

Street Light Betterment
PHASE 1&2

I. Quantity

The base bid shall include the indicated number of poles to be wired as shown on drawing **01S0131** and hereinafter specified and located as shown on the drawings.

II. Material

- a. Jumper Ground Wire - shall be crimped to the main ground wire and bonded to the #4 neutral by using a crimp connection. (see drawing # 01S0131)
- b. Crimp Connectors - The crimp compression connectors shall be copper, Burndy or approved equal. Connectors shall be determined by size of ground wire found in pole.
- c. Compression Terminal Lug - The copper lug shall be one hole type to fit machine bolt. The seamless copper tubing shall be a minimum of 1" and be marked for #4 or #6 wire, exact lug will be determined by size of ground wire found in pole. The lug shall be hot tin dipped to provide corrosion resistance and be Burndy or approved equal.
- d. Fuse Kit (480volt) – The fuse kit for the phase (480volt) wire shall be replaced with Buchanan /Ideal Industries part # 82S-EAFB1-C. Replace any incorrect fuses with the following - install KTK-3 amp fuse for 480 volt systems with luminaries equal to or less than 250W HPS. Install KTK-6 amp fuse for 480 volt systems containing 400 watt luminaries.
- e. Ground Rod - ground rod shall be a minimum of ½" x10' copperweld, Porcelain Product #8430; Blackburn #5010 or approved equal.
- f. Ground Rod Clamp - The ground rod clamp shall be ½" copper alloy, HEX or square head screw with 1/2"-13UNC; Joslyn #J8591H; Blackburn #JAB ½H or approved equal.

III. INSTALLATION

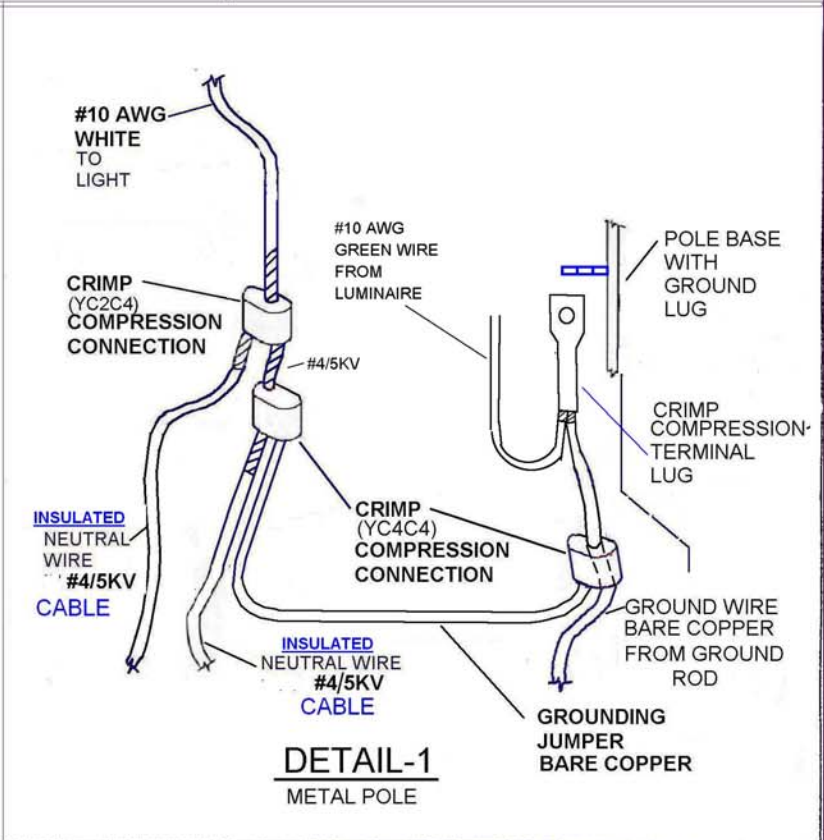
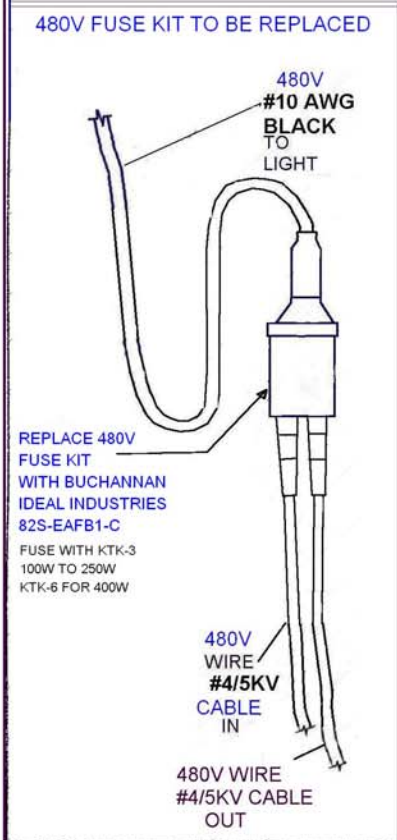
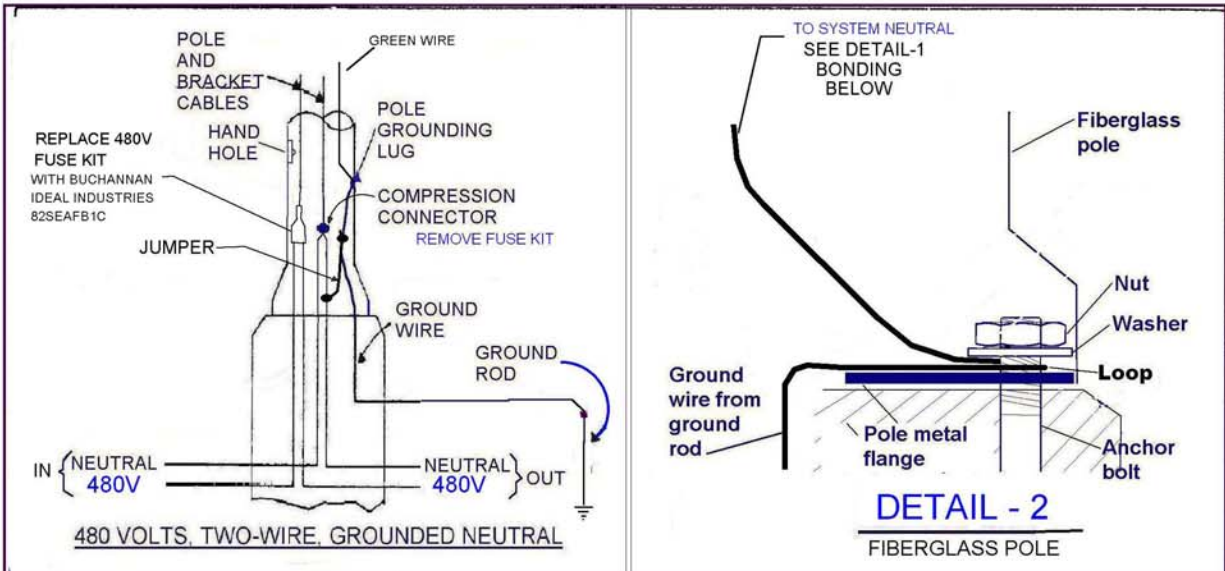
- a. To Ground a Metal Pole - The bare ground wire shall be connected to the ground rod with a ground rod clamp. The ground wire shall be crimped to the terminal lug and bolted directly to the pole, and tightened with a nut and washer until secure. A jumper ground wire shall be crimped to the main ground wire and bonded to the #4 neutral by using a crimp connection. See Drawing 01S0131, "Detail 1".
- b. To Ground a Fiberglass Pole - The bare ground wire shall be connected to the ground rod with a ground rod clamp. The ground wire shall be wrapped around an anchor bolt and tightened with the anchor nut and washer until secure. See Drawing 010S131 "Detail 2". Ground wire shall be crimped to the main ground wire and bonded to the #4 neutral by using a crimp.
- c. System Neutral - The white #10 wire shall run from the compression crimp of the #4 neutral through the pole shaft to the luminaire.
- d. Fuse Kit (neutral) – The fuse kit for the phase (neutral) wire shall be removed .

IV. TESTING

- a. Ground Test – Each ground rod shall be measured for earth resistance immediately after being upgraded. The earth resistance measurement shall not exceed 25 ohms. Ground rods or additional Ground rods shall be installed to achieve 25 ohms or less

V. Quotation

The poles to be wired shall be quoted as a unit price in the appropriate places of this document.



REVISED 8/21/07	MEL & P MUNICIPAL ELECTRIC LIGHT & POWER SYSTEM CITY OF COLUMBUS, OHIO DEPT. OF UTILITIES & AVATION - DIV. OF ELECTRICITY	
CIRCUIT BONDING BETTERMENT 480 VOLT -2 WIRE		
SCALE NONE	DRAWN MO/05	DRAWING NO. 01S0131
C. O. NUMBER	APPROVED	SHEET 1 OF 1

8/21/07
MIS 178