

ELECTRICAL SYMBOLS

LIGHTING SYMBOLS			SPECIAL SYSTEMS SYMBOLS		
SYMBOL	DESCRIPTION	MH (UON)	SYMBOL	DESCRIPTION	MH (UON)
	SINGLE POLE TOGGLE SWITCH	48" TOD		FIRE ALARM HORN TYPE SPEAKER	NOTE 5
	SWITCH: SUB-LETTER INDICATES FIXTURES CONTROLLED (a)	48" TOD		FIRE ALARM FLASHING STROBE LIGHT - WALL MOUNTED	NOTE 5
	DOUBLE POLE TOGGLE SWITCH	48" TOD		FIRE ALARM HORN AND FLASHING STROBE LIGHT	NOTE 5
	THREE WAY TOGGLE SWITCH (SPOT)	48" TOD		COMBINATION FIRE ALARM HORN AND FLASHING STROBE LIGHT	NOTE 5
	FOUR WAY TOGGLE SWITCH (DPDT)	48" TOD		S - CEILING SPEAKER, F - FIRE ALARM SPEAKER	
	KEY OPERATED SWITCH	48" TOD		FIRE ALARM SPEAKER W/ STROBE	
	THREE WAY DIMMER SWITCH: SUB-LETTER INDICATES FIXTURES CONTROLLED (a)	48" TOD		HORN TYPE SPEAKER	
	MANUAL STARTER W/ OVERLOADS	48" TOD		MAGNETIC DOOR HOLDER	
	SWITCH W/ PILOT LIGHT	48" TOD		DIGITAL ALARM COMMUNICATOR TRANSMITTER	
	DIMMER SWITCH	48" TOD		FIRE ALARM ANNUNCIATOR PANEL	
	4 BUTTON DIMMER SWITCH	48" TOD		FIRE ALARM CONTROL PANEL	
	LOW VOLTAGE CONTROL SWITCH	48" TOD		RESCUE ASSISTANCE MASTER CONTROL PANEL	48" TOD
	MANUAL TIME SWITCH	48" TOD		RESCUE ASSISTANCE REMOTE STATION	48" TOD
	MOMENTARY CONTACT SWITCH	48" TOD		FIRE ALARM TRANSPONDER	48" TOD
	SWITCH WITH WEATHERPROOF ENCLOSURE	48" TOD		DOOR SOLENOID, ELECTRIC STRIKE - LOCKING DEVICE CONNECTION POINT	48" TOD
	OCCUPANCY SENSOR (CEILING & WALL MOUNTED)			FIRE ALARM PULL STATION	48" TOD
	VACANCY SENSOR			HEAT DETECTOR: E - ELEVATOR CONTROLS	
	TIME CLOCK			SMOKE DETECTOR (PHOTOELECTRIC): AB - AUDIBLE BASE, E - ELEVATOR CONTROLS	
	RELAY			SMOKE DETECTOR (IONIZATION)	
	LIGHTING CONTACTOR			FIRE ALARM DUCT DETECTOR WITH RELAY	
	PHOTOCELL OR PUSHPLATE SWITCH			CARBON MONOXIDE DETECTOR	
	EMERGENCY SHUNT RELAY, UL 924 LISTED (CEILING MOUNTED)			FIRE ALARM SYSTEM ADDRESSABLE RELAY - CONTROL	
	LIGHTING FIXTURE: RECESSED, SURFACE, OR PENDANT MOUNTED - TYPE AS SPECIFIED			FIRE ALARM SYSTEM ADDRESSABLE RELAY - MONITOR	
	LIGHTING FIXTURE: 2 BALLAST			FIRE ALARM SYSTEM REMOTE ALARM LIGHT	
	LIGHTING FIXTURE: INDUSTRIAL			FLOW SWITCH CONNECTION	
	LIGHTING FIXTURE: WALL MOUNTED - TYPE AS SPECIFIED			TAMPERS SWITCH CONNECTION	
	LIGHTING FIXTURE: RECESSED, SURFACE, OR PENDANT MOUNTED			FIRE ALARM LINEAR BEAM SMOKE DETECTOR: TRANSMITTER (LBT) AND RECEIVER (LBR)	
	LIGHTING FIXTURE: WALL MOUNTED - TYPE AS SPECIFIED			FIRE FIGHTER'S TELEPHONE JACK	48" TOD
	WALL WASHER			MONITOR SYSTEM JUNCTION BOX	36" CTR
	ADJUSTABLE WALL WASHER			AMPLIFIER	
	LIGHTING FIXTURE ON EMERGENCY OR NIGHT LIGHT CIRCUIT (NL)			KEYPAD	48" TOD
	EMERGENCY BATTERY PACK: W/ NUMBER OF HEADS INDICATED			CARD READER	48" TOD
	EMERGENCY BATTERY PACK: W/ REMOTE HEADS			DOOR ALARM CONTACT	48" TOD
	REMOTE EMERGENCY HEAD			ROUGH-IN JUNCTION BOX FOR CCTV CAMERA	
	EMERGENCY BATTERY PACK: SEMI RECESSED, CEILING MOUNT			PUSH BUTTON PLATE	
	EXIT SIGN: CEILING OR PENDANT MOUNTED (SHADED PORTION INDICATES FACE)			TELEVISION ANTENNA OUTLET	18" CTR
	EXIT SIGN: WALL MOUNTED - END, BACK			CABLE TV OUTLET	
	EXIT SIGN: W/ DIRECTIONAL ARROWS			TELEVISION SYSTEM SPLITTER - 2 WAY, 4 WAY	
	POLE MOUNTED LIGHTING FIXTURE: SINGLE HEAD, DOUBLE HEAD			A/V CREDENZA LOCATION	
	POLE MOUNTED LIGHTING FIXTURE: SINGLE, POLE TOP			A/V INPUT PLATE	
	LIGHTING POLE (SPORTS)			A/V IN WALL RACK	
				A/V MONITOR TV	
				A/V SCREEN CONTROL	
				A/V SCHEDULE PANEL	
				A/V SIGNAGE TV	
				A/V TOUCH PANEL	
				DATA/TELEPHONE OUTLET: CEILING MOUNTED	
				TELEPHONE OUTLET	18" CTR
				DATA OUTLET	18" CTR
				TELEPHONE OUTLET, WALL MOUNTED	54" CTR
				TELEPHONE OUTLET, EMERGENCY	54" TOD
				DATA/TELEPHONE OUTLET: UNSHADED AREA - DATA, SHADED AREA - VOICE NUMERALS INDICATE QUANTITY OF WIRED JACKS	18" CTR
				TELEPHONE OUTLET, FLOOR MOUNTED	
				DATA OUTLET, FLOOR MOUNTED	
				DATA/TELEPHONE OUTLET, FLOOR MOUNTED: UNSHADED AREA - DATA, SHADED AREA - VOICE NUMERALS INDICATE QUANTITY OF WIRED JACKS	
				COMBINATION POWER & TELEPHONE OUTLET, FLOOR MOUNTED	
				COMBINATION POWER & DATA OUTLET, FLOOR MOUNTED	
				COMBINATION POWER & DATA/TELEPHONE OUTLET, FLOOR MOUNTED	
				WIRELESS ACCESS POINT	

POWER SYMBOLS			CIRCUIT DESIGNATIONS		
SYMBOL	DESCRIPTION	MH (UON)	SYMBOL	DESCRIPTION	MH (UON)
	COMBINATION SWITCH AND SIMPLEX RECEPTACLE	48" TOD		LIGHTING FIXTURE TYPE	
	COMBINATION SWITCH AND DUPLEX RECEPTACLE	48" TOD		CIRCUIT DESIGNATION (#12AWG MINIMUM)	
	SIMPLEX RECEPTACLE	18" CTR		POWER CIRCUIT DESIGNATION (#12AWG MINIMUM)	
	DUPLEX RECEPTACLE: E (IF SHOWN) INDICATES CONNECTED TO EMERGENCY CIRCUIT	18" CTR		SWITCH DESIGNATION	
	DUPLEX RECEPTACLE: CEILING MOUNTED				
	DUPLEX RECEPTACLE: SPLIT WIRED, BOTTOM HALF SWITCHED	18" CTR			
	DUPLEX RECEPTACLE: PEDESTAL TYPE				
	DUPLEX RECEPTACLE: MOUNTED ABOVE BACKSLASH OR COUNTER				
	DUPLEX RECEPTACLE: GROUND FAULT INTERRUPTER TYPE	18" CTR			
	DUPLEX RECEPTACLE: GFI MOUNTED ABOVE BACKSLASH OR COUNTER				
	DUPLEX RECEPTACLE: MOUNTED HIGH	84" CTR			
	DUPLEX RECEPTACLE: ISOLATED GROUND	18" CTR			
	DUPLEX RECEPTACLE: MULTI OUTLET ASSEMBLY: DARK SQUARES INDICATE PREWIRED RECEPTACLE LOCATIONS	54" CTR			
	DUPLEX RECEPTACLE: MULTI OUTLET ASSEMBLY: SIZE AS INDICATED	18" CTR			
	DOUBLE DUPLEX RECEPTACLE	18" CTR			
	DOUBLE DUPLEX RECEPTACLE ISOLATED GROUND	18" CTR			
	SIMPLEX RECEPTACLE: CART RECHARGE	36" CTR			
	DUPLEX RECEPTACLE: CART RECHARGE	36" CTR			
	DUPLEX RECEPTACLE: PAY PHONE	54" CTR			
	SPECIAL RECEPTACLE: NEMA 6-20R (30A, 2P, 3W, 208V)	18" CTR			
	SPECIAL RECEPTACLE: NEMA 6-30R (30A, 2P, 3W, 208V)	18" CTR			
	SPECIAL RECEPTACLE: NEMA 14-20R (20A, 3P, 4W, 208/120V)	18" CTR			
	SPECIAL RECEPTACLE: NEMA 15-30R (30A, 3P, 4W, 208V)	18" CTR			
	SPECIAL RECEPTACLE: FLOOR MOUNTED, NEMA 6-20R				
	SPECIAL RECEPTACLE: PEDESTAL TYPE, NEMA 6-20R				
	TELEVISION RECEPTACLE	72" CTR			
	TELEVISION RECEPTACLE	18" BFC			
	CLOCK HANGER OUTLET	84" CTR			
	PROGRAM CLOCK OUTLET: SINGLE FACE, DOUBLE FACE	54" CTR			
	EMERGENCY POWER OFF SWITCH	48" TOD			
	JUNCTION BOX				
	JUNCTION BOX - WALL MOUNTED	18" TOD			
	EQUIPMENT CONNECTION AS NOTED				
	EQUIPMENT CONNECTION AS NOTED - WALL MOUNTED	48" TOD			
	HEATER CONNECTION - NUMBER INDICATES KILOWATTS (KW)				
	HEATER CONNECTION - CEILING MOUNTED				
	CLOSE CIRCUIT BREAKER				
	NON-FUSED DISCONNECT SWITCH: 30A (UON)				
	FUSED DISCONNECT SWITCH: FUSE SIZE AS INDICATED (40A)				
	MAGNETIC MOTOR STARTER				
	COMBINATION MAGNETIC MOTOR STARTER: ABBREVIATION INDICATES TYPE - FVNR, FVR, RVAT, 2S1W, 2S2W, SST				
	VARIABLE FREQUENCY CONTROLLER W/ FUSED DISCONNECT SWITCH				
	VARIABLE FREQUENCY DRIVE W/ DISCONNECT SWITCH				
	MOTOR: NUMERALS (IF SHOWN) INDICATE HP				
	GENERATOR: NUMERALS (IF SHOWN) INDICATE KW				
	MANUAL MOTOR STARTER W/ THERMAL OVERLOADS				
	MOTOR SWITCH				
	MECHANICAL EQUIPMENT CONNECTION - WITH MOTOR				
	MECHANICAL EQUIPMENT CONNECTION - NO MOTOR				
	CONTROL PANEL: TYPE AS INDICATED				
	MOMENTARY CONTACT START-STOP PUSHBUTTON STATION	48" TOD			
	MAINTAINED CONTACT START-STOP PUSHBUTTON STATION	48" TOD			
	MAINTAINED CONTACT EMERGENCY STOP PUSHBUTTON STATION	48" TOD			
	BRANCH PANELBOARD	90" TOD			
	DISTRIBUTION PANELBOARD				
	TRANSFORMER, CONCRETE PAD MOUNTED				

ELECTRICAL ABBREVIATIONS

NOTE: THIS IS A STANDARD ABBREVIATION LIST. SOME ABBREVIATIONS MAY NOT APPEAR ON THE ACCOMPANYING DRAWINGS.

SYMBOL	DESCRIPTION	MH (UON)	SYMBOL	DESCRIPTION	MH (UON)
2S1W	2 SPEED SINGLE WINDING		LA	LIGHTNING ARRESTOR	
2S2W	2 SPEED DOUBLE WINDING		LC	LIGHTING CONTACTOR	
A	AMP		LP	LIGHTING PANEL	
AC	AIR CONDITIONING		LRA	LOCKED ROTOR AMPERES	
AC	ALTERNATING CURRENT		LTG	LIGHTNING	
AFCI	ARC FAULT CIRCUIT INTERRUPTER		LTNG	LIGHTNING	
AFD	ABOVE FINISHED FLOOR				
AHU	AIR HANDLING UNIT		MTV	MASTER ANTENNA TELEVISION	
AIC	AMPS INTERRUPTING CAPACITY		MCB	MAIN CIRCUIT BREAKER	
ALT	ALTERNATE		MCC	MOTOR CONTROL CENTER	
ANN	ANNUNCIATOR		MEL	METAL HALIDE	
APPROX	APPROXIMATELY		MH	MANHOLE, MOUNTING HEIGHT	
ARCH	ARCHITECT		MLO	MAIN LUGS ONLY	
ATC	AUTOMATIC TEMPERATURE CONTROL		MSF	MOTOR STARTER PANEL	
ATS	AUTOMATIC TRANSFER SWITCH		MTD	MOUNTED	
AV	AUDIOVISUAL		MV	MERCURY VAPOR	
AWG	AMERICAN WIRE GAUGE		NC	NORMALLY CLOSED	
BAS	BUILDING AUTOMATION SYSTEM		NEC	NATIONAL ELECTRIC CODE	
BFC	BELOW FINISHED CEILING		NFSS	NON FUSED SAFETY SWITCH	
BFG	BELOW FINISHED GRADE		NO	NUMBER, NORMALLY OPEN	
BLOG	BUILDING		OC	ON CENTER	
BOD	BOTTOM OF DEVICE		OCFI	OWNER FURNISHED CONTRACTOR INSTALLED	
C	CONDUIT		OFDI	OWNER FURNISHED EQUIPMENT INSTALLED	
CND	CABLE TELEVISION		OH	OVERHEAD	
CATV	CIRCUIT BREAKER		P	POLE	
CB	CIRCUIT BREAKER		PS	PUSHBUTTON	
CCTV	CLOSED CIRCUIT TELEVISION		PF	POWER FACTOR	
CKT, CCT	CIRCUIT		FCC	POWER FACTOR CORRECTION	
CL	CURRENT LIMITING		FCC	POWER FACTOR CORRECTION	
CLQ	CEILING		FL	FLOOR	
CONN	CONNECT		FLA	FULL LOAD AMPERES	
CPT	CONTROL POWER TRANSFORMER		FLR	FLOOR	
CT	CURRENT TRANSFORMER		FR	FRAME	
CTR	CENTER		FU	FUSED, FUSIBLE	
CU, CO	COPPER		FUSS	FUSED SAFETY SWITCH	
CX	CONNECT TO EXISTING		FVNR	FULL VOLTAGE NON REVERSING	
DC	DIRECT CURRENT		FVR	FULL VOLTAGE REVERSING	
DISC	DISCONNECT		GEN	GENERATOR, GENERAL	
DN	DOWN		GFCI	GROUND FAULT CIRCUIT INTERRUPTER	
DP	DISTRIBUTION PANEL		GFI	GROUND FAULT INTERRUPTER	
DPDT	DOUBLE POLE DOUBLE THROW		GFP	GROUND FAULT PROTECTED	
DPST	DOUBLE POLE SINGLE THROW		GFR	GROUND FAULT RELAY	
DT	DOWN THROW		GRD	GROUND	
EA	EMPTY CONDUIT		GRS	GALVANIZED RIGID STEEL	
EACH	EACH		HID	HIGH INTENSITY DISCHARGE	
EC	EMPTY CONDUIT		HQA	HAND OFF AUTOMATIC	
EH	ELECTRIC HEATER		HP	HEAT PUMP, HORSEPOWER	
ELEC	ELECTRIC		HPS	HIGH PRESSURE SODIUM	
ELEV	ELEVATION ELEVATOR		HTR	HEATER	
ETR	EXISTING TO REMAIN		HW	HIGH VOLTAGE	
EW	ELECTRIC WATER COOLER		HZ	HERTZ	
EX	EXISTING		IG	ISOLATED GROUND	
EXP	EXPOSED		JB	JUNCTION BOX	
FA	FIRE ALARM		KCML	THOUSAND CIRCULAR MILS	
FAAP	FIRE ALARM ANNUNCIATOR PANEL		KV	KILOVOLTS	
FACP	FIRE ALARM CONTROL PANEL		KVA	KILOVOLT AMPERES	
FBO	FURNISHED BY OTHERS		KVAR	KILOVOLT AMPERES REACTIVE	
FC	FAN COIL		KW	KILOWATTS	
FDR	FEEDER				
FLA	FULL LOAD AMPERES				
FLR	FLOOR				
FR	FRAME				
FU	FUSED, FUSIBLE				
FUSS	FUSED SAFETY SWITCH				
FVNR	FULL VOLTAGE NON REVERSING		</		