5 4 3 2 1

EXTERIOR ELECTRICAL LEGEND

EXISTING	NEW	
40'-4	#2 40'-4	Pole, No., Length, and Class as indicated
6M	6M 12 MT	Down guy and anchor. Strength in lbs. indicated (Anchor strength is based on holding power in Class 7 soil) "MT" indicates twin eye anchor rod
	II	Pole mounted roadway or area lighting installation, watts as indicated, Roman Numeral indicates IES type distribution
		Pole mounted floodlighting installation. Arrows indicate no. of luminaires and approx. horiz. aiming
4-#6 ACSR OHS	2#6 WP OHS	Overhead powerline-secondary or service drop No., size and type of conductor and line voltage as indicated.
3#1 13.8KV OHP	3#1 OHP	Overhead powerline-primary distribution. No., size, and type of conductors and line voltage as indicated
OHC	OHC	Overhead communications line
SL 1#6	AFL 1-#6 CWC	Series street light and airfield lighting circuit respectively. No., size and type of wire as indicated.
4#8, type USE DBP DBS DBC	DBP DBS DBC	Direct buried line. The letter "P" designates primary power (#8 min. if single-conductor cables are used), "S" secondary power (low voltage), "C" a communications type line. Number, size, and type of cable as indicated
4P 4P/2C 2C	4P 3-#3, 15 KV 1-#3 600V +3 Spare 2C	Underground duct line, concrete encased (See specs). Numeral indicates quantity of ducts (4" min. if not identified). Letter "P" indicates electrical power line, "C" a communications type line). No., size and voltage of cable as indicated or per cross section detail
UG	* UG	Underground distribution-misc. configurations. No. and size of conductors and raceway as described (*) or detailed
PB#4	HH#2 MH#4	Pullbox, Handhole or manhole. No., and type as indicated
EV	EV	Underground electrical equipment vault (Power or controls)
EP	EP	Electrical equipment in pad mounted cabinet or equipment assembly
	10	Individual transformer for overhead or fenced applicatons. ANSI voltage configuration as indicated, single numeral if present designates kVA rating
	75	Concrete pad mounted transformer installation ANSI (C84.1) voltage configuration as indicated.
PE	PE	Photoelectric control relay
R	R	Aerial automatic recloser.
SS	SS	Aerial auto sectionalizer
#4 G		Grounding system. Electrode and conductor (counterpoise) (Bare copper) size as indicated
2" C		Limits of conduit casing or sleeve
		Capped conduit

ELECTRICAL POWER DIAGRAM LEGEND

LVP 400A	Drawout type circuit breaker assembly ("LVP" indicates Low Voltage Power CB; "IC" indicates insulated case, "MC" molded case CB type). Size as indicated.
	Drawout fuse assembly
2P 30	Molded case circuit breaker, fixed trip. Three pole unless designated '1P' or '2P'
3200 AF 3040 AT	Molded case CB of a given frame size with adjustable trip settings
	Fused cutout or fused switch assembly. Voltage rating and size as indicated
30A 3A	Fuse-power and control applications respectively. Size as noted
9KV 9KV	Surge arrestor - voltage rating and class as noted
5	Power factor correction capacitor-Numeral denotes kvar rating
SS	Ground connection - to standard rod type electrode, to nearest structural steel (#6 min. conductor if not shown)
	Control interface or operating relationship between 2 or more devices (key interlock between breakers, relay/contactor, etc.)

1600A FB FB	Feeder type bus duct (FB) or metal-enclosed bus assemblies (High or medium voltage). (Cu bus if not identified). Ampacity as indicated
	Separable connector in primary distribution line (Elbow terminator and bushing combination)-loadbreak and non-loadbreak styles respectively
KWH	KiloWatt-hour meter (WH is watt-hour meter)
(3) 3000/5	Current transformer (CT). Second numeral of transformation ratio identifies nominal current of metering/accessory circuit. Numeral in parenthesis indicates quantity of CT's
480 (2) 120	Voltage (Potential) transformer (VT/PT), drawout and non-drawout. Quantity and voltage rating as indicated
	Transformer delta connection designation when used by a transformer symbol.
	Transformer grounded-wye connection designation when used by a transformer symbol, direct grounded and resistor grounded respectively. If the ground symbol is missing, then it is an ungrounded or floating wye connection.
AS A VS V	Ammeter and voltmeter with phase selector switch
GFI #2 150 AT 0.2 Sec.	Ground fault interrupting equipment (See specs) with trip setting at designated time delay interlocking control as indicated
52 67 52a	Sensor, device or apparatus (Electrical or electromechanical); Numeral identifies type or function per ANSI/IEEE C37.2

INTERIOR ELECTRICAL LEGEND

	Existing and new, respectively
a	Incandescent or H.I.D. luminaire less then 2' x 2' in size - Letter identifies corresponding switch (Note 5)
+7'	Wall fixture - Mounting height indicated (To fixture ℄) (Note 5)
	Fluorescent or HID luminaire 2' x2' or larger in size (The outlet symbol will normally be omitted in continuous row configurations) (Note 5)
	Ceiling exit light. Arrows identify direction of egress (Note 5)
	Wall exit light - Mounting height indicated (to ℄), arrows identify direction of egress (Note 5)
	Lighting contactor - no. of poles, current and voltage ratings as indicated
EPS	Emergency power system for egress lighting - battery inverter set (or forward transfer UPS), ratings and physical size as indicated
	Battery operated emergency light set, no. of luminaire heads as indicated
E / or / E	Feeder, device or fixture, and fluorescent type fixture, resp. supplied from an emergency circuit. The shaded portion of the fluorescent symbol indicates 2 lamps of a 3 or 4 lamp fixture are supplied from emergency power. A 1-lamp or 2-lamp fixture will be shown shaded or unshaded with the 'E' annotation
J	Junction box, 4" square unless noted otherwise. Ceiling and wall mount types indicated.
D	Dimming control for lighting
S TO	Manual starter with thermal overloads (motor rated switch)
S a	Single pole switch
S2	Double pole single throw switch
S3	Three way switch
S4	Four way switch
SP	Single pole switch with pilot light
ST	Timer operated switch
SK	Key operated switch
SMC	Momentary contact switch

(Switches: 4'-0" up Letters a, b, c, etc. where used, identify switched fixtures)

20A	2P,3W grounding type receptacle - 125V, conventional duplex & simplex "SW" indicates split wired, CO= clockoutlet, FO= fan outlet, IG= isolated ground type outlets, NEMA 5-XX series. Default size is 15A. See note 8.
X"	Receptacle strip assembly - Duplex NEMA 5-15 receptacles spaced at interval indicated (See Floor Plans) in surface mounted raceway. Wall mounted at 4 ft. AFF, consecutive phase connections (in 3Ø applications) unless noted otherwise
¾HP	Electric water cooler (Drinking Water Dispenser) Size as noted
SM SM R	Individual floor outlet assembly. 'SM' denotes surface mounted type (above floor service fitting), 'R' denotes recessed (Flush mounted) type, see specs
	Relocatible service post assembly - length as required to extend above suspended ceiling. See note 8.
	Telephone outlet, single and duplex jack configurations (8 pin jacks). See specs. Symbol Symbol without leg(s) requires duplex jacks. A square around the device indicate it is floor mounted. HL=hotline telephone, P= Public telephone, see note 8.
12" x 4" CT	Cable tray for communications and data processing, dimensions as indicated (W x D)
TTB-2 TTC#4 36x24x6	Telephone terminal board (Plywood backboard); telephone terminal cabinet, size as indicated
UF 3" UF 7" UFD UFD	Multioutlet configuration in underfloor duct system (See specs.). Open circle denotes blank insert location, solid denotes a device installation; 'P' indicates a power duct with duplex receptacles (NEMA 5-15), 'C' denotes communications duct w/bushed fitting; figures identify nominal width; UFD identifies a section of feeder duct (No inserts).
EF-3 M 2HP	Motor - use and size as indicated
#3 2S	Motor controller - magnetic or as indicated, upper numeral designates NEMA size; lower letter, if used, indicates: 'R' - reversing type, '2S' - two speed type, 'FV'- Full Voltage type (default if not indicated), 'RV' - Reduced Voltage type, 'AT' - Auto Transformer type, 'PW'- Part Winding type.
	Combination starter w/externally operated disconnect
	Disconnect switch, size and type as indicated (or 3P, 240V, 30A min)
	Pushbutton control station - 1, 2, or 3 buttons "EPO" = emergency power off.
2P SS	Selector switch (Separate from starter)- 2 position or 3 position as indicated. If not specified elsewhere, legend plate designations will be 'ON-OFF' and 'MAN-OFF-AUTO' (or 'H.O.A.)
T	Thermostat - see Mech. specs, 5'-0" up
MCC-2	Motor control center, free standing w/no. of 20" wide (min) vertical sections indicated. See diagram and/or schedule for sizes, ratings, and loads
LP2 B	Lighting and appliance type panelboard - flush mounted and surface mounted types, see corresponding panel schedule. Open symbol indicates existing
	Distribution type panel
MSB MSG MSB	Main Switch Board or Main Switch Gear (abbreviated or spelled out), see Floor Plans and diagrams for dimensions, clearances, and electrical ratings
PB 400A 30A 30/25	Bus duct assembly with plug-in power box capability at 2' intervals, current rating as indicated. Open circle represents a position with blank cover only, solid circle a plug in box with breaker or switch (see specs), recept. symbol identifies a box with receptacle attached (figures indicate rating of recept and overcurrent device.
L-2, 4, 6	Branch circuit and feeder wiring. Long, short, single dot and double dot hash marks represent phase conductor, neutral, equipment ground, and isolated equipment ground respectively (as applicable). Arrows and letter/numerals identify home-run circuits. If hash marks are omitted between home-runs, transition segments, and end-of-line devices, required quanity is understood to apply to all unmarked intervening segments. A circuit without any designation indicates the circuit is two-wire (min #12 in ½" C).
CO	Conduit only - no conductors, pull wire if over 50'
UF	Comm or power feeder installed under floor slab in coated R.S. conduit unless indicated otherwise
	Light line - existing, or by other trades
	Heavy line - new electrical work
- - - - -	Future work or electrical item repeated for clarity (to lighting sheet from power or comm dwg., across match lines, etc.)
X XR	Existing equipment; existing equipment as relocated (new location)
G	Generator or generator connection.
FCP FCP	Fire alarm control panel, (See specs)
FAA FAA	Fire alarm annunciation provisions, w/or w/o graphic representation, see specs
FST FST	Fire alarm signal transmitting (with antenna for FM radio type), see specs
F	Manual fire alarm station - 4'-0" A.F.F.
F	Abort station. "F"= fire; "H"=halon; "CO"=carbon dioxide
M	Fire alarm warning device - bell, chime, horn and minihorn, 7'-6" A.F.F.
	Fire alarm warning device, visible only - flashing light, ceiling mounted and wall mounted (7'-6" A.F.F.) respectively
M	F.A. warning device, combined audible and visible - flashing light with a minihorn, horn, bell, or chime - 7'-6" A.F.F.
CR	Heat detector - undifferentiated symbol indicates fixed temperature or combination F.T. and rate of rise type, see specs; 'CR' indicates compensated rate ("rate anticipation") type with tubular sensing element required
I P D	Smoke detector. The letter 'I' or 'P', if present, stipulates ionization or photoelectric type. 'D' stipulates a duct type smoke detector. Where duct detectors are shown in pairs, locations are in supply and return ducts, a single detector would be installed in the supply duct if the location is not otherwise indicated.
SV TS FS	Fire alarm contacts at solenoid (OSY) valve, tamper switch, alarm check valves, water flow indicator and flow switch, see Mech. specs
	24-inch lightning air terminal.
	60-inch lightning air terminal.
	Lightning protection main conductor

NOTES:

1. Where more than one symbol format is shown, the preferred form is shown first.
2. Supplemental electrical legends may appear in this set of drawings to establish symbols for items not covered by this sheet or to indicate specific conditions in lieu of symbols shown on this sheet.
3. For electrical device mounting heights in masonry construction, see Standard Drawing No. 40-15-01, sheet 2.
4. Existing items are designated by a thin line or an open symbol; new items with a thick line or closed (filled-in) symbol.
5. Electric light fixtures are identified by either or both of the following methods:
   (a) 203 indicates fixture type, per fixture schedule, for entire room or area when adjacent to the room name or number designation or for single fixture when adjacent to the fixture symbol.
   (b) Ⓑ capital letter or fixture designation inside or adjacent to symbol indicates fixture type for each fixture per fixture schedule.
6. Sizes of wire and cable are based on copper conductors unless indicated otherwise.
7. Letters such as "WP", "EP" adjacent to any symbol indicate special construction is required. See Abbreviations sheet for definitions.
8. All receptacle and communication outlets shall be mounted 15 - inches A.F.F. as measured to the bottom of the outlet box, unless indicated otherwise.

$$ – THINK VALUE ENGINEERING – $$

Revisions			
Symbol	Descriptions	Date	Approved

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
OMAHA, NEBRASKA

Designed by:	OMAHA NEBRASKA OMAHA DISTRICT DESIGN GUIDE		
Drawn by:	**ELECTRICAL LEGEND SYMBOLS**		
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Chief: ELEC. FAC. Section	Contract No.: DACA 45	X	3

COMPUTER AIDED DESIGN & DRAFTING

5 4 3 2 1 **EXAMPLE 3**

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