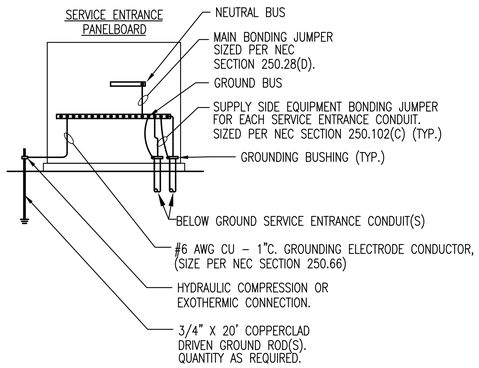
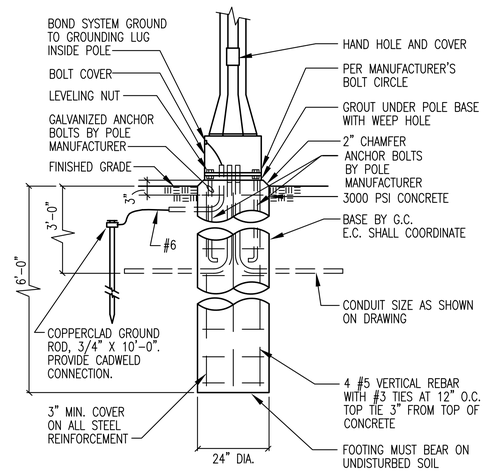


NOTES:

1. PROVIDE OTHER GROUNDING CONNECTIONS AS SPECIFIED IN NEC SECTION 250.50.
2. LABEL EACH GROUNDING ELECTRODE CONDUCTOR AND BONDING JUMPER.
3. WHERE CONDUCTORS ARE ROUTED IN FERROUS CONDUIT, BOND BOTH ENDS OF THE CONDUIT TO THE CONDUCTOR.

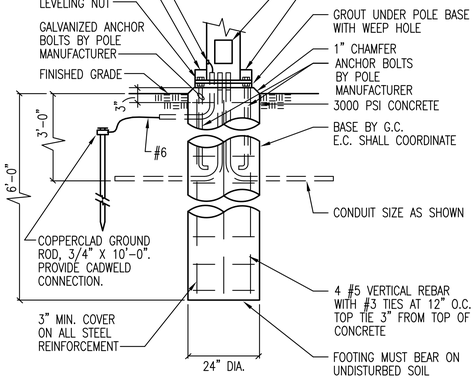
1 SYSTEM GROUNDING DETAIL – PANEL

NO SCALE



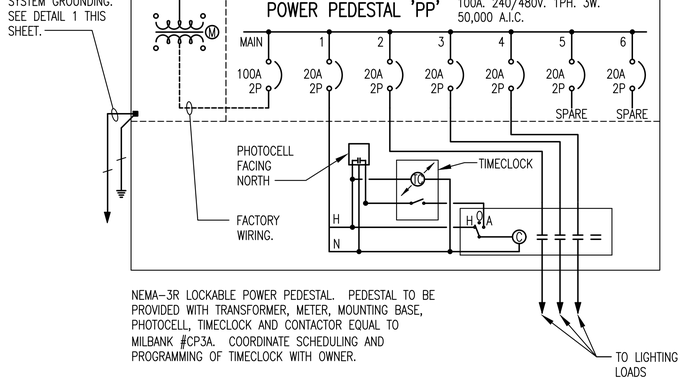
2 POLE BASE DETAIL

NO SCALE (20' MAX. POLE)



3 POLE BASE DETAIL

NO SCALE (20' MAX. POLE)



NEMA-3R LOCKABLE POWER PEDESTAL. PEDESTAL TO BE PROVIDED WITH TRANSFORMER, METER, MOUNTING BASE, PHOTOCELL, TIMECLOCK AND CONTACTOR EQUAL TO MILBANK #CP3A. COORDINATE SCHEDULING AND PROGRAMMING OF TIMECLOCK WITH OWNER.

4 ELECTRICAL ONE-LINE DIAGRAM

NO SCALE

LIGHTING FIXTURE SCHEDULE

(P.E.C.)

FIXT. LTR.	MANUFACTURER CATALOG NUMBER	MANUFACTURER CATALOG NUMBER	MANUFACTURER CATALOG NUMBER	MANUFACTURER CATALOG NUMBER	DESCRIPTION SEE NOTES	LAMP TYPE NO.	LAMP TYPE VOLTS	LENS\LOUVER\FINISH REMARKS	W	L	D
E	EXISTING FIXTURE TO REMAIN										
PL3	SUN VALLEY OV1-PG-III-36LED-NW-525				PATH LIGHT (4)	80W 4000K 80CRI 1	480	GLASS LENS TYPE III, BLACK	24	24	.875
PL	PHILIPS GARDCO MA17L-32L-450-NW-G2-3				PATH LIGHT (5)(7)	48W 4000K 80CRI 1	480	GLASS LENS TYPE III, BLACK	1.41	1.41	.916
PL	DECO LIGHTING DB32-LED-100-40-480-AM15-1-BK				PATH LIGHT (5)(6)	100W 4000K 80CRI 1	480	GLASS LENS TYPE V, BLACK	1.41	1.41	.916

(1) GENERAL CONTRACTOR SHALL PROVIDE FIREPROOFING AROUND RECESSED FIXTURES INSTALLED IN FIRE RATED CEILING PER U.L. REQUIREMENTS. ELECTRICAL CONTRACTOR WILL COORDINATE.

(2) MANUFACTURERS LISTED IN THIS SCHEDULE OR APPROVED BY WRITTEN ADDENDUM WILL BE THE ONLY APPROVED MANUFACTURERS TO BID THE LIGHTING FIXTURES FOR THIS PROJECT. CONTRACTORS AND SUPPLIERS USING PRICING FROM MANUFACTURERS NOT LISTED ON SCHEDULE OR BY ADDENDUM DO SO AT THEIR OWN RISK.

(3) LIGHT FIXTURE SELECTIONS ARE BASED ON THE MANUFACTURER IN THE LEFT MOST COLUMN AS LISTED IN THE SCHEDULE. FIXTURES APPROVED AS EQUALS IN THIS SCHEDULE OR BY ADDENDUM SHALL BE EQUAL TO THE UNIT SPECIFIED IN THE LEFT MOST COLUMN, IE: SPRING LOADED LATCHES, POST PAINTED FINISH, AND PHOTOMETRICS.

(4) PROVIDE WITH 13' DECORATIVE CONCRETE POLE, AMERON VBS #1610-017 OR EQUAL. POLE, ARM AND HEAD TO MATCH STYLE, FINISH, AND HEIGHT OF EXISTING FIXTURES LOCATED ALONG RIVER WALK.

(5) PROVIDE WITH 14' RTS BLACK POLE THAT MEETS LOCAL EPA REQUIREMENTS FOR WIND IN THAT REGION. HANDHOLE TO BE LOCATED AT TOP OF POLE.

(6) ALTERNATE #1

(7) BASE BID

DIVISION 16 – ELECTRICAL

A. General Instructions:

1. Codes, Permits and Inspections:
   a. Wiring shall be in accordance with latest edition National Electrical Code (NEC), NFPA, and/or applicable local, state, and Utility Company rules, laws, codes, and ordinances.
   b. Secure all permits and inspections required for the installation of the electrical work.
   c. All work shall comply with the latest edition of the Americans With Disabilities Act (ADA).
   d. Pay all fees associated with new utility services.

2. Verifications:
   a. Verify mounting heights and locations of electrical equipment before installation or rough-in.
   b. Verify exact location of electrical service entrance including point of service and system characteristics.

3. Wiring Methods:
   a. The Electrical Contractor shall cooperate with other Contractors and install equipment in proper sequence so as not to interfere with the progress of other Contractors.
   b. All materials shall be new and carry the Underwriter's Label or be "listed" by that group, and be fully equal to makes specified.
   c. Use only insulated copper conductors in conduit. Use flexible conduit for connections to motors and similar equipment.
   d. All wiring shall be concealed and all outlets shall be flush mounted in finished spaces except as noted otherwise.

4. Tests:
   a. This Contractor shall be responsible for performing all tests necessary to prevent concealment of defective or improper work.
   b. Upon completion of work, test the installation thoroughly and render it free from shorts, grounds or improper connections.

5. Guarantee:
   a. This Contractor shall guarantee that all defective items of workmanship, material, labor or mechanical operation developing within one (1) year from the date of final acceptance of completed installation shall be replaced to the complete satisfaction of the Owner.

6. Workmanship:
   a. Electrical equipment shall be installed in a neat and workmanlike manner. Unsightly installations shall be removed or reworked at no additional expense to the Owner.

7. Identification of Disconnecting Means:
   a. Provide a permanent nameplate for each disconnect switch indicating its purpose. The marking shall be of sufficient durability to withstand the environment it is installed in as required by N.E.C. Section 110.22 and 230.72(A).

8. Bidding
   a. All electrical work to be included in the LS bid item "Streetlighting"

B. Electrical Equipment:

1. Conduits:
   a. All conduit installed in earth, concrete, below concrete on earth, or exposed to weather shall be rigid steel or intermediate metal conduit. Electrical metallic tubing for all dry interior runs. Fittings shall be fully approved in accordance with N.E.C
   b. Flexible or P.V.C. conduit may be used where not exposed to damage and approved by N.E.C. and local codes.
   c. Provide a ground wire sized per N.E.C. Art. 250.122 in all conduits, both metallic and nonmetallic.
   d. Conduit shall be installed and sized according to code requirements and protected from damage during construction.
   e. Conduit may be re-routed where such action does not adversely affect the intended design or circuiting.

2. Conductors:
   a. Conductors shall be copper, generally with 600 volt rated insulation. Branch circuit wiring min. size #12 Type "THW" or "THWN/THHN" as required. Service entrance, feeder conductors Type "THWN/THHN" or "XHHW". Low voltage wire shall be Type "TF" or "TFF" minimum #18 gauge unless noted otherwise. All other types shall be as required by N.E.C.
   b. All conductors shall be color coded with type and size marking. Connections to service equipment, feeder panels shall be made with solderless lugs. All splices, taps, connections to service entrance conductors shall be made by bronze solderless lugs. All other splices, connections shall be pressure type connectors.
   c. Insulate joints, splices with Scotch #33 plastic tape or plastic moulded jackets.

3. Lighting Fixtures and Lamps:
   a. Install lighting fixtures. Provide lamps as indicated on the drawings.
   b. No substitutions on lighting fixtures except as approved by Engineer prior to bidding.
   c. Verify exact locations of fixture outlets so as to cause no interference with piping, equipment and architectural treatment.
   d. Furnish all fixtures with lamps as scheduled and/or required by final fixture selection. Lamps equal to G.E.

4. Grounding:
   a. Provide system ground as required by N.E.C. and utility company if not already existing.
   b. Bond mechanical equipment frames.
   c. Bond all service entrance equipment and conduit system.
   d. An equipment grounding conductor sized per N.E.C. Art. 250.122 shall be provided in all conduits. The ground wire is required for both metallic and nonmetallic conduit installations.

5. Equipment Supplied By Other Contractors And/Or The Owner
   a. The Electrical Contractor shall furnish, install and connect all wiring, conduit, boxes, toggle switches, thermal switches, disconnect switches, remote pushbutton stations, etc., for all equipment requiring electrical power that is either furnished or specified by other contractors and/or the Owner, shown on drawings or listed below. The E.C. shall receive, install and connect all magnetic starters and controllers, capacitors, power factor correction devices, transformers, alarms, bells, horns, relays, remote switches for equipment supplied by others (i.e. starters or capacitors or power factor correction devices for Mechanical Equip., etc.). In general, all major equipment will be specified to be factory prewired with only service and interconnecting required at the site by the Electrical Contractor; however,the E.C. shall check all Divisions of the specification to verify whether the equipment is specified to be factory prewired. If not, then it shall be the responsibility of the Electrical Contractor to provide the complete wiring of the equipment in accordance with wiring diagrams provided by other Contractors and/or Owner to the Electrical Contractor. All interconnecting of equipment shall be by the Electrical Contractor.
   b. All line and low voltage wiring and connections required to control the equipment are a part of this section. All wiring shall be in conduit.
   c. It shall be assumed the Contractor is familiar with the equipment to be furnished by the other Contractors and/or the Owner in connection with this work and that provisions for such connections and work have been included in the Contractor's
   d. In no case will extra remuneration be allowed for such work.

SYMBOL LIST

SYMBOL	DESCRIPTION	MOUNTING
A	LIGHT FIXTURE	POLE
WP	WEATHERPROOF	
AFG	ABOVE FINISHED GRADE	
UON	UNLESS OTHERWISE NOTED	
	SPECIAL DEVICE (AS NOTED)	
	JUNCTION BOX	
'A'	BRANCH CIRCUIT PANEL & PANEL DESIG.	72" TO TOP
	ELECTRICAL DISTRIBUTION EQUIPMENT	
#10	CONDUIT HOME RUN, 1 CIRCUIT. 2#10 & 1#10 GRD. GEN. NOTE 7 & 8	CEIL./WALL
	CONDUIT RUN 2#12 & 1#12 GRD.– 1/2"C.	CEIL./WALL
	CONDUIT RUN 2#12 & 1#12 GRD.– 3/4"C.	EARTH/FLOOR
	CONDUIT HOME RUN, 1 CIRCUIT. 2#12 & 1#12 GRD. 1/2"C.	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

GENERAL NOTES

1. ALL ELECTRICAL WORK SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) & THE AMERICANS WITH DISABILITIES ACT (ADA).
2. REFER TO RELATED ARCHITECTURAL AND CIVIL DRAWINGS FOR RELATED INFORMATION.
3. REFER TO THE SPECIFICATIONS FOR DATA NOT ON THE DRAWINGS.
4. COORDINATE OUTLET BOX LOCATIONS WITH MASONRY TO MINIMIZE CUTTING OF BRICK OR BLOCK.
5. ALL MOUNTING HEIGHTS TO CENTERLINE OF ITEM UNLESS OTHERWISE NOTED. VERIFY ALL OUTLET LOCATIONS ON THE JOB PRIOR TO ROUGH-IN.
6. CONDUIT RUN W/CONDUCTORS AS INDICATED & GROUND WIRE SIZED PER N.E.C. 250.122. CONDUIT SIZE AS REQUIRED.
7. 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.
8. 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.

ELECTRICAL SHEET INDEX

CHRISTOPHER J. VAN LICENSED 25693 11/03/2017 KANSAS PROFESSIONAL ENGINEER

No.	Revision	By	Date

EAST BANK ARK RIVER–LINCOLN TO GANDER MOUNTAIN SIDEWALK IMPROVEMENTS

ELECTRICAL LEAD SHEET

GARY JANZEN, P.E.– CITY ENGINEER
CITY OF WICHITA PROJECT NO. 472-85303

PEC PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
303 SOUTH TOPEKA WICHITA, KS 67202
316-262-2691 www.pec1.com

Designed by	SMS	Job No.	31-160312-001
Drawn by	CJV	Date	August 2017

Sht. 25 of 37