**VEHICULAR DETECTOR STANDARDS**

**LOOP WIDTH**

<table>
<thead>
<tr>
<th>LANE WIDTH (W) (FT.)</th>
<th>LOOP WIDTH (FT.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 ≤ W &lt; 11</td>
<td>5.0</td>
</tr>
<tr>
<td>11 ≤ W &lt; 12</td>
<td>5.5</td>
</tr>
<tr>
<td>12 ≤ W &lt; 13</td>
<td>6.0</td>
</tr>
<tr>
<td>13 ≤ W &lt; 14</td>
<td>3.5 - 3.5 (Q)</td>
</tr>
<tr>
<td>14 ≤ W &lt; 15</td>
<td>4.0 - 4.0 (Q)</td>
</tr>
<tr>
<td>15 ≤ W &lt; 16</td>
<td>4.5 - 4.5 (Q)</td>
</tr>
<tr>
<td>16 ≤ W &lt; 17</td>
<td>5.0 - 5.0 (Q)</td>
</tr>
<tr>
<td>W ≥ 17</td>
<td>USE TWO LOOPS</td>
</tr>
</tbody>
</table>

(Q) = QUADRUPOLE LOOP

---

**MULTIPLE LOOP DETECTOR INSTALLATION DETAIL**

NOTES:

ONLY ONE SET OF LOOP WIRES SHALL BE RUN IN A SAW SLOT.

ALL ADJACENT SAW SLOTS SHALL HAVE A MINIMUM DISTANCE OF 1 FT BETWEEN THEM. NO SAW SLOT SHALL BE LOCATED WITHIN 1 FT OF A LONGITUDINAL OR TRANSVERSE JOINT IN P.C.C. PAVEMENTS IF THE SLOT IS PARALLEL TO THE JOINT.

DETECTOR LOOPS SHALL EACH BE ON A SEPARATE DETECTOR UNIT CHANNEL.

ALL CONDUIT FROM THE LOOP DETECTOR TO THE PULL BOX SHALL BE 725.04.

THE DETECTOR LOOP SHALL BEGIN 20 FT. BEHIND THE STOP LINE.

THE DETECTOR LOOP SHOULD EXTEND TO WITHIN 15 FT. OF THE CROSSING STREET'S EXTENSION OF THE FACE OF CURB/EDGE LINE.

DETECTOR LOOPS SHALL NOT EXCEED 39 FT. IN LENGTH.

THE 15 FT. REQUIREMENT MAY BE INCREASED IN ORDER TO NOT EXCEED THE MAXIMUM LENGTH REQUIREMENT.
**RECTANGULAR DETECTOR LOOP DETAILS**

- Width as specified in plan
- Length specified in plan
- See detail A on Sheet 6 of 7
- See conduit drilled hole detail on Sheet 5 of 7.

**SAW CUT LAYOUT**

**WINDING PATTERN**

- See table for number of turns

<table>
<thead>
<tr>
<th>RECTANGULAR LOOP CONSTRUCTION</th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>LOOP TYPE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presence Detection Loops</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Advanced Detection Loops (6&quot;x6&quot;)</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>
QUADRUPOLE LOOP DETAILS

WIDTH AS SPECIFIED IN PLAN

LENGTH SPECIFIED IN PLAN

SEE DETAIL A ON SHEET 6 OF 7

SEE "CONDUIT DRILLED HOLE DETAIL" FOR 1" CONDUIT ON SHEET 5 OF 7

SAW CUT LAYOUT

WINDING PATTERN
NUMBER OF Turner IS 2-4-2

VEHICULAR DETECTOR STANDARDS

CITY OF COLUMBUS, OHIO
DEPARTMENT OF PUBLIC SERVICE
DIVISION OF DESIGN AND CONSTRUCTION

STD DWG
4300

07/01/2020

SHT 3 OF 7
WINDING DETAIL

SAWCUT DETAIL

BICYCLE ONLY
LOOP DETECTOR
INSTALLATION DETAIL

<table>
<thead>
<tr>
<th>LOOP TYPE</th>
<th>NUMBER OF TURNS</th>
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</thead>
<tbody>
<tr>
<td>PRESENCE DETECTION LOOPS</td>
<td>3-3-3-3</td>
</tr>
</tbody>
</table>

VEHICULAR DETECTOR STANDARDS

CITY OF COLUMBUS, OHIO
DEPARTMENT OF PUBLIC SERVICE
DIVISION OF DESIGN AND CONSTRUCTION

STD DWG 4300
07/01/2020
SHT 4 OF 7
NOTES:

1. THE DRILLED HOLE SHALL BE LOCATED AS SHOWN ABOVE AND WITHIN THE FULL DEPTH PAVEMENT. IT SHALL NOT BE DRILLED OR CUT THROUGH THE PAVED BERM, CURB OR CURB AND GUTTER SECTION.

2. IN AREAS OF POOR PAVEMENT CONDITION, THE SAW SLOT DEPTH SHALL BE INCREASED TO INSURE ADEQUATE WIRE EMBEDMENT. ALL FIELD ADJUSTMENTS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

3. IF AN EXISTING PAVED BERM IS 4.5" THICK OR MORE, THE LOOP WIRE MAY BE INSTALLED IN A SAW SLOT CUT ACROSS THE BERM. WHEN PAVED BERM ARE LESS THAN 4.5" THICK, THE CONDUIT RACEWAY SHALL BE INSTALLED AS SHOWN.

**TYPICAL DRILLED HOLE LOCATIONS FOR 1" CONDUIT**

**CONDUIT DRILLED HOLE DETAIL FOR 1" CONDUIT**

**VEHICULAR DETECTOR STANDARDS**

CITY OF COLUMBUS, OHIO  
DEPARTMENT OF PUBLIC SERVICE  
DIVISION OF DESIGN AND CONSTRUCTION

STD DWG 4300  
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SHT 5 OF 7
CUT OUT PAVEMENT AND JOINT MATERIAL TO DEPTH OF SAWCUT APPROXIMATELY 3" SQUARE OR 3" DIAMETER.
LAY WIRES IN "S" SHAPE.
FILL WITH ELASTIC JOINT MATERIAL OR ASPHALT.

JOINT CROSSING DETAIL IN PORTLAND CEMENT CONCRETE PAVEMENTS

1 1/4" DIAMETER (MIN.) HOLE DRILLED TO DEPTH OF SAW SLOT.

LOOP WIRES

DETAIL A
NOTES:

LOOP DETECTOR WIRE TO LEAD-IN CABLE SPLICES WITHIN THE ENCAPSULATED SPLICE ENCLOSURE SHALL BE SOLDERED.

IF A PULLBOX IS NOT SPECIFIED IN THE PLANS, THE WATERPROOF SPLICE ENCLOSURE SHALL BE LOCATED IN THE FIRST ENTERED POLE OR PEDESTAL, EXCEPT IF THE CONTROLLER CABINET IS MOUNTED ON THAT POLE OR PEDESTAL, IN WHICH CASE THE LOOP WIRE SHALL BE ROUTED DIRECTLY INTO THE CABINET.

THE ENCLOSURE SHALL NOT CONTAIN VISIBLE AIR BUBBLES (VOIDS) GREATER THAN 1/4 IN (16 MM)

LOOP SLOT DEPTH SHALL BE 4 IN.

LOOP DETECTOR WIRE IN TUBING SHALL BE AS SPECIFIED IN CMSC TABLE 732.19-1

LOOP DETECTOR SEALANT SHALL BE PER THE CITY OF COLUMBUS PRE-QUALIFIED PRODUCT LIST.

SAW SLOTS SHALL BE THOROUGHLY CLEANED AND DRIED PRIOR TO INSTALLATION OF SEALANT.