



REVISIONS:

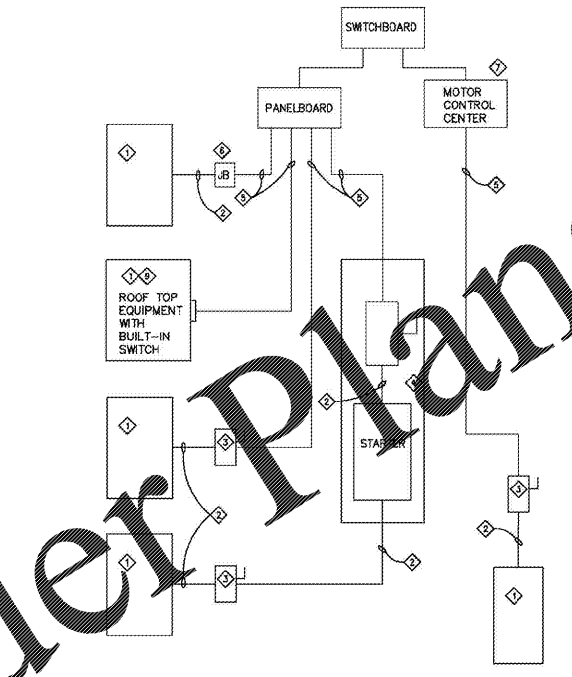
No.	Description	Date

PROJECT: 2020-169779
 DATE: 12/18
 DRAWN BY: SWB
 CHECKED BY: MPA

SYMBOLS AND SCHEDULES
E-100

GENERAL SYMBOLS		SYMBOL SCHEDULE	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
---	CONDUIT RUN CONCEALED ABOVE CEILINGS OR IN WALLS.	⊕	DUPLEX RECEPTACLE, 125V, 3-WIRE GROUNDING TYPE.
---	CONDUIT RUN CONCEALED IN OR BELOW FLOORS OR UNDERGROUND.	⊕C	DUPLEX RECEPTACLE, 125V, GROUND FAULT CIRCUIT INTERRUPTING, 3-WIRE GROUNDING TYPE. LOCATE WITHIN OR BEHIND AN ELECTRIC WATER COOLER. COORDINATE WITH PLUMBER FOR EXACT LOCATION.
---	CONDUIT RUN EXPOSED.	⊕G	DUPLEX RECEPTACLE, GROUND FAULT CIRCUIT INTERRUPTING.
⊕	SQUARE ON CONDUIT SYMBOL INDICATES THAT CIRCUIT CONTINUES BUT NOT SWITCHED.	⊕GFCI	DUPLEX GFCI RECEPTACLE. PROVIDE WITH OPERABLE, IN-USE WEATHERPROOF COVER.
→	HOMERUN TO PANEL AND CIRCUIT(S) DESIGNATED. ARROW(S) INDICATE QUANTITY OF CIRCUITS.	⊕C	DUPLEX RECEPTACLE, 125V, 3-WIRE GROUNDING TYPE. CEILING MOUNTED.
⊕	JUNCTION BOX PER N.E.C.	⊕G	TWO DUPLEX RECEPTACLES, 125V, 3-WIRE GROUNDING TYPE, IN A TWO-GANG BOX WITH TWO-GANG FACEPLATE.
⊕	SPECIAL NOTE, NUMERALS IDENTIFY, SEE SCHEDULE.	⊕G	SPECIAL PURPOSE RECEPTACLE, WITH SPECIAL NEMA CONFIGURATION AS NOTED.
⊕	SPECIAL CONNECTION TO A SPECIFIC ITEM OF EQUIPMENT. SEE CONNECTION SCHEDULE.	⊕G	HEAVY-WALL METAL CONDUIT STUB-UP FROM FLOOR, AT HEIGHT INDICATED, WITH CAST FS-TYPE BOX AND WIRING DEVICE AS INDICATED.
LIGHTING		⊕G	WALL OUTLET FOR TELECOMMUNICATIONS. SEE SPECIFICATIONS AND/OR DRAWINGS FOR CONDUIT AND CABLING REQUIREMENTS.
⊕	LED OR FLUORESCENT LIGHTING FIXTURE, DRAWN TO SCALE.	⊕G	DOT ABOVE OUTLETS INDICATES THAT THE DEVICE IS TO BE INSTALLED ABOVE CASEWORK OR OTHER OBSTACLE. COORDINATE.
⊕	LED OR FLUORESCENT LIGHTING FIXTURE, CONNECTED TO AN EMERGENCY CIRCUIT (SWITCHED).	S	LIGHT SWITCH, SINGLE-POLE.
⊕	LED OR FLUORESCENT LIGHTING FIXTURE, UTILIZED AS A NIGHT-LIGHT. CONNECT TO THE UNSWITCHED LEG OF THE CIRCUIT.	S3	LIGHT SWITCH, 3-WAY.
⊕	LED OR FLUORESCENT LIGHTING FIXTURE, CONNECTED TO AN EMERGENCY CIRCUIT, CONNECT TO THE UNSWITCHED LEG OF THE CIRCUIT.	S4	LIGHT SWITCH, 4-WAY.
⊕	BARE LED OR FLUORESCENT STRIP FIXTURE.	S1	PROGRAMMABLE LIGHT SWITCH, WALL MOUNTED.
⊕	BARE LED OR FLUORESCENT STRIP FIXTURE CONNECTED TO AN EMERGENCY CIRCUIT. CONNECT TO THE UNSWITCHED LEG OF THE CIRCUIT.	S0	DIMMER LIGHT SWITCH.
⊕	COMPACT FLUORESCENT, LED OR HID LIGHTING FIXTURE, CEILING MOUNTED.	⊕G	FLOOR BOX WITH DUPLEX RECEPTACLE.
⊕	COMPACT FLUORESCENT, LED OR HID LIGHTING FIXTURE, CONNECTED TO AN EMERGENCY CIRCUIT OR EMERGENCY BALLAST.	⊕G	FLOOR BOX FOR TELECOMMUNICATIONS.
⊕	COMPACT FLUORESCENT, LED OR HID LIGHTING FIXTURE, WALL MOUNTED.	⊕G	WHERE MULTIPLE FLOOR BOXES ARE SHOWN, USE APPROPRIATE MULTI-COMPARTMENT BOX.
⊕	COMPACT FLUORESCENT, LED OR HID LIGHTING FIXTURE, WALL MOUNTED. CONNECTED TO AN EMERGENCY CIRCUIT OR EMERGENCY BALLAST.	⊕G	WIRELESS ACCESS POINT.
⊕	EXIT SIGN, CEILING MOUNTED. SHADING INDICATES FACE ORIENTATION. PROVIDE ARROWS AS SHOWN ON PLAN BESIDE SYMBOL.	⊕G	OCCUPANCY SENSOR, CEILING MOUNTED. PROVIDE WITH 10 FEET WHP TO ALLOW FIELD ADJUSTMENT OF LOCATION. COORDINATE EXACT LOCATION WITH MANUFACTURERS RECOMMENDATION.
⊕	EXIT SIGN, WALL MOUNTED. SHADING INDICATES FACE ORIENTATION. CONNECT TO THE UNSWITCHED LEG OF THE CIRCUIT.	FIRE ALARM SYSTEM	
⊕	PHOTOCELL CONTROL DEVICE. MOUNT ON ROOF FACING NORTH.	FAC	FIRE ALARM SYSTEM CONTROL PANEL.
DISTRIBUTION		FAC	FIRE ALARM SYSTEM REMOTE ANNUNCIATOR.
⊕	ELECTRICAL PANELBOARD, FLUSH MOUNTED.	FAC	FIRE ALARM SYSTEM MANUAL 'PULL' STATION.
⊕	ELECTRICAL PANELBOARD, SURFACE MOUNTED.	FAC	FIRE ALARM SYSTEM CEILING MOUNTED PHOTOELECTRIC TYPE SMOKE DETECTOR.
⊕	CONTROL CABINET, FLUSH OR SURFACE MOUNTED.	FAC	FIRE ALARM SYSTEM DUCT MOUNTED PHOTOELECTRIC TYPE SMOKE DETECTOR.
⊕	MOTOR STARTER	FAC	FIRE ALARM SYSTEM FIXED-TEMPERATURE THERMAL DETECTOR.
⊕	DISCONNECT SWITCH, NON-FUSIBLE.	FAC	FIRE ALARM SYSTEM CONNECTION TO HOOD FIRE PROTECTION SYSTEM.
⊕	DISCONNECT SWITCH, FUSIBLE.	FAC	FIRE ALARM SYSTEM COMBINATION AUDIBLE/VISUAL NOTIFICATION APPLIANCE DEVICE. PROVIDE SYNCHRONIZED STROBES WHERE 2 OR MORE STROBES ARE LOCATED IN ONE ROOM OR VISIBLE FROM ONE LOCATION.
⊕	DISCONNECT SWITCH PROVIDED WITH EQUIPMENT.	FAC	FIRE ALARM SYSTEM VISUAL ONLY NOTIFICATION APPLIANCE DEVICE. PROVIDE SYNCHRONIZED STROBES WHERE 2 OR MORE STROBES ARE LOCATED IN ONE ROOM OR VISIBLE FROM ONE LOCATION.
⊕	GROUND CONNECTION.	FAC	FIRE ALARM SYSTEM MAGNETIC DOOR HOLD DEVICE AND ASSOCIATED OUTPUT MODULE.
⊕	COMBINATION MOTOR STARTER AND NON-FUSIBLE DISCONNECT SWITCH.	FAC	EXTERIOR FIRE ALARM SYSTEM COMBINATION WEATHERPROOF AUDIBLE/HIGH-POWER VISUAL NOTIFICATION APPLIANCE DEVICE. PROVIDE SYNCHRONIZED STROBES WHERE 2 OR MORE STROBES ARE VISIBLE FROM ONE LOCATION.
⊕	COMBINATION MOTOR STARTER AND FUSIBLE DISCONNECT SWITCH.	FAC	PROVIDE FIRE ALARM SYSTEM OUTPUT MODULE AND 120V CONNECTION TO COMBINATION FIRE SMOKE DAMPER. SMOKE DAMPER PROVIDED BY HVAC CONTRACTOR.
⊕	COMBINATION MOTOR STARTER AND CIRCUIT BREAKER.	FAC	PROVIDE FIRE ALARM SYSTEM OUTPUT MODULE AND 120V CONNECTION TO SMOKE DAMPER. SMOKE DAMPER PROVIDED BY HVAC CONTRACTOR.
⊕	DRY-TYPE TRANSFORMER, 480-120/208V 3-PHASE OR 208-120/208V 3-PHASE.	FAC	REMOTE ALARM INDICATOR. (TO BE USED WITH DUCT DETECTOR)

LIGHTING FIXTURE SCHEDULE														
TYPE	DESCRIPTION	VOLT.	QTY	TYPE	LAMPS			BALLASTS	WATTS	MOUNTING	MANUF. CATALOG NO.			
					BULB	BASE	TEMP							
A2	2'x4' LED TROFFER, GRID TYPE FOR LAY-IN CEILING, 0.125" ACRYLIC PRISMATIC DIFFUSER, FLAT STEEL DOOR FRAME, WHITE FINISH.	277	1	LED	---	---	3500 K	---	3000	1	LED DRIVER	25	CEILING, RECESSED	LITHONIA #21LED OR APPROVED EQUAL
A3	2'x4' LED TROFFER, GRID TYPE FOR LAY-IN CEILING, 0.125" ACRYLIC PRISMATIC DIFFUSER, FLAT STEEL DOOR FRAME, WHITE FINISH.	277	1	LED	---	---	3500 K	---	4800	1	LED DRIVER	40	CEILING, RECESSED	LITHONIA #21LED OR APPROVED EQUAL
A4	2'x4' LED TROFFER, GRID TYPE FOR LAY-IN CEILING, 0.125" ACRYLIC PRISMATIC DIFFUSER, FLAT STEEL DOOR FRAME, WHITE FINISH.	277	1	LED	---	---	3500 K	---	7200	1	LED DRIVER	67	CEILING, RECESSED	LITHONIA #21LED OR APPROVED EQUAL
B5	LED STRIP LIGHT, LOW PROFILE STRIP CHANNEL, DIFFUSE LENS, 4 FOOT NOMINAL LENGTH, COLD ROLLED STEEL HOUSING, HIGH GLOSS BAKED WHITE ENAMEL FINISH.	277	1	LED	---	---	3500 K	---	3000	1	LED DRIVER	41	CEILING, SURFACE	LITHONIA #212H OR APPROVED EQUAL
CV	LED STRIP LIGHT, LOW PROFILE STRIP CHANNEL, 4 FOOT NOMINAL LENGTH, 30 DEGREE DISTRIBUTION, UL LISTED FOR WET LOCATIONS.	277	1	LED	---	---	4000 K	---	2512	1	LED DRIVER	50	CEILING, RECESSED	MINORA #S211W OR APPROVED EQUAL
P1	LED PENDANT LIGHT, 4' LONG, 3.5" SQUARE CROSS SECTION, EXTRUDED ALUMINUM HOUSING, ACRYLIC LENS, FINISH AS SELECTED BY ARCHITECT.	277	1	LED	---	---	3500 K	---	---	1	LED DRIVER	20	PENDANT TO CEILING	PEERLESS #80MS OR APPROVED EQUAL
WL	DECORATIVE EXTERIOR WALL MOUNTED LED FIXTURE, TRAPEZOID SHAPE DIE-CAST, ALUMINUM HOUSING, ACRYLIC LENS, TWO LIGHT ENGINES (10 LED'S EACH), ELECTRONIC DRIVERS, WIDE DISTRIBUTION (SR2), UL LISTED FOR WET LOCATION. FINISH AS SELECTED BY ARCHITECT.	277	1	LED	---	---	4000 K	---	3844	---	LED DRIVER	47	WALL SURFACE MTC HT AS DIRECTED BY ARCHITECT	LITHONIA #WST LED SERIES OR APPROVED EQUAL
⊕	EXIT SIGN, WHITE METAL HOUSING, UNIVERSAL MOUNTING, RED STENCIL FACE, QUANTITY OF FACES INDICATED BY SHADING ON SYMBOL, DIRECTIONAL ARROWS AS INDICATED, WITH SELF-CONTAINED BATTERY RESERVE, CONNECT FIXTURE AHEAD OF ALL LOCAL AREA SWITCHING, FIXTURE SHALL NOT BE SWITCHED.	277	---	---	---	---	---	---	---	---	---	5	WALL OR CEILING AS INDICATED BY SYMBOL	LITHONIA #LE SURE-LITES #CX7 HIGH-LITES #Z02L EXTRONIX #400U LIGHTALARMS #ALD/#LED SERIES



NOTES:

- ⊕ EQUIPMENT BY TRADES OTHER THAN MECHANICAL IS SHOWN DASHED.
- ⊕ CONDUIT AND WIRING BY PLUMBING CONTRACTOR, OR OTHER TRADES.
- ⊕ AN ADDITIONAL DISCONNECT IS REQUIRED BY NEC, IT SHALL BE PROVIDED AND INSTALLED BY THE EQUIPMENT CONTRACTOR.
- ⊕ A COMBINATION STARTER OR VFD MAY BE USED IN LIEU OF A SEPARATE DISCONNECT SWITCH AND STARTER LOCATED ADJACENT TO EQUIPMENT.
- ⊕ FEEDER CIRCUIT WIRING AND CONDUIT IN ELECTRICAL WORK. SEE PANELBOARD SCHEDULES FOR WIRE AND BREAKER SIZES.
- ⊕ JUNCTION BOX MAY BE SHOWN ON ELECTRICAL PLANS FOR SOME EQUIPMENT. IF NO STARTER OR DISCONNECT IS SUPPLIED, A JUNCTION BOX SHALL BE INSTALLED ADJACENT TO EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL PROVIDE LINE SIDE WIRING TO THE JUNCTION BOX. LOAD SIDE WIRING WILL BE PROVIDED BY MECHANICAL CONTRACTOR OR OTHER TRADES.
- ⊕ PROJECTS UTILIZING AN MCC, THE STARTER, CB, OR VFD IN THE MCC ARE PROVIDED BY THE ELECTRICAL CONTRACTOR.
- ⊕ IN ALL CASES THE EQUIPMENT CONTRACTOR SHALL MAKE FINAL CONNECTIONS, START UP, AND TEST EQUIPMENT.
- ⊕ IF THE ROOF TOP EQUIPMENT IS NOT PROVIDED WITH BUILT IN SWITCH, THE ELECTRICAL CONTRACTOR SHALL PROVIDE A DISCONNECT SWITCH.

ABBREVIATIONS

A	AMPERES	KW	KILOWATTS
ACC	ARMORED CLAD CABLE	LPMC	LIQUIDTIGHT FLEXIBLE NON-METALLIC CONDUIT
AFF	ABOVE FINISHED FLOOR	LVMC	LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT
AFG	ABOVE FINISHED GRADE	LVC	LOW VOLTAGE CONTROL CABINET
ANK	FIRE ALARM ANNUNCIATOR CABINET	MCB	MAIN CIRCUIT BREAKER
C	CONDUIT	MCC	METAL CLAD CABLE
CB	CIRCUIT BREAKER	MLO	MAIN LUGS ONLY MOUNTED
CKT	CIRCUIT	MTD	MOUNTED
CLS	CEILING	NMC	NON-METALLIC CLAD CABLE
DN	DOWN	PB	PULL BOX
DW	DISHWASHER	PIL	PANELBOARD
EC	EMPTY CONDUIT	PRS	PROGRAM RAMP START
EMT	ELECTRICAL METALLIC TUBING	PS	PROGRAM START
ENT	ELECTRICAL NON-METALLIC TUBING	PRR	POWER RECEPTACLE
EMC	ELECTRIC WATER COOLER	REC	RECEPTACLE
FAC ¹	FIRE ALARM CONTROL PANEL	RMC	RIGID METAL CONDUIT
FMC	FLEXIBLE METAL CONDUIT	RSD	RAMP START
G	GROUND	SS	FIRE ALARM PULL STATION
GFI	GROUND FAULT INTERRUPTER	SW	SWITCH
HCA	HAND OFF AUTOMATIC	SWBD	SWITCHBOARD
HP	HORSEPOWER	TB	TELEPHONE TERMINAL BOARD
HPF	HIGH POWER FACTOR	TEL	TELEPHONE
HX	HIGH REACTANCE	TV	TELEVISION
IG	ISOLATED GROUND	TYP	TYPICAL
IMC	INTERMEDIATE METAL CONDUIT	V	VOLTS
IS	INSTANT START	VP	VAPOR PROOF
JB	JUNCTION BOX	W	WALL MOUNTED
KVA	KILOVOLT-AMPERES	WG	WIRE GUARD
FN	FUSE PER NAMEPLATE	WP	WEATHER PROOF TRANSFORMER

MOUNTING HEIGHTS
 (DISTANCE FROM FINISHED FLOOR TO CENTER OF DEVICE UNLESS OTHERWISE NOTED)

RECEPTACLE	GENERAL	18" AFF. (UNLESS OTHERWISE NOTED)
ABOVE COUNTER TOP	GENERAL	48" AFF. (UNLESS OTHERWISE NOTED)
LIGHT SWITCH	GENERAL	48" AFF. (UNLESS OTHERWISE NOTED)
TELECOMMUNICATIONS	GENERAL	18" AFF. (UNLESS OTHERWISE NOTED)
ABOVE COUNTER TOP	GENERAL	48" AFF. (UNLESS OTHERWISE NOTED)
WALL	GENERAL	48" AFF. (UNLESS OTHERWISE NOTED)
TELEVISION	GENERAL	18" AFF. (UNLESS OTHERWISE NOTED)
FIRE ALARM	GENERAL	48" AFF. (UNLESS OTHERWISE NOTED)
PULL STATION	GENERAL	80" AFF. (UNLESS OTHERWISE NOTED)
AUDIBLE/STROBE COMBINATION OR STROBE DEVICE ONLY	GENERAL	80" AFF. (UNLESS OTHERWISE NOTED)

ELECTRICAL SYSTEM AND EQUIPMENT (2012 NC ENERGY CODE)

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

Lighting schedule
 Lamp type required in fixture: REFER TO LIGHTING FIXTURE SCHEDULE
 Number of lamps in fixture: REFER TO LIGHTING FIXTURE SCHEDULE
 Ballast type used in fixture: REFER TO LIGHTING FIXTURE SCHEDULE
 Number of ballasts in fixture: REFER TO LIGHTING FIXTURE SCHEDULE
 Total interior wattage per fixture: REFER TO LIGHTING FIXTURE SCHEDULE
 Total interior wattage specified vs allowed: AS SHOWN SPECIFIED / 10,500W ALLOWED
 Lowest source efficacy for all exterior lamps: 83.9 LUMENS/WATT

Additional Prescriptive Compliance

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

DESIGNER STATEMENT:
 To the best of my knowledge and belief, the design of this building complies with the electrical system and equipment requirements of the North Carolina State Building Code, NC 2012 Energy Code.

SIGNED: Mark P. Arrington
 NAME: MARK P. ARRINGTON
 TITLE: ELECTRICAL ENGINEER