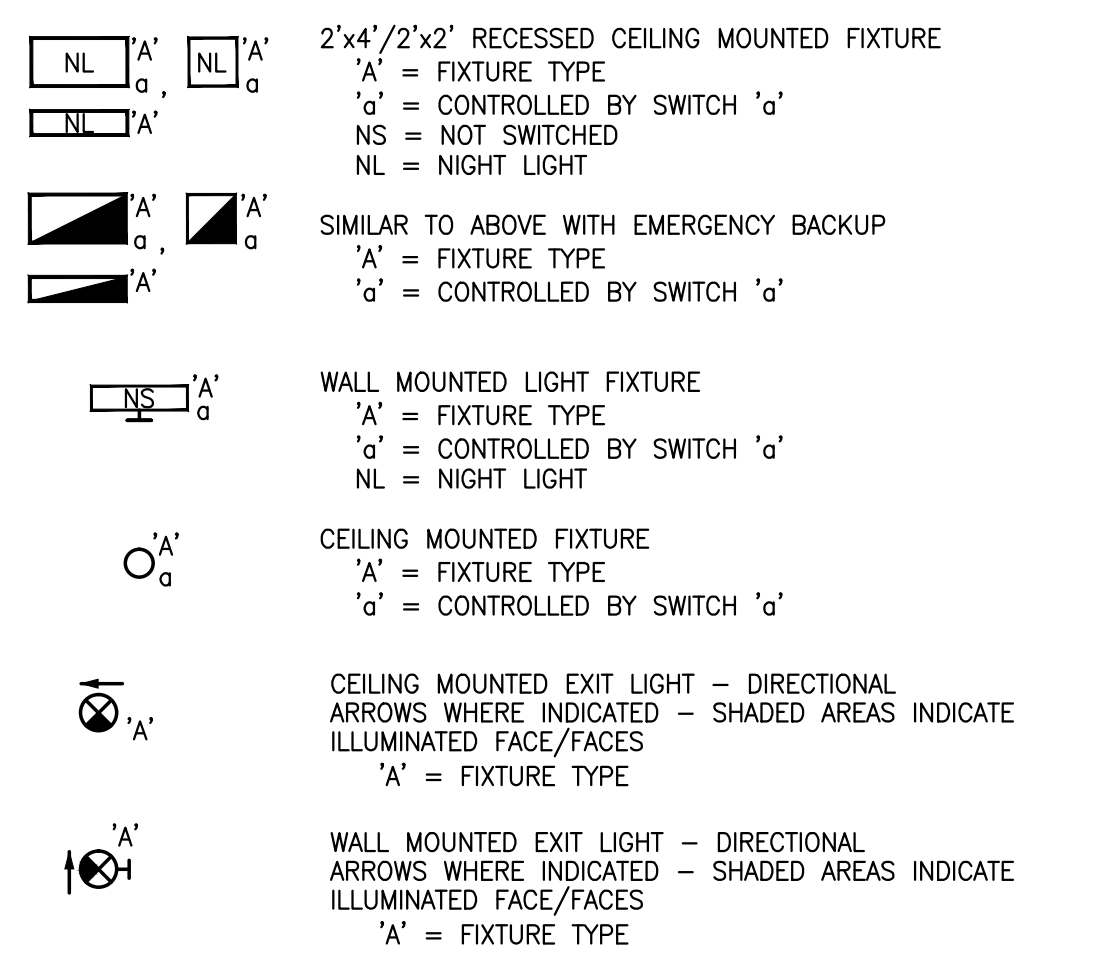
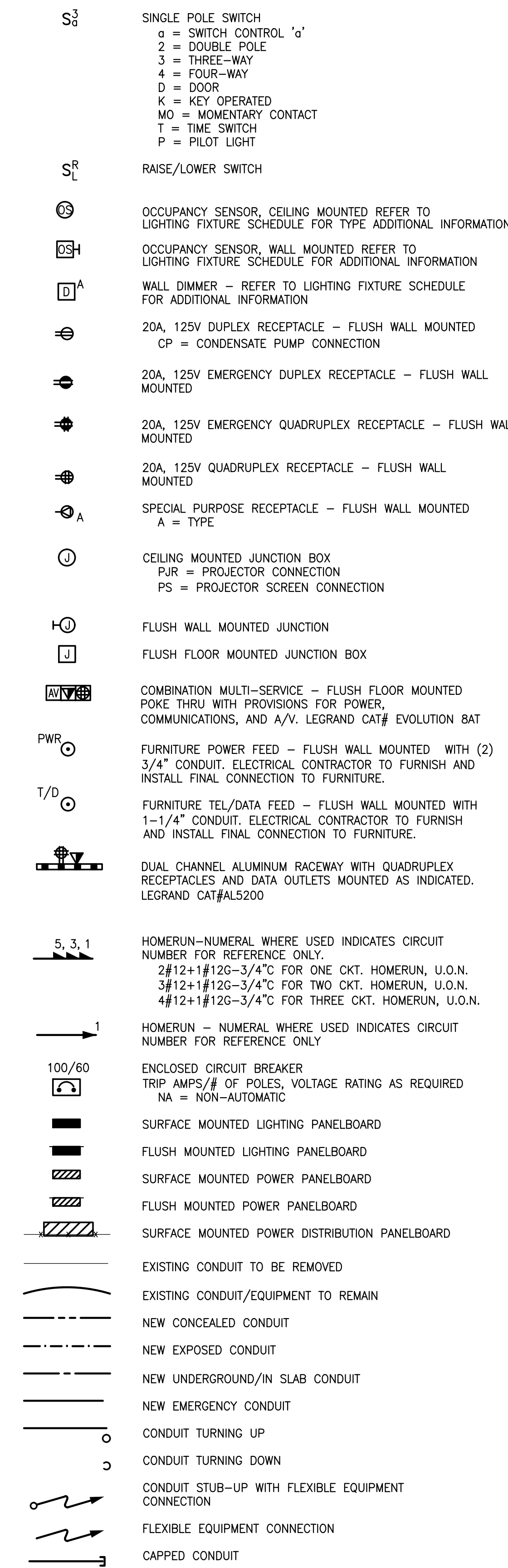


ELECTRICAL SYMBOLS LIST

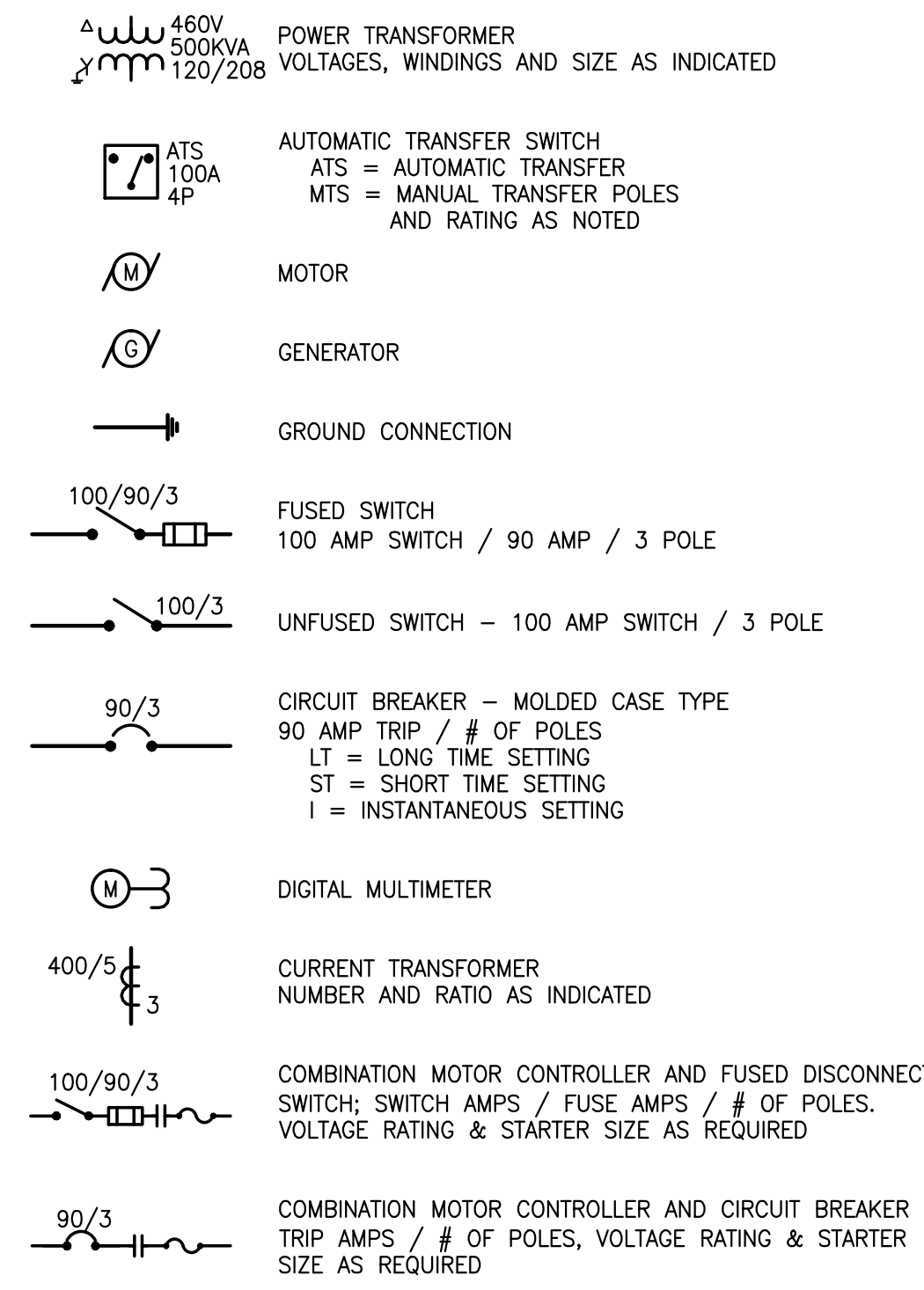
LIGHTING



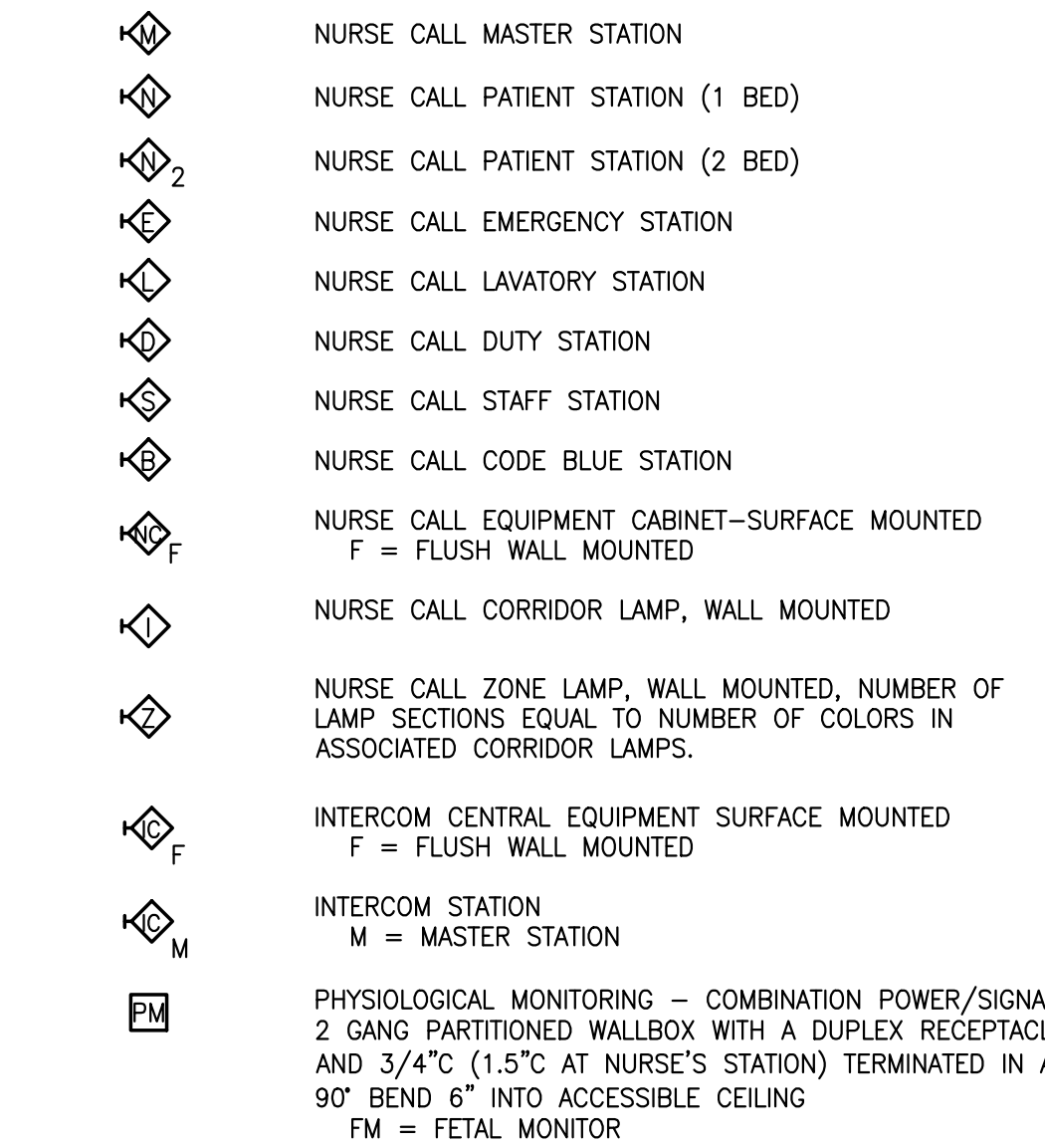
POWER



SINGLE LINE DIAGRAM



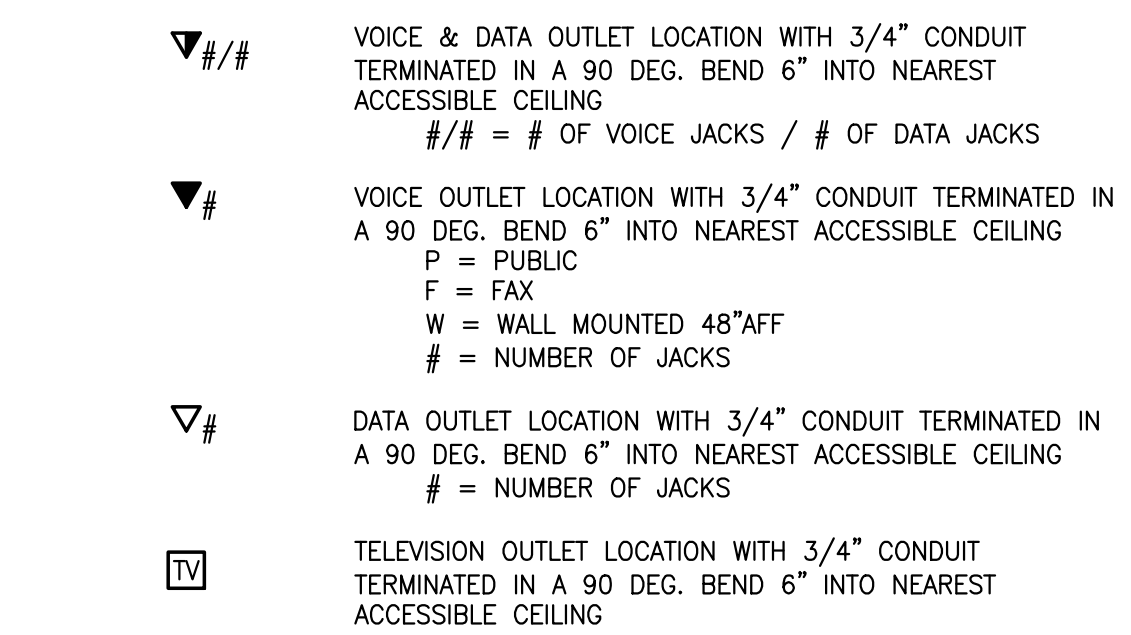
HEALTHCARE



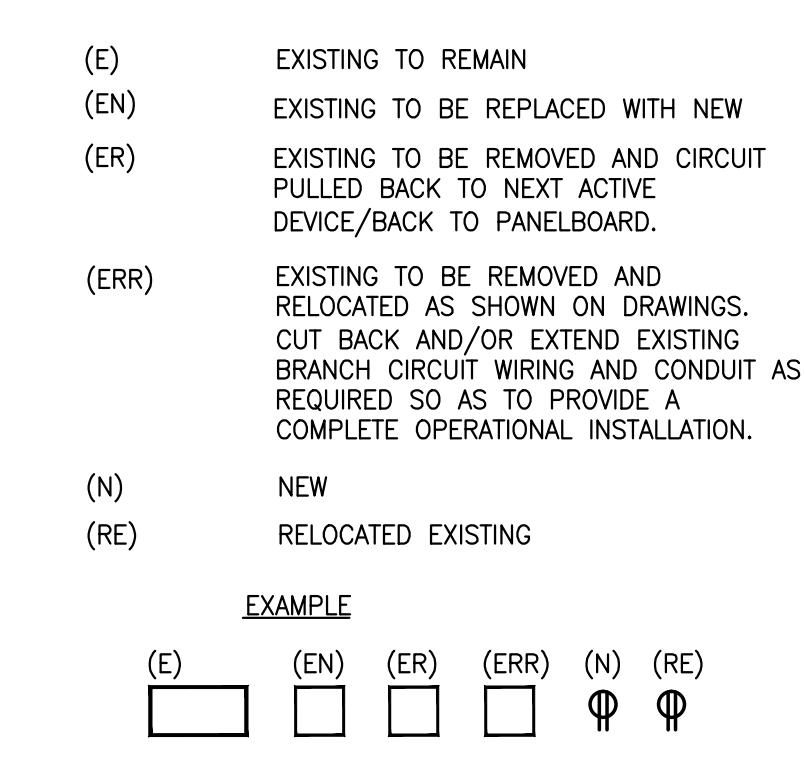
RELATED EQUIPMENT



VOICE/DATA/P.A.



DEMOLITION SYMBOLS



ABBREVIATIONS

- + SPECIAL MOUNTING HEIGHT, COORDINATE LOCATION WITH ARCHITECTURAL ELEVATIONS
- 1P SINGLE POLE
- 2P TWO POLE
- 3P THREE POLE
- A AMPERE
- AFB ABOVE FINISHED FLOOR
- AIC AMPERE INTERRUPTING CAPACITY
- ATS AUTOMATIC TRANSFER SWITCH
- AWG AMERICAN WIRE GAUGE
- BLDG BUILDING
- CAB CABINET
- C CONDUIT
- CB CIRCUIT BREAKER
- CCTV CLOSED CIRCUIT TELEVISION
- CKT CIRCUIT
- CLG CEILING
- CTL CONTROL
- CONN CONNECTED
- CONT CONTINUATION
- CU COPPER
- DEG DEGREE
- °C DEGREE CELSIUS
- °F DEGREE FAHRENHEIT
- DIA DIAMETER
- DISC DISCONNECT
- DN DIVISION
- DOWN DOWN
- DP DISTRIBUTION PANEL BOARD
- DWG DRAWING
- (E) EXISTING TO REMAIN
- EACH EACH
- EA ELECTRICAL CONTRACTOR
- ELEC ELECTRICAL
- EM EMERGENCY
- EQUIP EQUIPMENT
- (ER) EXISTING TO BE REMOVED
- (ERR) EXISTING TO BE REMOVED & RELOCATED
- EXISTING EXISTING
- FA FIRE ALARM
- FACP FIRE ALARM CONTROL PANEL
- FAP FIRE ALARM ANNUNCIATOR PANEL
- FDR FEEDER
- FIXT FIXTURE
- FL FLOOR
- FLA FULL LOAD AMPERES
- FLEX FLEXIBLE
- FLUOR FLUORESCENT
- G GROUND
- GEN GENERATOR
- GFI GROUND FAULT INTERRUPTER
- HP HORSE POWER
- HZ HERTZ
- IG ISOLATED GROUND
- INCAND INCANDESCENT
- JB JUNCTION BOX
- KCML THOUSAND CIRCULAR MILS
- KV KILOVOLT
- KVA KILOVOLT AMPERE
- KW KILOWATT
- KWH KILOWATT HOUR
- LTG LIGHTING
- MCB MAIN CIRCUIT BREAKER
- MCC MOTOR CONTROL CENTER
- MDP MAIN DISTRIBUTION PANEL
- MH MANHOLE
- MLO MAIN LUG ONLY
- MTD MOUNTED
- N NEUTRAL
- NC NORMALLY CLOSED
- NIC NOT IN CONTRACT
- NO NORMALLY OPEN
- NTS NOT TO SCALE
- P POLE
- PB PULL BOX
- PH PHASE
- PHL PANEL
- PWR POWER
- (RE) RELOCATED EXISTING
- RECEPT_REC RECEPTACLE
- (RRO) EXISTING TO BE REMOVED AND RETURN TO OWNER
- SCHED_SCH SCHEDULE
- SPEC SPECIFICATION
- SPKR SPEAKER
- SW SWITCH
- SYS SYSTEMS
- TRANSF_XFMR TRANSFORMER
- UON UNLESS OTHERWISE NOTED
- V VOLT OR VOLTAGE

ELECTRICAL DEMOLITION NOTES

- THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL COSTS ASSOCIATED WITH REMOVALS AND RELOCATIONS OF ELECTRICAL WORK AS DESCRIBED IN THE SPECIFICATIONS WITH ALLOWANCES FOR EXPECTED OR UNFORESEEN DIFFICULTIES WHEN CONCEALED WORK HAS BEEN OPENED. NO CLAIMS FOR ADDITIONAL WORK ASSOCIATED WITH DEMOLITION WILL BE ACCEPTED, EXCEPT IN CERTAIN CASES CONSIDERED JUSTIFIABLE BY THE ARCHITECT.
- THE CONTRACTOR SHALL REMOVE AND/OR RELOCATE ALL EXISTING ELECTRICAL WORK WHICH INTERFERES WITH THE NEW ARCHITECTURAL AND ELECTRICAL LAYOUTS IN FULL COORDINATION WITH THE ARCHITECT'S DEMOLITION PLANS. ALL SYSTEMS WHICH ARE NO LONGER REQUIRED TO FUNCTION SHALL BE DE-ENERGIZED AND DISCONNECTED AT THE SOURCE OF POWER SUPPLY.
- THE CONTRACTOR SHALL PERFORM DEMOLITION AND REMOVAL WORK WITH MINIMUM INTERFERENCE WITH FUNCTIONING ELECTRICAL SYSTEMS. ALL AFFECTED SYSTEMS SHALL BE RECONNECTED AND RESTORED.
- DEMOLITION AND REMOVAL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER. THE CONTRACTOR SHALL PATCH, REPAIR OR OTHERWISE RESTORE ANY DAMAGED INTERIOR OR EXTERIOR BUILDING SURFACE TO ITS ORIGINAL CONDITION.
- THE CONTRACTOR SHALL REMOVE ALL ELECTRICAL OUTLETS, SWITCHES AND OTHER DEVICES, COMPLETE WITH ASSOCIATED WIRING, CONDUITS, ETC., FROM PARTITIONS THAT ARE TO BE REMOVED. WHERE THE REMOVAL OF THESE ITEMS DISRUPTS EXISTING WIRING THAT IS TO REMAIN, THE CONTRACTOR SHALL INSTALL JUNCTION BOXES AND OTHER DEVICES AND PROVIDE BYPASS CONNECTIONS NECESSARY TO MAKE CIRCUITS AFFECTED CONTINUOUS AND READY FOR OPERATION. OTHERWISE, WIRING SHALL BE REMOVED BACK TO THE NEAREST ELECTRICAL JUNCTION BOX THAT IS TO REMAIN OR TO PANELBOARD.
- ALL RACEWAYS WHICH BECOME EXPOSED DURING THE ALTERATION WORK SHALL BE REMOVED AND REROUTED CONCEALED BEHIND FINISHED SURFACES.
- ALL UNUSED OUTLET BOXES OR CAPPED FLOOR OUTLETS SHALL BE PROVIDED WITH MATCHING BLANK COVERS.
- EXISTING PANEL DIRECTORIES AFFECTED BY THE ALTERATION WORK SHALL BE MODIFIED TO REFLECT THE BRANCH CIRCUIT WIRING CHANGES.
- PORTIONS OF FEEDER RUNS TO BE REMOVED OR ABANDONED AS A RESULT OF DEMOLITION WORK, BUT WHICH ARE REQUIRED TO REMAIN ENERGIZED, SHALL BE CUT AT CONVENIENT LOCATIONS, REROUTED AND RECONNECTED. NEW FEEDER EXTENSIONS SHALL MATCH EXISTING ONES IN ALL RESPECTS, CABLE TYPE, CONDUCTOR AMPACITY, CONDUIT SIZES, ETC.
- THE CONTRACTOR SHALL NOTIFY THE OWNER AT THE APPROPRIATE TIME OF THE PROJECTED DEMOLITION AND PHASING SCHEDULE SO THAT REMOVAL OR RELOCATION OF AFFECTED UTILITIES MAY BE CARRIED OUT IN COORDINATION WITH THE PROJECT REQUIREMENTS. THE CONTRACTOR SHALL FOLLOW CLOSELY THE ARCHITECT'S DEMOLITION AND PHASING SCHEDULE AND PROCEED IN THE SPECIFIED SEQUENCE.
- ALL EXISTING MATERIAL AND EQUIPMENT IN USABLE CONDITION, WHICH IS TO BE REMOVED UNDER THIS CONTRACT, SHALL REMAIN THE PROPERTY OF THE OWNER OR SHALL BE DISPOSED OF BY THE ELECTRICAL CONTRACTOR, AS DIRECTED BY THE OWNER.
- ARRANGE TO WORK CONTINUOUSLY, INCLUDING OVER TIME, IF REQUIRED, TO ASSURE THAT SYSTEMS WILL BE SHUT DOWN ONLY DURING THE TIME ACTUALLY REQUIRED TO MAKE THE NECESSARY CONNECTIONS TO THE EXISTING SYSTEMS.
- THE SHUTDOWN OF EXISTING BUILDING ELECTRICAL SERVICES SHALL BE COORDINATED WITH THE OWNER. MAKE ARRANGEMENTS AT LEAST 5 BUSINESS DAYS PRIOR TO A SHUTDOWN.

ELECTRICAL GENERAL NOTES

- GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL ELECTRICAL DRAWINGS.
- ALL WORK IS NEW UNLESS OTHERWISE NOTED.
- DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. FOLLOW DRAWINGS IN LAYOUT OUT WORK AND CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS, MAINTAIN HEADROOM AND SPACE CONDITIONS.
- SECURE ALL SUPPORTS TO BUILDING STRUCTURE UTILIZING TOGGLE BOLTS (HOLLOW MASONRY), EXPANSION SHELDIS OR INSERTS (CONCRETE AND BRICK), MACHINE SCREWS (METAL), BEAM CLAMPS (FRAMEWORK), WOOD SCREWS (WOOD) OR PAN THRU STRAPS (METAL DECK), NAILS, RAWL PLUGS AND WOOD PLUGS ARE NOT PERMITTED. WHERE REQUIRED BY STRUCTURE, PROVIDE THRU BOLTS AND FISH PLATES. SUPPORT HORIZONTAL RUNS OF METALLIC RACEWAYS NOT MORE THAN 10 FT APART. SUPPORT RACEWAY RISERS AT EACH FLOOR LEVEL. RUN EXPOSED RACEWAYS PARALLEL WITH OR AT RIGHT ANGLES TO WALLS.
- PASS RACEWAYS OVER WATER, STEAM OR OTHER PIPING WHEN PULL BOXES ARE NOT REQUIRED. NO RACEWAY WITHIN 3 INCHES OF STEAM OR HOT WATER PIPES OR APPLIANCES (EXCEPT PIPE CROSSINGS WHERE RACEWAY SHALL BE AT LEAST 1 INCH FROM PIPE COVERS).
- CUT CONDUIT ENDS SQUARE. REAM SMOOTH. PAINT MALE THREAD OF FIELD THREADED RACEWAYS WITH GRAPHITE BASE PIPE COMPOUND. DRAW UP TIGHT WITH RACEWAY COUPLING.
- HORIZONTAL OR CROSS RUNS IN PARTITIONS AND WALLS ARE NOT PERMITTED. DO NOT RUN CONDUIT IN PRECAST ROOF SLABS, IN 2 INCH SLABS OR IN TERRAZZO FLOOR FINISH.
- LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS. RACEWAYS OVER 10 FT LONG IN WHICH WIRING IS NOT INSTALLED: FURNISH FISH WIRE.
- SET BOXES SQUARE AND TRUE WITH BUILDING FINISH. ERECT WALL AND SWITCH OUTLETS IN ADVANCE OF FLOORING AND FIREPROOFING. SECURE TO BUILDING STRUCTURE BY ADJUSTABLE STRAP IRONS.
- VERIFY LOCATIONS OF OUTLETS AND SWITCHES IN FINISHED ROOMS WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISH. IN CENTERING OUTLETS AND LOCATING BOXES AND UNLETS, ALLOW FOR OVERHEAD PIPES, DUCTS AND MECHANICAL EQUIPMENT. VARIATIONS IN FIREPROOFING AND PLASTERING, WINDOW AND DOOR TRIM, PANELING, HUNG CEILING AND THE LIKE. CORRECT ANY INACCURACY RESULTING FROM FAILURE TO DO SO WITHOUT EXPENSE TO OWNER.
- LOCATIONS INDICATED FOR LOCAL WALL SWITCHES ARE SUBJECT TO MODIFICATIONS AT OR NEAR DOORS. COORDINATE WITH ARCHITECT AND INSTALL SWITCH ON SIDE OPPOSITE HINGE. VERIFY FINAL HINGE LOCATIONS IN FIELD PRIOR TO SWITCH OUTLET INSTALLATION.
- COVERS OF JUNCTION AND PULLBOXES SHALL BE READILY ACCESSIBLE.
- PROVIDE PULLBOXES WHERE INDICATED, WHERE REQUIRED BY CODE AND WHERE NECESSARY TO FACILITATE PULLING OF WIRE. COORDINATE PULLBOX LOCATIONS WITH OTHER TRADES.
- EMPTY RACEWAY RUNS: PROVIDE PULLBOXES EVERY 100 FT AND AS INDICATED. COORDINATE LOCATIONS WITH OTHER TRADES.
- JUNCTION AND PULLBOXES: LOCATE GENERALLY NOT EXPOSED IN FINISHED SPACES. WHERE NECESSARY, REROUTE RACEWAYS OR MAKE OTHER ARRANGEMENTS FOR CONCEALMENT.
- SUPPORT PANEL, JUNCTION AND PULLBOXES INDEPENDENTLY TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON RACEWAYS.
- ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.
- CONNECT CONDUIT TO MOTOR CONDUIT TERMINAL BOXES WITH FLEXIBLE CONDUIT (MINIMUM 18 IN. LENGTH AND 50% SLACK). DO NOT TERMINATE IN OR FASTEN RACEWAYS TO MOTOR FOUNDATION.
- PROVIDE 2#14 INDICATING PILOT LIGHT WIRES FROM PILOT LIGHT IN CONTROLLER TO LOAD SIDE OF DISCONNECT SWITCH. RUN WIRES IN BRANCH CIRCUIT CONDUIT AND INCREASE CONDUIT SIZE AS REQUIRED.
- PULL NO THERMOPLASTIC WIRES AT TEMPERATURES LOWER THAN 32°F (0°C). PROVIDE CABLE SUPPORTS FOR WIRE IN RISER CONDUITS AS REQUIRED BY CODE.
- PROVIDE SEPARATE RACEWAYS FOR CONDUCTORS OF NORMAL AND EMERGENCY CIRCUITS. COMMON BOXES: PROVIDE BARRIERS BETWEEN EMERGENCY AND NORMAL WIRING.
- HEIGHTS OF OUTLETS FROM FINISHED FLOOR TO CENTERLINE OF OUTLET: RECEPTACLES AND TELEPHONES: 1'-6" GENERALLY OVER WORK BENCHES 3'-6" WALL SWITCHES 4'-0" WALL FIXTURES 7'-0" MOTOR CONTROLLERS 5'-0" GONGS AND HORNS 7'-6" FIRE ALARM STATIONS 4'-0" CLOCKS 7'-6" STROBE LIGHTS 6'-8" TO BOTTOM
- EXCEPTIONS: AT JUNCTION OF DIFFERENT WALL FINISH MATERIALS, ON MOLDING OR BREAK IN WALL SURFACE, IN VIOLATION OF CODE REQUIREMENTS, AS NOTED OR DIRECTED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND CONFIRMING ALL MOUNTING HEIGHTS WITH ARCHITECT AND ARCHITECTURAL DRAWINGS.
- WIRE COLOR CODING: AS PER CODE. WHERE COLOR-CODED CABLE IS NOT AVAILABLE, CERTIFY IN WRITING AND REQUEST PERMISSION FOR OVERLAP COLOR TAPING OF CONDUCTORS (MINIMUM LENGTH 6") IN ACCESSIBLE LOCATIONS. COLOR CODING, ONCE SELECTED, MUST BE USED CONSISTENTLY FOR THE ENTIRE PROJECT.
- INSTALL NEW WORK AND CONNECT TO EXISTING WORK WITH MINIMUM INTERFERENCE TO EXISTING FACILITIES. TEMPORARY SHUTDOWNS: ONLY WITH WRITTEN CONSENT OF OWNER. MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES. ALARM AND EMERGENCY SYSTEMS ARE NOT TO BE INTERRUPTED.
- FIRESTOPPING SHALL BE INSTALLED WHENEVER WIRING OR RACEWAYS CROSS FIRE RATED CONSTRUCTION.
- LIGHTING FIXTURE SCHEDULE STANDARD NOTE: LIGHTING FIXTURE SCHEDULE SHOWN ON ENGINEER'S DRAWINGS ARE FOR INFORMATION PURPOSES ONLY. LIGHTING FIXTURES SHOWN ARE THOSE SELECTED BY ARCHITECT. ENGINEER SHALL NOT BE RESPONSIBLE FOR INFORMATION SHOWN RELATED TO FIXTURE SELECTION AND OVERALL LIGHTING DESIGN. REFER TO ARCHITECTURAL DRAWINGS FOR FURTHER INFORMATION.

ELECTRICAL DRAWING INDEX

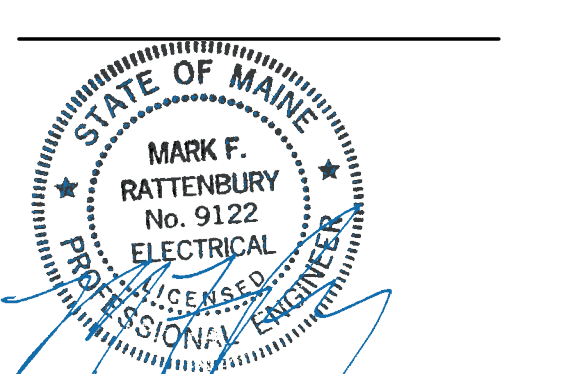
DRAWING NO.	DRAWING TITLE
E00-01	ELECTRICAL COVER SHEET
E00-10	ELECTRICAL SCHEDULES
E00-20	ELECTRICAL DETAILS
E00-30	ELECTRICAL SPECIFICATIONS
E00-31	ELECTRICAL SPECIFICATIONS
E01-01	RICHARDS 7 - ELECTRICAL LIGHTING DEMOLITION PLAN - WEST
E01-02	RICHARDS 8 - ELECTRICAL LIGHTING DEMOLITION PLAN - WEST
E01-03	RICHARDS 8 - ELECTRICAL LIGHTING DEMOLITION PLAN - EAST
E01-04	RICHARDS 9 - ELECTRICAL LIGHTING DEMOLITION PLAN - WEST
E01-05	RICHARDS 9 - ELECTRICAL LIGHTING DEMOLITION PLAN - EAST
E02-01	RICHARDS 7 - ELECTRICAL POWER DEMOLITION PLAN - WEST
E02-02	RICHARDS 8 - ELECTRICAL POWER DEMOLITION PLAN - WEST
E02-03	RICHARDS 8 - ELECTRICAL POWER DEMOLITION PLAN - EAST
E02-04	RICHARDS 9 - ELECTRICAL POWER DEMOLITION PLAN - WEST
E02-05	RICHARDS 9 - ELECTRICAL POWER DEMOLITION PLAN - EAST
E02-06	RICHARDS ROOF - ELECTRICAL POWER DEMOLITION PLAN - WEST
E02-07	RICHARDS ROOF - ELECTRICAL POWER DEMOLITION PLAN - EAST
E03-01	RICHARDS 7 - ELECTRICAL LIGHTING PLAN - WEST
E03-02	RICHARDS 8 - ELECTRICAL LIGHTING PLAN - WEST
E03-03	RICHARDS 8 - ELECTRICAL LIGHTING PLAN - EAST
E03-04	RICHARDS 9 - ELECTRICAL LIGHTING PLAN - WEST
E03-05	RICHARDS 9 - ELECTRICAL LIGHTING PLAN - EAST
E04-01	RICHARDS 7 - ELECTRICAL POWER PLAN - WEST
E04-02	RICHARDS 8 - ELECTRICAL POWER PLAN - WEST
E04-03	RICHARDS 8 - ELECTRICAL POWER PLAN - EAST
E04-04	RICHARDS 9 - ELECTRICAL POWER PLAN - WEST
E04-05	RICHARDS 9 - ELECTRICAL POWER PLAN - EAST
E04-06	RICHARDS ROOF - ELECTRICAL POWER PLAN - WEST
E04-07	RICHARDS ROOF - ELECTRICAL POWER PLAN - EAST

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06.24.2016
ISSUE CHART

NO.	ISSUE	DATE
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Checked	MFR	
Approved		

TITLE
ELECTRICAL COVER SHEET

SHEET NUMBER
E00-01

SAVE DATE: 06/24/2016 1:47 PM
 PLOT DATE: 06/24/2016 1:49 PM
 LOGIN: Roy, Adam