PHASE 2
ADDITION TO
RIVER of LIFE CHURCH

8411 OCEAN HIGHWAY
SUNSET BEACH
BRUNSWICK COUNTY
NORTH CAROLINA

SCOPE OF WORK:

1. THE BUILDING IS EXISTING. THE ASSEMBLY AREA SHALL HAVE THE EXISTING STAGE REMOVED.

2. ADD TWO BAYS TO THE EXISTING BUILDING. THIS WILL ENLARGE THE ASSEMBLY AND ADD CLASSROOMS AND TWO TOILETS.

3. THE KITCHEN AND PANTRY WILL BE REDONE. THERE WILL BE NEW EQUIPMENT INSTALLED. THE NEW RANGE WILL BE A RESIDENTIAL MODEL, SO NO COMMERCIAL HOOD IS REQUIRED.

4. THE EXISTING CEILING IN THE ASSEMBLY ROOM WILL BE REMOVED ALONG WITH THE EXISTING FLOORING. THERE WILL BE AN EXTENSION TO THE VESTIBULE, FINISHES TO MATCH EXISTING.

5. INSTALL A NEW COMMERCIAL FIRE SPRINKLER SYSTEM WHICH WILL SERVE THE EXISTING BUILDING AND THE ENTIRE NEW EXTENSION.

6. THE WORK ALSO INCLUDES ALL OF THE SITE WORK DRAWINGS AND SPECIFICATIONS BY THE CIVIL ENGINEER.

7. THE METAL BUILDING BAY ADDITION STRUCTURE SHALL MATCH THE EXSTING STRUCTURE. THE METAL ROOF SHALL MATCH THE EXISTING AND THE METAL SIDING SHALL MATCH THE EXISTING. INCLUDE AN ALTERNATE TO REPLACE ALL OF THE ROOF MATERIAL AND THE SIDING MATERIAL.

8. COORDINATE ALL WORK WITH THE H/AC AND ELECTRICAL.

9. REPAINT EXISTING WALLS WHERE NOTED. INSTALL NEW FLOOR AND CEILINGS AS NOTED IN EXISTING AREAS.

10. INCLUDE AN ALLOWANCE OF $50,000 FOR ADDITIONAL LIGHTS STAGE AND FINISH UPGRADES TO THE EXISTING CLASSROOMS AND ASSEMBLY AREA.

GENERAL NOTES:

1. ALL WORK TO BE DONE TO MEET LOCAL CODES AND ALL REGULATIONS OF THE TOWN OF CALABASH AND BRUNSWICK COUNTY.

2. VERIFY ALL EXISTING CONDITIONS BEFORE CONSTRUCTION. NOTIFY THE ARCHITECT ABOUT ANY DISCREPANCIES.

3. COORDINATE ALL WORK WITH THE OWNER'S SCHEDULE. GO OVER EACH WEEKS WORK ITEMS WITH THE OWNER SO THEY CAN PLAN AHEAD OF TIME.

4. COORDINATE ANY UTILITY DISRUPTIONS WITH THE TOWN, THE COUNTY, AND THE OWNER.

5. KEEP THE JOB SITE CLEAN AND SAFE FOR VISITORS.

6. SECURE THE PROPERTY EVERY NIGHT TO PROTECT THE CHURCH'S PROPERTY.

7. PROVIDE A WALL PROTECTION SO THE EXISTING SANCTUARY CAN BE USED AS LONG AS POSSIBLE. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO GET THE ASSEMBLY AREA BACK IN OPERATION.

INDEX TO DRAWINGS

SHEET NO.	SHEET TITLE
CS	COVER SHEET
B1	SCHEDULE B
ARCHITECTURAL	
A1	DEMOLITION PLAN
A2	NEW FLOOR PLAN
A3	REFLECTED CEILING PLAN
A4	DOOR & FINISH SCHEDULES
A5	INTERIOR ELEVATIONS
A6	LIFE SAFETY PLAN—EGRESS
A7	EXTERIOR ELEVATIONS
STRUCTURAL PLAN	
S1	STRUCTURAL NOTES
S2	STRUCTURAL DETAILS
S3	FOUNDATION DETAILS
S4	STEEL BUILDING FOUNDATION

SHEET NO.	SHEET TITLE
PLUMBING, MECHANICAL & ELECTRICAL	
P1	PLUMBING NOTES & DETAILS
P2	FLOOR PLAN – WASTE
P3	FLOOR PLAN – WATER
M1	MECHANICAL NOTES & DETAILS
M2	FLOOR PLAN—HVAC
E1	ELECTRICAL NOTES & DETAILS
E2	FLOOR PLAN—POWER
E3	FLOOR PLAN—LIGHTING
E4	ELECTRICAL SCHEDULES

SITE DRAWINGS AND SPECIFICATIONS ARE A PART OF THIS SET

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SHALLOTTE, NC 28470
910-755-5872

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5120

BID SET

CERT NO.
52549

SEPTEMBER 1, 2026
PROJECT # 2402

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BID SET
SEPTEMBER 1, 2026

APPENDIX B

2018 BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

(EXCEPT ONE- AND TWO-FAMILY DWELLINGS AND TOWNHOUSES)

Name of Project: RIVER OF LIFE CHURCH
Address: 8411 OCEAN HIGHWAY Zip Code 28468
Owner/Authorized Agent: BRIAN GARRETT Phone # (91)061-71078 E-Mail BGARCHITECTS1@GMAIL.COM
Owned By: ☐ City/County ☒ Private ☐ State
Code Enforcement Jurisdiction: ☒ City SUNSET BEACH ☒ County BRUNSWICK ☐ State ______

CONTACT: BRIAN GARRETT

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	BRIAN D GARRETT ARCH		5120	(91)0617-1078	BGARCHITECTS1@GMAIL.COM
Civil	MCGILL ASSOCIATES		28470	(91)0755-5872	TOM,MANNINO@MCGILLASSOCIATES.COM
Electrical	TOPSAIL ENGINEERING		018518	(91)0270-3747	OFFICE@TOPSAILENGINEERING.COM
Fire Alarm	TOPSAIL ENGINEERING		018518	(91)0270-3747	OFFICE@TOPSAILENGINEERING.COM
Plumbing	TOPSAIL ENGINEERING		23933	(91)0270-3747	OFFICE@TOPSAILENGINEERING.COM
Mechanical	TOPSAIL ENGINEERING		23933	(91)0270-3747	OFFICE@TOPSAILENGINEERING.COM
Sprinkler-Standpipe				( )	
Structural	SCOTT EVERETT PE		04889	(843362-2027	EVERETTENGINEERING@GMAIL.COM
Retaining Walls > 5 feet High				( )	
Other				( )	

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

2018 NC BUILDING CODE: ☐ New Building ☐ Shell/Core ☐ 1st Time Interior Completions
☒ Addition ☐ Phased Construction—Shell Core

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

CONSTRUCTED: (date) 9/17/2015 CURRENT USE(S) (Ch. 3): CHURCH
RENOVATED: (date) ______ PROPOSED USE(S) (Ch. 3): CHURCH
OCCUPANCY CATEGORY (Table 1604.5): Current: A3 Proposed: A3

BASIC BUILDING DATA

Construction Type: (check all that apply) ☐ I-A ☐ I-B ☐ II-A ☐ II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ☒ V-B
Sprinklers: ☐ No ☐ Partial ☒ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
Standpipes: ☐ No Class ☐ I ☐ II ☐ III ☒ Wet ☐ Dry
Primary Fire District: ☐ No ☒ Yes OIB Flood Hazard Area: ☒ No ☐ Yes
Special Inspections Required: ☒ No ☐ Yes

GROSS BUILDING AREA TABLE

Floor	Existing (sq ft)	New (sq ft)	Subtotal
3rd Floor			
2nd Floor			
Mezzanine			
1st Floor	7541 SF	3752 SF	11,293 SF
Basement			
TOTAL			11,293 SF

ALLOWABLE AREA

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

Accessory Occupancy Classification(s): ______
Incidental Uses (Table 509): ______
This separation is not exempt as a Nonseparated Use (see exceptions).
Special Uses (Chapter 4 – List Code Sections): ______
Special Provisions: (Chapter 5 – List Code Sections): ______
Mixed Occupancy: ☐ No ☒ Yes Separation: ______ Hr. Exception: ______
☒ Non-separated Use (508.3)
☐ Separated Use (508.4)—See below for area calculations for each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

Select one

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

______ + ______ = ______ ≤ 1.00

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.24 AREA	(C) AREA FOR FRONTAGE INCREASE1, 5	(D) ALLOWABLE AREA PER STORY OR UNLIMITED2, 3

1. Frontage area increases from Section 506.2 are computed thus:
   a. Perimeter which fronts a public way or open space having 20 feet minimum width = ______ (F)
   b. Total Building Perimeter = ______ (P)
   c. Ratio (F/P) = ______ (F/P)
   d. W = Minimum width of public way = ______ (W)
2. Unlimited area applicable under conditions of Section 507.
3. Maximum Building Area = total number of stories in the building × D (maximum 3 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 with Table 412.3.1.
5. Frontage increase is based on the unsprinklered area value in Table 506.2.

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet (Table 504.3)	40'	21'-6"	
Building Height in Stories (Table 504.4)	1	1	

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

FIRE PROTECTION REQUIREMENTS

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

* Indicate section number permitting reduction

PERCENTAGE OF WALL OPENING CALCULATIONS N/A

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

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: ☒ Yes ☐ No
Exit Signs: ☒ Yes ☐ No
Fire Alarm: ☒ Yes ☐ No
Smoke Detection Systems: ☒ Yes ☐ No
Carbon Monoxide Detection: ☐ Yes ☒ No

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: A-6

- ☐ Fire and/or smoke rated wall locations (Chapter 7)
- ☐ Assumed and real property line locations (if not on the site plan)
- ☐ Exterior wall opening area with respect to distance to assumed property lines (705.8)
- ☒ Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2)
- ☒ Occupant loads for each area
- ☒ Exit access travel distances (1017)
- ☒ Common path of travel distances [Tables 1006.2.1 & 1006.3.2(1)]
- ☐ Dead end lengths (1020.4)
- ☒ Clear exit widths for each exit door
- ☒ Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
- ☒ Actual occupant load for each exit door
- ☐ A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
- ☒ Location of doors with panic hardware (1010.1.10)
- ☐ Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
- ☐ Location of doors with electromagnetic egress locks (1010.1.9.9)
- ☐ 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 N/A
(SECTION 1107)

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

ACCESSIBILE PARKING SEE SITE PLAN
(SECTION 1106)

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

PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)

USE	WATERCLOSETS			URINALS	LAVATORIES			SHOWERS/ TUBS	DRINKING FOUNTAINS	
	Male	Female	Unisex		Male	Female	Unisex		Regular	Accessible
EXIST'G	1	3	0	2	2	2	0			
NEW	0	0	2	0	NEW	NEW	2			
REQ'D	REQ'D	REQ'D		REQ'D	REQ'D	REQ'D	REQ'D			

SPECIAL APPROVALS N/A

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

ENERGY SUMMARY
SEE THE PLANS

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 versus the annual energy cost for the proposed design.

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

Exempt Building: ☐ Provide code or statutory reference: ______

Climate Zone: ☐ 3A ☐ 4A ☐ 5A

Method of Compliance:
Energy Code: ☐ Performance ☐ Prescriptive
ASHSAE 90.1: ☐ Performance ☐ Prescriptive
Other: ☐ Performance (specify source) ______

THERMAL ENVELOPE: (Prescriptive method only)

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

Exterior Walls (each assembly)
Description of assembly ______
U-Value of total assembly: ______
R-Value of insulation: ______
Openings (windows or doors with glazing)
U-Value of assembly: ______
Solar heat gain coefficient: ______
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
Description of assembly: ______
U-Value of total assembly: ______
R-Value of insulation: ______
Horizontal/vertical requirement: ______
slab heated: ______

STRUCTURAL DESIGN SEE THE PLANS

DESIGN LOADS:
Importance Factors: Wind (IW) ______
Snow (IS) ______
Seismic (IE) ______

Live Loads: Roof ______ psf
Mezzanine ______ psf
Floor ______ psf
Ground Snow Load: ______ psf

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

SEISMIC DESIGN CATEGORY: ☐ A ☐ B ☐ C ☐ D

Provide the following Seismic Design Parameters:
Occupancy Category (Table 1604.5) ☐ I ☐ II ☐ III ☐ IV
Spectral Response Acceleration SS______ %g S1______ %g
Site Classification (ASCE 7) ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F
Data Source: ☐ Field Test ☐ Presumptive ☐ Historical Data
Basic structural system (check one)
☐ Bearing Wall ☐ Dual w/Special Moment Frame
☐ Building Frame ☐ Dual w/Intermediate R/C or Special Steel
☐ Moment Frame ☐ Inverted Pendulum
Analysis Procedure: ☐ Simplified ☐ Equivalent Lateral Force ☐ Dynamic
Architectural, Mechanical, Components anchored? ☐ Yes ☐ No

LATERAL DESIGN CONTROL: ☐ Earthquake ☐ Wind

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

MECHANICAL DESIGN SEE PLANS

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT
Thermal Zone
winter dry bulb: ______
summer dry bulb: ______

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

Building heating load: ______

Building cooling load: ______

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

List equipment efficiencies: ______

ELECTRICAL DESIGN SEE THE PLANS

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

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

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

Additional Prescriptive Compliance
☐ 506.2.1 More Efficient Mechanical Equipment
☐ 506.2.2 Reduced Lighting Power Density
☐ 506.2.3 Energy Recovery Ventilation Systems
☐ 506.2.4 Higher Efficiency Service Water Heating
☐ 506.2.5 On-Site Supply of Renewable Energy
☐ 506.2.6 Automatic Daylighting Control Systems

BID SET
SEPTEMBER 1, 2026

BRIAN D. GARRETT ARCHITECT, P.A. CERT NO. 52549
BRIAN D. GARRETT 5120
BID SET

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DATE: DECEMBER 1, 2024
PROJECT NO. 2402

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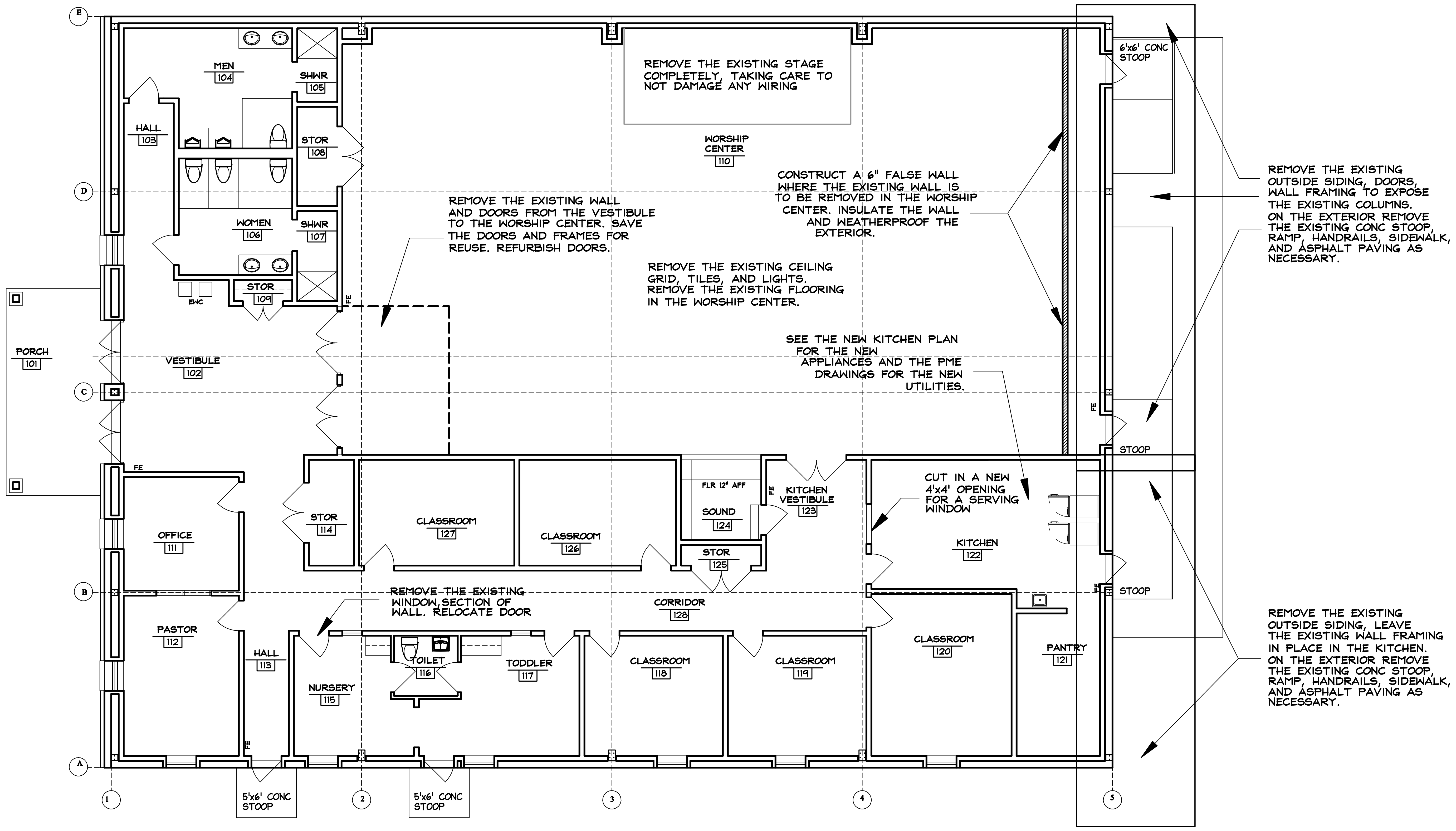
RIVER OF LIFE CHURCH

8411 OCEAN HIGHWAY
SUNSET BEACH, NC
BRUNSWICK COUNTY

SCHEDULE B

SHEET NUMBER:
B1 OF 1



REMOVE THE EXISTING STAGE COMPLETELY, TAKING CARE TO NOT DAMAGE ANY WIRING

REMOVE THE EXISTING WALL AND DOORS FROM THE VESTIBULE TO THE WORSHIP CENTER. SAVE THE DOORS AND FRAMES FOR REUSE. REFURBISH DOORS.

CONSTRUCT A 6" FALSE WALL WHERE THE EXISTING WALL IS TO BE REMOVED IN THE WORSHIP CENTER. INSULATE THE WALL AND WEATHERPROOF THE EXTERIOR.

REMOVE THE EXISTING CEILING GRID, TILES, AND LIGHTS. REMOVE THE EXISTING FLOORING IN THE WORSHIP CENTER.

SEE THE NEW KITCHEN PLAN FOR THE NEW APPLIANCES AND THE PME DRAWINGS FOR THE NEW UTILITIES.

CUT IN A NEW 4'x4' OPENING FOR A SERVING WINDOW

REMOVE THE EXISTING WINDOW,SECTION OF WALL. RELOCATE DOOR

REMOVE THE EXISTING OUTSIDE SIDING, DOORS, WALL FRAMING TO EXPOSE THE EXISTING COLUMNS. ON THE EXTERIOR REMOVE THE EXISTING CONC STOOP, RAMP, HANDRAILS, SIDEWALK, AND ASPHALT PAVING AS NECESSARY.

REMOVE THE EXISTING OUTSIDE SIDING, LEAVE THE EXISTING WALL FRAMING IN PLACE IN THE KITCHEN. ON THE EXTERIOR REMOVE THE EXISTING CONC STOOP, RAMP, HANDRAILS, SIDEWALK, AND ASPHALT PAVING AS NECESSARY.

DEMOLITION PLAN

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

BID SET

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CERT NO. 52549

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5120

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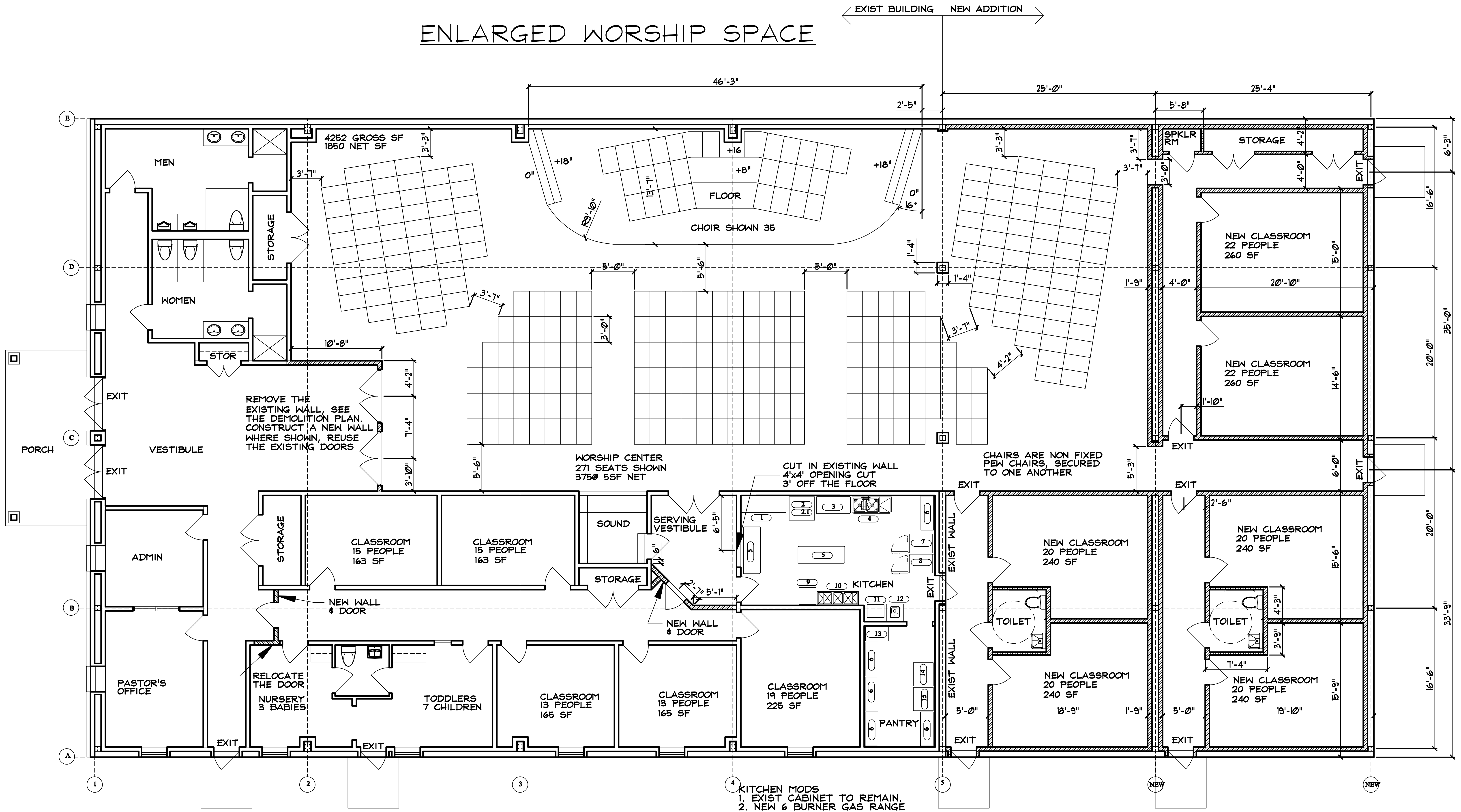
RIVER OF LIFE CHURCH
8411 OCEAN HIGHWAY
SUNSET BEACH, NC
BRUNSWICK COUNTY

DEMOLITION PLAN

BID SET
SEPTEMBER 1, 2026

SHEET NUMBER:
A1 OF 7



KITCHEN MODS
1. EXIST CABINET TO REMAIN.
2. NEW 6 BURNER GAS RANGE
2.1 NEW RESIDENTIAL RANGE HOOD
3. NEW 48"x24" STAINLESS STEEL TABLE
4. NEW 2-BOWL PREP SINK w/DISPOSAL
5. EXISTING STAINLESS STEEL TABLE
6. EXISTING PANTRY RACK
7. EXISTING COOLER
8. EXISTING FREEZER
9. NEW COMMERCIAL LOW TEMP CHEMICAL DISHWASHER
10. NEW 3-BOWL POT SINK w/SHELF
11. EXISTING ICE MACHINE
12. EXISTING HAND SINK IN CABINET
13. EXISTING WARMER STORAGE
14. EXISTING RESIDENTIAL FREEZER
15. EXISTING RESIDENTIAL REFRIGERATOR

NEW FLOOR PLAN

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

1. THE EXTERIOR WALLS SHALL BE 5/8" GYP BD. ALL INTERIOR WALLS SHALL BE 5/8" GYP BD., ALL CEILINGS SHALL BE 5/8" GYP BD,

2. ALL WALLS ARE 6" STEEL STUDS.
3. PROVIDE WOOD BLOCKING IN ALL TOILET WALLS BEHIND HANDRAILS AND ACCESSORIES.
4. PROVIDE WOOD BLOCKING IN ALL CLASSROOM WALLS AS DIRECTED BY THE OWNER FOR CHALK BOARDS.
5. SOUND INSULATE ALL WALLS. EXTERIOR WALLS TO BE INSULATED WITH R-19 ROLL BATT INSULATION. THE CEILING SHALL BE INSULATED WITH R-30 BATT INSULATION, TOTAL INSULATION VALUE, BY THE METAL BUILDING SUPPLIER.

BID SET

CERT NO. 52549

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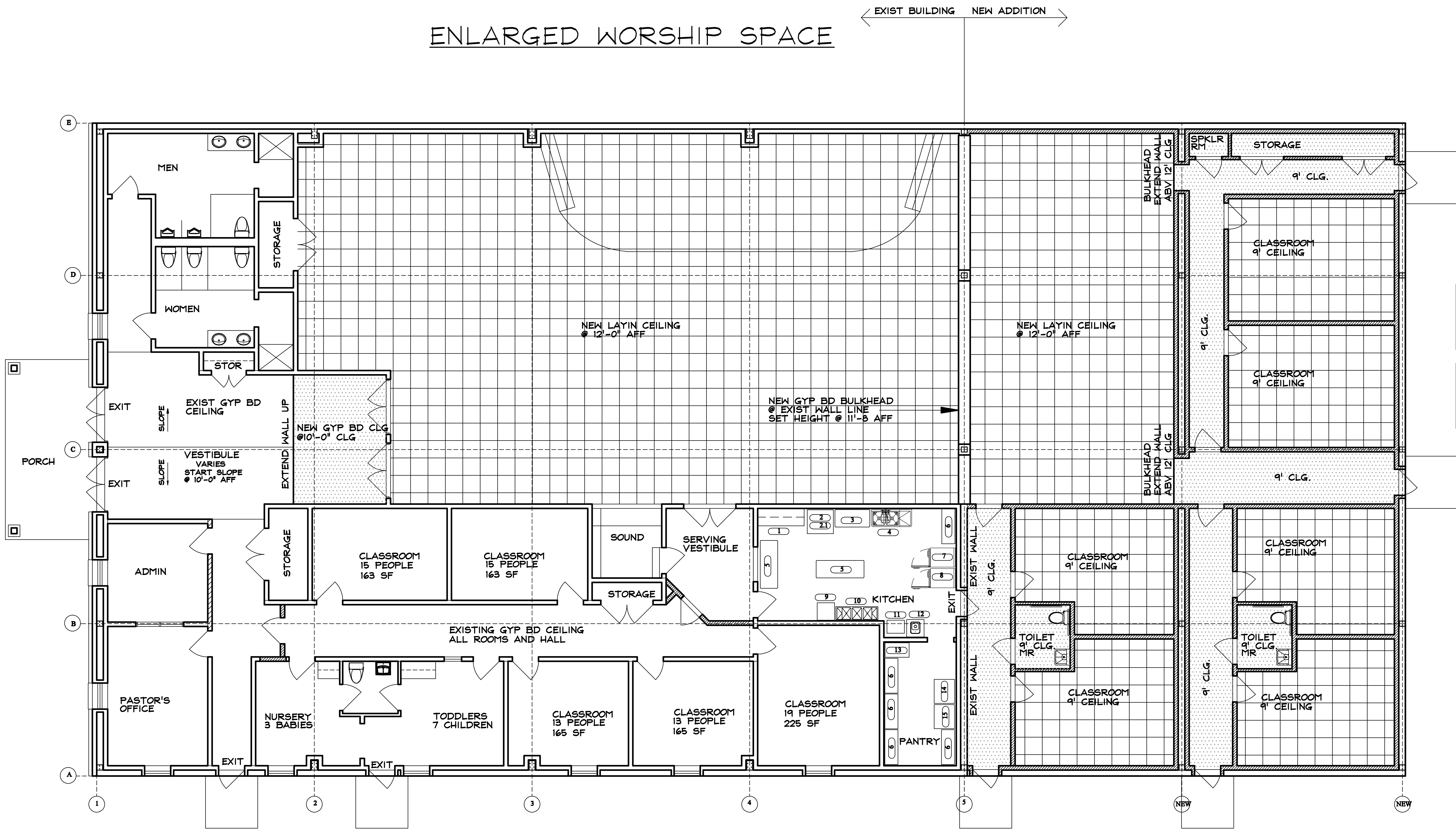
RIVER OF LIFE CHURCH
8411 OCEAN HIGHWAY
SUNSET BEACH, NC
BRUNSWICK COUNTY

NEW FLOOR
PLAN

BID SET
SEPTEMBER 1, 2026

SHEET NUMBER:
A2 OF 7


ENLARGED WORSHIP SPACE
EXIST BUILDING
NEW ADDITION
MEN
WOMEN
STORAGE
STOR
NEW LAYIN CEILING @ 12'-0" AFF
NEW LAYIN CEILING @ 12'-0" AFF
NEW GYP BD BULKHEAD @ EXIST WALL LINE SET HEIGHT @ 11'-8 AFF
EXIT
EXIST GYP BD CEILING
SLOPE
VESTIBULE VARIES START SLOPE @ 10'-0" AFF
PORCH
EXTEND WALL UP
NEW GYP BD CLG @10'-0" CLG
BULKHEAD EXTEND WALL ABV 12' CLG
SPKLR RM
9' CLG.
CLASSROOM 9' CEILING
ADMIN
PASTOR'S OFFICE
CLASSROOM 15 PEOPLE 163 SF
CLASSROOM 15 PEOPLE 163 SF
SOUND
SERVING VESTIBULE
KITCHEN
PANTRY
EXISTING GYP BD CEILING ALL ROOMS AND HALL
NURSERY 3 BABIES
TODDLERS 7 CHILDREN
CLASSROOM 13 PEOPLE 165 SF
CLASSROOM 13 PEOPLE 165 SF
CLASSROOM 19 PEOPLE 225 SF
EXIST WALL
TOILET 9' CLG. MR
A
B
C
D
E
1
2
3
4
5
NEW

REFLECTED CEILING PLAN

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

▦ ACCOUSTICAL CEILING TILE ARMSTRONG OR EQUAL, 2x2 REVEAL EDGE TEGULAR MEDIUM FISSURED, 15/16 GRID WHITE

▨ 5/8" GYP BD CEILING IN THE HALLWAYS. USE 5/8" MOISTURE RESISTANT IN THE TOILETS, AND STORAGE, SUPPORT w/GALV GYP BD CLG FRAMING

COORDINATE MECHANICAL AND ELECTRICAL WITH THE GRID

BRIAN D. GARRETT
CERT NO. 52549
5120

BID SET

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RIVER OF LIFE CHURCH
8411 OCEAN HIGHWAY
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BRUNSWICK COUNTY

REFLECTED CLG PLAN

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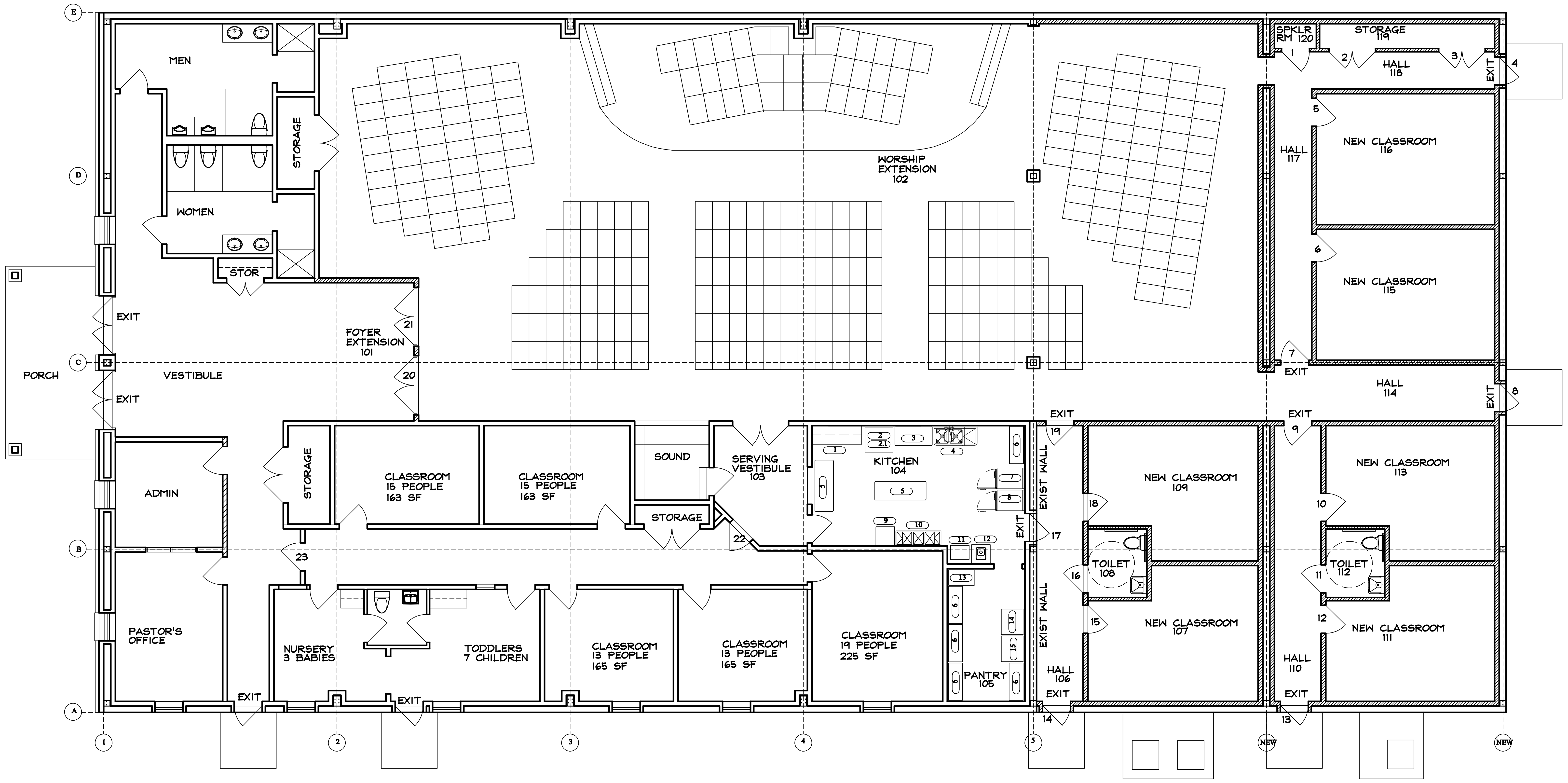
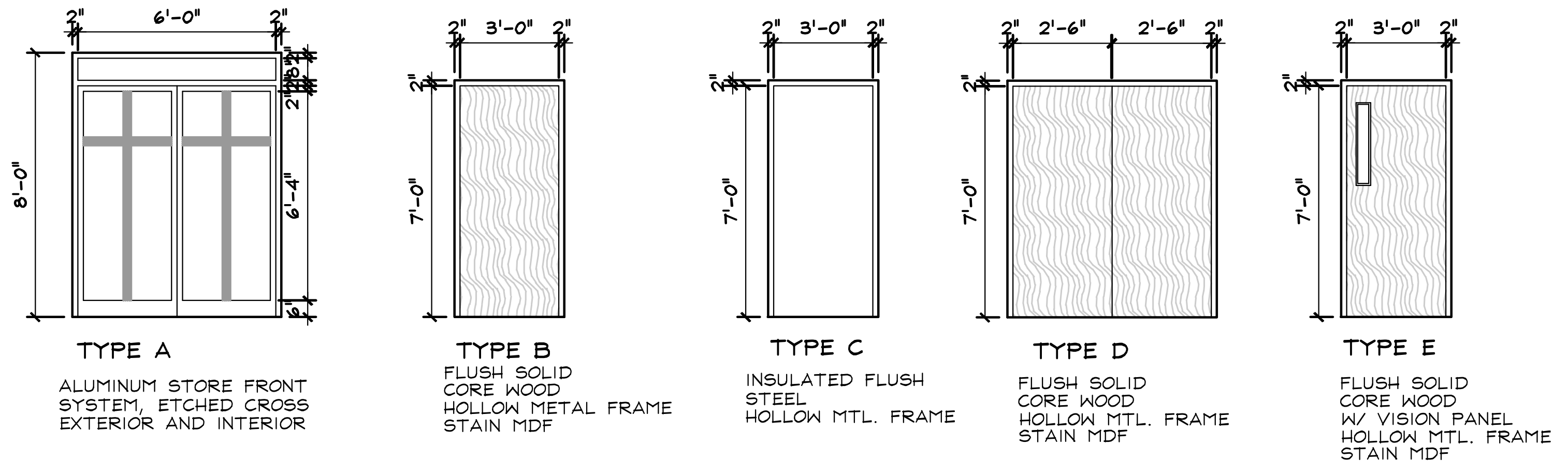
SHEET NUMBER:
A3 OF 7





TYPE A

ALUMINUM STORE FRONT
SYSTEM, ETCHED CROSS
EXTERIOR AND INTERIOR

TYPE B

FLUSH SOLID
CORE WOOD
HOLLOW METAL FRAME
STAIN MDF

TYPE C

INSULATED FLUSH
STEEL
HOLLOW MTL. FRAME

TYPE D

FLUSH SOLID
CORE WOOD
HOLLOW MTL. FRAME
STAIN MDF

TYPE E

FLUSH SOLID
CORE WOOD
W/ VISION PANEL
HOLLOW MTL. FRAME
STAIN MDF

ROOM FINISH SCHEDULE

ROOM	DESIGNATION	FLOORS AND BASE		WALLS		CEILING		REMARKS
		MATERIAL	BASE	SUBSTRATE	MATERIAL	SUBSTRATE	MATERIAL	
VESTIBULE EXTENSION	101	PORCELAIN TILE	WOOD	GWB	PAINT	SEE REFLECTED CEILING PLAN ON SHEET A3		MATCH EXIST
WORSHIP EXTENSION	102	CARPET	WOOD	GWB	PAINT			MATCH EXIST CHAIRRAIL & 12" WOOD BASE
SERVING VESTIBULE	103	VCT	RUBBER	GWB	PAINT			MATCH EXIST; NEW SERVING WINDOW
KITCHEN	104	QUARRY TILE	Q.T.	GWB	FRP			MATCH EXIST
PANTRY	105	QUARRY TILE	Q.T.	GWB	FRP			MATCH EXIST
HALL	106	VCT	RUBBER	GWB	PAINT			
CLASSROOM	107	CARPET	RUBBER	GWB	PAINT			
TOILET	108	CERAMIC TILE	C.T.	GWB	PAINT/CT			TILE TO 48" ON WALLS
CLASSROOM	109	CARPET	RUBBER	GWB	PAINT			
HALL	110	VCT	RUBBER	GWB	PAINT			
CLASSROOM	111	CARPET	WOOD	GWB	PAINT			
TOILET	112	CERAMIC TILE	C.T.	GWB	PAINT/CT			TILE TO 48" ON WALLS
CLASSROOM	113	VCT	RUBBER	GWB	PAINT			
HALL	114	VCT	RUBBER	GWB	PAINT			
CLASSROOM	115	CARPET	RUBBER	GWB	PAINT			
CLASSROOM	116	CARPET	RUBBER	GWB	PAINT			
HALL	117	VCT	RUBBER	GWB	PAINT			
HALL	118	VCT	RUBBER	GWB	PAINT			
STORAGE	119	VCT	RUBBER	GWB	PAINT			
SPRINKLER ROOM	120	VCT	RUBBER	GWB	PAINT			

FINISH NOTES

1. ALLOW $40/YARD FOR CARPET.
2. FLOOR TILE SHALL BE CERAMIC MOSAIC, WALL AND BASE TILE SHALL BE GLAZED CERAMIC.
3. RUBBER BASE SHALL BE EQUAL TO JOHNSONITE. VCT SHALL BE BY ARMSTRONG OR EQUAL.
4. QUARRY TILE SHALL BE 6x6 NON-SKID.
5. APPLY ONE COAT OF PRIMER AND TWO FINISH COATS ON ALL WALLS AT NEW CONSTRUCTION
6. ALL WOOD DOORS SHALL BE STAIN GRADE.
7. ALL WALL PAINT SHALL BE LATEX FLAT. TOILETS SHALL BE LATEX SEMI-GLOSS. PAINT HM DOORS AND FRAMES WITH SEMI-GLOSS ALKYD.
8. FRP-FIBERGLASS REINFORCED PANELS.
9. PORCELAIN TILE SHALL BE 12x12

DOOR & FRAME SCHEDULE

NO.	SIZE	MTL./ STYLE	TYPE	FRAME	HRDWR	REMARKS
1	3'-0" X 7'-0"	WOOD / FLUSH	B	HM	HW5	
2	2-2'-6" X 7'-0"	WOOD / FLUSH	D	HM	HW2	
3	2-2'-6" X 7'-0"	WOOD / FLUSH	D	HM	HW2	
4	3'-0" X 7'-0"	STEEL / FLUSH	C	HM	HW3	
5	3'-0" X 7'-0"	WOOD / FLUSH	E	HM	HW6	4"x32" LAMINATED GLASS
6	3'-0" X 7'-0"	WOOD / FLUSH	E	HM	HW6	4"x32" LAMINATED GLASS
7	3'-0" X 7'-0"	WOOD / FLUSH	E	HM	HW8	4"x32" LAMINATED GLASS
8	3'-0" X 7'-0"	STEEL / FLUSH	C	HM	HW3	
9	3'-0" X 7'-0"	WOOD / FLUSH	E	HM	HW8	4"x32" LAMINATED GLASS
10	3'-0" X 7'-0"	WOOD / FLUSH	E	HM	HW6	4"x32" LAMINATED GLASS
11	3'-0" X 7'-0"	WOOD / FLUSH	B	HM	HW7	
12	3'-0" X 7'-0"	WOOD / FLUSH	E	HM	HW6	4"x32" LAMINATED GLASS
13	3'-0" X 7'-0"	STEEL / FLUSH	C	HM	HW3	
14	3'-0" X 7'-0"	STEEL / FLUSH	C	HM	HW3	
15	3'-0" X 7'-0"	WOOD / FLUSH	E	HM	HW6	4"x32" LAMINATED GLASS
16	3'-0" X 7'-0"	WOOD / FLUSH	B	HM	HW7	
17	EXIST STEEL	STEEL / FLUSH			EXIST	EXIST DOOR TO BE REFERBISHED AND REPAINTED
18	3'-0" X 7'-0"	WOOD / FLUSH	E	HM	HW8	4"x32" LAMINATED GLASS
19	3'-0" X 7'-0"	WOOD / FLUSH	E	HM	HW8	4"x32" LAMINATED GLASS
20	2-3'-0" X 7'-0"	ALUM / GL	A	ALUM	EXIST	REWORK ALUM DOORS TO CHECK OPERABILITY
21	2-3'-0" X 7'-0"	ALUM / GL	A	ALUM	EXIST	REWORK ALUM DOORS TO CHECK OPERABILITY
22	3'-0" X 7'-0"	WOOD / FLUSH	E	HM	HW8	4"x32" LAMINATED GLASS
23	3'-0" X 7'-0"	WOOD / FLUSH	E	HM	HW8	4"x32" LAMINATED GLASS

DOOR NOTES

1) ALL EXTERIOR GLASS SHALL BE 1" LOW-E, INSULATED, TO MEET THE LOCAL WIND LOADS.
2) PROVIDE FLASHING AS PER MANUFACTURERS INSTRUCTIONS AROUND DOORS.
3) INTERIOR DOORS TO BE FLUSH SOLID CORE MDF, STAIN GRADE.
4) EXTERIOR HOLLOW METAL DOORS TO BE INSULATED.
5) PROVIDE TEMPERED GLASS WHERE REQUIRED.
6) EXIST REAR DOOR TO KITCHEN TO BE REPAINTED

HARDWARE SCHEDULE

HW1:(19,20)
SERVICE EXISTING LOCKS

HW2:(2,3)

HINGES-3 PR.	THROW
HOLD OPEN	LATCHSET
KICKPLATE	

HW3:(4,8,13,14)

HINGES-1 1/2 PR.	PANIC DEVICE NO EXT HANDLE ON 4 & 8
CLOSER	WEATHERSTRIP & THRESHOLD
KICKPLATE	STOP

PANIC DEVICE w/EXT HANDLE & LOCK ON 13 & 14

HW4: NOT USED

HW5:(1)

HINGES-1 1/2 PR.	LOCKSET w/THUMBTURN
STOP	

HW6:(5,6,10,12,15,17)

HINGES-1 1/2 PR.	LATCHSET
STOP	CLOSER
KICKPLATE	

HW7:(11,16)

HINGES 1 1/2 PR.	PRIVACY SET
STOP	

HW8:(7,9,19,22,23)

HINGES 1 1/2 PR.	PANIC DEVICE w/HANDLE
STOP	COORDINATOR
CLOSER	KICKPLATE

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SEPTEMBER 1, 2026

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RIVER OF LIFE CHURCH
8411 OCEAN HIGHWAY
SUNSET BEACH, NC
BRUNSWICK COUNTY

DOOR WINDOW
FINISH SCHEDULE

SHEET NUMBER:
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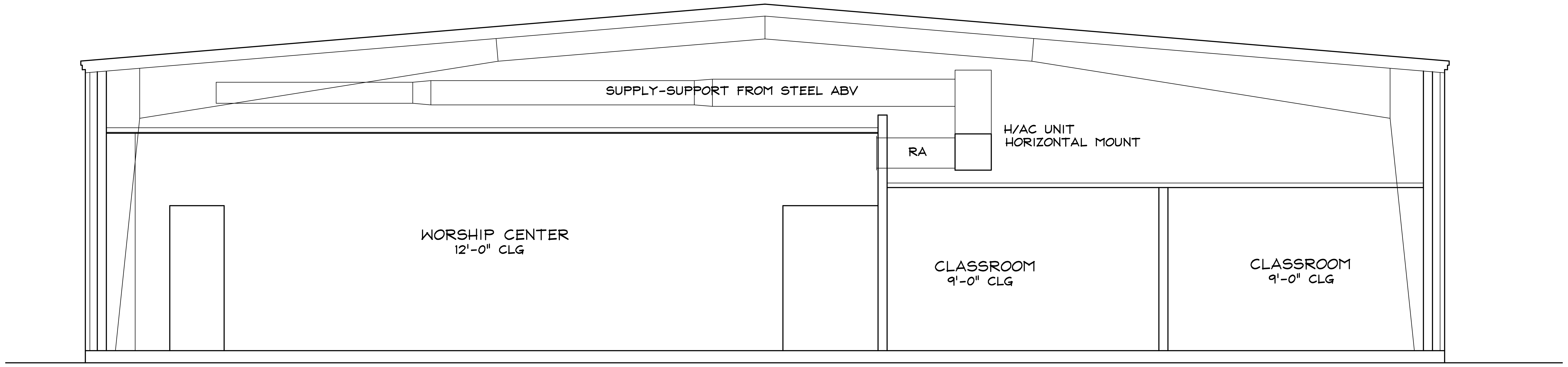
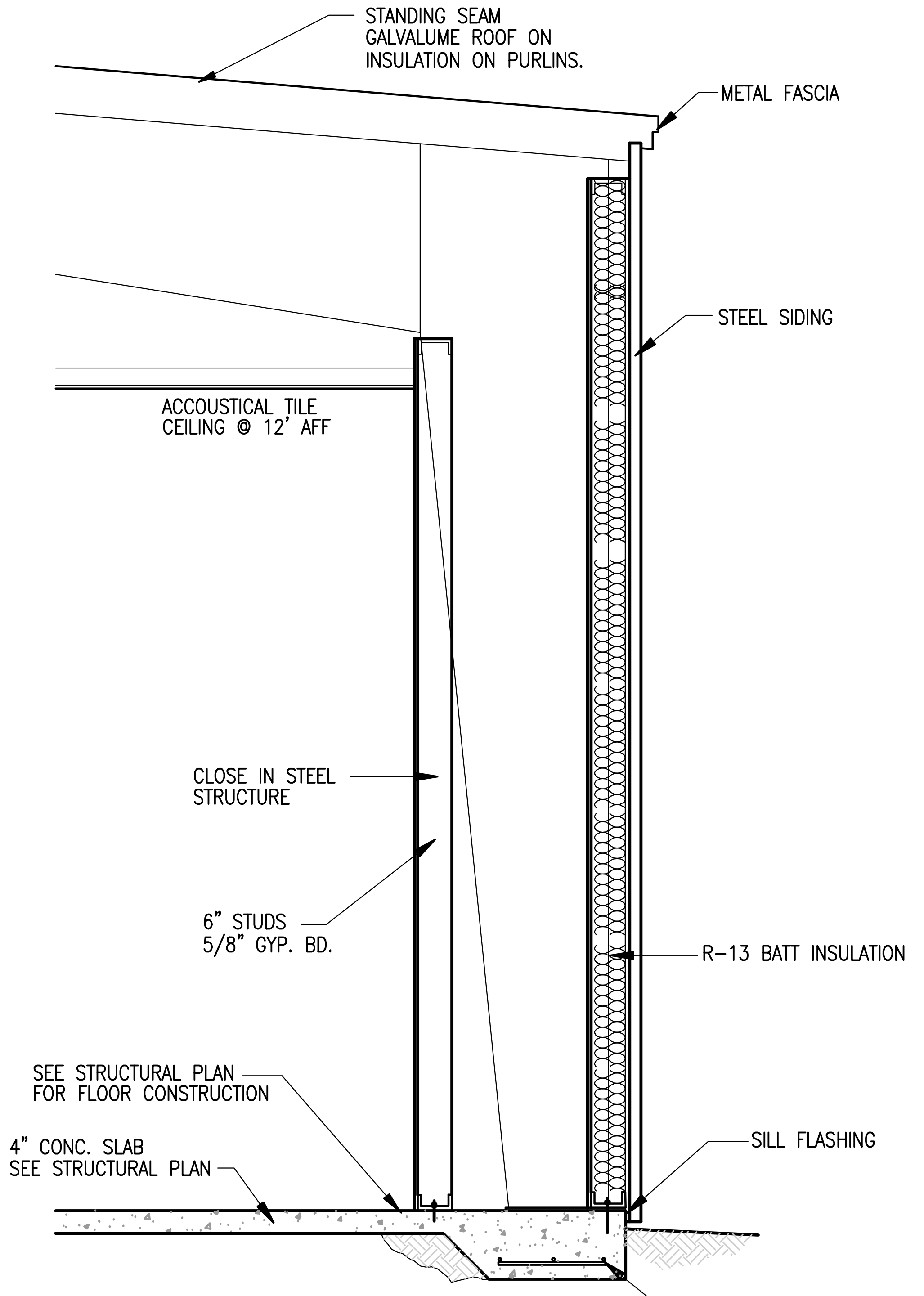


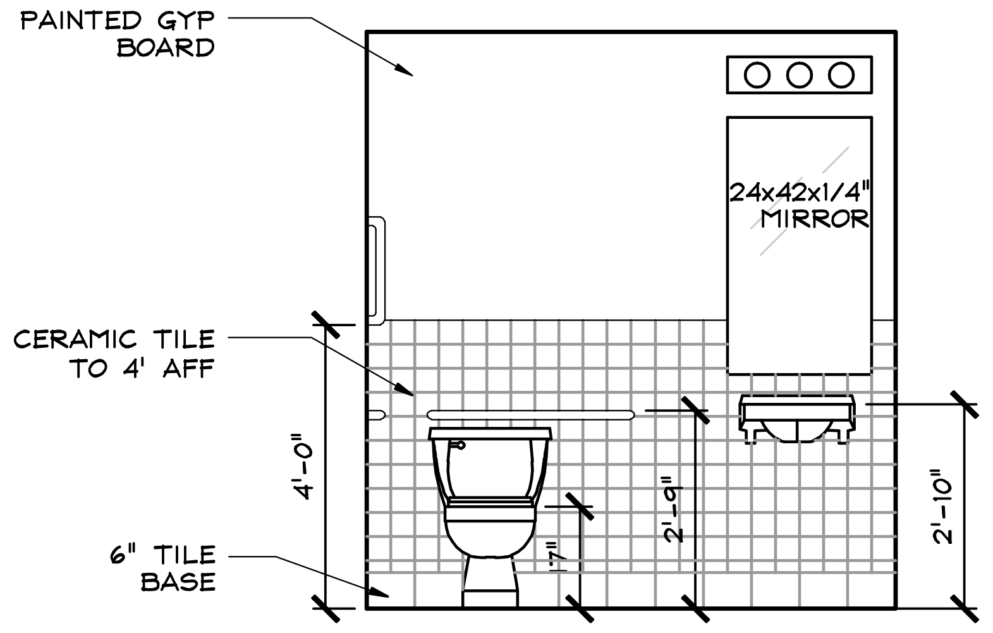
BUILDING SECTION

SCALE: 1/4"=1'-0"



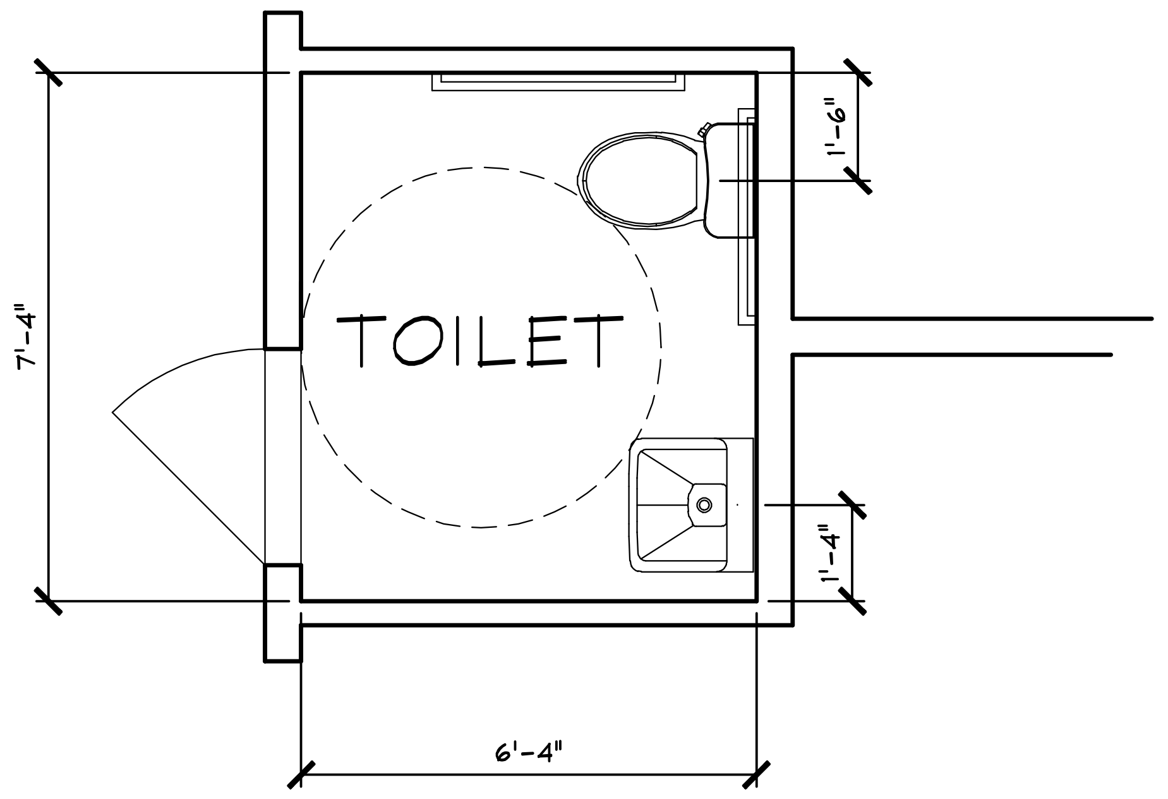
METAL BUILDING SECTION

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



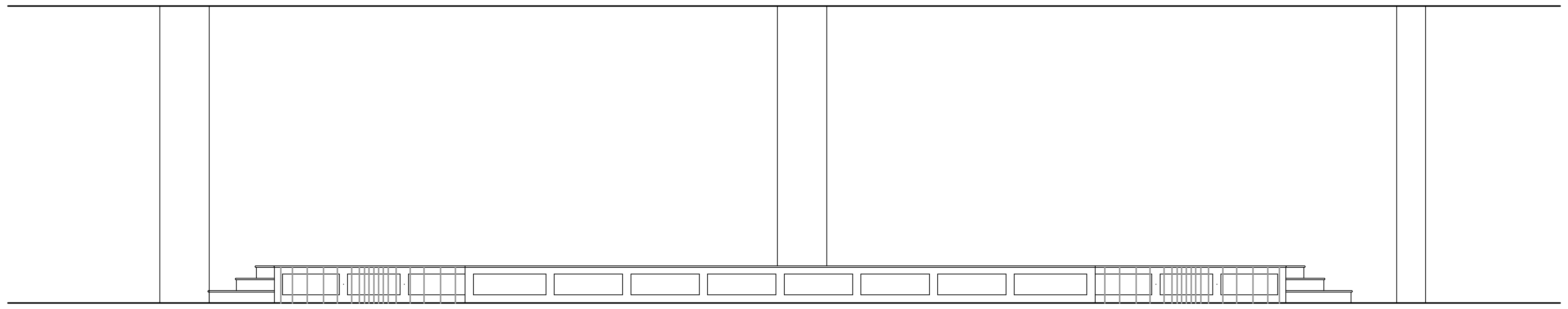
TOILET ELEVATION

3/8" = 1'-0"



TOILET PLAN

3/8" = 1'-0"



NEW STAGE ELEVATION

SCALE: 1/4"=1'-0"

BID SET
SEPTEMBER 1, 2026

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BRIAN D. GARRETT
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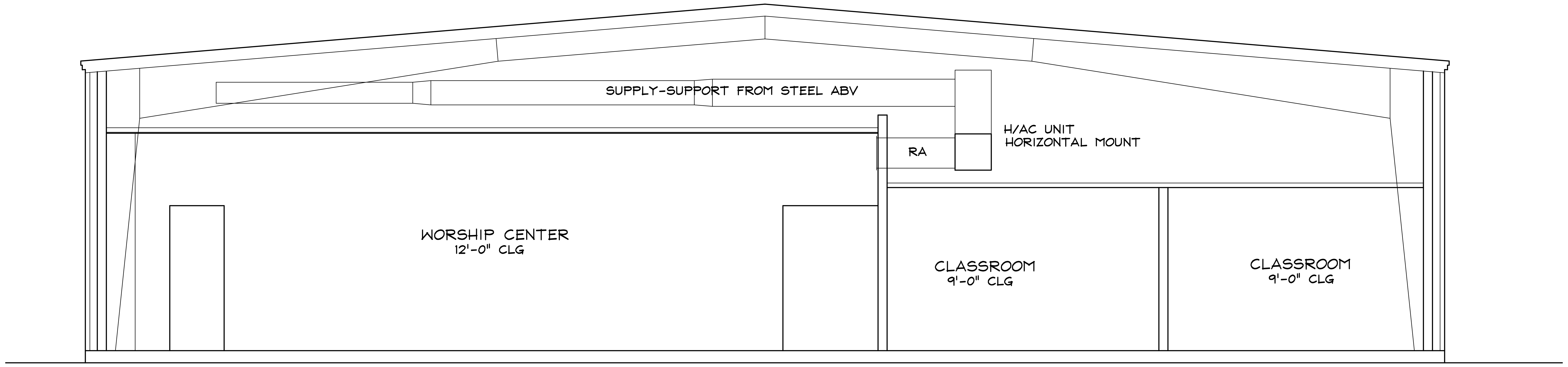
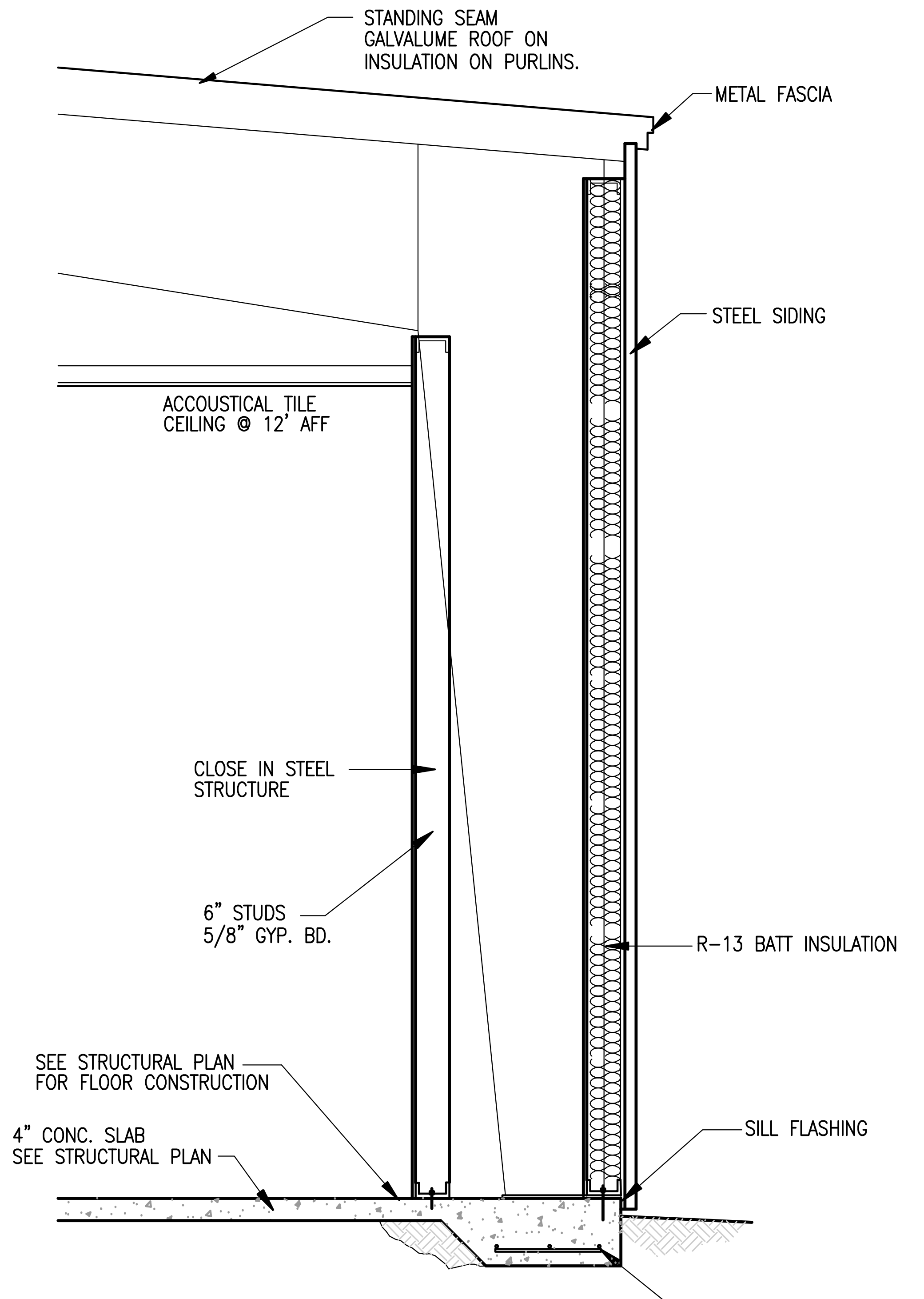
RIVER OF LIFE CHURCH
8411 OCEAN HIGHWAY
SUNSET BEACH, NC
BRUNSWICK COUNTY

INTERIOR
ELEVATIONS
CANOPY DETAIL

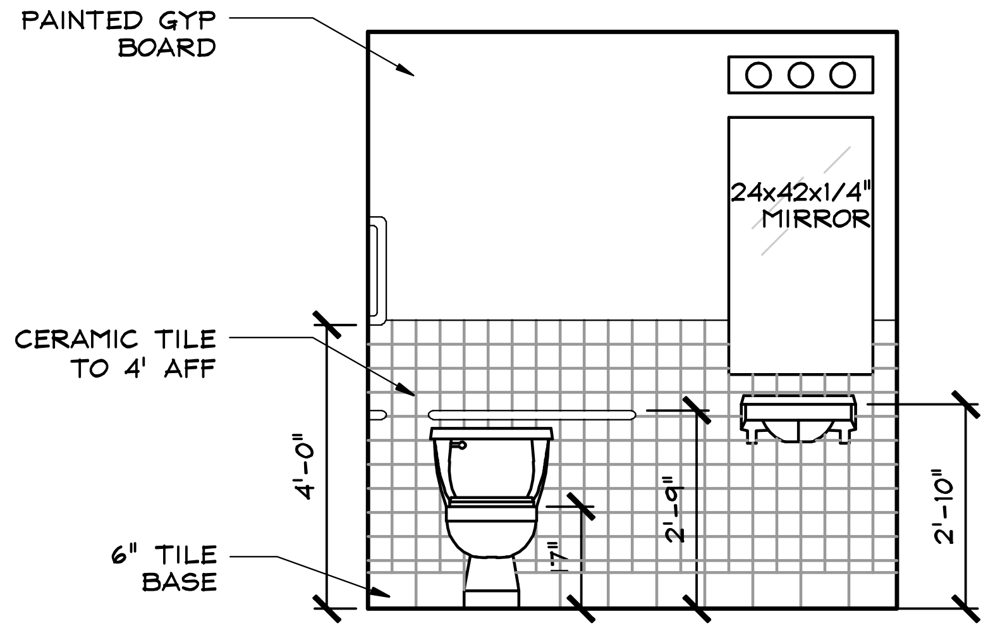
SHEET NUMBER:
A5 OF 7



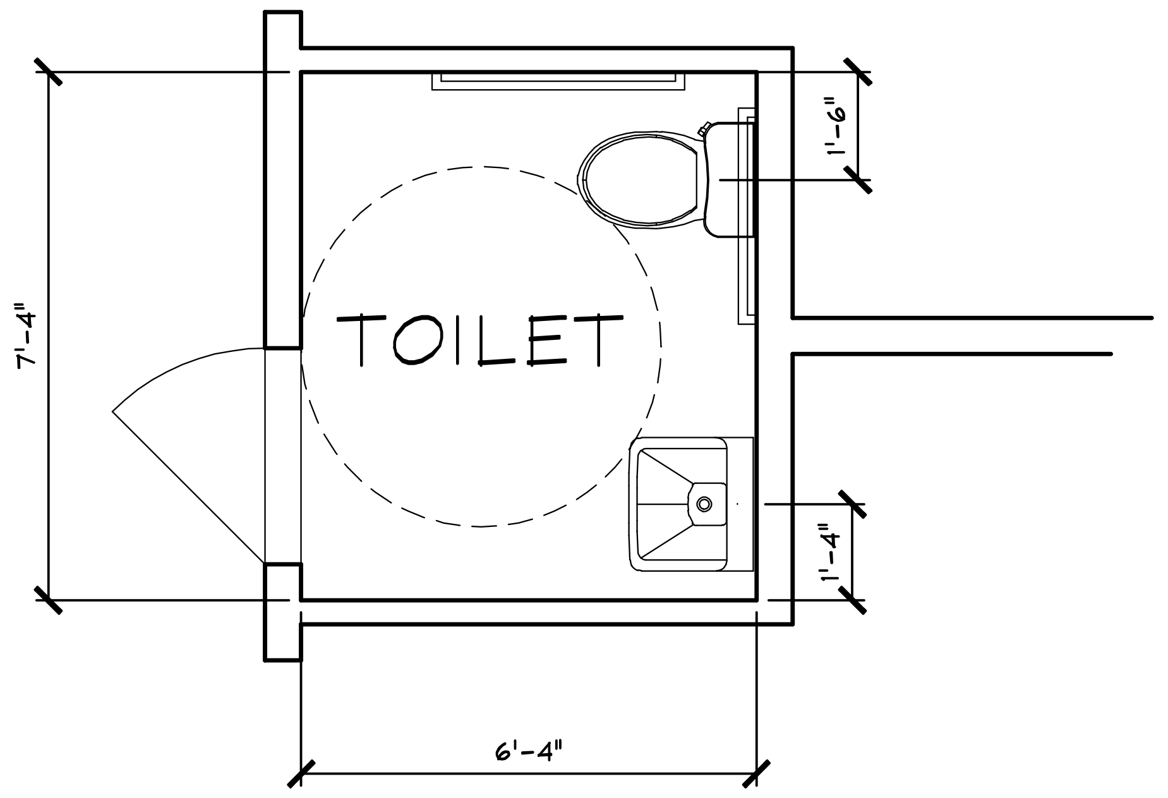
BUILDING SECTION
SCALE: 1/4"=1'-0"



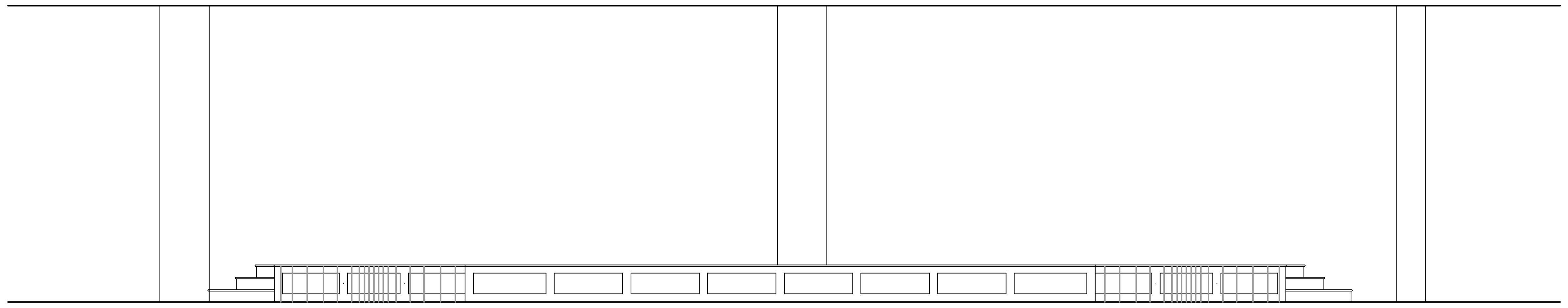
METAL BUILDING SECTION
SCALE: 1/2"=1'-0"



TOILET ELEVATION
3/8" = 1'-0"



TOILET PLAN
3/8" = 1'-0"



NEW STAGE ELEVATION
SCALE: 1/4"=1'-0"

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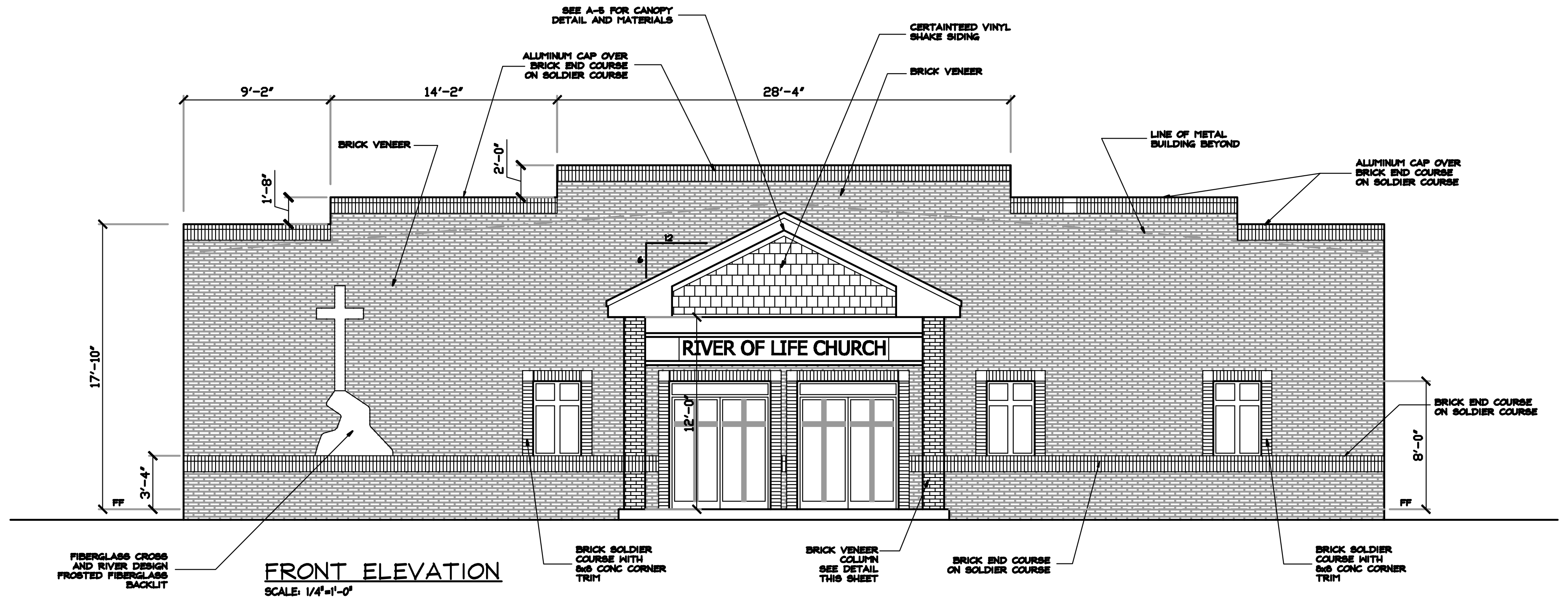
RIVER OF LIFE CHURCH
8411 OCEAN HIGHWAY
SUNSET BEACH, NC
BRUNSWICK COUNTY

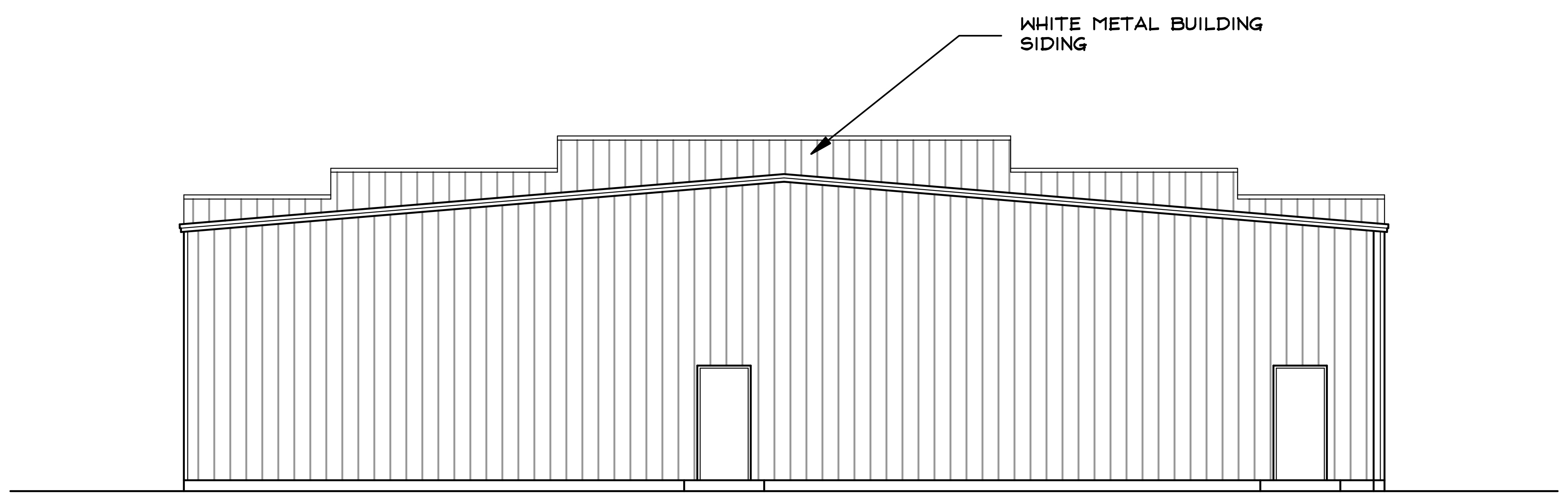
INTERIOR
ELEVATIONS
CANOPY DETAIL

SHEET NUMBER:
A5 OF 7


SEE A-5 FOR CANOPY DETAIL AND MATERIALS
CERTAINTEED VINYL SHAKE SIDING
ALUMINUM CAP OVER BRICK END COURSE ON SOLDIER COURSE
BRICK VENEER
9'-2"
14'-2"
28'-4"
BRICK VENEER
LINE OF METAL BUILDING BEYOND
ALUMINUM CAP OVER BRICK END COURSE ON SOLDIER COURSE
2'-0"
1'-8"
12
6
RIVER OF LIFE CHURCH
17'-10"
12'-0"
BRICK END COURSE ON SOLDIER COURSE
8'-0"
3'-4"
FF
FF
FIBERGLASS CROSS AND RIVER DESIGN FROSTED FIBERGLASS BACKLIT
FRONT ELEVATION
SCALE: 1/4"=1'-0"
BRICK SOLDIER COURSE WITH 8x8 CONC CORNER TRIM
BRICK VENEER COLUMN SEE DETAIL THIS SHEET
BRICK END COURSE ON SOLDIER COURSE
BRICK SOLDIER COURSE WITH 8x8 CONC CORNER TRIM

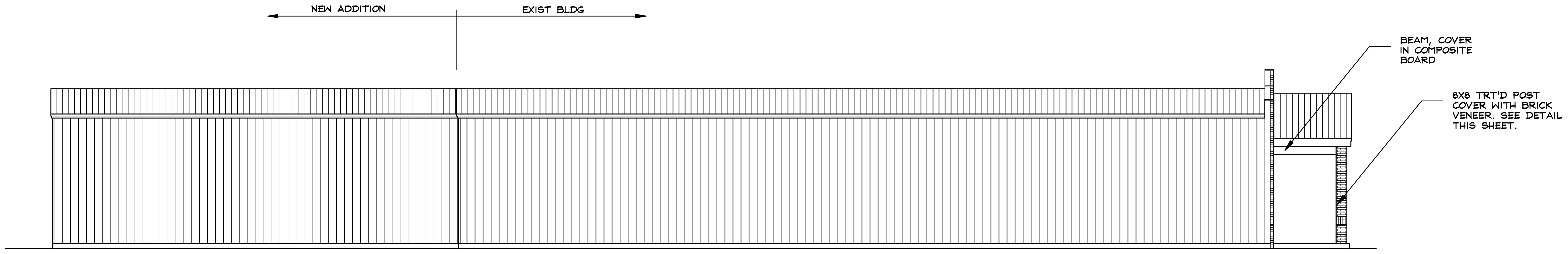
FRONT ELEVATION (NO CHANGE)

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



REAR ELEVATION(NEW ADDITION)

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

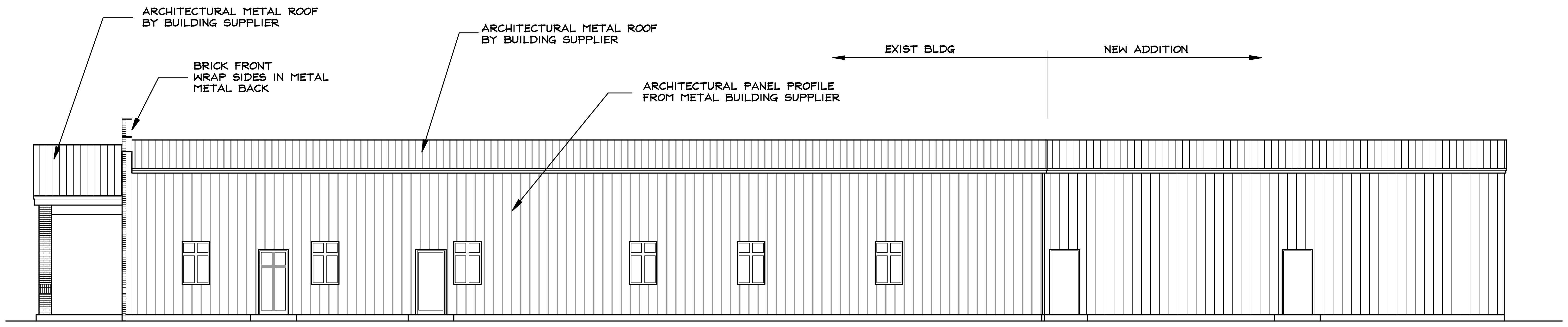

NEW ADDITION
EXIST BLDG
BEAM, COVER IN COMPOSITE BOARD
8X8 TRT'D POST COVER WITH BRICK VENEER. SEE DETAIL THIS SHEET.

LEFT SIDE ELEVATION(NEW ELEVATION)

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

EXTERIOR NOTES:

1. THE NEW BUILDING SIDING WILL MATCH THE EXISTING. PROVIDE AN ALTERNATE FOR REMOVING THE EXISTING SIDING AND INSTALLING NEW.
2. THE NEW ROOFING SHALL MATCH THE EXISTING. PROVIDE AN ALTERNATE FOR REMOVING THE EXISTING ROOF AND INSTALLING NEW ROOF PANELS.
3. THE FASCIA SHALL MATCH THE EXISTING. PROVIDE AN ALTERNATE FOR REMOVING THE EXISTING FASCIA AND INSTALLING NEW FASCIA.


ARCHITECTURAL METAL ROOF BY BUILDING SUPPLIER
BRICK FRONT WRAP SIDES IN METAL METAL BACK
ARCHITECTURAL METAL ROOF BY BUILDING SUPPLIER
ARCHITECTURAL PANEL PROFILE FROM METAL BUILDING SUPPLIER
EXIST BLDG
NEW ADDITION

RIGHT SIDE ELEVATION(NEW ELEVATION)

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

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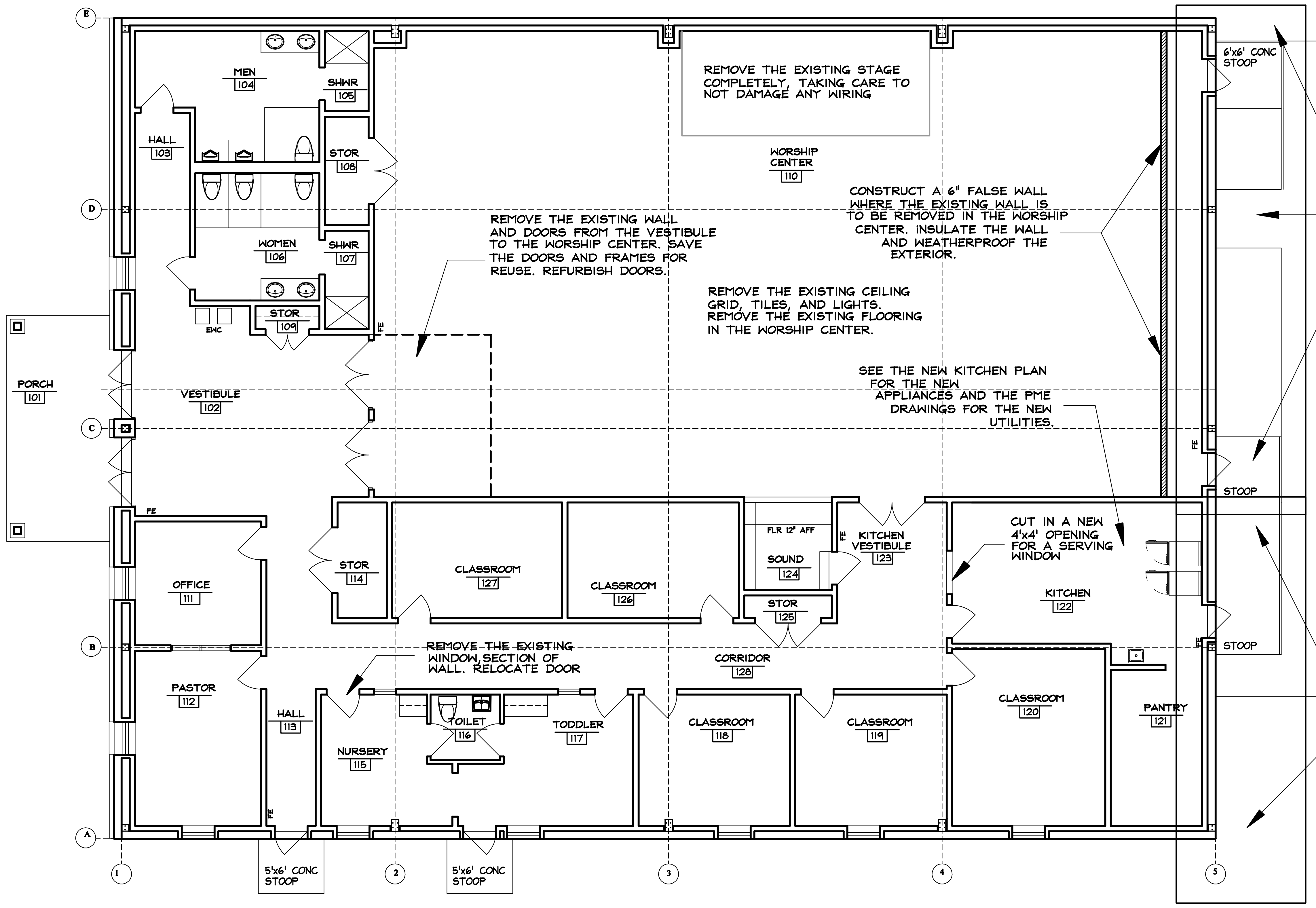
RIVER OF LIFE CHURCH
8411 OCEAN HIGHWAY
SUNSET BEACH, NC
BRUNSWICK COUNTY

EXTERIOR
ELEVATIONS

SHEET NUMBER:
A7 OF 7

BID SET
SEPTEMBER 1, 2026



REMOVE THE EXISTING STAGE COMPLETELY, TAKING CARE TO NOT DAMAGE ANY WIRING

REMOVE THE EXISTING WALL AND DOORS FROM THE VESTIBULE TO THE WORSHIP CENTER. SAVE THE DOORS AND FRAMES FOR REUSE. REFURBISH DOORS.

CONSTRUCT A 6" FALSE WALL WHERE THE EXISTING WALL IS TO BE REMOVED IN THE WORSHIP CENTER. INSULATE THE WALL AND WEATHERPROOF THE EXTERIOR.

REMOVE THE EXISTING CEILING GRID, TILES, AND LIGHTS. REMOVE THE EXISTING FLOORING IN THE WORSHIP CENTER.

SEE THE NEW KITCHEN PLAN FOR THE NEW APPLIANCES AND THE PME DRAWINGS FOR THE NEW UTILITIES.

CUT IN A NEW 4'x4' OPENING FOR A SERVING WINDOW

REMOVE THE EXISTING WINDOW,SECTION OF WALL. RELOCATE DOOR

REMOVE THE EXISTING OUTSIDE SIDING, DOORS, WALL FRAMING TO EXPOSE THE EXISTING COLUMNS. ON THE EXTERIOR REMOVE THE EXISTING CONC STOOP, RAMP, HANDRAILS, SIDEWALK, AND ASPHALT PAVING AS NECESSARY.

REMOVE THE EXISTING OUTSIDE SIDING, LEAVE THE EXISTING WALL FRAMING IN PLACE IN THE KITCHEN. ON THE EXTERIOR REMOVE THE EXISTING CONC STOOP, RAMP, HANDRAILS, SIDEWALK, AND ASPHALT PAVING AS NECESSARY.

DEMOLITION PLAN

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

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BRIAN D. GARRETT 5120 PIEDMONT S.C.

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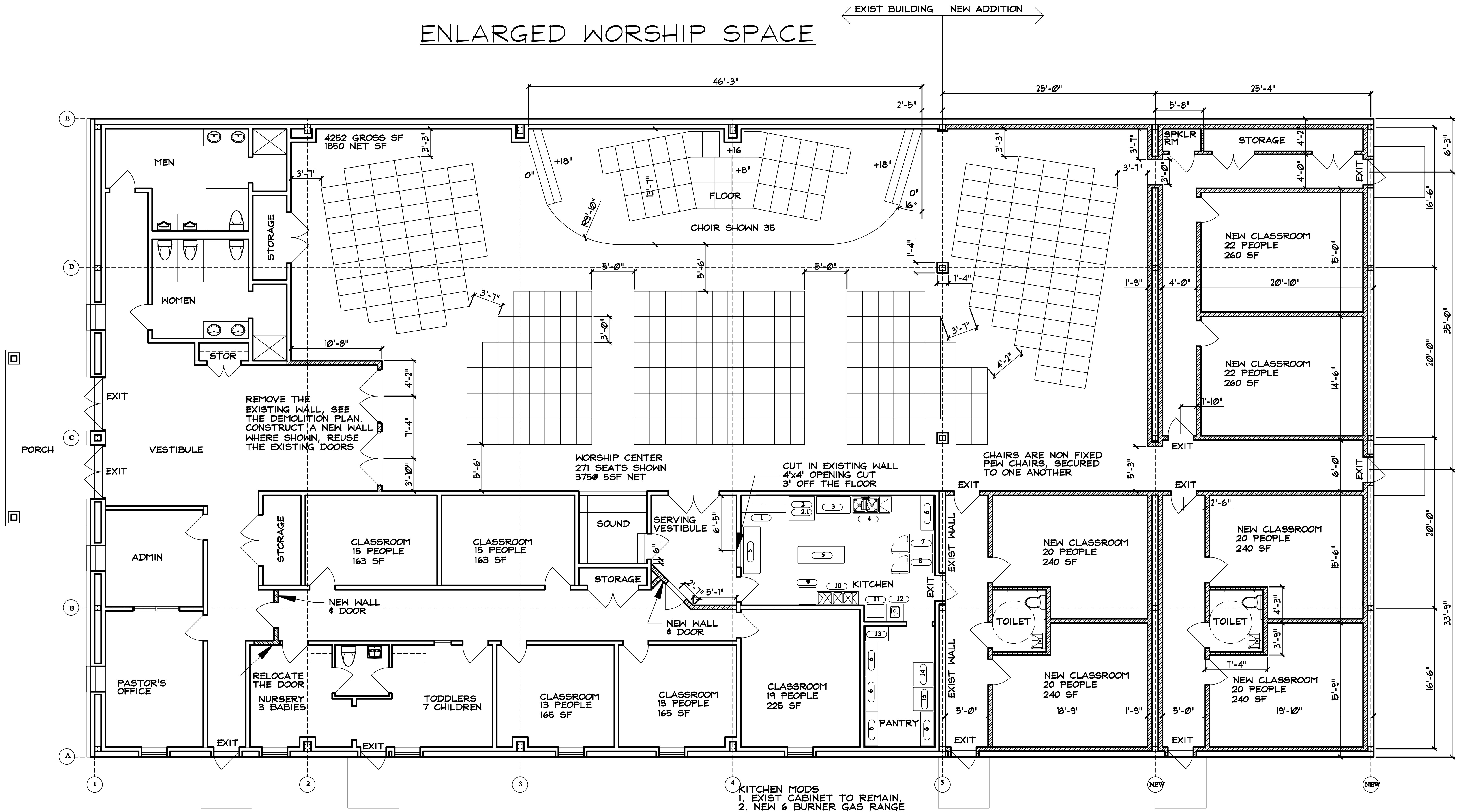
DEMOLITION
PLAN

BID SET
SEPTEMBER 1, 2026

SHEET NUMBER:
A1 OF 7

ENLARGED WORSHIP SPACE



KITCHEN MODS
1. EXIST CABINET TO REMAIN.
2. NEW 6 BURNER GAS RANGE
2.1 NEW RESIDENTIAL RANGE HOOD
3. NEW 48"x24" STAINLESS STEEL TABLE
4. NEW 2-BOWL PREP SINK w/DISPOSAL
5. EXISTING STAINLESS STEEL TABLE
6. EXISTING PANTRY RACK
7. EXISTING COOLER
8. EXISTING FREEZER
9. NEW COMMERCIAL LOW TEMP CHEMICAL DISHWASHER
10. NEW 3-BOWL POT SINK w/SHELF
11. EXISTING ICE MACHINE
12. EXISTING HAND SINK IN CABINET
13. EXISTING WARMER STORAGE
14. EXISTING RESIDENTIAL FREEZER
15. EXISTING RESIDENTIAL REFRIGERATOR

NEW FLOOR PLAN

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

1. THE EXTERIOR WALLS SHALL BE 5/8" GYP BD. ALL INTERIOR WALLS SHALL BE 5/8" GYP BD., ALL CEILINGS SHALL BE 5/8" GYP BD,

2. ALL WALLS ARE 6" STEEL STUDS.
3. PROVIDE WOOD BLOCKING IN ALL TOILET WALLS BEHIND HANDRAILS AND ACCESSORIES.
4. PROVIDE WOOD BLOCKING IN ALL CLASSROOM WALLS AS DIRECTED BY THE OWNER FOR CHALK BOARDS.
5. SOUND INSULATE ALL WALLS. EXTERIOR WALLS TO BE INSULATED WITH R-19 ROLL BATT INSULATION. THE CEILING SHALL BE INSULATED WITH R-30 BATT INSULATION, TOTAL INSULATION VALUE, BY THE METAL BUILDING SUPPLIER.

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NEW FLOOR PLAN

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SEPTEMBER 1, 2026

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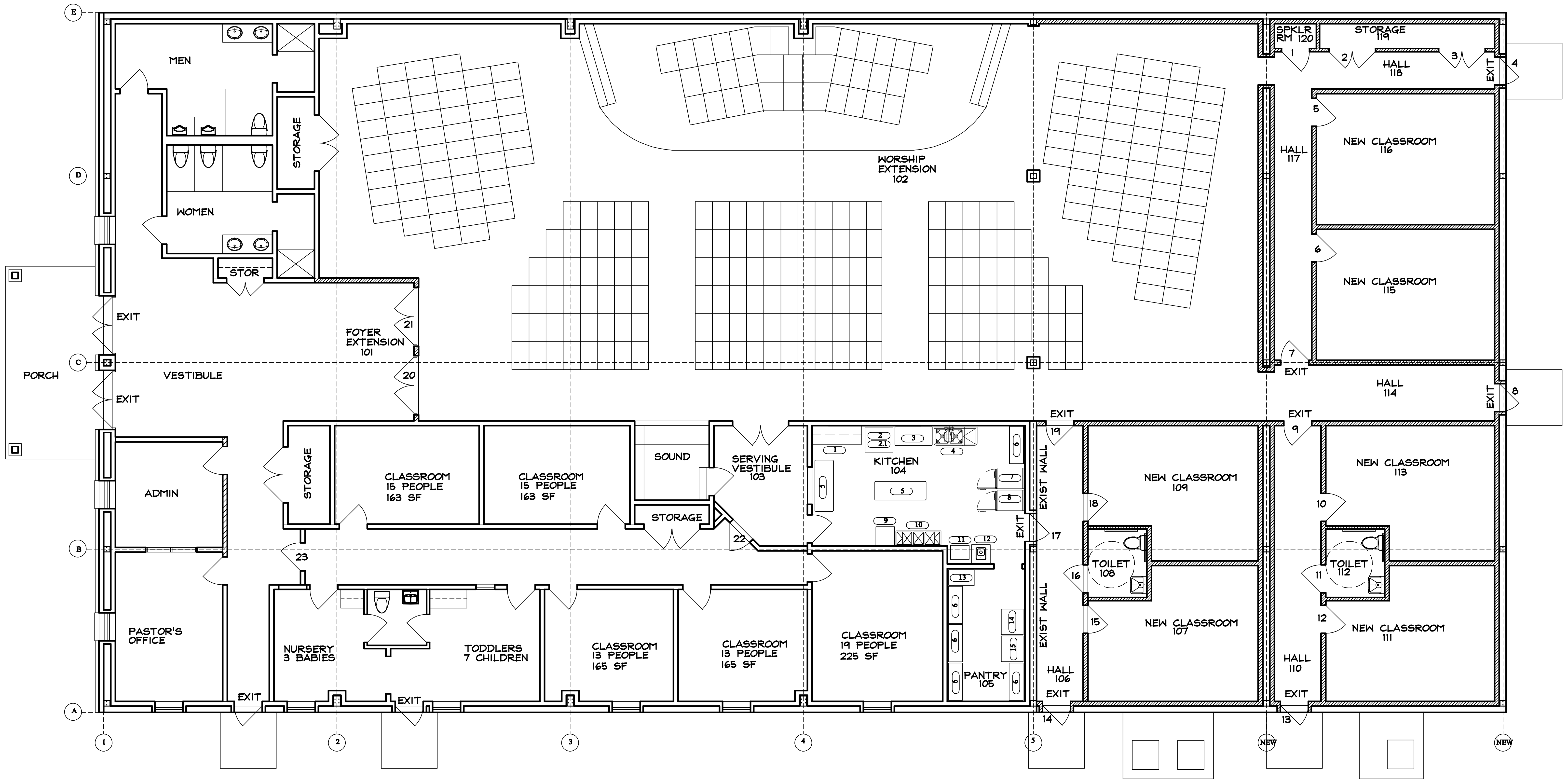
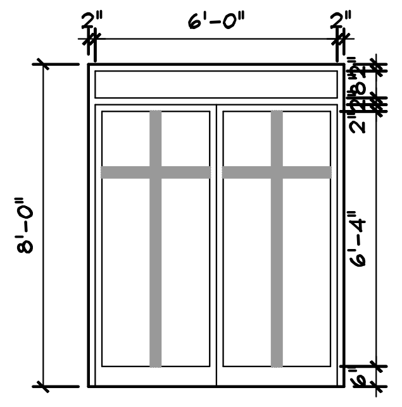
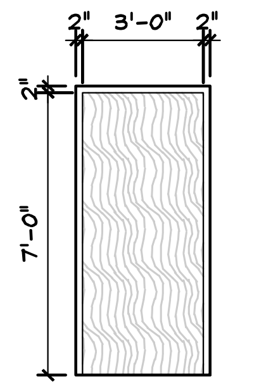
A2 OF 7





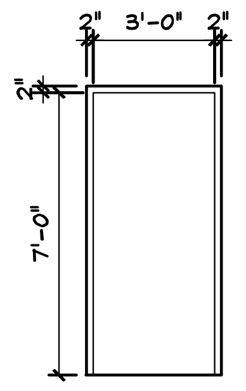
TYPE A

ALUMINUM STORE FRONT
SYSTEM, ETCHED CROSS
EXTERIOR AND INTERIOR



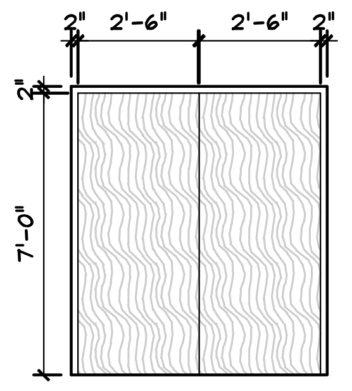
TYPE B

FLUSH SOLID
CORE WOOD
HOLLOW METAL FRAME
STAIN MDF



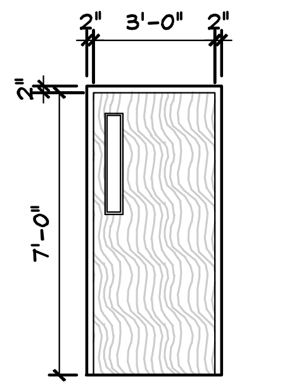
TYPE C

INSULATED FLUSH
STEEL
HOLLOW MTL. FRAME



TYPE D

FLUSH SOLID
CORE WOOD
HOLLOW MTL. FRAME
STAIN MDF



TYPE E

FLUSH SOLID
CORE WOOD
W/ VISION PANEL
HOLLOW MTL. FRAME
STAIN MDF

ROOM FINISH SCHEDULE

ROOM	DESIGNATION	FLOORS AND BASE		WALLS		CEILING		REMARKS
		MATERIAL	BASE	SUBSTRATE	MATERIAL	SUBSTRATE	MATERIAL	
VESTIBULE EXTENSION	101	PORCELAIN TILE	WOOD	GWB	PAINT	SEE REFLECTED CEILING PLAN ON SHEET A3		MATCH EXIST
WORSHIP EXTENSION	102	CARPET	WOOD	GWB	PAINT			MATCH EXIST CHAIRRAIL & 12" WOOD BASE
SERVING VESTIBULE	103	VCT	RUBBER	GWB	PAINT			MATCH EXIST; NEW SERVING WINDOW
KITCHEN	104	QUARRY TILE	Q.T.	GWB	FRP			MATCH EXIST
PANTRY	105	QUARRY TILE	Q.T.	GWB	FRP			MATCH EXIST
HALL	106	VCT	RUBBER	GWB	PAINT			
CLASSROOM	107	CARPET	RUBBER	GWB	PAINT			
TOILET	108	CERAMIC TILE	C.T.	GWB	PAINT/CT			TILE TO 48" ON WALLS
CLASSROOM	109	CARPET	RUBBER	GWB	PAINT			
HALL	110	VCT	RUBBER	GWB	PAINT			
CLASSROOM	111	CARPET	WOOD	GWB	PAINT			
TOILET	112	CERAMIC TILE	C.T.	GWB	PAINT/CT			TILE TO 48" ON WALLS
CLASSROOM	113	VCT	RUBBER	GWB	PAINT			
HALL	114	VCT	RUBBER	GWB	PAINT			
CLASSROOM	115	CARPET	RUBBER	GWB	PAINT			
CLASSROOM	116	CARPET	RUBBER	GWB	PAINT			
HALL	117	VCT	RUBBER	GWB	PAINT			
HALL	118	VCT	RUBBER	GWB	PAINT			
STORAGE	119	VCT	RUBBER	GWB	PAINT			
SPRINKLER ROOM	120	VCT	RUBBER	GWB	PAINT			

FINISH NOTES

1. ALLOW $40/YARD FOR CARPET.
2. FLOOR TILE SHALL BE CERAMIC MOSAIC, WALL AND BASE TILE SHALL BE GLAZED CERAMIC.
3. RUBBER BASE SHALL BE EQUAL TO JOHNSONITE. VCT SHALL BE BY ARMSTRONG OR EQUAL.
4. QUARRY TILE SHALL BE 6x6 NON-SKID.
5. APPLY ONE COAT OF PRIMER AND TWO FINISH COATS ON ALL WALLS AT NEW CONSTRUCTION
6. ALL WOOD DOORS SHALL BE STAIN GRADE.
7. ALL WALL PAINT SHALL BE LATEX FLAT. TOILETS SHALL BE LATEX SEMI-GLOSS. PAINT HM DOORS AND FRAMES WITH SEMI-GLOSS ALKYD.
8. FRP-FIBERGLASS REINFORCED PANELS.
9. PORCELAIN TILE SHALL BE 12x12

DOOR & FRAME SCHEDULE

NO.	SIZE	MTL./ STYLE	TYPE	FRAME	HRDWR	REMARKS
1	3'-0" X 7'-0"	WOOD / FLUSH	B	HM	HW5	
2	2-2'-6" X 7'-0"	WOOD / FLUSH	D	HM	HW2	
3	2-2'-6" X 7'-0"	WOOD / FLUSH	D	HM	HW2	
4	3'-0" X 7'-0"	STEEL / FLUSH	C	HM	HW3	
5	3'-0" X 7'-0"	WOOD / FLUSH	E	HM	HW6	4"x32" LAMINATED GLASS
6	3'-0" X 7'-0"	WOOD / FLUSH	E	HM	HW6	4"x32" LAMINATED GLASS
7	3'-0" X 7'-0"	WOOD / FLUSH	E	HM	HW8	4"x32" LAMINATED GLASS
8	3'-0" X 7'-0"	STEEL / FLUSH	C	HM	HW3	
9	3'-0" X 7'-0"	WOOD / FLUSH	E	HM	HW8	4"x32" LAMINATED GLASS
10	3'-0" X 7'-0"	WOOD / FLUSH	E	HM	HW6	4"x32" LAMINATED GLASS
11	3'-0" X 7'-0"	WOOD / FLUSH	B	HM	HW7	
12	3'-0" X 7'-0"	WOOD / FLUSH	E	HM	HW6	4"x32" LAMINATED GLASS
13	3'-0" X 7'-0"	STEEL / FLUSH	C	HM	HW3	
14	3'-0" X 7'-0"	STEEL / FLUSH	C	HM	HW3	
15	3'-0" X 7'-0"	WOOD / FLUSH	E	HM	HW6	4"x32" LAMINATED GLASS
16	3'-0" X 7'-0"	WOOD / FLUSH	B	HM	HW7	
17	EXIST STEEL	STEEL / FLUSH			EXIST	EXIST DOOR TO BE REFERBISHED AND REPAINTED
18	3'-0" X 7'-0"	WOOD / FLUSH	E	HM	HW8	4"x32" LAMINATED GLASS
19	3'-0" X 7'-0"	WOOD / FLUSH	E	HM	HW8	4"x32" LAMINATED GLASS
20	2-3'-0" X 7'-0"	ALUM / GL	A	ALUM	EXIST	REWORK ALUM DOORS TO CHECK OPERABILITY
21	2-3'-0" X 7'-0"	ALUM / GL	A	ALUM	EXIST	REWORK ALUM DOORS TO CHECK OPERABILITY
22	3'-0" X 7'-0"	WOOD / FLUSH	E	HM	HW8	4"x32" LAMINATED GLASS
23	3'-0" X 7'-0"	WOOD / FLUSH	E	HM	HW8	4"x32" LAMINATED GLASS

DOOR NOTES

1) ALL EXTERIOR GLASS SHALL BE 1" LOW-E, INSULATED, TO MEET THE LOCAL WIND LOADS.
2) PROVIDE FLASHING AS PER MANUFACTURERS INSTRUCTIONS AROUND DOORS.
3) INTERIOR DOORS TO BE FLUSH SOLID CORE MDF, STAIN GRADE.
4) EXTERIOR HOLLOW METAL DOORS TO BE INSULATED.
5) PROVIDE TEMPERED GLASS WHERE REQUIRED.
6) EXIST REAR DOOR TO KITCHEN TO BE REPAINTED

HARDWARE SCHEDULE

HW1:(19,20)
SERVICE EXISTING LOCKS

HW2:(2,3)
HINGES-3 PR. THROW
HOLD OPEN LATCHSET
KICKPLATE

HW3:(4,8,13,14)
HINGES-1 1/2 PR. PANIC DEVICE NO EXT HANDLE ON 4 & 8
CLOSER WEATHERSTRIP & THRESHOLD
KICKPLATE STOP
PANIC DEVICE w/EXT HANDLE & LOCK ON 13 & 14

HW4: NOT USED

HW5:(1)
HINGES-1 1/2 PR. LOCKSET w/THUMBTURN
STOP

HW6:(5,6,10,12,15,17)
HINGES-1 1/2 PR. LATCHSET
STOP CLOSER
KICKPLATE

HW7:(11,16)
HINGES 1 1/2 PR. PRIVACY SET
STOP

HW8:(7,9,19,22,23)
HINGES 1 1/2 PR. PANIC DEVICE w/HANDLE
STOP COORDINATOR
CLOSER KICKPLATE

BID SET
SEPTEMBER 1, 2026

BRIAN D. GARRETT ARCHITECT, P.A. 52549
BRIAN D. GARRETT 5120
BID SET

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DATE: DECEMBER 1, 2024
PROJECT NO. 2402

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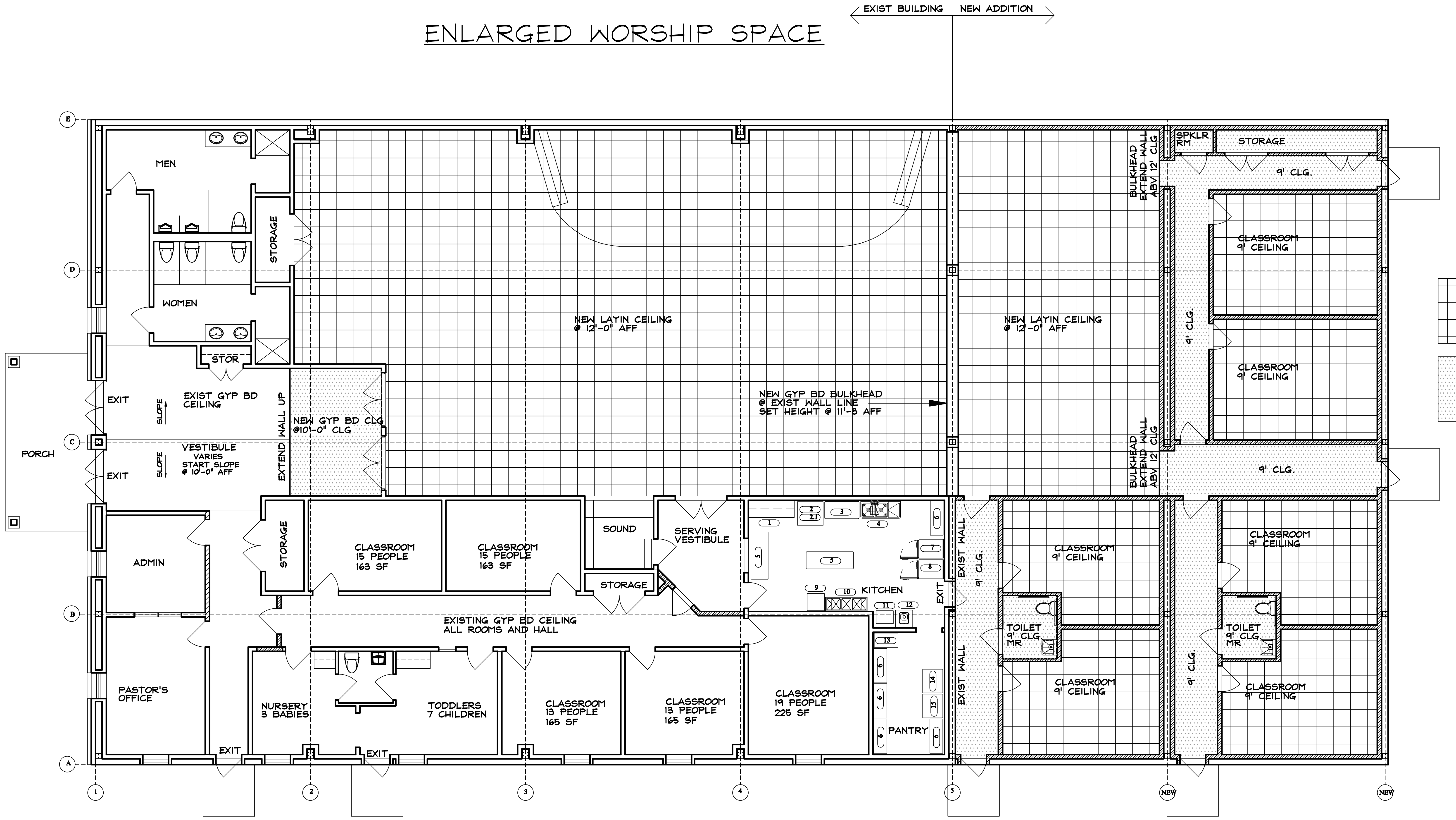
ARCHITECT, PA
107 GOLDEN GROVE CIRCLE
PIEDMONT, SC
910-617-1078
bgarchitects1@gmail.com

RIVER OF LIFE CHURCH
8411 OCEAN HIGHWAY
SUNSET BEACH, NC
BRUNSWICK COUNTY

DOOR WINDOW
FINISH SCHEDULE

SHEET NUMBER:
A4 OF 7



REFLECTED CEILING PLAN

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

▦	ACCOUSTICAL CEILING TILE ARMSTRONG OR EQUAL, 2x2 REVEAL EDGE TEGULAR MEDIUM FISSURED, 15/16 GRID WHITE
▒	5/8" GYP BD CEILING IN THE HALLWAYS. USE 5/8" MOISTURE RESISTANT IN THE TOILETS, AND STORAGE, SUPPORT w/GALV GYP BD CLG FRAMING

COORDINATE MECHANICAL
AND ELECTRICAL WITH
THE GRID

BID SET
SEPTEMBER 1, 2026

CERT NO. 52549

5120

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RIVER OF LIFE CHURCH

8411 OCEAN HIGHWAY
SUNSET BEACH, NC
BRUNSWICK COUNTY

REFLECTED CLG PLAN

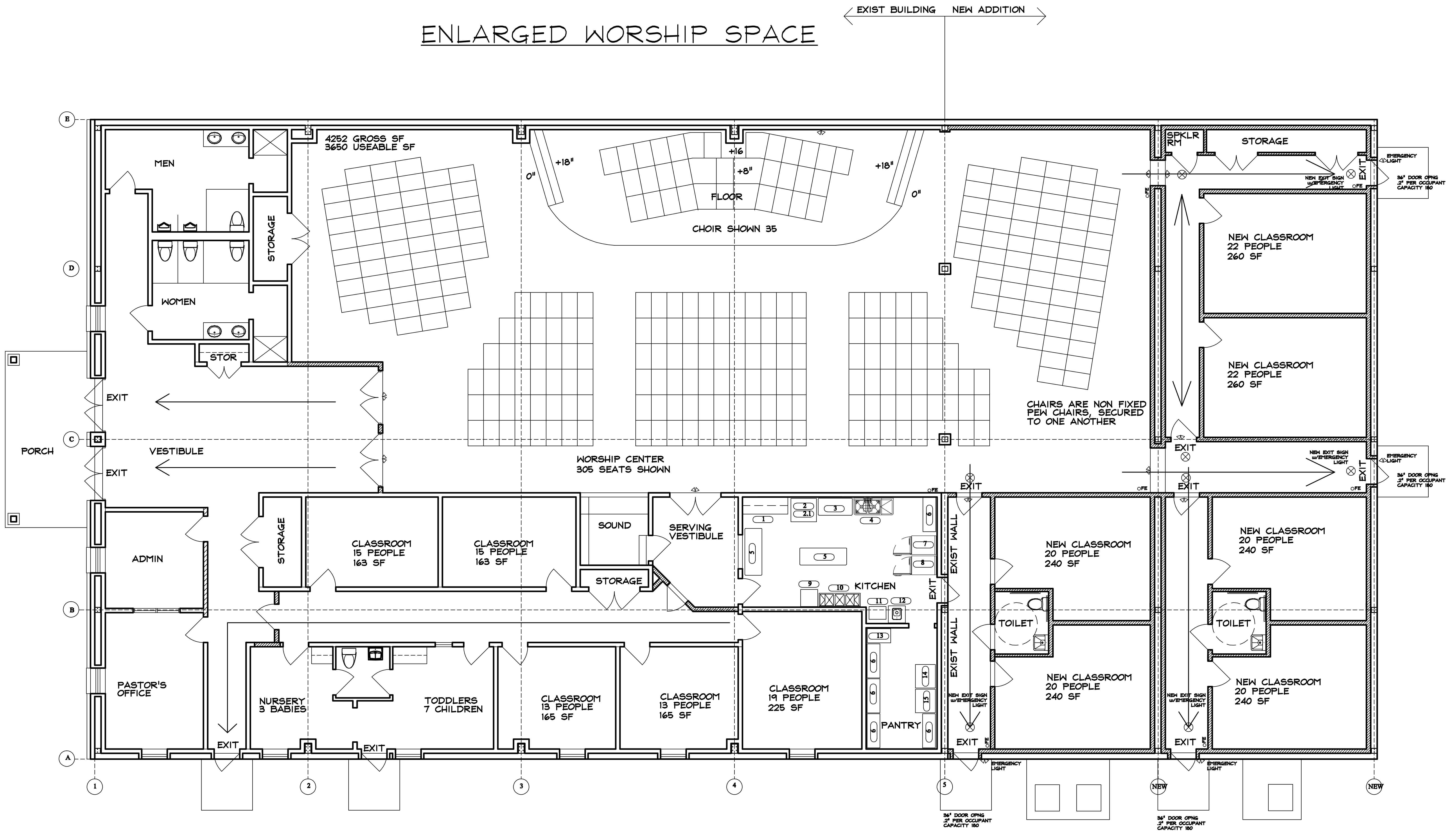
SHEET NUMBER:
A3 OF 7

LIFE SAFETY NOTES:

1. THE EXISTING MEANS OF EGRESS WILL NOT BE REDUCED. THERE WILL BE NEW EGRESS WAYS ADDED.

2. THE ENTIRE NEW BUILDING ADDITION AND EXISTING BUILDING WILL SPRINKLED.

3. THE EXISTING CLASSROOM HALLWAY IS FIRE RATED.


EXIST BUILDING
NEW ADDITION
ENLARGED WORSHIP SPACE
4252 GROSS SF
3650 USEABLE SF
MEN
WOMEN
STORAGE
STOR
CHOIR SHOWN 35
FLOOR
+18"
+16
+8"
0"
EXIT
PORCH
VESTIBULE
WORSHIP CENTER
305 SEATS SHOWN
CHAIRS ARE NON FIXED PEW CHAIRS, SECURED TO ONE ANOTHER
SPKLR RM
STORAGE
EMERGENCY LIGHT
NEW EXIT SIGN w/EMERGENCY LIGHT
36" DOOR OPNG .2" PER OCCUPANT CAPACITY 180
FE
NEW CLASSROOM 22 PEOPLE 260 SF
NEW CLASSROOM 22 PEOPLE 260 SF
ADMIN
STORAGE
CLASSROOM 15 PEOPLE 163 SF
CLASSROOM 15 PEOPLE 163 SF
SOUND
STORAGE
SERVING VESTIBULE
KITCHEN
PANTRY
EXIST WALL
NEW CLASSROOM 20 PEOPLE 240 SF
NEW CLASSROOM 20 PEOPLE 240 SF
TOILET
TOILET
NEW CLASSROOM 20 PEOPLE 240 SF
NEW CLASSROOM 20 PEOPLE 240 SF
PASTOR'S OFFICE
NURSERY 3 BABIES
TODDLERS 7 CHILDREN
CLASSROOM 13 PEOPLE 165 SF
CLASSROOM 13 PEOPLE 165 SF
CLASSROOM 19 PEOPLE 225 SF
A
B
C
D
1
2
3
4
5
NEW

LIFE SAFETY PLAN

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

CERT NO. 52549

5120

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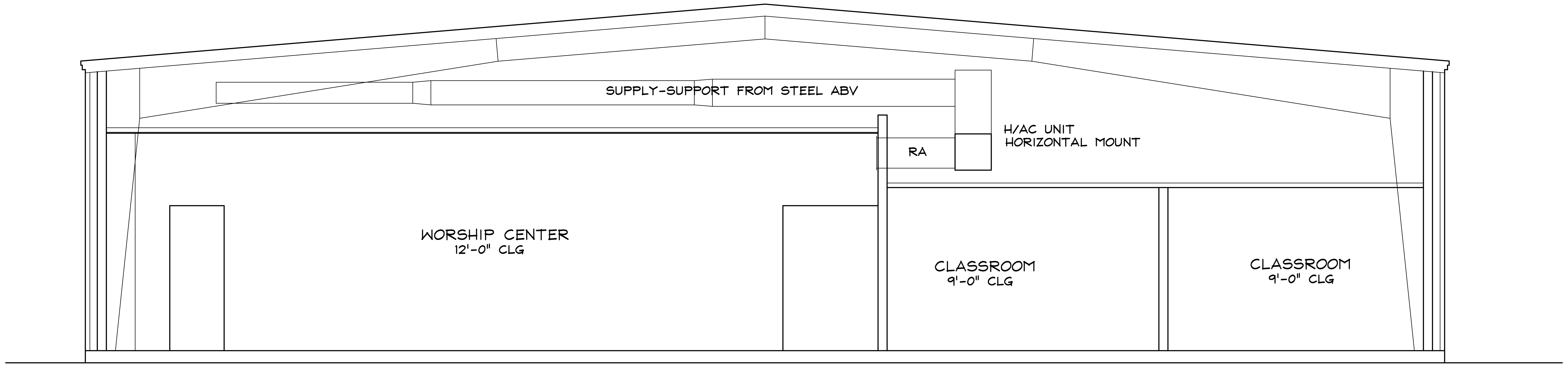
RIVER OF LIFE CHURCH
8411 OCEAN HIGHWAY
SUNSET BEACH, NC
BRUNSWICK COUNTY

LIFE SAFETY PLAN

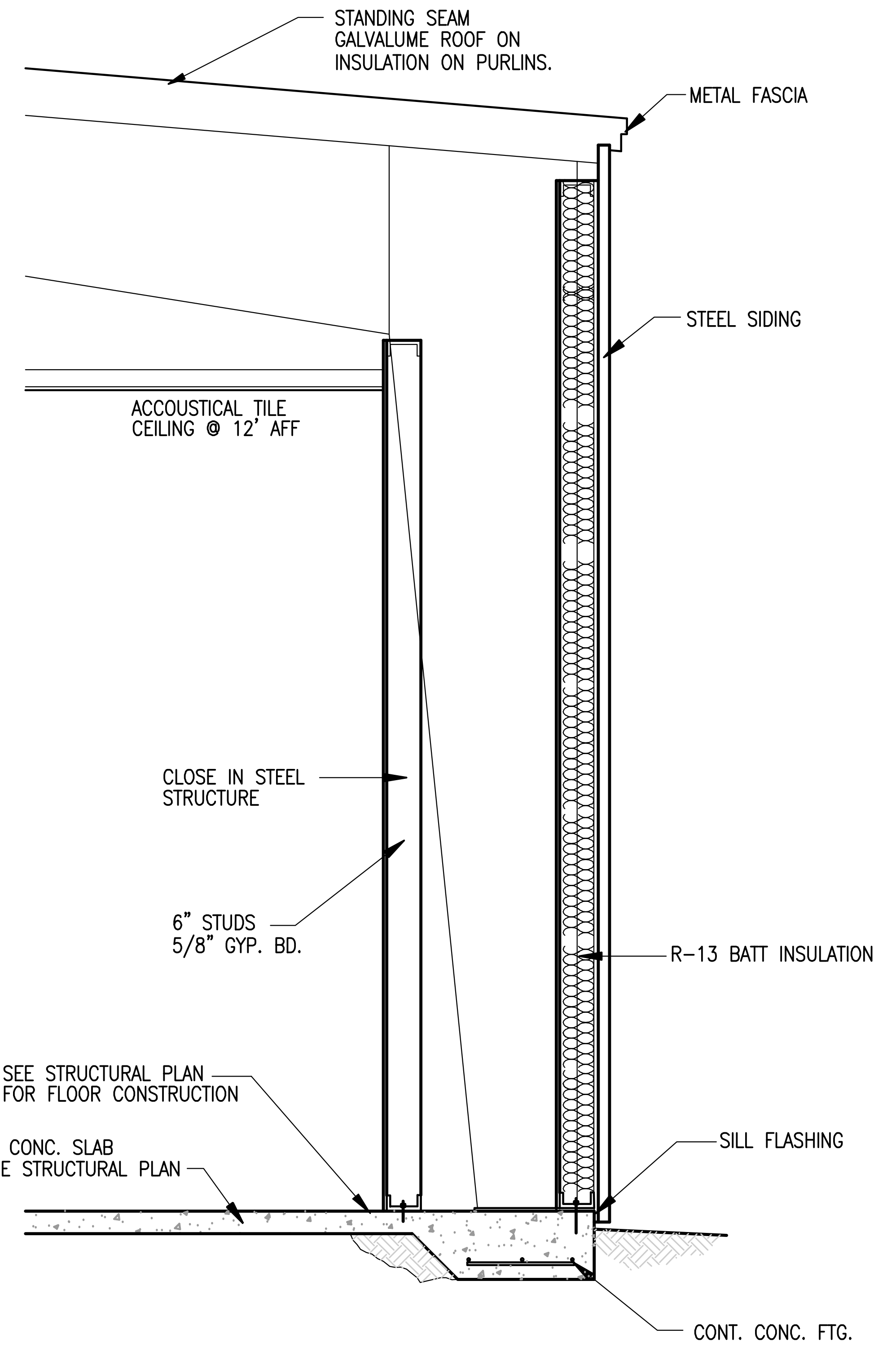
BID SET
SEPTEMBER 1, 2026

SHEET NUMBER:
A6 of 7



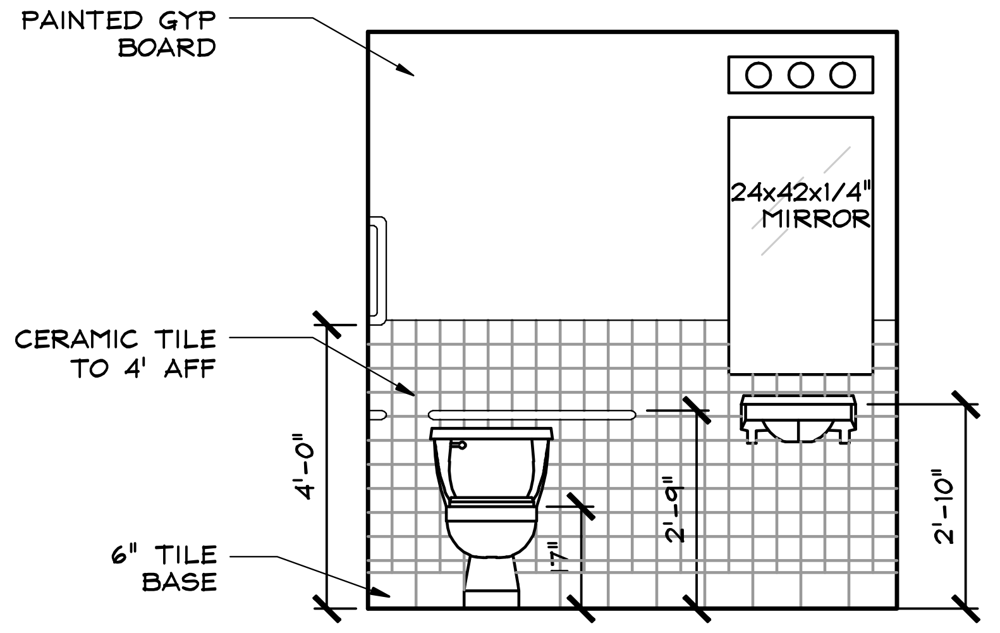
BUILDING SECTION

SCALE: 1/4"=1'-0"



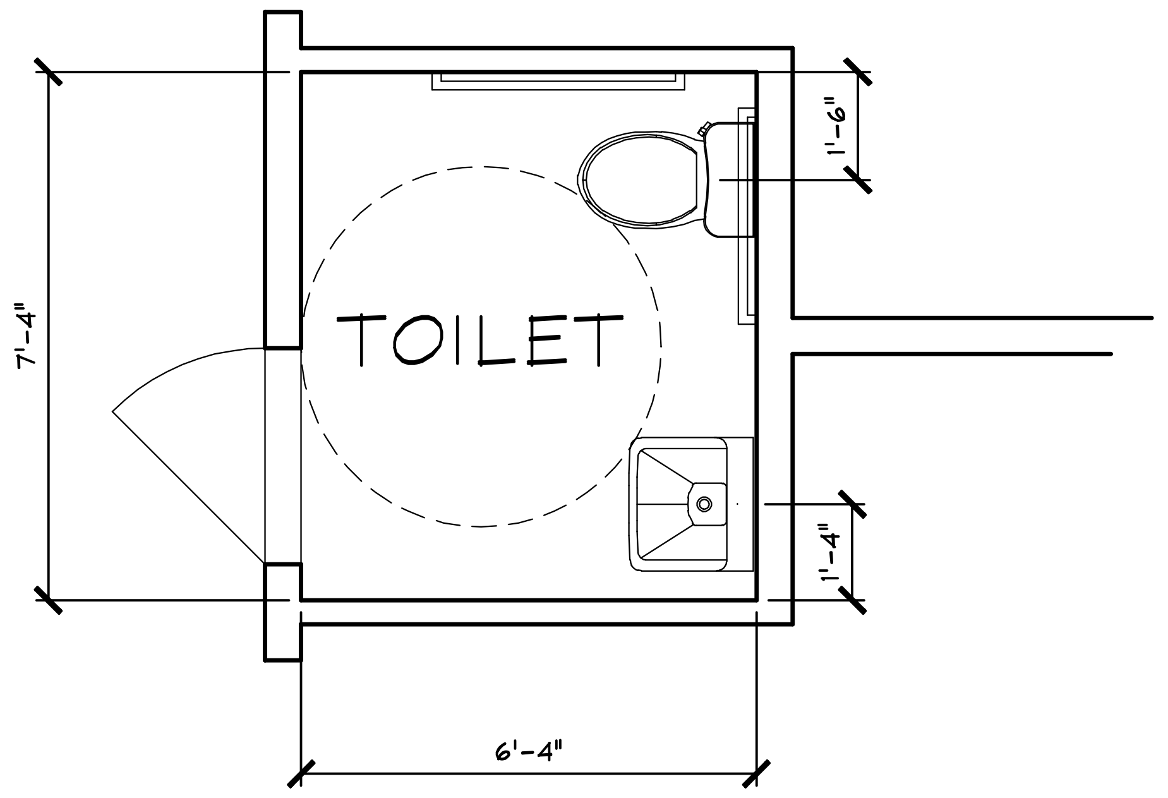
METAL BUILDING SECTION

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



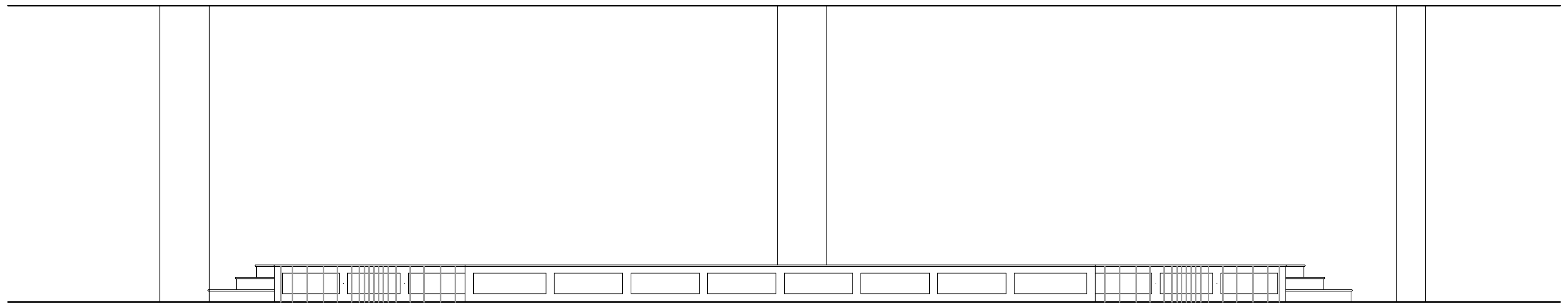
TOILET ELEVATION

3/8" = 1'-0"



TOILET PLAN

3/8" = 1'-0"



NEW STAGE ELEVATION

SCALE: 1/4"=1'-0"

BID SET
SEPTEMBER 1, 2026

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RIVER OF LIFE CHURCH

8411 OCEAN HIGHWAY
SUNSET BEACH, NC
BRUNSWICK COUNTY

INTERIOR
ELEVATIONS
CANOPY DETAIL

SHEET NUMBER:

A5 OF 7

Design Criteria:

DRAWINGS AND SPECIFICATIONS CONFORM TO:

DESIGN CRITERIA:

NCBC 2018 and ICC 2015
ASCE 7-16

Floor Live Load(psf)..................	100
Floor Dead Load(psf).................	20
Roof Load Load(psf)..................	20
Roof Dead Load(psf).................	2.5
Ground Snow Load(psf)............	10
Roof Snow Load(psf)................	7
Balconies Live Load(psf)..........	NA
Balconies Dead Load(psf)..........	NA

DESIGN DATA will also be provided by the Steel Building Manufacturer:

RISK CATEGORY : II STANDARD BUILDINGS

Wind Speed:
ASCE 7-16: 147 MPH - Vult (3 second gust)
Importance Factor: 1.0
Exposure Category: B
Component Cladding Wind Pressure: 50 PSF
Seismic Use Group: II
Seismic Design Category: C
Seismic Design Parameters: Ss=0.229, S1=0.090, SDS=0.244, SD1=0.144
Site Class: D
Importance - Seismic: 1.00
Seismic R: 3.0
Seismic Cs: 0.0813
Internal Pressure Coefficient: +/- 0.18
Seismic Force Resisting System: Steel Ordinary Concentrically Braced Frame
Analysis Procedure - Equivalent Lateral Force Method
Wind Enclosure: Enclosed

REFERENCE:

The Steel Building Manufacturer will provide the Steel Column and anchor bolt requirements for this addition. These final Steel Building plans will be reviewed by the Engineer prior to foundation and construction.

General Notes/Remarks/Assumptions

1. All work and materials shall be in accordance with the NCBC 2018.
2. Any variations from these plans should be referred to the Engineer.
3. All building materials shall conform to existing local building codes.
4. All cross-sections, drawings and tables are typical for similar locations where applicable.
5. All dimensions are to be derived from the architectural plans unless otherwise noted on this drawing.
6. Contractor is responsible for adequate construction bracing and any failures due to lack of it.
7. Refer to architectural plans and current code requirements for details not stated in this drawing.
8. Details not included in these drawings shall be governed by current applicable local building codes.
9. No non-standard load(such as equipment, etc.) shall be applied unless otherwise noted in these drawings.
10. All materials for headers and bracing to be #2 SYP @ 19% MC, all wood members in contact with masonry or concrete to be pressure treated .25 CCA.
11. All wood members for studs, bracing, purlins, and plates to be #2 SPF @ 19% MC.
12. All double top plates and sill plates to be #2 SPF. If contacting masonry or concrete, plates to be pressure treated .25 CCA.
13. Manufactured floor trusses and roof trusses shall be installed according to manufacturer's specifications.
14. Floor sheathing to be 3/4" T&G glued and nailed at 6" OC @ edges and 12" OC at interior.
15. All materials below BFE shall be of flood resistant treated type.
16. Sheathing nails shall be .131" shank diameter, (8d common nails) or .148" shank diameter, (10d common nails) as specified.
17. Ceiling diaphragm shall be 5/8" thick gypsum nailed with 5d nails spaced at 7" on the edges and 10" on the interior. Screws can also be used as substitute for nails.
18. Nailing for the double top plate shall be 16d common nails staggered @ 8" OC.
19. Foundation anchors to be within 8" of each sill plate section end and within 8" of each intersection of interior load bearing wall and exterior wall.
20. All internal load bearing walls on raised or monolithic slabs to have a continuous thickened footing per section detail specification.
21. All metal connectors in contact with pressure treated or ACQ wood products must be ZMAX coated or galvanized.
22. All structural storm panels made for all windows to meet NCBC 2018 relevant code code requirements.
23. Prior to construction, all vegetation, stumps, roots, foreign material, and surficial topsoil shall be removed from the area under the foundation and to a minimum distance of 5 feet beyond the limits of the proposed building. After this striping and clearing has been completed, the exposed natural soils shall be compacted to 95% of Modified Proctor in accordance with ASTM D 1557.
24. All fill material shall be placed in lifts not to exceed 8 inches and shall be compacted to 95% of Modified Proctor in accordance with ASTM D 1557. All fill material shall consist of soil with no more than 10% of the particles passing a #200 sleve and shall be free of vegetation, organic material, construction debris, large rocks, and all foreign material.
25. Groundwater levels shall be controlled to a minimum of 2 feet below the construction level. Groundwater elevations may fluctuate during construction groundwater levels.
26. All footings have been designed for the following soil bearing capacity of 2,000 PSF.
27. The outlying perimeter areas of the proposed building shall be graded in such a way as to provide positive drainage away from the Building.
28. A vapor retarder shall be installed underneath the slab consisting of 6 mil minimum polyethylene with joints lapped not less than 6 inches and sealed.
29. All concrete shall have a minimum compressive strength of 3,000 psi at 28 days.
30. All concrete shall be mixed until there is a uniform distribution of materials in accordance with ACI 318.
31. All reinforcing bars that do not require welding shall conform to ASTM-615, Grade 60. All reinforcing bars that are to be welded shall conform to ASTM A706, Grade 60. Welded wire fabric shall conform to ASTM A-185.
32. The rebar in the slab turn down shall be continuous for the entire perimeter of the foundation and shall be lap spliced a minimum of 24" at terminal points in order to maintain continuity.
33. The slab reinforcing including welded wire fabric shall not be cut during or anytime after construction since this reinforcement provides structural stability for the building.
34. Fiber reinforced concrete is an acceptable alternative to a welded-wire fabric. Standard synthetic fibers shall be used.
35. Control joints shall be installed in the foundation at intervals to route any stress cracks.
36. Maintain 3 inches minimum clearance for all rebar, unless otherwise noted.
37. All masonry cells containing reinforcement and/or anchor bolts shall be grouted solid.

Scott A. Everett, PE
165 Everett Place
Britton's Neck, SC 29546
843-362-2027 (office)
843-283-2000 (cell)

NOTE:
Contractor to verify all dimensions and local building code compliance.

Prepared For:
River of Life Church
Addition Project
8411 Ocean Highway
Sunset Beach, NC

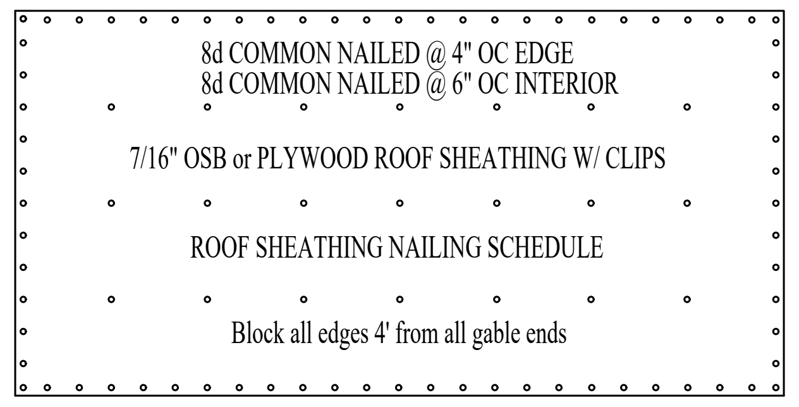
Structural General Notes

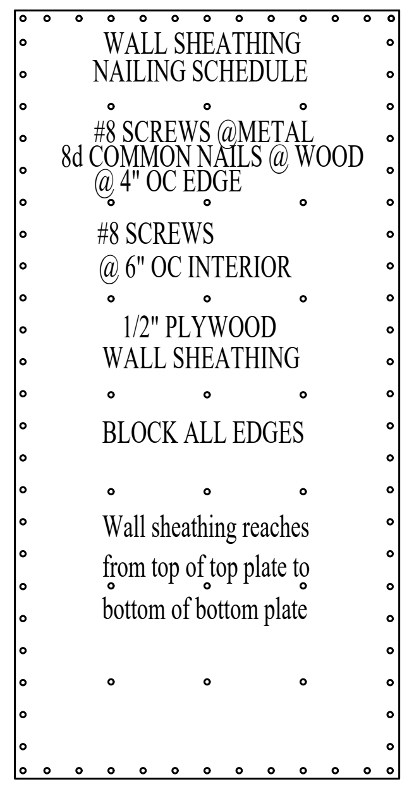
SCOTT A. EVERETT
048889
10/01/25

Date: 10/01/25

Revision: 1

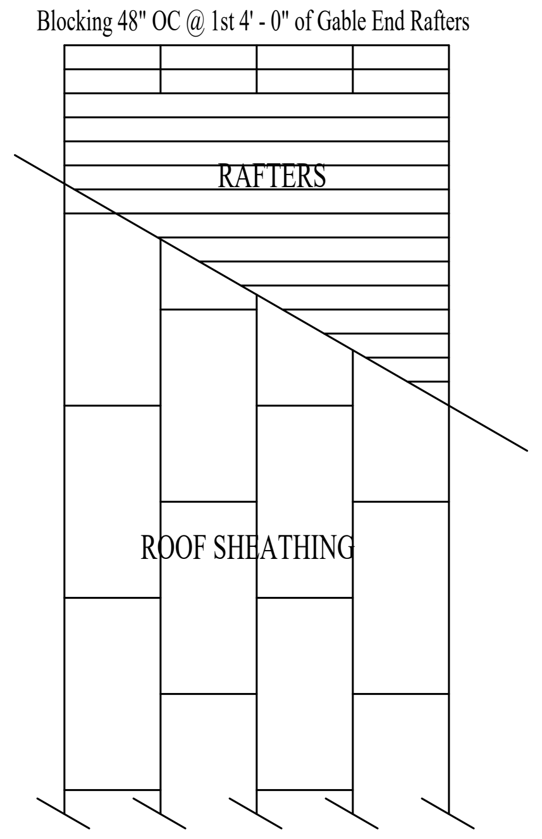
SHEET NUMBER
S-1
of 2


8d COMMON NAILED @ 4" OC EDGE
8d COMMON NAILED @ 6" OC INTERIOR
7/16" OSB or PLYWOOD ROOF SHEATHING W/ CLIPS
ROOF SHEATHING NAILING SCHEDULE
Block all edges 4' from all gable ends



1 / S - 1 ROOF AND WALL SHEATHING SCHEDULE

Scale: 1/2" = 1'



2 / S - 1 GABLE ROOF FRAMING DETAIL

Scale: NTS

HEADER SCHEDULE

OPENING WIDTH	HEADER			JAMB			SILL MEMBER WHERE APPLICABLE		
	TYPE	SIZE	CONNECTION	TYPE	SIZE	BASE CONNECTION	TYPE	SIZE	CONNECTION
0' to 4'	BOX	(2)550S162-43/ (2)800T125-43	3" LONG TRACK PIECE. ATTACH TO HEADER W/(4) #10 SCREWS EA. SIDE. ATTACH TO JAMB W/(8) #10 SCREWS.	2 STUD/ 1 TRACK	(2)800S162-43/ (1)800T125-43	3"x3"x3" LONG 18 GA. CLIP W/(2) #12 SCREWS & (1) HILTI QUICK CON II ($\frac{3}{16}$" DIA.)	1 TRACK	(1)800T125-43	FASTEN SILL AT EACH END TO AN ADDITIONAL CRIPPLE STUD INSTALLED AT EACH END OF SILL
>4' to 8'	BOX	(2)800S162-54/ (2)800T125-43	3" LONG TRACK PIECE. ATTACH TO HEADER W/(4) #10 SCREWS EA. SIDE. ATTACH TO JAMB W/(8) #10 SCREWS.	2 STUD/ 1 TRACK	(2)800S162-43/ (1)800T125-43	3"x3"x3" LONG 18 GA. CLIP W/(2) #12 SCREWS & (1) HILTI QUICK CON II ($\frac{3}{16}$" DIA.)	1 TRACK	(1)800T125-43	FASTEN SILL AT EACH END TO AN ADDITIONAL CRIPPLE STUD INSTALLED AT EACH END OF SILL
>8' to 12'	BOX	(2)1000S162-68/ (2)800T125-43	6" LONG TRACK PIECE. ATTACH TO HEADER W/(4) #10 SCREWS EA. SIDE. ATTACH TO JAMB W/(12) #10 SCREWS.	2 STUD/ 1 TRACK	(2)800S162-43/ (1)800T125-43	SIMPSON S/HDU4 ANCHOR PER ANCHOR SCHEDULE			

NOTES:

1. ALL HILTI QUICK CON II ANCHORS SHALL HAVE 1-1/4" EMBEDMENT MIN.
2. ALL CLIPS SHALL BE 18 GA. STEEL 33 KSI MIN. UNLESS NOTED OTHERWISE ON PLANS
3. ALL SCREWS USED FOR ATTACHMENT SHALL BE SELF TAPPING.
4. FASTEN MEMBERS OF BUILT-UP LIGHT GAGE ASSEMBLIES TO EACH OTHER USING #10 SELF TAPPING SCREWS @ 12" O.C. MAX.

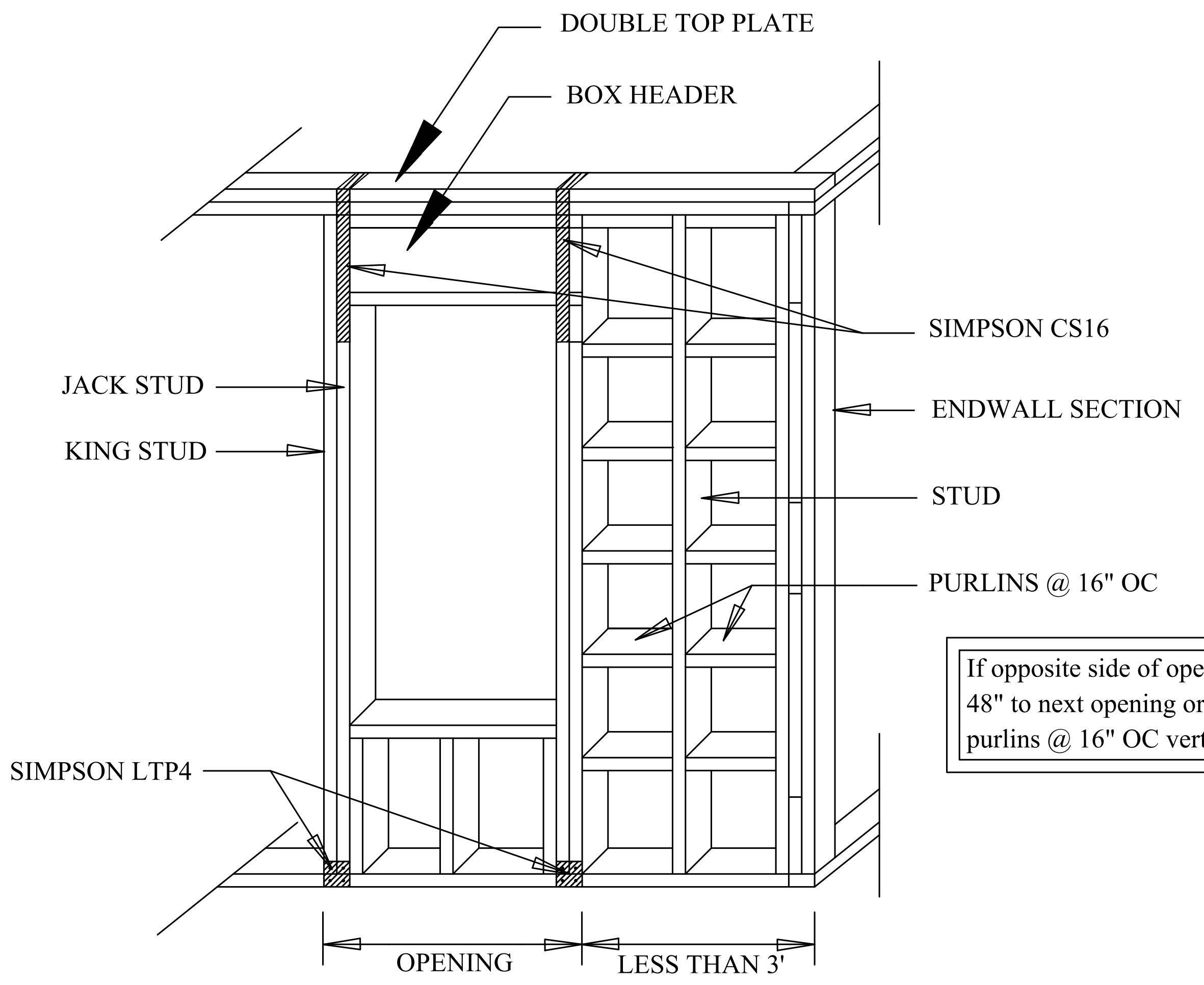
3 / S - 1 STEEL STUD WALL HEADER SPECIFICATIONS SCHEDULE

Scale: NTS

TRUSS HOLDDOWN SCHEDULE

SIMPSON HOLDOWN	ALLOWABLE UPLIFT LOAD	
	SPF	SYP
H10S	785	910
MTS12	850	990
HTS20	1125	1310
H10A	1015	1340
H14	1050	1465
(2) SDWC15600 SCREWS	1140	1200

THE CONNECTORS MAY BE APPLIED IN MULTIPLES TO ACHIEVE THE REQUIRED UPLIFT HOLDDOWN.

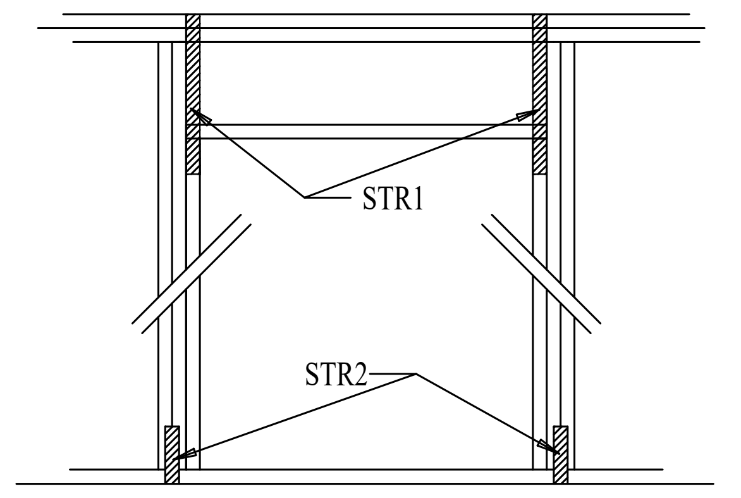


If opposite side of opening has less than 48" to next opening or corner, continue purlins @ 16" OC vertically to next post.

5 / S - 1 OPENING LESS THAN 3' FROM ENDWALL

Scale: 1/2" = 1'

APPLIES ONLY ON LOAD BEARING WALL OPENINGS



HEADER SPECIFICATIONS

Header Type	Window Door Opening Size	Number of jack studs	Number of king studs	STR1 each side	STR2 each side
2-2 x6 SYP Box Header	0' to 3'	1	1	No Straps Required	N/A
2-2 x8 SYP Box Header	>3' to 6'	1	1	No Straps Required	N/A
2-2 x10 SYP Box Header	>6' to 10'	2	2	No Straps Required	N/A
LVL as per Engineering	>10' to 16'	3	3	See Engineering	

6 / S - 1 WOOD STUD WALL HEADER SPECIFICATIONS SCHEDULE

Scale: NTS

Scott A. Everett, PE
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Britton's Neck, SC 29546
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843-283-2000 (cell)

NOTE:
Contractor to verify all dimensions and local building code compliance.

Prepared For:
River of Life Church
Addition Project
8411 Ocean Highway
Sunset Beach, NC

Structural General Notes

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 048889 SCOTT A. EVERETT
10/01/25

Date: 10/01/25

Revision: 1

SHEET NUMBER
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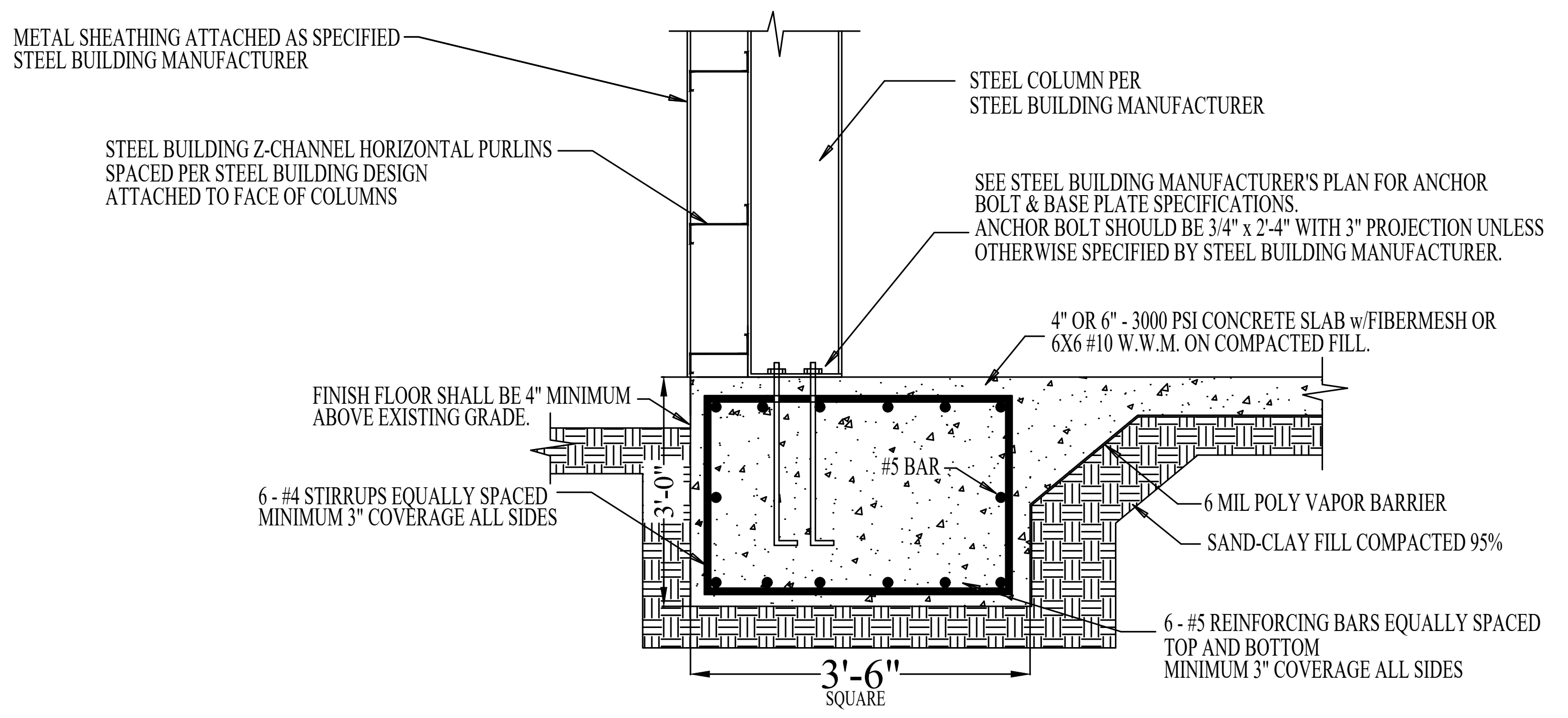
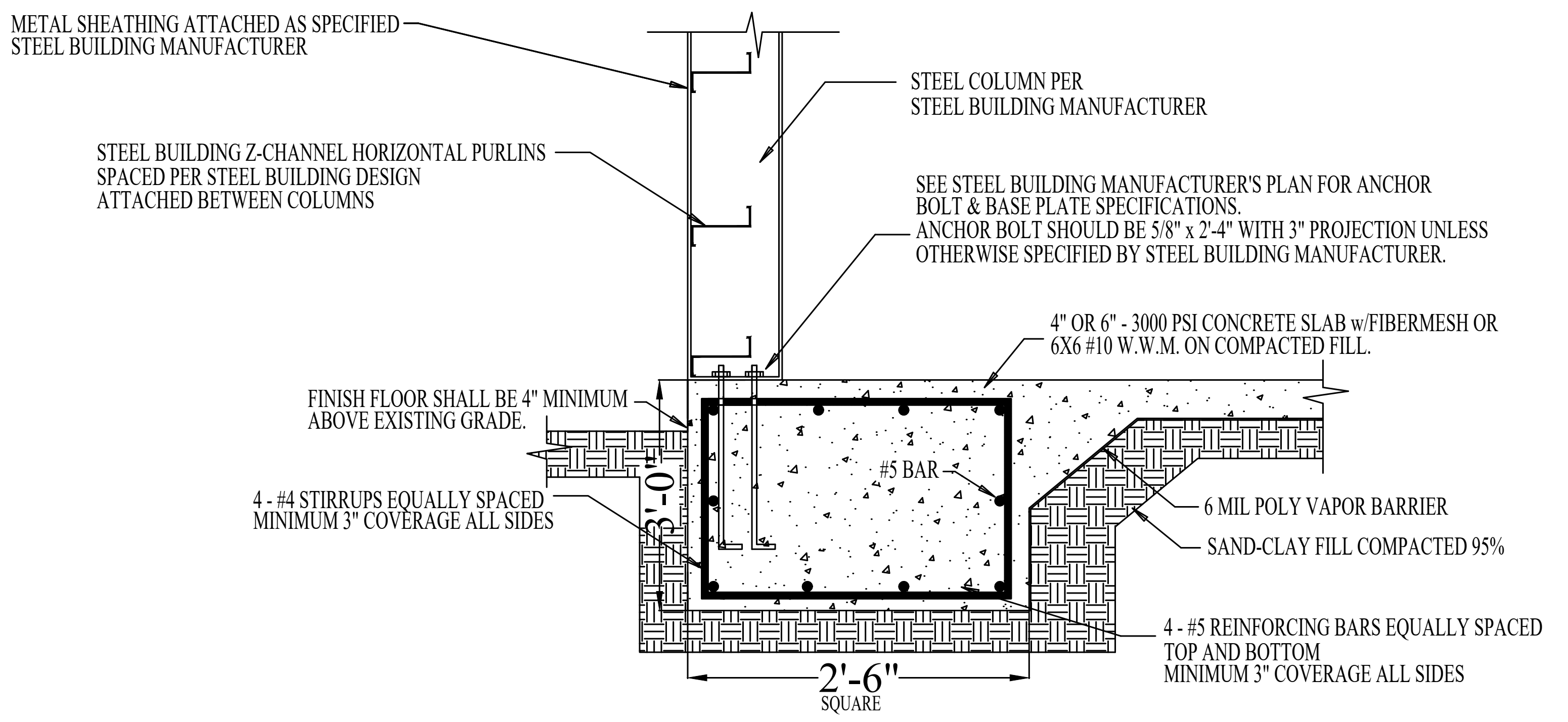
of 4


METAL SHEATHING ATTACHED AS SPECIFIED
STEEL BUILDING MANUFACTURER
STEEL BUILDING Z-CHANNEL HORIZONTAL PURLINS
SPACED PER STEEL BUILDING DESIGN
ATTACHED TO FACE OF COLUMNS
STEEL COLUMN PER
STEEL BUILDING MANUFACTURER
SEE STEEL BUILDING MANUFACTURER'S PLAN FOR ANCHOR
BOLT & BASE PLATE SPECIFICATIONS.
ANCHOR BOLT SHOULD BE 3/4" x 2'-4" WITH 3" PROJECTION UNLESS
OTHERWISE SPECIFIED BY STEEL BUILDING MANUFACTURER.
4" OR 6" - 3000 PSI CONCRETE SLAB w/FIBERMESH OR
6X6 #10 W.W.M. ON COMPACTED FILL.
FINISH FLOOR SHALL BE 4" MINIMUM
ABOVE EXISTING GRADE.
#5 BAR
6 - #4 STIRRUPS EQUALLY SPACED
MINIMUM 3" COVERAGE ALL SIDES
3'-0"
6 MIL POLY VAPOR BARRIER
SAND-CLAY FILL COMPACTED 95%
6 - #5 REINFORCING BARS EQUALLY SPACED
TOP AND BOTTOM
MINIMUM 3" COVERAGE ALL SIDES
3'-6"
SQUARE

1
F - 1
COLUMN FOOTER SECTION FOR FRONT AND REAR BEARING COLUMNS

NTS


METAL SHEATHING ATTACHED AS SPECIFIED
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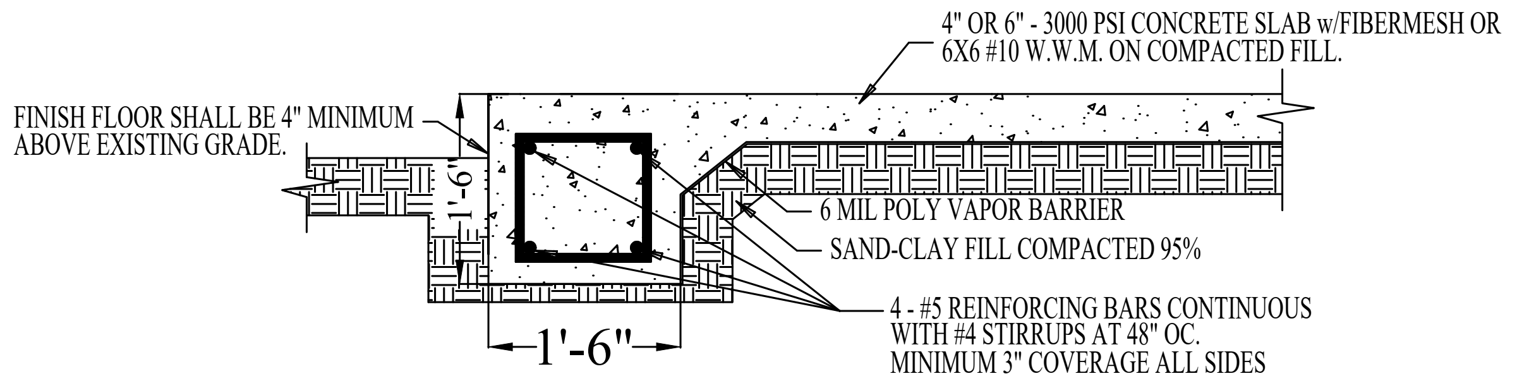
STEEL COLUMN PER
STEEL BUILDING MANUFACTURER
SEE STEEL BUILDING MANUFACTURER'S PLAN FOR ANCHOR
BOLT & BASE PLATE SPECIFICATIONS.
ANCHOR BOLT SHOULD BE 5/8" x 2'-4" WITH 3" PROJECTION UNLESS
OTHERWISE SPECIFIED BY STEEL BUILDING MANUFACTURER.
4" OR 6" - 3000 PSI CONCRETE SLAB w/FIBERMESH OR
6X6 #10 W.W.M. ON COMPACTED FILL.
FINISH FLOOR SHALL BE 4" MINIMUM
ABOVE EXISTING GRADE.
#5 BAR
4 - #4 STIRRUPS EQUALLY SPACED
MINIMUM 3" COVERAGE ALL SIDES
3'-0"
6 MIL POLY VAPOR BARRIER
SAND-CLAY FILL COMPACTED 95%
4 - #5 REINFORCING BARS EQUALLY SPACED
TOP AND BOTTOM
MINIMUM 3" COVERAGE ALL SIDES
2'-6"
SQUARE

2
F - 1
COLUMN FOOTER SECTION FOR END COLUMNS

NTS


4" OR 6" - 3000 PSI CONCRETE SLAB w/FIBERMESH OR
6X6 #10 W.W.M. ON COMPACTED FILL.
FINISH FLOOR SHALL BE 4" MINIMUM
ABOVE EXISTING GRADE.
1'-6"
6 MIL POLY VAPOR BARRIER
SAND-CLAY FILL COMPACTED 95%
4 - #5 REINFORCING BARS CONTINUOUS
WITH #4 STIRRUPS AT 48" OC.
MINIMUM 3" COVERAGE ALL SIDES
1'-6"

3
F - 1
CONTINUOUS PERIMETER FOOTER SECTION BETWEEN COLUMN FOOTERS

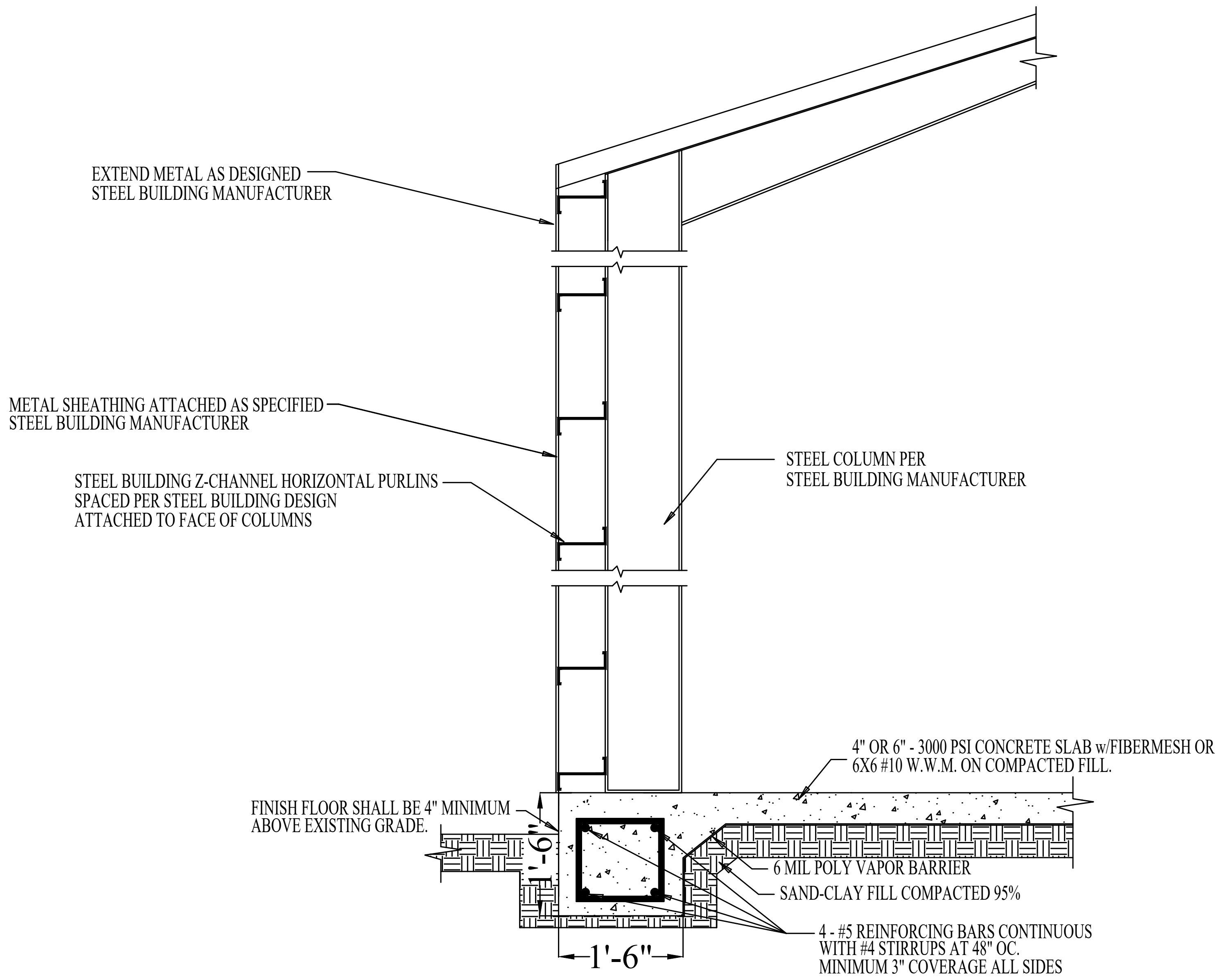
NTS

NOTES

The Concrete Floor may be 4" or 6" in depth as shown on the Details. The Builder will decide the final depth.
The Steel Building addition design will include any supports or modifications needed to remove the existing Steel Building exterior where the addition is connecting.
The Door Opening sizes and locations will be verified on-site.
Coordinate the location of all the Door Frame openings and supporting steel members on-site. They shall be located, attached, and bolted per the Manufacturer's specifications.

FOOTER NOTE FOR TIE IN TO EXISTING

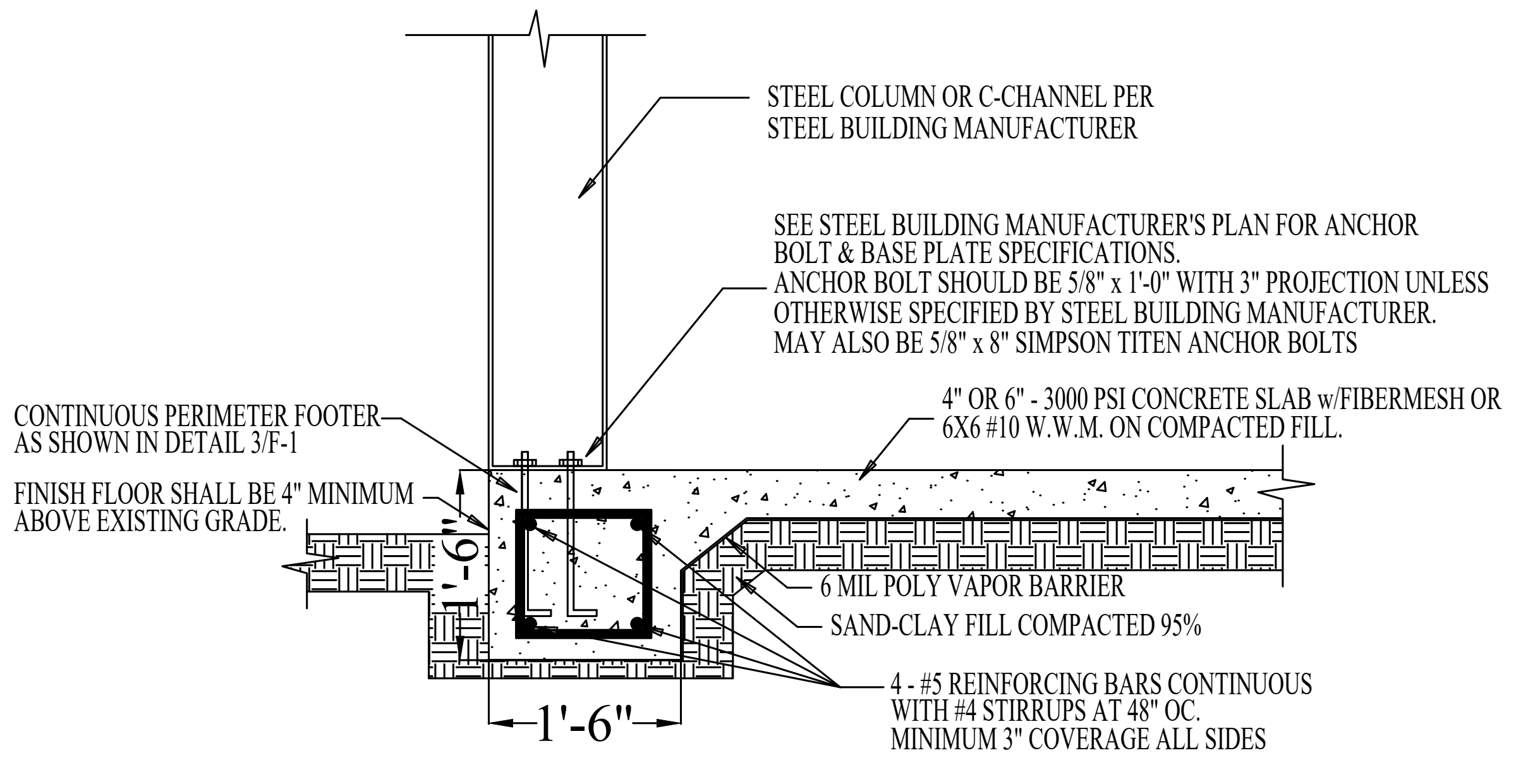
The new foundation footers shall be tied into the existing footer where they intersect. This shall be done by drilling and epoxying in the continuous rebar extending it into the existing concrete footer with a minimum of 6" embedment.


EXTEND METAL AS DESIGNED
STEEL BUILDING MANUFACTURER
METAL SHEATHING ATTACHED AS SPECIFIED
STEEL BUILDING MANUFACTURER
STEEL BUILDING Z-CHANNEL HORIZONTAL PURLINS
SPACED PER STEEL BUILDING DESIGN
ATTACHED TO FACE OF COLUMNS
STEEL COLUMN PER
STEEL BUILDING MANUFACTURER
4" OR 6" - 3000 PSI CONCRETE SLAB w/FIBERMESH OR
6X6 #10 W.W.M. ON COMPACTED FILL.
FINISH FLOOR SHALL BE 4" MINIMUM
ABOVE EXISTING GRADE.
1'-6"
6 MIL POLY VAPOR BARRIER
SAND-CLAY FILL COMPACTED 95%
4 - #5 REINFORCING BARS CONTINUOUS
WITH #4 STIRRUPS AT 48" OC.
MINIMUM 3" COVERAGE ALL SIDES
1'-6"

1
D - 1
FRONT and REAR EXTERIOR STEEL BUILDING WALL SECTION

Scale: NTS

LOCATE MAN DOOR COLUMNS/C-CHANNEL ON-SITE.
NOT SHOWN ON THE FOUNDATION PLAN


STEEL COLUMN OR C-CHANNEL PER
STEEL BUILDING MANUFACTURER
SEE STEEL BUILDING MANUFACTURER'S PLAN FOR ANCHOR
BOLT & BASE PLATE SPECIFICATIONS.
ANCHOR BOLT SHOULD BE 5/8" x 1'-0" WITH 3" PROJECTION UNLESS
OTHERWISE SPECIFIED BY STEEL BUILDING MANUFACTURER.
MAY ALSO BE 5/8" x 8" SIMPSON TITEN ANCHOR BOLTS
4" OR 6" - 3000 PSI CONCRETE SLAB w/FIBERMESH OR
6X6 #10 W.W.M. ON COMPACTED FILL.
CONTINUOUS PERIMETER FOOTER
AS SHOWN IN DETAIL 3/F-1
FINISH FLOOR SHALL BE 4" MINIMUM
ABOVE EXISTING GRADE.
1'-6"
6 MIL POLY VAPOR BARRIER
SAND-CLAY FILL COMPACTED 95%
4 - #5 REINFORCING BARS CONTINUOUS
WITH #4 STIRRUPS AT 48" OC.
MINIMUM 3" COVERAGE ALL SIDES
1'-6"

4
F - 1
COLUMN/C-CHANNEL FOOTER SECTION
FOR MAN DOOR OPENINGS

NTS

Scott A. Everett, PE
165 Everett Place
Britton's Neck, SC 29546
843-362-2027 (office)
843-283-2000 (cell)

NOTE:
Contractor to verify all dimensions and local building code compliance.

Prepared For:
River of Life Church
Addition Project
8411 Ocean Highway
Sunset Beach, NC

Structural Details/Foundation Plan

NORTH CAROLINA PROFESSIONAL SEAL 048889 ENGINEER SCOTT A. EVERETT
10/01/25

Date: 10/01/25

Revision: 1

SHEET NUMBER
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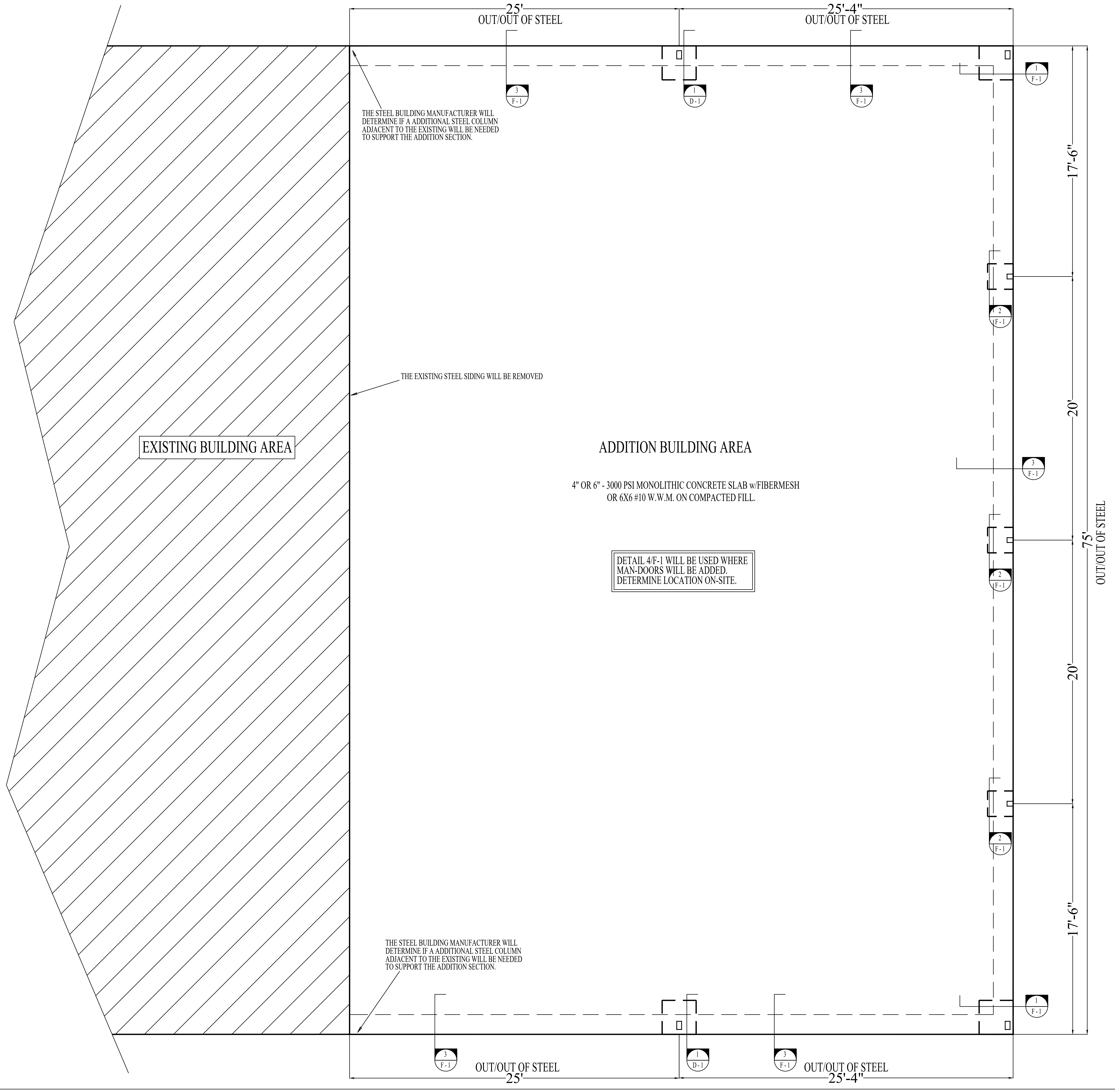
of 4



THE STEEL BUILDING MANUFACTURER WILL DETERMINE IF A ADDITIONAL STEEL COLUMN ADJACENT TO THE EXISTING WILL BE NEEDED TO SUPPORT THE ADDITION SECTION.

THE EXISTING STEEL SIDING WILL BE REMOVED

4" OR 6" - 3000 PSI MONOLITHIC CONCRETE SLAB w/FIBERMESH OR 6X6 #10 W.W.M. ON COMPACTED FILL.

DETAIL 4/F-1 WILL BE USED WHERE MAN-DOORS WILL BE ADDED. DETERMINE LOCATION ON-SITE.

THE STEEL BUILDING MANUFACTURER WILL DETERMINE IF A ADDITIONAL STEEL COLUMN ADJACENT TO THE EXISTING WILL BE NEEDED TO SUPPORT THE ADDITION SECTION.

STEEL BUILDING FOUNDATION PLAN

Scale: 1/4"=1'

VERIFY ALL DIMENSIONS AND COLUMN OFFSETS WITH MANUFACTURER'S ANCHOR BOLT PLAN AND ARCHITECTURAL PLANS.

COORDINATE LAYOUT OF ALL DOOR OPENINGS AND ADJUST FOOTERS ACCORDINGLY.

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10/01/25

Date: 10/01/25

Revision: 1

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of 4

DETAILED ELECTRICAL SPECIFICATIONS

SCOPE: FURNISH ALL MATERIALS, LABOR, TOOLS, EQUIPMENT AND SUPERVISION NECESSARY TO INSTALL COMPLETE ELECTRICAL POWER AND LIGHTING SYSTEM IN THE BUILDING AS FURTHER DESCRIBED ON THE ELECTRICAL CONTRACT DRAWINGS.

SUPPLY ALL MATERIALS, FITTINGS AND HARDWARE NECESSARY FOR COMPLETE OPERATING SYSTEMS WITHIN THE OBVIOUS INTENT OF THE DRAWINGS. NO ATTEMPT HAS BEEN MADE TO DETAIL OR LIST EACH AND EVERY ITEM OF MATERIAL. THE ELECTRICAL CONTRACTOR IS CAUTIONED TO READ THE ENTIRE PROJECT DRAWINGS AND SPECIFICATIONS TO ASSURE HIMSELF OF A THOROUGH KNOWLEDGE OF BUILDING CONSTRUCTION, STRUCTURAL RESTRICTIONS TO ELECTRICAL CONTRACT WORK AND TO ASSURE THAT NO REFERENCE ANYWHERE IN THE PROJECT DRAWINGS AND SPECIFICATIONS TO WORK BY THE ELECTRICAL CONTRACTOR IS OVERLOOKED.

CODES, PERMITS AND INSPECTIONS: THE LATEST EDITION OF THE STATE BUILDING CODE WHICH INCLUDES THE 2020 EDITION OF THE NATIONAL ELECTRICAL CODE IS HEREBY MADE A PART OF THIS SPECIFICATION. CODE REQUIREMENTS SHALL TAKE PRECEDENCE OVER THESE SPECIFICATIONS WHERE THE CODE REQUIREMENTS EXCEED THAT OF THE SPECIFICATIONS. HOWEVER, THE SPECIFICATIONS SHALL BE FOLLOWED WHERE THEY EXCEED CODE REQUIREMENTS. THE ELECTRICAL CONTRACTOR SHALL OBTAIN THE SERVICES OF THE LOCAL ELECTRICAL INSPECTOR TO MAKE ALL REQUIRED INSPECTIONS.

MATERIALS AND WORKMANSHIP: ALL MATERIAL BUILT INTO THIS PROJECT SHALL BE NEW OF EQUIVALENT OR BETTER QUALITY THAN THAT SPECIFIED. SPECIFIC NAMES AND CATALOG NUMBERS USED HEREIN ARE TO ESTABLISH THE ITEM FUNCTION, ARRANGEMENT AND QUALITY REQUIRED AND ARE NOT INTENDED TO RESTRICT COMPETITION. ALL MATERIALS SHALL BE UL LISTED AND LABELED FOR THE PARTICULAR APPLICATION AS USED ON THIS PROJECT.

CONDUCTORS: ALL CONDUCTORS SHALL BE COPPER (#10 AWG AND SMALLER SHALL BE SOLID, AND #8 AWG AND LARGER STRANDED) WITH THHN/THWN INSULATION, INSTALLED IN CONDUIT OR APPROVED CABLE ASSEMBLY. USE MC CABLE FOR BRANCH CIRCUIT WIRING. NM CABLE SHALL NOT BE USED. ALL CONDUCTORS SHALL BE COPPER, EXCEPT SERVICE CONDUCTORS. BRANCH CIRCUITS SHALL BE NM W/ GROUND SIZED PER NEC. CONDUCTOR COLOR CODE SHALL CONFORM TO THE NEC. CONDUCTORS SHALL BE CONTINUOUS FROM TERMINAL TO TERMINAL OR PULL BOX TO PULL BOX. JOINTS SHALL BE MADE WITH IDEAL "WIRENUTS." CONDUCTORS SHALL BE #12 AWG MINIMUM EXCEPT WITHIN LIGHT FIXTURES, LOW VOLTAGE CONTROLS OR COMMUNICATION/FIRE ALARM EQUIPMENT.

RACEWAYS: RACEWAYS SHALL BE ELECTRICAL METALLIC TUBING (EMT) WITH THREADED STEEL HEXAGONAL COMPRESSION FITTINGS – NEITHER INDENTOR TYPE OR DIE METAL FITTING WILL BE ACCEPTED. CONDUIT UNDER THE FLOOR SLAB AND UNDER GROUND OUTSIDE THE BUILDING MAY BE PVC. FITTINGS IN EMT SHALL BE WEATHER TIGHT (THOMAS AND BETTS SERIES #5123 WITH NYLON INSULATED THROATS), BENDS SHALL BE FACTORY FABRICATED OR MADE "COLD" WITH BENDING TOOL, FREE OF KINKS OR RESTRICTIONS. NO SINGLE BEND SHALL BE IN EXCESS OF 90 DEGREES. THERE SHALL BE NO MORE THAN THE EQUIVALENT OF THREE (3) 90 DEGREE BENDS IN A GIVEN RACEWAY FROM PULL BOX TO PULL BOX. RIGID RACEWAY THREADS SHALL BE CUT STRAIGHT AND TRUE – PIPE ENDS SHALL BE REAMED AND SMOOTHED INSIDE AND OUT.

SUPPORT 1–1/2 INCH AND LARGER CONDUIT 10 FEET O/C OR LESS, AND 1 INCH AND SMALLER 6 FEET O/C MAXIMUM. RACEWAYS SHALL BE SUPPORTED DIRECTLY FROM BUILDING STRUCTURE WITH BOLTS, SCREWS, STRAPS, HANGER RODS AND BRACKETS. ALL METALLIC HARDWARE SHALL BE GALVANIZED OR CADMIUM PLATED. NAILS, WIRE AND/OR PERFORATED STRAPS WILL NOT BE ACCEPTED.

USE THREADED LOCKNUTS OUTSIDE AND THREADED LOCKNUT AND BUSHING INSIDE ALL RACEWAY CONNECTIONS TO BOXES, DEVICES, PANELS AND GUTTERS. USE NON–METALLIC BUSHINGS ON ALL 1–1/4 INCH AND LARGER CONDUIT. EXPOSED CONDUIT SHALL BE RUN STRAIGHT AND TRUE PARALLEL AND PERPENDICULAR TO PRIMARY BUILDING LINES.

BOXES AND DEVICES: ALL BOXES, PANELS AND EQUIPMENT SHALL BE SUPPORTED DIRECTLY FROM THE BUILDING STRUCTURE AND SHALL NOT DEPEND ON THE FEEDER RACEWAYS FOR SUPPORT. ALL ITEMS SHALL BE CAREFULLY ALIGNED SO THAT COVERS WILL FINISH FLUSH AND STRAIGHT. DO NOT MOUNT OUTLETS BACK TO BACK IN FIRE RATED WALLS. ALL UNUSED KNOCKOUTS SHALL BE CLOSED WITH BLANKING DEVICES. MATCH EXISTING DEVICE AND PLATE FINISHES.

ALL 120V, 15A & 20A RECEPTACLES SHALL BE LISTED TAMPER–RESISTANT RECEPTACLES (NEC 406.12).

LOCATE DEVICES AND EQUIPMENT ABOVE FINISHED FLOOR AS FOLLOWS UNLESS OTHERWISE SPECIFICALLY NOTED ON PLANS:
    WALL SWITCHES – 4'–0".
    RECEPTACLES – 1'–6".
    LIGHT FIXTURES – AS NOTED ON FIXTURE SCHEDULE.

GROUNDING: THE ELECTRICAL SYSTEM AND ALL ELECTRICAL EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH ARTICLE 250 OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE. EQUIPMENT GROUND WIRE SHALL BE USED WITH ALL FEEDERS AND BRANCH CIRCUITS.

LIGHTING FIXTURES: LIGHTING FIXTURES AND LAMPS SHALL BE PROVIDED AND INSTALLED AS PER SCHEDULE. ALL FIXTURES SHALL BE CLEANED ON COMPLETION OF INSTALLATION.

TESTS: THE CONTRACTOR SHALL MEGGER ALL BUSWAYS, CABLES AND CONTROL CONNECTIONS TO PROVE INSULATION RESISTANCE IS OF ACCEPTABLE VALUE.

PANELBOARDS: PROVIDE PANELS AS SCHEDULED EQUAL TO SQUARE D NQOD.

SAFETY SWITCHES: SWITCHES SHALL BE EQUAL TO SQUARE D TYPE GD WITH RATINGS AND FUSING PROVISIONS AS INDICATED.

IDENTIFICATION AND NAMEPLATES: PROVIDE ENGRAVED, LAMINATED BAKELITE (WHITE LETTERS ON BLACK SURFACE) NAMEPLATES SCREWED TO EACH PIECE OF ELECTRICAL DISTRIBUTION EQUIPMENT AS FOLLOWS:

A. PANELBOARDS, SWITCHBOARDS – DESIGNATION L1, P1, ETC.,VOLTAGE, PHASE NUMBER OF WIRES, ETC.; WORDING EXAMPLE: PANEL L1–208V–3 PHASE, 4 WIRE.

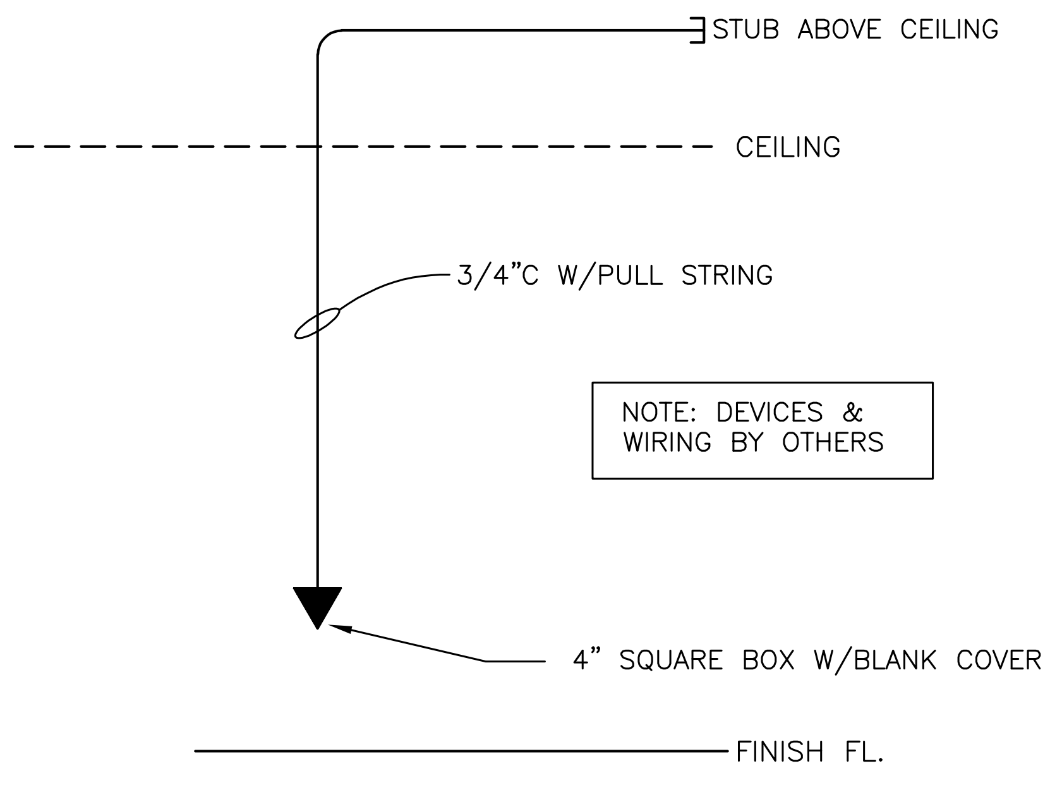
B. MOTOR STARTERS, DISCONNECT SWITCHES – UNLESS MOUNTED DIRECTLY ON OR ADJACENT TO IDENTIFY EQUIPMENT; WORDING EXAMPLE: EXHAUST FAN 1, MAKE–UP AIR UNIT.

EQUIPMENT CONNECTIONS: THIS CONTRACTOR SHALL BRING ALL REQUIRED ELECTRICAL SERVICE TO ALL EQUIPMENT ITEMS FURNISHED UNDER OTHER SECTIONS OF THESE SPECIFICATIONS OR BY THE OWNER, MAKE FINAL CONNECTIONS, AND LEAVE EQUIPMENT READY FOR OPERATION. THIS CONTRACTOR SHALL COORDINATE WITH ANY AFFECTED TRADE TO ASSURE CORRECT OPERATION OF THE EQUIPMENT ITEM.

CONTROL AND INTERLOCK WIRING: EXCEPT AS OTHERWISE INDICATED ON THE DRAWINGS, ALL CONTROL AND INTERLOCK WIRING SHALL BE PERFORMED BY THE RESPECTIVE CONTRACTORS.

THE ELECTRICAL SUBCONTRACTOR SHALL INSTALL ALL STARTERS, PILOT SWITCHES, CONTROL DEVICES AND MISCELLANEOUS ITEMS OF ELECTRICAL EQUIPMENT FURNISHED UNDER OTHER SECTIONS OF THESE SPECIFICATIONS THAT ARE NOT INTEGRALLY MOUNTED WITH THEIR ASSOCIATED EQUIPMENT.

SERVICE: THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING SERVICE MODIFICATION WITH THE UTILITY COMPANY. PROVIDE ADDITIONAL CONDUIT TO CT CABINET IF REQUIRED BY POWER CO. EC SHALL WORK DIRECTLY WITH THE UTILITY AND SHALL COMPLETE AND SUBMIT ALL LOAD DATA SHEETS REQUIRED FOR SERVICE APPLICATION.



TYPICAL DATA/COMM OUTLET

NTS

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

METHOD OF COMPLIANCE:

Energy Code: ● Prescriptive ☐ Performance

Lighting schedule
lamp type required in fixture See Fixture Schedule
number of lamps in fixture See Fixture Schedule
ballast type used in the fixture See Fixture Schedule
number of ballasts in fixture See Fixture Schedule
total wattage per fixture See Fixture Schedule

total interior wattage specified vs allowed 3607/6670
total exterior wattage specified vs allowed 44/240

Additional Efficiency Package Options
- ☐ C406.2 More Efficient HVAC Equipment Performance
- ● C406.3 Reduced Lighting Power Density
- ☐ C406.4 Enhanced Digital Lighting Controls
- ☐ C406.5 On–Site Renewable Energy
- ☐ C406.6 Dedicated Outdoor Air System
- ☐ C406.7 Reduced Energy Use in Service Water Heating
- ☐ N/A EXISTING/RENOVATION

DESIGNER STATEMENT:
To the best of my knowledge and belief, the design of this building complies with the requirements of Section C405 of the 2018 North Carolina State Energy Code.

SIGNED:
NAME: Gregory McDowell
TITLE: Professional Engineer

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
———	CONDUIT
– – – – –	CONDUIT UNDERFFLOOR OR UNDERGROUND
◄⫽	ARROW INDICATES HOMERUN, TICKMARKS: NEUTRAL,PHASE,GND.
▭	POWER PANEL
▼	DATA/COMM OUTLET
Ⓙ	JUNCTION BOX
AFF	ABOVE FINISHED FLOOR
Φ , ◐	DUPLEX RECEPT , ABOVE COUNTER
Φ WP , Φ GFI	WEATHERPROOF , GROUND FAULT
◪, ☐	DISCONNECT SWITCH; FUSED; NONFUSED

SEE SHEET E3 FOR ADDITIONAL SYMBOLS

GREGORY L. MCDOWELL
SEAL 018518
7/24/25

Digitally signed by Gregory L McDowell
Date: 2025.07.24 09:53:50 -04'00'

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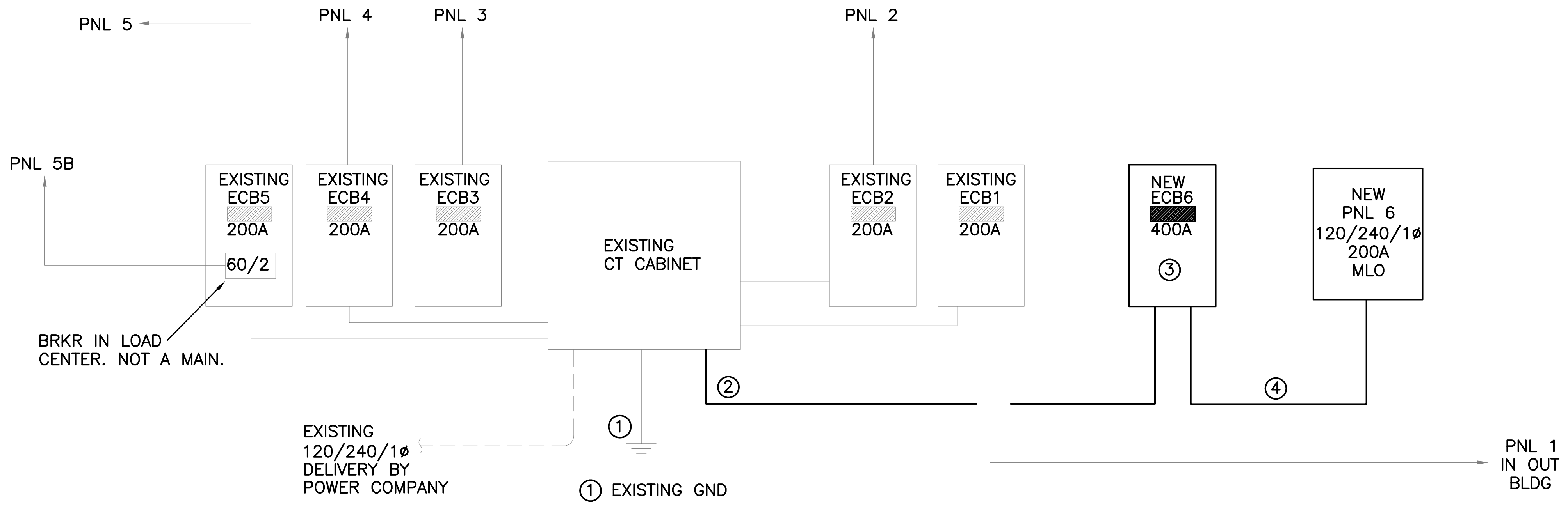
DATE: JULY 24, 2025
PROJECT NO. 2402



① EXISTING GND

② 2 PARALLEL RUNS OF 3 #3/0, #2 GND, EACH IN 2"C

③ NEMA 3R ENCLOSED BREAKER, 2P–400A WITH SOLID NEUTRAL AND SE LABEL. 22,000 AIC (VERIFY AFC PRIOR TO ORDERING).

④ 2 PARALLEL RUNS OF 3 #3/0, #3 GND, EACH IN 2"C

NEW MAIN ECB6 IS THE 6TH AND FINAL MAIN ALLOWED AT THIS SERVICE LOCATION.

NOTE: EC SHALL LABEL THE AVAILABLE FAULT CURRENT (AFC) AT POINT OF DELIVERY PER NEC 110.24A. OBTAIN FROM SERVING UTILITY PRIOR TO ORDERING GEAR. SERIES RATE PANEL 6 WITH ECB6 TO WITHSTAND THE AFC. DESIGN ASSUMES AFC LESS THAN 22,000. IF GREATER THAN 22,000 PURCHASE ECB6 WITH AIC RATING GREATER THAN AFC.

EXISTING/NEW POWER RISER DIAGRAM

SCALE: NTS

BRIAN D. GARRETT
ARCHITECT, PA
107 GOLDEN GROVE CIRCLE
PIEDMONT, SC
910–617–1078
bgarchitects1@gmail.com

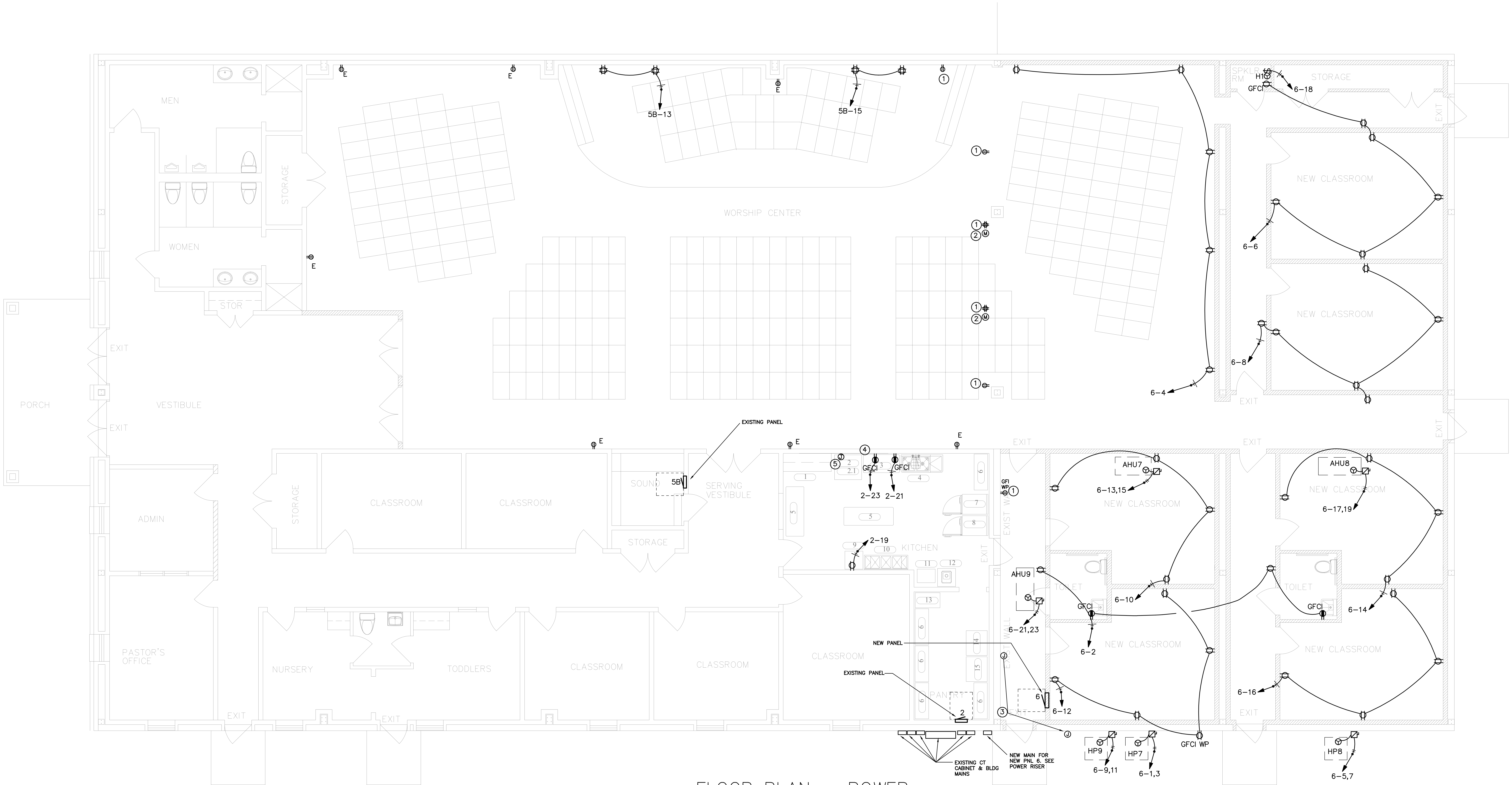
RIVER OF LIFE CHURCH
8411 OCEAN HIGHWAY
SUNSET BEACH, NC
BRUNSWICK COUNTY

ELECTRICAL
SCHEDULES,
NOTES & DETAILS

PROJECT NO. 19175

TOPSAIL
ENGINEERING, INC
P.O. BOX 367 | Hampstead, NC 28443
office@topsailengineering.com
NC License No. C-2546
(910) 270-3747

SHEET NUMBER:
E1 OF 4



FLOOR PLAN – POWER

SCALE: 3/16"=1'–0"

KITCHEN MODS
1. EXIST CABINET TO REMAIN.
2. NEW 6 BURNER GAS RANGE
2.1 NEW RESIDENTIAL RANGE HOOD
3. NEW 48"x24" STAINLESS STEEL TABLE
4. NEW 2–BOWL PREP SINK w/DISPOSAL
5. EXISTING STAINLESS STEEL TABLE
6. EXISTING PANTRY RACK
7. EXISTING COOLER
8. EXISTING FREEZER
9. NEW COMMERCIAL LOW TEMP CHEMICAL DISHWASHER
10. NEW 3–BOWL POT SINK w/SHELF
11. EXISTING ICE MACHINE
12. EXISTING HAND SINK IN CABINET
13. EXISTING WARMER STORAGE
14. EXISTING RESIDENTIAL FREEZER
15. EXISTING RESIDENTIAL REFRIGERATOR

REFERENCE NOTES:

① REMOVE OUTLET

② REMOVE MIC JACK

③ RELOCATE GAS WH CONTROLS. COORD W/PC

④ REMOVE TWO RESIDENTIAL RANGE CKTS BACK TO PNL 2 (1,3 AND 2,4)

⑤ CONNECT RESIDENTIAL RANGE HOOD FAN/LIGHT. CONNECT TO EXISTING KITCHEN LTG CKT AHEAD OF SWITCHING.

GREGORY L. McDOWELL
018518
7/24/25

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DATE: JULY 24, 2025
PROJECT NO. 2402

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RIVER OF LIFE CHURCH
8411 OCEAN HIGHWAY
SUNSET BEACH, NC
BRUNSWICK COUNTY

NEW FLOOR PLAN
ELECTRICAL
POWER

PROJECT NO. 19175

TOPSAIL
ENGINEERING, INC
P.O. BOX 367 | Hampstead, NC 28443
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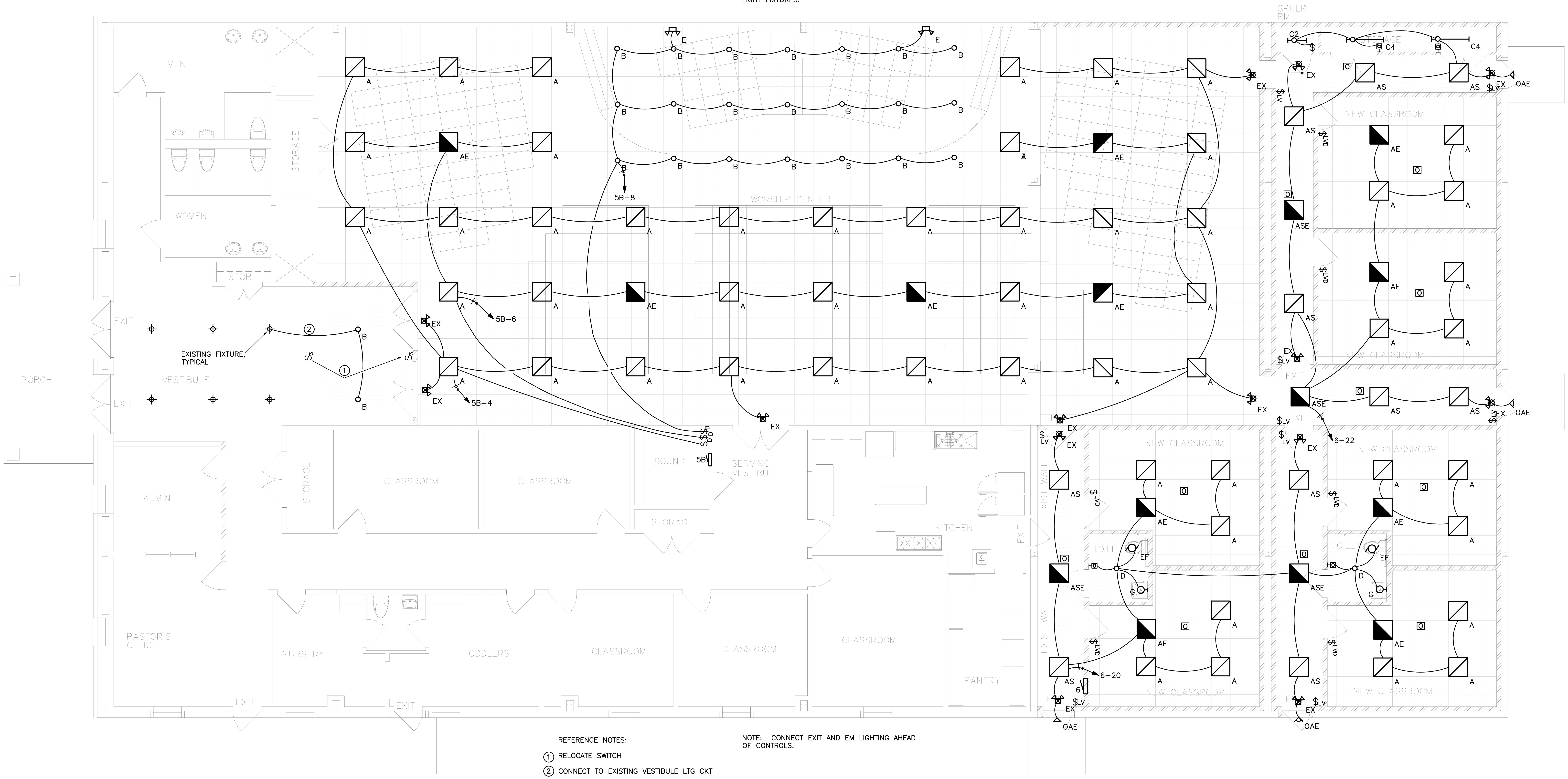
(910) 270-3747

SHEET NUMBER:
E2 OF 4

NOTE: REMOVE ALL EXISTING WORSHIP CENTER LIGHT FIXTURES.



REFERENCE NOTES:

① RELOCATE SWITCH

② CONNECT TO EXISTING VESTIBULE LTG CKT

NOTE: CONNECT EXIT AND EM LIGHTING AHEAD OF CONTROLS.

FLOOR PLAN – LIGHTING

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

SWITCH SCHEDULE

SYMBOL	NOTE 1
$\$_{LV}$	SENSORWORX SWX-801-XX LOW-VOLT MOMENTARY ON/OFF SWITCH
$\$_{LVD}$	SENSORWORX SWX-803-XX LOW-VOLT MOMENTARY ON/OFF/0-10V DIMMING
⊡	SENSORWORX SWX-222-1 CEILING MOUNT OCCUPANCY SENSOR
⊡	SENSORWORX SWX-121 WALL SWITCH OCCUPANCY SENSOR
$	SINGLE POLE SWITCH
$\$_{D}$	DIMMER SWITCH

PROVIDE POWER PACKS AS REQUIRED (900-AX)

NOTE: DIMMERS SHALL BE SLIDE TYPE WITH PRE-SET, COMPATIBLE WITH FIXTURES/LAMPS TO BE CONTROLLED. SIZE FOR MINIMUM 125% OF LOAD CONTROLLED. PROVIDE 0-10V DIMMING CONTROL WIRING WHERE REQUIRED.

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SEAL 18518
7/24/25

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NEW FLOOR PLAN
ELECTRICAL
LIGHTING

SHEET NUMBER:
E3 OF 4

2

MOUNTING FLUSH
FED FROM UTILITY
NOTE EXISTING PANEL

VOLTS 240/120V 2P 3W
BUS AMPS 200
NEUTRAL 100%

AIC 10,000
MAIN MLO
LUGS STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA		CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA	
			A	B				A	B
1	40/2	SPARE	0		2	40/2	SPARE	0	
3	|			0	4	|			0
5	20/1	EXIST REFRIG	1.2		6	20/1	EXIST KIT LTG/NEW RNG HOOD	1	
7	20/1	EXIST REFRIG		1.2	8	20/1	EXIST KITCHEN CKT		1
9	20/1	SPARE	0		10	20/1	SPARE	0	
11	20/1	EXIST KITCHEN RECS		1.1	12	20/1	EXIST ICE MAKER		1.4
13	20/1	EXIST KITCHEN CKT	1		14	20/1	EXIST MICROWAVE	1.5	
15	20/1	EXIST KITCHEN CKT		1	16	20/1	EXIST MICROWAVE		1.5
17	20/1	EXIST KITCHEN CKT	1		18	20/1	EXIST WARMER	1.2	
19	20/1	LOW TEMP DW *		1.9	20	–/1	SPACE		0
21	20/1	KITCHEN CONV OUTLET **	1.2		22	–/1	SPACE	0	
23	20/1	KITCHEN CONV OUTLET **		1.2	24	–/1	SPACE		0
25	–/1	SPACE	0		26	–/1	SPACE	0	
27	–/1	SPACE		0	28	–/1	SPACE		0
29	–/1	SPACE	0		30	–/1	SPACE	0	
							TOTAL CONNECTED KVA BY PHASE	8.1	10.3
							TOTAL CONNECTED AMPS BY PHASE	67.5	85.8

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	0.8	1	(125%)	MOTORS	0.2	0.2	(100%)
LARGEST MOTOR	0.2	0.05	(25%)	KITCHEN EQUIPMENT	17.4	11.3	(65%)
				TOTAL LOAD		12.6	
				BALANCED LOAD		52.3 A	

* NEW GFCI BREAKER ** NEW BREAKER

6

MOUNTING SURFACE
FED FROM UTILITY
NOTE NEMA 3R ENCLOSURE

VOLTS 240/120V 2P 3W
BUS AMPS 400
NEUTRAL 100%

AIC 10,000
MAIN MLO
LUGS STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA		CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA	
			A	B				A	B
1	35/2	HP7	2		2	20/1	RECS TLTS,HALLS	0.72	
3	|			2	4	20/1	RECS WORSHIP CNTR		0.9
5	40/2	HP8	2.3		6	20/1	RECS NEW CLASSRM	1.08	
7	|			2.3	8	20/1	RECS NEW CLASSRM		1.08
9	50/2	HP9	3.05		10	20/1	RECS NEW CLASSRM	0.72	
11	|			3.05	12	20/1	RECS NEW CLASSRM		0.9
13	45/2	AHU7	4.44		14	20/1	RECS NEW CLASSRM	0.72	
15	|			4.44	16	20/1	RECS NEW CLASSRM		0.72
17	60/2	AHU8	5.75		18	20/1	HEATER RISER RM	1	
19	|			5.75	20	20/1	LTG CR ADDITION SOUTH		1.05
21	60/2	AHU9	6		22	20/1	LTG CR ADDITION NORTH	0.639	
23	|			6	24	20/1	SPARE		0
25	20/1	SPARE	0		26	20/1	SPARE	0	
27	20/1	SPARE		0	28	20/1	SPARE		0
29	20/1	SPARE	0		30	20/1	SPARE	0	
31	–/1	SPACE		0	32	–/1	SPACE		0
33	–/1	SPACE	0		34	–/1	SPACE	0	
35	–/1	SPACE		0	36	–/1	SPACE		0
37	–/1	SPACE	0		38	–/1	SPACE	0	
39	–/1	SPACE		0	40	–/1	SPACE		0
							TOTAL CONNECTED KVA BY PHASE	28.4	28.2
							TOTAL CONNECTED AMPS BY PHASE	237	235

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	1.69	2.11	(125%)	RECEPTACLES	6.84	6.84	(50%>10)
LARGEST MOTOR	6.1	1.53	(25%)	HEATING	48.1	48.1	(100%)
				COOLING	20.2	0	(0%)
				TOTAL LOAD		58.6	
				BALANCED LOAD		244 A	

5B

MOUNTING FLUSH
FED FROM UTILITY
NOTE EXISTING PANEL

VOLTS 240/120V 2P 3W
BUS AMPS 60
NEUTRAL 100%

AIC 10,000
MAIN MLO
LUGS STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA		CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA	
			A	B				A	B
1	20/1	EXIST WC RECS	0.9		2	20/1	EXIST SOUND ROOM RECS	0.54	
3	20/1	EXIST WC RECS		0.9	4	20/1	WORSHIP CNTR LTG		0.875
5	20/1	EXIST PWR AMP	0.5		6	20/1	WORSHIP CNTR LTG	0.525	
7	20/1	EXIST SOUND ROOM RECS		0.54	8	20/1	WS STAGE CAN LIGHTS		0.588
9	20/1	EXIST FAP	0.5		10	20/1	SPARE	0	
11	20/1	EXIST SECURITY PNL		0.5	12	20/1	SPARE		0
13	20/1	NEW STAGE QUADS *	0.72		14	–/1	SPACE	0	
15	20/1	NEW STAGE QUADS *		0.72	16	–/1	SPACE		0
17	–/1	SPACE	0		18	–/1	SPACE	0	
19	–/1	SPACE		0	20	–/1	SPACE		0
21	–/1	SPACE	0		22	–/1	SPACE	0	
23	–/1	SPACE		0	24	–/1	SPACE		0
25	–/1	SPACE	0		26	–/1	SPACE	0	
27	–/1	SPACE		0	28	–/1	SPACE		0
29	–/1	SPACE	0		30	–/1	SPACE	0	
							TOTAL CONNECTED KVA BY PHASE	3.69	4.12
							TOTAL CONNECTED AMPS BY PHASE	30.7	34.4

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	1.99	2.49	(125%)	RECEPTACLES	4.32	4.32	(50%>10)
				NONCONTINUOUS	1.5	1.5	(100%)
				TOTAL LOAD		8.31	
				BALANCED LOAD		34.6 A	

* NEW BREAKER

EQUIPMENT CONNECTION SCHEDULE

EQUIPMENT TAG	*EQUIPMENT DESCRIPTION*	*SYMBOL*	*VOLTS*	*AMPS*	*KVA*	*CIRCUIT*	*WIRE CALLOUT*	*MCA*	*MOCP*	*DISCONNECT*	*DISCONNECT DESCRIPTION*
AHU7	AHU7	⊗⌒⊠	240V 2P 2W	37	8.88	6–13,15	3/4"C,2#6,#10G	45	45	FUSED	240/60/2
AHU8	AHU8	⊗⌒⊠	240V 2P 2W	47.92	11.5	6–17,19	3/4"C,2#4,#10G	58	60	FUSED	240/60/2
AHU9	AHU9	⊗⌒⊠	240V 2P 2W	50	12	6–21,23	3/4"C,2#4,#10G	60	60	FUSED	240/60/2
H1	HEATER RISER RM	⊗⌒$	120V 1P 2W	8.33	1	6–18	1/2"C,1#12,#12N,#12G	20	20	TOGGLE SWITCH	120V,20A TOGGLE DISC SW
HP7	HP7	⊗⌒⊠	240V 2P 2W	16.67	4	6–1,3	1/2"C,2#8,#10G	21	35	FUSED	240/60/2/3R
HP8	HP8	⊗⌒⊠	240V 2P 2W	19.17	4.6	6–5,7	1/2"C,2#8,#10G	24	40	FUSED	240/60/2/3R
HP9	HP9	⊗⌒⊠	240V 2P 2W	25.42	6.1	6–9,11	3/4"C,2#6,#10G	32	50	FUSED	240/60/2/3R

GENERAL LUMINAIRE SCHEDULE

CALLOUT	*LAMP*	*DESCRIPTION*	*MOUNTING*	*MODEL*	*TOTAL VA*	*VOLTS*	*NOTE 1*
A	LED. 4500 LUMENS	2X2 BASKET LED TROFFER	LAY–IN	ALS TREA–2–G2	35	120	SET TO 35W 5250 LUMENS SET TO COLOR TEMP SELECTED BY OWNER
AE	LED. 4500 LUMENS	2X2 BASKET LED TROFFER W/BATTERY	LAY–IN	ALS TREA–2–G2–EMB–H08170	35	120	90 MIN BATTERY SET TO 35W 5250 LUMENS SET TO COLOR TEMP SELECTED BY OWNER
AS	LED. 4500 LUMENS	2X2 BASKET LED TROFFER W/SURFACE KIT	SURFACE	ALS TREA–2–G2–MOUNT–LP–22–SMK	35	120	SET TO 35W 5250 LUMENS SET TO COLOR TEMP SELECTED BY OWNER
ASE	LED. 4500 LUMENS	2X2 BASKET LED TROFFER W/BATTERY AND SURFACE MOUNT KIT	LAY–IN	ALS TREA–2–G2–EMB–H08170–MOUNT–LP–22–SMK	35	120	90 MIN BATTERY SET TO 35W 5250 LUMENS SET TO COLOR TEMP SELECTED BY OWNER
B	LED 1900–2800 L	6" ROUND DOWNLIGHT SELECTABLE	RECESSED	LITON CH6LS1928/CR6L22–TS354	28	120	SET TO 22W 2300 LUMENS SET TO COLOR TEMP SELECTED BY OWNER
C2	LED 2000 LUMENS	2' STRIP	SURFACE	DAY–BRITE FSS220L840–UNV–DIM	17	120	
C4	LED. 4000 LUMENS	4' STRIP	SURFACE	DAY–BRITE FSS440L840–UNV–DIM	31	120	
D	LED 1900–2800 L	6" ROUND DOWNLIGHT SELECTABLE	RECESSED	LITON CH6LS1928/CR6L22–TS354	28	120	SET TO 17W 1900 LUMENS SET TO COLOR TEMP SELECTED BY OWNER
E	LED INCLUDED	EMERGENCY	WALL	ISOLITE BUG3	0	120	90 MINUTE BATTERY
EX	LED (EXIT) INCLUDED (EM)	EXIT/EM COMBO	WALL/CEILING	ISOLITE RLC–R–LED–U–WH	0	120	90 MINUTE BATTERY
G	AS REQUIRED	VANITY	WALL ABOVE MIRROR	SELECTED BY OWNER	60	120	60W MAX
OAE	LED 1050 LUMENS	EXTERIOR LIGHT W/BATTERY	WALL ABOVE DOOR	ISOLITE ELED–EM–XX–MB WHITE OR BRONZE FINISH TO BE SELECTED	11	MULTIPLE	NORMAL AND EMERGENCY LIGHT. UL WET LABEL. 90MIN BATT BUIT–IN PHOTOCELL

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RIVER OF LIFE CHURCH
8411 OCEAN HIGHWAY
SUNSET BEACH, NC
BRUNSWICK COUNTY

ELECTRICAL
SCHEDULES,
NOTES & DETAILS

PROJECT NO. 19175

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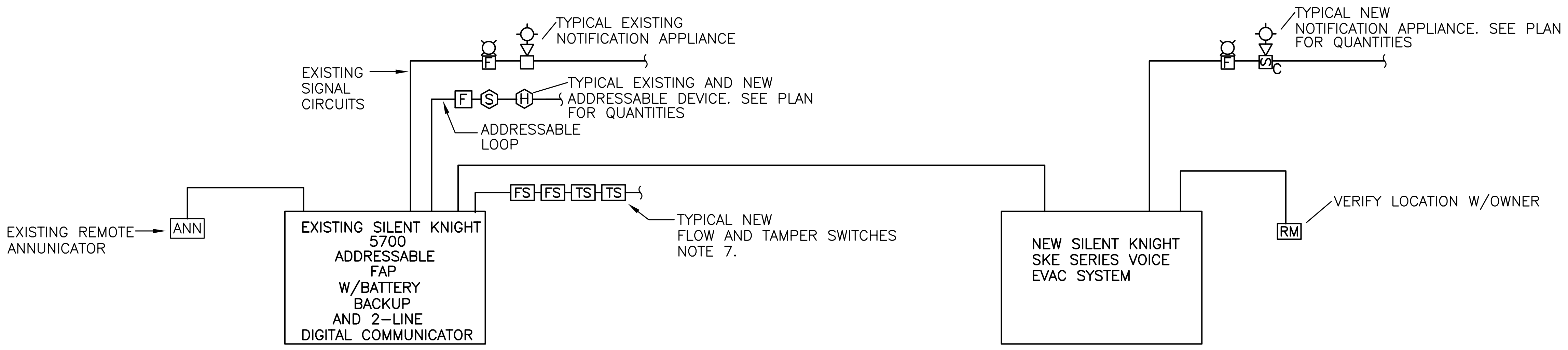
TYPICAL EXISTING NOTIFICATION APPLIANCE
EXISTING SIGNAL CIRCUITS
F
S
H
TYPICAL EXISTING AND NEW ADDRESSABLE DEVICE. SEE PLAN FOR QUANTITIES
ADDRESSABLE LOOP
EXISTING REMOTE ANNUNICATOR
ANN
EXISTING SILENT KNIGHT 5700 ADDRESSABLE FAP W/BATTERY BACKUP AND 2-LINE DIGITAL COMMUNICATOR
FS
FS
TS
TS
TYPICAL NEW FLOW AND TAMPER SWITCHES NOTE 7.
NEW SILENT KNIGHT SKE SERIES VOICE EVAC SYSTEM
TYPICAL NEW NOTIFICATION APPLIANCE. SEE PLAN FOR QUANTITIES
C
RM
VERIFY LOCATION W/OWNER

FIRE ALARM RISER

NTS

NOTE: VOICE EVACUATION REQUIRED IN NEW EDUCATIONAL AREA. WORSHIP CENTER EXPANSION IS NOT CLASSIFIED EDUCATIONAL. EXISTING CLASSROOM AREA PREVIOUSLY PERMITTED UNDER OLD CODE REQUIREMENTS.

PROVIDE NEW EMERGENCY VOICE/COMMUNICATION SYSTEM WHERE SHOWN PER NFPA 72 AND THE 2018 NC FIRE PREVENTION CODE 907.2.3 & 907.5.2.2

ALL SPEAKERS SHALL HAVE FIELD SELECTABLE WATTAGES .25, 0.5, 1, 2 FIELD ADJUST WATTAGES FOR CLARITY AND MIN 15dB ABOVE AMBIENT.

NOTES:

1. SYSTEM SHALL COMPLY W/ NFPA 72 AND ALL REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.
2. ALL WIRING SHALL BE APPROVED CABLE AS RECOMMENDED BY MANUFACTURER.
3. TEST AND CERTIFY SYSTEM ENTIRE SYSTEM.
4. PROVIDE NEW AND UPDATED O&M MANUALS & OWNER TRAINING.
5. SYNCHRONIZE STROBES.
6. SUBMIT ALL REQUIRED DOCUMENTATION TO AHJ FOR PERMITTING.
7. HARDWIRE DOOR HOLD OPENS TO ALARM PANEL. RELEASE DOORS ON ALARM.

FIRE ALARM LEGEND

SYMBOL	DESCRIPTION
F	PULL STATION
☐◁◇	F.A. HORN/STROBE, CANDELA INDICATED
F◇	F.A. STROBE, CANDELA INDICATED
S	SMOKE DETECTOR
F/A	FIRE ALARM PANEL
ANN	REMOTE ANNUNCIATOR
S_D	DUCT DETECTOR
H	HEAT DETECTOR
S◁◇ C	F.A. SPEAKER/STROBE, CANDELA INDICATED CEILING MOUNTED
RM	REMOTE VOICE EVAC MICROPHONE
FS	FLOW SWITCH
TS	TAMPER SWITCH

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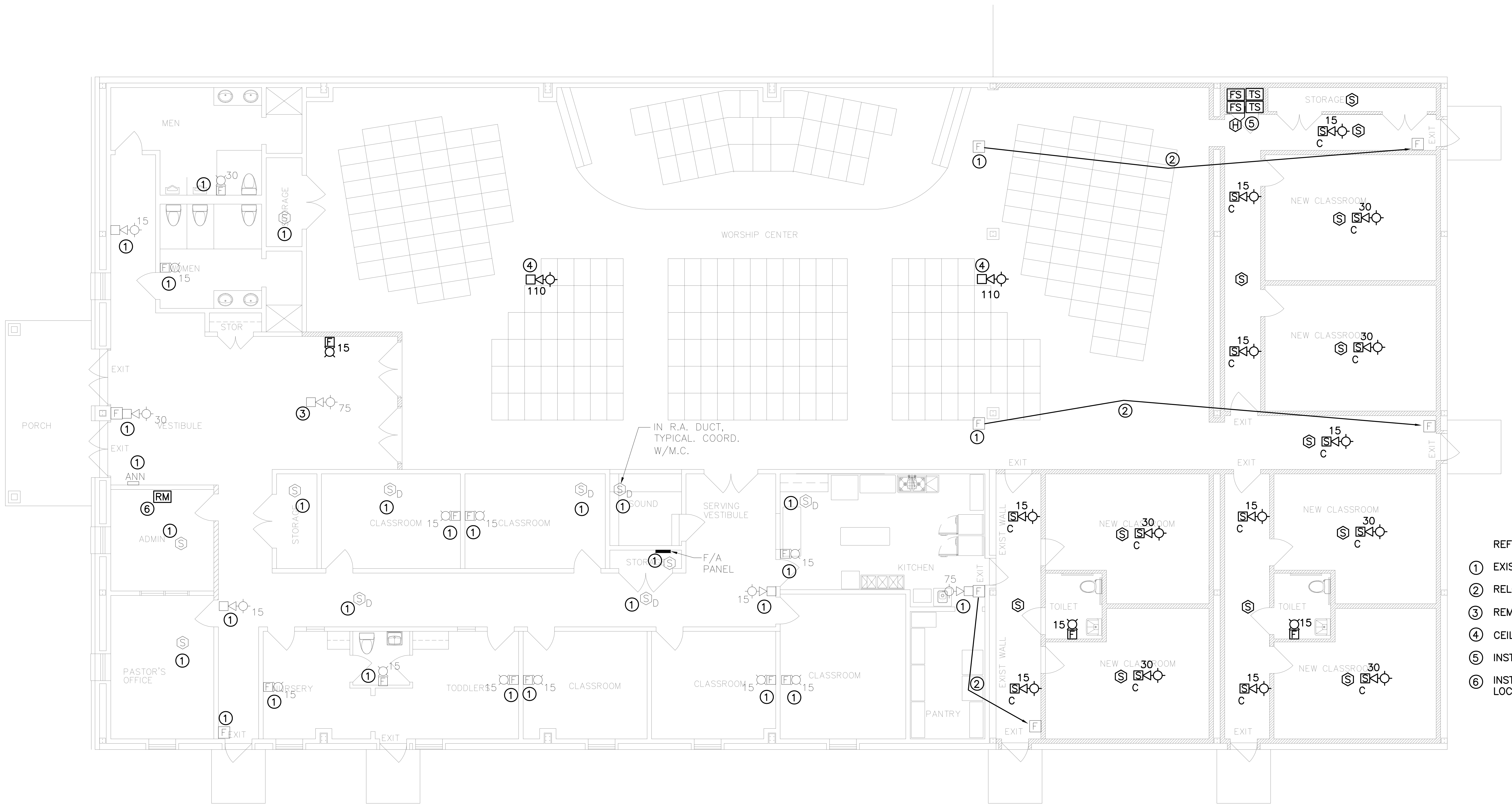

FLOOR PLAN – FIRE ALARM

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

REFERENCE NOTES:

① EXISTING
② RELOCATE PULL STATION
③ REMOVE HORN/STROBE
④ CEILING MOUNT
⑤ INSTALL HEAT DETECTOR IN RISER ROOM
⑥ INSTALL REMOTE VOICE EVAC MICROPHONE IN LOCATION DIRECTED BY OWNER

NEW FLOOR PLAN
FIRE ALARM

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ELECTRIC UNIT HEATER SCHEDULE

UNIT NO.	TYPE	CFM	MANUFACTURER & MODEL	HEAT CAP. kW	POWER SUPPLY	DESCRIPTION & ACCESSORIES
UH–1	WALL	175	MARKEL E3315TSRPW	1	120V–1ø–60	1, 2, 3

(1) MARKEL MANUFACTURING CO.; OR EQUAL.
(2) HORIZONTAL AIR DELIVERY, NICKEL CHROMIUM RESISTANCE COIL
(3) BUILT IN CONTACTORS AND CONTROL TRANSFORMER.

SPLIT SYSTEM HEAT PUMP SCHEDULE

UNIT NUMBER		AHU–8	AHU–9	AHU–7
AREA SERVED				
MANUFACTURER		TRANE	TRANE	TRANE
MODEL NUMBER		TEM6A0C36	TEM6A0C48	TEM6A0C60
UNIT WEIGHT (LBS)		146	151	163
FAN	TOTAL AIR CFM	1200	1600	2000
	OUTSIDE AIR CFM	120	215	300
	FAN H.P.	1/2	3/4	3/4
	EXT. S.P. (IN H2O)	0.9	0.4	0.7000
	POWER SUPPLY	208/230V–1ø–60	208/230V–1ø–60	208/230V–1ø–60
COOLING CAPACITY	TOTAL COOLING CAPACITY (BTUH)	39,500	48,000	58,100
	SENSIBLE COOLING CAPACITY (BTUH)	26,700	35,000	42,900
	ENTERING AIR TEMP	80/67	80/67	80/67
HEATING CAPACITY	ENTERING AIR TEMP	70°F	70°F	70°F
	HIGH TEMP (BTUH) 47°F	34,500	46,500	52,900
	LOW TEMP (BTUH) 47°F	21,700	29,400	35,800
	AUXILIARY COIL CAPACITY	5.77/7.68 KW @208/240	7.21/9.6 KW @208/240	7.21/9.6 KW @208/240
	POWER SUPPLY	208/230V–1ø–60	208/230V–1ø–60	208/230V–1ø–60
	MINIMUM AMPACITY	40/45	51/58	53/60
	MAX. OVERCURRENT PROTECTION	40/45	60/60	60/60
AIR COOLED HEAT PUMP	UNIT NUMBER	HP–8	HP–9	HP–7
	MODEL NUMBER	4TWR5036	4TWR5048	4TWR7060
	UNIT WEIGHT	227	255	311
	ENTERING AIR TEMP	95°F	95°F	95°F
	FAN TYPE	PROPELLER	PROPELLER	PROPELLER
	FAN H.P.	1/8	1/5	1/4
	COMPRESSOR	2 STAGE SCROLL	SCROLL	SCROLL
	POWER SUPPLY	208/230V–1ø–60	208/230V–1ø–60	208/230V–1ø–60
	MINIMUM AMPACITY	21	24	32
	MAX. OVERCURRENT PROTECTION	35	40	50
ACCESSORIES		(1), (2), (3), (4)	(1), (2), (3)	(1), (2), (3)

(1) PROVIDE WALL MOUNTED, PROGRAMMABLE ELECTRONIC THERMOSTAT WITH AUTO CHANGEOVER.
(2) PROVIDE STRIP HEAT SHUTOFF PER C403.2.4.1.1
(3) SYSTEMS SELECTED MEET REQUIREMENTS UNDER SECTION 406 OF THE NORTH CAROLINA STATE BUILDING CODE: ENERGY CONSERVATION CODE.
(4) PROVIDE SES HUMIDITY CONTROL MODULE.

AIR DISTRIBUTION DEVICES

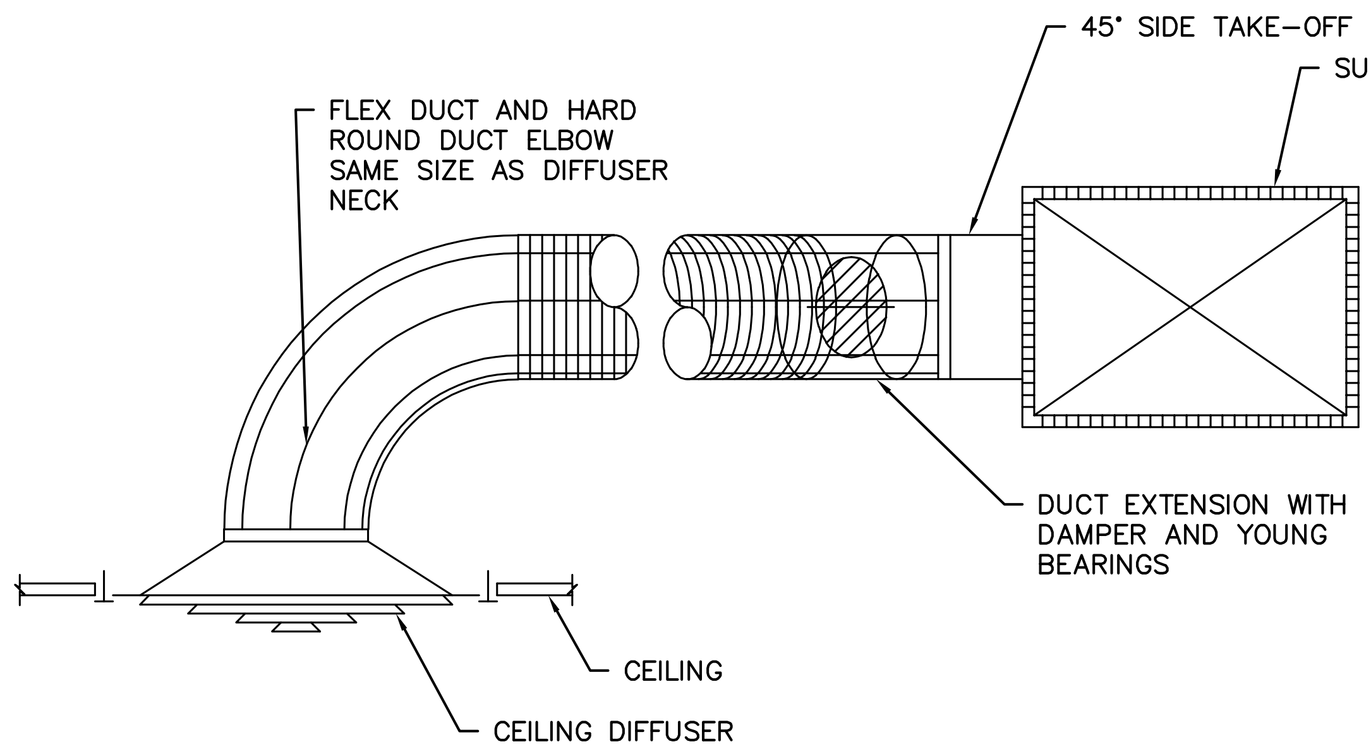
TAG	SERVICE	NECK SIZE	OVERALL SIZE	MODEL NUMBER	DESCRIPTION & ACCESSORIES
A	SUPPLY	8"ø	12 X 12	ASCD	1, 2, 4, 6, 7
B	SUPPLY	8"ø	24 X 24	ASCD	1, 2, 3, 6, 7
C	RETURN	14"ø	24 X 24	80	1, 2, 3, 5
D	RETURN	14"ø/–	32 X 30	630	1, 2, 3, 5
F	RETURN	14"ø	20 X 20	80	1, 2, 4, 5

(1) MODEL BASED ON PRICE AIR DISTRIBUTION; METALAIRE OR APPROVED EQUAL ACCEPTABLE.
(2) ALUMINUM CONSTRUCTION, STANDARD WHITE FINISH.
(3) T–BAR LAY–IN PANEL
(4) SURFACE MOUNT BORDER.
(5) CFM SHOWN IN GRILLE TAG IS MAXIMUM POSSIBLE WITH EXHAUST AND OUTSIDE AIR AT 0.
(6) SQUARE FACE. ROUND NECK DIFFUSER
(7) BUTTERFLY STYLE VOLUME CONTROL DAMPER.

EXHAUST FAN SCHEDULE

TAG	CFM	RPM	S.P. IN W.G	WATTS/HP	SONES	ELECTRIC	CONTROL	MANUF. MODEL NUMBER	DESCRIPTION & ACCESSORIES
EF–1	75	700	0.25	50 W	3.0	120V–1ø–60	WIRED WITH LIGHT	GREENHECK SP–B90	1,2,3

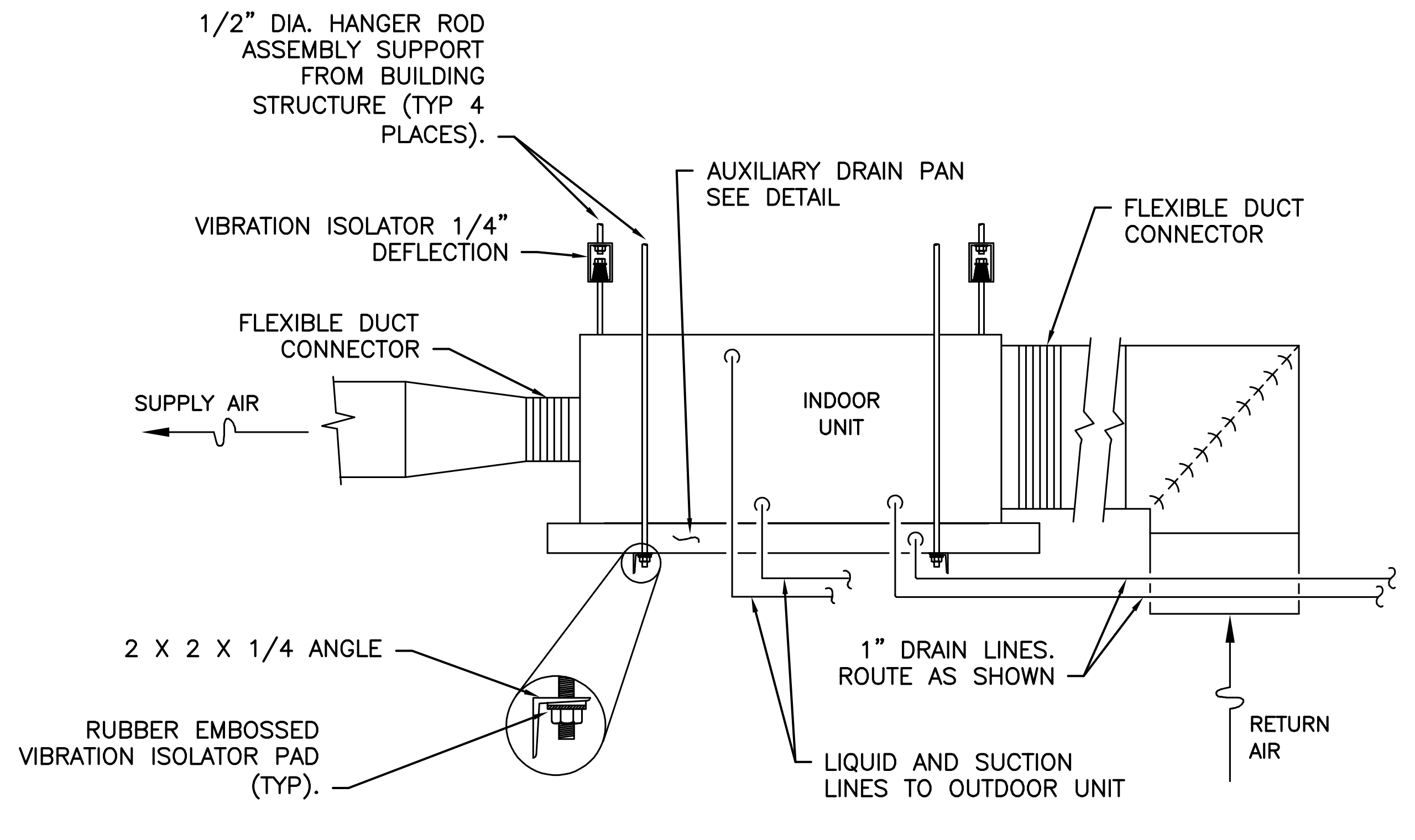
(1) CABINET CEILING FAN, DIRECT DRIVE, CENTRIFUGAL, SPRING LOADED ALUMINUM BACKDRAFT DAMPER.
(2) ALUMINUM, WHITE ENAMEL CEILING GRILLE.
(3) ALUMINUM HOODED WALL CAP WITH BUILT–IN BIRDSCREEN AND DAMPER.
ALTERNATE BY PENNBARRY ACCEPTABLE



FLEX DUCT AND HARD ROUND DUCT ELBOW SAME SIZE AS DIFFUSER NECK
45° SIDE TAKE–OFF
SUPPLY DUCT
DUCT EXTENSION WITH DAMPER AND YOUNG BEARINGS
CEILING
CEILING DIFFUSER

① DIFFUSER CONNECTIONS

SCALE: NONE



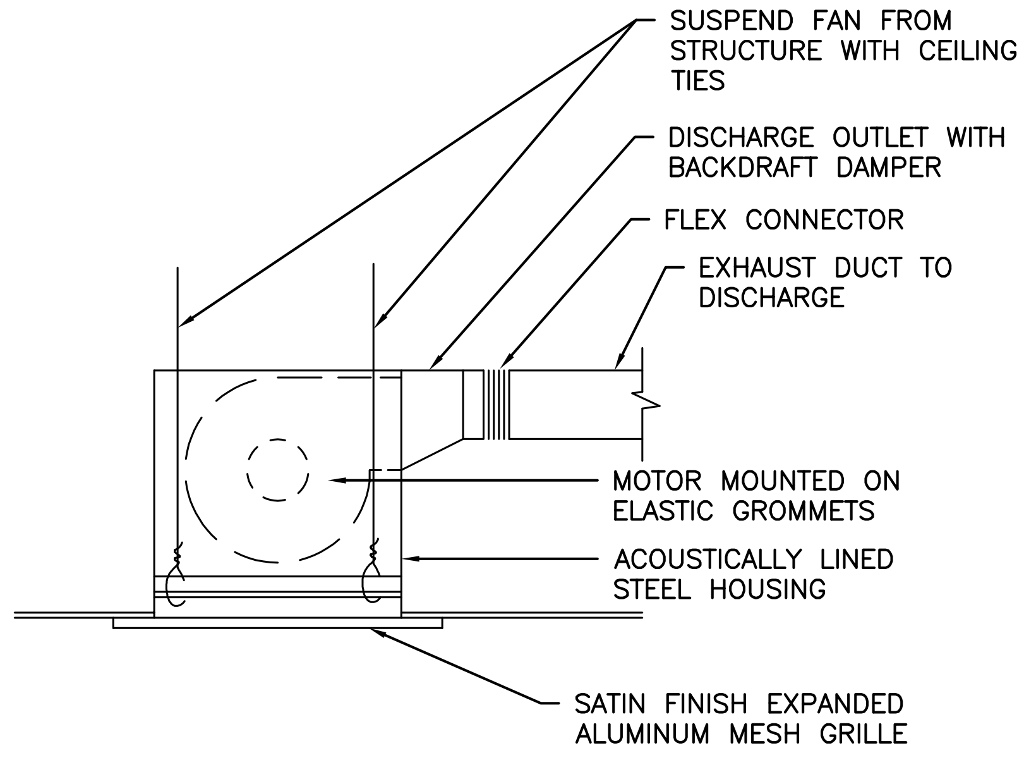
1/2" DIA. HANGER ROD ASSEMBLY SUPPORT FROM BUILDING STRUCTURE (TYP 4 PLACES).
AUXILIARY DRAIN PAN SEE DETAIL
VIBRATION ISOLATOR 1/4" DEFLECTION
FLEXIBLE DUCT CONNECTOR
FLEXIBLE DUCT CONNECTOR
SUPPLY AIR
INDOOR UNIT
2 X 2 X 1/4 ANGLE
RUBBER EMBOSSED VIBRATION ISOLATOR PAD (TYP).
1" DRAIN LINES. ROUTE AS SHOWN
LIQUID AND SUCTION LINES TO OUTDOOR UNIT
RETURN AIR

② SPLIT SYSTEM HEAT PUMP HORIZ. INSTALLATION DETAIL

SCALE: NONE

MECHANICAL LEGEND

═	EXISTING DUCTWORK TO REMAIN
═	NEW DUCTWORK
☒	EXISTING SUPPLY GRILLE/DIFFUSER TO REMAIN
⧄	EXISTING RETURN GRILLE/DIFFUSER TO REMAIN
☒	NEW SUPPLY GRILLE/DIFFUSER
⧄	NEW RETURN GRILLE/DIFFUSER
TS	THERMOSTAT
A #	CFM TAG
⧄ EF–#	EXHAUST FAN
—⊃	CONDENSATE/REFRIGERANT PIPE
←	AIRFLOW DIRECTION
◐	CONNECT NEW TO EXISTING
└	MANUAL VOLUME CONTROL



SUSPEND FAN FROM STRUCTURE WITH CEILING TIES
DISCHARGE OUTLET WITH BACKDRAFT DAMPER
FLEX CONNECTOR
EXHAUST DUCT TO DISCHARGE
MOTOR MOUNTED ON ELASTIC GROMMETS
ACOUSTICALLY LINED STEEL HOUSING
SATIN FINISH EXPANDED ALUMINUM MESH GRILLE

③ CEILING MOUNTED EXHAUST FAN

SCALE: NONE

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT METHOD OF COMPLIANCE

Prescriptive ● Energy Cost Budget ____

Thermal Zone 3A
Exterior design conditions
winter dry bulb 26° F
summer dry bulb 92° F DB/76° F WB
Interior design conditions
winter dry bulb 70° F
summer dry bulb 75° F
relative humidity 50%
Building heating load 100 MBTU/H
Building cooling load 12 TONS
Mechanical Spacing Conditioning System
Unitary
description of unit
heating efficiency 9.0 HSPF
cooling efficiency 15.0 SEER AVG.
heat output of unit SEE SCHEDULES
cooling output of unit SEE SCHEDULES
boiler
total boiler output. If oversized, state reason. N/A
chiller
total chiller capacity. If oversized, state reason. N/A
List equipment efficiencies N/A

Equipment schedules with motors (mechanical systems)
motor horsepower SEE SCHEDULES
number of phases SEE SCHEDULES
minimum efficiency SEE SCHEDULES
motor type ODP
# of poles 4

Additional prescriptive compliance method : C406.2.1 More Eff. Mech Equip.

DESIGNER STATEMENT:

To the best of my knowledge and belief, the design of this building complies with the mechanical systems, service systems and equipments of the 2018 North Carolina State Energy Code.

SIGNED:
NAME: STEVEN H. EVERHART JR., P.E.
TITLE: PROFESSIONAL ENGINEER

GENERAL MECHANICAL SPECIFICATIONS

ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE NC MECHANICAL CODE.

BASIS OF DESIGN: UNLESS OTHERWISE NOTED THE PURPOSE OF THESE DRAWINGS IS TO PROVIDE DIRECTION AND BASIS OF DESIGN TO A COMPETENT CONTRACTOR FAMILIAR WITH THE TYPE OF SYSTEMS BEING INSTALLED SUFFICIENT TO INDICATE OWNERS REQUESTS AND CODE REQUIREMENTS. IT IS THE CONTRACTORS RESPONSIBILITY, WHEN OTHERWISE UNDIRECTED, TO FOLLOW STANDARD INDUSTRY PRACTICES AND BASIC CODE COMPLIANCE INCLUDING, BUT NOT LIMITED TO, PROVIDING MATCHING REQUIRED ACCESSORIES TO THE SYSTEMS INDICATED, COORDINATING EXACT ROUTINGS AND LOCATIONS WITH OTHER TRADES AND THE OWNER, SELECTING CODE APPROVED MATERIALS, AND MAKING MINOR OFFSETS/ADJUSTMENTS BASED ON FIELD COORDINATION AND OWNER'S FIELD REQUESTS. CHANGE OF MANUFACTURER TO EQUIVALENT SYSTEMS, WITH OWNER'S APPROVAL, IS ACCEPTABLE. CONTACT ENGINEER WITH ANY CONFLICTS NOT COVERED BY THE ABOVE INSTRUCTIONS.

SHEET METAL WORK: THIS CONTRACTOR SHALL FURNISH ALL DUCTWORK AND ASSOCIATED SHEET METAL WORK AS CALLED FOR ON THE DRAWINGS AND REQUIRED FOR A COMPLETE DUCTED AIR DISTRIBUTION SYSTEM.

DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH BEST PRACTICES OF SHEET METAL WORK AND SMACNA STANDARDS.

ALL DUCTWORK SHALL BE GALVANIZED SHEET IRON THROUGHOUT EXCEPT WHERE OTHERWISE SHOWN AND FABRICATED IN ACCORDANCE WITH THE FOLLOWING TABLE (ALL DUCT SIZES ON CONTRACT DRAWINGS ARE SHEET METAL FABRICATION SIZES):

MAXIMUM DIMENSION OF DUCT	GAUGE U.S. STD.	TRANSVERSE JOINT	BRACING
UP TO 12"	26	DRIVE SLIPS 7'–10" CENTERS	NONE
13" TO 30"	24	DRIVE SLIPS 7'–10" CENTERS	1"X1"X1/8" ANGLES 4 FEET FROM JOINT

DUCTS 25 INCHES OR SMALLER IN MAXIMUM DIMENSION SHALL BE SUPPORTED WITH 1 INCH FLAT BAND HANGERS; DUCTS 25 INCHES AND LARGER SHALL BE SUPPORTED BY 3/4 INCH X 1–1/2 INCH ANGLE IRON AND ROUND ROD. SUPPORTS SHALL BE NOT MORE THAN 8 FEET ON CENTERS, PROPERLY FASTENED AND PLACED TO BUILDING STRUCTURES AND SHALL EXTEND AND BE RIVETED TO THE BOTTOM OF DUCTS.

UNLESS OTHERWISE SPECIFIED, FURNISH AND INSTALL ALL NECESSARY LINTELS, PROPERLY SIZED, SHEET METAL SLEEVES AND ESCUTCHEON COLLARS WHERE DUCTWORK RISES THROUGH FLOORS OR PASSES THROUGH WALLS OR CEILINGS.

FURNISH AND INSTALL FLEXIBLE COLLARS IN THE DUCTWORK CONNECTIONS TO AIR HANDLING FANS TO PREVENT NOISE TRANSMISSION BETWEEN SECTIONS.

ALL CHANGES IN DUCT DIRECTION SHALL BE LONG RADIUS ELBOWS OR SHALL BE FITTED WITH TURNING VANES.

IT IS ACCEPTABLE TO CHANGE RECTANGULAR DUCTWORK TO THE EQUIVALENT SIZE IN ROUND PROVIDED THE CONTRACTOR COORDINATES ALL CLEARANCE ISSUES.

DUCT INSULATION: ALL CONCEALED DUCTWORK SHALL BE INSULATED ON THE OUTSIDE WITH TWO INCH (2") THICK, 3/4 POUND DENSITY FIBERGLASS BLANKET INSULATION HAVING AN ALUMINUM FOIL–SCRIM VAPOR BARRIER JACKET. EXPOSED DUCTWORK SHOWN ROUND SHALL BE DOUBLE WALL SPIRAL UNLESS OWNER SPECIFICALLY ALLOWS FOR POTENTIAL SWEATING ISSUES.

EDGES OF INSULATION SHALL BE CUT STRAIGHT AND TRUE AND SHALL BE TIGHTLY BUTTED. THE VAPOR BARRIER JACKET SHALL OVERLAP THE BLANKET JOINT A MINIMUM OF THREE INCHES (3"). THE JACKET LAP SHALL BE FASTENED WITH MOISTURE RESISTANT ADHESIVE AND ALSO OUTWARD CLINCHING STAPLES SPACED TEN INCHES (10") C/C. THE VAPOR BARRIER EDGE AND STAPLES SHALL THEN BE COVERED WITH A THREE INCH (3") WIDE TAPE OF THE SAME MATERIAL AS THE JACKET AND SHALL BE FASTENED WITH MOISTURE RESISTANT ADHESIVE.

ALL CUTS, TEARS AND PENETRATIONS IN THE VAPOR BARRIER JACKET SHALL BE SEALED WITH JOINT TAPE. ALL EDGES OF INSULATING BLANKET SHALL BE SEALED FROM THE JACKET TO DUCT SURFACE WITH TAPE.

INSULATING BLANKET ON THE BOTTOM OF SURFACES IN EXCESS OF 24 INCHES WIDE SHALL BE SECURED AGAINST THE DUCT WITH ADHESIVE OVER THE ENTIRE AREA, MECHANICAL CLIPS ON 24 INCH CENTER OR BY WIRE TIES AROUND THE DUCT SPACED 24 INCHES C/C.

CONTRACTOR MAY USE FLEXIBLE DUCTWORK (MAXIMUM LENGTHS 15'–0") FOR FINAL CONNECTIONS TO DIFFUSERS/GRILLES. FLEXIBLE DUCTWORK SHALL BE CERTAFLEX 25 AS MANUFACTURED BY THE CERTAINTEED CORPORATION.

REGISTERS AND GRILLES: ALL REGISTERS AND GRILLES SHALL BE OF SIZE, STYLE AND CAPACITY CALLED FOR ON PLANS AND IN THE GRILLE SCHEDULE. PROVIDE RUBBER OR EXPANDED FOAM GASKETS COMPLETELY AROUND ALL REGISTER AND GRILLE FRAMES TO PREVENT AIR LEAKAGE BETWEEN GRILLE FRAME AND DUCT OR BETWEEN GRILLE FRAME AND SURROUNDING FINISHED SURFACE. ACCEPTABLE MGFS: PRICE, CARNES, METALAIR, KRUGER.

EQUIPMENT: MECHANICAL AND ELECTRICAL CONTRACTORS SHALL COORDINATE PRIOR TO ORDERING EQUIPMENT TO VERIFY CONSISTANT VOLTAGES. PRIOR TO EQUIPMENT BEING ENERGIZED, VOLTAGE TO EQUIPMENT CIRCUITS SHALL BE VERIFIED AS INSTALLED TO MATCH EQUIPMENT NAMEPLATE.

OPERATING INSTRUCTIONS, CERTIFICATES AND WARRANTIES: THE ORIGINAL OF ALL INSPECTION CERTIFICATES SHALL BE DELIVERED TO THE OWNER AND ONE (1) COPY EACH TO THE ENGINEER PRIOR TO REQUEST FOR FINAL PAYMENT.

THREE (3) COPIES OF OPERATING AND MAINTENANCE INSTRUCTIONS AND MANUFACTURER'S WARRANTIES FOR ALL EQUIPMENT PROVIDED UNDER THIS CONTRACT SHALL BE PROVIDED TO THE OWNER PRIOR TO SUBMITTING REQUEST FOR FINAL PAYMENT.

PRIOR TO FINAL PAYMENT TO THE CONTRACT, THE CONTRACTOR SHALL BE RESPONSIBLE TO TRAIN THE AUTHORIZED PERSONNEL ON HOW TO SERVICE, START–UP AND SHUT–DOWN THE VARIOUS SECTIONS OF THE SYSTEM. UPON COMPLETION OF THIS PHASE OF THE CONTRACT, THE CONTRACTOR SHALL SECURE A LETTER OF ACCEPTANCE FROM THE OWNER THAT HE IS SATISFIED WITH THE CONDITIONS STIPULATED HEREIN. UPON ACCEPTANCE OF THIS LETTER AND AT THE DISCRETION OF THE ENGINEER, THE FINAL PAYMENT WILL BE MADE.

THE CONTRACTOR SHALL PROVIDE A WRITTEN GUARANTEE OF ALL MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM DATE OF SYSTEM ACCEPTANCE.

THE WORK UNDER THIS CONTRACT WILL BE ACCEPTED ONLY AS AN ENTIRE SYSTEM UPON SATISFACTORY COMPLETION OF THE REQUIRED TESTS. NO PARTIAL ACCEPTANCE OF ANY PART OR PORTION OF APPARATUS WILL BE MADE.

INSTALL AND CONNECT ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND DO ALL WORK IN A NEAT AND WORKMANLIKE MANNER AND IN ACCORDANCE WITH ACCEPTED GOOD PRACTICE AS JUDGED BY THE ENGINEER.

ALL EQUIPMENT AND PIPING SHALL BE SO INSTALLED THAT NO OBJECTIONABLE NOISES FROM EQUIPMENT, PIPING OR AIR DISTRIBUTION ARE AUDIBLE IN THE FINISHED AREAS.

GUARANTEE: THIS CONTRACTOR SHALL GUARANTEE ALL MATERIALS, EQUIPMENT AND WORKMANSHIP FOR ONE (1) YEAR FOLLOWING FINAL INSPECTION AND ACCEPTANCE OF THE BUILDING BY THE ENGINEER AND OWNER. THIS APPLIES TO ALL MATERIALS AND EQUIPMENT INSTALLED UNDER THIS CONTRACT, REGARDLESS OF SOURCE.

THE ONE (1) YEAR GUARANTEE PERIOD WILL START ON THE DAY OF FINAL INSPECTION AND ACCEPTANCE BY THE OWNER. THE CONTRACTOR SHALL PROVIDE THE ENGINEER A LETTER WITH TWO (2) COPIES STATING THE BEGINNING AND ENDING DATES OF THE GUARANTEE BASED ON THE AFOREMENTIONED STARTING DATES.

EXTENDED GUARANTEE: PROVIDE AN ADDITIONAL FOUR (4) YEAR GUARANTEE ON ALL COMPRESSORS BEYOND THE ABOVE MENTIONED ONE (1) YEAR GUARANTEE PERIOD.

AIR BALANCE: ALL SYSTEMS SHALL BE BALANCED BY THE CONTRACTOR PER THE REQUIREMENTS OF SECTION 408.2.2.1 OF THE NORTH CAROLINA STATE BUILDING CODE: ENERGY CONSERVATION CODE.

ENERGY CODE COMPLIANCE: HVAC EQUIPMENT SELECTED MEETS PERFORMANCE REQUIREMENTS OF THE NORTH CAROLINA STATE BUILDING CODE: ENERGY CONSERVATION CODE SECTION 406.2 ANY SUBSTITUTIONS MUST MEET THIS STANDARD AS WELL. UPON FINAL INSPECTION THE CONTRACTOR SHALL PROVIDE TO OWNER MANUALS AND EVIDENCE OF AIR BALANCE. CONTRACTOR SHALL SCHEDULE DESIGN PROFESSIONAL AND ASSIST TO COMPLETE SYSTEM INSTALLATION STATEMENT IN ACCORDANCE WITH THE NORTH CAROLINA STATE BUILDING CODE: ENERGY CONSERVATION CODE SECTION 408.1.

Digitally signed by Steven H. Everhart Jr., P.E.
Date: 2025.07.24 09:45:15 -04'00'

STEVEN H. EVERHART, JR.
23933
7/24/25

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DATE: JULY 24, 2025
PROJECT NO. 2402

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RIVER OF LIFE CHURCH
8411 OCEAN HIGHWAY
SUNSET BEACH, NC
BRUNSWICK COUNTY

MECHANICAL
SCHEDULES,
NOTES & DETAILS

PROJECT NO. 19175

TOPSAIL
ENGINEERING, INC
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office@topsailengineering.com
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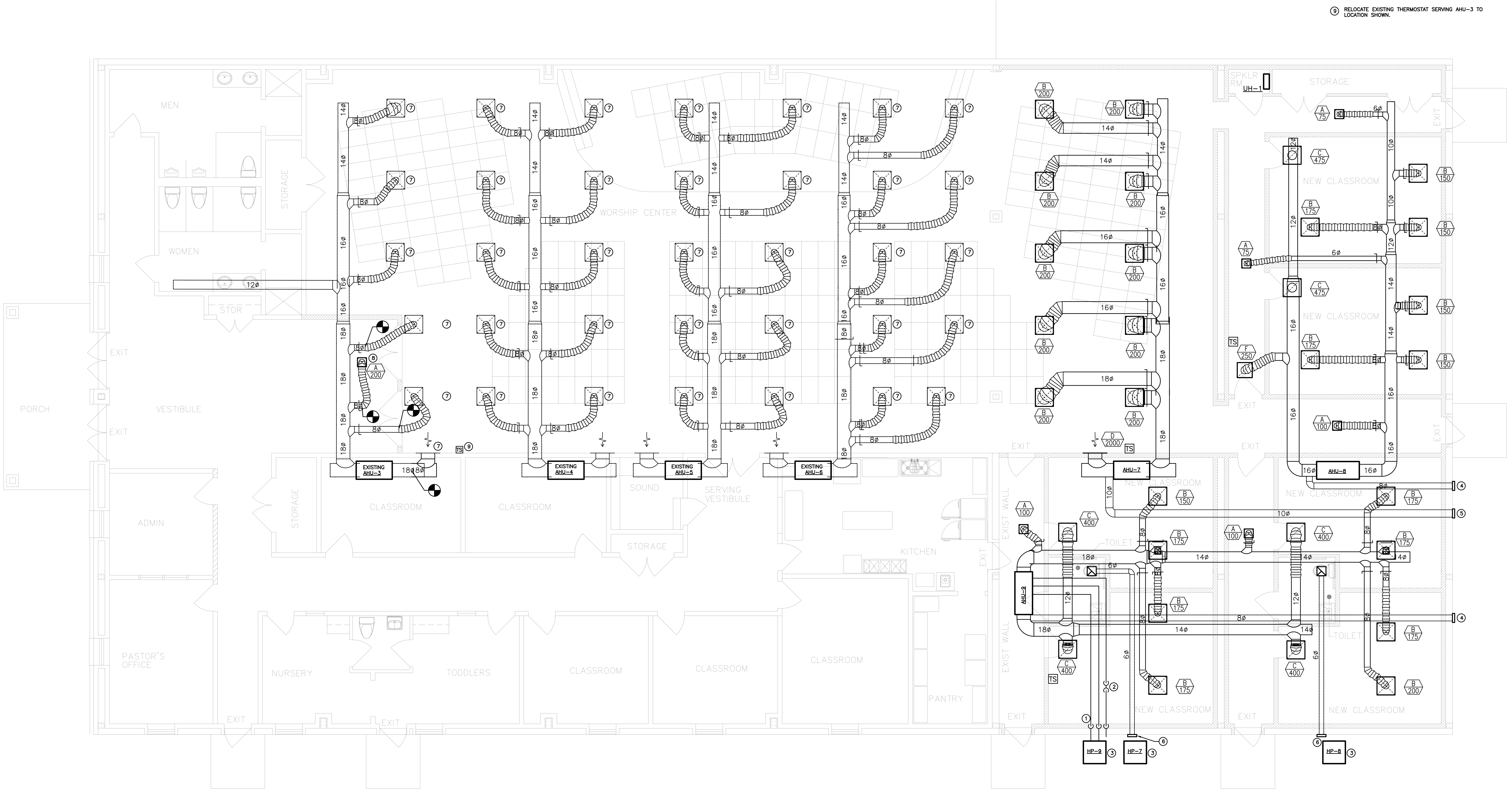
(910) 270-3747

SHEET NUMBER:
M1 OF 2



FLOOR PLAN – MECHANICAL

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

GENERAL NOTES:

① REFRIGERANT PIPING CONCEALED ABOVE CEILING AND IN BUILDING CONSTRUCTION, SIZE AS RECOMMENDED BY UNIT MANUFACTURER. (TYP.)

② 1"CONDENSATE DRAIN PIPING WITH PROPER PITCH. TERMINATE OUTSIDE BUILDING, MIN. 8" ABOVE GRADE WITH ELBOW LOOKING UP. (TYP.)

③ MOUNT UNIT ON 4" CONCRETE PAD OR PAVED SURFACE.

④ 8"O.A. TO INTAKE VENT WITH BACKDRAFT DAMPER. MINIUMUM 10' BETWEEN O.A. INTAKE AND EXHAUST FAN CAP.

⑤ 10"O.A. TO INTAKE VENT WITH BACKDRAFT DAMPER. MINIUMUM 10' BETWEEN O.A. INTAKE AND EXHAUST FAN CAP.

⑥ DUCT CAP TO EXHAUST FAN.

⑦ MOVE EXISTING SUPPLY DIFFUSER/RETURN GRILLE TO LOCATION SHOWN. UTILIZE EXISTING DUCTWORK AND EXTEND AS NECESSARY.

⑧ INSTALL NEW SUPPLY DIFFUSER. UTILIZE EXISTING DUCT CONNECTION TO MAIN SUPPLY TRUNK.

⑨ RELOCATE EXISTING THERMOSTAT SERVING AHU-3 TO LOCATION SHOWN.

Digitally signed
by Steven H.
Everhart, Jr.,
P.E.
Date:
2025.07.24
09:45:49
-04'00'

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BRUNSWICK COUNTY

NEW FLOOR PLAN
MECHANICAL

PROJECT NO. 19175

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SHEET NUMBER:
M2 OF 2

PLUMBING FIXTURE SCHEDULE

P-#	FIXTURES	SPECIFICATIONS	PIPING REQUIRED		
			WASTE	CW	HW
P-1	WATER CLOSET/ADA FLOOR MOUNTED TANK TYPE – 1.6 GPF	AMERICAN STANDARD "CADET RIGHT HEIGHT" MODEL 2298.012 VITREOUS CHINA TOILET WITH ELONGATED BOWL AND TANK WITH SIDE TRIP LEVER, 16 ½" RIM HEIGHT, 1.6 GPF, 12" ROUGH–IN, BOLT CAPS, COMPLIES WITH ANSI A112.19.2 & A117.1 SEAT : BEMIS/CHURCH DURAGUARD 2100 NSSC ANTI–MICROBIAL HEAVY DUTY WHITE ELONGATED OPEN FRONT SEAT WITH COVER. VALVE: McGUIRE NO. 2166 ⅜"X12" FLEX CLOSET SUPPLY WITH STOP.	3"	1/2"	--
P-2	LAVATORY – WALL MTD. AUTOMATIC FAUCET ADA	AMERICAN STANDARD "LUCERNE" 0355.012 WALL MTD. WHITE VITREOUS CHINA 20"X18" LAVATORY WITH 4" FAUCET CENTERS. FAUCET: AMERICAN STANDARD "SELECTRONIC" ELECTRONIC LAVATORY FAUCET MODEL 6057.205/6056.205 , VANDAL RESISTANT 0.5 GPM AERATOR, ⅜"O.D. COPPER INLETS, PROVIDE POWER SUPPLY AND THERMOSTATIC MIXING VALVE. SUPPLIES: McGUIRE NO. 165 ⅜"X12" FLEX ANGLE SUPPLY WITH STOP STRAINER: McGUIRE NO. 155–A GRID STRAINER WITH 1 ¼" TAILPIECE. TRAP AND SUPPLY INSULATION: McGUIRE PREWRAPED PROWRAP INSULATION KIT MODEL NO.2150	1–1/2"	1/2"	1/2"

PLUMBING LEGEND

P-#	FIXTURE NUMBER, SEE SCHEDULE
VTR	VENT THROUGH ROOF
— · —	NEW COLD WATER PIPE
— · · —	NEW HOT WATER PIPE
——	NEW WASTE PIPE
— — —	NEW VENT PIPE
— · —	EXISTING COLD WATER PIPE
— · · —	EXISTING HOT WATER PIPE
——	EXISTING WASTE PIPE
— — —	EXISTING VENT PIPE
— GAS —	EXISTING GAS PIPE
◐	CONNECT NEW TO EXISTING

GENERAL PLUMBING SPECIFICATIONS

GENERAL: THE ENTIRE PLUMBING SYSTEM SHALL BE IN ACCORDANCE WITH THE CURRENT NORTH CAROLINA BUILDING PLUMBING CODE. SUBMIT THREE (3) COPIES OF PLUMBING INSPECTION CERTIFICATES TO OWNER. PLUMBING CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS REQUIRED BY GOVERNING AUTHORITIES FOR WORK DONE UNDER THIS CONTRACT. PROVIDE AND INSTALL ALL SUPPORTS, BRACKETS, MATERIALS AND LABOR AS REQUIRED FOR A COMPLETE AND ACCEPTABLE PLUMBING SYSTEM. PLUMBING CONTRACTOR SHALL CLEAN ALL PLUMBING FIXTURES AFTER ALL CONSTRUCTION IS COMPLETE.

SOIL, WASTE AND VENT PIPING: WASTE PIPING AND VENT PIPING SHALL BE P.V.C. – D.W.C. SCHEDULE 40 PIPE. HOWEVER, COEXTRUDED PVC "FOAM CORE", ASTM F891, WILL NOT BE ALLOWED.

ALL PENETRATIONS THROUGH NON–COMBUSTIBLE CONSTRUCTION SHALL BE PACKED WITH NON–COMBUSTIBLE FIRE STOPPING MATERIAL.

GRADE WASTE AND VENT PIPING 1/4 INCH PER FOOT WHERE POSSIBLE BUT NOT LESS THAN 1/8 INCH PER FOOT, UNLESS SPECIFICALLY DIRECTED. MAINTAIN INVERTS WHERE INDICATED.

ALL ROUGHING–IN PIPING SHALL BE RUN CONCEALED. ALL EXPOSED WATER LINES, STOPS, TRAP AND WASTE PIPE AT THE FIXTURES SHALL BE CHROME PLATED BRASS, WHICH FOR THE MOST PART WILL BE FURNISHED WITH THE FIXTURES. CHROME PLATED ESCUTCHEON RINGS SHALL BE USED AT EACH POINT OF ENTRANCE OF CHROME PIPING INTO WALLS, FLOORS, OR CEILINGS. EXPOSED WORK SHALL BE UNIFORM IN HEIGHT AND LOCATION FOR EACH TYPE FIXTURE.

WATER PIPING UNDER GROUND OUTSIDE OF BUILDING SHALL BE AT LEAST 24 INCHES BELOW THE FINISHED GRADE SURFACE.

THERMAL INSULATION: ALL HOT AND COLD WATER PIPING INSIDE BUILDING AND IN CRAWL SPACE, ALL HOT WATER PIPING BELOW GRADE, AND COLD WATER PIPING BELOW GRADE WITHIN 3'–0" OF OUTSIDE SHALL BE INSULATED WITH 1" THICK "ARMAFLEX" OR IMCOA WITH SEALED JOINTS OR PREMOLDED FIBERGLASS WITH VAPOR BARRIER JACKET. IN LIEU OF INSULATING WATER PIPING IN HEATED WALLS PIPING MAY BE ENCASED IN BATT INSULATION WITHIN THE WALL OR FLOOR/CEILING.

DISCHARGE RELIEF VALVE FROM EACH WATER HEATER SHALL BE PIPED FULL SIZE TO WITHIN SIX (6) INCHES OF THE FLOOR OVER A FLOOR DRAIN, DRIP PAN OR OTHER SAFE LOCATION. DISCHARGE PIPE SHALL BE SUPPORTED AND ANCHORED SO THAT IT WILL NOT PUT UNDUE STRAIN ON THE RELIEF VALVE BODY OR MOUNTING COUPLING.

SUBMITTAL: THE CONTRACTOR SHALL WITHIN (15) DAYS OF RECEIPT OF PROPERLY SIGNED CONTRACT SUBMIT TO THE ARCHITECT/ENGINEER FOR APPROVAL (5) COPIES OF A LIST OF SUPPLIES AND MANUFACTURER'S MATERIAL AND EQUIPMENT TO BE USED ON THIS PROJECT.

SUBSTITUTION OF MATERIALS AND/OR EQUIPMENT FOR THAT SPECIFIED WILL NOT BE ACCEPTED WITHOUT PRIOR WRITTEN APPROVAL BY THE ARCHITECT/ENGINEER PRIOR TO RECEIPT OF BIDS.

GUARANTEE: THE PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE BY OWNER STATING THE DAY THE GUARANTEE BEGINS AND ENDS.

NOTE: PLANS SHOULD NOT BE SCALED FOR DIMENSIONS. COORDINATE ALL ROUGH IN DIMENSIONS WITH EQUIPMENT TO BE INSTALLED AND DIMENSIONED DRAWINGS INCLUDING KITCHEN EQUIPMENT PLANS IF AVAILABLE. CONTACT ENGINEER BEFORE CONSTRUCTION WITH ANY CONFLICTS.

PLUMBING GENERAL NOTES:

BASIS OF DESIGN: UNLESS OTHERWISE NOTED THE PURPOSE OF THESE DRAWINGS IS TO PROVIDE DIRECTION AND BASIS OF DESIGN TO A COMPETENT CONTRACTOR FAMILIAR WITH THE TYPE OF SYSTEMS BEING INSTALLED SUFFICIENT TO INDICATE OWNERS REQUESTS AND CODE REQUIREMENTS. IT IS THE CONTRACTORS RESPONSIBILITY, WHEN OTHERWISE UNDIRECTED, TO FOLLOW STANDARD INDUSTRY PRACTICES AND BASIC CODE COMPLIANCE INCLUDING, BUT NOT LIMITED TO, PROVIDING MATCHING REQUIRED ACCESSORIES TO THE SYSTEMS INDICATED, COORDINATING EXACT ROUTINGS AND LOCATIONS WITH OTHER TRADES AND THE OWNER, SELECTING CODE APPROVED MATERIALS, AND MAKING MINOR OFFSETS/ADJUSTMENTS BASED ON FIELD COORDINATION AND OWNER'S FIELD REQUESTS. CHANGE OF MANUFACTURER TO EQUIVALENT SYSTEMS, WITH OWNER'S APPROVAL, IS ACCEPTABLE. CONTACT ENGINEER WITH ANY CONFLICTS NOT COVERED BY THE ABOVE INSTRUCTIONS.

1. PROVIDE ALL MATERIALS AND LABOR NECESSARY FOR COMPLETE AND PROPERLY FUNCTIONING PLUMBING SYSTEMS. WARRANTY ALL WORK AND ALL MATERIALS, EQUIPMENT AND DEVICES FOR A PERIOD OF ONE YEAR AFTER OWNER'S ACCEPTANCE.

2. WORK SHALL CONFORM TO OR MEET THE REQUIREMENTS OF THE MOST CURRENT EDITION OF:
   A. NORTH CAROLINA PLUMBING CODE
   B. ASPE
   C. UL
   D. ANSI
   E. ALL FEDERAL, STATE AND LOCAL CODES AND ORDINANCES

3. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE NOT INTENDED TO BE SCALED FOR DIMENSIONS, UNLESS DIMENSIONED.

4. ALL MATERIALS, EQUIPMENT AND DEVICES SHALL, AS A MINIMUM, MEET THE REQUIREMENTS OF UL WHERE UL STANDARDS ARE ESTABLISHED FOR THOSE ITEMS. ALL ITEMS SHALL BE CLASSIFIED BY UL AS SUITABLE FOR THE PURPOSE USED.

5. ALL ITEMS SHALL BE NEW, UNLESS NOTED OTHERWISE.

6. ALL MATERIALS AND EQUIPMENT SHALL BE CURRENT PRODUCTS BY MANUFACTURERS REGULARLY ENGAGED IN THE PRODUCTION OF SUCH PRODUCTS.

7. COORDINATE LOCATION OF PLUMBING WORK WITH OTHER TRADES TO AVOID CONFLICTS AND INTERFERENCES. COORDINATE WITH SITE WORK TO PROVIDE FULL OPEN WATER SERVICE VALVE WITHIN 5 FEET OF BUILDING ENTRY.

8. INSTALL ALL EQUIPMENT AND MATERIAL IN ACCORDANCE WITH MANUFACTURER'S WRITTEN PRINTED INSTRUCTIONS AND RECOMMENDATIONS. VERIFY, INCLUDING WITH OTHER TRADES, POWER AND/OR FUEL SUPPLY BEFORE ORDERING.

9. COORDINATE WITH AND OBTAIN PERMITS AND INSPECTIONS FROM AUTHORITY HAVING JURISDICTION AND INCLUDE ALL FEES IN BID.

10. PROVIDE OWNER WITH CERTIFICATES OF FINAL INSPECTION AND ACCEPTANCE FROM AUTHORITY HAVING JURISDICTION.

11. ALL EQUIPMENT AND PIPE ABOVE CEILING SHALL BE SUPPORTED FROM BUILDING STRUCTURE ABOVE, UNO.

12. WHERE PIPES PENETRATE FIRE RATED BARRIERS (WALLS, FLOORS AND CEILINGS) SEAL OPENING AROUND PIPES AND DUCTWORK WITH U.L. LISTED FIRE STOPPING MATERIAL TO MAINTAIN THE FIRE RATING OF THE BARRIER. PER NC BUILDING CODE VOLUME 1, PENETRATIONS OF NONRATED WALLS, PARTITIONS AND FLOORS OF NONCOMBUSTIBLE CONSTRUCTION SHALL BE FIRE–STOPPED WITH NONCOMBUSTIBLE MATERIAL.

13. PROVIDE EXPANSION–DEFLECTION JOINTS WHERE PIPE CROSSES BUILDING EXPANSION OR SEISMIC JOINTS. PROVIDE SLEEVES WHERE PIPING CROSSES STRUCTURAL CONCRETE WALLS/FOOTINGS.

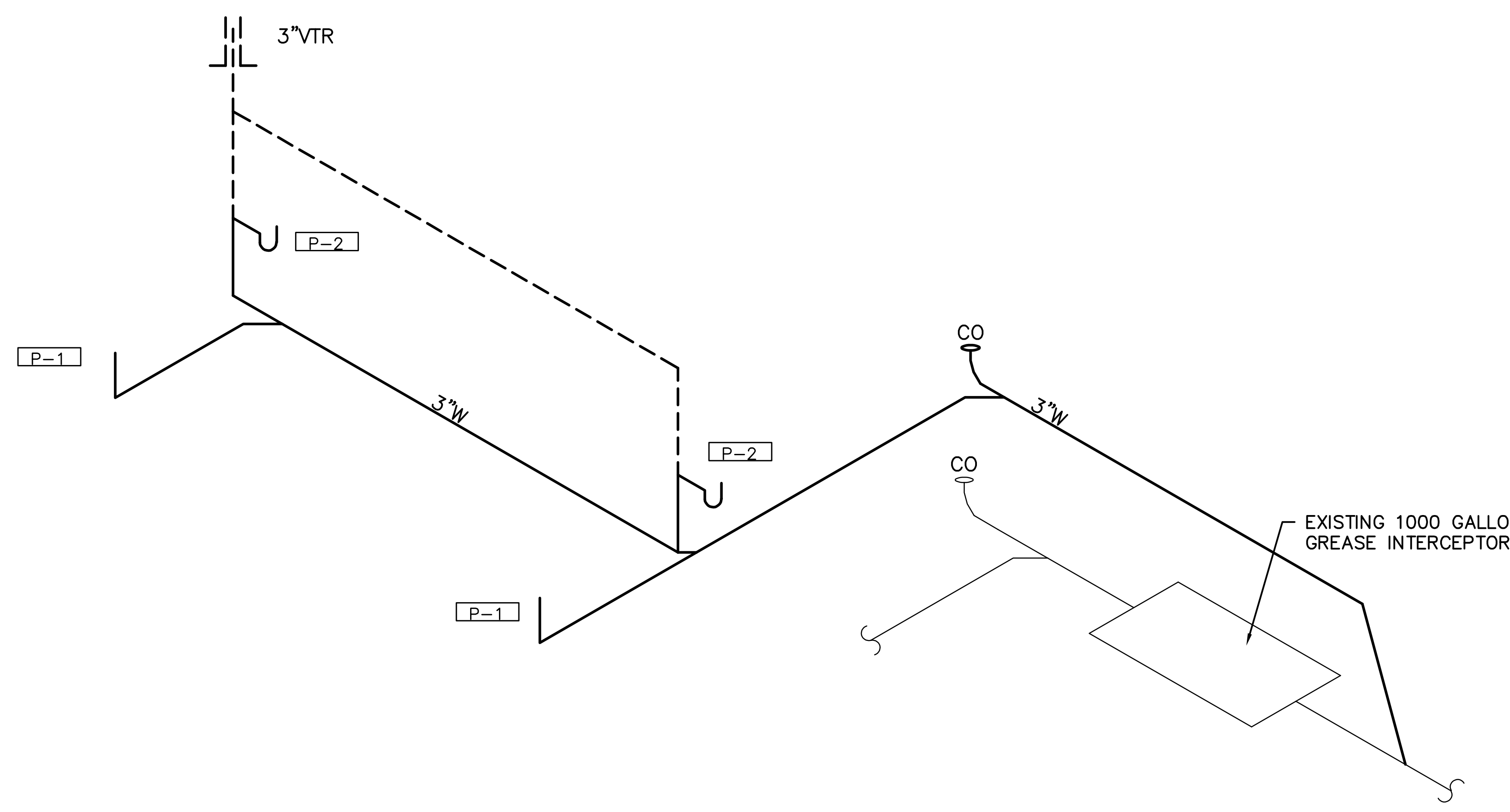
14. PRIOR TO BIDDING, THE CONTRACTOR AND HIS SUBCONTRACTORS SHALL VISIT THE JOBSITE AND SHALL FAMILIARIZE THEMSELVES WITH ALL CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED AND SHALL INCLUDE IN HIS BID ALL LABOR, MATERIAL AND OPERATIONS REQUIRED FOR A COMPLETE JOB. (NOTIFY OWNER AND ENGINEER OF ANY DISCREPANCIES PRIOR TO BID.)

15. CLEANOUTS, LINE SIZE, UNO.

16. FLOOR DRAINS, LINE SIZE, UNO.

17. FLOOR DRAINS WITH SUBSCRIPT CO TO HAVE INTEGRAL CLEANOUT AND SHALL BE SIMILAR TO REGULAR FLOOR DRAIN SPECIFIED, UNO.

18. FLOOR DRAINS AND FLOOR SINKS SHALL BE PROVIDED WITH TRAP PRIMERS OR ALTERNATE METHODS AS APPROVED BY AUTHORITY HAVING JURSIDICTION.



WASTE RISER

SCALE: NONE

Digitally signed by Steven H. Everhart, Jr. P.E.
Date: 2025.07.24 09:46:24 -04'00'

SEAL
23933
7/24/25

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DATE: JULY 24, 2025
PROJECT NO. 2402

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bgarchitects1@gmail.com

RIVER OF LIFE CHURCH
8411 OCEAN HIGHWAY
SUNSET BEACH, NC
BRUNSWICK COUNTY

PLUMBING
SCHEDULES,
NOTES & DETAILS

PROJECT NO. 19175

TOPSAIL
ENGINEERING, INC
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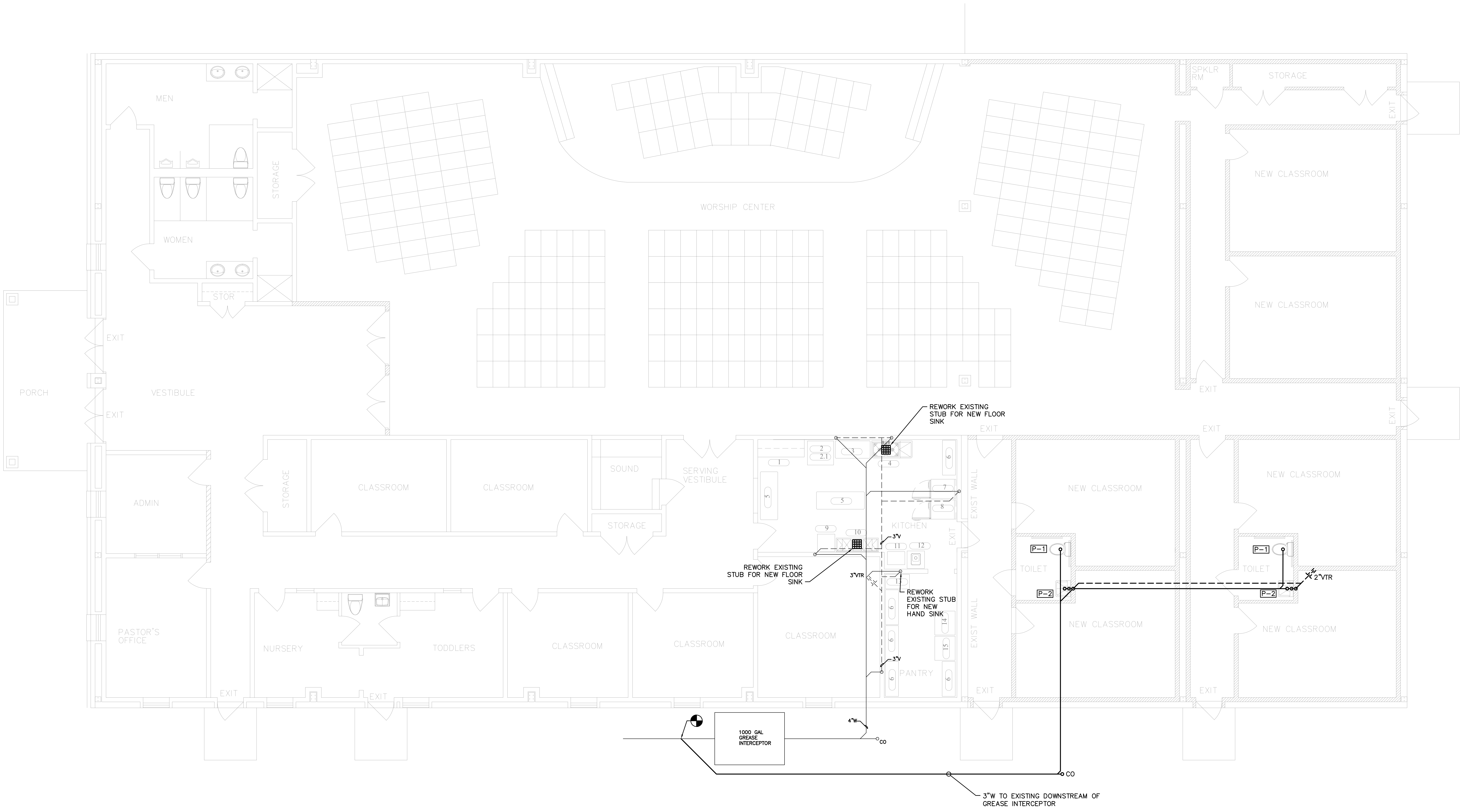
SHEET NUMBER:
P1 OF 3



FLOOR PLAN – PLUMBING – WASTE

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

KITCHEN MODS
1. EXIST CABINET TO REMAIN.
2. NEW 6 BURNER GAS RANGE
2.1 NEW RESIDENTIAL RANGE HOOD
3. NEW 48"x24" STAINLESS STEEL TABLE
4. NEW 2-BOWL PREP SINK w/DISPOSAL
5. EXISTING STAINLESS STEEL TABLE
6. EXISTING PANTRY RACK
7. EXISTING COOLER
8. EXISTING FREEZER
9. NEW COMMERCIAL LOW TEMP CHEMICAL DISHWASHER
10. NEW 3-BOWL POT SINK w/SHELF
11. EXISTING ICE MACHINE
12. EXISTING HAND SINK IN CABINET
13. EXISTING WARMER STORAGE
14. EXISTING RESIDENTIAL FREEZER
15. EXISTING RESIDENTIAL REFRIGERATOR

29933
STEVEN H. EVERHART, JR.
7/24/25

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by Steven H.
Everhart Jr.,
P.E.
Date:
2025.07.24
09:47:13-04'00'

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RIVER OF LIFE CHURCH
8411 OCEAN HIGHWAY
SUNSET BEACH, NC
BRUNSWICK COUNTY

NEW FLOOR PLAN
PLUMBING
WASTE

PROJECT NO. 19175

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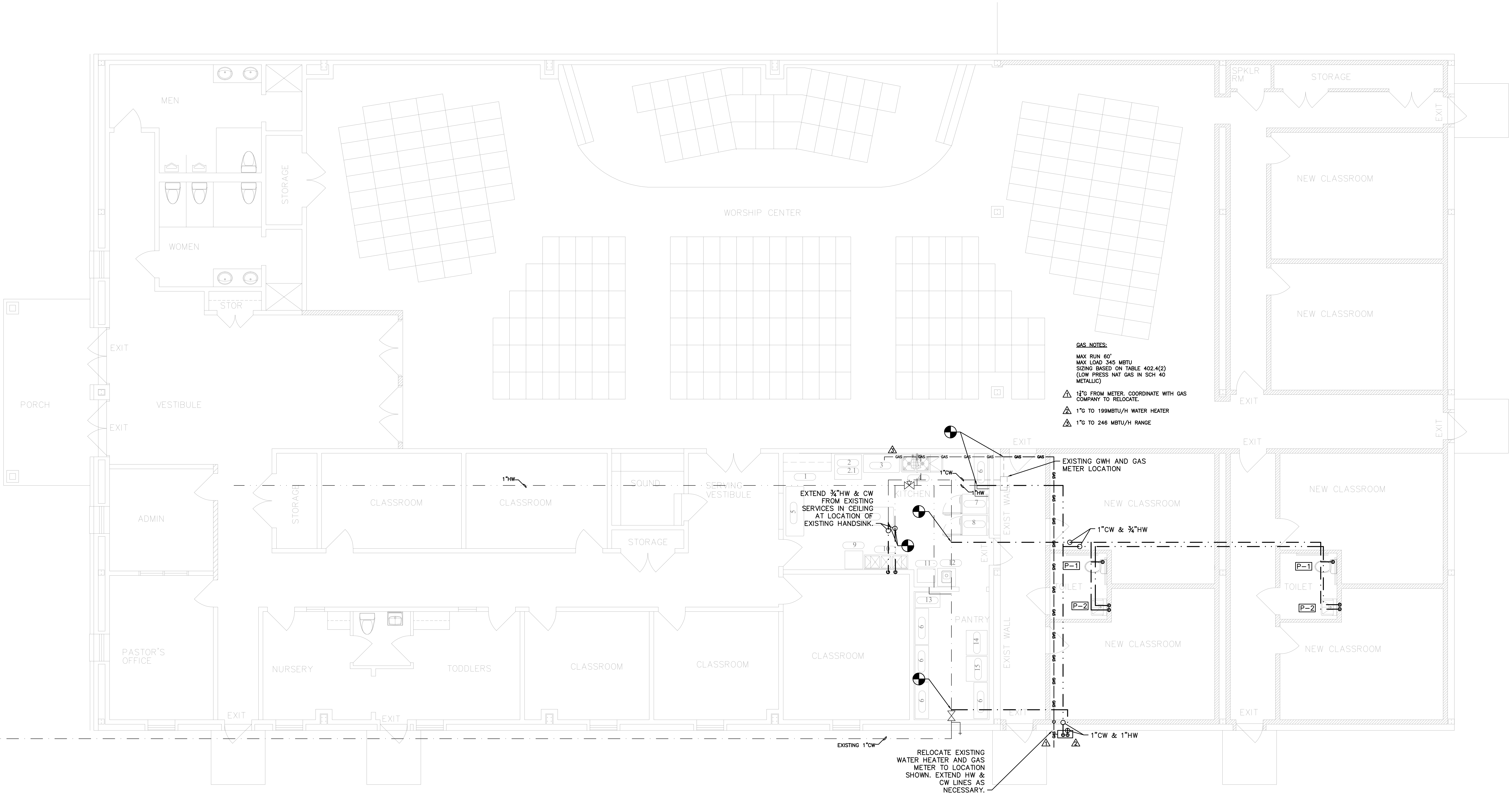

EXTEND ¾"HW & CW FROM EXISTING SERVICES IN CEILING AT LOCATION OF EXISTING HANDSINK.

EXISTING GWH AND GAS METER LOCATION

1"CW & ¾"HW

1"CW & 1"HW

EXISTING 1"CW

RELOCATE EXISTING WATER HEATER AND GAS METER TO LOCATION SHOWN. EXTEND HW & CW LINES AS NECESSARY.

GAS NOTES:

MAX RUN 60'
MAX LOAD 345 MBTU
SIZING BASED ON TABLE 402.4(2)
(LOW PRESS NAT GAS IN SCH 40
METALLIC)

- △1 1¼"G FROM METER. COORDINATE WITH GAS COMPANY TO RELOCATE.
- △2 1"G TO 199MBTU/H WATER HEATER
- △3 1"G TO 246 MBTU/H RANGE

FLOOR PLAN – PLUMBING – WATER

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

KITCHEN MODS
1. EXIST CABINET TO REMAIN.
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12. EXISTING HAND SINK IN CABINET
13. EXISTING WARMER STORAGE
14. EXISTING RESIDENTIAL FREEZER
15. EXISTING RESIDENTIAL REFRIGERATOR

STEVEN H. EVERHART, JR.
23333
7/24/25

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NEW FLOOR PLAN
PLUMBING
WATER

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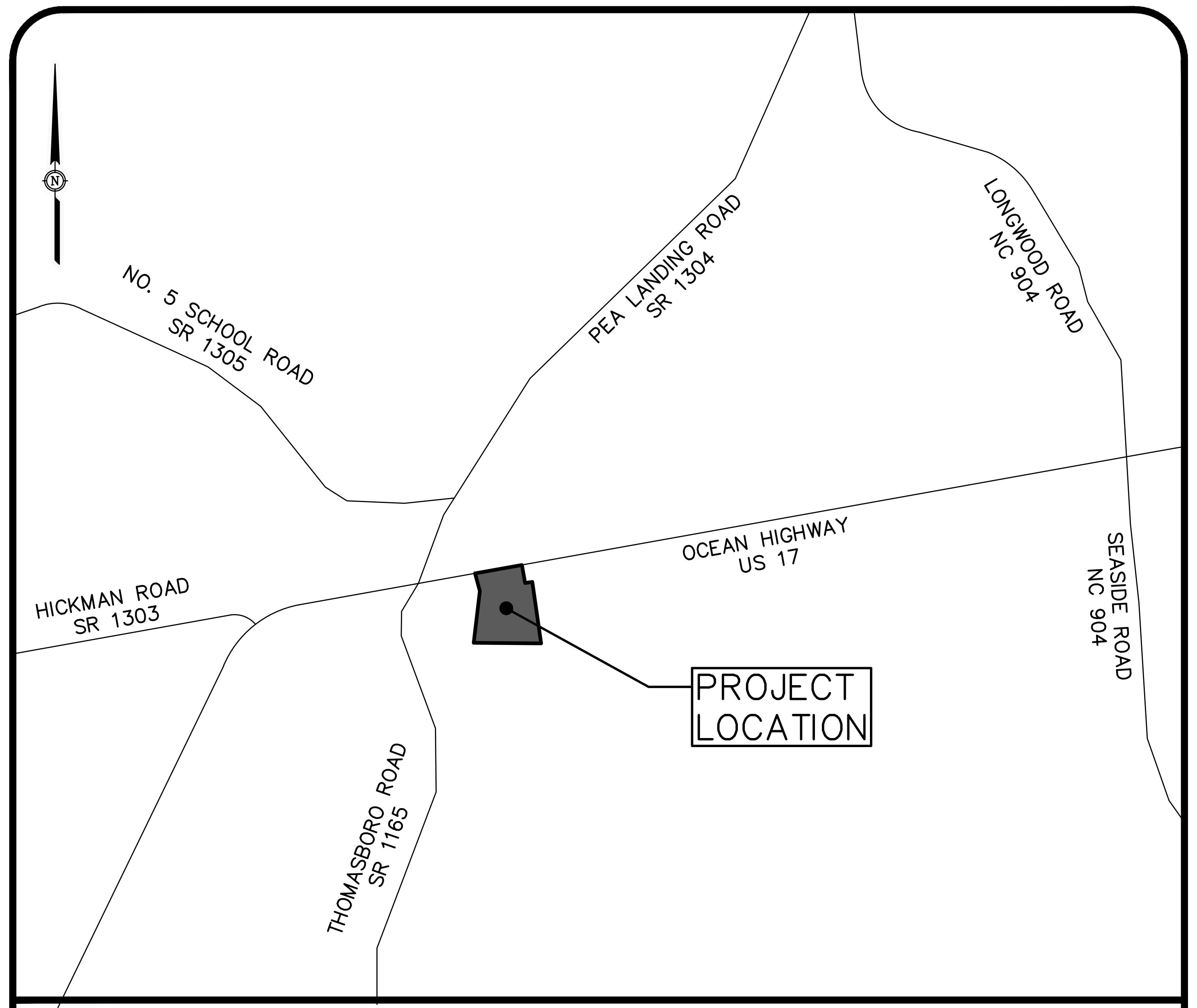
P3 OF 3

SITE EXPANSION DEVELOPMENT PLANS
FOR
RIVER OF LIFE BAPTIST CHURCH
BRUNSWICK COUNTY, NORTH CAROLINA

PROJECT INFORMATION

OWNER	RIVER OF LIFE BAPTIST CHURCH OF SUNSET BEACH, NC INC. 8411 OCEAN HIGHWAY US-17 W SUNSET BEACH, NC 28468
CONTACT:	THOMAS KIRKWOOD (910) 579-8411 (315) 251-4869
SURVEYOR:	COASTAL GEOMATICS 5041-3 MAIN STREET SHALLOTTE, NC 28470 (910) 356-1800
CIVIL/SITE ENGINEER:	MCGILL ASSOCIATES, P.A. 712 VILLAGE ROAD SW SUITE 103 SHALLOTTE, NC 28470 THOMAS MANNINO, P.E. (910) 755-5872 TOM.MANNINO@MCGILLASSOCIATES.COM
LEGAL REFERENCE	
TAX PARCEL ID:	2100000902
PARCEL PIN:	103602689313
DEED REFERENCE:	DB 03572, PG 1163
LOCATION:	8411 OCEAN HIGHWAY W SUNSET BEACH, NC 28468 LATITUDE: 33.938463° LONGITUDE: -78.547560°
TOWNSHIP:	SHALLOTTE
SITE SUMMARY	
TOTAL SITE AREA:	45.55 AC
DISTURBED AREA:	3.00 AC
PREVIOUSLY PERMITTED IMPERVIOUS AREA:	1.11 ACRES (PER PERMIT SW8140512)
EX. IMPERVIOUS AREA:	1.31 ACRES
PROP. IMPERVIOUS AREA:	2.77 ACRES
ZONING	
EXISTING ZONING:	CO-CLD, CO-R-7500
EXISTING/PROPOSED USE:	PLACE OF WORSHIP

FLOOD ZONE	
FIRM MAP:	3720102600K
ZONE(S):	X
RIVER BASIN	LUMBER
RECEIVING STREAM	LITTLE CAW CAW SWAMP
STREAM INDEX NO.:	15-23-1
CLASSIFICATION:	C;Sw
DATUM	
VERTICAL:	NAVD88
HORIZONTAL:	NAD 83-NSRS 2011
BENCHMARK	1/2" IRON ROD FOUND ELEV.=36.95' NAVD 88
POSTED SPEED LIMIT:	55 MPH
BUILDING AREA DATA:	
EXISTING BUILDING :	7,809 SF
PROPOSED BUILDING ADDITION :	3,800 SF
TOTAL EXISTING + BUILDING ADDITION:	11,609 SF
PARKING:	
TOTAL FINAL REMODELED ASSEMBLY AREA NET SQUARE FOOTAGE:	3,620
PLACE OF WORSHIP: 1 SPACE REQUIRED FOR EVERY 20 SF IN ASSEMBLY AREA; SPACES REQUIRED: 3,620 SF / 20=	181
EDUCATIONAL FACILITIES: 6 SPACES REQUIRED PER CLASSROOM, 1 SPACE REQUIRED PER 300 SF ADMIN. 11 CLASSROOMS x 6 = 66 SPACES 128 SF ADMIN / 300 = 1 SPACE SPACES REQUIRED:	67
TOTAL SPACES REQUIRED:	248
EXISTING SPACES TO REMAIN:	81
PROPOSED ADDITIONAL SPACES:	191
H/C ACCESSIBLE SPACES REQUIRED:	7
H/C ACCESSIBLE SPACES PROVIDED:	7
TOTAL SPACES:	272 (110% OF REQ'D)



VICINITY MAP NOT TO SCALE

SCHEDULE OF DRAWINGS

G-001 . . . . . COVER SHEET
G-002 . . . . . GENERAL NOTES AND ABBREVIATIONS
G-003 . . . . . GENERAL EROSION CONTROL NOTES
EXISTING CONDITIONS SURVEY
D-101 . . . . . DEMOLITION PLAN
C-101 . . . . . EROSION CONTROL PLAN
C-102 . . . . . SITE PLAN
C-103 . . . . . GRADING AND STORMWATER PLAN
C-104 . . . . UTILITY PLAN
L-101 . . . . . LANDSCAPE PLAN
LIGHTING PLAN BY BEMC
C-501 . . . . . SITE DETAILS
C-502 . . . . STORMWATER AND EROSION CONTROL DETAILS
C-503 . . . . STORMWATER AND EROSION CONTROL DETAILS
C-504 . . . . STORMWATER AND EROSION CONTROL DETAILS
C-505 . . . . WATER DETAILS
C-506 . . . . WATER DETAILS
C-507 . . . . WATER DETAILS
C-508 . . . . HANDRAIL DETAILS
C-509 . . . . TEMPORARY SKIMMER BASIN DETAILS
C-510 . . . . WATER DETAILS

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mcgillassociates.com

NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 50548
THOMAS P. MANNINO

SIGNED AND DATED:
8/20/26

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED IN ACCORDANCE WITH THE STANDARD CERTIFICATION REQUIREMENTS FOUND IN NC ADMINISTRATIVE CODE 21-56.1103(E). THIS DIGITAL SIGNATURE HAS BEEN FOUND BY THE NC BOARD OF EXAMINERS FOR ENGINEERS AND SURVEYORS TO MEET THESE STANDARDS. PLEASE CONTACT THE SIGNER IF YOU NEED ASSISTANCE IN VALIDATING THE SIGNATURE.

ISSUED FOR BID

NO.	DATE	BY	DESCRIPTION

DATE
AUGUST 2025

SHEET
G-001

P:\2024\24.07082-RIVEROFLBC-SITE EXPANSION\DRAWINGS\PLAN SHEETS\24.07082_RIVER OF LIFE COVER AND GENERAL SHEETS.DWG PLOT DATE 8/20/2026 8:06 AM TONY MINTZ

ABBREVIATIONS

@	AT
ABC	AGGREGATE BASE COURSE
AC	ACRE
A.D.	ALGEBRAIC DIFFERENCE
ADA	AMERICANS WITH DISABILITIES ACT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AL	AREA LIGHT
APPROX.	APPROXIMATE
ARCH.	ARCHITECTURAL
ASSY.	ASSEMBLY
BC	BOTTOM OF CURB
B–B	BACK TO BACK
BEAR.	BEARING
BLDG.	BUILDING
BOC	BACK OF CURB
BOT.	BOTTOM
℄	CENTERLINE
CABC	CRUSHED AGGREGATE BASE COURSE
CB	CATCH BASIN
CC	CENTER TO CENTER
CF	CUBIC FEET
CFM	CUBIC FEET PER MINUTE
C&G	CURB AND GUTTER
CH	CHORD
CI	CURB INLET
CL	CLASS
CNST	CONSTRUCTION
CO	CLEANOUT
CO.	COMPANY
COL	COLUMN
CONC.	CONCRETE
CONN	CONNECTION
CPP	CORRUGATED PLASTIC PIPE
CSP	CORRUGATED STEEL PIPE
CULV.	CULVERT
°	DEGREE(S)
△	DELTA ANGLE
ø / DIA.	DIAMETER
DP	DEPTH / DEEP
DB	DEED BOOK
Dc	DEGREE OF CURVATURE
DET	DETAIL
DI	DROP INLET
DIP	DUCTILE IRON PIPE
DN	DOWN
D/W	DRIVEWAY
DWG(S).	DRAWING(S)
E	EAST
EA.	EACH
EL/ELEV	ELEVATION
ELEC.	ELECTRICAL
EOP	EDGE OF PAVEMENT
ESMT	EASEMENT
EX/EXIST	EXISTING
FD	FLOOR DRAIN
FES	FLARED END SECTION
FFE	FINISHED FLOOR ELEVATION
FH	FIRE HYDRANT
FHA	FIRE HYDRANT ASSEMBLY
FI	FLOW INDICATOR
FLEX.	FLEXIBLE
FL	FLOW LINE
FM	FORCE MAIN
FO	FIBER OPTIC CABLE
FOP	FIBER OPTIC POST
FOSC	FIBER OPTIC SIGNAL CABLE
FOC	FACE OF CURB
FT	FEET
FUT	FUTURE
GA	GAUGE
GAL.	GALLON
GALV.	GALVANIZED
GEN	GENERATOR
G/L	GUTTER LINE
GV	GATE VALVE
GW	GUY WIRE/ANCHOR
HC	HANDICAP
HD	HEAVY DUTY
HDPE	HIGH DENSITY POLYETHYLENE PIPE (SMOOTH WALL INTERIOR)
HEX.	HEXAGONAL
HOR(IZ).	HORIZONTAL
HP	HIGH POINT
HWL	HIGH WATER LEVEL
HWY.	HIGHWAY
ICV	IRRIGATION CONTROL VALVE
ID	INSIDE DIAMETER
IN(S)	INCH(ES)
INV.	INVERT
JB	JUNCTION BOX
K	CURVE COEFFICIENT
L	LENGTH
LB(S)	POUND(S)
LD	LIGHT DUTY
LF	LINEAR FEET
LG	LONG
LP	LIGHT POLE
LT	LEFT
LWL	LOW WATER LEVEL

MAX.	MAXIMUM
MECH.	MECHANICAL
MFR.	MANUFACTURER
MH	MANHOLE
MIN.	MINIMUM
MI	MILE
# / NO.	NUMBER
N	NORTH
NCDEQ/LQS	NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY/LAND QUALITY SECTION
NCDOT	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
N/F	NOW OR FORMERLY
N.I.C.	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER(S)
OD	OUTSIDE DIAMETER
OHE	OVERHEAD ELECTRIC
OPNG	OPENING
⑩	PARKING SPACE NUMBER
PB	PLAT BOOK
PC	POINT OF CURVATURE
PERM.	PERMANENT
PG	PAGE
PI	POINT OF INTERSECTION
PL	PROPERTY LINE (——— — ———)
PROP.	PROPOSED
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PT	POINT
PVC	POLYVINYL CHLORIDE
P.V.C.	POINT OF VERTICAL CURVATURE
P.V.I.	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
P.V.T.	POINT OF VERTICAL TANGENCY
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REQ'D.	REQUIRED
RJ	RESTRAINED JOINT
RR	RAILROAD
RT	RIGHT
R/W	RIGHT–OF–WAY
S	SOUTH
SAN	SANITARY
SCH	SCHEDULE
SDMH	STORM DRAIN MANHOLE
SEC	SECONDS
SECT.	SECTION
SED.	SEDIMENT
SEW	SEWER
SF	SQUARE FEET
SHT. / SH.	SHEET
SP	SERVICE POLE
SPEC.	SPECIFICATION
SQ.	SQUARE
SR	STATE ROAD
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEANOUT
SSMH	SANITARY SEWER MANHOLE
STA.	STATION
STD.	STANDARD
STL	STEEL
S/W	SIDEWALK
TC	TOP OF CURB
TEL.	TELEPHONE
TEMP.	TEMPORARY
TK	THICK
T/	TOP OF
T.O.	TOP OF...
TP	TELEPHONE PEDESTAL
T/S	TOP OF SLAB
TST	TEMPORARY SEDIMENT TRAP
T/W	TOP OF WALL
TYP.	TYPICAL
U/G	UNDER GROUND
UGE	UNDER GROUND ELECTRIC
UV	ULTRAVIOLET
V	VALVE
VC	VERTICAL CURVE
VERT.	VERTICAL
W	WIDTH
W	WEST
W/	WITH
WD	WIDE
W/L	WATER LINE
WM	WATER METER
WSE	WATER SURFACE ELEVATION
WV	WATER VALVE
WWF	WELDED WIRE FABRIC
YD	YARD
YI	YARD INLET
YH	YARD HYDRANT

GENERAL NOTES

FOR THE PURPOSE OF THE FOLLOWING NOTES:
- "CONTRACTOR" REFERS TO GENERAL CONTRACTOR
- "OWNER" REFERS TO RIVER OF LIFE BAPTIST CHURCH OR ITS AUTHORIZED AGENTS
- "ENGINEER" REFERS TO MCGILL ASSOCIATES

1. DO NOT SCALE DRAWINGS.
2. THE CONTRACTOR SHALL ATTEND AN ON–SITE PRECONSTRUCTION CONFERENCE WITH THE OWNER'S REPRESENTATIVE(S) AND THE ENGINEER PRIOR TO BEGINNING WORK.
3. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL PERMITS, CODES, REGULATIONS, AND ORDINANCES.
4. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SITE SAFETY ASSOCIATED WITH THE WORK RELATED TO THIS PROJECT AND FOR COMPLIANCE WITH ALL FEDERAL, STATE, AND LOCAL HEALTH AND SAFETY LAWS, CODES, REGULATIONS, AND ORDINANCES INCLUDING BUT NOT LIMITED TO THOSE CURRENTLY MANDATED BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
5. THIS PLAN IS NOT INTENDED AS A SUBSTITUTE FOR THE PERSONAL INVESTIGATION, INDEPENDENT INTERPRETATION, AND JUDGEMENT OF THE CONTRACTOR.
6. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND LOCATIONS PRIOR TO BEGINNING WORK, AND IMMEDIATELY NOTIFY THE OWNER AND ENGINEER IN THE EVENT THERE ARE ANY DISCREPANCIES BETWEEN SUCH CONDITIONS AND THOSE SHOWN ON THE PLANS AND SPECIFICATIONS.
7. ALL TIE–INS SHALL BE SCHEDULED AND COORDINATED WITH THE ENGINEER AND LOCAL AUTHORITY AT LEAST 48 HOURS PRIOR TO MAKING THE CONNECTION.
8. THE CONTRACTOR SHALL KEEP THE ENGINEER INFORMED RELATIVE TO THE PROGRESS OF THE CONSTRUCTION. THE ENGINEER SHALL OBSERVE CONSTRUCTION ACTIVITIES AS REQUIRED BY NORTH CAROLINA GENERAL STATUTES 130A – 317. FAILURE OF THE CONTRACTOR TO KEEP THE ENGINEER INFORMED MAY REQUIRE UNCOVERING OF WORK TO VERIFY COMPLIANCE WITH PLANS AND SPECIFICATIONS. ANY COST ASSOCIATED WITH UNCOVERING WORK AND/OR VERIFYING COMPLIANCE SHALL BE BORNE BY THE CONTRACTOR.
9. ABSOLUTELY NO WORK SHALL BE PERFORMED ON PRIVATE PROPERTY BEYOND ANY AREA FOR WHICH EASEMENTS EXIST OR ARE TO BE PROVIDED BY THE OWNER FOR THE PURPOSES OF THIS PROJECT. THE CONTRACTOR SHALL NOT DISTURB ADJACENT PROPERTIES DURING CONSTRUCTION WITHOUT THE PRIOR WRITTEN APPROVAL OF THE OWNERS OF SAID PROPERTIES.
10. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING THE ENGINEER WITH A SET OF RECORD (AS–BUILT) DRAWINGS. THESE DRAWINGS SHALL AT A MINIMUM SHOW THE FINAL LOCATION OF ALL CONSTRUCTED FACILITIES.
11. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH OVERHEAD UTILITY OWNER WHEN WORKING NEAR POLES AND IS RESPONSIBLE FOR ALL WORK ASSOCIATED WITH BRACING AND SUPPORTING THE POLES DURING CONSTRUCTION.
12. THIS PLAN DOES NOT GUARANTEE THE EXISTENCE OF UNDERGROUND UTILITIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION, SIZE, AND TYPE OF ALL UNDERGROUND UTILITIES PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RELOCATION (AS DIRECTED BY THE ENGINEER) OF ANY CONFLICTING UNDERGROUND UTILITIES, IF REQUIRED AT NOT ADDITIONAL COST TO THE OWNER. IT IS ADVISABLE THE CONTRACTOR VISIT THE SITE PRIOR TO BIDDING AND BECOME FAMILIAR WITH THE SITE AND ANY POTENTIAL CONFLICTS.
13. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ALL DAMAGE CAUSED BY HIS OPERATIONS TO EXISTING UTILITIES AND FACILITIES WHICH ARE NOT INCLUDED AS PART OF THE INTENDED WORK. DAMAGED UTILITIES AND FACILITIES SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR, TO THE SATISFACTION OF THE OWNERS' REPRESENTATIVE, AT NO ADDITIONAL COST TO THE OWNER.
14. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION OPERATIONS WITH ANY AND ALL OTHER CONSTRUCTION ACTIVITIES WHICH MAY BE OCCURRING SIMULTANEOUSLY ON THE SITE. LACK OF COORDINATION ON THE CONTRACTOR'S PART RESULTING IN EXTRA WORK OR SCHEDULE DELAYS SHALL NOT CONSTITUTE A CHANGE ORDER.
15. THE CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO THE NORMAL WORKING HOURS. THE CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXEMPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
16. THE CONTRACTOR SHALL CONTROL ALL "DUST" BY PERIODIC WATERING AND SHALL PROVIDE ACCESS AT ALL TIMES FOR PROPERTY OWNERS WITHIN THE PROJECT AREA AND FOR EMERGENCY VEHICLES. ALL OPEN DITCHES AND HAZARDOUS AREAS SHALL BE CLEARLY MARKED IN ACCORDANCE WITH THE SPECIFICATIONS.
17. CONTRACTOR SHALL REPAIR ALL DISTURBED AREAS TO EQUAL OR BETTER CONDITIONS UNLESS OTHERWISE NOTED.
18. CONTRACTOR IS REQUIRED TO ENGAGE A QUALIFIED INDEPENDENT GEOTECHNICAL ENGINEERING TESTING AGENCY LICENSED IN THE STATE OF NORTH CAROLINA TO PERFORM FIELD QUALITY CONTROL TESTING. TESTING AGENCY AND OR THE CONTRACTOR MUST PROVIDE THE OWNER WITH TWO COPIES OF ALL TESTING REPORTS. CONTRACTOR SHALL ENSURE COMPLIANCE WITH THE GEOTECHNICAL ENGINEERING REPORT BY ECS SOUTHEAST LLP TITLED "GEOTECHNICAL ENGINEERING REPORT RIVER OF LIFE BAPTIST CHURCH" DATED JUNE 7, 2025 THROUGHOUT ALL PHASES OF CONSTRUCTION.
19. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ADJUSTMENT OF ALL UTILITY SURFACE ACCESSES WHETHER HE PERFORMS THE WORK OR A UTILITY COMPANY PERFORMS THE WORK.
20. ALL AREAS WHERE THERE IS EXPOSED DIRT SHALL BE SEEDED, FERTILIZED AND MULCHED ACCORDING TO THE SPECIFICATIONS. THE FINISHED SURFACE SHALL BE TO GRADE AND SMOOTH, FREE OF ALL ROCKS LARGER THAN 3", EQUIPMENT TRACKS, DIRT CLODS, BUMPS, RIDGES AND GOUGES PRIOR TO SEEDING; THE SURFACE SHALL BE LOOSENED TO A DEPTH OF ±4"–6" TO ACCEPT SEED. THE CONTRACTOR SHALL NOT PROCEED WITH SEEDING OPERATIONS WITHOUT FIRST OBTAINING THE ENGINEER'S APPROVAL OF THE GRADED SURFACE. ALL SEEDING SHALL BE PERFORMED BY A MECHANICAL "HYDRO–SEEDER". HAND SEEDING SHALL BE AUTHORIZED ON AN AREA BY AREA APPROVAL BY THE ENGINEER. DISTURBED AREAS SHOULD THEN BE MATTED WITH SHORT–TERM PHOTODEGRADABLE EROSION CONTROL MATTING.
21. CONTRACTOR SHALL VERIFY ALL ELEVATIONS BEFORE INSTALLATION OF FACILITIES.
22. DURING CONSTRUCTION ALL FIRE HYDRANTS ARE TO REMAIN ACCESSIBLE.
23. WHERE SPECIFIED, STORM DRAIN PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP) CONFORMING TO AASHTO M–170, AS CONTAINED IN NCDOT STANDARD SPECIFICATION 1032–9 FOR WALL TYPE.
24. WHERE SPECIFIED, ALL STORM DRAIN PIPE SHALL BE CORRUGATED HIGH DENSITY POLYETHYLENE PIPE (HDPE). SMOOTH WALL INTERIOR, CONFORMING WITH AASHTO DESIGNATION M294 AND M252, WITH WATER TIGHT JOINTS, BACKFILLED WITH # 57 WASHED STONE UP TO MIN. 6" OVER THE TOP OF THE PIPE.

GENERAL UTILITY NOTES

1. THE APPROXIMATE LOCATION OF ALL KNOWN UNDERGROUND UTILITIES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE TRUE LOCATION PRIOR TO COMMENCING WORK. IN THE EVENT A CONFLICT OR POTENTIAL CONFLICT IS IDENTIFIED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
2. THE CONTRACTOR SHALL COORDINATE ALL WORK AFFECTING UTILITIES WITH THE RESPECTIVE UTILITY COMPANY OWNER. ALL DETAILS OF CONSTRUCTION AND/OR RELOCATION SHALL BE APPROVED BY THE UTILITY OWNERS AND OTHER APPROVING AGENCIES, IF REQUIRED.
3. PROTECTION OF EXISTING STRUCTURES DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
4. ALL UTILITY CONSTRUCTION SHALL BE IN ACCORDANCE WITH BRUNSWICK COUNTY UTILITIES AND BRUNSWICK ELECTRIC MEMBERSHIP CORPORATION CONSTRUCTION STANDARDS.
5. RELATION BETWEEN WATER MAINS AND SEWER LINES:

A. HORIZONTAL AND VERTICAL SEPARATION:

1.) WATERLINES SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED SEWER LINE. THE DISTANCE SHALL BE MEASURED FROM EDGE TO EDGE. IF AN OBSTRUCTION PROHIBITS A 10–FOOT SEPARATION, THE CONTRACTOR SHALL CONTACT THE ENGINEER. INSTALLATION OF THE WATER MAIN CLOSER TO A SEWER LINE IS ALLOWED PROVIDED THAT THE WATER MAIN IS IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER AND AT AN ELEVATION SO THE BOTTOM OF THE WATER MAIN IS AT LEAST 18–INCHES ABOVE THE TOP OF THE SEWER.

2.) IF IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS DESCRIBED ABOVE OR ANY TIME THE SEWER IS OVER THE WATER MAIN, BOTH THE WATER MAIN AND SEWER LINE MUST BE CONSTRUCTED OF FERROUS PIPE COMPLYING WITH PUBLIC WATER SUPPLY DESIGN STANDARDS AND PRESSURE TESTED TO 150 PSI (MINIMUM) TO ASSURE WATERTIGHTNESS BEFORE BACKFILLING.

B. CROSSINGS

1.) FOR WATER MAINS CROSSING UNDER SEWER LINES: LINES SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18–INCHES BETWEEN THE OUTSIDE EDGE OF THE WATER MAIN AND THE OUTSIDE EDGE OF THE SEWER LINE. THE CROSSING SHALL BE ARRANGED SO THAT ONE 20–FOOT SECTION OF WATERLINE SHALL BE CENTERED AT THE CROSSING. ONE OF THE FOLLOWING METHODS MUST THEN BE UTILIZED AS DIRECTED BY THE ENGINEER:

I.) THE SEWER SHALL BE DESIGNED AND CONSTRUCTED OF FERROUS PIPE AND SHALL BE PRESSURE TESTED AT 150 PSI TO ASSURE WATERTIGHTNESS PRIOR TO BACKFILLING OR,

II.) EITHER THE WATER MAIN OR SEWER LINE MAY BE ENCASED IN A WATERTIGHT CARRIER PIPE WHICH EXTENDS 10–FEET BEYOND BOTH SIDES OF THE CROSSING, MEASURED PERPENDICULAR TO THE WATER MAIN. THE CARRIER PIPE SHALL BE OF A MATERIAL APPROVED BY THE REGULATORY AGENCY FOR USE IN WATER MAIN CONSTRUCTION.

2.) FOR WATER MAINS CROSSING OVER A SEWER LINE: LINES SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18–INCHES BETWEEN THE OUTSIDE EDGE OF THE WATER MAIN AND THE OUTSIDE EDGE OF THE SEWER. IN AN 18–INCH MINIMUM VERTICAL SEPARATION CANNOT BE MET, THEN THE WATERLINE SHALL BE CONSTRUCTED OF A FERROUS MATERIAL WITH ONE 20–FOOT SECTION OF PIPE CENTERED AT THE CROSSING. ONE OF THE CROSSING CONSTRUCTION METHODS ABOVE: 6.B.1.)I) OR II) SHALL BE UTILIZED.

UTILITY PROVIDERS

NATURAL GAS:	N/A	
TELEPHONE:	FOCUS BROADBAND	(910) 755-1815
CABLE TELEVISION / INTERNET:	FOCUS BROADBAND	(910) 755-1815
ELECTRIC:	BRUNSWICK ELECTRIC	(910) 754-4391
WATER:	BRUNSWICK COUNTY UTILITIES	(910) 253-2657
SEWER:	BRUNSWICK COUNTY UTILITIES	(910) 253-2657

NOTE:
AN EFFORT HAS BEEN MADE TO LOCATE AND SHOW APPROXIMATE LOCATION OF EXISTING UNDERGROUND UTILITY LINES. ALL BURIED UTILITIES ARE NOT NECESSARILY SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITIES AND VERIFY LOCATION OF SUCH, PRIOR TO START OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PRESERVE ALL UTILITY SERVICES.

ISSUED FOR BID

mcgill®
712 Village Road SW
Suite 103
Shallotte, NC 28470
910.755.5872
NC Firm License # C-0459
mcgillassociates.com

SEAL
50548
THOMAS P. MANNINO

SIGNED AND DATED:
8/20/26

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED IN ACCORDANCE WITH THE STANDARD CERTIFICATION REQUIREMENTS FOUND IN NC ADMINISTRATIVE CODE 21–56.1103(E). THIS DIGITAL SIGNATURE HAS BEEN FOUND BY THE NC BOARD OF EXAMINERS FOR ENGINEERS AND SURVEYORS TO MEET THESE STANDARDS. PLEASE CONTACT THE SIGNER IF YOU NEED ASSISTANCE IN VALIDATING THE SIGNATURE.

NO.	DATE	BY	DESCRIPTION

SITE EXPANSION DEVELOPMENT PLANS
FOR
RIVER OF LIFE BAPTIST CHURCH
BRUNSWICK COUNTY, NORTH CAROLINA

NOT TO SCALE

OFFICE MANAGER M. NORTON	DESIGNER T. MINTZ
PROJECT MANAGER J. MURRAY	REVIEWER T. MANNINO

GENERAL NOTES AND ABBREVIATIONS

DATE	PROJECT #	FUNDING #
AUGUST, 2025	24.07082	

SHEET
G-002

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes

Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

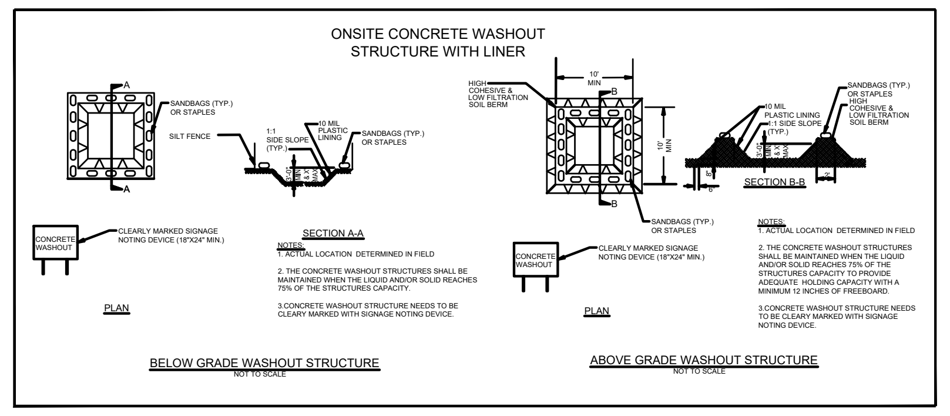
1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.


ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER
A
A
SANDBAGS (TYP.) OR STAPLES
SILT FENCE
1:1 SIDE SLOPE (TYP.)
10 MIL PLASTIC LINING
SANDBAGS (TYP.) OR STAPLES
3'-0" MIN & X MAX
CONCRETE WASHOUT
CLEARLY MARKED SIGNAGE NOTING DEVICE (18"X24" MIN.)
PLAN
SECTION A-A
HIGH COHESIVE & LOW FILTRATION SOIL BERM
10' MIN
B
B
10' MIN
10 MIL PLASTIC LINING
1:1 SIDE SLOPE (TYP.)
SANDBAGS (TYP.) OR STAPLES
HIGH COHESIVE & LOW FILTRATION SOIL BERM
3'-0" MIN & X MAX
8"
6"
2'
SECTION B-B
SANDBAGS (TYP.) OR STAPLES
CONCRETE WASHOUT
CLEARLY MARKED SIGNAGE NOTING DEVICE (18"X24" MIN.)
PLAN

NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY.
3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE.

BELOW GRADE WASHOUT STRUCTURE
NOT TO SCALE

NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE.

ABOVE GRADE WASHOUT STRUCTURE
NOT TO SCALE

CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING | EFFECTIVE: 04/01/19

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be documented in the manner described:

Item to Document	Documentation Requirements
(a) Each E&SC Measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC Plan.	Initial and date each E&SC Measure on a copy of the approved E&SC Plan or complete, date and sign an inspection report that lists each E&SC Measure shown on the approved E&SC Plan. This documentation is required upon the initial installation of the E&SC Measures or if the E&SC Measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC Plan.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC Measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC Measures.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation

In addition to the E&SC Plan documents above, the following items shall be kept on the site and available for agency inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This general permit as well as the certificate of coverage, after it is received.

(b) Records of inspections made during the previous 30 days. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

(c) All data used to complete the Notice of Intent and older inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that must be reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(a) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(b) Anticipated bypasses and unanticipated bypasses.

(c) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	• ***Within 24 hours***, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	• ***A report at least ten days before the date of the bypass, if possible***. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days,*** a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment[40 CFR 122.41(l)(7)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING | EFFECTIVE: 04/01/19

EC MAINTENANCE PLAN

1. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE NOT LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.
2. SEDIMENT SHALL BE REMOVED FROM THE TEMPORARY SKIMMER BASIN WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FIRST BAFFLE. CLEAN OUT AND RESHAPE BASIN BACK TO ITS ORIGINAL DIMENSIONS. REPAIR ANY DAMAGED BAFFLES. SKIMMER SHALL BE CHECKED FOR CLOGGING AND CLEANED OUT.
3. SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT WATTLES WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE WATTLE. REMOVE ACCUMULATED SEDIMENT AND ANY DEBRIS AS NEEDED TO ALLOW FOR ADEQUATE FLOW. REPAIR ANY DAMAGED WATTLES. SEDIMENT WATTLES MUST BE REPLACED/REINSTALLED IF CLOGGED, TORN, DAMAGED, OR DISLODGED.
4. SEDIMENT SHALL BE REMOVED FROM BEHIND THE SILT AND SUPER SILT FENCE WHEN IT BECOMES ABOUT ONE-HALF THE HEIGHT OF THE SILT FENCE. THE SILT AND SUPER SILT FENCE SHALL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER.
5. INSPECT TEMPORARY AND PERMANENT DIVERSIONS ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND LEVEL AND APPROPRIATELY STABILIZE IT.
6. INSPECT INLET PROTECTION AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (½ INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.
7. ALL SEEDED AREAS SHALL BE FERTILIZED, RESEEDED AS NECESSARY AND MULCHED ACCORDING TO SPECIFICATIONS IN THE SEEDING SPECIFICATION TO MAINTAIN A VIGOROUS AND DENSE VEGETATIVE COVER.
8. MAINTAIN ALL MATTING THAT HAS BEEN PLACED ON SLOPES AND IN DITCHES. CHECK FOR GOOD GROUND CONTACT AND FOR THE OCCURRENCE OF ANY EROSION UNDER THE MATTING. MONITOR AND REPAIR OR REPLACE AS NECESSARY.

CONSTRUCTION SEQUENCE

1. OBTAIN THE EROSION CONTROL PERMIT FROM NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY (NCDEQ).
2. PRIOR TO BEGINNING WORK ON THE PROJECT, THE CONTRACTOR SHALL OBTAIN FROM THE OWNER AND KEEP AT THE JOB SITE THE FOLLOWING:
   - A. A POSTED COPY OF THE “EROSION AND SEDIMENT CONTROL APPROVAL” ISSUED BY NCDEQ.
   - B. A CERTIFICATE OF COVERAGE (COC) ISSUED BY NCDEQ FOR COVERAGE UNDER THE NCG01 CONSTRUCTION STORMWATER GENERAL PERMIT, AND A COPY OF THE NCG01 GENERAL PERMIT.
   - C. A COPY OF THE APPROVED PLANS.
3. CONTACT THE NCDEQ WILMINGTON REGIONAL OFFICE AT (910) 796-7215 TO SCHEDULE A PRE-CONSTRUCTION MEETING.
4. FLAG WORK LIMITS BEFORE CONSTRUCTION ACTIVITY BEGINS.
5. NOTIFY NCDEQ LQS INSPECTOR 48 HRS BEFORE PROJECT STARTS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ALL RECORDS REQUIRED BY NCDEQ FOR THE INSTALLATION AND MAINTENANCE OF THE SITE EROSION CONTROL.
7. PRE-DISTURBANCE NOTIFICATION TO NCDEQ INSPECTOR.
8. CONSTRUCT TEMPORARY STABILIZED CONSTRUCTION ENTRANCE AS SHOWN ON PLANS.
9. INSTALL SILT FENCE / SILT FENCE OUTLETS AS SHOWN ON PLANS, CLEARING ONLY WHAT IS NECESSARY TO INSTALL THE SILT FENCE.
10. INSTALL TEMPORARY SKIMMER BASIN WITH CORRESPONDING SKIMMER / OUTLET PIPE AND TEMPORARY STONE WEIR WALL PER PLANS AND DETAILS. ADEQUATE GROUND COVER SHALL BE INSTALLED ON EMBANKMENTS IMMEDIATELY UPON CONSTRUCTION.
11. INSTALL PERMANENT DIVERSION DITCHES WITH SEDIMENT WATTLES AS SHOWN ON PLANS TO DIRECT RUNOFF THROUGH OR AROUND THE SITE. ADEQUATE GROUND COVER TO BE INSTALLED ON PERMANENT DIVERSION DITCHES IMMEDIATELY UPON CONSTRUCTION.
12. INSTALL STORM DRAINAGE CONVEYANCE AS SHOWN ON PLANS.
13. INSTALL INLET PROTECTION AT ALL STORM DRAINAGE AND PIPE INLETS.
14. NOTIFY NCDEQ FOR INSPECTION OF THE EROSION CONTROL MEASURES. UPON APPROVAL, BEGIN DEMOLITION, CLEARING, AND GRUBBING.
15. UPON APPROVAL, BEGIN GRADING. NO MAJOR GRADING ACTIVITIES OR BASIN CONSTRUCTION ARE TO TAKE PLACE DURING WET WEATHER OR PERIODS OF PREDICTED WET WEATHER (I.E. HURRICANES).
16. SITE MUST BE STORM READY BEFORE ANY EXTENDED BREAKS IN CONSTRUCTION ACTIVITIES INCLUDING WEEKENDS.
17. MAINTAIN PERMANENT DIVERSION DITCHES WITH SEDIMENT WATTLES BASED UPON GRADING SUCH THAT RUNOFF IS DIRECTED AS SHOWN ON PLANS.
18. SEED/GRASS AND INSTALL EROSION CONTROL MATTING FOR STABILIZATION ON ALL NEW CUT AND FILL SLOPES WITHIN 7 DAYS AFTER COMPLETION OF ANY PHASE OF GRADING.
19. AFTER THE DRAINAGE AREA TO THE TEMPORARY SKIMMER BASIN HAS BEEN PERMANENTLY STABILIZED, DEWATER THE TEMPORARY SKIMMER BASIN AND CONVERT TO POST CONSTRUCTION STORMWATER DETENTION POND.
20. DEWATERING OPERATIONS MUST BE DISCHARGED INTO ADEQUATE STILLING BASIN OR A COMPARABLE MEASURE TO PREVENT THE DISCHARGE OF SEDIMENT.
21. INSPECT AND CLEAN OUT THE STORMWATER SYSTEM BEFORE BRINGING IT ONLINE.
22. EROSION CONTROL MEASURES SHALL BE MAINTAINED DURING THE ENTIRE DURATION OF THE PROJECT AND UNTIL SITE IS STABILIZED.
23. A SITE INSPECTION SHOULD BE REQUESTED AT THE COMPLETION OF EACH PHASE OF LAND DISTURBANCE.
24. A NEW PHASE MAY NOT BE DISTURBED UNTIL A SEDIMENTATION INSPECTION REPORT IS ISSUED DOCUMENTING THAT THE PREVIOUS PHASE HAS ADEQUATE TEMPORARY OR PERMANENT GROUND COVER.
25. REMOVE REMAINING EROSION CONTROL MEASURES (INCLUDING TEMPORARY STONE WEIR WALL) ONCE SITE IS STABILIZED AND APPROVED BY NCDEQ.
26. NOTIFY NCDEQ LQS INSPECTOR WHEN PROJECT IS READY FOR A CLOSE OUT INSPECTION.
27. FILE FOR NPDES NCG010000 E-NOTICE OF TERMINATION WHEN FINAL CLOSE OUT INSPECTION REPORT IS RECEIVED FROM NCDEQ LQS.

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P:\2024\24.07082-RIVEROFLBC-SITE EXPANSION\DRAWINGS\PLAN SHEETS\24.07082_RIVER OF LIFE COVER AND GENERAL SHEETS.DWG PLOT DATE 8/20/2026 8:09 AM TONY MINTZ

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Shallotte, NC 28470
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NC Firm License # C-0459
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SEAL 025856
MICHAEL A. NORTON

SIGNED AND DATED:

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NO.	DATE	BY	DESCRIPTION

SITE EXPANSION DEVELOPMENT PLANS
FOR
RIVER OF LIFE BAPTIST CHURCH
BRUNSWICK COUNTY, NORTH CAROLINA

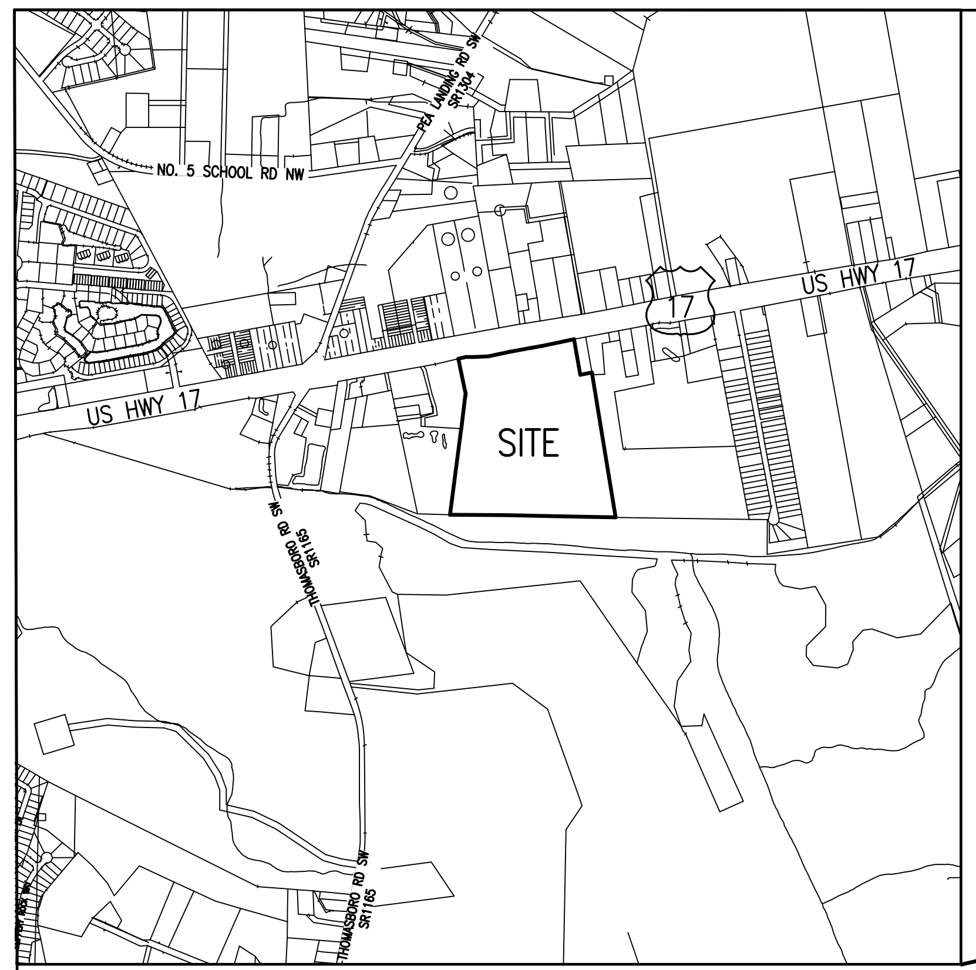
NOT TO SCALE

OFFICE MANAGER M. NORTON	DESIGNER T. MINTZ
PROJECT MANAGER J. MURRAY	REVIEWER T. MANNINO

GENERAL EROSION
CONTROL NOTES

DATE	PROJECT #	FUNDING #
AUGUST, 2025	24.07082	

SHEET
G-003



VICINITY MAP
NO SCALE

SURVEYOR'S CERTIFICATE

I CERTIFY THAT THIS MAP WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED DESCRIPTION RECORDED IN BOOK 3572, PAGE 1163; THAT THE BOUNDARY LINES NOT SURVEYED ARE INDICATED AS DRAWN FROM INFORMATION IN BOOK _____, PAGE _____; THAT THIS GROUND SURVEY WAS PERFORMED AT THE 95 PERCENT CONFIDENCE LEVEL TO MEET FEDERAL GEOGRAPHIC DATA COMMITTEE STANDARDS; THAT THIS SURVEY WAS PERFORMED TO MEET THE REQUIREMENTS FOR A TOPOGRAPHIC SURVEY TO THE ACCURACY OF CLASS A AND VERTICAL ACCURACY WHEN APPLICABLE TO THE CLASS C STANDARD, AND THAT THE ORIGINAL DATA WAS OBTAINED ON 05-15-2025; THAT THE SURVEY WAS COMPLETED ON 05-26-2025; THAT CONTOURS SHOWN AS BROKEN LINES]MAY NOT MEET THE STATED STANDARD; AND ALL COORDINATES ARE BASED ON N.A.D. 83 (2011 ADJUSTMENT) AND ALL ELEVATIONS ARE BASED ON N.A.V.D. 88; THAT THE RATIO OF PRECISION IS 1:10,000; AND THAT THIS SURVEY IS OF AN EXISTING PARCEL OF LAND; THAT THIS MAP WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL GPS SURVEY MADE UNDER MY SUPERVISION AND THE FOLLOWING INFORMATION WAS USED TO PERFORM THIS SURVEY:

CLASS OF SURVEY:	A
POSITIONAL ACCURACY:	0.022 METERS
TYPE OF GPS FIELD PROCEDURE:	RTN
DATES OF SURVEY:	05-15-2025
DATUM/EPOCH:	NAD 83-2011
PUBLISHED /FIXED CONTROL:	RTN
GEIOD MODEL:	18B
COMBINED GRID FACTOR:	1.00013581
UNITS:	US FEET

AND THAT THIS MAP MEETS THE REQUIREMENTS OF THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA (21 NCAC 56. 1600). THIS 28TH DAY OF MAY, 2025.

PROFESSIONAL LAND SURVEYOR NC L-3387

L-3387
CHRISTOPHER D. STANLEY

GENERAL NOTES:

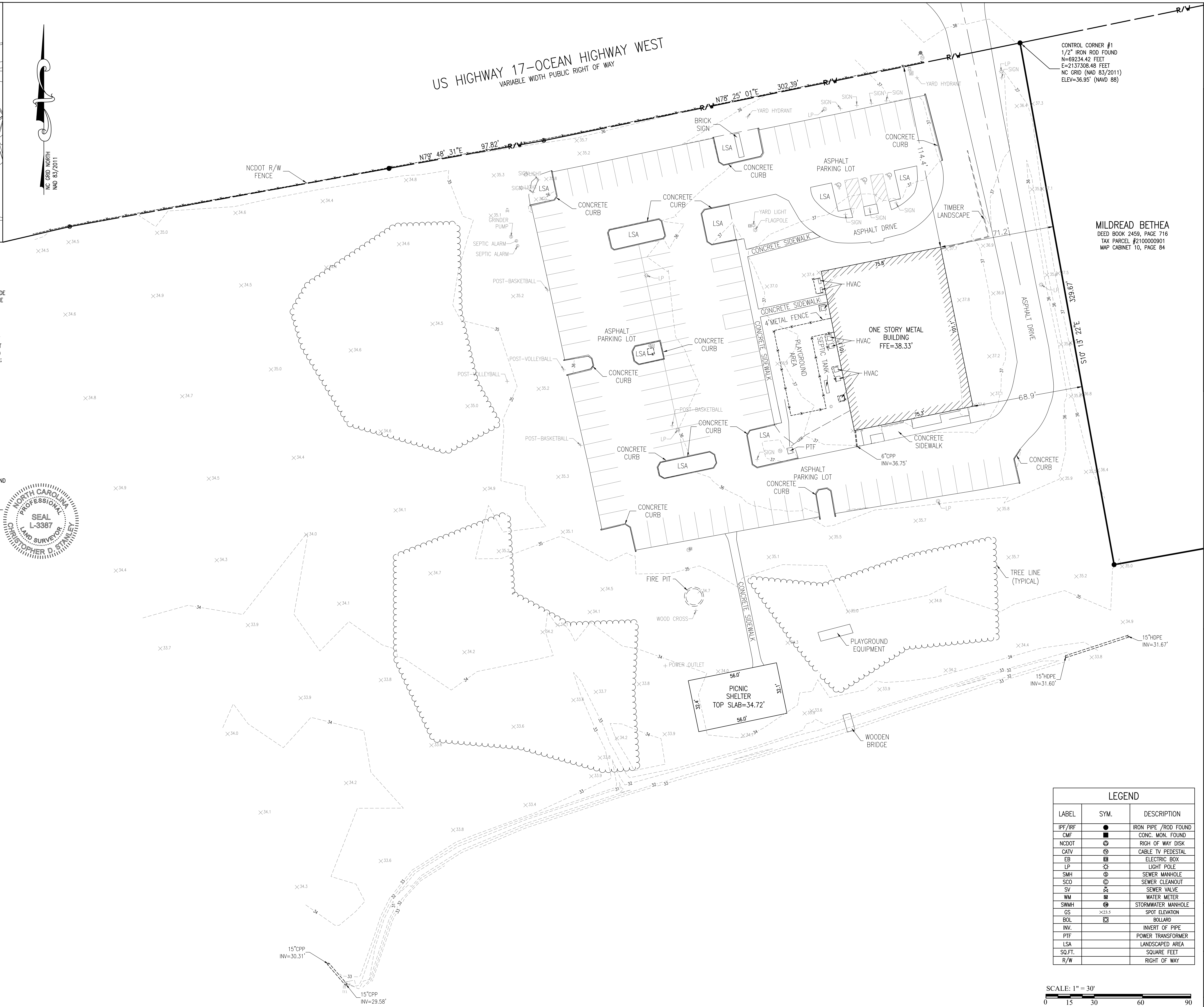
1. ADJOINING DEED REFERENCES BASED ON CURRENT INFORMATION FOUND IN THE BRUNSWICK COUNTY TAX OFFICE.
2. ACCORDING TO CURRENT FEMA FLOOD MAP # 3720102600K, THIS PARCEL APPEARS TO BE LOCATED IN THE FOLLOWING ZONE: "X", AREA OF MINIMAL FLOODING.
3. THIS PROPERTY IS SUBJECT TO ANY AND ALL EASEMENTS, COVENANTS, RESTRICTIONS, RIGHT-OF-WAYS OF RECORD, GOVERNMENTAL ORDINANCES AND/OR REQUIREMENTS WHICH MAY LIMIT THE USE OF THIS PROPERTY; WHETHER SHOWN OR NOT SHOWN ON THIS SURVEY MAP.
4. THIS SURVEY PERFORMED AND MAP PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS THEREBY SUBJECT TO ANY FACTS WHICH MAY BE DISCLOSED BY A FULL AND ACCURATE TITLE SEARCH. USERS OF THIS PLAT SHOULD OBTAIN AN ACCURATE LEGAL OPINION AS TO OWNERSHIP WITHIN THE BOUNDARIES OF THIS PLAT.
5. ALL BEARINGS ARE BASED ON NC GRID NORTH (NAD83-NSRS 2011); ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES. US SURVEY FEET.
6. ELEVATIONS WERE OBTAINED FROM NORTH CAROLINA REALTIME NETWORK AND ARE BASED ON NAVD 88.
7. CONTOUR SHOWN AT ONE FOOT INTERVALS.

PREPARED FOR:

mcgill Shaping Communities Together®

SUB-SURFACE UTILITY DISCLAIMER:

THERE HAS BEEN NO ATTEMPT BY THE CERTIFYING SURVEYOR TO LOCATE, MARK OR IDENTIFY ANY SUB-SURFACE UTILITY LINES ON THE PROPERTIES SHOWN ON THIS MAP. THE EXISTENCE OF SUB-SURFACE UTILITIES, IF ANY, MAY AFFECT THE USE OF THESE PROPERTIES BEYOND THE CONTROL OF THE SURVEYOR. USERS OF THIS MAP, AND THEIR ASSIGNS, ARE HEREBY NOTIFIED AND ACKNOWLEDGE THAT ANY DAMAGE RESULTING FROM ANY UTILITY SHOWN OR NOT SHOWN ON THIS MAP IS NOT THE RESPONSIBILITY OF THE SURVEYOR OR COASTAL GEOMATICS, PLLC.



LABEL	SYM.	DESCRIPTION
IPF/IRF	●	IRON PIPE /ROD FOUND
CMF	■	CONC. MON. FOUND
NCDOT	⊚	RIGH OF WAY DISK
CATV	Ⓣ	CABLE TV PEDESTAL
EB	EB	ELECTRIC BOX
LP	☼	LIGHT POLE
SMH	Ⓢ	SEWER MANHOLE
SCO	©	SEWER CLEANOUT
SV	⋈	SEWER VALVE
WM	W	WATER METER
SWMH	SW	STORMWATER MANHOLE
GS	×23.5	SPOT ELEVATION
BOL	▣	BOLLARD
INV.		INVERT OF PIPE
PTF		POWER TRANSFORMER
LSA		LANDSCAPED AREA
SQ.FT.		SQUARE FEET
R/W		RIGHT OF WAY

SCALE: 1" = 30'

0 15 30 60 90

Revisions

REV 01-09-2026 ADDED ADDITIONAL TOPOGRAPHICAL SURVEY

REV 08-18-2026 REVISED WATER PUMP TO YARD HYDRANT

COASTALGEOMATICS
LAND SURVEYING • MAPPING • PLANNING
Physical Address: 5041-3 Main Street, Shallotte, NC 28470
Mailing Address: Post Office Box 1560, Shallotte, NC 28459
Telephone: 910-356-1800 ~ www.coastalgeomatics.com
Firm License #
P-2248

SURVEY FOR
RIVER OF LIFE BAPTIST CHURCH

EXISTING CONDITIONS SURVEY
RIVER OF LIFE BAPTIST CHURCH EXPANSION PROJECT
8411 OCEAN HIGHWAY WEST, SUNSET BEACH, NC 28468
SHALLOTTE TOWNSHIP, BRUNSWICK COUNTY, NC
TAX PARCEL #2100000902, DEED BOOK 3572, PAGE 1163

Date: 05-28-2025
Scale: 1" = 30'
Drawn By: DML
Checked By: CDS

SHEET 1 OF 1

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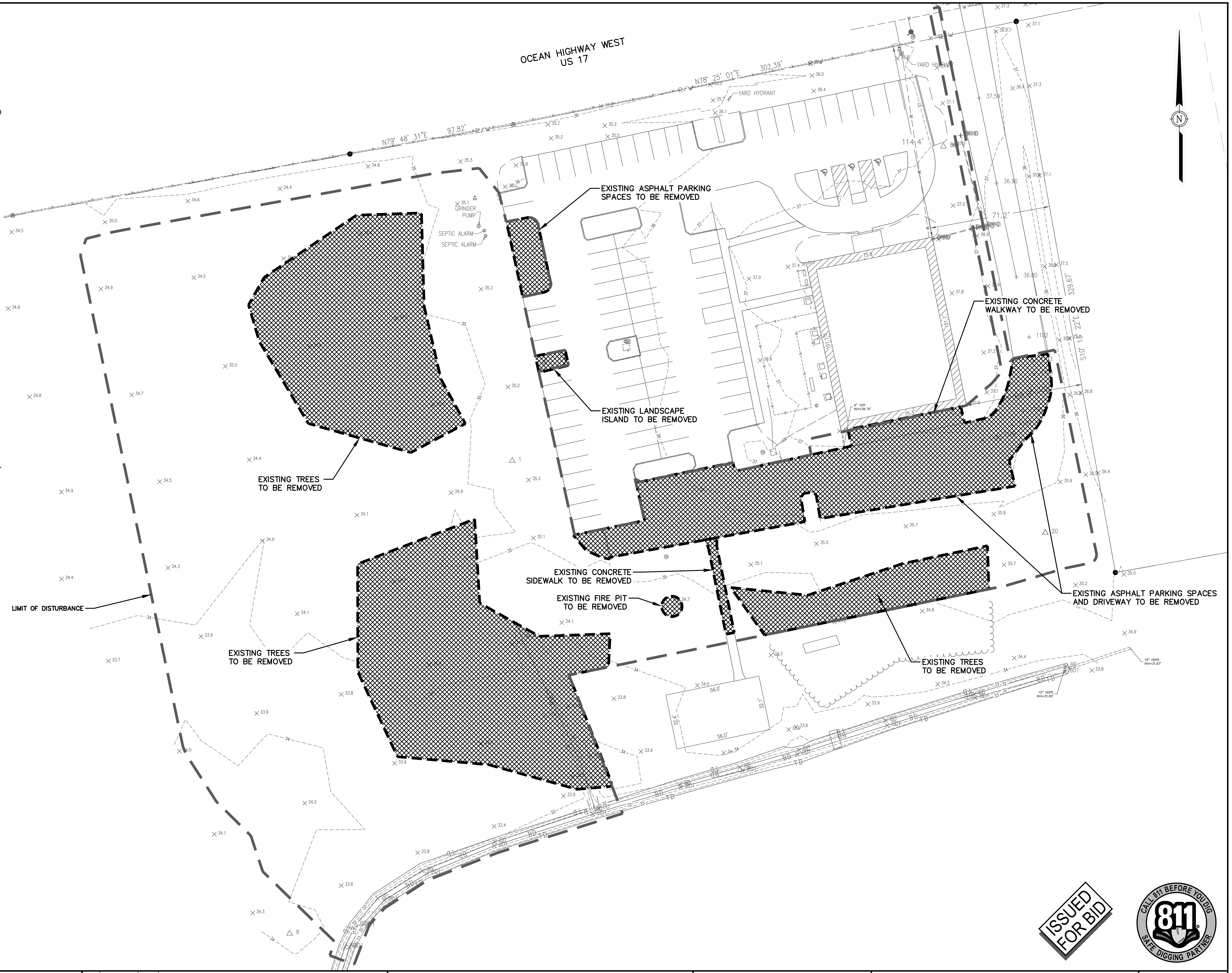
PROJECT NO. 4900.87

GENERAL NOTES:

1. EXISTING CONDITIONS AND TOPOGRAPHIC INFORMATION WAS OBTAINED FROM SURVEY BY COASTAL GEOMATICS, DATED 5/28/25.
2. ALL UTILITIES OR STRUCTURES NOT DESIGNATED FOR REMOVAL OR MODIFICATION ARE TO REMAIN. ALL STRUCTURES/UTILITIES TO REMAIN OR FOR MODIFICATION SHALL BE PROTECTED BY THE CONTRACTOR DURING CONSTRUCTION AND REMAIN IN WORKING ORDER.
3. ALL DEMOLITION WORK SHALL BE PERFORMED WITH "DUE CARE AND DILIGENCE" SO AS TO PREVENT THE ARBITRARY DESTRUCTION OR INTERRUPTION OF CONCEALED UTILITIES WHICH ARE INTENDED TO REMAIN IN USE AND THE ROUTING OF WHICH COULD NOT BE DETERMINED UNTIL DEMOLITION WAS STARTED. ALL SUCH DISCOVERIES OF UTILITIES DURING THE DEMOLITION PROCESS WHICH ARE IN A LOCATION DIFFERENT FROM THAT INDICATED, OR ARE UNIDENTIFIED, SHALL BE REPORTED TO THE ENGINEER BEFORE REMOVAL.
4. ANY EXISTING ASPHALT, DESIGNATED TO REMAIN THAT IS DAMAGED DURING DEMOLITION AND CONSTRUCTION SHALL BE REPAIRED AT NO COST TO THE OWNER.
5. ANY NOTE, OR REFERENCE TO AN ELEMENT, WHICH DOES NOT SPECIFY ACTION BY THE CONTRACTOR SHALL BE CONSTRUED AS INFORMATION ONLY.
6. THE GENERAL CONTRACTOR IS TO CONTACT AND COORDINATE WITH ALL APPROPRIATE PUBLIC AND PRIVATE UTILITY COMPANIES PRIOR TO ANY DEMOLITION OR RELOCATION OF EXISTING UTILITIES. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL UTILITIES HAVE BEEN PROPERLY CAPPED OFF OR RELOCATED.
7. PROTECT ALL ADJACENT PROPERTIES, THE GENERAL PUBLIC, AND ALL THE OWNER'S FACILITIES FROM DAMAGE. THE CONTRACTOR SHALL REPAIR ANY DAMAGE IMMEDIATELY AND SHALL MAKE REPAIRS AT THE CONTRACTOR'S EXPENSE.
8. CONTRACTOR SHALL HOLD HARMLESS THE OWNER FOR DAMAGES OR OTHER ACCIDENTS WHICH OCCUR DURING THESE CONSTRUCTION ACTIVITIES.
9. TREES AND LANDSCAPING NOT DESIGNATED FOR REMOVAL SHALL BE PROTECTED DURING CONSTRUCTION.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING AND COORDINATION OF ALL ILLUSTRATED CONSTRUCTION ACTIVITIES AT THE JOB SITE.
11. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE RULES AND REGULATIONS GOVERNING THE CONSTRUCTION INDUSTRY, INCLUDING BUT NOT LIMITED TO THOSE PERTAINING TO TRAVELING OPERATIONS AND OSHA.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION/ADJUSTMENTS OF ALL EXISTING VAULTS (REGARDLESS OF FUNCTION), METER BOXES, FIRE HYDRANTS, CLEAN OUTS, MANHOLES, ETC. TO MATCH FINISHED GRADES AND SITE PLAN.
13. UNDER ABSOLUTELY NO CIRCUMSTANCES SHALL ANY UNMANNED EXCAVATION BE LEFT OPEN OR UNPROTECTED DURING NON-WORKING HOURS. UTILIZE SIGNS, BARRICADES, ETC. TO ENSURE THE SAFETY OF THE GENERAL PUBLIC.
14. NO EXISTING TREES OR VEGETATION OUTSIDE OF THE LIMITS OF DISTURBANCE WILL BE REMOVED.

▨	EXISTING ASPHALT, CONCRETE AND VEGETATION TO BE DEMOLISHED AND REMOVED TO SUBGRADE.



OCEAN HIGHWAY WEST
US 17
N78° 25' 01"E 302.39'
N79° 48' 31"E 97.82'
R/W
YARD HYDRANT
GRINDER PUMP
SEPTIC ALARM
SEPTIC ALARM
114.4'
71.2'
329.67'
S10° 19' 22"E
56.0'
32.1'
32.4'
56.0'
EXISTING ASPHALT PARKING SPACES TO BE REMOVED
EXISTING CONCRETE WALKWAY TO BE REMOVED
EXISTING LANDSCAPE ISLAND TO BE REMOVED
EXISTING TREES TO BE REMOVED
EXISTING CONCRETE SIDEWALK TO BE REMOVED
EXISTING FIRE PIT TO BE REMOVED
LIMIT OF DISTURBANCE
EXISTING TREES TO BE REMOVED
EXISTING ASPHALT PARKING SPACES AND DRIVEWAY TO BE REMOVED
EXISTING TREES TO BE REMOVED
15" HDPE
N
ISSUED FOR BID
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NC Firm License # C-0459
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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 50548 THOMAS P. MANNINO

SIGNED AND DATED:
8/20/26

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NO.	DATE	BY	DESCRIPTION

SITE EXPANSION DEVELOPMENT PLANS
FOR
RIVER OF LIFE BAPTIST CHURCH
BRUNSWICK COUNTY, NORTH CAROLINA

GRAPHIC SCALE 30 0 15 30 60 DIVISION VALUE = 30 FEET

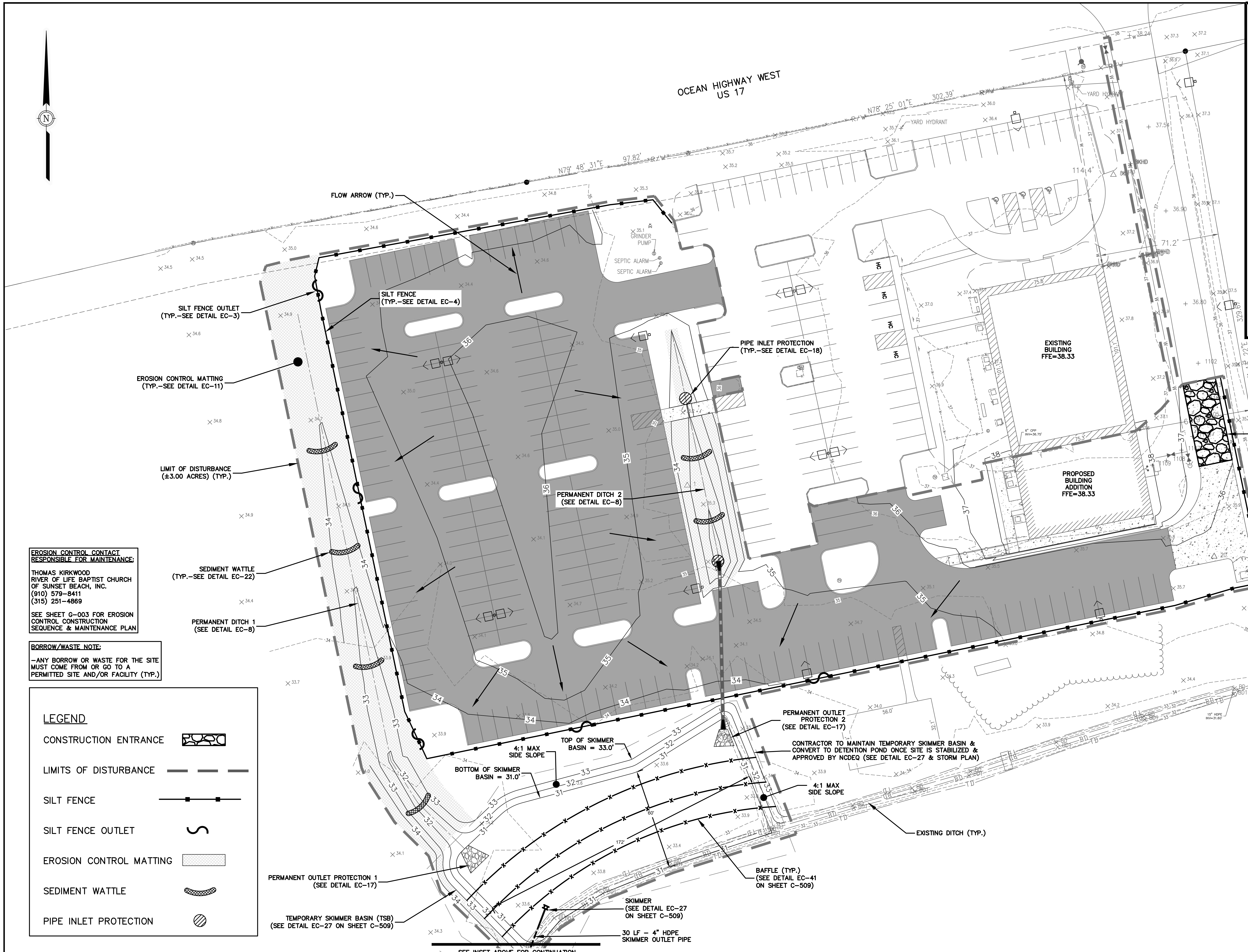
OFFICE MANAGER	DESIGNER
M. NORTON	T. MINTZ
PROJECT MANAGER	REVIEWER
J. MURRAY	T. MANNINO

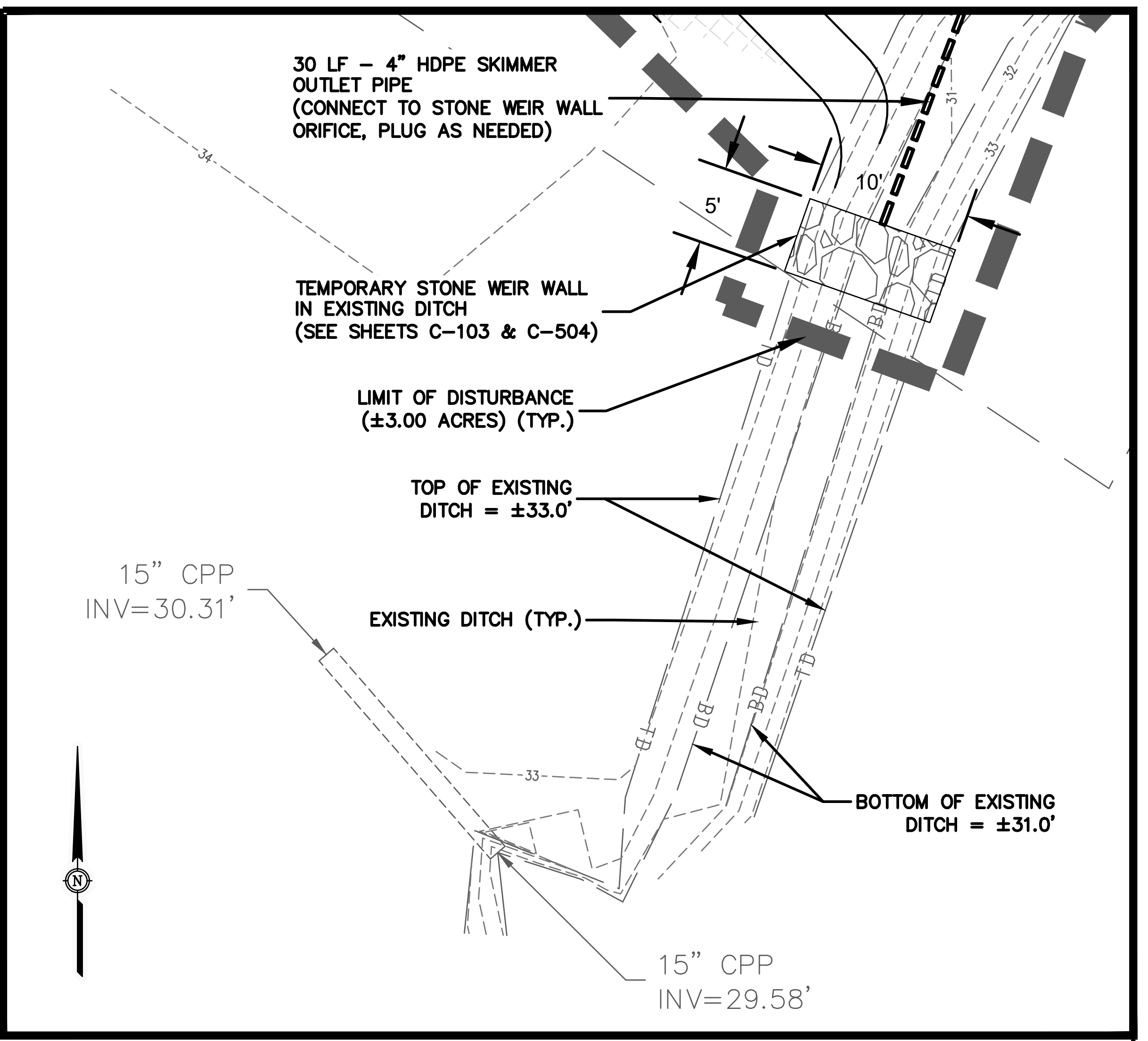
DEMOLITION PLAN

DATE	PROJECT #	FUNDING #
AUGUST, 2025	24.07082	N/A

SHEET
D-101

P:\2024\24.07082-RIVEROFLBC-SITE EXPANSION\DRAWINGS\PLAN SHEETS\24.07082_RIVER OF LIFE DEMO PLAN.DWG PLOT DATE 8/20/2026 8:11 AM TONY MINTZ





INSET: TEMPORARY STONE WEIR IN EXISTING DITCH

SCALE: 1" = 10'

EROSION CONTROL CONTACT RESPONSIBLE FOR MAINTENANCE:

THOMAS KIRKWOOD
RIVER OF LIFE BAPTIST CHURCH
OF SUNSET BEACH, INC.
(910) 579-8411
(315) 251-4869

SEE SHEET G-003 FOR EROSION CONTROL CONSTRUCTION SEQUENCE & MAINTENANCE PLAN

BORROW/WASTE NOTE:

–ANY BORROW OR WASTE FOR THE SITE MUST COME FROM OR GO TO A PERMITTED SITE AND/OR FACILITY (TYP.)

LEGEND

CONSTRUCTION ENTRANCE	▨
LIMITS OF DISTURBANCE	— — —
SILT FENCE	—■—■—
SILT FENCE OUTLET	∽
EROSION CONTROL MATTING	▨
SEDIMENT WATTLE	▨
PIPE INLET PROTECTION	⊘

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NC Firm License # C-0459
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SEAL 025856
MICHAEL A. NORTON

SIGNED AND DATED:

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NO.	DATE	BY	DESCRIPTION

SITE EXPANSION DEVELOPMENT PLANS
FOR

RIVER OF LIFE BAPTIST CHURCH

BRUNSWICK COUNTY, NORTH CAROLINA

30 0 15 30 60
GRAPHIC SCALE DIVISION VALUE = 30 FEET

OFFICE MANAGER: M. NORTON
DESIGNER: T. MINTZ
PROJECT MANAGER: J. MURRAY
REVIEWER: T. MANNINO

EROSION CONTROL PLAN

DATE: AUGUST, 2025
PROJECT #: 24.07082
FUNDING #: N/A

SHEET
C-101

OCEAN HIGHWAY WEST
US 17
(VARIABLE WIDTH PUBLIC RIGHT OF WAY)
N79° 48' 31"E 97.82'
N78° 25' 01"E 302.39'
R/W
ASPHALT PAVEMENT
6" VERTICAL CURB ISLAND (TYP.–17 PLACES)
APPROXIMATE LOCATION OF EXISTING SIGN
EXISTING 16" WATERLINE
LOCATION OF NEAREST FIRE HYDRANT
10'x70' NCDOT SIGHT DISTANCE TRIANGLE (TYP.)
20' PUBLIC UTILITY EASEMENT
EXISTING 20' ASPHALT DRIVE
EXISTING HANDICAP PARKING
HANDICAP PARKING SPACES STRIP ACCESS AISLE AND INSTALL SIGNAGE
25' FRONT SETBACK
20' STREET BUFFER
GRINDER PUMP
SEPTIC ALARM
SEPTIC ALARM
LIGHT
YARD HYDRANT
YARD LIGHT
LP
HC
9'x18' STANDARD PARKING SPACE (TYP.)
9'x18' ACCESS AISLES SINGLE WHITE TRAFFIC PAINT STRIPES AT 45° AND 24" ON CENTER
EXISTING ASPHALT PARKING LOT
8' WIDE CONCRETE SIDEWALK
9'x33' OVERSIZE/VAN PARKING SPACE (TYP.)
EXISTING CHURCH BUILDING 101' x 75' (7,809 SF)
TOTAL EXISTING + NEW BUILDING ADDITION AREA: 11,609 SF
REMODELED ASSEMBLY AREA NET SQUARE FOOTAGE: 3,620
NEW HVAC UNITS TO BE SCREENED (SEE HVAC UNIT SCREENING NOTE, THIS SHEET)
BUILDING ADDITION 50'–8" x 75' 3,800 SF (MAXIMUM BUILDING HEIGHT APPROX. 22'–2")
6' WIDE CONCRETE SIDEWALK
FIRE DEPARTMENT CONNECTION (FDC) ON BUILDING
FIRE HYDRANT ASSEMBLY (SEE DETAIL W–1, C–505)
CONCRETE PAVEMENT
12'x15' DUMPSTER PAD ENCLOSURE TO BE SCREENED IN ACCORDANCE WITH SECTION 6.4.2 OF BRUNSWICK COUNTY UDO (SEE DETAIL ON SHEET C–501)
RELOCATED EXISTING DUMPSTER
10' SIDE SETBACK
S10° 13' 22"E 329.67'
215.5'
224.9'
114.4'
71.2'
69.1'
39'
149.1'
75.8'
75.3'
101.1'
LANDSCAPE ISLAND (TYP.)
SINGLE WHITE TRAFFIC PAINT STRIPES 4" WIDE (TYP.)
PARKING LOT LIGHTING BY BEMC
1,025' TO PL
1,332' TO PL
5'x18' ACCESS AISLE SINGLE WHITE TRAFFIC PAINT STRIPES AT 45° AND 24" ON CENTER
6" CONCRETE REVEAL ON EDGE OF SIDEWALK (SEE DETAIL)
6" STAND–UP CURB
6'–WIDE ADA RAMP WITH ALUMINUM HANDRAILS. HANDRAIL CONSTRUCTION AND INSTALLATION TO MEET THE AMERICANS WITH DISABILITIES ACT (ADA) ACCESSIBILITY STANDARDS.
EXISTING PLAYGROUND EQUIPMENT
EXISTING PICNIC SHELTER
56.0'
32.1'
32.4'
POWER OUTLET
15" HDPE INV=31.67'
15" HDPE INV=31.60'
R3
R4
R5
R7
R10
R20
R30
9.0'
8.4'
10.6'
8.5'
24.0'
25.0'
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⑦
⑧
⑩
⑪
⑫
⑬
⑮
N
OCEAN HIGHWAY WEST
US 17
SEE SITE PLAN THIS SHEET

OVERALL SITE
SCALE: 1" = 100'

PARCEL#: 2100000902
OWNER: RIVER OF LIFE BAPTIST CHURCH
8411 OCEAN HIGHWAY W
SUNSET BEACH, NC 28468
ZONING: CO–CLD, CO–R–7500
USE: PLACE OF WORSHIP

PARCEL#: 2100000901
OWNER: MILDREAD G BETHEA
311 N 6TH ST
WILMINGTON, NC 28401
ZONING: CO–CLD
USE: VACANT

PARCEL#: 2100000806
OWNER: STARHEEL PROPERTIES INC.
SUITE 8
10140 BEACH DRIVE SW
CALABASH, NC 28467
ZONING: CO–CLD/CO–R–7500
USE: VACANT

PARCEL#: 21000008
OWNER: JOE AND LOIS KING
8531 OCEAN HWY W
SUNSET BEACH, NC 28468
ZONING: CO–R7500
USE: VACANT

HVAC SCREENING NOTE

NEW HVAC UNITS WILL BE SCREENED WITH A WOODEN FENCE TO THE HEIGHT OF THE EQUIPMENT PLUS SIX INCHES TO MATCH EXISTING HVAC UNITS PER SECTION 6.4 OF BRUNSWICK COUNTY UDO.

PARKING LOT LIGHTING:

- THE OWNER WILL BE CONTRACTING DIRECTLY WITH BRUNSWICK ELECTRIC MEMBERSHIP CORPORATION (BEMC) FOR THE SUPPLY AND INSTALLATION OF PARKING LOT LIGHTING PRIOR TO PLACEMENT OF THE NEW STONE SUBBASE AND ASPHALT PAVEMENT. CONTRACTOR IS REQUIRED TO COORDINATE WITH BEMC TO ALLOW THE LIGHTING INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR THE LIGHT POLE LOCATION STAKE–OUT WHERE SHOWN ON LIGHTING PLAN AND THE LIGHTING CONDUIT TRENCH COMPACTION.
- BEMC CONTACT:
  ADAM FULFORD
  PHONE: 910–540–1147

ISSUED FOR BID

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P:\2024\24.07082-RIVEROFLBC-SITE EXPANSION\DRAWINGS\PLAN SHEETS\24.07082_RIVER OF LIFE SITE PLAN.DWG PLOT DATE 8/20/2026 8:25 AM TONY MINTZ

mcgill®
712 Village Road SW
Suite 103
Shallotte, NC 28470
910.755.5872
NC Firm License # C-0459
mcgillassociates.com

SEAL 50548
THOMAS P. MANNINO

SIGNED AND DATED:
8/20/26

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NO.	DATE	BY	DESCRIPTION

SITE EXPANSION DEVELOPMENT PLANS
FOR
RIVER OF LIFE BAPTIST CHURCH
BRUNSWICK COUNTY, NORTH CAROLINA

30 0 15 30 60
GRAPHIC SCALE DIVISION VALUE = 30 FEET

OFFICE MANAGER M. NORTON	DESIGNER T. MINTZ
PROJECT MANAGER J. MURRAY	REVIEWER T. MANNINO

SITE PLAN

DATE	PROJECT #	FUNDING #
AUGUST, 2025	24.07082	N/A

SHEET
C-102

OCEAN HIGHWAY WEST
US 17
APPROXIMATE CENTERLINE OF EXISTING DITCH
N79° 48' 31"E 97.82'
N78° 25' 01"E 302.39'
S10° 18' 22"E 329.67'
YARD HYDRANT
GRINDER PUMP
SEPTIC ALARM
SAWCUT AND CONNECT TO EXISTING GRADE
PIPE A2
8 LF OF 8" PVC @ 2.00%
INV. IN: 33.10
INV. OUT: 32.94
EXISTING BUILDING
FFE=38.33
PROPOSED BUILDING ADDITION
FFE=38.33
FLOW ARROW (TYP.)
PERMANENT DITCH 2
(SEE DETAIL EC-8)
FLARED END SECTION A1
INV IN: 31.44
PERMANENT DITCH 1
(SEE DETAIL EC-8)
6" CONCRETE REVEAL ON EDGE OF SIDEWALK (SEE DETAIL)
6" STAND-UP CURB
6'-WIDE ADA RAMP WITH ALUMINUM HANDRAILS. HANDRAIL CONSTRUCTION AND INSTALLATION TO MEET THE AMERICANS WITH DISABILITIES ACT (ADA) ACCESSIBILITY STANDARDS.
PIPE A1
88.4 LF OF 18" HDPE @ 0.50%
FLARED END SECTION A0
INV OUT: 31.00
PERMANENT OUTLET PROTECTION 2
(SEE DETAIL EC-17)
EXISTING DITCH (TYP.)
PERMANENT OUTLET PROTECTION 1
(SEE DETAIL EC-17)
BOTTOM OF DRY DETENTION POND = 31.0'
DRY DETENTION POND (2' DEEP)
(SEE SHEET C-504 FOR DETAIL)
TOP OF DRY DETENTION POND = 33.0'
SEE INSET ABOVE FOR CONTINUATION
EXISTING DITCH (TYP.)
TOP OF EXISTING DITCH = ±33.0'
15" CPP INV=30.31'
15" CPP INV=29.58'
BOTTOM OF EXISTING DITCH = ±31.0'
ISSUED FOR BID
CALL 811 BEFORE YOU DIG
811
SAFE DIGGING PARTNER

INSET: EXISTING DITCH

SCALE: 1" = 10'

LEGEND

EXISTING GRADE	- - -34- - -
PROPOSED GRADE	—34—
EXISTING SPOT ELEVATION	× 34.2
PROPOSED SPOT ELEVATION	×—34.31'
FLOW ARROW	⟶

P:\2024\24.07082-RIVEROFLBC-SITE EXPANSION\DRAWINGS\PLAN SHEETS\24.07082_RIVER OF LIFE GRADING AND STORMWATER PLAN.DWG PLOT DATE 8/20/2026 8:19 AM TONY MINTZ

mcgill®
712 Village Road SW
Suite 103
Shallotte, NC 28470
910.755.5872
NC Firm License # C-0459
mcgillassociates.com

SEAL 025856
MICHAEL A. NORTON

SIGNED AND DATED:

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED IN ACCORDANCE WITH THE STANDARD CERTIFICATION REQUIREMENTS FOUND IN NC ADMINISTRATIVE CODE 21-56.1103(E). THIS DIGITAL SIGNATURE HAS BEEN FOUND BY THE NC BOARD OF EXAMINERS FOR ENGINEERS AND SURVEYORS TO MEET THESE STANDARDS. PLEASE CONTACT THE SIGNER IF YOU NEED ASSISTANCE IN VALIDATING THE SIGNATURE.

NO.	DATE	BY	DESCRIPTION

SITE EXPANSION DEVELOPMENT PLANS
FOR

RIVER OF LIFE BAPTIST CHURCH

BRUNSWICK COUNTY, NORTH CAROLINA

30 0 15 30 60
GRAPHIC SCALE DIVISION VALUE = 30 FEET

OFFICE MANAGER M. NORTON	DESIGNER T. MINTZ
PROJECT MANAGER J. MURRAY	REVIEWER T. MANNINO

GRADING AND STORMWATER PLAN

DATE	PROJECT #	FUNDING #
AUGUST, 2025	24.07082	N/A

SHEET

C-103

OCEAN HIGHWAY WEST
US 17
(VARIABLE WIDTH PUBLIC RIGHT OF WAY)
CONNECT TO EX. 20" DIP WATERLINE W/ 20"x6" TAPPING SLEEVE & VALVE (SEE DETAIL WS-18, C-507)
APPROXIMATE LOCATION OF EXISTING UTILITY POLE. CONTRACTOR TO PROTECT AND SUPPORT POLE AS NEEDED DURING WATERLINE INSTALLATION.
PROPOSED WATERLINE CONNECTION SHALL BE 3' DEEP AND MIN. 3' FROM EXISTING PAVEMENT. CONTRACTOR TO PROTECT AND SUPPORT PAVEMENT AS NEEDED DURING WATERLINE INSTALLATION.
LOCATION OF NEAREST EXISTING FIRE HYDRANT
EXISTING 3/4" BACKFLOW PREVENTER
EXISTING 3/4" WATER METER
APPROXIMATE LOCATION OF EXISTING DRIVEWAY CULVERT.
20'
YARD HYDRANT
20' PUBLIC UTILITY EASEMENT
RIGHT OF WAY
APPROXIMATE EDGE OF EXISTING PAVEMENT TAKEN FROM AERIAL PHOTO
EXISTING 1" WATER SERVICE LINE (SEE WATER SERVICE LINE NOTE THIS SHEET)
260 LF 6" DIP WATERLINE
114.4'
LIGHT
GRINDER PUMP
SEPTIC ALARM
YARD LIGHT
EXISTING CHURCH BUILDING
EXISTING PARKING
PROPOSED PARKING
FIRE DEPARTMENT CONNECTION (FDC) ON BUILDING
6"x4" TEE
4" PIV
2 – 4"x90° BENDS
38 LF OF 4" DIP WATERLINE
(SEE DETAIL W-14)
FIRE HYDRANT ASSEMBLY (SEE DETAIL W-1, C-505)
PROPOSED CHURCH BUILDING ADDITION
4" RPZ (SEE DETAIL W-8, C-510)
329.67'
S10°13'22"E
POWER OUTLET
56.0'
32.1'
N
ISSUED FOR BID
CALL 811 BEFORE YOU DIG
811
SAFE DIGGING PARTNER

WATER SERVICE LINE NOTE
EXISTING WATER SERVICE LINE LOCATION IS APPROXIMATE AND WAS TAKEN FROM "UTLITY PLAN RIVER OF LIFE BAPTIST CHURCH" BY NORRIS & TUNSTALL CONSULTING ENGINEERS, P.C. DATED 5/16/14.

P:\2024\24.07082-RIVEROFLBC-SITE EXPANSION\DRAWINGS\PLAN SHEETS\24.07082_RIVER OF LIFE UTILITY PLAN.DWG PLOT DATE 8/20/2026 8:26 AM TONY MINTZ

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Shallotte, NC 28470
910.755.5872
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NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 50548
THOMAS P. MANNINO

SIGNED AND DATED:
8/20/26

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NO.	DATE	BY	DESCRIPTION

SITE EXPANSION DEVELOPMENT PLANS
FOR

RIVER OF LIFE BAPTIST CHURCH

BRUNSWICK COUNTY, NORTH CAROLINA

GRAPHIC SCALE: 50 0 25 50 100
DIVISION VALUE = 50 FEET

OFFICE MANAGER M. NORTON	DESIGNER T. MINTZ
PROJECT MANAGER T. MANNINO	REVIEWER T. MANNINO

UTILITY PLAN

DATE	PROJECT #	FUNDING #
AUGUST, 2025	24.07082	N/A

SHEET
C-104

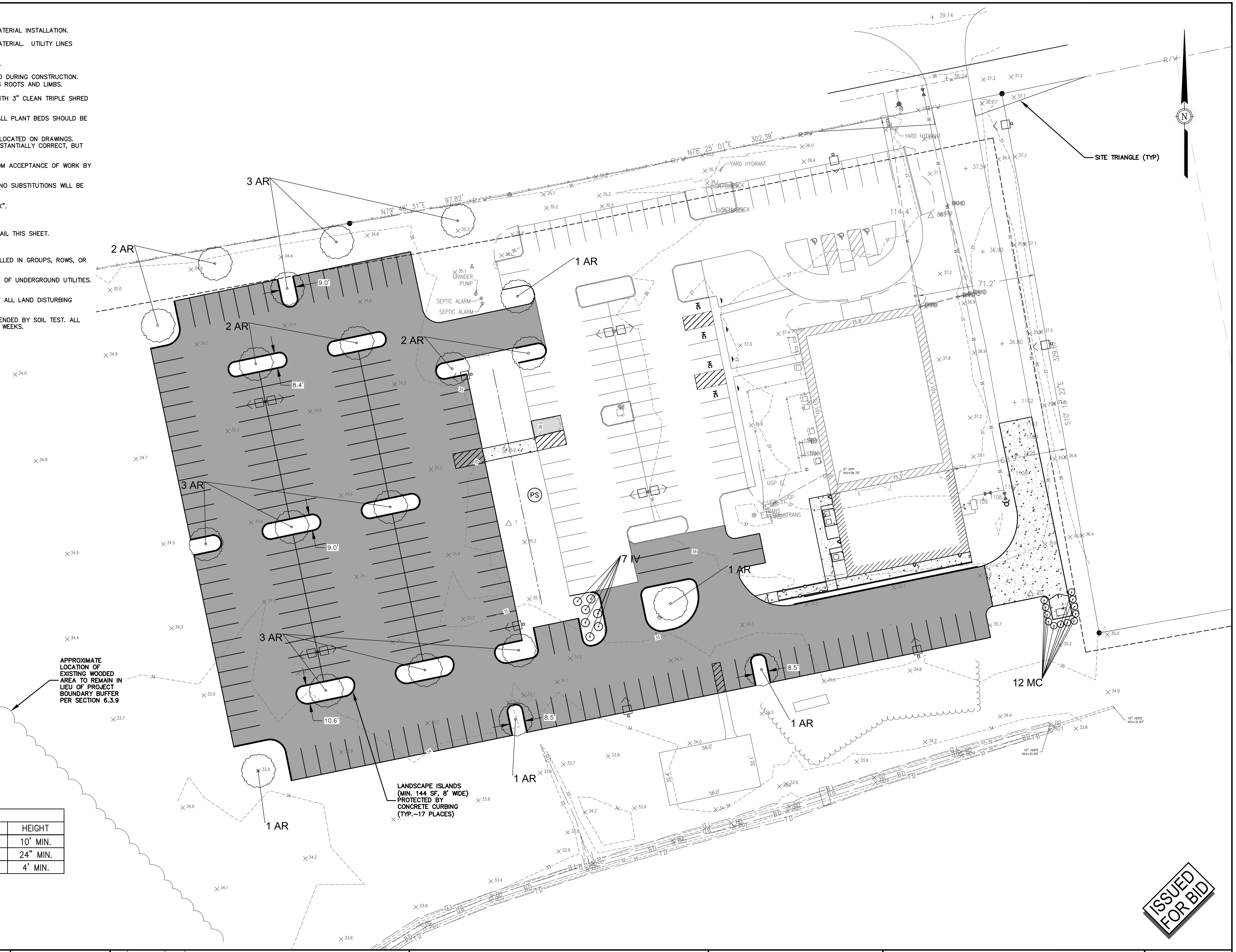
GENERAL NOTES:

1. LANDSCAPE CONTRACTOR TO VISIT THE SITE AND ACCEPT THE CONDITIONS PRIOR TO BIDDING AND PLANT MATERIAL INSTALLATION.
2. LANDSCAPE CONTRACTOR TO VERIFY ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY PLANT MATERIAL. UTILITY LINES SHOWN ON DRAWINGS ARE FOR GENERAL REFERENCE AND MAY NOT BE ALL INCLUSIVE.
3. LANDSCAPE CONTRACTOR TO PROTECT ALL EXISTING STRUCTURES DURING INSTALLATION OF PLANT MATERIAL.
4. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ALL FINE GRADING OF LAWN AND PLANTING AREAS DISTURBED DURING CONSTRUCTION. REMOVE ALL TEMPORARY SEEDING/STABILIZATION, STONES, GRAVEL, AND ALL EXTRANEOUS DEBRIS INCLUDING ROOTS AND LIMBS.
5. ALL PLANT BEDS TO BE TILLED AND AMENDED TO A DEPTH OF 12". THE ENTIRE AREA IS TO BE COVERED WITH 3" CLEAN TRIPLE SHRED HARDWOOD MULCH IMMEDIATELY AFTER PLANTING.
6. ALL BEDS TO CONSIST OF 1 PART EXISTING SOIL, 1 PART FRIABLE SOIL, AND 1 PART SOIL CONDITIONER. ALL PLANT BEDS SHOULD BE TILLED IN THEIR ENTIRETY. NO PIT PLANTING OF BEDS WILL BE ACCEPTED.
7. LANDSCAPE CONTRACTOR SHALL FURNISH ALL QUANTITIES NECESSARY TO COMPLETE PLANTINGS AS SHOWN/LOCATED ON DRAWINGS. QUANTITIES SHOWN ON PLANT LIST ARE FOR CONVENIENCE OF CONTRACTORS AND ARE BELIEVED TO BE SUBSTANTIALLY CORRECT, BUT ACCURACY OF QUANTITIES IN LIST IS NOT GUARANTEED.
8. LANDSCAPE CONTRACTOR TO GUARANTEE ALL PLANT MATERIAL AND WORK FOR A PERIOD OF ONE YEAR FROM ACCEPTANCE OF WORK BY OWNER.
9. ANY PLANT MATERIAL SUBSTITUTIONS OR ADJUSTMENTS ARE TO BE REQUESTED IN WRITING TO THE OWNER. NO SUBSTITUTIONS WILL BE PERMITTED WITHOUT WRITTEN NOTICE BY THE OWNER.
10. ALL PLANT MATERIAL TO CONFORM TO THE CURRENT EDITION OF "AMERICAN STANDARD FOR NURSERY STOCK".
11. ALL TREES PLANTED IN GRASS AREAS SHALL HAVE A 4' DIAMETER MULCH RING.
12. ALL GRASS TO PLANT BED BORDERS ARE TO BE NEATLY EDGED WITH A VERTICAL EDGE AS SHOWN ON DETAIL THIS SHEET.
13. ALL TREES SHALL BE SPECIMEN QUALITY AND WELL SHAPED.
14. ALL TREES OF THE SAME VARIETY SHALL MATCH IN SHAPE, FORM, AND SIZE WHERE THEY ARE TO BE INSTALLED IN GROUPS, ROWS, OR AS STREET TREES.
15. MINOR SHIFTING AND ADJUSTING OF PROPOSED TREE LOCATIONS MAY BE REQUIRED DUE TO EXACT LOCATION OF UNDERGROUND UTILITIES. LANDSCAPE CONTRACTOR TO CONTACT LANDSCAPE ARCHITECT PRIOR TO RELOCATION.
16. PRIOR TO SEEDING, LANDSCAPE CONTRACTOR IS TO CONTACT GENERAL CONTRACTOR FOR VERIFICATION THAT ALL LAND DISTURBING ACTIVITY HAS BEEN COMPLETED.
17. LANDSCAPE CONTRACTOR TO SEED ALL AREAS PER SPECIFICATIONS. ADD FERTILIZER AND LIME AS RECOMMENDED BY SOIL TEST. ALL NEWLY SEEDED AREAS SHOULD BE STAKED OFF FROM PEDESTRIANS AND VEHICLES FOR A PERIOD OF THREE WEEKS.
18. LANDSCAPE CONTRACTOR TO OBTAIN GRADING PLAN FOR COORDINATION OF FINAL GRADES.

HERITAGE TREE NOTE:

NO HERITAGE TREES EXIST WITHIN THE LIMITS OF DISTURBANCE.

NO EXISTING TREES OR VEGETATION OUTSIDE OF THE LIMITS OF DISTURBANCE SHALL BE REMOVED.



APPROXIMATE LOCATION OF EXISTING WOODED AREA TO REMAIN IN LIEU OF PROJECT BOUNDARY BUFFER PER SECTION 6.3.9

LANDSCAPE ISLANDS (MIN. 144 SF, 8' WIDE) PROTECTED BY CONCRETE CURBING (TYP.–17 PLACES)

LANDSCAPING REQUIREMENTS:

ONE LANDSCAPED ISLAND REQUIRED FOR EVERY 20 PARKING SPACES: 191 SPC/ 11 IS = 17.3

20 YARD STREET BUFFER REQUIRES 1 LARGE CANOPY TREE PER 100': 251'/100 =2.51 3 TREES PROVIDED

LANDSCAPE PLANTING SCHEDULE

QTY.	KEY	BOTANICAL NAME	COMMON NAME	ROOT	CALIPER	HEIGHT
20	AR	Acer rubrum	Red Maple	B&B	2" MIN.	10' MIN.
7	IV	Itea virginica	Virginiua Sweetspire	2 Gal	–	24" MIN.
12	MC	Myrica cerifera	Southern Wax Myrtle	7 Gal	2" MIN.	4' MIN.

* CIRCUMFERENCE AND CALIPER TO BE MEASURED 6" ABOVE GRADE.

(PS) PERMANENT SEEDING (ALL DISTURBED AREAS TO RECEIVE 99% WEED FREE WARM SEASON GRASS MIX)

P:\2024\24.07082-RIVEROFLBC-SITE EXPANSION\DRAWINGS\PLAN SHEETS\24.07082_RIVER OF LIFE LANDSCAPE PLAN.DWG PLOT DATE 8/20/2026 8:20 AM TONY MINTZ

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THOMAS P. MANNINO
SEAL 50548

SIGNED AND DATED:
8/20/26

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NO.	DATE	BY	DESCRIPTION

SITE EXPANSION DEVELOPMENT PLANS
FOR
RIVER OF LIFE BAPTIST CHURCH
BRUNSWICK COUNTY, NORTH CAROLINA

GRAPHIC SCALE 30 0 15 30 60 DIVISION VALUE = 30 FEET

OFFICE MANAGER	DESIGNER
M. NORTON	T. FORTENBERRY
PROJECT MANAGER	REVIEWER
J. MURRAY	J. FORD

LANDSCAPE PLAN

DATE	PROJECT #	FUNDING #
JULY 2025	24.07082	N/A

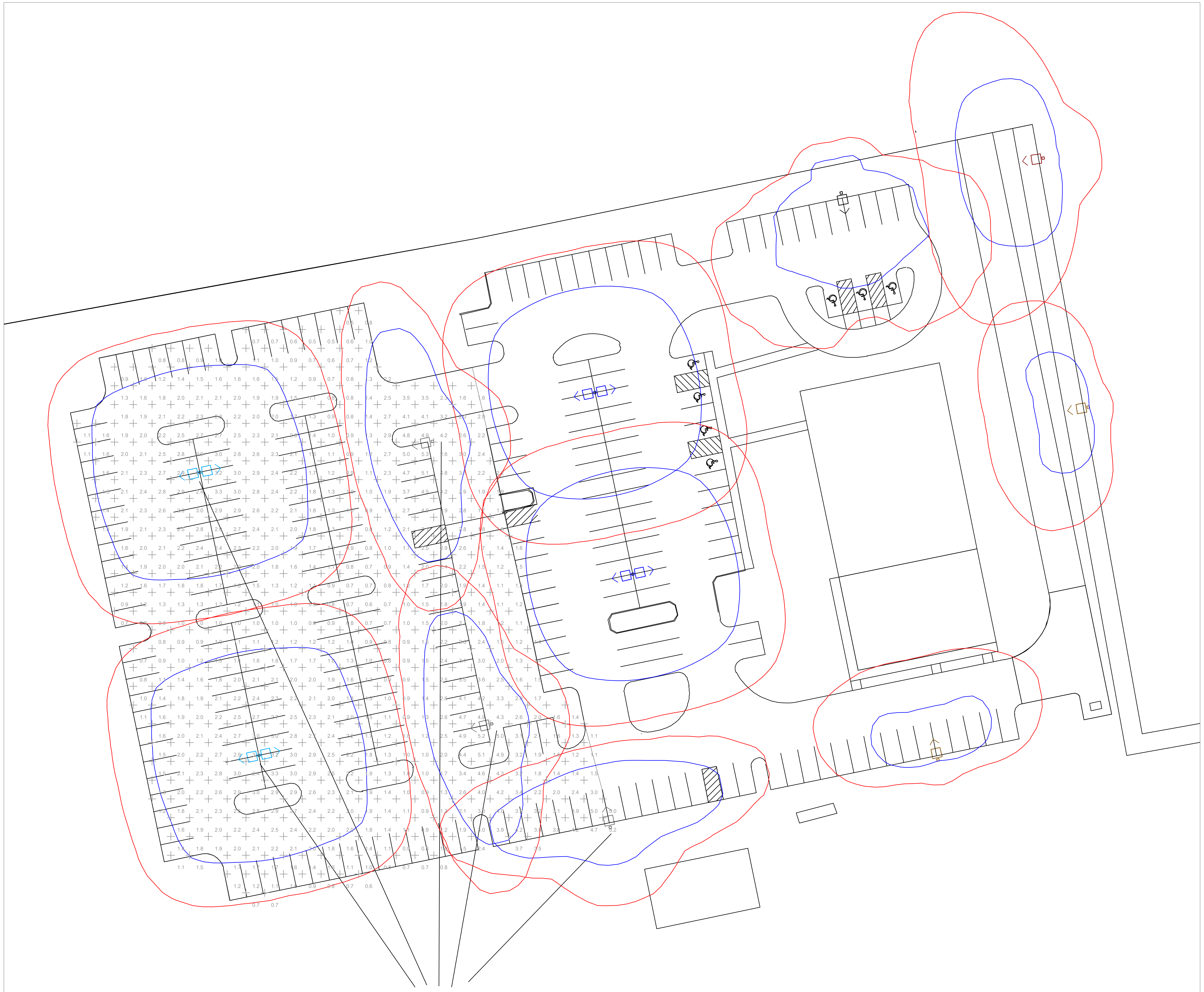
SHEET
L-101

Schedule

Symbol	Label	Image	Quantity	Manufacturer	Catalog Number	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor	Wattage	Plot
	A		2	Visionaire Lighting LLC	VMX-1-T5-64LC-10-5K-UNV	31.5 in L x 15 in W x 11.75 in H	1	25616	1	438	
	B		1	Visionaire Lighting LLC	VMX-1-T4-64LC-10-5K-UNV	31.5 in L x 15 in W x 11.75 in H	1	23870	1	219	
	C		2	Visionaire Lighting LLC	VSX-1-T3-32LC-10-5K-UNV	23 in L x 12.5 in W x 8 in H	1	12557	1	107	
	D		1	Visionaire Lighting LLC	VMX-1-T3-64LC-10-5K-UNV	31.5 in L x 15 in W x 11.75 in H	1	24721	1	219	
	E		2	Visionaire Lighting LLC	VSX-1-T5LS-20L-5K-UNV	23 in L x 12.5 in W x 8 in H LED LUMINAIRE	1	19760	1	268	
	G		3	Visionaire Lighting LLC	VSX-1-T2-25L-5K-UNV	23 in L x 12.5 in W x 8 in H LED LUMINAIRE	1	24061	1	167	

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
NEW PARKING	+	2.0 fc	5.3 fc	0.5 fc	10.6:1	4.0:1



NEW LIGHTS

30 FOOT POLES

Plan View

Scale: 1" = 30ft

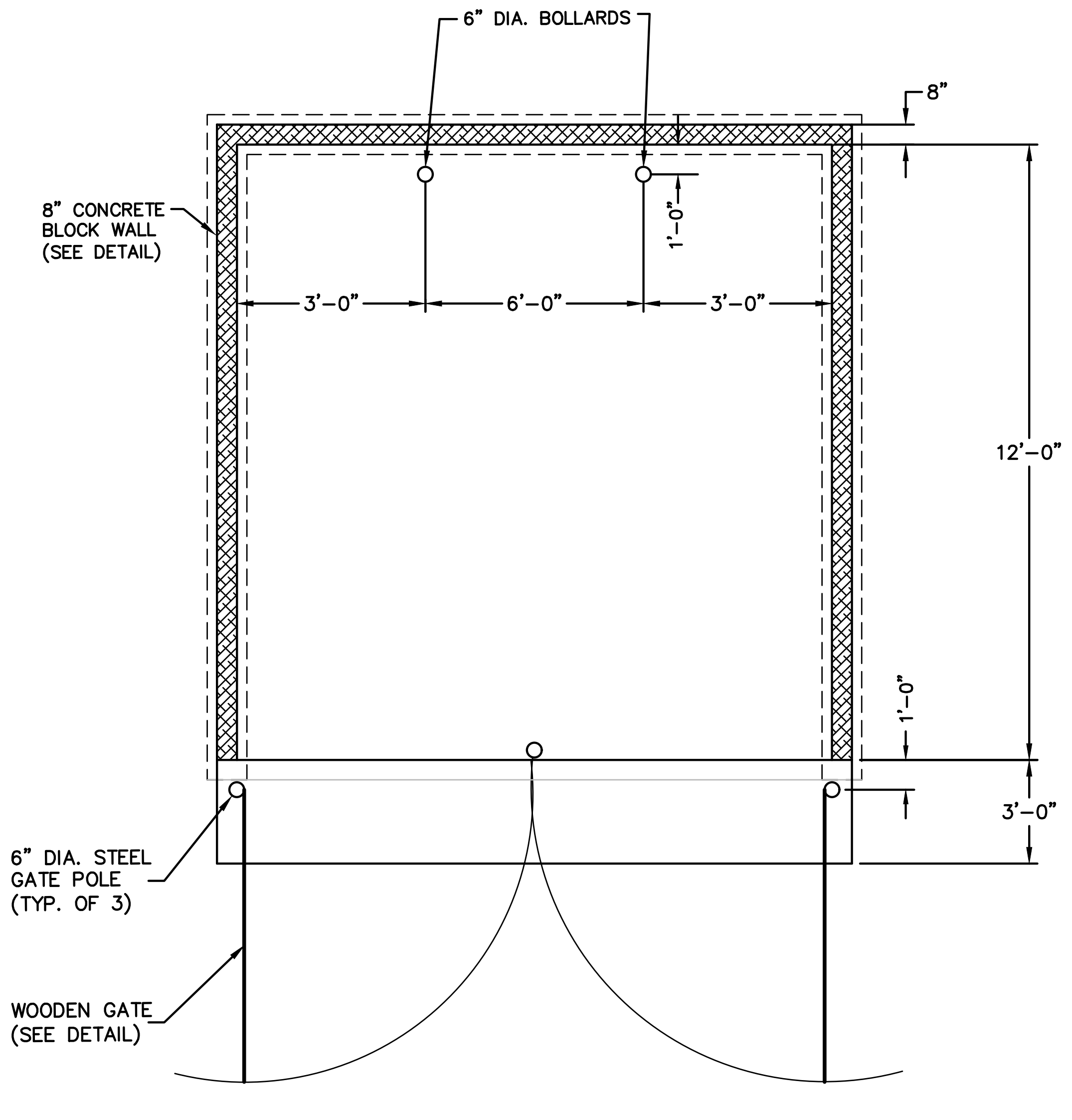
BRUNSWICK ELECTRIC
MEMBERSHIP CORPORATION

RIVER OF LIFE
BAPTIST CHURCH

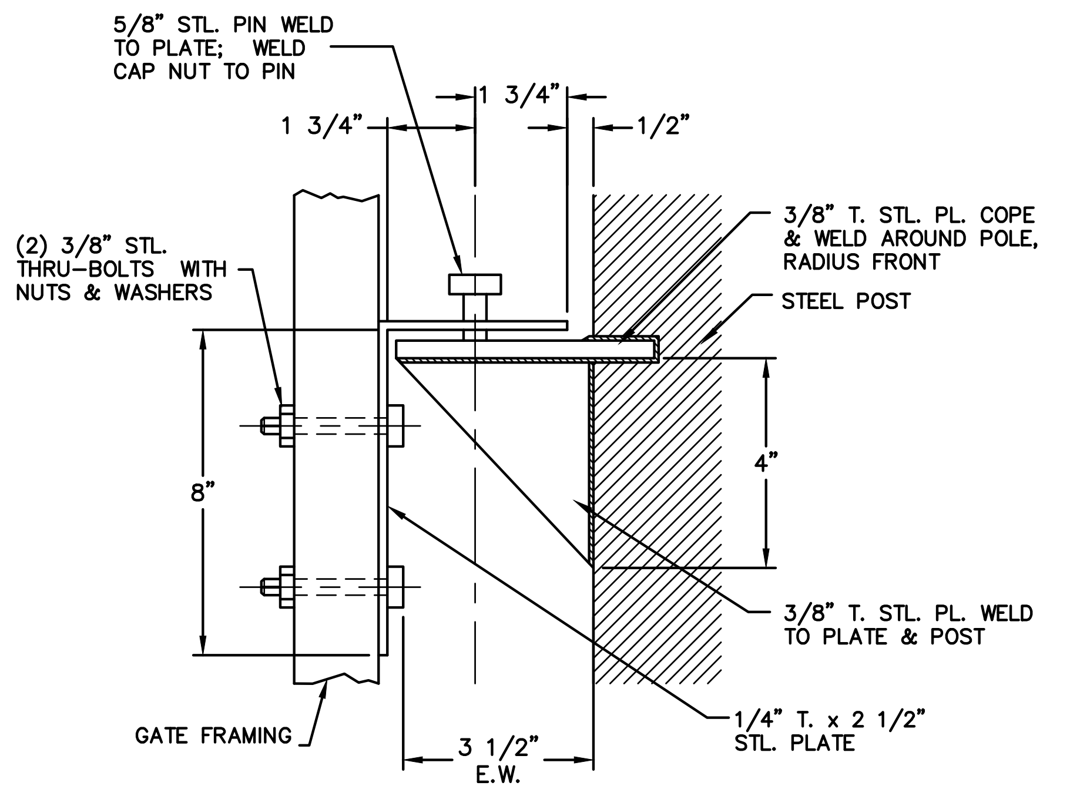
Designer
ADAM FULFORD
Date
09/04/2025
Scale
1" = 30'
Drawing No.

Summary

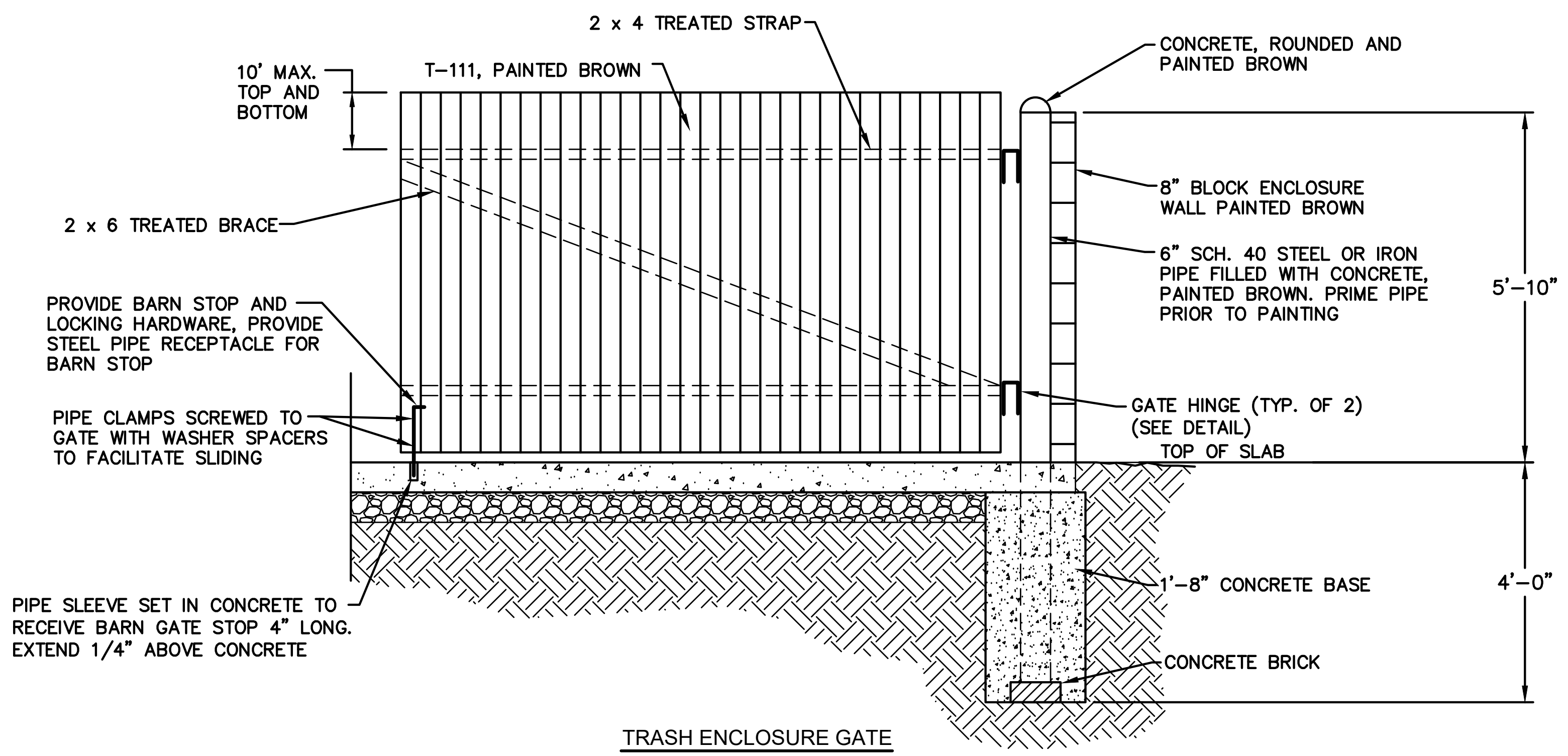
1 of 1



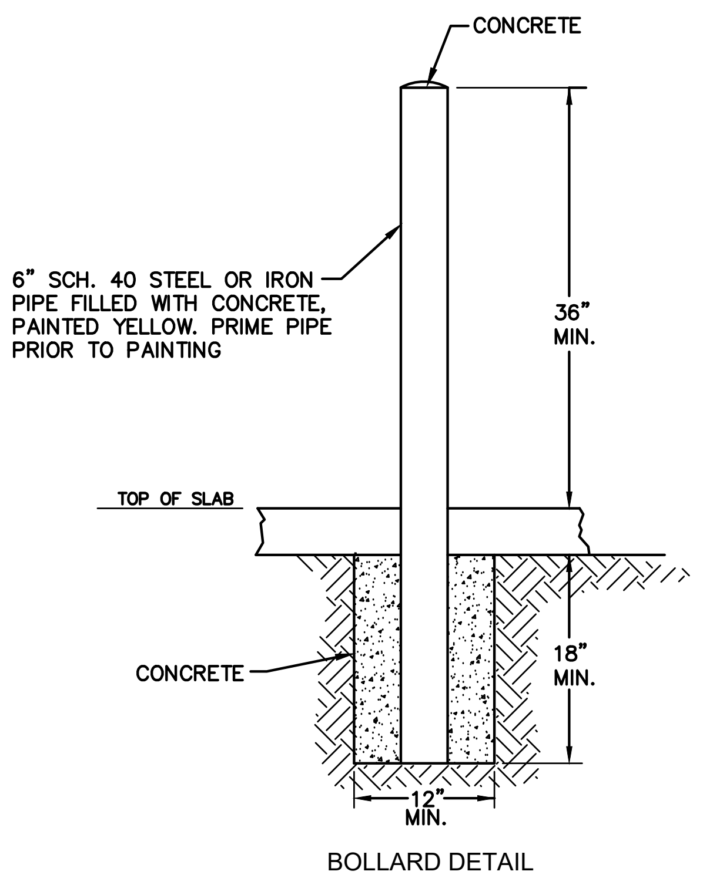
TRASH ENCLOSURE PLAN
SCALE: 1/4" = 1'-0"


5/8" STL. PIN WELD TO PLATE; WELD CAP NUT TO PIN
1 3/4"
1 3/4"
1/2"
(2) 3/8" STL. THRU-BOLTS WITH NUTS & WASHERS
3/8" T. STL. PL. COPE & WELD AROUND POLE, RADIUS FRONT
STEEL POST
8"
4"
3/8" T. STL. PL. WELD TO PLATE & POST
GATE FRAMING
3 1/2" E.W.
1/4" T. x 2 1/2" STL. PLATE

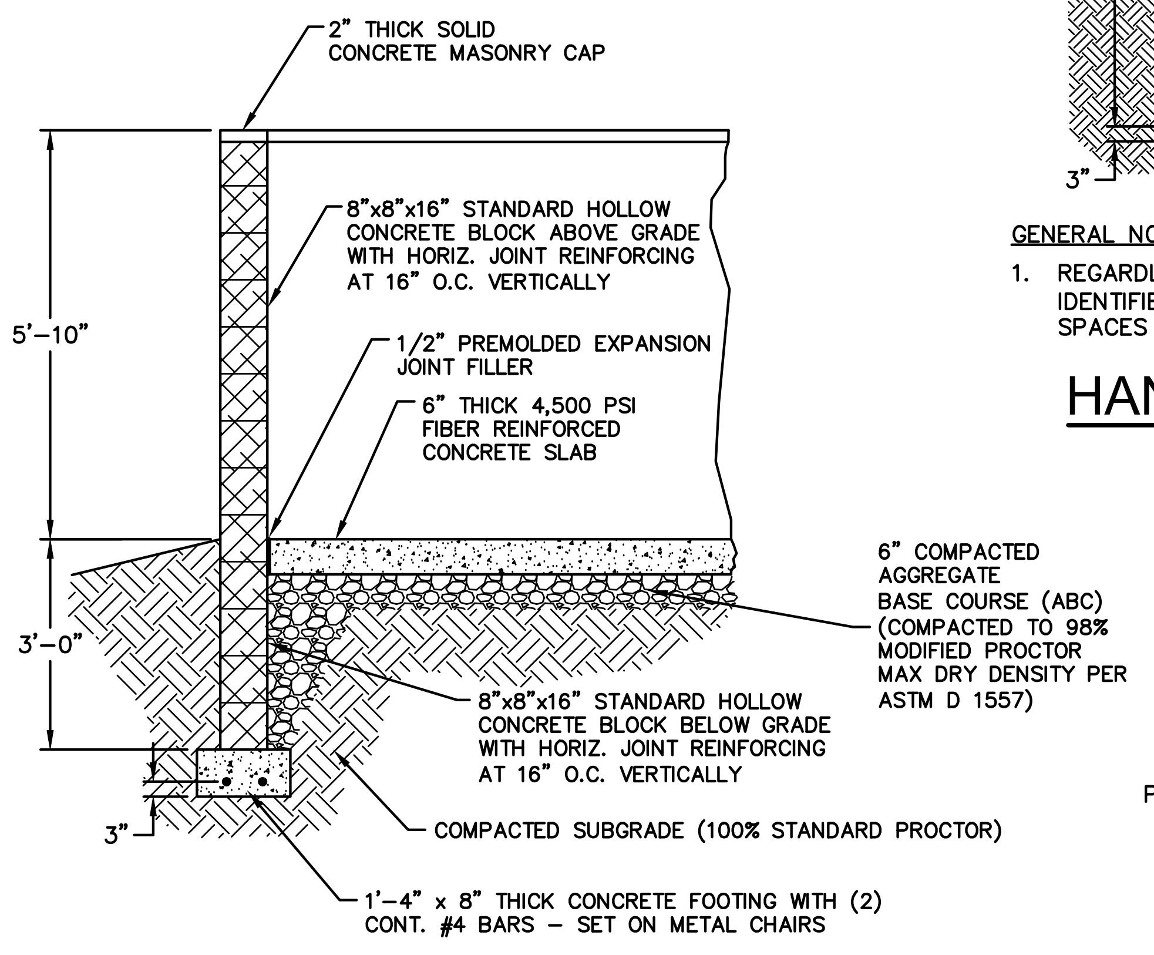
GATE HINGE
NOT TO SCALE


2 x 4 TREATED STRAP
10' MAX. TOP AND BOTTOM
T-111, PAINTED BROWN
CONCRETE, ROUNDED AND PAINTED BROWN
2 x 6 TREATED BRACE
8" BLOCK ENCLOSURE WALL PAINTED BROWN
6" SCH. 40 STEEL OR IRON PIPE FILLED WITH CONCRETE, PAINTED BROWN. PRIME PIPE PRIOR TO PAINTING
5'-10"
PROVIDE BARN STOP AND LOCKING HARDWARE, PROVIDE STEEL PIPE RECEPTACLE FOR BARN STOP
PIPE CLAMPS SCREWED TO GATE WITH WASHER SPACERS TO FACILITATE SLIDING
GATE HINGE (TYP. OF 2) (SEE DETAIL)
TOP OF SLAB
1'-8" CONCRETE BASE
4'-0"
PIPE SLEEVE SET IN CONCRETE TO RECEIVE BARN GATE STOP 4" LONG. EXTEND 1/4" ABOVE CONCRETE
CONCRETE BRICK

TRASH ENCLOSURE GATE
SCALE: 1/2" = 1'-0"


CONCRETE
6" SCH. 40 STEEL OR IRON PIPE FILLED WITH CONCRETE, PAINTED YELLOW. PRIME PIPE PRIOR TO PAINTING
36" MIN.
TOP OF SLAB
CONCRETE
18" MIN.
12" MIN.

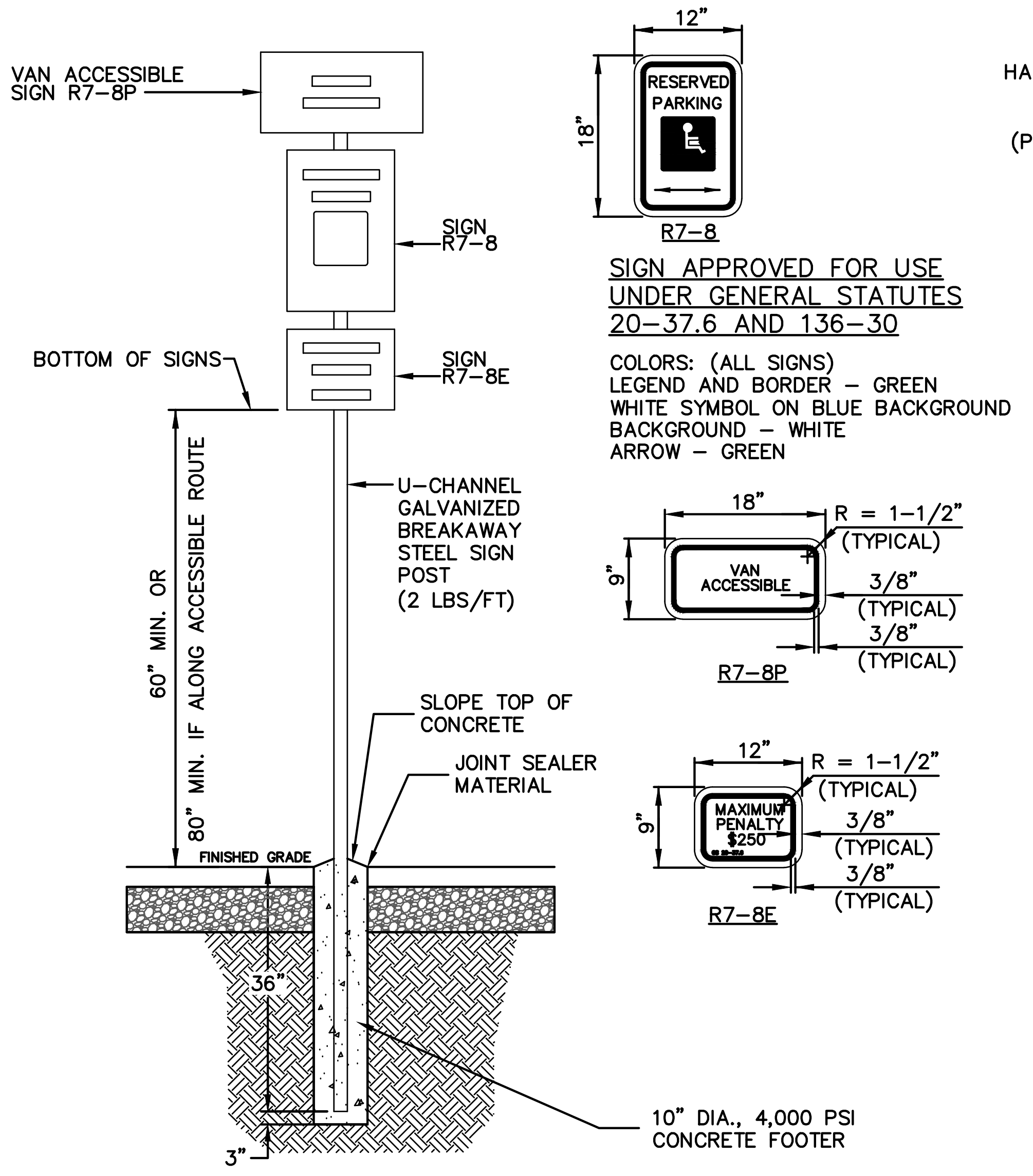
BOLLARD DETAIL
NOT TO SCALE


2" THICK SOLID CONCRETE MASONRY CAP
8"x8"x16" STANDARD HOLLOW CONCRETE BLOCK ABOVE GRADE WITH HORIZ. JOINT REINFORCING AT 16" O.C. VERTICALLY
5'-10"
1/2" PREMOLDED EXPANSION JOINT FILLER
6" THICK 4,500 PSI FIBER REINFORCED CONCRETE SLAB
6" COMPACTED AGGREGATE BASE COURSE (ABC) (COMPACTED TO 98% MODIFIED PROCTOR MAX DRY DENSITY PER ASTM D 1557)
3'-0"
8"x8"x16" STANDARD HOLLOW CONCRETE BLOCK BELOW GRADE WITH HORIZ. JOINT REINFORCING AT 16" O.C. VERTICALLY
COMPACTED SUBGRADE (100% STANDARD PROCTOR)
3"
1'-4" x 8" THICK CONCRETE FOOTING WITH (2) CONT. #4 BARS – SET ON METAL CHAIRS

TRASH ENCLOSURE SECTION
SCALE: 1/2" = 1'-0"

TRASH ENCLOSURE DETAILS

NOT TO SCALE



SIGN APPROVED FOR USE UNDER GENERAL STATUTES 20-37.6 AND 136-30

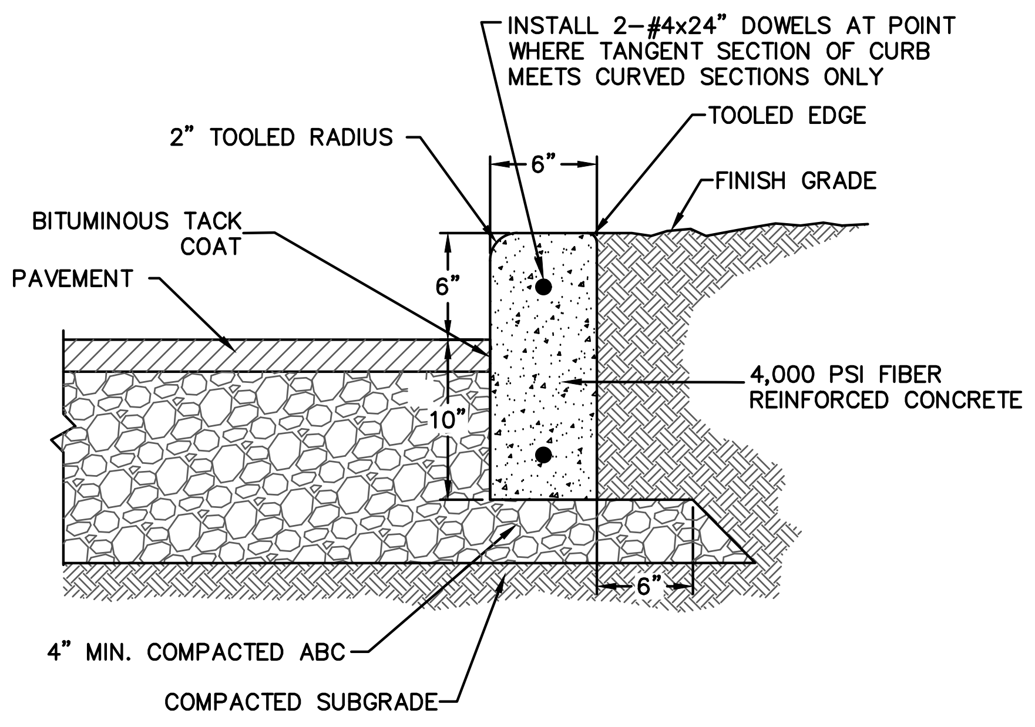
COLORS: (ALL SIGNS)
LEGEND AND BORDER – GREEN
WHITE SYMBOL ON BLUE BACKGROUND
BACKGROUND – WHITE
ARROW – GREEN

GENERAL NOTES:

1. REGARDLESS OF AGE, ALL ACCESSIBLE SPACES SHALL BE IDENTIFIED BY ABOVE-GROUND SIGNS ONLY. (SEE N.C.G.S.) SPACES SHALL NOT USE GROUND-PAINTED SYMBOLS.

HANDICAP PARKING SIGN

NOT TO SCALE

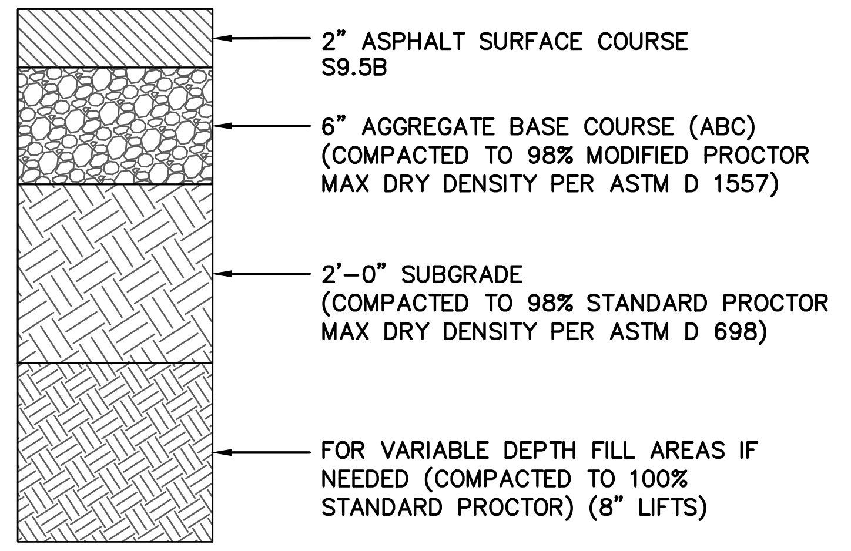

INSTALL 2-#4x24" DOWELS AT POINT WHERE TANGENT SECTION OF CURB MEETS CURVED SECTIONS ONLY
TOOLED EDGE
2" TOOLED RADIUS
6"
FINISH GRADE
BITUMINOUS TACK COAT
PAVEMENT
6"
10"
4,000 PSI FIBER REINFORCED CONCRETE
6"
4" MIN. COMPACTED ABC
COMPACTED SUBGRADE

NOTE:

1. CONSTRUCT EXPANSION JOINTS @ 20' O.C. AND ADJACENT TO ALL RIGID OBJECTS.
2. SAW CUT CONTRACTION JOINTS SHALL BE NO MORE THAN 10' APART OR AS APPROVED BY THE ENGINEER.

6" VERTICAL CURB

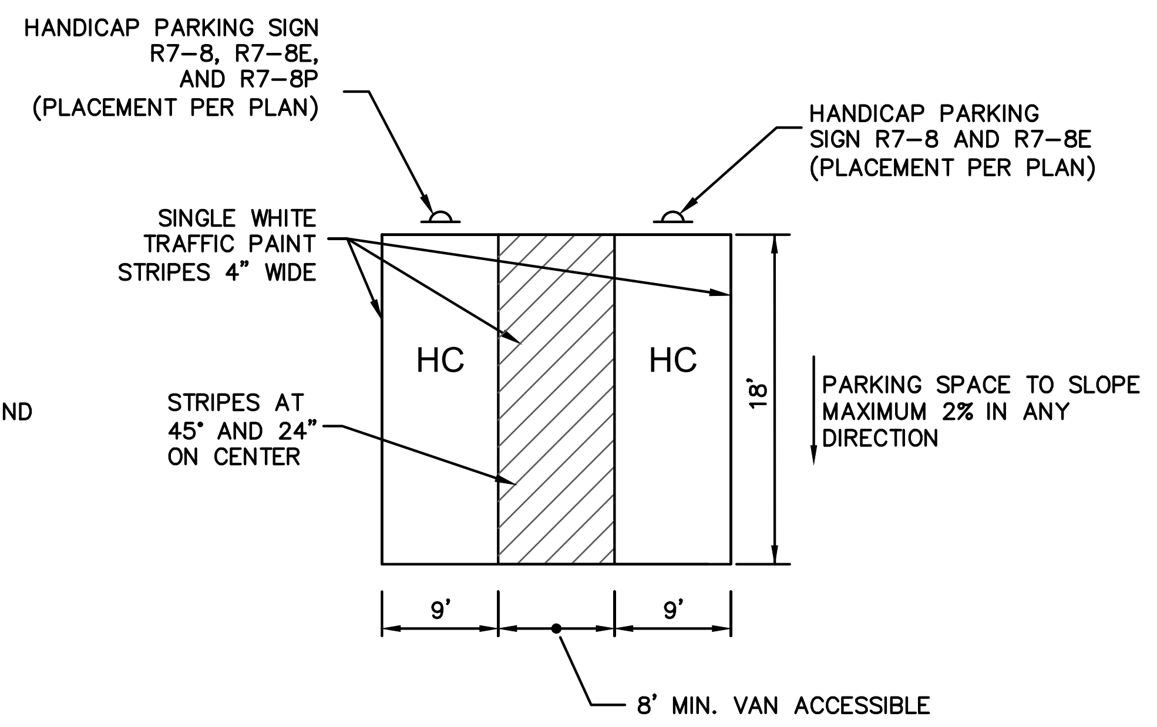
NOT TO SCALE


2" ASPHALT SURFACE COURSE S9.5B
6" AGGREGATE BASE COURSE (ABC) (COMPACTED TO 98% MODIFIED PROCTOR MAX DRY DENSITY PER ASTM D 1557)
2'-0" SUBGRADE (COMPACTED TO 98% STANDARD PROCTOR MAX DRY DENSITY PER ASTM D 698)
FOR VARIABLE DEPTH FILL AREAS IF NEEDED (COMPACTED TO 100% STANDARD PROCTOR) (8" LIFTS)

NOTE:
SEE PAVEMENT SECTION CONSTRUCTION NOTES.

ASPHALT PAVEMENT SECTION

NOT TO SCALE

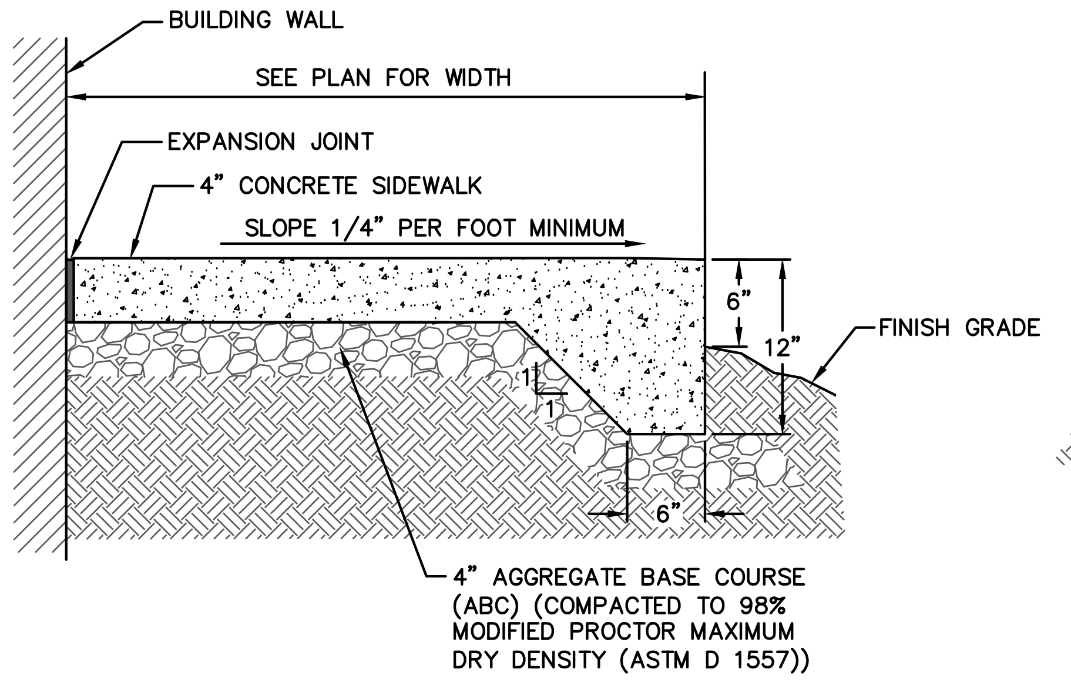

HANDICAP PARKING SIGN R7-8, R7-8E, AND R7-8P (PLACEMENT PER PLAN)
HANDICAP PARKING SIGN R7-8 AND R7-8E (PLACEMENT PER PLAN)
SINGLE WHITE TRAFFIC PAINT STRIPES 4" WIDE
HC
HC
18'
PARKING SPACE TO SLOPE MAXIMUM 2% IN ANY DIRECTION
STRIPES AT 45° AND 24" ON CENTER
9'
9'
8' MIN. VAN ACCESSIBLE

NOTES:

1. REGARDLESS OF AGE, ALL ACCESSIBLE SPACES SHALL BE IDENTIFIED BY ABOVE- GROUND SIGNS ONLY. (SEE N.C.G.S.)
2. NEW SPACES SHALL NOT USE GROUND-PAINTED SYMBOLS.

STRIPING DETAIL FOR HANDICAP PARKING STALLS

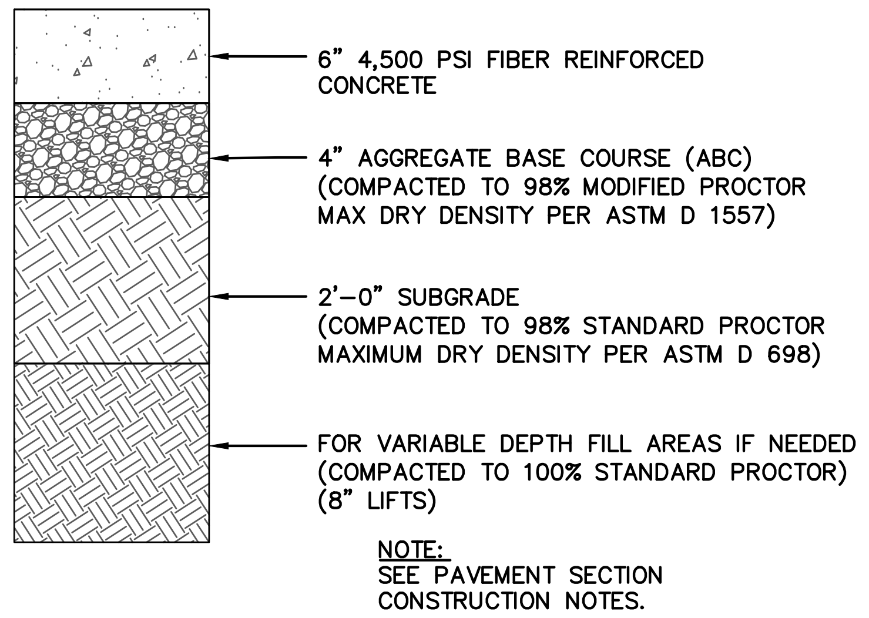
NOT TO SCALE


BUILDING WALL
SEE PLAN FOR WIDTH
EXPANSION JOINT
4" CONCRETE SIDEWALK
SLOPE 1/4" PER FOOT MINIMUM
6"
12"
FINISH GRADE
1
1
6"
4" AGGREGATE BASE COURSE (ABC) (COMPACTED TO 98% MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D 1557))

NOTE: SEE CONCRETE SIDEWALK DETAIL FOR CONSTRUCTION NOTES AND JOINT DETAIL INFORMATION.

CONCRETE SIDEWALK WITH EDGE REVEAL

NOT TO SCALE


6" 4,500 PSI FIBER REINFORCED CONCRETE
4" AGGREGATE BASE COURSE (ABC) (COMPACTED TO 98% MODIFIED PROCTOR MAX DRY DENSITY PER ASTM D 1557)
2'-0" SUBGRADE (COMPACTED TO 98% STANDARD PROCTOR MAXIMUM DRY DENSITY PER ASTM D 698)
FOR VARIABLE DEPTH FILL AREAS IF NEEDED (COMPACTED TO 100% STANDARD PROCTOR) (8" LIFTS)

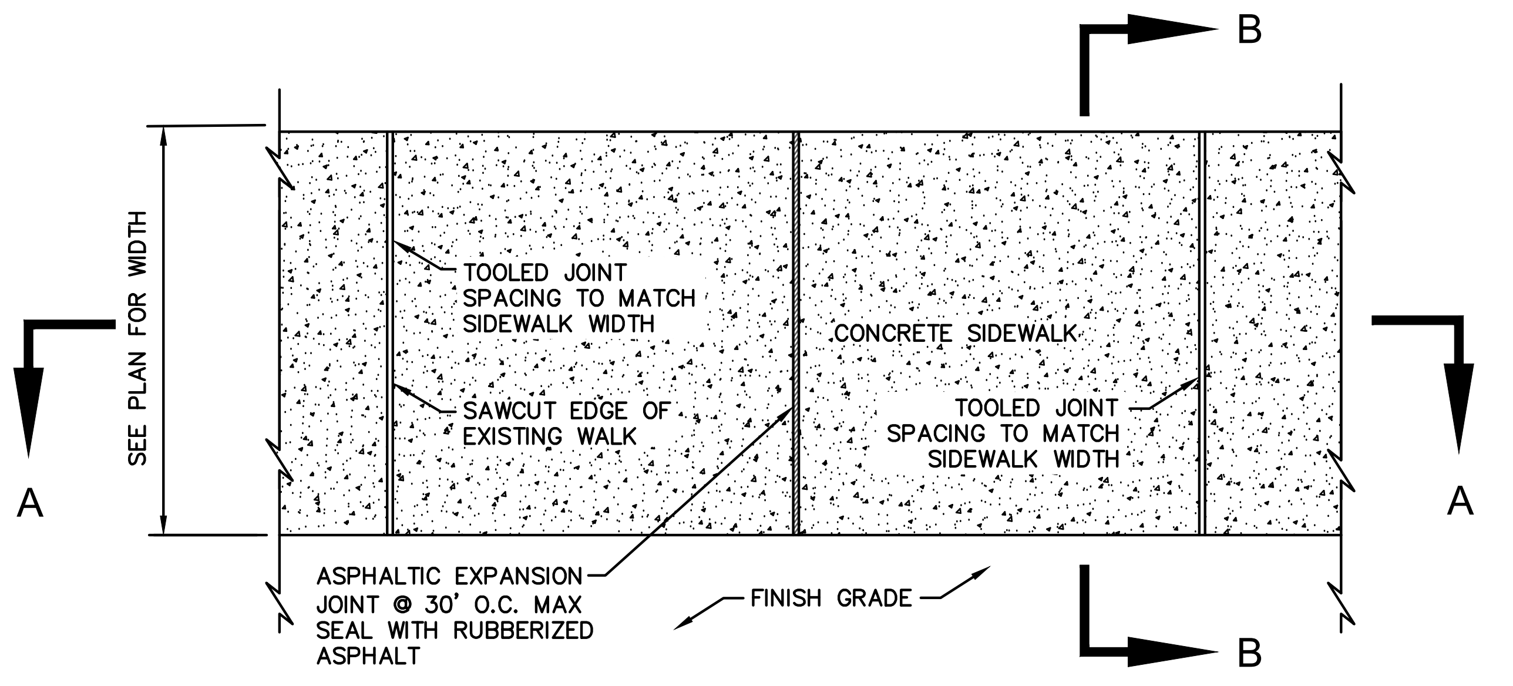
NOTE:
SEE PAVEMENT SECTION CONSTRUCTION NOTES.

NOTES:

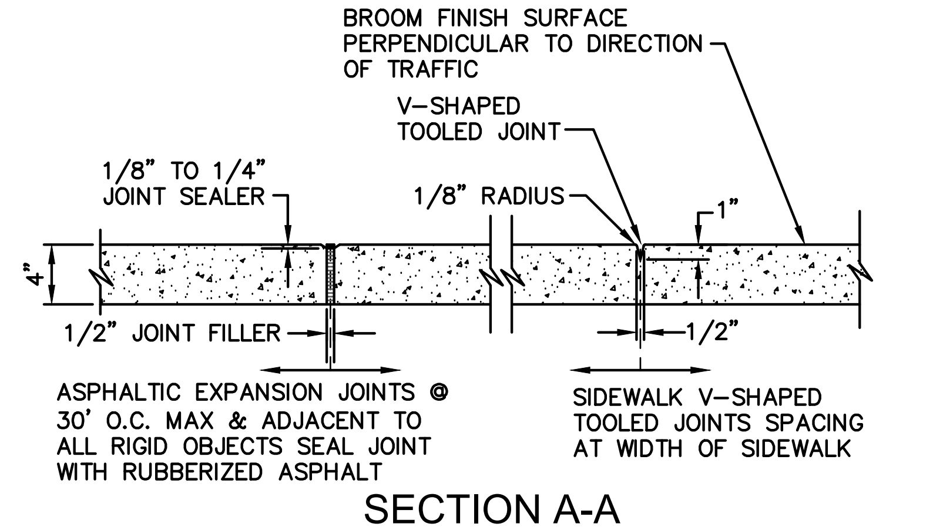
1. PLACE 1/2" PREMOULDED EXPANSION JOINT MATERIAL WITH SEALANT AT OBJECTS ABUTTING CONCRETE PAVEMENT UNLESS OTHERWISE NOTED.
2. CONSTRUCT TOOLED JOINT AT 10' ON CENTER OR AS APPROVED BY THE ENGINEER. SUBMIT JOINT LAYOUT TO ENGINEER FOR APPROVAL PRIOR TO POURING CONCRETE. TOOLED JOINT TO BE A 1/8" WIDE x 1.5" DEEP SAW CUT JOINT. CUT WITHIN 12 HOURS OF POUR FILL JOINT WITH JOINT FILLER. DO NOT TEAR, ABRADE OR OTHERWISE DAMAGE PAVEMENT SURFACE WHEN SAW CUTTING.
3. CONCRETE PAVEMENT SURFACE SHALL BE GIVEN A LIGHT BROOM FINISH WITH THE BRUSH MARKS PERPENDICULAR TO THE DIRECTION OF TRAFFIC.
4. CONTRACTOR SHALL VERIFY SPECIFICATION AND SUITABILITY OF BASE MATERIAL WITH LICENSED GEOTECHNICAL ENGINEER.
5. FIBER REINFORCED CONCRETE TO BE DESIGNED AS PER ASTM C1116.

CONCRETE PAVEMENT SECTION

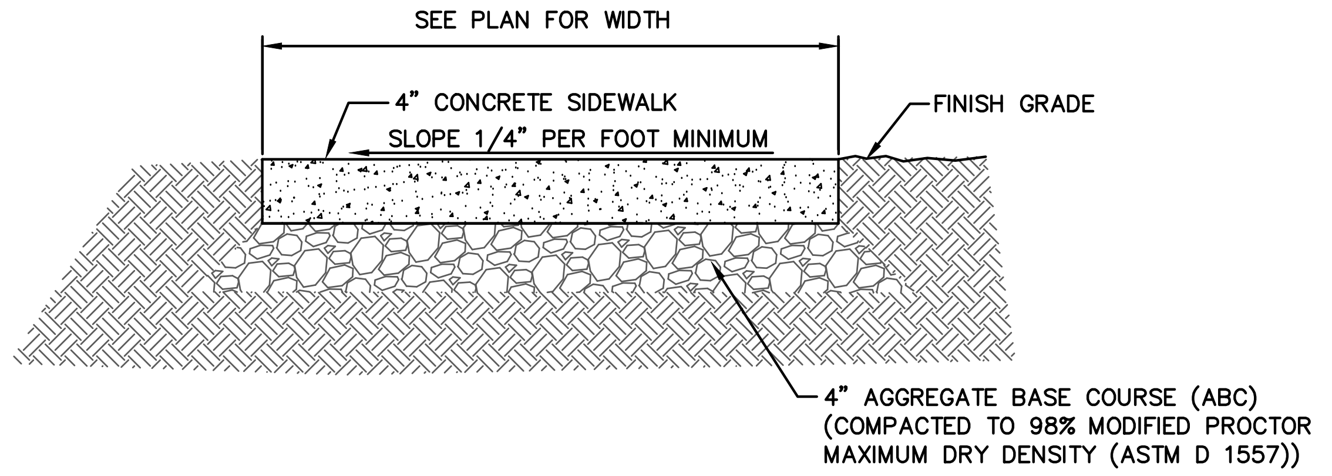
NOT TO SCALE


B
B
A
A
SEE PLAN FOR WIDTH
TOOLED JOINT SPACING TO MATCH SIDEWALK WIDTH
SAWCUT EDGE OF EXISTING WALK
CONCRETE SIDEWALK
TOOLED JOINT SPACING TO MATCH SIDEWALK WIDTH
ASPHALTIC EXPANSION JOINT @ 30' O.C. MAX SEAL WITH RUBBERIZED ASPHALT
FINISH GRADE

PLAN


BROOM FINISH SURFACE PERPENDICULAR TO DIRECTION OF TRAFFIC
V-SHAPED TOOLED JOINT
1/8" TO 1/4" JOINT SEALER
1/8" RADIUS
1"
4"
1/2" JOINT FILLER
1/2"
ASPHALTIC EXPANSION JOINTS @ 30' O.C. MAX & ADJACENT TO ALL RIGID OBJECTS SEAL JOINT WITH RUBBERIZED ASPHALT
SIDEWALK V-SHAPED TOOLED JOINTS SPACING AT WIDTH OF SIDEWALK

SECTION A-A


SEE PLAN FOR WIDTH
4" CONCRETE SIDEWALK
SLOPE 1/4" PER FOOT MINIMUM
FINISH GRADE
4" AGGREGATE BASE COURSE (ABC) (COMPACTED TO 98% MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D 1557))

SECTION B-B

CONSTRUCTION NOTES:

1. SIDEWALK SHALL BE CONSTRUCTED WITH 4,000 PSI FIBER REINFORCED CONCRETE.
2. APPLY A NONSLIP BROOM FINISH TO SIDEWALK SURFACE. IMMEDIATELY AFTER FLOAT FINISHING SLIGHTLY ROUGHEN CONCRETE SURFACE BY BROOMING WITH FIBER-BRISTLE BROOM PERPENDICULAR TO MAIN TRAFFIC ROUTE.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF SPECIFICATION AND SUITABILITY OF BASE MATERIAL.

CONCRETE SIDEWALK

NOT TO SCALE

PAVEMENT SECTION CONSTRUCTION NOTES:

1. COORDINATE WITH ECS SOUTHEAST, LLP "GEOTECHNICAL ENGINEERING REPORT" FOR RIVER OF LIFE BAPTIST CHURCH DATED JUNE 27, 2025 FOR PAVEMENT SECTION, DENSIFICATION, SUBGRADE PREPARATION, AND ENGINEERED FILL PLACEMENT RECOMMENDATIONS. SHOULD A CONFLICT EXIST, NOTIFY ENGINEER PRIOR TO CONSTRUCTION. THE PAVEMENT DESIGN SHOWN REPRESENTS THE MINIMUM THICKNESS OF SURFACE AND BASE COURSE TO BE USED. SUBGRADE SOILS TESTS MAY DETERMINE HEAVIER PAVEMENT DESIGNS ARE REQUIRED. CONTRACTOR IS REQUIRED TO ENGAGE A LICENSED GEOTECHNICAL ENGINEER FOR SUBGRADE, BASE COURSE AND PAVEMENT TESTING. CONTRACTOR SHALL PROVIDE A STATEMENT SEALED BY A PROFESSIONAL GEOTECHNICAL ENGINEER CONFIRMING THAT ALL WORK COMPLIES WITH COMPACTION REQUIREMENTS.
2. CONTRACTOR SHALL NOTIFY ENGINEER IF SATURATED SUBGRADE IS ENCOUNTERED DURING CONSTRUCTION AS ADDITIONAL DRAINAGE MEASURES MAY BE REQUIRED.
3. UNDERCUT ANY UNSUITABLE MATERIAL AS REQUIRED AND REPLACE WITH SELECT MATERIAL AS DETERMINED BY LICENSED GEOTECHNICAL ENGINEER.
4. NO BASE COURSE SHALL BE PLACED ON MULCH, PINE CLAY, ORGANIC MATTER OR OTHER UNSUITABLE MATERIAL.
5. WHEN CURBING IS NOT SPECIFIED, BASE COURSE SHALL EXTEND A MINIMUM OF 12" BEYOND EDGE OF ASPHALT.
6. COMPACTION PERCENTAGE OF ASPHALT SURFACE COURSE SHALL BE IN ACCORDANCE WITH NORTH CAROLINA DEPARTMENT OF TRANSPORTATION REQUIREMENTS.
7. SURFACE COURSE SHALL BE ALLOWED TO CURE THOROUGHLY BEFORE ANY COLOR COATINGS ARE APPLIED.
8. FLOOD SURFACE WITH WATER AND PATCH DEPRESSIONS/BIRDBATHS HOLDING MORE THAN 1/16" WATER WITH ACRYLIC PATCHING MATERIAL PER MANUFACTURER'S REQUIREMENTS. HIGH AREAS SHOULD BE LEVELED BY SCRAPING OR GRINDING. ALL AREAS MUST CURE PER REQURIEMENTS AND AREA MUST BE DRY BEFORE PROCEEDING.
9. ALL MATERIALS SHALL MEET THE REQUIREMENTS SET FORTH IN THE LATEST EDITION OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.

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50548
THOMAS P. MANNINO

SIGNED AND DATED:
8/20/25

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NO.	DATE	BY	DESCRIPTION

SITE EXPANSION DEVELOPMENT PLANS
FOR
RIVER OF LIFE BAPTIST CHURCH
BRUNSWICK COUNTY, NORTH CAROLINA

NOT TO SCALE

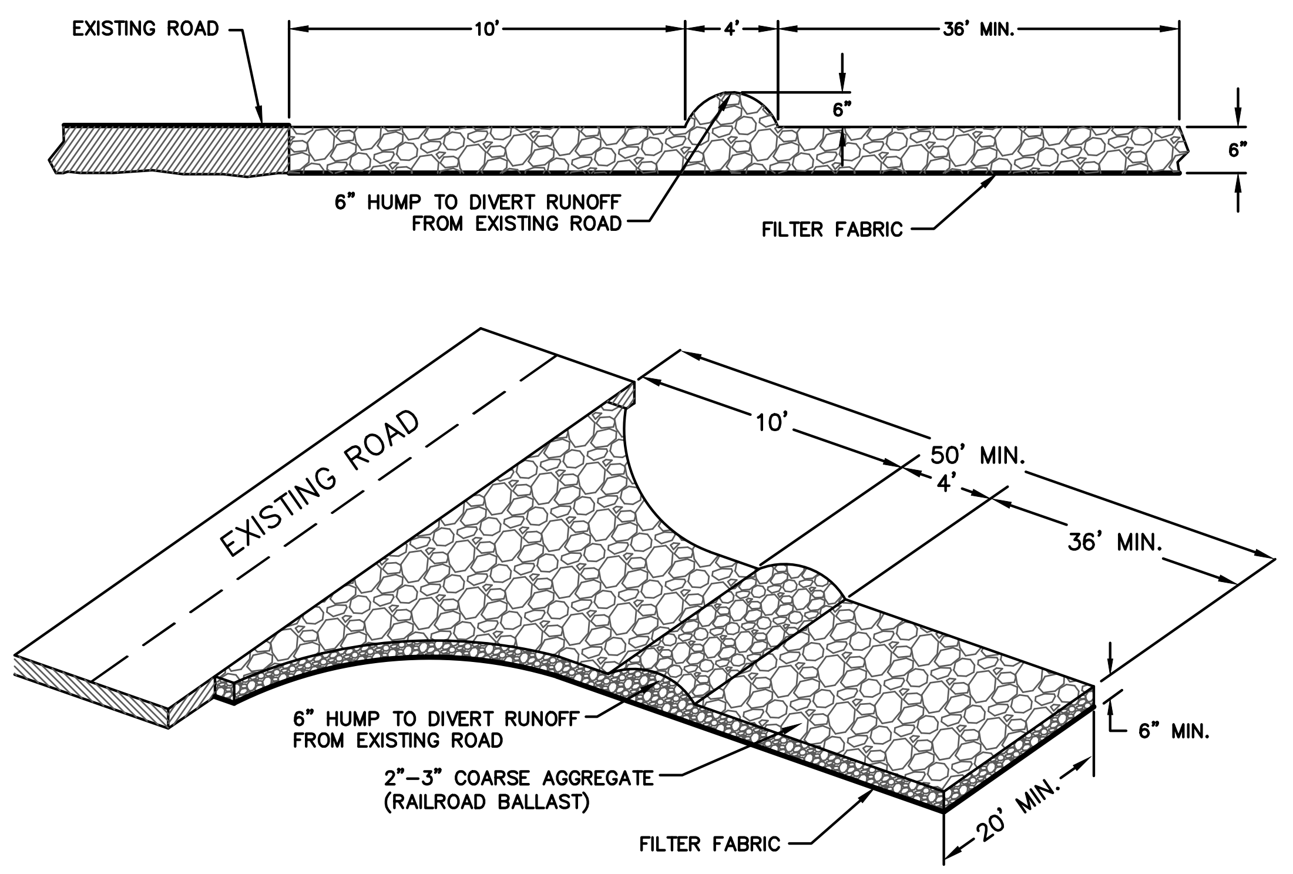
OFFICE MANAGER M. NORTON	DESIGNER T. MINTZ
PROJECT MANAGER J. MURRAY	REVIEWER T. MANNINO

SITE DETAILS

DATE	PROJECT #	FUNDING #
AUGUST, 2025	24.07082	N/A

SHEET
C-501

P:\2024\24.07082-RIVEROFLBC-SITE EXPANSION\DRAWINGS\PLAN SHEETS\24.07082_RIVER OF LIFE DETAILS.DWG PLOT DATE 8/20/2025 8:14 AM TONY MINTZ

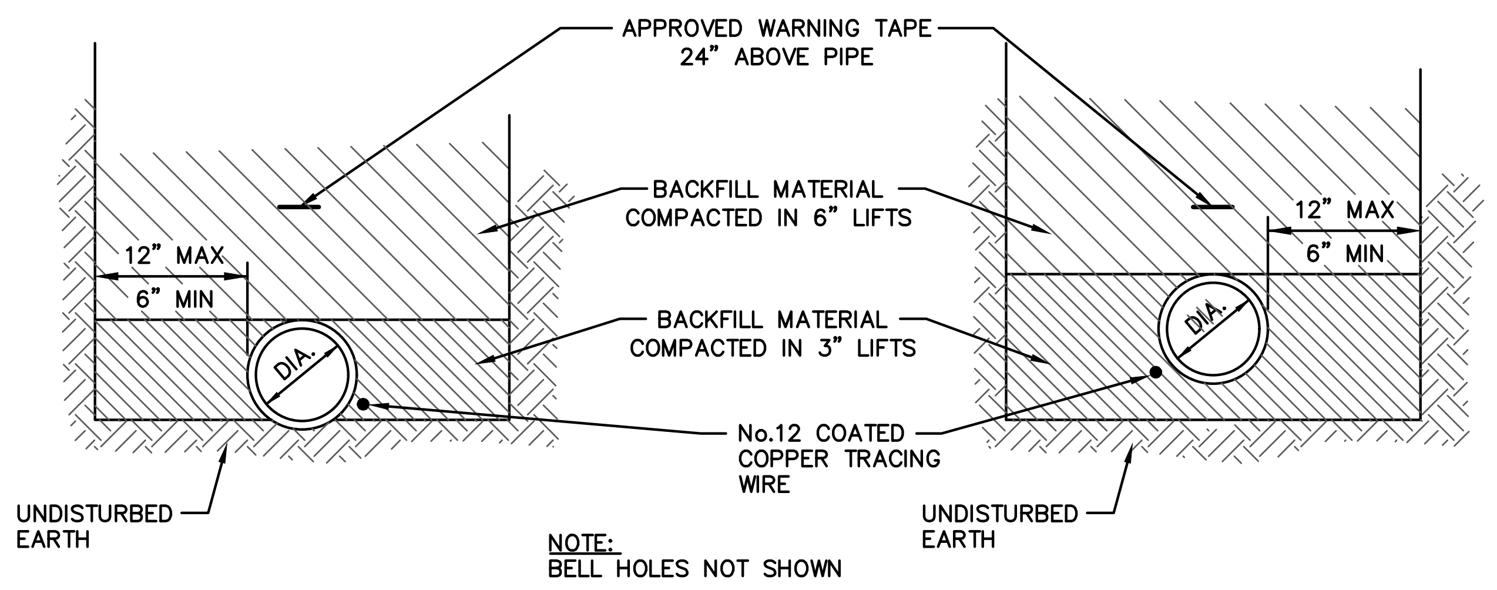

EXISTING ROAD
10'
4'
36' MIN.
6"
6"
6" HUMP TO DIVERT RUNOFF FROM EXISTING ROAD
FILTER FABRIC
EXISTING ROAD
10'
50' MIN.
4'
36' MIN.
6" HUMP TO DIVERT RUNOFF FROM EXISTING ROAD
2"-3" COARSE AGGREGATE (RAILROAD BALLAST)
FILTER FABRIC
6" MIN.
20' MIN.

NOTES:

1. A STABILIZED PAD OF CRUSHED STONE SHALL BE LOCATED WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM AN EXISTING ROAD.
2. STONE TO BE 2 – 3 INCH WASHED STONE RAILROAD BALLAST.
3. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC STREETS OR EXISTING PAVEMENT. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
4. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC STREETS MUST BE REMOVED IMMEDIATELY.
5. WHEN NECESSARY WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTERING A PUBLIC STREET, WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN.
6. REFERENCE NCDEQ LAND QUALITY SECTION DESIGN MANUAL: 6.06.

EC 1 TEMPORARY CONSTRUCTION ENTRANCE

NOT TO SCALE


APPROVED WARNING TAPE 24" ABOVE PIPE
BACKFILL MATERIAL COMPACTED IN 6" LIFTS
BACKFILL MATERIAL COMPACTED IN 3" LIFTS
12" MAX
6" MIN
DIA.
No.12 COATED COPPER TRACING WIRE
UNDISTURBED EARTH
12" MAX
6" MIN
DIA.
UNDISTURBED EARTH

NOTE:
BELL HOLES NOT SHOWN

STANDARD EXCAVATION

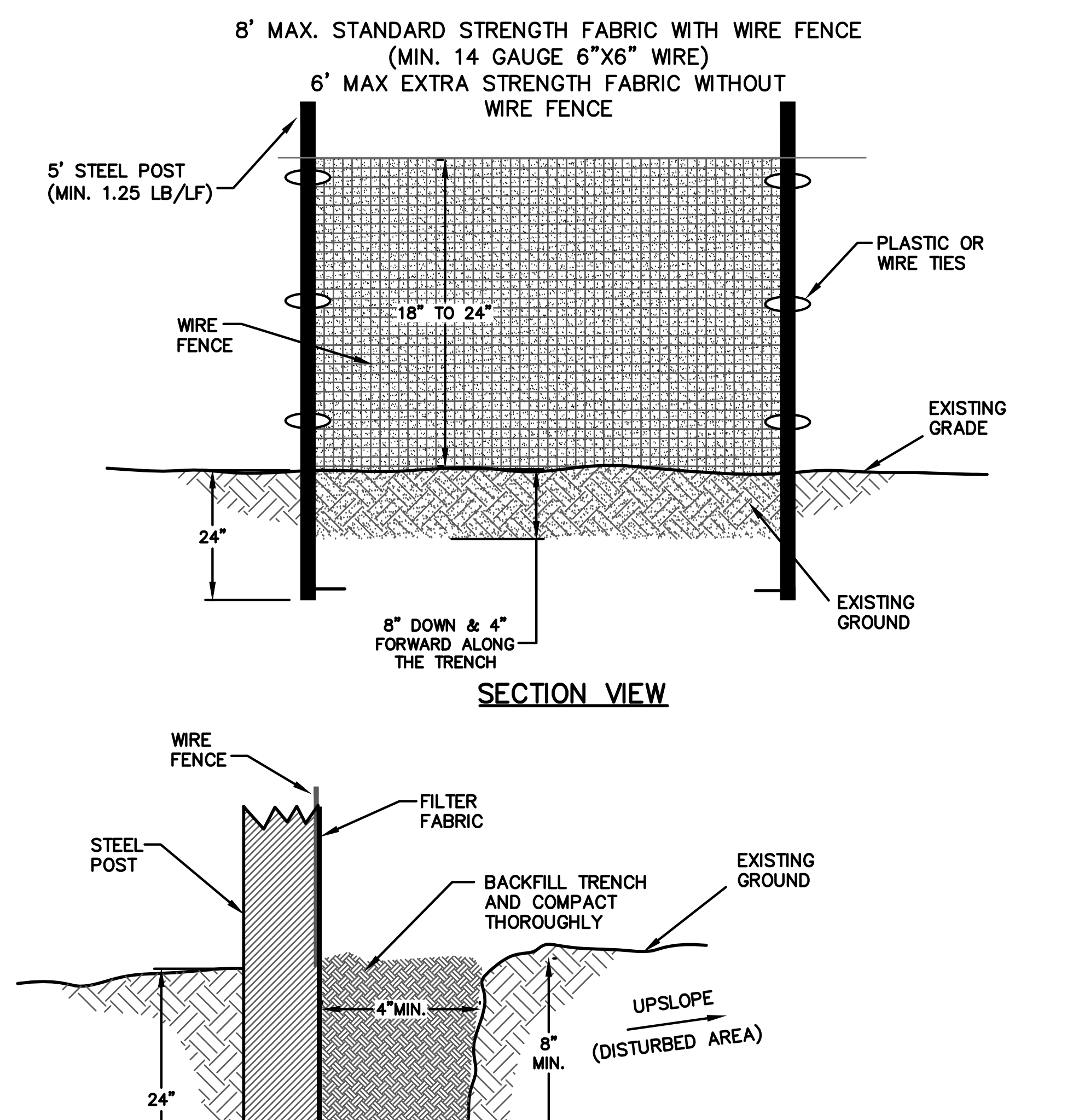
OVERCUT EXCAVATION

NOTES:
1. CONSTRUCTION OF TRENCHES SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL SAFETY AND HEALTH REGULATIONS WHICH HAVE JURISDICTION AT THE PROJECT SITE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH THE APPLICABLE REGULATIONS AND FOLLOW THEM ACCORDINGLY.

2. PAYMENT FOR ROCK EXCAVATION AND SELECT BACKFILL IN TRENCH SHALL BE FOR ACTUAL QUANTITIES AND SHALL NOT EXCEED THE WIDTH OF TRENCH SHOWN ON THIS DETAIL.

SD 15 STORM DRAIN TRENCH DETAIL

NOT TO SCALE


8' MAX. STANDARD STRENGTH FABRIC WITH WIRE FENCE (MIN. 14 GAUGE 6"X6" WIRE)
6' MAX EXTRA STRENGTH FABRIC WITHOUT WIRE FENCE
5' STEEL POST (MIN. 1.25 LB/LF)
PLASTIC OR WIRE TIES
WIRE FENCE
18" TO 24"
EXISTING GRADE
24"
8" DOWN & 4" FORWARD ALONG THE TRENCH
EXISTING GROUND
SECTION VIEW
WIRE FENCE
FILTER FABRIC
STEEL POST
BACKFILL TRENCH AND COMPACT THOROUGHLY
EXISTING GROUND
4"MIN.
24"
8" MIN.
UPSLOPE
(DISTURBED AREA)

SLOPE	SLOPE LENGTH(FT)	MAXIMUM AREA(SQFT)
<2%	100	10,000
2 TO 5%	75	7,500
5 TO 10%	50	5,000
10 TO 20%	25	2,500
>20%	15	1,500

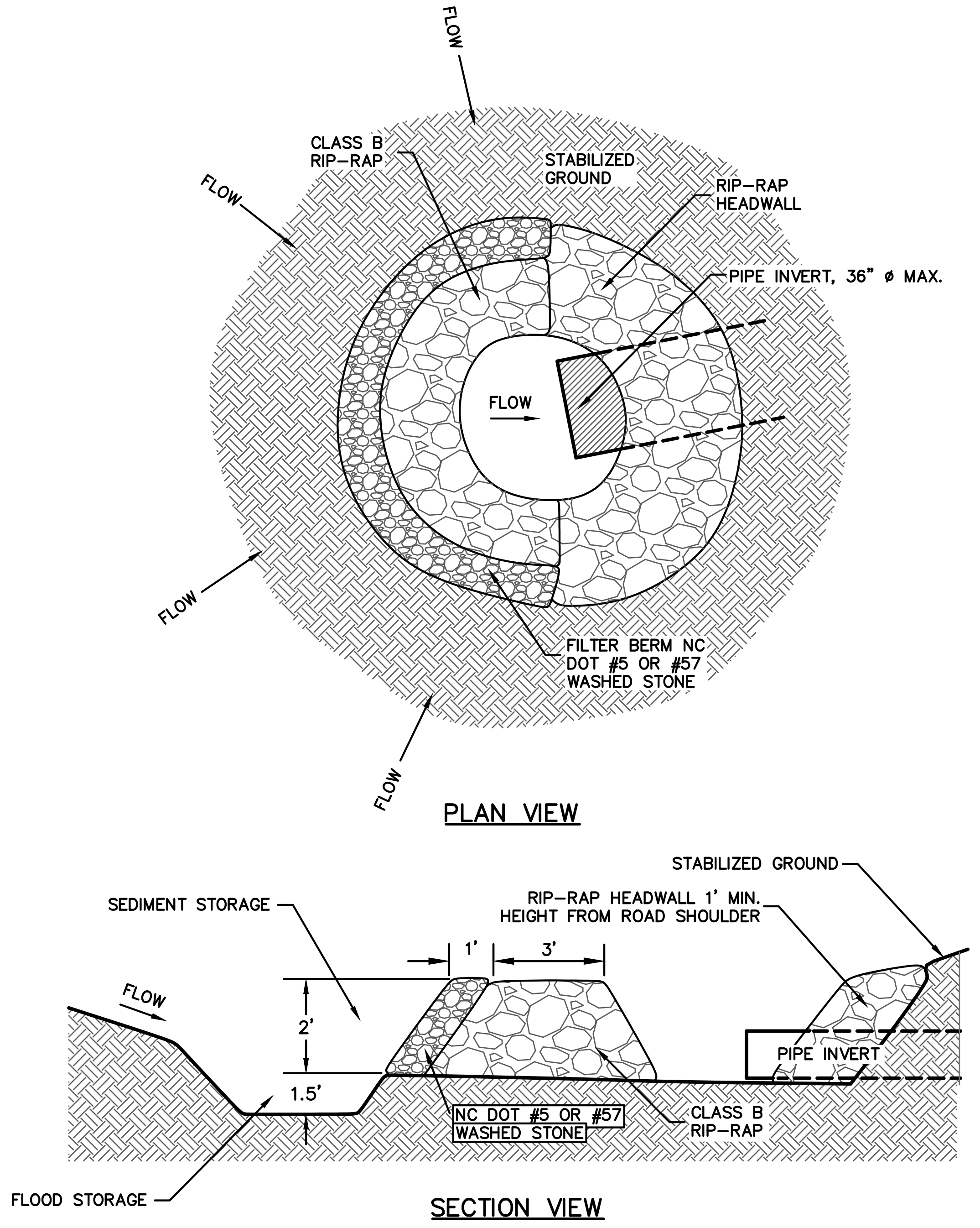
NOTES:

1. FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND DAILY DURING PROLONGED RAINFALL. REPAIR SHALL BE MADE AS NECESSARY.
2. FABRIC SHALL BE REPLACED PROMPTLY IF FOUND TO BE IN DISREPAIR.
3. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT AND WHEN DEPOSITS REACH APPROXIMATELY 1/3 HEIGHT OF BARRIER.
4. REFERENCE NCDEQ LAND QUALITY SECTION DESIGN MANUAL: 6.62.

EC 4 SILT / SEDIMENT FENCE

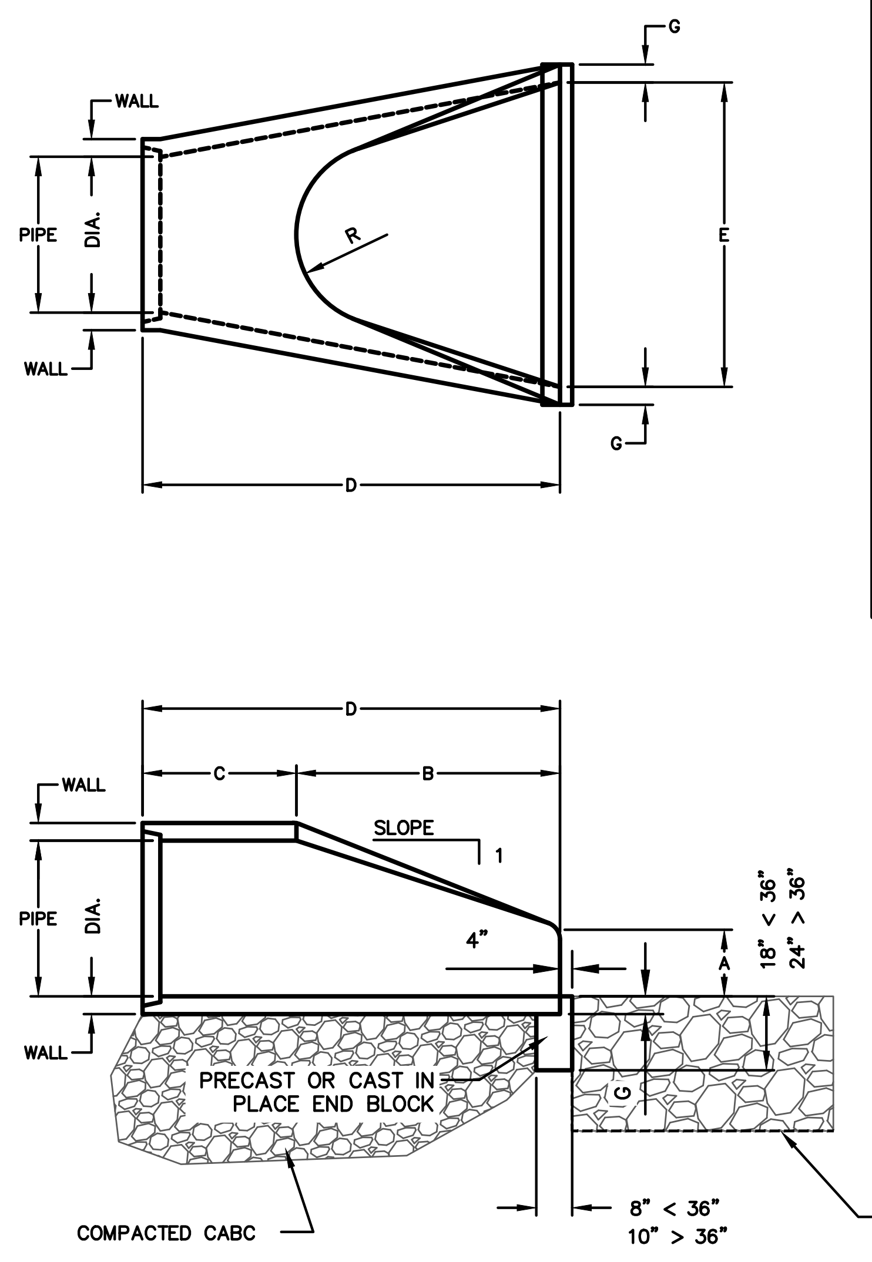
—■— PLAN SYMBOL

NOT TO SCALE



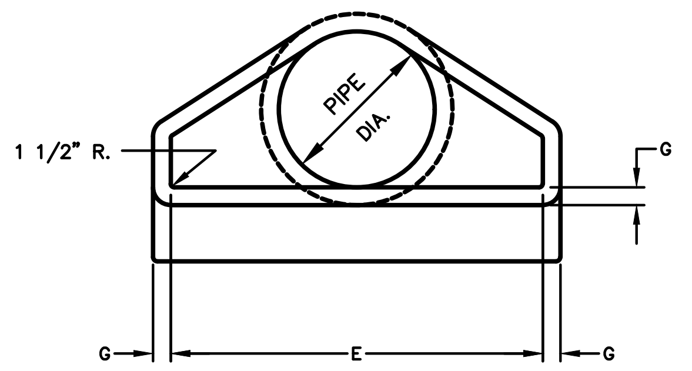
EC 18 PIPE INLET PROTECTION

NOT TO SCALE



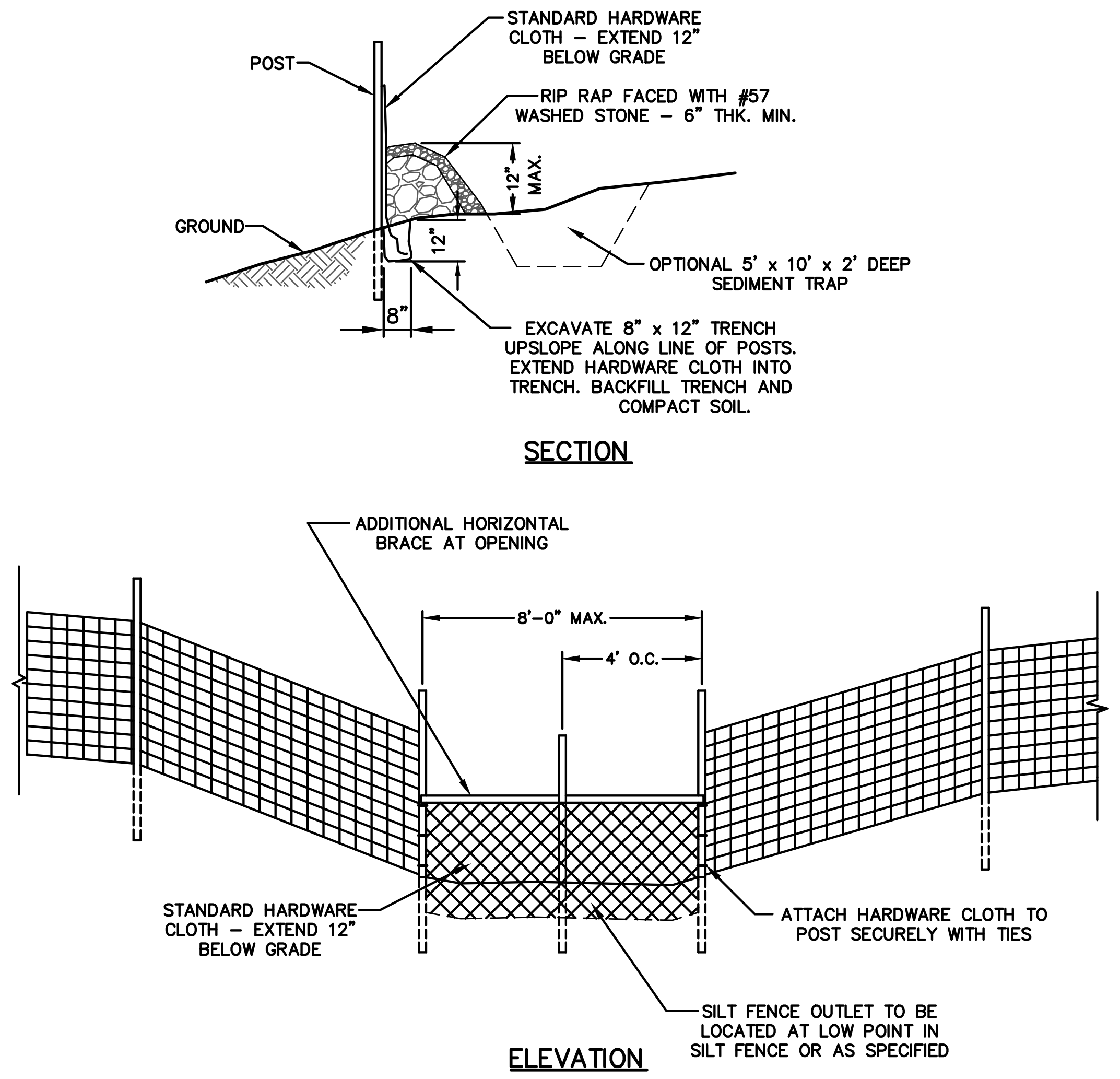
PIPE DIA.	APPROX WT.–LB.	WALL	A	B	C	D	E	G	R	APPROX. SLOPE
12"	530	2"	4"	24"	4'–0.875"	6'–0.875"	24"	2"	9"	1:2.4
15"	740	2.25"	6"	27"	3'–10"	6'–1"	30"	2.25"	11"	1:2.4
18"	990	2.5"	9"	27"	3'–10"	6'–1"	36"	2.5"	12"	1:2.4
21"	1280	2.75"	9"	35"	38"	6'–1"	3'–6"	2.75"	13"	1:2.4
24"	1520	3"	9.5"	3'–7.5"	30"	6'–1.5"	4'–0"	3"	14"	1:2.5
27"	1930	3.25"	10.5"	4'–0"	25.5"	6'–1.5"	4'–6"	3.25"	14.5"	1:2.4
30"	2190	3.5"	12"	4'–6"	19.75"	6'–1.75"	5'–0"	3.5"	15"	1:2.5
33"	3200	3.75"	13.5"	4'–10.5"	39.25"	8'–1.75"	5'–6"	3.75"	17.5"	1:2.5
36"	4100	4"	15"	5'–3"	34.75"	8'–1.75"	6'–0"	4"	20"	1:2.5
42"	5380	4.25"	21"	5'–3"	35"	8'–2"	6'–6"	4.5"	22"	1:2.5
48"	6550	5"	24"	6'–0"	26"	8'–2"	7'–0"	5"	22"	1:2.5
54"	8240	5.5"	27"	5'–5"	35"	8'–4"	7'–6"	5.5"	24"	1:2.0
60"	8730	6"	35"	5'–0"	39"	8'–3"	8'–0"	5"	*	1:1.9
66"	10710	6.5"	30"	6'–0"	27"	8'–3"	8'–6"	5.5"	*	1:1.7
72"	12520	7"	36"	6'–6"	21"	8'–3"	9'–0"	6"	*	1:1.8
78"	14770	7.5"	36"	7'–6"	21"	9'–3"	9'–6"	6.5"	*	1:1.8
84"	18160	8"	36"	7'–6.5"	21"	9'–3.5"	10'–0"	6.5"	*	1:1.6

* RADIUS AS FURNISHED BY MANUFACTURER



SD 11 CONCRETE FLARED END SECTION

NOT TO SCALE


POST
STANDARD HARDWARE CLOTH – EXTEND 12" BELOW GRADE
RIP RAP FACED WITH #57 WASHED STONE – 6" THK. MIN.
12" MAX.
GROUND
12"
8"
OPTIONAL 5' x 10' x 2' DEEP SEDIMENT TRAP
EXCAVATE 8" x 12" TRENCH UPSLOPE ALONG LINE OF POSTS. EXTEND HARDWARE CLOTH INTO TRENCH. BACKFILL TRENCH AND COMPACT SOIL.
SECTION
ADDITIONAL HORIZONTAL BRACE AT OPENING
8'-0" MAX.
4' O.C.
STANDARD HARDWARE CLOTH – EXTEND 12" BELOW GRADE
ATTACH HARDWARE CLOTH TO POST SECURELY WITH TIES
SILT FENCE OUTLET TO BE LOCATED AT LOW POINT IN SILT FENCE OR AS SPECIFIED
ELEVATION

NOTES:

1. FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND DAILY DURING PROLONGED RAINFALL. REPAIR SHALL BE MADE AS NECESSARY.
2. FABRIC SHALL BE REPLACED PROMPTLY IF FOUND TO BE IN DISREPAIR.
3. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT AND WHEN DEPOSITS REACH APPROXIMATELY 1/3 HEIGHT OF BARRIER.
4. SILT FENCE OUTLETS SHALL BE LOCATED AT LOW POINTS IN CONTINUOUS RUNS OF SILT FENCE.

EC 3 SILT / SEDIMENT FENCE - OUTLET

NOT TO SCALE

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P:\2024\24.07082-RIVEROFLBC-SITE EXPANSION\DRAWINGS\PLAN SHEETS\24.07082_RIVER OF LIFE DETAILS.DWG PLOT DATE 8/20/2026 8:14 AM TONY MINTZ

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50548
THOMAS P. MANNINO

SIGNED AND DATED:
8/20/26

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NO.	DATE	BY	DESCRIPTION

SITE EXPANSION DEVELOPMENT PLANS
FOR
RIVER OF LIFE BAPTIST CHURCH
BRUNSWICK COUNTY, NORTH CAROLINA

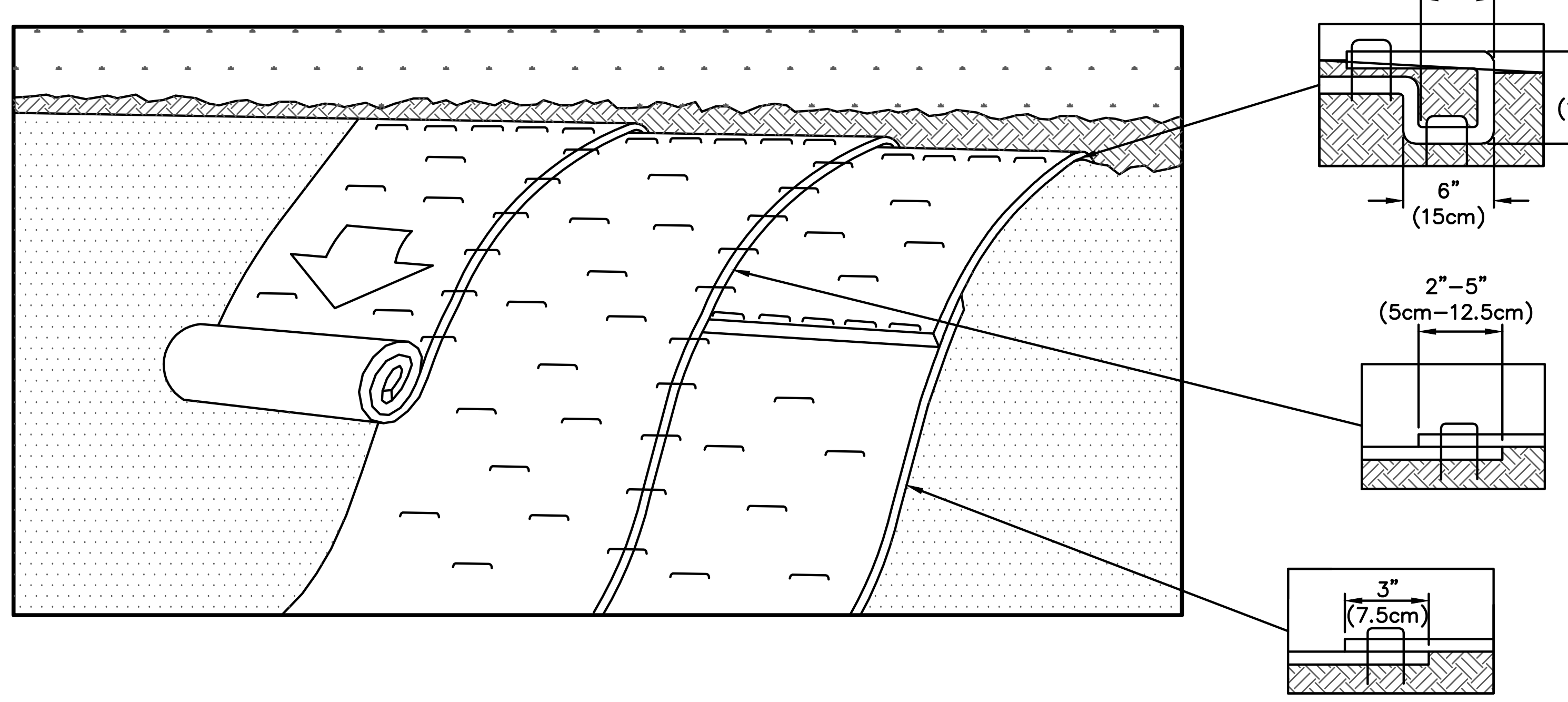
NOT TO SCALE

OFFICE MANAGER M. NORTON	DESIGNER T. MINTZ
PROJECT MANAGER J. MURRAY	REVIEWER T. MANNINO

STORMWATER AND EROSION
CONTROL DETAILS

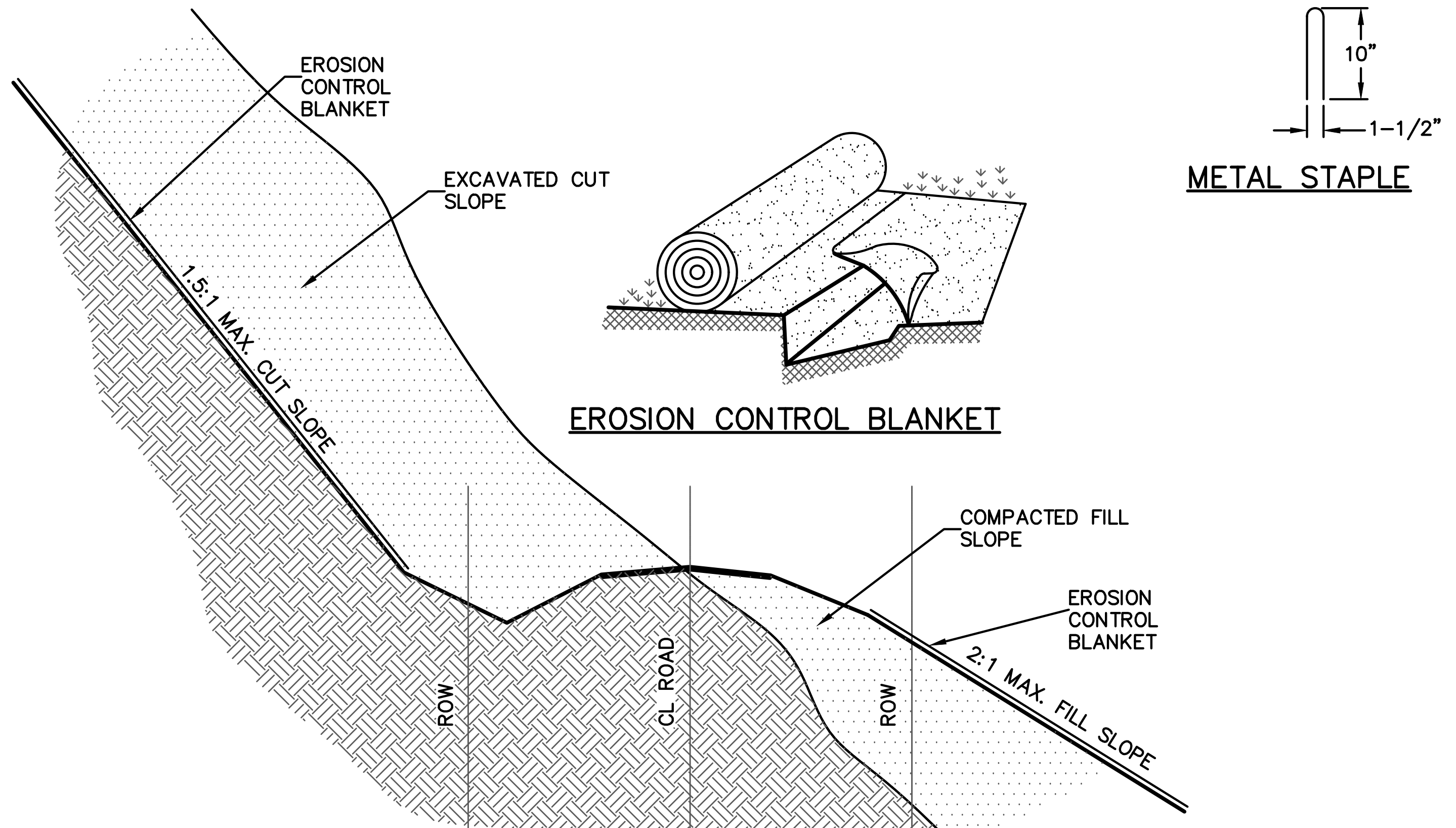
DATE	PROJECT #	FUNDING #
AUGUST, 2025	24.07082	N/A

SHEET
C-502



NOTES:

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP–SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL THE RECP'S DOWN OR HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING AND SPACING STAPLES/STAKES IN APPROPRIATE LOCATIONS PER MANUFACTURER RECOMMENDATIONS.
4. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2"–5" OVERLAP DEPENDING ON RECP'S TYPE.
5. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP'S WIDTH.
6. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.
7. INSTALLATION OF MATTING SHALL CONFORM TO MANUFACTURER'S REQUIREMENTS.
8. SEE GRADING PLAN FOR LOCATIONS OF CUT AND FILL SLOPES.
9. MATTING SHALL BE : NORTH AMERICAN GREEN SC150, AMERICAN EXCELSIOR EROSION CONTROL BLANKET, OR EQUAL. INSTALL ON ALL DISTURBED SLOPES (CHOSEN PRODUCT MUST BE RATED FOR SLOPES OF 2:1 OR 1:1). SEE PLAN FOR PRODUCT TYPE THAT MAY BE SPECIFIED
10. ALLOW 3" MIN. OVERLAP BETWEEN PARALLEL STRIPS.
11. BURY THE TOP OF THE MAT IN A TRENCH 4" OR MORE IN DEPTH. TAMP THE TRENCH FULL SOIL. SECURE WITH ROW OF STAPLES, 10" SPACING, 4" DOWN FROM THE TRENCH. OVERLAP END OF TOP STRIP 4" AND STAPLE.

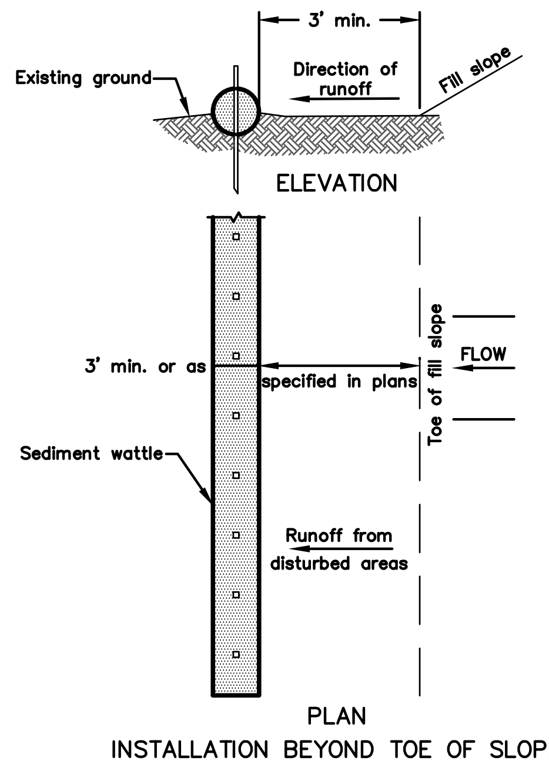


METAL STAPLE

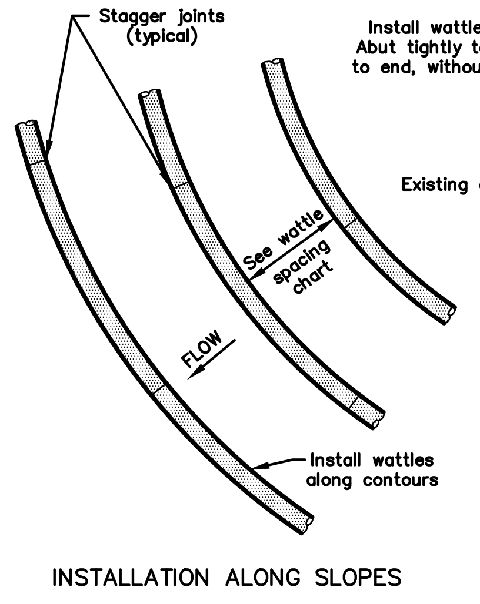
EROSION CONTROL BLANKET

EC 11 SLOPE MATTING INSTALLATION

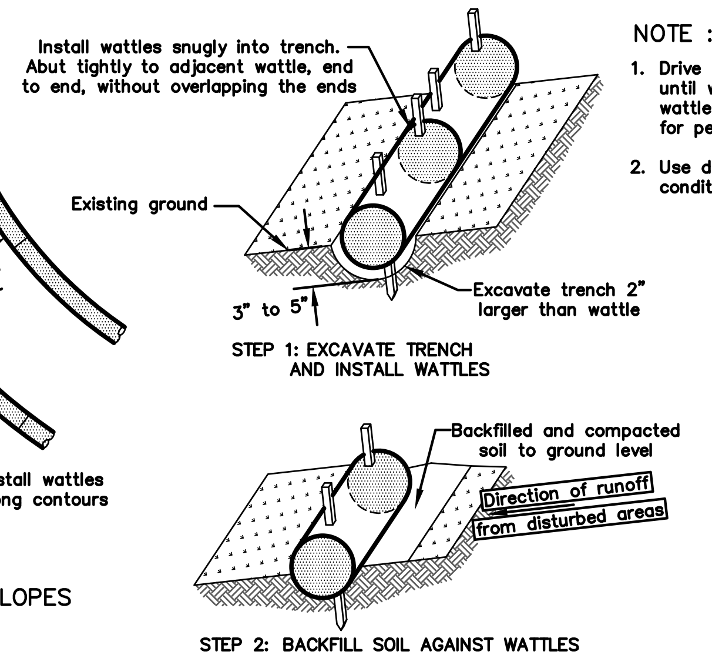
UPDATED MARCH, 2017
NOT TO SCALE



INSTALLATION BEYOND TOE OF SLOPE



INSTALLATION ALONG SLOPES


Install wattles snugly into trench. Abut tightly to adjacent wattle, end to end, without overlapping the ends
Existing ground
3" to 5"
Excavate trench 2" larger than wattle
STEP 1: EXCAVATE TRENCH AND INSTALL WATTLES
Backfilled and compacted soil to ground level
Direction of runoff from disturbed areas
STEP 2: BACKFILL SOIL AGAINST WATTLES

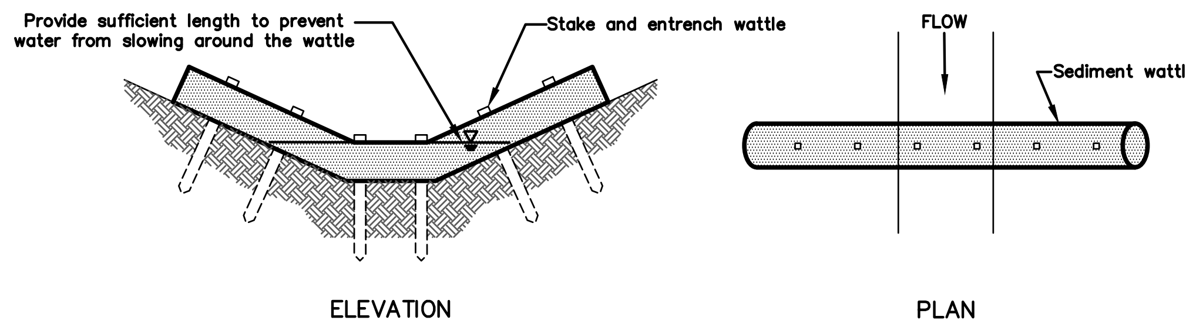
PROPERLY STAKED AND ENTRENCHED WATTLE

NOTE :

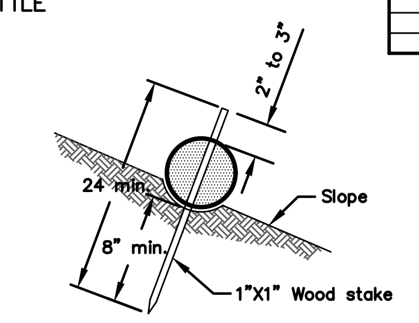
1. Drive states at each end and at 4' spacing until wattle is secured to slope. Do not crush wattle while staking. Live stakes may be used for permanent installations.
2. Use drainage ditch installation only in low flow conditions.

STAKES REQUIRED	
Wattle length (ft.)	Stakes required for each wattle
25	8
20	6
12	4

WATTLE SPACING	
Slope	Spacing (ft.)
1:4 of flatter	40
1:3	30
1:2	20
1:1	10


Provide sufficient length to prevent water from slowing around the wattle
Stake and entrench wattle
ELEVATION
FLOW
Sediment wattle
PLAN

DRAINAGE DITCH INSTALLATION



WATTLE STAKING DETAIL

WATTLE INSTALLATION AND MAINTENANCE NOTES

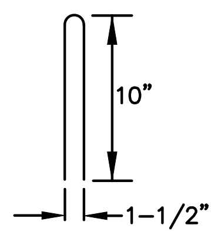
1. STRAW ROLL INSTALLATION REQUIRES PLACEMENT AND SECURE STAKING OF THE ROLL ALONG THE CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND THE ROLL.
2. IF WOODEN STAKES CAN NOT BE USED BECAUSE OF ROCK, THEN RE–BAR MAY BE USED. BE SURE TO REMOVED RE–BAR WHEN WATTLES ARE REMOVED.
3. ABUT ADJACENT ROLL TIGHTLY END TO END (DO NOT OVERLAP).
4. DO NOT CRUSH WATTLE WHILE STAKING.
5. REPLACE WATTLE ONCE SATURATED WITH SEDIMENT.

NOTE : DETAIL OBTAINED BY INTERNET U.S.D.O.T.

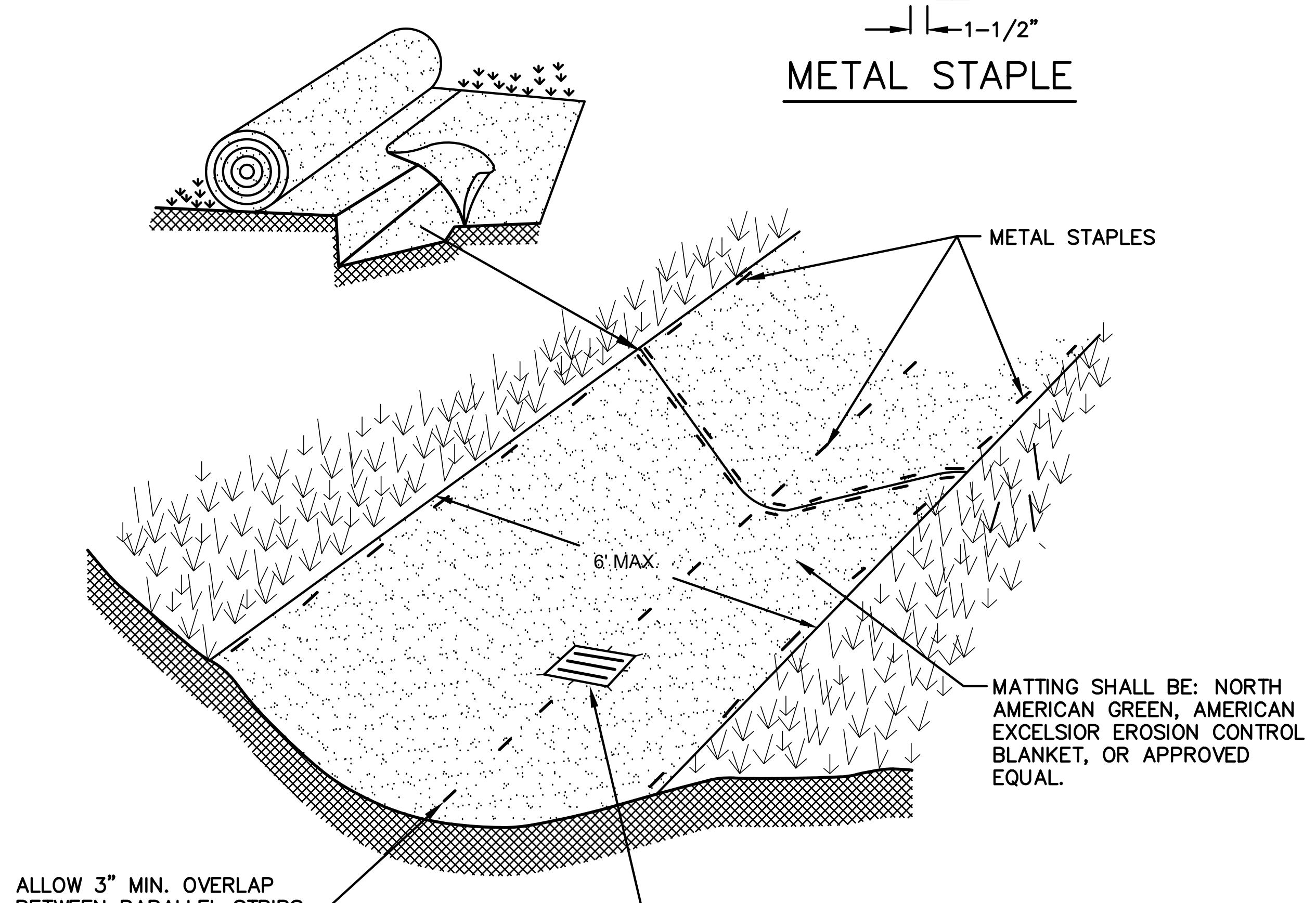
EC 22 SEDIMENT WATTLE DETAIL

UPDATED MARCH, 2017
NOT TO SCALE

BURY THE TOP END OF THE MAT IN A TRENCH 4" OR MORE IN DEPTH. TAMP THE TRENCH FULL OF SOIL. SECURE WITH ROW OF STAPLES, 10" SPACING, 4" DOWN FROM THE TRENCH. OVERLAP END OF TOP STRIP 4" AND STAPLE.



METAL STAPLE



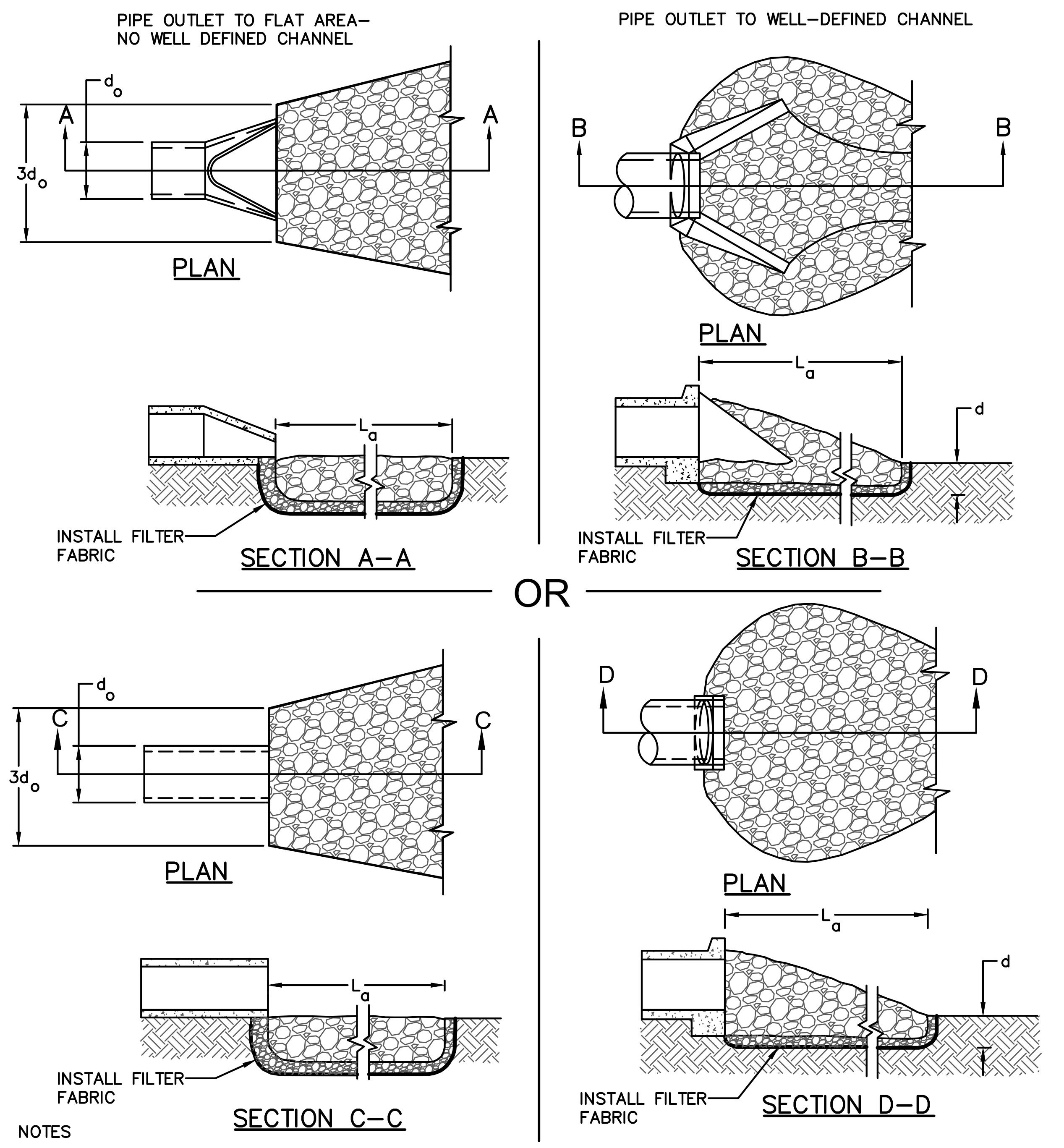
MATTING SHALL BE: NORTH AMERICAN GREEN, AMERICAN EXCELSIOR EROSION CONTROL BLANKET, OR APPROVED EQUAL.

ALLOW 3" MIN. OVERLAP BETWEEN PARALLEL STRIPS OR AS SPECIFIED BY MANUFACTURER, WHICHEVER IS GREATER

PRESS ENDS OF MATTING 4" INTO THE SOIL AROUND STRUCTURES AND STAPLE SECURELY

NOTES:

1. INSTALLATION OF MATTING SHALL CONFORM TO MANUFACTURER'S REQUIREMENTS.



NOTES

1. La IS THE LENGTH OF THE RIPRAP APRON
2. d= 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".
3. IN A WELL–DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
4. FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.
5. REFERENCE NCDEQ LAND QUALITY SECTION DESIGN MANUAL: 6.41.

NOTE:

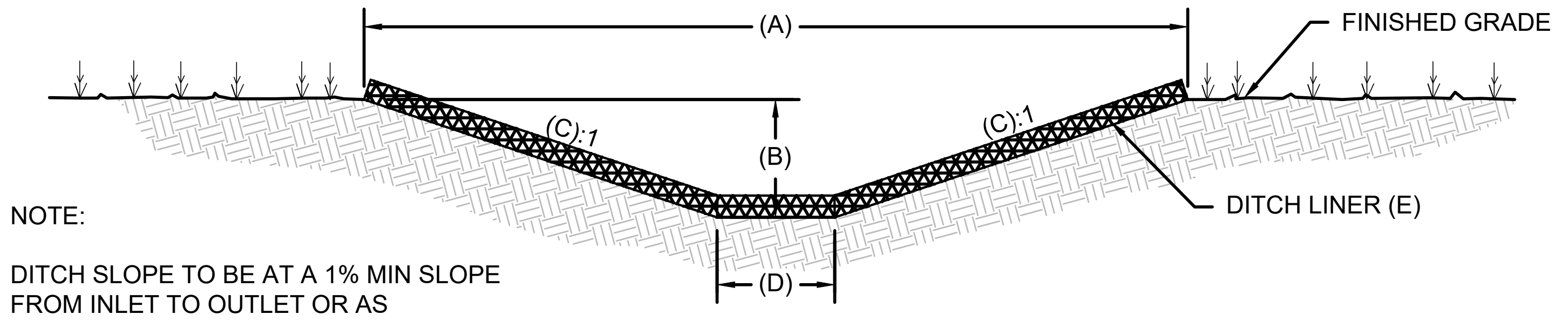
INCREASE DIMENSIONS OF STONE APRON
25-50% WHEN DISCHARGE LOCATION VELOCITY
EXCEEDS 10 FT/S OR OUTFALLS ONTO SLOPES

RIPRAP APRON SIZING

OUTLET No.	PIPE DIAMETER (Do)	3 x Do	APRON LENGTH (La)	APRON WIDTH (W=Do+La)	RIPRAP SIZE (d_{50}xTHICKNESS)
PERMANENT OUTLET PROTECTION 1	24" (EQUIVALENCY)	6'	13'	15'	6"
PERMANENT OUTLET PROTECTION 2	18" DIAMETER	5'	10'	12'	6"

EC 17 OUTLET PROTECTION

UPDATED MARCH, 2017
NOT TO SCALE



NOTE:

DITCH SLOPE TO BE AT A 1% MIN SLOPE FROM INLET TO OUTLET OR AS OTHERWISE INDICATED ON THE PLANS

DITCH ID	TOP WIDTH (A)	DEPTH (B)	SIDE SLOPES (C)	BOTTOM WIDTH (D)	LINER (E)
PERMANENT DITCH 1	18'	2'	4:1	2'	S150BN
PERMANENT DITCH 2	14'	1.5'	4:1	2'	S150BN

ISSUED FOR BID

EC 8 PERMANENT DIVERSION DITCH W/ EROSION CONTROL MATTING

UPDATED MARCH, 2017
NOT TO SCALE

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SAFE DIGGING PARTNER

P:\2024\24.07082-RIVEROFLBC-SITE EXPANSION\DRAWINGS\PLAN SHEETS\24.07082_RIVER OF LIFE DETAILS.DWG PLOT DATE 8/20/2026 8:14 AM TONY MINTZ

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Suite 103
Shallotte, NC 28470
910.755.5872
NC Firm License # C-0459
mcgillassociates.com

SEAL 50548
THOMAS P. MANNINO

SIGNED AND DATED:
8/20/26

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NO.	DATE	BY	DESCRIPTION

SITE EXPANSION DEVELOPMENT PLANS
FOR
RIVER OF LIFE BAPTIST CHURCH
BRUNSWICK COUNTY, NORTH CAROLINA

NOT TO SCALE

OFFICE MANAGER: M. NORTON
DESIGNER: T. MINTZ
PROJECT MANAGER: J. MURRAY
REVIEWER: T. MANNINO

STORMWATER AND EROSION CONTROL DETAILS

DATE: AUGUST, 2025
PROJECT #: 24.07082
FUNDING #: N/A

SHEET
C-503

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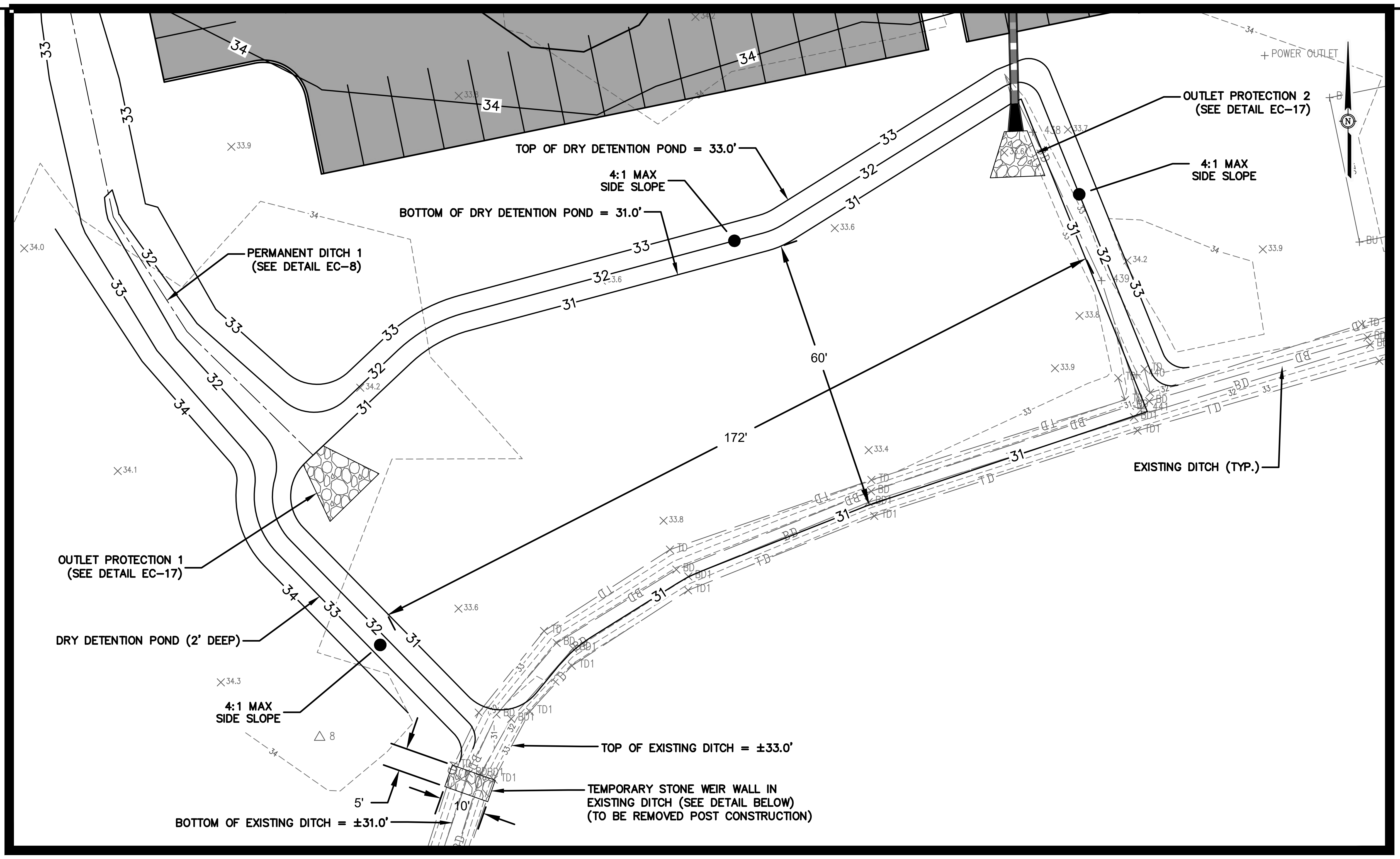
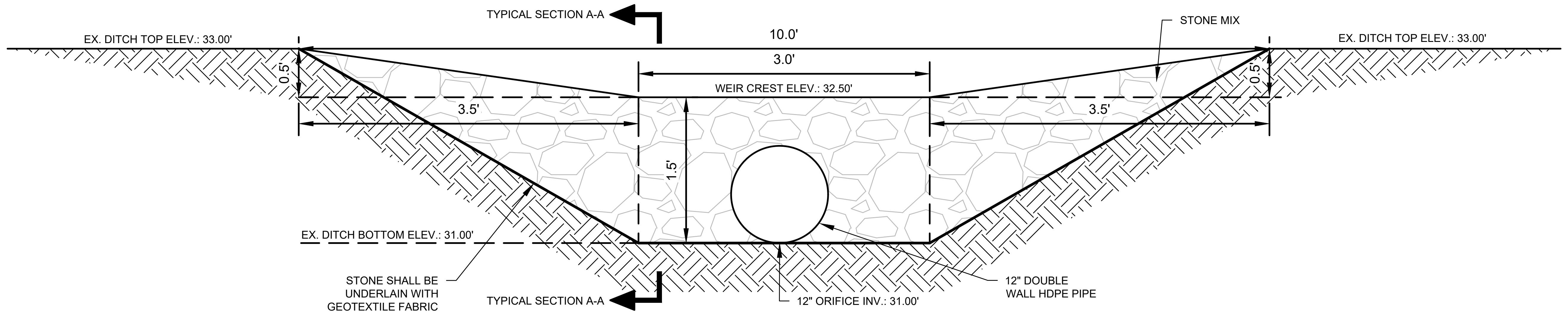


TOP OF DRY DETENTION POND = 33.0'
4:1 MAX SIDE SLOPE
BOTTOM OF DRY DETENTION POND = 31.0'
PERMANENT DITCH 1 (SEE DETAIL EC-8)
OUTLET PROTECTION 2 (SEE DETAIL EC-17)
4:1 MAX SIDE SLOPE
POWER OUTLET
60'
172'
EXISTING DITCH (TYP.)
OUTLET PROTECTION 1 (SEE DETAIL EC-17)
DRY DETENTION POND (2' DEEP)
4:1 MAX SIDE SLOPE
TOP OF EXISTING DITCH = ±33.0'
TEMPORARY STONE WEIR WALL IN EXISTING DITCH (SEE DETAIL BELOW) (TO BE REMOVED POST CONSTRUCTION)
5'
10'
BOTTOM OF EXISTING DITCH = ±31.0'
31
32
33
34

SEDIMENT BASIN INSET

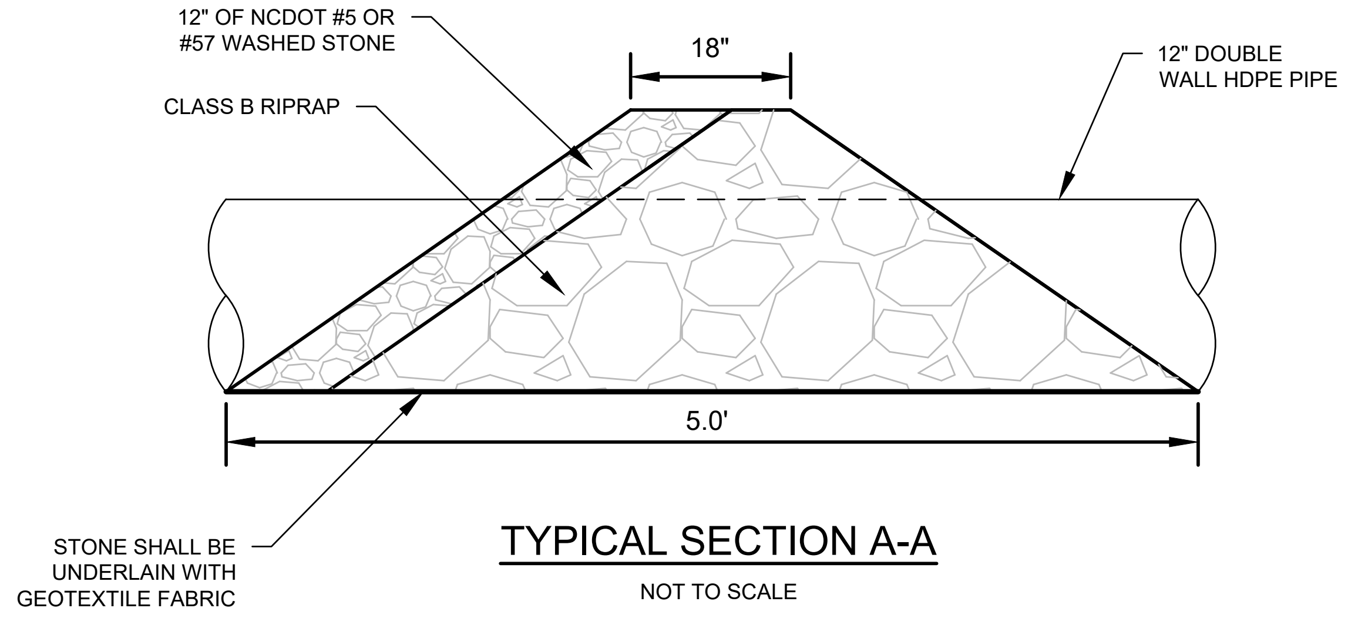
SCALE: 1" = 20'



TYPICAL SECTION A-A
EX. DITCH TOP ELEV.: 33.00'
10.0'
3.0'
STONE MIX
EX. DITCH TOP ELEV.: 33.00'
0.5'
WEIR CREST ELEV.: 32.50'
0.5'
3.5'
3.5'
1.5'
EX. DITCH BOTTOM ELEV.: 31.00'
STONE SHALL BE UNDERLAIN WITH GEOTEXTILE FABRIC
TYPICAL SECTION A-A
12" ORIFICE INV.: 31.00'
12" DOUBLE WALL HDPE PIPE

TEMPORARY STONE WEIR WALL IN EXISTING DITCH

NOT TO SCALE



12" OF NCDOT #5 OR #57 WASHED STONE
CLASS B RIPRAP
18"
12" DOUBLE WALL HDPE PIPE
5.0'
STONE SHALL BE UNDERLAIN WITH GEOTEXTILE FABRIC

TYPICAL SECTION A-A

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NORTH CAROLINA PROFESSIONAL SEAL 025856 ENGINEER MICHAEL A. NORTON

SIGNED AND DATED:

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NO.	DATE	BY	DESCRIPTION

SITE EXPANSION DEVELOPMENT PLANS
FOR
RIVER OF LIFE BAPTIST CHURCH
BRUNSWICK COUNTY, NORTH CAROLINA

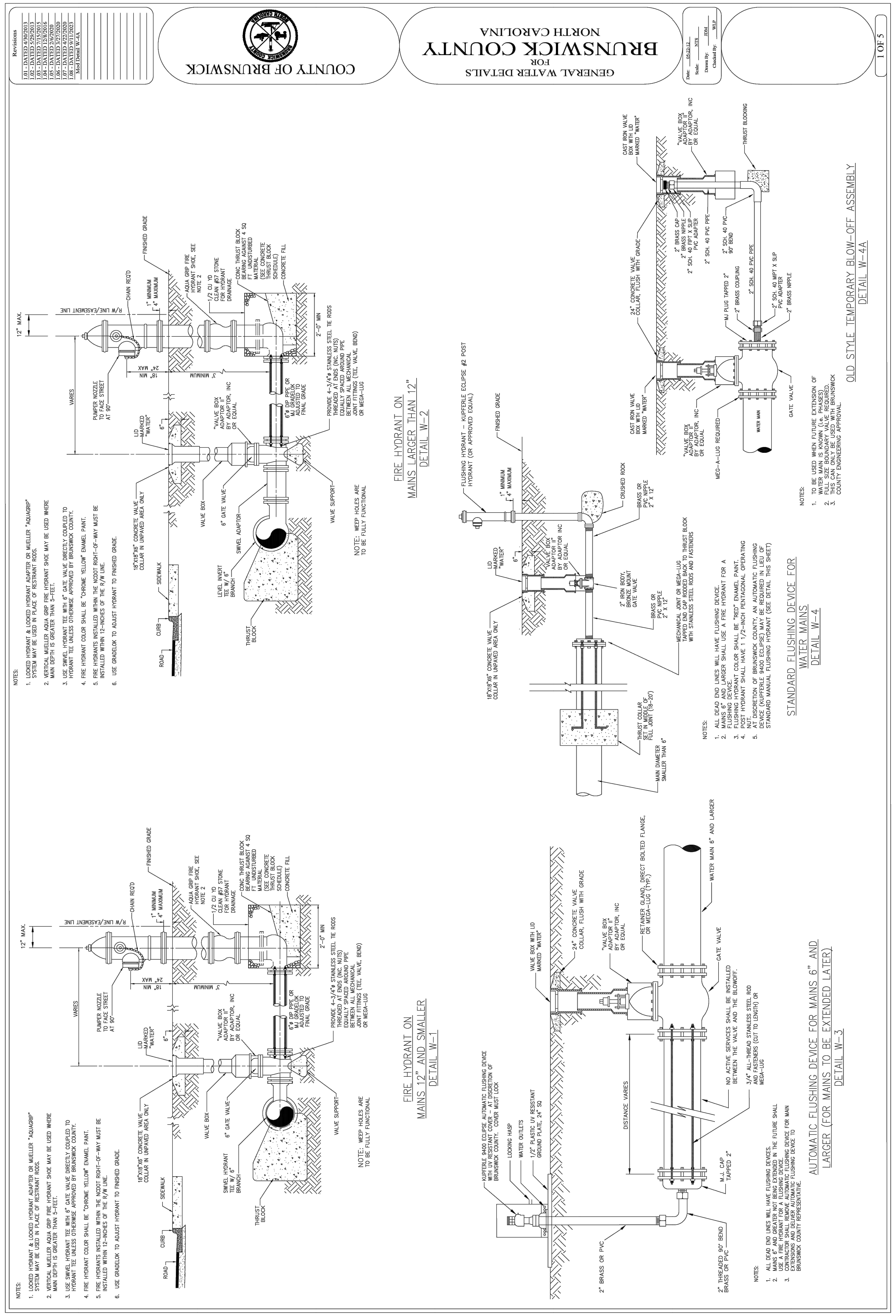
NOT TO SCALE

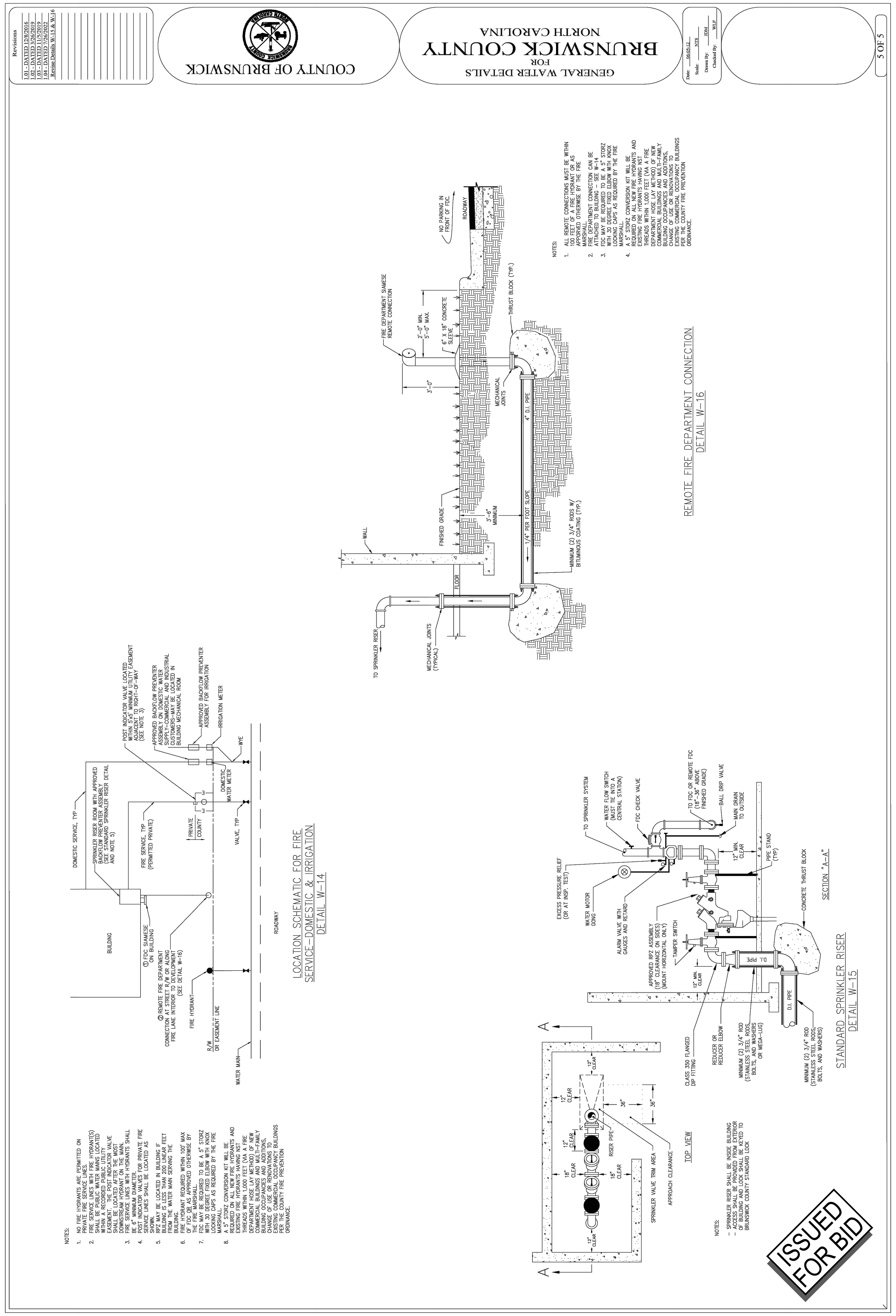
OFFICE MANAGER	DESIGNER
M. NORTON	T. MINTZ
PROJECT MANAGER	REVIEWER
J. MURRAY	T. MANNINO

STORMWATER AND EROSION CONTROL DETAILS

DATE	PROJECT #	FUNDING #
AUGUST, 2025	24.07082	N/A

SHEET
C-504


COUNTY OF BRUNSWICK
GENERAL WATER DETAILS FOR BRUNSWICK COUNTY NORTH CAROLINA
1 OF 5
FIRE HYDRANT ON MAINS LARGER THAN 12" DETAIL W-2
FIRE HYDRANT ON MAINS 12" AND SMALLER DETAIL W-1
STANDARD FLUSHING DEVICE FOR WATER MAINS DETAIL W-4
AUTOMATIC FLUSHING DEVICE FOR MAINS 6" AND LARGER (FOR MAINS TO BE EXTENDED LATER) DETAIL W-3
OLD STYLE TEMPORARY BLOW-OFF ASSEMBLY DETAIL W-4A


COUNTY OF BRUNSWICK
GENERAL WATER DETAILS FOR BRUNSWICK COUNTY NORTH CAROLINA
5 OF 5
REMOTE FIRE DEPARTMENT CONNECTION DETAIL W-16
LOCATION SCHEMATIC FOR FIRE SERVICE-DOMESTIC & IRRIGATION DETAIL W-14
STANDARD SPRINKLER RISER DETAIL W-15
SECTION "A-A"
TOP VIEW
ISSUED FOR BID

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Shallotte, NC 28470
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NC Firm License # C-0459
mcgillassociates.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 50548 THOMAS P. MANNINO

SIGNED AND DATED:
8/20/26

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NO.	DATE	BY	DESCRIPTION

SITE EXPANSION DEVELOPMENT PLANS
FOR
RIVER OF LIFE BAPTIST CHURCH
BRUNSWICK COUNTY, NORTH CAROLINA

NOT TO SCALE

OFFICE MANAGER	DESIGNER
M. NORTON	T. MINTZ
PROJECT MANAGER	REVIEWER
J. MURRAY	T. MANNINO

WATER DETAILS

DATE	PROJECT #	FUNDING #
AUGUST, 2025	24.07082	N/A

SHEET
C-505

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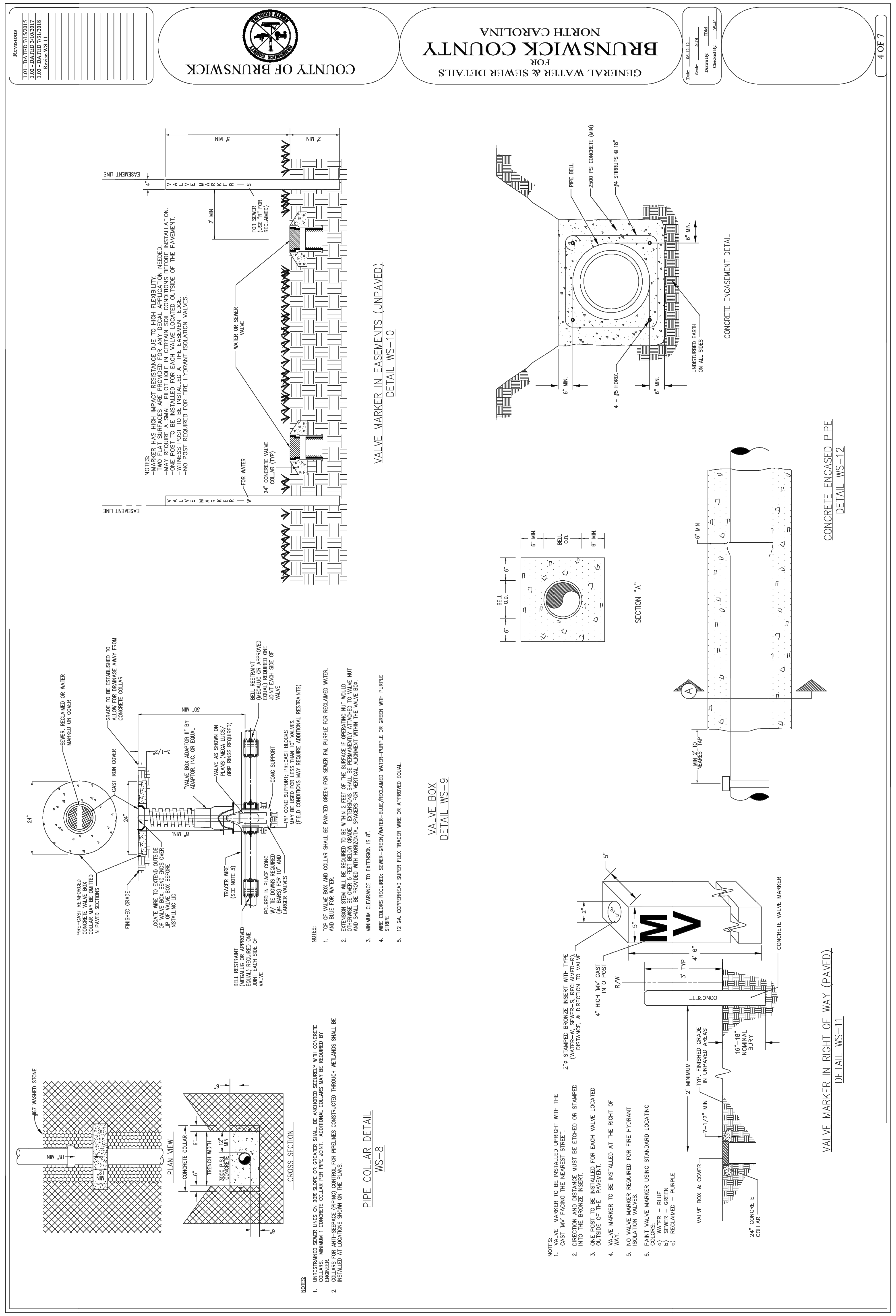

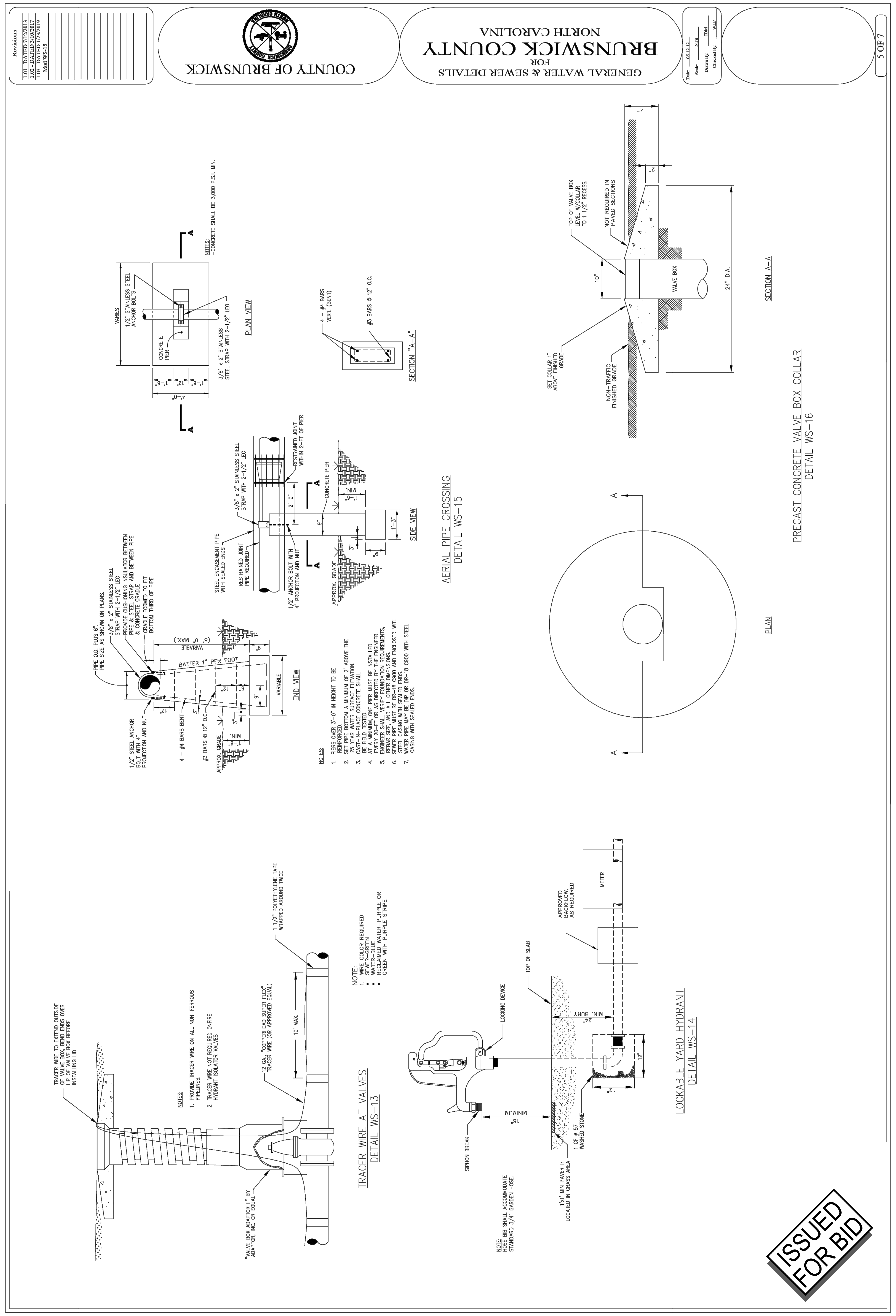

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SITE EXPANSION DEVELOPMENT PLANS
FOR

RIVER OF LIFE BAPTIST CHURCH

BRUNSWICK COUNTY, NORTH CAROLINA

NOT TO SCALE

OFFICE MANAGER M. NORTON	DESIGNER T. MINTZ
PROJECT MANAGER J. MURRAY	REVIEWER T. MANNINO

WATER DETAILS

DATE	PROJECT #	FUNDING #
AUGUST, 2025	24.07082	N/A

SHEET
C-506

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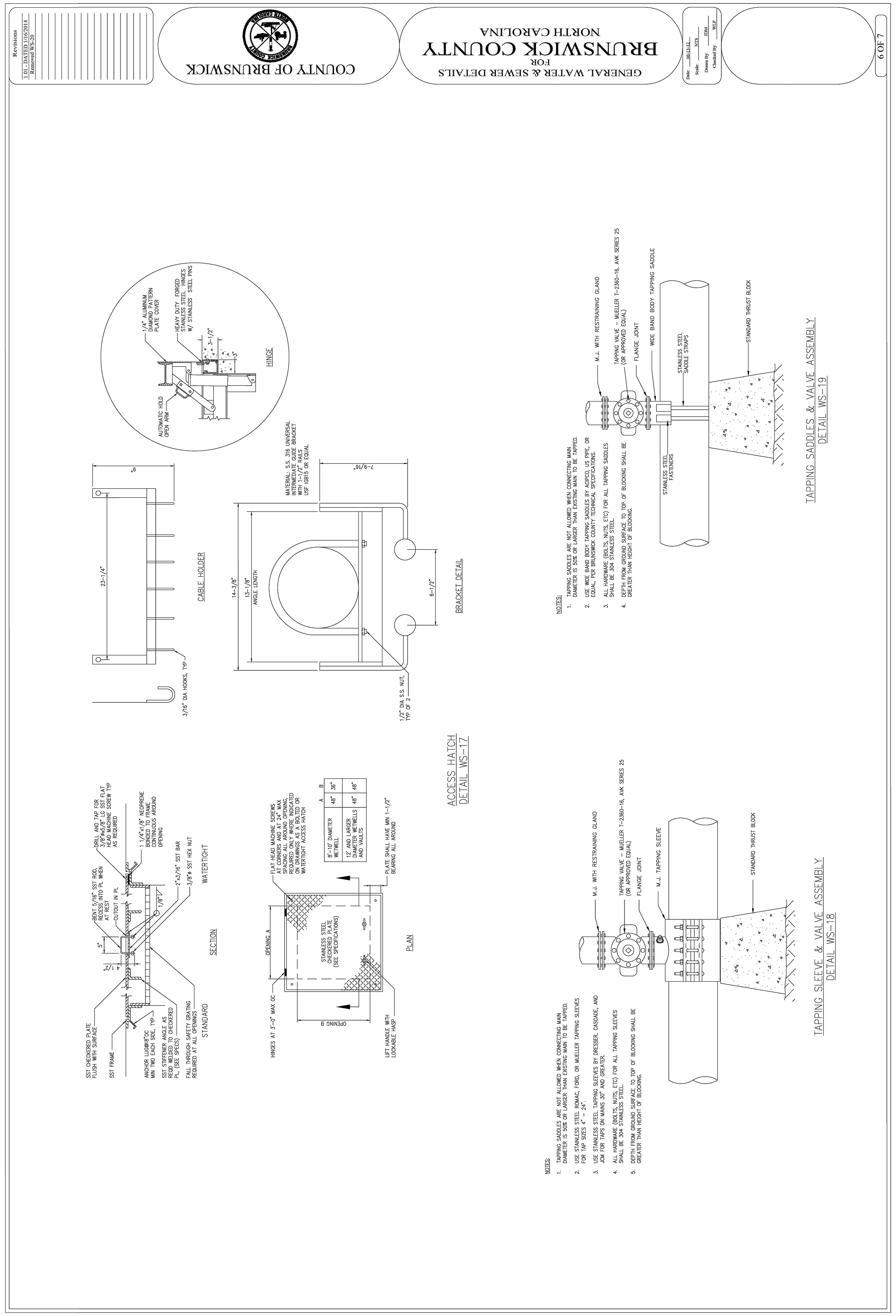

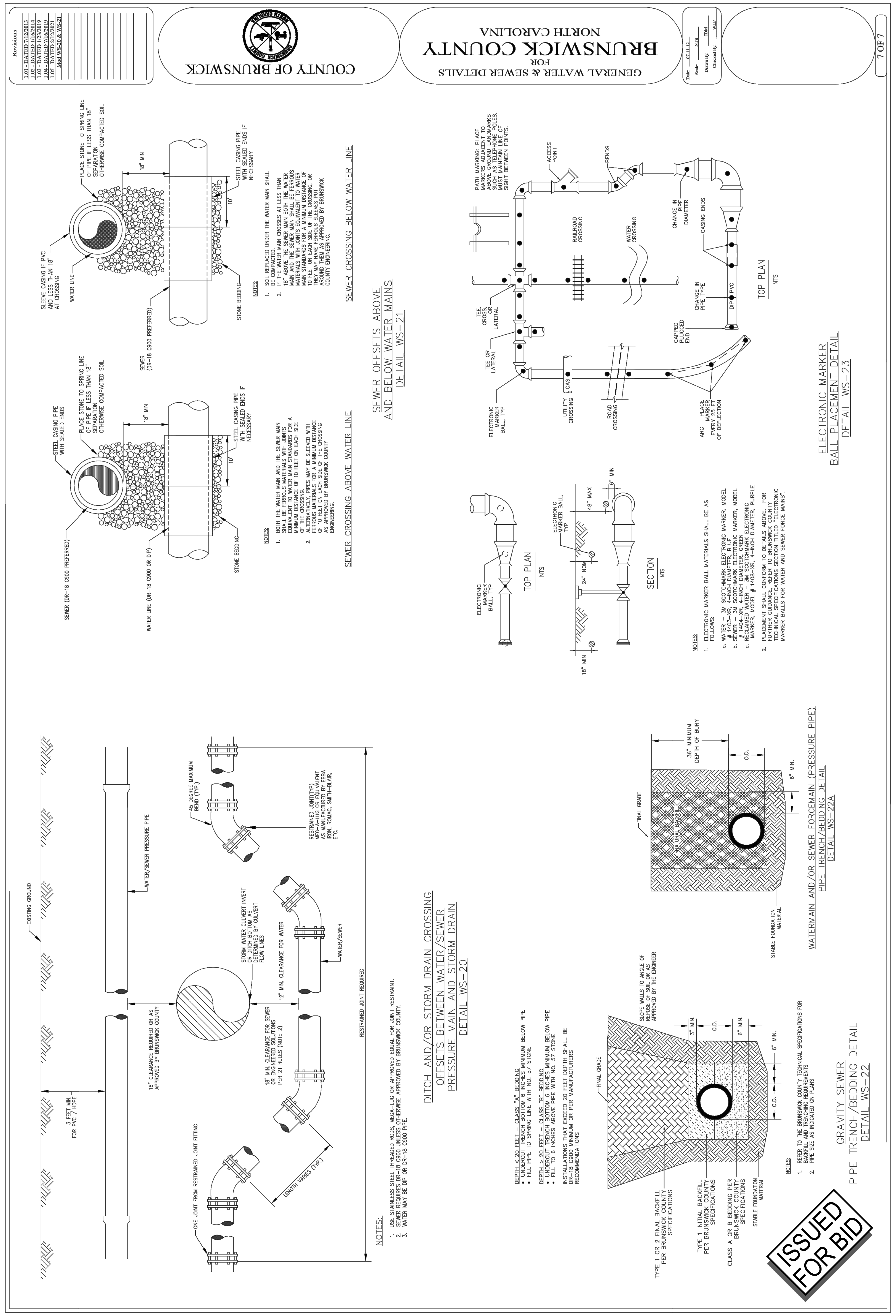
GENERAL WATER & SEWER DETAILS
FOR
BRUNSWICK COUNTY
NORTH CAROLINA
COUNTY OF BRUNSWICK
7 OF 7
SEWER OFFSETS ABOVE AND BELOW WATER MAINS
DETAIL WS-21
ELECTRONIC MARKER BALL PLACEMENT DETAIL
DETAIL WS-23
DITCH AND/OR STORM DRAIN CROSSING OFFSETS BETWEEN WATER/SEWER PRESSURE MAIN AND STORM DRAIN
DETAIL WS-20
WATERMAIN AND/OR SEWER FORCEMAIN (PRESSURE PIPE) PIPE TRENCH/BEDDING DETAIL
DETAIL WS-22A
GRAVITY SEWER PIPE TRENCH/BEDDING DETAIL
DETAIL WS-22

ISSUED FOR BID

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SITE EXPANSION DEVELOPMENT PLANS
FOR

RIVER OF LIFE BAPTIST CHURCH

BRUNSWICK COUNTY, NORTH CAROLINA

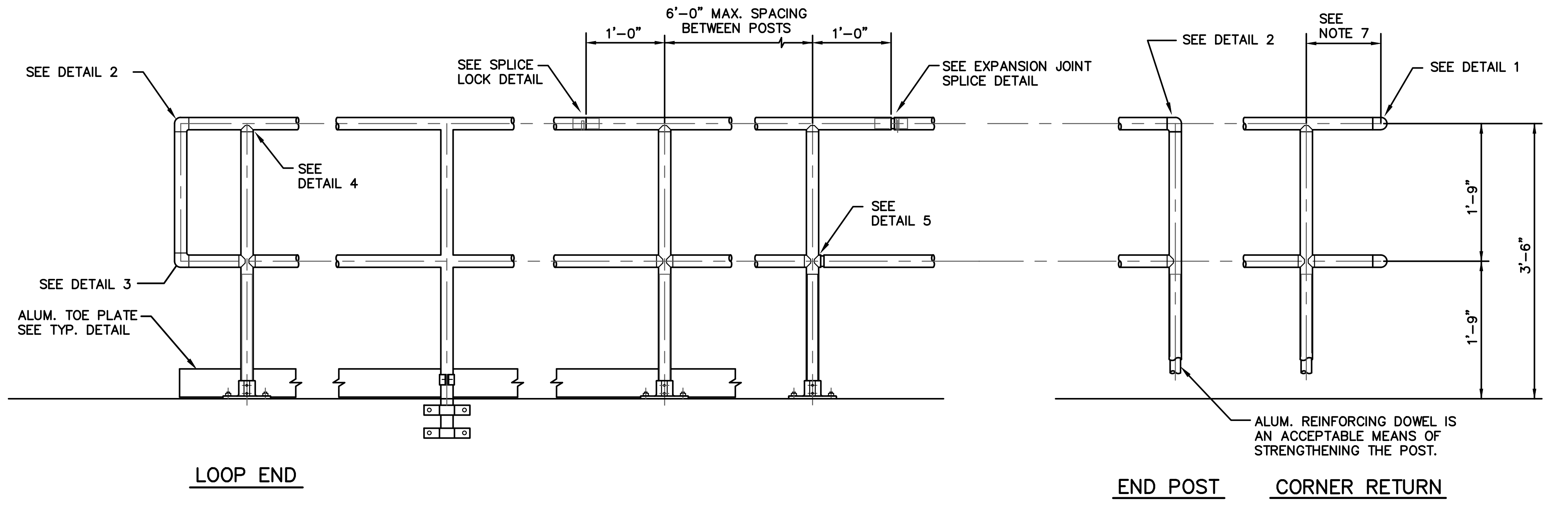
NOT TO SCALE

OFFICE MANAGER M. NORTON	DESIGNER T. MINTZ
PROJECT MANAGER J. MURRAY	REVIEWER T. MANNINO

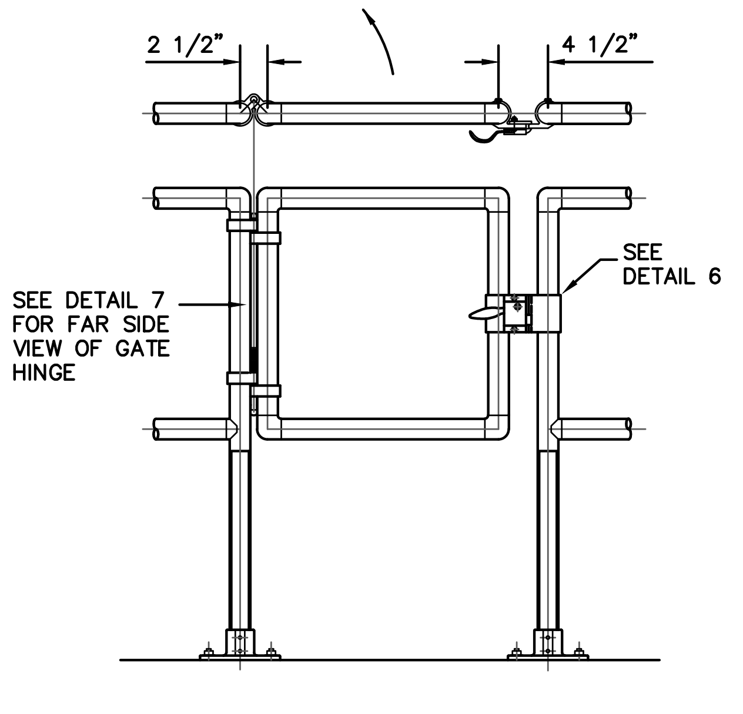
WATER DETAILS

DATE	PROJECT #	FUNDING #
AUGUST, 2025	24.07082	N/A

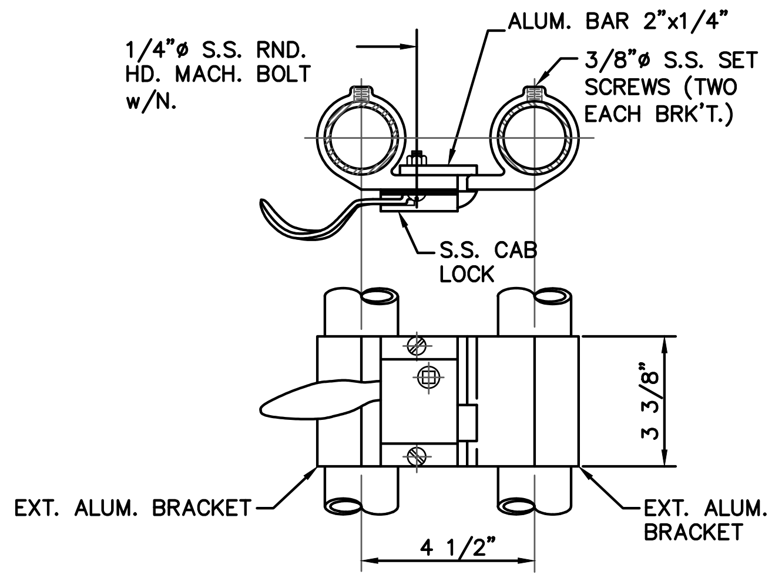
SHEET
C-507


6'-0" MAX. SPACING BETWEEN POSTS
1'-0"
1'-0"
SEE DETAIL 2
SEE SPLICE LOCK DETAIL
SEE EXPANSION JOINT SPLICE DETAIL
SEE DETAIL 4
SEE DETAIL 5
SEE DETAIL 3
ALUM. TOE PLATE SEE TYP. DETAIL
SEE DETAIL 2
SEE NOTE 7
SEE DETAIL 1
1'-9"
1'-9"
3'-6"
ALUM. REINFORCING DOWEL IS AN ACCEPTABLE MEANS OF STRENGTHENING THE POST.
LOOP END
END POST
CORNER RETURN

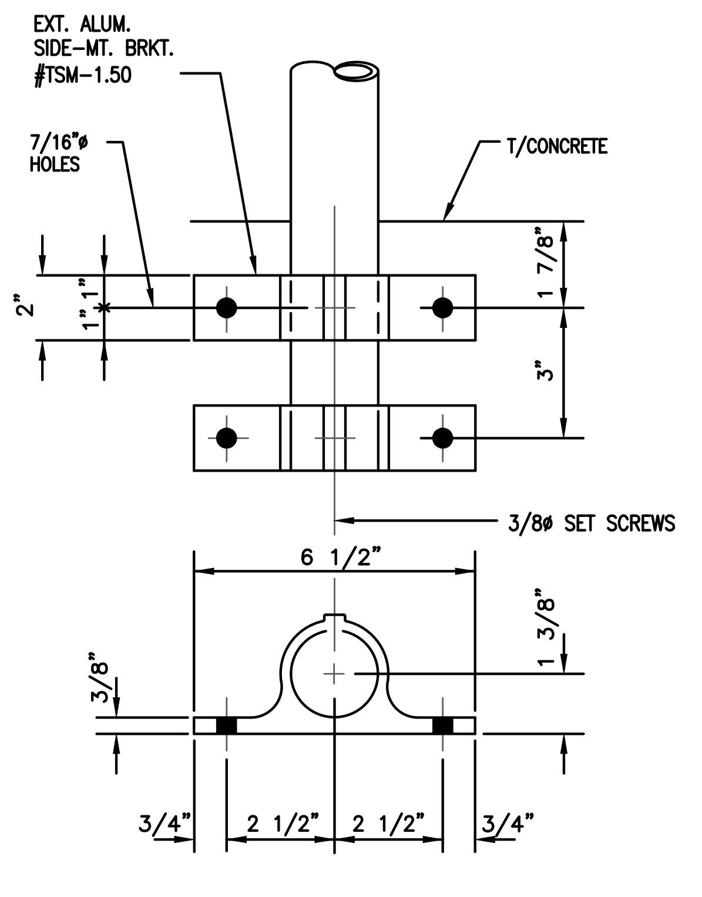
TYPICAL HANDRAIL



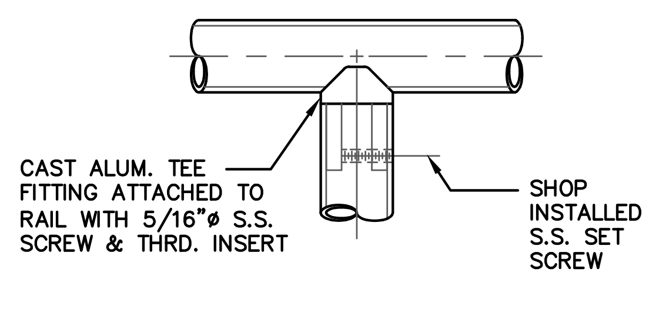
TYPICAL GATE



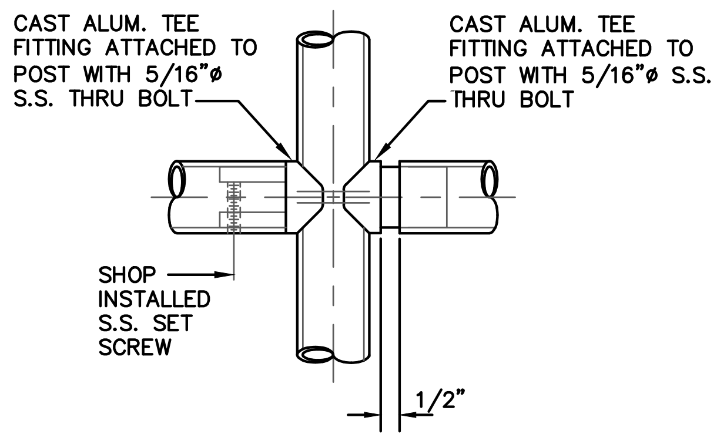
DETAIL 6



SIDE-MOUNTED HAND RAIL

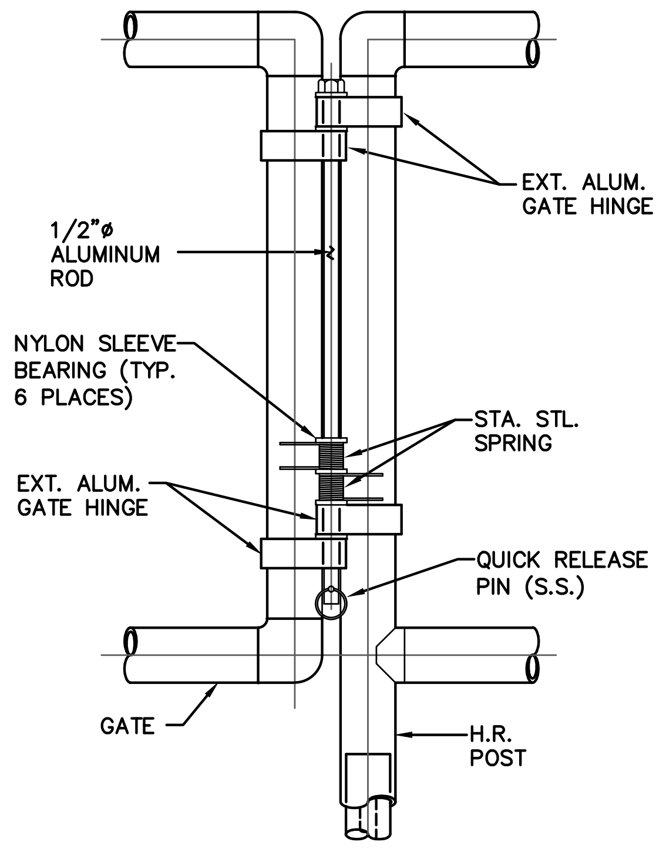

CAST ALUM. TEE FITTING ATTACHED TO RAIL WITH 5/16"ø S.S. SCREW & THRD. INSERT
SHOP INSTALLED S.S. SET SCREW

DETAIL 4

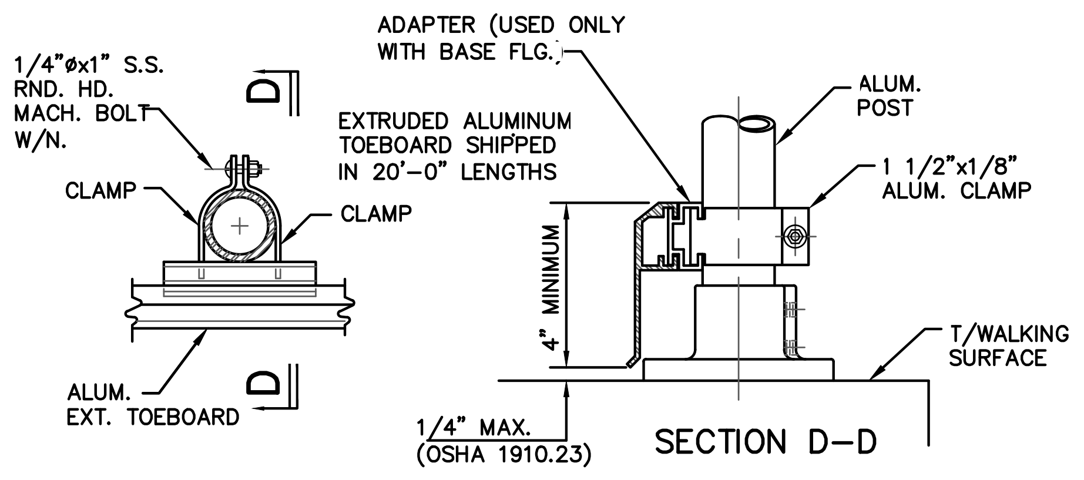

CAST ALUM. TEE FITTING ATTACHED TO POST WITH 5/16"ø S.S. THRU BOLT
CAST ALUM. TEE FITTING ATTACHED TO POST WITH 5/16"ø S.S. THRU BOLT
SHOP INSTALLED S.S. SET SCREW
1/2"

DETAIL 5

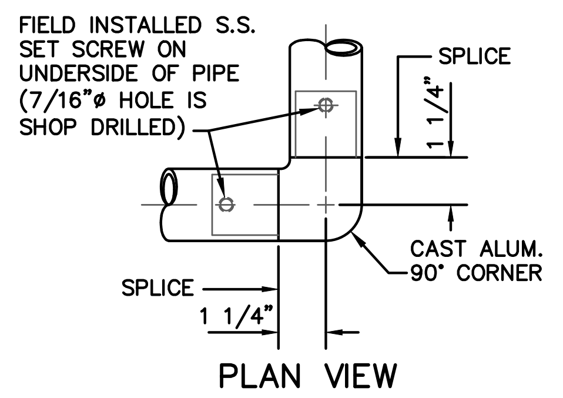
MIDRAIL EXPANSION SPLICE LOCATED AT 60'-0" MAX. INTERVALS



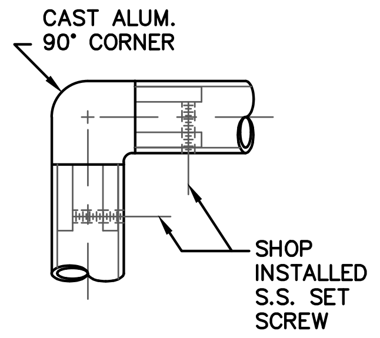
DETAIL 7



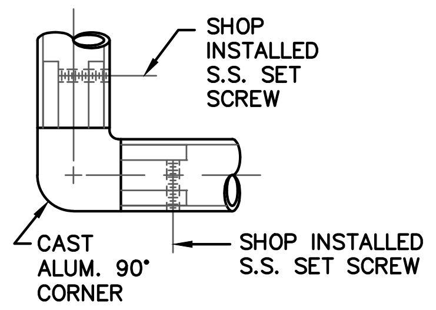
TYPICAL TOEBOARD DETAILS


FIELD INSTALLED S.S. SET SCREW ON UNDERSIDE OF PIPE (7/16"ø HOLE IS SHOP DRILLED)
SPLICE
1 1/4"
CAST ALUM. 90° CORNER
SPLICE
1 1/4"
PLAN VIEW

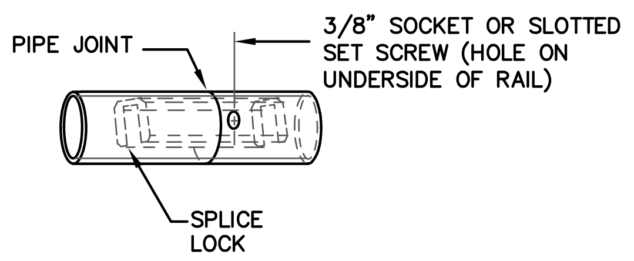
DETAIL 1



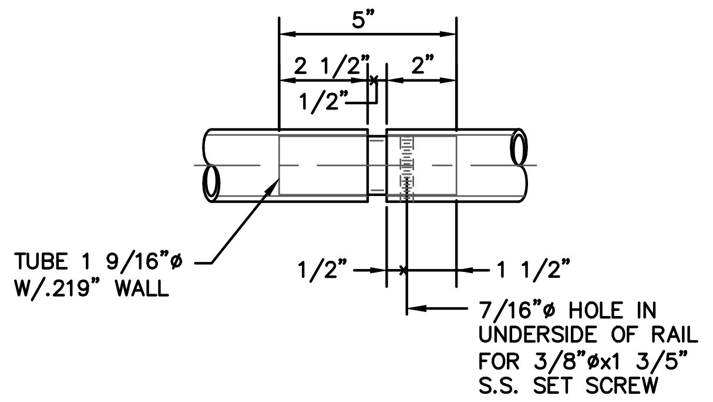
DETAIL 2



DETAIL 3

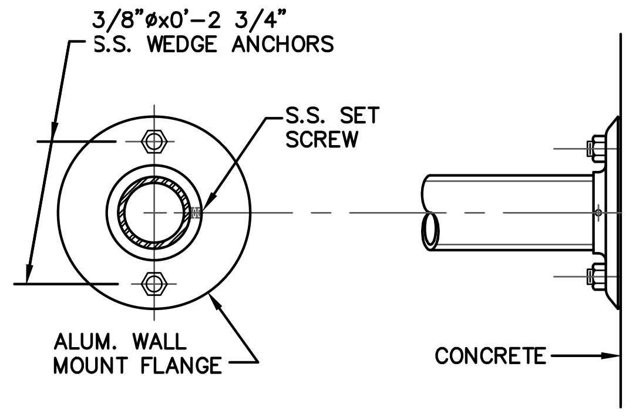

PIPE JOINT
3/8" SOCKET OR SLOTTED SET SCREW (HOLE ON UNDERSIDE OF RAIL)
SPLICE LOCK

SPLICE LOCK

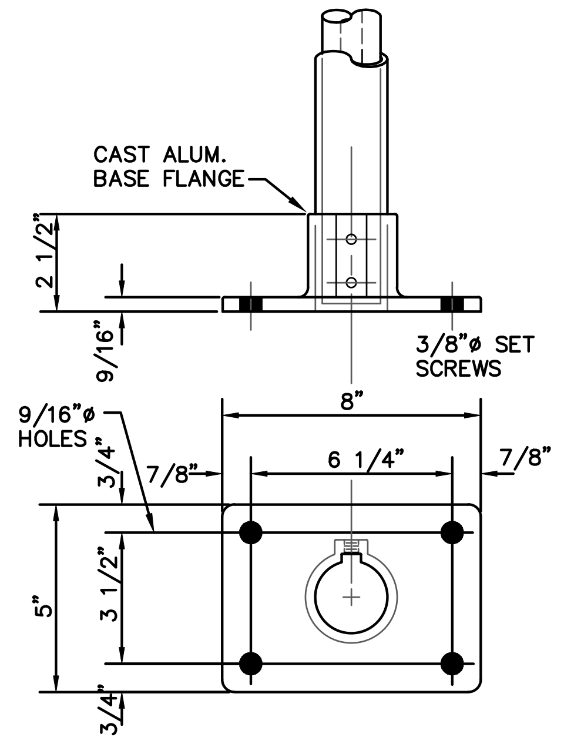

5"
2 1/2"
2"
1/2"
TUBE 1 9/16"ø W/.219" WALL
1/2"
1 1/2"
7/16"ø HOLE IN UNDERSIDE OF RAIL FOR 3/8"øx1 3/5" S.S. SET SCREW

EXPANSION JOINT SPLICE

LOCATED AT 60'-0" MAX. INTERVALS

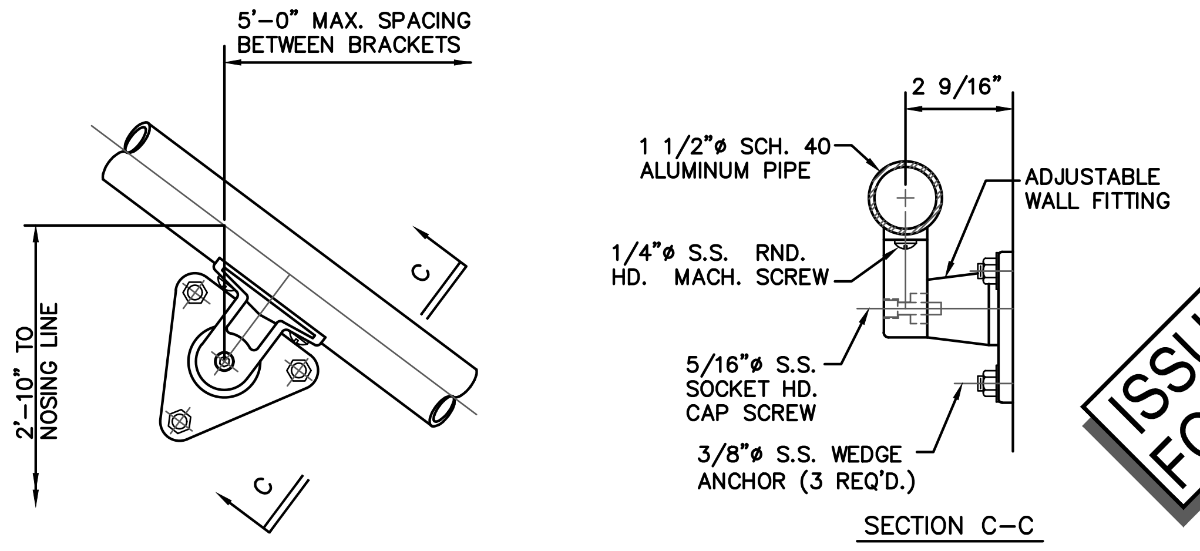


WALL FLANGE DETAIL



HANDRAIL BASE FLANGE

LOCATE SET SCREWS IN BASE FLANGE AT 90° FROM CENTERLINE OF H.R. RUN AND ON SIDE AWAY FROM WALKING SURFACE.


5'-0" MAX. SPACING BETWEEN BRACKETS
2'-10" TO NOSING LINE
C
C
2 9/16"
1 1/2"ø SCH. 40 ALUMINUM PIPE
ADJUSTABLE WALL FITTING
1/4"ø S.S. RND. HD. MACH. SCREW
5/16"ø S.S. SOCKET HD. CAP SCREW
3/8"ø S.S. WEDGE ANCHOR (3 REQ'D.)
SECTION C-C

WALL RAIL ELEVATION

STANDARD BUILDING CODE AND 1990 BOCA DESIGN SPECIFICATIONS FOR FACTORY-INDUSTRIAL APPLICATIONS

1. HANDRAIL SHALL BE THE PRODUCT OF A COMPANY NORMALLY ENGAGED IN THE MANUFACTURE OF PIPE RAILING. RAILING SHALL BE SHOP ASSEMBLED IN LENGTHS NOT TO EXCEED 24 FEET FOR FIELD ERECTION.
2. HANDRAILS AND STAIR RAILS SHALL BE DESIGNED TO WITHSTAND A 200# CONCENTRATED LOAD APPLIED IN ANY DIRECTION AT ANY POINT ON THE TOP RAIL. HANDRAILS AND STAIR RAILS SHALL ALSO BE DESIGNED TO WITHSTAND A LOAD OF 50#/FT APPLIED HORIZONTALLY TO THE TOP RAIL. THE 200# LOAD WILL NOT BE APPLIED SIMULTANEOUSLY WITH THE 50#/FT LOAD. IN ADDITION, THE HANDRAILS SHALL BE DESIGNED TO WITHSTAND A LOAD OF 100#/FT APPLIED VERTICALLY DOWNWARD TO THE TOP RAIL AND SIMULTANEOUSLY WITH THE 50#/FT HORIZONTAL LOAD. THE 100#/FT VERTICAL LOAD DOES NOT APPLY TO STAIR RAILS.
3. THE MANUFACTURER SHALL SUBMIT CALCULATIONS TO THE ENGINEER FOR APPROVAL. TESTING OF BASE CASTINGS OR BASE EXTRUSIONS BY AN INDEPENDENT LAB OR MANUFACTURER'S LAB (IF MANUFACTURER'S LAB MEETS THE REQUIREMENTS OF THE ALUMINUM ASSOCIATION) WILL BE AN ACCEPTABLE SUBSTITUTE FOR CALCULATIONS. CALCULATIONS WILL BE REQUIRED FOR APPROVAL OF ALL OTHER DESIGN ASPECTS.
4. POST SPACING SHALL BE A MAXIMUM OF 6'-0". POSTS AND RAILINGS SHALL BE A MINIMUM OF 1-1/2" SCHEDULE 40 ALUMINUM PIPE ALLOY 6105-T5, ASTM-B-429 OR ASTM-B-221. THE HANDRAIL MANUFACTURER SHALL SHOW THAT THEIR POSTS ARE OF ADEQUATE STRENGTH TO MEET THE LOADING REQUIREMENTS. IF THE MANUFACTURER'S POSTS ARE NOT OF ADEQUATE STRENGTH, THE MANUFACTURER MAY REDUCE THE POST SPACING OR ADD REINFORCING DOWELS OR MAY DO BOTH IN ORDER TO MEET LOADING REQUIREMENTS.
5. THE HANDRAIL SHALL BE MADE OF PIPES JOINED TOGETHER WITH COMPONENT FITTINGS. SAMPLES OF ALL COMPONENTS, BASES, TOE PLATE AND PIPE MUST BE SUBMITTED FOR APPROVAL. COMPONENTS THAT ARE POP-RIVETED OR GLUED AT THE JOINTS WILL NOT BE ACCEPTABLE. ALL COMPONENTS MUST BE MECHANICALLY FASTENED WITH STAINLESS STEEL HARDWARE. HANDRAIL AND COMPONENTS SHALL BE TUF RAIL, AS MANUFACTURED BY THOMPSON FABRICATING COMPANY (B'HAM, AL.) OR APPROVED EQUAL.
6. POSTS SHALL NOT INTERRUPT THE CONTINUATION OF THE TOP RAIL AT ANY POINT ALONG THE RAILING, INCLUDING CORNERS AND END TERMINATIONS (OSHA 1910.23). THE TOP SURFACE OF THE TOP RAILING SHALL BE SMOOTH AND SHALL NOT BE INTERRUPTED BY PROJECTING FITTINGS.
7. THE MIDRAIL AT A CORNER RETURN SHALL BE ABLE TO WITHSTAND A 200# LOAD WITHOUT LOOSENING. THE MANUFACTURER IS TO DETERMINE THIS DIMENSION FOR THEIR SYSTEM. PROVIDE PHYSICAL TESTS FROM A LABORATORY TO CONFIRM COMPLIANCE.
8. EXPANSION BOLTS SHALL BE SPACED 10D APART AND 5D EDGE DISTANCE FOR NO REDUCTION IN PULLOUT STRENGTH. A SAFETY FACTOR OF 4 SHALL BE USED ON EXPANSION BOLT PULLOUT VALUES PUBLISHED BY THE MANUFACTURER. EXPANSION BOLTS SHALL BE STAINLESS STEEL TYPE 303 WEDGE BOLTS AND SHALL BE FURNISHED BY THE HANDRAIL MANUFACTURER.
9. TOE PLATE SHALL CONFORM TO OSHA STANDARDS. TOE PLATE SHALL BE A MINIMUM OF 4" HIGH AND SHALL BE AN EXTRUSION THAT ATTACHES TO THE POSTS WITH CLAMPS WHICH WILL ALLOW FOR EXPANSION AND CONTRACTION BETWEEN POSTS. TOE PLATES SHALL BE SET 1/4" ABOVE THE WALKING SURFACE. TOE PLATES SHALL BE PROVIDED ON HANDRAILS AS REQUIRED BY OSHA AND/OR AS SHOWN ON DRAWINGS. TOE PLATES SHALL BE SHIPPED LOOSE IN STOCK LENGTHS WITH PRE-MANUFACTURED CORNERS FOR FIELD INSTALLATION.
10. OPENINGS IN THE RAILING SHALL BE GUARDED BY A SELF-CLOSING GATE (OSHA 1910.23). SAFETY CHAINS SHALL NOT BE USED UNLESS SPECIFICALLY SHOWN ON THE DRAWINGS.
11. FINISH SHALL BE ALUMINUM ASSOCIATION M10-C22-A41 (215-R1). THE PIPE SHALL BE PLASTIC WRAPPED. THE PLASTIC WRAP IS TO BE REMOVED AFTER ERECTION.
12. ALUMINUM SURFACES IN CONTACT WITH CONCRETE, GROUT OR DISSIMILAR METALS WILL BE PROTECTED WITH A NEOPRENE PAD, MYLAR ISOLATORS OR OTHER APPROVED MATERIAL.

NOTE: MANUFACTURER'S STANDARD DIMENSIONS AND DETAILS MAY BE UTILIZED ON HANDRAIL AND FITTINGS PROVIDED ALL OSHA AND BUILDING CODES REQUIREMENTS ARE MET.

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M
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HANDRAIL DETAILS

UPDATED MARCH, 2017
NOT TO SCALE

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THOMAS P. MANNINO

SIGNED AND DATED:
8/20/26

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NO.	DATE	BY	DESCRIPTION

SITE EXPANSION DEVELOPMENT PLANS
FOR
RIVER OF LIFE BAPTIST CHURCH
BRUNSWICK COUNTY, NORTH CAROLINA

NOT TO SCALE

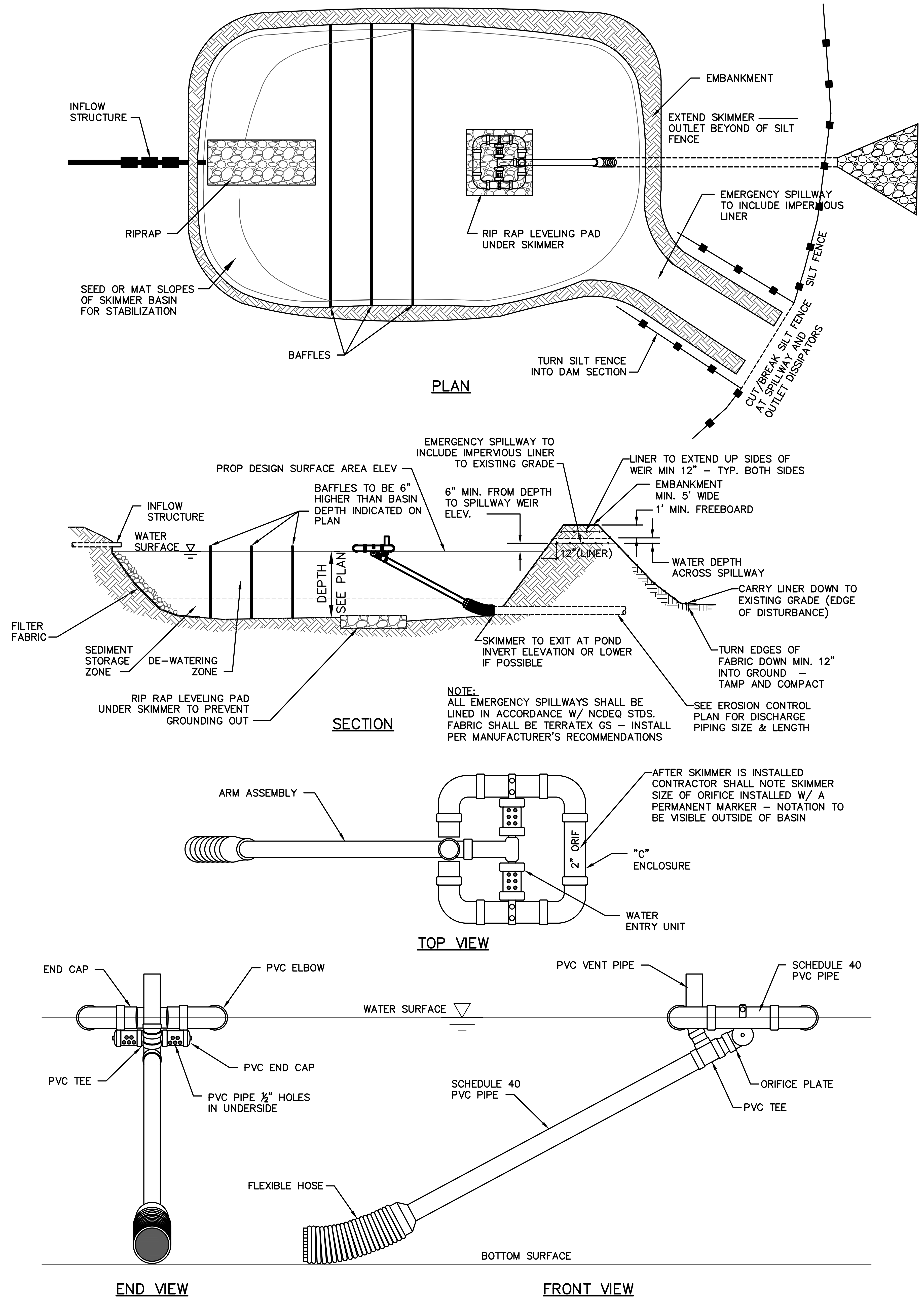
OFFICE MANAGER
M. NORTON
DESIGNER
T. MINTZ
PROJECT MANAGER
J. MURRAY
REVIEWER
T. MANNINO

HANDRAIL DETAILS

DATE
AUGUST, 2025
PROJECT #
24.07082
FUNDING #
N/A

SHEET
C-508

P:\2024\24.07082-RIVEROFLBC-SITE EXPANSION\DRAWINGS\PLAN SHEETS\24.07082_RIVER OF LIFE DETAILS.DWG PLOT DATE 8/20/2026 8:15 AM TONY MINTZ


INFLOW STRUCTURE
RIPRAP
SEED OR MAT SLOPES OF SKIMMER BASIN FOR STABILIZATION
BAFFLES
EMBANKMENT
EXTEND SKIMMER OUTLET BEYOND OF SILT FENCE
EMERGENCY SPILLWAY TO INCLUDE IMPERVIOUS LINER
RIP RAP LEVELING PAD UNDER SKIMMER
SILT FENCE
TURN SILT FENCE INTO DAM SECTION
CUT/BREAK SILT FENCE AT SPILLWAY AND OUTLET DISSIPATORS
PLAN
EMERGENCY SPILLWAY TO INCLUDE IMPERVIOUS LINER TO EXISTING GRADE
PROP DESIGN SURFACE AREA ELEV
LINER TO EXTEND UP SIDES OF WEIR MIN 12" – TYP. BOTH SIDES
EMBANKMENT MIN. 5' WIDE
1' MIN. FREEBOARD
BAFFLES TO BE 6" HIGHER THAN BASIN DEPTH INDICATED ON PLAN
6" MIN. FROM DEPTH TO SPILLWAY WEIR ELEV.
INFLOW STRUCTURE
WATER SURFACE
12"(LINER)
WATER DEPTH ACROSS SPILLWAY
DEPTH SEE PLAN
CARRY LINER DOWN TO EXISTING GRADE (EDGE OF DISTURBANCE)
FILTER FABRIC
SEDIMENT STORAGE ZONE
DE–WATERING ZONE
SKIMMER TO EXIT AT POND INVERT ELEVATION OR LOWER IF POSSIBLE
TURN EDGES OF FABRIC DOWN MIN. 12" INTO GROUND – TAMP AND COMPACT
RIP RAP LEVELING PAD UNDER SKIMMER TO PREVENT GROUNDING OUT
SECTION
SEE EROSION CONTROL PLAN FOR DISCHARGE PIPING SIZE & LENGTH
ARM ASSEMBLY
AFTER SKIMMER IS INSTALLED CONTRACTOR SHALL NOTE SKIMMER SIZE OF ORIFICE INSTALLED W/ A PERMANENT MARKER – NOTATION TO BE VISIBLE OUTSIDE OF BASIN
2" ORIF
"C" ENCLOSURE
WATER ENTRY UNIT
TOP VIEW
END CAP
PVC ELBOW
PVC VENT PIPE
SCHEDULE 40 PVC PIPE
WATER SURFACE
PVC END CAP
PVC TEE
PVC PIPE ½" HOLES IN UNDERSIDE
ORIFICE PLATE
SCHEDULE 40 PVC PIPE
PVC TEE
FLEXIBLE HOSE
BOTTOM SURFACE
END VIEW
FRONT VIEW

NOTE:
ALL EMERGENCY SPILLWAYS SHALL BE LINED IN ACCORDANCE W/ NCDEQ STDS. FABRIC SHALL BE TERRATEX GS – INSTALL PER MANUFACTURER'S RECOMMENDATIONS

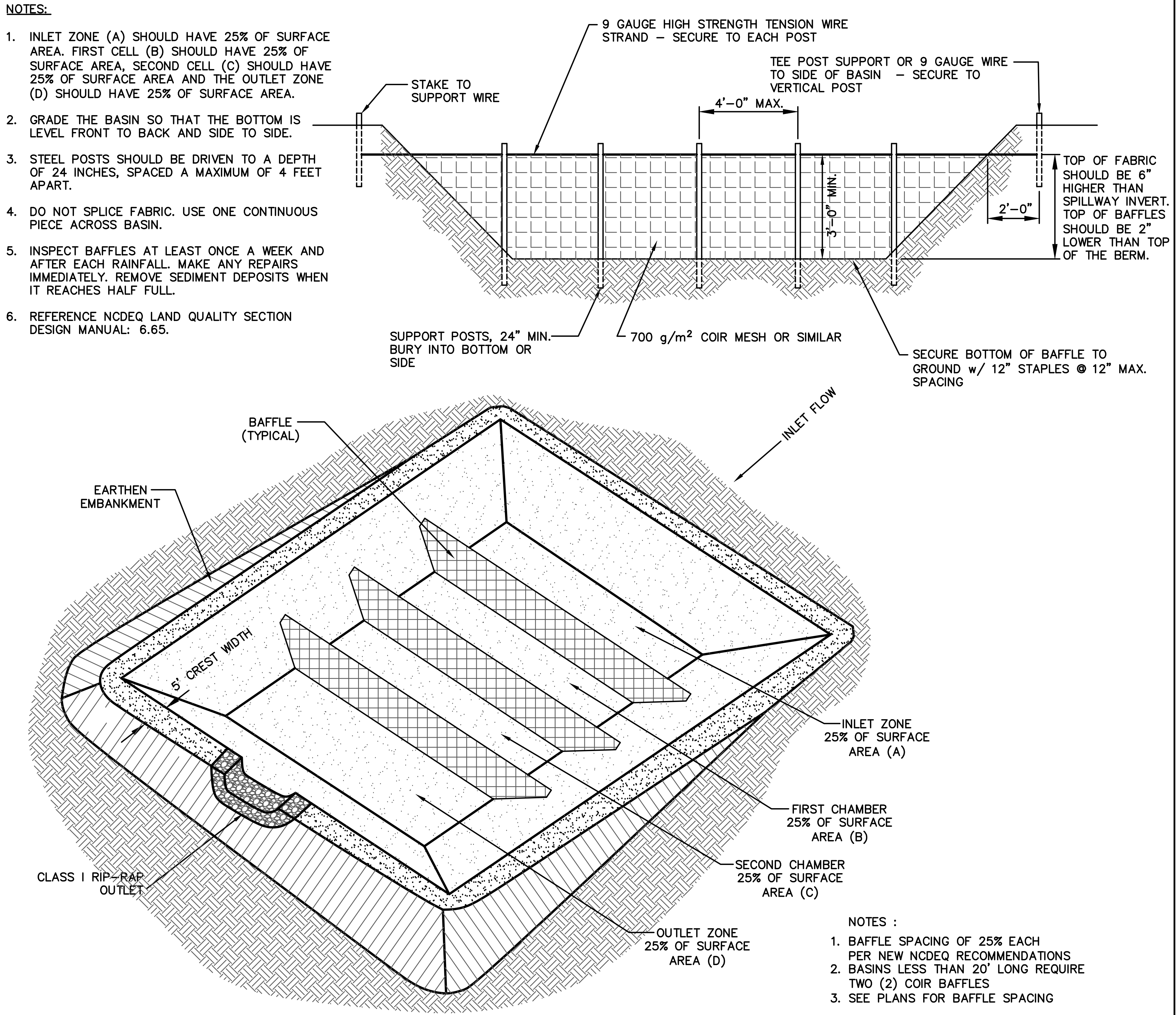
EC 27 TEMPORARY SKIMMER BASIN

UPDATED MARCH, 2017
NOT TO SCALE

BASIN#	TOP BERM ELEV. (ft)	EMERGENCY SPILLWAY ELEV. (ft)	EMERGENCY SPILLWAY (D x WIDTH)	BERM WIDTH (FT)	SKIMMER INVERT ELEV. (ft)	BASIN SIDE SLOPE RATIO	BASIN DEPTH (FT)	BASIN SPILLWAY LENGTH (FT)	BASIN SPILLWAY WIDTH (FT)	BASIN BOTTOM LENGTH (FT)	BASIN BOTTOM WIDTH (FT)	SKIMMER SIZE (IN)	SKIMMER ORIFICE SIZE (IN)
TSB	33.0'	32.5'	1.25' x 10'	5'	31.0'	4:1	2'	188'	76'	172'	60'	4.0"	1.5"

NOTES:

1. INLET ZONE (A) SHOULD HAVE 25% OF SURFACE AREA. FIRST CELL (B) SHOULD HAVE 25% OF SURFACE AREA, SECOND CELL (C) SHOULD HAVE 25% OF SURFACE AREA AND THE OUTLET ZONE (D) SHOULD HAVE 25% OF SURFACE AREA.
2. GRADE THE BASIN SO THAT THE BOTTOM IS LEVEL FRONT TO BACK AND SIDE TO SIDE.
3. STEEL POSTS SHOULD BE DRIVEN TO A DEPTH OF 24 INCHES, SPACED A MAXIMUM OF 4 FEET APART.
4. DO NOT SPLICE FABRIC. USE ONE CONTINUOUS PIECE ACROSS BASIN.
5. INSPECT BAFFLES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REPAIRS IMMEDIATELY. REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL.
6. REFERENCE NCDEQ LAND QUALITY SECTION DESIGN MANUAL: 6.65.


9 GAUGE HIGH STRENGTH TENSION WIRE STRAND – SECURE TO EACH POST
STAKE TO SUPPORT WIRE
TEE POST SUPPORT OR 9 GAUGE WIRE TO SIDE OF BASIN – SECURE TO VERTICAL POST
4'–0" MAX.
3'–0" MIN.
2'–0"
TOP OF FABRIC SHOULD BE 6" HIGHER THAN SPILLWAY INVERT. TOP OF BAFFLES SHOULD BE 2" LOWER THAN TOP OF THE BERM.
SUPPORT POSTS, 24" MIN. BURY INTO BOTTOM OR SIDE
700 g/m² COIR MESH OR SIMILAR
SECURE BOTTOM OF BAFFLE TO GROUND w/ 12" STAPLES @ 12" MAX. SPACING
BAFFLE (TYPICAL)
INLET FLOW
EARTHEN EMBANKMENT
5' CREST WIDTH
INLET ZONE 25% OF SURFACE AREA (A)
FIRST CHAMBER 25% OF SURFACE AREA (B)
SECOND CHAMBER 25% OF SURFACE AREA (C)
CLASS I RIP–RAP OUTLET
OUTLET ZONE 25% OF SURFACE AREA (D)

NOTES :

1. BAFFLE SPACING OF 25% EACH PER NEW NCDEQ RECOMMENDATIONS
2. BASINS LESS THAN 20' LONG REQUIRE TWO (2) COIR BAFFLES
3. SEE PLANS FOR BAFFLE SPACING

EC 41 POROUS BAFFLE DETAIL

UPDATED MARCH, 2017
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50548
THOMAS P. MANNINO

SIGNED AND DATED:
8/20/26

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NO.	DATE	BY	DESCRIPTION

SITE EXPANSION DEVELOPMENT PLANS
FOR
RIVER OF LIFE BAPTIST CHURCH
BRUNSWICK COUNTY, NORTH CAROLINA

NOT TO SCALE

OFFICE MANAGER M. NORTON	DESIGNER T. MINTZ
PROJECT MANAGER J. MURRAY	REVIEWER T. MANNINO

TEMPORARY SKIMMER BASIN DETAILS

DATE	PROJECT #	FUNDING #
AUGUST, 2025	24.07082	N/A

SHEET
C-509

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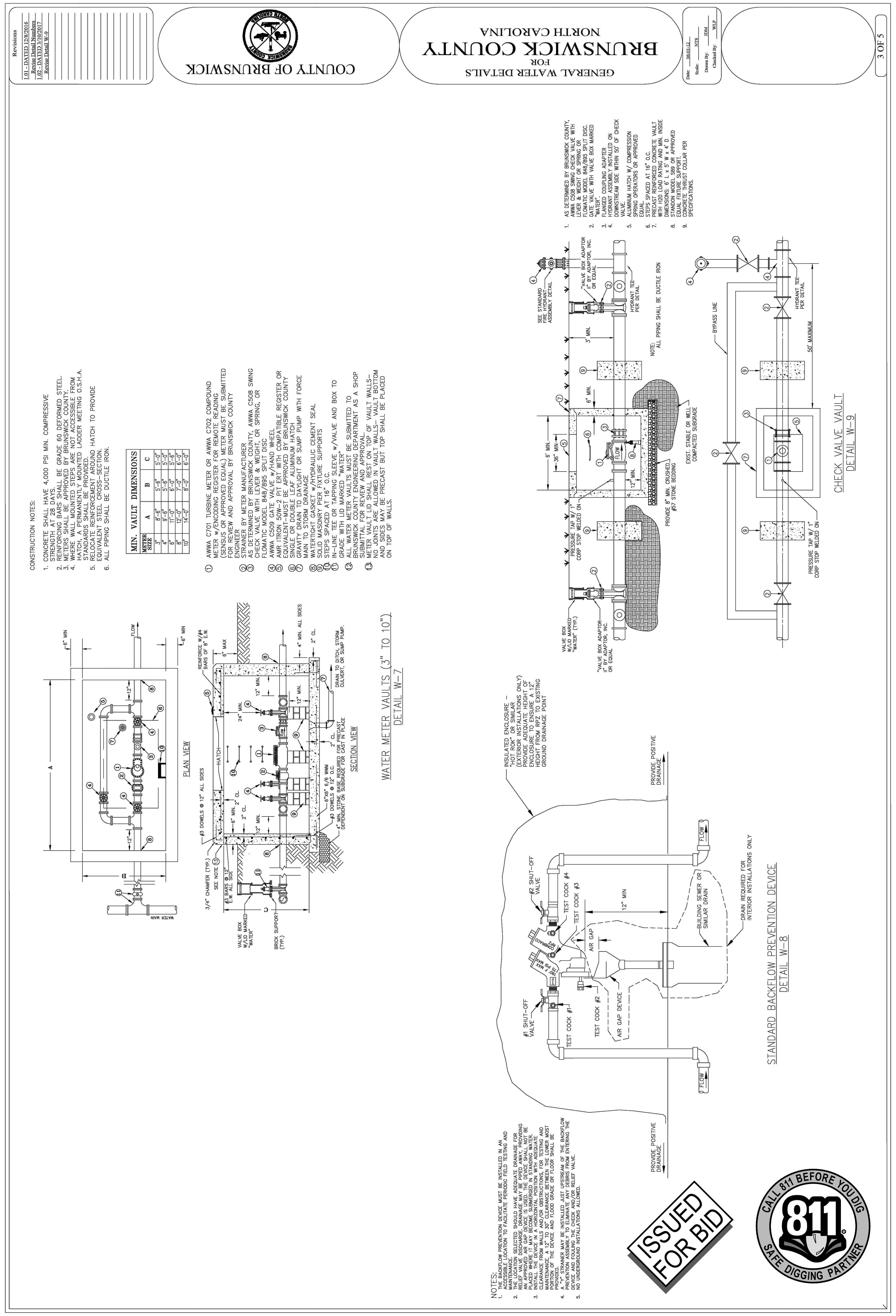

CONSTRUCTION NOTES:

1. CONCRETE SHALL HAVE 4,000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS.
2. REINFORCING BARS SHALL BE GRADE 60 DEFORMED STEEL.
3. METERS SHALL BE APPROVED BY BRUNSWICK COUNTY.
4. WHERE WALL MOUNTED STEPS ARE NOT ACCESSIBLE FROM HATCH, A PERMANENTLY MOUNTED LADDER MEETING O.S.H.A. STANDARDS SHALL BE PROVIDED.
5. RELOCATE REINFORCEMENT AROUND HATCH TO PROVIDE EQUIVALENT STEEL CROSS-SECTION.
6. ALL PIPING SHALL BE DUCTILE IRON.

MIN. VAULT DIMENSIONS

METER SIZE	A	B	C
3"	8'-6"	5'-6"	5'-0"
4"	9'-6"	5'-6"	5'-0"
6"	11'-0"	6'-0"	5'-6"
8"	12'-0"	7'-0"	6'-0"
10"	14'-0"	8'-0"	6'-0"

① AWWA C701 TURBINE METER OR AWWA C702 COMPOUND METER w/ENCODING REGISTER FOR REMOTE READING (SENSUS OR APPROVED EQUAL) METER MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY BRUNSWICK COUNTY ENGINEER
② STRAINER BY METER MANUFACTURER
③ AS DETERMINED BY BRUNSWICK COUNTY, AWWA C508 SWING CHECK VALVE WITH LEVER & WEIGHT, OR SPRING, OR FLOMATIC MODEL 848/895 SPLIT DISC
④ AWWA C509 GATE VALVE w/HAND WHEEL
⑤ AMR ITRON 50W-2 PIT ERT WITH COMPATIBLE REGISTER OR EQUIVALENT-MUST BE APPROVED BY BRUNSWICK COUNTY
⑥ SINGLE OR DOUBLE LEAF ALUMINUM HATCH
⑦ GRAVITY DRAIN TO DAYLIGHT OR SUMP PUMP WITH FORCE MAIN TO STORM DRAINAGE
⑧ WATERTIGHT GASKET w/HYDRAULIC CEMENT SEAL
⑨ SOLID MASONRY PIER FIXTURE SUPPORTS
⑩ STEPS SPACED AT 16" O.C.
⑪ IN-LINE TEE OR TAPPING SLEEVE w/VALVE AND BOX TO GRADE WITH LID MARKED "WATER"
⑫ ALL WATER METER VAULTS MUST BE SUBMITTED TO BRUNSWICK COUNTY ENGINEERING DEPARTMENT AS A SHOP SUBMITTAL FOR REVIEW AND APPROVAL.
⑬ METER VAULT LID SHALL REST ON TOP OF VAULT WALLS-NO JOINTS ARE ALLOWED IN VAULT WALLS- VAULT BOTTOM AND SIDES MAY BE PRECAST BUT TOP SHALL BE PLACED ON TOP OF WALLS.

NOTES:
1. THE BACKFLOW PREVENTION DEVICE MUST BE INSTALLED IN AN ACCESSIBLE LOCATION TO FACILITATE PERIODIC FIELD TESTING AND MAINTENANCE.
2. THE LOCATION SELECTED SHOULD HAVE ADEQUATE DRAINAGE FOR RELIEF VALVE DISCHARGE. DRAINAGE MAY BE PIPED AWAY, PROVIDING AN APPROVED AIR GAP DEVICE IS USED. THE DEVICE SHALL NOT BE PLACED WHERE IT MAY BECOME SUBMERGED IN STANDING WATER.
3. INSTALL THE DEVICE IN A HORIZONTAL POSITION WITH ADEQUATE CLEARANCE FROM WALLS AND/OR OBSTRUCTIONS, FOR TESTING AND MAINTENANCE. A 12" TO 30" CLEARANCE BETWEEN THE LOWER MOST PORTION OF THE DEVICE AND FLOOD GRADE OR FLOOR SHALL BE PROVIDED.
4. A "Y" STRAINER MAY BE INSTALLED JUST UPSTREAM OF THE BACKFLOW PREVENTION ASSEMBLY TO ELIMINATE ANY DEBRIS FROM ENTERING THE DEVICE AND FOULING THE CHECK AND/OR RELIEF VALVE.
5. NO UNDERGROUND INSTALLATIONS ALLOWED.

1. AS DETERMINED BY BRUNSWICK COUNTY, AWWA C508 SWING CHECK VALVE WITH LEVER & WEIGHT OR SPRING OR FLOMATIC MODEL 848/895 SPLIT DISC.
2. GATE VALVE WITH VALVE BOX MARKED "WATER".
3. FLANGED COUPLING ADAPTER
4. HYDRANT ASSEMBLY INSTALLED ON DOWNSTREAM SIDE WITHIN 50' OF CHECK VALVE.
5. ALUMINUM HATCH W/ COMPRESSION SPRING OPERATORS OR APPROVED EQUAL.
6. STEPS SPACED AT 16" O.C.
7. PRECAST REINFORCED CONCRETE VAULT WITH H20 LOAD RATING AND MIN. INSIDE DIMENSIONS: 6' L x 5' W x 4' D
8. STANDON MODEL S89 OR APPROVED EQUAL FIXTURE SUPPORT.
9. CONCRETE THRUST COLLAR PER SPECIFICATIONS.

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SIGNED AND DATED:
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SITE EXPANSION DEVELOPMENT PLANS
FOR
RIVER OF LIFE BAPTIST CHURCH
BRUNSWICK COUNTY, NORTH CAROLINA

NOT TO SCALE

OFFICE MANAGER: M. NORTON
DESIGNER: T. MINTZ
PROJECT MANAGER: J. MURRAY
REVIEWER: T. MANNINO

WATER DETAILS

DATE: AUGUST, 2025
PROJECT #: 24.07082
FUNDING #: N/A

SHEET
C-510