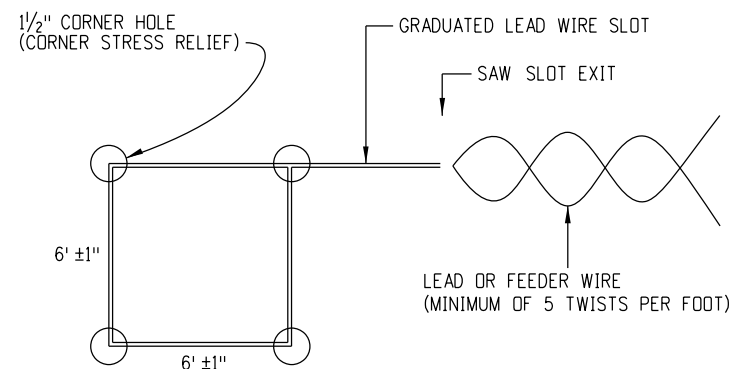


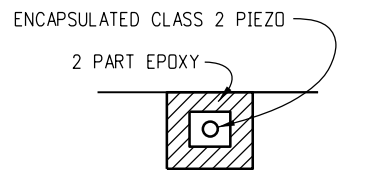
LOOP GEOMETRICS AND INSTALLATION

GENERAL NOTES

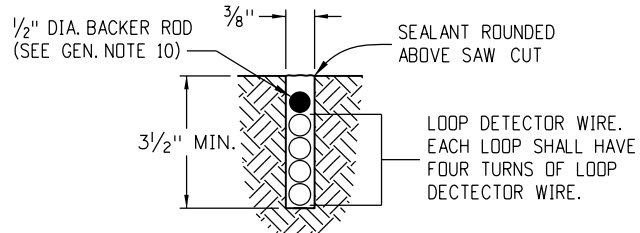
1. ALL DETECTOR LOOPS SHALL MEASURE 6 FT. X 6 FT. (WITHIN 1 INCH TOLERANCE).
2. LOOPS SHALL BE CENTERED IN THE TRAVEL LANE WITH TWO SIDES PARALLEL TO THE LANE STRIPING.
3. ALL LOOP, LOOP LEAD, AND FEEDER WIRE SAW SLOTS SHALL BE CUT TO A MINIMUM DEPTH OF 3 1/2 INCHES.
4. SLOTS SHALL BE SAWED AFTER PLANING AND BEFORE LAYING OF THE FIRST LIFT OF PAVEMENT WHEN APPLICABLE.
5. ALL LOOP CORNERS SHALL BE ROUNDED USING A 1 1/2 INCH HOLE DRILLED TO A MINIMUM DEPTH OF 3 1/2 INCHES.
6. MINIMUM SAW SLOT WIDTH SHALL BE 3/8 INCH.
7. BEFORE INSTALLATION OF THE WIRE, ALL SAW SLOTS SHALL BE CLEANED OF DEBRIS USING WATER AND COMPRESSED AIR. SURFACE AND SLOTS MUST BE ALLOWED TO DRY.
8. ALL LOOPS SHALL BE FOUR TURNS OF THE ABOVE SPECIFIED LOOP WIRE. THE WIRE SHALL BE SEATED IN THE BOTTOM OF THE SAW SLOT.
9. WIRE SPLICES WILL NOT BE PERMITTED IN THE SAW SLOTS. ALL LOOPS SHALL BE CONTINUOUS IN THE PAVEMENT AND TO THE PULL BOX.
10. A BACKER ROD WITH 1/2 INCH DIA. SHALL BE INSTALLED TO INSURE WIRES DO NOT FLOAT TO THE SURFACE DURING GROUTING.
11. ALL SAW SLOTS AND DRILL HOLES SHALL BE SEALED USING A TWO-PART SELF CURING, SELF BONDING WEATHERPROOF EPOXY. EXCESS EPOXY SHALL BE REMOVED TO AVOID UNNECESSARY HIGH SPOTS.
12. PIEZO SENSORS SHALL BE INSTALLED AT THE EXACT MIDPOINT BETWEEN THE LOOPS IN EACH LANE AND TO THE RIGHT OR LEFT SIDE OF THE LINE, CENTERED IN THE WHEEL PATH.
13. PIEZO SENSORS SHALL BE INSTALLED IN COMPLIANCE WITH THE MANUFACTURER'S SPECIFICATIONS, A COPY OF WHICH SHALL BE SUPPLIED TO THE ENGINEER PRIOR TO INSTALLATION.
14. LOOP SETS (TWO LOOPS IN A SERIES) WITHIN A SINGLE LANE SHALL BE SEPARATED BY 10 FEET RESULTING IN A DISTANCE OF 16 FEET FROM LEADING EDGE TO LEADING EDGE (WITHIN 1 INCH TOLERANCE).
15. NO MORE THAN ONE SET OF LOOP LEAD WIRES SHALL BE PLACED IN A SAW SLOT.
16. PULL BOXES MUST CONTAIN AN ADDITIONAL 3 FEET OF LOOP WIRE WHICH ENTERS AND/OR EXITS THE PULL BOX.
17. ALL LOOPS AND LOOP LEADS SHALL BE CLEARLY LABELED IN EACH PULL BOX.
18. MULTIPLE PAIR BELDEN CABLE MAY BE USED IN CONDUIT.
19. COORDINATE INSTALLATION WITH MIKE DELCUPP, CDOT DIVISION OF TRANSPORTATION DEVELOPMENT, AT 303-757-9816. CALL 5 DAYS IN ADVANCE FOR LAYOUT ASSISTANCE.



**DETAIL A
LOOP DETECTOR WIRE**



**SECTION B-B
TYPICAL PIEZO SECTION**

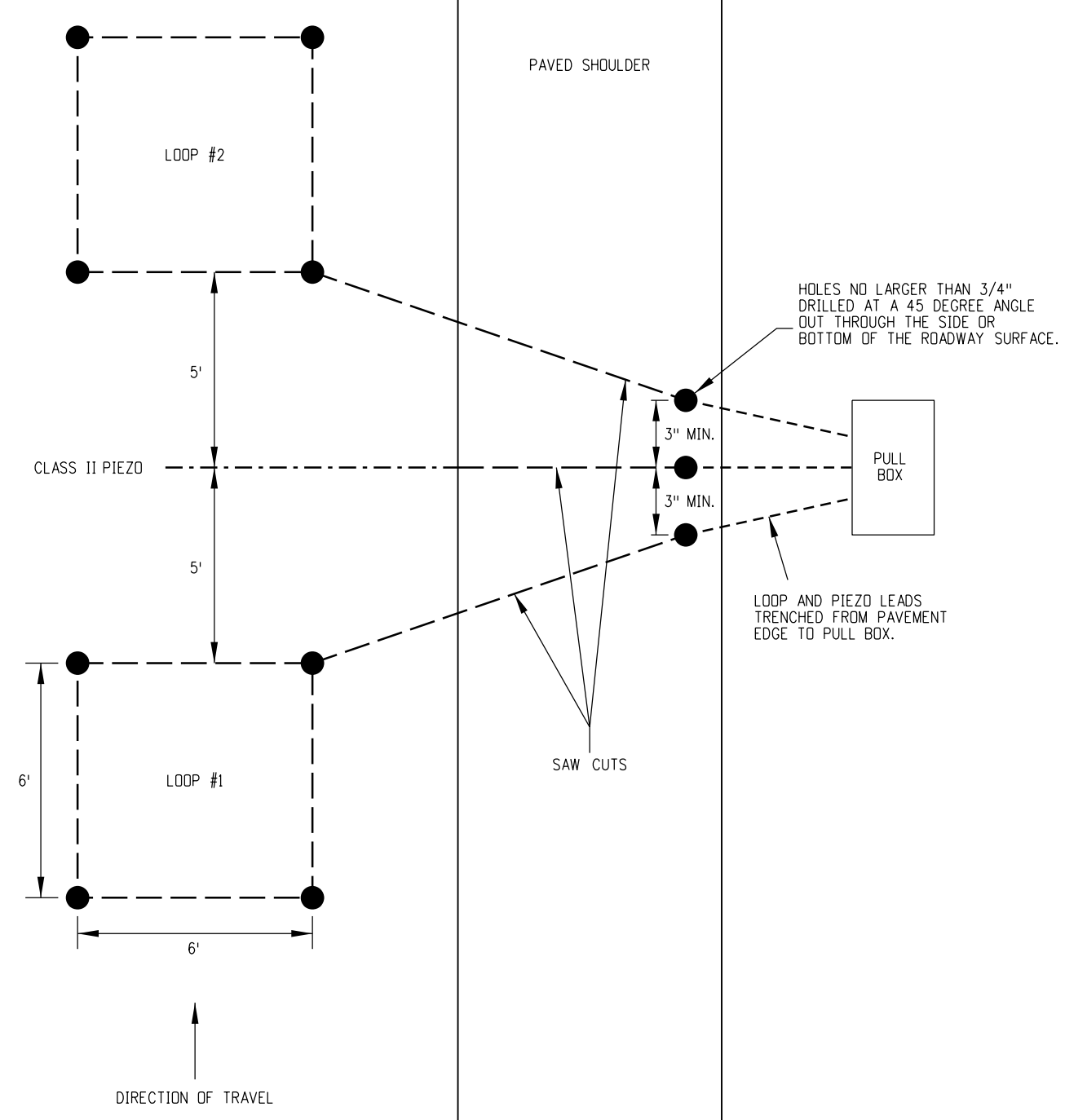


**SECTION C-C
LOOP DETECTOR WIRE INSTALLATION**

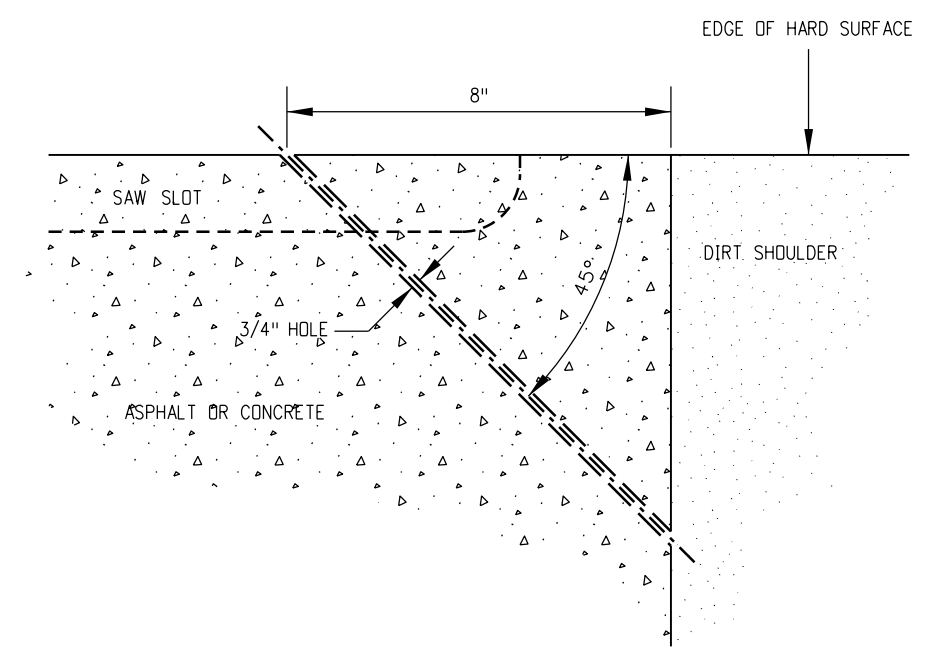
**PIEZO LOOP DETECTOR INSTALLATION DETAIL
D-614-2**

APPLICATION: ON EDGE OF PAVEMENTS.
 HISTORY:
 DESIGNER NOTES:
 PLEASE CALL THE STANDARDS ENGINEER AT 303-757-9021 FOR ANY QUESTIONS.
 PLEASE DELETE THIS BLOCK BEFORE USING THIS DETAIL ON A PROJECT. DATE: APRIL 26, 2011 DD/LTA

Computer File Information		Sheet Revisions		Colorado Department of Transportation		As Constructed		PIEZO LOOP DETECTOR INSTALLATION DETAIL		Project No./Code	
Creation Date: 07/31/19		(R-X)	mm/dd/yy	XXXXXXX	XXXXXX	Street Address		No Revisions: mm/dd/yy		XXXXX/XXXX	
Designer Initials: DD		(R-X)	mm/dd/yy	XXXXXXX	XXXXXX	Office location				Designer: XXXXXXXX	
Last Modification Date: 07/31/19		(R-X)	mm/dd/yy	XXXXXXX	XXXXXX	City, CO Zip code		Revised: mm/dd/yy		Sheet Number: 1 of 2	
Detailer Initials: LTA		(R-X)	mm/dd/yy	XXXXXXX	XXXXXX	Phone: XXX-XXX-XXXX Fax: XXX-XXX-XXXX		Void: mm/dd/yy		Project Sheet Number: XX	
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English		(R-X)	mm/dd/yy	XXXXXXX	XXXXXX	Region, Unit		Intials/Intials		Sheet Subset: XXXXXXXX Subset Sheets: XXX of XXX	



PIEZO PLACEMENT AND SAW CUTTING FOR AN ATR AXLE CLASSIFICATION SITE



SECTION VIEW DRILL DETAIL

PIEZO LOOP DETECTOR INSTALLATION DETAIL D-614-2

APPLICATION: ON EDGE OF PAVEMENTS.

HISTORY:

DESIGNER NOTES:

PLEASE CALL THE STANDARDS ENGINEER AT 303-757-9021 FOR ANY QUESTIONS.

PLEASE DELETE THIS BLOCK BEFORE USING THIS DETAIL ON A PROJECT. DATE: APRIL 26, 2011 DD/LTA

Computer File Information		Sheet Revisions		Colorado Department of Transportation		As Constructed		PIEZO LOOP DETECTOR INSTALLATION DETAIL		Project No./Code	
Creation Date: 07/31/19		(R-X)	mm/dd/yy	XXXXXXX	XXXXXX	Street Address		No Revisions: mm/dd/yy		XXXXX/XXXX	
Designer Initials: DD		(R-X)	mm/dd/yy	XXXXXXX	XXXXXX	Office location				D-614-2	
Last Modification Date: 07/31/19		(R-X)	mm/dd/yy	XXXXXXX	XXXXXX	City, CO Zip code		Revised: mm/dd/yy		Sheet Number: 2 of 2	
Detailer Initials: LTA		(R-X)	mm/dd/yy	XXXXXXX	XXXXXX	Phone: XXX-XXX-XXXX Fax: XXX-XXX-XXXX		Void: mm/dd/yy		Project Sheet Number: XX	
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English		(R-X)	mm/dd/yy	XXXXXXX	XXXXXX	Region, Unit		Intials/Intials		Sheet Subset: XXXXXXXX Subset Sheets: XXX of XXX	