NEW TYPE 'A' LED DOUBLE HEAD GARDCO CAMPUS LIGHT STANDARD ON NEW POLE AND NEW CONCRETE FOUNDATION.

NEW TYPE 'B' LED GARDCO CAMPUS STANDARD LUMINAIRE ON NEW POLE AND NEW CONCRETE FOUNDATION.

NEW TYPE 'C' LED PEDESTRIAN POLE AND NEW CONCRETE FOUNDATION.

NEW TYPE 'SL' LED SOLAR LUMINAIRE OF EXISTING POLE AND NEW CONCRETE FOUNDATION.

EXISTING HPS COBRAHEAD LIGHT STANDARD AND FOUNDATION TO BE REMOVED.

SCHEDULE 80 PVC IN 24" DEEP TRENCH, BURY AND COMPRESSION BACKFILL, UNLESS NOTED OTHERWISE ON PLANS.

3" SCHEDULE 80 PVC SLEEVE ACROSS ROADWAY TERMINATING IN SPLICE BOXES AT EACH END. BORE CONDUIT IF EXISTING ROADWAY IS TO REMAIN AND TRENCH IF NEW ROADWAY IS TO BE INSTALLED.

HEAVY DUTY, 24"x13"x12" DEEP FLUSH IN GRADE POLYMER CONCRETE SPLICE BOX WITH TRAFFIC RATED, TIER 22, BOLTED COVER LABELED "ELECTRIC"

LIGHTING CONTROL CENTER COMPLETE WITH METER, METER DISCONNECT, NEMA 4 ENCLOSURE, PANEL WITH LIGHTING CONTACTORS AND CONTROLS.

EXISTING ELECTRICAL PANEL AS LABELED.

GENERAL NOTES:

1. LIGHT STANDARD LOCATIONS SHOWN ON PLANS ARE APPROXIMATE. REFER TO DETAILS FOR TYPICAL OFFSET DIMENSIONS FROM BACK OF CURB OR EDGE OF SIDEWALK. CONTRACTOR SHALL STAKE LOCATIONS FOR APPROVAL BY CAMPUS ARCHITECT AND ENGINEER PRIOR TO DRILLING FOUNDATIONS.

2. ALL LIGHT POLES AND LUMINAIRES REMOVED SHALL BE RETURNED TO OWNER.

NOT IN CONTRACT FOR INFORMATION ONLY

EXISTING HPS XCEL COBRAHEAD - SHOWN FOR INFORMATION ONLY.

EXISTING HPS COBRAHEAD TO BE REMOVED- SHOWN FOR INFORMATION ONLY.

EXISTING HPS DOUBLE HEAD LIGHT STANDARD-SHOWN FOR INFORMATION ONLY.

EXISTING MH DOUBLE HEAD LIGHT STANDARD AND FOUNDATION TO BE REMOVED.

EXISTING HPS COBRAHEAD LIGHT STANDARD TO REMAIN.

NEW LED COBRAHEAD LUMINAIRE, POLE AND CONCRETE FOUNDATION.

EXISTING MH GARDCO CAMPUS STANDARD- SHOWN FOR INFORMATION ONLY.

EXISTING GARDCO CAMPUS LIGHT STANDARD AND FOUNDATION TO BE REMOVED.

EXISTING TIMBER POLE FOR OVERHEAD ELECTRIC TO BE REMOVED.

EXISTING MH PEDESTRIAN POLE TO REMAIN.

EXISTING MH PEDESTRIAN BOLLARD TO REMAIN.

EXISTING WALL MOUNTED MH LUMINAIRE TO REMAIN.

EXISTING STEP LIGHT TO REMAIN.
### SCHEDULE OF LIGHTING DEVICES

<table>
<thead>
<tr>
<th>LUMINAIRE</th>
<th>MANUFACTURER</th>
<th>DESCRIPTION / NOTES</th>
<th>MOUNTING</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Ganuco - Form 10 Round</td>
<td>New location, double 22&quot; cylindrical spun aluminum LED, single streetlight. Luminaire shall have a type 3 distribution, 0-10V integral dimming driver, 7-pin ANSI Standard photocell receptacle with shorting cap (for future wireless control node). Provide Campus standard powdercoat paint finish in RAL7030. Luminaire to be UL listed for wet locations. 135W per lamp (2700W)</td>
<td>30ft Pole with (2) 1ft Mast Arms</td>
<td></td>
</tr>
</tbody>
</table>

### TABULATION OF APPROXIMATE LIGHTING QUANTITIES

<table>
<thead>
<tr>
<th>CODE PAY ITEM</th>
<th>DESCRIPTION</th>
<th>UNIT</th>
<th>QUENTIN STREET PHASE 1</th>
<th>WRL</th>
<th>ERL</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>202-00700</td>
<td>REMOVAL OF LIGHT STANDARD</td>
<td>EA</td>
<td>7</td>
<td>14</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>202-00705</td>
<td>REMOVAL OF LIGHT STANDARD FOUNDATION</td>
<td>EA</td>
<td>2</td>
<td>8</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>613-01100</td>
<td>1 INCH ELECTRICAL CONDUIT (PLASTIC)</td>
<td>LF</td>
<td>190</td>
<td>10</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>613-01200</td>
<td>1 1/4 INCH ELECTRICAL CONDUIT (PLASTIC)</td>
<td>LF</td>
<td>1610</td>
<td>187</td>
<td>2110</td>
<td>3290</td>
</tr>
<tr>
<td>613-01300</td>
<td>3 INCH ELECTRICAL CONDUIT (BORED)</td>
<td>LF</td>
<td>550</td>
<td>135</td>
<td>685</td>
<td></td>
</tr>
<tr>
<td>613-07001</td>
<td>TYPE ONE PULL BOX</td>
<td>EA</td>
<td>1</td>
<td>7</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>613-07002</td>
<td>TYPE TWO PULL BOX</td>
<td>EA</td>
<td>9</td>
<td>4</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td>613-10000</td>
<td>WIRING</td>
<td>LS</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>613-13000</td>
<td>LUMINARE (LED) (SPECIAL)</td>
<td>EA</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>613-13006</td>
<td>LUMINARE (LED) (6,000 LUMENS)</td>
<td>EA</td>
<td>15</td>
<td>2</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>613-13016</td>
<td>LUMINARE (LED) (18,000 LUMENS)</td>
<td>EA</td>
<td>5</td>
<td>2</td>
<td>18</td>
<td>34</td>
</tr>
<tr>
<td>613-30300</td>
<td>LIGHT STANDARD ALUMINUM (10-FOOT)</td>
<td>EA</td>
<td>15</td>
<td>2</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>613-30300</td>
<td>LIGHT STANDARD ALUMINUM (10-FOOT)</td>
<td>EA</td>
<td>5</td>
<td>2</td>
<td>12</td>
<td>22</td>
</tr>
<tr>
<td>613-40100</td>
<td>ELECTRICAL SYSTEM MODIFICATIONS</td>
<td>LS</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>613-50375</td>
<td>SOLAR COLLECTION SYSTEM</td>
<td>EA</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**NOTES:**
1. ACTUAL LUMEN OUTPUT IS 5,100 LUMENS.
2. ACTUAL LUMEN OUTPUT IS 15,500 LUMENS.
3. INCLUDES THE PV SOLAR PANELS AND BATTERIES PROVIDED BY MANUFACTURER.
4. THIS PAY ITEM IS FOR THE SOLAR-POWERED LUMINARE IN THE EAST ROCK LOT.
MATCH LINE LE.01

PLAN NOTES

- PULL NEW CONDUCTORS FOR NEW CIRCUITS IN EXISTING 3" CONDUIT FROM SB2-8 TO SPLICE BOX IN MEDIAN
- PULL NEW CONDUCTORS FOR NEW CIRCUITS IN EXISTING CONDUIT.

Light poles to be Alternate 1 in bid request. Pull boxes included in base bid.
West Rock Lot as Alternate 02
East Rock Lot as Alternate 03
CAST IN PLACE POLE FOUNDATION. REFER TO FOUNDATION ELECTRICAL DETAIL FOR MORE INFORMATION.

INTERCEPT EXISTING CONDUIT AND EXTEND INTO NEW CONCRETE FOUNDATION. PROVIDE NEW CONDUCTORS AS NECESSARY.

POLE BASE COVER

SIDEWALK

POLE

HAND HOLE

ROUND NON-TAPERED STEEL POLE
COLOR: RAL 7038 (GRAY)

TYPE 'G3' LUMINAIRE

4" Ø (ASSUMED) MATCH EXISTING

POLE BASE COVER

SIDEWALK

INTERCEPT EXISTING CONDUIT AND EXTEND INTO NEW CONCRETE FOUNDATION. PROVIDE NEW CONDUCTORS AS NECESSARY.

POLE BASE COVER

SIDEWALK

POLE

ROUND NON-TAPERED STEEL POLE
COLOR: RAL 7038 (GRAY)

TYPE 'G3' LUMINAIRE

CAST IN PLACE POLE FOUNDATION. REFER TO FOUNDATION ELECTRICAL DETAIL FOR MORE INFORMATION.

PARKING LOT LIGHT STANDARD ELEVATION

NOT TO SCALE

TYPE 'A' AND 'AX' LUMINAIRE
SHORTING CAP ON 7-PIN RECEPTACLE FOR FUTURE WIRELESS CONTROL MODE.

TYPE 'B' AND 'BX' LUMINAIRE

(ASSUMED) MATCH EXISTING

ROUND NON-TAPERED STEEL POLE
COLOR: RAL 7038 (GRAY)

SIDEWALK

POLE BASE COVER

(DRAWN BY: LIGHTING DESIGN AND ENGINEERING
4699 NAUTILUS COURT SOUTH STE. 102
BOULDER, CO 80301
303-530-7229

PREPARED FOR:

PURPOSE:

DATE:

ISSUE RECORD / REVISION:

PROJECT NUMBER: 23-128743

SHEET NUMBER: LD.01

NOT TO SCALE

AS NOTED
1. CONTRACTOR SHALL COORDINATE TRENCHING WITH OTHER UNDERGROUND UTILITIES, RAMP METERING AND IRRIGATION. CONTRACTOR SHALL USE COMMON TRENCHES AT ALL ROAD CROSSINGS WHERE POSSIBLE.

2. ONE CONDUIT PER BUNDLE SHALL HAVE ONE #12 AWG MILD STEEL WIRE AND A NYLON OR POLYESTER PURPLE TAPE WITH 1,250 LBS TEST STRENGTH AND FOOTAGE MARKINGS IN ALL EMPTY CONDUITS. LOCATE WIRES SHALL NOT BE INSTALLED IN FIBER OPTIC CONDUITS.

3. ELECTRICAL CONDUIT (BORED) SHALL BE LISTED HOPE AND INSTALLED USING TRENCHLESS TECHNOLOGY OR EITHER JACKETED CONDUIT OR DIRECTIONAL BORING. IF TRENCHED CONDUIT IS SPECIFIED ON PLANS, BORED CONDUIT OF EQUAL OR GREATER SIZE MAY BE SUBSTITUTED FOR TRENCHED CONDUIT IF PAID FOR UNDER THE ORIGINALLY DESIGNED TRENCHED CONDUIT PAY ITEM AND AT NO ADDITIONAL COST TO THE PROJECT. ELECTRICAL CONDUIT (BORED) SHALL CONFORM TO THE SAME MINIMUM DEPTH REQUIREMENTS.

4. INSTALLING CONDUIT IN ANY METHOD OTHER THAN TRENCHING OR DIRECTIONAL BORE, THAT MAY CAUSE DAMAGE TO THE EMBANKMENT OR HIGHWAY AREA, OR BE HAZARDOUS TO THE TRAVELING PUBLIC WILL NOT BE PERMITTED. WHEN JACKING IS SPECIFIED, DISRUPTION OF HIGHWAY TRAFFIC WILL NOT BE PERMITTED.

5. FOR ALL SCHEDULE 80 PVC CONDUIT, PROVIDE SUIT FOR EXPANSION FITTINGS AT 100 FOOT INTERVALS AND 6 FEET (MAXIMUM) FROM EACH ELBOW. EXPANSION FITTINGS WILL BE INSTALLED PER N.E.C. REQUIREMENTS FOR 85 DEGREE FAHRENHEIT TEMPERATURE CHANGE.

6. FOR ALL TRENCHED CONDUIT, ELBOWS SHALL BE WIDE SWEEPS (36-InCHES MINIMUM) WITH PVC COATED GRC ON THE OUTSIDE AND THREADED COUPLINGS.

7. ALL PVC CONDUIT ENDS IN PULL BOXES SHALL HAVE END BELLS OR MALE ADAPTOR, THREADED TERMINAL ENDS WITH SCREW ON BUSHING. CONCRETE (CLASS B) SUPPORT RING (NOT REQUIRED WHEN EMBEDDED IN CONCRETE SIDEWALK OR OTHER SUITABLE HARDSCAPE SURFACE).

8. POLYMER CONCRETE BOX COVER, INCIDENTAL TRAFFIC RATED TIER 22 AND BOLTED.

9. INTERLOCK FOR CONCRETE RING CONNECTION.

10. CONDUITS SHALL NOT EXTEND UP MORE THEN 1 1/2" (MAX.) FROM BOTTOM OF BOX AND CONDUIT BUSINGS OR CAPS INSTALLED.

11. 1/2" DEEP (MIN) GRAVEL BED WITH 3/4" (MAX.) CRUSHED GRANITE FOR DRAINAGE.

12. THE CONTRACTOR SHALL PROVIDE INSTALLATION OF ALL SOLAR LIGHTING EQUIPMENT: LUMINAIRE, SOLAR ARRAY, AND BATTERY ENCLOSURE.

13. SOLAR LIGHTING SYSTEM SHALL BE PAID FOR ON A LUMP SUM BASIS WHICH INCLUDES THE LUMINAIRE, ARM, LIGHT STANDARD AND ALL NECESSARY ELECTRICAL FOR A COMPLETE AND OPERATIONAL SOLAR-POWERED LIGHTING SYSTEM.

14. FOR ALL SCHEDULE 80 PVC CONDUIT, PROVIDE SLIP FIT EXPANSION FITTINGS AT 100 FOOT INTERVALS AND 6 FEET (MAXIMUM) FROM EACH ELBOW. EXPANSION FITTINGS WILL BE INSTALLED PER N.E.C. REQUIREMENTS FOR 65 DEGREE FAHRENHEIT TEMPERATURE CHANGE.

15. FOR ALL TRENCHED CONDUIT, ELBOWS SHALL BE WIDE SWEEPS (36-INCHES MINIMUM) WITH PVC COATED GRC ON THE OUTSIDE AND THREADED COUPLINGS.

16. ALL PVC CONDUIT ENDS IN PULL BOXES SHALL HAVE END BELLS OR MALE ADAPTOR, THREADED TERMINAL ENDS WITH SCREW ON BUSHING. CONCRETE (CLASS B) SUPPORT RING (NOT REQUIRED WHEN EMBEDDED IN CONCRETE SIDEWALK OR OTHER SUITABLE HARDSCAPE SURFACE).

17. POLYMER CONCRETE BOX COVER, INCIDENTAL TRAFFIC RATED TIER 22 AND BOLTED.

18. INTERLOCK FOR CONCRETE RING CONNECTION.

19. CONDUITS SHALL NOT EXTEND UP MORE THEN 1 1/2" (MAX.) FROM BOTTOM OF BOX AND CONDUIT BUSINGS OR CAPS INSTALLED.

20. 1/2" DEEP (MIN) GRAVEL BED WITH 3/4" (MAX.) CRUSHED GRANITE FOR DRAINAGE.
1. ROUTE THIS CIRCUIT THROUGH A CONTACTOR WITH PHOTOCELL CONTROL LOCATED AT THE PANEL.
2. CONNECT THESE NEW LOADS TO THE EXISTING 20A-1P CIRCUIT BREAKERS.