ELECTRICAL SYMBOLS

NOTE: THIS IS A TYPICAL SYMBOL LIST, NOT ALL SYMBOLS ARE USED ON THIS PROJECT. DOTTED SYMBOLS INDICATE EXISTING FIXTURE, EQUIPMENT, ETC.

SYMBOL	EXPLANATION
———	BRANCH CIRCUIT CONCEALED IN CEILING OR WALL
- - - - - -	BRANCH CIRCUIT CONCEALED IN GROUND OR FLOOR
———	BRANCH CIRCUIT HOMERUNS TO PANEL
DOWN / UP	CONDUIT STUB – VERTICAL
——3	CONDUIT STUB – HORIZONRAL (CAP CONDUIT)
SURFACE / FLUSH	PANELBOARD – 480Y/277 VOLT
SURFACE / FLUSH	PANELBOARD – 208Y/120 VOLT, 208/120 VOLT, 240/120 VOLT
X	MECHANICAL EQUIPMENT SYMBOL
XX	KITCHEN EQUIPMENT SYMBOL
X	KEYED NOTE REFERENCE
J CEILING / H WALL / M FLOOR	JUNCTION BOX – POWER
C CEILING / H WALL / C FLOOR	JUNCTION BOX – COMMUNICATIONS SYSTEM (TELEPHONE/DATA)
	DUPLEX RECEPTACLE
WP / A>3 / REF	MODIFIER: PANEL SPACE ASSIGNMENT / EQUIPMENT DESIGNATION
WP	WEATHERPROOF COVER
+44"	MOUNTING HEIGHT ABOVE FLOOR OR GRADE GIVEN IN INCHES
REF	REFRIGERATOR
DW	DISHWASHER
DISP	DISPOSAL
WASH	WASHING MACHINE
	GROUND FAULT DUPLEX RECEPTACLE
	QUAD RECEPTACLE
	GROUND FAULT QUAD RECEPTACLE
	SPLIT WIRED DUPLEX RECEPTACLE
WP	DUPLEX RECEPTACLE WEATHERPROOF WITH GFCI
EWC	DUPLEX RECEPTACLE FOR ELECTRIC WATER COOLER (EWC)
	220V RECEPTACLE
	ISOLATED GROUND RECEPTACLE
	DUPLEX RECEPTACLE – FLOOR MOUNTED
	DUPLEX RECEPTACLE – CEILING MOUNTED
	SPECIAL RECEPTACLE
	POWER/DATA/TELEPHONE POLE
	MUTI-OUTLET WIREWAY
	DRY TYPE TRANSFORMER (PLAN VIEW)
	DISTRIBUTION SWITCHBOARD
	TELEPHONE AND/OR DATA TERMINAL BOARD
NON-FUSED / FUSED	DISCONNECT SWITCH
NON-FUSED / FUSED	DISCONNECT SWITCH WITH MOTOR STARTER
	MOTOR STARTER
VFD	VARIABLE FREQUENCY DRIVE
	FLUORESCENT FIXTURE (TYPICAL)
EM	FLUORESCENT FIXTURE ON EMERGENCY CIRCUIT OR WITH EMERGENCY BATTER PACK
	CEILING MOUNTED FIXTURE
	PENDANT MOUNTED FIXTURE
	RECESSED FIXTURE
	WALL MOUNTED FIXTURE
	HID WALL PACK
	FLUORESCENT STRIP
	TRACK LIGHTING
	EMERGENCY LIGHTING UNIT
F1	FIXTURE TYPE SYMBOL
CEILING / WALL	EXIT LIGHT (SINGLE FACE)
CEILING / WALL	EXIT LIGHT (DOUBLE FACE)
CEILING / WALL	EXIT LIGHT WITH DIRECTIONAL ARROW (SINGLE FACE)
CEILING / WALL	EXIT LIGHT WITH DIRECTIONAL ARROW(S) (DOUBLE FACE)
42X	FEEDER TAG (SEE FEEDER SCHEDULE)

SYMBOL	EXPLANATION
$	SINGLE POLE SWITCH (SUBSCRIPT AS INDICATED BELOW)
2	TWO POLE SWITCH
3	3–WAY SWITCH
4	4–WAY SWITCH
D	DIMMER SWITCH
K	KEYED SWITCH
T	TIMER SWITCH
M	MANUAL STARTER WITH THERMAL OVERLOAD
F	EXHAUST FAN TIMER SWITCH
OC	OCCUPANCY SENSOR SWITCH
P	PILOT LIGHT
$*$^S	CONTROLLING SWITCH (LETTER INDICATES CONTROL CIRCUIT)
$$	DOUBLE GANG SWITCH
(S)	OCCUPANCY SENSOR SWITCH (CEILING MOUNTED)
	MOTOR (NUMBER INDICATES HORSEPOWER)
T	THERMOSTAT OUTLET
	EXHAUST FAN (CEILING MOUNTED)
	BELL
	PUSHBUTTON
	STOP/START STATION
	"EMERGENCY POWER OFF" MUSHROOM TYPE BUTTON
AMP	SOUND SYSTEM AMPLIFIER
V	SOUND SYSTEM VOLUME CONTROL
CEILING / S / WALL	SOUND SYSTEM SPEAKER
M WALL / M FLOOR	SOUND SYSTEM MICROPHONE
—S—	SOUND SYSTEM CONDUIT
WALL / FLOOR	TELEPHONE OUTLET
WALL / FLOOR	COMPUTER DATA OUTLET
WALL / FLOOR	DATA AND VOICE OUTLET
TV	TELEVISION OUTLET
P CEILING / P WALL	PHOTOCELL
TS	TIME SWITCH
LC	LIGHTING CONTACTOR
F	FIRE ALARM PULL STATION
	FIRE ALARM HORN/STROBE
	FIRE ALARM STROBE
	SMOKE DETECTOR (SUBSCIPT AS INDICATED BELOW)
CO	SMOKE AND CARBON MONOXIDE DETECTOR COMBINATION
B	SMOKE DETECTOR/ALARM BATTERY–BACKED
D	DUCT SMOKE DETECTOR
R	SMOKE DETECTOR WITH ELEVATOR RECALL MODULE
	HEAT DETECTOR
	CARBON MONOXIDE GAS DETECTOR
	TAMPER SWITCH
	FLOW SWITCH
	PRESSURE SWITCH
	POST INDICATION VALVE
	DOOR HOLDER
	FIRE/SMOKE DAMPER
	FIREMAN'S PHONE
CM	CONTROL MODULE
MM	MONITOR MODULE
R	FIRE ALARM RELAY
GAA	FIRE ALARM GENERATOR ANNUNCIATOR
FST	FIRE ALARM TRANSMISSION (MONITORING) DEVICE
FACP	FIRE ALARM CONTROL PANEL
FAA	FIRE ALARM REMOTE ANNUNCIATOR PANEL
	INTERCOM CALL BUTTON
CEILING / S / WALL	INTERCOM SYSTEM SPEAKER
PMI	MASTER INTERCOM CONTROL
	CLOCK SYSTEM WALL CLOCK

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	EWC	ELECTRIC WATER COOLER	NIC	NOT IN CONTRACT
AFP	ARC FAULT PROTECTOR	EWH	ELECTRIC WATER HEATER	NL	NIGHT LIGHT
AIC	AMP INTERRUPTING CURRENT (SYMMETRICAL)	(F)	FUTURE	NFS	NON–FUSED SWITCH
AL	ALUMINUM	FA	FIRE ALARM	NTS	NOT TO SCALE
BG	BELOW GRADE	FLA	FULL LOAD AMPS	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
C	CONDUIT	FS	FUSED SWITCH	OFOI	OWNER FURNISHED OWNER INSTALLED
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	PNL	PANEL
CKT	CIRCUIT	GFP	GROUND FAULT PROTECTOR	(R)	RELOCATE
CO	CONDUIT ONLY	GRC	GALVANIZED RIGID CONDUIT	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
CU	COPPER	GRD	GROUND	TYP	TYPICAL
C/w	CONDUIT WITH	IG	ISOLATED GROUND	UNO	UNLESS NOTED OTHERWISE
DISP	DISPOSAL	MCB	MAIN CIRCUIT BREAKER	WASH	WASHER
DRY	DRYER	MCC	MOTOR CONTROL CENTER	WP	WEATHER PROOF
DW	DISHWASHER	MH	MANHOLE	(D)	DEMOLISH/DELETE
EM	EMERGENCY	MLO	MAIN LUGS ONLY	XFMR	TRANSFORMER
(E)	EXISTING	MW	MICROWAVE	(XP)	EXPLOSION PROOF
EPO	EMERGENCY POWER OFF	(N)	NEW		

NOTE: THIS IS A TYPICAL ABBREVIATION LIST. NOT ALL ABBREVIATIONS AE USED ON THIS PROJECT.

EQUIPMENT SCHEDULE

		ELECTRICAL				DISCONNECT							
UNIT #	DESCRIPTION	VOLTS	PHASE	LOAD		DISCONNECT TYPE	SIZE	FUSE	STARTER SIZE	ENCLOSURE TYPE	NEMA OUTLET TYPE	REFERENCE NOTE	REMARKS
EF–1	EXHAUST FAN	120	1	200 VA	1.7 AMPS	14A	–	–	–	20	–	–	
PTAC–1	THRU THE WALL AC UNIT	240	1	5,000 VA	20.8 AMPS	13A	–	–	–	20	–	–	
EWH–1	ELECTRIC WALL HEATER	120	1	1,500 VA	12.5 AMPS	17A	–	–	–	20	–	–	
WH–1	INSTANTANEOUS ELEC WATER HEATER	240	1	9,000 VA	37.5 AMPS	1A	60A/2P	–	–	20	–	–	

NOTES:

1. NON–FUSED DISCONNECT SWITCH
2. FUSED DISCONNECT SWITCH
3. BREAKER IN ENCLOSURE
4. FUSED DISCONNECT SWITCH WITH SHUNT TRIP
5. MANUAL STARTER WITH THERMAL OVERLOAD
6. MAGNETIC STARTER
7. MAGNETIC STARTER/NON–FUSED DISCONNECT COMBINATION
8. MAGNETIC STARTER/FUSED DISCONNECT COMBINATION
9. MAGNETIC STARTER/BREAKER COMBINATION
10. VARIABLE SPEED DRIVE
11. REDUCED VOLTAGE STARTER
12. DIRECT CONNECTION
13. RECEPTACLE/SPECIAL PURPOSE OUTLET ETC.
14. INTEGRAL RECEPTACLE
15. TWO–SPEED STARTER, COORDINATE WITH MOTOR TYPE
16. JUNCTION OR PULL BOX
17. THERMOSTAT
18. PANELBOARD
19. SEE PANELBOARD SCHEDULE FOR SIZE
20. PROVIDE WITH NEMA 1 ENCLOSURE
21. PROVIDE WITH NEMA 3R ENCLOSURE
22. MAXIMUM CIRCUIT AMPS (MCA)
23. FULL LOAD CURRENT
24. CONDUIT RUN ONLY WITH NYLON PULL STRING (SEE PANEL SCHEDULE OR ONE LINE DIAGRAM)

A. FURNISHED, INSTALLED AND FINAL CONNECTION BY THE ELECTRICAL CONTRACTOR.
B. FURNISHED AND INSTALLED UNDER ANOTHER DIVISION, FINAL CONNECTION BY THE ELECTRICAL CONTRACTOR.
C. FURNISHED UNDER ANOTHER DIVISION, INSTALLED AND FINAL CONNECTION BY THE ELECTRICAL CONTRACTOR.
D. FURNISHED, INSTALLED AND FINAL CONNECTION UNDER ANOTHER DIVISION.

GENERAL NOTES:

1. VERIFY ALL EQUIPMENT LOCATIONS AND CONNECTION REQUIREMENTS (i.e. VOLTAGE, PHASE, FLA, ETC.) WITH MECHANICAL DRAWINGS/SUBMITTALS PRIOR TO STARTING ROUGH IN.
2. ALL FUSES SHALL BE DUAL ELEMENT, TIME DELAY. FINAL BREAKER/FUSE & DISCONNECT SIZE SHALL BE DETERMINED BY MANUFACTURER'S RECOMMENDATION ACTUAL EQUIPMENT INSTALLED.
3. ALL INSULATION ON CONDUCTORS TO BE THHN UNLESS NOTED OTHERWISE. INSULATION ON ALL UNDERGROUND EXTERIOR CONDUCTORS SHALL BE THHW.

GENERAL NOTES:

1. THE ELECTRICAL CONTRACTOR SHALL REVIEW AND COORDINATE WITH ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL, PLUMBING AND OTHER DRAWINGS PRIOR TO BID.
2. SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH THE SPECIFICATIONS BOUND IN A THREE RING BINDER, INDEXED IN A NEAT AND ORDERLY MANNER WITH TYPE AND MODEL NUMBERS INDICATED. SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO: LIGHTING FIXTURES, LAMPS, WIRING DEVICES, OCCUPANCY SENSORS, CONTACTORS, TIME CLOCKS, PHOTOCELLS, RELAYS, SWITCHBOARDS, PANELBOARDS, MOTOR CONTROL CENTERS, SAFETY SWITCHES, MOTOR STARTERS, OVERCURRENT PROTECTION DEVICES, TRANSFORMERS, CONDUCTORS OVER 600 VOLTS AND ALL SPECIAL SYSTEMS SUCH AS FIRE ALARM, LIGHTING CONTROLS, SECURITY SYSTEMS, SOUND SYSTEMS ETC.
3. IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS TO ESTABLISH A STANDARD OF QUALITY. MANUFACTURES CATALOG NUMBERS ARE LISTED AS A BASIS OF DESIGN. ELECTRICAL CONTRACTOR SHALL SUBMIT PRODUCT INFORMATION THAT DEVIATES FROM ORIGINAL DESIGN INTENT AND SPECIFICATION.
4. CONTRACTOR SHALL SECURE AND PAY FOR ALL NECESSARY BUILDING PERMITS AND INSPECTION FEES.
5. ALL IMPACT FEES ASSOCIATED WITH CITY, UTILITY OR SERVICE COMPANIES FOR BUT NOT LIMITED TO POWER, TELEPHONE, FIBER OPTIC & INTERNET SHALL BE THE RESPONSIBILITY OF THE OWNER.
6. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH THE GENERAL CONTRACTOR TO PROVIDE AND INSTALL TEMPORARY POWER FOR PROJECT CONSTRUCTION AS REQUIRED. ALL ENERGY COSTS ARE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
7. THE ELECTRICAL CONTRACTOR SHALL NOTIFY AND COOPERATE WITH THE MECHANICAL CONTRACTOR SUCH THAT NO DUCTS, PIPING, OR EQUIPMENT FOREIGN TO THE OPERATION OF THE ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED IN, ENTER, OR PASS THROUGH ELECTRICAL ROOMS OR SPACES, OR ABOVE OR BELOW ELECTRICAL EQUIPMENT IN OTHER AREAS. THE ELECTRICAL CONTRACTOR SHALL COMPLY WITH THE MOST RECENT VERSION OF THE NATIONAL ELECTRICAL CODE REGARDING CLEARANCES REQUIRED AROUND THE PANELBOARD(S).
8. DO NOT SCALE DRAWINGS VERIFY DIMENSIONS IN FIELD PRIOR TO MAKING ANY ROUGH–INS.
9. ELECTRICAL CONTRACTOR SHALL REVIEW ALL ARCHITECTS ELEVATIONS, SECTIONS AND FLOOR PLANS PRIOR TO ROUGH IN OF ELECTRICAL DEVICE JUNCTION BOXES.
10. ELECTRICAL CONTRACTOR SHALL MEET WITH THE CEILING AND MECHANICAL CONTRACTORS TO COORDINATE LOCATIONS, CLEARANCES, CEILING TYPES AND ROUGH–IN REQUIREMENTS OF ALL LIGHTING FIXTURES PRIOR TO DUCT, PIPING AND CEILING INSTALLATIONS.
11. VERIFY EXACT LOCATION(S) OF ALL EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH–IN. REFER TO THE MECHANICAL SHEETS FOR THE EXACT LOCATION OF THE MECHANICAL EQUIPMENT.
12. ELECTRICAL CONTRACTOR SHALL VERIFY ALL EQUIPMENT DIMENSIONS AND LOCATIONS BEFORE BEGINNING ROUGH–INS. CONSULT CONTRACT DOCUMENT DRAWINGS AND SHOP DRAWINGS TO VERIFY AND MAINTAIN REQUIRED CLEARANCES.
13. ELECTRICAL ROOM DRAWINGS ARE FOR REFERENCE ONLY OF EQUIPMENT QUANTITIES. ELECTRICAL CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF ELECTRICAL ROOM SHOWING DIMENSIONS AND CLEARANCES OF ALL EQUIPMENT AND ELECTRICAL GEAR PROVIDED. COORDINATE LAYOUT WITH ONE–LINE DRAWINGS.
14. CONTRACTOR SHALL VERIFY ACTUAL ELECTRICAL LOADS FROM NAMEPLATE RATINGS OF EACH PIECE OF EQUIPMENT REQUIRING POWER. BRING ANY DISCREPANCIES TO THE ATTENTION OF THE PROJECT ENGINEER.
15. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER, PER INDUSTRY STANDARD AND TO THE SATISFACTION OF THE ARCHITECT AND ENGINEER.
16. WORK, MATERIALS AND EQUIPMENT SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL, STATE AND NATIONAL CODES, STANDARDS AND ORDINANCES.
17. FINAL CONNECTIONS TO EQUIPMENT SHALL BE MADE AS PER MANUFACTURERS WRITTEN INSTRUCTIONS AND APPROVED WIRING DIAGRAMS AND DETAILS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROVIDE ALL MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED.
18. ALL EMPTY RACEWAY SYSTEMS SHALL HAVE A 200lb RATED PULL CORD INSTALLED AND SHALL BE IDENTIFIED AT EACH JUNCTION, PULL AND TERMINATION POINT, USING PERMANENT MARKER IN THE BOX. ID SHALL INDICATE INTENDED USE OF CONDUIT, ORIGINATION AND TERMINATION POINTS OF EACH INDIVIDUAL CONDUIT.
19. ALL PENETRATIONS OF FIRE RATED FLOORS, CEILING AND WALLS SHALL BE SEALED WITH UL LISTED AND RATED FIRE STOP MATERIAL TO MAINTAIN FIRE RATING OF ASSEMBLY.
20. THE MINIMUM SIZE OF THE CONDUCTORS ARE TO BE #12 AWG THHN COPPER, UNLESS INDICATED OTHERWISE ON THE DRAWINGS. STRANDED CONDUCTORS ARE NOT ALLOWED IN CONDUCTORS SMALLER THAN #10 AWG.
21. DETAILS ARE SHOWN ON DIFFERENT SHEETS. THE CONTRACTOR SHALL REFER TO THOSE DETAILS WHETHER OR NOT CALLED IN REFERENCE NOTES.
22. ALL J–BOXES SHALL HAVE MINIMUM DEPTH OF 2⅛" UNLESS OTHERWISE SPECIFIED. SECURE ALL J–BOXES AS SHOWN IN THE DETAILS. FURNISH AND INSTALL PROPER PLASTER RINGS.
23. ALL NEW EXPOSED CONDUIT MUST RUN AGAINST THE WALLS OR CEILINGS. DO NOT PENDANT MOUNT ANY CONDUIT FROM THE CEILINGS.
24. COORDINATE WITH THE OWNER AND ARCHITECT FOR THE EXACT LOCATION OF THE OUTLETS.
25. LIGHT SWITCHES INSTALLED ADJACENT TO EACH OTHER, SHALL BE GANGED TOGETHER WITH ONE PIECE COVERPLATE.
26. USE EPOXY ANCHORS TO SUPPORT THE ELECTRICAL EQUIPMENT. EXPANSION ANCHOR BOLTS ARE NOT ACCEPTED.
27. AT THE END OF THE JOB, PROVIDE BLANK COVER PLATES TO MATCH THE OTHER COVER PLATES FOR ALL J–BOXES WHERE DEVICES HAVE NOT YET BEEN INSTALLED.
28. SEAL AROUND ALL CONDUIT PENETRATIONS THROUGH FIRE RATED WALLS AND CEILINGS WITH FIRE RATED MATERIAL. 3M IS AN APPROVED MANUFACTURER.
29. ALL MATERIALS USED IN THIS INSTALLATION SHALL BE U.L. APPROVED AND NEW.
30. FLEXIBLE CONDUITS CAN ONLY BE USED FOR SHORT RUNS (6'–0" MAXIMUM). FLEXIBLE CONDUITS LOCATED IN AIR PLENUMS SHALL NOT EXCEED 4'–0" IN LENGTH AS PER NATIONAL ELECTRICAL CODE 300.22(b).
31. NO CONDUITS SHALL RUN IN DUCT WORK.
32. PRIOR TO SUBMITTING A BID THE ELECTRICAL CONTRACTOR SHALL INSPECT THE SITE AND INCLUDE IN HIS BID PACKAGE ALL CHARGES DUE TO EXISTING CONDITIONS. SHOP DRAWINGS ARE REQUIRED.
33. THE ELECTRICAL CONTRACTOR SHALL TERMINATE THE ELECTRICAL CONNECTIONS TO ALL THE EQUIPMENT BY PROVIDING THE NECESSARY MALE/FEMALE CONNECTOR, RECEPTACLE, PLUG, ETC.
34. ALL DUPLEX OUTLETS AND SWITCHES SHALL BE 20 AMP, 120 VOLT SPEC GRADE. HUBBELL AND PASS & SEYMOUR AND LEVITON ARE APPROVED MANUFACTURERS.
35. ELECTRICAL BOXES SHALL NOT BE LOCATED IN MASONRY OR CONCRETE COLUMNS, BOND BEAMS OR GROUTED CELLS OF MASONRY WALLS ADJACENT TO OPENINGS WITHOUT COORDINATION WITH THE MASONRY CONTRACTOR.
36. MINIMUM SIZE OF CONDUIT TO BE ¾". ALUMINUM CONDUITS SHALL NOT BE USED, NO EXCEPTIONS TAKEN. USE RIGID STEEL SET SCREW TYPE FITTINGS ONLY. DIE CAST FITTINGS SHALL NOT BE USED.
37. WIRE FOR GENERAL USE SHALL BE COPPER 75° C RATED . WIRING FOR HID FIXTURES WITHIN 3" OF FLUORESCENT BALLAST SHALL BE COPPER, MINIMUM 90° C RATED. CONDUCTOR SIZES INDICATED ARE FOR INSTALLATION IN A MAXIMUM 30° C AMBIENT TEMPERATURE ENVIRONMENT. CONDUCTOR AMPACITY SHALL BE DERATED FOR HIGHER AMBIENT INSTALLATIONS.
38. ELECTRICAL CONTRACTOR TO COMPLY WITH 210.4(b) OF THE NATIONAL ELECTRICAL CODE FOR MULTIWIRE BRANCH CIRCUITS, NOT MORE THAN THREE (3) CIRCUITS TOTAL SHALL BE INSTALLED IN A CONDUIT. BRANCH CIRCUITS SHALL HAVE CONDUCTORS CONSISTENT WITH THE FOLLOWING TABLE:

# CIRCUITS	# WIRE(S)	NEUTRAL	GROUND	TOTAL
3	3	3	1	7
2	2	2	1	5
1	1	1	1	3

CONDUCTORS SHALL BE DERATED AS PER NATIONAL ELECTRICAL CODE, TABLE 310.15(B)(2)(a). PROVIDE AND INSTALL A GROUNDING CONDUCTOR (AS PER NATIONAL ELECTRICAL CODE, ARTICLE 250) IN ALL BRANCH CIRCUIT AND FEEDER RUNS REGARDLESS OF CONDUIT TYPE. CONDUIT ONLY GROUNDING IS NOT ACCEPTABLE. NO EXCEPTIONS TAKEN.

39. CONDUCTORS HAVE BEEN SIZED FOR VOLTAGE DROP AS PER PLANS AND DIRECT ROUTING. ANY DEVIATION IN CONDUIT ROUTING MAY INCREASE THE WIRE AND CONDUIT SIZE. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO INSURE PROPER OPERATING VOLTAGE ON ALL CIRCUITS BOTH INTERIOR AND EXTERIOR. THE VOLTAGE DROP SHALL NOT EXCEED 3% FOR BRANCH CIRCUITS AND 2% FOR FEEDERS FOR A TOTAL OF 5% COMBINED TOGETHER OF BRANCH AND FEEDER CIRCUITS TO THE FARTHEST OUTLET.
40. THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, CONNECTION REQUIREMENT, ETC.) OF EQUIPMENT FURNISHED UNDER OTHER DIVISIONS WITH APPROVED SHOP DRAWINGS PRIOR TO BEGINNING ROUGH–IN.
41. THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING OF ANY DISCREPANCIES FOUND BETWEEN THE INTENDED FUNCTION OF EQUIPMENT AND EQUIPMENT SPECIFIED IN THE CONTRACT DOCUMENTS, A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO ISSUANCE OF THE FINAL BID. FAILURE TO REPORT ANY DISCREPANCY (CATALOG NUMBERS, DISCONTINUED ITEMS, ETC.) DOES NOT RELIEVE THE CONTRACTOR FROM PROVIDING EQUIPMENT WHICH SHALL CONFORM TO AND FULFILL THE INTENT OF THE CONTRACT DOCUMENTS, NOR SHALL IT BE USED AS A CONDITION TO OBTAIN ADDITIONAL FUNDS FROM THE OWNER AFTER THE CONTRACT IS AWARDED. THE CONTRACTOR SHALL REQUEST ALL CLARIFICATIONS OF CONTRACT DOCUMENT REQUIREMENTS IN WRITING TO THE ENGINEER A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO ISSUANCE OF THE FINAL ADDENDUM.
42. ALL VOICE/DATA OUTLET LOCATIONS WILL BE A 4" SQUARE x 2⅛" DEEP OUTLET BOX WITH A SINGLE GANG PLASTER RING. EXTEND A ¾" CONDUIT INTO ACCESSIBLE CEILING SPACE FOR FUTURE EXTENSION BY OWNER. INSTALL 200lb NYLON PULL CORD IN EACH CONDUIT.
43. PROVIDE TYPED LABEL FOR ALL DUPLEX OUTLETS, VOICE/DATA AND LIGHT SWITCHES TO INDICATE WHICH CIRCUIT THEY ARE TIED TO.
44. ELECTRICAL CONTRACTOR SHALL TEST AND VERIFY ALL SYSTEMS WITH PROJECT ENGINEER DURING FINAL INSPECTION TO INSURE PROPER OPERATION. IF TESTS RESULT IN DEFECT THE CONTRACTOR SHALL MAKE ANY CORRECTIONS NECESSARY AT NO ADDITIONAL COSTS TO THE OWNER.
45. ELECTRICAL CONTRACTOR TO PROVIDE RECORD ("AS CONSTRUCTED") DRAWINGS TO THE ENGINEER AT THE END OF THE PROJECT. DRAWINGS SHALL BE IN THE LATEST VERSION OF AUTOCAD DRAWING (.DWG) FORMAT. ELECTRICAL CONTRACTOR SHALL PROVIDE SHOP DRAWING SUBMITTALS FOR ALL EQUIPMENT, PANELBOARDS, LIGHTING FIXTURES, DEVICES, AUXILIARY SYSTEMS, ETC. THAT ARE USED ON THE PROJECT.
46. ALL LABOR, MATERIAL AND WORKMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF 1 YEAR FROM THE DATE OF ACCEPTANCE BY THE TENANT. REPLACE OR REPAIR ALL DEFECTS DURING THE GUARANTEED PERIOD. DEFECTS SHALL BE PROMPTLY CORRECTED.

PLANCHECK BY PMS
May 02, 2012
(A,S,P,M,E,F/P,E/N)

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ELECTRICAL LEGEND, SYMBOLS, AND GENERAL NOTES

E3.1