

PROJECT TEAM

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△ Date Description

01/30/24 FOR CONSTRUCTION
 1 05/8/24 PERMIT REVIEW COMMENTS
 2 10/14/24 RTAP NO. 1

Project Name



making church come **alive**658 GRAHAM ROAD
SANFORD NC 27311

Client

3D COMMUNITY CHURCH

Project Number

23024.00

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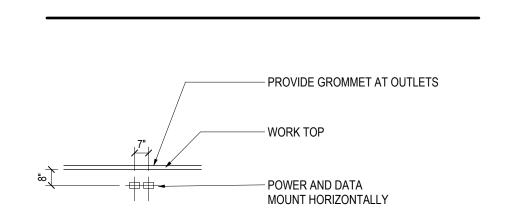
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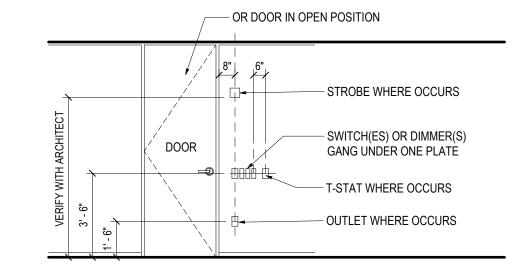
3D COMMUNITY CHURCH

658 GRAHAM ROAD SANFORD NC 27311



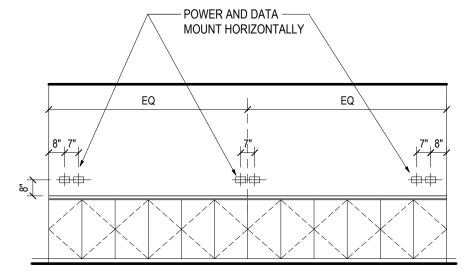
10/14/24 RTAP NO. 1 01/30/24 FOR CONSTRUCTION





LOCATIONS AT DOOR JAMBS SWITCH AND THERMOSTATS

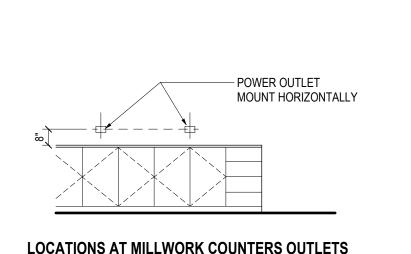
LOCATIONS AT WORK SURFACES OUTLETS

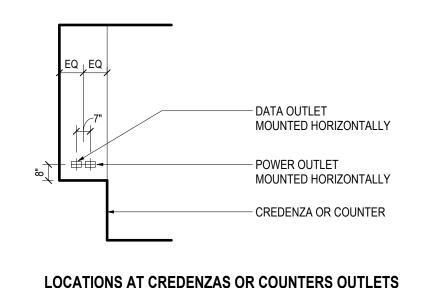


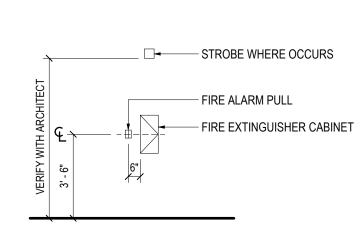
STROBE WHERE OCCURS SWITCH(ES) OR DIMMER(S) GANG UNDER ONE PLATE - T-STAT WHERE OCCURS OUTLET WHERE OCCURS

LOCATIONS AT MILLWORK COUNTERS OUTLETS

LOCATIONS AT CORNERS

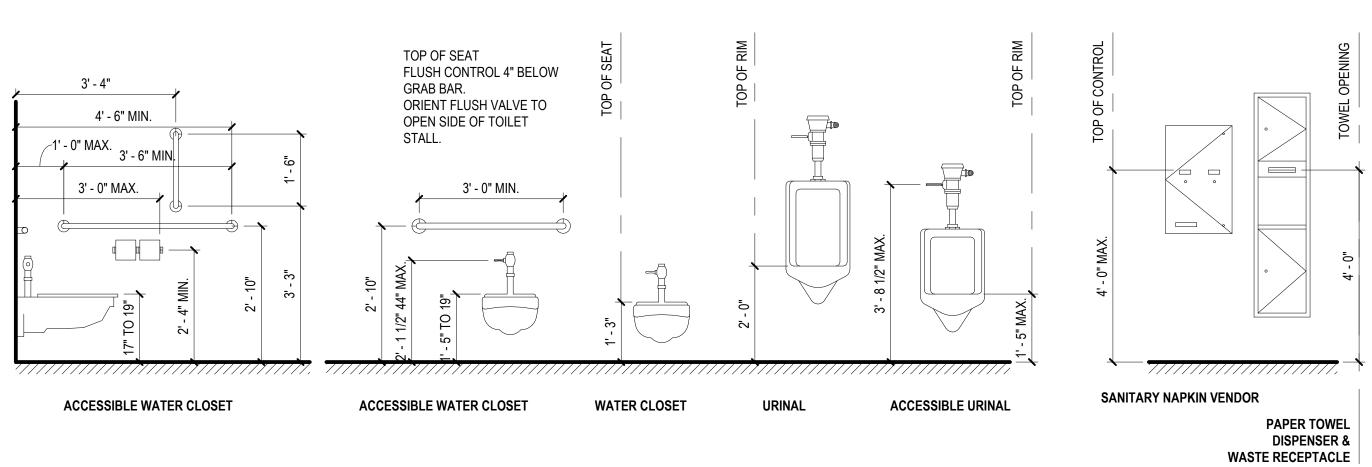


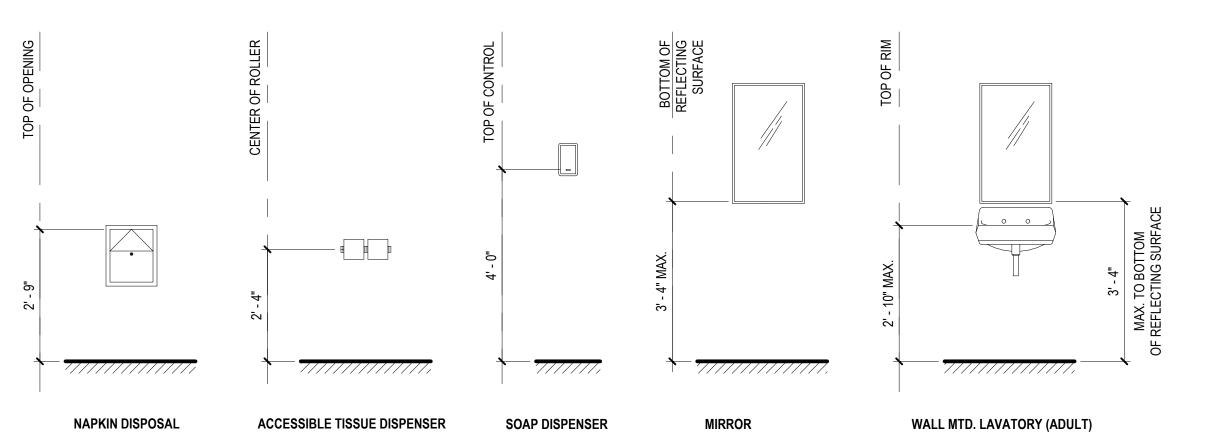




LOCATIONS AT FIRE EXTINGUISHER CABINET STROBES AND FIRE ALARM PULLS

MOUNTING LOCATIONS





GENERAL NOTES

1. COMPLY WITH CODES, LAWS, ORDINANCES, RULES, AND REGULATIONS OF PUBLIC AUTHORITIES GOVERNING THE WORK. 2. OBTAIN AND PAY FOR PERMITS AND INSPECTIONS REQUIRED BY PUBLIC AUTHORITIES GOVERNING THE WORK.

3. REVIEW DOCUMENTS, VERIFY DIMENSIONS AND FIELD CONDITIONS AND CONFIRM THAT WORK IS BUILDABLE AS SHOWN. REPORT ANY CONFLICTS OR OMISSIONS TO THE ARCHITECT FOR CLARIFICATION PRIOR TO PERFORMING ANY WORK IN QUESTION. 4. SUBMIT REQUESTS FOR SUBSTITUTIONS, REVISIONS, OR CHANGES TO ARCHITECT FOR REVIEW PRIOR TO PURCHASE, FABRICATION OR INSTALLATION.

5. COORDINATE WORK WITH THE OWNER, INCLUDING SCHEDULING TIME AND LOCATIONS FOR DELIVERIES, BUILDING ACCESS, USE OF BUILDING SERVICES AND FACILITIES, AND USE OF ELEVATORS. MINIMIZE DISTURBANCE OF BUILDING FUNCTIONS AND OCCUPANTS. 6. OWNER WILL PROVIDE WORK NOTED "BY OTHERS" OR "NIC" UNDER SEPARATE CONTRACT. INCLUDE SCHEDULE REQUIREMENTS IN CONSTRUCTION PROGRESS SCHEDULE AND

COORDINATE TO ASSURE ORDERLY SEQUENCE OF INSTALLATION 7. COORDINATE TELECOMMUNICATIONS, DATA AND SECURITY SYSTEM INSTALLATIONS. 8. MAINTAIN EXITS, EXIT LIGHTING, FIRE PROTECTIVE DEVICES, AND ALARMS IN CONFORMANCE WITH CODES AND ORDINANCES.

13. COORDINATE AND PROVIDE BACKING FOR MILLWORK AND ITEMS ATTACHED OR MOUNTED TO WALLS OR CEILINGS.

15. UNDERCUT DOORS TO CLEAR TOP OF FLOOR FINISHES BY 1/4 INCH, UNLESS OTHERWISE NOTED

9. PROTECT AREA OF WORK AND ADJACENT AREAS FROM DAMAGE. 10. MAINTAIN WORK AREAS SECURE AND LOCKABLE DURING CONSTRUCTION. COORDINATE WITH TENANT AND LANDLORD TO ENSURE SECURITY.

14. WHERE EXISTING ACCESS PANELS CONFLICT WITH CONSTRUCTION, RELOCATE PANELS TO ALIGN WITH AND FIT WITHIN NEW CONSTRUCTION

11. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN. IN CASE OF CONFLICT, CONSULT THE ARCHITECT. 12. PARTITIONS ARE DIMENSIONED FROM FINISH FACE TO FINISH FACE, UNLESS OTHERWISE NOTED. MAINTAIN DIMENSIONS MARKED "CLEAR". ALLOW FOR THICKNESS OF

FIRE DEPARTMENT NOTES

1. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 4-A WITHIN 75 FOOT TRAVEL DISTANCE TO ALL PORTIONS OF THE BUILDING ON EACH FLOOR, AND ADDITIONAL EXTINGUISHERS AS REQUIRED BY FIRE DEPARTMENT FIELD INSPECTOR OR BUILDING DEPARTMENT INSPECTOR. 2. PROVIDE EXIT SIGN WITH 6" LETTERS OVER REQUIRED EXITS, WHERE SHOWN ON DRAWINGS, AND ADDITIONAL SIGNS AS REQUIRED BY BUILDING DEPARTMENT INSPECTOR OR FIRE DEPARTMENT FIELD INSPECTOR. CONNECT EXIT SIGNS TO EMERGENCY POWER CIRCUITS. COMPLY WITH BUILDING CODES. 3. PROVIDE EMERGENCY LIGHTING OF ONE FOOT-CANDLE AT FLOOR LEVEL. COMPLY WITH BUILDING CODES.

4. MAINTAIN AISLES AT LEAST 44" WIDE AT PUBLIC AREAS. 5. EVERY EXIT DOOR SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT. SPECIAL LOCKING DEVICES SHALL BE OF AN APPROVED TYPE. ALL NEW DOORS SHALL HAVE APPROVED LEVER HANDLES. 6. DOORS OPENING INTO REQUIRED 1-HOUR, FIRE-RESISTIVE CORRIDORS SHALL BE PROTECTED WITH A SMOKE OR DRAFT STOP ASSEMBLY HAVING A 20-MINUTE RATING AND SHALL

7. 20-MINUTE DOOR JAMBS TO BE TIGHT-FITTING, SMOKE AND DRAFT CONTROLLED. 8. EXIT DOORS SHALL SWING IN THE DIRECTION OF TRAVEL WHEN SERVING 50 OR MORE PERSONS AND IN ANY HAZARDOUS AREA.

9. INTERIOR WALL AND CEILING FINISHES FOR EXIT CORRIDOR SHALL NOT EXCEED AN END POINT FLAME SPREAD RATING: A. CLASS I, FLAME SPREAD 0-25, SMOKE DENSITY 150, FOR MATERIALS INSTALLED IN VERTICAL EXITS.

COMPLETE DESCRIPTION OF SEQUENCE OF OPERATION, AND OBTAIN APPROVAL PRIOR TO INSTALLATION.

B. CLASS II, FLAME \SPREAD 26-75, SMOKE DENSITY 300, FOR MATERIALS INSTALLED IN HORIZONTAL EXITS. C. CLASS III, FLAME SPREAD 76-200, SMOKE DENSITY 450, FOR MATERIALS INSTALLED IN ANY OTHER LOCATION.

10. DECORATIONS (CURTAINS, DRAPES, SHADES, HANGINGS, ETC.) SHALL BE NON-COMBUSTIBLE OR BE FLAMEPROOFED IN AN APPROVED MANNER. 11. PROVIDE FIRE DAMPERS OR DOORS WHERE AIR DUCTS PENETRATE FIRE-RATED WALLS OR CEILINGS.

12. STORAGE, DISPENSING OR USE OF ANY FLAMMABLE OR COMBUSTIBLE LIQUIDS, FLAMMABLE GAS AND HAZARDOUS SUBSTANCES SHALL COMPLY WITH FIRE CODE REGULATIONS. 13. WOOD BLOCKING SHALL BE FIRE TREATED IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS. 14. EXTEND OR MODIFY EXISTING FIRE/LIFE SAFETY SYSTEM AS REQUIRED TO PROVIDE AN APPROVED FIRE/LIFE SAFETY SYSTEM. SUBMIT PLANS TO FIRE DEPARTMENT WITH

15. LOCATE THE CENTER OF FIRE ALARM INITIATING DEVICES 48" ABOVE THE LEVEL OF THE FLOOR, WORKING PLATFORM, GROUND SURFACE OR SIDEWALK. 16. EMERGENCY WARNING SYSTEMS SHALL ACTIVATE A MEANS OF WARNING THE HEARING IMPAIRED. FLASHING VISUAL WARNING SHALL HAVE A FREQUENCY OF NOT MORE THAN 60 FLASHES PER MINUTE. 17. EXTEND OR MODIFY EXISTING AUTOMATIC FIRE EXTINGUISHING SYSTEM AS REQUIRED TO PROVIDE AN APPROVED AUTOMATIC FIRE EXTINGUISHING SYSTEM. SUBMIT PLANS TO

FIRE DEPARTMENT AND OBTAIN APPROVAL PRIOR TO INSTALLATION. 18. AUTOMATIC SPRINKLER SYSTEMS SHALL BE SUPERVISED BY AN APPROVED CENTRAL, PROPRIETARY OR REMOTE STATION SERVICE OR A LOCAL ALARM WHICH WILL GIVE AN AUDIBLE SIGNAL AT A CONSTANTLY ATTENDED LOCATION.

FINISH NOTES

BE SELF-CLOSING.

1. ENSURE SURFACES TO RECEIVE FINISHES ARE CLEAN, TRUE, AND FREE OF IRREGULARITIES. DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN 2. REPAIR EXISTING SURFACES TO REMAIN AS REQUIRED FOR APPLICATION OF NEW FINISHES.

3. PROVIDE STRAIGHT, FLUSH RESILIENT BASE AT CARPETED AREAS, AND COVED, TOP SET RESILIENT BASE AT RESILIENT FLOORING, UNLESS OTHERWISE NOTED.

POWER & COMMUNICATION NOTES

1. PRIOR TO CORING SLAB, REVIEW LOCATIONS WITH ARCHITECT AND COORDINATE LOCATIONS WITH OWNER. 2. COORDINATE INSTALLATION OF TELECOMMUNICATIONS, DATA AND SECURITY SYSTEMS AND AUDIOVISUAL DRAWINGS. 3. VERIFY EQUIPMENT SPECIFICATIONS, POWER AND INSTALLATION REQUIREMENTS WITH MANUFACTURER TO ENSURE PROPER FIT AND FUNCTION.

4. VERIFY MOUNTING REQUIREMENTS OF ELECTRICAL, TELEPHONE AND OTHER EQUIPMENT. 5. GANG ADJACENT LIGHT SWITCHES AND COVER WITH A SINGLE PLATE.

6. MOUNT STANDARD WALL OUTLETS, SWITCHES AND THERMOSTATS AT HEIGHTS REQUIRED BY TITLE 24 AND ADA GUIDELINES, UNLESS OTHERWISE NOTED. WHEN THERMOSTATS AND LIGHT SWITCH OCCUR TOGETHER, INSTALL BOTH ALIGNED HORIZONTALLY WITH CENTER LINE AT +3'-2" ABOVE FINISHED FLOOR. 7. INDICATED DIMENSIONS ARE TO THE CENTER LINE OF OUTLET OR SWITCH, OR CLUSTER OF OUTLETS OR SWITCHES, UNLESS OTHERWISE NOTED. 8. INSTALL OUTLETS ON OPPOSITE SIDES OF PARTITIONS IN SEPARATE STUD CAVITIES. DO NOT INSTALL BACK-TO-BACK.

9. PROVIDE MATCHING COVER PLATES, RECEPTACLES AND RELATED ITEMS. PROVIDE ONE-PIECE TYPE GANG COVER PLATES, UNLESS OTHERWISE NOTED. 10. IDENTIFY DEDICATED OR ISOLATED GROUND ELECTRICAL OUTLETS WITH A RED DOT

DISABLED ACCESS NOTES

1. IN BUILDINGS AND FACILITIES, FLOORS OF A GIVEN STORY SHALL BE A COMMON LEVEL THROUGHOUT, OR SHALL BE CONNECTED BY PEDESTRIAN RAMPS, PASSENGER ELEVATORS OR SPECIAL ACCESS LIFTS. 2. FLOOR SURFACES SHALL BE SLIP-RESISTANT.

3. EVERY CORRIDOR AND AISLE SERVING AN OCCUPANT LOAD OF 10 OR MORE SHALL BE NOT LESS THAN 44" IN WIDTH. 4. ABRUPT CHANGES IN LEVEL ALONG ANY ACCESSIBLE ROUTE SHALL NOT EXCEED 1/2" IN HEIGHT. LEVEL CHANGES NOT EXCEEDING 1/4" MAY BE VERTICAL. BEVEL OTHERS WITH A SLOPE NO GREATER THAN 1:2 5. LATCHING AND LOCKING DOORS THAT ARE HAND ACTIVATED AND WHICH ARE IN A PATH OF TRAVEL SHALL BE OPERABLE WITH A SINGLE EFFORT BY LEVER TYPE HARDWARE, PANIC BARS, PUSH-PULL ACTIVATING BARS, OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING THE ABILITY TO GRASP THE OPENING HARDWARE. 6. CENTER HAND ACTIVATED DOOR OPENING HARDWARE BETWEEN 30" AND 44" ABOVE THE FLOOR.

7. MAXIMUM PULL OR PUSH EFFORT TO OPERATE DOORS SHALL NOT EXCEED 8.5 POUNDS FOR EXTERIOR DOORS AND 5 POUNDS FOR INTERIOR DOORS, MEASURED AT RIGHT ANGLES TO HINGED DOORS AND AT CENTER PLANE OF SLIDING OR FOLDING DOORS. CORRESPONDING DEVICES OR AUTOMATIC DOOR OPERATORS MAY BE UTILIZED TO MEET THE ABOVE STANDARDS. MAXIMUM EFFORT TO OPERATE REQUIRED FIRE DOORS MAY BE INCREASED NOT TO EXCEED 15 POUNDS. 8. THE BOTTOM 10" OF ALL DOORS (EXCEPT SLIDING AND AUTOMATIC) SHALL HAVE A SMOOTH UNINTERRUPTED SURFACE TO ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION.PROVIDE A 10" HIGH SMOOTH PANEL ON THE PUSH SIDE OF NARROW FRAME DOORS. 9. EVERY REQUIRED ENTRANCE OR PASSAGE DOORWAY SHALL BE NOT LESS THAN 3'-0" IN WIDTH AND NOT LESS THAN 6'-8" IN HEIGHT. DOORS SHALL BE CAPABLE OF OPENING AT LEAST

90 DEGREES AND SHALL BE SO MOUNTED THAT THE CLEAR WIDTH OF THE DOORWAY IS NOT LESS THAN 32". 10. WHERE A PAIR OF DOORS IS UTILIZED, AT LEAST ONE OF THE DOORS SHALL PROVIDE A CLEAR, UNOBSTRUCTED OPENING WIDTH OF 32" WITH THE LEAF POSITIONED AT AN ANGLE OF 90 11. IDENTIFY ACCESSIBLE ENTRANCES WITH AT LEAST ONE STANDARD SIGN AND WITH ADDITIONAL DIRECTIONAL SIGNS, AS REQUIRED, VISIBLE FROM APPROACHING PEDESTRIAN WAYS. 12. THE FLOOR OR LANDING ON EACH SIDE OF AN ENTRANCE OR PASSAGE DOOR SHALL BE LEVEL AND CLEAR. THE LEVEL AND CLEAR AREA \ SHALL HAVE A LENGTH IN THE DIRECTION OF DOOR SWING OF AT LEAST 60" AND THE LENGTH OPPOSITE THE DIRECTION OF DOOR SWING OF 44" AS MEASURED

AT RIGHT ANGLES TO THE PLANE OF THE DOOR IN ITS CLOSED POSITION. 13. FLOORS OR LANDINGS SHALL BE NOT MORE THAN 1/2" LOWER THAN THE THRESHOLD OF THE BE BEVELED WITH A SLOPE NO GREATER THAN 1:2. 14. TO ALERT THE VISUALLY IMPAIRED, MARK THE UPPER APPROACH AND THE LOWER TREAD OF EACH INTERIOR STAIR WITH A STRIP OF CLEARLY CONTRASTING COLOR AT LEAST 2" WIDE, PLACED PARALLEL TO AND NOT MORE THAN 1" FROM THE NOSE OF THE STEP OR LANDING. THE STRIP SHALL BE OF A MATERIAL THAT IS AT LEAST AS SLIP RESISTANT AS THE OTHER

TREADS OF THE STAIR. 15. CENTER ELECTRICAL RECEPTACLE OUTLETS NOT LESS THAN 15" ABOVE THE FLOOR OR WORKING PLATFORM. 16. SANITARY FACILITIES LOCATED ON AN ACCESSIBLE FLOOR OF A BUILDING SHALL BE ACCESSIBLE TO THE PHYSICALLY HANDICAPPED.

17. ENTRY TO SANITARY FACILITIES: A. 44" CLEAR AISLES OR CORRIDORS WHERE OCCUPANT LOAD IS 10 OR MORE.

B. DOORWAYS TO HAVE A 32" CLEAR OPENING. C. ON APPROACH SIDE, PROVIDE A 60" CLEAR LEVEL SPACE WHEN DOOR SWINGS TOWARD APPROACH AND 44" SPACE WHEN DOOR SWINGS AWAY FROM APPROACH.

18. TOILET ROOM ACCESSORIES A. MOUNT BOTTOM EDGE OF MIRRORS NO HIGHER THAN 40" FROM THE FLOOR. B. MOUNT TOILET TISSUE DISPENSERS WITHIN 12" FROM THE FRONT EDGE OF THE TOILET SEAT.

C. MOUNT DISPENSING AND DISPOSAL FIXTURES (TOWEL, SANITARY NAPKINS, WASTE, COIN SLOTS, ETC.) WITH OPERATING PARTS NO HIGHER THAN 40" FROM THE FLOOR.

19. SINGLE ACCOMMODATION TOILET FACILITY A. WATER CLOSET TO HAVE A 28" CLEARANCE FROM A FIXTURE AND 32" FROM A WALL.

B. MINIMUM CLEAR SPACE IN FRONT OF WATER CLOSET TO BE 48". C. A SPACE 36" X 48" IS PERMITTED IN FRONT OF EXISTING WATER CLOSET ACCESSIBLE TO THE HANDICAPPED. 20. THE HEIGHT OF THE WATER CLOSET

(TOP OF SEAT) SHALL BE BETWEEN 17" AND 19" 21. MOUNT FLUSH VALVE CONTROL NO MORE THAN 44" ABOVE THE FLOOR, ON THE SIDE

OF THE TOILET WITH THE GREATEST SEPARATION FROM ADJACENT WALL OR OTHE SURFACE. 22. PROVIDE GRAB BARS ON EACH SIDE, OR ONE SIDE AND BACK OF WATER CLOSET.

A. GRAB BARS TO BE 33" ABOVE AND PARALLEL TO THE FLOOR. B. SIDE BARS TO BE 42" LONG AND PROJECT 24" IN FRONT OF WATER CLOSET STOOL. GRAB BAR AT BACK TO BE 36" LONG. C. DIAMETER OF GRAB BARS TO BE 1-1/4" TO 1-1/2".

D. PROVIDE 1-1/2" CLEARANCE BETWEEN GRAB BARS AND WALL. E. GRAB BARS (INCLUDING CONNECTORS, FASTENERS, SUPPORT BACKING, ETC.) SHALL SUPPORT A 250 POUND LOAD.

F. GRAB BARS SHALL NOT ROTATE WITHIN THEIR FITTINGS.

G. GRAB BARS AND ANY ADJACENT SURFACE SHALL BE FREE OF SHARP OR ABRASIVE ELEMENTS. H. EDGES SHALL HAVE A MINIMUM RADIUS OF 1/8".

23. PROVIDE A CLEAR FLOOR SPACE 30" X 48" IN FRONT OF LAVATORY TO PERMIT A FORWARD APPROACH. 24. MOUNT LAVATORIES WITH A MINIMUM CLEARANCE OF 29" FROM THE FLOOR TO THE BOTTOM OF THE APRON. PROVIDE KNEE CLEARANCE UNDER THE FRONT LIP EXTENDING A MINIMUM OF 30" IN WIDTH WITH 8" MINIMUM WIDTH, AND SHALL BE A MINIMUM OF 9" HIGH FROM THE FLOOR A MINIMUM OF 17" DEEP FROM THE FRONT OF THE LAVATORY. 25. FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE

FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 POUNDS. LEVER OPERATED, PUSH TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. SELF CLOSING ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS.

26. INSULATE OR OTHERWISE COVER HOT WATER AND DRAIN PIPES UNDER LAVATORIES. 27. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES

DDAWING INDEV

M01.01 FLOOR PLAN - HVAC

M06.01 SCHEDULES - HVAC

P01.01 FLOOR PLAN - PLUMBING

P07.01 DETAILS - PLUMBING

S001 NOTES - STRUCTURAL

S101 FRAMING AND STAGE PLAN

S100 FOUNDATION PLAN

S401 SECTIONS S402 SECTION

STRUCTURAL

P04.01 ENLARGED PLANS - PLUMBING

P00.01 NOTES & ABBREVIATIONS - PLUMBING

M07.01 DETAILS - HVAC

M07.02 DETAILS - HVAC

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# ARCHITECT	SHEET NAME	#	DATE	
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A00.00	DRAWING INDEX, GENERAL NOTES AND MOUNTING DIAGRAMS	1	05/8/24	PERMIT REVIEW COMMENTS
A00.02	ACCESSIBILITY REFERENCE DETAILS		00/0/24	T ERWITT NEVIEW GOWINERTO
A00.03	APPENDIX B	1	05/8/24	PERMIT REVIEW COMMENTS
A00.04	LIFE SAFETY PLAN	2	10/14/24	RTAP NO. 1
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A01.01	3D PLAN SECTION			
A01.02	EXTERIOR RENDERINGS			
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A04.11	WALL SECTIONS	1	05/8/24	PERMIT REVIEW COMMENTS
A04.20	INTERIOR ELEVATIONS			
A04.21	INTERIOR ELEVATIONS			
A04.22	INTERIOR ELEVATIONS			
A04.23	INTERIOR ELEVATIONS			
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A05.02	INTERIOR VIEWS			
A05.03	INTERIOR VIEWS			
A05.04 A05.10	INTERIOR VIEWS MILLWORK DETAILS			
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A06.10	SECTION DETAILS	<u>'</u>	00/0/24	T ENWIT REVIEW COMMENTO
A06.11	SECTION DETAILS	2	10/14/24	RTAP NO. 1
A06.20	SECTION DETAILS	2	10/14/24	RTAP NO. 1
CIVIL				
1	COVER SHEET			
2	EXISTING CONDITION			
3	OVERALL SITE LAYOUT PLAN			
4	INITIAL EROSION AND SED. CONTROL PLAN			
5	INTERMEDIATE REO. AND SED. CONTROL PLAN			
6	FINAL EROSION AND SED. CONTROL PLAN			
8	SEDIMENT AND EROSION CONTROL NARRATIVE NVG01 GROUND STABILIZATION AND MATERIALS HANDLING			
9	NCG01 SEFL-INSPECTION, RECORDKEEPING AND REPORTING			
10	GRADING AND DRAINAGE PLAN			
11	WATER LINE PLAN AND PROFILE			
12	WATER LINE DETAILS			
13	LANDSCAPE PLAN			
D1	SWALE DRAINAGE MAP			
ELECTRICA	L			
E00.01	GENERAL NOTES, RISER DIAGRAM & ABBREVIATIONS - ELECTRICAL	1	4/22/24	PERMIT REVISION
E00.02	SPECIFICATIONS - ELECTRICAL			
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E00.04	SCHEDULES & DIAGRAMS - ELECTRICAL	2	5/3/24	PERMIT REVISION
E01.01	FLOOR PLAN - LIGHTING	1	4/24/24	PERMIT REVISION
E02.01	FLOOR PLAN - POWER	1	4/24/24	PERMIT REVISION
E03.01	FLOOR PLAN - SYSTEMS	2	5/3/24	PERMIT REVISION
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M00.01 M00.02	NOTES & ABBREVIATIONS - HVAC SPECIFICATIONS - HVAC			
M01.02	FLOOR PLAN - HVAC	1	5/3/24	PERMIT REVISION

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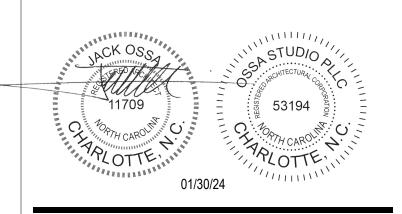
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Mechanical, Electrical, Plumbing & Fire Protection **ENGITECTURE** www.engitecture.com 704.287.2193

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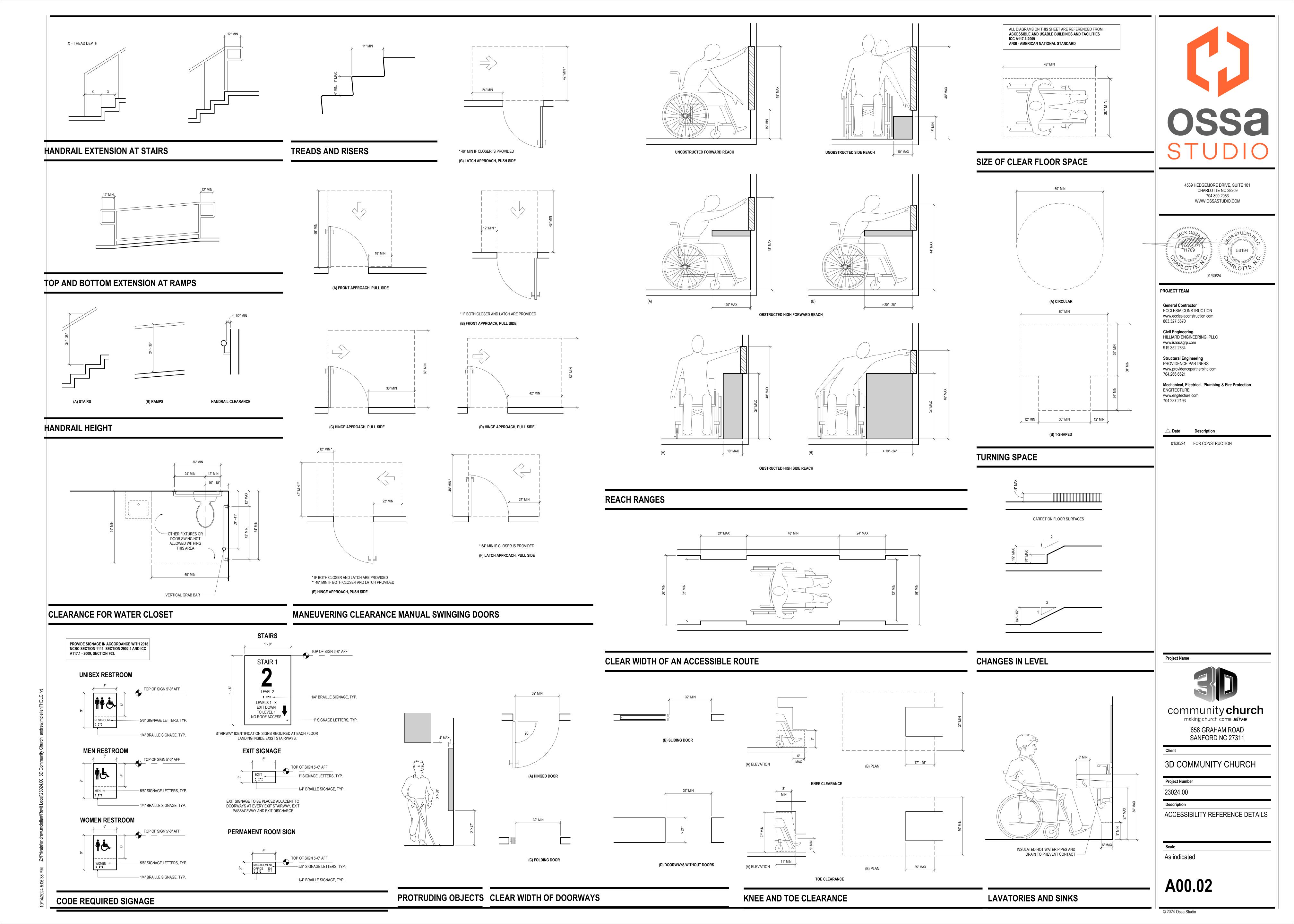
3D COMMUNITY CHURCH

Project Number 23024.00

DRAWING INDEX, GENERAL NOTES AND MOUNTING DIAGRAMS

As indicated

A00.01



N. PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)

			WATER	CLOSETS (U	RINALS)		LAVATORIES		SHOWERS	DRINKING
			MALE	FEMALE	UNISEX	MALE	FEMALE	UNISEX	/ TUBS	FOUNTAINS
		EXISTING								
		NEW	2 (3)	5	2	2	3	2	0	2
		REQUIRED	2	3	1	1	1	1		1

O. SPECIAL APPROVALS

LOCAL JURISDICTION, DEPARTMENT OF INSURANCE, OSC, DPI, DHHS, ETC.

P. ENERGY SUMMARY

ENERGY REQUIREMENTS:

THE FOLLOWING DATA SHALL BE CONSIDERED MINIMUM AND ANY SPECIAL ATTRIBUTE REQUIRED TO MEET THE ENERGY CODE SHALL ALSO BE PROVIDED. EACH DESIGNER SHALL FURNISH THE REQUIRED PORTIONS OF THE PROJECT INFORMATION FOR THE PLAN DATA SHEET. IF PERFORMANCE METHOD, STATE THE ANNUAL ENERGY COST FOR THE STANDARD REFERENCE DESIGN VS ANNUAL ENERGY COST FOR THE PROPOSED DESIGN.

EXISTING BUILDING ENVELOPE COMPLIES WITH CODE: \(\subseteq \text{NO} \subseteq \text{YES (THE REMAINDER OF THIS SECTION IS NOT APPLICABLE)} **EXEMPT BUILDING:** \(\subseteq \text{NO} \subseteq \text{YES} \) CODE OR STATUTORY REFERENCE: \(\subseteq \text{L} \)

CLIMATE ZONE: ☐ 3A ■ 4A ☐ 5A METHOD OF COMPLIANCE: ENERGY CODE: ☐ PERFORMANCE ☐ PRESCRIPTIVE

ASHRAE 90.1: ☐ PERFORMANCE ☐ PRESCRIPTIVE

THERMAL ENVELOPE (PRESCRIPTIVE METHOD ONLY)

ROOF/CEILING ASSEMBLY (EACH ASSEMBLY) METAL BUILDING ROOF DESCRIPTION OF ASSEMBLY:

U-VALUE OF TOTAL ASSEMBLY: R-19 + R-11 LS; R-VALUE OF INSULATION:

SKYLIGHTS IN EACH ASSEMBLY: U-VALUE OF SKYLIGHT:

TOTAL S.F. SKYLIGHTS IN EACH ASSEMBLY: ____ EXTERIOR WALLS (EACH ASSEMBLY)

METAL STUDS WITH RIGID INSULATION / EIFS DESCRIPTION OF ASSEMBLY: __U-0.064 U-VALUE OF TOTAL ASSEMBLY: R-13 + R-7.5ci R-VALUE OF INSULATION:

OPENINGS (WINDOWS OR DOORS WITH GLAZING) 0.45 (WINDOWS) 0.77 (DOORS) U-VALUE OF ASSEMBLY: 0.25 0.33 0.40 SOLAR HEAT GAIN COEFFICIENT: <0.25 <0.5 >0.5 PROJECTION FACTOR:

DOOR R-VALUES: WALLS BELOW GRADE (EACH ASSEMBLY) DESCRIPTION OF ASSEMBLY: U-VALUE OF TOTAL ASSEMBLY:

R-VALUE OF INSULATION: FLOORS OVER UNCONDITIONED SPACE (EACH ASSEMBLY)

DESCRIPTION OF ASSEMBLY:

U-VALUE OF TOTAL ASSEMBLY: R-VALUE OF INSULATION:

FLOORS SLAB ON GRADE

CONCRETE SLAB ON GRADE DESCRIPTION OF ASSEMBLY: F-0.520 U-VALUE OF TOTAL ASSEMBLY: R-15 for 24" R-VALUE OF INSULATION:

HORIZONTAL/VERTICAL REQUIREMENT: _____ SLAB HEATED:

Q. STRUCTURAL, MECHANICAL, & ELECTRICAL DESIGN

REFER TO THE STRUCTURAL, MECHANICAL, & ELECTRICAL SHEETS

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE ¹
BUILDING HEIGHT IN FEET (TABLE 504.3) ²	55'	30'	
BUILDING HEIGHT IN STORIES (TABLE 504.4) ³	2	1	

¹ Provide code reference if the "shown on plans" quantity is not based on table 504.3 or 504.4. ²The maximum height of air traffic control towers must comply with Table 412.3.1.

³The maximum height of open parking garages must comply with Table 406.5.4.

H. FIRE PROTECTION REQUIREMENTS

		RAT	ING				
	SEPARATION DISTANCE	REQUIRED	PROVIDED W/ TEDUCTION	DETAIL#& SHEET#	DESIGN#FOR ASSEMBLY	DESIGN#FOR PENETRATION	DESIGN#FOR JOINTS
STRUCTURE/COLUMNS/GIRDERS/TRUSSES		0					
BEARING WALLS							
EXTERIOR							
NORTH		N/A					
EAST		N/A					
SOUTH		N/A					
WEST		N/A					
INTERIOR		N/A					
NON-BEARING WALLS							
EXTERIOR							
NORTH	30'	0	0				
EAST	30'	0	0				
SOUTH	30'	0	0				
WEST	30'	0	0				
INTERIOR		0	0				
FLOOR CONSTRUCTION/BEAMS/JOISTS		0	0				
FLOOR/CEILING ASSEMBLY		N/A					
COLUMNS SUPPORTING FLOORS		N/A					
ROOF CONSTRUCTION/BEAMS/JOISTS		0	0				
ROOF/CEILING ASSEMBLY		0	0				
COLUMNS SUPPORTING ROOF		0	0				
SHAFT ENCLOSURES - EXIT		N/A				^	
SHAFT ENCLOSURES - OTHER		N/A				<u>/1\</u>	
CORRIDOR SEPARATION		1 HR	1 HR	A00.07	UL U419		
OCCUPANCY/FIRE BARRIER SEPARATION		2 HR	2 HR	A00.07	UL U419		
PARTY/FIRE WALL SEPARATION		N/A					
SMOKE BARRIER SEPARATION		N/A					
SMOKE PARTITION		N/A					
TENANT/DWELLING UNIT/SLEEPING UNIT SEPA	ARATION	N/A					
1 Indicate section number permitting reduction		N/A					

¹ Indicate section number permitting reduction.

SOUTH > 30'

WEST > 30'

PERCENTAGE OF WALL OPENINGS

_	RATION DISTANCE ROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
NORTH	> 30'	UP, NS	NO LIMIT	
EAST	> 30'	UP, NS	NO LIMIT	

NO LIMIT

NO LIMIT

J. LIFE SAFETY SYSTEM REQUIREMENTS

EMERGENCY LIGHTING	\square NO	■ YES	
EXIT SIGNS	\square NO	YES	
FIRE ALARM	\square NO	YES	
SMOKE DETECTION SYSTEMS:	\square NO	YES	☐ PARTIAL
CARBON MONOXIDE DETECTION:	NO	☐ YES	

K. LIFE SAFETY PLAN REQUIREMENTS

- FIRE AND/OR SMOKE RATED WALL LOCATIONS (CHAPTER 7)
- ☐ ASSUMED AND REAL PROPERTY LINE LOCATIONS (IF NOT ON THE SITE PLAN) ☐ EXTERIOR WALL OPENING AREA WITH RESPECT TO DISTANCE TO ASSUMED PROPERTY LINES (705.8)
- OCCUPANCY USE FOR EACH AREA AS IT RELATES TO OCCUPANT LOAD CALCULATION (TABLE 1004.1.2)
- OCCUPANT LOADS FOR EACH AREA
- EXIT SIGN LOCATIONS (1013) **EXIT ACCESS TRAVEL DISTANCES (1017)**
- COMMON PATH OF TRAVEL DISTANCES (TABLES 1006.2.1 & 1006.3.2(1))
- ☐ DEAD END LENGTHS (1020.4)
- CLEAR EXIT WIDTHS FOR EACH EXIT DOOR MAXIMUM CALCULATED OCCUPANT LOAD CAPACITY EACH EXIT DOOR CAN ACCOMMODATE BASED ON EGRESS WIDTH (1005.3)
- ACTUAL OCCUPANT LOAD FOR EACH EXIT DOOR
- ☐ A SEPARATE SCHEMATIC PLAN INDICATING WHERE FIRE RATED FLOOR/CEILING AND/OR ROOF STRUCTURE IS PROVIDED FOR PURPOSES OF OCCUPANCY SEPARATION
- LOCATION OF DOORS WITH PANIC HARDWARE (1010.1.10)
- ☐ LOCATION OF DOORS WITH DELAYED EGRESS LOCKS AND THE AMOUNT OF DELAY (1010.1.9.7) ☐ LOCATION OF DOORS WITH ELECTROMAGNETIC EGRESS LOCKS (1010.1.9.9)
- ☐ LOCATION OF DOORS EQUIPPED WITH HOLD-OPEN DEVICES
- ☐ LOCATION OF EMERGENCY ESCAPE WINDOWS (1030)
- ☐ THE SQUARE FOOTAGE OF EACH FIRE AREA (202)
- ☐ THE SQUARE FOOTAGE OF EACH SMOKE COMPARTMENT FOR OCCUPANCY CLASSIFICATION I-2 (407.5) ☐ NOTE ANY CODE EXCEPTIONS OR TABLE NOTES THAT MAY HAVE BEEN UTILIZED REGARDING THE ITEMS ABOVE.

.. ACCESSIBLE DWELLING UNITS (SECTION 1107)

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

M. ACCESSIBLE PARKING (SECTION 1106)

	,					
	TOTAL # OF PARKING SPACES		# OF ACCE	TOTAL#		
LOT OR PARKING AREA	REQUIRED	PROVIDED	REGULAR	REGULAR VAN SPA		ACCESSIBLE
	REQUIRED	PROVIDED	WITH 5' AISLE	132' AISLE	8' AISLE	PROVIDED
	6	6	2		4	6
TOTAL						

2018 APPENDIX B **BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS**

EXCEPT 1 & 2-FAMILY DWELLINGS & TOWNHOUSES

A. PROJECT INFORMATION					
NAME OF PROJECT: 3D COMMUNITY CHUR	RCH				
ADDRESS: 658 GRAHAM ROAD SANFORD	NC 27311				
PROPOSED USE: CHURCH					
OWNER / AUTHORIZED AGENT: 3D COMM	UNITY CHURCH	CHARLES HICKMAN			
EMAIL: PASTORCHARLIE@3DCOMMUNITYC	HURCH.COM		PHONE: _	919.353.2060	
OWNED BY:	\square CITY	☐ COUNTY	\square STATE	PRIVATE	
CODE ENFORCEMENT JURISDICTION:	CITY	\square COUNTY	☐ STATE		

B. DESIGN PROFESSIONAL INFORMATION

B. DESIGN PROF	ESSIONAL INFORMATION				
DESIGNER	FIRM	NAME	LICENSE	PHONE	EMAIL
ARCHITECTURAL:	OSSA STUDIO	JACK OSSA	11709	704.890.2053	JACK@OSSASTUDIO.COM
CIVIL:	HILLIARD ENGINEERING	JARROD HILLIARD	35670	919.352.2834	JHILLIARD@HILLIARDENGINEERING.COM
ELECTRICAL:	ENGITECTURE	GREGORY WILEY	31600	704.287.2193	GREG.WILEY@ENGITECTURE.COM
FIRE ALARM:	ENGITECTURE	GREGORY WILEY	31600	704.287.2193	GREG.WILEY@ENGITECTURE.COM
PLUMBING:	ENGITECTURE	J. CHANTRY JOHNSON	44505	704.575.0305	CHANTRY.JOHNSON@ENGITECTURE.COM
MECHANICAL:	ENGITECTURE	J. CHANTRY JOHNSON	44505	704.575.0305	CHANTRY.JOHNSON@ENGITECTURE.COM
SPRINKLER:					
STRUCTURAL:	PROVIDENCE PARTNERS	K. BRIAN CONE	36791	704.773.2925	BCONE@PROVIDENCEPARTNRESINC.COM
OTHER:					
O					

C: CODE DATA

2018 NC BUILDING CODE:	NEW	BUILDING	☐ ADDITI	ION	\square 1ST TIME INTERIOR COMPLETION
	☐ COR	E & SHELL	☐ PHASE CONSTRUCTION		TION CORE & SHELL
2018 NC EXISTING BUILDING CO	DE: N/A	☐ PRESC	RIPTIVE	REPAIR	☐ CHAPTER 14
	☐ ALTE	RATION LEVEL I	☐ ALTER	ATION LEVEL	II ALTERATION LEVEL III
	☐ HIST	ORIC PROPERTY	☐ CHANG	GE OF USE	
,			` , `	,	
RISK CATEGORY:	CURRENT		П		□IV

D: BASIC BUILDING DATA

PROPOSED

(TABLE 1604.5)

CONSTRUCTION TYPE:	□ I-A □ I-B	□ II-A ■ II-B	☐ III-A ☐ III-B	□ IV □ IV	□ V-A □ V-B	
SPRINKLERS:	■ NO	☐ YES	☐ PARTIAL	□NF	PA 13	FPA13R
STANDPIPES:	■ NO	☐ YES	CLASS:			\square WET \square DRY
FIRE DISTRICT:	■ NO	☐ YES				
FLOOD HAZARD AREA:	■ NO	\square YES				

E. GROSS BUILDING AREA

SPECIAL INSPECTIONS REQUIRED: ■ NO □ YES

FLOOR	EXISTING (SF)	NEW (SF)	SUBTOTAL (SF)
1ST FLOOR		11,898	
TOTAL	-	 11,898	

F. ALLOWABLE AREA					<u>/ 1</u>	7	
PRIMARY OCCUPANCY CL	ASSIFICATION(S):					
ASSEMBLY (303)	☐ A-1	☐ A-2	A-3	☐ A-4	☐ A-5		
BUSINESS (304)	В						
EDUCATIONAL (305)	□ E						
FACTORY (306)	☐ F-1 MODE	RATE	☐ F-2 LOW				
HAZARDOUS (307)	☐ H-1 DETO	NATE	☐ H-2 DEFLAG	RATE 🗌 I	H-3 COMBUST	☐ H-4 HEALTH	

INSTITUTIONAL (308) \square I-1 CONDITION: \square 1 \square \square I-2 CONDITION: \square 1 \square \square I-3 CONDITION: \square 1 \square 2 \square 3 \square 4 \square □ I-4

MERCANTILE (309) ☐ M RESIDENTIAL (310) \square R-1 \square R-2 \square R-3 \square R-4 STORAGE (311) S-1 MODERATE S-2 LOW HIGH-PILED

☐ PARKING GARAGE ☐ OPEN ☐ ENCLOSED ☐ REPAIR GARAGE UTILITY & MISC. (312) 🔲 U

ACCESSORY OCCUPANCY CLASSIFICATION(S): _

INCIDENTAL USES (TABLE 509): _ SPECIAL USES (CHAPTER 4): _____

SPECIAL PROVISIONS (CHAPTER 5): ____ MIXED OCCUPANCY: NO YES SEPARATION: 2 HR. EXCEPTION: ___ □ NON-SEPARATED USE (508.3) The required type of construction for the building shall be determined by applying the height and area

limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building. SEPARATED USE (508.4)

See below for area calculations for each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not

 $\frac{\textit{Actual Area of Occupancy A}}{\textit{Allowable Area of Occupancy A}} + \frac{\textit{Actual Area of Occupancy B}}{\textit{Allowable Area of Occupancy B}} \le 1$

STORY NO.	DESCRIPTION & USE	AREA PER STORY (ACTUAL)	AREA PER TABLE 506.2 ⁴	AREA FOR FRONTAGE INCREASE ^{1,5}	ALLOWABLE AREA, OR UNLIMITED ^{2,3}
1ST FLOOR	ASSEMBLY (A-3)	4,873 SF	9,500 SF		9,500 SF
1ST FLOOR	BUSINESS (B)	7,025 SF	23,000 SF		23,000 SF

¹ Frontage area increases from Section 506.2 are computed thus:

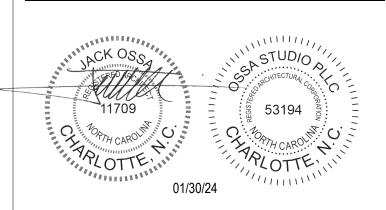
b. Total Building Perimeter = _____(P) c. Ratio (F/P) = _____ (F/P) d. W = Minimum width of public way = _____(W)

e. Percent of frontage increase I_f = 100 [F/P – 0.25] x W/30 = _____(%) ² Unlimited area applicable under conditions of Section 507. ³ Maximum Building Area = total number of stories in the building x D (maximum3 stories) (506.2). ⁴ The maximum area of open parking garages must comply with Table 406.5.4. The maximum area of air traffic control towers must comply

a. Perimeter which fronts a public way or open space having 20 feet minimum width = _____ (F)

⁵ Frontage increase is based on the unsprinklered area value in Table 506.2.

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Structural Engineering PROVIDENCE PARTNERS www.providencepartnersinc.com 704.266.6621

Mechanical, Electrical, Plumbing & Fire Protection **ENGITECTURE** www.engitecture.com 704.287.2193

☐ H-5 HPM

01/30/24 FOR CONSTRUCTION 1 05/8/24 PERMIT REVIEW COMMENTS

Project Name



3D COMMUNITY CHURCH

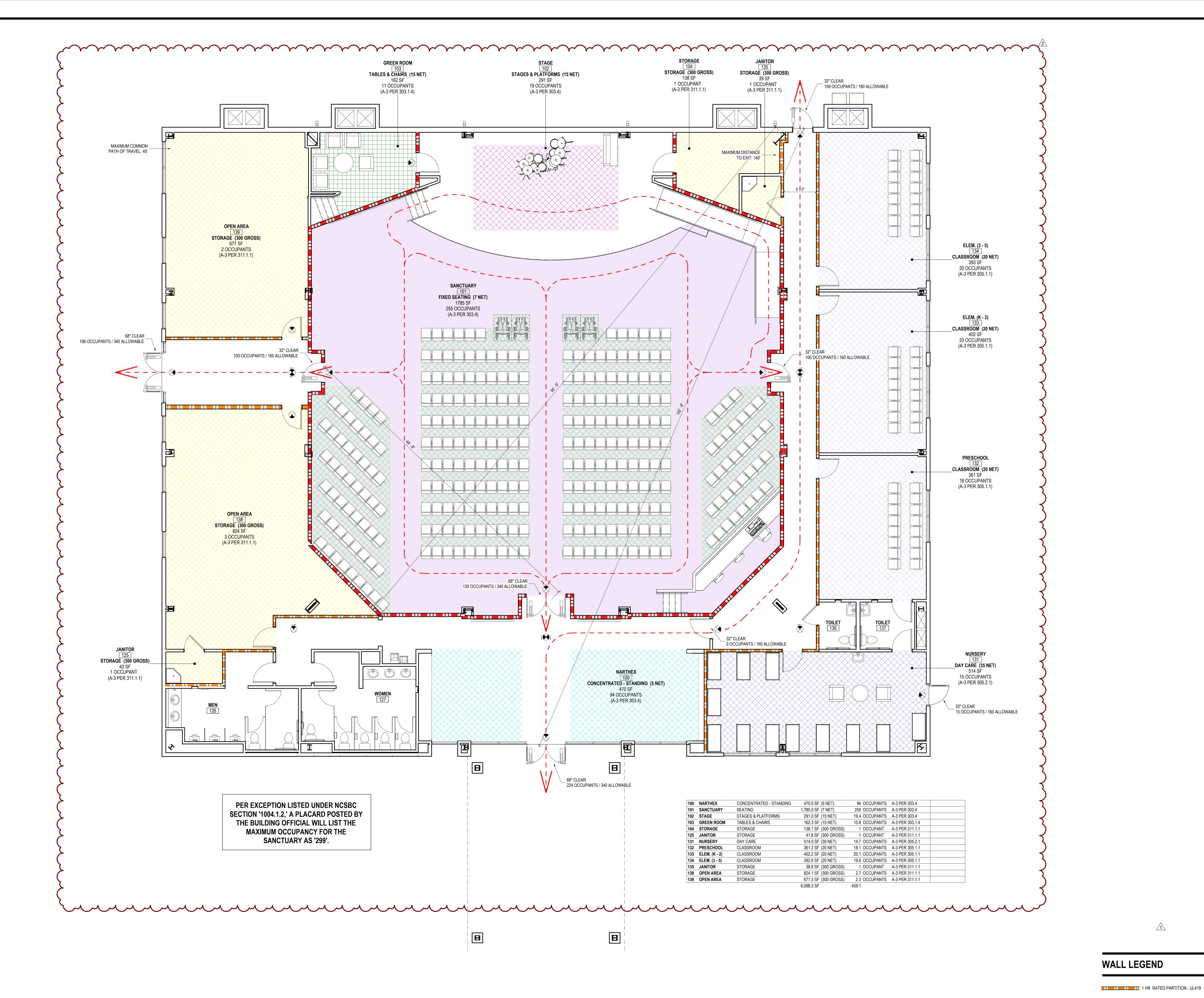
658 GRAHAM ROAD

SANFORD NC 27311

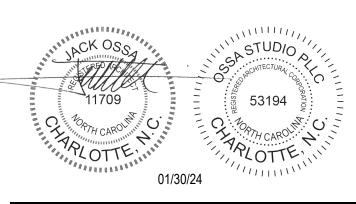
Project Number 23024.00 Description

APPENDIX B

A00.03







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Mechanical, Electrical, Plumbing & Fire Protection ENGITECTURE www.engitecture.com 704.287.2193

 \triangle Date Description

01/30/24 FOR CONSTRUCTION 1 05/8/24 PERMIT REVIEW COMMENTS 2 10/14/24 RTAP NO. 1

Project Name



community church
making church come alive

658 GRAHAM ROAD SANFORD NC 27311

3D COMMUNITY CHURCH

Project Number 23024.00

Description

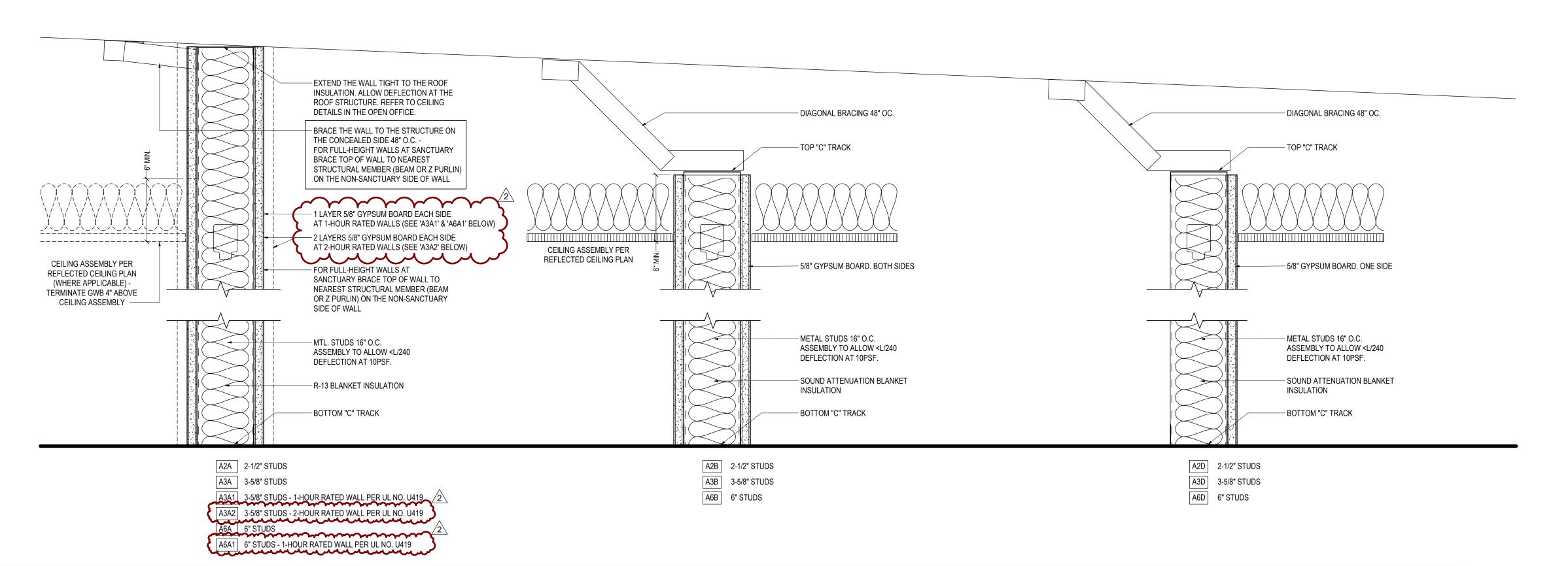
LIFE SAFETY PLAN

Scale As indicated

1

2 HR RATED PARTITION - UL419

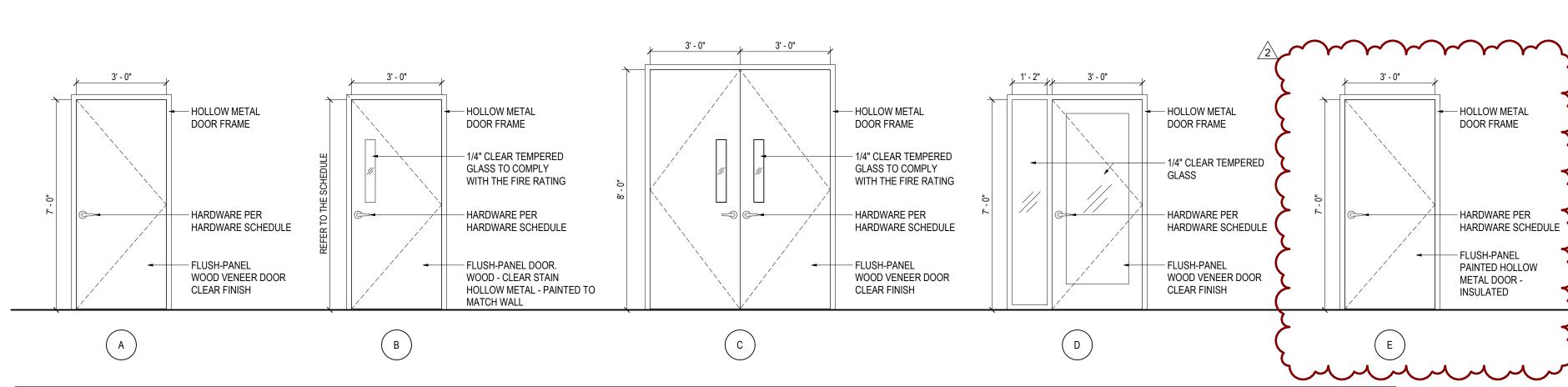
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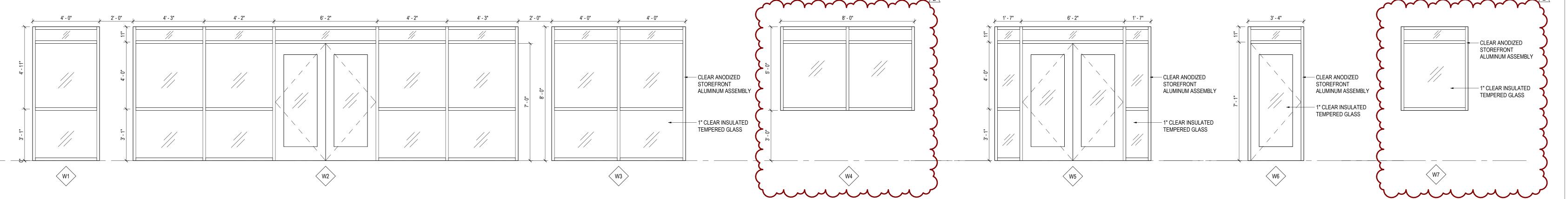
01 PARTITION TYPES SCALE: 3" = 1'-0"

		HARDWARE SCH	EDULE					HARDWARE SCH	EDULE	
SET	QUAN	DESCRIPTION	FINISH	COMMENT		SET	QUAN	DESCRIPTION	FINISH	COMMENT
C1		CLASSROOMS & OFFICES (3-0)								
	1 EA	CYLINDRICAL CLASSROOM LOCKSET - ANSI F84	630			SA2		SANCTUARY (3-0)		
	3 EA	BALL BEARING BUTT HINGE	630				1 EA	MORTISE EXIT DEVICE	630	CLASSROOM ANSI 08
	1 EA	REGULAR ARM CLOSER	630	PULL SIDE			4 EA	BALL BEARING BUTT HINGE	630	
	1 EA	MAGNETIC DOOR-HOLDER	630				1 EA	REGULAR ARM DOOR CLOSER	689	PULL SIDE
	3 EA	SILENCERS	GRAY				1 EA	MAGNETIC DOOR-HOLDER	689	
							4 EA	SILENCERS	GRAY	
C2		STAGE DOORS					1 EA	KICK PLATE - 8" X 34" (PUSH SIDE)	630	
	1 EA	CYLINDRICAL CLASSROOM LOCKSET - ANSI F84	630							
	3 EA	BALL BEARING BUTT HINGE	630			SA3		SANCTUARY (3-0) - SECURE		
	1 EA	REGULAR ARM CLOSER - HOLD OPEN	630	PULL SIDE			1 EA	MORTISE EXIT DEVICE	630	STORE DOOR ANSI F14
	1 EA	CONCAVE WALL STOP	630				4 EA	BALL BEARING BUTT HINGE	630	
	3 EA	SILENCERS	GRAY				1 EA	REGULAR ARM CLOSER	689	PULL SIDE
							1 EA	MAGNETIC DOOR-HOLDER	689	
C3		PASTOR'S OFFICE & CLOSETS (3-0)					4 EA	SILENCERS	GRAY	
	1 EA	CYLINDRICAL CLASSROOM LOCKSET - ANSI F84	630				1 EA	KICK PLATE - 8" X 34" (PUSH SIDE)	630	
	3 EA	BALL BEARING BUTT HINGE	630							
	1 EA	CONCAVE WALL STOP	630			SF1		EXTERIOR STOREFRONT DOORS (6-0)		
	3 EA	SILENCERS	GRAY				2 EA	CONCEALED VERTICAL ROD EXIT DEVICE	630	EXTERIOR CYLINDER ONLY - ONE LEAF
							2 EA	OFFSET PULL	630	
C4		KITCHEN & NURSERY (3-0)					2 EA	TOP OFFSET PIVOT HINGE	630	
	1 EA	CYLINDRICAL CLASSROOM LOCKSET - ANSI F84	630				4 EA	INTERMEDIATE OFFSET PIVOT HINGE	630	
	3 EA	BALL BEARING BUTT HINGE	630				2 EA	BOTTOM OFFSET PIVOT HINGE	630	
	1 EA	REGULAR ARM CLOSER - MAGNETIC DOOR HOLDER	689	PULL SIDE			2 EA	PARALLEL ARM DOOR CLOSER	689	INTERIOR SIDE
	3 EA	SILENCERS	GRAY				1 EA	WEATHERSTRIPPING SET	630	
	1	T					2 EA	DOOR SWEEP	630	
C5		STORAGE & JANITOR (3-0)					1 EA	ACCESSIBLE THRESHOLD	ALUMINUM	
	1 EA	CYLINDRICAL CLASSROOM LOCKSET - ANSI F84	630							
	3 EA	BALL BEARING BUTT HINGE	630			SF2		EXTERIOR STOREFRONT DOOR (3-0)		
	1 EA	PARALLEL ARM CLOSER - MAGNETIC DOOR HOLDER	689	PUSH SIDE			1 EA	MORTISE EXIT DEVICE	630	EXTERIOR CYLINDER ONLY
	3 EA	SILENCERS	GRAY				1 EA	OFFSET PULL	630	
γ	~~			~ ~ ~ ~ ~	_ \		1 EA	TOP OFFSET PIVOT HINGE	630	
E1	4.54	EXTERIOR HOLLOW METAL DOOR (3-0)		EVERTOR OVERLINE	 		2 EA	INTERMEDIATE OFFSET PIVOT HINGE	630	
	1 EA	RIM EXIT DEVICE - STOREROOM TRIM ANSI 09	630	EXTERIOR CYLINDER ONLY	⊣ ノ ∤		1 EA	BOTTOM OFFSET PIVOT HINGE	630	INTERIOR OIDE
	3 EA	BALL BEARING BUTT HINGE	630	DUOU OIDE	⊣ ໄ ∤		1 EA	PARALLEL ARM DOOR CLOSER	689	INTERIOR SIDE
	1 EA	PARALLEL ARM DOOR CLOSER	689	PUSH SIDE	⊣) ∤		1 EA	WEATHERSTRIPPING SET	630	
	3 EA	WEATHERSTRIPPING SET	630 630		⊣		1 EA	DOOR SWEEP ACCESSIBLE THRESHOLD	630 ALUMINUM	
	1 EA	KICK PLATE - 8" X 34" (PUSH SIDE) THRESHOLD	ALUMINUM		⊣) և		IEA	ACCESSIBLE THRESHOLD	ALUMINUM	
	I EA		ALUMINUM		ا کر ⊢	T1		TOILET (3-0)		
R1		RESTROOMS (3-0)	\sim			11	1 EA	CYLINDRICAL PRIVACY LOCKSET - YALE YPL SERIES -	630	w/ OCCUPANCY INDICATOR
IXI	1 EA	PULL HANDLE	630	ROCKWOOD 3300 SERIES			I LA	ANSI F76	030	W/ OCCUPANCT INDICATOR
	1 EA	PUSH PLATE - 4" X 20"	630	NOCKWOOD 3300 SERIES			3 EA	BALL BEARING BUTT HINGE	630	
	3 EA	BALL BEARING BUTT HINGE	630				1 EA	REGULAR ARM CLOSER	630	PULL SIDE
	1 EA	REGULAR ARM CLOSER	630	PULL SIDE			3 EA	SILENCERS	GRAY	
	1 EA	CONCAVE WALL STOP	630	I OLE SIDE			1 EA	COAT HOOK - ROCKWOOD RM802	630	48" AFF
	3 EA	SILENCERS	630				1		1	1
	1 EA	KICK PLATE - 8" X 34	630	PUSH SIDE		T2		TOILET (3-0)		
	I LA	MONTENIE TO NOT	000	I COLLOIDE			1 EA	CYLINDRICAL PASSAGE LOCKSET - ANSI F75	630	
SA1		SANCTUARY (6-0)					3 EA	BALL BEARING BUTT HINGE	630	
JAI	2 EA	CONCEALED VERTICAL ROD EXIT DEVICE	630	CLASSROOM ANSI 08			1 EA	CONCAVE WALL STOP	630	
	8 EA	BALL BEARING BUTT HINGE	630	OLI (OOI (OOIVI AINOI OO			3 EA	SILENCERS	GRAY	
	2 EA	REGULAR ARM DOOR CLOSER	630	PULL SIDE			1 EA	COAT HOOK - ROCKWOOD RM802	630	48" AFF
	2 EA	MAGNETIC DOOR-HOLDER	689	. 522 6/62	_		l		I	
	2 EA	SILENCERS	GRAY	+						
	2 EA	KICK PLATE - 8" X 34" (PUSH SIDE)	630	+						
		MONTENE O NOT (LOOH OLDE)	1000							

		DO	OR SCHEDU	ILE			
#	TYPE	DESCRIPTION	LOCATION	WIDTH	HEIGHT	RATING	HDWF
100A	W2	STOREFRONT	NARTHEX	6' - 0"	7' - 0"		SF1
100B	Α	WOOD VENEER	CORRIDOR	3' - 0"	7' - 0"		C1
101B	В	WOOD VENEER	SANCTUARY	3' - 0"	8' - 0"	90 MIN	SA2
101C	В	WOOD VENEER	SANCTUARY	3' - 0"	8' - 0"	90 MIN	SA3
101D	С	WOOD VENEER	SANCTUARY	6' - 0"	8' - 0"	90 MIN	SA1
103A	В	WOOD VENEER	GREEN ROOM	3' - 0"	7' - 0"	90 MIN	C2
104A	Е	PAINTED HOLLOW METAL	STORAGE	3' - 0"	7' - 0"		C2
110A	W5	STOREFRONT	CORRIDOR	6' - 0"	7' - 0"		SF1
125A	Α	WOOD VENEER	JANITOR	3' - 0"	7' - 0"		R1
126A	Α	WOOD VENEER	MEN	3' - 0"	7' - 0"		R1
127A	Α	WOOD VENEER	WOMEN	3' - 0"	7' - 0"		R1
130A	Е	PAINTED HOLLOW METAL	CORRIDOR	3' - 0"	7' - 0"		E1
131A	В	WOOD VENEER	NURSERY	3' - 0"	7' - 0"	20 MIN	C4
131B	W6	STOREFRONT	NURSERY	3' - 0"	7' - 0"		SF2
132A	В	WOOD VENEER	PRESCHOOL	3' - 0"	7' - 0"	20 MIN	C1
133A	В	WOOD VENEER	ELEM. (K - 2)	3' - 0"	7' - 0"	20 MIN	C1
134A	В	WOOD VENEER	ELEM. (3 - 5)	3' - 0"	7' - 0"	20 MIN	C1
135A	Α	WOOD VENEER	JANITOR	3' - 0"	7' - 0"	20 MIN	C5
136A	Α	WOOD VENEER	TOILET	3' - 0"	7' - 0"	20 MIN	T1
137A	Α	WOOD VENEER	TOILET	3' - 0"	7' - 0"		T2
137B	Α	WOOD VENEER	TOILET	3' - 0"	7' - 0"		T2
138A	Α	WOOD VENEER	OPEN AREA	3' - 0"	7' - 0"	20 MIN	C1
138B	Α	WOOD VENEER	OPEN AREA	3' - 0"	7' - 0"	20 MIN	C1
139A	Α	WOOD VENEER	OPEN AREA	3' - 0"	7' - 0"	20 MIN	C1

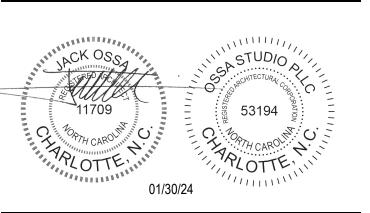


02 DOOR TYPES SCALE: 3/8" = 1'-0"



A00.05

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919.352.2834

Structural Engineering PROVIDENCE PARTNERS www.providencepartnersinc.com 704.266.6621

Mechanical, Electrical, Plumbing & Fire Protection ENGITECTURE www.engitecture.com 704.287.2193

01/30/24 FOR CONSTRUCTION
1 05/8/24 PERMIT REVIEW COMMENTS
2 10/14/24 RTAP NO. 1

Project Name

community church
making church come alive

making church come **alive**658 GRAHAM ROAD
SANFORD NC 27311

3D COMMUNITY CHURCH

Project Number 23024.00

PARTITIONS, DOORS, & WINDOW

As indicated

700.03

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WINDOW TYPES
SCALE: 3/8" = 1'-0"

USG MEXICO S A DE C V — 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX, WRC or; 3/4 in. thick Types IP-X3 or ULTRACODE

When Item 7B, Steel Framing Members*, is used, Nonbearing Wall Rating is limited to 1 Hr. Min. stud depth is 3-1/2 in., min. thickness of insulation (Item 4) is 3 in., and two layers of gypsum board panels (1/2 in. or 5/8 in. thick) shall be attached to furring channels as described in Item 6. One layer of gypsum board panels (1/2 in. or 5/8 in. thick) attached to opposite side of stud without furring channels as described in Item 6.

5A. Gypsum Board* — (As an alternate to Item 5) — 5/8 in. thick, 24 to 54 in. wide, applied horizontally as the outer layer to one side of the assembly. Secured as described in Item 6.

UNITED STATES GYPSUM CO — Type FRX-G, SHX.

RAY-BAR ENGINEERING CORP — Type RB-LBG

USG MEXICO S A DE C V — Type SHX.

5B. Gypsum Board* — (Not Shown) - As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 in or ¾ in. thick products are specified. For direct attachment only to steel studs Item 2B, (not to be used with Item 3) - Nom 5/8 in. or ¾ in. may be used as alternate to all 5/8 in. or ¾ in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 in. or ¾ in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board secured to 20 MSG steel studs Item 2B with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. To be used with Lead Batten Strips (see Item 11) or Lead Discs or Tabs (see Item 12).

5C. Gypsum Board* — (For Use With Item 2C) Rating Limited to 1 Hour. 5/8 in. thick, 48 in. wide, Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. (Vertical Application) - The gypsum board is to be installed on each side of the studs with 1 in. long Type S coated steel screws spaced 8 in. OC starting 4 in. from the edge of the board at the vertical edges and 12 in. OC starting 6 in. from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in. OC starting 4 in. from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. Vertical joints are to be centered over studs and staggered one stud cavity on opposite sides of studs. (Horizontal Application) - The gypsum board is to be installed on each side of the studs with 1 in. long Type S coated steel screws spaced 8 in. OC starting 4 in. from the edge of the board at the vertical edges and 12 in. OC starting 6 in. from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in. OC starting 4 in. from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. All horizontal joints are to be backed as outlined under section VI of Volume 1 in the Fire Resistive Directory. CGC INC — Type SCX.

UNITED STATES GYPSUM CO — Type SCX.

USG MEXICO S A DE C V — Type SCX.

5D. Gypsum Board* — (As an alternate to Item 5) — 5/8 in. thick, 48 in. wide, applied vertically or horizontally. Secured as described in Item 6. For use with Items 1 and 2 only. UNITED STATES GYPSUM CO — Type USGX.

5E. Gypsum Board* — (Not Shown) - (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 1/2 in. or 5/8 in thick products are specified, For direct attachment only to steel studs Item 2B, not to be used with Item 3). Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 (or No. 6 by 1-1/4 in. long bugle head fine driller) steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.

NEW ENGLAND LEAD BURNING CO INC, DBA

NELCO — Nelco

5F. Gypsum Board* — (As an alternate to Item 5) — For use with Items 1G and 2F and limited to 1 Hour Rating only, Gypsum panels with beveled, square or tapered edges, applied vertically, and fastened to the steel studs with 1 in. long Type S screws spaced 8 in. OC along vertical and bottom edges and 12 in. OC in the field. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Steel stud depth shall be a minimum 3-5/8 in. UNITED STATES GYPSUM CO — 5/8 in. thick Type SCX.

5G. Gypsum Board* — (As an alternate to Item 5) — For use with Items 1G and 2F only, Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally, as specified in the table below and fastened to the steel studs as described in Item 6. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 2 hr, 3 hr and 4 hr ratings are as follows:

Gypsum Board Protection on Each Side of Wall

Min Stud Rating, Depth, in. Hr Item 2F		No. of Layers & Thickness of Panel	Min Thkns of Insulation (Item 4)	
2	1-5/8	2 layers, 1/2 in. thick	Optional	
2	1-5/8	2 layers, 5/8 in. thick	Optional	
3	1-5/8	3 layers, 1/2 in. thick	Optional	
3	1-5/8	3 layers, 5/8 in. thick	Optional	
4	1-5/8	4 layers, 5/8 in. thick	Optional	
4	1-5/8	4 layers, 1/2 in. thick	Optional	

CGC INC — 1/2 in. thick Type C, IP-X2 or IPC-AR;, 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, or; 3/4 in. thick Types IP-X3 or ULTRACODE

UNITED STATES GYPSUM CO — 1/2 in. thick Type C, IP-X2, IPC-AR or; 5/8 in. thick Type SCX, SHX, IP-X1, AR, C, , FRX-G, IP-AR, IP-X2, IPC-AR; 3/4 in. thick Types IP-X3 or ULTRACODE

USG MEXICO S A DE C V — 1/2 in. thick Type C, IP-X2, IPC-AR or; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, or; 3/4 in. thick Types IP-X3 or ULTRACODE

5H. Gypsum Board* — (Not Shown) - As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 or 3/4 in thick products are specified. For direct attachment only to steel studs Item 2B, (not to be used with Item 3) - Nom 5/8 or 3/4 in. may be used as alternate to all 5/8 or 3/4 in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board secured to 20 MSG steel studs Item 2B with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. To be used with Lead Batten Strips (see Item 11A) or Lead Discs (see Item 12A).

MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

51. Gypsum Board* — (As an alternate to Item 5) - Nom. 5/8 in. thick gypsum panels with beveled, square or tapered edges installed as described in Item 5. Steel stud minimum depth shall be as indicated in Item 5.

UNITED STATES GYPSUM CO — Type ULX

USG MEXICO S A DE C V — Type ULX

PAC INTERNATIONAL INC — Types RSIC-1, RSIC-V.

PLITEQ INC — Type GENIECLIP

6. Fasteners — (Not shown) — For use with Items 2 and 2F - Type S or S-12 steel screws used to attach panels to studs (Item 2) or furring channels (Item 7). Single layer systems: 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8 in. OC when panels are applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. Two layer systems: First layer- 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in. thick panels or 2-5/8 in. long for 1/2 in. thick panels or 2-5/8 in. long for 1/2 in. thick panels or 2-5/8 in. long for 1/2 in. thick panels or 2-5/8 in. long for 1/2 in. thick panels or 3 in. long for 5/8 in. thick panels, spaced 24 in. OC. Fourth layer- 2-5/8 in. long for 1/2 in. thick panels or 3 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below.

6A. Fasteners — (Not shown) —For use with Item 2A - Type S or S-12 steel screws used to attach panels to studs (Item 2A). Single layer systems: 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8-1/2 in. OC with additional screws 1 in. and 2-1/2 in. from edges of the board when panels are horizontally. or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. Two layer systems applied vertically: First layer-1 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer-1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 16 in. OC with screws offset 8 in. from first layer. Two layer systems applied horizontally: First layer-1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels or 2-1/4 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 1/2 in., 5/8 in. thick panels or 2-5/8 in. long for 1/2 in., 5/8 in. thick panels or 2-5/8 in. long for 1/2 in., 5/8 in. thick panels or 2-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer-1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Fourth layer-2-5/8 in. long for 1/2 in., 5/8 in. thick panels or 3 in. long for 5/8 in. thick panels, spaced 24 in. OC. Fourth layer-2-5/8 in. long for 1/2 in. thick panels or 3 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below. For all layers, an additional screw shall be placed 1-1/4 in. from each edge of the board.

7. Furring Channels — (Optional, not shown, for single or double layer systems) — Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S-12 steel screws. Not for use with Item 5A and 5E.

7A. Framing Members* — (Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 7, furring channels and Steel Framing Members as described below:

a. Furring Channels — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A and 5E.

b. Steel Framing Members* — Used to attach furring channels (Item 7Aa) to studs (Item 2). Clips spaced max. 48 in. OC. RSIC-1 clips secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. RSIC-V clips

7B. Framing Members* — (Optional, Not Shown) — As an alternate to Item 7, for single or double layer systems, furring channels and Steel Framing Members on only one side of studs as described below:

a. Furring Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 5. Not for use with Item 5. A and 5.

furring channels as described in Item 5. Not for use with Item 5A and 5E.

b. Steel Framing Members* — Used to attach furring channels (Item 7Ba) to one side of studs (Item 2) only. Clips spaced 48 in. OC., and secured to studs with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips.

KINETICS NOISE CONTROL INC — Type Isomax

7C. Framing Members* — Optional - Not Shown - Used as an alternate method to attach resilient channels (Item 7). Clips attached at each intersection of the resilient channel and the steel studs (Item 2). Resilient channels are friction fitted into clips, and then clips are secured to the steel stud with min. 1 in. long Type S-12 steel screws through the center hole of the clip and the resilient channel flange.

KEENE BUILDING PRODUCTS CO INC — Type RC Assurance.

7D. Framing Members* — (Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 7, furring channels and Steel Framing Members as described below:

a. Furring Channels — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A and 5E.

b. Steel Framing Members* — Used to attach furring channels (Item 7Aa) to studs (Item 2). Clips spaced max. 48 in. OC. GENIECLIPS secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.

8. Joint Tape and Compound — Vinyl or casein, dry or premixed joint compound applied in two coats to joints and screw heads of outer layers. Paper tape, nom 2 in. wide, embedded in first layer of compound over all joints of outer layer panels. Paper tape and joint compound may be omitted when gypsum panels are supplied with a square edge.

9. Siding, Brick or Stucco — (Optional, not shown) — Aluminum, vinyl or steel siding, brick veneer or stucco, meeting the requirements of local code agencies, installed over gypsum panels. Brick veneer attached to studs with corrugated metal wall ties attached to each stud with steel screws, not more than each sixth course of brick.

10. Caulking and Sealants* — (Optional, not shown) — A bead of acoustical sealant applied around the partition perimeter for sound control. UNITED STATES GYPSUM CO — Type AS

secured to studs with No. 8 x 9/16 in. minimum self-drilling, S-12 steel screw through the center hole. Furring channels are friction fitted into clips.

11. Lead Batten Strips — (Not Shown, For Use With Item 5B) - Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5B) and optional at remaining stud locations. Required behind vertical joints.

11A. Lead Batten Strips — (Not Shown, For Use With Item 5H) Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.0625 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 6) and optional at remaining stud locations.

12. Lead Discs or Tabs — (Not Shown, For Use With Item 5B) - Used in lieu of or in addition to the lead batten strips (Item 11) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 5B) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

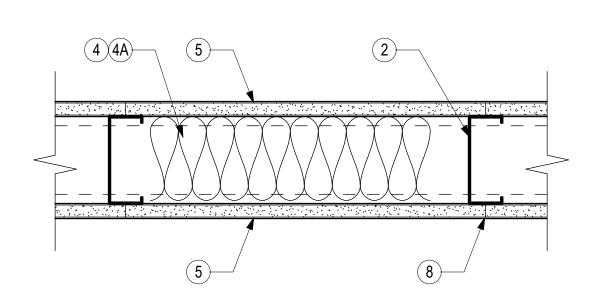
12A. Lead Discs — (Not Shown, for use with Item 5H) Max 5/16 in. diam by max 0.0625 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.9% meeting the Federal Specification QQ-L-201f, Grade "C".

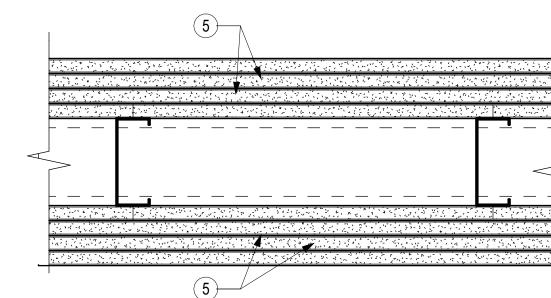
13. Lead Batten Strips — (Not Shown, For Use With Item 5E) Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5E) and optional at remaining stud locations.

14. Lead Tabs — (Not Shown, For Use With Item 5E) 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs friction-fit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where a screw (that secures the gypsum boards, Item 5E) will penetrate the steel stud. Lead tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary.

*Bearing the UL Classification Mark

DESIGN No. U419 NONBEARING WALL RATINGS - 1, 2, 3 OR 4 HR.(SEE ITEMS 4 & 5)





1. Floor and Ceiling Runners — (Not shown) — For use with Item 2 - Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth to accommodate stud size, with min 1-1/4 in. long legs, attached to floor and ceiling with fasteners 24 in. OC max.

1A. Framing Members* - Floor and Ceiling Runners — Not shown - In lieu of Item 1 — For use with Item 2A, proprietary channel shaped, min. 3-5/8 in. deep, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC max. Effective thickness is 0.034 in.

CLARKDIETRICH BUILDING SYSTEMS — UltraSTEEL®.

1B. Framing Members* - Floor and Ceiling Runners — (Not shown - In lieu of Item 1) — For use with Item 2A, proprietary channel shaped, min. 2-1/2 in. deep, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling fasteners 24 in. OC. max. Effective thickness is 0.034 in.

CLARKDIETRICH BUILDING SYSTEMS — UltraSTEEL®.

1C. Framing Members* - Floor and Ceiling Runner — Not shown - In lieu of Item 1 — For use with Item 2C, proprietary channel shaped runners, 3-5/8 in. deep attached to floor and ceiling with fasteners 24 in. OC max. CALIFORNIA EXPANDED METAL PRODUCTS CO — ViperTrack™

CRACO MFG INC — SmartTrack™
MARINO/WARE, DIV OF WARE INDUSTRIES

INC — Viper25™ Track
TELLING INDUSTRIES L L C — Viper25™ Track

1D. Framing Members* - Floor and Ceiling Runner — Not shown - In lieu of Item 1 — For use with Item 2D, proprietary channel shaped runners, 1-1/4 in. wide by 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

MARINO/WARE, DIV OF WARE INDUSTRIES

INC — Viper20™ Track TELLING INDUSTRIES L L C — Viper20™ Track

1E. Framing Members*— Floor and Ceiling Runners — (Not shown) — In lieu of Item 1 - Channel shaped, attached to floor and ceiling with fasteners 24 in. OC. max. ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME Framing System

assembly height. Allowable use of studs is shown in the table below. For direct attachment of gypsum board only. Effective thickness is 0.034 in.

CONSOLIDATED FABRICATORS CORP,
BUILDING PRODUCTS DIV — Type SUPREME Framing System
QUAIL RUN BUILDING MATERIALS INC — Type SUPREME Framing System
SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME Framing System
STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME Framing System
UNITED METAL PRODUCTS INC — Type SUPREME Framing System

1F. Floor and Ceiling Runners — (Not shown)—For use with Item 2B- Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, min depth to accommodate stud size, with min 1 in. long legs, attached to floor and ceiling with fasteners spaced max 24 in. OC.

1G. Framing Members*— Floor and Ceiling Runners — (Not shown, As an alternate to Item 1) — For use with Items 2F, 5F or 5G or 5I only, channel shaped, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC. max.

CLARKDIETRICH BUILDING SYSTEMS — CD ProTRAK DMFCWBS L L C — ProTRAK MBA BUILDING SUPPLIES — ProTRAK

SOUTHEASTERN STUD & COMPONENTS INC — ProTRAK TELLING INDUSTRIES L L C — TRUE-TRACK™

1H. Framing Members* - Floor and Ceiling Runner — Not shown - In lieu of Item 1 — For use with Item 2G, proprietary channel shaped runners, minimum width to accommodate stud size, with 1- 1/8 in. long legs fabricated from min 0.015 in. (min bare metal thickness) galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

SUPER STUD BUILDING PRODUCTS — The Edge

2. Steel Studs — Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.

2A. Framing Members* - Steel Studs — In lieu of Item 2 - Proprietary channel shaped studs, min. depth as indicated under Item 5, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than

CLARKDIETRICH BUILDING SYSTEMS — UltraSTEEL®.

2B. Steel Studs — (As an alternate to Item 2, For use with Items 5B & 5E) Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, 3-1/2 in. min depth, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners. Studs to be cut 5/8 to 3/4 in. less than assembly height.

2C. Framing Members* - Steel Studs — (As an alternate to Item 2, For use with Items 5C or 5I) - Proprietary channel shaped studs, 3-5/8 in. deep spaced a max of 24 in. OC. Studs to be cut 3/4 in less than the assembly height and installed with a ½ in. gap between

the end of the stud and track at the bottom of the wall. For direct attachment of gypsum board only.

CALIFORNIA EXPANDED METAL PRODUCTS CO — ViperStud ™

CRACO MFG INC — SmartStud™
MARINO/WARE, DIV OF WARE INDUSTRIES
INC — Viper25™

TELLING INDUSTRIES L L C — Viper25™

2D. Framing Members* - Metal Studs — Not shown - In lieu of Item 2 — For use with Item 1D, proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max if 24 in. OC, fabricated from min 0.020 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights.

MARINO/WARE, DIV OF WARE INDUSTRIES

INC — Viper20™ TELLING INDUSTRIES L L C — Viper20™

2E. Framing Members*— Steel Studs — In lieu of Item 2 - For Use with Item 1E- Channel shaped studs, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.

ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME Framing System CONSOLIDATED FABRICATORS CORP.

CONSOLIDATED FABRICATORS CORP,
BUILDING PRODUCTS DIV — Type SUPREME Framing System

QUAIL RUN BUILDING MATERIALS INC — Type SUPREME Framing System SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME Framing System

STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME Framing System UNITED METAL PRODUCTS INC — Type SUPREME Framing System

2F. Framing Members*— Steel Studs — (Not shown, As an alternate to Item 2) —For use with Items 1G, 5F or 5G or 5I only, channel shaped studs, min depth as indicated under Item 5F, 5G or 5I, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.

CLARKDIETRICH BUILDING SYSTEMS — CD ProSTUD
DMFCWBS L L C — ProSTUD
MBA BUILDING SUPPLIES — ProSTUD

MBA BUILDING SUPPLIES — ProSTUD

SOUTHEASTERN STUD & COMPONENTS INC — ProSTUD

TELLING INDUSTRIES L L C — TRUE-STUD™

2G. Framing Members* - Metal Studs — Not shown - In lieu of Item 2 — For use with Item 1H, proprietary channel shaped steel studs, minimum width indicated under Item 5, 1-1/4 in. deep fabricated from min 0.015 in. (min bare metal thickness) galvanized steel. Studs 3/8 in. to 3/4 in. less in lengths than assembly heights. SUPER STUD BUILDING PRODUCTS — The Edge

3. Wood Structural Panel Sheathing — (Optional, For use with Item 5 Only.)- (Not Shown) - 4 ft wide, 7/16 in. thick oriented strand board (OSB) or 15/32 in. thick structural 1 sheathing (plywood) complying with DOC PS1 or PS2, or APA Standard PRP-108, manufactured with exterior glue, applied horizontally or vertically to the steel studs. Vertical joints centered on studs, and staggered one stud space from wallboard joints. Attached to studs with flat-head self-drilling tapping screws with a min. head diam. of 0.292 in. at maximum 6 in. OC. in the perimeter and 12 in. OC. in the field. When used, fastener lengths for gypsum panels increased by min. 1/2 in.

4. Batts and Blankets* — (Required as indicated under Item 5) — Mineral wool batts, friction fitted between studs and runners. Min nom thickness as indicated under Item 5. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.

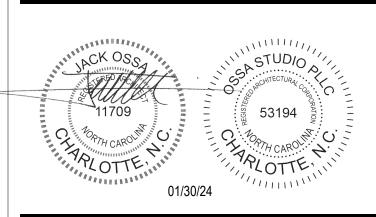
4A. Batts and Blankets* — (Optional) — Placed in stud cavities, any glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.

5. Gypsum Board* — Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 1 hr, 2 hr, 3 hr and 4 hr ratings are as follows:

Gypsum Board Protection on Each Side of Wall

Rating, Hr	Min Stud Depth, in. Items 2, 2D, 2E, 2G and 2F	Min Stud Depth, in. Item 2A	No. of Layers & Thkns of Panel	Min Thkns of Insulation (Item 4)
1	3-1/2	3-5/8	1 layer, 5/8 in. thick	Optional
1	2-1/2	3-5/8	1 layer, 1/2 in. thick	1-1/2 in.
1	1-5/8	3-5/8	1 layer, 3/4 in. thick	Optional
2	1-5/8	2-1/2	2 layers, 1/2 in. thick	Optional
2	1-5/8	2-1/2	2 layers, 5/8 in. thick	Optional
2	3-1/2	3-5/8	1 layer, 3/4 in. thick	3 in.
3	1-5/8	2-1/2	3 layers, 1/2 in. thick	Optional
3	1-5/8	2-1/2	2 layers, 3/4 in. thick	Optional
3	1-5/8	2-1/2	3 layers, 5/8 in. thick	Optional
4	1-5/8	2-1/2	4 layers, 5/8 in. thick	Optional
4	1-5/8	2-1/2	4 layers, 1/2 in. thick	Optional
4	2-1/2	2-1/2	2 layers, 3/4 in. thick	2 in.

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PROJECT TEAM

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01/30/24 FOR CONSTRUCTION

Project Name



SANFORD NC 27311

658 GRAHAM ROAD

3D COMMUNITY CHURCH

Project Number

UL PARTITION DETAILS

Scale
NOT TO SCALE

23024.00

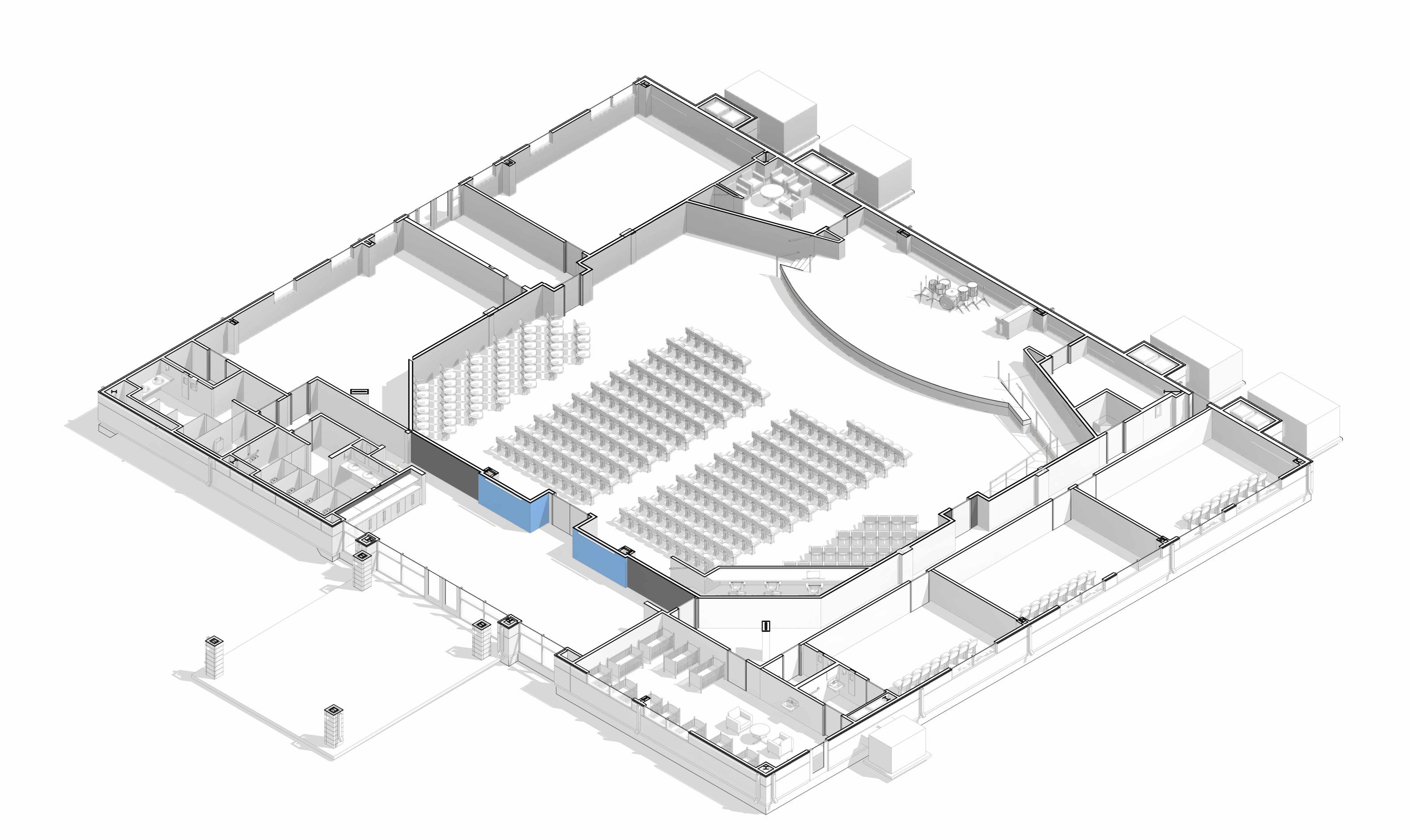
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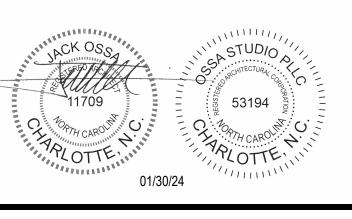
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△ Date Desc

01/30/24 FOR CONSTRUCTION

Project Name



community church
making church come alive

658 GRAHAM ROAD SANFORD NC 27311

Client

3D COMMUNITY CHURCH

Project Number 23024.00

Description

3D PLAN SECTION

Scale

A01.01

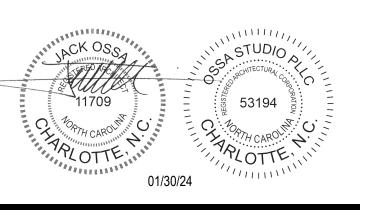












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01/30/24 FOR CONSTRUCTION

Project Name



naking church come **alive**658 GRAHAM ROAD
SANFORD NC 27311

Client

3D COMMUNITY CHURCH

Project Number

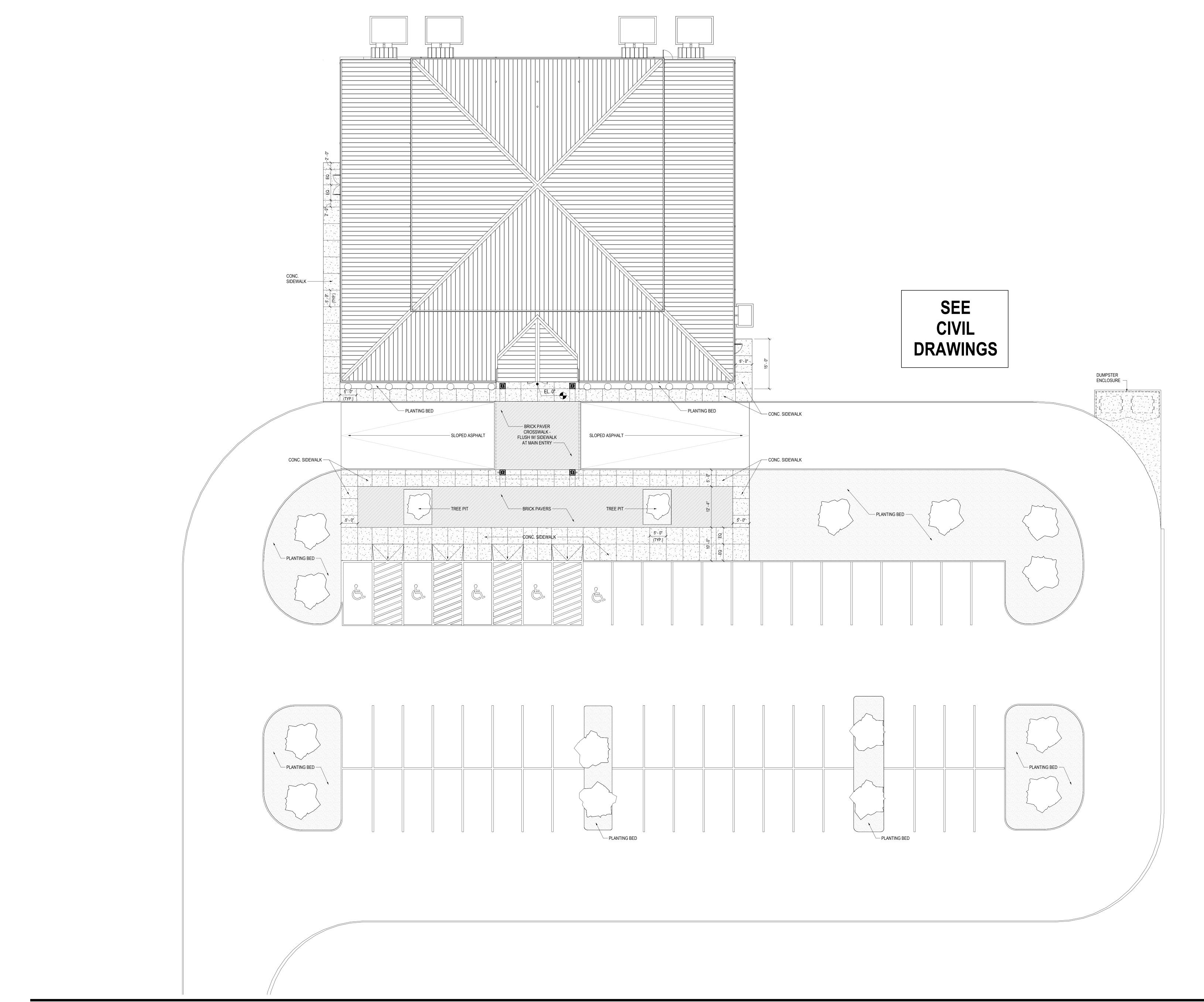
23024.00

Description

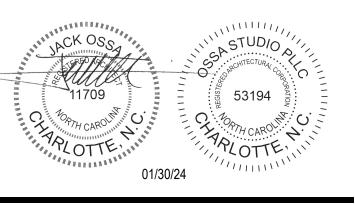
EXTERIOR RENDERINGS

Scale

A01.02







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01/30/24 FOR CONSTRUCTION

Project Name



community church
making church come alive 658 GRAHAM ROAD

SANFORD NC 27311

3D COMMUNITY CHURCH

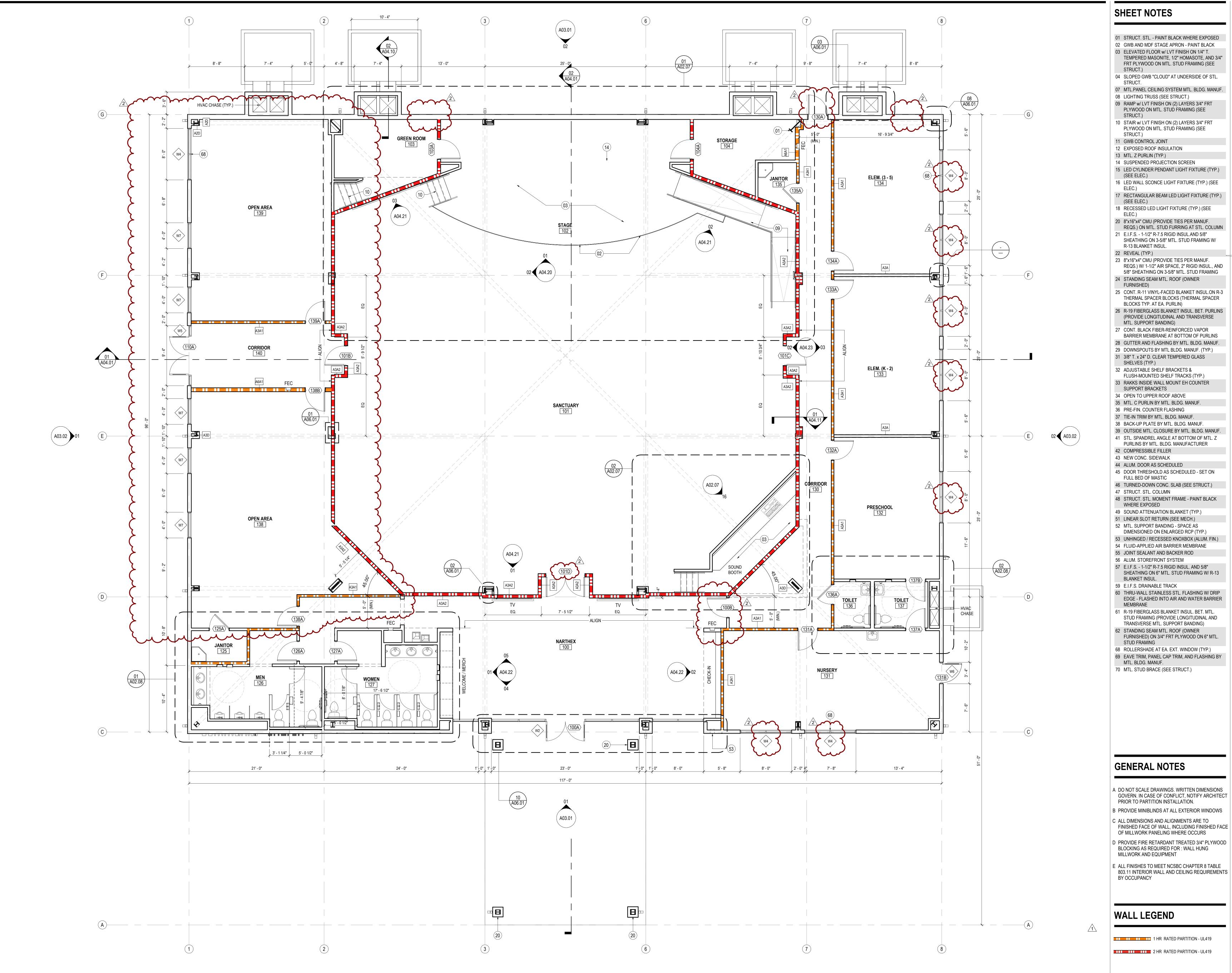
Project Number

23024.00

Description ARCHITECTURAL SITE PLAN

3/32" = 1'-0"

A02.00



01 STRUCT. STL. - PAINT BLACK WHERE EXPOSED 02 GWB AND MDF STAGE APRON - PAINT BLACK 03 ELEVATED FLOOR w/ LVT FINISH ON 1/4" T. TEMPERED MASONITE, 1/2" HOMASOTE, AND 3/4" FRT PLYWOOD ON MTL. STUD FRAMING (SEE

04 SLOPED GWB "CLOUD" AT UNDERSIDE OF STL.

07 MTL.PANEL CEILING SYSTEM MTL. BLDG. MANUF. 08 LIGHTING TRUSS (SEE STRUCT.)

09 RAMP w/ LVT FINISH ON (2) LAYERS 3/4" FRT PLYWOOD ON MTL. STUD FRAMING (SEE

10 STAIR w/ LVT FINISH ON (2) LAYERS 3/4" FRT PLYWOOD ON MTL. STUD FRAMING (SEE

11 GWB CONTROL JOINT

12 EXPOSED ROOF INSULATION 13 MTL. Z PURLIN (TYP.)

15 LED CYLINDER PENDANT LIGHT FIXTURE (TYP.) (SEE ELEC.) 16 LED WALL SCONCE LIGHT FIXTURE (TYP.) (SEE

17 RECTANGULAR BEAM LED LIGHT FIXTURE (TYP.) (SEE ELEC.)

18 RECESSED LED LIGHT FIXTURE (TYP.) (SEE

20 8"x16"x4" CMU (PROVIDE TIES PER MANUF. REQS.) ON MTL. STUD FURRING AT STL. COLUMN 21 E.I.F.S. - 1-1/2" R-7.5 RIGID INSUL.AND 5/8" SHEATHING ON 3-5/8" MTL. STUD FRAMING W/

22 REVEAL (TYP.) 23 8"x16"x4" CMU (PROVIDE TIES PER MANUF. REQS.) W/ 1-1/2" AIR SPACE, 2" RIGID INSUL., AND 5/8" SHEATHING ON 3-5/8" MTL. STUD FRAMING

24 STANDING SEAM MTL. ROOF (OWNER FURNISHED) 25 CONT. R-11 VINYL-FACED BLANKET INSUL.ON R-3 THERMAL SPACER BLOCKS (THERMAL SPACER

BLOCKS TYP. AT EA. PURLIN) 26 R-19 FIBERGLASS BLANKET INSUL. BET. PURLINS (PROVIDE LONGITUDINAL AND TRANSVERSE MTL. SUPPORT BANDING)

27 CONT. BLACK FIBER-REINFORCED VAPOR BARRIER MEMBRANE AT BOTTOM OF PURLINS 28 GUTTER AND FLASHING BY MTL. BLDG. MANUF. 29 DOWNSPOUTS BY MTL BLDG. MANUF. (TYP.)

31 3/8" T. x 24" D. CLEAR TEMPERED GLASS SHELVES (TYP.)

32 ADJUSTABLE SHELF BRACKETS & FLUSH-MOUNTED SHELF TRACKS (TYP.)

33 RAKKS INSIDE WALL MOUNT EH COUNTER SUPPORT BRACKETS 34 OPEN TO UPPER ROOF ABOVE 35 MTL. C PURLIN BY MTL. BLDG. MANUF.

37 TIE-IN TRIM BY MTL. BLDG. MANUF. 38 BACK-UP PLATE BY MTL. BLDG. MANUF. 39 OUTSIDE MTL. CLOSURE BY MTL. BLDG. MANUF.

41 STL. SPANDREL ANGLE AT BOTTOM OF MTL. Z PURLINS BY MTL. BLDG. MANUFACTURER 42 COMPRESSIBLE FILLER

43 NEW CONC. SIDEWALK

44 ALUM. DOOR AS SCHEDULED 45 DOOR THRESHOLD AS SCHEDULED - SET ON FULL BED OF MASTIC

46 TURNED-DOWN CONC. SLAB (SEE STRUCT.) 47 STRUCT. STL. COLUMN 48 STRUCT. STL. MOMENT FRAME - PAINT BLACK

49 SOUND ATTENUATION BLANKET (TYP.) 51 LINEAR SLOT RETURN (SEE MECH.) 52 MTL. SUPPORT BANDING - SPACE AS

DIMENSIONED ON ENLARGED RCP (TYP.) 53 UNHINGED / RECESSED KNOXBOX (ALUM. FIN. 54 FLUID-APPLIED AIR BARRIER MEMBRANE 55 JOINT SEALANT AND BACKER ROD 56 ALUM. STOREFRONT SYSTEM

57 E.I.F.S. - 1-1/2" R-7.5 RIGID INSUL. AND 5/8" SHEATHING ON 6" MTL. STUD FRAMING W/ R-13

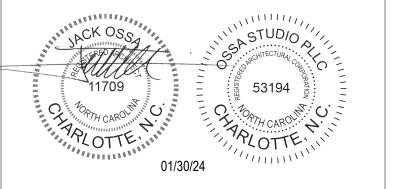
59 E.I.F.S. DRAINABLE TRACK 60 THRU-WALL STAINLESS STL. FLASHING W/ DRIP EDGE - FLASHED INTO AIR AND WATER BARRIER

61 R-19 FIBERGLASS BLANKET INSUL. BET. MTL. STUD FRAMING (PROVIDE LONGITUDINAL AND TRANSVERSE MTL. SUPPORT BANDING)

62 STANDING SEAM MTL. ROOF (OWNER FURNISHED) ON 3/4" FRT PLYWOOD ON 6" MTL. STUD FRAMING 68 ROLLERSHADE AT EA. EXT. WINDOW (TYP.)

69 EAVE TRIM, PANEL CAP TRIM, AND FLASHING BY MTL. BLDG. MANUF.

4539 HEDGEMORE DRIVE, SUITE 101 CHARLOTTE NC 28209 704.890.2053 WWW.OSSASTUDIO.COM



PROJECT TEAM

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01/30/24 FOR CONSTRUCTION 1 05/8/24 PERMIT REVIEW COMMENTS 2 10/14/24 RTAP NO. 1



community **church** making church come **alive**

658 GRAHAM ROAD SANFORD NC 27311

Project Name

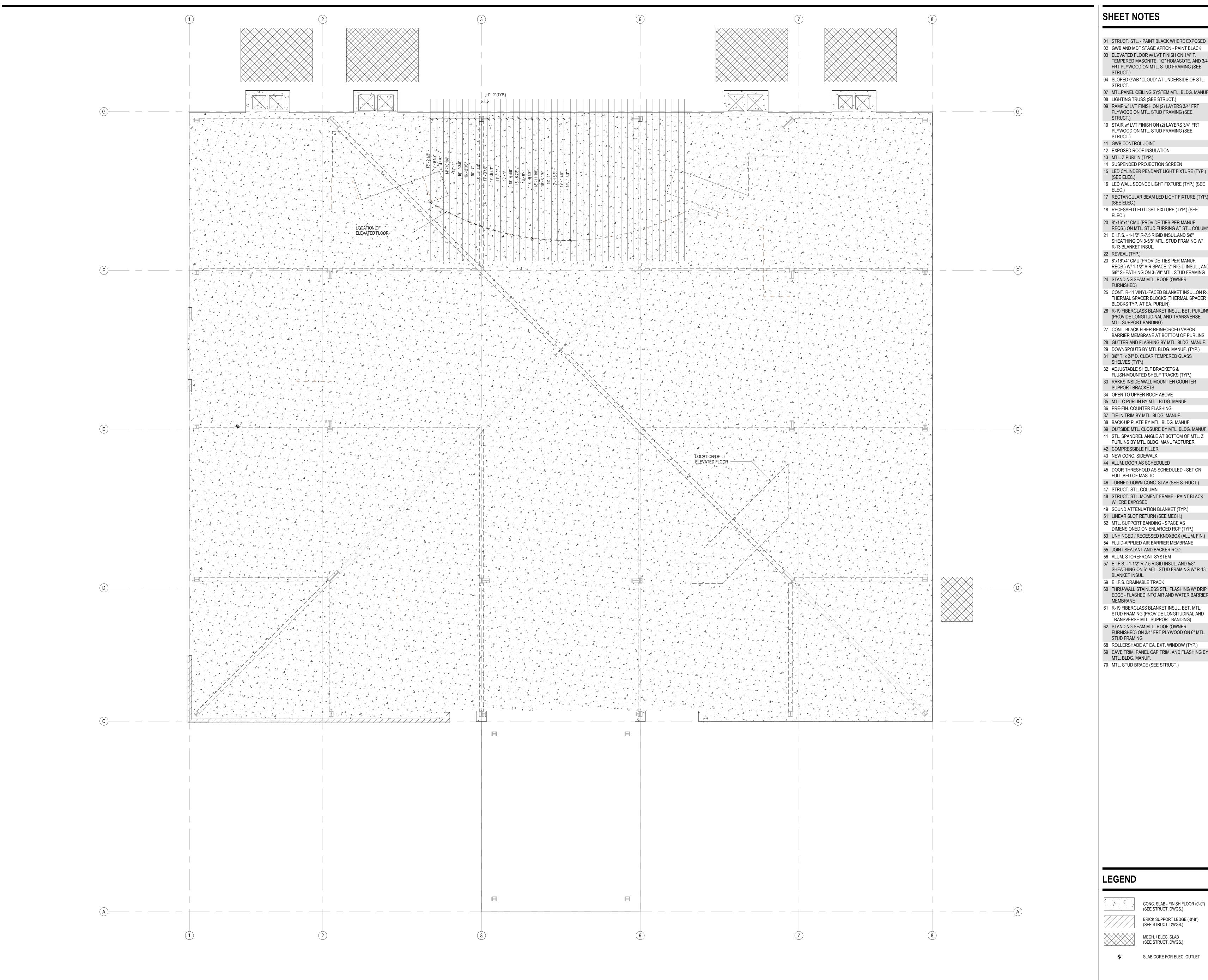
3D COMMUNITY CHURCH

Project Number 23024.00

Description CONSTRUCTION PLAN

Scale As indicated

A02.01



01 STRUCT. STL. - PAINT BLACK WHERE EXPOSED 02 GWB AND MDF STAGE APRON - PAINT BLACK 03 ELEVATED FLOOR w/ LVT FINISH ON 1/4" T.

TEMPERED MASONITE, 1/2" HOMASOTE, AND 3/4" FRT PLYWOOD ON MTL. STUD FRAMING (SEE

04 SLOPED GWB "CLOUD" AT UNDERSIDE OF STL.

07 MTL.PANEL CEILING SYSTEM MTL. BLDG. MANUF. 08 LIGHTING TRUSS (SEE STRUCT.)

10 STAIR w/ LVT FINISH ON (2) LAYERS 3/4" FRT PLYWOOD ON MTL. STUD FRAMING (SEE

STRUCT.)

11 GWB CONTROL JOINT 12 EXPOSED ROOF INSULATION

14 SUSPENDED PROJECTION SCREEN 15 LED CYLINDER PENDANT LIGHT FIXTURE (TYP.)

17 RECTANGULAR BEAM LED LIGHT FIXTURE (TYP.)

(SEE ELEC.)

18 RECESSED LED LIGHT FIXTURE (TYP.) (SEE

REQS.) ON MTL. STUD FURRING AT STL. COLUMN 21 E.I.F.S. - 1-1/2" R-7.5 RIGID INSUL.AND 5/8" SHEATHING ON 3-5/8" MTL. STUD FRAMING W/

23 8"x16"x4" CMU (PROVIDE TIES PER MANUF. REQS.) W/ 1-1/2" AIR SPACE, 2" RIGID INSUL., AND 5/8" SHEATHING ON 3-5/8" MTL. STUD FRAMING 24 STANDING SEAM MTL. ROOF (OWNER

FURNISHED) 25 CONT. R-11 VINYL-FACED BLANKET INSUL.ON R-3 THERMAL SPACER BLOCKS (THERMAL SPACER

BLOCKS TYP. AT EA. PURLIN) 26 R-19 FIBERGLASS BLANKET INSUL. BET. PURLINS (PROVIDE LONGITUDINAL AND TRANSVERSE

27 CONT. BLACK FIBER-REINFORCED VAPOR BARRIER MEMBRANE AT BOTTOM OF PURLINS 28 GUTTER AND FLASHING BY MTL. BLDG. MANUF.

31 3/8" T. x 24" D. CLEAR TEMPERED GLASS SHELVES (TYP.) 32 ADJUSTABLE SHELF BRACKETS &

FLUSH-MOUNTED SHELF TRACKS (TYP.) 33 RAKKS INSIDE WALL MOUNT EH COUNTER

SUPPORT BRACKETS 34 OPEN TO UPPER ROOF ABOVE 35 MTL. C PURLIN BY MTL. BLDG. MANUF.

38 BACK-UP PLATE BY MTL. BLDG. MANUF. 41 STL. SPANDREL ANGLE AT BOTTOM OF MTL. Z

42 COMPRESSIBLE FILLER 43 NEW CONC. SIDEWALK

44 ALUM, DOOR AS SCHEDULED 45 DOOR THRESHOLD AS SCHEDULED - SET ON

46 TURNED-DOWN CONC. SLAB (SEE STRUCT.) 47 STRUCT. STL. COLUMN 48 STRUCT. STL. MOMENT FRAME - PAINT BLACK

49 SOUND ATTENUATION BLANKET (TYP.) 51 LINEAR SLOT RETURN (SEE MECH.)

52 MTL. SUPPORT BANDING - SPACE AS DIMENSIONED ON ENLARGED RCP (TYP.) 53 UNHINGED / RECESSED KNOXBOX (ALUM. FIN. 54 FLUID-APPLIED AIR BARRIER MEMBRANE

55 JOINT SEALANT AND BACKER ROD 56 ALUM. STOREFRONT SYSTEM 57 E.I.F.S. - 1-1/2" R-7.5 RIGID INSUL. AND 5/8"

SHEATHING ON 6" MTL. STUD FRAMING W/ R-13

59 E.I.F.S. DRAINABLE TRACK 60 THRU-WALL STAINLESS STL. FLASHING W/ DRIP EDGE - FLASHED INTO AIR AND WATER BARRIER

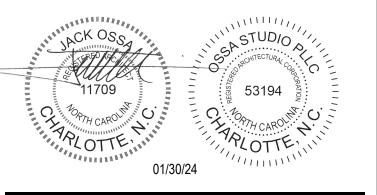
61 R-19 FIBERGLASS BLANKET INSUL. BET. MTL. STUD FRAMING (PROVIDE LONGITUDINAL AND TRANSVERSE MTL. SUPPORT BANDING)

62 STANDING SEAM MTL. ROOF (OWNER FURNISHED) ON 3/4" FRT PLYWOOD ON 6" MTL. STUD FRAMING 68 ROLLERSHADE AT EA. EXT. WINDOW (TYP.)

69 EAVE TRIM, PANEL CAP TRIM, AND FLASHING BY MTL. BLDG. MANUF.



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01/30/24 FOR CONSTRUCTION

Project Name



making church come **alive** 658 GRAHAM ROAD SANFORD NC 27311

3D COMMUNITY CHURCH

Project Number 23024.00

SLAB PLAN

Description

As indicated

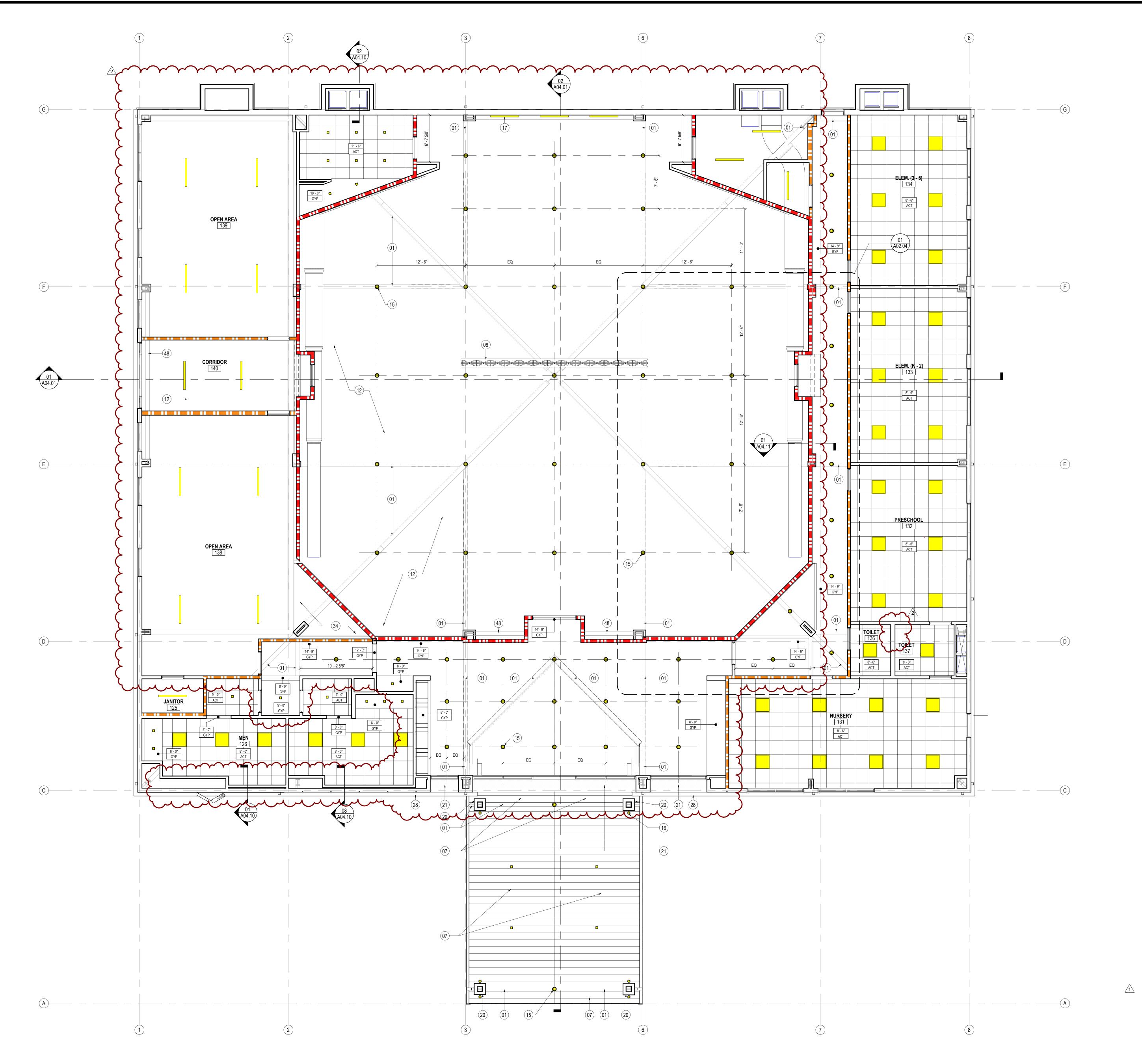
A02.02

SLAB CORE FOR ELEC. OUTLET

(SEE STRUCT. DWGS.)

MECH. / ELEC. SLAB (SEE STRUCT. DWGS.)

BRICK SUPPORT LEDGE (-0'-8") (SEE STRUCT. DWGS.)



01 STRUCT. STL. - PAINT BLACK WHERE EXPOSED
02 GWB AND MDF STAGE APRON - PAINT BLACK
03 ELEVATED FLOOR w/ LVT FINISH ON 1/4" T.
TEMPERED MASONITE, 1/2" HOMASOTE, AND 3/4"

FRT PLYWOOD ON MTL. STUD FRAMING (SEE STRUCT.)

04 SLOPED GWB "CLOUD" AT UNDERSIDE OF STL.

STRUCT.

07 MTL.PANEL CEILING SYSTEM MTL. BLDG. MANUF.

08 LIGHTING TRUSS (SEE STRUCT.)
09 RAMP w/ LVT FINISH ON (2) LAYERS 3/4" FRT

PLYWOOD ON MTL. STUD FRAMING (SEE STRUCT.)

10 STAIR w/ LVT FINISH ON (2) LAYERS 3/4" FRT PLYWOOD ON MTL. STUD FRAMING (SEE

11 GWB CONTROL JOINT

12 EXPOSED ROOF INSULATION13 MTL. Z PURLIN (TYP.)

 14 SUSPENDED PROJECTION SCREEN
 15 LED CYLINDER PENDANT LIGHT FIXTURE (TYP.) (SEE ELEC.)

ELEC.)

17 RECTANGULAR BEAM LED LIGHT FIXTURE (TYP.)

16 LED WALL SCONCE LIGHT FIXTURE (TYP.) (SEE

(SEE ELEC.)

18 RECESSED LED LIGHT FIXTURE (TYP.) (SEE

20 8"x16"x4" CMU (PROVIDE TIES PER MANUF.
REQS.) ON MTL. STUD FURRING AT STL. COLUMN

21 E.I.F.S. - 1-1/2" R-7.5 RIGID INSUL.AND 5/8" SHEATHING ON 3-5/8" MTL. STUD FRAMING W/ R-13 BLANKET INSUL.
22 REVEAL (TYP.)

23 8"x16"x4" CMU (PROVIDE TIES PER MANUF. REQS.) W/ 1-1/2" AIR SPACE, 2" RIGID INSUL., AND 5/8" SHEATHING ON 3-5/8" MTL. STUD FRAMING 24 STANDING SEAM MTL. ROOF (OWNER

FURNISHED)

25 CONT. R-11 VINYL-FACED BLANKET INSUL.ON R-3
THERMAL SPACER BLOCKS (THERMAL SPACER
BLOCKS TYP. AT EA. PURLIN)

26 R-19 FIBERGLASS BLANKET INSUL. BET. PURLINS
 (PROVIDE LONGITUDINAL AND TRANSVERSE
 MTL. SUPPORT BANDING)
 27 CONT. BLACK FIBER-REINFORCED VAPOR

BARRIER MEMBRANE AT BOTTOM OF PURLINS
28 GUTTER AND FLASHING BY MTL. BLDG. MANUF.
29 DOWNSPOUTS BY MTL BLDG. MANUF. (TYP.)

31 3/8" T. x 24" D. CLEAR TEMPERED GLASS

SHELVES (TYP.)

32 ADJUSTABLE SHELF BRACKETS &

FLUSH-MOUNTED SHELF TRACKS (TYP.)

33 RAKKS INSIDE WALL MOUNT EH COUNTER

SUPPORT BRACKETS

34 OPEN TO UPPER ROOF ABOVE

35 MTL. C PURLIN BY MTL. BLDG. MANUF.36 PRE-FIN. COUNTER FLASHING37 TIE-IN TRIM BY MTL. BLDG. MANUF.

38 BACK-UP PLATE BY MTL. BLDG. MANUF.
39 OUTSIDE MTL. CLOSURE BY MTL. BLDG. MANUF.
41 STL. SPANDREL ANGLE AT BOTTOM OF MTL. Z

PURLINS BY MTL. BLDG. MANUFACTURER
42 COMPRESSIBLE FILLER
43 NEW CONC. SIDEWALK

44 ALUM. DOOR AS SCHEDULED45 DOOR THRESHOLD AS SCHEDULED - SET ON

FULL BED OF MASTIC
46 TURNED-DOWN CONC. SLAB (SEE STRUCT.)

47 STRUCT. STL. COLUMN

48 STRUCT. STL. MOMENT FRAME - PAINT BLACK
WHERE EXPOSED

49 SOUND ATTENUATION BLANKET (TYP.)51 LINEAR SLOT RETURN (SEE MECH.)

52 MTL. SUPPORT BANDING - SPACE AS
DIMENSIONED ON ENLARGED RCP (TYP.)

DIMENSIONED ON ENLARGED RCP (TYP.)
53 UNHINGED / RECESSED KNOXBOX (ALUM. FIN.)

54 FLUID-APPLIED AIR BARRIER MEMBRANE55 JOINT SEALANT AND BACKER ROD

56 ALUM. STOREFRONT SYSTEM
57 E.I.F.S. - 1-1/2" R-7.5 RIGID INSUL. AND 5/8"

57 E.I.F.S. - 1-1/2" R-7.5 RIGID INSUL. AND 5/8" SHEATHING ON 6" MTL. STUD FRAMING W/ R-13

BLANKET INSUL.
59 E.I.F.S. DRAINABLE TRACK

60 THRU-WALL STAINLESS STL. FLASHING W/ DRIP EDGE - FLASHED INTO AIR AND WATER BARRIER

EDGE - FLASHED INTO AIR AND WATER BARRIER MEMBRANE

61 R-19 FIBERGLASS BLANKET INSUL. BET. MTL.

STUD FRAMING (PROVIDE LONGITUDINAL AND TRANSVERSE MTL. SUPPORT BANDING)

62 STANDING SEAM MTL. ROOF (OWNER

FURNISHED) ON 3/4" FRT PLYWOOD ON 6" MTL. STUD FRAMING

70 MTL. STUD BRACE (SEE STRUCT.)

68 ROLLERSHADE AT EA. EXT. WINDOW (TYP.)69 EAVE TRIM, PANEL CAP TRIM, AND FLASHING BY MTL. BLDG. MANUF.

Project Name



4539 HEDGEMORE DRIVE, SUITE 101

CHARLOTTE NC 28209

704.890.2053 WWW.OSSASTUDIO.COM

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704.266.6621

ENGITECTURE

www.engitecture.com 704.287.2193

2 10/14/24 RTAP NO. 1

01/30/24 FOR CONSTRUCTION

1 05/8/24 PERMIT REVIEW COMMENTS

General Contractor

ECCLESIA CONSTRUCTION

www.ecclesiaconstruction.com

HILLIARD ENGINEERING, PLLC

community **church**

making church come **alive**658 GRAHAM ROAD
SANFORD NC 27311

Client

3D COMMUNITY CHURCH

Project Number

23024.00

Description

REFLECTED CEILING PLAN

WALL LEGEND

1 HR RATED PARTITION - UL419

2 HR RATED PARTITION - UL419

A02.03

As indicated



01 STRUCT. STL. - PAINT BLACK WHERE EXPOSED 02 GWB AND MDF STAGE APRON - PAINT BLACK 03 ELEVATED FLOOR w/ LVT FINISH ON 1/4" T. TEMPERED MASONITE, 1/2" HOMASOTE, AND 3/4"

FRT PLYWOOD ON MTL. STUD FRAMING (SEE

04 SLOPED GWB "CLOUD" AT UNDERSIDE OF STL. 07 MTL.PANEL CEILING SYSTEM MTL. BLDG. MANUF.

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11 GWB CONTROL JOINT

12 EXPOSED ROOF INSULATION 13 MTL. Z PURLIN (TYP.)

R-13 BLANKET INSUL.

14 SUSPENDED PROJECTION SCREEN 15 LED CYLINDER PENDANT LIGHT FIXTURE (TYP.) (SEE ELEC.)

17 RECTANGULAR BEAM LED LIGHT FIXTURE (TYP.)

16 LED WALL SCONCE LIGHT FIXTURE (TYP.) (SEE

(SEE ELEC.) 18 RECESSED LED LIGHT FIXTURE (TYP.) (SEE

20 8"x16"x4" CMU (PROVIDE TIES PER MANUF. REQS.) ON MTL. STUD FURRING AT STL. COLUMN 21 E.I.F.S. - 1-1/2" R-7.5 RIGID INSUL.AND 5/8"

SHEATHING ON 3-5/8" MTL. STUD FRAMING W/

22 REVEAL (TYP.) 23 8"x16"x4" CMU (PROVIDE TIES PER MANUF. REQS.) W/ 1-1/2" AIR SPACE, 2" RIGID INSUL., AND 5/8" SHEATHING ON 3-5/8" MTL. STUD FRAMING

24 STANDING SEAM MTL. ROOF (OWNER FURNISHED) 25 CONT. R-11 VINYL-FACED BLANKET INSUL.ON R-3 THERMAL SPACER BLOCKS (THERMAL SPACER

BLOCKS TYP. AT EA. PURLIN) 26 R-19 FIBERGLASS BLANKET INSUL. BET. PURLINS (PROVIDE LONGITUDINAL AND TRANSVERSE MTL. SUPPORT BANDING)

27 CONT. BLACK FIBER-REINFORCED VAPOR BARRIER MEMBRANE AT BOTTOM OF PURLINS 28 GUTTER AND FLASHING BY MTL. BLDG. MANUF. 29 DOWNSPOUTS BY MTL BLDG. MANUF. (TYP.)

31 3/8" T. x 24" D. CLEAR TEMPERED GLASS SHELVES (TYP.) 32 ADJUSTABLE SHELF BRACKETS &

FLUSH-MOUNTED SHELF TRACKS (TYP.) 33 RAKKS INSIDE WALL MOUNT EH COUNTER SUPPORT BRACKETS

34 OPEN TO UPPER ROOF ABOVE 35 MTL. C PURLIN BY MTL. BLDG. MANUF. 36 PRE-FIN. COUNTER FLASHING

37 TIE-IN TRIM BY MTL. BLDG. MANUF. 38 BACK-UP PLATE BY MTL. BLDG. MANUF. 39 OUTSIDE MTL. CLOSURE BY MTL. BLDG. MANUF. 41 STL. SPANDREL ANGLE AT BOTTOM OF MTL. Z

PURLINS BY MTL. BLDG. MANUFACTURER 42 COMPRESSIBLE FILLER 43 NEW CONC. SIDEWALK

WHERE EXPOSED

44 ALUM. DOOR AS SCHEDULED 45 DOOR THRESHOLD AS SCHEDULED - SET ON

FULL BED OF MASTIC 46 TURNED-DOWN CONC. SLAB (SEE STRUCT.) 47 STRUCT. STL. COLUMN 48 STRUCT. STL. MOMENT FRAME - PAINT BLACK

49 SOUND ATTENUATION BLANKET (TYP.) 51 LINEAR SLOT RETURN (SEE MECH.) 52 MTL. SUPPORT BANDING - SPACE AS

DIMENSIONED ON ENLARGED RCP (TYP.) 53 UNHINGED / RECESSED KNOXBOX (ALUM. FIN.) 54 FLUID-APPLIED AIR BARRIER MEMBRANE

55 JOINT SEALANT AND BACKER ROD 56 ALUM. STOREFRONT SYSTEM 57 E.I.F.S. - 1-1/2" R-7.5 RIGID INSUL. AND 5/8"

SHEATHING ON 6" MTL. STUD FRAMING W/ R-13 BLANKET INSUL. 59 E.I.F.S. DRAINABLE TRACK

60 THRU-WALL STAINLESS STL. FLASHING W/ DRIP EDGE - FLASHED INTO AIR AND WATER BARRIER 61 R-19 FIBERGLASS BLANKET INSUL. BET. MTL.

STUD FRAMING (PROVIDE LONGITUDINAL AND TRANSVERSE MTL. SUPPORT BANDING) 62 STANDING SEAM MTL. ROOF (OWNER FURNISHED) ON 3/4" FRT PLYWOOD ON 6" MTL.

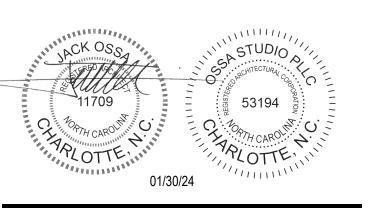
68 ROLLERSHADE AT EA. EXT. WINDOW (TYP.) 69 EAVE TRIM, PANEL CAP TRIM, AND FLASHING BY MTL. BLDG. MANUF.

70 MTL. STUD BRACE (SEE STRUCT.)

STUD FRAMING



4539 HEDGEMORE DRIVE, SUITE 101 CHARLOTTE NC 28209 704.890.2053 WWW.OSSASTUDIO.COM



PROJECT TEAM

General Contractor ECCLESIA CONSTRUCTION www.ecclesiaconstruction.com 803.327.5670

Civil Engineering HILLIARD ENGINEERING, PLLC www.isaacsgrp.com 919.352.2834

Structural Engineering PROVIDENCE PARTNERS www.providencepartnersinc.com 704.266.6621

Mechanical, Electrical, Plumbing & Fire Protection **ENGITECTURE** www.engitecture.com 704.287.2193

01/30/24 FOR CONSTRUCTION 2 10/14/24 RTAP NO. 1

Project Name



community **church** making church come **alive**

658 GRAHAM ROAD SANFORD NC 27311

3D COMMUNITY CHURCH

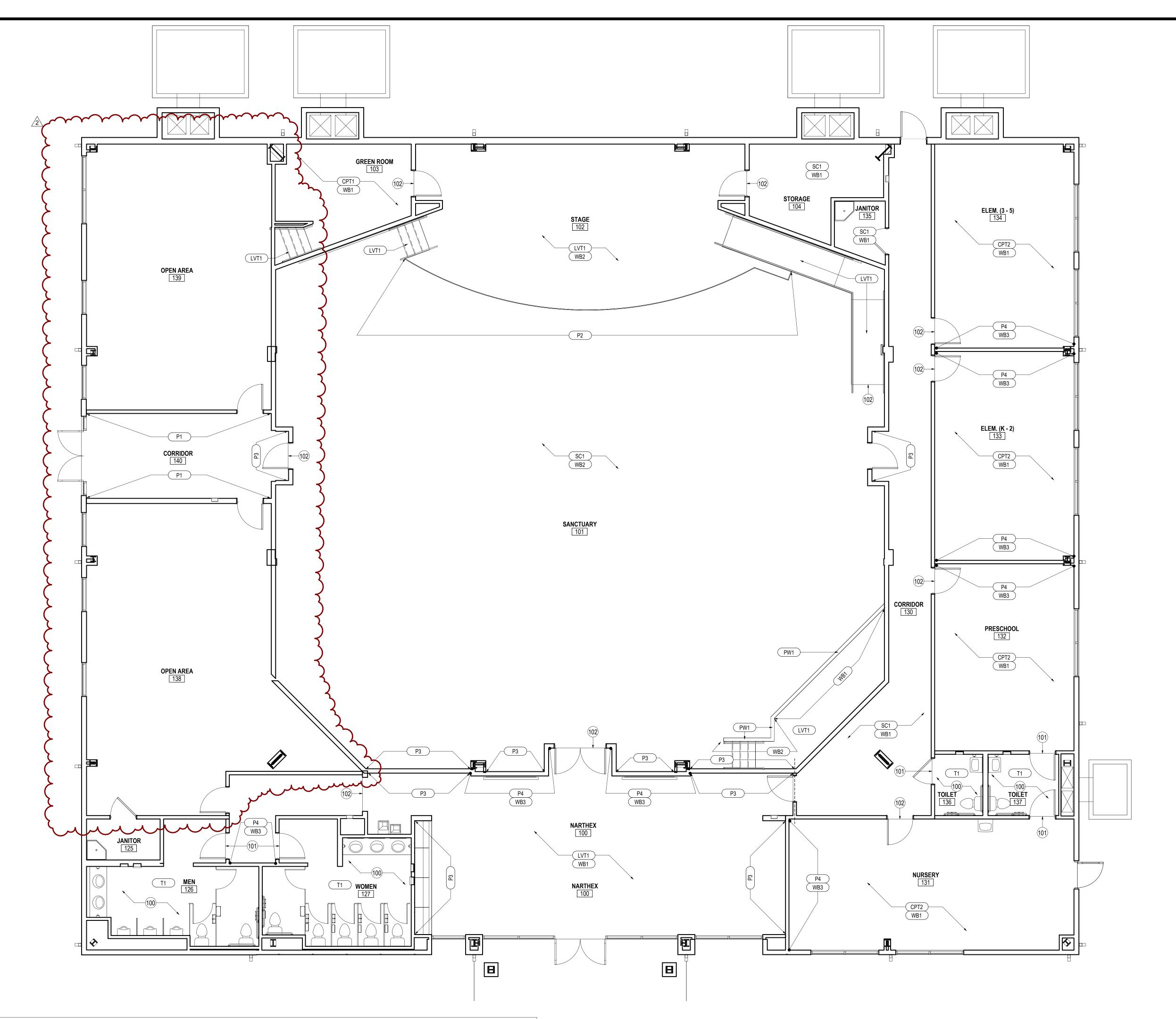
Project Number 23024.00

ENLARGED REFLECTED CEILING

3/8" = 1'-0"

A02.04

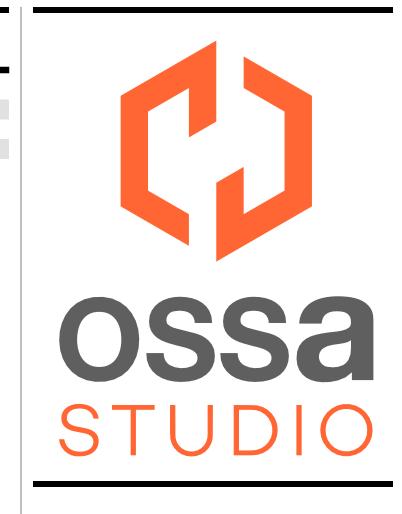
ENLARGED REFLECTED CEILING PLAN SCALE: 3/8" = 1'-0"



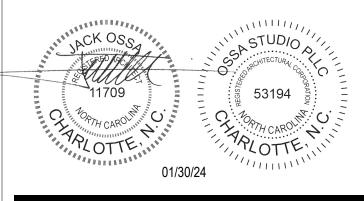
	MATERIALS SCHEDULE									
TAG	DESCRIPTION	MANUFACTURER	NAME	COMMENTS	CONTACT					
ACT1	ACOUSTICAL CEILING TILE	ARMSTRONG	CORTEGA #769	24" x 24", - 15/16" PRELUDE XL GRID						
AG1	PRE-FIN. ALUMINUM GUTTER	-	-	OWNER FURNISHED						
AP1	SUSPENDED ACOUSTICAL PANEL SYSTEM	ACOUSTICAL PRODUCTS & SYSTEMS	ECOCORE	AME-08 ANTIQUE WHITE	SCOTT REASON sreason@lbiboyd.com					
AS1	ALUMINUM STOREFRONT	YKK	THERMALLY BROKEN	ANODIZED ALUMINUM FINISH - 6 1/4"x2 1/2" MULLION						
CMU1	CONCRETE MASONRY UNIT	JOHNSON CONCRETE PRODUCTS	BLACK BOULDER JCL-3621	8"x16"x4" GROUND FACE (STACK BOND) w/ HOLCIM SANTEE BLACK S MORTAR						
CPT1	CARPET TILE - GRAY	TARKETT	AGGREGATE 11016 ANCHOR BOLT 28301	MONOLITHIC - PROVIDE TARKETT METAL EDGE TRANSITION STRIP AT ALL TRANSITIONS	2'-0" x 2'-0" TILES					
CPT2	CARPET TILE - BLUE	TARKETT	CHAIN REACTION 11183 SHUTTLE SAPPHIRE 72207	MONOLITHIC - PROVIDE TARKETT METAL EDGE TRANSITION STRIP AT ALL TRANSITIONS	2'-0" x 2'-0" TILES					
EIFS1	EXTERIOR INSULATION FINISHING SYSTEM	DRYVIT	DPR FINISHES	SANDBLAST626A Cloudy Day						
EIFS2	EXTERIOR INSULATION FINISHING SYSTEM	DRYVIT	DPR FINISHES	SANDBLAST621 Whale Gray						
GL1	1" INSULATED GLASS	GUARDIAN - SUNGUARD	SNX 62/27	TEMPERED LOW E	TYPICAL AT EXTERIOR WALL					
GL2	INTERIOR GLASS		1/4" TEMPERED GLASS							
LVT1	LUXURY VINYL TILE	TARKETT	ID LATITUDE WOOD 4692	6"x48"						
P1	PAINT - WHITE	SHERWIN WILLIAMS	SW 6196 FROSTY WHITE	WALLS: EGGSHELL - DOORS, FRAMES, TRIM: SEMIGLOSS						
P2	PAINT - BLACK	SHERWIN WILLIAMS	TBD	WALLS: EGGSHELL - DOORS, FRAMES, TRIM: SEMIGLOSS						
P3	PAINT - DARK GRAY	SHERWIN WILLIAMS	SW 7045 SOFTWARE	WALLS: EGGSHELL - DOORS, FRAMES, TRIM: SEMIGLOSS						
P4	PAINT - BLUE	SHERWIN WILLIAMS	SW 6958 DYNAMIC BLUE	WALLS: EGGSHELL - DOORS, FRAMES, TRIM: SEMIGLOSS						
PL1	PLASTIC LAMINATE	FORMICA	5795 NG							
PW1	PAINTED WOOD CAP	-	PAINTED TO MATCH WALL	1X WOOD						
RL1	PRE-FIN. ALUMINUM DOWNSPOUT	-	-	OWNER FURNISHED						
SC1	SEALED CONCRETE - SCARIFY TO AN EVEN FLAT SURFACE									
SS1	SOLID SURFACE	FORMICA	406 LUNA BRITTE WHITE	25" X COUNTERTOP LENGTH	1 1/2" FRONT					
SS2	SOLID SURFACE	FORMICA	406 LUNA BRITTE WHITE	10" X COUNTERTOP LENGTH - PROVIDE PLYWOOD BACKING	1 1/2" FRONT					
SSM1	STANDING SEAM METAL ROOF	-	-	OWNER FURNISHED						
T1	CERAMIC TILE	CROSSVILLE	MAGMA AV295	PROVIDE ANTIFRACTURE MEMBRANE - STRAIGHT STACK - GROUT: MAPEI 107 IRON-FER-HIERRO	PROVIDE SCHLUTER STRIP AT ALL EDGES					
T2	CERAMIC TILE	CROSSVILLE	FLANNEL SUIT AV317	PROVIDE ANTIFRACTURE MEMBRANE - STRAIGHT STACK - GROUT: MAPEI 107 IRON-FER-HIERRO	PROVIDE SCHLUTER STRIP AT ALL EDGES					
WB1	WALL - GRAY	TARKETT	PERCEPTIONS	RWDC CONTOUR TA5 COLONIAL GRAY	4.25"					
WB2	APPLIED 1/2" MDF		PAINTED TO MATCH WALL	SEMIGLOSS	12" TALL					
WB3	WALL BASE - BLUE	TARKETT	PERCEPTIONS	RWDC 18 CONTOUR 18 NAVY BLUE	4.25"					

FINISH SHEDULE											
					- -						
NUMBER	NAME	FLOOR	WALL BASE	WALL FINISH	CEILING	COMMENTS					
100	NARTHEX	LVT1	WB1	P1 / P3 / P4	GWB / OPEN TO STRUCTURE						
101	SANCTUARY	SC1	WB2	P1 / P3	GWB / OPEN TO STRUCTURE						
102	STAGE	SC1	WB2	P1	GWB / OPEN TO STRUCTURE						
103	GREEN ROOM	CPT1	WB1	P1	ACT1						
104	STORAGE	SC1	WB1	P1	OPEN TO STRUCTURE						
125	JANITOR	SC1	WB1	P1	OPEN TO STRUCTURE						
126	MEN	T1	-	P1 / P4	ACT1 / GWB						
127	WOMEN	T1	-	P1 / P4	ACT1 / GWB						
130	CORRIDOR	SC1	WB1	P1 / P3	OPEN TO STRUCTURE / GWB						
131	NURSERY	CPT1	WB1	P1 / P4	ACT1						
132	PRESCHOOL	CPT1	WB1	P1 / P4	ACT1						
133	ELEM. (K - 2)	CPT1	WB1	P1 / P4	ACT1						
134	ELEM. (3 - 5)	CPT1	WB1	P1 / P4	ACT1						
135	JANITOR	SC1	WB1	P1	OPEN TO STRUCTURE						
136	TOILET	T1	-	P1	GWB						
137	TOILET	T1	-	P1	GWB						
138	OPEN AREA	SC1	-	P1	OPEN TO STRUCTURE						
139	OPEN AREA	SC1	-	P1	OPEN TO STRUCTURE						
140	CORRIDOR	SC1	WB1	P1	OPEN TO STRUCTURE						

100 PROVIDE 'T2' TILE UP TO 5'-0" AT ALL WALLS 101 SCHLUTER SCHIENE STRIP FLOOR TRANSITION 102 RUBBER FLOOR TRANSITION STRIP



4539 HEDGEMORE DRIVE, SUITE 101 CHARLOTTE NC 28209 704.890.2053 WWW.OSSASTUDIO.COM



PROJECT TEAM

General Contractor ECCLESIA CONSTRUCTION www.ecclesiaconstruction.com 803.327.5670

Civil Engineering HILLIARD ENGINEERING, PLLC www.isaacsgrp.com 919.352.2834

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Mechanical, Electrical, Plumbing & Fire Protection ENGITECTURE www.engitecture.com 704.287.2193

01/30/24 FOR CONSTRUCTION 2 10/14/24 RTAP NO. 1

Project Name



community church
making church come alive 658 GRAHAM ROAD SANFORD NC 27311

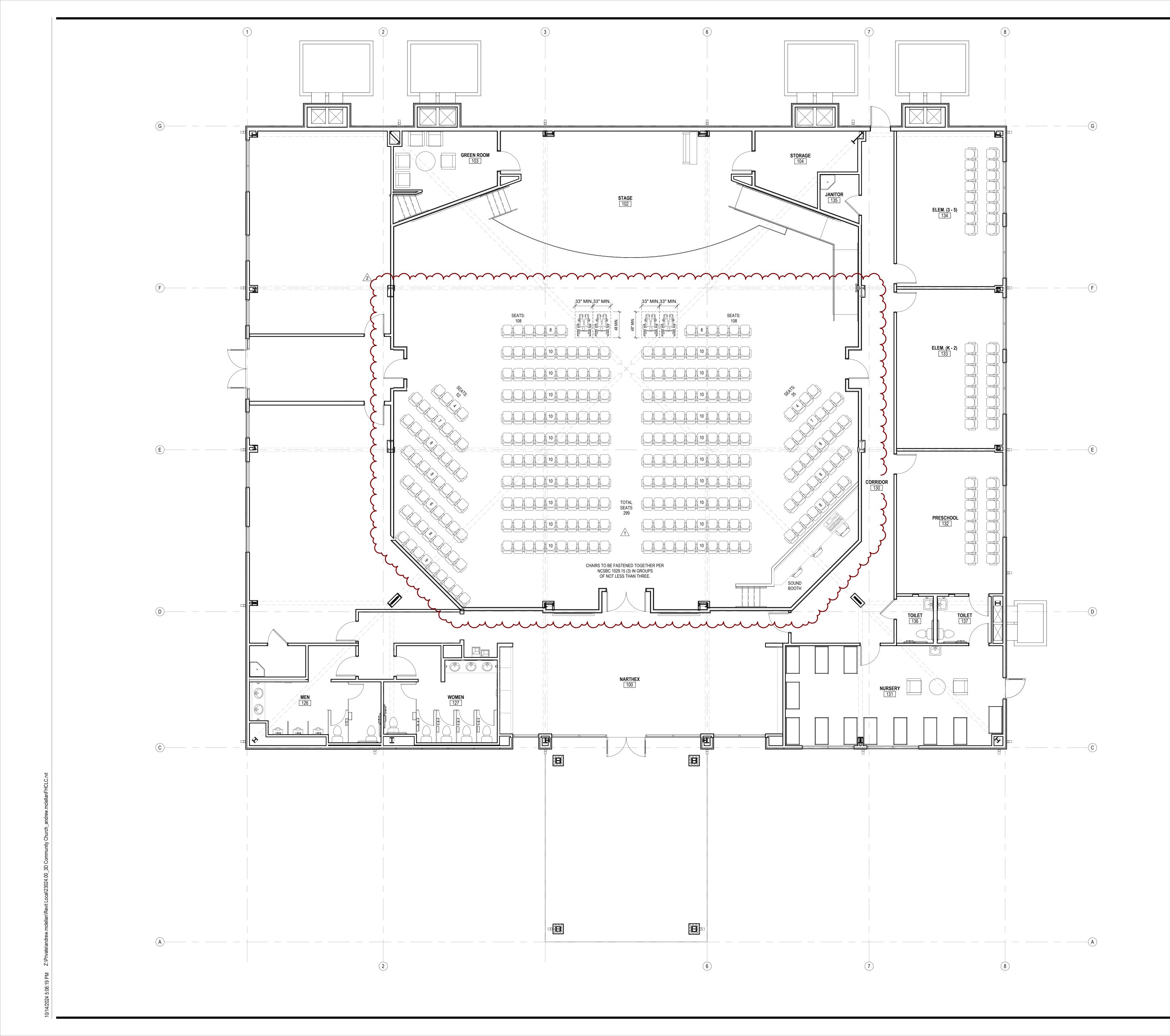
3D COMMUNITY CHURCH

Project Number 23024.00

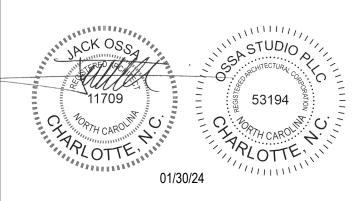
Description FINISH PLAN

3/16" = 1'-0"

A02.05







PROJECT TEAM

General Contractor ECCLESIA CONSTRUCTION www.ecclesiaconstruction.com 803.327.5670

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Structural Engineering
PROVIDENCE PARTNERS
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704.266.6621

Mechanical, Electrical, Plumbing & Fire Protection ENGITECTURE www.engitecture.com 704.287.2193

01/30/24 FOR CONSTRUCTION
1 05/8/24 PERMIT REVIEW COMMENTS
2 10/14/24 RTAP NO. 1

Project Name



community church
making church come alive

658 GRAHAM ROAD SANFORD NC 27311

Client

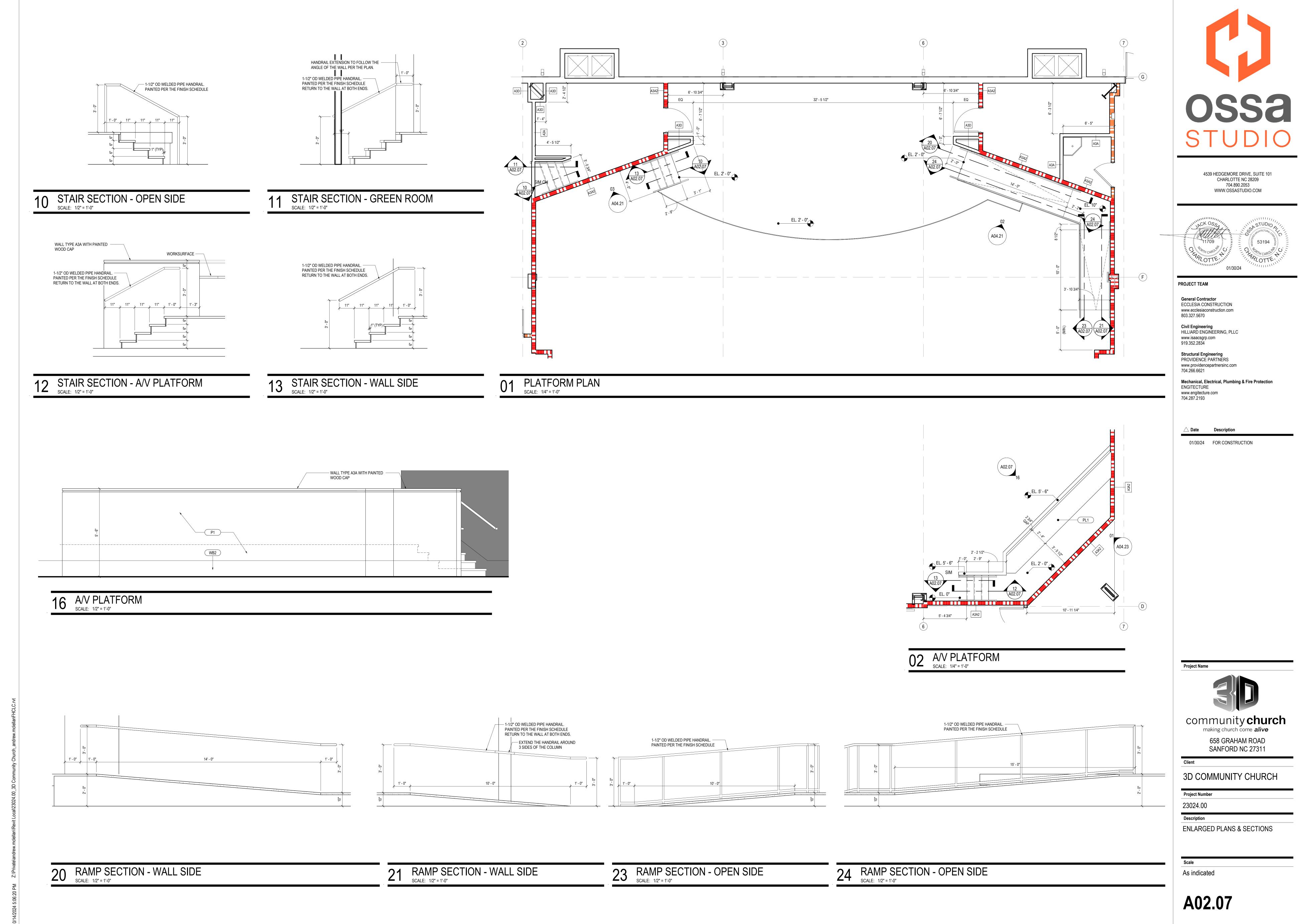
3D COMMUNITY CHURCH

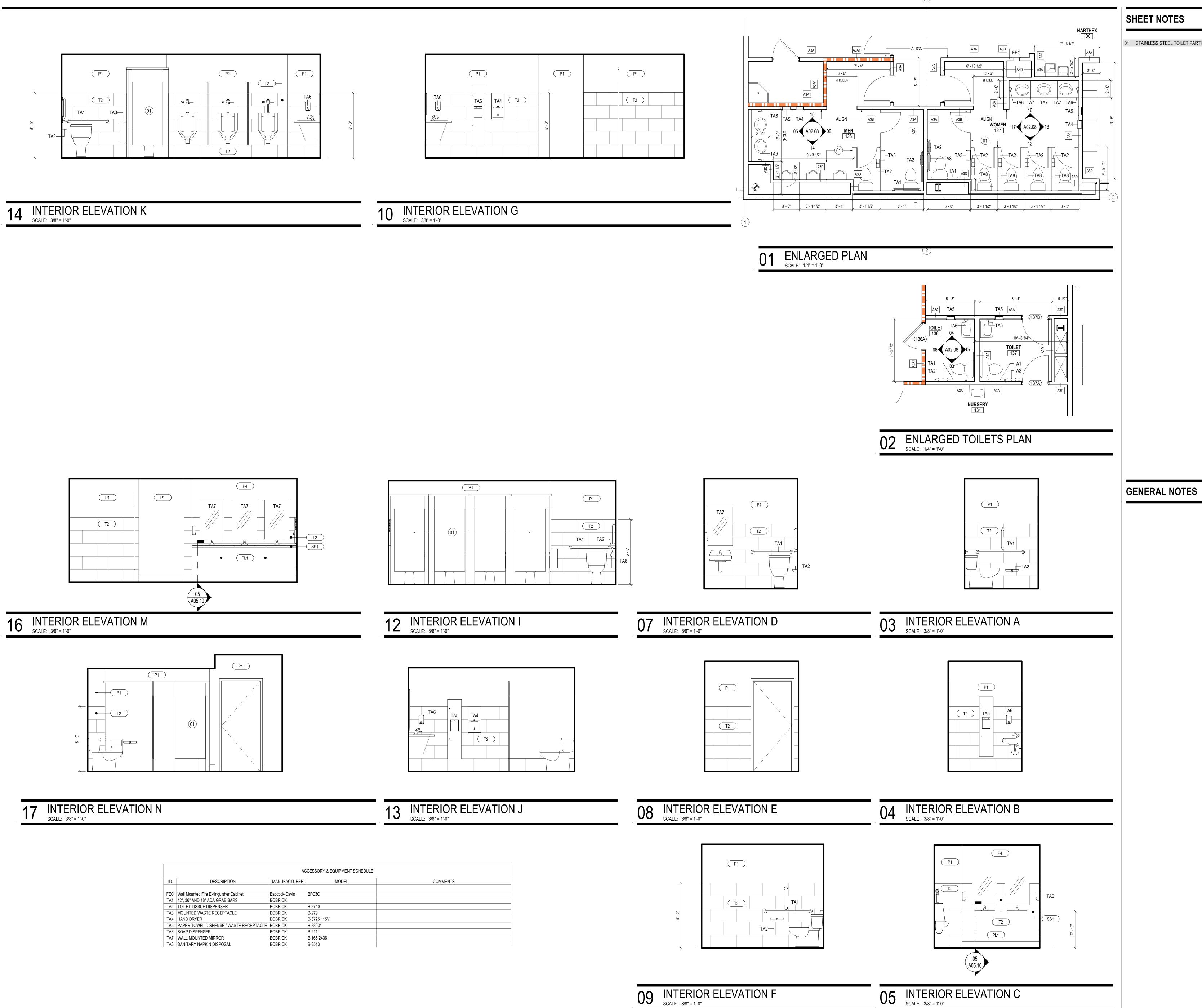
Project Number 23024.00

Description
FURNITURE PLAN

3/16" = 1'-0"

A02.06

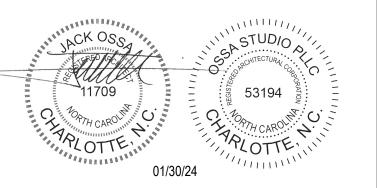




01 STAINLESS STEEL TOILET PARTITIONS



4539 HEDGEMORE DRIVE, SUITE 101 CHARLOTTE NC 28209 704.890.2053 WWW.OSSASTUDIO.COM



PROJECT TEAM

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Structural Engineering PROVIDENCE PARTNERS www.providencepartnersinc.com

704.266.6621

Mechanical, Electrical, Plumbing & Fire Protection ENGITECTURE www.engitecture.com 704.287.2193

 \triangle Date Description

01/30/24 FOR CONSTRUCTION

Project Name



community church
making church come alive

658 GRAHAM ROAD SANFORD NC 27311

3D COMMUNITY CHURCH

Project Number

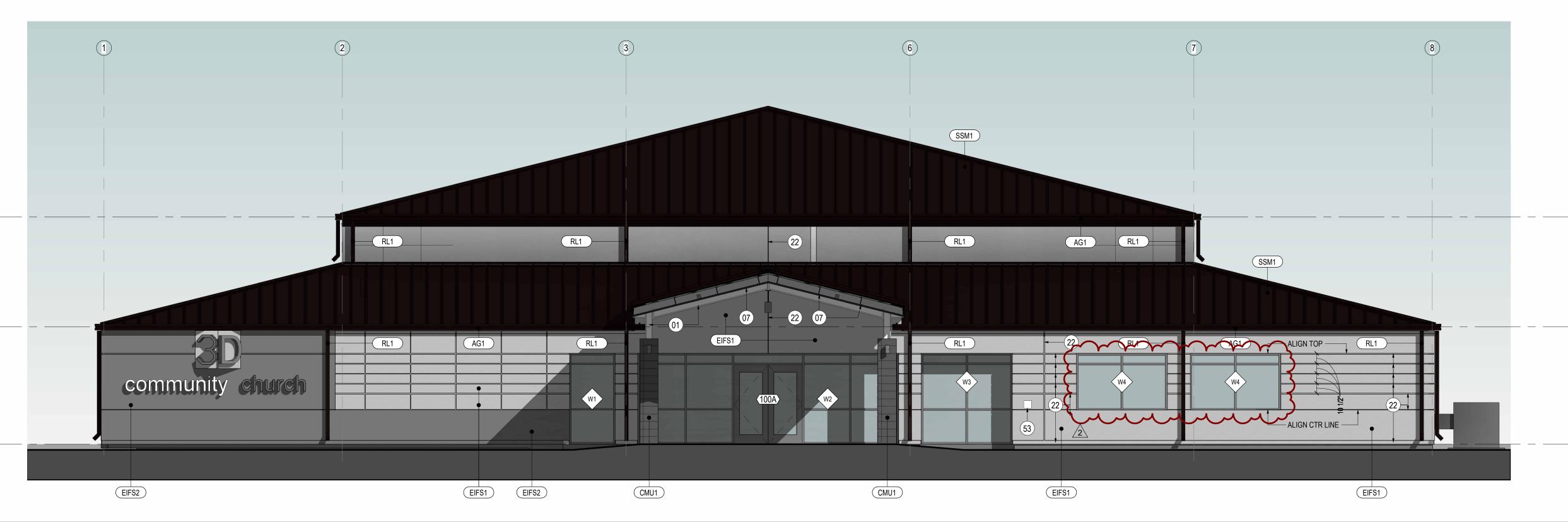
23024.00

Description **ENLARGED PLANS & ELEVATIONS**

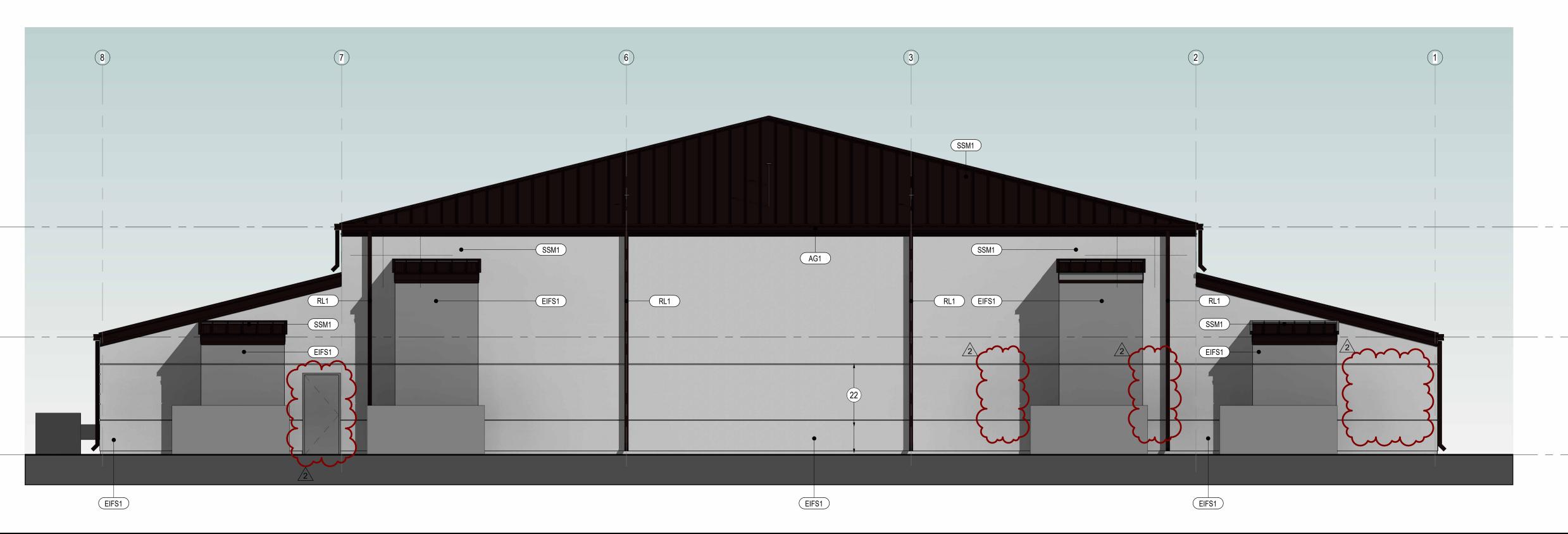
As indicated

A02.08

	MATERIALS SCHEDULE									
TAG	DESCRIPTION	MANUFACTURER	NAME	COMMENTS	CONTACT					
ACT1	ACOUSTICAL CEILING TILE	ARMSTRONG	CORTEGA #769	24" x 24", - 15/16" PRELUDE XL GRID						
AG1	PRE-FIN. ALUMINUM GUTTER	-	-	OWNER FURNISHED						
AP1	SUSPENDED ACOUSTICAL PANEL SYSTEM	ACOUSTICAL PRODUCTS & SYSTEMS	ECOCORE	AME-08 ANTIQUE WHITE	SCOTT REASON sreason@lbiboyd.com					
AS1	ALUMINUM STOREFRONT	YKK	THERMALLY BROKEN	ANODIZED ALUMINUM FINISH - 6 1/4"x2 1/2" MULLION						
CMU1	CONCRETE MASONRY UNIT	JOHNSON CONCRETE PRODUCTS	BLACK BOULDER JCL-3621	8"x16"x4" GROUND FACE (STACK BOND) w/ HOLCIM SANTEE BLACK S MORTAR						
CPT1	CARPET TILE - GRAY	TARKETT	AGGREGATE 11016 ANCHOR BOLT 28301	MONOLITHIC - PROVIDE TARKETT METAL EDGE TRANSITION STRIP AT ALL TRANSITIONS	2'-0" x 2'-0" TILES					
CPT2	CARPET TILE - BLUE	TARKETT	CHAIN REACTION 11183 SHUTTLE SAPPHIRE 72207	MONOLITHIC - PROVIDE TARKETT METAL EDGE TRANSITION STRIP AT ALL TRANSITIONS	2'-0" x 2'-0" TILES					
EIFS1	EXTERIOR INSULATION FINISHING SYSTEM	DRYVIT	DPR FINISHES	SANDBLAST626A Cloudy Day						
EIFS2	EXTERIOR INSULATION FINISHING SYSTEM	DRYVIT	DPR FINISHES	SANDBLAST621 Whale Gray						
GL1	1" INSULATED GLASS	GUARDIAN - SUNGUARD	SNX 62/27	TEMPERED LOW E	TYPICAL AT EXTERIOR WALL					
GL2	INTERIOR GLASS		1/4" TEMPERED GLASS							
LVT1	LUXURY VINYL TILE	TARKETT	ID LATITUDE WOOD 4692	6"x48"						
P1	PAINT - WHITE	SHERWIN WILLIAMS	SW 6196 FROSTY WHITE	WALLS: EGGSHELL - DOORS, FRAMES, TRIM: SEMIGLOSS						
P2	PAINT - BLACK	SHERWIN WILLIAMS	TBD	WALLS: EGGSHELL - DOORS, FRAMES, TRIM: SEMIGLOSS						
P3	PAINT - DARK GRAY	SHERWIN WILLIAMS	SW 7045 SOFTWARE	WALLS: EGGSHELL - DOORS, FRAMES, TRIM: SEMIGLOSS						
P4	PAINT - BLUE	SHERWIN WILLIAMS	SW 6958 DYNAMIC BLUE	WALLS: EGGSHELL - DOORS, FRAMES, TRIM: SEMIGLOSS						
PL1	PLASTIC LAMINATE	FORMICA	5795 NG							
PW1	PAINTED WOOD CAP	-	PAINTED TO MATCH WALL	1X WOOD						
RL1	PRE-FIN. ALUMINUM DOWNSPOUT	-	-	OWNER FURNISHED						
SC1	SEALED CONCRETE - SCARIFY TO AN EVEN FLAT SURFACE									
SS1	SOLID SURFACE	FORMICA	406 LUNA BRITTE WHITE	25" X COUNTERTOP LENGTH	1 1/2" FRONT					
SS2	SOLID SURFACE	FORMICA	406 LUNA BRITTE WHITE	10" X COUNTERTOP LENGTH - PROVIDE PLYWOOD BACKING	1 1/2" FRONT					
SSM1	STANDING SEAM METAL ROOF	-	-	OWNER FURNISHED						
T1	CERAMIC TILE	CROSSVILLE	MAGMA AV295	PROVIDE ANTIFRACTURE MEMBRANE - STRAIGHT STACK - GROUT: MAPEI 107 IRON-FER-HIERRO	PROVIDE SCHLUTER STRIP AT ALL EDGES					
T2	CERAMIC TILE	CROSSVILLE	FLANNEL SUIT AV317	PROVIDE ANTIFRACTURE MEMBRANE - STRAIGHT STACK - GROUT: MAPEI 107 IRON-FER-HIERRO	PROVIDE SCHLUTER STRIP AT ALL EDGES					
WB1	WALL - GRAY	TARKETT	PERCEPTIONS	RWDC CONTOUR TA5 COLONIAL GRAY	4.25"					
WB2	APPLIED 1/2" MDF		PAINTED TO MATCH WALL	SEMIGLOSS	12" TALL					
WB3	WALL BASE - BLUE	TARKETT	PERCEPTIONS	RWDC 18 CONTOUR 18 NAVY BLUE	4.25"					



FRONT ELEVATION SCALE: 3/16" = 1'-0"



SHEET NOTES

01 STRUCT. STL. - PAINT BLACK WHERE EXPOSED 02 GWB AND MDF STAGE APRON - PAINT BLACK 03 ELEVATED FLOOR w/ LVT FINISH ON 1/4" T. TEMPERED MASONITE, 1/2" HOMASOTE, AND 3/4"

FRT PLYWOOD ON MTL. STUD FRAMING (SEE STRUCT.) 04 SLOPED GWB "CLOUD" AT UNDERSIDE OF STL.

STRUCT. 07 MTL.PANEL CEILING SYSTEM MTL. BLDG. MANUF.

08 LIGHTING TRUSS (SEE STRUCT.) 09 RAMP w/ LVT FINISH ON (2) LAYERS 3/4" FRT

PLYWOOD ON MTL. STUD FRAMING (SEE STRUCT.) 10 STAIR w/ LVT FINISH ON (2) LAYERS 3/4" FRT PLYWOOD ON MTL. STUD FRAMING (SEE

STRUCT.) 11 GWB CONTROL JOINT

12 EXPOSED ROOF INSULATION

13 MTL. Z PURLIN (TYP.)

14 SUSPENDED PROJECTION SCREEN 15 LED CYLINDER PENDANT LIGHT FIXTURE (TYP.) (SEE ELEC.)

16 LED WALL SCONCE LIGHT FIXTURE (TYP.) (SEE

17 RECTANGULAR BEAM LED LIGHT FIXTURE (TYP.) (SEE ELEC.)

18 RECESSED LED LIGHT FIXTURE (TYP.) (SEE

20 8"x16"x4" CMU (PROVIDE TIES PER MANUF. REQS.) ON MTL. STUD FURRING AT STL. COLUMN 21 E.I.F.S. - 1-1/2" R-7.5 RIGID INSUL.AND 5/8" SHEATHING ON 3-5/8" MTL. STUD FRAMING W/ R-13 BLANKET INSUL.

22 REVEAL (TYP.) 23 8"x16"x4" CMU (PROVIDE TIES PER MANUF. REQS.) W/ 1-1/2" AIR SPACE, 2" RIGID INSUL., AND 5/8" SHEATHING ON 3-5/8" MTL. STUD FRAMING

24 STANDING SEAM MTL. ROOF (OWNER FURNISHED) 25 CONT. R-11 VINYL-FACED BLANKET INSUL.ON R-3

THERMAL SPACER BLOCKS (THERMAL SPACER BLOCKS TYP. AT EA. PURLIN) 26 R-19 FIBERGLASS BLANKET INSUL. BET. PURLINS (PROVIDE LONGITUDINAL AND TRANSVERSE

MTL. SUPPORT BANDING) 27 CONT. BLACK FIBER-REINFORCED VAPOR BARRIER MEMBRANE AT BOTTOM OF PURLINS 28 GUTTER AND FLASHING BY MTL. BLDG. MANUF.

29 DOWNSPOUTS BY MTL BLDG. MANUF. (TYP.) 31 3/8" T. x 24" D. CLEAR TEMPERED GLASS

SHELVES (TYP.) 32 ADJUSTABLE SHELF BRACKETS & FLUSH-MOUNTED SHELF TRACKS (TYP.)

33 RAKKS INSIDE WALL MOUNT EH COUNTER SUPPORT BRACKETS 34 OPEN TO UPPER ROOF ABOVE

35 MTL. C PURLIN BY MTL. BLDG. MANUF. 36 PRE-FIN. COUNTER FLASHING

37 TIE-IN TRIM BY MTL. BLDG. MANUF. 38 BACK-UP PLATE BY MTL. BLDG. MANUF. 39 OUTSIDE MTL. CLOSURE BY MTL. BLDG. MANUF. 41 STL. SPANDREL ANGLE AT BOTTOM OF MTL. Z

PURLINS BY MTL. BLDG. MANUFACTURER 42 COMPRESSIBLE FILLER

43 NEW CONC. SIDEWALK

44 ALUM. DOOR AS SCHEDULED 45 DOOR THRESHOLD AS SCHEDULED - SET ON **FULL BED OF MASTIC**

46 TURNED-DOWN CONC. SLAB (SEE STRUCT.) 47 STRUCT. STL. COLUMN

48 STRUCT. STL. MOMENT FRAME - PAINT BLACK

WHERE EXPOSED 49 SOUND ATTENUATION BLANKET (TYP.) 51 LINEAR SLOT RETURN (SEE MECH.)

52 MTL. SUPPORT BANDING - SPACE AS DIMENSIONED ON ENLARGED RCP (TYP.)

53 UNHINGED / RECESSED KNOXBOX (ALUM. FIN.)

54 FLUID-APPLIED AIR BARRIER MEMBRANE 55 JOINT SEALANT AND BACKER ROD

56 ALUM. STOREFRONT SYSTEM 57 E.I.F.S. - 1-1/2" R-7.5 RIGID INSUL. AND 5/8"

SHEATHING ON 6" MTL. STUD FRAMING W/ R-13

BLANKET INSUL. 59 E.I.F.S. DRAINABLE TRACK

60 THRU-WALL STAINLESS STL. FLASHING W/ DRIP EDGE - FLASHED INTO AIR AND WATER BARRIER

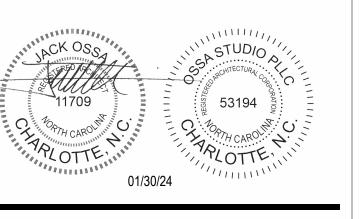
61 R-19 FIBERGLASS BLANKET INSUL. BET. MTL. STUD FRAMING (PROVIDE LONGITUDINAL AND TRANSVERSE MTL. SUPPORT BANDING)

62 STANDING SEAM MTL. ROOF (OWNER FURNISHED) ON 3/4" FRT PLYWOOD ON 6" MTL. STUD FRAMING

68 ROLLERSHADE AT EA. EXT. WINDOW (TYP.) 69 EAVE TRIM, PANEL CAP TRIM, AND FLASHING BY

MTL. BLDG. MANUF. 70 MTL. STUD BRACE (SEE STRUCT.)

4539 HEDGEMORE DRIVE, SUITE 101 CHARLOTTE NC 28209 704.890.2053 WWW.OSSASTUDIO.COM



PROJECT TEAM

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01/30/24 FOR CONSTRUCTION 2 10/14/24 RTAP NO. 1

Project Name



making church come **alive** 658 GRAHAM ROAD

SANFORD NC 27311

3D COMMUNITY CHURCH

Project Number 23024.00

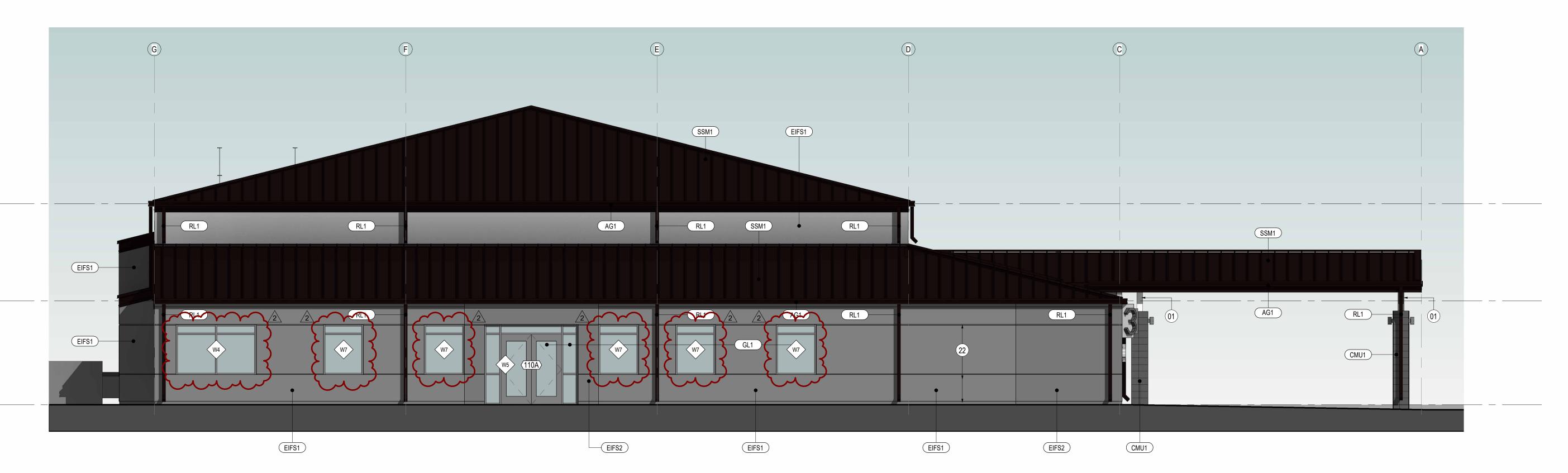
Description **EXTERIOR ELEVATIONS**

3/16" = 1'-0"

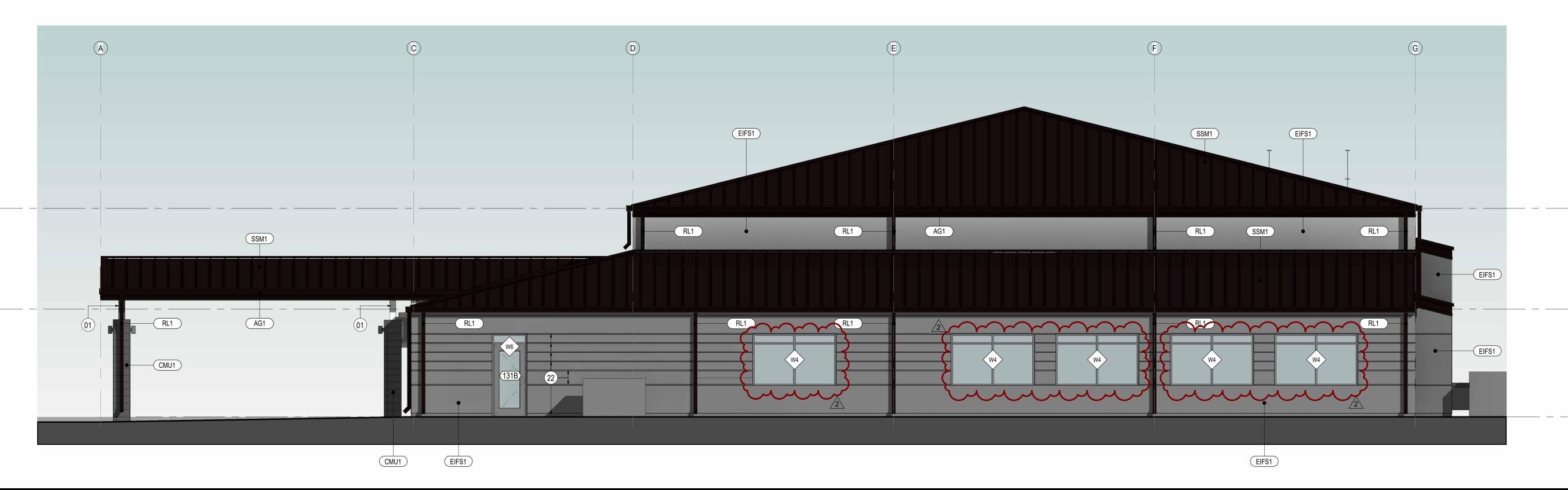
A03.01

02 REAR ELEVATION SCALE: 3/16" = 1'-0"

MATERIALS SCHEDULE									
TAG	DESCRIPTION	MANUFACTURER	NAME	COMMENTS	CONTACT				
ACT1 AC	COUSTICAL CEILING TILE	ARMSTRONG	CORTEGA #769	24" x 24", - 15/16" PRELUDE XL GRID					
AG1 PR	RE-FIN. ALUMINUM GUTTER	-	-	OWNER FURNISHED					
	JSPENDED ACOUSTICAL PANEL YSTEM	ACOUSTICAL PRODUCTS & SYSTEMS	ECOCORE	AME-08 ANTIQUE WHITE	SCOTT REASON sreason@lbiboyd.com				
AS1 AL	LUMINUM STOREFRONT	YKK	THERMALLY BROKEN	ANODIZED ALUMINUM FINISH - 6 1/4"x2 1/2" MULLION					
CMU1 CC	ONCRETE MASONRY UNIT	JOHNSON CONCRETE PRODUCTS	BLACK BOULDER JCL-3621	8"x16"x4" GROUND FACE (STACK BOND) w/ HOLCIM SANTEE BLACK S MORTAR					
CPT1 CA	ARPET TILE - GRAY	TARKETT	AGGREGATE 11016 ANCHOR BOLT 28301	MONOLITHIC - PROVIDE TARKETT METAL EDGE TRANSITION STRIP AT ALL TRANSITIONS	2'-0" x 2'-0" TILES				
CPT2 CA	ARPET TILE - BLUE	TARKETT	CHAIN REACTION 11183 SHUTTLE SAPPHIRE 72207	MONOLITHIC - PROVIDE TARKETT METAL EDGE TRANSITION STRIP AT ALL TRANSITIONS	2'-0" x 2'-0" TILES				
	KTERIOR INSULATION FINISHING YSTEM	DRYVIT	DPR FINISHES	SANDBLAST626A Cloudy Day					
	KTERIOR INSULATION FINISHING YSTEM	DRYVIT	DPR FINISHES	SANDBLAST621 Whale Gray					
GL1 1"	INSULATED GLASS	GUARDIAN - SUNGUARD	SNX 62/27	TEMPERED LOW E	TYPICAL AT EXTERIOR WALL				
GL2 IN	TERIOR GLASS		1/4" TEMPERED GLASS						
LVT1 LU	JXURY VINYL TILE	TARKETT	ID LATITUDE WOOD 4692	6"x48"					
P1 PA	AINT - WHITE	SHERWIN WILLIAMS	SW 6196 FROSTY WHITE	WALLS: EGGSHELL - DOORS, FRAMES, TRIM: SEMIGLOSS					
P2 PA	AINT - BLACK	SHERWIN WILLIAMS	TBD	WALLS: EGGSHELL - DOORS, FRAMES, TRIM: SEMIGLOSS					
P3 PA	AINT - DARK GRAY	SHERWIN WILLIAMS	SW 7045 SOFTWARE	WALLS: EGGSHELL - DOORS, FRAMES, TRIM: SEMIGLOSS					
P4 PA	AINT - BLUE	SHERWIN WILLIAMS	SW 6958 DYNAMIC BLUE	WALLS: EGGSHELL - DOORS, FRAMES, TRIM: SEMIGLOSS					
PL1 PL	ASTIC LAMINATE	FORMICA	5795 NG						
PW1 PA	AINTED WOOD CAP	-	PAINTED TO MATCH WALL	1X WOOD					
RL1 PR	RE-FIN. ALUMINUM DOWNSPOUT	-	-	OWNER FURNISHED					
	EALED CONCRETE - SCARIFY TO N EVEN FLAT SURFACE								
SS1 SC	OLID SURFACE	FORMICA	406 LUNA BRITTE WHITE	25" X COUNTERTOP LENGTH	1 1/2" FRONT				
SS2 SC	OLID SURFACE	FORMICA	406 LUNA BRITTE WHITE	10" X COUNTERTOP LENGTH - PROVIDE PLYWOOD BACKING	1 1/2" FRONT				
SSM1 ST	FANDING SEAM METAL ROOF	-	-	OWNER FURNISHED					
T1 CE	ERAMIC TILE	CROSSVILLE	MAGMA AV295	PROVIDE ANTIFRACTURE MEMBRANE - STRAIGHT STACK - GROUT: MAPEI 107 IRON-FER-HIERRO	PROVIDE SCHLUTER STRIP AT ALL EDGES				
T2 CE	ERAMIC TILE	CROSSVILLE	FLANNEL SUIT AV317	PROVIDE ANTIFRACTURE MEMBRANE - STRAIGHT STACK - GROUT: MAPEI 107 IRON-FER-HIERRO	PROVIDE SCHLUTER STRIP AT ALL EDGES				
WB1 WA	ALL - GRAY	TARKETT	PERCEPTIONS	RWDC CONTOUR TA5 COLONIAL GRAY	4.25"				
WB2 AP	PPLIED 1/2" MDF		PAINTED TO MATCH WALL	SEMIGLOSS	12" TALL				
WB3 WA	ALL BASE - BLUE	TARKETT	PERCEPTIONS	RWDC 18 CONTOUR 18 NAVY BLUE	4.25"				



01 LEFT ELEVATION SCALE: 3/16" = 1'-0"



SHEET NOTES

01 STRUCT. STL. - PAINT BLACK WHERE EXPOSED
02 GWB AND MDF STAGE APRON - PAINT BLACK
03 ELEVATED FLOOR w/ LVT FINISH ON 1/4" T.
TEMPERED MASONITE, 1/2" HOMASOTE, AND 3/4"
ERT PLYWOOD ON MTL. STUD FRAMING (SEE

FRT PLYWOOD ON MTL. STUD FRAMING (SEE STRUCT.)

04 SLOPED GWB "CLOUD" AT UNDERSIDE OF STL.

STRUCT.

07 MTL.PANEL CEILING SYSTEM MTL. BLDG. MANUF.

08 LIGHTING TRUSS (SEE STRUCT.)
09 RAMP w/ LVT FINISH ON (2) LAYERS 3/4" FRT

PLYWOOD ON MTL. STUD FRAMING (SEE STRUCT.)

10 STAIR w/ LVT FINISH ON (2) LAYERS 3/4" FRT PLYWOOD ON MTL. STUD FRAMING (SEE

STRUCT.)
11 GWB CONTROL JOINT

12 EXPOSED ROOF INSULATION

13 MTL. Z PURLIN (TYP.)

14 SUSPENDED PROJECTION SCREEN
15 LED CYLINDER PENDANT LIGHT FIXTURE (TYP.) (SEE ELEC.)

16 LED WALL SCONCE LIGHT FIXTURE (TYP.) (SEE

ELEC.)
17 RECTANGULAR BEAM LED LIGHT FIXTURE (TYP.)

(SEE ELEC.)

18 RECESSED LED LIGHT FIXTURE (TYP.) (SEE

20 8"x16"x4" CMU (PROVIDE TIES PER MANUF. REQS.) ON MTL. STUD FURRING AT STL. COLUMN
21 E.I.F.S. - 1-1/2" R-7.5 RIGID INSUL.AND 5/8" SHEATHING ON 3-5/8" MTL. STUD FRAMING W/R-13 BLANKET INSUL.

22 REVEAL (TYP.)
23 8"x16"x4" CMU (PROVIDE TIES PER MANUF. REQS.) W/ 1-1/2" AIR SPACE, 2" RIGID INSUL., AND 5/8" SHEATHING ON 3-5/8" MTL. STUD FRAMING

24 STANDING SEAM MTL. ROOF (OWNER FURNISHED)
 25 CONT. R-11 VINYL-FACED BLANKET INSUL.ON R-3 THERMAL SPACER BLOCKS (THERMAL SPACER

BLOCKS TYP. AT EA. PURLIN)

26 R-19 FIBERGLASS BLANKET INSUL. BET. PURLINS
(PROVIDE LONGITUDINAL AND TRANSVERSE
MTL. SUPPORT BANDING)

27 CONT. BLACK FIBER-REINFORCED VAPOR
BARRIER MEMBRANE AT BOTTOM OF PURLINS

28 GUTTER AND FLASHING BY MTL. BLDG. MANUF.
29 DOWNSPOUTS BY MTL BLDG. MANUF. (TYP.)
31 3/8" T. x 24" D. CLEAR TEMPERED GLASS

SHELVES (TYP.)

32 ADJUSTABLE SHELF BRACKETS &
FLUSH-MOUNTED SHELF TRACKS (TYP.)

33 RAKKS INSIDE WALL MOUNT EH COUNTER SUPPORT BRACKETS

34 OPEN TO UPPER ROOF ABOVE35 MTL. C PURLIN BY MTL. BLDG. MANUF.36 PRE-FIN. COUNTER FLASHING

37 TIE-IN TRIM BY MTL. BLDG. MANUF.38 BACK-UP PLATE BY MTL. BLDG. MANUF.39 OUTSIDE MTL. CLOSURE BY MTL. BLDG. MANUF.

41 STL. SPANDREL ANGLE AT BOTTOM OF MTL. Z
PURLINS BY MTL. BLDG. MANUFACTURER
42 COMPRESSIBLE FILLER

42 COMPRESSIBLE FILLER
43 NEW CONC. SIDEWALK

44 ALUM. DOOR AS SCHEDULED45 DOOR THRESHOLD AS SCHEDULED - SET ON

FULL BED OF MASTIC

46 TURNED-DOWN CONC. SLAB (SEE STRUCT.)

47 STRUCT STL COLUMN

47 STRUCT. STL. COLUMN
48 STRUCT. STL. MOMENT FRAME - PAINT BLACK
WHERE EXPOSED

49 SOUND ATTENUATION BLANKET (TYP.)
 51 LINEAR SLOT RETURN (SEE MECH.)
 52 MTL. SUPPORT BANDING - SPACE AS

DIMENSIONED ON ENLARGED RCP (TYP.)

53 UNHINGED / RECESSED KNOXBOX (ALUM. FIN.)

54 FLUID-APPLIED AIR BARRIER MEMBRANE

JOINT SEALANT AND BACKER ROD
 ALUM. STOREFRONT SYSTEM
 E.I.F.S. - 1-1/2" R-7.5 RIGID INSUL. AND 5/8"

SHEATHING ON 6" MTL. STUD FRAMING W/ R-13 BLANKET INSUL. 59 E.I.F.S. DRAINABLE TRACK

60 THRU-WALL STAINLESS STL. FLASHING W/ DRIP EDGE - FLASHED INTO AIR AND WATER BARRIER

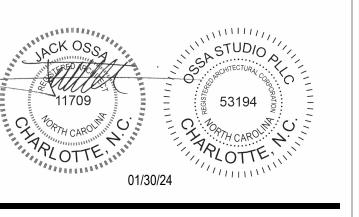
MEMBRANE
61 R-19 FIBERGLASS BLANKET INSUL. BET. MTL.
STUD FRAMING (PROVIDE LONGITUDINAL AND
TRANSVERSE MTL. SUPPORT BANDING)

62 STANDING SEAM MTL. ROOF (OWNER FURNISHED) ON 3/4" FRT PLYWOOD ON 6" MTL. STUD FRAMING
68 ROLLERSHADE AT EA. EXT. WINDOW (TYP.)

68 ROLLERSHADE AT EA. EXT. WINDOW (TYP.)
69 EAVE TRIM, PANEL CAP TRIM, AND FLASHING BY MTL. BLDG. MANUF.

70 MTL. STUD BRACE (SEE STRUCT.)

4539 HEDGEMORE DRIVE, SUITE 101 CHARLOTTE NC 28209 704.890.2053 WWW.OSSASTUDIO.COM



PROJECT TEAM

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Mechanical, Electrical, Plumbing & Fire Protection ENGITECTURE www.engitecture.com 704.287.2193

01/30/24 FOR CONSTRUCTION 2 10/14/24 RTAP NO. 1

Project Name



making church come **alive**658 GRAHAM ROAD
SANFORD NC 27311

Client

3D COMMUNITY CHURCH

Project Number 23024.00

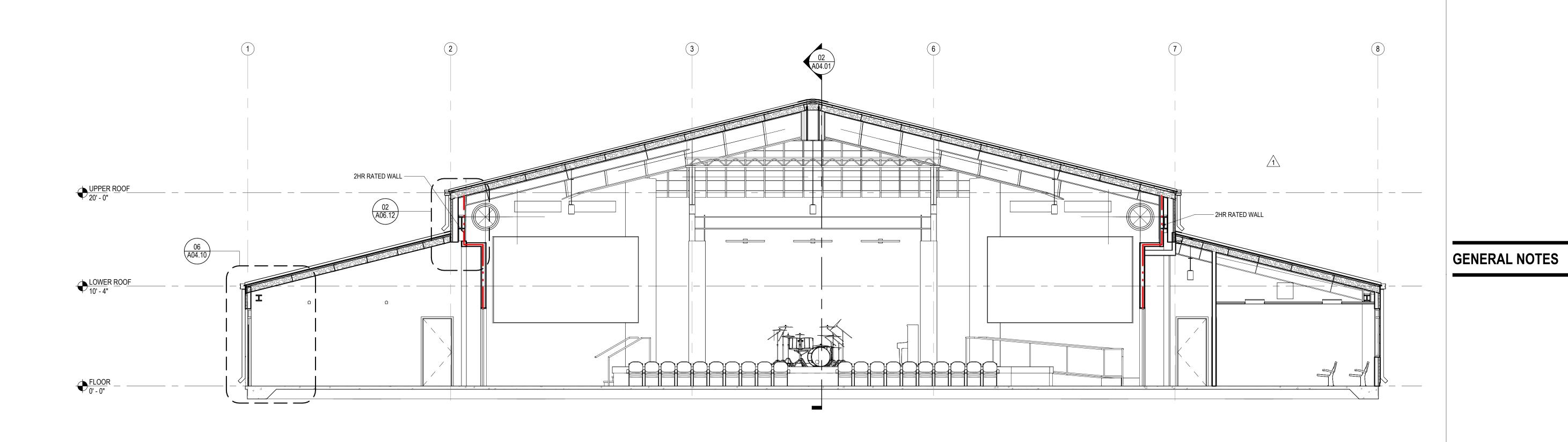
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EXTERIOR ELEVATIONS

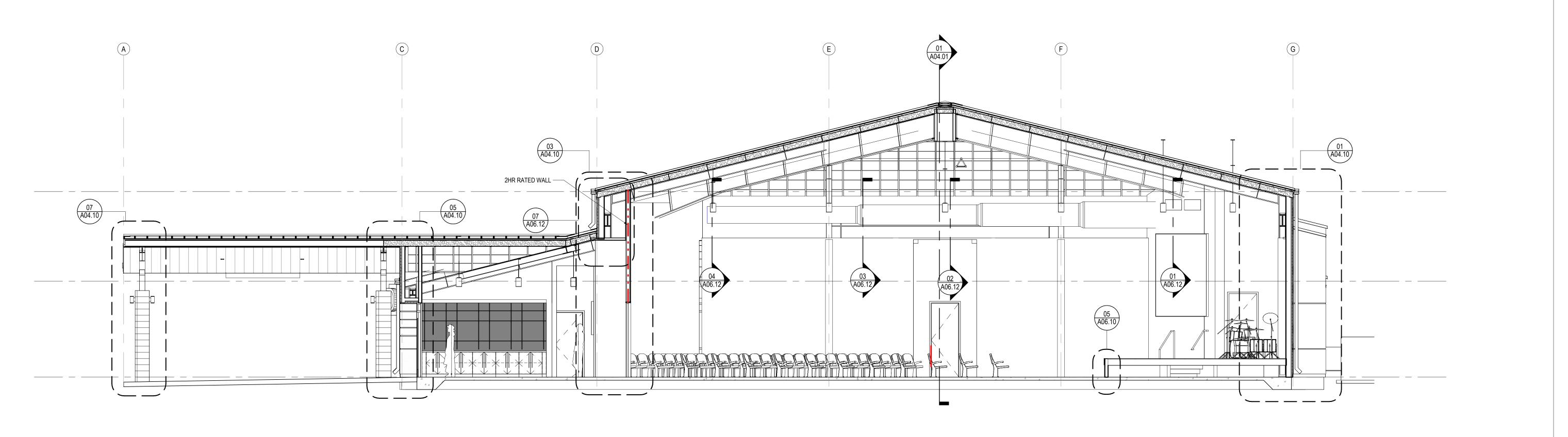
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A03.02

02 RIGHT ELEVATION SCALE: 3/16" = 1'-0"



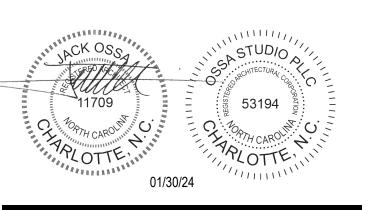
01 Section 1 SCALE: 3/16" = 1'-0"



SHEET NOTES



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01/30/24 FOR CONSTRUCTION
1 05/8/24 PERMIT REVIEW COMMENTS

Project Name



making church come **alive**658 GRAHAM ROAD
SANFORD NC 27311

Client

3D COMMUNITY CHURCH

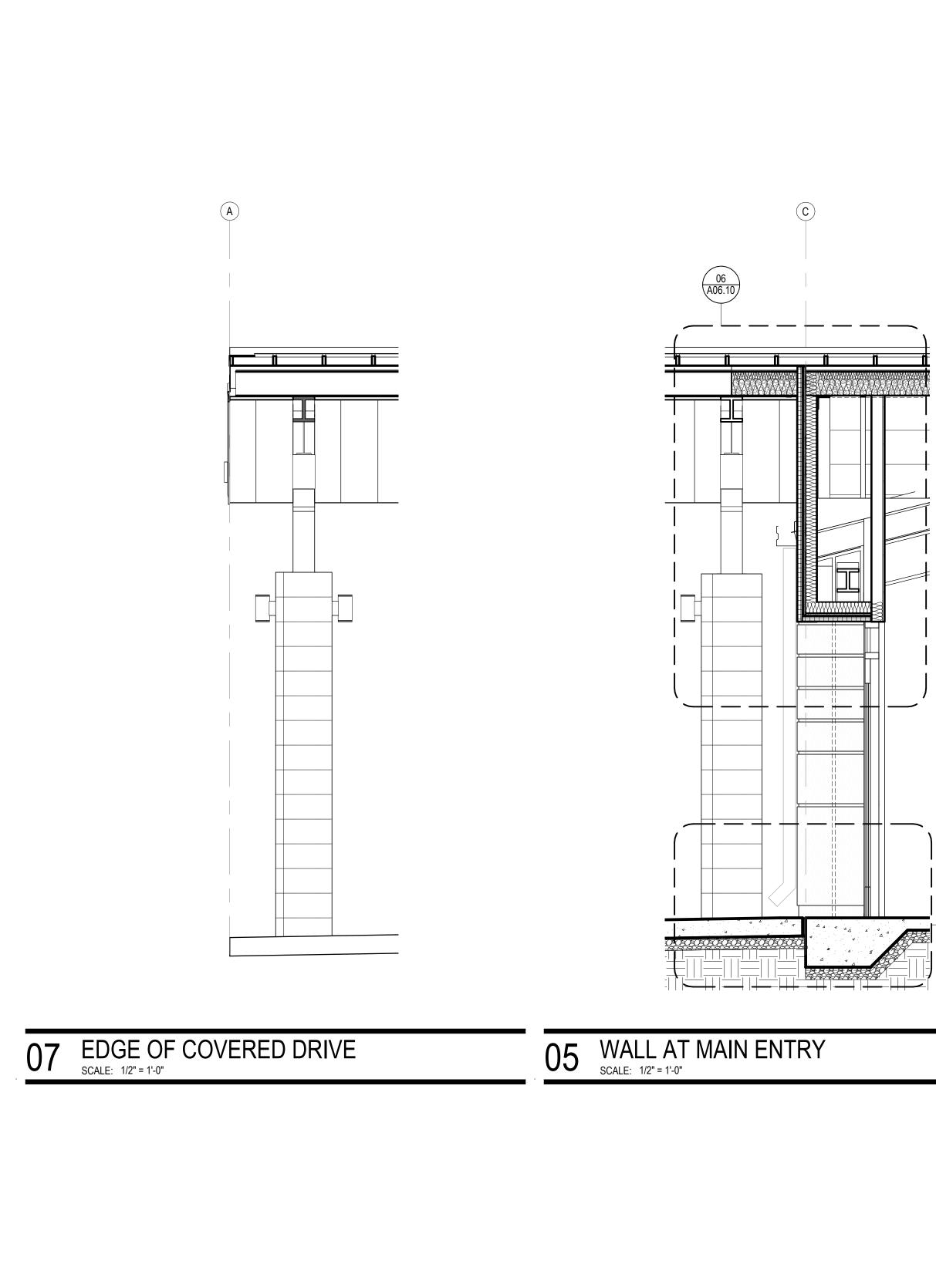
Project Number 23024.00

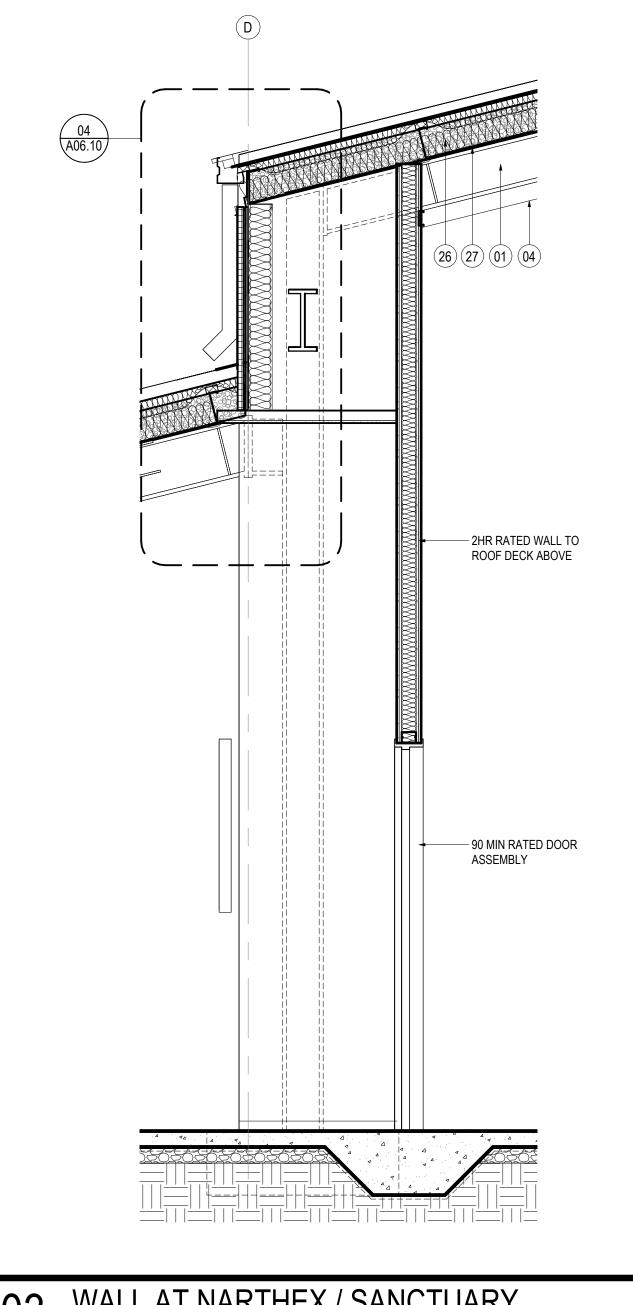
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SECTIONS

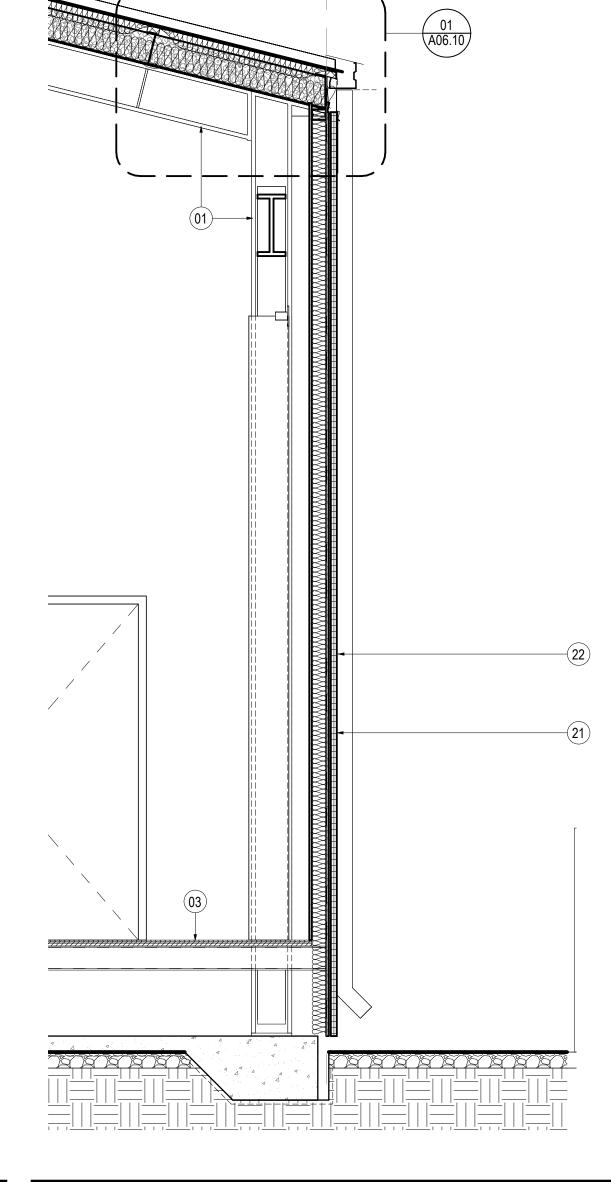
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3/16" = 1'-0"

A04.01

02 Section 2
SCALE: 3/16" = 1'-0"

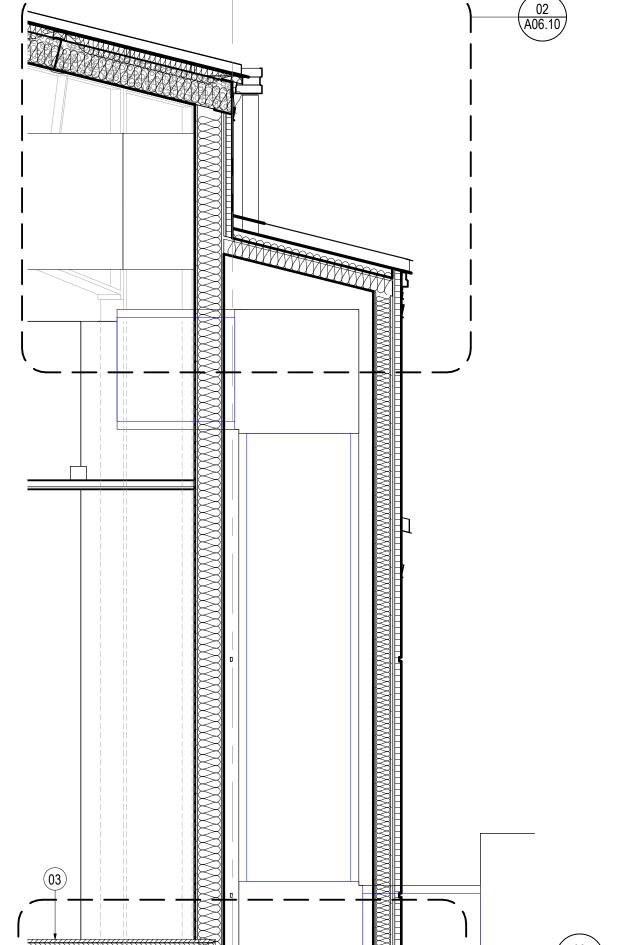






03 WALL AT NARTHEX / SANCTUARY

SCALE: 1/2" = 1'-0"



01 NORTH WALL AT STAGE
SCALE: 1/2" = 1'-0"

03 A06.10

SHEET NOTES

01 STRUCT. STL. - PAINT BLACK WHERE EXPOSED 02 GWB AND MDF STAGE APRON - PAINT BLACK 03 ELEVATED FLOOR w/ LVT FINISH ON 1/4" T. TEMPERED MASONITE, 1/2" HOMASOTE, AND 3/4" FRT PLYWOOD ON MTL. STUD FRAMING (SEE

04 SLOPED GWB "CLOUD" AT UNDERSIDE OF STL.

07 MTL.PANEL CEILING SYSTEM MTL. BLDG. MANUF.

08 LIGHTING TRUSS (SEE STRUCT.) 09 RAMP w/ LVT FINISH ON (2) LAYERS 3/4" FRT PLYWOOD ON MTL. STUD FRAMING (SEE

10 STAIR w/ LVT FINISH ON (2) LAYERS 3/4" FRT PLYWOOD ON MTL. STUD FRAMING (SEE

STRUCT.) 11 GWB CONTROL JOINT

12 EXPOSED ROOF INSULATION 13 MTL. Z PURLIN (TYP.)

14 SUSPENDED PROJECTION SCREEN 15 LED CYLINDER PENDANT LIGHT FIXTURE (TYP.) (SEE ELEC.) 16 LED WALL SCONCE LIGHT FIXTURE (TYP.) (SEE

17 RECTANGULAR BEAM LED LIGHT FIXTURE (TYP.)

(SEE ELEC.)

18 RECESSED LED LIGHT FIXTURE (TYP.) (SEE 20 8"x16"x4" CMU (PROVIDE TIES PER MANUF. REQS.) ON MTL. STUD FURRING AT STL. COLUMN

21 E.I.F.S. - 1-1/2" R-7.5 RIGID INSUL.AND 5/8" SHEATHING ON 3-5/8" MTL. STUD FRAMING W/ R-13 BLANKET INSUL. 22 REVEAL (TYP.)

23 8"x16"x4" CMU (PROVIDE TIES PER MANUF. REQS.) W/ 1-1/2" AIR SPACE, 2" RIGID INSUL., AND 5/8" SHEATHING ON 3-5/8" MTL. STUD FRAMING 24 STANDING SEAM MTL. ROOF (OWNER FURNISHED)

25 CONT. R-11 VINYL-FACED BLANKET INSUL.ON R-3 THERMAL SPACER BLOCKS (THERMAL SPACER BLOCKS TYP. AT EA. PURLIN) 26 R-19 FIBERGLASS BLANKET INSUL. BET. PURLINS

(PROVIDE LONGITUDINAL AND TRANSVERSE MTL. SUPPORT BANDING) 27 CONT. BLACK FIBER-REINFORCED VAPOR BARRIER MEMBRANE AT BOTTOM OF PURLINS 28 GUTTER AND FLASHING BY MTL. BLDG. MANUF.

29 DOWNSPOUTS BY MTL BLDG. MANUF. (TYP.) 31 3/8" T. x 24" D. CLEAR TEMPERED GLASS SHELVES (TYP.)

FLUSH-MOUNTED SHELF TRACKS (TYP.) 33 RAKKS INSIDE WALL MOUNT EH COUNTER SUPPORT BRACKETS 34 OPEN TO UPPER ROOF ABOVE

32 ADJUSTABLE SHELF BRACKETS &

35 MTL. C PURLIN BY MTL. BLDG. MANUF. 36 PRE-FIN. COUNTER FLASHING 37 TIE-IN TRIM BY MTL. BLDG. MANUF. 38 BACK-UP PLATE BY MTL. BLDG. MANUF.

39 OUTSIDE MTL. CLOSURE BY MTL. BLDG. MANUF. 41 STL. SPANDREL ANGLE AT BOTTOM OF MTL. Z PURLINS BY MTL. BLDG. MANUFACTURER

42 COMPRESSIBLE FILLER 43 NEW CONC. SIDEWALK 44 ALUM. DOOR AS SCHEDULED

45 DOOR THRESHOLD AS SCHEDULED - SET ON FULL BED OF MASTIC 46 TURNED-DOWN CONC. SLAB (SEE STRUCT.)

47 STRUCT. STL. COLUMN 48 STRUCT. STL. MOMENT FRAME - PAINT BLACK WHERE EXPOSED 49 SOUND ATTENUATION BLANKET (TYP.)

51 LINEAR SLOT RETURN (SEE MECH.) 52 MTL. SUPPORT BANDING - SPACE AS DIMENSIONED ON ENLARGED RCP (TYP.)

53 UNHINGED / RECESSED KNOXBOX (ALUM. FIN.) 54 FLUID-APPLIED AIR BARRIER MEMBRANE 55 JOINT SEALANT AND BACKER ROD

56 ALUM. STOREFRONT SYSTEM 57 E.I.F.S. - 1-1/2" R-7.5 RIGID INSUL. AND 5/8" SHEATHING ON 6" MTL. STUD FRAMING W/ R-13 BLANKET INSUL.

59 E.I.F.S. DRAINABLE TRACK 60 THRU-WALL STAINLESS STL. FLASHING W/ DRIP EDGE - FLASHED INTO AIR AND WATER BARRIER

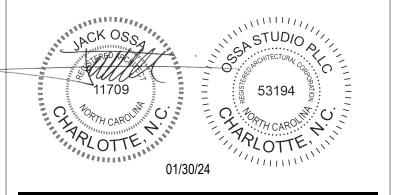
61 R-19 FIBERGLASS BLANKET INSUL. BET. MTL. STUD FRAMING (PROVIDE LONGITUDINAL AND

TRANSVERSE MTL. SUPPORT BANDING) 62 STANDING SEAM MTL. ROOF (OWNER FURNISHED) ON 3/4" FRT PLYWOOD ON 6" MTL. STUD FRAMING

68 ROLLERSHADE AT EA. EXT. WINDOW (TYP.) 69 EAVE TRIM, PANEL CAP TRIM, AND FLASHING BY MTL. BLDG. MANUF. 70 MTL. STUD BRACE (SEE STRUCT.)



4539 HEDGEMORE DRIVE, SUITE 101 CHARLOTTE NC 28209 704.890.2053 WWW.OSSASTUDIO.COM



PROJECT TEAM

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ENGITECTURE www.engitecture.com 704.287.2193

01/30/24 FOR CONSTRUCTION 1 05/8/24 PERMIT REVIEW COMMENTS

Project Name



making church come **alive** 658 GRAHAM ROAD

SANFORD NC 27311

3D COMMUNITY CHURCH

Project Number 23024.00

Description WALL SECTIONS

Scale 1/2" = 1'-0"

A04.10

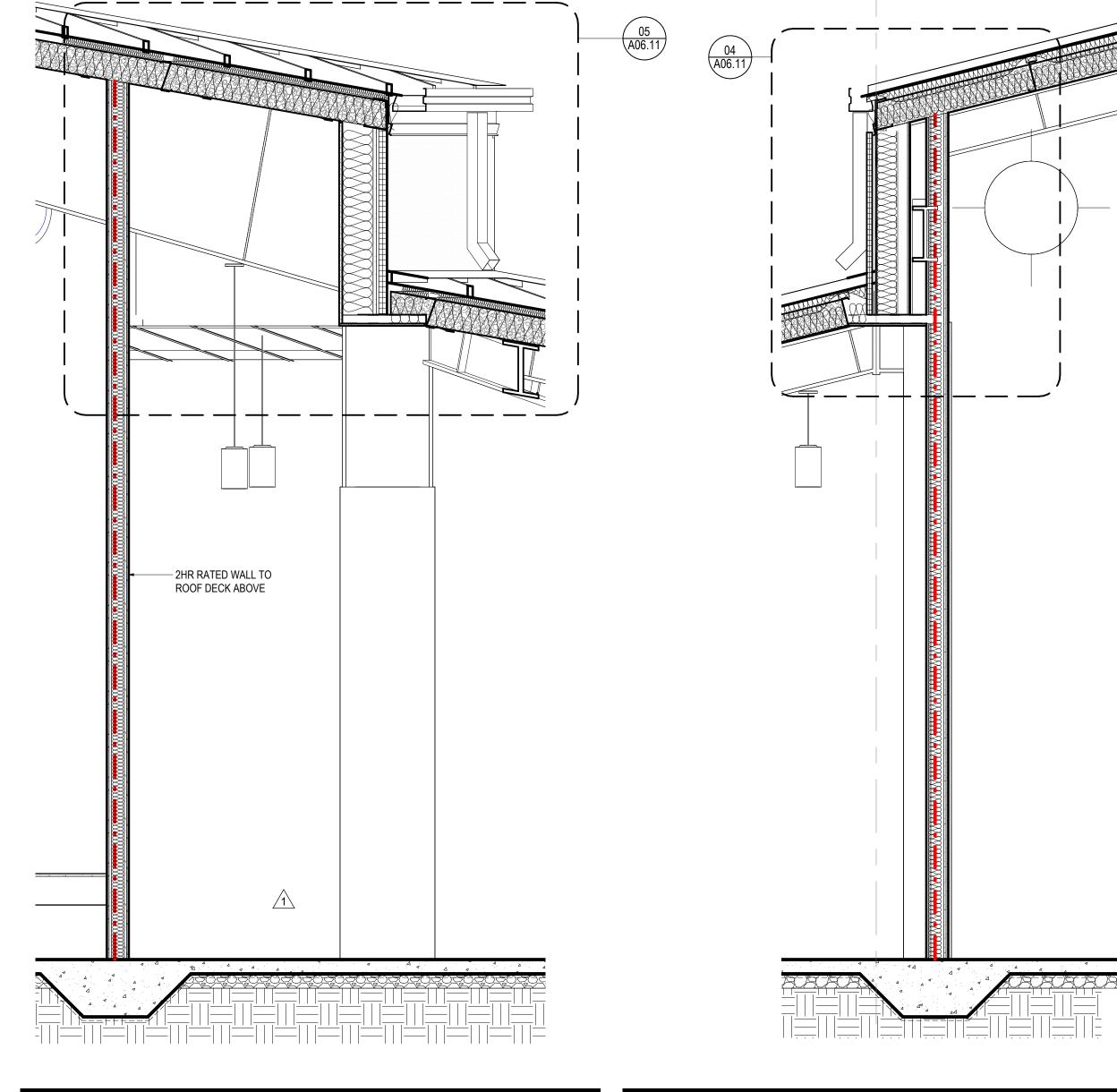
08 SOUTH WALL AT EIFS
SCALE: 1/2" = 1'-0" 06 WALL AT LOBBY ENTRY SCALE: 1/2" = 1'-0"

(01) (A06.11)

04 SOUTH WALL AT RESTROOMS SCALE: 1/2" = 1'-0"

03 A06.11

02 NORTH WALL AT HVAC CHASE SCALE: 1/2" = 1'-0"



02 SANCTUARY AT CHAMFERED CORNER SCALE: 1/2" = 1'-0"

1 EAST / WEST SANCTUARY WALL SCALE: 1/2" = 1'-0"

SHEET NOTES

01 STRUCT. STL. - PAINT BLACK WHERE EXPOSED
02 GWB AND MDF STAGE APRON - PAINT BLACK
03 ELEVATED FLOOR w/ LVT FINISH ON 1/4" T.
TEMPERED MASONITE, 1/2" HOMASOTE, AND 3/4"
FRT PLYWOOD ON MTL. STUD FRAMING (SEE

FRT PLYWOOD ON MTL. STUD FRAMING (SEE STRUCT.)

04 SLOPED GWB "CLOUD" AT UNDERSIDE OF STL.

STRUCT.

07 MTL.PANEL CEILING SYSTEM MTL. BLDG. MANUF.

08 LIGHTING TRUSS (SEE STRUCT.)

09 RAMP w/ LVT FINISH ON (2) LAYERS 3/4" FRT PLYWOOD ON MTL. STUD FRAMING (SEE STRUCT.)

10 STAIR w/ LVT FINISH ON (2) LAYERS 3/4" FRT PLYWOOD ON MTL. STUD FRAMING (SEE STRUCT.)

11 GWB CONTROL JOINT12 EXPOSED ROOF INSULATION

12 EXPOSED ROOF INSULATION13 MTL. Z PURLIN (TYP.)

 14 SUSPENDED PROJECTION SCREEN
 15 LED CYLINDER PENDANT LIGHT FIXTURE (TYP.) (SEE ELEC.)

16 LED WALL SCONCE LIGHT FIXTURE (TYP.) (SEE ELEC.)

17 RECTANGULAR BEAM LED LIGHT FIXTURE (TYP.)
(SEE ELEC.)

20 8"x16"x4" CMU (PROVIDE TIES PER MANUF.

18 RECESSED LED LIGHT FIXTURE (TYP.) (SEE ELEC.)

REQS.) ON MTL. STUD FURRING AT STL. COLUMN
21 E.I.F.S. - 1-1/2" R-7.5 RIGID INSUL.AND 5/8"
SHEATHING ON 3-5/8" MTL. STUD FRAMING W/
R-13 BLANKET INSUL.

22 REVEAL (TYP.)
23 8"x16"x4" CMU (PROVIDE TIES PER MANUF. REQS.) W/ 1-1/2" AIR SPACE, 2" RIGID INSUL., AND 5/8" SHEATHING ON 3-5/8" MTL. STUD FRAMING
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THERMAL SPACER BLOCKS (THERMAL SPACER
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 (PROVIDE LONGITUDINAL AND TRANSVERSE
 MTL. SUPPORT BANDING)
 27 CONT. BLACK FIBER-REINFORCED VAPOR

BARRIER MEMBRANE AT BOTTOM OF PURLINS

28 GUTTER AND FLASHING BY MTL. BLDG. MANUF.

29 DOWNSPOUTS BY MTL BLDG. MANUF. (TYP.)

31 3/8" T. x 24" D. CLEAR TEMPERED GLASS

SHELVES (TYP.)

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34 OPEN TO UPPER ROOF ABOVE
35 MTL. C PURLIN BY MTL. BLDG. MANUF.

36 PRE-FIN. COUNTER FLASHING
37 TIE-IN TRIM BY MTL. BLDG. MANUF.
38 BACK-UP PLATE BY MTL. BLDG. MANUF.
39 OUTSIDE MTL. CLOSURE BY MTL. BLDG. MANU

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46 TURNED-DOWN CONC. SLAB (SEE STRUCT.)

47 STRUCT. STL. COLUMN

48 STRUCT. STL. MOMENT FRAME - PAINT BLACK

WHERE EXPOSED

49 SOUND ATTENUATION BLANKET (TYP.)

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 E.I.F.S. - 1-1/2" R-7.5 RIGID INSUL. AND 5/8" SHEATHING ON 6" MTL. STUD FRAMING W/ R-13

BLANKET INSUL.

59 E.I.F.S. DRAINABLE TRACK

60 THRU-WALL STAINLESS STL. FLASHING W/ DRIP EDGE - FLASHED INTO AIR AND WATER BARRIER MEMBRANE

R-19 FIBERGLASS BLANKET INSUL. BET. MTL.
 STUD FRAMING (PROVIDE LONGITUDINAL AND TRANSVERSE MTL. SUPPORT BANDING)
 STANDING SEAM MTL. ROOF (OWNER

62 STANDING SEAM MTL. ROOF (OWNER FURNISHED) ON 3/4" FRT PLYWOOD ON 6" MTL. STUD FRAMING
 68 ROLLERSHADE AT EA. EXT. WINDOW (TYP.)

69 EAVE TRIM, PANEL CAP TRIM, AND FLASHING BY MTL. BLDG. MANUF.
 70 MTL. STUD BRACE (SEE STRUCT.)

Project Name



4539 HEDGEMORE DRIVE, SUITE 101

CHARLOTTE NC 28209

704.890.2053 WWW.OSSASTUDIO.COM

PROJECT TEAM

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www.engitecture.com 704.287.2193

01/30/24 FOR CONSTRUCTION

1 05/8/24 PERMIT REVIEW COMMENTS

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HILLIARD ENGINEERING, PLLC

community church

658 GRAHAM ROAD SANFORD NC 27311

Client

3D COMMUNITY CHURCH

Project Number 23024.00

Description
WALL SECTIONS

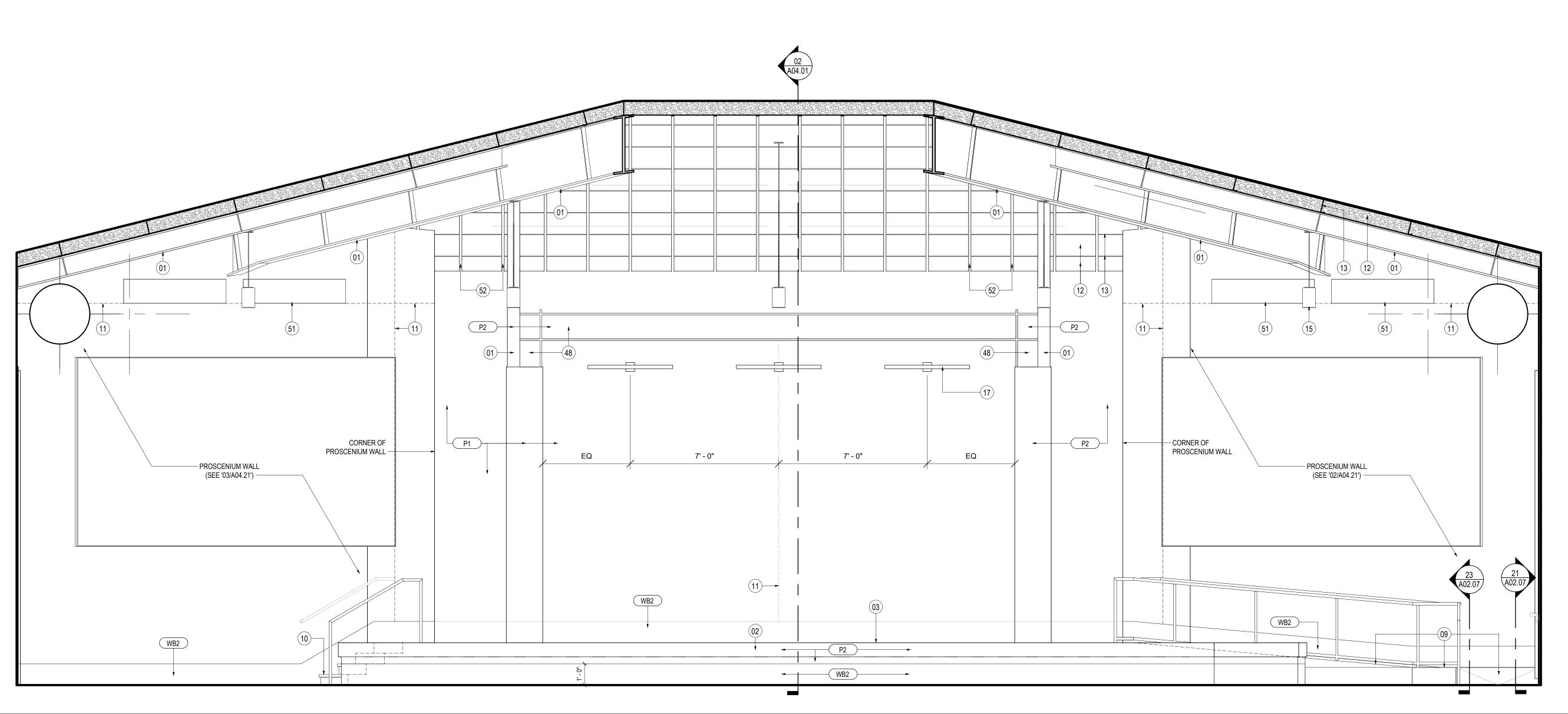
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1/2" = 1'-0"

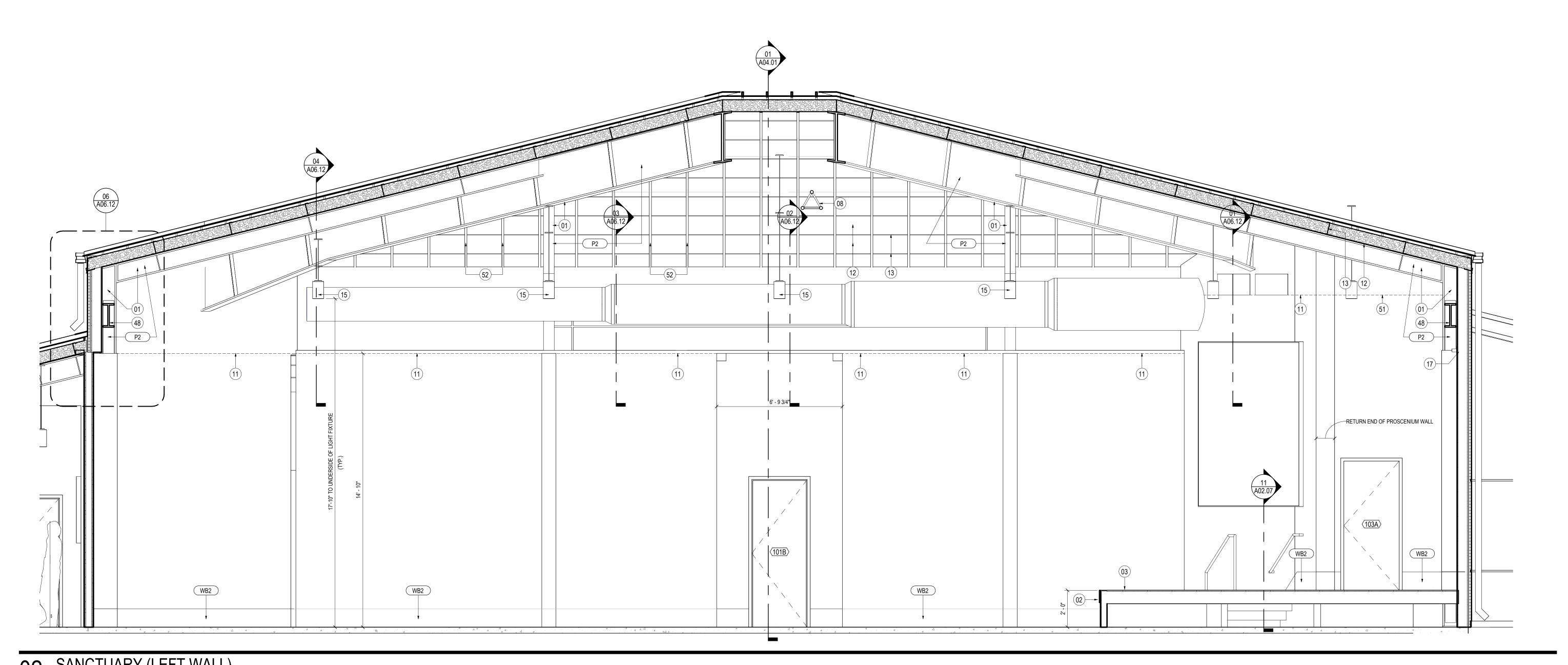
A04.11

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2024 5:07:08 PM Z:\Private\andrew.mclellan\Revit Local\23024.00_3D Community Church_andrew.mclellanFHCLC.rvt



SANCTUARY STAGE SCALE: 3/8" = 1'-0"



SHEET NOTES

01 STRUCT. STL. - PAINT BLACK WHERE EXPOSED 02 GWB AND MDF STAGE APRON - PAINT BLACK 03 ELEVATED FLOOR w/ LVT FINISH ON 1/4" T. TEMPERED MASONITE, 1/2" HOMASOTE, AND 3/4"

FRT PLYWOOD ON MTL. STUD FRAMING (SEE

04 SLOPED GWB "CLOUD" AT UNDERSIDE OF STL.

07 MTL.PANEL CEILING SYSTEM MTL. BLDG. MANUF. 08 LIGHTING TRUSS (SEE STRUCT.) 09 RAMP w/ LVT FINISH ON (2) LAYERS 3/4" FRT

PLYWOOD ON MTL. STUD FRAMING (SEE 10 STAIR w/ LVT FINISH ON (2) LAYERS 3/4" FRT

PLYWOOD ON MTL. STUD FRAMING (SEE STRUCT.)

11 GWB CONTROL JOINT

12 EXPOSED ROOF INSULATION 13 MTL. Z PURLIN (TYP.)

14 SUSPENDED PROJECTION SCREEN 15 LED CYLINDER PENDANT LIGHT FIXTURE (TYP.) (SEE ELEC.)

17 RECTANGULAR BEAM LED LIGHT FIXTURE (TYP.)

16 LED WALL SCONCE LIGHT FIXTURE (TYP.) (SEE

(SEE ELEC.)

18 RECESSED LED LIGHT FIXTURE (TYP.) (SEE

20 8"x16"x4" CMU (PROVIDE TIES PER MANUF.

REQS.) ON MTL. STUD FURRING AT STL. COLUMN 21 E.I.F.S. - 1-1/2" R-7.5 RIGID INSUL.AND 5/8" SHEATHING ON 3-5/8" MTL. STUD FRAMING W/ R-13 BLANKET INSUL.

22 REVEAL (TYP.) 23 8"x16"x4" CMU (PROVIDE TIES PER MANUF. REQS.) W/ 1-1/2" AIR SPACE, 2" RIGID INSUL., AND 5/8" SHEATHING ON 3-5/8" MTL. STUD FRAMING

24 STANDING SEAM MTL. ROOF (OWNER FURNISHED) 25 CONT. R-11 VINYL-FACED BLANKET INSUL.ON R-3 THERMAL SPACER BLOCKS (THERMAL SPACER

26 R-19 FIBERGLASS BLANKET INSUL. BET. PURLINS (PROVIDE LONGITUDINAL AND TRANSVERSE MTL. SUPPORT BANDING) 27 CONT. BLACK FIBER-REINFORCED VAPOR

BARRIER MEMBRANE AT BOTTOM OF PURLINS 28 GUTTER AND FLASHING BY MTL. BLDG. MANUF. 29 DOWNSPOUTS BY MTL BLDG. MANUF. (TYP.)

31 3/8" T. x 24" D. CLEAR TEMPERED GLASS SHELVES (TYP.) 32 ADJUSTABLE SHELF BRACKETS &

BLOCKS TYP. AT EA. PURLIN)

FLUSH-MOUNTED SHELF TRACKS (TYP.) 33 RAKKS INSIDE WALL MOUNT EH COUNTER

SUPPORT BRACKETS 34 OPEN TO UPPER ROOF ABOVE 35 MTL. C PURLIN BY MTL. BLDG. MANUF.

36 PRE-FIN. COUNTER FLASHING 37 TIE-IN TRIM BY MTL. BLDG. MANUF. 38 BACK-UP PLATE BY MTL. BLDG. MANUF.

39 OUTSIDE MTL. CLOSURE BY MTL. BLDG. MANUF. 41 STL. SPANDREL ANGLE AT BOTTOM OF MTL. Z

PURLINS BY MTL. BLDG. MANUFACTURER 42 COMPRESSIBLE FILLER 43 NEW CONC. SIDEWALK

44 ALUM. DOOR AS SCHEDULED 45 DOOR THRESHOLD AS SCHEDULED - SET ON

FULL BED OF MASTIC 46 TURNED-DOWN CONC. SLAB (SEE STRUCT.)

47 STRUCT. STL. COLUMN 48 STRUCT. STL. MOMENT FRAME - PAINT BLACK

WHERE EXPOSED 49 SOUND ATTENUATION BLANKET (TYP.)

51 LINEAR SLOT RETURN (SEE MECH.) 52 MTL. SUPPORT BANDING - SPACE AS

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54 FLUID-APPLIED AIR BARRIER MEMBRANE 55 JOINT SEALANT AND BACKER ROD

56 ALUM. STOREFRONT SYSTEM 57 E.I.F.S. - 1-1/2" R-7.5 RIGID INSUL. AND 5/8"

SHEATHING ON 6" MTL. STUD FRAMING W/ R-13 BLANKET INSUL.

59 E.I.F.S. DRAINABLE TRACK

60 THRU-WALL STAINLESS STL. FLASHING W/ DRIP EDGE - FLASHED INTO AIR AND WATER BARRIER

61 R-19 FIBERGLASS BLANKET INSUL. BET. MTL.

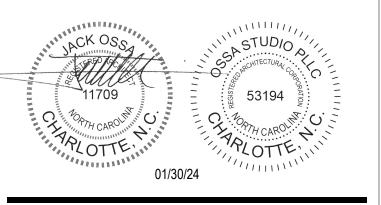
STUD FRAMING (PROVIDE LONGITUDINAL AND TRANSVERSE MTL. SUPPORT BANDING) 62 STANDING SEAM MTL. ROOF (OWNER

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69 EAVE TRIM, PANEL CAP TRIM, AND FLASHING BY

MTL. BLDG. MANUF. 70 MTL. STUD BRACE (SEE STRUCT.)

4539 HEDGEMORE DRIVE, SUITE 101 CHARLOTTE NC 28209 704.890.2053 WWW.OSSASTUDIO.COM



PROJECT TEAM

General Contractor ECCLESIA CONSTRUCTION www.ecclesiaconstruction.com 803.327.5670

Civil Engineering HILLIARD ENGINEERING, PLLC www.isaacsgrp.com 919.352.2834

Structural Engineering PROVIDENCE PARTNERS www.providencepartnersinc.com 704.266.6621

ENGITECTURE www.engitecture.com 704.287.2193

01/30/24 FOR CONSTRUCTION

Project Name



making church come **alive** 658 GRAHAM ROAD

SANFORD NC 27311

3D COMMUNITY CHURCH

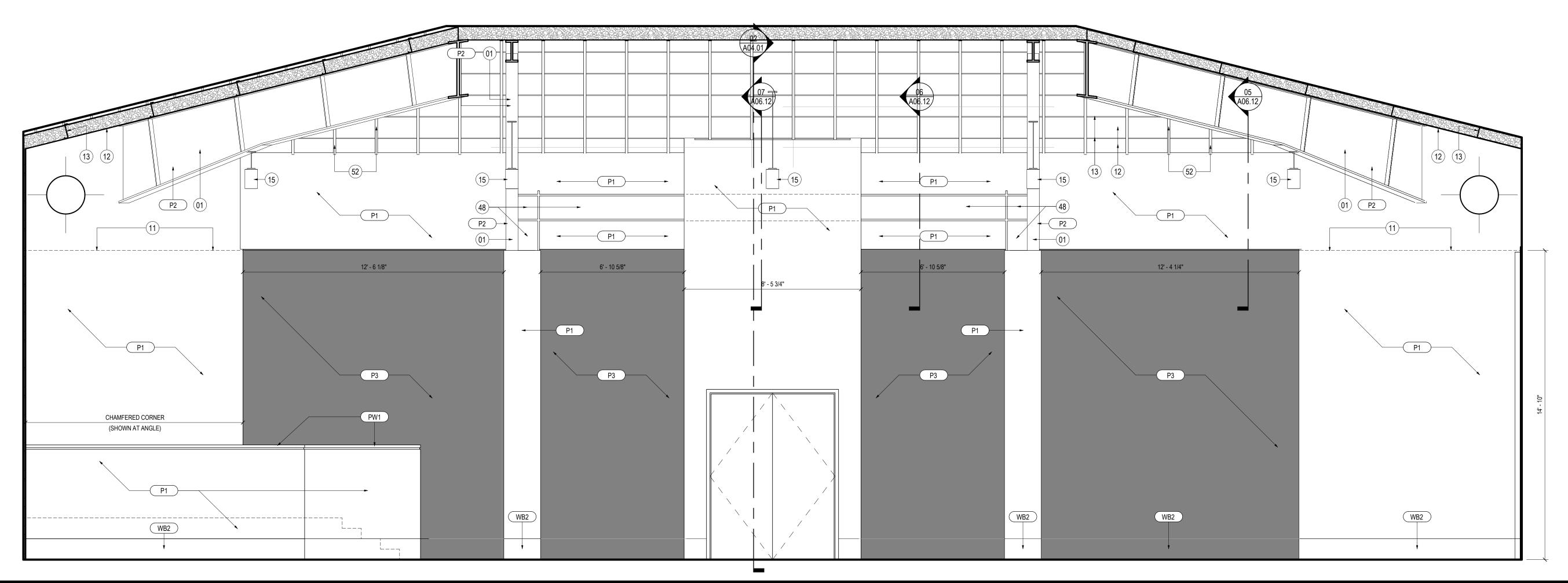
Project Number 23024.00

Description INTERIOR ELEVATIONS

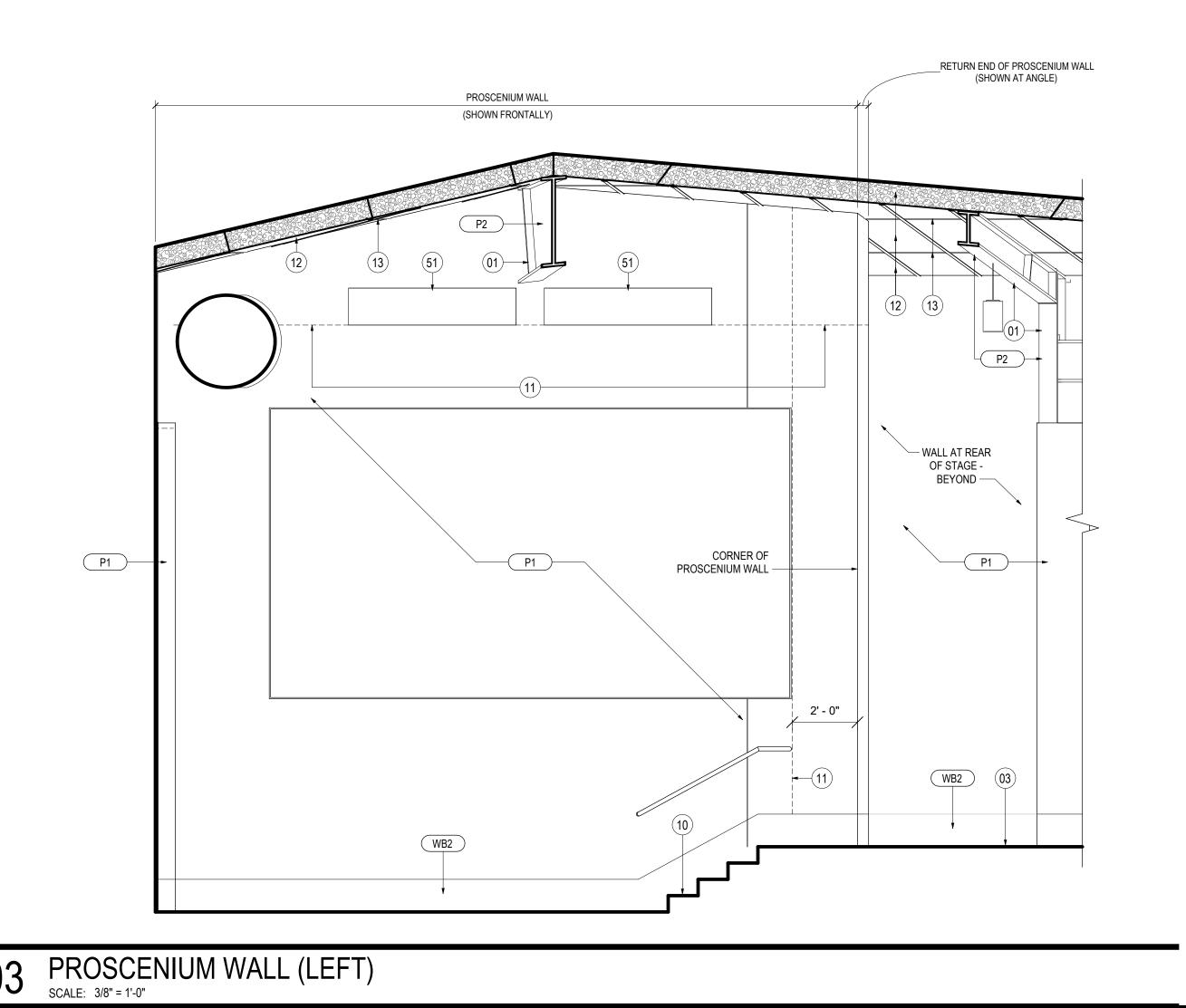
3/8" = 1'-0"

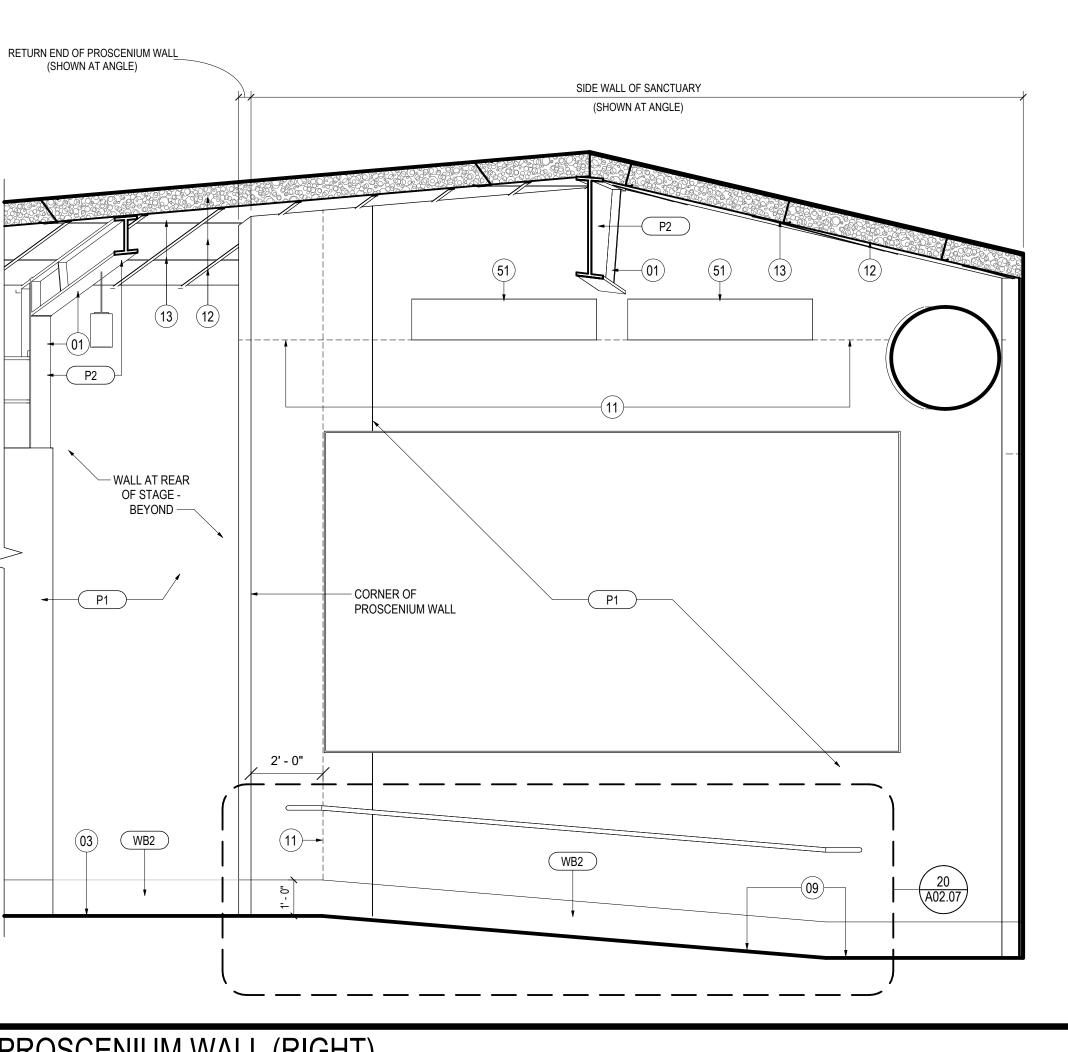
A04.20

02 SANCTUARY (LEFT WALL)
SCALE: 3/8" = 1'-0"



SANCTUARY (ENTRY WALL) SCALE: 3/8" = 1'-0"





02 PROSCENIUM WALL (RIGHT)
SCALE: 3/8" = 1'-0"

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- 12 EXPOSED ROOF INSULATION

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- 14 SUSPENDED PROJECTION SCREEN 15 LED CYLINDER PENDANT LIGHT FIXTURE (TYP.)
- (SEE ELEC.) 16 LED WALL SCONCE LIGHT FIXTURE (TYP.) (SEE
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- 43 NEW CONC. SIDEWALK 44 ALUM. DOOR AS SCHEDULED
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- 48 STRUCT. STL. MOMENT FRAME PAINT BLACK WHERE EXPOSED
- 49 SOUND ATTENUATION BLANKET (TYP.) 51 LINEAR SLOT RETURN (SEE MECH.)
- 52 MTL. SUPPORT BANDING SPACE AS DIMENSIONED ON ENLARGED RCP (TYP.)
- 53 UNHINGED / RECESSED KNOXBOX (ALUM. FIN.) 54 FLUID-APPLIED AIR BARRIER MEMBRANE
- 55 JOINT SEALANT AND BACKER ROD 56 ALUM. STOREFRONT SYSTEM
- 57 E.I.F.S. 1-1/2" R-7.5 RIGID INSUL. AND 5/8" SHEATHING ON 6" MTL. STUD FRAMING W/ R-13
- BLANKET INSUL.
- 59 E.I.F.S. DRAINABLE TRACK 60 THRU-WALL STAINLESS STL. FLASHING W/ DRIP
- EDGE FLASHED INTO AIR AND WATER BARRIER
- 61 R-19 FIBERGLASS BLANKET INSUL. BET. MTL. STUD FRAMING (PROVIDE LONGITUDINAL AND TRANSVERSE MTL. SUPPORT BANDING)
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- MTL. BLDG. MANUF.

70 MTL. STUD BRACE (SEE STRUCT.)

Project Name



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CHARLOTTE NC 28209

704.890.2053 WWW.OSSASTUDIO.COM

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01/30/24 FOR CONSTRUCTION

Mechanical, Electrical, Plumbing & Fire Protection

community **church** making church come **alive**

658 GRAHAM ROAD SANFORD NC 27311

3D COMMUNITY CHURCH

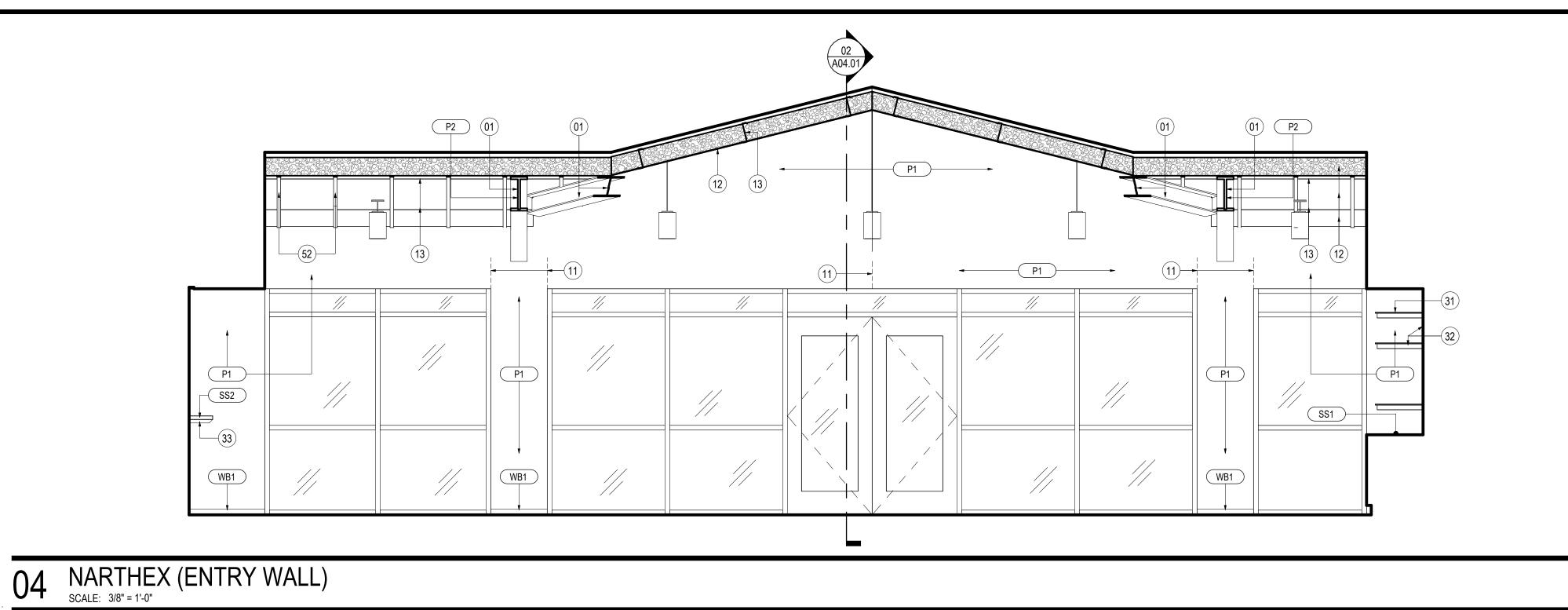
Project Number 23024.00

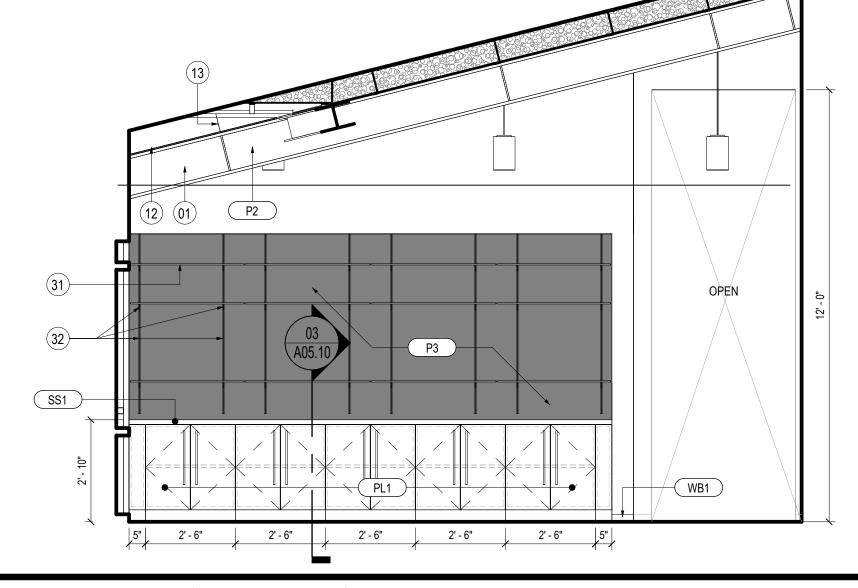
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INTERIOR ELEVATIONS

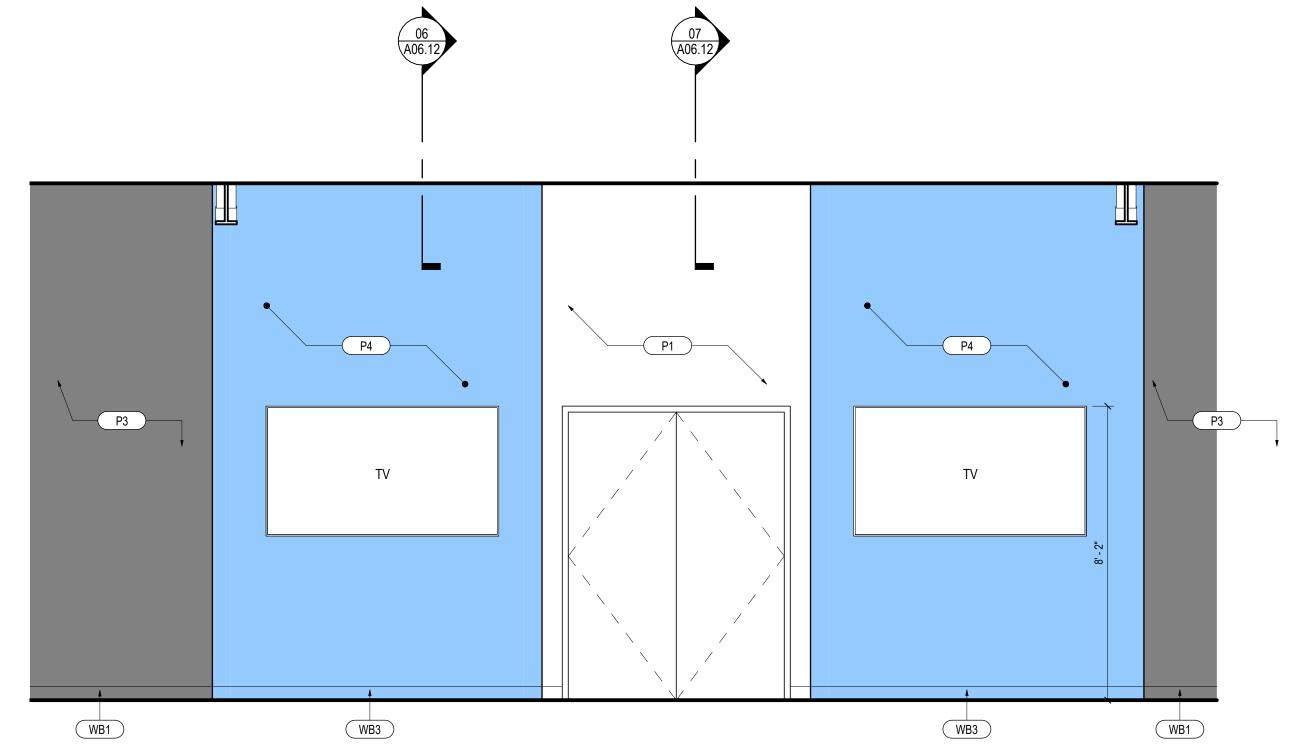
3/8" = 1'-0"

A04.21

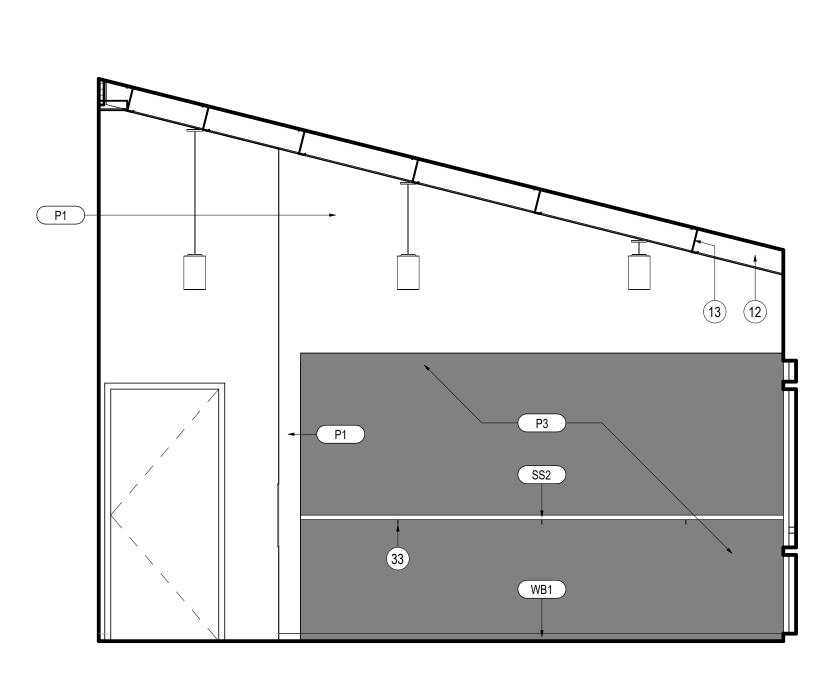




NARTHEX (LEFT WALL)



05 INTERIOR ELEVATION SCALE: 3/8" = 1'-0"



02 NARTHEX (RIGHT WALL)
SCALE: 3/8" = 1'-0"

SHEET NOTES

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FRT PLYWOOD ON MTL. STUD FRAMING (SEE 04 SLOPED GWB "CLOUD" AT UNDERSIDE OF STL.

STRUCT. 07 MTL.PANEL CEILING SYSTEM MTL. BLDG. MANUF. 08 LIGHTING TRUSS (SEE STRUCT.)

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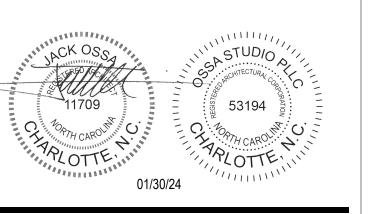
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01/30/24 FOR CONSTRUCTION

Project Name



making church come **alive** 658 GRAHAM ROAD SANFORD NC 27311

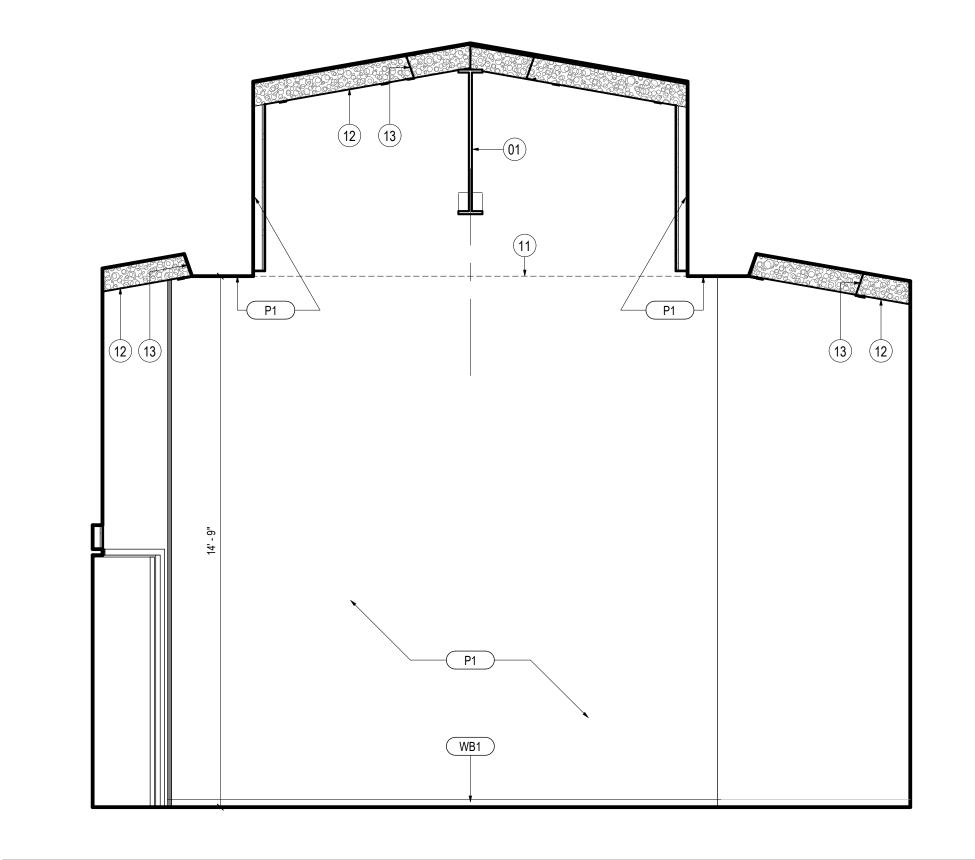
3D COMMUNITY CHURCH

Project Number 23024.00

Description INTERIOR ELEVATIONS

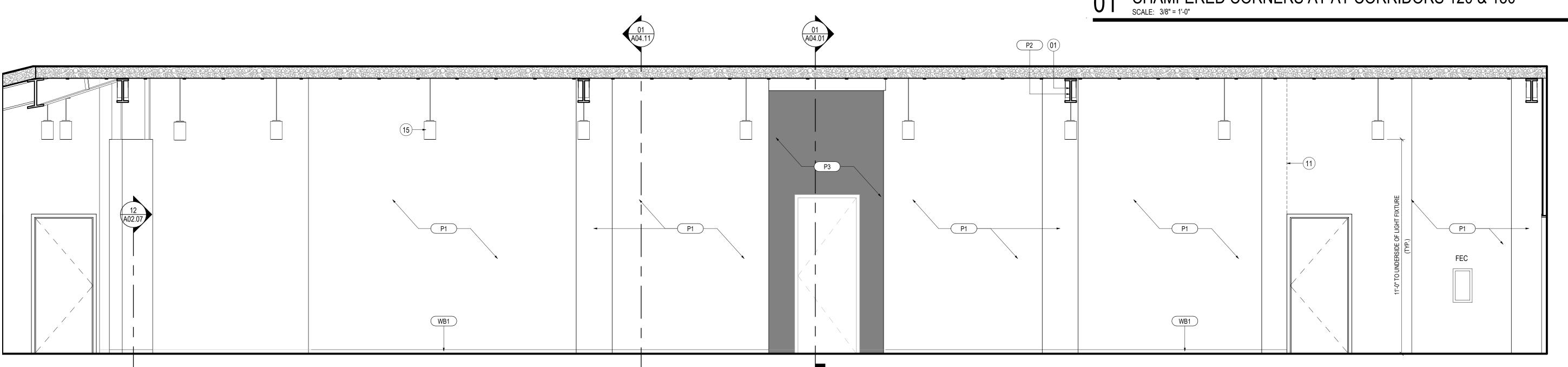
3/8" = 1'-0"

A04.22



O1 CHAMFERED CORNERS AT AT CORRIDORS 120 & 130

WB1



WB1

EQ

EQ

03 CLASSROOM CORRIDOR (LOOKING EAST)

SCALE: 3/8" = 1'-0"

WB1

EQ

02 CLASSROOM CORRIDOR (LOOKING WEST)
SCALE: 3/8" = 1'-0"

SHEET NOTES

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MEMBRANE

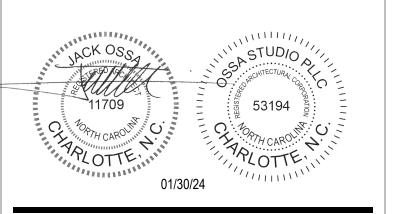
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01/30/24 FOR CONSTRUCTION

Project Name



making church come **alive**658 GRAHAM ROAD
SANFORD NC 27311

Client

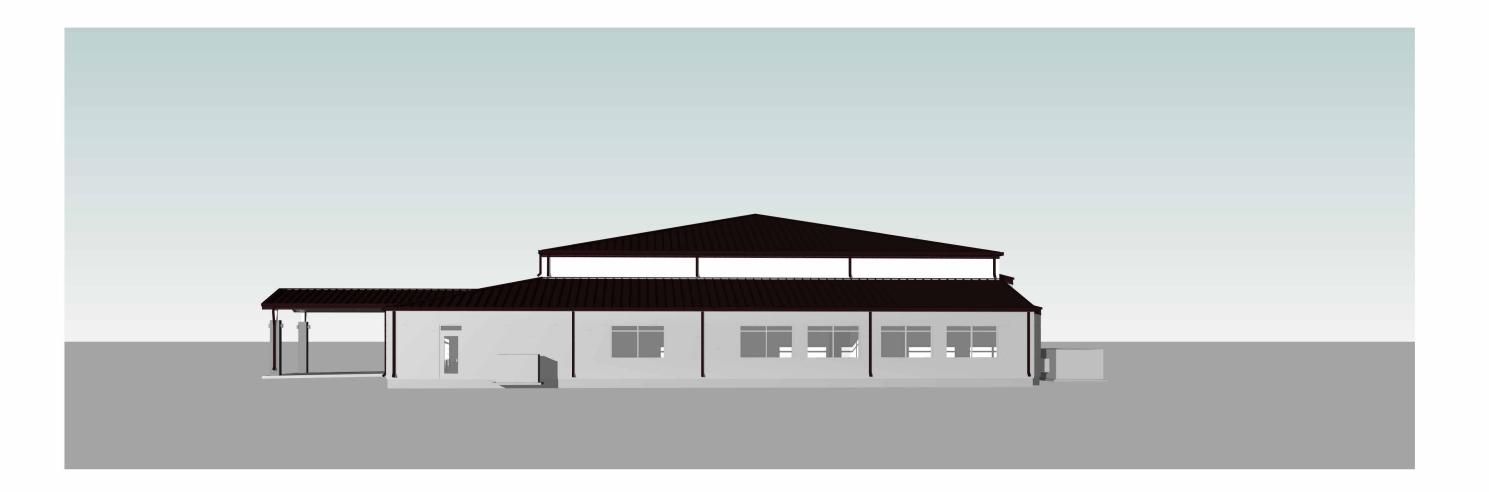
3D COMMUNITY CHURCH

Project Number 23024.00

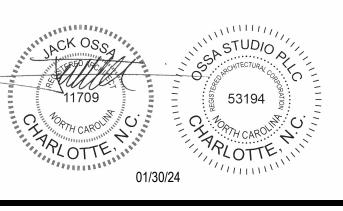
Description
INTERIOR ELEVATIONS

Scale 3/8" = 1'-0"

A04.23







PROJECT TEAM

General Contractor ECCLESIA CONSTRUCTION www.ecclesiaconstruction.com 803.327.5670

Civil Engineering HILLIARD ENGINEERING, PLLC www.isaacsgrp.com 919.352.2834

Structural Engineering PROVIDENCE PARTNERS www.providencepartnersinc.com 704.266.6621

Mechanical, Electrical, Plumbing & Fire Protection ENGITECTURE www.engitecture.com 704.287.2193

 \triangle Date Description

01/30/24 FOR CONSTRUCTION

01 FRONT PERSPECTIVE - 1





02 FRONT PERSPECTIVE - 2



03 FRONT PERSPECTIVE - 3



07 FRONT PERSPECTIVE - 5

05 RIGHT SIDE PERSPECTIVE - 1

06 FRONT PERSPECTIVE - 4

04 LEFT SIDE PERSPECTIVE - 1

A05.01

Project Name

community church
making church come alive

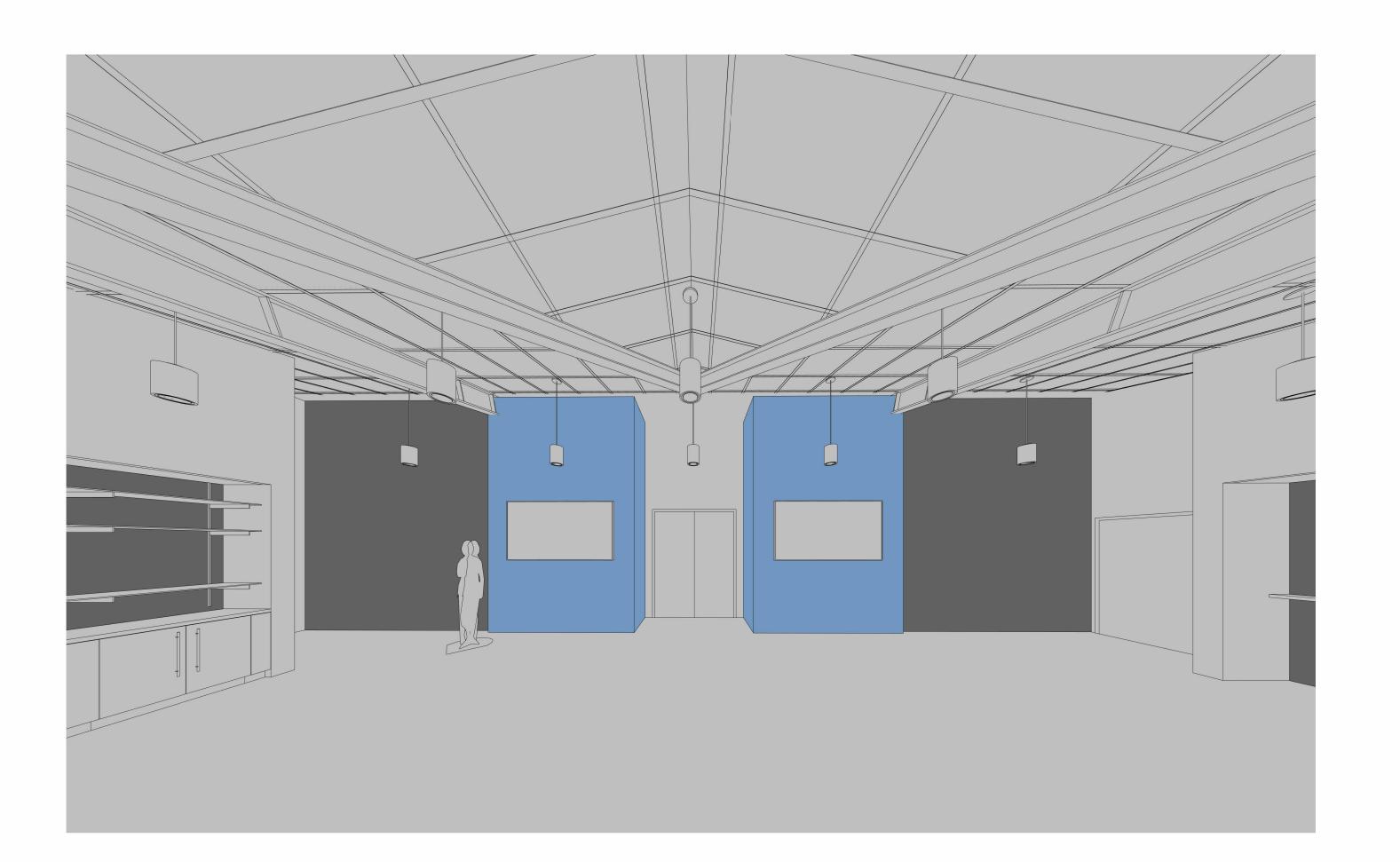
658 GRAHAM ROAD SANFORD NC 27311

3D COMMUNITY CHURCH

Project Number 23024.00

Description **EXTERIOR VIEWS**

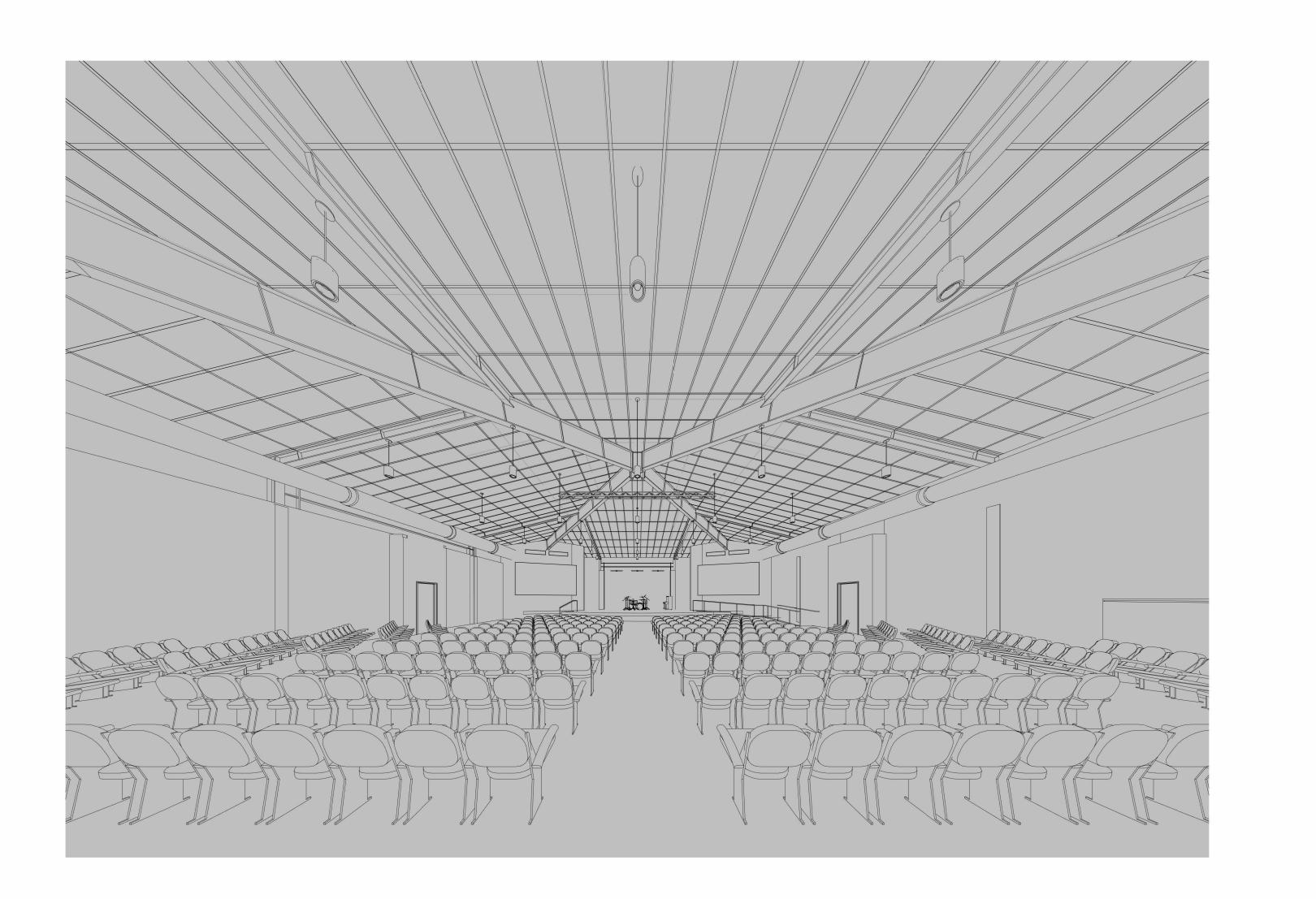




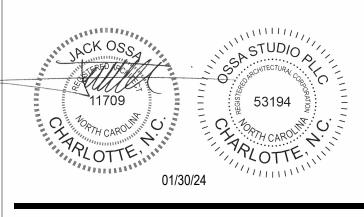
03 NARTHEX - PERSPECTIVE VIEW TOWARDS WELCOME AREA

01 NARTHEX - PERSPECTIVE VIEW TOWARDS SANCTUARY ENTRY





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Project Name



making church come **alive**658 GRAHAM ROAD
SANFORD NC 27311

nt ____

3D COMMUNITY CHURCH

Project Number 23024.00

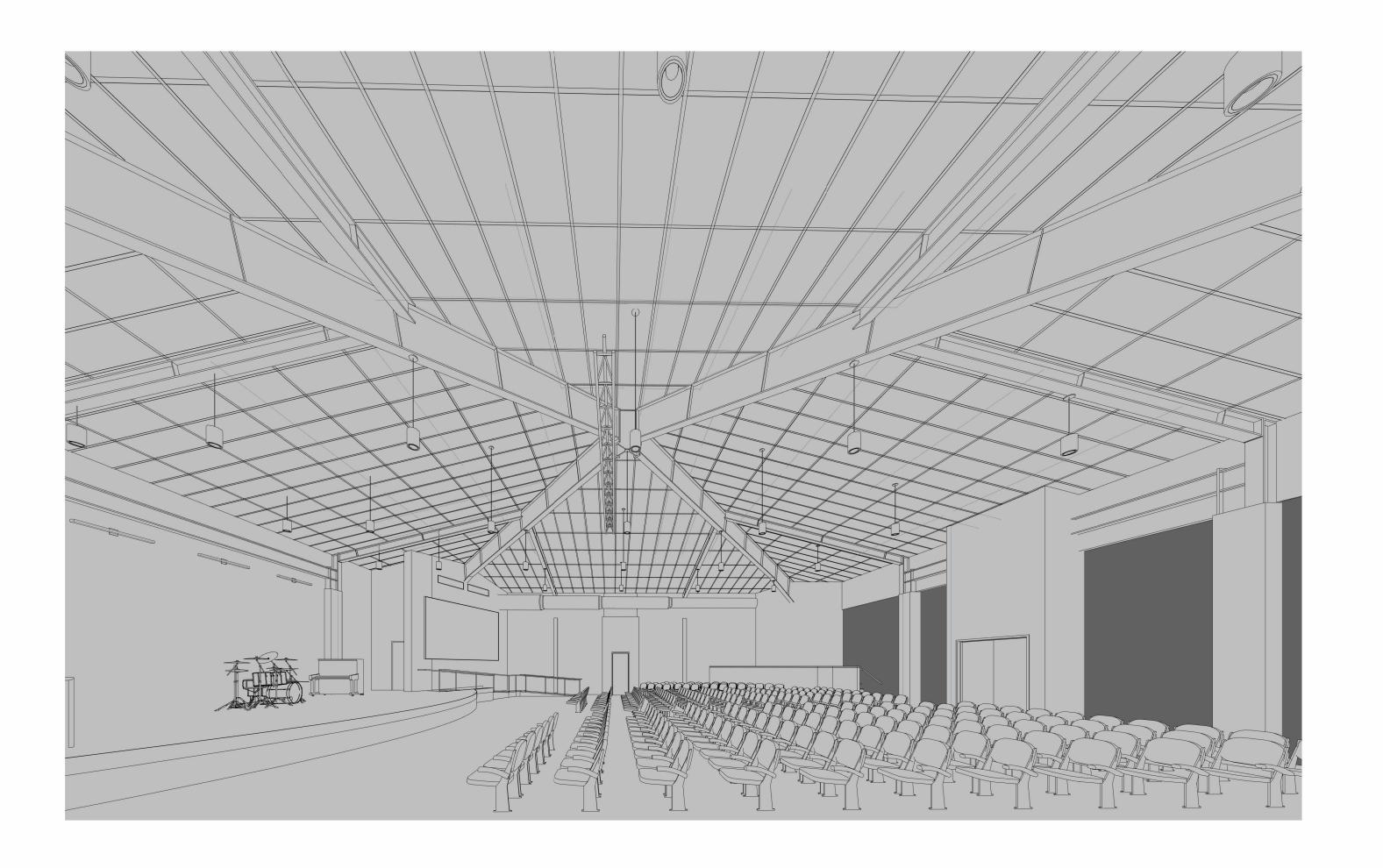
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INTERIOR VIEWS

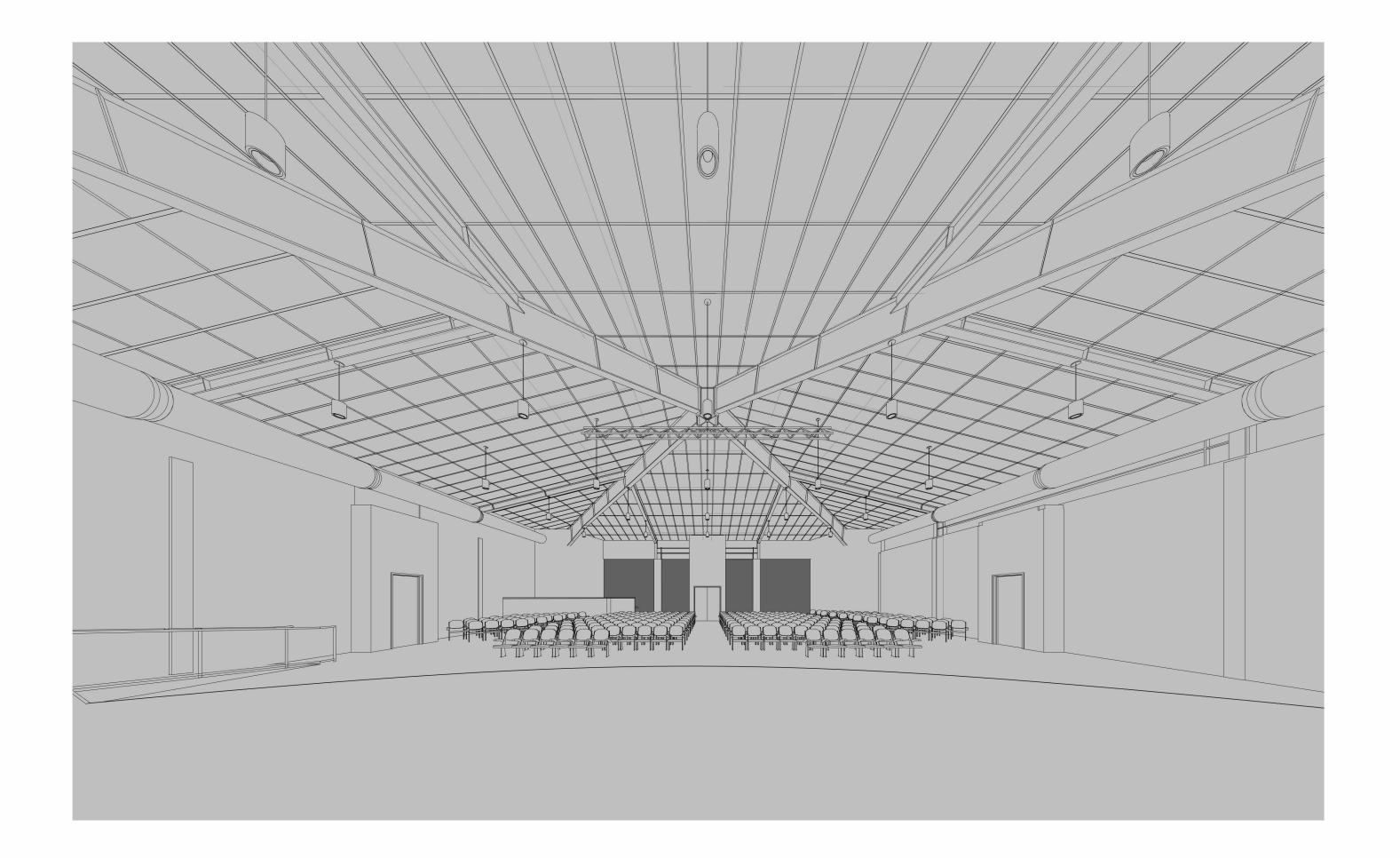
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A05.02

04 NARTHEX - PERSPECTIVE VIEW TOWARDS CHECK-IN AREA

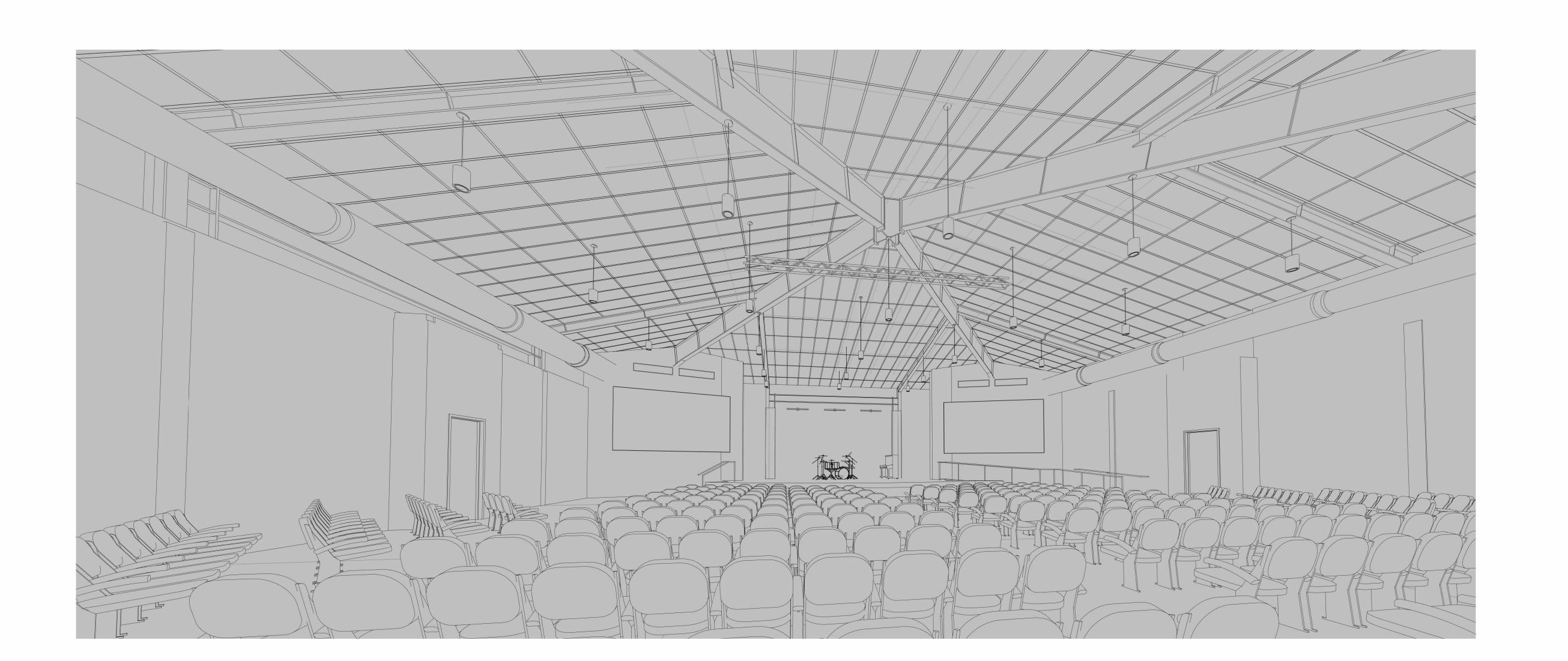
02 SANCTUARY - PERSPECTIVE VIEW 1



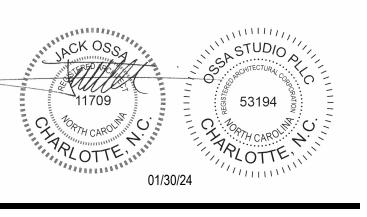


03 SANCTUARY - PERSPECTIVE 3

01 SANCTUARY - PERSPECTIVE FROM STAGE



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01/30/24 FOR CONSTRUCTION

Project Name



making church come **alive** 658 GRAHAM ROAD SANFORD NC 27311

Client

3D COMMUNITY CHURCH

Project Number 23024.00

Description
INTERIOR VIEWS

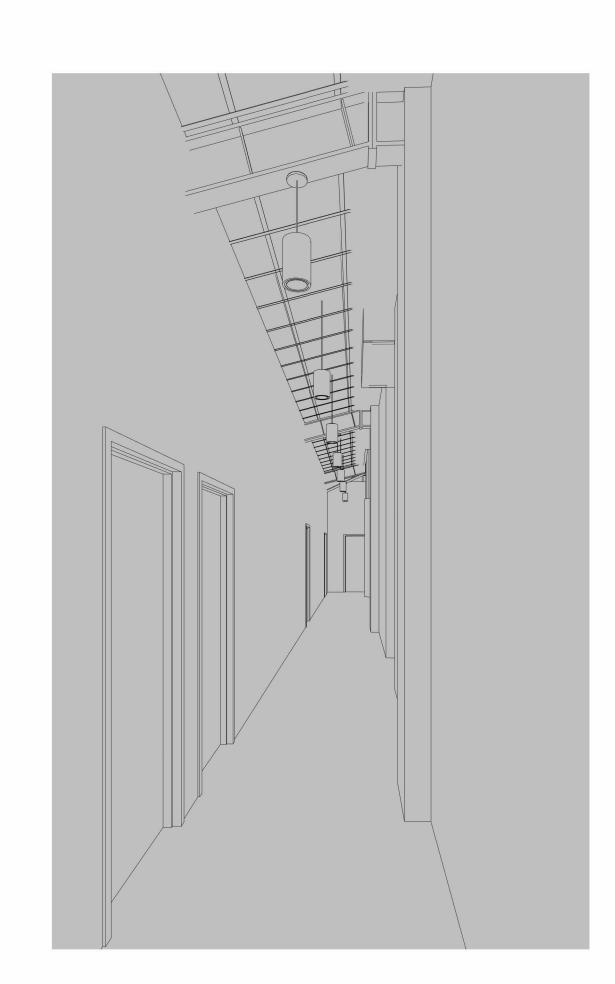
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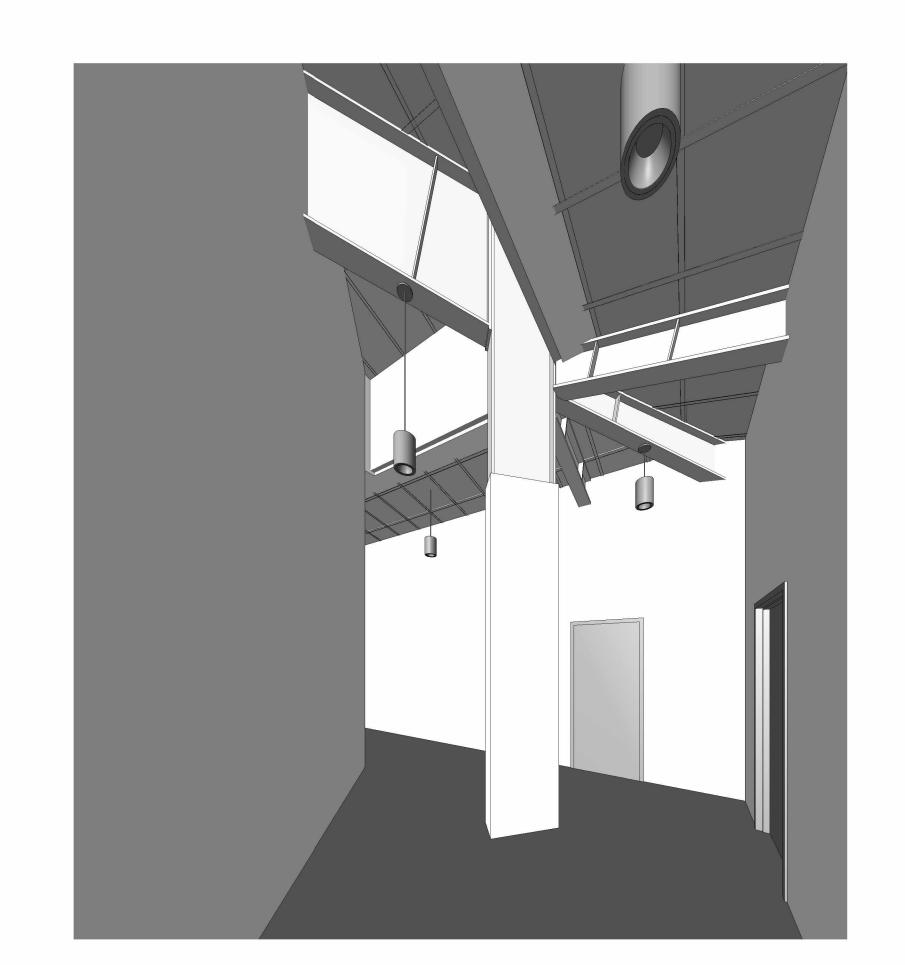
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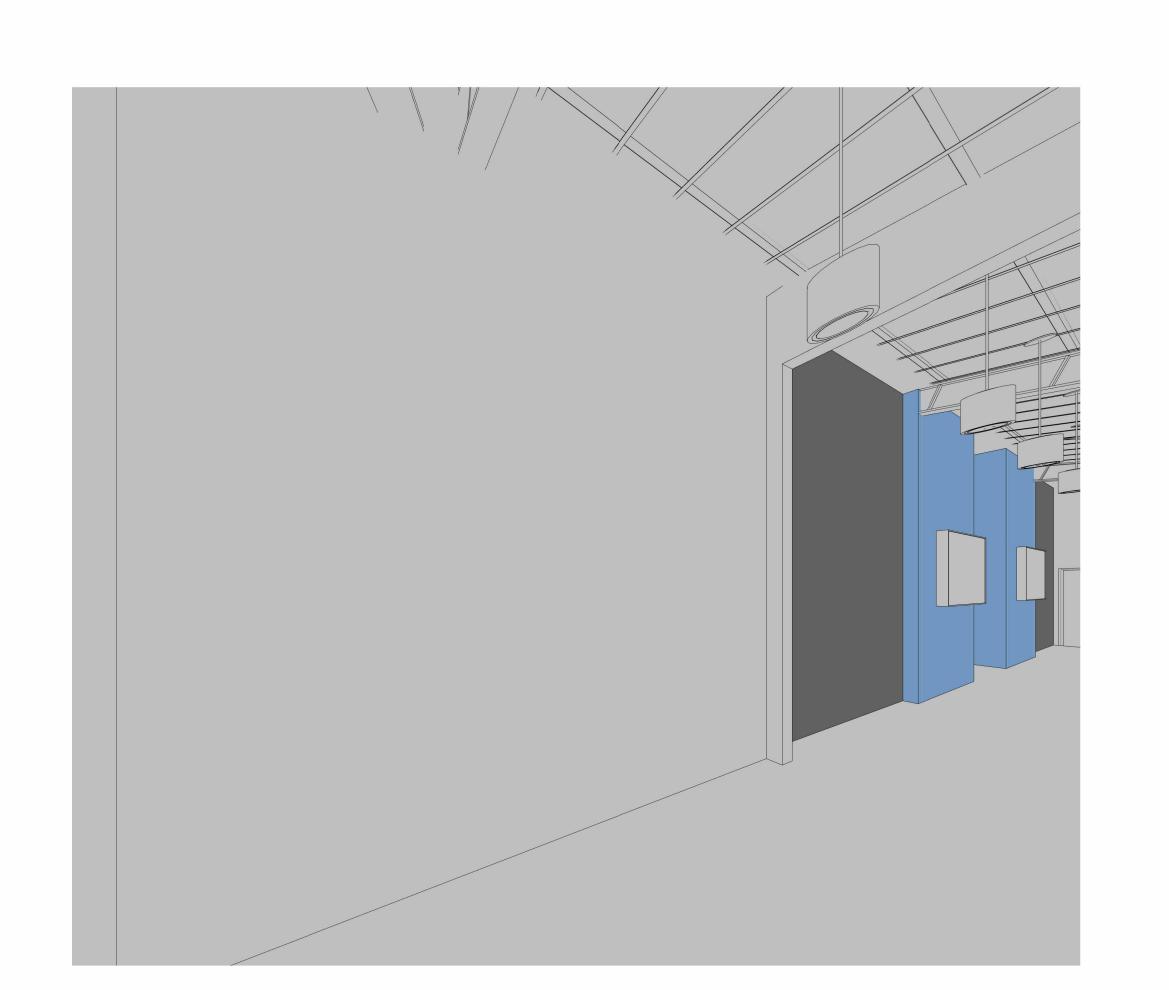
02 SANCTUARY - PERSPECTIVE 2

04 CHILD CARE CORRIDOR - PERSPECTIVE AT NURSERY ENTRY

02 OFFICE CORRIDOR - PERSPECTIVE AT CORNER

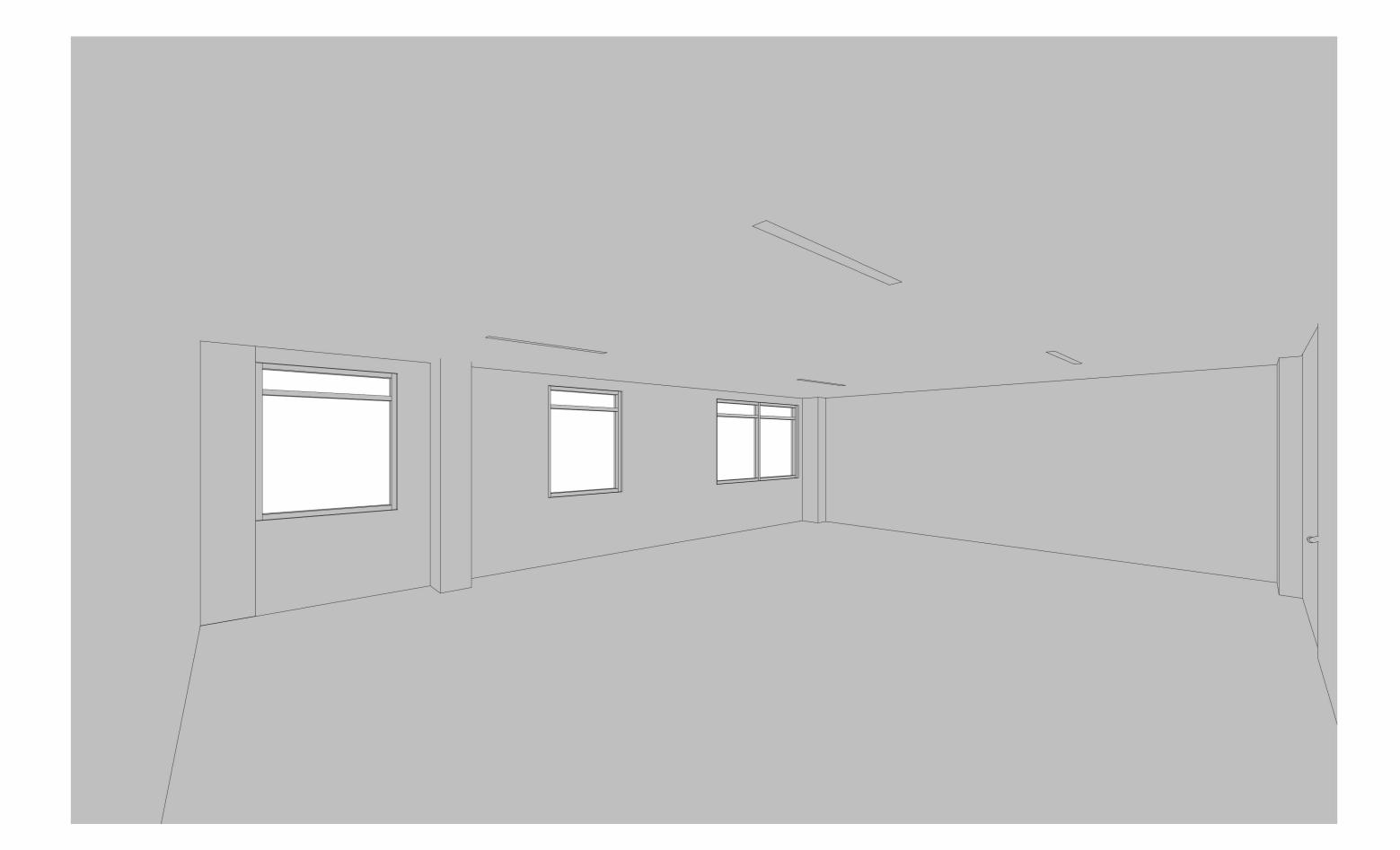


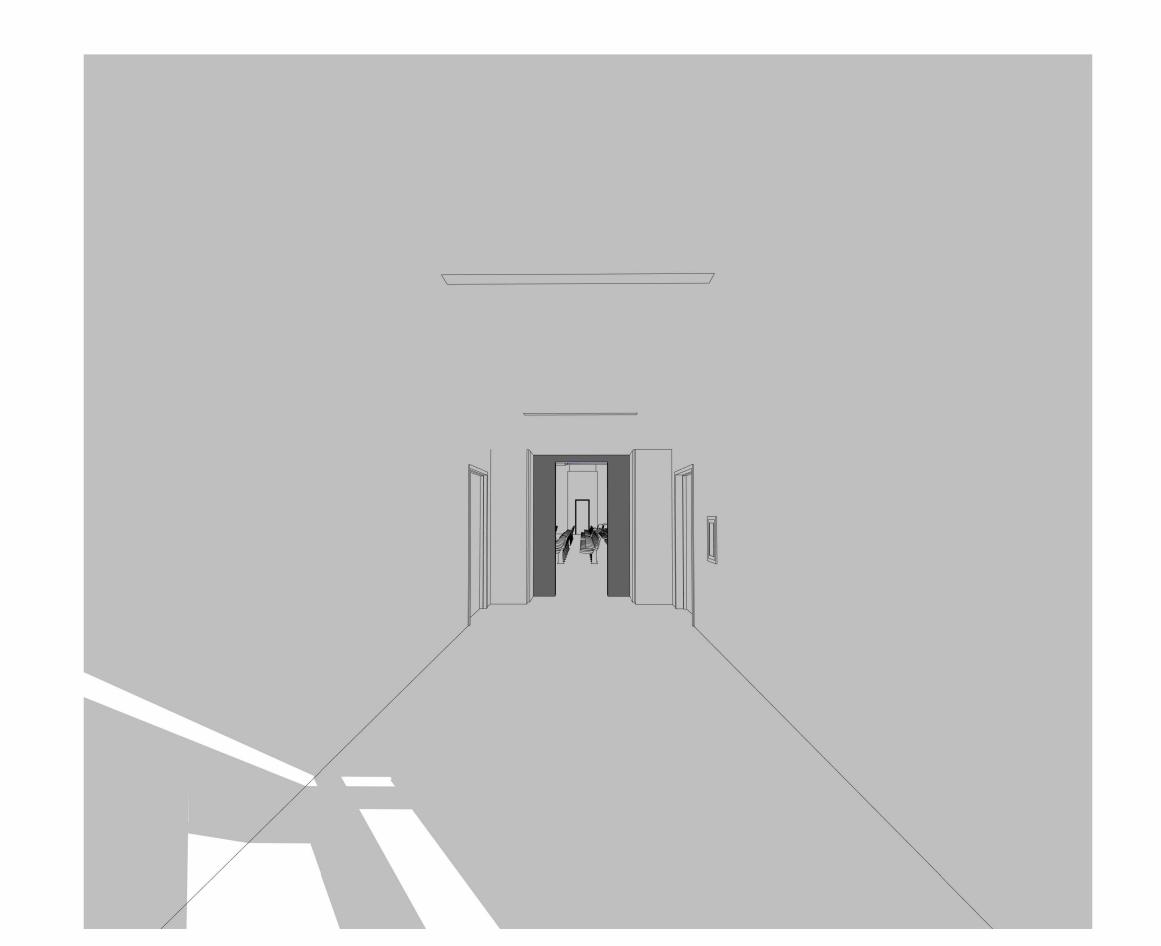




03 SHARED OFFICE - PERSPECTIVE VIEW

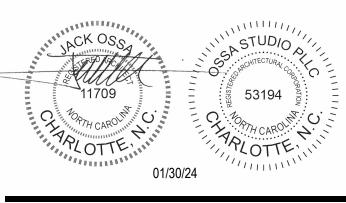
01 LOBBY - PERSPECTIVE AT SANCTUARY ENTRY







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01/30/24 FOR CONSTRUCTION

Project Name

Project Number

23024.00

INTERIOR VIEWS

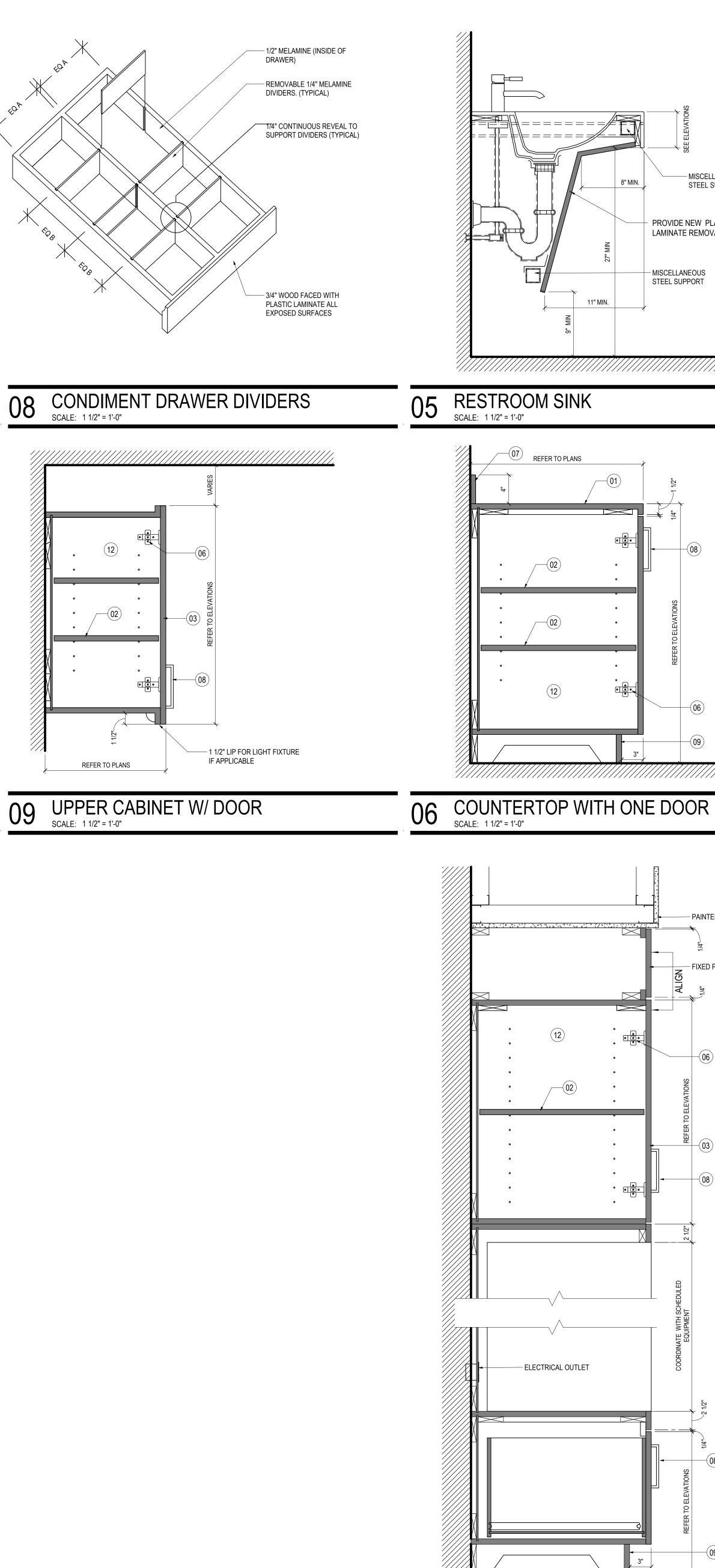
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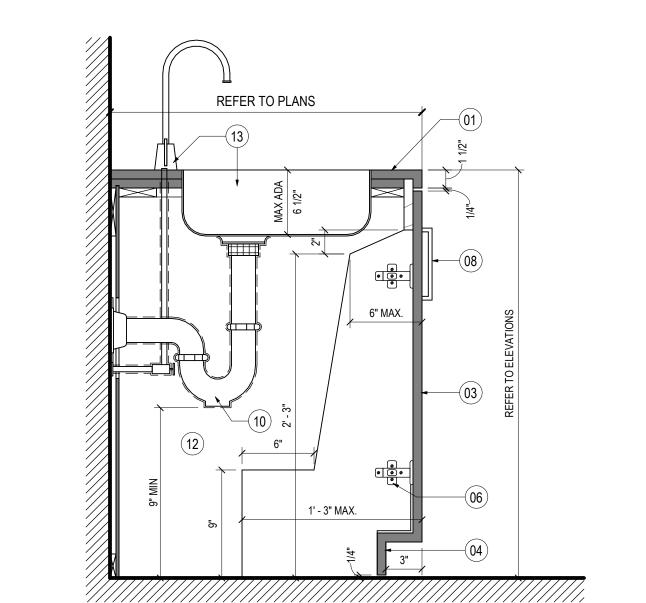
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community church
making church come alive

658 GRAHAM ROAD SANFORD NC 27311

3D COMMUNITY CHURCH





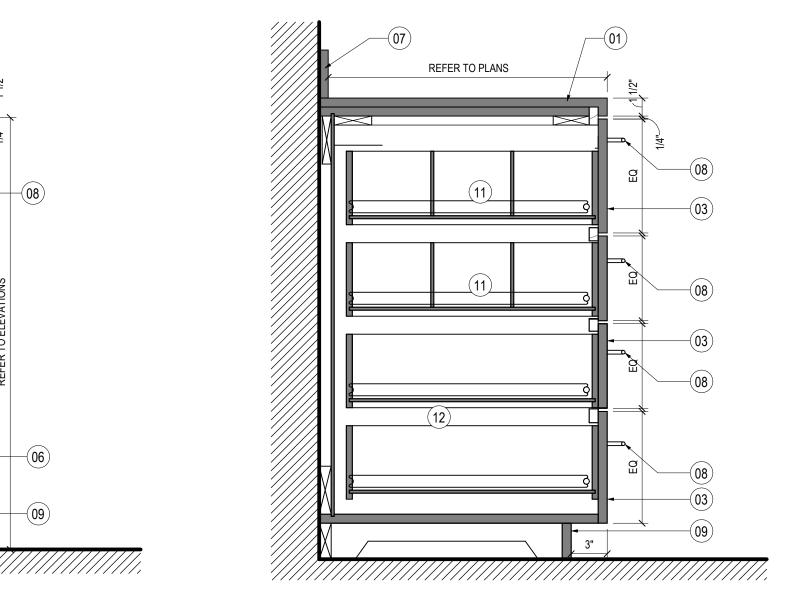
CABINET WITH SINK
SCALE: 1 1/2" = 1'-0"

— PAINTED GWB SOFFIT ABOVE

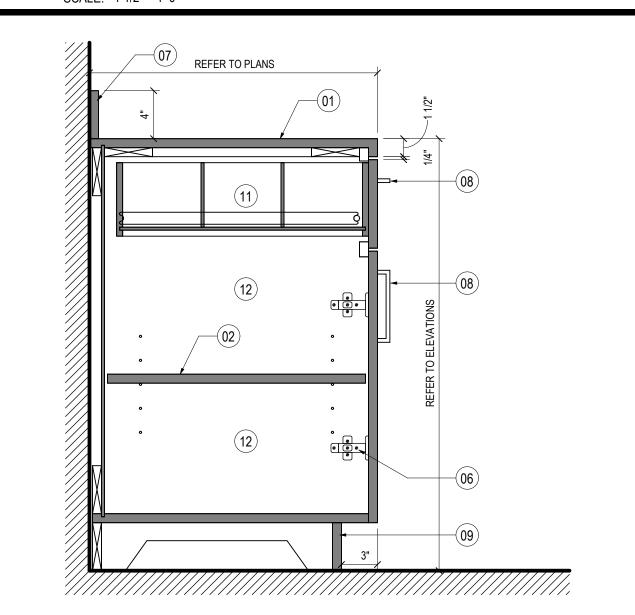
- MISCELLANEOUS STEEL SUPPORT

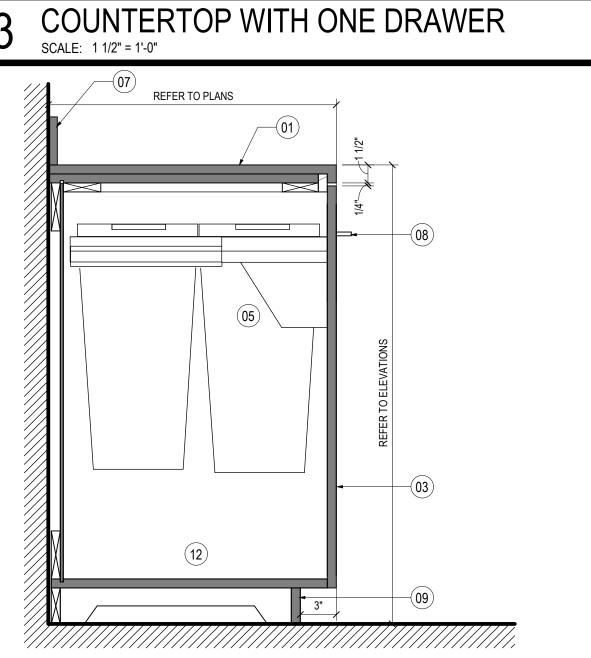
 PROVIDE NEW PLASTIC LAMINATE REMOVABLE APRON

- MISCELLANEOUS STEEL SUPPORT



BREAKROOM CABINET W/ DRAWERS 02 BREAKRO SCALE: 1 1/2" = 1'-0"





04 PULL-OUT TRASH CABINET SCALE: 1 1/2" = 1'-0"

07 MICROWAVE OVEN TALL CABINET SCALE: 1 1/2" = 1'-0"

SHEET NOTES

(01) COUNTERTOP AS SCHEDULED - SEE INTERIOR ELEVATIONS

(02) ADJUSTABLE WHITE MELAMINE SHELVING (03) FRONT PANEL AS SCHEDULED

(04) INTEGRAL TOE KICK - NOTCH AS REQUIRED TO ALLOW DOORS TO SWING OPEN

(05) INTEGRATED DOUBLE WASTE BIN SYSTEM -HAFELE #502.74.252 WITH OVERTRAVEL

(06) CONCEALED EUROPEAN HINGES - TYP. (07) BACKSPLASH - SEE INTERIOR ELEVATIONS IF

REQUIRED (08) DOOR PULL - BERENSON : CONTEMPORARY ADVANTAGE ONE #9012-4BPN-P (09) SCRIBE STRIP - BLACK PLASTIC LAMINATE -

(10) PIPE INSULATION (11) REMOVABLE DRAWER DIVIDERS

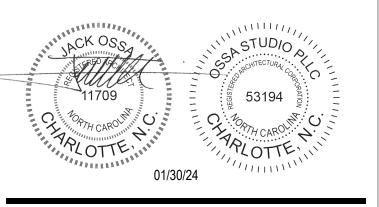
(12) WHITE MELAMINE INTERIOR SURFACE - TYP. (13) SINK AND FAUCET AS SCHEDULED

(14) FILE CABINET DRAWER WITH HANGING RAILS

(15) STAINLESS STEEL GROMET TRASH RING



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 \triangle Date Description

01/30/24 FOR CONSTRUCTION

A ANY SHELF EXCEEDING 36" IN WIDTH TO BE 1"

MILLWORK NOTES

B ALL DOOR AND DRAWER FRONTS TO BE 3/4" PARTICLE BOARD WITH PLASTIC LAMINATE (OR WOOD VENEER) ON 2 SIDES AND PLASTIC LAMINATE (OR WOOD VENEER) ON ALL 4 EDGES.

C DOOR HINGES TO BE EQUAL TO BLUM 90A8530 & 91A8530 170 DEGREE HINGES, TYP. - USE THREE HINGES ON DOORS OVER 42" HIGH. D DRAWERS TO BE CONSTRUCTED USING 1/2" PARTICLE BOARD SIDES, FRONT, AND REAR PANELS WITH 1/4" LUAUN PLYWOOD BOTTOMS UNO. FRONT PANEL TO BE 3/4" PARTICLE

E DRAWERS TO BE ON SLIDES EQUAL TO BLUM 430E SERIES W/ FULL EXTENSION AND SOFT

F ALL EXPOSED SURFACES OF CABINETS TO BE COVERED IN PLASTIC LAMINATE (OR WOOD VENEER) UNLESS NOTED OTHERWISE. CABINET INTERIORS TO BE MELAMINE, COLOR AS NOTED, COVERED PARTICLE BOARD UNLESS NOTED OTHERWISE.

G ADJUSTABLE SHELF SUPPORT EQUAL TO

BLUM NO. 34.0040 H ALL PLASTIC LAMINATE MILLWORK COUNTERS AND BACKSPLASHES AT WET LOCATIONS TO BE PLASTIC LAMINATE OVER 3/4" THICK MARINE GRADE PLYWOOD, TYP. I HARDWARE TO INCLUDE PULLS, CONCEALED HINGES, HEAVY DUTY FULL EXTENSION DRAWER SLIDES, FULLY RECESSED CAM-TYPE

SUPPORTS. J PROVIDE ADEQUATE SUPPORT FOR ALL COUNTERTOPS, EVEN WHEN NOT SPECIFICALLY SHOWN IN ELEVATIONS. ALL EXPOSED SUPPORTS SHALL MATCH FINISHED

LOCKS AND DRILLED HOLE AND CLIP SHELF

MATERIAL. K MILLWORK MATERIAL QUALITY AND CONSTRUCTION TO BE IN ACCORDANCE WITH AWI STANDARDS FOR PREMIUM GRADE ASSEMBLY AND INSTALLATION.

L INSTALLED MILLWORK SHALL BE SCRIBED TO ADJACENT FINISHED SURFACES. FILLER PANELS SHALL NOT BE LARGER THAN 1".

Project Name



community **church** making church come **alive**

658 GRAHAM ROAD SANFORD NC 27311

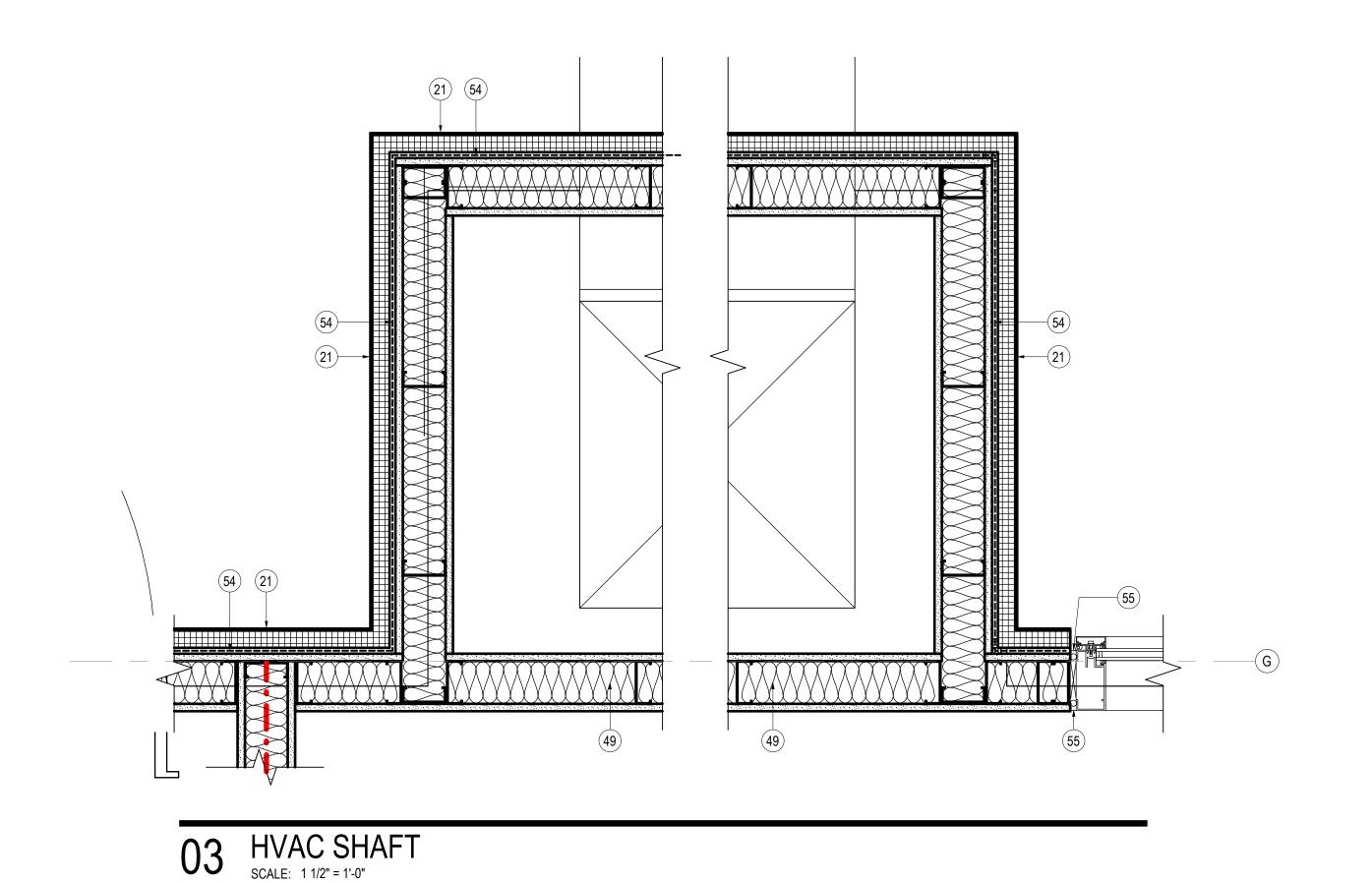
3D COMMUNITY CHURCH

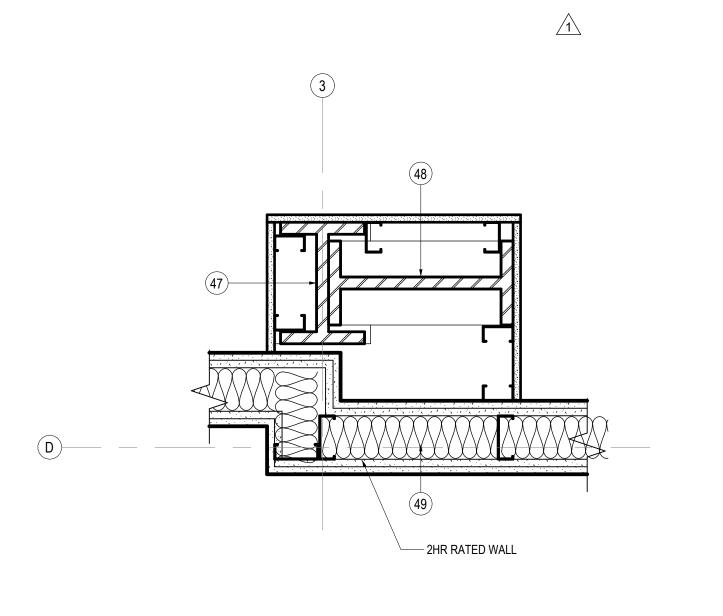
Project Number 23024.00

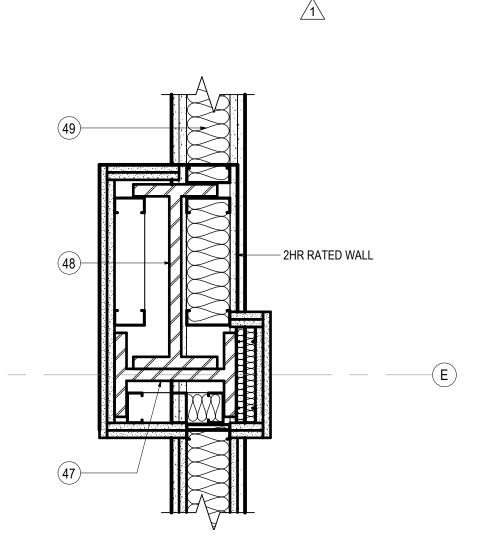
Description MILLWORK DETAILS

As indicated

A05.10

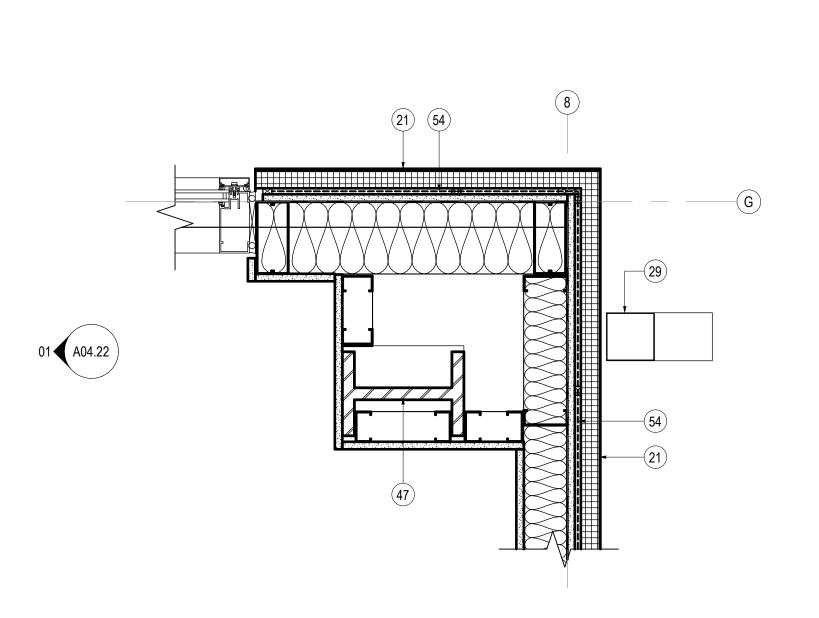






O2 COLUMN ENCLOSURE SCALE: 1 1/2" = 1'-0"

O1 COLUMN ENCLOSURE
SCALE: 1 1/2" = 1'-0"



08 COLUMN ENCLOSURE
SCALE: 1 1/2" = 1'-0"

SHEET NOTES

- 01 STRUCT. STL. PAINT BLACK WHERE EXPOSED 02 GWB AND MDF STAGE APRON - PAINT BLACK 03 ELEVATED FLOOR w/ LVT FINISH ON 1/4" T. TEMPERED MASONITE, 1/2" HOMASOTE, AND 3/4" FRT PLYWOOD ON MTL. STUD FRAMING (SEE
- 04 SLOPED GWB "CLOUD" AT UNDERSIDE OF STL.
- 07 MTL.PANEL CEILING SYSTEM MTL. BLDG. MANUF.
- 08 LIGHTING TRUSS (SEE STRUCT.) 09 RAMP w/ LVT FINISH ON (2) LAYERS 3/4" FRT
- PLYWOOD ON MTL. STUD FRAMING (SEE 10 STAIR w/ LVT FINISH ON (2) LAYERS 3/4" FRT
- PLYWOOD ON MTL. STUD FRAMING (SEE STRUCT.)
- 11 GWB CONTROL JOINT 12 EXPOSED ROOF INSULATION
- 13 MTL. Z PURLIN (TYP.) 14 SUSPENDED PROJECTION SCREEN
- 15 LED CYLINDER PENDANT LIGHT FIXTURE (TYP.) (SEE ELEC.) 16 LED WALL SCONCE LIGHT FIXTURE (TYP.) (SEE
- 17 RECTANGULAR BEAM LED LIGHT FIXTURE (TYP.)
- (SEE ELEC.) 18 RECESSED LED LIGHT FIXTURE (TYP.) (SEE
- 20 8"x16"x4" CMU (PROVIDE TIES PER MANUF.

REQS.) ON MTL. STUD FURRING AT STL. COLUMN

- 21 E.I.F.S. 1-1/2" R-7.5 RIGID INSUL.AND 5/8" SHEATHING ON 3-5/8" MTL. STUD FRAMING W/ R-13 BLANKET INSUL. 22 REVEAL (TYP.)
- 23 8"x16"x4" CMU (PROVIDE TIES PER MANUF. REQS.) W/ 1-1/2" AIR SPACE, 2" RIGID INSUL., AND 5/8" SHEATHING ON 3-5/8" MTL. STUD FRAMING 24 STANDING SEAM MTL. ROOF (OWNER
- FURNISHED) 25 CONT. R-11 VINYL-FACED BLANKET INSUL.ON R-3 THERMAL SPACER BLOCKS (THERMAL SPACER
- BLOCKS TYP. AT EA. PURLIN) 26 R-19 FIBERGLASS BLANKET INSUL. BET. PURLINS (PROVIDE LONGITUDINAL AND TRANSVERSE
- MTL. SUPPORT BANDING) 27 CONT. BLACK FIBER-REINFORCED VAPOR BARRIER MEMBRANE AT BOTTOM OF PURLINS
- 28 GUTTER AND FLASHING BY MTL. BLDG. MANUF. 29 DOWNSPOUTS BY MTL BLDG. MANUF. (TYP.)

31 3/8" T. x 24" D. CLEAR TEMPERED GLASS

FLUSH-MOUNTED SHELF TRACKS (TYP.)

- SHELVES (TYP.) 32 ADJUSTABLE SHELF BRACKETS &
- 33 RAKKS INSIDE WALL MOUNT EH COUNTER SUPPORT BRACKETS
- 34 OPEN TO UPPER ROOF ABOVE 35 MTL. C PURLIN BY MTL. BLDG. MANUF.
- 36 PRE-FIN. COUNTER FLASHING
- 37 TIE-IN TRIM BY MTL. BLDG. MANUF. 38 BACK-UP PLATE BY MTL. BLDG. MANUF.
- 39 OUTSIDE MTL. CLOSURE BY MTL. BLDG. MANUF. 41 STL. SPANDREL ANGLE AT BOTTOM OF MTL. Z PURLINS BY MTL. BLDG. MANUFACTURER
- 42 COMPRESSIBLE FILLER
- 43 NEW CONC. SIDEWALK 44 ALUM. DOOR AS SCHEDULED
- 45 DOOR THRESHOLD AS SCHEDULED SET ON **FULL BED OF MASTIC**
- 46 TURNED-DOWN CONC. SLAB (SEE STRUCT.) 47 STRUCT. STL. COLUMN
- 48 STRUCT. STL. MOMENT FRAME PAINT BLACK WHERE EXPOSED

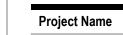
49 SOUND ATTENUATION BLANKET (TYP.)

- 51 LINEAR SLOT RETURN (SEE MECH.) 52 MTL. SUPPORT BANDING - SPACE AS
- DIMENSIONED ON ENLARGED RCP (TYP.) 53 UNHINGED / RECESSED KNOXBOX (ALUM. FIN.)
- 55 JOINT SEALANT AND BACKER ROD 56 ALUM. STOREFRONT SYSTEM

54 FLUID-APPLIED AIR BARRIER MEMBRANE

- 57 E.I.F.S. 1-1/2" R-7.5 RIGID INSUL. AND 5/8" SHEATHING ON 6" MTL. STUD FRAMING W/ R-13
- BLANKET INSUL. 59 E.I.F.S. DRAINABLE TRACK
- 60 THRU-WALL STAINLESS STL. FLASHING W/ DRIP EDGE - FLASHED INTO AIR AND WATER BARRIER
- 61 R-19 FIBERGLASS BLANKET INSUL. BET. MTL. STUD FRAMING (PROVIDE LONGITUDINAL AND
- TRANSVERSE MTL. SUPPORT BANDING) 62 STANDING SEAM MTL. ROOF (OWNER FURNISHED) ON 3/4" FRT PLYWOOD ON 6" MTL.
- STUD FRAMING 68 ROLLERSHADE AT EA. EXT. WINDOW (TYP.)
- 69 EAVE TRIM, PANEL CAP TRIM, AND FLASHING BY MTL. BLDG. MANUF.

70 MTL. STUD BRACE (SEE STRUCT.)





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CHARLOTTE NC 28209

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01/30/24 FOR CONSTRUCTION

1 05/8/24 PERMIT REVIEW COMMENTS

General Contractor

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Mechanical, Electrical, Plumbing & Fire Protection

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658 GRAHAM ROAD SANFORD NC 27311

3D COMMUNITY CHURCH

Project Number 23024.00

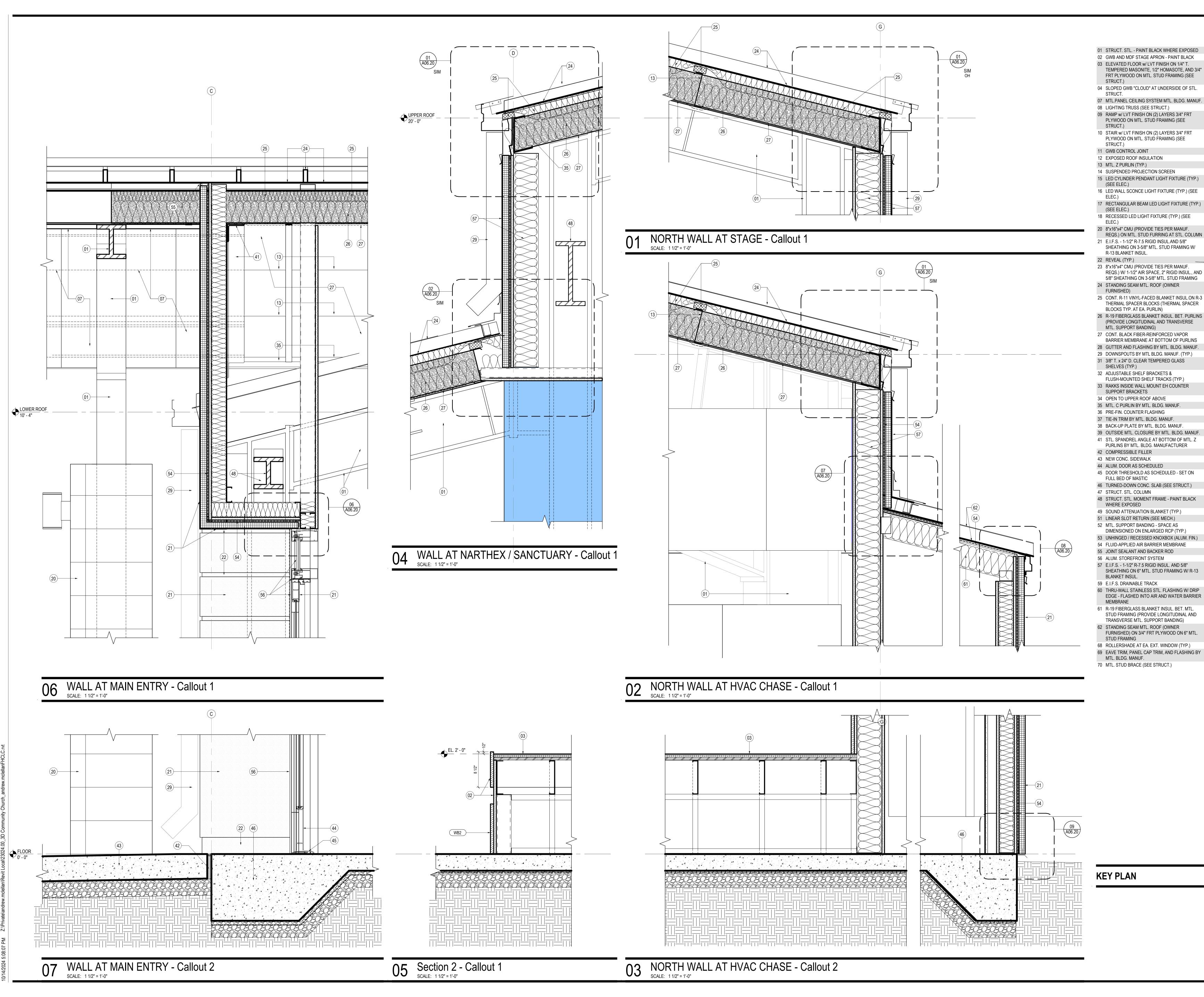
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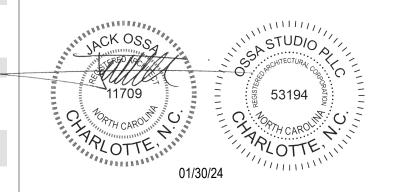
1 1/2" = 1'-0"

A06.01

10 FRONT ENTRY AT THE NARTHEX

SCALE: 1 1/2" = 1'-0"





PROJECT TEAM

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01/30/24 FOR CONSTRUCTION

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3D COMMUNITY CHURCH

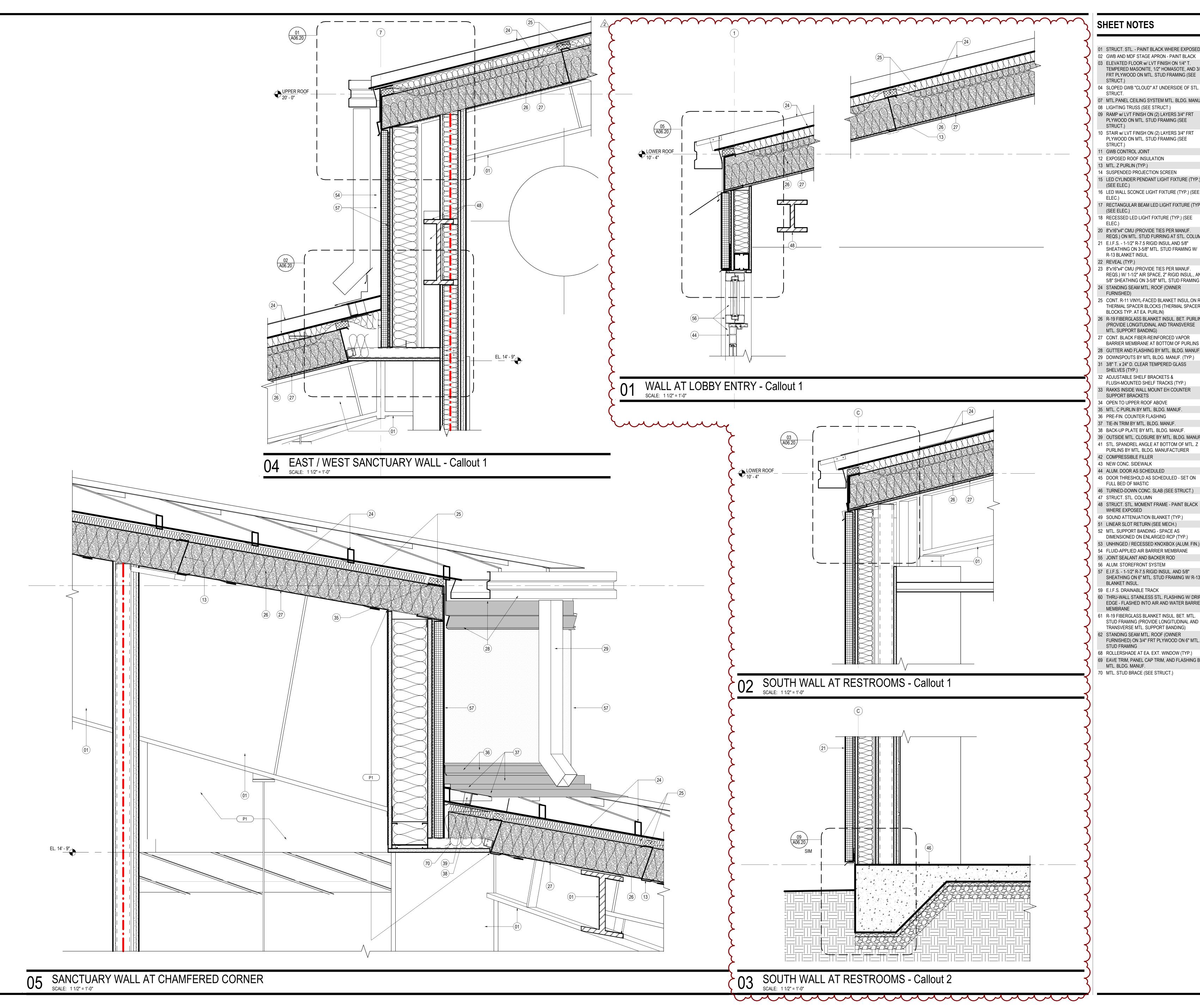
Project Number 23024.00

Description

SECTION DETAILS

1 1/2" = 1'-0"

A06.10



01 STRUCT. STL. - PAINT BLACK WHERE EXPOSED 02 GWB AND MDF STAGE APRON - PAINT BLACK 03 ELEVATED FLOOR w/ LVT FINISH ON 1/4" T. TEMPERED MASONITE, 1/2" HOMASOTE, AND 3/4"

FRT PLYWOOD ON MTL. STUD FRAMING (SEE

04 SLOPED GWB "CLOUD" AT UNDERSIDE OF STL.

07 MTL.PANEL CEILING SYSTEM MTL. BLDG. MANUF. 08 LIGHTING TRUSS (SEE STRUCT.)

09 RAMP w/ LVT FINISH ON (2) LAYERS 3/4" FRT PLYWOOD ON MTL. STUD FRAMING (SEE

10 STAIR w/ LVT FINISH ON (2) LAYERS 3/4" FRT PLYWOOD ON MTL. STUD FRAMING (SEE

11 GWB CONTROL JOINT

13 MTL. Z PURLIN (TYP.) 14 SUSPENDED PROJECTION SCREEN

15 LED CYLINDER PENDANT LIGHT FIXTURE (TYP.) 16 LED WALL SCONCE LIGHT FIXTURE (TYP.) (SEE

17 RECTANGULAR BEAM LED LIGHT FIXTURE (TYP.)

(SEE ELEC.) 18 RECESSED LED LIGHT FIXTURE (TYP.) (SEE

20 8"x16"x4" CMU (PROVIDE TIES PER MANUF. REQS.) ON MTL. STUD FURRING AT STL. COLUMN

SHEATHING ON 3-5/8" MTL. STUD FRAMING W/ R-13 BLANKET INSUL. 22 REVEAL (TYP.) 23 8"x16"x4" CMU (PROVIDE TIES PER MANUF.

REQS.) W/ 1-1/2" AIR SPACE, 2" RIGID INSUL., AND 5/8" SHEATHING ON 3-5/8" MTL. STUD FRAMING 24 STANDING SEAM MTL. ROOF (OWNER

25 CONT. R-11 VINYL-FACED BLANKET INSUL.ON R-3 THERMAL SPACER BLOCKS (THERMAL SPACER BLOCKS TYP. AT EA. PURLIN) 26 R-19 FIBERGLASS BLANKET INSUL. BET. PURLINS (PROVIDE LONGITUDINAL AND TRANSVERSE

27 CONT. BLACK FIBER-REINFORCED VAPOR BARRIER MEMBRANE AT BOTTOM OF PURLINS 28 GUTTER AND FLASHING BY MTL. BLDG. MANUF. 29 DOWNSPOUTS BY MTL BLDG. MANUF. (TYP.)

SHELVES (TYP.) 32 ADJUSTABLE SHELF BRACKETS &

33 RAKKS INSIDE WALL MOUNT EH COUNTER SUPPORT BRACKETS

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38 BACK-UP PLATE BY MTL. BLDG. MANUF. 39 OUTSIDE MTL. CLOSURE BY MTL. BLDG. MANUF.

41 STL. SPANDREL ANGLE AT BOTTOM OF MTL. Z PURLINS BY MTL. BLDG. MANUFACTURER 42 COMPRESSIBLE FILLER

43 NEW CONC. SIDEWALK

44 ALUM. DOOR AS SCHEDULED 45 DOOR THRESHOLD AS SCHEDULED - SET ON

46 TURNED-DOWN CONC. SLAB (SEE STRUCT.) 47 STRUCT. STL. COLUMN

49 SOUND ATTENUATION BLANKET (TYP.) 51 LINEAR SLOT RETURN (SEE MECH.)

52 MTL. SUPPORT BANDING - SPACE AS DIMENSIONED ON ENLARGED RCP (TYP.) 54 FLUID-APPLIED AIR BARRIER MEMBRANE

55 JOINT SEALANT AND BACKER ROD 56 ALUM. STOREFRONT SYSTEM 57 E.I.F.S. - 1-1/2" R-7.5 RIGID INSUL. AND 5/8" SHEATHING ON 6" MTL. STUD FRAMING W/ R-13

59 E.I.F.S. DRAINABLE TRACK

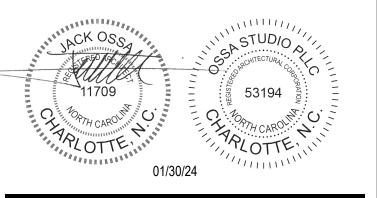
60 THRU-WALL STAINLESS STL. FLASHING W/ DRIP EDGE - FLASHED INTO AIR AND WATER BARRIER

STUD FRAMING (PROVIDE LONGITUDINAL AND TRANSVERSE MTL. SUPPORT BANDING) 62 STANDING SEAM MTL. ROOF (OWNER

FURNISHED) ON 3/4" FRT PLYWOOD ON 6" MTL. 68 ROLLERSHADE AT EA. EXT. WINDOW (TYP.)

69 EAVE TRIM, PANEL CAP TRIM, AND FLASHING BY MTL. BLDG. MANUF.

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ENGITECTURE www.engitecture.com 704.287.2193

01/30/24 FOR CONSTRUCTION 2 10/14/24 RTAP NO. 1

Project Name



community **church** making church come **alive**

> 658 GRAHAM ROAD SANFORD NC 27311

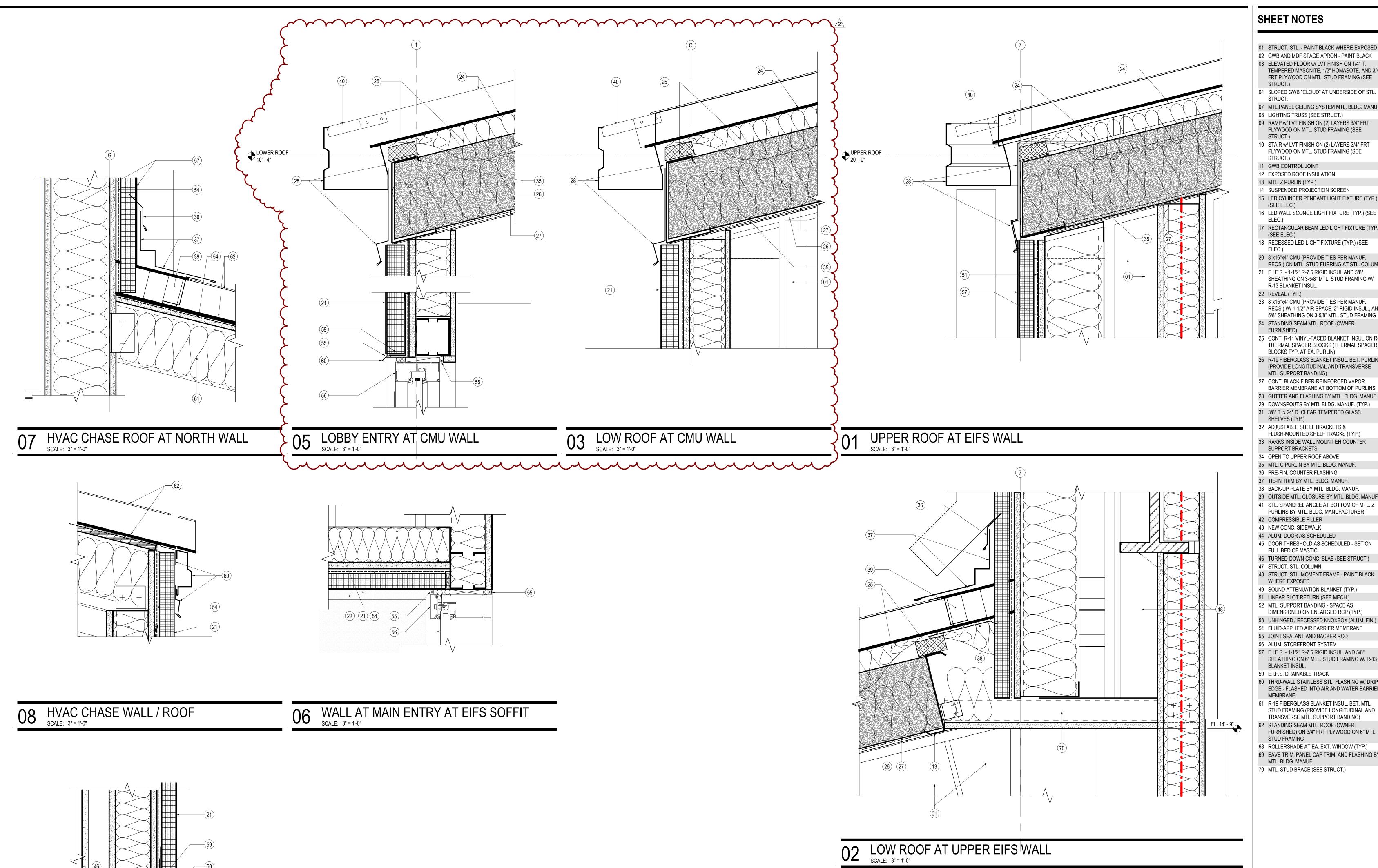
3D COMMUNITY CHURCH

Project Number 23024.00

Description SECTION DETAILS

1 1/2" = 1'-0"

A06.11



09 HVAC CHASE WALL AT FOUNDATION SCALE: 3" = 1'-0"

SHEET NOTES

01 STRUCT. STL. - PAINT BLACK WHERE EXPOSED 02 GWB AND MDF STAGE APRON - PAINT BLACK 03 ELEVATED FLOOR w/ LVT FINISH ON 1/4" T. TEMPERED MASONITE, 1/2" HOMASOTE, AND 3/4" FRT PLYWOOD ON MTL. STUD FRAMING (SEE

07 MTL.PANEL CEILING SYSTEM MTL. BLDG. MANUF.

08 LIGHTING TRUSS (SEE STRUCT.)

09 RAMP w/ LVT FINISH ON (2) LAYERS 3/4" FRT PLYWOOD ON MTL. STUD FRAMING (SEE

10 STAIR w/ LVT FINISH ON (2) LAYERS 3/4" FRT PLYWOOD ON MTL. STUD FRAMING (SEE

11 GWB CONTROL JOINT 12 EXPOSED ROOF INSULATION

13 MTL. Z PURLIN (TYP.) 14 SUSPENDED PROJECTION SCREEN

16 LED WALL SCONCE LIGHT FIXTURE (TYP.) (SEE

17 RECTANGULAR BEAM LED LIGHT FIXTURE (TYP.) (SEE ELEC.)

18 RECESSED LED LIGHT FIXTURE (TYP.) (SEE

20 8"x16"x4" CMU (PROVIDE TIES PER MANUF. REQS.) ON MTL. STUD FURRING AT STL. COLUMN 21 E.I.F.S. - 1-1/2" R-7.5 RIGID INSUL.AND 5/8" SHEATHING ON 3-5/8" MTL. STUD FRAMING W/

23 8"x16"x4" CMU (PROVIDE TIES PER MANUF. REQS.) W/ 1-1/2" AIR SPACE, 2" RIGID INSUL., AND 5/8" SHEATHING ON 3-5/8" MTL. STUD FRAMING

25 CONT. R-11 VINYL-FACED BLANKET INSUL.ON R-3 THERMAL SPACER BLOCKS (THERMAL SPACER BLOCKS TYP. AT EA. PURLIN) 26 R-19 FIBERGLASS BLANKET INSUL. BET. PURLINS

(PROVIDE LONGITUDINAL AND TRANSVERSE MTL. SUPPORT BANDING) 27 CONT. BLACK FIBER-REINFORCED VAPOR BARRIER MEMBRANE AT BOTTOM OF PURLINS

28 GUTTER AND FLASHING BY MTL. BLDG. MANUF. 29 DOWNSPOUTS BY MTL BLDG. MANUF. (TYP.)

SHELVES (TYP.) 32 ADJUSTABLE SHELF BRACKETS &

33 RAKKS INSIDE WALL MOUNT EH COUNTER SUPPORT BRACKETS

34 OPEN TO UPPER ROOF ABOVE 35 MTL. C PURLIN BY MTL. BLDG. MANUF. 36 PRE-FIN. COUNTER FLASHING

38 BACK-UP PLATE BY MTL. BLDG. MANUF. 39 OUTSIDE MTL. CLOSURE BY MTL. BLDG. MANUF. 41 STL. SPANDREL ANGLE AT BOTTOM OF MTL. Z

PURLINS BY MTL. BLDG. MANUFACTURER 42 COMPRESSIBLE FILLER

44 ALUM. DOOR AS SCHEDULED 45 DOOR THRESHOLD AS SCHEDULED - SET ON

FULL BED OF MASTIC 46 TURNED-DOWN CONC. SLAB (SEE STRUCT.)

47 STRUCT. STL. COLUMN 48 STRUCT. STL. MOMENT FRAME - PAINT BLACK

51 LINEAR SLOT RETURN (SEE MECH.) 52 MTL. SUPPORT BANDING - SPACE AS DIMENSIONED ON ENLARGED RCP (TYP.)

54 FLUID-APPLIED AIR BARRIER MEMBRANE

56 ALUM. STOREFRONT SYSTEM 57 E.I.F.S. - 1-1/2" R-7.5 RIGID INSUL. AND 5/8" SHEATHING ON 6" MTL. STUD FRAMING W/ R-13

59 E.I.F.S. DRAINABLE TRACK

60 THRU-WALL STAINLESS STL. FLASHING W/ DRIP EDGE - FLASHED INTO AIR AND WATER BARRIER 61 R-19 FIBERGLASS BLANKET INSUL. BET. MTL.

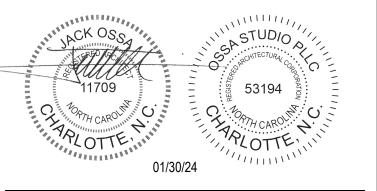
TRANSVERSE MTL. SUPPORT BANDING) 62 STANDING SEAM MTL. ROOF (OWNER FURNISHED) ON 3/4" FRT PLYWOOD ON 6" MTL.

68 ROLLERSHADE AT EA. EXT. WINDOW (TYP.) 69 EAVE TRIM, PANEL CAP TRIM, AND FLASHING BY

70 MTL. STUD BRACE (SEE STRUCT.)



4539 HEDGEMORE DRIVE, SUITE 101 CHARLOTTE NC 28209 704.890.2053 WWW.OSSASTUDIO.COM



PROJECT TEAM

General Contractor ECCLESIA CONSTRUCTION www.ecclesiaconstruction.com 803.327.5670

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3D COMMUNITY CHURCH

Project Number 23024.00

SECTION DETAILS

3" = 1'-0"

A06.20

TYPE	DESCRIPTION	LUMENS	TOTAL FIXTURE	COLOR	BALLAST/	VOLTAGE	MOUNTING		MANUFACTURER/MODEL	NOTES
			WATTS	TEMP	DRIVER	7 5 2 1 1 1 2		RENOVA	· 	
A	2X2 LED FLAT PANEL	4000	29.24	3500K	LED	MVOLT	RECESSED	LIGHTING "OVATION"	RVN22-N-L040-UNV-DM-C35-AF OR PREAPPROVED EQUAL	
С	4' LED CHAIN HUNG STRIP LIGHT	4000	43	3500K	LED	LED	MVOLT	LITHONIA CLX	CLX-L48-3500LM-SEF-MVOLT-40K-80CRI- ZACVH M100 OR PREAPPROVED EQUAL	SET LIGHT TO 3500K. PROVIDE WITH CHAIN HANGARS. MOUNT BOTTOM OF LIGHT AT 9'-0"AFF
D	WET LISTED DECORATIVE LED LIGHTING SCONCE WITH EMERGENCY BATTERY PACK	1700	24	4000	LED	MVOLT	TRACK	SUNLITE 88142-SU LFX/UD/R/12"/24W/BK/SCT PREAPPROVED EQUAL		WET LISTED. PROVIDE WITH EMERGENCY BATTERY PACK
F	SUSPENDED NARROW BEAM STRIP LED LIGHT	3000	43	3500K	LED	MVOLT	SUSPENDED	JUNO LIGHTING	T286L35K-90CRI-PDIM-NFL-BL-LSPREAD 469 - BARN DOORS OR PREAPPROVED EQUAL	MOUNT OUT OF PUBLIC VIEW BEHIND CURTAIN. PROVIDE WITH LINEAR BEAM SPREAD OPTION AND BARN DOORS. MOUNT ON JUNO T SERIES TRAC T-6FT BL. PROVIDE WITH 2.5A CURRENT LIMITER.
G1	4" LED SQUARE RECESSED DOWNLIGHT IN GYPBOARD CEILING	1500	13.7	4000K	LED	MVOLT	RECESSED	GOTHAM EVO	EVO4SQ-35/15-AR-LSS-MVOLT-GZ1 OR PREAPPROVED EQUAL	MOUNT IN GYPBOARD CEILINGS AND PROVIDE ALL ACCESSORIES FOR INSTALLATION
G2	4" LED SQUARE RECESSED DOWNLIGHT IN ACT CEILING	1500	13.7	3500K	LED	MVOLT	RECESSED	GOTHAM EVO	EVO4SQ-35/15-AR-LSS-MVOLT-GZ1 OR PREAPPROVED EQUAL	MOUNT IN CEILING GRID AND PROVIDE ALL ACCESSORIES FOR INSTALLATION
G3	4" LED SQUARE RECESSED DOWNLIGHT IN GYPBOARD CEILING	2000	19.5	3500K	LED	MVOLT	RECESSED	GOTHAM EVO	EVO4SQ-35/20-AR-LSS-MVOLT-GZ1 OR PREAPPROVED EQUAL	MOUNT IN GYPBOARD CEILINGS AND PROVIDE ALL ACCESSORIES FOR INSTALLATION
G4	4" LED SQUARE RECESSED DOWNLIGHT IN GYPBOARD CEILING	2000	19.5	3500K	LED	MVOLT	RECESSED	GOTHAM EVO	EVO4SQ-35/20-AR-LSS-MVOLT-GZ1 OR PREAPPROVED EQUAL	MOUNT IN CEILING GRID AND PROVIDE ALL ACCESSORIES FOR INSTALLATION
н	VANITY LIGHT	1500	50 MAX	3500K	LED	MVOLT	WALL		TO BE SPECIFIED BY OTHERS	
К1	LED PENDANT MOUNTED CYLINDER LIGHT FIXTURE	2000	19.7	3500K	LED	MVOLT	SUSPENDED	GOTHAM EVO	EVO6CC-35/20-AR-LSS-MWD-MVOLT-GZ1- CCAN45-CORD LENGTH - BLACK - E15WCP OR PREAPPROVED EQUAL	PROVIDE ACCESSORIES TO MOUNT ON INCLINED CEILING. BLACK FINISH.
K1W	WET LISTED LED PENDANT MOUNTED CYLINDER LIGHT FIXTURE AND EMERGENCY BATTERY PACK	2000	19.7	3500K	LED	MVOLT	SUSPENDED	GOTHAM EVO	EVO6CC-35/20-AR-LSS-MWD-MVOLT-GZ1- CCAN45-CORD LENGTH - BLACK - E15WCP - WL OR PREAPPROVED EQUAL	BLACK FINISH.
К2	LED PENDANT MOUNTED CYLINDER LIGHT FIXTURE	8000	74.9	3500K	LED	MVOLT	SUSPENDED	GOTHAM EVO	EVO6CC-35/80-AR-LSS-MWD-MVOLT-GZ1- CCAN45-CORD LENGTH - E15WCP OR PREAPPROVED EQUAL	PROVIDE ACCESSORIES TO MOUNT ON INCLINED CEILING.
K2E	SAME AS TYPE 'K2', EXCEPT PROVIDE WITH 90 MINUTE EMERGENCY BATTERY PACK	8000	74.9	3500K	LED	MVOLT	SUSPENDED			
SC1W	WET LISTED LED SCONCE WITH UP/DOWNLIGHT	1500	20W MAX	3500K	LED	MVOLT	WALL		TO BE SELECTED BY OTHERS	WET LISTED. BLACK FINISH.
x	THERMOPLASTIC LED EXIT SIGN		5					LITHONIA	LQM SERIES OR PREAPPROVED EQUAL	PROVIDE WITH 90 MINUTE BATTERY PACK. MATCH ARROWS AND NUMBER OF FACES WITH DRAWINGS. COLOR TO BE SPECIFIED BY ARCHITECT.
Y	EMERGENCY DUAL HEAD LED LIGHT FIXTURE		5					LITHONIA	ELM2L SERIES OR PREAPPROVED EQUAL	PROVIDE WITH 90 MINUTE BATTERY PACK
z	THERMOPLASTIC LED EXIT SIGN WITH DUAL HEAD LED EMERGENCY LIGHT FIXTURE		5					LITHONIA	LHQM SERIES OR PREAPPROVED EQUAL	PROVIDE WITH 90 MINUTE BATTERY PACK. UL924 COMPLIANCE. MATCH ARROWS AND NUMBER OF FACES WITH DRAWINGS. COLOR TO BE SPECIFIED BY ARCHITECT.
			1			sc	HEDULE NOTES	5		
1	NO SUBSTITUTIONS ARE ALLOWED WITHOUT	APPROVAL B	Y EOR AND O	WNER.					EXIT AND EMERGENCY LIGHTING FIXTURES SHAL	L BE CIRCUITED TO AN UNSWITCHED LEG OF A
2	ALL EXPEDITED COSTS SHALL BE THE RESPON	SIBILITY OF	THE CONTRA	CTOR.			4		LOCAL LIGHTING CIRCUIT (UNLESS OTHERWISE	NOTED). INCLUDE 90 MINUTE BATTERY BACKUP AND
3	BATTERY BALLASTS SHALL PROVIDE 90 MINUT INTEGRAL INDICATOR LIGHT.	ES OF BATTE	ERY BACKUP A	and be equ	IPPED WITH				TESTING MEANS. THE CONTRACTOR SHALL VERIFY THE LEAD TIME	OF ALL PRODUCTS TO BE SUBMITTED AT THE TIME
						1	5			TY THE ARCHITECT AND ENGINEER OF ANY DELIVERY

CHALLENGES.

GENERAL ELECTRICAL NOTES:

. THE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND DO NOT NECESSARILY SHOW EVERY FITTING AND DETAIL. ALL WORK SHALL BE COMPLETED SO THE JUNCTION BOXES AND COMPONENTS WILL BE ACCESSIBLE FOR SERVICING.

25. ALL CONDUCTORS SHALL BE COPPER UNLESS OTHERWISE NOTED.

MOUNTING HEIGHT NOTES:

1. WALL MOUNTED FIRE ALARM NOTIFICATION DEVICES MUST BE MOUNTED MOUNTED NO LOWER THAN 80" AFF TO BOTTOM OF DEVICE AND NO HIGHER THAN 96" TO TOP OF THE DEVICE. CONTRACTOR SHALL MOUNT THESE DEVICES AT 88" TO THE MIDDLE OF THE DEVICE UNLESS FIELD CONDITIONS DO NOT ALLOW TO MOUNT AT THIS HEIGHT. IF THE DEVICE CAN NOT BE LOCATED BETWEEN 80" AND 96", CONTACT ENGINEER IMMEDIATELY FOR SOLUTION.

2. MOUNT CENTER LINE OF EXIT SIGN 24" ABOVE DOOR WHERE CEILING IS OVER 12'-0"AFF OR TO STRUCTURE WHERE NO CEILING IS PRESENT. IF CEILING IS 12'-0"AFF OR UNDER, CONTRACTOR SHALL MOUNT CENTER LINE OF EXIT SIGN 12" BELOW CEILING.

3. WALL MOUNTED TELEPHONES, FIRE ALARM PULL STATIONS, AND LIGHT SWITCHES SHALL BE MOUNTED AT 48"AFF TO TOP OF THE DEVICE.

4. ALL RECEPTACLES SHALL BE MOUNTED AT 18"AFF TO THE CENTER LINE OF THE DEVICE UNLESS OTHERWISE NOTED.

5. THE NEAREST EDGE OF ALL CEILING MOUNTED SMOKE OR HEAT DETECTORS SHALL BE LOCATED NO LESS THAN 4" FROM THE WALL.

\sim	ENERAL ELECTRICAL NOTES	ELECTRICAL SYMB	OLLEGEND
<u>G</u>	ENERAL ELECTRICAL NOTES:	①	JUNCTION BOX
1.	THE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND DO NOT	HQ)	WALL MOUNTED JUNCTION BOX
	NECESSARILY SHOW EVERY FITTING AND DETAIL. ALL WORK SHALL BE		CONCEALED CONDUIT
	COMPLETED SO THE JUNCTION BOXES AND COMPONENTS WILL BE ACCESSIBLE FOR SERVICING.	/	CONCEALED CONDUIT IN FLOOR OR UNDERGROUND
ว	ALL ELECTRICAL WORK PERFORMED DURING THIS SCOPE OF WORK SHALL		CIRCUIT HOMERUN TO PANEL; EACH ARROWHEAD = 1 CIRCUIT
۷.	COMPLY WITH ALL LOCAL BUILDING CODES, LAWS, REGULATIONS, ORDINANCES, AND THE REQUIREMENTS OF THE 2020 NATIONAL ELECTRICAL CODE. ALL WORK SHALL COMPLY WITH ANY OWNER SPECIFICATIONS NOT CALLED OUT ON THIS SET OF DRAWINGS.		HASH MARKS ACROSS CONDUIT INDICATE THE NUMBER OF #12 CONDUCTORS (# OF PHASES + NEUTRAL) UNLESS OTHERWISE NOTED. NO HASH MARKS INDICATE TWO #12 CONDUCTORS. EQUIPMENT GROUNDING CONDUCTORS ARE NOT INDICATED BY HASH MARKS.
			120/208V ELECTRICAL PANELBOARD
3.	WHERE ELECTRICAL CONTINUITY TO EXISTING TO REMAIN RECEPTACLES/LIGHTS/EQUIPMENT IS DISRUPTED BY DEMOLITION DURING THIS SCOPE OF WORK, RECONNECT THE DEVICE TO THE CIRCUIT IT WAS		277/480V ELECTRICAL PANELBOARD
	CONNECTED TO BEFORE DEMOLITION TOOK PLACE UNLESS THE DRAWINGS SHOW OTHERWISE.	⊢ □#/#	NON-FUSED DISCONNECT SWITCH (FRAME/POLES) FUSED DISCONNECT SWITCH (FRAME/POLES/FUSE) - FUSE IF NEEDED AND SIZE PER
	ALL CONDUCTORS SHALL BE COPPER WITH TYPE "THHN" OR "THW" INSULATION. USE "THHN" FOR #10 OR SMALLER CONDUCTORS. USE "THW"	r⊠#/#/#	POWER SYMBOLS
	FOR CONDUCTORS #8 OR LARGER.	₩P/GFI	DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTION AND WEATHERPROOF HOUSING
5.	THE MINIMUM WIRE SIZE SHALL BE #12 A.W.G.	₽GFI	DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTION
6.	ALL PENETRATIONS THRU RATED WALLS, FLOORS AND CEILINGS SHALL BE FIRE STOPPED PER N.E.C. 300-21 AND NFPA 221.	Ф	5-20R DUPLEX RECEPTACLE
_		#	QUADRAPLEX RECEPTACLE
/.	PROVIDE GROUNDING AS REQUIRED BY N.E.C	\Diamond	SPECIAL RECEPTACLE. NEMA TYPE NOTED NEXT TO DEVICE OR IN KEYED NOTE
	WHERE MOUNTING HEIGHTS ARE SHOWN ON THE DRAWINGS, THE MEASUREMENT IS TO BE TAKEN FROM THE CENTERLINE OF THE DEVICE.		FLOOR MOUNTED POKE-THRU DEVICE WITH DUPLEX RECEPTACLE FOR NON-SLAB ON GRADE APPLICATIONS. FLOOR MOUNTED RECESSED FLOOR BOX WITH DUPLEX RECEPTACLE FOR SLAB ON GRADE APPLICATIONS.
	TYPICAL CONDUIT SIZES ARE 3/4" EMT WITH 2#12, 1#12G. AWG UNLESS OTHERWISE NOTED.		FLOOR MOUNTED POKE-THRU DEVICE WITH QUADRAPLEX RECEPTACLE FOR NON-SLAB ON GRADE APPLICATIONS. FLOOR MOUNTED RECESSED FLOOR BOX WITH QUADRAPLEX RECEPTACLE FOR SLAB ON GRADE APPLICATIONS.
10.	A #12 GROUND SHALL BE PROVIDED FOR ALL MECHANICAL EQUIPMENT UNLESS NOTED OTHERWISE. ALL EQUIPMENT SHALL BE GROUNDED AT THE PANEL THAT FEEDS THE EQUIPMENT.		FLOOR MOUNTED POKE-THRU DEVICE WITH DUPLEX RECEPTACLE AND DATA/COMMUNICATIONS DEVICES FOR NON-SLAB ON GRADE APPLICATIONS. FLOOR MOUNTED RECESSED FLOOR BOX WITH DUPLEX RECEPTACLE AND DATA/COMMUNICATIONS DEVICES FOR SLAB ON GRADE APPLICATIONS.
11.	CONTRACTOR SHALL PROVIDE A PANEL SCHEDULE DIRECTORY LOCATED ON THE INSIDE COVER OF THE ELECTRICAL PANEL. ALL CIRCUITS, SPARES, AND SPACES SHALL BE CORRECTLY LABELED.		FLOOR MOUNTED POKE-THRU DEVICE WITH QUADRAPLEX RECEPTACLE AND DATA/COMMUNICATIONS DEVICES FOR NON-SLAB ON GRADE APPLICATIONS. FLOOR MOUNTED RECESSED FLOOR BOX WITH QUADRAPLEX RECEPTACLE AND DATA/COMMUNICATIONS DEVICES FOR SLAB ON GRADE APPLICATIONS.
12.	ALL BRANCH CIRCUIT HOMERUN CONDUCTORS SHALL BE PROVIDED WITH A SEPERATE INSULATED #12 AWG EQUIPMENT GROUNDING CONDUCTOR.	□© FF	CAST IRON FURNITURE FEED FLOOR BOX. NUMBER NEXT TO DEVICE INDICATES NUMBER OF CUBICLES TO BE SERVED BY THIS DEVICE. BASIS OF DESIGN IS LEGRAND EVOLUTION SERIES FLOOR BOX, FURNITURE SERIES. PROVIDE COVER PLATES AND
13.	IF THE GENERAL CONTRACTOR DOES ANY WORK THAT CAUSES DISRUPTION TO ANY ELECTRICAL CIRCUITS OR SYSTEMS, THE ELECTRICAL CONTRACTOR SHALL CONNECT ALL REMAINING WORKING DEVICES ON		FLANGES AS REQUIRED. COORDINATE EXACT LOCATION AND COVER FINISH WITH ARCHITECT. TELE/COMMUNICATIONS JACK (CONTRACTOR SHALL PROVIDE AND INSTALL JUNCTION
	THAT CIRCUIT AS REQUIRED TO ENSURE PROPER WORKING SYSTEM.	V	BOX CONNECTED TO PULLSTRING TO UP ABOVE ACCESSIBLE CEILING)
14.	BUILDING CODE SECTION 705.4 SHALL BE MET WITH ELECTRICAL DEVICES	Pusb	DUPLEX RECEPTACLE WITH (2) USB PLUGS. BASIS OF DESIGN IS LEGRAND 'TM826USBWCC6'
	TO BE INSTALLED IN RATED WALLS.	0	CONDUIT STUB UP
15.	ALL ELECTRICAL MATERIALS, DEVICES, AND EQUIPMENT SHALL BE LISTED	BFH	FURNITURE BASE FEED
	BY UL OR OTHER STATE APPROVED THIRD PARTY TESTING AGENCY.		CARD READER. PROVIDE JUNCTION BOX WITH PULLSTRING TO UP ABOVE ACCESSIBLE CEILING.
16.	FIRE RATED SLEEVES SHALL BE PROVIDED AND ALL FIRESTOPPING SHALL	<u> </u>	TELEVISION. REFER TO DETAIL ON THIS DRAWING SET. MOUNT AT +60"AFF UNLESS
	BE PROVIDED AS REQUIRED BY CODE WHEN CABLING IS ROUTED THROUGH A FIRE RATED PARTITION. BLANK COVERS SHALL BE INSTALLED	TVH	OTHERWISE NOTED.
	ON RINGS.		LIGHTING SYMBOLS
17.	ALL ELECTRICAL EQUIPMENT SHALL BE PROTECTED FROM DAMAGE AFTER BEING INSTALLED. CONTRACTOR SHALL NOT INSTALL TRIM AND COVER		LIGHT FIXTURE (LETTER NEXT TO LIGHT SIGNIFIES LIGHTING TYPE - REFER TO LIGHTING FIXTURE SCHEDULE) EMERGENCY OVERHEAD LIGHT FIXTURE (LETTER NEXT TO LIGHT SIGNIFIES LIGHTING TYPE -
	PLATES UNTIL AFTER ALL FINISHES TO ARCHITECTURAL ELEMENTS HAVE BEEN COMPLETED.	⊗ 👿	REFER TO LIGHTING FIXTURE SCHEDULE) EXIT SIGN (COORDINATE ARROWS AND FACES WITH DRAWINGS)
		₩	EMERGENCY "BUG EYE" LIGHT FIXTURE
18.	MOUNT ALL DISCONNECT SWITCHES TO STRUCTURE. DISCONNECTS SHALL NOT BE MOUNTED TO DUCTWORK OR MECHANICAL EQUIPMENT.	42₽	COMBINATION EXIT SIGN / EMERGENCY "BUG EYE" LIGHT FIXTURE
19.	ANY CABLING TO BE INSTALLED DURING THIS SCOPE OF WORK THAT IS ROUTED THROUGH ANOTHER TENANT SPACE OR COMMON AREA SHALL BE	\$	WALL MOUNTED COMMERCIAL GRADE DECORATOR LIGHT SWITCH. GREENGATE 7521 SERIES. VALUE ENGINEERING SUBSTITUTION SHALL BE COMMERCIAL GRADE TOGGLE SWITCH. GREENGATE CS120 SERIES.
20	ENCLOSED IN CONDUIT.	\$P	WALL MOUNTED STANDARD 0-10V COMMERCIAL GRADE SLIDE DIMMER LIGHT SWITCH. GREENGATE WBSD-010M-C1
20.	ALL LIGHT FIXTURE SHALL BE CLEANED, AND FULLY FUNCTIONAL AT MOVE-IN. THIS INCLUDES RE-LAMPING.	\$3	WALL MOUNTED OCCUPANCY CENSOR A LIGHT SWITCH COMPINATION LINES. CREENGATE
21	CONTRACTOR SHALL PROVIDE AND INSTALL NAMEPLATE FOR ALL	\$ ^{os}	WALL MOUNTED OCCUPANCY SENSOR / LIGHT SWITCH COMBINATION UNIT. GREENGATE 'ONW-D-1001' WIRED FOR SINGLE POLE OPERATION.
۷1.	RECEPTACLES AND POWERED DEVICES. INFORMATION ON NAMEPLATE	\$ ^{OSD}	WALL MOUNTED 0-10V DIMMING LIGHT SWITCH WITH DUAL TECHNOLOGY INTEGRAL OCCUPANCY SENSOR. GREENGATE 'OSW-D-010'.
	SHALL INCLUDE ELECTRICAL PANEL AND CIRCUIT NUMBER FROM WHICH DEVICE IS POWERED.	\$052	WALL MOUNTED 0-10V RECESSED DUAL RELAY LIGHT SWITCH WITH DUAL TECHNOLOGY INTEGRAL OCCUPANCY SENSOR. GREENGATE 'ONW-D-1001-DMV-N. THIS CONTROL SWITCH SHALL CONTROL TWO ZONES OF LIGHTING.
22.	WHERE TWO SWITCHES OR MORE (INCLUDING DIMMERS) ARE LOCATED	\$ ^{0S3}	WALL MOUNTED OCCUPANCY SENSOR / LIGHT SWITCH COMBINATION UNIT. GREENGATE 'ONW-D-1001' WIRED FOR THREE-WAY OPERATION.
	NEXT TO EACH OTHER, CONTRACTOR SHALL PROVIDE AND INSTALL A SINGLE SWITCHPLATE TO PROVIDE A NEATER APPEARANCE.	\$ ^{vs}	WALL MOUNTED OCCUPANCY SENSOR / LIGHT SWITCH COMBINATION UNIT. GREENGATE
22	NO MC CABLE IS ALLOWED WHERE VISIBLE.	\$VSD	'VNW-D-1001-MV' WIRED FOR SINGLE POLE OPERATION. WALL MOUNTED 0-10V DIMMING LIGHT SWITCH WITH DUAL TECHNOLOGY INTEGRAL OCCUPANCY
		Φ \$ ^{VS2}	SENSOR. GREENGATE 'VSW-D-010'. WALL MOUNTED 0-10V RECESSED DUAL RELAY LIGHT SWITCH WITH DUAL TECHNOLOGY INTEGRAL
24.	ALL CONDUCTORS #1 AND UNDER SHALL BE RATED FOR 60 DEGREES CELSIUS. ALL CONDUCTORS LARGER THAN #1 SHALL BE RATED FOR 75	<u> </u>	OCCUPANCY SENSOR. GREENGATE 'VNW-D-1001-DMV-N. THIS CONTROL SWITCH SHALL CONTROL TWO ZONES OF LIGHTING.
	DEGREES CELSIUS.	\$ ^{VS3}	WALL MOUNTED OCCUPANCY SENSOR / LIGHT SWITCH COMBINATION UNIT. GREENGATE 'VNW-D-1001-MV' WIRED FOR THREE-WAY OPERATION.

LIGHTING NOTES: TIMEOUTS FOR ALL OCCUPANCY OR VACANCY SENSORS SHALL BE SET TO MAXIMUM LENGTH ALLOWED BY SENSOR MANUFACTURER. MANUFACTURERS ALLOWED ARE GREENGATE (BASIS OF DESIGN), NLIGHT, SENSOR SWITCH, WATTSTOPPER, LEVITON OR OTHER PREAPPROVED EQUAL. ALL LIGHTING CONTROL PRODUCTS FOR THE PROJECT SHALL BE OF

FIRE ALARM NOTIFICATION

SWITCHES THAT ARE TO BE PAIRED WITH SENSORS.

LESS THAN 46'X25'.

M.C.

WP

CEILING MOUNTED 0-10V DUAL TECHNOLOGY OCCUPANCY SENSOR, GREENGATE 'OAC-DT-1000

ABOVE ACCESSIBLE CEILING MOUNTED 0-10V POWER PACK. GREENGATE 'SP20' SERIES

OR EQUAL BY SENSOR SWITCH, WATTSTOPPER, LEVITON, NLIGHT. WHERE THERE ARE TWO POWER PACKS IN A ROOM/AREA, ONE POWER PACK IS TO CONTROL ONE OF THE LIGHTING ZONES AND THE OTHER POWER PACK(S) SHALL CONTROL THE OTHER(S).

POWER PACKS SHALL BE PROVIDED WITH DEFAULT MODES TO MATCH DEFAULTS OF

FOR SPACES UP TO 34'X18'. GREENGATE 'OAT-CT-2000' FOR SPACES GREATER THAN 34'X18' AND

THE SAME MANUFACTURER. PROVIDE AND INSTALL ACCESSORIES REQUIRED FOR FULL OPERATION OF DEVICES. LIGHTING CONTROLS SHALL BE TYPE RECOMMENDED BY LIGHTING MANUFACTURER TO OPERATE THE LIGHTING TYPE WITH FEATURES AS SELECTED/PROVIDED. MANUFACTURER'S RECOMMENDATION SHALL SUPERCEDE ALL SPECIFICATIONS ON THIS ELECTRICAL SYMBOL LEGEND.

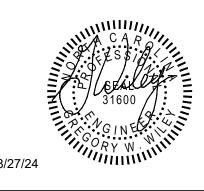
ALL CEILING MOUNTED OCCUPANCY OR VACANCY SENSORS SHALL BE CENTRALLY LOCATED IN THE ROOM IT SERVES AND POSITIONED FOR ACCURATE DETECTION. FOR ALL LOW VOLTAGE CEILING MOUNTED OCCUPANCY AND VACANCY SENSORS, THE CONTRACTOR SHALL ALSO PROVIDE AND INSTALL A POWER PACK OF MODEL RECOMMENDED BY MANUFACTURER. ALL DEVICE COLORS SHALL BE SELECTED BY ARCHITECT/INTERIOR DESIGNER.

MECHANICAL CONTRACTOR

NEMA 3R RATED

FIRE ALARM PULL STATION WALL MOUNTED HORN/STROBE NOTICATION DEVICE (CANDELA RATING IS LOCATED NEXT TO DEVICE) MATCH EXISTING. WALL MOUNTED VISUAL NOTICATION DEVICE (CANDELA RATING IS LOCATED NEXT TO DEVICE) MATCH EXISTING.
CEILING MOUNTED HORN/STROBE NOTICATION DEVICE (CANDELA RATING IS LOCATED NEXT TO DEVICE). MATCH EXISTING. CEILING MOUNTED VISUAL NOTICATION DEVICE (CANDELA RATING IS LOCATED NEXT TO DEVICE). MATCH EXISTING. FAAP FIRE ALARM ANNUNCIATION PANEL **FACP** FIRE ALARM CONTROL PANEL **ABBREVIATIONS** # OF INCHES TO MOUNT CENTERLINE OF DEVICE ABOVE FINISHED FLOOR ABOVE COUNTER **BELOW CEILING** BC CM CEILING MOUNTED EMPTY CONDUIT (WITH PULLSTRING) E.C. **ELECTRICAL CONTRACTOR** GENERAL CONTRACTOR G.C.

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PROJECT TEAM

General Contractor ECCLESIA CONSTRUCTION www.ecclesiaconstruction.com 803.327.5670



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Description

12/15/2023 DESIGN DEVELOPMENT DWGS. 12/22/2023 DESIGN DEVELOPMENT DWGS. 01/24/2024 REVIEW DWGS.

01/30/2024 ISSUED FOR CONSTRUCTION.

04/22/2024 PERMIT REVISION 10/14/2024 RTAP NO. 1

Project Name



making church come alive 658 GRAHAM ROAD

SANFORD NC 27311

3D COMMUNITY CHURCH

& ABBREVIATIONS - ELECTRICAL

Project Number 23024.00

GENERAL NOTES, RISER DIAGRAM

E00.01

ELECTRICAL SYSTEMS AS SHOWN ON THE PLANS. B. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, NFPA, STATE BUILDING CODE, AND ANY OTHER LOCAL REQUIREMENTS THAT MAY APPLY. CONTRACTOR SHALL PAY FOR ALL REQUIRED PERMITS, FEES, INSPECTIONS, ETC.

C. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL ELECTRICAL PERMITS AND INSPECTION FEES. D. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BE LISTED BY THE UNDERWRITER'S LABORATORIES, INC. OR BY A STATE APPROVED THIRD PARTY TESTING AGENCY FOR THE USE INTENDED WHERE A STANDARD FOR SUCH MATERIALS AND USE EXISTS. ALL ITEMS OF THE SAME TYPE AND RATING SHALL BE

IDENTICAL AND OF THE SAME MANUFACTURER. E. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND CATALOG DATA IN ELECTRONIC FORMAT (PDF) FOR ALL ELECTRICAL ITEMS IN THE SCOPE OF WORK, INCLUDING, BUT NOT LIMITED TO, RACEWAYS, BOXES, FITTINGS, CONDUCTORS, LUMINAIRES, LAMPS, BALLASTS, WIRING DEVICES, SAFETY SWITCHES, DISCONNECTS, TRANSFORMERS, PANELBOARDS, FIRE ALARM, TELECOMMUNICATIONS, ETC. FOR APPROVAL AS APPLICABLE FOR THE PROJECT. ONE COMPLETE SET OF APPROVED SUBMITTALS

SHALL BE MAINTAINED AT THE JOB SITE. F. ALL COST ASSOCIATED WITH SUBSTITUTED EQUIPMENT TO COMPLY WITH THE BASIS OF DESIGN, INCLUDING PROVIDING MAINTENANCE ACCESS, CLEARANCE, CONDUIT, WIRING, REPLACEMENT OF OTHER SYSTEM COMPONENTS, BUILDING ALTERATIONS, METHODS, ETC., SHALL BE INCLUDED IN THE ORIGINAL BASE BID. NO ADDITIONAL COSTS ASSOCIATED WITH SUBSTITUTED EQUIPMENT WILL BE APPROVED AFTER BIDS HAVE BEEN ACCEPTED AND ALL COSTS WILL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

CREDITS SHALL BE GIVEN TO THE OWNER WHERE SUCH EQUIPMENT AND METHODS RESULT IN LESS EXPENSE TO THE CONTRACTOR. G. ONE COMPLETE SET OF THE LATEST CONSTRUCTION PLANS OF ALL TRADES SHALL BE MAINTAINED AT THE JOB SITE. IN ADDITION, ALL ADDENDUMS, BULLETINS, AND/OR SKETCHES SHALL BE

INCORPORATED INTO THE ON-SITE CONSTRUCTION PLANS AS THE 10B PROGRESSES H. COMPLETELY ADEQUATE HOUSING SHALL BE PROVIDED FOR ALL MATERIALS STORED ON JOB SITE. ONLY CONDUIT MAY BE STORED OUTSIDE, BUT NOT IN CONTACT WITH THE GROUND.

I. THE CONDUIT AND NEUTRAL SYSTEM SHALL BE GROUNDED AT THE MAIN SERVICE EQUIPMENT. GROUNDING ELECTRODE SYSTEM SHALL BE INSTALLED PER NEC 250. J. PROVIDE AN INTERSYSTEM BONDING TERMINATION DEVICE AT THE MAIN ELECTRICAL SERVICE PER NEC 250.94.

K. WIRING SHALL BE TESTED FOR CONTINUITY AND GROUNDS BEFORE BEING ENERGIZED. FAULTY WIRING SHALL BE REPLACED AT NO ADDITIONAL EXPENSE TO THE OWNER. L. PROVIDE ALL CUTTING AND PATCHING FOR INSTALLATION OF WORK

AND REPAIR ANY DAMAGE DONE. M. THE ELECTRICAL CONTRACTOR SHALL CONNECT ALL EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS (UNLESS OTHERWISE NOTED), EXCEPT FOR CONTROL WIRING FOR EQUIPMENT NOT PROVIDED BY THE ELECTRICAL CONTRACTOR. CONTROL WIRING FOR SUCH EQUIPMENT SHALL BE PROVIDED BY THE RESPECTIVE

DISCIPLINE. N. ALL ELECTRICAL JUNCTION BOXES, SWITCHGEAR, CABLING, VOICE/DATA OUTLETS, LOW VOLTAGE CABINETS, EMERGENCY RECEPTACLES, ETC. SHALL BE LABELED ACCORDING TO PANEL AND CIRCUIT NUMBER.

O. UPON COMPLETION OF WORK, CONTRACTOR SHALL PRESENT ENGINEER WITH CERTIFICATE OF APPROVAL FROM LOCAL INSPECTOR AND/OR AUTHORITY HAVING JURISDICTION BEFORE WORK WILL BE APPROVED FOR FINAL PAYMENT.

P. CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS FOR A PERIOD OF ONE YEAR EFFECTIVE THE DATE THE PROJECT IS ACCEPTED BY THE OWNER. ANY IMPERFECT MATERIALS OR WORKMANSHIP SHALL BE REPLACED WITHOUT ADDED COST TO THE PROJECT.

Q. IT SHALL NOT BE THE INTENT OF ISSUED PLANS AND/OR SPECIFICATIONS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION, THE FLECTRICAL CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL NECESSARY ITEMS FOR A COMPLETE AND OPERATING SYSTEM.

R. THE WORD "PROVIDE" MEANS THAT THIS CONTRACTOR SHALL FURNISH, FABRICATE, ERECT, CONNECT, AND COMPLETELY INSTALL SYSTEMS IN PROPER OPERATING CONDITION. ALL LABOR, PRODUCT OPTIONS, ACCESSORIES AND INCIDENTAL MATERIALS REQUIRED SHALL BE INCLUDED AS PART OF THIS WORK TO COMPLETE THE

S. THE WORD "CONNECT" MEANS THAT THIS CONTRACTOR SHALL PROVIDE (SEE DEFINITION ABOVE) ALL DISCONNECTING MEANS. OVERCURRENT PROTECTION AND WIRING REQUIRED TO PLACE THE EQUIPMENT AND SYSTEMS IN PROPER OPERATING CONDITION AND TO COMPLY WITH CODE REQUIREMENTS. T. CONTRACTOR SHALL COORDINATE THE ROUGH-IN OF ALL OUTLET

LOCATIONS WITH ARCHITECTURAL FLOOR PLANS, ELEVATIONS, AND MILLWORK SHOP DRAWINGS PRIOR TO ROUGH-IN. U. ELECTRICAL CONTRACTOR SHALL NOT SCALE PLANS. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT, UNLESS OTHERWISE NOTED.

V. IF DURING THE COURSE OF WORK, THE CONTRACTOR DISCOVERS A PROBLEM WITH THE PERFORMANCE OF THE INSTALLATION RELATIVE TO THE PLANS AND SPECIFICATIONS, THE NEC, OR OTHER CODES OR REQUIREMENTS, THE CONTRACTOR SHALL IMMEDIATELY BRING THE PROBLEM TO THE ATTENTION OF THE ARCHITECT AND/OR ENGINEER FOR RESOLUTION PRIOR TO THE EXECUTION OF THE

W. WHERE THERE ARE CONFLICTS BETWEEN THE PLANS AND SPECIFICATIONS, THE CONTRACTOR SHALL BRING THE ISSUE TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION PRIOR TO THE EXECUTION OF THE WORK OR ORDERING ANY MATERIALS. NO ADDITIONAL COSTS SHALL BE WARRANTED WITHOUT A CHANGE TO THE PROJECT SCOPE

X. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PROVIDING TEMPORARY POWER AND LIGHTING FOR ALL TRADES. AT NO TIME SHALL EXISTING BUILDING POWER SYSTEMS BE UTILIZED WITHOUT WRITTEN PERMISSION FROM THE

Y. COORDINATE LOCATION AND REQUIREMENTS FOR ELECTRICAL SERVICE WITH THE POWER COMPANY. WHERE MORE THAN ONE

SERVICE IS SUPPLIED TO A BUILDING, PROVIDE IDENTIFICATION AT EACH SERVICE PER NEC 230-2(E). Z. COORDINATE LOCATION AND REQUIREMENTS FOR TELEPHONE SERVICE WITH THE TELEPHONE COMPANY.

CONDUCTORS PART 1 GENERAL

A. CONDUCTORS SHALL BE MANUFACTURED BY SOUTHWIRE (SIMPULL), ENCORE (SUPERSLICK), UNITED COPPER (SLK), CERRO (SLP), OR APPROVED EQUAL, "PRE-LUBRICATED" BY THE MANUFACTURER. B. ALL CONDUCTORS SHALL BE COPPER, RATED 75° C WET/DRY EXCEPT

WHERE OTHERWISE NOTED OR REQUIRED BY U.L. OR OTHER CODES. C. ALL CONDUCTORS SHALL BE SINGLE INSULATED CONDUCTOR. THHN/THWN-2. SIZES #10 AWG AND SMALLER SHALL BE SOLID. SIZES #8 AWG AND LARGER SHALL BE STRANDED.

D. BRANCH CIRCUITS SHALL NOT BE SMALLER THAN #12 AWG. CONTROL WIRING MAY BE #14 AWG. E. CONDUCTORS SHALL BE COLOR CODED BLACK/RED/BLUE FOR

120/208 VOLT SYSTEMS AND BROWN/ORANGE/YELLOW FOR 277/480 VOLT SYSTEMS FOR A, B, AND C PHASES, RESPECTIVELY. NEUTRAL SHALL BE WHITE FOR 120/208 VOLT SYSTEMS AND NATURAL GRAY FOR 277/480 VOLT SYSTEMS. GROUND CONDUCTOR SHALL BE GREEN ON ALL SYSTEMS. ALL CONDUCTOR SIZES SHALL HAVE COLOR-CODED INSULATION. THE USE OF COLORED TAPE ON ARGER WIRE SIZES SHALL NOT BE ALLOWED.

INSULATION SHALL BE DUAL RATED TYPE THHN/THWN-2 FOR FEEDERS AND BRANCH CIRCUITS. FIXTURE TAPS SHALL BE #12 THHN/THWN-2 IN FLEX WITH GREEN #12 AWG GROUNDING CONDUCTOR.

G. ALL CONDUCTORS SHALL BE IN CONDUIT. H. WIRING TO LIGHTING FIXTURES SHALL BE AS REQUIRED BY UL

MULTI-WIRE BRANCH CIRCUITS SHALL NOT BE ALLOWED, UNLESS EXPLICITLY INDICATED ON THE DRAWINGS OR WHEN POWERING MODULAR SYSTEMS FURNITURE. WHERE EXPLICITLY INDICATED ON

THE DRAWINGS: 1) ALL 20A MULTI-WIRE RECEPTACLE CIRCUITS SHALL UTILIZE A #10 AWG NEUTRAL CONDUCTOR.

2) WHERE MULTI-WIRE BRANCH CIRCUITS ARE EXPLICITLY INDICATED ON THE DRAWINGS, THEY SHALL BE INSTALLED PER NEC 210.4. MEANS SHALL BE PROVIDED TO SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE POINT WHERE THE BRANCH CIRCUIT ORIGINATES IN ADDITION TO OTHER REQUIREMENTS PER NEC

J. JOINTS IN #10 AWG AND SMALLER SHALL BE MADE UP WITH CRIMPED CONNECTORS WITH INSULATING CAPS (NO TAPE) OR WIRENUTS (MAXIMUM OF 3 CONDUCTORS UNDER ANY CONNECTOR OR WIRENUT). LARGER WIRE SHALL USE SPLIT BOLTS OR BOLTED

K. ALL WIRING LUGS THROUGHOUT THE PROJECT, INCLUDING, BUT NOT LIMITED TO, BREAKERS, PANELBOARD/SWITCHBOARD LUGS, SAFETY SWITCH LUGS, MOTOR STARTER LUGS, TRANSFORMERS LUGS, WIRING DEVICE TERMINALS, AND ALL EQUIPMENT LUGS/TERMINALS SHALL BE RATED FOR USE WITH 75 DEGREE INSULATED CONDUCTORS AT THEIR 75 DEGREE AMPACITY AND SHALL BE SIZED AND SELECTED TO MATCH THE CONDUCTOR SIZE

AND MATERIAL

L. CIRCUIT JOINTS SHALL NOT BE MADE ON DEVICE TERMINALS.

M. WIRE WITHIN PANELBOARDS SHALL BE NEATLY TRAINED, SQUARED, BUNCHED, AND TAGGED N. ALL SYSTEM FURNITURE CONNECTIONS SHALL COMPLY WITH NEC

O. GROUND ALL EQUIPMENT PER NEC ARTICLE 250. BOND WHERE CONDUITS ENTER ENCLOSURES THROUGH CONCENTRIC KNOCKOUTS. ALL FLEX, INCLUDING FIXTURE TAPS, SHALL INCLUDE GREEN GROUNDING CONDUCTOR, #12 AWG MINIMUM. PROVIDE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR IN EACH CONDUIT, SIZED PER NEC 250-122.

P. ALL CONDUCTORS INSTALLED IN VERTICAL RACEWAYS SHALL BE SUPPORTED AT INTERVALS AS REQUIRED PER NEC 300-19. Q. THE ELECTRICAL CONTRACTOR SHALL FOLLOW AND APPLY THE TABLE BELOW, REGARDLESS WHAT THE PANEL SCHEDULE INDICATES, FOR SIZING ALL 120V & 277V, 20 AMP BRANCH CIRCUITS (COPPER CONDUCTORS) TO ALLOW A MAXIMUM OF 3% VOLTAGE DROP FROM THE CIRCUIT BREAKER TO THE FIRST DEVICE

VOLTAGE DROP ACROSS THE ENTIRE BRANCH CIRCUIT:

ON THE BRANCH CIRCUIT AND ACHIEVE A MAXIMUM OF 5%

CONDUCTOR LENGTH * BRANCH CIRCUIT 51' - 90' #10 91' - 140' 141' - 225' * - THE LENGTH IS MEASURED FROM THE CIRCUIT BREAKER TO THE FIRST DEVICE WHICH THE BRANCH CIRCUIT SERVES. WHERE

THE DISTANCE EXCEEDS ABOVE, CONSULT WITH THE ENGINEER.

PART 1 GENERAL A. SUITABLE FINISH COAT SHALL BE PROVIDED FOR ALL EQUIPMENT. PANEL TUBS, COVERS, ETC. SHALL BE PRIMED AND ENAMELED TO BLEND WITH ADJACENT SURFACES, OR SHALL BE MANUFACTURER'S STANDARD COLOR BAKED ENAMEL FINISH, OR AS DIRECTED BY THE ARCHITECT.

<u>TELECOMMUNICATIONS</u>

A. CONTRACTOR SHALL UTILIZE EXISTING TELEPHONE CONDUIT SYSTEM. CONTRACTOR SHALL COORDINATE ANY NEW CONDUIT REQUIREMENTS WITH TELEPHONE PROVIDER AND FURNISH ACCORDINGLY

B. TELECOMMUNICATION OUTLETS SHALL CONSIST OF A 4" SQUARE DEEP BOX WITH SINGLE GANG PLASTER RING. PROVIDE BLANK PLATE WITH KNOCKOUTS FOR OUTLETS, AS PERMANENT COVERS WILL BE PROVIDED BY A SEPARATE INSTALLER. C. PROVIDE MINIMUM 210# TEST NYLON PULL CORD AND NYLON

BUSHINGS IN ALL EMPTY RACEWAYS. D. PROVIDE GROUNDING FOR ALL TELEPHONE/DATA SYSTEMS AND EQUIPMENT PER REQUIREMENTS AND SPECIFICATIONS PROVIDED BY THE OWNERS DESIGNATED VENDOR.

E. ALL LOW-VOLTAGE CABLING SHALL BE PLENUM-RATED. F. VERIFY SITE LOCATION OF TELEPHONE SERVICES WITH APPROPRIATE VENDOR, PRIOR TO SUBMITTING BID.

<u>GROUNDING AND BONDING</u>

1.01 SECTION INCLUDES A. GROUNDING AND BONDING COMPONENTS. B. PROVIDE ALL COMPONENTS NECESSARY TO COMPLETE THE GROUNDING SYSTEM(S) CONSISTING OF:

1. EXISTING METAL UNDERGROUND WATER PIPE. 2. METAL UNDERGROUND WATER PIPE. 3. METAL FRAME OF THE BUILDING. 4. STEEL WATER STORAGE TANK AND SUPPORTS.

5. CONCRETE-ENCASED ELECTRODE. 6. ROD ELECTRODES. 7. PLATE ELECTRODES 8. ACTIVE ELECTRODES.

PART 1 GENERAL

1.02 REFERENCES A. NETA STD ATS - ACCEPTANCE TESTING SPECIFICATIONS FOR ELECTRICAL POWER DISTRIBUTION EQUIPMENT AND SYSTEMS: INTERNATIONAL ELECTRICAL TESTING ASSOCIATION; 2007.

B. NFPA 70 - NATIONAL ELECTRICAL CODE: NATIONAL FIRE PROTECTION ASSOCIATION: 2005 C. NFPA 99 - STANDARD FOR HEALTH CARE FACILITIES; NATIONAL FIRE PROTECTION ASSOCIATION; 2005.

1.03 PERFORMANCE REQUIREMENTS A. GROUNDING SYSTEM RESISTANCE: 5 OHMS.

1.04 QUALITY ASSURANCE A. CONFORM TO REQUIREMENTS OF NFPA 70.

B. MANUFACTURER QUALIFICATIONS: COMPANY SPECIALIZING IN MANUFACTURING THE PRODUCTS SPECIFIED IN THIS SECTION WITH MINIMUM THREE YEARS DOCUMENTED EXPERIENCE WITH SERVICE FACILITIES WITHIN 100 MILES OF PROJECT. C. PRODUCTS: LISTED AND CLASSIFIED BY UNDERWRITERS LABORATORIES INC. AS SUITABLE FOR THE PURPOSE SPECIFIED AND

PART 2 PRODUCTS 2.01 MANUFACTURERS

A. COOPER POWER SYSTEMS: B. FRAMATOME CONNECTORS INTERNATIONAL:

C. LIGHTNING MASTER CORPORATION: 2.02 ELECTRODES A. ROD ELECTRODES: COPPER.

 DIAMETER: 3/4 INCH (19 MM). 2. LENGTH: 5 FEET (1500 MM). B. ACTIVE ELECTRODES: METALLIC-SALT-FILLED COPPER-TUBE ELECTRODE.

1. SHAPE: STRAIGHT. 2. LENGTH: 8 FEET (2400 MM). 3. CONNECTOR: U-BOLT PRESSURE PLATE.

C. FOUNDATION ELECTRODES: 2/0 AWG. 2.03 CONNECTORS AND ACCESSORIES A. MECHANICAL CONNECTORS: BRONZE.

B. WIRE: STRANDED COPPER. C. GROUNDING ELECTRODE CONDUCTOR: SIZE TO MEET NFPA 70 REQUIREMENTS.

D. GROUNDING WELL: PIPE WITH BELLED END.

1. WELL PIPE: 8 INCH (200 MM) BY 24 INCH (600 MM) LONG CLAY TILE 2. WELL COVER: CAST IRON WITH LEGEND "GROUND" EMBOSSED ON

PART 3 EXECUTION

3.01 EXAMINATION A. VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING WORK. B. VERIFY THAT FINAL BACKFILL AND COMPACTION HAS BEEN COMPLETED BEFORE DRIVING ROD ELECTRODES.

3.02 INSTALLATION A. INSTALL GROUND ELECTRODES AT LOCATIONS INDICATED. INSTALL ADDITIONAL ROD ELECTRODES AS REQUIRED TO ACHIEVE SPECIFIED RESISTANCE TO GROUND

B. PROVIDE GROUNDING WELL PIPE WITH COVER AT EACH ROD LOCATION. INSTALL WELL PIPE TOP FLUSH WITH FINISHED GRADE. C. INSTALL 4 AWG BARE COPPER WIRE IN FOUNDATION FOOTING WHERE INDICATED

D. PROVIDE GROUNDING ELECTRODE CONDUCTOR AND CONNECT TO REINFORCING STEEL IN FOUNDATION FOOTING WHERE INDICATED. BOND STEEL TOGETHER.

E. PROVIDE BONDING TO MEET REQUIREMENTS DESCRIBED IN **OUALITY ASSURANCE.** F. BOND TOGETHER METAL SIDING NOT ATTACHED TO GROUNDED

STRUCTURE; BOND TO GROUND. G. EQUIPMENT GROUNDING CONDUCTOR: PROVIDE SEPARATE, INSULATED CONDUCTOR WITHIN EACH FEEDER AND BRANCH CIRCUIT RACEWAY. TERMINATE EACH END ON SUITABLE LUG, BUS, OR BUSHING.

HANGERS AND SUPPORTS PART 1 GENERAL

1.01 SECTION INCLUDES A. CONDUIT AND EQUIPMENT SUPPORTS. B. ANCHORS AND FASTENERS.

1.02 QUALITY ASSURANCE A. CONFORM TO REQUIREMENTS OF NFPA 70. B. PRODUCTS: LISTED AND CLASSIFIED BY UNDERWRITERS LABORATORIES INC. AS SUITABLE FOR THE PURPOSE SPECIFIED AND

PART 2 EXECUTION

2.01 INSTALLATION A. INSTALL HANGERS AND SUPPORTS AS REQUIRED TO ADEQUATELY AND SECURELY SUPPORT ELECTRICAL SYSTEM COMPONENTS, IN A NEAT AND WORKMANLIKE MANNER, AS SPECIFIED IN NECA 1.

1. DO NOT FASTEN SUPPORTS TO PIPES, DUCTS, MECHANICAL EQUIPMENT, OR CONDUIT. 2. OBTAIN PERMISSION FROM ARCHITECT BEFORE DRILLING OR

CUTTING STRUCTURAL MEMBERS. B. RIGIDLY WELD SUPPORT MEMBERS OR USE HEXAGON-HEAD BOLTS TO PRESENT NEAT APPEARANCE WITH ADEQUATE STRENGTH AND RIGIDITY. USE SPRING LOCK WASHERS UNDER ALL NUTS. C. INSTALL SURFACE-MOUNTED CABINETS AND PANELBOARDS WITH

MINIMUM OF FOUR ANCHORS

D. IN WET AND DAMP LOCATIONS USE STEEL CHANNEL SUPPORTS TO STAND CABINETS AND PANELBOARDS 1 INCH (25 MM) OFF WALL. E. USE SHEET METAL CHANNEL TO BRIDGE STUDS ABOVE AND BELOW

ELECTRICAL IDENTIFICATION

CABINETS AND PANELBOARDS RECESSED IN HOLLOW PARTITIONS.

PART 1 GENERAL 1.01 SECTION INCLUDES

A. NAMEPLATES AND LABELS. B. WIRE AND CABLE MARKERS. C. CONDUIT MARKERS. D. FIELD-PAINTED IDENTIFICATION OF CONDUIT 1.02 QUALITY ASSURANCE

A. CONFORM TO REQUIREMENTS OF NFPA 70. B. PRODUCTS: LISTED AND CLASSIFIED BY UNDERWRITERS LABORATORIES INC. AS SUITABLE FOR PURPOSE SPECIFIED AND

PART 2 PRODUCTS

2.01 NAMEPLATES AND LABELS A. NAMEPLATES: ENGRAVED THREE-LAYER LAMINATED PLASTIC, BLACK LETTERS ON WHITE BACKGROUND. B. LOCATIONS:

1. EACH ELECTRICAL DISTRIBUTION AND CONTROL EQUIPMENT ENCLOSURE: 2.02 CONDUIT MARKERS

A. LOCATION: FURNISH MARKERS FOR EACH CONDUIT LONGER THAN 6 FEET (2 M). B. SPACING: 20 FEET (6 M) ON CENTER. 2.03 UNDERGROUND WARNING TAPE

A. DESCRIPTION: 4 INCH (100 MM) WIDE PLASTIC TAPE, DETECTABLE TYPE COLORED RED WITH SUITABLE WARNING LEGEND DESCRIBING BURIED ELECTRICAL LINES.

PART 3 EXECUTION

3.01 INSTALLATION A. INSTALL NAMEPLATES AND LABELS PARALLEL TO EQUIPMENT LINES. B. SECURE NAMEPLATES TO EQUIPMENT FRONT USING SCREWS. C. SECURE NAMEPLATES TO INSIDE SURFACE OF DOOR ON

PANELBOARD THAT IS RECESSED IN FINISHED LOCATIONS.

D. IDENTIFY UNDERGROUND CONDUITS USING UNDERGROUND WARNING TAPE. INSTALL ONE TAPE PER TRENCH AT 3 INCHES (75 MM) BELOW FINISHED GRADE.

CONDUIT

PART 1 GENERAL 1.01 SECTION INCLUDES A. CONDUIT, FITTINGS AND CONDUIT BODIES.

1.02 QUALITY ASSURANCE CONFORM TO REQUIREMENTS OF NFPA 70. PRODUCTS: LISTED AND CLASSIFIED BY UNDERWRITERS LABORATORIES INC. AS SUITABLE FOR PURPOSE SPECIFIED AND

1.04 DELIVERY, STORAGE, AND HANDLING A. ACCEPT CONDUIT ON SITE. INSPECT FOR DAMAGE. B. PROTECT CONDUIT FROM CORROSION AND ENTRANCE OF DEBRIS BY

STORING ABOVE GRADE. PROVIDE APPROPRIATE COVERING. C. PROTECT PVC CONDUIT FROM SUNLIGHT.

PART 2 PRODUCTS 2.01 CONDUIT REQUIREMENTS

> A. CONDUIT SIZE: COMPLY WITH NFPA 70. 1. MINIMUM SIZE: 3/4 INCH (13 MM) UNLESS OTHERWISE SPECIFIED B. UNDERGROUND INSTALLATIONS

1. MORE THAN 5 FEET (1.5 METERS) FROM FOUNDATION WALL: USE RIGID STEEL CONDUIT, INTERMEDIATE METAL CONDUIT, OR PLASTIC 2. WITHIN 5 FEET (1.5 METERS) FROM FOUNDATION WALL: USE RIGID

STEEL CONDUIT, INTERMEDIATE METAL CONDUIT, PLASTIC COATED CONDUIT, OR THICKWALL NONMETALLIC CONDUIT 3. IN OR UNDER SLAB ON GRADE: USE RIGID STEEL CONDUIT INTERMEDIATE METAL CONDUIT, OR PLASTIC COATED CONDUIT.

4. MINIMUM SIZE: 3/4 INCH (19 MM). C. OUTDOOR LOCATIONS ABOVE GRADE: USE RIGID STEEL CONDUIT RIGID ALUMINUM CONDUIT, INTERMEDIATE METAL CONDUIT, OR ELECTRICAL METALLIC TUBING.

D. IN SLAB ABOVE GRADE: 1. USE RIGID STEEL CONDUIT, INTERMEDIATE METAL CONDUIT, ELECTRICAL METALLIC TUBING, OR THICKWALL NONMETALLIC

2. MAXIMUM SIZE CONDUIT IN SLAB: 3/4 INCH (19 MM); 1/2 INCH (13 MM) FOR CONDUITS CROSSING EACH OTHER . WET AND DAMP LOCATIONS: USE RIGID STEEL CONDUIT, RIGID ALUMINUM CONDUIT, INTERMEDIATE METAL CONDUIT, ELECTRICAL

METALLIC TUBING, THICKWALL NONMETALLIC CONDUIT, OR NONMETALLIC TUBING F. DRY LOCATIONS: 1. CONCEALED: USE RIGID STEEL CONDUIT, RIGID ALUMINUM CONDUIT, INTERMEDIATE METAL CONDUIT, ELECTRICAL METALLIC

TUBING, THICKWALL NONMETALLIC CONDUIT, OR NONMETALLIC 2. EXPOSED: USE RIGID STEEL CONDUIT, RIGID ALUMINUM CONDUIT INTERMEDIATE METAL CONDUIT, ELECTRICAL METALLIC TUBING, OR

THICKWALL NONMETALLIC CONDUIT. 2.02 METAL CONDUIT A. RIGID STEEL CONDUIT: ANSI C80.1.

B. RIGID ALUMINUM CONDUIT: ANSI C80.5. C. INTERMEDIATE METAL CONDUIT (IMC): RIGID STEEL. D. FITTINGS AND CONDUIT BODIES: NEMA FB 1; MATERIAL TO MATCH

CONDUIT 2.03 ELECTRICAL METALLIC TUBING (EMT)

A. DESCRIPTION: ANSI C80.3; GALVANIZED TUBING. B. FITTINGS AND CONDUIT BODIES: NEMA FB 1; STEEL OR MALLEABLE IRON COMPRESSION TYPE. PART 3 EXECUTION

3.01 EXAMINATION A. VERIFY THAT FIELD MEASUREMENTS ARE AS SHOWN ON DRAWINGS. B. VERIFY ROUTING AND TERMINATION LOCATIONS OF CONDUIT PRIOR TO ROUGH-IN. C. CONDUIT ROUTING IS SHOWN ON DRAWINGS IN APPROXIMATE

LOCATIONS UNL 3.02 INSTALLATION

SLEEVES AND NIPPLES

ENTRANCE OF DIRT AND MOISTURE.

A MAXIMUM OF 3'-0" FROM BOXES.

A. INSTALL CONDUIT SECURELY, IN A NEAT AND WORKMANLIKE MANNER, AS SPECIFIED IN B. INSTALL STEEL CONDUIT AS SPECIFIED IN NECA 101.

C. ARRANGE SUPPORTS TO PREVENT MISALIGNMENT DURING WIRING INSTALLATION D. SUPPORT CONDUIT USING COATED STEEL OR MALLEABLE IRON STRAPS, LAY-IN ADJUSTABLE HANGERS, CLEVIS HANGERS, AND SPLIT HANGERS

CONSTRUCT RACK USING STEEL CHANNEL; PROVIDE SPACE ON EACH FOR 25 PERCENT ADDITIONAL CONDUITS. F. FASTEN CONDUIT SUPPORTS TO BUILDING STRUCTURE AND SURFACES UNDER PROVISIONS OF SECTION 16070.

E. GROUP RELATED CONDUITS; SUPPORT USING CONDUIT RACK.

G. DO NOT SUPPORT CONDUIT WITH WIRE OR PERFORATED PIPE STRAPS. REMOVE WIRE USED FOR TEMPORARY SUPPORTS. H. DO NOT ATTACH CONDUIT TO CEILING SUPPORT WIRES.

I. ARRANGE CONDUIT TO MAINTAIN HEADROOM AND PRESENT NEAT APPEARANCE. J. ROUTE EXPOSED CONDUIT PARALLEL AND PERPENDICULAR TO

K. ROUTE CONDUIT INSTALLED ABOVE ACCESSIBLE CEILINGS PARALLEL AND PERPENDICULAR TO WALLS. L. ROUTE CONDUIT IN AND UNDER SLAB FROM POINT-TO-POINT. M. MAINTAIN ADEQUATE CLEARANCE BETWEEN CONDUIT AND PIPING. N. CUT CONDUIT SQUARE USING SAW OR PIPECUTTER; DE-BURR CUT

BRING CONDUIT TO SHOULDER OF FITTINGS; FASTEN SECURELY P. INSTALL NO MORE THAN EQUIVALENT OF THREE 90 DEGREE BENDS BETWEEN BOXES. USE CONDUIT BODIES TO MAKE SHARP CHANGES IN DIRECTION, AS AROUND BEAMS. USE HYDRAULIC ONE SHOT BENDER TO FABRICATE BENDS IN METAL CONDUIT LARGER THAN 2 INCH (50 MM) SIZE.

O. AVOID MOISTURE TRAPS; PROVIDE JUNCTION BOX WITH DRAIN FITTING AT LOW POINTS IN CONDUIT SYSTEM. R. PROVIDE SUITABLE FITTINGS TO ACCOMMODATE EXPANSION AND DEFLECTION WHERE CONDUIT CROSSES SEISMIC. S. PROVIDE SUITABLE PULL STRING IN EACH EMPTY CONDUIT EXCEPT

T. USE SUITABLE CAPS TO PROTECT INSTALLED CONDUIT AGAINST

<u>SUPPORTS</u>

A. ALL EQUIPMENT SHALL BE ADEQUATELY SUPPORTED FROM STRUCTURE. B. INSERTS IN MASONRY SHALL BE LEAD OR FIBER IN DRILLED HOLES, OR CAST IN PLACE. C. NAILS OR POWDER ACTUATED FASTENERS SHALL NOT BE USED. D. EMT/IMC/RGS SUPPORTS SHALL BE A MAXIMUM OF 8'-0" APART AND E. LIGHTING FIXTURES MOUNTED IN OR ON CEILING SHALL BE SUPPORTED FROM STRUCTURE VIA 12 GAUGE STEEL WIRE. PROVIDE A MINIMUM OF FOUR WIRES, ONE ATTACHED TO EACH CORNER OF LAY-IN FIXTURES. RECESSED DOWNLIGHT FIXTURES SHALL BE SUPPORTED THE SAME. DO NOT SUPPORT RACEWAY OR FIXTURES FROM CEILING GRID OR DUCT WORK. USE U.L. LISTED GRID CLIPS ON ALL LAY-IN FIXTURES.

PART 1 GENERAL 1.01 SECTION INCLUDES A. PULL AND JUNCTION BOXES.

PART 2 EXECUTION

2.01 INSTALLATION A. INSTALL BOXES SECURELY, IN A NEAT AND WORKMANLIKE MANNER, AS SPECIFIED IN NECA 1. B. INSTALL IN LOCATIONS AS SHOWN ON DRAWINGS, AND AS

REQUIRED FOR SPLICES, TAPS, WIRE PULLING, EQUIPMENT CONNECTIONS, AND AS REQUIRED BY NFPA 70. C. ORIENT BOXES TO ACCOMMODATE WIRING DEVICES ORIENTED AS SPECIFIED IN SECTION 16140. D. MAINTAIN HEADROOM AND PRESENT NEAT MECHANICAL

APPEARANCE. E. ALIGN ADJACENT WALL MOUNTED OUTLET BOXES FOR SWITCHES, THERMOSTATS, AND SIMILAR DEVICES. F. SUPPORT BOXES INDEPENDENTLY OF CONDUIT, EXCEPT CAST BOX THAT IS CONNECTED TO TWO RIGID METAL CONDUITS BOTH

SUPPORTED WITHIN 12 INCHES (305 MM) OF BOX. G. USE GANG BOX WHERE MORE THAN ONE DEVICE IS MOUNTED TOGETHER. DO NOT USE SECTIONAL BOX.

WIRING DEVICES

PART 1 GENERAL

1.01 SECTION INCLUDES A. WALL SWITCHES.

B. RECEPTACLES. C. DEVICE PLATES AND DECORATIVE BOX COVERS. 1.02 QUALITY ASSURANCE

A. CONFORM TO REQUIREMENTS OF NFPA 70.

PURPOSE SPECIFIED AND INDICATED.

B. MANUFACTURER QUALIFICATIONS: COMPANY SPECIALIZING IN MANUFACTURING THE PRODUCTS SPECIFIED IN THIS SECTION WITH MINIMUM THREE YEARS DOCUMENTED EXPERIENCE. C. PRODUCTS: PROVIDE PRODUCTS LISTED AND CLASSIFIED BY

UNDERWRITERS LABORATORIES INC. AS SUITABLE FOR THE

PART 2 PRODUCTS

2.01 MANUFACTURERS A. COOPER WIRING DEVICES:

B. GE INDUSTRIAL: C. LEVITON MANUFACTURING, INC: 2.02 WALL SWITCHES A. WALL SWITCHES: HEAVY DUTY, AC ONLY GENERAL-USE SNAP

SWITCH, COMPLYING WITH NEMA WD 6 AND WD 1. 1. BODY AND HANDLE: FINISH/COLOR SHALL BE SELECTED BY ARCHITECT. PROVIDE PLASTIC WITH TOGGLE HANDLE. 2. RATINGS: MATCH BRANCH CIRCUIT AND LOAD CHARACTERISTICS. B. SWITCH TYPES: SINGLE POLE, DOUBLE POLE, AND 3-WAY.

2.03 RECEPTACLES A. RECEPTACLES: HEAVY DUTY, COMPLYING WITH NEMA WD 6 AND WD

1. DEVICE BODY: FINISH/COLOR TO BE SELECTED BY ARCHITECT. DEVICE SHALL BE MADE OF PLASTIC. 2. CONFIGURATION: NEMA WD 6, TYPE AS SPECIFIED AND INDICATED. B. CONVENIENCE RECEPTACLES: TYPE 5 TO 20. C. SINGLE CONVENIENCE RECEPTACLES.

D. DUPLEX CONVENIENCE RECEPTACLES. E. GFCI RECEPTACLES: CONVENIENCE RECEPTACLE WITH INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER TO MEET REGULATORY REQUIREMENTS.

2.04 WALL PLATES A. DECORATIVE COVER PLATES: FINISH/COLOR TO BE SELECTED BY ARCHITECT, SMOOTH PLASTIC B. JUMBO COVER PLATES: COORDAINTE DEVICE COLOR WITH

ARCHITECT, SMOOTH PLASTIC. C. WEATHERPROOF COVER PLATES: GASKETED CAST METAL WITH

3.01 EXAMINATION

FINISHED SURFACE.

3.04 INTERFACE WITH OTHER PRODUCTS

B. CLEAN DEBRIS FROM OUTLET BOXES.

PART 3 EXECUTION

A. VERIFY THAT OUTLET BOXES ARE INSTALLED AT PROPER HEIGHT. B. VERIFY THAT WALL OPENINGS ARE NEATLY CUT AND WILL BE COMPLETELY COVERED BY WALL PLATES.

C. VERIFY THAT BRANCH CIRCUIT WIRING INSTALLATION IS COMPLETED, TESTED, AND READY FOR CONNECTION TO WIRING DEVICES 3.02 PREPARATION A. PROVIDE EXTENSION RINGS TO BRING OUTLET BOXES FLUSH WITH

3.03 INSTALLATION A. INSTALL SECURELY, IN A NEAT AND WORKMANLIKE MANNER, AS SPECIFIED IN NECA 1. B. INSTALL DEVICES PLUMB AND LEVEL. C. INSTALL SWITCHES WITH OFF POSITION DOWN.

D. INSTALL RECEPTACLES WITH GROUNDING POLE ON TOP. E. CONNECT WIRING DEVICE GROUNDING TERMINAL TO OUTLET BOX WITH BONDING JUMPER F. INSTALL DECORATIVE PLATES ON SWITCH, RECEPTACLE, AND BLANK OUTLETS IN FINISHED AREAS.

G. CONNECT WIRING DEVICES BY WRAPPING CONDUCTOR AROUND SCREW TERMINAL H. INSTALL PROTECTIVE RINGS ON ACTIVE FLUSH COVER SERVICE FITTINGS.

A. INSTALL WALL SWITCH 48 INCHES (1.2 M) ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED ON DRAWINGS. B. INSTALL CONVENIENCE RECEPTACLE 18 INCHES (450 MM) ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED ON DRAWINGS. C. INSTALL CONVENIENCE RECEPTACLE 6 INCHES (150 MM) ABOVE COUNTER UNLESS OTHERWISE NOTED ON DRAWINGS.

D. INSTALL TELEPHONE JACK 18 INCHES (450 MM) ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED ON DRAWINGS. E. INSTALL TELEPHONE JACK FOR SIDE-REACH WALL TELEPHONE TO POSITION TOP OF TELEPHONE AT 54 INCHES (1.4 M) ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED ON DRAWINGS. F. INSTALL TELEPHONE JACK FOR FORWARD-REACH WALL TELEPHONE TO POSITION TOP OF TELEPHONE AT 48 INCHES (1.2 M) ABOVE

3.05 FIELD QUALITY CONTROL A. INSPECT EACH WIRING DEVICE FOR DEFECTS. B. OPERATE EACH WALL SWITCH WITH CIRCUIT ENERGIZED AND VERIFY PROPER OPERATION. C. VERIFY THAT EACH RECEPTACLE DEVICE IS ENERGIZED. D. TEST EACH RECEPTACLE DEVICE FOR PROPER POLARITY.

E. TEST EACH GFCI RECEPTACLE DEVICE FOR PROPER OPERATION.

FINISHED FLOOR UNLESS OTHERWISE NOTED ON DRAWINGS.

F. VERIFY THAT EACH TELEPHONE JACK IS PROPERLY CONNECTED AND CIRCUIT IS OPERATIONAL. A. ADJUST DEVICES AND WALL PLATES TO BE FLUSH AND LEVEL.

CLEAN EXPOSED SURFACES TO REMOVE SPLATTERS AND RESTORE FINISH. **EQUIPMENT WIRING** PART 1 GENERAL

A. ELECTRICAL CONNECTIONS TO EQUIPMENT PART 2 PRODUCTS

1.01 SECTION INCLUDES

2.01 MATERIALS A. CORDS AND CAPS: NEMA WD 6; MATCH RECEPTACLE CONFIGURATION AT OUTLET PROVIDED FOR EQUIPMENT. 1. COLORS: CONFORM TO NEMA WD 1.

2. CORD CONSTRUCTION: NFPA 70, TYPE SO, MULTICONDUCTOR

FLEXIBLE CORD WITH IDENTIFIED EQUIPMENT GROUNDING

CONDUCTOR, SUITABLE FOR USE IN DAMP LOCATIONS. PART 3 EXECUTION

3.01 EXAMINATION A. VERIFY THAT EQUIPMENT IS READY FOR ELECTRICAL CONNECTION, WIRING, AND ENERGIZATION. 3.02 ELECTRICAL CONNECTIONS A. MAKE ELECTRICAL CONNECTIONS IN ACCORDANCE WITH EQUIPMENT

B. MAKE CONDUIT CONNECTIONS TO EQUIPMENT USING FLEXIBLE

MANUFACTURER'S INSTRUCTIONS.

CONDUIT. USE LIQUIDTIGHT FLEXIBLE CONDUIT WITH WATERTIGHT CONNECTORS IN DAMP OR WET LOCATIONS. C. CONNECT HEAT PRODUCING EQUIPMENT USING WIRE AND CABLE WITH INSULATION SUITABLE FOR TEMPERATURES ENCOUNTERED.

D. PROVIDE RECEPTACLE OUTLET TO ACCOMMODATE CONNECTION WITH ATTACHMENT PLUG.

E. PROVIDE CORD AND CAP WHERE FIELD-SUPPLIED ATTACHMENT PLUG F. INSTALL SUITABLE STRAIN-RELIEF CLAMPS AND FITTINGS FOR CORD CONNECTIONS AT OUTLET BOXES AND EQUIPMENT CONNECTION

1.08 DISTRIBUTION PANELS (600A-1200A) SHALL HAVE FRONT ACCESSIBLE DEAD FRONT COVERS. G. INSTALL DISCONNECT SWITCHES, CONTROLLERS, CONTROL STATIONS, AND CONTROL DEVICES TO COMPLETE EQUIPMENT 1.09 PROVIDE HANDLE LOCK-ON DEVICES FOR ALL CIRCUIT BREAKERS CONNECTED TO EMERGENCY, EXIT, NIGHT LIGHTING, FIRE ALARM,

WIRING REQUIREMENTS. H. INSTALL TERMINAL BLOCK JUMPERS TO COMPLETE EQUIPMENT WIRING REQUIREMENTS. I. INSTALL INTERCONNECTING CONDUIT AND WIRING BETWEEN

DEVICES AND EQUIPMENT TO COMPLETE EQUIPMENT WIRING

INTERIOR LUMINAIRES

PART 1 GENERAL 1.01 SECTION INCLUDES A. INTERIOR LUMINAIRES AND ACCESSORIES. B. BALLASTS. C. LAMPS.

REQUIREMENTS.

D. LUMINAIRE ACCESSORIES. 1.02 SUBMITTALS A. SHOP DRAWINGS: INDICATE DIMENSIONS AND COMPONENTS FOR

EACH LUMINAIRE THAT IS NOT A STANDARD PRODUCT OF THE

MANUFACTURER. B. PRODUCT DATA: PROVIDE DIMENSIONS, RATINGS, AND PERFORMANCE DATA. 1.03 QUALITY ASSURANCE

A. CONFORM TO REQUIREMENTS OF NFPA 70 AND NFPA 101.

MANUFACTURING THE PRODUCTS SPECIFIED IN THIS SECTION WITH MINIMUM THREE YEARS DOCUMENTED EXPERIENCE. C. PRODUCTS: LISTED AND CLASSIFIED BY UNDERWRITERS LABORATORIES INC. AS SUITABLE FOR THE PURPOSE SPECIFIED AND INDICATED.

B. MANUFACTURER QUALIFICATIONS: COMPANY SPECIALIZING IN

PART 2 PRODUCTS

A. FURNISH PRODUCTS AS INDICATED IN SCHEDULE INCLUDED ON THE

2.02 BALLASTS AND CONTROL UNITS A. FLUORESCENT BALLASTS: ANSI C82.1, HIGH POWER FACTOR TYPE ELECTROMAGNETIC BALLAST, SUITABLE FOR LAMPS SPECIFIED. VOLTAGE: AS INDICATED ON LIGHTING FIXTURE SCHEDULE.

 GE LIGHTING MODEL PHILIPS LIGHTING CO

A. MANUFACTURERS:

2.03 LAMPS

PART 3 EXECUTION 3.01 INSTALLATION A. INSTALL FIXTURES SECURELY, IN A NEAT AND WORKMANLIKE MANNER, AS SPECIFIED IN NECA 500 (COMMERCIAL LIGHTING). B. INSTALL SUSPENDED LUMINAIRES AND EXIT SIGNS USING PENDANTS SUPPORTED FROM SWIVEL HANGERS. PROVIDE PENDANT LENGTH REQUIRED TO SUSPEND LUMINAIRE AT INDICATED HEIGHT.

C. SUPPORT LUMINAIRES LARGER THAN 2 X 4 FOOT (600 X 1200 MM) SIZE INDEPENDENT OF CEILING FRAMING. D. LOCATE RECESSED CEILING LUMINAIRES AS INDICATED ON REFLECTED CEILING PLAN.

FIRESTOPPING MATERIALS TO MEET REGULATORY REQUIREMENTS

FOR FIRE RATING. F. INSTALL CLIPS TO SECURE RECESSED GRID-SUPPORTED LUMINAIRES IN PLACE. G. INSTALL ACCESSORIES FURNISHED WITH EACH LUMINAIRE

H. CONNECT LUMINAIRES AND EXIT SIGNS TO BRANCH CIRCUIT

EQUIPMENT GROUNDING CONDUCTOR.

C. CLEAN FINISHES AND TOUCH UP DAMAGE

COMPLETION.

TIME-DELAY WITH INDICATION.

DRAWINGS.

E. INSTALL RECESSED LUMINAIRES USING ACCESSORIES AND

OUTLETS PROVIDED UNDER SECTION 16138 USING FLEXIBLE I. MAKE WIRING CONNECTIONS TO BRANCH CIRCUIT USING BUILDING WIRE WITH INSULATION SUITABLE FOR TEMPERATURE CONDITIONS WITHIN LUMINAIRE J. BOND PRODUCTS AND METAL ACCESSORIES TO BRANCH CIRCUIT

K. INSTALL SPECIFIED LAMPS IN EACH EMERGENCY LIGHTING UNIT, EXIT SIGN, AND LUMINAIRE. 3.02 FIELD QUALITY CONTROL

A. OPERATE EACH LUMINAIRE AFTER INSTALLATION AND CONNECTION.

A. CLEAN ELECTRICAL PARTS TO REMOVE CONDUCTIVE AND DELETERIOUS MATERIALS B. REMOVE DIRT AND DEBRIS FROM ENCLOSURES.

INSPECT FOR PROPER CONNECTION AND OPERATION.

3.04 DEMONSTRATION AND INSTRUCTIONS A. DEMONSTRATE LUMINAIRE OPERATION FOR MINIMUM OF TWO 3.05 PROTECTION

A. RELAMP LUMINAIRES THAT HAVE FAILED LAMPS AT SUBSTANTIAL

3.06 SCHEDULE - SEE DRAWINGS DISCONNECTS 1.1 DISCONNECT SWITCHES SHALL BE HEAVY-DUTY TYPE IN NEMA 1 ENCLOSURES, UNLESS OTHERWISE NOTED, FUSED OR NON-FUSED AS INDICATED. SWITCHES SHALL HAVE REJECTION-TYPE FUSE CLIPS. SWITCHES SHALL BE BY EATON, SQUARE-D, GENERAL ELECTRIC, OR APPROVED EQUAL. WHERE FED FROM A LOAD CENTER, GENERAL-DUTY

SWITCHES SHALL BE PERMITTED. 1.2 FUSES LESS THAN 60A SHALL BE CLASS RK5, DUAL-ELEMENT, TIME-DELAY WITH INDICATION 1.3 FUSES GREATER THAN 60A SHALL BE CLASS J, DUAL-ELEMENT,

FIRE STOPPING 1.01 ALL PENETRATIONS OF RATED ASSEMBLIES SHALL BE SEALED WITH RATED MATERIALS MEETING ASTM E-814. 1.02 PROVIDE FIRESTOPPING DEVICE(S) OR SYSTEM(S) WHICH HAVE BEEN TESTED AND LISTED AS COMPLYING WITH ASTM E-814. INSTALL THE DEVICE(S) OR SYSTEM(S) IN ACCORDANCE WITH THE CONDITIONS OF THEIR LISTING. PROVIDE THE APPROPRIATE DEVICE(S) OR SYSTEM(S) WITH AN 'F' RATING EQUAL TO THE RATING OF THE ASSEMBLY BEING

1.03 DEVICE(S) AND/OR SYSTEM(S) SHALL BE BY HILTI, 3M OR EQUIVALENT

ELECTRICAL COORDINATION WITH OTHER TRADES 1.01 THE ELECTRICAL CONTRACTOR SHALL CONNECT AND/OR PROVIDE FINAL CONNECTIONS TO ALL EOUIPMENT SUPPLIED BY OTHERS APPLICABLE TO THE PROJECT, INCLUDING BUT NOT LIMITED TO, MECHANICAL PLUMBING, FIRE PROTECTION AND SUPPRESSION, OWNER FURNISHED, KITCHEN, LABORATORY, ETC. UNLESS OTHERWISE NOTED.

1.02 THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL CONNECTIONS

PRIOR TO ROUGH-IN USING APPROVED CATALOG SHEETS AND SHOP

1.03 THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANUAL MOTOR STARTER SWITCHES, DISCONNECT SWITCHES, RECEPTACLES, ETC. TO MECHANICAL AND PLUMBING EQUIPMENT. ALL STARTERS, OTHER THAN MANUAL STARTER SWITCHES, SHALL BE PROVIDED BY OTHERS, BUT INSTALLED BY THE ELECTRICAL CONTRACTOR 1.04 ALL DISCONNECT SWITCHES AND FUSE SIZES SHALL BE COORDINATED

WITH SHOP DRAWINGS PRIOR TO ORDERING OR INSTALLING. ANY EQUIPMENT INSTALLED INCORRECTLY BECAUSE OF LACK OF COORDINATION WILL BE REMOVED AND INSTALLED CORRECTLY AT THE EXPENSE OF THE ELECTRICAL CONTRACTOR.

1.05 THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL CONDUIT RUNS

AND LIGHT FIXTURE LOCATIONS ABOVE THE CEILING WITH OTHER

TRADES PRIOR TO INSTALLATION. 1.06 ALL DUCT SMOKE DETECTORS SHALL BE PROVIDED AND CONNECTED BY THE ELECTRICAL CONTRACTOR, BUT INSTALLED BY THE MECHANICAL 1.07 THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY OUTLETS FOR HEAT TAPE CONNECTIONS FOR MECHANICAL SYSTEMS. PROVIDE

CLASS B (30mA) GFCI PROTECTION ON THE BREAKER SUPPLYING THE HEAT TAPE. 1.08 THE ELECTRICAL CONTRACTOR SHALL PROVIDE 120V POWER AT EACH HVAC UNIT HAVING A CONTROLS POWER SUPPLY. CIRCUIT(S) SHALL BE DEDICATED 20A SERVING A MAXIMUM OF 10 HVAC UNITS PER CIRCUIT. COORDINATE ALL LOCATIONS WITH THE MECHANICAL CONTRACTOR.

PANELBOARDS

1.01 PANELBOARDS SHALL BE PROVIDED AS MANUFACTURED BY EATON, SQUARE-D, GENERAL ELECTRIC, SIEMENS, OR APPROVED EQUAL. ALL NEW EQUIPMENT FOR THE PROJECT SHALL BE BY THE SAME MANUFACTURER. LOAD CENTER TYPE PANELBOARDS SHALL BE USED WHERE THE PANELBOARD SERVES A DWELLING UNIT ONLY. 1.02 ALL BUSSING, INCLUDING NEUTRAL AND GROUND, SHALL BE COPPER. 1.03 ALL BREAKERS SHALL BE AUTOMATIC THERMAL-MAGNETIC TYPE

MOLDED CASE BOLT-ON TYPE, CALIBRATED FOR 40 DEGREE C, OR

1.04 PANELS SHALL BE FULLY RATED (AIC). NO SERIES AIC RATINGS ARE ALLOWED. 1.05 PANELS SHALL HAVE FULL SIZE EQUIPMENT GROUNDING BARS AND NEUTRAL BARS, EXCEPT WHERE INDICATED TO BE 200%.

AMBIENT COMPENSATION, UNLESS OTHERWISE NOTED.

1.06 ALL PANELBOARD AND BREAKER LUGS SHALL BE SIZED AND RATED PER 1.07 LIGHTING AND APPLIANCE PANELS (100A-600A) SHALL HAVE FRONT ACCESSIBLE HINGED DOOR-IN-DOOR COVERS WITH DEAD FRONT. SHALL BE 20" WIDE MINIMUM WITH MINIMUM 4" WIDE WIRING

THE CONDUCTOR SIZE AND MATERIAL.

TELEPHONE BOARDS, AND SECURITY SYSTEMS.

REFRIGERATION SHALL BE HACR RATED

MANUFACTURER DOCUMENTATION INDICATING

THE NEC.

1.11 BREAKERS USED FOR HEATING, AIR-CONDITIONING AND/OR

1.12 GROUND-FAULT CIRCUIT-INTERRUPTER (GFCI) PROTECTION FOR

WHERE A DEVICE LOCATION IS NOT ACCESSIBLE, THE GFCI

1.10 BREAKERS USED FOR SWITCHING SHALL BE SWITCHING DUTY (SWD)

PERSONNEL SHALL BE PROVIDED IN ALL LOCATIONS PER NEC 210.8.

PROTECTION SHALL BE PROVIDED WITH THE BREAKER SERVING THE

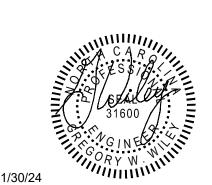
1.13 ALL OVERCURRENT DEVICES WHICH COMPRISE THE EMERGENCY SYSTEM

OR LEGALLY REQUIRED STANDBY SYSTEM SHALL BE SELECTIVELY

COORDINATED. THE ELECTRICAL CONTRACTOR SHALL PROVIDE

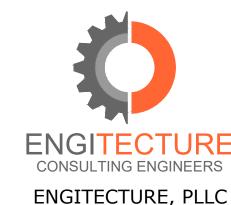
COMPLIANCE WITH THE SELECTIVE COORDINATION REQUIREMENTS PER

4539 HEDGEMORE DRIVE, SUITE 101 CHARLOTTE NC 28209 704.890.2053 WWW.OSSASTUDIO.COM



PROJECT TEAM

General Contractor ECCLESIA CONSTRUCTION www.ecclesiaconstruction.com 803.327.5670



4539 Hedgemore Drive, Suite 102 Charlotte, NC 28209 704-287-2193 PROJ# 23253

12/15/2023 DESIGN DEVELOPMENT DWGS.

NC License No. P-1625

12/22/2023 DESIGN DEVELOPMENT DWGS. 01/24/2024 REVIEW DWGS. 01/30/2024 ISSUED FOR CONSTRUCTION.

Description

Project Name



making church come alive

SANFORD NC 27311

23024.00

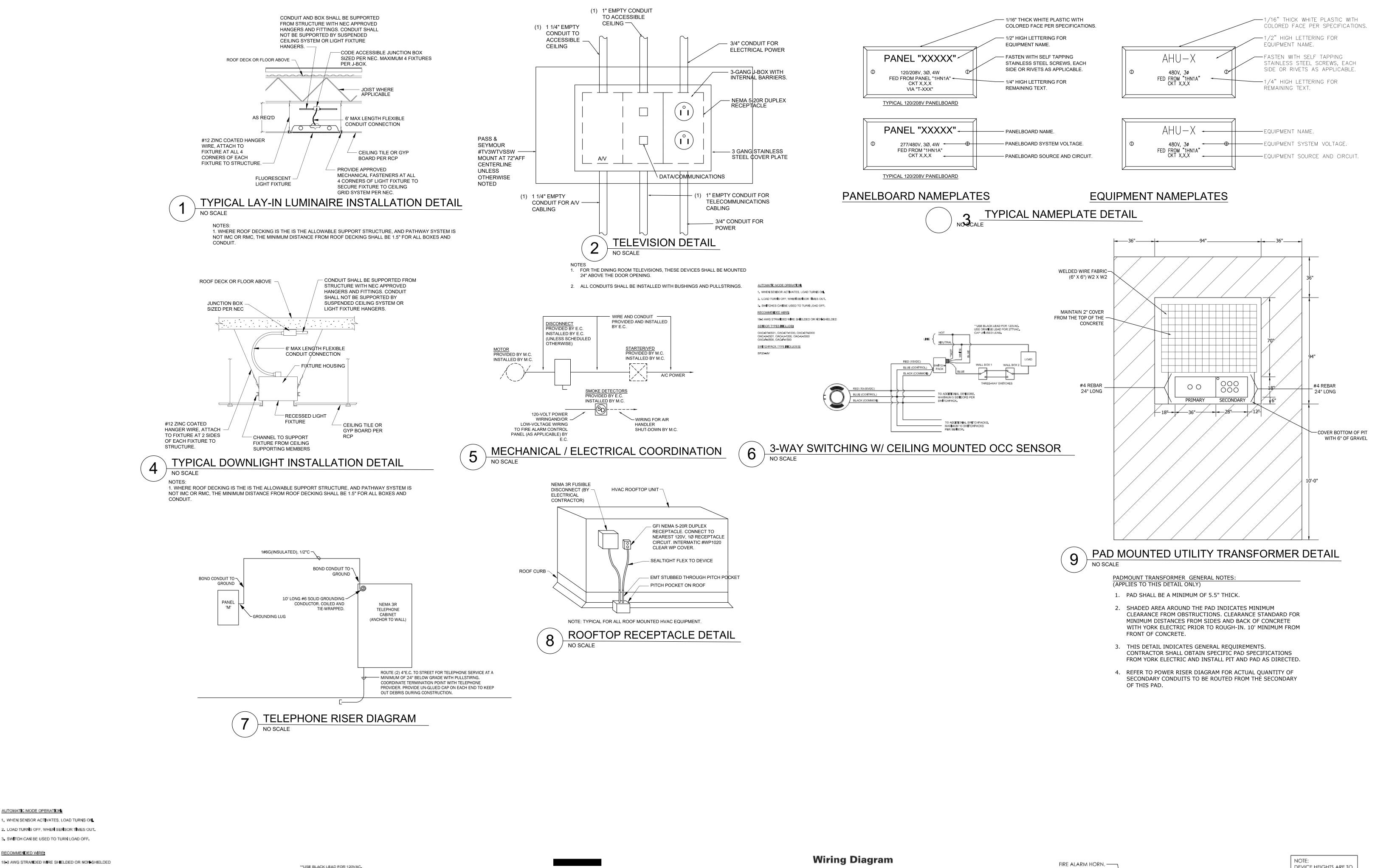
Description SPECIFICATIONS - ELECTRICAL

3D COMMUNITY CHURCH

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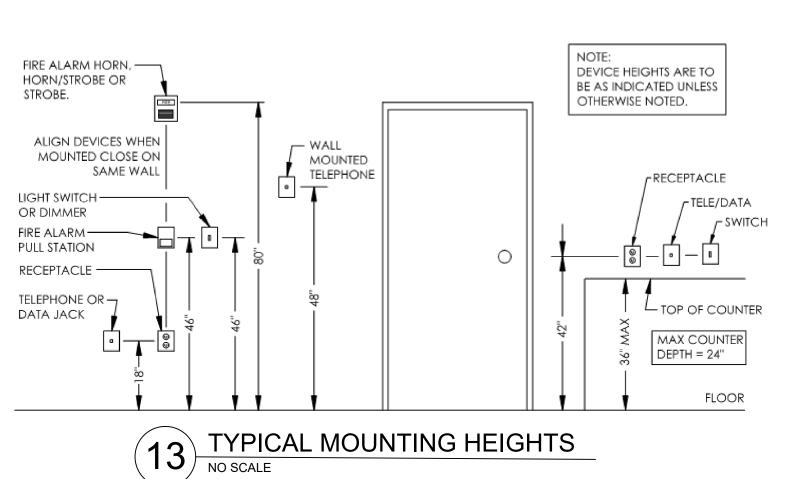
658 GRAHAM ROAD

Project Number



Single Level Switching

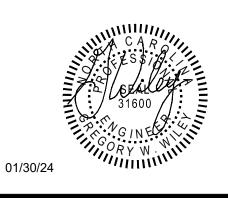
12 STANDARD SWITCHING DETAIL NO SCALE



1. WALL MOUNTED FIRE ALARM NOTIFICATION DEVICES MUST BE MOUNTED MOUNTED NO LOWER THAN 80" AFF TO BOTTOM OF DEVICE AND NO HIGHER THAN 96" TO TOP OF THE DEVICE. CONTRACTOR SHALL MOUNT THESE DEVICES AT 88" TO THE MIDDLE OF THE DEVICE UNLESS FIELD CONDITIONS DO NOT ALLOW TO MOUNT AT THIS HEIGHT. IF THE DEVICE CAN NOT BE LOCATED BETWEEN 80" AND 96", CONTACT ENGINEER IMMEDIATELY FOR SOLUTION.

2. MOUNT CENTER LINE OF EXIT SIGN 24" ABOVE DOOR WHERE CEILING IS OVER 12'-0"AFF OR TO STRUCTURE WHERE NO CEILING IS PRESENT. IF CEILING IS 12'-0"AFF OR UNDER, CONTRACTOR SHALL MOUNT CENTER LINE OF EXIT SIGN 12" BELOW CEILING.

4539 HEDGEMORE DRIVE, SUITE 101 CHARLOTTE NC 28209 704.890.2053 WWW.OSSASTUDIO.COM



PROJECT TEAM

General Contractor ECCLESIA CONSTRUCTION www.ecclesiaconstruction.com 803.327.5670



ENGITECTURE, PLLC NC License No. P-1625 4539 Hedgemore Drive, Suite 102 Charlotte, NC 28209

704-287-2193

PROJ# 23253 Description

12/15/2023 DESIGN DEVELOPMENT DWGS. 12/22/2023 DESIGN DEVELOPMENT DWGS. 01/24/2024 REVIEW DWGS.

01/30/2024 ISSUED FOR CONSTRUCTION.

Project Name



658 GRAHAM ROAD SANFORD NC 27311

3D COMMUNITY CHURCH

Project Number 23024.00

Description

DETAILS - ELECTRICAL

Scale

E00.03

AUTOMATIC MODE OPERATION

RECOMMENDED WIRE

SENSOR TYPES INCLUDE:

OAC P 0500, OAC P 1500

SP20-MV

SWITCHPACK TYPE INCLUDES:

1. WHEN SENSOR ACTIVATES, LOAD TURNS ON 2. LOAD TURNS OFF, WHEN SENSOR TIMES OUT.

3. SWITCH CAN BE USED TO TURN LOAD OFF.

OAC-DT-0501, OAC-DT-1000, OAC-DT-2000 OAC-U-0501, OAC-U-1000, OAC-U-2000

USE ORANGE LEAD FOR 277VAC

BLACK

NO SCALE

PURPLE (+)

PURPLE (+)

STANDARD OCCUPANCY SENSOR / WALL SWITCH DETAIL

0-10V DIMMABLE

FIXTURE

0-10V DIMMABLE FIXTURE

AP UNUSED LEAD

TO ADDITIONAL SENSORS.

MAXIMUM 5 SENSORS PER

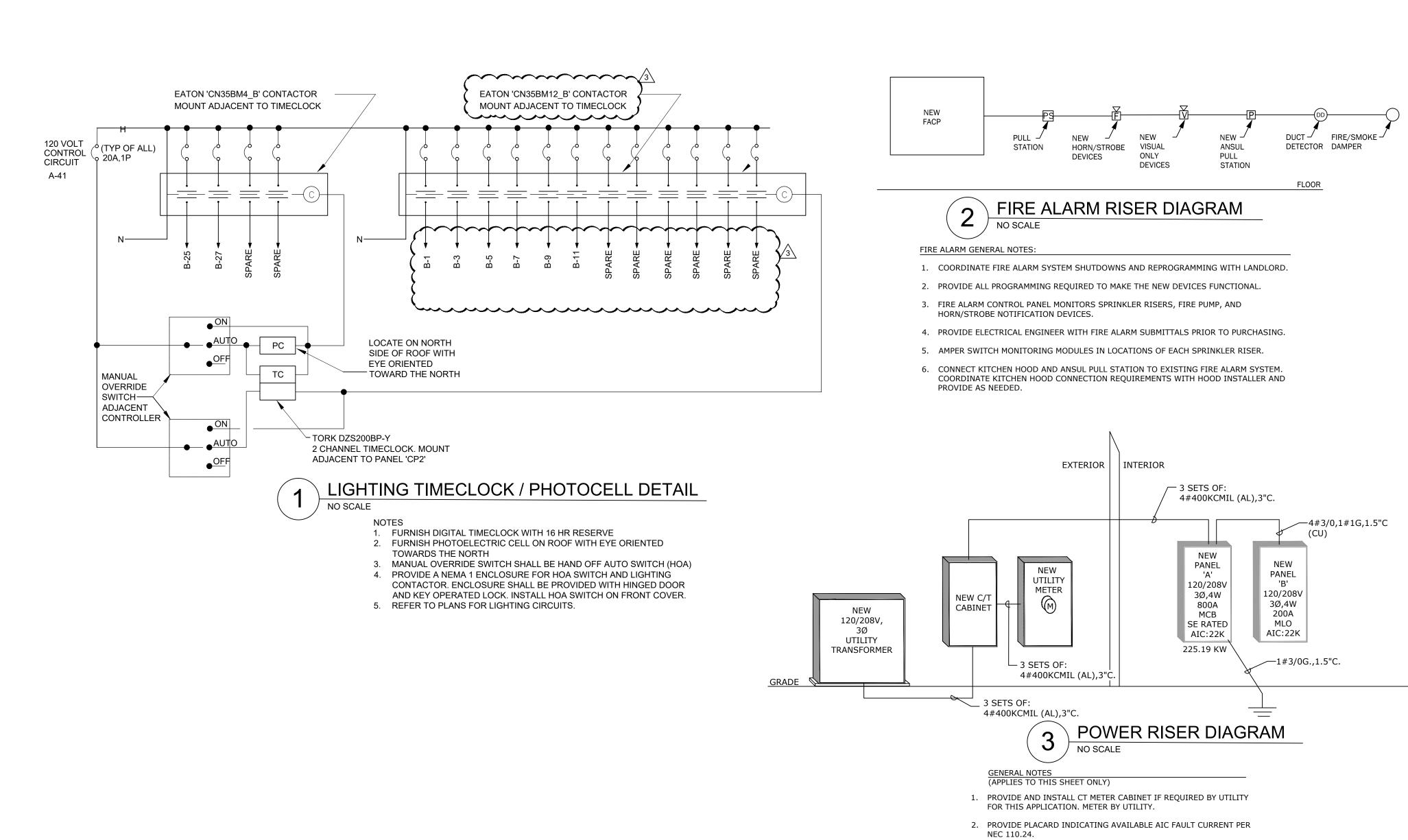
PER SENSOR.

MAXIMUM 10 SWITCHPACKS

SWITCHPACK.

LUE (CONTROL)

10 STANDARD SWITCHING WITH CEILING MOUNTED OCCUPANCY SENSOR DETAIL



3. UTILITY TRANSFORMER SPECIFICATIONS UNKNOWN AT TIME OF

TRANSFORMER PROPERTIES WITH WITH UTILITY PRIOR TO PURCHASING EQUIPMENT. IF TRANSFORMER AIC IS HIGHER THAN

INDICATED, CONTACT ENGINEER FOR FAULT CURRENT FOR

4. PROVIDE PLACARD INDICATING ARC-FLASH HAZARD AT

5. ELECTRICAL PANEL(S) SHALL BE INSTALLED PER NEC 110.26.

PANEL(S)/DISCONNECT(S) PER NEC 110.26.

ELECTRICAL PANEL(S).

mille and the commence and the commence

DESIGN, DESIGN IS BASED ON 20,800AIC, E.C. TO VERIFY

SEQUENCE OF OPERATION:				Bl	JIL[OIN	g s	YS	TEN	и C	DUT	PU	rs					EN CC			
UPON CHANGE IN STATUS OF ANY DEVICE ON THE SYSTEM INDICATED IN THIS CHART, THE FIRE ALARM CONTROL PANEL SHALL ACTIVATE AUDIBLE CHANGE INDICATORS AND DISPLAY THE SYSTEM POINT NUMBER, POINT DESCRIPTION, AND MESSAGE ASSOCIATED WITH THE POINT. ACTIVATION OF ANY WATERFLOW DEVICE, SMOKE DETECTOR, OR OTHER INITIATING DEVICE WILL CAUSE THE FUNCTION TO OCCUR NOTED IN THIS CHART.		ACTIVATE AUDIBLE ALARM SIGNAL	ACTIVATE COMMON SUPERVISORY SIGNAL INDICATOR	ACTIVATE AUDIBLE SUPERVISORY INDICATOR	ACTIVATE COMMON TROUBLE SIGNAL INDICATOR	ACTIVATE AUDIBLE TROUBLE SIGNAL	ACTIVATE GENERAL EVACUATION SIGNAL	DISPLAY CHANGE OF STATUS	ACTIVATE EXTERNAL HORNS/STROBES	TRANSMIT FIRE ALARM SIGNAL TO CENTRAL STATION	TRANSMIT SUPERVISORY SIGNAL TO CENTRAL STATION	TRANSMIT TROUBLE SIGNAL TO CENTRAL STATION	RETURN ELEVATOR TO ALTERNATE FLOOR	RETURN ELEVATOR TO FIRST FLOOR	SHUNT TRIP AFTER ELEV. REACHES DESIGNATED FLOOR	SHUT DOWN RESPECTIVE HVAC	SHOW CHANGE OF STATUS ON ANNUNCIATOR	SHOW CHANGE OF STATUS ON CENTRAL PANEL	TRANSMIT FIRE ALARM SIGNAL TO CENTRAL STATION	TRANSMIT SUPERVISORY SIGNAL TO CENTRAL STATION	TRANSMIT TROUBLE SIGNAL TO CENTRAL STATION
MANUAL FIRE ALARM PULL BOXES	Х	Х					Χ	Χ	X	Х							Χ	X	X		
BUILDING SMOKE DETECTOR	Х	X	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<u> </u>			Х	Х	X	X	<u> </u>						Х	X	X		
DUCT SMOKE DETECTOR	.	ļ.,	Х	X				X	<u>,,</u>	ļ.,	X					Х	X	X	l	X	
SPRINKLER WATER FLOW	Х	X	.,				Χ	X	X	X							Х	X	X		
SPRINKLER TAMPER			Χ	X				Х			X						Х	X		X	L.
NOTIFICATION DEVICE SHORT CIRCUIT					X	X		X				X					X	X			X
OPEN CIRCUIT					X	X		X				X					X	X			X
GROUND FAULT	<u> </u>				X	X		X				X					X	X			<u> </u>
FIRE ALARM A.C. POWER FAILURE	┞				X	X		X				X					X	X	_	_	X
FIRE ALARM SYSTEM LOW BATTERY			\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		X			Х			<u>, , </u>	X					Х	X			X
FIRE PUMP RUNNING			X								X						ऻ—	—			
FIRE PUMP COMMON TROUBLE FIRE PUMP POWER FAILURE/PHASE REVER.	<u> </u>		X								X						<u> </u>	Щ.		<u> </u>	

ENERGY STATEMENT

CODE SUMMARY PER THE REQUIREMENTS OF THE 2018 NORTH CAROLINA ENERGY CONSERVATION CODE

ELECTRICAL DESIGN

(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE) ELECTRICAL SYSTEM AND EQUIPMENT

METHOD OF COMPLIANCE: PERSCRIPTIVE

LIGHTING SCHEDULE (EACH FIXTURE TYPE)

LAMP TYPE REQUIRED IN FIXTURE REFER TO LIGHTING FIXTURE SCHEDULE NUMBER OF LAMPS IN FIXTURE NUMBER OF BALLASTS IN FIXTURE

REFER TO LIGHTING FIXTURE SCHEDULE BALLAST TYPE USED IN THE FIXTURE REFER TO LIGHTING FIXTURE SCHEDULE REFER TO LIGHTING FIXTURE SCHEDULE TOTAL WATTAGE PER FIXTURE REFER TO LIGHTING FIXTURE SCHEDULE

4. ALL INCOMING PANEL & BRKR LUGS SHALL MATCH FEEDERS.

6. PROVIDE METAL DIRECTORY FRAME.

5. PROVIDE HINGED DOOR-IN-DOOR WITH OUTER DOOR LOCK.

TOTAL INTERIOR WATTAGE * **7388** SPECIFIED **10170** ALLOWED TOTAL EXTERIOR WATTAGE 237 SPECIFIED 650 ALLOWED

ADDITIONAL EFFICIENCY PACKAGE OPTIONS (WHEN USING THE 2018 NCECC; NOT REQUIRED FOR ASHRAE 90.1)

C406.7 REDUCED ENERGY USE IN SERVICE WATER HEATING

C406.2 MORE EFFICIENT HVAC EQUIPMENT PERFORMANCE X C406.3 REDUCED LIGHTING POWER DENSITY

C406.4 ENHANCED DIGITAL LIGHTING CONTROLS C406.5 ON-SITE RENEWABLE ENERGY

C406.6 DEDICATED OUTDOOR AIR SYSTEM

* WHOLE BUILDING OR SPACE BY SPACE

		NEW PANEL A				NEW PANEL B											
VOLTAGE	: 120/208 AMPS: 800 MCB	MOU	UNTING: SURFACE				VOLTAGE:	120/ 208	AMPS: 200 MCB				MOUNTING:	SURFACE			
3 PHASE,	4 WIRE TOTAL LOAD: 217.1 KVA	AIC I	RATING: 22,000				3 PHASE, 4 V	•	TOTAL LOAD: 23.0 KVA				C RATING:				
CIRCUIT DESCRIPTION	LOAD (KVA) CONT RCPT MTR A/C KITCH MISC		BREAKER P TRIP MISC KITCH	LOAD (KVA) A/C MTR RCPT CONT	CIRCUIT DESCRIPTION No.	No. CIRCUIT DES	CRIPTION	SONT DOD	LOAD (KVA)	BREAKER	- F	PHASE	BREAKER		OAD (KVA)	CIRCUIT DESCRIPTION	
	5.20 2.52 0.00 0.00 5.00 1.60	15.98	1.66	7,70 11110 10011 00111	2	1 CANCTHA			T MTR A/C KITCH MIS		A 0.61	B C		MISC KITCH A	A/C MTR RCPT CONT		
PANEL 'B'	5.00 3.06 0.00 0.00 2.50 0.00	200 3 12.22	3 30 1.66		EUH-1 4	1 SANCTUA		0.61		20 1	0.61	0.90	1 20			SPARE SPARE	
1711122 3	5.00 3.06 0.00 0.00 2.50 0.00 4.00 2.88 0.20 0.00 2.50 0.00	11.24	1.66		6	3 NARTHEX/C		0.90		20 1			1 20			SPARE SPARE	
	14.69	16.19	2 20 1.50		8	5 NURSERY/CL		0.13		20 1	0.45	0.13	1 20			SPARE SPARE	
RTU-1		175 3 16.19	2 20 1.50		EWH-1 3 10	7 BATH/SH 9 STAGE		0.45 1.50		20 1		1.50	1 20			SPARE SPARE	
	14.69	15.05	1 20	0.36	BACKSTAGE REC 12	11 BACK STAGE		0.24		20 1	_	0.24	1 20			SPARE SPARE	
	15.74	16.28	1 20	0.54	STORAGE/JAN REC 14			0.24			0.00	0.24	1 20			SPARE	
RTU-2		175 3 16.64	1 20	0.90	CLASSROOM 134 REC 16	13 SPAI 15 SPAI		<u> </u>		20 1 20 1		0.00	1 20			SPARE	
	15.74	16.64	1 20	0.90	CLASSROOM 133 REC 18	17 SPAI				20 1		0.00				SPARE	
	15.74	16.82	1 20	1.08	CLASSROOM 132 REC 20	19 SPAI					0.00	0.00	1 20			0.72	
RTU-3	15.74	175 3 16.82	1 20	1.08	NURSERY 131 REC 22	21 SPAI				20 1		0.00	2 50			SPARE	
	15.74	16.10	1 20	0.36	BACK STAGE QUAD 24	23 SPAI	`-			20 1		0.00					
		0.36	1 20	0.36	BACK STAGE QUAD 26	23 SPAI 25 SIGN		1.20			1.20	- 0.00	2 50			SPARE	
SPARE		70 3 0.36	1 20	0.36	BACK STAGE QUAD 28	27 EXTERIO		0.24		20 1		1.68	1 20		1.44	STORAGE/BATH REC	
		0.50	1 20 0.50		A/V POWER FUTURE 30	29 FIRE/SMOKI			0.30		_	1.10		0.80		HAND DRYER	
	6.62	7.12	1 20 0.50		A/V POWER FUTURE 32	31 STAGE		0.54	4	20 1	1.34		1 20 0	 		HAND DRYER	
RTU-5	6.62	70 3 7.12	1 20 0.50		A/V POWER FUTURE 34	33 STAGE FLO		0.36		20 1		0.54	1 20	-	0.18	EWC GFI	
	6.62	7.12	1 20	0.50	RP-1 36	35 STAGE FLO	OR REC	0.36		20 1		0.72	1 20		0.36	MERCH REC	
IT QUAD	0.72	20 1 3.72	3.00		38	37 STAGE FLO	OR REC	0.36	6	20 1	1.08		1 20		0.72	GREEN ROOM REC	
FACP (RED BREAKER)	0.50		3 35 3.00		WH-1 40	39 STAGE FLO	OR REC	0.36		20 1		0.36	1 20			SPARE	
TIMECLOCK	0.50	20 1 3.50	3.00		42	41 STAGE FLO	OR REC	0.36	6	20 1		1.40	1 20 0	0.50	0.54	SANCTUARY REC/TV'S	
	LOADS W/ NEC 220 DEMAND FACTORS (KVA)	TOTAL 76.47 72.85 70.15	21.08 10.00	158.38 0.70 15.12 14.20 0	CONNECTED KVA 219.476	43 FIRE/SMOK	DAMPER		0.20		0.74		1 20		0.54	CHECK-IN REC	
	CONT RCPT MTR A/C KITCH MISC			T =		45 FIRE/SMOK	DAMPER		0.20	20 1		0.70	1 20 0	0.50		SANCTUARY PROJECTOR	
	E 6.50 5.22 0.00 52.79 3.25 8.26				IEL NOTES	47 SPA	RE				_	0.72	1 20		0.72	SOUNDBOOTH REC	
	E 6.25 5.40 0.00 52.79 1.63 7.16	73.23 CONTINUOUS: 125% LO		L-	BE AS REQUIRED PER PANEL AIC RATING.	49 SPA	RE			20 1			1 20		0.72	SOUNDBOOTH REC	
C PHASI	E 5.00 4.50 0.83 52.79 1.63 5.66	/0.40 RECEPTACLES: 100% 1ST	10 KW + 50% REMAINING	[2. SHALL BE FULLY RATED -	- SERIES RATINGS NOT ALLOWED.	51 SPA	RF T			20 1		0.54	1 20		0.54	SOUNDBOOTH REC	

MOTORS: 125% LARGEST MOTOR + 100% REMAINING 3.

A/C: 100% LOAD

MISC: 100% LOAD

KITCHEN: 65% LOAD

76.02

633.05 A

ALL BUSSING, INCL GND AND NEUTRAL, SHALL BE COPPER.

PROVIDE HINGED DOOR-IN-DOOR WITH OUTER DOOR LOCK.

4. ALL INCOMING PANEL & BRKR LUGS SHALL MATCH FEEDERS.

PROVIDE METAL DIRECTORY FRAME.

TOTALS FOR PANEL 17.75 12.56 0.83 158.38 6.50 21.08 217.09

DESIGN LOAD (KVA)

FOR LARGEST PHASE

DESIGN LOAD (KVA) FOR PANEL

							N	EW P	ANEL	В										
VOLTAGE:	120/	208		AMPS:	200 MCB					М	OUN.	TING:	SURF	FACE						
3 PHASE, 4	WIRE		TOTAL	LOAD:	23.0 KVA					AI	C RA	TING:	22,0	000						
CIDCUIT DESCRIPTION			LOAD	(KVA)		BREA	KER		PHASE		BRE					(KVA)			CIDCUIT DESCRIPTION	No.
CIRCUIT DESCRIPTION	CONT	RCPT	MTR	A/C	KITCH MIS	TRIP	Р	Α	В	С	Р	TRIP	MISC	KITCH	A/C	MTR	RCPT	CONT	CIRCUIT DESCRIPTION	INO.
SANCTUARY LTG	0.61					20	1	0.61			1	20							SPARE	2
NARTHEX/CORR. LTG	0.90					20	1		0.90		1	20							SPARE	4
NURSERY/CLASSRM LTG	0.13					20	1			0.13	1	20							SPARE	6
BATH/SHELL LTG	0.45					20	1	0.45			1	20							SPARE	8
STAGE LTG	1.50					20	1		1.50		1	20							SPARE	10
BACK STAGE LIGHTING	0.24					20	1			0.24	1	20							SPARE	12
SPARE						20	1	0.00			1	20							SPARE	14
SPARE						20	1		0.00		1	20							SPARE	16
SPARE						20	1			0.00	1	20							SPARE	18
SPARE						20	1	0.00			_	EO							CDADE	20
SPARE						20	1		0.00		^	30							SPARE	22
SPARE						20	1			0.00	_	F0							CDADE	24
SIGNAGE	1.20					20	1	1.20] ~	50							SPARE	26
EXTERIOR LTG	0.24					20	1		1.68		1	20					1.44		STORAGE/BATH REC	28
FIRE/SMOKE DAMPER					0.30	20	1			1.10	1	20	0.80						HAND DRYER	30
STAGE REC		0.54				20	1	1.34			1	20	0.80						HAND DRYER	32
STAGE FLOOR REC		0.36				20	1		0.54		1	20					0.18		EWC GFI	34
STAGE FLOOR REC		0.36				20	1			0.72	1	20					0.36		MERCH REC	36
STAGE FLOOR REC		0.36				20	1	1.08			1	20					0.72		GREEN ROOM REC	38
STAGE FLOOR REC		0.36				20	1		0.36		1	20							SPARE	40
STAGE FLOOR REC		0.36				20	1			1.40	1	20	0.50				0.54		SANCTUARY REC/TV'S	42
FIRE/SMOKE DAMPER					0.20	20	1	0.74			1	20					0.54		CHECK-IN REC	44
FIRE/SMOKE DAMPER					0.20	20	1		0.70		1	20	0.50						SANCTUARY PROJECTOR	46
SPARE						20	1			0.72	1	20					0.72		SOUNDBOOTH REC	48
SPARE							1	0.72			1	20					0.72		SOUNDBOOTH REC	50
						_	1		0.54		1								SOUNDBOOTH REC	52
						_	1			0.00	1								SPARE	54
							1	1.66	1				1.66							56
							1		1.66		3	30							EUH-2	58
							1			1.66	1									60
	OADS	W/ NEC	220 DE	MAND F	ACTORS (KV	Δ 1			1			1		0.00	0.00	0.00	8.10	5.27	CONNECTED KVA 21.65	
						⊸ ווו	AL	7.80	7.88	5.97								/ \		
A PHASE			_				37		NEC 2	20 DEM	AND	FACT	ORS					PAN	NEL NOTES	
								CONTI							1.	BREAKE	R FRAM			RATING.
													0% REM	IAINING	2				-	
CITIASE			1 0.00	1 0.00	1 3.00 3.20		. •	'\	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,							J				
	CIRCUIT DESCRIPTION SANCTUARY LTG NARTHEX/CORR. LTG NURSERY/CLASSRM LTG BATH/SHELL LTG STAGE LTG BACK STAGE LIGHTING SPARE SPARE SPARE SPARE SPARE SPARE SIGNAGE EXTERIOR LTG FIRE/SMOKE DAMPER STAGE FLOOR REC STAGE SPARE SPARE	CIRCUIT DESCRIPTION SANCTUARY LTG NARTHEX/CORR. LTG NURSERY/CLASSRM LTG STAGE LTG BATH/SHELL LTG STAGE LTG STAGE LTG SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SIGNAGE STAGE REC STAGE FLOOR REC STAGE SPARE SP	CIRCUIT DESCRIPTION	TOTAL	TOTAL LOAD: CIRCUIT DESCRIPTION	CIRCUIT DESCRIPTION	CIRCUIT DESCRIPTION	VOLTAGE: 120/ 208	VOLTAGE: 120/ 208	VOLTAGE: 120/ 208	CIRCUIT DESCRIPTION	VOLTAGE: 120/ 208	VOLTAGE: 120/ 208	VOLTAGE: 1207 208	VOLTAGE: 120/ 208	VOLTAGE: 1207 208 AMPS: 200 MCB 3.0 KVA	VOLTAGE: 120/ 208	VOLTAGE 1207 208	VOLTAGE: 120/208	VOLTAGE: 120/ 208 AMS: 200 MCB AMS: 200 MCB ACCURATIONS: 22,000

A/C: 100% LOAD

MISC: 100% LOAD

KITCHEN: 65% LOAD

DESIGN LOAD (KVA)

FOR LARGEST PHASE

DESIGN LOAD (KVA) FOR PANEL

8.54

63.75 A

71.11 A

4539 HEDGEMORE DRIVE, SUITE 101 CHARLOTTE NC 28209 704.890.2053 WWW.OSSASTUDIO.COM



PROJECT TEAM

General Contractor ECCLESIA CONSTRUCTION www.ecclesiaconstruction.com 803.327.5670



NC License No. P-1625 4539 Hedgemore Drive, Suite 102

Charlotte, NC 28209 704-287-2193 PROJ# 23253

Description

12/15/2023 DESIGN DEVELOPMENT DWGS. 12/22/2023 DESIGN DEVELOPMENT DWGS.

01/24/2024 REVIEW DWGS. 01/30/2024 ISSUED FOR CONSTRUCTION.

2 05/03/2024 ARCHITECTURAL REVISION 1 10/14/2024 RTAP NO. 1

Project Name



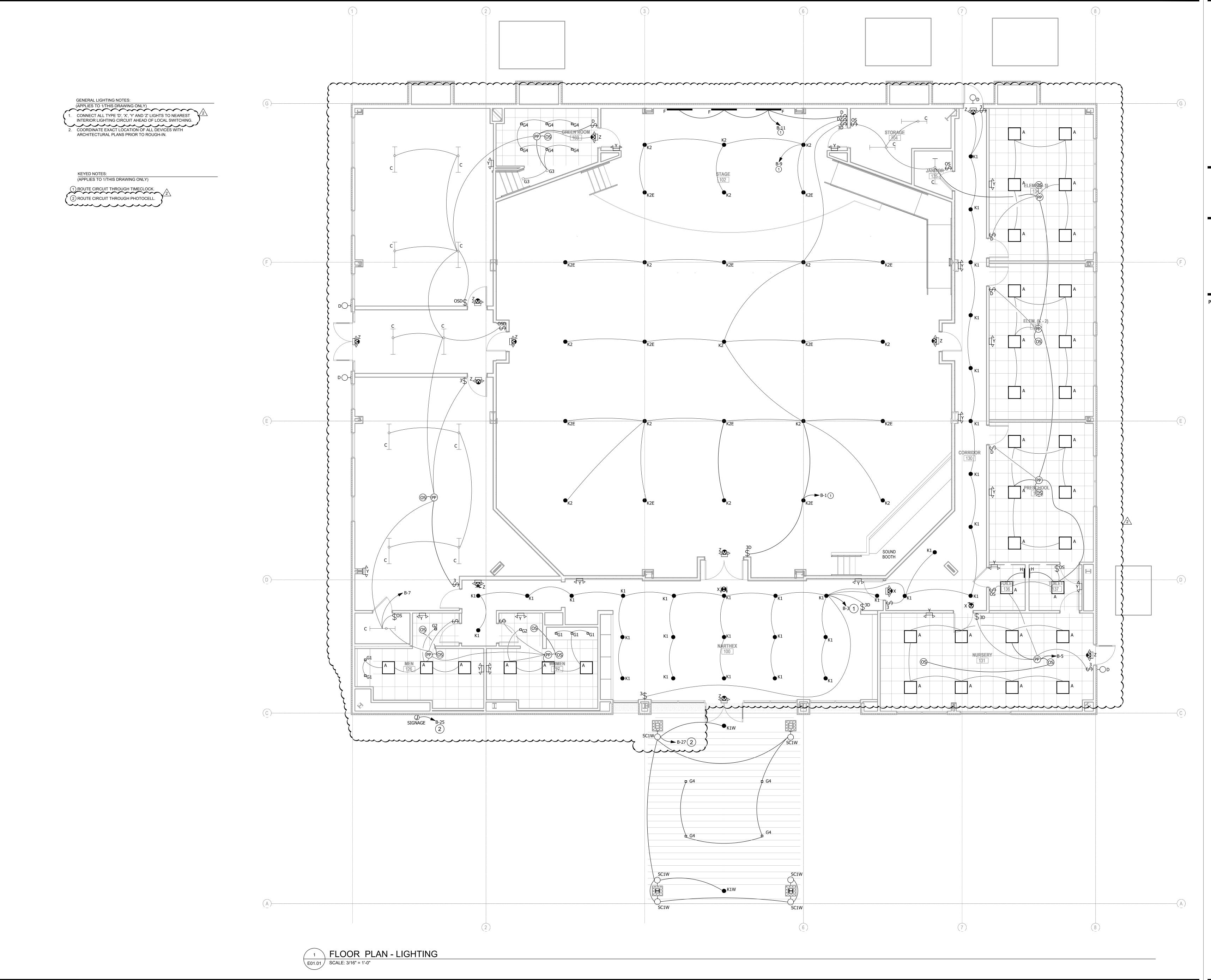
community **church** making church come **alive**

658 GRAHAM ROAD SANFORD NC 27311

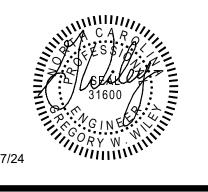
3D COMMUNITY CHURCH

23024.00

SCHEDULES & DIAGRAMS -ELECTRICAL







PROJECT TEAM

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community church
making church come alive 658 GRAHAM ROAD

SANFORD NC 27311

3D COMMUNITY CHURCH

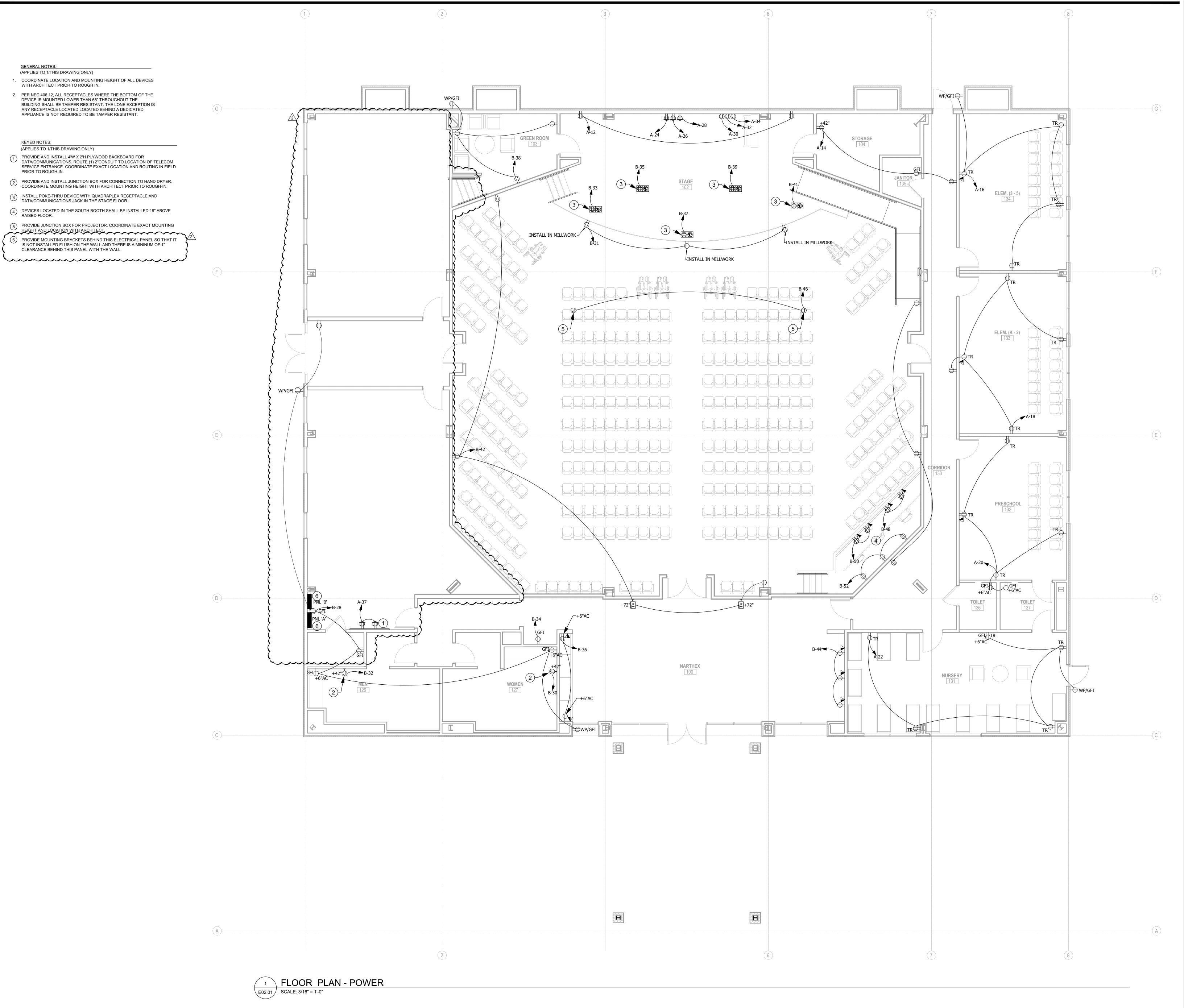
Project Number

23024.00

FLOOR PLAN - LIGHTING

SEE PLANS

E01.01



GENERAL NOTES:

KEYED NOTES:

PRIOR TO ROUGH-IN.

(APPLIES TO 1/THIS DRAWING ONLY)

(APPLIES TO 1/THIS DRAWING ONLY)

WITH ARCHITECT PRIOR TO ROUGH IN.

1. COORDINATE LOCATION AND MOUNTING HEIGHT OF ALL DEVICES

PER NEC 406.12, ALL RECEPTACLES WHERE THE BOTTOM OF THE

DEVICE IS MOUNTED LOWER THAN 65" THROUGHOUT THE BUILDING SHALL BE TAMPER RESISTANT. THE LONE EXCEPTION IS

APPLIANCE IS NOT REQUIRED TO BE TAMPER RESISTANT.

PROVIDE AND INSTALL 4'W X 2'H PLYWOOD BACKBOARD FOR

DATA/COMMUNICATIONS. ROUTE (1) 2"CONDUIT TO LOCATION OF TELECOM SERVICE ENTRANCE. COORDINATE EXACT LOCATION AND ROUTING IN FIELD

PROVIDE AND INSTALL JUNCTION BOX FOR CONNECTION TO HAND DRYER. COORDINATE MOUNTING HEIGHT WITH ARCHITECT PRIOR TO ROUGH-IN.

DEVICES LOCATED IN THE SOUTH BOOTH SHALL BE INSTALLED 18" ABOVE RAISED FLOOR.

(6) PROVIDE MOUNTING BRACKETS BEHIND THIS ELECTRICAL PANEL SO THAT IT

IS NOT INSTALLED FLUSH ON THE WALL AND THERE IS A MININUM OF 1"

3 INSTALL POKE-THRU DEVICE WITH QUADRAPLEX RECEPTACLE AND

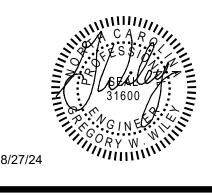
DATA/COMMUNICATIONS JACK IN THE STAGE FLOOR.

CLEARANCE BEHIND THIS PANEL WITH THE WALL.

ANY RECEPTACLE LOCATED LOCATED BEHIND A DEDICATED



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Project Name



community church
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SANFORD NC 27311

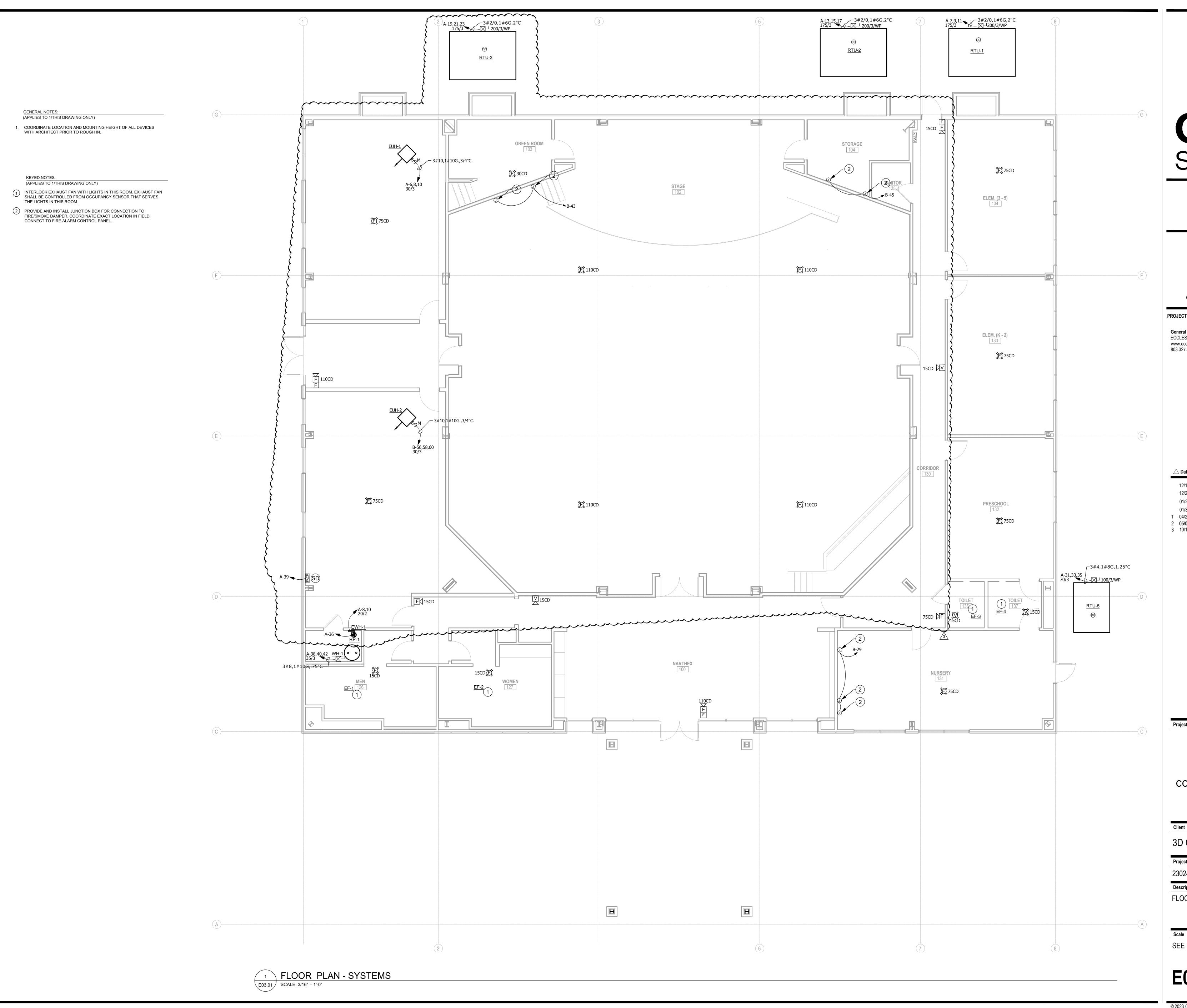
3D COMMUNITY CHURCH

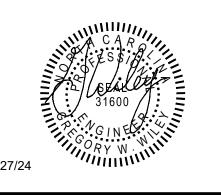
Project Number 23024.00

FLOOR PLAN - POWER

SEE PLANS

E02.01





PROJECT TEAM

General Contractor ECCLESIA CONSTRUCTION www.ecclesiaconstruction.com 803.327.5670



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Project Name



community church
making church come alive 658 GRAHAM ROAD

SANFORD NC 27311

3D COMMUNITY CHURCH

Project Number

23024.00

FLOOR PLAN - SYSTEMS

SEE PLANS

E03.01

GENERAL MECHANICAL NOTES

- MECHANICAL CONTRACTOR IS TO FURNISH AND PAY FOR ALL LABOR, MATERIAL, EQUIPMENT, PERMITS & FEES REQUIRED FOR THE COMPLETE INSTALLATION OF ALL SYSTEMS IN THIS SECTION OF
- ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH THE NORTH CAROLINA MECHANICAL CODE AND ALL OTHER APPLICABLE CODES. MC IS TO COORDINATE WITH THE G.C. IN REGARDS TO PROJECT TIMELINE, WORK HOURS, AS WELL AS ANY BONDING OR INSURANCE REQUIREMENTS.
- ALL MECHANICAL EQUIPMENT SHALL BE PROVIDED COMPLETE WITH ALL ACCESSORIES, HANGERS, SUPPORTS, CONTROLS, ETC FOR A FULLY FUNCTIONING SYSTEM REGARDLESS OF PRESENCE ON
- I. ALL EQUIPMENT, MATERIALS AND INSTALLATION SHALL BE GUARANTEED TO BE FREE OF DEFECTS FOR A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE OF WORK OR IN ACCORDANCE WITH THE MANUFACTURER'S STANDARD GUARANTEE, IF LONGER. ALL COMPRESSORS ARE TO INCLUDE FIVE (5) YEAR WARRANTY. EXISTING EQUIPMENT IS EXCLUDED FROM WARRANTY REQUIREMENT.
- THESE DRAWINGS ARE DIAGRAMMATIC AND SHOW GENERAL LOCATION AND ARRANGEMENT OF ALL MATERIALS AND EQUIPMENT. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS BUILDING CONSTRUCTION AND ALL OTHER WORK WILL PERMIT.
- 6. DO NOT SCALE DRAWINGS FOR MEASUREMENT.
- 7. ALL DUCT DIMENSIONS SHOWN ARE INTERIOR DUCT DIMENSIONS.
- 8. INFORMATION GIVEN IN SCHEDULES INCLUDES BOTH DESCRIPTION OF PRODUCT AND MANUFACTURER'S MODEL NUMBER. IF A CONFLICT IS PRESENT BETWEEN THE DESCRIPTION AND MODEL NUMBER, EQUIPMENT DESCRIPTION SHALL TAKE PRECEDENT. IN CASE OF CONFLICT BETWEEN THE PLANS AND NOTES/SPECIFICATIONS OR CONFLICT BETWEEN INFORMATION PRESENTED ON THE PLANS OR IN THE NOTES/SPECIFICATIONS, THEN THE MOST RESTRICTIVE SHALL TAKE PRECEDENT.
- THE M.C. IS RESPONSIBLE FOR CLARIFYING WITH THE G.C. ANY CONFUSION IN REGARDS TO RESPONSIBILITY OF WORK TO BE PERFORMED OR MATERIALS TO BE PROVIDED PRIOR TO SUBMITTING THE BID. THE SUBMITTAL OF THE BID BY THE CONTRACTOR WILL BE HELD AS PROOF THAT THE CONTRACTOR UNDERSTANDS THOROUGHLY AND COMPLETELY THE SCOPE OF THE WORK INVOLVED, AND HAS INCLUDED ON THE BID ALL THE NECESSARY ITEMS TO CARRY OUT THIS SECTION
- 10. ALL QUESTIONS MUST BE SUBMITTED IN RFI FORMAT TO THE ARCHITECT AND MUST BE ADDRESSED BY THE APPROPRIATE DESIGNER OF RECORD PRIOR TO BECOMING A PROPOSED CHANGE ORDER.
- UPON COMPLETION OF WORK, THE M.C. IS TO PROVIDE THE OWNER WITH A COMPLETE BOUND SET OF ALL EQUIPMENT OPERATION & MAINTENANCE MANUALS. THE PACKAGE SHALL ALSO INCLUDE ALL APPLICABLE WARRANTY & GUARANTEE INFORMATION.
- 12. M.C. IS TO PROVIDE TRAINING TO OWNER OR OWNER'S REPRESENTATIVE IN REGARDS TO OPERATION, FUNCTION, AND MAINTENANCE OF ALL MECHANICAL EQUIPMENT, CONTROLS, ETC.
- 13. M.C. IS TO REVIEW COMPLETE DRAWING SET. M.C. IS RESPONSIBLE FOR WORK EXPLICITLY SHOWN AND WORK IMPLIED.
- 14. THE M.C. SHALL BE HELD TO HAVE REVIEWED ALL SHEETS OF THE ENTIRE CONTRACT DOCUMENTS INCLUDING ALL TRADES (ARCHITECTURAL, PLUMBING ELECTRICAL, FIRE PROTECTION, AV/DATA, STRUCTURAL, INTERIORS, ETC) AND WILL BE RESPONSIBLE FOR PERFORMING ALL WORK INDICTED ON ANY SHEET. THE M.C WILL BE RESPONSIBLE FOR COORDINATING THEIR WORK WITH THE WORK OF OTHERS.
- 15. THE M.C. SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO STARTING WORK AND ADJUST
- DUCTWORK, ETC, TO CORRESPOND TO THE EXISTING CONDITIONS AS REQUIRED. 16. M.C. TO COORDINATE WITH G.C FOR MOUNTING FRAMES, ROOF CURBS, ACCESS PANELS AND ANY OTHER WORK THAT NEEDS INTERDISCIPLINE COORDINATION.
- 17. ALL FRESH AIR INTAKES SHALL BE A MINIMUM OF 10 FT. FROM ALL EXHAUST TERMINATIONS IN
- COMPLIANCE WITH THE LOCAL BUILDING/MECHANICAL CODE. 18. ALL EQUIPMENT, DUCT, PIPING, ETC EXPOSED INSIDE OR OUTSIDE OF THE BUILDING SHALL BE
- PAINTED WITH COLOR AS SELECTED BY ARCHITECT WHERE REQUESTED. 19. ALL EXPOSED DUCT SHALL BE INTERNALLY INSULATED DOUBLE WALL SPIRAL DUCT WORK.
- 20. ALL CONCEALED DUCT WORK SHALL BE EXTERNALLY INSULATED 21. ALL GREASE DUCT SHALL BE INSULATED WITH FIRE WRAP AS REQUIRED BY THE LOCAL MECHANICAL
- CODE IF CLEARANCE TO COMBUSTIBLES CAN NOT BE MAINTAINED. 22. DISHWASHER UTILIZED SHALL BE A LOW TEMPERATURE DISHWASHER. THE HEAT AND MOISTURE LOADS HAVE BEEN INCLUDED IN THE HVAC CALCULATIONS.
- 23. ALL ROOFING WORK TO BE PERFORMED BY LANDLORDS ROOFING CONTRACTOR.

- ALL ROOF WORK INCLUDING PENETRATIONS, OPENINGS, FLASHING, CURB INSTALLS, ETC. ARE TO BE PERFORMED BY THE ROOFING CONTRACTOR. THE M.C. IS RESPONSIBLE FOR PROVIDING ANY ROOF CURBS, EQUIPMENT RAILS, VENTS, ETC. AND COMMUNICATING ALL REQUIREMENTS WITH THE G.C. AND ROOFING CONTRACTOR PRIOR TO PERFORMING WORK.
- ALL LOW VOLTAGE WIRING RELATED TO MECHANICAL EQUIPMENT AND SYSTEMS IS THE RESPONSIBILITY OF THE M.C. (ANY LOW VOLTAGE FIRE ALARM WIRING TO BE BY E.C.). THE E.C. SHALL
- PROVIDE AND INSTALL ALL HIGH VOLTAGE CONNECTIONS TO MECHANICAL EQUIPMENT. MECHANICAL CONTRACTOR SHALL EMPLOY THE SERVICES OF THE G.C. FOR CUTTING AND PATCHING OF WALLS, FLOORS AND CEILINGS RELATED TO THE INSTALLATION OF MECHANICAL EQUIPMENT AND
- 4. THE G.C. IS RESPONSIBLE FOR PAINTING OF ANY EXPOSED DUCTWORK, PIPING, GRILLES, ETC. THE M.C. IS RESPONSIBLE FOR CLEANING AND PREPARING ITEMS FOR PAINT. M.C. SHALL COORDINATE ALL FIELD PAINTED EQUIPMENT AND ACCESSORIES WITH THE G.C PRIOR TO PERFORMING WORK.
- THE G.C. SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ANY ACCESS PLATFORMS, GUARD RAILS, LADDERS, CONCRETE PADS, ETC. THE M.C. SHALL COMMUNICATE ALL REQUIREMENTS WITH THE G.C. PRIOR TO PERFORMING WORK.

- THE MECHANICAL CONTRACTOR SHALL COORDINATE CLOSELY WITH ALL OTHER TRADES TO AVOID CONFLICT AND ENSURE OTHER TRADES PROVIDE MEASURES TO ACCOMMODATE MECHANICAL WORK (I.E. ACCESS DOORS, SLAB/WALL/ROOF OPENINGS, ELECTRICAL CONNECTIONS, ETC).
- THE M.C. SHALL COORDINATE LOCATION OF ALL ROOF PENETRATIONS WITH THE ROOFING CONTRACTOR. THE P.C. AND M.C. SHALL COORDINATE LOCATIONS OF NEW PLUMBING VENTS AND EXHAUST TO ENSURE THAT NO PLUMBING VENTS OR ANY OTHER SOURCES OF BUILDING EXHAUST ARE LOCATED WITHIN 10' OF ANY OUTSIDE AIR INTAKES.

- 1. ALL MATERIALS SHALL BE NEW UNLESS OTHERWISE SHOWN OR SPECIFIED. 2. PROVIDE HANGERS AND SUPPORTS APPROVED FOR USE BY APPLICABLE MECHANICAL CODE.
- 3. ALL MAIN DUCTWORK (SUPPLY, RETURN, EXHAUST) SHALL BE GALVANIZED SHEET METAL CONSTRUCTED IN ACCORDANCE WITH SMACNA STANDARDS.
- 4. ALL FLEXIBLE DUCTWORK SHALL BE LIMITED TO 5FT MAX. AND SHALL BE SUPPORTED AT THE MIDPOINT.
- 5. ALL DIFFUSER AND GRILLE CONNECTIONS SHALL HAVE A RIGID 90° ELBOW PRIOR TO CONNECTION.
- FLEXIBLE DUCTWORK SHALL NOT CONNECT DIRECTLY TO THE DIFFUSER/GRILLE NECK. 6. ALL SUPPLY AND RETURN DUCTWORK SHALL BE INSULATED. INSULATION OF DUCTWORK IN UNCONDITIONED SPACE SHALL BE MINIMUM REQUIREMENTS SET FORTH BY THE APPLICABLE
- CONCEALED SHEET METAL SUPPLY & RETURN DUCT SHALL BE EXTERNALLY INSULATED WITH MINERAL FIBER BOARD OR BLANKET.
- 8. ALL MAIN DUCTWORK (INCLUDING EXHAUST) SHALL BE SEALED ACCORDING TO THE APPLICABLE

ENERGY CONSERVATION CODE.

ENERGY CONSERVATION CODE TO SEAL CLASS C. AT A MINIMUM, INCLUDE SEALING OF ALL DUCT SEAMS WITH NON-HARDENING MASTIC. SEALING BY TAPE ALONE SHALL NOT BE ALLOWED. ALL DAMPERS TO INCLUDE SET SCREW OR SIMILAR FEATURE FOR LOCKING IN POSITION. ALL DAMPERS INSTALLED IN INSULATED DUCTWORK SHALL HAVE STANDOFFS FOR DAMPER OPERATION

- OUTSIDE OF THE INSULATION. ALL PROGRAMMABLE THERMOSTATS TO INCLUDE BATTERY BACK-UP AND SHALL INITIALLY BE PROGRAMMED TO THE FOLLOWING ADJUSTABLE SETPOINTS: A. HEATING (OCCUPIED) = 70°F
- B. HEATING (UNOCCUPIED) = 65°F C. COOLING (OCCUPIED) = 75°F
- D. COOLING (UNOCCUPIED) = 80°F

PIPING, UTILITIES, ETC.

- THERMOSTAT SCHEDULES SHALL BE SET TO RUN "BUILDING WARM UP" BY PROGRAMMING THE OCCUPIED SETPOINTS TO BEGIN ONE HOUR PRIOR TO ACTUAL BUILDING OCCUPANCY (EXAMPLE: CHANGE THE HEATING SETPOINT FROM 65°F TO 70°F AT 6AM IF THE SPACE IS NORMALLY OCCUPIED
- 2. FOR ALL REMOVED EQUIPMENT CONTRACTOR SHALL REMOVE ALL SUPPORTS, HANGERS, CONTROLS,
- THE MECHANICAL DRAWINGS INDICATE THE GENERAL DESIGN AND ARRANGEMENT OF PIPING. EQUIPMENT, SYSTEMS, ETC. INFORMATION SHOWN IS DIAGRAMMATIC IN CHARACTER AND DOES NOT INDICATE EVERY REQUIRED OFFSET, FITTING, ETC.
- 14. THE LOCATIONS OF THE ITEMS SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED BY THE PROJECT SITE CONDITIONS AND SHALL HAVE THE APPROVAL OF THE ENGINEER BEFORE BEING INSTALLED. DO NOT SCALE THE DRAWINGS (UNLESS NOTED OTHERWISE).
- CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND SIZES OF ALL EXISTING EQUIPMENT, DUCTWORK, PIPING. ELECTRICAL CONDUIT. STRUCTURAL MEMBERS. ETC. PRIOR TO BID. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY AND ALL DISCREPANCIES BETWEEN FIELD CONDITIONS AND CONTRACT
- 16. ALL DUCTWORK, PIPING AND EQUIPMENT SUPPORTED FROM STRUCTURAL STEEL SHALL BE COORDINATED WITH THE GC. ALL ATTACHMENTS TO STEEL BAR JOISTS, TRUSSES, OR JOIST GIRDERS, SHALL BE AT PANEL POINTS, PROVIDE BEAM CLAMPS MEETING MSS STANDARDS, WELDING TO STRUCTURAL MEMBERS SHALL NOT BE PERMITTED. THE USE OF C-CLAMPS SHALL NOT BE
- 7. MECHANICAL EQUIPMENT, DUCTWORK, AND PIPING SHALL NOT BE SUPPORTED FROM METAL DECK. 18. BOXES SHALL BE PROVIDED WHEREVER DUCTS PASS THROUGH FLOOR, WALL AND ROOF CONSTRUCTION.
- 19. WHERE HORIZONTAL DUCTS PASS THROUGH WALLS AND VERTICAL DUCTS PASS THROUGH FLOORS OR ROOFS, SEAL OFF VOID BETWEEN OPENING AND DUCT, WITH AN APPROVED NON-COMBUSTIBLE
- 20. FURNISH AND INSTALL ALL FOUNDATIONS, BASES AND SUPPORTS.
- 21. LEAK TEST ALL DUCTWORK SYSTEMS PRIOR TO CONCEALMENT. 22. PROVIDE VIBRATION ISOLATION FOR ALL MECHANICAL EQUIPMENT TO PREVENT TRANSMISSION OF
- VIBRATION TO BUILDING STRUCTURE. 23. VALVES AND CLEANOUTS SHALL BE INSTALLED AS SHOWN ON THE DRAWINGS AND AS REQUIRED BY
- 24. PROVIDE ACCESS PANELS FOR INSTALLATION IN WALLS AND CEILINGS, WHERE REQUIRED, TO SERVICE DAMPERS, VALVES, SMOKE DETECTORS, AND OTHER CONCEALED MECHANICAL EQUIPMENT. ACCESS PANELS SHALL BE TURNED OVER TO GENERAL CONTRACTOR FOR INSTALLATION.
- 25. ALL OPENINGS IN FIREWALLS DUE TO DUCTWORK, PIPING, CONDUIT, ETC., SHALL BE FIRE STOPPED WITH A PRODUCT SIMILAR TO 3M OR APPROVED EQUAL. 26. ALL AIR CONDITIONING CONDENSATE DRAIN LINES FROM EACH AIR HANDLING UNIT AND ROOFTOP
- UNIT SHALL BE PIPED FULL SIZE OF THE UNIT DRAIN OUTLET, WITH A P-TRAP, AND PIPED TO NEAREST DRAIN. PROVIDE A CONDENSATE PUMP IF REQUIRED, FIELD VERIFY.
- 27. ALL DUCTWORK SHALL CLEAR DOORS AND WINDOWS.

- M.C. TO FOLLOW MANUFACTURER'S INSTRUCTIONS WHEN INSTALLING MECHANICAL EQUIPMENT. ENSURE REQUIRED MAINTENANCE ACCESS AND CLEARANCES ARE MAINTAINED. IF CONFLICT EXISTS BETWEEN THESE PLANS AND MFG INSTRUCTIONS CONTACT ENGINEER.
- ALL PENETRATIONS THROUGH EXTERIOR WALLS AND ROOF SHALL BE FLASHED AND COUNTER-FLASHED IN A WATERPROOF MANNER.
- INSTALL ALL CONTROL DEVICES, INCLUDING THERMOSTATS AND SWITCHES, 4'-0" ABOVE FINISHED
- AN INDEPENDENTLY CERTIFIED TEST AND BALANCE CONTRACTOR SHALL BALANCE SYSTEM TO AIR QUANTITIES INDICATED ON PLANS AND IN ACCORDANCE WITH THE APPLICABLE ENERGY CONSERVATION CODE. THE M.C. SHALL PROVIDE THE OWNER'S REPRESENTATIVE & ENGINEER WITH COMPLETE BALANCE REPORT. THE M.C. IS RESPONSIBLE FOR PROVIDING ANY DAMPERS, VALVES, PORTS, ETC. NECESSARY FOR A COMPLETE SYSTEM BALANCE.
- ANY NOTCHING, DRILLING, BORING OR OTHER ALTERATION TO BUILDING STRUCTURE SHALL BE PERFORMED IN A CODE APPROVED METHOD AND NOT THREATEN THE INTEGRITY OF THE BUILDING
- SUPPORT ALL DUCTWORK AND PIPING IN ACCORDANCE WITH THE APPLICABLE MECHANICAL CODE. ANY SUSPENDED MATERIALS SHALL BE DIRECTLY SUPPORTED BY THE BUILDING STRUCTURE. DO NOT ATTACH ANYTHING TO THE ROOF DECK.
- PENETRATIONS OF ALL EXTERIOR WALLS, FLOORS AND CEILINGS SHALL BE SEALED IN AN AIR TIGHT
- MANNER AND IN ACCORDANCE WITH THE APPLICABLE ENERGY CONSERVATION CODE. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL MECHANICAL EQUIPMENT FROM FOREIGN MATERIAL DURING CONSTRUCTION (PAINT, SPACKLE, ETC.), UPON

EQUIPMENT WITHIN THE SCOPE OF WORK AND LEAVE ALL ITEMS BRIGHT AND CLEAN.

SPECIAL NOTICE TO CONTRACTORS

ALL CONTRACTORS (GENERAL CONTRACTOR AND SUB-CONTRACTORS) BIDDING THIS PROJECT ARE REQUIRED TO VISIT THE JOB SITE AND VERIFY THE EXISTING CONDITIONS PRIOR TO SUBMITTING THEIR BID. CONTRACTORS ARE TO CAREFULLY REVIEW ALL CONSTRUCTION DOCUMENTS AND NOTE ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND THE CONDITIONS OBSERVED AT THE JOB SITE PRIOR TO SUBMISSION OF ANY BID. THE BUILDING OWNER REPRESENTATIVE MAY BE CONTACTED FOR ACCESS TO THE JOB SITE.

COMPLETION OF WORK, THE MECHANICAL CONTRACTOR SHALL CLEAN, WASH, ETC ALL ITEMS AND

- PRIOR TO CONSTRUCTION CONTRACTORS ARE RESPONSIBLE FOR VERIFYING THE LOCATION AND CONDITION OF THE FOLLOWING:
 - A. ALL POINTS OF CONNECTION TO BUILDING UTILITIES AND/OR SYSTEMS INCLUDING, BUT NOT LIMITED TO, GAS, WATER, SEWER, VENT, ELECTRICAL, MECHANICAL SYSTEMS, DUCTWORK, EXHAUST/OUTSIDE AIR, SECURITY, FIRE/LIFE SAFETY, DATA, AND PHONE. B. ALL REQUIRED CONNECTIONS TO THE BUILDING STRUCTURE
- C. ALL REQUIRED BUILDING PENETRATIONS. IT IS RECOMMENDED THAT THE CONTRACTOR X-RAY ALL PENETRATIONS THRU CONCRETE AND MASONRY.
- ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND THE CONDITIONS OBSERVED SHALL BE BROUGHT TO THE ATTENTION, IN WRITING, TO THE ARCHITECT AND/OR ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
- SEE ARCHITECTURAL PLANS FOR CONTACT INFORMATION.

PROJECT SPECIFIC NOTES:

- 1. ALL EXPOSED DUCT SHALL BE INTERNALLY INSULATED DOUBLE WALL SPIRAL DUCT WORK WITH PAINT GRIP FINISH. INTERNAL INSULATION SHALL BE PROVIDED WITH PERFORATED INNER SHEET METAL WALL.
- 2. ALL CONCEALED DUCT WORK SHALL BE EXTERNALLY INSULATED.
- 3. THERE SHALL BE NO COOKING OF FOODS ON THE PREMISES.
- 4. INTAKE TERMINATIONS SHALL BE LOCATED A MINIMUM OF 10 FEET FROM ALL EXHAUST AND VENT TERMINATIONS IN COMPLIANCE WITH THE NORTH CAROLINA MECHANICAL CODE.
- 5. EXHAUST TERMINATIONS SHALL BE A MINIMUM OF 10 FEET FROM ALL INTAKE OPENINGS AND OPERABLE OPENINGS INTO THE BUILDING IN COMPLIANCE WITH THE NORTH CAROLINA MECHANICAL CODE.
- 6. DRAWING IS DIAGRAMMATIC IN NATURE AND NOT INTENDED TO INDICATED FINAL INSTALLED LOCATIONS OF EQUIPMENT OR DUCTWORK. DRAWINGS DEMONSTRATE DESIGN INTENT ONLY. CONTRACTOR(S) ARE RESPONSIBLE FOR FINAL COORDINATION AND THE PRODUCTION OF ACCURATE, DIMENSIONED SHOP DRAWINGS AS REQUIRED TO PROVIDE A COMPLETE INSTALLATION. THERE SHALL BE NO ALLOWANCES GIVEN FOR THE LACK OF CONTRACTOR COORDINATION. MAINTAIN ALL CODE AND MANUFACTURER REQUIRED CLEARANCES TO ALL EQUIPMENT AND DEVICES.
- ALTERNATE DUCT SIZES/SHAPE ARE ALLOWED AND ARE NOT REQUIRED TO BE RESUBMITTED TO THE PERMIT DEPARTMENT. MAINTAIN DUCT PRESSURE DROP AND VELOCITY. SEE SPECIFICATIONS FOR ADDITIONAL DETAILS. ALL CHANGES SHALL BE CAPTURED IN THE CONTRACTORS SHOP DRAWINGS

AFF	ABOVE FINISHED FLOOR	KW	KILOWATT
AHJ	AUTHORITY HAVING JURISDICTION	LAT	LEAVING AIR TEMPERATURE
Α	AMPERE (AMP, AMPS)	LB	POUNDS
	AMERICAN NATIONAL	LRA	LOCKED ROTOR AMPS
ANSI	STANDARDS INSTITUTE	MAX.	MAXIMUM
APPROX.	APPROXIMATELY	MBH	ONE THOUSAND BTU/HR
40UD4E	AMERICAN SOCIETY OF	M.C.	MECHANICAL CONTRACTOR
ASHRAE	HEATING, REFRIGERATING, AND AIR CONDITIONING ENGINEERS	MCA	MINIMUM CIRCUIT AMPACITY
BTU	BRITISH THERMAL UNIT	MIN.	MINIMUM
BTU/HR	BTU PER HOUR	MOOD	MAXIMUM OVERCURRENT
CFM	CUBIC FEET PER MINUTE	MOCP	PROTECTION
DB	DRY BULB TEMPERATURE (°F)	N/A	NOT APPLICABLE
DEG	DEGREE	NC	NOISE CRITERIA
DEMO	DEMOLISH <u>OR</u> DEMOLITION	NTS	NOT TO SCALE
DIA	DIAMETER	OA	OUTDOOR AIR
EAT	ENTERING AIR TEMPERATURE	P.C.	PLUMBING CONTRACTOR
E.C.	ELECTRICAL CONTRACTOR	RA	RETURN AIR
ESP	EXTERNAL STATIC PRESSURE	RH	RELATIVE HUMIDITY
EXIST.	EXISTING	RLA	RUNNING LOAD AMPS
°F	DEGREES FAHRENHEIT	RPM	REVOLUTIONS PER MINUTE
FLA	FULL LOAD AMPS	RTU	ROOFTOP UNIT
F.P.C.	FIRE PROTECTION CONTRACTOR	SA	SUPPLY AIR
FPM	FEET PER MINUTE	SEER	SEASONAL ENERGY
FT	FOOT <u>OR</u> FEET	SEER	EFFICIENCY RATIO
G.C.	GENERAL CONTRACTOR	SF	SQUARE FOOT/FEET
HP	HORSEPOWER <u>OR</u> HEAT PUMP	SQ. FT.	SQUARE FOOT/FEET
HR	HOUR	TYP.	TYPICAL
цере	HEAT PUMP SEASONAL	V	VOLTAGE
HSPF	PERFORMANCE FACTOR	VAV	VARIABLE AIR VOLUME
IN.	INCHES	W	WATT

MECHANICAL BUILDING CODE SUMMARY

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

THERMAL ZONE 4A WINTER DRY BULB: 21.6°F SUMMER DRY BULB: 94.2°F SUMMER WET BULB: 74.7°F NTERIOR DESIGN CONDITIONS

WINTER DRY BULB: 68°F SUMMER DRY BULB: 75°F RELATIVE HUMIDITY: 50%

HEATING AND COOLING LOADS

BUILDING HEATING LOAD: SEE SCHEDULES BUILDING COOLING LOAD: SEE SCHEDULES MECHANICAL SPACING CONDITIONING SYSTEM

DESCRIPTION OF UNIT: SEE SCHEDULES HEATING EFFICIENCY: SEE SCHEDULES COOLING EFFICIENCY: SEE SCHEDULES SIZE CATEGORY OF UNIT: SEE SCHEDULES

EQUIPMENT EFFICIENCIES COOLING EFFICIENCY: SEE SCHEDULES

HEATING EFFICIENCY: SEE SCHEDULES

E (°F)		EXTENSION FOR INSULATED DUC
	X ###	AIR DISTRIBUTIO 'X' REPRESEN '###' REPRES
	 √	RETURN/EXHAU:
<u>on</u>	T	7-DAY PROGRAM OCCUPANCY CO CONFORM TO AI REQUIREMENTS

12x8	DOUBLE LINE RECTANGULAR DUCT (DIMENSIONS IN INCHES)
12"Ø	DOUBLE LINE ROUND DUCT
	SUPPLY AIR DUCT ELBOW DOWN WITH TURNING VANES, INSTALLED PER SMACNA STANDARDS
	RETURN AIR DUCT ELBOW DOWN WITH TURNING VANES, INSTALLED PER SMACNA STANDARDS
	EXHAUST AIR DUCT ELBOW DOWN WITH TURNING VANES, INSTALLED PER SMACNA STANDARDS
	SUPPLY AIR DUCT ELBOW UP WITH TURNING VANES, INSTALLED PER SMACNA STANDARDS
	RETURN AIR DUCT ELBOW UP WITH TURNING VANES, INSTALLED PER SMACNA STANDARDS
	EXHAUST AIR DUCT ELBOW UP WITH TURNING VANES, INSTALLED PER SMACNA STANDARDS
	DUCT ELBOW WITH TURNING VANES, INSTALLED PER SMACNA STANDARDS
	CEILING SUPPLY DIFFUSER, DESIGNATION AS NOTED
	CEILING RETURN GRILLE, DESIGNATION AT NOTED
	MANUAL VOLUME DAMPER WITH QUADRANT EXTENSION FOR OPERATION WITH EXTERNALLY INSULATED DUCTWORK
X ###	AIR DISTRIBUTION TAG 'X' REPRESENTS TAG '###' REPRESENTS CFM
 √	RETURN/EXHAUST AIRFLOW DIRECTION
T	7-DAY PROGRAMMABLE THERMOSTAT WITH OCCUPANCY CONTROL. MOUNT AT 48" AFF TO CONFORM TO ADA AND NC ACCESSIBILITY REQUIREMENTS.
A	AUDIO/VISUAL CONDENSATE ALARM WITH REMOTE TEST SWITCH
$\overline{\mathbb{Z}}$	REMOTE WIRELESS ZONE TEMPERATURE SENSOR
•	POINT OF CONNECTION CONNECT TO EXISTING OR DISCONNECT FROM EXISTING
⟨x⟩	KEY NOTE TAG
]

MECHANICAL DRAWING SYMBOLS

TABLE 305.4 PIPING SUPPORT SPACINGa

(feet)	(feet)
4	10c
	15
	10
6	10
10	10
5	15
12	10
r 6	10
10	10
3	10c
4	10c
Continuous	4
$2\frac{2}{3}$ (32 inches)	4
$2\frac{2}{3}$ (32 inches)	10c
4	10c
^{22/3} (32 inches)	10c
^{22/3} (32 inches)	10c
4	10c
4	10c
8	10
12	15
	10 5 12 6 10 3 4 Continuous $2\frac{2}{3}$ (32 inches) $2\frac{2}{3}$ (32 inches) 4 $22/3$ (32 inches) 4 $22/3$ (32 inches) 4 4 4 4 4

 a. See Section 301.18. b. The maximum horizontal spacing of cast-iron pipe hangers shall be increased to 10 feet where 10-foot lengths ofpipe are installed. c. Mid-story guide.

DIFFUSER SCHEDULE										
CFM	NECK SIZE									
0 - 100 101 - 200 201 - 350 351 - 650 651 - 1000	6" 8" 10" 12" 14"									
FOR ANY RUN-OUT OVER 20' IN LENGTH, USE NEXT SIZE UP ON THIS SCHEDULE. DETERMINE LENGTH IN FIELD.										

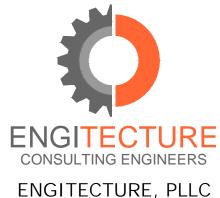


4539 HEDGEMORE DRIVE, SUITE 101 CHARLOTTE NC 28209 704.890.2053 WWW.OSSASTUDIO.COM



PROJECT TEAM

General Contractor ECCLESIA CONSTRUCTION www.ecclesiaconstruction.com 803.327.5670



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01/30/2024 ISSUE FOR CONSTRUCTION

Project Name



3D COMMUNITY CHURCH

SANFORD NC 27311

Project Number 23024.00

Description NOTES & ABBREVIATIONS - HVAC

M00.01

- 2. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT PARTITION LAYOUTS, REFLECTED CEILING PLANS, DIMENSIONS, ETC.
- 3. ALL MATERIALS AND EQUIPMENT SHALL BE PROPERLY AND EFFECTIVELY PROTECTED BY THE CONTRACTOR DURING THE EXECUTION OF THE WORK.
- 4. EQUIPMENT IDENTIFIED ON DRAWINGS IN SOME INSTANCES ARE LOCATED FOR DRAWING CLARITY. COORDINATE EXACT LOCATION OF EQUIPMENT WITH STRUCTURE, OTHER EQUIPMENT, AND OTHER TRADES TO ALLOW CLEARANCE FOR EQUIPMENT ACCESS PER MANUFACTURERS REQUIREMENTS.
- 5. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NORTH CAROLINA MECHANICAL, FUEL GAS AND PLUMBING CODE.
- 6. CONTRACTOR SHALL COORDINATE LOCATIONS AND SIZES OF ALL PENETRATIONS THROUGH WALLS AND CEILING WITH OTHER TRADES INVOLVED.
- 7. ALL SCHEDULED EQUIPMENT SIZES ARE NOMINAL; OPERATING SPEEDS AND POWER REQUIREMENTS ARE MAXIMUM VALUES. AIR VELOCITIES AND PRESSURE DROPS THROUGH SYSTEM COMPONENTS SHALL BE WITHIN ±5% OF THOSE INDICATED.
- 8. TEST AND BALANCE ALL DIFFUSERS, BOXES, FANS, PUMPS, ETC. TO THE AIRFLOWS AND CONDITIONS INDICATED. ALL EXISTING DIFFUSERS, BOXES, FANS, ETC. WHICH ARE NOT NOTED OTHERWISE SHALL BE BALANCED TO THEIR PRIOR DESIGN AIRFLOWS; REFERENCE THE EXISTING RECORD DRAWING AVAILABLE FROM THE OWNER. TESTING AND BALANCING OF HVAC SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS OF AABC AND SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF AN AABC CERTIFIED TEST AND BALANCE ENGINEER. SUBMIT 4 COPIES OF THE REPORT TO THE OWNER. NEBB AGENCIES ARE NOT ACCEPTABLE AND ARE CAUSE FOR REJECTION.
- 9. ALL FLOOR PENETRATIONS WITHIN THE BUILDING SHALL BE CORE DRILLED. PRIOR TO CORE DRILLING FLOOR, CONTRACTOR SHALL VERIFY EXACT LOCATION OF STRUCTURAL MEMBERS, DUCTWORK, PIPING, EQUIPMENT, ETC., IN CEILING SPACE BELOW. [WHERE CONDUITS MAY EXIST WITHIN THE SLAB THE CONTRACTOR SHALL USE X-RAY TECHNIQUES].
- 10. COORDINATE EXACT LOCATION OF FIRE AND SMOKE RATED WALL TYPES WITH ARCHITECTURAL PLANS.
- 11. PROVIDE ALL SLEEVES, SAW CUTTING, CORE-DRILLING AND FIRE STOPPING ASSOCIATED WITH DIVISION 15 (EXCLUDING FIRE PROTECTION) WORK. SEAL (FIRE, SMOKE, AS REQUIRED) ALL PENETRATIONS (BOTH NEW AND DEMOLITION WORK) CAUSED BY PLUMBING/MECHANICAL WORK. SEAL ALL FLOOR AND DECK PENETRATIONS CAUSED BY MECHANICAL/PLUMBING DEMOLITION WITH CONCRETE. ALL PENETRATIONS MUST BE FIRE STOPPED IN THE SAME DAY THEY ARE CREATED.
- 12. IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO ENSURE THAT AT THE BEGINNING OF EACH NIGHT OUTAGE. THAT AIR. PLUMBING. MEDICAL GASES AND ALL OTHER SERVICES DISRUPTED/AFFECTED BY THIS SCOPE OF WORK ARE SUPPLIED TO ALL AREAS OF THE FACILITY REMAINING IN OPERATION. THIS INCLUDES FURNISHING AND INSTALLING ANY TEMPORARY MATERIALS NECESSARY TO ACCOMPLISH THIS.
- 13. RECEIVE, UNLOAD, HOIST TO FINAL LOCATION, SET INTO PLACE, CONNECT, TEST AND BALANCE ALL NEW PREPURCHASE EQUIPMENT (INCLUDING WARRANTY FOR INSTALLATION ONLY) UPON DELIVERY TO SITE. COORDINATE DELIVERY WITH THE RESPECTIVE EQUIPMENT
- FURNISH AND INSTALL ALL ROOF MOUNTED SUPPORT STRUCTURES. INCLUDE ALL SUPPORTS, CURBS, ANGLES, CLIPS, ALL THREAD, BOLTS, AND OTHER CONNECTIONS TO SUPPORT AND MOUNT NEW WORK. COORDINATE WITH ROOFING
- 15. ALL WELDS SHALL BE PERFORMED BY A CERTIFIED WELDER. A CERTIFICATE FOR THE WELDER PERFORMING WORK ON THIS PROJECT SHALL BE SUBMITTED DURING THE SUBMITTAL PROCESS FOR APPROVAL BY THE OWNER AND ENGINEER. PHOTO IDENTIFICATION OF THE CERTIFIED WELDER SHALL BE PRESENTED TO THE PROJECT SUPERINTENDENT PRIOR TO WORKING ON SITE.
- 16. ALL INDIVIDUAL DUCTWORK/PIPING SECTIONS SHALL BE WRAPPED PRIOR TO DELIVERY TO JOBSITE TO PREVENT CONTAMINATION. WRAPPING SHALL BE MAINTAINED UNTIL DUCTWORK IS HUNG IN PLACE.
- 17. AT THE END OF EACH SHIFT, THE CONTRACTOR SHALL SEAL THE OPEN ENDS OF DUCTWORK/PIPING TO PREVENT DUST INFILTRATION.
- 18. FOLLOW ALL REQUIREMENTS OF THE MANUFACTURES' INSTALLATION, OPERATION, AND STARTUP INSTRUCTIONS AND THE SPECIFICATIONS LISTED BELOW. THE MATERIALS AND WORKMANSHIP SHALL MEET AND/OR EXCEED THESE SPECIFICATIONS. IN THE EVENT THERE IS A CONFLICT BETWEEN THESES SPECIFICATION, THE MANUFACTURES' REQUIREMENTS, AND/OR LOCAL AUTHORITY REQUIREMENTS, THE MOST STRINGENT SHALL APPLY.
- 19. ANY PENETRATION OF A FIRE AND/OR SMOKE RATED ASSEMBLY SHALL BE PROTECTED IN A U.L. APPROVED MANNER.
- 20. CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND/OR MODIFYING ALL CONTROLS AND SAFETY DEVICES REQUIRED BY THE LOCAL AUTHORITY. CONTRACTOR IS TO FIELD VERIFY AND INCLUDED ANY CONTROLS AND SAFETY DEVICE WORK IN PROPOSAL.
- 21. ALL WORK SHALL BE PERFORMED IN A NEAT AND WORKMAN LIKE MANNER.
- 22. PRESSURE TEST ALL PIPING, DUCT WORK AND EQUIPMENT PRIOR TO FINAL CONNECTION TO EXISTING SYSTEM. PROVIDE OWNER WITNESS DOCUMENTATION.
- 23. CONTRACTOR SHALL VERIFY THE CLEANLINESS OF HYDRONIC SYSTEMS PRIOR TO MAKING CONNECTION TO NEW EQUIPMENT. CONTRACTOR SHALL NOTIFY PROPERTY AND PROJECT MANAGER IF HIGH CONCENTRATIONS OF SOLIDS ARE DETECTED.
- 24. DEBRIS FROM DEMOLITIONS AND CONSTRUCTION SHALL BE REMOVED FROM THE PROPERTY.
- 25. DEBRIS SHALL BE DISPOSED OF PER LOCAL, STATE, AND FEDERAL REGULATIONS.
- 26. WORK SITE SHALL BE KEPT CLEAN AT ALL TIMES. WORK SITE SHALL BE BROOM CLEANED AT THE COMPLETION OF EACH WORK DAY. ALL DEBRIS AND MATERIAL SHALL BE REMOVED FROM JOB SITE EACH DAY UNLESS THE PROPERTY DESIGNATES A DEBRIS STORAGE AREA.
- 27. CONTRACTOR SHALL NOT UTILIZED THE PROPERTY'S DUMPSTER UNLESS APPROVAL IS GIVEN BY THE PROPERTY.
- 28. FRESH AIR INTAKES AND EXHAUST/FLUE/VENT TERMINATIONS SHALL BE SEPARATED A MINIMUM OF 10 FT AND INSTALLED IN ACCORDANCE WITH THE LOCAL MECHANICAL CODE.

ALL RETURN AIR AND TRANSFER AIR DUCT WORK SHALL BE INTERNAL LINED FOR SOUND

- ATTENUATION. NO DUCT LINER SHALL BE INSTALLED IN DUCT WORK SERVING LABS, CLEAN ROOMS, PHARMACIES, OR OPERATING ROOMS. ALL NEW DUCTWORK: THE FABRICATION AND INSTALLATION OF ALL NEW DUCTWORK,
- TOGETHER WITH RELATED EQUIPMENT, SHALL COMPLY WITH "SMACNA" DUCT CONSTRUCTION STANDARDS, NFPA 90A & 90B, LATEST ADDITION OF ASHRAE GUIDE & DATA BOOK, AS DETAILED ON THE DRAWINGS & PER LOCAL CODES.
- 3. THE DUCTWORK CONTRACTOR SHALL INSTALL AND SECURE ALL NEW DUCTWORK TO ROOF STRUCTURE IN ATTIC SPACE ABOVE ARCHITECTURAL CEILING.
- NEW DUCTWORK.

4. THE DUCTWORK CONTRACTOR SHALL VERIFY & FIELD MEASURE PRIOR TO FABRICATION OF

- 5. ALL NEW DUCTWORK SHALL BE GALVANIZED SHEETMETAL, UNLESS NOTED OTHERWISE. MIN. R-8 INSULATION FOR SUPPLY DUCT AND R-4.2 FOR RETURN AND EXHAUST DUCT.
- FLEXIBLE DUCT SHALL BE UL LISTED AS CLASS 1 CONNECTOR, STANDARD 181 AND SHALL COMPLY WITH NFPA 90A. THE FLEXIBLE DUCT SHALL HAVE AN EXTERIOR JACKET OF FIBERGLASS INSULATION ENCLOSED IN A VINYL VAPOR BARRIER AND WITH AN INNER LINER TOTALLY ENVELOPING THE HELICAL COIL. MINIMUM R-8 INSULATION VALUE. ACCEPTABLE
- 7. PROVIDE FLEXIBLE DUCT OF THE SAME SIZE INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TRANSITIONS AS REQUIRED FOR A COMPLETE
- 8. PENETRATION OF NEW DUCTWORK BY PIPES, CONDUITS, ELECTRICAL FIXTURES, OR STRUCTURAL MEMBERS IS NOT ACCEPTABLE.

MANUFACTURERS, ATCO - "UPC #078" OR APPROVED EQUAL.

- 9. COORDINATE EXACT LOCATION OF WALL MOUNTED THERMOSTAT SHOWN ON DRAWINGS WITH EQUIPMENT LAYOUT AND ARCHITECT/OWNER.
- 10. ALL DUCT SIZES ARE CLEAR INSIDE DIMENSIONS.
- 11. THE DUCTWORK CONTRACTOR SHALL COORDINATE HIS WORK WITH BOTH THE ELECTRICAL AND CEILING CONTRACTOR THROUGHOUT THE ENTIRE PROJECT.
- 12. ALL DIFFUSERS, REGISTERS, GRILLES, INTAKES SHALL BE BALANCED TO AIRFLOW SHOWN ON MECHANICAL PLANS.

- 13. ALL CONTROL WIRING AND TUBING INSTALLED ABOVE THE CEILING SHALL BE LOCATED AS HIGH ABOVE THE CEILING AS POSSIBLE AND SHALL FOLLOW THE DESIGNATED GENERAL ROUTING OF THE DUCTWORK. DO NOT HANG WIRING OR TUBING FROM DUCTWORK; RATHER. SUSPEND FROM THE STRUCTURE.
- 14. THERMOSTATS SHALL BE LOCATED IN EACH ZONE AS SHOWN. THE EXACT LOCATION ON THE WALL INDICATED SHALL BE AS DIRECTED BY THE ARCHITECT. NEW THERMOSTATS SHALL BE SELECTED TO MATCH EXISTING BASE BUILDING THERMOSTATS AND SHALL BE COMPATIBLE WITH EQUIPMENT SERVED.
- 15. ALL DUCTWORK SHALL BE GALVANIZED SHEET METAL CONSTRUCTED IN ACCORDANCE WITH THE LATEST SMACNA STANDARDS.
- 15.1. PRESSURE CLASS SHALL BE 150% OF FAN EXTERNAL STATIC PRESSURE AT DEAD HEAD. 16. SIZE DUCTWORK PER CURRENT ASHRAE FUNDAMENTALS.
- 16.1. RECOMMENDATION 16.1.1. LOW PRESSURE SUPPLY DUCT WORK
 - 16.1.1.1. NTE 0.1 INCH/100FT & 1400 FPM.
 - 16.1.1. MEDIUM PRESSURE SUPPLY DUCT WORK 16.1.1.1. NTE - 0.25 INCH/100FT & 2500 FPM.
 - 16.1.1. TOILET EXHAUST AND RETURN DUCT WORK

16.1.1.1. NTE - 0.1 INCH/100FT & 1200 FPM.

- 17. PROVIDE TURNING VANES AT ALL RECTANGULAR ELBOWS. TURNING VANES ARE NOT ALLOWED IN MEDIUM PRESSURE DUCT WORK UNLESS SPECIFICALLY APPROVED.
- 18. ALL JOINTS SHALL BE SEALED WITH DUCTMATE 35 OR SIMILAR SYSTEM IN A CLEAN AND
- PROFESSIONAL MANNER.
- 19. ALL DUCTWORK CONVEYING SUPPLY AIR, RETURN AIR LOCATED ON UPPER FLOOR OR OUTDOORS, AND OUTSIDE AIR LOCATED INDOORS SHALL BE INSULATED.
- 20. INSULATION AND ADHESIVE SHALL MEET 25/50 FLAME SPREAD AND SMOKE DEVELOPMENT. COMPLIANCE WITH NFPA 90A & 90B.
- 21. INTERNAL LINING (INDOORS): CERTAINTEED TOUGHGARD "R" DUCT LINER. TYPE 150, 2.0 INCH THICKNESS, R-8 MINIMUM OR AS REQUIRED BY LOCAL CODE.
- 22. INTERNAL LINING (OUTDOOR): CERTAINTEED TOUGHGARD RIGID LINER BOARD. 2.0 INCH THICKNESS, R-8.7 MINIMUM OR AS REQUIRED BY LOCAL CODE.
- 23. EXTERNAL WRAP (INDOORS): CERTAINTEED SOFTTOUCH DUCTWRAP. TYPE 75, 2.25 INCH
- 24. ALL DUCTWORK SHALL BE PROPERLY SUPPORTED. WOOD PRODUCTS ARE NOT PERMITTED
- FOR SUPPORTS. 25. DUCTWORK INSTALLED ON ROOF SHALL BE SUPPORTED BY ROOF RAILS ATTACHED TO THE BUILDING ROOFING SYSTEM IN LOCATION WHERE WIND COULD DAMAGE THE DUCTWORK. DO
- 26. IT IS NOT ACCEPTABLE TO SUPPORT FROM EXISTING PIPE OR DUCTWORK.

NOT SCREW INTO DUCTWORK. SUPPORT BETWEEN 2 PIECES OF UNI-STRUT.

THICKNESS, R-8 MINIMUM OR AS REQUIRED BY CODE.

1. PIPE SUPPORT ATTACHMENT TO BRIDGING OR METAL ROOF DECK IS STRICTLY PROHIBITED.

- 2. GAS PIPING IN THE BUILDING SHALL BE THREADED SCHEDULE 40 BLACK STEEL UNDER 4". SYSTEMS ABOVE 4" SHALL BE WELDED IN COMPLIANCE WITH THE SC FUEL GAS CODE. PROVIDE HANGERS IN COMPLIANCE WITH THE SC MECHANICAL, FUEL GAS AND PLUMBING CODES.
- 3. GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL COMPLYING WITH ANSI B36.10.
- ABOVEGROUND DOMESTIC WATER SYSTEM PIPING 3" IN SIZE AND SMALLER SHALL BE TYPE L
- HARD DRAWN COPPER TUBING WITH WROUGHT COPPER FITTINGS AND SOLDERED JOINTS.
- PROVIDE PIPE HANGERS FOR IN COMPLIANCE WITH THE NORTH CAROLINA PLUMBING CODE. 6. ALL HOT AND COLD WATER PIPING SHALL BE INSULATED WITH 1" THICK PREFORMED
- FIBERGLASS PIPE INSULATION WITH ALL-SERVICE JACKET. ALL LONGITUDINAL JOINTS, TEARS, ETC., SEALED WITH A MATCHING WHITE VAPOR BARRIER TAPE. ELBOWS SHALL BE MITERED OR MAY BE ZESTON COVERS FILLED WITH EQUIVALENT FIBERGLASS INSULATION. 7. ANY ITEM OR EQUIPMENT THAT IS REMOVED OR RELOCATED TO FACILITATE THE DEMOLITION
- AND/OR NEW WORK SHALL BE CLEANED AND REINSTALLED BACK TO ITS ORIGINAL OR NEW LOCATION. PATCH ALL OPENINGS IN FLOOR, CEILINGS, AND WALLS MADE IN ADJACENT AREAS THAT ARE NOT BEING DEMOLISHED.
- REMOVE OR REUSE ALL HANGERS, SUPPORTS, AND ACCESSORIES ASSOCIATED WITH ITEMS OR EQUIPMENT BEING DEMOLISHED.
- 9. EXISTING SERVICES ARE BASED ON ORIGINAL DRAWINGS AND LIMITED FIELD WORK. CONTRACTOR SHALL VERIFY EXISTING SERVICES PRIOR TO TIE-IN.
- 10. PROVIDE PIPE UNIONS AT ALL AUTOMATIC CONTROL VALVES AND VARIABLE AIR VOLUME TERMINAL UNIT REHEAT COIL CONNECTIONS. REFER TO SPECIFICATION SECTION 15050 FOR ADDITIONAL REQUIREMENTS.
- 11. ALL SANITARY PIPING SHALL BE INSTALLED AT A MINIMUM SLOPE OF 1/8" PER FOOT.
- 12. STORM WATER PIPING SHALL BE INSTALLED AT A MINIMUM SLOPE OF 1/8" PER FOOT(OR AS INDICATED ON THE FLOOR PLANS).
- 13. THE MEDICAL GAS AND VACUUM SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 99 AND UPON COMPLETION SHALL BE TESTED AND CERTIFIED BY AN INDEPENDENT TESTING
- 14. ALL HVAC WATER SUPPLY AND RETURN PIPING SHALL BE SCHEDULE 40 STEEL.
- 15. ALL HVAC WATER SUPPLY AND RETURN PIPING SHALL BE INSULATED WITH 1-1/2" THICK FIBERGLASS PERFORMED PIPE INSULATION WITH A WHITE ALL-SERVICE JACKET/VAPOR
- 16. BALANCING VALVES SHALL HAVE A CAST IRON BODY, BRONZE TRIM AND BRONZE DISC. VALVE SHALL BE SUITABLE FOR 125 PSIG WORKING PRESSURE AND PROVIDE POSITIVE SHUT-OFF. EACH BALANCING VALVE SHALL BE EQUIPPED WITH TWO GAUGE TAPS WITH CHECK VALVES AND DRIP CAPS. PROVIDE PREFORMED INSULATION TO ENCASE VALVE ASSEMBLY. BALANCING VALVES SHALL BE AUTO FLOW TYPE URT OR GRISWOLD 3600. AFTER THE TEST AND BALANCE IS COMPLETE, PROVIDE TO THE OWNER A DIFFERENTIAL PRESSURE GAUGE TO
- MATCH THE BALANCING VALVES. 17. ALL PIPING AND SPECIALTIES MATERIAL SHALL BE SUITABLE FOR SYSTEM TYPE, APPLICATION, AND CONFORM TO LOCAL CODE AND REGULATIONS.
- 18. INCLUDE ALL LABOR AND MATERIALS TO PROVIDE A COMPLETE FUNCTIONAL SYSTEM. INCLUDING: ISOLATION AND BALANCING VALVES, FITTINGS, UNIONS, ADAPTERS, REDUCERS, HANGERS, THREADED RODS, ANCHORS, TEMPERATURE AND PRESSURE GAUGES. ETC. SOME SPECIALTIES MAY BE PROVIDED BY OWNER OR CONTROLS CONTRACTOR.
- 19. PIPING SHALL BE PITCHED DOWN IN THE DIRECTION OF FLOW WITH MANUAL AIR VENTS AT ALL HIGH POINTS AND DRAINS AT ALL LOW POINTS. VENTS AND DRAINS SHALL CONTAIN 3/4" BALL VALVE WITH CAP AND HOSE CONNECTION. PROVIDE AUTOMATIC AIR VENTS AT HIGH POINTS IN INACCESSIBLE AREAS AND PIPE TO NEAREST FLOOR DRAIN.
- 20. INSTALL DIELECTRIC UNION AT CONNECTION OF DISSIMILAR METALS.
- 21. INSTALL HEAT TRACE OF PIPING OUTDOORS AND IN AREAS AT RISK OF FREEZE TEMPERATURES.
- 22. DOMESTIC WATER PIPING:
- 22.1. TYPE L HARD DRAWN SEAMLESS COPPER AND CAST COPPER FITTINGS.
- 22.2. JOINTS UP TO 1 INCH TIN/SILVER SOLDER
- 22.3. JOINTS OVER 1 INCH SILVER/PHOSPHORUS SOLDER
- 22.4. UPON APPROVAL PRO-PRESS JOINTS MAY BE USED PIPING 2 INCH DIAMETER OR LESS.
- 22.5. STERILIZE SYSTEM IN ACCORDANCE WITH AMERICAN WATER WORK ASSOCIATION AND LOCAL HEALTH DEPARTMENT REGULATIONS.

23. HYDRONIC WATER PIPING:

- 23.1. SCHEDULE 40 BLACK STEEL
- 23.2. VICTUALIC AND/OR WELDED CONNECTIONS.
- 23.3. NPT CONNECTION FOR 2 INCH DIAMETER OR LESS IS ALLOWED.
- 24. VALVES:
- 24.1. MANUFACTURER: APOLLO
- 24.2. MATERIAL AND VALVE TYPE
- 24.3. DOMESTIC: BRONZE, BRASS, OR STAINLESS STEEL

- 24.4. HYDRONIC/GAS: IN ADDITION TO THE ABOVE, STEEL.
- 24.5. 3/4 INCH TO 4 INCH DIAMETER: FULL PORT BALL VALVE
- 24.6. OVER 4 INCH DIAMETER: BUTTERFLY VALVE

25. STRAINERS:

- 25.1. ALL EQUIPMENT CONTAINING HYDRONIC COILS OR HEAT EXCHANGERS SHALL BE PROVIDE WITH A STRAINER IN THE SUPPLY WATER PIPING.
- 25.2. Y-STRAINER: STAINLESS INTERNAL MESH AND BLOW DOWN VALVE AND CAP. SELECT PROPER MESH SIZE AS RECOMMENDED BY THE EQUIPMENT MANUFACTURE AND APPLICATION.
- 26. CHECK VALVES:
- 26.1. CHECK SHALL BE INSTALLED AT EQUIPMENT PIPED IN PARALLEL AND CERTAIN PIPING CONFIGURATION SUBJECT TO REVERSE FLOW AND SHORT CYCLING.
- 27. SWING CHECK:
- 28. GAUGES AND SENSORS
- 28.1. PRESSURE GAUGE: ASME B40.1, 4-1/2 INCH DIAMETER DRAWN STEEL CASE, PHOSPHOR BRONZE BOURDON TUBE, ROTARY BRASS MOVEMENT, BRASS SOCKET, WITH FRONT CALIBRATION ADJUSTMENT, BLACK SCALE ON WHITE BACKGROUND, ONE PERCENT MID-SCALE ACCURACY, SCALE CALIBRATED IN °F. GAUGE RANGE SUITABLE FOR SYSTEM PRESSURE.
- 28.2. TEMPERATURE GAUGE: ASTM E1, 12 INCH SCALE, STEAM TYPE, ADJUSTABLE ANGLE, RED APPEARING SPIRIT, LEN FRONT TUBE CAST ALUMINUM CASE WITH ENAMEL FINISH AND CLEAR GLASS WINDOW, BRASS STEAM, CAST ALUMINUM ADJUSTABLE JOINT WITH POSITIVE LOCKING DEVICE, 2 PERCENT OF SCALE ACCURACY TO ASTM E77, SCALE CALIBRATED IN °F. GAUGE RANGE SUITABLE FOR SYSTEM TEMPERATURE.
- 10. PIPE INSULATION
- 10.1. PIPING CONVEYING CHILLED WATER, HYDRONIC HEATING WATER, OR DOMESTIC HOT WATER SHALL BE INSULATED WITH MINERAL FIBER OR FIBERGLASS PREFORMED INSULATION. PRE-FORM FITTINGS FOR VALVES AND FITTINGS.
 - 10.1.1. OWENS CORNING OR EQUAL; ASTM C 547; 'K' VALUE OF 0.26 AT 75°F, NON COMBUSTIBLE FLAME SMOKE DEVELOPMENT: ASTM E84 25/50

3/4 INCH

- 10.2. INSULATION THICKNESS: (GREATER IF REQUIRED BY CODE)
 - 10.2.2. PIPING DIAMETER 1 INCH TO 1-1/2 INCH: 1 INCH

10.2.1. PIPING DIAMETER UP TO 3/4 INCH:

- 10.2.3. PIPING DIAMETER 2 INCH AND LARGER: 10.3. INSULATION SHALL RUN CONTINUOUSLY THROUGH WALLS, PARTISANS, ROOF, AND/OR
- FLOOR. 11. PIPE INSULATION JACKETING
- 11.1. ALL INSULATED PIPING SHALL INCLUDED A FACTORY APPLIED ALL SERVICE JACKETING WITH VAPOR BARRIER FOR PIPING LOCATED INDOORS.
 - 11.1.1. ALUMINUM JACKETING WITH VAPOR BARRIER FOR PIPING LOCATED
- 11.2. PVC PRE-MOLDED JACKET COVERS FOR VALVES AND FITTINGS.

OUTDOORS.

11.3. ON COLD SYSTEMS, ALL PENETRATIONS OF THE JACKET VAPOR BARRIER AND EXPOSED ENDS SHALL BE SEALED WITH VAPOR BARRIER MASTIC IN A CLEAN AND PROFESSIONAL MANNER. IF HUMIDITY EXCEEDS 90% ADDITIONAL VAPOR RETARDING COATING OR JACKET MAY BE NECESSARY.

- 12. GAS PIPING AND REGULATOR 12.1. SCHEDULE 40 BLACK STEEL. NO FLEXIBLE PIPING IS ALLOWED.
- 12.2. NPT CONNECTION: PIPING DIAMETERS UP TO 2.5 INCH.
- 12.3. WELDED CONNECTION: PIPING DIAMETERS 3 INCHES AND OVER.
- 12.4. GAS FIRE EQUIPMENT SHALL EACH HAVE A BALL VALVE ISOLATOR. INSTALL SEDIMENT TRAP IN VERTICAL DROP PRIOR TO REGULATOR.
- 12.5. VENT REGULATOR/EQUIPMENT AS REQUIRED BY CODE. INSTALL STAINLESS STEEL INSECT SCREEN OVER VENT TERMINATE OUTDOORS.
- 12.6. PAINT: RUST INHIBITING, COLOR: YELLOW, LABEL: NATURAL GAS 13. PIPING AND CONDUIT SUPPORT

NOT PERMITTED FOR SUPPORTS.

- 13.1. ALL PIPING AND CONDUIT SHALL BE PROPERLY SUPPORTED. WOOD PRODUCTS ARE
- 13.2. PIPING AND CONDUIT LOCATED ON ROOF OR FLOOR SHALL BE SUPPORTED WITH B-LINE DURA-BLOK OR EQUAL. SUPPORT SYSTEM SHALL BE COMPATIBLE WITH ROOFING SYSTEM. PIPING SUPPORTED MORE THAN 24 INCHES AFF SHALL BE SUPPORTED WITH ADJUSTABLE HEIGHT SYSTEMS, ANCHORED TO FLOOR, WITH RAILS AND/OR SADDLES TO SUPPORT AND ANCHOR PIPING. SUPPORT AT 10 FEET ON CENTER AND WITHIN 12 INCHES IN EACH CHANGE OF DIRECTION.
- ALL SUSPENDED PIPING SHALL BE SUPPORTED WITH CLEVIS HANGERS OR TRAPEZE SYSTEM AT 10 FEET ON CENTER AND WITHIN 12 INCHES IN EACH CHANGE OF DIRECTION. PROVIDE ADDITIONAL HANGERS OR SUPPORTS TO PREVENT WEIGHT OF PIPING BEING PLACED ON EQUIPMENT. ALL SUPPORTS SYSTEMS SHALL BE SUITABLE FOR WEIGHT
- 13.4. ALL INSULATED PIPING SHALL HAVE SADDLES AT EACH HANGER (3 PIPE DIAMETER IN
- 13.5. IT IS NOT ACCEPTABLE TO SUPPORT FROM EXISTING PIPE, CONDUIT, OR DUCTWORK.
- COMBUSTION EQUIPMENT VENTING CATEGORY IV APPLIANCE - DIRECT VENT EQUIPMENT

STEEL WITH GLUED/WELDED JOINTS.

- 1.1. COMBUSTION AIR VENTING MATERIAL SHALL BE SCHEDULE PVC, CPVC, OR STAINLESS
- 1.2. FLUE EXHAUST VENTING MATERIAL SHALL BE SCHEDULE CPVC OR STAINLESS STEEL WITH GLUED/WELDED JOINTS.
- 1.3. FITTINGS SHALL BE CLEANED, PRIMED AND GLUED PER INDUSTRY STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
- REFERENCE MANUFACTURER'S LITERATURE FOR ROUTING LIMITATIONS, TERMINATION METHODS, AND VENTING CAPS. INSTALL TEE TYPE VENT CAP ON FLUE EXHAUST

TERMINATION. A. ELECTRICAL AND CONTROLS

- MAKE SAFE ANY USED ELECTRICAL SERVICE. LABEL PANEL AS SPARE.
- 2. ALL ELECTRICAL CABLING SHALL BE INSTALLED FROM JUNCTION BOX OR ELECTRICAL PANEL IN HARD METAL CONDUIT.
- 3. ALL OUTDOOR ELECTRICAL AND CONTROLS SHALL BE ENCLOSED IN WEATHER PROOF ENCLOSURES.
- 4. FINAL EQUIPMENT CONNECTION IS ALLOWED IN FLEXIBLE LIQUID-TIGHT CONDUIT OF NO MORE
- 5. CONDUIT SHALL BE BONDED IF NECESSARY. CONTRACTOR SHALL FIELD VERIFY.
- 6. WIRE SPLICING MUST BE ENCLOSED IN A CODE APPROVE ENCLOSURE. 7. CONTROL WIRING SHALL BE PLENUM RATED. INSTALL IN HARD METAL CONDUIT IF REQUIRED BY LOCAL CODE AND WHEN INSTALL OUTDOORS.
- ELECTRIC MOTORS MOTORS UTILIZING VARIABLE FREQUENCY DRIVES SHALL HAVE BEARING PROTECTION RINGS (GROUNDING RINGS) INSTALLED.

2. ALL MOTORS OPERATING HVAC EQUIPMENT SHALL BE OF THE NON-OVERLOADING TYPE.

<u>IDENTIFICATION</u> . ALL EQUIPMENT AND PIPING SHALL BE LABELED. EQUIPMENT SHALL BE IDENTIFIED WITH A PLASTIC UV RESISTANT NAME PLATE WITH BLACK FOREGROUND AND WHITE LETTERING. PIPING SHALL BE LABELED WITH FLUID TYPE ABBREVIATION AND DIRECTIONAL ARROWS. PIPING SHALL BE PAINTED TO MATCH EXISTING. LABELING SHALL BE PER ANSI/ASME STD

EQUIPMENT INSTALLATION AND CONNECTIONS

MAINTAIN CLEARANCES AROUND EQUIPMENT PER MANUFACTURERS' REQUIREMENTS.

- 2. ALL EQUIPMENT CONNECTIONS SHALL BE PER THE MANUFACTURERS' RECOMMENDATIONS, STATE, AND LOCAL CODE. PROVIDE AND INSTALL ALL SPECIALTIES AS REQUIRED BY THE
- 3. ALL FINAL CONNECTIONS TO EQUIPMENT SHALL BE MADE WITH FLANGES OR UNIONS.
- 4. CONTRACTOR SHALL CONFIGURE ALL CONNECTIONS TO BE EASILY REMOVABLE FOR MAINTENANCE IF NECESSARY.
- 5. DI-ELECTRIC UNION SHALL BE USED AT THE CONNECTION OF DISSIMILAR METALS.
- 6. PROVIDE FLEX CONNECTION TO ALL BASE MOUNTED HYDRONIC PUMPS OVER 10 HP AND AIR

TEST, ADJUSTMENT, AND BALANCE

SIDE EQUIPMENT.

- ALL HVAC SYSTEM PERFORMANCE SHALL BE TESTED, ADJUSTED, AND BALANCED (TAB) BY A CERTIFIED THIRD PARTY AABC OR NEBB CONTRACTOR. TEST EQUIPMENT ACCURACY/CALIBRATION SHALL MEET THE STANDARDS ESTABLISHED BY AABC OR NEBB
- THE TAB CONTRACTOR SHALL MAINTAIN CERTIFICATION THROUGHOUT THE ENTIRE CONTRACT PERIOD.
- 3. THE TAB CONTRACTOR SHALL PLAN AND ISSUES A FINAL REPORT IN ACCORDANCE WITH AABC OR NEBB. THE FINAL REPORT SHALL BE SIGNED AND BEAR THE SEAL OF THE TAB STANDARD. FINAL BALANCE SHALL BE WITHIN 10% OF VALUE SPECIFIED.
- 4. TAB CONTRACTOR SHALL PERFORM ALL NECESSARY TESTING AND ADJUSTMENTS UNTIL FINAL ACCEPTANCE BY PROJECT MANAGER.



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PROJECT TEAM

General Contractor ECCLESIA CONSTRUCTION www.ecclesiaconstruction.com 803.327.5670



NC License No. P-1625

4539 Hedgemore Drive, Suite 102 Charlotte, NC 28209

704-287-2193

PROJ# 23253 △ Date Description

01/30/2024 ISSUE FOR CONSTRUCTION

Project Name



658 GRAHAM ROAD

SANFORD NC 27311

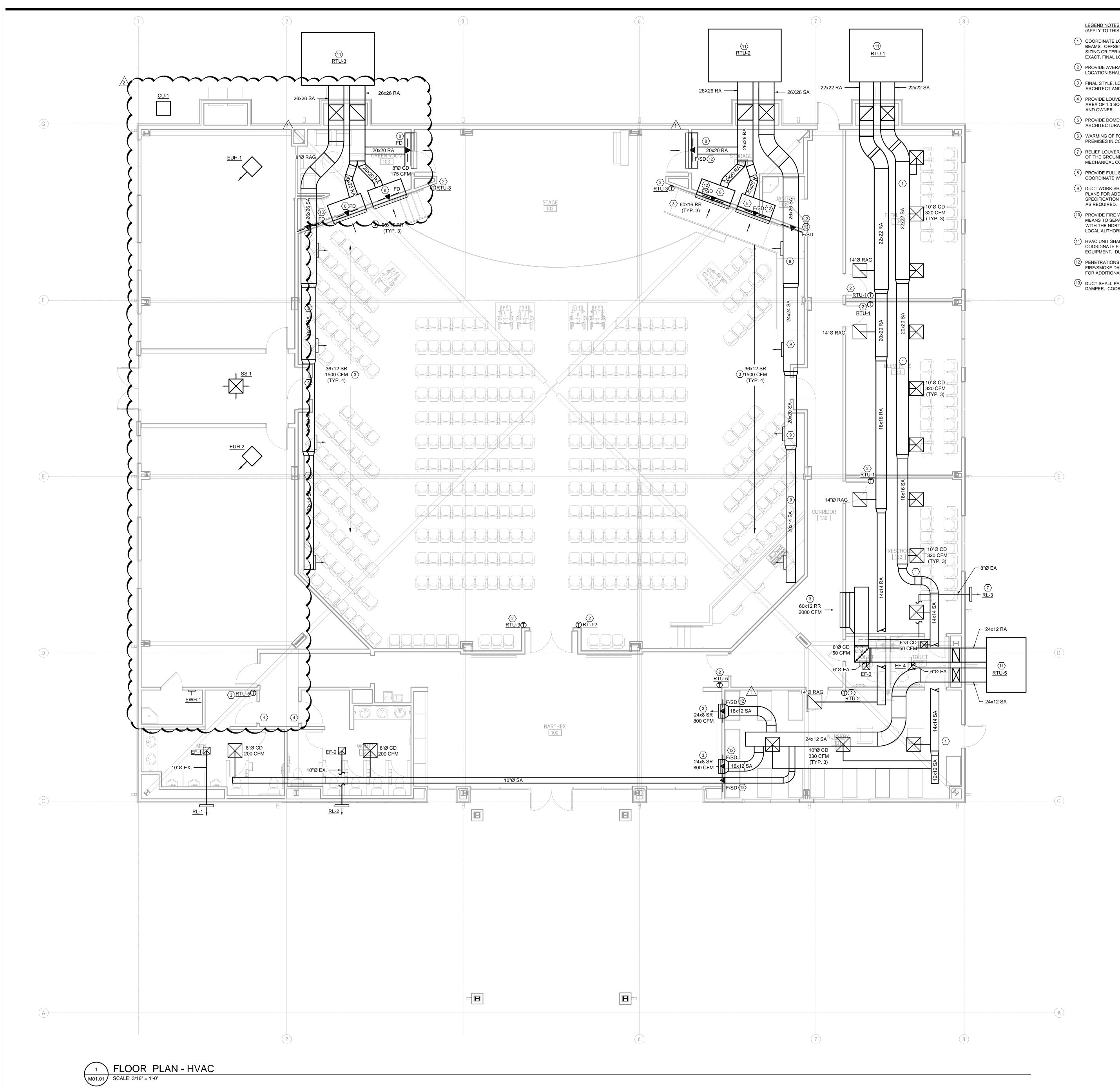
3D COMMUNITY CHURCH

Project Number

23024.00

Description SPECIFICATIONS - HVAC

Scale



- COORDINATE LOW PRESSURE DUCT WORK LOCATION AND SIZE WITH STRUCTURAL BEAMS. OFFSET/FLATTEN AS REQUIRED. SEE SPECIFICATION SECTION 16.1 FOR DUCT SIZING CRITERIA. LOCATION SHOWN IS DIAGRAMMATIC AND NOT INTENDED TO SHOW EXACT, FINAL LOCATION.
 - $\langle 2 \rangle$ PROVIDE AVERAGING THERMOSTAT IN APPROXIMATE LOCATION, FINAL STYLE AND LOCATION SHALL BE APPROVED BY ARCHITECT AND OWNER.
 - $\langle 3 \rangle$ FINAL STYLE, LOCATION, ELEVATION AND FINISH SHALL BE APPROVED BY THE ARCHITECT AND OWNER.
- PROVIDE LOUVER IN DOOR FOR TRANSFER AIR, LOUVER SHALL HAVE A MINIMUM FREE AREA OF 1.0 SQFT. FINAL STYLE AND FINISH SHALL BE APPROVED BY THE ARCHITECT
- (5) PROVIDE DOMESTIC RANGE HOOD IN THIS APPROXIMATE LOCATION. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL DETAILS.
- (6) WARMING OF FOODS ONLY IN THIS AREA. THERE SHALL BE NO COOKING ON THE PREMISES IN COMPLIANCE WITH THE NORTH CAROLINA MECHANICAL CODE.
- RELIEF LOUVER TO BE MOUNTED UP HIGH ON WALL 10 FT AWAY FROM THE OUTSIDE AIR OF THE GROUND MOUNTED PACKAGED RTU IN COMPLIANCE WITH THE NORTH CAROLINA MECHANICAL CODE.
- PROVIDE FULL SIZE PLENUM BOX ON THE BACK OF THE RETURN REGISTER. COORDINATE WITH STRUCTURE.
- 9 DUCT WORK SHALL BE MOUNTED IN ARCHITECTURAL SOFFIT. SEE ARCHITECTURAL PLANS FOR ADDITIONAL DETAILS. COORDINATE WITH FINAL CONSTRUCTION. SEE SPECIFICATION SECTION 16.1 FOR DUCT SIZING CRITERIA FOR ALTERNATE DUCT SIZES
- 10 PROVIDE FIRE WRAP OR OTHER PREAPPROVED UL ASSEMBLY AROUND DUCT WORK AS A MEANS TO SEPARATE THE DUCT WORK FROM THE EXIST PASSAGEWAY IN COMPLIANCE WITH THE NORTH CAROLINA BUILDING AND MECHANICAL CODES AS ALLOWED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
- (11) HVAC UNIT SHALL BE MOUNTED ON MINIMUM OF A 4" THICK CONCRETE HOUSE KEEPING. COORDINATE FINAL HOUSE KEEPING PAD LOCATION AND SIZE WITH PURCHASED EQUIPMENT, DUCT TRANSITIONS INTO BUILDING AND FINAL INSTALLED CONDITIONS.
- PENETRATIONS THOROUGH HORIZONTAL EXITS SHALL BE PROTECTED WITH A FIRE/SMOKE DAMPER IN COMPLIANCE WITH NCMC 607.5.2.1. SEE ARCHITECTURAL PLANS FOR ADDITIONAL DETAILS.
- (13) DUCT SHALL PASS PERPENDICULAR TO WALL FOR INSTALLATION OF FIRE/SMOKE DAMPER. COORDINATE WITH WALL FRAMING. OFFSET TRANSITION DUCT AS REQUIRED.





PROJECT TEAM

General Contractor ECCLESIA CONSTRUCTION www.ecclesiaconstruction.com 803.327.5670



ENGITECTURE, PLLC NC License No. P-1625 4539 Hedgemore Drive, Suite 102 Charlotte, NC 28209

704-287-2193 PROJ# 23253

 \triangle Date Description

01/30/2024 ISSUE FOR CONSTRUCTION ↑ 05/03/2024 ARCHITECTURAL REVISION 1 ↑ 10/14/**2024** RTAP NO. 1

Project Name



community church
making church come alive 658 GRAHAM ROAD

SANFORD NC 27311

3D COMMUNITY CHURCH

Project Number

23024.00

Description FLOOR PLAN - HVAC

SEE PLANS

M01.01



1. Summary
Ventilation Sizing Method Design Condition ... Occupant Diversity (D) Uncorrected Outdoor Air Intake (Vou) . System Ventilation Efficiency (Ev) ...

2. Space Ventilation Analysis

Outdoor Air Intake (Vot)

Outdoor Air Intake (Vot)

					Time	People			Breathing	
		Supply	Space Floor	Area Outdoor	Averaged	Outdoor Air		Space	Zone	Space
		Air			Occupancy			Outdoor Air		Ventilation
		(CFM)	(ft²)	(CFM/ft²)	(Occupants)	(CFM/person)	Effectiveness	(CFM)	(CFM)	Efficiency
Zone Name / Space Name	Mult.	(Vpz)	(Az)	(Ra)	(Pz)	(Rp)	(Ez)	(Voz)	(Vbz)	(Evz)
Zone 1										
ELEM (3-5)	1	1041	384.0	0.12	13.5	10.00	0.8	226	181	0.902
ELEM (K-2)	1	949	393.0	0.12	9.8	10.00	0.8	182	145	0.92
PRESCHOOL	1	914	353.0	0.18	8.8	10.00	0.8	190	152	0.91
PRESCHOOL TOILET	1	64	56.0	0.18	1.4	10.00	0.8	30	24	0.651
HALL TOILET	1	36	50.0	0.06	0.3	5.00	0.8	5	4	0.97
NURSERY	1	1125	501.0	0.18	12.5	10.00	0.8	269	215	0.880
Totals (incl. Space Multipliers)		4130							491	0.651

	Ventilation Sizing Summary for RTU-2&3	
Project Name: 23253 - 3D COMMUNITY CHURCH - 12-08-23		01/19/2024
		02:06PM

1. Summary Ventilation Sizing Method . ASHRAE Std 62.1-2016 Design Condition Occupant Diversity (D) Uncorrected Outdoor Air Intake (Vou) . System Ventilation Efficiency (Ev) ..

2. Space Ventilation Analysis		Supply	Space Floor	Area Outdoor	Time Averaged			Space	Breathing Zone	Space
		Air (CFM)	Area		Occupancy	Rate		Outdoor Air (CFM)		Ventilation Efficiency
Zone Name / Space Name	Mult.	(Vpz)	(Az)	(Ra)	(Pz)	(Rp)	(Ez)	(Voz)	(Vbz)	(Evz)
Zone 1										
SANCTUARY	1	10536	4800.0	0.06	400.0	5.00	0.8	2860	2288	0.943
STORAGE NORTH	1	193	141.0	0.06	1.0	5.00	0.8	17	13	1.127
JANITOR NORTH	1	61	39.0	0.06	1.0	5.00	0.8	9	7	1.062
Totals (incl. Space Multipliers)		10789							2309	0.943

	$\sim\sim$	
	Summary for RTU-5	~ ~ /
Mandle de la Colonia	O Care DTILL C	

1. Summary		
Ventilation Sizing Method	ASHRAE Std 62.1-2016	
Design Condition		
Occupant Diversity (D)	0.750	
Uncorrected Outdoor Air Intake (Vou)	153	CFM
System Ventilation Efficiency (Ev)		
Outdoor Air Intake (Vot)	194	CFM

CAPACITY

KW

208

208

TYPE

2) PROVIDE UNIT MOUNTED THERMOSTAT, WALL RECESS KIT AND INTEGRAL DISCONNECT.

MARK LOCATION

EWH-1 JANITORS RECESSED WALL CLOSET HEATER

1)FINAL SYSTEMS SHALL MEET OR EXCEED THESE VALUES.

4) MOCP NOT PUBLISHED IN MANUFACTURERS INFORMATION.

EUH-1,2 OPEN AREAS UNIT HEATER

3) PROVIDE BASIS OF DESIGN OR EQUAL

2. Space Ventilation Analysis					Time	People			Breathing	
		Supply Air (CFM)	Area	Area Outdoor Air Rate (CFM/ft²)	Averaged Occupancy	Outdoor Air Rate	Air Distribution Effectiveness	Space Outdoor Air (CFM)	Zone Outdoor Air	Space Ventilation Efficiency
Zone Name / Space Name	Mult.	(Vpz)	(Az)	(Ra)	(Pz)	(Rp)	(Ez)	(Voz)	(Vbz)	(Evz)
Zone 1										
WEST HALL/NARTHEX/LOB	1	2438	1400.0	0.06	8.0	5.00	0.8	155	124	0.990
MENS	1	182	206.0	0.06	1.0	5.00	0.8	22	18	0.933
WOMENS	1	183	223.0	0.06	1.1	5.00	0.8	24	19	0.925
JANITOR WEST	1	31	26.0	0.06	1.0	5.00	0.8	8	7	0.790
Totals (incl. Space Multipliers)		2834							153	0.790

ELECTRICAL

VOLT PHASE MCA MOCP

14 (4)

24

ELECTRIC WALL/UNIT HEATER SCHEDULE

				INTAKE	/EXHAUS	ST HOO	DD SCHEDU	LE	
MARK	LOCATION	TYPE	AIR FLOW	FREE AREA	VELOCITY (1)	APD (1)	DAMPER TYPE	BASIS OF DESIGN (2)	NOTES
			CFM	SQ. FT.	FPM	IN			
RL-1	WALL	RELIEF	375	1	600	0.1	GRAVITY BD	GREENHECK ESD	3
RL-2	WALL	RELIEF	375	1	600	0.1	GRAVITY BD	GREENHECK ESD	3
RL-3	WALL	RELIEF	150	0.25	600	0.1	GRAVITY BD	GREENHECK ESD	3
		i I			İ				

1) MAXIMUM, NOT TO EXCEED. 2) PROVIDE BASIS OF DESIGN OR EQUAL.

3) PROVIDE MOTOR OPERATED BACKDRAFT DAMPER AND BIRDSCREEN.

	AIR DEVICE SCHEDULE											
		MAX		NECK SIZE								
MARK	TYPE	APD (1)	MOUNTING	IN	NC (1)	BASIS OF DESIGN (2)	NOTES					
		IN WG		IIV								
CD	PERFORATED	0.100	CEILING	SEE PLANS	30	PRICE PDF	4,5,6					
RG	PERFORATED	0.100	CEILING	SEE PLANS	30	PRICE PFRF	4,5,7					
EG	PERFORATED	0.100	CEILING	SEE PLANS	30	PRICE	4,5					
SR	SUPPLY REGISTER	0.100	DUCT	NA	30	PRICE SDG	3,5					
SD	ACT SLOT DIFFUSER	0.100	CEILING	SEE PLANS	30	PRICE TBD	3,5,6					

1) MAXIMUM NOT TO EXCEED VALUE.

2) PROVIDE BASIS OF DESIGN OR EQUAL.

3) COORDINATE DIFFUSER/GRILLE COLOR WITH ARCHITECT PRIOR TO ORDERING.

4) PROVIDE WITH OPPOSED BLADE DAMPER.

5) SEE MECHANICAL AND ARCHITECTURAL PLANS FOR ADDITIONAL DETAILS AND INFORMATION.

6) THE BACK OF ALL SUPPLY AIR DISTRIBUTION SHALL BE INSULATED OR LINED TO PREVENT CONDENSATION. 7) PROVIDE WITH PLENUM SOUND ATTENUATING BOOT. REFER TO DETAILS FOR ADDITIONAL INFORMATION.

					FAN S	CHEDUL	_E				
			FAN								
MARK	LOCATION	AIR FLOW (2)	ESP (2)	TYPE	DRIVE	NOMINAL POWER	PHASE	VOLT			
		CFM	IN			HP					
EF-1	CEILING	375	0.25	CEILING	DIRECT	224 W	1	115			
EF-2	CEILING	375	0.25	CEILING	DIRECT	224 W	1	115			
EF-3	CEILING	75	0.25	CEILING	DIRECT	15 W	1	115			
EF-4	CEILING	75	0.25	CEILING	DIRECT	15 W	1	115			
					İ	i i i					

3) PROVIDE FAN GRAVITY BACKDRAFT DAMPER AND SPEED CONTROLLER. SPEED CONTROLLER SHALL BE USED TO BALANCE THE FAN.

		! AID ELOW/ON!		!	!						
MARK	LOCATION	AIR FLOW (2)	ESP (2)	TYPE	DRIVE	NOMINAL POWER	PHASE	VOLT	SPEED	BASIS OF DESIGN (1)	NOTES
		CFM	IN			HP			CONTROL		
EF-1	CEILING	375	0.25	CEILING	DIRECT	224 W	1	115	YES	GREENHECK	3,4
EF-2	CEILING	375	0.25	CEILING	DIRECT	224 W	1	115	YES	GREENHECK	3,4
EF-3	CEILING	75	0.25	CEILING	DIRECT	15 W	1	115	YES	GREENHECK	3,4
EF-4	CEILING	75	0.25	CEILING	DIRECT	15 W	1	115	YES	GREENHECK	3,4
					İ	I I I					
,	IOTES:) PROVIDE BASIS OF DESIGN OR EQUAL) DESIGN MINIMUM. FINAL SELECTIONS SHALL MEET OR EXCEED THIS VALUE.										

											·-·-·			= .=.									
								PA	CKAGED A	IR CON	IDITIO	NER S	SCHEL	OULE (RO	OOFT	OP)							
					TOTAL	MIN.			CC	OOLING C	APACITY				HEA ⁻	TING CAP	ACITY		ELECTRI	CAL DATA			
	MARK	LOCATION	AREA AND/OR	TYPE	SUPPLY AIR	OUTSIDE	EXT STATIC PRESSURE (1)	MIN TOTAL	MIN SENS	EA	.T	L	AT	OSA DESIGN	MIN. INPUT	EAT	LAT	LINIT	DOWED	CONNEC	TION	BASIS OF DESIGN (7)	NOTES
	IVIARK	LOCATION	BLDG SERVED	ITPE	FLOW	AIR FLOW	i resource (1)	CAPACITY (3)	CAPACITY (3)	Db	Wb	Db	Wb	TEMP	(2)	Db	Db	i UNIT	POWER	CONNEC	TION	BASIS OF DESIGN (1)	NOTES
					CFM	CFM	IN	MBH	MBH	°F	°F	°F	°F	°F	KW	°F	°F	VOLT	PHASE	MCA	MOCP		
	RTU-1	GROUND	EDUCATION	ELECTRIC	4000	800	0.75	114	87	78	67	58	58	95	32	65	85	208	3	153	175	TRANE TSJ120	4,5,6,8
2	RTU-2,3	GROUND	SANCTUARY	ELECTRIC	6000	1250	0.75	171	120	78	67	58	58	95	48	32	85	208	3~	164	175	TRANE TSJ180	4,5,6,8
	RTU-4		,		•			REMOVED FR	OM SCOPE - VALUE	ENGINEER	ING BY OW	/NERSHIP	& CONTRA	CTING TEAM A	ND IS NO	T RECOMM	NEDED BY	THE EOR.		•	•		
	RTU-5	GROUND	COMMON AREAS	ELECTRIC	2000	200	0.75	mg-	~~ ₅₂ ~~	78	→ 87	58	58	- 95 -	16	65	85	208	7	69~	70~	TRANE TSC060	4,5,6,8

4) FAN SHALL BE INTERLOCKED WITH RESTROOM LIGHTING.

1) THIS IS THE SP EXTERNAL TO THE ENTIRE UNIT ASSEMBLY (WET COIL, CASING, CLEAN FILTERS, AND FURNACE LOSSES ARE NOT INCLUDED IN THIS EXT. SP.)
2) THIS IS THE MINIMUM OUTPUT CAPACITY (IN MBH FOR GAS AND IN KW FOR ELEC.)

NOTES

BASIS OF DESIGN (3)

QMARK AWH

QMARK MUH

3) THIS IS A DESIGN MINIMUM, NOT UNIT CAPACITY.

4) PROVIDE UNIT WITH SMOKE DETECTORS IN COMPLIANCE WITH THE NCMC AND LOCAL AHJ. 5) PROVIDE UNIT WITH ECONOMIZER AND BAROMETRIC RELIEF. 6) PROVIDE UNIT WITH HINGED ACCESS DOORS AND SECONDARY MEANS OF CONDENSATE DISPOSAL AS REQUIRED BY NCMC 307.2.3 METHOD 1,2,3 OR 4

7) PROVIDE BASIS OF DESIGN OR EQUAL 8) PROVIDE UNIT WITH SINGLE ZONE VAV FUNCTIONALITY.

							SPLIT S	SYSTEM All	R CON	IDITIO	NER SC	HEDULE												
				NOMINAL	MIN.	EXT STATIC	ļ	COOLING (CAPACITY	,		HE	EATING CA	APACITY			E	LECTRIC	CAL DATA	١				
AHU MARK	CONDENSING UNIT MARK	AREA AND/OR BLDG SERVED	TYPE	TOTAL SUPPLY AIR FLOW	OUTSIDE AIR FLOW (3)	PRESSURE [1]	MIN TOTAL CAPACITY [3]	MIN SENS CAPACITY [3]	E/ Db	AT Wb	OSA DESIGN TEMP	MIN. HEAT CAPACITY (3)	EAT DB	LAT Db	OSA DESIGN TEMP	1		INDOOR UNIT OUTDOOR UN		UNIT OUTDOOR UNIT			BASIS OF DESIGN [2]	REMARKS
				CFM	CFM	IN	MBH	MBH	°F	°F	°F	MBH	°F	°F	°F	VOLT	PHASE	VOLT	PHASE	MCA	MOCP			
SS-1	CU-1	CORRIDOR	CASSETTE MINI-SPLIT	400	0	NA	10000	8000	80	67	95	10	68	95	18	24 VDC	NA	208	1	9	15	MITSUBISHI SLZ/SUZ	5,6,7,8	

Lumment and the commence of th

1) THIS IS THE SP EXTERNAL TO THE ENTIRE UNIT ASSEMBLY (WET COIL, CASING, CLEAN FILTERS, AND FURNACE LOSSES ARE NOT INCLUDED IN THIS EXT. SP.)

2) PROVIDE BASIS OF DESIGN OR APPROVED EQUAL. 3) THESE ARE DESIGN MINIMUMS, NOT UNIT CAPACITIES. ALL EQUIPMENT SHALL MEET OR EXCEED SCHEDULED MINIMUMS.

4) NOT USED.

5) PROVIDE 7 DAY PROGRAMMABLE THERMOSTAT.

6) DISCONNECT BY ELECTRICIAN. 7) PROVIDE CONDENSATE PUMP IF CONDENSATE CAN NOT BE GRAVITY DRAINED.

8) PROVIDE UNIT WITH LOW AMBIENT HEATING CAPACITY.

Project Name



4539 HEDGEMORE DRIVE, SUITE 101 CHARLOTTE NC 28209

704.890.2053 WWW.OSSASTUDIO.COM

CONSULTING ENGINEERS

ENGITECTURE, PLLC

NC License No. P-1625

4539 Hedgemore Drive, Suite 102 Charlotte, NC 28209 704-287-2193

PROJ# 23253

01/30/2024 ISSUE FOR CONSTRUCTION

△ Date Description

2 10/14/**2024** RTAP NO. 1

PROJECT TEAM

803.327.5670

General Contractor **ECCLESIA CONSTRUCTION** www.ecclesiaconstruction.com

SANFORD NC 27311

3D COMMUNITY CHURCH

Project Number 23024.00

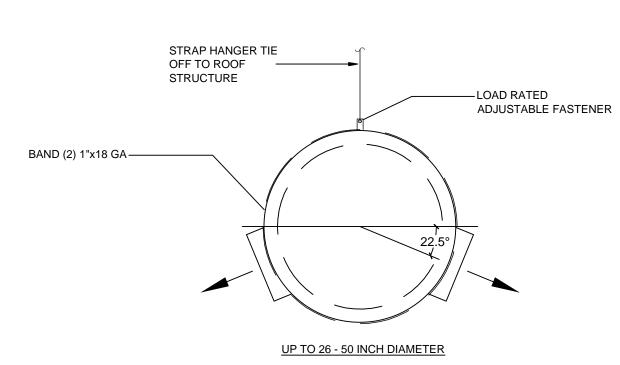
Description SCHEDULES - HVAC

NOTE:

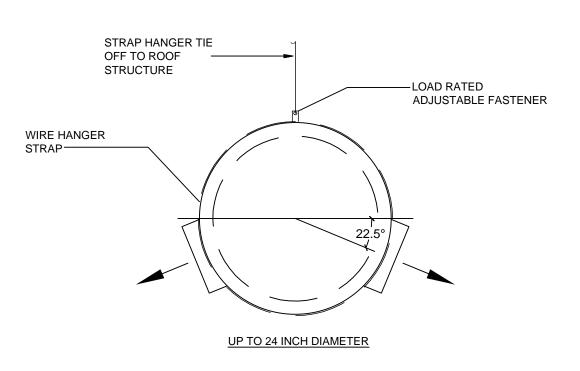
1. PROVIDE SUPPORTS FOR DUCT WORK IN ACCORDANCE WITH NCMC 603.10. 2. DUCT WORK SHALL BE INTERNALLY INSULATED WITHIN 25 FEET OF ANY

OPERABLE OPENING TO THE EXTERIOR OR ANY OTHER CONDENSATION WHERE CONDENSATION MAY OCCUR.

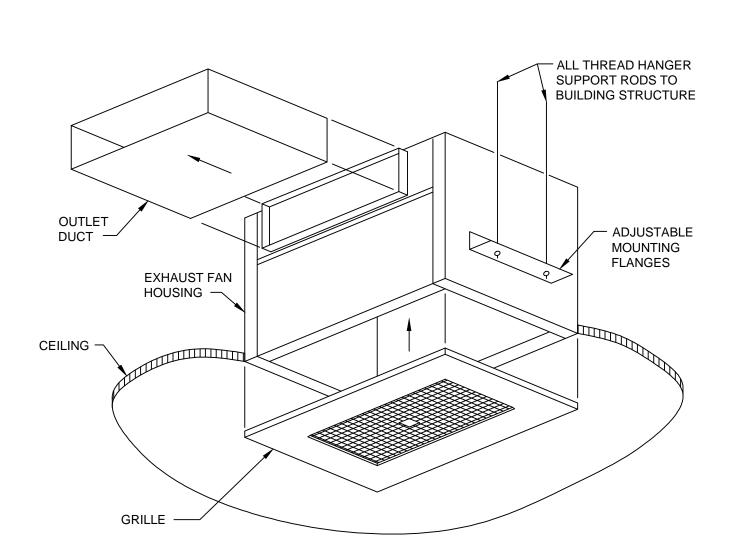
- 3. DUCT WORK SHALL BE INSTALLED LEVEL AND IN A NEAT AND WORKMAN LIKE
- 4. SEE SMACNA HVAC DUCT CONSTRUCTION STANDARDS, TABLE 5.2, FOR HANGER SIZE AND SPACING.
- 5. SEE SMACNA HVAC DUCT CONSTRUCTION STANDARDS FIG 5-1 & 5-2 (WITH SPECIFIC BUILDING STRUCTURAL ENGINEER APPROVAL WHERE APPLICABLE BASED ON WEIGHT AND SEISMIC CRITERIA)FOR UPPER ATTACHMENT TO
- 6. SEE SMACNA HVAC DUCT CONSTRUCTION STANDARDS CHAPTER 5 FOR ADDITIONAL DETAILS AND CONFIGURATIONS.



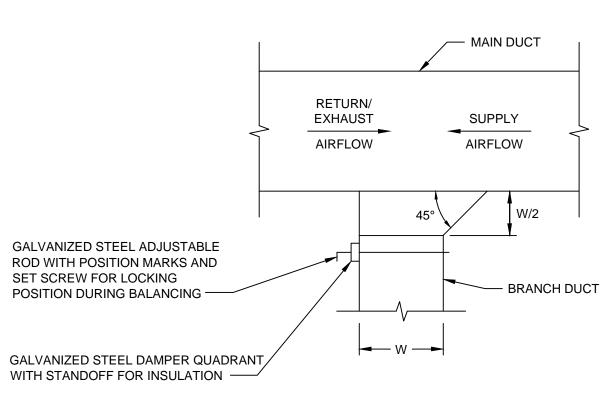
OVER 50 INCH DIAMETER



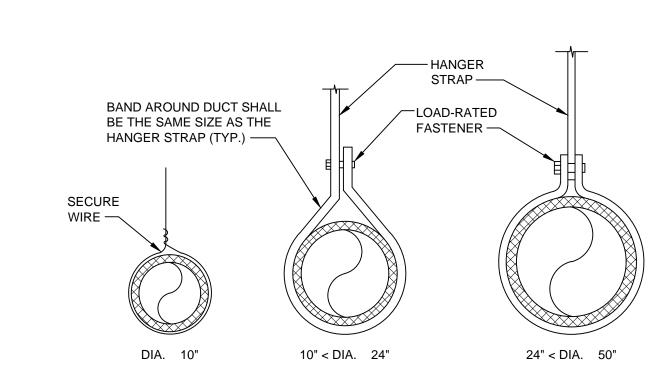
SUPPLY REGISTER DETAIL



CEILING EXHAUST FAN DETAIL \M0.701 / SCALE: NTS

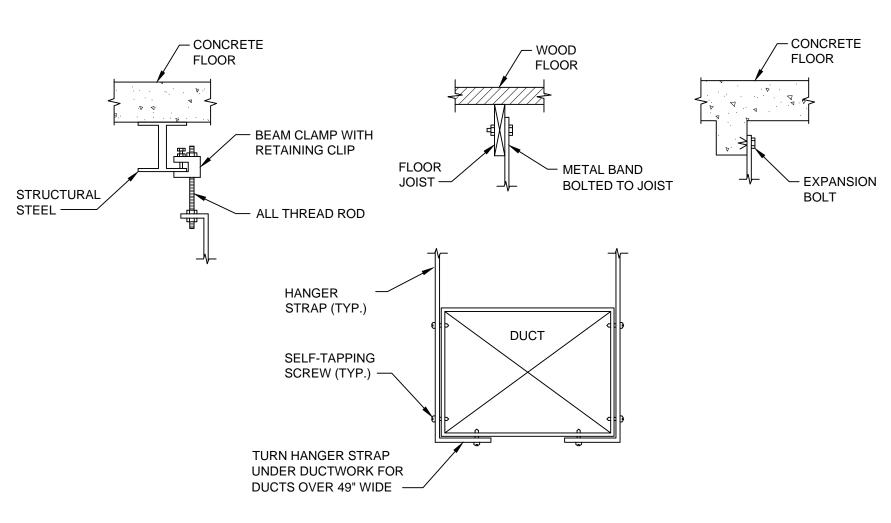


TYPICAL DUCTWORK TAKEOFF DETAIL M07.01 | SCALE: NTS



NOTE: HANGERS SHALL NOT DEFORM DUCT SHAPE.

ROUND DUCTWORK SUPPORT DETAIL M07.01 | SCALE: NTS

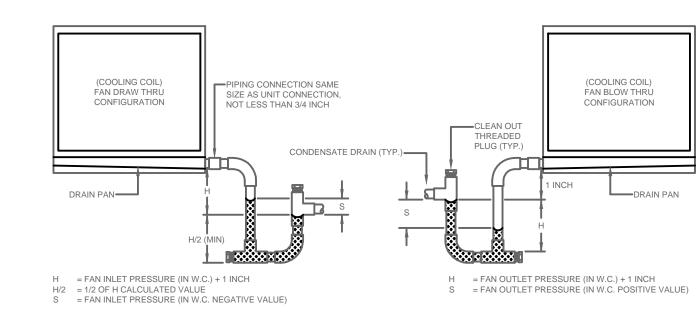


3 LOW PRESSURE RECTANGULAR DUCTWORK SUPPORT DETAIL M07.01 SCALE: NTS

NOTES:

1. ALL DUCTWORK HANGER SPACING AND SIZING SHALL BE IN ACCORDANCE WITH THE LATEST SMACNA STANDARDS.

- 2. DUCTS SHALL NOT BE HUNG FROM OR SUPPORTED BY HUNG CEILING.
- 3. PROVIDE SUPPLEMENTAL BRACING TO LIMIT THE AMPLITUDE OF WALL VIBRATION AND WALL DEFLECTION IN ACCORDANCE WITH PROJECT SEISMIC AND VIBRATION REQUIREMENTS.

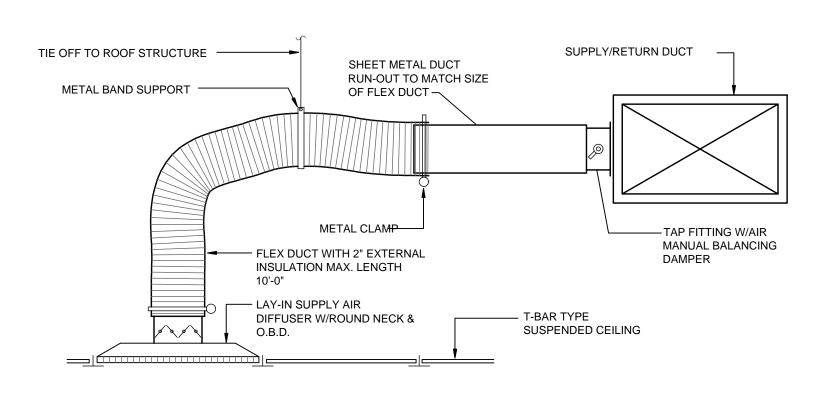


CONDENSATE SIZING TABLE

REFERENCE SUBMITTALS FOR FAN PRESSURE. ADDITIONAL 1 INCH ACCOUNTS FOR FIELD INSTALLED CONDITIONS: FILTER LOADING ON DRAW THRU CONFIGURATION AND HIGHER DUCTWORK PRESSURE DROP IN BLOW THRU CONFIGURATION.

- 2. EQUIPMENT SHALL BE ELEVATED SUFFICIENTLY TO ALLOW FOR PROPER P-TRAP INSTALLATION. PIPE CONDENSATE TO NEAREST ROOF/FLOOR DRAIN. COORDINATE WITH LOCAL JURISDICTION/UTILITY TERMINATION OF CONDENSATE
- 4. INSULATE CONDENSATE PIPING LOCATED INDOORS WITHIN A CEILING RETURN PLENUM OR AREA WITH HIGH HUMIDITY. 5. MATERIAL: TYPE L COPPER. 6. PROVIDE FLOAT SWITCH IN DRAIN PAN OR PROVIDE ALTERNATE MEANS TO MEET THE INTENT OF 2018 NCMC 307.2.3 OR APPLICABLE

² CONDENSATE DRAIN DETAIL M07.01 SCALE: NTS



AIR DISTRIBUTION DETAIL

. ALL MANUAL VOLUME DAMPERS LOCATED ABOVE INACCESSIBLE CEILINGS (INCLUDING CAULKED ACOUSTICAL CEILING TILE) SHALL BE PROVIDED WITH REMOTE MEANS OF BALANCING.

- 2. INSULATE THE BACK OF ALL SUPPLY AIR DIFFUSERS INSTALLED IN DUCTED RETURN SYSTEMS OR ARE SUBJECT TO CONDITIONS WHERE CONDENSATION
- 3. ALL ITEMS INSTALLED IN A RETURN AIR PLENUM SHALL BE PLENUM RATED.
- 4. PROVIDE SUPPORTS FOR DUCT WORK IN ACCORDANCE WITH NCMC 603.10.

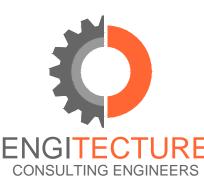


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PROJECT TEAM

General Contractor **ECCLESIA CONSTRUCTION** www.ecclesiaconstruction.com 803.327.5670



ENGITECTURE, PLLC NC License No. P-1625 4539 Hedgemore Drive, Suite 102 Charlotte, NC 28209 704-287-2193

PROJ# 23253

Description

01/30/2024 ISSUE FOR CONSTRUCTION

Project Name



SANFORD NC 27311

3D COMMUNITY CHURCH

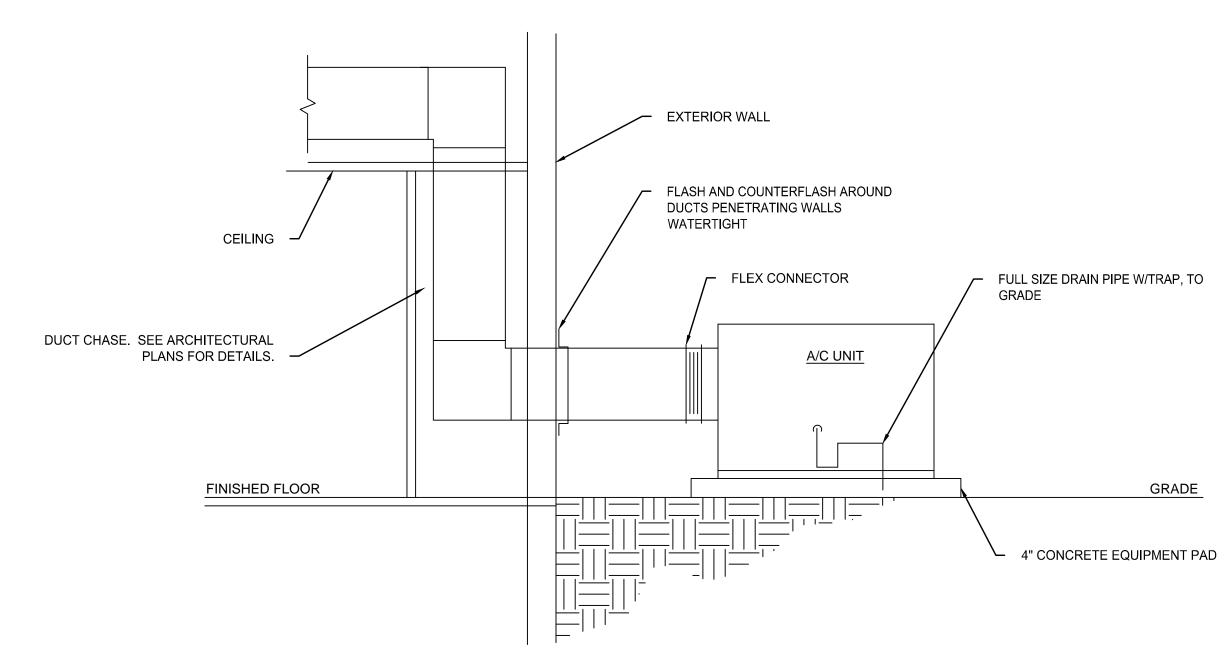
Project Number 23024.00

Description

DETAILS - HVAC

Scale

M07.01



GROUND MOUNTED PACKAGED UNIT DETAIL M07.01 SCALE: NTS

1. DUCTWORK EXPOSED OUTSIDE SHALL BE INSULATED WITH 2" THICK RIGID EXTERNAL FIBERGLASS INSULATION IN ADDITION TO 1" THICK DUCT LINER. COVER EXTERNAL INSULATION WITH AN ALUMINUM OUTER ENCLOSURE AND SEAL WATER-TIGHT.

2. AC UNIT SHALL BE INSTALLED LEVEL.

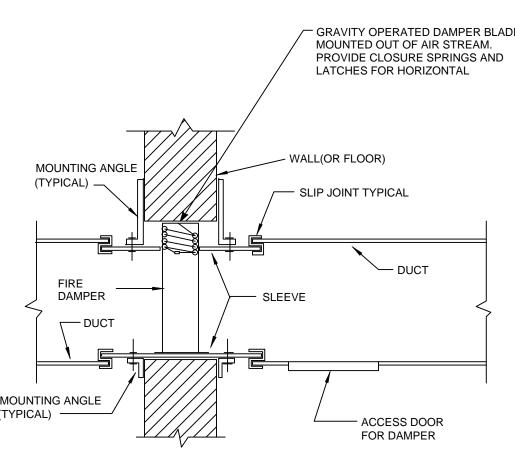
3. SMOKE DETECTORS SHALL BE IONIZATION TYPE WIRED TO SHUT DOWN THE UNIT UPON ACTIVATION. SMOKE DETECTORS SHALL BE PROVIDED ON SYSTEMS OVER 2000 CFM.

FIRE DAMPER, UL555 & UL555S WITH MECHANICAL ATTACHED BLADE AND FLEXIBLE STAINLESS STEEL JAMB SEALS. DAMPER SHALL BE U.L. LISTED INSTALLED IN ACCORDANCE WITH NFPA. ACCESS DOOR SHALL BE RUSKIN MODEL ADC2 LOCATED ON ACCESSIBLE SIDE OF WALL. IF ACCESSIBLE CEILING IS NOT AVAILABLE, MECHANICAL CONTRACTOR SHALL PROVIDE ACCESS DOOR IN CEILING (OR WALL) TO MATCH FINISH COLOR.

ALL MODEL NUMBERS ARE RUSKIN. (APPROVED EQUALS ACCEPTABLE)

DAMPER ACTUATOR SHALL BE FURNISHED BY THE MANUFACTURER





FIRE DAMPER SHALL BE RUSKIN TYPE IBD2 STYLE B 1 1/2 HOUR UL, INSTALLED IN ACCORDANCE WITH NFPA. ACCESS DOOR SHALL BE RUSKIN MODEL ADC2 LOCATED ON ACCESSIBLE CEILING SIDE OF WALL. IF ACCESSIBLE CEILING NOT AVAILABLE, MECHANICAL CONTRACTOR SHALL PROVIDE ACCESS DOOR IN CEILING (OR WALL) TO MATCH FINISH COLOR. DAMPER SHALL BE EQUIPPED FOR HORIZONTAL OR VERTICAL MOUNTING AS REQUIRED. WHERE ROUND DUCTS REQUIRE A DAMPER, AN ENCLOSURE WITH ROUND DUCT CONNECTION WILL BE REQUIRED WITH TYPE B DAMPER INSIDE. ALL MODELS ARE RUSKIN(APPROVED EQUAL ACCEPTABLE).

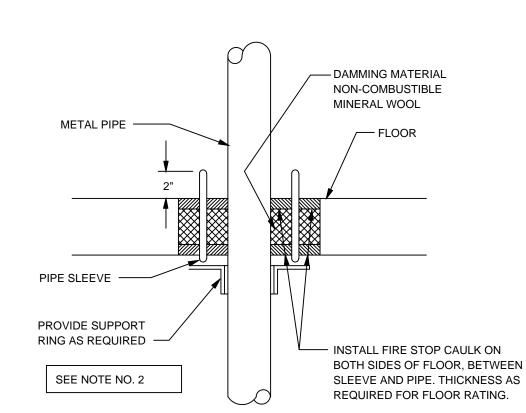
PIPE AND DUCTWORK WALL PENETRATIONS NOTES (MECHANICAL)

- 1. ALL INSULATED METAL PIPING PENETRATING A ONE HOUR OR MORE RATED SLAB SHALL BE SEALED AROUND INSULATION ON BOTH SIDES OF WALL WITH AN APPROVED FIRE STOP WRAP/STRIP MATERIAL. NUMBER OF WRAPS AROUND INSULATION WITHIN WALL OPENING SHALL BE AS REQUIRED FOR THICKNESS OF INSULATION AND MFG. RECOMMENDATIONS. COVER EXPOSED SURFACE AND SEAMS WITH AN APPROVED FIRE STOP CAULK ON BOTH
- ALL NON-INSULATED METAL PIPING PENETRATING A ONE HOUR WALL OR MORE RATED WALL OR FLOOR SHALL BE SEALED AROUND PIPE ON BOTH SIDES OF WALL WITH AN APPROVED FIRE STOP CAULK. THICKNESS SHALL
- ALL METAL DUCTWORK (LESS THAN 100 SQUARE INCHES) PENETRATING A ONE HOUR WALL OR SMOKE SHALL BE SEALED AROUND DUCT ON BOTH SIDES OF WALL WITH A SHEET METAL COLLAR (SAME GAGE AS DUCT) SECURED TO WALL AND DUCT IN A SMOKE-TIGHT MANNER. DUCT PENETRATIONS EXCEEDING 100

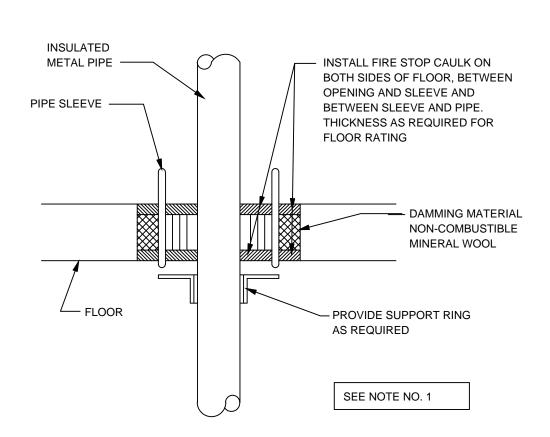
NELSON FLAMESEAL PUTTY CROUSE-HINDS CABLE BARRIER SYSTEM DOW CORNING FIRE STOP SEALANT/FOAM 3M FIRE BARRIER

THERMAFIBER BRAND SAFING

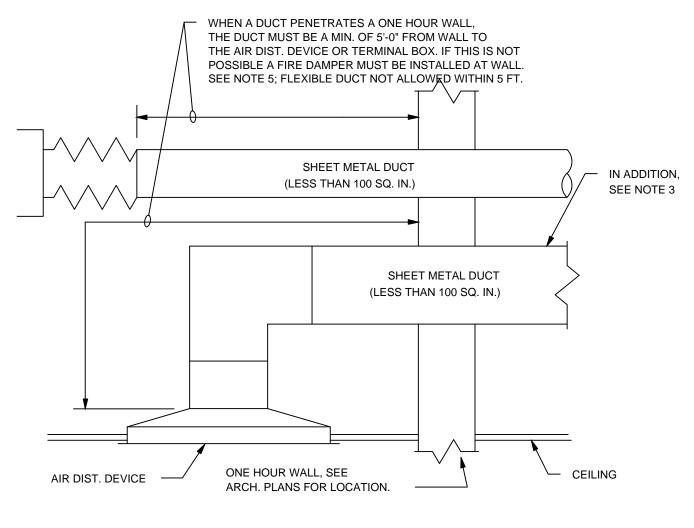
- WHEN A PIPE, WIRE, OR DUCT PENETRATES A NON-RATED SMOKETIGHT PARTITION, THE MECHANICAL CONTRACTOR SHALL SEAL AROUND ALL PIPES WIRES AND DUCTS WITH SEALANT MATERIAL TO MAKE IT SMOKETIGHT. SEE ARCHITECTURAL PLANS FOR LOCATION OF THESE PARTITIONS.
- 10. PENETRATIONS OF NONRATED WALLS, PARTITIONS AND FLOORS OF NON-MATERIALS. PENETRATIONS OF NONRATED WALLS, PARTITIONS AND FLOOR OF COMBUSTIBLE CONSTRUCTION SHALL BE FIRESTOPPED WITH MATERIALS EQUIVALENT TO TWO INCHES OF WOOD. FIRESTOPPING SHALL COMPLY WITH ASTM E-814.



METAL PIPE PENETRATION-FLOOR (U.L. SYSTEM NO. CAJ1043) - 1, 2 HR. (U.L. SYSTEM NO. CAJ1044) - 3, 4 HR.



INSULATED METAL PIPE PENETRATION-FLOOR (U.L. SYSTEM NO. CAJ1043) - 1, 2 HR. (U.L. SYSTEM NO. CAJ1044) - 3, 4 HR.



SEE NOTE NO. 3

METAL DUCT (LESS THAN 100 SQ. IN.)

SMOKE OR ONE HOUR WALL-DUCT PENETRATION

NOTE: DUCTS EXCEEDING 100 SQ. IN. SHALL HAVE FIRE DAMPER

INSTALLED IN RATED WALL (SEE FIRE DAMPER DETAIL)

PROVIDE MAXIMUM OF 1/2" CLEARANCE

— PROVIDE SHEET METAL COLLAR AROUND DUCT

PENETRATION. COLLAR TO BE SAME GAGE AS

METAL DUCT AND SHALL BE FLUSH WITH WALL

AND DUCT TO PROVIDE SMOKE TIGHT CONSTRUCTION.

SECURE COLLAR TO DUCT AND WALL, BOTH SIDES

AROUND METAL DUCTWORK.

SMOKE WALL OR

ONE HOUR WALL.

DUCT INSULATION,

WHERE REQUIRED,

WILL STOP FLUSH

WITH WALL. ———

SEE ARCHITECTURAL

DUCT PENETRATION AT ONE HOUR WALL NOTE: DUCTS EXCEEDING 100 SQ. IN. SHALL HAVE FIRE DAMPER INSTALLED IN RATED WALL (SEE FIRE DAMPER DETAIL)

1 UL PENETRATION DETAILS M07.02 SCALE: NTS

INSULATED METAL PIPE PENETRATION-WALL

— INSTALL FIRE STOP CAULK ON

1,2,4 HOUR WALL

OR SMOKE WALL.

PLANS. —

SEE ARCHITECTURAL

METAL PIPE ----

PIPE SLEEVE -

SEE NOTE NO. 2

1,2,4 HOUR WALL

OR SMOKE WALL.

METAL PIPE ----

PLANS. ----

INSULATED

PIPE SLEEVE ----

DAMMING MATERIAL

NON-COMBUSTIBLE

MINERAL WOOL -

SEE ARCHITECTURAL

METAL PIPE PENETRATION-WALL

(U.L. SYSTEM NO. WL5024)

BOTH SIDES OF WALL, BETWEEN

SLEEVE AND PIPE. THICKNESS AS

REQUIRED FOR WALL RATING.

- DAMMING MATERIAL

SEE NOTE NO. 1

- WRAP PIPE INSULATION WITH

FIRE STOP WRAP/STRIP. NUMBER

THICKNESS AND WALL RATING

INSTALL FIRE STOP CAULK ON BOTH

AND SLEEVE AND BETWEEN SLEEVE AND

SIDES OF WALL, BETWEEN OPENING

PIPE. THICKNESS AS REQUIRED FOR

FLOOR RATING.

OF WRAPS DEPENDS ON INSULATION

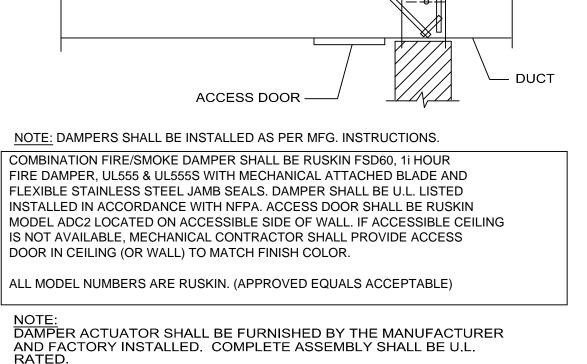
NON-COMBUSTIBLE

MINERAL WOOL

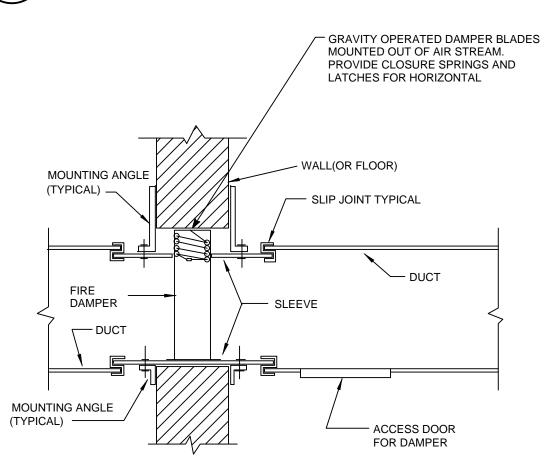
OPENING AND SLEEVE AND BETWEEN



(U.L. SYSTEM NO. WL5024)



FIRE/SMOKE DAMPER DETAIL M07.02 SCALE: NTS



FIRE DAMPER DETAIL SCALE: NTS

SIDES OF WALL.

BE AS RECOMMENDED BY MANUFACTURER FOR WALL RATING REQUIRED TO MAINTAIN U.L. CLASSIFICATION.

SQUARE INCHES SHALL HAVE A FIRE DAMPER INSTALLED IN THE WALL AS DETAILED.

ALL DUCTWORK PENETRATING A TWO HOUR OR MORE RATED WALL OR FLOOR SHALL BE PROVIDED WITH A FIRE DAMPER INSTALLED AS DETAILED.

NO FLEXIBLE DUCTWORK WILL BE ALLOWED TO PENETRATE ONE HOUR WALLS, TWO HOUR WALLS, SMOKE WALLS, CORRIDOR WALLS OR WALLS CLOSED-OFF TO STRUCTURE. METAL RIGID DUCTWORK SHALL EXTEND A MINIMUM OF 5'-0" FROM WALL BEFORE THE FIRST AIR DISTRIBUTION DEVICE IS INSTALLED OR BEFORE FLEXIBLE DUCT IS STARTED. FLEXIBLE DUCTWORK IN A SINGLE DUCT RUN IS ALLOWED ON ONE SIDE OF A RATED WALL BUT NOT BOTH SIDES.

ACCEPTABLE MANUFACTURERS OF FIRE STOP MATERIALS ARE AS FOLLOWS:

T&B FLAMESAFE

ALL MATERIALS AND METHODS OF INSTALLATION SHALL BE U.L. APPROVED FOR THAT INSTALLATION. SHOP DRAWING SUBMITTALS OF MATERIALS AND METHOD OF INSTALLATION, INCLUDING DRAWINGS, SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW.

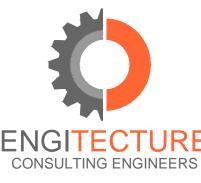
- SEE ARCHITECTURAL PLANS FOR WALL TYPES.
- 9. ALL RATED WALL PENETRATIONS SHALL BE IN ACCORDANCE WITH UNDERWRTIERS LABORATORIES PENETRATION FIRESTOP SYSTEM REQUIREMENTS. ALL MATERIALS USED IN PENETRATION FIRESTOP SYSTEMS SHALL BE APPROVED BY UNDERWRITERS LABORATORIES AND SHALL BE U.L. LABELED.
 - COMBUSTIBLE CONSTRUCTION SHALL BE FIRESTOPPED WITH NONCOMBUSTIBLE

4539 HEDGEMORE DRIVE, SUITE 101 CHARLOTTE NC 28209 704.890.2053 WWW.OSSASTUDIO.COM



PROJECT TEAM

General Contractor ECCLESIA CONSTRUCTION www.ecclesiaconstruction.com 803.327.5670



ENGITECTURE, PLLC NC License No. P-1625 4539 Hedgemore Drive, Suite 102 Charlotte, NC 28209 704-287-2193

PROJ# 23253

△ Date Description

01/30/2024 ISSUE FOR CONSTRUCTION 05/03/2024 ARCHITETURAL REVISION 1

Project Name



community church making church come alive 658 GRAHAM ROAD SANFORD NC 27311

3D COMMUNITY CHURCH Project Number

Description **DETAILS - HVAC**

23024.00

M07.02

PLUMBING GENERAL NOTES

GENERAL REQUIREMENTS

- THE P.C. SHALL FURNISH AND PAY FOR ALL LABOR, MATERIAL, EQUIPMENT, PERMITS, AND FEES REQUIRED FOR THE COMPLETE INSTALLATION OF ALL SYSTEMS IN THIS SECTION OF WORK. ALL WORK IS SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODE AND ALL OTHER APPLICABLE CODES. THE P.C. SHALL COORDINATE WITH G.C. IN REGARDS TO PROJECT TIMELINE, WORK HOURS, AND ANY BONDING OR INSURANCE REQUIREMENTS.
- ALL PLUMBING FIXTURES AND PLUMBING SYSTEM EQUIPMENT SHALL BE PROVIDED COMPLETE WITH ALL ACCESSORIES, HANGERS, VALVES, STOPS, TAILPIECES, TRAPS, FAUCETS, STRAINERS,
- ETC. REGARDLESS OF PRESENCE ON PLANS. SEE FIXTURE SCHEDULE. ALL EQUIPMENT, MATERIALS AND INSTALLATION SHALL BE GUARANTEED TO BE FREE OF DEFECTS FOR A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE OF WORK OR IN ACCORDANCE WITH THE MANUFACTURER'S STANDARD GUARANTEE, IF LONGER. EXISTING EQUIPMENT IS EXCLUDED FROM WARRANTY REQUIREMENT.
- THESE DRAWINGS ARE DIAGRAMMATIC AND SHOW GENERAL LOCATION AND ARRANGEMENT OF ALL MATERIALS AND EQUIPMENT. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS BUILDING CONSTRUCTION AND ALL OTHER WORK WILL PERMIT. 6. DO NOT SCALE DRAWINGS FOR MEASUREMENT.
- INFORMATION GIVEN IN SCHEDULES INCLUDES BOTH DESCRIPTION OF PRODUCT AND MANUFACTURER'S MODEL NUMBER. IF A CONFLICT IS PRESENT BETWEEN DESCRIPTION AND MODEL NUMBER, THE EQUIPMENT DESCRIPTION SHALL TAKE PRECEDENT. IN THE CASE OF A CONFLICT BETWEEN THE PLANS AND NOTES/SPECIFICATIONS OR CONFLICT BETWEEN INFORMATION PRESENTED ON THE PLANS OR IN THE NOTES/SPECIFICATIONS. THEN THE MOST RESTRICTIVE SHALL TAKE PRECEDENT.
- THE P.C. IS RESPONSIBLE FOR CLARIFYING ANY CONFUSION IN REGARDS TO RESPONSIBILITY OF WORK TO BE PERFORMED OR MATERIALS TO BE PROVIDED WITH THE G.C. PRIOR TO SUBMITTING A BID. THE SUBMITTAL OF THE BID BY THE CONTRACTOR WILL BE HELD AS PROOF THAT THE CONTRACTOR UNDERSTANDS THOROUGHLY AND COMPLETELY THE SCOPE OF THE WORK INVOLVED, AND HAS INCLUDED ON THE BID ALL THE NECESSARY ITEMS TO CARRY OUT THIS SECTION OF WORK.
- ALL QUESTIONS SHALL BE SUBMITTED IN RFI FORMAT TO THE ARCHITECT AND SHALL BE ADDRESSED BY THE APPROPRIATE DESIGNER OF RECORD PRIOR TO BECOMING A PROPOSED
- 10. THE P.C. SHALL REVIEW THE COMPLETE DRAWING SET. THE P.C. IS RESPONSIBLE FOR WORK EXPLICITLY SHOWN AND WORK IMPLIED. UNLESS OTHERWISE NOTED FINAL PLUMBING CONNECTION TO ALL EQUIPMENT, FIXTURES, ETC. IS THE RESPONSIBILITY OF THE P.C.

- 1. ALL ROOF PENETRATIONS, FLASHING, ETC. SHALL BE PERFORMED BY ROOFING CONTRACTOR.
- ALL LOW VOLTAGE WIRING RELATED TO PLUMBING EQUIPMENT AND SYSTEMS IS THE RESPONSIBILITY OF THE P.C. ALL HIGH VOLTAGE CONNECTIONS TO PLUMBING EQUIPMENT, INCLUDING DISCONNECTS SHALL BE PROVIDED AND INSTALLED BY THE E.C.
- THE G.C. SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ANY ACCESS DOORS RELATED TO PLUMBING SYSTEM, WITH THE EXCEPTION OF CLEANOUT COVERS BY THE P.C. THE P.C. SHALL BE RESPONSIBLE FOR COMMUNICATING SIZE AND LOCATION OF ALL REQUIRED ACCESS DOORS TO
- 4. THE P.C. SHALL EMPLOY THE SERVICES OF THE G.C. FOR CUTTING AND PATCHING OF WALLS. FLOORS & CEILINGS RELATED TO THE INSTALLATION OF PLUMBING EQUIPMENT & SYSTEMS.
- THE G.C. SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ANY WATER HEATER PLATFORMS, EITHER FLOOR/WALL MOUNTED OR SUSPENDED. THE P.C. SHALL COMMUNICATE ALL REQUIREMENTS TO THE G.C. PRIOR TO PERFORMING WORK.

- 1. ALL MATERIALS SHALL BE NEW UNLESS OTHERWISE SHOWN OR SPECIFIED. 2. PIPING MATERIALS AND FITTINGS SHALL BE AS FOLLOWS:
- A. WASTE, VENT & STORM (BELOW SLAB): PVC PIPE, PVC SOCKET FITTINGS, AND
- SOLVENT-CEMENTED FITTINGS. B. WASTE VENT & STORM (ABOVE SLAB - NON RETURN AIR PLENUM WHEN EXPLICITLY ALLOWED BY OWNER): PVC PIPE, PVC SOCKET FITTINGS, AND SOLVENT-CEMENTED
- C. WASTE, VENT & STORM (ABOVE SLAB RETURN AIR PLENUM): HUBLESS CAST IRON, JOINTS SHALL BE MADE WITH NEOPRENE COUPLINGS AND STAINLESS STEEL CLAMPS
- CONFORMING TO CISPI STANDARD 310 AND MARKED WITH NSF OR ASTM C 1540. D. DOMESTIC WATER (BELOW SLAB -3" AND BELOW): TYPE 'K' COPPER WITH WROUGHT
- COPPER FITTINGS AND BRAZED JOINTS. E. DOMESTIC WATER (BELOW SLAB -1/2" & 3/4" ONLY): TYPE 'K' COPPER TUBING, CONTINUOUS
- WITH NO JOINTS. F. DOMESTIC WATER (ABOVE SLAB 3" OR LESS): TYPE 'L' COPPER WITH SWEATED SOCKET
- FITTINGS. THREADED FITTINGS MAY BE USED AT VALVES, FIXTURES & SIMILAR. G. DOMESTIC WATER (ABOVE SLAB 4" AND LARGER): TYPE 'L' COPPER WITH ROLLED GROVED
- JOINTS AND FITTINGS. H. NATURAL GAS: SCHEDULE 40 BLACK STEEL COMPLYING WITH ANSI B36.10. ALL GAS

HAVE A THERMAL CONDUCTIVITY NOT EXCEEDING 0.27 BTU-IN/(HR-FT²-°F) OR IN ACCORDANCE WITH

- COCKS SHALL MEET ANSI B16.33 ALL DOMESTIC WATER PIPING SHALL BE INSULATED IN ACCORDANCE WITH THE APPLICABLE ENERGY CONSERVATION CODE. INSULATION SHALL BE PREFORMED MINERAL FIBER PIPE INSULATION WITH AN ALL SERVICE JACKET (ASJ) AND SELF-SEALING LAP (SSL). INSULATION SHALL
- LOCAL CODES, WHICHEVER IS MORE STRINGENT. 4. PROVIDE HANGERS AND SUPPORTS APPROVED FOR USE BY APPLICABLE PLUMBING CODE.

- INVERT ELEVATIONS SHALL BE VERIFIED PRIOR TO BEGINNING WORK. THE P.C. SHALL ENSURE PROPER SLOPES OF ALL SANITARY PIPING CAN BE MAINTAINED. THE P.C. SHALL CONTACT THE ARCHITECT AND ENGINEER IMMEDIATELY IF A PROBLEM/ISSUE IS DISCOVERED.
- 2. THE P.C. SHALL COORDINATE THE LOCATION OF ALL ROOF PENETRATIONS WITH THE ROOFING CONTRACTOR & M.C. THE P.C. AND M.C. SHALL COORDINATE PLUMBING VENT LOCATIONS TO ENSURE THAT NO PLUMBING VENTS ARE LOCATED WITHIN 10' OF ANY OUTSIDE AIR INTAKES.

THE P.C. SHALL COORDINATE WITH THE G.C. AND ARCHITECTURAL PLANS TO ENSURE NECESSARY BACKING/SUPPORTS ARE INSTALLED TO ALLOW INSTALLATION OF PLUMBING FIXTURES. THE PLUMBING CONTRACTOR SHALL COORDINATE CLOSELY WITH ALL OTHER TRADES TO AVOID

(I.E. ACCESS DOORS, SLAB/WALL/ROOF OPENINGS, ELECTRICAL CONNECTIONS, ETC.).

PIPING SHALL BE COORDINATED WITH ALL STRUCTURAL FOOTINGS AND FOUNDATIONS. PIPE SHOULD BE OFFSET TO AVOID CONTACT WITH FOOTINGS AND FOUNDATION WALLS. IF PIPING MUST RUN UNDERNEATH A FOOTING OR THROUGH A FOUNDATION WALL, THE PIPE MUST BE INSTALLED WITH A RELIEVING ARCH OR IN A PIPE SLEEVE.

CONFLICT AND ENSURE OTHER TRADES PROVIDE MEASURES TO ACCOMMODATE PLUMBING WORK

THE P.C. SHALL REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS OF PLUMBING FIXTURES.

- THE P.C. SHALL FOLLOW MANUFACTURER'S INSTRUCTIONS WHEN INSTALLING PLUMBING EQUIPMENT. ENSURE REQUIRED MAINTENANCE ACCESS AND CLEARANCES ARE MAINTAINED. THE P.C. SHALL CONTACT THE ARCHITECT AND ENGINEER IF A CONFLICT EXISTS BETWEEN THESE PLANS AND MANUFACTURER INSTRUCTIONS.
- THE P.C. SHALL BE RESPONSIBLE FOR EXECUTING ALL CODE REQUIRED TESTS AND INSPECTIONS INCLUDING, BUT NOT LIMITED TO, LEAK & PRESSURE TESTING OF SANITARY, VENT, AND DOMESTIC WATER PIPING AND SANITIZING OF WATER PIPING.
- ENSURE PIPING LOCATED ON EXTERIOR WALLS (OR OTHER WALLS EXPOSED TO FREEZING CONDITIONS) IS INSTALLED ON WARM-SIDE OF WALL INSULATION.
- ANY NOTCHING, DRILLING, BORING OR OTHER ALTERATION TO BUILDING STRUCTURE SHALL BE PERFORMED IN A CODE APPROVED METHOD AND NOT THREATEN THE INTEGRITY OF THE BUILDING
- SUPPORT ALL PIPING IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODE. ANY SUSPENDED MATERIALS SHALL BE DIRECTLY SUPPORTED BY THE BUILDING STRUCTURE. DO NOT ATTACH ANYTHING TO THE ROOF DECK.
- PENETRATIONS OF ALL EXTERIOR WALLS, FLOORS AND CEILINGS SHALL BE SEALED IN AN AIR TIGHT MANNER AND IN ACCORDANCE WITH THE APPLICABLE ENERGY CONSERVATION CODE.
- CLEANOUT PLUGS SHALL BE INSTALLED IN ACCORDANCE WITH PLUMBING CODE REQUIREMENTS. PROVIDE CLEANOUTS AS PLANS INDICATED AND AT THE BASE OF ALL WASTE STACKS, AT EVERY FOUR 45 DEGREE TURNS, AT EVERY 100 FEET. CLEANOUTS SHALL BE PLACED IN READILY
- ACCESSIBLE LOCATIONS. DOMESTIC WATER BRANCH LINES SERVING MORE THAN ONE (1) FIXTURE SHALL INCLUDE A
- SHUT-OFF VALVE. LABEL VALVE AND LOCATE AS CLOSE TO RISER/MAIN AS POSSIBLE. VALVES NOT DIRECTLY AT EQUIPMENT SHALL BE LABELED INDICATING THE FIXTURE OR AREA
- 0. THE WATER HEATER SHALL BE FILLED WITH WATER AND PURGED AS SOON AS INSTALLED OR IN NO EVENT LATER THAN ELECTRIC HOOK-UP. COPPER PIPING SHALL BE PROTECTED AGAINST CONTACT WITH MASONRY OR DISSIMILAR METALS. ALL HANGERS, SUPPORTS, ANCHORS, AND CLIPS SHALL BE COPPER OR COPPER PLATED. WHERE
- COPPER PIPING IS CARRIED ON IRON TRAPEZE HANGERS WITH OTHER PIPING, SATISFACTORY AND PERMANENT ELECTROLYTIC ISOLATION MATERIAL SHALL PROTECT THE COPPER AGAINST WHERE COPPER PIPING IS SLEEVED THROUGH MASONRY, SLEEVES SHALL BE COPPER OR RED BRASS. WHERE COPPER MUST BE CONCEALED IN A MASONRY PARTITION OR AGAINST MASONRY,
- CONTACT SHALL BE PREVENTED BY COATING THE COPPER HEAVILY WITH ASPHALTIC ENAMEL AND PROVIDING 15# ASPHALT SATURATED FELT BETWEEN THE PIPE AND MASONRY. ALL PIPE INSULATION SHALL RUN CONTINUOUSLY THROUGH FLOORS, WALLS, AND PARTITIONS. PIPE INSULATION SHALL BE MITERED AT ELBOWS AND TEES TO ENSURE COMPLETE COVERAGE OF
- 4. PROVIDE QUARTER TURN SHUTOFF VALVES ON THE FIXTURE SUPPLY TO EACH PLUMBING
- FIXTURE, APPLIANCE, OR MECHANICAL EQUIPMENT.
- 5. VACUUM BREAKERS SHALL BE PROVIDED FOR ALL FIXTURES TO WHICH HOSES MAY BE ATTACHED. VACUUM BREAKERS SHALL BE PERMANENTLY ATTACHED. 6. THE P.C. SHALL PROVIDE WATER HAMMER PROTECTION ON ALL WATER DISTRIBUTION PIPING SERVING EQUIPMENT WITH QUICK-CLOSING VALVES (ICE MAKERS, FLUSH VALVES, WATER
- COOLERS, ETC.) SEE WATER HAMMER ARRESTOR ARRESTOR SCHEDULE. ACCESS DOORS SHALL BE PROVIDED FOR ALL VALVES AND DEVICES REQUIRING ACCESS WHEN LOCATED IN WALLS OR ABOVE INACCESSIBLE CEILING CONSTRUCTION. ACCESS DOORS SHALL BE
- FIRE RATED WHERE INSTALLED IN FIRE RATED ASSEMBLIES. 8. THE P.C. SHALL BE RESPONSIBLE FOR PROTECTING ALL PLUMBING EQUIPMENT FROM FOREIGN MATERIAL DURING CONSTRUCTION (PAINT, SPACKLE, ETC.). UPON COMPLETION OF WORK THE PLUMBING CONTRACTOR SHALL CLEAN, WASH, ETC ALL ITEMS AND EQUIPMENT WITHIN THE SCOPE OF WORK AND LEAVE ALL ITEMS BRIGHT AND CLEAN.

SPECIAL NOTICE TO CONTRACTORS

DRAWING IS DIAGRAMMATIC IN NATURE AND NOT INTENDED TO INDICATE FINAL INSTALLED LOCATIONS OF EQUIPMENT OR PIPING. DRAWINGS DEMONSTRATES

DESIGN INTENT ONLY. CONTRACTOR(S) ARE RESPONSIBLE FOR FINAL

SHALL BE NO ALLOWANCES GIVEN FOR THE LACK OF CONTRACTOR

ASSOCIATED WITH DEVIATIONS FROM THE PERMITTED PLANS.

COORDINATION. MAINTAIN ALL CODE AND MANUFACTURER REQUIRED

CLEARANCES TO ALL EQUIPMENT AND DEVICES. CONTRACTOR(S) ARE

COORDINATION AND THE PRODUCTION OF ACCURATE, DIMENSIONED SHOP DRAWINGS AS REQUIRED TO PROVIDE A COMPLETE INSTALLATION. THERE

RESPONSIBLE FOR ANY AND ALL CONSTRUCTION, DESIGN, ETC, EXPENSES

- ALL CONTRACTORS (GENERAL CONTRACTOR AND SUB-CONTRACTORS) BIDDING THIS PROJECT ARE REQUIRED TO VISIT THE JOB SITE AND VERIFY THE EXISTING CONDITIONS PRIOR TO SUBMITTING THEIR BID. CONTRACTORS ARE TO CAREFULLY REVIEW ALL CONSTRUCTION DOCUMENTS AND NOTE ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND THE CONDITIONS OBSERVED AT THE JOB SITE PRIOR TO SUBMISSION OF ANY BID. THE BUILDING OWNER REPRESENTATIVE MAY BE CONTACTED FOR ACCESS TO THE JOB SITE.
- PRIOR TO CONSTRUCTION CONTRACTORS ARE RESPONSIBLE FOR VERIFYING THE LOCATION AND CONDITION OF THE FOLLOWING:

B. ALL REQUIRED CONNECTIONS TO THE BUILDING STRUCTURE

- A. ALL POINTS OF CONNECTION TO BUILDING UTILITIES AND/OR SYSTEMS INCLUDING, BUT NOT LIMITED TO, GAS, WATER, SEWER, VENT, ELECTRICAL, MECHANICAL SYSTEMS, DUCTWORK, EXHAUST/OUTSIDE AIR, SECURITY, FIRE/LIFE SAFETY, DATA, AND PHONE.
- C. ALL REQUIRED BUILDING PENETRATIONS. IT IS RECOMMENDED THAT THE CONTRACTOR X-RAY ALL PENETRATIONS THRU CONCRETE AND MASONRY.
- ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND THE CONDITIONS OBSERVED SHALL BE BROUGHT TO THE ATTENTION, IN WRITING, TO THE ARCHITECT AND/OR
- ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION. SEE ARCHITECTURAL PLANS FOR CONTACT INFORMATION.

- WATER HAMMER ARRESTOR SCHEDULE UNIT SIZE (CONN. SIZE) MFG & MODEL (OR EQUAL) IND. FIXTURE SEE FIXTURE SCHEDULE SIOUX CHIEF "MINI-RESTER" SIOUX CHIEF "HYDRA-RESTER" 12 - 32 B (3/4") SIOUX CHIEF "HYDRA-RESTER" 33-60 C (1") SIOUX CHIEF "HYDRA-RESTER"
- WATER HAMMER ARRESTOR NOTES: LOCATE SHOCK ARRESTORS IN ACCESSIBLE LOCATION OR PROVIDE SIOUX CHIEF
- BRAND ARRESTORS ONLY. SEE PLAN, RISERS, SCHEDULES FOR ARRESTER LOCATIONS. IF LOCATION NOT INDICATED INSTALL IN ACCORDANCE WITH MANUFACTURER REQUIREMENTS.

	VALVE SC	HEDULE
TAG	DESCRIPTION	MFG & MODEL (OR EQUAL)
BV-1	FULL-PORT BALL VALVE	WATTS LFB6081
BV-2	BALANCING VALVE	BELL & GOSSETT CB (CIRCUIT SETTER PLUS, W/ TEST PORTS)
CV-1	BRONZE CHECK VALVE	WATTS CV
TMV-1	THERMO. MIX. VALVE	WATTS LFMMV (0.5 TO 20 GPM; 1.2" TO 1") SET TO 110°F DISCHARGE

- SEE PLAN FOR SIZE. VALVE SIZE TO EQUAL LINE SIZE.
- . BALL VALVES TO INCLUDE REMOVABLE HANDLES. B. IF AVAILABLE, VALVES MAY BE THREADED OR SWEATED CONNECTIONS. USE
- EXTREME CARE AND LOW TEMP SOLDER TO PROTECT VALVE SEATS IF SWEATED CONNECTIONS ARE USED. 4. TMV-1 SHALL COMPLY WITH ASSE 1070,

	BACK FLOW PREVENTER A	ASSEMBLY REQUIREMEN	ITS
TYPE OF EQUIPMENT ON SYSTEM	METHOD OF CROSS CONNECTION CONTROL	MANUFACTURE AND MODEL NUMBER	REMARKS
CARBONATOR SODA SYSTEM	DUAL CHECK VALVE WITH ATMOSPHERIC PORT	WATTS SD3-QT ASSE 1022/1024 CERT	STAINLESS STEEL BODY WITH QUARTER TURN VALVE SS STRAINER.
ICE MACHINE	REDUCED PRESSURE ZONE ASSEMBLY	WATTS LF-009-QT-S	STAINLESS STEEL BODY WITH QUARTER TURN VALVE BRONZE STRAINER.
TEA MACHINE	DUAL CHECK VALVE WITH ATMOSPHERIC PORT	WATTS SD3-QT ASSE 1022/1024 CERT	STAINLESS STEEL BODY WITH QUARTER TURN VALVE BRONZE STRAINER.
WATER SERVICE	REDUCED PRESSURE ZONE ASSEMBLY	WATTS LF-919-QT	LEAD FREE CAST COPPER WITH QUATER TURN
1. CONTRACTO	R SHALL PROVIDE INDIVIDUAL	BACKFLOW PREVENTER	RS FOR EACH PIECE

3. BRONZE BODIED BACKFLOW PREVENTERS ARE PERMISSABLE IF ALLOWED BY LOCAL

2. EACH BACKFLOW PREVENTER MUST HAVE TESTING PORTS.

	PLUMBING AI	BE	BREVIA	TIONS
AAV	AIR ADMITTANCE VALVE		HR	HOUR
ADA	AMERICANS WITH DISABILITIES ACT		HW	DOMESTIC HOT WATER
AFF	ABOVE FINISHED FLOOR		HWR	DOMESTIC HOT WATER RETURN
BFP	BACKFLOW PREVENTER		IN.	INCH(ES)
BTU	BRITISH THERMAL UNIT		KW	KILOWATT
BTU/HR	BRITISH THERMAL UNIT PER HOUR		LV	LAVATORY
CAP.	CAPACITY		MAX.	MAXIMUM
СО	CLEANOUT		MBH	ONE THOUSAND BTU/HR
CV	CHECK VALVE		M.C.	MECHANICAL CONTRACTOR
CW	DOMESTIC COLD WATER		MIN.	MINIMUM
DEMO	DEMOLISH <u>OR</u> DEMOLITION		N/A	NOT APPLICABLE
DIA.	DIAMETER		NTS	NOT TO SCALE
DWV	DRAIN, WASTE, AND VENT		P.C.	PLUMBING CONTRACTOR
E.C.	ELECTRICAL CONTRACTOR		PSI	POUNDS PER SQUARE INCH
ET	EXPANSION TANK		S	SINK
°F	DEGREES FAHRENHEIT		TEMP.	TEMPERATURE
FCO	FLOOR CLEANOUT		TMV	THERMOSTATIC MIXING VALVE
FT	FOOT <u>OR</u> FEET		TYP.	TYPICAL
GAL.	GALLON(S)		V	VOLT
G.C.	GENERAL CONTRACTOR		W	WATT
GPH	GALLONS PER HOUR		WC	WATER CLOSET
GPM	GALLONS PER MINUTE		WH	WATER HEATER
HP	HORSEPOWER		WHA	WATER HAMMER ARRESTOR

INSULATION SCHEDULE									
FLUID RUN 1-1/4" 2-1/2" 5" TO AN CONTROL C									
DOMESTIC COLD WATER 40-60		1/2"	1/2"	1/2"	1/2"				
105 OR GREATER	1/2"	1"	1-1/2"	1-1/2"	1-1/2"				
	FLUID TEMPERATURE RANGE 40-60	FLUID RUN OUTS UP TO 1" 40-60 1/2" 105 OR 1/2"	FLUID TEMPERATURE RANGE	FLUID TEMPERATURE RANGE RUN OUTS UP TO 1" 1-1/4" TO 2" TO 4" 1/2" 1/2" 1/2" 1/2" 1/2" 1/2" 1/2" 1/2" 1/2" 1/2" 1/2" 1/2" 1/2" 1/2" 1/2"	FLUID TEMPERATURE RANGE RUN OUTS UP TO 1" 1-1/4" TO 2" 2-1/2" 5" TO 6" 40-60 1/2" 1/2" 1/2" 1/2" 105 OR 1/2" 1" 1-1/2" 1-1/2"				

PLUMBING DRAWING SYMBOLS									
<u>—ф</u>	FULL PORT QUARTER TURN BALL VALVE								
_ _	CHECK VALVE								
— D —	GLOBE VALVE								
	PRESSURE REDUCING VALVE								
	TEMPERATURE AND PRESSURE RELIEF VALVE								
- } -	STRAINER								
WHA	WATER HAMMER ARRESTOR								
<u> </u>	UNION								
6	PRESSURE GAUGE								
—	INLINE PUMP								
(FD)	FLOOR DRAIN								
•	CONNECT TO EXISTING								
•	DISCONNECT FROM EXISTING								
$\langle x \rangle$	KEY NOTE TAG								

IAMETER OF	CONNECTI DRAIN O	ED TO ANY PORTHE BUILD CHES OF THE	DRAINAGE FIX DRTION OF TH ING SEWER, IN BUILDING DRA	E BUILDING ICLUDING
	7 ₆ inch	1/2 inch	per foot	1/2 inch
11/4			1	1
11/2			3	3
2			21	26
21/2			24	31
3		36	42	50
4		180	216	250
5		390	480	575
6		700	840	1,000
8	1,400	1,600	1,920	2,300
10	2,500	2,900	3,500	4,200
12	3,900	4,600	5,600	6,700
15	7,000	8,300	10,000	12,000

a. The minimum size of any building drain serving a water closet shall be 3

No building sewer shall be less than 4 inches in size.

c. No more than three water closets. d. Minimum of 2-inch diameter underground.

SECTION 704 DRAINAGE PIPING INSTALLATION

704.1 Slope of horizontal drainage piping. Horizontal drainage piping shall be installed in uniform alignment at uniform slopes. The slope of a horizontal drainage pipe shall be not less than that indicated in Table 704.1.

SLOPE OF HORIZONTAL DRAINAGE PIPE

SIZE (inches)	MINIMUM SLOPE (Inch per loot)
2 ¹ / ₂ or less	1/4
3 to 6	1/8
8 or larger	1/16

For SI: 1 inch = 25.4 mm, 1 inch per foot = 83.33 mm/m.

704.2 Change in size. The size of the drainage piping shall not be reduced in size in the direction of the flow. A 4-inch by 3-inch (102 mm by 76 mm) water closet connection shall not be considered as a reduction in size.

704.3 Connections to offsets and bases of stacks. Horizontal branches shall connect to the bases of stacks at a point located not less than 10 times the diameter of the drainage stack downstream from the stack. Horizontal branches shall connect to horizontal stack offsets at a point located not less than 10 times the diameter of the drainage stack downstream from the upper stack.

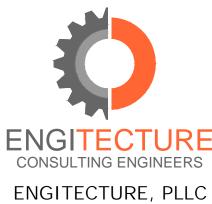


4539 HEDGEMORE DRIVE, SUITE 101 CHARLOTTE NC 28209 704.890.2053 WWW.OSSASTUDIO.COM



PROJECT TEAM

General Contractor ECCLESIA CONSTRUCTION www.ecclesiaconstruction.com 803.327.5670



NC License No. P-1625 4539 Hedgemore Drive, Suite 102 Charlotte, NC 28209 704-287-2193 PROJ# 23253

01/30/2024 ISSUE FOR CONSTRUCTION

Project Name



658 GRAHAM ROAD

SANFORD NC 27311

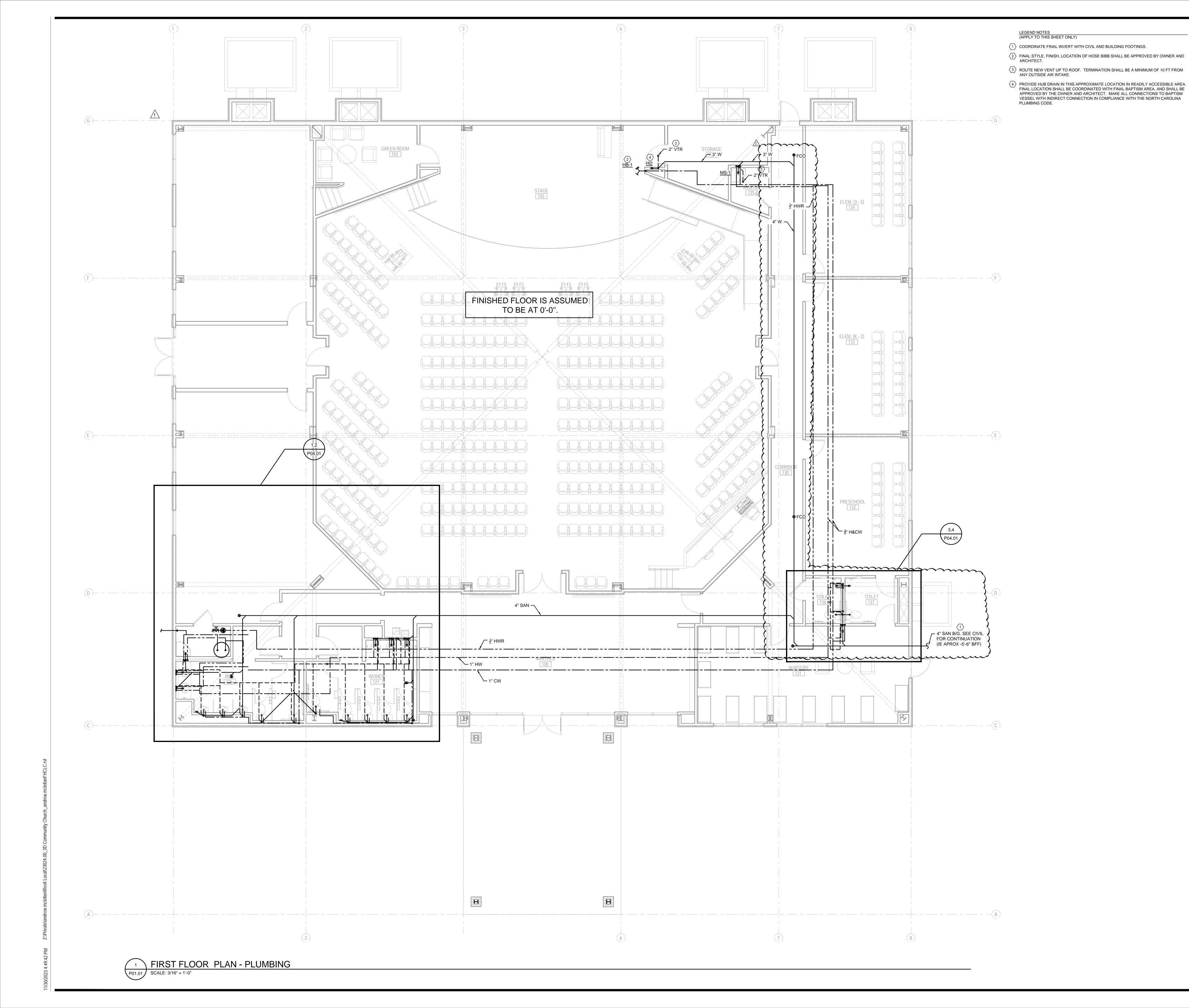
3D COMMUNITY CHURCH

Project Number 23024.00

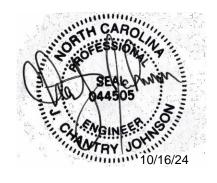
PLUMBING

Description **NOTES & ABBREVIATIONS**

P00.01







PROJECT TEAM

General Contractor ECCLESIA CONSTRUCTION www.ecclesiaconstruction.com 803.327.5670



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704-287-2193 PROJ# 23253 △ Date Description

01/30/2024 ISSUE FOR CONSTRUCTION 08/27/2024 REVISION 2

↑ 08/27/2024 REVISION 2 ↑ 10/14/2024 RTAP NO 1

Project Name



community church
making church come alive

658 GRAHAM ROAD
SANFORD NC 27311

Client

3D COMMUNITY CHURCH

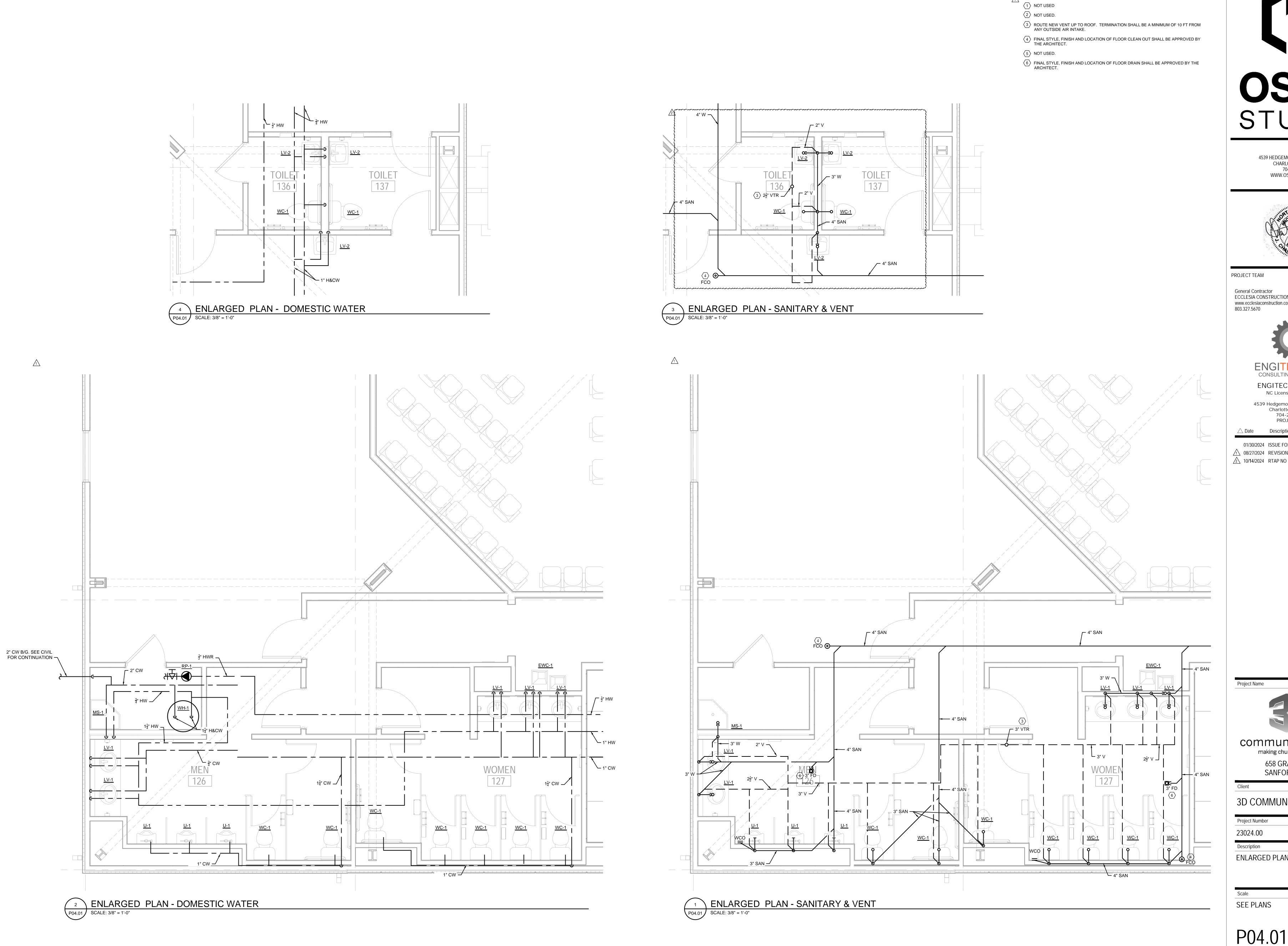
Project Number

23024.00

FLOOR PLAN - PLUMBING

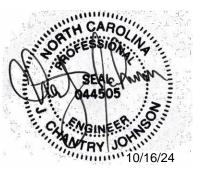
Scale
SEE PLANS

P01.01



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△ Date Description

01/30/2024 ISSUE FOR CONSTRUCTION △ 08/27/2024 REVISION 2 2 10/**1**4/2024 RTAP NO 1

Project Name



658 GRAHAM ROAD SANFORD NC 27311

3D COMMUNITY CHURCH

ENLARGED PLANS- PLUMBING

	ELECTRIC WATER HEATER SCHEDULE											
MARK	LOCATION	SYSTEM AND/OR SERVICE	TYPE	STORAGE CAPACITY	RECOVERY @ 100°F RISE	ELECTIRCAL INPUT			BASIS OF DESIGN (1)	NOTES		
IVIAIXIX				GAL	GAL/HR	TOTAL kW	VOLT	PHASE	DAGIO OI DEGIGIV (1)	NOTES		
WH-1	FIRST FLOOR JANITORS CLOSET	DOMESTIC HOT WATER	ELECTRIC TANK TYPE	50	37	9	208	3	AO SMITH DRE			

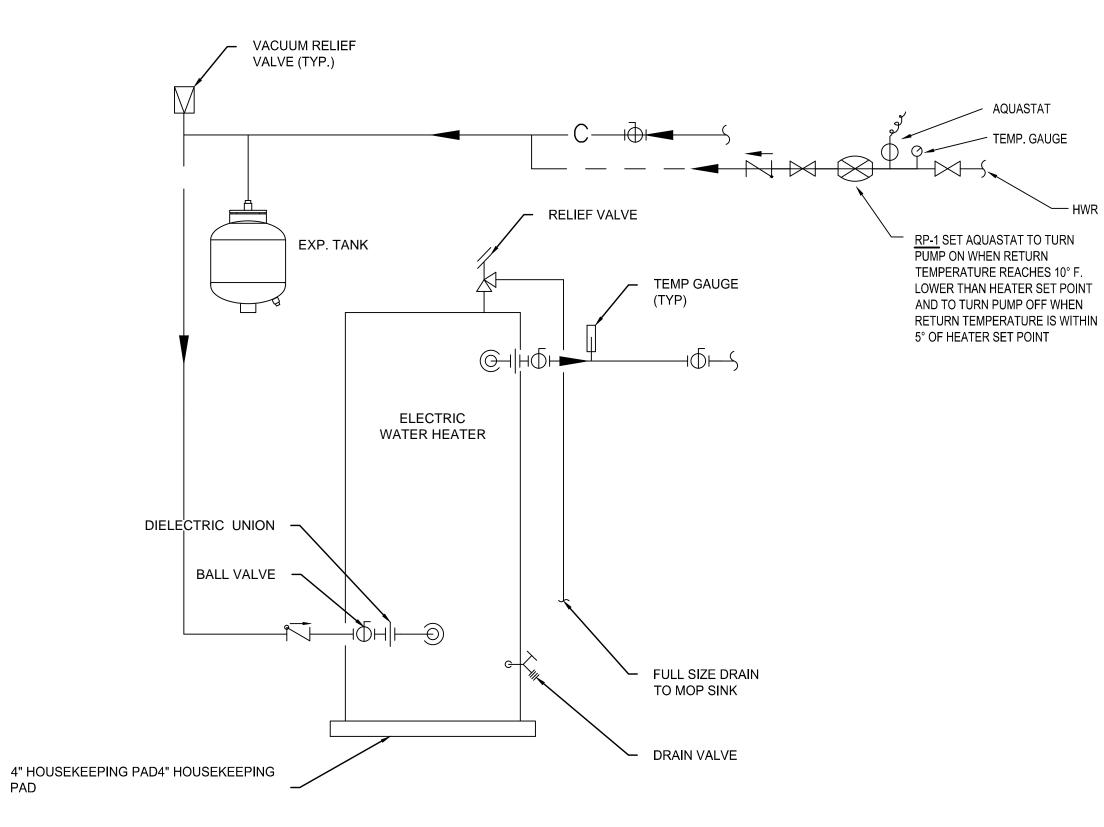
1) PROVIDE BASIS OF DESIGN OR EQUAL.

1) PROVIDE WITH TIMER.

	PLUMBING PUMP SCHEDULE										
		TYPE	CIRCULATING FLUID			ELECTRICAL MOTOR					
MARK	LOCATION		FLUID	FLOW	HEAD	NOMINAL POWER	PHASE	VOLT	BASIS OF DESIGN	REMARKS	
				GPM	FT	HP					
RP-1	FIRST FLOOR JANITORS CLOSET	INLINE	DOMESTIC HOT WATER	3.8	3	50 W	1	120	TACO 003	1	

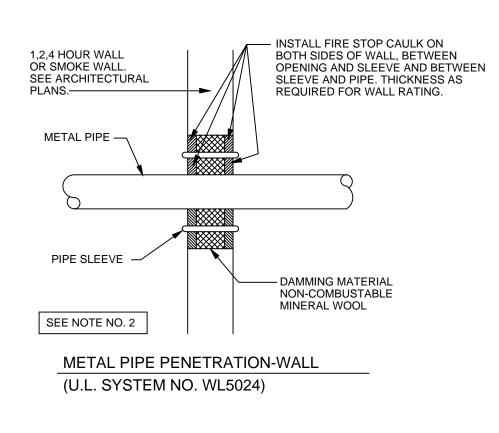
1) ALL FINAL PLUMBING FIXTURE SUBMITTALS SHALL BE REVIEWED BY THE ARCHITECT AND OWNER PRIOR TO PURCHASING AND ORDERING

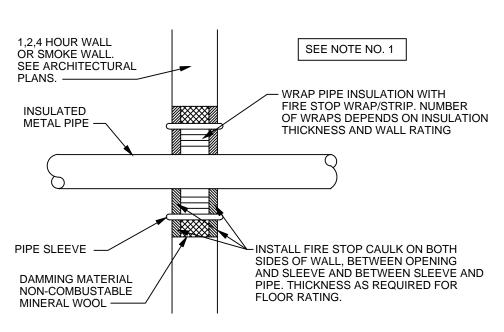
2) COORDINATE ALL FINAL PLUMBING FIXTURE SELECTIONS WITH MILL WORK SHOP DRAWINGS.



FLOOR MOUNTED ELECTRIC WATER HEATER DETAIL SCALE: NTS \setminus P07.01 /

1. GC TO PROVIDE SUPPORT FOR EXPANSION TANK. 2. PROVIDE VACUUM BREAKER ON BOTTOM INLET WATER HEATER. . PROVIDE HEAT TRAPS IN ACCORDANCE WITH THE LOCAL ENERGY CONSERVATION CODE.

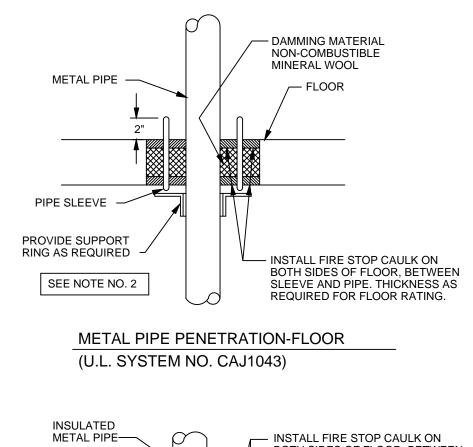


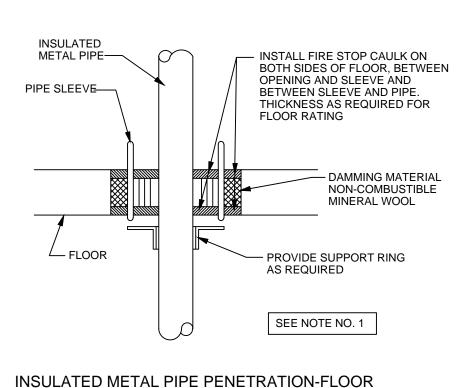


RATED PENETRATION DETAIL

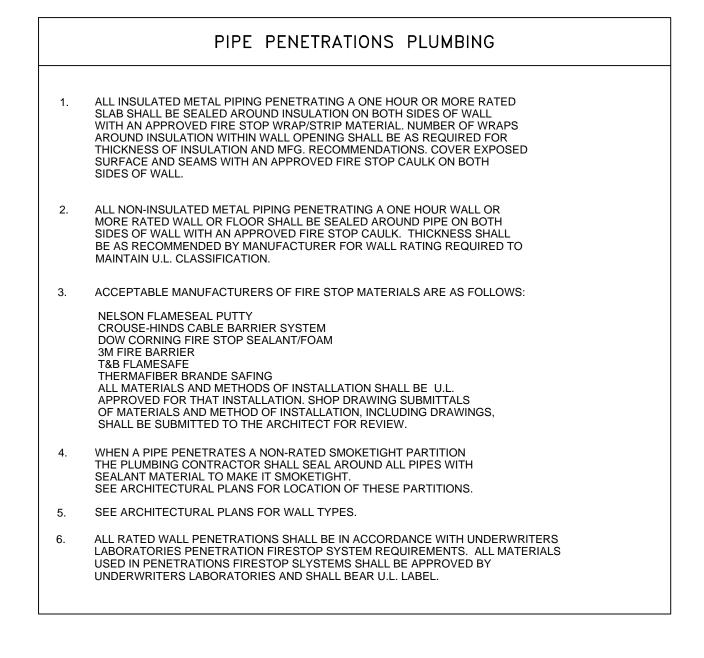
INSULATED METAL PIPE PENETRATION-WALL (U.L. SYSTEM NO. WL5024)

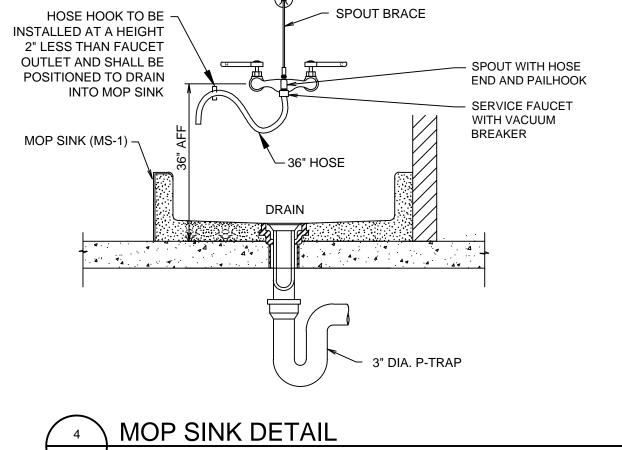
SCALE: NTS

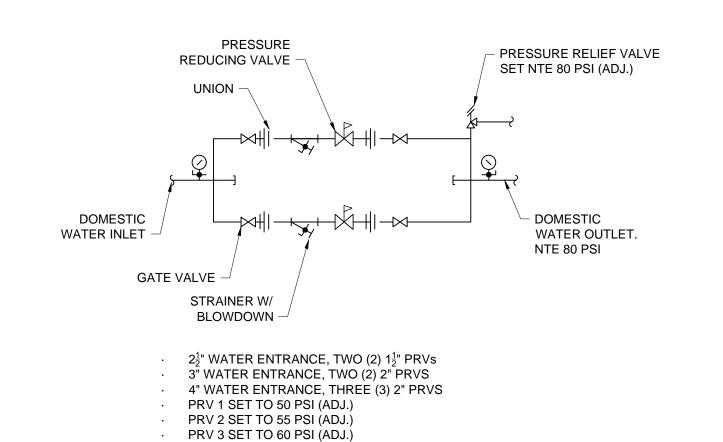




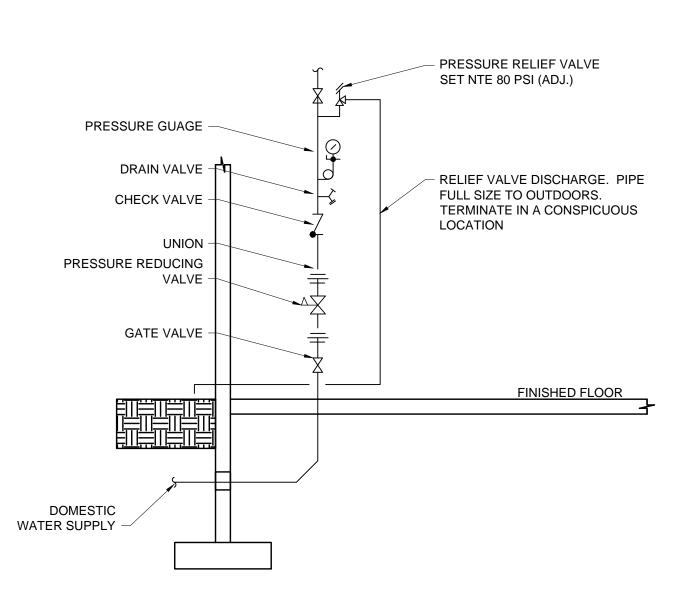
(U.L. SYSTEM NO. CAJ10)



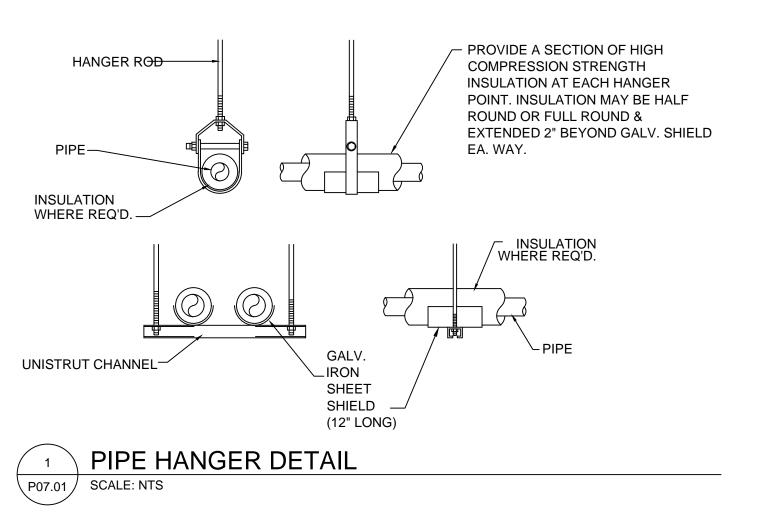




\ PRESSURE REDUCING STATION DETAIL P07.01 SCALE: NTS



WATER SERVICE DETAIL P07.01 SCALE: NTS



1. ATTACH SUPPORTS FOR ALL PIPING SUSPENDED FROM THE STEEL STRUCTURE TO THE TOP CORD OF JOISTS OR BEAMS. 2. PROVIDE COPPER OR PLASTIC COATED HANGERS FOR NON-INSULATED



4539 HEDGEMORE DRIVE, SUITE 101 CHARLOTTE NC 28209 704.890.2053 WWW.OSSASTUDIO.COM



PROJECT TEAM

General Contractor ECCLESIA CONSTRUCTION www.ecclesiaconstruction.com 803.327.5670



CONSULTING ENGINEERS ENGITECTURE, PLLC NC License No. P-1625 4539 Hedgemore Drive, Suite 102 Charlotte, NC 28209 704-287-2193 PROJ# 23253

△ Date Description

01/30/2024 ISSUE FOR CONSTRUCTION

Project Name



658 GRAHAM ROAD SANFORD NC 27311

3D COMMUNITY CHURCH

Project Number 23024.00

Description **DETAILS - PLUMBING**

Scale

P07.01