

# ELECTRICAL SHEET INDEX

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# GENERAL NOTES

- ALL ELECTRICAL WORK SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) & THE AMERICANS WITH DISABILITIES ACT (ADA).
- REFER TO RELATED CIVIL AND MECHANICAL DRAWINGS FOR RELATED INFORMATION.
- REFER TO THE SPECIFICATIONS FOR DATA NOT ON THE DRAWINGS.
- ALL MOUNTING HEIGHTS TO CENTERLINE OF ITEM UNLESS OTHERWISE NOTED. VERIFY ALL OUTLET LOCATIONS ON THE JOB PRIOR TO ROUGH-IN.
- CONDUIT RUN W/CONDUCTORS AS INDICATED & GROUND WIRE SIZED PER N.E.C. 250.122. CONDUIT SIZE AS REQUIRED.
- WHEN INCREASED CONDUCTOR SIZES ARE SHOWN ON THE PLANS, THE LARGER CONDUCTOR SIZE SHALL BE USED THROUGHOUT THE LENGTH OF THE CIRCUIT, INCLUDING NEUTRAL AND GROUND.
- BRANCH CIRCUITS ARE INDICATED AS ONE CIRCUIT HOME RUNS WITH INDIVIDUAL NEUTRALS. A MAXIMUM OF THREE CIRCUITS (MAXIMUM OF THREE PHASE CONDUCTORS) MAY BE GROUPED IN A SINGLE CONDUIT. WHERE MULTIPLE CIRCUITS ARE LOCATED IN THE SAME RACEWAY, JUNCTION BOX OR ENCLOSURE, NEUTRALS SHALL BE MARKED OR LABELED TO INDICATE WHICH CIRCUIT THEY ARE ASSOCIATED WITH. SEE SPECIFICATION SECTION "LOW VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES" FOR ADDITIONAL INFORMATION.

# ABBREVIATION LIST

ABBREVIATION	DESCRIPTION
A	AMPS
AHF	ACTIVE HARMONIC FILTER
A.I.C.	AMPS INTERRUPTING CAPACITY
A.T.S.	AUTOMATIC TRANSFER SWITCH
AFF	ABOVE FINISHED FLOOR
E	EMERGENCY POWER
GEN	GENERATOR
HP	HORSE POWER
KW	KILOWATT
MCB	MAIN CIRCUIT BREAKER
N	NORMAL POWER
PH	PHASE
SPD	SURGE PROTECTION DEVICE
UON	UNLESS OTHERWISE NOTED
V	VOLTAGE
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE
WP	WEATHERPROOF
XFMR	TRANSFORMER

# SYMBOL LIST

SYMBOL	DESCRIPTION	MOUNTING
LSIG	CIRCUIT BREAKER ACCESSORIES: LSIG = LONG TIME, SHORT TIME, INSTANTANEOUS, GROUND FAULT	
GFI	GFI = GROUND FAULT	
ST	ST = SHUNT TRIP	
K	K = KIRK KEY INTERLOCK	
Ⓢ	INDICATOR LIGHT (G=GREEN, R=RED)	
	CONTACTS (NORMALLY OPEN, CLOSED)	
Ⓢ	FUSE	
Ⓢ	CIRCUIT BREAKER	
Ⓢ	OVERLOADS	
Ⓢ	DRAWOUT CONTACTS	
Ⓢ	DISCONNECT (SEE EQUIP CONN SCHED) (VOLTAGE / SWITCH SIZE / FUSE SIZE / # OF POLES NOTED IF EQUIPMENT NOT SCHEDULED)	
Ⓢ	STARTER (SEE EQUIP CONN SCHED) (VOLTAGE / STARTER SIZE / # OF POLES NOTED IF EQUIPMENT NOT SCHEDULED)	
Ⓢ	GROUND CONNECTION	
Ⓢ	LIGHTNING ARRESTOR	
1	FEEDER DESIGNATION	
SPD	SURGE PROTECTIVE DEVICE	
1 60A 45A 2P	FUSIBLE SWITCH (CIRCUIT NUMBER / SWITCH SIZE / FUSE SIZE / # OF POLES) (# OF POLES IF OTHER THAN 3)	PANEL
1 30A 30A 2P 1'	STARTER WITH FUSIBLE SWITCH (CIRCUIT NUMBER / SWITCH SIZE / FUSE SIZE / # OF POLES / STARTER SIZE) (# OF POLES IF OTHER THAN 3)	PANEL
1 20A 2P	CIRCUIT BREAKER (MOLDED CASE NON-ADJUSTABLE TRIP / ADJUSTABLE TRIP) (# OF POLES IF OTHER THAN 3)	PANEL
Δ	3Ø TRANSFORMER (DELTA PRIMARY / WYE SECONDARY)	
Ⓢ	1Ø TRANSFORMER	
PANEL SPD	PANELBOARD (WITH BUILT-IN SPD)	
M	METER (UTILITY / PANEL MOUNTED)	
HP KW	EQUIPMENT (SINGLE MOTOR / MULTI- MOTOR OR OTHER TYPE AS NOTED)	
VFD 20HP	VARIABLE FREQUENCY DRIVE (HP SIZE IF NOT SCHEDULED)	
N E ATS	TRANSFER SWITCH (ATS = AUTOMATIC, MTS = MANUAL) (SIZE / VOLTAGE / POLES / AIC RATING / NEMA RATING) (NEMA RATING IF OTHER THAN NEMA-1)	
RV AT	MOTOR STARTER [SINGLE SPEED ACROSS-THE-LINE (UON)] (SIZE / RV = REDUCED VOLTAGE / AT = AUTO-TRANSFORMER / SS = SOLID STATE)	FIELD

# PEN WEIGHT LEGEND

SYMBOL	DESCRIPTION
Ⓢ	ALL DEVICES, LIGHT FIXTURES, ETC., DRAWN IN DARK SOLID LINES ARE NEW TO BE INSTALLED.
Ⓢ	NEW DUPLEX GROUNDED RECEPTACLE
Ⓢ	NEW LIGHT FIXTURE
Ⓢ	ALL DEVICES, LIGHT FIXTURES, ETC., DRAWN IN LIGHT SOLID LINES ARE EXISTING TO REMAIN.
Ⓢ	EXISTING DUPLEX GROUNDED RECEPTACLE TO REMAIN
Ⓢ	EXISTING LIGHT FIXTURE TO REMAIN
Ⓢ	ALL DEVICES, LIGHT FIXTURES, ETC., DRAWN IN DARK DASHED LINES ARE TO BE REMOVED.
Ⓢ	DUPLEX GROUNDED RECEPTACLE TO BE REMOVED
Ⓢ	LIGHT FIXTURE TO BE REMOVED

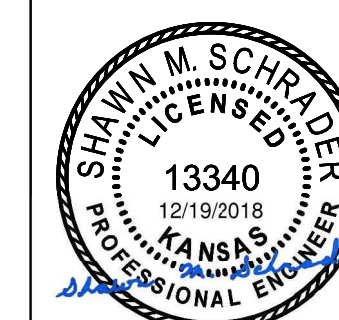
# CONTROL CABLES CONDUIT SCHEDULE

# OF CABLES	ESTIMATED CONDUIT SIZE
1	1/2"
2	3/4"
3	1"
5	1 1/4"
7	1 1/2"
13	2"
18	2 1/2"
29	3"
38	3 1/2"

NOTE:  
ABOVE CONDUIT SIZES DEPEND ON ACTUAL CABLES INSTALLED. VERIFY CABLE SIZES & ADJUST CONDUIT AS REQUIRED. RUN ALL CONTROL CABLES IN SEPARATE CONDUIT FROM POWER CIRCUITS. ALSO RUN SHIELDED & LAN LAN CABLES IN SEPARATE CONDUIT FROM OTHER CONTROLS. CONTRACTOR CAN SIZE CONDUIT FOR ACTUAL CABLE SIZE, PER N.E.C. FILL TABLE WITH 25% SPARE CAPACITY. SUBMIT CALCULATIONS.

# SYMBOL LIST

SYMBOL	DESCRIPTION	MOUNTING
Ⓢ	DUPLEX RECEPTACLE	18" AFF
WP	WEATHERPROOF GROUND FAULT DUPLEX RECEPTACLE	18" AFF
\$ \$2 \$3 \$4	SWITCHES (1-POLE, 2-POLE, 3-WAY, 4-WAY)	46" AFF
Ⓢ	JUNCTION BOX	
Ⓢ	BRANCH CIRCUIT PANEL & PANEL DESIG.	72" TO TOP
Ⓢ	ELECTRICAL DISTRIBUTION EQUIPMENT	
1	FEEDER DESIGNATION	
Ⓢ	CONDUIT HOME RUN, 1 CIRCUIT. 2#10 & 1#10 GRD. GEN. NOTE 5 & 6	CEIL./WALL
Ⓢ	CONDUIT RUN 2#12 & 1#12 GRD.-1/2".	CEIL./WALL
Ⓢ	CONDUIT RUN 2#12 & 1#12 GRD.-3/4".	EARTH/FLOOR
Ⓢ	CONDUIT HOME RUN, 1 CIRCUIT. 2#12 & 1#12 GRD. 1/2".	CEIL./WALL
Ⓢ	CONDUIT RUN PARTIAL CIRCUIT. 2#12 & 1#12 GRD. 1/2".	CEIL./WALL
Ⓢ	CONDUIT HOME RUN, 2 CIRCUITS PHASE CONDUCTORS (#12 UON) NEUTRAL CONDUCTOR (#12 UON) SWITCH LEGS (#12 UON) GROUND CONDUCTOR (#12 UON)	CEIL./WALL
Ⓢ	DISCRETE CONTROL CABLE (# OF PAIRS)	CEIL./WALL
Ⓢ	ANALOG CONTROL CABLE (# OF SHIELDED PAIRS)	CEIL./WALL
ES	EMERGENCY STOP PUSHBUTTON	
X-X	MECHANICAL EQUIPMENT	
MD	MAN DOWN SWITCH	
A	LIGHT FIXTURE & FIXTURE LETTER	WALL
A	STRIP LIGHT FIXTURE & FIXTURE LETTER	CEILING
A	FIXTURE W/SHADED LAMP(S) ON EMERG. POWER	CEILING
Ⓢ	CIRCUIT BREAKER	
Ⓢ	ATS	
Ⓢ	MOTOR	
PT	PRESSURE TRANSMITTER	
LS	LIMIT SWITCH	
Ⓢ	F.A. RELAY	
Ⓢ	DUCT SMOKE DETECTOR	DUCTWORK



No.	Revision	By	Date
CITY OF WICHITA, KANSAS			
ELECTRICAL LEAD SHEET			
37TH STREET BOOSTER PUMP STATION IMPROVEMENTS			
PROFESSIONAL ENGINEERING CONSULTANTS, P.A. 303 SOUTH TOPEKA WICHITA, KS 67202 316-262-2891 www.pec1.com			
Designed by	RWW	Job No.	34-170920-000
Drawn by	MAL	Date	DECEMBER 2018
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