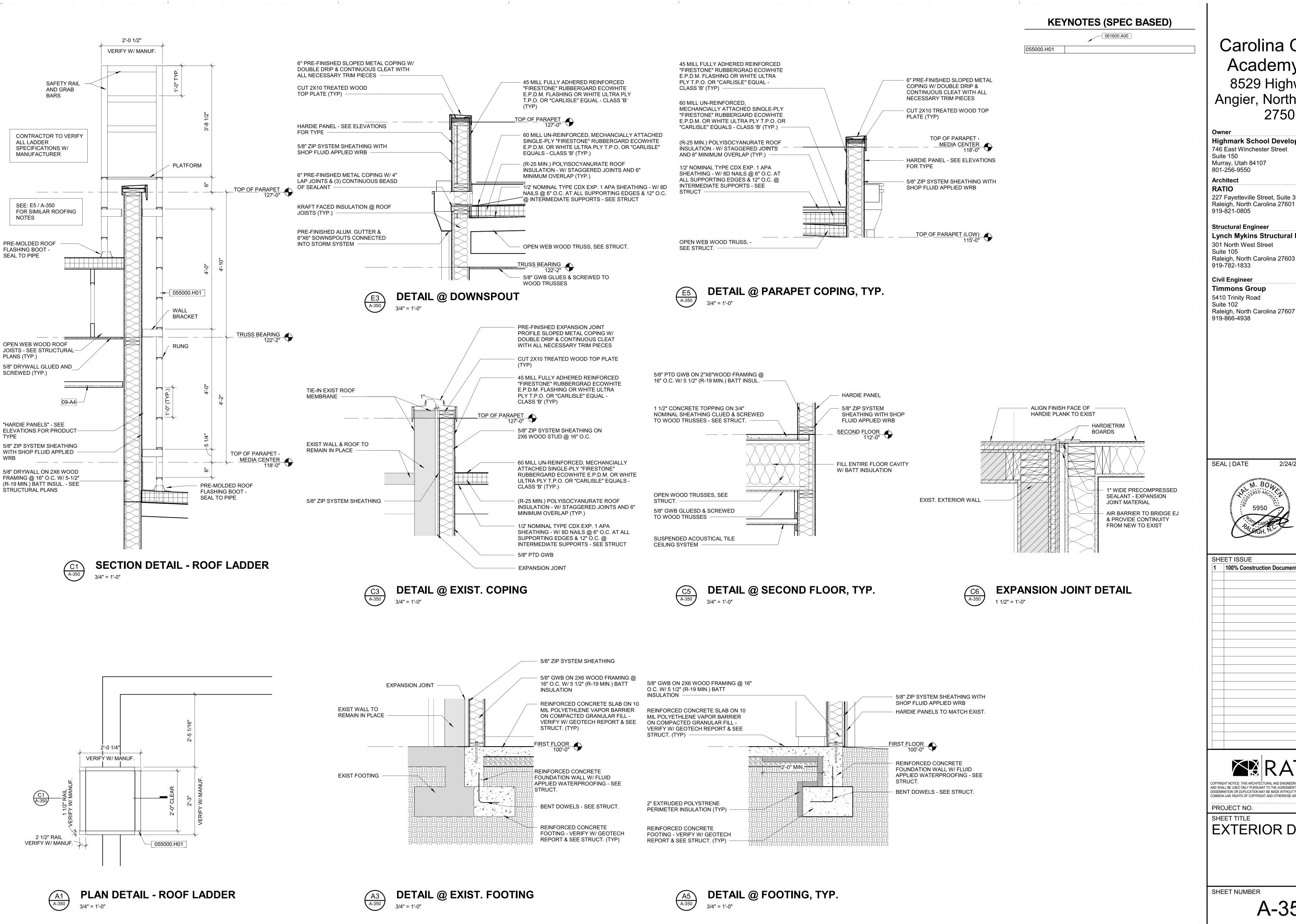
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WALL SECTIONS

SHEET NUMBER



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2/24/2021



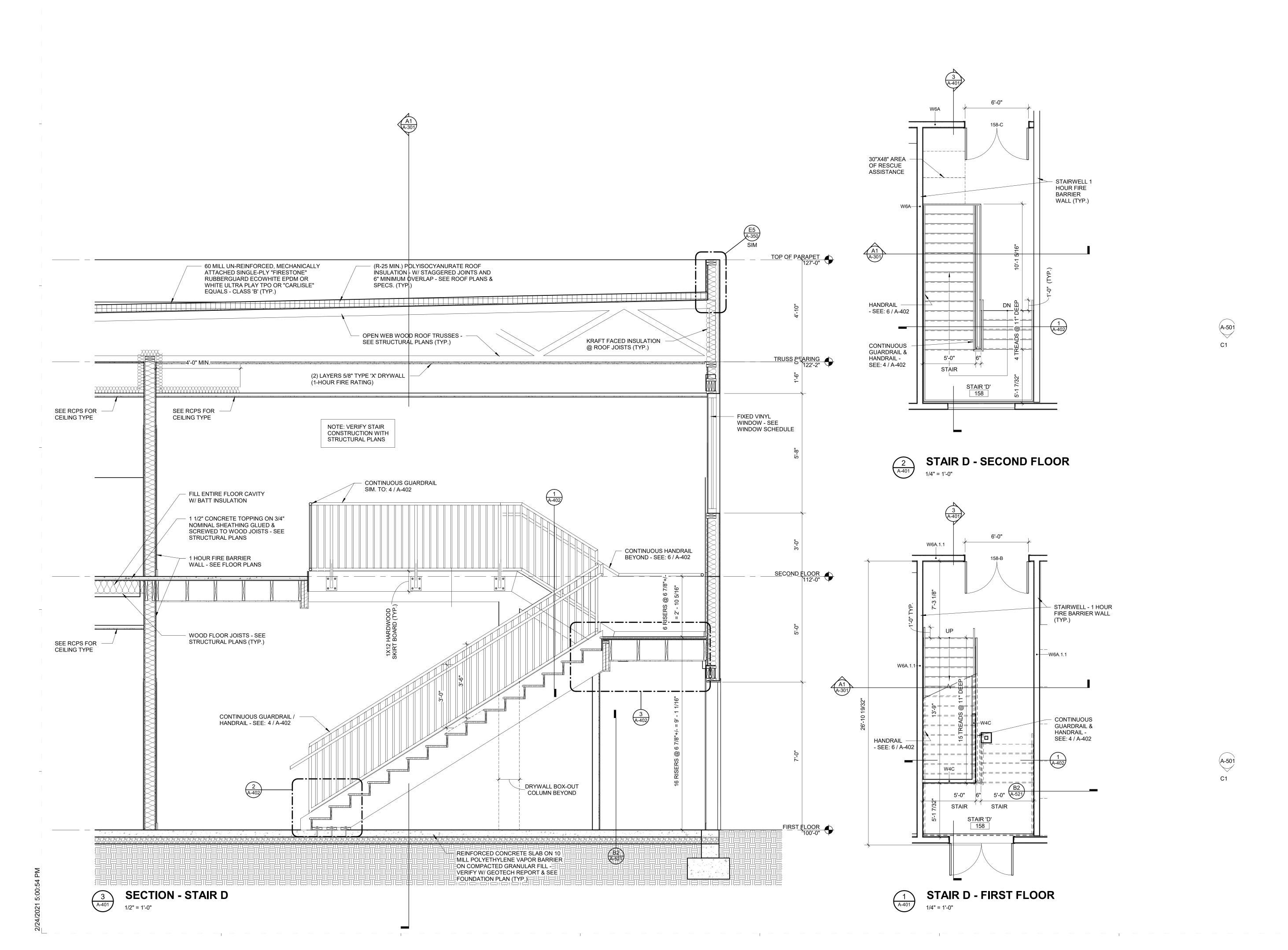
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EXTERIOR DETAILS

061600.A0



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

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

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

Civil Engineer

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

SEAL | DATE



2/8/2021

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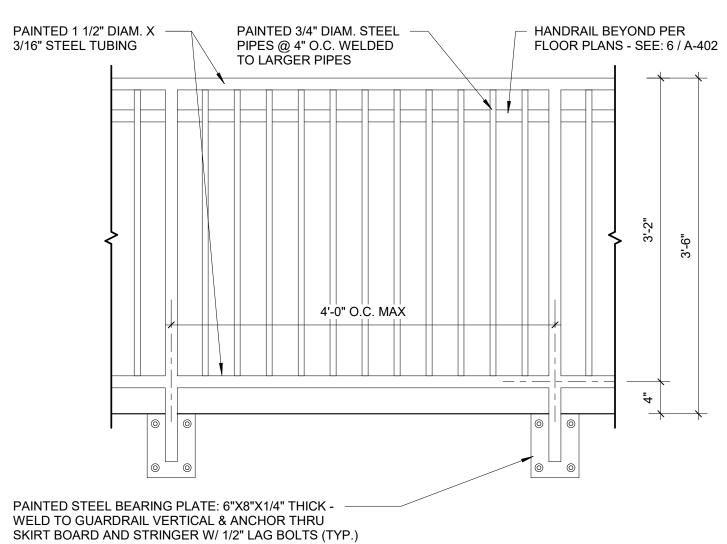
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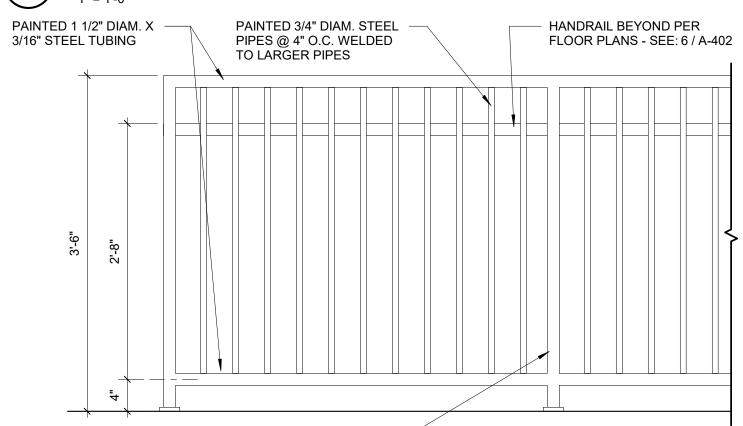
PLANS AND SECTIONS

SHEET NUMBE



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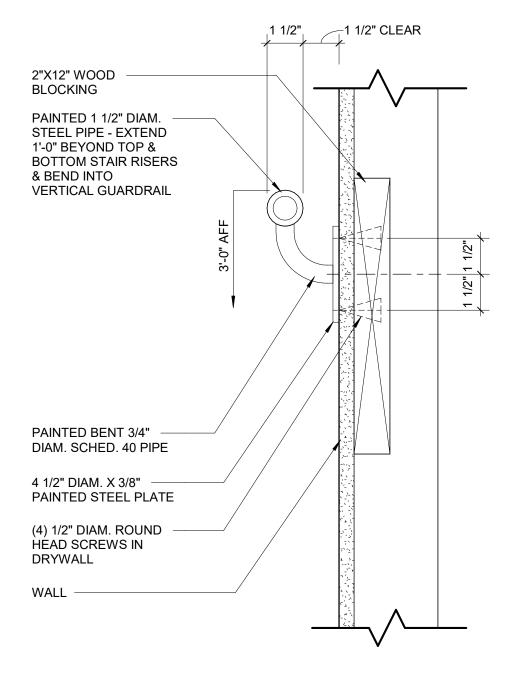




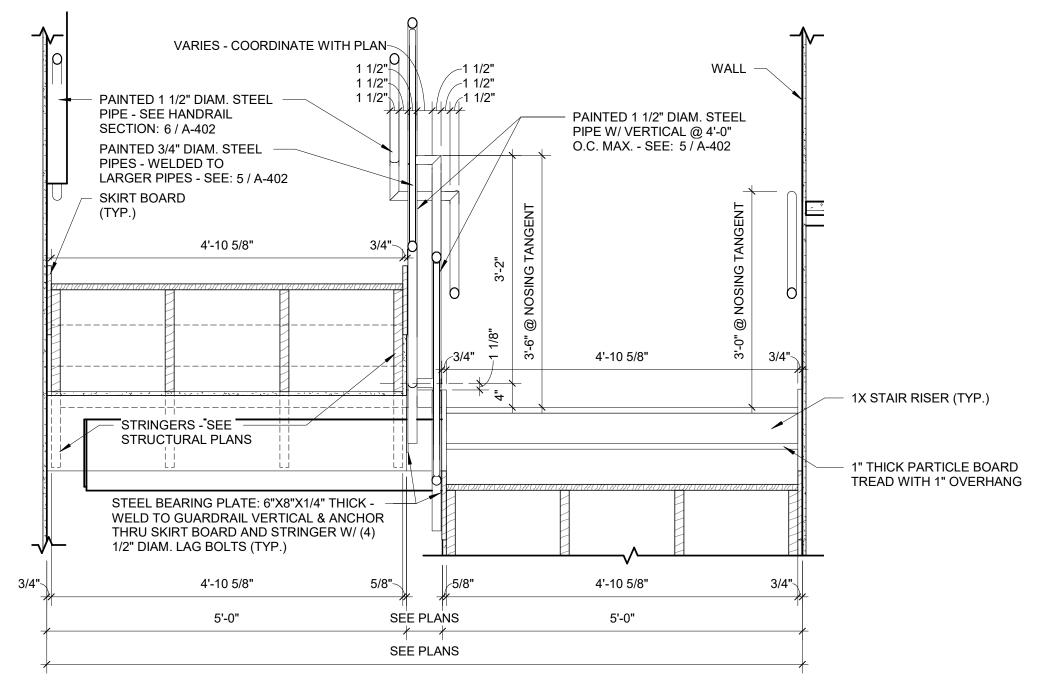
PAINTED 1 1/2" DIAM. X S/16" STEEL TUBING VERTICALS @ 48" O.C. MAX. WITH 4"X4"3/16" STEEL BASE PLATE EXPANSION ANCHORED TO CONCRETE



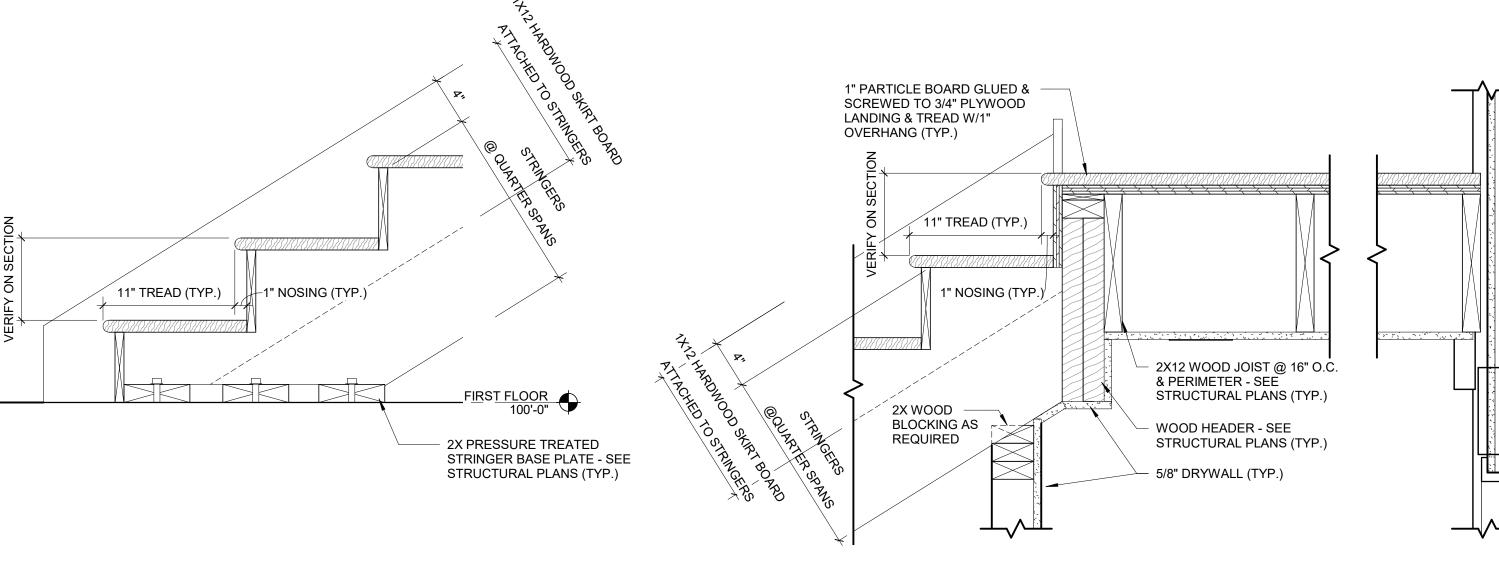
PICKET GUARDRAIL - TOP ANCHOR















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

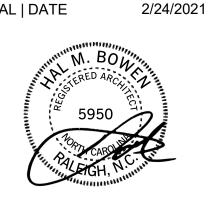
**Structural Engineer** Lynch Mykins Structural Engineers, PC

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

Raleigh, North Carolina 27607

Civil Engineer **Timmons Group** 5410 Trinity Road Suite 102

919-866-4938



| 1 | EET ISSUE 100% Construction Documents | 2/24/20 |
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**RATIO** 

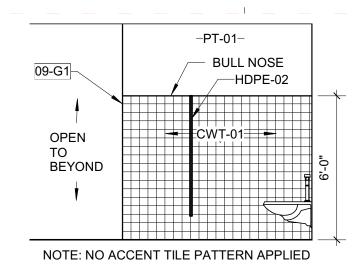
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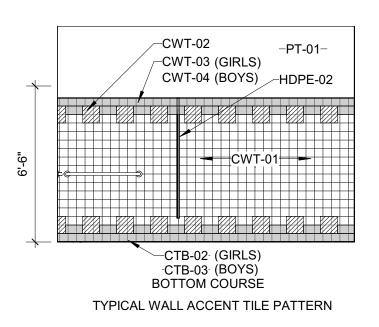
STAIR DETAILS

PROJECT NO.

SHEET NUMBER A-402



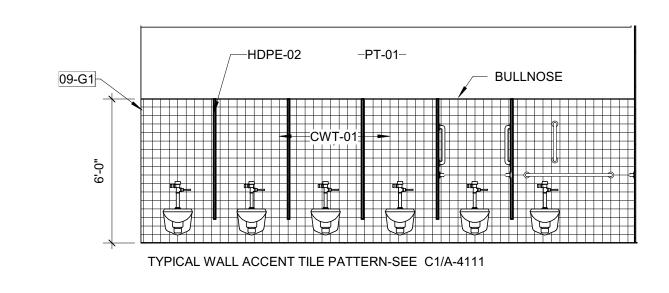
#### **INTERIOR ELEVATION - TOILET ROOM** D1 A-411



OPEN

CWT-01-

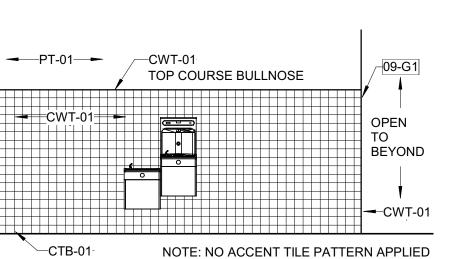
TO BEYOND

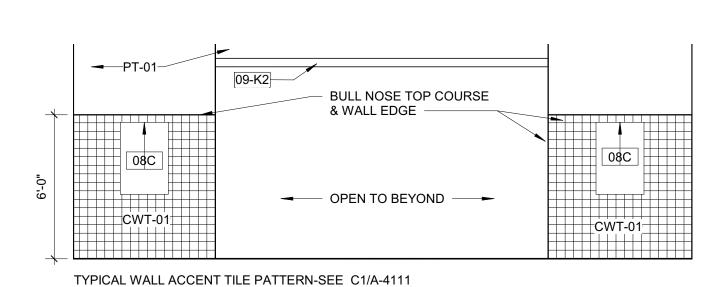


**INTERIOR ELEVATION - TOILET TOOM** 

1/4" = 1'-0"

### INTERIOR ELEVATION - TOILET ROOM NORTH 1/4" = 1'-0" C1 A-411





**ENLARGED TOILET PLAN** 



#### **TOILET ROOM ACCESSORIES**

05A

| REFER TO SHEET A-002 FOR TOILET COMPARTMENT TYPES AND ACCESSORIES |                                           |                           |             |       |  |  |  |  |  |
|-------------------------------------------------------------------|-------------------------------------------|---------------------------|-------------|-------|--|--|--|--|--|
| TAG                                                               | DESCRIPTION                               | DESCRIPTION MFR MODEL NO. |             |       |  |  |  |  |  |
|                                                                   |                                           |                           |             |       |  |  |  |  |  |
| D                                                                 | PAPER TOWEL DISPENSER, SURFACE MOUNTED    | BOBRICK                   | B-4262      |       |  |  |  |  |  |
| SA.                                                               | TOILET TISSUE HOLDER, 2 STANDARD ROLL     | BOBRICK                   | B-2888      |       |  |  |  |  |  |
| ·A                                                                | SANITARY NAPKIN DISPOSAL, SURFACE MOUNTED | BOBRICK                   | B-270       |       |  |  |  |  |  |
| iΑ                                                                | GRAB BAR, 42"                             | BOBRICK                   | B-5806 x 42 |       |  |  |  |  |  |
| B                                                                 | GRAB BAR, 36"                             | BOBRICK                   | B-5806 x 36 |       |  |  |  |  |  |
| D .                                                               | GRAB BAR, 18"                             | BOBRICK                   | B-5806 x 18 |       |  |  |  |  |  |
| B                                                                 | SOAP DISPENSER, WALL MOUNTED              | BOBRICK                   | B-2111      |       |  |  |  |  |  |
| SA .                                                              | MIRROR, ABOVE COUNTERTOP                  | BOBRICK                   | B-290 2436  |       |  |  |  |  |  |
| C                                                                 | MIRROR, CUSTOM                            | PER SPECIFICATIONS        | N/A         | OWNER |  |  |  |  |  |
| Α                                                                 | CLOTHES HOOK                              | BOBRICK                   | B-7672      |       |  |  |  |  |  |

**BULLNOSE TOP** COURSE

08C

CTB-01-BOTTOM COURSE

CWT-01

11'-10"

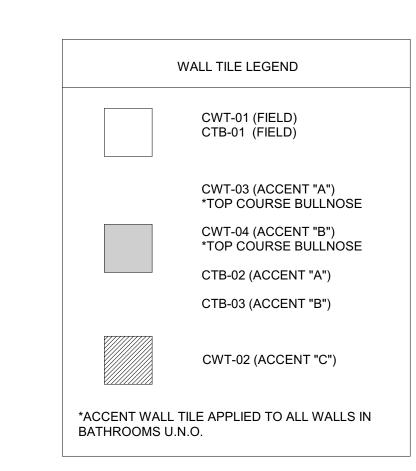
## **KEYNOTES (SPEC BASED)**

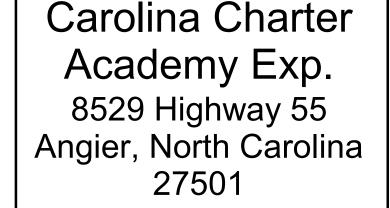
#### **KEYNOTES (ACTION/GENERAL)**

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

#### **GENERAL TOILET ROOM NOTES**

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





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

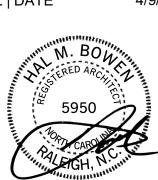
Suite 105 Raleigh, North Carolina 27603 919-782-1833

**Civil Engineer** 

919-866-4938

Timmons Group 5410 Trinity Road Suite 102 Raleigh, North Carolina 27607

SEAL | DATE



THAT THE BUILDING 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

REGULATIONS

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

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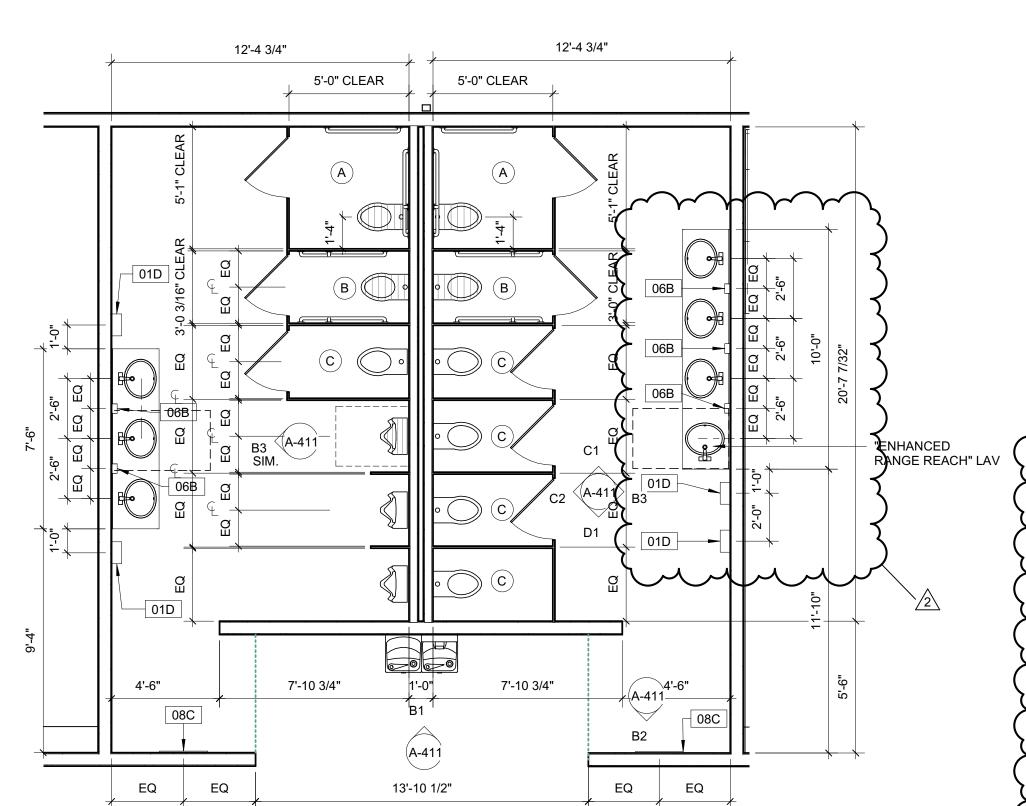
PROJECT NO.

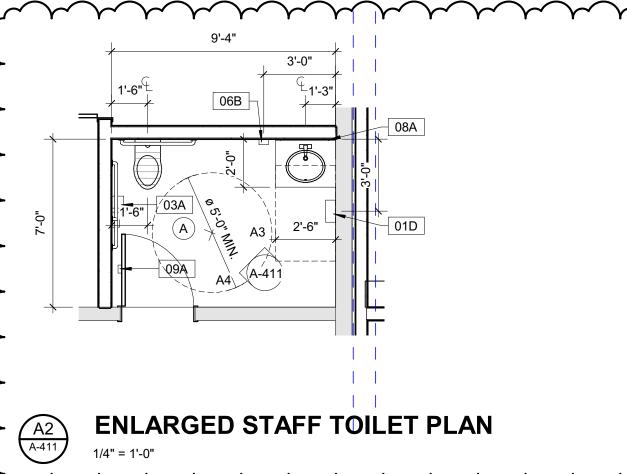
**ENLARGED TOILET** 

20408.000

**PLANS** 

A-411





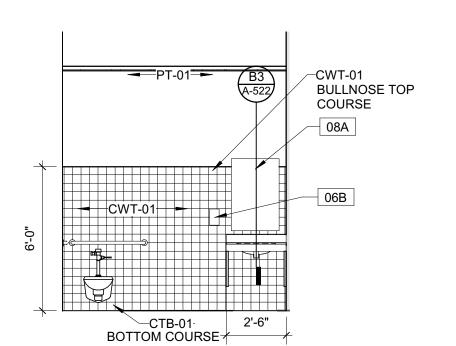
<sup>+</sup>HDPE-01<del>+</del>√

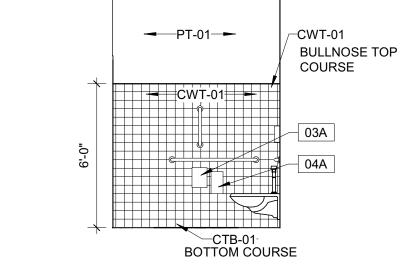
EQ EQ

TYPICAL WALL ACCENT TILE PATTERN-SEE C1/A-4111

EQ

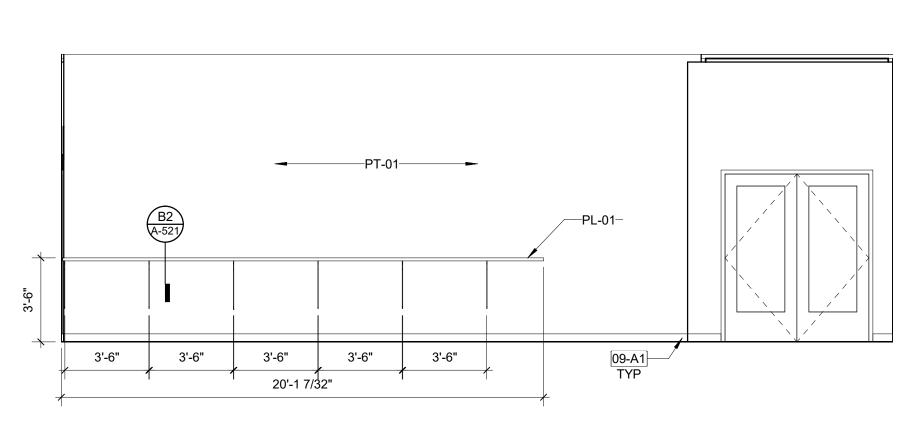
**INTERIOR ELEVATION - TOILET ROOM EAST** 



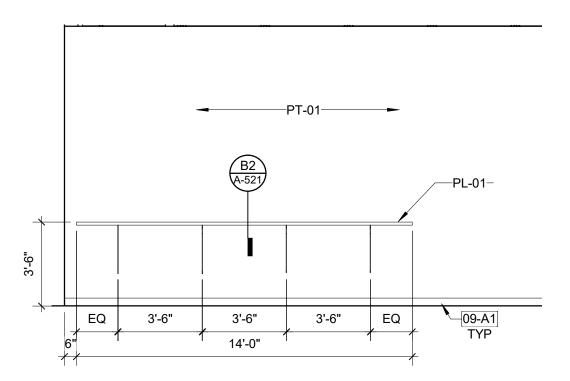


**INTELEV-STAFF TOILET WEST** 

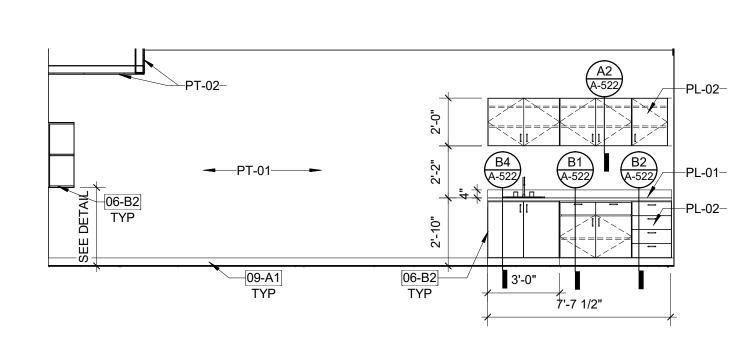
A1 A-411







**INTELEV-MEDIA COUNTER WEST 2** D2 A-501



**INTELEV-CLASSROOM 163/263** D3 A-501

#### **KEYNOTES (SPEC BASED)**

#### **KEYNOTES (ACTION/GENERAL)**

PROVIDE FINISHED END PANEL AT EXPOSED CASEWORK END

#### **GENERAL CASEWORK NOTES**

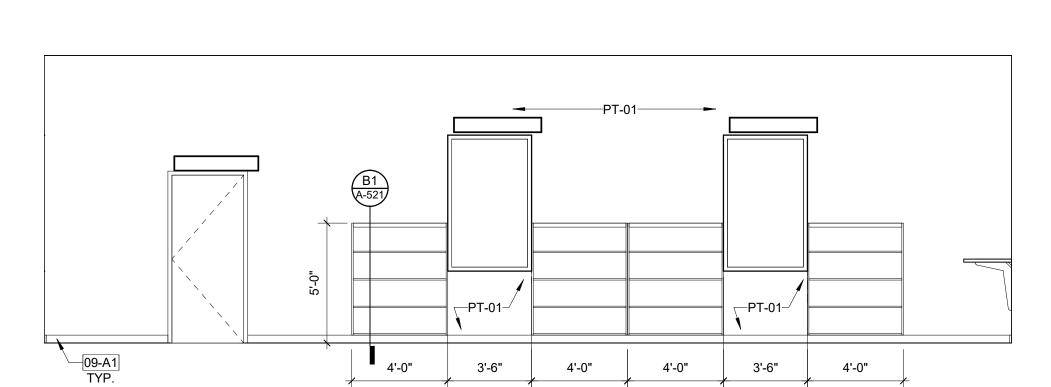
- A. PROVIDE FINISHED END PANELS AT ALL EXPOSED CABINET
- B. PROVIDE FILLER PANELS BETWEEN CORNER CABINETS AND BETWEEN CABINETS AND WALLS, UNLESS NOTED OTHERWISE

WALL BASE, REFER TO FINISH PLAN FOR TYPE

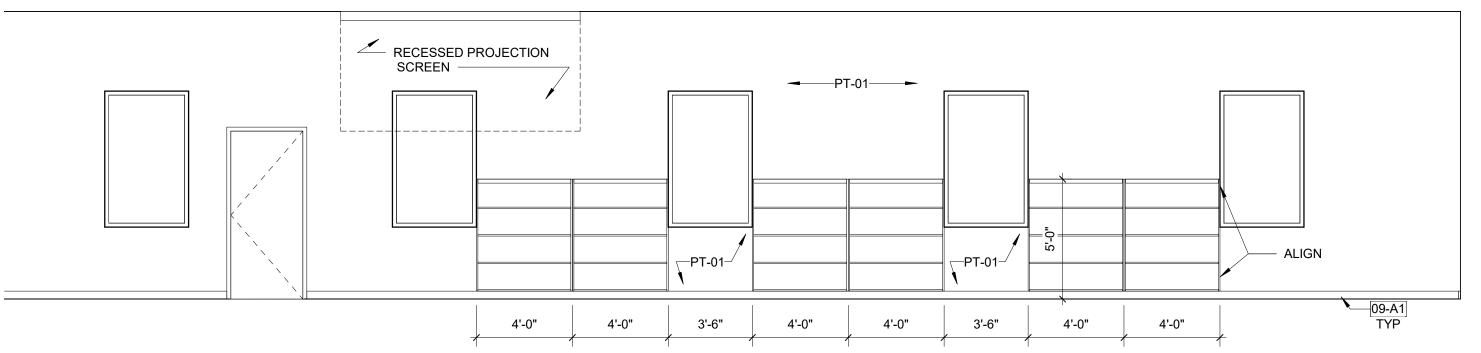
- C. PROVIDE SEALANT BETWEEN BACKSPLASH AND COUNTER AT PERIMETER WALLS.
- D. PROVIDE COUNTERTOP SUPPORT BRACKETS AS REQUIRED UNLESS NOTED OTHERWISE ON ELEVATIONS. BRACKETS
- TO BE SPACED 48" ON CENTER, MINIMUM. E. COORDINATE FINAL ELECTRICAL AND DATA OUTLET LOCATIONS IN CASEWORK/MILLWORK WITH OWNERPRIOR
- TO INSTALLATION. PROVIDE FINISHED END PANELS, FILLERS, SUPPORTS, ETC.
- REQUIRED FOR A COMPLETE CABINETRY INSTALLATION. E. PROVIDE CUTOUTS, ACCESS PANELS AND REMOVABLE COMPONENTS AS REQUIRED BY NEW OR EXISTING

CONDITIONS SUCH AS ELECTRICAL OUTLETS, JUNCTION

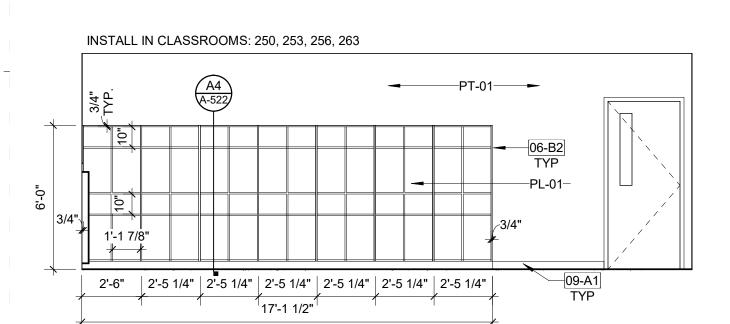
- BOXES, CLEANOUTS, ETC. H. MOUNT TOP OF WALL CABINETS AT +7'-0" A.F.F. UNLESS NOTED OTHERWISE.
- PROVIDE GROMMETS IN COUNTERTOPS WHERE ELECTRICAL OR COMMUNICATIONS OUTLETS ARE INDICATED IN KNEE SPACE BELOW. GROMMETS TO BE INSTALLED IN FIELD. VERIFY ALL LOCATIONS WITH OWNER PRIOR TO INSTALL.
- J. ALL TOE KICKS TO BE 4" HIGH AFF AND 3" DEEP, UNLESS NOTED OTHERWISE.
- K. ALL CABINET INTERIORS TO BE WHITE MELAMINE UNLESS NOTED OTHERWISE. TRASH AND RECYCLE CABINET INTERIORS SHALL BE BLACK MELAMINE, UNLESS NOTED
- OTHERWISE. L. FINAL KEYING TO CABINET DOORS AND DRAWERS TO BE PROVIDED BY OWNER, PRIOR TO MANUFACTURING.



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

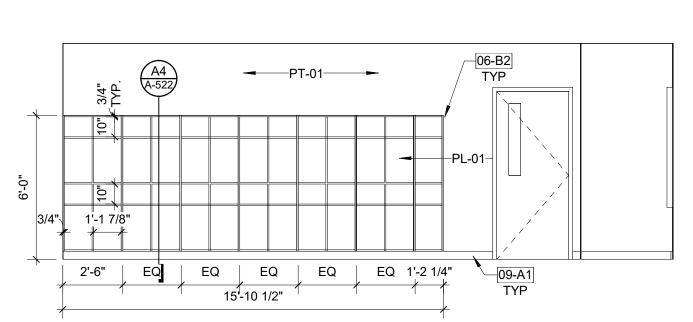


**INTELEV-MEDIA CENTER EAST** 

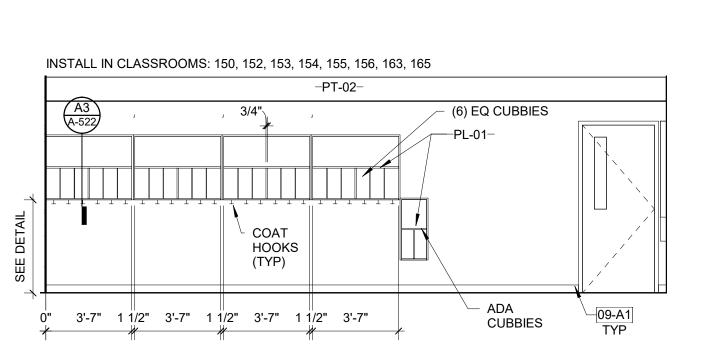


INTELV-TYP CLASSROOM CUBBIES -UPPER GRADES B1 A-501

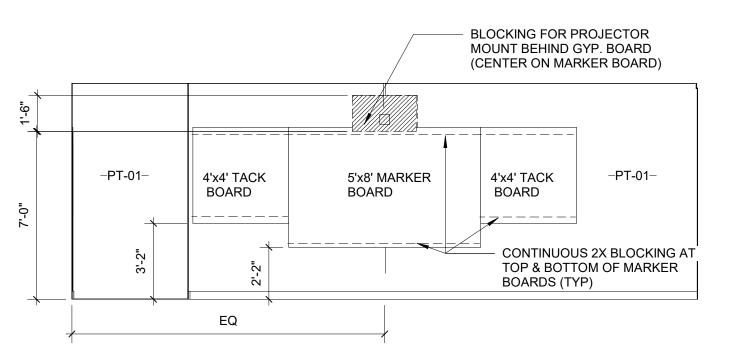
—PT-01—<sup>∕</sup>



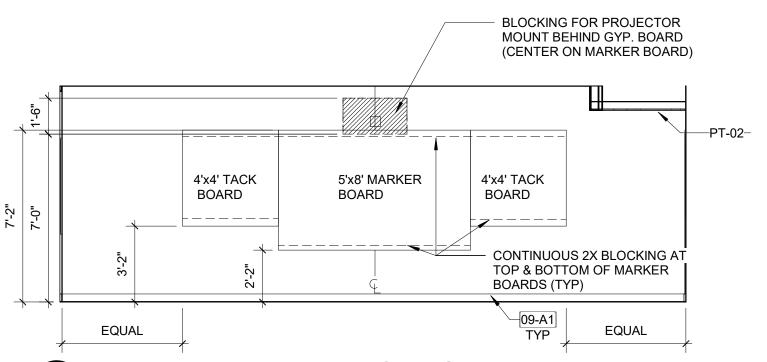
**INTELEV-MIDDLE SCHOOL CUBBIES WITH CHASE** 



**INTELV-TYP CLASSROOM CUBBIES** 



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



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

B3 A-501

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

Owner

Murray, Utah 84107

**Highmark School Development** 746 East Winchester Street Suite 150

Architect **RATIO** 

801-256-9550

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

**Structural Engineer** 

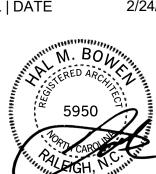
Lynch Mykins Structural Engineers, PC 301 North West Street

Suite 105 Raleigh, North Carolina 27603

919-782-1833

Civil Engineer **Timmons Group** 

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



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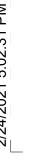
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PROJECT NO. SHEET TITLE

**INTERIOR** 

**ELEVATIONS** 

A-501



**INTELEV-TYP CLASSROOM CASE** A1 A-501

EQ 1-0" 2'-0" EQ 06-B2

061600.A00

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

**Highmark School Development** 746 East Winchester Street

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**Architect** 

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

27501

PRECOMPRESSED SEALANY -**EXPANSION JOINT MATERIAL** 5/8" PTD GWB ON 2"X6" WOOD STUD SEE SCHEDULE FOR DOOR DETAILS

D1 A-521 **EXPANSION JOINT DETAIL AT DOOR HEAD CONDITION** 1 1/2" = 1'-0"

EXIST. EXTERIOR WALL,

CORNER BEAD

(1) LAYER 5/8" GYP BD

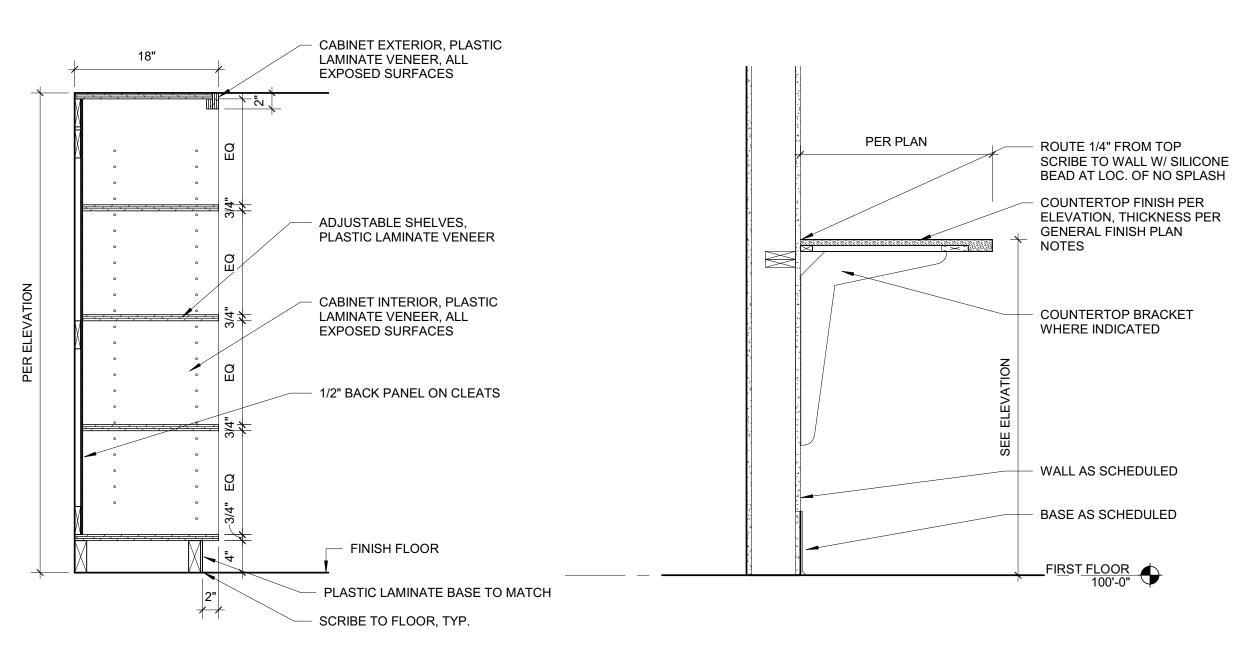
COMPOUND TYPE MTL

**BEAD J PROFILE EDGE** 

VERIFY IF A WOOD HEADER IS ALREADY IN PLACE

**EXPANSION JOINT DETAIL AT JAMB CONDITION** 

5/8" ZIP SYSTEM SHEATHING



5/8" ZIP SYSTEM SHEATHING

STUD WALL

SEE SCHEDULE FOR DOOR DETAILS

5/8" PTD GWB ON 2"X6" WOOD

PRECOMPRESSED SEALANY -**EXPANSION JOINT MATERIAL** 

**EXIST** 

EXTERIOR WALL

MTL CORNER BEAD —

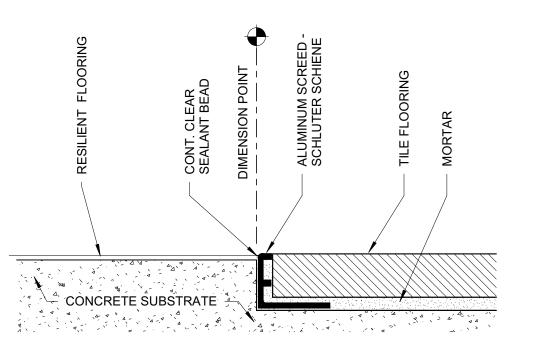
5/8" PTD GWB

COMPOUND TYPE MTL

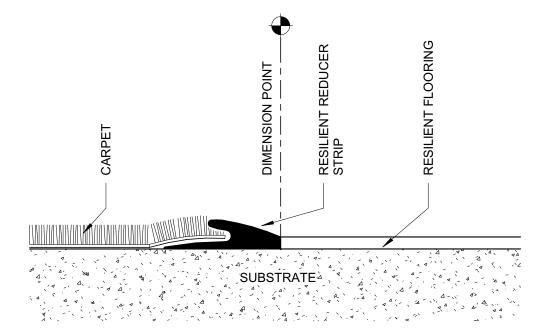
BEAD J PROFILE EDGE

SECTION-MEDIA CENTER SHELVING B1 A-521

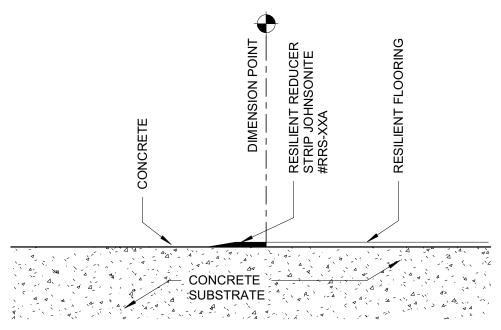
B2 A-521 SECDTL-COUNTERTOP BRACKET SUPPORT



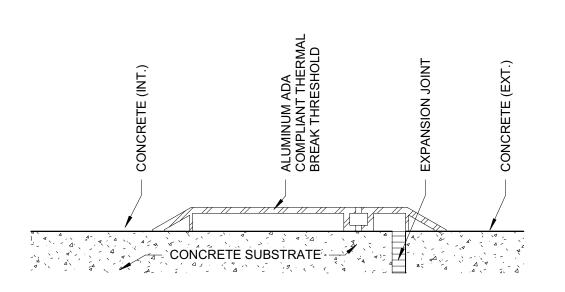
A1 A-521 **RESILIENT TO TILE** 12" = 1'-0"



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



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



**CONCRETE (INT.) TO CONCRETE (EXT.)** A-521

2/24/2021

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AND LOCAL
BUILDING
REGULATIONS

CODE CERT.
I HEREBY CERTIFY
THAT THE BUILDING

CODE SUMMARY

THIS PAGE IS

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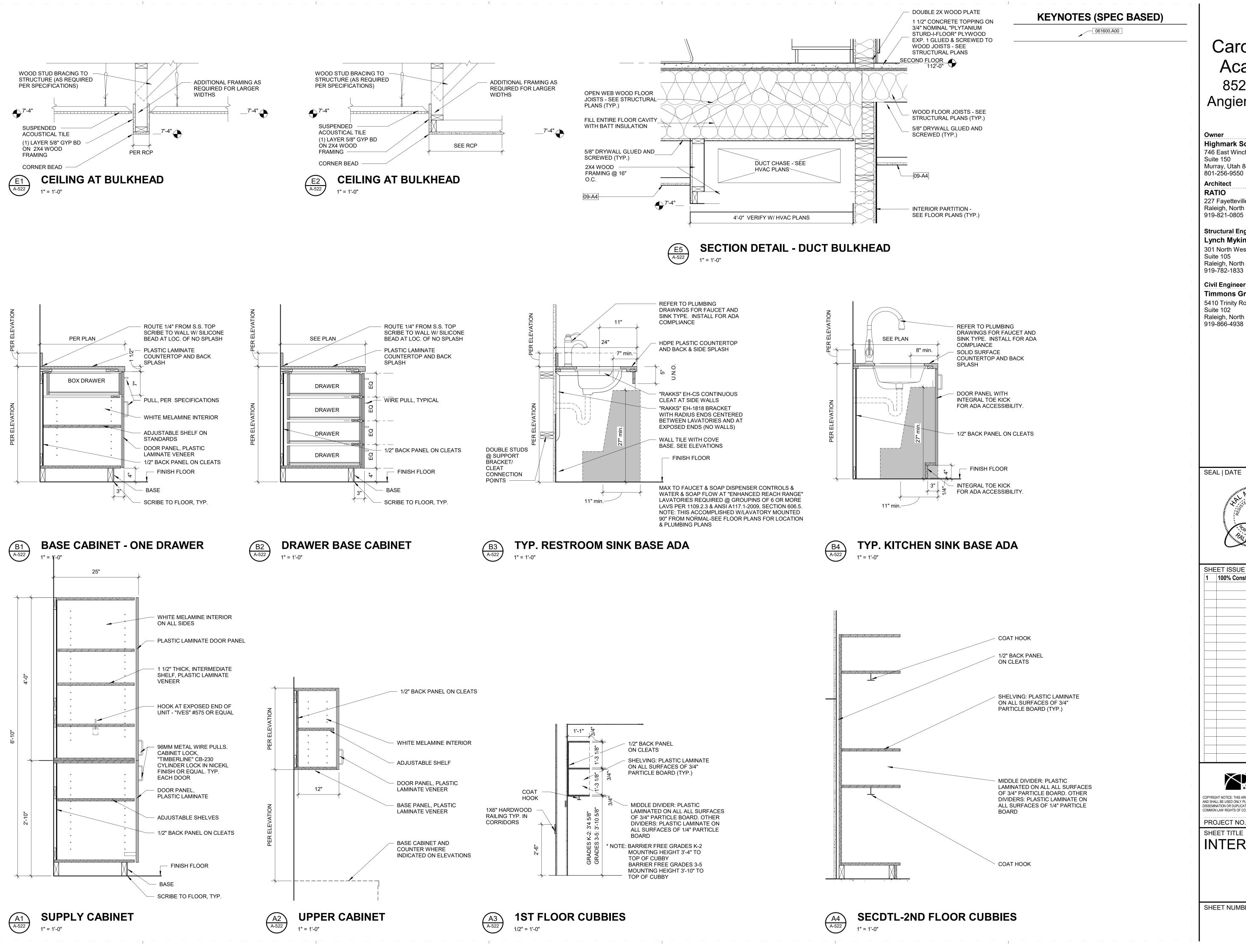
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20408.000

PROJECT NO.

INTERIOR DETAILS

SHEET NUMBER



Owner **Highmark School Development** 746 East Winchester Street Suite 150

Murray, Utah 84107 801-256-9550

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

Structural Engineer **Lynch Mykins Structural Engineers, PC** 

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

Civil Engineer **Timmons Group** 5410 Trinity Road

Suite 102 Raleigh, North Carolina 27607 919-866-4938



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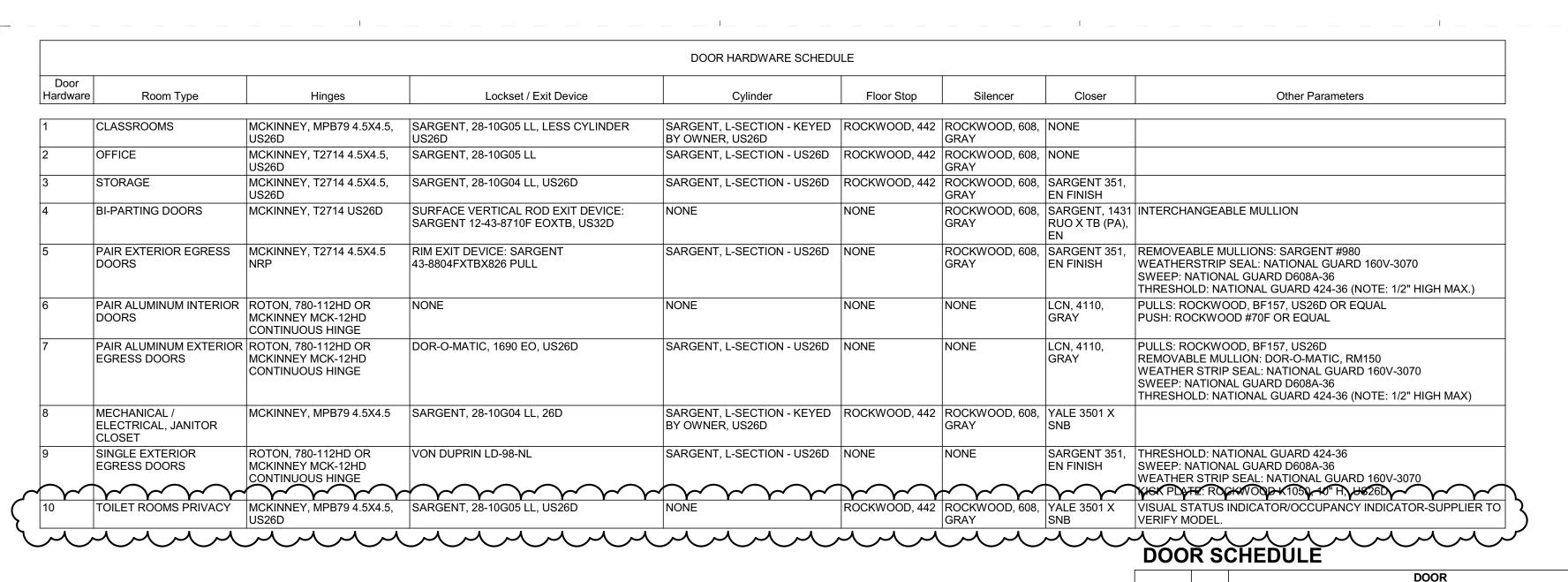
1 100% Construction Documents 2/24/2021

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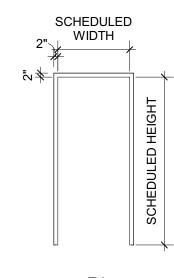
INTERIOR DETAILS



## FG HG **N2 N1**

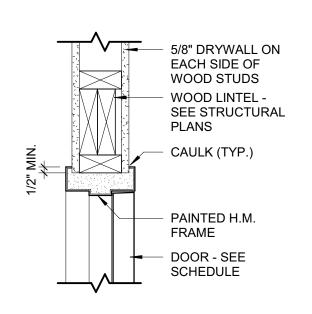
#### DOOR PANEL LEGEND

1/4" = 1'-0"

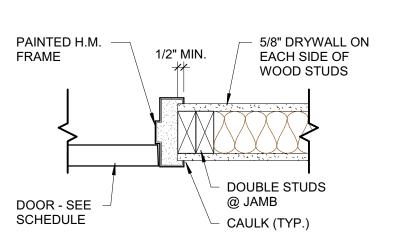


DOOR FRAME LEGEND

1/4" = 1'-0"



#### **HEAD DETAIL**



**JAMB DETAIL** 

A-601



DOOR

145-A

160-A

160-B

201B

201D

WOOD LINTEL -

CAULK (TYP.)

PAINTED H.M.

DOOR - SEE

SCHEDULE

PAINTED H.M.

DOOR - SEE

SCHEDULE

20 GA. PRE-

SEALANT AND

BACKER ROD (TYP.)

FINISHED ALUMINUM

FRAME

PLANS

SEE STRUCTURAL

SECOND FLOOR

3'-0"

3'-0"

3'-0"

3'-0"

3'-0"

3'-0"

3'-0"

3'-0"

3'-0"

3'-0"

3'-0"

3'-0"

3'-0"

3'-0"

3'-0"

3'-0"

3'-0"

**HEAD DETAIL** 

1/2" MIN.

CAULK (TYP.)

@ JAMB

DOUBLE STUDS

Yes 3'-0"

Yes 3'-0"

**DETAILS** 

MTRL. | ELEV. | GLASS | SET | MTRL. | ELEV. | HEAD | JAMB | THRESHOLD | RATING

700 1004" WD FT 11 11 HM 19 12/A-604 1/2 / A-604 1/2 /

7 | AL | F1 | A6 / A-601 | A6 / A-601

HM F1 A2 / A-601 A2 / A-601

7'-0" | 1 3/4" | WD | F | - | 1 | HM | F1 | A2 / A-601 | A2 / A-601 |

7'-0" 1 3/4" WD F - 1 HM F1 A2 / A-601 A2 / A-601

7'-0" | 1 3/4" | WD | F | - | 1 | HM | F1 | A2 / A-601 | A2 / A-601 |

7'-0" | 1 3/4" | WD | F | - | 10 | HM | F1 | A2 / A-601 | A2 / A-601

7'-0" 1 3/4" WD F - 1 HM F1 A2 / A-601 A2 / A-601

7'-0" | 1 3/4" | WD | F | - | 1 | HM | F1 | A2 / A-601 | A2 / A-601

7'-0" 1 3/4" WD F -- 4 HM F1

FG GL-01

HM | F | -- |

1 3/4"

1 3/4"

1 3/4"

1 3/4"

1 3/4"

FIBER CEMENT PANEL -

FIBER CEMENT

SEALANT AND

FIBER CEMENT PANEL -

SEE ELEVATIONS FOR TYPE

5/8" ZIP SYSTEM SHEATHING

WITH SHOP FLUID APPLIED

FIBER CEMENT PANEL END

W/ DRIP

PANEL END TRIM

METAL FLASHING

BACKER ROD (TYP.)

SEE ELEVATIONS FOR TYPE

5/8" ZIP SYSTEM SHEATHING

WITH SHOP FLUID APPLIED

WD

7'-0" | 1 3/4" |

1 3/4"

7'-0"

WD F - 10 HM F1 A2 / A-601 A2 / A-601

WD F - 1 HM F1 A2/A-601 A2/A-601

WD F - 1 HM F1 A2 / A-601 A2 / A-601

WD | F | - | 1 | HM | F1 | A2 / A-601 | A2 / A-601

WD | F | - | 1 | HM | F1 | A2 / A-601 | A2 / A-601 WD F - 1 HM F1 A2/A-601 A2/A-601

WD N1 GL-12 5 HM F1 A2/A-601 A2/A-601

HM F -- 9 HM F1 A3 / A-601 A3 / A-601

HM F -- 9 HM F1 A3 / A-601 A3 / A-601

WD HG GL-11 2 HM F1 A2 / A-601 A2 / A-601

WD | F | - | 1 | HM | F1 | A2 / A-601 | A2 / A-601

WD | F | - | 1 | HM | F1 | A2 / A-601 | A2 / A-601

WD | F | - | 1 | HM | F1 | A2 / A-601 | A2 / A-601

HG GL-11 2 HM F1 A2 / A-601 A2 / A-601

HG GL-11 2 HM F1 A2 / A-601 A2 / A-601

"J" MOLDING

ALUMINUM

FRAME

ALUMINUM /

GLASS DOOR -

SEE SCHEDULE

HM F1

FG GL-11 6 AL F1 A5/A-601 A5/A-601



#### **GENERAL DOOR SCHEDULE NOTES** Carolina Charter A. THESE GENERAL NOTES APPLY TO ▶ SERIES 600 ◀ DOOR B. UNDERCUT DOORS AS REQUIRED BY FINAL FLOOR FINISH.

SCHEDULE DRAWINGS.

RAITING.

SCHEDULE.

1. CASED OPENING

REV. 07/22/09

REMARKS

NR

NR

NR

NR

NR

NR

NR

NR

NR

NR PH

NR

NR

NR

NR

NR

NR

5/8" DRYWALL ON

SEE STRUCTURAL

EACH SIDE OF

WOOD STUDS

WOOD LINTEL -

WOOD SHIM

- CAULK (TYP.)

ALUMINUM

ALUMINUM /

— "J" MOLDING

5/8" DRYWALL ON

EACH SIDE OF WOOD STUDS

GLASS DOOR -

SEE SCHEDULE

FRAME

PLANS

**HEAD DETAIL** 

NR PH

NR PH, 2

45 MIN PH; 20 MIN FIRE RATED

UNLESS OTHERWISE INDICATED.

MASONRY WALL CONSTRUCTION.

GYPSUM BOARD WALL CONSTRUCTION.

C. PROVIDE SEALANT BETWEEN HOLLOW METAL FRAME

D. PROVIDE SEALANT BETWEEN INTERIOR AND EXTERIOR

E. GROUT FULL NEW HOLLOW METAL DOOR FRAMES IN

F. SPOT GROUT NEW HOLLOW METAL DOOR FRAMES IN

G. WHERE A FIRE RATING IS INDICATED ON THE DOOR

SCHEDULE, HARDWARE AND DOOR ASSEMBLY

SCHEDULE, HARDWARE AND DOOR ASSEMBLY

DOOR SCHEDULE REMARKS

PERIMETERS AND SURROUNDING WALL CONSTRUCTION

STOREFRONT FRAME PERIMETERS AND SURROUNDING WALL CONSTRUCTION UNLESS OTHERWISE INDICATED.

COMPONENTS SHALL MEET THE REQUIREMENTS OF THAT

COMPONENTS SHALL MEET THE REQUIREMENTS OF THAT

H. WHERE ACOUSTICAL RATING IS INDICATED ON THE DOOR

INSTALL DOOR GLASS USING WET-GLAZING METHOD.

REFER TO PROJECT MANUAL DIVISION 08 FOR GLAZING.

2. HOLLOW METAL DOORS AND FRAMES TO BE PAINTED PT-04

**GLAZING SCHEDULE** 

1" CLEAR INSULATING GLASS, LOW-E COATED.

1/4" CLEAR TEMPERED GLASS - INTERIOR APPLICATIONS,

FIBER CEMENT PANEL -

FIBER CEMENT

SEALANT AND

W/ DRIP

PANEL END TRIM

METAL FLASHING

BACKER ROD (TYP.)

ALIGN FRAME WITH

FACE OF SHEATHING

SEE ELEVATIONS FOR TYPE

5/8" ZIP SYSTEM SHEATHING

WITH SHOP FLUID APPLIED

EMPERED - EXTERIOR APPLICATIONS

WINDOWS AND DOORS

GL-12 3/16" LAMINATED CERAMIC GLASS

REFER TO PROJECT MANUAL DIVISION 08 FOR HARDWARE

Academy Exp. 8529 Highway 55 Angier, North Carolina 27501

Owner

Highmark School Development 746 East Winchester Street Suite 150 Murray, Utah 84107

Architect

801-256-9550

**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

4/9/2021 CODE CERT THAT THE BUILDING **CODE SUMMARY** THIS PAGE IS ACCURATE FOR TH 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

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



DISSEMINATION OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF RATIO. AL

20408.000

PROJECT NO

SHEET TITLE DOOR SCHEDULE **AND DETAILS** 

SHEET NUMBER

A-601

FLASHING **JAMB DETAIL** 

A5 A-601

FIBER CEMENT PANEL -SEE ELEVATIONS FOR TYPE SEALANT AND 5/8" ZIP SYSTEM SHEATHING BACKER ROD (TYP.) WITH SHOP FLUID APPLIED DOUBLE STUDS @ JAMB FIBER CEMENT PANEL END CAULK (TYP.) **JAMB DETAIL JAMB DETAIL** 

WOOD LINTEL -

CAULK (TYP.)

ALUMINUM

ALUMINUM /

GLASS DOOR -

SEE SCHEDULE

CAULK (TYP.)

ALUMINUM

DOOR - SEE

SCHEDULE

FRAME

FRAME

SHIM -

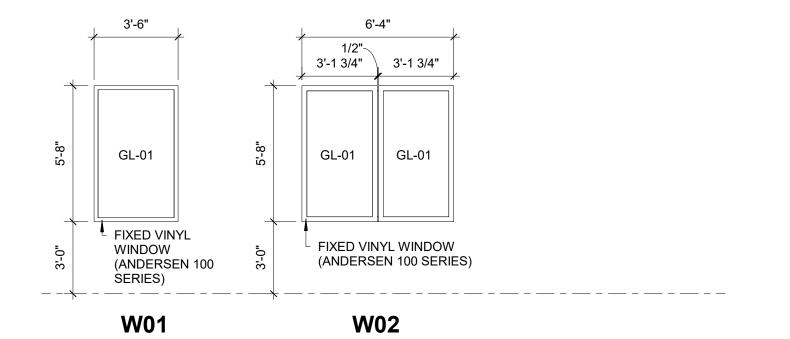
SEE STRUCTURAL

**EXTERIOR WOOD STUD / ALUM FRAME** 

**HEAD DETAIL** 

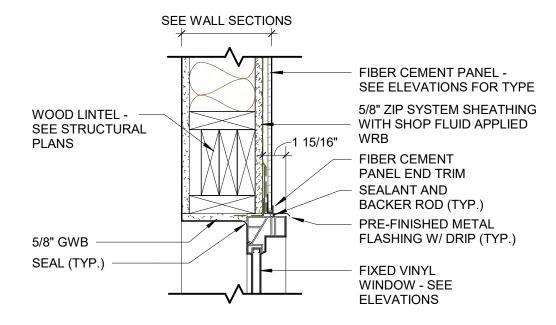
- DOUBLE STUDS

@ JAMB

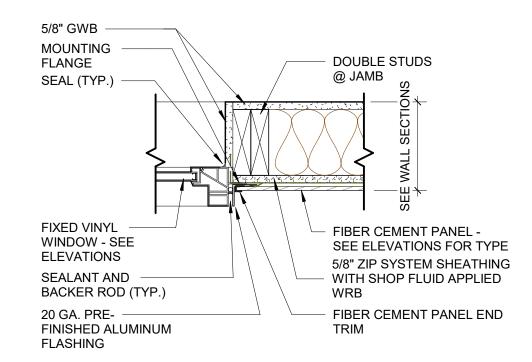


#### **WINDOW TYPE ELEVATIONS**

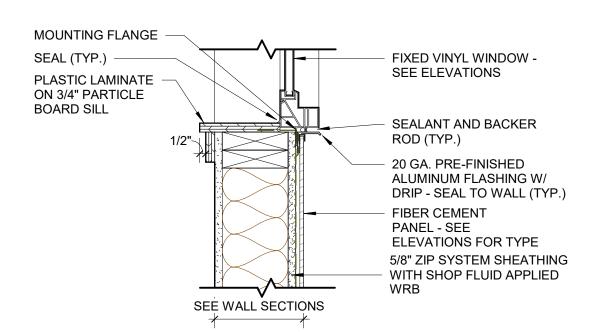
1/4" = 1'-0"



#### **HEAD DETAIL**



#### JAMB DETAIL



#### SILL DETAIL



#### **GLAZING SCHEDULE**

GL-01 1" CLEAR INSULATING GLASS, LOW-E COATED, TEMPERED - EXTERIOR APPLICATIONS

GL-11 1/4" CLEAR TEMPERED GLASS - INTERIOR APPLICATIONS, WINDOWS AND DOORS

GL-12 3/16" LAMINATED CERAMIC GLASS

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

Owner
Highmark School Development

746 East Winchester Street Suite 150 Murray, Utah 84107

Murray, Utah 84107 801-256-9550 **Architect** 

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SHEET ISSUE

1 100% Construction Documents 2/24/2021

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PROJECT NO.

SHEET TITLE
WINDOW

ELEVATIONS AND DETAILS

SHEET NUMBER

#### FINISH SCHEDULE

CT-01

|                                     |                              |        |                  | FINISH DESCRIPTION               |                 |                                   |                             |                                              |                                      |  |
|-------------------------------------|------------------------------|--------|------------------|----------------------------------|-----------------|-----------------------------------|-----------------------------|----------------------------------------------|--------------------------------------|--|
| LOCATION                            | FINISH TYPE                  | TAG    | MANUFACTURER     | STYLE                            | SIZE            | PRODUCT NUMBER                    | COLOR                       | INSTALL NOTES                                | COMMENTS                             |  |
|                                     |                              |        |                  |                                  |                 |                                   |                             |                                              |                                      |  |
| WALL                                | PAINT                        | PT-01  | SHERWIN WILLIAMS | PER SPECIFICATION                | N/A             |                                   | SW7063 NEBULOUS<br>WHITE    |                                              |                                      |  |
| CEILING                             | PAINT                        | PT-02  | SHERWIN WILLIAMS | PER SPECIFICATION                | N/A             |                                   | SW7007 CEILING BRIGHT WHITE |                                              | CEILING PAINTED<br>STRUCTURE/DRYWALL |  |
| GAURDRAILS AND<br>HANDRAILS         | EPOXY PAINT                  | PT-03  | SHERWIN WILLIAMS | PER SPECIFICATION                | N/A             |                                   | SW6531 INDIGO               |                                              | GAURDRAILS AND<br>HANDRAILS          |  |
| HOLLOW METAL<br>DOORS AND<br>FRAMES | EPOXY PAINT                  | PT-04  | SHERWIN WILLIAMS | PER SPECIFICATION,<br>SEMI-GLOSS | N/A             |                                   | SW6321 RED BAY              |                                              | HOLLOW METAL DOORS                   |  |
| WALL                                | CERAMIC TILE                 | CTB-01 | DALTILE          | BRIGHT GLAZED CERAMIC<br>WALL    | 4 1/4" X 4 1/4" | A-3401, ACR/L-3401,<br>SCR/L-3401 | 0042 LIGHT SMOKE            | BOTTOM COURSE COVE BASE                      |                                      |  |
| WALL                                | CERAMIC TILE                 | CTB-02 | DALTILE          | BRIGHT GLAZED CERAMIC WALL       | 4 1/4" X 4 1/4" | A-3401, ACR/L-3401,<br>SCR/L-3401 | 0121 RUBY RED               | BOTTOM COURSE COVE BASE                      | GIRLS/WOMENS<br>RESTROOMS            |  |
| WALL                                | CERAMIC TILE                 | CTB-03 | DALTILE          | BRIGHT GLAZED CERAMIC WALL       | 4 1/4" X 4 1/4" | A-3401, ACR/L-3401,<br>SCR/L-3401 | A0070 SAPPHIRE SKY          | BOTTOM COURSE COVE BASE                      | BOYS/MENS<br>RESTROOMS               |  |
| WALL                                | CERAMIC TILE                 | CWT-01 | DALTILE          | BRIGHT GLAZED CERAMIC WALL       | 4 1/4" X 4 1/4" |                                   | 0091 BISCUIT                |                                              | WALL FIELD TILE                      |  |
| WALL                                | CERAMIC TILE                 | CWT-02 | DALTILE          | BRIGHT GLAZED CERAMIC WALL       | 4 1/4" X 4 1/4" |                                   | 0042 LIGHT SMOKE            |                                              |                                      |  |
| WALL                                | CERAMIC TILE                 | CWT-03 | DALTILE          | BRIGHT GLAZED CERAMIC WALL       | 4 1/4" X 4 1/4" |                                   | 0121 RUBY RED               | TOP COURSE BULLNOSE<br>TILE,S-4449,SCRL-4449 | GIRLS/WOMENS<br>RESTROOMS            |  |
| WALL                                | CERAMIC TILE                 | CWT-04 | DALTILE          | BRIGHT GLAZED CERAMIC WALL       | 4 1/4" X 4 1/4" |                                   | 0070 SAPHIRE SKY            | TOP COURSE BULLNOSE<br>TILE,S-4449,SCRL-4449 | BOYS/MENS<br>RESTROOMS               |  |
| BASE                                | WALL BASE-RUBBER             | RB-01  | JOHNSONITE       | ROLLED GOODS, COVE               | 4"H             |                                   | #18 NAVY BLUE               |                                              |                                      |  |
| FLOOR                               | CARPET TILE                  | CPT-01 | PATCRAFT         | EXPERIENCE MODERN                | 2x2             |                                   | 00425 SOLUTION (BLUE)       |                                              |                                      |  |
| FLOOR                               | PORCELAIN TILE               | CT-01  | DALTILE          | KEYSTONES                        | 2"x2"           |                                   | D037 PEPPER WHITE           |                                              | FLOOR FIELD TILE                     |  |
| FLOOR                               | PORCELAIN TILE               | CT-02  | DALTILE          | KEYSTONES                        | 2"x2"           |                                   | D208 SUEDE GRAY<br>SPECKLE  |                                              | FLOOR ACCENT TILE "A                 |  |
| FLOOR                               | PORCELAIN TILE               | CT-03  | DALTILE          | KEYSTONES                        | 2"x2"           |                                   | D209 NAVY SPECKLE           |                                              | FLOOR ACCENT TILE "E                 |  |
| FLOOR                               | LUXURY VINYL TILE            |        | PATCRAFT         | STRATIFIED 20 MIL                | 6" X 24"        |                                   | 00500 FROST                 |                                              | FIELD TILE                           |  |
| FLOOR                               | LUXURY VINYL TILE            | LVT-02 | PATCRAFT         | STRATIFIED 20 MIL                | 6" X 24"        |                                   | 00880 GARNET (RED)          |                                              | ACCENT TILE "A"                      |  |
| FLOOR                               | LUXURY VINYL TILE            | LVT-03 | PATCRAFT         | STRATIFIED 20 MIL                | 6" X 24"        |                                   | 00480 SAPPHIRE (BLUE)       |                                              | ACCENT TILE "B"                      |  |
| FLOOR                               | SEALED CONCRETE              | SC     |                  | ENVIROSEAL 20                    |                 |                                   |                             |                                              |                                      |  |
| CEILING                             | ACOUSTICAL CEILING           | ACT-01 | USG              |                                  | 24"X48"X3/4"    | 2410 RADAR PLUS                   | FLAT WHITE                  |                                              |                                      |  |
| MILLWORK/<br>CASEWORK               | HIGH DENSITY<br>POLYETHYLENE |        | HINY HIDERS      |                                  |                 |                                   | LINEN                       |                                              | RESTROOM<br>COUNTERTOPS              |  |
| MILLWORK/<br>CASEWORK               | HIGH DENSITY<br>POLYETHYLENE | HDPE-0 | HINY HIDERS      |                                  |                 |                                   | BLUEBERRY                   |                                              | TOILET PARTITIONS                    |  |
| MILLWORK/<br>CASEWORK               | PLASTIC LAMINATE             | PL-01  | WILSONART        |                                  |                 |                                   | 4942-38 CRISP LINEN         |                                              | COUNTERTOPS                          |  |
| MILLWORK/<br>CASEWORK               | PLASTIC LAMINATE             | PL-02  | WILSONART        |                                  |                 |                                   | 4879-38 STEEL MESH          |                                              | WINDOW SILLS,<br>CABINET FACES       |  |

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| 1 | 100% Construction Documents | 2/24/202 |
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PROJECT NO.

20408.000

FINISH SCHEDULE

#### PLUMBING LEGEND **GENERAL VALVES & ACCESSORIES** WASTE WATER AUTOMATIC AIR VENT DOMESTIC COLD WATER AUTOMATIC FLOW CONTROL VALVE HOT WATER RECIRC **BACKFLOW PREVENTER (BFP)** HOT WATER RECIRC \_\_\_\_\_ - $\Diamond$ -**BALL VALVE** VENT PIPING **BUTTERFLY VALVE** PIPE TURNING DOWN PIPE TURNING UP CAPPED PIPE **BRANCH BOTTOM CONNECTION CHECK VALVE BRANCH SIDE CONNECTION** CONCENTRIC REDUCER **BRANCH TOP CONNECTION** DIRECTION OF FLOW **CLEANOUT** ECCENTRIC REDUCER ⊙ <u>FCO</u> CLEANOUT, FLOOR TYPE -FLANGED CONNECTION FLOOR DRAIN WITH TRAP PRIMER FLEXIBLE CONNECTION $\forall$ TP $\longrightarrow$ FLOW METER -----UNION <u>WCO</u> WALL CLEANOUT - $\bigvee$ -GATE VALVE

VENT THROUGH ROOF - DIAGRAMMATIC (VTR)

CONNECT TO EXISTING

 $-\infty$ 

- $\forall$  $\leftarrow$ 

 $\longrightarrow$ 

+

GLOBE VALVE

GAS COCK

PIPE SLEEVE

MANUAL AIR VENT

W/PRESSURE TAPS

METERED BALANCING VALVE

PRESSURE REDUCING VALVE

PRESSURE GAUGE WITH GAUGE COCK

STRAINER W/BLOW DOWN VALVE

PRESSURE RELIEF VALVE

SQUARE HEAD COCK

THERMOMETER

VACUUM BREAKER

SOLENOID VALVE.

STRAINER

#### PLUMBING SPECIFICATIONS

#### SCOPE OF WORK

1. ALL WORK REQUIRED CONSISTS OF PERFORMING ALL LABOR AND FURNISHING ALL MATERIALS, FIXTURES AND EQUIPMENT REQUIRED TO PROVIDE A 1. THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF ALL UTILITIES PRIOR TO BID. THE CONTRACTOR SHALL VISIT THE SITE AND INSPECT THE COMPLETE PLUMBING INSTALLATION AS INDICATED ON THE DRAWINGS. IT SHALL FURTHER INCLUDE FURNISHING AND INSTALLING ALL MISCELLANEOUS ITEMS REQUIRED FOR THE OPERATION OF THE SYSTEMS, WHETHER SPECIFICALLY CALLED FOR OR NOT. CONNECT ALL EQUIPMENT FURNISHED UNDER OTHER TRADES AS REQUIRED. DETERMINE IN ADVANCE THE SHUT-DOWN OF EXISTING UTILITIES.

1. ALL MATERIALS, EQUIPMENT AND INSTALLATION MUST COMPLY WITH ALL APPLICABLE LAWS, CODES, RULES, AND REGULATION, REQUIRED BY CITY. COUNTY AND STATE, AS WILL AS FEDERAL REQUIREMENTS.

#### **PERMITS**

1. THIS CONTRACTOR SHALL PAY FOR ALL PERMITS. LICENSES AND FEES REQUIRED BY STATE AND LOCAL AUTHORITIES

#### INSPECTION

1. FURNISH ARCHITECT WITH CERTIFICATE OF INSPECTION AND APPROVAL BY LOCAL AUTHORITIES PRIOR TO FINAL ACCEPTANCE OF THE PROJECT BY TESTING THE ARCHITECT. ALL WORK MUST BE INSPECTED.

#### **MATERIALS**

#### WATER PIPING:

- A. ALL PIPING SHALL CONFORM TO THE REQUIREMENTS OF THE ANSI SAFETY CODE AND BE FREE FROM ALL DEFECTS AND BE PROPERLY
- IDENTIFIED. B. ABOVE GROUND: SHALL BE TYPE "L" HARD DRAWN COPPER TUBING CONFORMING TO ASTM B 88-72.
- C. BELOW GROUND: (INSTALLED IN CONCRETE OR UNDER CONCRETE) TYPE "K" SOFT DRAWN COPPER TUBING, CONFORMING TO ASTM B 88-72, SPIRALLY WRAP PIPING BELOW GRADE OR FLOORS WITH 3 LAYERS OF 30 MIL POLYETHYLENE TAPE WITH 1/2 OVERLAP. INSTALL NO PIPING JOINTS BELOW FLOOR.
- D. ALL COPPER TUBING SHALL UTILIZE SWEAT FITTINGS SOLDERED WITH ASTM B 32, ALLOY SN95, SN94, OR E, LEAD FREE SOLDER.
- E. ALL CONDENSATE PIPING SHALL BE COPPER PIPE. 2. SOIL, WASTE, AND VENT PIPING:
- A. CAST IRON: NO-HUB CAST IRON, CISPI 301-72T SPECIFICATION FOR ALL SOIL, WASTE AND VENT PIPING 2 INCHES AND LARGER WITH STANDARD WEIGHT FITTINGS, USE STAINLESS STEEL NO-HUB CAST IRON COUPLINGS THROUGHOUT THE PROJECT.
- B. GALVANIZED IRON: SCHEDULE 40 STANDARD WEIGHT CONFORMING TO ASTM A72-68, FOR ALL VENT PIPING 1-1/2" AND SMALLER, USE WROUGHT IRON SCREWED FITTINGS TO MATCH PIPE. MAKE ALL SCREWED JOINTS WITH TEFLON TAPE.
- C. ALL SOIL AND WASTE PIPING 2-1/2" AND SMALLER SHALL SLOPE MINIMUM OF 1/4" PER FOOT, PIPING 3" AND LARGER SHALL SLOPE MINIMUM OF 1/8" PER FOOT. 3. GAS PIPING:
- A. THE PLUMBING CONTRACTOR SHALL SEE THAT THE PROPER GAS METER AND REGULATOR ARE INSTALLED BY THE UTILITY CO., AND PAY FOR ANY FEES CHARGED FOR THE INSTALLATION OF THE METER AND SERVICE LINES. GAS LINES SHALL EXTEND FROM THE METER TO ALL EQUIPMENT
- B. GAS PIPING: SCREWED STANDARD WEIGHT SCHEDULE 40 BLACK STEEL CONFORMING TO ASTM A53 SPECIFICATIONS FOR GAS PIPING. C. GAS PIPING INSTALLED BELOW GRADE SHALL BE PROVIDED WITH FACTORY WRAPPED PROTECTIVE COATING WITH FITTINGS TRIPLE SPIRALLY WRAPPED WITH 20 MIL POLYETHYLENE TAPE WITH 1/2 OVERLAP. PROVIDE CATHODIC PROTECTION CONSISTING OF ONE 17 POUND MAGNESIUM
- ANODE PER 100 SQUARE FEET OF GROUND EXPOSED SURFACE, TO THE PIPING. D. GAS PIPE SHALL BE PROVIDED WITH SUITABLE DRIP LEGS ON ALL MAINS AND RISERS AT EQUIPMENT CONNECTIONS. ALL EQUIPMENT
- CONNECTIONS SHALL BE PROVIDED WITH AN AGA APPROVED BUTTERFLY VALVE. CAP WHERE REQUIRED E. PROVIDE SLEEVES AT ALL PIPING PENETRATING MASONRY WALLS AND PACKED WATERTIGHT WITH APPROVED PACKING.
- 4. VALVES: A. SIZE OF SHUT-OFF VALVE, CONTROL VALVES, BALANCING COCKS, UNIONS ETC., SHALL BE FULL LINE SIZE
- 5. PIPE HANGERS:
- A. PIPE HANGERS SHALL BE MICHIGAN #400 FOR STEEL PIPING, #402 FOR GAS AND COPPER PIPING. SUPPORT PIPING 3/4" AND LESS AT 6'-0" O/C,
- 1-1/4" O/C AND SMALLER 8'-0" O/C, AND PIPING 1-1/2" AND LARGER 10'-0" O/C. WASTE PIPING SHALL BE SUPPORTED AT 5'-0" O/C. PROVIDE 3/8" DIA. THREADED ROD PROPERLY BRACED FOR SEISMIC RESTRAINT ZONE 2. 6. PIPE INSULATION:
- A. ALL HOT WATER PIPING AND HOT WATER RETURN PIPING (IF APPLICABLE) SHALL HAVE 1 INCH THICK FIBERGLASS INSULATION WITH ASJ JACKET, HAVING A THERMAL CONDUCTIVITY (K-FACTOR) OF 0.24 AT 75 DEGREES MEAN TEMPERATURE.
- B. THE MAXIMUM FIRE HAZARD CLASSIFICATION OF THE INSULATION SYSTEM SHALL NOT HAVE MORE THAN A FLAME SPREAD OF 25, AND A FUEL CONTRIBUTED RATING OF 50, AND A SMOKE DEVELOPED RATING OF 50, WHEN TESTED IN ACCORDANCE WITH U.L. REQUIREMENTS. PIPE
- COVERING SHALL BEAR THE U.L. LABEL. C. INSULATE ALL FITTINGS VALVE BODIES ETC. WITH SINGLE OR MULTIPLE LAYERS OF INSULATION WITH PREFABRICATED FITTINGS WITH P.V.C.
- D. ALL CONDENSATE PIPING SHALL HAVE 1 INCH THICK FIBERGLASS INSULATION WITH ASJ JACKET, HAVING A THERMAL CONDUCTIVITY (K-FACTOR)
- OF 0.24 AT 75 DEGREES MEAN TEMPERATURE. E. SUBMIT SHOP DRAWINGS FOR ALL INSULATION MATERIALS. 7. CLEAN OUTS: (ZURN, JOSAM, SMITH)
- A. CLEAN OUTS SHALL BE THE SAME SIZE AS THE LARGEST DOWNSTREAM PIPE IT IS SERVING. NO PLASTIC CLEAN OUTS WILL BE ACCEPTED. PLUGS 8. PIPE INSTALLATION:
- A. INSTALL PIPING TO BEST SUIT FIELD CONDITIONS, COORDINATE LAYER OF PIPING WITH DUCT WORK AND OFFSET PIPING AS REQUIRED TO CLEAR NEW DUCTWORK.

#### **EXISTING CONDITIONS**

WORK THEY MUST PERFORM, IN ADDITION TO WHAT IS SHOWN HEREIN, AND INCLUDE IN THEIR BID AN AMOUNT TO DO SUCH WORK.

#### 1. PROVIDE A UNION BETWEEN CONNECTIONS TO EACH FIXTURE, DEVICE OR PIECE OF EQUIPMENT FOR DISCONNECTING OF PIPING.

#### STERILIZATION

UNIONS

1. STERILIZE THE ENTIRE WATER DISTRIBUTION SYSTEM THOROUGHLY WITH A SOLUTION CONTAINING NOT LESS THAN 50 PARTS PER MILLION OF AVAILABLE CHLORINE, FOR CHLORINATING MATERIALS USE SODIUM HYPOCHLORITE SOLUTION CONFORMING TO FEDERAL SPEC, 0-8-441, GRADE D. AND INTRODUCE INTO THE SYSTEM BY USE OF A COCK AT A SLOW, EVEN, CONTINUOUS RATE. ALLOW THE STERILIZING SOLUTION TO REMAIN IN THE SYSTEM FOR A PERIOD OF 8 HOURS, DURING WHICH TIME ALL VALVES AND FAUCETS SHALL BE OPENED AND CLOSED SEVERAL TIMES. AFTER STERILIZATION. FLUSH THE SOLUTION FROM THE SYSTEM WITH CLEAN WATER UNTIL THE RESIDUAL CHLORINE CONTENT IS NOT GREATER THAN 0.2 PARTS PER MILLION. PLATE COUNT SHALL INDICATE COUNT LESS THAN 100 BACTERIA PER CC.

- . FILL DOMESTIC WATER SYSTEM WITH WATER AND PRESSURIZE TO 125 PSI AND MAINTAIN FOR FOUR (4) HOURS WITH NO PRESSURE DROP. 2. FILL WASTE, SOIL, AND VENT SYSTEM WITH WATER TO HIGHEST POINT OF THE SYSTEM. HOLD PRESSURE FOR FOUR (4) HOURS WITH NO DROP IN
- WATER LEVEL TEST AND OBTAIN APPROVAL ON ALL UNDERGROUND PIPING BEFORE COVERING WORK. PROVIDE WRITTEN TESTING REPORT TO ARCHITECT.
- 4. GAS TESTING: A. AIR PRESSURE TEST SYSTEM TO 75 PSI AND MAINTAIN FOR A PERIOD OF EIGHT (8) HOURS WITH NO PRESSURE DROP.
- B. PURGE LINE WITH NITROGEN AT JUNCTION WITH MAIN LINE AT GAS METER TO REMOVE ALL AIR. CLEAR COMPLETE LINE BY ATTACHING A TEST PILOT FIXTURE AT CAPPED STUB-IN LINE AT THE BUILDING LOCATION. AND LET GAS FLOW UNTIL TEST PILOT IGNITES. CAUTION FAILURE TO PURGE SYSTEM MAY RESULT IN EXPLOSION WITHIN LINE WHEN AIR-TO-GAS IS AT CORRECT MIXTURE

#### **CLEANING**

1. AT THE COMPLETION OF THE WORK AND PRIOR TO FINAL ACCEPTANCE, ALL PARTS OF THE WORK INSTALLED UNDER THIS SPECIFICATION SHALL BE THOROUGHLY CLEANED. ALL EQUIPMENT, FIXTURES, PIPE, VALVES AND FITTINGS SHALL BE CLEANED OF GREASE, METAL CUTTINGS AND SLUDGE WHICH MAY HAVE ACCUMULATED BY OPERATION OF THE SYSTEM FOR TESTING HEREIN BEFORE SPECIFIED OR FROM OTHER CAUSES.

#### **GUARANTEE**

THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS, EQUIPMENT AND WORKMANSHIP FROM DEFECT OF MATERIAL AND WORKMANSHIP, AND SHALL REPLACE OR REPAIR, WITHOUT ADDITIONAL COST TO THE OWNER, ALL DEFECTIVE MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR AFTER COMPLETION AND ACCEPTANCE.

#### COORDINATION

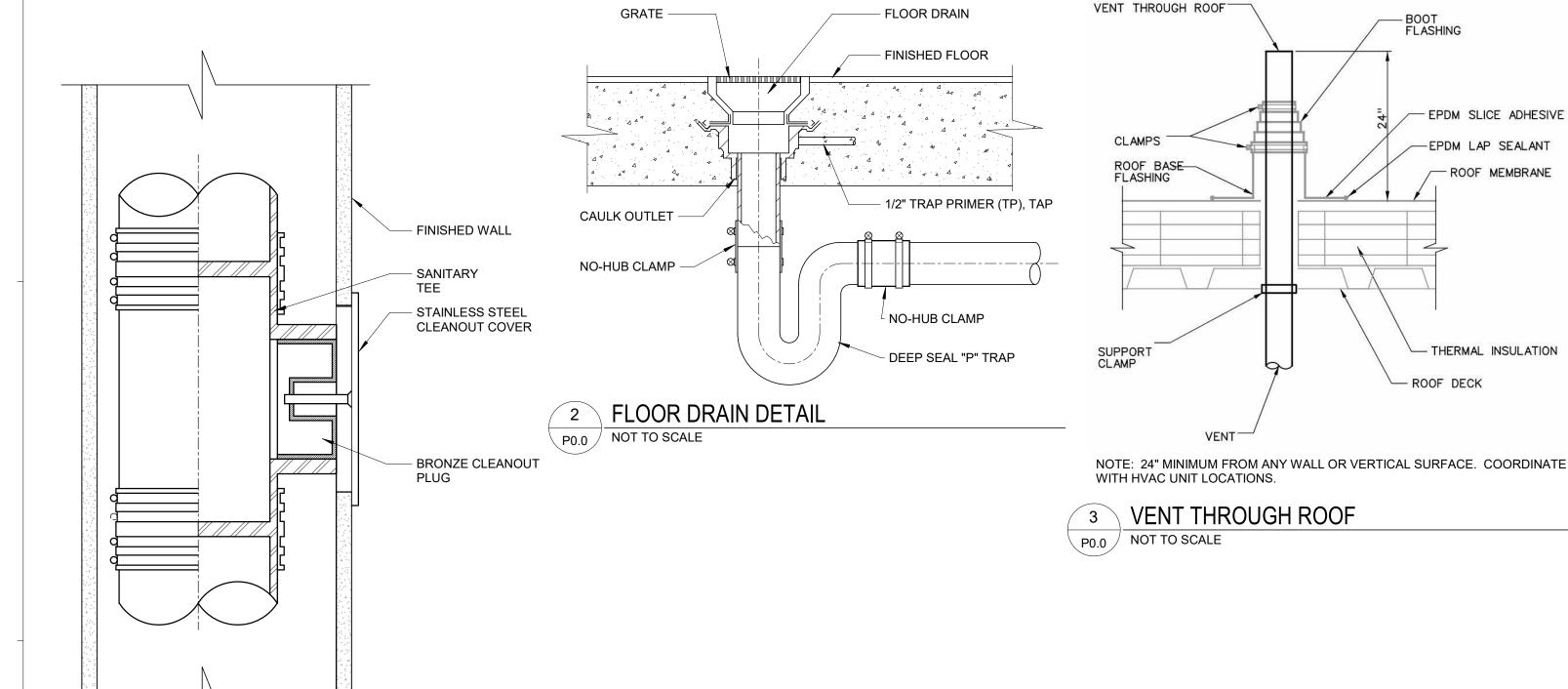
ALL CONTRACTORS SHALL BE RESPONSIBLE FOR COORDINATING WORK WITH OTHER TRADES AFFECTED BY EACH OTHERS WORK AND FOR CUTTING AND RE-FINISHING OF EXISTING WALLS, FLOORS, SOLID AND SUSPENDED CEILINGS ETC., WHERE REQUIRED BY WORK SHOWN AND NOTED HEREIN. INSTALL ALL WORK TO CLEAR NEW AND EXISTING ARCHITECTURAL AND STRUCTURAL MEMBERS. ITEMS SUCH AS PIPE, FITTINGS, ETC., SHALL NOT BE INSTALLED IN CONFLICT WITH EQUIPMENT. COORDINATE ALL CUTTING AND PATCHING WITH THE GENERAL CONTRACTOR. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING OF HIS WORK. OBTAIN WRITTEN PERMISSION OF ARCHITECT BEFORE PROCEEDING WITH ANY CUTTING OR PATCHING OF STRUCTURAL SYSTEMS.

#### **SUBSTITUTIONS**

- SUBSTITUTIONS OF MATERIALS OR PRODUCTS SHOWN HEREIN SHALL BE AT THE OWNER'S, ARCHITECTS OR ENGINEER'S WRITTEN APPROVAL ONLY WITH COPIES OF APPROVAL SENT TO ARCHITECT FOR PROJECT FILE. DEVIATION FROM THESE DRAWINGS WILL NOT BE ALLOWED ANY FIELD CHANGES BY THE CONTRACTOR FOR WHICH THE LOCAL AUTHORITY REQUIRES A SEALED LETTER AND/OR DRAWING BY THE ENGINEER SHALL RESULT IN A COST TO THE CONTRACTOR. THE FEE FOR THESE CHANGES SHALL BE PAYABLE UPON DELIVERY OF THE LETTER/DRAWING AND UNLESS THE CHANGE WAS INSTITUTED BY THE OWNER. THE CONTRACTOR SHALL <u>NOT</u> CHARGE THE OWNER THIS FEE.
- THE FEE FOR THE ABOVE NOTED LETTER/DRAWING SHALL BE \$250.00 PER ITEM. ANY DEVIATIONS FROM THESE PLANS (FOR ANY REASON INCLUDING ACTUAL FIELD CONDITIONS) WITH OUT PRIOR WRITTEN APPROVAL SHALL BE THE COMPLETE RESPONSIBILITY OF THE INSTALLING CONTRACTOR.

#### **RECORD DRAWINGS**

PROVIDE TWO (2) SETS OF "RECORD" DRAWINGS AND TWO (2) BOUND SETS OF ALL OPERATIONS MANUALS, DIAGRAMS, SERVICE CONTRACTS, GUARANTEES, ETC., ONE FOR THE OWNER AND ONE FOR BUILDING OPERATIONS DEPARTMENT. OBTAIN A COMPLETE SET OF RECORD DRAWINGS OF EXISTING CONSTRUCTION FROM THE OWNERS FOR INFORMATION ON EXISTING CONDITIONS. INCORPORATE ANY EXISTING CONDITIONS ON NEW RECORD DRAWINGS REQUIRED TO SHOW THE "INSTALLED" INSTALLATION.



| PLUMBING FIXTURE SCHEDULE |                          |                      |                                        |            |             |                                                                                                                                                    |  |  |
|---------------------------|--------------------------|----------------------|----------------------------------------|------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| TAG                       | ITEM                     | MANUFACTURER         | NAME                                   | MODEL NO.  |             | DESCRIPTION                                                                                                                                        |  |  |
| EWC-1                     | ELECTRIC WATER<br>COOLER | ELKAY                | BI-LEVEL<br>(38-7/8" & 32 7/8" HEIGHT) | LZSTL8WSLP | FIXTURE     | TWO LEVEL WHEELCHAIR ACCESS - BOTTLE FILLING STATION LEAD FREE, LIGHT GRAY FINISH, 8 GHP BASE FLOW RATE, 370 WATTS, 5.0 FULL LOAD AMPS, 120V, 1 PH |  |  |
| FD-1                      | FLOOR DRAIN              | MIFAB                |                                        | F1000      | FIXTURE     | LACQUERED CAST IRON BODY, ANCHOR FLANGE, 5-INCH DIAMETER HEAVY DUTY POLISHED STAINLESS STEEL STRAINER. PROVIDE WITH TRAP PRIMER CONNECTION.        |  |  |
|                           |                          |                      |                                        |            | ACCESSORIES | TRAP PRIMER                                                                                                                                        |  |  |
| HB-1                      | HOSE BIBB                | WOODFORD             |                                        | MODEL 24   | FIXTURE     | CHROME PLATED BRASS CONSTRUCTED FAUCET WITH CHROME PLATED ANTI-SIPHON VACUUM BREAKER, POLYCARBONATE WHEEL HANDLE. STEM LOCK                        |  |  |
|                           |                          |                      |                                        |            | FIXTURE     | COUNTER TOP TYPE, 4-INCH CENTERS, VITREOUS CHINA, 20-INCH x 17-INCH OVAL (WHITE).                                                                  |  |  |
|                           |                          | AMEDICANI            |                                        |            | FAUCET      | ZURN, SINGLE LEVER, POLISHED CHROME, MODEL NO. Z7440-WF WITH GRID STRAINER                                                                         |  |  |
| L-1                       | LAVATORY                 | AMERICAN<br>STANDARD | AQUALYN                                | 0476.028   | STOPS       | 1/2-INCH CHROME PLATED, ANGLE SUPPLY WITH LOOSE KEY.                                                                                               |  |  |
|                           |                          | 017111071110         |                                        |            | TRAP        | CHROME PLATED P-TRAP                                                                                                                               |  |  |
|                           |                          |                      |                                        |            | ACCESSORIES | TRUEBRO, LAV-GUARD, UNDERSINK PROTECTIVE PIPE, AERATOR                                                                                             |  |  |
|                           |                          |                      |                                        |            | FIXTURE     | SINGLE COMPARTMENT STAINLESS STEEL, 18 GAUGE - TYPE 302 SELF RIM, 2-HOLES.                                                                         |  |  |
|                           | SINGLE                   |                      |                                        |            | FAUCET      | ZURN, SINGLE LEVER, POLISHED CHROME, MODEL NO. Z824SO WITH GOOSENECK SPOUT.                                                                        |  |  |
| S-1                       | COMPARTMENT              | ELKAY                | LUSTERTONE                             | LR-1919    | STOPS:      | 1/2 INCH CHROME PLATED, ANGLE SUPPLY WITH LOOSE KEY                                                                                                |  |  |
|                           | SINK                     |                      |                                        | TRAP       |             | CHROME PLATED P-TRAP                                                                                                                               |  |  |
|                           |                          |                      |                                        |            | ACCESSORIES | IN-SINK-ERATOR, DISPOSER BADGER 5, 1/2 HP, 6.9 AMPS, 120V, 3 PH; GRID STRAINER CUP                                                                 |  |  |
| U-1                       | URINAL                   | AMERICAN             | TRIMBROOK                              | 6561.017   | FIXTURE     | WALL HUNG, VITREOUS CHINA, SIPHON JET, 3/4-INCH INLET SPUD, LOW CONSUMPTION-1.0 GPF (WHITE)                                                        |  |  |
| 0-1                       | ORMAL                    | STANDARD             | (17" HEIGHT)                           | 0301.017   | FLUSH VALVE | ZURN AQUAFLUSH, EXPOSED FLUSHOMETER, CHROME PLATED, 3/4-INCH TOP SPUD, LOW CONSUMPTION-1.0 GPF                                                     |  |  |
| U-2                       | URINAL                   | AMERICAN             | TRIMBROOK                              | 6561.017   | FIXTURE     | WALL HUNG, VITREOUS CHINA, SIPHON JET, 3/4-INCH INLET SPUD, LOW CONSUMPTION-1.0 GPF (WHITE)                                                        |  |  |
| 0-2                       | (ADA)                    | STANDARD             | (17" HEIGHT)                           | 0301.017   | FLUSH VALVE | ZURN AQUAFLUSH, EXPOSED FLUSHOMETER, CHROME PLATED, 3/4-INCH TOP SPUD, LOW CONSUMPTION-1.0 GPF                                                     |  |  |
|                           |                          | AMERICAN             | MADERA                                 |            | FIXTURE     | FLOOR MOUNT, VITREOUS CHINA, SIPHON JET, 1-1/2 INCH INLET SPUD, LOW CONSUMPTION-1.6 GPF, ENLONGATED BOWL (WHITE)                                   |  |  |
| WC-1                      | WATER CLOSET             | STANDARD             | (14-1/8" HEIGHT)                       | 2234.015   | FLUSH VALVE | ZURN AQUAFLUSH, EXPOSED FLUSHOMETER, CHROME PLATED, LOW CONSUMPTION 1.6 GP                                                                         |  |  |
|                           |                          |                      |                                        |            | SEAT        | CENTOCO, HEAVY DUTY, OPEN FRONT, SOLID PLASTIC, MODEL NO. 500CC-SS-WHT (WHITE)                                                                     |  |  |
| \\\C 2                    | WATER CLOSET             | AMERICAN             | MADERA                                 | 0005 400   | FIXTURE     | FLOOR MOUNT, VITREOUS CHINA, SIPHON JET, 1-1/2 INCH INLET SPUD, LOW CONSUMPTION-1.6 GPF, ENLONGATED BOWL (WHITE)                                   |  |  |
| WC-2                      | (ADA)                    | STANDARD             | (16-1/8" HEIGHT)                       | 2305.100   | FLUSH VALVE | ZURN AQUAFLUSH, EXPOSED FLUSHOMETER, CHROME PLATED, LOW CONSUMPTION 1.6 GP                                                                         |  |  |
|                           |                          |                      |                                        |            | SEAT        | CENTOCO, HEAVY DUTY, OPEN FRONT, SOLID PLASTIC, MODEL NO. 500CC-SS-WHT (WHITE)                                                                     |  |  |
| WCO                       | WALL CLEANOUT            | ZURN                 |                                        | Z1446      | FIXTURE     | CLEANOUT WITH ROUND ACCESS COVER.                                                                                                                  |  |  |

| HAMMER ARRESTOR SCHEDULE |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| PDI RATING A             |      |      | В    |      | С    |      | D    |      | E    |      | F    |      |
| FIXTURE                  | MIN. | MAX. |
| UNIT CAP                 | 1    | 11   | 12   | 32   | 33   | 60   | 61   | 113  | 114  | 154  | 155  | 330  |



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

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#### 801-256-9550 **Architect**

Murray, Utah 84107

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

**Structural Engineer** Lynch Mykins Structural Engineers, PC

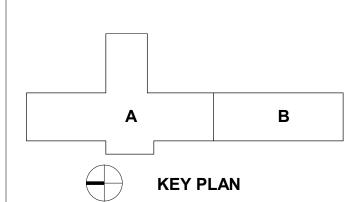
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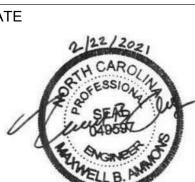
#### **Civil Engineer**

919-866-4938

**Timmons Group** 5410 Trinity Road Suite 102 Raleigh, North Carolina 27607



SEAL | DATE



|   | PERMIT SUBMITTAL    | 02/22 |
|---|---------------------|-------|
| 1 | INSPECTION COMMENTS | 04/09 |
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PROJECT NO.

**PLUMBING** 

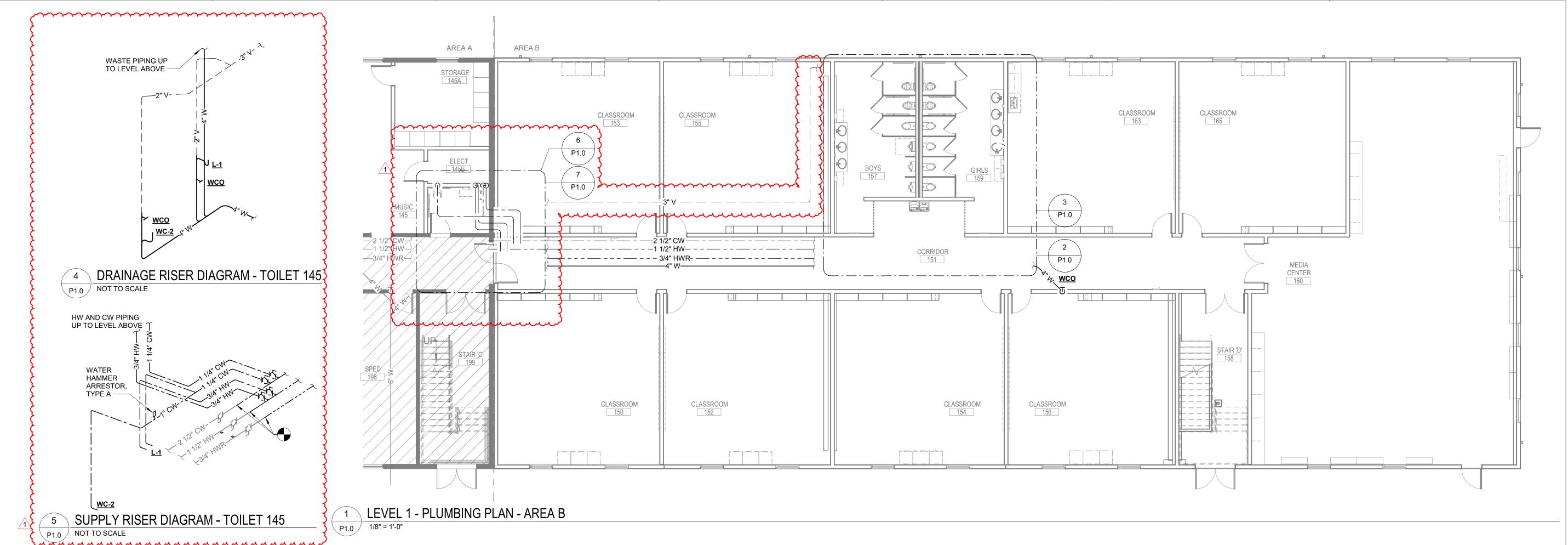
SPECIFICATIONS & **LEGEND** 

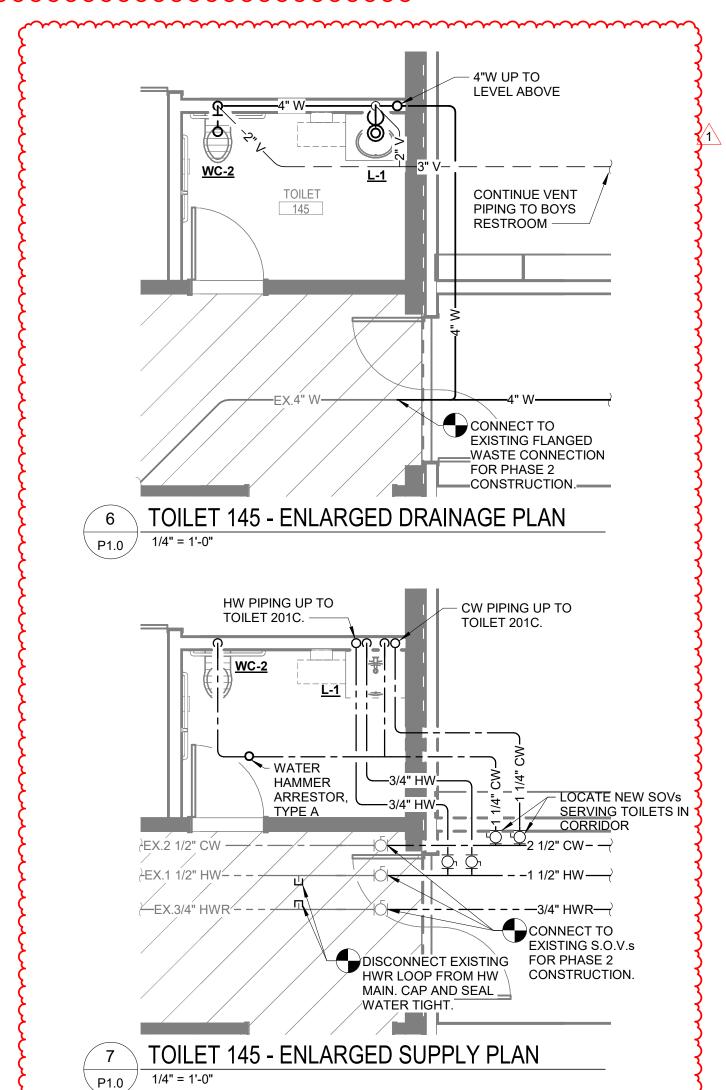
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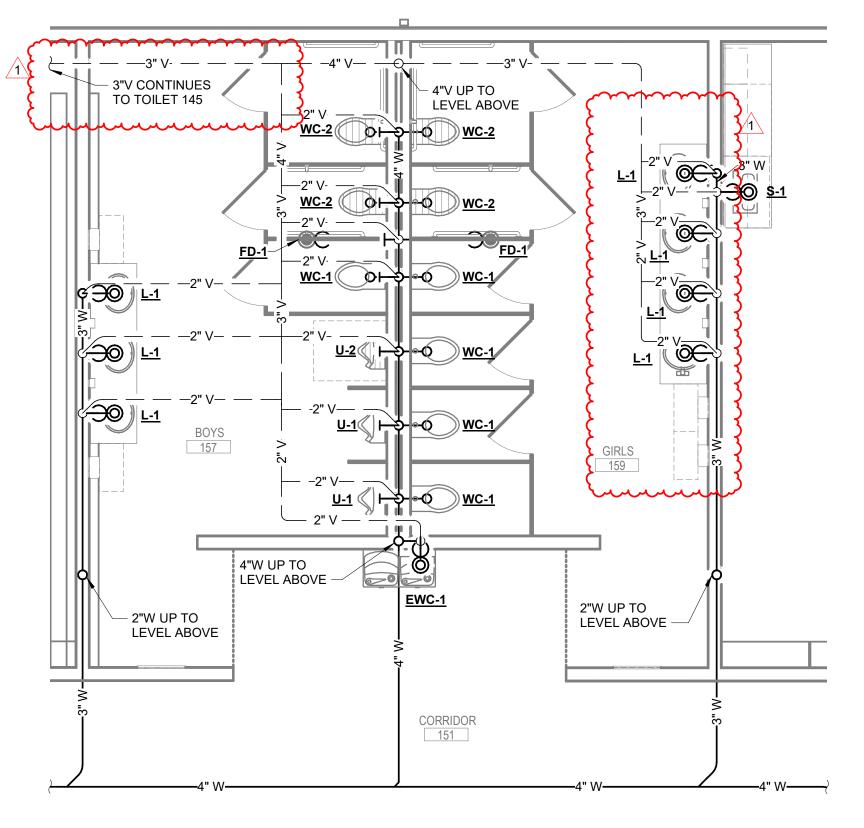
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WALL CLEANOUT DETAIL

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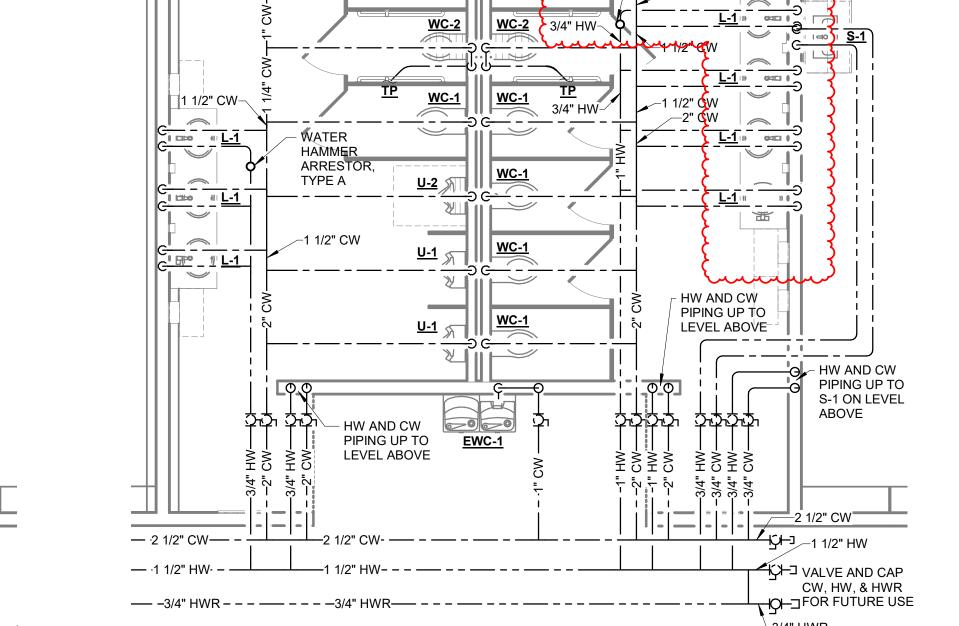






2 LEVEL 1 - ENLARGED DRAINAGE PLAN

P1.0 1/4" = 1'-0"



HAMMER

ARRESTOR,

ARRESTOR,

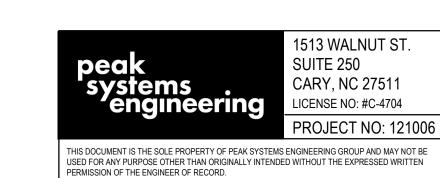
Below 1/4" = 1'-0"

LEVEL 1 - ENLARGED SUPPLY PLAN

1/4" = 1'-0"

HAMMER

ARRESTOR,



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27501

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Murray, Utah 84107 801-256-9550

RATIO
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Raleigh, North Carolina 27601
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Structural Engineer

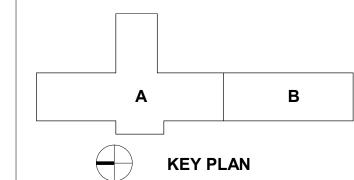
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Suite 105 Raleigh, North Carolina 27603 919-782-1833

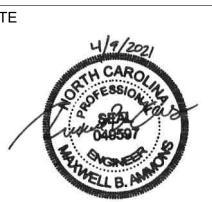
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SEAL | DATE

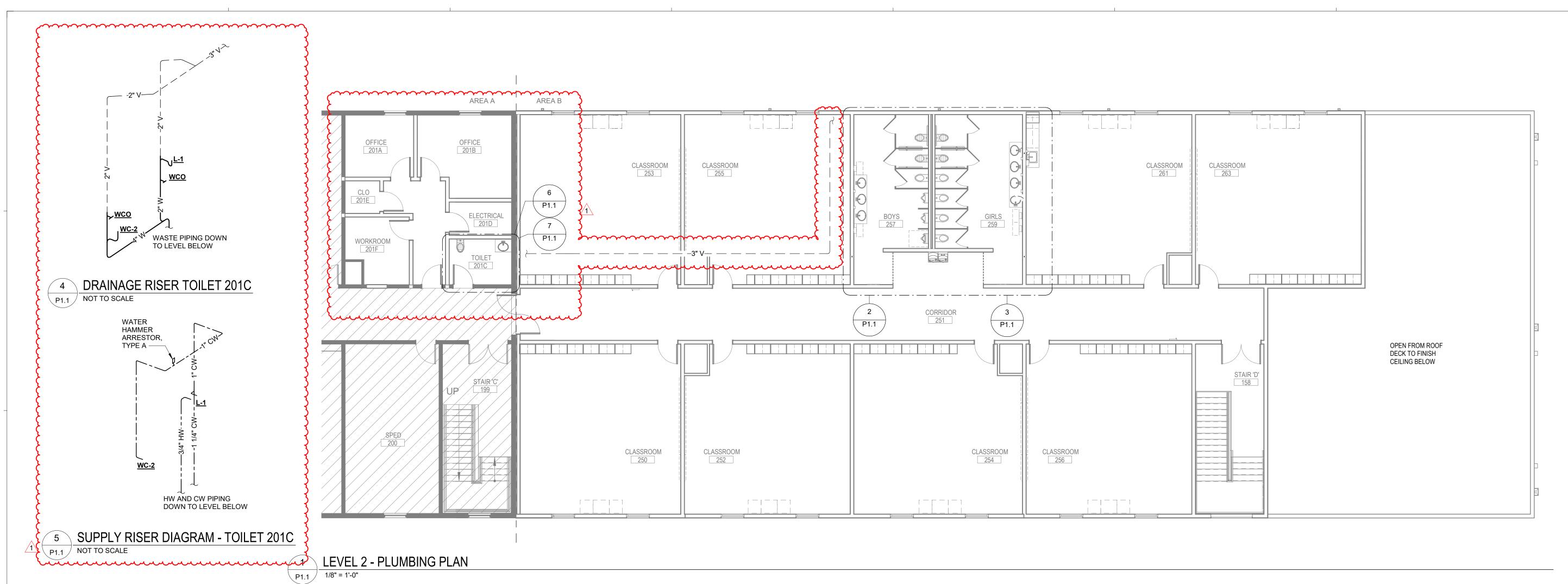


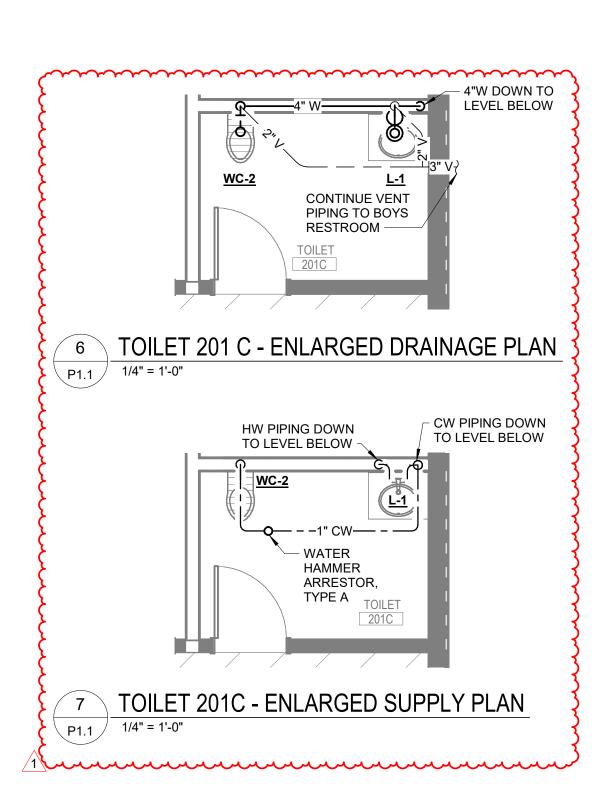
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| 1  | INSPECTION COMMENTS | 04/09/21 |
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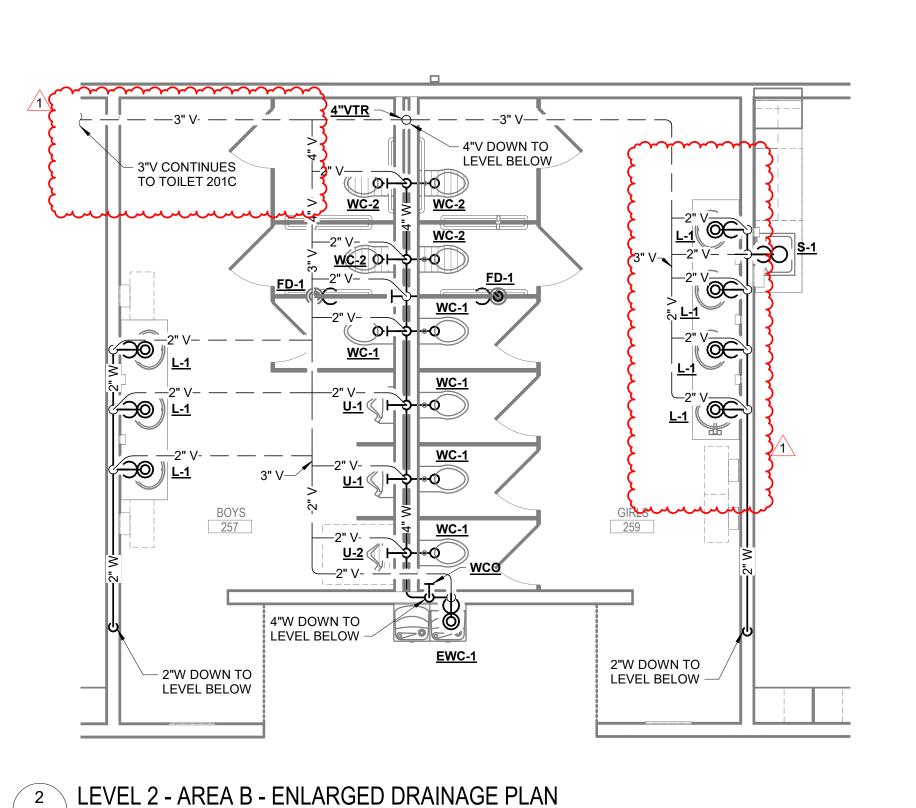
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| PROJECT NO. 20408.00                                                                                                                                                                                                                                                                                                               |
| PLUMBING PLAN -<br>LEVEL 1                                                                                                                                                                                                                                                                                                         |

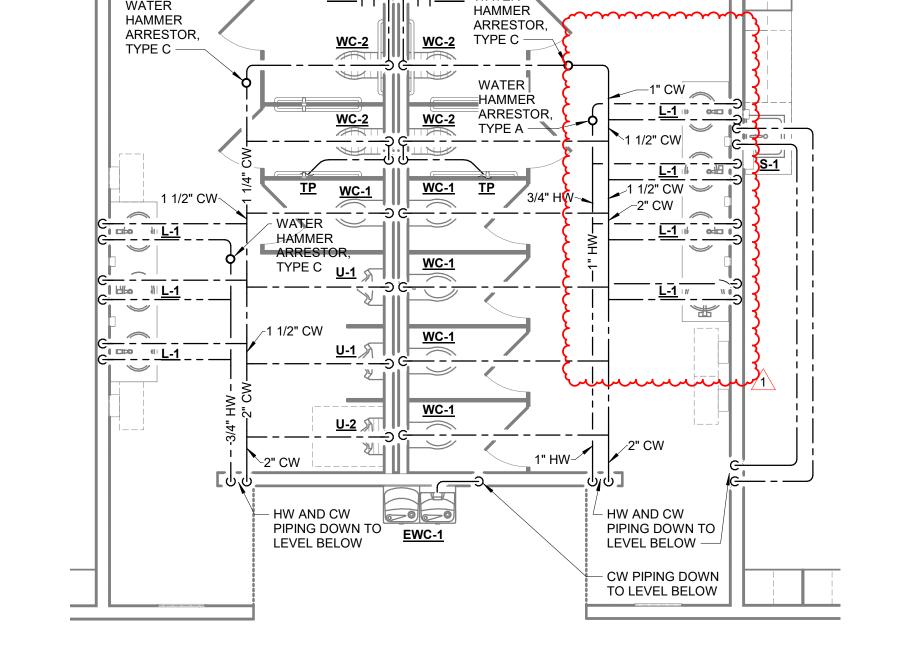
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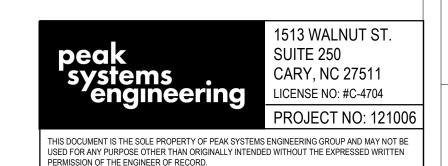








3 LEVEL 2 - AREA B - ENLARGED SUPPLY PLAN
1/4" = 1'-0"



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Murray, Utah 84107 801-256-9550

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Structural Engineer

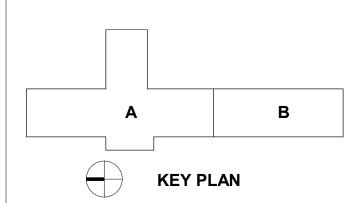
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Raleigh, North Carolina 27607 919-866-4938



SEAL | DATE

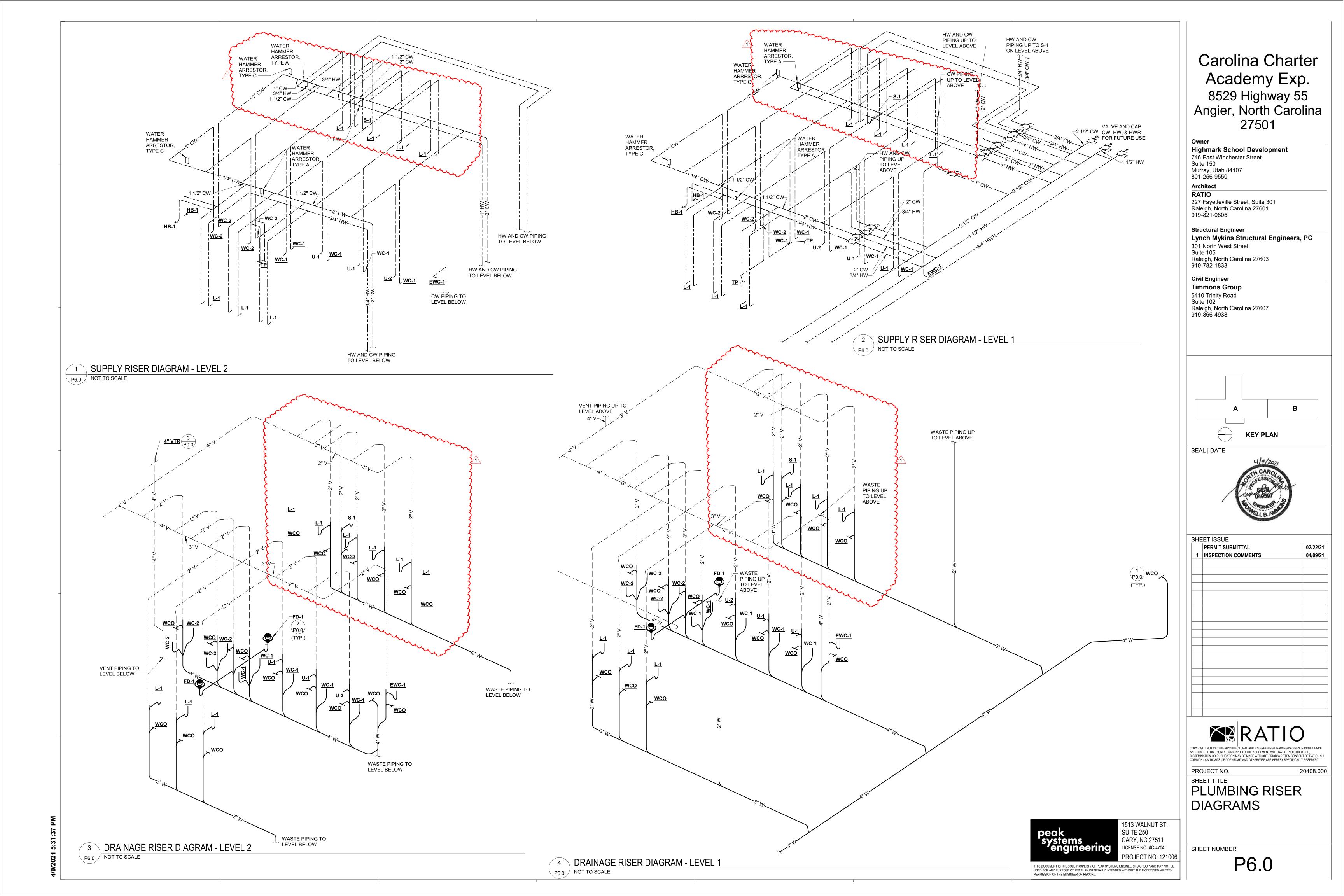


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|     | PERMIT SUBMITTAL    | 02/22/21 |
| 1   | INSPECTION COMMENTS | 04/09/21 |
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| PROJECT NO.                                                                                                                                                                                                                      | 20408.000                                                                             |
| SHEET TITLE                                                                                                                                                                                                                      |                                                                                       |
| PLUMBING PL                                                                                                                                                                                                                      | AN -                                                                                  |
| LEVEL 2                                                                                                                                                                                                                          |                                                                                       |

SHEET NUMBER

P1.1



#### GENERAL MECHANICAL NOTES:

- . ALL PIPING PENETRATIONS THRU SMOKE AND FIRE WALLS SHALL BE SEALED WITH APPROPRIATE UL RATED/LISTED SEALANT.
- 2. ALL OUTSIDE AIR INTAKES SHALL BE LOCATED 10'-0" MIN. FROM ANY VENT/EXHAUST TERMINAL.
- 3. BRANCH DUCT CONNECTION TO DIFFUSER OR GRILLE MAY HAVE 7'-0" LONG MAX. FLEX DUCT CONNECTOR
- 4. COORDINATE DUCTWORK AND PIPING INSTALLATIONS WITH BUILDING ELEMENTS AND OTHER TRADES. DUCT AND PIPING ROUTING ON PLANS ARE DIAGRAMATIC. ADDITIONAL DUCTWORK AND OFFSETS MAY BE REQUIRED TO INSTALL DUCTWORK AND PIPING IN ACTUAL FIELD CONDITIONS. MAINTAIN MANUFACTURERS SERVICE CLEARANCES FOR ALL EQUIPMENT.
- . 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 ACCOMODATE OCCUPANT COMFORT AFTER OCCUPANCY.
- 6. INSULATE ALL INDOOR SUPPLY DUCTWORK WITH 2.2" FG BLANKET WITH SEALED FSK VAPOR BARRIER.

ROOFTOP FAN-

SECURE FAN TO-CURB W/CADMIUM PLATED LAG SCREWS,

MÍN 1 PER SIDE

-ELECTRIC CONDUIT

-BACKDRAFT

CURB DETAIL

GAS FIRED

EQUIPMENT

NOTE: PAINT ALL GAS PIPING WITH

TYPICAL GAS CONNECTION

YELLOW OIL BASED PAINT.

MIN 1 PER SIDE

MC LOCATE CURB – AND SECURE TO ROOF DECK

GAS COCK TEST PORT □

GAS REG.(

TEST PORT

DIRT LEG

7NO SCALE

/NOT TO SCALE

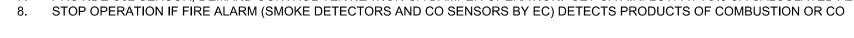
GAS MAIN

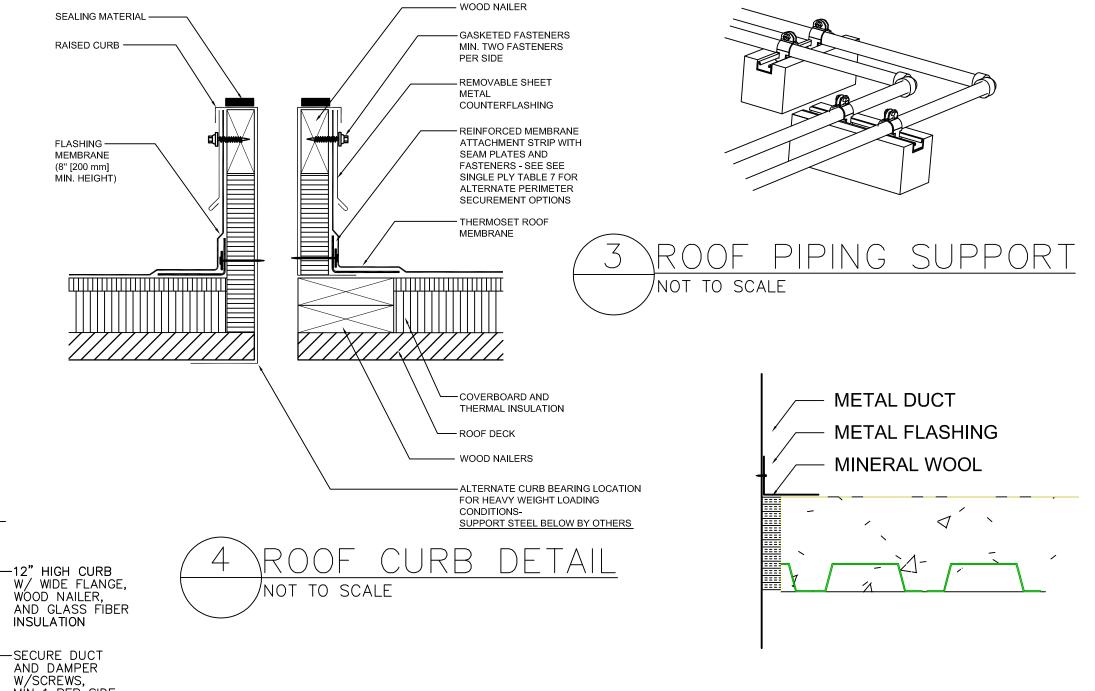
. BLANK OFF OPENINGS WHERE DUCTS TRAVEL DOWN TO FIRST LEVEL WITH SHEET METAL AND MINERAL WOOL AT SECOND FLOOR LEVEL.

|         |          |                            |           |     |             |     |                               | PAC   | KAGE | ROOF              | TOP S | CHE | DULE            |     |     |              |         |                   |
|---------|----------|----------------------------|-----------|-----|-------------|-----|-------------------------------|-------|------|-------------------|-------|-----|-----------------|-----|-----|--------------|---------|-------------------|
| TAG     | S<br>CFM | ESP (IN. H <sub>2</sub> 0) | AN<br>BHP | RPM | MIN.<br>O/A |     | LING COI<br>SENS MBH<br>(MIN) |       |      | TOT MBH<br>OUTPUT |       |     | UNIT<br>VOLTAGE | MCA | МОР | MANUF./MODEL | REMARKS | WEIGHTS<br>(APPX) |
| RTU-1-1 | 1841     | 1                          | Х         | Χ   | 400         | 60  | 48                            | 80/67 | 60   | 49                | 60    |     | 480/3P          | 12  | 15  | TRANE        | 1-8     | 1200              |
| RTU-1-2 | 1841     | 1                          | X         | Х   | 400         | 60  | 48                            | 80/67 | 60   | 49                | 60    |     | 480/3P          | 12  | 15  |              | 1-8     | 1200              |
| RTU-1-3 | 1853     | 1                          | Х         | Χ   | 400         | 60  | 48                            | 80/67 | 60   | 49                | 60    |     | 480/3P          | 12  | 15  |              | 1-8     | 1200              |
| RTU-1-4 | 1840     | 1                          | Х         | Х   | 400         | 60  | 48                            | 80/67 | 60   | 49                | 60    |     | 480/3P          | 12  | 15  |              | 1-8     | 1200              |
| RTU-1-5 | 3496     | 1                          | Х         | X   | 425         | 120 | 90                            |       | 120  | 96                | 60    |     | 480/3P          | 22  | 25  |              | 1-8     | 1600              |
| RTU-2-1 | 2277     | 1                          | Х         | Х   | 430         | 72  | 58                            | 80/67 | 80   | 64                | 60    |     | 480/3P          | 15  | 20  |              | 1–8     | 1400              |
| RTU-2-2 | 2277     | 1                          | Χ         | X   | 430         | 72  | 58                            | 80/67 | 80   | 64                | 60    |     | 480/3P          | 15  | 20  |              | 1-8     | 1400              |
| RTU-1-1 | 1947     | 1                          | Χ         | Χ   | 400         | 60  | 48                            | 80/67 | 60   | 49                | 60    |     | 480/3P          | 12  | 15  |              | 1-8     | 1200              |
| RTU-1-1 | 1997     | 1                          | Х         | Х   | 400         | 60  | 48                            | 80/67 | 60   | 49                | 60    |     | 480/3P          | 12  | 15  |              | 1-8     | 1200              |
|         |          |                            |           |     |             |     |                               |       |      |                   |       |     |                 |     |     |              |         |                   |
|         |          |                            |           |     |             |     |                               |       |      |                   |       |     |                 |     |     |              |         |                   |
|         |          |                            |           |     |             |     |                               |       |      |                   |       |     |                 |     |     |              |         |                   |

#### REMARKS / ACCESSORIES

- PROVIDE INTEGRATED HOT GAS REHEAT COIL AND DEHUMDIFICATION 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 C02 SENSOR, DEMAND CONTROL VENTILATION OA DAMPER OPERATION. SET OA AIRFLOW AT 75% OA CALCULATED ABOVE.





| RETURN S              | IZE SCHEDULE                |
|-----------------------|-----------------------------|
| AIRFLOW RANGE,<br>CFM | ROUND DUCT AND<br>FLEX SIZE |
| 8"                    | 0-180                       |
| 10"                   | 181-280                     |
| 12"                   | 281-400                     |
| 14"                   | 401-580                     |
| 16"                   | 581-725                     |
| 18"                   | 726-925                     |
|                       |                             |
|                       |                             |

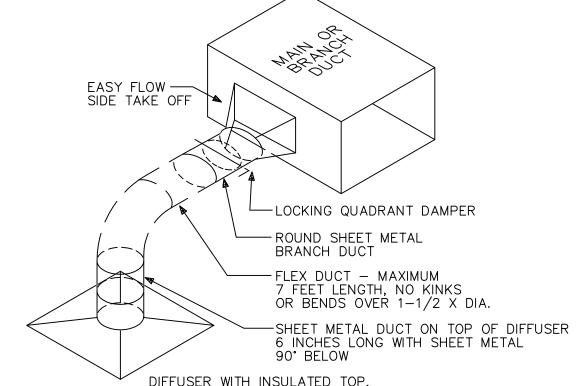
| AIR RUNOU             | T SCHEDULE                  |
|-----------------------|-----------------------------|
| AIRFLOW RANGE,<br>CFM | ROUND DUCT AND<br>FLEX SIZE |
| 4"                    | 0-40                        |
| 5"                    | 41-70                       |
| 6"                    | 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 NECESSAY FOR ROOM AIRFLOW

|          | FAN SCHEDULE |            |     |                               |     |     |    |                    |         |              |       |         |  |  |  |
|----------|--------------|------------|-----|-------------------------------|-----|-----|----|--------------------|---------|--------------|-------|---------|--|--|--|
| TAG      | SERVICE      | TYPE       | CFM | ESP<br>(IN. H <sub>2</sub> 0) | RPM | ВНР | HP | MAX SOUND<br>SONES | VOLTAGE | MANUFACTURER | MODEL | REMARKS |  |  |  |
| EF-1-1,2 | BATH EXH     | CEILING    | 300 | .5                            | _   | _   | _  | 7                  | 120/1P  | GREENHECK    | SP    | 2,3     |  |  |  |
| EE-1-2   | BATH EXH     | ROOF DB DD | 600 | .5                            | _   | _   | _  | 7                  | 120/1P  | GREENHECK    | G     | 1,3     |  |  |  |
| EF-1-3   | BATH EXH     | CEILING    | 75  | .375                          | _   | _   | 1  | 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.

| $\sqrt{2}$ | DUCT      | FLOOR | PENETRATION |
|------------|-----------|-------|-------------|
|            | NOT TO SC | ALE   |             |



DIFFUSER WITH INSULATED TOP, AND SQUARE/ROUND ADAPTOR AS REQUIRED.

| 1 | \TYP   | ICAL  | DIFFUSER | DETAIL |
|---|--------|-------|----------|--------|
|   | NOT TO | SCALE |          |        |

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

#### REMARKS/ACCESSORIES:

1. PROVIDE PLASTER FRAMES FOR DIFFUSERS MOUNTED IN HARD SURFACES

2. ARROWS INDICATE DIFFUSERS OTHER THAN 4-WAY BLOW. PROVIDE DIFFUSERS WITH INDICATED BLOW DIRECTIONS.

| 3. WHERE PLA<br>4. PROVIDE S | NHERE PLANS INDICATE, FURNISH 12×12 FACE SIMPLINFFUSER PLI SYSIEM SCHEDULE<br>NEROVIDE SOUND TRAP ELBOW FOR ALL PLENUM RETURN DIFFUSERS - TAG B |      |      |          |         |       |      |                  |       |           |  |                               |      |       |      |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------|------|----------|---------|-------|------|------------------|-------|-----------|--|-------------------------------|------|-------|------|
|                              |                                                                                                                                                 |      | GENE | RAL DATA | 4       |       |      | COOLING CAPACITY |       |           |  | HEAT PUMP HEATING CAPACITY-NA |      |       |      |
| MARK                         | CFM                                                                                                                                             | CFM  | SEER | COP      | VOLTAGE | MCA   | MOCP | TOTAL            | SENS. | OAT       |  | TOTAL                         | OAT  | TOTAL | OAT  |
|                              | TOTAL                                                                                                                                           | O.A. | SEER | COP      | VOLTAGE | IVICA | MOCF | MBH              | MBH   | °Fdb/°Fwb |  | BTH/H                         | °Fdb | ВТН/Н | °Fdb |
| MS-1                         | 350                                                                                                                                             |      | 18   | 2.9      | 208/1P  | 7     | 15   | 12               | 10    | 95/75     |  | NA                            | 47   | NA    | 17   |

#### **REMARKS/ACCESSORIES:**

- 1. RUN LIQUID AND SUCTION LINES IN MOST INCONSPICUOUS ROUTE TO CONDENSING UNIT
- 2. PROVIDE PROGRAMABLE T'STATS BY UNIT MANUFACTURER, MOUNTED 54" TO 60" A.F.F. PROVIDE WIRING FROM INDOOR TO OUTDOOR UNIT. 3. PROVIDE LOW AMBIENT OPERATION, FLOAT SWITCH TO STOP OPERATION IF CONDENSATE DRAIN FAILS. PROVIDE CONDENSATE PUMP

8529 NC-55
ANGIER, NC
TOMER: SWINERTON CONSTRUCTION
| SHEET No.: CAROLINA CHARTER ACADEMY 2021 ADDITION

ROBERT BOUKNIGHT,

1507 TALBOT RD

GARDEN, NC 27313

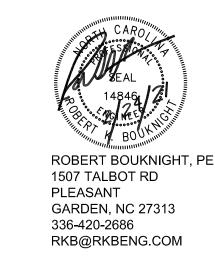
RKB@RKBENG.COM

PLEASANT

336-420-2686

ANICAL TECHNOLI SOLUTIONS, LLC.

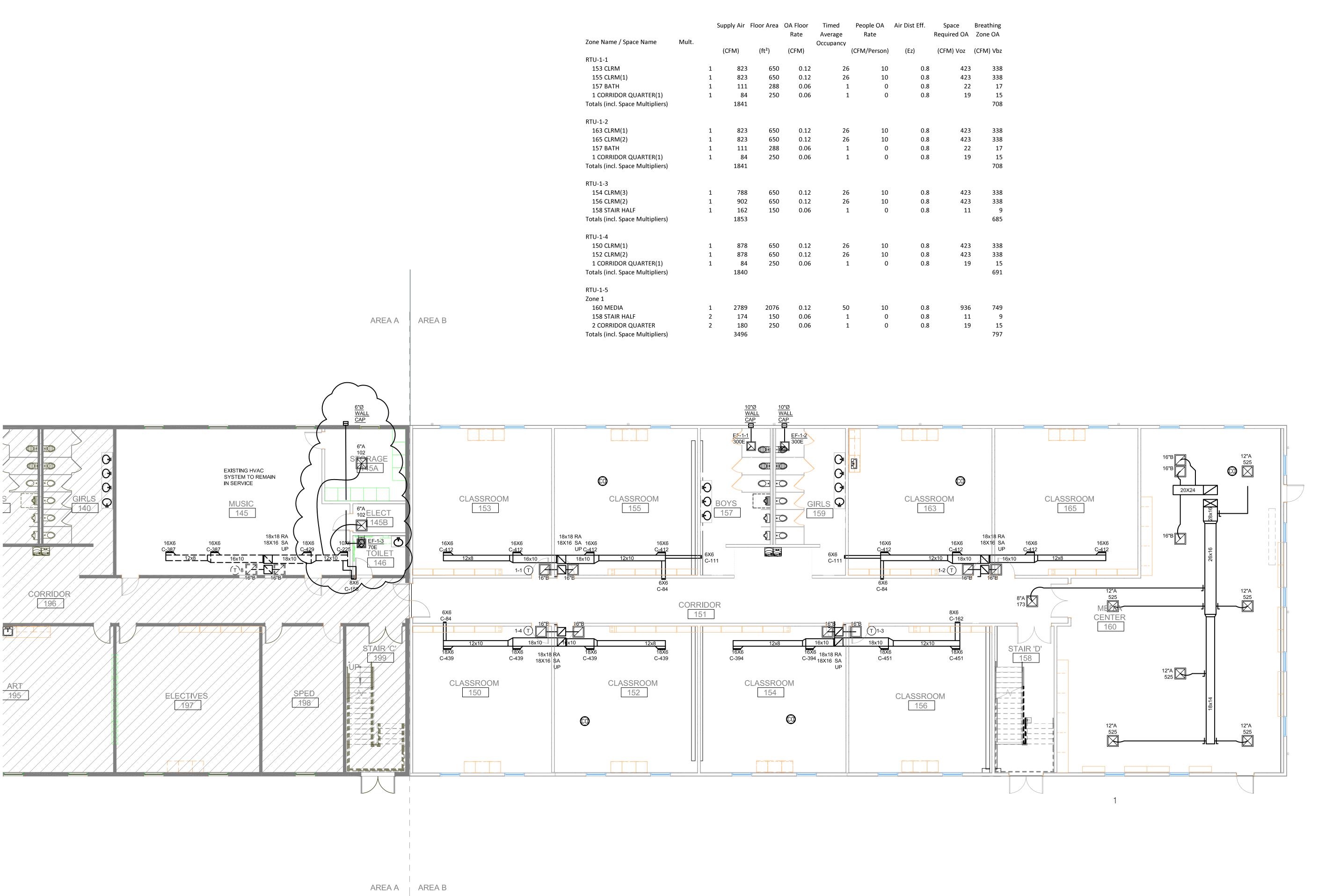
ME



MECHANICAL TECHNOLIGIES SOLUTIONS, LLC.

8529 NC-55
ANGIER, NC
STOMER: SWINERTON CONSTRUCTION
SHEET No.:
SHEET No.:

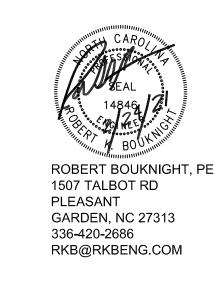
CAROLINA CHARTER ACADEMY 2021 ADDITION



HVAC FIRST FLOOR PLAN

SCALE 1/8" = 1'-0"

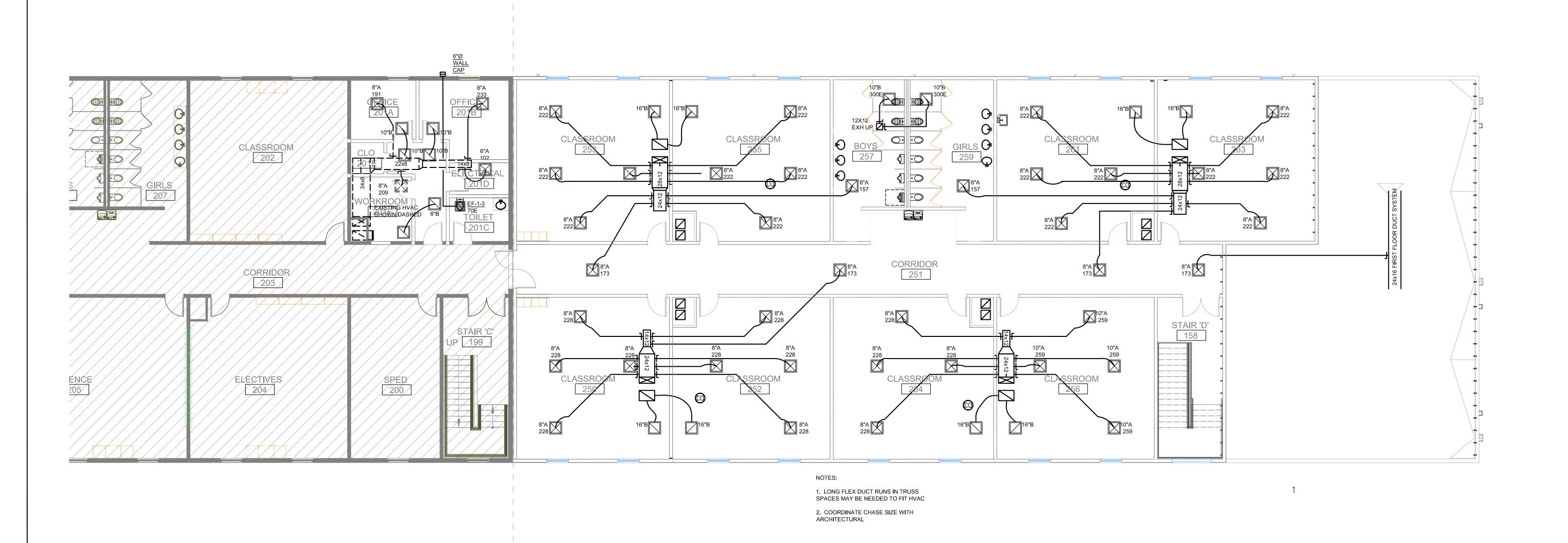
0 4' 8' 16'



MECHANICAL TECHNOLIGIES SOLUTIONS, LLC.

SWINERTON CONSTRUCTION | SCALE: |

| Zone Name / Space Name           | Mult.   | Supply Air | Floor Area | OA Floor<br>Rate | Timed Average Occupancy | People OA<br>Rate | Air Dist Eff. | Space<br>Required OA | Breathing<br>Zone OA |
|----------------------------------|---------|------------|------------|------------------|-------------------------|-------------------|---------------|----------------------|----------------------|
| Zone Name / Space Name           | TVIGIC. | (CFM)      | (ft²)      | (CFM)            | Occupancy               | (CFM/Person)      | (Ez)          | (CFM) Voz            | (CFM) Vbz            |
| RTU-2-1                          |         | , ,        | ` ,        | , ,              |                         | . , ,             | ` ,           | . ,                  | , ,                  |
| 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                  |
| RTU-2-2                          |         |            |            |                  |                         |                   |               |                      |                      |
| 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                  |
| RTU-2-3                          |         |            |            |                  |                         |                   |               |                      |                      |
| 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                  |
| RTU-2-4                          |         |            |            |                  |                         |                   |               |                      |                      |
| 250 CLRM(2)                      |         | 1 912      | 650        | 0.12             | 26                      | 10                | 0.8           | 423                  | 338                  |
| 252 CLRM(3)                      |         | 1 912      | 650        | 0.12             | 26                      | 10                | 0.8           | 423                  | 338                  |
| 2 CORRIDOR QUARTER               |         | 1 173      | 250        | 0.06             | 1                       | 0                 | 0.8           | 19                   | 15                   |
| Totals (incl. Space Multipliers) |         | 1997       |            |                  |                         |                   |               |                      | 691                  |



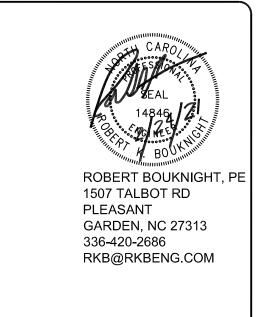
AREA A AREA B

AREA A | AREA B

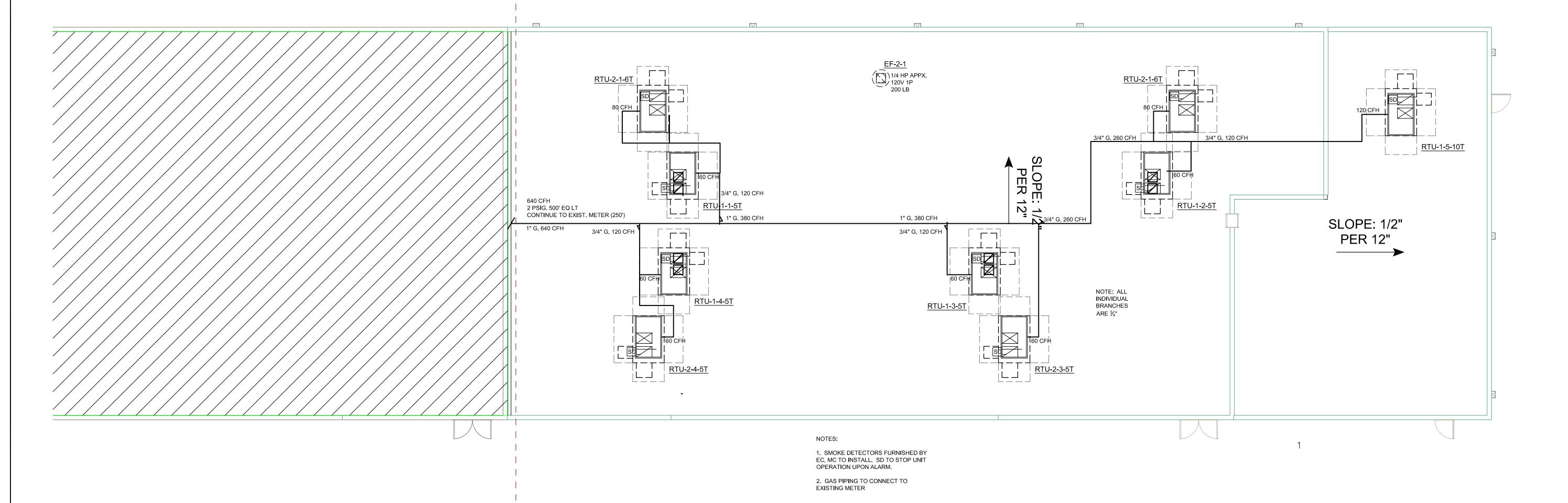
HVAC 2ND FLOOR PLAN

SCALE 1/8" = 1'-0"

0 4' 8' 16'



AREA A AREA B



AREA A | AREA B



| ICH ICHANICAL TECHNOLICI               |               | SOLUTIONS, LLC.   | 790 Megahertz Drive | Willston-Saletti, NC, 27.107<br>Phone (336) 399-5166 Eax (336) 893-7712 | www.mtshvac.com        |                                                                                                                           |
|----------------------------------------|---------------|-------------------|---------------------|-------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------|
| REVISIONS                              | DESCRIPTION   |                   |                     |                                                                         |                        |                                                                                                                           |
|                                        | REV. BY DATE  |                   |                     |                                                                         |                        |                                                                                                                           |
| REVISIONS                              | DESCRIPTION   |                   |                     |                                                                         |                        | THIS DRAWING IS PRIVATE AND CONFIDENTIAL. ALL USE IS FORBIDDEN EXCEPT BY WRITTEN COMMENT OF MECHANICAL SYSTEMS & SERVICES |
|                                        | REV. BY DATE  |                   |                     |                                                                         |                        | THIS DRAWING IS PRIVATE AND CONFIDENTIAL. ALL U COMMENT OF MECHANICAL SYSTEMS & SERVICES                                  |
| ER ACADEMY                             |               |                   |                     |                                                                         | ONSTRUCTION            | SCALE:                                                                                                                    |
| TITLE: CAROLINA CHARTER ACADEMY        | ZUZI ADDITION | 8529 NC-55        | ANGIER, NC          | OMER: (C. C. C                         | SWINEKION CONSTRUCTION | SHEET No.:                                                                                                                |
|                                        | <u> </u>      | <i>ω</i>          | <u>`</u>            | CUSTOM                                                                  |                        | -ANOB No.                                                                                                                 |
| NED BY: RKB DATE:<br>AWN BY: RKB DATE: | DATE:         | VED BY: RKB DATE: | NG NUMBER:          |                                                                         | í<br>í                 | IC ROOF LEV PLAI                                                                                                          |

### SYMBOLS & LEGEND BRANCH CIRCUIT CONDUIT CONCEALED IN CEILING AND/OR WALLS, 2#12AWG & 1#12AWG EG UNLESS OTHERWISE INDICATED, HASHMARKS INDICATE NO. OF WIRES. BRANCH CIRCUIT CONDUIT EXPOSED ON WALL AND OR CEILING, 2#12AWG & 1#12AWG EG UNLESS OTHERWISE INDICATED. HASHMARKS INDICATE NO. OF WIRES. BRANCH CIRCUIT CONDUIT CONCEALED IN OR UNDER FLOOR OR IN FURRED CEILING BELOW, TWO 2#12AWG & 1#12AWG EG UNLESS OTHERWISE INDICATED, HASHMARKS INDICATE NO. OF WIRES. → HOMERUN TO PANELBOARD. NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS MECHANICAL CONTRACTOR. THE LOCATION SHOWN ON THE ELECTRICAL PLANS ARE APPROXIMATE. THE E.C. SHALL FULLY COORDINATE WITH - PHASE WIRES NEUTRAL NOTE: ALL CONDUITS TO BE 3/4" C - 2#12AWG & 1#12AWG EG UNLESS OTHERWISE INDICATED BY HASH MARKS OR CONDUIT AND WIRE SCHEDULE CONDUIT FITTINGS TO BE STEEL COMPRESSION TYPE WHERE SUBJECT TO PHYICAL DAMAGE, IMC OR RIGID CONDUIT TO BE UTILIZED ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH INS. 6. FOR ANY WALL OR FLOOR PENETRATIONS, E.C. TO SHALL PROVIDE 3-WIRE TIE CONNECTION BETWEEN MASTER/SLAVE LIGHTING FIXTURE COMBINATIONS 1/2" FLEXIBLE CONDUIT CONNECTION WITH 3#14 & 1#14 E.G. LUDRESCENT LIGHTING FIXTURE, SURFACE. LUDRESCENT LIGHTING FIXTURE, RECESSED. WALL OR CEILING MOUNTED EXIT LIGHT. SHADE INDICATES FACE. RECESSED LIGHTING FIXTURE. SINGLE POLE SWITCH, (SEE MOUNTING DETAIL) THREE WAY SWITCH, (SEE MOUNTING DETAIL) DIMMER SWITCH EQUAL TO LUTRON NOVA SERIES, SIZED FOR LOAD, (SEE MOUNTING DETAIL) FLUDRESCENT DIMMER SWITCH EQUAL TO LUTRON NOVA SERIES, (SEE MOUNTING DETAIL) SIZED FOR LOAD SIZED FOR LOAD, PROVIDE POWER PACKS FOR LOAD DUPLEX CONVENIENCE DUTLET. (SEE MOUNTING DETAIL) CROSSMARK INDICATES 46" A.F.F. SINGLE CONVENIENCE DUTLET, MOUNTED AS DETAILED. NEMA TYPE AS NOTED OR REQUIRED. ELECTRIC WATER COOLER DUTLET, VERIFY ROUGH-IN DUPLEX CONVENIENCE DUTLET, WP-WITH WEATHER PROOF COVER, G-GFI TYPE, L-LOCKABLE COVER. T - TAMPER RESISTANT QUAD, CONVENIENCE DUTLET. TELEPHONE, TV, SOUND, ETC., CABINET, AS NOTED. LIGHTING AND POWER PANELBOARD 120/208 VOLTS. MECHANICAL PANELBOARD 277/480 VOLTS JUNCTION BOX, HEIGHT & SIZE AS NOTED OR REQUIRED. EXHAUST FAN DUTLET, VERIFY ROUGH-IN SAFETY SWITCH, RATING AS INDICATED. TELEPHONE/DATA OUTLET (SEE TYPICAL TELE/DATA RISER; SHEET E01 CEILING RECEPTACLE MOUNTED IN CEILING FOR FUTURE CONNECTION, COORDINATE EXACT LOCATION WITH OWNER PRIOR TO INSTALLATION. CEILING MOUNTED INFRARED AND ULTRASONIC OCCUPANCY SENSOR WITH POWER CONTROL STATION LITHONIA LMTO-H-LPCS WITH EQUALS BY HUBBELL, WATT STOPPER, OR NOVITAS ELECTRICAL DEVICE NOTES PRIOR TO PLACING ORDER FOR ELECTRICAL DEVICES; E.C. TO CONFIRM WITH ARCHITECH 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 FIRE ALARM INDICATING

--- DUTLET W/HASHMARK

MTD. ABV. CABINET

DUTLET LOCATION DETAIL

HASHMARK INDICATES TO BE MTD. AT 46" ABOVE FLOOR

D-M□UNT

(UNLESS NOTED OTHERWISE)

RECEPTACLE -

NO SCALE

BASEBOARD

FLOOR

## COORDINATION NOTES

1. MOUNTING HEIGHTS SHOWN ARE FROM THE FINISHED FLOOR TO THE CENTER OF DEVICE UNLESS OTHERWISE NOTED (SEE DETAIL). 2. 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. 3. 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. 4. MECHANICAL EQUIPMENT WILL BE FURNISHED AND INSTALLED BY THE

THE M.C. TO DETERMINE THE EXACT LOCATION OF EACH PIECE OF EQUIPMENT, PRIOR TO ANY INSTALLATION. 5. 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

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. 7. ALL ROUGH-INS BOXES TO BE INSTALLED SO THAT NO BOX EXTENSION ARE UTILIZED.

> CABLING TO TELE. SERVICE

#### 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 DACT TO BE INTEGRAL ADDRESSABLE POINT REPORTING TYPE IF ACCEPTABLE WITH FIRE MARSHAL, ALL STROBES AND HORN/STROBES TO HAVE RED FINISH; PROVIDE DEVICE MAP AT ANNUNCIATOR

NOTIFICATION ALARM CIRCUIT PANEL W/BATTERIES

#### FIRE ALARM LEGEND

NAC

FACP ANALOG ADDRESSABLE FIRE ALARM CONTROL PANEL

DSS| FLUSH MOUNTED SPEAKER WITH LIGHT

DOUBLE ACTION ADDRESSABLE PULL STATION

CEILING MOUNTED FIXED HEAT DETECTOR

 $\bigoplus$ FLUSH MOUNTED STROBE LIGHT ONLY

CEILING MOUNTED ADDRESSABLE PHOTO SMOKE DETECTOR

"S" DENOTES SURFACE MOUNTED "E" DENOTES ELEVATOR RECALL CEILING MOUNTED STROBE LIGHT ONLY

DUCT MOUNTED SMOKE DETECTOR WITH DUCT HOUSING ASSEMBLY PROVIDED BY ELEC. CONTRACTOR 1- THE MECHANICAL CONTRACTOR WILL MOUNT THE DETECTOR

& WIRE FROM FAM TO AHU SHUT DOWN 2- THE ELECTRICAL CONTRACTOR SHALL WIRE INTO FIRE ALARM SYSTEM. REMOTE TEST STATION FOR DUCT MOUNTED SMOKE DETECTOR, 90"

FIRE ALARM DOOR HOLDER OUTLET, 24 VOLT DC

SPRINKLER WATER FLOW MONITORING DEVICE, COORDINATE EXACT LOCATION AND REQUIRED QUANTITIES

SPRINKLER TAMPER MONITORING DEVICE, COORDINATE EXACT LOCATION

AND REQUIRED QUANTITIES CEILING MOUNTED SPEAKER WITH LIGHT

CONTROL ZAM; COMPATIBLE WITH DELAYED EGRESS HARDWARE MAG LOCKS/ACCESS CONTROL TO RELEASE UPON FIRE ALARM ACTIVATION

CLASS B

CARBON MONOXIDE DETECTOR

BEAM DETECTOR TRANSMITTER

BEAM DETECTOR REFLECTOR

E.C. TO VERIFY EXACT QUANTITY AS SHOWN ON DRAWINGS



96" MAX (NFPA)

(2440mm MAX)

80" MIN (NFPA) (2032mm MIN)

ABOVE FINISHED FLOOR

CEILING MOUNTED

SMOKE/HEAT DETECTOR

24" (610mm) TO TOP OF LENS MIN DISTANCE HANDICAP

BEDROOM STROBE

SYNCHRONIZE MORE THAN

TWO APPLIANCES IN ANY

NFPA 72 1999 EDITION

(SECTION A-4-4.4.1.1(1))

NFPA 72 2002 EDITION

(SECTION A.7.5.4.3)

(SECTION A.7.5.4.5)

NFPA 72 1999 EDITION

NFPA 72 2002 EDITION

(SECTION 4-4.4)

NFPA 72 2007 FDITION

(2032mm MIN)

(2440mm MAX)

REF. 96" MAX (IBC)

DEVICE MOUNTING HEIGHTS (PER NFPA 72)

TO EXIT DOOR

5'(MAX.)

(1524mm)

ACCEPTED HERE

NEVER /

WALL MOUNTED

SMOKE/HEAT

FINISHED /

(305mm MAX)

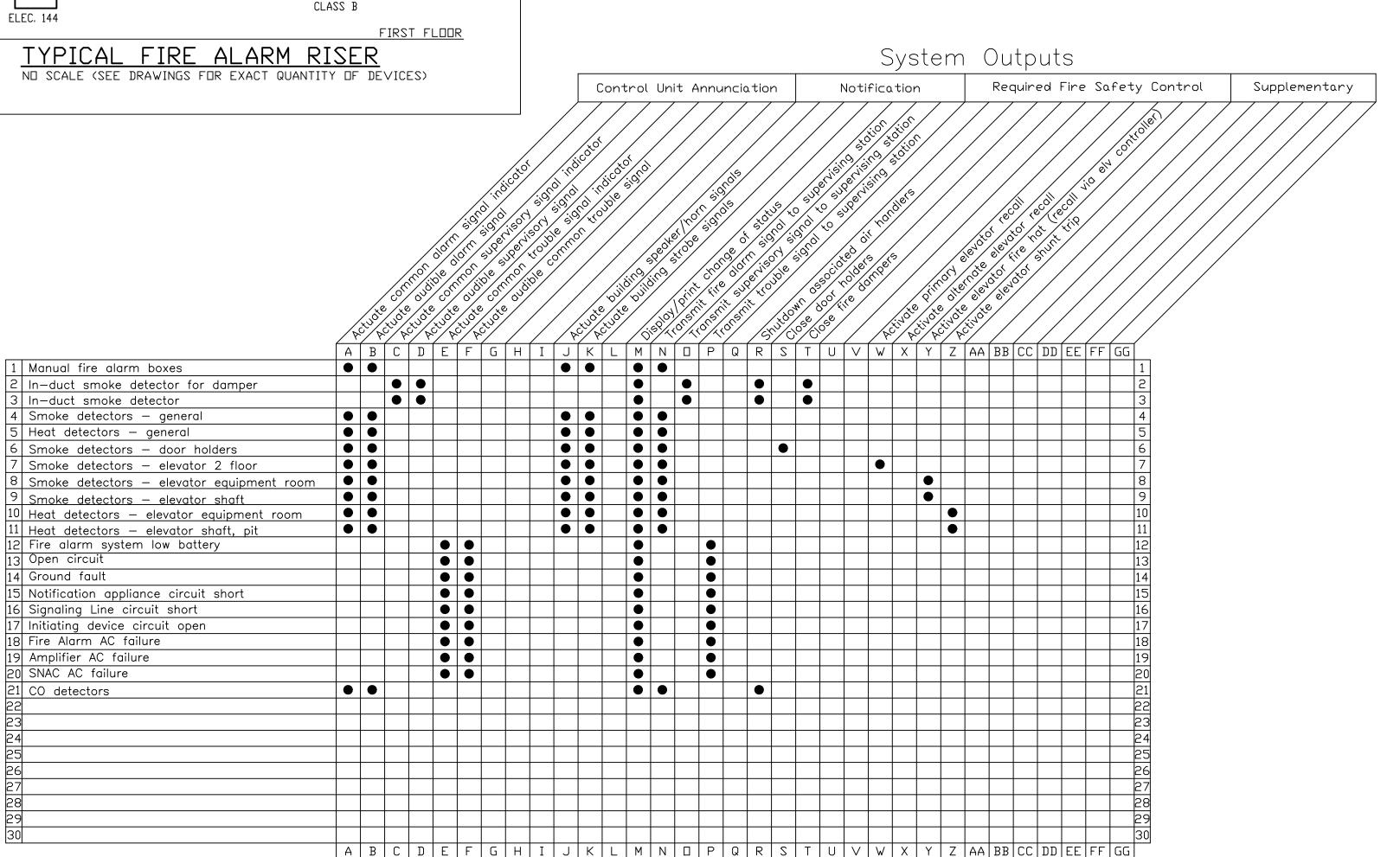
A/C SUPPLY OR RETURN DIFFUSER

(914mm MIN)

MANUAL PULL STATION

|      | TRANSFORMER SCHEDULE |       |      |                  |         |           |          |  |  |  |  |  |  |
|------|----------------------|-------|------|------------------|---------|-----------|----------|--|--|--|--|--|--|
|      |                      |       |      | VOL <sup>-</sup> | TAGE    |           |          |  |  |  |  |  |  |
| MARK | KVA                  | PHASE | WIRE | PRI.             | SEC.    | ENCLOSURE | MOUNTING |  |  |  |  |  |  |
| 1    | 45*                  | 3     | 4    | 480              | 120/208 | NEMA 1    | FLOOR    |  |  |  |  |  |  |
| 2    | _                    | _     | _    | _                | _       | _         | _        |  |  |  |  |  |  |
| 3    | -                    | _     | -    | _                | _       | _         | _        |  |  |  |  |  |  |
| 4    | _                    | _     | _    | _                | _       | _         | _        |  |  |  |  |  |  |
| 5    | _                    | _     | _    | _                | _       | _         | _        |  |  |  |  |  |  |

\* NEMA TP-1, 150° RISE, AL WINDINGS



FIRE ALARM SYSTEM MATRIX

NO SCALE

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

| 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 ELECTOR 945 NORTHWEST BLVD. WINSTON-SALEM, NC PHONE 336 722-3311 DATE OF THE CAROLUMAN CAROLUMA |   |
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| Murray, Utah 84107 801-256-9550  Architect RATIO  227 Fayetteville Street, Suite 301 Raleigh, North Carolina 27601 919-821-0805  DESIGNED FOR SAMMY PHILLIPS ELECTORY 945 NORTHWEST BLVD. WINSTON—SALEM, NC PHONE 336 722—3311                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |   |
| RATIO  227 Fayetteville Street, Suite 301 Raleigh, North Carolina 27601 919-821-0805  DESIGNED FOR SAMMY PHILLIPS ELECTORY 945 NORTHWEST BLVD. WINSTON—SALEM, NC PHONE 336 722—3311                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |   |
| 227 Fayetteville Street, Suite 301 Raleigh, North Carolina 27601 919-821-0805  DESIGNED FOR SAMMY PHILLIPS ELECTORY 945 NORTHWEST BLVD. WINSTON—SALEM, NC PHONE 336 722—3311                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |
| ENSBORO ENGINEERING  ANKING STREET, SUITE B GREENSBORO  336 275-6360 FAX 336 275-  Soengineering.com  GREENSON  ON WATTHEN STATE  ON WATTH |   |
| GREENSBORO  1848 BANKING STREET, SI PHONE 536 275-6360  www.gsoengineering.com  SINGLANDIA  ON SINGLAND  ON S |   |
| A I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | В |
| KEY PLAN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |
| SEAL   DATE 2/12/2021                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |

| 1 | 50% Construction Documents | 2/8/ |
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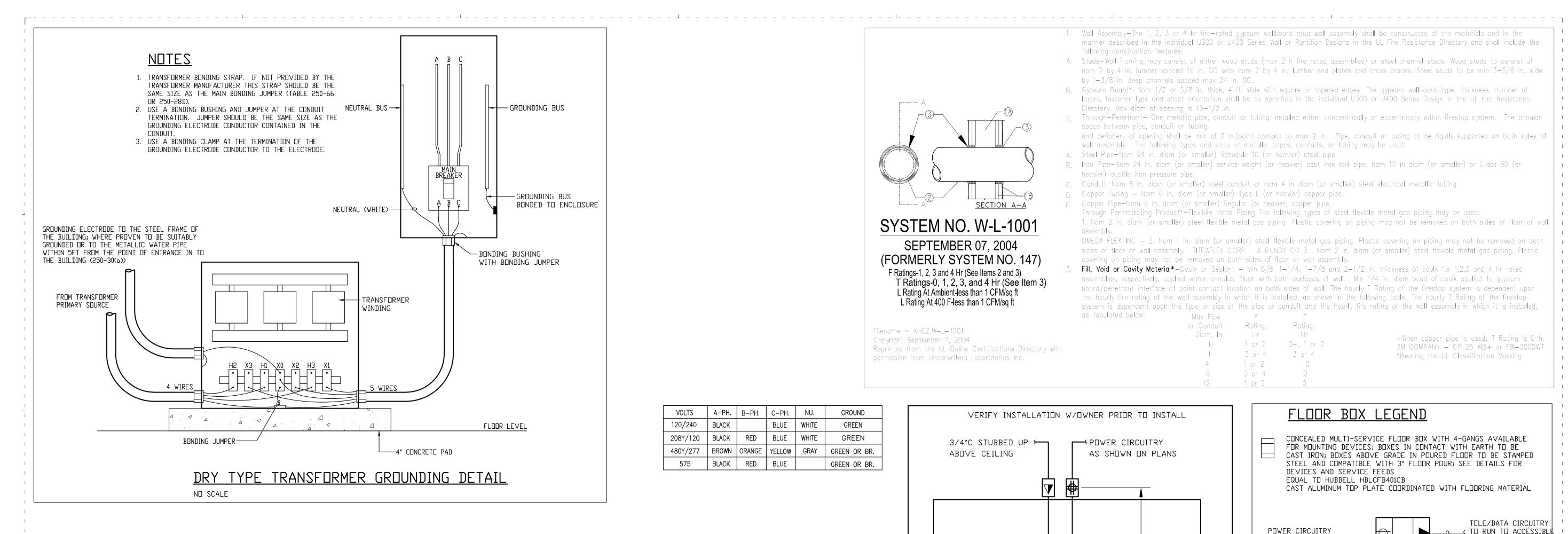
AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTHER USE. DISSEMINATION OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF RATIO. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED.

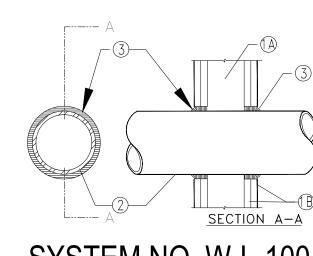
20408.000

PROJECT NO.

Electrical -Symbols & Legends, Notes & Details

SHEET NUMBER





### SYSTEM NO. W-L-1001 **SEPTEMBER 07, 2004**

(FORMERLY SYSTEM NO. 147) F Ratings-1, 2, 3 and 4 Hr (See Items 2 and 3) T Ratings-0, 1, 2, 3, and 4 Hr (See Item 3) L Rating At Ambient-less than 1 CFM/sq ft L Rating At 400 F-less than 1 CFM/sg ft

Filename = XHEZ.W-L-1001Copyright September 7, 2004 Reprinted from the UL Online Certifications Directory with permission from Underwriters Laboratories Inc

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:

A. Studs—Wall framing may consist of either wood studs (max 2 h 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.

B. 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-Penetrant- 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 popes, 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

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.

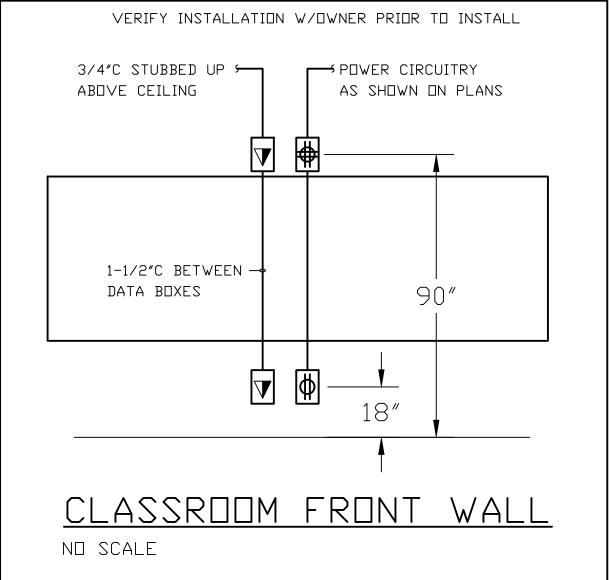
Through Pentratrating Product\*-Flexibile Metal Piping The following types of steel flexible metal gas piping may be used: 1. Nom 2 in. diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may not be removed on both sides of floor or wall

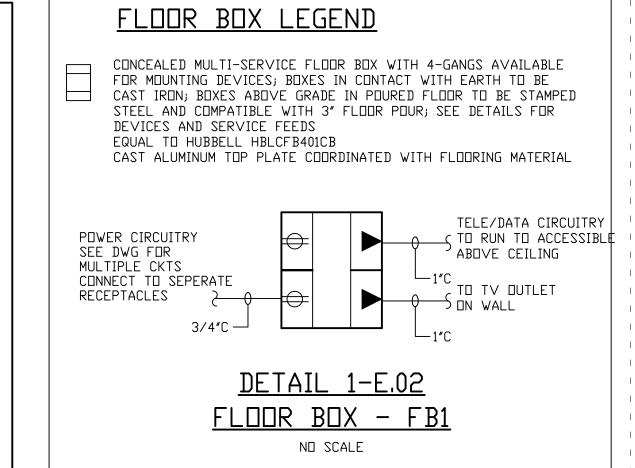
OMEGA FLEX INC — 2. Nom 1 in. diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may not be removed on both sides of floor or wall assembly. TITEWFLEX CORP A BUNDY CO 3. Nom 2 in. diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may not be removed on both sides of floor or wall assembly.

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 as tabulated below:

| n th∈ | e type or size of | f the pipe or | conduit and the | hourly fire rating | of the wall assembly | in which it is installed, |
|-------|-------------------|---------------|-----------------|--------------------|----------------------|---------------------------|
|       | Max Pipe          | F             | Т               |                    |                      |                           |
|       | or Conduit        | Rating,       | Rating,         |                    |                      |                           |
|       | Diam, In          | Hr            | Hr              |                    | +When conner nine    | is used, T Rating is O    |
|       | 1                 | 1 or 2        | 0+, 1 or 2      |                    |                      | 25 WB+ or FB-3000W        |
|       | 1                 | 3 or 4        | 3 or 4          |                    | *Bearing the UL Cla  |                           |
|       | 4                 | 1 or 2        | 0               |                    | J                    | J                         |
|       | 6                 | 3 or 4        | 0               |                    |                      |                           |
|       | 12                | 1 or 2        | 0               |                    |                      |                           |

| VOLTS    | A-PH. | B-PH.  | C-PH.  | NU.   | GROUND       |
|----------|-------|--------|--------|-------|--------------|
| 120/240  | BLACK |        | 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. |





(201**D**)

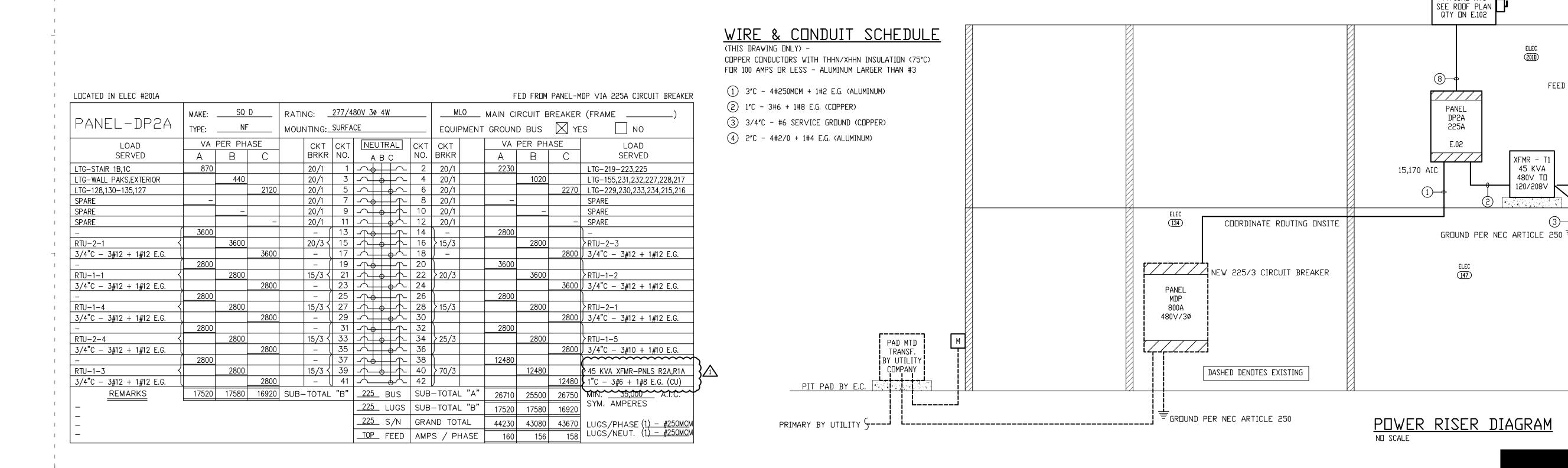
45 KVA

480V TD

120/208V

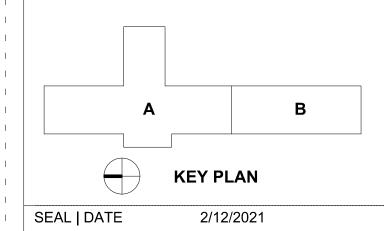
FEED THRU LUGS

IAIN BREAKER



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

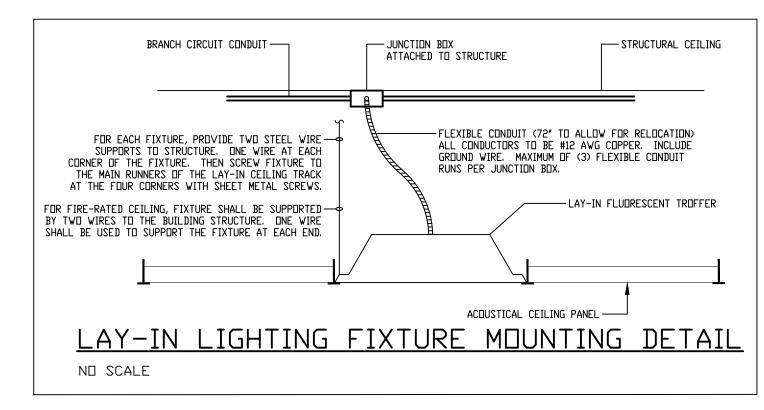
**Highmark School Development** 746 East Winchester Street Suite 150 Murray, Utah 84107 801-256-9550 Architect RATIO 227 Fayetteville Street, Suite 301 Raleigh, North Carolina 27601 919-821-0805 SAMMY PHILLIPS ELECTRIC 945 NORTHWEST BLVD WINSTON-SALEM, NC PHONE 336 722-3311 ENGINEERING



| 1 | 100% Construction Documents | 2/26/2021 |
|---|-----------------------------|-----------|
| 1 | INSPECTION REVIEW           | 3/17/2021 |
|   |                             |           |
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| SEE       | DRAWINGS AND E | MERGENCY LIGHTING LEGEND FOR EM FIX | TURE:    | Z                                         | LU      | M | INAIRE S            | CHE   | DU    | LE       |                              |                                                                                                                                                                               |
|-----------|----------------|-------------------------------------|----------|-------------------------------------------|---------|---|---------------------|-------|-------|----------|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MARK      | MANUFACTURER   | CATALOG NUMBER                      |          | LAMP(S)                                   | l ==    |   | BALLAST(S)          |       |       | TURE     | MOUNTING                     | REMARKS                                                                                                                                                                       |
|           | LITHONIA       | EPANL SERIES                        | #        | TYPE                                      | WATT.   | # | TYPE                | WATT. | WATT. | VOLTAGE  |                              | 2' X 4' RECESSED LED TROFFER; 120/277V;                                                                                                                                       |
|           | DAY-BRITE      | EQUAL                               |          | 4500 LUMEN PACKAGE                        | _       |   | 0-10V DIMMING       |       |       |          |                              | CURVED LINEAR PRISMS; 0–10V DIMMING DRIVER                                                                                                                                    |
|           |                |                                     |          |                                           |         |   |                     | 70    | 70    | 100 /077 | OFILING DECESSED             |                                                                                                                                                                               |
| A         | COOPER         | EQUAL                               |          | LED 3500° K MIN 85 CRI                    | 39      | - | DRIVER DIM TO BLACK | 39    | 39    | 120/2//  | CEILING RECESSED             | A — 4500 LUMENS<br>—                                                                                                                                                          |
|           | LITHONIA       | EPANL SERIES                        |          |                                           |         |   |                     |       |       |          |                              | - 2' X 2' RECESSED LED TROFFER; 120/277V;                                                                                                                                     |
|           | DAY-BRITE      | EQUAL                               |          | 3500 LUMEN PACKAGE                        | _       |   | 0-10V DIMMING       |       |       |          |                              | CURVED LINEAR PRISMS; 0-10V DIMMING DRIVER                                                                                                                                    |
| A2        | COOPER         | EQUAL                               | _        | LED 3500° K MIN 85 CRI                    | 39<br>– | - | DRIVER DIM TO BLACK | 39    | 39    | 120/277  | CEILING RECESSED             | A - 3500 LUMENS<br>-                                                                                                                                                          |
|           | LITHONIA       | EPANL SERIES                        |          |                                           |         |   |                     |       |       |          |                              | 2' X 4' RECESSED LED TROFFER; 120/277V;                                                                                                                                       |
|           | DAY-BRITE      | EQUAL                               |          | 7200 LUMEN PACKAGE                        | _       |   | 0-10V DIMMING       |       |       |          |                              | CURVED LINEAR PRISMS; 0-10V DIMMING DRIVER                                                                                                                                    |
| В         | COOPER         | EQUAL                               | _        | LED 3500° K MIN 85 CRI                    | 60<br>- | - | DRIVER DIM TO BLACK | 60    | 60    | 120/277  | CEILING RECESSED             | A - 7200 LUMENS<br>-                                                                                                                                                          |
|           | LITHONIA       | ZL1N SERIES                         |          |                                           |         |   |                     |       |       |          |                              | -<br>4' LED STRIP LIGHT; 120/277V;                                                                                                                                            |
|           | DAY-BRITE      | EQUAL                               |          | 4,000 LUMEN                               |         |   | _                   |       |       |          |                              | 4,000 LUMEN PACKAGE; FACTORY CHAIN MOUNT                                                                                                                                      |
| S4        | COOPER         | EQUAL                               | _        | LED MODULE PACKAGE 3500° K MINIMUM 85 CRI | 36      | - | DRIVER              | 36    | 36    | 120/277  | PENDANT MOUNT 8' AFF         | * 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 |
|           | LITHONIA       | WPX2 SERIES                         |          |                                           |         |   |                     |       |       |          |                              | GENERAL PURPOSE WALL PAK                                                                                                                                                      |
|           | DAY-BRITE      | EQUAL                               |          | 6K LUMEN                                  |         |   |                     |       |       |          |                              | 6000 LUMEN OUTPUT; DARK BRONZE COLOR                                                                                                                                          |
| W         | PRESCOLITE     | EQUAL                               | 1        | LED OUTLET                                | 45      | 1 | LED DRIVER          | 45    | 45    | 120/277  | WALL MOUNTED                 | BUILT IN PE CELL                                                                                                                                                              |
|           |                |                                     |          | -                                         |         |   |                     |       |       | ·        | 12' AFG SEE ARCH. ELEVATIONS | FINSH AND STYLE TO MATCH EXISTING (VERIFY PRIOR TO ORDERED)                                                                                                                   |
|           | LITHONIA       | ELM4L SERIES                        |          |                                           |         |   |                     |       |       |          |                              | TWO HEADED, SELF-CONTAINED EMERGENCY LIGHTING UNIT;                                                                                                                           |
| E1        | DAY-BRITE      | EQUAL                               |          | 9.6 VOLT                                  |         |   |                     |       |       |          | WALL MOUNTED                 | 120/277 DUAL VOLTAGE INPUT; 9.6 VOLT, 3 WATT SEALED BEAM                                                                                                                      |
| EL        | COOPER         | EQUAL                               | 2        | 2 WATT<br>LED                             | 12      | _ | _                   | -     | 12    | 120/277  | 8'-0" AFF                    | LED LAMPS; HIGH-IMPACT POLYCARBONATE HOUSING; MAINTENANCE FREE LEAD CALCIUM BATTERY; WHITE HOUSING 90 MINUTE BATTERY RUN TIME                                                 |
|           | LITHONIA       | QUANTUM SERIES                      |          |                                           |         |   |                     |       |       |          |                              | THERMOPLASTIC LED EXIT LIGHT WITH EMERGENCY 90 MINUTE                                                                                                                         |
|           | SURE LITES     | CCX SERIES                          | <b>-</b> | LED                                       |         |   |                     |       |       |          |                              | BATTERY BACK-UP; WHITE HOUSING; GREEN LETTERS; 120/277V                                                                                                                       |
| $\otimes$ | McPHILBEN      | CXXL SERIES                         |          |                                           | 5       |   |                     |       | 5     | 120/277  | CEILING OR                   | PROVIDE WIRE CAGE IN GYM #100                                                                                                                                                 |
|           | _              | _                                   | <b>-</b> | LED EXIT                                  |         |   |                     |       |       | ·        |                              | COMBINATION EXIT/EMERGENCY EQUAL TO LITHONIA THQM                                                                                                                             |
| X         | LITHONIA       | QUANTUM COMBINATION EXIT/EMERGENCY  |          |                                           |         |   |                     |       |       |          |                              | TWIN LAMP EXTERIOR EMERGENCY LIGHT EQUAL LED ELA T Q WP                                                                                                                       |

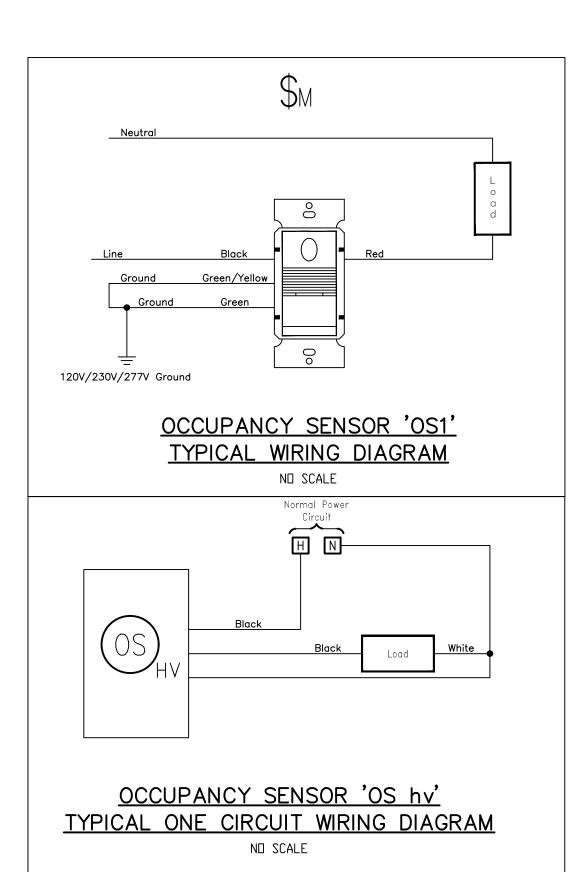


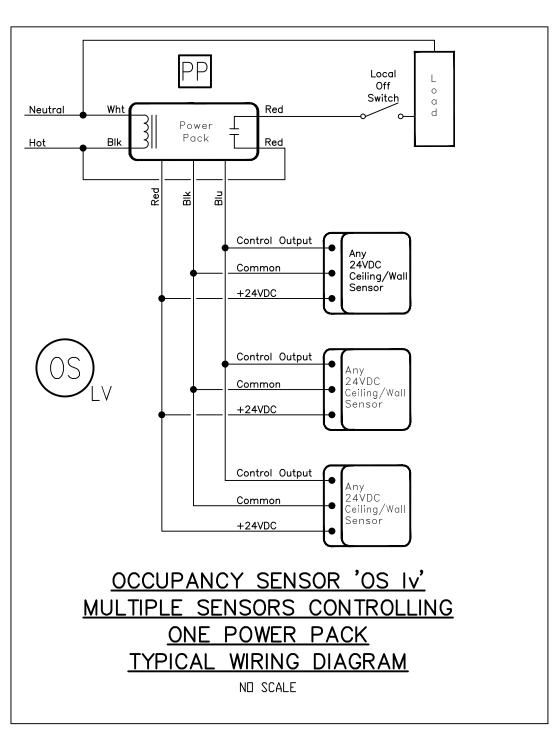
## EMERGENCY LIGHTING LEGEND

LIGHT FIXTURES WITH 'CROSSHAIRS'
TO BE PROVIDED WITH EMERGENCY
BATTERY BACK-UP. SEE NOTES
FOR SPECIFIC DETAILS.

#### EMERGENCY LIGHTING NOTES

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





# 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

O29468 2261

WMNSTON—SALEM, NC
PHONE 336 722-3311

O29468 2261

Registers by Componition of the Componition of the

**KEY PLAN** 

| 1 | 100% Construction Documents | 2/26/202  |
|---|-----------------------------|-----------|
| 1 | INSPECTION REVIEW COMMENTS  | 04/8/2021 |
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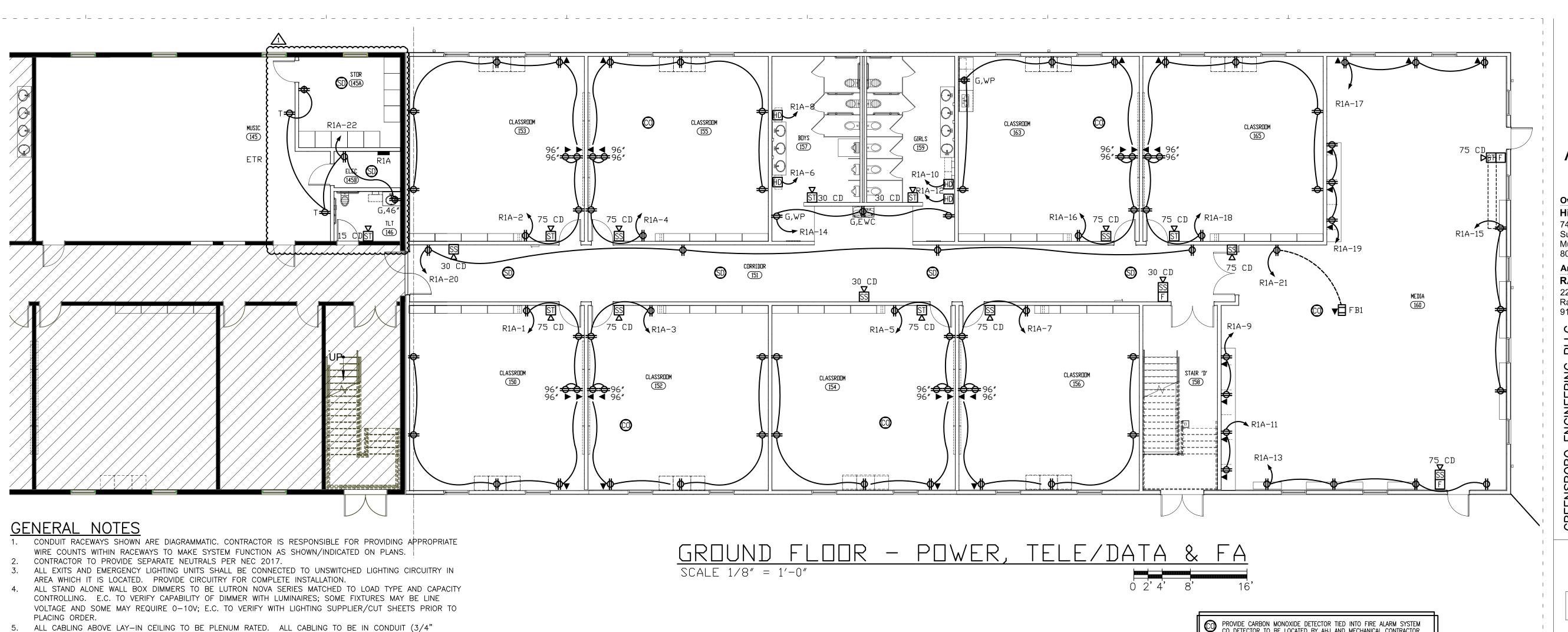
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SHEET TITLE

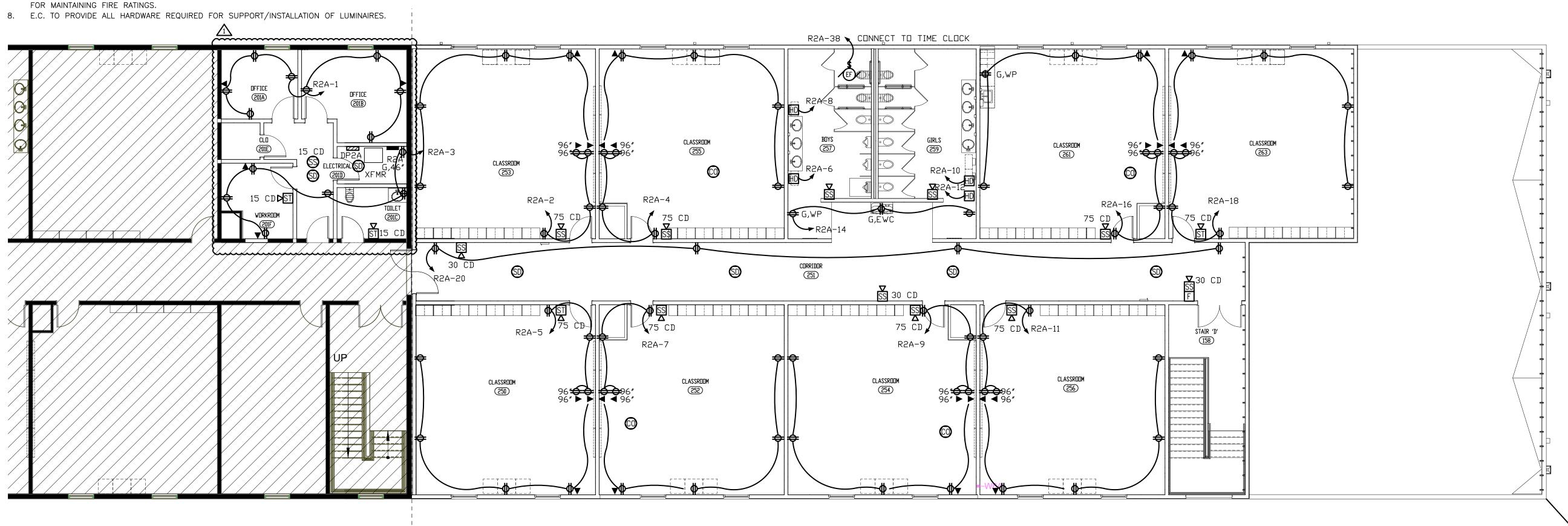
Electrical-

Luminaire Schedule, Notes & Details

SHEET NUM



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



#### KEYED PLAN NOTES -

- 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.

ALL 120V HOMERUNS OVER 75 FEET IN LENGTH TO HAVE UPSIZED (ONE SIZE LARGER) WIRE FOR VOLTAGE

7. SEE ARCHITECTURAL SHEETS FOR RATED WALL ASSEMBLIES; E.C. TO PROVIDE PROPER UL APPROVED METHODS

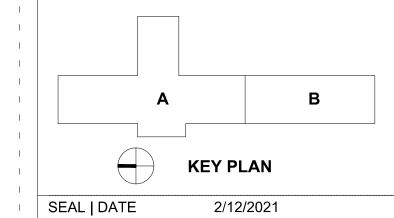
2ND FLOOR - POWER, TELE/DATA & FA

SCALE 1/8" = 1'-0"

0 2' 4' 8' 16

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

**Highmark School Development** 746 East Winchester Street 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



SHEET ISSUE **100% Construction Documents** 1 INSPECTION REVIEW COMMENTS

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PROJECT NO.

Electrical -Power, Tele/Data & FA;

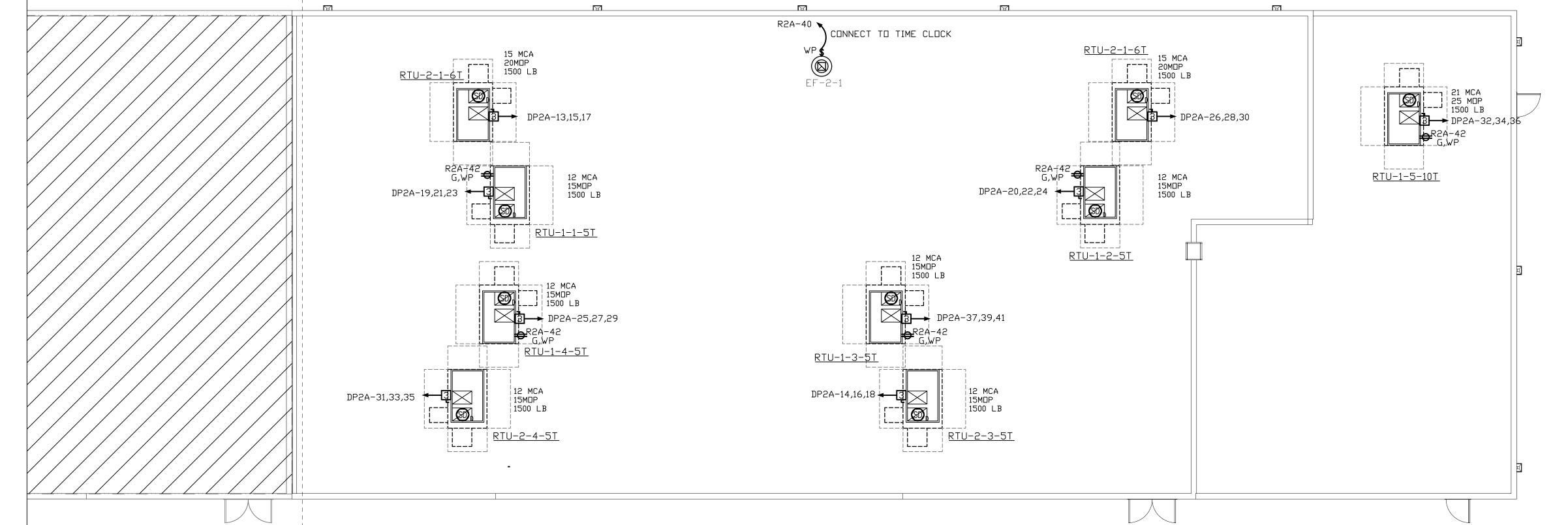
Notes & Details

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



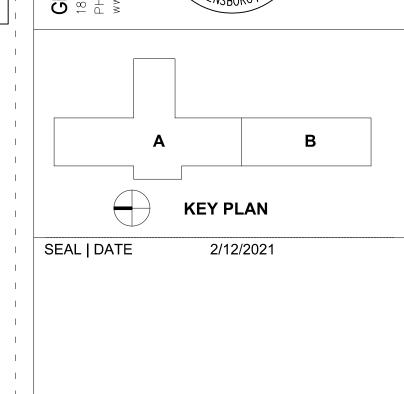


|                             | MAKE:    | SQ        | D            | <br>  RATIN | IG:    | 120/20 | 08V 3ø 4W        |               |            |       |              |      |      |                         |
|-----------------------------|----------|-----------|--------------|-------------|--------|--------|------------------|---------------|------------|-------|--------------|------|------|-------------------------|
| PANEL-R1A                   | TYPE:    | NQO       | D            |             | TING:_ |        |                  |               |            |       |              |      | ·    |                         |
|                             | 1        |           |              |             |        |        |                  |               |            |       | VA PER PHASE |      |      |                         |
| LOAD                        |          | PER PH    |              |             |        | CKT    | NEUTRAL          | CKT           | CKT        |       |              |      |      | LOAD                    |
| SERVED                      | A        | В         | С            |             |        | NO.    | ABC              | NO.           | BRKR       |       | A            | В    | С    | SERVED                  |
| REC-CLASSROOM 150           | 720      |           |              |             | 20/1   | 1      | $\sim$           | 2             | 20/1       |       | 720          |      |      | REC-CLASSROOM 153       |
| REC-CLASSROOM 152           |          | 720       |              | -           | 20/1   | 3      | $\sim$           | 4             | 20/1       |       |              | 720  |      | REC-CLASSROOM 155       |
| REC-CLASSROOM 154           |          |           | 720          |             | 20/1   | 5      | $\sim + + \sim$  | 6             | 20/1       | GFCI  |              |      | 720  | 111 11 B B111 E11 101   |
| 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     | <u> </u>         | 12            | 20/1       | GFCI  |              |      | 1200 |                         |
| 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     | <u> </u>         | 18            | 20/1       |       |              |      | 720  | REC-CLASSROOM 165       |
| REC-MEDIA 160               | 720      |           |              |             | 20/1   | 19     | <u> </u>         | 20            | 20/1       |       | 720          |      |      | REC-CORRIDOR 151        |
| REC-MEDIA 160               |          | 720       |              |             | 20/1   | 21     | <u> </u>         | 22            | 20/1       |       |              | 720  |      | REC-MUSIC 145, 146, 147 |
| SPARE                       |          |           | _            |             | 20/1   | 23     | <u> </u>         | 24            | 20/1       |       |              |      | _    | SPARE                   |
| SPARE                       | _        |           |              |             | 20/1   | 25     | <del></del>      | 26            | 20/1       |       | _            |      |      | SPARE                   |
| SPARE                       |          | _         |              |             | 20/1   | 27     | <u> </u>         | 28            | 20/1       |       |              | _    |      | SPARE                   |
| SPARE                       |          |           | _            |             | 20/1   | 29     | <u> </u>         | 30            | 20/1       |       |              |      | _    | SPARE                   |
| SPARE                       | _        |           |              |             | 20/1   | 31     | <del></del>      | 32            | 30/2       |       | _            |      |      | SPARE                   |
| SPARE                       |          | -         |              |             | 20/1   | 33     |                  | 34            | <b>)</b> – |       |              | _    |      | <i></i>                 |
| SPARE                       |          |           | _            |             | 20/1   | 35     |                  | 36            | 30/2       |       |              |      | _    | SPARE                   |
| SPARE                       | _        |           |              | GFCI        | 20/1   | 37     | <b>→</b>         | 38            | <b>S</b> – |       | _            |      |      | <i></i>                 |
| SPARE                       |          |           |              | GFCI        | 20/1   | 39     | <u></u>          | 40            | 30/2       |       |              |      |      | SPARE                   |
| FIRE NAC                    |          |           | _            | *           | 20/1   | 41     | <u></u>          | 42            | <b>S</b> – |       |              |      | _    | <i></i>                 |
| REMARKS                     | 4320     | 4320      | 4320         | SUB-        | TOTAL  | "B"    | <u>200A</u> BUS  | SUB           | -TOTAL     | _ "A" | 5040         | 5040 | 5040 |                         |
| * DENOTES RED CIRCUIT E     | BREAKER  | LOCKIN    | G DEVIC      | Œ           |        |        | <u>200A</u> LUGS | SUB           | -TOTAL     | _ "B" | 4320         | 4320 | 4320 | SYM. AMPERES            |
| -<br>GFCI - GROUND FAULT IN | ITFRRUPT | FR CIRC   | UIT BR       | FAKFR       |        |        | <u>200A</u> S/N  | 200A S/N GRAN |            | ΓAL   | 9360         | 9360 | 9360 | LUGS/PHASE (1) - #2/0   |
| _                           |          | BOTT FEED | AMPS / PHASE |             | 78     | 78     | 78               |               |            |       |              |      |      |                         |

| LOCATED IN ELEC # 201D      |                |              |          |             |                  |            |                                               |            |                  | <u>^</u> î | \      | ED FROM       | 1 PANEL-DP2 VIA 45 KVA XFMR | <i>y</i>                                                                                                                                |
|-----------------------------|----------------|--------------|----------|-------------|------------------|------------|-----------------------------------------------|------------|------------------|------------|--------|---------------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| PANEL-R2A                   | MAKE:<br>TYPE: | SQ<br>NQC    |          | RATI<br>MOU | NG: _<br>NTING:_ |            | 08V 3ø 4W<br>.CE                              |            | 150A<br>EQUIPMEN | MAIN CIR   |        | BREAKER<br>YE |                             |                                                                                                                                         |
| LOAD<br>SERVED              | Α              | PER PH.<br>B | ASE<br>C |             | CKT<br>BRKR      | CKT<br>NO. | NEUTRAL<br>A B C                              | CKT<br>NO. | CKT<br>BRKR      | VA P       | ER PHA | ASE<br>C      | LOAD<br>SERVED              |                                                                                                                                         |
| REC-201,201A                | 720            |              |          |             | 20/1             | 1          |                                               | 2          |                  | 720        |        |               | 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         | <u> </u>                                      | 14         | 20/1             | 720        |        |               | REC-257,259                 |                                                                                                                                         |
| SPARE                       |                | _            |          |             | 20/1             | 15         |                                               | 16         | 20/1             |            | 720    |               | REC-CLASSROOM 261           | 1                                                                                                                                       |
| SPARE                       |                |              | _        |             | 20/1             | 17         |                                               | . 18       | 20/1             |            |        | 720           | REC-CLASSROOM 263           |                                                                                                                                         |
| SPARE                       | _              |              |          |             | 20/1             | 19         |                                               | 20         | 20/1             | 720        |        |               | REC-CORRIDOR 251            | ARATIC                                                                                                                                  |
| SPARE                       |                | _            |          |             | 20/1             | 21         |                                               | 22         | 20/1             |            | _      |               | SPARE                       |                                                                                                                                         |
| SPARE                       |                |              | _        |             | 20/1             | 23         | <u>-                                    </u>  | 24         | 20/1             |            |        |               | SPARE                       | COPYRIGHT NOTICE: THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVE                                                                    |
| SPARE                       | _              |              |          |             | 20/1             | 25         |                                               | 26         | 20/1             | _          |        |               | SPARE                       | AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH RATIO. NO OTH DISSEMINATION OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONS |
| SPARE                       |                | _            |          |             | 20/1             | 27         | -                                             | 28         | 20/1             |            | _      |               | SPARE                       | COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICA                                                                       |
| SPARE                       |                |              | _        |             | 20/1             | 29         | <u> </u>                                      | . 30       | 20/1             |            |        | _             | SPARE                       | PROJECT NO.                                                                                                                             |
| SPARE                       | _              |              |          |             | 20/1             | 31         | <u> -^+ -</u>                                 | 32         | 30/2             | _          |        |               | SPARE                       |                                                                                                                                         |
| SPARE                       |                | _            |          |             | 20/1             | 33         |                                               | 34         | <u> </u>         |            | _      |               | <u> </u>                    | SHEET TITLE                                                                                                                             |
| SPARE                       |                |              | _        |             | 20/1             | 35         | <u> -^+++</u> 1                               | 36         | 30/2             |            |        | -             | SPARE                       | Electrical -                                                                                                                            |
| SPARE                       | _              |              |          | GFCI        | 20/1             | 37         | 1-~+                                          | 38         | <u> </u>         | _          |        |               | J -                         | Licotificat                                                                                                                             |
| SPARE                       |                | _            |          | GFCI        | 20/1             | 39         | <u>  ^                                   </u> | 40         | 30/2             |            |        |               | SPARE                       | Roof Power & FA                                                                                                                         |
| FIRE NAC                    |                |              | _        | *           | 20/1             | 41         | <u> </u>                                      | 42         | <u> </u>         |            |        | -             | J –                         | I KOOLL OWEL & LA                                                                                                                       |
| REMARKS                     | 4320           | 4320         | 4320     | SUB-        | -TOTAL           | "B"        | <u>200A</u> BUS                               | SUE        | B-TOTAL "A"      | 5040       | 5040   | 5040          | MIN. <u>18,000</u> A.I.C.   | Panel Schedules                                                                                                                         |
| * DENOTES RED CIRCUIT E     | BREAKER        | LOCKIN       | IG DEVIC | DE .        |                  |            | _200A_ LUGS                                   | SUE        | B-TOTAL "B"      | 4320       | 4320   | 4320          | SYM. AMPERES                | Pariel Schedules                                                                                                                        |
| FEED THRU LUGS              |                |              |          |             |                  |            |                                               |            |                  |            |        |               | į , , l                     |                                                                                                                                         |
| GFCI — GROUND FAULT IN      | TERRUP'        | TER CIRC     | CUIT BR  | EAKEF       | ?                |            | <u>200A</u> S/N                               |            | AND TOTAL        | 9360       | 9360   | 9360          |                             | '                                                                                                                                       |
| _                           |                |              |          |             |                  |            | BOTT FEED                                     | AMF        | PS / PHASE       | 78         | 78     | 78            | LUGS/NEUT. (1) - #2/0       | SHEET NUMBER                                                                                                                            |

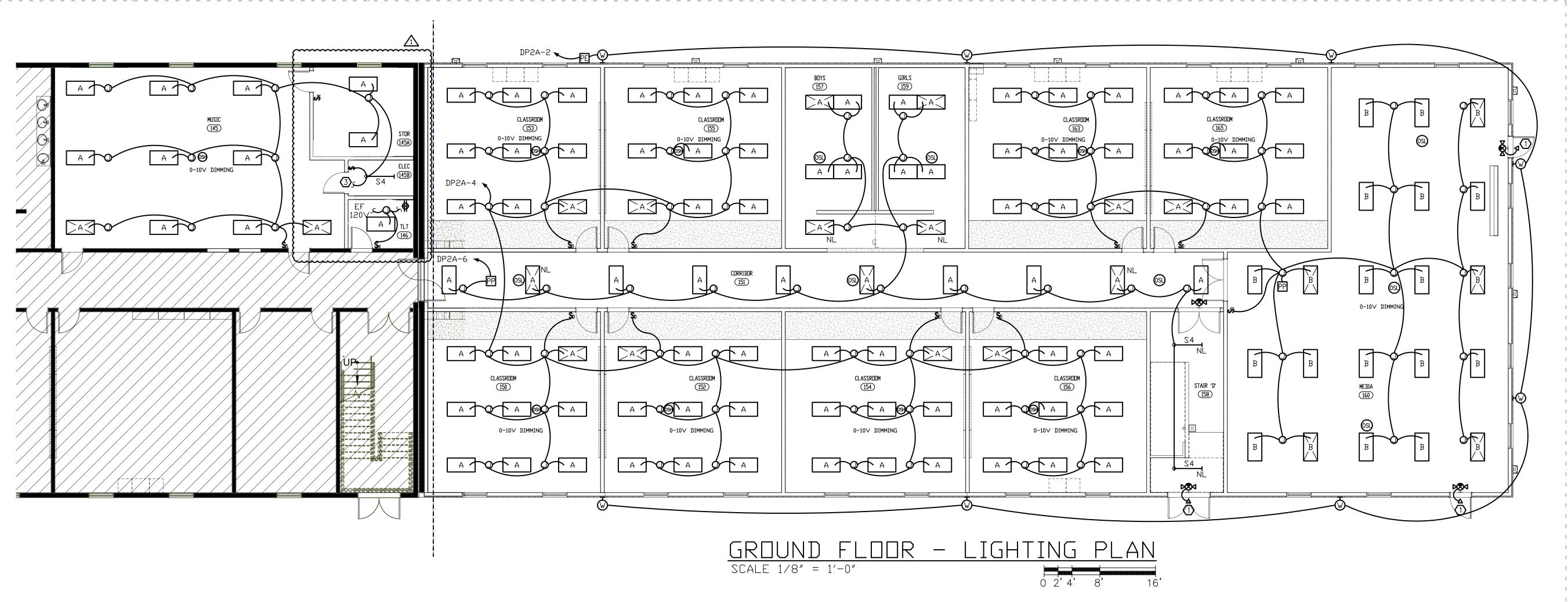
## Carolina Charter Academy Exp. 8529 Highway 55 Angier, North Carolina 27501

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



| 1         | 100% Construction Documents | 2/26/2021 |
|-----------|-----------------------------|-----------|
| <u>^1</u> | INSPECTION REVIEW           | 3/17/2021 |
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| XX RATI                                                                                                                                                                                                                                                                    | 0                                  |
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| PROJECT NO.                                                                                                                                                                                                                                                                | 20408.000                          |
| Electrical -                                                                                                                                                                                                                                                               |                                    |
| Roof Power & FA                                                                                                                                                                                                                                                            | Plan;                              |



#### 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.

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

### KEYED PLAN NOTES -

- 1. FIXTURES SHOWN WITH CROSS HAIRS TO BE WIRED AS NITE LIGHTS; CONNECTED TO UNSWITCHED LIGHTING LEG SERVING SAME AREA; TYPICAL OF ALL

  2. ALL EXTERIOR LIGHTS CONNECTED TO PE CELL; PE CELL TO BE LED RATED AND
- MADE FOR LOAD; COORDINATE INSTALLATION.

  3. CONNECT TO EXISTING LIGHTING CIRCUITRY; COORDINATE WITH EXISTING CONDITIONS.

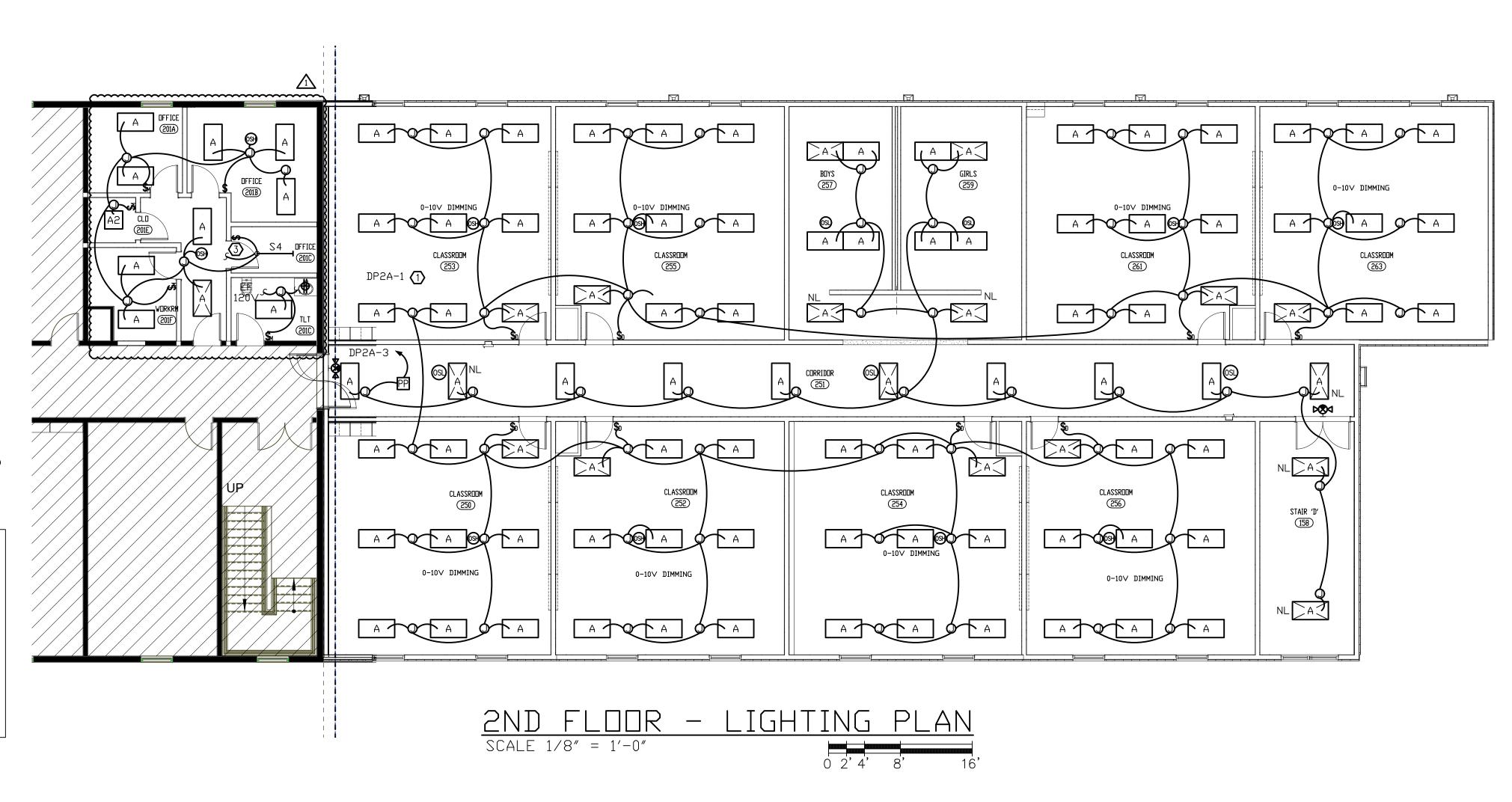
#### EMERGENCY LIGHTING LEGEND

LIGHT FIXTURES WITH 'CROSSHAIRS'
TO BE PROVIDED WITH EMERGENCY
BATTERY BACK-UP. SEE NOTES
FOR SPECIFIC DETAILS.

#### EMERGENCY LIGHTING NOTES

- 1. EMERGENCY BATTERIES IN DESIGNATED FIXTURES ARE TO BE WIRED SUCH THAT FIXTURES ARE CONTROLLED BY LOCAL SWITCHING AND OPERATE BY BATTERY DURING POWER OUTAGE UNLESS NOTED OTHERWISE. ALL BATTERIES TO HAVE SELF-DIAGNOSTICS. ALL FIXTURES TO BE PROVIDED WITH REMOTE TEST SWITCH AND SELF-DIAGNOSTICS INDICATING LIGHT IN FIXTURE.
- INDICATING LIGHT IN FIXTURE.

  2. BATTERIES SERVING LED LAMPS ARE TO BE CONNECTED TO TWO ARRAYS (IF AVAILABLE)
  BATTERIES SHALL HAVE 1100-1400 LUMEN DUTPUT AND BE FACTORY INSTALLED WITH
  5 YEAR WARRANTY; MINIMUM 90 MINUTES OF BATTERY BACKUP PER CODE



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

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OR OBORNALING
SEAL NC
PHONE 348 722—3311

OR OBORNALING
SEAL NC
S

**KEY PLAN** 

2/12/2021

SEAL | DATE

| 1       | 100% Construction Documents | 2/26/2021 |
|---------|-----------------------------|-----------|
| <u></u> | INSPECTION REVIEW COMMENTS  | 04/8/2021 |
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PROJECT NO.

20408.000

Electrical 1st and 2nd Floor
Lighting Plans; Notes

SHEET NUMB