

| F.A.P. RTE.                                  | SECTION | COUNTY    | TOTAL SHEETS | SHEET NO. |
|--|---------|-----------|--------------|-----------|
| 729  | *       | VERMILION | 298          | 126       |
| * 36(W,RS-1) & 34Z-(W,RS)<br>CONTRACT #90939 |         |           |              |           |

**BILL OF MATERIALS**

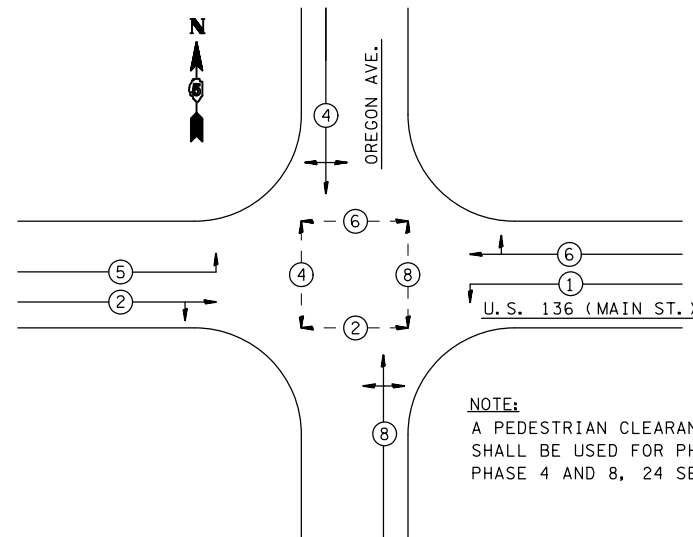
**U.S. 136 (MAIN ST.) & OREGON ST.**

| ITEM  | UNIT  | QUANTITY |
|---|-------|----------|
| SERVICE INSTALLATION, TYPE A  | EACH  | 1.0      |
| HANDHOLE  | EACH  | 3.0      |
| DOUBLE HANDHOLE   | EACH  | 1.0      |
| GULFBOX JUNCTION REMOVAL  | EACH  | 2.0      |
| LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, PHOTO-CELL CONTROL, 250 WATT                   | EACH  | 2.0      |
| FULL-ACTUATED CONTROLLER AND TYPE IV CABINET  | EACH  | 1.0      |
| UNINTERRUPTABLE POWER SUPPLY, STANDARD  | EACH  | 1.0      |
| TRANSCIVER - FIBER OPTIC  | EACH  | 1.0      |
| PEDESTRIAN PUSH-BUTTON POST, GALVANIZED STEEL, TYPE II                                    | EACH  | 2.0      |
| SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED                       | EACH  | 2.0      |
| SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED                      | EACH  | 8.0      |
| SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED                      | EACH  | 2.0      |
| SIGNAL HEAD, POLYCARBONATE, LED, 2-FACE, 1-3-SECTION, BRACKET MOUNTED                     | EACH  | 2.0      |
| PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED WITH COUNT DOWN TIMER | EACH  | 8.0      |
| TRAFFIC SIGNAL BACKPLATE  | EACH  | 8.0      |
| INDUCTIVE LOOP DETECTOR   | EACH  | 6.0      |
| PEDESTRIAN PUSH-BUTTON  | EACH  | 8.0      |
| TEMPORARY TRAFFIC SIGNAL INSTALLATION   | EACH  | 1.0      |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT  | EACH  | 1.0      |
| REMOVE EXISTING HANDHOLE  | EACH  | 6.0      |
| REMOVE EXISTING CONCRETE FOUNDATION   | EACH  | 7.0      |
| UNDERGROUND CONDUIT, PVC, 25MM DIA.   | METER | 21.0     |
| UNDERGROUND CONDUIT, PVC, 40MM DIA.   | METER | 7.0      |
| UNDERGROUND CONDUIT, PVC, 50MM DIA.   | METER | 169.0    |
| UNDERGROUND CONDUIT, PVC, 65MM DIA.   | METER | 16.0     |
| UNDERGROUND CONDUIT, PVC, 75MM DIA.   | METER | 43.0     |
| UNDERGROUND CONDUIT, PVC, 100MM DIA.  | METER | 29.0     |
| UNDERGROUND CONDUIT, PVC, 150MM DIA.  | METER | 2.0      |
| CONDUIT ATTACHED TO STRUCTURE, 40MM DIA., GALVANIZED STEEL                                | METER | 2.0      |
| CONDUIT ATTACHED TO STRUCTURE, 50MM DIA., GALVANIZED STEEL                                | METER | 2.0      |
| ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10                                 | METER | 237.0    |
| LIGHT POLE, WOOD, 10.67 METER, CLASS 3  | EACH  | 1.0      |
| ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C   | METER | 425.0    |
| ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C   | METER | 352.0    |
| ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C   | METER | 456.0    |
| ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 18 3 PAIR   | METER | 415.0    |
| ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C   | METER | 8.0      |
| ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR NO. 6 1 C                        | METER | 157.0    |
| TRAFFIC SIGNAL POST, ALUMINUM 4.25 METER  | EACH  | 2.0      |
| TRAFFIC SIGNAL POST, ALUMINUM 4.85 METER  | EACH  | 2.0      |
| STEEL MAST ARM ASSEMBLY AND POLE, 7.92 METER  | EACH  | 1.0      |
| STEEL MAST ARM ASSEMBLY AND POLE, 10.97 METER   | EACH  | 1.0      |
| STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 12.19 METER                                  | EACH  | 1.0      |
| STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 13.41 METER                                  | EACH  | 1.0      |
| CONCRETE FOUNDATION, TYPE A   | METER | 3.7      |
| CONCRETE FOUNDATION, TYPE C   | METER | 1.1      |
| CONCRETE FOUNDATION, TYPE E 750MM DIAMETER  | METER | 3.0      |
| CONCRETE FOUNDATION, TYPE E 900MM DIAMETER  | METER | 11.4     |
| DETECTOR LOOP, TYPE I   | METER | 174.0    |



**NOTE:** PEDESTRIAN PUSH-BUTTON SIGNS SHALL BE MOUNTED ABOVE THE PEDESTRIAN PUSH-BUTTONS. THE SIGNS SHALL BE BOLTED TO THE POSTS. THE SIGNS SHALL BE CONSIDERED AS INCLUDED IN THE COST OF PEDESTRIAN PUSH-BUTTONS IN ACCORDANCE WITH SECTION 888 OF THE STANDARD SPECIFICATIONS.

**PEDESTRIAN PUSH-BUTTON SIGN DETAIL**



**NOTE:**  
A PEDESTRIAN CLEARANCE INTERVAL OF 19 SECONDS SHALL BE USED FOR PHASE 2, 22 SECONDS FOR PHASE 4 AND 8, 24 SECONDS FOR PHASE 6.

**PHASE DESIGNATION DIAGRAM**

| LOOP INDUCTANCE DATA |        |       |   |              |
|----------------------|--------|-------|---|--------------|
| U.S. 136 & Oregon    |        |       |   |              |
| Loop                 | Length | Width |   | Delay (sec.) |
| A1                   | 6      | 12    | 3 | 10           |
| A2                   | 6      | 6     | 3 | 10           |
| B1-2                 | 6      | 6     | 3 | 10           |
| C1-3                 | 6      | 6     | 4 |              |
| C4-5                 | 6      | 6     | 6 |              |
| D1-3                 | 6      | 6     | 3 |              |
| D4-5                 | 6      | 6     | 5 |              |

THE FOLLOWING LOOPS SHALL BE WIRED TO COMMON AMPLIFIERS: (A1-2), (B1-2), (C1-3), (C4-5), (D1-3), (D4-5)

THE CONTROLLER SHALL BE SET TO MINIMUM RECALL U.S. 136 (MAIN ST.)

**GENERAL NOTES**

- THE FOLLOWING SIGNAL HEADS SHALL BE WIRED IN PARALLEL AT THE MAST POLE HANDHOLE: (A2, A3), (B2, B3), (C2, C3), (D2, D3) - EACH MAST ARM MOUNTED SIGNAL HEAD SHALL HAVE ITS OWN INDIVIDUAL OWN INDIVIDUAL CABLE FROM THE ACCESS HOLE AT BASE OF MAST POLE TO THE SIGNAL HEAD.
- THE ACTUAL LOCATION OF ALL SIGNAL FOUNDATIONS, HANDHOLES, AND TRAFFIC CONTROLLER WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- POST MOUNTED SIGNALS SHALL BE INSTALLED SO THAT NO PART OF THE SIGNAL HEAD IS WITHIN 600 mm OF THE FACE OF CURB.
- ALL MAST ARM POLES SHALL BE A MINIMUM OF 1.8 m FROM THE CENTER OF THE POLE TO THE FACE OF CURB (ON THE MAST ARM SIDE) OR AS SHOWN ON THE PLANS.
- ALIGN ADJACENT RED INDICATIONS TO SAME HEIGHT ABOVE PAVEMENT.
- THE BASE FOR A TRAFFIC SIGNAL POST SHALL BE SITUATED SUCH THAT THE HANDHOLE IS LOCATED ON A SIDE AWAY FROM A TRAVELED LANE.
- PEDESTRIAN PUSHBUTTON SIGNAL SIGNS SHALL BE MOUNTED ABOVE THE APPROPRIATE PEDESTRIAN PUSHBUTTON.
- THE ANTI-BACKUP FEATURE SHALL BE HARDWIRED ON THE BACKPANEL OF THE CONTROLLER CABINET.