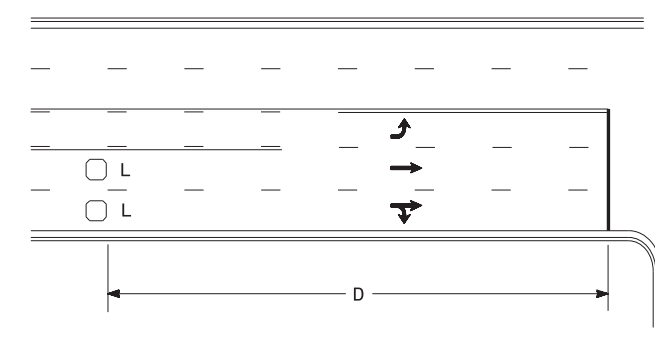


### High Speed Detection (≥40 mph)

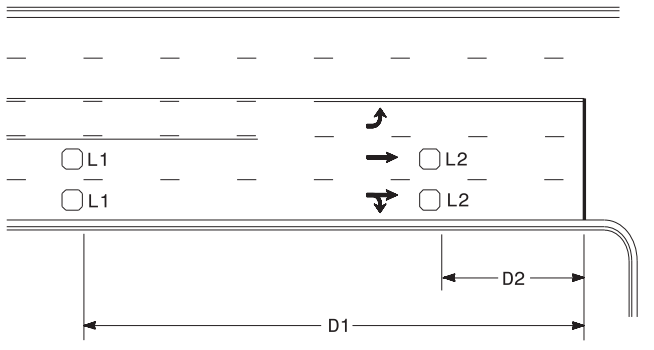


| Speed Limit<br>mph | D<br>ft |
|--------------------|---------|
| 40                 | 250     |
| 45                 | 300     |
| 50                 | 355     |
| 55                 | 420     |

L = 6ft X 6ft  
Wired separately

Volume Density Operation

OR

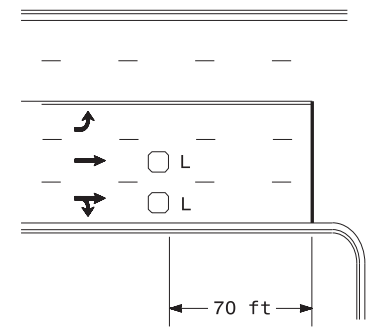


| Speed Limit<br>mph | D1<br>ft | D2<br>ft |
|--------------------|----------|----------|
| 40                 | 250      | 80       |
| 45                 | 300      | 90       |
| 50                 | 355      | 100      |
| 55                 | 420      | 110      |

L1 = 6ft X 6ft  
Wired in series  
  
L2 = 6ft X 6ft  
Wired in series

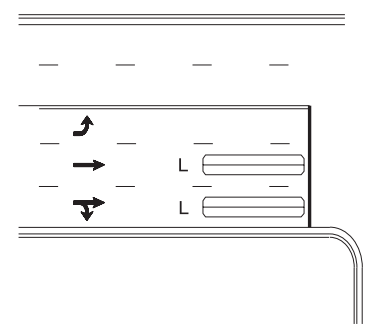
"Stretch" Operation

### Low Speed Detection (≤35 mph)



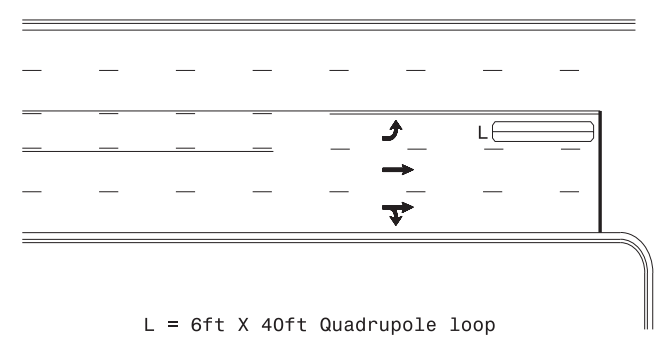
L = 6ft X 6ft  
Wired in series

OR



L = 6ft X 40ft  
Quadrupole loop, wired separately

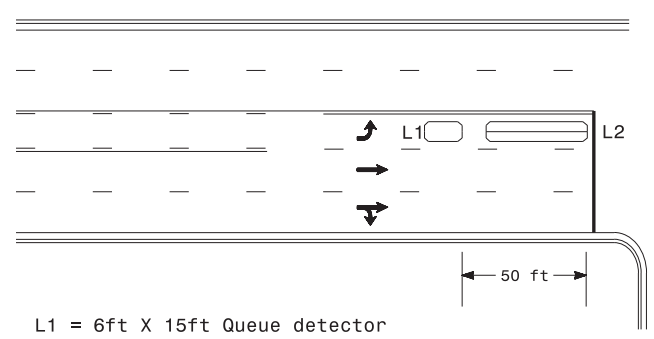
### Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

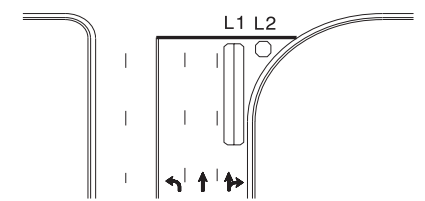
OR



L1 = 6ft X 15ft Queue detector  
L2 = 6ft X 40ft Quadrupole loop

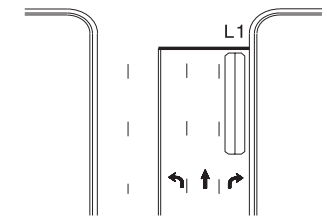
Queue Loop Detection

### Right Turn Lane Detection

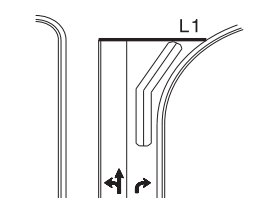


L1 = 6ft X 40ft Quadrupole loop  
L2 = 6ft X 6ft [Minimum] Presence loop  
Wired separately

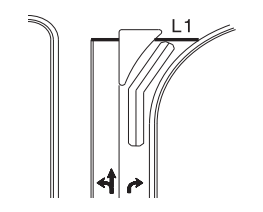
Shared Lane/  
Wide Radius Turn



Standard Turn

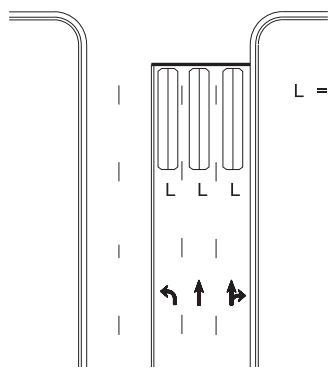


Wide Radius Turn



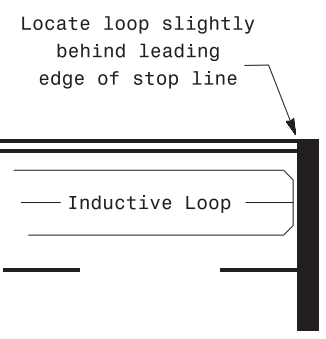
Channelized Turn

### Side Street Detection



L = 6ft X 40ft  
Quadrupole loop  
Wired to separate  
detectors/channels

### Presence Loop Placement at Stop Lines



Note:  
Loop may be located in advance of stop line under any of the following conditions:  
1) stop line is greater than 15' from edge of intersecting roadway  
2) loop detects a permissive or protected/permissive left turn  
3) for an exclusive right turn lane

### Recommended Number of Turns

Single 6' X 6' loop  
(when wired separately):

| Length of Lead-in<br>ft | Number of Turns |
|-------------------------|-----------------|
| < 250                   | 3               |
| 250-375                 | 4               |
| 375-525                 | 5               |
| > 525                   | 6               |

Quadrupole loops: Use 2-4-2 turns

6' X 15' Loops:  
Lead-in < 150', use 2 turns  
Lead-in > 150', use 3 turns

09-SEP-2020 11:54 S:\1154\SIG\SIG1\SIG1.dgn Section=Eastern\_Regional\_Loop\_Type\cal\loop\typical\2015.dgn JGallaway

750 N. Greenfield Pkwy, Garner, NC 27529

Prepared in the Offices of:

| Typical Signal Loop Locations |                       |
|-------------------------------|-----------------------|
| PLAN DATE: September 2020     | REVIEWED BY: JPG      |
| PREPARED BY: PLA              | REVIEWED BY:          |
| SCALE: N/A                    | REVISIONS: INIT. DATE |
| DATE: 9/8/2020                |                       |
| SIG. INVENTORY NO.            |                       |