

City of Anaheim

Lewis Substation 69 KV Breaker Replacement

525-521-6751-7865-0801218.01

| Bidder # 1 | Bidder # 2 |
|--|---|
| Henkels & McCoy, Inc. | Miron Electric Construction, Inc. |
| Attn: Edward W. Cambell 2840 Ficus Street Pomona, CA 91766 License No.: 1893393 A, C-10 & C-7 Bid Bond: 10% Phone No.: 909 - 517 - 3011 | Attn: Ronald Kaufman 9238 Deering Avenue Chatsworth, CA 91311 License No.: 166923 A & C-10 Bid Bond: 10% Phone No.: 818 - 772 - 9494 |

Bid Date: 8/27/2009

| ITEM | ESTIMATED QUANTITY OF WORK | UNIT | DESCRIPTION | UNIT PRICE | TOTAL | UNIT PRICE | TOTAL | UNIT PRICE | TOTAL |
|------|----------------------------|------|--|------------|-------|--------------|--------------|---------------|---------------|
| 1 | 1 | EA | MOBILIZATION | \$ - | \$ - | \$ 22,811.00 | \$ 22,811.00 | \$ 185,819.00 | \$ 185,819.00 |
| | | | Furnish and Install Items 2-54 Below- Reference Bill of Material | | | | | | |
| 2 | 39 | EA | Furnish and Install CONNECTORS, TERMINAL, 90 DEGREE MANUFACTURER, PDU, CAT. NO. 16-169D-90 or equivalent | \$ - | \$ - | \$ 360.43 | \$ 14,056.77 | \$ 372.00 | \$ 14,508.00 |
| 3 | 200 | EA | Furnish and Install CONNECTOR, ELECTRICAL TYPE, 1590 MCM ACSR CONDUCTOR 4 INCH WIDE, 4 HOLE CENTER FORMED PDU, CAT NO. 16-169D or equivalent. | \$ - | \$ - | \$ 90.28 | \$ 18,056.00 | \$ 278.00 | \$ 55,600.00 |
| 4 | 200 | EA | Furnish and Install CONNECTOR, ELECTRICAL TYPE, 1590 MCM ACC CONDUCTOR 4 INCH WIDE, 4 HOLE CENTER FORMED PDU, CAT NO. 16-168D or equivalent | \$ - | \$ - | \$ 87.75 | \$ 17,550.00 | \$ 278.00 | \$ 55,600.00 |
| 5 | 120 | EA | Furnish and Install CONNECTOR, ELECTRICAL TYPE, "DUCKBILL", Aluminum UNS-A96061 per ASTM B209 CONDITION T6 | \$ - | \$ - | \$ 198.58 | \$ 23,829.60 | \$ 363.00 | \$ 43,560.00 |
| 6 | 24 | EA | Furnish and Install CONNECTOR, ELECTRICAL TYPE, COPPER COMPRESSION, CABLE TO FLAT PAD 1590 MCM, 54/19 ACSR CONDUCTOR | \$ - | \$ - | \$ 396.42 | \$ 9,514.08 | \$ 305.00 | \$ 7,320.00 |
| 7 | 100 | EA | Furnish and Install HIGH VOLTAGE TERMINAL AREVA NO. 1-412-910-P1 DRAWING HG14B.1.412.910 | \$ - | \$ - | \$ 749.50 | \$ 74,950.00 | \$ 750.00 | \$ 75,000.00 |
| 8 | 275 | EA | Furnish and Install CONNECTOR, ELECTRICAL TYPE, PDU Cat AL-4X6X90(3/4" thick) | \$ - | \$ - | \$ 101.56 | \$ 27,929.00 | \$ 305.00 | \$ 83,875.00 |
| 9 | 2,400 | FT | Furnish and Install CONDUCTOR, ELECTRICAL TYPE 1590 KCMIL ACSR, BARE, 54/19 STRANDED, NON-GREASED | \$ - | \$ - | \$ 9.45 | \$ 22,680.00 | \$ 23.50 | \$ 56,400.00 |
| 10 | 1,500 | FT | Furnish and Install CONDUCTOR, ELECTRICAL TYPE 1590 ACC, All Aluminum Conductor 61 STRAND | \$ - | \$ - | \$ 11.89 | \$ 17,835.00 | \$ 27.35 | \$ 41,025.00 |
| 11 | 60 | EA | Furnish and Install CONNECTOR, ALUMINUM, CABLE SPACER PDU, CAT NO 110-121-CS-4 or equivalent | \$ - | \$ - | \$ 184.16 | \$ 11,049.60 | \$ 351.00 | \$ 21,060.00 |
| 12 | 10 | EA | Furnish and Install CONNECTOR, BUS SUPPORT, ALUMINUM CABLE TO INSULATOR, 1590 ACSR PDU, CAT NO 19-404 or equivalent | \$ - | \$ - | \$ 901.00 | \$ 9,010.00 | \$ 642.00 | \$ 6,420.00 |
| 13 | 3 | EA | Furnish and Install CONNECTOR, TEE, ALUMINUM, 1590MCM TO 336.6 ACSR PDU CAT NO 12-926 or equivalent | \$ - | \$ - | \$ 130.50 | \$ 391.50 | \$ 642.00 | \$ 1,926.00 |
| 14 | 1 | LOT | Furnish and Install STAINLESS STEEL NUTS, UNC, BOLTS AND WASHERS AS REQUIRED FOR ELECTRICAL CONNECTIONS OF HIGH VOLTAGE COMPONENTS ASTM A193 GRADE B8M, 1/2 INCH | \$ - | \$ - | \$ 28,354.00 | \$ 28,354.00 | \$ 14,546.00 | \$ 14,546.00 |
| 15 | 26 | EA | Furnish and Install PULL BOX, 24" X 18" X 8" SIZE, NEMA 3R FOR OUTDOOR USE, MADE FROM HOT DIP GALVANIZED STEEL SHEETS. MANUFACTURER, COOPER BLINE, CAT NO 24188RTHC NK | \$ - | \$ - | \$ 1,669.00 | \$ 43,394.00 | \$ 1,200.00 | \$ 31,200.00 |
| 16 | 52 | EA | Furnish and Install LOCKNUT, 4", APPLETON CAT NO BL400 | \$ - | \$ - | \$ 98.88 | \$ 5,141.76 | \$ 18.00 | \$ 936.00 |
| 17 | 52 | EA | Furnish and Install SEALING LOCKNUT, 4", APPLETON CAT NO. BLSG 400 | \$ - | \$ - | \$ 137.35 | \$ 7,142.20 | \$ 30.00 | \$ 1,560.00 |
| 18 | 2,000 | FT | Furnish and Install ELECTRICAL PVC CONDUIT 4", SCHEDULE 80 | \$ - | \$ - | \$ 15.02 | \$ 30,040.00 | \$ 5.00 | \$ 10,000.00 |
| 19 | 52 | EA | Furnish and Install GROUNDING BUSHING, 4", APPLETON CAT NO GIB-400L-AC | \$ - | \$ - | \$ 74.91 | \$ 3,895.32 | \$ 80.00 | \$ 4,160.00 |

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| ITEM | ESTIMATED QUANTITY OF WORK | UNIT | DESCRIPTION | UNIT PRICE | TOTAL | UNIT PRICE | TOTAL | UNIT PRICE | TOTAL |
|------|----------------------------|------|---|------------|-------|-------------|--------------|--------------|--------------|
| 20 | 400 | FT | Furnish and Install RIGID METAL CONDUILT, 3 INCH, GRAYBAR OR EQUIVALENT | | \$ - | \$ 23.42 | \$ 9,368.00 | \$ 22.00 | \$ 8,800.00 |
| 21 | 390 | FT | Furnish and Install FLEXIBLE METAL CONDUIT, LIQUID TIGHT, UV RESISTANT 3 INCH GRAYBAR OR EQUIVALENT | | \$ - | \$ 22.48 | \$ 8,767.20 | \$ 24.00 | \$ 9,360.00 |
| 22 | 78 | EA | Furnish and Install CONDUIT CONNECTORS, APPLETON CAT NO HUB-300 | | \$ - | \$ 88.10 | \$ 6,871.80 | \$ 50.00 | \$ 3,900.00 |
| 23 | 156 | EA | Furnish and Install CONDUIT CONNECTORS, APPLETON CAT NO ST300 | | \$ - | \$ 125.38 | \$ 19,559.28 | \$ 125.00 | \$ 19,500.00 |
| 24 | 52 | EA | Furnish and Install LOCKNUT, 3", APPLETON CAT NO BL300 | | \$ - | \$ 97.55 | \$ 5,072.60 | \$ 10.00 | \$ 520.00 |
| 25 | 52 | EA | Furnish and Install SEALING LOCKNUT, 3", APPLETON CAT NO. BLSG 300 | | \$ - | \$ 109.75 | \$ 5,707.00 | \$ 23.00 | \$ 1,196.00 |
| 26 | 52 | EA | Furnish and Install GROUNDING BUSHING, 3", APPLETON CAT NO GIB-300L-25AC | | \$ - | \$ 88.91 | \$ 4,623.32 | \$ 70.00 | \$ 3,640.00 |
| 27 | 26 | EA | Furnish and Install CONNECTORS, BRONZE GROUND CLAMP, CABLE TO FLAT, PDU #17-158 | | \$ - | \$ 102.96 | \$ 2,676.96 | \$ 60.00 | \$ 1,560.00 |
| 28 | 500 | FT | Furnish and Install CABLE, # 4/0 AWG. 19-STRANDED, MEDIUM DRAWN BARE COPPER | | \$ - | \$ 8.87 | \$ 4,435.00 | \$ 8.00 | \$ 4,000.00 |
| 29 | 75 | FT | Furnish and Install CABLE, # 2/0 AWG. 19-STRANDED, MEDIUM DRAWN BARE COPPER | | \$ - | \$ 36.31 | \$ 2,723.25 | \$ 6.00 | \$ 450.00 |
| 30 | 1 | LOT | Furnish and Install ALL GROUNDING FOR ABOVE GROUND AND UNDERGROUND INSTALLATION. CADWELD, ALL REQUIRED DEVICES & MATERIALS FOR CADWELDING OF GROUND GRID TO TAPS. CARTRIDGE | | \$ - | \$ 3,905.00 | \$ 3,905.00 | \$ 55,000.00 | \$ 55,000.00 |
| 31 | 78 | EA | Furnish and Install TERMINAL CONNECTOR, BRONZE, TAP LUG TERMINAL ONE CABLE TO FLAT HUBBELL, CAT NO TLS-42 | | \$ - | \$ 37.83 | \$ 2,950.74 | \$ 110.00 | \$ 8,580.00 |
| 32 | 26 | EA | Furnish and Install 1/2" x 1 1/2" SIL. BRONZE BOLT AND NUT (2) FLAT WASHERS AND LOCK WASHER | | \$ - | \$ 159.16 | \$ 4,138.16 | \$ 25.00 | \$ 650.00 |
| 33 | 52 | EA | Furnish and Install TERMINAL CONNECTOR, BRONZE, CABLE TO FLAT 4/0 MCM, PUD CAT NO. 11-110 | | \$ - | \$ 142.58 | \$ 7,414.16 | \$ 180.00 | \$ 9,360.00 |
| 34 | 114 | EA | Furnish and Install HILTI, ANCHORING SYSTEM, HAS RODS 5.8, 3/4 X 12 IN., #3432164 | | \$ - | \$ 121.09 | \$ 13,804.26 | \$ 110.00 | \$ 12,540.00 |
| 35 | 1 | LOT | Furnish and Install CADWELD MOLD, 4/0 - 4/0, PARALLEL CAT NO. PTC-2Q2Q | | \$ - | \$ 4,067.00 | \$ 4,067.00 | \$ 200.00 | \$ 200.00 |
| 36 | 75 | EA | Furnish and Install 1/2" x 2 1/4" SIL. BRONZE BOLT AND NUT (4) FLAT WASHERS AND (2) LOCK WASHERS | | \$ - | \$ 82.06 | \$ 6,154.50 | \$ 25.00 | \$ 1,875.00 |
| 37 | 175 | FT | Furnish and Install CABLE, # 8 AWG. SOLID MEDIUM DRAWN BARE COPPER (FOR GROUNDING BUSHINGS) | | \$ - | \$ 14.27 | \$ 2,497.25 | \$ 1.00 | \$ 175.00 |
| 38 | 2,050 | FT | Furnish and Install CABLE, ELECTRICAL TYPE, 12 AWG SIZE, 600V RATING, TINNED COPPER MATERIAL, 2 CONDUCTOR, CONTROL KIND. STRANDED, JACKETED, INSULATED, ICEA/NEMA METHOD 1 TABLE E1 SHAWFLEX CORP, CAT NO 2C010U120200710 OR EQUAL. | | \$ - | \$ 4.02 | \$ 8,241.00 | \$ 2.15 | \$ 4,407.50 |

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|------|----------------------------|------|---|------------|-------|--------------|---------------|---------------|---------------|
| 39 | 5,784 | FT | Furnish and Install CABLE, ELECTRICAL TYPE, 12 AWG SIZE, 600V RATING, TINNED COPPER MATERIAL, 4 CONDUCTOR, CONTROL KIND. STRANDED, JACKETED, INSULATED, ICEA/NEMA METHOD 1 TABLE E1 SHAWFLEX CORP, CAT NO 2C010U120400710 OR EQUAL | \$ - | \$ - | \$ 2.17 | \$ 12,551.28 | \$ 2.75 | \$ 15,906.00 |
| 40 | 7,805 | FT | Furnish and Install CABLE, ELECTRICAL TYPE, 12 AWG SIZE, 600V RATING, TINNED COPPER MATERIAL, 9 CONDUCTOR, CONTROL KIND. STRANDED, JACKETED, INSULATED, ICEA/NEMA METHOD 1 TABLE E1 | \$ - | \$ - | \$ 2.88 | \$ 22,478.40 | \$ 4.25 | \$ 33,171.25 |
| 41 | 16,850 | FT | Furnish and Install CABLE, ELECTRICAL TYPE, 8 AWG SIZE, 600V RATING, TINNED COPPER MATERIAL, 4 CONDUCTOR, CONTROL KIND. STRANDED, JACKETED, INSULATED, ICEA/NEMA METHOD 1 TABLE E1 SHAEFLEX CORP, CAT NO 2C010U080400710 OR EQUAL | \$ - | \$ - | \$ 2.45 | \$ 41,282.50 | \$ 4.50 | \$ 75,825.00 |
| 42 | 8,025 | FT | Furnish and Install CABLE, ELECTRICAL TYPE, 8 AWG SIZE, 600V RATING, TINNED COPPER MATERIAL, 2 CONDUCTOR, CONTROL KIND. STRANDED, SHAWFLEX CORP, CAT NO 2C010U080200710 OR EQUAL. | \$ - | \$ - | \$ 1.98 | \$ 15,889.50 | \$ 3.25 | \$ 26,081.25 |
| 43 | 7,100 | FT | Furnish and Install CABLE, ELECTRICAL TYPE, 16 AWG SIZE, 600V RATING, TINNED COPPER MATERIAL, 4 CONDUCTOR, CONTROL KIND. STRANDED, JACKETED, INSULATED, ICEA/NEMA METHOD 1 TABLE E1 SHAWFLEX CORP, CAT NO 2C010U160400710 OR EQUAL | \$ - | \$ - | \$ 1.47 | \$ 10,437.00 | \$ 2.00 | \$ 14,200.00 |
| 44 | 30 | EA | Furnish and Install TERMINAL BLOCK 6 PT, GE/STATE DT1-72.5 K AREVA PART NO 1417315-P9 | \$ - | \$ - | \$ 263.29 | \$ 7,898.70 | \$ 120.00 | \$ 3,600.00 |
| 45 | 1 | LOT | Install all items Noted on the bill of material *To be provided by the City of Anaheim. | \$ - | \$ - | \$ 5,000.00 | \$ 5,000.00 | \$ - | \$ - |
| 46 | 1 | LOT | Remove/relocate/dispose all connectors, conductors, bus supports, cable spacers, conduit and related items between 69kV circuit breakers, control trench and 69kV rack structure as shown in the drawings and as directed by the City Engineer. | \$ - | \$ - | \$ 78,115.00 | \$ 78,115.00 | \$ 61,500.00 | \$ 61,500.00 |
| 47 | 26 | EA | Isolate the relay schemes prior to removing the breakers as directed by Anaheim. | \$ - | \$ - | \$ 1,565.00 | \$ 40,690.00 | \$ 3,500.00 | \$ 91,000.00 |
| 48 | 26 | EA | Disconnect, remove, relocate and dispose/recycle twenty six (26) 69kV circuit breakers and other equipment to City of Anaheim, USC laydown area. | \$ - | \$ 0 | \$ 4,068.00 | \$ 105,768.00 | \$ 1,850.00 | \$ 48,100.00 |
| 49 | 26 | EA | Test oil in breaker bushings, remove, relocate and palletize per specification. | \$ - | \$ 0 | \$ 1,525.00 | \$ 39,650.00 | \$ 2,088.00 | \$ 54,288.00 |
| 50 | 26 | EA | Install twenty six (26) new 69kV breakers (furnished by the City), in accordance with the elevation drawing, elementary diagrams, wiring diagrams, and specifications. | \$ - | \$ 0 | \$ 3,818.00 | \$ 99,268.00 | \$ 1,850.00 | \$ 48,100.00 |
| 51 | 1 | LOT | Disconnect/remove/dispose all secondary wires and control cables and current circuits running from the switchyard (circuit breakers, etc.) to the relay racks according to the drawings and Cable Schedule. All secondary cables to be removed shall be identified at both ends and lifted from the devices and multi-conductor cable shall be cut one conductor at a time. | \$ - | \$ 0 | \$ 13,207.00 | \$ 13,207.00 | \$ 135,000.00 | \$ 135,000.00 |

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| 52 | 1 | LOT | Remove and Dispose all excess/retired materials and dirt, clean-up the site, restore the site as needed. | \$ - | 0 | \$ 10,159.00 | \$ 10,159.00 | \$ 20,000.00 | \$ 20,000.00 |
| 53 | 1 | LOT | Construct new equipment foundations in accordance with plans and specifications. Furnish and install equipment anchorage qualified according to plans and requirements of the IEEE Std. 693-2005. | \$ - | 0 | \$ 13,053.00 | \$ 13,053.00 | \$ 10,000.00 | \$ 10,000.00 |
| 54 | 26 | EA | Furnish and install all labels and identification markers for all cables, conduits, conductors, breakers and equipment as required by the bid documents and applicable codes. | \$ - | 0 | \$ 623.35 | \$ 16,207.10 | \$ 500.00 | \$ 13,000.00 |
| 55 | 26 | EA | Furnish and install any internal wiring connections on circuit breakers or other equipment that were added or omitted for shipment, including the removal or installation of necessary jumpers and local interconnections that may not be shown on the drawings. | \$ - | - | \$ 1,260.00 | \$ 32,760.00 | \$ 2,000.00 | \$ 52,000.00 |
| 56 | 1 | LOT | After all the breakers have been installed; furnish and install bus differential relay protection scheme with no splices per specification. | | | \$ 18,805.00 | \$ 18,805.00 | \$ 18,000.00 | \$ 18,000.00 |
| 57 | 1 | LOT | Allowance to accommodate unknown obstructions, site conditions or deficiencies on a lump sum or T&M basis, as directed by the City. | \$ 50,000.00 | \$ 50,000.00 | \$ 50,000.00 | \$ 50,000.00 | \$ 50,000.00 | \$ 50,000.00 |
| 58 | 1 | LOT | Allowance to accommodate premium portion of overtime work as needed and directed by the City. | \$ 20,000.00 | \$ 20,000.00 | \$ 20,000.00 | \$ 20,000.00 | \$ 20,000.00 | \$ 20,000.00 |
| 59 | 1 | LOT | Allowance to accommodate switching delays and restrictions due to unforeseen system conditions | \$ 20,000.00 | \$ 20,000.00 | \$ 20,000.00 | \$ 20,000.00 | \$ 20,000.00 | \$ 20,000.00 |
| 60 | 1 | LOT | Discrepancies: This bid item is to accommodate those portions of the work(contractor take-offs),required by the contract documents, whose method of payment is not included in the bid items above or elsewhere herein...(Itemization required) | | \$ - | \$ - | \$ - | \$ 125,000.00 | \$ 125,000.00 |
| 61 | 26 | EA | All required testing as spelled out in the Scope of Work Special Provisions / Contract Documents | \$ - | \$ - | \$ 8,975.00 | \$ 233,350.00 | \$ 3,000.00 | \$ 78,000.00 |
| 62 | 1 | LOT | Demobilize | \$ - | \$ - | \$ 12,736.00 | \$ 12,736.00 | \$ 8,000.00 | \$ 8,000.00 |
| TOTAL (ITEMS 1 TO 62) = | | | | | | | \$ 1,429,443.79 | | \$ 1,877,000.00 |

Subcontractor
Electrical Power

Address
557 E. Juanita Ave. Meza, AZ. 85204

Item of Work
61

Phone No.
(480) 633-1490