

ELECTRICAL SYMBOL SCHEDULE

ALL SYMBOLS MAY NOT BE USED
NOTE: ALL ELECTRICAL DEVICES SHALL BE IVORY IN COLOR WITH NYLON COVER PLATES.

ABBREVIATIONS

EX	EXISTING
NI	NEW
DL	DEMOLISH
R	RELOCATE
A	AMPS
AC	AIR CONDITIONING UNIT
ACT	Above Counter Top
AD	AUTOMATIC DOOR
AF	Above Finished Floor
AFI	Above Finished Grade
AFR	Above Finished Roof
AHJ	AUTHORITY HAVING JURISDICTION
AH	AIR HANDLING UNIT
AC	AMPS INTERRUPTING CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
B	BOARD
SAS	BUILDING AUTOMATION SYSTEM
BC	BYPASS CONTACTOR
BLDG	BUILDING
BFG	BELOW FINISHED GRADE
C	CONDUIT
CB	CIRCUIT BREAKER
CH	CHILLER
CHT	CHIGRIT
CLG	CEILING
CD	CONDUIT ONLY
COMP	COMPRESSOR
CP	CONDENSATE PUMP
CPT	CONTROL POWER TRANSFORMER
CR	CRITICAL BRANCH
CY	CURRENT TRANSFORMER
CU	COPPER
CHT	CABINET UNIT HEATER
D	DETERMINED PANEL
DWG	DRAWING
EC	ELECTRICAL CONTRACTOR
EOP	EMERGENCY OPERATING PANEL
EF	EXHAUST FAN
EF	ELECTRICAL INTERLOCK
EM	EMERGENCY
EOL	END OF LINE RESISTOR
EXP	EXPLOSION PROOF
ET	ELECTRICAL TEST
EW	ELECTRIC WATER COOLER
FXC	EXHAUST FAN
F	FUSE
F1	FUSED DISCONNECT SWITCH
F2	FLOOR
F3	FREEZE STAT
GC	GENERAL CONTRACTOR
GF	GROUND FAULT PROTECTOR
GND	GROUND
HA	HANDS OFF AUTO SELECTOR SWITCH
HP	HORSE POWER
HVAC	HEATING, VENTILATION, AIR CONDITIONING
IS	ISOLATED GROUND
J	JUNCTION BOX
KK	KIRK KEY
KW	KILOVAULT AMPS
KW	KILOWATT
LRA	LOCKED ROTOR AMPS
LTR	LINE REACTOR/MAGNETIC TRAP FILTER
LS	LIFE SAFETY BRANCH
LTD	LIGHTING
LT	LIGHT
LT	LIGHTING
LT	LIGHT
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MCC	MOTOR CONTROL CENTER
MCB	MOLDED CASE CIRCUIT BREAKER
MIN	MINIMUM
MCD	MAN LIFT ONLY
MT	MOUNTED
MTC	MOUNTING
MV	MICROWAVE
N	NORMAL BRANCH
NC	NORMALLY CLOSED
NC	NOT IN CONTRACT
NO	NORMALLY OPEN
NOS	NOT TO SCALE
OL	OVERLOAD RELAY
P	PUMP
PS	PUSH BUTTON
PB	PUSH BUTTON
PB	PUSH BUTTON
PH	PHASE
PL	PANEL
PMP	PUMP MOTOR
RF	RETURN AIR FAN
RTU	ROOF TOP UNIT
SA	SAFETY AIR FAN
SPEC	SPECIFICATION
SG	SOUND SYSTEM CONSULTANT
SW	SWITCH
TC	TEMPERATURE CONTROL CONTRACTOR
TR	TYPICAL
UL	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES, INC.
UNO	UNLESS NOTED OTHERWISE
V	VOLTS
VA	VOLT AMPS
VF	VARIABLE FREQUENCY DRIVE
W	WATTS
W	WITH
WP	WEATHERPROOF
WR	TRANSFORMER

RECEPTACLES

SYMBOL	DESCRIPTION	MOUNTING
	RECEPTACLE, COMMERCIAL GRADE, DUPLEX, HUBBELL NR20X 20 AMPERE RATED, GROUNDING TYPE, 2 POLE, 3 WIRE, 125 VOLTS.	1'-6" AFF OR AS NOTED
	RECEPTACLE, MOUNTED HORIZONTAL, TYPICAL.	6" ACT TO BTWHEN THERE IS NO COUNTER, MNT AT 42" AFF TO BTM
	RECEPTACLE, SAME AS ABOVE EXCEPT MOUNTING HEIGHT.	1'-6" AFF OR AS NOTED
	DOUBLE DUPLEX RECEPTACLE, (Q) HUBBELL NR20X 20 AMPERE RATED, GROUNDING TYPE, WHERE SUBSCRIPT 'N' IS INDICATED, PROVIDE RE-DEVICE PLATE.	1'-6" AFF OR AS NOTED
	DUPLEX RECEPTACLE, GFI FOR ELECTRIC WATER COOLER, POSITION RECEPTACLE BEHIND WATER COOLER SO AS TO BE 18" MIN FROM RIGHT, COORDINATE EXACTLY WITH HUBBELL RFR57570Z.	SEE PLUMBING SHOP DRAWINGS
	RECEPTACLE, GFI WEATHER RESISTANT W/IN USER COVER, 20 AMP, GROUNDING TYPE, HUBBELL RFR57570Z.	1'-6" AFF
	GROUND FAULT CIRCUIT INTERRUPTING RECEPTACLE, 20 AMP, FEED THRU TYPE, STANDARD OUTLET, HUBBELL RFR57570Z.	1'-6" AFF OR AS NOTED
	RECEPTACLE, SAME AS ABOVE EXCEPT MOUNTING HEIGHT.	6" ACT TO BTWHEN THERE IS NO COUNTER, MNT AT 42" AFF TO BTM
	RECEPTACLE, SAME AS ABOVE EXCEPT DOUBLE DUPLEX.	6" ACT TO BTWHEN THERE IS NO COUNTER, MNT AT 42" AFF TO BTM
	TAMPER RESISTANT GROUND FAULT CIRCUIT INTERRUPTING RECEPTACLE, 20 AMP, FEED THRU TYPE, COMMERCIAL GRADE, HUBBELL RFR17570Z.	6" ACT TO BTWHEN THERE IS NO COUNTER, MNT AT 42" AFF TO BTM
	RECEPTACLE 125/250 VOLT RATED, 30 AMP, 3 POLE, 4 WIRE, GROUND HUBBELL RFR1500X WITH WIPER PLUG AND COVER.	1'-6" AFF OR AS NOTED
	RECEPTACLE 125/250 VOLT RATED, 30 AMP, 3 POLE, 4 WIRE, GROUND HUBBELL RFR1500X WITH WIPER PLUG AND COVER.	1'-6" AFF OR AS NOTED
	FLOOR BOX WITH (2) DUPLEX RECEPTACLES, LEAD AND WIRE MOLD RE-584 INDICATED, MOUNTED FLUSH IN FLOOR. SEE POWER AND AWM SHEETS FOR UTILITIES. LEAD AND WIRE MOLD RE-584 TO BE INSTALLED WITH (2) DUPLEX RECEPTACLES AND (2) DUPLEX RECEPTACLES. PROVIDE ALL REQUIRED DEVICES AND CONNECTIONS AS NOTED IN SYMBOL SCHEDULES. PROVIDE ALL REQUIRED DEVICES AND CONNECTIONS AS NOTED IN SYMBOL SCHEDULES. PROVIDE ALL REQUIRED DEVICES AND CONNECTIONS AS NOTED IN SYMBOL SCHEDULES. PROVIDE ALL REQUIRED DEVICES AND CONNECTIONS AS NOTED IN SYMBOL SCHEDULES.	FLUSH IN FLOOR COORD. LOCATION WITH OWNER & ARCHITECTURAL EQUIPMENT LAYOUT PRIOR TO ROUGH-IN.
	RECEPTACLE 125/250 VOLT RATED, 30 AMP, 3 POLE, 4 WIRE, GROUND HUBBELL RFR1500X WITH WIPER PLUG AND COVER.	24" AFF TO TOP, FLUSH IN WALL COORD. LOCATION WITH OWNER & ARCHITECTURAL EQUIPMENT LAYOUT PRIOR TO ROUGH-IN.
	RECEPTACLE 125/250 VOLT RATED, 30 AMP, 3 POLE, 4 WIRE, GROUND HUBBELL RFR1500X WITH WIPER PLUG AND COVER.	FLUSH IN FLOOR COORD. LOCATION WITH OWNER & ARCHITECTURAL EQUIPMENT LAYOUT PRIOR TO ROUGH-IN.

NOTES:
A. MANUFACTURERS EQUAL APPROVED: HUBBELL, LEGRAND, EATON, LEVITON, FSR, STEEL CITY. DEVICES INSTALLED IN MANUFACTURED PARTITIONS TO BE PROVIDED BY PARTITION MANUFACTURER. SEE NOTES ON ELECTRICAL POWER & RECEPTACLE PLANS.

POWER, WIRING & CONDUIT

SYMBOL	DESCRIPTION	MOUNTING
	ELECTRICAL PANELBOARD, SEE PANEL SCHEDULE FOR DESCRIPTION.	6" TO TOP
	SURGE SUPPRESSOR SEE SPECIFICATIONS.	MNT ON SERVICE DISTRIBUTION EQ. SEE ELECTRICAL RIBER.
	DISCONNECT SWITCH, BODY, WHERE EXPOSED TO WEATHER SHALL BE NEMA 3R.	AS RECD, NO HIGHER THAN 6'-6" AFF
	FUSED DISCONNECT SWITCH, BODY, WHERE EXPOSED TO WEATHER SHALL BE NEMA 3R.	AS RECD, NO HIGHER THAN 6'-6" AFF
	FUSED DISCONNECT SWITCH, BODY, WHERE EXPOSED TO WEATHER SHALL BE NEMA 3R. SHALL BE SQUARE "D" SAFETY SWITCH OR EQUAL.	AS RECD, NO HIGHER THAN 6'-6" AFF
	FUSED DISCONNECT SWITCH, BODY, WHERE EXPOSED TO WEATHER SHALL BE NEMA 3R. SHALL BE SQUARE "D" SAFETY SWITCH OR EQUAL.	AS RECD, NO HIGHER THAN 6'-6" AFF
	EXHAUST FAN PUMP MOTOR.	SEE MECH. DWGS
	PUMP MOTOR.	SEE PLUMBING & MECH. DWGS
	HOME RUN TO PANELBOARD. ARROW HEAD INDICATE NUMBER OF CIRCUITS WIRE & CONDUIT AS SPECIFIED.	AS RECD
	CONDUIT SIZED AS SPECIFIED.	AS RECD
	UNDERGROUND WIRE & CONDUIT, SIZED AS SPECIFIED.	AS RECD
	JUNCTION BOX (JB) AS MANUFACTURED BY RACO, STEEL CITY, OR UNIVERSAL, SEE AS APPLICABLE OR RE-584, E.T. TO MAKE FINAL CONNECTIONS TO FURNITURE SYSTEMS AND/OR EQUIPMENT AS REQUIRED.	WALL MNTD, AS RECD
	WALL MOUNTED JUNCTION BOX, SAME AS ABOVE. COORDINATE MOUNTING HEIGHTS AND REQUIREMENTS WITH HAND DRYER MANUFACTURER.	WALL MNTD, AS RECD
	TRANSFORMER. SIZES AS NOTED.	FLOOR
	TRANSFORMER, SMALL W/INTD AVM CLOS. SIZES AS NOTED.	ARM CLOS.

SWITCHING

SYMBOL	DESCRIPTION	MOUNTING
	SWITCH, SINGLE POLE, 20 AMP, COMMERCIAL DUTY, HUBBELL W58120X 120/277 VOLT RATED, BODY COLOR.	6" AFF TO TOP OR AS NOTED
	SWITCH, SINGLE POLE, 20 AMP, COMMERCIAL DUTY, HUBBELL W58120X 120/277 VOLT RATED, BODY COLOR.	6" AFF TO TOP OR AS NOTED
	SWITCH, SINGLE POLE, 20 AMP, COMMERCIAL DUTY, 120/277 VOLT RATED, HUBBELL W58120X 120/277 VOLT RATED, BODY COLOR.	6" AFF TO TOP OR AS NOTED
	SWITCHES 6" OR DUAL LEVEL LIGHTING. SEE ELECTRICAL NOTE 1.	6" AFF TO TOP OR AS NOTED
	WALL SWITCH, DUAL RELAY, DUAL TECHNOLOGY, OCCUPANCY SENSOR, HUBBELL AL500M 20XN. WIRE PER MFG'S RECOMMENDATIONS.	4'-0" AFF TO TOP OR AS NOTED
	WALL SWITCH, SINGLE RELAY, DUAL TECHNOLOGY, OCCUPANCY SENSOR, HUBBELL AL500M 20XN. WIRE PER MFG'S RECOMMENDATIONS.	4'-0" AFF TO TOP OR AS NOTED
	WHERE 'WP' IS INDICATED IN SUBSCRIPT, PROVIDE WATER TIGHT ENCLOSURE FOR SWITCHING.	

NOTES: MANUFACTURERS EQUAL APPROVED: HUBBELL, LEGRAND, LEVITON

TELEPHONE/DATA/COMMUNICATIONS

SYMBOL	DESCRIPTION	MOUNTING
	DATA OUTLET BOX, PROVIDE BOX, 1" CONDUIT TO ABV ACCESSIBLE CLO.	1'-0" AFF OR AS NOTED
	PAGING SYSTEM INTERIOR TYPE SPEAKER. MATCH EXISTING. SEE MANUFACTURER'S WIRING REQUIREMENTS.	CILING RECESSED
	INTERCOM SYSTEM INTERIOR TYPE SPEAKER. MATCH EXISTING. SEE MANUFACTURER'S WIRING REQUIREMENTS.	CILING RECESSED
	ACCESS POINT FOR WIRELESS CONNECTION. VERIFY EXACT REQUIREMENTS WITH OWNER PRIOR TO INSTALLATION.	ABV ACCESSIBLE CEILING OR WALL @ 10' AFF
	DATA RACK, WALL MOUNTED.	WALL - 6'-0" TO TOP

SECURITY

SYMBOL	DESCRIPTION	MOUNTING
	JUNCTION BOX, FOR ALARM SYSTEM, PROVIDE POWER, BGL, CONDUIT AND WIRING AS INDICATED ON PLANS. COORDINATE EXACT LOCATION WITH EQUIPMENT.	ABV ACCESSIBLE CEILING
	INTERIOR SECURITY CARD READER (CVR) AND KEY LOCATION. ELECTRICAL CONTRACTOR TO PROVIDE POWER, CONDUIT, BOXES AND INTERCONNECTION TO FIRE ALARM SYSTEM SHALL BE PROVIDED AS INDICATED ON DWG.	4'-0" AFF OR AS NOTED
	EXTERIOR SECURITY CARD READER LOCATION. REFER TO ELECTRICAL SPECIFICATIONS FOR ADDITIONAL INFORMATION. ELECTRICAL CONTRACTOR TO PROVIDE GASKET BACK BOX, POWER, CONDUIT, BOXES, AND INTERCONNECTION TO FIRE ALARM SYSTEM SHALL BE PROVIDED AS INDICATED ON DWG.	4'-0" AFF
	SECURITY ELECTRIC DOOR STRIKE LOCATION. ELECTRICAL CONTRACTOR TO PROVIDE POWER, CONDUIT BOXES, AND INTERCONNECTION TO FIRE ALARM SYSTEM SHALL BE PROVIDED FROM AS INDICATED ON DWG.	COORDINATE WITH DOOR FRAME
	ELECTRIC DOOR OPERATOR PUSH PASS PROVIDE BOX CONDUIT, AND POWER WIRING AS REQUIRED. COORDINATE WITH ARCHITECTURAL ELEVATIONS & DOOR FRAME.	4'-0" AFF OR AS NOTED
	CAMERA OUTLET BOX, 3/4" CONDUIT WITH DATA CABLE TO IT ROOM. CONNECT TO COORDINATE WITH MATCH OWNER'S EXISTING SYSTEM.	COORD. WITH OWNER PRIOR TO ROUGH IN CEILING MNTD OR (W) WALL

LIGHT FIXTURES

SYMBOL	DESCRIPTION
	2'x4' LIGHTING FIXTURE.
	2'x4' LIGHTING FIXTURE, W/ BATTERY BACK UP.
	DESIGNER'S NIGHT LIGHT AND/OR NATURE ON NIGHT LIGHT CIRCUIT. PROVIDE SWITCHING SUCH THAT SINGLE BALLAST FIXTURES ARE CONNECTED TO UNMOUNTED END OF EXPRESS CIRCUIT. MULTIBALLAST FIXTURES, CONNECT ONE BALLAST INSIDE LAMPS AND BATTERY BACK UP, IF APPLICABLE, TO UNMOUNTED END OF SAME BRANCH CIRCUIT. CONNECT OTHER LAMP BALLAST TO SWITCHED AREA LIGHTS.
	EXIT SIGN.
	DOWNLIGHT.
	DOWNLIGHT, W/ BATTERY BACK UP.

ELECTRICAL SPECIFICATIONS

IT IS THE INTENT OF THESE SPECIFICATIONS FOR THE ELECTRICAL CONTRACTOR TO FURNISH A COMPLETE ELECTRICAL SYSTEM, FULLY ADJUSTED, & READY FOR USE.

ALL ELECTRICAL WORK TO BE DONE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE OBSERVING ALL STATE & LOCAL CODES.

ELECTRICAL CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS & PAY ALL SALES TAXES, UTILITY COMPANY CHARGES FOR SERVICE, PERMITS, FEES, & OTHER COSTS IN CONNECTION WITH HIS WORK.

ELECTRICAL CONTRACTOR TO ENSURE THAT ALL MATERIAL & EQUIPMENT FURNISHED FOR THIS PROJECT WHICH CAN BE U.L. LISTED SHALL BE.

THE MATERIAL & EQUIPMENT HAS BEEN CAREFULLY SELECTED FOR THIS PROJECT & THE ELECTRICAL CONTRACTOR IS EXPECTED TO PROVIDE ALL ITEMS AS CLOSELY AS POSSIBLE TO THE SPECIFICATIONS & AS CALLED FOR ON THE DRAWINGS.

ELECTRICAL CONTRACTOR SHALL SUBMIT THREE (3) SETS OF EQUIPMENT DATA SHOP DRAWINGS TO THE ENGINEER FOR ALL ITEMS TO BE FURNISHED & INSTALLED FOR APPROVAL.

ELECTRICAL CONTRACTOR SHALL INCLUDE IN THE WORK, WITHOUT EXTRA COST TO THE OWNER, ANY LABOR, MATERIALS, SERVICES, APPARATUS, DRAWINGS, INCIDENTAL CONSTRUCTION WORK, ETC., IN ORDER TO COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, & REGULATIONS, WHETHER OR NOT SHOWN ON DRAWINGS AND/OR SPECIFIED. NO CLAIM FOR EXTRAS WILL BE APPROVED WITHOUT PRIOR COORDINATION FOR CONFLICTS BY CONTRACTOR, & WRITTEN REQUEST & APPROVAL PRIOR TO PERFORMING WORK.

ALL WORK & EQUIPMENT TO BE GUARANTEED BY CONTRACTOR FOR ONE (1) YEAR.

UPON COMPLETION OF ALL WORK & ALL TESTS, ELECTRICAL CONTRACTOR SHALL INSTRUCT THE OWNER OR HIS REPRESENTATIVE FULLY IN THE OPERATIONS, ADJUSTMENTS, & MAINTENANCE OF EQUIPMENT FURNISHED. ELECTRICAL CONTRACTOR SHALL PROVIDE OWNER WITH MAINTENANCE SCHEDULE FOR THE PRINCIPAL ITEMS OF EQUIPMENT FURNISHED. MANUFACTURER'S ADVERTISING LITERATURE OR CATALOGS WILL NOT BE ACCEPTABLE.

ALL MATERIALS AND EQUIPMENT TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS & GOOD RECOMMENDED PRACTICES.

ELECTRICAL CONTRACTOR SHALL GIVE FULL COOPERATION TO OTHER TRADES. WHERE THE WORK OF ELECTRICAL CONTRACTOR WILL BE INSTALLED IN CLOSE PROXIMITY TO, OR WILL INTERFERE WITH WORK OF OTHER TRADES, HE SHALL ASSIST IN WORKING OUT SPACE CONDITIONS TO MAKE SATISFACTORY ADJUSTMENTS. IF ELECTRICAL CONTRACTOR INSTALLS HIS WORK BEFORE COORDINATING WITH OTHER TRADES, HE SHALL MAKE THE NECESSARY CHANGES IN HIS WORK TO CORRECT THE CONDITION WITHOUT EXTRA CHARGE.

THE DRAWINGS ARE DIAGRAMMATIC & INDICATE THE GENERAL ARRANGEMENTS OF SYSTEMS & WORK INCLUDED IN THE CONTRACT. THE DRAWINGS ARE NOT TO BE SCALED.

EXISTING INFORMATION SHOWN ON DRAWINGS TAKEN FROM OWNER FURNISHED AS BUILT DRAWINGS & LIMITED SITE SURVEY. CONTRACTOR TO FIELD VERIFY ALL EXISTING EQUIPMENT, CIRCUITS, & WIRING.

ELECTRICAL CONTRACTOR TO VERIFY EXACT LOCATION OF EQUIPMENT, ROUTING PIPE, ETC., & WORK CLOSELY WITH OTHER TRADES TO AVOID CONFLICTS.

ELECTRICAL CONTRACTOR TO LOCATE & INSTALL ELECTRICAL CONTROL PANELS IN SUITABLE LOCATION WITH APPROPRIATE CLEARANCES & OVERLOAD PROTECTION FOR ALL ITEMS REQUIRED.

ELECTRICAL CONTRACTOR MAY COMBINE CONDUITS WHERE APPLICABLE, BUT MUST HOOK UP ITEMS TO PROPER CIRCUITS AS SHOWN.

THE OWNER, ARCHITECT & ELECTRICAL CONTRACTOR TO COORDINATE FOR PROPER CUTOFF HOLES, ALL STUB-UPS & JUNCTION BOXES, & TO LOCATIONS.

WHERE ALUMINUM CONDUCTORS ARE UTILIZED THEY SHALL BE TERMINATED WITH BURNY-HY-PLUG, HYDRAULIC COMPRESSION TERMINALS.

ALL CONDUCTORS, THROUGH #10 AWG, TO BE SOLID COPPER WITH TYPE THW/THHN OR XHHW INSULATION UNLESS OTHERWISE NOTED OTHERWISE.

ALL CONDUCTORS, #8 AWG AND LARGER, TO BE CLASS B STRANDED COPPER WITH TYPE THW/THHN OR XHHW INSULATION UNLESS OTHERWISE NOTED OTHERWISE.

THE COLOR CODE FOR CONDUCTORS SHALL BE BLACK, RED, WHITE, ORANGE (120/240V, 3Ø, Y).

PROVIDE GREEN GROUNDING CONDUCTOR WITH ALL CIRCUITS.

P.V.C. CONDUIT SHALL NOT BE USED IN AREAS OF ASSEMBLY.

ALL WIRING TO BE IN CONDUIT OR APPROVED RACEWAY.

ELECTRICAL CONTRACTOR SHALL PROVIDE & INSTALL SMOOTH PLASTIC DEVICE PLATES BY THE #10000 SERIES, LEVITON 85/96000 SERIES OR APPROVED EQUAL. PLATES SHALL BE OF THE SAME COLOR AS THE DEVICE (REFER TO SYMBOL SCHEDULE). EXTERIOR MOUNTED BOXES SHALL HAVE APPROVED WEATHERPROOF PLATES &/OR COVERS. ALL SURFACE INSTALLED BOXES SHALL HAVE STAMPED, METAL DEVICE PLATES.

ALL DEVICE OUTLETS SHALL BE FLUSH MOUNTED UNLESS SPECIFICALLY NOTED.

BALLASTS SUPPLIED WITH RECESSED PENDENT FIXTURES SHALL BE APPROVED BY UNDERWRITERS' LABORATORIES & SHALL BE, ELECTRONIC, ENERGY SAVINGS, PREMIUM GRADE, PROPERLY APPLIED TO EACH METALLIC BALLASTS SUPPLIED WITH SURFACE MOUNTED FLUORESCENT FIXTURES SHALL BE, ELECTRONIC, ENERGY SAVINGS, EXTRA LOW HEAT, PREMIUM GRADE, BALLASTS TO BE AS MANUFACTURED BY ADVANCE, UNIVERSAL, JEFFERSON, OR APPROVED EQUAL.

GENERAL ELECTRICAL NOTES

- THIS CONTRACTOR SHALL COORDINATE WITH ALL OTHER CONTRACTORS & TRADES TO LOCATE HIS WORK TO AVOID CONFLICTS.
- ALL 2'x4' LIGHT FIXTURES ARE TYPE "A" UNLESS SPECIFICALLY NOTED OTHERWISE. CONTRACTOR TO COORDINATE FIXTURE MOUNTING METHOD (FLANGED, GRID, SPLINE ETC.) WITH TYPE OF CEILING ACTUALLY INSTALLED IN THESE AREAS. TYPICAL.
- THIS CONTRACTOR SHALL NOT UTILIZE "THRU TYPE" OUTLET BOXES WHERE DEVICES ARE SHOWN BACK TO BACK IN SOUND INSULATED OR SOUND SECURE AREAS, TYPICAL.
- SMOKE DETECTORS FOR AIR HANDLING UNITS SHALL BE LOCATED IN AIR DUCTS OBSERVING ALL APPLICABLE CODES & ORDINANCES. ELECTRICAL CONTRACTOR SHALL COORDINATE THE EXACT LOCATION & REQUIREMENTS OF INSTALLATION WITH MECHANICAL CONTRACTOR PRIOR TO CUTTING DUCTWORK. LOCATE THE DETECTOR INDICATOR/RESET DEVICE IN AN ACCESSIBLE LOCATION AS DIRECTED BY THE ARCHITECT & LABEL AS TO AREA & ROOFTOP UNIT SERVED, TYPICAL.
- THIS CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS & PLACEMENT OF LIGHT FIXTURES, OUTLET BOXES, DEVICES, & EQUIPMENT WITH SITE & ARCHITECTURAL DRAWINGS, INCLUDING REFLECTED CEILING PLANS, INTERIOR AND EXTERIOR ELEVATIONS, DETAILS, & SECTIONS. PRIOR TO ROUGH-IN, OR RELOCATE AS DIRECTED BY THE DESIGNER AT NO ADDITIONAL COST TO THE OWNER. ELECTRICAL DRAWINGS ARE NOT TO BE SCALED FOR SUCH LOCATIONS.
- MOUNTING HEIGHTS GIVEN ARE TO TOP OF OUTLET BOX, UNLESS OTHERWISE NOTED. HEIGHTS MAY BE ADJUSTED TO MATCH MASONRY JOINTS, & MUST COMPLY WITH 2017 NEC.
- LIGHT FIXTURE WHIPS SHALL NOT EXCEED 6' IN LENGTH.
- ALL CONDUITS & RACEWAYS ARE TO BE CONCEALED UNLESS OTHERWISE NOTED OR APPROVED BY THE DESIGNER.
- ALL CONDUITS, SLEEVES, INSERTS, OUTLET BOXES, & OTHER ROUGH-IN MATERIALS SHALL BE INSTALLED AS BUILDING CONSTRUCTION PROGRESSES.
- ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- IN MECHANICAL ROOMS & OTHER AREAS WHERE LIGHT FIXTURES ARE SPECIFIED, & DUCT WORK & PIPING IS INSTALLED, ELECTRICAL CONTRACTOR SHALL INSTALL LIGHT FIXTURES AFTER INSTALLATION OF MECHANICAL CONTRACTORS DUCT WORK & PIPING.
- VENDING MACHINES TO BE GFI PROTECTED. ELECTRICAL CONTRACTOR TO VERIFY VENDING MACHINE POWER SUPPLY CORN INCLUDES GFI PROTECTION. OTHERWISE REPLACE VENDING RECEPTACLE WITH A GFI PROTECTED RECEPTACLE.

GENERAL ELECTRICAL NOTES

- SWITCH ONE BALLAST IN EACH FIXTURE TO PROVIDE HALF OR FULL ILLUMINATION OF THIS AREA. WIRE SUCH THAT ONE SWITCH CONTROLS INSIDE LAMPS OF FIXTURE AND OTHER SWITCH CONTROLS OUTSIDE LAMPS. TYPICAL AS NOTED OR AS REQUIRED BY NORTH CAROLINA STATE ENERGY CODE, CHAPTER 8 (805.2.1.1).
- THIS CONTRACTOR SHALL COORDINATE WITH ALL OTHER CONTRACTORS AND TRADES TO LOCATE HIS WORK TO AVOID CONFLICTS.
- ALL 2'x4' LIGHT FIXTURES ARE TYPE "A" UNLESS SPECIFICALLY NOTED OTHERWISE NOTED. CONTRACTOR TO COORDINATE FIXTURE MOUNTING METHOD (FLANGED, GRID, SPLINE ETC.) WITH TYPE OF CEILING ACTUALLY INSTALLED IN THESE AREAS, TYPICAL.
- THIS CONTRACTOR SHALL NOT UTILIZE "THRU TYPE" OUTLET BOXES WHERE DEVICES ARE SHOWN BACK TO BACK IN SOUND INSULATED OR SOUND SECURE AREAS, TYPICAL.
- SMOKE DETECTORS FOR AIR HANDLING UNITS SHALL BE LOCATED IN AIR DUCTS OBSERVING ALL APPLICABLE CODES AND ORDINANCES. ELECTRICAL CONTRACTOR SHALL COORDINATE THE EXACT LOCATION AND REQUIREMENTS OF INSTALLATION WITH MECHANICAL CONTRACTOR PRIOR TO CUTTING DUCTWORK. LOCATE THE DETECTOR INDICATOR/RESET DEVICE IN AN ACCESSIBLE LOCATION AS DIRECTED BY THE ARCHITECT AND LABEL AS TO AREA AND ROOFTOP UNIT SERVED, TYPICAL.
- THIS CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS AND PLACEMENT OF LIGHT FIXTURES, OUTLET BOXES, DEVICES, & EQUIPMENT WITH SITE & ARCHITECTURAL DRAWINGS, INCLUDING REFLECTED CEILING PLANS, INTERIOR AND EXTERIOR ELEVATIONS, DETAILS, & SECTIONS. PRIOR TO ROUGH-IN, OR RELOCATE AS DIRECTED BY THE DESIGNER AT NO ADDITIONAL COST TO THE OWNER. ELECTRICAL DRAWINGS ARE NOT TO BE SCALED FOR SUCH LOCATIONS.
- MOUNTING HEIGHTS GIVEN ARE TO TOP OF OUTLET BOX, UNLESS OTHERWISE NOTED. HEIGHTS MAY BE ADJUSTED TO MATCH MASONRY JOINTS, & MUST COMPLY WITH NORTH CAROLINA STATE BUILDING CODE VOLUME 1-C.
- LIGHT FIXTURE WHIPS SHALL NOT EXCEED 6' IN LENGTH.
- ALL CONDUITS AND RACEWAYS ARE TO BE CONCEALED UNLESS OTHERWISE NOTED OR APPROVED BY THE DESIGNER.
- ALL CONDUITS, SLEEVES, INSERTS, OUTLET BOXES, & OTHER ROUGH-IN MATERIALS SHALL BE INSTALLED AS BUILDING CONSTRUCTION PROGRESSES.
- ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- IN MECHANICAL ROOMS & OTHER AREAS WHERE ITEMS SUCH AS EXIT SIGN, FIRE ALARM DEVICES, ETC., ARE LOCATED TO BE CONCEALED, PROVIDE AND INSTALL GUARDS AS RECOMMENDED BY THE MANUFACTURER.
- IN MECHANICAL ROOMS & OTHER AREAS WHERE LIGHT FIXTURES ARE SPECIFIED, AND DUCT WORK & PIPING IS INSTALLED, ELECTRICAL CONTRACTOR SHALL INSTALL LIGHT FIXTURES AFTER INSTALLATION OF MECHANICAL CONTRACTORS DUCT WORK & PIPING.
- THE SYMBOL "D" DENOTES GROUNDING CONDUCTOR TYPICAL UNLESS OTHERWISE NOTED, ALL CONDUITS SHALL BE 3/4" MINIMUM.
- ALL PANEL DIRECTORIES SHALL BE TYPOD AS TO THE LOAD SERVED AND USING THE OWNER'S NUMBERING SYSTEM.
- ALL WIRING TROUGHS SHALL BE A MINIMUM OF 8" DEEP.
- ALL ELECTRICAL PANELS TO BE LABELED WITH PHENOLIC LABELS.
- ELECTRICAL CONTRACTOR TO MAKE ALL PROVISIONS TO PROVIDE A COORDINATION STUDY (SELECTIVE) OF THE EMERGENCY POWER SYSTEM AS IT RELATES TO THE NATIONAL ELECTRICAL CODE, EXPRESSLY, ARTICLE 700.12, PART III, ARTICLE 700.27, ARTICLE 620.42, ARTICLE 517.26, AND THE EQUIPMENT SUPPLIER, OF THE EMERGENCY SYSTEM GEAR AND BREAKERS. ALL BREAKER TRIP SETTINGS SHALL BE ADJUSTED IN ACCORDANCE WITH THIS STUDY.

ESTIMATED ADDITIONAL ELECTRICAL LOAD SUMMARY

SERVICE VOLTAGE = 208/120 VOLT, 3 PHASE, 4 WIRE
SERVICE WIRING = EXISTING
SERVICE CAPACITY = (EXISTING)

	CONNECTED LOAD	DEMAND LOAD
ELECTRIC WATER HEATING/COOLING	0.80 KVA	0.80 KVA (100%)
MISC MECHANICAL EQUIPMENT	1.00 KVA	0.60 KVA (60%)
RECEPTACLES (FIRST 10KVA)	10.00 KVA	10.00 KVA (100%)
RECEPTACLES (REMAINDER OVER 10KVA)	25.22 KVA	12.61 KVA (50%)
ADDED ELECTRICAL	37.02 KVA	24.01 KVA (64.9%)
EXISTING ELECTRICAL	418.31 KVA	292.81 KVA (70%)
NEW TOTALS	455.33 KVA	306.82 KVA (67.4%)

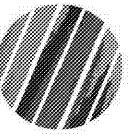
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