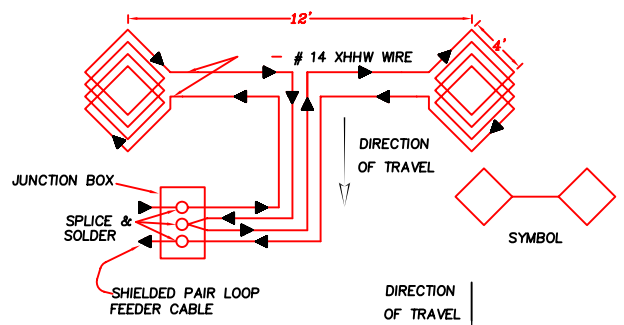
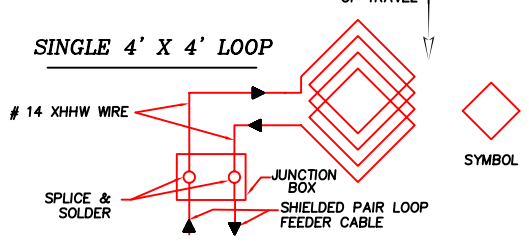
NOTE: DRAWING NOT TO SCALE

ALL EYEBOLTS, BOLTS, NUTS, AND WASHERS SHALL BE GALV. STEEL UNLESS NOTED OTHERWISE, ALL SET SCREWS SHALL BE MIN. DIA. 1/4" STAINLESS STEEL WITH SQUARE OR HEX HEADS. ALL SPANWIRE HANGERS AND PLUMBIZERS SHALL BE CAST BRONZE.

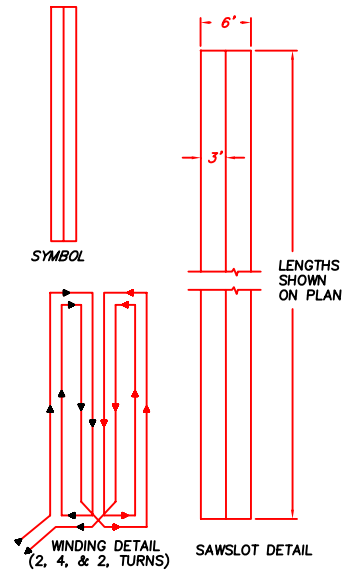
TWO 4' X 4' LOOPS IN SERIES



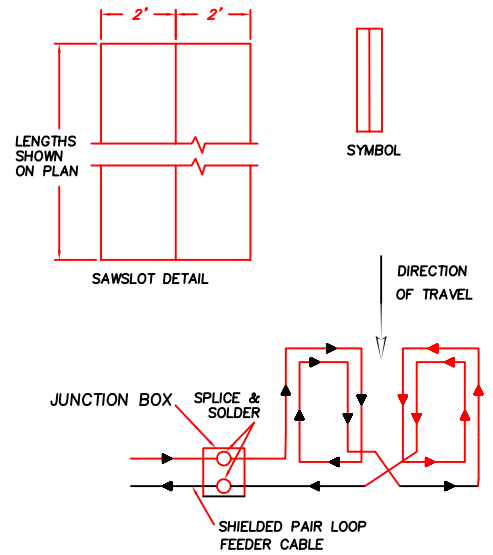
SINGLE 4' X 4' LOOP



DIAMOND LOOP DETECTOR WINDING PATTERN

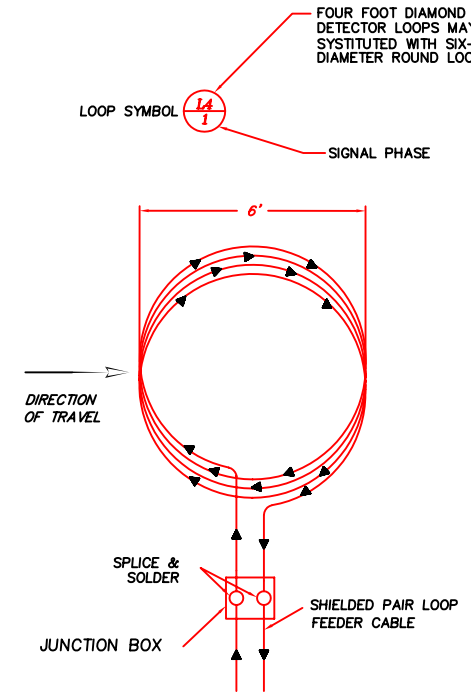


QUADRUPOLE LOOP DETECTOR WINDING PATTERN

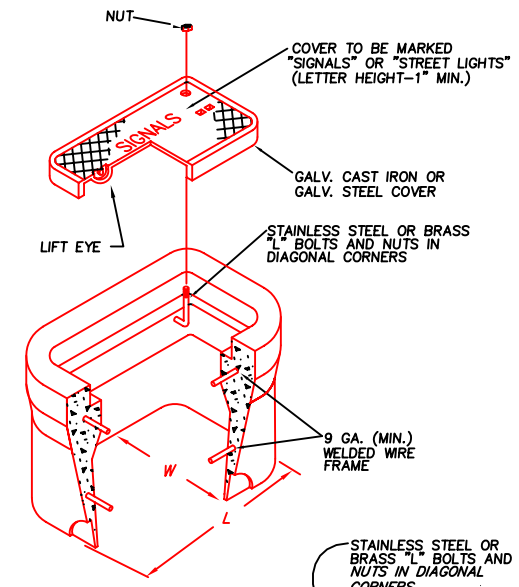


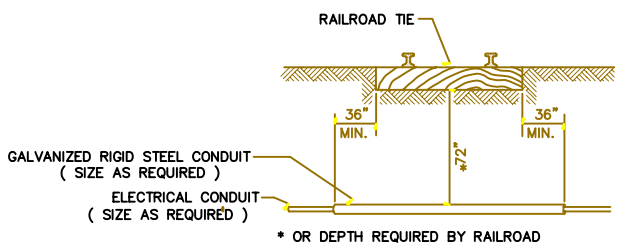
BICYCLE QUADRAPOLE WINDING PATTERN

(USE ONLY WHEN SPECIFIED)

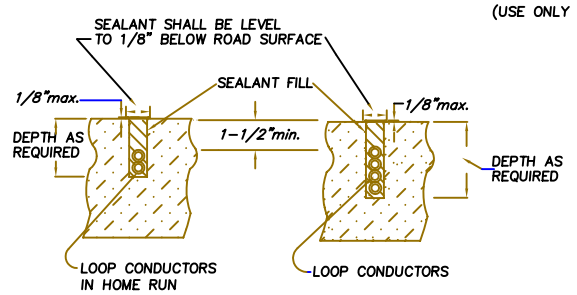


CIRCULAR LOOP DETECTOR (PRE-WOUND)





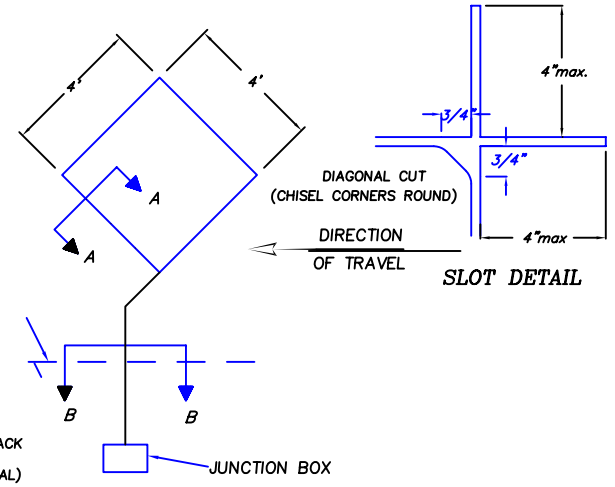
RAILROAD UNDERCROSSING DETAIL



SECTION B – B SECTION A – A

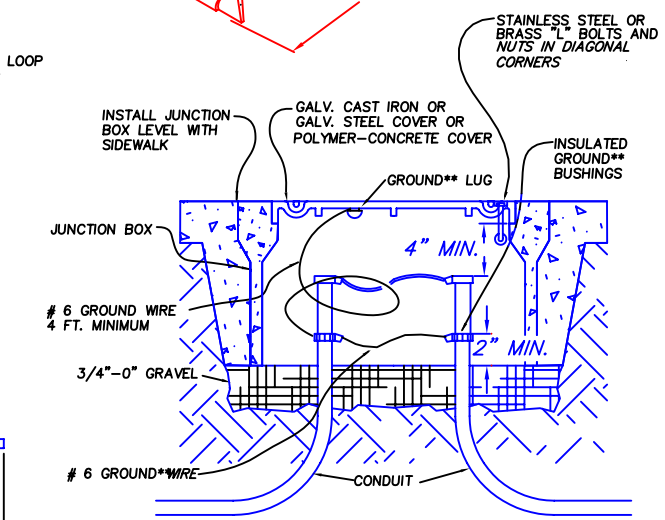
NOTE:
ON ALL NEW OR RE-PAVING PROJECTS LOOPS SHALL BE CUT INTO BASE LIFT AND PAVED OVER WITH 2" FINAL LIFT. SAW CUTS SHALL BE 1/4" TO 3/8" WIDE

DETECTOR LAYOUTS & SECTIONS



SLOT DETAIL

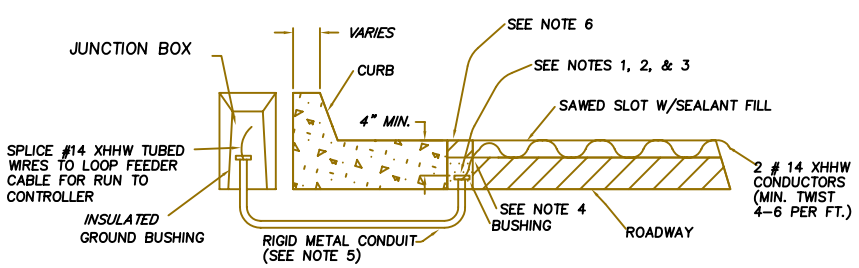
PLAN VIEW OF DIAGONAL CUT AT CORNERS



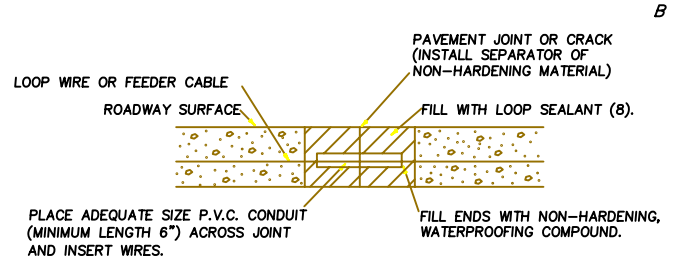
**NOTE: GROUNDING WIRE & BUSHINGS NOT REQUIRED FOR LOW VOLTAGE WIRING (IE: DETECTION & INTERCONNECT)

PRECAST POLYMER-CONCRETE JUNCTION BOX

NOT TO BE USED IN TRAVEL LANES, SHOULDERS, OR AREAS EXPOSED TO TRAFFIC. FOR LOCATION AND TYPE SEE PLANS.

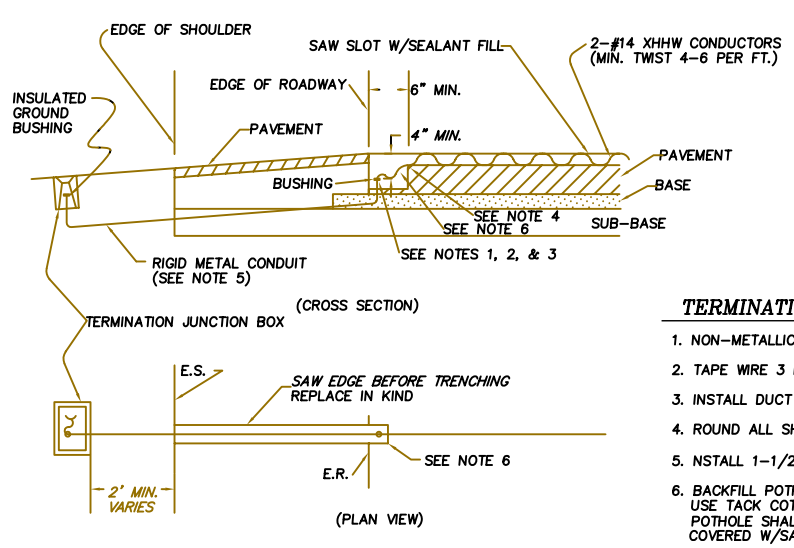


CURB TERMINATION DETAIL



PAVEMENT JOINT AND CRACK CROSSING DETAIL

(FOR CONCRETE OR A.C. PAVEMENT)



SHOULDER TERMINATION DETAIL

TERMINATION DETAIL NOTES:

1. NON-METALLIC BUSHING SHALL BE USED AT ROADWAY END OF CONDUIT.
2. TAPE WIRE 3 INCHES EACH SIDE OF ROADWAY BUSHING.
3. INSTALL DUCT SEAL COMPOUND TO EACH END OF ROADWAY CONDUIT BEFORE INSTALLING SAND AND A. C.
4. ROUND ALL SHARP EDGES WHERE WIRE PASSES
5. NSTALL 1-1/2" CONDUIT MINIMUM.
6. BACKFILL POTHOLE W/FINE SAND TO WITHIN 3" OF ROADWAY SURFACE. BACKFILL REMAINDER W/HOT MIX ASPHALT. USE TACK COTE RS-1 OR SS-1 ON EDGE OF POTHOLE PRIOR TO INSTALLATION OF HOT MIX. SAW CUTS AT EDGE OF POTHOLE SHALL BE 4" DEEP. CONDUCTORS SHALL BE SEALED WITH APPROVED LOOP SEALANT IN SAWCUTS AND COVERED W/SAND IN THE POTHOLE PRIOR TO INSTALLING HOT MIX ASPHALT.

JUNCTION BOX DIMENSION TABLE

TYPE	CONCRETE BOX MIN. THICKNESS *	CONCRETE BOX MIN. DEPTH BOX	CAST IRON OR STEEL COVER L **	W **	R	EDGE THICKNESS	EDGE TAPER
1	1"	12"	17-1/4"	10-1/4"	1-5/32"	1-5/32"	1/8"
2	1"	13"	22-1/4"	12-1/4"	1-1/4"	2"	1/8"
3	1-1/2"	12"	30"	17"	1-1/4"	2"	1/8"

* EXCLUDING CONDUIT WEB
** TOP DIMENSION

LOOP INSTALLATION PROCEDURE

1. SAW SLOTS IN PAVEMENT FOR LOOP CONDUCTORS AS SHOWN IN DETAILS. BLOW OUT AND DRY THOUROUGHLY WITH COMPRESSED AIR.
2. INSTALL TERMINATION "J" BOX.
3. INSTALL # 14 AWG XHHW LOOP CONDUCTOR IN SLOTS USING A 3/8" TO 1/2" THICK WOOD PADDLE, POINTED METAL OBJECTS SUCH AS SCREWDRIVERS SHALL NOT BE USED.(SEE "LOOP WINDING PATTERN") ALLOW ADDITIONAL LENGTH OF CONDUCTOR FOR THE RUN TO TERMINATION "J" BOX PLUS 5 FEET OF SLACK IN "J" BOX. THIS ADDITIONAL LENGTH OF CONDUCTOR FOR EACH LOOP CIRCUIT SHALL BE TWISTED TOGETHER INTO A PAIR (4-6 TURNS PER FOOT) BEFORE BEING RUN TO "J" BOX. LOOP CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICES IN SAW CUT.
4. IDENTIFY LOOP CIRCUIT PAIRS. IDENTIFY AND LABEL START OF CONDUCTOR AND LOOP NUMBER AS SHOWN ON THE PLANS.
5. LOOP CONDUCTORS SHALL BE JOINED W/NON-INSULATED PRESSURE BUTT CONNECTORS. WIRE AND CONNECTOR SHALL BE SOLDERED USING ROSIN CORE SOLDER, THEN SEALED W/HEAT-SHRINK TUBING CONTAINING WATERPROOFING SEALANT. SPLICING SHALL BE DONE DURING DRY WEATHER. ALL SPLICING OF LOOP CONDUCTORS TO FEEDER CABLE SHALL BE IN "J" BOXES ONLY.
6. TEST EACH LOOP CIRCUIT AT CONTROLLER CABINET (OR IF THESE ARE NOT INSTALLED, TEST AT TERMINATION PULL BOX.) BEFORE FILLING SLOTS PERFORM A RESISTANCE TEST BETWEEN EACH CIRCUIT AND GROUND. INSULATION RESISTANCE SHALL BE NOT LESS THEN 200 MEGAOHMS. TEST EACH LOOP CIRCUIT FOR CONTINUITY; LOOP RESISTANCE SHALL NOT EXCEED 0.5 OHMS PLUS 0.35 OHMS PER 100 FEET OF LEAD-IN CABLE.
7. WHERE LOOP CONDUCTORS ARE NOT TO BE SPLICED TO A LEAD-IN CABLE. ENDS OF CONDUCTORS SHALL BE TAPED.
8. FILL SLOTS WITH CRAFCO BRAND #34271 DETECTOR LOOP SEALANT OR APPROVED EQUIVILANT.
9. NO MORE THAN TWO LOOP DETECTOR CONDUCTORS (TWO PAIR OF WIRES) SHALL BE INSTALLED IN ONE SAWED CUT.
10. LEAD-IN CABLE SHALL NOT BE SPLICED BETWEEN THE TERMINATION "J" BOX AND THE CONTROLLER CABINET.
11. DISTANCE BETWEEN SIDE OF LOOP AND LEAD-IN SAW CUT, SHALL BE 2'-0" MINIMUM. DISTANCE BETWEEN LEAD-IN SAW CUTS SHALL BE 6" MINIMUM.

NO	REVISION	DATE	BY	APPR.
1	REM. POLE GRND. DETAILS	6/91	J.B.	J.E.
2	STD. DWG. 5-12	3/93	D.B.	S.M.
3	DWG. UPDATE	5/01	D.B.	B.F.B
4	DWG. UPDATE	12/04	D.B.	B.F.B

	BY	DATE
DRAWN:	DRB	10/93
DESIGNED:		
CHECKED:		
APPROVED:		
FILENAME:	TSD5_12	

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DEPT. OF PUBLIC WORKS
TRANSPORTATION DIVISION
225 FIFTH STREET
SPRINGFIELD, OR. 97477
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SPRINGFIELD TRANSPORTATION DIVISION

STANDARD ROADWAY LOOP DETECTOR AND MISCELLANEOUS DETAILS

STANDARD DRAWING

5-12