

GENERAL SPECIFICATIONS

- EXAMINE DRAWINGS AND OTHER SPECIFICATIONS FOR REQUIREMENTS THAT AFFECT WORK SHOWN ON THESE DRAWINGS.
- VISIT SITE AND EXAMINE CONDITIONS UNDER WHICH WORK MUST BE PERFORMED. REPORT ADVERSE CONDITIONS IN WRITING TO ARCHITECT. COMMENCEMENT OF WORK SHALL BE CONSTRUED AS COMPLETE ACCEPTANCE OF EXISTING CONDITIONS INCLUDING PREPARATORY WORK DONE BY OTHERS.
- GIVE NOTICES, FILE PLANS, OBTAIN PERMITS AND LICENSES, PAY FEES AND BACK CHARGES, AND OBTAIN NECESSARY APPROVALS FROM AUTHORITIES THAT HAVE JURISDICTION.
- PERFORM WORK AS REQUIRED BY CODES, REGULATIONS AND LAWS OF LOCAL, STATE AND FEDERAL GOVERNMENTS AND OTHER AUTHORITIES WITH LAWFUL JURISDICTION.
- MATERIAL AND EQUIPMENT SHALL BE UL, NEMA, ANSI, IEEE, ADA & CBM APPROVED FOR INTENDED SERVICE. MATERIAL AND INSTALLATION SHALL MEET REQUIREMENT OF NATIONAL AND STATE ELECTRICAL CODE.
- MAINTAIN RECORD DRAWINGS ON SITE. RECORD SET MUST BE COMPLETE, CURRENT AND AVAILABLE FOR INSPECTION WHEN REQUISITIONS FOR PAYMENT ARE SUBMITTED.
- GUARANTEE WORK IN WRITING FOR ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE. REPAIR OR REPLACE DEFECTIVE MATERIALS OR INSTALLATION AT NO COST TO OWNER. CORRECT DAMAGE CAUSED IN MAKING NECESSARY REPAIRS AND REPLACEMENTS UNDER GUARANTEE AT NO COST TO OWNER.
- SUBMIT GUARANTEE TO OWNER BEFORE FINAL PAYMENT. STATEMENT OF GUARANTEE REQUIREMENTS SHALL NOT BE INTERPRETED TO LIMIT OWNER'S RIGHTS UNDER LAW AND THIS CONTRACT.
- DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS. PROVIDE INFORMATION AND COMPONENTS SHOWN ON RISER DIAGRAMS BUT NOT SHOWN ON PLANS, AND VICE VERSA AS IF EXPRESSLY REQUIRED ON BOTH.
- UTILIZE MOLDED CASE CIRCUIT BREAKERS. MINIMUM INTERRUPTING CAPACITY SHALL BE 10,000 AMPS SYMMETRICAL AT 240 VOLTS.
- TEMPORARY LIGHT AND POWER SHALL BE PROVIDED ON SITE BY THE ELECTRICAL CONTRACTOR. COST OF ELECTRICITY SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
- ADDRESS QUESTIONS REGARDING DRAWINGS TO ARCHITECT ON E.B. BEFORE AWARD OF CONTRACT. OTHERWISE, ARCHITECT INTERPRETATION OF MEANING AND INTENT OF DRAWINGS SHALL BE FINAL.
- SUBMIT SHOP DRAWINGS AND PRODUCT DATA WITHIN THIRTY (30) DAYS AFTER AWARD OF CONTRACT. CHECK, STAMP AND MARK WITH PROJECT NAMES SUBMITTALS BEFORE TRANSMITTING TO ARCHITECT. INDICATE DEVIATIONS FROM CONTRACT DOCUMENTS. SHOP DRAWINGS SHALL BE PROVIDED FOR ALL EQUIPMENT SHOWN ON THE DRAWINGS.
- DEVIATION FROM CONTRACT DOCUMENTS, OR PROPOSED SUBSTITUTION OF MATERIALS OR EQUIPMENT FOR THOSE SPECIFIED, SHALL BE REQUESTED IN SEPARATE LETTER, WHETHER DEVIATIONS ARE DUE TO FIELD CONDITIONS, STANDARD SHOP PRACTICE, OR OTHER CAUSE.
- SCHEDULE AT LEAST THREE (3) WORKING DAYS, EXCLUSIVE OF TRANSMITTAL TIME FOR SUBMITTAL REVIEW.
- ALL WIRING SHALL BE RUN CONCEALED UNLESS SPECIFIED OTHERWISE.
- ALL EQUIPMENT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER, RECTILINEAR TO BUILDING STRUCTURE.
- LOCATION OF MECHANICAL EQUIPMENT THAT REQUIRE ELECTRICAL CONNECTIONS ARE SHOWN ON THE MECHANICAL DRAWINGS.
- THE ELECTRICAL CONTRACTOR SHALL CONSULT AND COOPERATE WITH CONTRACTORS OF OTHER TRADES TO AVOID ANY INTERFERENCE IN THE INSTALLATION OF THEIR RESPECTIVE EQUIPMENT. CONTRACTOR SHALL REVIEW ALL TRADES' CONTRACT DOCUMENTS TO DETERMINE SPECIFIC MOUNTING LOCATIONS FOR ELECTRICAL EQUIPMENT. COORDINATE EXACT MOUNTING LOCATIONS WITH THE ARCHITECT.
- BRANCH CIRCUIT WIRING MAY NOT BE SHOWN GRAPHICALLY ON DRAWINGS AND MAY BE INDICATED BY CIRCUIT NUMBERS BESIDE FIXTURES, DEVICES AND EQUIPMENT.
- ALL NEW WIRING SHALL BE TYPE THHN/THWN RATED 75-90°C, 600V. WET-DRY LOCATIONS. MINIMUM BRANCH CIRCUIT WIRING SHALL BE NO. 12 AWG SOLID COPPER. BRANCH CIRCUITS LONGER THAN 75 FEET FOR 120 VOLTS SHALL BE AT LEAST NO. 10 AWG FROM PANEL TO LAST OUTLET.
- ALL GROUNDING SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE OR / AS AMENDED BY THE LOCAL AUTHORITY.
- ALL FIREPROOFING FOR ELECTRICAL PENETRATIONS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
- NO CONDUIT SMALLER THAN 3/4 INCH ELECTRICAL TRADE SIZE SHALL BE USED UNLESS SPECIFICALLY CALLED FOR ON THE DRAWINGS.
- WIRING DEVICES SHALL BE SPECIFICATION GRADE, 20 AMP, WITH SMOOTH NYLON DEVICE PLATES AS MANUFACTURED BY HUBBELL, OR EQUAL.
- MOUNTING HEIGHTS OF ELECTRICAL EQUIPMENT SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:
 - CONVENIENCE RECEPTACLE (GENERAL), 1'-6" FROM FLOOR TO CENTERLINE.
 - CONVENIENCE RECEPTACLE (OFFICE), 1'-6" FROM FLOOR TO CENTERLINE.
 - TELEPHONE OUTLETS, 1'-6" FROM FLOOR TO CENTERLINE.

GENERAL NOTES:

- REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR MOUNTING HEIGHTS AND EXACT LOCATIONS OF ALL DEVICES.
- ALL FLOOR, MASONRY WALLS AND STRUCTURAL CEILING PENETRATIONS SHALL BE SLEEVED.
- PROVIDE FIRE/MOISTURE SEAL FOR WALL, FLOOR OR CEILING PENETRATIONS.
- DO NOT LAY CABLES OR RACEWAY ON, OR SUPPORT FROM SUSPENDED CEILING OR PIPING AND DUCTWORK.
- OUTLET BOXES SHALL BE MOUNTED FLUSH. CONDUIT SHALL BE RUN CONCEALED. WHERE WALLS ARE BLOCK, DEVICES AND WIRING SHALL BE SURFACE MOUNTED. PROVIDE WIREMOLD OR EQUAL TO SURFACE MOUNTED RACEWAY WITH FINISHED BOXES.
- ELECTRICAL CONDUITS -- THESE SHALL BE NOT BE MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS (360 DEGREES TOTAL) BETWEEN ALL POINTS PER NEC. FLEXIBLE CONDUIT CONNECTIONS SHALL BE A MAXIMUM OF 6'-0".
- MC TYPE CONDUCTOR WITH INTEGRAL GROUND WIRE MAY BE UTILIZED FOR POWER AND LIGHTING CIRCUITS. CABLES SHALL BE UTILIZED ONLY WHERE COMPLETELY CONCEALED AND PERMITTED BY LOCAL AUTHORITY HAVING JURISDICTION. ALL WIRING IN CONDUIT IN AND UNDER SLAB AND OUTSIDE IS REQUIRED TO BE WET LOCATION LISTED PER NEC 300.5
- DEVICES AND DEVICE PLATES SHALL BE WHITE IN COLOR.

LIGHTING NOTES:

- ALL CONDUIT, FIXTURES AND OUTLETS ARE SHOWN DIAGRAMMATICALLY. EXACT LOCATION AND METHOD OF SUPPORT SHALL BE DETERMINED IN THE FIELD, EXCEPT WHERE SPECIFIC DIMENSIONS AND DETAILS ARE SHOWN.
- ALL LIGHTING FIXTURE SPACING DIMENSIONS AND MOUNTING HEIGHTS ARE RECOMMENDED CONDITIONS. SLIGHT VARIATIONS WHERE NECESSARY TO AVOID INTERFERENCE SHALL BE DETERMINED IN THE FIELD.
- MOUNTING HEIGHTS OF ELECTRICAL EQUIPMENT SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED:
 - LIGHT SWITCHES, 4'-0" FROM FLOOR TO CENTERLINE.
 - LIGHTING PANELBOARDS, 6'-6" FROM FLOOR TO TOP.
 - LIGHT FIXTURES - SEE LIGHTING FIXTURE SCHEDULE, MOUNTING HEIGHT OF FIXTURE IS MEASURED TO BOTTOM OF REFLECTOR.
- WHERE REQUIRED, ADDITIONAL SUPPORT STEEL FOR LIGHTING INSTALLATION SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. SEISMIC RESTRAINTS SHALL BE INCLUDED AS PER STATE BUILDING CODE.
- PROVIDE SEPARATE UN-SWITCHED LEG TO ALL EMERGENCY LIGHT FIXTURES CONTAINING EMERGENCY BALLASTS.
- FOR RENOVATION PROJECTS, PROVIDE NEW BRANCH CIRCUITRY BETWEEN ALL NEW FIXTURES BEING PROVIDED, UNLESS NOTED OTHERWISE ON DRAWINGS.

ABBREVIATIONS

A/AMP	AMPERE	IMC	INTERMEDIATE METALLIC CONDUIT
AC	ALTERNATING CURRENT	JB	JUNCTION BOX
AF	AMPERE FRAME	KVA	KILOVOLT - AMPERE
AFF	ABOVE FINISHED FLOOR	KW	KILOWATT
AFG	ABOVE FINISHED GRADE	LTG	LIGHTING
AIC	AMPERE INTERRUPTING CAPACITY	PWR	POWER
AL	ALUMINUM	MCB	MAIN CIRCUIT BREAKER
AT	AMPERE TRIP	MLO	MAIN LUGS ONLY
ATS	AUTOMATIC TRANSFER SWITCH	MTG	MOUNTING
AWG	AMERICAN WIRE GAUGE	MTD	MOUNTED
C	CONDUIT	MCC	MOTOR CONTROL CENTER
CKT	CIRCUIT	NEC	NATIONAL ELECTRICAL CODE
CB	CIRCUIT BREAKER	NS	NON - SYSTEM
CU	COPPER	NTS	NOT TO SCALE
CL	CENTERLINE	No. #	NUMBER
DC	DIRECT CURRENT	UOI	UNLESS OTHERWISE INDICATED
DE	DUAL ELEMENT	PC	PLUMBING CONTRACTOR
DWG	DRAWING	RPM	REVOLUTIONS PER MINUTE
EC	ELECTRICAL CONTRACTOR	RMS	ROOT MEAN SQUARE VALUE
EMH	ELECTRICAL MANHOLE	RGS	RIGID STEEL CONDUIT
EWC	ELECTRIC WATER COOLER	SF	SQUARE FOOT
EMT	ELECTRIC METALLIC CONDUIT	SN	SOLID NEUTRAL
FLMT	FLEXIBLE LIQUID TIGHT METALLIC TUBING	SPD	SURGE PROTECTION DEVICE
GC	GENERAL CONTRACTOR	SWBD	SWITCHBOARD
GND	GROUND	TYP	TYPICAL
GFI	GROUND FAULT INTERRUPTING	V	VOLTS
GRMC	GALVANIZED RIGID METAL CONDUIT	VA	VOLT - AMPERE
GF	GABLE FAN	VFD	VARIABLE FREQUENCY DRIVE
HVAC	HEATING, VENTILATION AND AIR CONDITIONING	WP	WEATHER PROOF
HP	HORSEPOWER	WR	WATER RESISTANT

SYMBOL LEGEND

CO ₂	CO2 SENSOR	⊕	SIMPLEX RECEPTACLE (WALL MOUNT)
NOS	NIGHT OVERRIDE SENSOR	⊕	SIMPLEX TWISTLOCK RECEPTACLE (WALL MOUNT)
TS	THERMOSTAT LOCATION	⊕	DUPLEX RECEPTACLE (WALL MOUNT)
■	ELECTRICAL PANEL (SURFACE MOUNT)	⊕	DUPLEX TWISTLOCK RECEPTACLE (WALL MOUNT)
■	ELECTRICAL PANEL (FLUSH MOUNT)	⊕	DUPLEX RECEPTACLE (HORIZONTAL WALL MOUNT)
□	NON FUSED DISCONNECT	⊕	QUADRUPLX RECEPTACLE (WALL MOUNT)
⊕	CIRCUIT BREAKER DISCONNECT	⊕	ISOLATED GROUND DUPLEX RECEPTACLE (WALL MOUNT)
⊕	FUSED DISCONNECT	⊕	ISOLATED GROUND QUADRUPLX RECEPTACLE (WALL MOUNT)
⊕	BELL / BUZZER	⊕	DUPLEX RECEPTACLE (FLOOR MOUNT)
⊕	PUSH BUTTON	⊕	QUADRUPLX RECEPTACLE (FLOOR MOUNT)
⊕	TELE-POWER POLE	⊕	ISOLATED GROUND DUPLEX RECEPTACLE (FLOOR MOUNT)
\$	SINGLE-POLE SWITCH	⊕	DUPLEX RECEPTACLE (CEILING MOUNT)
\$3	THREE-WAY SWITCH	⊕	ISOLATED GROUND DUPLEX RECEPTACLE (CEILING MOUNT)
\$4	FOUR-WAY SWITCH	⊕	TWISTLOCK RECEPTACLE (CEILING MOUNT)
\$D	TRIMMER SWITCH	⊕	ISOLATED GROUND TWISTLOCK RECEPTACLE (CEILING MOUNT)
\$	KEY TURN SWITCH	⊕	SPECIAL OUTLET (NEMA CONFIG AS NOTED)
\$P	SINGLE POLE SWITCH WITH PILOT LIGHT.	X	TELEPHONE/DATA OUTLET (RJ45), X INDICATES NUMBER OF DEVICES
C	'IP' SECURITY CAMERA. 'PTZ' INDICATES PAN/TILT/ZOOM. 'FIXED' INDICATES FIXED POSTING. 'C' INDICATES CEILING MOUNTED, 'W' INDICATES WALL MOUNTED	X	DATA OUTLET (RJ45), X INDICATES NUMBER OF DEVICES
NVR	CAMERA NETWORK VIDEO RECORDER	X	TELEPHONE (RJ11), X INDICATES NUMBER OF DEVICES
DVR	DIGITAL VIDEO RECORDER	X	DATA / PHONE JACK (FLOOR MOUNT), X INDICATES NUMBER OF DEVICES
POE	POWER OVER ETHERNET SWITCH	⊕	JUNCTION BOX
SP	SPEAKER	⊕	MOTOR
TX	TEMPERATURE SENSOR. 'X' INDICATES SENSOR NUMBER	⊕	SMOKE DETECTOR
		⊕	PHOTOCELL
		⊕	HORN / STROBE
		⊕	ALARM

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ELECTRICAL SYMBOLS, NOTES, SPECIFICATIONS

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