LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	LUMENS	TOTAL FIXTURE WATTS	COLOR TEMP	BALLAST/ DRIVER	VOLTAGE	MOUNTING	MANUFACTURER/MODEL		NOTES
A	2X2 LED FLAT PANEL	4000	29.24	3500K	LED	MVOLT	RECESSED	RENOVA LIGHTING "OVATION"	RVN22-N-L040-UNV-DM-C35-AF OR PREAPPROVED EQUAL	
AE	SAME AS TYPE 'A', EXCEPT PROVIDE WITH 90 MINUTE EMERGENCY BATTERY PACK	4000		3500K	LED	MVOLT	RECESSED			
B	ARCHITECTURAL LINEAR LED ILLUMINATING SYSTEM WALLWASH	625	5.18/LF	3500	LED	120	SUSPENDED	MERCURY ARCHITECTURAL LIGHTING	MLP3-N5-3PER DWGS-625-35K-HTA-1%-U OR PREAPPROVED EQUAL	PROVIDE LENGTHS PER DRAWINGS
C	4' LED CHAIN HUNG STRIP LIGHT	4000	43	3500K	LED	LED	MVOLT	LITHONIA CLX	CLX-L48-3500LM-SEF-MVOLT-40K-80CRI-ZACVH M100 OR PREAPPROVED EQUAL	SET LIGHT TO 3500K. PROVIDE WITH CHAIN HANGARS. MOUNT BOTTOM OF LIGHT AT 9'-0"AFF
DE	4' LED STRIP LIGHT FIXTURE	12000		3500K	LED	MVOLT	SUSPENDED	LITHONIA CLX	CLX-L48-5000LM-SEF- -L/LENS-MVOLT-GZ1-35K-90CRI-E10WLCP-MB OR PREAPPROVED EQUAL	BLACK HOUSING. EMERGENCY BATTERY PACK
F	SUSPENDED NARROW BEAM STRIP LED LIGHT	3000	43	3500K	LED	MVOLT	SUSPENDED	JUNO LIGHTING	T286L- -35K-90CRI-PDIM-NFL-BL-LSPREAD 469 - BARN DOORS OR PREAPPROVED EQUAL	MOUNT OUT OF PUBLIC VIEW BEHIND CURTAIN. PROVIDE WITH LINEAR BEAM SPREAD OPTION AND BARN DOORS. MOUNT ON JUNO T SERIES TRAC T-6FT BL. PROVIDE WITH 2.5A CURRENT LIMITER.
G1	4" LED SQUARE RECESSED DOWNLIGHT IN GYPBOARD CEILING	1500	13.7	4000K	LED	MVOLT	RECESSED	GOTHAM EVO	EVO4SQ-35/15-AR-LSS-MVOLT-GZ1 OR PREAPPROVED EQUAL	MOUNT IN GYPBOARD CEILINGS AND PROVIDE ALL ACCESSORIES FOR INSTALLATION
G2	4" LED SQUARE RECESSED DOWNLIGHT IN ACT CEILING	1500	13.7	3500K	LED	MVOLT	RECESSED	GOTHAM EVO	EVO4SQ-35/15-AR-LSS-MVOLT-GZ1 OR PREAPPROVED EQUAL	MOUNT IN CEILING GRID AND PROVIDE ALL ACCESSORIES FOR INSTALLATION
G2E	SAME AS TYPE 'G2', EXCEPT PROVIDE WITH 90 MINUTE EMERGENCY BATTERY PACK	1500	13.7	3500K	LED	MVOLT	RECESSED			
G3	4" LED SQUARE RECESSED DOWNLIGHT IN GYPBOARD CEILING	2000	19.5	3500K	LED	MVOLT	RECESSED	GOTHAM EVO	EVO4SQ-35/20-AR-LSS-MVOLT-GZ1 OR PREAPPROVED EQUAL	MOUNT IN GYPBOARD CEILINGS AND PROVIDE ALL ACCESSORIES FOR INSTALLATION
G3E	SAME AS TYPE 'G3', EXCEPT PROVIDE WITH 90 MINUTE EMERGENCY BATTERY PACK	2000	19.5	3500K	LED	MVOLT	RECESSED			
G4	4" LED SQUARE RECESSED DOWNLIGHT IN GYPBOARD CEILING	2000	19.5	3500K	LED	MVOLT	RECESSED	GOTHAM EVO	EVO4SQ-35/20-AR-LSS-MVOLT-GZ1 OR PREAPPROVED EQUAL	MOUNT IN CEILING GRID AND PROVIDE ALL ACCESSORIES FOR INSTALLATION
G4E	SAME AS TYPE 'G4', EXCEPT PROVIDE WITH 90 MINUTE EMERGENCY BATTERY PACK	2000	19.5	3500K	LED	MVOLT	RECESSED			
G5	4" LED SQUARE RECESSED ADJUSTABLE DOWNLIGHT IN GYPBOARD CEILING	2200	19	3500K	LED	MVOLT	RECESSED	ACULUX AX4SQ	AX4SQ D 22LM 35K 90CRI 45D GZ1 MVOLT 4SQA FINISH SF CEILING THICKNESS OR PREAPPROVED EQUAL	ARCHITECT SHALL SPECIFY FINISH AND CEILING THICKNESS
G5E	SAME AS TYPE 'G5', EXCEPT PROVIDE WITH 90 MINUTE EMERGENCY BATTERY PACK	2000	19	3500K	LED	MVOLT	RECESSED			
G6E	6" LED ADJUSTABLE DOWNLIGHT WITH 90 MINUTE EMERGENCY BATTERY PACK	8000	74.9	3500K	LED	MVOLT	RECESSED	GOTHAM EVO	EVO6CC-35/80-AR-LSS-MWD-MVOLT-GZ1-CCAN45-CORD LENGTH - E15WCP OR PREAPPROVED EQUAL	
H	VANITY LIGHT	1500	50 MAX	3500K	LED	MVOLT	WALL		TO BE SPECIFIED BY OTHERS	
K1	LED PENDANT MOUNTED CYLINDER LIGHT FIXTURE	2000	19.7	3500K	LED	MVOLT	SUSPENDED	GOTHAM EVO	EVO6CC-35/20-AR-LSS-MWD-MVOLT-GZ1-CCAN45-CORD LENGTH - BLACK - E15WCP OR PREAPPROVED EQUAL	PROVIDE ACCESSORIES TO MOUNT ON INCLINED CEILING. BLACK FINISH.
K1E	SAME AS TYPE 'K1', EXCEPT PROVIDE WITH 90 MINUTE EMERGENCY BATTERY PACK	2000	19.7	3500K	LED	MVOLT	SUSPENDED			
K1W	WET LISTED LED PENDANT MOUNTED CYLINDER LIGHT FIXTURE AND EMERGENCY BATTERY PACK	2000	19.7	3500K	LED	MVOLT	SUSPENDED	GOTHAM EVO	EVO6CC-35/20-AR-LSS-MWD-MVOLT-GZ1-CCAN45-CORD LENGTH - BLACK - E15WCP - WL OR PREAPPROVED EQUAL	BLACK FINISH.
K2	LED PENDANT MOUNTED CYLINDER LIGHT FIXTURE	8000	74.9	3500K	LED	MVOLT	SUSPENDED	GOTHAM EVO	EVO6CC-35/80-AR-LSS-MWD-MVOLT-GZ1-CCAN45-CORD LENGTH - E15WCP OR PREAPPROVED EQUAL	PROVIDE ACCESSORIES TO MOUNT ON INCLINED CEILING.
K2E	SAME AS TYPE 'K2', EXCEPT PROVIDE WITH 90 MINUTE EMERGENCY BATTERY PACK	8000	74.9	3500K	LED	MVOLT	SUSPENDED			
L1	LED PENDANT MOUNTED LINEAR LIGHT FIXTURE	750/LF	7/FL	3500K	LED	MVOLT	SUSPENDED	MOJO ILLUMINATION	GR22D-D-750F-35K-010-M-A10-BLACK-CEILING-FINISH-12 OR PREAPPROVED EQUAL	12' LENGTH. ARCHITECT SHALL SELECT MOUNTING COLOR, CEILING TYPE. BLACK FINISH.
L2	SURFACE GRID MOUNTED LED LINEAR LIGHT FIXTURE	750/LF	5.9/LF	3500	LED	MVOLT	SURFACE	MOJO ILLUMINATION	GR2S-DR-750F-35K-010-M-SM-CEILING-BK-06 OR PREAPPROVED EQUAL	COORDINATE CEILING OPTION WITH ARCHITECTURAL DRAWINGS
SC1	LED SCONCE WITH UP/DOWNLIGHT	1500	20W MAX	3500K	LED	MVOLT	WALL		TO BE SELECTED BY OTHERS	BLACK FINISH.
SC1W	WET LISTED LED SCONCE WITH UP/DOWNLIGHT	1500	20W MAX	3500K	LED	MVOLT	WALL		TO BE SELECTED BY OTHERS	WET LISTED. BLACK FINISH.
SC2	LED SCONCE WITH DOWNLIGHT ONLY	3000	40W MAX	3500K	LED	MVOLT	WALL		TO BE SELECTED BY OTHERS	BLACK FINISH.
X	EDGE-LIT EXIT SIGN		5		LED	MVOLT	TRACK	LITHONIA	EDG SERIES OR PREAPPROVED EQUAL	PROVIDE WITH 90 MINUTE BATTERY PACK. COLOR TO BE SELECTED BY ARCHITECT. PROVIDE SURFACE, WALL, OR RECESS MOUNT FOR THE APPLICATION.
Y	WET LISTED DECORATIVE LED LIGHTING SCONCE WITH EMERGENCY BATTERY PACK	1700	24		LED	MVOLT	TRACK	SUNLITE	88142-SU LFX/UD/R/12"/24W/BK/SCT OR PREAPPROVED EQUAL	WET LISTED. PROVIDE WITH EMERGENCY BATTERY PACK

SCHEDULE NOTES

1	NO SUBSTITUTIONS ARE ALLOWED WITHOUT APPROVAL BY EOR AND OWNER.	4	EXIT AND EMERGENCY LIGHTING FIXTURES SHALL BE CIRCUITED TO AN UNSWITCHED LEG OF A LOCAL LIGHTING CIRCUIT (UNLESS OTHERWISE NOTED). INCLUDE 90 MINUTE BATTERY BACKUP AND TESTING MEANS.
2	ALL EXPEDITED COSTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.		
3	BATTERY BALLASTS SHALL PROVIDE 90 MINUTES OF BATTERY BACKUP AND BE EQUIPPED WITH INTEGRAL INDICATOR LIGHT.	5	THE CONTRACTOR SHALL VERIFY THE LEAD TIME OF ALL PRODUCTS TO BE SUBMITTED AT THE TIME OF THE SUBMITTAL ISSUANCE. AND SHALL NOTIFY THE ARCHITECT AND ENGINEER OF ANY DELIVERY CHALLENGES.

GENERAL ELECTRICAL NOTES:

1. THE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND DO NOT NECESSARILY SHOW EVERY FITTING AND DETAIL. ALL WORK SHALL BE COMPLETED SO THE JUNCTION BOXES AND COMPONENTS WILL BE ACCESSIBLE FOR SERVICING.
2. ALL ELECTRICAL WORK PERFORMED DURING THIS SCOPE OF WORK SHALL COMPLY WITH ALL LOCAL BUILDING CODES, LAWS, REGULATIONS, ORDINANCES, AND THE REQUIREMENTS OF THE 2020 NATIONAL ELECTRICAL CODE. ALL WORK SHALL COMPLY WITH ANY OWNER SPECIFICATIONS NOT CALLED OUT ON THIS SET OF DRAWINGS.
3. WHERE ELECTRICAL CONTINUITY TO EXISTING TO REMAIN RECEPTACLES/LIGHTS/EQUIPMENT IS DISRUPTED BY DEMOLITION DURING THIS SCOPE OF WORK, RECONNECT THE DEVICE TO THE CIRCUIT IT WAS CONNECTED TO BEFORE DEMOLITION TOOK PLACE UNLESS THE DRAWINGS SHOW OTHERWISE.
4. ALL CONDUCTORS SHALL BE COPPER WITH TYPE "THHN" OR "THW" INSULATION. USE "THHN" FOR #10 OR SMALLER CONDUCTORS. USE "THW" FOR CONDUCTORS #8 OR LARGER.
5. THE MINIMUM WIRE SIZE SHALL BE #12 A.W.G.
6. ALL PENETRATIONS THRU RATED WALLS, FLOORS AND CEILINGS SHALL BE FIRE STOPPED PER N.E.C. 300-21 AND NFPA 221.
7. PROVIDE GROUNDING AS REQUIRED BY N.E.C..
8. WHERE MOUNTING HEIGHTS ARE SHOWN ON THE DRAWINGS, THE MEASUREMENT IS TO BE TAKEN FROM THE CENTERLINE OF THE DEVICE.
9. TYPICAL CONDUIT SIZES ARE 3/4" EMT WITH 2#12, 1#12G. AWG UNLESS OTHERWISE NOTED.
10. A #12 GROUND SHALL BE PROVIDED FOR ALL MECHANICAL EQUIPMENT UNLESS NOTED OTHERWISE. ALL EQUIPMENT SHALL BE GROUNDED AT THE PANEL THAT FEEDS THE EQUIPMENT.
11. CONTRACTOR SHALL PROVIDE A PANEL SCHEDULE DIRECTORY LOCATED ON THE INSIDE COVER OF THE ELECTRICAL PANEL. ALL CIRCUITS, SPARES, AND SPACES SHALL BE CORRECTLY LABELED.
12. ALL BRANCH CIRCUIT HOMERUN CONDUCTORS SHALL BE PROVIDED WITH A SEPERATE INSULATED #12 AWG EQUIPMENT GROUNDING CONDUCTOR.
13. IF THE GENERAL CONTRACTOR DOES ANY WORK THAT CAUSES DISRUPTION TO ANY ELECTRICAL CIRCUITS OR SYSTEMS, THE ELECTRICAL CONTRACTOR SHALL CONNECT ALL REMAINING WORKING DEVICES ON THAT CIRCUIT AS REQUIRED TO ENSURE PROPER WORKING SYSTEM.
14. BUILDING CODE SECTION 705.4 SHALL BE MET WITH ELECTRICAL DEVICES TO BE INSTALLED IN RATED WALLS.
15. ALL ELECTRICAL MATERIALS, DEVICES, AND EQUIPMENT SHALL BE LISTED BY UL OR OTHER STATE APPROVED THIRD PARTY TESTING AGENCY.
16. FIRE RATED SLEEVES SHALL BE PROVIDED AND ALL FIRESTOPPING SHALL BE PROVIDED AS REQUIRED BY CODE WHEN CABLING IS ROUTED THROUGH A FIRE RATED PARTITION. BLANK COVERS SHALL BE INSTALLED ON RINGS.
17. ALL ELECTRICAL EQUIPMENT SHALL BE PROTECTED FROM DAMAGE AFTER BEING INSTALLED. CONTRACTOR SHALL NOT INSTALL TRIM AND COVER PLATES UNTIL AFTER ALL FINISHES TO ARCHITECTURAL ELEMENTS HAVE BEEN COMPLETED.
18. MOUNT ALL DISCONNECT SWITCHES TO STRUCTURE. DISCONNECTS SHALL NOT BE MOUNTED TO DUCTWORK OR MECHANICAL EQUIPMENT.
19. ANY CABLING TO BE INSTALLED DURING THIS SCOPE OF WORK THAT IS ROUTED THROUGH ANOTHER TENANT SPACE OR COMMON AREA SHALL BE ENCLOSED IN CONDUIT.
20. ALL LIGHT FIXTURE SHALL BE CLEANED, AND FULLY FUNCTIONAL AT MOVE-IN. THIS INCLUDES RE-LAMPING.
21. CONTRACTOR SHALL PROVIDE AND INSTALL NAMEPLATE FOR ALL RECEPTACLES AND POWERED DEVICES. INFORMATION ON NAMEPLATE SHALL INCLUDE ELECTRICAL PANEL AND CIRCUIT NUMBER FROM WHICH DEVICE IS POWERED.
22. WHERE TWO SWITCHES OR MORE (INCLUDING DIMMERS) ARE LOCATED NEXT TO EACH OTHER, CONTRACTOR SHALL PROVIDE AND INSTALL A SINGLE SWITCHPLATE TO PROVIDE A NEATER APPEARANCE.
23. NO MC CABLE IS ALLOWED WHERE VISIBLE.
24. ALL CONDUCTORS #1 AND UNDER SHALL BE RATED FOR 60 DEGREES CELSIUS. ALL CONDUCTORS LARGER THAN #1 SHALL BE RATED FOR 75 DEGREES CELSIUS.
25. ALL CONDUCTORS SHALL BE COPPER UNLESS OTHERWISE NOTED.

MOUNTING HEIGHT NOTES:

1. WALL MOUNTED FIRE ALARM NOTIFICATION DEVICES MUST BE MOUNTED MOUNTED NO LOWER THAN 80" AFF TO BOTTOM OF DEVICE AND NO HIGHER THAN 96" TO TOP OF THE DEVICE. CONTRACTOR SHALL MOUNT THESE DEVICES AT 88" TO THE MIDDLE OF THE DEVICE UNLESS FIELD CONDITIONS DO NOT ALLOW TO MOUNT AT THIS HEIGHT. IF THE DEVICE CAN NOT BE LOCATED BETWEEN 80" AND 96", CONTACT ENGINEER IMMEDIATELY FOR SOLUTION.
2. MOUNT CENTER LINE OF EXIT SIGN 24" ABOVE DOOR WHERE CEILING IS OVER 12'-0"AFF OR TO STRUCTURE WHERE NO CEILING IS PRESENT. IF CEILING IS 12'-0"AFF OR UNDER, CONTRACTOR SHALL MOUNT CENTER LINE OF EXIT SIGN 12" BELOW CEILING.
3. WALL MOUNTED TELEPHONES, FIRE ALARM PULL STATIONS, AND LIGHT SWITCHES SHALL BE MOUNTED AT 48"AFF TO TOP OF THE DEVICE.
4. ALL RECEPTACLES SHALL BE MOUNTED AT 18"AFF TO THE CENTER LINE OF THE DEVICE UNLESS OTHERWISE NOTED.
5. THE NEAREST EDGE OF ALL CEILING MOUNTED SMOKE OR HEAT DETECTORS SHALL BE LOCATED NO LESS THAN 4" FROM THE WALL.

ELECTRICAL SYMBOL LEGEND

Ⓙ	JUNCTION BOX
⊢Ⓙ	WALL MOUNTED JUNCTION BOX
⌒	CONCEALED CONDUIT
‐ ‐ ‐	CONCEALED CONDUIT IN FLOOR OR UNDERGROUND
→	CIRCUIT HOMERUN TO PANEL; EACH ARROWHEAD = 1 CIRCUIT
⫲	HASH MARKS ACROSS CONDUIT INDICATE THE NUMBER OF #12 CONDUCTORS (# OF PHASES + NEUTRAL) UNLESS OTHERWISE NOTED. NO HASH MARKS INDICATE TWO #12 CONDUCTORS. EQUIPMENT GROUNDING CONDUCTORS ARE NOT INDICATED BY HASH MARKS.
■	120/208V ELECTRICAL PANELBOARD
▨	277/480V ELECTRICAL PANELBOARD
☐ #/#	NON-FUSED DISCONNECT SWITCH (FRAME/POLES)
☒ #/#/#	FUSED DISCONNECT SWITCH (FRAME/POLES/FUSE) - FUSE IF NEEDED AND SIZE PER EQUIPMENT NAMEPLATE

POWER SYMBOLS

WP/GFI	DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTION AND WEATHERPROOF HOUSING
GFI	DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTION
	5-20R DUPLEX RECEPTACLE
	QUADRAPLEX RECEPTACLE
▽	SPECIAL RECEPTACLE. NEMA TYPE NOTED NEXT TO DEVICE OR IN KEYED NOTE
	FLOOR MOUNTED POKE-THRU DEVICE WITH DUPLEX RECEPTACLE FOR NON-SLAB ON GRADE APPLICATIONS. FLOOR MOUNTED RECESSED FLOOR BOX WITH DUPLEX RECEPTACLE FOR SLAB ON GRADE APPLICATIONS.
⊞	FLOOR MOUNTED POKE-THRU DEVICE WITH QUADRAPLEX RECEPTACLE FOR NON-SLAB ON GRADE APPLICATIONS. FLOOR MOUNTED RECESSED FLOOR BOX WITH QUADRAPLEX RECEPTACLE FOR SLAB ON GRADE APPLICATIONS.
	FLOOR MOUNTED POKE-THRU DEVICE WITH DUPLEX RECEPTACLE AND DATA/COMMUNICATIONS DEVICES FOR NON-SLAB ON GRADE APPLICATIONS. FLOOR MOUNTED RECESSED FLOOR BOX WITH DUPLEX RECEPTACLE AND DATA/COMMUNICATIONS DEVICES FOR SLAB ON GRADE APPLICATIONS.
	FLOOR MOUNTED POKE-THRU DEVICE WITH QUADRAPLEX RECEPTACLE AND DATA/COMMUNICATIONS DEVICES FOR NON-SLAB ON GRADE APPLICATIONS. FLOOR MOUNTED RECESSED FLOOR BOX WITH QUADRAPLEX RECEPTACLE AND DATA/COMMUNICATIONS DEVICES FOR SLAB ON GRADE APPLICATIONS.
FF	CAST IRON FURNITURE FEED FLOOR BOX. NUMBER NEXT TO DEVICE INDICATES NUMBER OF CUBICLES TO BE SERVED BY THIS DEVICE. BASIS OF DESIGN IS LEGRAND EVOLUTION SERIES FLOOR BOX, FURNITURE SERIES. PROVIDE COVER PLATES AND FLANGES AS REQUIRED. COORDINATE EXACT LOCATION AND COVER FINISH WITH ARCHITECT.
▼	TELE/COMMUNICATIONS JACK (CONTRACTOR SHALL PROVIDE AND INSTALL JUNCTION BOX CONNECTED TO PULLSTRING TO UP ABOVE ACCESSIBLE CEILING)
USB	DUPLEX RECEPTACLE WITH (2) USB PLUGS. BASIS OF DESIGN IS LEGRAND 'TM826USBWCC6'
○	CONDUIT STUB UP
BF	FURNITURE BASE FEED
CR	CARD READER. PROVIDE JUNCTION BOX WITH PULLSTRING TO UP ABOVE ACCESSIBLE CEILING.
TV	TELEVISION. REFER TO DETAIL ON THIS DRAWING SET. MOUNT AT +60"AFF UNLESS OTHERWISE NOTED.

LIGHTING SYMBOLS

☐ ○ ▭ ○	LIGHT FIXTURE (LETTER NEXT TO LIGHT SIGNIFIES LIGHTING TYPE - REFER TO LIGHTING FIXTURE SCHEDULE)
◪	EMERGENCY OVERHEAD LIGHT FIXTURE (LETTER NEXT TO LIGHT SIGNIFIES LIGHTING TYPE - REFER TO LIGHTING FIXTURE SCHEDULE)
⊗ ⊗	EXIT SIGN (COORDINATE ARROWS AND FACES WITH DRAWINGS)
	EMERGENCY "BUG EYE" LIGHT FIXTURE
⊗	COMBINATION EXIT SIGN / EMERGENCY "BUG EYE" LIGHT FIXTURE
$	WALL MOUNTED COMMERCIAL GRADE DECORATOR LIGHT SWITCH. GREENGATE 7521 SERIES. VALUE ENGINEERING SUBSTITUTION SHALL BE COMMERCIAL GRADE TOGGLE SWITCH. GREENGATE CS120 SERIES.
$D	WALL MOUNTED STANDARD 0-10V COMMERCIAL GRADE SLIDE DIMMER LIGHT SWITCH. GREENGATE WBSD-010M-C1
$3	WALL MOUNTED STANDARD COMMERCIAL GRADE THREE-WAY TOGGLE LIGHT SWITCH. GREENGATE
$OS	WALL MOUNTED OCCUPANCY SENSOR / LIGHT SWITCH COMBINATION UNIT. GREENGATE 'ONW-D-1001' WIRED FOR SINGLE POLE OPERATION.
$OSD	WALL MOUNTED 0-10V DIMMING LIGHT SWITCH WITH DUAL TECHNOLOGY INTEGRAL OCCUPANCY SENSOR. GREENGATE 'OSW-D-010'.
$OS2	WALL MOUNTED 0-10V RECESSED DUAL RELAY LIGHT SWITCH WITH DUAL TECHNOLOGY INTEGRAL OCCUPANCY SENSOR. GREENGATE 'ONW-D-1001-DMV-N. THIS CONTROL SWITCH SHALL CONTROL TWO ZONES OF LIGHTING.
$OS3	WALL MOUNTED OCCUPANCY SENSOR / LIGHT SWITCH COMBINATION UNIT. GREENGATE 'ONW-D-1001' WIRED FOR THREE-WAY OPERATION.
$VS	WALL MOUNTED OCCUPANCY SENSOR / LIGHT SWITCH COMBINATION UNIT. GREENGATE 'VNW-D-1001-MV' WIRED FOR SINGLE POLE OPERATION.
$VSD	WALL MOUNTED 0-10V DIMMING LIGHT SWITCH WITH DUAL TECHNOLOGY INTEGRAL OCCUPANCY SENSOR. GREENGATE 'VSW-D-010'.
$VS2	WALL MOUNTED 0-10V RECESSED DUAL RELAY LIGHT SWITCH WITH DUAL TECHNOLOGY INTEGRAL OCCUPANCY SENSOR. GREENGATE 'VNW-D-1001-DMV-N. THIS CONTROL SWITCH SHALL CONTROL TWO ZONES OF LIGHTING.
$VS3	WALL MOUNTED OCCUPANCY SENSOR / LIGHT SWITCH COMBINATION UNIT. GREENGATE 'VNW-D-1001-MV' WIRED FOR THREE-WAY OPERATION.
OS	CEILING MOUNTED 0-10V DUAL TECHNOLOGY OCCUPANCY SENSOR. GREENGATE 'OAC-DT-1000 FOR SPACES UP TO 34'X18'. GREENGATE 'OAT-CT-2000' FOR SPACES GREATER THAN 34'X18' AND LESS THAN 46'X25'.
PP	ABOVE ACCESSIBLE CEILING MOUNTED 0-10V POWER PACK. GREENGATE 'SP20' SERIES OR EQUAL BY SENSOR SWITCH, WATTSTOPPER, LEVITON, NLIGHT. WHERE THERE ARE TWO POWER PACKS IN A ROOM/AREA, ONE POWER PACK IS TO CONTROL ONE OF THE LIGHTING ZONES AND THE OTHER POWER PACK(S) SHALL CONTROL THE OTHER(S). POWER PACKS SHALL BE PROVIDED WITH DEFAULT MODES TO MATCH DEFAULTS OF SWITCHES THAT ARE TO BE PAIRED WITH SENSORS.

LIGHTING NOTES:

- TIMEOUTS FOR ALL OCCUPANCY OR VACANCY SENSORS SHALL BE SET TO MAXIMUM LENGTH ALLOWED BY SENSOR MANUFACTURER.
- MANUFACTURERS ALLOWED ARE GREENGATE (BASIS OF DESIGN), NLIGHT, SENSOR SWITCH, WATTSTOPPER, LEVITON OR OTHER PREAPPROVED EQUAL. ALL LIGHTING CONTROL PRODUCTS FOR THE PROJECT SHALL BE OF THE SAME MANUFACTURER.
- PROVIDE AND INSTALL ACCESSORIES REQUIRED FOR FULL OPERATION OF DEVICES.
- LIGHTING CONTROLS SHALL BE TYPE RECOMMENDED BY LIGHTING MANUFACTURER TO OPERATE THE LIGHTING TYPE WITH FEATURES AS SELECTED/PROVIDED. MANUFACTURER'S RECOMMENDATION SHALL SUPERCEDE ALL SPECIFICATIONS ON THIS ELECTRICAL SYMBOL LEGEND.
- ALL CEILING MOUNTED OCCUPANCY OR VACANCY SENSORS SHALL BE CENTRALLY LOCATED IN THE ROOM IT SERVES AND POSITIONED FOR ACCURATE DETECTION.
- FOR ALL LOW VOLTAGE CEILING MOUNTED OCCUPANCY AND VACANCY SENSORS, THE CONTRACTOR SHALL ALSO PROVIDE AND INSTALL A POWER PACK OF MODEL RECOMMENDED BY MANUFACTURER.
- ALL DEVICE COLORS SHALL BE SELECTED BY ARCHITECT/INTERIOR DESIGNER.

FIRE ALARM NOTIFICATION

F	FIRE ALARM PULL STATION
F	WALL MOUNTED HORN/STROBE NOTICATION DEVICE (CANDELA RATING IS LOCATED NEXT TO DEVICE) MATCH EXISTING.
V	WALL MOUNTED VISUAL NOTICATION DEVICE (CANDELA RATING IS LOCATED NEXT TO DEVICE) MATCH EXISTING.
F	CEILING MOUNTED HORN/STROBE NOTICATION DEVICE (CANDELA RATING IS LOCATED NEXT TO DEVICE). MATCH EXISTING.
V	CEILING MOUNTED VISUAL NOTICATION DEVICE (CANDELA RATING IS LOCATED NEXT TO DEVICE). MATCH EXISTING.
FAAP	FIRE ALARM ANNUNCIATION PANEL
FACP	FIRE ALARM CONTROL PANEL

ABBREVIATIONS

"+"	# OF INCHES TO MOUNT CENTERLINE OF DEVICE ABOVE FINISHED FLOOR
AC	ABOVE COUNTER
BC	BELOW CEILING
CM	CEILING MOUNTED
EC	EMPTY CONDUIT (WITH PULLSTRING)
E.C.	ELECTRICAL CONTRACTOR
G.C.	GENERAL CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
WP	NEMA 3R RATED

ossa STUDIO

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

NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 31600
GREGORY W. WILEY

04/22/24

PROJECT TEAM

General Contractor
ECCLESIA CONSTRUCTION
www.ecclesiaconstruction.com
803.327.5670

ENGITECTURE
CONSULTING ENGINEERS
ENGITECTURE, PLLC
NC License No. P-1625

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

△	Date	Description
	12/15/2023	DESIGN DEVELOPMENT DWGS.
	12/22/2023	DESIGN DEVELOPMENT DWGS.
	01/24/2024	REVIEW DWGS.
	01/30/2024	ISSUED FOR CONSTRUCTION.
1	04/22/2024	PERMIT REVISION

Project Name

3D community church
making church come *alive*

658 GRAHAM ROAD
SANFORD NC 27311

Client

3D COMMUNITY CHURCH

Project Number

23024.00

Description

GENERAL NOTES, RISER DIAGRAM
& ABBREVIATIONS - ELECTRICAL

Scale

NA

E00.01

11/30/2023 4:49:42 PM   Z:\Private\andrew.mclellan\Revit Local\23024.00_3D Community Church_andrew.mclellanFHCLC.rvt

GENERAL SPECIFICATIONS

A. THE WORK COVERED BY THESE SPECIFICATIONS CONSISTS OF FURNISHING ALL LABOR, EQUIPMENT, MATERIAL,S AND SUPPLIES AS NECESSARY FOR THE COMPLETE AND SATISFACTORY OPERATING ELECTRICAL SYSTEMS AS SHOWN ON THE PLANS.

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

C. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL ELECTRICAL PERMITS AND INSPECTION FEES.

D. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BE LISTED BY THE UNDERWRITER'S LABORATORIES, INC. OR BY A STATE APPROVED THIRD PARTY TESTING AGENCY FOR THE USE INTENDED WHERE A STANDARD FOR SUCH MATERIALS AND USE EXISTS. ALL ITEMS OF THE SAME TYPE AND RATING SHALL BE IDENTICAL AND OF THE SAME MANUFACTURER.

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

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

G. ONE COMPLETE SET OF THE LATEST CONSTRUCTION PLANS OF ALL TRADES SHALL BE MAINTAINED AT THE JOB SITE. IN ADDITION, ALL ADDENDUMS, BULLETINS, AND/OR SKETCHES SHALL BE INCORPORATED INTO THE ON-SITE CONSTRUCTION PLANS AS THE JOB PROGRESSES.

H. COMPLETELY ADEQUATE HOUSING SHALL BE PROVIDED FOR ALL MATERIALS STORED ON JOB SITE. ONLY CONDUIT MAY BE STORED OUTSIDE, BUT NOT IN CONTACT WITH THE GROUND.

I. THE CONDUIT AND NEUTRAL SYSTEM SHALL BE GROUNDED AT THE MAIN SERVICE EQUIPMENT. GROUNDING ELECTRODE SYSTEM SHALL BE INSTALLED PER NEC 250.

J. PROVIDE AN INTERSYSTEM BONDING TERMINATION DEVICE AT THE MAIN ELECTRICAL SERVICE PER NEC 250.94.

K. WIRING SHALL BE TESTED FOR CONTINUITY AND GROUNDS BEFORE BEING ENERGIZED. FAULTY WIRING SHALL BE REPLACED AT NO ADDITIONAL EXPENSE TO THE OWNER.

L. PROVIDE ALL CUTTING AND PATCHING FOR INSTALLATION OF WORK AND REPAIR ANY DAMAGE DONE.

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

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

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

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

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

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

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

T. CONTRACTOR SHALL COORDINATE THE ROUGH-IN OF ALL OUTLET LOCATIONS WITH ARCHITECTURAL FLOOR PLANS, ELEVATIONS, AND MILLWORK SHOP DRAWINGS PRIOR TO ROUGH-IN.

U. ELECTRICAL CONTRACTOR SHALL NOT SCALE PLANS. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT, UNLESS OTHERWISE NOTED.

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

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

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

Y. COORDINATE LOCATION AND REQUIREMENTS FOR ELECTRICAL SERVICE WITH THE POWER COMPANY. WHERE MORE THAN ONE SERVICE IS SUPPLIED TO A BUILDING, PROVIDE IDENTIFICATION AT EACH SERVICE PER NEC 230-2(E).

Z. COORDINATE LOCATION AND REQUIREMENTS FOR TELEPHONE SERVICE WITH THE TELEPHONE COMPANY.

CONDUCTORS

PART 1 GENERAL

A. CONDUCTORS SHALL BE MANUFACTURED BY SOUTHWIRE (SIMPULL), ENCORE (SUPERSLICK), UNITED COPPER (SLK), CERRO (SLP), OR APPROVED EQUAL, "PRE-LUBRICATED" BY THE MANUFACTURER.

B. ALL CONDUCTORS SHALL BE COPPER, RATED 75° C WET/DRY EXCEPT WHERE OTHERWISE NOTED OR REQUIRED BY U.L. OR OTHER CODES.

C. ALL CONDUCTORS SHALL BE SINGLE INSULATED CONDUCTOR, THHN/THWN-2. SIZES #10 AWG AND SMALLER SHALL BE SOLID, SIZES #8 AWG AND LARGER SHALL BE STRANDED.

D. BRANCH CIRCUITS SHALL NOT BE SMALLER THAN #12 AWG. CONTROL WIRING MAY BE #14 AWG.

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

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

G. ALL CONDUCTORS SHALL BE IN CONDUIT.

H. WIRING TO LIGHTING FIXTURES SHALL BE AS REQUIRED BY UL LABEL.

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

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

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

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

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

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

M. WIRE WITHIN PANELBOARDS SHALL BE NEATLY TRAINED, SQUARED, BUNCHED, AND TAGGED.

N. ALL SYSTEM FURNITURE CONNECTIONS SHALL COMPLY WITH NEC 605.

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

P. ALL CONDUCTORS INSTALLED IN VERTICAL RACEWAYS SHALL BE SUPPORTED AT INTERVALS AS REQUIRED PER NEC 300-19.

Q. THE ELECTRICAL CONTRACTOR SHALL FOLLOW AND APPLY THE TABLE BELOW, REGARDLESS WHAT THE PANEL SCHEDULE INDICATES, FOR SIZING ALL 120V & 277V, 20 AMP BRANCH CIRCUITS (COPPER CONDUCTORS) TO ALLOW A MAXIMUM OF 3% VOLTAGE DROP FROM THE CIRCUIT BREAKER TO THE FIRST DEVICE ON THE BRANCH CIRCUIT AND ACHIEVE A MAXIMUM OF 5% VOLTAGE DROP ACROSS THE ENTIRE BRANCH CIRCUIT:

VOLTAGE	CONDUCTOR LENGTH *	BRANCH CIRCUIT
120	0' - 50'	#12
120	51' - 90'	#10
120	91' - 140'	#8
120	141' - 225'	#6

* - THE LENGTH IS MEASURED FROM THE CIRCUIT BREAKER TO THE FIRST DEVICE WHICH THE BRANCH CIRCUIT SERVES. WHERE THE DISTANCE EXCEEDS ABOVE, CONSULT WITH THE ENGINEER.

PAINTING

PART 1 GENERAL

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

TELECOMMUNICATIONS

PART 1 GENERAL

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

B. TELECOMMUNICATION OUTLETS SHALL CONSIST OF A 4" SQUARE DEEP BOX WITH SINGLE GANG PLASTER RING. PROVIDE BLANK PLATE WITH KNOCKOUTS FOR OUTLETS, AS PERMANENT COVERS WILL BE PROVIDED BY A SEPARATE INSTALLER.

C. PROVIDE MINIMUM 210# TEST NYLON PULL CORD AND NYLON BUSHINGS IN ALL EMPTY RACEWAYS.

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

E. ALL LOW-VOLTAGE CABLING SHALL BE PLENUM-RATED.

F. VERIFY SITE LOCATION OF TELEPHONE SERVICES WITH APPROPRIATE VENDOR, PRIOR TO SUBMITTING BID.

GROUNDING AND BONDING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. GROUNDING AND BONDING COMPONENTS.

B. PROVIDE ALL COMPONENTS NECESSARY TO COMPLETE THE GROUNDING SYSTEM(S) CONSISTING OF:

1. EXISTING METAL UNDERGROUND WATER PIPE.
2. METAL UNDERGROUND WATER PIPE.
3. METAL FRAME OF THE BUILDING.
4. STEEL WATER STORAGE TANK AND SUPPORTS.
5. CONCRETE-ENCASED ELECTRODE.
6. ROD ELECTRODES.
7. PLATE ELECTRODES.
8. ACTIVE ELECTRODES.

1.02 REFERENCES

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

B. NFPA 70 - NATIONAL ELECTRICAL CODE; NATIONAL FIRE PROTECTION ASSOCIATION; 2005.

C. NFPA 99 - STANDARD FOR HEALTH CARE FACILITIES; NATIONAL FIRE PROTECTION ASSOCIATION; 2005.

1.03 PERFORMANCE REQUIREMENTS

A. GROUNDING SYSTEM RESISTANCE: 5 OHMS.

1.04 QUALITY ASSURANCE

A. CONFORM TO REQUIREMENTS OF NFPA 70.

B. MANUFACTURER QUALIFICATIONS: COMPANY SPECIALIZING IN MANUFACTURING THE PRODUCTS SPECIFIED IN THIS SECTION WITH MINIMUM THREE YEARS DOCUMENTED EXPERIENCE WITH SERVICE FACILITIES WITHIN 100 MILES OF PROJECT.

C. PRODUCTS: LISTED AND CLASSIFIED BY UNDERWRITERS LABORATORIES INC. AS SUITABLE FOR THE PURPOSE SPECIFIED AND INDICATED.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. COOPER POWER SYSTEMS:

B. FRAMATOME CONNECTORS INTERNATIONAL:

C. LIGHTNING MASTER CORPORATION:

2.02 ELECTRODES

A. ROD ELECTRODES: COPPER.

1. DIAMETER: 3/4 INCH (19 MM).
2. LENGTH: 5 FEET (1500 MM).

B. ACTIVE ELECTRODES: METALLIC-SALT-FILLED COPPER-TUBE ELECTRODE.

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

C. FOUNDATION ELECTRODES: 2/0 AWG.

2.03 CONNECTORS AND ACCESSORIES

A. MECHANICAL CONNECTORS: BRONZE.

B. WIRE: STRANDED COPPER.

C. GROUNDING ELECTRODE CONDUCTOR: SIZE TO MEET NFPA 70 REQUIREMENTS.

D. GROUNDING WELL:

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

PART 3 EXECUTION

3.01 EXAMINATION

A. VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING WORK.

B. VERIFY THAT FINAL BACKFILL AND COMPACTION HAS BEEN COMPLETED BEFORE DRIVING ROD ELECTRODES.

3.02 INSTALLATION

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

B. PROVIDE GROUNDING WELL PIPE WITH COVER AT EACH ROD LOCATION. INSTALL WELL PIPE TOP FLUSH WITH FINISHED GRADE.

C. INSTALL 4 AWG BARE COPPER WIRE IN FOUNDATION FOOTING WHERE INDICATED.

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

E. PROVIDE BONDING TO MEET REQUIREMENTS DESCRIBED IN QUALITY ASSURANCE.

F. BOND TOGETHER METAL SIDING NOT ATTACHED TO GROUNDED STRUCTURE; BOND TO GROUND.

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

HANGERS AND SUPPORTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. CONDUIT AND EQUIPMENT SUPPORTS.

B. ANCHORS AND FASTENERS.

1.02 QUALITY ASSURANCE

A. CONFORM TO REQUIREMENTS OF NFPA 70.

B. PRODUCTS: LISTED AND CLASSIFIED BY UNDERWRITERS LABORATORIES INC. AS SUITABLE FOR THE PURPOSE SPECIFIED AND INDICATED.

PART 2 EXECUTION

2.01 INSTALLATION

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

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

B. RIGIDLY WELD SUPPORT MEMBERS OR USE HEXAGON-HEAD BOLTS TO PRESENT NEAT APPEARANCE WITH ADEQUATE STRENGTH AND RIGIDITY. USE SPRING LOCK WASHERS UNDER ALL NUTS.

C. INSTALL SURFACE-MOUNTED CABINETS AND PANELBOARDS WITH MINIMUM OF FOUR ANCHORS.

D. IN WET AND DAMP LOCATIONS USE STEEL CHANNEL SUPPORTS TO STAND CABINETS AND PANELBOARDS 1 INCH (25 MM) OFF WALL.

E. USE SHEET METAL CHANNEL TO BRIDGE STUDS ABOVE AND BELOW CABINETS AND PANELBOARDS RECESSED IN HOLLOW PARTITIONS.

ELECTRICAL IDENTIFICATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. NAMEPLATES AND LABELS.

B. WIRE AND CABLE MARKERS.

C. CONDUIT MARKERS.

D. FIELD-PAINTED IDENTIFICATION OF CONDUIT.

1.02 QUALITY ASSURANCE

A. CONFORM TO REQUIREMENTS OF NFPA 70.

B. PRODUCTS: LISTED AND CLASSIFIED BY UNDERWRITERS LABORATORIES INC. AS SUITABLE FOR PURPOSE SPECIFIED AND SHOWN.

PART 2 PRODUCTS

2.01 NAMEPLATES AND LABELS

A. NAMEPLATES: ENGRAVED THREE-LAYER LAMINATED PLASTIC, BLACK LETTERS ON WHITE BACKGROUND.

B. LOCATIONS:

1. EACH ELECTRICAL DISTRIBUTION AND CONTROL EQUIPMENT ENCLOSURE.

2.02 CONDUIT MARKERS

A. LOCATION: FURNISH MARKERS FOR EACH CONDUIT LONGER THAN 6 FEET (2 M).

B. SPACING: 20 FEET (6 M) ON CENTER.

2.03 UNDERGROUND WARNING TAPE

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

PART 3 EXECUTION

3.01 INSTALLATION

A. INSTALL NAMEPLATES AND LABELS PARALLEL TO EQUIPMENT LINES.

B. SECURE NAMEPLATES TO EQUIPMENT FRONT USING SCREWS.

C. SECURE NAMEPLATES TO INSIDE SURFACE OF DOOR ON PANELBOARD THAT IS RECESSED IN FINISHED LOCATIONS.

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

CONDUIT

PART 1 GENERAL

1.01 SECTION INCLUDES

A. CONDUIT, FITTINGS AND CONDUIT BODIES.

1.02 QUALITY ASSURANCE

A. CONFORM TO REQUIREMENTS OF NFPA 70.

B. PRODUCTS: LISTED AND CLASSIFIED BY UNDERWRITERS LABORATORIES INC. AS SUITABLE FOR PURPOSE SPECIFIED AND SHOWN.

1.04 DELIVERY, STORAGE, AND HANDLING

A. ACCEPT CONDUIT ON SITE. INSPECT FOR DAMAGE.

B. PROTECT CONDUIT FROM CORROSION AND ENTRANCE OF DEBRIS BY STORING ABOVE GRADE. PROVIDE APPROPRIATE COVERING.

C. PROTECT PVC CONDUIT FROM SUNLIGHT.

PART 2 PRODUCTS

2.01 CONDUIT REQUIREMENTS

A. CONDUIT SIZE: COMPLY WITH NFPA 70.

1. MINIMUM SIZE: 3/4 INCH (13 MM) UNLESS OTHERWISE SPECIFIED.

B. UNDERGROUND INSTALLATIONS:

1. MORE THAN 5 FEET (1.5 METERS) FROM FOUNDATION WALL: USE RIGID STEEL CONDUIT, INTERMEDIATE METAL CONDUIT, OR PLASTIC COATED CONDUIT.
2. WITHIN 5 FEET (1.5 METERS) FROM FOUNDATION WALL: USE RIGID STEEL CONDUIT, INTERMEDIATE METAL CONDUIT, PLASTIC COATED CONDUIT, OR THICKWALL NONMETALLIC CONDUIT.
3. IN OR UNDER SLAB ON GRADE: USE RIGID STEEL CONDUIT, INTERMEDIATE METAL CONDUIT, OR PLASTIC COATED CONDUIT.
4. MINIMUM SIZE: 3/4 INCH (19 MM).

C. OUTDOOR LOCATIONS ABOVE GRADE: USE RIGID STEEL CONDUIT, RIGID ALUMINUM CONDUIT, INTERMEDIATE METAL CONDUIT, OR ELECTRICAL METALLIC TUBING.

D. IN SLAB ABOVE GRADE:

1. USE RIGID STEEL CONDUIT, INTERMEDIATE METAL CONDUIT, ELECTRICAL METALLIC TUBING, OR THICKWALL NONMETALLIC CONDUIT.
2. MAXIMUM SIZE CONDUIT IN SLAB: 3/4 INCH (19 MM); 1/2 INCH (13 MM) FOR CONDUITS CROSSING EACH OTHER.

E. WET AND DAMP LOCATIONS: USE RIGID STEEL CONDUIT, RIGID ALUMINUM CONDUIT, INTERMEDIATE METAL CONDUIT, ELECTRICAL METALLIC TUBING, THICKWALL NONMETALLIC CONDUIT, OR NONMETALLIC TUBING.

F. DRY LOCATIONS:

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

2.02 METAL CONDUIT

A. RIGID STEEL CONDUIT: ANSI C80.1.

B. RIGID ALUMINUM CONDUIT: ANSI C80.5.

C. INTERMEDIATE METAL CONDUIT (IMC): RIGID STEEL.

D. FITTINGS AND CONDUIT BODIES: NEMA FB 1; MATERIAL TO MATCH CONDUIT.

2.03 ELECTRICAL METALLIC TUBING (EMT)

A. DESCRIPTION: ANSI C80.3; GALVANIZED TUBING.

B. FITTINGS AND CONDUIT BODIES: NEMA FB 1; STEEL OR MALLEABLE IRON COMPRESSION TYPE.

PART 3 EXECUTION

3.01 EXAMINATION

A. VERIFY THAT FIELD MEASUREMENTS ARE AS SHOWN ON DRAWINGS.

B. VERIFY ROUTING AND TERMINATION LOCATIONS OF CONDUIT PRIOR TO ROUGH-IN.

C. CONDUIT ROUTING IS SHOWN ON DRAWINGS IN APPROXIMATE LOCATIONS UNL

3.02 INSTALLATION

A. INSTALL CONDUIT SECURELY, IN A NEAT AND WORKMANLIKE MANNER, AS SPECIFIED IN NECA 1.

B. INSTALL STEEL CONDUIT AS SPECIFIED IN NECA 101.

C. ARRANGE SUPPORTS TO PREVENT MISALIGNMENT DURING WIRING INSTALLATION.

D. SUPPORT CONDUIT USING COATED STEEL OR MALLEABLE IRON STRAPS, LAY-IN ADJUSTABLE HANGERS, CLEVIS HANGERS, AND SPLIT HANGERS.

E. GROUP RELATED CONDUITS; SUPPORT USING CONDUIT RACK. CONSTRUCT RACK USING STEEL CHANNEL; PROVIDE SPACE ON EACH FOR 25 PERCENT ADDITIONAL CONDUITS.

F. FASTEN CONDUIT SUPPORTS TO BUILDING STRUCTURE AND SURFACES UNDER PROVISIONS OF SECTION 16070.

G. DO NOT SUPPORT CONDUIT WITH WIRE OR PERFORATED PIPE STRAPS. REMOVE WIRE USED FOR TEMPORARY SUPPORTS.

H. DO NOT ATTACH CONDUIT TO CEILING SUPPORT WIRES.

I. ARRANGE CONDUIT TO MAINTAIN HEADROOM AND PRESENT NEAT APPEARANCE.

J. ROUTE EXPOSED CONDUIT PARALLEL AND PERPENDICULAR TO WALLS.

K. ROUTE CONDUIT INSTALLED ABOVE ACCESSIBLE CEILINGS PARALLEL AND PERPENDICULAR TO WALLS.

L. ROUTE CONDUIT IN AND UNDER SLAB FROM POINT-TO-POINT.

M. MAINTAIN ADEQUATE CLEARANCE BETWEEN CONDUIT AND PIPING.

N. CUT CONDUIT SQUARE USING SAW OR PIPECUTTER; DE-BURR CUT ENDS.

O. BRING CONDUIT TO SHOULDER OF FITTINGS; FASTEN SECURELY.

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

Q. AVOID MOISTURE TRAPS; PROVIDE JUNCTION BOX WITH DRAIN FITTING AT LOW POINTS IN CONDUIT SYSTEM.

R. PROVIDE SUITABLE FITTINGS TO ACCOMMODATE EXPANSION AND DEFLECTION WHERE CONDUIT CROSSES SEISMIC.

S. PROVIDE SUITABLE PULL STRING IN EACH EMPTY CONDUIT EXCEPT SLEEVES AND NIPPLES.

T. USE SUITABLE CAPS TO PROTECT INSTALLED CONDUIT AGAINST ENTRANCE OF DIRT AND MOISTURE.

SUPPORTS

A. ALL EQUIPMENT SHALL BE ADEQUATELY SUPPORTED FROM STRUCTURE.

B. INSERTS IN MASONRY SHALL BE LEAD OR FIBER IN DRILLED HOLES, OR CAST IN PLACE.

C. NAILS OR POWDER ACTUATED FASTENERS SHALL NOT BE USED.

D. EMT/IMC/RGS SUPPORTS SHALL BE A MAXIMUM OF 8'-0" APART AND A MAXIMUM OF 3'-0" FROM BOXES.

E. LIGHTING FIXTURES MOUNTED IN OR ON CEILING SHALL BE SUPPORTED FROM STRUCTURE VIA 12 GAUGE STEEL WIRE. PROVIDE A MINIMUM OF FOUR WIRES, ONE ATTACHED TO EACH CORNER OF LAY-IN FIXTURES. RECESSED DOWNLIGHT FIXTURES SHALL BE SUPPORTED THE SAME. DO NOT SUPPORT RACEWAY OR FIXTURES FROM CEILING GRID OR DUCT WORK. USE U.L. LISTED GRID CLIPS ON ALL LAY-IN FIXTURES.

BOXES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. PULL AND JUNCTION BOXES.

PART 2 EXECUTION

2.01 INSTALLATION

A. INSTALL BOXES SECURELY, IN A NEAT AND WORKMANLIKE MANNER, AS SPECIFIED IN NECA 1.

B. INSTALL IN LOCATIONS AS SHOWN ON DRAWINGS, AND AS REQUIRED FOR SPLICES, TAPS, WIRE PULLING, EQUIPMENT CONNECTIONS, AND AS REQUIRED BY NFPA 70.

C. ORIENT BOXES TO ACCOMMODATE WIRING DEVICES ORIENTED AS SPECIFIED IN SECTION 16140.

D. MAINTAIN HEADROOM AND PRESENT NEAT MECHANICAL APPEARANCE.

E. ALIGN ADJACENT WALL MOUNTED OUTLET BOXES FOR SWITCHES, THERMOSTATS, AND SIMILAR DEVICES.

F. SUPPORT BOXES INDEPENDENTLY OF CONDUIT, EXCEPT CAST BOX THAT IS CONNECTED TO TWO RIGID METAL CONDUITS BOTH SUPPORTED WITHIN 12 INCHES (305 MM) OF BOX.

G. USE GANG BOX WHERE MORE THAN ONE DEVICE IS MOUNTED TOGETHER. DO NOT USE SECTIONAL BOX.

WIRING DEVICES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. WALL SWITCHES.

B. RECEPTACLES.

C. DEVICE PLATES AND DECORATIVE BOX COVERS.

1.02 QUALITY ASSURANCE

A. CONFORM TO REQUIREMENTS OF NFPA 70.

B. MANUFACTURER QUALIFICATIONS: COMPANY SPECIALIZING IN MANUFACTURING THE PRODUCTS SPECIFIED IN THIS SECTION WITH MINIMUM THREE YEARS DOCUMENTED EXPERIENCE.

C. PRODUCTS: PROVIDE PRODUCTS LISTED AND CLASSIFIED BY UNDERWRITERS LABORATORIES INC. AS SUITABLE FOR THE PURPOSE SPECIFIED AND INDICATED.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. COOPER WIRING DEVICES:

B. GE INDUSTRIAL:

C. LEVITON MANUFACTURING, INC:

2.02 WALL SWITCHES

A. WALL SWITCHES: HEAVY DUTY, AC ONLY GENERAL-USE SNAP SWITCH, COMPLYING WITH NEMA WD 6 AND WD 1.

1. BODY AND HANDLE: FINISH/COLOR SHALL BE SELECTED BY ARCHITECT. PROVIDE PLASTIC WITH TOGGLE HANDLE.
2. RATINGS: MATCH BRANCH CIRCUIT AND LOAD CHARACTERISTICS.

B. SWITCH TYPES: SINGLE POLE, DOUBLE POLE, AND 3-WAY.

2.03 RECEPTACLES

A. RECEPTACLES: HEAVY DUTY, COMPLYING WITH NEMA WD 6 AND WD 1.

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

B. CONVENIENCE RECEPTACLES: TYPE 5 TO 20.

C. SINGLE CONVENIENCE RECEPTACLES.

D. DUPLEX CONVENIENCE RECEPTACLES.

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

2.04 WALL PLATES

A. DECORATIVE COVER PLATES: FINISH/COLOR TO BE SELECTED BY ARCHITECT. SMOOTH PLASTIC.

B. JUMBO COVER PLATES: COORDAINTE DEVICE COLOR WITH ARCHITECT, SMOOTH PLASTIC.

C. WEATHERPROOF COVER PLATES: GASKETED CAST METAL WITH HINGED.

PART 3 EXECUTION

3.01 EXAMINATION

A. VERIFY THAT OUTLET BOXES ARE INSTALLED AT PROPER HEIGHT.

B. VERIFY THAT WALL OPENINGS ARE NEATLY CUT AND WILL BE COMPLETELY COVERED BY WALL PLATES.

C. VERIFY THAT BRANCH CIRCUIT WIRING INSTALLATION IS COMPLETED, TESTED, AND READY FOR CONNECTION TO WIRING DEVICES.

3.02 PREPARATION

A. PROVIDE EXTENSION RINGS TO BRING OUTLET BOXES FLUSH WITH FINISHED SURFACE.

B. CLEAN DEBRIS FROM OUTLET BOXES.

3.03 INSTALLATION

A. INSTALL SECURELY, IN A NEAT AND WORKMANLIKE MANNER, AS SPECIFIED IN NECA 1.

B. INSTALL DEVICES PLUMB AND LEVEL.

C. INSTALL SWITCHES WITH OFF POSITION DOWN.

D. INSTALL RECEPTACLES WITH GROUNDING POLE ON TOP.

E. CONNECT WIRING DEVICE GROUNDING TERMINAL TO OUTLET BOX WITH BONDING JUMPER.

F. INSTALL DECORATIVE PLATES ON SWITCH, RECEPTACLE, AND BLANK OUTLETS IN FINISHED AREAS.

G. CONNECT WIRING DEVICES BY WRAPPING CONDUCTOR AROUND SCREW TERMINAL.

H. INSTALL PROTECTIVE RINGS ON ACTIVE FLUSH COVER SERVICE FITTINGS.

3.04 INTERFACE WITH OTHER PRODUCTS

A. INSTALL WALL SWITCH 48 INCHES (1.2 M) ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED ON DRAWINGS.

B. INSTALL CONVENIENCE RECEPTACLE 18 INCHES (450 MM) ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED ON DRAWINGS.

C. INSTALL CONVENIENCE RECEPTACLE 6 INCHES (150 MM) ABOVE COUNTER UNLESS OTHERWISE NOTED ON DRAWINGS.

D. INSTALL TELEPHONE JACK 18 INCHES (450 MM) ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED ON DRAWINGS.

E. INSTALL TELEPHONE JACK FOR SIDE-REACH WALL TELEPHONE TO POSITION TOP OF TELEPHONE AT 54 INCHES (1.4 M) ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED ON DRAWINGS.

F. INSTALL TELEPHONE JACK FOR FORWARD-REACH WALL TELEPHONE TO POSITION TOP OF TELEPHONE AT 48 INCHES (1.2 M) ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED ON DRAWINGS.

3.05 FIELD QUALITY CONTROL

A. INSPECT EACH WIRING DEVICE FOR DEFECTS.

B. OPERATE EACH WALL SWITCH WITH CIRCUIT ENERGIZED AND VERIFY PROPER OPERATION.

C. VERIFY THAT EACH RECEPTACLE DEVICE IS ENERGIZED.

D. TEST EACH RECEPTACLE DEVICE FOR PROPER POLARITY.

E. TEST EACH GFCI RECEPTACLE DEVICE FOR PROPER OPERATION.

F. VERIFY THAT EACH TELEPHONE JACK IS PROPERLY CONNECTED AND CIRCUIT IS OPERATIONAL.

3.06 ADJUSTING

A. ADJUST DEVICES AND WALL PLATES TO BE FLUSH AND LEVEL.

3.07 CLEANING

CLEAN EXPOSED SURFACES TO REMOVE SPLATTERS AND RESTORE FINISH.

EQUIPMENT WIRING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. ELECTRICAL CONNECTIONS TO EQUIPMENT

PART 2 PRODUCTS

2.01 MATERIALS

A. CORDS AND CAPS: NEMA WD 6; MATCH RECEPTACLE CONFIGURATION AT OUTLET PROVIDED FOR EQUIPMENT.

1. COLORS: CONFORM TO NEMA WD 1.
2. CORD CONSTRUCTION: NFPA 70, TYPE SO, MULTICONDUCTOR FLEXIBLE CORD WITH IDENTIFIED EQUIPMENT GROUNDING CONDUCTOR, SUITABLE FOR USE IN DAMP LOCATIONS.

PART 3 EXECUTION

3.01 EXAMINATION

A. VERIFY THAT EQUIPMENT IS READY FOR ELECTRICAL CONNECTION, WIRING, AND ENERGIZATION.

3.02 ELECTRICAL CONNECTIONS

A. MAKE ELECTRICAL CONNECTIONS IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S INSTRUCTIONS.

B. MAKE CONDUIT CONNECTIONS TO EQUIPMENT USING FLEXIBLE CONDUIT. USE LIQUIDTIGHT FLEXIBLE CONDUIT WITH WATERTIGHT CONNECTORS IN DAMP OR WET LOCATIONS.

C. CONNECT HEAT PRODUCING EQUIPMENT USING WIRE AND CABLE WITH INSULATION SUITABLE FOR TEMPERATURES ENCOUNTERED.

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

E. PROVIDE CORD AND CAP WHERE FIELD-SUPPLIED ATTACHMENT PLUG IS REQUIRED.

F. INSTALL SUITABLE STRAIN-RELIEF CLAMPS AND FITTINGS FOR CORD CONNECTIONS AT OUTLET BOXES AND EQUIPMENT CONNECTION BOXES.

G. INSTALL DISCONNECT SWITCHES, CONTROLLERS, CONTROL STATIONS, AND CONTROL DEVICES TO COMPLETE EQUIPMENT WIRING REQUIREMENTS.

H. INSTALL TERMINAL BLOCK JUMPERS TO COMPLETE EQUIPMENT WIRING REQUIREMENTS.

I. INSTALL INTERCONNECTING CONDUIT AND WIRING BETWEEN DEVICES AND EQUIPMENT TO COMPLETE EQUIPMENT WIRING REQUIREMENTS.

INTERIOR LUMINAIRES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. INTERIOR LUMINAIRES AND ACCESSORIES.

B. BALLASTS.

C. LAMPS.

D. LUMINAIRE ACCESSORIES.

1.02 SUBMITTALS

A. SHOP DRAWINGS: INDICATE DIMENSIONS AND COMPONENTS FOR EACH LUMINAIRE THAT IS NOT A STANDARD PRODUCT OF THE MANUFACTURER.

B. PRODUCT DATA: PROVIDE DIMENSIONS, RATINGS, AND PERFORMANCE DATA.

1.03 QUALITY ASSURANCE

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

B. MANUFACTURER QUALIFICATIONS: COMPANY SPECIALIZING IN MANUFACTURING THE PRODUCTS SPECIFIED IN THIS SECTION WITH MINIMUM THREE YEARS DOCUMENTED EXPERIENCE.

C. PRODUCTS: LISTED AND CLASSIFIED BY UNDERWRITERS LABORATORIES INC. AS SUITABLE FOR THE PURPOSE SPECIFIED AND INDICATED.

PART 2 PRODUCTS

2.01 LUMINAIRES

A. FURNISH PRODUCTS AS INDICATED IN SCHEDULE INCLUDED ON THE DRAWINGS.

2.02 BALLASTS AND CONTROL UNITS

A. FLUORESCENT BALLASTS: ANSI C82.1, HIGH POWER FACTOR TYPE ELECTROMAGNETIC BALLAST, SUITABLE FOR LAMPS SPECIFIED.

1. VOLTAGE: AS INDICATED ON LIGHTING FIXTURE SCHEDULE.

2.03 LAMPS

A. MANUFACTURERS:

1. GE LIGHTING MODEL
2. PHILIPS LIGHTING CO

PART 3 EXECUTION

3.01 INSTALLATION

A. INSTALL FIXTURES SECURELY, IN A NEAT AND WORKMANLIKE MANNER, AS SPECIFIED IN NECA 500 (COMMERCIAL LIGHTING).

B. INSTALL SUSPENDED LUMINAIRES AND EXIT SIGNS USING PENDANTS SUPPORTED FROM SWIVEL HANGERS. PROVIDE PENDANT LENGTH REQUIRED TO SUSPEND LUMINAIRE AT INDICATED HEIGHT.

C. SUPPORT LUMINAIRES LARGER THAN 2 X 4 FOOT (600 X 1200 MM) SIZE INDEPENDENT OF CEILING FRAMING.

D. LOCATE RECESSED CEILING LUMINAIRES AS INDICATED ON REFLECTED CEILING PLAN.

E. INSTALL RECESSED LUMINAIRES USING ACCESSORIES AND FIRESTOPPING MATERIALS TO MEET REGULATORY REQUIREMENTS FOR FIRE RATING.

F. INSTALL CLIPS TO SECURE RECESSED GRID-SUPPORTED LUMINAIRES IN PLACE.

G. INSTALL ACCESSORIES FURNISHED WITH EACH LUMINAIRE.

H. CONNECT LUMINAIRES AND EXIT SIGNS TO BRANCH CIRCUIT OUTLETS PROVIDED UNDER SECTION 16138 USING FLEXIBLE CONDUIT.

I. MAKE WIRING CONNECTIONS TO BRANCH CIRCUIT USING BUILDING WIRE WITH INSULATION SUITABLE FOR TEMPERATURE CONDITIONS WITHIN LUMINAIRE.

J. BOND PRODUCTS AND METAL ACCESSORIES TO BRANCH CIRCUIT EQUIPMENT GROUNDING CONDUCTOR.

K. INSTALL SPECIFIED LAMPS IN EACH EMERGENCY LIGHTING UNIT, EXIT SIGN, AND LUMINAIRE.

3.02 FIELD QUALITY CONTROL

A. OPERATE EACH LUMINAIRE AFTER INSTALLATION AND CONNECTION. INSPECT FOR PROPER CONNECTION AND OPERATION.

3.03 CLEANING

A. CLEAN ELECTRICAL PARTS TO REMOVE CONDUCTIVE AND DELETERIOUS MATERIALS.

B. REMOVE DIRT AND DEBRIS FROM ENCLOSURES.

C. CLEAN FINISHES AND TOUCH UP DAMAGE.

3.04 DEMONSTRATION AND INSTRUCTIONS

A. DEMONSTRATE LUMINAIRE OPERATION FOR MINIMUM OF TWO HOURS.

3.05 PROTECTION

A. RELAMP LUMINAIRES THAT HAVE FAILED LAMPS AT SUBSTANTIAL COMPLETION.

3.06 SCHEDULE - SEE DRAWINGS

DISCONNECTS

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

1.2 FUSES LESS THAN 60A SHALL BE CLASS RK5, DUAL-ELEMENT, TIME-DELAY WITH INDICATION

1.3 FUSES GREATER THAN 60A SHALL BE CLASS J, DUAL-ELEMENT, TIME-DELAY WITH INDICATION.

FIRE STOPPING

1.01 ALL PENETRATIONS OF RATED ASSEMBLIES SHALL BE SEALED WITH RATED MATERIALS MEETING ASTM E-814.

1.02 PROVIDE FIRESTOPPING DEVICE(S) OR SYSTEM(S) WHICH HAVE BEEN TESTED AND LISTED AS COMPLYING WITH ASTM E-814. INSTALL THE DEVICE(S) OR SYSTEM(S) IN ACCORDANCE WITH THE CONDITIONS OF THEIR LISTING. PROVIDE THE APPROPRIATE DEVICE(S) OR SYSTEM(S) WITH AN 'F' RATING EQUAL TO THE RATING OF THE ASSEMBLY BEING PENETRATED.

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

ELECTRICAL COORDINATION WITH OTHER TRADES

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

1.02 THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL CONNECTIONS PRIOR TO ROUGH-IN USING APPROVED CATALOG SHEETS AND SHOP DRAWINGS.

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

1.04 ALL DISCONNECT SWITCHES AND FUSE SIZES SHALL BE COORDINATED WITH SHOP DRAWINGS PRIOR TO ORDERING OR INSTALLING. ANY EQUIPMENT INSTALLED INCORRECTLY BECAUSE OF LACK OF COORDINATION WILL BE REMOVED AND INSTALLED CORRECTLY AT THE EXPENSE OF THE ELECTRICAL CONTRACTOR.

1.05 THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL CONDUIT RUNS AND LIGHT FIXTURE LOCATIONS ABOVE THE CEILING WITH OTHER TRADES PRIOR TO INSTALLATION.

1.06 ALL DUCT SMOKE DETECTORS SHALL BE PROVIDED AND CONNECTED BY THE ELECTRICAL CONTRACTOR, BUT INSTALLED BY THE MECHANICAL CONTRACTOR.

1.07 THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY OUTLETS FOR HEAT TAPE CONNECTIONS FOR MECHANICAL SYSTEMS. PROVIDE CLASS B (30mA) GFCI PROTECTION ON THE BREAKER SUPPLYING THE HEAT TAPE.

1.08 THE ELECTRICAL CONTRACTOR SHALL PROVIDE 120V POWER AT EACH HVAC UNIT HAVING A CONTROLS POWER SUPPLY. CIRCUIT(S) SHALL BE DEDICATED 20A SERVING A MAXIMUM OF 10 HVAC UNITS PER CIRCUIT. COORDINATE ALL LOCATIONS WITH THE MECHANICAL CONTRACTOR.

PANELBOARDS

1.01 PANELBOARDS SHALL BE PROVIDED AS MANUFACTURED BY EATON, SQUARE-D, GENERAL ELECTRIC, SIEMENS, OR APPROVED EQUAL. ALL NEW EQUIPMENT FOR THE PROJECT SHALL BE BY THE SAME MANUFACTURER. LOAD CENTER TYPE PANELBOARDS SHALL BE USED WHERE THE PANELBOARD SERVES A DWELLING UNIT ONLY.

1.02 ALL BUSSING, INCLUDING NEUTRAL AND GROUND, SHALL BE COPPER.

1.03 ALL BREAKERS SHALL BE AUTOMATIC THERMAL-MAGNETIC TYPE MOLDED CASE BOLT-ON TYPE, CALIBRATED FOR 40 DEGREE C, OR AMBIENT COMPENSATION, UNLESS OTHERWISE NOTED.

1.04 PANELS SHALL BE FULLY RATED (AIC). NO SERIES AIC RATINGS ARE ALLOWED.

1.05 PANELS SHALL HAVE FULL SIZE EQUIPMENT GROUNDING BARS AND NEUTRAL BARS, EXCEPT WHERE INDICATED TO BE 200%.

1.06 ALL PANELBOARD AND BREAKER LUGS SHALL BE SIZED AND RATED PER THE CONDUCTOR SIZE AND MATERIAL.

1.07 LIGHTING AND APPLIANCE PANELS (100A-600A) SHALL HAVE FRONT ACCESSIBLE HINGED DOOR-IN-DOOR COVERS WITH DEAD FRONT, SHALL BE 20" WIDE MINIMUM WITH MINIMUM 4" WIDE WIRING GUTTERS.

1.08 DISTRIBUTION PANELS (600A-1200A) SHALL HAVE FRONT ACCESSIBLE DEAD FRONT COVERS.

1.09 PROVIDE HANDLE LOCK-ON DEVICES FOR ALL CIRCUIT BREAKERS CONNECTED TO EMERGENCY, EXIT, NIGHT LIGHTING, FIRE ALARM, TELEPHONE BOARDS, AND SECURITY SYSTEMS.

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

1.11 BREAKERS USED FOR HEATING, AIR-CONDITIONING AND/OR REFRIGERATION SHALL BE HACR RATED.

1.12 GROUND-FAULT CIRCUIT-INTERRUPTER (GFCI) PROTECTION FOR PERSONNEL SHALL BE PROVIDED IN ALL LOCATIONS PER NEC 210.8. WHERE A DEVICE LOCATION IS NOT ACCESSIBLE, THE GFCI PROTECTION SHALL BE PROVIDED WITH THE BREAKER SERVING THE DEVICE.

1.13 ALL OVERCURRENT DEVICES WHICH COMPRISE THE EMERGENCY SYSTEM OR LEGALLY REQUIRED STANDBY SYSTEM SHALL BE SELECTIVELY COORDINATED. THE ELECTRICAL CONTRACTOR SHALL PROVIDE MANUFACTURER DOCUMENTATION INDICATING COMPLIANCE WITH THE SELECTIVE COORDINATION REQUIREMENTS PER THE NEC.

ossa STUDIO

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

SEAL 31600
GREGORY W. WILEY
01/30/24

PROJECT TEAM

General Contractor
ECCLESIA CONSTRUCTION
www.ecclesiaconstruction.com
803.327.5670

ENGITECTURE
CONSULTING ENGINEERS

ENGITECTURE, PLLC
NC License No. P-1625

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

△ Date	Description
12/15/2023	DESIGN DEVELOPMENT DWGS.
12/22/2023	DESIGN DEVELOPMENT DWGS.
01/24/2024	REVIEW DWGS.
01/30/2024	ISSUED FOR CONSTRUCTION.

Project Name

3D community church
making church come *alive*

658 GRAHAM ROAD
SANFORD NC 27311

Client

3D COMMUNITY CHURCH

Project Number

23024.00

Description

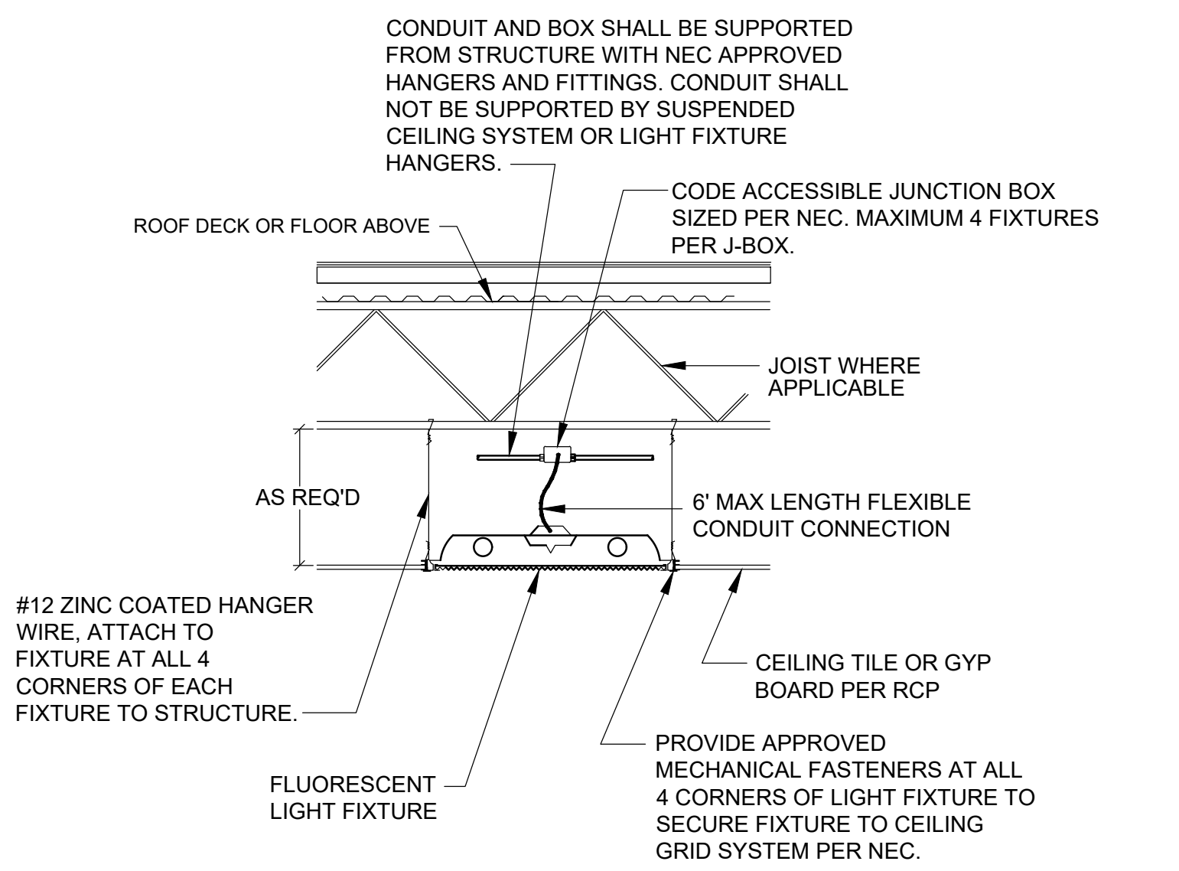
SPECIFICATIONS - ELECTRICAL

Scale

NA

E00.02

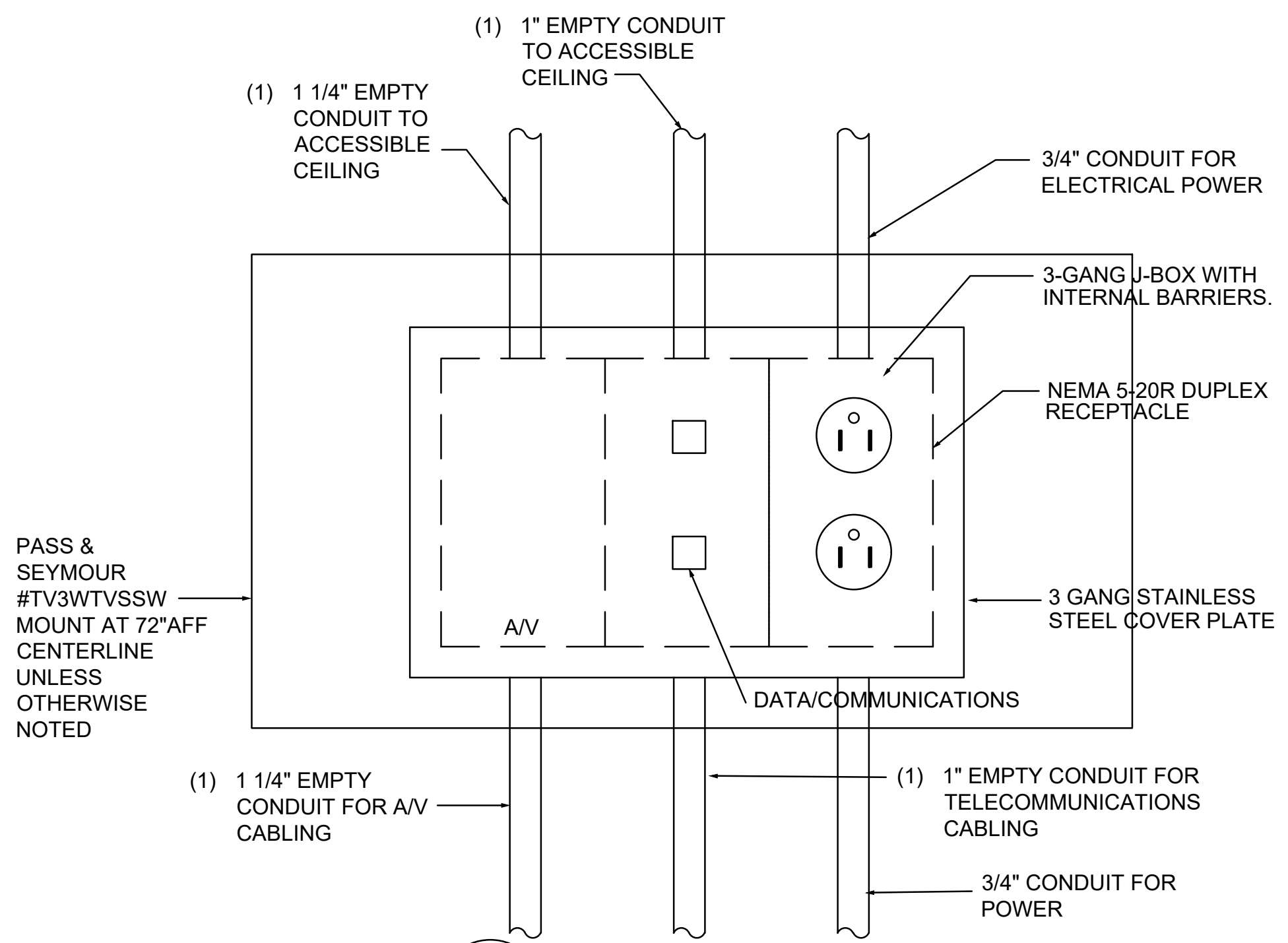
11/30/2023 4:49:42 PM Z:\Private\andrew.mclellan\Revit Local\23024.00_3D Community Church_andrew.mclellanFHCLC.rvt



1 TYPICAL LAY-IN LUMINAIRE INSTALLATION DETAIL

NO SCALE

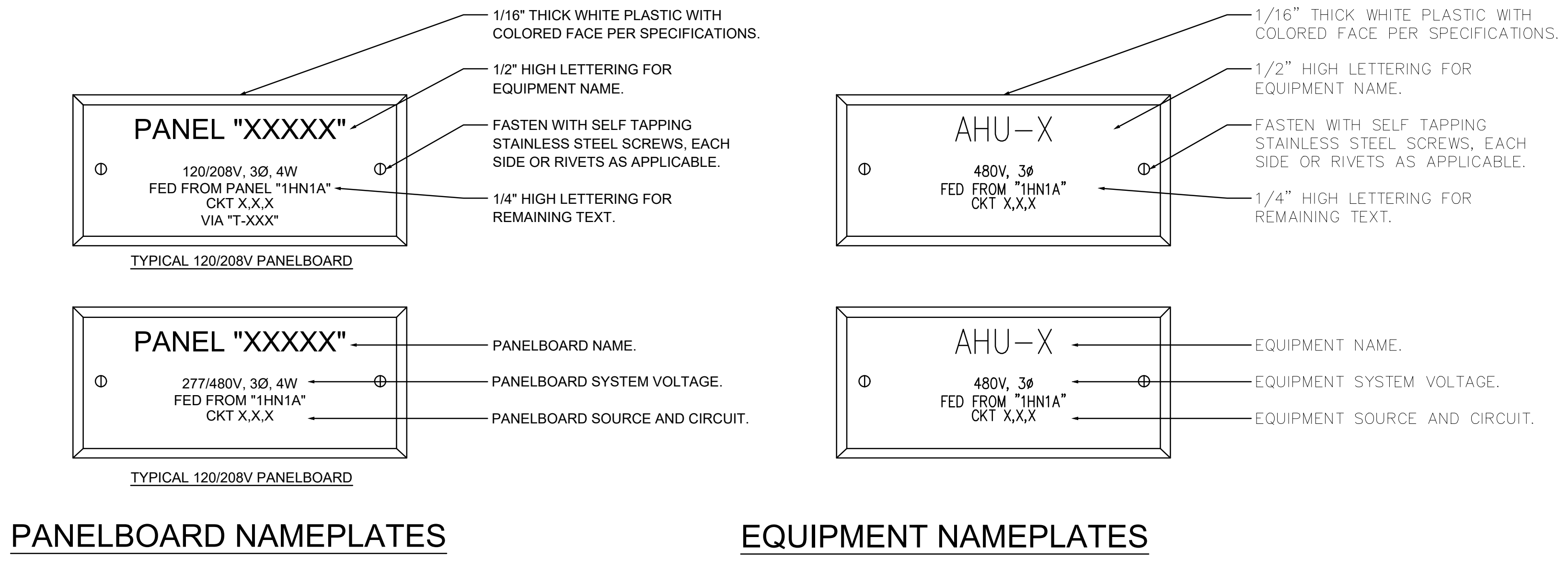
NOTES:
1. WHERE ROOF DECKING IS THE IS THE ALLOWABLE SUPPORT STRUCTURE, AND PATHWAY SYSTEM IS NOT IMC OR RMC, THE MINIMUM DISTANCE FROM ROOF DECKING SHALL BE 1.5" FOR ALL BOXES AND CONDUIT.



2 TELEVISION DETAIL

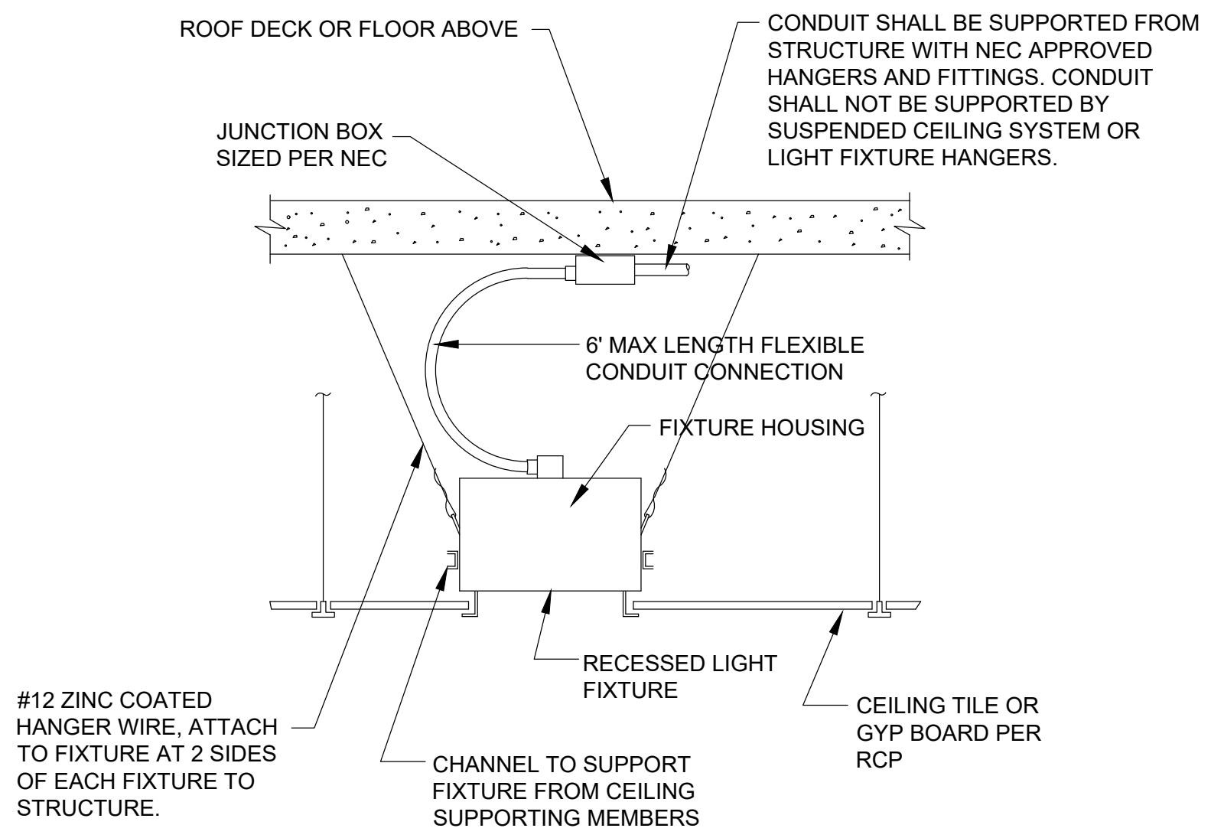
NO SCALE

NOTES
1. FOR THE DINING ROOM TELEVISIONS, THESE DEVICES SHALL BE MOUNTED 24" ABOVE THE DOOR OPENING.
2. ALL CONDUITS SHALL BE INSTALLED WITH BUSHINGS AND PULLSTRINGS.



3 TYPICAL NAMEPLATE DETAIL

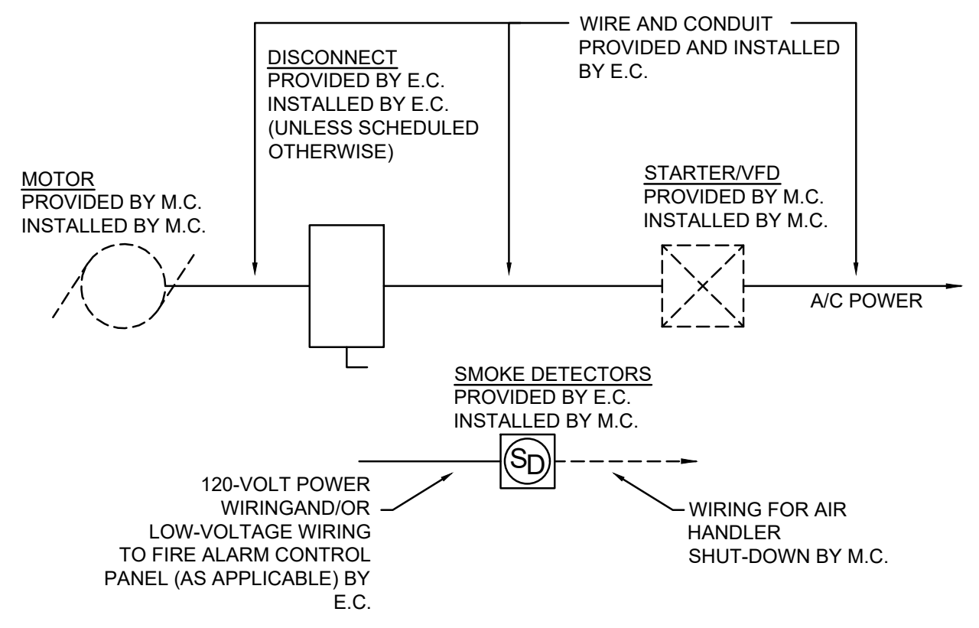
NO SCALE



4 TYPICAL DOWNLIGHT INSTALLATION DETAIL

NO SCALE

NOTES:
1. WHERE ROOF DECKING IS THE IS THE ALLOWABLE SUPPORT STRUCTURE, AND PATHWAY SYSTEM IS NOT IMC OR RMC, THE MINIMUM DISTANCE FROM ROOF DECKING SHALL BE 1.5" FOR ALL BOXES AND CONDUIT.



5 MECHANICAL / ELECTRICAL COORDINATION

NO SCALE

AUTOMATIC MODE OPERATION:

1. WHEN SENSOR ACTIVATES, LOAD TURNS ON.
2. LOAD TURNS OFF, WHEN SENSOR TIMES OUT.
3. SWITCHES CAN BE USED TO TURN LOAD OFF.

RECOMMENDED WIRE:

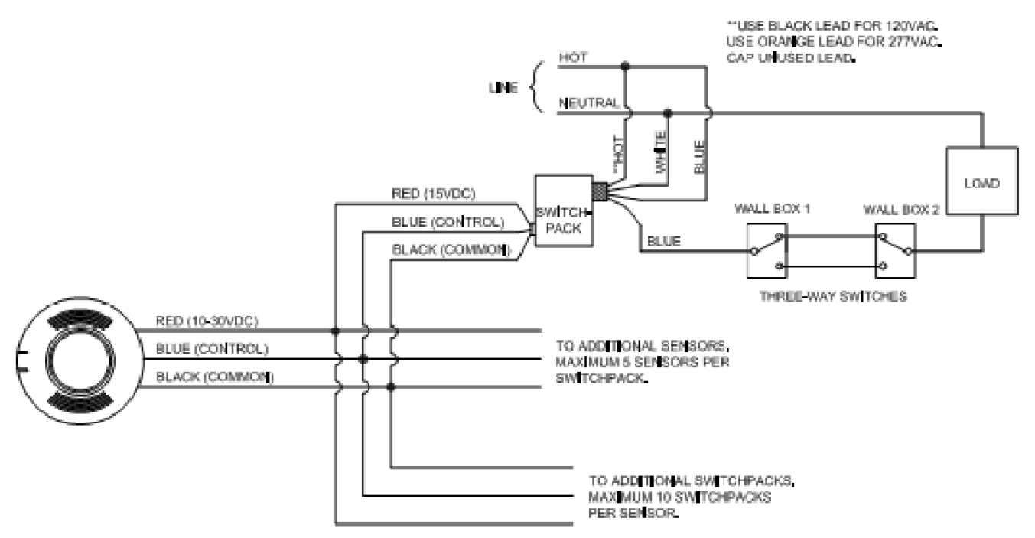
18-3 AWG STRANDED WIRE SHIELDED OR NON-SHIELDED

SENSOR TYPES INCLUDE:

OAC-DT-0501, OAC-DT-1000, OAC-DT-2000
OAC-U-0501, OAC-U-1000, OAC-U-2000
OAC-P-0500, OAC-P-1500

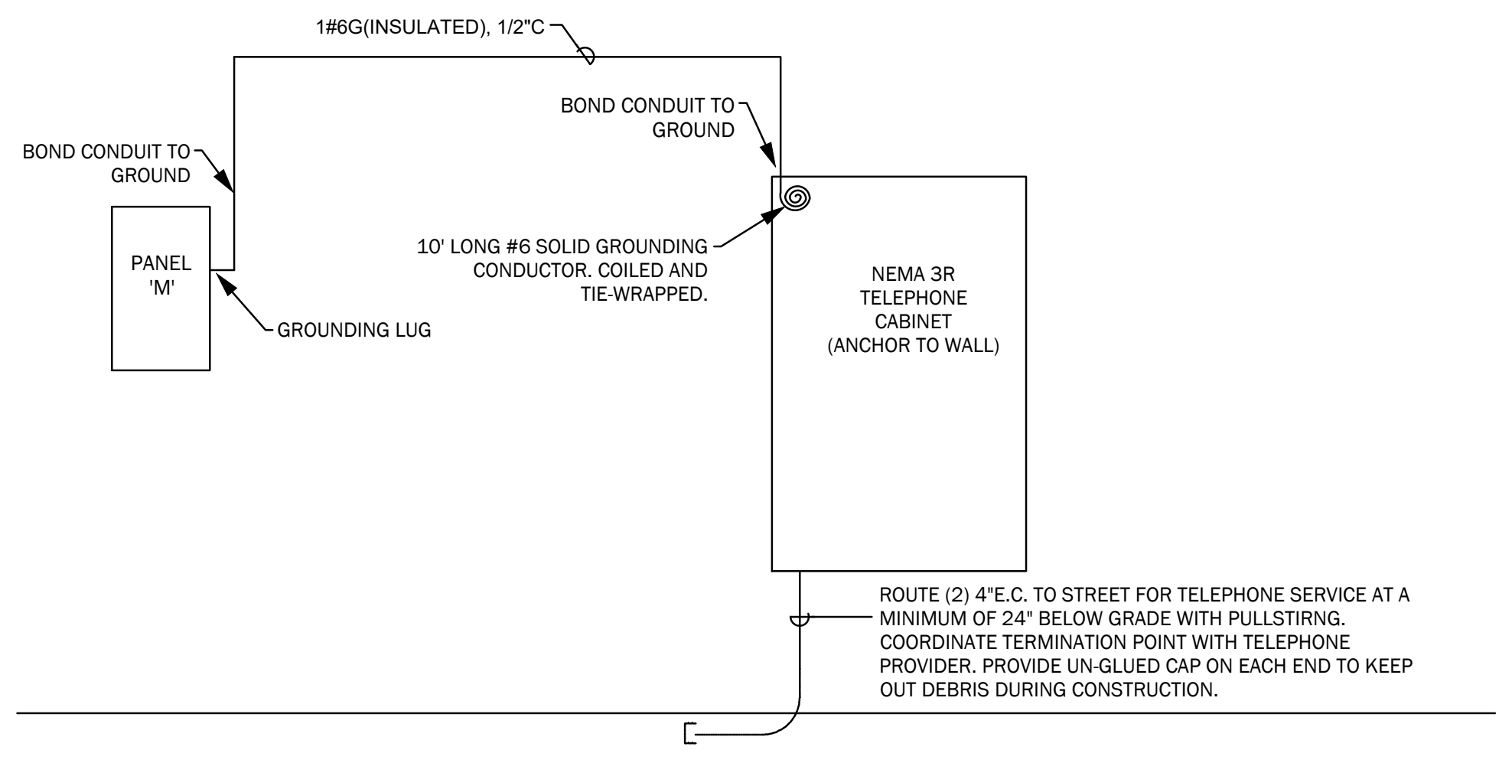
SWITCHPACK TYPE INCLUDES:

SP20-MV



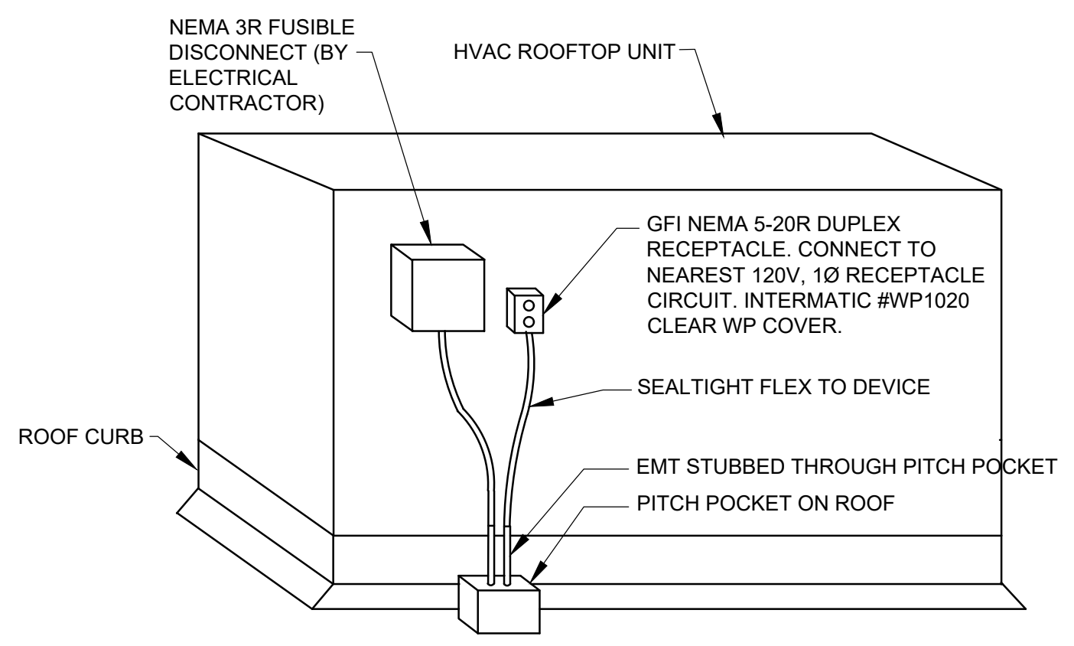
6 3-WAY SWITCHING W/ CEILING MOUNTED OCC SENSOR

NO SCALE



7 TELEPHONE RISER DIAGRAM

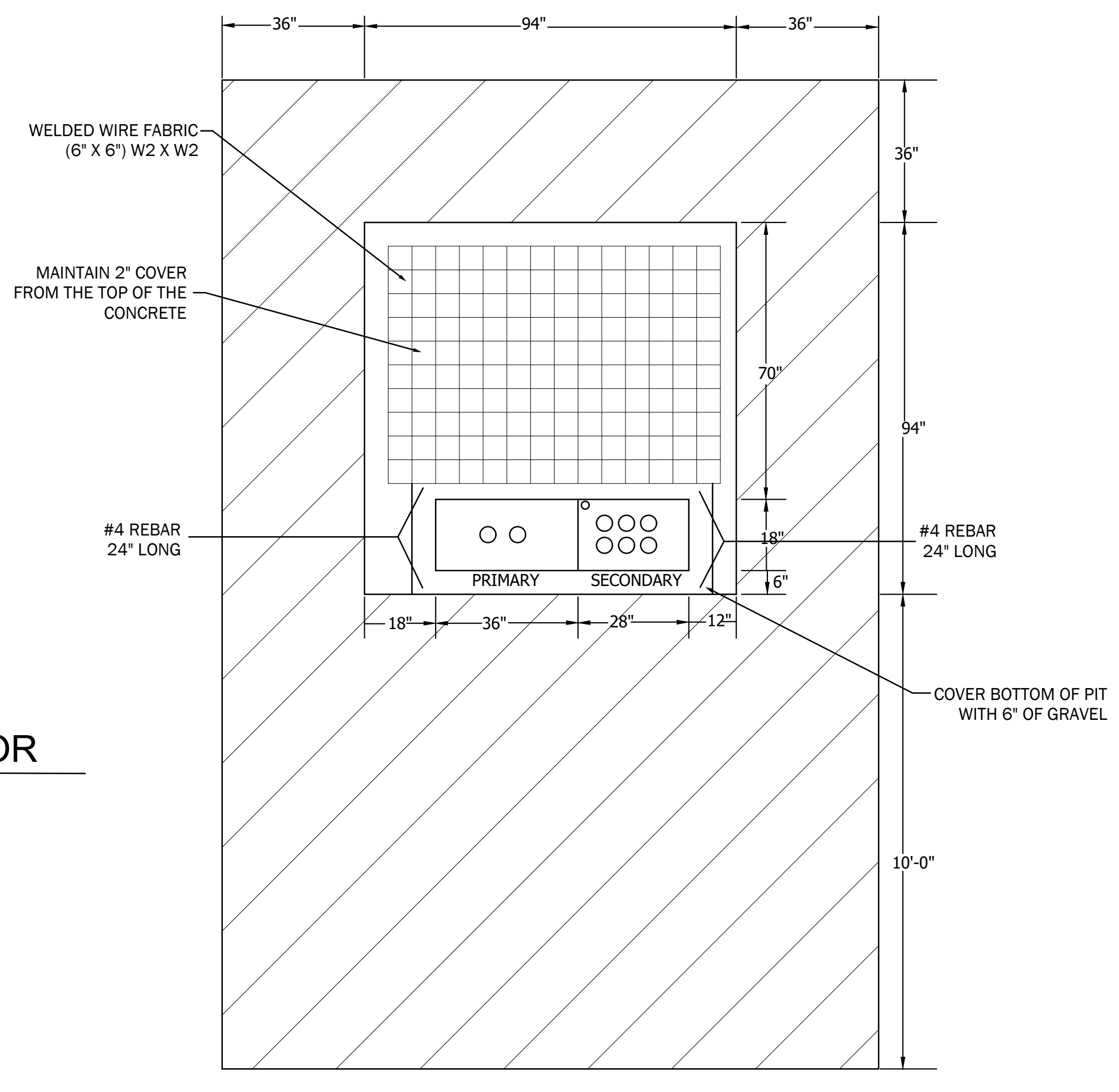
NO SCALE



NOTE: TYPICAL FOR ALL ROOF MOUNTED HVAC EQUIPMENT.

8 ROOFTOP RECEPTACLE DETAIL

NO SCALE



9 PAD MOUNTED UTILITY TRANSFORMER DETAIL

NO SCALE

PADMOUNT TRANSFORMER GENERAL NOTES:
(APPLIES TO THIS DETAIL ONLY)

1. PAD SHALL BE A MINIMUM OF 5.5" THICK.
2. SHADED AREA AROUND THE PAD INDICATES MINIMUM CLEARANCE FROM OBSTRUCTIONS. CLEARANCE STANDARD FOR MINIMUM DISTANCES FROM SIDES AND BACK OF CONCRETE WITH YORK ELECTRIC PRIOR TO ROUGH-IN. 10' MINIMUM FROM FRONT OF CONCRETE.
3. THIS DETAIL INDICATES GENERAL REQUIREMENTS. CONTRACTOR SHALL OBTAIN SPECIFIC PAD SPECIFICATIONS FROM YORK ELECTRIC AND INSTALL PIT AND PAD AS DIRECTED.
4. REFER TO POWER RISER DIAGRAM FOR ACTUAL QUANTITY OF SECONDARY CONDUITS TO BE ROUTED FROM THE SECONDARY OF THIS PAD.

AUTOMATIC MODE OPERATION:

1. WHEN SENSOR ACTIVATES, LOAD TURNS ON.
2. LOAD TURNS OFF, WHEN SENSOR TIMES OUT.
3. SWITCH CAN BE USED TO TURN LOAD OFF.

RECOMMENDED WIRE:

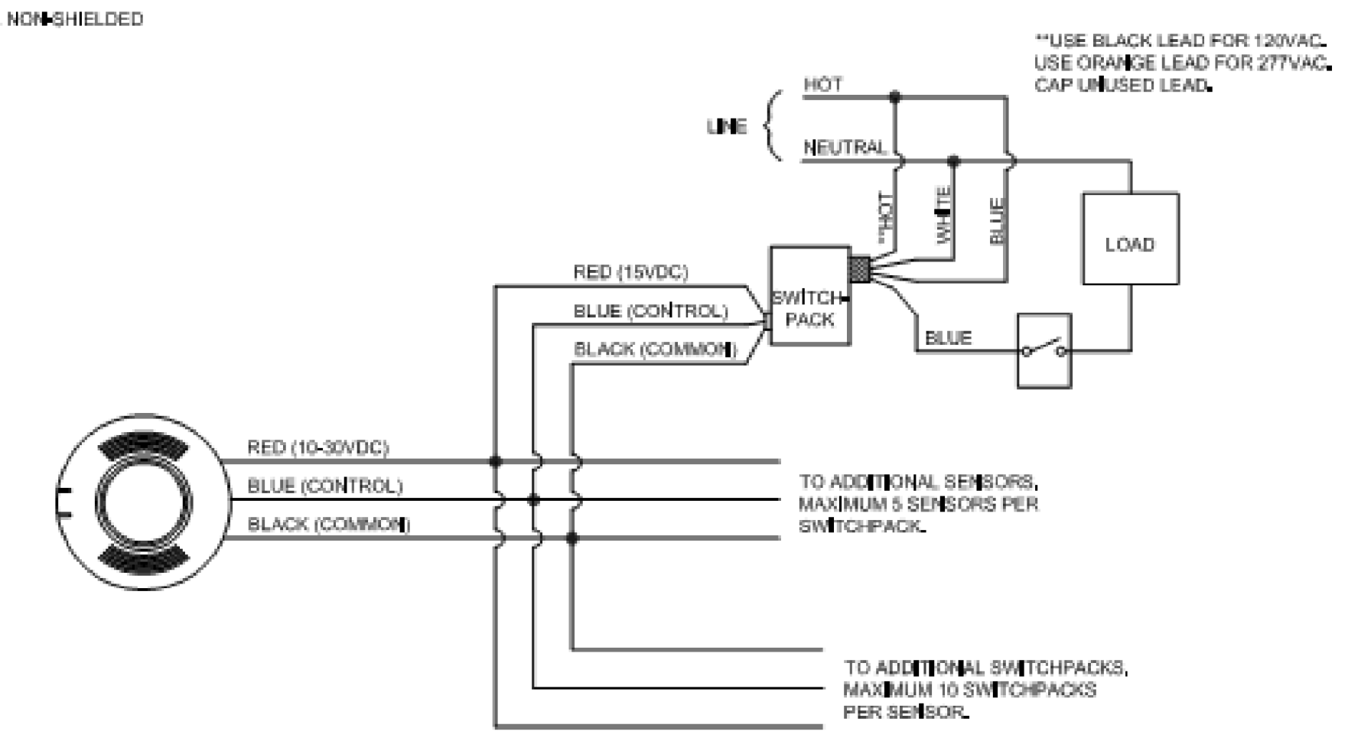
18-3 AWG STRANDED WIRE SHIELDED OR NON-SHIELDED

SENSOR TYPES INCLUDE:

OAC-DT-0501, OAC-DT-1000, OAC-DT-2000
OAC-U-0501, OAC-U-1000, OAC-U-2000
OAC-P-0500, OAC-P-1500

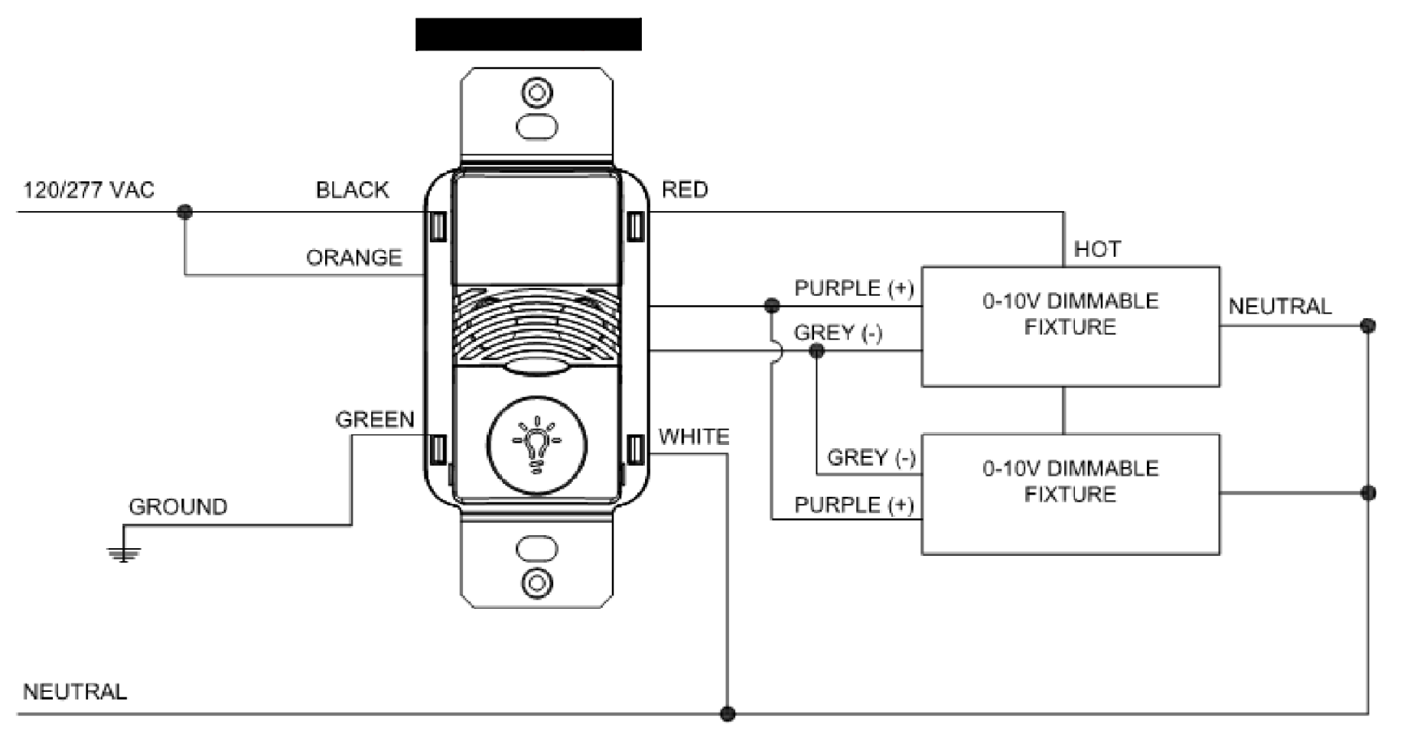
SWITCHPACK TYPE INCLUDES:

SP20-MV



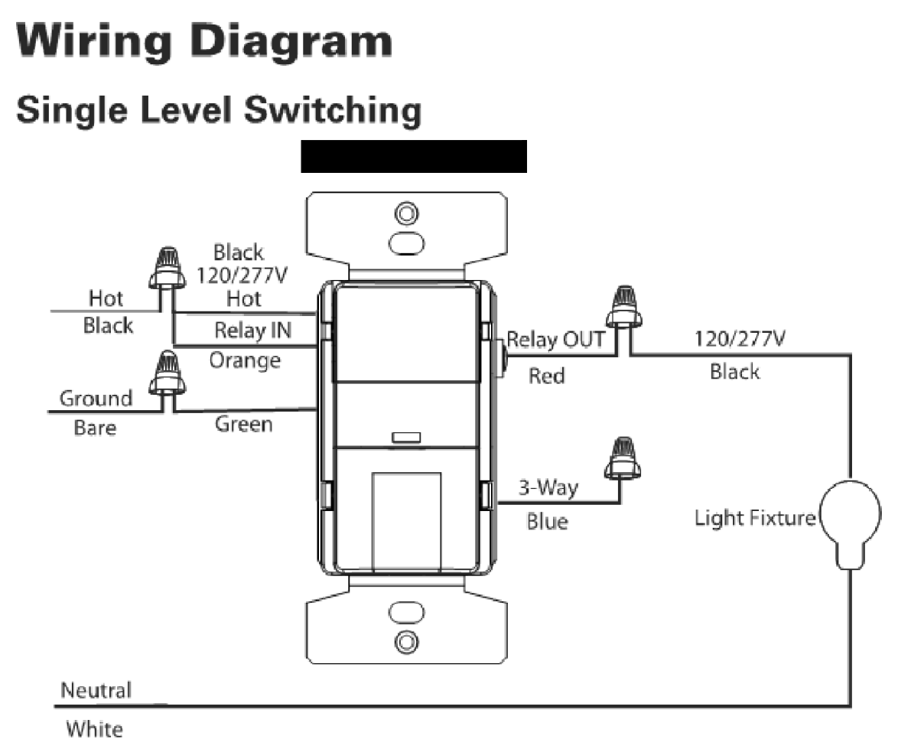
10 STANDARD SWITCHING WITH CEILING MOUNTED OCCUPANCY SENSOR DETAIL

NO SCALE



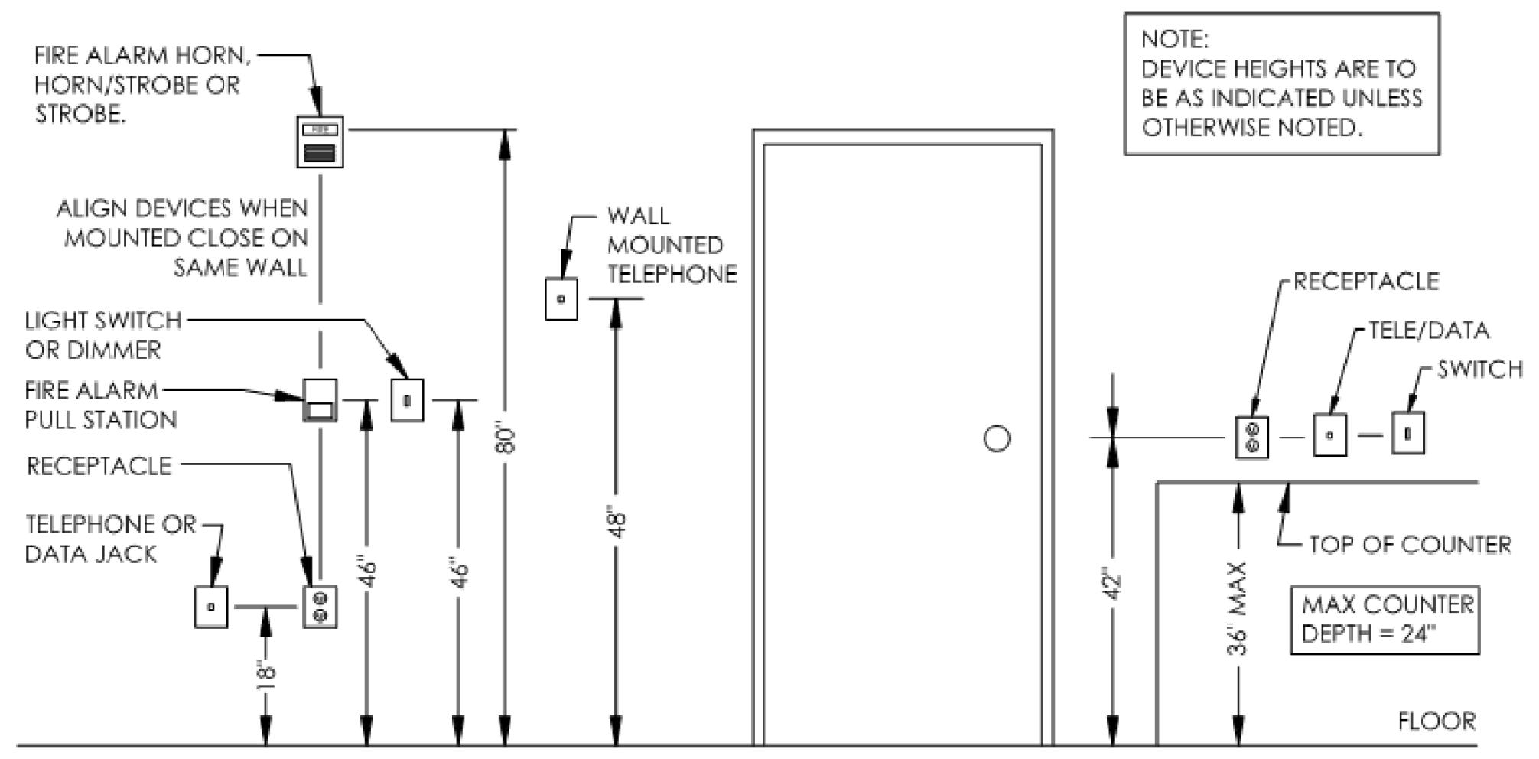
11 STANDARD OCCUPANCY SENSOR / WALL SWITCH DETAIL

NO SCALE



12 STANDARD SWITCHING DETAIL

NO SCALE



13 TYPICAL MOUNTING HEIGHTS

NO SCALE

NOTES
1. WALL MOUNTED FIRE ALARM NOTIFICATION DEVICES MUST BE MOUNTED MOUNTED NO LOWER THAN 80" AFF TO BOTTOM OF DEVICE AND NO HIGHER THAN 96" TO TOP OF THE DEVICE. CONTRACTOR SHALL MOUNT THESE DEVICES AT 88" TO THE MIDDLE OF THE DEVICE UNLESS FIELD CONDITIONS DO NOT ALLOW TO MOUNT AT THIS HEIGHT. IF THE DEVICE CAN NOT BE LOCATED BETWEEN 80" AND 96", CONTACT ENGINEER IMMEDIATELY FOR SOLUTION.
2. MOUNT CENTER LINE OF EXIT SIGN 24" ABOVE DOOR WHERE CEILING IS OVER 12'-0"AFF OR TO STRUCTURE WHERE NO CEILING IS PRESENT. IF CEILING IS 12'-0"AFF OR UNDER, CONTRACTOR SHALL MOUNT CENTER LINE OF EXIT SIGN 12" BELOW CEILING.

---

ossa STUDIO

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

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 31600 GREGORY W. WILEY

01/30/24

PROJECT TEAM

General Contractor
ECCLESIA CONSTRUCTION
www.ecclesiaconstruction.com
803.327.5670

ENGITECTURE
CONSULTING ENGINEERS

ENGITECTURE, PLLC
NC License No. P-1625

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

△ Date	Description
12/15/2023	DESIGN DEVELOPMENT DWGS.
12/22/2023	DESIGN DEVELOPMENT DWGS.
01/24/2024	REVIEW DWGS.
01/30/2024	ISSUED FOR CONSTRUCTION.

Project Name

community church
making church come *alive*

658 GRAHAM ROAD
SANFORD NC 27311

Client

3D COMMUNITY CHURCH

Project Number

23024.00

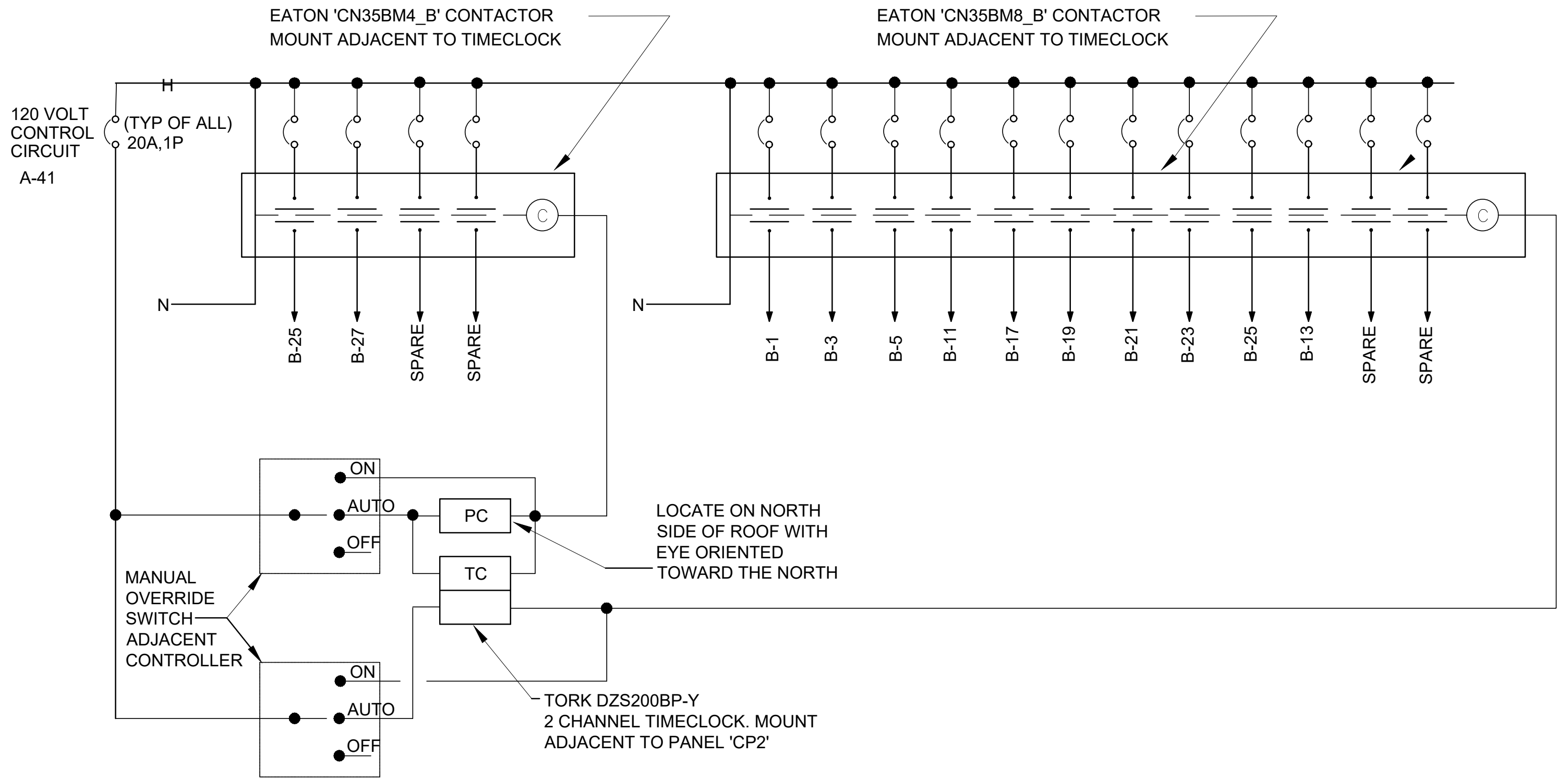
Description

DETAILS - ELECTRICAL

Scale

NA

E00.03

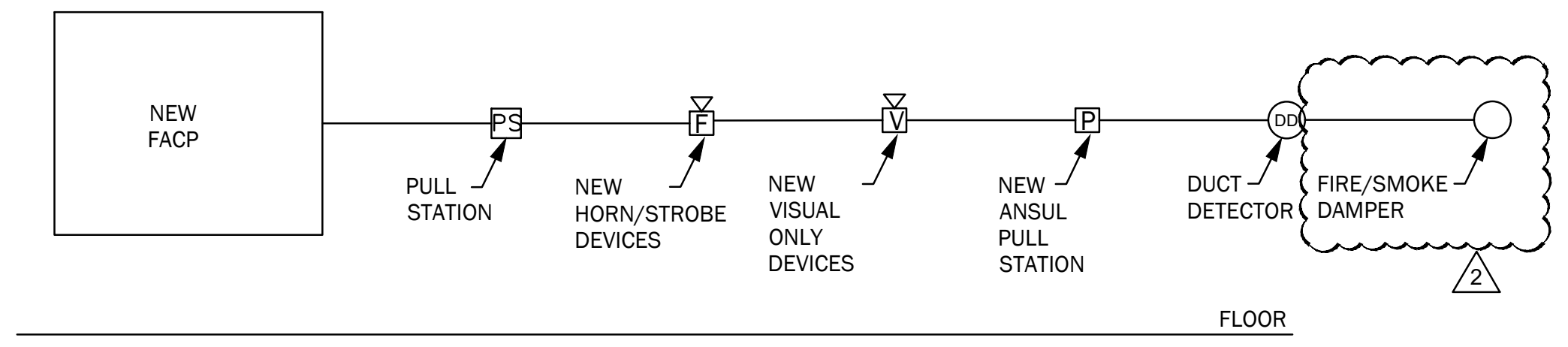


1 LIGHTING TIMECLOCK / PHOTOCELL DETAIL

NO SCALE

NOTES

1. FURNISH DIGITAL TIMECLOCK WITH 16 HR RESERVE
2. FURNISH PHOTOELECTRIC CELL ON ROOF WITH EYE ORIENTED TOWARDS THE NORTH
3. MANUAL OVERRIDE SWITCH SHALL BE HAND OFF AUTO SWITCH (HOA)
4. PROVIDE A NEMA 1 ENCLOSURE FOR HOA SWITCH AND LIGHTING CONTACTOR. ENCLOSURE SHALL BE PROVIDED WITH HINGED DOOR AND KEY OPERATED LOCK. INSTALL HOA SWITCH ON FRONT COVER.
5. REFER TO PLANS FOR LIGHTING CIRCUITS.



2 FIRE ALARM RISER DIAGRAM

NO SCALE

FIRE ALARM GENERAL NOTES:

1. COORDINATE FIRE ALARM SYSTEM SHUTDOWNS AND REPROGRAMMING WITH LANDLORD.
2. PROVIDE ALL PROGRAMMING REQUIRED TO MAKE THE NEW DEVICES FUNCTIONAL.
3. FIRE ALARM CONTROL PANEL MONITORS SPRINKLER RISERS, FIRE PUMP, AND HORN/STROBE NOTIFICATION DEVICES.
4. PROVIDE ELECTRICAL ENGINEER WITH FIRE ALARM SUBMITTALS PRIOR TO PURCHASING.
5. AMPER SWITCH MONITORING MODULES IN LOCATIONS OF EACH SPRINKLER RISER.
6. CONNECT KITCHEN HOOD AND ANSUL PULL STATION TO EXISTING FIRE ALARM SYSTEM. COORDINATE KITCHEN HOOD CONNECTION REQUIREMENTS WITH HOOD INSTALLER AND PROVIDE AS NEEDED.

FIRE ALARM SYSTEM MATRIX

SEQUENCE OF OPERATION:

UPON CHANGE IN STATUS OF ANY DEVICE ON THE SYSTEM INDICATED IN THIS CHART, THE FIRE ALARM CONTROL PANEL SHALL ACTIVATE AUDIBLE CHANGE INDICATORS AND DISPLAY THE SYSTEM POINT NUMBER, POINT DESCRIPTION, AND MESSAGE ASSOCIATED WITH THE POINT.

ACTIVATION OF ANY WATERFLOW DEVICE, SMOKE DETECTOR, OR OTHER INITIATING DEVICE WILL CAUSE THE FUNCTION TO OCCUR NOTED IN THIS CHART.

	BUILDING SYSTEM OUTPUTS																CENTRAL COMM				
	ACTIVATE COMMON ALARM SIGNAL INDICATOR	ACTIVATE AUDIBLE ALARM SIGNAL	ACTIVATE COMMON SUPERVISORY SIGNAL INDICATOR	ACTIVATE AUDIBLE SUPERVISORY INDICATOR	ACTIVATE COMMON TROUBLE SIGNAL INDICATOR	ACTIVATE AUDIBLE TROUBLE SIGNAL	ACTIVATE GENERAL EVACUATION SIGNAL	DISPLAY CHANGE OF STATUS	ACTIVATE EXTERNAL HORNS/STROBES	TRANSMIT FIRE ALARM SIGNAL TO CENTRAL STATION	TRANSMIT SUPERVISORY SIGNAL TO CENTRAL STATION	TRANSMIT TROUBLE SIGNAL TO CENTRAL STATION	RETURN ELEVATOR TO ALTERNATE FLOOR	RETURN ELEVATOR TO FIRST FLOOR	SHUNT TRIP AFTER ELEV. REACHES DESIGNATED FLOOR	SHUT DOWN RESPECTIVE HVAC	SHOW CHANGE OF STATUS ON ANNUNCIATOR	SHOW CHANGE OF STATUS ON CENTRAL PANEL	TRANSMIT FIRE ALARM SIGNAL TO CENTRAL STATION	TRANSMIT SUPERVISORY SIGNAL TO CENTRAL STATION	TRANSMIT TROUBLE SIGNAL TO CENTRAL STATION
MANUAL FIRE ALARM PULL BOXES	X	X					X	X	X	X							X	X	X		
BUILDING SMOKE DETECTOR	X	X					X	X	X	X							X	X	X		
DUCT SMOKE DETECTOR			X	X				X			X					X	X	X		X	
SPRINKLER WATER FLOW	X	X					X	X	X	X							X	X	X		
SPRINKLER TAMPER			X	X				X			X						X	X		X	
NOTIFICATION DEVICE SHORT CIRCUIT					X	X		X				X					X	X			X
OPEN CIRCUIT					X	X		X				X					X	X			X
GROUND FAULT					X	X		X				X					X	X			X
FIRE ALARM A.C. POWER FAILURE					X	X		X				X					X	X			X
FIRE ALARM SYSTEM LOW BATTERY					X			X				X					X	X			X
FIRE PUMP RUNNING			X								X										
FIRE PUMP COMMON TROUBLE			X								X										
FIRE PUMP POWER FAILURE/PHASE REVER.			X								X										

ENERGY STATEMENT

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

**ELECTRICAL DESIGN
(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)**

ELECTRICAL SYSTEM AND EQUIPMENT

METHOD OF COMPLIANC PERSCRIPTIVE

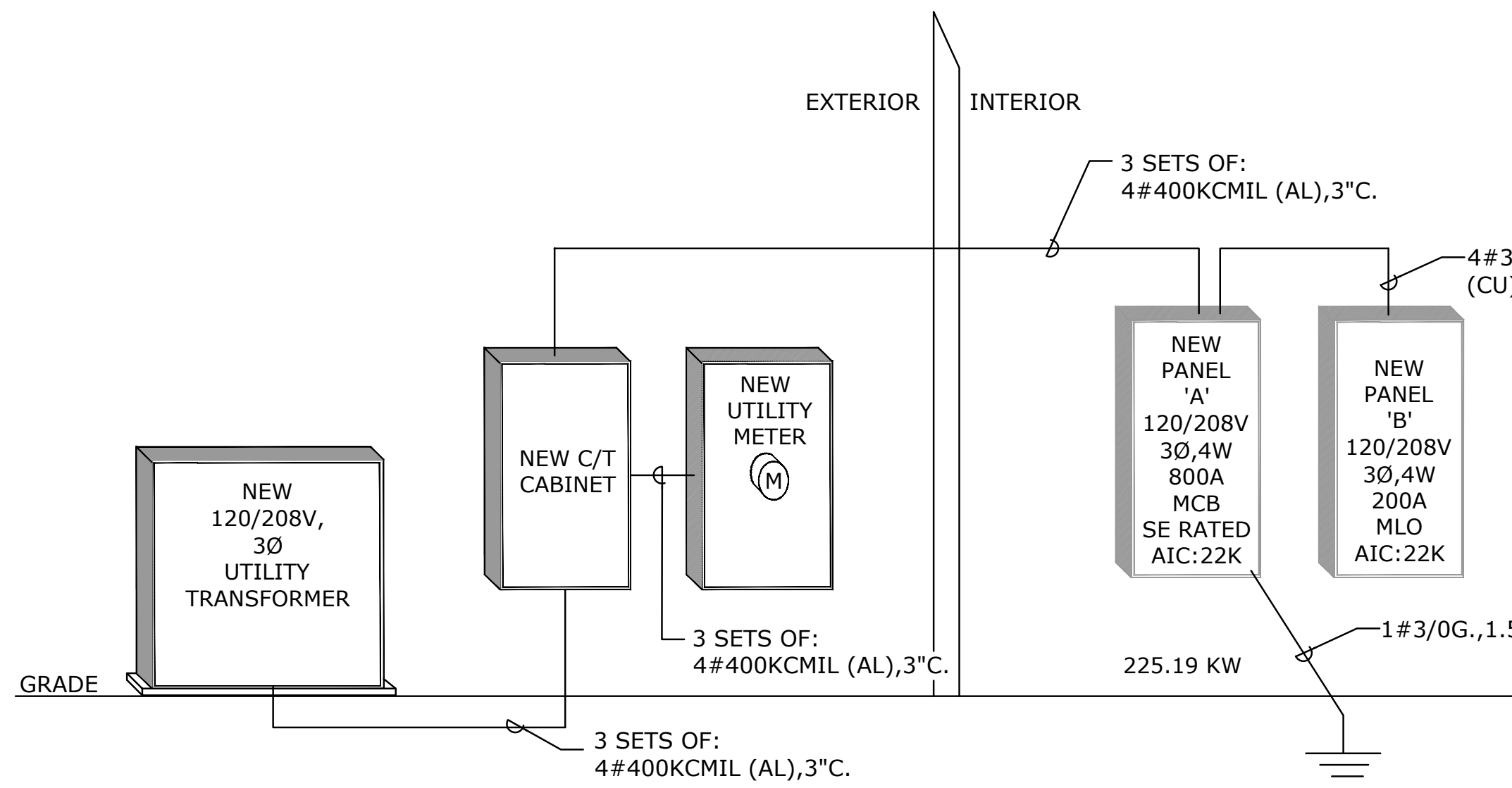
LIGHTING SCHEDULE (EACH FIXTURE TYPE)

LAMP TYPE REQUIRED IN FIXTURE	**REFER TO LIGHTING FIXTURE SCHEDULE**	
NUMBER OF LAMPS IN FIXTURE	**REFER TO LIGHTING FIXTURE SCHEDULE**	
BALLAST TYPE USED IN THE FIXTURE	**REFER TO LIGHTING FIXTURE SCHEDULE**	
NUMBER OF BALLASTS IN FIXTURE	**REFER TO LIGHTING FIXTURE SCHEDULE**	
TOTAL WATTAGE PER FIXTURE	**REFER TO LIGHTING FIXTURE SCHEDULE**	
TOTAL INTERIOR WATTAGE *	**7388** SPECIFIED	**10170** ALLOWED
TOTAL EXTERIOR WATTAGE	**237** SPECIFIED	**650** ALLOWED

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

☐ C406.2 MORE EFFICIENT HVAC EQUIPMENT PERFORMANCE
☒ C406.3 REDUCED LIGHTING POWER DENSITY
☐ C406.4 ENHANCED DIGITAL LIGHTING CONTROLS
☐ C406.5 ON-SITE RENEWABLE ENERGY
☐ C406.6 DEDICATED OUTDOOR AIR SYSTEM
☐ C406.7 REDUCED ENERGY USE IN SERVICE WATER HEATING

*** WHOLE BUILDING OR SPACE BY SPACE**



3 POWER RISER DIAGRAM

NO SCALE

GENERAL NOTES
(APPLIES TO THIS SHEET ONLY)

1. PROVIDE AND INSTALL CT METER CABINET IF REQUIRED BY UTILITY FOR THIS APPLICATION. METER BY UTILITY.
2. PROVIDE PLACARD INDICATING AVAILABLE AIC FAULT CURRENT PER NEC 110.24.
3. UTILITY TRANSFORMER SPECIFICATIONS UNKNOWN AT TIME OF DESIGN. DESIGN IS BASED ON 20,800AIC. E.C. TO VERIFY TRANSFORMER PROPERTIES WITH WITH UTILITY PRIOR TO PURCHASING EQUIPMENT. IF TRANSFORMER AIC IS HIGHER THAN INDICATED, CONTACT ENGINEER FOR FAULT CURRENT FOR ELECTRICAL PANEL(S).
4. PROVIDE PLACARD INDICATING ARC-FLASH HAZARD AT PANEL(S)/DISCONNECT(S) PER NEC 110.26.
5. ELECTRICAL PANEL(S) SHALL BE INSTALLED PER NEC 110.26.

NEW PANEL A

VOLTAGE: 120/208 AMPS: 800 MCB MOUNTING: SURFACE
3 PHASE, 4 WIRE TOTAL LOAD: 225.2 KVA AIC RATING: 22,000

No.	CIRCUIT DESCRIPTION	LOAD (KVA)						BREAKER		PHASE			BREAKER		LOAD (KVA)						CIRCUIT DESCRIPTION	No.
		CONT	RCPT	MTR	A/C	KITCH	MISC	TRIP	P	A	B	C	P	TRIP	MISC	KITCH	A/C	MTR	RCPT	CONT		
1	PANEL 'B'	5.20	2.52	0.00	0.00	5.00	1.60	200	3	14.86			1	20					0.54		CORRIDOR REC	2
3		5.00	3.06	0.00	0.00	2.50	0.00				11.82		1	20					1.26		OFFICE 121 REC	4
5		4.00	2.88	0.20	0.00	2.50	0.00					10.66	1	20					1.08		SHARED OFFICE REC	6
7	RTU-1				14.69			175	3	15.59			1	20					0.90		SHARED OFFICE REC	8
9					14.69						15.95		1	20					1.26		PASTOR REC	10
11					14.69							15.05	1	20					0.36		BACKSTAGE REC	12
13	RTU-2				14.69			175	3	15.23			1	20					0.54		STORAGE/JAN REC	14
15					14.69						15.59		1	20					0.90		CLASSROOM 134 REC	16
17					14.69							15.59	1	20					0.90		CLASSROOM 133 REC	18
19	RTU-3				14.69			175	3	15.77			1	20					1.08		CLASSROOM 132 REC	20
21					14.69						15.77		1	20					1.08		NURSERY 131 REC	22
23					14.69							15.05	1	20					0.36		BACK STAGE QUAD	24
25	RTU-4				6.62			70	3	6.98			1	20					0.36		BACK STAGE QUAD	26
27					6.62						6.98		1	20					0.36		BACK STAGE QUAD	28
29					6.62							7.12	1	20	0.50						A/V POWER FUTURE	30
31	RTU-5				6.62			70	3	7.12			1	20	0.50						A/V POWER FUTURE	32
33					6.62						7.12		1	20	0.50						A/V POWER FUTURE	34
35					6.62							7.12	1	20				0.50			RP-1	36
37	IT QUAD		0.72					20	1	3.72			3	35	3.00						WH-1	38
39	FACP (RED BREAKER)						0.50	20	1		3.50				3.00							40
41	TIMECLOCK						0.50	20	1			3.50			3.00							42
								TOTAL		79.27	76.73	74.09			13.10	10.00	171.94	0.70	20.16	14.20	CONNECTED KVA 230.096	

	OADS W/ NEC 220 DEMAND FACTORS (KVA						
	CONT	RCPT	MTR	A/C	KITCH	MISC	
A PHASE	6.50	6.66	0.00	57.31	3.25	5.10	78.82
B PHASE	6.25	7.92	0.00	57.31	1.63	4.00	77.11
C PHASE	5.00	5.58	0.83	57.31	1.63	4.00	74.34
TOTALS FOR PANEL	17.75	15.08	0.83	####	6.50	13.10	225.19
	DESIGN LOAD (KVA) FOR LARGEST PHASE						**78.82** **656.36 A**
	DESIGN LOAD (KVA) FOR PANEL						**225.19** **625.07 A**

NEC 220 DEMAND FACTORS

CONTINUOUS: 125% LOAD
RECEPTACLES: 100% 1ST 10 KW + 50% REMAINING
MOTORS: 125% LARGEST MOTOR + 100% REMAINING
A/C: 100% LOAD
KITCHEN: 65% LOAD
MISC: 100% LOAD

PANEL NOTES

1. BREAKER FRAME SHALL BE AS REQUIRED PER PANEL AIC RATI
2. SHALL BE FULLY RATED - SERIES RATINGS NOT ALLOWED.
3. ALL BUSSING, INCL GND AND NEUTRAL, SHALL BE COPPER.
4. ALL INCOMING PANEL & BRKR LUGS SHALL MATCH FEEDERS.
5. PROVIDE HINGED DOOR-IN-DOOR WITH OUTER DOOR LOCK.
6. PROVIDE METAL DIRECTORY FRAME.

NEW PANEL B

VOLTAGE: 120/208 AMPS: 200 MCB MOUNTING: SURFACE
3 PHASE, 4 WIRE TOTAL LOAD: 33.7 KVA AIC RATING: 22,000

No.	CIRCUIT DESCRIPTION	LOAD (KVA)						BREAKER		PHASE			BREAKER		LOAD (KVA)						CIRCUIT DESCRIPTION	No.
		CONT	RCPT	MTR	A/C	KITCH	MISC	TRIP	P	A	B	C	P	TRIP	MISC	KITCH	A/C	MTR	RCPT	CONT		
1	CORRIDOR LTG	0.59						20	1	1.39			1	20	0.80						FRIDGE	2
3	CORRIDOR SCONCE LTG	0.18						20	1		1.68		1	20	1.50						MICROWAVE	4
5	NARTHEX LTG	0.52						20	1			0.88	1	20					0.36		COUNTER REC	6
7	BATH LTG	0.57						20	1	1.11			1	20					0.54		COUNTER REC	8
9	OFFICE LTG	0.66						20	1		1.46		1	20	0.80						DISHWASHER	10
11	BACK STAGE LTG	0.13						20	1			0.93	1	20	0.80						ICEMAKER	12
13	STAGE LIGHTING	0.08						20	1	0.44			1	20					0.36		COUNTER REC	14
15	NURSERY/CLASSRM LTG	1.02						20	1		1.38		1	20					0.36		COUNTER REC	16
17	SANCTUARY LTG	0.75						20	1			0.95	1	20				0.20			HOOD	18
19	SANCTUARY LTG	1.50						20	1	4.00			2	50		2.50					OVEN	20
21	SANCTUARY SCONCE LTG	0.36						20	1		2.86					2.50						22
23	SANCTUARY SCONCE LTG	0.34						20	1			2.84	2	50		2.50					STOVETOP	24
25	SIGNAGE	1.20						20	1	3.70						2.50						26
27	EXTERIOR LTG	0.24						20	1		1.32		1	20					1.08		STORAGE/BATH REC	28
29	FIRE/SMOKE DAMPER						0.30	20	1			1.10	1	20	0.80						HAND DRYER	30
31	STAGE REC		0.54					20	1	1.34			1	20	0.80						HAND DRYER	32
33	STAGE FLOOR REC		0.36					20	1		0.54		1	20					0.18		EWC GFI	34
35	STAGE FLOOR REC		0.36					20	1			0.72	1	20					0.36		MERCH REC	36
37	STAGE FLOOR REC		0.36					20	1	1.08			1	20					0.72		GREEN ROOM REC	38
39	STAGE FLOOR REC		0.36					20	1		1.08		1	20					0.72		NARTHEX TVs	40
41	STAGE FLOOR REC		0.36					20	1			1.44	1	20					1.08		SANCTUARY REC	42
43	FIRE/SMOKE DAMPER						0.20	20	1	0.74			1	20					0.54		CHECK-IN REC	44
45	FIRE/SMOKE DAMPER						0.20	20	1		0.70		1	20	0.50						SANCTUARY PROJECTOR	46
47	SPARE							20	1			0.72	1	20					0.72		SOUNDBOOTH REC	48
49	SPARE							20	1	0.72			1	20					0.72		SOUNDBOOTH REC	50
51	SPARE							20	1		0.54		1	20					0.54		SOUNDBOOTH REC	52
53	SPARE							20	1			0.00	1	20							SPARE	54
55	SPARE							20	1	0.00			1	20							SPARE	56
57	SPARE							20	1		0.00		1	20							SPARE	58
59	SPARE							20	1			0.00	1	20							SPARE	60
								TOTAL		14.52	11.56	9.58			6.70	10.00	0.00	0.20	10.62	8.14	CONNECTED KVA 35.66	

	OADS W/ NEC 220 DEMAND FACTORS (KVA						
	CONT	RCPT	MTR	A/C	KITCH	MISC	
A PHASE	4.93	3.78	0.00	0.00	3.25	1.80	13.76
B PHASE	3.08	3.60	0.00	0.00	1.63	3.00	11.30
C PHASE	2.18	3.24	0.25	0.00	1.63	1.90	9.19
TOTALS FOR PANEL	10.18	10.31	0.00	0.00	6.50	6.70	33.69
	DESIGN LOAD (KVA) FOR LARGEST PHASE						**13.76** **114.54 A**
	DESIGN LOAD (KVA) FOR PANEL						**33.69** **93.5 A**

NEC 220 DEMAND FACTORS

CONTINUOUS: 125% LOAD
RECEPTACLES: 100% 1ST 10 KW + 50% REMAINING
MOTORS: 125% LARGEST MOTOR + 100% REMAINING
A/C: 100% LOAD
KITCHEN: 65% LOAD
MISC: 100% LOAD

PANEL NOTES

1. BREAKER FRAME SHALL BE AS REQUIRED PER PANEL AIC RATI
2. SHALL BE FULLY RATED - SERIES RATINGS NOT ALLOWED.
3. ALL BUSSING, INCL GND AND NEUTRAL, SHALL BE COPPER.
4. ALL INCOMING PANEL & BRKR LUGS SHALL MATCH FEEDERS.
5. PROVIDE HINGED DOOR-IN-DOOR WITH OUTER DOOR LOCK.
6. PROVIDE METAL DIRECTORY FRAME.
7.

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

SEAL
31600
GREGORY W. WILEY
05/03/24

PROJECT TEAM

General Contractor
ECCLESIA CONSTRUCTION
www.ecclesiaconstruction.com
803.327.5670

ENGITECTURE
CONSULTING ENGINEERS
ENGITECTURE, PLLC
NC License No. P-1625

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

	Date	Description
	12/15/2023	DESIGN DEVELOPMENT DWGS.
	12/22/2023	DESIGN DEVELOPMENT DWGS.
	01/24/2024	REVIEW DWGS.
	01/30/2024	ISSUED FOR CONSTRUCTION.
2	05/03/2024	ARCHITECTURAL REVISION 1

Project Name
community church
making church come *alive*
658 GRAHAM ROAD
SANFORD NC 27311

Client
3D COMMUNITY CHURCH

Project Number
23024.00

Description
SCHEDULES & DIAGRAMS - ELECTRICAL

Scale
NA

E00.04

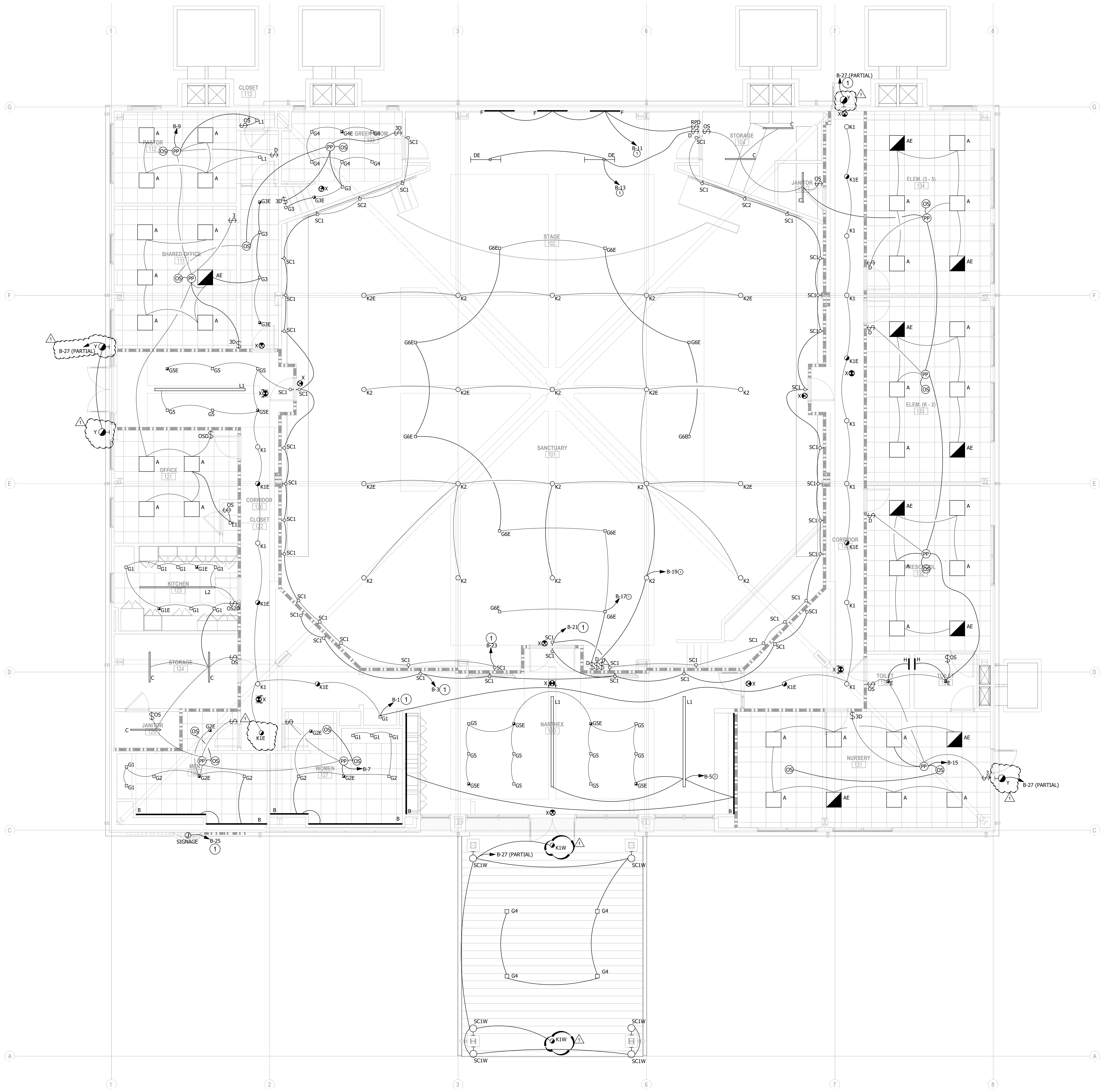
11/30/2023 4:49:42 PM Z:\Private\andrew.mclellan\Revit Local\23024.00_3D Community Church_andrew.mclellanFHCLC.rvt

GENERAL LIGHTING NOTES:
(APPLIES TO 1/THIS DRAWING ONLY)

1. CONNECT ALL TYPE 'W', 'X', 'Y' AND 'Z' LIGHTS TO NEAREST INTERIOR LIGHTING CIRCUIT AHEAD OF LOCAL SWITCHING.
2. COORDINATE EXACT LOCATION OF ALL DEVICES WITH ARCHITECTURAL PLANS PRIOR TO ROUGH-IN.

KEYED NOTES:
(APPLIES TO 1/THIS DRAWING ONLY)

① ROUTE CIRCUIT THROUGH TIMECLOCK.



1
E01.01

FLOOR PLAN - LIGHTING

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

ossa
STUDIO

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

GREGORY W. WILEY
31600
04/22/24

PROJECT TEAM

General Contractor
ECCLESIA CONSTRUCTION
www.ecclesiaconstruction.com
803.327.5670

ENGITECTURE
CONSULTING ENGINEERS

ENGITECTURE, PLLC
NC License No. P-1625

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

△	Date	Description
	12/15/2023	DESIGN DEVELOPMENT DWGS.
	12/22/2023	DESIGN DEVELOPMENT DWGS.
	01/24/2024	REVIEW DWGS.
	01/30/2024	ISSUED FOR CONSTRUCTION.
1	04/24/2024	PERMIT REVISION

Project Name

3D
community church
making church come *alive*

658 GRAHAM ROAD
SANFORD NC 27311

Client

3D COMMUNITY CHURCH

Project Number

23024.00

Description

FLOOR PLAN - LIGHTING

Scale

SEE PLANS

E01.01

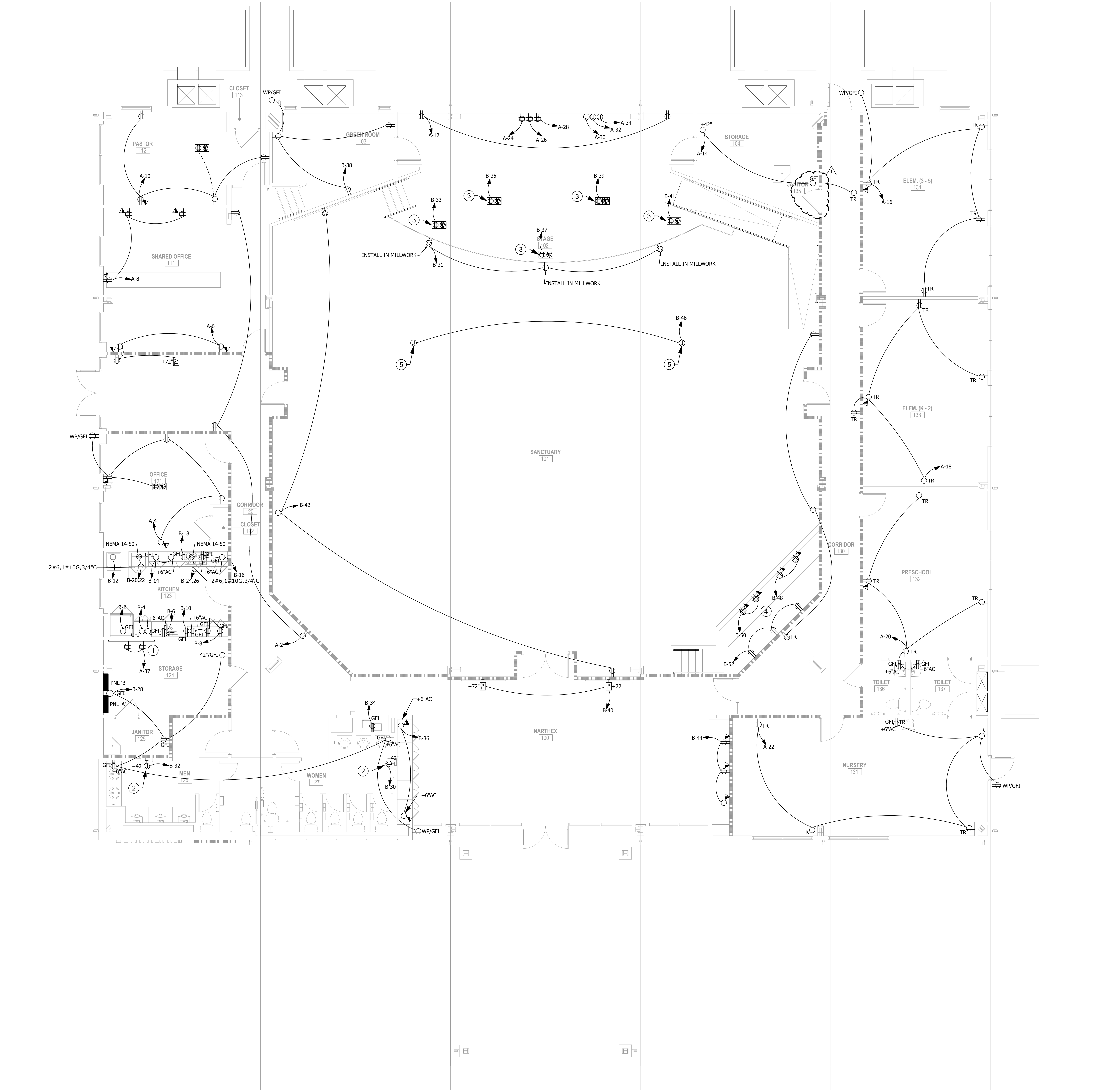
11/30/2023 4:49:42 PM Z:\Private\andrew.mclellan\Revit Local\23024.00_3D Community Church_andrew.mclellanFHCLC.rvt

GENERAL NOTES:
(APPLIES TO 1/THIS DRAWING ONLY)

1. COORDINATE LOCATION AND MOUNTING HEIGHT OF ALL DEVICES WITH ARCHITECT PRIOR TO ROUGH IN.
2. PER NEC 406.12, ALL RECEPTACLES WHERE THE BOTTOM OF THE DEVICE IS MOUNTED LOWER THAN 65" THROUGHOUT THE BUILDING SHALL BE TAMPER RESISTANT. THE LONE EXCEPTION IS ANY RECEPTACLE LOCATED LOCATED BEHIND A DEDICATED APPLIANCE IS NOT REQUIRED TO BE TAMPER RESISTANT.

KEYED NOTES:
(APPLIES TO 1/THIS DRAWING ONLY)

① PROVIDE AND INSTALL 4'W X 2'H PLYWOOD BACKBOARD FOR DATA/COMMUNICATIONS. ROUTE (1) 2"CONDUIT TO LOCATION OF TELECOM SERVICE ENTRANCE. COORDINATE EXACT LOCATION AND ROUTING IN FIELD PRIOR TO ROUGH-IN.
② PROVIDE AND INSTALL JUNCTION BOX FOR CONNECTION TO HAND DRYER. COORDINATE MOUNTING HEIGHT WITH ARCHITECT PRIOR TO ROUGH-IN.
③ INSTALL POKE-THRU DEVICE WITH QUADRAPLEX RECEPTACLE AND DATA/COMMUNICATIONS JACK IN THE STAGE FLOOR.
④ DEVICES LOCATED IN THE SOUTH BOOTH SHALL BE INSTALLED 18" ABOVE RAISED FLOOR.
⑤ PROVIDE JUNCTION BOX FOR PROJECTOR. COORDINATE EXACT MOUNTING HEIGHT AND LOCATION WITH ARCHITECT.



1 E02.01 FLOOR PLAN - POWER
SCALE: 3/16" = 1'-0"

11/30/2023 4:49:42 PM Z:\Private\andrew.mclellan\Revit Local\23024.00_3D Community Church_andrew.mclellanFHCLC.rvt

ossa STUDIO

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

31600
GREGORY W. WILEY
04/22/24

PROJECT TEAM

General Contractor
ECCLESIA CONSTRUCTION
www.ecclesiaconstruction.com
803.327.5670

ENGITECTURE
CONSULTING ENGINEERS
ENGITECTURE, PLLC
NC License No. P-1625

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

△	Date	Description
	12/15/2023	DESIGN DEVELOPMENT DWGS.
	12/22/2023	DESIGN DEVELOPMENT DWGS.
	01/24/2024	REVIEW DWGS.
	01/30/2024	ISSUED FOR CONSTRUCTION.
1	04/24/2024	PERMIT REVISION

Project Name

3D community church
making church come *alive*
658 GRAHAM ROAD
SANFORD NC 27311

Client
3D COMMUNITY CHURCH

Project Number
23024.00

Description
FLOOR PLAN - POWER

Scale
SEE PLANS

E02.01

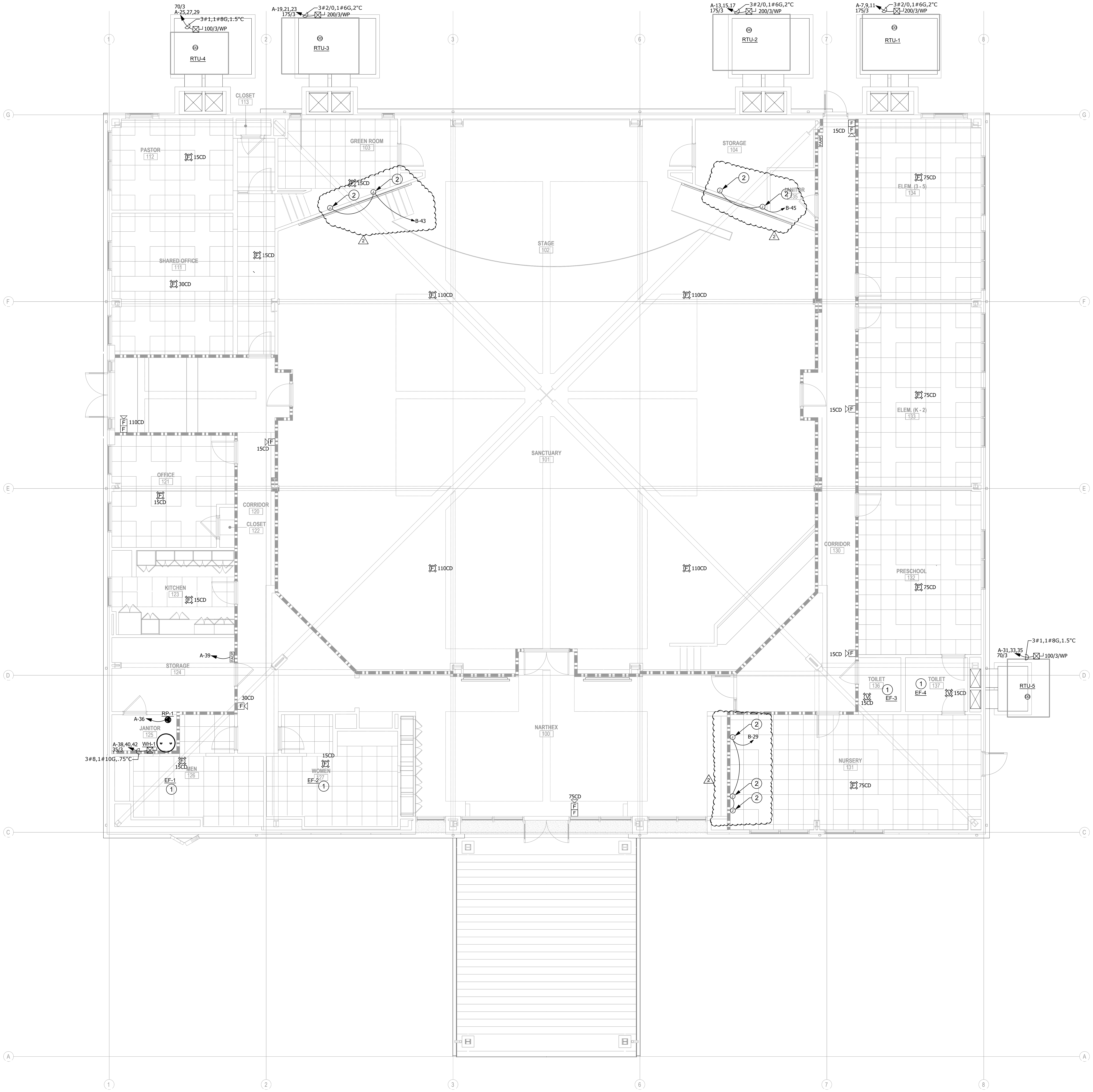
GENERAL NOTES:
(APPLIES TO 1/THIS DRAWING ONLY)

1. COORDINATE LOCATION AND MOUNTING HEIGHT OF ALL DEVICES WITH ARCHITECT PRIOR TO ROUGH IN.

KEYED NOTES:
(APPLIES TO 1/THIS DRAWING ONLY)

① INTERLOCK EXHAUST FAN WITH LIGHTS IN THIS ROOM. EXHAUST FAN SHALL BE CONTROLLED FROM OCCUPANCY SENSOR THAT SERVES THE LIGHTS IN THIS ROOM.

2 ② PROVIDE AND INSTALL JUNCTION BOX FOR CONNECTION TO FIRE/SMOKE DAMPER. COORDINATE EXACT LOCATION IN FIELD. CONNECT TO FIRE ALARM CONTROL PANEL.



1
E03.01

FLOOR PLAN - SYSTEMS

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

11/30/2023 4:49:42 PM Z:\Private\andrew.mclellan\Revit Local\23024.00_3D Community Church_andrew.mclellanFHCLC.rvt

ossa STUDIO

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

SEAL 31600
GREGORY W. WILEY
05/03/24

PROJECT TEAM

General Contractor
ECCLESIA CONSTRUCTION
www.ecclesiaconstruction.com
803.327.5670

ENGITECTURE
CONSULTING ENGINEERS
ENGITECTURE, PLLC
NC License No. P-1625

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

△	Date	Description
	12/15/2023	DESIGN DEVELOPMENT DWGS.
	12/22/2023	DESIGN DEVELOPMENT DWGS.
	01/24/2024	REVIEW DWGS.
	01/30/2024	ISSUED FOR CONSTRUCTION.
1	04/24/2024	PERMIT REVISION
2	05/03/2024	ARCHITECTURAL REVISION 1

Project Name

3D community church
making church come *alive*
658 GRAHAM ROAD
SANFORD NC 27311

Client
3D COMMUNITY CHURCH

Project Number
23024.00

Description
FLOOR PLAN - SYSTEMS

Scale
SEE PLANS

E03.01