### ILLUMINATION & SIGNALIZATION

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1. METERBASE: 400 AMP MAX, 320 CONT, 4 JWA, AW #324N WITH BYPASS BLOCKS (CONTRACTOR TO VERIFY WITH PUD).

2. PANELBOARD: 120V/240 VAC, 400 AMP, 1 PHASE, 3 WIRE, COPPER BUS SERIES RATED AT 65 KAIC, 30 CKT INTERIOR. MAIN BREAKER 300 AMP, 2 POLE, “CUTLER HAMMER” #DK2300, “CUTLER HAMMER” TYPE BAB BOLT-ON BRANCH BREAKERS:
   - 2 - 30/2 STREET LIGHTING BRANCH (PROVISIONS FOR 2 MORE).
   - 2 - 30/2 ORNAMENTAL LIGHTING BRANCH
   - 2 - 30/1 SIGNAL BRANCH
   - 1 - 15/1 CONTROL CKT BRANCH.
   - 1 - 20/1 RECEPTACLE BRANCH
   - 2 - 20/1 SPARE BRANCH
   - 12 - 20/1 HOLIDAY LIGHTING BRANCH.
   - 4 - SPARE SPACE

3. CONTACTOR: 30 A, LIGHTING RATED, 120 VAC COIL. 2 - REQUIRED, 4-POLE, STREET LIGHTING & ORNAMENTAL LIGHTING (PROVISIONS FOR 1 MORE), 1 - REQUIRED, 12-POLE, HOLIDAY LIGHTING

4. PHOTOCELL: 1800 WATT, 105 TO 305 VAC, PHOTO DIODE TYPE PER WSDOT SPEC, ALR #SST-PV-IES.

5. PHOTO-CELL BYPASS SWITCH SPDT, 20 AMP, 277 VOLT RATED "TEST SWITCH".

6. CONTROL SWITCH: 30MM, HOA SWITCH SQ D #9001KS43B. 3-REQUIRED: STREET LTG, ORNAMENTAL LTG, HOLIDAY LIGHTING.

7. TIMER: 24 HR, 120 VAC, 40 AMP, WITH SPRING WOUND CARRYOVER WIRED IN SERIES WITH PHOTOCELL. FOR ORNAMENTAL LTG & HOLIDAY LIGHTING.

8. CONVENIENCE OUTLET: DUPLEX RECEPTACLE, GFCI, 120 VAC, 20A.

**CABINET FABRICATION NOTES:**

1. CABINET: NEMA 3R, PADMOUNT, WELDED SEAM CONSTRUCTION, MILL FINISHED ALUMINUM, OPEN BOTTOM WITH 2" INSIDE RETURN, 2 SCREENED AND GASKETED VENTS AND U.L. LISTED. FOUNDATION PER STANDARD DRAWING 826.

2. DOORS: HEAVY DUTY CONCEALED HINGE (LIFT-OFF TYPE). CLOSED CELL NEOPRENE GASKET AND PADS. METER DOOR WITH POLISHED WIRE GLASS WINDOW.

3. LOCKABLE VAULT HANDLES: STAINLESS STEEL.

4. PANEL DOOR: 3 POINT LATCH, TUMBLER LOCK, KEYED FOR "BEST" LOCK AND SUPPLIED WITH A BLUE CONSTRUCTION CORE.

5. METER DOOR: SINGLE POINT LATCH WITH PADLOCK. HANDLE TO OPEN AWAY FROM KEY/LOCK.

6. INCLUDE LIFTING EYES ON CABINET ROOF.

7. PAINT: ZINC RICH ALUMINUM OUTSIDE, POLYESTER POWDER COAT WHITE INSIDE.

8. ALL UNFUSED POWER SHALL BE PROTECTED FROM ACCIDENTAL CONTACT BY MAINTENANCE PERSONNEL AND ISOLATED IN ENCLOSED RACEWAYS/WIRE CUTTERS.

9. PANEL BOARDS SHALL EITHER BE TOTALLY ENCLOSED OR PROTECTED WITH A DEAD-FRONT DOOR.

10. FEEDS TO PANEL BOARDS TO OCCUR DIRECTLY THROUGH BACK OF PANEL BOARD OR VIA ENCLOSED WIRE CUTTER.
LANDING PAD

120/240V
1Ø 3W

METER SOCKET
400A, 4 JAW

PHOTOCELL

TEST SWITCH

TIMER

CONTACTOR
12 POLE

CONTACTOR
4 POLE

240V ORNAMENTAL LIGHTING

240V HOLIDAY LIGHTING

200 MAIN

15A SIGNAL
30A SIGNAL
20A SIGNAL
20A SIGNAL

CONTACTOR POLE

4 POLE

SIGNAL

30A

20A

20A

20A

20A

20A

20A

20A

20A

30A

20A

GFI RECEPTACLE

2FT WIDE 4" THICK CONC SAFETY PAD REQUIRED ON ALL SIDES WITH ACCESS.

2" MIN/3" MAX

1 1/2" CHAMFER AT FOUNDATION TOP.

STAINLESS STEEL ANCHOR BOLTS, LOCATION, SIZE AND QUANTITY PER CABINET MFG SPEC.

FOUNDATION AND PAD TO SIT ON UNDISTURBED SOIL.

CONDUIT TO EXTEND 2" MIN TO 3" MAX ABOVE FOUNDATION.

TOP SURFACE SHALL BE LEVEL.

WIRING SCHEMATIC

FOUNDATION & SAFETY PAD NOTES

1. FORMED CONSTRUCTION.
2. COMMERCIAL CONCRETE.
3. 1 1/2" CHAMFER AT FOUNDATION TOP.
4. STAINLESS STEEL ANCHOR BOLTS, LOCATION, SIZE AND QUANTITY PER CABINET MFG SPEC.
5. FOUNDATION AND PAD TO SIT ON UNDISTURBED SOIL.
6. CONDUIT TO EXTEND 2" MIN TO 3" MAX ABOVE FOUNDATION.
7. TOP SURFACE SHALL BE LEVEL.
CABINET ENCLOSURE NOTES
CABINET: NEMA 3R, PADMOUNT, WELDED SEAM CONSTRUCTION, MILL FINISHED ALUMINUM, OPEN BOTTOM WITH 2" INSIDE RETURN, 2 SCREENED AND GASKETED VENTS AND U.L. LISTED. FOUNDATION PER CITY STANDARD DRAWING 821.

DOORS: HEAVY DUTY CONCEALED HINGE (LIFT-OFF TYPE) CLOSED CELL NEOPRENE GASKET AND PADS. METER DOOR WITH POLISHED WIRE GLASS WINDOW.

LOCKABLE VAULT HANDLES: STAINLESS STEEL

PANEL DOOR: WITH 3 POINT LATCH, TUMBLER LOCK, KEYED FOR "BEST" LOCK AND SUPPLIED WITH A BLUE CONSTRUCTION CORE. METER DOOR: SINGLE POINT LATCH WITH PADLOCK. HANDLE TO OPEN AWAY FROM KEY/LOCK.

INCLUDE LIFTING EYES ON CABINET ROOF.

PAINT: ZINC RICH ALUMINUM OUTSIDE, INSIDE POLYESTER POWDER COAT WHITE.

ALL UNFUSED POWER SHALL BE PROTECTED FROM ACCIDENTAL CONTACT BY MAINTENANCE PERSONNEL AND ISOLATED IN ENCLOSED RACEWAYS/WIRE GUTTERS.

PANEL BOARDS SHALL EITHER BE TOTALLY ENCLOSED OR PROTECTED WITH A DEAD-FRONT DOOR.

FEEDS TO PANEL BOARDS TO OCCUR DIRECTLY THROUGH BACK OF PANEL BOARD OR VIA ENCLOSED WIRE GUTTER.

## COMPONENT SCHEDULE

1. METERBASE: 200 AMP, 4 JAW, AW #U264 WITH BYPASS BLOCKS (CONTRACTOR TO VERIFY WITH PUD).

2. PANELBOARD: 120V/240 200 AMP, 1 PHASE, 3 WIRE, COPPER BUS SERIES RATED AT 65 KAIC, 18 KCT INTERIOR. MAIN BREAKER 200 AMP, 2 POLE, "CUTLER HAMMER" #ED2200, "CUTLER HAMMER" TYPE BAB BOLT-ON BRANCH BREAKERS:
   - 2 - 30/2 STREET LIGHTING BRANCH.
   - 1 - 30/2 ORNAMENTAL LIGHTING BRANCH
   - 1 - 30/1 SIGNAL BRANCH
   - 1 - 15/1 CONTROL CKT BRANCH
   - 2 - 20/1 SPARE BRANCH
   - 7 - SPARE SPACE.

3. CONTACTOR: 30 A, LIGHTING RATED, 4 POLE, 120 VAC COIL, 2 REQUIRED.

4. PHOTOCELL: 1800 WATT, 105 TO 305 VAC, PHOTO DIODE TYPE PER WSDOT SPEC, ALR #5ST-PI-IES.

5. PHOTO-CELL BYPASS SWITCH HOA, 30 MM, "SQ D #9001KS43B".

6. CONVENIENCE OUTLET: DUPLEX RECEPTACLE, 120 VAC, GFCI. 125 VAC, 20 A.

WIRING SCHEMATIC

200 AMP SERVICE CABINET FOR METERED SIGNAL, ORNAMENTAL LIGHTING W/PHOTOCELL FOR LIGHTING.
1. UNLESS OTHERWISE INDICATED ON PLANS ALL LOOP DETECTORS SHALL BE CENTERED IN THE LANE.
2. FOR LANES 14' AND WIDER, 8'x30' LOOP WILL BE USED.
3. ALL LOOP DETECTORS SHALL BE BROUGHT BACK AS INDIVIDUALLY TWISTED AND SHIELDED PAIR, THIS SHIELDED PAIR MAY BE CONTAINED IN MULTI-PAIR (INDIVIDUALLY SHIELDED AND TWISTED) CABLE.
4. INSTALL MAXIMUM OF 3 LOOPS PER SAWCUT, ONLY LOOPS ASSOCIATED WITH THE SAME SIGNAL PHASE SHALL BE INSTALLED IN THE SAME SAWCUT.
5. FOR CROSSWALK AND STOPLINE LAYOUT SEE STANDARD DRAWING 721.
6. FOR LOOP INSTALLATION SPECIFICATIONS SEE STANDARD DRAWING 809 & 810.
7. HOME RUNS WILL CROSS ADJACENT LANES AT RIGHT ANGLE TO DIRECTION OF TRAVEL SO AS TO NOT CONFLICT WITH FUTURE LOOP INSTALLATION IN THE ADJACENT LANES.
8. 6"x6" WHITE STAMARK TAPE LOCATED AT THE CENTER OF THE LOOP, ORIENTED AS A DIAMOND IN THE LANE TO BE INSTALLED BY CITY FORCES OR STRIPING CONTRACTOR.
1. Unless otherwise indicated on plans all loop detectors shall be centered in the lane.

2. For lanes 14' and wider, loop layout will be adjusted in the field by the engineer.

3. Loop splicing to lead-in cable per plans.

4. Install maximum of 3 loops per sawcut. Only loops associated with the same signal phase shall be installed in the same sawcut.

5. For crosswalk and stopline layout see standard drawing 721.

6. For loop installation specifications see standard drawings 809 & 810.

7. Home runs will cross adjacent lanes at right angle to direction of travel so as to not conflict with future loop installation in the adjacent lanes.

8. 6"x6" white Stamark tape located at the center of the loop, oriented as a diamond in the lane to be installed by city forces or striping contractor.
NOTES
1. CABINET MATERIALS AND FABRICATION PER WSDOT/APWA STANDARD SPECIFICATIONS 9-29.5.
2. PLACEMENT OF TERMINAL STRIPS PER THIS DRAWING.
3. PLACEMENT OF WIRE TERMINATION LABELS SHALL BE PER PLAN.

SECTION A-A

THREADED NIPPLE AND GROUND NUT, 4" DIA SHOWN

ACCESS OPENING

8" WIDE ALUMINUM CHANNEL MOUNTING BRACKET

EXISTING POLE

2 1/2" Ø THREADED NIPPLE AND GROUND NUT (WIRE WAY)

TYPICAL POLE TERMINATION WIRING SCHEME

TYPICAL CONTROLLER 10Cd TERMINATION WIRING SCHEME

RISER AS REQUIRED 4" DIA SHOWN
1. FOR ADDITIONAL INFORMATION ON MIN CLEARANCES REFER TO SNOHOMISH COUNTY PUD NO 1 T&D GUIDELINES SECTION 4 & W.A.C 296-155-428.

2. ANY FINAL INSTALLATION CLEARANCES FROM EXISTING UTILITIES LESS THAN SHOWN ABOVE MUST BE APPROVED BY THE AFFECTED UTILITY.

FOR ADDITIONAL GUIDANCE ON MIN CLEARANCES REFER TO SNOHOMISH COUNTY PUD NO 1 T&D GUIDELINES SECTION 4 & W.A.C 296-155-428.

ANY FINAL INSTALLATION CLEARANCES FROM EXISTING UTILITIES LESS THAN SHOWN ABOVE MUST BE APPROVED BY THE AFFECTED UTILITY.
NOTES:
1. ALL DIMENSIONS ARE MINIMUM, EXACT CONFIGURATIONS VARY AMONG DIFFERENT MANUFACTURERS.
2. THE NOTED LID THICKNESSES ARE OVERALL MINIMUMS, NON-SKID LID SHALL BE HOT DIP GALVANIZED IN ACCORDANCE W/ ASTM A 123. AN APPROVED SURFACE PLATE IS STEEL "SLIPNOT GRADE 3 - COARSE" BY "W.S. MOLNAR CO".
3. LID SUPPORT MEMBERS SHALL BE WELDED TO FRAME.
4. 4000 PSI CONCRETE IS ALLOWED IF BOX REINFORCEMENT CONSISTS OF 6x6 - W3xW3 WELDED WIRE FABRIC WELDED TO THE FRAME.
5. WHEN NOTED IN THE CONTRACT TYPE 2 AND TYPE 8 BOXES SHALL BE PROVIDED WITH 12" DEEP EXTENSION BOXES.
6. WHEN NOTED IN THE CONTRACT TYPE 2 BOXES SHALL BE PROVIDED WITH A 10''x27 1/2'' 10 GAGE DIVIDER PLATE COMPLETE WITH FASTENERS.
7. NON CONCRETE BOXES MAY BE SUBMITTED FOR APPROVAL EVALUATION WILL INCLUDE AN H-20 LOAD TEST.
8. ALL BOXES WILL BE WSDOT APPROVED AND CERTIFIED.
9. LEGEND FOR TRAFFIC SIGNAL SYSTEM BOXES WILL BE "TS", AND "LT" FOR ILLUMINATION SYSTEMS. LEGEND LETTERS WILL BE FORMED WITH 1/8" WELD BEAD.

JUNCTION BOX MATERIALS

<table>
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<tr>
<th>ITEM</th>
<th>MATERIAL</th>
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<tbody>
<tr>
<td>BOX</td>
<td>6000 PSI CONC</td>
</tr>
<tr>
<td>FRAME</td>
<td>FLAT OR DIA-MOND GALV STEEL A786</td>
</tr>
<tr>
<td>LID SUPPORT</td>
<td>1/8&quot;MIN GALV STEEL C,L OR T, -A36</td>
</tr>
<tr>
<td>LID</td>
<td>NON-SKID PLATE STEEL (GALV)</td>
</tr>
<tr>
<td>ANCHORS</td>
<td>STEEL WIRE OR TEE PLATE</td>
</tr>
<tr>
<td>REINF</td>
<td>ASTM A-82 STEEL</td>
</tr>
<tr>
<td>HANDLE</td>
<td>GALV STEEL</td>
</tr>
<tr>
<td>FOUNDATION</td>
<td>3000 PSI CONC</td>
</tr>
</tbody>
</table>
1. **SEALANT** - CRAFCO PART NO 34271, OR APPROVED EQUAL.

2. **LOOP WIRE** - NUMBER VARIES SEE LOOP WINDING DETAILS STANDARD DRAWING 810.

3. **LEAD-IN WIRES**: ONE PAIR FOR EACH LOOP SERVED, 3 PAIR MAX PER SAWCUT.

4. **EXTEND SAWCUT SUFFICIENT LENGTH TO PROVIDE FULL SAWCUT DEPTH AROUND CORNERS.**

5. **LOCATE CORNER SAWCUT AT 45° TO SIDE CUTS TO PREVENT KINK IN LOOP WIRE AND ALSO MINIMIZE VOID. TRIANGULAR VOID WILL BE REMOVED AND FILLED WITH SEALANT.**

6. **INSTALL JUNCTION BOX AND LEAD-IN CONDUIT.**

7. **LAY OUT LOOP SLOTS AND LEAD-IN SLOTS.**

8. **INSTALL WIRE IN LOOP SLOT. SEE LOOP WINDING DETAIL.**

9. **RETURN TO JUNCTION BOX AND IDENTIFY LEADS WITH PLAN DETECTOR NUMBER AND "S" FOR START AND "F" FOR FINISH.**

10. **TWIST EACH PAIR OF LEAD-IN WIRES TWO TURNS PER FOOT FROM LOOP TO JUNCTION BOX AND INSTALL IN LEAD-IN SLOT AND CONDUIT. REVERSE DIRECTION OF TWIST FOR EACH SUCCESSIVE PAIR INSTALLED.**

11. **CONSTRUCT SUPPLEMENTAL SPLICE CONTAINING ANY SERIES OR PARALLEL LOOP CONNECTIONS REQUIRED IN PLANS. SUPPLEMENTAL SPICES ARE SUBJECT TO THE SAME REQUIREMENTS SHOWN FOR THE LOOP LEAD AND SHIELDED CABLE SPLICE. IF APPROVED BY ENGINEER SCOTCHLOK 3570 EPOXY KIT SEALING PACKS MAY BE SUBSTITUTED FOR THE SCOTCHCAST 82-81 FOR SUPPLEMENTAL SPICES.**

12. **SPLICE LOOP LEADS OR SUPPLEMENTAL SPLICE LEADS TO SHIELDED CABLE AS NOTED.**

13. **COMPLETE INSTALLATION AND TEST LOOP CIRCUITS OR COMBINATION LOOP CIRCUITS. SEE WSDOT STANDARD SPEC 8-20.3(14).**

14. **FOR LOOP LOCATION REFER TO STANDARD DRAWING 805 AND PLANS.**

15. **SEAL ENDS OF CONDUIT WITH ELECTRICAL PUTTY OF SILICONE.**

16. **DRILL HOLE FOR HOME-RUN CONDUIT 1" LARGER THAN CONDUIT AND FILL VOID WITH HOT MIX ASPHALT.**

17. **ALL SPLICES SHALL BE ABLE TO BE RAISED A MINIMUM OF 16" ABOVE GROUND LINE.**

18. **BUCHANAN 2006S SPLICE CAPS, CRIMP WITH BUCHANAN C-24 CRIMPER FOLLOWING MANUFACTURE'S INSTALLATION PROCEDURE. SOLDER CRIMP (NO OPEN FLAME TORCH OR SIMILAR IS ALLOWED) AND TAPE WITH 2 LAYERS OF TAPE.**

**TYPICAL CONDUIT PLACEMENT FOR LOOP LEAD-IN WIRES**

<table>
<thead>
<tr>
<th>LOOP LEAD PAIRS</th>
<th>1-2</th>
<th>3</th>
<th>4-5</th>
<th>6-8</th>
<th>9-12</th>
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<tr>
<td>CONDUIT SIZE (MIN)</td>
<td>2&quot;</td>
<td></td>
<td>2&quot;</td>
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<tr>
<td>TRENCH WIDTH (MIN)</td>
<td>4&quot;</td>
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<td>4&quot;</td>
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**GENERAL NOTES FOR LOOP INSTALLATION:**

1. **SEALANT - CRAFCO PART NO 34271, OR APPROVED EQUAL.**

2. **LOOP WIRE - NUMBER VARIES SEE LOOP WINDING DETAILS STANDARD DRAWING 810.**

3. **LEAD-IN WIRES**: ONE PAIR FOR EACH LOOP SERVED, 3 PAIR MAX PER SAWCUT.

4. **EXTEND SAWCUT SUFFICIENT LENGTH TO PROVIDE FULL SAWCUT DEPTH AROUND CORNERS.**

5. **LOCATE CORNER SAWCUT AT 45° TO SIDE CUTS TO PREVENT KINK IN LOOP WIRE AND ALSO MINIMIZE VOID. TRIANGULAR VOID WILL BE REMOVED AND FILLED WITH SEALANT.**
GENERAL NOTES FOR LOOP INSTALLATION:

1. INSTALL JUNCTION BOX AND LEAD-IN CONDUIT.
2. SAW LOOP SLOTS AND LEAD-IN SLOTS.
3. LAY OUT LOOP SLOTS BEGINNING AT JUNCTION BOX, ALLOWING 5" MINIMUM SLACK.
4. INSTALL WIRE IN LOOP SLOT, SEE LOOP WINDING DETAIL.
5. RETURN TO JUNCTION BOX AND IDENTIFY LEADS WITH PLAN DETECTOR NUMBER AND "S" FOR START AND "F" FOR FINISH.
6. TWIST EACH PAIR OF LEAD-IN WIRES TWO TURNS PER FOOT FROM LOOP TO JUNCTION BOX AND INSTALL IN LEAD-IN SLOT AND CONDUIT. REVERSE DIRECTION OF TWIST FOR EACH SUCCESSIVE PAIR INSTALLED.
7. CONSTRUCT SUPPLEMENTAL SPLICE CONTAINING ANY SERIES OR PARALLEL LOOP CONNECTIONS REQUIRED IN PLANS. SUPPLEMENTAL SPLICES ARE SUBJECT TO THE SAME REQUIREMENTS SHOWN FOR THE LOOP LEAD AND SHIELDED CABLE SPLICE. IF APPROVED BY ENGINEER SCOTCHLOK 3570 EPOXY KIT SEALING PACKS MAY BE SUBSTITUTED FOR THE SCOTCHCAST 82-B1 FOR SUPPLEMENTAL SPLICES.
8. SPLICE LOOP LEADS OR SUPPLEMENTAL SPLICE LEADS TO SHIELDED CABLE AS NOTED.
9. COMPLETE INSTALLATION AND TEST LOOP CIRCUITS OR COMBINATION LOOP CIRCUITS. SEE WSDOT STANDARD SPEC 8-20.3(14/D).
10. FOR LOOP LOCATION REFER TO STANDARD DRAWING 805 AND PLANS.
11. SEAL ENDS OF CONDUIT WITH ELECTRICAL PUTTY OF SILICONE.
12. DRILL HOLE FOR HOME-RUN CONDUIT 1" LARGER THAN CONDUIT AND FILL VOID WITH HOT MIX ASPHALT.
13. ALL SPLICES SHALL BE ABLE TO BE RAISED A MINIMUM OF 16" ABOVE GROUND LINE.
14. BUCHANAN 2006S SPLICE CAPS, CRIMP WITH BUCHANAN C-24 CRIMPER FOLLOWING MANUFACTURE'S INSTALLATION PROCEDURE. SOLDER CRIMP (NO OPEN FLAME TORCH OR SIMILAR IS ALLOWED) AND TAPE WITH 2 LAYERS OF TAPE.

INSTALLATION NOTES:

1. SEALANT - Crafco Part No 34271, OR APPROVED EQUAL.
2. LOOP WIRE - NUMBER VARIES SEE LOOP WINDING DETAILS STANDARD DRAWING 810.
3. LEAD-IN WIRES: ONE PAIR FOR EACH LOOP SERVED, 3 PAIR MAX PER SAWCUT.
4. EXTEND SAWCUT SUFFICIENT LENGTH TO PROVIDE FULL SAWCUT DEPTH AROUND CORNERS.
5. LOCATE CORNER SAWCUT AT 45° TO SIDE CUTS TO PREVENT KINK IN LOOP WIRE AND ALSO MINIMIZE VOID. TRIANGULAR VOID WILL BE REMOVED AND FILLED WITH SEALANT.
1. The top 12" of anchor bolts shall be galvanized.

2. Install 2" x 1" reducing washer and 1" connector to secure conductors, and coil 30' of cable for future connection at end of mast arm.

3. For double mast arm install 2nd cable between luminaires when both luminaires are on same circuit.


5. Place pole and bracket cable in conductor attachment bracket. Strip outer cable sheath below bracket and connect to feed cable with quick disconnects.

Condition 3 Notes:
1. If pole foundation falls within sidewalk area, top of foundation will be flush with finished sidewalk and be finished in the same manner as sidewalk.

2. 1/2" expansion joint will be placed between foundation and sidewalk.

Placement Notes:
1. Condition 1 & 2 are normal installation options depending on street design.

2. Condition 3 installation is allowed with approval of City Engineer where existing R/W or physical conditions warrant this type installation.
DEADEND MOUNTING

CABLE SUSPENSION CLAMP

EQUIPMENT LEGEND

A. 5/8" STRAIGHT HOT-DIPPED GALVANIZED STEEL BOLT (LENGTH Varies due to POLE DIAMETER).
B. 3" SQ x 3/16" THICK CURVED GALVANIZED WASHER.
C. 5/8" GALVANIZED HEX NUT.
D. FIGURE 8 CABLE. FOR SIZE and TYPE SEE PLANS and SPECIFICATIONS. (MESSENGER 1/4" HS STEEL MIN).
E. J-HOOK & CABLE SUSPENSION CLAMP ASSEMBLY (TANGENTIAL SUPPORT W/ CLAMP FOR 5/8" BOLT).
F. SHORT-BALE STRANDVISE SIZED TO MESSENGER CABLE (1/4" MIN).
G. RISER W/WEATHER HEAD.
H. BRASS CABLE CONNECTOR.
I. POLE GROUND TO 5/8"x8' COPPER PLATED GROUND ROD.

INSTALLATION NOTES

1. IF HORIZONTAL DEFLECTION IS GREATER THAN 2 DEGREES USE ANGLE POINT MOUNTING STANDARD DRAWING 814.
2. CONNECT MESSENGER CABLE TO POLE GROUND WIRE.
3. SPLIT MESSENGER CABLE AWAY FROM MAIN CABLE.
4. FOR DOWN GUY SEE WSDOT STANDARD PLAN J-7D.
EQUIPMENT LEGEND

A. 5/8" STRAIGHT HOT-DIPPED GALVANIZED STEEL BOLT (LENGTH VARIES DUE TO POLE DIAMETER).
B. 3" SQ x 3/16" THICK CURVED GALVANIZED WASHER.
C. 5/8" GALVANIZED HEX NUT.
D. FIGURE 8 CABLE. FOR SIZE AND TYPE SEE PLANS AND SPEC'S. (MESSENGER 1/4" HS STEEL MIN).
E. J-HOOK & CABLE SUSPENSION CLAMP ASSEMBLY (TANGENTIAL SUPPORT W/ CLAMP FOR 5/8" BOLT).
F. SHORT-BALE STRANDVISE SIZED TO MESSENGER CABLE (1/4" MIN).
G. BRASS CABLE CONNECTOR.
H. POLE GROUND TO 5/8"x8' COPPER PLATED GROUND ROD.

INSTALLATION NOTES

1. CONNECT MESSENGER CABLES TOGETHER SUITABLE FOR GROUNDING WIRE.
2. SPLIT MESSENGER CABLE AWAY FROM MAIN CABLE.
3. 3" MINIMUM VERTICAL CLEARANCE BETWEEN GROSSING BOLTS.
4. SINGLE ACCESS CABLE CLOSURE FOR PLASTIC JACKETED TELEPHONE CABLE (RELIABLE ELECTRIC MODEL 100-MB OR EQUAL).
5. TERMINAL BLOCK SIZED AS REQUIRED.
6. MESSENGER CABLE SPLICE WITH STRAND LINK.
7. FIGURE 8 CABLE. SEE PLANS & SPEC'S FOR SIZE AND TYPE.
8. BARE ENDS OF TWISTED PAIRS MUST BE AT LEAST 24" LONG BEFORE TERMINATING.
9. SPLICE CABLE SHIELDING USING 2 CASEY CLIPS (COMMUNICATIONS TECHNOLOGY # C4029 OR EQUAL) AND 1 BONDING JUMPER WITH GREEN INSULATION (NO. 14 AWG STRANDED).
NOTES
1. THE AUTO-FLASH SWITCH SHALL BE A PUSH BUTTON SWITCH RATED AT 15 AMPS, 125 VOLTS AC.
2. THE RESET SWITCH SHALL BE A PUSH BUTTON SWITCH RATED AT 15 AMPS, 125 VOLTS AC.

POLICE PANEL WIRING

KEY
IND INDICATOR LIGHT
PUSH BUTTON RESET SWITCH
TOGGLE ON-OFF SWITCH

POLICE PANEL AND ON/OFF/FLASH RESET PANEL

NOTES
1. THE SIGNALS "ON-OFF" SWITCH SHALL BE AN "ON-OFF" SWITCH RATED AT 15 AMPS, 125 VOLTS AC.
2. THE RESET SWITCH AND AUTO/FLASH SWITCH SHALL BE A PUSH BUTTON SWITCH RATED AT 15 AMPS, 125 VOLTS AC.
DETECTOR TEST SWITCH WIRING

MARKER AREA (TYP)

ON OFF TEST

ON OFF TEST

ON OFF TEST

ON OFF TEST

ON OFF TEST

ON OFF TEST

ON OFF TEST

ON OFF TEST

DETROTER TEST SWITCH WIRING

KEY

IND

PUSH BUTTON TEST SWITCH

INDICATOR LIGHT

+24 VDC

VEH CALL

H.L.M.P.-3750 OR EQUAL

CLEAR LED

DETECTOR OUTPUT "F" OR "W"

T:

ACAD

EPS-COE DESIGN & CONSTR SPECS FOR DEVELOPMENT

IN-WORK

STD816.DWG

T:

ACAD

FILENAM

CITY OF EVERETT

PUBLIC WORKS DEPARTMENT

TITLE

STANDARD DRAWING No.

DETECTION PANEL

MODEL 332 CABINET

DETECTION PANEL

ON OFF/TEST

ROTARY WAFER SWITCH

1  2  3  4  5  6  7  8  9  12  13

| 28, 29 | 68, 69 |

Ø1 (IND) S

Ø2 (IND) S

Ø2 (IND) S

Ø3 (IND) S

Ø4 (IND) S

Ø4 (IND) S

Ø1 OR SD (IND) S

Ø2 P (IND) S

Ø6 P (IND) S

Ø1 (IND) S

Ø2 (IND) S

Ø2 (IND) S

Ø3 (IND) S

Ø4 (IND) S

Ø4 (IND) S

Ø3 OR SD (IND) S

Ø4 P (IND) S

Ø8 P (IND) S

Ø5 (IND) S

Ø6 (IND) S

Ø6 (IND) S

Ø7 (IND) S

Ø8 (IND) S

Ø5 OR SD (IND) S

Ø7 OR SD (IND) S

48, 49

88, 89

12/30/2016

RYAN SASS

COREY HERT

PAUL WILHELM

LAK
1. Foundation depths based on 2500 PSF average lateral bearing pressure and Ø @ 26". If soil conditions at site are not equal to or better than this the contractor shall provide new foundation dimensions.

2. All poles and pole bases shall have one extra 2" conduit that extends to and is capped in the nearest junction box. Unless otherwise approved by the engineer.

3. Concrete shall be class 3000 poured in place with forming on the top 3-1/2" and all above grade portions of the foundation.

4. Size and number of conduit(s) per plan.

5. Saw cut paving when foundation is in existing paved surface.

6. Bolt circles and anchor bolts according to manufacturer’s shop drawings and specs.

7. Conduit shall extend 3" above foundation.

8. Extend system ground to all equipment (PPB’s, terminal cabinets, ped signal heads, etc.) that is less than 12' above pole base when concrete poles are required.

TELEMETRY CABINET & FOUNDATION
TYPES 2 & 3

PANEL NOTES:
1. NEMA R3, PMOUNT WELDED SEAM ALUMINUM 0.125" REMOVABLE EQUIPMENT MOUNTING PAN
HEAVY DUTY LIFT-OFF HINGE CLOSED CELL NEOPRENE
GASKET ON DOOR STAINLESS STEEL VAULT HANDLE
BEST CD LOCK WITH CX CORE 2 SCREENED AND
GASKETED VENTS.

2. 50 PAIR TERMINAL BLOCK WITH GAS TUBE
PROTECTION MODULES RELIANCE COMM/TEC
#50VSR4P4MH (OR EQUAL)

3. FINISH: POWDER COAT WHITE INSIDE AND OUT
EPOXY ALUMINUM OVERCOAT OUTSIDE.

FOUNDATION & RAMP NOTES:
1. FORMED CONSTRUCTION.

2. CLASS 3000 CONCRETE.

3. 1/2" CHAMFER AT TOP SERVICE.

4. 1/2"x3" STAINLESS STEEL ANCHOR BOLTS (4EA).

5. CONDUIT TO EXTEND A MIN OF 2" ABOVE
FOUNDATION.

6. FOUNDATION AND RAMP TO SIT ON UNDISTURBED
SOIL.
FOUNDATION & PAD NOTES

1. FORMED CONSTRUCTION.
2. CLASS 3000 CONCRETE.
3. 1" CHAMFER AT FOUNDATION TOP.
4. 3/8"x3" STAINLESS STEEL ANCHOR BOLTS (4EA).
5. FOUNDATION AND PAD TO SIT ON UNDISTURBED SOIL.
6. CONDUIT TO EXTEND A MIN. OF 6" ABOVE FOUNDATION.

CABINET NOTES

7. CABINET: NEMA 3R, PAD MOUNT, MILL FINISHED ALUMINUM, OPEN BOTTOM WITH 2" RETURN, REMOVABLE EQUIPMENT MOUNTING PAN. 2 SCREENED AND GASKETED VENTS. U.L. LISTED.
8. DOOR: HEAVY DUTY CONCEALED HINGE, LIFTOFF TYPE, WITH STAINLESS STEEL VAULT HANDLE, AND CLOSED CELL NEOPRENE GASKET. SUPPLY WITH "BEST" LOCK AND BLUE CONSTRUCTION CORE.
9. PANEL BOARD: 120/240 VAC, Ø, 3 WIRE, 100 AMP, 8CKT (SQUARE D Q08-16L100S MAIN LUG ONLY, OR EQUAL), 10 KAIC, WITH TWO (2) 40/2 ILLUMINATION BRANCHES, ONE (1) 20/1 GROUND FAULT RECEPTACLE BRANCH.
10. PAINT: ZINC RICH ALUMINUM OUTSIDE, WHITE INSIDE OVER PRIME OVEN BAKED ENAMEL.
11. TOTAL NUMBER OF BREAKERS IN CABINET NOT TO EXCEED 6.
12. DESIGN BASED ON "SKYLINE: MODEL 47550."
1. Weatherhead shall be located 8" below secondary. The PUD will make all secondary service connections at the pole.

2. The first ten (10) feet of riser shall be rigid galvanized steel or schedule 80 PVC conduit and remaining portion shall be schedule 40 PVC or schedule 80 PVC.

3. Apply a bituminous coating on buried portion of steel conduit.

4. Ground clamp & tap to pole ground required when first ten (10) feet of riser is rigid steel.

5. 4" min spacing from pole to conduit.

Riser and standoff on same side as transformer and/or grid gain.
18EVR CAST ALUMINUM FIMAL

16EVR2 CAST ALUMINUM TWIN ARM ASSEMBLY

LIGHT FIXTURE PER SPECIFICATIONS. SEE TABLE ON THIS DRAWING

FLOWER BASKET HANGER, FIELD MOUNTED BY OTHERS SEE DETAIL ON STANDARD DRAWING 824.

20A, 120V, GFCI RECEPTACLE WITH WEATHER PROOF COVER. (LOCATED IN-LINE WITH HANDHOLE)

GALVAINIZED STEEL POLE (TAPERED, 11GA, OCTAGON, ASTM A570)

SPLIT CAST ALUMINUM BASE WITH REMOVABLE ACCESS DOOR. SEE DETAIL ON STANDARD DRAWING 824.

LIGHTING REFERENCE NO. VI-EVR/9-EVR2-DCT/13'

TYPE A TWIN FIXTURE MOUNTING

PEDESTRIAN LIGHT ONLY USED WITH APPROVAL OF CITY ENGINEER

TYPE B SINGLE FIXTURE MOUNTING

SPECIFICATIONS

<table>
<thead>
<tr>
<th>LAMP POST STYLE</th>
<th>PER MANUFACTURER</th>
</tr>
</thead>
<tbody>
<tr>
<td>CASTINGS STYLE</td>
<td>&quot;EVERETT&quot; SPLIT BASE ASSEMBLY</td>
</tr>
<tr>
<td>MATERIAL</td>
<td>ASTM A356 ALUMINUM</td>
</tr>
<tr>
<td>SUPPORT POLE</td>
<td>TAPERED, 11GA, OCTAGON</td>
</tr>
<tr>
<td>MATERIAL</td>
<td>ASTM A570-88, Gr. 33 STEEL</td>
</tr>
<tr>
<td>FIXTURE STYLE</td>
<td>CYCLONE</td>
</tr>
<tr>
<td>LIGHT SOURCE</td>
<td>LED, 67 WATTS, 4000K, IES TYPE III - OR AS SPECIFIED</td>
</tr>
<tr>
<td>FINISH</td>
<td>PRIME &amp; FINISH PAINT, EVERETT GREEN</td>
</tr>
<tr>
<td>ANCHOR BOLTS</td>
<td>3x36x6 A307 GALV</td>
</tr>
<tr>
<td>FLOWER BASKET HANGER</td>
<td>TWIN 20&quot; DECORATIVE</td>
</tr>
</tbody>
</table>

CASTINGS STYLE: 16EVR2 CAST ALUMINUM TWIN ARM ASSEMBLY

18EVR CAST ALUMINUM FIMAL

15'-8-1/2'

12'-0''

13'-2" LIGHT CENTER

12" POLE HEIGHT

FLORIST BASKET HANGER: FIELD MOUNTED BY OTHERS SEE DETAIL ON STANDARD DRAWING 824.

20A, 120V, GFCI RECEPTACLE WITH WEATHER PROOF COVER. (LOCATED IN-LINE WITH HANDHOLE)

GALVAINIZED STEEL POLE (TAPERED, 11GA, OCTAGON, ASTM A570)

SPLIT CAST ALUMINUM BASE WITH REMOVABLE ACCESS DOOR. SEE DETAIL ON STANDARD DRAWING 824.

LIGHTING REFERENCE NO. VI-EVR/9-EVR2-DCT/13'

TYPE A TWIN FIXTURE MOUNTING

PEDESTRIAN LIGHT ONLY USED WITH APPROVAL OF CITY ENGINEER

TYPE B SINGLE FIXTURE MOUNTING

DECORATIVE STREET LIGHT TYPE A & TYPE B POLES

CITY OF EVERETT
PUBLIC WORKS DEPARTMENT

FILENAME: T:\ACAD\EPS-COE DESIGN & CONSTR SPECS FOR DEVELOPMENT\IN-WORK\STD823.DWG

PLOTTED: 1/25/2019 1:35 PM

04/27/2017

RYAN SASS
COREY HERT
PAUL WILHELM
ESH

STANDARD DRAWING No. DECORATIVE STREET LIGHT TYPE A & TYPE B POLES

TITLE

DRAWN BY

DRAWING NO.

CURRENT REV DATE

REV

DRAWING SCALE

SCALE

DRAWN BY

DRAFTSMAN

TITLE

FOR

STANDARD DRAWING 823

PER MANUFACTURER

"EVERETT" SPLIT BASE ASSEMBLY

ASTM A356 ALUMINUM

TAPERED, 11GA, OCTAGON

ASTM A570-88, Gr. 33 STEEL

CYCLONE

LED, 67 WATTS, 4000K, IES TYPE III - OR AS SPECIFIED

PRIME & FINISH PAINT, EVERETT GREEN

3x36x6 A307 GALV

TWIN 20" DECORATIVE

CG21T4-AAGPF-3L-67W-4K-240-EA1-GCY03P-F3AP-R30-RAL6012TX

67 WATTS, 4000K, IES TYPE III - OR AS SPECIFIED

LED, 67 WATTS, 4000K, IES TYPE III - OR AS SPECIFIED

PRIME & FINISH PAINT, EVERETT GREEN

3x36x6 A307 GALV

TWIN 20" DECORATIVE
**FLOWER BASKET HANGER (OPTIONAL)**

- **1" SCH 40 ALUM PIPE**
- **ATTACH ALUM SCROLL**
- **5/8" x 8" COPPER CLAD GROUND ROD**

**BASE SPECIFICATIONS**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>SINGLE FIXTURE</th>
<th>TWIN FIXTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIMENSION &quot;A&quot;</td>
<td>18&quot;</td>
<td>24&quot;</td>
</tr>
<tr>
<td>DIMENSION &quot;B&quot;</td>
<td>30&quot;</td>
<td>40&quot;</td>
</tr>
<tr>
<td>MATERIAL</td>
<td>CAST ALUMINUM</td>
<td>CAST ALUMINUM</td>
</tr>
</tbody>
</table>

**ANCHOR PLATE SPECIFICATIONS**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>TYPE A TWIN FIXTURE</th>
<th>TYPE B SINGLE FIXTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLATE</td>
<td>1&quot; THICK A36 STEEL</td>
<td>1&quot; THICK A36 STEEL</td>
</tr>
<tr>
<td>BOLT CIRCLE</td>
<td>12&quot;Ø</td>
<td>9&quot;Ø</td>
</tr>
<tr>
<td>BOLT SLOTS</td>
<td>(4) 1&quot; - 1/8&quot;</td>
<td>(4) 1&quot; - 1/8&quot;</td>
</tr>
<tr>
<td></td>
<td>ACCEPTING *</td>
<td>ACCEPTING 1&quot;Ø</td>
</tr>
<tr>
<td>ANCHOR BOLT</td>
<td>A307 GALVANIZED *</td>
<td>1&quot; x 36&quot; GALVANIZED</td>
</tr>
</tbody>
</table>

* LENGTH PER MANUFACTURE SPECIFICATIONS.

**NOTES**

1. **ANCHOR BOLT**, SIZE & CIRCLE DIAMETER PER MANUFACTURERS SHOP DRAWINGS.
2. 2" NOM GROUT PAD WITH 1/2" DRAIN HOLE. FOUNDATION FLUSH IN PAVED AREAS.
3. EXTEND 2'-6" DIAMETER FOUNDATION 1" MINIMUM ABOVE FINISHED SIDEWALK. TOP SURFACE OF FOUNDATION SHALL BE LEVEL WITH 1/2" CHAMFER.
4. CONNECT SYSTEM GROUND TO POLE GROUND STRAP AND EXTEND GROUND TO ALL EQUIPMENT.
5. ALL CONDUITS SHALL EXTEND 3" ABOVE FOUNDATION.
6. CONCRETE SHALL BE COMMERCIAL MIX CONCRETE AS CALLED OUT IN WSDOT STANDARD SPECIFICATIONS.
7. FOUNDATION WILL BE POURED IN PLACE WITH FORMING OF TOP 3-1/2".
8. FOR SPECIFIC LOCATION AND SURROUNDING ITEMS LIKE JUNCTION BOXES AND SIDEWALKS SEE PLANS.
PLAN VIEW

SECTION A-A

REAR SIDE

FRONT SIDE

CONCRETE PAD EACH SIDE IN UNPAVED AREAS

CONDUIT SHALL EXIT FOUNDATION IN THIS AREA

SEAL WITH SILICONE COMPOUND

PLAN VIEW

CONTROLLED CABINET

COMMERCIAL MIX CONCRETE
PER WSDOT STANDARD SPECIFICATIONS TYPICAL

FINISHED GRADE

T: 4" TYP

4 ANCHOR BOLTS PER SPECIFICATIONS OF CABINET MANUFACTURER

A

A

T:

PLOTTED:

1/25/2019 1:35 PM
SECTION A-A

PLAN VIEW

CONDUIT SHALL EXIT FOUNDATION IN THIS AREA

4 ANCHOR BOLTS AS SPECIFIED BY CABINET MANUFACTURER

CONDUITS SIZE & NUMBER SEE PLANS

FRONT FACE OF CABINET

CONCRETE PAD

SECTION A-A

SEAL CABINET TO FOUNDATION WITH SILICONE COMPOUND

1" x 45° CHAMFER

COMMERCIAL MIX CONCRETE AS CALLED OUT IN WSDOT STANDARD SPECIFICATIONS

CONDUCT

CONTROLLER CABINET

4 ANCHOR BOLTS AS SPECIFIED BY CABINET MANUFACTURER
INSTALL EMERGENCY PRE-EMPTION BEACON ON THREADED 1/2" PIPE NIPPLE

REMOVE EXISTING 3-WAY COUPLING; INSTALL 4-WAY PIPE COUPLING

PEDESTRIAN SIGNAL MOUNTING BRACKET

PEDESTRIAN SIGNAL

PEDESTRIAN SIGNAL
1. FORMED CONSTRUCTION.
2. COMMERCIAL CONCRETE.
3. 1/2" CHAMFER AT FOUNDATION TOP.
4. STAINLESS STEEL ANCHOR BOLTS, LOCATION, SIZE AND QUANTITY PER CABINET MANUFACTURES SPECIFICATION.
5. FOUNDATION AND PAD TO SIT UNDISTURBED SOIL.
6. CONDUIT TO EXTEND A MIN OF 6" ABOVE FOUNDATION.
7. TOP SURFACE SHALL BE LEVEL.

CONDUIT ACCESS AREA PER MANUFACTURERS RECOMMENDATION

SECTION A-A

UNDISTURBED SOIL TYPICAL

ACCESS SIDE

CONDUIT TYPE & SIZE PER PLANS & SPECIFICATIONS. 18" MIN COVER

SEAL BASE OF CABINET TO FOUNDATION WITH SILICONE

1/2" X 45° CHAMFER (ALL TOP SURFACES)

FINISHED GRADE

PAD

FOUNDATION

CONCRETE PAD REQUIRED ON ALL SIDES WITH CABINET ACCESS

FOUNDATION & PAD NOTES