

ELECTRICAL NOTES AND SPECIFICATIONS:

- 1. DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. DRAWINGS ARE NOT TO BE SCALED. THE DRAWINGS AND DETAILS WILL BE EXAMINED FOR EXACT LOCATION OF FIXTURES AND EQUIPMENT. ANYTHING MENTIONED IN THE SPECIFICATION AND NOT SHOWN ON THE DRAWINGS, OR SHOWN ON THE DRAWINGS BUT NOT IN THE SPECIFICATIONS WILL BE INTERPRETED AS BEING IN BOTH. CONFLICTS WILL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER OR ENGINEER BEFORE PROCEEDING WITH THE WORK.
2. THE ELECTRICAL CONTRACTOR TO FURNISH ALL EQUIPMENT, MATERIAL, LABOR, ETC. NECESSARY TO PROVIDE A COMPLETE, WORKABLE AND CODE APPROVED ELECTRICAL POWER DISTRIBUTION SYSTEM. ALL WORK TO BE DONE IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS, LOCAL, STATE AND NATIONAL CODES.
3. THE ELECTRICAL CONTRACTOR WILL GIVE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS AND PAY ALL GOVERNMENT FEES, SALES TAXES AND OTHER COSTS IN CONNECTION WITH HIS WORK. FILE ALL NECESSARY APPROVALS OF ALL GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION, OBTAIN ALL REQUIRED CERTIFICATES OF INSPECTION FOR HIS WORK, AND DELIVER TO THE GENERAL CONTRACTOR THE SAME CERTIFICATES BEFORE REQUEST FOR ACCEPTANCE AND FINAL PAYMENT FOR THE WORK.
4. THE ELECTRICAL CONTRACTOR (E.C.) WILL GIVE FULL COOPERATION TO OTHER TRADES AND WILL FURNISH IN WRITING TO THE GENERAL CONTRACTOR, ANY INFORMATION NECESSARY TO PERMIT THE WORK OF ALL TRADES TO BE INSTALLED SATISFACTORILY AND WITH THE LEAST POSSIBLE INTERFERENCE OR DELAY. THE E.C. MUST COORDINATE ALL CONDUIT RUNS AND EQUIPMENT MOUNTING LOCATIONS WITH OTHER TRADES PRIOR TO ROUGH-IN.
5. THE ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ALL ELECTRICAL DEVICES AS SHOWN, VERIFYING ALL MOUNTING HEIGHTS AND EXACT LOCATIONS OF ALL WALL-MOUNTED ELECTRICAL DEVICES WITH GENERAL CONTRACTOR PRIOR TO ROUGH-IN. IN THE EVENT OF A CODE CONFLICT, THE CONTRACTOR WILL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO COMMENCING THE WORK.
6. ALL SPARE CONDUITS TO BE INSTALLED FOR FUTURE USE WILL BE CAPPED WITH PULL WIRE INSTALLED. UNDERGROUND SPARE CONDUITS WILL BE STUBBED UP 12" A.F.F. WHERE INDICATED AND CAPPED WITH PULL WIRE. ALL CAPPED CONDUIT WILL BE LABELED WITH ITS PURPOSE.
7. THE ELECTRICAL CONTRACTOR WILL PROVIDE A COMPLETE GROUNDING SYSTEM PER APPLICABLE SECTIONS OF THE N.E.C. AND SERVICING ENTRANCE GROUND TO BUILDING STEEL, METAL WATER MAINS, MADE ELECTRODES, ETC. AS NECESSARY.
8. ALL ELECTRICAL DISTRIBUTION EQUIPMENT TO HAVE ONLY COPPER BUSING. ALL EXTERIOR ELECTRICAL EQUIPMENT TO BE RAIN-PROOF TYPE NEMA 3R. ALL DISCONNECTS TO BE GENERAL DUTY TYPE. ALL EXTERIOR DISCONNECTS TO BE RAIN-PROOF TYPE NEMA 3R. ALL CIRCUIT BREAKERS TO BE 30A MINIMUM OR AS SHOWN ON THE PANEL SCHEDULES.
9. ALL DISCONNECTS SHALL BE HEAVY DUTY TYPE AND INSTALLED AS REQUIRED FOR CONDENSING AND AIR HANDLING UNITS, EXHAUST FANS, KITCHEN EQUIPMENT, WATER HEATERS, ETC. SUPPLIED BY MECHANICAL, PLUMBING AND FOOD SERVICE CONTRACTOR(S), SUPPLY AND INSTALL ALL REQUIRED CONDUIT AND DEVICE BOXES FOR HVAC TEMPERATURE CONTROLS.
10. ELECTRICAL CONTRACTOR TO SUPPLY ALL REQUIRED DISCONNECTS AND WIRE ALL EXHAUST FANS, AIR HANDLING UNITS, CONDENSING UNITS, SMOKE DAMPERS, ETC. PROVIDED BY THE MECHANICAL. E.C. WILL VERIFY NAMEPLATE RATINGS OF ALL MECHANICAL EQUIPMENT PRIOR TO ROUGH-IN. E.C. TO PROVIDE DISCONNECTS AND CIRCUIT BREAKERS PER NAMEPLATE RATING. THE E.C. SHALL PROVIDE ALL HARDWARE CONTROLS, RELAYS, LOW VOLTAGE TRANSFORMER POWER SUPPLIES, & ENCLOSURES) FOR THE PROPER OPERATION OF MECH. UNITS, EXHAUST FANS & SMOKE DAMPERS PER THE "SEQUENCE OF OPERATIONS" AS DETALLED ON THE MECHANICAL PLANS. E.C. WILL NOTIFY THE ARCHITECT/ENGINEER OF ANY CHANGES REQUIRED TO CIRCUITING PRIOR TO COMMENCING THE WORK.
11. ALL INTERIOR POWER/LIGHTING CIRCUITS TO BE #12, 1-F12 G. IN MINIMUM 1/2" C. W/MAXIMUM 30% FILL, UNLESS SHOWN OTHERWISE ON THE PLANS. INTERIOR HOME RUNS TO BE A MINIMUM OF 3/4" C. W/MAXIMUM 40% FILL. ALL EXTERIOR LIGHTING CIRCUITS TO BE A MINIMUM OF 2-1/2 W/10G TO THE FIRST JUNCTION BOX OR LIGHT FIXTURE AND 2-1/2 W/10G TO THE REMAINING FIXTURES OR AS INDICATED ON PLANS. ALL UNDERGROUND CONDUIT TO BE A MINIMUM OF 1" TYPE MC CABLE HAVING STRANDED COPPER CONDUCTORS SHALL BE ACCEPTABLE FOR BRANCH CIRCUITS IN CONDITIONED SPACES ONLY. ALL FEEDER CONDUCTORS SHALL BE COPPER WITH TYPE THHN INSULATION. TYPE XHHW-2 OR THWN-2 SHALL BE USED FOR CONDUCTORS INSTALLED IN WET AND DAMP LOCATIONS. SPECIFIC EQUIPMENT CIRCUITS (HVAC, PUMPS, WATER HEATERS, ETC.) SHALL BE AS REQUIRED PER NAMEPLATE RATINGS(S).
12. THE ELECTRICAL CONTRACTOR SHALL PROPERLY AND PERMANENTLY IDENTIFY ALL BOXES, ENCLOSURES, ETC. FOR EMERGENCY CIRCUITS IN ACCORDANCE WITH NEC 700.10. LABEL ALL PANEL CIRCUITS TO IDENTIFY UNIT EQUIPMENT CONNECTED IN ACCORDANCE WITH NEC 700.12 (F).
13. ELECTRICAL CONTRACTOR WILL CONTACT LOCAL ELECTRICAL UTILITY AND COORDINATE EXACT LOCATION OF ELECTRICAL SERVICE SOURCE. THE CONTRACTOR SHALL COORDINATE SHORT CIRCUIT RATINGS (A.I.C.) WITH UTILITY PRIOR TO BID AND PROVIDE THE APPROPRIATE SHORT CIRCUIT RATINGS FOR ALL ELECTRICAL EQUIPMENT. COORDINATE USE OF HAND HOLE / UTILITY POLE / PAD MOUNT TRANSFORMER PRIOR TO BID AND/OR ROUGH-IN.
14. MINOR DETAILS, NOT USUALLY SHOWN OR SPECIFIED, BUT NECESSARY FOR PROPER OPERATION AND CONSISTENT WITH GOOD WORKMANSHIP, WILL BE INCLUDED IN THE ESTIMATE, THE SAME AS IF SHOWN ON DRAWINGS.
15. PROVIDE CONDUIT STUBS, BACK BOXES AND PULL STRINGS ETC. FOR ALL LOW VOLTAGE SYSTEMS PROVIDED BY OTHERS TO DEVICES LOCATED IN ALL SPACES. PROVIDE SEPARATE PERMITS FOR ALL LOW VOLTAGE SYSTEMS.
16. ALL MATERIALS FURNISHED AND ALL WORK INSTALLED UNDER THIS SECTION SHALL COMPLY WITH THE FOLLOWING:
- LIFE SAFETY CODE NFPA 101-2015
- APPLICABLE NFPA FIRE CODES
- APPLICABLE STATE AND LOCAL CODES
- NATIONAL BUREAU OF FIRE UNDERWRITERS
- ACCESSIBILITY FOR THE HANDICAPPED ANS. A117
- AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES
- FLORIDA DEPARTMENT OF COMMUNITY AFFAIRS ACCESSIBILITY REQUIREMENTS MANUAL
- NATIONAL ELECTRICAL CODE NFPA 70-2014
- THE SERVING UTILITY COMPANIES
- FLORIDA BUILDING CODE 2017, SIXTH EDITION
- FLORIDA BUILDING CODE - ENERGY CONSERVATION 2017
- FLORIDA BUILDING CODE - MECHANICAL 2017
- FLORIDA BUILDING CODE - PLUMBING 2017
17. ALL ELECTRICAL SYSTEM COMPONENTS AND INSTALLATIONS SHALL BE WARRANTED TO BE FREE OF DEFECTS (MATERIALS AND LABOR) FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM RECEIPT OF CERTIFICATE OF OCCUPANCY. THE CONTRACTOR SHALL PROVIDE FOR OWNERS OPTION A MAINTENANCE CONTRACT AND/OR AN EXTENDED WARRANTY.
18. CONTRACTOR TO PROVIDE MANUFACTURER CERTIFICATION, WITH SHOP DRAWING SUBMITTALS, THAT ALL ASSEMBLY WITH SPECIFIC BRANDS AND ALL REQUIRED OPTIONS MEETS WIND LOAD REQUIREMENTS PER 2017 FLORIDA BUILDING CODE PER SECTION 1629.3. ELECTRICAL CONTRACTOR TO SUBMIT MANUFACTURER RECOMMENDED CHARGES FOR A CODE CONFORMING INSTALLATION TO OWNERS FOR APPROVAL. ADDITIONALLY, CONTRACTOR SHALL PROVIDE CERTIFICATE OF TESTING METHOD, I.E. DIRECT BURY/ANCHOR BASE MEMBERS ABOVE REQUIREMENTS. POLE MOUNTING CERTIFICATION SHALL BE SIGNED AND SEALED AND BE PROVIDED TO THE STATE OF FLORIDA.
19. ELEVATOR SHEFTED ON BY HORSEPOWER MOTOR. ELECTRICAL CONTRACTOR WILL VERIFY WIRE ELECTRICAL SIZE OF ELEVATOR PRIOR TO BID. E.C. TO PROVIDE CIRCUIT BREAKER AND PANEL SIZES RECOMMENDED BY ELEVATOR SHOP DRAWING. THE ELEVATOR CIRCUIT BREAKER WILL BE SHUNT-TRIP. E.C. WILL NOTIFY ARCHITECT/ENGINEER OF ANY SIZE CHANGES PRIOR TO COMMENCING THE WORK.
20. PROVIDE LOW VOLTAGE PROTECTION IN ACCORDANCE WITH SPECIFICATION SECTION 264114. LIGHTNING SYSTEM SHALL BE BONDED TO THE BUILDING GROUNDING PRODE SYSTEM IN ACCORDANCE WITH NEC 250.106.
ELECTRICAL CONTRACTOR TO PROVIDE AS-BUILT DOCUMENTS, OPERATION MANUALS, MAINTENANCE MANUALS TO THE OWNER WITHIN 30 DAYS OF ACCEPTANCE OF SYSTEMS AS PER FBC 405.6.4.2.

ELECTRICAL COMMISSIONING

- BUILDING COMMISSIONING GENERAL REQUIREMENTS:
THE 2017 FLORIDA BUILDING CODE "ENERGY CONSERVATION" PROVIDES THE REQUIREMENTS FOR COMMERCIAL BUILDING EFFICIENCY. THE CODE DEFINES THE ENERGY EFFICIENCY REQUIREMENTS FOR THE ELECTRICAL, POWER AND LIGHTING SYSTEM, TOTAL BUILDING PERFORMANCE, AND COMMISSIONING. THIS CODE CHAPTER REQUIRES A CERTAIN SET OF ACTIVITIES AND PROCESSES TO BE ADMINISTERED AND DOCUMENTED IN ACCORDANCE WITH DEFINED STANDARDS. THIS SPECIFICATION IS THE OWNER'S MEANS OF VERIFYING THAT THE PLANNING, DESIGN, CONSTRUCTION AND OPERATION OF ELECTRICAL SYSTEMS ACHIEVE THEIR GOALS AND DELIVER A HIGH QUALITY BUILDING WITH MAXIMUM ASSET VALUES.
COMMISSIONING OF THE BUILDING ELECTRICAL POWER AND LIGHTING SYSTEMS AS PER SECTION 408 SHALL BE AS DEFINED HEREIN. PRIOR TO PASSING THE FINAL ELECTRICAL INSPECTION, THE CONTRACTOR SHALL PROVIDE EVIDENCE OF SYSTEM COMMISSIONING AND COMPLETION IN ACCORDANCE WITH THE PROVISIONS OF THIS SECTION CERTIFYING THAT THE INSTALLED LIGHTING CONTROLS MEET THE DOCUMENTED PERFORMANCE CRITERIA OF SECTION 408.3 AND SUBMIT TO THE REGISTERED DESIGN PROFESSIONAL (ENGINEER OF RECORD) FOR APPROVAL, AND TO THE BUILDING OWNER WITHIN 90 DAYS FROM THE DATE OF RECEIPT OF THE CERTIFICATION OF OCCUPANCY.
ELECTRICAL SYSTEMS TO BE COMMISSIONED INCLUDE:
ALL AUTOMATIC CONTROLS FOR INTERIOR AND EXTERIOR LIGHTING/ELECTRICAL SYSTEMS SHALL BE SUBJECT TO THESE REQUIREMENTS.
SCOPE:
FUNCTIONAL TESTING PRIOR TO PASSING FINAL INSPECTION, THE REGISTERED DESIGN PROFESSIONAL SHALL PROVIDE EVIDENCE THAT THE LIGHTING CONTROL SYSTEMS HAVE BEEN TESTED TO ENSURE THAT CONTROL AND SOFTWARE ARE CALIBRATED, ADJUSTED, PROGRAMMED AND IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND MANUFACTURER'S INSTRUCTIONS. FUNCTIONAL TESTING SHALL BE IN ACCORDANCE WITH SECTIONS C408.3.1.1 THRU C408.3.1.3 FOR THE APPLICABLE CONTROL TYPE.
THE PROJECT GENERAL CONTRACTOR SHALL HIRE A FIRM QUALIFIED IN THE TESTING OF LIGHTING AND ELECTRICAL SYSTEM PERFORMANCE FUNCTIONALITY OF THE SYSTEMS LISTED IN THIS SPECIFICATION. THE TESTING FIRM SHALL DETERMINE THE EXTENT AND SCOPE OF THE SYSTEMS REQUIRING COMMISSIONING. NEEDED ON A PROJECT BASIS.
ALL TEST DATA SHALL BE PROVIDED TO THE REGISTERED DESIGN PROFESSIONAL FOR FINAL REVIEW AND APPROVAL PRIOR TO THE FINAL INSPECTION AND WALK THROUGH OF THE ARCHITECTURAL AND/OR ENGINEERING TEAM.
A FUNCTIONAL PERFORMANCE TEST SHALL BE CONDUCTED TO DEMONSTRATE THE INSTALLATION AND OPERATION OF COMPONENTS, SYSTEMS, AND SYSTEM-TO-SYSTEM INTERFACING RELATIONSHIPS IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS SUCH THAT OPERATION, FUNCTION, AND MAINTENANCE SERVICEABILITY FOR EACH OF THE COMMISSIONED SYSTEMS IS COMPLIANT. TESTING SHALL INCLUDE ALL MODES AND SEQUENCE OF OPERATION, INCLUDING UNDER FULL-LOAD, PART-LOAD AND THE FOLLOWING EMERGENCY CONDITION:
1. ALL MODES AS DESCRIBED IN THE SEQUENCE OF OPERATION OR MANUFACTURER'S OPERATING INSTRUCTIONS
2. PERFORMANCE OF LIGHTING OVER-RIDE
3. MODE OF OPERATION UPON A LOSS OF POWER AND RESTORATION OF POWER.
THE GENERAL CONTRACTOR SHALL:
1. INCORPORATE COMMISSIONING ACTIVITIES INTO THE CONSTRUCTION SCHEDULE.
2. FACILITATE COOPERATION OF SUB CONTRACTORS IN COMMISSIONING WORK.
3. PROVIDE SUB-CONTRACTOR ASSISTANCE IN OPERATING EQUIPMENT TO BE COMMISSIONED.
4. INSURE EQUIPMENT START-UP IS COMPLETE PRIOR TO BEGINNING THE COMMISSIONING PROCESS.
5. WORK WITH SUB-CONTRACTORS IN DEVELOPING A TRAINING SCHEDULE AND PLAN FOR APPROVAL BY THE OWNER.
6. VERIFY THE PRE-FUNCTIONAL CHECKLISTS ARE COMPLETED PRIOR TO SYSTEM TESTING.
7. VERIFY THE EQUIPMENT START-UP AND CONTROLS VERIFICATIONS ARE COMPLETE.
8. INSURE RESOLUTION OF NON-COMPLIANT AND DEFICIENT CONSTRUCTION RELATED ITEMS IDENTIFIED BY THE COMMISSIONING TEAM.
9. ASSIST IN WARRANTY REVIEW OF SYSTEM AND EQUIPMENT PERFORMANCE.
THE SUB-CONTRACTORS SHALL:
1. PREPARE OWNER TRAINING PLAN FOR INSTALLED EQUIPMENT AND CONTROLS.
2. PROVIDE NECESSARY PERSONNEL TO ASSIST THE ELECTRICAL TESTING AGENT IN HIS RESPONSIBILITIES AS DESCRIBED LATER IN THIS SPECIFICATION.
3. PREPARE AND SCHEDULE EQUIPMENT START-UP WITH THE GENERAL CONTRACTOR AND ELECTRICAL TESTING AGENT.
4. EXECUTE ALL REQUIRED EQUIPMENT AND SYSTEM TESTING AS MANDATED BY THE FLORIDA BUILDING CODE, PROJECT PLANS AND SPECIFICATIONS.
5. ENSURE INSTALLATION WORK IS COMPLETE AND IN COMPLIANCE WITH THE CONTRACT DOCUMENTS AND READY FOR FUNCTION PERFORMANCE TESTING.
6. PROVIDE CERTIFIED AND CALIBRATED INSTRUMENTATION REQUIRED FOR MEASURING FUNCTIONAL PERFORMANCE DURING THE FUNCTIONAL PERFORMANCE TESTING.
7. PREPARE CLOSEOUT DOCUMENTS INCLUDING BUT NOT LIMITED TO:
a. AS-BUILT DRAWINGS
b. WARRANTIES
c. OPERATIONAL AND MAINTENANCE MANUALS FOR INSTALLED EQUIPMENT.
d. DELIVERY OF ANY SPARE PARTS REQUIRED BY THE PROJECT SPECIFICATION.
THE CODE OFFICIAL SHALL BE PERMITTED TO RE-TEST A PORTION OF THE FINAL COMMISSIONING REPORT BE MADE AVAILABLE FOR HIS REVIEW.
CONSTRUCTION DOCUMENTS SHALL INCLUDE THE LOCATION ON EACH PIECE OF EQUIPMENT, AN OPERATION AND MAINTENANCE MANUAL. EACH SHALL BE PROVIDED AND INCLUDE ALL OF THE FOLLOWING:
1. SUBMITTAL DATA STATING EQUIPMENT SERIALS AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE.
2. MANUFACTURER'S OPERATION, MAINTENANCE AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE. THE OPERATION AND MAINTENANCE MANUALS FOR THE PROJECT SHALL BE IDENTIFIED. ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED.
A RECORD OF TEST PROCEDURES AND RESULTS IDENTIFIED AS "FINAL COMMISSIONING REPORT" SHALL BE SUBMITTED TO THE BUILDING OWNER AND SHALL INCLUDE:
1. DETERMINATION OF DEFICIENCIES FOUND DURING TESTING, INCLUDING DETAILS OF CORRECTIVE MEASURES USED OR PROPOSED.
2. FUNCTIONAL PERFORMANCE TEST PROCEDURES USED DURING THE COMMISSIONING PROCESS INCLUDING MEASURABLE CRITERIA FOR TEST ACCEPTANCE, PROVIDED HEREIN FOR REPEATABILITY.
CONTROLS FOR AUTOMATIC LIGHTING SYSTEMS SHALL COMPLY AS FOLLOWS:
1. TESTING SHALL ENSURE THAT CONTROL, HARDWARE AND SOFTWARE ARE CALIBRATED, ADJUSTED, PROGRAMMED AND IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. AN APPROVED THIRD PARTY INDEPENDENT FROM THE DESIGN OR CONSTRUCTION OF THE PROJECT SHALL BE RESPONSIBLE FOR THE FUNCTIONAL TESTING AND SHALL PROVIDE DOCUMENTATION TO THE OWNER, REGISTERED DESIGN PROFESSIONAL AND CODE OFFICIAL CERTIFYING THAT THE INSTALLED LIGHTING CONTROLS MEET THE PROVISIONS OF SECTION 408.3. WHERE OCCUPANT SENSORS, TIME SWITCHES, PROGRAMMABLE SCHEDULE CONTROLS, PHOTOSENSORS OR DAYLIGHTING CONTROLS ARE INSTALLED, THE FOLLOWING PROCEDURES SHALL BE PERFORMED:
a. CONFIRM THAT THE PLACEMENT, SENSITIVITY AND TIME-OUT ADJUSTMENTS FOR OCCUPANT SENSORS YIELD ACCEPTABLE PERFORMANCE AS PER FBC-C408.3.
b. CONFIRM THAT THE TIME SWITCHES AND PROGRAMMABLE SCHEDULE CONTROLS ARE PROGRAMMED TO TURN THE LIGHTS OFF AS PER THE OWNER SCHEDULE AND FBC-C408.3.1.2.
c. CONFIRM THAT THE PLACEMENT AND SENSITIVITY ADJUSTMENTS FOR PHOTOSENSOR CONTROLS REDUCE ELECTRICAL LIGHT BASIS ON THE AMOUNT OF USABLE DAYLIGHT IN THE SPACE AS SPECIFIED AND PER C408.3.

ELECTRICAL IDENTIFICATION NOTES

- PRODUCTS AND MATERIALS
ALL LABELS SHALL BE PERMANENT AND MACHINE-PRODUCED. HANDWRITTEN LABELS SHALL NOT BE ACCEPTABLE, UNLESS OTHERWISE INDICATED.
CONDUCTOR/CABLING LABELS: ALL CONDUCTOR/CABLING LABELS SHALL BE CONSTRUCTED OF TRANSPARENT VINYL OR VINYL CLOTH, SELF-LAMINATING TAPE. FLAG-TYPE LABELS SHALL NOT BE ACCEPTABLE. LABELS SHALL BE SIZED TO ACCOMMODATE THAT CIRCUMFERENCE OF THE CONDUCTOR/CABLE.
CONDUCTOR/CABLING IDENTIFICATION TAPE: CONDUCTOR/CABLING IDENTIFICATION TAPE SHALL BE SCOTCH #25 VINYL ELECTRICAL TAPE, COLORED IN ACCORDANCE WITH THE SYSTEM VOLTAGE AND TYPE OF CONDUCTOR.
NAMEPLATES: NAMEPLATES SHALL BE PHENOLIC, ENGRAVED TYPE. EMBOSSED TAPE SHALL NOT BE ACCEPTABLE. NORMAL SYSTEMS SHALL UTILIZE WHITE LETTERS ON A BLACK BACKGROUND. EMERGENCY SYSTEMS SHALL UTILIZE WHITE LETTERS ON A RED BACKGROUND. LEGALLY-REQUIRED STANDBY SYSTEMS SHALL UTILIZE WHITE LETTERS ON A BLUE BACKGROUND. OPTIONAL STANDBY SYSTEMS SHALL UTILIZE WHITE LETTERS ON A YELLOW BACKGROUND.
ADHESIVE LABELS: ADHESIVE LABELS SHALL NOT BE ACCEPTABLE, EXCEPT FOR THE IDENTIFICATION OF CONDUCTORS/CABLING, DEVICE FACEPLATES, AND JUNCTION BOXES SIZED 8" SQ. OR SMALLER.
GENERAL WHERE MULTIPLE SYSTEM VOLTAGES (E.G. 480/277V, 208/120V, ETC.) ARE UTILIZED IN THE SAME BUILDING, ALL DISCONNECT SWITCHES, JUNCTION BOXES, PANELBOARDS, SWITCHBOARDS, TRANSFORMERS, AND MISCELLANEOUS EQUIPMENT SHALL BE LABELED TO INDICATE THE SYSTEM VOLTAGES, IN ADDITION TO THE REQUIREMENTS LISTED BELOW.
CLEAN ALL MOUNTING SURFACES PRIOR TO AFFIXING LABELS. UTILIZE THE LABEL MANUFACTURER'S RECOMMENDED CLEANING AGENT. INSTALL LABELS NEATLY AND FIRMLY AND IN ACCORDANCE WITH THE LABEL MANUFACTURER'S RECOMMENDATIONS.
AFFIX NAMEPLATES TO EQUIPMENT UTILIZING SCREWS, RIVETS, OR OTHER MATERIALS APPROVED BY THE MANUFACTURER.
PROVIDE A PLACARD AT EACH SERVICE DISCONNECT WITH THE WORDS "SERVICE DISCONNECT." LOCATE ABOVE THE MAIN DISCONNECT SWITCH OR CIRCUIT BREAKER.
JUNCTION BOX AND PULL BOX IDENTIFICATION
JUNCTION BOXES AND PULL BOXES SHALL BE IDENTIFIED UTILIZING SPRAY-PAINTED COVERS AS FOLLOWS:
SECONDARY POWER - 480Y/277V BROWN
PRIMARY POWER - 208Y/120V, 240/120V WHITE
EMERGENCY SYSTEM - LIFE SAFETY BRANCH (NEC 700) - 480Y/277V BROWN/RED
EMERGENCY SYSTEM - LIFE SAFETY BRANCH (NEC 700) - 208Y/120V WHITE/RED
LEGALLY REQUIRED STANDBY SYSTEM (NEC 701) - 480Y/277V BROWN/BLUE
LEGALLY REQUIRED STANDBY SYSTEM (NEC 701) - 208Y/120V WHITE/BLUE
OPTIONAL STANDBY SYSTEM (NEC 702) - 480Y/277V BROWN/YELLOW
OPTIONAL STANDBY SYSTEM (NEC 702) - 208Y/120V WHITE/YELLOW
FIRE ALARM RED
TEMPERATURE CONTROL GREEN
DOOR CONTROL, AND DOOR MONITORING SYSTEM PURPLE
SOUND AND INTERCOM SYSTEMS LIGHT BLUE
VIDEO SURVEILLANCE SYSTEM/MATV DATA VIDEO SYSTEM LIGHT GREEN
BOXES AND PULL BOXES FOR THE CONDUCTORS SHALL BE LABELED WITH CIRCUIT NUMBERS AND SOURCE PANELBOARD DESIGNATION. JUNCTION BOXES AND PULL BOXES FOR OTHER SYSTEMS SHALL BE IDENTIFIED BY SOURCE WITH THE DRAWINGS FOR THE RESPECTIVE SYSTEMS.
EXPOSURE IDENTIFICATION
EXPOSURE IDENTIFICATION SHALL BE AS FOLLOWS:
1. ALL EXPOSURES SHALL BE IDENTIFIED WITH PHENOLIC, ENGRAVED CARDS. LET THE IDENTIFICATION SHALL BE A MINIMUM OF 1/2". IDENTIFY THE SYSTEM SOURCE(S) AND LOAD(S) SERVING EACH EXPOSURE.
2. EXPOSED JUNCTION BOXES 8" SQ. OR SMALLER SHALL BE IDENTIFIED WITH ADHESIVE LABELS.
3. EXPOSURES INSTALLED ABOVE AN ACCESSIBLE CEILING SHALL BE PERMITTED TO BE IDENTIFIED WITH MARKERS. LETTERING SHALL BE NEAT AND LEGIBLE.
COMMUNICATIONS CONDUIT LABELING
CONDUITS INSTALLED BETWEEN ELECTRICAL AND/OR INFORMATION TECHNOLOGY (I.T.) ROOMS SHALL BE LABELED IN ACCORDANCE WITH ANSI/TIA/EIA-606. BOTH TERMINATION POINTS OF THE CONDUIT SHALL BE IDENTIFIED.
ALL LABELS SHALL BE MACHINE-PRODUCED. HANDWRITTEN LABELS SHALL NOT BE ACCEPTABLE.
THE LABEL SHALL INDICATE THE LOCATION OF THE TERMINATION POINT OF THE CONDUIT AND A UNIQUE IDENTIFICATION NUMBER.
POWER AND LOW-VOLTAGE CONDUCTORS/CABLE IDENTIFICATION
PROVIDE CONDUCTOR/CABLE LABELS ON EACH CONDUCTOR IN PANELBOARD GUTTERS, JUNCTION BOXES, PULL BOXES, AND OUTLET BOXES AT LOAD CONNECTIONS. IDENTIFY THE BRANCH CIRCUIT OR FEEDER NUMBER FOR ALL POWER AND LIGHTING BRANCH CIRCUITS. FOR LOW-VOLTAGE SYSTEMS, INDICATE THE WIRE NUMBER IN ACCORDANCE WITH SHOP DRAWINGS.
WIRING DEVICE IDENTIFICATION
WALL SWITCHES, RECEPTACLES, OCCUPANCY SENSORS, DEVICE PLATES, BOX COVERS, POKE-THROUGH FITTINGS, ACCESS FLOOR BOXES, PHOTOCELLS, AND TIME CLOCKS SHALL BE IDENTIFIED WITH CIRCUIT NUMBERS AND IDENTIFICATION IN EXPOSED SPACES. IDENTIFICATION SHALL BE MADE INSIDE OF DEVICE COVERS. USE MACHINE-PRODUCED ADHESIVE LABELS OR PERMANENT MARKER. HANDWRITTEN LABELS SHALL BE NEAT AND LEGIBLE.
NAMEPLATES FOR ELECTRICAL EQUIPMENT
PROVIDE NAMEPLATES OF THE MINIMUM LETTER HEIGHT AS LISTED BELOW.
DISTRIBUTION PANELBOARDS, SUBPANELS, AND SWITCHBOARDS: 1 INCH NAME PLATE MIN. IDENTIFY THE SYSTEM VOLTAGE, SOURCE, AND LOCATION OF THE SOURCE. FOR 240V/3PH SYSTEMS: PROVIDE PANELBOARD IDENTIFICATION AS REQUIRED BY 2017 NEC SECTION 408.3. PANELS SHALL BE MARKED "CAUTION 3 PHASE HAS 208 VOLTS TO GROUND" WITH PHENOLIC ENGRAVED LABEL.
ENCLOSED CIRCUIT BREAKERS AND DISCONNECT SWITCHES: 1/2 INCH NAME PLATE MIN. IDENTIFY THE SOURCE CIRCUIT, LOAD SERVED, AND LOCATION.
TRANSFORMERS: 1 INCH NAME PLATE MIN. IDENTIFY PRIMARY AND SECONDARY VOLTAGES, PRIMARY SOURCE AND LOCATION, SECONDARY LOAD AND LOCATION.
PANELBOARDS/SWITCHBOARDS DISCONNECTS
SHALL BE TYPEWRITTEN AND COVERED WITH CLEAR PLASTIC WITH METAL FRAMING.
NOTES
1. ELECTRICAL CONTRACTOR SHALL VERIFY EXACT LOCATIONS & MOUNTING HEIGHTS OF ALL ELECTRICAL DEVICES WITH OWNER/ARCHITECT BEFORE ROUGH-IN. MOUNTING HEIGHTS ARE MEASURED TO CENTER OF BOX.
2. ALL RECEPTACLES & SWITCHES SHALL BE ARCH/DECORA TYPE WITH MATCHING FACE PLATES. COOR. FINAL COLOR WITH ARCH. PRIOR TO ORDERING.
3. ALL SYMBOLS AND ABBREVIATIONS DO NOT NECESSARILY APPEAR ON THIS PROJECT.
4. MANUFACTURERS SHOWN IN THIS LEGEND ARE "BASIS OF DESIGN" AND "OR EQUAL" DEVICES MAY BE SUBMITTED FOR APPROVAL.

Table with 2 columns: SYMBOL and DESCRIPTION. Contains electrical symbols for various components like switches, receptacles, and sensors, along with their descriptions and specifications.



PROJECT NAME: ROCKLEDGE FLATS - BUILDING C
1220 Baron Boulevard
Rockledge, FL 32955
SHEET TITLE: ELECTRICAL SPECIFICATIONS & LEGEND

Table with 2 columns: No. and Description, used for revision tracking.

E001

GMP PRICING SET