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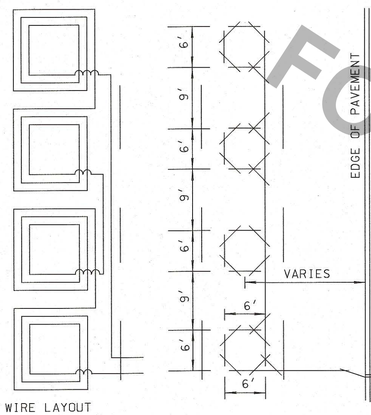
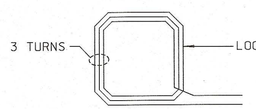
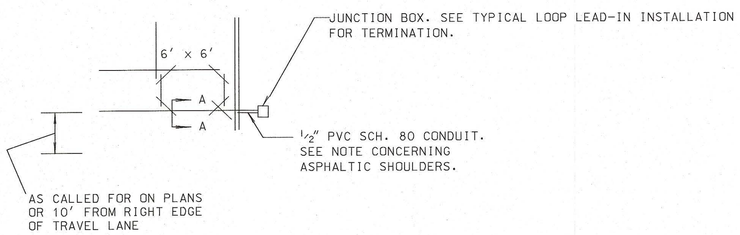
TYPICAL SAW CUT LAYOUT



WIRE LAYOUT





NOTES:

1. LOOPS SHALL CONSIST OF A CONTINUOUS LENGTH OF NO. 14 AWG, 19-STRAND WIRE, INSULATED BY A CROSS-LINKED THERMOSETTING BLACK POLYETHYLENE COMPOUND (ASTM D-2655-80).
2. THE CONDUCTOR SHALL BE COPPER AND SHALL, BEFORE INSULATING, CONFORM TO THE REQUIREMENTS OF ASTM B-3.
3. THE STRANDED CONDUCTOR SHALL UTILIZE EITHER CONCENTRIC OR BUNCH STRANDING AND SHALL CONFORM TO THE CIRCULAR MIL AREA AND PHYSICAL REQUIREMENTS SPECIFIED IN ASTM DESIGNATION B-8, OR ASTM DESIGNATION B-174, FOR BUNCH STRANDING.
4. THE INSULATION SHALL BE APPLIED CONCENTRICALLY ABOUT CONDUCTOR. THE THICKNESS OF THE INSULATION SHALL BE NOT LESS THAN 0.030 INCHES AT ANY POINT WITH A MINIMUM AVERAGE THICKNESS OF 0.035 INCHES. THE METHOD OF MEASUREMENT AND THE APPARATUS USED SHALL BE IN ACCORDANCE WITH UNDERWRITERS LABORATORIES, INCORPORATED STANDARD UL62 (ANSI C33.1).
5. THE INSULATION OF THE FINISHED CONDUCTOR SHALL WITHSTAND WITHOUT BREAKDOWN THE APPLICATION OF A 60 OR 3000 HERTZ, 7500 VOLT (RMS) ESSENTIALLY SINUSOIDAL SPARK TEST POTENTIAL IN ACCORDANCE WITH THE METHOD AND USING EQUIPMENT SPECIFIED IN UNDERWRITERS LABORATORIES, INCORPORATED STANDARD UL83 (ANSI C33.8).
6. LOOP WIRE SHALL CONFORM TO IMSA SPECIFICATION 51-7 EXCEPT WHERE MODIFIED BY THESE SPECIFICATIONS.
7. THE INSULATED CONDUCTOR SHALL BE COMPLETELY ENCASED IN A TUBE OF LOW DENSITY POLYETHYLENE CONFORMING TO THE FOLLOWING DIMENSIONS:

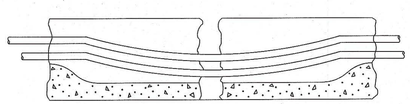
NOMINAL OUTSIDE DIAMETER	.24 INCH
MAXIMUM OUTSIDE DIAMETER	.25 INCH
NOMINAL INSIDE DIAMETER	.173 INCH
MAXIMUM INSIDE DIAMETER	.190 INCH
NOMINAL WALL THICKNESS	.030 INCH
MAXIMUM WALL THICKNESS	.035 INCH

THE NAME OF THE MANUFACTURER, THE YEAR OF MANUFACTURE, AND ANY APPLICABLE PART NUMBER SHALL BE PRINTED ON THE ENCASING TUBE AT INTERVALS OF 27 INCHES OR LESS

8. SLOTS SHALL BE CLEANED OF LOOSE MATERIAL. THE WIRE SHALL BE CAREFULLY INSTALLED TO ENSURE THE INSULATION IS NOT DAMAGED.
9. LOOPS POSITIONED PART IN ASPHALT AND PART IN CONCRETE SHALL BE SEPARATED. SEPARATE LOOPS SHALL TERMINATE AT THE JUNCTION BOX AND SHALL BE WIRED IN SERIES.

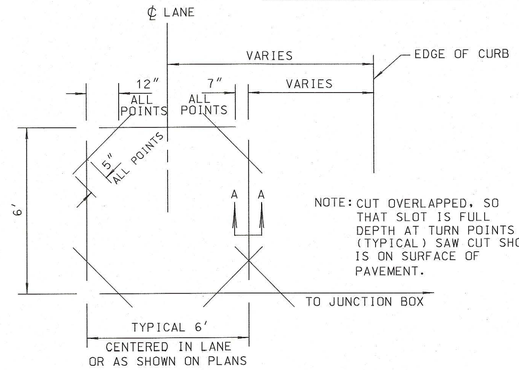
PAVEMENT JOINT & CRACK SECTION

LEAVE WIRE SLACK

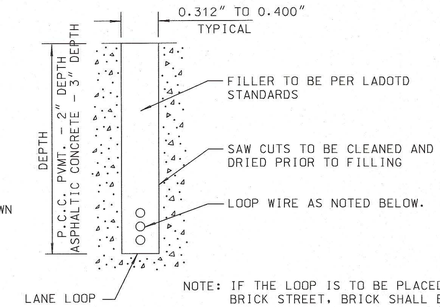


NOTE: DROP SAW BLADE DOWN TO ALLOW SLACK IN CABLE FOR A JOINT LESS THAN 1/2″. ALL OTHER JOINTS SHALL NOT BE CROSSED EXCEPT AS DIRECTED BY ENGINEER.

LOOP SAW-CUT CONFIGURATION



NOTE: CUT OVERLAPPED, SO THAT SLOT IS FULL DEPTH AT TURN POINTS (TYPICAL) SAW CUT SHOWN IS ON SURFACE OF PAVEMENT.

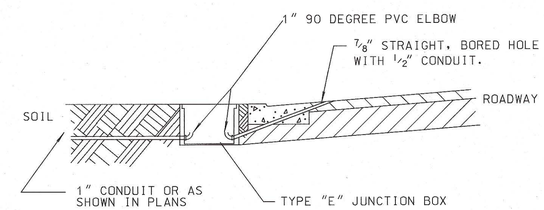


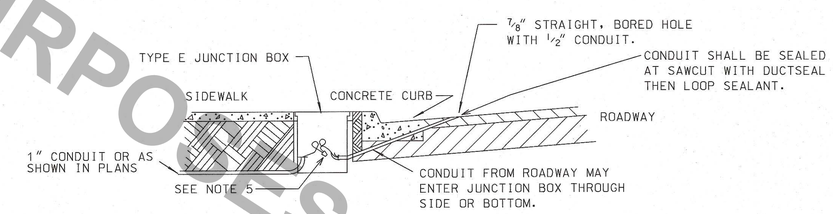
SECTION A-A

NOTE: IF THE LOOP IS TO BE PLACED IN A BRICK STREET, BRICK SHALL BE TAKEN UP AND THE LOOP WIRE PLACED 1″ BELOW THE BRICK BEDDING SURFACE TO PREVENT ABRASION BETWEEN BRICK AND WIRE. BRICK SHALL BE REPLACED TO ORIGINAL GRADE UPON COMPLETION OF LOOP WIRE PLACEMENT.

NOTE: SAW CUTS DO NOT MEET AT CORNER OF RECTANGLE. DIMENSIONS SHOWN ARE REQUIRED FOR USING 12″SAW BLADE. LARGE BLADES REQUIRE LONGER DISTANCES THAN SHOWN AT CORNERS. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING CORRECT DEPTH REGARDLESS OF BLADE SIZE, UNLESS OTHERWISE NOTED IN PLANS.

TYPICAL LOOP LEAD-IN INSTALLATION





NOTES:

1. CONTRACTOR SHALL PROVIDE 1/2″ CONDUIT FROM JUNCTION BOX AND TERMINATE BELOW GROUND SO THAT IT DIRECTLY RECEIVES LOOP LEAD-IN WIRE.
2. FOR A LOOP INSTALLATION IN PAVEMENT WITH OVERLAYS LESS THAN 3″ OVER CONCRETE, A DEEPER DEPTH SAWCUT SHALL BE REQUIRED. THE DEPTH REQUIRED SHALL PRODUCE A 1″ SAW CUT INTO THE CONCRETE AND SHALL BE DETERMINED AT THE JOB SITE. THE SAW CUT SHALL BE APPROVED BY THE PROJECT ENGINEER PRIOR TO THE WIRE INSTALLATION.
3. FOR LOOP INSTALLATIONS IN ROADWAY THAT HAS ASPHALT SHOULDERS, THE 1/2″ CONDUIT SHOWN ABOVE SHALL BE EXTENDED THROUGH A TRENCH IN THE SHOULDER TO A JUNCTION BOX INSTALLED OUTSIDE THE SHOULDER.
4. IDENTIFY LOOP WIRES WITH PERMANENT LABEL MARKED WITH CONTROLLER PHASE.
5. LOOP SPLICE SHALL BE MADE INSIDE THE JUNCTION BOX WITH A COPPER OPEN ENDED COMPRESSION SPLICE CAP AND CRIMPED. THE LOOP SPLICE SHALL THEN BE SEALED WITH A SCOTCHCAST ELECTRICAL INSULATING RESIN SYSTEM OR A APPROVED EQUAL.

STATE OF LOUISIANA
LEI Q. WANG
License No. 33365
PROFESSIONAL ENGINEER
2-19-2015

FOR INFORMATIONAL PURPOSES ONLY

SHEET NUMBER	
PARISH	
FEDERAL PROJECT	
STATE PROJECT	
DESIGNED S. MCCARROLL	
CHECKED D. LORIO	
DETAILED S. MCCARROLL	
CHECKED L. WANG	
DATE 2/16/2015	
SHEET 12 of 14	

NO.	DATE	REVISION DESCRIPTION	BY

TRAFFIC SIGNAL STANDARD DETAILS
SAW CUTTING PAVEMENT AND LOOP WIRE DETAILS
TSD-11

TRAFFIC ENGINEERING