



**TOWN OF SUMMERVILLE  
COMMERCIAL DESIGN REVIEW BOARD – AGENDA  
Summerville Municipal Complex  
Annex Building 2<sup>nd</sup> Floor Training Room  
March 19, 2020 4:00 p.m.**

**Approval of February 20, 2020 meeting Minutes**

**APPLICANTS –**

*For additional information regarding this public meeting please contact the Planning Department at 843.851.5200. All applications and related documents for this public meeting are available for review at the Planning Department during regular business hours, Monday–Friday, 8:30–5:00 excluding Town of Summerville holidays.*

**OLD BUSINESS:**

- 1. Trolley Road Apartments – Review of proposed façade changes (UC-MX)**  
The applicant is requesting Final Approval
- 2. Parker’s Kitchen – Development of a new gas station at Ladson Road and Limehouse Drive (UC-MX)**  
The applicant is requesting Preliminary Approval
- 3. N. Cedar St. Offices – Development of a new 10,000 sf office building at 204 N Cedar St (B-3)**  
The applicant is requesting Preliminary Approval

**NEW BUSINESS:**

- 1. 106 Boone Street – Emanuel Baptist Church new sanctuary (N-R)**  
The applicant is requesting Preliminary Approval
- 2. 201 W. 9<sup>th</sup> North Street – Village at Summerville Community 24 Bed Memory Care Facility (PUD)**  
The applicant is requesting Preliminary Approval
- 3. 710 N Main Street – Exterior Renovations of the existing building for a new Salon (UC-MX)**  
The applicant is requesting Final Approval

**MISCELLANEOUS:**

1. None

**ADJOURN:**

Posted March 11, 2020

**Design Review Board Minutes**  
**Thursday, February 20, 2020**  
**Summerville Municipal Complex –Annex Building Training Room**

**Members Present:**

Bill Beauchene  
Chris Karpus  
Chris Campeau  
Carolyn Rogerson  
Hart Weatherford

Jessi Shuler, Director of Planning  
Bonnie Miley, Assistant Town Engineer  
Rich Palmer, Building Official

**Staff Present:**

Items on the agenda:

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**OLD BUSINESS:**

1. 4234 Ladson Road – New Caliber Collision car repair facility (UC-MX)
2. 605 Old Trolley Road – Redevelopment of existing carwash facility into office space (UC-MX)

**NEW BUSINESS:**

1. 101 N. Main Street – Redevelopment of existing restaurant (D-MX)

**MISCELLANEOUS:**

1. None
- 

The meeting was called to order at 4:00 pm by the Chairman.

Mr. Campeau asked for consideration of the January 16, 2020 meeting minutes. Mr. Beauchene made a motion for approval of the minutes as presented and Ms. Rogerson seconded. The motion carried 5-0.

**OLD BUSINESS**

1. **4234 Ladson Road** – The first item under Old Business was a request for Preliminary Approval for the proposed development of a new Calber Collision car repair facility on Ladson Road. Ms. Shuler detailed the staff comments. Mr. Kyle Hoyt of Hoyt + Berenyi came to the table to discuss the proposal. Mr. Hoyt responded and explained that the presence of wetlands in the back left corner, along with most of the significant trees, dictated the site design. He stated that they were hoping to get final approval. Mr. Hoyt addressed the staff comments regarding the DHEC buffer requirements, explaining that they were not creating a new discharge point as there was already an existing swale. Ms. Miley agreed that she could meet on-site to determine if any buffer requirements for the pond would be required. Mr. Hoyt then described that they would remove an entire row of parking behind the fence and push the parking in front of the building back approximately 15 feet in order to meet the zoning requirement that all parking be on the side or rear of the site. He added that they would be willing to leave the left side natural and not underbrush and can add evergreen plantings from the front around to the wooded area on the right side along the top of the pond ledge. Ms. Shuler explained that due to the interpretation of the parking in the rear as outdoor storage, a landscape screen is required. After further discussion, the Board agreed that the requirements of the UDO should be met in regards to the landscape screen, which would be verified by staff. Mr. Campeau pointed out that a sidewalk connection needed to be made from the interior sidewalk to the sidewalk on Ladson Road. The photometric plan was discussed, and will be reviewed by staff once it is available. Bret Flory with Cross Architects provided an images of the Mt. Pleasant location which was finishing construction, and stated that on the Summerville location, there would be an additional window on the front elevation, but they still would not meet the 65% front façade transparency, and are asking the Board for an exception to that guideline. The materials proposed were presented. Ms. Rogerson asked for clarification on the black material at the top of the building, and Mr. Flory stated that it was E.I.F.S. Mr. Campeau asked about the exposed roof mechanicals. Mr. Flory explained that the mechanicals were being screened with a metal screen, but the intake and exhaust fans were not currently shown to be screened. Discussion followed on how to minimize the

appearance of the intake and exhaust fans, and it was agreed that they could be moved slightly forward and elbowed to reduce their height. Mr. Campeau requested that awnings be added over the two exterior doors on the left elevation, and Mr. Flory agreed that he could copy the same awning that is over the front windows. Mr. Karpus stated that we was good with them not meeting the 65% façade transparency on the front, and the other Board members agreed. The Board asked about the monument sign, and the applicant stated that they planned to match the building using the dark brick and provided an example. They will submit the sign separately to staff.

Ms. Rogerson made a motion for Final Approval with comments noted. The motion was seconded by Mr. Beauchene. The motion passed unanimously 5-0.

**2. 605 Old Trolley Road** – The second item under Old Business was a request for Final Approval of a proposal to redevelop the existing carwash located at 605 Old Trolley Road into a professional office building. Mr. Gene Brislin of Eugene Brislin Jr. and Ms. Christine Garcia of Trolley Car Wash LLC came to the table to present the project. Ms. Shuler detailed the staff comments. Mr. Brislin explained that an evergreen hedgerow was shown along Martin's Creek to the culvert. Mr. Brislin presented the photometric plan, and Mr. Campeau asked about the lack of lighting at the driveway entrance. Mr. Brislin confirmed that they were not showing any lighting at the entrance as the property across the street has two large sodium halide lights that provide plenty of lighting to the front of the property. Mr. Campeau then asked about the plans for the sign. Mr. Brislin and Ms. Garcia stated that they were just planning to reface the existing sign, but Ms. Shuler explained that due to the extent of the renovation, the existing sign would need to be brought into conformance. The Board agreed that the sign requirements would be worked out with staff. A discussion ensued regarding the front landscaping, and Mr. Brislin pointed out that they were adding two canopy trees and keeping the existing landscaping. The Board agreed this was sufficient. Mr. Brislin explained that the island in the middle of the parking lot would be grouted red brick (1 3/8") in a herringbone pattern, which would leave a 24 foot aisle all the way around. Mr. Campeau asked about awnings over the rear doors, and Mr. Brislin explained that there would be a one foot roof overhang. On the building, Mr. Brislin explained that it was not vinyl shown but Masonite. Mr. Beauchene requested that vents be added to the side gables. Ms. Garcia stated that on the building, the awning would be bronze to match the windows, not red as shown.

Ms. Rogerson made a motion for Final Approval with comments noted. The motion was seconded by Mr. Karpus. The motion passed unanimously 5-0.

## **NEW BUSINESS**

**1. 101 N. Main Street** – The first item under New Business was conceptual review for the proposed redevelopment of an existing restaurant at the corner of N. Main St. and E. Luke St. Rachel Burton of Swallowtail Architecture and Nico Romo and Brett Schleifer of NT Estate came to the table to present the project. Ms. Burton explained that this was a renovation of an existing building into a high-end restaurant. She explained that tying into the site's catty corner location to Hutchinson Square and the pedestrian corridor across the railroad tracks was the design inspiration for the renovation, specifically the reason the main entrance faced E. Luke, rather than N. Main St. Ms. Burton noted that the design was limited by the existing site; however, they were adding a large porch, reorganizing the existing parking, adding trees, and closing a portion of the curb cut on N. Main St. She detailed that the N. Main St. elevation did not include an entrance, but that the large windows provided a view into the kitchen area to provide a pedestrian experience. Ms. Burton addressed the staff comments regarding certain UDO design guidelines not being met. She detailed how the design met almost all of the core principles found in Section 4.2 of the UDO, including ground floor activity, diversity and scale, and supporting a walkable public realm. Although the façade transparency requirement in Section 4.2.9 of the UDO is not being met, Ms. Burton expressed her belief that the intent was being met by creating the interaction between the interior and exterior with the large windows. Ms. Burton fielded several questions from the Board members explaining that the alley side would not be visible due to the adjacent building; the final colors for the building have not been chosen yet; and discussing the need for a life safety plan and interior sprinkler riser room. Mr. Karpus agreed that this design was a great improvement over the existing building; however, he felt that the narrow windows on the N. Main St. elevation are a little too narrow and should have more detailed trimming. Ms. Rogerson agreed, and asked if the windows could be slightly taller as well to make them more in proportion with the façade. Ms. Burton explained that the façade did include a parapet wall, but they could see if they could be made slightly taller. Mr. Campeau asked about the water table on the right side of the N. Main Street elevation, and Ms. Burton stated that the water table was used to unify the façade by giving the appearance of one building. Mr. Karpus asked if the bracing of the entry element on the E. Luke St. elevation could be interior. He also recommended lowering the element slightly and providing the same roof overhang on the back as the front. Mr. Campeau agreed that the entry element looked disingenuous and should either go all the way back to the other roof or not have it at all. After further discussion, the Board members all agreed that

the entry element should be extended all the way back and shortened slightly. The Board members also all agreed that they were okay with no entrance on the N. Main St. elevation. Ms. Rogerson asked if they planned to have wheel stops for the parking, and if so, to make sure that they don't allow parked cars to encroach on the sidewalk. Mr. Weatherford expressed his concern about the trash trucks accessing the dumpster and having to back out onto N. Main St. There was further discussion about possible alternative locations for the dumpster, and the applicants agreed that they would take his concern into consideration.

This being a Conceptual Review there was no vote taken.

**MISCELLANEOUS:**

There were no items under miscellaneous.

**ADJOURN:**

There being no further business, the meeting was adjourned at 5:52 PM on a motion by Ms. Rogerson and a second by Mr. Karpus. The motion passed unanimously

Respectfully Submitted,

Date: \_\_\_\_\_

Jessi Shuler  
Director of Planning

Approved: Chris Campeau, Chairman \_\_\_\_\_; or,

Michael Gregor, Vice Chairman \_\_\_\_\_

**STAFF REPORT  
CDRB Meeting  
March 19, 2020 at 4:00 p.m.**

**TO:** Town of Summerville CDRB  
**FROM:** Planning Staff  
**DATE:** March 13, 2020

**GENERAL INFORMATION**

**Applicant:** PDI Architecture – Sheldon Lovelace  
**Property Owner:** Whitfield Comp, LLC.  
**Requested Action:** The applicant is requesting Final Approval of a proposed changes to the approved facades  
**Requested Approval:** Final Approval  
**Existing Zoning:** UC-MX Urban Corridor Mixed Use  
**Adjacent Zoning:** **North:** UC-MX Urban Corridor Mixed Use and MF-R Multi Family Residential  
**South:** PL Public Land and HI Heavy Industrial  
**East:** PUD Planned Development and N-B Neighborhood Business  
**West:** UC-MX Urban Corridor Mixed Use and MF-R Multi Family Residential  
**Location:** Old Trolley road  
**Existing Land Use:** Vacant property  
**Prior Approvals:** March 21, 2019 – Preliminary Approval  
October 17, 2019 – Final Approval

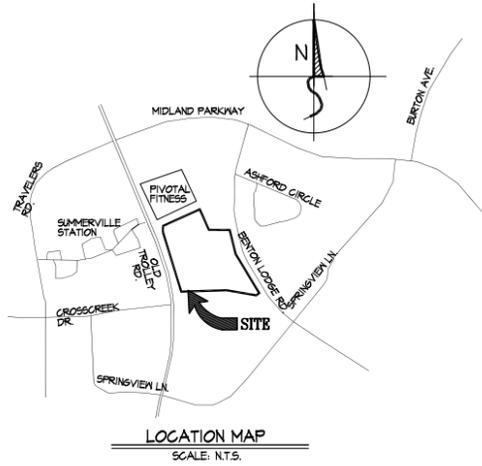
**Ordinance Reference:**  
Sec. 13.3.5. Design Review Board.

- (b) *Mission statement.* The purpose of the commercial design review board is to establish a review process that will protect and improve the visual and aesthetic character and economic value of commercial development within the town. In turn, this establishment of scenic corridors will contribute to the community's sense of place and pride further strengthening the town's unity of character. Through this process, the assurance of respect for the character, integrity, and quality of the built environment of the town will be established without stifling innovative architecture and/or development. All development shall adhere to the definitions and terms outlined in all of the town's zoning ordinances and codes as preliminary criteria. The commercial design review board is granted the authority to determine the appropriateness of the construction of the commercial site in pursuit of achieving that style which is characteristic of the region and of the town in particular as stated in the guidelines of this section.

**Recommendation:**

The applicant is requesting approval for changes to the proposed facades of the buildings.





UNIT TYPE BREAKDOWN											
BLDG NO.	BLDG TYPE	NO. OF APPTS	1 BR CORE	1 BR H.C.	2 BR CORE	2 BR END	2 BR H.C.	3 BR CORE	3 BR END	3 BR H.C.	TOTAL UNITS PER BLDG.
1	A	1	12	T.B.D.	-	12	T.B.D.	-	-	-	24
2	A	1	12	T.B.D.	-	12	T.B.D.	-	-	-	24
3	A	1	12	T.B.D.	-	12	T.B.D.	-	-	-	24
4	A	1	12	T.B.D.	-	12	T.B.D.	-	-	-	24
5	A	1	12	T.B.D.	-	12	T.B.D.	-	-	-	24
6	A	1	12	T.B.D.	-	12	T.B.D.	-	-	-	24
7	C	1	12	T.B.D.	-	-	T.B.D.	-	12	-	24
8	B	1	-	-	12	-	-	-	12	T.B.D.	24
9	B	1	-	-	12	-	-	-	12	T.B.D.	24
<b>TOTAL</b>			<b>84</b>		<b>24</b>	<b>12</b>			<b>36</b>		<b>216</b>

1 BR = 84 (38%)  
 2 BR = 48 (22%)  
 3 BR = 36 (17%)  
 H.G. UNIT REQTS (S.C.) 2% REQUIRED = 5 TOTAL UNITS (2) 1BR, (2) 2 BR, (1) 3BR

GENERAL PROJECT OUTLINE SPECIFICATIONS

**DIVISION 1 - GENERAL REQUIREMENTS**  
 SUMMARY OF THE WORK: THE WORK OF THIS CONTRACT INCLUDES THE CONSTRUCTION OF ALL BUILDINGS WITH SITE IMPROVEMENTS, PARKING LOTS AND LANDSCAPING AREAS AS SHOWN ON THE PLANS.  
 FIRE PROTECTION: A 1BR FIRE SUPPRESSION SYSTEM MEETING NFPA STANDARDS IS TO BE INCORPORATED IN THIS PROJECT. ALL CONTRACTORS SHALL OBSERVE AND ENFORCE ALL REQUIREMENTS OF CITY, COUNTY AND STATE, INSURANCE AND OWNER TO MINIMIZE FIRE HAZARDS DURING THE PROGRESS OF THE WORK.

**DIVISION 2 - ASPHALTIC CONCRETE SURFACING**  
 THE BASE COURSE SHALL BE STABILIZED AGGREGATE OF TOTAL COMPACT THICKNESS OF 4 INCHES.  
 THE SURFACE COURSE SHALL CONSIST OF 2 LIFTS AT ROAD ONLY- 1 LIFT IN PARKING LOT AND SHALL BE HOT LAID ASPHALT CONCRETE, TYPE I. THE TOTAL COMPACTED THICKNESS SHALL BE 3 INCHES.

**DIVISION 3 - CONCRETE**  
 ALL EXTERIOR CONCRETE EXPOSED TO WEATHER OR FREEZING, WALLS, STOOPS, STEPS, PATIO SLABS, AND FOUNDATIONS SHALL BE 3000 PSI CONCRETE, 28 DAY TEST.

**DIVISION 6 - WOOD**  
 STUDS: SPECIFICATION STANDARD STUD GRADE OR BETTER.  
 PLATES AND BLOCKING: SOUTHERN YELLOW PINE #2 OR BETTER. PLATES IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED.  
 JOISTS, RAFTERS, BEAMS: WEST COAST SPECIES OR SOUTHERN YELLOW PINE STRESS GRADED AS REQUIRED BY SPANS.  
 POSTS, TIMBERS, AND TRIMS: 6x6 FT WRAPPED WITH FIBER CEMENT.  
 ROOF SOFFITS: PERFORATED VINYL.  
 EXTERIOR SIDING/ MASONRY VENEERS: SEE ELEVATIONS.  
 TRUSSES: ALL ROOF TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST REVISIONS OF THE 'NATIONAL DESIGN SPECIFICATION OF STRESS GRADED LUMBER AND ITS FASTENINGS'.  
 ROOF SHEATHING: 15/32" EXTERIOR OSB WITH PLY CLIPS.

**DIVISION 7 - THERMAL AND MOISTURE PROTECTION**  
 EXTERIOR WALL INSULATION: BATTS HAVING A THERMAL RESISTANCE VALUE OF R-13. TOTAL EXTERIOR WALLS R VALUE OF 16.  
 CEILING: BLOWN INSULATION AND THERMAL RESISTANCE OF R-30.  
 IN ALL SOUND WALLS BETWEEN UNITS AND AROUND BATHS, FURNISH AND INSTALL 3/2" THICK 'FIBERGLASS BATTS' IN EACH OF THE STUDS.  
 ROOFING: FIBERGLASS SHINGLES SHALL BE SELF-SEALING. COLOR SHALL BE UNIFORM OVER ENTIRE EXPOSED SHINGLE AND OVER ENTIRE ROOF. COLOR AS SELECTED BY ARCHITECT.  
 FLASHING AND SHEET METAL: SHEET METAL SHALL BE GALVANIZED AND FABRICATED FROM NOT LESS THAN 26 GAUGE, PAINTED WHERE EXPOSED. FLASHING TO BE USED ON ALL EXPOSED WINDOW HEADS, DOOR HEADS, EXTERIOR TRIM SAGES, ROOFING INTERSECTIONS, ALL HORIZONTAL TO VERTICAL TRANSITIONS, BALCONY AND WALL INTERSECTIONS.

**DIVISION 8 - DOORS AND WINDOWS**  
 EXTERIOR DOORS SHALL BE 6 PANEL, METAL INSULATED WITH SPRING HINGE.  
 INTERIOR DOORS ARE 1 3/4" HOLLOW CORE PAINT GRADE OR PREFINISHED.  
 PATIO DOORS TO BE INSULATED METAL WITH TEMPERED INSULATION GLASS.  
 ALL WINDOWS SHALL BE VINYL WITH INSULATED GLASS.

**DIVISION 9 - FINISHES**  
 GYPSUM WALLBOARD: INTERIOR WALLS 5/8" GYPSUM WALLBOARD.  
 PARTY WALLS: 5/8" FIRECODE.  
 EXTERIOR WALLS: 5/8" GYPSUM WALLBOARD.  
 CEILING: 5/8" GYPSUM WALLBOARD FIRECODE WITH TEXTURED FINISH.

**FLOORING: DWELLING UNITS - SERVICE 6AUGE VINYL SHEET 6000S OR CERAMIC TILE.**  
 CARPET - 24 OUNCE WITH DOUBLE JUTE BACK.  
 PADDING - 3/8" PRIME POLYURETHANE PAD MEETING UMB-44G.  
 ENTRANCE Foyer - NONE  
 PAINTING - INTERIOR WALLS - 2 COATS OF PAINT OVER ONE COAT OF PRIMER.  
 INTERIOR CEILING - ONE COAT OF PAINT/ TEXTURED.  
 WALL FINISH - TEXTURED KNOCK DOWN.  
 DOORS AND TRIM - 1 COAT COMBINATION SEALER AND PAINT. 1 COAT OF SEMI-GLOSS ENAMEL APPLIED OVER 1 COAT EXTERIOR GRADE FLAT OIL PAINT.

**DIVISION 10 - SPECIALTIES**  
 TOILET AND BATH ACCESSORIES: DWELLING UNITS - MIRROR/LIGHT/VANITY UNIT, TOYEL BARS, SOAP DISH, PAPER HOLDER, SHOWER ROD.  
 KITCHEN AND LAVATORY CABINETS: DOORS, DRAWER HEADS AND PANELS OF SOLID STOCK WOOD WITH WOOD VENEER.  
 PLASTIC LAMINATE TOPS SHALL BE DROP EDGE WITH 4 INCH BACK SPLASH AT KITCHEN.

**DIVISION 11 - EQUIPMENT**  
 KITCHEN EQUIPMENT: FREE STANDING OVEN AND RANGE DELUXE UNIT. MICROWAVE WITH NON-VENTED EXHAUST ABOVE RANGE.  
 GARBAGE DISPOSAL  
 REFRIGERATOR - 18 CUBIC FOOT FROST FREE.  
 DISHWASHER - 3 CYCLE, SOUND INSULATED GENERAL ELECTRIC OR EQUAL.

**DIVISION 15 - PLUMBING**  
 SINK: STAINLESS STEEL DOUBLE COMPARTMENT.  
 LAVATORY: VITREOUS CHINA WITH LAMINATED PLASTIC TOP.  
 WATER CLOSET: VITREOUS CHINA.  
 BATHTUB: FIBERGLASS TUB AND SURROUND.  
 HOT WATER HEATER: HOT WATER HEATERS SHALL BE AUTOMATIC, ELECTRIC OR 6AS - 40 GALLON - 50 GALLON FOR 1 BEDROOM UNITS

**HEATING AND AIR CONDITIONING:**  
 THE SYSTEM SHALL BE ADEQUATE FOR THE FOLLOWING:  
 DESIGN TEMPERATURES: 75 DEGREES INSIDE, SUMMER AND WINTER, 45 DEGREES OUTSIDE IN THE SUMMER AND 14 DEGREES OUTSIDE IN THE WINTER. UNITS SHALL BE ELECTRIC, 15 SEER HEAT PUMP OR GAS, DEPENDING UPON AVAILABILITY. GENERAL ELECTRIC OR EQUAL.

**DIVISION 16 - ELECTRICAL**  
**FIXTURES:**  
 BEDROOM- EACH BEDROOM SHALL HAVE EITHER A LIGHT FIXTURE OR SWITCHED OUTLET  
 LAUNDRY: HALL, WALK-IN-CLOSETS, KITCHEN- SHALL HAVE CLG. MTD. LIGHTS  
 LIVING ROOM- SHALL HAVE A CEILING FAN AND SWITCHED OUTLET  
 SUNROOM (IF APPLICABLE)- SHALL HAVE A CLG. MTD. LIGHT  
 BATHROOMS- WALL SCONCE AND EXHAUST FAN  
 BREEZEWAYS- ADEQUATE LIGHT FIXTURES AND EMERGENCY LIGHTS  
 BLDG EXTERIOR- FLOOD LIGHTING  
**ALARMS:**  
 AS REQUIRED BY FIRE/BLDG. CODES

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LOCATION MAP, GENERAL PROJECT OUTLINE SPECIFICATIONS & BLDG/UNIT MIX  
 Trolley Road Apartments  
 SummerVile, South Carolina

CDRB Review Only  
 February 26, 2020 A-01

LOTS A & B  
DEED BOOK 5952, PAGE 230  
PLAT BOOK K, PAGE 190

TMS #153-00-00-137  
HOUSING RESOURCES, LLC  
"TRACT A2"  
DEED BOOK 11208, PAGE 317  
PLAT BOOK K, PAGE 28

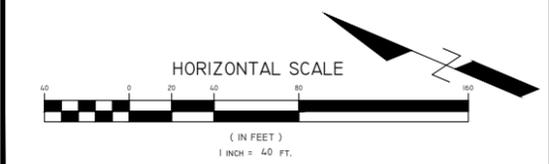


TMS #161-04-06-002  
COMMISSIONER OF  
PUBLIC WORKS  
SUMMERVILLE  
DB 476, PAGE 266  
PB D, PAGE 210

TMS #161-04-06-001  
SOUTH CAROLINA  
ELECTRIC & GAS COMPANY  
DEED BOOK 429, PAGE 68

TMS #161-04-06-004  
TOWN OF SUMMERVILLE  
DEED BOOK 537, PAGE 193  
PLAT BOOK M, PAGE 103

PARKING CALCULATIONS			
Building Use	Spaces Required	Tabulation	
Apartments	2 spaces per Dwelling Unit	X 216	= 432
TOTAL REQUIRED SPACES			= 432
Provided Parking Spaces			
	Standard Spaces	=	423
	ADA Standard Spaces	=	0
	ADA Van Spaces	=	11
PROVIDED SPACES			= 434



**CYPRESS**  
ENGINEERING

CYPRESS ENGINEERING  
100 SOUTH MAIN STREET  
SUITE L  
SUMMERVILLE, SC 29483  
PHONE: 843-225-5151  
WWW.CYPRESSENG.COM

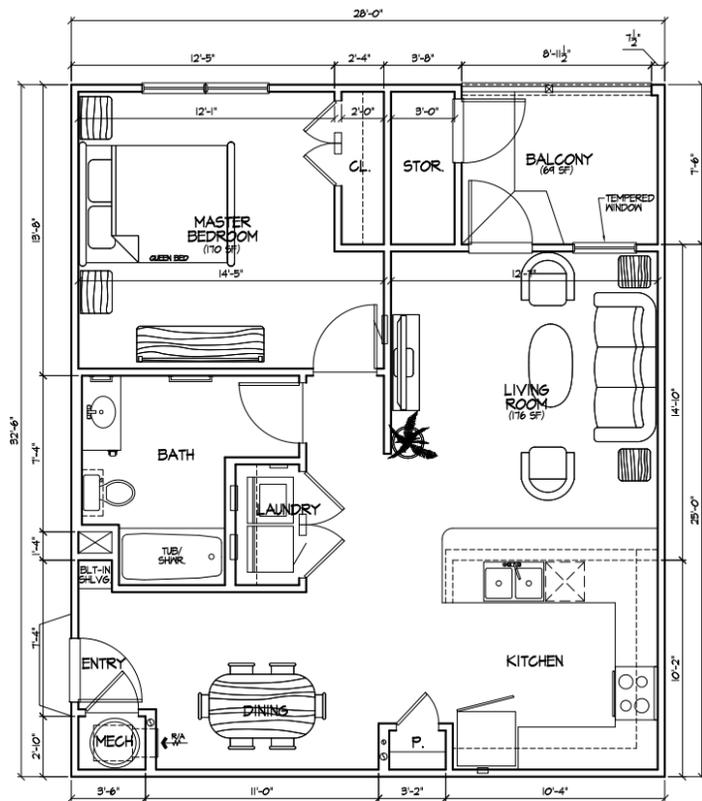
DATE: 1/29/2020	CYP PROJ #: 18047
DRAWN: WWR	CLIENT: ATLANTIC HOUSING FOUNDATION
DESIGNED: JCT	CLIENT JOB #:
CHECKED: WWR	

**WATERS AT OAKBROOK**  
SUMMERVILLE, SC

REV #	DESCRIPTION	DATE

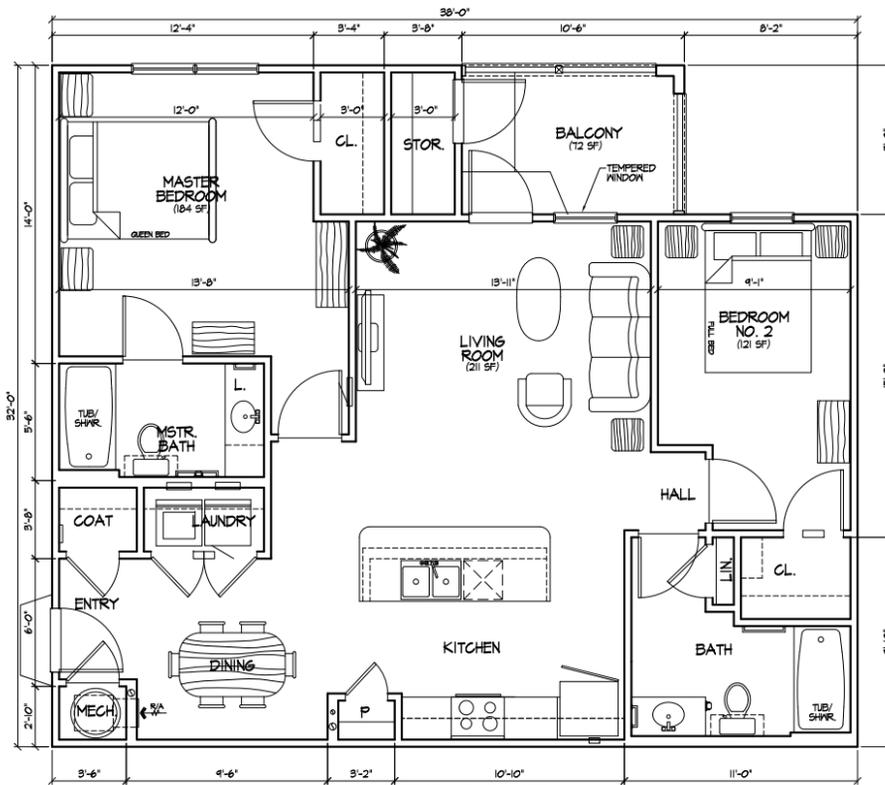


CONCEPT PLAN      C5.60



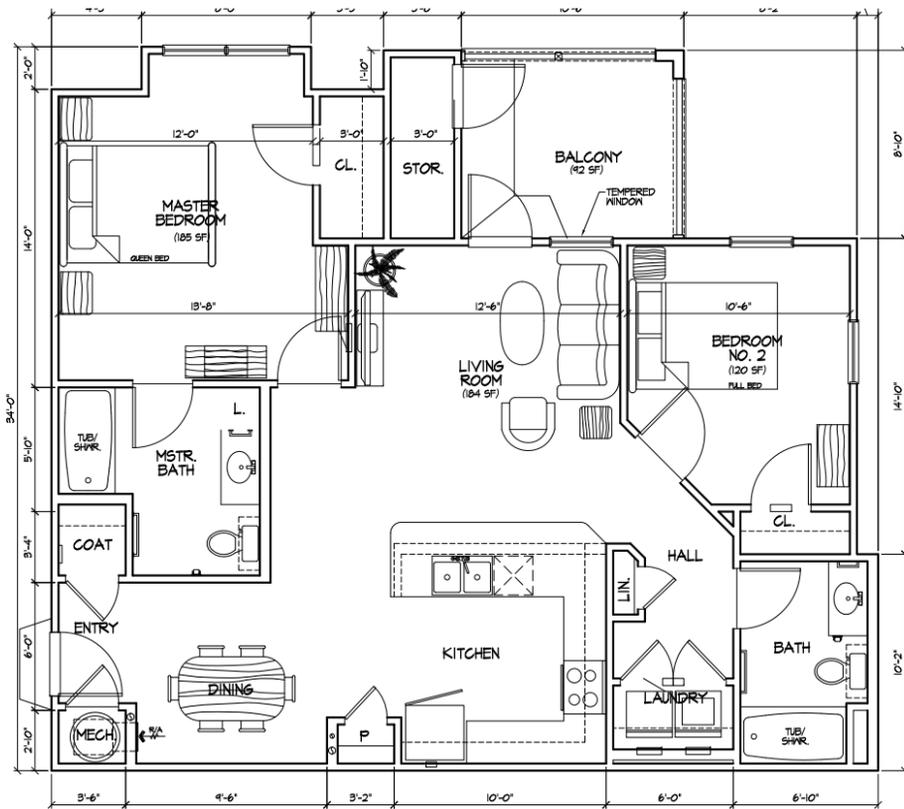
1 BR UNIT PLAN- CORE

773 net / htd. s.f.  
833 gross / htd. s.f.  
64 balcony s.f.  
910 total gross



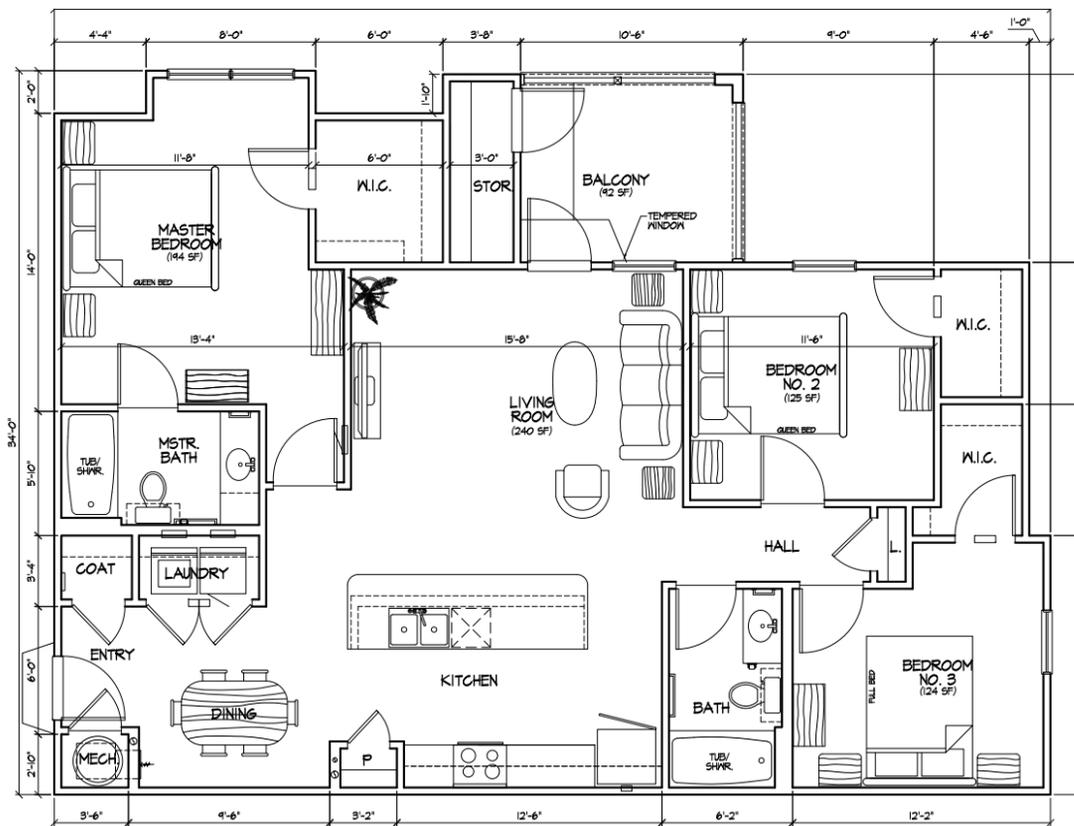
2 BR UNIT PLAN- CORE

1014 net / htd. s.f.  
1095 gross / htd. s.f.  
72 balcony s.f.  
1154 total gross



2 BR UNIT PLAN- END

1031 net / htd. s.f.  
1118 gross / htd. s.f.  
42 balcony s.f.  
1211 total gross



3 BR UNIT PLAN- END

1255 net / htd. s.f.  
1394 gross / htd. s.f.  
42 balcony s.f.  
1482 total gross

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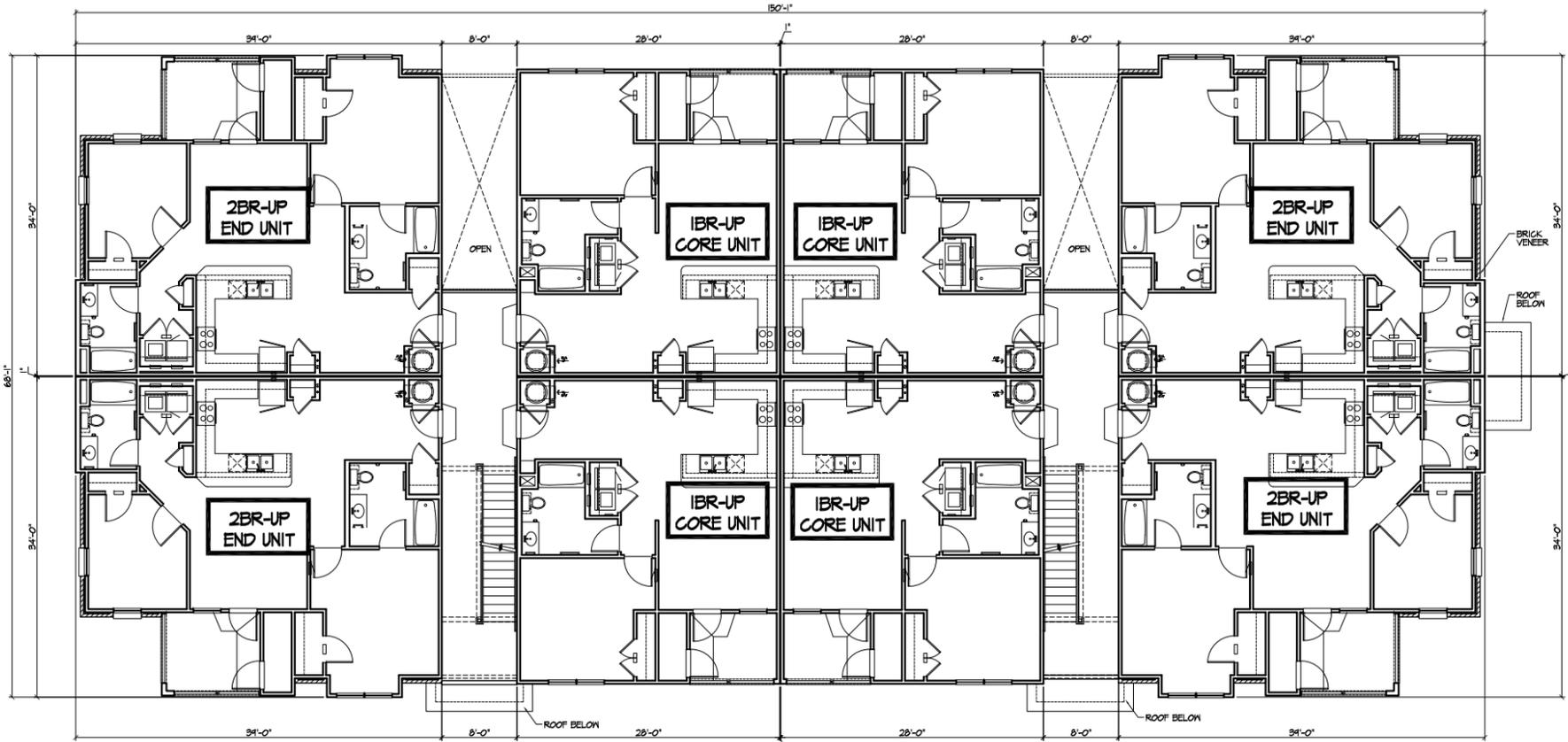


1 BR, 2 BR & 3 BR UNIT FLOOR PLANS  
Trolley Road Apartments  
Summerville, South Carolina

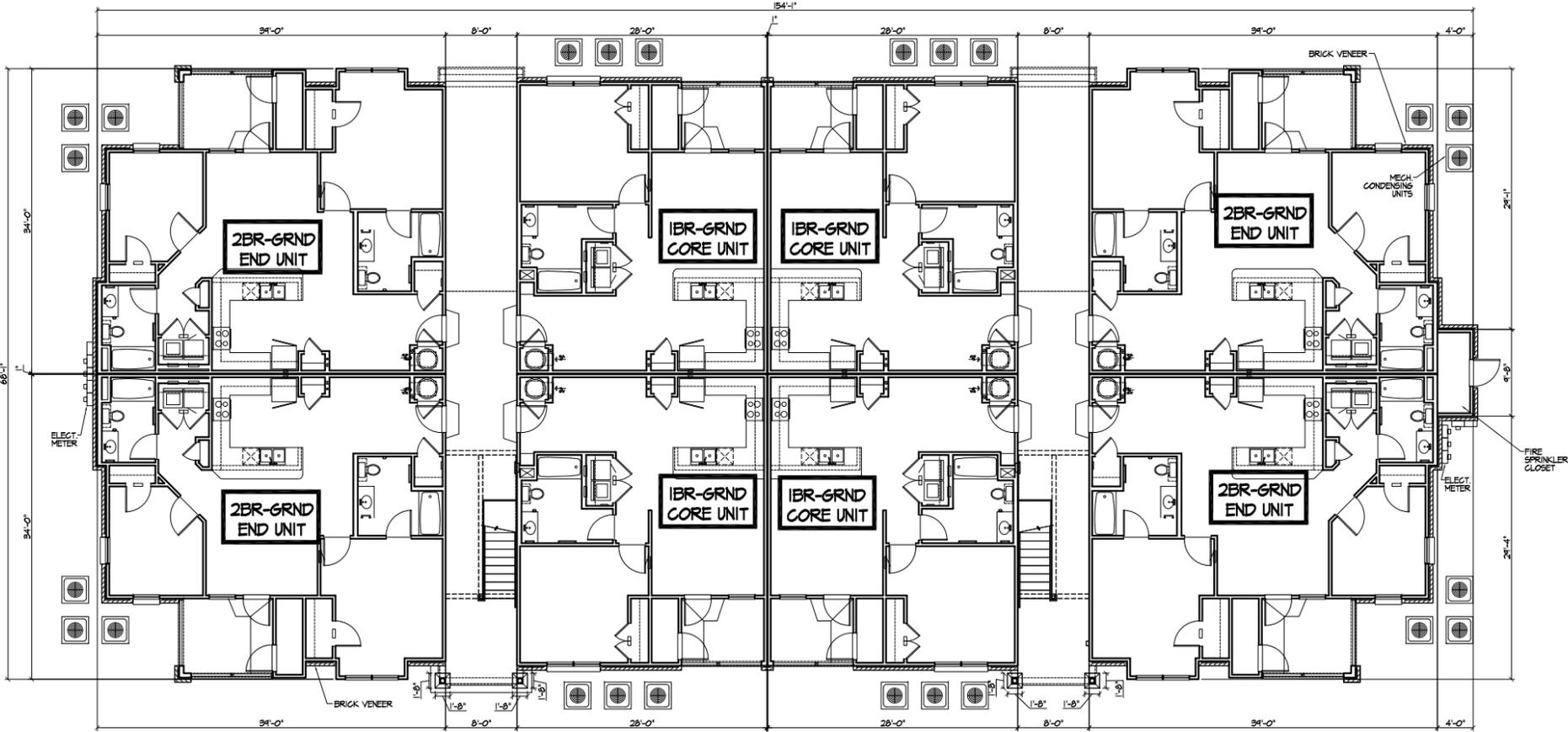
CDRB Review Only  
February 26, 2020 A-02



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BLDG. A- 2ND FLOOR PLAN  
SCALE: 1/8" = 1'-0"



BLDG. A- GROUND FLOOR PLAN  
SCALE: 1/8" = 1'-0"

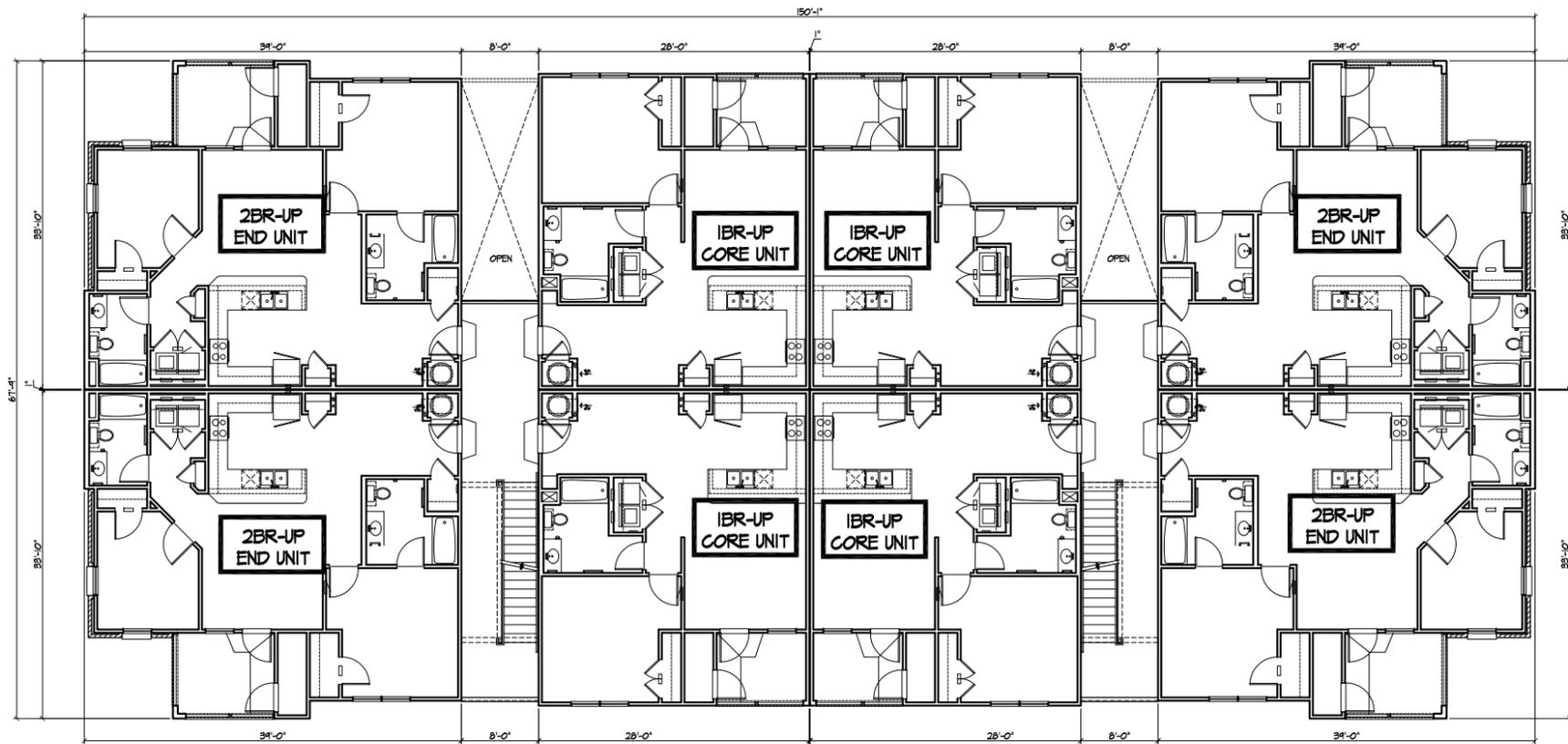


BLDG. A PLANS  
Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina

CDRB Review Only  
February 26, 2020  
A-03



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BLDG. A- 3RD FLOOR PLAN  
SCALE: 1/8" = 1'-0"

TR-
AS NOTED
14011

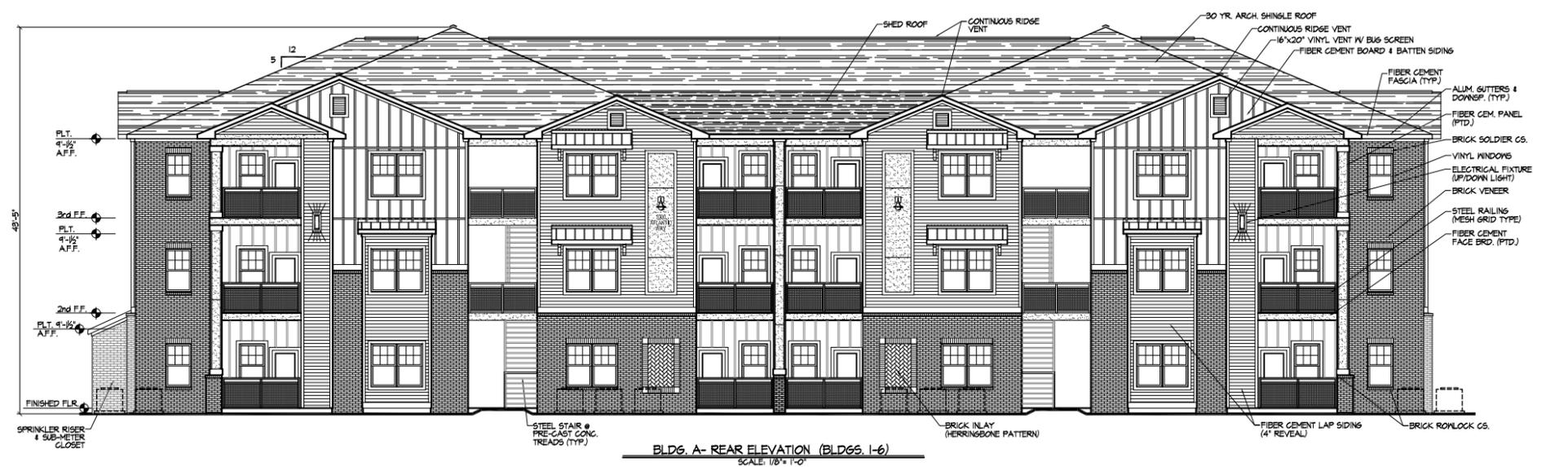
BLDG. A PLANS  
Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina

CDRB Review Only  
February 26, 2020

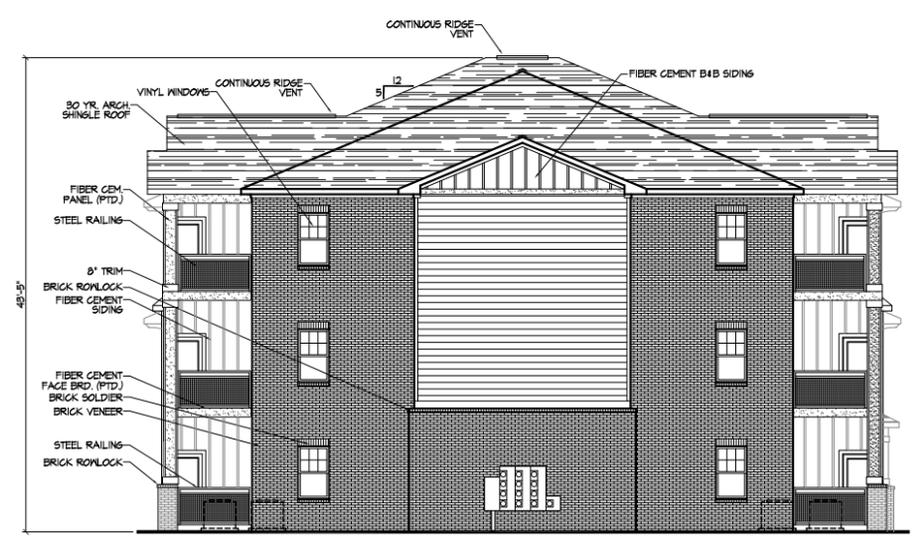
A-04



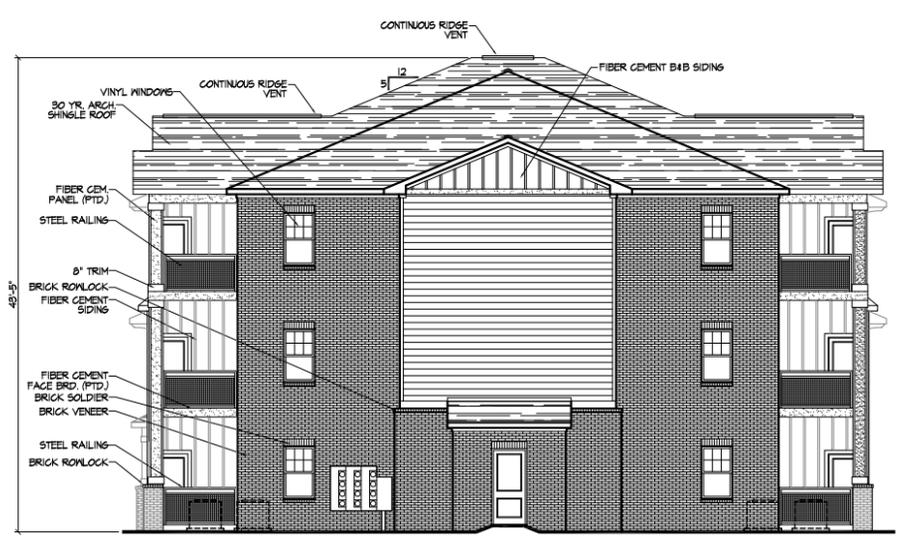
BLDG. A- FRONT ELEVATION (BLDG5.1-6)  
SCALE: 1/8" = 1'-0"



BLDG. A- REAR ELEVATION (BLDG5.1-6)  
SCALE: 1/8" = 1'-0"



BLDG. A- LEFT SIDE ELEVATION (BLDG5.1-6)  
SCALE: 1/8" = 1'-0"



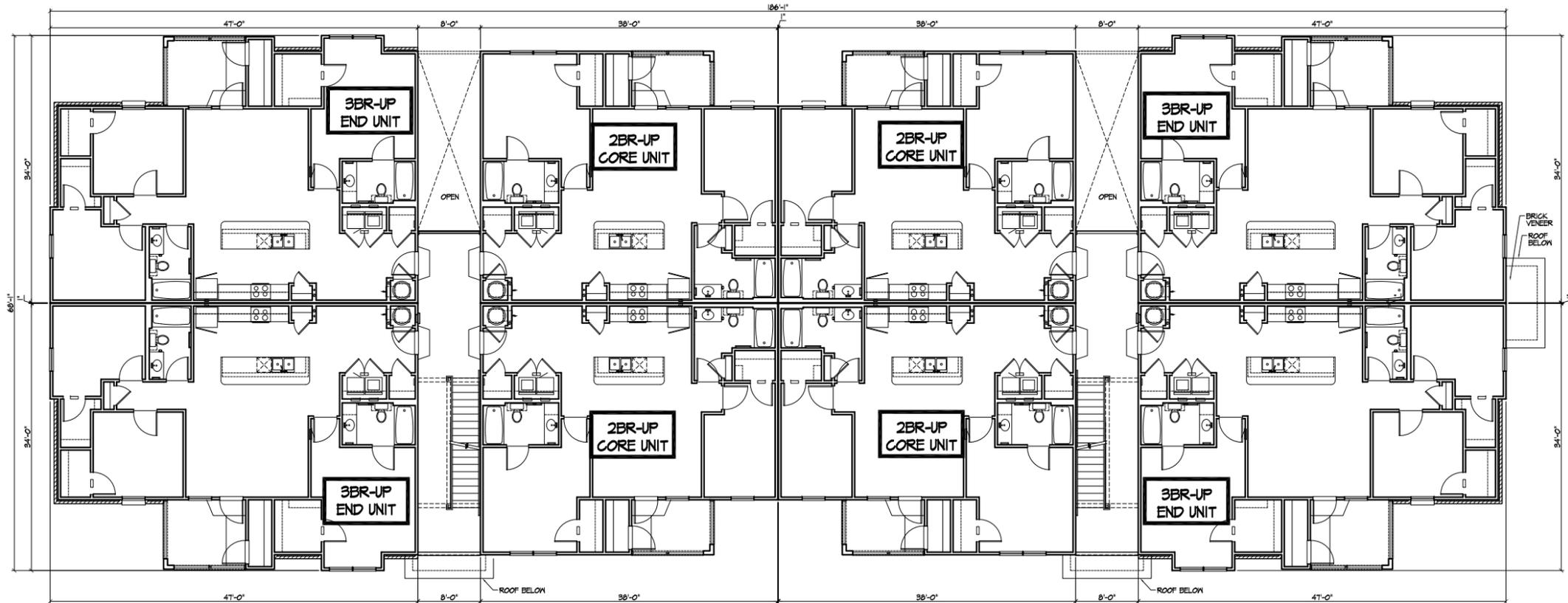
BLDG. A- RIGHT SIDE ELEVATION (BLDG5.1-6)  
SCALE: 1/8" = 1'-0"

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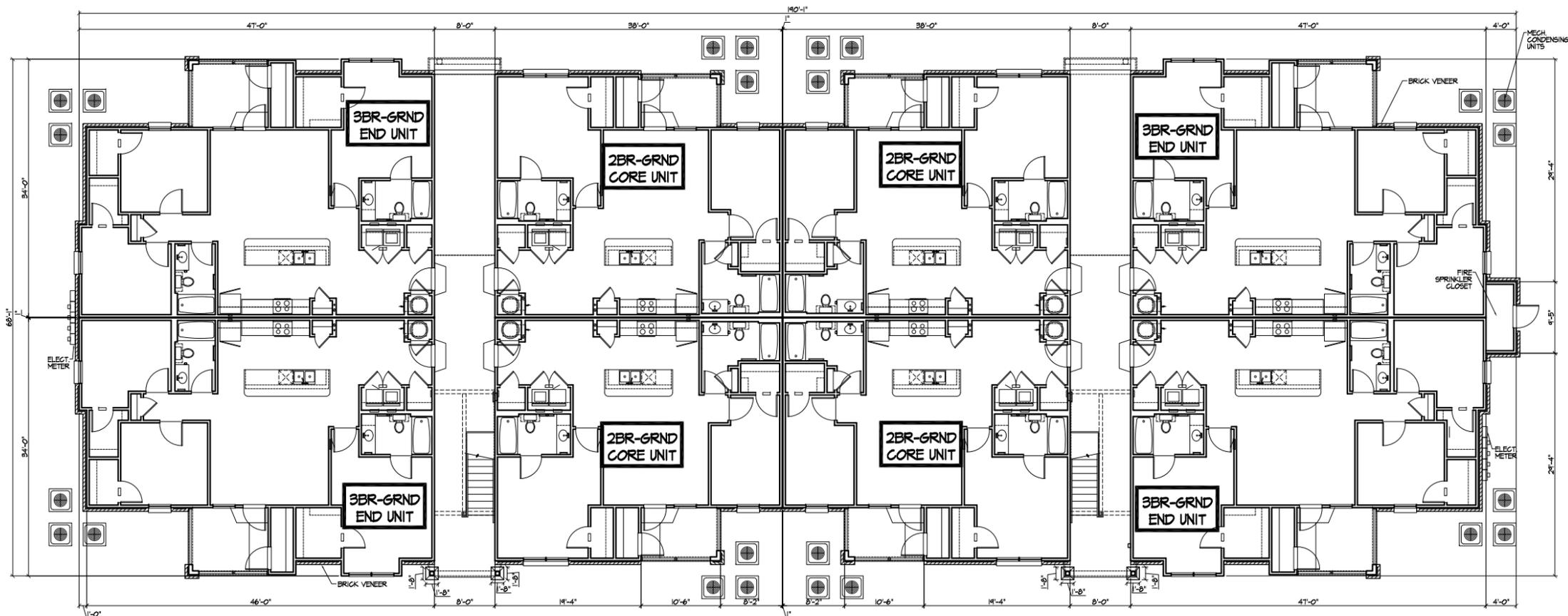


BLDG. A ELEVATIONS  
Trolley Road Apartments  
Summerville, South Carolina

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February 26, 2020 A-05



BLDG. B- 2ND FLOOR PLAN  
SCALE 1/8" = 1'-0"



BLDG. B- GROUND FLOOR PLAN  
SCALE 1/8" = 1'-0"

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BLDG. B PLANS  
Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina

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February 26, 2020  
A-06

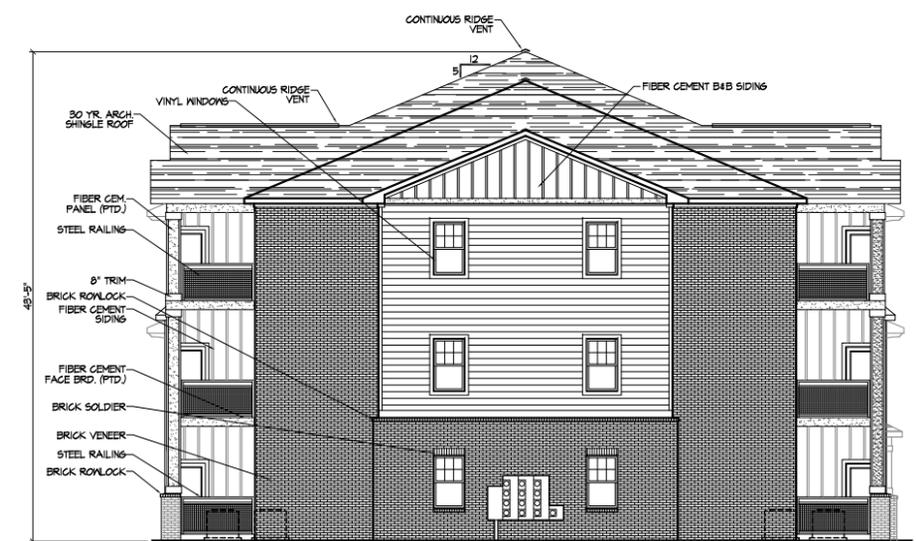




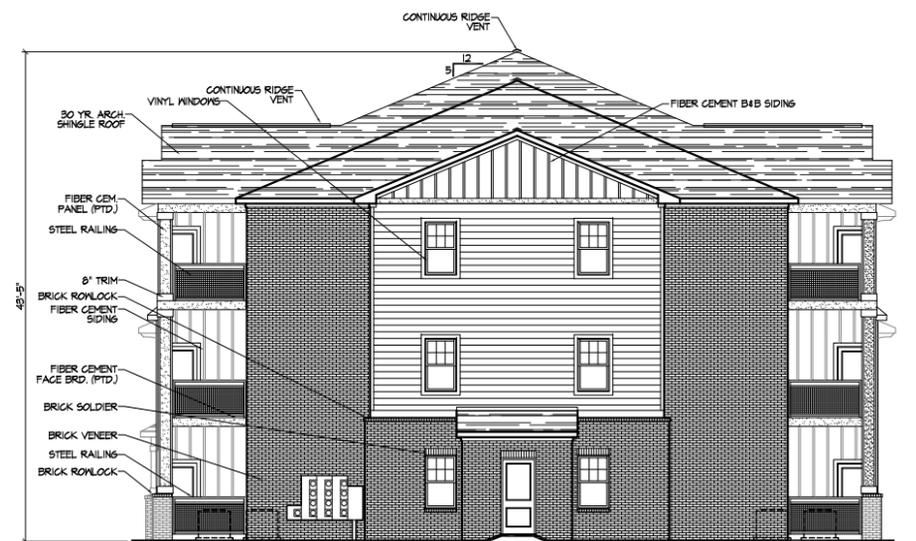
BLDG. B- FRONT ELEVATION (BLDGs. 8 & 9)  
SCALE: 1/8" = 1'-0"



BLDG. B- REAR ELEVATION (BLDGs. 8 & 9)  
SCALE: 1/8" = 1'-0"



BLDG. B- LEFT SIDE ELEVATION (BLDGs. 8 & 9)  
SCALE: 1/8" = 1'-0"

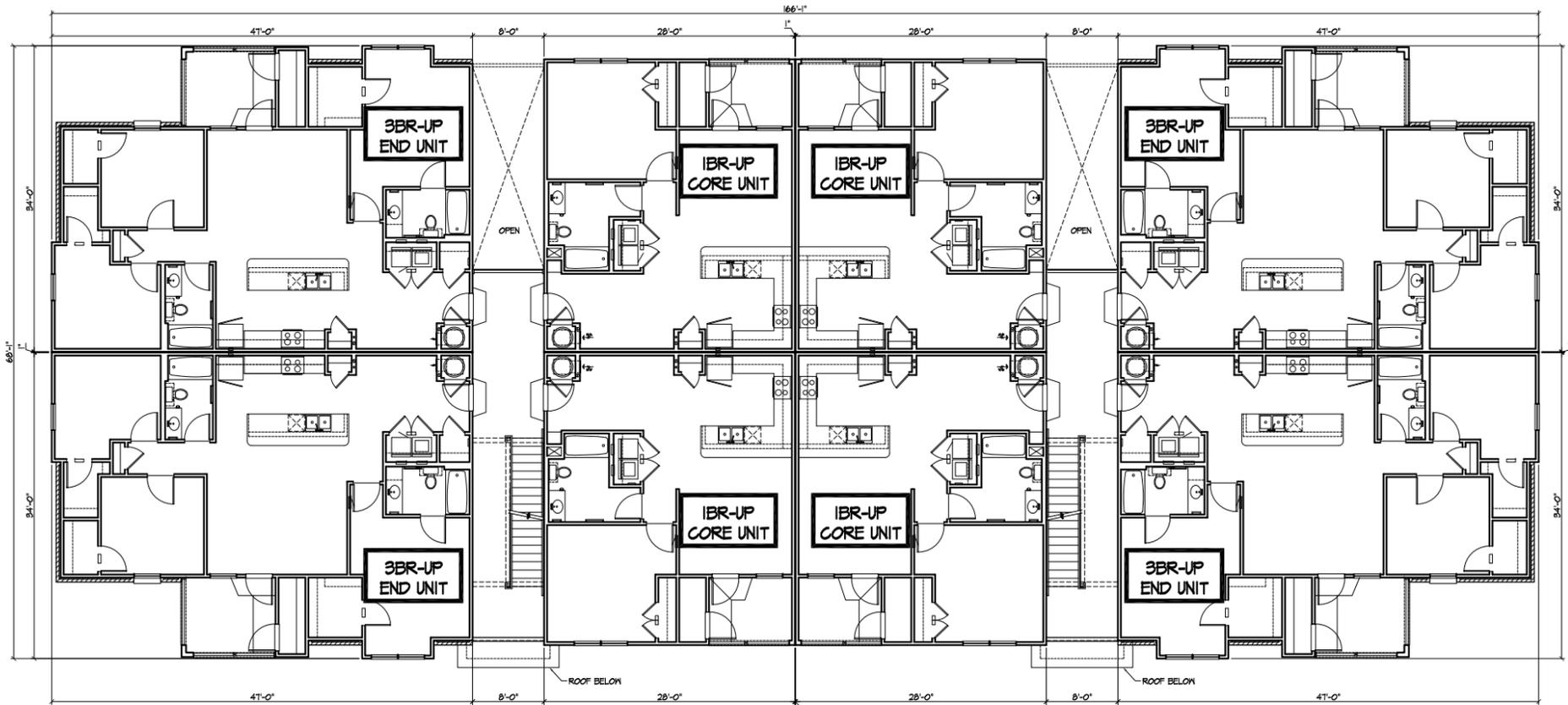


BLDG. B- RIGHT SIDE ELEVATION (BLDGs. 8 & 9)  
SCALE: 1/8" = 1'-0"

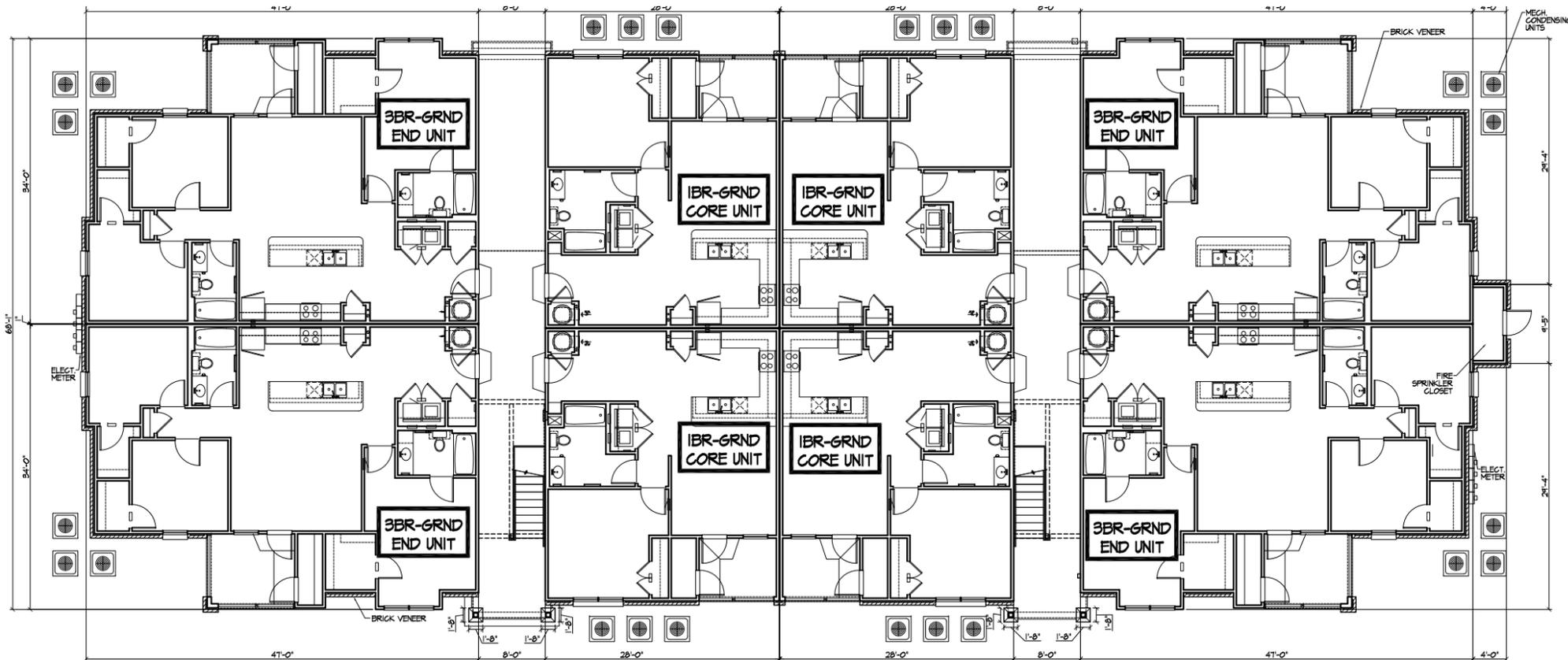
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Trolley Road Apartments  
 SummerVile, South Carolina  
 BLDG. B ELEVATIONS  
 1/20/20  
 AS NOTED  
 1/20/20

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February 26, 2020 A-08



BLDG. C- 2ND FLOOR PLAN  
SCALE 1/8" = 1'-0"



BLDG. C- GROUND FLOOR PLAN  
SCALE 1/8" = 1'-0"

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BLDG. C PLANS  
Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina

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February 26, 2020 A-09







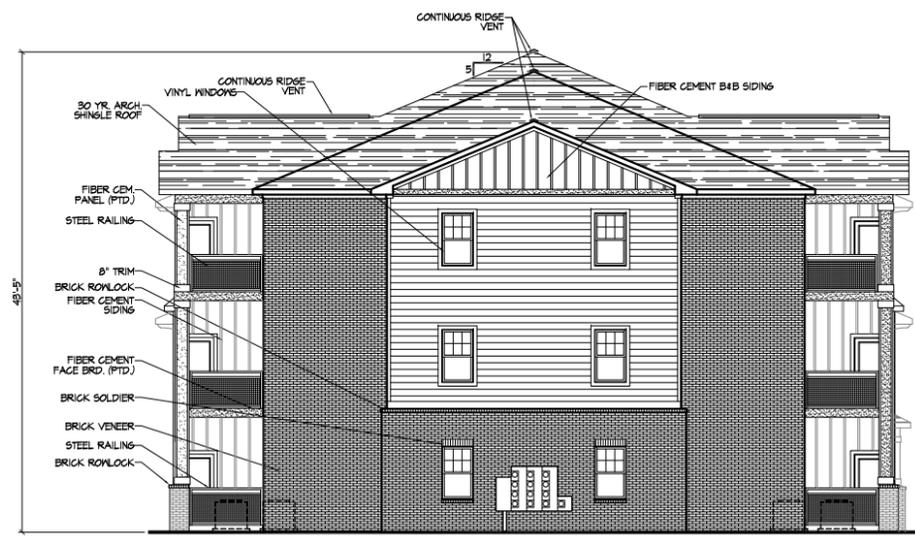
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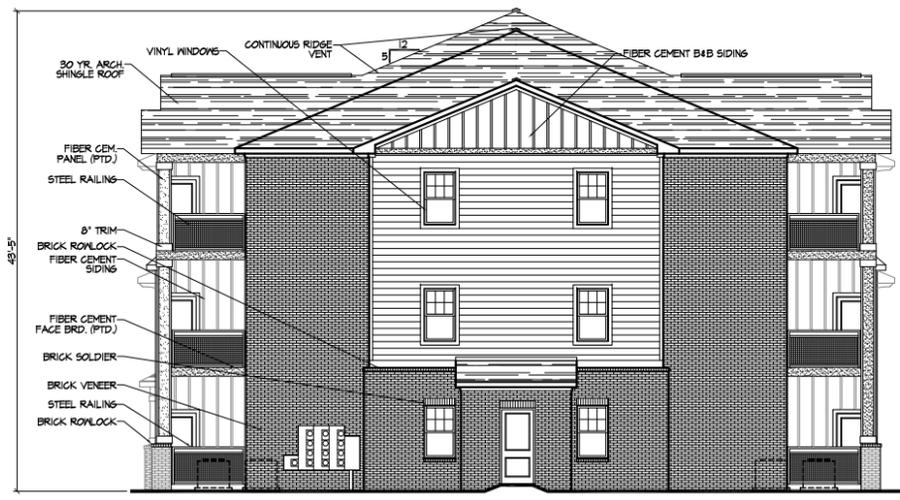
BLDG. C- FRONT ELEVATION (BLDG. 1)  
SCALE: 1/8" = 1'-0"



BLDG. C- REAR ELEVATION (BLDG. 1)  
SCALE: 1/8" = 1'-0"



BLDG. C- LEFT SIDE ELEVATION (BLDG. 1)  
SCALE: 1/8" = 1'-0"

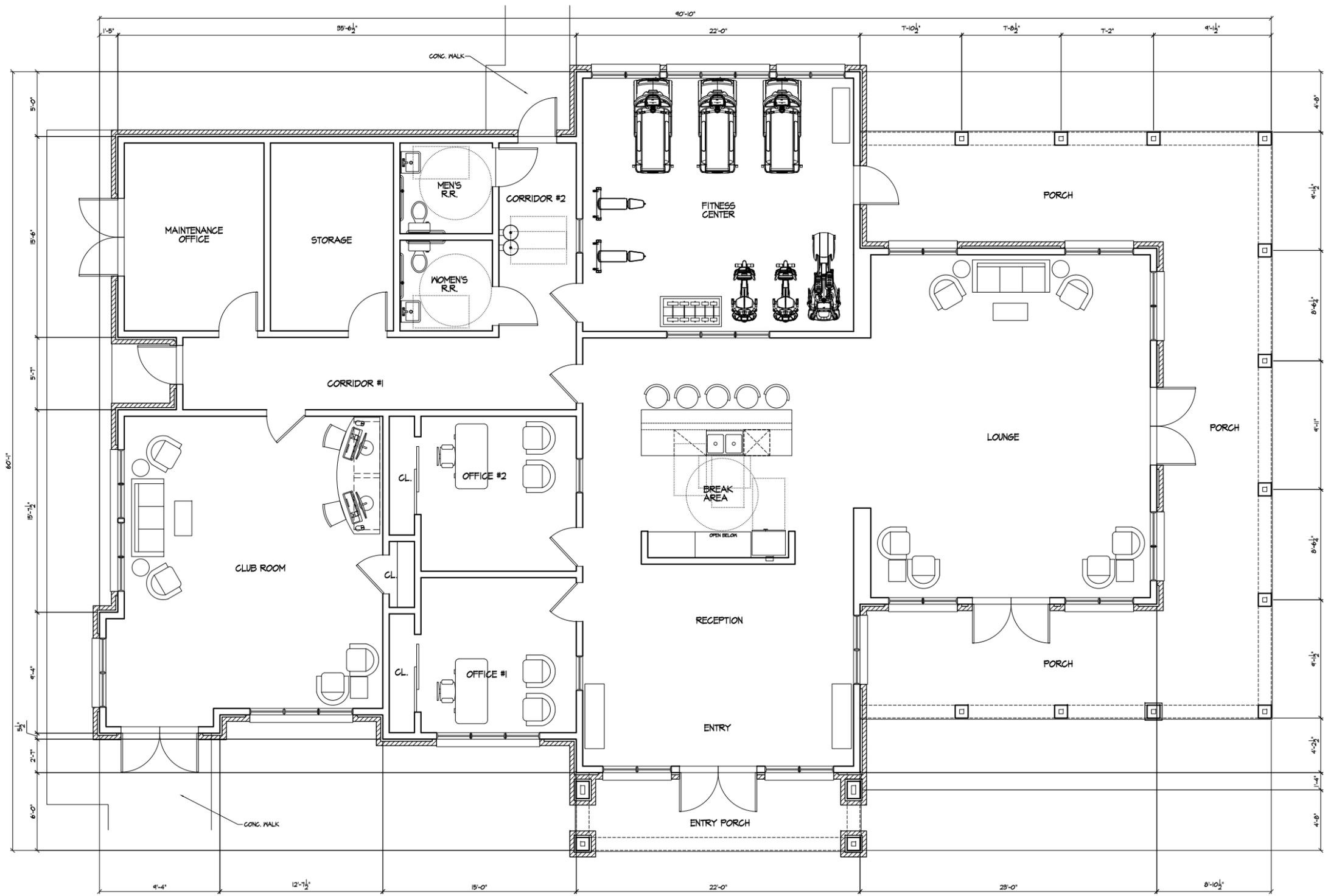


BLDG. C- RIGHT SIDE ELEVATION (BLDG. 1)  
SCALE: 1/8" = 1'-0"



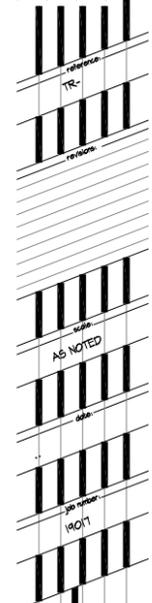
BLDG. C ELEVATIONS  
Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina

CDRB Review Only  
February 26, 2020 A-11



CLUBHOUSE - FLOOR PLAN  
SCALE: 1/4"=1'-0"

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CLUBHOUSE PLANS  
Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina

CDRB Review Only  
February 26, 2020 A-12







BLDG. A- FRONT ELEVATION (BLDG. 1-6)  
SCALE: 1/8" = 1'-0"



BLDG. A- REAR ELEVATION (BLDG. 1-6)  
SCALE: 1/8" = 1'-0"

NO.	DESCRIPTION	DATE
1	TR-1	
2	TR-2	
3	TR-3	
4	TR-4	
5	TR-5	
6	TR-6	
7	TR-7	
8	TR-8	
9	TR-9	
10	TR-10	
11	TR-11	
12	TR-12	
13	TR-13	
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42	TR-42	
43	TR-43	
44	TR-44	
45	TR-45	
46	TR-46	
47	TR-47	
48	TR-48	
49	TR-49	
50	TR-50	

BUILDING 'A' ELEVATIONS  
Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina

Not for Construction  
February 18, 2020

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BLDG. A- LEFT SIDE ELEVATION (BLDGs. 1-6)  
SCALE: 1/8" = 1'-0"

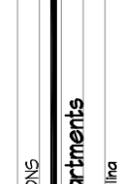


BLDG. A- RIGHT SIDE ELEVATION (BLDGs. 1-6)  
SCALE: 1/8" = 1'-0"

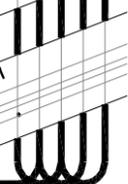
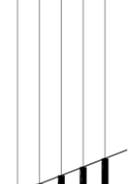
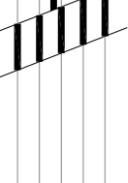
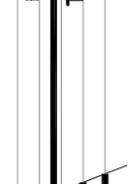
BUILDING 'A' ELEVATIONS  
Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina

Not for Construction  
February 18, 2020

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BUILDING 'B' ELEVATIONS  
Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina



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BLDG. B- FRONT ELEVATION (BLDGs. 8 & 9)  
SCALE: 1/8" = 1'-0"

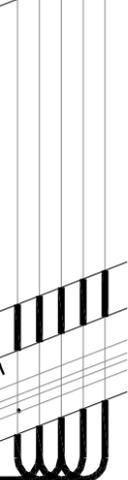
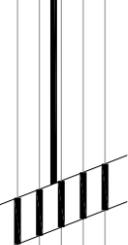


BLDG. B- REAR ELEVATION (BLDGs. 8 & 9)  
SCALE: 1/8" = 1'-0"

Not for Construction  
February 18, 2020



BUILDING ELEVATIONS  
Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina



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BLDG. B- LEFT SIDE ELEVATION (BLDGs. 8 & 9)  
SCALE: 1/8" = 1'-0"



BLDG. B- RIGHT SIDE ELEVATION (BLDGs. 8 & 9)  
SCALE: 1/8" = 1'-0"

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February 18, 2020

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BLDG. C- FRONT ELEVATION (BLDG. 1)  
SCALE: 1/8" = 1'-0"



BLDG. C- REAR ELEVATION (BLDG. 1)  
SCALE: 1/8" = 1'-0"



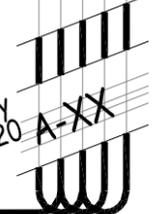
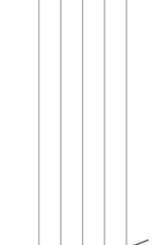
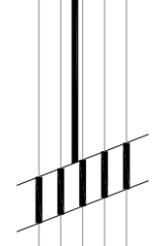
BUILDING 'C' ELEVATIONS  
Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina

Not for Construction  
February 18, 2020





CLUBHOUSE COLORED ELEVATIONS  
 Trolley Road Apartments  
 Trolley Road  
 Summerville, South Carolina



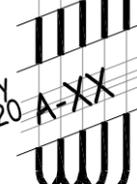
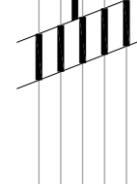
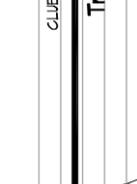
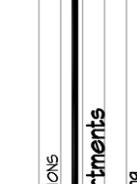
CLUBHOUSE- FRONT ELEVATION  
 SCALE: 1/4"=1'-0"



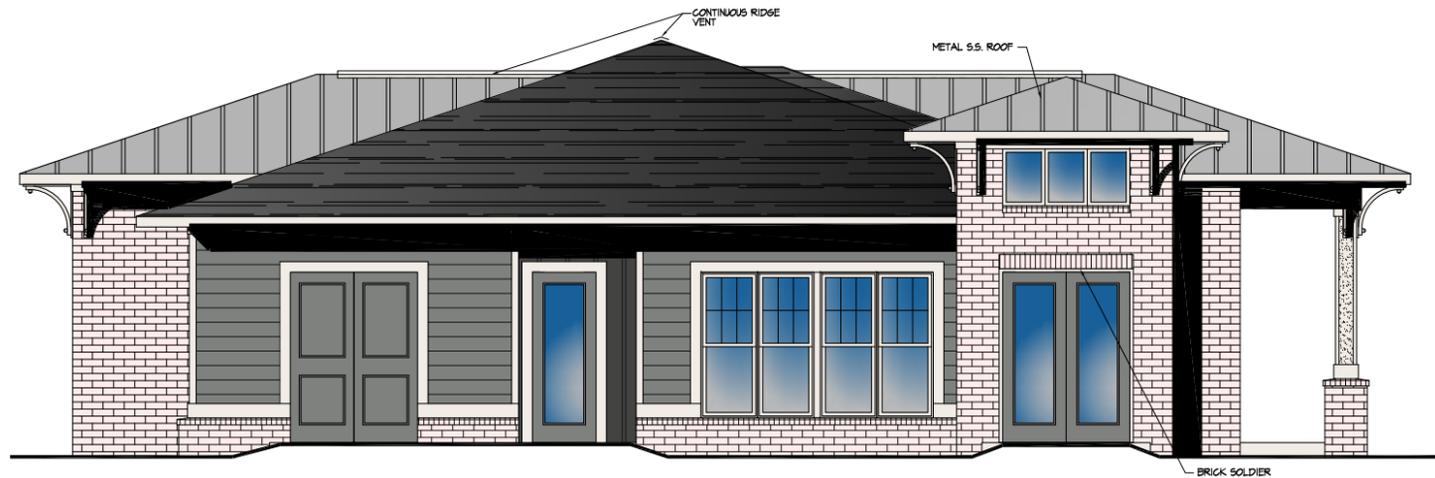
CLUBHOUSE- REAR ELEVATION  
 SCALE: 1/4"=1'-0"

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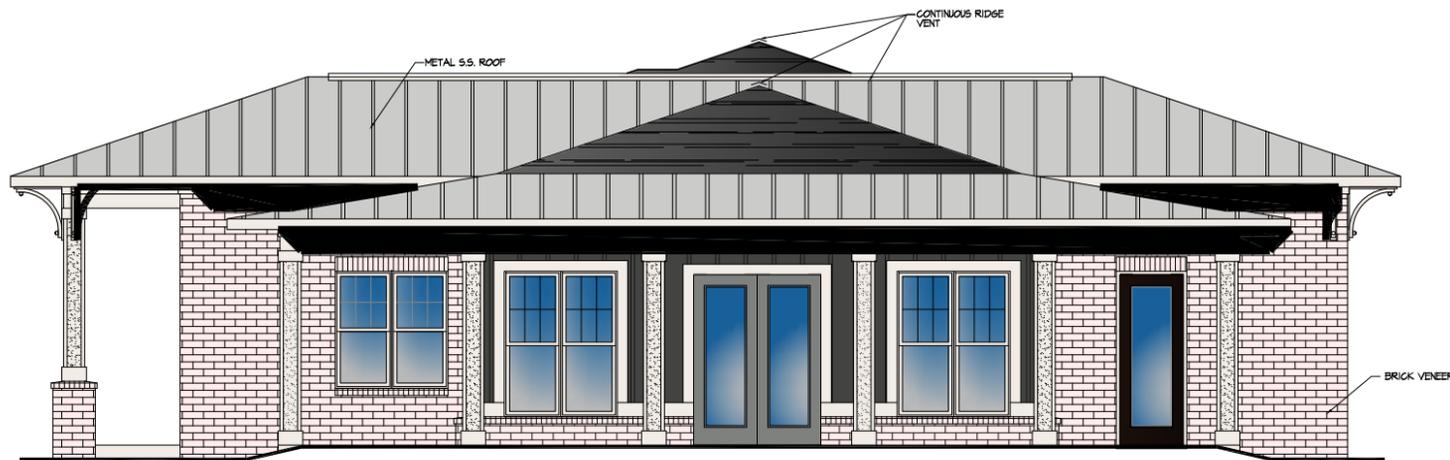
CDRB Review Only  
 February 26, 2020 A-XX



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CLUBHOUSE- LEFT SIDE ELEVATION  
SCALE: 1/4"=1'-0"



CLUBHOUSE- RIGHT SIDE ELEVATION  
SCALE: 1/4"=1'-0"

CLUBHOUSE COLORED ELEVATIONS

Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina

CDRB Review Only  
February 26, 2020

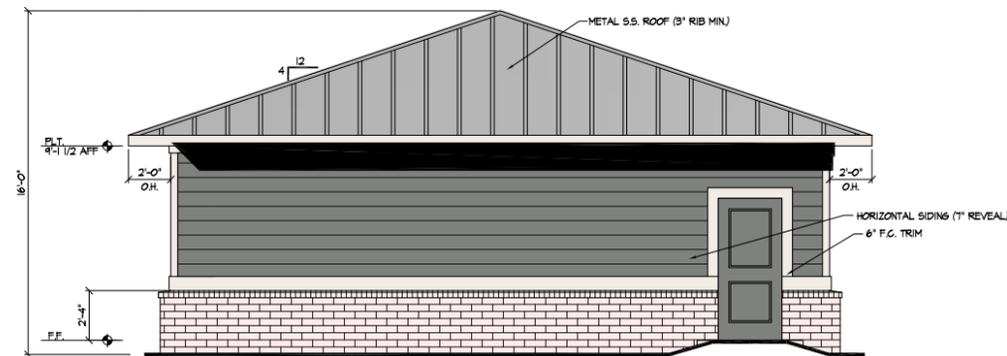
A-XX



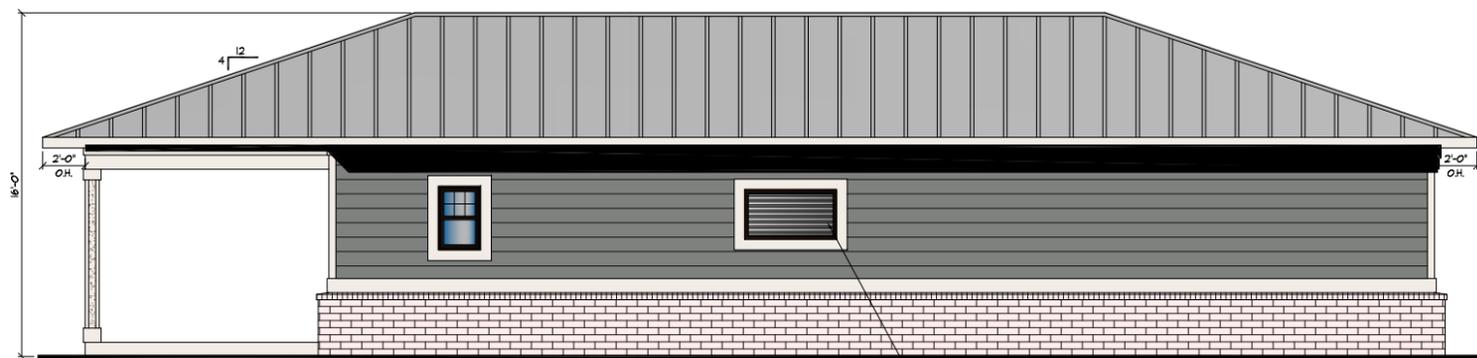
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MAIL/LAUNDRY - FRONT ELEVATION  
SCALE: 1/4"=1'-0"



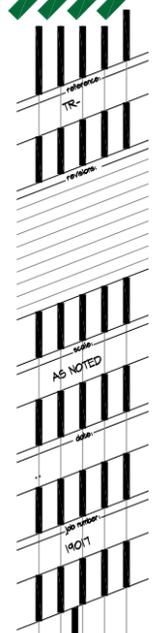
MAIL/LAUNDRY - LEFT SIDE ELEVATION  
SCALE: 1/4"=1'-0"



MAIL/LAUNDRY - REAR ELEVATION  
SCALE: 1/4"=1'-0"



MAIL/LAUNDRY - RIGHT SIDE ELEVATION  
SCALE: 1/4"=1'-0"



MAIL/LAUNDRY COLORED ELEVATIONS  
Trolley Road Apartments  
Summerville, South Carolina

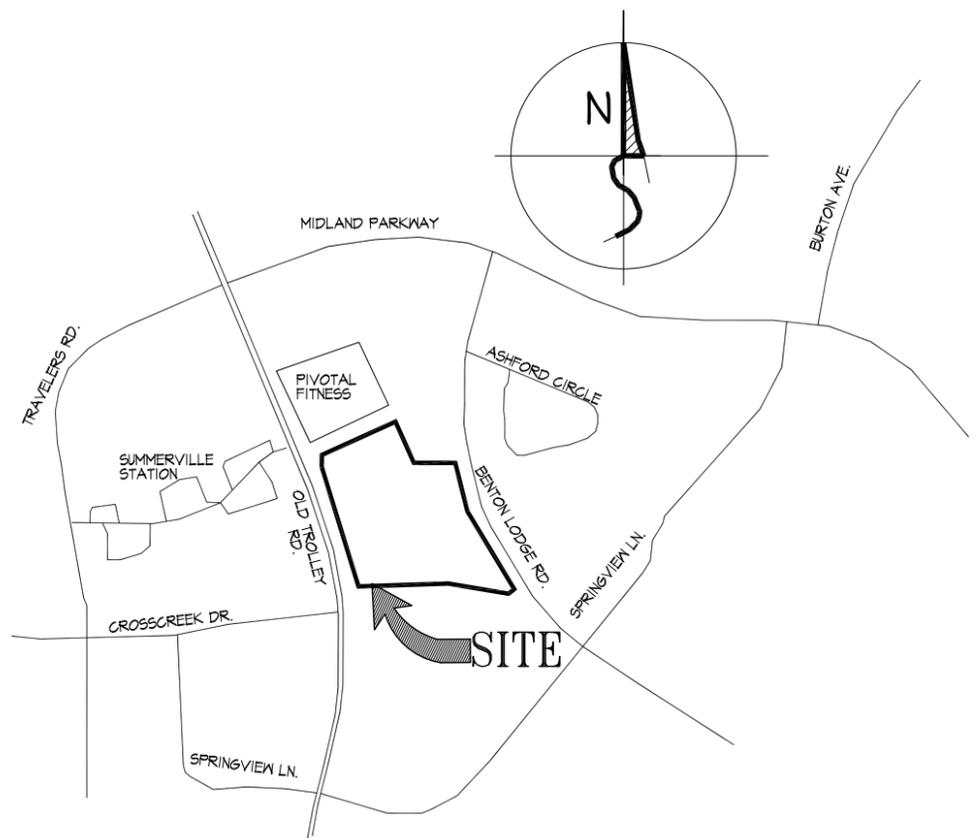
CDRB Review Only  
February 26, 2020 A-XX



UNIT TYPE BREAKDOWN														
BLDG. NO.	BLDG. TYPE	NO. OF APT. BLDGS.	1 BR CORE	1 BR H.C.			2 BR CORE	2 BR END	2 BR H.C.			3 BR END	3 BR H.C.	TOTAL UNITS PER BLDG.
1	A	1	12	T.B.D.			-	12	T.B.D.			-		24
2	A	1	12	T.B.D.			-	12	T.B.D.			-		24
3	A	1	12	T.B.D.			-	12	T.B.D.			-		24
4	A	1	12	T.B.D.			-	12	T.B.D.			-		24
5	A	1	12	T.B.D.			-	12	T.B.D.			-		24
6	A	1	12	T.B.D.			-	12	T.B.D.			-		24
7	A	1	12	T.B.D.			-	12	T.B.D.			-		24
8	B	1	-				12	-				12	T.B.D.	24
9	B	1	-				12	-				12	T.B.D.	24
TOTAL			84				24	84				24		216

1 BR = 84 (38.9%)      2 BR = 108 (50%)      3 BR = 24 (11.1%)

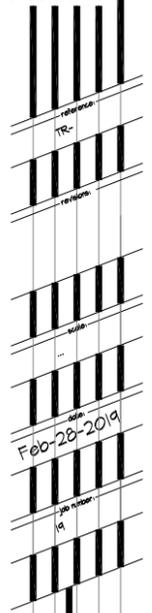
H.C. UNIT REQ'TS (S.C.) 2% REQUIRED = 6 TOTAL UNITS (2) 1BR, (3) 2 BR, (1) 3BR



LOCATION MAP

SCALE: N.T.S.

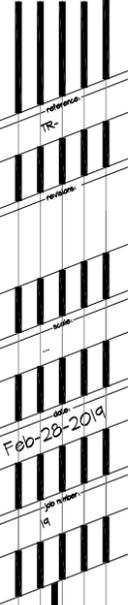
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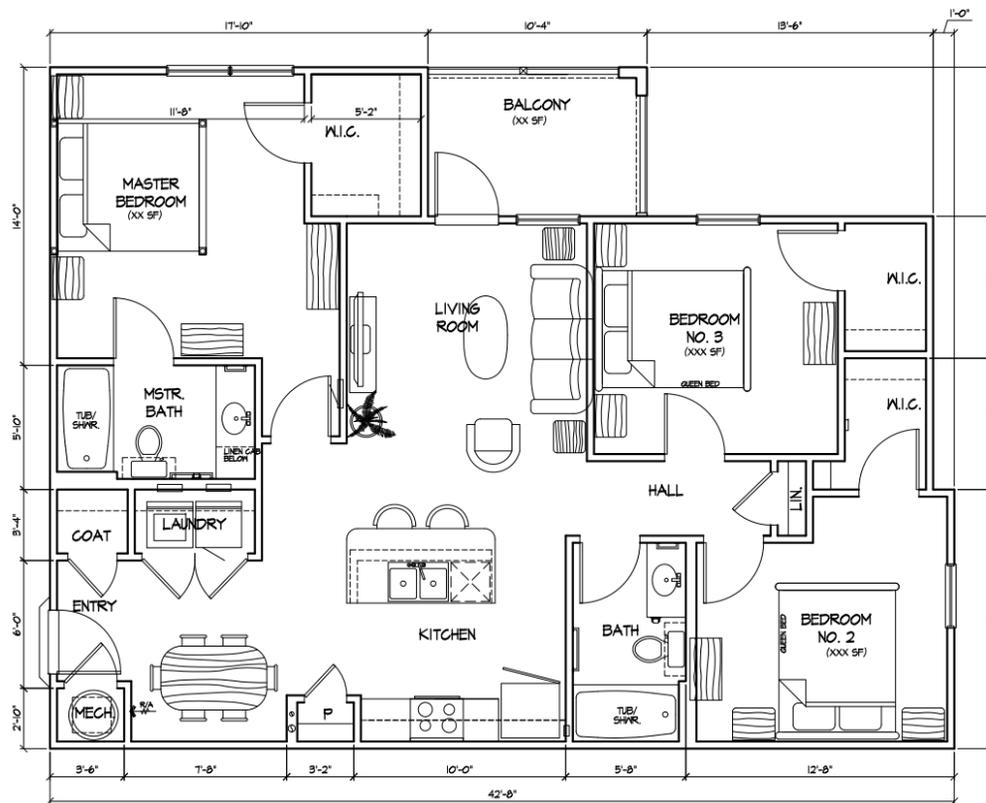
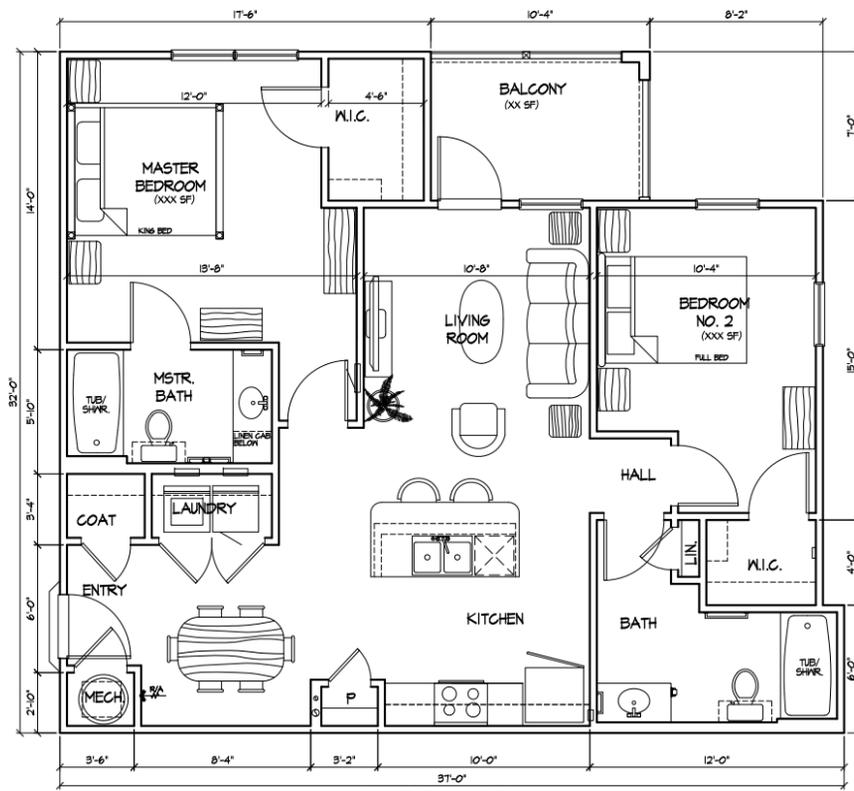
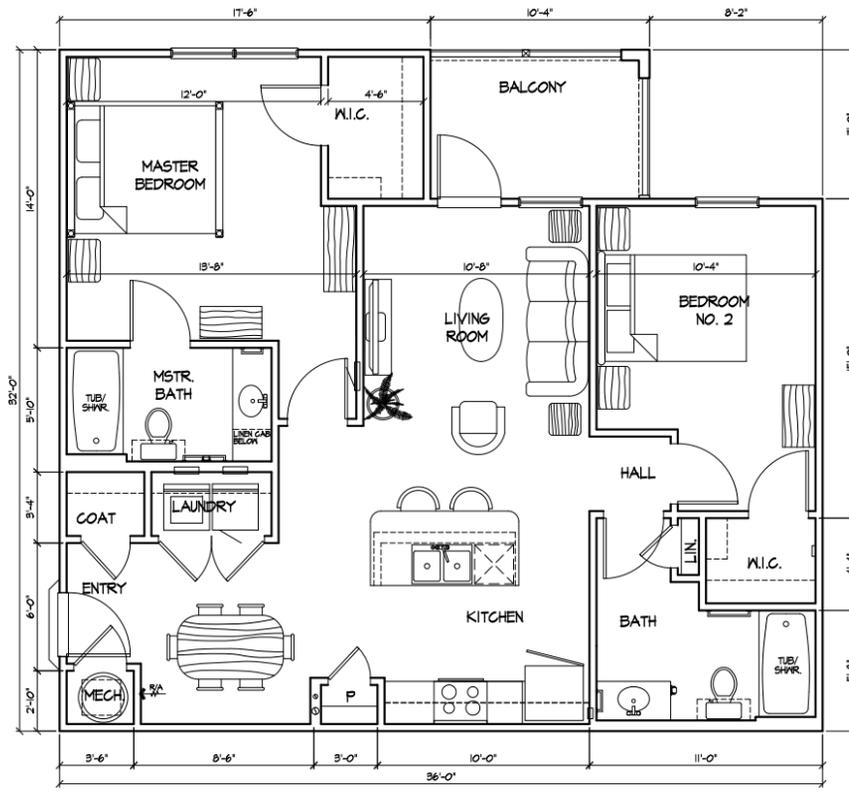
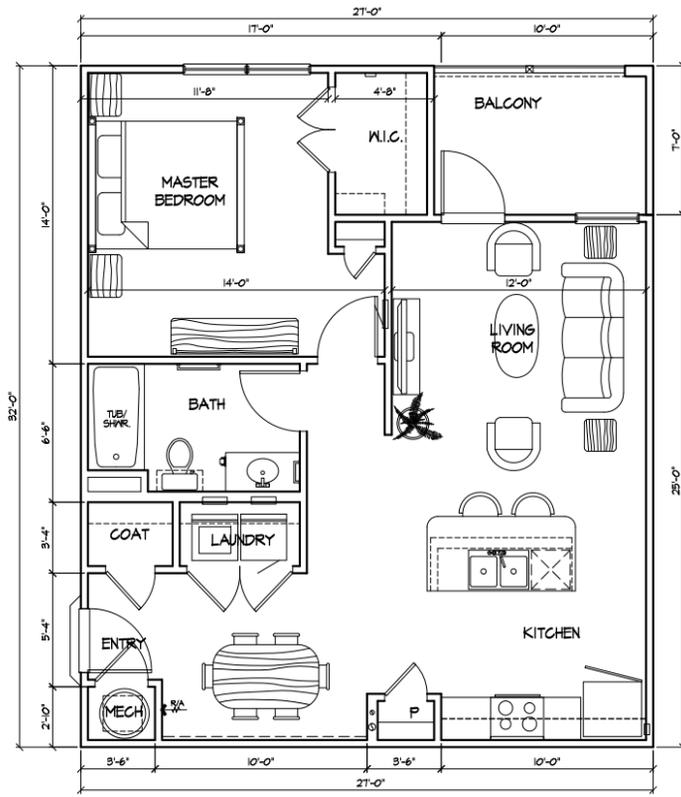
LOCATION MAP & BLDG. UNIT MIX  
Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina

Preliminary  
Not for Construction  
October 24, 2019

A-01



1 BR, 2 BR & 3 BR UNIT FLOOR PLANS  
Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina

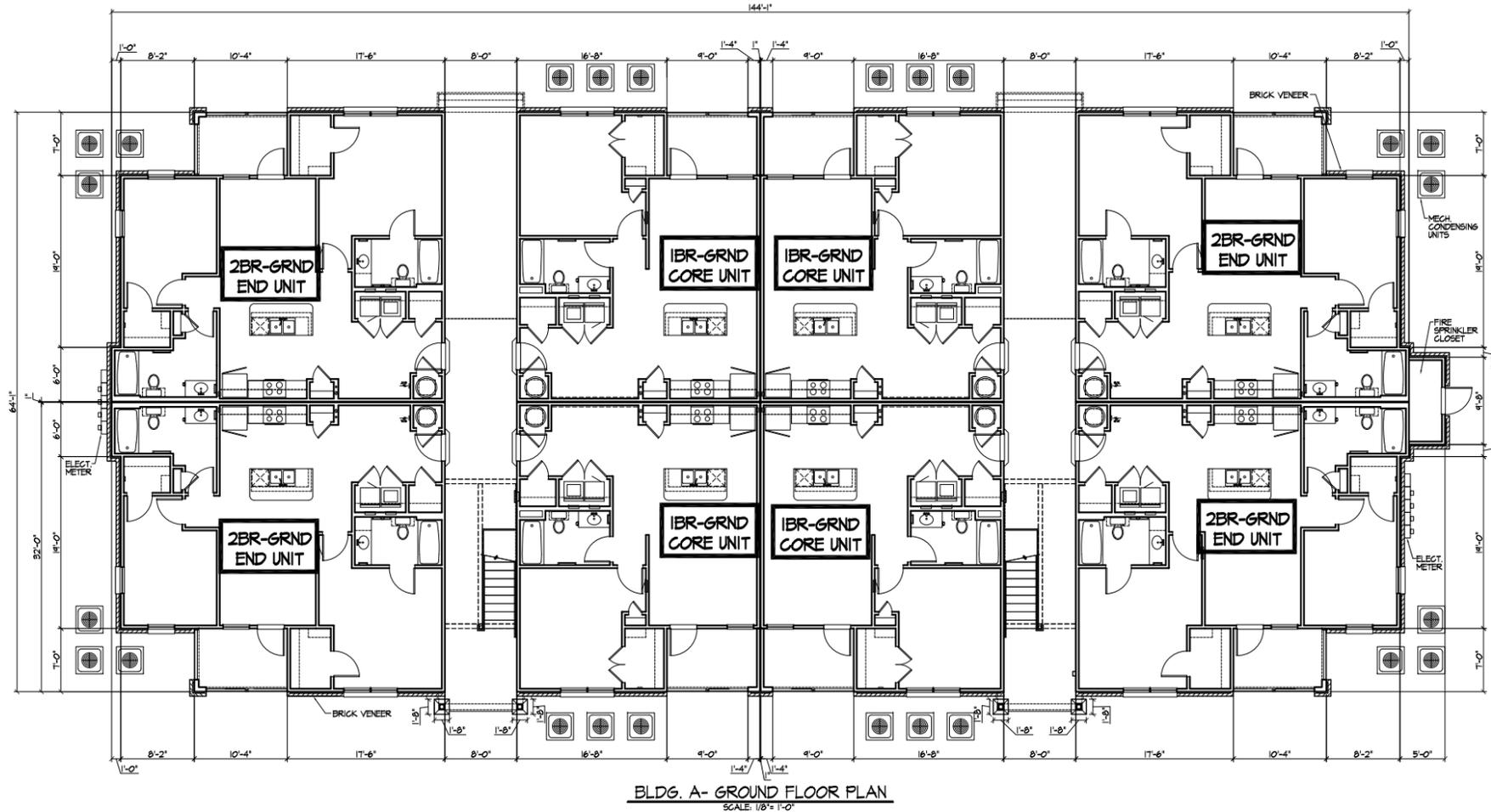
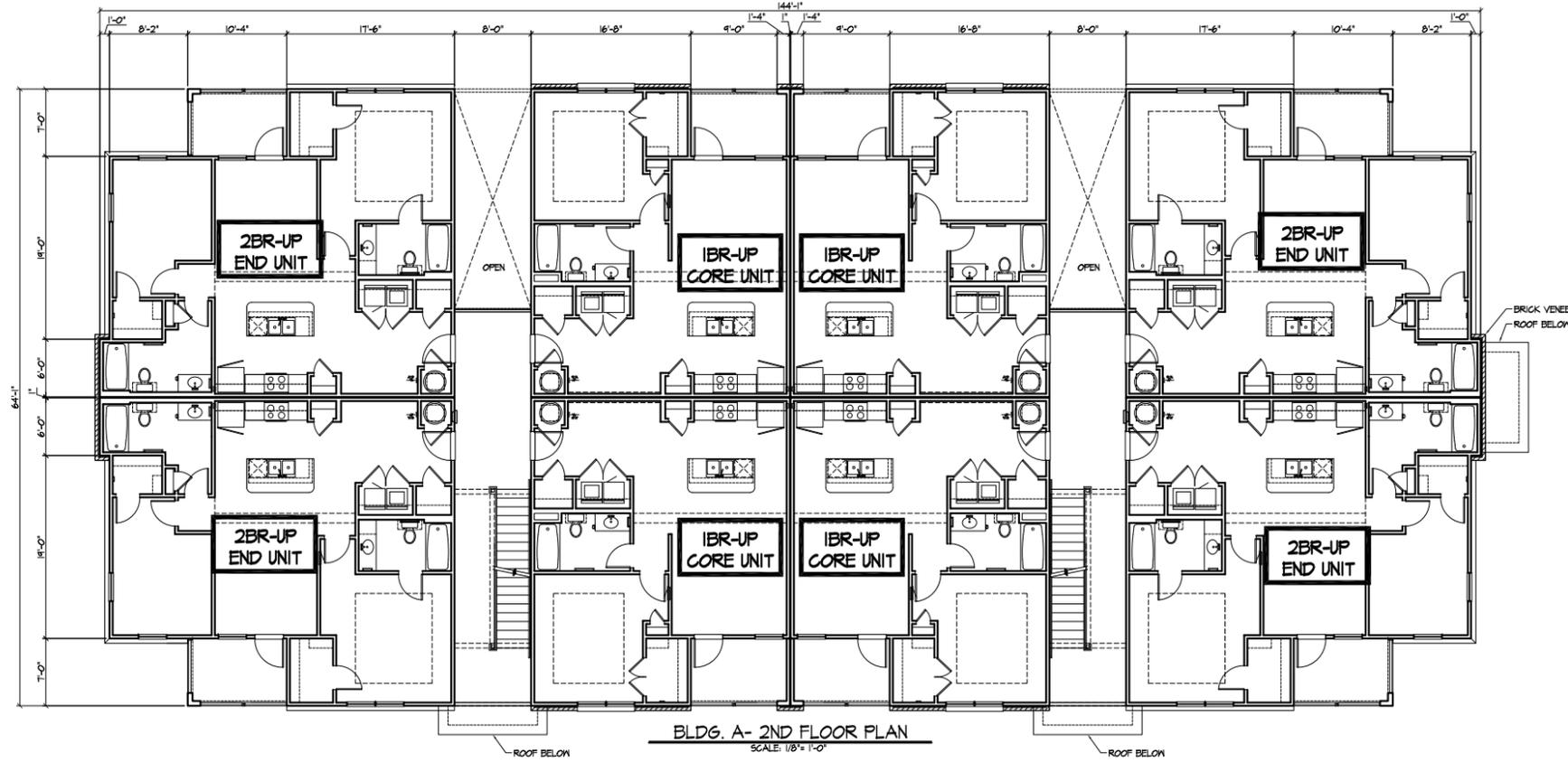


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Preliminary  
Not for Construction  
September 26, 2019  
A-04



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DATE	DESCRIPTION
Feb-28-2019	REVISED
19	REVISED

BLDG. A PLANS  
Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina

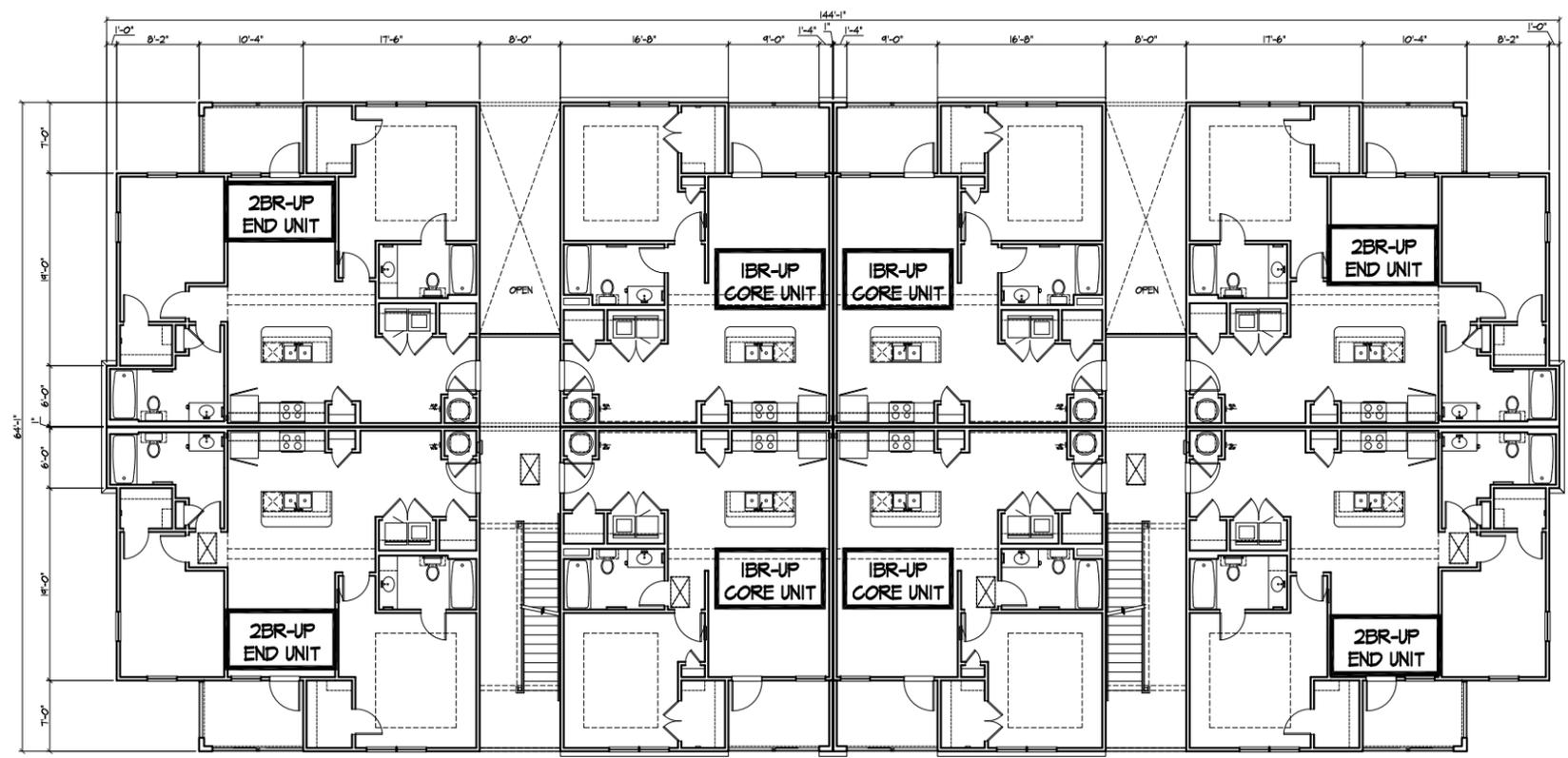
Preliminary  
Not for Construction  
September 26, 2019  
A-05



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99	99R
100	100R

BLDG. A PLANS  
Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina

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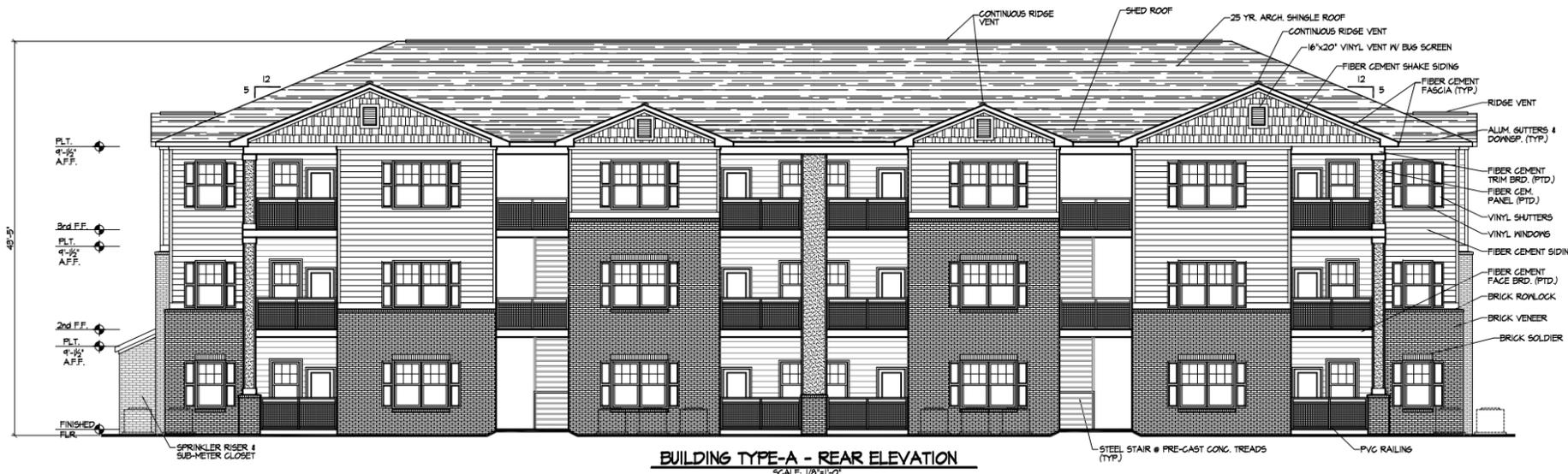


BLDG. A- 3RD FLOOR PLAN  
SCALE: 1/8" = 1'-0"

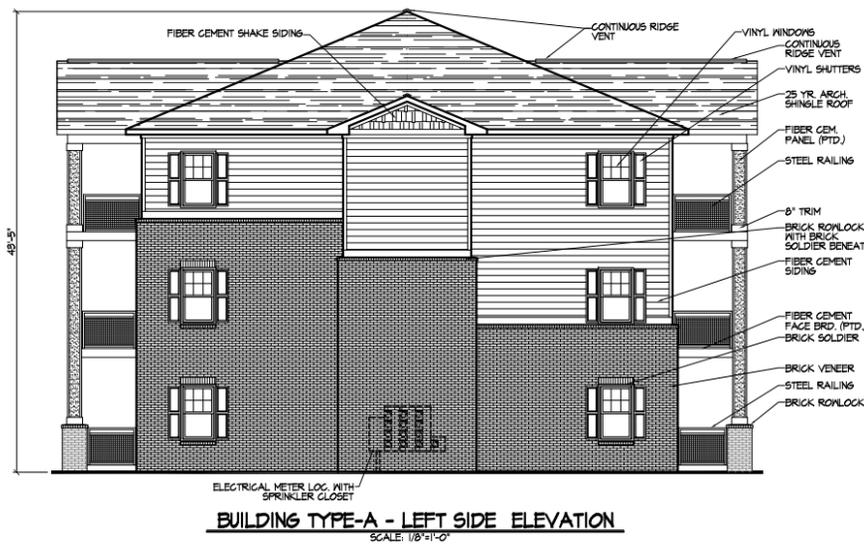
Preliminary  
Not for Construction  
September 26, 2019  
A-06



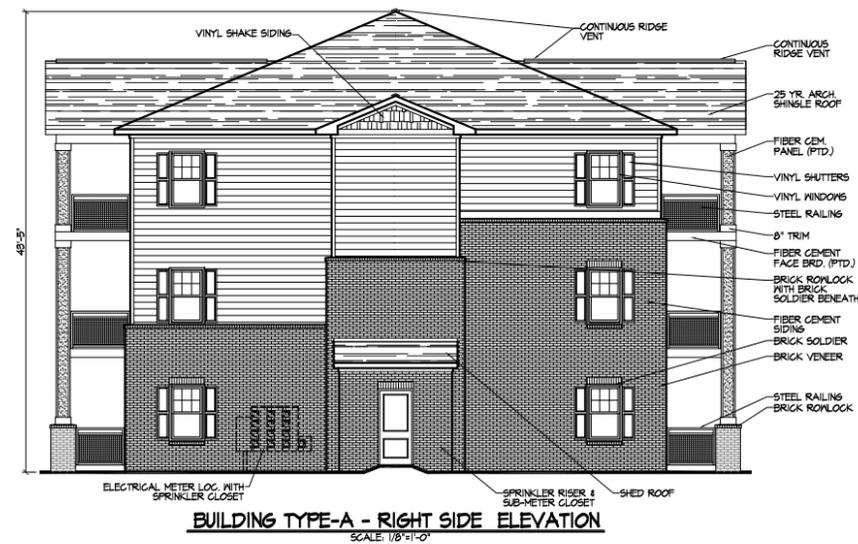
**BUILDING TYPE-A - FRONT ELEVATION**  
SCALE: 1/8"=1'-0"



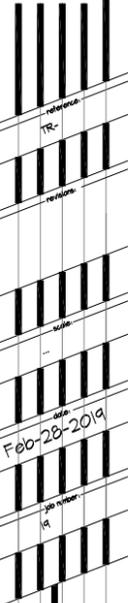
**BUILDING TYPE-A - REAR ELEVATION**  
SCALE: 1/8"=1'-0"



**BUILDING TYPE-A - LEFT SIDE ELEVATION**  
SCALE: 1/8"=1'-0"



**BUILDING TYPE-A - RIGHT SIDE ELEVATION**  
SCALE: 1/8"=1'-0"

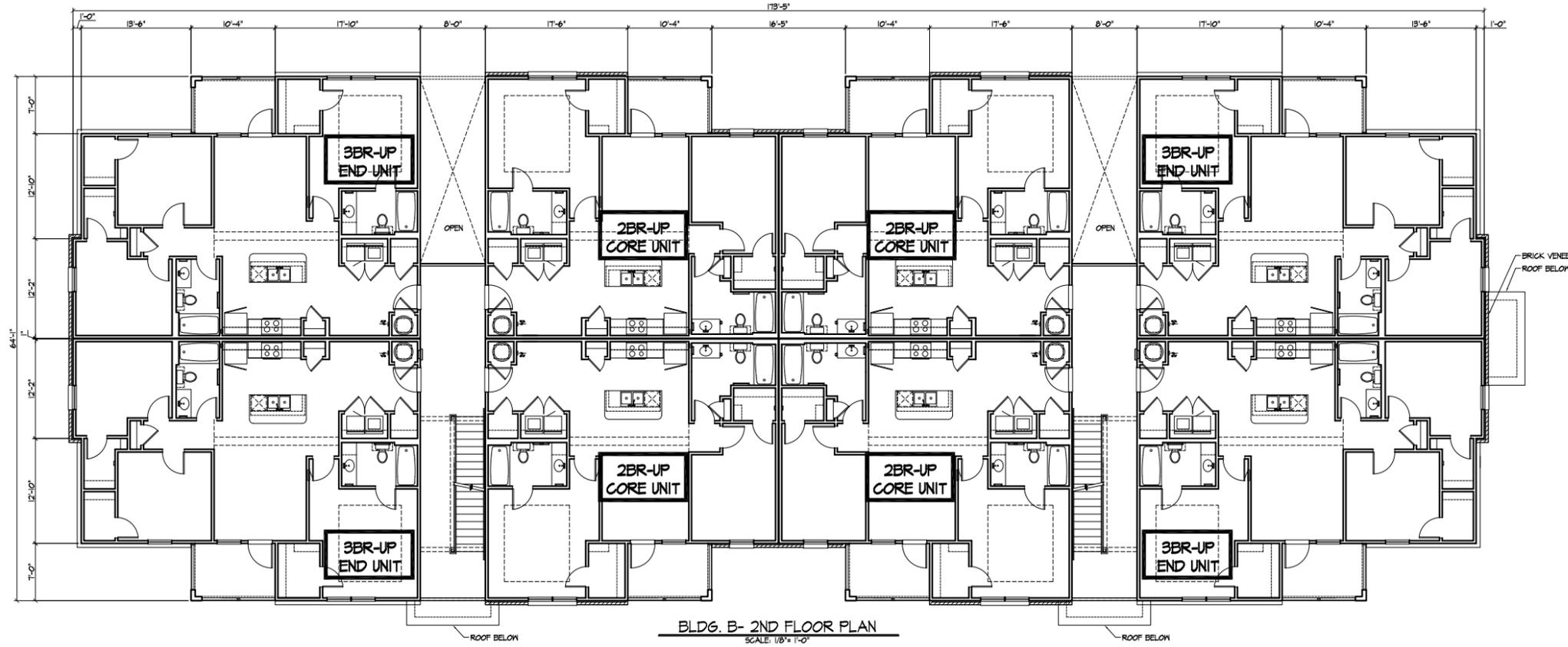


BLDG. A ELEVATIONS  
Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina

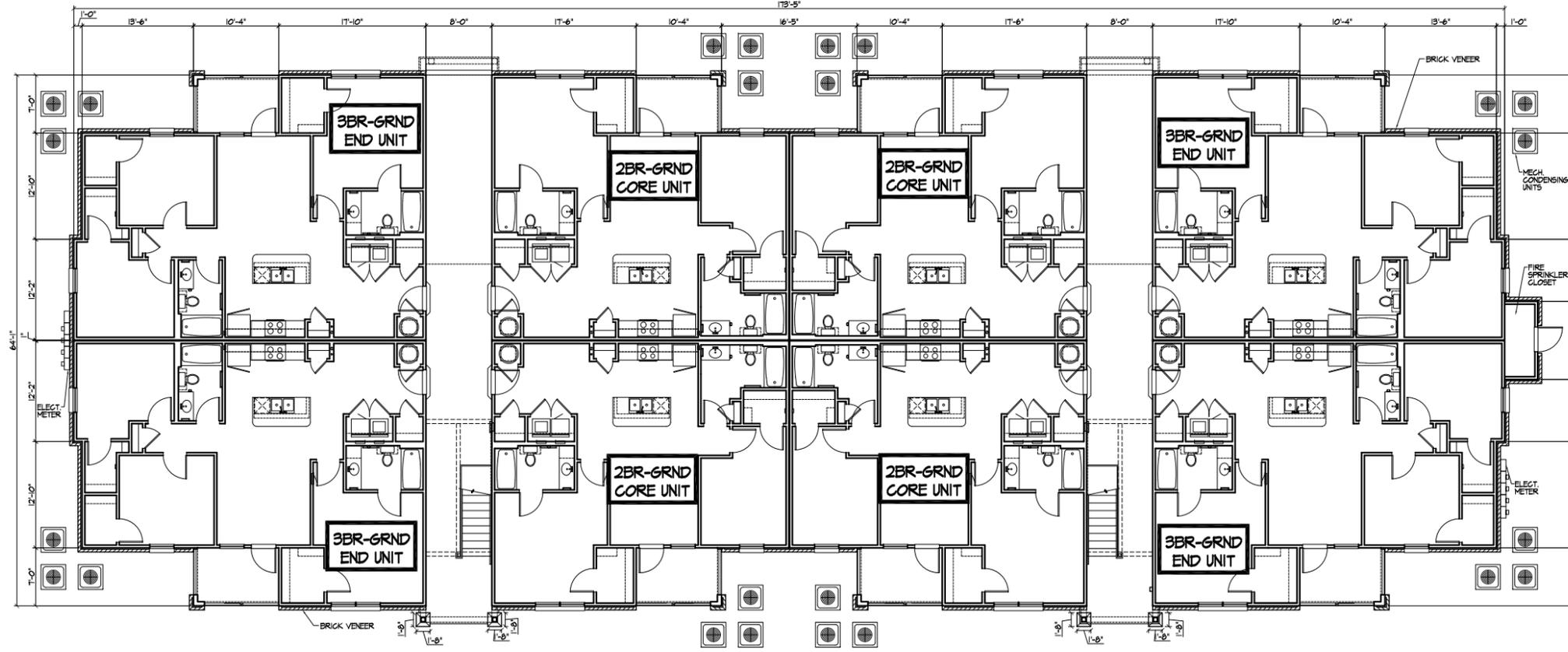
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September 26, 2019

A-07

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BLDG. B- 2ND FLOOR PLAN  
SCALE: 1/8" = 1'-0"



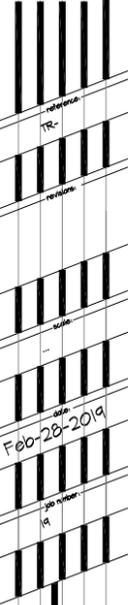
BLDG. B- GROUND FLOOR PLAN  
SCALE: 1/8" = 1'-0"

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DATE	DESCRIPTION
Feb-28-2019	REVISED
19	REVISED

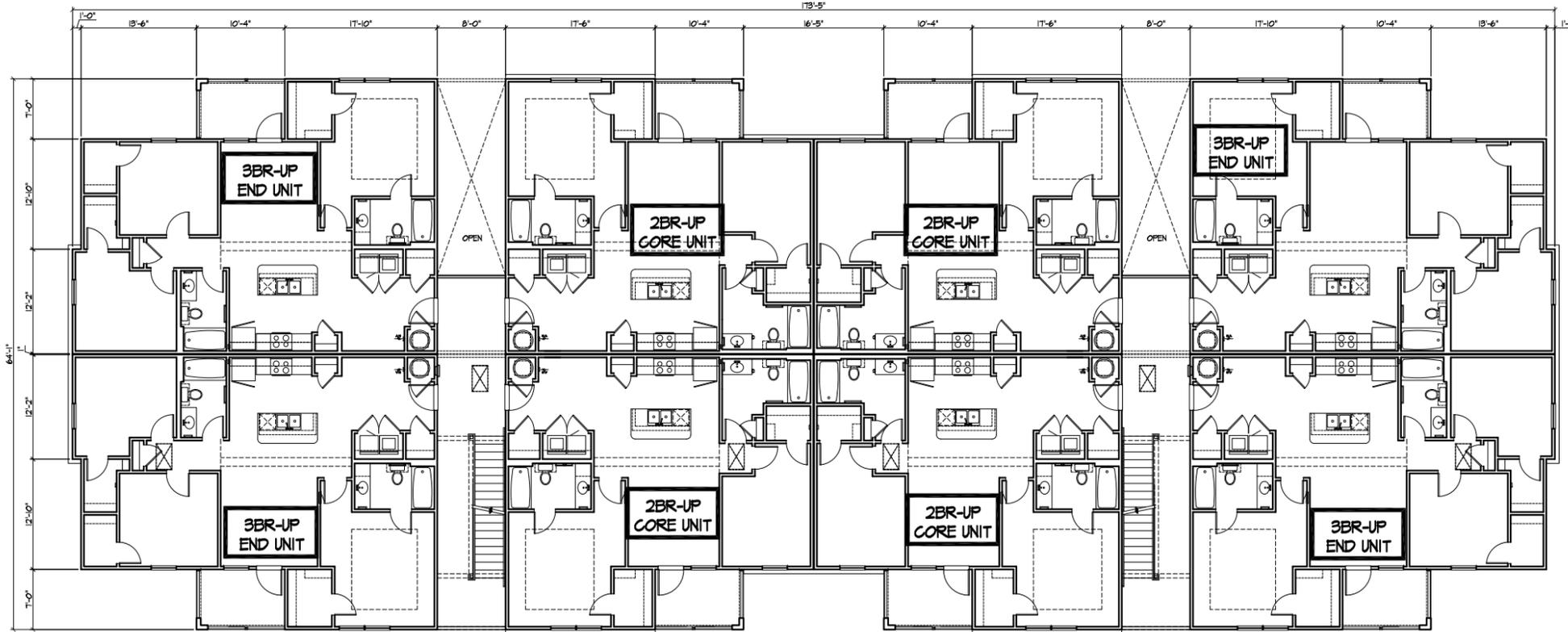
BLDG. B PLANS  
Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina

Preliminary  
Not for Construction  
September 26, 2019  
A-08



Feb-28-2019

BLDG. B PLANS  
Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina



BLDG. B- 3RD FLOOR PLAN  
SCALE: 1/8" = 1'-0"

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September 26, 2019  
A-09



**BUILDING TYPE-B - FRONT ELEVATION**  
SCALE: 1/8"=1'-0"



**BUILDING TYPE-B - REAR ELEVATION**  
SCALE: 1/8"=1'-0"



**BUILDING TYPE-B - LEFT SIDE ELEVATION**  
SCALE: 1/8"=1'-0"



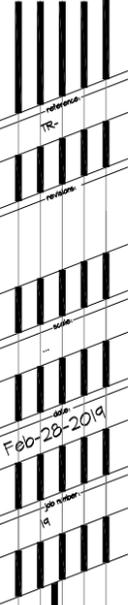
**BUILDING TYPE-B - RIGHT SIDE ELEVATION**  
SCALE: 1/8"=1'-0"

Feb-28-2019

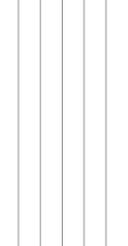
BLDG. B ELEVATIONS  
Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina

Preliminary  
Not for Construction  
September 26, 2019  
A-10

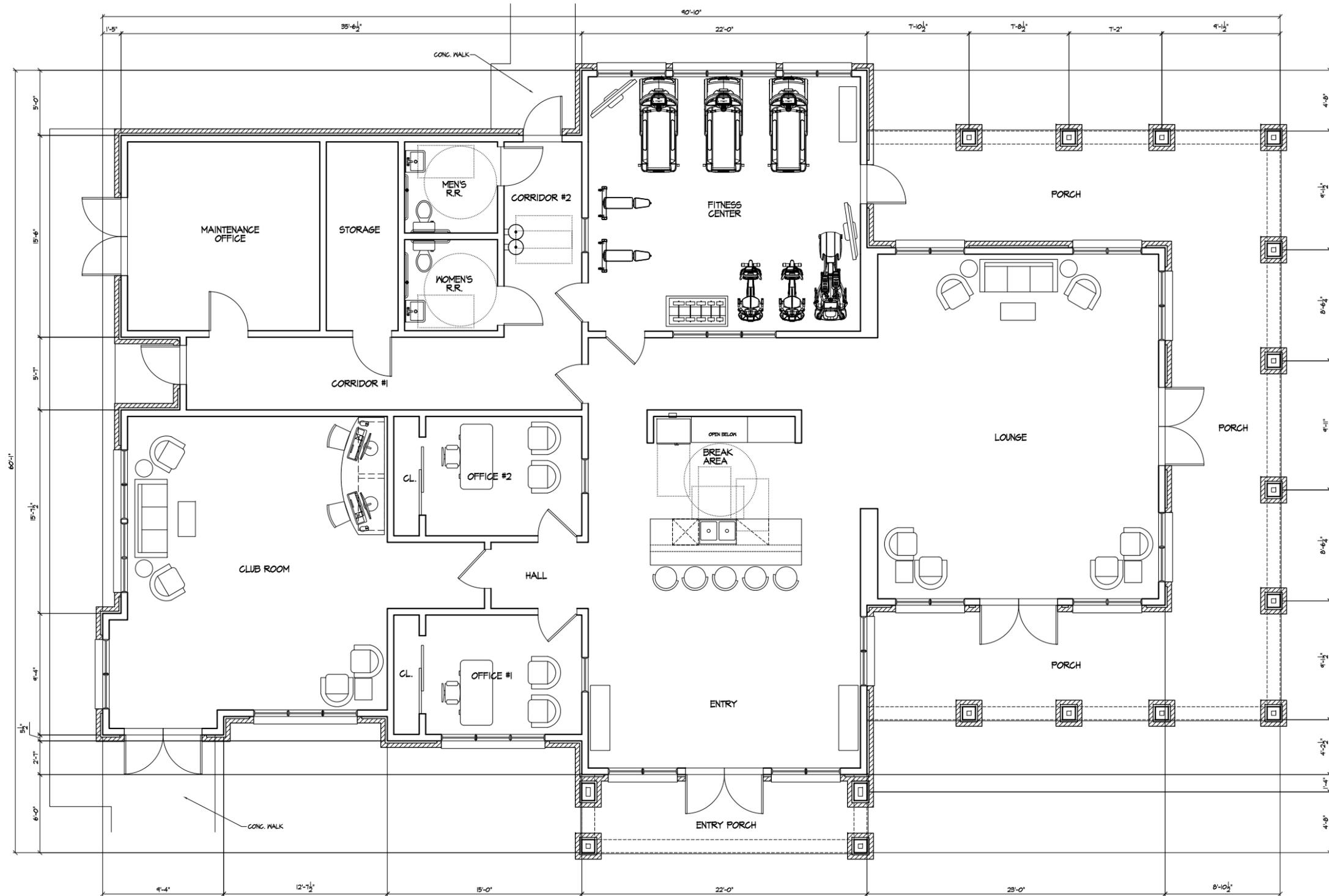
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CLUBHOUSE PLANS  
 Trolley Road Apartments  
 Trolley Road  
 Summerville, South Carolina



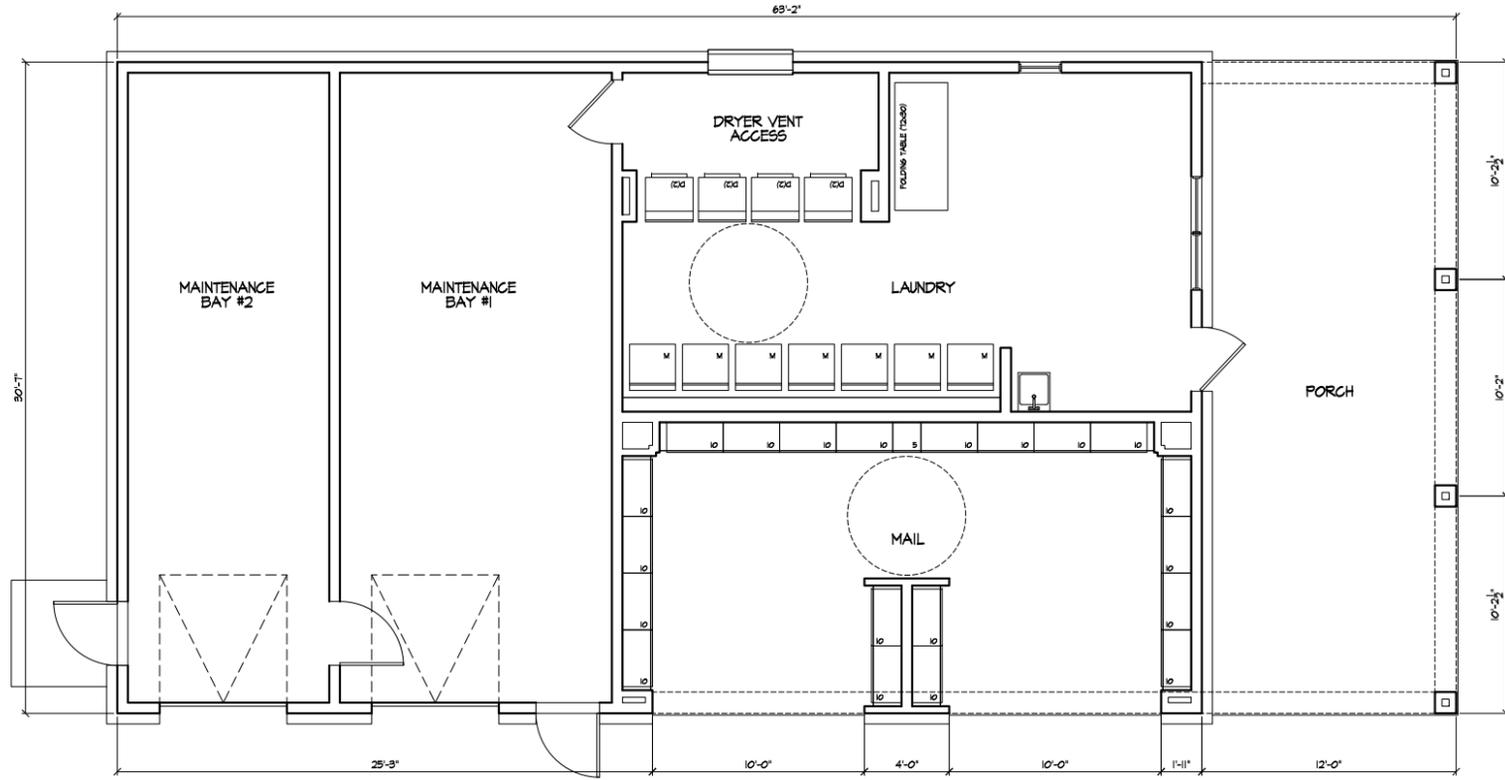
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**CLUBHOUSE- FLOOR PLAN**  
 SCALE: 1/4"=1'-0"

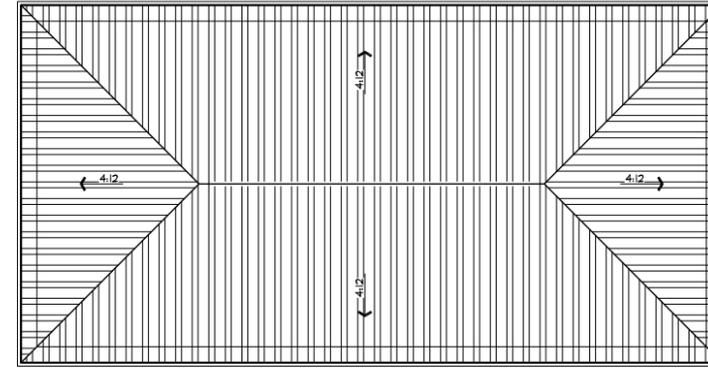
Preliminary  
 Not for Construction  
 September 26, 2019 A-11





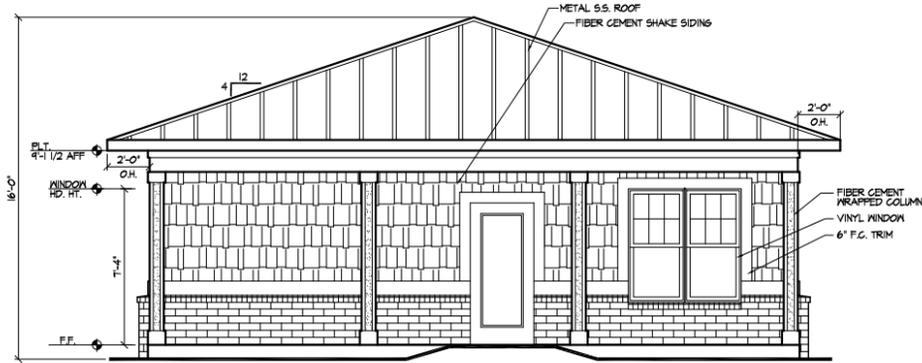
MAIL/LAUNDRY- FLOOR PLAN

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



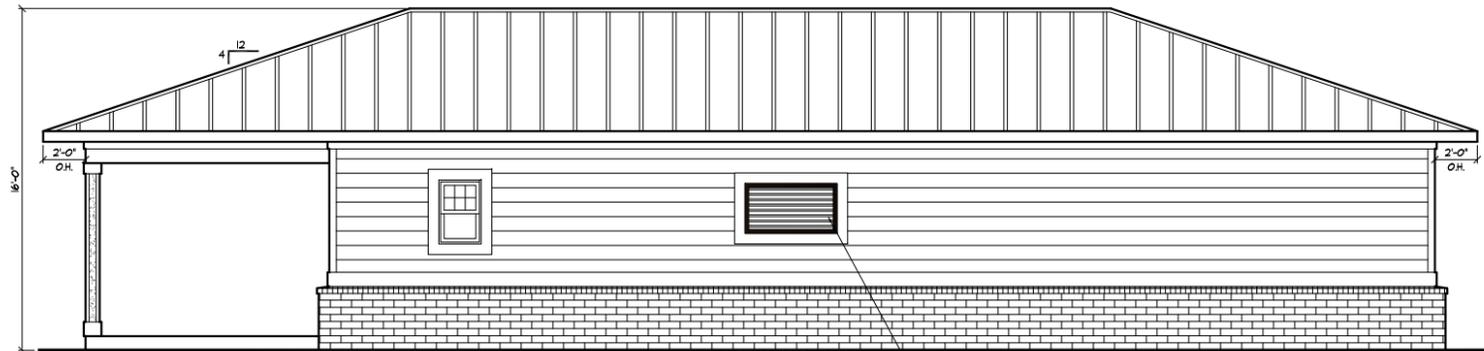
MAIL/LAUNDRY- ROOF PLAN

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



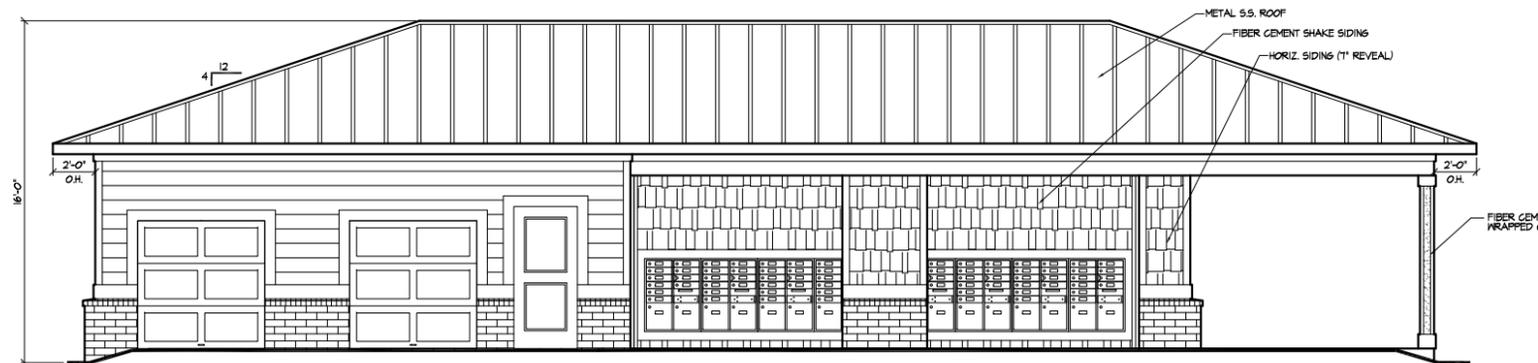
MAIL/LAUNDRY- RIGHT SIDE ELEVATION

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



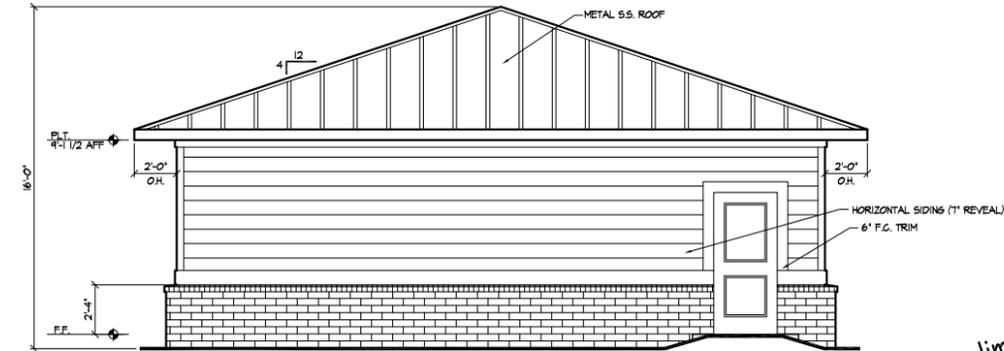
MAIL/LAUNDRY- REAR ELEVATION

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



MAIL/LAUNDRY- FRONT ELEVATION

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



MAIL/LAUNDRY- LEFT SIDE ELEVATION

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



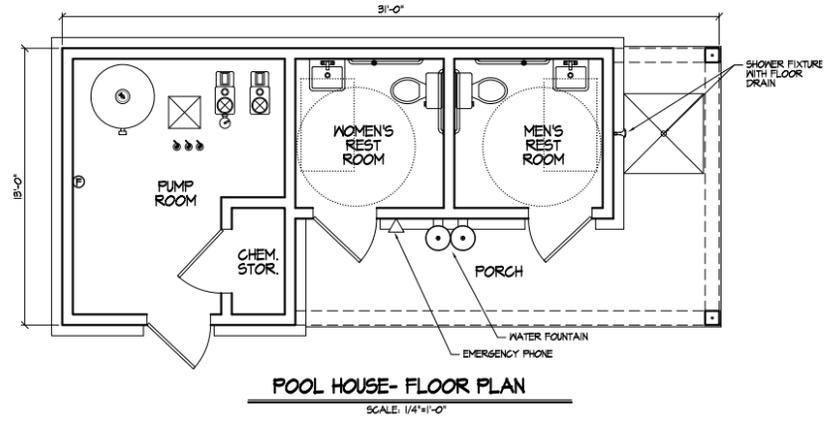
Feb-28-2019

MAIL/LAUNDRY PLANS & ELEVATIONS  
Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina

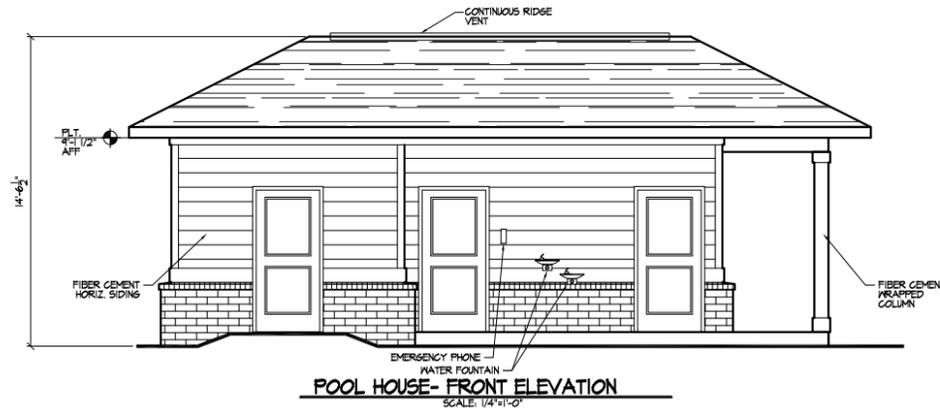
Preliminary  
Not for Construction  
September 26, 2019

A-13

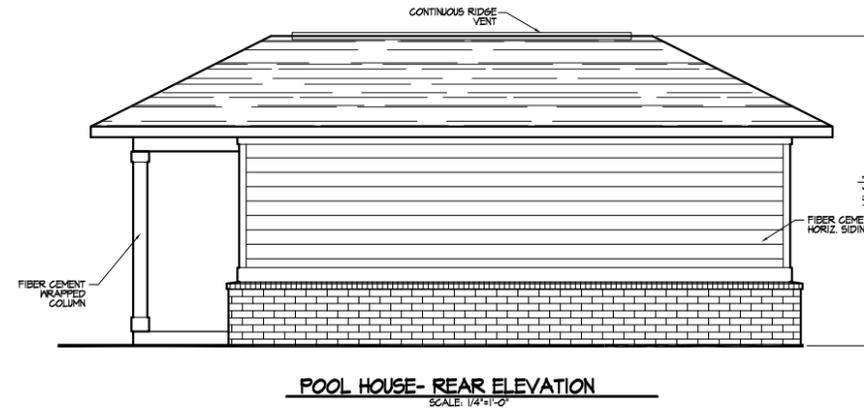
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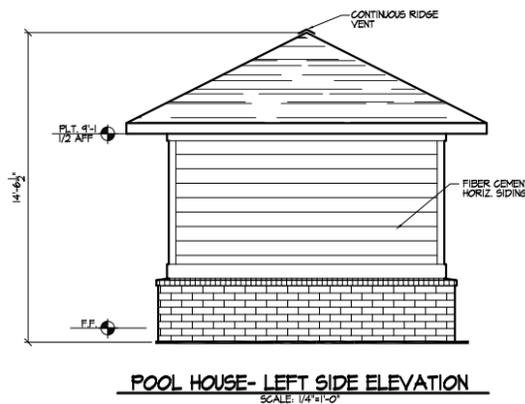
POOL HOUSE- FLOOR PLAN  
SCALE: 1/4"=1'-0"



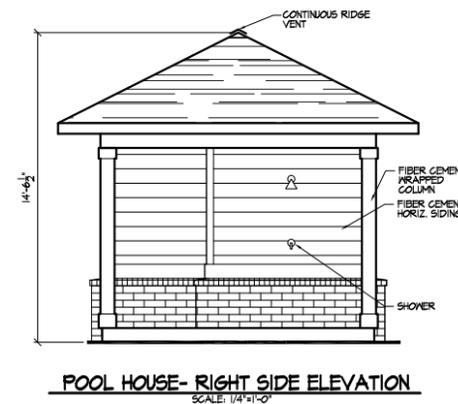
POOL HOUSE- FRONT ELEVATION  
SCALE: 1/4"=1'-0"



POOL HOUSE- REAR ELEVATION  
SCALE: 1/4"=1'-0"



POOL HOUSE- LEFT SIDE ELEVATION  
SCALE: 1/4"=1'-0"



POOL HOUSE- RIGHT SIDE ELEVATION  
SCALE: 1/4"=1'-0"

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1-10-19	TR-100

POOL HOUSE PLAN & ELEVATIONS  
 Trolley Road Apartments  
 Trolley Road  
 Summerville, South Carolina

Preliminary  
Not for Construction  
September 26, 2019



BUILDING TYPE-A - FRONT ELEVATION  
SCALE: 1/8"=1'-0"



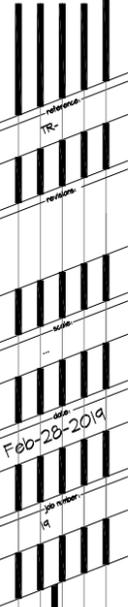
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SCALE: 1/8"=1'-0"



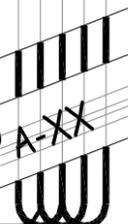
BUILDING TYPE-A - LEFT SIDE ELEVATION  
SCALE: 1/8"=1'-0"



BUILDING TYPE-A - RIGHT SIDE ELEVATION  
SCALE: 1/8"=1'-0"



BLDG. A - COLORED ELEVATIONS  
Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina



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Not for Construction  
September 26, 2019  
A-XX

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BUILDING TYPE-B - FRONT ELEVATION  
SCALE: 1/8"=1'-0"



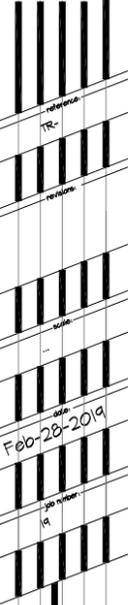
BUILDING TYPE-B - REAR ELEVATION  
SCALE: 1/8"=1'-0"



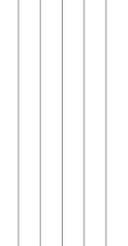
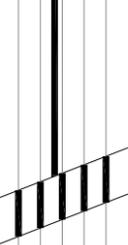
BUILDING TYPE-B - LEFT SIDE ELEVATION  
SCALE: 1/8"=1'-0"



BUILDING TYPE-B - RIGHT SIDE ELEVATION  
SCALE: 1/8"=1'-0"



BLDG. B - COLORED ELEVATIONS  
Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina



Preliminary  
Not for Construction  
September 26, 2019  
A-XX

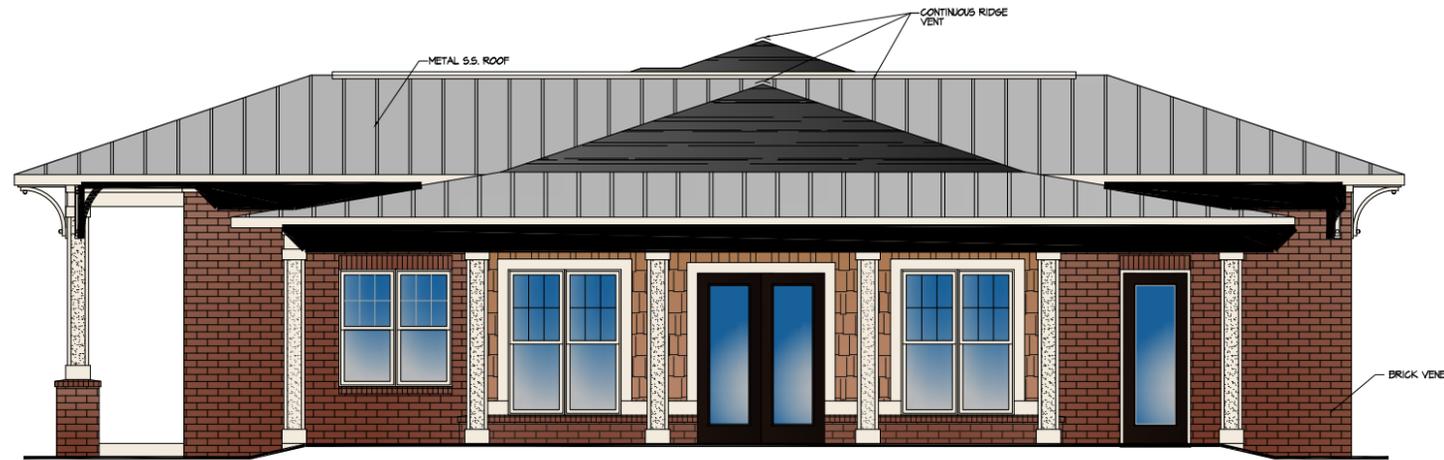
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CLUBHOUSE- LEFT SIDE ELEVATION  
SCALE: 1/4"=1'-0"



CLUBHOUSE- RIGHT SIDE ELEVATION  
SCALE: 1/4"=1'-0"

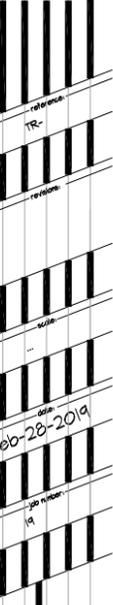


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CLUBHOUSE COLORED ELEVATIONS  
Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina

Preliminary  
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September 26, 2019

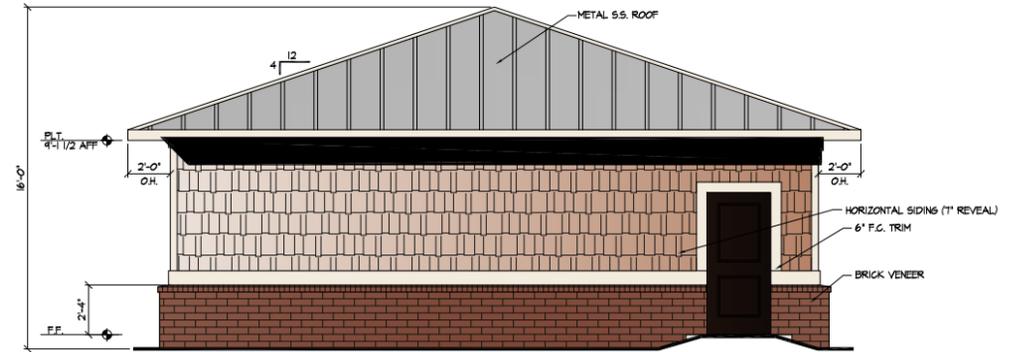
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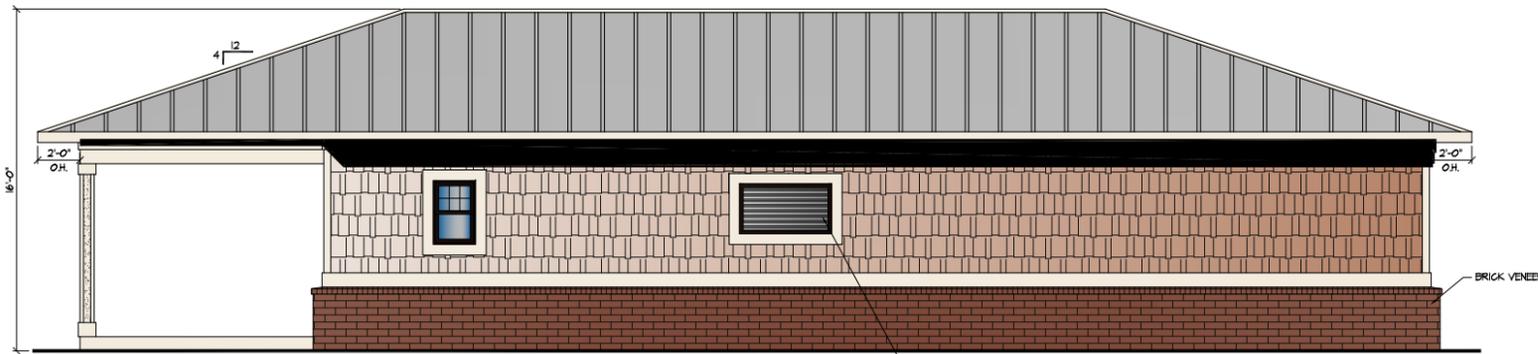
MAIL/LAUNDRY COLORED ELEVATIONS  
**Trolley Road Apartments**  
 Trolley Road  
 Summerville, South Carolina



MAIL/LAUNDRY - FRONT ELEVATION  
 SCALE: 1/4"=1'-0"



MAIL/LAUNDRY - LEFT SIDE ELEVATION  
 SCALE: 1/4"=1'-0"



MAIL/LAUNDRY - REAR ELEVATION  
 SCALE: 1/4"=1'-0"



MAIL/LAUNDRY - RIGHT SIDE ELEVATION  
 SCALE: 1/4"=1'-0"

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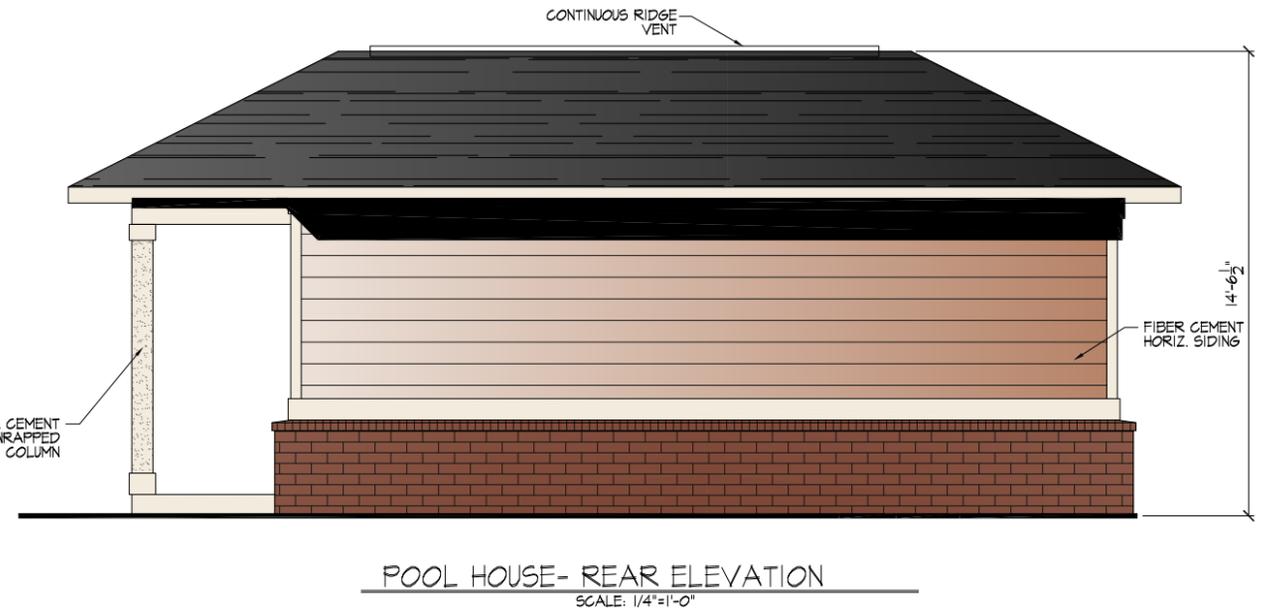
Preliminary  
 Not for Construction  
 September 26, 2019  
 A-XX



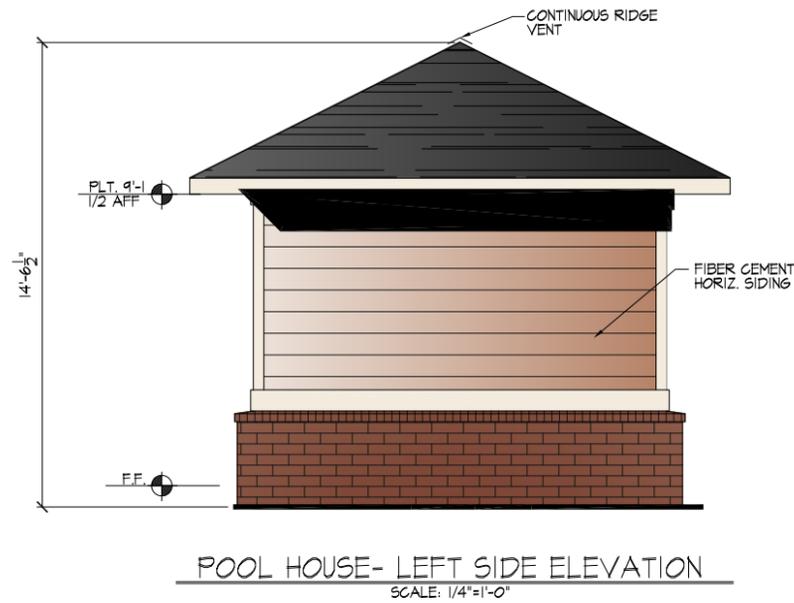
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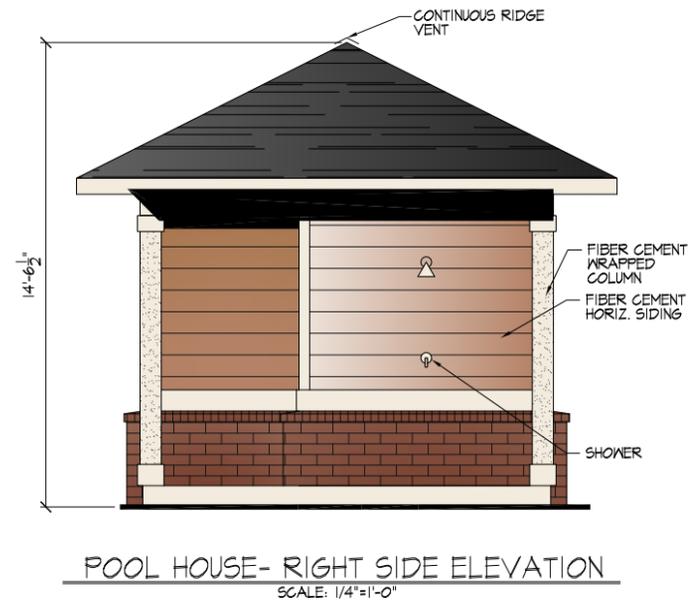
POOL HOUSE- FRONT ELEVATION  
SCALE: 1/4"=1'-0"



POOL HOUSE- REAR ELEVATION  
SCALE: 1/4"=1'-0"



POOL HOUSE- LEFT SIDE ELEVATION  
SCALE: 1/4"=1'-0"



POOL HOUSE- RIGHT SIDE ELEVATION  
SCALE: 1/4"=1'-0"

Feb-28-2019

POOL HOUSE COLORED ELEVATIONS  
Trolley Road Apartments  
Trolley Road  
Summerville, South Carolina

Preliminary  
Not for Construction  
September 26, 2019  
A-XX

# Project Materials



Typical Lap Siding\*



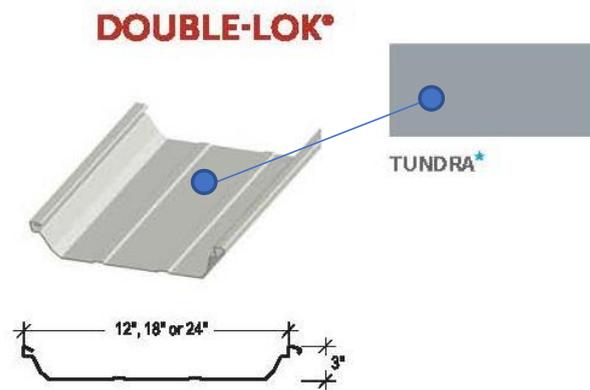
Typical Roof Shingles (Timberline HD – Charcoal shown)



Typical Board & Batten Siding\*



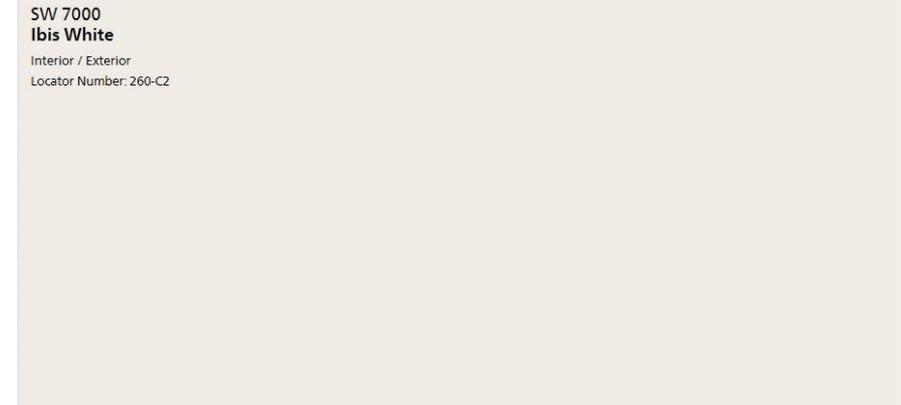
Typ. Brick Veneer (General Shale – Cortez shown)



Typical Metal Roofing

\* photos shown do not indicate project colors; shown as examples

# Project Colors



**STAFF REPORT  
CDRB Meeting  
March 19, 2020 at 4:00 p.m.**

**TO:** Town of Summerville CDRB  
**FROM:** Planning Staff  
**DATE:** March 13, 2020

**GENERAL INFORMATION**

**Applicant:** Parkers Gas Station  
**Property Owner:** The Parker Companies  
**Requested Action:** The applicant is requesting Preliminary Approval of proposed new gas station  
**Requested Approval:** Preliminary Approval  
**Existing Zoning:** UC-MX Urban Corridor Mixed Use  
**Adjacent Zoning:** **North:** UC-MX Urban Corridor Mixed Use  
**South:** UC-MX Urban Corridor Mixed Use  
**East:** UC-MX Urban Corridor Mixed Use  
**West:** Out - Dorchester County R-2  
**Location:** Corner of Ladson Road and Limehouse Drive  
**Existing Land Use:** Vacant  
**Prior Approvals:** Conceptual Review 10/17/2019  
BZA - Maximum Side Setback Increase from 15 feet to 43 feet – DENIED 02/11/2020

**Ordinance Reference:**  
Sec. 13.3.5. Design Review Board.

- A. *Mission statement.* The purpose of the commercial design review board is to establish a review process that will protect and improve the visual and aesthetic character and economic value of commercial development within the town. In turn, this establishment of scenic corridors will contribute to the community's sense of place and pride further strengthening the town's unity of character. Through this process, the assurance of respect for the character, integrity, and quality of the built environment of the town will be established without stifling innovative architecture and/or development. All development shall adhere to the definitions and terms outlined in all of the town's zoning ordinances and codes as preliminary criteria. The commercial design review board is granted the authority to determine the appropriateness of the construction of the commercial site in pursuit of achieving that style which is characteristic of the region and of the town in particular as stated in the guidelines of this section.

**Recommendation:**

Based upon preliminary staff review, the following are staff comments regarding the plans. A new plat will be required to be recorded prior to issuance of any building permits. A sidewalk will be required to be extended the length of the property on Limehouse Drive. Parking exceeds 200% of the parking minimum, a parking justification letter will be required, and all excess parking must to be constructed with pervious pavers. The proposed sign must maintain a minimum of a 10 foot setback from any property line. All proposed mulch should be Pine Straw.

# PRELIMINARY CDRB SITE DEVELOPMENT PLANS

**Parker's kitchen**

(STORE #84)

LADSON RD & LIMEHOUSE DR.  
SUMMERVILLE, SC

#### GENERAL NOTES:

1. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS AND FIELD CONDITIONS WHEN POSSIBLE BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF TRENCHING. IF THE CLEARANCES ARE LESS THAN SPECIFIED ON THE PLANS OR 12', WHICHEVER IS LESS, CONTACT FREELAND AND KAUFFMAN, INC. (864-293-5497) AND OWNER PRIOR TO PROCEEDING WITH CONSTRUCTION.

2. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL CONTACT THE TOWN OF SUMMERVILLE (843) 851-4217 TO SET UP A PRE-CONSTRUCTION MEETING.

3. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL REQUIRED/NECESSARY SHEETING, SHORING, AND SPECIAL EXCAVATION MEASURES REQUIRED ON THE PROJECT TO MEET OSHA, FEDERAL, STATE AND LOCAL REGULATIONS PURSUANT TO THE INSTALLATION OF THE WORK INDICATED ON THE DRAWINGS. OWNER AND FREELAND AND KAUFFMAN, INC. ACCEPT NO RESPONSIBILITY FOR THE DESIGN TO INSTALL SAID ITEMS.

4. CALL UTILITY LOCATOR SERVICE 72 HOURS IN ADVANCE OF DIGGING AT 811.

5. ALL WORK SHALL CONFORM TO THE TOWN OF SUMMERVILLE STANDARDS AND SPECIFICATIONS.

6. PRE-CAST STORM SEWER STRUCTURES HAVE BEEN SPECIFIED ON THE PLANS. OWNER AND FREELAND AND KAUFFMAN, INC. HOWEVER, ASSUME NO RESPONSIBILITY FOR THESE STRUCTURES AS FIELD CONDITIONS DURING CONSTRUCTION OFTEN DICTATE MINOR ELEVATION ADJUSTMENTS. THE CONTRACTOR ASSUMES ALL RESPONSIBILITY AND EXPENSE FOR MODIFYING THESE STRUCTURES TO ACCOMMODATE THESE FIELD ADJUSTMENTS.

7. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH FREELAND AND KAUFFMAN, INC. FOR ALL REQUIRED TESTING.

8. THE LAND DISTURBANCE PERMIT MUST BE KEPT ON THE WORK SITE AND SHOWN UPON REQUEST.

9. THE CONTRACTOR SHALL INCLUDE IN THE CONTRACT PRICE ANY DE-WATERING NECESSARY TO CONSTRUCT THE PROJECT AS SHOWN ON THE PLANS.

10. SEDIMENT CONTROL MEASURES MUST BE INSPECTED ONCE EVERY 7 CALENDAR DAYS AND MAINTAINED AS NEEDED TO INSURE THAT THE INTENDED PURPOSES ARE ACCOMPLISHED.

11. CONTRACTOR SHALL INCLUDE TESTING & AS-BUILT SURVEYS OF ALL WATER AND SEWER LINES REQUIRED IN ORDER FOR PERMIT TO OPERATE ISSUANCE.

12. CONTRACTOR SHALL PROVIDE AN AS-BUILT SURVEY, BY A SC LICENSED SURVEYOR, FOR THE DETENTION FACILITY AND DRAINAGE SYSTEM. THIS SURVEY SHALL BE PROVIDED TO THE OWNER & ENGINEER AT LEAST 3 WEEKS PRIOR TO KEY TURNOVER.

13. CONTRACTOR IS RESPONSIBLE FOR PROVIDING A DESIGN/BUILD IRRIGATION SYSTEM, INCLUDING ALL BACKFLOW PREVENTION, TO PROVIDE COVERAGE OF THE NEW LANDSCAPE AREAS.

14. COORDINATE ALL WORK WITH SHOPPING CENTER DEVELOPER.

#### TOWN OF SUMMERVILLE NOTES:

1. SWPPP, INSPECTION RECORDS, AND RAINFALL DATA MUST BE KEPT ONSITE OR WITHIN THIRTY (30) MINUTES OF THE SITE AT ALL TIMES FROM THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS ACHIEVED. THESE ITEMS ARE TO BE IN A DESIGNATED AREA THAT IS ACCESSIBLE TO THE INSPECTORS.

2. THE TOWN OF SUMMERVILLE SHALL NOT MAINTAIN STORMWATER DETENTION OR RETENTION PONDS. THE PROPERTY OWNER SHALL MAINTAIN ALL STORMWATER DETENTION FACILITIES SHOWN HEREIN. THE INSPECTOR FREQUENCIES, MAINTENANCE ACTIVITIES AND OTHER RESPONSIBILITIES AS NECESSARY TO ENSURE THE SYSTEM'S PROPER LONG-TERM FUNCTIONING ARE DEFINED IN THE OPERATION AND MAINTENANCE AGREEMENT OF STORMWATER FACILITIES.

3. A CERTIFIED STORMWATER AS-BUILT MUST BE SUBMITTED TO THE TOWN OF SUMMERVILLE PRIOR TO LETTER OF OCCUPANCY, CLOSEOUT PACKAGE, AND TO SCD-EC PRIOR TO RECEIVING A NOTICE OF TERMINATION.

4. THE PROJECT/SITE MUST BE BUILT ACCORDING TO APPROVED TOWN AND SCD-EC PLANS UNLESS SWPPP DOCUMENTS ARE UPDATED BY THE ORIGINAL SWPPP PREPARER. OTHERWISE PERMITS AND APPROVALS WILL BE INVALIDATED.

#### SHEET INDEX

NO.	TITLE
1	COVER
2	SURVEY
3	OVERALL SITE PLAN
4	SITE PLAN
5	TREE OVERLAY PLAN
L1	LANDSCAPE PLAN
L2	LANDSCAPE DETAILS / NOTES
A100	ARCHITECTURAL SITE PLAN
A201	ARCHITECTURAL ELEVATIONS
A202	ARCHITECTURAL PERSPECTIVE VIEWS

#### OWNER/DEVELOPER:

**THE PARKER COMPANIES**  
17 W. MCDONOUGH STREET  
SAVANNAH, GA 31401  
CONTACT: ADAM CARACCI  
PHONE: (912) 235-1640

#### ENGINEER:

**FREELAND and KAUFFMAN, INC.**  
*Engineers - Landscape Architects*  
209 WEST STONE AVENUE  
GREENVILLE, S.C. 29609  
PHONE: (864) 672-3426  
CONTACT: TODD SIMMONS, P.E.  
E-MAIL: TSIMMONS@FK-INC.COM

TAX MAP PARCEL:  
154-00-00-009.000  
SITE AREA: 2.53 AC. +/-  
IMPERVIOUS AREA: 1.20 AC. +/-  
IMPERVIOUS %: 47% +/-

PRELIMINARY  
NOT FOR  
CONSTRUCTION

SHEET 1  
FEBRUARY 28, 2020

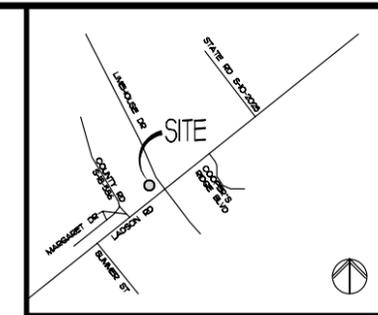


**SITE LEGEND**

- (A) 18" CURB & GUTTER
- (B) STOP BAR WITH "STOP" SIGN (RH), SEE DETAILS
- (C) TAPER CURB TO FLUSH
- (D) DUMPSTER ENCLOSURE (RE: ARCH)
- (E) STANDARD-DUTY CONCRETE PAVEMENT
- (F) WHEEL STOP
- (G) SIDEWALK TO BE FLUSH
- (H) CONCRETE TRANSFORMER PAD
- (I) 2" CONCRETE CURB BACKING AT ENTRANCES
- (J) AIR / VACUUM EQUIPMENT
- (K) 30" DIAMETER CONCRETE SPHERE BOLLARD, CONTRACTOR TO COORDINATE EXACT LOCATION WITH OWNER
- (L) TWO (2) 46" WIDE X 32" DEEP PROPANE CAGES WITH TWO (2) 48" TALL STEEL BOLLARDS PLACED THREE (3) FEET IN FRONT OF PROPANE CAGES, SEE ARCHITECTURAL DRAWINGS FOR DETAILS, CONTRACTOR TO PROVIDE & COORDINATE EXACT LOCATION WITH OWNER
- (M) 48" TALL STEEL BOLLARD, SEE ARCHITECTURAL DRAWINGS FOR DETAILS, CONTRACTOR TO PROVIDE & COORDINATE EXACT LOCATION WITH OWNER
- (N) GREASE TRAP, 1500 GAL. MIN.
- (O) OIL TANK, TO BE SECURED
- (P) FUEL VENTS
- (Q) ACCESSIBLE RAMP PER SCODT 720-99H
- (R) 6' WIDE CROSSWALK PER SCODT 625-905-00
- (S) 5' CONCRETE SIDEWALK
- (T) THE PROPOSED SIDEWALK TO EXISTING
- (U) TAPER GUTTER PAN TO SCODT WIDTH
- (V) THE PROPOSED CURB TO EXISTING
- (W) TAPER CURB WITH VERTICAL TRANSITION
- (X) FUTURE ACCESS LOCATION
- (Y) EXISTING CURB TO BE REMOVED
- (Z) ONSITE HANDICAP RAMP
- (AA) ACCESSIBLE PARKING SPACE, TYPICAL, SEE DETAIL SHEET FOR ACCESSIBLE SPACE WALL MOUNTED SIGN AND SYMBOL, VAN INDICATES VAN ACCESSIBLE SPACE
- (BB) SITE SIGNAGE

**PARKING CALCULATIONS**

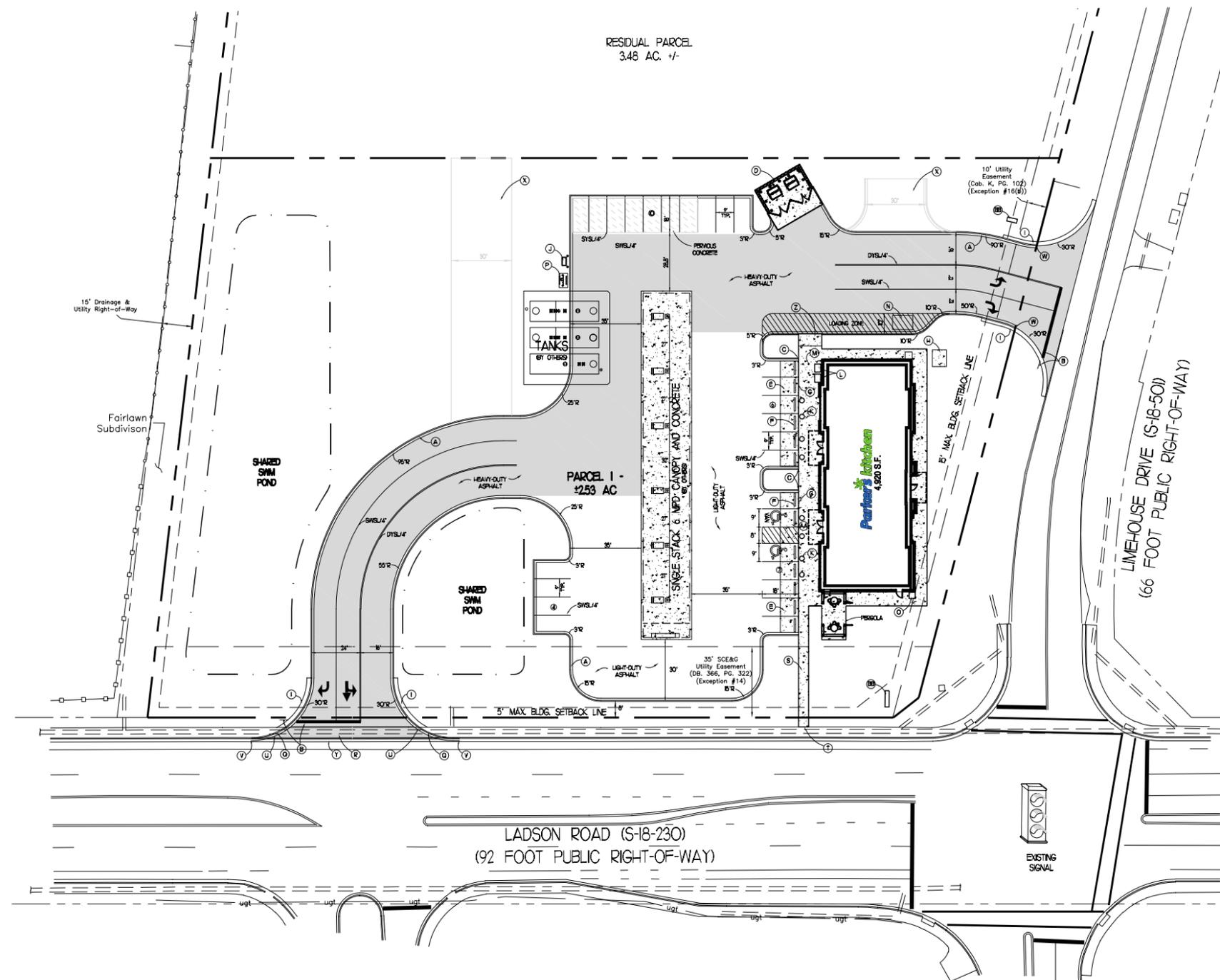
TENANT	AREA SF	MIN. REQUIRED RATIO	MIN. REQUIRED PARKING	MAX. REQUIRED RATIO	MAX. REQUIRED PARKING	PARKING PROVIDED
PARKER'S	4,920 SF	2 SPACES PER 1000 SF	10	20% OF MINIMUM	20	27



VICINITY MAP  
(NOT TO SCALE)

EXISTING	PROPOSED	DESCRIPTION
(3)	(3)	NUMBER OF SPACES PER ROW
---	---	CURB & GUTTER
- - -	- - -	FENCE
♿	♿	SIGN
♿	♿	HANDICAP SYMBOL
[Pattern]	[Pattern]	CONCRETE PAVEMENT
[Pattern]	[Pattern]	STANDARD DUTY PAVING
[Pattern]	[Pattern]	HEAVY DUTY PAVING
[Pattern]	[Pattern]	PERVIOUS CONCRETE
☆	☆	LIGHT POLE

SWSL/4" - SINGLE WHITE SOLID LINE / 4" WIDE  
 SWSL/4" - SINGLE WHITE DASHED LINE / 4" WIDE  
 DYSL/4" - DOUBLE YELLOW SOLID LINE / 4" WIDE EACH



**SITE PLAN NOTES**

1. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR THE EXACT LOCATION OF UTILITY ENTRANCES, BUILDING DIMENSIONS, ROOF LEADERS, EXIT DOORS, EXIT RAMPS AND PORCHES.
2. ALL DIMENSIONS ARE TO BUILDING FACE, FACE OF CURB, EDGE OF ASPHALT OR EDGE OF SIDEWALK UNLESS NOTED OTHERWISE.
3. CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS FOR THE INSTALLATION OF TRAFFIC SIGNAGE AND PAVEMENT MARKINGS AS SHOWN ON THE CONSTRUCTION PLANS.
4. ALL NON-LANDSCAPED ISLANDS SHALL BE PAINTED WITH STRIPES 4" WIDE, AT 45' AND 2 FEET O.C.
5. ALL STRIPING SHALL BE 4" WIDE UNLESS NOTED OTHERWISE.
6. CONTRACTOR SHALL COORDINATE FINAL LOCATION OF THE SITE SIGNS WITH PARKER'S CONSTRUCTION MANAGER.
7. CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION.
8. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY OF SUMMERVILLE REGULATIONS AND CODES AND OSHA STANDARDS.
9. ALL DISTURBED AREAS ARE TO RECEIVE FOUR INCHES OF TOPSOIL, SEED, MULCH AND WATER UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED, UNLESS OTHERWISE NOTED.
10. CONTRACTOR IS RESPONSIBLE FOR OBTAINING APPROVAL FROM UTILITY COMPANY AND TOWN OF SUMMERVILLE FOR THE LOCATION AND HEIGHT OF ALL SIGNAGE BEFORE CONDUIT AND WIRING IS INSTALLED.
11. EXISTING STRUCTURES WITHIN CONSTRUCTION LIMITS ARE TO BE ABANDONED, REMOVED OR RELOCATED AS NECESSARY. ALL COST SHALL BE INCLUDED IN BASE BID. (RE: DEMOLITION PLAN)
12. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITIES SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COST SHALL BE INCLUDED IN BASE BID.
13. SITE BOUNDARY, TOPOGRAPHY, UTILITY AND ROAD INFORMATION TAKEN FROM A SURVEY BY SURVEY MATTERS, LLC.
14. CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL ITEMS/FEATURES IN CONFLICT WITH PROPOSED IMPROVEMENTS AND FOR INCLUDING ALL COSTS IN BASE BID.

REVISIONS	BY

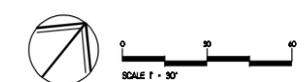
**FREELAND and KAUFFMAN, INC.**  
 Engineers & Landscape Architects  
 209 West Stone Avenue  
 Greenville, South Carolina 29609  
 864-233-5497

**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

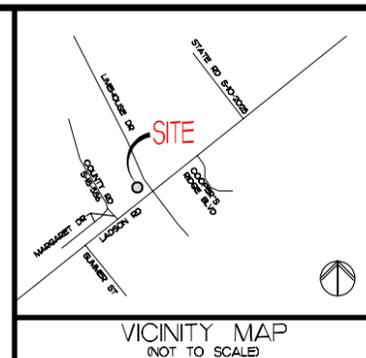


**Parker's kitchen**  
 17 W. MCCONOUGH STREET  
 SAVANNAH, GA 31401  
**STORE #84 - LADSON RD & LINEHOUSE DR**

**SITE PLAN**



DRAWN	DAC
CHECKED	
BITS	
DATE	02/28/2020
SCALE	AS NOTED
DRAWING	



N/F  
Limehouse Villas  
Homeowners Association  
PIN: 154-07-06-048.000  
DB: 9096, PG. 258  
PB: M, PG. 33  
Zone: PUD

NGS "Tabernacle 2010"  
N 418,907.43  
E 2,267,599.44  
Elev=56.82'  
NAVD 88

FUTURE DEVELOPMENT  
PARCEL 2 - ±3.48 AC

PARCEL 1  
±2.53 AC

LEGEND

EXISTING TREE CONDITION GRADE	
	B - GOOD
	C - FAIR
	D - POOR
	F - POOR

TREE OVERLAY PLAN



REVISIONS	BY

**FREELAND and KAUFFMAN, INC.**  
Engineers & Landscape Architects  
209 West Stone Avenue  
Greenville, South Carolina 29609  
864-233-5497

PRELIMINARY  
NOT FOR  
CONSTRUCTION



**Parker's kitchen**  
17 W. MCCONOUGH STREET  
SAVANNAH, GA 31401  
STORE #84 - LADSON RD & LINEHOUSE DR

DRAWN	DAC
CHECKED	BTS
DATE	02/28/2020
SCALE	AS NOTED
DRAWING	DRAWING

**SUMMERVILLE UNIFIED DEVELOPMENT ORDINANCE  
SECTION 8.5 PARKING AREA LANDSCAPING  
8.5.2 PARKING LOTS- PERIMETER LANDSCAPING & SCREENING**

- A. Minimum Width: Perimeter landscape areas shall be a minimum of 8 feet in width adjacent to all parking spaces and travel areas.
- B. Required Trees: Large maturing trees shall be planted a minimum of 40 feet on center.
- C. Required Shrubs: A continuous row or staggered row of evergreen shrubs, with a minimum expected height at maturity of 3 feet, shall be installed at not more than 6 feet on center. If used in addition to a wall or fence, the evergreen shrubs shall be planted on the exterior side of such features.

**SECTION 8.6 SCREENING/BUFFERS  
8.6.1 BUFFERS**

- A. Required District Buffers: Landscaped perimeter buffers shall be preserved or established along the adjoining boundary lines of all sites located within Conventional Business (N-B, G-B) and Industrial (I-I, H-I) Districts as defined in Chapter 2; along the boundary of Mixed-Use Districts (N-MX, D-MX, UC-MX) adjacent to GR-2, GR-3, and GR-5 Districts;

**8.6.2 LANDSCAPE SCREENS**

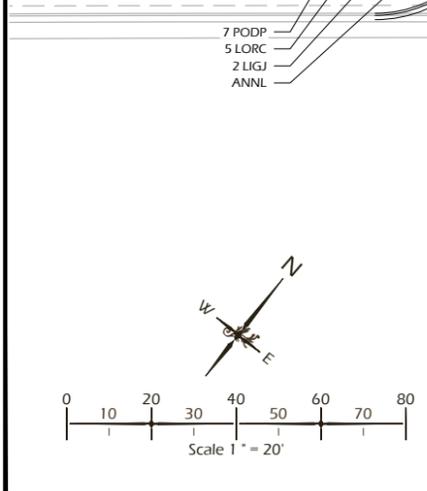
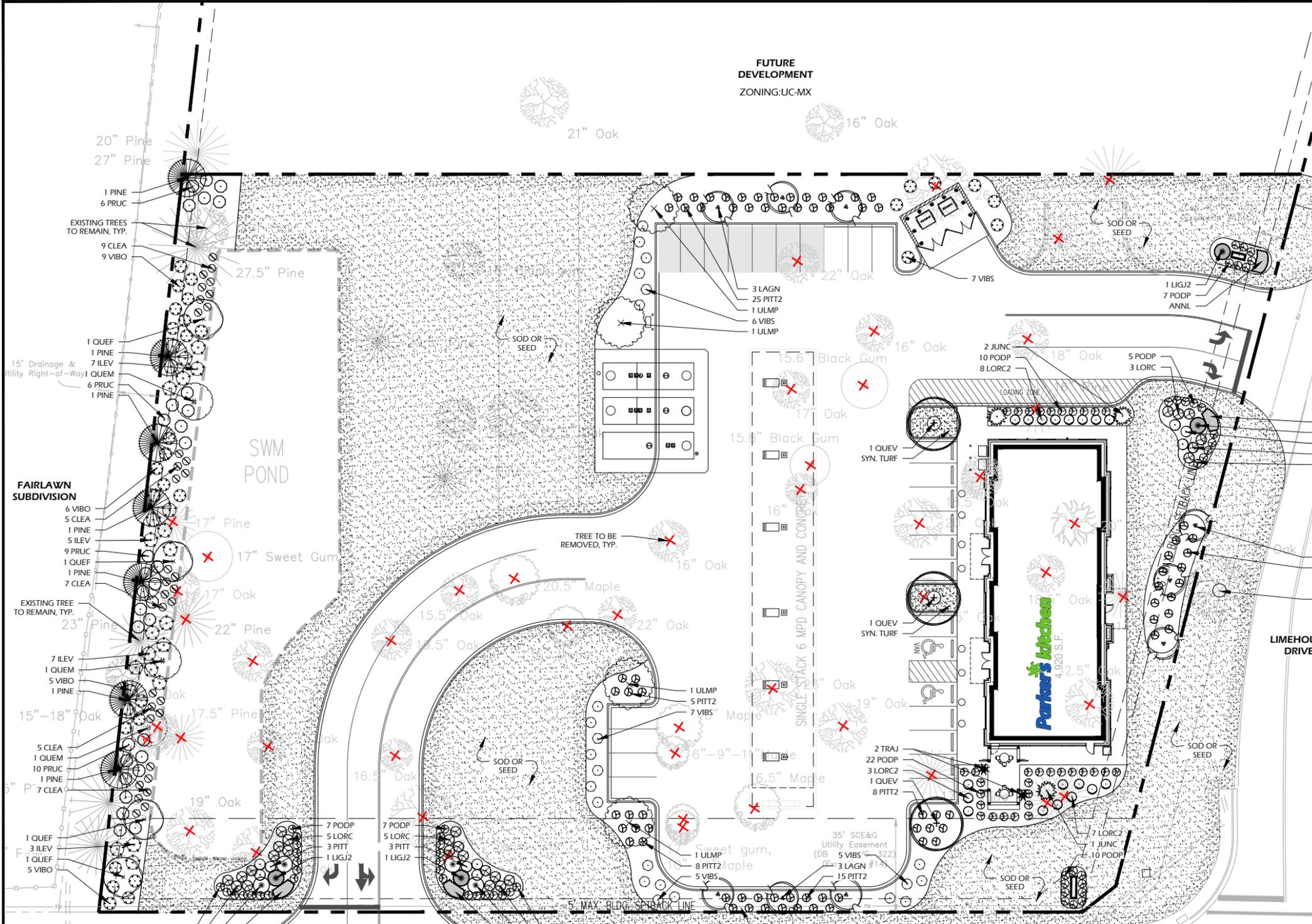
- A. Applicability: Landscape screens shall be required anywhere that Chapter 2 - District Standards and/or Chapter 3 - Use Standards specify requirements for a landscape screen. Where landscape screens are required, they shall be installed in accordance with the provisions below.
- B. Minimum Width: For a landscape screen, a minimum 15-foot wide pervious space shall be provided, unless another width is deemed appropriate by Town Staff during the approval process based on site conditions.
- C. Minimum Required Landscaping
  1. A minimum of 6 large maturing trees and 40 shrubs shall be planted for each 100 linear feet of landscape screen area to provide continuous coverage.
  2. Trees shall be a minimum 50% evergreen.
  3. Shrubs shall be a minimum 75% evergreen.

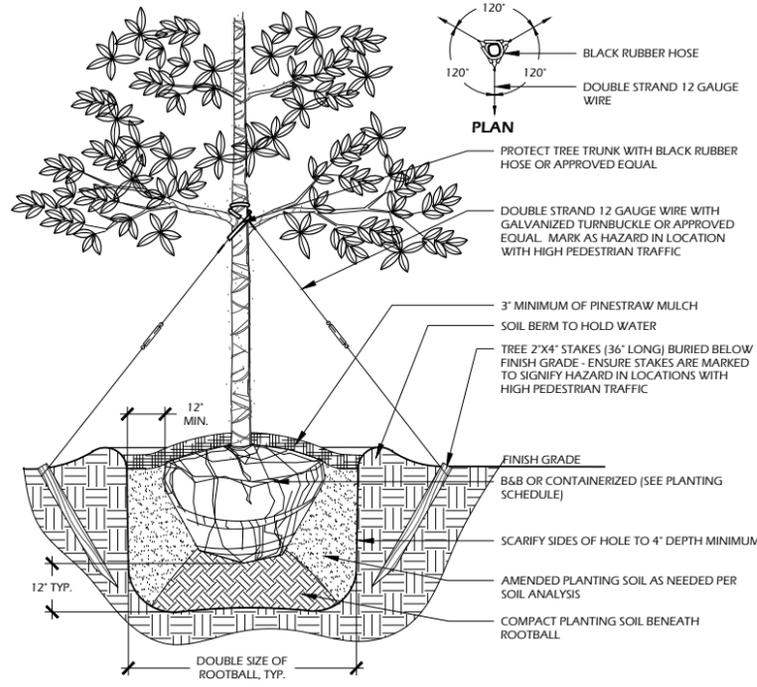
LANDSCAPE BUFFERS		
REQUIREMENT ADJACENT TO FAIRLAWN SUBDIVISION	TOTAL REQUIRED AT ±277 LF	PROPOSED
6 LARGE TREES PER 100 FEET	17	14 + 3 EXISTING
40 SHRUBS PER 100 FEET	111	111

**PLANT SCHEDULE:**

Quantity	Abbrev	Botanical Name	Common Name	Height	Spread	Container	Cal./Spacing	Notes
<b>TREES</b>								
7	PINE	Pinus Elliotti	Slash Pine	7-8'	4-5'	15 gal.	-	Full
4	QUEF	Quercus falcata	Southern Red Oak	14-18'	12-14'	-	2.5-3' cal.	
3	QUEM	Quercus michauxii	Swamp Chestnut Oak	12-16'	10-12'	-	2' cal.	
3	QUEV	Quercus virginiana 'High Rise'	High Rise Live Oak	10-12'	4-5'	-	2' cal.	
4	ULMP	Ulmus parviflora	Lacinate Elm	10-12'	6-8'	-	2' cal.	
<b>UNDERSTORY TREES</b>								
9	LAGN	Lagerstroemia indica x fauriei 'Natchez'	Natchez Cape Myrtle	8-10'	4-5'	Cont.	-	
<b>SHRUBS</b>								
3	JUNC	Juniperus chinensis 'Torulosa'	Torulosa Juniper	30"	15'-18"	3 gal.	-	
4	LIGJ	Ligustrum japonicum	Japanese Privet	4-5'	2-3'	30 gal.	-	Full
4	LIGJ2	Ligustrum japonicum	Japanese Privet	6-7'	3-4'	45 gal.	-	Tree form
26	LORC	Loropetalum chinense 'Shanghi'	Purple Diamond® Fringe Flower	3-4'	-	7 gal.	-	
18	LORC2	Loropetalum chinense 'Peach' PP1B441	Purple Peach® Fringe Flower	12'-15'	15'-18"	3 gal.	-	
9	PITT	Pittosporum tobira	Pittosporum	4'	-	15 gal.	-	Full
76	PITT2	Pittosporum tobira 'Wheeler's Dwarf'	Dwarf Pittosporum	24"	24"	-	-	
87	PODP	Podocarpus macrophyllus 'Pringles'	Dwarf Podocarpus	12'-15'	12'-15'	3 gal.	-	Full
30	VIBS	Viburnum suspensum	Sandhwa Viburnum	3-4'	2-3'	15 gal.	-	Full
<b>Groundcovers</b>								
130 sf	ANNL	Seasonal Color		4-6"	4-6"	1 gal.	12" O.C.	See specification at left
2	TRAJ	Trachelospermum jasminoides	Confederate Jasmine	-	-	1 gal.	-	
<b>Other</b>								
40600 sf	SOD	Centipede sod or approved equal		-	-	-	-	
330 sf	SYN. TURF	Synthetic Turf		-	-	-	-	
13,200 sf	MULCH	Mulch type to be approved by Owner (mulch all plant beds and disturbed areas)		-	-	-	-	

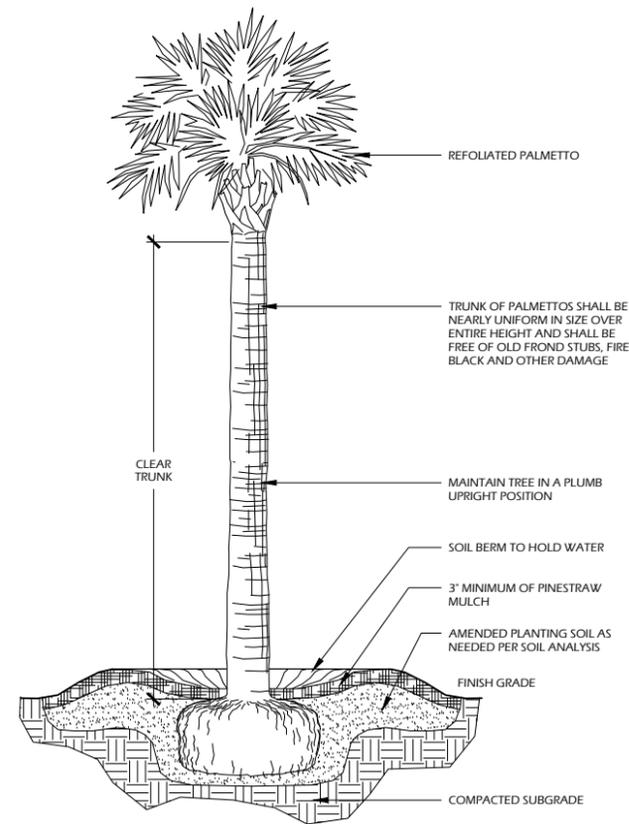
**Seasonal Color Plant Selections**  
 Summer: Vinca, Caladium (Red Flash) - Shade, Coleus - Sun  
 Winter: Viola/Pansies, Ornamental Cabbage/Kale  
 \*Final specifications to be approved by landscape architect





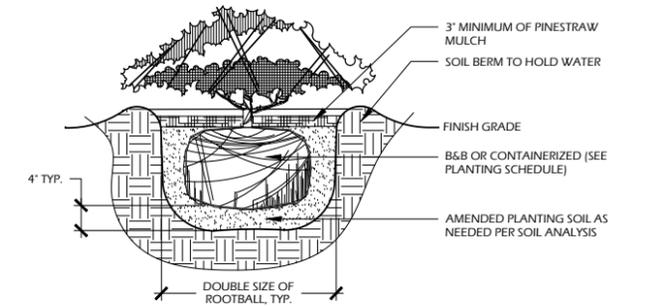
- NOTES:**
- TREE STAKING OPTIONAL HOWEVER, LANDSCAPE CONTRACTOR RESPONSIBLE FOR MAINTAINING TREES IN AN UPRIGHT (90 DEGREE/ PERPENDICULAR) POSITION FOR 1 YEAR AFTER PLANTING IS COMPLETE OR UNTIL TREE ROOT SYSTEM IS FULLY ESTABLISHED AND STURDY. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER'S REPRESENTATIVE.
  - CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.
  - IN SEMI-IMPERVIOUS SOIL CONDITIONS, ROOTBALL ELEVATION SHALL BE 2" ABOVE FINISH GRADE. COORDINATE WITH OWNER'S REPRESENTATIVE PRIOR TO SETTING ROOTBALL ELEVATIONS.

**1 // L2** TREE PLANTING  
SCALE: N.T.S.



- NOTES:**
- FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER OR OWNER'S REPRESENTATIVE.
  - CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.
  - SABAL PALMETTOS SHALL BE REFOLIATED, PROTECT CABBAGE HEAD FROM DAMAGE.

**2 // L2** PALM TREE PLANTING  
SCALE: N.T.S.



- NOTES:**
- WHEN GROUNDCOVERS AND SHRUBS ARE USED IN MASSES, ENTIRE BED TO BE EXCAVATED TO RECEIVE PLANTING SOIL AND PLANT MATERIAL.
  - CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.
  - IN SEMI-IMPERVIOUS SOIL CONDITIONS, ROOTBALL ELEVATION SHALL BE 2" ABOVE FINISH GRADE. COORDINATE WITH OWNER'S REPRESENTATIVE PRIOR TO SETTING ROOTBALL ELEVATIONS.

**3 // L2** SHRUB PLANTING  
SCALE: N.T.S.

**PLANTING NOTES:**

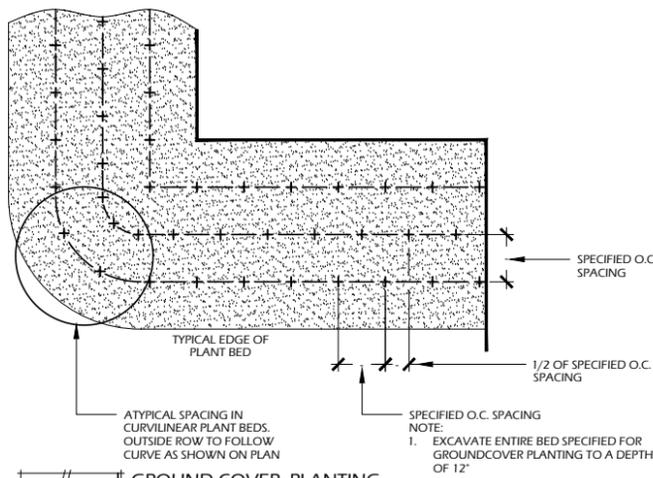
- CONTRACTOR IS RESPONSIBLE FOR INSPECTION OF EXISTING CONDITIONS, INCLUDING UTILITIES, AND PROMPTLY REPORTING ANY DISCREPANCIES OR CONFLICTS WITH PLANTING AREAS. REPORT INFORMATION TO OWNER, OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT.
- CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE AND MAKE REPAIRS THAT MAY OCCUR TO EXISTING UTILITIES IN ACCORDANCE WITH NATIONAL, STATE AND LOCAL CODES.
- LANDSCAPE PLANTING AND / OR MULCHED AREAS TO BE FINE GRADED, HAND RAKED SMOOTH AND FREE OF DEBRIS.
- CONTRACTOR TO PERFORM SOIL TESTS AS NECESSARY TO ASSURE PLANT HEALTH AND GROWTH.
- MULCH ALL PLANTING BEDS TO A MIN. 3" DEPTH WITH MULCH SPECIFIED IN PLANT SCHEDULE.
- CONTRACTOR VERIFIES THAT ALL PLANT MATERIAL IS DETERMINED AVAILABLE AS SPECIFIED WHEN BID / PROPOSAL IS SUBMITTED.
- PLANT SCHEDULE WAS PREPARED FOR ESTIMATING PURPOSES ONLY. CONTRACTOR SHALL MAKE OWN QUANTITY TAKEOFFS USING DRAWINGS TO DETERMINE QUANTITIES TO HIS SATISFACTION, REPORTING PROMPTLY ANY DISCREPANCIES WHICH MAY AFFECT BIDDING.
- GALLON SIZES ARE FOR PRICING PURPOSES ONLY. PLANT MUST MEET HEIGHTS AND WIDTHS SPECIFIED IN PLANT SCHEDULE.
- ROOT TYPE MAY BE FREELY SUBSTITUTED IN CASE OF BALLED AND BURLAPPED OR CONTAINER GROWN, OTHER SPECIFICATIONS REMAINING UNCHANGED, EXCEPT IN THE CASE OF CONTAINER GROWN SPECIMEN TREES AS INDICATED IN THE TREE PLANTING SCHEDULE.
- ANY SIGNIFICANT ROOTS ENCOUNTERED 2" DIA. AND LARGER SHALL BE DUG OUT BY HAND AND CLEANLY CUT BACK IN THE FOOTING / FOUNDATION AREA TO PROMOTE ROOT RE-GROWTH AND HELP PREVENT ROOT DIEBACK.
- ALL PLANT MATERIAL (EXCEPT SEASONAL COLOR) SHALL BE GUARANTEED AND REPLACED AS NECESSARY BY THE CONTRACTOR FOR ONE YEAR.
- ALL SEASONAL COLOR SHALL BE GUARANTEED AND REPLACED AS NECESSARY BY THE CONTRACTOR FOR THREE MONTH TIME FRAMES.

**SOIL AMENDMENT NOTES:**

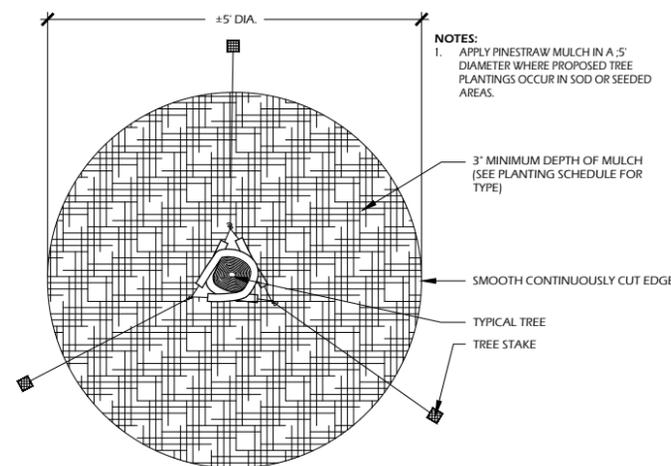
- TOPSOIL SHALL CONSIST OF THE NATURAL LOAM, SANDY LOAM, SILT LOAM, OR CLAY LOAM HUMUS BEARING SOILS, ADAPTED TO THE SUSTENANCE OF PLANT LIFE, WITH THE FOLLOWING TEXTURE:
  - ORGANIC MATERIAL - TWO (2) TO TWENTY (20) PERCENT BY MASS
  - SAND CONTENT - TWENTY (20) TO SIXTY (60) PERCENT BY MASS
  - CLAY-SILT CONTENT - THIRTY FIVE (35) TO SEVENTY (70) PERCENT BY MASS.
  - TOPSOIL PH SHALL BE BETWEEN FIVE (5) AND SEVEN (7).
- TOPSOIL SHALL BE OF UNIFORM QUALITY AND FREE FROM FOREIGN MATERIAL SUCH HARD CLODS, SOD, STIFF CLAY, HARD PAN, STONES LARGER THAN ONE (1) INCH DIAMETER, LIME CEMENT, ASHES, SLAG, CONCRETE, TAR RESIDUES, TARRED PAPER, BOARDS, CHIPS, STICKS, OR OTHER UNDESIRABLE MATERIALS. IT SHALL ALSO BE REASONABLY FREE FROM WEEDS AND OBJECTIONABLE PLANT MATERIAL.
- AFTER ALL DEMOLITION, CLEARING AND DISPOSAL IS COMPLETED, THE CONTRACTOR SHALL STRIP FROM THE TOP OF THE EXISTING GROUND ALL TOPSOIL IN ALL AREAS TO BE GRADED.
- PRIOR TO STOCKPILING OF TOPSOIL, TOPSOIL SHALL BE SCREENED WITH A ONE HALF (1/2) INCH SIZE SIEVE. STOCKPILE TOPSOIL IN DESIGNATED OR APPROVED LOCATIONS WITH PROPER DRAINAGE AND WHERE IT WILL NOT INTERFERE WITH THE WORK. AFTER TOPSOIL HAS BEEN STOCKPILED, CONTRACTOR SHALL QUANTIFY THE AMOUNTS AT NO ADDITIONAL COST TO THE OWNER. QUANTITIES SHALL BE GIVEN TO THE ARCHITECT, OWNER AND SITE DESIGN PROFESSIONAL.
- IF AMOUNT OF SCREENED TOPSOIL STOCKPILED FROM STRIPPING OPERATIONS IS INSUFFICIENT TO PROVIDE THE NECESSARY AMOUNTS (4" MINIMUM DEPTH), IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN (FROM OFF-SITE SOURCE) THE NECESSARY AMOUNT OF SCREENED TOPSOIL TO COMPLETE THE PROJECT.
- SCREENED TOPSOIL SHALL BE DISTRIBUTED WITH A MINIMUM DEPTH OF FOUR (4) INCHES TO ALL GRADED AREAS (NOT INCLUDING BUILDING, PAVED, SYNTHETIC TURF, PERVIOUS PAVEMENT, ETC.) AND / OR AS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE. GROUND SHALL BE SCARIFIED BEFORE PLACING TOPSOIL. AREAS WHERE SCREENED TOPSOIL IS DISTRIBUTED SHALL BE STABILIZED WITH TEMPORARY AND/OR PERMANENT VEGETATION (SEASON DEPENDENT) OR TEMPORARY MULCH WITHIN FOURTEEN (14) CALENDAR DAYS OF DISTRIBUTION.

**TURF AND GRASSING NOTES:**

- AFTER TOPSOIL HAS BEEN INSTALLED, AND BEFORE ANY SOD IS LAID, CORRECT ALL SOFT SPOTS AND IRREGULARITIES IN GRADE. THE SOD SHALL BE LAID BY BUTTING THE ENDS AND SIDES UP EVENLY AND STAGGERING THE ROLLS OF SOD. CONTRACTOR SHALL NOT OVERLAP SOD. AS SOON AS THE SOD IS LAID OR AS IT IS BEING LAID ROLL OVER WITH A LIGHT ROLLER, MAKING CERTAIN THAT ALL OF THE SOD IS IN CONTACT WITH THE SOIL. THE COMPLETED SODDED AREAS SHALL BE TRUE TO FINISH GRADE, EVEN AND FIRM AT ALL POINTS.
- UPON COMPLETION OF PLANTINGS ALL EXCESS SOIL STONES AND DEBRIS WHICH HAS NOT PREVIOUSLY BEEN CLEANED UP SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
- ALL LAWN AREAS THAT DO NOT SHOW SATISFACTORY GROWTH WITHIN (18) DAYS AFTER PLANTING SHALL BE RE-PLANTED AND RE-FERTILIZED AS SPECIFIED UNTIL A SATISFACTORY LAWN IS ESTABLISHED. THE LAWN SHALL BE CONSIDERED ESTABLISHED WHEN ITS REASONABLY FREE FROM WEED, GREEN IN APPEARANCE AND THE SPECIFIED GRASS IS VIGOROUS AND GROWING WELL ON EACH SQ. FT. OF LAWN AREA.
- LAWN SHALL BE PROTECTED AND MAINTAINED BY WATERING, MOWING, AND REPLANTING, OVERSEEING, AS NECESSARY FOR AS LONG AS IS NECESSARY TO ESTABLISH A UNIFORM STAND. SCATTERED BARE SPOTS, NONE OF WHICH IS LARGER THAN ONE SQ. FT., WILL BE ALLOWED UP TO MAXIMUM OF THREE PERCENT OF ANY LAWN AREA. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR ANY EROSIONAL DAMAGE TO THE LAWN AREA. FULL COVERAGE IS REQUIRED IN SIXTY DAYS.
- MAINTENANCE OF GRASSED AREAS SHALL CONSIST OF MOWING, WATERING AND FERTILIZING. ALL GRASSED AREAS SHALL BE MAINTAINED AT A HEIGHT NOT TO EXCEED 6" ABOVE FINISHED GRADE.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL GRASSED AREAS UNTIL ACCEPTANCE BY OWNER AT END OF PROJECT. LAWN MAINTENANCE SHALL OCCUR AT A MINIMUM OF ONCE PER SEVEN CALENDAR DAYS.



**4 // L2** GROUND COVER PLANTING  
SCALE: N.T.S.



**5 // L2** TREE STAKING  
SCALE: N.T.S.

DATE:	MAR. 2, 2020
PROJECT NO.:	15051.28
DRAWN BY:	CB
CHECKED BY:	DK

REVISIONS:


DRAWING TITLE  
**PLANTING NOTES AND DETAILS**

DRAWING NUMBER

## Parkers 84 - Ladson &amp; limehouse - Arborist Index

Tree Number	DBH	Speices	Grade	Comments	Comments	Condition
1	16	Pine	B			Good
2	16	Pine	B			Good
3	22.5	Water oak	D	Utility prune	Poor form	Poor
4	27	Water oak	D	Utility prune	V shaped crotch	Poor
5	17	Pine	B			Good
6	18.5	Water oak	F	Hollow	Leaning	Poor
7	20	Poplar	C	Leaning		Fair
8	18.5	Water oak	C			Fair
9	20	Water oak	C			Fair
10	15.5	Water oak	D	Hollow	Poor form	Poor
11	16	Pine	B			Good
12	18	Red oak	D	Broken top	Poor form	Poor
13	21	Pine	B			Good
14	20	Pine	C	Crook		Fair
15	26.5	White oak	D	Storm damage	Hollow	Poor
16	10.5-10.5	Water oak	D	V shaped crotch	Poor form	Poor
17	15.8	Red oak	D	Broken top		Poor
18	16.5	Pine	B			Good
19	9.5-14	White oak	D	Stump sprouts	Poor form	Poor
20	16.5	White oak	B			Good
21	16	Pine	B			Good
22	17	Pine	C			Fair
23	19.5	Willow oak	D	Utility prune	Hollow	Poor
24	34	Pine	D	Fusiform rust		Poor
25	18.5	Pine	C			Fair
26	22	Pine	B			Good
27	16.5	Pine	F	Fusiform rust		Poor
28	17	Pine	B			Good
29	16.5	Pine	B			Good
30	16.5	Pine	B			Good
31	17	Pine	B			Good
32	15.7	Pine	B			Good
33	15.8	Pine	B			Good

## Parkers 84 - Ladson &amp; limehouse - Arborist Index

34	15.7	Pine	C	Sweep		Fair
35	17	Water oak	C			Fair
36	23.5	Pine	D	Crook		Poor
37	16.5-18	Live oak	B			Good
38	19	Sweet gum	B			Good
39	22	Red oak	B			Good
40	7.5-11	Water oak	D	V shaped crotch	Hollow base	Poor
41	20	Water oak	F	Hollow	Leaning	Poor
42	18	Red oak	C			Fair
43	29	Sweet gum	D	Poor form		Poor
44	17	Water oak	D	Hollow	Leaning	Poor
45	17	Sweet gum	D	V shaped crotch	Hollow base	Poor
46	19	Beech	C	Storm damage		Fair
47	8-12.5	Water oak	D	Stump sprouts	Poor form	Poor
48	16.5	Red oak	D	Hollow base		Poor
49	17.5	Water oak	C			Fair
50	17	Water oak	C	Poor form		Fair
51	17	White oak	B			Good
52	19.5	Beech	C	V shaped crotch		Fair
53	19	Water oak	C	Slight lean		Fair
54	16	Red oak	B			Good
55	22	Red oak	B			Good
56	16	White oak	B			Good
57	15.6	Black gum	B			Good
58	17	Water oak	B			Good
59	15.8	Black gum	B			Good
60	16	Water oak	F	Broken top	Hollow	Poor
61	23	Red oak	C			Fair
62	19	Water oak	D	Hollow base	Poor form	Poor
63	16.5	Maple	D	Hollow		Poor
64	17.5	Pine	B			Good
65	16.5	Water oak	C			Fair
66	23	Water oak	C	Poor form		Fair
67	18.5	Sweet gum	D	Utility prune		Poor

## Parkers 84 - Ladson &amp; limehouse - Arborist Index

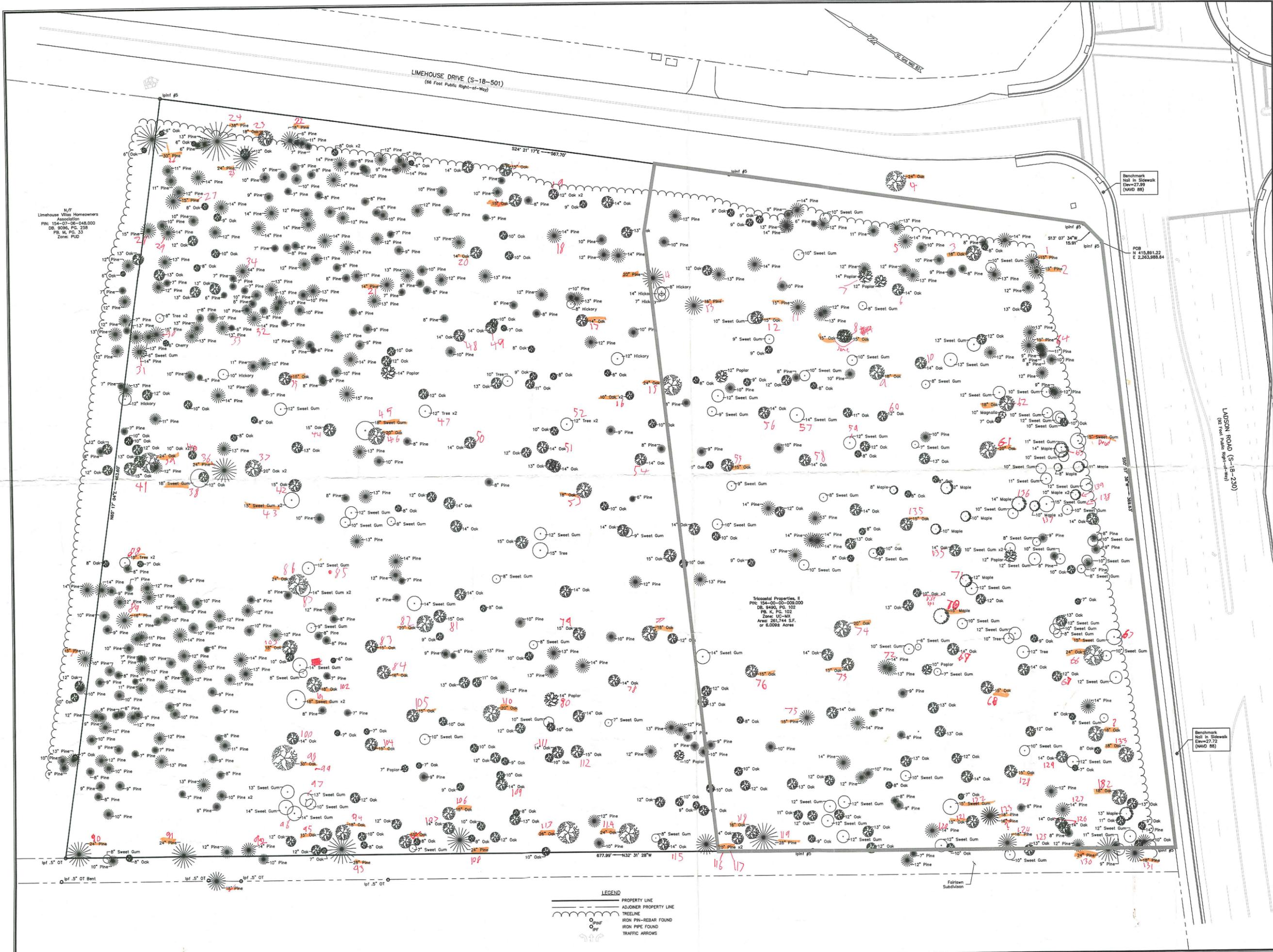
68	19.5	Water oak	F	Hollow		Poor
69	15.5	Red oak	B			Good
70	20.5	Maple	D	V shaped crotch		Poor
71	16	Maple	F	Hollow base	Leaning	Poor
72	19	Pine	B			Good
73	17	White oak	B			Good
74	22.5	White oak	D	Hollow base		Poor
75	20.5	Pine	B			Good
76	18	Black gum	D	Hollow base		Poor
77	21	Red oak	C	Slight lean		Fair
78	18	Water oak	B			Good
79	18	Water oak	D	Broken top	Hollow base	Poor
80	26	Poplar	D	V shaped crotch	Poor form	Poor
81	19	Water oak	D	Hollow		Poor
82	20	Red oak	C			Fair
83	17	Water oak	D	Hollow		Poor
84	18	Red oak	B			Good
85	19.5	Red oak	D	Leaning		Poor
86	10.5-15	Sweet gum	D	Hollow base	Poor form	Poor
87	23	Red oak	D	Leaning		Poor
88	7-10.5	Mulberry	C	V shaped crotch		Fair
89	17	Pine	B			Good
90	25	Pine	B			Good
91	24.5	Pine	B			Good
92	16	Pine	C	Crook		Fair
93	25	Pine	B			Good
94	17	Water oak	D	Hollow		Poor
95	15.8	Red oak	C			Fair
96	16	Sweet gum	B			Good
97	16	Sweet gum	B			Good
98	7.5-9.5	Live oak	D	Hollow	Suppressed	Poor
99	26.5	Red oak	C			Fair
100	17	Red oak	B			Good
101	17-17.5	Sweet gum	D	V shaped crotch	Hollow base	Poor

## Parkers 84 - Ladson &amp; limehouse - Arborist Index

102	17.5	Red oak	C			Fair
103	20	Red oak	D	Hollow		Poor
104	19	Willow oak	D	Forked	Leaning	Poor
105	22	Red oak	C			Fair
106	17	Water oak	B			Good
107	17	Water oak	D	Hollow	Leaning	Poor
108	25	Pine	B			Good
109	15.8	Willow oak	C	Slight lean		Fair
110	21.5	Water oak	C			Fair
111	18.5	Water oak	D	Hollow		Poor
112	19.5	Water oak	D	Hollow		Poor
113	22.5	Red oak	B			Good
114	24.5	Red oak	B			Good
115	16.5	Red oak	D	Broken top		Poor
116	20	Pine	B			Good
117	27	Pine	B			Good
118	17	Red oak	B			Good
119	27.5	Pine	C	Crook		Fair
120	17	Pine	D	Sweep		Poor
121	17	Water oak	D	Hollow	Poor form	Poor
122	17	Sweet gum	C	Poor form		Fair
123	22	Pine	C	Sweep		Fair
124	23	Pine	C	Sweep		Fair
125	16	White oak	D	Broken top	Hollow	Poor
126	15-18	White oak	D	Poor form	Hollow	Poor
127	17.5	Pine	F	Broken top	Storm damage	Poor
128	19.5	Water oak	D	Hollow base		Poor
129	17	Water oak	D	Forked	Hollow	Poor
130	24.5	Pine	C	Sweep		Fair
131	23.5	Pine	D	Sweep	Twist	Poor
132	19	Water oak	F	V shaped crotch	Decline	Poor
133	23	Water oak	D	Broken top	Hollow	Poor
134	22	Water oak	C	Possibly Hollow		Fair
135	16	Water oak	B			Good

Parkers 84 - Ladson & limehouse - Arborist Index

136	18	Maple	C	Forked		Fair
137	6-9-11	Maple	D	Stump sprouts		Poor
138	17	Sweet gum	B			Good
139	10-11	Maple	D	Utility prune	V shaped crotch	Poor



N/F  
Limehouse Villas Homeowners  
Association  
PIN: 154-07-DE-048,000  
DB: 9094, PG: 128  
PL: M, PG: 33  
Zone: PUD

Tricoastal Properties, II  
PIN: 154-00-00-009,000  
DB: 9494, PG: 102  
PL: K, PG: 102  
Zone: UC-M2  
Area: 281,744 S.F.  
or 6.0092 Acres

Benchmark  
Nail in Sidewalk  
Elev=27.99  
(NAVD 88)

POB  
N 410.881,122  
E 2,263,988.64

LADSON ROAD (S-18-230)  
(66 Foot Public Right-of-Way)

Benchmark  
Nail in Sidewalk  
Elev=27.72  
(NAVD 88)

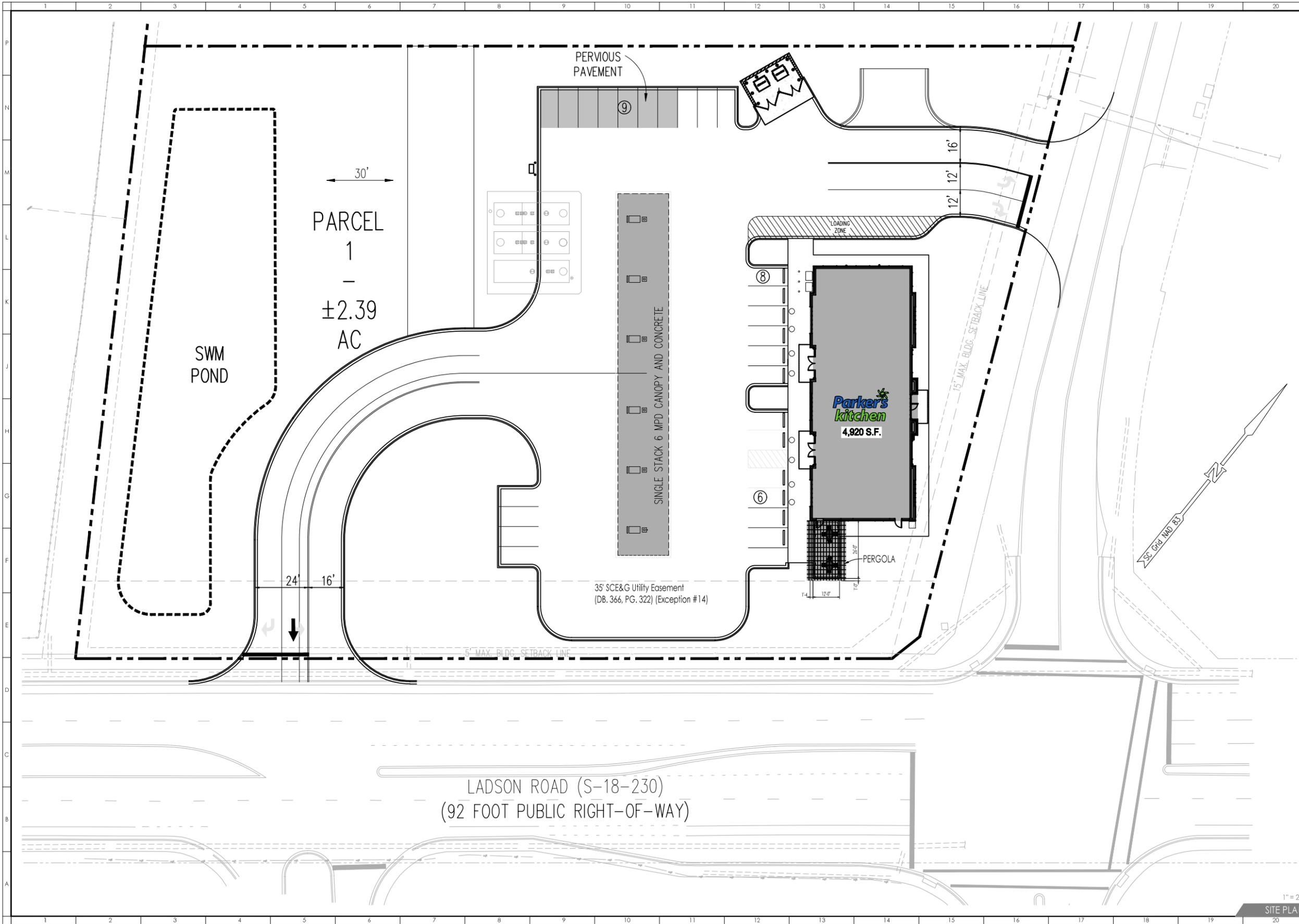
LEGEND  
 \_\_\_\_\_ PROPERTY LINE  
 - - - - - ADJONER PROPERTY LINE  
 ~~~~~ TREELINE  
 ○ PIN-REBAR FOUND  
 ○ PIN FOUND  
 ○ PIPE FOUND  
 → TRAFFIC ARROWS

**SURVEY MATTERS**  
 LAND SURVEYING SERVICES  
 107 Hillcrest Avenue  
 Simpsonville, South Carolina 29681  
 (864) 451-0176  
 nick@survey-matters.com

REVISIONS

TREE SURVEY  
 PREPARED FOR:  
 DRAYTON-PARKER COMPANIES, LLC.  
 PROPERTY OF:  
 TRICOASTAL PROPERTIES, II  
 LADSON ROAD & LIMEHOUSE DRIVE  
 TOWN OF SUMMERSVILLE, DORCHESTER COUNTY, SOUTH CAROLINA

|                                  |                |
|----------------------------------|----------------|
| DRAWN<br>NMR                     | CHECKED<br>NLM |
| SCALE: 1" = 20'                  |                |
| DATE OF SURVEY:<br>OCT. 15, 2019 |                |
| DATE OF PLOT:<br>NOV. 26, 2019   |                |
| PROJECT NO. 19-143               |                |
| 2 of 2                           |                |
| SHEET NO.                        |                |



121 OAKDENE ROAD  
 POOLER, GEORGIA 31322  
 P 912.695.3111  
 WWW.WISSMACHARCHITECTS.COM

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**PARKERS STORES**  
 DRAYTON-PARKERS, LLC  
 17 WEST McDONOUGH STREET  
 SAVANNAH, GEORGIA 31401



**PARKER'S STORE #84**

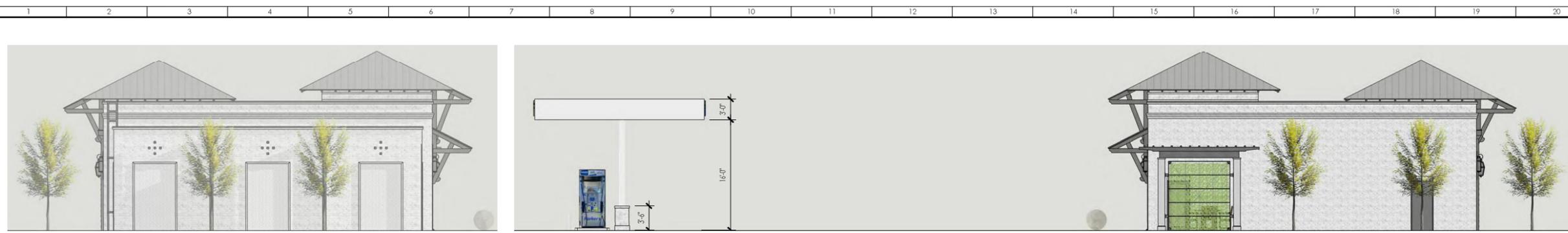
**SITE PLAN**

| NO. | DESCRIPTION | DATE | INITIAL |
|-----|-------------|------|---------|
|     |             |      |         |
|     |             |      |         |

DO NOT SCALE FROM DRAWINGS  
 SCALE AS INDICATED  
 DATE 02-27-20  
 PROJECT NO. 20006.00

**A100**

1" = 20'  
 SITE PLAN



1/8" = 1'-0"  
LEFT ELEVATION

1/8" = 1'-0"  
LADSON ROAD ELEVATION



1/8" = 1'-0"  
REAR ELEVATION



1/8" = 1'-0"  
FRONT ELEVATION



1/8" = 1'-0"  
FRONT ELEVATION WITH CANOPY



**WISSMACH  
ARCHITECTS**

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POOLER, GEORGIA 31322  
P 912.695.3111  
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PARKERS STORES

DRAYTON-PARKERS, LLC  
17 WEST MCDONOUGH STREET  
SAVANNAH, GEORGIA 31401



PARKER'S  
STORE #84

ELEVATIONS

| NO. | DESCRIPTION | DATE | INITIAL |
|-----|-------------|------|---------|
|     |             |      |         |
|     |             |      |         |

DO NOT SCALE FROM DRAWINGS

SCALE AS INDICATED  
DATE 02-27-20  
PROJECT NO. 20006.00

**A201**



N.T.S.  
PERSPECTIVE VIEW



N.T.S.  
PERSPECTIVE VIEW



N.T.S.  
PERSPECTIVE VIEW



**WISSMACH  
ARCHITECTS**

121 OAKDENE ROAD  
POOLER, GEORGIA 31322  
P 912.695.3111  
WWW.WISSMACHARCHITECTS.COM

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**PARKERS STORES**

DRAYTON-PARKERS, LLC  
17 WEST MCDONOUGH STREET  
SAVANNAH, GEORGIA 31401



**PARKER'S  
STORE #84**

**PERSPECTIVE  
VIEWS**

| NO. | DESCRIPTION | DATE | INITIAL |
|-----|-------------|------|---------|
|     |             |      |         |
|     |             |      |         |

DO NOT SCALE FROM DRAWINGS

SCALE AS INDICATED  
DATE 02-27-20  
PROJECT NO. 20006.00

**A202**





A large blue billboard with a white border. At the top left is a circular logo showing a person with a red cart. To the right of the logo, the text "morningstar STORAGE" is written in white, with "morningstar" in a sans-serif font and "STORAGE" in a larger, spaced-out sans-serif font. Below the logo and text, "2 MONTHS FREE" is written in very large, bold, white, spaced-out capital letters. At the bottom of the billboard, a brown horizontal band contains the website address "MORNINGSTARSUMMerville.COM" in white, all-caps, sans-serif font. The billboard is supported by four black metal posts. A small black sign with the number "134201" and the name "ADAMS" is attached to the top left corner of the billboard's frame.

morningstar  
STORAGE

2 MONTHS FREE

MORNINGSTARSUMMerville.COM

134201 ADAMS

ADAMS  
134201

ADAMS  
134201





RELAX

**STAFF REPORT  
CDRB Meeting  
March 19, 2020 at 4:00 p.m.**

**TO:** Town of Summerville CDRB  
**FROM:** Planning Staff  
**DATE:** March 13, 2020

**GENERAL INFORMATION**

**Applicant:** Pendium Group, LLC  
**Property Owner:** JWS Aspirations, LLC  
**Requested Action:** The applicant is requesting Preliminary Approval of a proposed 8,460 sf office building  
**Requested Approval:** Preliminary Approval  
**Existing Zoning:** D-MX Downtown Mixed Use  
**Adjacent Zoning:** **North:** PL Public Land  
**South:** D-MX Downtown Mixed Use  
**East:** PL Public Land  
**West:** D-MX Downtown Mixed Use  
**Location:** 204 N. Cedar Street  
**Existing Land Use:** Vacant property  
**Prior Approvals:** Conceptual Review 03/21/2019

**Ordinance Reference:**

Sec. 13.3.5. Design Review Board.

- A. *Mission statement.* The purpose of the commercial design review board is to establish a review process that will protect and improve the visual and aesthetic character and economic value of commercial development within the town. In turn, this establishment of scenic corridors will contribute to the community's sense of place and pride further strengthening the town's unity of character. Through this process, the assurance of respect for the character, integrity, and quality of the built environment of the town will be established without stifling innovative architecture and/or development. All development shall adhere to the definitions and terms outlined in all of the town's zoning ordinances and codes as preliminary criteria. The commercial design review board is granted the authority to determine the appropriateness of the construction of the commercial site in pursuit of achieving that style which is characteristic of the region and of the town in particular as stated in the guidelines of this section.

**Recommendation:**

Based upon preliminary staff review, staff has the following comments: The first handicap parking space and designated path are blocking traffic flow, it is recommended that this space be removed and an alternative location for the handicap parking be identified, staff suggests the "southern" property line. This would also reduce the travel distance from vehicle to door for handicapped patrons. D-MX does not have a minimum parking requirement. Because the parking is behind the building, staff recommends no more parking than is required based on the use. For Office Use the parking requirement is 2/1,000 sf. The minimum parking for this location would be 17 parking spaces. Staff would also recommend removing the last space and the first space along the "southern" property line both impede traffic flow or are difficult to maneuver into and out of. Sugar Maples are not a recommended parking lot tree. Provide a dumpster enclosure detail. Provide a detail of the HVAC screening. The enclosure must be constructed of materials to match the building. Staff would still recommend seeking the possibility for a shared drive or parking with the adjacent bank. Please provide documentation of effort to establish connection.

Building: The first floor does not meet the 65% façade transparency requirement. It is currently at 21%. The second floor does not meet the 30% façade transparency requirement. It is currently at 21%.

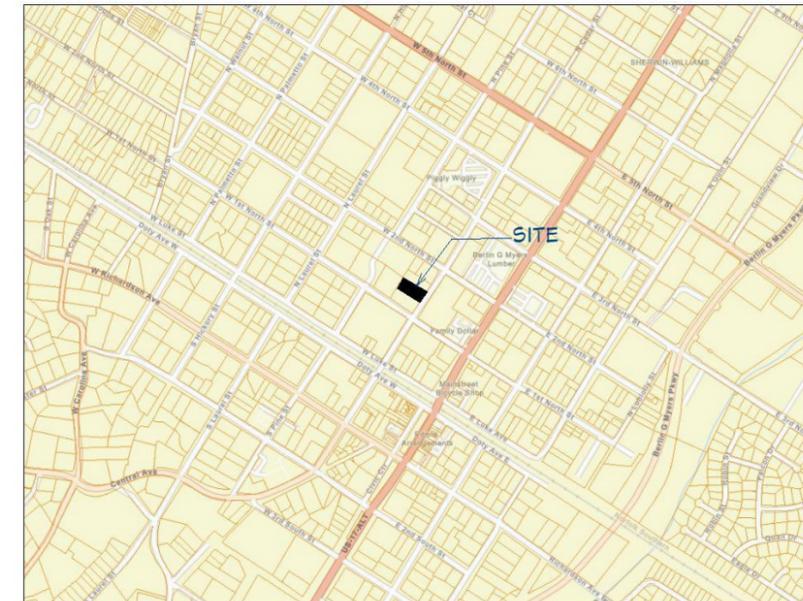


**RENDERING**

FOR ILLUSTRATION ONLY  
No Scale



**DRB PLANS**  
for  
**Executive Offices**  
**204 North Cedar,**  
**Summerville, SC 29483**



**VICINITY MAP**

FOR ILLUSTRATION ONLY  
No Scale

**Project Planning Statistics**

TMS: 137-03-09-013.000  
Developer: Pendium Group LLC  
Zoning: D-MX

|                                                                                                               |                                     |
|---------------------------------------------------------------------------------------------------------------|-------------------------------------|
| <b>Property Total Area:</b>                                                                                   | <b>27,490.00 Sq. Ft. (.631 AC.)</b> |
| <b>Parking and Curb Areas:</b>                                                                                | <b>16,500.00 Sq. Ft.</b>            |
| <b>Office Footprint Area:</b>                                                                                 | <b>4,634.58 Sq. Ft.</b>             |
| <b>Covered Porches:</b>                                                                                       | <b>265.42 Sq. Ft.</b>               |
| <b>Sidewalks and Stoops Areas:</b>                                                                            | <b>630.00 Sq. Ft.</b>               |
| <b>Green Space &amp; Landscaping Area:</b>                                                                    | <b>5,460.00 Sq. Ft. (19.9%)</b>     |
| <b>Gross Floor Area:</b>                                                                                      | <b>8,460.00 Sq. Ft.</b>             |
| <b>Usable Floor Area (USF):</b><br>(USF excludes balconies, stairways, elevators, corridors and public areas) | <b>7,867.00 Sq. Ft.</b>             |
| <b>Parking Spaces (Total):</b>                                                                                | <b>33</b>                           |
| <b>Accessible Parking Spaces:</b>                                                                             | <b>2 /with 1 Van Accessible</b>     |

**Project Contacts**

**Owner:**  
Pendium Group, LLC.  
Tom Wingard (Project Coordination Main Contact):  
Ph: 843 458-4601 tom@pendium.com | 4265 Duck Club Rd Ravenel SC 29470

**Architectural Firm & Construction Management:**  
Pendium Group, LLC Architecture Firm #101636  
Tom Wingard (Main Contact) GC #G121762, CCM #1046  
Ph: 843 458-4601 tom@pendium.com | 4265 Duck Club Rd Ravenel SC 29470  
Ahmad M Al-Shemmeri, NCARB (Architect) SC-AR #10394  
Ph: 843 405-7055 ahmad@pendium.com | 4265 Duck Club Rd Ravenel SC 29470

**Engineering and Landscape Design:**  
Eugene H Brislin Jr., PE  
Ph: 843 821-1678 gene\_pe@bellsouth.net  
606 Old Trolley Rd Ste 202 Summerville SC 29485

**Sources:**  
Palmetto Land Surveying, Inc  
Jason Penington  
Ph: 843-571-5191 plsoffice@palmettols.com  
2065 Savannah Highway Ste 2 Charleston, S.C. 29407

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| EXTERIOR ELEVATIONS          | A6 |
| SECTIONS / DETAILS / SIGNAGE | A7 |
| SITE PHOTOS                  | A8 |

Drawings below completed by other entities and were not under the supervision of Pendium Group or the design professional in responsible charge:

|                       |      |
|-----------------------|------|
| SITE PLAN AND PARKING | C1.0 |
| LANDSCAPING PLAN      | C1.1 |
| GRADING AND DRAINAGE  | --   |
| PHOTOMETRIC           | --   |
| DETAIL/SECTIONS       | --   |



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204 North Cedar  
Summerville, SC 29483

COVER  
PAGE

DATE:  
2/28/2020

SHEET:

**A1**

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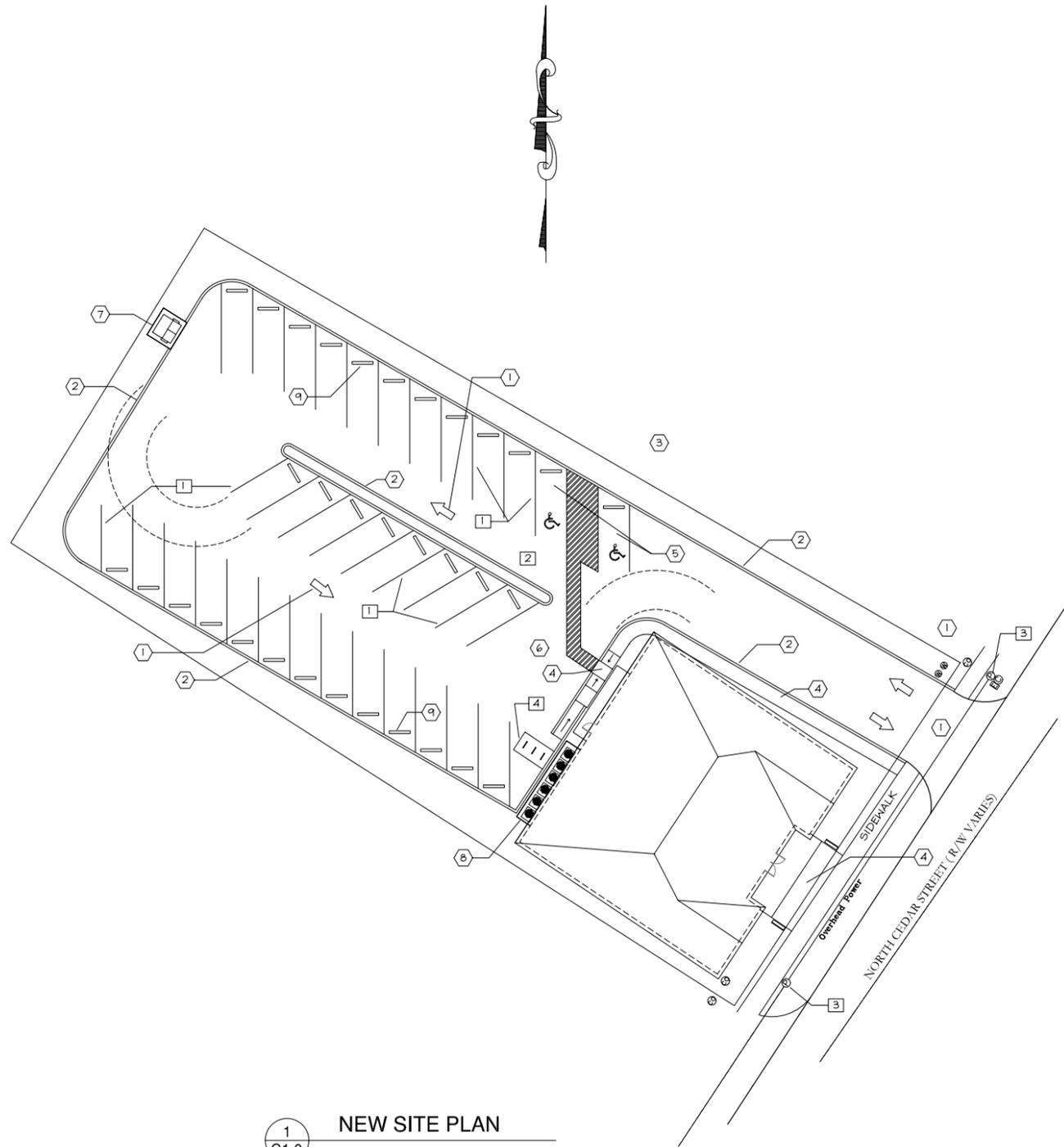
**PARKING**

D-MX ZONING HAS NO MINIMUM PARKING REQUIREMENT.  
 33 SPACES PROVIDED BASE ON OCCUPANT NEEDS  
 USE 2 SPACES AS HANDICAP PARKING SPACE - VAN ACCESSIBLE



KNOW WHAT'S BELOW,  
 CALL BEFORE YOU DIG

THE SOUTH CAROLINA STATE LAW REQUIRES THAT EXCAVATORS GIVE A 72--HOUR NOTICE, (3 WORKING DAYS EXCLUDING WEEKENDS AND HOLIDAYS), FOR THE LOCATORS TO GET OUT TO MARK THE AREA. AFTER A TICKET HAS BEEN PROCESSED, YOU WILL KNOW WHEN YOU ARE LEGALLY FREE TO PROCEED WITH THE DIGGING WORK AND WHICH UTILITIES IN THE AREA P.U.P.S. WILL BE NOTIFYING FOR YOU. ANY UTILITIES THAT P.U.P.S. DOES NOT NOTIFY, YOU WILL BE RESPONSIBLE FOR NOTIFYING DIRECTLY. THE UTILITY COMPANIES ASK THAT YOU LEAVE A 2 1/2 FEET MARGIN ON EACH SIDE OF A MARKED UTILITY LINE. ALSO NOTE THAT YOUR REQUEST IS GOOD FOR 15 WORKING DAYS AFTER IT HAS BEEN PROCESSED BY OUR SYSTEM.



1  
 C1.0  
**NEW SITE PLAN**  
 SCALE: 1"=20'

**SITE NOTES**

- SEE C2.0 AND C2.1 FOR ALL DETAILS SHOWN ON THIS PLAN
- 1 4" TRAFFIC YELLOW LANE STRIPES - TYPICAL
  - 2 4" BABY BLUE LANE STRIPES FOR ALL HANDICAP SPACES
  - 3 EXISTING WOOD POWER POLE
  - 4 BICYCLE PARKING AREA

**DETAIL NOTES**

- SEE C2.0 AND C2.1 FOR ALL DETAILS SHOWN ON THIS PLAN
- ALL PARKING SPACES TO BE 9' x 19' UNLESS NOTED OTHERWISE
- 1 TRAFFIC FLOW ARROW
  - 2 EXTRUDED CURB
  - 3 EXTERIOR LIGHTING POLE WITH FOUNDATION
  - 4 CONCRETE SIDE WALK
  - 5 HANDICAP PARKING SPACE
  - 6 HANDICAP RAMP IN CONCRETE SIDE WALK
  - 7 TRASH DUMPSTER SCREENING
  - 8 HVAC UNIT SCREENING
  - 9 WHEEL STOP - TYPICAL

PROFESSIONAL OFFICE  
 605 OLD TROLLEY ROAD  
 SUMMERVILLE, SC

| No. | Revision/Issue | Date |
|-----|----------------|------|
|     |                |      |
|     |                |      |
|     |                |      |
|     |                |      |

**Eugene H. Brislin Jr., PE**

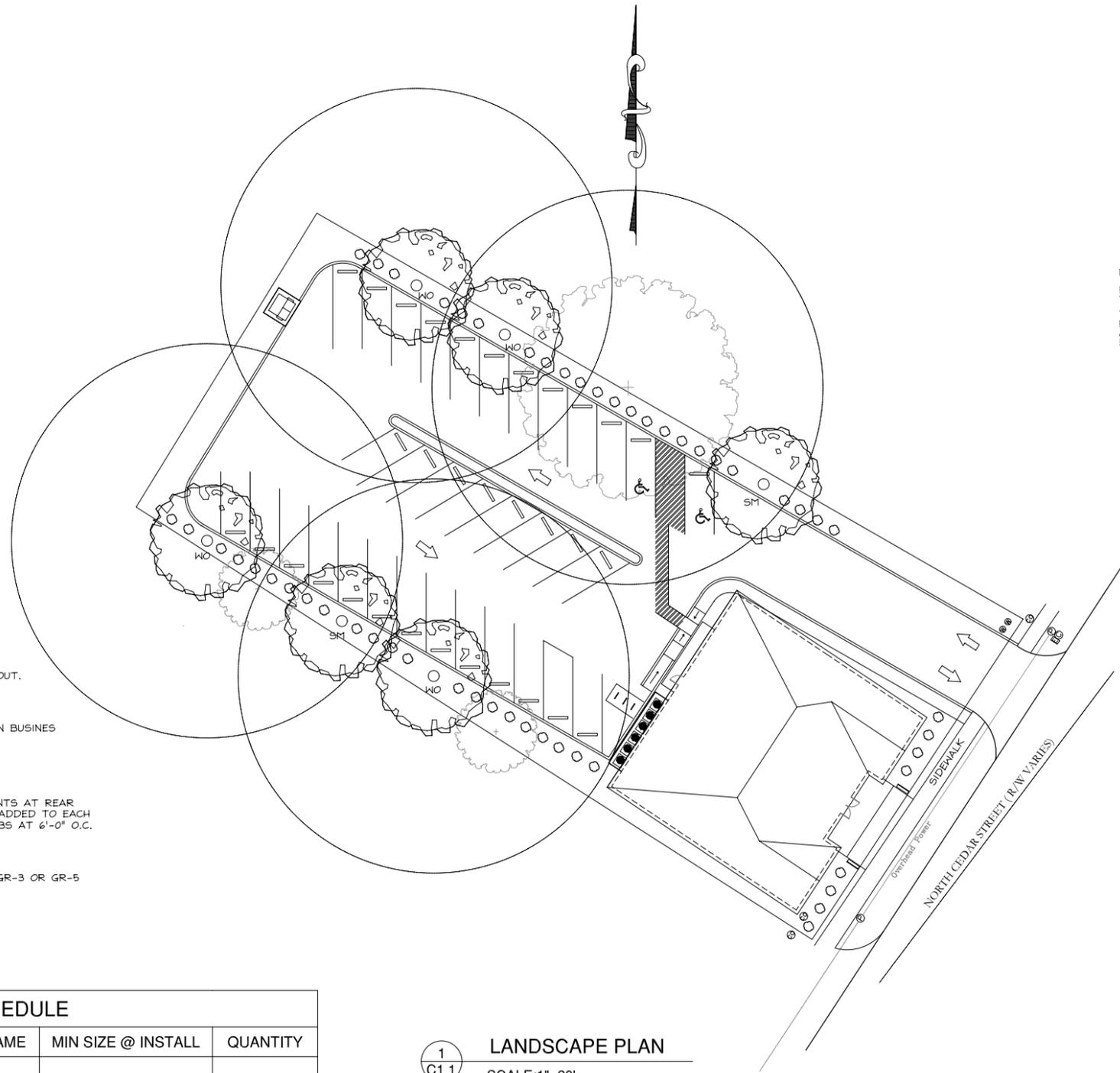
606 Old Trolley Road  
 Suite 202  
 Summerville, SC 29485  
 843-821-1678

Sheet Title  
**NEW SITE PLAN**

|                    |                      |
|--------------------|----------------------|
| Date<br>3 FEB 20   | Sheet<br><b>C1.0</b> |
| Scale<br>1"=20'-0" |                      |

CDRB - APPROVAL

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**TREE PRESERVATION**  
 NO EXISTING TREES ARE EFFECTED BY PARKING LAYOUT.

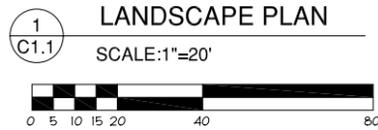
**SITE LANDSCAPE REQUIREMENTS**  
 NONE REQUIRED. SITE IS NOT LOCATED IN SUBURBAN BUSINESS DISTRICT (N-g, G-B) OR IN A INDUSTRIAL DISTRICT (L-l, H-l).

**PARKING LANDSCAPE REQUIREMENTS**  
 EXISTING TREES ARE USED FOR PARKING REQUIREMENTS AT REAR OF THE PROPERTY. ADDITIONAL TREES HAVE BEEN ADDED TO EACH SIDE OF THE PARKING LOT AT 40'-0" O.C. AND SHRUBS AT 6'-0" O.C.

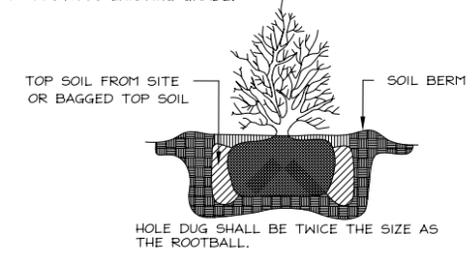
**BUFFER REQUIREMENTS**  
 NONE REQUIRED. SITE IS NOT ADJACENT TO GR-2, GR-3 OR GR-5 DISTRICTS.

| PLANT SCHEDULE |                    |                 |                    |          |
|----------------|--------------------|-----------------|--------------------|----------|
| TAG            | COMMON NAME        | BOTANICAL NAME  | MIN SIZE @ INSTALL | QUANTITY |
| WO             | CANOPY TREE        |                 |                    |          |
|                | WILLOW OAK         | QUERCUS PHELLOS | 2 1/2" CALIPER     | 4        |
| SM             | CANOPY TREE        |                 |                    |          |
|                | SUGAR MAPLE        | QUERCUS PHELLOS | 2 1/2" CALIPER     | 2        |
| BH             | SHRUBS             |                 |                    |          |
|                | DWARF BUFORD HOLLY | ILEX COMMUTA    | 36" HEIGHT         | 45       |

NOTE - EXISTING TREES AND SHRUBS ARE SHOW AS SUBDUED COLOR

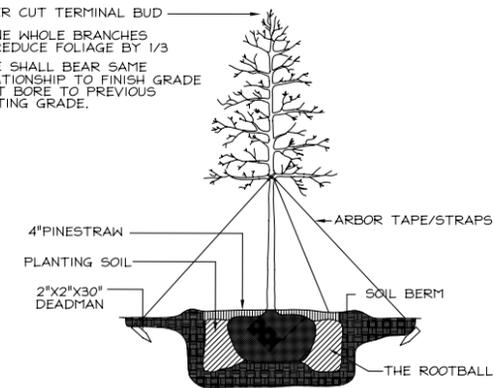


PLANT SHALL BEAR SAME RELATIONSHIP TO FINISH GRADE AS IT BORE TO PREVIOUS EXISTING GRADE.



**DETAIL - SHRUB PLANTING**  
 NO SCALE

NEVER CUT TERMINAL BUD  
 PRUNE WHOLE BRANCHES TO REDUCE FOLIAGE BY 1/3  
 TREE SHALL BEAR SAME RELATIONSHIP TO FINISH GRADE AS IT BORE TO PREVIOUS EXISTING GRADE.



**DETAIL - TREE PLANTING**  
 NO SCALE



**KNOW WHAT'S BELOW,  
 CALL BEFORE YOU DIG**

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PROFESSIONAL OFFICE  
 605 OLD TROLLEY ROAD  
 SUMMERVILLE, SC

| No. | Revision/Issue | Date |
|-----|----------------|------|
|     |                |      |
|     |                |      |
|     |                |      |

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 Suite 202  
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 843-821-1678

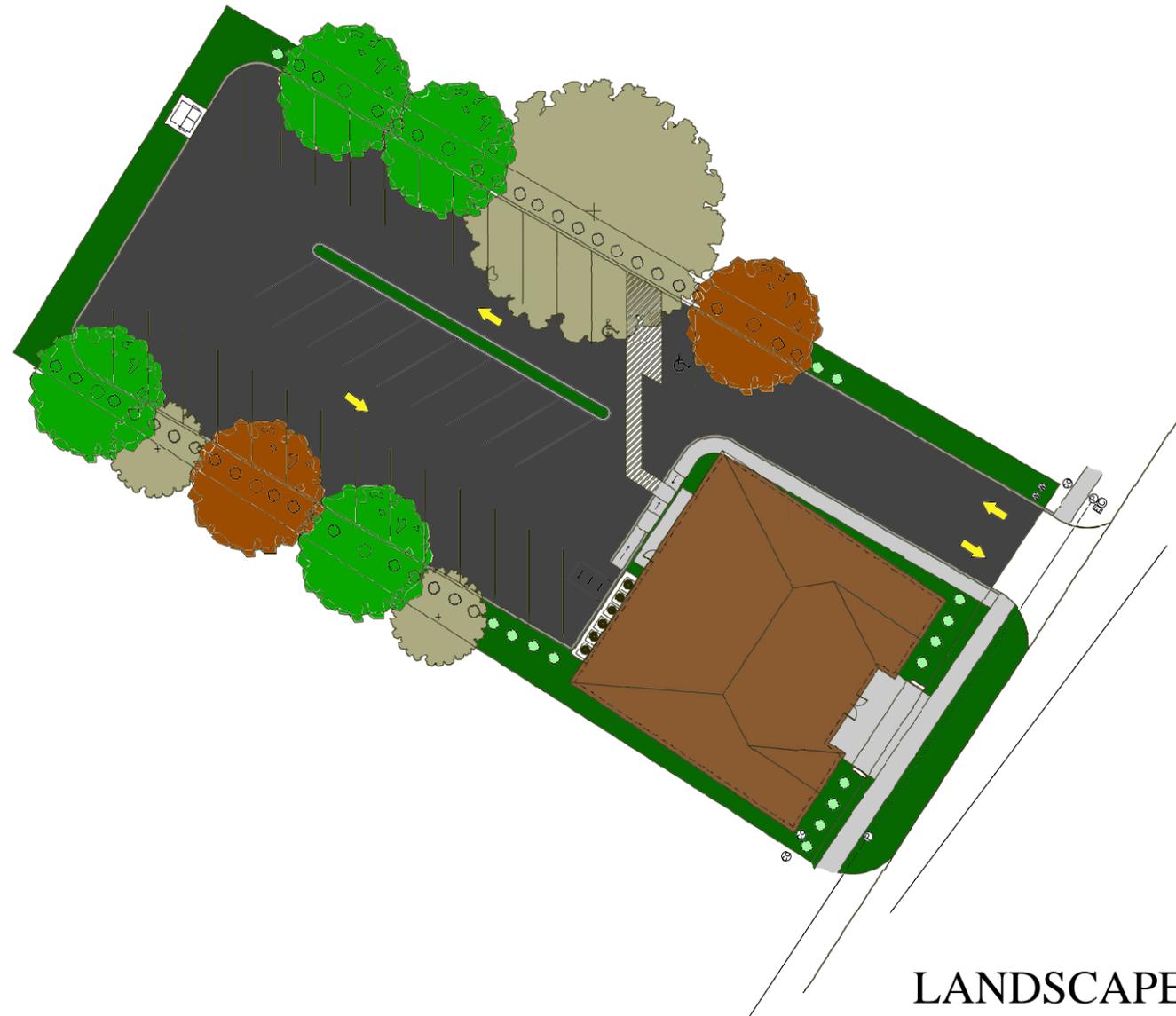
Sheet Title  
**LANDSCAPE PLAN**

Date  
**3 FEB 20**

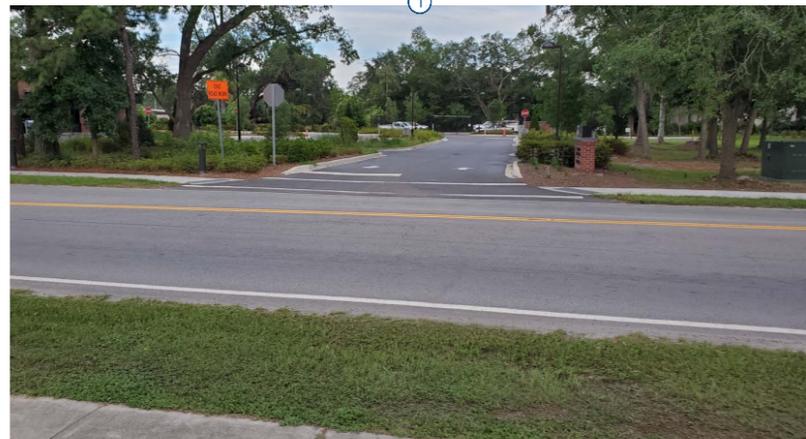
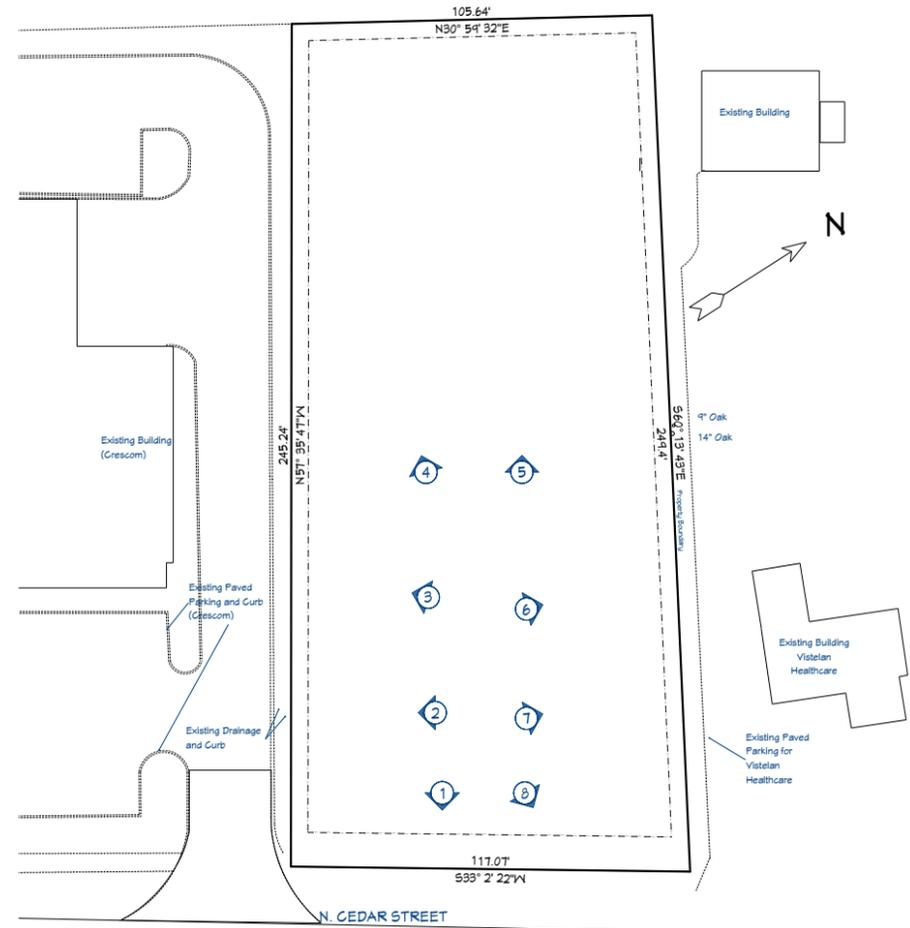
Scale  
**1"=20'-0"**

Sheet  
**C1.1**

CDRB - APPROVAL



LANDSCAPE PLAN



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SITE PHOTOS

DATE:  
2/28/2020

SHEET:

A8



**Front Elevation**

Scale: 1/4" = 1'



**Rear Elevation**

Scale: 1/4" = 1'

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**EXTERIOR ELEVATIONS**

**DATE:**  
 2/28/2020

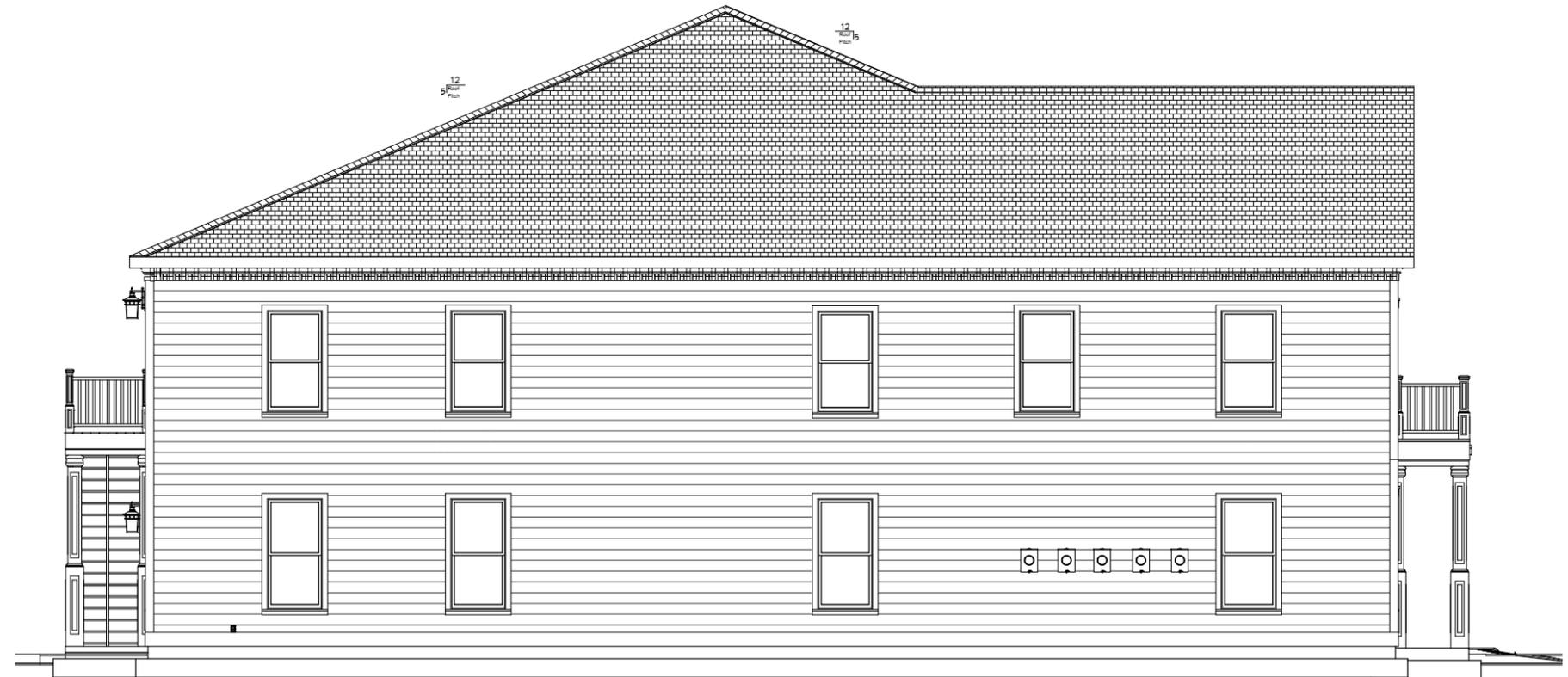
**SHEET:**

**A5**



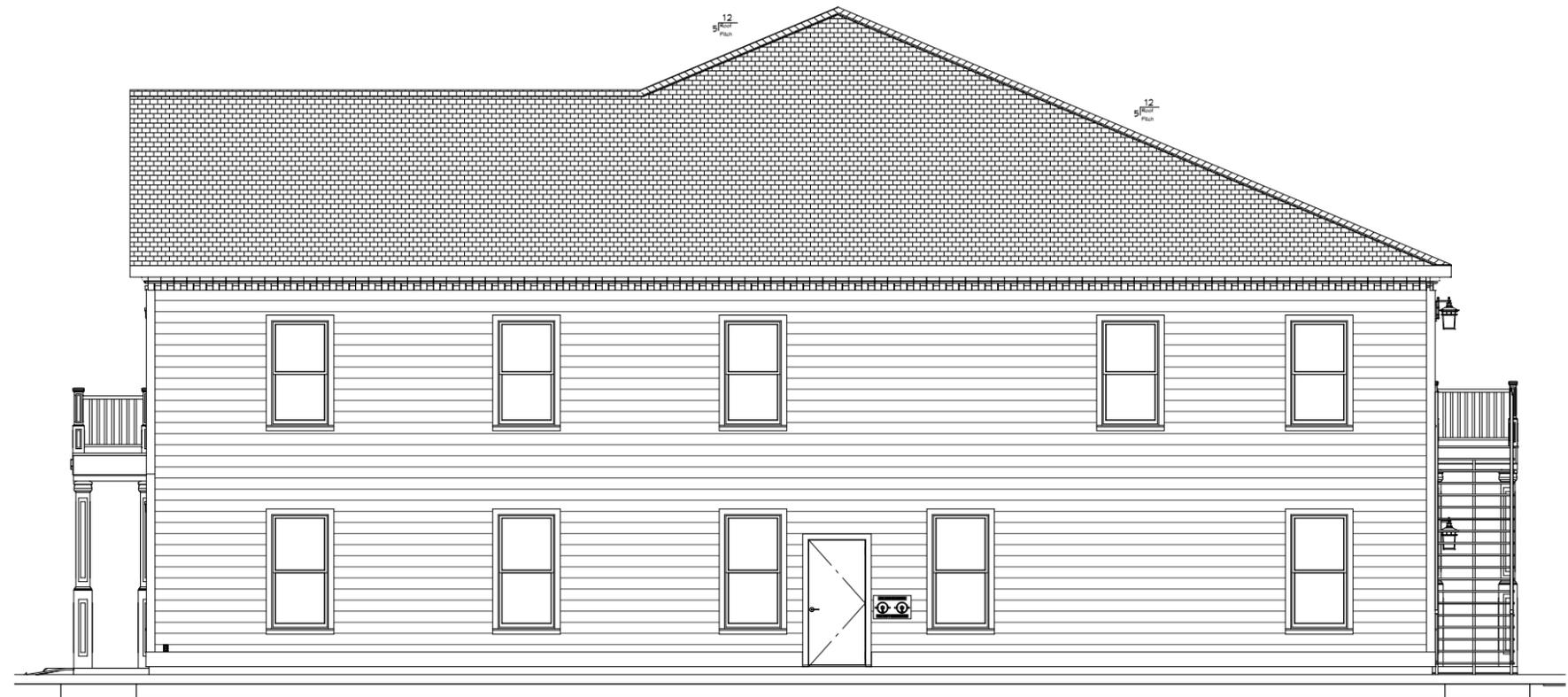
**COLOR RENDERING**

FOR COLOR AND FINISH ILLUSTRATION ONLY  
No Scale



**Left Elevation**

Scale: 1/4" = 1'



**Right Elevation**

Scale: 1/4" = 1'



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**EXTERIOR  
ELEVATIONS**

DATE:  
2/28/2020

SHEET:

**A6**

**GENERAL NOTES AND SPECIFICATIONS**

**DESIGN CRITERIA: 2015 IBC**

THE GENERAL CONTRACTOR SHALL FULLY COMPLY WITH ALL STATE AND LOCAL CODE REQUIREMENTS. THE CONTRACTOR SHALL ALSO PERFORM COORDINATION WITH ALL UTILITIES AND STATE SERVICE AUTHORITIES.

WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. THE GENERAL CONTRACTOR SHALL VERIFY AND IS RESPONSIBLE FOR ALL DIMENSIONS (INCLUDING ROUGH OPENINGS) AND CONDITIONS ON THE JOB AND MUST NOTIFY THIS OFFICE OF ANY VARIATIONS FROM THESE DRAWINGS.

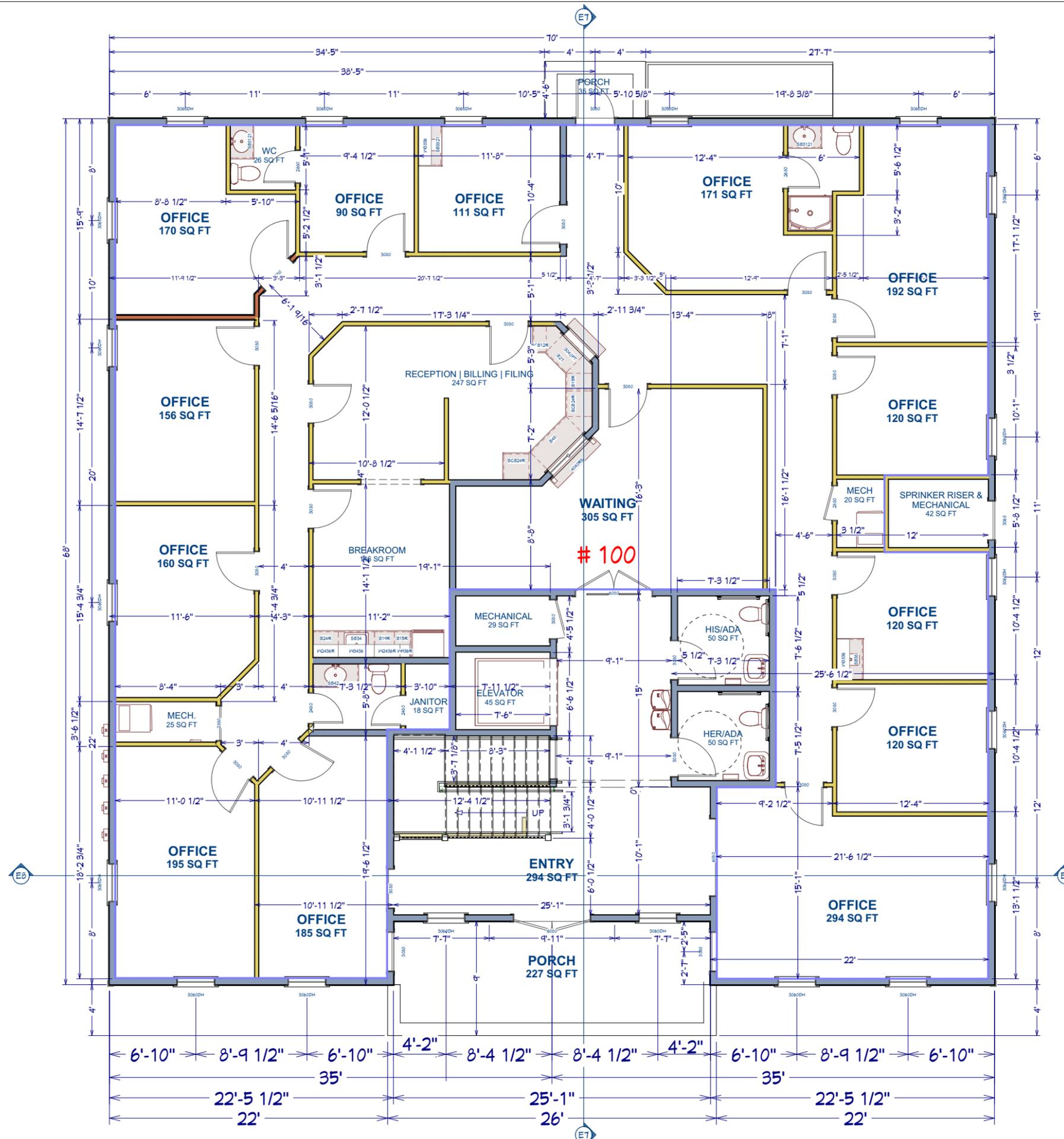
THE ENGINEER/DESIGNER SHALL BE CONSULTED FOR CLARIFICATION IF SITE CONDITIONS ARE ENCOUNTERED THAT ARE DIFFERENT THAN SHOWN, IF DISCREPANCIES ARE FOUND IN THE PLANS OR NOTES, OR IF A QUESTION ARISES OVER THE INTENT OF THE PLANS OR NOTES. ALL TRADES SHALL MAINTAIN A CLEAN WORK SITE AT THE END OF EACH WORK DAY.

**FRAMING NOTES:**

ALL EXTERIOR DIMENSIONS ARE TO THE FRAMING OR MAIN LAYER. DIMENSIONS TO OPENINGS ARE TO THE FRAMING, ROUGH OPENING.

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND IS RESPONSIBLE FOR ALL DIMENSIONS (INCLUDING ROUGH OPENINGS).

PLEASE SEE ADDITIONAL NOTES CALLED OUT ON OTHER SHEETS.



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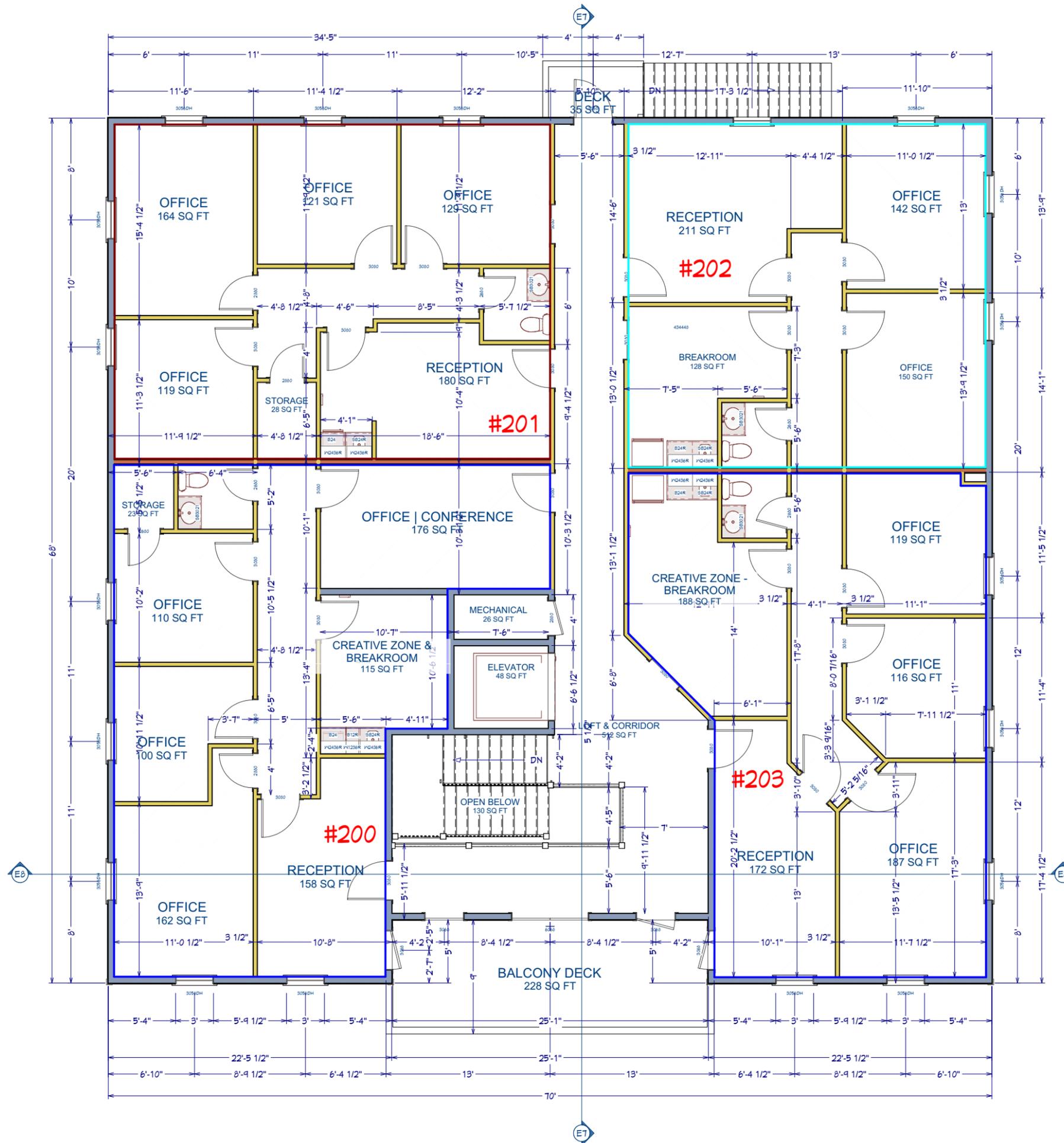
FIRST FLOOR PLAN

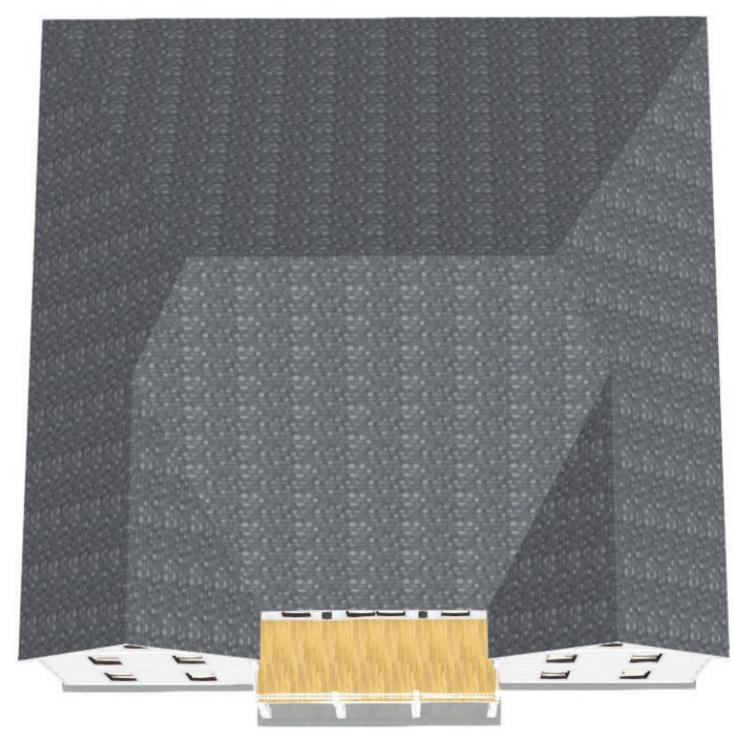
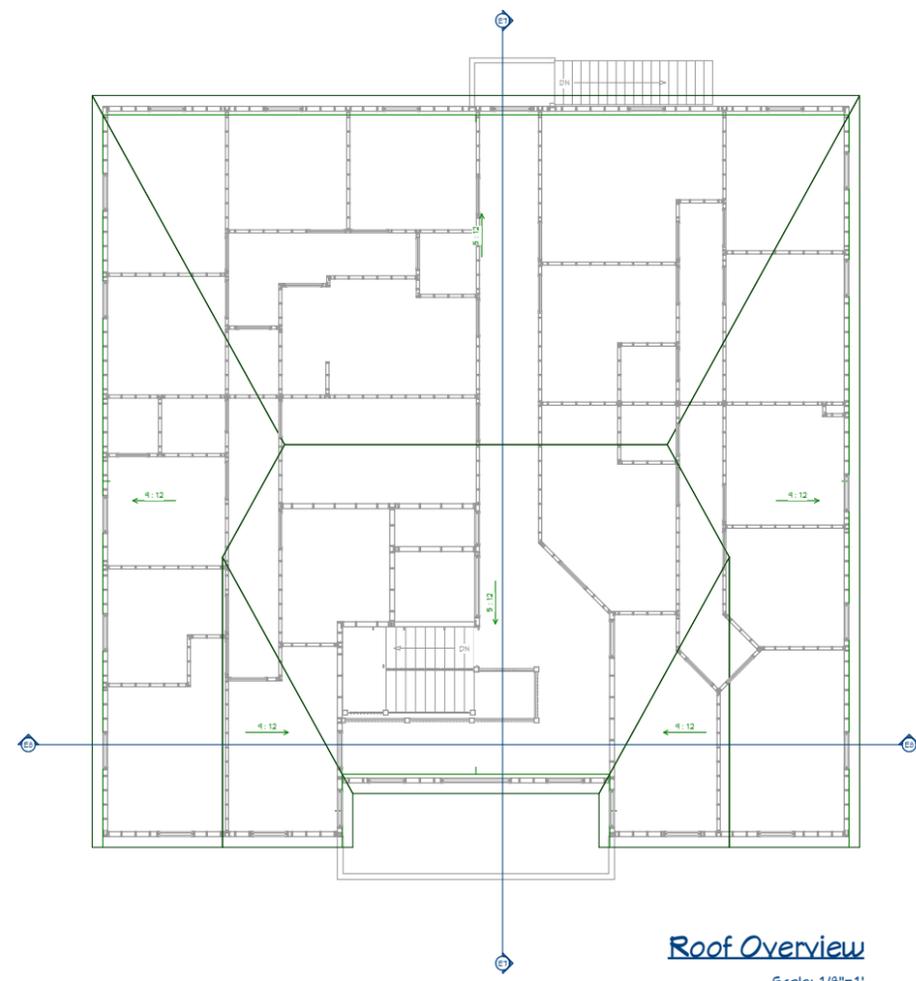
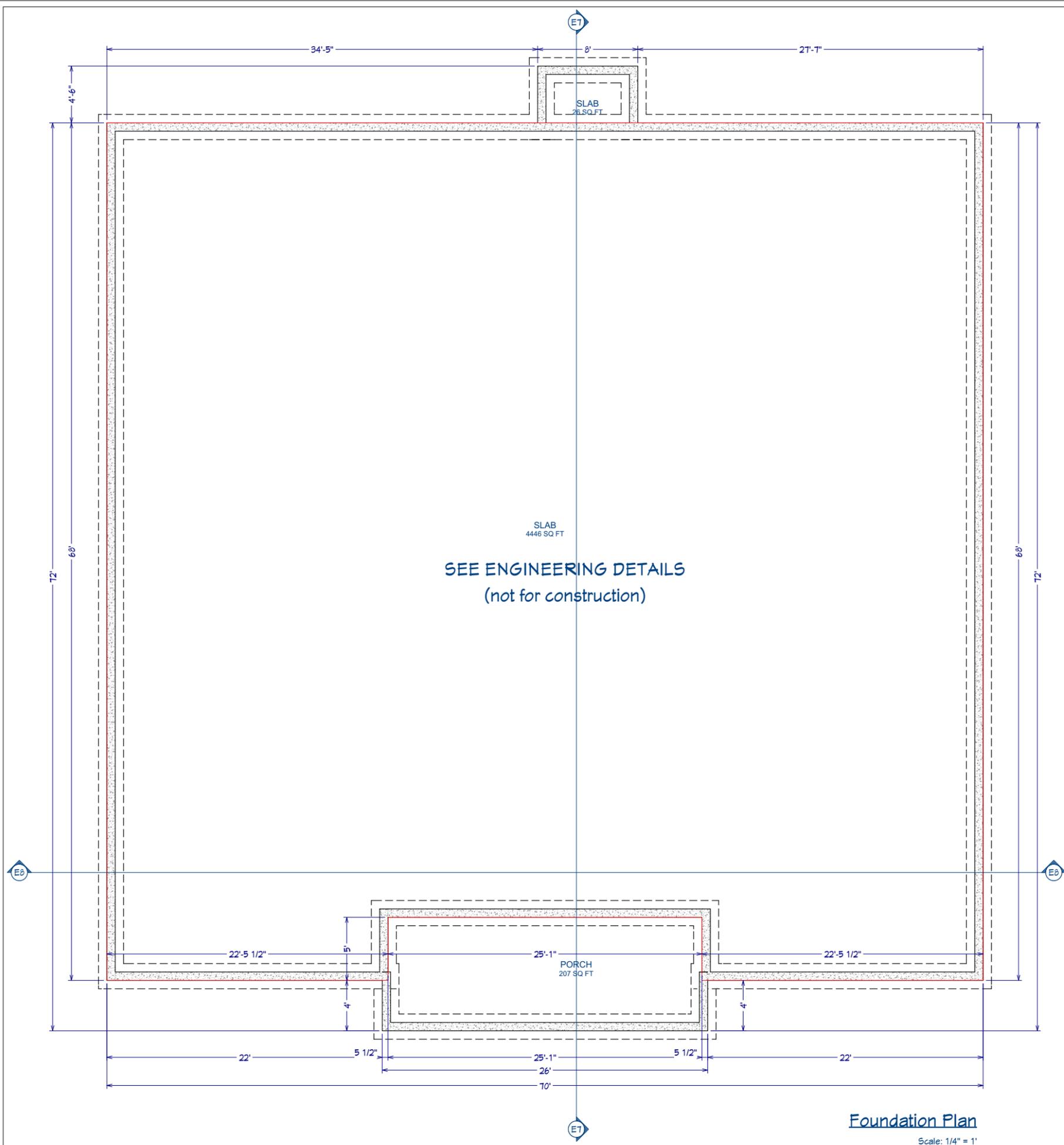
DATE:  
2/28/2020

SHEET:

**A2**

**First Floor Plan**  
 Scale: 1/4" = 1'



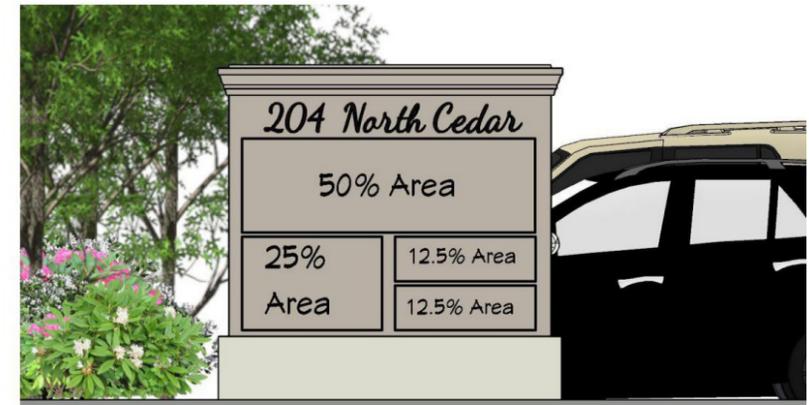




Elevation 7 | Section View Set  
1/4 in = 1 ft



Elevation 8 | Section View Set  
1/4 in = 1 ft

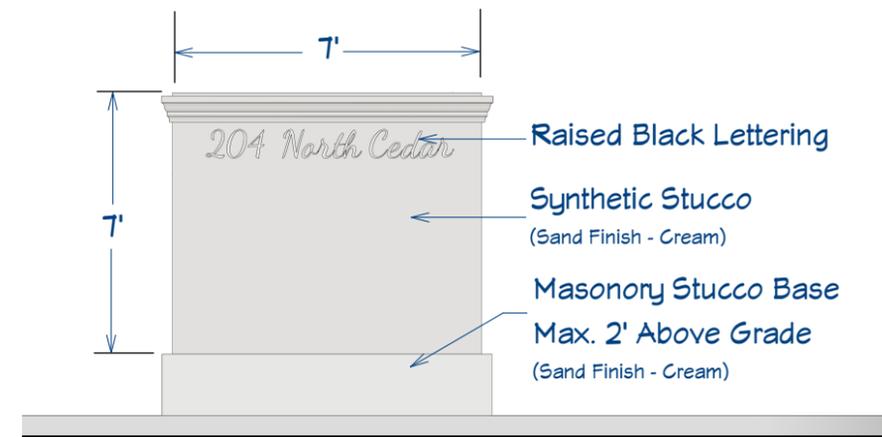


SIGNAGE (sample layout shown)

**RENDERING**

FOR ILLUSTRATION ONLY  
No Scale

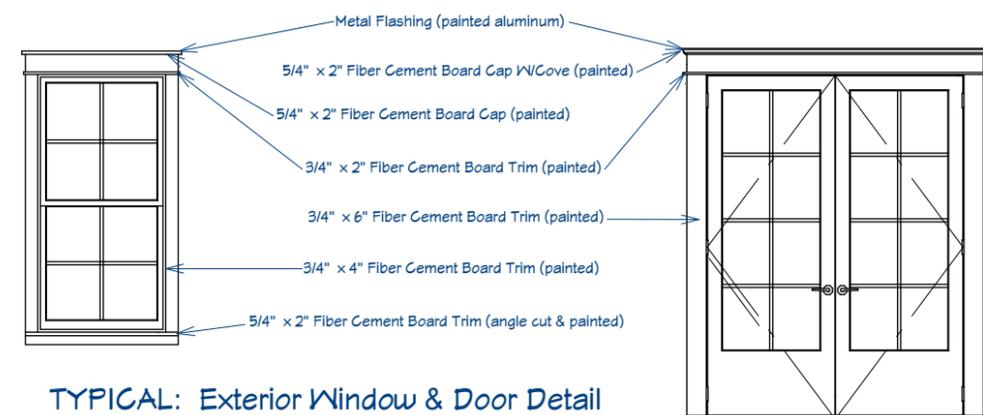
Monolith style with approximately 50 Sq ft of overall area per side  
Suite #100 50% of the available sign face (both sides)  
Suites #200 - #203 are deeded 12.5% of the available sign face (both sides)



- 7'
- 7'
- 7'
- 204 North Cedar
- Raised Black Lettering
- Synthetic Stucco  
(Sand Finish - Cream)
- Masonry Stucco Base  
Max. 2' Above Grade  
(Sand Finish - Cream)

**Signage**

Scale: 1/2" = 1'



TYPICAL: Exterior Window & Door Detail

Scale: 1/2" = 1'

Door & Window Detail



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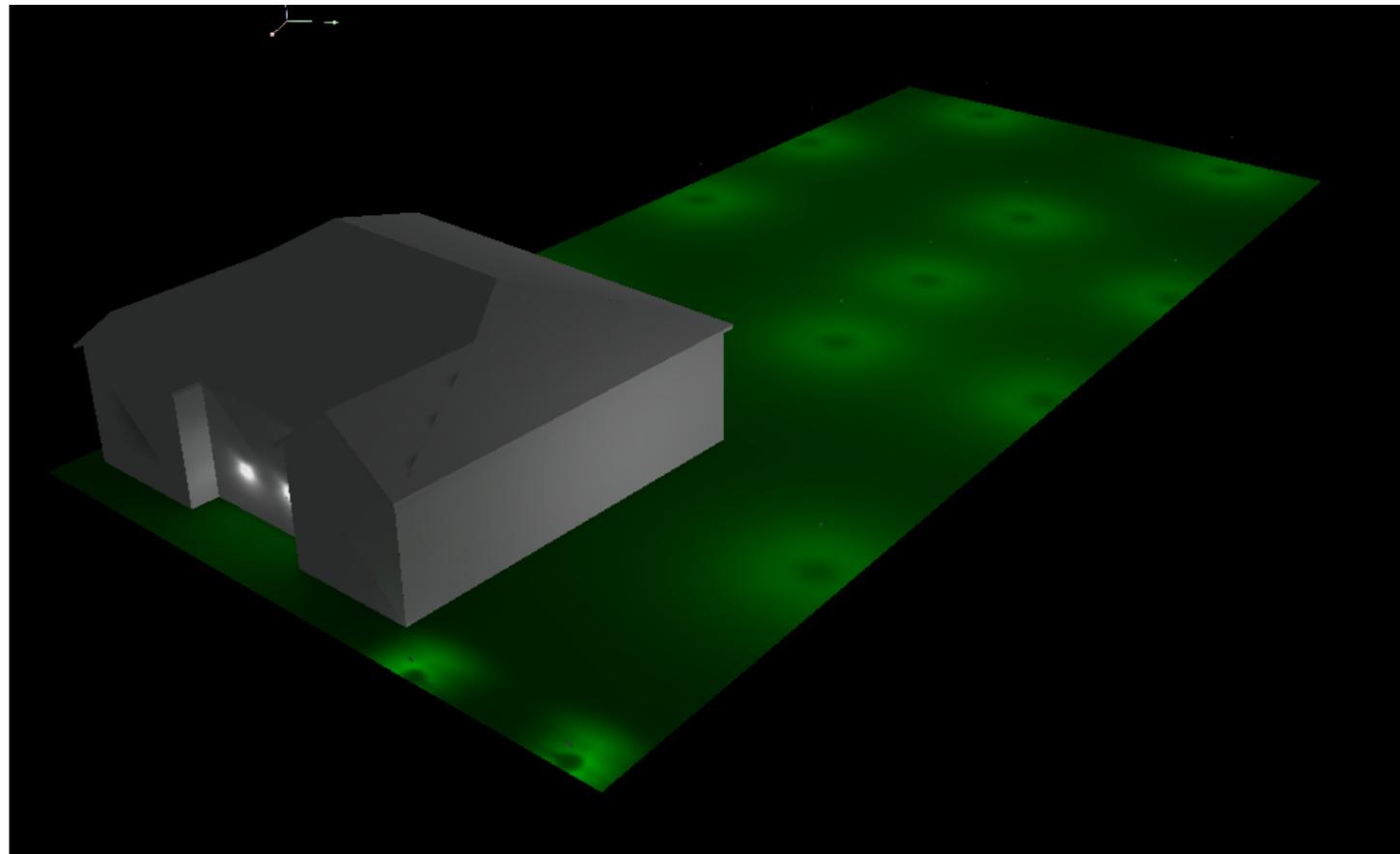
DETAILS/  
SECTIONS

DATE:  
2/28/2020

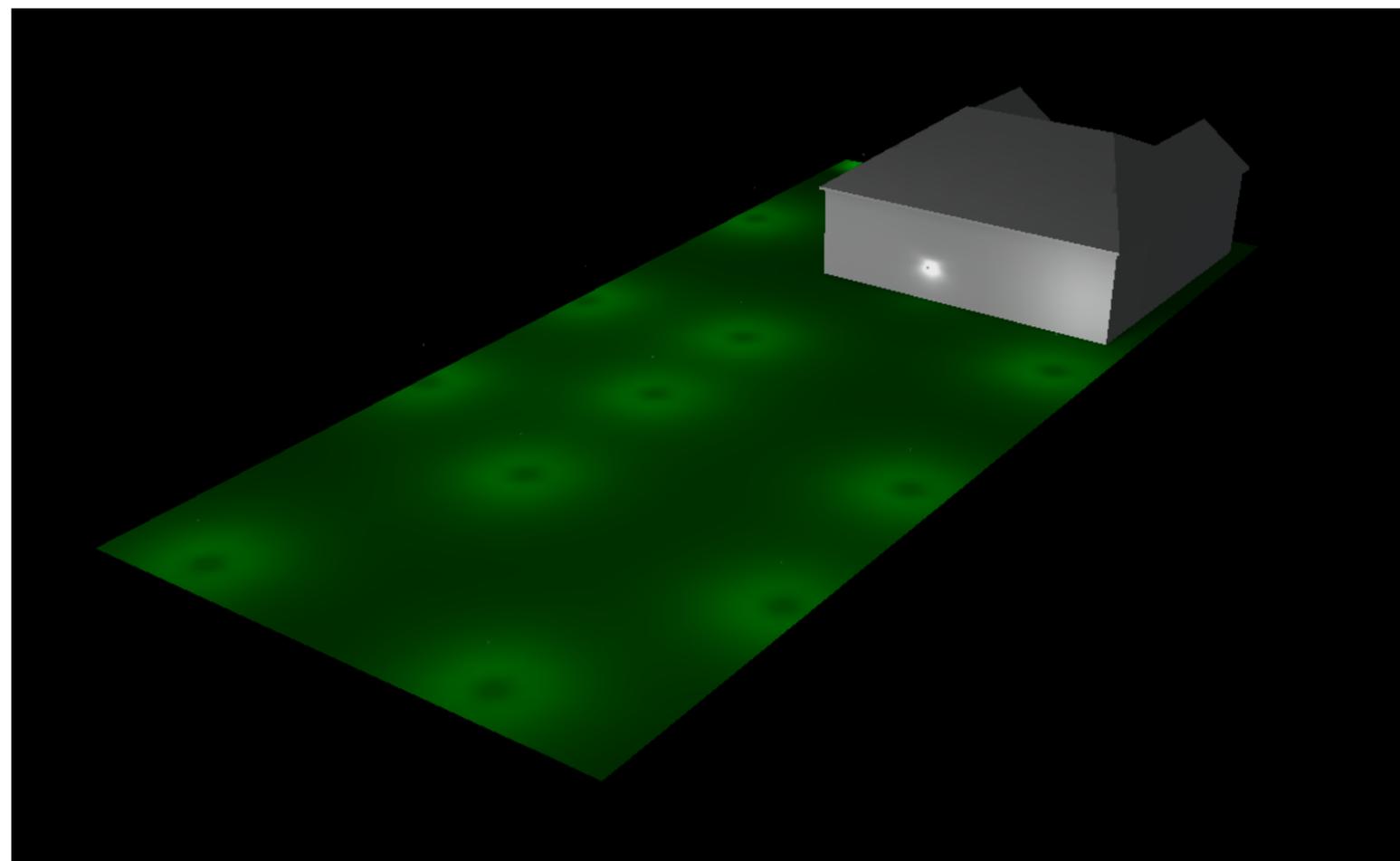
SHEET:

**A7**





Lighting 3d views



**STAFF REPORT  
CDRB Meeting  
March 19, 2020 at 4:00 p.m.**

**TO:** Town of Summerville CDRB  
**FROM:** Planning Staff  
**DATE:** March 13, 2020

**GENERAL INFORMATION**

**Applicant:** Emanuel Baptist Church  
**Property Owner:** Emanuel Baptist Church  
**Requested Action:** The applicant is requesting Final Approval for a proposed new Sanctuary  
**Requested Approval:** Final Approval  
**Existing Zoning:** N-R Neighborhood Residential  
**Adjacent Zoning:** **North:** N-R Neighborhood Residential  
**South:** N-R Neighborhood Residential  
**East:** N-R Neighborhood Residential  
**West:** N-R Neighborhood Residential  
**Location:** 106 Boone Street  
**Existing Land Use:** Emanuel Baptist Church  
**Prior Approvals:** First Meeting

**Ordinance Reference:**  
Sec. 13.3.5. Design Review Board.

- (b) *Mission statement.* The purpose of the commercial design review board is to establish a review process that will protect and improve the visual and aesthetic character and economic value of commercial development within the town. In turn, this establishment of scenic corridors will contribute to the community's sense of place and pride further strengthening the town's unity of character. Through this process, the assurance of respect for the character, integrity, and quality of the built environment of the town will be established without stifling innovative architecture and/or development. All development shall adhere to the definitions and terms outlined in all of the town's zoning ordinances and codes as preliminary criteria. The commercial design review board is granted the authority to determine the appropriateness of the construction of the commercial site in pursuit of achieving that style which is characteristic of the region and of the town in particular as stated in the guidelines of this section.

**Recommendation:**

The applicant is requesting Final Approval for a proposed new sanctuary building. The applicant needs to update the plans and address the TRC comments concerning the 36" Live Oak on the edge of the parking. This tree will not be able to survive with the proposed paving. A tree removal permit will be required. The plans are showing parking on the adjacent lawn area next to the daycare, this had not been previously discussed or shown in previous plans. This area should remain grass and an area for preserved trees. It can be used informally as parking during services, but the plan should not show parking being designated for this area. If it is intended to be used for designated parking a tree removal permit would be required for the removal of the existing trees. The applicant has applied for a Variance for the proposed height of the building. The application is on the agenda for the March 31, 2020 BZA Meeting.

# CIVIL PERMIT SET FOR THE EMANUEL BAPTIST CHURCH

## OWNER:

EMANUEL BAPTIST CHURCH  
106 BOONE STREET,  
SUMMERVILLE, SC 29483  
(843) 875-6786

NESMITH CONSTRUCTION  
1229 AIMWELL ROAD  
ANDREW, SC 29510  
(843) 387-5700



**Robert Davis  
ENGINEERING, LLC**

181 E EVANS STREET SUITE 210  
FLORENCE, SC 29506  
(843) 536-0896



- G100 TITLE SHEET
- G101 ABBREVIATIONS
- C100 GENERAL NOTES
- C101 EXISTING CONDITIONS
- C102 DEMO PLAN
- C103 OVERALL SITE PLAN
- C104 SITE PLAN
- C105 GRADING AND UTILITY PLAN
- C106 SWPP PLAN
- C107 LANDSCAPE PLAN
- C201 UTILITY DETAILS
- C202 SITE DETAILS
- C203 SITE DETAILS
- C204 LANDSCAPE DETAILS
- C205 STORM DRAIN PROFILE



**Robert Davis  
ENGINEERING, LLC**

181 E. Evans Street, BTC 024  
Florence, SC 29506  
Phone (843) 536-0896  
Fax (843) 536-0901

### Seals:



EMANUEL BAPTIST CHURCH  
NEW SANCTUARY  
106 BOONE STREET  
SUMMERVILLE, SC 29483

| Mark | Date | Description | Revisions |
|------|------|-------------|-----------|
|      |      |             |           |
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### SHEET TITLE

**COVER**

|          |           |
|----------|-----------|
| Drawn    | AEB       |
| Designed | RD        |
| Checked  | RD        |
| Date     | 1/20/2019 |
| Job No.  | 19078     |

Sheet No.  
**G100**



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ABBREVIATIONS

|          |                                          |            |                                           |          |                                                     |         |                                                       |          |                             |       |                              |
|----------|------------------------------------------|------------|-------------------------------------------|----------|-----------------------------------------------------|---------|-------------------------------------------------------|----------|-----------------------------|-------|------------------------------|
| L        | ANGLE                                    | CS         | CAST STONE                                | FRT      | FIRE-RETARDANT                                      | LTVG    | LIGHTNING                                             | PSF      | POUNDS PER SQUARE FOOT      | THRES | THRESHOLD                    |
| A/C      | AIR CONDITIONING                         | CSK        | COUNTERSUNK                               | FS       | FULL SIZE                                           | LVR     | LOUVER                                                | PSI      | POUNDS PER SQUARE INCH      | TK BD | TACKBOARD                    |
| A/C UNIT | AIR CONDITIONING UNIT                    | CSMT       | CASEMENT                                  | FSNTR    | FASTENER                                            | LWC     | LIGHTWEIGHT CONCRETE                                  | PT       | PNEUMATIC TUBE              | TKS   | TACKSTRIP                    |
| AB       | ANCHOR BOLT                              | CT         | CERAMIC TILE                              | FT       | FEET                                                | LWT     | LEAVING WATER TEMPERATURE                             | PT CONC  | POINT                       | TO    | TOP OF                       |
| ABV      | ABOVE                                    | CTF        | CURRENT TRANSFORMER                       | FTG      | FOOTING                                             | M       | METER(S)                                              | PTD      | POST-TENSIONED CONCRETE     | TOL   | TOLERANCE                    |
| AC       | ALTERNATING CURRENT                      | C TO C     | CENTER TO CENTER                          | FURG     | FURRING                                             | M&B     | MATCHED AND BEADED                                    | PTD      | PAPER TOWEL DISPENSER       | TOPO  | TOPOGRAPHY                   |
| ACC      | ACCESSIBLE                               | CTR        | CENTER                                    | FUT      | FUTURE                                              | MACH    | MACHINE                                               | PTN      | PARTITION                   | TOS   | TOP OF SLAB                  |
| ACI      | AMERICAN CONCRETE INSTITUTE              | CU         | CONDENSING UNIT                           | FW       | FIRE WATER                                          | MAS     | MASONRY                                               | PTR      | PAPER TOWEL RECEPTACLE      | TOS   | TOP OF STEEL                 |
| ACR      | ACRYLIC PLASTIC                          | CU FT      | CUBIC FEET                                | FWC      | FABRIC WALL COVERING                                | MAT     | MATERIAL(S)                                           | PV       | PAVING                      | TOW   | TOP OF WALL                  |
| ACS DR   | ACCESS DOOR                              | CUH        | CUBIC FEET                                | G        | NATURAL GAS                                         | MAX     | MAXIMUM                                               | PVC      | POLYVINYL CHLORIDE          | TPD   | TOILET PAPER DISPENSER       |
| ACS PNL  | ACCESS PANEL                             | CUH        | CUBIC FEET                                | GA       | GAGE                                                | MB      | MACHINE BOLTS                                         | PVG      | PAVING                      | TPTN  | TOILET PARTITION             |
| ACSR     | ALUMINUM CABLE STEEL REINFORCED          | CU YD      | CUBIC YARDS                               | GAL      | GALLON(S)                                           | MBR     | MEMBER                                                | PW       | PASS WINDOW                 | TRANS | TRANSOM                      |
| ACT      | ACoustical                               | CVH        | CONDUCTIVE VINYL HOMOGENEOUS (SHEET TYPE) | GL       | GALVANIZED                                          | MC      | MEDICINE CABINET                                      | QT       | QUART                       | TRANS | TRANSVERSE                   |
| ADD      | ADDENDUM                                 | CW         | COLD WATER                                | GB       | GRAB BAR                                            | MCO     | METAL-CASED OPENING                                   | QTR      | QUARTER                     | TSTAT | THERMOSTAT                   |
| ADH      | ADHESIVE                                 | CYL        | CYLINDER                                  | GC       | GENERAL CONTRACTOR                                  | MCS     | METAL DIVIDER STRIP                                   | 1/4 RND  | QUARTER ROUND               | TV    | TELEVISION                   |
| ADJ      | ADJACENT, ADJOINING, ADJUSTABLE          | GEN        | GENERAL                                   | MECH     | MECHANICAL                                          | MECH    | MECHANICAL ROOM                                       | QTY      | QUANTITY                    | TY    | TYPICAL                      |
| ADO      | AUTOMATIC DOOR OPERATOR                  | DAT        | DATUM                                     | GF       | GROUND FACE                                         | MECH RM | MECHANICAL ROOM                                       | R        | RADIUS                      | UGND  | UNDERGROUND                  |
| AFF      | ABOVE FINISHED FLOOR                     | DB         | DRY BULB                                  | ME       | MECHANICAL                                          | ME      | MEDIUM                                                | RANGE    | RANGE                       | UH    | UNIT HEATER                  |
| AGGR     | AGGREGATE                                | DBL        | DOUBLE                                    | GFE      | GROUND FAULT CIRCUIT INTERRUPTER                    | MEMB    | MEMBRANE                                              | R        | RISER                       | UL    | UNDERWRITERS LABORATORIES    |
| AHU      | AIR HANDLING UNIT                        | DBL ACT DR | DOUBLE ACTING DOOR                        | GFE/CI   | GOVERNMENT-FURNISHED EQUIPMENT CONTRACTOR INSTALLED | MES     | METAL EDGE STRIP                                      | RA       | RETURN AIR                  | UNEX  | UNEXCAVATED                  |
| AI       | AREA INLET                               | DCJ        | DOWELED CONTROL JOINT                     | MF       | METAL FLOOR DECKING                                 | MFG     | MANUFACTURING                                         | RAB      | RABBETED                    | UNFIN | UNFINISHED                   |
| AIC      | AMPERE INTERRUPTING CAPACITY             | DCJT       | DUMMY CONTROL JOINT                       | GIP      | GALVANIZED IRON PIPE                                | MFR     | MANUFACTURER                                          | RA GR    | RETURN AIR GRILLE           | UPS   | UNINTERRUPTIBLE POWER SUPPLY |
| AISC     | AMERICAN INSTITUTE OF STEEL CONSTRUCTION | DEG        | DEGREE                                    | GKT      | GASKET(ED)                                          | MFR     | MANUFACTURER                                          | RAR      | RETURN AIR REGISTER         | UR    | URNAL                        |
| AL       | ACTIVE LEAF                              | DEMO       | DEMOLITION                                | GL       | GLASS                                               | MIR     | MIRROR                                                | RECF     | RECEPTACLE                  | UTL   | UTILITY                      |
| ALT      | ALTERNATE                                | DEPR       | DEPRESSION                                | GL BLK   | GLASS BLOCK                                         | MGT     | MANHOLE                                               | RBL      | RUBBLE STONE                | UV    | UNIT VENTILATOR              |
| ALUM     | ALUMINUM                                 | DEPT       | DEPARTMENT                                | GLF      | GLASS FIBER                                         | MH      | MANHOLE                                               | RBR      | RUBBER                      | V     | VOLT                         |
| AMB      | AMBIENT                                  | DET        | DETAIL                                    | GLZ      | GLAZING                                             | MI      | MALLEABLE IRON                                        | RC       | REMOTE CONTROL              | VAR   | VARNISH                      |
| AMP      | AMPERE                                   | DF         | DRINKING FOUNTAIN                         | GLZ CMU  | GLAZED CONCRETE MASONRY UNITS                       | MIR     | MIRROR                                                | RCP      | REINFORCED CONCRETE PIPE    | VBS   | VINYL BASE                   |
| ANOD     | ANODIZE                                  | DH         | DUCT HEATER                               | G        | GROUND                                              | MIRR    | MIRROR                                                | RCVR     | RECEIVER                    | VCT   | VINYL COMPOSITION TILE       |
| ANSI     | AMERICAN NATIONAL STANDARDS INSTITUTE    | DI         | DIAMETER                                  | G        | GROUND                                              | MISC    | MISCELLANEOUS                                         | RDG INS  | RIGID INSULATION            | VCT   | VITRIFIED CLAY TILE          |
| APPD     | APPROVED                                 | DIA        | DIAMETER                                  | GPM      | GALLONS PER MINUTE                                  | ML      | MILL LATH                                             | RDG INS  | RIGID INSULATION            | VD    | VAULT DOOR                   |
| APPROX   | APPROXIMATE                              | DIA        | DIAMETER                                  | GRAN     | GRANITE                                             | MNL     | MONOLITHIC                                            | RENF     | REINFORCED                  | VENT  | VENT (AIR/STATION)           |
| ARCH     | ARCHITECT                                | DIM        | DIMENSION                                 | GR LN    | GRADE LINE                                          | MOLDG   | MOLDING                                               | REC ROOM | RECREATION ROOM             | VERT  | VERTICAL                     |
| ARI      | AMERICAN REFRIGERATION INSTITUTE         | DISC       | DISCONNECT                                | GR LN    | GRADE LINE                                          | MLWK    | MILLWORK                                              | RECT     | RECTIFIER                   | VEST  | VESTIBULE                    |
| ASC      | ABOVE SUSPENDED CEILING                  | DISP       | DISPENSER                                 | GR T     | GRATING                                             | MTR     | MATERIAL NOT IN CONTRACT (INSTALLATION BY CONTRACTOR) | REF      | REFERENCE                   | VF    | VINYL FABRIC                 |
| ASPH     | ASPHALT                                  | DISTR PNL  | DISTRIBUTION PANEL                        | GSU      | GLAZED STRUCTURAL UNITS                             | NIC     | NICKEL                                                | REFR     | REFRIGERATION               | VH    | VINYL HOMOGENEOUS            |
| ATC      | ACOUSTICAL TILE CEILING                  | DL         | DEAD LOAD                                 | GT       | GROUT                                               | MOD     | MODULAR                                               | REG      | REGISTER                    | VJ    | V-JOINT(ED)                  |
| AUTO     | AUTOMATIC                                | DMPP       | DAMP PROOFING                             | GWT      | GLAZED WALL TILE                                    | MOD     | MODIFIED                                              | REG      | REGLET                      | VNR   | VENEER                       |
| AVG      | AVERAGE                                  | DNPR       | DOWN PULL                                 | GYP      | GYP(SUM) BOARD                                      | MOT     | MOTOR                                                 | REFR     | REFLECTOR                   | VOL   | VOLUME                       |
| AWG      | AMERICAN WIRE GAUGE                      | DMT        | DEMOUNTABLE                               | GYP BD   | GYP(SUM) BOARD                                      | MP      | MOVABLE PARTITION                                     | REM      | REMOVE(ABLE)                | VR    | VAPOR RETARDER               |
| AWT      | ACOUSTICAL WALL TREATMENT                | DN         | DOWN                                      | GYP PLAS | GYP(SUM) PLASTER                                    | MR      | MOP RECEPTOR                                          | REOD     | REQUIRED                    | VRM   | VERMICULITE                  |
| BC       | BOOKCASE                                 | DR         | DOOR                                      | HB       | HOSE BIBB                                           | MRB     | MARBLE BASE                                           | RESIL    | RESILIENT                   | VS    | VENT STACK                   |
| BD       | BOARD                                    | DRB        | DRAINBOARD                                | HC       | HOLLOW CORE                                         | MS      | MACHINE SCREWS                                        | REV      | REVISION                    | V.T.  | VOLTA GE TRANSFORMER         |
| BDRY     | BOUNDARY                                 | DR CL      | DOOR CLOSER                               | HCP      | HANDICAPPED                                         | MT      | MOUNT                                                 | RFG      | ROOFING                     | VTR   | VINYL WALL COVERING          |
| BEJ      | BRICK EXPANSION JOINT                    | DS         | DOUBLE STRENGTH (GLASS)                   | HD       | HEAD                                                | MT      | MOUNT                                                 | RH       | RELATIVE HUMIDITY           | W     | WEST                         |
| BEV      | BEVEL                                    | DS         | DOUBLE STRENGTH (GLASS)                   | HD       | HEAD                                                | MTD     | MOUNT                                                 | RH       | RELATIVE HUMIDITY           | W     | WEST                         |
| BITUM    | BITUMINOUS                               | DT         | DRAIN TILE                                | HDBD     | HARDBOARD                                           | MTFR    | METAL FURRING                                         | RK       | RACK                        | WB    | WET BULB                     |
| BUT      | BED JOINT                                | DVTL       | DOVETAIL                                  | HD JT    | HEAD JOINT                                          | MTL     | METAL                                                 | RLG      | RAILING                     | WC    | WATER CLOSET                 |
| BLDG     | BUILDING                                 | DWG        | DRAWING                                   | HDR      | HEADER                                              | MVBL    | MOVABLE                                               | RM       | ROOM                        | WC    | WATER CLOSET                 |
| BLW      | BELOW                                    | DWLS       | DRAWINGS                                  | HDWR     | HARDWARE                                            | N       | NORTH                                                 | RND      | ROUND                       | WCO   | WOOD-CASED OPENING           |
| BM       | BENCHMARK                                | DWTR       | DUMBWATER                                 | HES      | HIGH EARLY-STRENGTH CEMENT                          | NAT     | NATURAL                                               | RO       | ROUGH OPENING               | WD    | WOOD                         |
| BO       | BOTTOM OF                                | DX         | DIRECT EXPANSION                          | HEX      | HEXAGON                                             | NC      | NORMALLY CLOSED                                       | ROW      | RIGHT OF WAY                | WD    | WOOD DOOR                    |
| BOT      | BOTTOM                                   | EA         | EACH                                      | HND      | HANDHOLE                                            | NE      | NATIONAL ELECTRICAL CODE                              | RP       | RAISED ELECTRICAL PARTITION | WDSP  | WASTE DISPOSER               |
| BP       | BACK PLASTER(ED)                         | EAT        | ENTERING AIR TEMPERATURE                  | HK       | HOOK(S)                                             | NEMA    | NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION         | RPM      | REVOLUTIONS PER MINUTE      | WDW   | WINDOW                       |
| BRCC     | BRACING                                  | EF         | EACH FACE                                 | HM       | HOLLOW METAL                                        | NFPA    | NATIONAL FIRE PROTECTION ASSOCIATION                  | RPT      | RAISED PATTERN RUBBER TILE  | WF    | WIDE FLANGE                  |
| BRDG     | BRIDGING                                 | EL         | ELEVATION JOINT                           | HNDRL    | HANDRAIL                                            | Ni      | NICKEL                                                | RTF      | RUBBER TILE FLOOR           | WGL   | WIRED GLASS                  |
| BRG      | BEARING                                  | EL         | ELEVATION - GRADE OR BUILDING             | HR       | HORIZONTAL                                          | NR      | NOT IN CONTRACT                                       | RVS      | REVERSE                     | WH    | WATER HEATER                 |
| BRG PL   | BEARING PLATE                            | ELEC       | ELECTRIC                                  | HP       | HORSEPOWER                                          | NL      | NAILABLE                                              | RVT      | RIVET                       | WHB   | WHEEL BUMPER                 |
| BRK      | BRICK                                    | EM         | EXPANDED METAL                            | HPT      | HIGH POINT                                          | N.L.    | NEOPRENE LATEX                                        | RWC      | RAINWATER CONDUCTOR         | WHM   | WATT-HOUR METER              |
| BRKT     | BRACKET                                  | END        | ESTIMATED MAXIMUM DEMAND                  | HJR      | HOUR                                                | NM      | NONMETALLIC                                           | S        | SOUTH                       | WI    | WARDROBE                     |
| BRZ      | BRONZE                                   | EMER       | EMERGENCY                                 | HS       | HIGH STRENGTH                                       | NO      | NORMALLY OPEN                                         | SB       | SPLASH BLOCK                | WKSH  | WORK SHOP                    |
| BS       | BOTH SIDES                               | ENCL       | ENCLOSURE                                 | HSGYP    | HIGH-STRENGTH GYPSUM PLASTER                        | NOM     | NOMINAL                                               | S.B.     | SECURITY BARS               | WM    | WIRE MESH                    |
| BSMT     | BASEMENT                                 | ENTR       | ENTRANCE, ENTERING                        | HSPKG    | HOUSEKEEPING                                        | NR      | NOISE REDUCTION                                       | SC       | SOLID CORE                  | W/O   | WITHOUT                      |
| BTU      | BRITISH THERMAL UNIT                     | ENT        | ENTERING PANELBOARD                       | HTR      | HEATING                                             | NRG     | NOISE REDUCTION COEFFICIENT                           | SCHED    | SCHEDULE                    | WP    | WEATHERPROOF(ING)            |
| BTU/H    | BTU PER HOUR                             | EPRF       | EXPLOSION PROOF                           | HTR      | HEATER                                              | N'REOD  | NOT REQUIRED                                          | SCRN     | SCREEN                      | WP    | WEATHERPROOF                 |
| BTWN     | BETWEEN                                  | EPY        | EPOXY COATING                             | HVAC     | HEATING, VENTILATING AND AIR CONDITIONING           | NTS     | NOT TO SCALE                                          | SCT      | STRUCTURAL CLAY TILE        | WP    | WORKING POINT                |
| BUR      | BUILT-UP ROOFING                         | EQU        | EQUAL                                     | HYDR     | HYDRAULIC                                           | OA      | OUTSIDE AIR                                           | SD       | STORM DRAIN                 | WR    | WASTE RECEPTACLE             |
| CB       | CABINET                                  | ESCAL      | ESCALATOR                                 | HYDR     | HYDRAULIC                                           | OBW     | OBSERVATION WINDOW                                    | SDI      | STEEL DOOR INSTITUTE        | WRB   | WARDROBE                     |
| CAP      | CAPACITY                                 | EST        | ESTIMATE(D)                               | HZ       | HERTZ                                               | OC      | ON CENTER                                             | SECT     | SECTION                     | WS    | WATERSTOP                    |
| CB       | CATCH BASIN                              | EWC        | ELECTRIC WATER COOLER                     | IC       | INTERCOM                                            | OCEW    | ON CENTER EACH WAY                                    | SEQ      | SEQUENCE                    | W.S.  | WASTE STACK                  |
| CCT      | CUBICLE CURTAIN TRACK                    | ENT        | ENTERING WATER TEMPERATURE                | IESNA    | ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA   | OD      | OUTSIDE DIAMETER                                      | SFGL     | SAFETY GLASS                | WSCOT | WAINSCOT                     |
| CCTV     | CLOSED CIRCUIT TELEVISION                | EXC        | EXCAVATE                                  | ILK      | INTERLOCK                                           | OF      | OFF                                                   | SFGL     | STRUCTURAL FACING TILE UNIT | WT    | WEIGHT                       |
| CE       | COVER ELEVATION                          | EXH        | EXHAUST                                   | IN       | INCH                                                | OGL     | OBSCURE GLASS                                         | SG       | SHEET GLASS                 | WTH   | WALL TO WALL                 |
| CEM      | CEMENT                                   | EXH A      | EXHAUST AIR                               | INCH     | INCORPORATOR                                        | OH      | OVERHEAD                                              | SHDR     | SHOULDER                    | WWF   | WELDED WIRE FABRIC           |
| CEM PLAS | CEMENT PLASTER                           | EXST       | EXHAUST                                   | INCLD    | INCLUDED                                            | OHMS    | OVALHEAD MACHINE SCREW                                | SHTG     | SHEATHING                   | WWM   | WELDED WIRE MESH             |
| CER      | CERAMIC                                  | EXP        | EXPANSION                                 | INSF     | INSULATING FILL                                     | OHWS    | OVALHEAD WOOD SCREW                                   | SHV      | SHELVING                    | WWR   | WELDED WIRE REINFORCEMENT    |
| CFI      | CONDUCTIVE FLOORING                      | EXP        | EXPOSED                                   | INSUL    | INSULATION                                          | OPH     | OPPOSITE HAND                                         | SIM      | SIMILAR                     | XFMR  | TRANSFORMER                  |
| CFLG     | COUNTERFLASHING                          | EXP BT     | EXPANSION BOLT                            | INT      | INTERIOR                                            | OPNG    | OPENING                                               | SIM      | SIMILAR                     | YD    | YARD                         |
| CFM      | CUBIC FEET PER MINUTE                    | EXT        | EXTENDING                                 | INTM     | INTERMEDIATE                                        | OPQ     | OPAQUE                                                | SJ       | STEEL JOIST INSTITUTE       | YD    | YARD                         |
| CG       | CORNER GUARD                             | FA         | FIRE ALARM                                | INVT     | INVERT                                              | OPS     | OPERATIONS                                            | SKLT     | SKYLIGHT                    |       |                              |
| CH BD    | CHALKBOARD                               | FA         | FRESH AIR                                 | IP       | IRON PIPE                                           | OS & Y  | OUTSIDE SCREW AND YOKE                                | SLNT     | SLANT                       |       |                              |
| CHFR     | CHAMFER                                  | FAC        | FRESH AIR CLOSET                          | IPS      | INSIDE PIPE SIZE                                    | OSWGL   | OUTSIDE WIRE GLASS                                    | SLV      | SLEEVE                      |       |                              |
| CHIM     | CHIMNEY                                  | FAI        | FRESH AIR INTAKE                          | I.P.S.   | INSIDE PIPE SIZE                                    | PA      | PUBLIC ADDRESS                                        | SM       | SHEET METAL                 |       |                              |
| CHK      | CHECK                                    | FBRK       | FIRE BRICK                                | JAN CLO  | JANITOR'S CLOSET                                    | P       | P                                                     | SMS      | SHEET METAL SCREWS          |       |                              |
| CHR PL   | CHROME PLATED                            | FC         | FOOT CANDLE                               | J-BOX    | JUNCTION BOX                                        | PAR     | PARALLEL                                              | SOV      | SHUT OFF VALVE              |       |                              |
| CI       | CAST IRON                                | FC BRK     | FACE BRICK                                | JCT      | JUNCTION                                            | PAN     | PANIC BAR                                             | SPC      | SPACER                      |       |                              |
| CIP      | CAST-IN-PLACE                            | FCJ        | FLOOR CONSTRUCTION JOINT                  | JST      | JOIST                                               | PBD     | PARTICLE BOARD                                        | SPD      | SOUNDPROOF DOOR             |       |                              |
| CIRC     | CIRCULAR                                 | FCJ        | FLOOR CONSTRUCTION JOINT                  | JT       | JOINT                                               | PBS     | PUSH BUTTON STATION                                   | SPC      | SPECIFICATION               |       |                              |
| CJ       | CONTROL JOINT                            | FCO        | FLOOR CLEANOUT                            | KIP      | KILOPOUND (1000 POUNDS)                             | PC      | PIECE                                                 | SPF      | SOUNDPROOF                  |       |                              |
| CJ       | CONSTRUCTION JOINT                       | FCU        | FAN COIL UNIT                             | KOP      | KNOCKOUT PANEL                                      | PCC     | PRECAST CONCRETE                                      | SP FIN   | SPECIAL FINISH              |       |                              |
| CKT      | CIRCUIT                                  | FD         | FLOOR DRAIN                               | KPL      | KICKPLATE                                           | PCF     | POUNDS PER CUBIC FOOT                                 | SPH      | SPACE HEATER                |       |                              |
| CKT BRKR | CIRCUIT BREAKER                          | FDMPR      | FIRE DAMPER                               | KV       | KILOVOLTS                                           | PCP     | CEMENT PLASTER (PORTLAND)                             | SPKR     | SPEAKER                     |       |                              |
| CL       | CENTER LINE                              | FDTN       | FOUNDATION                                | KVA      | KILOVOLT AMPERES                                    | PD      | PAVEMENT DRAIN                                        | SO       | SQUARE                      |       |                              |
| CLG      | CEILING                                  | FE         | FIRE EXTINGUISHER                         | KVAR     | KILOVOLT AMPERES REACTIVE                           | PED     | PEDESTAL                                              | SOHD     | SQUARE HEAD                 |       |                              |
| CLG HT   | CEILING HEIGHT                           | FEB        | FIRE EXTINGUISHER BRACKET                 | KW       | KILOWATT                                            | PERF    | PERFORATE(D)                                          | S&R      | SHELF AND ROD               |       |                              |
| CLGL     | CLEAR GLASS                              | FEC        | FIRE EXTINGUISHER CABINET                 | KWY      | KEYWAY                                              | PERIM   | PERIMETER                                             | SS       | SERVICE SINK                |       |                              |
| CLL      | CONTRACT LIMIT LINE                      | LAB        | LABORATORY                                | LAD      | LADDER                                              | PH      | PHASE                                                 | SS       | STANDING SEAM (ROOF)        |       |                              |
| CLOS     | CLOSURE                                  | LAM        | LAMINATE                                  | LAM      | LAMINATE                                            | PHR     | PHARMACY                                              | SST      | STAINLESS STEEL             |       |                              |
| CLR      | CLEAR(ANCE)                              | LAT        | LEAVING AIR TEMPERATURE                   | LAV      | LAVATORY                                            | PIPU    | POINT OF INTERSECTION                                 | STA      | STATION                     |       |                              |
| CLWG     | CLEAR WIRE GLASS                         | LAV        | LAVATORY                                  | LAV      | LAVATORY                                            | PIV     | POST INDICATING VALVE                                 | STD      | STANDARD                    |       |                              |
| CM       | CENTIMETER(S)                            | LAV        | LAVATORY                                  | LAG      | LAG BOLT                                            | PL      | PROPERTY LINE                                         | STG      | SEATING                     |       |                              |
| CMP      | CORRUGATED METAL PIPE                    | LB         | POUND                                     | LAG      | LAG BOLT                                            | PL      | PROPERTY LINE                                         | STOR     | STORAGE                     |       |                              |
| CMPT     | COMPOSITE                                | LBL        | LABEL                                     | LB       | POUND                                               | PLAM    | PLASTIC LAMINATE                                      | ST PR    | STATIC PRESSURE             |       |                              |
| CMU      | CONCRETE MASONRY UNIT                    | LBR        | LUMBER                                    | LB       | POUND                                               | PLAS    | PLASTER                                               | STR      | STRINGER                    |       |                              |
| CND      | CONDUIT                                  | LCR        | LIGHT CONTROL                             | LB       | POUND                                               | PLAT    | PLATFORM                                              | STRUC    | STRUCTURAL                  |       |                              |
| CNL      | CONDUCTIVE NEOPRENE LATEX                | LD         | LOAD                                      | LB       | POUND                                               | PLBG    | PLUMBING                                              | STWY     | STAIRWAY                    |       |                              |
| CNR      | CORNER                                   | LDG        | LOADING                                   | LB       | POUND                                               | PLF     | POUNDS PER LINEAR FOOT                                | SUB FL   | SUBFLOOR                    |       |                              |
| CNTR     | COUNTER                                  | LH         | LENGTH                                    | LB       | POUND                                               | PLG     | PLING                                                 | SUSP     | SUSPENDED                   |       |                              |
| CO       | CLEANOUT                                 | LH         | LENGTH                                    | LDG      | LOADING                                             | PL GL   | PLATE GLASS                                           | SV       | SHEET VINYL                 |       |                              |
| CO2      | CARBON DIOXIDE                           | LH         | LENGTH                                    | LH       | LEFT HAND(ED)                                       | PLYWD   | PLYWOOD                                               | SW       | SWITCH                      |       |                              |
| COL      | COLUMN                                   | LN         | LINEAR                                    | FLSH     | FLASHING                                            | PNL     | PANEL                                                 | SWBD     | SWITCHBOARD                 |       |                              |
| COM      | COMMON                                   | LKR        | LOCKER                                    | FLR      | FLOOR                                               | PT      | PAINT(ED)                                             | SYMM     | SYMMETRICAL                 |       |                              |
| COMB     | COMBUSTION                               | LLD        | LEAD-LINED DOOR                           | FLG      | FLEXIBLE                                            | PT      | PAINT(ED)                                             | SYNTH    | SYNTHETIC                   |       |                              |
| COMP     | COMPARTMENT                              | LLD        | LEAD-LINED DOOR                           | FLR PL   | FLOOR PLATE                                         | PORC    | PORCELAIN                                             | SYS      | SYSTEM                      |       |                              |
| CONC     | CONCRETE                                 | LM         | LUMEN                                     | FLUOR    | FLUORESCENT                                         | PORT    | PORTABLE                                              | T        | TREAD                       |       |                              |
| CONN     | CONNECT                                  | LMST       | LIMESTONE                                 | FN       | FENCE                                               | PPGL    | POLISHED PLATE GLASS                                  | TAN      | TANGENT                     |       |                              |
| CONSTR   | CONSTRUCTION                             | LNTEL      | LONGITUDINAL                              | FOC      | FACE OF CONCRETE                                    | PM      | PARTS PER MILLION                                     | TC       | TERRA COTTA                 |       |                              |
| CONT     | CONTINUE                                 | LP         | LIGHTPROOF                                | FOM      | FACE OF MASONRY                                     | PR      | PREFABRICATED                                         | TEL      | TELEPHONE                   |       |                              |
| CONTR    | CONTRACTOR                               | LPD        | LIGHTPROOF DOOR                           | FOS      | FACE OF STUD                                        | PREFAB  | PREFABRICATED(D)                                      | TEMP     | TEMPERATURE                 |       |                              |
| CORR     | CORRIDOR                                 | LPD        | LIGHTPROOF DOOR                           | FP       | FIREPROOF                                           | PREFABD | PREFABRICATED(D)                                      | TER      | TERRAZZO                    |       |                              |
| COV      | COVER                                    | LPT        | LOW POINT                                 | FR       | FIRE RESISTANT                                      | PRJ     | PROJECT                                               | TERM     | TERMINAL                    |       |                              |
| CPRS     | COMPRESSIBLE                             | LR         | LIVING ROOM                               | FR       | FIRE RESISTANT                                      | PRV     | PRESSURE-REGULATING VALVE                             | T&G      | TONGUE AND GROOVE           |       |                              |
| CPT      | CARPET                                   | LS         | LAWN SPRINKLER                            | FRG      | FRAMING                                             | PS      | PRESSED STEEL                                         | TH       | TRUSS HEAD                  |       |                              |
| CR       | CROSS                                    | LT         | LEFT                                      | FRG      | FRAMING                                             | P.S.    | PRESSED STEEL                                         | THK      | THICKNESS                   |       |                              |
| CRCS     | CIRCUMFERENCE                            | LT         | LEFT                                      | FRMG     | FRAMING                                             | PS CONC | PRESTRESSED CONCRETE                                  |          |                             |       |                              |
| CRS      | CROSS GRAIN                              | LT         | LEFT                                      |          |                                                     |         |                                                       |          |                             |       |                              |
| CRS      | COURSE(S)                                | LT         | LEFT                                      |          |                                                     |         |                                                       |          |                             |       |                              |

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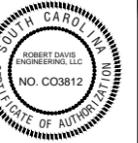
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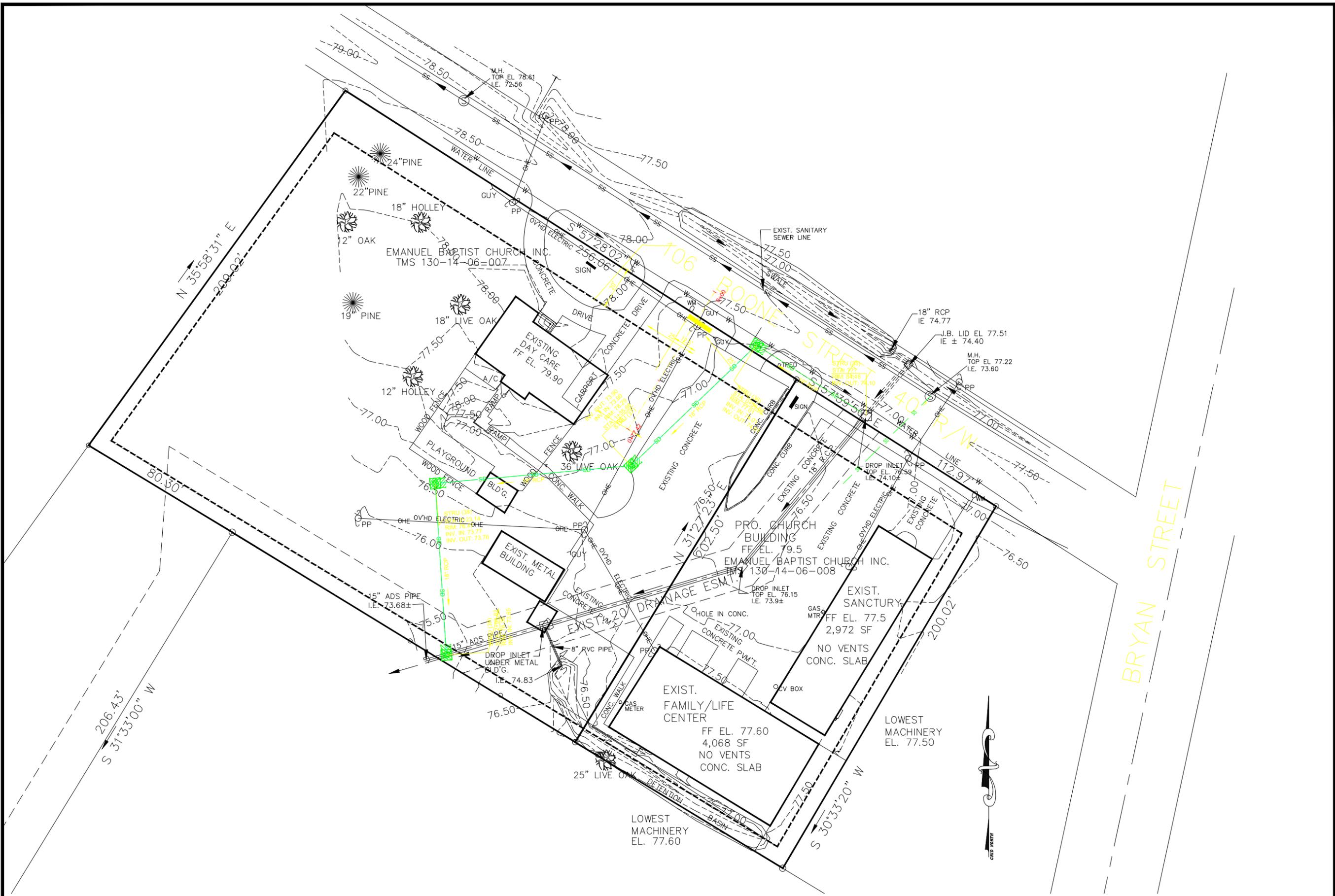
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SHEET TITLE

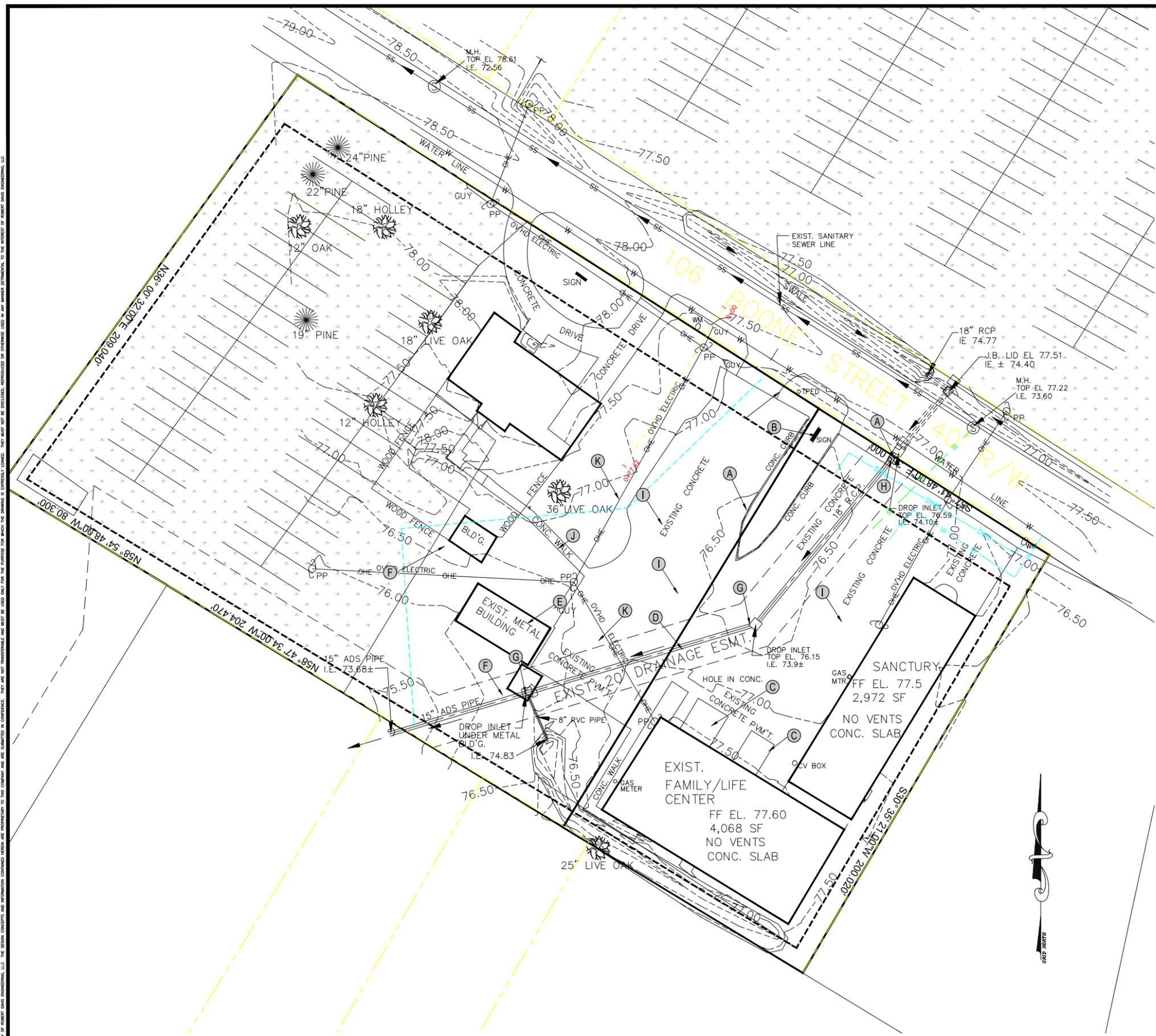
**EXISTING  
CONDITIONS**

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| Date      | 1/20/2019 |
| Job No.   | 19078     |
| Sheet No. | C101      |

**C101**



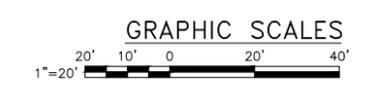
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**DEMO LEGEND**

- (A) REMOVE CURB & GUTTER
  - (B) REMOVE SIGN
  - (C) REMOVE LANDSCAPING
  - (D) FILL EXISTING STORM DRAIN WITH FLOWABLE FILL. ONCE NEW STORM DRAIN IS INSTALLED.
  - (E) RELOCATE EXISTING BUILDING
  - (F) DEMO EXISTING BUILDING
  - (G) FILL EXISTING DROP INLET WITH FLOWABLE FILL
  - (H) CAP EXISTING PIPE.
  - (I) EXISTING CONCRETE TO BE REMOVED
  - (J) EXISTING CONCRETE WALK TO REMAIN
  - (K) RELOCATE EXISTING POWER LINES
- (ALL LABELS ARE TYPICAL UNLESS OTHERWISE NOTED)

**DEMO PLAN**  
SCALE: 1" = 20'



**Robert Davis  
ENGINEERING, LLC**

181 E. Evans Street, BTC 024  
Suite C1  
Florence, SC 29506  
Phone (843) 536-0896  
Fax (843) 536-0901

**Seals:**

**EMANUEL BAPTIST CHURCH  
NEW SANCTUARY  
106 BOONE STREET  
SUMMERVILLE, SC 29483**

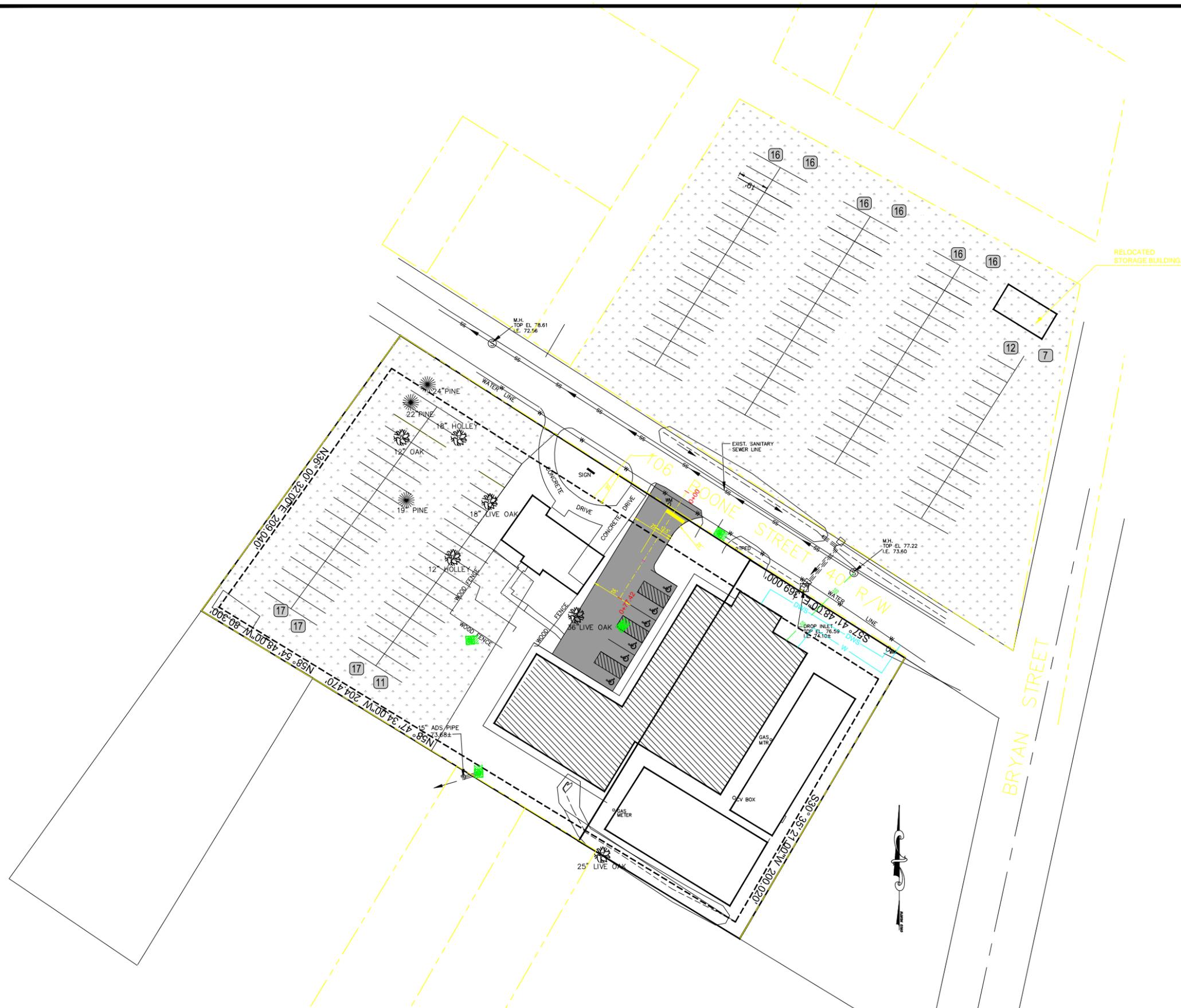
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**SHEET TITLE**

**DEMO PLAN**

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| Date      | 1/20/2019   |
| Job No.   | 19078       |
| Sheet No. | <b>C102</b> |

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**SITE LEGEND**

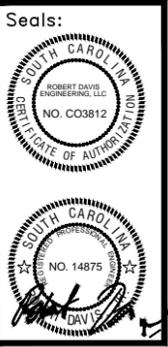
-  DENOTES GRASSED/LANDSCAPED AREAS  
REFER TO C201
-  DENOTES ASPHALT PAVEMENT  
REFER TO C201
-  DENOTES EXISTING PAVING
-  DENOTES PROPOSED 4' WIDE x 4' THICK  
SIDEWALK
-  DENOTES NUMBER OF PARKING  
STALLS IN A ROW

**SITE PLAN**  
SCALE: 1" = 30'



**PUPS**  
PALMETTO UTILITY PROTECTION SERVICES INC  
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**Robert Davis ENGINEERING, LLC**  
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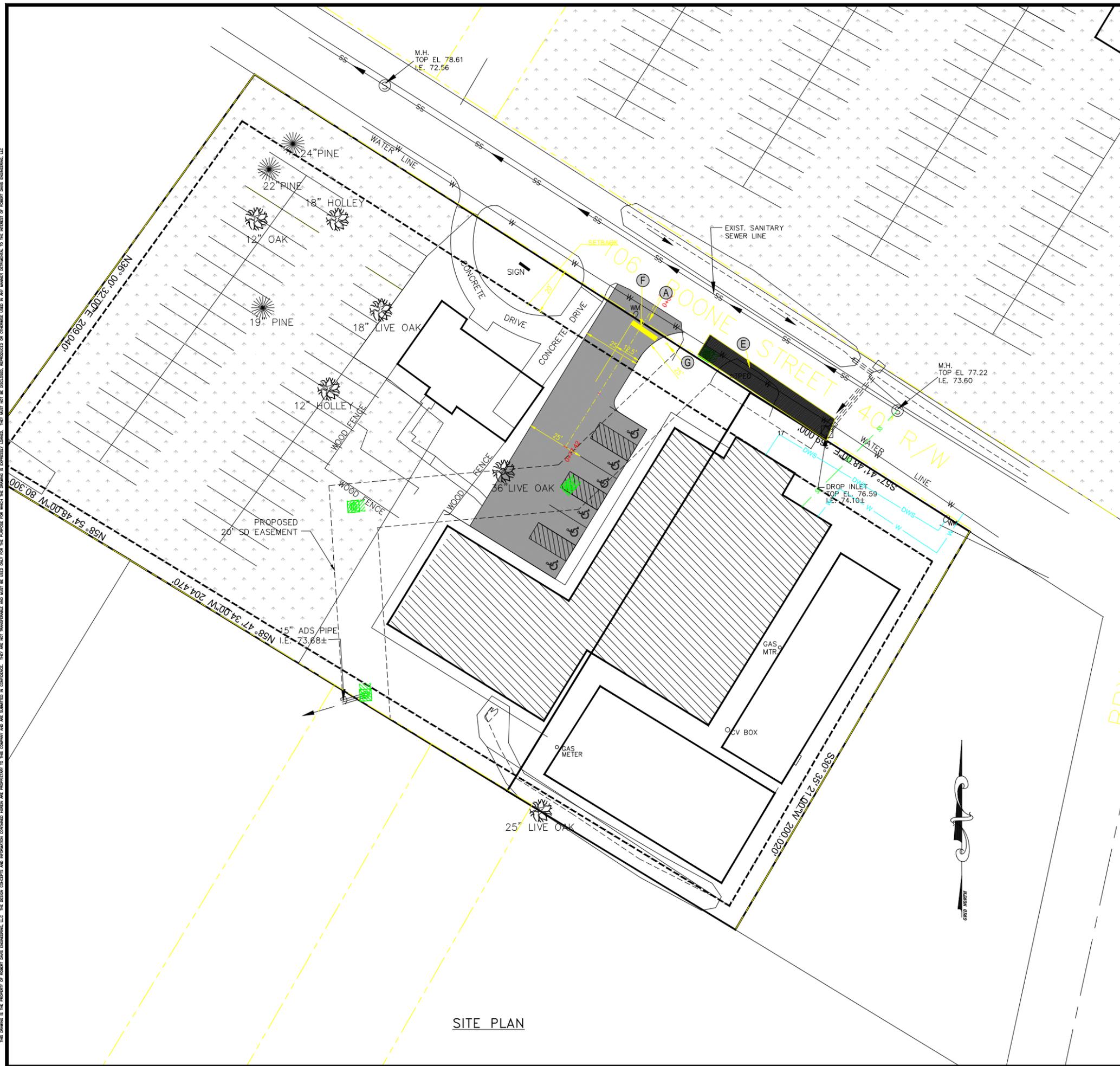
**EMANUEL BAPTIST CHURCH  
NEW SANCTUARY  
106 BOONE STREET  
SUMMERVILLE, SC 29483**

| Mark | Date | Description | Revisions |
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**SHEET TITLE**

**PARKING PLAN**

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| Drawn     | AEB         |
| Designed  | RD          |
| Checked   | RD          |
| Date      | 1/20/2019   |
| Job No.   | 19078       |
| Sheet No. | <b>C103</b> |



SITE PLAN

**SITE NOTES**

- EXISTING SITE CONDITIONS SHALL BE VERIFIED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPORT ANY DIFFERENCES FROM THE PLAN THAT WILL AFFECT CONSTRUCTION, IN WRITING, TO THE ENGINEER AND AWAIT FURTHER INSTRUCTIONS.
- DIMENSIONS ARE TO THE EDGE OF PAVEMENT, FACE OF BUILDING OR PROPERTY LINE.
- R DENOTES EDGE OF PAVEMENT RADIUS. ALL RADII ARE 5' UNLESS NOTED OTHERWISE.
- ALL WORK IN THE R/W SHALL BE VERIFIED WITH THE APPROVED ENCROACHMENT PERMIT PRIOR TO COMMENCING WORK.
- TOTAL AREA OF SITE = 15.46 ACRES  
TOTAL AREA DISTURBED = 2.46 ACRES
- AN ELECTRONIC FILE OF THE SITE PLAN SHALL BE MADE AVAILABLE FOR STAKING PURPOSES.
- CONTACT THE UTILITY COMPANY TO RELOCATE ANY EXISTING UTILITY POLES. ALL EXISTING FACILITIES WHICH CONFLICT WITH THE IMPROVEMENTS UNDER THE SCOPE OF THIS PROJECT MUST BE RELOCATED AT THE EXPENSE OF THE CONTRACTOR.

**ZONING CODE SUMMARY**

PROJECT NAME: EMANUEL BAPTIST CHURCH NEW SANCTUARY  
 PLANS PREPARED BY: ROBERT DAVIS ENGINEERING LLC PHONE# (843)536-0896  
 TAX PARCEL ID: 130-14-06-008, 130-24-15-001  
 STREET ADDRESS: 106 BOONE ST, SUMMERVILLE, SC  
 ZONING: R-5 MIXED RELIGIOUS  
 PROPOSED USE: RELIGIOUS  
 BUILDING HEIGHT: 18'  
 BUILDING COVERAGE: 12099 SF±  
 LOT SIZE: 1.25 ACRES  
 JURISDICTION: DORCHESTER COUNTY, SC  
 YARD REQUIREMENTS:  
 FRONT YARD (EAST): 20'  
 REAR YARD (WEST): 7.5'  
 SIDE YARD (SOUTH): 7.5'

**REQUIRED BUFFERS:**  
 BUFFER YARD "B" PER BERKELEY COUNTY ZONING ORDINANCE

REQUIRED SCREENING:  
 SETBACK (FRONT): N/A SIDE YARD (EAST): N/A  
 REAR YARD: N/A SIDE YARD (WEST): N/A  
 PARKING AND SERVICE ONLY: N/A

**OPEN SPACE SUMMARY**

PARCEL AREA: 1.25 ACRES  
 TOTAL IMPERVIOUS AREA (PAVEMENT, WALKS, AND BUILDING): 1.96 ACRES  
 IMPERVIOUS RATIO: 12.6%

OPEN SPACE:  
 REQUIRED: NONE  
 PROVIDED: NONE

**PARKING SUMMARY**

CURRENT BUILDING: RELIGIOUS  
 NEW BUILDING: RELIGIOUS  
 1 PER 4 SEATS RELIGIOUS  
 1 PER 4 SEATS RELIGIOUS

PARKING REQUIRED: 165 SPACES (660 SEATS IN SANCTUARY)  
 ACCESSIBLE PARKING REQUIRED: 6 H/C SPACES, 1 VAN  
 PARKING PROPOSED: 172 SPACES - 6 H/C, 2 VAN  
 TOTAL PARKING PROVIDED: 175 SPACES - 9 H/C, 4 VAN

**DETAIL LEGEND**

- (A) SCDOT STANDARD DUTY ASPHALT PAVEMENT (SEE SITE DETAIL SHEETS)
  - (B) ACCESSIBLE PARKING AND SIGNAGE (SEE SITE DETAIL SHEETS)
  - (C) VAN ACCESSIBLE PARKING AND SIGNAGE (SEE SITE DETAIL SHEETS)
  - (D) CONCRETE WHEEL STOPS AT ALL SPACES(SEE SITE DETAIL SHEETS)
  - (E) RESURFACE ROAD PER SCDOT STANDARDS
  - (F) STOP BAR
  - (G) STOP SIGN
- (ALL LABELS ARE TYPICAL UNLESS OTHERWISE NOTED)

**SITE LEGEND**

- DENOTES GRASSED/LANDSCAPED AREAS REFER TO C201
- DENOTES ASPHALT PAVEMENT REFER TO C201
- DENOTES EXISTING PAVING
- DENOTES PROPOSED 4'WIDEx4' THICK SIDEWALK
- DENOTES NUMBER OF PARKING STALLS IN A ROW



**Robert Davis ENGINEERING, LLC**

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 Fax (843) 536-0901

**Seals:**



EMANUEL BAPTIST CHURCH  
 NEW SANCTUARY  
 106 BOONE STREET  
 SUMMERVILLE, SC 29483

| Mark | Date | Description | Revisions |
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**SHEET TITLE**

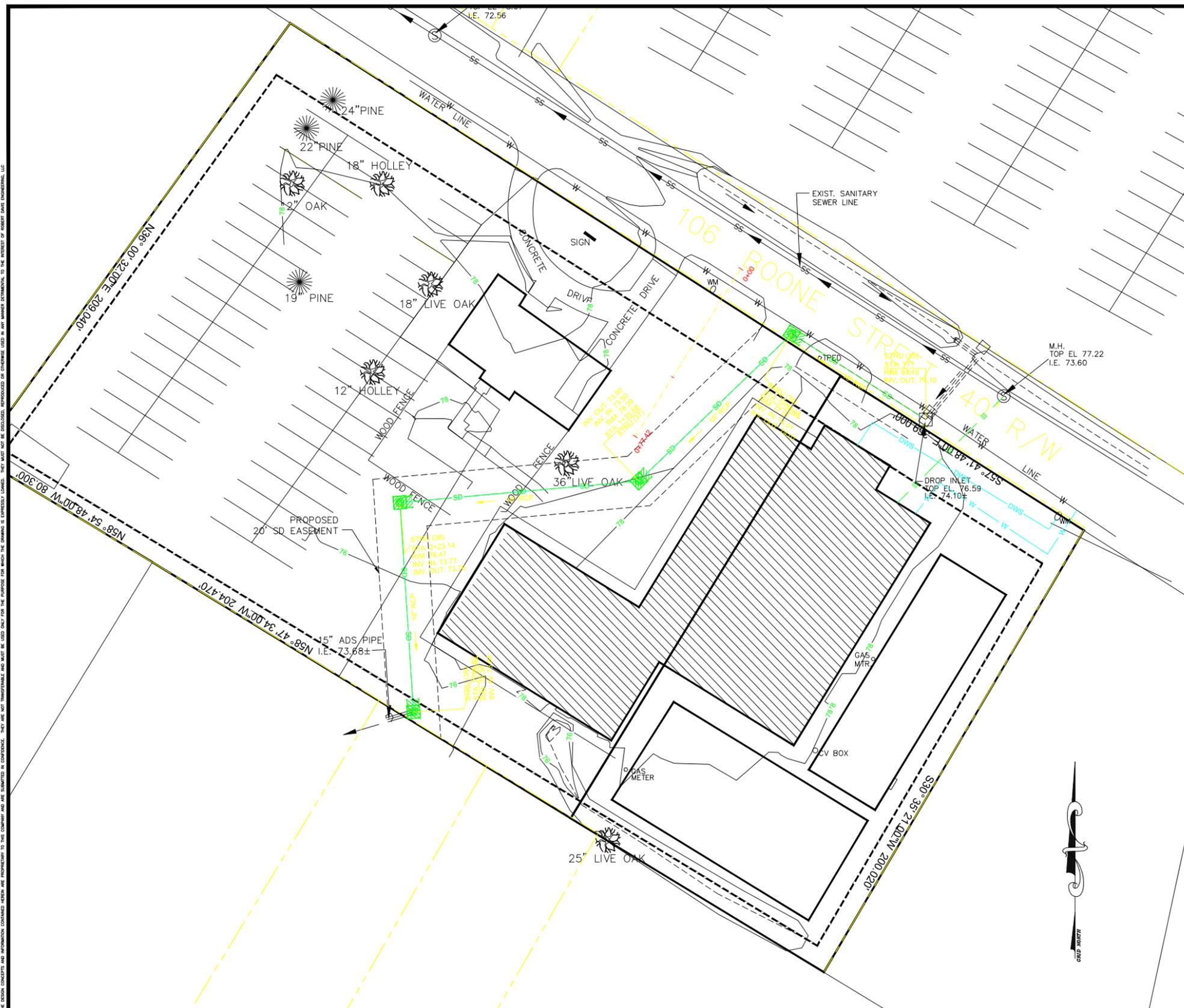
**SITE PLAN**

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| Drawn     | AEB       |
| Designed  | RD        |
| Checked   | RD        |
| Date      | 1/20/2019 |
| Job No.   | 19078     |
| Sheet No. | C104      |



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**GRADING & UTILITY PLAN**  
SCALE: 1"=20'

**WATER NOTES:**

- CP DENOTES COPPER PIPE. CP SHALL BE TYPE "K" SOFT COPPER TO COMPLY WITH ASTM B 88 LATEST EDITION AND INSTALLED WITH WROUGHT COPPER (95-5 TIN ANTIMONY SOLDER JOINT) FITTINGS IN ACCORDANCE WITH WITH ASME B16.22.
- ALL WATER LINES SHALL HAVE A MINIMUM COVER OF 3'-0".
- WHERE POTABLE WATER LINES AND SANITARY SEWER LINES CROSS WITH LESS THAN 18" OF VERTICAL CLEARANCE OR WHERE THE SEWER LINE IS ABOVE THE WATER LINE, THE SEWER LINE SHALL BE PRESSURE RATED PVC PIPE, MEETING THE ANWA C900-DR18 OR C905-DR18 WITH A MINIMUM VERTICAL CLEARANCE OF 12" SPECIFICATION FOR A MINIMUM LENGTH OF 20', CENTERED ON THE POINT OF CROSSING. A MINIMUM HORIZONTAL SEPARATION OF 10" (EDGE TO EDGE) BETWEEN POTABLE WATER LINES AND SEWER LINES SHALL BE MAINTAINED WHEN AT ALL POSSIBLE. WHEN THE 10" HORIZONTAL SEPARATION CANNOT BE MAINTAINED THE WATER LINE SHALL BE INSTALLED IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF AT LEAST 12" ABOVE THE SEWER LINE. ALTERNATIVELY, THE SEWER LINE SHALL BE ENCLOSED IN A WATER TIGHT CARRIER PIPE, OR PRESSURE RATED PVC PIPE (MEETING ANWA C-900 OR C905 SPECIFICATION) AND PRESSURE TESTED.
- CONNECT TO EXISTING COUNTY WATER SYSTEM IN COMPLIANCE WITH THE UTILITY REQUIREMENTS FOR NEW SERVICE CONNECTIONS.
- THRUST BLOCKS SHALL BE USED AT ALL BENDS AND TEES.
- ALL DOMESTIC WATER LINES SHALL BE DISINFECTED PER ANWA REQUIREMENTS OR STATE REQUIREMENTS, WHICHEVER IS MORE STRINGENT.
- WATER INSTALLATION SHALL CONFORM TO ALL FEDERAL, STATE AND LOCAL REQUIREMENTS.

**GRADING & DRAINAGE NOTES:**

- GRADES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CLEARING. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES FROM THE PLAN THAT WILL AFFECT CONSTRUCTION IN WRITING, TO THE ENGINEER AND AWAIT FURTHER INSTRUCTIONS.
- PROPOSED CONTOURS AND SPOT ELEVATIONS ARE FINISHED SURFACE ELEVATIONS. THE GRADING CONTRACTOR SHALL DEDUCT PAVEMENT AND TOPSOIL THICKNESS FOR SUBGRADE ELEVATIONS. REFER TO C2.1 FOR FURTHER DETAILS.
- CLEAR AND GRUB THE SITE WITHIN THE LIMITS OF CONSTRUCTION. CLEARING AND GRUBBING SHALL CONSIST OF REMOVING PAVEMENT, BRUSH, ROOTS, ETC. TO A MINIMUM OF 18" BELOW THE EXISTING SURFACE.
- TOPSOIL SHALL BE STOCKPILED IN A LOCATION THAT WILL NOT IMPEDE CONSTRUCTION. THE STOCKPILE SHALL HAVE SILT FENCE INSTALLED ON THE DOWNSTREAM SIDE OF THE STOCKPILE.
- A SOILS ENGINEER SHALL BE EMPLOYED BY THE CONTRACTOR TO DETERMINE THE SUITABILITY OR INSUITABILITY OF SOILS DURING EARTHWORK OPERATIONS, CONDUCT TESTS AND MAKE RECOMMENDATIONS.
- SOILS SHALL BE TESTED, PER THE SOILS REPORT, OR EVERY 5,000 SF OR LESS PER LIFT FOR EMBANKMENT AND BUILDING PAD CONSTRUCTION. THE CONTRACTOR SHALL FURNISH ALL TEST REPORTS IN A TIMELY MANNER.
- FILL SOIL SHALL BE PLACED IN 8" LIFTS, LOOSE, AND COMPACTED TO 95% STANDARD PROCTOR UNLESS NOTED OTHERWISE.
- HANDICAP PARKING STALLS SHALL HAVE A MAXIMUM SLOPE OF 2%.
- RCP DENOTES REINFORCED CONCRETE PIPE. RCP SHALL BE CLASS III AND COMPLY WITH ASTM C76 SPECIFICATIONS.
- HDPE DENOTES A CORRUGATED HIGH DENSITY POLYETHYLENE PIPE WITH SMOOTH WALLS THAT COMPLIES WITH ASTM F687 SPECIFICATIONS. HDPE CAN BE USED IN LIEU OF RCP.
- FLARED END SECTIONS SHALL BE CLASS I.
- PVC DENOTES POLYVINYL CHLORIDE PIPE. PVC SHALL BE SDR 35 AND COMPLY WITH ASTM D3034 SPECIFICATIONS.

**SEWER NOTES:**

- PVC DENOTES POLYVINYL CHLORIDE PIPE. PVC SHALL BE SDR 35 AND COMPLY WITH ASTM D3034 SPECIFICATIONS.
- ALL PIPES, FITTINGS, AND ACCESSORIES SHALL BE INSTALLED IN ACCORDANCE WITH ASTM C 12, ASTM C 14, MANUFACTURER'S PUBLISHED INSTRUCTIONS AND STATE OR LOCAL REQUIREMENTS. JOINTS SHALL BE WATER TIGHT.
- ALL PIPE SHALL HAVE A MINIMUM COVER OF 3'-0".
- CONNECT TO EXISTING SANITARY SEWER LATERAL IN COMPLIANCE WITH CITY OF FLORENCE SEWER DISTRICT REQUIREMENTS.
- SANITARY SEWER CLEAN-OUTS SHALL BE SPACED A MAXIMUM 50' O.C. AND AT ALL BENDS GREATER THAN 45°.
- ALL 90° TURNS SHALL BE ACCOMPLISHED BY 45° ELBOWS.
- SEWER INSTALLATION AND TESTING SHALL CONFORM TO COUNTY STANDARDS.

**GRADING LEGEND**

|                               | EXISTING   | PROPOSED   |
|-------------------------------|------------|------------|
| CONTOURS REFER TO NOTES       | --- 98 --- | --- 98 --- |
| SPOT ELEVATION REFER TO NOTES | 99.40<br>x | 99.4<br>x  |

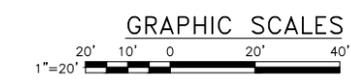
STORM PIPE REFER TO NOTES

**DETAIL LEGEND**

- (A) PROPOSED 4" SANITARY SEWER LATERAL AT MINIMUM 0.6% SLOPE. SEE PLUMBING DRAWINGS SHEET P1.1
- (B) PROPOSED 1 1/2" PVC WATER SERVICE SEE PLUMBING DWG. SHEET P1.2
- (C) DOMESTIC METER WITH BACKFLOW PREVENTER
- (D) IRRIGATION METER WITH BACKFLOW PREVENTER
- (E) EXISTING MANHOLE

**UTILITY LEGEND**

|                            | EXISTING | PROPOSED |
|----------------------------|----------|----------|
| WATER LINE REFER TO NOTES  | — W —    | — W —    |
| SEWER LINE REFER TO NOTES  | — SS —   | — SS —   |
| TELEPHONE                  | — T —    | — T —    |
| STORM PIPE REFER TO C1.2   | ---      | ---      |
| STORM INLET REFER TO C1.2  | □        | ⊕        |
| SANITARY MANHOLE           | ⊕        | ⊕        |
| FIRE HYDRANT REFER TO C2.3 | ⊕        | ⊕        |
| UTILITY POLE               | ⊕        | ⊕        |
| THRUST BLOCK REFER TO C2.3 | ∇        | ∇        |
| BACKFLOW PREVENTER         | ∩        | ∩        |
| WATER VALVE                | ⊗        | ⊗        |



**\*\*\*CAUTION\*\*\***

ALL EXISTING UTILITIES SHOWN ARE THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS, AND MAKE ALL NECESSARY ARRANGEMENTS WITH PRIVATE AND PUBLIC UTILITY COMPANIES TO AVOID ANY POSSIBLE DAMAGE TO, OR INTERRUPTION OF, UTILITY EQUIPMENT OR SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INQUIRIES CONCERNING LOCATION OF UTILITY LINES. REPAIR OF ANY DAMAGE TO UTILITY LINES DUE TO THIS WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

**Robert Davis Engineering, LLC**  
181 E. Evans Street, BTC 024  
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Florence, SC 29506  
Phone (843) 536-0896  
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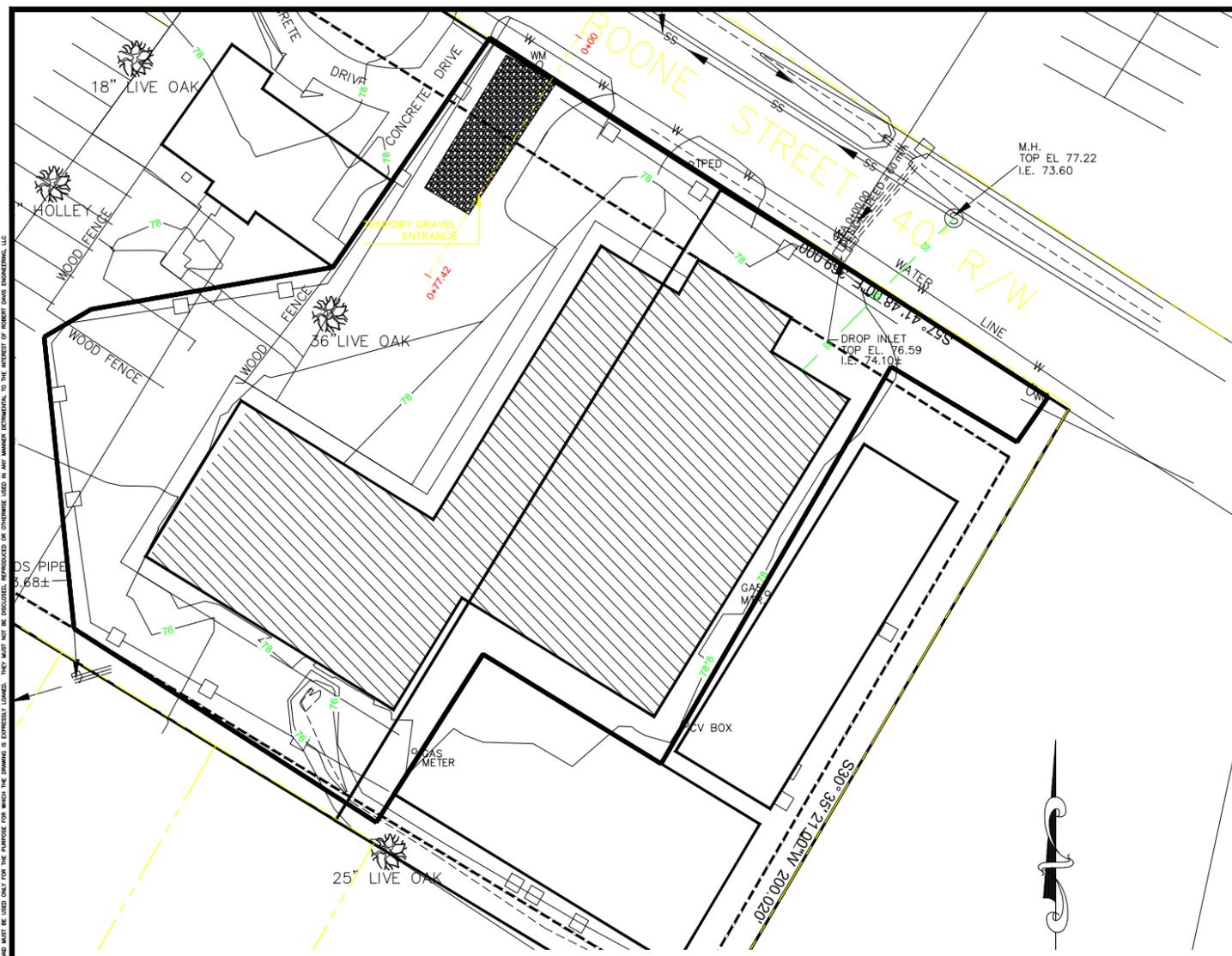
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**SHEET TITLE**

**UTILITY & GRADING PLAN**

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| Designed  | RD          |
| Checked   | RD          |
| Date      | 1/20/2019   |
| Job No.   | 19078       |
| Sheet No. | <b>C106</b> |

**PUPS**  
PALMETTO UTILITY PROTECTION SERVICES INC  
3 DAYS BEFORE DIGGING IN  
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CALL 1-888-721-7877



**STORMWATER PLAN**

**CONSTRUCTION SEQUENCE:**

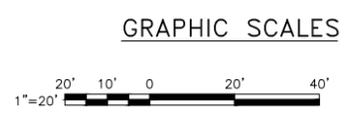
1. RECEIVE NPDES COVERAGE FROM DHEC
2. PRE-CONSTRUCTION MEETING (ON-SITE IF MORE THAN 10 DISTURBED AND NON-LINEAR)
3. NOTIFY DHEC EDC REGIONAL OFFICE OR OCRM OFFICE 48 HOURS PRIOR TO BEGINNING LAND-DISTURBING ACTIVITIES
4. INSTALLATION OF CONSTRUCTION ENTRANCE(S)
5. CLEARING & GRUBBING ONLY AS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS
6. INSTALLATION OF PERIMETER CONTROLS (E.G., SILT FENCE)
7. CLEARING & GRUBBING ONLY IN AREAS OF BASINS/ TRAPS/ PONDS
8. INSTALLATION OF BASINS/ TRAPS/ PONDS AND INSTALLATION OF DIVERSIONS TO THOSE STRUCTURES (OUTLET STRUCTURES MUST BE COMPLETELY INSTALLED AS SHOWN ON THE DETAILS BEFORE PROCEEDING TO NEXT STEP; AREAS DRAINING TO THESE STRUCTURES CANNOT BE DISTURBED UNTIL THE STRUCTURES AND DIVERSIONS TO THE STRUCTURES ARE COMPLETELY INSTALLED)
9. CLEARING & GRUBBING OF SITE OR DEMOLITION (SEDIMENT & EROSION CONTROL MEASURES FOR THESE AREAS MUST ALREADY BE INSTALLED)
10. ROUGH GRADING
11. INSTALLATION OF STORM DRAIN SYSTEM AND PLACEMENT OF INLET PROTECTION AS EACH INLET IS INSTALLED
12. FINE GRADING, PAVING, ETC.
13. PERMANENT/ FINAL STABILIZATION
14. CLEAN-OUT OF DETENTION BASINS THAT WERE USED AS SEDIMENT CONTROL STRUCTURES AND RE-GRADING OF DETENTION POND BOTTOMS; IF NECESSARY, MODIFICATION OF SEDIMENT BASIN RISER TO CONVERT TO DETENTION BASIN OUTLET STRUCTURE
15. REMOVAL OF TEMPORARY SEDIMENT & EROSION CONTROL MEASURES AFTER ENTIRE AREA DRAINING TO THE STRUCTURE IS FINALLY STABILIZED (THE DEPARTMENT RECOMMENDS THAT THE PROJECT OWNER/ OPERATOR HAVE THE SWPPP PREPARER OR REGISTRATION EQUIVALENT APPROVE THE REMOVAL OF TEMPORARY STRUCTURES.)
16. PERFORM AS-BUILT SURVEYS OF ALL DETENTION STRUCTURES AND SUBMIT TO DHEC OR MS4 FOR ACCEPTANCE.
17. SUBMIT NOTICE OF TERMINATION (NOT) TO DHEC AS APPROPRIATE.

**SWPPP NOTES:**

1. PRIOR TO ANY OTHER CONSTRUCTION, A STABILIZED CONSTRUCTION EXIT SHALL BE CONSTRUCTED AT EACH POINT OF ENTRY TO OR EXIT FROM THE SITE.
2. APPROVED EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING, GRADING, EXCAVATION, FILLING, OR OTHER LAND DISTURBING ACTIVITIES, EXCEPT THOSE OPERATIONS NEEDED TO INSTALL SUCH CONTROL MEASURES.
3. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND WITH LOCAL AND STATE REQUIREMENTS.
4. ADDITIONAL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED IMMEDIATELY AFTER GROUND DISTURBANCES OCCUR. THE LOCATION OF SOME OF THE EROSION AND SEDIMENT CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION AND SEDIMENT CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
5. EROSION AND SEDIMENT CONTROL DEVICES SHALL BE CLEANED WHEN THEY BECOME HALF FILLED WITH SEDIMENT AND AFTER PERMANENT GROUND COVER HAS BEEN ESTABLISHED.
6. ANY FAILURE OF ANY EROSION AND SEDIMENT CONTROL DEVICE TO FUNCTION AS INTENDED FOR ANY REASON SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
7. SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED WITH TURF REINFORCEMENT MATS IN ADDITION TO GRASS SEEDING TO ENSURE THEIR INTEGRITY. TURF REINFORCEMENT SHALL BE LANDLOK TRM 450 INSTALLED TO MANUFACTURERS RECOMMENDATIONS OR AN APPROVED ALTERNATE. TEMPORARY SLOPE DRAINS SHALL BE INSTALLED AS NECESSARY DURING CONSTRUCTION WHERE SAID SLOPES EXCEED EIGHT (8) VERTICAL FEET.
8. ALL DISTURBED AREAS OF THE SITE WHERE CONSTRUCTION HAS TEMPORARILY OR PERMANENTLY CEASED SHALL BE STABILIZED WITH GRASSING AS SOON AS PRACTICABLE AND IN NO CASE EXCEEDING FOURTEEN (14) DAYS FOLLOWING WORK STOPPAGE UNLESS SAID CONSTRUCTION WILL RESUME WITHIN THE SUBSEQUENT SEVEN (7) DAYS.
9. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS. DAMAGED OR INEFFECTIVE DEVICES SHALL BE REPAIRED OR REPLACED AS NECESSARY.
10. SILT FENCE AND/OR OTHER CONTROL DEVICES AS MAY BE REQUIRED SHALL BE PROVIDED TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED AND STABILIZED WITH GRASSING IMMEDIATELY FOLLOWING SAID UTILITY INSTALLATION.
11. ALL EROSION CONTROL DEVICES SHALL BE MAINTAINED FULLY FUNCTIONAL UNTIL ALL CONSTRUCTION ACTIVITIES ARE COMPLETED AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED FOLLOWING CONSTRUCTION COMPLETION AND SITE STABILIZATION.
12. THE CONTRACTOR SHALL TAKE NECESSARY ACTION TO MINIMIZE MUD BEING TRACKED FROM CONSTRUCTION AREAS TO ANY PAVED ROADWAYS. THE CONTRACTOR SHALL REMOVE MUD/SOIL FROM THE PAVEMENT DAILY AS OFTEN AS MAY BE REQUIRED.
13. TEMPORARY DIVERSION BERMS/DITCHES SHALL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.
14. FAILURE TO PROPERLY INSTALL AND MAINTAIN EROSION AND SEDIMENT CONTROL PRACTICES MAY RESULT IN FINES AND/OR CONSTRUCTION BEING HALTED.

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**\*\*\*CAUTION\*\*\***  
 ALL EXISTING UTILITIES SHOWN ARE THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS, AND MAKE ALL NECESSARY ARRANGEMENTS WITH PRIVATE AND PUBLIC UTILITY COMPANIES TO AVOID ANY POSSIBLE DAMAGE TO, OR INTERRUPTION OF, UTILITY EQUIPMENT OR SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INQUIRIES CONCERNING LOCATION OF UTILITY LINES. REPAIR OF ANY DAMAGE TO UTILITY LINES DUE TO THIS WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.



**SWPPP LEGEND**

|                             |  |
|-----------------------------|--|
| SILT FENCE<br>REFER TO C303 |  |
| LIMITS OF<br>DISTURBANCE    |  |



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 Fax (843) 536-0901

**Seals:**




**EMANUEL BAPTIST CHURCH  
 NEW SANCTUARY  
 106 BOONE STREET  
 SUMMERVILLE, SC 29483**

| Mark | Date | Description | Revisions |
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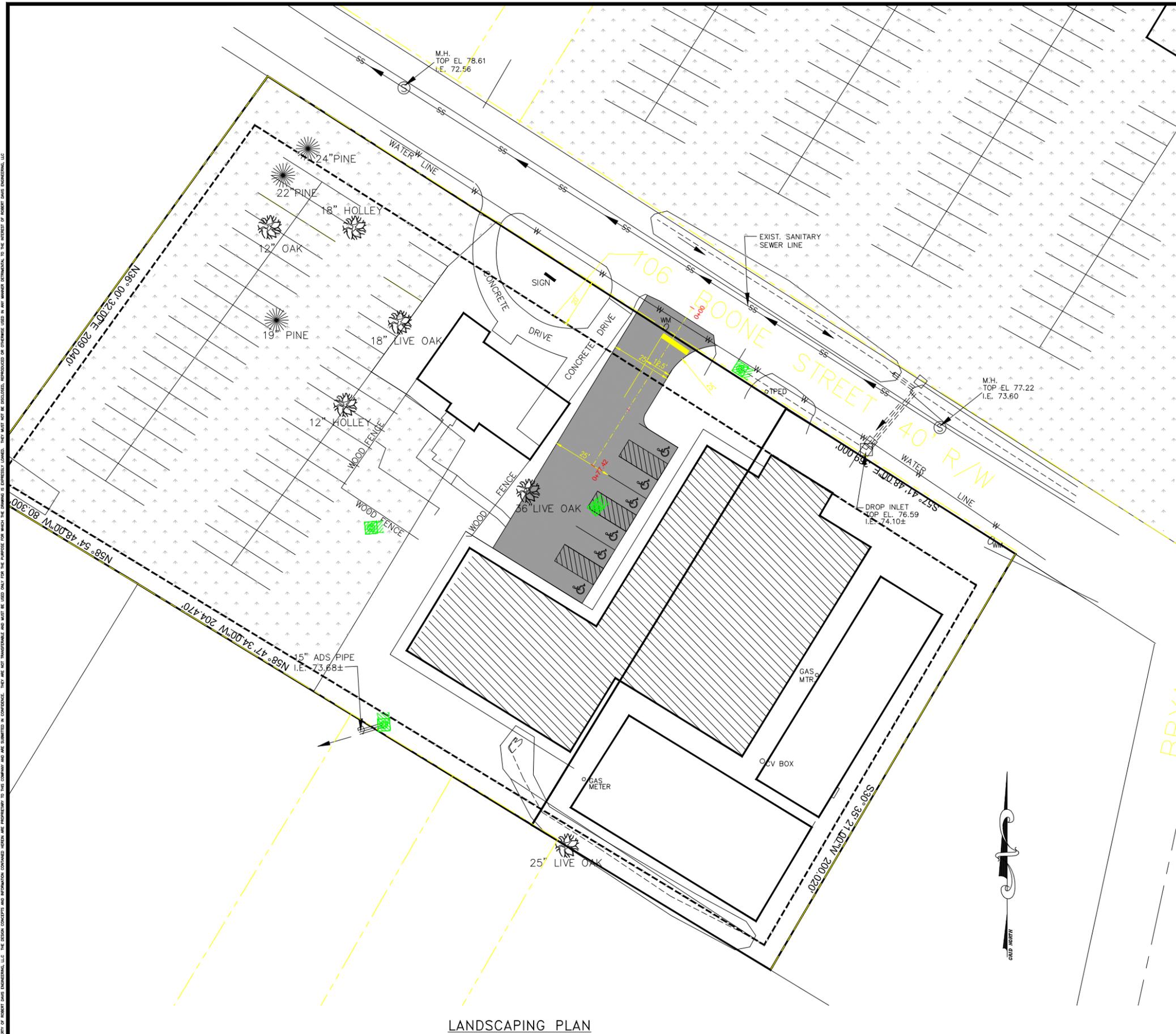
**STORMWATER  
 PLAN**

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| Designed  | RD          |
| Checked   | RD          |
| Date      | 1/20/2019   |
| Job No.   | 19078       |
| Sheet No. | <b>C105</b> |



**PUPS**  
 PALMETTO UTILITY PROTECTION SERVICES INC  
 3 DAYS BEFORE DIGGING IN  
 SOUTH CAROLINA  
 CALL 1-888-721-7877

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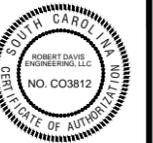


LANDSCAPING PLAN



**Robert Davis ENGINEERING, LLC**  
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 Fax (843) 536-0901

Seals:



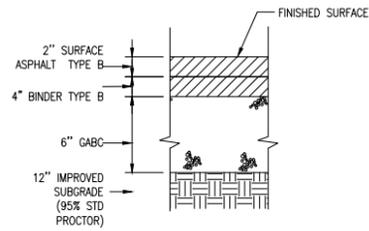
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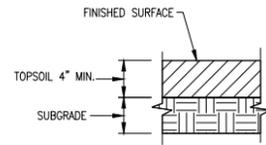
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LANDSCAPING PLAN

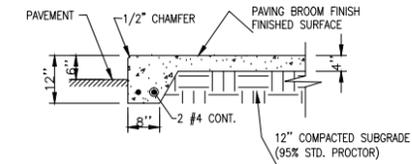
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| Job No.   | 19078     |
| Sheet No. | C106      |



1. THE SURFACE ASPHALT SHALL CONFORM TO SECTION 403, TYPE 3 ASPHALT, IN THE S.C.D.O.T. STANDARD SPECIFICATIONS FOR HIGHWAYS LATEST EDITION.
2. BASE COURSE SHALL CONFORM TO SECTION 305 IN THE S.C.D.O.T. STANDARD SPECIFICATIONS FOR HIGHWAYS LATEST EDITION.



GRASSED/LANDSCAPED AREA DETAIL



1. CONCRETE SHALL HAVE A MINIMUM ULTIMATE 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI WITH 4" MAXIMUM SLUMP.
2. AIR ENTRAINING AGENTS SHALL BE USED TO PRODUCE 3% TO 6% AIR BY VOLUME IN ALL CONCRETE EXPOSED TO WEATHER.
3. WHERE MONOLITHIC WALK ABUTS BUILDING OR OTHER CONCRETE PAVING, INSTALL 1/2" PREMOULDED EXPANSION JOINT.

1 SCDOT PAVEMENT DETAIL

NOT TO SCALE

2 GRASSED/LANDSCAPED AREA DETAIL

NOT TO SCALE

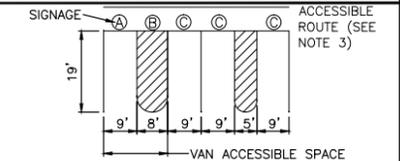
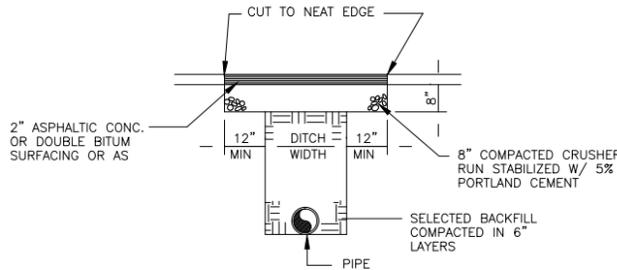
3 MONOLITHIC SIDEWALK

NOT TO SCALE



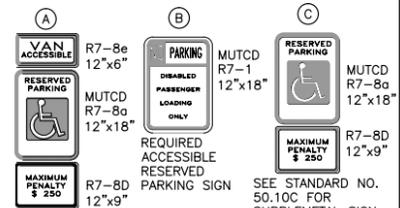
NOTE: CHECK DAMS SHALL BE USED TO CONTROL EROSION UNTIL CHANNEL HAS BEEN STABILIZED WITH PERMANENT VEGETATION. REFER TO CHECK DAM DETAIL.

GRASSED CHANNEL  
NTS



ONE OUT OF EVERY EIGHT (8) ACCESSIBLE SPACES, BUT NOT LESS THAN ONE, IS REQUIRED TO BE VAN ACCESSIBLE.

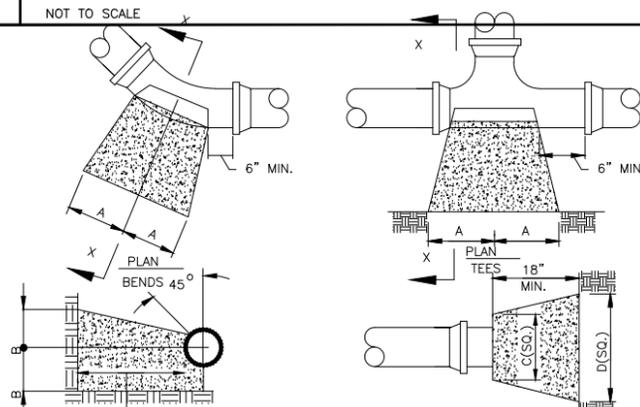
PARKING SPACE PAVEMENT MARKINGS



SHALL BE MOUNTED AT 7 FEET FROM MOUNTING HEIGHT CAN BE REDUCED TO SIDEWALK AND BUILDING FACE IN WHICH

4

NOT TO SCALE



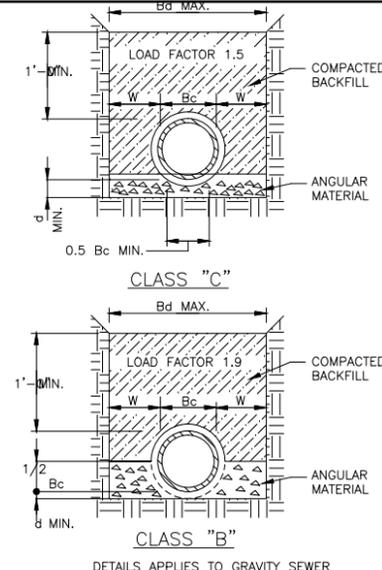
SECTION X-X 24" MIN. - 12" & LARGER PIPE  
18" MIN. - 10" & SMALLER PIPE

| PIPE SIZE | 1/4 BENDS |     | 1/8 BENDS |     | 1/16 BENDS |    | PLUGS |     |     |     |
|-----------|-----------|-----|-----------|-----|------------|----|-------|-----|-----|-----|
|           | A         | B   | A         | B   | A          | B  | A     | B   | C   | D   |
| JP TO 6"  | 16"       | 10" | 9"        | 10" | 6"         | 8" | 10"   | 12" | 10" | 21" |

- NOTES:
1. SIZED ON 2000 PSF SOIL AND 100 PSI STATIC PRESSURE PLUS A.W.W.A. WATER HAMMER.
  2. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND.
  3. CONCRETE SHALL BE 3,000 P.S.I. COMPRESSIVE STRENGTH AFTER 28 DAYS.

5 CUTTING & REPLACING PAVEMENT DETAIL

NOT TO SCALE



DETAILS APPLIES TO GRAVITY SEWER

6 ACCESSIBLE PARKING AND SIGNAGE STANDARDS

NOT TO SCALE

NOTES:

1. FRAME & COVER CONTACT SURFACES SHALL BE MACHINED TO PROVIDE EVEN BEARING OF COVER ON FRAME.
2. STANDARD FRAME & COVER SHALL BE MH-RCR-2001 BY DEWEY, OR COVER MC-18 & FRAME MF-11 BY SUMTER, OR EQUAL. (TOTAL WT. = 310 LBS.)
3. MANHOLES SHALL CONFORM TO ASTM C478.

| IMPROVED DITCH BEDDING DIMENSIONS FOR CLASS "B" & CLASS "C" |              |                   |                     |                               |
|-------------------------------------------------------------|--------------|-------------------|---------------------|-------------------------------|
| PIPE SIZE I. D.                                             | Bc OUT. DIA. | W MAX. WORK SPACE | Bd MAX. DITCH WIDTH | d DEPTH OF BEDDING UNDER PIPE |
| UP TO 8"                                                    | 10"          | 8"                | 2'-4"               | 4"                            |

NOTES:

- 1.) DITCH WIDTH NOT TO EXCEED Bd MAX. AT 1'-0" OVER TOP OF PIPE.
- 2.) ALL PIPE TO BE INSTALLED IN CLASS "B" DITCH BEDDING UNLESS NOTED OTHERWISE.
- 3.) CLASS "B" DITCH BEDDING TO BE USED AS NOTED ON PLANS OR AS DIRECTED BY ENGINEER.

7 THRUST BLOCKS FOR WATER MAINS

NOT TO SCALE

8 IMPROVED DITCH BEDDING

NOT TO SCALE

9 IMPROVED DITCH BEDDING NOTES

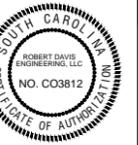
NOT TO SCALE



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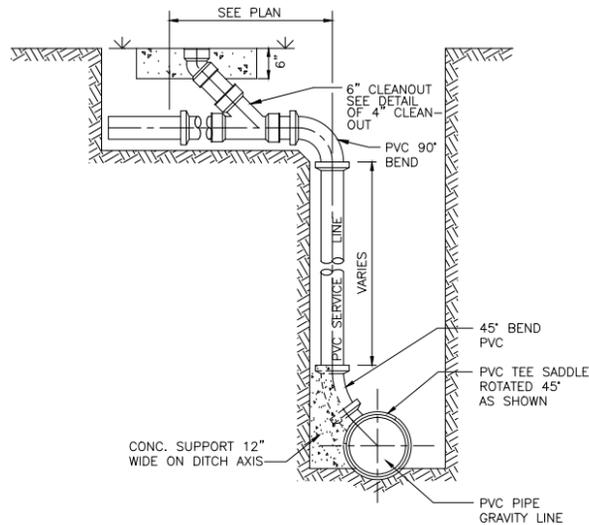
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| Date     | 1/20/2019 |
| Job No.  | 19078     |

Sheet No. C201

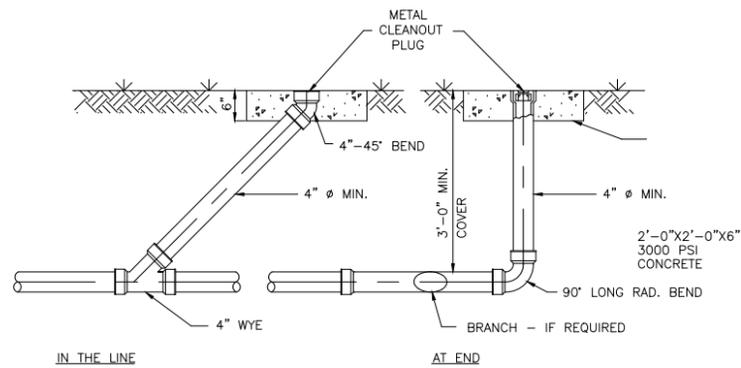
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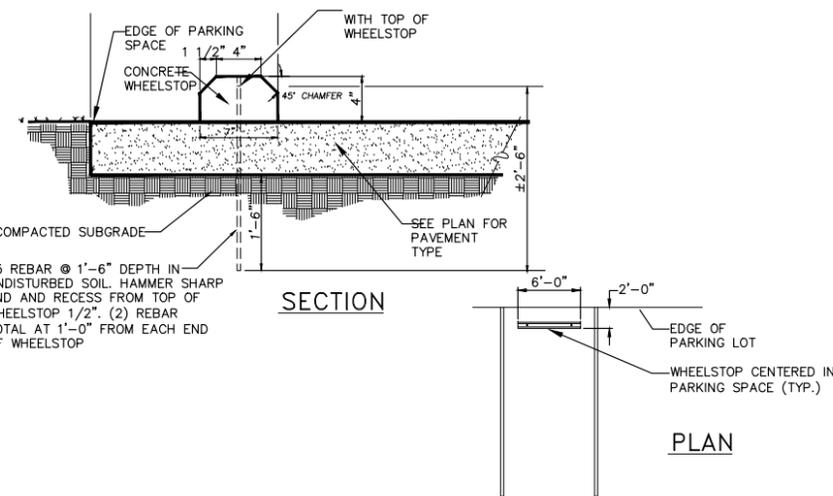
**1 SEWER SERVICE CONNECTION**

NOT TO SCALE N.T.S.



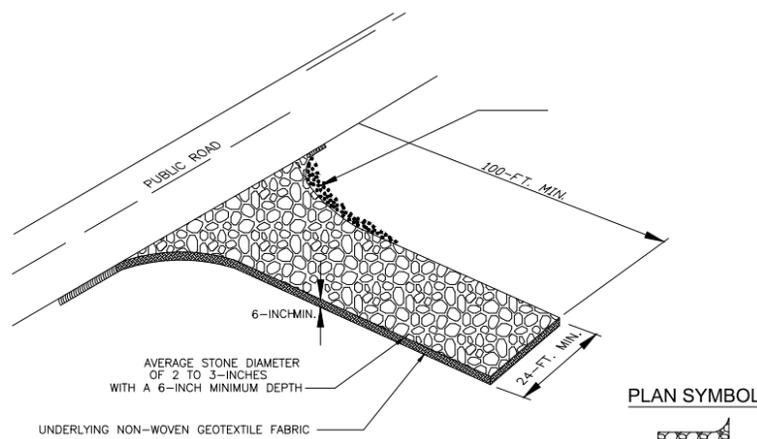
**2 CLEANOUT DETAIL**

NOT TO SCALE



**3 CONCRETE WHEELSTOP DETAIL**

NOT TO SCALE



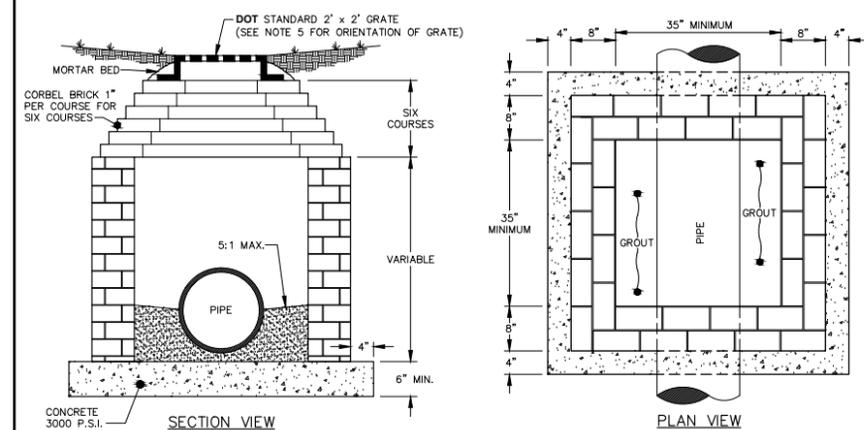
|                       |            |
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| ROCK PAD THICKNESS    | 6 INCHES   |
| ROCK PAD WIDTH        | 24 FEET    |
| ROCK PAD LENGTH       | 100 FEET   |
| ROCK PAD STONE SIZE D | 2-3 INCHES |

**INSPECTION & MAINTENANCE**

1. THE KEY TO FUNCTIONAL CONSTRUCTION ENTRANCES IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.
2. REGULAR INSPECTIONS OF CONSTRUCTION ENTRANCES SHALL BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24-HOURS AFTER EACH RAINFALL EVEN THAT PRODUCES 1/2-INCH OR MORE OF PRECIPITATION.
3. DURING REGULAR INSPECTIONS, CHECK FOR MUD AND SEDIMENT BUILDUP AND PAD INTEGRITY. INSPECTION FREQUENCIES MAY NEED TO BE MORE FREQUENT DURING LONG PERIODS OF WET WEATHER.
4. RESHAPE THE STONE PAD AS NECESSARY FOR DRAINAGE AND RUNOFF CONTROL.
5. WASH OR REPLACE STONES AS NEEDED AND AS DIRECTED BY SITE INSPECTOR. THE STONE IN THE ENTRANCE SHOULD BE WASHED OR REPLACED WHENEVER THE ENTRANCE FAILS TO REDUCE THE AMOUNT OF MUD BEING CARRIED OFF-SITE BY VEHICLES. FREQUENT WASHING WILL EXTEND THE USEFUL LIFE OF STONE PAD.
6. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO ADJACENT IMPERVIOUS SURFACES BY BRUSHING OR SWEEPING. FLUSHING SHOULD ONLY BE USED WHEN THE WATER CAN BE DISCHARGED TO A SEDIMENT TRAP OR BASIN.
7. DURING MAINTENANCE ACTIVITIES, ANY BROKEN PAVEMENT SHOULD BE REPAIRED IMMEDIATELY.
8. CONSTRUCTION ENTRANCES SHOULD BE REMOVED AFTER THE SITE HAS REACHED FINAL STABILIZATION. PERMANENT VEGETATION SHOULD REPLACE AREAS FROM WHICH CONSTRUCTION ENTRANCES HAVE BEEN REMOVED, UNLESS AREA WILL BE CONVERTED TO AN IMPERVIOUS SURFACE TO SERVE POST-CONSTRUCTION.

**GENERAL NOTES**

1. STABILIZED CONSTRUCTION ENTRANCES SHOULD BE USED AT ALL POINTS WHERE TRAFFIC WILL CROSS/INGRESS A CONSTRUCTION SITE ONTO A PUBLIC ROAD OR ANY IMPERVIOUS SURFACES, SUCH AS PARKING LOTS.
2. INSTALL A NON-WOVEN GEOTEXTILE FABRIC PRIOR TO PLACING ANY STONE.
3. INSTALL A CULVERT PIPE ACROSS THE ENTRANCE WHEN NEEDED TO PROVIDE POSITIVE DRAINAGE.
4. THE ENTRANCE SHALL CONSIST OF 2-INCH TO 3-INCH D50 STONE PLACED AT A MINIMUM DEPTH OF 6-INCHES.
5. MINIMUM DIMENSIONS OF THE ENTRANCE SHALL BE 24- FEET WIDE BY 100- FEET LONG, AND MAY BE MODIFIED AS NECESSARY TO ACCOMMODATE SITE CONSTRAINTS.
6. THE EDGES OF THE ENTRANCE SHALL BE TAPERED OUT TOWARDS THE ROAD TO PREVENT TRACKING AT THE EDGE OF THE ENTRANCE.
7. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN OR OTHER SEDIMENT TRAPPING STRUCTURE.
8. LIMESTONE MAY NOT BE USED FOR THE STONE PAD.



- NOTES:**
1. EITHER SOLID BRICK, SOLID BLOCK, OR PRECAST CONCRETE MAY BE USED.
  2. FOR 24 INCH R.C.P. AND LARGER USE PIPE DIAMETER PLUS 12 INCHES FOR MINIMUM INSIDE DIMENSION.
  3. GRATED INLETS SHALL NOT BE USED WITHIN TRAVEL AREAS.
  4. STANDARD STEPS REQUIRED @ 16 INCHES O.C. WHERE DEPTH EXCEEDS 3 FEET.
  5. WHERE STEPS ARE REQUIRED, USE OF PRECAST CONCRETE SLAB SHALL BE USED AS TOP AND GRATE POSITIONED OVER STEPS.
  6. YARD INLETS DEEPER THAN 10 FEET SHALL REQUIRE DOUBLE WALLS.

**4 STANDARD YARD INLET WITH GRATE AND FRAME**

NOT TO SCALE

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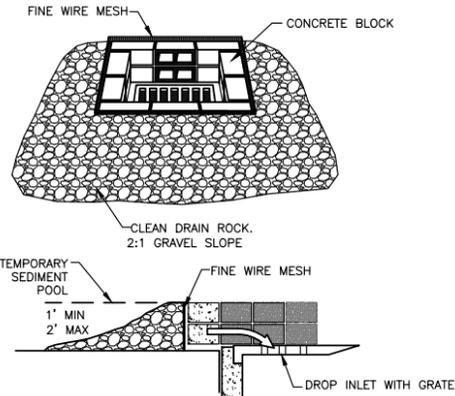
**Seals:**

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**SHEET TITLE**  
**SITE DETAILS**

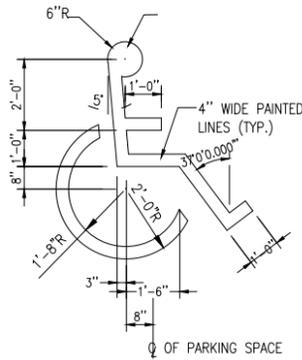
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| Sheet No. | C202      |



THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED AND WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE. AS SHOWN IN DETAIL ONE BLOCK IS PLACED ON EACH SIDE OF THE STRUCTURE ON ITS SIDE IN THE BOTTOM ROW TO ALLOW POOL DRAINAGE. THE FOUNDATION SHOULD BE EXCAVATED AT LEAST 2 INCHES BELOW THE CREST OF THE STORM DRAIN. THE BOTTOM ROW OF BLOCKS ARE PLACED AGAINST THE EDGE OF THE STORM DRAIN FOR LATER SUPPORT AND TO AVOID WASHOUTS WHEN OVERFLOW OCCURS. IF NEEDED, LATERAL SUPPORT MAY BE GIVEN TO SUBSEQUENT ROWS BY PLACING 2" X 4" WOOD STUDS THROUGH BLOCK OPENINGS. HARD WARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2 INCH OPENINGS SHALL BE FITTED OVER ALL BLOCK OPENINGS TO HOLD GRAVEL IN PLACE. CLEAN GRAVEL SHOULD BE PLACED 2 INCHES BELOW THE TOP OF THE BLOCKS ON A 2:1 SLOPE OR FLATTER AND SMOOTHED TO AN EVEN GRADE. DOT #57 WASHED STONE IS RECOMMENDED.

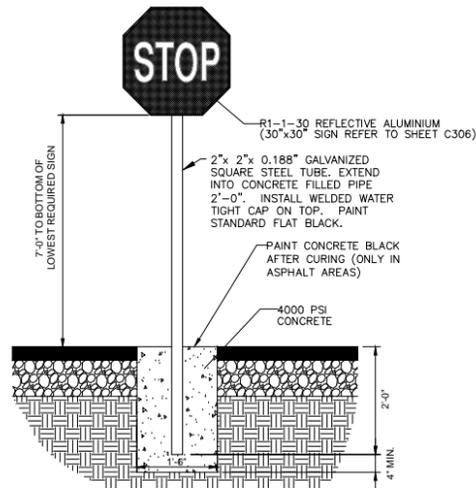
**1 BLOCK AND GRAVEL DROP INLET PROTECTION**

NOT TO SCALE



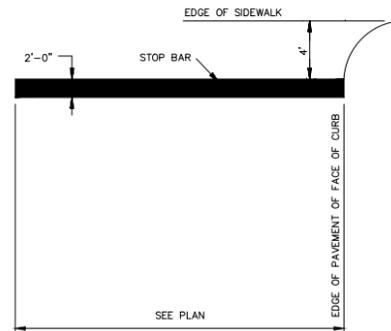
**2 PAINTED HANDICAP SYMBOL**

NOT TO SCALE



**3 STOP SIGN DETAIL**

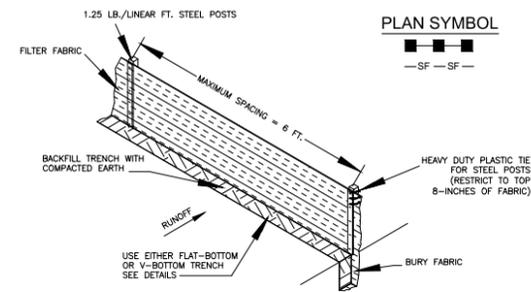
NOT TO SCALE



**4 STOP BAR DETAIL**

NOT TO SCALE

**SILT FENCE INSTALLATION**



**SILT FENCE - GENERAL NOTES**

- Do not place silt fence across channels or in other areas subject to concentrated flows. Silt fence should not be used as a velocity control BMP. Concentrated flows are any flows greater than 0.5 cfs.
- Maximum sheet or overlaid flow path length to the silt fence shall be 100-feet.
- Maximum slope steepness (normal [perpendicular] to the fence line) shall be 2:1.
- Silt fence joints, when necessary, shall be completed by one of the following options:
  - Wrap each fabric together at a support post with both ends fastened to the post, with a 1-foot minimum overlap; Overlap silt fence by installing 3-foot support post to which the new silt fence roll is attached. Attach old roll to new roll with heavy-duty plastic ties; or,
  - Overlap entire width of each silt fence roll from one support post to the next support post.
- Attach filter fabric to the steel posts using heavy-duty plastic ties that are evenly spaced within the top 8-inches of the fabric.
- Install the silt fence perpendicular to the direction of the stormwater flow and place the silt fence the proper distance from the toe of steep slopes to provide sediment storage and access for maintenance and cleanout.
- Install Silt Fence Checks (Tie-Backs) every 50-100 feet, dependent on slope, along silt fence that is installed with slope and where concentrated flows are expected or are documented along the proposed/installed silt fence.

**SILT FENCE - POST REQUIREMENTS**

- Silt Fence posts must be 48-inch long steel posts that meet, at a minimum, the following physical characteristics:
  - Composed of a high strength steel with a minimum yield strength of 50,000 psi.
  - Include a standard "T" section with a nominal face width of 1.38-inches and a nominal "T" length of 1.48-inches.
  - Weigh 1.25 pounds per foot ( $\pm 8\%$ )
- Posts shall be equipped with projections to aid in fastening of filter fabric.
- Steel posts may need to have a metal soil stabilization plate welded near the bottom when installed along steep slopes or installed in loose soils. The plate should have a minimum cross section of 17-square inches and be composed of 15 gauge steel, at a minimum. The metal soil stabilization plate should be completely buried.
- Install posts to a minimum of 24-inches. A minimum height of 1- to 2- inches above the fabric shall be maintained, and a maximum height of 3 feet shall be maintained above the ground.
- Post spacing shall be at a maximum of 6-feet on center.

**SILT FENCE - FABRIC REQUIREMENTS**

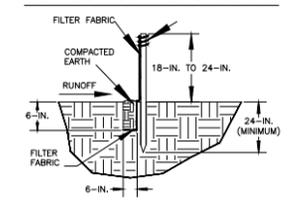
- Silt fence must be composed of woven geotextile filter fabric that consists of the following requirements:
  - Composed of fibers consisting of long chain synthetic polymers of at least 85% by weight of polyolefins, polyesters, or polyamides that are formed into a network such that the filaments or yarns retain dimensional stability relative to each other;
  - Free of any treatment or coating which might adversely alter its physical properties after installation;
  - Free of any defects or flaws that significantly affect its physical and/or filtering properties; and,
  - Have a minimum width of 36-inches.
- Use only fabric appearing on SC DOT's Qualified Products Listing (QPL), Approval Sheet #34, meeting the requirements of the most current edition of the SC DOT Standard Specifications for Highway Construction.
- 12-inches of the fabric should be placed within excavated trench and toed in when the trench is backfilled.
- Filter Fabric shall be purchased in continuous rolls and cut to the length of the barrier to avoid joints.
- Filter Fabric shall be installed at a minimum of 24-inches above the ground.

- The key to functional silt fence is weekly inspections, routine maintenance, and regular sediment removal.
- Regular inspections of silt fence shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
- Attention to sediment accumulations along the silt fence is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
- Remove accumulated sediment when it reaches 1/3 the height of the silt fence.
- Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
- Check for areas where stormwater runoff has eroded a channel beneath the silt fence, or where the fence has sagged or collapsed due to runoff overtopping the silt fence. Install checks/tie-backs and/or reinstall silt fence, as necessary.
- Check for tears within the silt fence, areas where silt fence has begun to decompose, and for any other circumstance that may render the silt fence ineffective. Removed damaged silt fence and reinstall new silt fence immediately.
- Silt fence should be removed within 30 days after final stabilization is achieved and once it is removed, the resulting disturbed area shall be permanently stabilized.

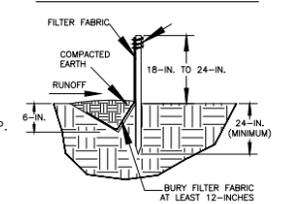
**5 CONSTRUCTION OF SILT FENCE DETAILS**

NOT TO SCALE

**FLAT-BOTTOM TRENCH DETAIL**



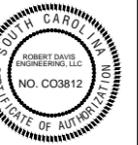
**V-SHAPED TRENCH DETAIL**



**Robert Davis Engineering, LLC**

181 E. Evans Street, BTC 024  
Suite C1  
Florence, SC 29506  
Phone (843) 536-0896  
Fax (843) 536-0901

**Seals:**



EMANUEL BAPTIST CHURCH  
NEW SANCTUARY  
106 BOONE STREET  
SUMMERVILLE, SC 29483

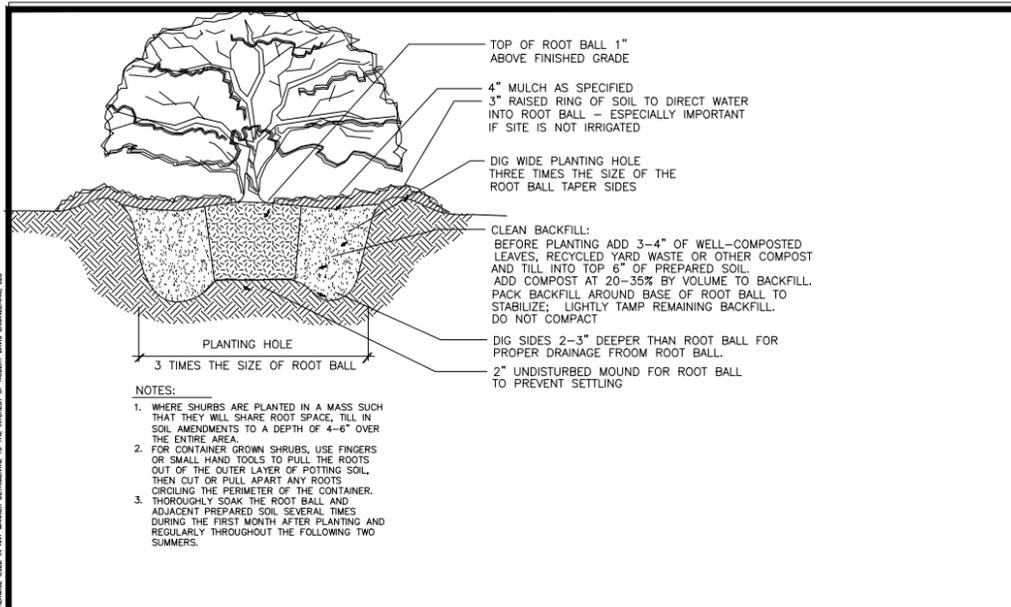
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**SHEET TITLE**

LANDSCAPING  
DETAILS

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| Drawn     | AEB       |
| Designed  | RD        |
| Checked   | RD        |
| Date      | 1/20/2019 |
| Job No.   | 19078     |
| Sheet No. | C203      |

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NOTES & SPECIFICATIONS:

1. THIS PLAN IS FOR PLANTING PURPOSES ONLY.
2. VERIFICATION OF TOTAL QUANTITIES AS SHOWN IN THE PLANT LIST SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.
3. ALL PLANTS AND PLANTING PROCEDURES SHALL CONFORM TO ACCEPTED STANDARDS ESTABLISHED BY THE AMERICAN ASSOCIATION OF NURSEYMEN LATEST EDITION.
4. ALL SAUCERS SHALL BE SOAKED WITH WATER AND MULCHED IMMEDIATELY FOLLOWING PLANTING.
5. ALL TREES AND SHRUBS SHALL BE FULL WELL BRANCHED PLANTS WHICH ARE CHARACTERISTIC OF THE SPECIES.
6. ALL GRASS IS TO BE BERMUDA SOD, OR BETTER QUALITY.
7. ALL ROOT BALLS REMOVED FROM CONTAINERS SHALL BE SCARIFIED PRIOR TO BACKFILLING.
8. REMOVE ALL STRING AND WIRE FROM BASE OF ALL PLANT MATERIAL.
9. MULCH ALL BEDS WITH 3" OF CLEAN PINE NEEDLES, UNLESS OTHERWISE NOTED.
10. IF SHRUB PLANTING BEDS DO NOT HAVE A MIN. 6" TOPSOIL THEN AMENDED WITH 3" PINE BARK TILLED INTO THE SOIL TO A DEPTH OF 8".
11. ALL AREAS NOT COVERED WITH PAVING, GRAVEL, BUILDINGS OR PLANTING BEDS SHALL BE SODDED.
12. LAWN AREAS SHALL BE RAKED TO REMOVE ROCKS, STICKS, ROOTS AND OTHER TRASH AND DEBRIS AND SHALL BE SMOOTH FOR EASE OF MOWING.
13. ALL PLANTINGS OF TREES AND SHRUBS SHALL BE A MINIMUM OF 4' BEHIND ALL CURBS. WHERE NO CURB AND GUTTER IS PROPOSED BORDERING PARKING SPACES, WHEEL STOPS MUST BE PROVIDED TO PREVENT DAMAGE TO PLANT MATERIAL.
14. FOUR CHERRY LAUREL AND 47 WAX MYRTLE LOCATED AROUND THE RETENTION AREA SHALL BE PLANTED ON THE RETENTION AREA SLOPE TO SCREEN THE RETENTION WALL AND PREVENT VEHICULAR SIGHT-DISTANCE PROBLEMS.
15. ALL EXISTING VEGETATION ON THE SITE SHALL BE REMOVED EXCEPT WHERE NOTED.
16. WORK PLANTS AROUND TRANSFORMER AND F.D.C.

SHRUB PLANTING DETAIL

NO SCALE

1

GRID & PIN CONNECTION

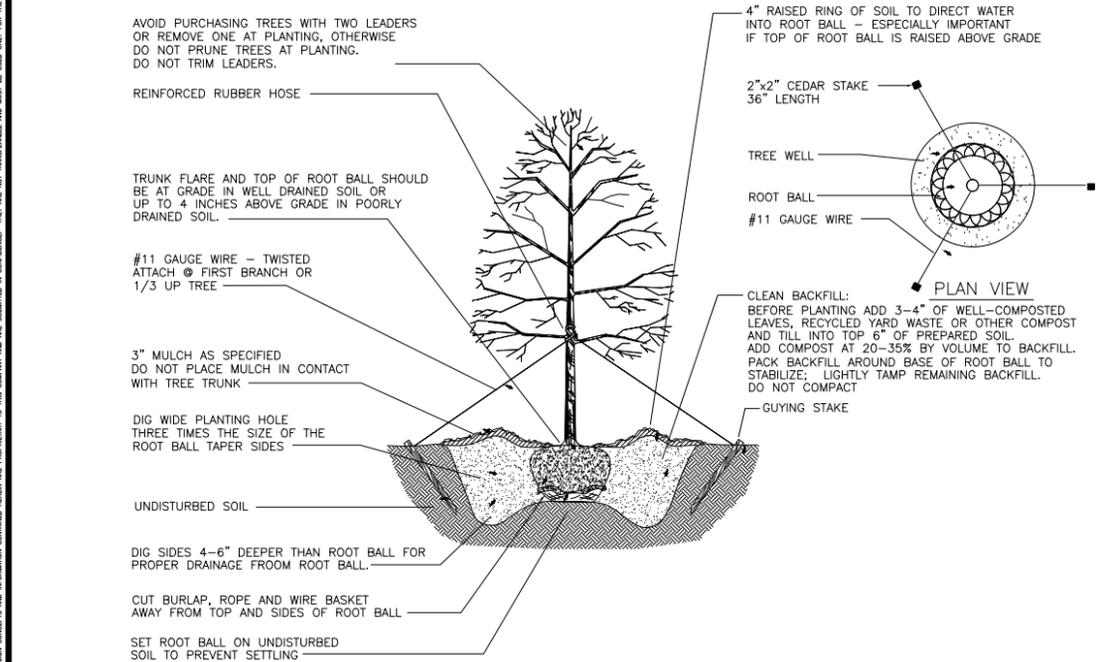
NO SCALE

2

NOT USED

NO SCALE

3



NOTES:

1. WHERE SEVERAL TREES ARE PLANTED CLOSE TOGETHER SUCH THAT THEY WILL LIKELY SHARE ROOT SPACE, TILL IN SOIL AMENDMENTS TO A DEPTH OF 4-6" OVER THE ENTIRE AREA.
2. FOR CONTAINER GROWN TREES, USE FINGERS OR SMALL HAND TOOLS TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL, THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER.
3. THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.

TREE PLANTING DETAIL

NO SCALE

4

NOT USED

NO SCALE

6

NOT USED

NO SCALE



Robert Davis  
ENGINEERING, LLC

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Fax (843) 536-0901

Seals:



EMANUEL BAPTIST CHURCH  
NEW SANCTUARY  
106 BOONE STREET  
SUMMERVILLE, SC 29483

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SHEET TITLE

LANDSCAPING  
DETAILS

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| Drawn     | AEB       |
| Designed  | RD        |
| Checked   | RD        |
| Date      | 1/20/2019 |
| Job No.   | 19078     |
| Sheet No. | C204      |

C204

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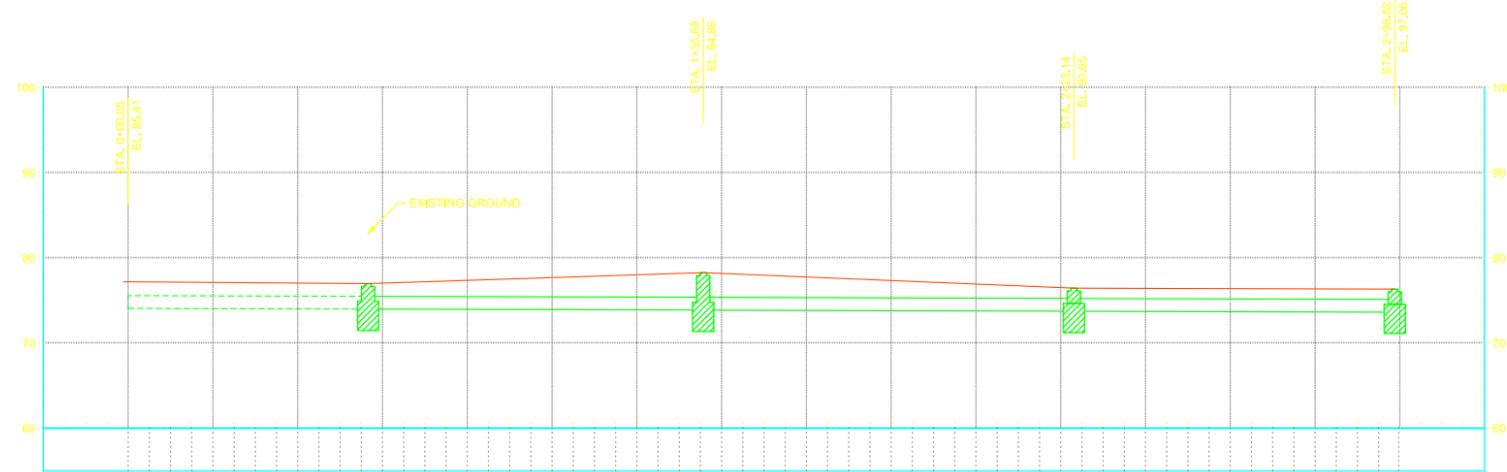
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Seals:

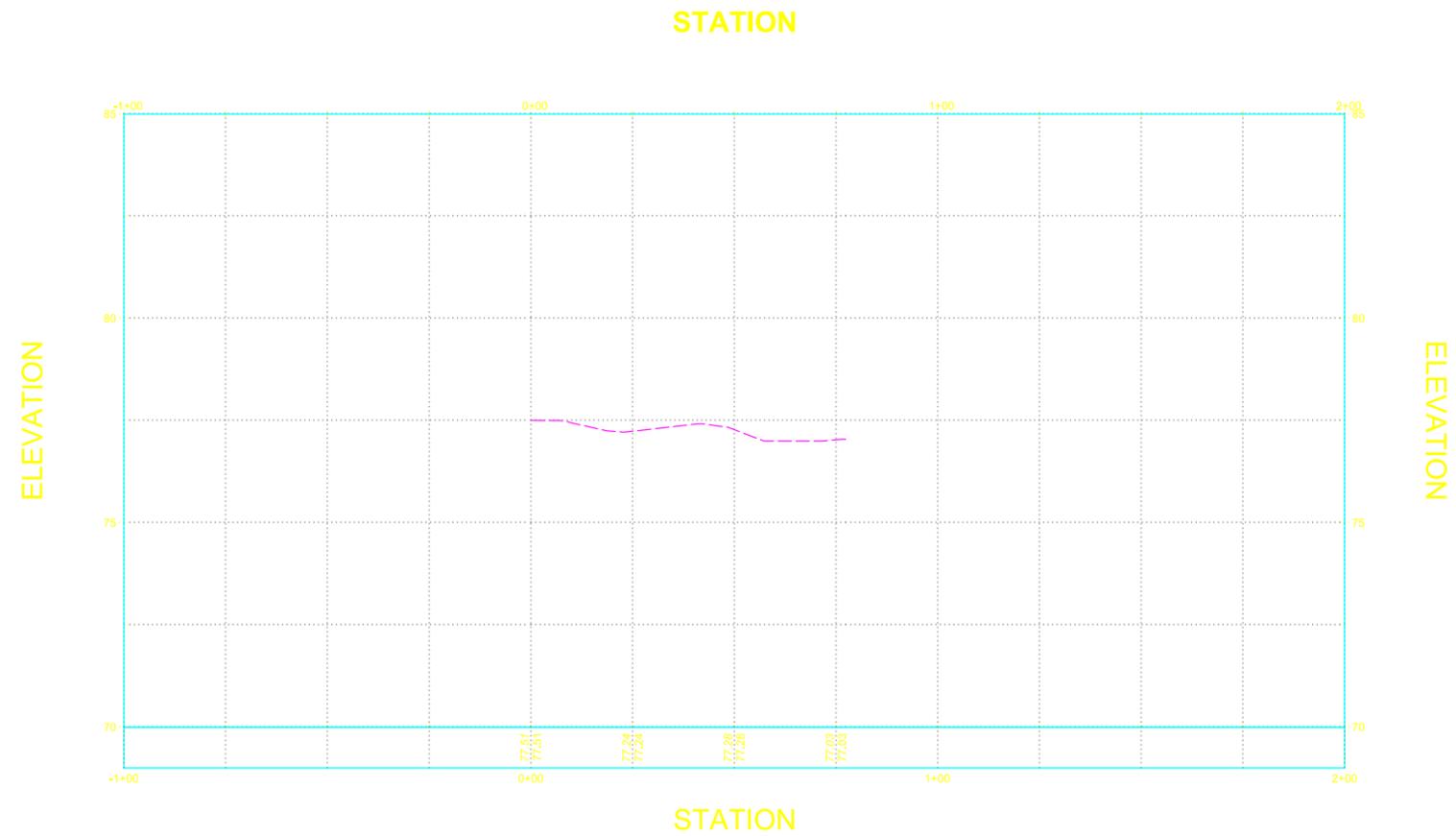


**EMANUEL BAPTIST CHURCH  
NEW SANCTUARY  
106 BOONE STREET  
SUMMERVILLE, SC 29483**



**ALIGNMENT - (1)**

**Profile View of CRIVEWAY**



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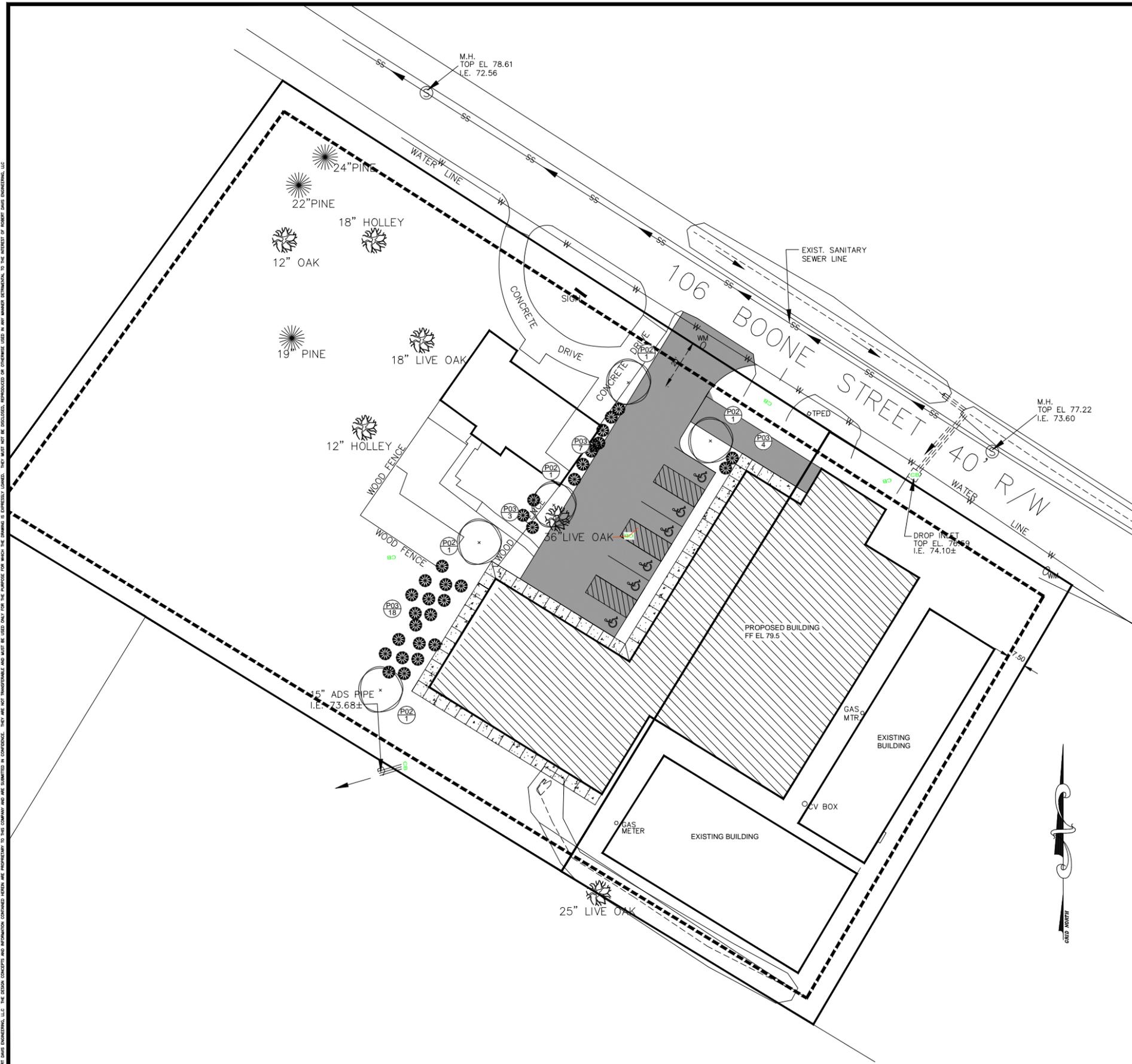
**SHEET TITLE**

**STORM  
DRAIN  
PROFILE**

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| Date     | 1/20/2019 |
| Job No.  | 19078     |

Sheet No.  
**C301**

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**LANDSCAPING PLAN**  
SCALE: 1"=20'

| PLANT SCHEDULE |      |                            |                             |                                        |                 |
|----------------|------|----------------------------|-----------------------------|----------------------------------------|-----------------|
| NUMBER         | QTY  | COMMON NAMES               | SCIENTIFIC NAME             | FLOWER COLOR                           | PLANTING HEIGHT |
| P01            | NONE | HIGHTOWER WILLOW OAK       | QUERCUS PHELLOS 'HIGHTOWER' |                                        | 8'-10'          |
| P02            | 4    | GRAPE MYRTLE, CREPE MYRTLE | LAGERSTROEMIA INDICA        | BLUE/VIOLET/LAVENDER, PINK/ROSE, WHITE | 8'-10'          |
| P03            | 32   | ENGLISH COMMON BOXWOOD     | BUXUS SEMPERVIRENS          | GREEN                                  | 12"-24"         |

NOTE:  
REFER TO SHEET C204 FOR LANDSCAPING NOTES AND DETAILS.



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Seals:

EMANUEL BAPTIST CHURCH  
NEW SANCTUARY  
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SUMMERVILLE, SC 29483

| Mark | Date | Description | Revisions |
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**SHEET TITLE**  
**LANDSCAPING PLAN**

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| Drawn     | AEB         |
| Designed  | RD          |
| Checked   | RD          |
| Date      | 1/20/2019   |
| Job No.   | 19078       |
| Sheet No. | <b>C107</b> |

# A NEW CAMPUS FOR EMANUEL BAPTIST CHURCH

106 BOONE STREET SUMMERVILLE SOUTH CAROLINA 29483

**OWNER CONTACT - ROBERT DAVIS JR.**  
181 E EVANS STREET-SUITE 210 - FLORENCE SC 29506  
1-843-536-0896 - robert@robertdavisengineering.com

**BRIEF NARRATIVE:**  
OWNER IS DEMOLISHING SEVERAL EXISTING BUILDINGS AND CONSTRUCTING A NEW METAL FRAMED BUILDING TO FUNCTION AS BOTH AN ASSEMBLY AREA AND BUSINESS AREA.



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- GENERAL NOTES**
- T1-1 TITLE SHEET-SITE PLAN
  - ARCHITECTURAL
  - A1-1 ARCHITECTURAL FLOOR PLAN
  - A1-2 SANCTUARY FLOOR PLAN
  - A1-3 SANCTUARY SECOND FLOOR PLAN
  - A1-4 OFFICE AREA FLOOR PLAN
  - A1-5 LIFE SAFETY PLAN
  - A1-6 RCP - CHURCH BUILDING
  - A1-7 RCP - ADMINISTRATION BUILDING
  - A1-8 MEZZ CEILING PLAN
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  - A2-1 EXTERIOR ELEVATIONS
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  - A3-1 BUILDING SECTION - ADMINISTRATION BUILDING
  - A3-2 BUILDING SECTION - SANCTUARY - MBM FRAME
  - A3-3 WALL SECTIONS
  - A4-1 STAIR DETAILS
  - A4-2 RAIL ELEVATION
  - A4-3 MEZZ SECTION
  - A4-4 SEISMIC CEILING DETAILS
  - A5-1 FINISH SCHEDULE
  - A5-2 DOOR SCHEDULE
  - A5-3 WINDOW TYPES

## SITE PREPARATION NOTES

IT IS THE RESPONSIBILITY OF THE OWNER TO PROVIDE A SITE GEOTECHNICAL INVESTIGATION FOR THIS PROJECT. SUB SOIL INVESTIGATION IS NEEDED TO DETERMINE THE BEARING CAPACITY OF THE SOIL AND IF THE SOIL IS SUITABLE FOR THE BEARING CONDITIONS.

EXISTING FINISH FLOOR HEIGHT 0.0' ABOVE SEA LEVEL, OWNER TO PROVIDE.

I CERTIFY THAT THIS STRUCTURE AS MODIFIED BY THE REFERENCED NOTES IS DESIGNED TO WITHSTAND WIND LOADS RESULTING FOR A BASIC WIND SPEED OF 140 MPH, 3-5 SEC GUST: BUILDING CAT. ONE, EXPOSURE "B"; IMPORTANCE FACTOR 1, SEISMIC ZONE A, ALL IN ACCORD WITH SECTION 1609, WIND LOADS and

- A. 2018 - International Building Code w/ South Carolina Modifications.
- B. 2018 - International Plumbing Code w/ South Carolina Modifications
- C. 2018 - International Mechanical Code w/ South Carolina Modifications
- D. 2018 - International Fuel Gas Code w/ South Carolina Modifications
- E. 2018 - International Fire Code w/ South Carolina Modifications
- F. 2017 - National Electrical Code
- G. 2009 - International Energy Conservation Code
- H. 2009 - ICC ANSI 117.1 - Accessible Buildings
- I. 2018 - International Residential Code w/ South Carolina Modifications
- J. 2018 - International Existing Building Code w/ South Carolina Modifications
- K. 2018 - International Swimming Pool Code

FURTHERMORE, TO THE BEST OF "MY KNOWLEDGE", THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES AND THE APPLICABLE FIRE-SAFETY STANDARDS AS DETERMINED BY THE LOCAL AUTHORITY, SUMMERVILLE SOUTH CAROLINA.

DARBY W. MCCLOSKEY, REGISTERED ARCHITECT

FLORIDA, GEORGIA AND SOUTH CAROLINA  
(NOT VALID WITHOUT ORIGINAL SIGNATURE)

FLORIDA LICENCE NO. AR-16696  
GEORGIA LICENCE NO. RA-9435  
SOUTH CAROLINA LICENCE NO. AR-9673

## PROPERTY INFORMATION

1. PROPERTY ADDRESS - 106 BOONE STREET, SUMMERVILLE SC, 29483
2. EXISTING LOT IS IN FEMA FLOOD "ZONE X" AND IN "ZONE AE"; SEE SITE PLAN FOR EXACT LOCATION
3. FEMA MAP - 45035C0343E, effective on 07/18/2017
4. MEAN AVERAGE GRADE AVAILABLE UPON REQUEST
5. AREA OF LOT 23,086.0 SQ. FEET (.53 ACRES)
6. PARCEL # - 130-140-600-8000
7. MEAN AVERAGE GRADE HAS NOT BEEN DETERMINED.
8. ZONING - NR
9. REQUIRED YARD SET BACKS FOR . - FRONT 20-0, REAR 20-0, SIDES 10-0
10. WATER AND WASTE SYSTEM HAS NOT BEEN DETERMINED.
11. THIS IS NOT A SURVEY, THIS IS A DIAGRAM OF EXISTING CONDITIONS.

## ARCHITECTURAL NOTES (UTILIZE NOTATIONS ONLY IF APPLICABLE TO THIS PROJECT)

- A. ALL WOOD IN CONTACT WITH GRADE, MASONRY, AUTOCLAVE AERATED CONCRETE, POURED IN PLACE CONCRETE, OR CONCRETE PRODUCTS SHALL BE PRESSURE TREATED.
- B. PRESSURE TREATED COLUMNS SHALL BE TREATED UC4B GROUND CONTACT, HEAVY DUTY. MICRONIZED COPPER AZOLE. (MCA)
- C. RETENTION LEVELS FOR P.T. MATERIAL ARE .06 FOR ABOVE-GROUND USE AND .15 FOR GROUND CONTACT AND .23 FOR BELOW GRADE APPLICATIONS.
- D. (if needed) COMMERCIAL DOOR HARDWARE SHALL BE SCHLAGE OR APPROVED EQUAL.
- E. DIMENSIONS ARE DRAWN TO FACE OF MASONRY, OR FACE OF WOOD STUDS, AND OR CENTER LINE OF COLUMNS SHOWN.
- F. (if needed) PROVIDE WOOD BLOCKING AT INTERIOR AND EXTERIOR WALLS FOR ACCESSORIES AND OTHER BUILDING COMPONENTS SUCH AS LIGHT FIXTURES ETC.
- G. FINISH GRADES SHALL SLOPE AWAY FROM BUILDING A MINIMUM 2% SLOPE.
- H. IT IS THE INTENT OF THESE DRAWINGS TO DOCUMENT A CONTINUOUS LOAD PATH FROM THE TOP OF THE BUILDING TO THE FOUNDATION OF THE BUILDING TO RESIST HURRICANE FORCE WINDS. THIS LOAD PATH IS CONSTRUCTED OF WOOD FRAMING MEMBERS (IE COLUMNS, BEAMS, RAFTERS, JOISTS AND SHEATHING) AND REINFORCED CONCRETE MASONRY. ALL CONNECTIONS ARE TO BE REINFORCED WITH METAL CONNECTIONS, PLATES BOLTS, AND OTHER FASTENERS. DETAILS SHOWN DESCRIBE TYPICAL CONNECTIONS BETWEEN FUNDAMENTAL STRUCTURAL COMPONENTS TO RESIST LIVE AND DEAD LOAD AND HURRICANE FORCE WINDS OF 120 MPH. OTHER SIMILAR DETAILS ARE TO BE CONSTRUCTED IN LIKE MANNER. THE CONTRACTOR MAY REVISE THESE DETAILS WITH PRIOR APPROVAL FROM THE ARCHITECT...SUBMIT REVISE DETAILS PRIOR TO CONSTRUCTING DETAILS
- I. ALL EXTERIOR FASTENERS SHALL BE STAINLESS STEEL OR G-185 GALVANIZED FOR BELOW GRADE P.T. WOOD MATERIAL.
- J. ALL EXTERIOR PLYWOOD **ROOF SHEATHING** IS TO BE NAILED TO RAFTERS WITH 8D RING SHANK GALVANIZED NAILS AT 6" O.C. (ALL LOCATIONS), AND 4" O.C. AT PANEL EDGES.
- K. ALL EXTERIOR PLYWOOD **WALL SHEATHING** IS TO BE NAILED TO STUDS WITH 8D COMMON GALVANIZED NAILS AT 6" O.C. (ALL LOCATIONS), AND 4" O.C. AT PANEL EDGES.
- L. (IF NEEDED) GENERAL CONTRACTORS TO PROVIDE ELECTRICAL RISER DIAGRAM AS REQUIRED BY AUTHORITY HAVING JURISDICTION.
- M. IT IS THE RESPONSIBILITY OF THE OWNER TO PROVIDE SOIL COMPACTION TESTING FOR FINAL VERIFICATION OF THE FOUNDATION LOADS ON THIS PROJECT.
- N. THE SITE IS NOT LOCATED WITHIN 200 FEET OF STATE WATERS.
- O. NPDES TESTING AND MONITORING BY OWNER, HOWEVER NOT REQUIRED ON THIS PROJECT.
- P. ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND OR STATE OF GEORGIA "BEST PRACTICE"
- Q. ALL PERMITS NECESSARY FOR CONSTRUCTION SHALL BE OBTAINED BY CONTRACTOR.
- R. ANY DEVIATIONS FROM THE PLANS ARE PROHIBITED WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT.
- S. THE CONTRACTOR IS TO IMMEDIATELY CONTACT THE ARCHITECT IF ANY UNFORESEEN COMPLICATIONS OR DISCREPANCIES OCCUR.
- T. THE ARCHITECT SHALL NOT BE HELD RESPONSIBLE FOR THE PHYSICAL CONSTRUCTION OF THE SITE / BUILDING / WITHOUT CONTRACTUAL INSPECTION OBLIGATIONS.
- U. FIELD CHANGES TO THE ENCLOSED STRUCTURE IS PROHIBITED. CONTACT ARCHITECT FOR DRAWING REVISIONS PRIOR TO CHANGING STRUCTURE.
- V. CONTRACTOR SHALL MAINTAIN A SAFE SITE AND MEET ALL APPROPRIATE REGULATIONS CONCERNING SAFETY.
- W. CONTRACTOR TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION BY CALLING THE CALL BEFORE YOU DIG HOTLINE: 1-800-282-7411.
- X. (optional) PROVIDE OPEN CELL R-30 SPRAY FOAM INSULATION AT ROOF PERIMETER, AND R-13 SPRAY FOAM INSULATION AT EXTERIOR WALLS AND CRAWL SPACE.
- Y. IT IS ACCEPTABLE FOR THE CONTRACTOR TO MAKE SUBSTITUTION TO THE DESIGN OF THIS PROJECT. SUBSTITUTIONS ARE REQUIRED TO HAVE SOUTH CAROLINA PRODUCT APPROVAL NUMBERS AND BE APPROVED BY THE AUTHORITY HAVING JURISDICTION. PLEASE FORWARD A COPY OF THE APPROVED SUBSTITUTIONS TO DARBY W. MCCLOSKEY, ARCHITECT.
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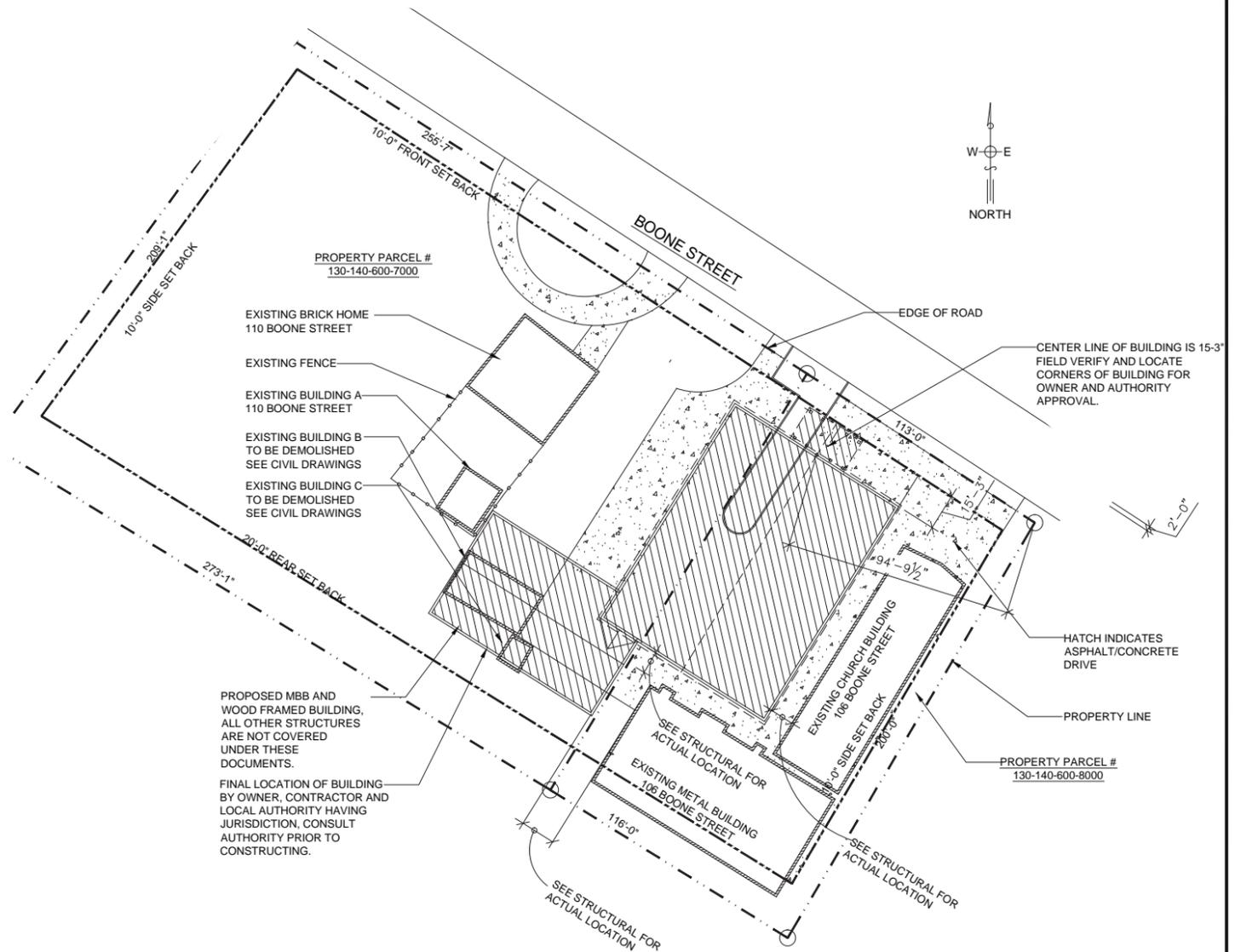
## GENERAL NOTES

1. SOUTH CAROLINA PRODUCT APPROVAL DATA SHALL BE REQUIRED FOR ALL EXTERIOR ENVELOPE MATERIALS. MATERIALS SHALL INCLUDE METAL ROOF, EXTERIOR WINDOWS AND DOORS, AND EXTERIOR SIDING
2. TERMITE TREATMENT OF SOIL IS REQUIRED UNDER THE SLAB AND FOOTERS
3. MINIMUM DEPTH OF STRUCTURAL FOOTING IS 12" BELOW EXISTING GRADE IBC 1805.2
4. FILL SHALL CONSIST OF STRUCTURAL SAND INSTALLED IN 8" MAXIMUM LIFTS COMPACTED TO A MINIMUM OF 95% OF THE MODIFIED PROCTOR DENSITY PER ASTM D-1557.
5. AT CONCRETE SLABS PROVIDE 6 MIL. POLY VAPOR BARRIER WITH 8" TAPPED AND LAPPED JOINTS.
6. WHERE SOILS UNSUITABLE FOR BEARING ARE EXPOSED WITHIN THE LIMITS OF EXCAVATION, FILL SHALL BE INSTALLED TO REPLACE THE UNSUITABLE MATERIALS.
7. OWNER / CONTRACTOR TO DETERMINE IF EXISTING SOIL HAS A MIN. BEARING CAPACITY OF 2500 PSI. CONTRACTOR TO EMPLOYEE A GEO-TECHNICAL ENGINEER TO TEST SOIL AND SUBMIT REPORT TO ARCHITECT.
8. SOIL AT BASE OF FOOTING SHALL BE CAPABLE OF SUPPORTING A MINIMUM COMPRESSIVE PRESSURE OF 2,000 PSF.
9. MINIMUM BAR LAP SPLICE TO BE 25".
10. CONCRETE MIX SHALL DESIGNED TO DEVELOP 3000 PSI AT 28 DAYS.

## SQUARE FOOTAGE CALCULATIONS:

|                                 |           |         |
|---------------------------------|-----------|---------|
| EXISTING METAL BUILDING:        | 4,329.75  | SQ. FT. |
| EXISTING CHURCH:                | 3,217.81  | SQ. FT. |
| EXISTING HOME:                  | 1,440.95  | SQ. FT. |
| BUILDING A:                     | 420.20    | SQ. FT. |
| BUILDING B:                     | 729.84    | SQ. FT. |
| BUILDING C:                     | 130.39    | SQ. FT. |
| CONCRETE/ASPHALT DRIVE          | 18,589.70 | SQ. FT. |
| PROPOSED METAL FRAMED BUILDING: | 12,245.14 | SQ. FT. |

|                            |           |         |
|----------------------------|-----------|---------|
| TOTAL SITE AREA            | 77,339.82 | SQ. FT. |
| PERCENTAGE OF LOT COVERAGE | 53.14%    |         |

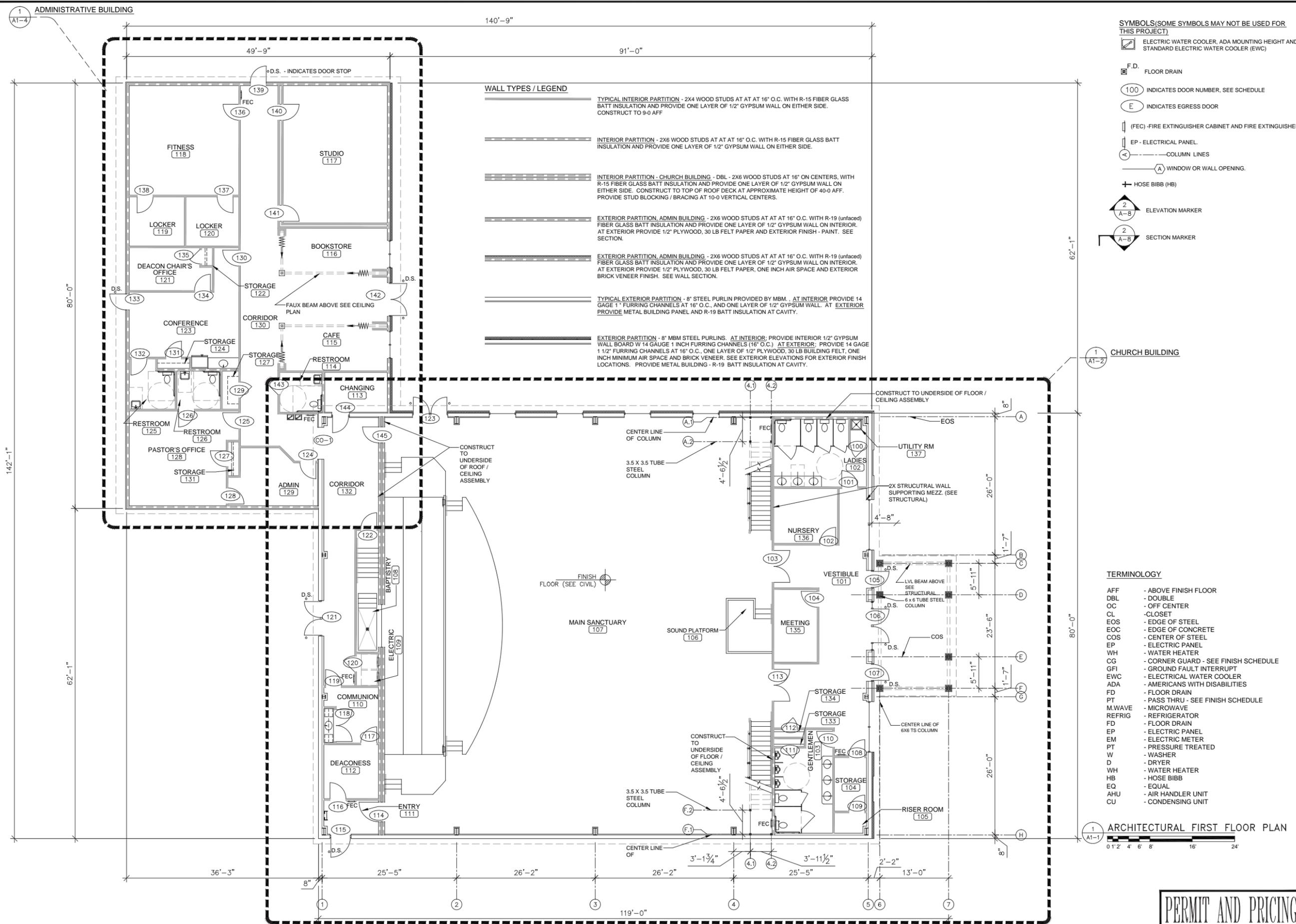


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Registered Architect, Florida, Georgia & South Carolina  
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Email : darby@darbyarchitect.com - Web : darbyarchitect.com

**EMANUEL BAPTIST CHURCH**  
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|            |
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| 1921       |
| 02-28-2020 |
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PERMIT AND PRICING



- SYMBOLS (SOME SYMBOLS MAY NOT BE USED FOR THIS PROJECT)**
- ELECTRIC WATER COOLER, ADA MOUNTING HEIGHT AND STANDARD ELECTRIC WATER COOLER (EWC)
  - F.D. FLOOR DRAIN
  - 100 INDICATES DOOR NUMBER, SEE SCHEDULE
  - E INDICATES EGRESS DOOR
  - (FEC) - FIRE EXTINGUISHER CABINET AND FIRE EXTINGUISHER
  - EP - ELECTRICAL PANEL
  - C COLUMN LINES
  - A WINDOW OR WALL OPENING
  - HOSE BIBB (HB)
  - ELEVATION MARKER
  - SECTION MARKER

- TERMINOLOGY**
- AFF - ABOVE FINISH FLOOR
  - DBL - DOUBLE
  - OC - OFF CENTER
  - CL - CLOSET
  - EOS - EDGE OF STEEL
  - EOC - EDGE OF CONCRETE
  - COS - CENTER OF STEEL
  - EP - ELECTRIC PANEL
  - WH - WATER HEATER
  - CG - CORNER GUARD - SEE FINISH SCHEDULE
  - GFI - GROUND FAULT INTERRUPT
  - EWC - ELECTRICAL WATER COOLER
  - ADA - AMERICANS WITH DISABILITIES
  - FD - FLOOR DRAIN
  - PT - PASS THRU - SEE FINISH SCHEDULE
  - M.WAVE - MICROWAVE
  - REFRIG - REFRIGERATOR
  - FD - FLOOR DRAIN
  - EP - ELECTRIC PANEL
  - EM - ELECTRIC METER
  - PT - PRESSURE TREATED
  - W - WASHER
  - D - DRYER
  - WH - WATER HEATER
  - HB - HOSE BIBB
  - EQ - EQUAL
  - AHU - AIR HANDLER UNIT
  - CU - CONDENSING UNIT

1 ARCHITECTURAL FIRST FLOOR PLAN  
A1-1

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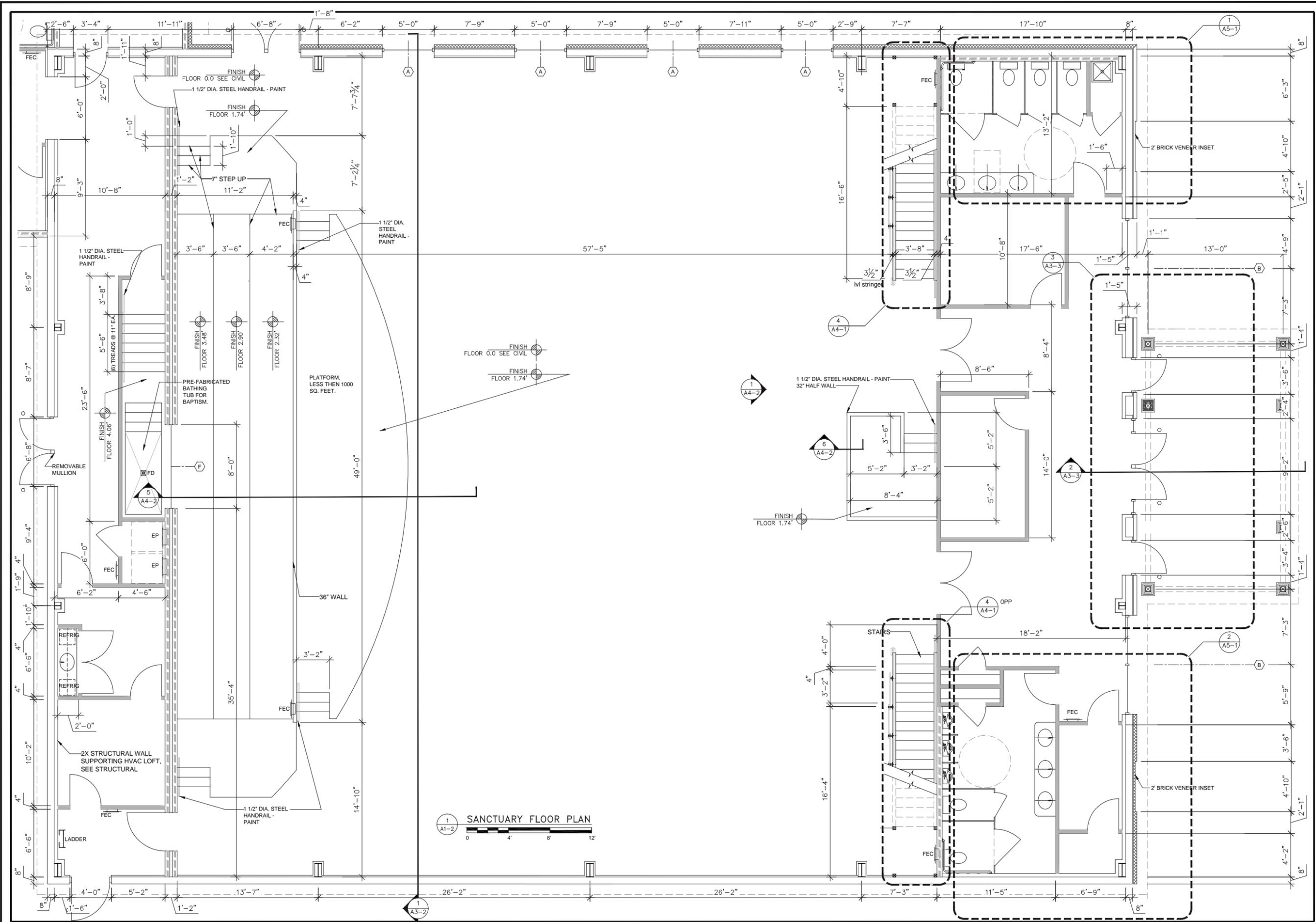


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A NEW CAMPUS FOR  
**EMANUEL BAPTIST CHURCH**  
106 BOONE STREET SUMMERVILLE SOUTH CAROLINA 29483  
OWNER CONTACT - ROBERT DAVIS, JR.  
181 E. EVANS STREET - SUITE 200 - FLORENCE, SC 29506  
1-843-538-0896 - robert@robertdavisengineering.com

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1 A1-2 SANCTUARY FLOOR PLAN



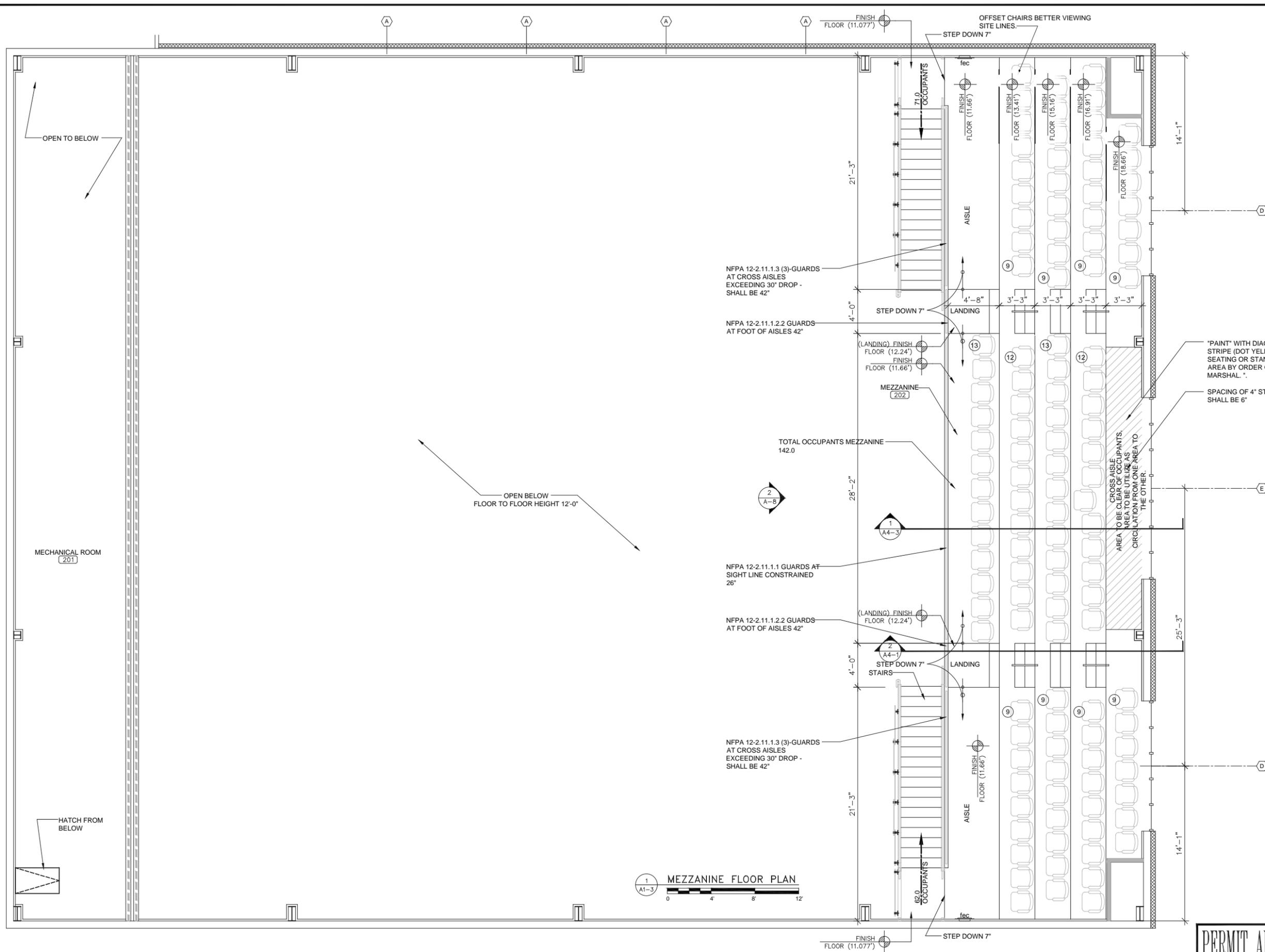
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A1-2



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A1-3  
MEZZANINE FLOOR PLAN  
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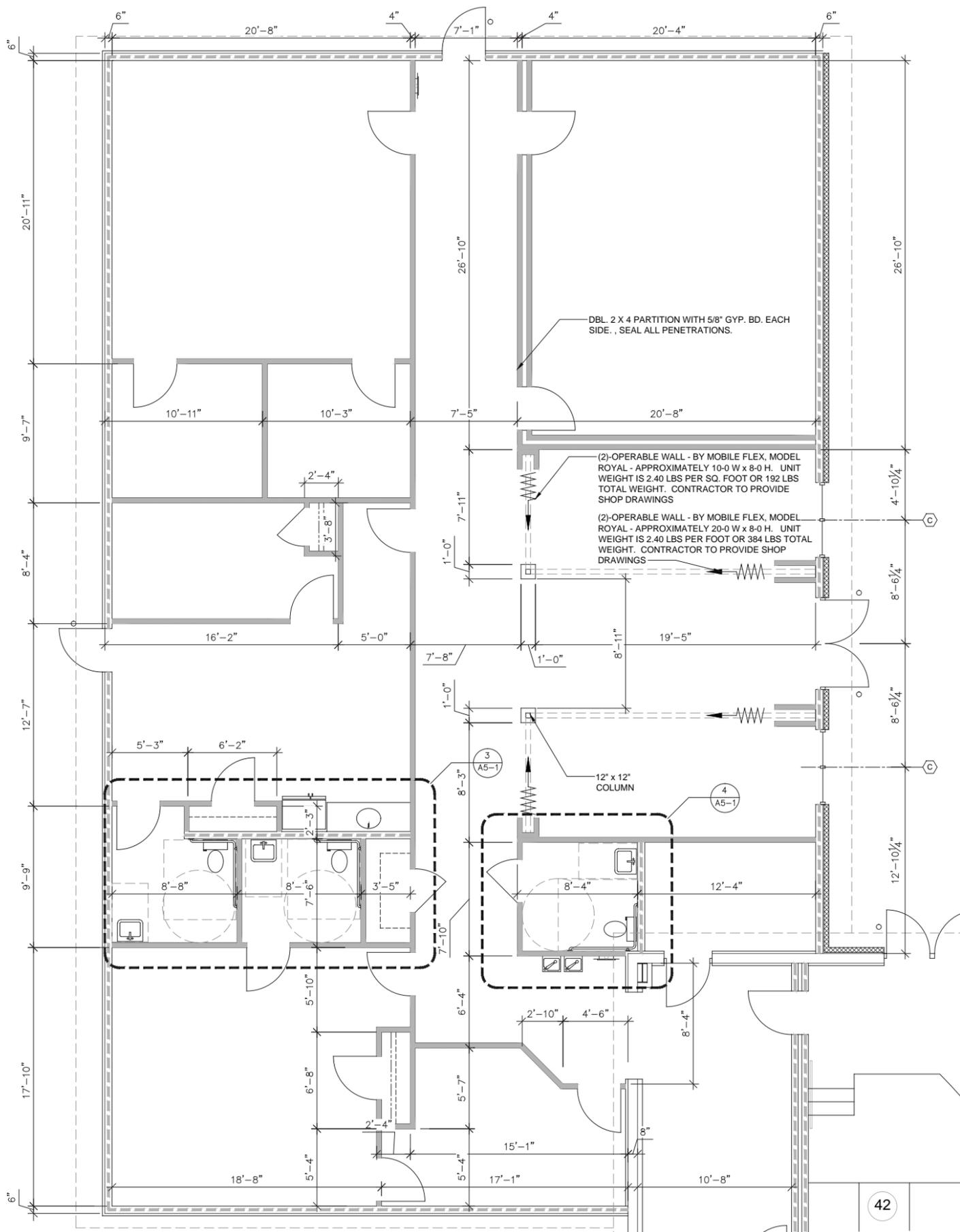
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A1-3



1 ADMINISTRATION FLOOR PLAN  
A1-4  
0 4' 8' 12'

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A1-4

**LIFE SAFETY**

1. **GROSS PROJECT AREA**  
 a. CHURCH BUILDING MAIN LEVEL 8375.0 SQ. FT.  
 b. MEZZANINE CHURCH BUILDING 1506.0 SQ. FT.  
 c. ADMINISTRATIVE BUILDING 3733.0 SQ.FT.

GROSS SQ. FT. 12108.0 SQ/FT (EXCLUDES MEZZ. PER SECTION 505)

2. **APPLICABLE CODE PER (see title sheet T1-1)**

3. **OCCUPANCY CLASSIFICATION** - 304.1 GROUP A.3 ASSEMBLY - RELIGIOUS WORSHIP.

4. **OCCUPANT LOAD CHURCH** - (NFPA - 101 - 8-1.7.1 (D)) - FIXED SEATING - **662.0 MAX OCCUPANTS**  
 A.A. CHURCH BUILDING - FIRST FLOOR - 520 CHURCH SEATING  
 CHAIR - 42, STAGE 14, LEFT SIDE 165, RIGHT SIDE 165, CENTER 134,  
 A.B. CHURCH BUILDING - MEZZANINE - 142 OCCUPANTS.  
 A.C. ADMINISTRATIVE BUILDING (NFPA 101 - 26-1.7) - 1/100 SQ. FT., **37.38 OCCUPANTS**

**TOTAL OCCUPANTS = 699.38 OCCUPANTS.**

5. **TYPE OF CONSTRUCTION** SCBC-602.5  
 A. TABLE 506.2 - TYPE V (B) - (A3) - (S1) - PROTECTED AND SPRINKLER  
 B. TABLE 506.2-ALLOWABLE SQ. FT. IS 24,000.0 (SEE BELOW ABBREVIATIONS)  
 PROPOSED/PROVIDED 13,614.0 SQ/FT.  
 C. TABLE 504.3 (ALLOWABLE) HEIGHT 50-0 FEET., PROPOSED 42-8  
 D. TABLE 504.4 -(ALLOWABLE) NO. OF STORY (2), PROPOSED (1) WITH MEZZANINE.  
 E. TABLE 506.2 - UL = Unlimited; NP = Not Permitted; NS = Buildings not equipped throughout with an automatic sprinkler system; S1 = Buildings a maximum of one story above grade plane equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1; S1R = Buildings two or more stories above grade plane equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.2; S13D = Buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.3.

6. **Seismic Risk Category** TABLE 1604.5

- Seismic Risk Category III - Buildings and other structures that represent a substantial hazard to human life in the event of failure, including but not limited to: Buildings and other structures whose primary occupancy is public assembly with an occupant load greater than 300.
- IBC - 1613.2.2 Site class definitions: - Based on the site soil properties, the site shall be classified as Site Class A, B, C, D, E or F in accordance with Chapter 20 of ASCE 7.
- Where the soil properties are not known in sufficient detail to determine the site class, Site Class D, subjected to the requirements of Section 1613.2.3, shall be used unless the building official or geotechnical data determines that Site Class E or F soils are present at the site.
- Emanuel church is utilizing Design category "D".
- GENERAL CONTRACTOR SHALL SUBMIT CEILING SHOP DRAWINGS FOR ACTUAL CEILING INSTALLATION. APPROVAL BY ARCHITECT AND LOCAL AUTHORITIES IS REQUIRED PRIOR TO CONSTRUCTING OR ORDERING MATERIAL FOR CEILING INSTALLATION.

**LIFE SAFETY (CONTINUE)**

6. **TOILET FIXTURES - (IBC SECTION 403).**  
 A. TOILETS - 1/150 MEN AND 1/75 WOMEN.  
 B. LAV - 1/200.  
 C. DRINKING FOUNTAINS. 1/1000. - 2 REQUIRED, (ONE ADA).  
 D. SERVICE SINK - 1

TOILET REQUIRED - 2 FOR MEN AND 3.90 FOR WOMEN.

7. **FIRE RESISTANCE REQUIREMENTS**  
 A. TABLE 601 TYPE V (A) REDUCTION TO "0" HOURS PER SUB NOTE e....  
 B. EXTERIOR WALLS SHALL REMAIN ONE HOUR RATED.

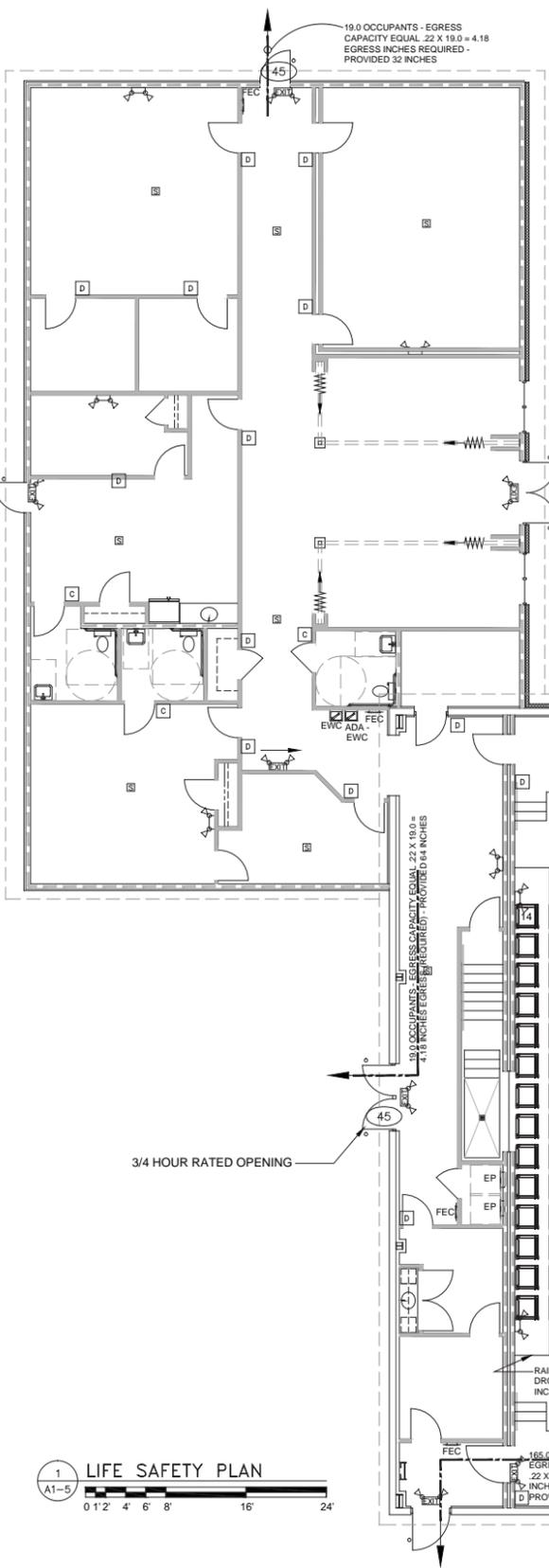
8. **MISC. CODE REQUIREMENTS**  
 A. SBC-1609-(3).1 - 1 MIN. WIND LOAD, SEE STRUCTURAL  
 B. SBC-1006.2.1 - TWO EXITS ARE REQUIRED, TRAVEL DISTANCE FOR SINGLE EXIT IS GREATER THEN 75-0  
 C. 1009.4 WIDTH. THE WIDTH OF STAIRWAYS SHALL BE DETERMINED AS SPECIFIED IN SECTION 1005.1, BUT SUCH WIDTH SHALL NOT BE LESS THAN 44 INCHES (1118 MM). SEE SECTION 1007.3 FOR ACCESSIBLE MEANS OF EGRESS STAIRWAYS. EXCEPTIONS: STAIRWAYS SERVING AN OCCUPANT LOAD OF LESS THAN 50 SHALL HAVE A WIDTH OF NOT LESS THAN 36 INCHES (914 MM).  
 D. 1009.7.2 RISER HEIGHT AND TREAD DEPTH. STAIR RISER HEIGHTS SHALL BE 7 INCHES (178 MM) MAXIMUM AND 4 INCHES (102 MM) MINIMUM. RECTANGULAR TREAD DEPTHS SHALL BE 11 INCHES.  
 E. NFPA 101-12.2.3.6.4 (2) - MAIN ENTRANCE SHALL CONTAIN HALF TOTAL OCCUPANTS.  
 F. 101-12.2.3.6.2.3 (2) - MAIN ENTRANCE SHALL HAVE EGRESS WIDTH OF AT LEAST 1/2 TOTAL OCCUPANT LOAD OF 22 X 330 = 72.6 INCHES - (SEE 12.2.3.2 CAPACITY FACTOR).  
 H. NFPA 101-MIN. FIRE PROTECTION - 45 MIN OPENINGS REQUIRED FOR 1 HOUR PARTITIONS.  
 I. NFPA 220 - 4.1.1 - TYPE V - (OOO) - UNPROTECTED, SPRINKLERED.  
 J. NFPA 8-2.2.2.3 PANIC HARDWARE REQUIRED.  
 K. NFPA CAPACITY FACTOR - DOORWAYS .220 X (NO OF OCCUPANTS) = 132 CLEAR EGRESS CAPACITY.

9. **ACOUSTICAL CEILING SUMMARY OF IBC SEISMIC INSTALLATION REQUIREMENTS**

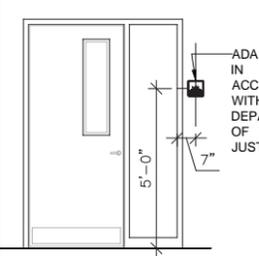
| IBC CATEGORY | IBC INSTALLATION REQUIREMENTS                                |
|--------------|--------------------------------------------------------------|
| A, B         | Ceiling installation shall conform to minimums in ASTM C636. |
| C            | Installed to ASTM E580 Seismic Design Category C.            |
| D, E, F      | Installed to ASTM C636 and ASTM E580                         |

- Minimum 7/8" wall molding
- Suspension system must not be attached to the wall molding
- Minimum 3/8" clearance on all sides
- Minimum 3/8" overlap of the suspension system on the wall molding
- Ends of main beams and cross tees must be tied together to prevent their spreading
- Safety wires required on light fixtures

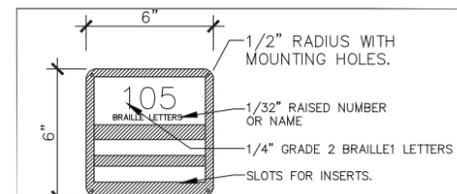
- Minimum 2" wall molding
- Suspension system must be attached to two adjacent walls - opposite walls must have a 3/4" clearance
- Heavy-duty suspension system
- Ceiling areas over 1,000 SF must have horizontal restraint wire or rigid bracing
- Ceiling areas over 2,500 SF must have seismic separation joints or full height partitions
- Ceilings without rigid bracing must have 2" oversized trim rings for sprinklers and other penetrations
- Changes in ceiling plane must have positive bracing
- Cable trays and electrical conduits must be independently supported and braced
- Suspended ceilings will be subject to special inspection
- Perimeter support wires within 6"



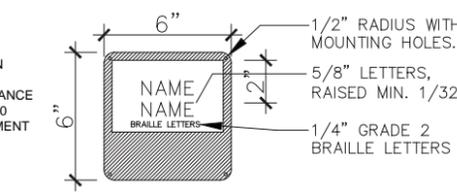
2 ADA SIGN "C"  
 A1-5 N.T.S



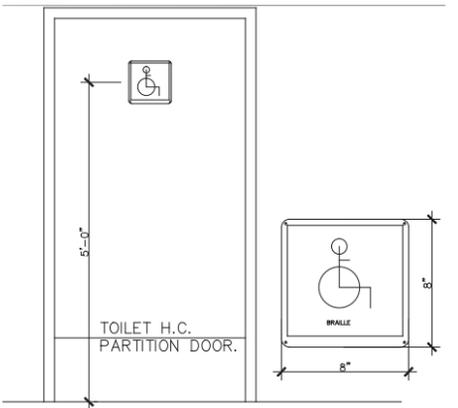
4 ADA SIGN LOCATION  
 A1-5 0 1-0 2-0 3-0 4-0 6-0



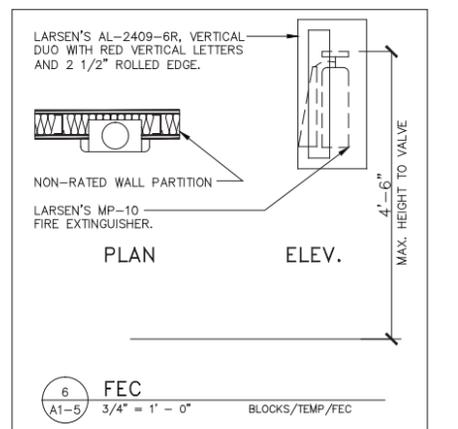
3 ROOM SIGN "A" (not used)  
 A1-5 3" = 1' - 0" BLOCKS/TEMP/SIGN-A



5 ROOM SIGN "D"  
 A1-5 3" = 1' - 0" BLOCKS/TEMP/SIGN-D



7 ROOM SIGN "B"  
 A1-5 3/4" = 1' - 0" BLOCKS/TEMP/SIGN-B



6 FEC  
 A1-5 3/4" = 1' - 0" BLOCKS/TEMP/FEC



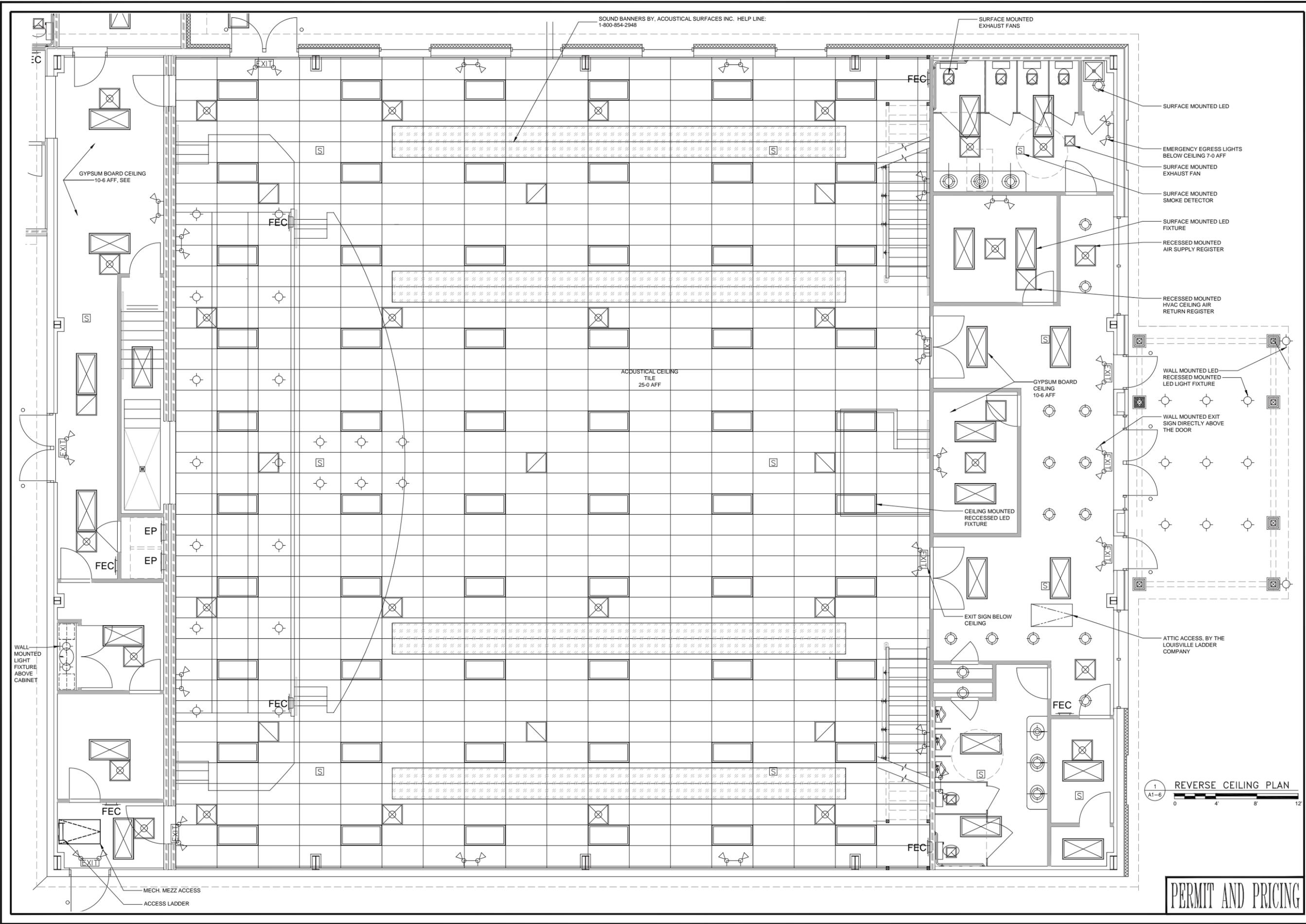
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SURFACE MOUNTED  
EXHAUST FANS

SURFACE MOUNTED LED

EMERGENCY EGRESS LIGHTS  
BELOW CEILING 7-0 AFF

SURFACE MOUNTED  
EXHAUST FAN

SURFACE MOUNTED  
SMOKE DETECTOR

SURFACE MOUNTED LED  
FIXTURE

RECESSED MOUNTED  
AIR SUPPLY REGISTER

RECESSED MOUNTED  
HVAC CEILING AIR  
RETURN REGISTER

WALL MOUNTED LED  
RECESSED MOUNTED  
LED LIGHT FIXTURE

WALL MOUNTED EXIT  
SIGN DIRECTLY ABOVE  
THE DOOR

ATTIC ACCESS, BY THE  
LOUISVILLE LADDER  
COMPANY

ACOUSTICAL CEILING  
TILE  
25-0 AFF

GYPSUM BOARD CEILING  
10-6 AFF, SEE

GYPSUM BOARD  
CEILING  
10-6 AFF

CEILING MOUNTED  
RECESSED LED  
FIXTURE

EXIT SIGN BELOW  
CEILING

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A1-6 REVERSE CEILING PLAN



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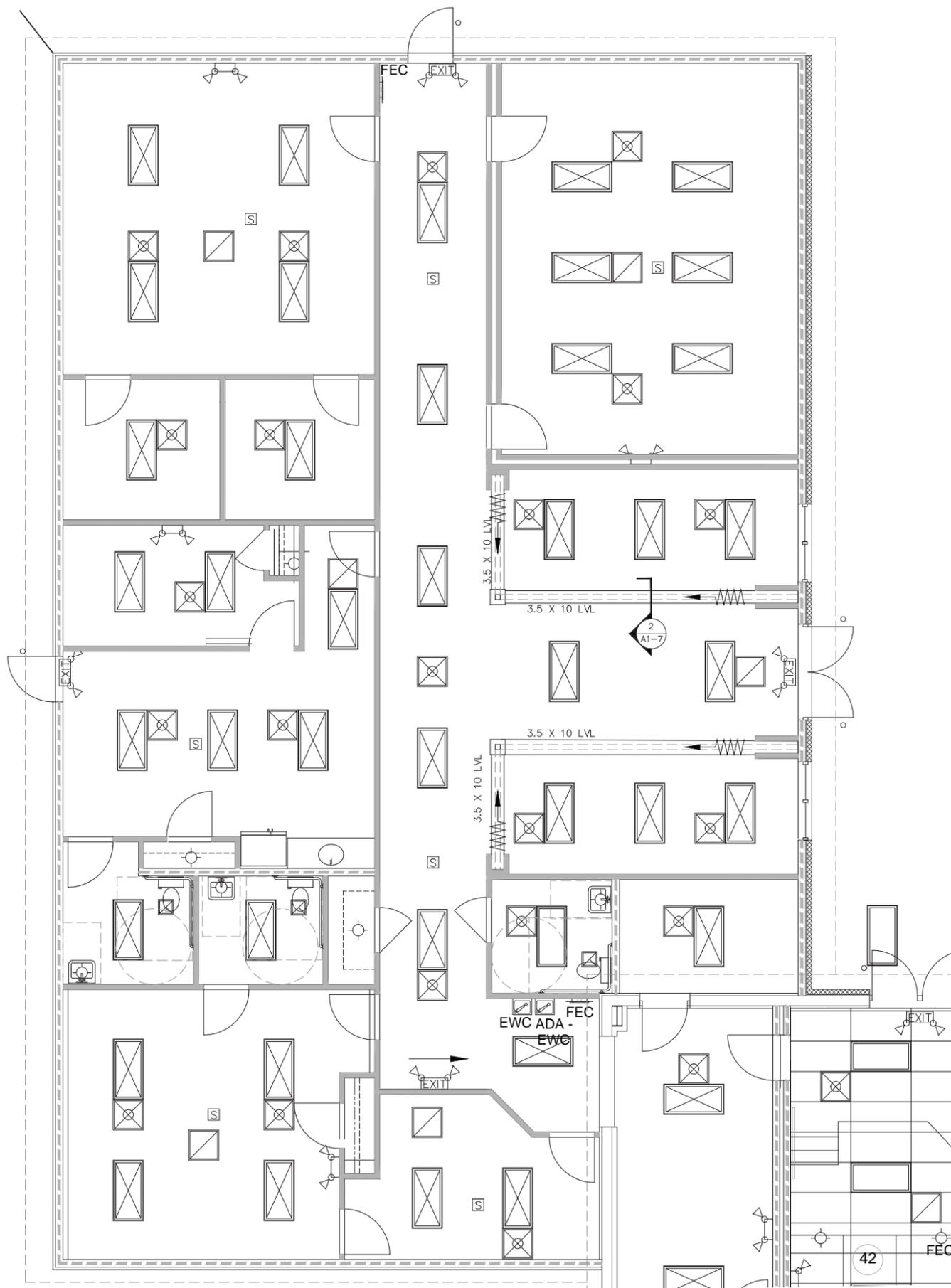
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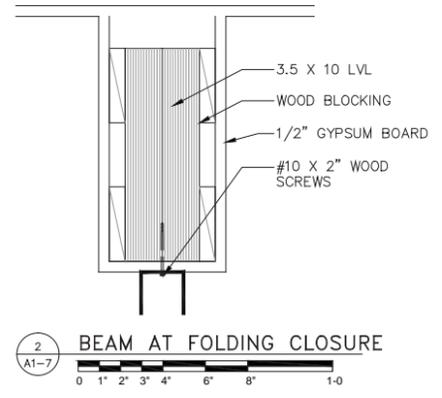
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| ELECTRICAL SYMBOLS LEGEND                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ELECTRICAL SYMBOLS LEGEND                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>⊕ DUPLEX CONVENIENCE OUTLET</li> <li>⊕ DUPLEX OUTLET TOP SWITCHED</li> <li>⊕ WP DUPLEX OUTLET - WATERPROOF</li> <li>⊕ DUPLEX OUTLET - VERIFY HEIGHT</li> <li>⊕ GFI DUPLEX OUTLET - GROUND FAULT INTERRUPT.</li> <li>⊕ DEDICATED OUTLET</li> <li>⊕ SPECIAL OUTLET - VERIFY</li> <li>⊕ QUADRAPLEX OUTLET</li> <li>⊕ DUPLEX OUTLET FLOOR MOUNTED</li> <li>⊕ SWITCH</li> <li>⊕ SWITCH - 3 WAY</li> <li>⊕ R SWITCH WITH RHEOSTAT</li> <li>○ RECESSED LED LIGHT</li> <li>○ P CEILING MOUNT LED WITH PULLSTRING</li> <li>○ CEILING MOUNT LED</li> <li>○ W WALL MOUNT LIGHT</li> <li>○ P CEILING MOUNTED LED PENDANT LIGHT</li> <li>⊕ G GARAGE DOOR OPENER</li> <li>⊕ P PUSH BUTTON - GARAGE DOOR</li> <li>▬ SURFACE MOUNTED 1X4, LED FIXTURE, CHAIN PULL</li> <li>▬ SURFACE MOUNTED 1X8, LED FIXTURE, CHAIN PULL</li> <li>▬ CHAIN MOUNTED &amp; SUSPENDED 1X4, LED FIXTURE, APPROXIMATE HEIGHT 10-0</li> <li>▬ CHAIN MOUNTED &amp; SUSPENDED 1X8 LED FIXTURE APPROXIMATE HEIGHT 10-0</li> <li>▬ UNDER CABINET SLIM LINE FLUORESCENT FIXTURE</li> <li>▬ LED RECESSED 1X4 FIXTURE</li> <li>▬ LED, RECESSED 2X4 FIXTURE</li> <li>▬ LED, RECESSED 2X2 FIXTURE</li> <li>▬ LED, SURFACE 2X2 FIXTURE</li> <li>▬ LED, SURFACE MOUNTED 1X4 FIXTURE</li> <li>▬ LED, SURFACE MOUNTED 2X4 FIXTURE</li> <li>▬ FLUORESCENT 1X4 WALL MOUNTED LIGHT FIXTURE</li> <li>▬ DIRECTIONAL TRACK LIGHTING</li> <li>▬ FLOOD LIGHT - DIRECTIONAL</li> <li>○ TELEPHONE OUTLET</li> <li>○ TELEVISION CABLE OUTLET</li> <li>○ SURFACE MOUNTED DOME/LED LIGHT FIXTURE</li> <li>⊕ EXHAUST FAN AND LIGHT</li> <li>⊕ DOOR CHIME</li> <li>○ PUSH BUTTON</li> <li>⊕ FA FIRE ALARM PULL STATION</li> <li>⊕ FAS FIRE ALARM STROBE LIGHT</li> <li>⊕ S SMOKE DETECTOR</li> <li>⊕ GARAGE DOOR SENSOR</li> <li>⊕ SMART JACK</li> </ul> | <ul style="list-style-type: none"> <li>⊕ A/C THERMOSTAT.</li> <li>⊕ FIRE EXTINGUISHER</li> <li>⊕ OUTDOOR CENTRAL AC UNIT AND DISCONNECT</li> <li>⊕ INDOOR CENTRAL AC UNIT, CONNECT TO PANEL</li> <li>▬ WALL MOUNTED VRF 36X14X12 Variable Refrigerant Flow - AC-UNIT BY DAIKIN OR APPROVED EQUAL.</li> <li>⊕ RECESSED CEILING CASSETTE-24X24X12 VRF-Variable Refrigerant Flow - AC-UNIT BY DAIKIN OR APPROVED EQUAL.</li> <li>⊕ VARIABLE REFRIGERANT FLOW, OUT DOOR UNIT WITH 4" CONCRETE PAD. VERIFY LOCATION WITH OWNER.</li> <li>⊕ 14X8 HVAC CEILING AIR SUPPLY REGISTER</li> <li>⊕ 24X24 HVAC CEILING AIR SUPPLY REGISTER</li> <li>⊕ 24X24 HVAC CEILING AIR RETURN REGISTER</li> <li>⊕ 8X8 HVAC CEILING AIR EXHAUST REGISTER</li> <li>⊕ CEILING FAN. CEILING FAN W/ LIGHT KIT</li> <li>⊕ ELECTRICAL METER</li> <li>⊕ ELECTRICAL PANEL</li> <li>⊕ GARAGE DOOR OPENER</li> <li>▬ 60 INCH TELEVISION AND CONSOLE</li> <li>⊕ GARBAGE DISPOSAL</li> <li>⊕ CHANDELIER WITH LED LIGHT BULBS</li> <li>⊕ EXIT DIRECTIONAL EXIT SIGN WITH BATTERY BACK UP</li> <li>⊕ EMERGENCY EGRESS LIGHTING</li> <li>⊕ LED EXTERIOR MONITOR ACTIVATED</li> </ul> |



1 ADMINISTRATION AREA REVERSE CEILING PLAN  
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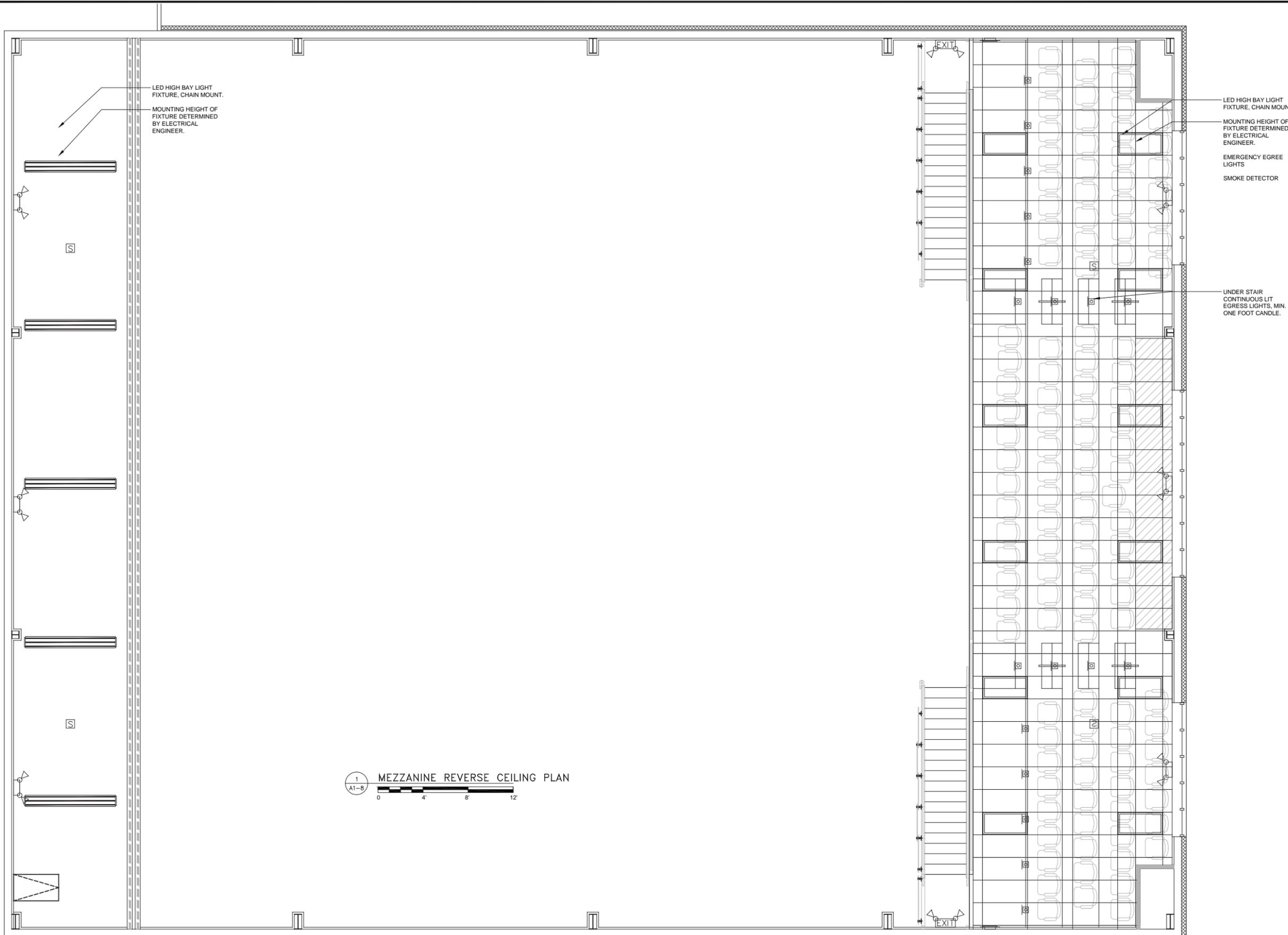
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LED HIGH BAY LIGHT  
FIXTURE, CHAIN MOUNT.  
MOUNTING HEIGHT OF  
FIXTURE DETERMINED  
BY ELECTRICAL  
ENGINEER.

LED HIGH BAY LIGHT  
FIXTURE, CHAIN MOUNT.  
MOUNTING HEIGHT OF  
FIXTURE DETERMINED  
BY ELECTRICAL  
ENGINEER.  
EMERGENCY EGREE  
LIGHTS  
SMOKE DETECTOR

UNDER STAIR  
CONTINUOUS LIT  
EGRESS LIGHTS, MIN.  
ONE FOOT CANDLE.

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A1-8 MEZZANINE REVERSE CEILING PLAN  
0 4' 8' 12'



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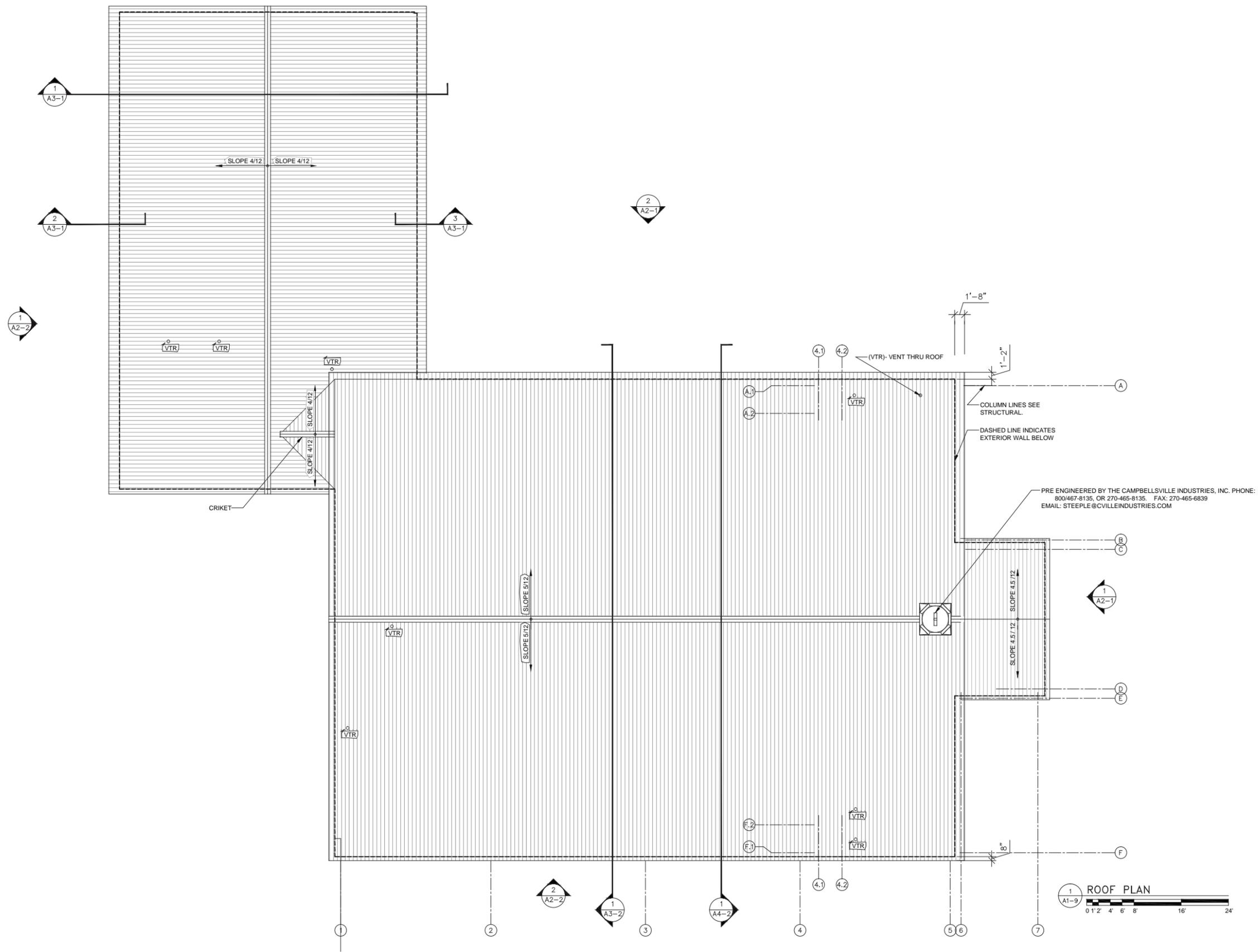
**Darby W. McCloskey, AIA**  
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1700 FREDERICA ROAD SUITE #203, St. Simons GA, 31522 - 912-996-7942  
Email : darby@darbyarchitect.com - Web : darbyarchitect.com

A NEW CAMPUS FOR  
**EMANUEL BAPTIST CHURCH**  
106 BOONE STREET SUMMERVILLE SOUTH CAROLINA 29483  
OWNER CONTACT - ROBERT DAVIS JR.  
181 E. EVANS STREET - SUITE 210 - FLORENCE SC 29506  
1-843-638-0886 - robert@robertdavisengineering.com

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PERMIT AND PRICING

A1-8



1  
A1-9  
ROOF PLAN  
0 1' 2' 4' 6' 8' 16' 24'

PERMIT AND PRICING



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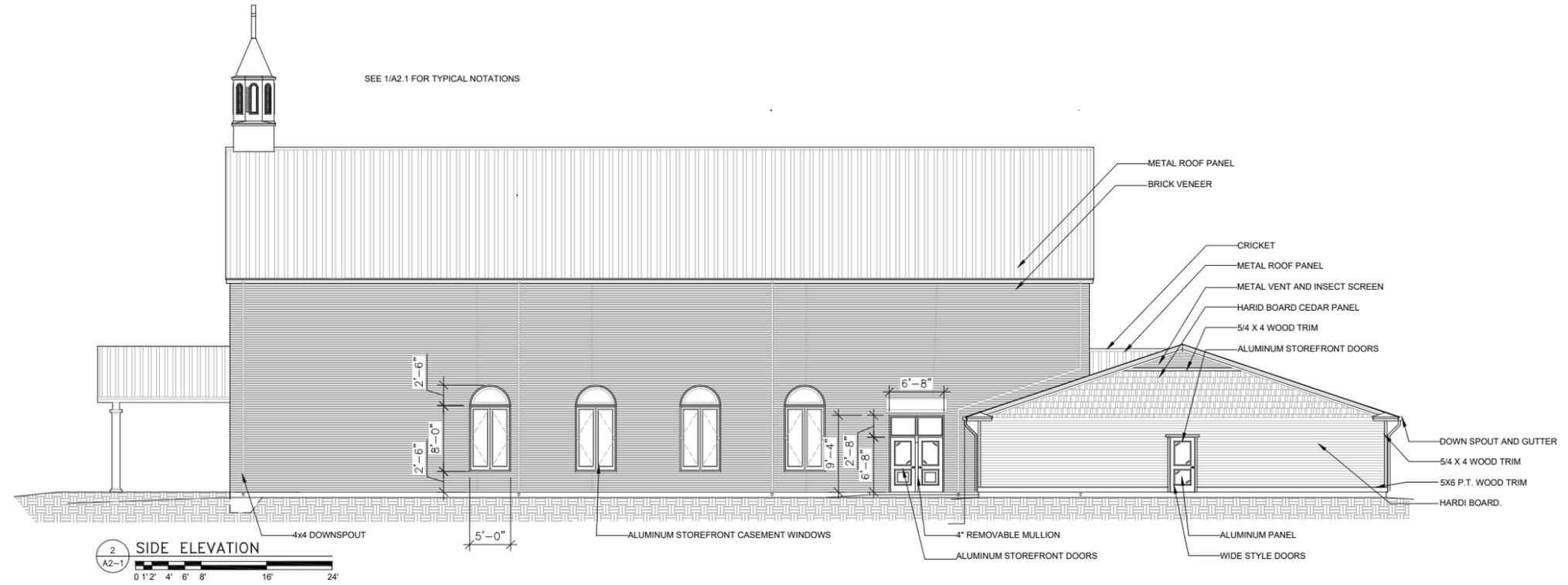
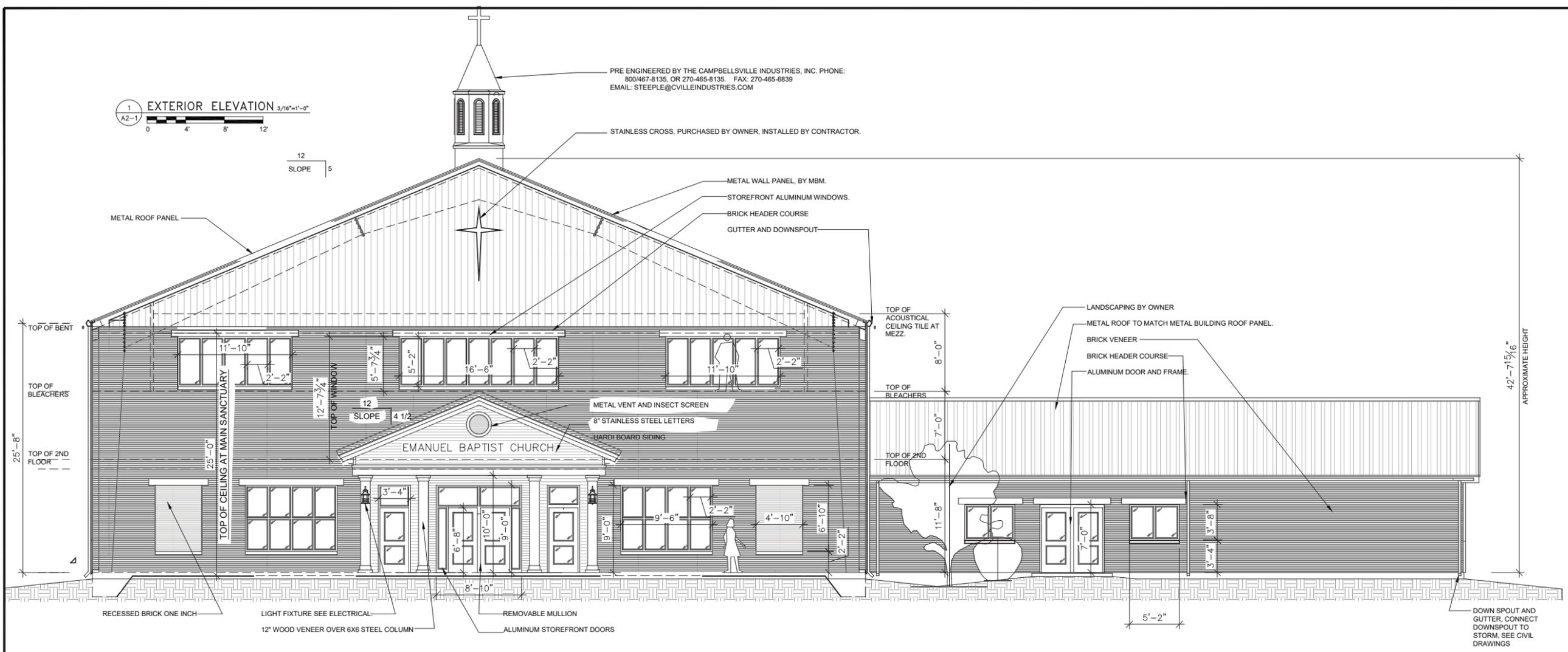
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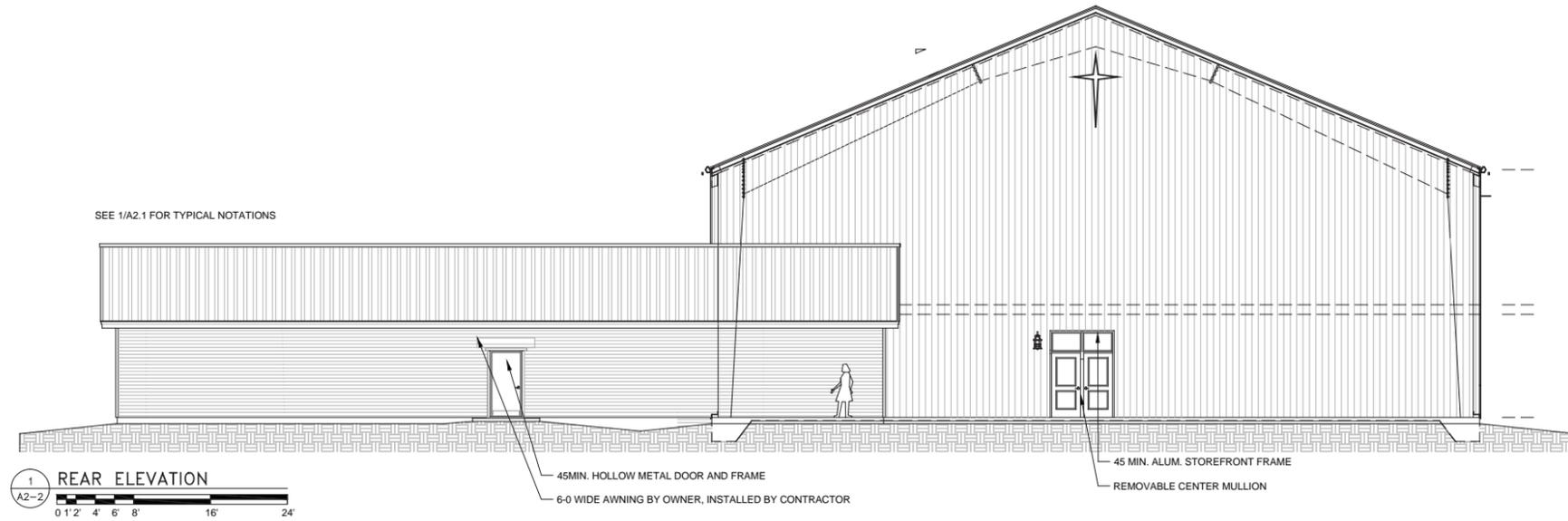
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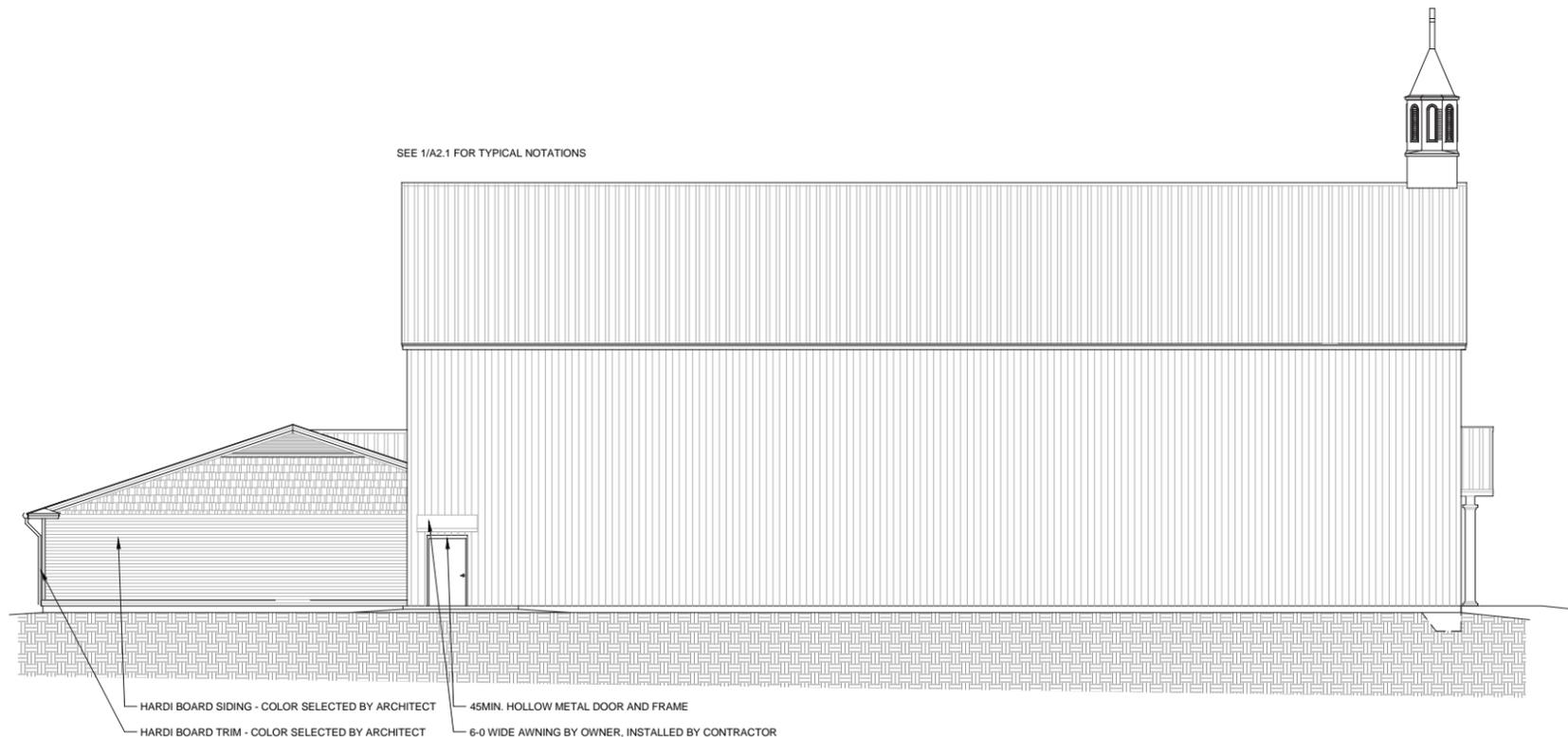
A2-1

PERMIT AND PRICING





1 REAR ELEVATION  
0' 1' 2' 4' 6' 8' 16' 24'



2 SIDE ELEVATION  
0' 1' 2' 4' 6' 8' 16' 24'



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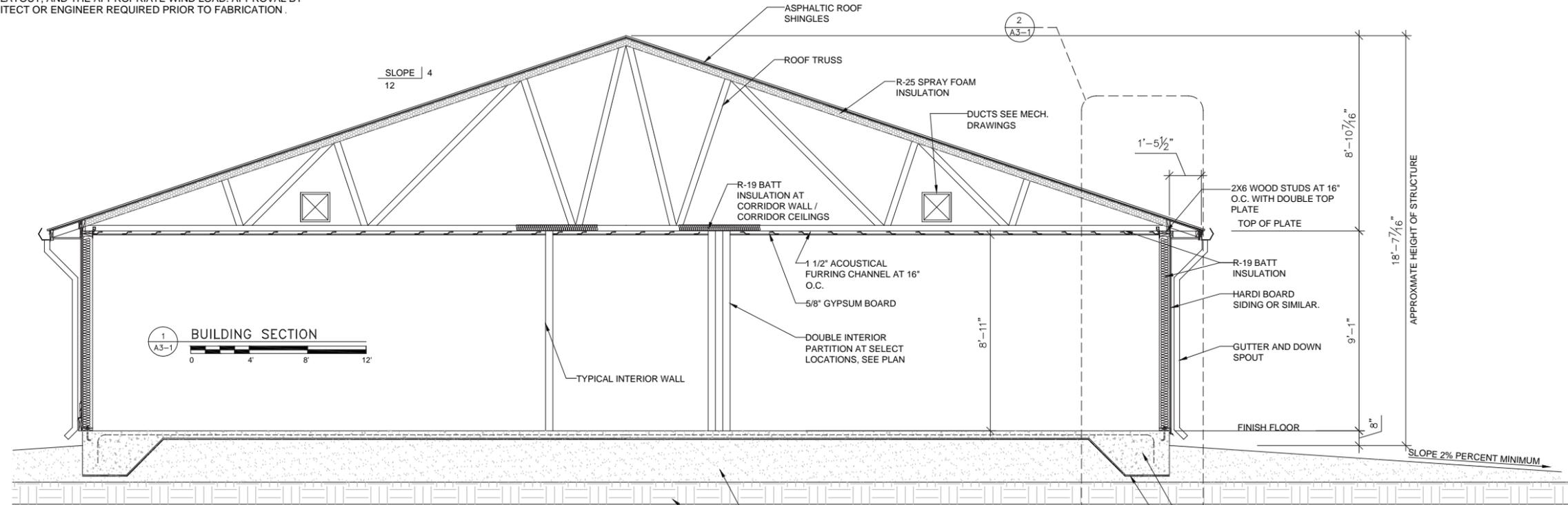
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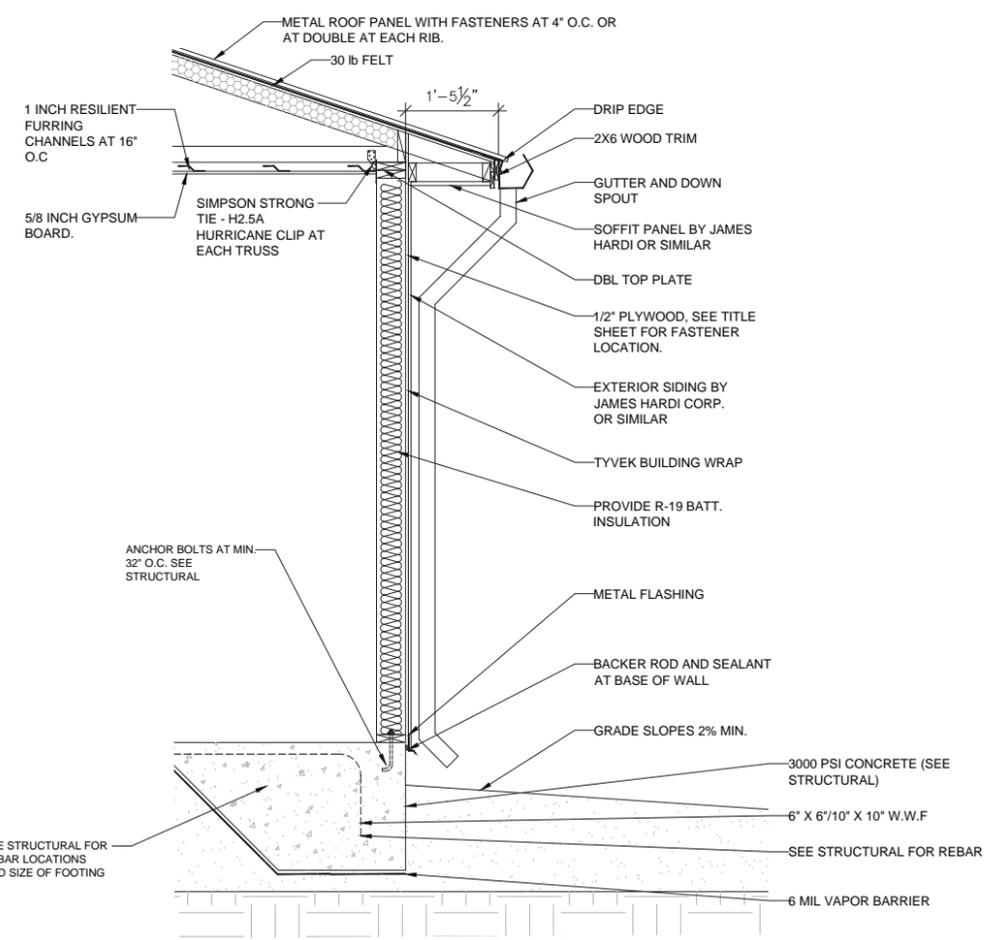
PERMIT AND PRICING

A2-2

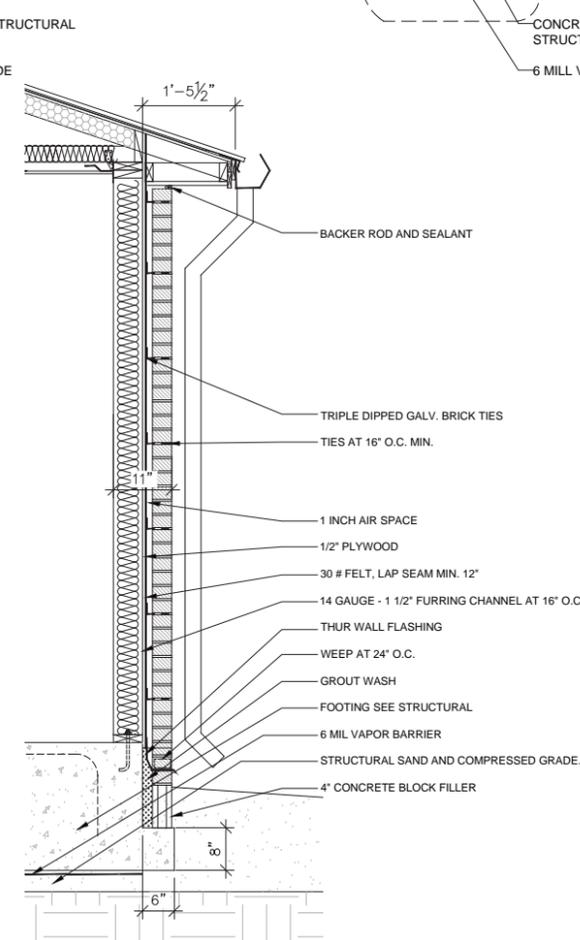
NOTE : CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR WOOD TRUSSES , BUILDING INSULATION SYSTEM, LOAD REACTIONS, ANCHOR BOLT LAYOUT, AND THE APPROPRIATE WIND LOAD. APPROVAL BY ARCHITECT OR ENGINEER REQUIRED PRIOR TO FABRICATION .



1 BUILDING SECTION  
0 4 8 12



2 WALL SECTION  
0 6 1-0 1-6 2-0 3-0



3 WALL SECTION  
0 6 1-0 1-6 2-0 3-0



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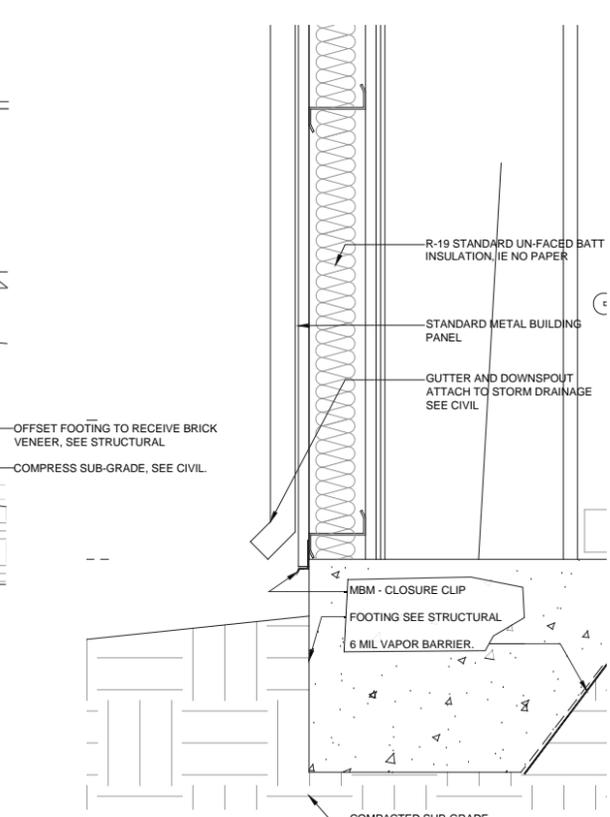
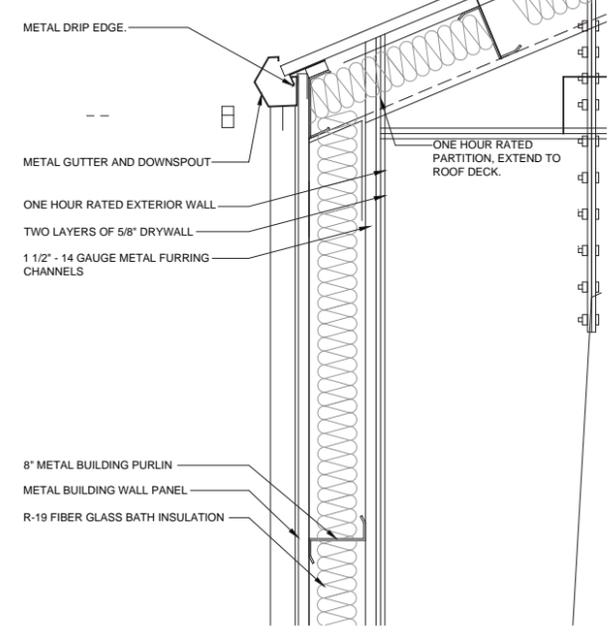
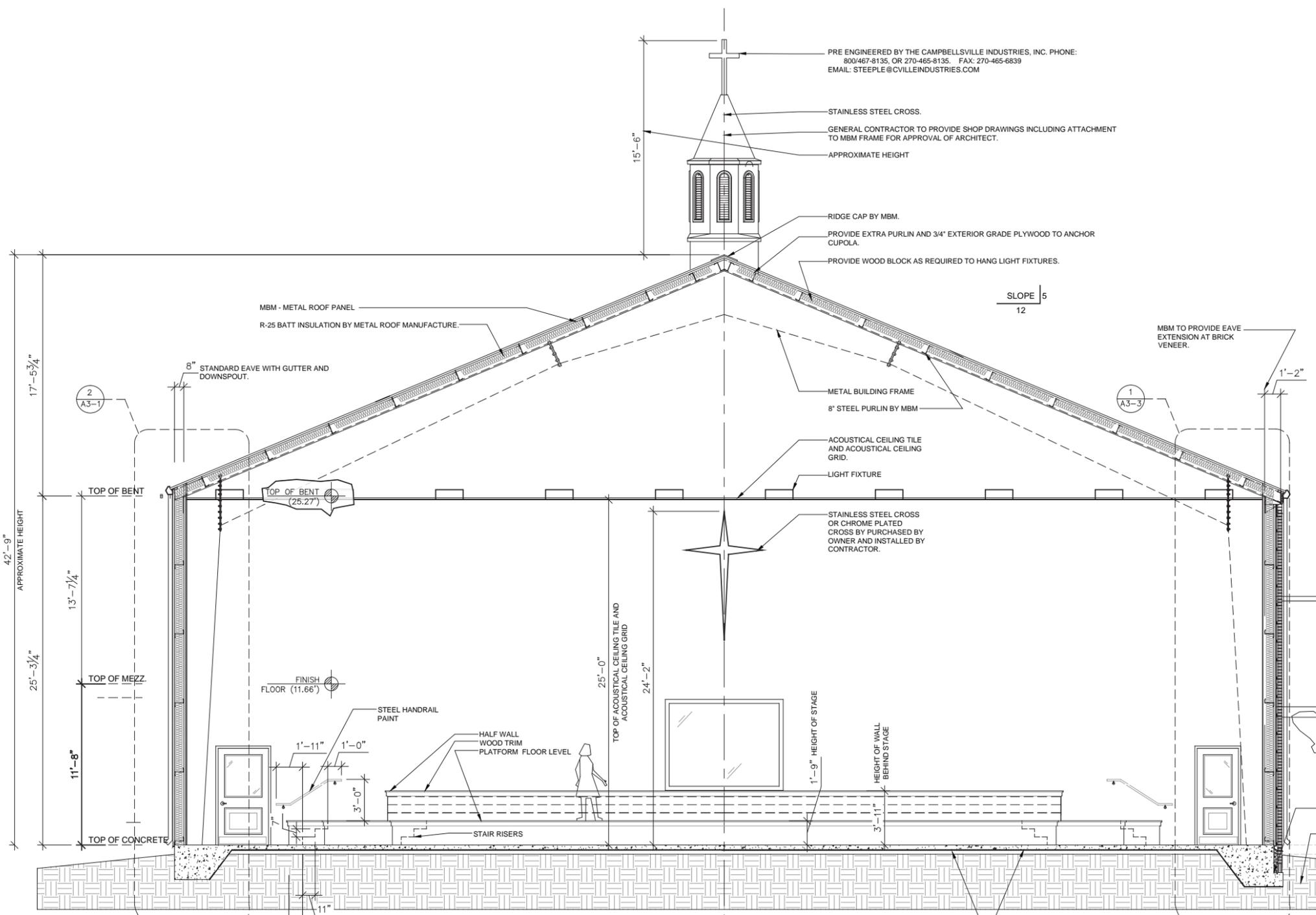
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PERMIT AND PRICING

A3-1



1 A3-2 BUILDING SECTION

1 A3-2 WALL SECTION

STATE OF SOUTH CAROLINA  
DARBY W. McCLOSKEY  
REGISTERED ARCHITECT  
12-12-2009  
AR9879

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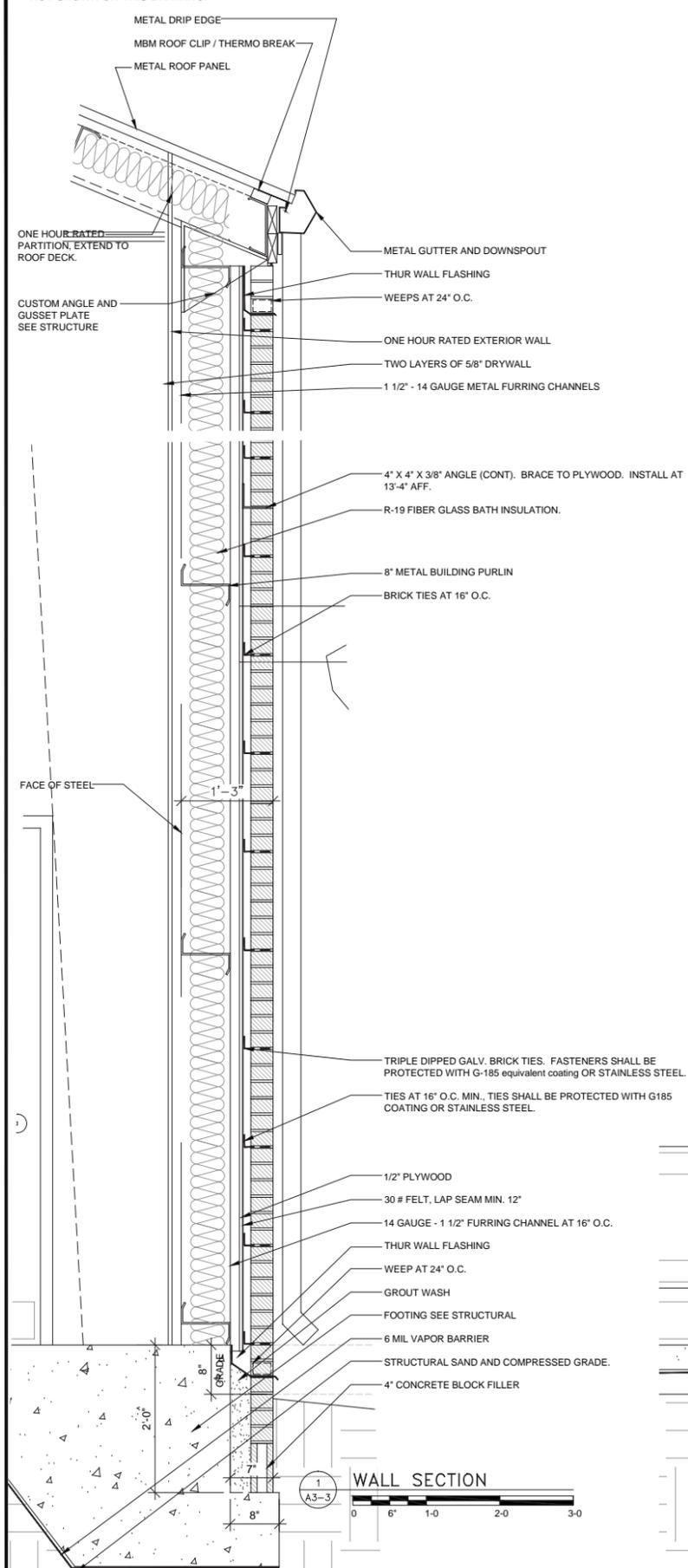
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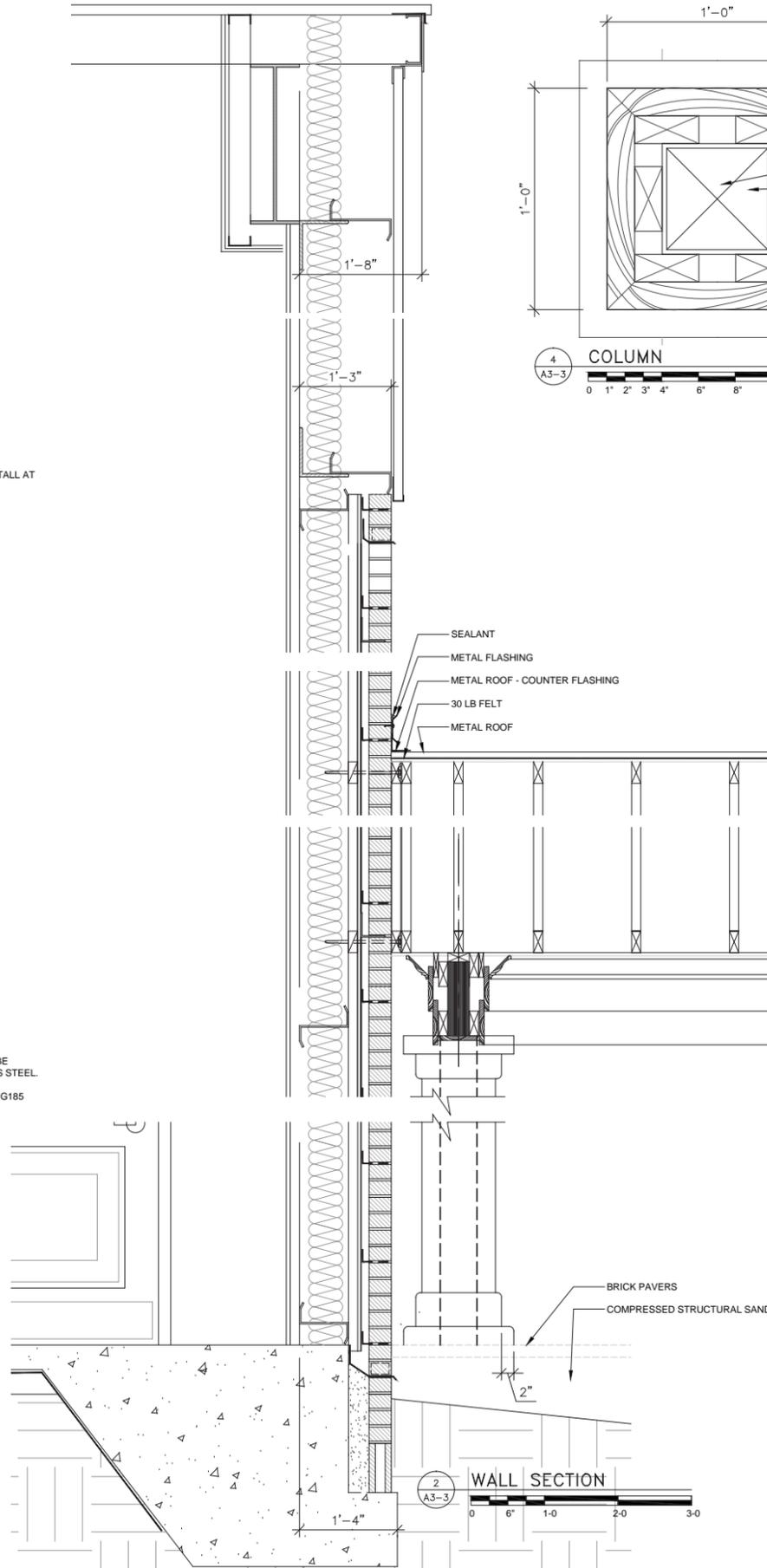
PERMIT AND PRICING

A3-2

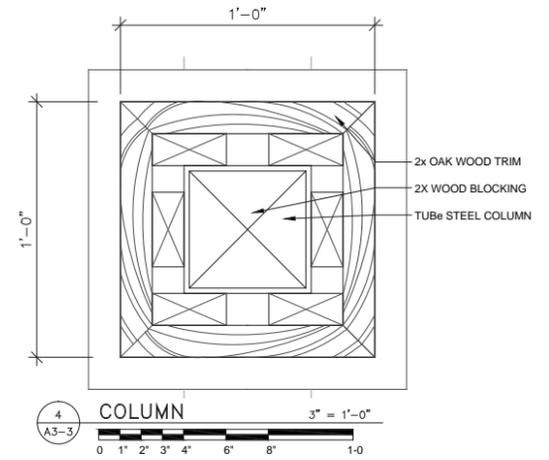
NOTE: PROVIDE R-25 FIBER GLASS BATT INSULATION WITH THERMO BREAK. INSULATION NOT SHOWN ON THIS DRAWING.



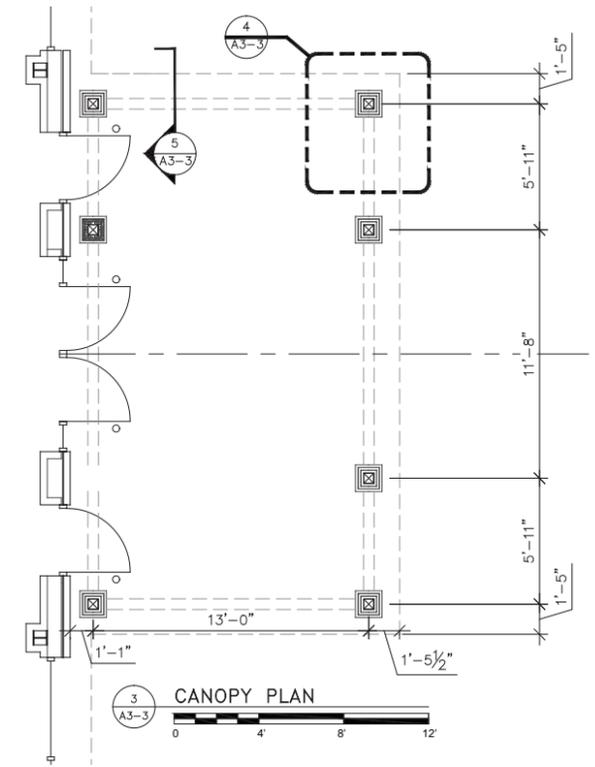
1 WALL SECTION  
0 6" 1-0 2-0 3-0



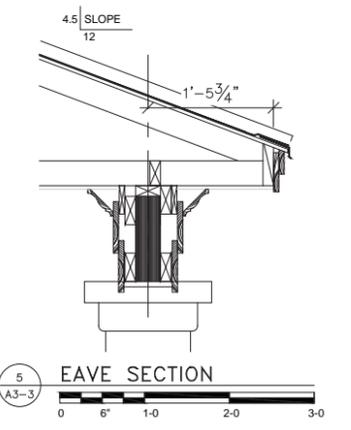
2 WALL SECTION  
0 6" 1-0 2-0 3-0



4 COLUMN  
0 1' 2' 3' 4' 6' 8' 1-0



3 CANOPY PLAN  
0 4' 8' 12'



5 EAVE SECTION  
0 6" 1-0 2-0 3-0



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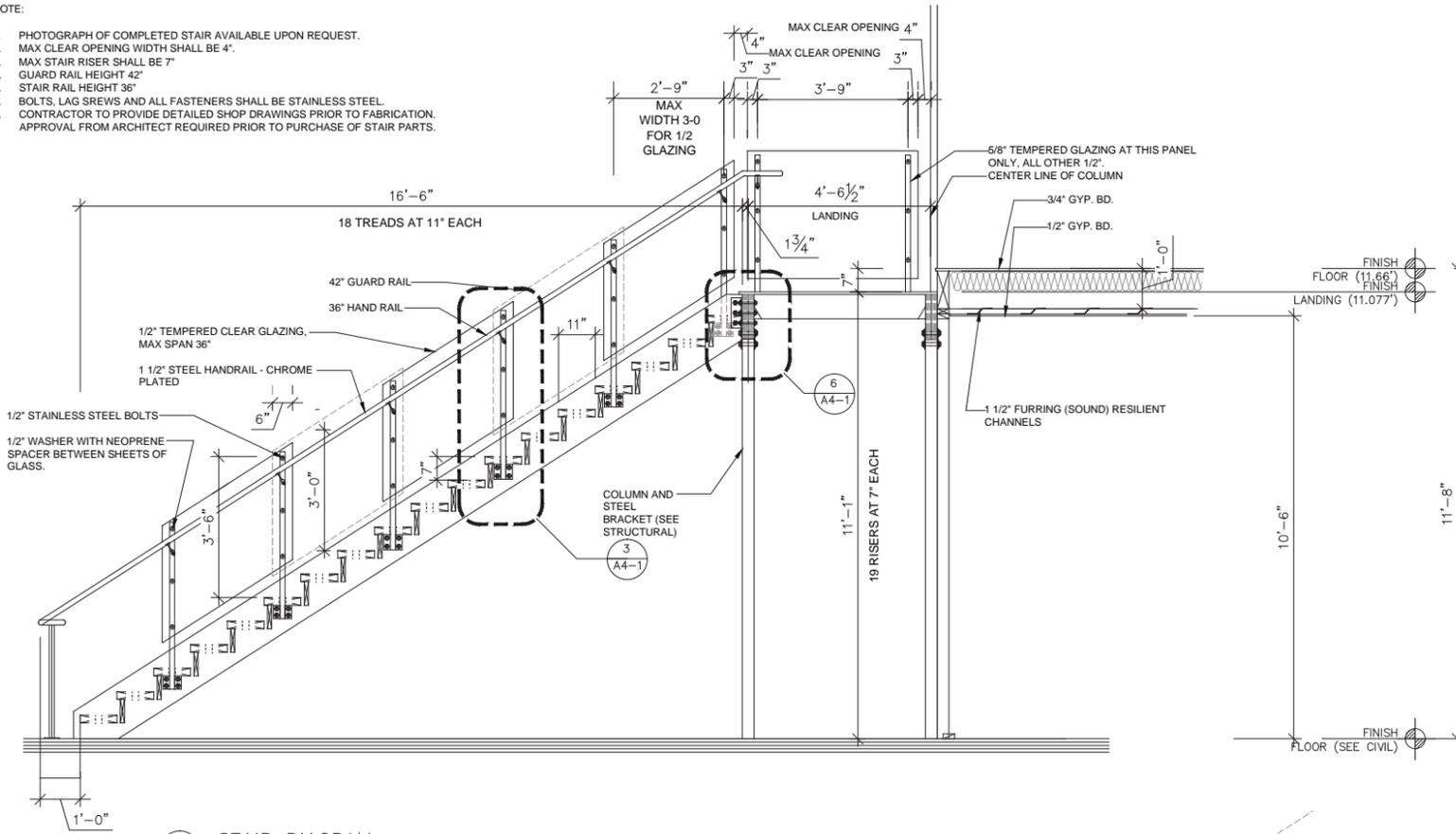
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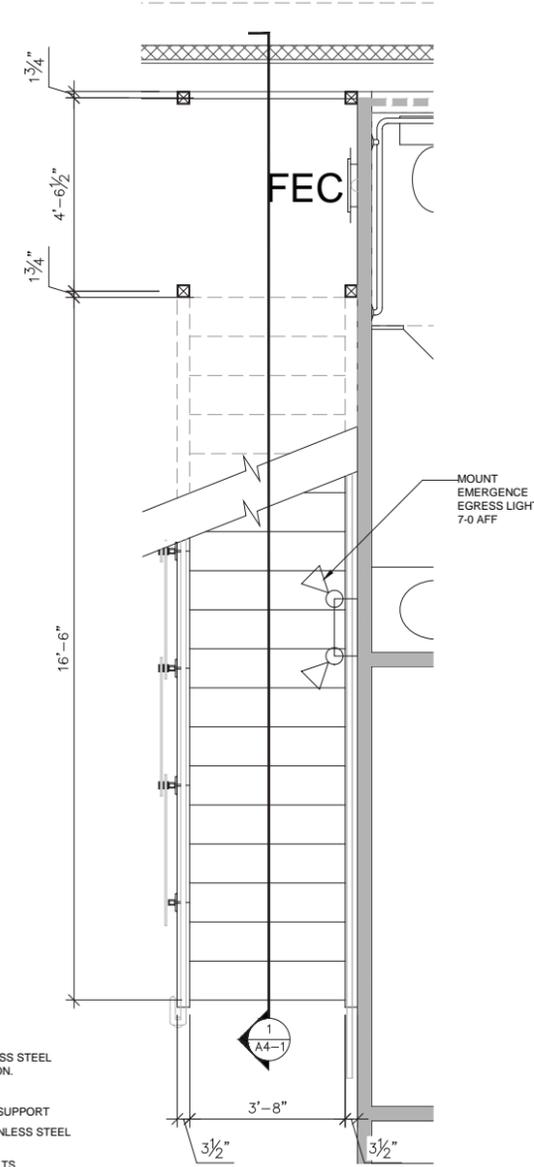
A3-3

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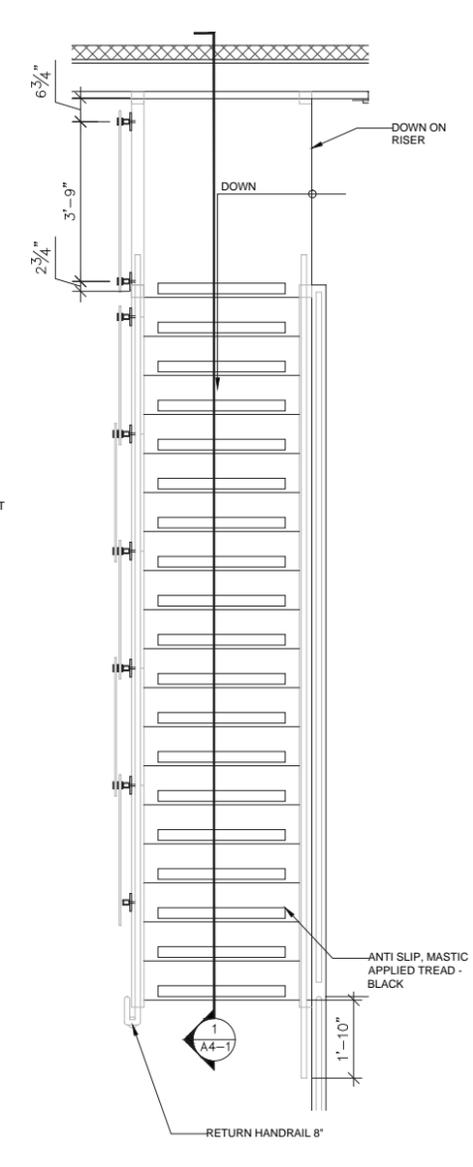
1. PHOTOGRAPH OF COMPLETED STAIR AVAILABLE UPON REQUEST.
2. MAX CLEAR OPENING WIDTH SHALL BE 4".
3. MAX STAIR RISER SHALL BE 7".
4. GUARD RAIL HEIGHT 42"
5. STAIR RAIL HEIGHT 36"
6. BOLTS, LAG SCREWS AND ALL FASTENERS SHALL BE STAINLESS STEEL.
7. CONTRACTOR TO PROVIDE DETAILED SHOP DRAWINGS PRIOR TO FABRICATION. APPROVAL FROM ARCHITECT REQUIRED PRIOR TO PURCHASE OF STAIR PARTS.



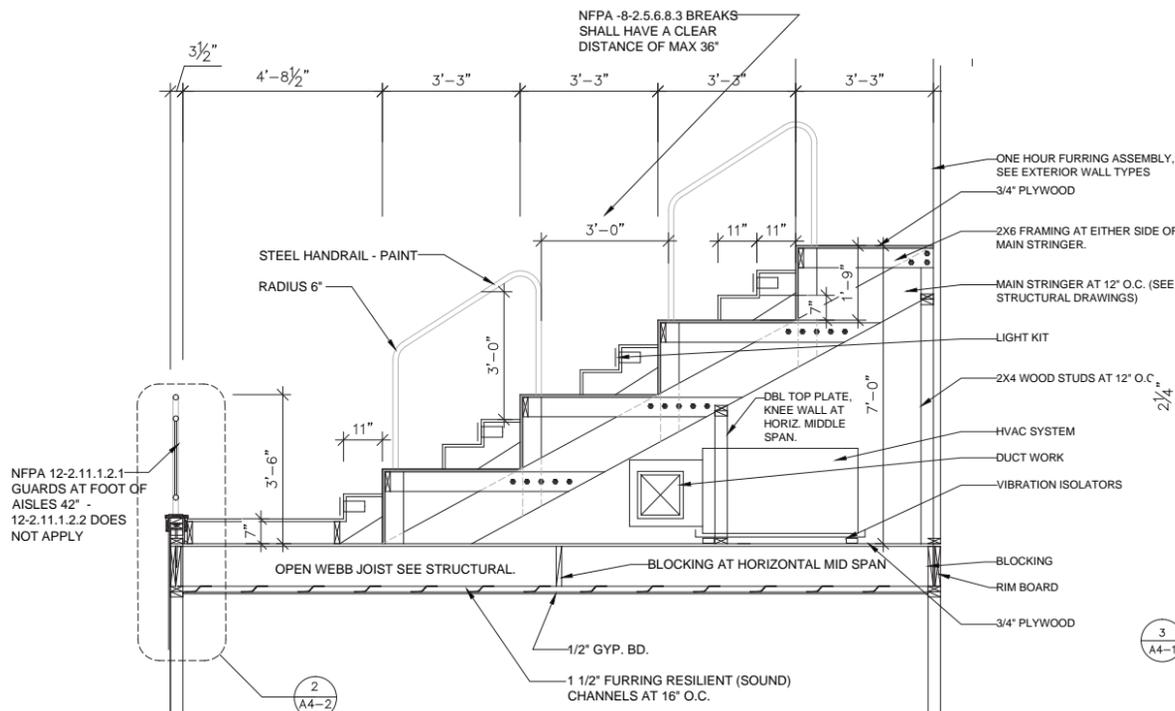
1 STAIR DIAGRAM  
A4-1



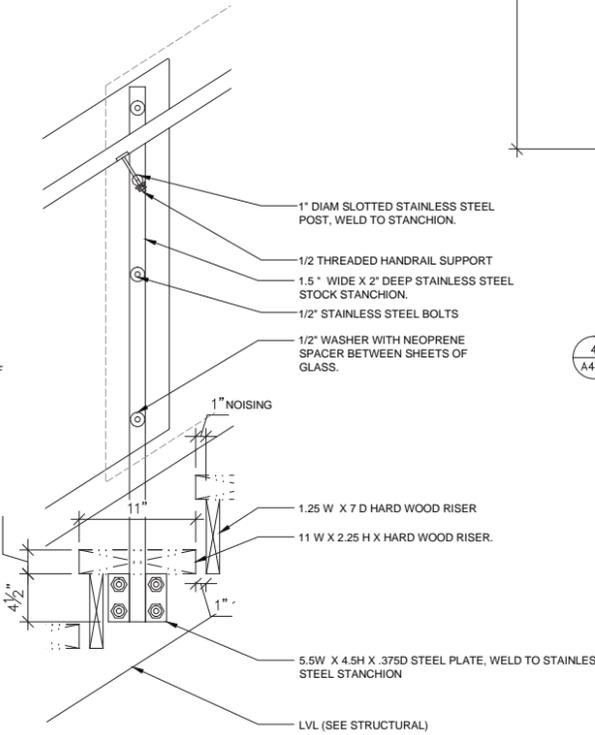
4 1ST FLR STAIR PLAN  
A4-1



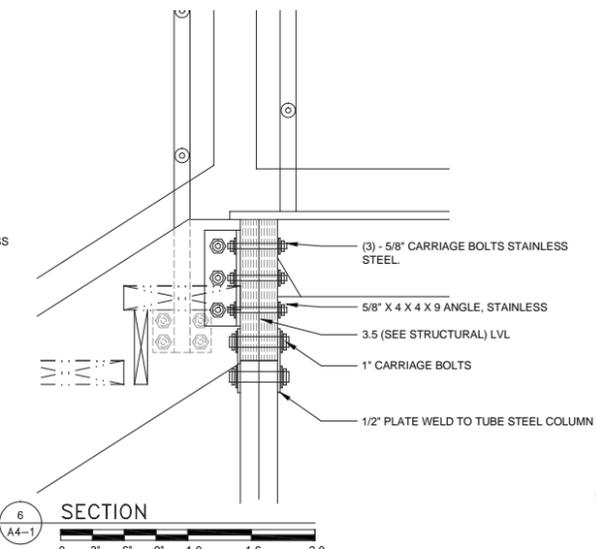
5 2ND FLR STAIR PLAN  
A4-1



2 SECTION @ MEZZANINE AISLES  
A4-1



3 SECTION  
A4-1



6 SECTION  
A4-1



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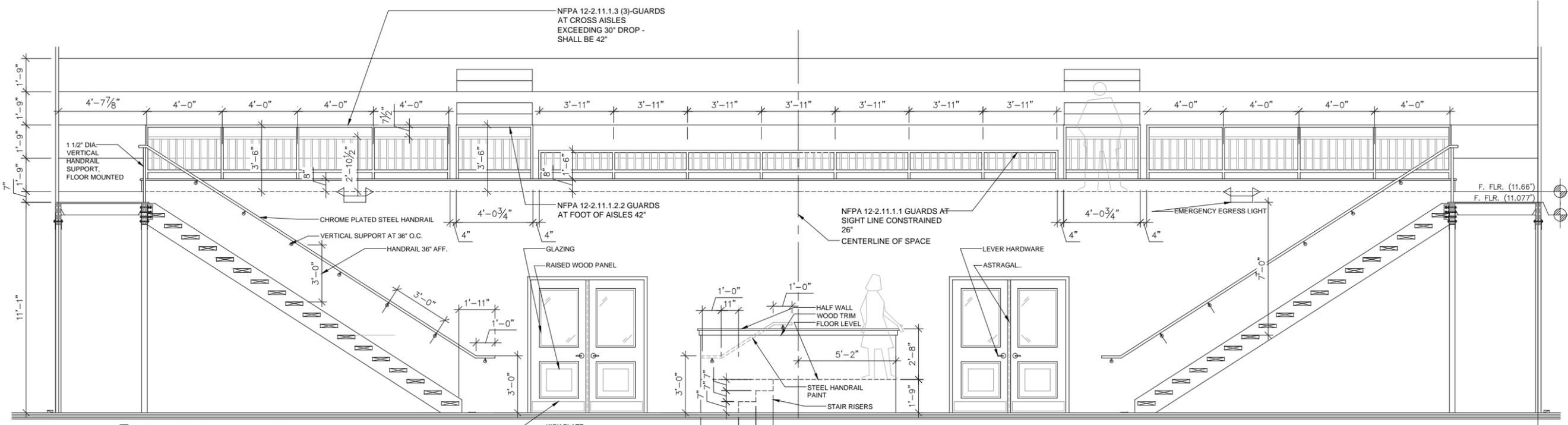
**Darby W. McCloskey, AIA**  
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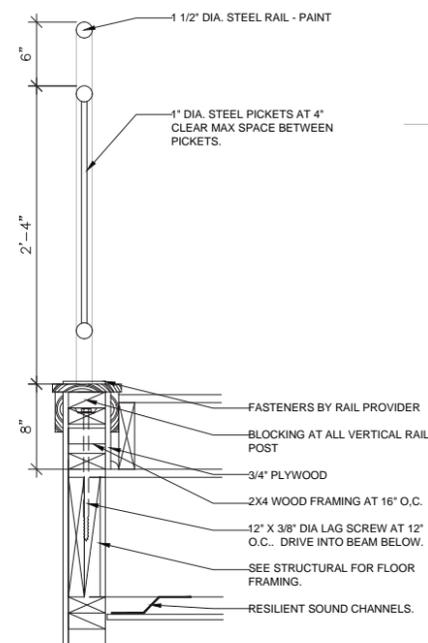
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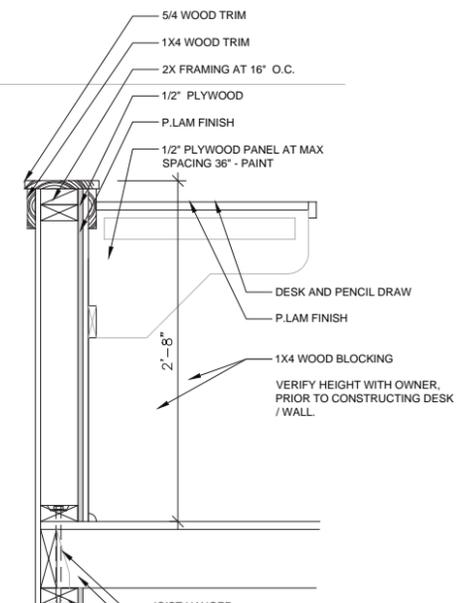
A4-1



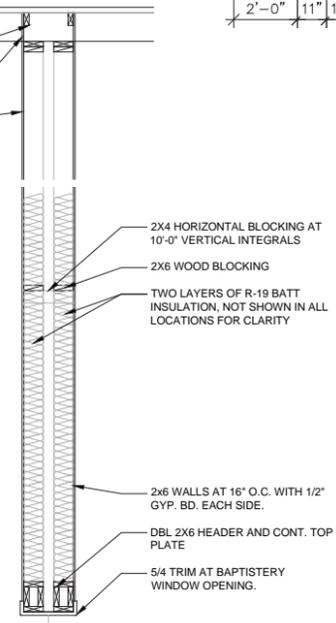
1 MEZZANINE ELEVATION  
A4-2



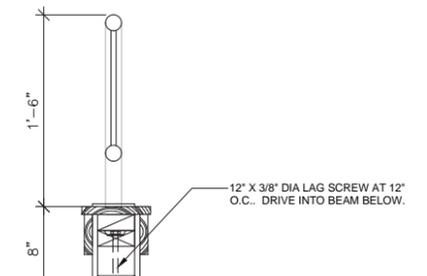
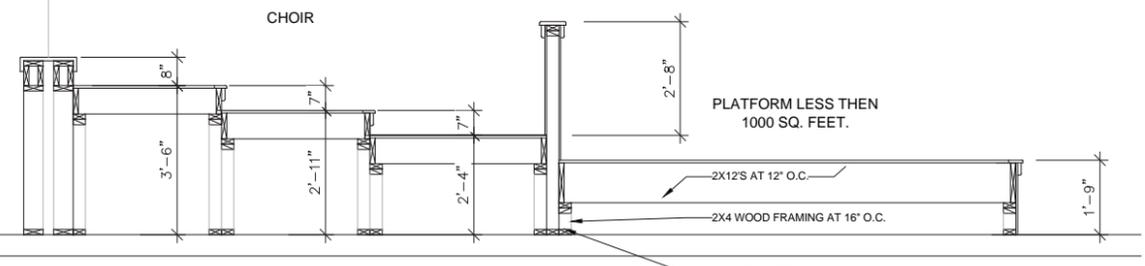
2 SECTION  
A4-2



6 SECTION  
A4-2



5 SECTION CHOIR AND STAGE  
A4-2



3 SECTION  
A4-2

PERMIT AND PRICING



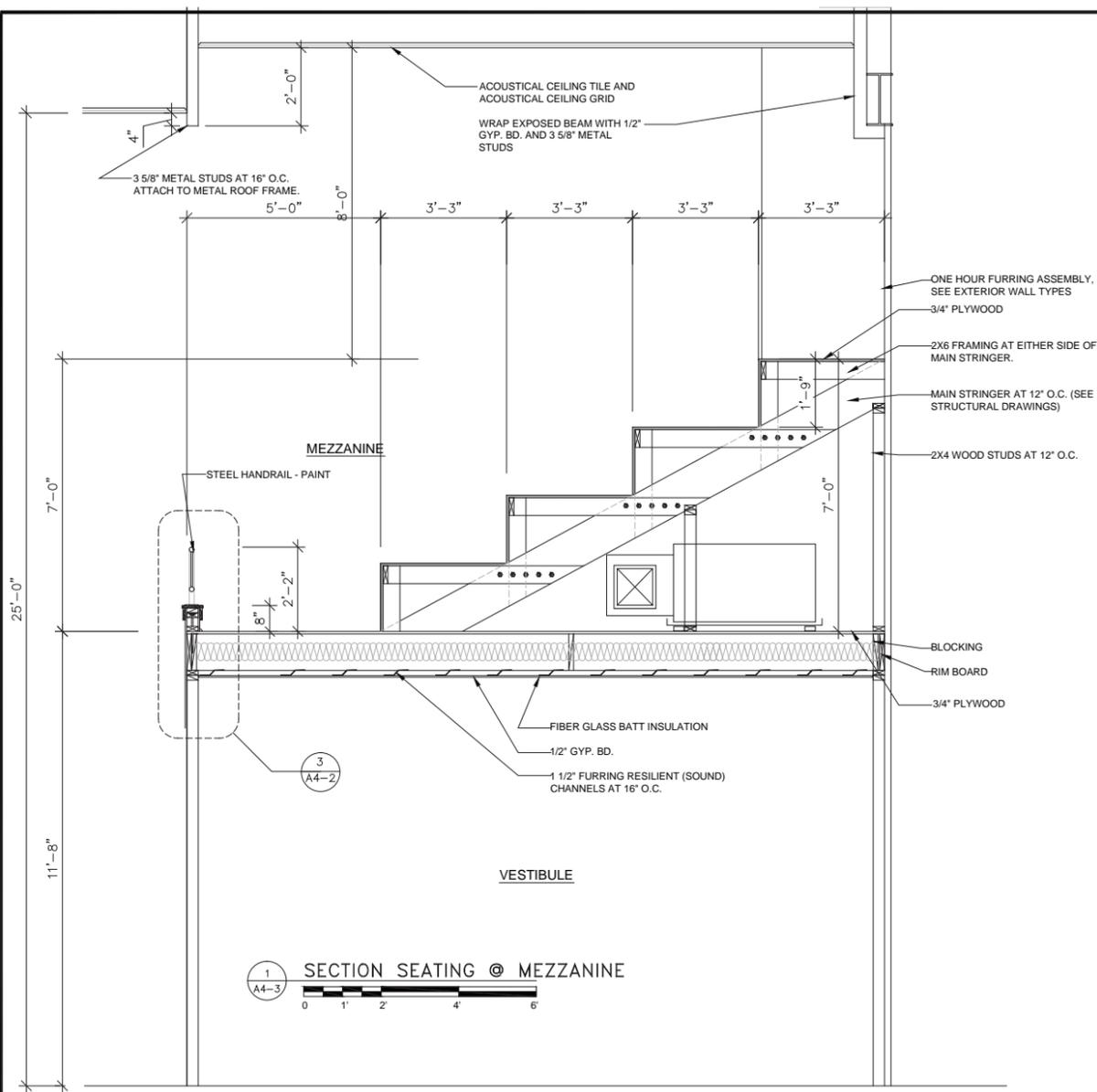
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A4-2



1 SECTION SEATING @ MEZZANINE  
A4-3

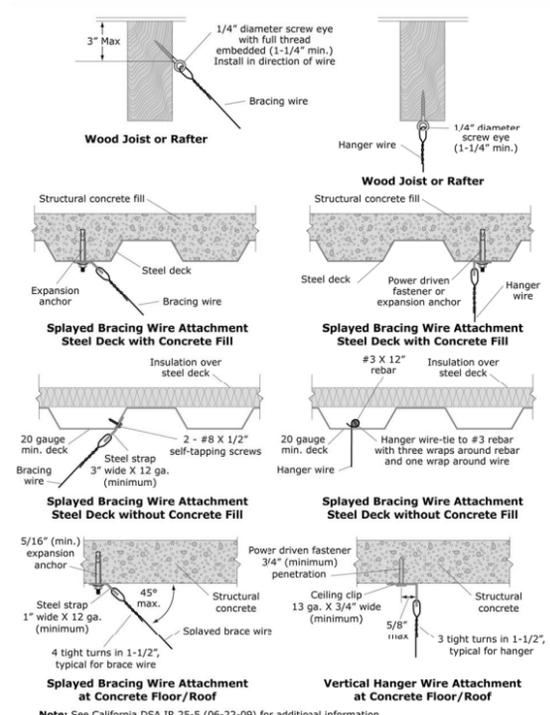


Figure 6.3.4.1-9 Suspension system for acoustic lay-in panel ceiling - general layout (PR).  
FEMA E-74 6: Seismic Protection of Nonstructural Components Page 6-94

2 DETAILS @ ACOUSTICAL CEILING  
A4-3

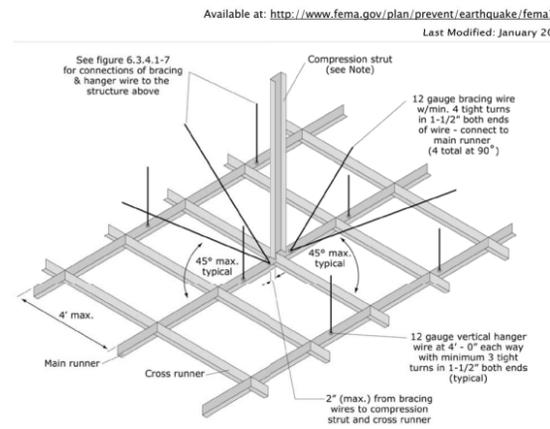


Figure 6.3.4.1-8 Suspension system for acoustic lay-in panel ceilings - lateral bracing assembly (PR).  
Note: Compression strut shall not replace hanger wire. Compression strut consists of a steel section attached to main runner with 2 - #12 sheet metal screws and to structure with 2 - #12 screws to wood or 1/4" min. expansion anchor to structure. Size of strut is dependent on distance between ceiling and structure (l/r ≤ 200). A 1" diameter conduit can be used for up to 6', a 1-5/8" X 1-1/4" metal stud can be used for up to 10'.  
Per DSA IR 25-5, ceiling areas less than 144 sq. ft. or fire rated ceilings less than 96 sq. ft., surrounded by walls bonded to the structure above do not require lateral bracing assemblies when they are attached to two adjacent walls. (ASTM E580 does not require lateral bracing assemblies for ceilings less than 1000 sq. ft.; see text.)

4 DETAILS @ ACOUSTICAL CEILING  
A4-3

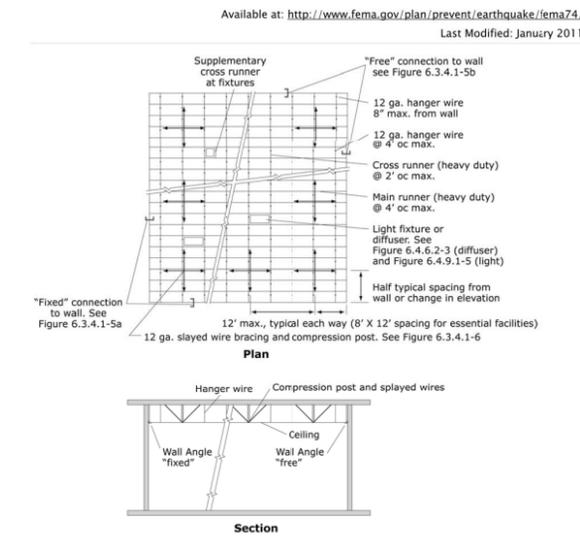


Figure 6.3.4.1-7 Suspension system for acoustic lay-in panel ceilings - edge conditions (PR).  
Available at: <http://www.fema.gov/plan/prevent/earthquake/fema74/>  
Last Modified: January 2011

3 DETAILS @ ACOUSTICAL CEILING  
A4-3

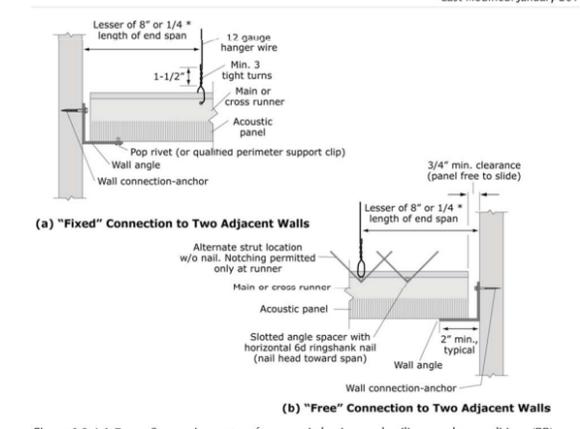


Figure 6.3.4.1-7 Suspension system for acoustic lay-in panel ceilings - edge conditions (PR).  
Available at: <http://www.fema.gov/plan/prevent/earthquake/fema74/>  
Last Modified: January 2011

5 DETAILS @ ACOUSTICAL CEILING  
A4-3



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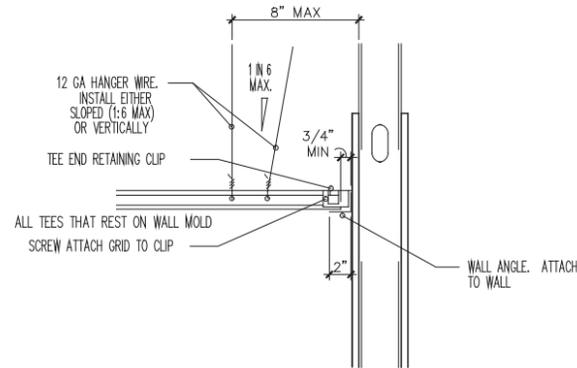
A4-3

SEISMIC REQUIREMENTS FOR CEILINGS 144 GSF OR GREATER  
CATEGORY

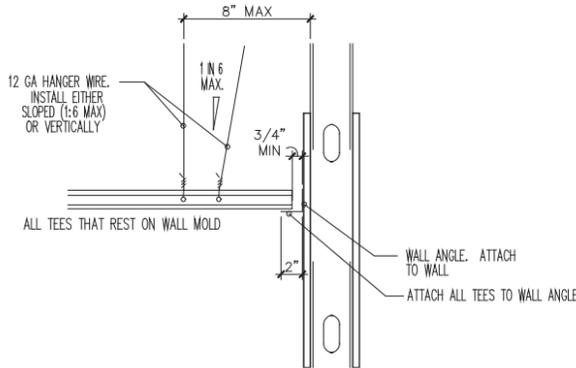
REQUIREMENTS

| CONNECTIONS/HANGERS                      | NOTE: USE HEAVY DUTY GRID                 |
|------------------------------------------|-------------------------------------------|
| INTERSECTION STRENGTH                    | 180 LBS                                   |
| HANGERS                                  | #12 @ 4' O.C. / #10 @ 5' O.C.             |
| PLUMB                                    | NOT MORE THAN 1 IN 6 OR 10" FROM VERTICAL |
| CONNECTION DEVICES                       | MIN. 200LBS.                              |
| PERIMETER WIRES - ALL WALLS              | MAXIMUM 8" FROM ALL WALLS                 |
| SPLAY BRACING                            | NOTE: USE HEAVY DUTY GRID                 |
| 4 WIRE CLUSTERS                          | REQUIRED OVER 1000 SF.                    |
| FIRST POINT                              | MAX. 6" FROM PERIMETER WALLS              |
| SPACING                                  | 12' O.C.                                  |
| CONNECTION STRENGTH                      | MIN. 200LBS.                              |
| COMPRESSION POSTS                        | REQUIRED (CONDUIT/STEEL STUD)             |
| MOLDING/PARTITIONS                       | NOTE: USE HEAVY DUTY GRID                 |
| MOLDING                                  | MIN. 2"                                   |
| ATTACHMENT (NO MOVEMENT)                 | REQUIRED @ 2 ADJACENT WALLS               |
| CLEARANCE (FREE TO MOVE)                 | 3/4" @ 2 ADJACENT WALLS                   |
| SPACER BARS                              | REQUIRED - IF CLIPS NOT USED              |
| PARTITION ATTACHMENT                     | ALLOWED WITH BRACING, UNDER 2,500 SF.     |
| LIGHTING/FIXTURES                        | NOTE: USE HEAVY DUTY GRID                 |
| RECESSED CAN LIGHTS                      | 1 SLACK WIRE OR ATTACH TO GRID            |
| LIGHTS LESS THAN 56LBS                   | 2 CONNECTORS/2 SLACK WIRES                |
| LIGHTS GREATER THAN 56LBS                | SUSPEND FROM STRUCTURE, NOT GRID          |
| MECHANICAL LESS THAN 20LBS               | ATTACHED TO GRID                          |
| MECH GREATER THAN 20LBS, LESS THAN 56LBS | 2 SLACK WIRES                             |
| MECHANICAL GREATER THAN 56LBS            | SUSPEND FROM STRUCTURE, NOT GRID          |

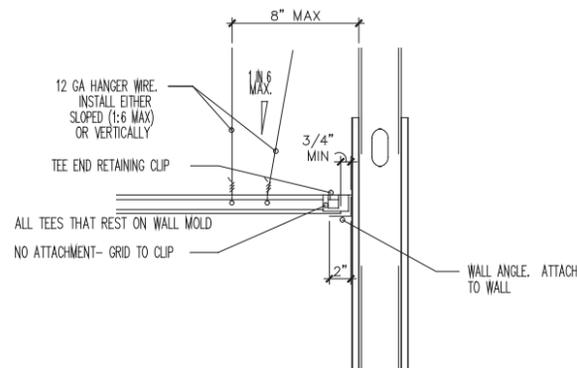
USE OF PROPRIETARY MANUF SEISMIC DETAILS SHALL REQUIRE APPROVAL FROM ARCHITECT



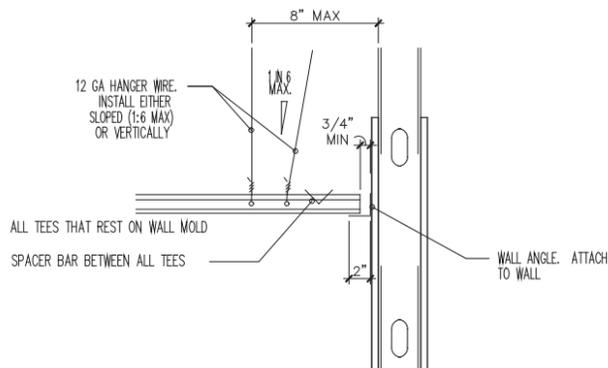
A.1 DETAIL @ TWO ADJACENT WALLS WITH GRID ATTACHED TO WALL ANGLE



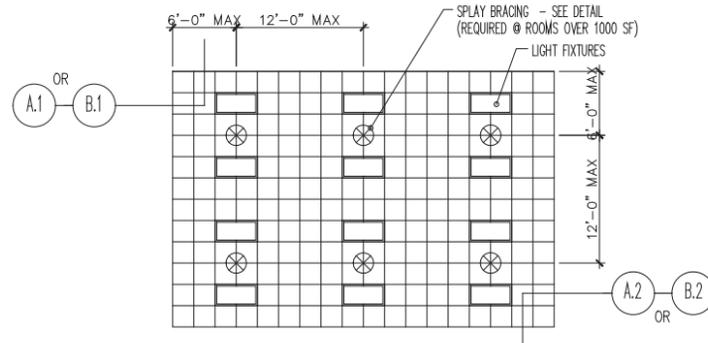
B.1 DETAIL @ TWO ADJACENT WALLS WITH GRID ATTACHED TO WALL ANGLE



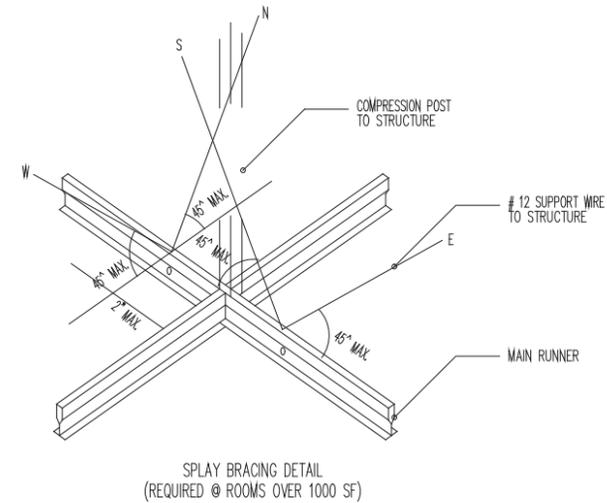
A.2 DETAIL @ TWO ADJACENT WALLS WITH NO ATTACHMENT TO WALL ANGLES



B.2 DETAIL @ TWO ADJACENT WALLS WITH NO ATTACHMENT TO WALL ANGLES



TYPICAL GRID PERIMETER DETAIL LOCATIONS



ATTACHMENT NOTES:

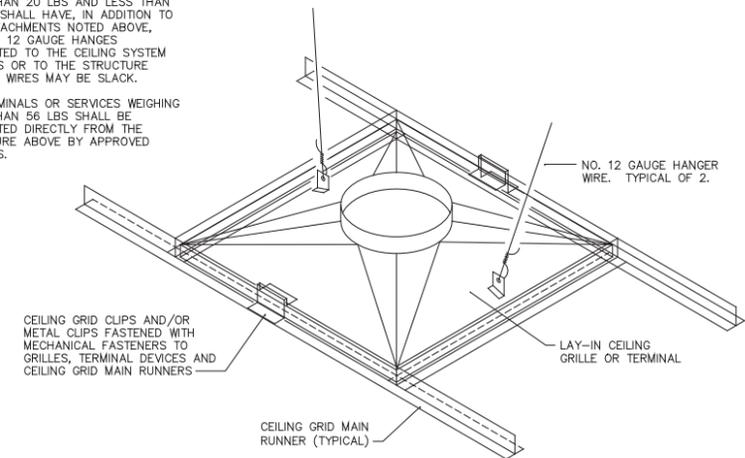
CEILING MOUNTED AIR TERMINALS OR SERVICES WEIGHING 20 LBS. OR LESS SHALL BE POSITIVELY ATTACHED TO THE CEILING SUSPENSION MAIN RUNNERS OR CROSS RUNNERS.

AIR TERMINALS OR SERVICES WEIGHING MORE THAN 20 LBS AND LESS THAN 56 LBS SHALL HAVE, IN ADDITION TO THE ATTACHMENTS NOTED ABOVE, TWO NO. 12 GAUGE HANGES CONNECTED TO THE CEILING SYSTEM HANGERS OR TO THE STRUCTURE ABOVE. WIRES MAY BE SLACK.

AIR TERMINALS OR SERVICES WEIGHING MORE THAN 56 LBS SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE ABOVE BY APPROVED HANGERS.

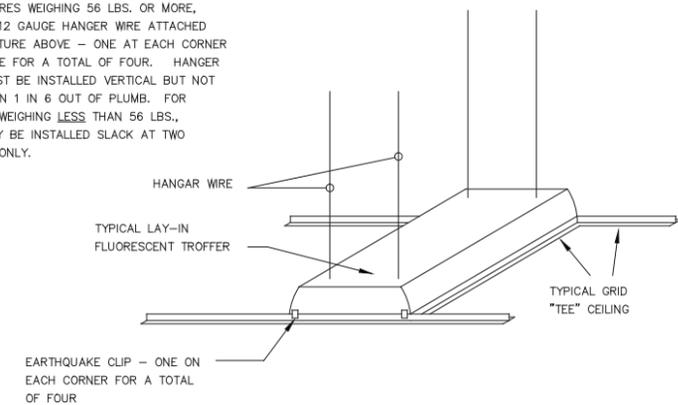
AIR TERMINAL / SERVICES SEISMIC RESTRAINT DETAIL

NO SCALE



NOTE:

FOR FIXTURES WEIGHING 56 LBS. OR MORE, INSTALL #12 GAUGE HANGER WIRE ATTACHED TO STRUCTURE ABOVE - ONE AT EACH CORNER OF FIXTURE FOR A TOTAL OF FOUR. HANGER WIRES MUST BE INSTALLED VERTICAL BUT NOT MORE THAN 1 IN 6 OUT OF PLUMB. FOR FIXTURES WEIGHING LESS THAN 56 LBS., WIRES MAY BE INSTALLED SLACK AT TWO CORNERS ONLY.



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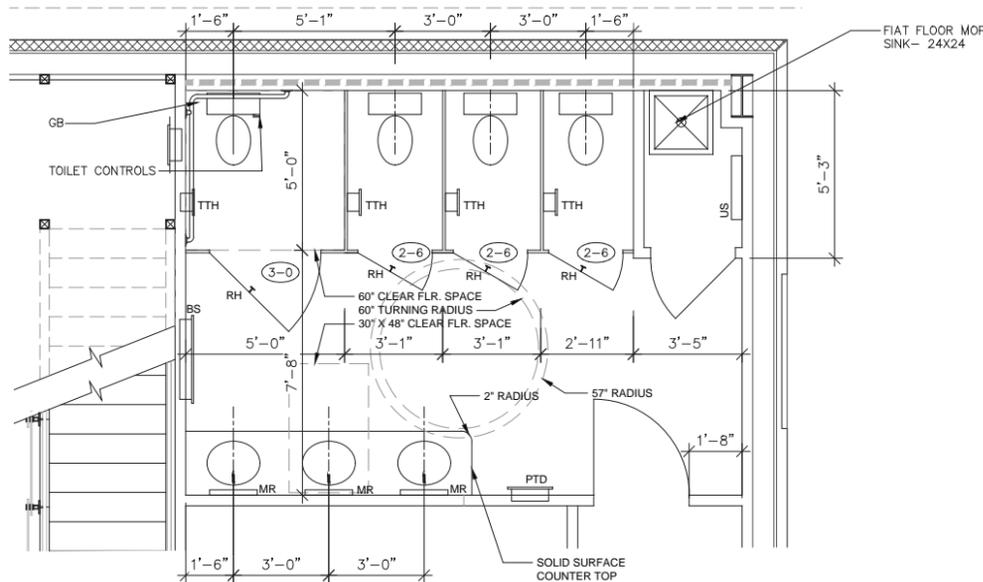
A NEW CAMPUS FOR  
**EMANUEL BAPTIST CHURCH**  
106 BOONE STREET SUMMERVILLE SOUTH CAROLINA 29483

OWNER CONTACT - ROBERT DAVIS, JR.  
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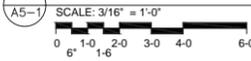
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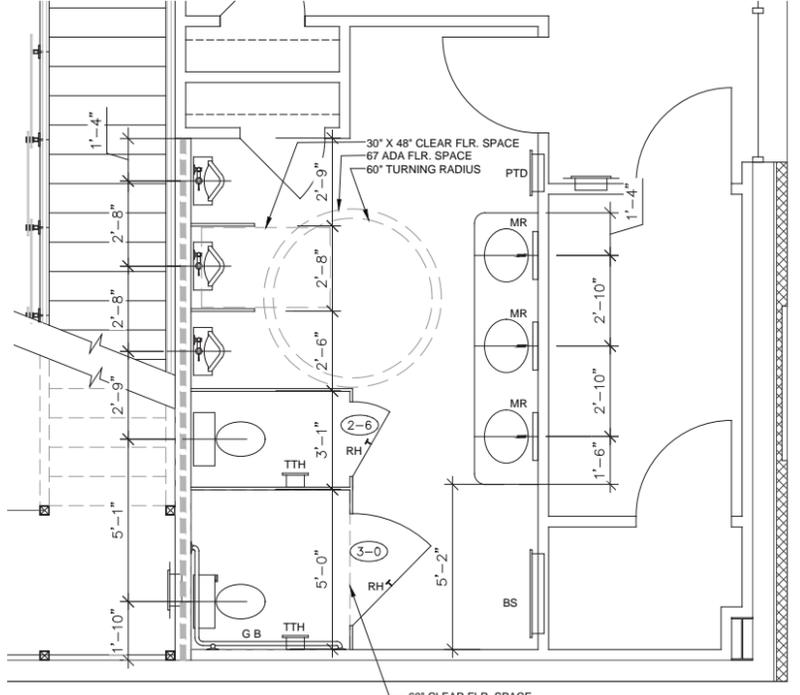


**1 LADIES BATHROOM**

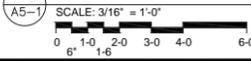


ACCESSORIES: PROVIDE STAINLESS FINISH FOR ALL ACCESSORIES

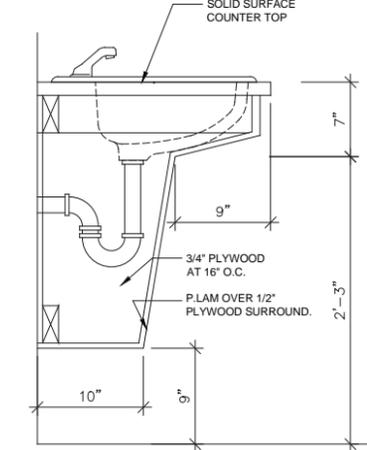
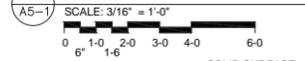
- FEC - SEE THIS SHEET.
- EHD - ELECTRIC HAND DRY BY XLERATOR, HAND DRYER XL-SB (NOT USED)
- PTD - PAPER TOWEL DISPENSER BY BOBRICK B262 POLISHED
- SD - SOAP DISPENSER BY OWNER.
- GB - GRAB BARS BY BOBRICK B-68137, NOM. 36" X 54" STAINLESS STEEL (SS) FINISH.
- MR - BOBRICK B-165 - 24X48 - POLISHED STAINLESS STEEL.
- TTH - TISSUE HOLDER BY BOBRICK B-686 POLISHED STAINLESS STEEL.
- RH - ROBE HOOK - BY BOBRICK.
- DS - DOOR STOP
- MB - MOP BASIN BY FIAT 24X24.
- US - UTILITY SHELF BOBRICK B239
- HB - 24" AFF. HOSE BIBB SEE PLUMBING.
- URS - (NOT USED) URINAL SCREEN BY BOBRICK WITH CONT. FULL HEIGHT HARDWARE.
- TP - (NOT USED) TOILET PARTITION BY BOBRICK DURALINE SERIES 1080/1180 SOLID PHENOLIC, OVERHEAD BRACED, FULL HEIGHT HARDWARE WITH CONT. PIANO HINGES. COLOR FROM STANDARD SELECTION.
- B.S. - BABY STATION - MANUFACTURED BY KOALA KB 110 SSRE, RECESSED WALL MOUNTED COORDINATE WITH METAL STUD PARTITION.
- TOILET PARTITIONS BY BRADLEY - BRADMAR - FLOOR MOUNTED OVERHEAD BRACED - COLOR SELECTED BY ARCHITECT. PROVIDE SHOP DRAWINGS FOR A APPROVAL.
- URINAL SCREENS BY BRADLEY - P474 BRADMAR SOLID PLASTIC WALL-HUNG URINAL SCREEN (24"X48") MOUNT 12" AFF.



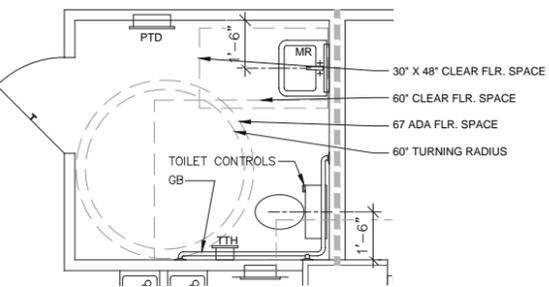
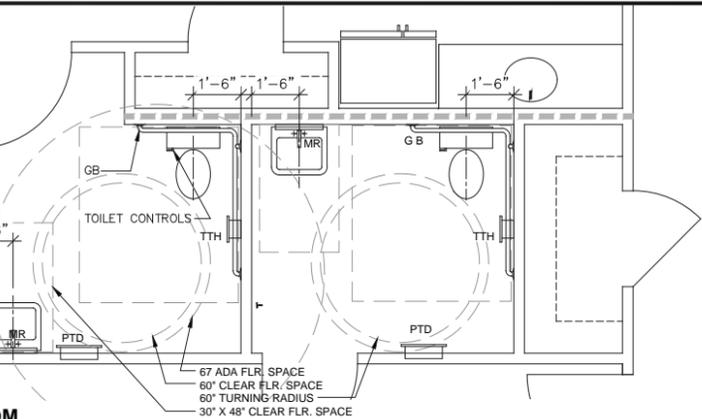
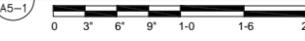
**2 GENTLEMEN BATHROOM**



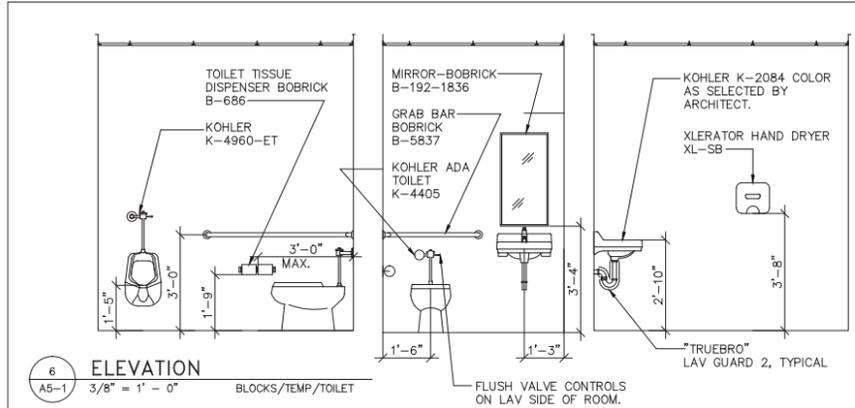
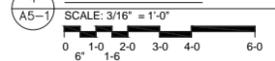
**3 TOILET ROOM**



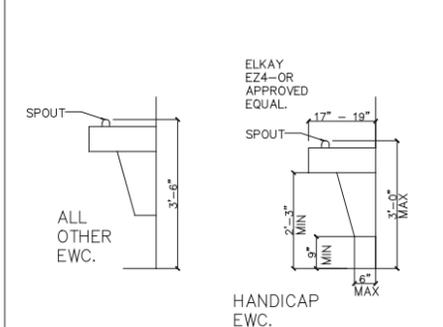
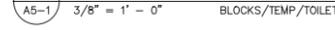
**5 SECTION**



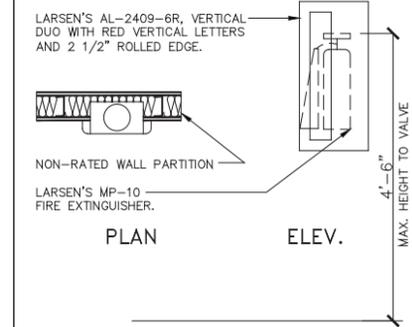
**4 TOILET ROOM**



**6 ELEVATION**



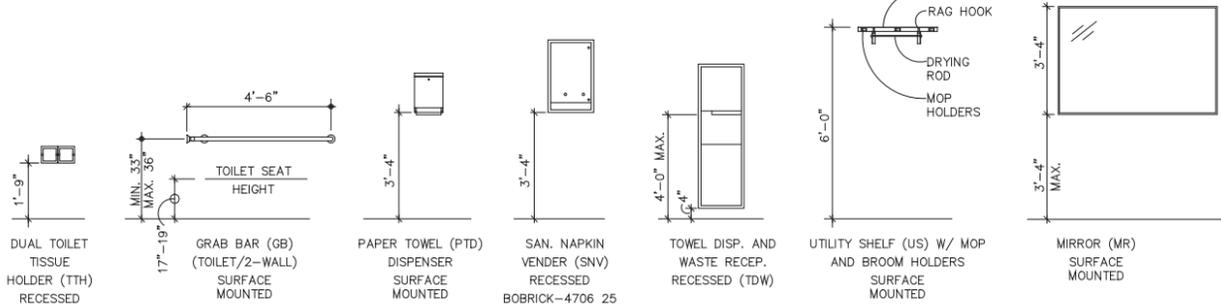
**7 ELECTRIC WATER COOLER (EWC)**



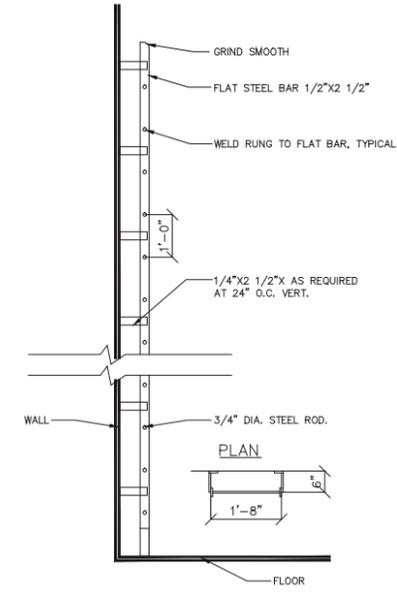
**8 FEC**



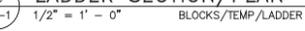
NOTE SEE PLAN FOR LOCATION OF ACCESSORY.



**9 ACCESSORY MOUNTING HEIGHTS**



**10 LADDER SECTION/PLAN**



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02-28-2020

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# FINISH SCHEDULE

| ROOM NAME               | CEILING HEIGHT | CEILING FINISH | WALLS | FLOOR  | BASE | CASE | CROWN | COMMENTS |
|-------------------------|----------------|----------------|-------|--------|------|------|-------|----------|
| VESTIBULE 101           | 10-6           | PT             | PT    | VCT    | RB   | -    | -     | -        |
| LADIES 102              | 10-6           | PT             | PT    | VCT    | RB   | -    | -     | -        |
| GENTLEMEN 103           | 10-6           | PT             | PT    | VCT    | RB   | -    | -     | -        |
| STORAGE 104             | 10-6           | PT             | PT    | SC     | RB   | -    | -     | -        |
| RISER ROOM 105          | 10-6           | PT             | PT    | SC     | RB   | -    | -     | -        |
| SOUND PLATFORM 106      | EXPOSED        | NONE           | PT    | CARPET | RB   | -    | -     | -        |
| SANCTUARY 107           | 25-0           | ACT            | PT    | CARPET | RB   | -    | -     | -        |
| BAPTISTERY 108          | 10-6           | PT             | PT    | CARPET | RB   | -    | -     | -        |
| ELECTRICAL 109          | 10-6           | PT             | PT    | VCT    | RB   | -    | -     | -        |
| COMMUNION 110           | 10-6           | PT             | PT    | CARPET | RB   | -    | -     | -        |
| ENTRY 111               | 10-6           | PT             | PT    | VCT    | RB   | -    | -     | -        |
| DEACONESS 112           | 10-6           | PT             | PT    | CARPET | RB   | -    | -     | -        |
| CHANGING 113            | 8-11           | PT             | PT    | VCT    | RB   | -    | -     | -        |
| RESTROOM 114            | 8-11           | PT             | PT    | VCT    | RB   | -    | -     | -        |
| CAFE 115                | 8-11           | PT             | PT    | VCT    | RB   | -    | -     | -        |
| BOOKSTORE 116           | 8-11           | PT             | PT    | VCT    | RB   | -    | -     | -        |
| STUDIO 117              | 8-11           | PT             | PT    | VCT    | RB   | -    | -     | -        |
| FITNESS 118             | 8-11           | PT             | PT    | VCT    | RB   | -    | -     | -        |
| LOCKER 119              | 8-11           | PT             | PT    | VCT    | RB   | -    | -     | -        |
| LOCKER 120              | 8-11           | PT             | PT    | VCT    | RB   | -    | -     | -        |
| DECON CHAIRS OFFICE 121 | 8-11           | PT             | PT    | CARPET | RB   | -    | -     | -        |
| STORAGE 122             | 8-11           | PT             | PT    | VCT    | RB   | -    | -     | -        |
| CONFERENCE 123          | 8-11           | PT             | PT    | CARPET | RB   | -    | -     | -        |
| STORAGE 124             | 8-11           | PT             | PT    | VCT    | RB   | -    | -     | -        |
| RESTROOM 125            | 8-11           | PT             | PT    | VCT    | RB   | -    | -     | -        |
| RESTROOM 126            | 8-11           | PT             | PT    | VCT    | RB   | -    | -     | -        |
| STORAGE 127             | 8-11           | PT             | PT    | VCT    | RB   | -    | -     | -        |
| PASTORS OFFICE 128      | 8-11           | PT             | PT    | CARPET | RB   | -    | -     | -        |
| ADMIN. 129              | 8-11           | PT             | PT    | CARPET | RB   | -    | -     | -        |
| CORRIDOR 130            | 8-11           | PT             | PT    | VCT    | RB   | -    | -     | -        |
| STORAGE 131             | 8-11           | PT             | PT    | CARPET | RB   | -    | -     | -        |
| CORRIDOR 132            | 10-6           | PT             | PT    | VCT    | RB   | -    | -     | -        |
| STORAGE 133             | 10-6           | PT             | PT    | VCT    | RB   | -    | -     | -        |
| STORAGE 134             | 10-6           | PT             | PT    | VCT    | RB   | -    | -     | -        |
| MEETING 135             | 10-6           | PT             | PT    | CARPET | RB   | -    | -     | -        |
| NURSERY 136             | 10-6           | PT             | PT    | CARPET | RB   | -    | -     | -        |
| UTILITY 137             | 10-6           | PT             | PT    | SC     | RB   | -    | -     | -        |
| MECHANICAL LOFT 201     | EXPOSED        | NONE           | PT    | NONE   | RB   | -    | -     | -        |
| MEZZANINE 202           | 26-8           | PT             | PT    | CARPET | RB   | -    | -     | -        |

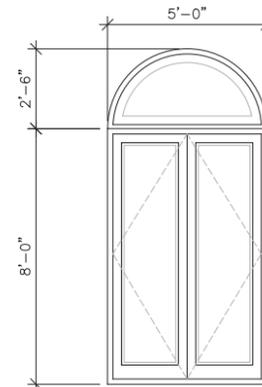
**FINISH LEGEND:**  
 LIN = SHEET LINOLEUM  
 WD. FLR. = WOOD FLOOR  
 CARP. = CARPET  
 GYP. = GYPSUM WALL BOARD  
 W.C. = WALL COVERING, BY OWNER INSTALLED BY CONTRACTOR  
 PT. = PAINT  
 CT. = CERAMIC TILE  
 C.S. = CONCRETE STAIN  
 ACT = "ARMSTRONG" CIRUSS 574HRC-HIGH RECYCLED CONTENT.  
 VCT = VINYL COMPOSITION TILE

**SPECIFICATIONS AND FINISH ALLOWANCE FOR BIDDING PURPOSES.**

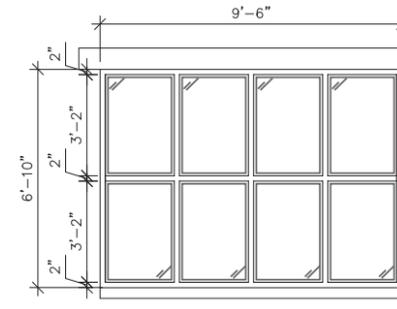
- LINOLEUM - BY ARMSTRONG - 6 DOLLARS PER SQ. FT.
- CERAMIC TILE - BY LOTUS TILE, COLOR: ASPEN OR NATURAL - 8 DOLLARS PER SQ. FT., SIZE-6X36.
- PASS THRU - GLOBAL™ 670148 - STAINLESS STEEL PASS THROUGH SPECIMEN CABINET, 13-1/4"W X 6"D X 12-3/4"H
- ( NOT USED ) CORNER GUARDS (COLOR BY OWNER)- SOLD BY: GLOBALINDUSTRIAL.COM - VINYL SURFACE MOUNTED CORNER GUARD, 90° CORNER, 1-1/2" WINGS, 4"H, CAFÉ AU LAIT, UNDRILLED - MANUFACTURER PART NUMBER CGU-12-4-694
- PROVIDE FIBERGLASS BATT. INSULATION FOR ACOUSTIC PURPOSES ABOVE / IN THE CEILING OF THE FOLLOWING ROOMS: 102, 103, 112, 114, 125, 126, 128, 129, 136

**FINISH NOTES**

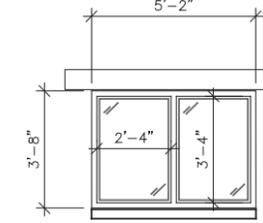
- EXTERIOR CONCRETE AND SHALL REMAIN UN-FINISHED - PROVIDE BROOM FINISH.
- (IF NEEDED) CONCRETE BLOCK SHALL RECEIVE BLOCK FILLER AND TWO COATS FINISH PAINT AT ALL CONCRETE MASONRY PRODUCTS.
- (PT) PAINT - PROVIDE 2 COATS MIN. FINISH PAINT AND ONE COAT PRIMER EACH SURFACE. ARCHITECT TO SELECT PAINT COLOR FROM STANDARD COLORS.
- (PT) - PAINT ALL EXPOSED STEEL THAT IS IN PLAIN VIEW AT ANY FLOOR LEVEL.
- GYPSUM BOARD (GB) - SHALL RECEIVE LEVEL FOUR (4) AS DESCRIBED IN THE GYP. BD. ASSOCIATION.
- PROVIDE 1X2 MARBLE TRANSITION STRIPS BETWEEN DIFFERENT FLOOR FINISHES.
- (ACT) - ACOUSTICAL CEILING TILE BY ARMSTRONG, ULTIMA Lay-In and Tegular PRODUCT NUMBER 1915, 2X4 WITH MIN. NRC RATING OF .75, WITH BEVELED TEGULAR EDGE.
- (RB) - RUBBER BASE SHALL BE BLACK, BY ARMSTRONG. VINYL BASE IS NOT ACCEPTABLE. RUBBER BASE NOT REQUIRED AT METAL BUILDING INTERIOR LINER PANEL.
- SEALED CONCRETE SHALL BE AN (EC) - EPOXY COATING, - 2 PART EPOXY GARAGE FLOOR COATING WITH GRANITE COLOR FLECKS, FROM QUIKRETE. 0703-57 GRAY. OR INCRETE SYSTEMS HIGH PERFORMANCE EPOXY.



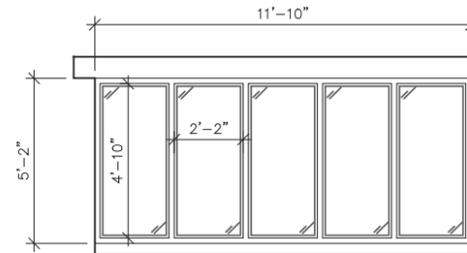
TYPE "A" - ALUM



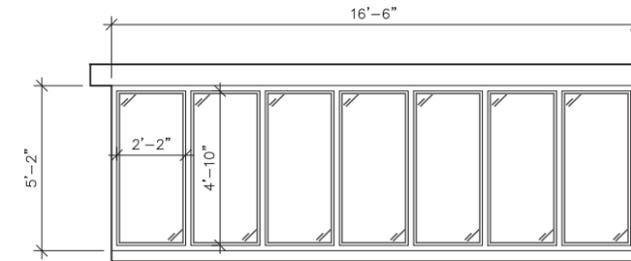
TYPE "B" - ALUM



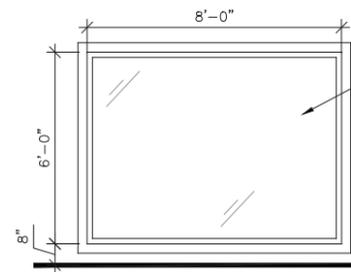
TYPE "C" - ALUM



TYPE "D" - ALUM



TYPE "E" - ALUM



TYPE "F" - ALUM

INTERIOR WINDOW AT SANCTUARY, COORDINATE EXACT SIZE AND LOCATION WITH OWNER PRIOR TO ORDERING AND INSTALLING WINDOW.



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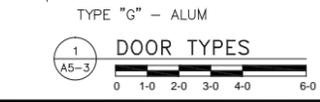
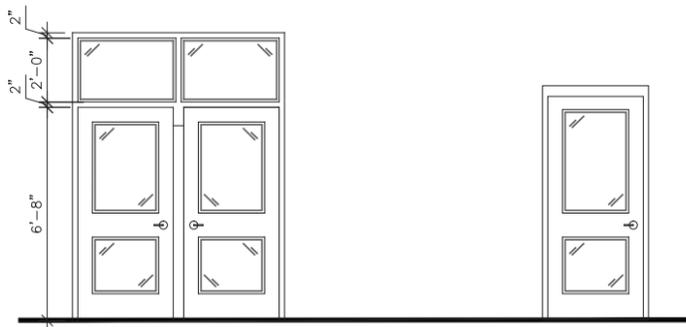
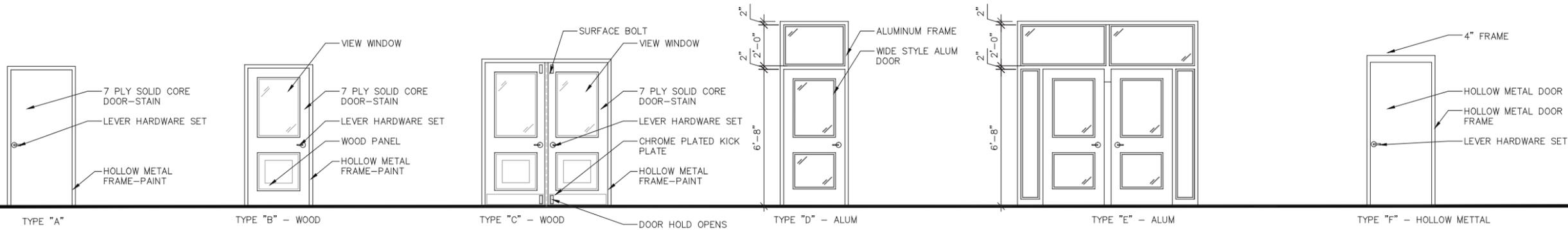
## DOOR SCHEDULE

| MARK | SIZE   |   |     | DOOR |        |          |          |          | FRAME    |          |      | REMARKS  | NOTES                    |        |
|------|--------|---|-----|------|--------|----------|----------|----------|----------|----------|------|----------|--------------------------|--------|
|      | W      | H | D   | TYPE | RATING | MATERIAL | FINISH   | GLAZING  | HARDWARE | MATERIAL | TYPE |          |                          | FINISH |
| 100  | 2-8    | X | 6-8 | A    | NONE   | WOOD     | STAIN    | -        | -        | HM       | -    | PAINT    |                          |        |
| 101  | 3-0    | X | 6-8 | A    | NONE   | WOOD     | STAIN    | -        | -        | HM       | -    | PAINT    |                          |        |
| 102  | 3-0    | X | 6-8 | B    | NONE   | WOOD     | STAIN    | TEMPERED | -        | HM       | -    | PAINT    |                          |        |
| 103  | PR-3-0 | X | 7-0 | C    | NONE   | WOOD     | STAIN    | TEMPERED | -        | HM       | -    | PAINT    |                          |        |
| 104  | 3-0    | X | 6-8 | B    | NONE   | WOOD     | STAIN    | TEMPERED | -        | HM       | -    | PAINT    |                          |        |
| 105  | 3-0    | X | 6-8 | D    | NONE   | ALUM     | ANODIZED | TEMPERED | -        | ALUM     | -    | ANODIZED |                          |        |
| 106  | PR-3-0 | X | 6-8 | E    | NONE   | ALUM     | ANODIZED | TEMPERED | -        | ALUM     | -    | ANODIZED | REMOVABLE CENTER MULLION |        |
| 107  | 3-0    | X | 6-8 | D    | NONE   | ALUM     | ANODIZED | TEMPERED | -        | ALUM     | -    | ANODIZED |                          |        |
| 108  | 3-0    | X | 6-8 | A    | NONE   | WOOD     | STAIN    | -        | -        | HM       | -    | PAINT    |                          |        |
| 109  | 3-0    | X | 6-8 | A    | NONE   | WOOD     | STAIN    | -        | -        | HM       | -    | PAINT    |                          |        |
| 110  | 3-0    | X | 6-8 | A    | NONE   | WOOD     | STAIN    | -        | -        | HM       | -    | PAINT    |                          |        |
| 111  | 2-8    | X | 6-8 | A    | NONE   | WOOD     | STAIN    | -        | -        | HM       | -    | PAINT    |                          |        |
| 112  | 2-8    | X | 6-8 | A    | NONE   | WOOD     | STAIN    | -        | -        | HM       | -    | PAINT    |                          |        |
| 113  | PR-3-0 | X | 7-0 | C    | NONE   | WOOD     | STAIN    | TEMPERED | -        | HM       | -    | PAINT    |                          |        |
| 114  | 3-8    | X | 6-8 | A    | NONE   | WOOD     | STAIN    | -        | -        | HM       | -    | PAINT    |                          |        |
| 115  | 3-8    | X | 7-0 | F    | NONE   | HM       | PAINT    | -        | -        | HM       | -    | PAINT    |                          |        |
| 116  | 3-0    | X | 6-8 | A    | NONE   | WOOD     | STAIN    | -        | -        | HM       | -    | PAINT    |                          |        |
| 117  | 3-0    | X | 6-8 | A    | NONE   | WOOD     | STAIN    | -        | -        | HM       | -    | PAINT    |                          |        |
| 118  | PR-3-0 | X | 6-8 | A    | NONE   | WOOD     | STAIN    | -        | -        | HM       | -    | PAINT    |                          |        |
| 119  | 3-0    | X | 6-8 | A    | NONE   | WOOD     | STAIN    | -        | -        | HM       | -    | PAINT    |                          |        |
| 120  | 3-0    | X | 6-8 | A    | NONE   | WOOD     | STAIN    | -        | -        | HM       | -    | PAINT    |                          |        |
| 121  | PR-3-0 | X | 6-8 | G    | NONE   | ALUM     | ANODIZED | TEMPERED | -        | ALUM     | -    | ANODIZED | REMOVABLE CENTER MULLION |        |
| 122  | 3-0    | X | 6-8 | A    | NONE   | WOOD     | STAIN    | -        | -        | HM       | -    | PAINT    |                          |        |
| 123  | PR-3-0 | X | 6-8 | G    | NONE   | ALUM     | ANODIZED | TEMPERED | -        | ALUM     | -    | ANODIZED | REMOVABLE CENTER MULLION |        |
| 124  | 3-0    | X | 6-8 | B    | NONE   | WOOD     | STAIN    | TEMPERED | -        | HM       | -    | PAINT    |                          |        |
| 125  | 3-0    | X | 6-8 | B    | NONE   | WOOD     | STAIN    | TEMPERED | -        | HM       | -    | PAINT    |                          |        |
| 126  | 3-0    | X | 6-8 | A    | NONE   | WOOD     | STAIN    | -        | -        | HM       | -    | PAINT    |                          |        |
| 127  | 3-0    | X | 6-8 | A    | NONE   | WOOD     | STAIN    | -        | -        | HM       | -    | PAINT    |                          |        |
| 128  | 3-0    | X | 6-8 | B    | NONE   | WOOD     | STAIN    | TEMPERED | -        | HM       | -    | PAINT    |                          |        |
| 129  | 3-0    | X | 6-8 | A    | NONE   | WOOD     | STAIN    | -        | -        | HM       | -    | PAINT    |                          |        |
| 130  | 3-0    | X | 6-8 | B    | NONE   | WOOD     | STAIN    | TEMPERED | -        | HM       | -    | PAINT    |                          |        |
| 131  | 3-0    | X | 6-8 | A    | NONE   | WOOD     | STAIN    | -        | -        | HM       | -    | PAINT    |                          |        |
| 132  | 3-0    | X | 6-8 | A    | NONE   | WOOD     | STAIN    | -        | -        | HM       | -    | PAINT    |                          |        |
| 133  | 3-0    | X | 7-0 | F    | NONE   | HM       | PAINT    | -        | -        | HM       | -    | PAINT    |                          |        |
| 134  | 3-0    | X | 6-8 | B    | NONE   | WOOD     | STAIN    | TEMPERED | -        | HM       | -    | PAINT    |                          |        |
| 135  | 2-8    | X | 6-8 | A    | NONE   | WOOD     | STAIN    | -        | -        | HM       | -    | PAINT    |                          |        |
| 136  | 3-0    | X | 6-8 | B    | NONE   | WOOD     | STAIN    | TEMPERED | -        | HM       | -    | PAINT    |                          |        |
| 137  | 3-0    | X | 6-8 | A    | NONE   | WOOD     | STAIN    | -        | -        | HM       | -    | PAINT    |                          |        |
| 138  | 3-0    | X | 6-8 | A    | NONE   | WOOD     | STAIN    | -        | -        | HM       | -    | PAINT    |                          |        |

## DOOR SCHEDULE (CONT.)

| MARK | SIZE   |   |     | DOOR |        |          |          |          | FRAME    |          |      | REMARKS  | NOTES                       |        |
|------|--------|---|-----|------|--------|----------|----------|----------|----------|----------|------|----------|-----------------------------|--------|
|      | W      | H | D   | TYPE | RATING | MATERIAL | FINISH   | GLAZING  | HARDWARE | MATERIAL | TYPE |          |                             | FINISH |
| 139  | 3-0    | X | 7-0 | H    | NONE   | ALUM     | ANODIZED | TEMPERED | -        | ALUM     | -    | ANODIZED |                             |        |
| 140  | 3-0    | X | 6-8 | B    | NONE   | WOOD     | STAIN    | TEMPERED | -        | HM       | -    | PAINT    |                             |        |
| 141  | 3-0    | X | 6-8 | B    | NONE   | WOOD     | STAIN    | TEMPERED | -        | HM       | -    | PAINT    |                             |        |
| 142  | PR-3-0 | X | 6-8 | G    | NONE   | ALUM     | ANODIZED | TEMPERED | -        | ALUM     | -    | ANODIZED | REMOVABLE CENTER MULLION    |        |
| 143  | 3-0    | X | 6-8 | A    | NONE   | WOOD     | STAIN    | -        | -        | HM       | -    | PAINT    |                             |        |
| 144  | 3-0    | X | 6-8 | A    | NONE   | WOOD     | STAIN    | -        | -        | HM       | -    | PAINT    |                             |        |
| 145  | 3-0    | X | 6-8 | B    | NONE   | WOOD     | STAIN    | TEMPERED | -        | HM       | -    | PAINT    |                             |        |
| CO-1 | 6-0    | X | 6-8 |      |        |          |          |          |          | HM       |      |          | CASED OPENING WITH HM FRAME |        |

- DOOR SCHEDULE NOTES**
- DOOR SELECTED BY OWNER PURCHASED BY CONTRACTOR, INSTALLED BY CONTRACTOR.
  - ALL INTERIOR AND EXTERIOR DOORS SHALL HAVE LEVER TYPE DOOR HARDWARE AS REQUIRED BY ADA.
  - ALL EXTERIOR DOORS AND FRAMES SHALL BE RATED FOR IMPACT SEE STRUCTURAL FOR MPH WIND LOAD.
  - DOORS AND WINDOWS SHALL BE OBTAINED FROM SAME SOURCE COMPANY, PROVIDE WIND TESTING DATA FOR EXTERIOR OPENINGS.
  - INTERIOR WOOD DOORS SHALL BE 7 PLY SOLID CORE.
  - KROSSWOOD DOORS ARE AVAILABLE AT HOME DEPOT. GLASS IS NOT INCLUDED, ALL GLASS SHALL BE 1/2" TEMPERED CLEAR.
  - CONTRACTOR TO SUBMIT HARDWARE SCHEDULE. HOLLOW METAL FRAMES MOUNTED IN CMU WALL SHALL HAVE 4" HEAD, HOLLOW METAL FRAMES MOUNT IN GYPSUM BOARD PARTITIONS SHALL HAVE 2" HEAD.
  - PROVIDE BURNS MANUFACTURING RB540 FLOOR MOUNTED DOOR STOPS AT THE FOLLOWING DOORS: 105, 106, 107, 108, 115, 121, 123, 133, 139, 142
  - PROVIDE WALL MOUNTED DOOR STOPS BOBRICK B-687 AT THE FOLLOWING LOCATIONS: 101, 102, 103, 104, 109, 110, 111, 113, 114, 116, 117, 118, 119, 122, 124, 125, 126, 128, 130, 132, 134, 141, 144
  - E M-D Building Products DB005 Vinyl Insert Mill Door Sweep AND WEATHER STRIPPING FOR SOUND CONTROL AT THE FOLLOWING LOCATIONS: 101, 102, 103, 105, 106, 107, 113, 114, 123, 124, 125, 126, 130, 132, 139, 142, 143, 145
  - PROVIDE NATIONAL HARDWARE KICK PLATES AT LOCATIONS SHOWN ON DOOR TYPES AS WELL AS THE FOLLOWING LOCATIONS: 103, 113, 114, 115, 123, 139, 142, 145  
KICK PLATE MATERIAL SHALL MATCH DOOR HARDWARE FINISH.
  - PROVIDE DOOR WEATHER STRIPPING AND DOOR SWEEP AT JAMB AND SILL FOR SOUND CONTROL AT BATHROOM DOORS.



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A NEW CAMPUS FOR  
**EMANUEL BAPTIST CHURCH**  
106 BOONE STREET SUMMERVILLE SOUTH CAROLINA 29483  
OWNER CONTACT - ROBERT DAVIS, JR.  
181 E. EVANS STREET - SUITE 210 - FLORENCE, SC 29506  
1-843-636-0886 - robert@robertdavisengineering.com

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PERMIT AND PRICING

A5-3

**GENERAL NOTES:**

**GENERAL:**

- 1.0 THIS PROJECT HAS BEEN DESIGNED FOR THE WEIGHTS AND MATERIALS INDICATED ON THE DRAWINGS AND FOR THE LIVE LOADS INDICATED IN THE DESIGN DATA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALLOWABLE CONSTRUCTION LOADS AND TO PROVIDE PROPER DESIGN AND CONSTRUCTION OF FALSEWORK, FORMWORK, STAGING, BRACING, SHEETING AND SHORING, ETC.
  - 1.1 COORDINATE THESE DRAWINGS WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND CIVIL DRAWINGS.
  - 1.2 THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL FLOOR, WALL AND ROOF OPENING SIZES AND LOCATIONS, EQUIPMENT PAD SIZES AND LOCATIONS, ANCHOR BOLT LOCATIONS, ETC WITH EQUIPMENT SELECTED. THE CONTRACTOR SHALL MAKE ANY REQUIRED MODIFICATIONS AT NO ADDITIONAL COST.
  - 1.3 THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR SLEEVES, CURBS, INSERTS OR OPENINGS, ETC. NOT HEREIN INDICATED.
  - 1.4 WORK NOT INCLUDED ON THE DRAWINGS BUT IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES ELSEWHERE ON THE DRAWINGS SHALL BE REPEATED.
  - 1.5 IN CASE OF CONFLICT BETWEEN THE NOTES, DETAILS AND SPECIFICATIONS THE MOST RIGID REQUIREMENTS SHALL GOVERN.
  - 1.6 SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF MASONRY AND DRYWALL NON-LOAD BEARING PARTITIONS. PROVIDE COMPRESSIBLE FIRESAFING AT TOP OF WALL AS REQUIRED BY ARCHITECTURAL DRAWINGS.
  - 1.7 GENERAL CONTRACTOR SHALL REVIEW AND STAMP ALL DRAWINGS BEFORE SUBMITTAL FOR APPROVAL. SHOP DRAWINGS, REVIEWED BY THE GENERAL CONTRACTOR, FOR REINFORCING, STRUCTURAL MEMBERS, AND STRUCTURAL STEEL SHALL BE SUBMITTED TO THE ARCHITECT AND A STAMPED REVIEW RECEIVED PRIOR TO FABRICATION. ERECTION SHALL BE MADE FROM REVIEWED SHOP DRAWINGS ONLY.
  - 1.8 ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED IN THE FIELD AND ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING WITH THE AFFECTED PART OF WORK.
- 2.0 FOUNDATIONS/SOILS:**
- 2.1 SELECT FILL MATERIALS SHALL BE PLACED IN 8-INCH LAYERS AND BE COMPACTED TO AT LEAST 95 PERCENT STANDARD PROCTOR MAXIMUM DRY DENSITY.
  - 2.2 ALL FOUNDATIONS, OR PORTIONS THEREOF, BELOW GRADE MAY BE EARTH FORMED BY NEAT EXCAVATIONS.
  - 2.3 FOUNDATIONS SHALL BE CENTERED ON COLUMNS AND WALLS UNLESS NOTED OTHERWISE.
  - 2.4 ALL FOUNDATIONS SHALL BEAR ON EXISTING NATURAL MATERIAL AT ELEVATIONS SHOWN ON PLANS AND DETAILS. A MOISTURE RETARDER SHALL BE PLACED BELOW THE SLAB.
  - 2.5 FOUNDATIONS ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENGAGING A TESTING AGENCY TO VERIFY SOIL BEARING CAPACITY.
- 3.0 CONCRETE WORK:**
- 3.1 CONCRETE SHALL HAVE THE UNIT WEIGHT AND THE MINIMUM COMPRESSIVE STRENGTHS (f<sub>c</sub>) AT 28 DAYS AS SHOWN ON THE CONCRETE MATERIALS SCHEDULE. (DWG S-002) SEE SPECIFICATIONS FOR FURTHER INFORMATION. ENTRAIN AIR TO PRODUCE TOTAL AIR CONTENT ACCORDING TO THE SPECIFICATIONS. FOR CONCRETE EXPOSED TO FREEZING TEMPERATURES (EXTERIOR FOOTINGS, SLAB TURN-DOWNS, EXTERIOR SLABS AND SLABS-ON-GRADE, EXTERIOR RETAINING WALLS, AND EXTERIOR GRADE BEAMS.)
  - 3.2 GROUT FOR BASE PLATES SHALL BE NON-SHRINKABLE GROUT AND SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH AT 28 DAYS OF 5000 PSI, UNLESS NOTED OTHERWISE.
  - 3.3 NO CALCIUM CHLORIDE SHALL BE USED IN ANY CONCRETE MIXING.
  - 3.4 TRANSPORTING AND PLACING OF CONCRETE SHALL CONFORM TO ACI-301-89.
  - 3.5 ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI-318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", AND CONTRACT SPECIFICATIONS, WHEN THERE IS A CONFLICT BETWEEN ACI AND SPECIFICATIONS, THE MORE STRINGENT SHALL GOVERN.
  - 3.6 ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI-318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", AND CONTRACT SPECIFICATIONS, WHEN THERE IS A CONFLICT BETWEEN ACI AND SPECIFICATIONS, THE MORE STRINGENT SHALL GOVERN.
  - 3.7 CONCRETE REINFORCEMENT BARS SHALL CONFORM TO ASTM A615, GRADE 60, REINFORCING BARS SHALL NOT BE TACK WELDED, WELDED HEATED OR CUT, UNLESS INDICATED ON THE CONTRACT DOCUMENTS. ALL LAP SPICES SHALL BE CLASS "B" U.N.O.
  - 3.8 HORIZONTAL FOOTING AND HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS AND SHALL HAVE 90 DEGREE BENDS AND EXTENSIONS, OR CORNER BARS OF EQUIVALENT SIZE LAPPED WITH A CLASS B TENSION SPICE AT CORNERS AND INTERSECTIONS. TOP BAR CRITERIA SHALL APPLY IF 12" OR MORE OF FRESH CONCRETE IS PLACED BELOW BAR.
  - 3.8 SLABS-ON-GRADE SHALL HAVE CONSTRUCTION JOINTS OR CRACK CONTROL JOINTS AS SHOWN ON THE DRAWINGS. CONSTRUCTION JOINTS CAN BE USED AT CONTROL JOINT LOCATIONS AT CONTRACTORS OPTION. SEE SLAB PLANS & JOINT DETAILS FOR ADDITIONAL INFORMATION.
  - 2.0 SEE SPECIFICATIONS FOR ALL WATERPROOFING/DAMP-PROOFING DETAILS.
  - 3.11 ALL WELDED WIRE FABRIC SHALL CONFORM TO THE STANDARDS OF ASTM A-185. SUPPLY IN FLAT SHEETS.
  - 3.12 ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED, AND SPACED IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318, AND THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315, LATEST EDITION.
  - 3.13 SHOP DRAWINGS SHOWING REINFORCING DETAILS, INCLUDING STEEL SIZES, SPACING AND PLACEMENT, SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION.
  - 3.14 ALL WELDED WIRE FABRIC SHALL BE LAPPED TWO (2) FULL MESH PANELS AND TIED SECURELY.
  - 3.15 ALL DOWELS SHALL MATCH SIZE AND NUMBER OF MAIN REINFORCING, UNLESS NOTED OTHERWISE ON DRAWINGS.
  - 3.16 ADDITIONAL BARS SHALL BE PROVIDED AROUND ALL FLOOR AND WALL OPENINGS AS SHOWN ON THE DWGS.
  - 3.17 SEE ARCHITECTURAL DRAWINGS FOR TYPE AND LOCATION OF ALL FLOOR FINISHES
  - 3.18 THE CONTRACTOR SHALL COORDINATE ADDITIONAL WALL/SLAB OPENINGS NOT SHOWN ON STRUCTURAL DRAWINGS. SEE MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL DRAWINGS.
  - 3.19 UNLESS NOTED OTHERWISE, ALL CURBS SHALL BE REINFORCED WITH AT LEAST 1 #4 CONTINUOUS AND #4 AT 12" OC DOWELS TO STRUCTURE BELOW.
  - 3.20 THE SUBCONTRACTOR SHALL VERIFY ALL OPENINGS, PAD SIZES, AND ANCHOR BOLTS WITH EQUIPMENT SELECTED.
  - 3.21 FOR ALL WALLS & PIERS, PROVIDE DOWELS INTO FOOTING AT EACH VERT REINF BAR, U.N.O. DOWEL SIZE SHALL BE SAME AS VERT REINF.
  - 3.22 ALL DEFORMED BAR ANCHORS SHALL BE TRS NELSON DIVISION OR EQUAL 1/2" DIA (UNO) CONFORMING TO ASTM A-498M WITH A MINIMUM TENSILE STRENGTH OF 80,000 PSI ANCHOR DIMENSIONS SHALL BE IN ACCORDANCE WITH ASTM D-19. INSTALL ANCHORS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS BY AUTOMATIC END WELDING AS INDICATED ON THE DRAWINGS. NO UNAUTHORIZED OR FIELD WELDING SHALL BE MADE WITHOUT AUTHORIZATION FROM THE MANUFACTURER.
  - 3.23 ALL REINFORCING INDICATED TO BE WELDED SHALL BE IN ACCORDANCE WITH ASTM A706M. "LOW ALLOY STEEL DEFORMED BARS FOR CONCRETE REINFORCEMENT". ANY INSTALLATIONS USING MANUFACTURER'S EQUIPMENT SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.
  - 3.24 PROVIDE ADDITIONAL 2-#4 x 3'-0" REINFORCING BARS IN SLAB-ON-GRADE AT ALL RE-ENTRANT CORNERS. PLACE BARS AT MID-DEPTH OF SLAB WITH A CLEARANCE OF 2" FROM CORNER UNO.
  - 3.25 ALL INSTALLERS OF DRILLED-IN ADHESIVE ANCHORS SHALL BE CERTIFIED BY THE MANUFACTURER. IF ANY BOLTS ARE INSTALLED BY ANYONE THAT IS NOT CERTIFIED, THOSE BOLTS SHALL BE TESTED TO 5,000LB TENSION.

**4.0 MASONRY:**

- 4.1 MASONRY CONSTRUCTION AND MATERIALS SHALL CONFORM TO ALL REQUIREMENTS OF THESE CONTRACT DOCUMENTS AND THE PROJECT SPECIFICATIONS.
- 4.2 THE SPECIFIED ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE MASONRY (f<sub>m</sub>) ON THE NET AREA IS A MINIMUM AS INDICATED IN THE SPECIFICATIONS.
- 4.3 PROVIDE TWO #5 BARS CONTINUOUS IN ALL BOND BEAMS, UNLESS OTHERWISE INDICATED IN THE DRAWINGS. REINFORCEMENT PLACED IN BOND BEAMS SHALL CONTINUOUS WITH STANDARD ACI HOOKS AT EACH END. PROVIDE STANDARD BAR SPICES AS SPECIFIED. MAXIMUM BOND BEAM SPACING SHALL BE 8'-0" OC UNO.
- 4.4 PROVIDE VERTICAL REINFORCEMENT IN ALL WALLS AS SHOWN. PROVIDE VERTICAL BARS AT EACH END OF ALL WALLS AS SHOWN. PROVIDE VERTICAL BARS ON EACH SIDE OF OPENINGS IN ALL WALLS AS SHOWN. PROVIDE STANDARD BAR SPICES AS SPECIFIED. ALL VERTICAL REINFORCEMENT EXTENDS FULL HEIGHT OF WALL. SEE TYPICAL MASONRY DETAILS DWG S-501 AND OTHER SECTIONS AND DETAILS AS INDICATED ON DRAWINGS.
- 4.5 BLOCK CELLS THAT REQUIRE VERTICAL REINFORCING BARS AS INDICATED ON THE CONTRACT DRAWINGS AND/OR SPECS SHALL BE PLACED IN CENTERS OF BLOCK CELLS UNO. PROVIDE #5 BAR AT INDICATED SPACING MINIMUM VERTICAL REINFORCING BARS @ ALL INTERIOR NON-STRUCTURAL CMU WALLS UNO.
- 4.6 PROVIDE JOINT REINFORCEMENT AS INDICATED IN THE SPECIFICATIONS AND ON THE ARCHITECTURAL DRAWINGS.
- 4.7 PROVIDE JOINT REINFORCEMENT AS INDICATED IN THE SPECIFICATIONS AND ON THE ARCHITECTURAL DRAWINGS.
- 4.8 GROUT FOR MASONRY SHALL BE NORMAL WEIGHT AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. GROUT SHALL CONFORM TO ASTM C476. GROUT LIFTS SHALL NOT EXCEED 4'-0".
- 4.9 FILL ALL BOND AND LINTEL BEAMS AND CELLS AT VERTICAL REINFORCEMENT WITH GROUT.
- 4.10 USE MORTAR TYPE AS INDICATED IN THE SPECIFICATIONS.
- 4.11 CONCRETE MASONRY UNITS SHALL BE AS INDICATED IN SPECIFICATIONS.
- 4.12 ALL CELLS, OPEN CAVITIES, AND AIR SPACES BELOW GRADE SHALL BE GROUTED.
- 4.13 BOND BEAMS AND REINFORCING SHALL BE DISCONTINUOUS AT CONTROL JOINTS (UNO). MAXIMUM CONTROL JOINT SPACING SHALL BE AS INDICATED ON THE ARCHITECTURAL DRAWINGS.
- 4.14 CONTRACTOR SHALL COORDINATE LOCATION OF ALL OPENINGS SEE ARCH., MECH., ELEC., AND PLUMBING DWGS. FOR SIZE AND LOCATION OF OPENINGS.
- 4.15 SEE DRAWING S-501 FOR TYPICAL MASONRY SECTIONS AND DETAILS.
- 4.16 MASONRY WALLS SHALL NOT BE BACK FILLED PRIOR TO THE MORTAR AND GROUT ATTAINING THEIR RESPECTIVE MAXIMUM DESIGN STRENGTHS PER SPECIFICATIONS.

**5.1 STEEL DECK**

- 5.1 STEEL DECK SHALL BE ASTM A446 HAVING A MINIMUM YIELD STRENGTH OF 33,000 PSI AS PER THE STEEL DECK INSTITUTE DESIGN MANUAL.
  - 5.2 STEEL DECK SHALL BE ERECTED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND ERECTION LAYOUTS AND CONNECTED TO SUPPORTING MEMBERS AS INDICATED BELOW.
  - 5.3.1 STEEL ROOF DECK SHALL BE 1 1/2", 22 GA GALVANIZED WIDE RIB (S.D.I. TYPE WR 22) UNO.
  - 5.3.2 ROOF DECK SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES U.N.O.:
 

|                                                |                                 |
|------------------------------------------------|---------------------------------|
| MOMENT OF INERTIA, I                           | 22 GA                           |
| SECTION MODULUS (TOP OF DECK), S <sub>x</sub>  | 0.140 IN <sup>3</sup> /FT WIDTH |
| SECTION MODULUS (BOT. OF DECK), S <sub>y</sub> | 0.131 IN <sup>3</sup> /FT WIDTH |
| SECTION MODULUS (BOT. OF DECK), S <sub>p</sub> | 0.120 IN <sup>3</sup> /FT WIDTH |
- IN ADDITION TO MEETING THE MINIMUM REQUIREMENTS ABOVE, THE DECK MANUFACTURER SHALL DESIGN THE ROOF DECK AND ATTACHMENTS TO STEEL FOR THE ROOF LOADS, INCLUDING DECK UPLIFT. ALL ROOF DECK SHALL HAVE A MINIMUM 3-SPAN CONDITION.
- 5.3.3 1 1/2" ROOF DECK SHALL BE CONNECTED TO SUPPORTS WITH #12 TEK SCREWS IN THE BOTTOM OF THE FLUTES USING A S.D.I. 36/5 PATTERN (UNO). DECK SIDELAPS SHALL BE FASTENED USING #10 SCREWS WITH MINIMUM 5-SIDE LAPS CONNECTIONS PER SPAN. ALL ENDLAPS SHALL BE A MINIMUM OF 2" AND SHALL OCCUR OVER SUPPORTS. MINIMUM DIAPHRAGM SHEAR STRENGTH Q = 270 PLF (UNO).
  - 5.3.4 DO NOT SUSPEND PIPES, DUCTS, OR CEILING FROM ROOF DECK.

**6.0 STRUCTURAL STEEL**

- 6.1 STRUCTURAL STEEL ROLLED SHAPES AND PLATES SHALL CONFORM TO THE MATERIAL INFORMATION SCHEDULE ON SHEET S-002. DIMENSIONS AND PROPERTIES SHALL BE IN ACCORDANCE TO ASTM A6.
- 6.2 ANCHOR BOLTS SHALL CONFORM TO ASTM A36, OR A307, UNLESS NOTED OTHERWISE.
- 6.3 CONNECTION BOLTS FOR STRUCTURAL STEEL MEMBERS SHALL BE 3/4" DIA A325-N, UNO, AND SHALL CONFORM TO ASTM A325. NUTS SHALL CONFORM TO ASTM A563. WASHERS SHALL CONFORM TO ASTM F436. CONNECTION BOLTS SHALL HAVE HARDENED WASHER PLACED UNDER THE ELEMENT TO TIGHTENED.
- 6.4 DETAILING OF STRUCTURAL STEEL CONNECTIONS MUST BE CONSISTENT WITH RECOGNIZED, PUBLISHED METHODS SUCH AS IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 9th EDITION; "ENGINEERING FOR STRUCTURE", OR "VOLUME II CONNECTIONS MANUAL OF STEEL CONSTRUCTION". SECTION A7 OF AISC 9TH EDITION ASD IS AMENDED SUCH THAT THE FABRICATION IS RESPONSIBLE FOR THE DESIGN AND DETAILING OF ALL CONNECTIONS.
- 6.5 SEE SHEET S401 FOR STANDARD FRAMING CONNECTIONS. STRUCTURAL STEEL CONNECTIONS SHALL BE DETAILED BY THE CONTRACTOR IN ACCORDANCE WITH THE CONNECTIONS SHALL BE DESIGNED TO DEVELOP A MINIMUM END REACTION OF 12.0 KIPS, UNLESS NOTED OTHERWISE AS THUS: ##R# EITHER IN PLAN OR IN THE BEAM REACTION TABLES. CONNECTIONS SHALL BE DESIGNED AND DETAILED FOR THE END REACTION DETERMINED FROM PART 2 - "ALLOWABLE UNIFORM LOAD TABLES" FROM THE AISC MANUAL OF STEEL CONSTRUCTION - ASD 9TH EDITION OR A MINIMUM OF 12 KIPS WHICH EVER IS GREATER.
- 6.6 ALL MEMBERS AND CONNECTIONS ON THE CONTRACT DRAWINGS AND CONNECTIONS FOR ANY PORTION OF THE STRUCTURE NOT SHOWN SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF SOUTH CAROLINA. DETAILED AND SUBMITTED FOR APPROVAL AND SHOWN ON THE SHOP DRAWINGS.
- 6.7 ALTERNATIVE CONNECTION DETAILS MAY BE SUBMITTED ON SHOP DRAWINGS BY THE CONTRACTOR ONLY IF ACCOMPANIED BY COMPLETE STRUCTURE CALCULATIONS PREPARED AND SEALED BY AN ENGINEER, LICENSED IN THE STATE OF SOUTH CAROLINA AND SUBMITTED FOR APPROVAL.
- 6.8 CALCULATIONS FOR DETAILS MUST SHOW A RATIONAL ANALYSIS OF A COMPLETE LOAD PATH, INCLUDING LOCAL EFFECTS ON WEBS, FLANGES, ETC. OF THE CONNECTED MEMBERS AND THE DEVICES (PLATES, SEATS, BRACKETS, BOLTS, WEBS, ETC.) TO BE SUBMITTED TO THE ARCHITECT FOR REVIEW CONCURRENT WITH SHOP DRAWING ERECTION PLANS AND DETAILS WILL BE CAUSE FOR REJECTION OF THAT SUBMITTAL.
- 6.8.1 ALL SHEAR TAB CONNECTIONS SUBMITTED AS AN ALTERNATE FOR APPROVAL SHALL BE DESIGNED USING A FLEXIBLE SUPPORT CONDITION.
- 6.8.1 BEAM AND GIRDER CONNECTIONS SHALL BE DESIGNED SUCH THAT ALL ADDITIONAL STRESSES DUE TO CONNECTION ECCENTRICITY SHALL BE DEVELOPED BY THE CONNECTION AND NOT INDUCE ANY ADDITIONAL STRESSES INTO SUPPORTING MEMBERS.
- 6.9 STRUCTURAL STEEL DETAILING, FABRICATION AND ERECTION SHALL CONFORM TO THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS - ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN" (JUNE 1, 1989), AND THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" (SEPTEMBER 1, 1989)
- 6.10 WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE AWS D1.1. ELECTRODES FOR SHOP AND FIELD WELDS SHALL BE CLASS E70XX. ALL WELDING SHALL BE DONE BY QUALIFIED, CERTIFIED WELDERS PER THE ABOVE STANDARD.

**6.0 STRUCTURAL STEEL (CONT):**

- 6.11 SHOP AND FIELD TESTING OF WELDS AND BOLTS SHALL BE AS OUTLINED IN THE SPECIFICATIONS.
- 6.12 ALL WELDS NOT INDICATED SHALL BE A MINIMUM OF 1/4" ALL AROUND UNLESS NOTED OTHERWISE.
- 6.13 THERE SHALL BE NO FIELD CUTTING OF STRUCTURAL STEEL MEMBERS FOR THE WORK OTHER TRADES WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.
- 6.14 FOR ROOF OPENINGS, THE FABRICATOR SHALL VERIFY OPENING LOCATIONS WITH EQUIPMENT SELECTED AND MAKE ANY NECESSARY MODIFICATIONS AT NO ADDITIONAL COST. THE CONTRACTOR SHALL COORDINATE MECHANICAL UNITS AND OPENINGS & ARCHITECTURAL ITEMS REQUIRED FOR COMPLETE INSTALLATION OF WORK. IT IS THE RESPONSIBILITY OF FABRICATOR TO RECEIVE ALL NECESSARY INFORMATION PRIOR TO FABRICATION OF THE STEEL.
- 6.15 ALL STRUCTURAL STEEL SHALL BE PRIMED AS PER THE SPECIFICATIONS.
- 6.16 FOR STEEL BEAMS THAT ARE PRIMED, THE TOP FLANGE RECEIVING STEEL STUDS SHALL NOT PRIMED PAINTED.
- 6.17 ALL PLATES NOT INDICATED SHALL BE 5/16" MIN THICKNESS. ALL ANGLES NOT INDICATED SHABE 3x3x5/16" MIN. SEE MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL OPENINGS NOT SHOWN. SEE DWG. S-401 FOR TYPICAL FRAMING DETAILS.
- 6.18 SEE SHEET S401 FOR STANDARD FRAMING CONNECTIONS. WHERE AN AXIAL LOAD INDICATED THUS ( 55K) IS SHOWN ON A FRAMING MEMBER, THE CONNECTION SHALL BE DESIGNED FOR MAXIMUM CONNECTION REACTION INDICATED BY NOTE 0.5:1 PLUS THE BOLT PRYING ACTION GENERATED BY THE LESSER OF THE TWO CONNECTING MEMBER AXIAL FORCES SHOWN ON THPLANS.

**7.0 MISCELLANEOUS STEEL**

- 7.1 SEE ARCHITECTURAL PLANS FOR MISCELLANEOUS STEEL LOCATIONS AND REQUIREMENTS.

**9.0 BRICK OR CMU LEDGE ANGLES/PLATES**

- 9.1 ALL LEDGES SHALL BE 1/2" MIN THICKNESS AND SHALL EXTEND TO WITHIN 1" (UNO) OF OUTSIDE FACE OF WALL.
- 9.2 ALL LEDGES SHALL BE DISCONTINUOUS AT CONTROL AND EXPANSION JOINTS.
- 9.3 ALL LEDGES EXPOSED TO WEATHER SHALL BE GALVANIZED.
- 9.4 ALL LEDGES SHALL BE FIELD WELDED TO ACCOMMODATE VARIATIONS IN SWEEP, CAMBER, THICKNESS OF MORTAR JOINTS, CONSTRUCTION TOLERANCES, DEFLECTION OF MEMBERS DURING PLACEMENT OF DEAD LOAD, ETC. TO ENMENT AND PLACEMENT OF LEDGES WITH BRICK AND CMU MORTAR JOINTS, CONTROL & EXPANSION JOINTS, FINISHED FLOOR ELEVATIONS, ETC. ALL BENT PLATE LEDGES ARE INDICATED TO BE ONEPIECE. THE SUBCONTRACTOR SHALL VERIFY AND COORDINATE ALL CONDITIONS (INCLUDING COORDINATION WITH THE BRICK MASONRY CONTRACTOR) TO ENSURE PROPER INSTALLATION OF WORK. ANY MODIFICATIONS REQUIRED FOR COMPLETION OF WORK WILL BE AT NO ADDITIONAL COST TO THE OWNER.

**PRE-ENGINEERED METAL BLDG NOTES**

- 10.1 DESIGN THE BUILDING SYSTEM(S) IN ACCORDANCE WITH THE BUILDING CODE.
- 10.2 DESIGN THE BUILDING SYSTEM FOR THE LIVE LOADS OR SNOW LOADS (WHICHEVER IS GREATER) INDICATED AND A COLLATERAL DEAD LOAD OF 7 PSF IN ADDITION TO THE BUILDING DEAD LOADS, WIND LOADS AND SEISMIC LOADS. PARAMETERS FOR THE DEVELOPMENT OF THE SNOW, WIND, AND SEISMIC LOADS ARE LISTED IN THE GENERAL NOTES. INCLUDE THE EFFECTS OF UNBALANCED SNOW LOAD, SNOWDRIFT, SLIDING SNOW, RAIN ON SNOW AND WINDWARD AND LEeward WIND PRESSURE AND SUCTION LOADS. ROOF PURLINS SHALL BE DESIGNED FOR AN ADDITIONAL CONCENTRATED LIVE LOAD OF 250 POUNDS LOCATED ANYWHERE ALONG THE LENGTH OF THE PURLIN.
- 10.3 LOAD COMBINATIONS SHALL BE IN ACCORDANCE WITH THE APPLICABLE BUILDING CODE UNLESS THE MBMA METAL BUILDING SYSTEMS MANUAL (2002) LOAD COMBINATIONS ARE MORE STRINGENT.
- 10.4 DESIGN THE BUILDING SYSTEM WITH HINGED COLUMN BASES. FIXED BASE COLUMNS ARE NOT ALLOWED.
- 10.5 BUILDING LATERAL DEFLECTIONS AND RACKING LIMITS SHALL BE IN ACCORDANCE WITH "SERVICEABILITY CONSIDERATIONS" SUMMARY TABLES CONTAINED IN AISC STEEL DESIGN GUIDE SERIES 3 "SERVICEABILITY DESIGN CONSIDERATIONS FOR LOW RISE BUILDINGS" 1990. DEFLECTIONS SHALL BE LIMITED TO ENSURE THAT BUILDING COMPONENTS DO NOT CONTACT INTERIOR PARTITIONS. DEFLECTION LIMITS SHALL NOT EXCEED DEFLECTION TOLERANCES OF EQUIPMENT SUPPORTED BY THE BUILDING.
- 10.6 THE BUILDING FOUNDATION HAS BEEN DESIGNED FOR THE REACTIONS SHOWN. THE REACTIONS HAVE NOT BEEN REDUCED FOR DEAD PLUS WIND LOAD COMBINATIONS. REDESIGN THE FOUNDATIONS IF THE REACTIONS FOR THE BUILDING EXCEED THE INDICATED REACTIONS BY 10 PERCENT. CALCULATIONS SEALED BY A PROFESSIONAL ENGINEER SHALL BE SUBMITTED FOR REVIEW. DO NOT PLACE FOUNDATIONS PRIOR TO THE REVIEW AND APPROVAL OF THE BUILDING SYSTEM FOUNDATION LOADINGS.
- 10.7 PIER AND FOOTING SIZES AND LOCATION SHOWN ARE BASED UPON ASSUMPTIONS OF THE BUILDING SYSTEM'S COMPONENTS, CONFIGURATIONS AND LOADS. COORDINATE ALL FINAL DETAILS AND DIMENSIONS TO ENSURE THAT THE FOUNDATION SYSTEM IS COMPATIBLE WITH THE BUILDING SYSTEM USED.
- 10.8 DESIGN AND PROVIDE STRUCTURAL MEMBERS FOR THE SUPPORT OF HVAC UNITS, DUCTS, FANS, PIPING, ELECTRICAL COMPONENTS, SUPPORTED PARTITIONS, ETC.
- 10.9 DESIGN OF THE ANCHOR BOLT DIAMETER AND LENGTH OF EMBEDMENT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- 10.10 ALLOWABLE DEFLECTION AND BUILDING DRIFT LIMIT DEFLECTION TO LIMITS SHOWN IN TABLE 1604.3 OF THE IBC. BUILDING DRIFT SHALL BE LIMITED TO H/600 FOR WIND AND SEISMIC LOADS
- 10.11 METAL BUILDING CALCULATIONS SHALL BE SEALED BY A REGISTERED ENGINEER IN THE STATE OF THE PROJECT AND SHALL BE SUBMITTED TO THE ENGINEER OF RECORD.

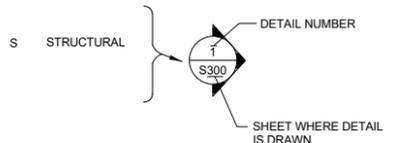
| BRICK SHELF ANGLE SCHEDULE |                        |
|----------------------------|------------------------|
| CLEAR SPAN                 | ANGLE SIZE             |
| UP TO 3'-0"                | L4x4x1/4               |
| 3'-0" TO 6'-0"             | L4x4x3/8               |
| 6'-0" TO 8'-0"             | L6x4x5/16(LLV)         |
| 8'-0" TO 10'-0"            | L6x4x3/8(LLV)          |
| OVER 10'-0"                | L6x4x3/8 BOLTED TO HDR |

**ABBREVIATIONS**

|        |                                            |
|--------|--------------------------------------------|
| AB     | ANCHOR BOLT                                |
| ABV    | ABOVE                                      |
| ACI    | AMERICAN CONCRETE INSTITUTE                |
| AHR    | ANCHOR                                     |
| AISC   | AMERICAN INSTITUTE OF STEEL CONSTRUCTION   |
| ARCH   | ARCHITECTURAL                              |
| ASTM   | AMERICAN SOCIETY FOR TESTING AND MATERIALS |
| AWS    | AMERICAN WELDING SOCIETY                   |
| BL     | BUILDING LINE, BASE LINE                   |
| BLDG   | BLOCK, BLOCKING                            |
| BLK    | BELOW                                      |
| BLW    | BEAM, BENCH MARK                           |
| BM     | BOTTOM                                     |
| BOT    | BASE PLATE, BACKFLOW PREVENTER             |
| BP     | BEARING                                    |
| BRG    | CONSTRUCTION JOINT                         |
| CJ     | CONCRETE MASONRY UNITS                     |
| CMU    | COLUMN                                     |
| COL    | CONCRETE                                   |
| CONC   | CONTINUOUS, CONTINUATION                   |
| CONT   | CONTRACT, CONTRACTOR                       |
| CONTR  | CENTER                                     |
| CTR    | DRAWING                                    |
| DWG    | DIAMETER                                   |
| DIA    | EACH                                       |
| EA     | EACH FACE                                  |
| EJ     | EXPANSION JOINT                            |
| EL     | ELEVATION                                  |
| EQL    | EQUAL                                      |
| EXIST  | EXISTING                                   |
| FINH   | FINISH                                     |
| FL     | FLOOR, FLASHING                            |
| FT     | FOOT                                       |
| FTG    | FOOTING                                    |
| IN     | INCH                                       |
| JST    | JOIST                                      |
| MID    | MIDDLE                                     |
| MIN    | MINIMUM                                    |
| MISC   | MISCELLANEOUS                              |
| MK     | MARK                                       |
| MPH    | MILES PER HOUR                             |
| N      | NORTH                                      |
| NOM    | NOMINAL                                    |
| NTS    | NOT TO SCALE                               |
| O TO O | OUT TO OUT                                 |
| OC     | ON CENTER                                  |
| OPNG   | OPENING                                    |
| OPP    | OPPOSITE                                   |
| PL     | PLATE, PROPERTY LINE                       |
| PSF    | POUNDS PER SQUARE FOOT                     |
| PSI    | POUNDS PER SQUARE INCH                     |
|        | ROUND (DIAMETER), PHASE                    |
| SECT.  | SECTION                                    |
| SH     | SHEET                                      |
| SIM    | SIMILAR                                    |
| SLP    | SLOPE                                      |
| SNT    | SEALANT                                    |
| SST    | SIMPSON STRONG TIE                         |
| STRL   | STRUCTURAL                                 |
| STRUC  | STRUCTURE                                  |
| T & B  | TOP AND BOTTOM                             |
| T & G  | TONGUE AND GROOVE                          |
| T & P  | TEMPERATURE AND PRESSURE                   |
| TOC    | TOP OF CONCRETE                            |
| T.O.M. | TOP OF MASONRY                             |
| TOS    | TOP OF STEEL                               |
| VERT   | VERTICAL                                   |
| TW     | TOP OF WALL                                |
| UNO    | UNLESS NOTED OTHERWISE                     |
| WHS    | WELD HEADED STUD                           |
| WLS    | WIND LOAD, WATER LINE                      |
| WP     | WORKING POINT, WEATHERPROOF                |
| WSP    | WOOD STRUCTURAL PANEL                      |
| WWF    | WELDED WIRE FABRIC                         |

**DESIGNATION SYMBOLS**

**DETAILS & SECTIONS**



**BUILDING MATERIALS**

|  |                         |
|--|-------------------------|
|  | EARTH                   |
|  | CRUSHED STONE           |
|  | CONCRETE                |
|  | STEEL                   |
|  | CONCRETE MASONRY UNITS  |
|  | BRICK                   |
|  | ROUGH WOOD              |
|  | FINISH WOOD             |
|  | PLYWOOD                 |
|  | PLASTER OR GWB          |
|  | BATT OR FOAM INSULATION |

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**106 BOONE STREET**  
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| Mark | Date | Description |
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**SHEET TITLE**

**GENERAL NOTES**

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| Drawn    | RD        |
| Designed | RD        |
| Checked  | RD        |
| Date     | 10/9/2019 |
| Job No.  | 19079     |

**S101**

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# STRUCTURAL DESIGN CRITERIA

ALL DESIGNS SHALL CONFORM TO THE PROVISIONS OF THE INTERNATIONAL BUILDING CODE, 2018 EDITION.

## 1.4.4 DESIGN WIND PRESSURE - ROOF UPLIFT

JOISTS, LIGHT GAGE TRUSSES, ROOF DECK & FASTENERS SHALL BE DESIGNED FOR THE WIND PRESSURES SHOWN BELOW

### 1.0 DESIGN LOADS

#### 1.1 DEAD LOADS

##### 1.1.1 ROOF DEAD LOADS

|                                 | MAXIMUM GRAVITY LOADS  | MINIMUM GRAVITY LOAD FOR UPLIFT |
|---------------------------------|------------------------|---------------------------------|
| ROOF DECK                       | 2 PSF                  | 2 PSF                           |
| RIGID INSULATION                | 2 PSF                  | 1 PSF                           |
| ROOF SYSTEM (BUILT-UP ROOF)     | 10 PSF                 | 8 PSF                           |
| ROOF SYSTEM (STANDING SEAM)     | 2 PSF                  | 1 PSF                           |
| STEEL JOISTS/LIGHT GAGE TRUSSES | 4 PSF                  | 3 PSF                           |
| LIGHTING & DUCTS                | 5 PSF                  | 3 PSF                           |
| SPRINKLERS AND CEILING          | 3 PSF                  | 2 PSF                           |
| MISC.                           | 3 PSF                  | -                               |
|                                 | 21 PSF (STANDING SEAM) | 12 PSF                          |
|                                 | 29 PSF (B.U.R.)        | 19 PSF                          |

#### 1.2 LIVE LOADS (PER IBC 2018 EDITION)

1.2.1 ROOF LIVE LOADS: ALL AREAS (ZONES)  
GREATER OF 20 PSF MINIMUM OR SNOW LOAD

#### 1.3 SNOW LOAD (PER IBC 2018 EDITION)

1.3.1 DESIGN PARAMETERS

FLAT ROOF SNOW LOAD = 10 PSF  
SLOPED ROOF SNOW LOAD = 10 PSF  
SNOW LOAD IMPORTANCE FACTOR, I = 1.1  
SNOW EXPOSURE FACTOR = 1.0

#### 1.4 WIND LOAD (PER IBC 2018 EDITION)

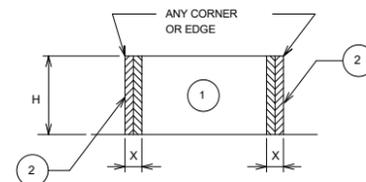
1.4.1 BASIC WIND SPEED = 151 MPH  
EXPOSURE C, Risk Factor III  
THERMAL FACTOR 1.0

1.4.2 DESIGN WIND PRESSURE - MAIN WINDFORCE RESISTING SYSTEM

| LOCATION       | WALL WINDWARD + LEEWARD<br>(@ MEAN ROOF HEIGHT) |          | ROOF          |           | X<br>(FT) |
|----------------|-------------------------------------------------|----------|---------------|-----------|-----------|
|                | INTERIOR ZONE                                   | END ZONE | INTERIOR ZONE | END ZONE  |           |
| ALL AREAS, UNO | 29 PSF                                          | 37.2 PSF | -20.4 PSF     | -31.8 PSF | 8         |

#### 1.4.3 DESIGN WIND PRESSURE - WALL COMPONENTS & CLADDING

EXTERIOR WALL SYSTEMS & THEIR ATTACHMENTS TO THE PRIMARY STRUCTURE SHALL BE DESIGNED FOR THE PRESSURES SHOWN IN THE DIAGRAM BELOW:



PRESSURE ON EXTERIOR WALL SYSTEMS FOR BUILDINGS WITH MEAN ROOF HEIGHT (H) = AS SHOWN

| LOCATION                  | H     | WINDWARD PRESSURE<br>psf (INWARD) |      | LEEWARD PRESSURE<br>psf (OUTWARD) |       | X<br>(FT) |   |
|---------------------------|-------|-----------------------------------|------|-----------------------------------|-------|-----------|---|
|                           |       | ①                                 | ②    | ①                                 | ②     |           |   |
| AREA < 10 ft <sup>2</sup> | 0-60' | 6                                 | 36.4 | -39.4                             | -48.5 | 5         |   |
| ALL AREAS, U.N.O.         | 2     | 10 ft AREA < 50 ft <sup>2</sup>   | 31.0 | 31.0                              | -34.0 | -37.8     | 5 |
|                           | 2     | 50 ft AREA < 100 ft <sup>2</sup>  | 27.3 | 27.3                              | -30.3 | -30.3     | 5 |

| TRIBUTARY AREA  | UPLIFT PRESSURE psf |                   |                   | X<br>(FT) |
|-----------------|---------------------|-------------------|-------------------|-----------|
|                 | ZONE ①<br>T (PSF)   | ZONE ②<br>T (PSF) | ZONE ③<br>T (PSF) |           |
| A < 10ft        | -39.7               | -66.7             | -100.3            | 7         |
| 10ft < A < 50ft | -37.4               | -50.2             | -60.3             | 7         |
| A > 100ft       | -36.4               | -43.1             | -43.1             | 7         |

\*T\* = TYPICAL ROOF AREA EXCLUDING OVERHANG  
\*\* = PRESSURES ACTING TOWARD SURFACES  
\*\* = PRESSURES ACTING AWAY FROM SURFACES

### 1.5 SEISMIC LOAD (PER IBC 2018)

|                                                                        |                                                                 |
|------------------------------------------------------------------------|-----------------------------------------------------------------|
| 1.5.1 SEISMIC USE GROUP, (CATEGORY)                                    | II (TABLE 1604.5)                                               |
| 1.5.2 SPECTRAL RESPONSE COEFFICIENTS S <sub>s</sub> AND S <sub>1</sub> | S <sub>s</sub> = 1.856 S <sub>1</sub> = 0.558                   |
| 1.5.3 SITE CLASS                                                       | D                                                               |
| 1.5.4 BASIC SEISMIC-FORCE-RESISTING SYSTEM                             | BRACE FRAMING SYSTEM                                            |
| PER TABLE 1617.6                                                       |                                                                 |
| 1.5.5 DESIGN BASE SHEAR ANALYSIS PROCEDURE                             | 0.194 * W<br>EQUIVALENT LATERAL FORCE PROCEDURE, TABLE 1616.6.3 |
| 1.5.6 SEISMIC DESIGN CATEGORY                                          | D (TABLE 1616.3 (1))                                            |

### 2.0 FOUNDATION DESIGN CRITERIA

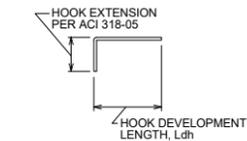
- MINIMUM FOOTING BEARING DEPTH BELOW GRADE IS 18 INCHES.
- MINIMUM FACTOR OF SAFETY FOR STABILITY AGAINST SLIDING, OVERTURNING AND UPLIFT IS 1.5  
SLIDING FRICTION COEFFICIENT FOR FOOTINGS IS 0.35
- NOT USED
- ALLOWABLE SOIL BEARING CAPACITIES = 1500psf.

### STEEL MATERIALS SCHEDULE

| STRUCTURAL ELEMENT               | F <sub>y</sub> YIELD STRENGTH (KSI) | REMARKS               |
|----------------------------------|-------------------------------------|-----------------------|
| BEAMS & GIRDERS                  | 50                                  | ASTM A572             |
| COLUMNS                          | 50                                  | ASTM A572             |
| BRACING                          | 50                                  | ASTM A572             |
| CONNECTIONS PLATES, & ALL OTHERS | 36                                  | ASTM A36              |
| ANCHOR BOLTS                     | 36                                  | ASTM A36<br>ASTM A307 |
| PIPES                            | 35                                  | ASTM A573<br>GRADE B  |
| TUBING                           | 46                                  | ASTM A500<br>GRADE B  |

### STANDARD HOOKS IN TENSION PER (ACI 318-14)

| HOOK DEVELOPMENT LENGTH<br>L <sub>dh</sub> (INCHES) |                         |                         |
|-----------------------------------------------------|-------------------------|-------------------------|
| BAR SIZE                                            | f <sub>c</sub> 4000 PSI | f <sub>c</sub> 3000 PSI |
| #3                                                  | 7                       | 9                       |
| #4                                                  | 10                      | 11                      |
| #5                                                  | 12                      | 14                      |
| #6                                                  | 15                      | 17                      |
| #7                                                  | 17                      | 19                      |
| #8                                                  | 19                      | 22                      |
| #9                                                  | 22                      | 25                      |
| #10                                                 | 24                      | 28                      |
| #11                                                 | 27                      | 31                      |



NOTES:

- CONCRETE IS NORMAL WEIGHT CONCRETE.
- BAR YIELD STRENGTH, f<sub>y</sub> = 60 KSI.
- SIDE COVER REQUIREMENTS OF ACI SECT. 12.5.3.2 ARE ASSUMED TO NOT BE MET.
- TIE OR STIRRUP REQUIREMENTS OF ACI SECT. 12.5.3.2 ARE ASSUMED TO NOT BE MET.
- REDUCTION FOR EXCESS REINFORCEMENT IS NOT TAKEN.
- HOOK DEVELOPMENT LENGTH IS VALID FOR 180° HOOKS ALSO.

### MINIMUM LAP SPLICES OF REINFORCING BARS IN TENSION (PER ACI 318-14)

| CENTER TO CENTER BAR SPACING | f <sub>c</sub> = 3500psi |             |               |             |
|------------------------------|--------------------------|-------------|---------------|-------------|
|                              | LESS THAN 4db            | 4db OR MORE | LESS THAN 4db | 4db OR MORE |
| #3                           | 20                       | 20          | 16            | 16          |
| #4                           | 28                       | 26          | 22            | 21          |
| #5                           | 43                       | 33          | 34            | 23          |
| #6                           | 61                       | 39          | 47            | 30          |
| #7                           | 83                       | 46          | 64            | 36          |
| #8                           | 110                      | 58          | 84            | 45          |
| #9                           | 139                      | 74          | 107           | 57          |
| #10                          | 176                      | 94          | 136           | 72          |
| #11                          | 216                      | 115         | 169           | 89          |

NOTES:

- YIELD STRENGTH OF REINFORCEMENT, f<sub>y</sub>, IS 60 KSI (LAP SPLICE LENGTH IS IN INCHES).
- CONCRETE IS NORMAL WEIGHT (150 pcf).
- TOP BAR INDICATES HORIZONTAL REINFORCEMENT WHICH IS PLACED ABOVE 12" OR MORE OF FRESH CONCRETE.
- UNLESS NOTED OTHERWISE COLUMNS & PIERS UTILIZE TENSION LAP SPLICES.
- STRAIGHT DEVELOPMENT LENGTH OF AN UNLAPPED BAR IS EQUAL TO VALUE FROM TABLE DIVIDED BY 1.3.
- CATEGORY FOR BARS SPACED LESS THAN 4d, ON CENTER CORRESPONDS TO CATEGORY 1 IN THE CRSI HANDBOOK WHEREAS FOR BARS SPACED 4d, OR MORE ON CENTER CORRESPOND TO CRSI CATEGORY 5.

### CONCRETE MATERIALS SCHEDULE

| STRUCTURAL ELEMENT  | f <sub>c</sub> CONCRETE COMPRESSIVE STRENGTH @ 28 DAYS (PSI) | REMARKS |
|---------------------|--------------------------------------------------------------|---------|
| ALL FOOTINGS U.N.O. | 3000                                                         |         |
| SLAB-ON-GRADE       | 4000                                                         |         |
| ALL OTHER CONCRETE  | 4000                                                         |         |

NOTES:  
1. ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE. (150 PCF) (U.N.O.)



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106 BOONE STREET  
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| Mark | Date | Description |
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SHEET TITLE

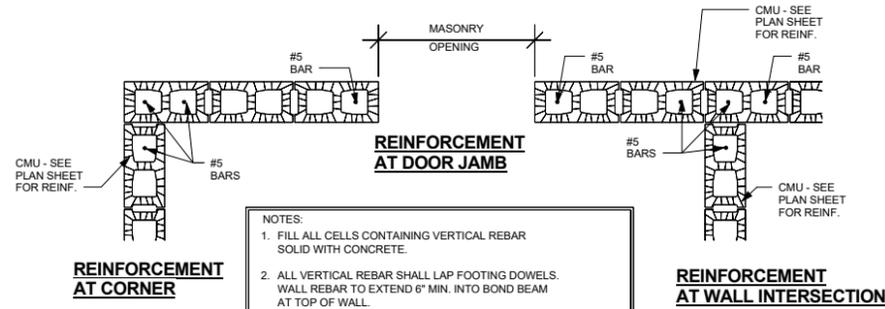
DESIGN  
CRITERIA

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| Drawn    | RD        |
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| Date     | 10/9/2019 |
| Job No.  | 19079     |

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**S103**



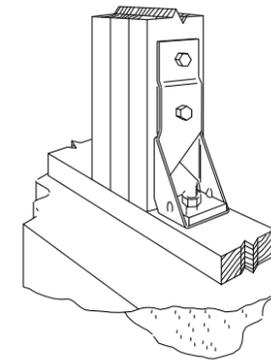
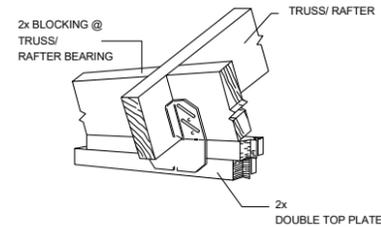
| REBAR LAP SPLICES IN REINFORCED MASONRY |              |
|-----------------------------------------|--------------|
| BAR SIZE                                | REQUIRED LAP |
| #4 BAR                                  | 24" LAP      |
| #5 BAR                                  | 30" LAP      |
| #6 BAR                                  | 36" LAP      |
| #7 BAR                                  | 42" LAP      |
| #8 BAR                                  | 48" LAP      |



- NOTES:**
1. FILL ALL CELLS CONTAINING VERTICAL REBAR SOLID WITH CONCRETE.
  2. ALL VERTICAL REBAR SHALL LAP FOOTING DOWELS. WALL REBAR TO EXTEND 6" MIN. INTO BOND BEAM AT TOP OF WALL.
  3. ALL DOWELS TO HAVE STANDARD END HOOKS.
  4. SEE GENERAL NOTES FOR REBAR LAP SCHEDULE.

- MINIMUM CONCRETE COVERAGE**
1. CONCRETE CAST AGAINST EARTH
    - A. ALL BARS 3"
  2. CONCRETE EXPOSED TO EARTH OR WEATHER
    - A. #6 THROUGH #18 BARS 2"
    - B. #5 AND SMALLER BARS 1.5"
  3. CONCRETE NOT EXPOSED TO EARTH OR WEATHER
    - A. SLABS & WALLS #14 & #18 BARS 1.5"
    - B. SLABS & WALLS #11 BARS & SMALLER .75"
    - C. BEAMS & COLUMNS (ALL REINF.) 1.5"

**TYPICAL MASONRY REINFORCEMENT DETAIL**



**HOLD DOWN DETAIL**

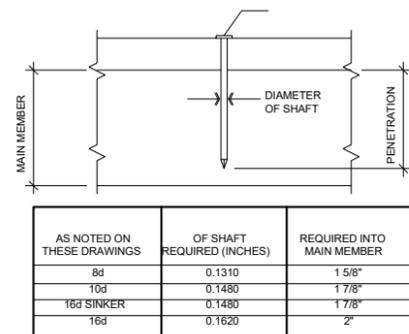
**1 DETAIL**  
SCALE: NO SCALE

**2 DETAIL**  
SCALE: NO SCALE

**3 DETAIL**  
SCALE: NO SCALE

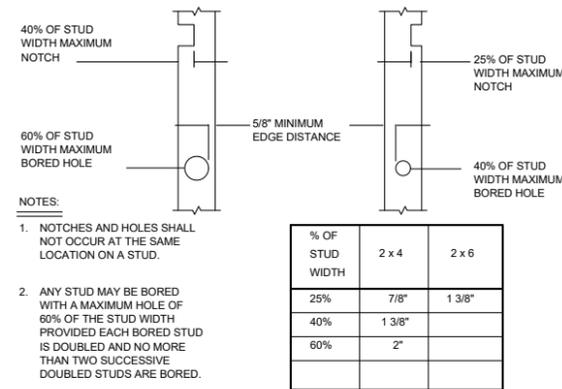
**HEADER & GIRDER SPANS FOR EXTERIOR BEARING WALLS**

| SPAN | SIZE   | NJ | NK | COMMENTS           |
|------|--------|----|----|--------------------|
| 2-8  | 2-2x4  | 1  | 2  | ALT. HH HDR HANGER |
| 3-11 | 2-2x6  | 1  | 2  | ALT. HH HDR HANGER |
| 5-0  | 2-2x8  | 2  | 3  |                    |
| 6-1  | 2-2x10 | 2  | 3  |                    |
| 7-1  | 2-2x12 | 2  | 3  |                    |
| 6-3  | 3-2x8  | 2  | 3  |                    |
| 7-7  | 3-2x10 | 2  | 3  |                    |
| 8-10 | 3-2x12 | 2  | 3  |                    |

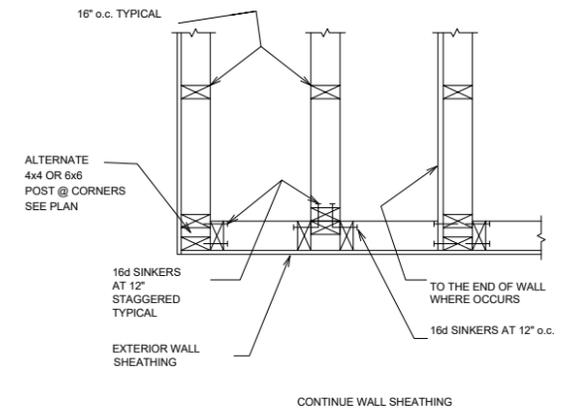


1. USE NAILS WITH OVERALL LENGTHS THAT PROVIDE NOT LESS THAN THE REQUIRED PENETRATION NOTED IN THIS TABLE FOR EACH CONNECTION.

**NAIL DETAIL**



**STUD NOTCH DETAIL**



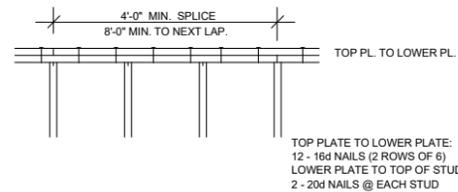
**STUD DETAIL @ INTERSECTIONS**

**4 DETAIL**  
SCALE: NO SCALE

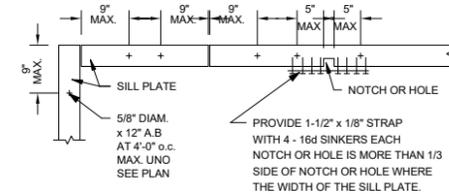
**5 DETAIL**  
SCALE: NO SCALE

**6 DETAIL**  
SCALE: NO SCALE

**7 DETAIL**  
SCALE: NO SCALE



**TOP PLATE SPLICE DETAIL**



**SILL PLATE ATTACHMENT DETAIL**

**8 DETAIL**  
SCALE: NO SCALE

**9 DETAIL**  
SCALE: NO SCALE



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Fax (843) 536-0901  
info@robertdavisengineering.com



**EMANUEL BAPTIST CHURCH**  
**106 BOONE STREET**  
**SUMMERVILLE, SC**

| Mark | Date | Description |
|------|------|-------------|
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**SHEET TITLE**  
**STANDARD DETAILS**

|          |           |
|----------|-----------|
| Drawn    | Author    |
| Designed | Designer  |
| Checked  | Approver  |
| Date     | 10/9/2019 |
| Job No.  | 19079     |

**S105**

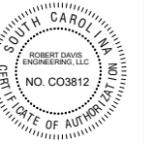
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Seals:



EMANUEL BAPTIST CHURCH  
106 BOONE STREET  
SUMMERVILLE, SC

| Mark | Date | Description |
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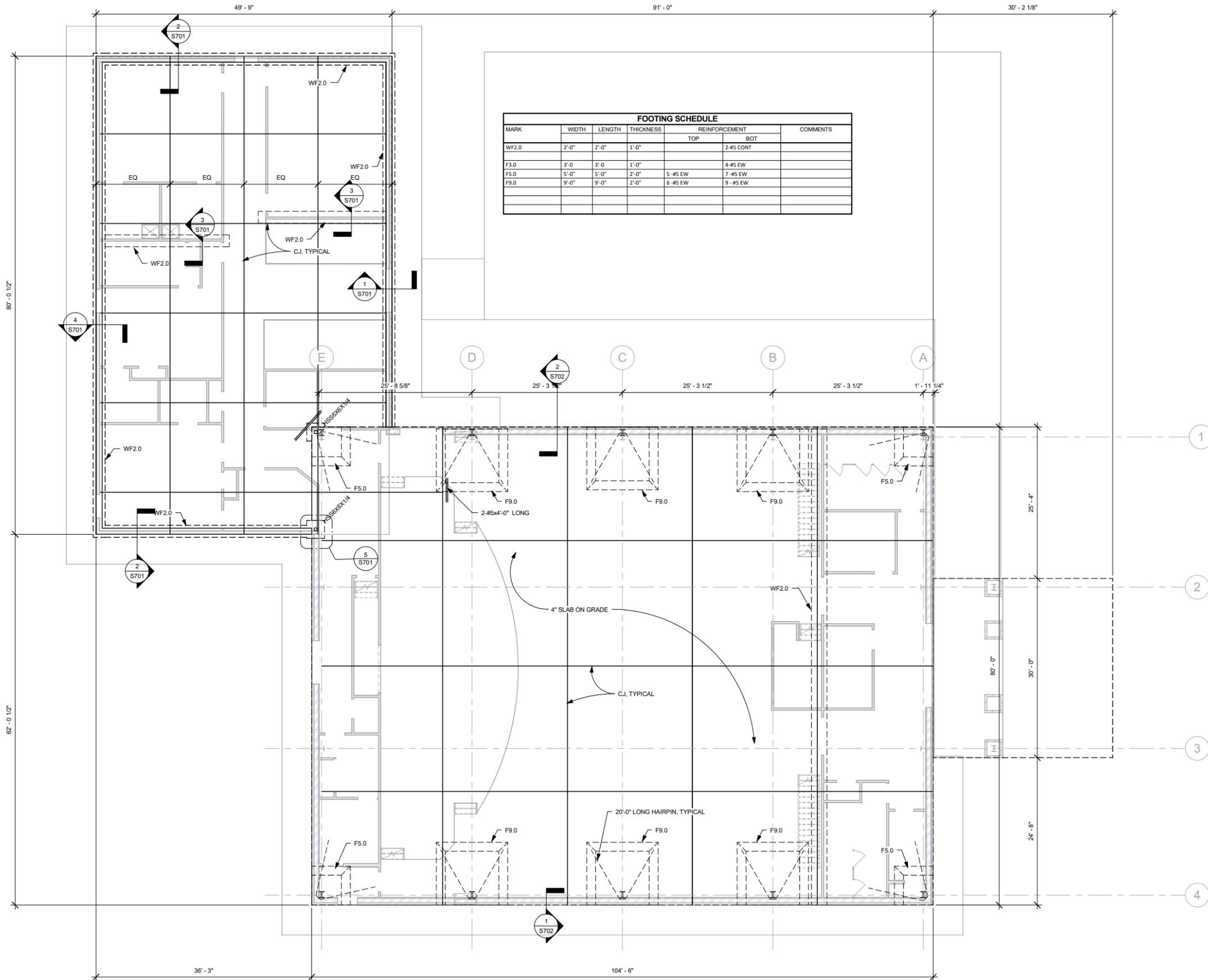
SHEET TITLE

FOUNDATION/  
FLOOR PLAN

|          |           |
|----------|-----------|
| Drawn    | RD        |
| Designed | RD        |
| Checked  | RD        |
| Date     | 10/9/2019 |
| Job No.  | 19079     |

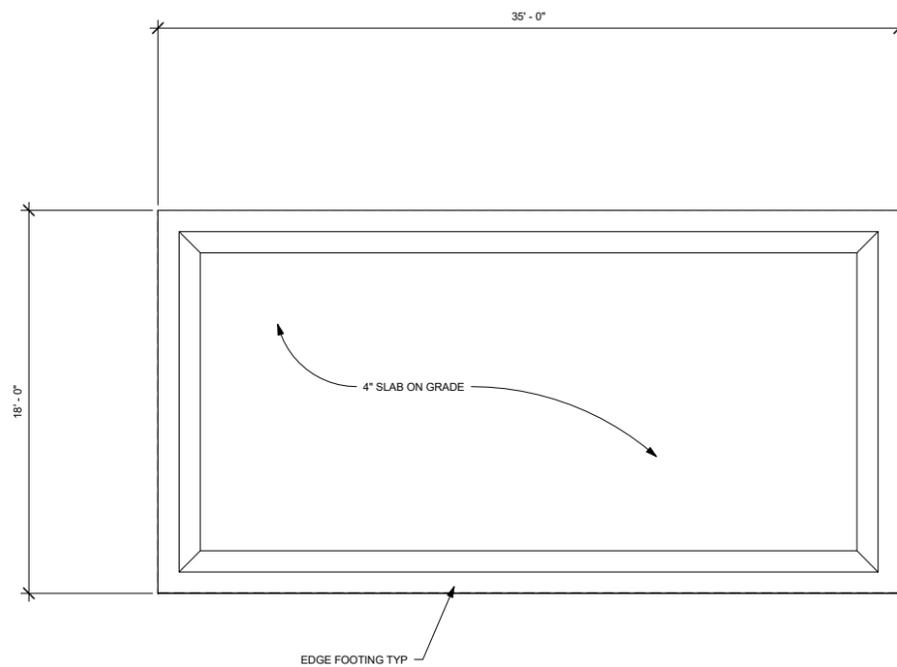
S  
**S201**

| MARK  | WIDTH | LENGTH | THICKNESS | REINFORCEMENT |           | COMMENTS |
|-------|-------|--------|-----------|---------------|-----------|----------|
|       |       |        |           | TOP           | BOT       |          |
| WF2.0 | 2'-0" | 2'-0"  | 1'-0"     |               | 2-#5 CONT |          |
| F3.0  | 3'-0" | 3'-0"  | 1'-0"     |               | 4-#5 EW   |          |
| F5.0  | 5'-0" | 5'-0"  | 2'-0"     | 5-#5 EW       | 7-#5 EW   |          |
| F9.0  | 9'-0" | 9'-0"  | 2'-0"     | 6-#5 EW       | 9-#5 EW   |          |



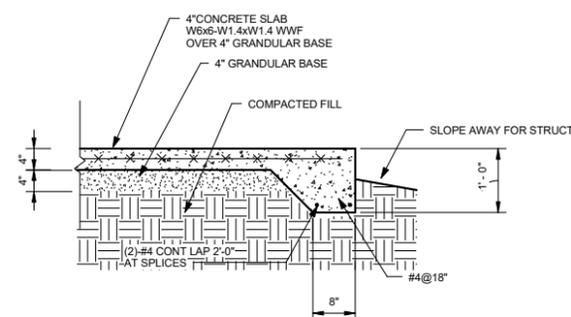
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**1** FOUNDATION PLAN  
SCALE: 1/8" = 1'-0"



NOTE:  
1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS

① SHED FOUNDATION  
1/4" = 1'-0"



② EDGE FOOTING DETAIL  
3/4" = 1'-0"

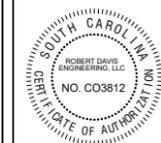
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Seals:



**EMANUEL BAPTIST CHURCH**

**106 BOONE STREET  
SUMMERVILLE, SC**

| Mark | Date | Description |
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SHEET TITLE

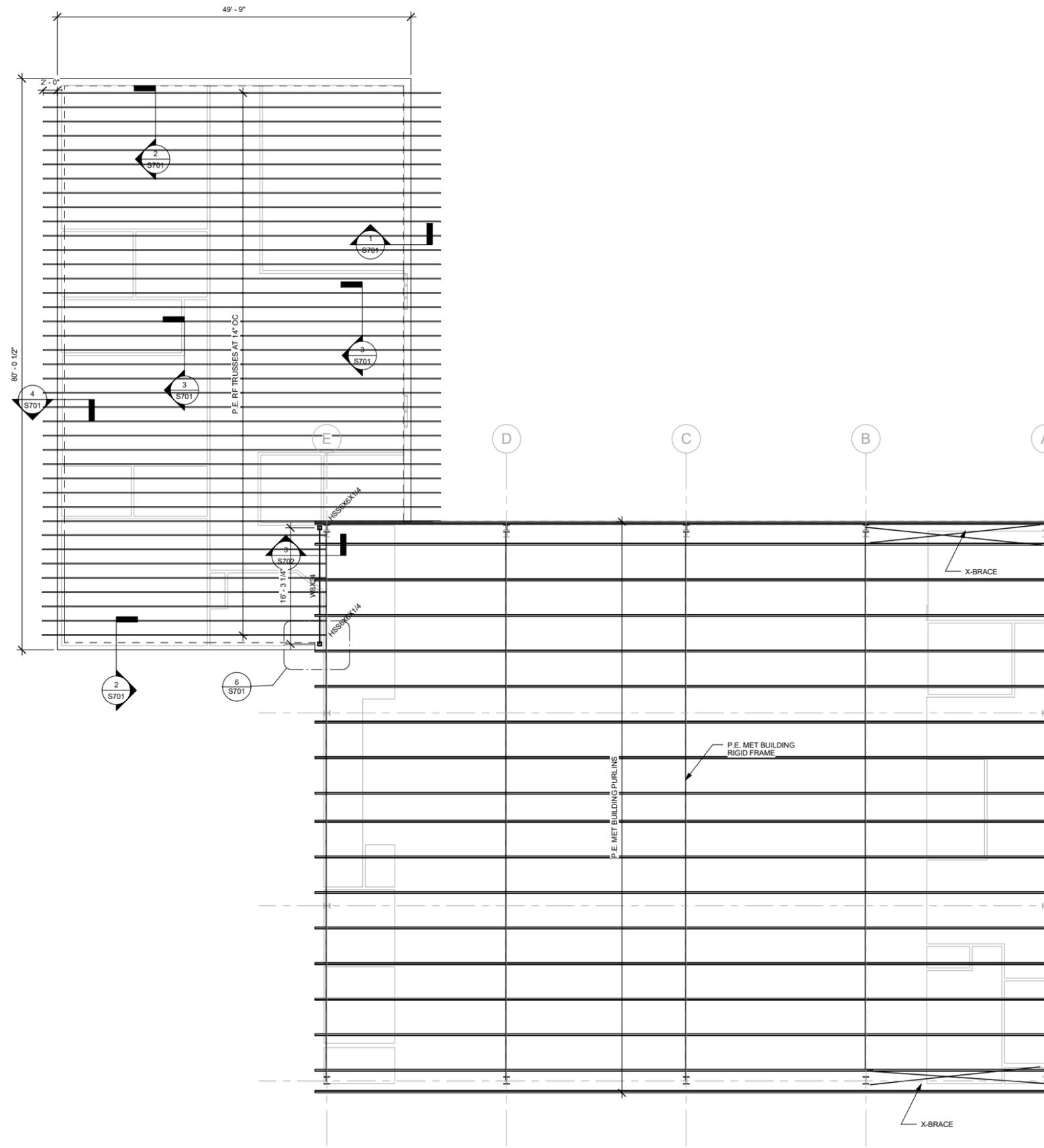
**SHED  
FOUNDATION**

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| Drawn    | RD        |
| Designed | RD        |
| Checked  | RD        |
| Date     | 10/9/2019 |
| Job No.  | 19079     |

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**S202**

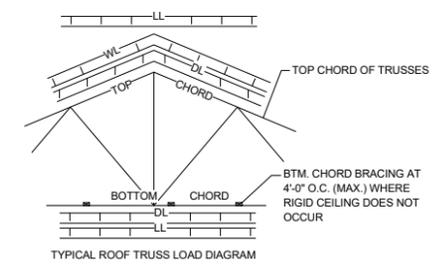


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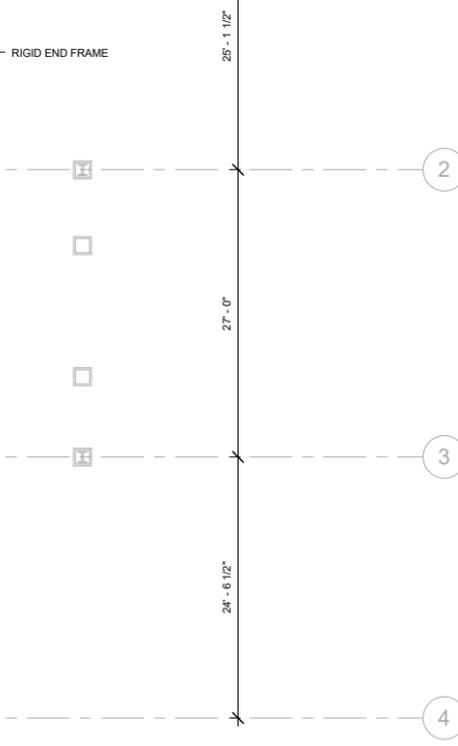
**PRE-ENGINEERED WOOD TRUSSES:**

- T1. ALL PREFABRICATED TRUSSES SHALL BE DESIGNED TO MEET THE LOADINGS SPECIFIED. FABRICATION AND ERECTION SHALL BE PER TRUSS PLATE INSTITUTE RECOMMENDATIONS AS CONTAINED IN THE APPROPRIATE PUBLICATIONS.
- T2. SHOP DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED FOR EACH TYPE OF TRUSS STATE OF SOUTH CAROLINA.
- T3. ALL LUMBER USED IN THE MANUFACTURING OF WOOD TRUSSES SHALL BE #2 SOUTHERN YELLOW SPECIFIED AND SHALL BEAR THE SEAL OF A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE PINE OR BETTER.
- T4. PROVIDE ALL TEMPORARY AND PERMANENT TRUSS BRACING AND BRIDGING AS REQUIRED AND SHOWN ON THE TRUSS MANUFACTURERS SHOP DRAWINGS. BRACING SHOWN ON STRUCTURAL DRAWINGS IS IN ADDITION TO ANY BRACING SHOWN ON THE SHOP DRAWINGS.
- T5. PROVIDE 2x4 CONTINUOUS BOTTOM CHORD/ CEILING BRACING AT 4 FEET O.C. MAXIMUM WHERE GYPSUM BOARD IS NOT ATTACHED DIRECTLY TO BOTTOM CHORD OF WOOD TRUSSES.
- T6. INSTALL STRONG BACKS, BRACING AND/OR BRIDGING PRIOR TO DECK INSTALLATION AND AS TRUSSES ARE ERECTED. FASTEN ALL BRACING TO EACH TRUSS.
- T7. PROVIDE DOUBLE FLOOR TRUSSES OR BEAMS UNDER WALLS.



NOTE: THIS DIAGRAM IS A SCHEMATIC SHOWING THE APPLICATION OF LOADS STATED HEREIN. LOADS SHALL BE COMBINED AS PROVIDED BY THE GOVERNING BUILDING CODE TO DETERMINE THE MOST UNFAVORABLE EFFECT. PREFABRICATED ROOF TRUSS DESIGN CRITERIA:

- SPACING = 24" OC
- DL = 15 PSF TOP CHORD
- LL = 20 PSF TOP CHORD
- WL = PER 2015 IBC
- DL = 5 PSF BOTTOM CHORD



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Seals:

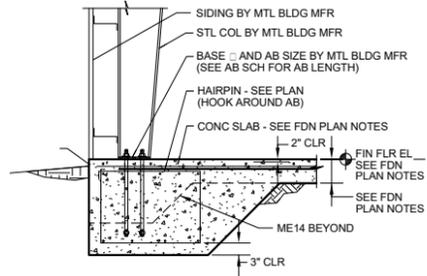
**EMANUEL BAPTIST CHURCH**  
**106 BOONE STREET**  
**SUMMERVILLE, SC**

| Mark | Date | Description |
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SHEET TITLE  
**ROOF FRAMING PLAN**

|          |           |
|----------|-----------|
| Drawn    | RD        |
| Designed | RD        |
| Checked  | RD        |
| Date     | 10/9/2019 |
| Job No.  | 19079     |

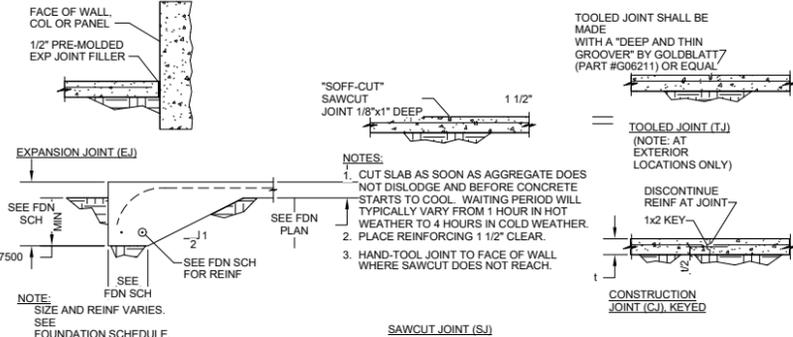
**S501**



NOTES:  
 1. FOR AB EMBEDMENT SEE AB SCHEDULE.  
 2. GRIND AND OR ADJUST SURFACE THAT COLUMNS BEAR ON TO ENSURE FULL BEARING.

**SECTION @ COLUMN FTG**

**1 SECTION**  
 SCALE: 3/4" = 1'-0"



**SLAB-ON-GRADE DETAILS (FOOT TRAFFIC)**

**3 DETAIL**  
 SCALE: NO SCALE

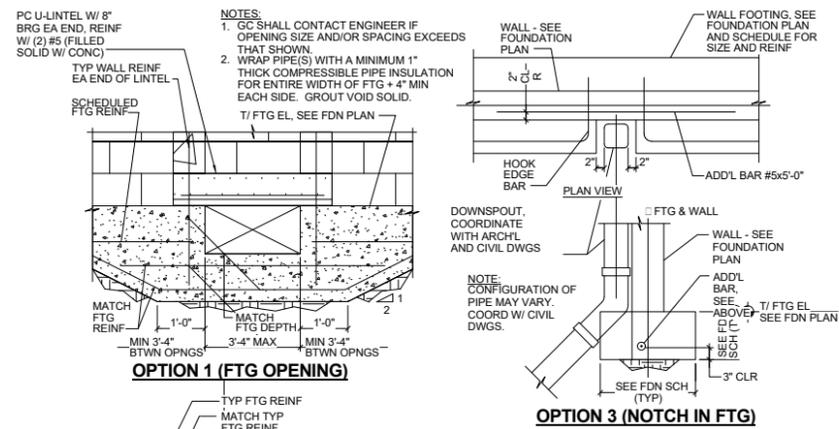
**PRE-ENGINEERED METAL BUILDING ANCHOR ROD SCHEDULE**

| DIAMETER "D" | MIN. EMBEDMENT "E" | PROJECTION "P" (AS REQ'D) |
|--------------|--------------------|---------------------------|
| 5/8"         | 8"                 | T/ CONC                   |
| 3/4"         | 10"                |                           |
| 7/8"         | 12"                |                           |
| 1"           | 14"                |                           |
| 1 1/8"       | 16"                |                           |
| 1 1/4"       | 19"                |                           |
| 1 1/2"       | 22"                |                           |

HEAVY HEX NUT, TYP.  
 \* ROD DIAMETER BY METAL BUILDING MFR.  
 \*\* EMBEDMENT BY "STRUCTURAL ENGINEERS".

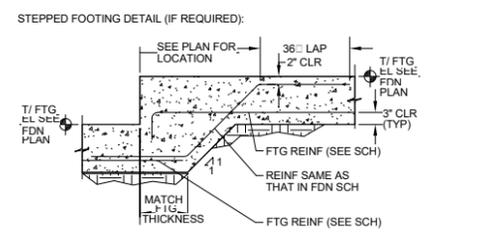
NOTES:  
 1. DEVELOPS FULL TENSILE CAPACITY OF SINGLE ROD WITHOUT EDGE DISTANCE OR GROUPING.  
 2. REDUCTIONS EX. FOR ADJ. WALLS PER K&J INFO.  
 3. IT SHALL BE ACCEPTABLE TO PROVIDE A HEAVY HEX HEAD BOLT IN LIEU OF THE THREADED ROD WITH HEAVY HEX NUT AT BOTTOM.

**4 DETAIL**  
 SCALE: NO SCALE



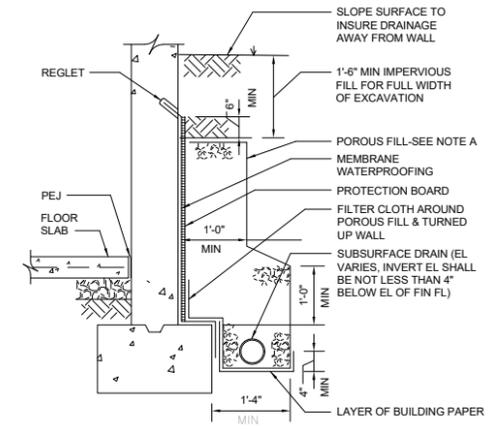
**DETAIL - FOOTING PENETRATIONS**

**5 DETAIL**  
 SCALE: NO SCALE



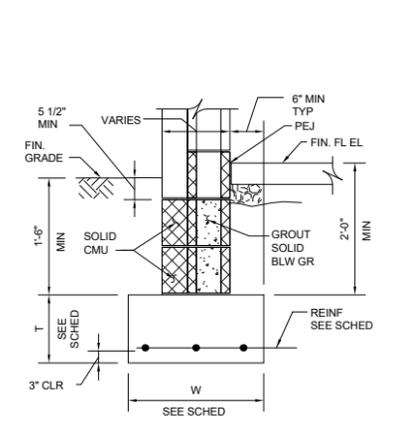
TERMINATE ALL DISCONTINUED ELEVATED SLAB TOP BARS WITH A 180 DEGREE STANDARD HOOK UNLESS OTHERWISE NOTED.  
 CONTINUOUS TOP BARS SHALL BE SPLICED AT MID-SPAN. CONTINUOUS BOTTOM BARS SHALL BE SPLICED AT CENTER-LINE OF SUPPORTS (OR AS SHOWN ON TYPICAL DETAILS).

**6 SECTION**  
 SCALE: 3/4" = 1'-0"



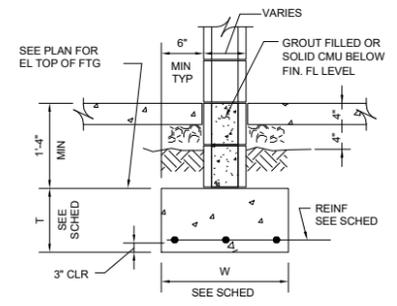
NOTE A: CONTRACTOR MAY SUBSTITUTE A PREFABRICATED DRAINAGE STRUCTURE FOR POROUS FILL & FILTER CLOTH. PREFABRICATED DRAINAGE STRUCTURE SHALL BE PLACED AGAINST THE WALL AND AROUND SUBSURFACE DRAIN IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE FOLLOWING PREFABRICATED DRAINAGE STRUCTURES ARE ACCEPTABLE:  
 MIRADRAIN 6200  
 AMER DRAIN 500  
 HYDRODUCT 2

**8 DETAIL**  
 SCALE: NO SCALE



NOTES:  
 1. SEE TYP CMU WALL REINF DETAIL FOR REINF NOT SHOWN.  
 2. PROVIDE REINF IN TOPS OF ALL FTG AT DOORWAYS AND OTHER OPNG GREATER THAN 3'-0" WIDE. UNLESS OTHERWISE NOTED PROVIDE SAME TOP REINF AT OPNG AS IS SCHEDULED FOR BOT REINF. TOP REINF SHALL EXTEND NOT LESS THAN 2'-0" BEYOND EACH FACE OF OPNG.

**9 SECTION**  
 SCALE: 12" = 1'-0"



NOTE: SEE TYP CMU WALL REINF DETAIL FOR REINF NOT SHOWN.

**10 SECTION**  
 SCALE: 12" = 1'-0"

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 info@robertdavisengineering.com

Seals:

**EMANUEL BAPTIST CHURCH**  
 106 BOONE STREET  
 SUMMERVILLE, SC

| Mark | Date | Description |
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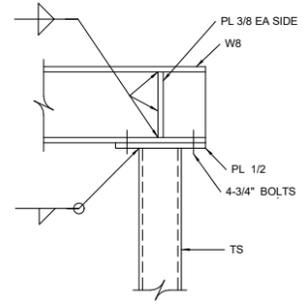
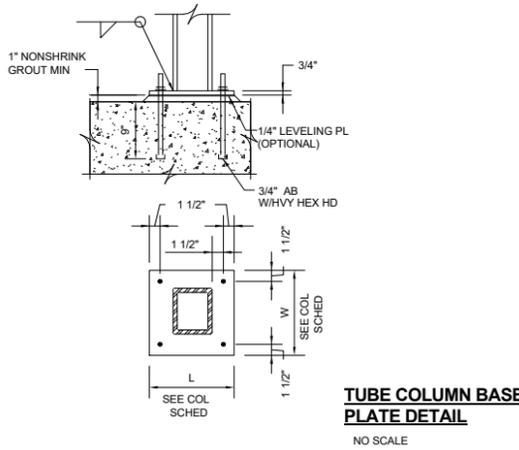
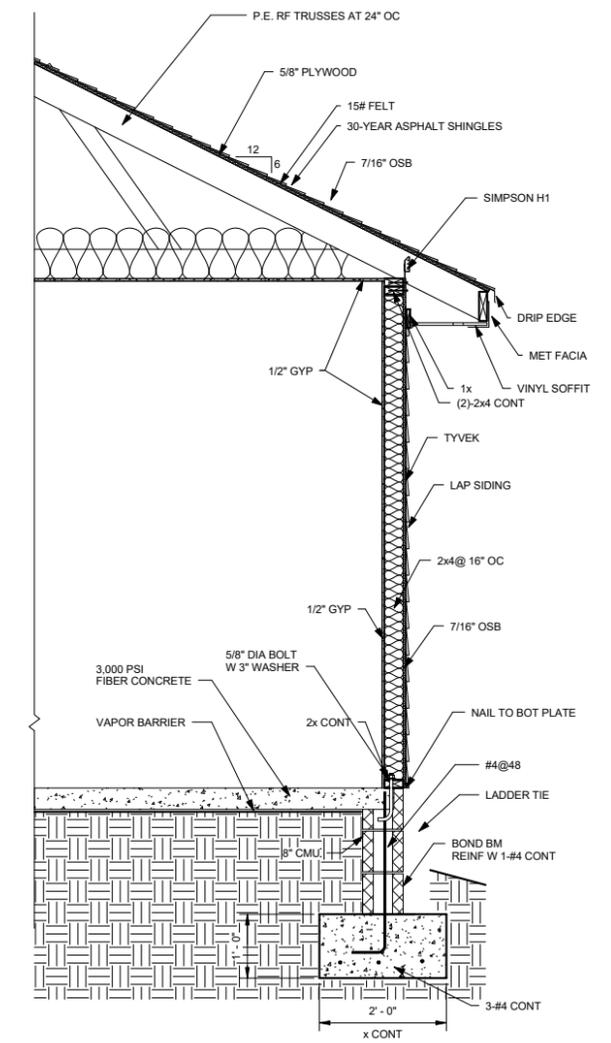
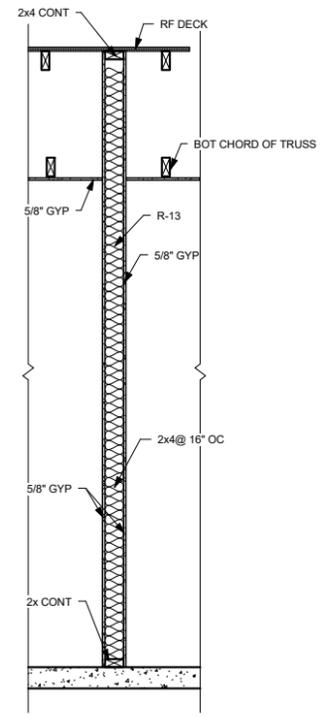
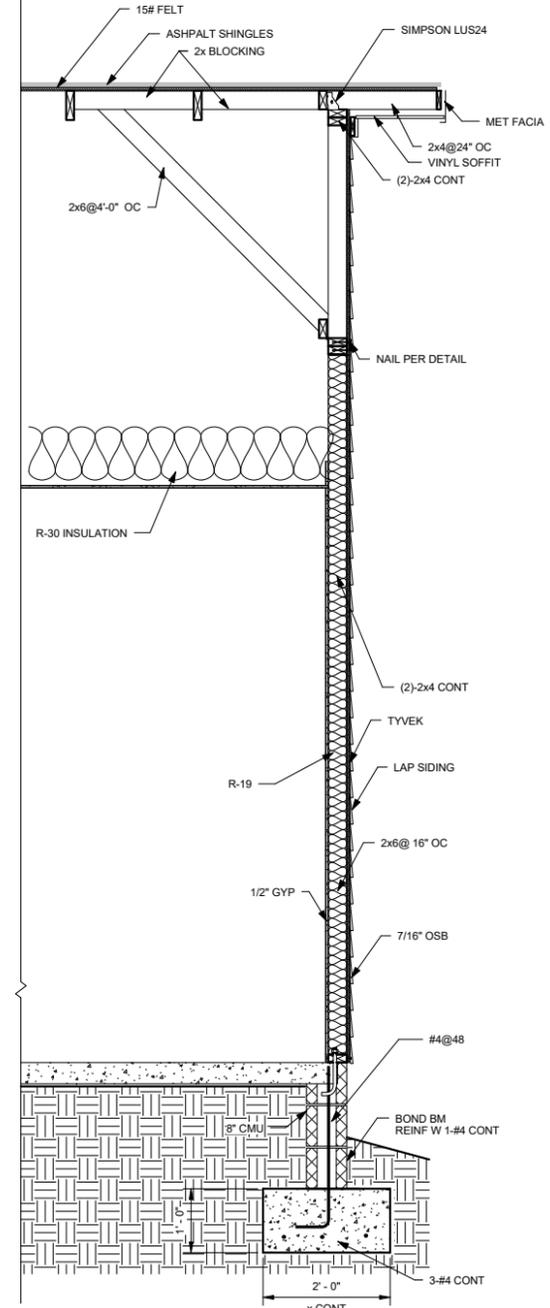
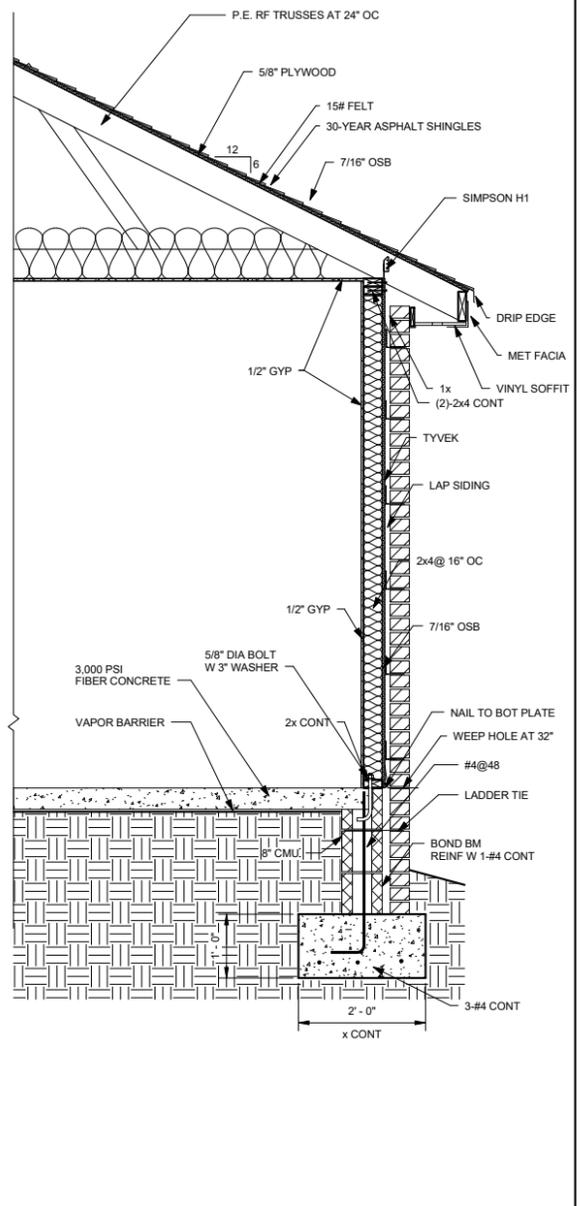
**FOUNDATION SECTION AND DETAILS**

|          |           |
|----------|-----------|
| Drawn    | RD        |
| Designed | RD        |
| Checked  | RD        |
| Date     | 10/9/2019 |
| Job No.  | 19079     |

**S601**

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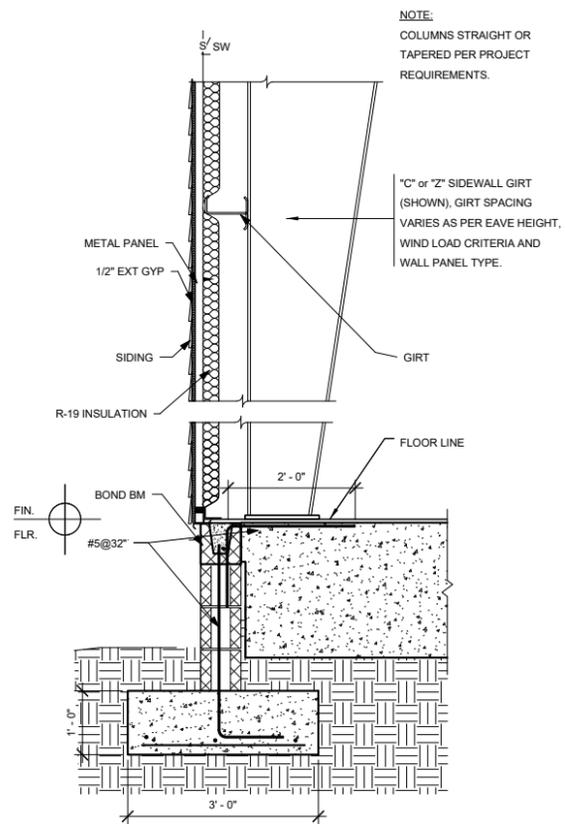
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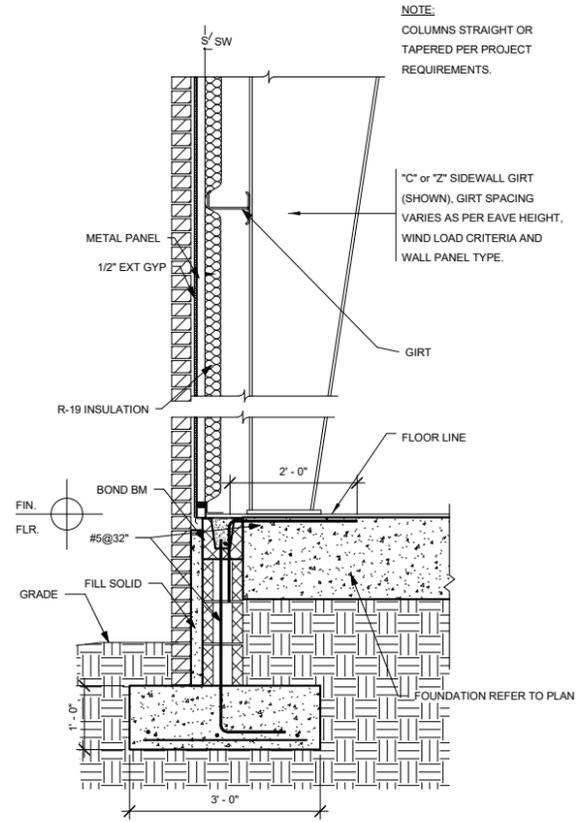
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| Date     | 10/9/2019 |
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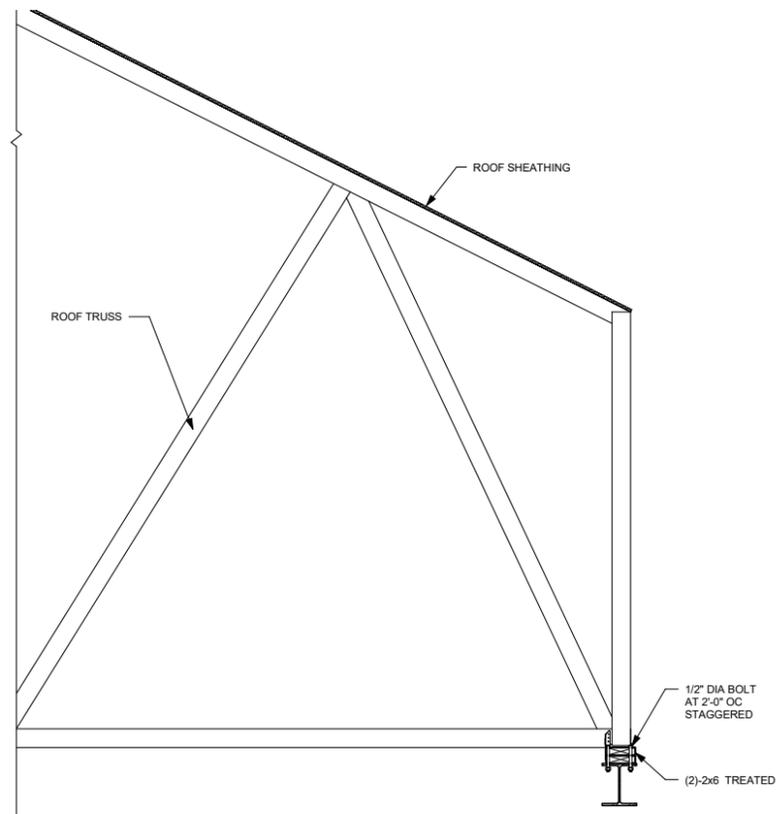
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**1 SECTION**  
SCALE: 3/4" = 1'-0"



**2 SECTION**  
SCALE: 3/4" = 1'-0"



**3 SECTION**  
SCALE: 3/4" = 1'-0"

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**SUMMERVILLE, SC**

| Mark | Date | Description |
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**SHEET TITLE**  
**SECTIONS**

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| Drawn    | RD        |
| Designed | RD        |
| Checked  | RD        |
| Date     | 10/9/2019 |
| Job No.  | 19079     |

**S702**

## SYMBOL SCHEDULE

### GENERAL SYMBOLS

- HOMERUN TO PANELBOARD. SEE "CIRCUIT HOMERUN SYMBOL SCHEDULE".
- CONDUIT RUN CONCEALED OVERHEAD OR MC CABLE WHERE PERMITTED. USE SURFACE RACEWAY SYSTEM EXPOSED ON INACCESSIBLE EXISTING CONSTRUCTION.
- CONDUIT RUN EXPOSED.
- CONDUIT RUN CONCEALED BELOW FLOOR.
- FLEXIBLE CONDUIT WITH CONNECTION TO EQUIPMENT SERVED.
- GROUND SIZED PER NEC 250.
- PANELBOARD. SEE PANEL SCHEDULE.
- DRY TYPE TRANSFORMER.
- JUNCTION BOX-ABOVE CEILING OR AS INDICATED BY ITS USE.

### LIGHTING

- 1'X4' FLUORESCENT LIGHT FIXTURE.
- LIGHTING FIXTURE WITH ONE OR MORE LAMPS CONNECTED UNSWITCHED.
- FLUORESCENT STRIP OR INDUSTRIAL LIGHT FIXTURE.
- FLUORESCENT OR HID DOWNLIGHT.
- WALL MOUNTED INCANDESCENT FLUORESCENT FIXTURE.
- 2' X 4' FLUORESCENT.
- EMERGENCY UNIT LIGHTING FIXTURE.
- CEILING OR BACK-WALL MOUNTED SINGLE FACE EXIT LIGHT FIXTURE. SHADED SURFACE INDICATES FACE. PROVIDE ARROWS WHERE INDICATED.

NOTE:  
SEE LIGHTING FIXTURE SCHEDULE.

### WIRING DEVICES

- DUPLEX RECEPTACLE.
- DUPLEX RECEPTACLE WITH BOTTOM OF BOX 2' ABOVE COUNTER BACKSPASH OR AT COUNTER HEIGHT.
- TWO DUPLEX RECEPTACLES IN COMMON BOX.
- TWO DUPLEX RECEPTACLE IN COMMON BOX AT COUNTER HEIGHT.
- GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE.
- DUPLEX RECEPTACLE WITH WEATHERPROOF COVERPLATE.
- RECEPTACLE WITH SPECIAL NEMA CONFIGURATION.
- 2 GANG FLOOR BOX. ONE SECTION WITH DUPLEX RECEPTACLE, ONE SECTION FOR OWNERS COMPUTER DATA WIRING.

**NOTE**  
ALL QUESTIONS ABOUT MOUNTING HEIGHTS SHALL BE DIRECTED TO THE ARCHITECT  
SUBSCRIPT "WG" INDICATES PROVIDE DEVICE WITH WIRE GUARD.

### SWITCHES

- SINGLE POLE SWITCH.
- TWO SWITCHES IN COMMON OUTLET BOX AT 48" AFF. WHERE TWO SWITCHES ARE SHOWN CONTROLLING THE SAME GROUP OF FLUORESCENT LIGHTING FIXTURES, THE SWITCH CLOSEST TO THE DOOR SHALL CONTROL THE INNER LAMP(S) IN EACH FIXTURE AND THE OUTER SWITCH SHALL CONTROL THE OUTER LAMPS IN EACH FIXTURE.
- WALL BOX DIMMER FOR FAN CONTROL. 1000W. SLIDE TYPE.
- PHOTOCCELL
- PASSIVE INFRARED CEILING MOUNTED OCCUPANT SENSOR. CONNECT BETWEEN SWITCH AND LOAD.

### COMMUNICATIONS SYMBOLS

- COMBINATION TELEPHONE AND COMPUTER OUTLET IN COMMON BOX WITH APPROPRIATE WALL PLATE. PROVIDE 5' TO AN ACCESSIBLE LOCATION ABOVE THE LAY-IN CEILING.
- NOTE:  
PROVIDE A BLANK COVERPLATE ON TELEPHONE & COMPUTER OUTLETS.

### EQUIPMENT CONNECTIONS

- CONNECTION TO MOTOR.
  - HEAVY DUTY SAFETY SWITCH. SEE "EQUIPMENT DISCONNECT SCHEDULE".
  - MOTOR STARTER FURNISHED AND INSTALLED BY E.C. SUBSCRIPT INDICATES SIZE.
  - JUNCTION BOX WITH CONNECTION TO EQUIPMENT SERVED.
  - CONNECTION TO HVAC, PLUMBING OR OTHER EQUIPMENT AS NOTED. FOR HVAC SYSTEM SENSOR. COORDINATE TYPE & LOCATION.
- \* NOTE: PROVIDE A DISCONNECT ON ALL FANS, UNIT HEATERS, FAN COILS, PUMPS, AIR HANDLERS, UNIT VENTILATORS, ETC UNLESS NOTED OTHERWISE ON DRAWINGS.

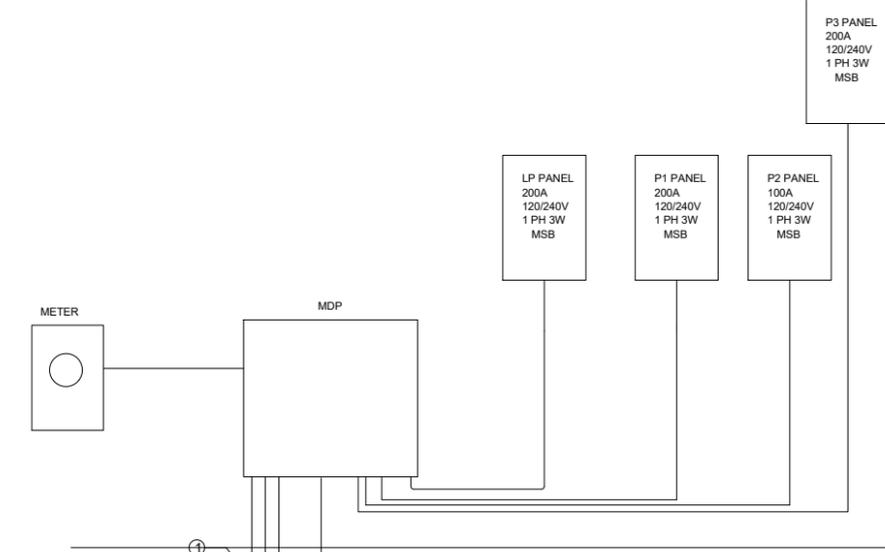
### FIRE ALARM

- FIRE ALARM PULL STATION, 48" AFF.
- FIRE ALARM AUDIBLE HORN AND VISUAL SIGNAL STROBE LIGHT, +80" AFF OR 6" BELOW CEILING WHICH EVER IS LOWER. WP INDICATED WEATHER PROOF. SUBSCRIPT INDICATES CANDELA LEVEL.
- VISUAL SIGNAL STROBE LIGHT, +80" AFF OR 6" BELOW CEILING WHICHEVER IS LOWER. SUBSCRIPT INDICATES CANDELA LEVEL.
- DUCT MOUNTED SMOKE DETECTOR.
- REMOTE DUCT DETECTOR INDICATOR LIGHT.
- AREA SMOKE DETECTOR.

## ELECTRICAL NOTES

1. WIRE AND CABLE SHALL BE INSULATED, TYPE THWN OR THHN, 600 VOLTS, WITH COPPER CONDUCTORS, CONDUCTOR SIZES NO. 8 AWG AND LARGER MAY BE STRAINED. CONDUCTORS SIZES NO. 10 AWG AND SMALLER MAY BE SOLID OR STRANDED. NO ROMEX PERMITTED.
2. EMT SHALL BE GALVANIZED STEEL TUBING, 1/2"-INCH MINIMUM SIZE, EQUAL TO ELECTRUNITE BRAND OR APPROVED AND USED ONLY WITH HEXAGONAL ALL STEEL COMPRESSION FITTINGS.
3. PLASTIC CONDUIT SHALL BE RIGID, 3/4"-INCH MINIMUM NON-METALLIC, HEAVY DUTY, HIGH IMPACT, POLYVINYLCHORIDE (PVC), TYPE I WILL BE USED FOR CONCRETE ENCASMENT. FITTINGS SHALL BE THE SAME MATERIALS AND MANUFACTURER AS THE PLASTIC CONDUIT.
4. FLEXIBLE METAL CONDUIT SHALL BE 1/2"-INCH MINIMUM SINGLE STRIP, STEEL HOT DIPPED GALVANIZED INSIDE AND OUTSIDE, MAXIMUM LENGTH 72 INCHES FOR LIGHTING AND 36" FOR MOTORS. FLEXIBLE METAL CONDUIT SHALL BE LIQUIDTIGHT OR WATER TIGHT WITH PVC JACKET WHERE USED IN DAMP, WET OR OUTSIDE AREAS, AND LIQUIDTIGHT OR WATERTIGHT CONNECTORS SHALL BE USED.
5. NO RECEPTACLES OR TEL. OUTLETS TO BE MOUNTED MOUNTED BACK TO BACK, KEEP AT LEAST 2 INCHES BETWEEN RECEPTACLES AND OUTLETS.
6. ALL CONDUCTOR SHALL BE COPPER WITH A MINIMUM SIZE OF #12 AWG EXCEPT FOR FIRE ALARM. THESE CONDUCTORS SHOULD COMPLY WITH NFPA.
7. CONTRACTOR SHALL ALIGN FIXTURES, SMOKE DETECTORS, CEILING DIFUSERES ETC. AS REQUIRED TO PROVIDE A UNIFORM PRESENTATION. AT NO TIME WILL AN IONIZATUION DETECTOR BE LOCATED WITHIN 3'-0" OF A SUPPLY OR RETURN AIR GRILLE.
8. CIRCUIT BREAKES AND WIRE ARE SIZED FOR SPECIFIC EQUIPMENT. BEFORE ORDERING WIEE. BREAKERS AND CONDUIT FOR THIS PROJECT THE CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACTORS ON THE JOB AND VERIFYTHE ELECTRICAL DATA FOR THE EQUIPMENT WHICH WILL ACTUALLY BE INSTALLED, RECOMPUTING WIRE ADD BREAKER SIZES IF REQUIRED BY THE NEC.
9. ALL CONDUIT TERMINATING IN THE CEILING CAVITIES IS TO BE LABELED.
10. ALL CONDUIT SHALL BE COLOR CODED WITH 1/2" WIDE TAPE, 10'-0" ON CENTER IN ACCORDANCE WITH THE FOLLOWING.
 

|                     |        |
|---------------------|--------|
| 120 / 208           | BLUE   |
| COMMUNICATION/SOUND | ORANGE |
| FIRE ALARM          | RED    |
| TELEPHONE           | BLACK  |
11. THE MOUNTING HEIGHTS AND LOCATIONS OF ALL WALL MOUNTED OUTLETS AND JUNCTION BOXES SHALL BE REVIEWED AND COORDINATED WITH THE OWNER, PRIOR TO INSTALLATION, FOR USE WITH ACTUAL EQUIPMENT.
12. EACH CONTRACTOR WILL PROVIDE HIS OWN SUPPORT OF ALL DEVICES AND EQUIPMENT PROVIDED BY HIM AND SHALL SUPPORT SUCH EQUIPMENT PER APPROVED GOVERNING CODES OR PER APPROVED OF THE ENGINEER/OWNER. UNACCEPTABLE WORKMANSHIP OR MATERIALS SHALL BE REPLACED AT THE REQUEST OF THE ENGINEER/OWNER AT THE CONTRACTORS EXPENSE.
13. THE CONTRACTOR SHALL REFER TO THE BUILDING PLANS FOR FLOOR PLAN DIMENSIONS. THE CONTRACTOR SHALL COORDINATE ANY AND ALL WORK WITH OTHER TRADES INVOLVED IN THIS PROJECT PRIOR TO THE INSTALLATION OF HIS EQUIPMENT, SO AS TO AVOID CONFLICTS DURING CONSTRUCTION AND ALLOW FOR OPTIMUM WORKING SPACE AND MAINTENANCE.
14. ALL FUSES DISCONNECT SWITCHES AND BREAKER SIZES SHOWN FOR MECHANICAL EQUIPMENT SHALL BE VERIFIED BEFORE PURCHASE AND INSTALLATION OF SAID EQUIPMENT WITH THE EQUIPMENT SUPPLIER AND MECHANICAL CONTRACTOR.
15. WHERE EQUIPMENT PENETRATES EXTERIOR WALL OR ROOF THEY SHALL BE PROPERLY SEALED WITH METHODS APPROVED BY THE ENGINEER.



**RISER DIAGRAM**  
N.T.S.

### GROUNDING ELECTRODE DETAILS

- GROUNDING ELECTRODE CONDUCTORS SHALL BE #3-0 BARE COPPER. OTHER MATERIAL AND INSULATION PER NEC SECTION 250.
1. CONNECT TO METALLIC WATER PIPE AS REQUIRED.
  2. #3/0 COPPER GROUND TO FOUNDATION REBAR AND BLDG. STEEL
  3. 3/4" X 10' LONG COPPER CLAD GROUNDING ROD W/#3/0 COPPER GROUND

### ELECTRIC RISER

### FEEDER SCHEDULE

| DEVICE | CALLOUT                                         |
|--------|-------------------------------------------------|
| E-P1   | 2" C, 2-3/0, 3/0N, #6G                          |
| E-P2   | 2-1/2" C, 2-350kcmil, 350kcmil N, #4G           |
| LP     | 2" C, 2-3/0, 3/0N, #6G                          |
| MDP    | (4)3-1/2" C, 2-600kcmil, 600kcmil N, 300kcmil G |
| P1     | 3" C, 2-600kcmil, 600kcmil N, #2G               |
| P2     | 1-1/4" C, #1, #1N, #8G                          |
| P3     | 2" C, 2-3/0, 3/0N, #6G                          |

### ARC-FLASH SCHEDULE

| Panel Name | REQUIRED PPE | VOLTAGE | INCIDENT ENERGY | WORKING DISTANCE | ARC-FLASH-PROTECTION BOUNDARY |          |
|------------|--------------|---------|-----------------|------------------|-------------------------------|----------|
|            |              |         |                 |                  | ENERGY                        | DISTANCE |
| E-P1       | 3            | 240V    | 89.95 J/cm²     | 1'-6"            | 5.02 J/cm²                    | 7'-6"    |
| E-P2       | 4            | 240V    | 125.37 J/cm²    | 1'-6"            | 5.02 J/cm²                    | 10'-8"   |
| LP         | 3            | 240V    | 86.70 J/cm²     | 1'-6"            | 5.02 J/cm²                    | 8'-6"    |
| MDP        | X            | 240V    | 219.66 J/cm²    | 1'-6"            | 5.02 J/cm²                    | 14'-12"  |
| P1         | 4            | 240V    | 114.51 J/cm²    | 1'-6"            | 5.02 J/cm²                    | 10'-1"   |
| P2         | 4            | 240V    | 105.55 J/cm²    | 1'-6"            | 5.02 J/cm²                    | 9'-7"    |
| P3         | 3            | 240V    | 85.37 J/cm²     | 1'-6"            | 5.02 J/cm²                    | 8'-5"    |

### VOLTAGE DROP SCHEDULE

| Panel Name | FEEDER        |             | BRANCH CIRCUIT |           | TOTAL VOLTAGE DROP |
|------------|---------------|-------------|----------------|-----------|--------------------|
|            | VOLTAGE DROP  | WIRE SIZE   | CIRCUIT NUMBER | WIRE SIZE |                    |
| MDP        | 0.34%         | (4)600kcmil |                |           | 0.34%              |
| E-P1       | 1.77%         | 3/0         | 1,3            | 1/0       | 2.06%              |
| E-P2       | 0.68%         | 350kcmil    | 1,3            | 1/0       | 0.78%              |
| LP         | 2.55%         | 3/0         | 28             | #12       | !!! 8.43% !!!      |
| P1         | 2.27%         | 600kcmil    | 22,24          | #10       | 4.12%              |
| P2         | 0.41%         | #1          | 5              | #12       | 0.59%              |
| P3         | !!! 7.02% !!! | 3/0         | 32             | #12       | !!! 8.90% !!!      |

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BAPTIST CHURCH  
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SUMMERVILLE, SC**

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### SHEET TITLE

**ELECTRICAL NOTES  
DETAILS AND  
SCHEDULES**

|          |           |
|----------|-----------|
| Drawn    | RD        |
| Designed | RD        |
| Checked  | RD        |
| Date     | 2/28/2020 |
| Job No.  | 19078     |

Sheet No.  
**E100**

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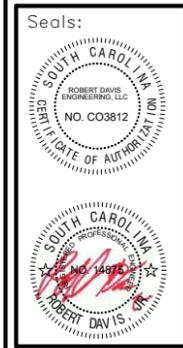
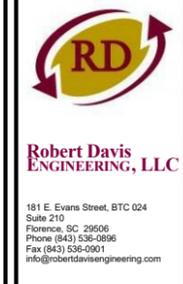
ELECTRICAL SPECIFICATIONS

PART 1 - GENERAL
1.01 SCOPE OF WORK:
FURNISH AND INSTALL ALL MATERIALS AND EQUIPMENT AND PROVIDE ALL LABOR, TOOLS, TRANSPORTATION, SUPERINTENDENCE AND SERVICES REQUIRED AND NECESSARY TO COMPLETE THE WORK SHOWN ON THE DRAWINGS AND/OR SPECIFIED HEREIN. ALSO ARE INCLUDED ALL OTHER WORK AND MISCELLANEOUS ITEMS, NOT SPECIFICALLY MENTIONED, BUT REASONABLY INFERRED FOR A COMPLETE INSTALLATION INCLUDING ALL ACCESSORIES AND APPURTENANCES REQUIRED FOR TESTING THE SYSTEM. IT IS THE INTENT OF THE DRAWINGS AND SPECIFICATIONS THAT ALL SYSTEMS BE COMPLETE, AND READY FOR OPERATION.
1.02 REGULATORY REQUIREMENTS:
CODE COMPLIANCE IS MANDATORY. NOTHING IN THESE DRAWINGS AND SPECIFICATIONS PERMITS WORK NOT CONFORMING TO THESE CODES. WHERE WORK IS SHOWN TO EXCEED MINIMUM CODE REQUIREMENTS, COMPLY WITH DRAWINGS AND SPECIFICATIONS. ALL WORK AND MATERIALS SHALL COMPLY WITH THE LATEST RULES, CODES AND REGULATIONS, INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:
1. OCCUPATIONAL SAFETY AND HEALTH ACT STANDARDS (OSHA).
2. NFPA #70: NATIONAL ELECTRIC CODE (NEC).
3. NFPA #101: LIFE SAFETY CODE.
4. STATE FIRE MARSHAL.
5. LOCAL UTILITIES COMPANIES.
6. LANDLORD REQUIREMENTS.
1.03 LICENSE, FEES AND PERMITS:
ELECTRICAL CONTRACTOR SHALL PAY FOR ALL LICENSES, PERMITS AND INSPECTION FEES REQUIRED BY THE AUTHORITY HAVING JURISDICTION AND SHALL ARRANGE FOR ALL REQUIRED INSPECTIONS.
1.04 SAFETY AND INDEMNITY:
THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. NO ACT SERVICE, DRAWING REVIEW OR CONSTRUCTION REVIEW BY THE OWNER, THE ENGINEERS OR THEIR CONSULTANTS, IS INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON, OR NEAR THE CONSTRUCTION SITE.
1.05 DRAWINGS AND SPECIFICATIONS:
ALL DRAWINGS AND ALL DIVISIONS OF THESE SPECIFICATIONS SHALL BE CONSIDERED AS A WHOLE AND WORK OF THIS DIVISION SHOWN ANYWHERE THEREIN SHALL BE FURNISHED UNDER THIS DIVISION. DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF EQUIPMENT AND WIRING. MOST DIRECT ROUTING OF CONDUITS AND WIRING IS NOT ASSURED. EXACT REQUIREMENTS SHALL BE GOVERNED BY CONDITIONS OF THE JOB. CONSULT ALL OTHER DRAWINGS. PREPARATION OF THE BID, EXTRA LENGTHS OF WIRING OR ADDITION OF PULL OR JUNCTION BOXES, ETC., NECESSITATE BY SUCH CONDITIONS SHALL BE INCLUDED IN THE BID.
1.06 CONDITIONS:
THE ELECTRICAL CONTRACTOR SHALL HAVE EXAMINED THE SITE AND FAMILIARIZED THEMSELVES WITH ALL DISCREPANCIES EXISTING CONDITIONS. NO EXTRA PAYMENT WILL BE ALLOWED FOR WORK REQUIRED BECAUSE OF THESE CONDITIONS, WHETHER SPECIFICALLY MENTIONED OR NOT.
1.07 WORKMANSHIP AND CONTRACTOR'S QUALIFICATIONS:
ONLY QUALITY WORKMANSHIP WILL BE ACCEPTED. HAPHAZARD OR POOR INSTALLATION WILL BE CAUSE FOR REJECTION OF WORK.
1.08 SHOP DRAWINGS AND MATERIALS LISTS:
SUBMIT TO OWNER IN A SINGLE PACKAGE SIX (6) COPIES OF COMPLETE SHOP DRAWINGS AND MATERIALS LIST, AS NOTED BELOW, FOR REVIEW WITHIN FIFTEEN (15) DAYS AFTER AWARD OF CONTRACT.
SUBMITTALS REQUIRED AS FOLLOWS:
1. WIRING DEVICES: SWITCHES, RECEPTACLES, DEVICE PLATES.
2. ENCLOSURES FOR UTILITY COMPANY METERING.
3. MAIN FUSED DISCONNECT SWITCH.
4. PANELBOARDS.
5. DISCONNECT SWITCHES.
6. LIGHTING FIXTURES, LAMPS AND LIGHTING CONTROL EQUIPMENT.
1.09 SUBSTITUTIONS:
ONE OR MORE MAKES OF MATERIALS OR METHODS MAY HAVE BEEN SPECIFIED TO ESTABLISH THE STANDARD OF QUALITY, WORKMANSHIP, FINISH AND DESIGN REQUIRED, BUT OTHER MATERIALS OR METHODS EQUAL IN QUALITY, WORKMANSHIP, FINISH AND DESIGN, AND GUARANTEED PERFORMANCE, WILL BE ACCEPTED. HOWEVER, ALL CHANGES AND SUBSTITUTIONS SHALL BE REQUESTED IN LETTER FORM AND SHALL BE ACCOMPANIED WITH A STATEMENT OF THE AMOUNT OF MONEY TO BE RETURNED TO THE CONTRACT IF THE SUBSTITUTION PERMITTED INVOLVING MATERIALS SUBMITTED FOR SUBSTITUTION SHALL PROCEED UNTIL WRITTEN ACCEPTANCE IS RECEIVED FROM THE OWNER. THE OWNER IS THE SOLE JUDGE OF ACCEPTABILITY OF PREFERRED SUBSTITUTIONS. IF A SUBSTITUTION ITEM IS PERMITTED, AND ANY RE-DESIGN EFFORT IS THEREBY NECESSITATED, THE REQUIRED RE-DESIGN SHALL BE AT THE CONTRACTOR'S EXPENSE.
1.10 COORDINATION:
COORDINATE WORK WITH OTHER TRADES TO AVOID CONFLICT AND TO PROVIDE CORRECT ROUTING AND CONNECTION FOR EQUIPMENT FURNISHED UNDER OTHER TRADES THAT REQUIRE ELECTRICAL CONNECTIONS. INFORM CONTRACTORS OF OTHER TRADES OF THE REQUIRED ACCESS TO AND CLEARANCES AROUND ELECTRICAL EQUIPMENT TO MAINTAIN SERVICE ABILITY AND CODE COMPLIANCE. VERIFY EQUIPMENT DIMENSIONS AND REQUIREMENTS WITH PROVISIONS SPECIFIED UNDER THIS SECTION. CHECK ACTUAL JOB CONDITIONS BEFORE FABRICATING WORK. REPORT NECESSARY CHANGES IN TIME TO PREVENT NEEDLESS WORK, CHANGES OR ADDITIONS, SUBJECT TO ADDITIONAL COMPENSATION, WHICH ARE MADE WITHOUT WRITTEN AUTHORIZATION AND AN AGREED PRICE, SHALL BE AT THE CONTRACTOR'S RISK AND EXPENSE.
1.11 CUTTING AND PATCHING:
ALL CUTTING AND PATCHING REQUIRED FOR WORK OF THIS DIVISION IS INCLUDED HEREIN. COORDINATE WITH GENERAL AND OTHER TRADES IS IMPERATIVE. CONTRACTOR SHALL BEAR THE RESPONSIBILITY FOR AND THE ADDED EXPENSE OF ADJUSTING FOR IMPROPER HOLES, SUPPORTS, ETC.
1.12 ACCEPTANCE DEMONSTRATION:
UPON COMPLETION OF THE WORK, AT A TIME TO BE DESIGNATED BY THE OWNER, THE CONTRACTOR SHALL DEMONSTRATE FOR THE OWNER THE OPERATION OF THE ELECTRICAL INSTALLATION, INCLUDING ANY AND ALL SPECIAL ITEMS INSTALLED BY HIM OR INSTALLED UNDER HIS SUPERVISION. PROPERLY SET AUTOMATIC TIME SWITCHES TO PERFORM SWITCHING OPERATIONS IN ACCORDANCE WITH SCHEDULES PROVIDED BY THE OWNER'S REPRESENTATIVE. AND DEMONSTRATE (USING THE MANUFACTURER'S OPERATING INSTRUCTIONS) HOW TO OVERRIDE AND/OR TEST TIME SWITCHES PROGRAMMING.
1.13 RECORD DRAWINGS, EQUIPMENT DATA:
MAINTAIN ONE SET OF CLEAN WORKING DRAWINGS AT THE JOB SITE AND ENTER DAILY "AS-BUILT" INFORMATION AS FEEDER AND SERVICE ROUTES, PULL BOX LOCATIONS AND CHANGES IN LAYOUT OR ARRANGEMENT WHICH OCCUR DURING CONSTRUCTION. DELIVER COMPLETED DRAWINGS TO THE OWNER. DELIVER TO THE OWNER'S REPRESENTATIVE THREE COPIES OF DATA SHEETS OR OTHER CURRENT MANUFACTURER'S PUBLICATIONS FOR EACH ITEM OF ELECTRICAL EQUIPMENT FURNISHED FOR THE PROJECT INCLUDING AT LEAST THESE DATA:
1. TECHNICAL DESCRIPTION AND REPLACEABLE PARTS LIST.
2. PHYSICAL DESCRIPTION AND INSTALLATION INSTRUCTIONS.
3. USER'S MANUAL AND OPERATING INSTRUCTIONS.
4. MANUFACTURER'S WARRANTY.
1.14 CLEAN-UP:
RID THE PREMISES OF SCRAP MATERIALS, TRASH AND DEBRIS BOTH DURING CONSTRUCTION AND AT COMPLETION OF THE PROJECT. LEAVE THE BUILDING AND SURROUNDING AREA IN A CLEAN AND ORDERLY CONDITION.
1.15 GUARANTEE:
GUARANTEE THE INSTALLATION FREE FROM DEFECTS OF WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR AFTER DATE OF CERTIFICATION OF FINAL PAYMENT AND PROMPTLY REMEDY ANY DEFECTS DEVELOPING DURING THIS PERIOD, WITHOUT CHARGE.
1.16 TEMPORARY SERVICES:
PROVIDE ADEQUATE AND SAFE TEMPORARY ELECTRICAL POWER AND LIGHTING THROUGHOUT THE CONSTRUCTION AND FINISHING OF THE PREMISES. IN ADDITION TO SPECIAL OR UNUSUAL REQUIREMENTS, PROVIDE AT LEAST THESE ITEMS:
1. THREE 20-AMP CIRCUITS FOR CONSTRUCTION POWER TOOLS. PROVIDE GFI TEMPORARY CIRCUITS WITH COVERPLATES TO MEET OSHA REQUIREMENTS.

2. THREE OR MORE LIGHT STRINGS SUSPENDED APPROXIMATELY ONE FOOT BELOW THE HEIGHT OF FINISH CEILING WITH LAMPS SPACED NOT MORE THAN TWELVE FEET ON CENTERS. STRINGS SHALL BE RUN THE LENGTH OF THE STOVE SPACE PARALLEL TO THE DEMISING WALLS, WITH ONE STRING WITHIN EACH FEET OF EACH WALL AND ONE (OR MORE) INTERMEDIATE STRING(S) ARRANGED TO LIMIT THE SPACING BETWEEN ROWS TO SIXTEEN FEET OR LESS.
3. FLOOD LIGHTING AND TASK LIGHTING FOR PAINTING AND OTHER FINISH WORK.
WHEN PERMANENT ELECTRICAL SERVICE IS OPERABLE, DISCONNECT AND REMOVE FROM THE PREMISES THE MATERIALS AND EQUIPMENT USED FOR TEMPORARY POWER AND LIGHTING, AND RESTORE MODIFICATIONS AND REPAIR DAMAGE CAUSED BY THE INSTALLATION, USE OR REMOVAL OF TEMPORARY SERVICE PROVISIONS.
1.17 OWNER-FURNISHED ITEMS:
CONTRACTOR SHALL INSTALL, CONNECT AND COMPLETE THE FOLLOWING ITEMS FURNISHED BY THE OWNER AND SHALL PROVIDE WIRES, CABLES, CONNECTORS, PIGTAILS, CORDS AND CORD-CAPS, BOXES, CONDUITS, PLATES, SUPPORTS, AND OPERATING TESTS TO MAKE COMPONENTS AND SYSTEMS OPERATE SATISFACTORILY. PROVIDE SYSTEMS DRAWINGS FROM THE MANUFACTURER THROUGH THE OWNER IN ORDER TO INSTALL COMPLETE OPERABLE SYSTEM.
1. MUSIC SOUND SYSTEM COMPONENTS.
2. DIMMING PANEL FOR LIGHTING CONTROLS.
PART 2 - PRODUCTS
2.01 MATERIAL APPROVAL:
ALL MATERIALS MUST BE NEW AND BEAR UNDERWRITER'S LABORATORIES LABEL. MATERIALS THAT ARE NOT COVERED BY UL TESTING STANDARDS SHALL BE TESTED AND APPROVED BY AN INDEPENDENT TESTING LABORATORY OR A GOVERNMENTAL AGENCY. MATERIAL NOT IN ACCORDANCE WITH THESE SPECIFICATIONS MAY BE REJECTED EITHER BEFORE OR AFTER INSTALLATION.
2.02 CONDUITS AND OTHER RACEWAYS:
A. RIGID STEEL: HOT-DIPPED GALVANIZED.
B. INTERMEDIATE METAL CONDUIT (IMC): HOT-DIPPED GALVANIZED.
C. ELECTRICAL METALLIC TUBING (EMT): ELECTRO-GALVANIZED.
D. WIREWAY: CODE GAUGE STEEL, WITH KNOCKOUTS AND HINGED COVER, CORROSION RESISTANT GRAY BAKED ENAMEL FINISH.
E. PROVIDE FITTINGS AND ACCESSORIES APPROVED FOR THE PURPOSE EQUAL IN ALL RESPECTS TO THE CONDUIT OR RACEWAY. EMT CONNECTORS AND COUPLINGS SHALL BE STEEL SETSCREW TYPE INDOORS AND STEEL WELDING TYPE IN WET LOCATIONS AND OUTDOORS.
2.03 WIRES AND CABLES:
A. FOR POWER AND LIGHTING SYSTEM 600V OR LESS:
1. CONDUCTOR: MINIMUM SIZE #12 AWG.
a. #12 AND #10 AWG SOLID COPPER.
b. #8 AWG AND LARGER SHALL BE STRANDED COPPER.
2. INSULATION TYPE:
a. #12 TO #1 AWG: THHN FOR WET OR UNDERGROUND AND THHN FOR DRY LOCATIONS.
b. #10 THROUGH #4 AWG: XHHW (55 MILS).
c. #250 MCM AND LARGER: XHHW (65 MILS).
d. GROUNDING WIRE: TW.
B. FOR SIGNAL AND COMMUNICATIONS CIRCUIT:
1. SPECIAL CABLES SHALL BE AS SPECIFIED ON DRAWINGS.
2. CONDUCTORS FOR GENERAL USE SHALL BE STRANDED COPPER CONDUCTOR, #16 AWG MINIMUM, WITH THWN INSULATION FOR UNDERGROUND OR WET LOCATIONS AND THHN INSULATION FOR DRY LOCATIONS.
C. ACCEPTABLE PRODUCTS: GENERAL ELECTRIC, ANACONDA, OKONITE, LANARON OR TRIANGLE PRODUCTS CONFORMING OR EXCEEDING APPLICABLE IPCEA STANDARDS.
2.04 OUTLET BOXES, JUNCTION AND PULL BOXES:
A. OUTLET BOXES: 4" SQUARE X 1-1/2" DEEP (OR LARGER) GALVANIZED SHEET STEEL KO-TYPE WITH PLASTER RING AND COVER FOR GENERAL INTERIOR USE AND CAST METAL TYPE FS OR FD WITH MATCHING SCREW COVERS FOR EXTERIOR AND EXPOSED INTERIOR LOCATIONS (GASKETED IN DAMP OR WET LOCATIONS).
B. JUNCTION BOXES SHALL BE SAME AS OUTLET BOXES UP TO 42 CU. IN. AND CODE-GAUGE STEEL IN LARGER SIZES WITH SURFACE OR FLUSH-TYPE SCREW-MOUNTED TRIM COVERS, BOTH BOXES AND COVERS INHIBIT-PRIMED AND PAINTED INSIDE OUT.
C. PULL BOXES SHALL BE SAME AS JUNCTION BOXES UNLESS INDICATED OTHERWISE ON THE DRAWINGS, WITH COVERS.
D. TELEPHONE CABLE BOXES SHALL BE THE TYPE AND SIZE REQUIRED BY THE SERVING TELEPHONE COMPANY BUT NOT SMALLER THAN 4-11/16" SQUARE X 2-1/8" DEEP WITH SINGLE-GANG RING AND SIERRA #S-754N SPLIT PLATE BUSHING.
2.05 WIRING DEVICES AND PLATES:
WIRING DEVICES AND PLATES SHALL BE BY PASS AND SEYMOUR OR APPROVED EQUAL.
1. STANDARD SWITCHES:
a. SWITCH AND RECEPTACLES DEVICES SHALL BE PLASTIC BODIES, COLOR PER ARCHITECT.
b. WALL PLATES SHALL BE METAL TYPE #30, STAINLESS STEEL, COLOR PER ARCHITECT.
c. ISOLATED GROUND RECEPTACLES SHALL BE WHITE WITH ORANGE TRIANGLE AS REQUIRED PER NEC, MANUFACTURED BY "LEVITON" # 5362-IGW OR APPROVED EQUAL.
2.06 CONDUIT HANGERS:
FOR INDIVIDUAL CONDUIT RUNS NOT DIRECTLY FASTENED TO THE STRUCTURE, USE ROD HANGERS MANUFACTURED BY CADDY, UNISTRUT OR POWERSTRUT. FOR MULTIPLE CONDUIT RUNS, USE UNISTRUT OR POWERSTRUT TRAPEZE TYPE CONDUIT SUPPORT DESIGNED FOR MAXIMUM DEFLECTION NOT GREATER THAN 1/8".
2.07 WIRE CONNECTORS:
FOR WIRE SIZES #8 AWG AND SMALLER: INSULATED PRESSURE TYPE (WITH LIVE SPRING) RATED 105 DEGREES C, 600V, FOR BUILDINGS WIRING AND 1000V IN SIGNS OR FIXTURES, SCOTT OR IDEAL. FOR WIRE SIZE #8 AWG AND LARGER, T & B OR EQUIVALENT COMPRESSION TYPE WITH 3M #33+ OR PLYMOUTH "SLIPKNOT GREY" TAPE INSULATION.
2.08 PANELBOARDS:
A. CONSTRUCTION: CABINETS SHALL BE OF CODE GAUGE, GALVANIZED STEEL, SURFACE OR FLUSH MOUNTED AS INDICATED. DOORS SHALL BE OF COLD-ROLLED STEEL WITH CONCEALED HINGES AND FLUSH CATCH AND LOCK. ALL PANELS SHALL BE KEYPAD ALIKE. PANELS LOCATED ADJACENT TO EACH OTHER SHALL HAVE IDENTICALLY SIZED ENCLOSURE AND TRIMS. MINIMUM PANEL WIDTH SHALL BE 20". FINISH EXPOSED PART WITH ONE COAT OF PRIMER AND ONE COAT OF LIGHT GREY ENAMEL, SUITABLE FOR OVERPAINTING IN FIELD IF DESIRED.
B. BUS BARS: PROVIDE GROUND BLOCK WITH FULL COMPLEMENT OF TERMINALS IN ADDITION TO INSULATED NEUTRAL BUS. FUTURE BREAKER SPACES SHALL HAVE COMPLETE PROVISION INCLUDING BUSES AND CONNECTING HARDWARE.
C. MANUFACTURERS: PANELBOARDS SHALL BE GENERAL ELECTRIC TYPE "AQ" OR TYPE "AE" OR EQUIVALENT PRODUCTS OF WESTINGHOUSE, SQUARE-D OR SIEMENS-ITE. CIRCUIT BREAKERS SHALL BE QUICK-MAKE, QUICK-BREAK, MOLDED CASE TYPE:
1. 120/240 VOLT PANELS: SHALL BE GENERAL ELECTRIC TYPE "Q" LINE, BOLT-ON TYPE, WITH MINIMUM SYMMETRICAL INTERRUPTING CAPACITY AS SHOWN.
2. PROVIDE MULTI-POLE UNITS WITH COMMON TRIP ELEMENT.
3. CIRCUIT BREAKERS USED ON "ON-OFF" CONTROL OF FLUORESCENT LIGHTING (PANELBOARD SWITCHING) SHALL BE UNDERWRITER'S LABORATORIES LISTED AND MARKED "SWD" TO INDICATE THEIR SUITABILITY.
E. IDENTIFICATION: PROVIDE SCREWED-ON (NO ADHESIVES) BAKELITE OR PHOTO-ETCHED METALLIC NAMEPLATE IDENTIFICATION ON OUTSIDE OF EACH PANEL SHOWING PANEL DESIGNATION, VOLTAGE AND PHASE IN MINIMUM 1/8" HIGH LETTERS. EACH PANEL SHALL CONTAIN A METAL-FRAMED CIRCUIT DIRECTORY INSIDE COVER, WITH PLASTIC PROTECTOR.
F. COMPLETE SHOP DRAWINGS ARE REQUIRED. SEE ARTICLE 1.08.
2.09 INDIVIDUALLY MOUNTED MOTOR CONTROLLERS:
FOR POLYPHASE MOTORS: COMBINATION MOTOR CIRCUIT PROTECTOR AND MAGNETIC STARTER, WITH 3-LEG OVERLOAD PROTECTION. PROVIDE TWO INTERLOCK CONTACTS OF THE INTERCHANGEABLE OPEN-CLOSE TYPE. PROVIDE HAND-OFF-AUTOMATIC SELECTOR SWITCH, MOTOR RUNNING PILOT LIGHT AND RESET BUTTON IN COVER. CIRCUITS 300V AND OVER SHALL BE PROVIDED WITH 120V CONTROL TRANSFORMERS.
STARTERS FOR FRACTIONAL HORSEPOWER 120V MOTORS SHALL BE MANUAL TYPE UNLESS SHOWN OTHERWISE, EQUIPPED WITH BUILT-IN OVERLOAD PROTECTION.
ACCEPTABLE MANUFACTURERS: GENERAL ELECTRIC, SIEMENS, SQUARE D, WESTINGHOUSE, AND ALLEN BRADLEY.
2.10 LIGHTING:
A. FURNISH AND INSTALL ALL FIXTURES COMPLETE, INCLUDING LAMPS AND BALLAST READY FOR SERVICE.
B. SUPPORTS: PROPER SUPPORTS AND MOUNTING ACCESSORIES, SUCH AS HANGERS, STEMS, YOKES, PLASTER FRAMES, ETC. SHALL BE PROVIDED AS REQUIRED BY THE TYPE OF CEILING INSTALLED, WHERE SWIVEL CANOPIES OR BALL ALIGNERS ARE SPECIFIED, THEY SHALL COUSE FIXTURE TO HANG PLUMP REGARDLESS OF CEILING SLOPE.

C. FIXTURE DESIGNATION: FIXTURE TYPES ARE DESIGNATED ON DRAWINGS. WHERE ONLY ONE FIXTURE DESIGNATION IS SHOWN, IT APPLIES TO ALL FIXTURES IN THAT ROOM OR AREA. FOR EXACT FIXTURE COUNT AND LOCATION REFER TO REFLECTED CEILING PLAN.
D. WIRE LAMP AND SLAMP FLUORESCENT FIXTURES IN TANDEM WHERE REQUIRED BY CODE.
E. BALLASTS: ADVANCE, GE, OR APPROVED HIGH FREQUENCY ELECTRONIC, FULL LIGHT OUTPUT, ENERGY SAVING, CLASS "P", HIGH POWER FACTOR, ETL CERTIFIED, SOUND RATING "A" OR AS INDICATED ON DRAWINGS.
2.11 DRY TYPE TRANSFORMERS:
A. GENERAL:
EQUIPMENT SHALL CONFORM TO OR EXCEED REQUIREMENTS OF NEMA, ANSI STANDARD C89.2 FOR DRY TYPE TRANSFORMERS FOR GENERAL APPLICATIONS. ACCEPTABLE PRODUCTS ARE THOSE OF GENERAL ELECTRIC COMPANY'S "QHT" LINE OR EQUIVALENT SQUARE D, SIEMENS-ITE, OR WESTINGHOUSE.
B. ELECTRICAL RATINGS:
1. PRIMARY WINDINGS VOLTAGE: 480 VOLTS, 3-PHASE, DELTA. SECONDARY WINDINGS VOLTAGES: 208Y/120 VOLTS, 3-PHASE GROUNDING. FREQUENCY: 60 HZ. KVA RATING: AS SHOWN ON DRAWINGS. TAPS: SIX (6) 2.5% FULL CAPACITY TAPS; 2 ABOVE AND 4 BELOW, RATED VOLTAGE. IMPEDANCE: FOR TRANSFORMERS LARGER THAN 75 KVA, 4.5% MINIMUM, 5.75% MAXIMUM.
2. WINDING TEMPERATURE RISE SHALL BE 150 DEGREES CENTIGRADE IN ACCORDANCE WITH UL SPECIFICATION ARTICLE 506.
3. TRANSFORMER SHALL BE CAPABLE OF OPERATING AT 100% OF NAMEPLATE RATING CONTINUOUSLY WHILE IN AN AMBIENT TEMPERATURE NOT EXCEEDING 40 DEGREES CENTIGRADE.
4. TRANSFORMER SHALL MEET THE DAILY OVERLOAD REQUIREMENTS OF ANSI STANDARD C57.96.
C. VIBRATION ISOLATION, FACTORY-INSTALLED:
PROVIDE NEOPRENE RUBBER PADS TO ISOLATE CORE AND COIL ASSEMBLY FROM TRANSFORMER ENCLOSURE.
D. INSTALLATION:
1. ANCHOR TRANSFORMER SECURELY WITH MINIMUM 1/2" DIAMETER BOLTS. STRENGTH OF BOLTS USED TO SECURE THE TRANSFORMER SHALL BE SUFFICIENT TO RESIST SHEAR AND UPLIFT PRODUCED BY FORCE EQUAL TO 1/2 OF THE EQUIPMENT MASS APPLIED HORIZONTALLY AT ENTER OF GRAVITY.
2. PROVIDE 1" THICK HIGH RESILIENCY PADS TO ISOLATE TRANSFORMER FROM FLOOR OR PLATFORM, KORFUND "ELASTO RIB" OR EQUIVALENT.
3. USE FLEXIBLE CONDUITS AT LEAST 24" LONG FOR ELECTRICAL CONNECTIONS.
4. PROVIDE GROUNDING OF EACH TRANSFORMER SECONDARY INCLUDING ALL CONDUITS, WIRES, AND CONNECTORS IN ACCORDANCE WITH NEC 250-26 AND ANY LOCAL ADDITIONAL REGULATIONS.
2.12 INDIVIDUALLY MOUNTED MOTOR CONTROLLERS:
A. FOR POLYPHASE MOTORS: COMBINATION MOTOR CIRCUIT PROTECTOR AND MAGNETIC STARTER, WITH 3-LEG OVERLOAD PROTECTION. PROVIDE TWO INTERLOCK CONTACTS OF THE INTERCHANGEABLE OPEN-CLOSE TYPE. PROVIDE HAND-OFF-AUTOMATIC SELECTOR SWITCH, MOTOR RUNNING PILOT LIGHT AND RESET BUTTON IN COVER. CIRCUITS 300V AND OVER SHALL BE PROVIDED WITH INDIVIDUAL 120V CONTROL TRANSFORMERS.
B. STARTERS FOR FRACTIONAL HORSEPOWER 120V MOTORS SHALL BE MANUAL TYPE UNLESS SHOWN OTHERWISE, EQUIPPED WITH BUILT-IN OVERLOAD PROTECTION.
C. ACCEPTABLE MANUFACTURERS: GENERAL ELECTRIC, SIEMENS, SQUARE D, WESTINGHOUSE, AND ALLEN BRADLEY.
2.13 MISCELLANEOUS MATERIALS:
A. SAFETY SWITCHES: HEAVY DUTY TYPE, 600V, HORSEPOWER RATED FOR MOTORS, FUSED OR NON-FUSED AS REQUIRED. MOUNT IN ENCLOSURE WITH NEMA RATING AS REQUIRED FOR THE SPECIFIC APPLICATION GENERAL ELECTRIC, SQUARE D OR WESTINGHOUSE.
PART 3 - EXECUTION
3.01 GENERAL:
A. ELECTRIC SYSTEM LAYOUTS INDICATED ON THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND SHALL BE FOLLOWED AS CLOSELY AS ACTUAL CONSTRUCTION AND WORK OF OTHER TRADES WILL PERMIT. GOVERN EXACT ROUTING OF CABLE AND WIRING AND THE LOCATIONS OF OUTLETS BY THE STRUCTURE AND EQUIPMENT SERVED. TAKE ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS.
B. CONSULT ALL OTHER DRAWINGS, VERIFY SCALES AND REPORT ANY DIMENSIONAL DISCREPANCIES OR OTHER CONFLICTS WITH OWNER BEFORE SUBMITTING BID.
C. ALL HOME RUNS TO PANELBOARDS ARE INDICATED AS STARTING FROM THE OUTLET NEAREST THE PANEL AND CONTINUING IN THE GENERAL DIRECTION OF THAT PANEL. CONTINUE SUCH CIRCUITS TO THE PANEL AS THOUGH THE ROUTES WERE COMPLETELY INDICATED. TERMINATE HOMERUNS OF SIGNAL, ALARM, AND COMMUNICATION SYSTEMS IN A SIMILAR MANNER.
D. AVOID CUTTING AND BORING HOLES THROUGH STRUCTURE OR STRUCTURAL MEMBERS WHEREVER POSSIBLE. OBTAIN PRIOR APPROVAL OF OWNER AND CONFORM TO ALL STRUCTURAL REQUIREMENTS WHEN CUTTING OR BORING THE STRUCTURE IS NECESSARY AND PERMITTED.
E. FURNISH AND INSTALL ALL NECESSARY HARDWARE, HANGERS, BLOCKING, BRACKETS, BRACING, RUNNERS, ETC. REQUIRED FOR EQUIPMENT INSTALLED UNDER THIS SECTION.
F. PROVIDE NECESSARY BACKING REQUIRED TO INSURE RIGID MOUNTING OF OUTLET BOXES.
3.02 WIRING METHODS:
A. INSTALL ALL WIRING IN RACEWAY, OR USE MC CABLE WHERE APPROVED BY ALL APPLICABLE CODES AND REGULATIONS. CONDUIT SHALL BE RIGID STEEL, IMC OR EMT AS FOLLOWS:
1. ABOVE GROUND: USE RIGID STEEL, IMC OR EMT.
a. WET LOCATIONS: RIGID STEEL OR IMC ONLY.
b. LOCATIONS SUBJECT TO MECHANICAL INJURY: RIGID STEEL OR IMC ONLY.
c. DRY LOCATIONS AND NOT SUBJECT TO MECHANICAL INJURY: EMT, IMC OR RIGID STEEL CONDUIT.
2. UNDERGROUND: USE RIGID STEEL.
B. USE FLEXIBLE CONDUITS OR MC CABLE IN THE FOLLOWING APPLICATIONS:
1. FINAL CONNECTIONS TO MOTOR.
2. FINAL CONNECTIONS INTO AND OUT OF THE TRANSFORMER.
3. FINAL CONNECTIONS TO VIBRATING EQUIPMENT.
4. INTER-CONNECTIONS BETWEEN ALL LIGHT FIXTURES (NOT TO INCLUDE HOMERUN FROM FIXTURE OR DEVICE TO PANELBOARD, WHICH MUST BE RIGID).
5. FINAL CONNECTIONS WHERE RIGID CONDUIT IS NOT PRACTICAL.
6. IN WALLS (FOR LIGHT SWITCHES AND 120V POWER RECEPTACLES AND HVAC CONTROL EQUIPMENT).
C. FLEXIBLE METALLIC CONDUIT OR MC CABLE MUST BE THE SAME SIZE AS THE RIGID CONDUIT TO WHICH IT IS CONNECTED.
D. THE CONNECTION TO OUTDOOR EQUIPMENT MUST BE WEATHERPROOF, I.E. LIQUIDTIGHT OR SEALTIGHT.
E. MINIMUM SIZE OF CONDUIT SHALL BE 1/2" FOR INDIVIDUAL LIGHTING FIXTURE CONNECTIONS OR TO INDIVIDUAL LIGHT SWITCHES IF APPROVED BY ALL APPLICABLE CODES. MINIMUM SIZE FOR ALL OTHER LOCATIONS SHALL BE 3/4". IF HVAC CONTROL WIRING IS REQUIRED TO BE RUN IN CONDUIT, IT SHALL BE A 3/4" MINIMUM, UNLESS OTHERWISE NOTED ON DRAWINGS. ALL INUNDER FLOOR CONDUITS SHALL BE 3/4" MINIMUM SIZE.
3.03 INSTALLATION OF CONDUITS:
A. GENERAL:
1. RUN ALL CONDUIT CONCEALED UNLESS OTHERWISE NOTED OR SHOWN.
2. RUN ALL CONDUIT PARALLEL TO OR AT RIGHT ANGLES TO CENTER LINES OF COLUMNS AND BEAMS.
3. CONDUITS ABOVE CEILINGS SHALL NOT OBSTRUCT REMOVAL OF CEILING TILES, LIGHTING FIXTURES, AIR DIFFUSERS, ETC.
4. CONDUITS SHALL NOT CROSS ANY DUCT SHAFT OR AREA DESIGNATED AS FUTURE DUCT SHAFT HORIZONTALLY. CONDUIT RISERS WHEN ALLOWED IN DUCT SHAFT MUST BE COORDINATED WITH MECHANICAL WORK TO AVOID ANY CONFLICT.
B. CONDUIT SUPPORTS:
1. SUPPORT CONDUITS WITH UNDERWRITER'S LABORATORIES LISTED STEEL CONDUIT SUPPORTS AT INTERVALS REQUIRED BY THE NATIONAL ELECTRIC CODE. WIRES OR SHEET METAL STRIPS ARE NOT ACCEPTABLE FOR CONDUIT SUPPORT. USE CONDUIT HANGERS FOR ALL CONDUITS NOT DIRECTLY FASTENED TO STRUCTURE AND FOR ALL MULTIPLE CONDUIT RUNS. DO NOT ATTACH ANY CONDUIT TO MECHANICAL DUCTS OR PIPES.

2. INDIVIDUAL CONDUITS 1/2" AND 3/4" SIZE FOR LIGHTING MAY BE SUPPORTED FROM CEILING SUPPORT WIRES WITH CADDY CLIP ONLY IF ACCEPTABLE TO LOCAL CODE. ONLY ONE CONDUIT IS PERMITTED TO BE ATTACHED TO ANY CEILING SUPPORT WIRE. HANG SUCH CONDUIT SO AS NOT TO AFFECT LEVEL OF CEILING.
3. AVOID ATTACHING CONDUIT TO FAN PLENUMS. WHEN IT IS NECESSARY TO SUPPORT CONDUIT FROM FAN PLENUM, PROVIDE A LENGTH OF FLEXIBLE CONDUIT BETWEEN PORTION ATTACHED FAN PLENUM AND PORTION ATTACHED TO THE BUILDING TO MINIMIZE TRANSMISSION OF VIBRATION TO THE BUILDING STRUCTURE.
C. CONDUIT PENETRATIONS:
1. PENETRATING FIRE RATED FLOOR OR WALL: INSTALL CONDUIT IN CONDUIT SLEEVE OR FRAMED OPENING. SEAL PENETRATION WITH FIRE RETARDANT SEALANT SPECIFIED HEREIN.
2. PENETRATING ROOF OR EXTERIOR WALL: AVOID PENETRATING ROOF OR EXTERIOR WALL WHERE POSSIBLE. WHERE PENETRATIONS ARE NECESSARY, BUILDING WEATHERPROOF INTEGRITY MUST BE PRESERVED.
3. PENETRATING SOUND INSULATED OR AIR PLENUM WALL: INSTALL CONDUIT IN CONDUIT SLEEVE AND SEAL PENETRATION AS DETAILED ON THE DRAWINGS.
4. PENETRATING NON-FIRE RATED DRY WALL: CONDUIT SLEEVES ARE NOT REQUIRED. PENETRATIONS MUST BE SEALED WITH PLASTER PRIOR TO PAINTING. PENETRATIONS MADE AFTER WALL FINISH IS APPLIED MUST BE AS SMALL AS POSSIBLE AND PROVIDED WITH ESCUTCHEONS, ONE ON EACH SIDE OF WALL.
5. PENETRATING SUSPENDED CEILING: CUT HOLE AS SMALL AS POSSIBLE TO PERMIT CONDUIT PENETRATION. PROVIDE ESCUTCHEON FOR EACH CONDUIT BELOW CEILING.
3.04 CONNECTIONS TO EQUIPMENT:
A. GENERAL:
1. FURNISH AND INSTALL REQUIRED POWER SUPPLY CONDUIT AND WIRING TO ALL EQUIPMENT. SEE BELOW FOR OTHER WIRING REQUIRED.
2. FURNISH AND INSTALL A DISCONNECT SWITCH IMMEDIATELY AHEAD OF AND ADJACENT TO EACH MAGNETIC MOTOR STARTER OR APPLIANCE UNLESS THE MOTOR APPLIANCE IS LOCATED ADJACENT AND WITHIN SIGHT OF THE SERVING PANELBOARD, CIRCUIT BREAKER OR SWITCH. VERIFY ALL EQUIPMENT NAMEPLATE CURRENT RATINGS PRIOR TO INSTALLATION.
3. FURNISH AND INSTALL MANUAL THERMAL PROTECTION FOR ALL MOTORS NOT INTEGRALLY EQUIPPED WITH THERMAL PROTECTION.
4. FURNISH 120 VOLT POWER TO EACH CONTROL PANEL AND TIME SWITCH REQUIRING A SOURCE OF POWER TO OPERATE.
3.05 INSTALLATION OF WIRES:
A. PULL NO WIRE INTO ANY PORTION OF THE CONDUIT SYSTEM UNTIL ALL CONSTRUCTION WORK WHICH MIGHT DAMAGE THE WIRE HAS BEEN COMPLETED.
B. INSTALL ALL WIRE CONTINUOUS FROM OUTLET TO OUTLET OR TERMINAL TO TERMINAL. SPLICES IN CABLES WHEN REQUIRED SHALL BE MADE IN HANDHOLES, PULL BOXES OR JUNCTION BOXES. MAKE BRANCH CIRCUIT SPLICES IN OUTLET BOXES WITH 8" OF CORRECTLY COLOR-CODED TAILS LEFT IN THE BOX.
C. SPLICES IN WIRES AND CABLES SHALL BE MADE USING MATERIALS AND METHODS DESCRIBED HEREIN BEFORE.
D. MAKE ALL GROUND, NEUTRAL AND LINE CONNECTIONS TO RECEPTACLE AND WIRING DEVICE TERMINALS AS RECOMMENDED BY MANUFACTURE. PROVIDE GROUND JUMPER FROM OUTLET BOX TO GROUND TERMINAL OF DEVICES WHEN THE DEVICE IS NOT APPROVED FOR GROUNDING THROUGH THE MOUNTING SCREWS.
E. PROVIDE BRADY WIRE MARKERS WHERE NUMBER OF CONDUCTORS IN A BOX EXCEEDS FOUR.
F. MEGGER AND RECORD INSULATION RESISTANCE OF ALL 600 VOLT INSULATED CONDUCTORS SIZE #40 AND LARGER USING 500 VOLT MEGGER FOR ONE MINUTE. MAKE TESTS WITH CIRCUITS ISOLATED FROM SOURCE AND LOAD.
3.06 WIRE COLOR CODE:
COLOR CODING SHALL BE CONTINUOUS FOR WIRE #12 THROUGH #10 AWG. PHASE CONDUCTORS #8 AND LARGER AND CONDUCTORS OF ANY SIZE IN CABLE ASSEMBLIES MAY HAVE COLORED PHASING TAPE AT TERMINATIONS. COLOR CODE WIRES AS FOLLOWS:
VOLTAGE PHASE A PHASE B PHASE C NEUTRAL GROUND
120/208V BLACK RED BLUE WHITE GREEN
277/480V BROWN ORANGE YELLOW GRAY GREEN
3.07 IDENTIFICATION:
A. PROVIDE NAMEPLATES FOR SWITCHGEARS, PANELBOARDS, AND ALL SIMILAR DEVICES. NAMEPLATES SHALL BE SCREWED (NO ADHESIVES) ENGRAVED BAKELITE OR PHOTO-ETCHED METALLIC NAMEPLATE IDENTIFICATION SHOWING PANEL DESIGNATION, VOLTAGE AND PHASE IN MINIMUM 1/4" HIGH LETTERS.
B. PROVIDE DYMO LABELS ON ALL LIGHTING SWITCHES AND CONVENIENCE AND SPECIAL PURPOSE RECEPTACLES TO SHOW PANEL AND CIRCUIT NUMBER TO WHICH THE DEVICE IS CONNECTED.
C. EACH PANELBOARD SHALL CONTAIN A METAL-FRAMED CIRCUIT DIRECTORY INSIDE COVER, WITH PLASTIC PROTECTOR.
D. PANELBOARD SCHEDULES: AFTER COMPLETION OF WORK, PROVIDE TYPEWRITTEN UPDATED PANELBOARD SCHEDULES FOR ALL PANELBOARDS.
3.08 REMODELING WORK
A. EXISTING ELECTRICAL WIRING WHICH WILL NOT BE MADE OBSOLETE AND WHICH WILL BE DISTURBED DUE TO CONSTRUCTION CHANGES REQUIRED BY THIS CONTRACT SHALL BE RESTORED TO OPERATING CONDITION. WHERE CONSTRUCTION CHANGES REQUIRE, OUTLETS AND CONDUIT RUNS SHALL BE RELOCATED, EXTEND CONDUITS AND PULL IN NEW WIRING OR INSTALL JUNCTION BOXES AND SPLICE IN NEW WIRING.
B. OUTLETS FROM WHICH FIXTURES, SWITCHES, RECEPTACLES, AND/OR OTHER ELECTRICAL DEVICES ARE MOVED AND WHICH ARE NOT REPLACED OR REUSED SHALL BE REMOVED, WHERE OUTLETS BOXES, ETC., ARE COMPLETELY REMOVED, THE CONTRACTOR SHALL CUT OFF CONDUITS AND REMOVE WIRING.
C. WHERE CONDUITS EXTENDING THROUGH FLOORS ARE TO BE ABANDONED, THE CONTRACTOR SHALL CUT AND CAP OR PLUG CONDUIT, AND THE CONDUIT SHALL NOT PROTRUDE ABOVE THE FLOOR.
D. WHERE EXISTING CONDUIT IS TO BE ABANDONED, THE CONDUIT SHALL BE REMOVED IF IT IS EXPOSED, IN A CRAWL SPACE OR IN ACCESSIBLE CEILING, WHERE IT IS IMPOSSIBLE TO REMOVE THE CONDUIT, IT SHALL BE CUT OFF AND CAPPED OR PLUGGED.
E. REMOVE ALL EXISTING WIRING NOT REUSED OR REQUIRED TO MAINTAIN CONTINUITY TO CIRCUITS TO REMAIN.
F. THE CONTRACTOR SHALL BE HELD FULLY RESPONSIBLE FOR THE PROPER RESTORATION OF ALL EXISTING SURFACES REQUIRING PATCHING, PLASTERING, PAINTING AND/OR OTHER REPAIRS DUE TO THE INSTALLATION OF ELECTRICAL WORK UNDER THE TERMS OF THIS SPECIFICATION. CLOSE ALL OPENINGS, REPAIR ALL SURFACES, ETC., AS REQUIRED.
G. MAINTAIN CIRCUIT CONTINUITY TO AREAS OUTSIDE OF THIS WORK. PROVIDE NEW CONDUIT AND CONDUCTORS AS REQUIRED TO MAINTAIN CONTINUITY AND MAINTAIN AREA AS EXISTING.
3.09 GROUNDING:
A. ELECTRICAL SERVICE AND SEPARATELY DERIVED ALTERNATING CURRENT SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH NEC ARTICLE 250-3 TO 250-25, INCLUSIVE.
B. GROUND NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT ENCLOSURES, FRAMES, CONDUCTOR RACEWAYS OR CABLE TRAYS TO PROVIDE A LOW IMPEDANCE PATH FOR LINE-TO-GROUND FAULT CURRENT AND TO BAND ALL NON-CURRENT CARRYING METAL PARTS TOGETHER. PROVIDE GROUND CONDUCTOR IN EACH RACEWAY SYSTEM IN ADDITION TO CONDUCTORS SHOWN. EQUIPMENT GROUND CONDUCTOR SHALL BE ELECTRICALLY AND MECHANICALLY CONTINUOUS FROM THE ELECTRICAL CIRCUIT SOURCE TO THE EQUIPMENT TO BE GROUNDED. SIZE GROUND CONDUCTORS PER NEC ARTICLE 250-95 UNLESS LARGER CONDUCTORS ARE SHOWN ON DRAWINGS.
C. GROUNDING CONDUCTORS SHALL BE IDENTIFIED WITH GREEN INSULATION, WHERE GREEN INSULATION IS NOT AVAILABLE ON LARGER SIZES, BLACK INSULATION SHALL BE USED AND SUITABLE IDENTIFIED WITH GREEN TAPE AT EACH JUNCTION BOX OR DEVICE ENCLOSURE.
END OF SECTION



A NEW SANCTUARY EMANUEL BAPTIST CHURCH 106 BOONE STREET SUMMERVILLE, SC

Table with 4 columns: Mark, Date, Revisions, Description

SHEET TITLE SPECIFICATIONS Drawn RD, Designed RD, Checked RD, Date 2/28/2020, Job No. 19078, Sheet No. E101

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### Branch Panel: LP

Location: ELEC 129  
Supply From: MDP  
Mounting: Recessed  
Enclosure: Type 1

Volts: 120/240 Single  
Phases: 1  
Wires: 3

A.I.C. Rating: 22000  
Mains Type: MCB Rating: 200 A  
Mains Rating: 200 A

Notes:

| CKT | Load Name                       | Trip | Poles | A                  | B        | Load Name                          | CKT                             |    |
|-----|---------------------------------|------|-------|--------------------|----------|------------------------------------|---------------------------------|----|
| 1   | Receptacle PASTOR'S OFFICE 103, | 20 A | 1     | 900 VA             | 0 VA     | Receptacle ADMINISTRATOR 56,       | 2                               |    |
| 3   | Receptacle Room 118, 104, 119,  | 20 A | 1     |                    | 540 VA   | 180 VA                             | Receptacle CONFERENCE ROOM 104, | 4  |
| 5   | Receptacle CONFERENCE ROOM 104, | 20 A | 1     | 720 VA             | 0 VA     | Receptacle DECON CHAIR OFFICE 124, | 6                               |    |
| 7   | Receptacle CHANGING ROOM 107,   | 20 A | 1     |                    | 720 VA   | 58 VA                              | DECONESS 128,                   | 8  |
| 9   | Room 120, 132,                  | 20 A | 1     | 61 VA              | 0 VA     | Lighting,                          | 10                              |    |
| 11  | Lighting,                       | 30 A | 1     |                    | 2184 VA  | 180 VA                             | Receptacle BOOKSTORE 127,       | 12 |
| 13  | Receptacle RESTROOM 117,        | 20 A | 1     | 180 VA             | 0 VA     | Receptacle CAFE 112,               | 14                              |    |
| 15  | Receptacle CAFE 112,            | 20 A | 1     |                    | 180 VA   | 180 VA                             | Receptacle CAFE 112,            | 16 |
| 17  | Receptacle SANCTUARY 65,        | 20 A | 1     | 900 VA             | 0 VA     | Receptacle SANCTUARY 65,           | 18                              |    |
| 19  | Receptacle VESTIBULE 67,        | 20 A | 1     |                    | 180 VA   | 720 VA                             | Receptacle MEETING 125,         | 20 |
| 21  | Receptacle,                     | 20 A | 1     | 360 VA             | 0 VA     | Receptacle,                        | 22                              |    |
| 23  | Receptacle,                     | 20 A | 1     |                    | 360 VA   | 720 VA                             | Receptacle NURSERY 121,         | 24 |
| 25  | Receptacle WOMEN 45,            | 20 A | 1     | 180 VA             | 0 VA     | Receptacle MEN 66,                 | 26                              |    |
| 27  | STUDIO 48,                      | 20 A | 1     |                    | 800 VA   | 1724 VA                            | Room 116, 122,                  | 28 |
| 29  | DECON CHAIR OFFICE 124,         | 20 A | 1     | 819 VA             | 0 VA     | Other BOOKSTORE 127,               | 30                              |    |
| 31  | Other CAFE 112,                 | 20 A | 1     |                    | 720 VA   | 349 VA                             | CONFERENCE ROOM 104,            | 32 |
| 33  | Room 118, 119,                  | 20 A | 1     | 1642 VA            | 0 VA     | Room 117, 107,                     | 34                              |    |
| 35  | PASTOR'S OFFICE 103,            | 20 A | 1     |                    | 890 VA   | 174 VA                             | ADMINISTRATOR 56,               | 36 |
| 37  | FITNESS ROOM 104,               | 20 A | 1     | 971 VA             | 0 VA     | WOMEN 45,                          | 38                              |    |
| 39  | NURSERY 121,                    | 20 A | 1     |                    | 808 VA   | 464 VA                             | VESTIBULE 67,                   | 40 |
| 41  | MEETING 125,                    | 20 A | 1     | 819 VA             | 0 VA     | Room 66, 126,                      | 42                              |    |
| 43  | Lighting,                       | 30 A | 1     |                    | 2184 VA  | 2184 VA                            | Lighting,                       | 44 |
| 45  | Lighting,                       | 30 A | 1     | 2184 VA            | 0 VA     |                                    | Lighting,                       | 46 |
| 47  | Lighting,                       | 30 A | 1     |                    | 2184 VA  | 2184 VA                            | Lighting,                       | 48 |
| 49  | Lighting,                       | 30 A | 1     | 2184 VA            |          |                                    |                                 | 50 |
| 51  |                                 |      |       |                    |          |                                    |                                 | 52 |
| 53  |                                 |      |       |                    |          |                                    |                                 | 54 |
|     |                                 |      |       | <b>Total Load:</b> | 21858 VA | 20867 VA                           |                                 |    |
|     |                                 |      |       | <b>Total Amps:</b> | 182 A    | 174 A                              |                                 |    |

| Load Classification | Connected Load | Estimated Demand | Panel Totals                            |
|---------------------|----------------|------------------|-----------------------------------------|
| Lighting            | 23125 VA       | 28906 VA         |                                         |
| Other               | 11042 VA       | 11042 VA         | <b>Total Conn. Load:</b> 44247 VA       |
| Receptacle          | 10080 VA       | 10040 VA         | <b>Total Est. Demand:</b> 49988 VA      |
|                     |                |                  | <b>Total Conn. Current:</b> 184 A       |
|                     |                |                  | <b>Total Est. Demand Current:</b> 208 A |

Notes:

### Branch Panel: MDP

Location: UTILITY  
Supply From: UTILITY  
Mounting: Surface  
Enclosure: OUTDOOR NEMA 3R

Volts: 120/240 Single  
Phases: 1  
Wires: 3

A.I.C. Rating: 35000  
Mains Type: BREAKER  
Mains Rating: 1400 A  
MCB Rating: 1400 A

Notes:

| CKT | Load Name | Trip  | Poles | A                  | B         | Poles     | Trip  | Load Name | CKT |
|-----|-----------|-------|-------|--------------------|-----------|-----------|-------|-----------|-----|
| 1   | LP,       | 200 A | 2     | 21403...           | 41360...  | 2         | 400 A | P1,       | 2   |
| 3   | --        | --    | --    |                    | 19832...  | 41089...  | --    | --        | 4   |
| 5   | P2,       | 100 A | 2     | 817 VA             |           |           |       |           | 6   |
| 7   | --        | --    | --    |                    | 720 VA    |           |       |           | 8   |
| 9   |           |       |       | 66549...           |           | 2         | 200 A | P3,       | 10  |
| 11  |           |       |       |                    | 67510...  | --        | --    | --        | 12  |
| 13  |           |       |       |                    |           |           |       |           | 14  |
| 15  |           |       |       |                    |           |           |       |           | 16  |
| 17  |           |       |       |                    |           |           |       |           | 18  |
| 19  |           |       |       |                    |           |           |       |           | 20  |
| 21  |           |       |       |                    |           |           |       |           | 22  |
| 23  |           |       |       |                    |           |           |       |           | 24  |
| 25  |           |       |       |                    |           |           |       |           | 26  |
| 27  |           |       |       |                    |           |           |       |           | 28  |
| 29  |           |       |       |                    |           |           |       |           | 30  |
| 31  |           |       |       |                    |           |           |       |           | 32  |
| 33  |           |       |       |                    |           |           |       |           | 34  |
| 35  |           |       |       |                    |           |           |       |           | 36  |
| 37  |           |       |       |                    |           |           |       |           | 38  |
| 39  |           |       |       |                    |           |           |       |           | 40  |
| 41  |           |       |       |                    |           |           |       |           | 42  |
| 43  |           |       |       |                    |           |           |       |           | 44  |
| 45  |           |       |       |                    |           |           |       |           | 46  |
| 47  |           |       |       |                    |           |           |       |           | 48  |
| 49  |           |       |       |                    |           |           |       |           | 50  |
| 51  |           |       |       |                    |           |           |       |           | 52  |
| 53  |           |       |       |                    |           |           |       |           | 54  |
|     |           |       |       | <b>Total Load:</b> | 130129 VA | 129151 VA |       |           |     |
|     |           |       |       | <b>Total Amps:</b> | 1084 A    | 1076 A    |       |           |     |

| Load Classification | Connected Load | Estimated Demand | Panel Totals                             |
|---------------------|----------------|------------------|------------------------------------------|
| HVAC                | 1092 VA        | 1092 VA          |                                          |
| Lighting            | 23492 VA       | 29365 VA         | <b>Total Conn. Load:</b> 264118 VA       |
| Other               | 11042 VA       | 11042 VA         | <b>Total Est. Demand:</b> 265721 VA      |
| Power               | 0 VA           | 0 VA             | <b>Total Conn. Current:</b> 1100 A       |
| Receptacle          | 18540 VA       | 14270 VA         | <b>Total Est. Demand Current:</b> 1107 A |

Notes:

### FAULT CURRENT SCHEDULE

| Panel Name | FAULT AT DEVICE | AIC RATING | VOLTAGE | FEEDER      |        | TRANSFORMER |    | FAULT AT PRIMARY |
|------------|-----------------|------------|---------|-------------|--------|-------------|----|------------------|
|            |                 |            |         | SIZE        | LENGTH | KVA         | Z% |                  |
| MDP        | 22,050          | 35000      | 240V    | (4)600kcmil | 37'    |             |    |                  |
| E-P1       | 5,058           | 22000      | 240V    | 3/0         | 223'   |             |    |                  |
| E-P2       | 10,714          | 22000      | 240V    | 350kcmil    | 108'   |             |    |                  |
| LP         | 6,666           | 22000      | 240V    | 3/0         | 159'   |             |    |                  |
| P1         | 9,536           | 22000      | 240V    | 600kcmil    | 161'   |             |    |                  |
| P2         | 8,587           | 22000      | 240V    | #1          | 67'    |             |    |                  |
| P3         | 6,535           | 22000      | 240V    | 3/0         | 163'   |             |    |                  |

### Branch Panel: P1

Location: ELEC 129  
Supply From: MDP  
Mounting: Recessed  
Enclosure: Type 1

Volts: 120/240 Single  
Phases: 1  
Wires: 3

A.I.C. Rating: 22000  
Mains Type: MCB Rating: 400 A  
Mains Rating: 400 A

Notes:

| CKT | Load Name                    | Trip | Poles | A                  | B        | Poles    | Trip | Load Name                    | CKT                          |    |
|-----|------------------------------|------|-------|--------------------|----------|----------|------|------------------------------|------------------------------|----|
| 1   |                              | 50 A | 2     | 3912 VA            | 3912 VA  |          |      |                              | 2                            |    |
| 3   | --                           | --   | --    |                    | 3912 VA  | 3912 VA  | --   | --                           | 4                            |    |
| 5   |                              | 50 A | 2     | 3912 VA            | 3912 VA  |          |      |                              | 6                            |    |
| 7   | --                           | --   | --    |                    | 3912 VA  | 3912 VA  | --   | --                           | 8                            |    |
| 9   |                              | 20 A | 2     | 984 VA             | 3912 VA  |          |      |                              | 10                           |    |
| 11  | --                           | --   | --    |                    | 984 VA   | 3912 VA  | --   | --                           | 12                           |    |
| 13  |                              | 50 A | 2     | 3912 VA            | 3912 VA  |          |      |                              | 14                           |    |
| 15  | --                           | --   | --    |                    | 3912 VA  | 3912 VA  | --   | --                           | 16                           |    |
| 17  |                              | 50 A | 2     | 3912 VA            | 3912 VA  |          |      |                              | 18                           |    |
| 19  | --                           | --   | --    |                    | 3912 VA  | 3912 VA  | --   | --                           | 20                           |    |
| 21  |                              | 30 A | 2     | 2232 VA            | 2232 VA  |          |      |                              | 22                           |    |
| 23  | --                           | --   | --    |                    | 2232 VA  | 2232 VA  | --   | --                           | 24                           |    |
| 25  | Receptacle FITNESS ROOM 104, | 20 A | 1     | 180 VA             | 180 VA   |          |      | Receptacle FITNESS ROOM 104, | 26                           |    |
| 27  | Receptacle FITNESS ROOM 104, | 20 A | 1     |                    | 180 VA   | 180 VA   | 1    | 20 A                         | Receptacle FITNESS ROOM 104, | 28 |
| 29  | Receptacle FITNESS ROOM 104, | 20 A | 1     | 180 VA             | 180 VA   |          |      | Receptacle FITNESS ROOM 104, | 30                           |    |
| 31  | Receptacle FITNESS ROOM 104, | 20 A | 1     |                    | 180 VA   |          | 1    | 20 A                         | Receptacle FITNESS ROOM 104, | 32 |
| 33  | HVAC LOCKER ROOM 116,        | 20 A | 1     | 156 VA             |          |          |      |                              | 34                           |    |
| 35  |                              |      |       |                    |          |          |      |                              | 36                           |    |
| 37  |                              |      |       |                    |          |          |      |                              | 38                           |    |
| 39  |                              |      |       |                    |          |          |      |                              | 40                           |    |
| 41  |                              |      |       |                    |          |          |      |                              | 42                           |    |
|     |                              |      |       | <b>Total Load:</b> | 41532 VA | 41196 VA |      |                              |                              |    |
|     |                              |      |       | <b>Total Amps:</b> | 346 A    | 343 A    |      |                              |                              |    |

| Load Classification | Connected Load | Estimated Demand | Panel Totals                            |
|---------------------|----------------|------------------|-----------------------------------------|
| HVAC                | 156 VA         | 156 VA           |                                         |
| Power               | 0 VA           | 0 VA             | <b>Total Conn. Load:</b> 82728 VA       |
| Receptacle          | 1260 VA        | 1260 VA          | <b>Total Est. Demand:</b> 82728 VA      |
|                     |                |                  | <b>Total Conn. Current:</b> 345 A       |
|                     |                |                  | <b>Total Est. Demand Current:</b> 345 A |

Notes:

### Branch Panel: P3

Location: ELEC 129  
Supply From: MDP  
Mounting: Recessed  
Enclosure: Type 1

Volts: 120/240 Single  
Phases: 1  
Wires: 3

A.I.C. Rating: 22000  
Mains Type: MCB Rating: 200 A  
Mains Rating: 200 A

Notes:

| CKT | Load Name                   | Trip | Poles | A                  | B        | Poles    | Trip | Load Name                | CKT                           |    |
|-----|-----------------------------|------|-------|--------------------|----------|----------|------|--------------------------|-------------------------------|----|
| 1   |                             | 70 A | 2     | 6240 VA            | 156 VA   |          |      |                          | 2                             |    |
| 3   | --                          | --   | --    |                    | 6240 VA  | 156 VA   | 1    | 20 A                     | HVAC CONFERENCE RESTROOM 119, | 4  |
| 5   | HVAC PASTOR'S RESTROOM 118, | 20 A | 1     | 156 VA             | 156 VA   |          |      |                          | HVAC RESTROOM 117,            | 6  |
| 7   |                             |      |       |                    |          |          |      |                          | 70 A                          | 8  |
| 9   | HVAC,                       | 20 A | 1     | 312 VA             | 6240 VA  |          |      |                          |                               | 10 |
| 11  |                             | 70 A | 2     |                    | 6240 VA  | 6240 VA  | 2    | 70 A                     |                               | 12 |
| 13  | --                          | --   | --    |                    | 6240 VA  | 6240 VA  | --   | --                       |                               | 14 |
| 15  |                             | 70 A | 2     |                    | 6240 VA  | 6240 VA  | 2    | 70 A                     |                               | 16 |
| 17  | --                          | --   | --    |                    | 6240 VA  | 6240 VA  | --   | --                       |                               | 18 |
| 19  |                             | 50 A | 2     |                    | 3960 VA  | 6240 VA  | 2    | 70 A                     |                               | 20 |
| 21  | --                          | --   | --    |                    | 3960 VA  | 6240 VA  | --   | --                       |                               | 22 |
| 23  |                             |      |       |                    |          |          |      |                          |                               | 24 |
| 25  | Receptacle Room 128, 130,   | 20 A | 1     | 720 VA             | 540 VA   |          |      | Receptacle SANCTUARY 65, | 26                            |    |
| 27  | Receptacle Room 65, 132,    | 20 A | 1     |                    | 720 VA   | 180 VA   | 1    | 20 A                     | Receptacle COMMUNION 120,     | 28 |
| 29  | Receptacle CORRIDOR 132,    | 20 A | 1     | 540 VA             | 180 VA   |          |      | Receptacle CORRIDOR 132, | 30                            |    |
| 31  | Receptacle,                 | 20 A | 1     |                    | 1440 VA  | 1440 VA  | 1    | 20 A                     | Receptacle,                   | 32 |
| 33  |                             | 50 A | 2     | 3960 VA            | 6240 VA  |          |      |                          |                               | 34 |
| 35  | --                          | --   | --    |                    | 3960 VA  | 6240 VA  | --   | --                       |                               | 36 |
| 37  |                             | 40 A | 2     | 3240 VA            | 3240 VA  |          |      |                          |                               | 38 |
| 39  | --                          | --   | --    |                    | 3240 VA  | 3240 VA  | --   | --                       |                               | 40 |
| 41  |                             |      |       |                    |          |          |      |                          |                               | 42 |
|     |                             |      |       | <b>Total Load:</b> | 67080 VA | 68256 VA |      |                          |                               |    |
|     |                             |      |       | <b>Total Amps:</b> | 559 A    | 569 A    |      |                          |                               |    |

| Load Classification | Connected Load | Estimated Demand | Panel Totals                            |
|---------------------|----------------|------------------|-----------------------------------------|
| HVAC                | 936 VA         | 936 VA           |                                         |
| Power               | 0 VA           | 0 VA             | <b>Total Conn. Load:</b> 135336 VA      |
| Receptacle          | 5760 VA        | 5760 VA          | <b>Total Est. Demand:</b> 135336 VA     |
|                     |                |                  | <b>Total Conn. Current:</b> 564 A       |
|                     |                |                  | <b>Total Est. Demand Current:</b> 564 A |

Notes:

### Branch Panel: P2

Location: STUDIO 48  
Supply From: MDP  
Mounting: Recessed  
Enclosure: Type 1

Volts: 120/240 Single  
Phases: 1  
Wires: 3

A.I.C. Rating: 22000  
Mains Type: MCB Rating: 100 A  
Mains Rating: 100 A

Notes:

| CKT | Load Name             | Trip | Poles | A                  | B       | Poles  | Trip | Load Name             | CKT                   |    |
|-----|-----------------------|------|-------|--------------------|---------|--------|------|-----------------------|-----------------------|----|
| 1   | Receptacle STUDIO 48, | 20 A | 1     | 180 VA             | 180 VA  |        |      | Receptacle STUDIO 48, | 2                     |    |
| 3   | Receptacle STUDIO 48, | 20 A | 1     |                    | 180 VA  | 180 VA | 1    | 20 A                  | Receptacle STUDIO 48, | 4  |
| 5   | Receptacle STUDIO 48, | 20 A | 1     | 180 VA             | 180 VA  |        |      | Receptacle STUDIO 48, | 6                     |    |
| 7   | Receptacle STUDIO 48, | 20 A | 1     |                    | 180 VA  | 180 VA | 1    | 20 A                  | Receptacle STUDIO 48, | 8  |
| 9   | STUDIO 48,            | 20 A | 1     | 349 VA             |         |        |      |                       |                       | 10 |
| 11  |                       |      |       |                    |         |        |      |                       |                       | 12 |
|     |                       |      |       | <b>Total Load:</b> | 1069 VA | 720 VA |      |                       |                       |    |
|     |                       |      |       | <b>Total Amps:</b> | 9 A     | 6 A    |      |                       |                       |    |

| Load Classification | Connected Load | Estimated Demand | Panel Totals                          |
|---------------------|----------------|------------------|---------------------------------------|
| Lighting            | 367 VA         | 459 VA           |                                       |
| Other               | 0 VA           | 0 VA             | <b>Total Conn. Load:</b> 1807 VA      |
| Receptacle          | 1440 VA        | 1440 VA          | <b>Total Est. Demand:</b> 1899 VA     |
|                     |                |                  | <b>Total Conn. Current:</b> 8 A       |
|                     |                |                  | <b>Total Est. Demand Current:</b> 8 A |

Notes:



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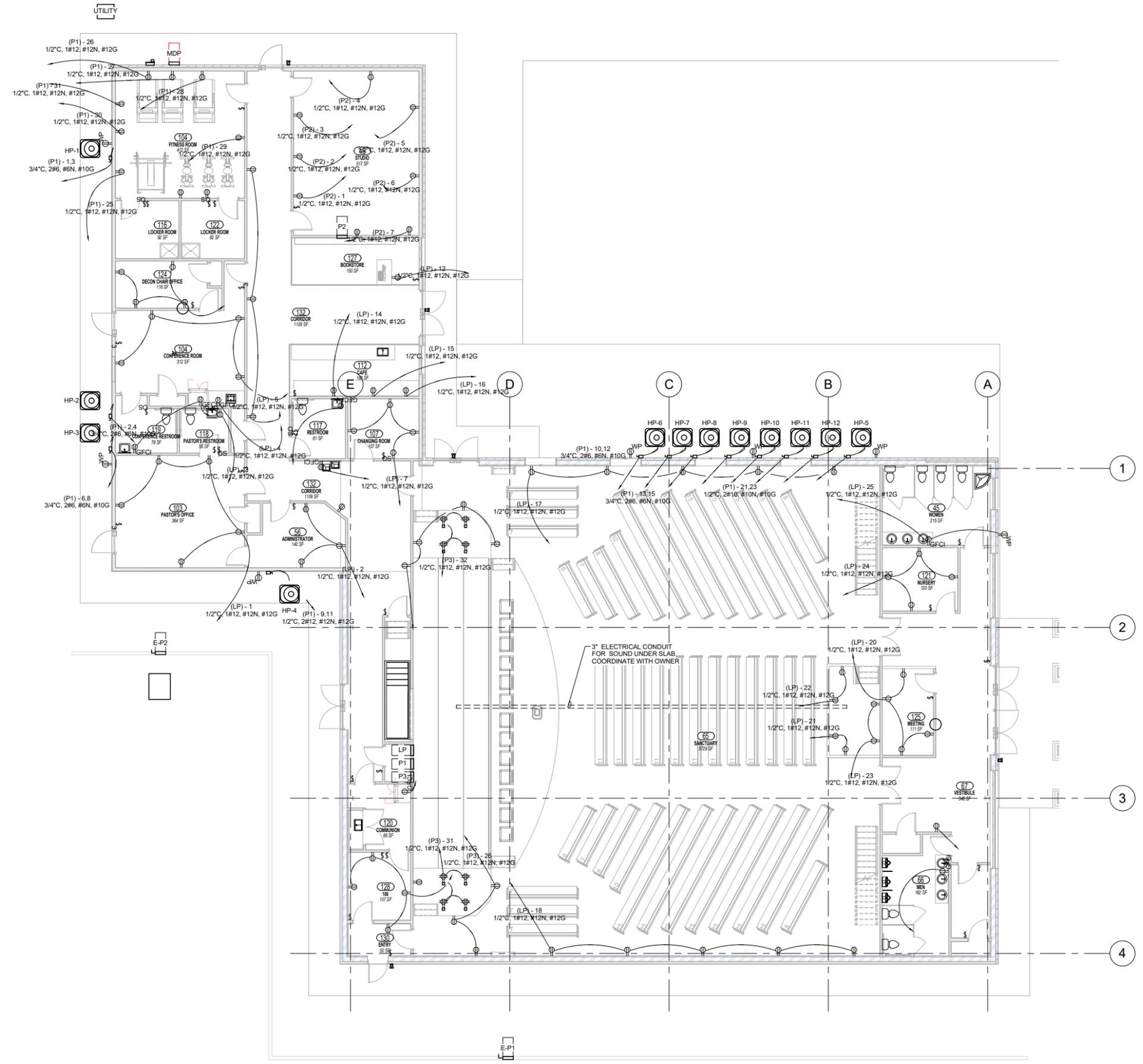
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**1 POWER PLAN**  
1/8" = 1'-0"



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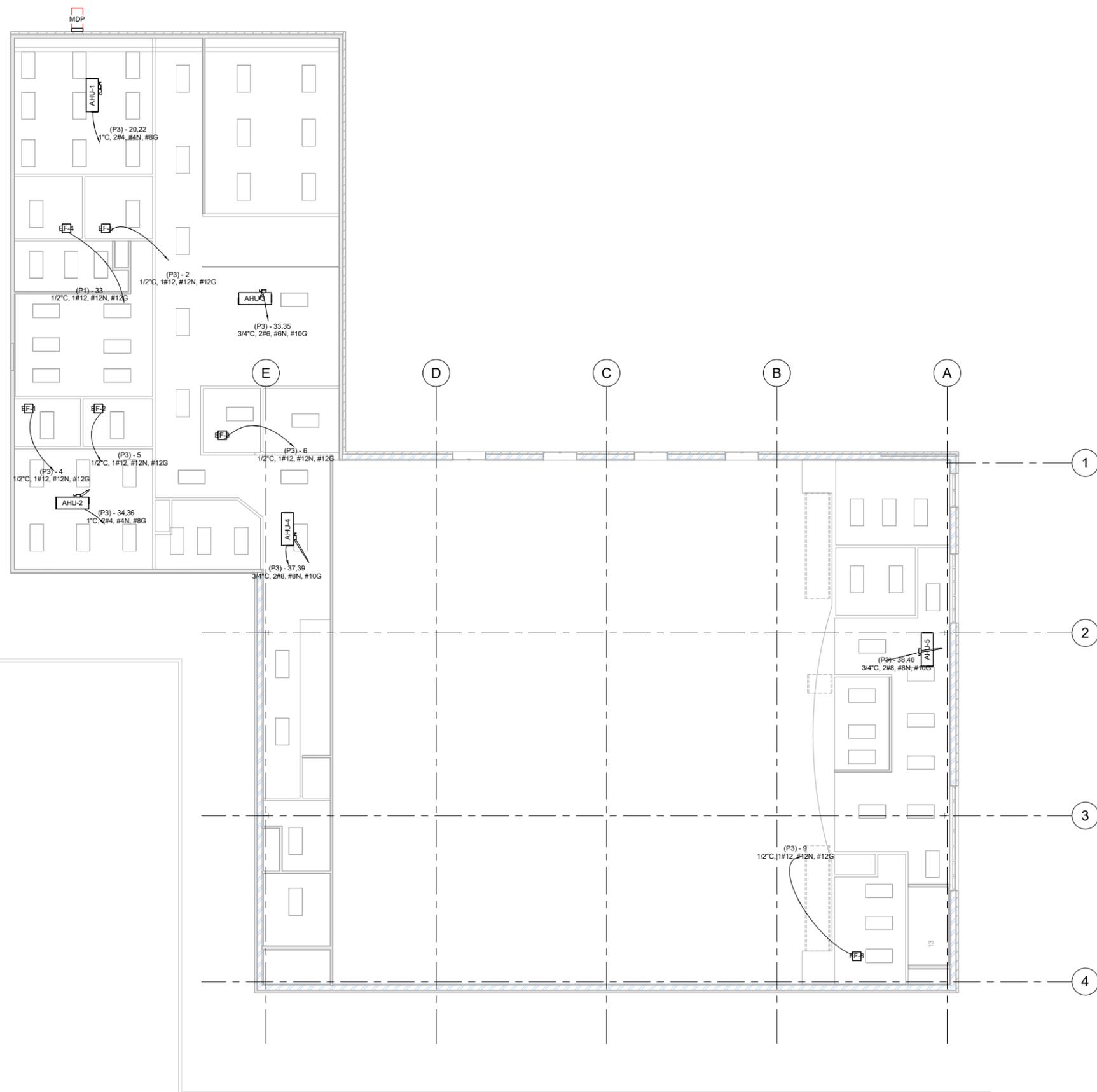
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**SHEET TITLE**  
**1ST FLOOR  
POWER  
PLAN**

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| Drawn    | RD        |
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**1 POWER PLAN - LOW CEILING**  
1/8" = 1'-0"

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**SHEET TITLE**  
**POWER  
PLAN - LOW  
CEILING**

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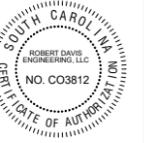
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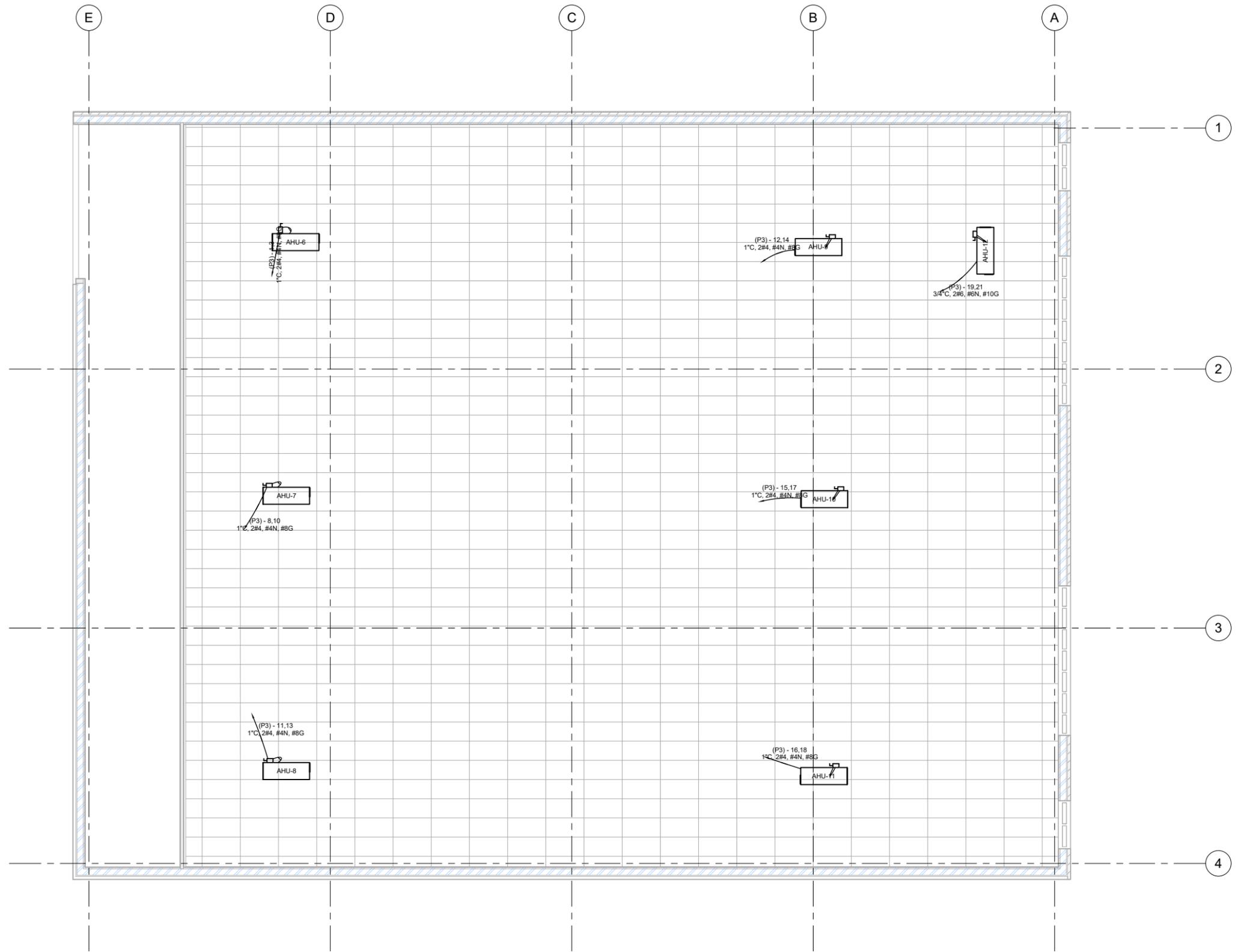
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**POWER  
PLAN HIGH  
CEILING**

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**E203**



**1 POWER PLAN - HIGH CEILING**  
3/16" = 1'-0"

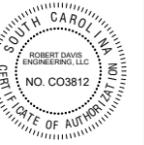
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SHEET TITLE

**LIGHTING PLAN**

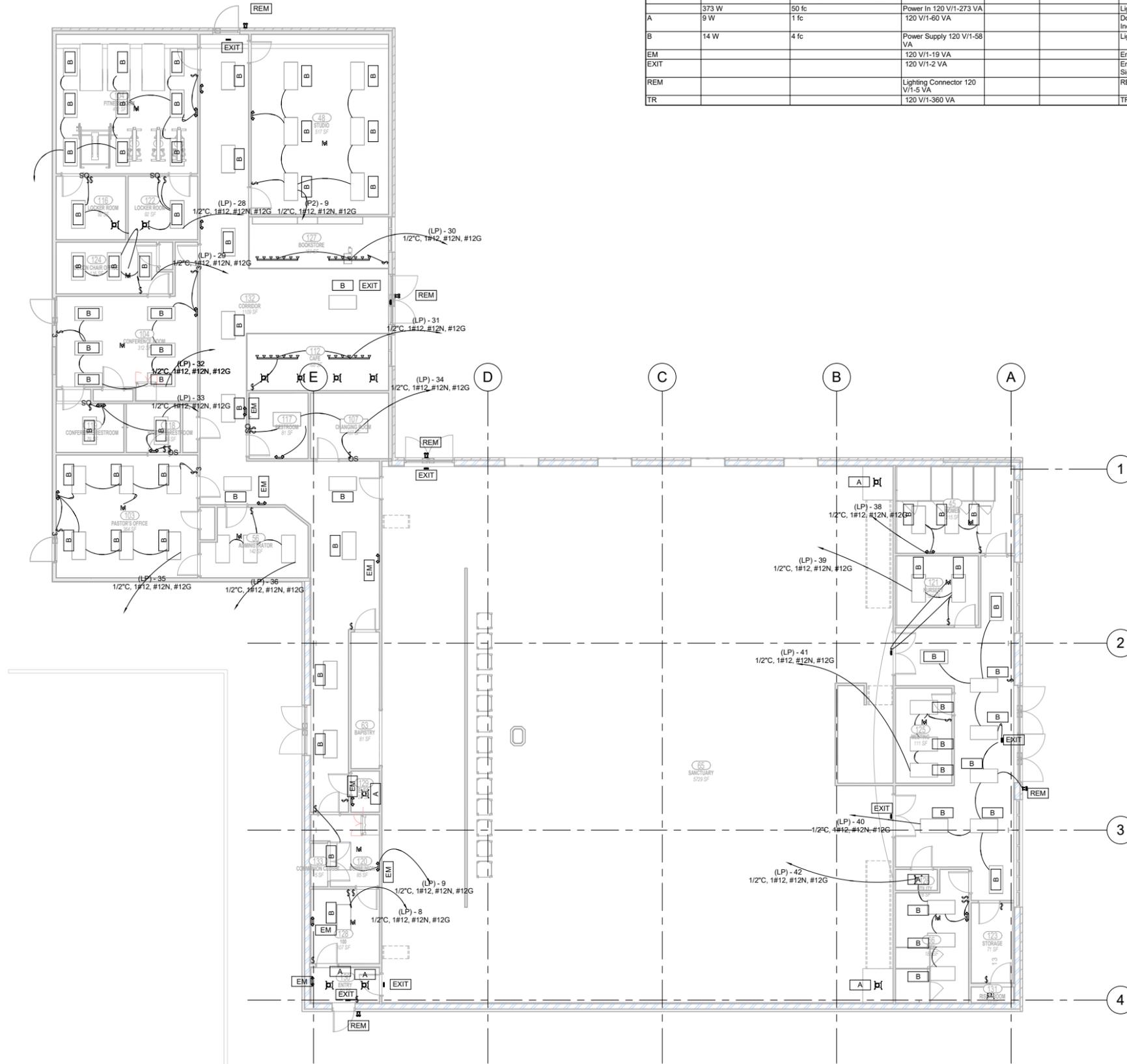
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**E204**

### LIGHTING FIXTURE SCHEDULE

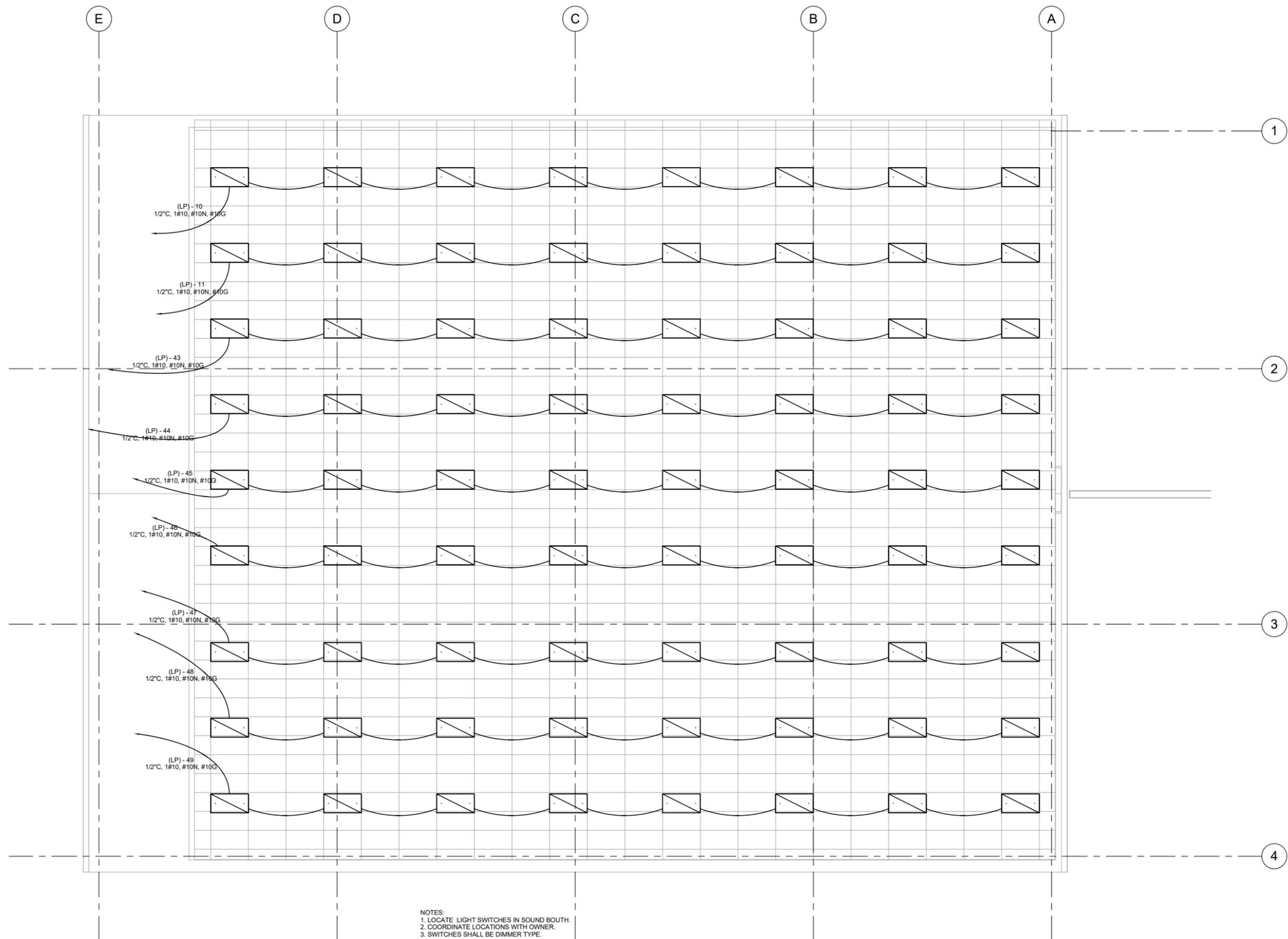
| Type Mark | WATTAGE | ILLUMINANCE | Electrical Data                          | Ballast Loss | Voltage Loss | TYPE                                                                                                                   | Image |
|-----------|---------|-------------|------------------------------------------|--------------|--------------|------------------------------------------------------------------------------------------------------------------------|-------|
| A         | 373 W   | 50 fc       | Power In 120 V/1-273 VA<br>120 V/1-60 VA |              |              | Lighting-High-Bay-Cooper-Metalux-OHB-LED: OHB_60SE_N_70CRI                                                             |       |
| B         | 9 W     | 1 fc        |                                          |              |              | Downlight_Recessed_Cooper_Halo_LED_6 Inch_H750T: Downlight_Recessed_Cooper_Halo_LED_6 Inch_H750T                       |       |
|           | 14 W    | 4 fc        |                                          |              |              | Light-Architectural-Cooper-Metalux-Surface: 2x4-Accord-2ACS-2Lamp-28W-TS-120V                                          |       |
| EM        |         |             | 120 V/1-19 VA                            |              |              | EmergencyLighting_Cooper_SureLites_All Pro_AP2SQ: 6V_AP2SQ_Incandescent_SLCBattery_120V                                |       |
| EXIT      |         |             | 120 V/1-2 VA                             |              |              | EmergencyExit_Cooper_FailSafe_Exit_Signs_EXL Exit Lighting; EmergencyExit_Cooper_FailSafe_Exit Signs_EXL Exit Lighting |       |
| REM       |         |             | Lighting Connector 120 V/1-5 VA          |              |              | REMOTE: OCR Double-White                                                                                               |       |
| TR        |         |             | 120 V/1-360 VA                           |              |              | TRACK LIGHT: TRACK LIGHT                                                                                               |       |



**1 LIGHTING PLAN - LOW CEILING**  
1/8" = 1'-0"

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NOTES:  
 1. LOCATE LIGHT SWITCHES IN SOUND BOUTH.  
 2. COORDINATE LOCATIONS WITH OWNER.  
 3. SWITCHES SHALL BE DIMMER TYPE.

**1 LIGHTING PLAN HIGH CEILING**  
 3/16" = 1'-0"

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**SHEET TITLE**  
**LIGHTING  
 PLAN - HIGH  
 ROOF**

|          |           |
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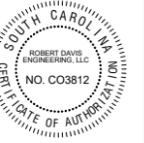
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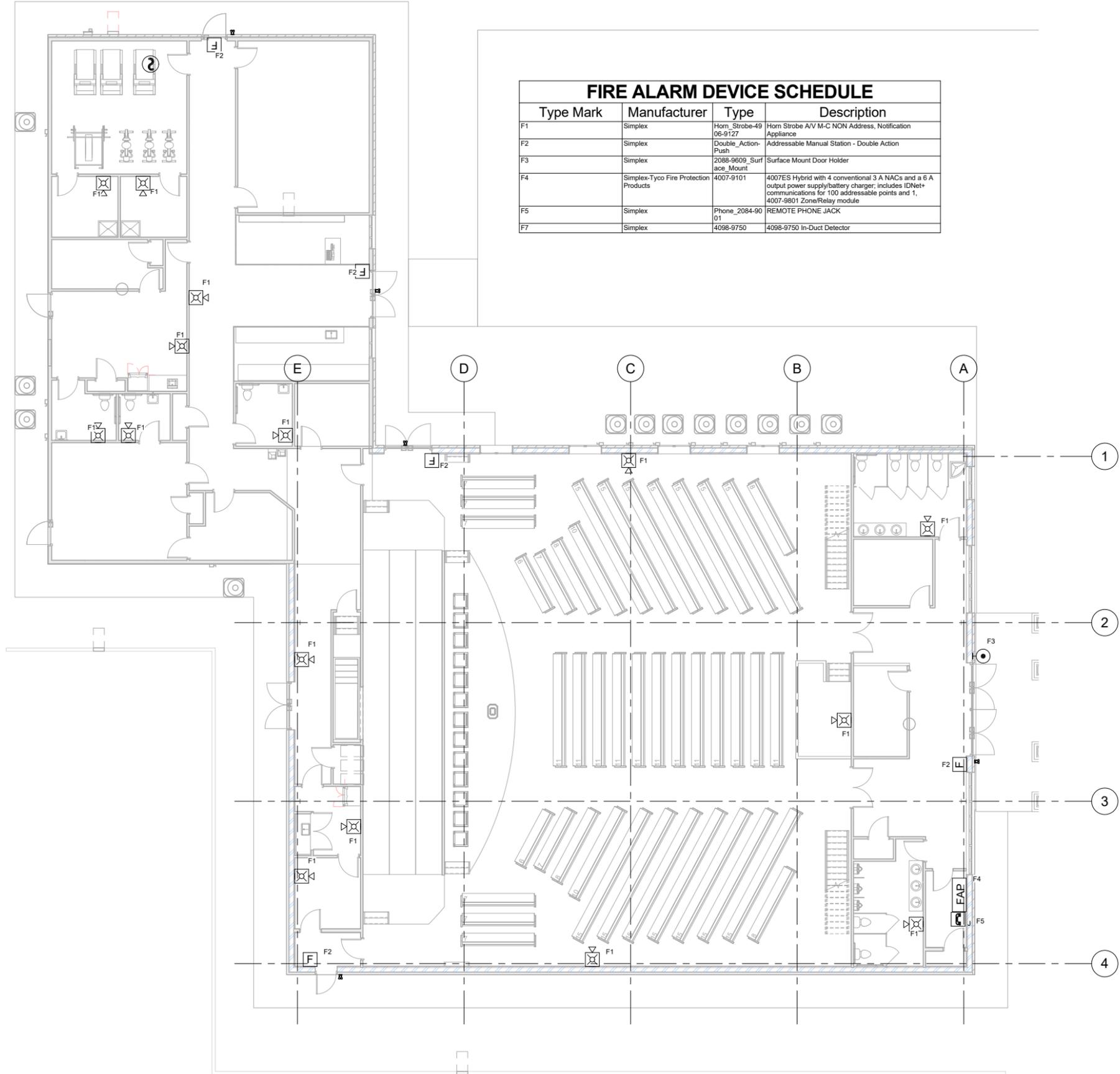
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| Type Mark | Manufacturer                             | Type                        | Description                                                                                                                                                                                     |
|-----------|------------------------------------------|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| F1        | Simplex                                  | Horn_Strobe-49<br>06-9127   | Horn Strobe AV M-C NON Address, Notification<br>Appliance                                                                                                                                       |
| F2        | Simplex                                  | Double_Action-<br>Push      | Addressable Manual Station - Double Action                                                                                                                                                      |
| F3        | Simplex                                  | 2088-9609 Surf<br>ace_Mount | Surface Mount Door Holder                                                                                                                                                                       |
| F4        | Simplex-Tyco Fire Protection<br>Products | 4007-9101                   | 4007ES Hybrid with 4 conventional 3 A NACs and a 6 A<br>output power supply/battery charger; includes IDNet+<br>communications for 100 addressable points and 1,<br>4007-9801 Zone/Relay module |
| F5        | Simplex                                  | Phone_2084-90<br>01         | REMOTE PHONE JACK                                                                                                                                                                               |
| F7        | Simplex                                  | 4098-9750                   | 4098-9750 In-Duct Detector                                                                                                                                                                      |



1 FIRE ALARM PLAN  
1/8" = 1'-0"

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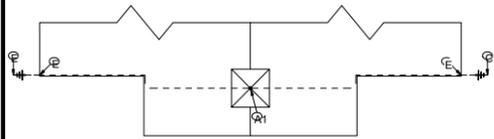
FIRE ALARM  
PLAN

|          |           |
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Sheet No.

E301

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LIGHTING PROTECTION ROOF PLAN CHURCH STEEPLE

**LEGEND**

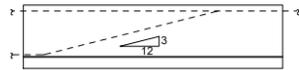
|   |                                                |                                             |
|---|------------------------------------------------|---------------------------------------------|
| • | AIR TERMINAL                                   | COOPER CABLE (32 STR., x 17 GA)             |
| ⚡ | GROUND ROD LOCATION                            | STEEPLE MANUFACTURES DOWNLEAD               |
| — | TINNED COPER BOUNDING CABLE (14 STR., x17 GA.) | COOPER CABLE BELOW GRADE (32 STE., x 17 GA) |



**TYPICAL CABLE BEND**

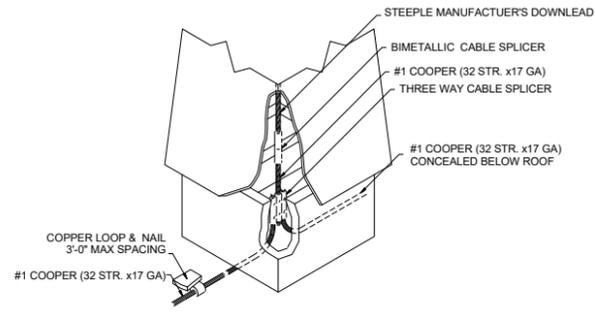
NO SCALE

NOTE:  
CABLE MAY RISE AT A RATE OF 3" OF RESE PER 12" OF RUN. REFER TO NFPA 780 CODE PARAGRAPH 3.12 FASTEN CABLE EVERY 3'-0" MAX SPACING



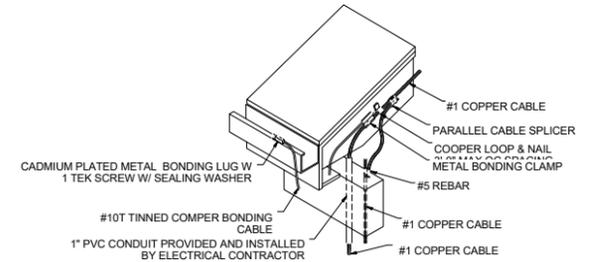
**TYPICAL CABLE RISE ELEVATION**

NO SCALE



**TYPICAL STEEPLE/CROSS DOWNLOAD LOCATION**

NTS

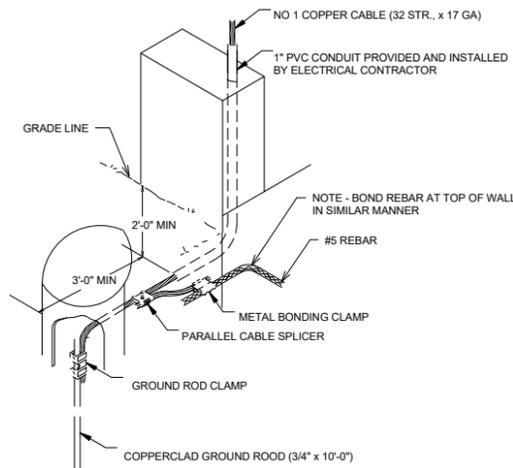


**TYPICAL GUTTER BOND & DOWNLOAD DETAIL**

NTS

**1 DETAIL**

SCALE: NO SCALE



**TYPICAL DOWNLOAD, REBAR BOND AND GROUND**

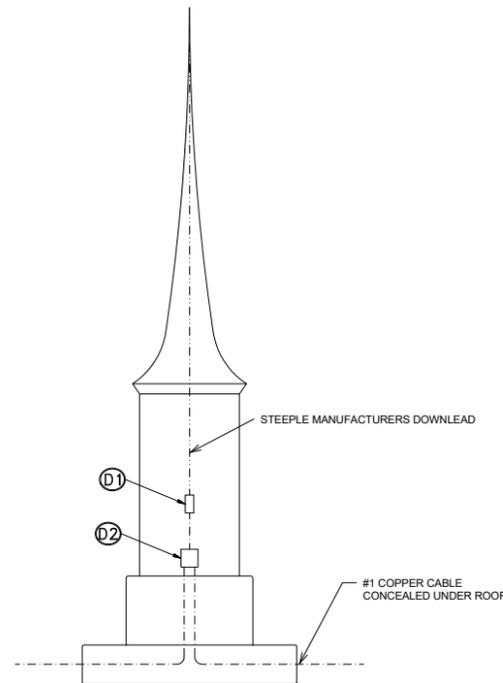
NO SCALE

**5 DETAIL**

SCALE: NO SCALE

**2 DETAIL**

SCALE: NO SCALE



**TYPICAL STEEPLE DOWNLOAD LOCATION DETAIL**

NO SCALE

**7 DETAIL**

SCALE: NO SCALE

**3 DETAIL**

SCALE: NO SCALE

**STEEPLE GROUNDING - GENERAL NOTES**

THE DESIGN & DETAILS SHOWN WILL MEET THE REQUIREMENTS OF UNDERWRITERS LABORATORY CODE 96A, NATIONAL FIRE PROTECTION ASSOCIATION CODE 780 & THE LIGHTNING PROTECTION INSTITUTE CODE 175 FOR LIGHTNING PROTECTION SYSTEMS

- CONDUCTOR BEND SHALL NOT FORM A SHARPER ANGLE THAN 90 DEGREES OR HAVE A RADIUS LESS THAN 8 INCHES.
- METAL BODIES OF INDUCTANCE LOCATED WITHIN 6' OF A MAIN LIGHTNING CONDUCTOR SHALL BE BONDED TO THE LIGHTNING PROTECTION SYSTEM. (INCLUDING METAL VENTS, FLASHING, LOUVERS & ROOF DRAINS)
- CONNECTIONS TO GROUND AND/OR COUNTERPOISE SHALL BE MADE AT A POINT NOT LESS THAN 2'-0" BELOW GRADE, AND 3'-0" TO 8'-0" AWAY FROM FOUNDATION WALL.
- AIR TERMINAL SHALL BE PLACED AT THE LOCATIONS INDICATED, NOT MORE THAN 2'-0" FROM THE ENDS OF RIDGES, OUTSIDE CORNERS, OR OUTSIDE EDGES OF MAIN ROOFS AND MUST EXTEND A MINIMUM OF 1'-0" ABOVE THE OBJECT TO BE PROTECTED.
- MIDROOF AIR TERMINALS SHALL BE SPACED AT 50'-0" D.C. MAX. SPACING.
- JOB CONDITIONS MAY DICTATE SLIGHT VARIATIONS IN AIR TERMINAL AND GROUND ROD LOCATIONS.
- CONDUCTORS SHALL MAINTAIN A HORIZONTAL OR DOWNWARD PATH FREE FROM "U" AND "V" POCKETS ANY RISE IN HORIZONTAL CONDUCTOR SHALL NOT EXCEED 6 INCHES.
- COPPER LIGHTNING PROTECTION MATERIALS SHALL NOT BE PLACED ON ALUMINUM SURFACES, NOR SHALL ALUMINUM MATERIALS BE PLACED ON COPPER SURFACES.
- FOR CLARITY WE HAVE NOT CALLED OUT EACH INDIVIDUAL ITEM OF LIGHTNING PROTECTION MATERIALS ON THE ROOF PLAN. WE HAVE SHOWN TYPICAL DETAILS AND HAVE CALLED OUT EACH OF THESE DETAILS ON THE ROOF PLAN, ONLY IN SCATTERED LOCATIONS.
- ALL STRUCTURAL STEEL, REBAR, FRAMING & MISCELLANEOUS STEEL SHALL BE MADE ELECTRICALLY CONTINUOUS THROUGH CONSTRUCTION (NOT THE RESPONSIBILITY OF THE LIGHTNING PROTECTION CONTRACTOR.)
- ELECTRIC, TELEPHONE, AND ANTENNA SYSTEM GROUNDS SHALL BE CONNECTED WITH MAIN SIZED CONDUCTOR TO ONE LIGHTNING PROTECTION GROUND OR METAL WATER PIPE.
- A LIGHTNING ARRESTOR, PROTECTOR, OR ANTENNA-DISCHARGE UNIT MUST BE INSTALLED ON EACH ELECTRIC AND TELEPHONE SERVICE ENTRANCE AND RADIO AND TELEVISION ANTENNA LEAD IN. (TO BE PROVIDED BY ELECTRICAL CONTRACTOR.)
- ALL ADHESIVE FIXTURES SHALL BE SET WITH AN ADHESIVE COMPOUND COMPATIBLE WITH THE ROOFING MATERIAL. ADHESIVES SHALL BE APPROVED IN ADVANCE BY THE ROOFING CONTRACTOR.
- BOND ALL METAL PIPES SUCH AS WATER, GAS, FIRE, STORM, SEWER WHICH ENTER THE STRUCTURE TO THE NEAREST DOWNLOAD, GROUND ROD OR COUNTERPOISE.
- SEAL THE ENDS OF CONDUIT MOISTURE TIGHT WITH DUCT SEAL, SILICONE OR LEAD WEDGES.
- CABLE WILL BE FASTENED EVERY 3'-0" D.C. MAX. SPACING.



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**STEEPLE LIGHTNING PROTECTION DETAILS**

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Sheet No.  
**E401**

# FIRE PROTECTION LEGEND

|  |                                      |
|--|--------------------------------------|
|  | ALARM CHECK                          |
|  | CHECK VALVE                          |
|  | CONNECT EXISTING PIPE TO NEW PIPE    |
|  | CONCENTRIC REDUCER                   |
|  | 2-WAY CONTROL VALVE                  |
|  | DIRECTION OF FLOW ARROW              |
|  | END OF PIPE CAP                      |
|  | FIRE DEPARTMENT CONNECTION           |
|  | FIRE PROTECTION SPRINKLER PIPING     |
|  | FLOW SWITCH                          |
|  | GATE VALVE                           |
|  | INSPECTOR'S TEST CONNECTION          |
|  | O, S & Y GATE VALVE W/ TAMPER SWITCH |
|  | PRESSURE GAUGE AND COCK              |
|  | PRESSURE SWITCH                      |
|  | PUMP                                 |
|  | REFERENCE TO NOTES                   |
|  | 2-WAY RELIEF VALVE                   |
|  | RETARD CHAMBER                       |
|  | SOLENOID VALVE                       |
|  | STRAINER                             |
|  | UNION OR FLANGED CONNECTION          |
|  | WATER MOTOR ALARM                    |

# ABBREVIATIONS

|       |                                      |
|-------|--------------------------------------|
| AFF   | ABOVE FINISHED FLOOR                 |
| A/G   | ABOVE GRADE                          |
| BF    | BLIND FLANGE                         |
| BFP   | BACKFLOW PREVENTER                   |
| B/G   | BELOW GRADE                          |
| BLDG  | BUILDING                             |
| CONC  | CONCRETE                             |
| CONN  | CONNECTION                           |
| CONT. | CONTINUATION                         |
| COR   | CONTRACTING OFFICER'S REPRESENTATIVE |
| DIA.  | DIAMETER                             |
| DN.   | DOWN                                 |
| DEPT. | DEPARTMENT                           |
| DWG.  | DRAWING                              |
| ELEC. | ELECTRICAL                           |
| ELEV. | ELEVATION                            |
| FP    | FIRE PROTECTION                      |
| FS    | FLOW SWITCH                          |
| GPM   | GALLONS PER MINUTE                   |
| HP    | HORSE POWER                          |
| LPD   | LOW POINT DRAIN                      |
| MAX   | MAXIMUM                              |
| MECH  | MECHANICAL                           |
| MIN   | MINIMUM                              |
| NC    | NORMALLY CLOSED                      |
| NFPA  | NATIONAL FIRE PROTECTION ASSOC.      |
| NIC   | NOT IN CONTRACT                      |
| NO.   | NUMBER                               |
| PRV   | PRESSURE REDUCING VALVE              |
| PS    | PRESSURE SWITCH                      |
| PSIG  | POUNDS PER SQUARE INCH GAUGE         |
| REQD. | REQUIRED                             |
| SP    | STATIC PRESSURE                      |
| STL.  | STEEL                                |
| TYP.  | TYPICAL                              |
| UL    | UNDERWRITERS LABORATORY              |
| W/    | WITH                                 |
| W/O   | WITHOUT                              |

# GENERAL NOTES:

1. THE INTENT, AND EXTENT OF THIS SYSTEM DESIGN IS AS ILLUSTRATED, BUT IS DIAGRAMMATIC ONLY. SPRINKLER CONTRACTOR SHALL VISIT JOB SITE AND BECOME FAMILIAR WITH EXISTING CONDITIONS AND NOTIFY CONTRACTING OFFICER'S REPRESENTATIVE OF ANY DISCREPANCIES OUTSIDE OF THE DESIGN INTENT PRIOR TO BID, FABRICATION, AND INSTALLATION.
2. DESIGN AND INSTALLATION SHALL BE IN ACCORDANCE WITH UFC 3-600-01, "FIRE PROTECTION FOR FACILITIES", 2008 EDITION OF NFPA 30 "FLAMMABLE AND COMBUSTIBLE LIQUIDS CODE", AND 2010 EDITION OF NFPA 13, "STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS". UFC 3-600-01 SHALL TAKE PRECEDENCE OVER NFPA REQUIREMENTS.
3. ANY ADDITIONAL OFFSETS OR FITTINGS REQUIRED FOR PROPER INSTALLATION, COORDINATION WITH OTHER TRADES, AND/OR TO MAINTAIN PROPER CLEARANCES SHALL BE PROVIDED FOR A COMPLETE AND WORKING SYSTEM.
4. NOT ALL PIPING, VALVES, AND APPURTENANCES ARE SHOWN ON THE PLANS. REFER TO PLAN AND DETAILS FOR ADDITIONAL INFORMATION.
5. ADHERE TO AND OBTAIN ALL PERMITS, LICENSES, AND ALL GOVERNMENT REQUIREMENTS.
6. CONTRACTOR SHALL PERFORM A NEW FLOW TEST PRIOR TO PREPARATION OF SHOP DRAWINGS. CONTRACTOR SHALL NOTIFY COR OF FLOW TEST RESULTS.
7. CONTRACTOR SHALL SUBMIT COMPLETE SHOP DRAWINGS WITH HYDRAULIC CALCULATIONS, MATERIAL SPECIFICATIONS, AND A COPY OF THE FIRE SPRINKLER CONTRACTOR'S WATER SUPPLY RESULTS TO COR FOR REVIEW PRIOR TO COMMENCING FABRICATION AND INSTALLATION.
8. CONTRACTOR SHALL COORDINATE INSTALLATION OF ALL FIRE PROTECTION DEVICES WITH ALL OTHER TRADES.
9. ALL CONTROL VALVES ON THE FIRE PROTECTION SYSTEM SHALL BE ELECTRICALLY SUPERVISED, IN ACCORDANCE WITH NFPA 13, BY THE PROTECTED PREMISES FIRE ALARM SYSTEM. COORDINATE TYPE AND EXACT LOCATION OF FLOW AND SUPERVISORY SWITCHES BETWEEN FIRE PROTECTION AND ELECTRICAL CONTRACTORS. PROTECTED PREMISES FIRE ALARM SYSTEM, SUPERVISION AND WIRING SHALL BE PROVIDED UNDER THE ELECTRICAL DIVISION.
10. DO NOT SCALE PLANS FOR THE PURPOSE OF ESTABLISHING DIMENSIONS.
11. FIRE STOP ALL PENETRATIONS OF SMOKE/FIRE PARTITIONS. FIRE STOPPING SHALL BE OF UL LISTED OR FM APPROVED ASSEMBLY.
12. FIRE SPRINKLER SYSTEM(S) SHALL BE DESIGNED FOR A MAXIMUM WORKING PRESSURE OF 175 PSI IN ACCORDANCE WITH NFPA 13.
13. FIRE SPRINKLER SYSTEM(S) SHALL BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH NFPA 13.
14. INSPECTOR'S TEST CONNECTION SHALL BE PROVIDED SO THAT THE WATER FLOW SWITCH, OR PRESSURE MECHANISM CAN BE TESTED IN ACCORDANCE WITH NFPA 13. CONNECTION SHALL BE LOCATED AT THE SYSTEM RISER, IN AN ACCESSIBLE LOCATION AND DISCHARGE TO AN APPROVED LOCATION.
15. ALL VALVES SHALL HAVE A PERMANENTLY AFFIXED SIGN IN ACCORDANCE WITH NFPA 13, INDICATING ITS FUNCTION AND SECURED TO THE VALVE WITH A CHAIN.
16. PROVIDE A PERMANENTLY ATTACHED HYDRAULIC NAMEPLATE STATING THE REQUIRED DESIGN CRITERIA FOR EACH DESIGNED SYSTEM IN ACCORDANCE WITH NFPA 13.
17. ONLY LISTED AND APPROVED DEVICES AND MATERIALS AS SPECIFIED IN NFPA 13 SHALL BE INSTALLED THROUGHOUT THE SYSTEM.
18. HANGER MATERIALS, SPACING, AND METHOD OF ATTACHMENT SHALL BE IN ACCORDANCE WITH NFPA 13 AND MANUFACTURER'S REQUIREMENTS.
19. MAINTAIN A MINIMUM OF 18" CLEARANCE BELOW SPRINKLER DEFLECTOR(S) AND ANY PERMANENT OR TEMPORARY OBSTRUCTION(S) IN ACCORDANCE WITH NFPA 13.
20. AT LEAST SIX (6) SPARE SPRINKLER HEADS OF EACH TYPE, TEMPERATURE AND ORIFICE SIZE USED IN THE SYSTEM, INCLUDING A SPECIAL WRENCH FOR EACH FIRE SPRINKLER, SHALL BE PROVIDED IN A CABINET IN ACCORDANCE WITH NFPA 13.
21. ALL SPRINKLERS SHALL BE INSTALLED ACCORDING TO THEIR LISTED SPACING AND OBSTRUCTION REQUIREMENTS.
22. SPRINKLERS SHALL BE CENTERED IN CEILING TILES IN SPACES WITH SUSPENDED CEILINGS, SUBJECT TO SPACING REQUIREMENTS OF NFPA 13.
23. PROVIDE WATER FLOW DETECTING DEVICES ON ALL FIRE PROTECTION RISERS WITH A BUILT IN ADJUSTABLE RETARD (NOT LESS THAN 0 - 90 SECONDS).
24. FIRE SPRINKLER CONTRACTOR SHALL INSTALL SYSTEM PIPING AND COMPONENTS IN A WORKMANSHIP LIKE MANNER. CHANGES IN INSTALLATION AS A RESULT OF POOR CRAFTSMANSHIP SHALL BE AS DIRECTED BY THE COR AND SHALL BE AT NO ADDITIONAL COST TO THE OWNER.
25. ALL SPRINKLER PIPING SHALL BE BLACK STEEL. INSTALLATIONS MUST EVALUATE THE WATER QUALITY IN ACCORDANCE WITH UFC 3-600-01 TO DETERMINE IF SCHEDULE 10 STEEL PIPE CAN BE USED FOR PIPE SIZES GREATER THAN 2-INCHES. EVIDENCE OF EITHER CORROSION POTENTIAL OR PAST HISTORY OF SPRINKLER SYSTEM FAILURE DUE TO CORROSION AT THE BASE WILL PROHIBIT THE USE OF SCHEDULE 10 PIPING, AND SCHEDULE 40 WILL NEED TO BE USED.
26. SPRINKLER SYSTEM PIPING SHALL BE PROVIDED WITH SEISMIC BRACING. SEISMIC BRACING SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 13.

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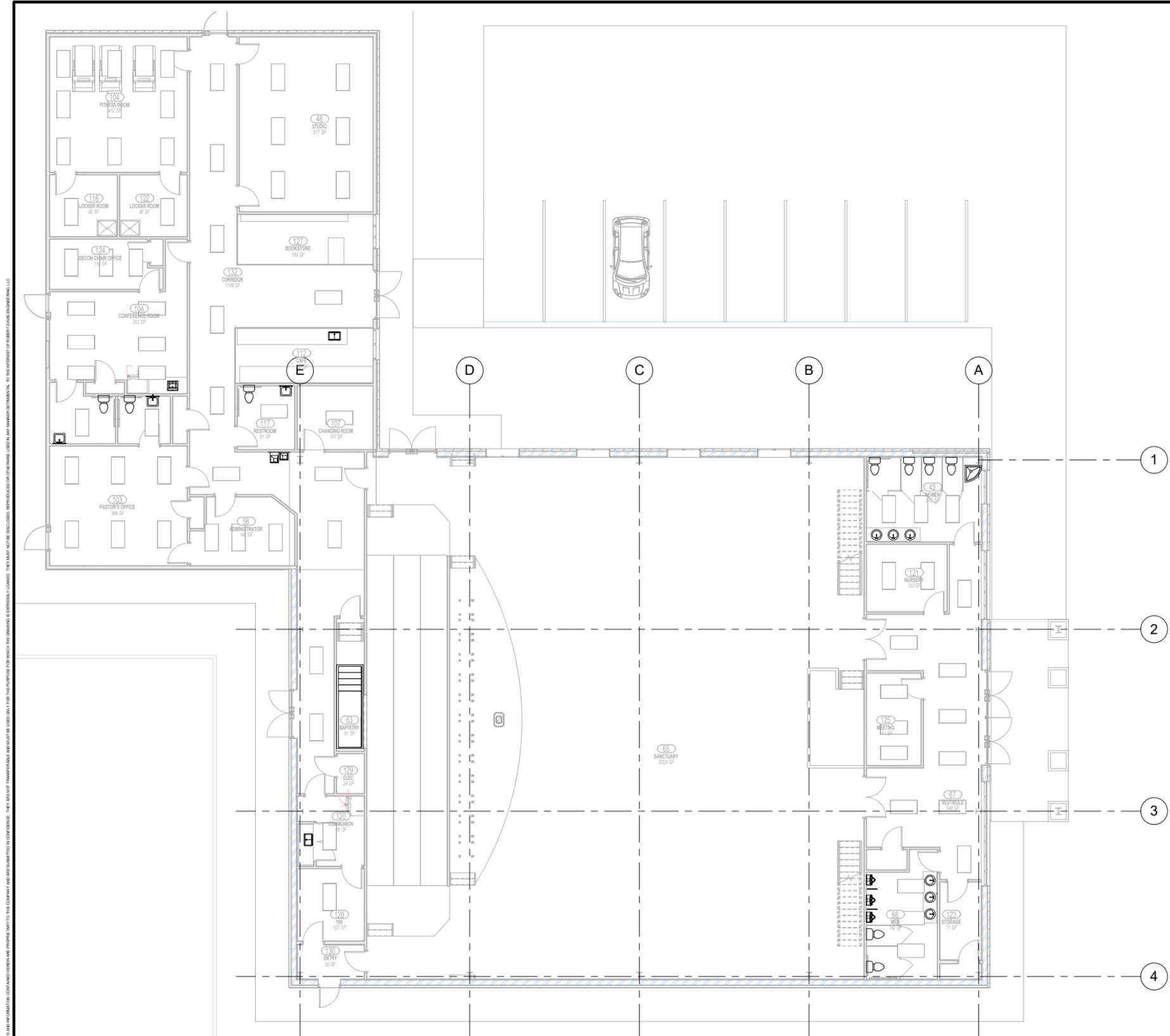
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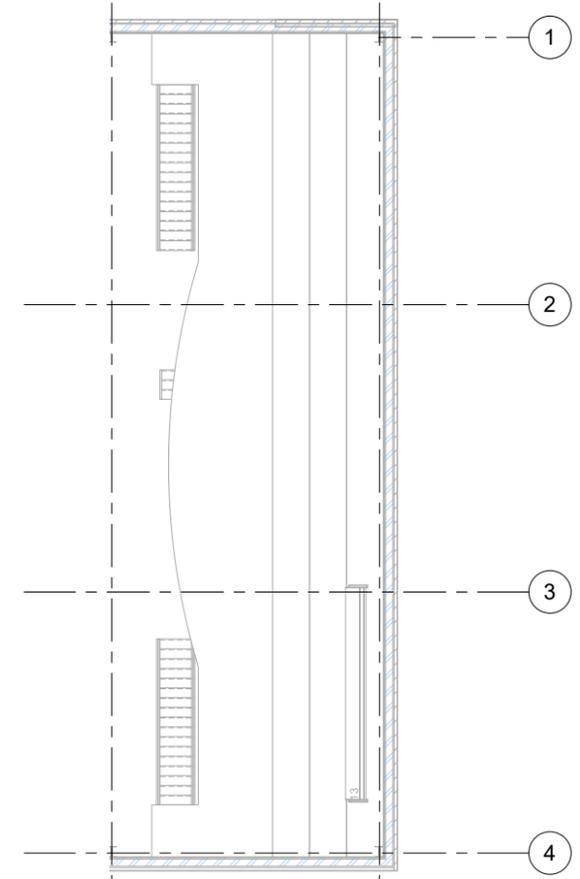
**FIRE PROTECTION NOTES**

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| Job No.  | 19078     |

Sheet No.  
**F100**



**1 LOWER FLOOR FIRE PROTECTION PLAN**  
1/8" = 1'-0"



**3 BALCONY FIRE PROTECTION PLAN**  
1/8" = 1'-0"

**GENERAL NOTES:**

- 1. SEE SHEET F-100 FOR GENERAL NOTES, LEGEND, AND ABBREVIATIONS.

**HAZARD CLASSIFICATION ZONES (NFPA 13):**

|                           |              |
|---------------------------|--------------|
| OCCUPANCY CLASSIFICATION: | LIGHT HAZARD |
| DENSITY:                  | 0.10 GPM/SF  |
| HYDRAULIC REMOTE AREA:    | 3000 SF      |
| HOSE STREAM ALLOWANCE:    | 250 GPM      |
| DURATION OF SUPPLY:       | 60 MINUTES   |

**KEYNOTES:**

- ① REQUIRED SPRINKLER PROTECTION FOR MORE DEMANDING AREA SHALL EXTEND 15 FEET BEYOND ITS PERIMETER, IN ACCORDANCE WITH NFPA 13 FOR ADJACENT HAZARDS NOT PHYSICALLY SEPARATED.

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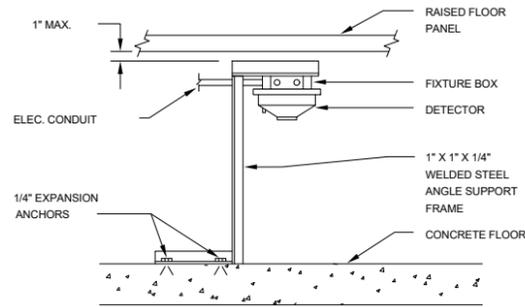
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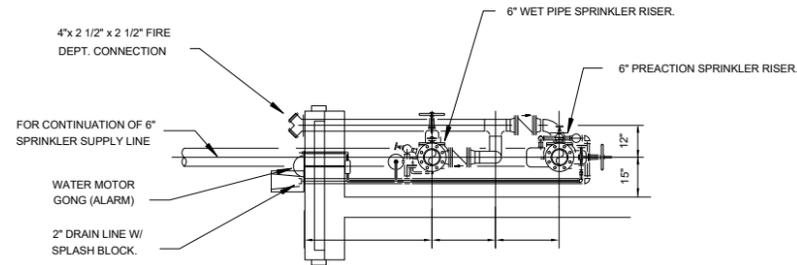
**SHEET TITLE**  
**FIRE PROTECTION PLAN**

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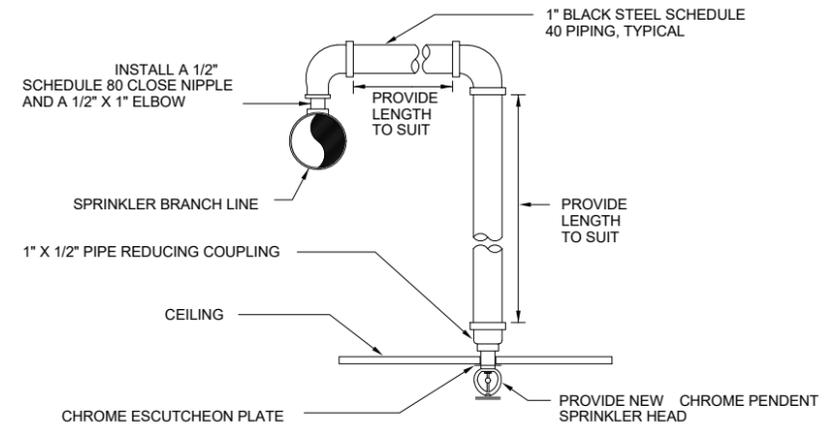
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**TYPICAL UNDERFLOOR SMOKE DETECTOR MOUNTING**  
N.T.S.



**PRE-ACTION SPRINKLER RISER PLAN**  
N.T.S.



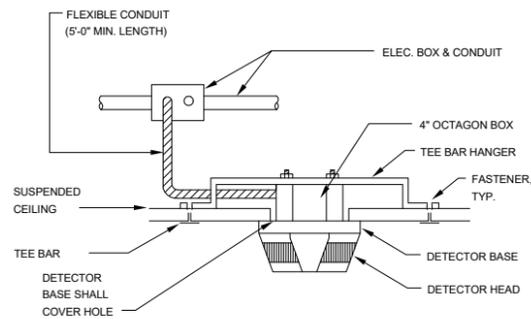
- NOTES:**
- ADJUST SPRINKLER DROPS AS NECESSARY TO CLEAR OBSTRUCTIONS SUCH AS THE CEILING "T" BAR SUSPENSION SYSTEM, LIGHT FIXTURES, ETC. PROVIDE A PIPE HANGER IF THE HORIZONTAL OFFSET LENGTH EXCEEDS 24 INCHES.
  - THIS SPRINKLER HEAD DROP IS APPLICABLE ONLY WHERE IT IS NOT NECESSARY TO RETAIN AN UPRIGHT SPRINKLER FOR PROTECTION OF COMBUSTIBLE CONSTRUCTION ABOVE THE CEILING.

**TYPICAL NEW SPRINKLER HEAD DROP**  
N.T.S.

**1 DETAIL**  
SCALE: NO SCALE

**2 DETAIL**  
SCALE: NO SCALE

**3 DETAIL**  
SCALE: NO SCALE



**CEILING MOUNTED DETECTOR**  
N.T.S.

**4 DETAIL**  
SCALE: NO SCALE



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**FIRE PROTECTION DETAILS**

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**F301**



**SPECIFICATIONS**

**SECTION 15500 - HEATING, VENTILATING AND AIR CONDITIONING**

1.00 - GENERAL

1.01 DESCRIPTION OF WORK

FURNISH AND INSTALL COMPLETE AND OPERATIVE HVAC SYSTEM AS SHOWN ON THE DRAWING AND SPECIFIED HEREIN. WORK SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:

A. AC UNIT, SEE SCHEDULES.  
 B. TOILET EXHAUST FAN.  
 C. AUTOMATIC TEMPERATURE CONTROLS SYSTEM INCLUDING TIME CLOCK, BY-PASS TIMER, THERMOSTATS, CONTROL LOW-VOLTAGE INTERLOCK WIRING AND OTHER ASSOCIATED DEVICES.  
 D. DUCTWORK AND AIR DISTRIBUTION SYSTEMS.  
 E. HANGERS AND SUPPORTS FOR DUCTWORK, PIPING AND HVAC EQUIPMENT  
 F. FLASHING OF DUCT AND PIPE PENETRATIONS THROUGH EXTERIOR OPENINGS.  
 G. ROOF CURB AND ROOF SLEEPER SUPPORTS.  
 H. DUCT THERMAL AND ACOUSTIC INSULATION.  
 I. LICENSE, PERMITS AND ASSOCIATED FEES.  
 J. DEMOLITION AND REMOVAL OF EXISTING HVAC EQUIPMENT AS REQUIRED.  
 K. SEISMIC RESTRAINTS AND BRACING.  
 L. KITCHEN GREASE EXHAUST FANS AND ASSOCIATED DUCTWORK.

1.02 RELATED WORK INCLUDED UNDER OTHER SECTIONS

A. FIRE PROTECTION, SECTION 15300.  
 B. PLUMBING, SECTION 15400.  
 C. TESTING AND BALANCING SECTION 15990.  
 D. LINE VOLTAGE AND POWER WIRING, ELECTRICAL SECTION 16000.

1.03 EXAMINATION OF SITE

VISIT SITE BEFORE SUBMITTING BID AND CHECK LOCATION OF ALL EXISTING CONDITIONS WHICH WILL AFFECT THIS WORK. VERIFY DIMENSIONS AND LOCATIONS SHOWN ON DRAWINGS AND COVER ALL COSTS. CONTRACTOR SHALL ASSUME REASONABLE VARIATIONS OR MINOR OMISSIONS AND SHALL COMPLETE PROPOSED WORK WITHOUT ADDITIONAL COST. FAILURE TO VISIT SITE WILL NOT LESSEN RESPONSIBILITY OR ENTITLE ADDITIONAL COMPENSATION FOR WORK NOT INCLUDED IN PROPOSAL.

1.04 DRAWINGS

THE ACCOMPANYING DRAWINGS SHALL BE CONSIDERED PART OF THESE SPECIFICATIONS. WORK AND MATERIALS SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS AND VICE VERSA SHALL BE EXECUTED AS IF SPECIFICALLY MENTIONED OR SHOWN IN BOTH. THE DRAWINGS SHALL BE CONSIDERED AS SCHEMATIC IN NATURE AND MINOR MODIFICATIONS OF THE WORK TO COMPLY WITH THE STRUCTURE AS FOUND SHALL BE MADE.

1.05 RULES AND REGULATIONS

A. ALL WORK AND MATERIAL SHALL BE IN FULL ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE STATE FIRE MARSHAL AND OTHER APPLICABLE STATE AND LOCAL ORDINANCES AND REGULATIONS. NOTHING IN THESE DRAWINGS OR SPECIFICATIONS SHALL BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.  
 B. FURNISH WITHOUT ANY EXTRA CHARGE ANY ADDITIONAL MATERIAL AND LABOR WHEN REQUIRED TO COMPLY WITH THESE LAWS, ORDINANCES AND CODES REGARDLESS OF WHETHER SHOWN OR MENTIONED IN THESE SPECIFICATIONS OF DRAWINGS.

1.06 SUBMITTALS

A. SUBMIT FOR REVIEW TO THE OWNER A COMPLETE AND ALL-INCLUSIVE LIST OF EQUIPMENT AND MATERIALS PROPOSED FOR USE (6 COPIES), ACCOMPANIED BY MANUFACTURER'S DATA SHEETS. DATA SHALL BE FORWARDED IN A SINGLE PACKAGE WITHIN 15 DAYS AFTER AWARD OF CONTRACT. SUBMIT SIX BLUELINE PRINTS AND ONE REPRODUCIBLE SHOP DRAWING SHOWING PROPOSED DUCTWORK INSTALLATION. INCLUDE SIZES, LOCATIONS AND OTHER REQUIRED INFORMATION TO COORDINATE INSTALLATION WITH OTHER TRADES.  
 B. WITHIN 5 DAYS AFTER AWARD OF CONTRACT, SUBMIT 6 COPIES OF A LETTER STATING ANY MATERIALS THAT CONTRACTOR WISHES TO SUBSTITUTE, TO THE OWNER FOR APPROVAL. INCLUDE SUCH INFORMATION AS MANUFACTURER'S NAME, TYPE OF MATERIAL, CERTIFIED RATINGS, OVERALL APPEARANCE, AND NECESSARY INFORMATION TO EXPLAIN FUNCTION AND OPERATION OF MATERIAL. ALL PROPOSED SUBSTITUTIONS SHALL BE EQUAL IN QUALITY, DESIGN, UTILITY AND APPEARANCE TO MATERIAL, EQUIPMENT OR METHOD SPECIFIED.

1.07 AS-BUILT DRAWINGS

A SET OF HVAC PRINTS WILL BE FURNISHED TO THE CONTRACTOR ON WHICH HE SHALL INDICATE THE INSTALLATION "AS-BUILT" AS THE WORK PROGRESSES. UPON COMPLETION OF THE WORK, A SET OR REPRODUCIBLE DRAWINGS SHALL BE OBTAINED FROM THE OWNER AT COST, AND ALL CHANGES AS NOTED ON THE RECORD SET OF PRINTS SHALL BE INCORPORATED THEREON. THIS SET OF REPRODUCIBLES, ALONG WITH ONE SET OF BLUEPRINTS, SHALL BE DELIVERED TO THE OWNER UPON COMPLETION AND BEFORE FINAL ACCEPTANCE OF THE PROJECT.

1.08 GUARANTEE

THE CONTRACTOR SHALL LEAVE THE ENTIRE INSTALLATION IN COMPLETE WORKING ORDER FREE FROM ANY DEFECTIVE MATERIAL, WORKMANSHIP OR FINISH. HE SHALL GUARANTEE TO REPAIR OR REPLACE, WITHOUT CHARGE, DEFECTS DUE TO FAULTY WORKMANSHIP OR MATERIAL FOR A PERIOD OF ONE YEAR FROM THE DATE OF FILING OF THE NOTICE OF COMPLETION.

1.09 OPERATION MANUALS AND OWNER INSTRUCTIONS

A. PROVIDE COMPLETE OPERATION AND MAINTENANCE MANUALS COVERING ALL MECHANICAL SYSTEMS AND EQUIPMENT THAT HAVE BEEN INSTALLED. THREE (3) COPIES OF THE MANUAL SHALL BE BOUND IN HARDBACK BINDERS.  
 B. PROVIDE INSTRUCTIONS TO STORE PERSONEL AS TO OPERATION OF ALL HVAC EQUIPMENT AND THERMOSTATS. INSTRUCTION PERIOD TO COMMENCE FOR MINIMUM OF (2) HOURS AND SHALL BE SCHEDULED AT OWNER'S CONVENIENCE. ALSO, PROVIDE STORE MANAGER WITH OPERATION MANUAL.

1.10 CUTTING AND PATCHING

A. THE CONTRACTOR SHALL DO ALL CUTTING, DRILLING AND PATCHING WHICH MAY BE REQUIRED FOR THE INSTALLATION OF THE WORK UNDER THIS SECTION OF THE SPECIFICATIONS.  
 B. PATCHING SHALL BE OF THE SAME WORKMANSHIP, MATERIAL, AND FINISH AND SHALL MATCH ACCURATELY ALL SURROUNDING CONSTRUCTION IN A MANNER SATISFACTORY TO THE OWNER. NO CUTTING OF THE STRUCTURE SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE OWNER.

2.00 - PRODUCTS

2.01 DUCTWORK

SHALL BE AS SPECIFIED IN THE FOLLOWING SCHEDULES. MATERIALS SHALL BE CLEARLY STAMPED OR MARKED WITH GRADES AND GAUGES.

A. SHEET METAL RECTANGULAR DUCTWORK, PLENUMS AND CASING CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, AND THE SHEET METAL CONSTRUCTION FOR VENTILATING/AIR CONDITIONING SYSTEMS, LATEST EDITION AS ISSUED BY SMACNA AND ASHRAE RESPECTIVELY.

B. SHEET METAL ROUND: SHALL BE UNITED SHEET METAL, OR APPROVED EQUAL, SPIRAL "UNISEAL" WITH "UNIFORM" FITTINGS, MACHINE FORMED.

C. MATERIALS FOR DUCTWORK SHALL BE GALVANIZED STEEL, OF GAUGES SHOWN IN THE SMACNA HVAC DUCT CONSTRUCTION STANDARDS. ALL DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PRESSURE-VELOCITY CLASSIFICATION STANDARDS NO LESS THAN +.2" WG AND DUCT SEALING REQUIREMENTS OF CLASS C (MINIMUM).

D. FLEXIBLE DUCTWORK SHALL BE PRE-INSULATED LOW PRESSURE TYPE (RATED TO 4" W.P.) WITH VAPOR BARRIER. DUCTS SHALL MEET CLASS 1 REQUIREMENTS OF NFPA 90A AND SHALL BE LABELED BY U.L. FLEXIBLE DUCTS SHALL BE GENFLEX, NIL(S) OR APPROVED EQUAL. FLEXIBLE DUCT IS ALLOWED ONLY AT FINAL CONNECTIONS TO AIR DISTRIBUTION FIXTURES AT LENGTHS OF FIVE FEET MAXIMUM.

E. UNLESS SHOWN OTHERWISE, ALL INSULATION SHALL BE EXTERNAL TO DUCTWORK.

F. ALL KITCHEN VENTILATION DUCT INSTALLATION AND DESIGN SHALL CONFORM TO UBC SECTION 2002 AND SECTION 2003, UBC, NFPA 96 AND OTHER LOCAL CODE REQUIREMENTS. GREASE DUCTS SHALL BE CONSTRUCTED OF NOT LESS THAN 0.055 INCH(16 GAUGE) GALVANIZED STEEL OR STAINLESS STEEL AT LEAST 0.044 INCH IN THICKNESS. JOINTS AND SEAMS SHALL BE MADE WITH A CONTINUOUS LIQUID-TIGHT WELD OR BRAZE MADE ON THE EXTERNAL SURFACE OF THE DUCT SYSTEM. DUCT BRACING AND SUPPORTS SHALL BE MADE OF NON-COMBUSTIBLE MATERIALS. BOLTS AND OTHER MECHANICAL FASTENERS SHALL NOT PENETRATE THE DUCT WALLS.

G. GREASE DUCT SYSTEMS SHALL SLOPE NOT LESS THAN 1/4 INCH PER LINEAL FOOT TOWARD THE HOOD OR TOWARD AN APPROVED GREASE RESERVOIR. WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH THE SLOPE SHALL BE NOT LESS THAN 1 INCH PER LINEAL FOOT.

H. ANY PORTION OF A GREASE DUCT SYSTEM INACCESSIBLE FROM THE DUCT ENTRY OR DISCHARGE SHALL BE PROVIDED WITH ADEQUATE CLEANOUT OPENINGS. CLEANOUT OPENINGS SHALL BE EQUIPPED WITH TIGHT-FITTING DOORS CONSTRUCTED OF STEEL HAVING A THICKNESS NOT LESS THAN THAT REQUIRED FOR THE DUCT.

I. 3M FIRE RESISTIVE DUCT WRAP(1 1/2" THICKNESS) SHALL BE USED TO ENCLOSE THE GREASE DUCTWORK. THE ENCLOSURE SHALL BE CONSTRUCTED OF NO LESS THAN 2 LAYERS OF DUCT WRAP FIRESTOP SYSTEM MATERIAL FOR 1 OR 2 HOUR ENCLOSURE PER MANUFACTURER'S INSTALLATION INSTRUCTION. ENCLOSURE IS PERMITTED TO BE IN DIRECT CONTACT WITH COMBUSTIBLES.

2.02 PIPING (NOT APPLICABLE)

2.03 DUCTWORK ACCESSORIES

A. DAMPER OPERATORS

1. DUCTS WITH EXTERNAL INSULATION: VENTLOCK #637, DURADYNE, YOUNG, OR APPROVED EQUAL.  
 2. DUCTS WITH INTERNAL INSULATION AND/OR NO INSULATION: VENTLOCK #635, DURADYNE, YOUNG, OR APPROVED EQUAL.

B. FLEXIBLE CONNECTIONS: VENTFABRICS "VENTGLAS", DURADYNE, OR APPROVED EQUAL, U.L. APPROVED WITH METAL ATTACHMENT.

C. AIR EXTRACTOR: TITUS AG-225, KRUEGER EX-88C, OR APPROVED EQUAL.

D. TURNING VANES SHALL COMPLY WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS. ALL RECTANGULAR DUCT WITH MITERED ELBOWS SHALL BE FITTED WITH TURNING VANES.

E. SPIN-IN-FITTINGS ARE NOT ALLOWED. USE UNITED MCGILL BELLMOUTH FITTING FOR ROUND DUCT TAPS.

F. SUPPORT DUCTWORK ACCORDING TO THE SMACNA DUCT CONSTRUCTION STANDARDS AND THE DRAWINGS.

G. ACCESS DOORS IN DUCTWORK: SHALL BE VENTLOCK, DUCTMATE OR APPROVED EQUAL, STAMPED OR FORMED INSULATED ACCESS DOORS COMPLETE WITH ALL HARDWARE AND SEALANT.

H. JOINT SEALING:

1. THE FOLLOWING ITEMS ARE TO BE SEALED WITH HARDCAST DT TAPE AND ADHESIVE:  
 A. LONGITUDINAL AND TRANSVERSE SEAMS OF RECTANGULAR DUCTWORK.  
 B. ALL ROUND FITTINGS AND JOINT CONNECTORS USE FTA-20 FOR INDOOR USE AND RTA-20 FOR OUTDOOR USE.  
 2. FLEXIBLE DUCT AT DIFFUSERS SHALL USE INTEGRAL STAINLESS STEEL DRAW BAND AND PRESSURE SENSITIVE TAPE, HARDCAST P-301 OR EQUAL.

I. BRACINGS, HANGERS, NUTS, ETC. SHALL BE GALVANIZED.

J. CURVED ELBOWS SHALL HAVE CENTERLINE RADIUS EQUAL TO ONE AND ONE-HALF TIMES DUCT WIDTH IN PLANE OF TURN.

K. SQUARE ELBOWS SHALL HAVE TURNING VANES. MITER ELBOWS (NOT SQUARE) SHALL HAVE SPLITTER VANES 3 INCHES O.C.

L. VOLUME DAMPERS SHALL BE CONSTRUCTED TO SMACNA STANDARDS AND SHALL BE YOUNG REGULATOR MODEL 4040 FOR ROUND DUCTS AND SERIES 820 FOR RECTANGULAR DUCTS

2.04 AIR DEVICES

DIFFUSERS, GRILLES AND REGISTERS: TITUS, KRUEGER, METAL/AIRE, OR THERMAFUSER WHERE SHOWN, FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR. PROVIDE VOLUME DAMPERS AND PAINT INTERIOR FLAT BLACK. SIZE, FINISH, FRAME TYPES AND ACCESSORIES AS SHOWN ON THE DRAWINGS.

2.05 FIRE DAMPERS & SMOKE FIRE DAMPERS

A. PROVIDE FIRE DAMPERS WITH ACCESS DOORS INSTALLED WHERE REQUIRED BY ALL LOCAL CODES. IN GENERAL, FIRE DAMPERS ARE REQUIRED WHERE DUCTS PIERCE FIRE-RATED FLOORS, CEILINGS, WALLS AND SHAFTS. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL FIRE RATED ASSEMBLIES.  
 B. FIRE DAMPERS SHALL BE EQUAL TO AIR BALANCE INC., MODEL NO. 119BLX, OR 119CL, OR AS APPROVED, FOR RECTANGULAR AND ROUND DUCTS. DAMPERS SHALL MEET THE REQUIREMENTS FOR NFPA BULLETIN NO. 90A, AND SHALL BE TESTED IN ACCORDANCE WITH UL 555 TEST CRITERIA, FIRE DAMPERS SHALL BE LABELED AND LISTED BY UL.  
 C. IF APPLICABLE, FIRE DAMPERS SHALL COMPLY WITH UL-555-1990, 4TH EDITION AND SHALL BE MARKED "FOR USE IN DYNAMIC SYSTEMS" OR "FOR USE IN STATIC SYSTEMS" AS REQUIRED.  
 D. COMBINATION SMOKE FIRE DAMPERS SHALL BE INSTALLED WHERE DUCTWORK PENETRATES FIRE RATED WALLS SURROUNDING AN EXIT CORRIDOR.

2.06 AIR CONDITIONING EQUIPMENT

A. FURNISH AND INSTALL DAIKIN OR EQUAL AIR CONDITIONING EQUIPMENT AS SPECIFIED ON THE DRAWINGS AND IN THESE SPECIFICATIONS.

2.07 INSULATION (INSTALLED PER MANUFACTURER'S RECOMMENDATIONS)

A. HEATING AND COOLING DUCTWORK LOCATED IN INTERIOR LOCATIONS

1. INSULATE WITH 1-1/2" THICK OWENS-CORNING FIBERGLAS ALL SERVICE FACED DUCT WRAP TYPE 150 WITH FACTORY APPLIED FLAME RETARDANT FOIL REINFORCED KRAFT FACING (FRK-25 UL LABELSD), OR APPROVED EQUAL. INSTALLED THERMAL RESISTANCE SHALL BE A MINIMUM OF 4.5.

B. ACOUSTICAL DUCTWORK AND PLENUM AND CASING LINER

1. PROVIDE INTERNALLY LINED DUCTWORK WHERE INDICATED ON DRAWINGS. ACOUSTICAL DUCT LINER SHALL BE TRALITE DUCT LINER, OR EQUAL, MATTE FACE, 3 LB. DENSITY, 1" THICK, SUITABLE FOR VELOCITIES FROM 1500 TO 4000 FPM, IN COMPLIANCE W/ UL723 AND UL181. SECURE LINER TO DUCTWORK WITH ADHESIVE AND MECHANICAL FANSTENERS PER SMACNA DUCT LINER APPLICATION STANDARD.  
 2. WHERE INTERNAL INSULATION IS APPLIED, DUCT AND PLENUM SIZES AS SHOWN ON THE DRAWINGS SHALL BE INSIDE CLEAR DIMENSIONS.  
 3. FIBERGLAS DUCT AND PLENUM INSULATION ARE TO BE APPLIED ONLY WITH MANUFACTURER'S APPROVED ADHESIVES, MASTICS AND MECHANICAL FASTENING DEVICES.

C. HEATING AND COOLING DUCTWORK LOCATED ON THE ROOF.

1. INSULATE WITH RIGID BOARD INSULATION WITH A MINIMUM R VALUE OF R-6.3. COAT EXTERIOR OF INSULATION WITH PERFORATED SHEET METAL LINER. SUITABLE FOR VELOCITIES FROM 1500 TO 4000 FPM, IN COMPLIANCE W/ UL723 AND UL181.  
 2. WHERE INTERNAL INSULATION IS APPLIED, DUCT AND PLENUM SIZES AS SHOWN ON THE DRAWINGS SHALL BE INSIDE CLEAR DIMENSIONS.  
 3. FIBERGLAS DUCT AND PLENUM INSULATION ARE TO BE APPLIED ONLY WITH MANUFACTURER'S APPROVED ADHESIVES, MASTICS AND MECHANICAL FASTENING DEVICES. COAT EXTERIOR WITH ARABOL AND CANVAS TO MANUFACTURER'S DIRECTIONS FOR EXTERIOR APPLICATION.

D. SOFT FLEXIBLE DUCT.

1. GENFLEX NIL(S). 7-0" MAXIMUM LENGTH UNLESS NOTED OTHERWISE. CLASS 1 RATING WITH R VALUE OF 4.2 MINIMUM.

E. INSULATION.

1. FOIL FACED FIBERGLAS, OWENS CORNING TYPE 75 OR EQUAL, 1-1/3" THICK. FLAME SPREAD RATING OF NOT MORE THAN 25 AND A SMOKE DEVELOPMENT RATING OF NOT MORE THAN 50.

F. DUCT LINER.

1. FOR EXTERIOR DUCTS: FIBERGLAS 1-1/2" THICK WITH FIRE RATED BLACK COATING, 1-1/2 LBS. PER CUBIC FOOT MINIMUM DENSITY. OWENS CORNING AEROFLEX TYPE 150.  
 2. FOR OTHER LOCATIONS SHOWN ON DRAWINGS: AEROFLEX TYPE 150, AS ABOVE, EXCEPT 1 INCH THICK. FLAME SPREAD RATING OF NOT MORE THAN 25 AND SMOKE DEVELOPED RATING OF NOT MORE THAN 50.  
 3. AN EPA-APPROVED BIOCIDAL IN THE AIRSTREAM COATING ENABLES OWENS-CORNING DUCT LINERS TO RESIST FUNGAL OR BACTERIAL GROWTH WHEN SUBJECTED TO MICROBIAL ATTACK DESCRIBED IN ASTM C 665 AND STANDARD PRACTICES ASTM G 21 (FUNGUS TEST) AND G 22 (BACTERIA TEST).

2.08 TEMPERATURE CONTROL SYSTEM

A. PROVIDE 24/7 PROGRAMMABLE THERMOSTAT.

B. CONTRACTOR SHALL FURNISH ALL NECESSARY CONTROL DEVICES (RELAYS, CONTACTS, ETC.) AND SHALL OBTAIN DIRECTION FROM MANUFACTURER ON ACTUAL WIRING REQUIREMENTS.  
 C. CONTRACTOR SHALL POST IN THE OFFICE TYPEWRITTEN INSTRUCTIONS ON OPERATION OF ALL CONTROLS.

2.09 DX PIPING

REFRIGERANT PIPING SHALL BE TYPE L HARD COPPER ACR TUBING WITH WROUGHT COPPER, SOLDER JOINT FITTINGS, SILVER SOLDERED. ALL REFRIGERANT PIPING SHALL BE INSULATED EXCEPT WHERE THE UNINSULATED AREA DOES NOT RESULT IN AN ENERGY LOSS TO THE SYSTEM OR AN ADVERSE EFFECT TO THE SYSTEM FROM STRAY HEAT. PIPE INSULATION SHALL BE ARMSTRONG ARMAFLEX, OWENS-CORNING FLEXIBLE TUBING, RUBICON OR APPROVED EQUAL. THICKNESS SHALL BE 3/4" ON INTERIOR PIPING AND 1" ON EXTERIOR PIPING. INSULATED PIPING EXPOSED TO WEATHER SHALL BE PROVIDED WITH ARMSTRONG ARMAFLEX FINISH AND ALL-WEATHER SERVICE JACKET FOR OUTDOOR APPLICATIONS VALVES, STRAINERS, SIGHT GLASS, FILTER DRIERS, OIL SEPARATORS, ETC. SHALL BE MANUFACTURED BY SPORLAN VALVE CO.

2.10 SEISMIC RESTRAINTS AND BRACING

A. ALL HVAC EQUIPMENT, DUCTWORK, PIPING AND WIRING CONDUITS SHALL BE INSTALLED TO MEET THE LATERAL BRACING REQUIREMENTS FOR THE APPLICABLE SEISMIC ZONE. PROVIDE SEISMIC RESTRAINTS IN ACCORDANCE WITH SEISMIC HAZARD LEVEL (SH) A OF THE "SEISMIC RESTRAINT MANUAL: GUIDELINES FOR MECHANICAL SYSTEMS" DATED 1991, AS PUBLISHED BY S.M.A.C.N.A. AND ALSO IN ACCORDANCE WITH APPLICABLE LOCAL BUILDING CODES.  
 B. ALL ROOFTOP EQUIPMENT SHALL HAVE PROPER ANCHORING AND RESTRAINT SYSTEMS, AND SHALL BE SECURED TO A ROOF CURB, EQUIPMENT PAD OR OTHER STRUCTURAL MEMBER TO PREVENT LATERAL, VERTICAL OR OVERTURNING MOVEMENT WITHOUT SACRIFICING ANY RESILIENT VIBRATION ISOLATION REQUIREMENTS.

3.00 INSTALLATION AND EXECUTION

3.01 INSTALLATION REQUIREMENTS

A. DUCTWORK:

1. DUCT BRANCHES SHALL BE FITTED WITH VOLUME OR SPLITTER DAMPER AND WHERE REQUIRED, EXTRACTION DAMPER. ALL ACCESSIBLE VOLUME CONTROLS SHALL HAVE LOCKING QUADRANTS. ALL INACCESSIBLE CONTROLS (DAMPERS, ETC.) SHALL BE PROVIDED WITH PERMANENT EXTENSIONS TO ACCESSIBLE SPACES. BRANCH VOLUME CONTROLS ARE IN ADDITION TO VOLUME CONTROLS AT THE REGISTERS AND DIFFUSERS.  
 2. AIR INLETS, OUTLETS SHALL BE PROPERLY SET IN PLACE. REGISTERS AND GRILLES SHALL BE TIGHTLY SEALED.  
 3. TRANSITIONS IN SIZE OF DUCTS SHALL BE MADE BY UNIFORMLY TAPERING SECTIONS HAVING 1 INCH INCREASE IN WIDTH FOR EACH 7 INCHES OF RUN UNLESS CONSTRUCTION LIMITATIONS REQUIRE A MORE ABRUPT TRANSITION.  
 4. DIFFUSERS, GRILLES AND REGISTERS: EACH REGISTER AND DIFFUSER SHALL BE EQUIPPED WITH A VOLUME DAMPER OR AIR EXTRACTOR. PAINT INTERIOR SURFACE OF ALL UNITS FLAT BLACK. FACE AND TRIM OF ALL UNITS SHALL BE FINISHED. SIZE, FINISH, FRAMES, ACCESSORIES, CAPACITY AND PATTERN AS SHOWN ON DRAWINGS.  
 5. CONTRACTOR SHALL PROVIDE MANUAL VOLUME DAMPERS AT ALL BRANCH DUCTWORK IN SUPPLY AIR, RETURN AIR AND OUTSIDE AIR SYSTEMS (WHETHER SHOWN ON PLANS OR NOT) WHERE REQUIRED FOR AIR BALANCING OF HVAC SYSTEMS.

3.02 TESTING AND BALANCING (SEE ALSO, SECTION 15990 AT RIGHT.)

BALANCING OF THE AIR CONDITIONING SYSTEM WILL BE PERFORMED BY AN INDEPENDENT TEST AND BALANCING AGENCY. THE MECHANICAL CONTRACTOR SHALL COOPERATE WITH THE SELECTED TEST AND BALANCE AGENCY IN THE FOLLOWING MANNER:

A. PROVIDE SUFFICIENT TIME BEFORE FINAL COMPLETION DATE SO THAT TEST AND BALANCING CAN BE ACCOMPLISHED.  
 B. PROVIDE IMMEDIATE LABOR AND TOOLS TO MAKE CORRECTIONS WHEN REQUIRED WITHOUT UNDUE DELAY. INSTALL BALANCING DAMPERS AS REQUIRED BY TEST AND BALANCE AGENCY.  
 C. THE CONTRACTOR SHALL PUT ALL HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS AND EQUIPMENT INTO FULL OPERATION AND SHALL CONTINUE THE OPERATION OF SAME DURING EACH WORKING DAY OF TESTING AND BALANCING.  
 D. TESTING AND BALANCING AGENCY SHALL BE KEPT INFORMED OF ANY MAJOR CHANGES MADE TO SYSTEM DURING CONSTRUCTION AND SHALL BE PROVIDED WITH COMPLETE AS-BUILT DRAWINGS.  
 E. THE MECHANICAL CONTRACTOR SHALL INCLUDE THE COSTS OF DAMPERS, PULLEY AND BELT CHANGES IN HIS CONTRACT.

3.04 SPECIAL CONDITIONS

A. AIR CONDITIONING EQUIPMENT ON ROOF: THE EXACT EQUIPMENT LOCATIONS ON THE ROOF SHALL BE FIELD VERIFIED BY CONTRACTOR. THE INTENT OF THE DESIGN IS TO UTILIZE A MANUFACTURER SUPPLIED ROOF CURB THAT WOULD SUPPORT THE NEW EQUIPMENT. CONTRACTOR SHALL CONFORM TO MANUFACTURER'S PUBLISHED INSTALLATION AND ASSEMBLY GUIDE. INSTALLATION SHALL CONFORM TO STRUCTURAL ENGINEER'S REQUIREMENTS.  
 B. STRUCTURAL SUPPORT FOR THE AIR CONDITIONING UNIT: THE OWNER SHALL ENGAGE A LICENSED STRUCTURAL ENGINEER TO DESIGN THE STRUCTURAL SUPPORT FOR THE AIR CONDITIONING UNIT ON THE ROOF. THE MECHANICAL CONTRACTOR IS TO COORDINATE ALL WORK WITH THE STRUCTURAL ENGINEER.  
 C. ALL REQUIRED PENETRATIONS OF EXISTING ROOFING SYSTEM SHALL BE MADE BY LANDLORD'S ROOFING CONTRACTOR AT OWNER'S EXPENSE AFTER NOTIFICATION TO LANDLORD FOR APPROVAL.

END OF SECTION

**SECTION 15990 - TESTING, ADJUSTING AND BALANCING**

1.00 - GENERAL

1.01 DESCRIPTION

THE WORK DESCRIBED IN THIS SECTION SHALL BE PERFORMED BY AN INDEPENDENT TEST AND BALANCE AGENCY, SPECIALIZING IN TESTING AND BALANCING OF HVAC SYSTEMS AND A NUMBER OF THE AABC OR APPROVED EQUAL ORGANIZATION.

1.02 SCOPE OF WORK

A. HVAC SYSTEM TEST AND BALANCE IN ACCORDANCE WITH PROCEDURES ESTABLISHED BY AABC OR NEBB.  
 B. MEASUREMENT OF FINAL OPERATING CONDITIONS OF HVAC EQUIPMENT.  
 C. TEST AND BALANCE REPORTS.  
 D. EACH PIECE OF AIR CONDITIONING AND HEATING EQUIPMENT AND THE AIR DISTRIBUTIONS SYSTEMS SHALL BE TESTED AND ADJUSTED TO INSURE PROPER FUNCTIONING OF ALL CONTROL. PROPER DISTRIBUTION OF AIR, MAINTENANCE OF TEMPERATURE, ELIMINATION OF DRAFTS, NOISE AND VIBRATION, AND LEFT IN FIRST CLASS OPERATING CONDITION. THE AIR SYSTEM SHALL BE READJUSTED IF REQUIRED FOR COMFORT OF EACH ROOM.  
 E. THE MECHANICAL CONTRACTOR WILL MAKE ANY CHANGES IN THE PULLEYS, BELTS, DAMPERS, VANES, BAFFLES AND THE LIKE REQUIRED FOR CORRECT BALANCE OF SYSTEM AS RECOMMENDED BT T&B AGENCY AND TO THE SATISFACTION OF THE OWNER.

1.03 SUBMITTALS

A. PROVIDE (6) SIX COPIES OF TEST AND BALANCE REPORT TO THE OWNER FOR REVIEW AND APPROVAL IN SOFT COVER, LETTER SIZE, 3-RING BINDER MANUAL COMPLETE WITH INDEX PAGE AND INDEXING TABS. THE REPORT SHALL INCLUDE A SET OF REDUCED DRAWINGS WITH AIR OUTLETS AND EQUIPMENT IDENTIFIED TO CORRESPOND WITH DATA SHEETS AND INDICATING THERMOSTAT LOCATIONS.  
 B. THE TEST AND BALANCE REPORT SHALL INCLUDE, AS A MINIMUM, BUT NOT BE LIMITED TO:

1. EACH EQUIPMENT SHALL BE IDENTIFIED BY EQUIPMENT SERVICE NUMBER, MANUFACTURER, MODEL NUMBER, AND SERIAL NUMBER, MOTOR HORSEPOWER, MOTOR NAMEPLATE VOLTAGE, MOTOR RPM, ACTUAL AND DESIGN STATIC PRESSURE, ACTUAL OUTLET VELOCITY, ACTUAL CFM, DESIGN CFM.  
 2. EACH COIL SHALL BE IDENTIFIED BY EQUIPMENT SERVICE NUMBER, MANUFACTURER, MODEL NUMBER AND SIZE, NUMBER OF ROWS, TOTAL CFM, AIR INLET AND OUTLET DRY BULB AND WET BULB TEMPERATURES.  
 3. EACH AIR OUTLET SHALL BE IDENTIFIED WITH MANUFACTURE, MODEL NUMBER, SIZE, VELOCITY, CORRECTION FACTOR, ACTUAL CFM, DESIGN CFM.  
 4. TRAVERSE READING OF MAIN SUPPLY, RETURN AND OUTSIDE AIR DUCTS TO ESTABLISH AIR QUANTITIES.  
 5. TEST AND RECORD TEMPERATURES FROM TEMPERATURE CONTROLLERS SUCH AS DAY THERMOSTAT, NIGHT THERMOSTAT.  
 6. TEST AND RECORD TEMPERATURES FROM MAIN SUPPLY AIR TRUNK, MIXED AIR DURING THE FULL HEATING AND FULL COOLING CYCLE AND ECONOMIZER CYCLE.  
 7. TEST AND BALANCE ECONOMIZER.  
 8. WATER BALANCE INFORMATION  
 9. EXHAUST SYSTEM BALANCE.

2.00 - PRODUCTS (NOT APPLICABLE)

3.00 - EXECUTION

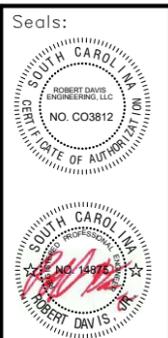
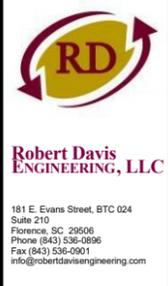
3.01 DEFICIENCIES IN SYSTEM

BALANCING CONTRACTOR SHALL REPORT IN WRITING TO THE OWNER ANY DISCREPANCIES ON ITEMS NOT INSTALLED IN ACCORDANCE WITH CONTRACT DOCUMENTS, ALL DEFICIENCIES IN HVAC SYSTEM, AND OTHER DEFICIENCIES. THE OWNER WILL REIMBURSE THE BALANCING CONTRACTOR IF ADDITIONAL WORK IS REQUIRED FOR HIS PHASE OF WORK.

3.02 WARRANTY

THE TEST AND BALANCE AGENCY SHALL INCLUDE AN EXTENDED WARRANTY OF 90 DAYS, AFTER COMPLETION OF WORK, DURING WHICH TIME THE OWNER, AT THEIR DISCRETION, MAY REQUEST A RECHECK OR RESETTING OF ANY OUTLET, SUPPLY AIR FAN, OR EXHAUST FAN AS LISTED IN TEST REPORT.

END OF SECTION



**A NEW SANCTUARY EMANUEL  
 BAPTIST CHURCH  
 106 BOONE STREET  
 SUMMERVILLE, SC**

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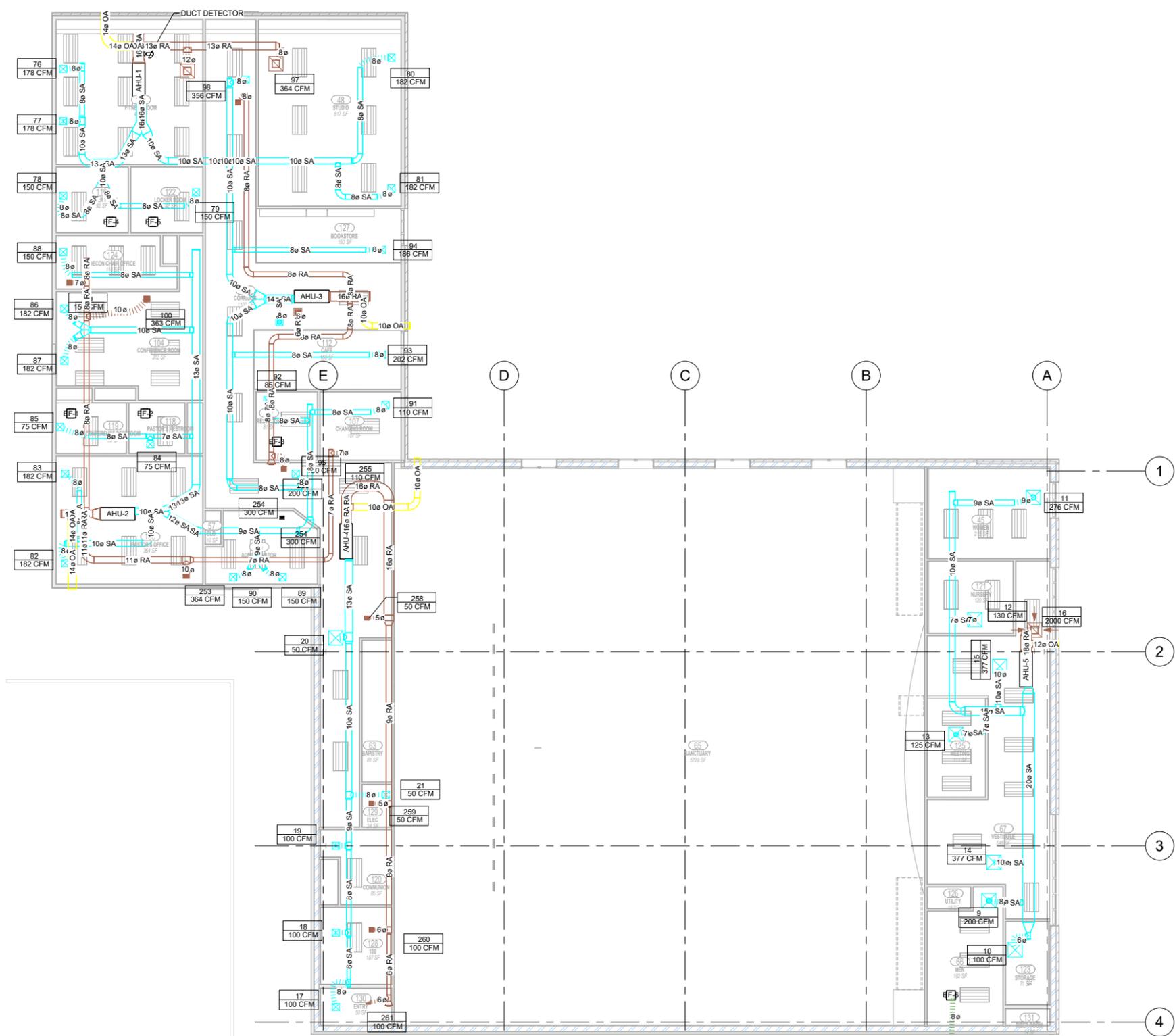
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**HVAC SPECS**

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**1 HVAC PLAN - LOW CEILING**  
1/8" = 1'-0"



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info@robertdavisengineering.com



**A NEW SANCTUARY  
EMANUEL BAPTIST  
CHURCH  
106 BOONE STREET  
SUMMERVILLE, SC**

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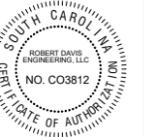
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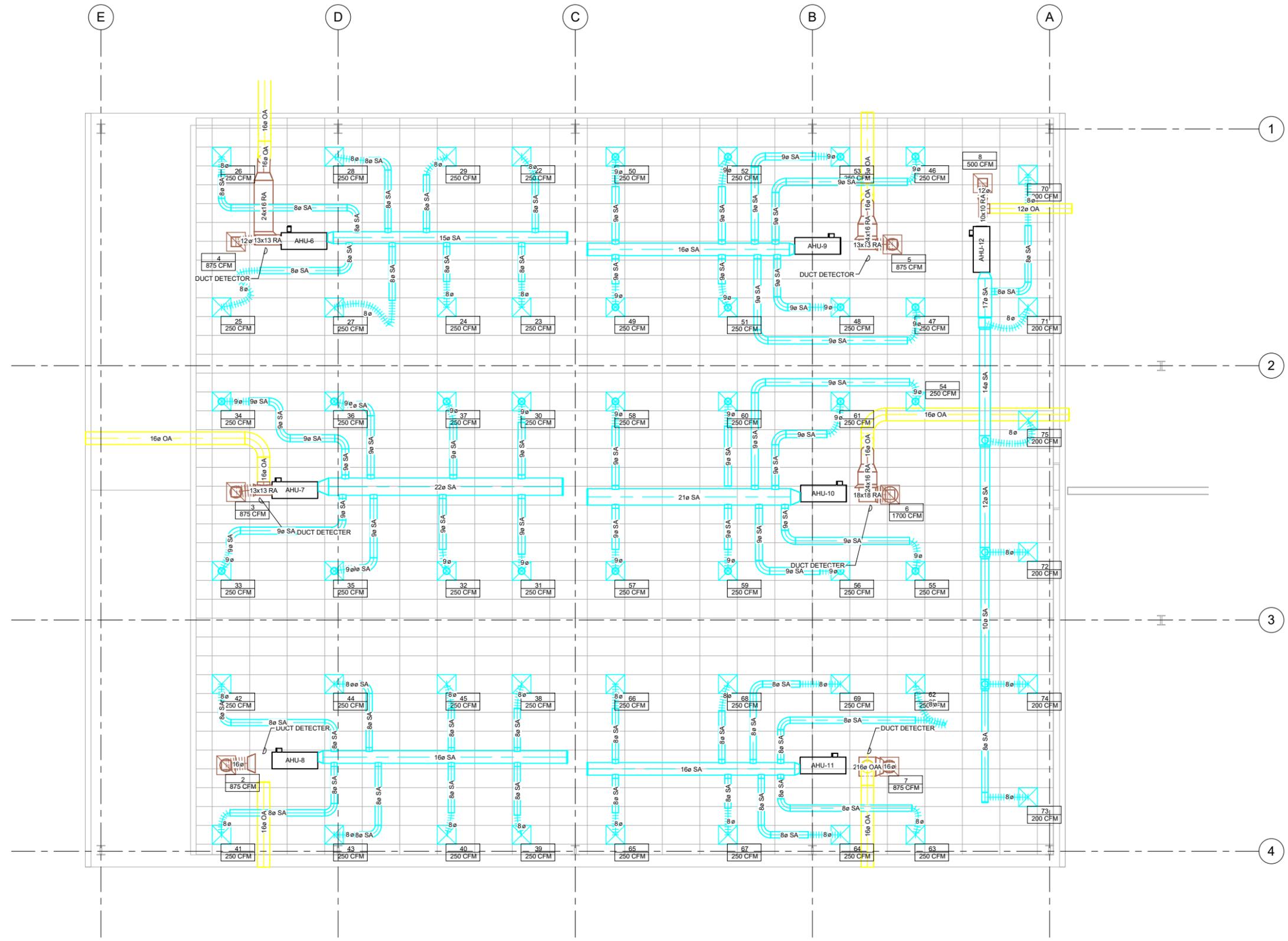
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Seals:



A NEW SANCTUARY EMANUEL  
BAPTIST CHURCH  
106 BOONE STREET  
SUMMERVILLE, SC



1 HVAC PLAN HIGH CEILING  
3/16" = 1'-0"

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HVAC - HIGH  
CEILING

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Seals:



A NEW SANCTUARY EMANUEL  
BAPTIST CHURCH  
106 BOONE STREET  
SUMMERVILLE, SC

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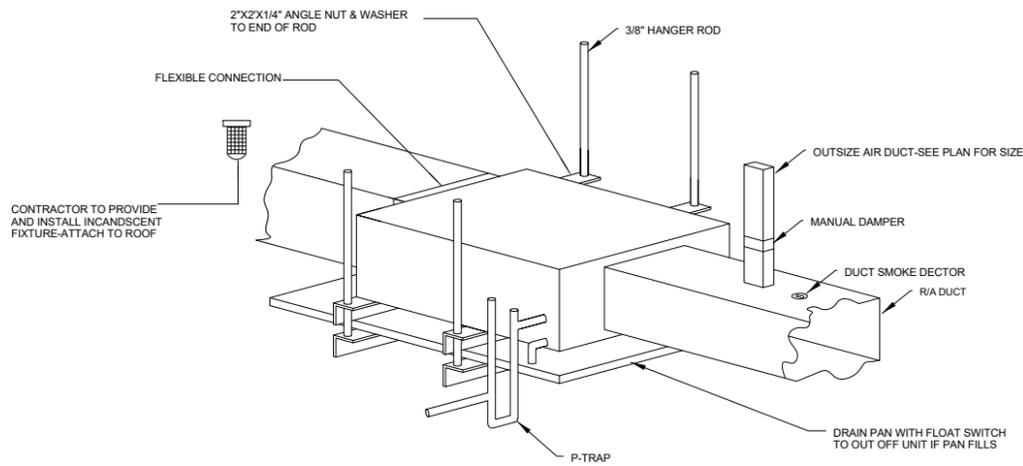
SHEET TITLE

HVAC  
DETAILS

|          |           |
|----------|-----------|
| Drawn    | RD        |
| Designed | RD        |
| Checked  | RD        |
| Date     | 2/28/2020 |
| Job No.  | 19078     |

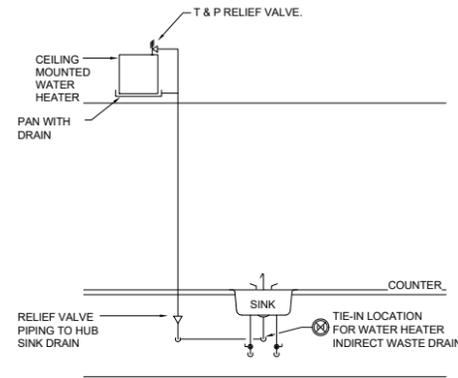
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M301



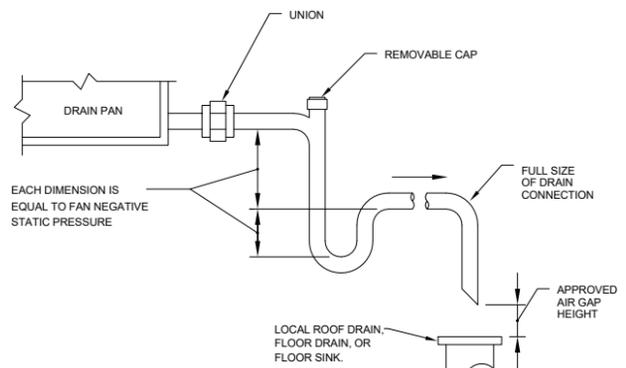
1 AIR HANDLER DETAIL

3/4" = 1'-0"



2 CEILING MOUNTED WATER HEATER DRAIN DETAIL

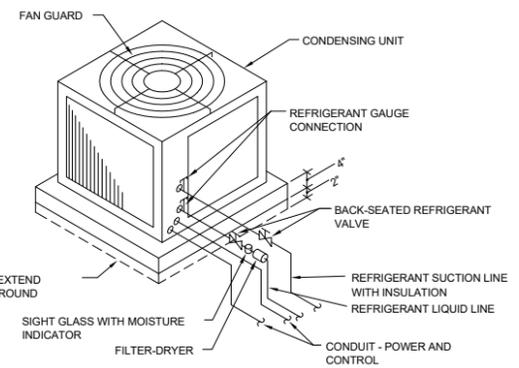
1/4" = 1'-0"



CONDENSATE DRAIN DETAIL

5 CONDENSATE DRAIN DETAIL

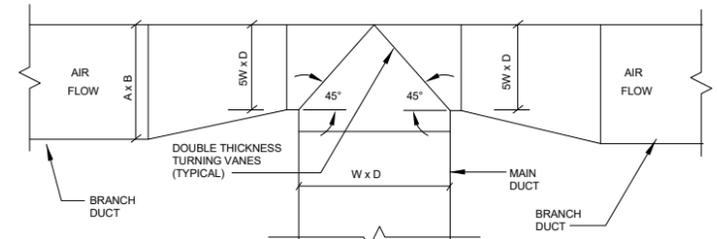
1/4" = 1'-0"



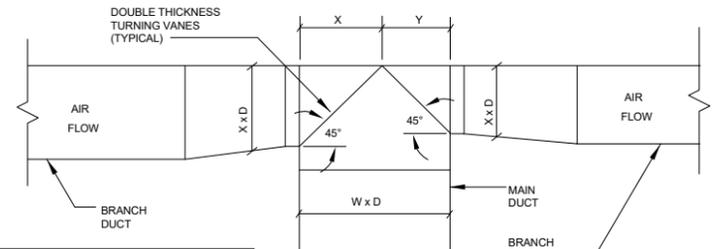
AIR-COOLED CONDENSING UNIT - SLAB MOUNTED AT GRADE

4 CONDENSING UNIT

1/4" = 1'-0"



EQUAL SPLIT

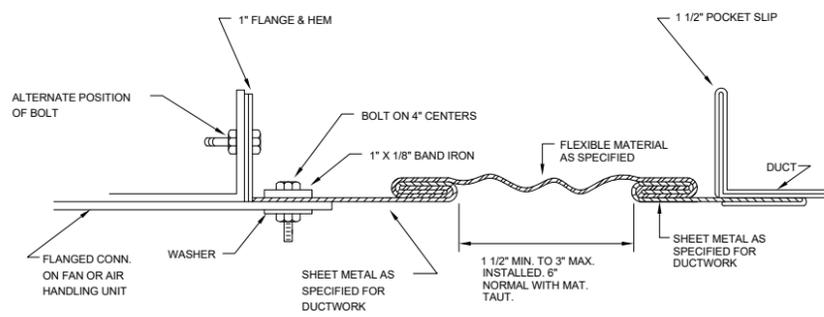


UNEQUAL SPLIT

6 DUCT TEE CONNECTION DETAIL

1/4" = 1'-0"

NOTE: DIMENSIONS 'X' AND 'Y' ARE EQUAL TO (BRANCH CFM - MAIN CFM) x W

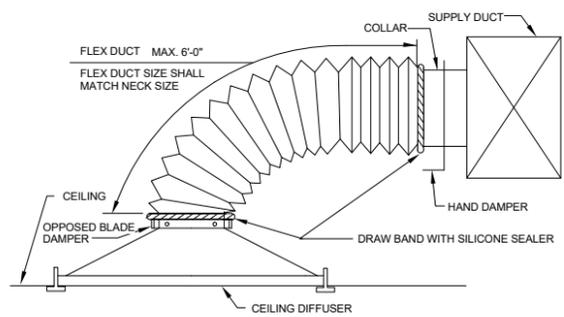


RECTANGULAR FLEXIBLE CONNECTION DETAIL

N.T.S.

7 DUCT CONNECTION

1/4" = 1'-0"

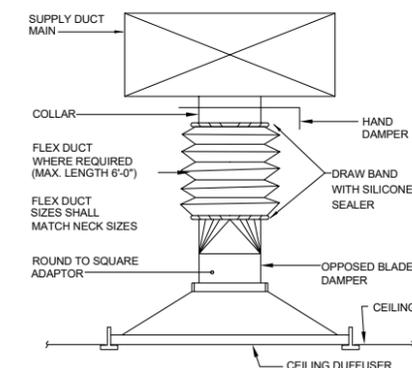


TYPICAL DIFFUSER CONNECTION

(SIDE OF DUCT CONNECTION)  
NOT TO SCALE

8 TYPICAL DIFFUSER CONNECTION

1/4" = 1'-0"



TYPICAL DIFFUSER CONNECTION - DIFFUSER CONNECTION

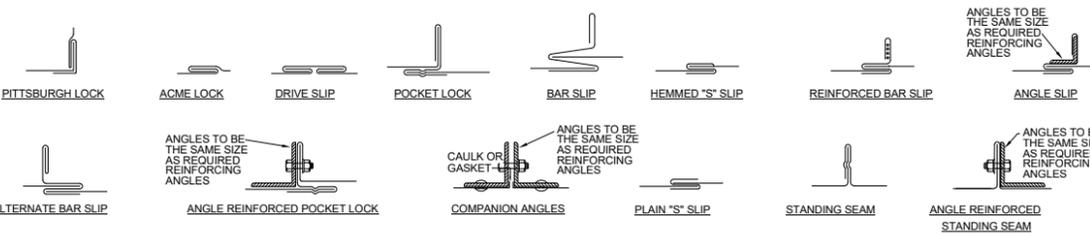
1/4" = 1'-0"

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# THICKNESS & REINFORCING SCHEDULE - \* LOW PRESSURE DUCTWORK

\* NOTE: LOW PRESSURE DUCTWORK SHALL BE DUCTWORK IN WHICH THE PRESSURE DOES NOT EXCEED 2" WATER GAUGE

| GREATEST DUCT DIMENSION | STEEL DUCTS U.S. STANDARD GAUGE | ALUMINUM DUCTS B & S GAUGE                          | LONGITUDINAL SEAM       | TRANSVERSE JOINT SMALLEST DIMENSION                                                                           | TRANSVERSE JOINT GREATEST DIMENSION                                                                           | REINFORCING (ALL DUCTS 18" THRU 54" SHALL BE CROSSBROKEN)                                                                                                                                                                                                                                                                                                                         |
|-------------------------|---------------------------------|-----------------------------------------------------|-------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12" OR LESS             | 26                              | 24(0.020")                                          | PITTSBURGH OR ACME LOCK | DRIVE SLIP OR POCKET LOCK OR BAR SLIP                                                                         | PLAIN "S" SLIP OR POCKET LOCK OR BAR SLIP                                                                     | NONE REQUIRED                                                                                                                                                                                                                                                                                                                                                                     |
| 13" THRU 18"            | 24                              | 22(0.025")                                          | PITTSBURGH OR ACME LOCK | DRIVE SLIP OR POCKET LOCK OR BAR SLIP                                                                         | PLAIN "S" SLIP OR POCKET LOCK OR BAR SLIP                                                                     | NONE REQUIRED                                                                                                                                                                                                                                                                                                                                                                     |
| 19" THRU 30"            | 24                              | 22(0.025")                                          | PITTSBURGH OR ACME LOCK | HEMMED "S" SLIP OR BAR SLIP OR DRIVE SLIP OR 1" POCKET LOCK                                                   | HEMMED "S" SLIP OR BAR SLIP OR 1" POCKET LOCK                                                                 | IF TRANSVERSE JOINTS ARE LOCATED 4'-0" OR LESS ON CENTER NO REINFORCING IF ON 8'-0" CENTERS REINFORCE WITH 1"x1"x1/8" ANGLES AT 4 FT. O.C. FASTENED ON 8" CENTERS                                                                                                                                                                                                                 |
| 31" THRU 42"            | 22                              | 20(0.032")                                          | PITTSBURGH OR ACME LOCK | DRIVE SLIP 18" OR LESS BAR SLIP OR POCKET LOCK                                                                | BAR SLIP OR REINFORCED BAR SLIP OR POCKET LOCK                                                                | IF TRANSVERSE JOINTS ARE LOCATED 4'-0" OR LESS ON CENTER NO REINFORCING IF ON 8'-0" CENTERS REINFORCE WITH 1"x1"x1/8" ANGLES AT 4 FT. O.C. FASTENED ON 8" CENTERS                                                                                                                                                                                                                 |
| 43" THRU 54"            | 22                              | 20(0.032")                                          | PITTSBURGH OR ACME LOCK | 1 1/4" BAR SLIP OR REINFORCED BAR SLIP OR 1 1/2" POCKET LOCK                                                  | 1 1/4" BAR SLIP OR REINFORCED BAR SLIP OR 1 1/2" POCKET LOCK                                                  | IF TRANSVERSE JOINTS ARE LOCATED 4'-0" OR LESS ON CENTER NO REINFORCING IF ON 8'-0" CENTERS REINFORCE WITH 1"x1"x1/8" ANGLES AT 4 FT. O.C. FASTENED ON 8" CENTERS                                                                                                                                                                                                                 |
| 55" THRU 60"            | 20                              | 18(0.040")                                          | PITTSBURGH OR ACME LOCK | 1 1/4" BAR SLIP OR REINFORCED BAR SLIP OR 1 1/2" POCKET LOCK                                                  | 1 1/4" BAR SLIP OR REINFORCED BAR SLIP OR 1 1/2" POCKET LOCK                                                  | IF TRANSVERSE JOINTS ARE LOCATED 4'-0" OR LESS ON CENTER NO REINFORCING IF ON 8'-0" CENTERS REINFORCE WITH 1"x1"x1/8" ANGLES AT 4 FT. O.C. FASTENED ON 8" CENTERS                                                                                                                                                                                                                 |
| 61" THRU 84"            | 20                              | 18(0.040")                                          | PITTSBURGH OR ACME LOCK | REINFORCED BAR SLIP OR ANGLE REINFORCED POCKET LOCK                                                           | REINFORCED BAR SLIP OR ANGLE REINFORCED POCKET LOCK                                                           | REINFORCE ALL SIDES OVER 60" WITH 1 1/2"x1 1/2"x1/8" ANGLES ON 2'-0" CENTERS. SIDES UNDER 60" NEED NO REINFORCING IF JOINTS ARE ON 4'-0" CENTERS. IF JOINTS ARE ON 8'-0" CENTERS REINFORCE WITH 1 1/2"x1 1/2"x1/8" ANGLES ON 4'-0" CENTERS.                                                                                                                                       |
| 85" THRU 96"            | 18                              | 16(0.051") (LONGITUDINAL SEAM MAY BE STANDING SEAM) | PITTSBURGH OR ACME LOCK | 1 1/2" COMPANION ANGLE OR ANGLE REINFORCED POCKET LOCK OR REINFORCED BAR SLIP                                 | 1 1/2" COMPANION ANGLE OR ANGLE REINFORCED POCKET LOCK OR REINFORCED BAR SLIP                                 | REINFORCE ALL SIDES OVER 84" WITH 1 1/2"x1 1/2"x3/16" ANGLES ON 2'-0" CENTERS. SIDES 61" THRU 84" REINFORCE WITH 1 1/2"x1 1/2"x1/8" ANGLES ON 2'-0" CENTERS. REINFORCE ALL SIDES UNDER 60" WITH 1 1/2"x1 1/2"x1/8" ANGLES IF JOINTS ARE 8'-0" ON CENTER. NO REINFORCING IF JOINTS ARE 4'-0" ON CENTER.                                                                            |
| OVER 96"                | 18                              | 16(0.051") (LONGITUDINAL SEAM MAY BE STANDING SEAM) | PITTSBURGH OR ACME LOCK | 2" COMPANION ANGLE OR 2"x2"x1/4" ANGLE SLIP OR 2"x2"x1/4" ANGLE REINFORCED POCKET LOCK OR REINFORCED BAR SLIP | 2" COMPANION ANGLE OR 2"x2"x1/4" ANGLE SLIP OR 2"x2"x1/4" ANGLE REINFORCED POCKET LOCK OR REINFORCED BAR SLIP | REINFORCE ALL SIDES OVER 96" WITH 2"x2"x1/4" ANGLES ON 2'-0" CENTERS. REINFORCE ALL SIDES 85" THRU 96" WITH 1 1/2"x1 1/2"x3/16" ANGLES ON 2'-0" CENTERS. REINFORCE ALL SIDES UNDER 60" WITH 1 1/2"x1 1/2"x1/8" ANGLES ON 2'-0" CENTERS. REINFORCE ALL SIDES UNDER 60" WITH 1 1/2"x1 1/2"x1/8" ANGLES IF JOINTS ARE 8'-0" ON CENTER. NO REINFORCING IF JOINTS ARE 4'-0" ON CENTER. |

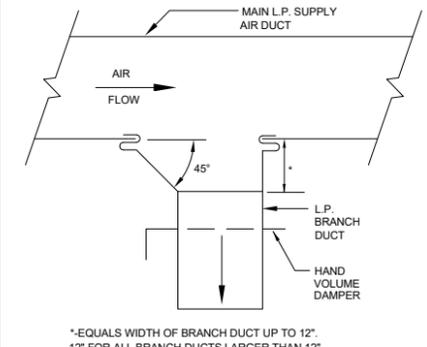


## DUCT CONSTRUCTION MINIMUM SHEET METAL THICKNESSES

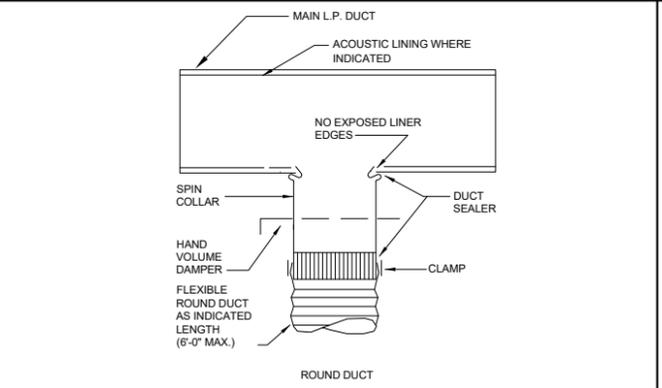
| MAXIMUM SIZE (INCHES) | RECTANGULAR DUCTS                  |                                       |
|-----------------------|------------------------------------|---------------------------------------|
|                       | STEEL (MINIMUM THICKNESS, NOMINAL) | ALUMINUM (MINIMUM THICKNESS, NOMINAL) |
| THROUGH 12            | 0.022 INCH (26 GAGE, GALV.)        | 0.020 INCH (NO. 24 B&S GAGE)          |
| 13 THROUGH 30         | 0.028 INCH (24 GAGE, GALV.)        | 0.025 INCH (NO. 22 B&S GAGE)          |
| 31 THROUGH 54         | 0.034 INCH (22 GAGE, GALV.)        | 0.030 INCH (NO. 20 B&S GAGE)          |
| 55 THROUGH 84         | 0.040 INCH (20 GAGE, GALV.)        | 0.040 INCH (NO. 18 B&S GAGE)          |
| OVER 84               | 0.052 INCH (18 GAGE, GALV.)        | 0.051 INCH (NO. 16 B&S GAGE)          |

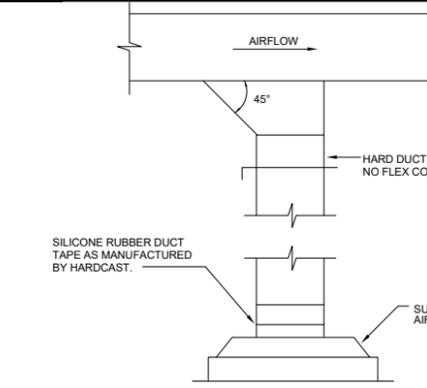
| MAXIMUM SIZE (INCHES) | ROUND DUCTS                                   |                                                     |                                       |
|-----------------------|-----------------------------------------------|-----------------------------------------------------|---------------------------------------|
|                       | SPIRAL SEAM DUCT (MINIMUM THICKNESS, NOMINAL) | LONGITUDINAL SEAM DUCT (MINIMUM THICKNESS, NOMINAL) | FITTINGS (MINIMUM THICKNESS, NOMINAL) |
| THROUGH 12            | 0.019 INCH (28 GAGE, GALV.)                   | 0.022 INCH (26 GAGE, GALV.)                         | 0.022 INCH (26 GAGE, GALV.)           |
| 13 THROUGH 18         | 0.022 INCH (26 GAGE, GALV.)                   | 0.028 INCH (24 GAGE, GALV.)                         | 0.028 INCH (24 GAGE, GALV.)           |
| 19 THROUGH 28         | 0.028 INCH (24 GAGE, GALV.)                   | 0.034 INCH (22 GAGE, GALV.)                         | 0.034 INCH (22 GAGE, GALV.)           |
| 29 THROUGH 36         | 0.034 INCH (22 GAGE, GALV.)                   | 0.040 INCH (20 GAGE, GALV.)                         | 0.040 INCH (20 GAGE, GALV.)           |
| 37 THROUGH 52         | 0.040 INCH (20 GAGE, GALV.)                   | 0.052 INCH (18 GAGE, GALV.)                         | 0.052 INCH (18 GAGE, GALV.)           |



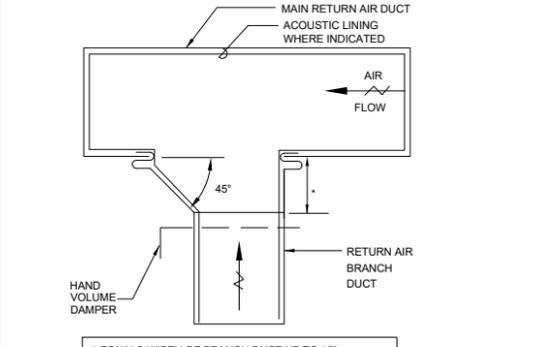
**TYPICAL LOW PRESSURE BRANCH DUCT TAKE-OFF**  
NOT TO SCALE



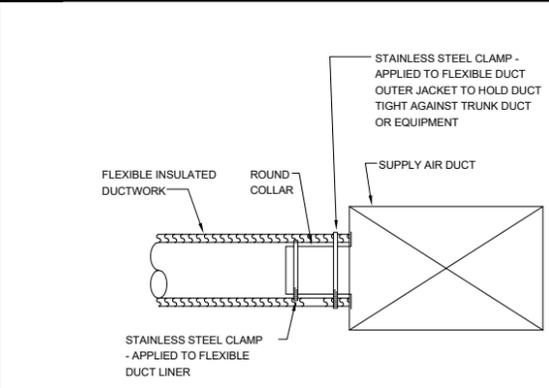
**TYPICAL LOW PRESSURE BRANCH DUCT TAKE-OFF**  
NOT TO SCALE



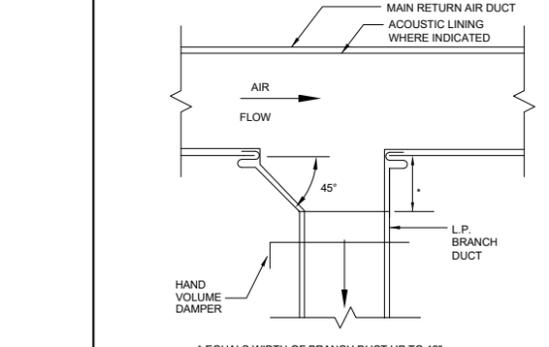
**DUCT BRANCH TAKE-OFF DETAIL**  
NOT TO SCALE



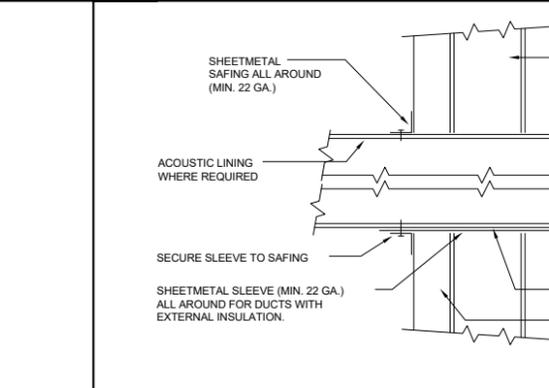
**TYPICAL RETURN AIR BRANCH DUCT TAKE-OFF**  
NOT TO SCALE



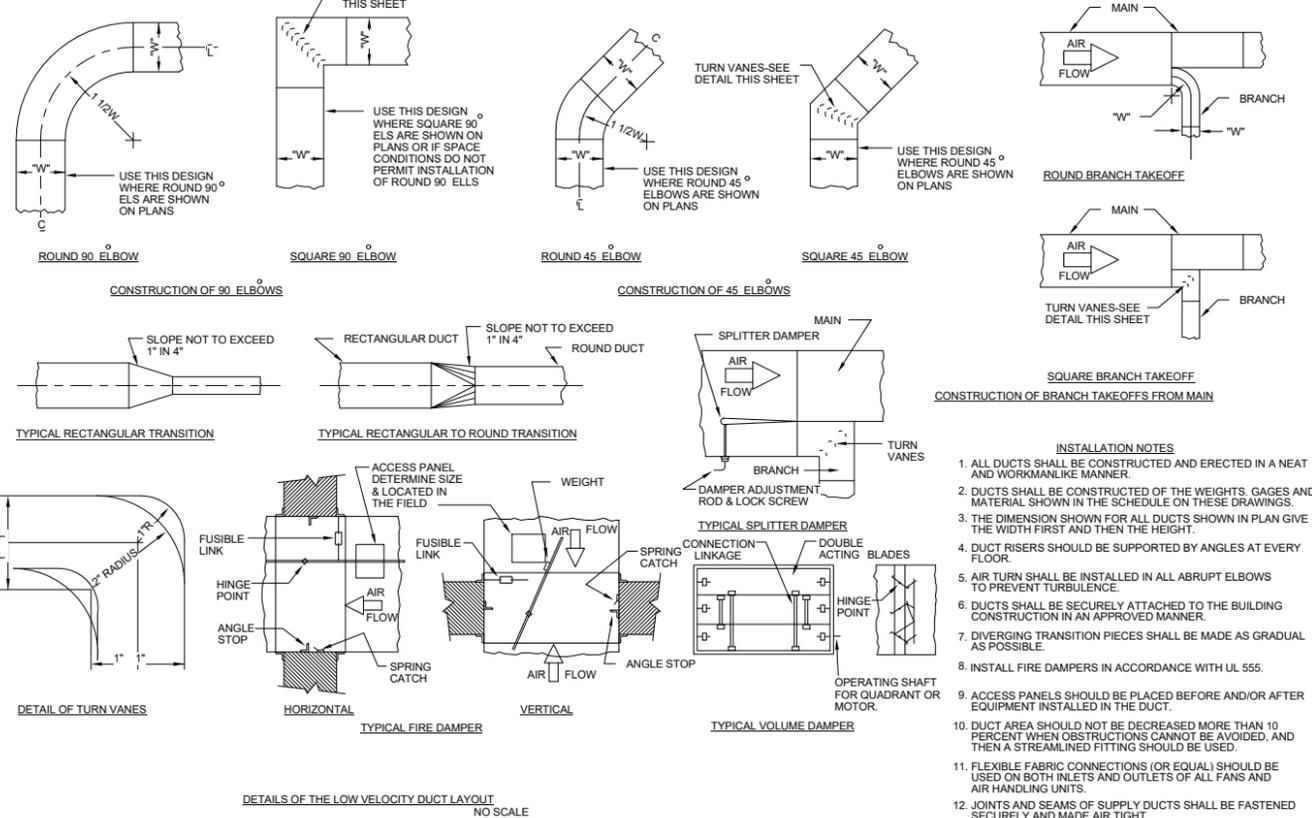
**TYPICAL FLEXIBLE DUCT CONNECTION**  
N.T.S.



**TYPICAL SUPPLY AIR BRANCH DUCT TAKE-OFF**  
NOT TO SCALE



**DUCT PENETRATION THROUGH NON-FIRE RATED WALL**  
NOT TO SCALE



**DETAILS OF THE LOW VELOCITY DUCT LAYOUT**  
NO SCALE

- INSTALLATION NOTES**
- ALL DUCTS SHALL BE CONSTRUCTED AND ERECTED IN A NEAT AND WORKMANLIKE MANNER.
  - DUCTS SHALL BE CONSTRUCTED OF THE WEIGHTS, GAGES AND MATERIAL SHOWN IN THE SCHEDULE ON THESE DRAWINGS.
  - THE DIMENSION SHOWN FOR ALL DUCTS SHOWN IN PLAN GIVE THE WIDTH FIRST AND THEN THE HEIGHT.
  - DUCT RISERS SHOULD BE SUPPORTED BY ANGLES AT EVERY FLOOR.
  - AIR TURN SHALL BE INSTALLED IN ALL ABRUPT ANGLES TO PREVENT TURBULENCE.
  - DUCTS SHALL BE SECURELY ATTACHED TO THE BUILDING CONSTRUCTION IN AN APPROVED MANNER.
  - DIVERGING TRANSITION PIECES SHALL BE MADE AS GRADUAL AS POSSIBLE.
  - INSTALL FIRE DAMPERS IN ACCORDANCE WITH UL 555.
  - ACCESS PANELS SHOULD BE PLACED BEFORE AND/OR AFTER EQUIPMENT INSTALLED IN THE DUCT.
  - DUCT AREA SHOULD NOT BE DECREASED MORE THAN 10 PERCENT WHEN OBSTRUCTIONS CANNOT BE AVOIDED, AND THEN A STREAMLINED FITTING SHOULD BE USED.
  - FLEXIBLE FABRIC CONNECTIONS (OR EQUAL) SHOULD BE USED ON BOTH INLETS AND OUTLETS OF ALL FANS AND AIR HANDLING UNITS.
  - JOINTS AND SEAMS OF SUPPLY DUCTS SHALL BE FASTENED SECURELY AND MADE AIR TIGHT.

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info@robertdavisengineering.com

Seals:

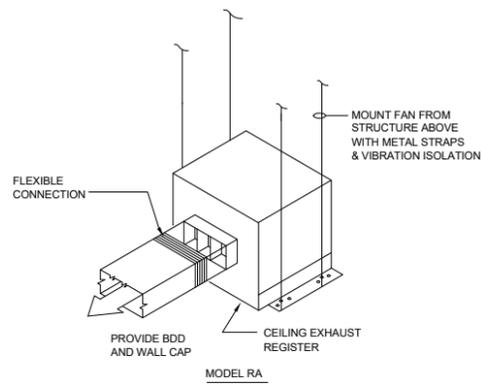
**A NEW SANCTUARY EMANUEL BAPTIST CHURCH**  
106 BOONE STREET  
SUMMERVILLE, SC

| Mark | Date | Description |
|------|------|-------------|
|      |      |             |
|      |      |             |
|      |      |             |
|      |      |             |

**SHEET TITLE**  
**DUCT DETAILS**

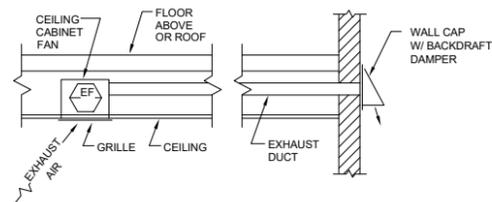
|          |           |
|----------|-----------|
| Drawn    | Author    |
| Designed | Designer  |
| Checked  | Approver  |
| Date     | 2/28/2020 |
| Job No.  | 19078     |

Sheet No.  
**M302**



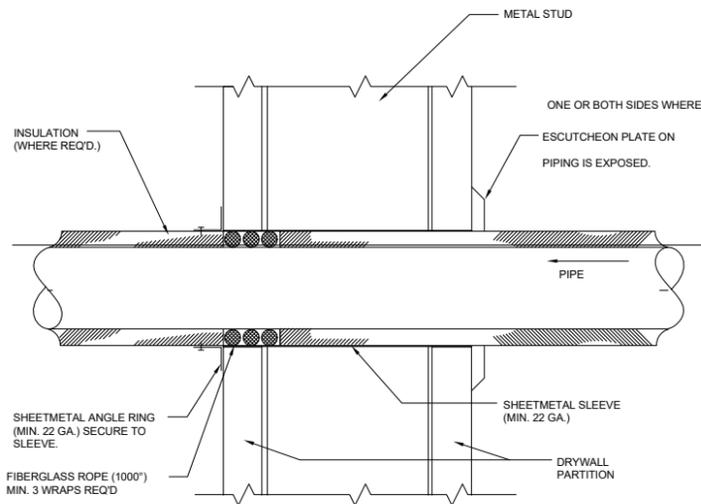
**CEILING EXHAUST FAN DETAIL**  
NOT TO SCALE

**1** CEILING EXHAUST FAN DETAIL  
1/4" = 1'-0"



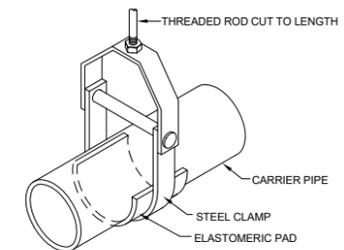
**BATHROOM EXHAUST FAN DETAIL - SIDEWALL DISCHARGE**  
N.T.S.

**2** BATHROOM EXHAUST  
1/4" = 1'-0"



**PIPE SLEEVE THROUGH WALL DETAIL**  
NOT TO SCALE

**3** PIPE THRU WALL  
1/4" = 1'-0"



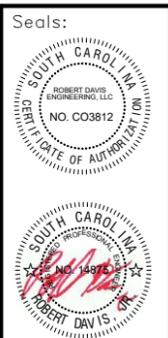
**CLEVIS TYPE PIPE SUPPORT FOR NONMETALLIC PIPE**  
NTS

**4** PIPE SUPPORT  
1/4" = 1'-0"

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info@robertdavisengineering.com



**A NEW SANCTUARY EMANUEL  
BAPTIST CHURCH  
106 BOONE STREET  
SUMMERVILLE, SC**

| Mark | Date | Description |
|------|------|-------------|
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**SHEET TITLE**  
**HVAC  
DETAILS**

|          |           |
|----------|-----------|
| Drawn    | RD        |
| Designed | RD        |
| Checked  | RD        |
| Date     | 2/28/2020 |
| Job No.  | 19078     |

Sheet No.  
**M303**



# GENERAL NOTES

- WASTE PIPE SHALL SLOPE 2 % MINIMUM, UNLESS OTHERWISE NOTED OR REQUIRED BY CODE.
- ALL DRAIN, WATER LINES SHALL BE KEPT TIGHT TO THE UNDERSIDE OF EQUIPMENT & SECURED IN PLACE.
- CONTRACTOR SHALL VERIFY THE LOCATION OF THE SANITARY SEWER AT SITE AND SHALL REVISE THE SEWER SYSTEM AS REQUIRED.
- PROVIDE TRAP PRIMERS FOR FLOOR DRAINS.
- ALL CLEANOUTS SHALL BE INSTALLED WHERE READILY ACCESSIBLE. THE CONTRACTOR SHALL COORDINATE ALL CLEANOUT LOCATIONS WITH EQUIPMENT, CABINETS, ETC. AND THE ARCHITECT PRIOR TO ANY INSTALLATION.
- ALL VALVES, TRAP PRIMERS, WATER HAMMERS ARRESTORS OR OTHER EQUIPMENT SHOWN IN WALLS OR ABOVE NON-ACCESSIBLE CEILING SHALL BE INSTALLED BEHIND AN ACCESS PANEL.
- ALL PLUMBING FIXTURE VENTS TO TERMINATE A MINIMUM OF 12 INCHES FROM ANY VERTICAL SURFACE AND 10 FEET FROM ANY OUTSIDE AIR INTAKE.
- CONTRACTOR SHALL PROVIDE CONDENSATE DRAINS FROM A/C UNITS TO APPROVED DRAIN POINT.
- INSTALLATION SHALL CONFORM TO THE ENERGY CODE FOR NEW NON-RESIDENTIAL BUILDINGS.
- PRIOR TO COMMENCING WORK ON THIS PROJECT, CONTRACTOR SHALL VERIFY DEPTH, SIZE, LOCATION AND CONDITION OF ALL EXISTING UTILITIES IN FIELD BEFORE STARTING WORK. SHOULD CONDITIONS EXIST OTHER THAN THOSE INDICATED WHICH WOULD CAUSE THE DESIGN TO BE ALTERED, CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY.
- CONTRACTOR SHALL COORDINATE INSTALLATION OF PLUMBING WORK WITH ALL OTHER TRADES SO AS TO AVOID UNNECESSARY DELAY OR INTERFERENCES. CONTRACTOR TO REVIEW ARCHITECTURAL AND EQUIPMENT SHEETS.
- ALL PLUMBING WORK AND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE STATE & LOCAL ORDINANCES & REGULATIONS HAVING JURISDICTION. CONTRACTOR SHALL OBTAIN ALL APPROVALS REQUIRED FROM REGULATING AGENCIES BEFORE STARTING WORK. ALL PLUMBING WORK & MATERIALS SHALL MEET THE REQUIREMENTS OF THE LATEST EDITIONS OF THE LOCAL PLUMBING CODE, UNLESS OTHERWISE REQUIRED BY THE DEPARTMENT OF BUILDING & SAFETY. OBTAIN & PAY FOR ALL PERMITS, FEES & INSPECTIONS REQUIRED BY GOVERNING AUTHORITIES. ALL PIPING TO BE CONCEALED UNLESS NOTED OTHERWISE.
- THE EQUIPMENT ROUGH-INS AS SHOWN ARE BASED UPON AVAILABLE INFORMATION HOWEVER, IN SOME INSTANCES, THE OWNER OR SUPPLIER MAY SUBSTITUTE OR THE EQUIPMENT ITEM MAY VARY FROM WHAT IS SHOWN, THEREFORE, THE CONTRACTOR SHALL VERIFY ALL CRITICAL DIMENSIONS WITH THE OWNER PRIOR TO CONSTRUCTION. FAILURE OF THE CONTRACTOR TO VERIFY THESE DIMENSIONS SHALL PLACE THE RESPONSIBILITY FOR ANY SUBSEQUENT RELOCATION DIRECTLY ON THE CONTRACTOR.
- INSTALL SHUT-OFF VALVES ON ALL HOT & COLD WATER LINES TO FIXTURE OR APPLIANCE.
- ALL VALVES, UNIONS, ETC. TO BE SAME SIZE AS PIPE UNLESS OTHERWISE INDICATED ON DRAWINGS.
- ENSURE THAT ALL JOINTS, GAPS AND SPACES ALONG THE PERIMETER OF PLUMBING FIXTURES ARE TO BE SEALED WITH NSF APPROVED SEALANT TO WITHIN 1/32".
- SURFACE MOUNTED PIPING IS NOT ACCEPTABLE PIPING AND CONDUITS OF ALL TYPES MUST BE CONCEALED WITHIN WALLS, FLOORS AND CEILING, INCLUDING CONDENSATE DRAIN LINES, WATER HEATER PRESSURE RELIEF LINES AND SODA LINES.
- ALL NEW PENETRATIONS THRU EXISTING CONCRETE FLOOR SLAB SHALL BE X-RAYED PRIOR TO PROCEEDING WITH ANY PENETRATIONS.
- CONSTRUCTION TO CONFORM WITH:
  - 2012 INTERNATIONAL BUILDING CODE, WITH LOCAL AMENDMENTS.
  - 2012 INTERNATIONAL MECHANICAL CODE, WITH LOCAL AMENDMENTS.
  - 2012 INTERNATIONAL PLUMBING CODE, WITH LOCAL AMENDMENTS.
  - 2011 NATIONAL ELECTRICAL CODE, WITH LOCAL AMENDMENTS.
  - 2012 INTERNATIONAL FIRE CODE, WITH LOCAL AMENDMENTS.
  - ALONG WITH ANY OTHER APPLICABLE LOCAL CODE AND STATE LAWS AND REGULATIONS.
- BRASS LEAD CONTENT SHALL NOT EXCEED 0.25%.
- ALL SINKS SHALL HAVE A MIXED-VALVE FAUCET.

## PLUMBING FIXTURE SCHEDULE

| SYMBOL | MANUFACTURER         | MODEL               | FIXTURE DESCRIPTION                     | ACCESSORIES                        | SUPPLY       | WASTE | VENT   | REMARKS                                              |
|--------|----------------------|---------------------|-----------------------------------------|------------------------------------|--------------|-------|--------|------------------------------------------------------|
| P-1    | AMERICAN STANDARD    | 2898.0.12           | WATER CLOSET (TANK) FLOOR TYPE HANDICAP | TOILET SEAT                        | 3/4" CW      | 3"    | 2"     | PROVIDE STAINLESS STEEL GRAB BARS MOUNTED AT 34" AFF |
| P-2    | AMERICAN STANDARD    | 2898.012            | WATER CLOSET                            | TOILET SEAT                        | 3/4" CW      | 3"    | 2"     |                                                      |
| P-3    | AMERICAN STANDARD    | 490.011             | OVAL LAVATORY, COUNTERTOP               | AMERICAN STANDARS, 2385 400 FACUET | 1/2" CW & HW | 2"    | 1 1/2" |                                                      |
| P-4    | AMERICAN STANDARD    |                     | MOP SINK                                | FACUET                             | 1/2" CW      | 2"    | 1 1/2" |                                                      |
| P-5    | AMERICAN STANDARD    |                     | URINAL, WALL TPE                        | SLOAN ROYAL 186-1 FLUSH VALVE      | 3/4"         | 3"    | 2"     |                                                      |
| P-6    | AMERICAN STANDARD    | 31.026              | LAVATORY, WALL HUNG                     | AMERICAN STANDARS, 2385 400 FACUET | 1/2" CW & HW | 2"    | 1 1/2" |                                                      |
| P-7    | AMERICAN STANDARD    | 0614.00             | STUDIO UNDERCOUNTER SINK                | AMERICAN STANDARD, 2385 400 FACUET | 1/2" CW & HW | 2"    | 1 1/2" |                                                      |
| P-8    | FIBERGLASS UNLIMITED | MODEL 12-B W WINDOW | BAPISTRY                                | INLINE HEATER W BACKFLOW PREVENTER | 1/2" CW & HW | 2"    | 1 1/2" |                                                      |
| EW-1   | EKLAY                |                     | ELECTRIC WATER COOLER (TWO STATIONS)    |                                    | 3/4" CW      | 2"    | 1 1/2" | SEE PLAN FOR LOCATION                                |

## PLUMBING PIPE SCHEDULE

| PIPING SYSTEM                         | PIPING MATERIALS |     |              |            | PIPE FITTINGS |              | CONDITIONS FIELD TEST |        |          | REMARKS                     |
|---------------------------------------|------------------|-----|--------------|------------|---------------|--------------|-----------------------|--------|----------|-----------------------------|
|                                       | SIZES            | SCH | ASTM         | MATERIAL   | MATERIAL      | TYPE         | TEMP F                | TIME   | PRESSURE |                             |
| DOMESTIC WATER - ABOVE GRADE          | ALL              | -   | 875, 88, 251 | COPPER "L" | WR0T COPPER   | SWEAT JOINT  | 40-140                | 2 HR   | 100 PSI  | TEST PER LOCAL REQUIREMENTS |
| DOMESTIC WATER - ABOVE GRADE - OPTION | ALL              | -   | D-2846       | CPVC-4120  | CPVC          | SOLVENT WELD | 40-140                | 2 HR   | 100 PSI  | TEST PER LOCAL REQUIREMENTS |
| DOMESTIC WATER - ABOVE GRADE - OPTION | ALL              | -   | F-876, 877   | PEX "      | METAL INSERT  | CRIMP RING   | 40-140                | 2 HR   | 100 PSI  | TEST PER LOCAL REQUIREMENTS |
| WASTE AND VENT ABOVE GRADE            | ALL              | SV  | 174          | CAST IRON  | CAST IRON     | NO-HUB       | 40-140                | 1/2 HR | 10 FEET  | -                           |
| WASTVENT ABOVE GRADE - OPTION         | ALL              | 40  | PVC-1120     | PVC        | PVC           | SOLVENT WELD | 40-140                | 1/2 HR | 10 FEET  | -                           |
| HVAC CONDENSATE LINES                 | ALL              | 40  | PVC-1120     | PVC        | PVC           | SOLVENT WELD | 35                    | -      | -        | -                           |

NOTES: SOME OF THE ABOVE PIPING SPECIFICATION AND SYSTEM DO NOT APPLY SPECIFICALLY TO THIS PROJECT.  
 \* REQUIRES CERTIFIED WELDER  
 \*\* PEX TUBING SHALL MEET ALL THE REQUIREMENTS OF THE IPC (INTERNATIONAL PLUMBING CODE) LATEST ADOPTED EDITION AND ALL LOCAL PLUMBING CODE REQUIREMENTS  
 IPC SECTION 605 MATERIALS, JOINTS AND CONNECTIONS; TABKE 605.5 WATER DISTRIBUTION PIPE ANDT TABLE 605.6 MANUFACTURED PIPE NIPPLES, ALL PIPING SHALL BE SUPPORTED PER SECTION 308 PIPING SUPPORT. PIPE SHALL BE SUPPORTED PER IPC SECTION 308TABLE 308.5, CONTRACTOR SHALL SUBMIT MANUFACTURE'S INFORMATION AND RECOMMENDATIONS ON PLEX INSTALLATION DURING THE SUBMITTAL PROCESS FOR APPROVAL OF HANDEY LOCATIONS.

## MINIMUM PIPING INSULATION

| PIPING SYSTEM                    | TEMPERATURE - F | PIPE SIZE | INSULATION THICKNESS/MATERIAL | INSULATION COVERING/JACKET | NOTES                 |
|----------------------------------|-----------------|-----------|-------------------------------|----------------------------|-----------------------|
| DOMESTIC COLD WATER              | 55 - 65         | UP TO 1"  | 1/2" FIBERGLASS               | ALL SERVICE JACKET         | SEAL ALL JOINTS FULLY |
| DOMESTIC HOT WATER               | 105 - 140       | UP TO 1"  | 1" FIBERGLASS                 | ALL SERVICE JACKET         | SEAL ALL JOINTS FULLY |
| CONDENSATE DRAINS - COPPER/STEEL | AMB.            | ALL       | 1/2" FIBERGLASS               | ALL SERVICE JACKET         | SEAL ALL JOINTS FULLY |
| CONDENSATE DRAINS - PVC/PLASTIC  | AMB.            | ALL       | NONE                          | NONE                       |                       |

NOTE:  
 PIPE INSULATION TO BE IN COMPLIANCE WITH THE INTERNATIONAL ENERGY CONSERVATION CODE PER SECTION 504.5

| PIPING                       | MATERIAL           | NOMINAL PIPE SIZE (INCHES) |     |       |      |       |       |     |       |       | REMARKS            |
|------------------------------|--------------------|----------------------------|-----|-------|------|-------|-------|-----|-------|-------|--------------------|
|                              |                    | 1/2                        | 5/8 | 3/4   | 1    | 1 1/4 | 1 1/2 | 2   | 2 1/2 | 3     |                    |
| WATER                        | SCH 40 STEEL       | 6'                         | -   | 6'    | 7'   | 8'    | 10'   | 10' | 10'   | 12'   | SEE NOTES 1 & 2    |
| WATER                        | COOPER             | 5'                         | 5'  | 7'    | 7'   | 7'    | 10'   | 10' | 10'   | 12'   | SEE NOTES 1 & 2    |
| PVC                          | POLYVINYL CHLORINE | 4'                         | -   | 4'-3" | 5'   | 5'-6" | 5'-6" | 6'  | 6'    | 7'-6" | SEE NOTES 1 & 2    |
| PP                           | POLYPROPYLENE      | 32"                        | 32" | 32"   | 32"  | 32"   | 32"   | 32" | -     | -     | SEE NOTES 1, 2 & 4 |
| WATER                        | PEX                | 32"                        | 32" | 32"   | 32"  | 32"   | 32"   | 32" | -     | -     | SEE NOTES 1, 2 & 4 |
| RECOMMENDED HANGER ROD SIZES |                    |                            |     |       | 3/8" |       |       |     |       | 1/2"  |                    |

- NOTES
- DOES NOT APPLY WHERE OTHER LOADING EXIST, INCLUDING VALVES, ETC.
  - LISTED SPACING ARE MAXIMUMS THAT RESULT IN MAXIMUM DEFLECTON
  - GAS LINE SPACING ARE CLOSER ON ROOF INSTALLATIONS.
  - DISTANCE IN INCHES, PEX TUBING SHALL BE SUPPORTED PER IPC (INTERNATIONAL PLUMBING CODE) LATEST ADOPTED EDITION SECTION 308 TABLE 205.5

## WATER HEATER SCHEDULE

| Mark | VOLTAGE | POLES | NUMBER OF ELEMENTS | TANK CAPACITY | WIRE CALLOUT | ELEMENTS | MODEL  | MANUFACTURER | WEIGHT   |
|------|---------|-------|--------------------|---------------|--------------|----------|--------|--------------|----------|
| WH-1 | 208 V   | 2     | 2                  | 30.0 gal      |              | 12000 W  | DEL-30 | A. O. Smith  | 0.10 kip |
| WH-2 | 208 V   | 2     | 2                  | 30.0 gal      |              | 12000 W  | DEL-30 | A. O. Smith  | 0.10 kip |



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Seals:



A NEW SANCTUARY EMANUEL  
 BAPTIST CHURCH  
 106 BOONE STREET  
 SUMMERVILLE, SC

| Mark | Date | Description |
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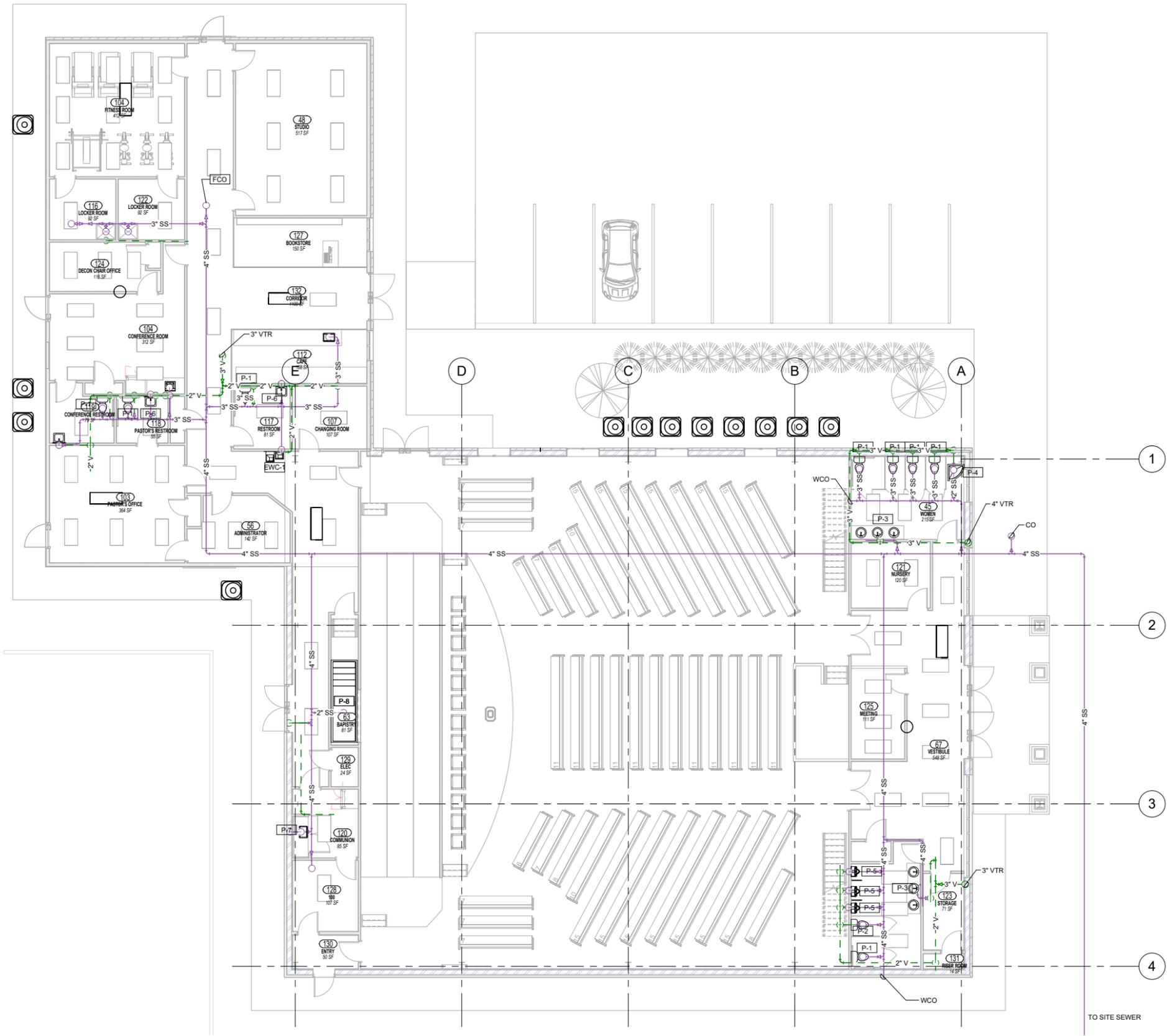
SHEET TITLE

PLUMBING  
 NOTES AND  
 DETAILS

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| Drawn    | RD        |
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| Checked  | RD        |
| Date     | 2/28/2020 |
| Job No.  | 19078     |

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**1 WASTE AND VENT PLAN**  
1/8" = 1'-0"



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EMANUEL BAPTIST  
CHURCH  
106 BOONE STREET  
SUMMERVILLE, SC**

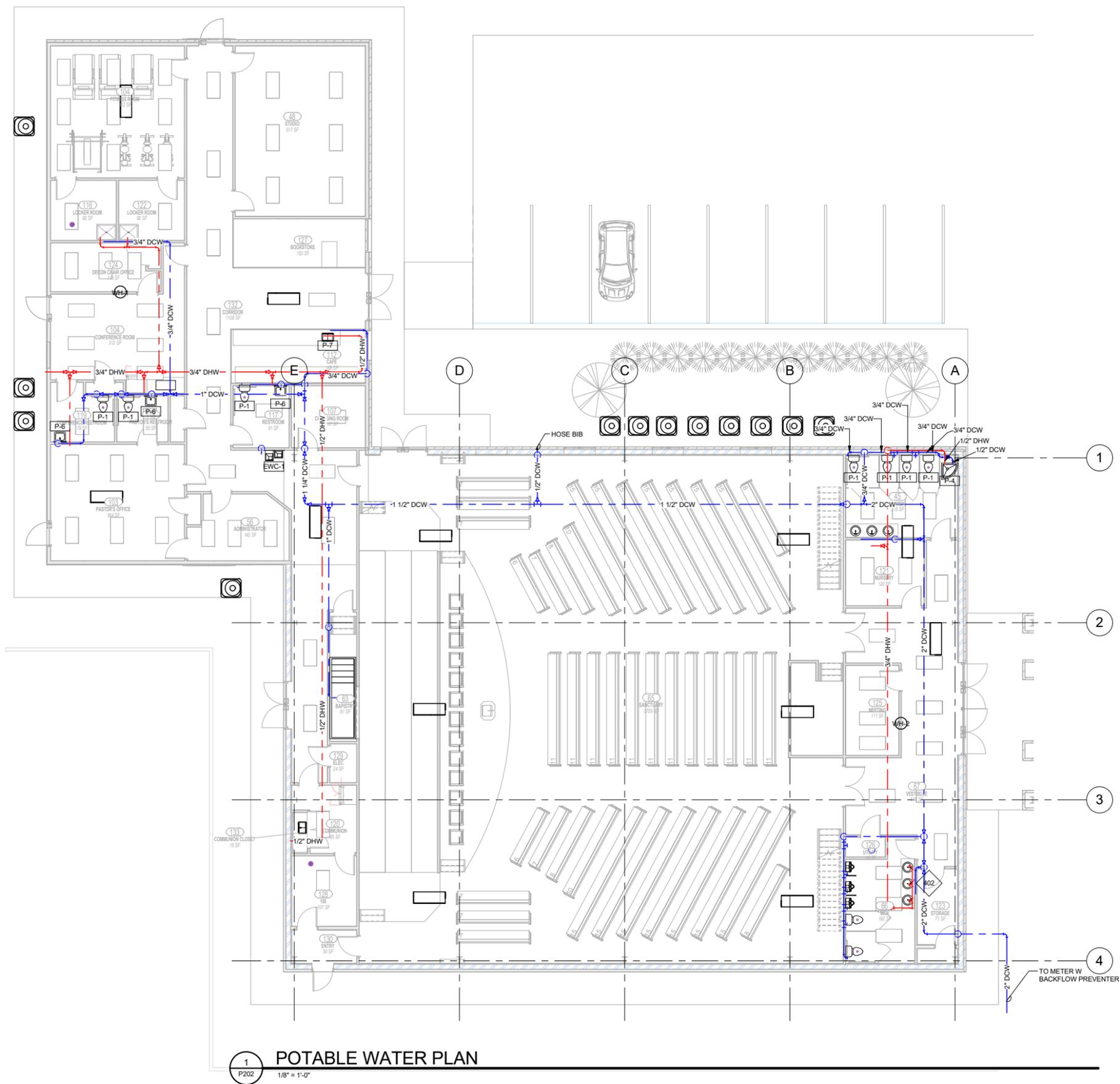
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**SHEET TITLE**  
**WASTE AND VENT PLAN**

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**1 POTABLE WATER PLAN**  
1/8" = 1'-0"



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SUMMERVILLE, SC**

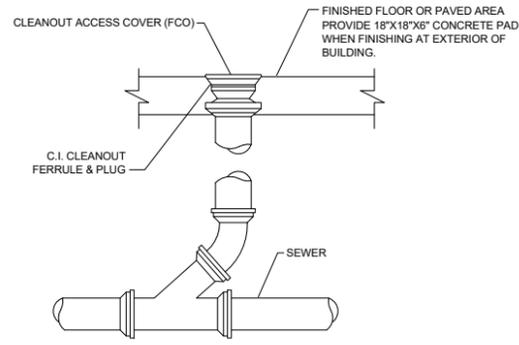
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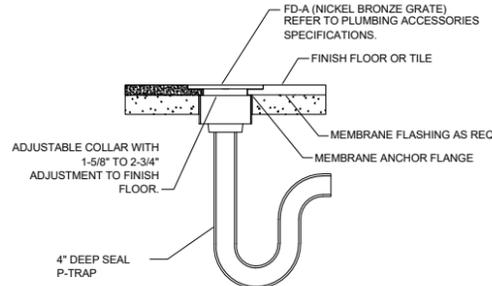
**DOMESTIC  
WATER PLAN**

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| Date     | 2/28/2020 |
| Job No.  | 19078     |

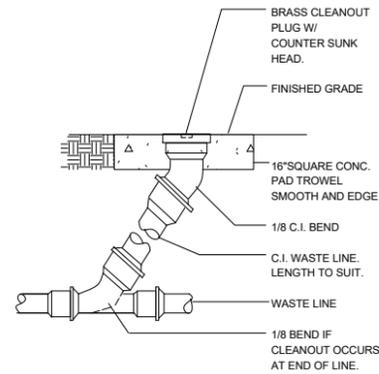
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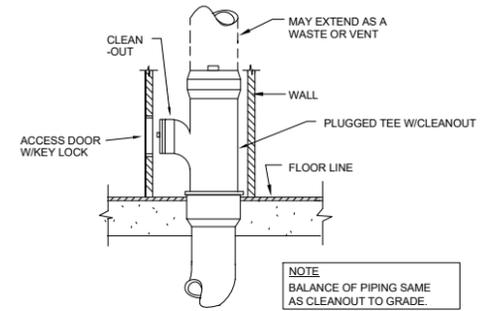
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NOT TO SCALE



**TOILET AREA FLOOR DRAIN**  
NOT TO SCALE



**CLEANOUT TO GRADE**  
NOT TO SCALE



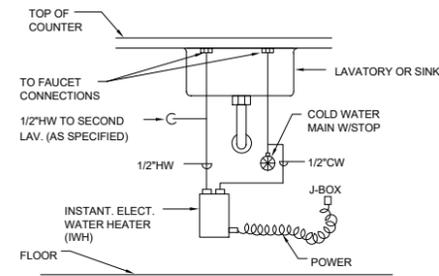
**WALL CLEANOUT DETAIL**  
NOT TO SCALE

**1 DETAIL**  
SCALE: NO SCALE

**2 DETAIL**  
SCALE: NO SCALE

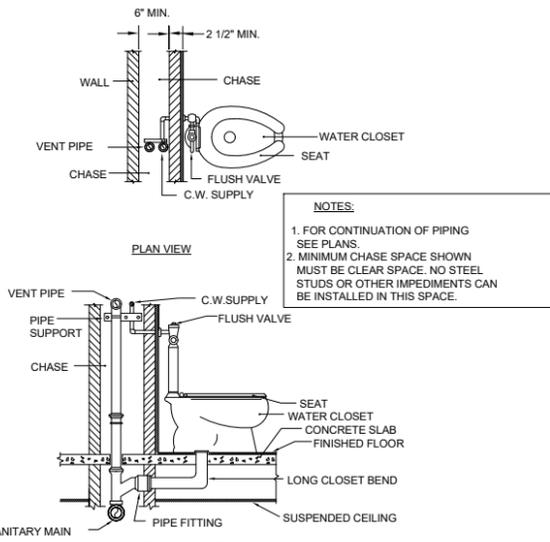
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**4 DETAIL**  
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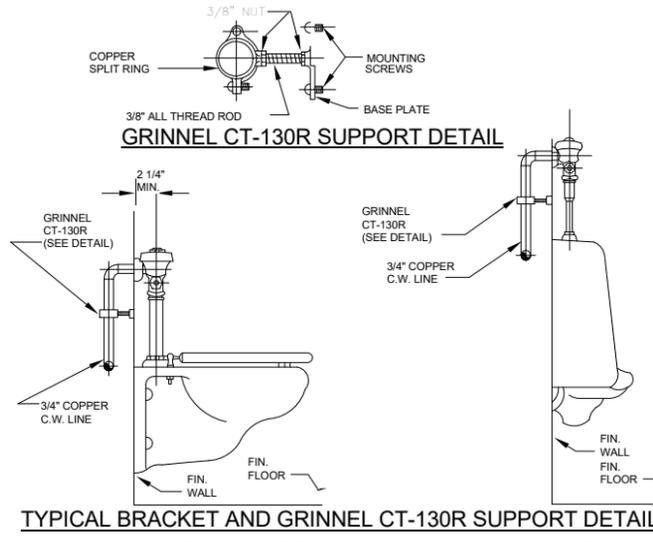


**INSTANTANEOUS WATER HEATER DETAIL**  
NOT TO SCALE

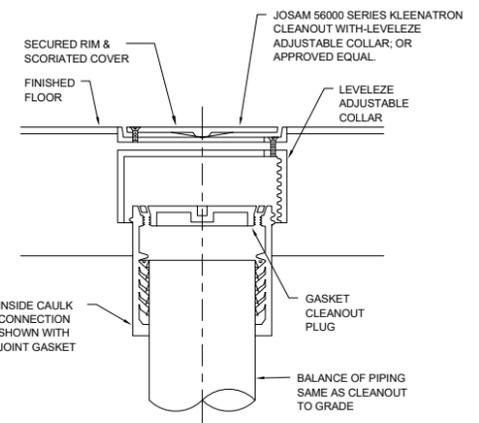
DETP319



**ELEVATION**  
NOT TO SCALE



**TYPICAL BRACKET AND GRINNEL CT-130R SUPPORT DETAIL**  
FOR WATER CLOSET AND URINAL FLUSH VALVES



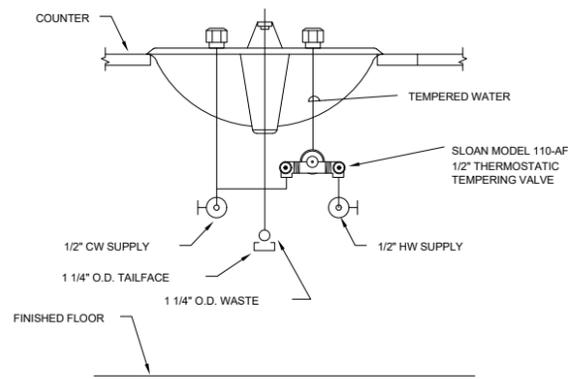
**FLOOR CLEANOUT DETAIL**  
NOT TO SCALE

**5 DETAIL**  
SCALE: NO SCALE

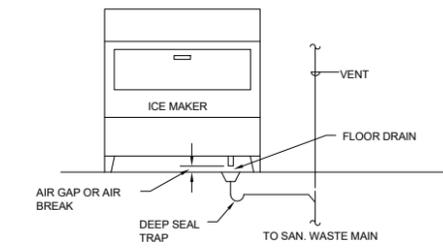
**6 DETAIL**  
SCALE: NO SCALE

**7 DETAIL**  
SCALE: NO SCALE

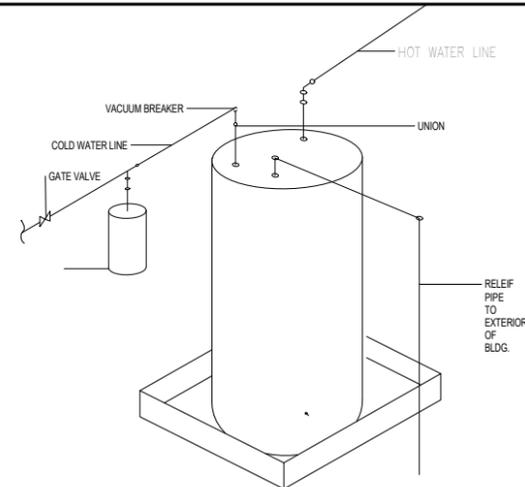
**8 DETAIL**  
SCALE: NO SCALE



**LOCAL MIXING VALVE DETAIL**  
NOT TO SCALE



**ICE MAKER DRAINAGE**  
**PIPING DETAIL**  
NOT TO SCALE



**WATER HEATER DETAIL**  
NOT TO SCALE

**10 DETAIL**  
SCALE: NO SCALE

**11 DETAIL**  
SCALE: NO SCALE

**9 DETAIL**  
SCALE: NO SCALE



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Seals:



**A NEW SANCTUARY EMANUEL**  
**BAPTIST CHURCH**  
**106 BOONE STREET**  
**SUMMERVILLE, SC**

| Mark | Date | Description |
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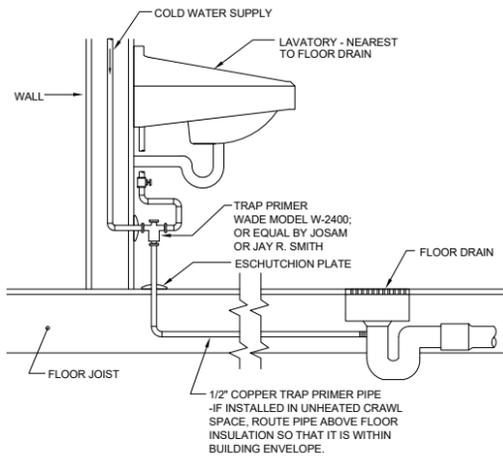
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**PLUMBING**  
**DETAILS**

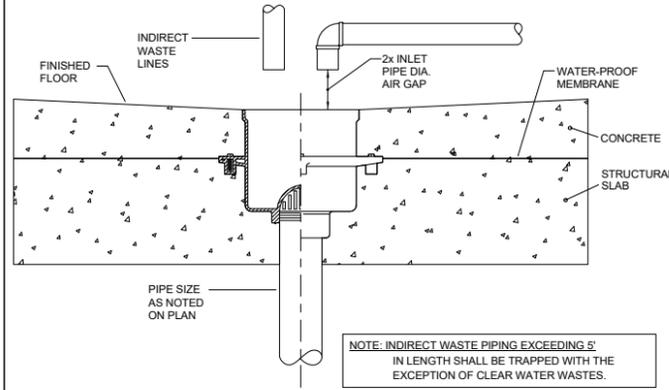
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Sheet No.

**P301**

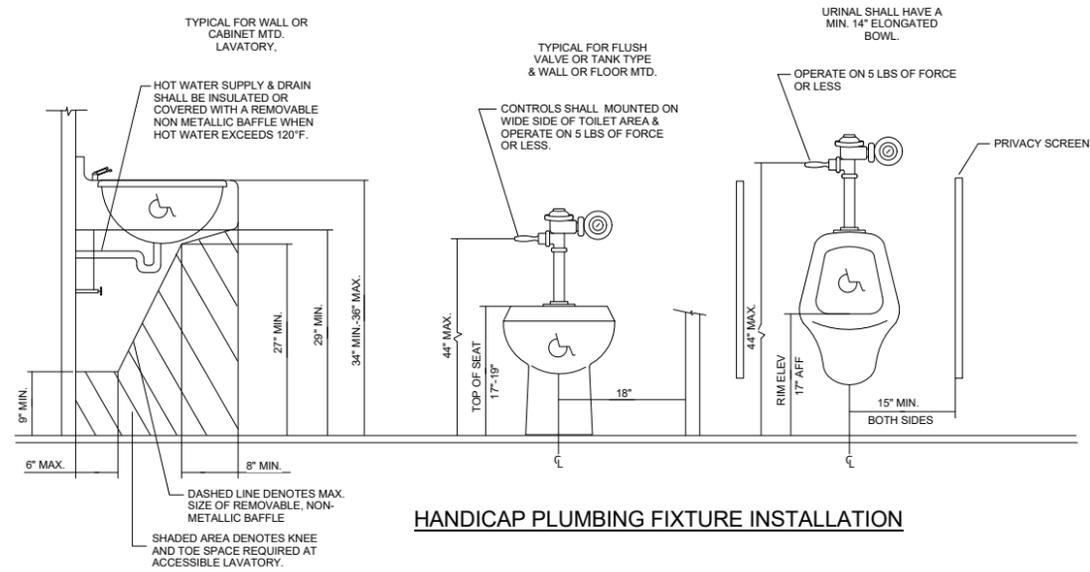


**FLOOR DRAIN TRAP PRIMER DETAIL**  
NOT TO SCALE



**FLOOR SINK DETAIL**  
NOT TO SCALE

NOTE: INDIRECT WASTE PIPING EXCEEDING 5' IN LENGTH SHALL BE TRAPPED WITH THE EXCEPTION OF CLEAR WATER WASTES.

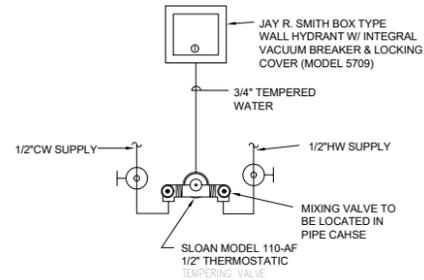


**HANDICAP PLUMBING FIXTURE INSTALLATION**

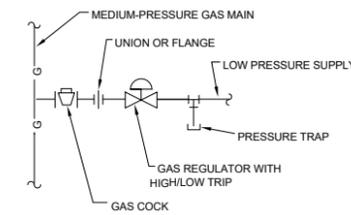
1 **DETAIL**  
SCALE: NO SCALE

2 **DETAIL**  
SCALE: NO SCALE

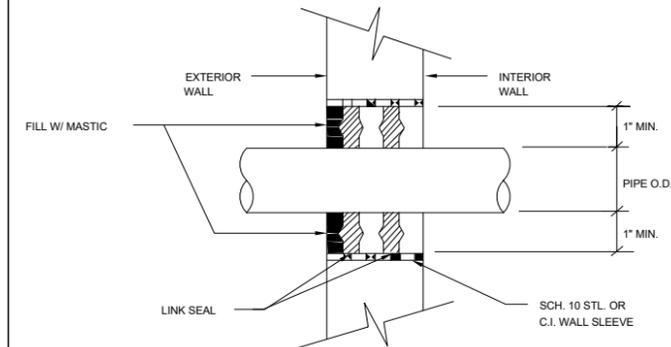
3 **DETAIL**  
SCALE: NO SCALE



**INTERIOR WALL HYDRANT DETAIL**  
NOT TO SCALE



**MEDIUM TO LOW PRESSURE GAS REGULATOR DETAIL**  
NOT TO SCALE

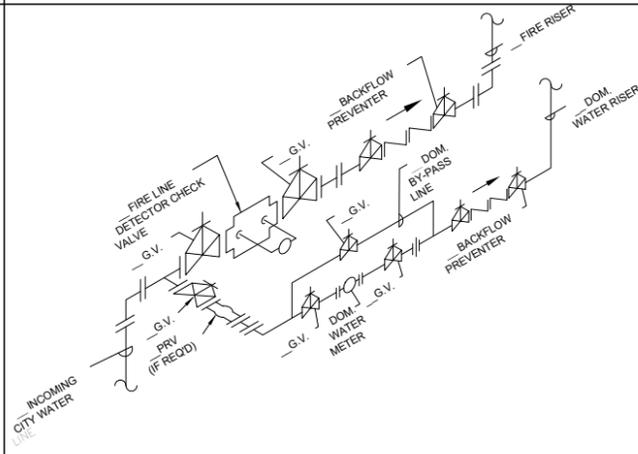


**EXTERIOR WALL SLEEVE DETAIL**  
NOT TO SCALE

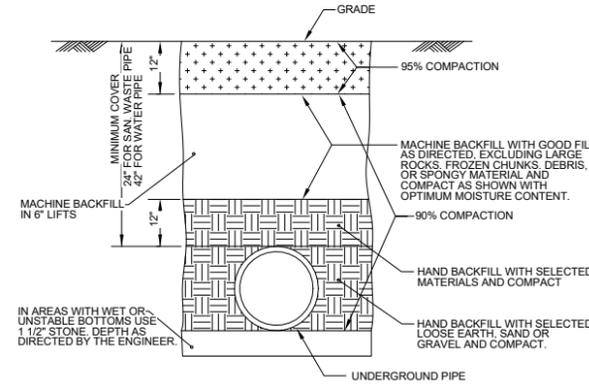
4 **DETAIL**  
SCALE: NO SCALE

6 **DETAIL**  
SCALE: NO SCALE

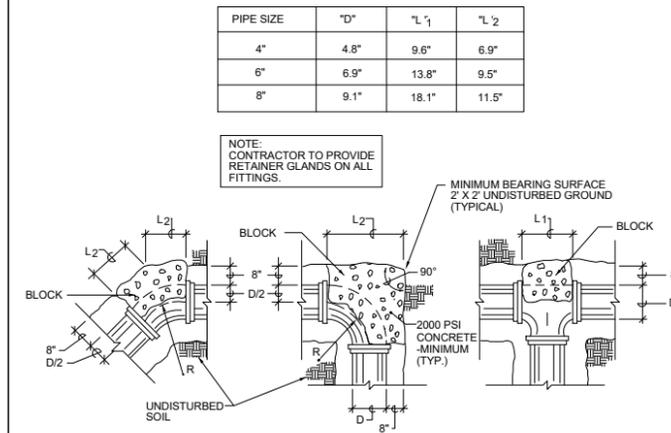
7 **DETAIL**  
SCALE: NO SCALE



**FIRE/DOMESTIC WATER INCOMING SERVICE RISER**  
NOT TO SCALE



**PIPE TRENCH DETAIL**  
NOT TO SCALE



**THRUST BLOCK DETAIL**  
NOT TO SCALE

10 **DETAIL**  
SCALE: NO SCALE

11 **DETAIL**  
SCALE: NO SCALE

12 **DETAIL**  
SCALE: NO SCALE



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A NEW SANCTUARY  
EMANUEL BAPTIST  
CHURCH  
106 BOONE STREET  
SUMMERVILLE, SC

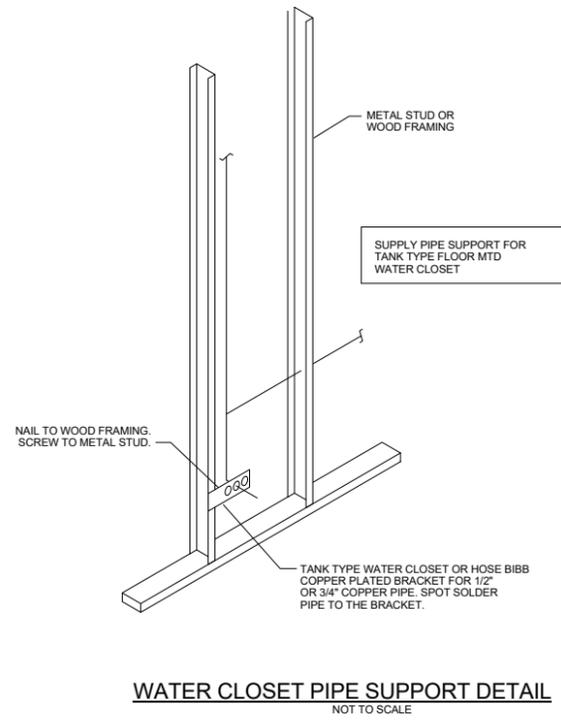
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SHEET TITLE  
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| Date     | 2/28/2020 |
| Job No.  | 19078     |

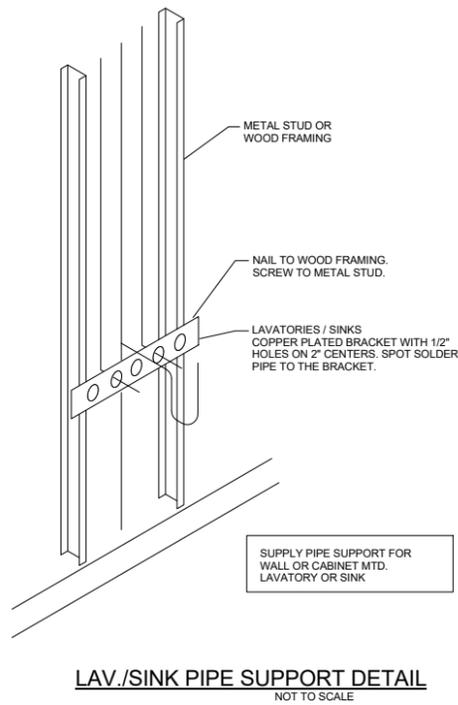
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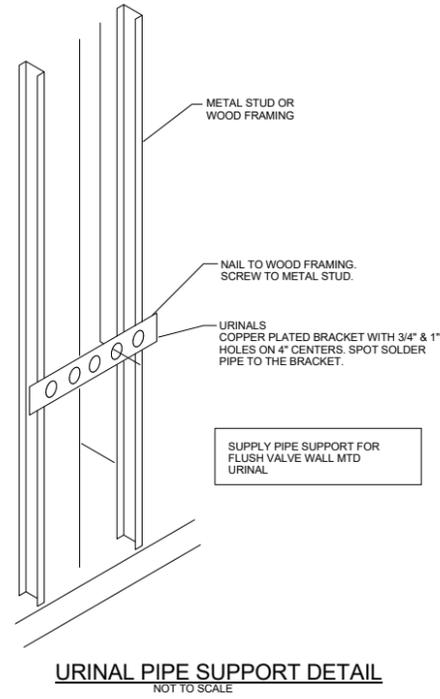
**WATER CLOSET PIPE SUPPORT DETAIL**  
NOT TO SCALE

**1** DETAIL  
SCALE: NO SCALE



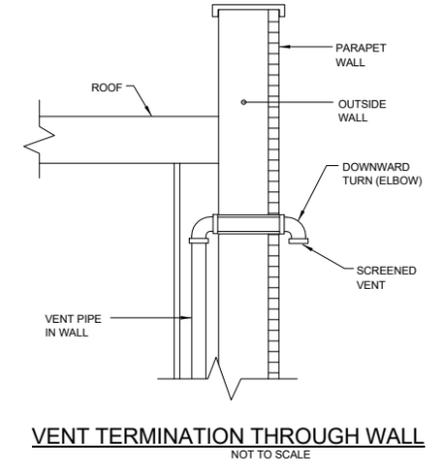
**LAV./SINK PIPE SUPPORT DETAIL**  
NOT TO SCALE

**8** DETAIL  
SCALE: NO SCALE



**URINAL PIPE SUPPORT DETAIL**  
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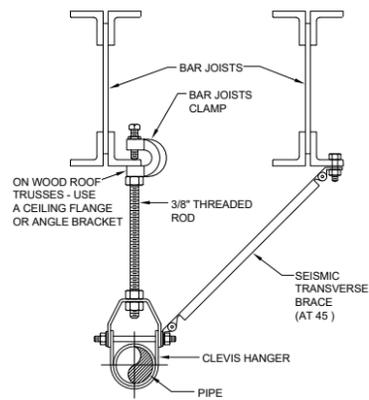
**4** DETAIL  
SCALE: NO SCALE



**VENT TERMINATION THROUGH WALL**  
NOT TO SCALE

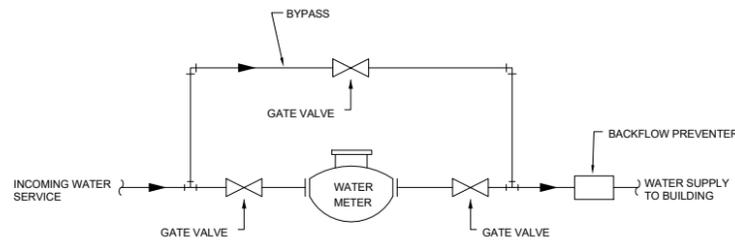
**3** DETAIL  
SCALE: NO SCALE

**NOTE:**  
PROVIDE SEISMIC RESTRAINTS FOR PIPING AS FOLLOWS:  
• 1" & 1-1/2" PIPES: 20 FT. ON CENTER  
• 2" & 2-1/2" PIPES: 30 FT. ON CENTER  
• 3", 4" & 6" PIPES: 40 FT. ON CENTER



**PIPE SUPPORT AND SEISMIC RESTRAINT  
DETAIL - HORIZONTAL PIPING**  
NOT TO SCALE

**2** DETAIL  
SCALE: NO SCALE



**WATER METER INSTALLATION DETAIL**  
NOT TO SCALE

**7** DETAIL  
SCALE: NO SCALE



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Seals:



**A NEW SANCTUARY  
EMANUEL BAPTIST  
CHURCH  
106 BOONE STREET  
SUMMERVILLE, SC**

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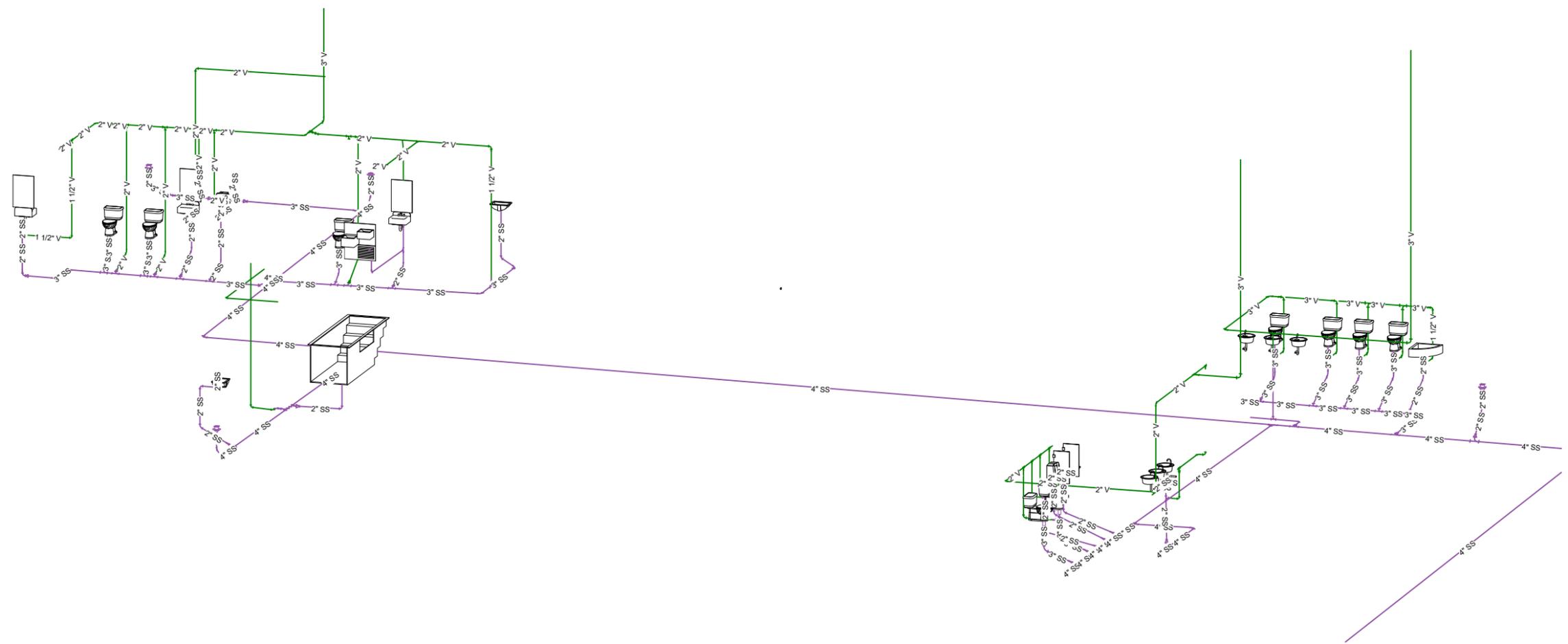
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**PLUMBING  
DETAILS**

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1 WASTE & VENT ISOMETRIC



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BAPTIST CHURCH  
106 BOONE STREET  
SUMMERVILLE, SC**

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SHEET TITLE

**WASTE AND  
VENT  
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| Drawn    | Author    |
| Designed | Designer  |
| Checked  | Approver  |
| Date     | 2/28/2020 |
| Job No.  | 19078     |

Sheet No.  
**P401**

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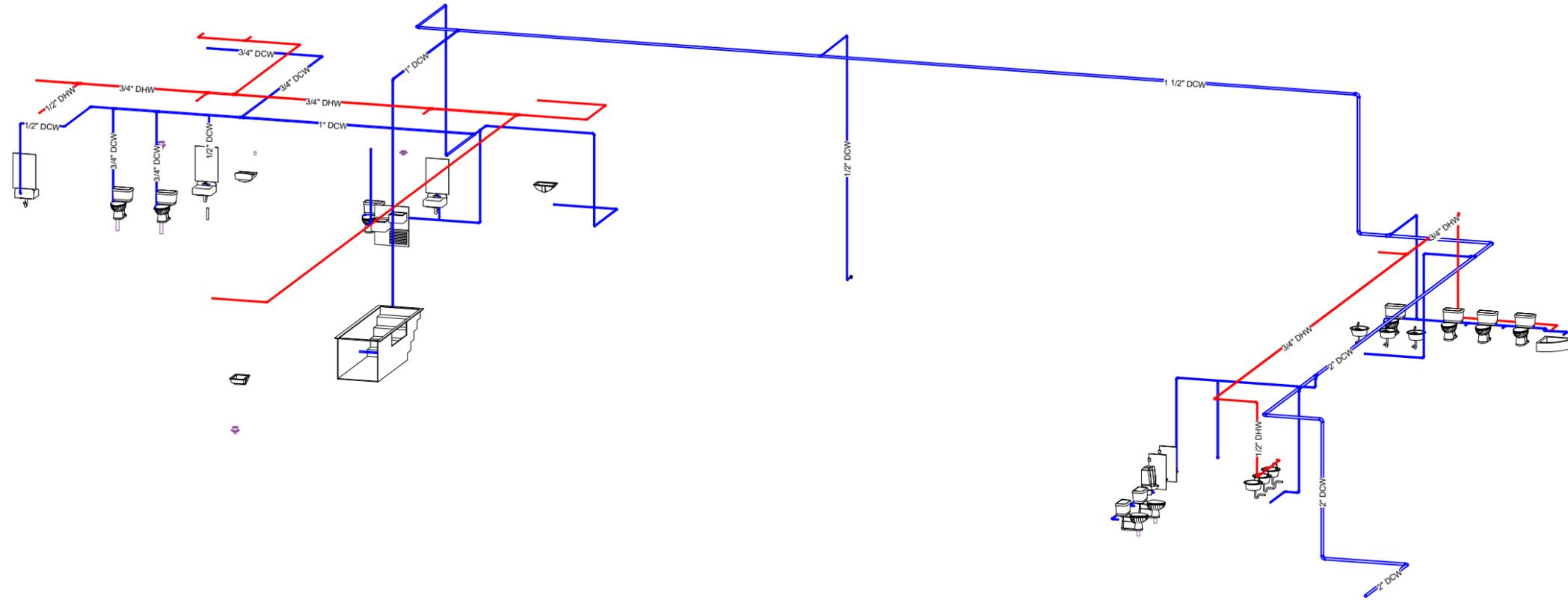
**Robert Davis  
ENGINEERING, LLC**

181 E. Evans Street, BTC 024  
Florence, SC 29506  
Phone (843) 536-0896  
Fax (843) 536-0901  
info@robertdavisengineering.com

Seals:



**A NEW SANCTUARY  
EMANUEL BAPTIST  
CHURCH  
106 BOONE STREET  
SUMMERVILLE, SC**



**1 COLD AND HOT WATER ISOMETRIC**

| Mark | Date | Description |
|------|------|-------------|
|      |      |             |
|      |      |             |
|      |      |             |
|      |      |             |

SHEET TITLE

**POTABLE  
WATER  
ISOMETRIC**

|          |           |
|----------|-----------|
| Drawn    | RD        |
| Designed | RD        |
| Checked  | RD        |
| Date     | 2/28/2020 |
| Job No.  | 19078     |

Sheet No.  
**P402**

**STAFF REPORT  
CDRB Meeting  
March 19, 2020 at 4:00 p.m.**

**TO:** Town of Summerville CDRB  
**FROM:** Planning Staff  
**DATE:** March 13, 2020

**GENERAL INFORMATION**

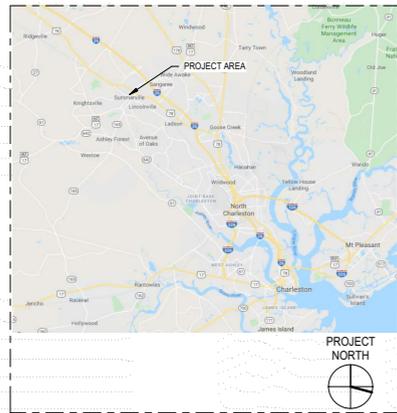
**Applicant:** Presbyterian Home – The Village at Summerville  
**Property Owner:** Presbyterian Home of South Carolina – The Village at Summerville  
**Requested Action:** The applicant is requesting Final Approval for a proposed new 24 bed Memory Care Facility  
**Requested Approval:** Preliminary Approval  
**Existing Zoning:** PUD Planned Development  
**Adjacent Zoning:** **North:** PUD Planned Development  
**South:** PUD Planned Development  
**East:** PUD Planned Development  
**West:** PUD Planned Development  
**Location:** 201 W. 9<sup>th</sup> North Street  
**Existing Land Use:** Presbyterian Home Villages at Summerville  
**Prior Approvals:** First Meeting  
**Ordinance Reference:**  
Sec. 13.3.5. Design Review Board.

- (b) *Mission statement.* The purpose of the commercial design review board is to establish a review process that will protect and improve the visual and aesthetic character and economic value of commercial development within the town. In turn, this establishment of scenic corridors will contribute to the community's sense of place and pride further strengthening the town's unity of character. Through this process, the assurance of respect for the character, integrity, and quality of the built environment of the town will be established without stifling innovative architecture and/or development. All development shall adhere to the definitions and terms outlined in all of the town's zoning ordinances and codes as preliminary criteria. The commercial design review board is granted the authority to determine the appropriateness of the construction of the commercial site in pursuit of achieving that style which is characteristic of the region and of the town in particular as stated in the guidelines of this section.

**Recommendation:**

Based on preliminary review the this proposal appears to meet the requirements of the PUD.

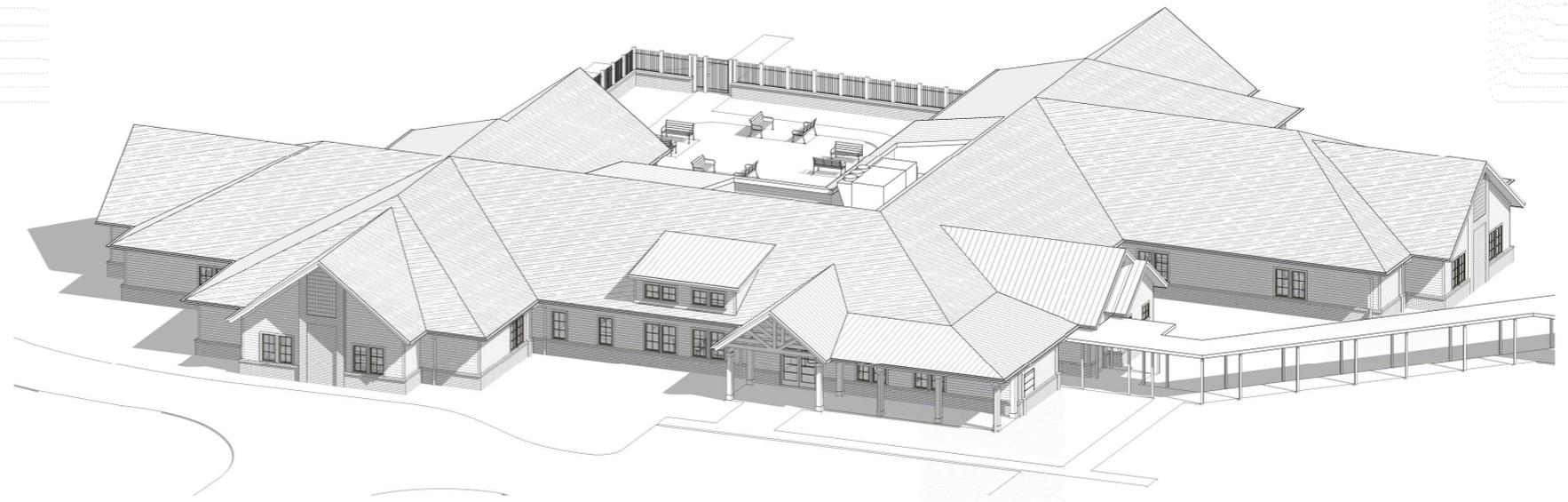
# The Village at Summerville New Memory Care Facility



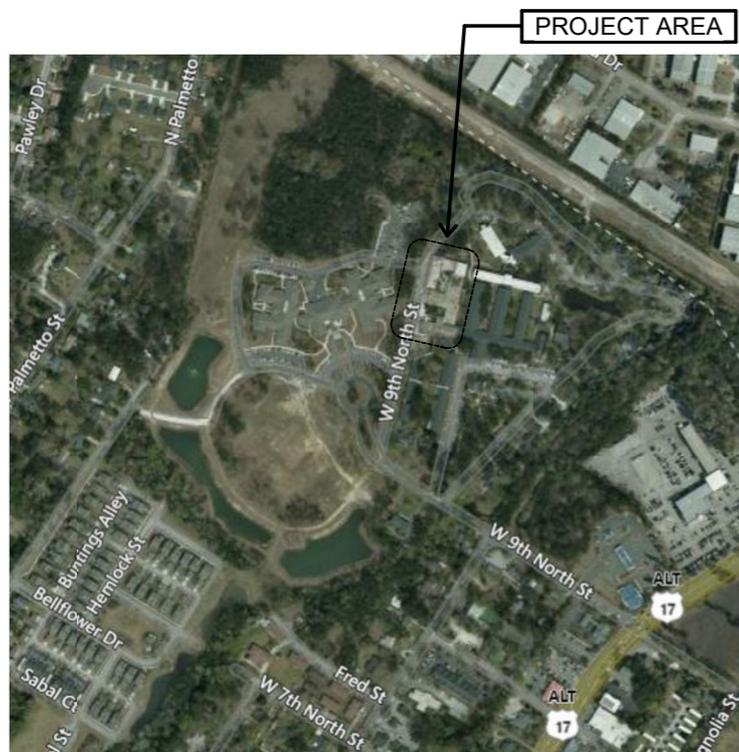
SUMMERVILLE, SC



201 W 9TH N ST, SUMMERVILLE



PERSPECTIVE VIEW - FRONT ELEVATION



Aerial view of community



View of proposed site from Community Road



View across proposed site, toward existing Kitchen, Dining, and Staff Entrance



View across end of proposed site, adjacent buildings are Assisted Living and Independent Living Units



Community road, view toward front of new building



Community road



Planned demolition of existing lean-to shed



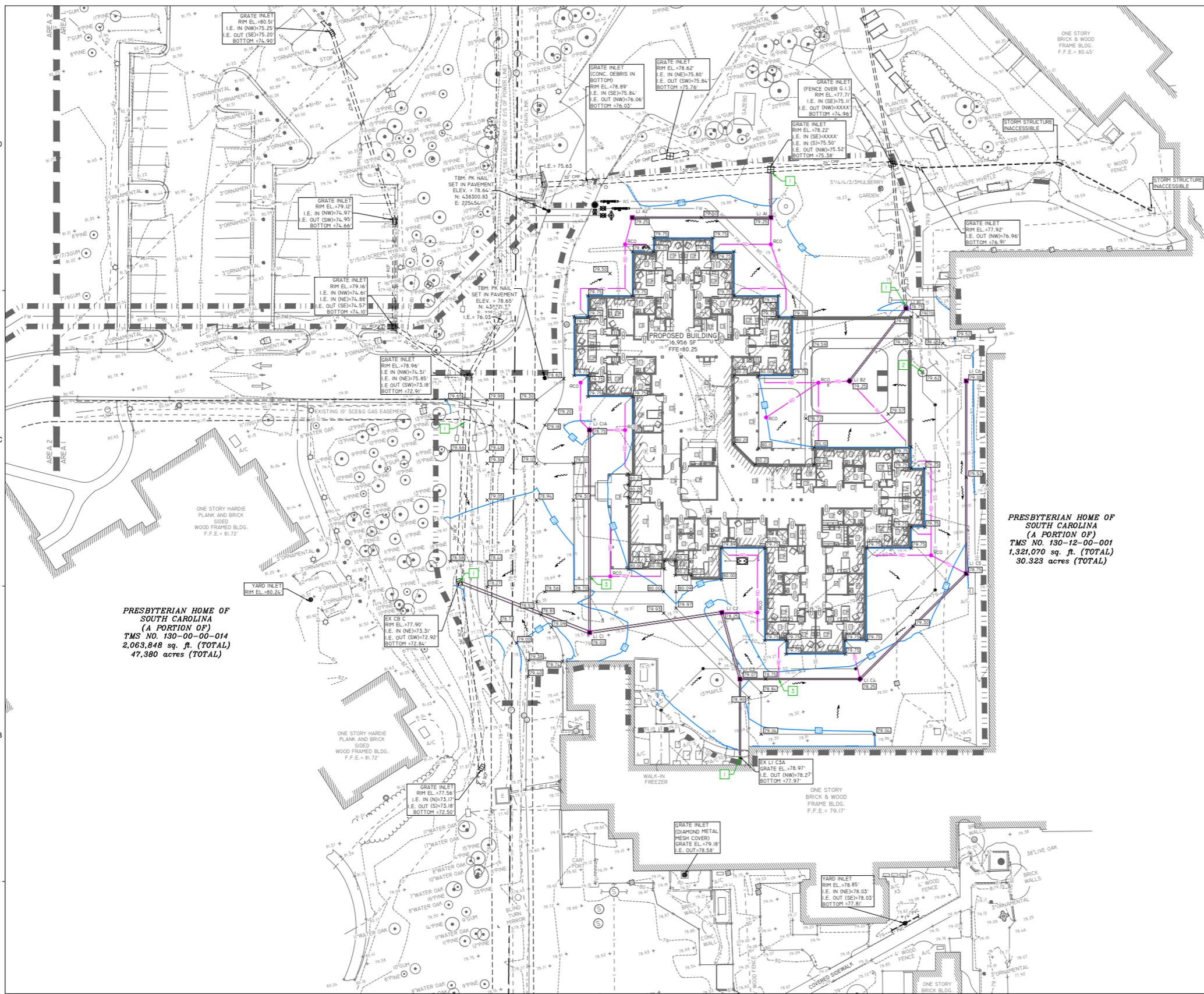
Intersection of community roads, near front of new building; Staff Parking behind landscape to right



Community road at front of new building



View across end of proposed site



**PRESBYTERIAN HOME OF SOUTH CAROLINA (A PORTION OF)**  
**TMS NO. 130-00-00-014**  
**2,063,848 sq. ft. (TOTAL)**  
**47,380 acres (TOTAL)**

**PRESBYTERIAN HOME OF SOUTH CAROLINA (A PORTION OF)**  
**TMS NO. 130-12-00-001**  
**1,321,070 sq. ft. (TOTAL)**  
**30.323 acres (TOTAL)**

**GENERAL NOTES:**

- SEE SHEET C0.01 FOR CIVIL ABBREVIATIONS AND GENERAL NOTES.
  - SEE SHEET C1.01 FOR EXISTING SITE LEGEND.
- KEYNOTES**
- CONNECT TO EXISTING STORM WITH NON SHRINK GROUT.
  - RAISE EXISTING UTILITY TO ELEVATION SHOWN. REFER TO UTILITY PLAN FOR MORE INFORMATION.
  - TIE ROOF DRAINAGE LINE INTO STORM LINE WITH TEE. SEE TABLE AND LEGEND FOR PIPE SIZES.

**DRAINAGE LEGEND**

- LAWN INLET - INSTALL IAW TABLE & DETAIL SHEET C3.20.
- STORM DRAINAGE PIPE - INSTALL IAW TABLE & DETAIL SHEET C3.20.
- ROOF DRAINAGE PIPE (PVC SDR 35) - 6" UNLESS OTHERWISE NOTED. INSTALL AT A MINIMUM 0.5% SLOPE & 1' OF COVER, IAW DETAIL SHEET C3.20.
- ROOF DRAINAGE CLEANOUT - INSTALL IAW DETAIL SHEET C3.20.
- NEW FINISHED GRADE SPOT ELEVATION - SPOTS SHOWN ARE TO EDGE OF PAVEMENT/BOTTOM FACE OF CURB, UNLESS OTHERWISE NOTED.
- NEW FINISHED GRADE CONTOUR
- x 16.00 EXISTING GRADE SPOT
- 19.00 EXISTING GRADE CONTOUR
- LIMITS OF CONSTRUCTION

**STRUCTURE TABLE**

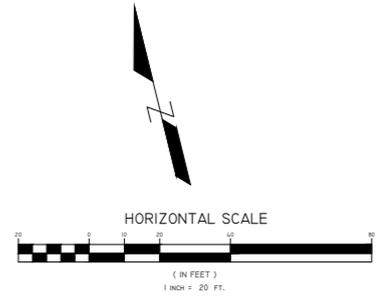
| STRUCTURE | RIM ELEVATION (FT) | BOTTOM ELEV (FT) | DEPTH (FT) | STRUCTURE TYPE |
|-----------|--------------------|------------------|------------|----------------|
| LI A1     | 79.25              | 76.33            | 2.93       | LI             |
| LI A2     | 79.25              | 77.00            | 2.25       | LI             |
| LI B1     | 78.75              | 75.60            | 3.35       | LI             |
| LI B2     | 79.25              | 76.95            | 2.30       | LI             |
| LI C1     | 78.00              | 72.99            | 5.01       | LI             |
| LI C1A    | 78.75              | 76.50            | 2.25       | LI             |
| LI C2     | 78.25              | 73.14            | 5.11       | LI             |
| LI C3     | 79.07              | 73.23            | 5.84       | LI             |
| LI C4     | 78.25              | 73.37            | 4.88       | LI             |
| LI C5     | 78.75              | 73.56            | 5.19       | LI             |
| LI C6     | 79.00              | 73.79            | 5.21       | LI             |

**PIPE TABLE**

| DOWNSTREAM STRUCTURE | UPSTREAM STRUCTURE | DOWNSTREAM INVERT (FT) | UPSTREAM INVERT (FT) | PIPE LENGTH (FT) | PIPE SIZE & MATERIAL | PIPE SLOPE |
|----------------------|--------------------|------------------------|----------------------|------------------|----------------------|------------|
| A                    | A1                 | 76.47                  | 76.83                | 23               | 8" PVC               | 1.50%      |
| A1                   | A2                 | 76.83                  | 77.50                | 67               | 8" PVC               | 1.00%      |
| B1                   | B2                 | 77.60                  | 77.45                | 15               | 8" PVC               | 1.00%      |
| C                    | C1                 | 73.31                  | 73.49                | 68               | 16" PVC              | 0.26%      |
| C1                   | C1A                | 75.01                  | 77.00                | 99               | 8" PVC               | 2.00%      |
| C1                   | C2                 | 73.49                  | 73.64                | 65               | 12" PVC              | 0.24%      |
| C2                   | C3                 | 73.64                  | 73.73                | 34               | 10" PVC              | 0.25%      |
| C3                   | C3A                | 77.11                  | 78.27                | 39               | 8" PVC               | 3.00%      |
| C3                   | C4                 | 73.73                  | 73.87                | 58               | 8" PVC               | 0.25%      |
| C4                   | C5                 | 73.87                  | 74.06                | 73               | 8" PVC               | 0.25%      |
| C5                   | C6                 | 74.06                  | 74.29                | 95               | 8" PVC               | 0.25%      |

CONTRACTOR SHALL CALL 811 FOR LOCATION OF ALL EXISTING UTILITIES AT LEAST 72 HOURS PRIOR TO STARTING CONSTRUCTION. CONTACT ENGINEER IMMEDIATELY IF UTILITIES CONFLICT WITH PROPOSED WORK.

**South Carolina 811**



100 SOUTH MAIN STREET, SUITE L  
 SUMMERVILLE, SC 29483  
 PHONE: 843-225-5151  
 WWW.CYPRESSENG.COM



PRESBYTERIAN COMMUNITIES OF SOUTH CAROLINA  
**THE VILLAGE AT SUMMERVILLE - MEMORY CARE**  
 291 W. 9TH ST.  
 SUMMERVILLE, SC 29483

SHEET ISSUE:

| NO. | DATE    | DESCRIPTION       | BY  |
|-----|---------|-------------------|-----|
| A   | 1.28.20 | PERMIT REVIEW SET | JCT |

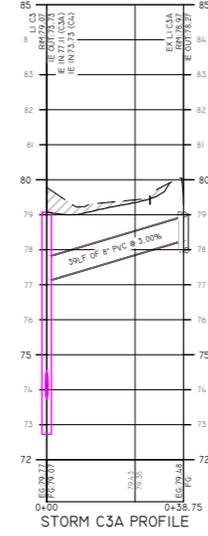
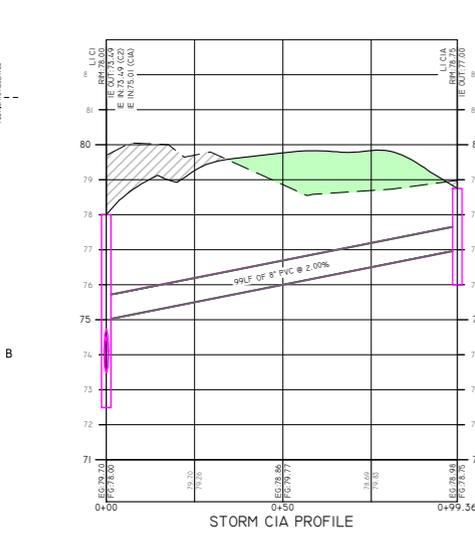
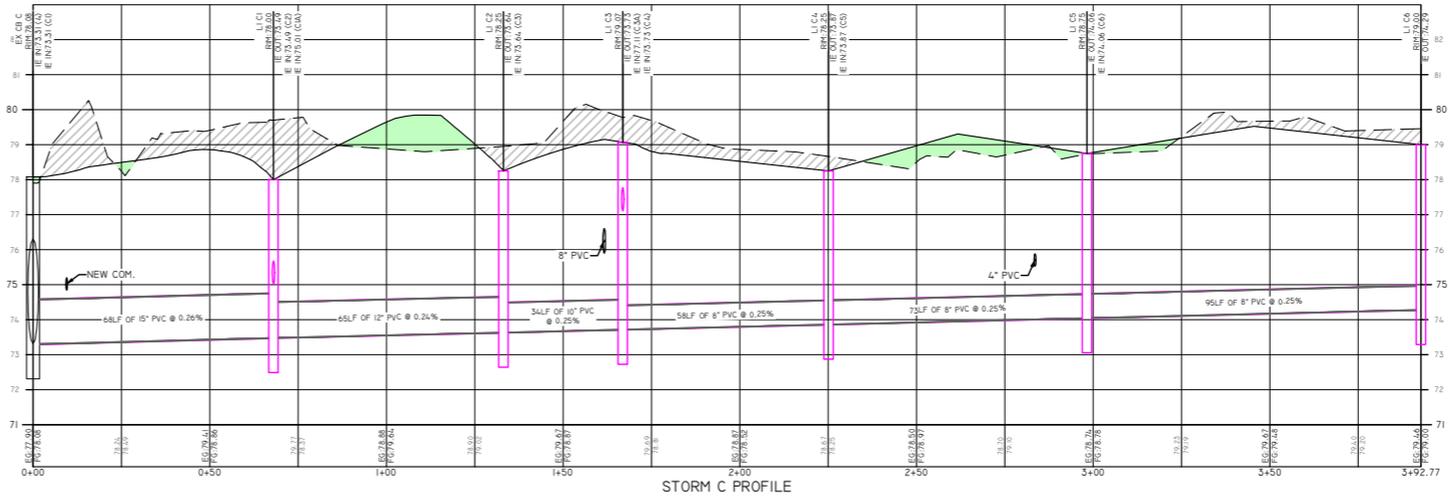
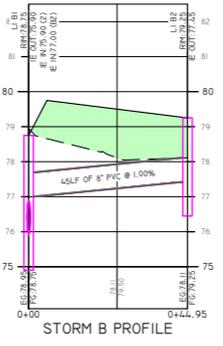
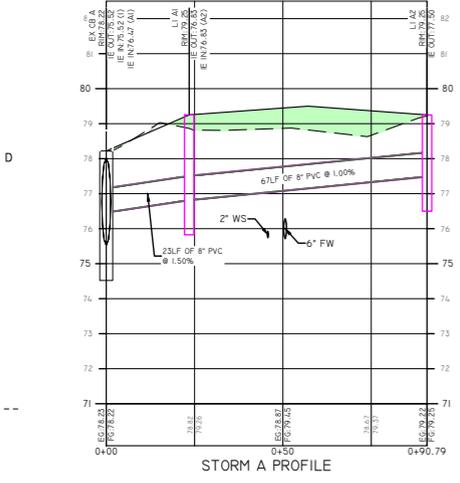
ENGINEER OF RECORD: WWR  
 PROJECT ENGINEER: JCT  
 DRAWN BY: JCT

**SHEET TITLE:**  
**DRAINAGE PLAN**

SHEET NO. PROJ. NO.  
 019501.00  
 D/H/C PROJ. NO. #22572

**C3.01**

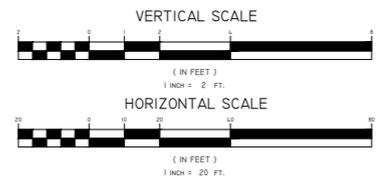
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**PROFILE LEGEND**

- FILL SECTION
- CUT SECTION
- PROPOSED GRADE
- EXISTING GRADE
- HYDRAULIC GRADE LINE

CONTRACTOR SHALL CALL 811 FOR LOCATION OF ALL EXISTING UTILITIES AT LEAST 72 HOURS PRIOR TO STARTING CONSTRUCTION. CONTACT ENGINEER IMMEDIATELY IF UTILITIES CONFLICT WITH PROPOSED WORK.



100 SOUTH MAIN STREET, SUITE L  
 SUMMERVILLE, SC 29483  
 PHONE: 843-225-5151  
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PRESBYTERIAN COMMUNITIES OF SOUTH CAROLINA  
**THE VILLAGE AT SUMMERVILLE - MEMORY CARE**  
 921 W. 9TH ST.  
 SUMMERVILLE, SC 29483

| NO. | DATE    | DESCRIPTION       | BY  |
|-----|---------|-------------------|-----|
| A   | 1.28.20 | PERMIT REVIEW SET | JCT |

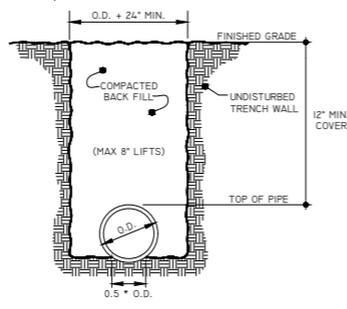
ENGINEER OF RECORD: WWR  
 PROJECT ENGINEER: JCT  
 DRAWN BY: JCT

**SHEET TITLE:  
 DRAINAGE  
 PROFILES**

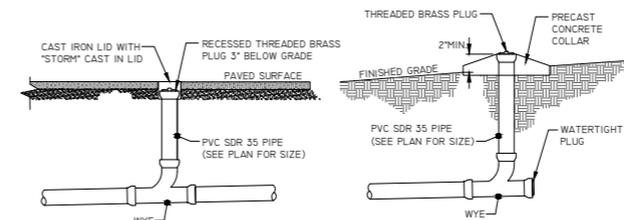
SHEET NO. PROJ. NO.  
 019501.00  
 D/HFC PROJ. NO.  
 #022572

**C3.10**

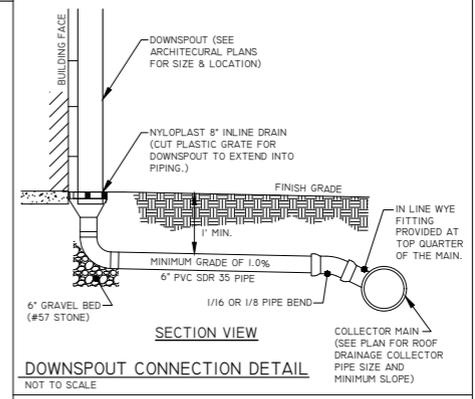
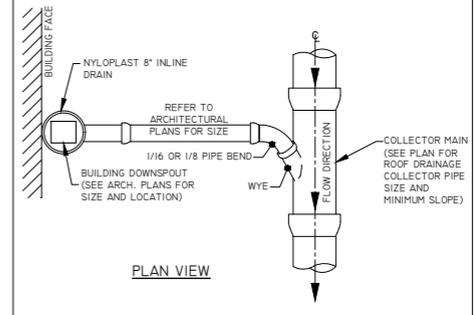
ALL DRAWINGS, SPECIFICATIONS AND OTHER NOTES FOR THIS PROJECT ARE THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE AND SHALL REMAIN THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE. THESE MATERIALS SHALL BE USED ONLY FOR THE PROJECT AND NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. PERMISSION IS GRANTED TO THE CONTRACTOR TO REPRODUCE THESE DRAWINGS FOR THE PROJECT ONLY. ANY OTHER REPRODUCTION OR TRANSMISSION IS STRICTLY PROHIBITED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.



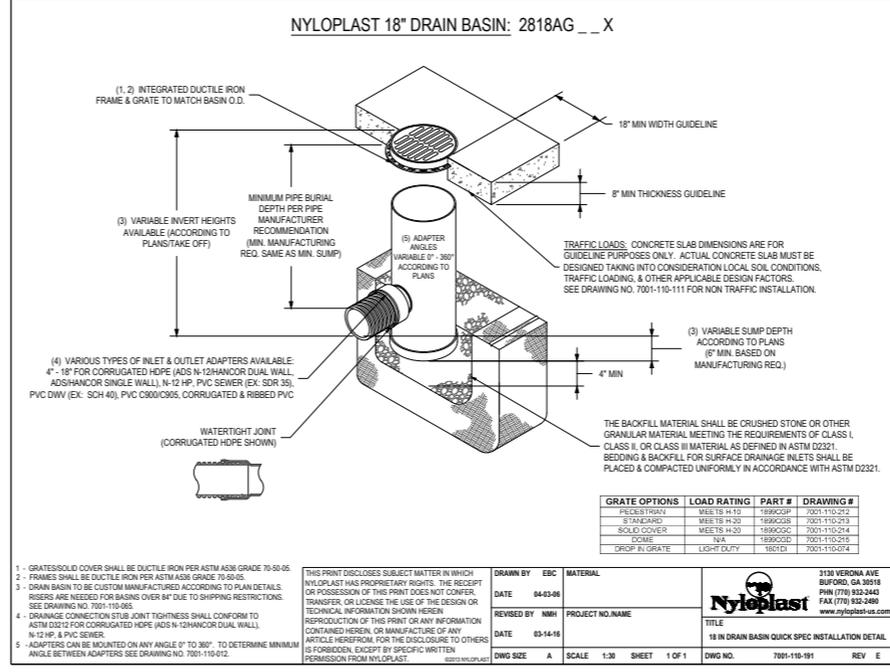
**PIPE TRENCH**  
NOT TO SCALE



**ROOF DRAINAGE CLEANOUT DETAIL**  
NOT TO SCALE



**DOWNSPOUT CONNECTION DETAIL**  
NOT TO SCALE



**LAWN INLET**  
NOT TO SCALE

| GRATE OPTIONS | LOAD RATING | PART #  | DRAWING #    |
|---------------|-------------|---------|--------------|
| FLUSH TRAY    | WET 15 H-19 | 1899G2P | 7001-110-212 |
| STANDARD      | WET 15 H-20 | 1899G2B | 7001-110-213 |
| SOLID COVER   | WET 15 H-23 | 1899G2C | 7001-110-214 |
| DOME          | N/A         | 1899G2D | 7001-110-215 |
| DROP IN GRATE | LIGHT DUTY  | 1810E1  | 7001-110-214 |

1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.  
 2 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.  
 3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 8" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-205.  
 4 - DRAINAGE CONNECTION STUD JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HOPE (ADSHANCOR DUAL WALL, N-12 HP, & PVC SEWER).  
 5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-212.

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DRAWN BY: EBC DATE: 04-03-08  
 REVISIONS: N/A  
 PROJECT NO. NAME: 18 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL  
 DATE: 03-14-16  
 DWG SIZE: A SCALE: 1:30 SHEET: 1 OF 1 DWG NO.: 7001-110-191 REV: E

3130 VERONA AVE  
 BUFORD, GA 30518  
 PHN (770) 932-3440  
 FAX (770) 932-3480  
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PRESBYTERIAN COMMUNITIES OF SOUTH CAROLINA  
**THE VILLAGE AT SUMMERVILLE - MEMORY CARE**  
 021 W. 9TH ST.  
 SUMMERVILLE, SC 29483

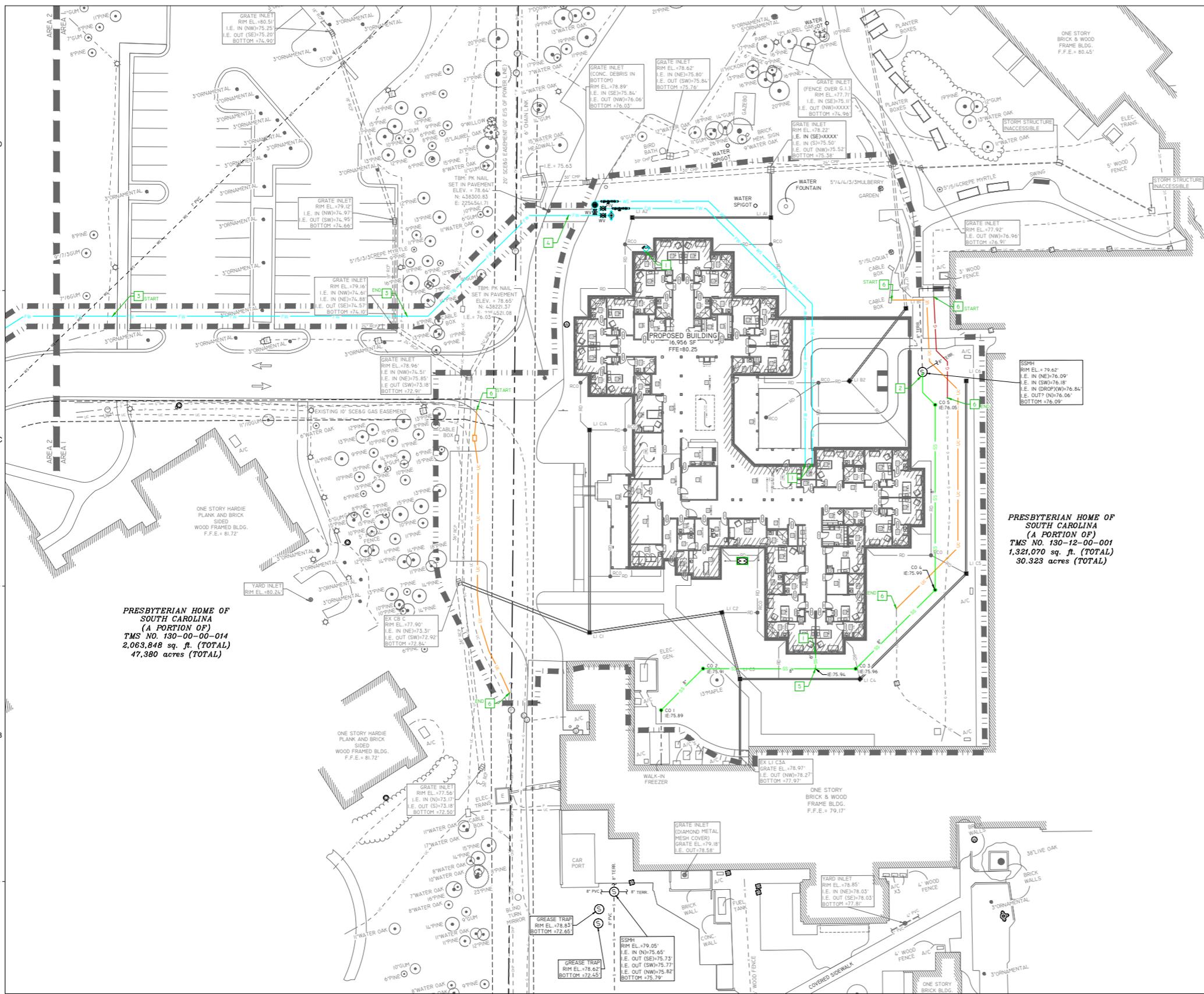
| NO. | DATE    | DESCRIPTION       | BY  |
|-----|---------|-------------------|-----|
| A   | 1.28.20 | PERMIT REVIEW SET | JCT |

ENGINEER OF RECORD: WWR  
 PROJECT ENGINEER: JCT  
 DRAWN BY: JCT

SHEET TITLE:  
**DRAINAGE DETAILS**

SHEET NO. PROJ. NO.  
 019501.00  
 D/HFC PROJ. NO. #622572

**C3.20**



**PRESBYTERIAN HOME OF SOUTH CAROLINA (A PORTION OF)**  
**TMS NO. 130-00-00-014**  
**2,063,848 sq. ft. (TOTAL)**  
**47,380 acres (TOTAL)**

**PRESBYTERIAN HOME OF SOUTH CAROLINA (A PORTION OF)**  
**TMS NO. 130-12-00-001**  
**1,321,070 sq. ft. (TOTAL)**  
**30.323 acres (TOTAL)**

**GENERAL NOTES:**

- SEE SHEET C0.01 FOR CIVIL ABBREVIATIONS AND GENERAL NOTES.
- SEE SHEET C1.01 FOR EXISTING SITE LEGEND.

**KEYNOTES:**

- REFER TO MEP PLANS FOR MORE INFORMATION.
- TIE INTO EXISTING SEWER MANHOLE. BOTTOM OF MANHOLE NEEDS TO BE REWORKED TO SLOPE INVERT TOWARD NEW DOWNSTREAM PIPE.
- DIRECTIONAL DRILL WATERLINE UNDER PARKING LOT.
- OPEN CUT & REPAIR ROAD AS NECESSARY FOR NEW WATERLINE CONSTRUCTION IAW DETAIL SHEET C4.20 & C5.20.
- INSTALL 8"x6" SEWER SERVICE WYE.
- RELOCATE UTILITY LINE AS NECESSARY FOR NEW CONSTRUCTION. COORDINATE ALL WORK WITH OWNER AND UTILITY PROVIDER.
- INSTALL 4"x4" OUT IN TEE. COORDINATE SHUTDOWN FOR CONNECTION WITH OWNER AND UTILITY PROVIDER.

**UTILITY LEGEND**

- FIRE HYDRANT ASSEMBLY - INSTALL IAW DETAIL SHEET C4.20.
- GATE VALVE (MATCH LINE SIZE) - INSTALL IAW DETAIL SHEET C4.20.
- POST INDICATOR VALVE (MATCH LINE SIZE) - INSTALL IAW DETAIL SHEET C4.20.
- 2" WATER METER - INSTALL IAW DETAIL SHEET C4.20.
- BACKFLOW PREVENTER (MATCH LINE SIZE) - INSTALL IAW DETAIL SHEET C4.20.
- FIRE DEPARTMENT CONNECTION - SEE PLUMBING DRAWINGS.
- SEWER CLEANOUT - INSTALL USING 100' MIN. SPACING AND IAW DETAIL SHEET C4.20.
- GREASE TRAP - INSTALL IAW MEP PLANS.
- 6" FIRE SERVICE - INSTALL IAW DETAIL SHEET C4.20.
- 2 1/2" WATER SERVICE - INSTALL IAW DETAIL SHEET C4.20.
- PVC SEWER SERVICE (SEE PLAN FOR SIZE) - INSTALL AT 1.0% MINIMUM SLOPE. IAW ASTM D 3034 AND IAW DETAIL SHEET C4.20. ALL WORK SHALL MEET ASTM D 2321 AND SCDHEC REQUIREMENTS.
- GAS LINE - COORDINATE INSTALLATION WITH UTILITY PROVIDER.
- CABLE LINE - COORDINATE INSTALLATION WITH UTILITY PROVIDER.
- LIMITS OF CONSTRUCTION

**UTILITY CONTACT INFORMATION**

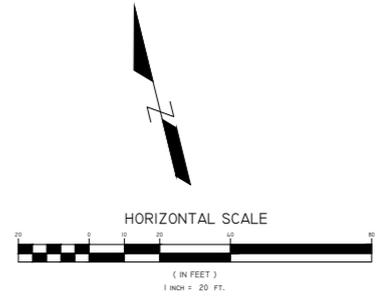
- WATER & SEWER**  
 SUMMERVILLE CPW (SCPW)  
 CONTACT: BK BONGE  
 PHONE: 843-875-8795  
 EMAIL: BBONGE@SUMMERVILLECPW.COM
- GAS**  
 DOMINION ENERGY  
 CONTACT: BARRON GOSSETT  
 PHONE: 843-791-6912  
 EMAIL: BARRON.GOSSETT@DOMINIONENERGY.COM
- ELECTRIC**  
 DOMINION ENERGY  
 CONTACT: RICHARD GILBERT  
 PHONE: 843-851-4940  
 EMAIL: RICHARD.GILBERT@DOMINIONENERGY.COM

CONTRACTOR SHALL CALL 811 FOR LOCATION OF ALL EXISTING UTILITIES AT LEAST 72 HOURS PRIOR TO STARTING CONSTRUCTION. CONTACT ENGINEER IMMEDIATELY IF UTILITIES CONFLICT WITH PROPOSED WORK.

**South Carolina 811**

**HYDRANT FLOW TEST RESULTS**

|                    |           |                    |          |
|--------------------|-----------|--------------------|----------|
| Test Date:         | 2/10/2020 | Static Pressure:   | 60 psi   |
| Test Performed By: | SCPW      | Residual Pressure: | 38 psi   |
| Flow Hydrant #:    | 96        | Flow:              | 1570 GPM |
| Test Hydrant #:    | 17        | Flow @ 20 psi:     | 2,168    |



100 SOUTH MAIN STREET, SUITE L  
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PRESBYTERIAN COMMUNITIES OF SOUTH CAROLINA  
**THE VILLAGE AT SUMMERVILLE - MEMORY CARE**  
 201 W. 9TH ST.  
 SUMMERVILLE, SC 29483

**SHEET ISSUE:**

| NO. | DATE    | DESCRIPTION       | BY  |
|-----|---------|-------------------|-----|
| A   | 1.28.20 | PERMIT REVIEW SET | JCT |

ENGINEER OF RECORD: WWR  
 PROJECT ENGINEER: JCT  
 DRAWN BY: JCT

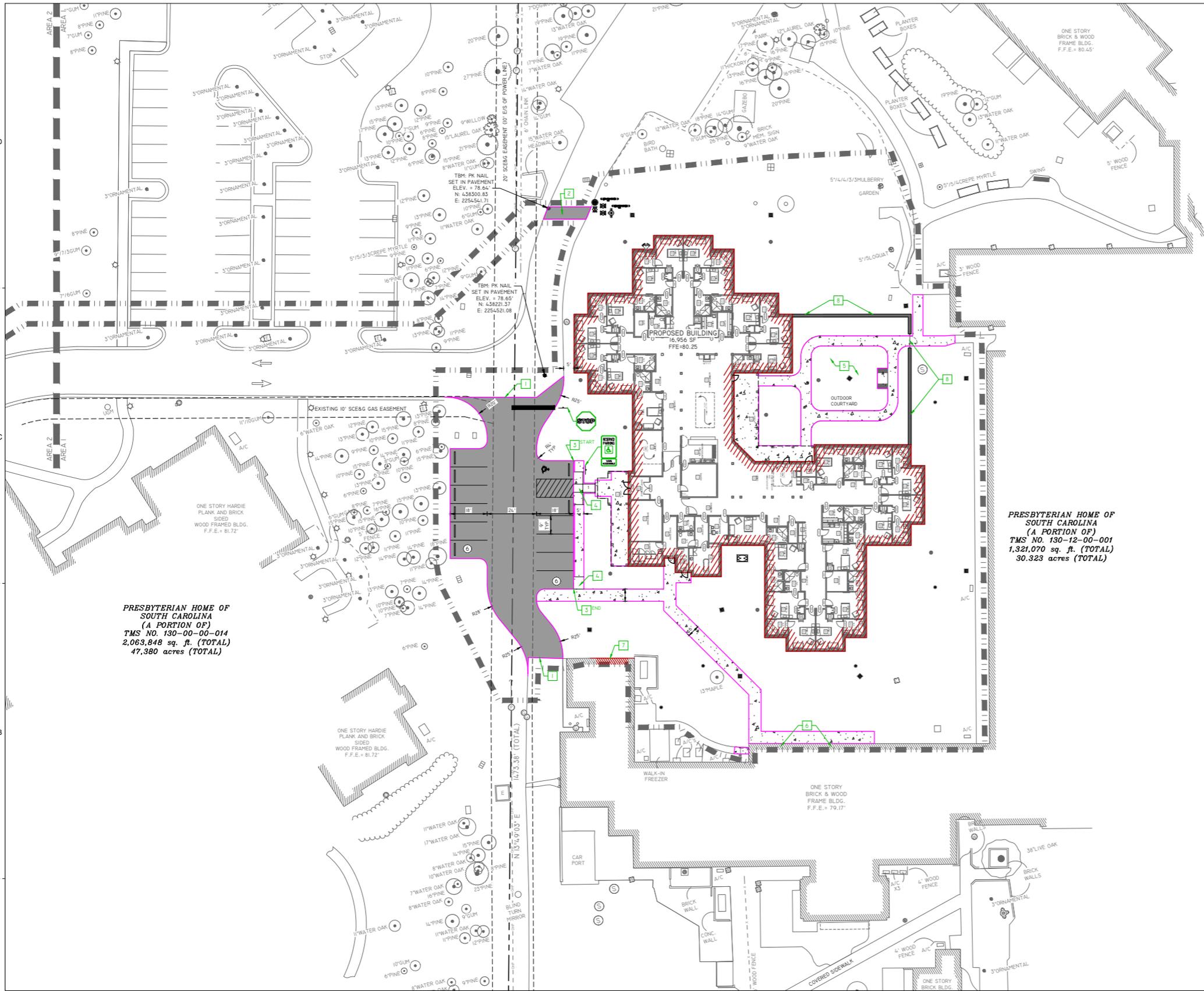
SHEET TITLE:  
**UTILITY PLAN - AREA 1**

SHEET NO. PROJ. NO.  
 019501.00  
 DHPFC PROJ. NO. #22272

**C4.01**







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**TMS NO. 130-00-00-014**  
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**47.380 acres (TOTAL)**

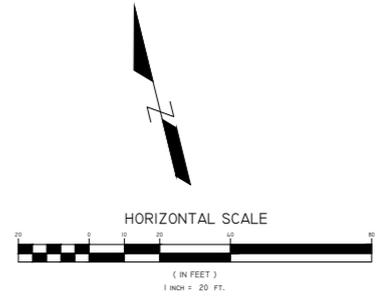
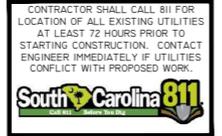
**PRESBYTERIAN HOME OF SOUTH CAROLINA (A PORTION OF)**  
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- GENERAL NOTES:**
- SEE SHEET C0.01 FOR CIVIL ABBREVIATIONS AND GENERAL NOTES.
  - SEE SHEET C1.01 FOR EXISTING SITE LEGEND.
- KEYNOTES:**
- TIE INTO EXISTING PAVEMENT IAW DETAIL SHEET C5.20.
  - REPAIR ROAD AS NECESSARY FOR NEW WATERLINE CONSTRUCTION IAW DETAIL SHEET C4.20 & C5.20.
  - INSTALL INTEGRAL CURB & WALK IAW DETAIL SHEET C5.20.
  - INSTALL ADA RAMP IAW DETAIL SHEET C5.20.
  - INSTALL COURTYARD & ACCESSORIES IAW LANDSCAPE PLANS.
  - INSTALL AWNING & NEW DOORS IAW ARCHITECTURAL PLANS.
  - REPAIR BUILDING IAW ARCHITECTURAL PLANS.
  - INSTALL COURTYARD FENCING AND GATE IAW ARCHITECTURAL PLANS.
- SITE LEGEND**
- STANDARD DUTY ASPHALT PAVEMENT - INSTALL IAW DETAIL SHEET C5.20.
  - CONCRETE SIDEWALK - INSTALL IAW DETAIL SHEET C5.20.
  - ACCESSIBLE PARKING SPACE AND AISLE - IAW DETAIL SHEET C5.20.
  - STOP BAR - INSTALL IAW DETAIL SHEET C5.20.
  - PARKING SPACES - STRIPE WITH 4" SINGLE WHITE SOLID LINE
  - NEW TRAFFIC SIGN - INSTALL PER PLAN AND IAW DETAILS SHEET C5.20.
  - WHEELSTOP - IAW DETAIL SHEET C5.20.
  - LIMITS OF CONSTRUCTION

| PARKING CALCULATIONS    |                       |                                   |
|-------------------------|-----------------------|-----------------------------------|
| Building Use            | Spaces Required       | Tabulation                        |
| Memory Care             | 1 space per 2 beds    | X 24 = 12                         |
|                         |                       | <b>TOTAL REQUIRED SPACES = 12</b> |
| Provided Parking Spaces |                       |                                   |
|                         | Standard Spaces =     | 11                                |
|                         | ADA Standard Spaces = | 0                                 |
|                         | ADA Van Spaces =      | 1                                 |
|                         |                       | <b>PROVIDED SPACES = 12</b>       |

| POST-DEVELOPMENT PROPERTY COVERAGE (SEE DEMOLITION PLAN FOR PRE-DEVELOPED) |                  |                   |             |
|----------------------------------------------------------------------------|------------------|-------------------|-------------|
| BUILDING =                                                                 | 20,353 SF        | 0.47 ACRES        | 32%         |
| PAVEMENT / WALKS =                                                         | 10,752 SF        | 0.25 ACRES        | 17%         |
| POUND =                                                                    | - SF             | 0.00 ACRES        | 0%          |
| WOODS =                                                                    | - SF             | 0.00 ACRES        | 0%          |
| GRASS =                                                                    | 32,652 SF        | 0.75 ACRES        | 51%         |
| <b>TOTAL =</b>                                                             | <b>63,757 SF</b> | <b>1.46 ACRES</b> | <b>100%</b> |

- DIMENSION NOTES:**
- CONTRACTOR SHALL BE PROVIDED LOCATION OF ALL EXISTING UTILITIES AT LEAST 72 HOURS PRIOR TO STARTING CONSTRUCTION. CONTACT ENGINEER IMMEDIATELY IF UTILITIES CONFLICT WITH PROPOSED WORK.
  - ALL DIMENSIONS SHOWN ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.



PRESBYTERIAN COMMUNITIES OF SOUTH CAROLINA  
**THE VILLAGE AT SUMMERVILLE - MEMORY CARE**  
 291 W. 9TH ST.  
 SUMMERVILLE, SC 29483

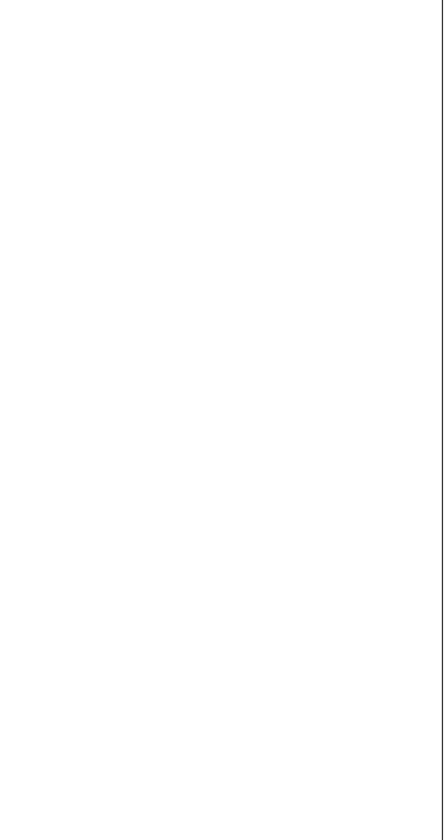
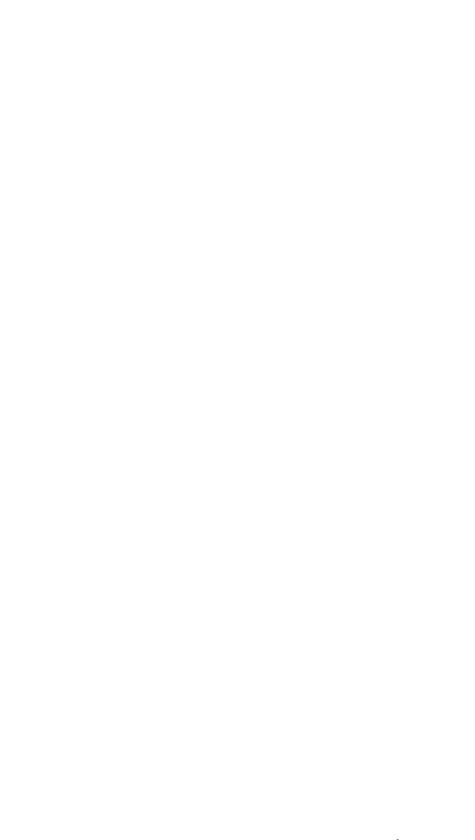
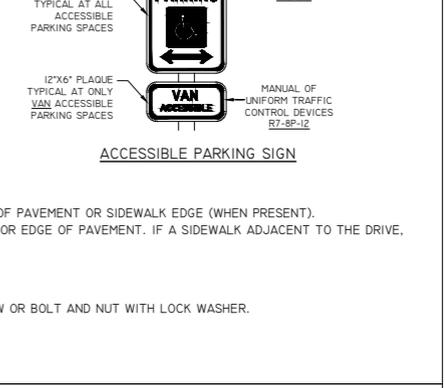
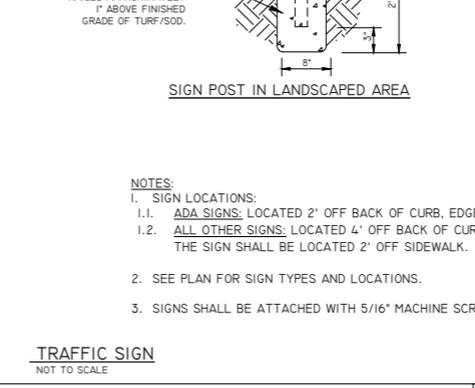
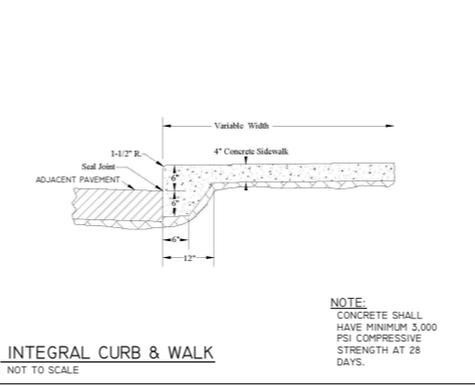
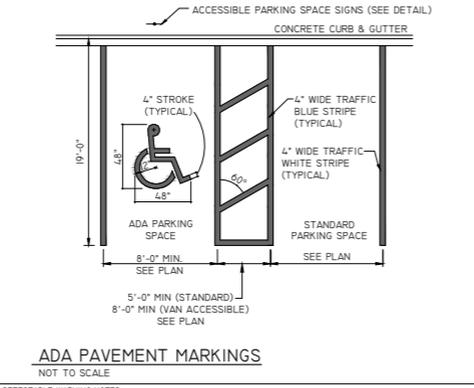
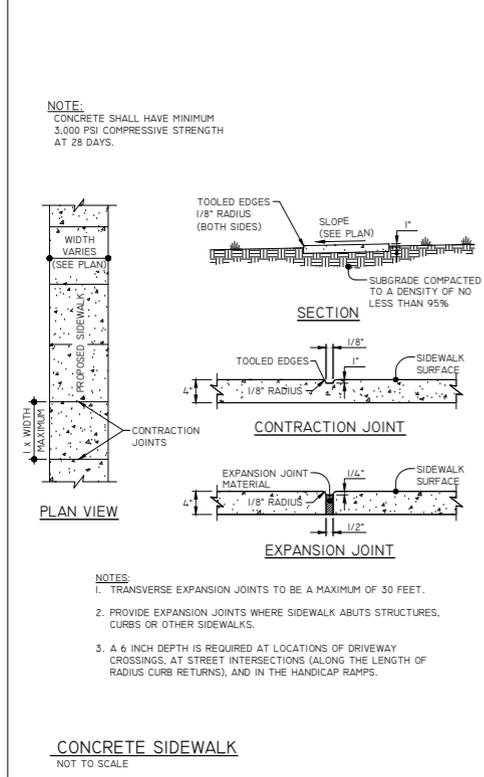
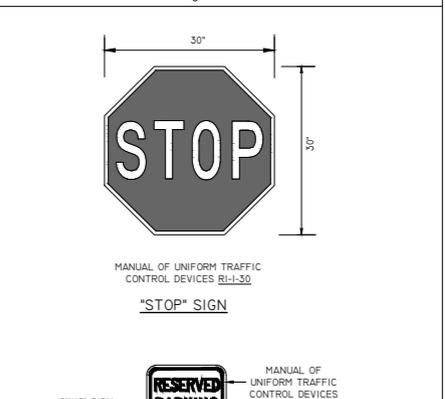
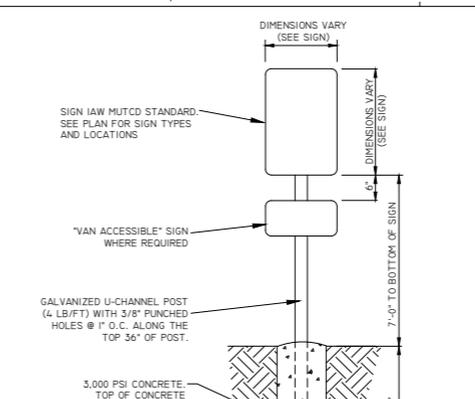
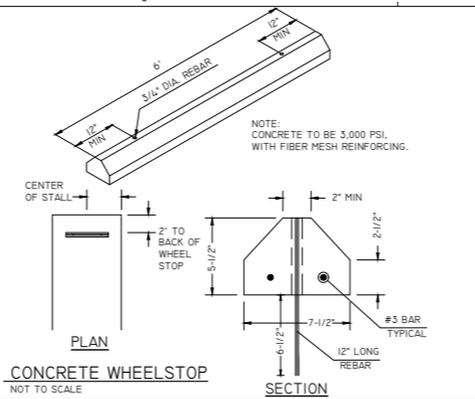
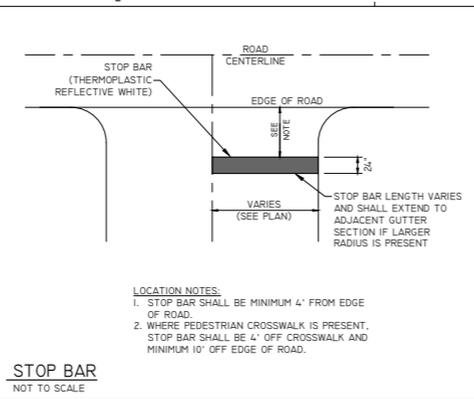
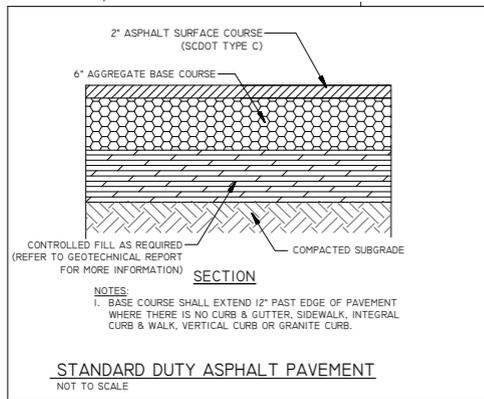
| NO. | DATE    | DESCRIPTION       | BY  |
|-----|---------|-------------------|-----|
| A   | 1.28.20 | PERMIT REVIEW SET | JCT |

ENGINEER OF RECORD: WWR  
 PROJECT ENGINEER: JCT  
 DRAWN BY: JCT

SHEET TITLE:  
**SITE PLAN**

SHEET NO. PROJ. NO. 019501.00  
 D/HFC PROJ. NO. #022572

**C5.01**



**mcmillan pazdan smith ARCHITECTURE**

**CYPRESS ENGINEERING**

100 SOUTH MAIN STREET, SUITE L  
SUMMERVILLE, SC 29483  
PHONE: 843-225-5151  
WWW.CYPRESSENG.COM

STATE OF SOUTH CAROLINA  
CYPRESS ENGINEERING, LLC  
No. 4755  
2/1/20

STATE OF SOUTH CAROLINA  
CYPRESS ENGINEERING, LLC  
No. 2784  
2/1/20

PRESBYTERIAN COMMUNITIES OF SOUTH CAROLINA

THE VILLAGE AT SUMMERVILLE - MEMORY CARE

291 W. 9TH ST.  
SUMMERVILLE, SC 29483

SHEET ISSUE:

| NO. | DATE    | DESCRIPTION       | BY  |
|-----|---------|-------------------|-----|
| A   | 1.28.20 | PERMIT REVIEW SET | JCT |

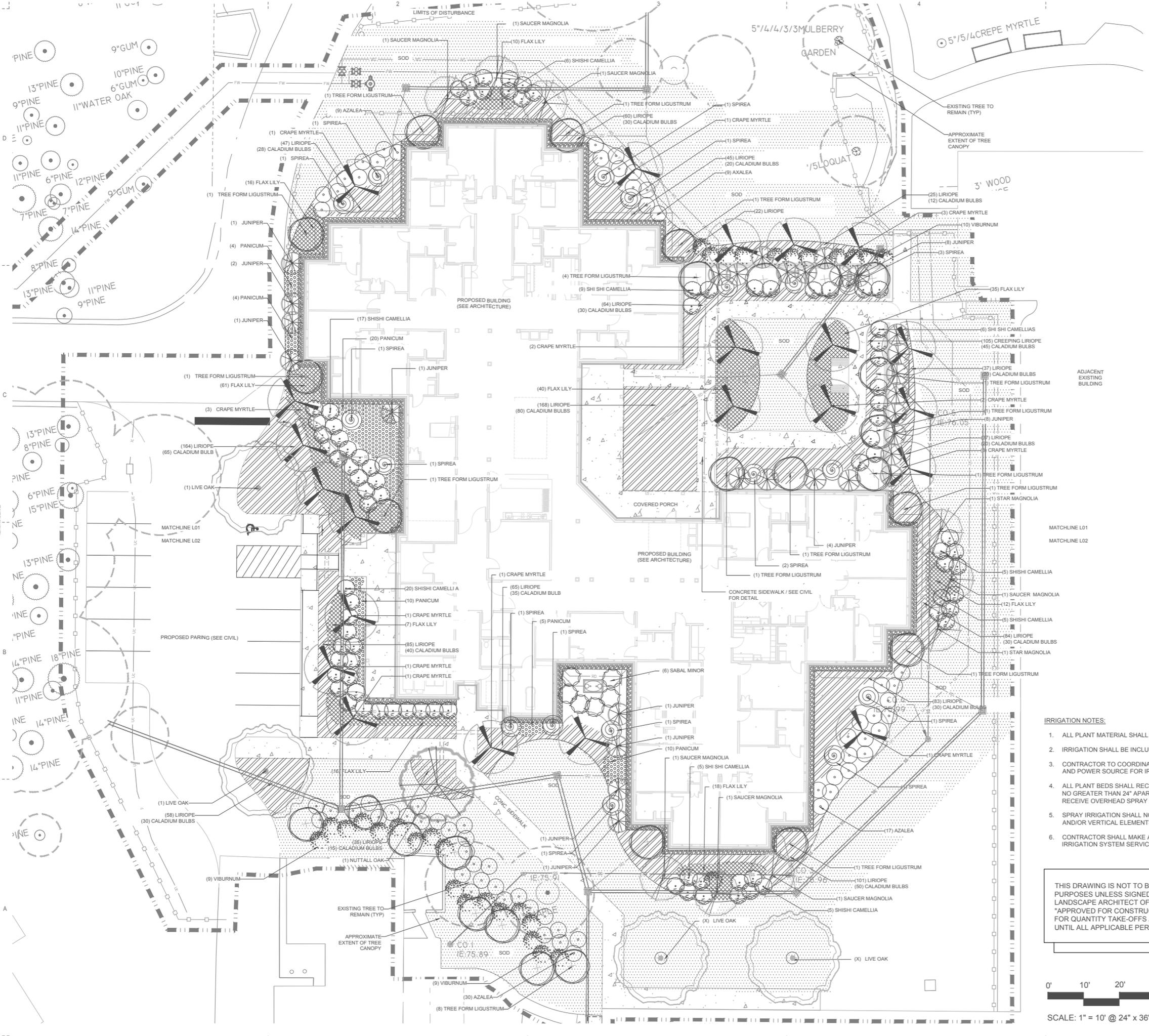
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PROJECT ENGINEER: JCT  
DRAWN BY: JCT

SHEET TITLE:  
**SITE DETAILS**

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019501.00  
D/HFC PROJ. NO. #622572

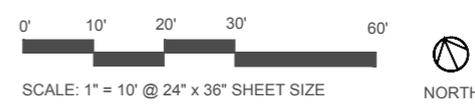
**C5.20**

**PRELIMINARY**  
NOT FOR CONSTRUCTION



- IRRIGATION NOTES:**
1. ALL PLANT MATERIAL SHALL BE IRRIGATED.
  2. IRRIGATION SHALL BE INCLUDED IN THE CONTRACTORS BASE BID.
  3. CONTRACTOR TO COORDINATE WITH THE OWNER FOR LOCATION AND POWER SOURCE FOR IRRIGATION CLOCK, AND WATER SOURCE.
  4. ALL PLANT BEDS SHALL RECEIVE IN-LINE DRIP IRRIGATION SPACED NO GREATER THAN 24" APART, AND ALL SODDED AREAS SHALL RECEIVE OVERHEAD SPRAY IRRIGATION.
  5. SPRAY IRRIGATION SHALL NOT BE CAST ONTO ANY HARDSCAPE AND/OR VERTICAL ELEMENTS.
  6. CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR TEMPORARY IRRIGATION SYSTEM SERVICES, PERMITS AND FEES AS NEEDED.

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION PURPOSES UNLESS SIGNED AND SEALED BY THE LANDSCAPE ARCHITECT OF RECORD AND STAMPED "APPROVED FOR CONSTRUCTION." USE OF THIS DRAWING FOR QUANTITY TAKE-OFFS AND PRICING IS PRELIMINARY UNTIL ALL APPLICABLE PERMITS HAVE BEEN OBTAINED.



PRESBYTERIAN COMMUNITIES OF SOUTH CAROLINA  
**THE VILLAGE AT SUMMERVILLE - MEMORY CARE**  
201 W. 9TH ST.  
SUMMERVILLE, SC 29483

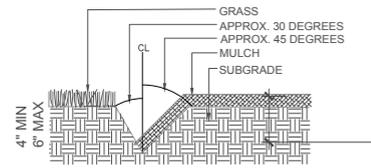
| SHEET ISSUE | NO. | DATE    | DESCRIPTION       | BY  |
|-------------|-----|---------|-------------------|-----|
|             | A   | 1.28.20 | PERMIT REVIEW SET | MLF |

LANDSCAPE ARCH OF RECORD: EWB  
LANDSCAPE ARCHITECT: MLF  
DRAWN BY: MLF  
SHEET TITLE:

**PLANTING PLAN**

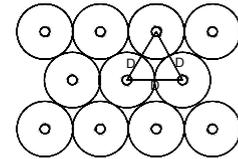
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DHC PROJ. NO. #62252

**L01**



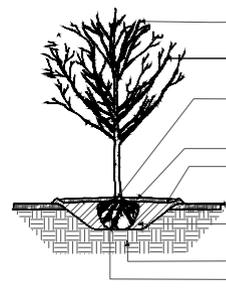
NOTE: EXCAVATE TRENCH BY HAND WITH SPADE. ADD EXCESS SOIL TO ADJACENT PLANT BED AFTER PULLING BACK EXISTING MULCH. RAKE SOIL AND SMOOTH BEFORE MULCHING.

1 TRENCH EDGE



D = DIMENSION OF PLANT SPACING (SHRUB, GROUND COVER OR PERENNIAL) AS INDICATED ON PLANS.

2 SHRUB / GROUND COVER SPACING

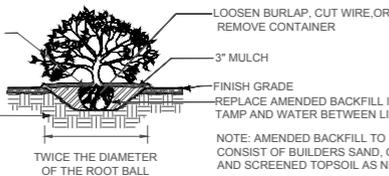


DO NOT PRUNE OR THIN CANOPY UNLESS DIRECTED TO DO SO BY LANDSCAPE ARCHITECT.  
 ORIENT TREE TO HAVE SIMILAR SOLAR ASPECT AS IN NURSERY OR AS DIRECTED BY LANDSCAPE ARCHITECT.  
 CONTRACTOR SHALL REMOVE EXCESS FILL FROM TOP OF TRUNK. SET CROWN OF ROOT BALL 2'-3" HIGHER THAN FINISHED GRADE. REMOVE ROPE FROM CROWN TO PREVENT GIRDLING. LEAVE DRUM LACING OR WIRE BASKETS IN PLACE.  
 3" MULCH.  
 CREATE SOIL SAUCER (4" SIDES) MOUND SLIGHTLY HIGHER IN CENTER.  
 FINISH GRADE  
 UNLESS OTHERWISE SPECIFIED, REPLACE UNAMENDED BACKFILL IN 3-4" LIFTS. TAMP AND WATER BETWEEN LIFTS.  
 UNDISTURBED SUBGRADE.  
 CUT AND REMOVE BURLAP FROM TOP 1/3 OF ROOTBALL.

TWICE THE DIAMETER OF THE ROOTBALL

3 TREE INSTALLATION

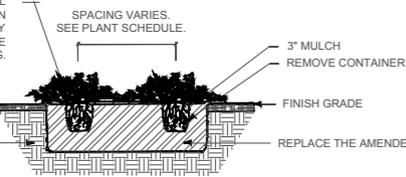
CONTRACTOR SHALL REMOVE EXCESS FILL FROM CROWN OF SHRUB. SET CROWN OF ROOTBALL 1"-2" HIGHER THAN FINISHED GRADE. GENTLY SEPARATE ROOTBALL BEFORE PLANTING.



NOTE: WHERE SHRUBS ARE PLANTED IN BEDS, MULCH TO COVER ENTIRE BED.

4 SHRUB INSTALLATION

SET CROWN OF ROOTBALL SLIGHTLY HIGHER THAN FINISHED GRADE. GENTLY SCARIFY ROOTBALL BEFORE PLANTING.



NOTE: AMENDED BACKFILL TO CONSIST OF BUILDERS SAND, COMPOST, AND SCREENED TOPSOIL AS NECESSARY.

5 GROUND COVER INSTALLATION

PLANT SCHEDULE

TREES

| Quantity | Botanical Name                   | Common Name          | Size        | Remarks |
|----------|----------------------------------|----------------------|-------------|---------|
| 6        | QUERCUS VIRGINIANA               | LIVE OAK             | 3" CAL.     | B&B     |
| 1        | QUERCUS TEXANA                   | NUTTALL OAK          | 3" CAL.     | B&B     |
| 32       | LAGERSTROEMIA INDICA X 'NATCHEZ' | NATCHEZ CRAPE MYRTLE | 8'-10' HGT. | B&B     |
| 30       | LIGUSTRUM JAPONICUM              | TREE FORM LIGUSTRUM  | 8'-10' HGT. | B&B     |
| 12       | MAGNOLIA X SOULANGEANA           | SAUCER MAGNOLIA      | 8'-10' HGT. | B&B     |
| 10       | JUNIPERUS CHINENSIS 'SPARTAN'    | SPARTAN JUNIPER      | 4'-6' HGT.  | B&B     |

SHRUBS

| Quantity | Botanical Name                     | Common Name               | Size    | Remarks        |
|----------|------------------------------------|---------------------------|---------|----------------|
| 113      | CAMELLIA SASANQUA 'SHISHI GASHIRA' | SHISHI GASHIRA CAMELLIA   | 7 GAL.  | FULL CONTAINER |
| 66       | RHODODENDRON 'ROBLEX'              | AUTUMN LILY ENCORE AZALEA | 3 GAL.  | FULL CONTAINER |
| 46       | SPIRAEA PRUNIFOLIA                 | BRIDALWREATH SPIREA       | 15 GAL. | FULL CONTAINER |
| 7        | SABAL MINOR                        | DWARF PALMETTO            | 7 GAL.  | FULL CONTAINER |
| 31       | VIBURNUM ODORATISSIMUM             | VIBURNUM                  | 7 GAL.  | FULL CONTAINER |

GROUNDCOVERS, PERENNIALS & GRASSES

| Quantity | Botanical Name                  | Common Name              | Size   | Remarks          |
|----------|---------------------------------|--------------------------|--------|------------------|
| 53       | PANICUM VARIGATUM 'HEAVY METAL' | HEAVY METAL SWITCH GRASS | 3 GAL. | PLANTED 36" O.C. |
| 1251     | LIRIOPE SPICATA                 | CREeping LIRIOPE         | 1 GAL. | PLANTED 24" O.C. |
| 215      | DIANELLA TASMANICA 'VARIEGATA'  | VARIEGATED FLAX LILY     | 1 GAL. | PLANTED 36" O.C. |

BULBS

| Quantity | Botanical Name | Common Name | Size | Remarks |
|----------|----------------|-------------|------|---------|
| 560      | CALADIUM       | CALADIUM    | BULB |         |
|          | SOD ---        | CENTPEDE    |      |         |

GENERAL LANDSCAPE NOTES:

- LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING CONDITIONS, AND REVIEW PROPOSED PLANTINGS AND RELATED WORK PRIOR TO SUBMITTING BID.
- CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT TO CHECK THE QUALITY AND LOCATION OF ALL PLANT MATERIAL PRIOR TO PLANT INSTALLATION.
- IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, PLAN SHALL GOVERN QUANTITIES. CONTACT LANDSCAPE ARCHITECT WITH ANY CONCERNS. CONTRACTOR TO VERIFY ALL PLANT COUNTS PRIOR TO BIDDING.
- LANDSCAPE CONTRACTOR TO COORDINATE THE PHASES OF CONSTRUCTION AND PLANTING INSTALLATIONS WITH OTHER CONTRACTORS WORKING ON SITE.
- WHERE EXISTING TREES AND/OR SIGNIFICANT SHRUB MASSINGS ARE FOUND ON SITE, WHETHER SHOWN ON THE DRAWINGS OR NOT, THEY SHALL BE PROTECTED AND SAVED UNLESS NOTED TO BE REMOVED AND/OR ARE IN AN AREA TO BE GRADED. ANY QUESTIONS REGARDING WHETHER PLANT MATERIAL SHOULD REMAIN OR NOT SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO REMOVAL.
- ALL EXISTING TREES TO REMAIN TO BE FERTILIZED AND PRUNED TO REMOVE DEAD WOOD AND DAMAGED OR RUBBING BRANCHES.
- NO PLANT MATERIAL SUBSTITUTIONS WILL BE ACCEPTED UNLESS APPROVAL IS REQUESTED OF AND GRANTED BY THE LANDSCAPE ARCHITECT BY THE CONTRACTOR PRIOR TO INSTALLATION.
- ALL PLANT MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMAN.
- CONTRACTOR IS RESPONSIBLE FOR ONGOING MAINTENANCE OF ALL NEWLY INSTALLED MATERIALS UNTIL TIME OF OWNER'S ACCEPTANCE. ANY ACTS OF VANDALISM OR DAMAGE WHICH MAY OCCUR PRIOR TO OWNER ACCEPTANCE SHALL BE THE RESPONSIBILITY OF CONTRACTOR.
- WARRANTY FOR LANDSCAPE MATERIALS SHALL BEGIN ON THE DATE OF ACCEPTANCE BY THE OWNERS REPRESENTATIVE AFTER THE COMPLETION OF PLANTING OF ALL LANDSCAPE MATERIALS. NO PARTIAL ACCEPTANCE WILL BE CONSIDERED. LANDSCAPE CONTRACTOR SHALL PROVIDE A WRITTEN REQUEST FOR THE OWNER'S ACCEPTANCE INSPECTION. REMOVE AND REPLACE DEAD PLANT MATERIAL IMMEDIATELY UNLESS REQUIRED TO PLANT IN THE SUCCEEDING PLANTING SEASON. A LIMIT OF ONE REPLACEMENT OF EACH TREE AND SHRUB WILL BE REQUIRED EXCEPT FOR LOSSES CAUSED BY CONTRACTOR'S ERRORS.
- LANDSCAPE CONTRACTOR SHALL GUARANTEE NEW PLANT MATERIAL THROUGH ONE CALENDAR YEAR FROM THE DATE OF OWNER'S ACCEPTANCE. ACCEPTANCE OF GRADING AND SOD SHALL BE BY LANDSCAPE ARCHITECT OR OWNER. CONTRACTOR SHALL ASSUME MAINTENANCE RESPONSIBILITY UNTIL FINAL ACCEPTANCE. MAINTENANCE SHALL INCLUDE WATERING, WEEDING, REPLACEMENT OF WASH-OUTS AND OTHER OPERATIONS NECESSARY TO KEEP MATERIAL IN A THRIVING CONDITION.
- PLANT MATERIAL LOCATIONS SHOWN ARE DIAGRAMMATIC AND MAY BE SUBJECT TO CHANGE IN THE FIELD AS REQUIRED. CONTACT LANDSCAPE ARCHITECT FOR APPROVAL OF LANDSCAPE MATERIAL PLACEMENT.
- CONTRACTOR TO REPAIR ALL DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO THE OWNER.
- OWNER OR LANDSCAPE ARCHITECT SHALL INSPECT LANDSCAPE INSTALLATION AND HAVE THE RIGHT TO REJECT AND WITHHOLD PAYMENT ON ANY PLANT MATERIAL(S) OF DAMAGED OR POOR QUALITY NOT MEETING SPECIFICATIONS.
- NO PLANTING TO BE INSTALLED UNTIL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
- IF THE CONTRACTOR PERCEIVES ANY DEFICIENCIES IN THE PLANT SELECTIONS, SOIL CONDITIONS, OR ANY OTHER SITE CONDITION(S) WHICH MIGHT NEGATIVELY AFFECT PLANT MATERIAL ESTABLISHMENT, SURVIVAL, OR GUARANTEE, THEY SHALL BRING THESE DEFICIENCIES TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- PRIOR TO INSTALLATION OF PLANT MATERIAL, CONTRACTOR SHALL SUBMIT SEVERAL SOIL SAMPLES OF EXISTING SOIL AND ADDITIONAL SOIL BROUGHT ON SITE TO CLEMSON EXTENSION. CONTRACTOR SHALL PROVIDE TEST RESULTS TO LANDSCAPE ARCHITECT AND VERIFY THAT SOIL CONDITIONS ARE OPTIMAL BEFORE ANY PLANT INSTALLATION COMMENCES.
- ALL PLANTS TO BE INSTALLED AS PER PLANTING DETAILS. PLANT MATERIALS ARE TO BE PLANTED IN THE SAME RELATIONSHIP TO GRADE AS WAS GROWN IN NURSERY CONDITIONS. REMOVE ALL TWINE, WIRE AND BURLAP FROM TOP 1/3 OF TREE TRUNKS.
- ONE SHRUB PER TYPE AND SIZE IN EACH PLANTING BED AND EVERY TREE SHALL BE CLEARLY IDENTIFIED (COMMON OR LATIN NOMENCLATURE) WITH A PLASTIC TAG WHICH SHALL NOT BE REMOVED PRIOR TO OWNER ACCEPTANCE.
- SEED AND/OR SOD ALL AREAS DISTURBED DUE TO GRADING AND CONSTRUCTION ACTIVITIES, WHERE SOD/SEED ABUTS PAVED SURFACES, FINISHED GRADE OF SOD/SEED, SHALL BE HELD 1" BELOW SURFACE ELEVATION OF TRAIL, SLAB, CURB, ETC. SOD SHALL BE LAID PARALLEL TO THE CONTOURS AND SHALL HAVE STAGGERED JOINTS ON SLOPES STEEPER THAN 3:1 OR N DRAINAGE SWALES, THE SOD SHALL BE STAKED TO THE GROUND.
- ALL LANDSCAPE AREAS SHALL HAVE PROPER DRAINAGE THAT PREVENTS EXCESS WATER FROM STANDING AROUND TREES AND SHRUBS. IMMEDIATELY MULCH WITH DOUBLE SHREDDED HARDWOOD MULCH AT A DEPTH OF NO LESS THAN 3 INCHES AND WATER ALL PLANTS AND TREES. COMPLETE WITHIN 16 HOURS OF INSTALLATION.
- TREE PLANTINGS AND BED LINES SHALL BE STAKED BY CONTRACTOR FOR LANDSCAPE ARCHITECTS APPROVAL PRIOR TO INSTALLATION.
- CONTRACTOR TO INCLUDE IN HIS BASE BID ALL GRADING, PLANTINGS, MULCHING, HOSE BIBS AND IRRIGATION SYSTEM WHICH SHALL TIE INTO EXISTING SYSTEM (WHERE APPLICABLE).
- CONTRACTOR TO PROVIDE 3" BEE'S FERRY COMPOST OR APPROVED EQUAL TO ALL BEDS AND FINE GRADE TO PROVIDE SMOOTH TRANSITION INTO EXISTING GRADES. GRADE TO PREVENT PONDING.
- IF SEASONAL CONDITIONS NECESSITATE THE NEED FOR CONTAINER GROWN STOCK WHEN BALLED AND BURLAPPED PLANT MATERIAL AS SPECIFIED, CONTRACTOR TO CONTACT LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO SUBSTITUTION.



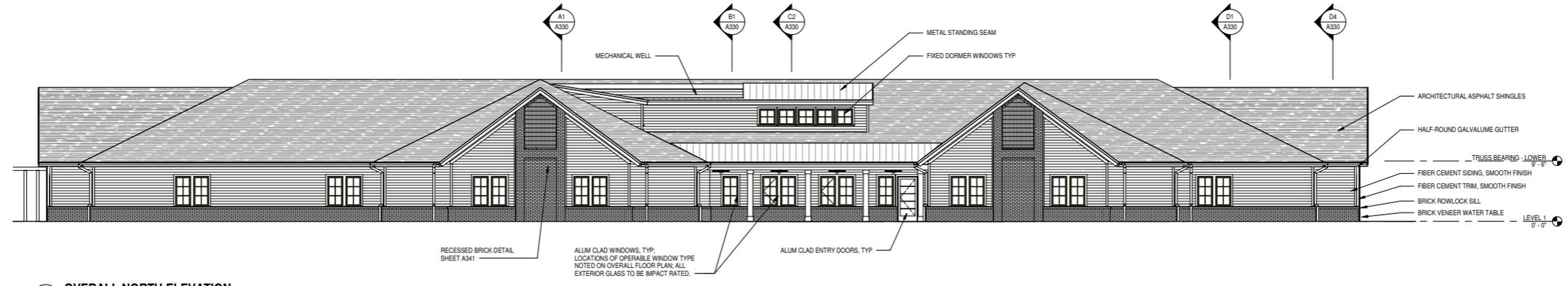
PRESBYTERIAN COMMUNITIES OF SOUTH CAROLINA  
 THE VILLAGE AT SUMMERVILLE - MEMORY CARE  
 201 W 9TH ST  
 SUMMERVILLE, SC 29483

| SHEET ISSUE: | NO. | DATE    | DESCRIPTION       | BY  |
|--------------|-----|---------|-------------------|-----|
|              | A   | 1.28.20 | PERMIT REVIEW SET | MLF |

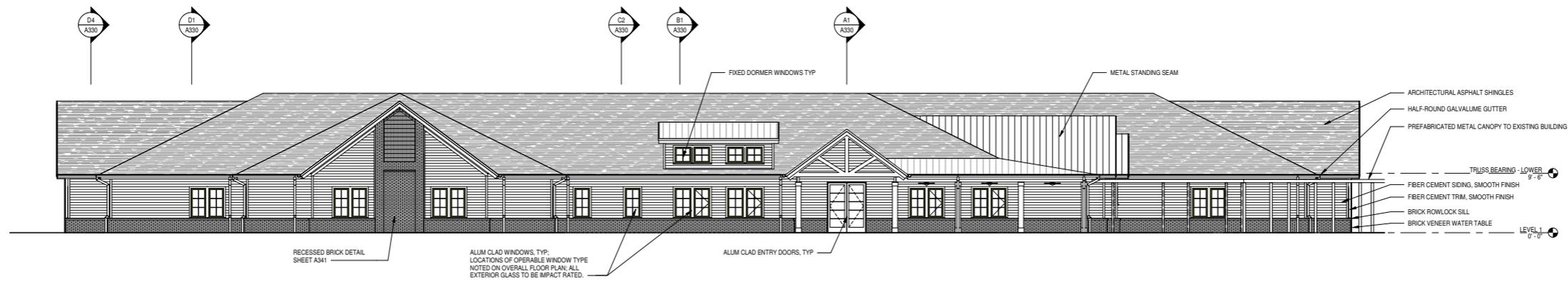
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 LANDSCAPE ARCHITECT: MLF  
 DRAWN BY: MLF

SHEET TITLE:  
 PLANTING DETAILS / NOTES / SCHEDULE

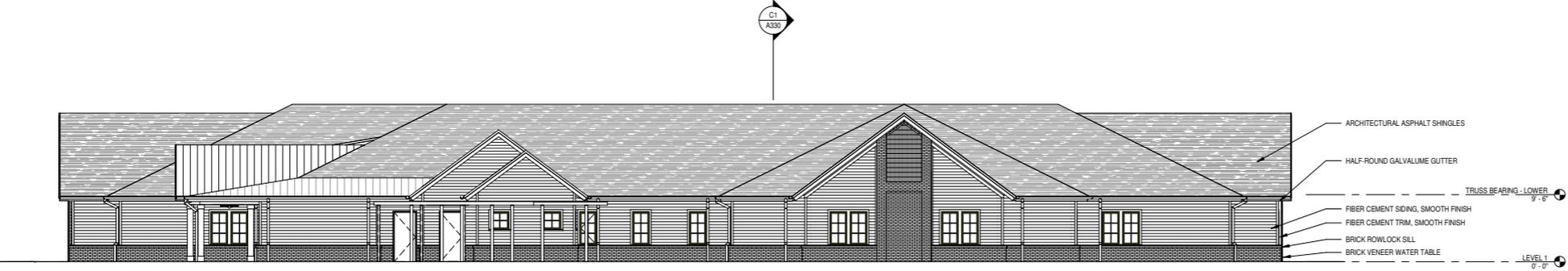
SHEET NO. PROJ. NO. 019501.00  
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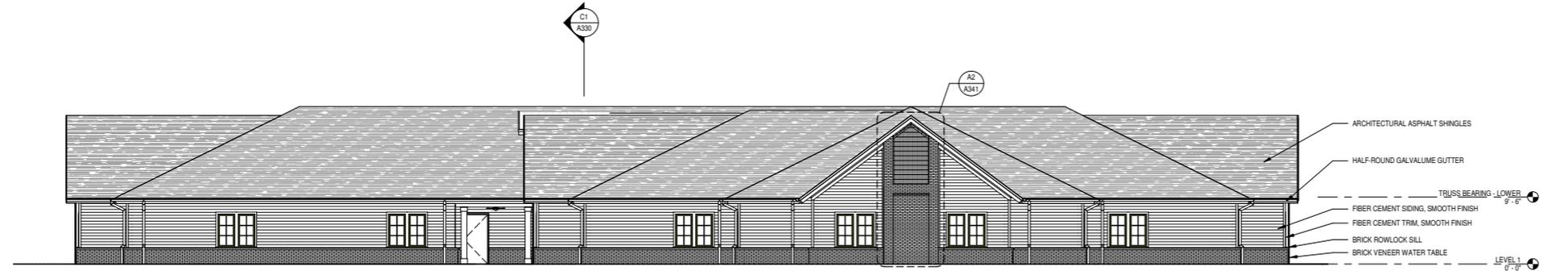
**OVERALL NORTH ELEVATION**  
1/8" = 1'-0"



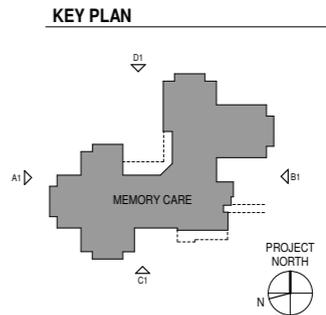
**OVERALL SOUTH ELEVATION**  
1/8" = 1'-0"



**OVERALL EAST ELEVATION**  
1/8" = 1'-0"



**OVERALL WEST ELEVATION**  
1/8" = 1'-0"



PRESBYTERIAN COMMUNITIES OF SOUTH CAROLINA  
**THE VILLAGE AT SUMMERVILLE - MEMORY CARE**  
201 WORTH ST.  
SUMMERVILLE, SC 29483

SHEET ISSUE:

| NO. | DATE      | DESCRIPTION        | BY  |
|-----|-----------|--------------------|-----|
| A   | 10.21.19  | SCHEMATIC DESIGN   |     |
| B   | 11.11.19  | SD DHEC            |     |
| C   | 12.02.19  | DESIGN DEVELOPMENT | MPS |
| D   | 12.10.19  | DD DHEC            |     |
| E   | 1.28.2020 | PERMIT REVIEW SET  | MPS |
| F   | 2.27.2020 | DHEC FINAL         | MPS |

PRINCIPAL IN CHARGE: SMB  
PROJECT ARCHITECT: SAH  
DRAWN BY: SHUD

SHEET TITLE:  
**OVERALL ELEVATIONS**

SHEET NO. **A300**  
PROJ. NO. 016501.00  
DHEC PROJ. NO. #22572

ALL DIMENSIONS, SPECIFICATIONS AND CODES REFERRED TO IN THESE DRAWINGS ARE UNLESS OTHERWISE SPECIFIED TO THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE AND FEDERAL AUTHORITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE AND FEDERAL AUTHORITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE AND FEDERAL AUTHORITIES.

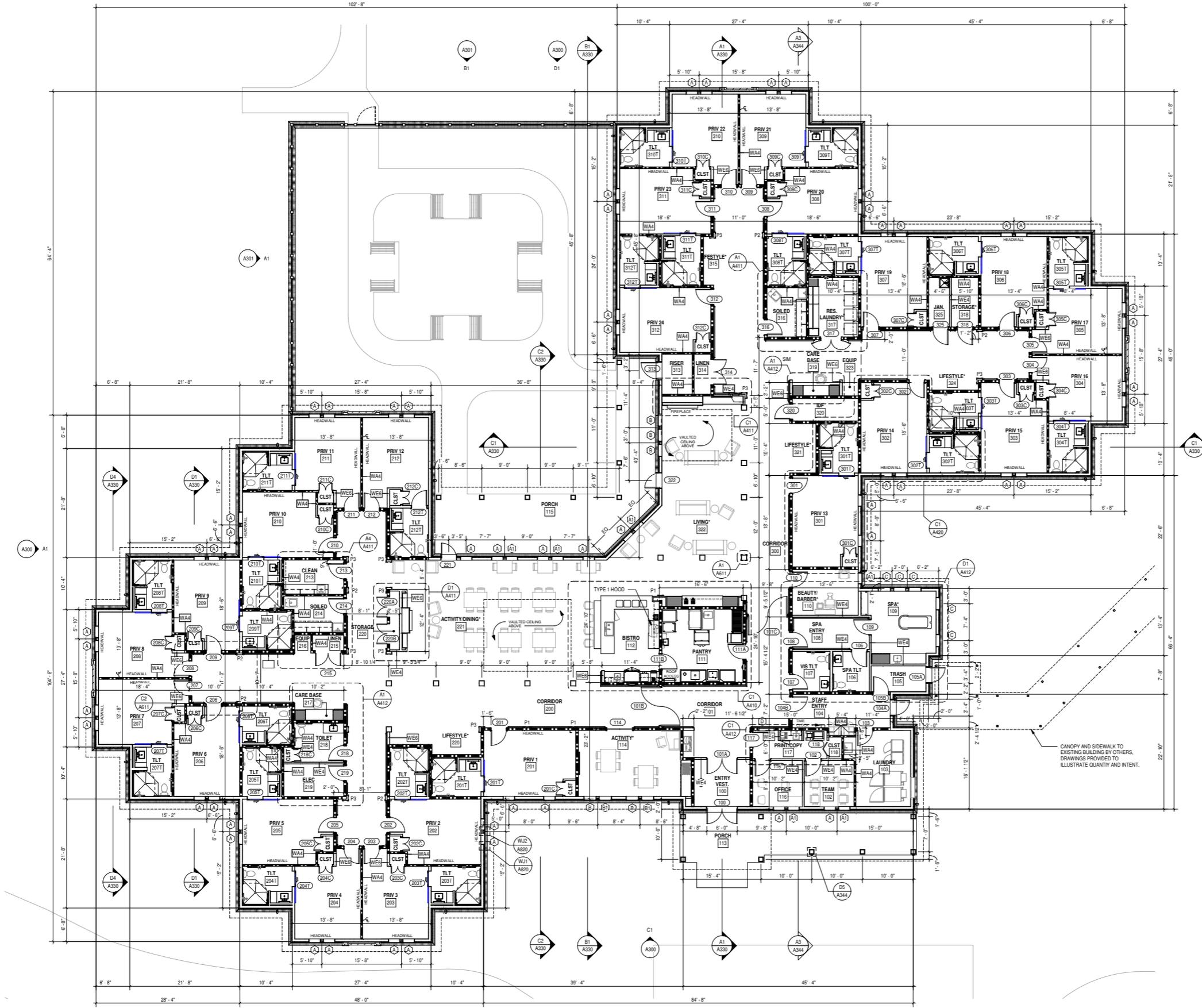
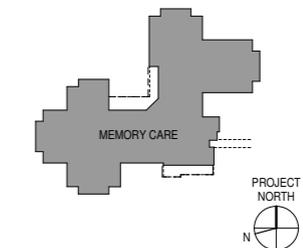
ENLARGED PLAN LEGEND

- 1 HR FIRE PARTITION
  - 1 HR FIRE BARRIER (SEE G010 LS PLAN)
  - 1 HR SMOKE BARRIER (SEE G010 LS PLAN)
  - NEW EXTERIOR WALL
  - NEW INTERIOR WALL
  - NEW DOOR
  - FLAT PANEL TELEVISION (W/ BRACKET) - O.F.C.I.
  - CURTAIN & TRACK - O.F.C.I.
  - EQUIPMENT SPACE
  - DRINKING FOUNTAIN
  - SEMI-RECESSED FIRE EXTINGUISHER CABINET 2A 2-1/2 GALLON PRESSURIZED WATER
  - SEMI-RECESSED FIRE EXTINGUISHER CABINET 2A10BC DRY CHEMICAL MULTI-PURPOSE
  - FIRE EXTINGUISHER 20-BC DRY CHEMICAL KITCHEN
  - FIRE EXTINGUISHER K-TYPE WET CHEMICAL KITCHEN
  - COUNTERTOP OR WORK SURFACE
  - ACCESSIBLE TURN-AROUND SPACE
- INTERIOR SIGNAGE (NOT SHOWN) - O.F.C.I.  
ALL ITEMS NOT OTHERWISE NOTED ARE C.F.C.I.

GENERAL NOTES - FLOOR PLAN

1. ALL WALL DIMENSIONS ARE TO FACE OF STUD OR FACE OF BRICK, UNLESS NOTED OTHERWISE.
  2. ALL OPENINGS IN STUD WALLS ARE TO CENTERLINE OF OPENINGS, UNLESS NOTED OTHERWISE. ALL OPENINGS IN CMU WALLS ARE TO FACE OF BLOCK OPENING, UNLESS NOTED OTHERWISE.
  3. RETURN ALL BRICK AT OPENINGS, WINDOWS, DOORS AND END-WALL CONDITIONS.
  4. ROOMS MARKED WITH AN ASTERISK (\*) ARE LIVING, RECREATION, AND DINING SPACES AS REQUIRED BY DHEC. DOORS THAT ARE NOT DIMENSIONED ARE TO BE LOCATED 4" FROM FACE OF ADJACENT STUD TO INSIDE EDGE OF DOOR, INCLUDING DOOR JAMB.
  5. GC TO PROVIDE BLOCKING IN WALL AT ALL WALL MOUNTED ACCESSORIES, ADA GRAB BARS, MILLWORK (INCL. FLOATING SHELVES), AND TELEVISION LOCATIONS.
  6. ALL STUD WALLS THAT ARE NOT TAGGED ARE ASSUMED TO BE TYPE - WA4. (SEE ENLARGED PLANS FOR WALL TYPES IN TYPICAL PRIVATE ROOMS AND TOILET ROOMS).
  7. ALL SINGLE WINDOWS ARE DIMENSIONED TO CENTER OF WINDOW. TWO OR MORE WINDOWS ARE DIMENSIONED TO CENTER OF SUPPORT BETWEEN WINDOWS.
- NOTE: ALL ITEMS ON FLOOR PLAN OR ENLARGED FLOOR PLAN LEGEND C.F.C.I. UNLESS OTHERWISE NOTED.

KEY PLAN



A1 OVERALL FLOOR PLAN  
A110 1/8" = 1'-0"

| NO. | DATE      | DESCRIPTION         | BY  |
|-----|-----------|---------------------|-----|
| A   | 10.21.19  | SCHEMATIC DESIGN    |     |
| B   | 10.22.19  | SD Submittal Rev. 1 |     |
| C   | 11.11.19  | SD DHEC             |     |
| D   | 12.02.19  | DESIGN DEVELOPMENT  | MPS |
| E   | 12.10.19  | DD DHEC             | MPS |
| F   | 1.28.2020 | PERMIT REVIEW SET   | MPS |
| G   | 2.27.2020 | DHEC FINAL          | MPS |

PRINCIPAL IN CHARGE: SMB  
PROJECT ARCHITECT: SAH  
DRAWN BY: SHUD

SHEET TITLE:  
FIRST LEVEL FLOOR PLAN

SHEET NO. PROJ. NO. 019501.00  
DHEC PROJ. NO. #22572

**A110**

## DESCRIPTION

The Arbor Bollard from Invue brings architectural style to the pedestrian level. The Arbor Bollard can be used along with Arbor post top luminaires to provide a coordinated look sure to enhance any architectural setting. WaveStream™ LED optics present a pixilation free image replacing visible glare, while providing high levels of pavement illumination.

|                    |  |             |
|--------------------|--|-------------|
| <b>Catalog #</b>   |  | <b>Type</b> |
| <b>Project</b>     |  |             |
| <b>Comments</b>    |  | <b>Date</b> |
| <b>Prepared by</b> |  |             |

## SPECIFICATION FEATURES

### Construction

**Top Housing:** Low copper, cast aluminum top maintains strength and precision while providing for: rapid heat dissipation, vandal resistance and superior dayform. **Lower Housing:** Heavy 0.188" wall seamless extruded aluminum 4" O.D. shaft attaches to base via stainless steel fasteners. **BASE:** Rugged corrosion resistant extruded aluminum base mounts to foundation with three anchor bolts. Base features a pliable 1/2" thick neoprene leveling pad fitted to the bottom of base allows for sealing against water and dirt ingress regardless of minor deviations in grade of concrete pad.

### Optics

General purpose symmetric distribution is available using WaveStream LED optical technology. The optical waveguide is manufactured using precision injection molded acrylic for the ultimate level of glare control and visual comfort. Offered standard in 4000K (+/- 275K) CCT, optional 3000K minimum 80 CRI.

### Electrical

LED driver(s) are mounted to electrical tray for easy installation and maintenance for 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. Offered standard with 0-10V dimming driver and Cooper Lighting Solutions' proprietary circuit module designed to withstand 10kV of transient line surge. Luminaire is suitable for ambient temperature applications from -30°C (-22°F) to 40°C (104°F) and IP66 rated against the ingress of dust and water.

### Controls

The Arbor Bollard options are designed to be simple and cost-effective ASHRAE and California Title 24 compliant solutions. An integrated dimming and occupancy sensor is a standalone control option available in on/off (MSP) and bi-level dimming (MSP/DIM) operation. An optional handheld remote (ISHH) allows custom programming to suit all needs.

### Mounting

Luminaire is mounted to 3 x 1/2" anchor bolts on a 2-3/8" bolt circle to with stand a 600 pound overturn moment. Order anchor bolts and installation template separately (ABAnchor).

### Finish

Cooper Lighting Solutions utilizes premium ultra-weatherable TGIC based polyester powder coatings that are specifically formulated to withstand extended outdoor exposure. The powders are formulated exclusively for Cooper Lighting Solutions to serve functionally as well as decorative. Good film appearance combined with excellent mechanical an exterior exposure qualities display greater than twice as much gloss retention. RAL and custom color matches available. Finish is compliant with ASTM B117 3000hr salt spray standard.

### Warranty

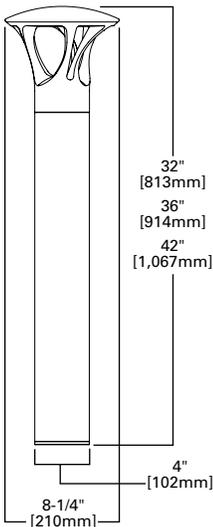
Five-year warranty.



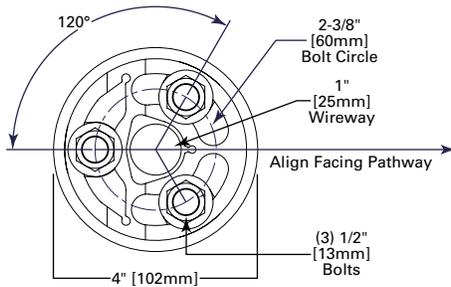
## ABB ARBOR BOLLARD

PATHWAY LUMINAIRE

## DIMENSIONS



## BOLT CIRCLE ORIENTATION



## CERTIFICATION DATA



UL/cUL Listed  
IP66 Housing  
ISO 9001  
RoHS  
Dark Sky Approved (3000K CCT and warmer only)

## ENERGY DATA

**Electronic LED Driver**  
>0.9 Power Factor  
<20% Total Harmonic Distortion  
120-277V 50/60Hz  
347V 60Hz, 480V 60Hz  
-30°C Minimum Temperature  
40°C Ambient Temperature Rating

**Approximate Net Weight:**  
19.25 lbs. [8.75 kgs.]

**POWER AND LUMENS**

| Lumen/Distribution        | B1 Symmetric | B2 Symmetric | B1 Asymmetric | B2 Asymmetric |
|---------------------------|--------------|--------------|---------------|---------------|
| <b>Drive Current</b>      |              |              |               |               |
| Power Wattage (Watts)     | 16W          | 32W          | 11W           | 23W           |
| Input Current (mA) @ 120V | 140          | 270          | 100           | 200           |
| Input Current (mA) @ 208V | 80           | 160          | 60            | 120           |
| Input Current (mA) @ 240V | 70           | 140          | 50            | 100           |
| Input Current (mA) @ 277V | 60           | 120          | 40            | 90            |
| Power Wattage (Watts)     | 19W          | 37W          | 13W           | 27W           |
| Input Current (mA) @ 347V | 60           | 110          | 40            | 80            |
| Input Current (mA) @ 480V | 180          | 320          | 120           | 240           |
| <b>Optics</b>             |              |              |               |               |
| Lumens                    | 717          | 1,276        | 472           | 848           |
| BUG Rating                | B1-U0-G1     | B1-U0-G2     | B1-U0-G1      | B1-U0-G2      |

**LUMEN MAINTENANCE**

| Ambient Temperature | TM-21 Lumen Maintenance (60,000 Hours) | Calculated L70 (Hours) |
|---------------------|----------------------------------------|------------------------|
| 25°C                | >94%                                   | >350,000               |
| 40°C                | >93%                                   | >250,000               |
| 50°C                | >90%                                   | >170,000               |

**NOTE:** Maintenance data applies to the highest drive current and represents the worst case at the highest wattage.

**LUMEN MULTIPLIER**

| Ambient Temperature | Lumen Multiplier |
|---------------------|------------------|
| 0°C                 | 1.02             |
| 10°C                | 1.01             |
| 25°C                | 1.00             |
| 50°C                | 0.97             |

**COLOR TEMPERATURE**

| Color Temperature (CCT) | CRI (Nominal) | Multiplier (Hours) |
|-------------------------|---------------|--------------------|
| 4000                    | 70            | 1.00               |
| 3000                    | 80            | 0.87               |

**ORDERING INFORMATION**

Sample Number: ABB-B2-LED-42-D1-A-GM

| Product Family                                                                                                                                                                                                                                                                                                                                | Lumen Output <sup>1</sup>                   | Source | Nominal Height             | Voltage                                                                                       | Distribution                                                                                                                              | Color                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|--------|----------------------------|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| ABB=Arbor Bollard                                                                                                                                                                                                                                                                                                                             | B1=Mid Lumen Output<br>B2=High Lumen Output | LED    | 30=32"<br>36=36"<br>42=42" | D1=Dimming Driver (120-277V) <sup>2</sup><br>347=347V <sup>3</sup><br>480=480V <sup>3,4</sup> | A=Asymmetric<br>S=Symmetric                                                                                                               | AP=Grey<br>BZ=Bronze<br>BK=Black<br>DP=Dark Platinum<br>GM=Graphite Metallic<br>WH=White<br>CC=Custom Color <sup>5</sup> |
| <b>Options</b> (Add as Suffix)                                                                                                                                                                                                                                                                                                                |                                             |        |                            |                                                                                               | <b>Accessories</b> (Order Separately)                                                                                                     |                                                                                                                          |
| 8030=80 CRI / 3000K CCT <sup>6</sup><br>HA=High Ambient <sup>7</sup><br>MS/DIM-H8=Motion Sensor for Dimming or Bi-Level Operation (Horizontal Detection) <sup>8</sup><br>MS/DIM-2H8=Twin Motion Sensors for 360° Dimming or Bi-Level Operation (Horizontal Detection) <sup>8</sup><br>DIM=0-10V Dimming Driver Leads Brought Out from Fixture |                                             |        |                            |                                                                                               | ABAAnchor=Anchor Bolt Kit and Template <sup>9</sup><br>ISHH=Wireless Configuration Tool for Integrated Sensor (Occupancy Sensor Settings) |                                                                                                                          |

- NOTES:**
- Standard 4000K CCT nominal 70 CRI.
  - Dimming driver standard.
  - Requires the use of a step down transformer.
  - Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
  - RAL and custom color matching available. Consult your lighting representative at Cooper Lighting Solutions for more information.
  - Extended lead times apply. Use dedicated IES files when performing layouts.
  - 50°C ambient rating.
  - The ISHH configuration tool is required to adjust parameters including high and low dimming levels, sensitivity, time delay, cutoff and more. Consult your lighting representative at Cooper Lighting Solutions for more information.
  - Contact your customer service representative at Cooper Lighting Solutions for advance shipping.

# AccuLite®

Project: \_\_\_\_\_

Fixture Type: \_\_\_\_\_

Location: \_\_\_\_\_

Contact/Phone: \_\_\_\_\_

## FINIA™ LED WALL MOUNTED LW SERIES DOWN OR UP OPTICS

LED 35W, 70W, 105W AND 135W

Cat. No.: \_\_\_\_\_

### PRODUCT DESCRIPTION

The Finia LW series is an architectural wall mounted LED luminaire ideally suited for commercial applications where a low profile, high performance fixture is needed. The design of this luminaire takes full advantage of the LED light source with exclusive features specifically aimed at extracting heat from the diodes and improving light source performance. With an IP65 full fixture rating the LW series can be aimed up for decorative and façade lighting applications.

### PRODUCT SPECIFICATIONS

**Optics** Custom designed, high performance molded TIR (Total Internal Reflection) optics shape the LED light with three different distributions • All optics are Dark Sky friendly, with zero up light • A cut-off wall wash distribution fitted with a prismatic glass lens softens the light on the wall and is especially suited for façade lighting either aimed down or up • The wide and forward throw distributions are full cut-off, performance oriented to extract the maximum light out of the LEDs and deliver it exactly where needed • A tempered glass lens completely seals the optical system • Optional high transmission glass lens with 96% transmittance can be specified where maximum energy savings and fixture spacing are needed.

**Construction** Heavy wall die cast aluminum body, back box, and frame deliver a sturdy, durable fixture • A tempered glass lens completely seals and protects the LED compartment • Optional polycarbonate lens can be used when vandal resistance is desired • All exposed hardware is stainless steel and recessed for concealment • Acrylic TIR lenses provide the highest transmittance of any TIR optics material available in the market today • A powder coat finish with a thorough 6 stage application process seals the aluminum components from the environment.

**Thermal management** LED boards are directly mounted against a polished surface for maximum contact between boards and heat sink • Deep fins are directly behind the LED boards increasing the surface area for maximum heat dissipation • An exclusive air vent between the LED compartment and the electronic driver isolates and cools the two components.

**Electrical** The luminaire is equipped with one, two, three or four LED modules depending on the light output/wattage selection • All versions are available for 120/277VAC or 347/480VAC • Total Harmonic Distortion (THD) is less than 20% • Power factor > 90% at full load • Surge immunity up to 10,000 amps.

**Mounting** Direct mounting to wall with threaded and plugged back conduit entry • Dimpled location prepared for drilling a conduit entry from the sides (for surface conduit mounting) • Can be aimed down or up maintaining IP65 rating • A neoprene gasket is provided for the back entry to seal against the wall.

**Finish** Polyester powder coat finish with a six stage application process • Bronze, black, white or silver are standard • Designer finishes available upon request (provide RAL number).

**0-10V Dimming Option** An optional 0-10V dimming driver (D option) is available • In applications where additional 0-10V wiring presents a challenge, a programmable, automatic dimming unit (PD option) is available • The PD option eliminates the need for 0-10V wiring and automatically dims the fixture with a factory pre-programmed schedule.

REV-10/15



Aimed Down



Aimed Up

**Motion Detection Option** Finia LED luminaires can be ordered with an optional motion sensor integrally mounted to the fixture • The sensor is configured to function either as an ON/OFF switch (M option) or to operate a High/Low dimming driver (H option) • In the High/Low configuration the user can field adjust the “Low” light setting with an internal potentiometer for continuous adjustment down to 15% • The amount of time the fixture remains in the “High” mode is also field adjustable • The fixture operates normally in the “Low” mode, and when the motion sensor detects movement it switches the driver to “High” mode.

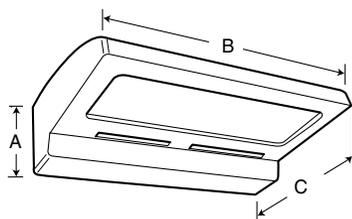
**Emergency Lighting Option** An optional integral battery pack can be provided for emergency lighting during power outages • Emergency battery pack is internal to the fixture so there is no need for any external battery installation • A larger back box is provided for emergency battery (see dimensions) • Choose “EM” option (-30° to 40°C, -22° to 104°F ambient) • 600 initial delivered lumens in emergency mode

**Two Independent Circuits Option** Optional two independent circuit configuration (“2C” option) • Fixtures with this option include two drivers, each of them driving separate LED modules • Excellent option to meet the multiple lamp requirement in egress lighting ordinances, or for energy savings using individual switching of drivers • Fixtures with B06 engines supplied with two drivers, each operating one LED module. Fixtures with B09 engines supplied with one driver operating one module, and one driver operating 2 modules • Fixtures with B12 engines supplied with two drivers, each operating two LED modules • Option not available for fixtures with B03 engines, or emergency battery.

**Certification** Fixture meets UL1598 and CSA C22.2-250 standards • Suitable for wet location applications • Full fixture IP65 rating • Union made • Assembled in the USA • Meets “Buy American Act” • 5 year limited warranty when used in accordance with manufacturer guidelines.

Specifications subject to change without notice.

**DIMENSIONS**



|                              | A      | B       | C       | Weight  |
|------------------------------|--------|---------|---------|---------|
| Standard Unit                | 4 3/4" | 15 1/2" | 9 3/4"  | 17 lbs. |
| Unit w/ options H, M, PD, EM | 4 3/4" | 15 1/2" | 11 1/2" | 25 lbs. |

**LED LUMEN DEPRECIATION**

| Ambient Temperature (°C) | Fixture   | L <sub>70</sub> Hours |
|--------------------------|-----------|-----------------------|
| 25°C                     | LW Series | 100,000               |

L<sub>70</sub> is the LED manufacturer predicted time when the LED performance depreciates below 70% of the initial lumen output and it is based on the stated ambient temperature.

**LED PERFORMANCE (4000K OR 5000K CCT, MIN CRI 70)**

| Catalog Number  | Distribution  | Delivered Lumens | Input Voltage | Watts | Efficacy |
|-----------------|---------------|------------------|---------------|-------|----------|
| LW-B12-4K-UN-WT | Wide          | 11,960           | 120           | 135   | 89       |
| LW-B09-4K-UN-WT | Wide          | 8,970            | 120           | 105   | 85       |
| LW-B06-4K-UN-WT | Wide          | 5,980            | 120           | 70    | 85       |
| LW-B03-4K-UN-WT | Wide          | 2,990            | 120           | 35    | 85       |
| LW-B12-4K-UN-FT | Forward Throw | 10,813           | 120           | 136   | 80       |
| LW-B09-4K-UN-FT | Forward Throw | 8,110            | 120           | 105   | 77       |
| LW-B06-4K-UN-FT | Forward Throw | 5,407            | 120           | 70    | 77       |
| LW-B03-4K-UN-FT | Forward Throw | 2,703            | 120           | 35    | 77       |
| LW-B12-4K-UN-WW | Wall Wash     | 10,838           | 120           | 138   | 79       |
| LW-B09-4K-UN-WW | Wall Wash     | 8,129            | 120           | 105   | 77       |
| LW-B06-4K-UN-WW | Wall Wash     | 5,419            | 120           | 70    | 77       |
| LW-B03-4K-UN-WW | Wall Wash     | 2,710            | 120           | 35    | 77       |

**PHOTOMETRY**

|                      | LW-B03-4K-UN-WT<br>Total Lumens: 2,915 |                       | LW-B12-4K-UN-WT<br>Total Lumens: 11,659 |                       | LW-B03-4K-UN-FT<br>Total Lumens: 2,707 |                       | LW-B12-4K-UN-FT<br>Total Lumens: 10,828 |                       | LW-B03-4K-UN-WW<br>Total Lumens: 2,706 |                       | LW-B12-4K-UN-WW<br>Total Lumens: 10,826 |                       |
|----------------------|----------------------------------------|-----------------------|-----------------------------------------|-----------------------|----------------------------------------|-----------------------|-----------------------------------------|-----------------------|----------------------------------------|-----------------------|-----------------------------------------|-----------------------|
| Zone                 | Luminaire Lumens                       | % of Luminaire Lumens | Luminaire Lumens                        | % of Luminaire Lumens | Luminaire Lumens                       | % of Luminaire Lumens | Luminaire Lumens                        | % of Luminaire Lumens | Luminaire Lumens                       | % of Luminaire Lumens | Luminaire Lumens                        | % of Luminaire Lumens |
| <b>Forward Light</b> | <b>2,093</b>                           | <b>71.8%</b>          | <b>8,374</b>                            | <b>71.8%</b>          | <b>1,509</b>                           | <b>55.7%</b>          | <b>6,036</b>                            | <b>55.7%</b>          | <b>1,406</b>                           | <b>51.9%</b>          | <b>5,623</b>                            | <b>51.9%</b>          |
| FL (0°-30°)          | 470                                    | 16.1%                 | 1,880                                   | 16.1%                 | 166                                    | 6.1%                  | 665                                     | 6.1%                  | 469                                    | 17.3%                 | 1,874                                   | 17.3%                 |
| FM (30°-60°)         | 1,191                                  | 40.9%                 | 4,766                                   | 40.9%                 | 682                                    | 25.2%                 | 2,730                                   | 25.2%                 | 785                                    | 29.0%                 | 3,139                                   | 29.0%                 |
| FH (60°-80°)         | 427                                    | 14.7%                 | 1,709                                   | 14.7%                 | 645                                    | 23.8%                 | 2,581                                   | 23.8%                 | 142                                    | 5.3%                  | 569                                     | 5.3%                  |
| FVH (80°-90°)        | 5                                      | 0.2%                  | 19                                      | 0.2%                  | 15                                     | 0.6%                  | 60                                      | 0.6%                  | 10                                     | 0.4%                  | 40                                      | 0.4%                  |
| <b>Back Light</b>    | <b>821</b>                             | <b>28.2%</b>          | <b>3,285</b>                            | <b>28.2%</b>          | <b>1,198</b>                           | <b>44.3%</b>          | <b>4,792</b>                            | <b>44.3%</b>          | <b>1,301</b>                           | <b>48.1%</b>          | <b>5,203</b>                            | <b>48.1%</b>          |
| BL (0°-30°)          | 273                                    | 9.4%                  | 1,094                                   | 9.4%                  | 160                                    | 5.9%                  | 641                                     | 5.9%                  | 470                                    | 17.4%                 | 1,881                                   | 17.4%                 |
| BM (30°-60°)         | 389                                    | 13.3%                 | 1,554                                   | 13.3%                 | 627                                    | 23.2%                 | 2,508                                   | 23.2%                 | 733                                    | 27.1%                 | 2,932                                   | 27.1%                 |
| BH (60°-80°)         | 158                                    | 5.4%                  | 633                                     | 5.4%                  | 408                                    | 15.1%                 | 1,631                                   | 15.1%                 | 94                                     | 3.5%                  | 376                                     | 3.5%                  |
| BVH (80°-90°)        | 1                                      | 0.0%                  | 4                                       | 0.0%                  | 3                                      | 0.1%                  | 12                                      | 0.1%                  | 4                                      | 0.1%                  | 15                                      | 0.1%                  |
| <b>UL Light</b>      | <b>0</b>                               | <b>0.0%</b>           | <b>0</b>                                | <b>0.0%</b>           | <b>0</b>                               | <b>0.0%</b>           | <b>0</b>                                | <b>0.0%</b>           | <b>0</b>                               | <b>0.0%</b>           | <b>0</b>                                | <b>0.0%</b>           |
| UL (90°-100°)        | 0                                      | 0.0%                  | 0                                       | 0.0%                  | 0                                      | 0.0%                  | 0                                       | 0.0%                  | 0                                      | 0.0%                  | 0                                       | 0.0%                  |
| UH (100°-180°)       | 0                                      | 0.0%                  | 0                                       | 0.0%                  | 0                                      | 0.0%                  | 0                                       | 0.0%                  | 0                                      | 0.0%                  | 0                                       | 0.0%                  |
| <b>Trapped Light</b> | <b>N/A</b>                             | <b>N/A</b>            | <b>N/A</b>                              | <b>N/A</b>            | <b>N/A</b>                             | <b>N/A</b>            | <b>N/A</b>                              | <b>N/A</b>            | <b>N/A</b>                             | <b>N/A</b>            | <b>N/A</b>                              | <b>N/A</b>            |
| BUG Rating           | B1-U1-G1                               |                       | B3-U1-G2                                |                       | B1-U1-G1                               |                       | B3-U1-G3                                |                       | B1-U1-G1                               |                       | B3-U1-G1                                |                       |

All tests were performed according to IES LM-79-08

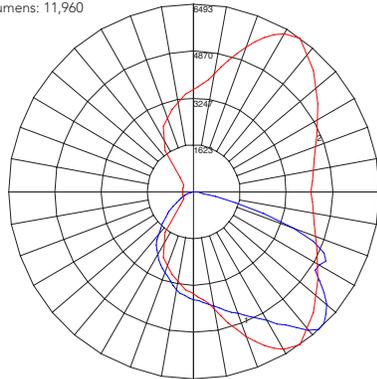


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 220 Chrysler Drive • Brampton, Ontario • Canada L6S 6B6 • Phone (905) 792-7335 • Fax (905) 792-0064  
 Visit us at [www.junolightinggroup.com](http://www.junolightinggroup.com)

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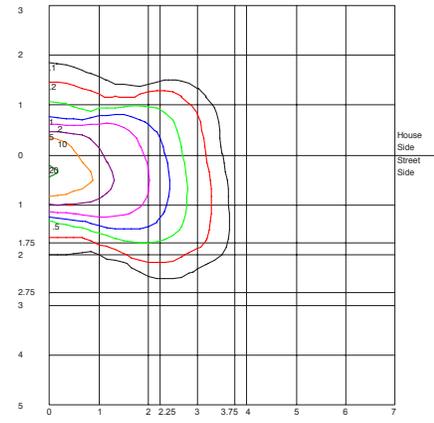
**LW-B12-4K-UN-WT**

Total Fixture Watts: 135W  
Total Lumens: 11,960



Maximum Candela = 6493.1 Located At Horizontal Angle = 55, Vertical Angle = 42.5  
 # 1 - Vertical Plane Through Horizontal Angles (55-235) (Through Max. Cd.)  
 # 2 - Horizontal Cone Through Vertical Angle (42.5) (Through Max Cd.)

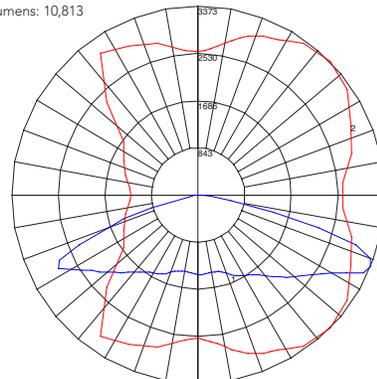
**ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE**



Distance In Units Of Mounting Height  
Values Based On 15 Foot Mounting Height

**LW-B12-4K-UN-FT**

Total Fixture Watts: 136W  
Total Lumens: 10,813



**ORDERING INFORMATION**

| Series                                  | Light Engine Code                                                                                  | CCT                                       | Voltage                                                                          | Distribution                                               | Options                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Finish                                                                                                                                            |
|-----------------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| LW                                      | B06                                                                                                | 4K                                        | UN                                                                               | WT                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | WH                                                                                                                                                |
| LW<br>High Performance LED Wall Mounted | B03<br>35W LED Engine<br>B06<br>70W LED Engine<br>B09<br>105W LED Engine<br>B12<br>135W LED Engine | 5K<br>5000K<br>4K<br>4000K<br>3K<br>3000K | UN<br>Universal 120-277V<br>E1<br>120V<br>E2<br>277V<br>E3<br>347V<br>E4<br>480V | WT<br>Wide Throw<br>FT<br>Forward Throw<br>WW<br>Wall Wash | PC <sup>3</sup><br>Button Style Photocontrol (Specify voltage)<br>H <sup>2, 4, 6</sup><br>Motion sensor hi/lo (Specify voltage)<br>M <sup>1, 6</sup><br>Motion sensor on/off (Specify voltage)<br>HT<br>High transmission glass lens (WT & FT optics only)<br>PG<br>Prismatic glass lens (WT & FT optics only)<br>PL <sup>6</sup><br>Polycarbonate Lens (WT & FT optics only)<br>F <sup>7</sup><br>Fusing (Specify voltage)<br>TP<br>Tamper resistant hardware<br>D <sup>4</sup><br>Dimming 0-10V<br>PD <sup>1, 4</sup><br>Pre-programmed Dimming<br>2C <sup>1, 5</sup><br>Two independent circuits (Not available with B03 engine)<br>EM <sup>1, 7</sup><br>Integral emergency battery (-30° to 40°C, -22° to 104°F ambient) | no suffix<br>Bronze finish<br>BL<br>Black finish<br>WH<br>White finish<br>SL<br>Silver finish<br>custom finish<br>Contact factory with RAL number |

**Notes:**

- <sup>1</sup>Available in 120V-277V
- <sup>2</sup>Available with 120V or 277V only
- <sup>3</sup>Available with 120V, 277V or 347V only
- <sup>4</sup>Options "H", "D" and "PD" can't be combined.
- <sup>5</sup>Option "2C" can't be combined with options "PC", "EM" or "M".
- <sup>6</sup>Option not available for uplighting applications.
- <sup>7</sup>Fixtures with "EM" and "F" options combined are supplied with a single fuse connected to the main driver input line.

**ACCESSORIES**

| Description                                                    | Catalog #   |
|----------------------------------------------------------------|-------------|
| USB PC Cable<br>For field programming of "PD" option with a PC | PDUSBPCABLE |



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**STAFF REPORT  
CDRB Meeting  
March 19, 2020 at 4:00 p.m.**

**TO:** Town of Summerville CDRB  
**FROM:** Planning Staff  
**DATE:** March 13, 2020

**GENERAL INFORMATION**

**Applicant:** Thanh Vu  
**Property Owner:** Thanh Vu  
**Requested Action:** The applicant is requesting Final Approval for proposed renovations to the exterior of the existing building  
**Requested Approval:** Final Approval  
**Existing Zoning:** UC-MX Urban Corridor Mixed Use  
**Adjacent Zoning:** **North:** UC-MX Urban Corridor Mixed Use  
**South:** UC-MX Urban Corridor Mixed Use  
**East:** UC-MX Urban Corridor Mixed Use  
**West:** UC-MX Urban Corridor Mixed Use  
**Location:** 710 N Main Street  
**Existing Land Use:** Vacant Office  
**Prior Approvals:** First Meeting  
**Ordinance Reference:**  
Sec. 13.3.5. Design Review Board.

- (b) *Mission statement.* The purpose of the commercial design review board is to establish a review process that will protect and improve the visual and aesthetic character and economic value of commercial development within the town. In turn, this establishment of scenic corridors will contribute to the community's sense of place and pride further strengthening the town's unity of character. Through this process, the assurance of respect for the character, integrity, and quality of the built environment of the town will be established without stifling innovative architecture and/or development. All development shall adhere to the definitions and terms outlined in all of the town's zoning ordinances and codes as preliminary criteria. The commercial design review board is granted the authority to determine the appropriateness of the construction of the commercial site in pursuit of achieving that style which is characteristic of the region and of the town in particular as stated in the guidelines of this section.

**Recommendation:**

- Based on preliminary review staff had the following comments. The preferred option to address the one-way entrance is to discuss an agreement with Wendy's to provide a vehicular exit through their back parking area. If Wendy's is not willing to grant access, the driveway in the front could be widened to create a pull-off, but would need to stay the same width at the right-of-way of N. Main St. The allowed square footage for the monument sign face is 36 sf. A tree removal permit will be required if trees need to be removed to accommodate cross access. The following landscaping is required along the rear sides of the property as feasible: Canopy tree every 40 feet; A continuous row of evergreen shrubs with an expected height of 3 ft at maturity, installed at not more than 6 ft on center

