High Speed Detection
(≥40 mph)

OR

Speed Limit mph	D ft
40	250
45	300
50	355
55	420

L = 6ft X 6ft
Wired in series for TS1
   Controllers
Wired separately for TS2,
   170, and 2070L Controllers

Volume Density Operation

Speed Limit mph	D1 ft	D2 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
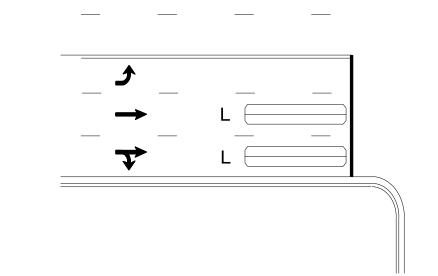
"Stretch" Operation

Low Speed Detection
(≤35 mph)

OR

70 ft

L = 6ft X 6ft
   Wired in series

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

Left Turn Lane Detection

OR

L = 6ft X 40ft Quadrupole loop
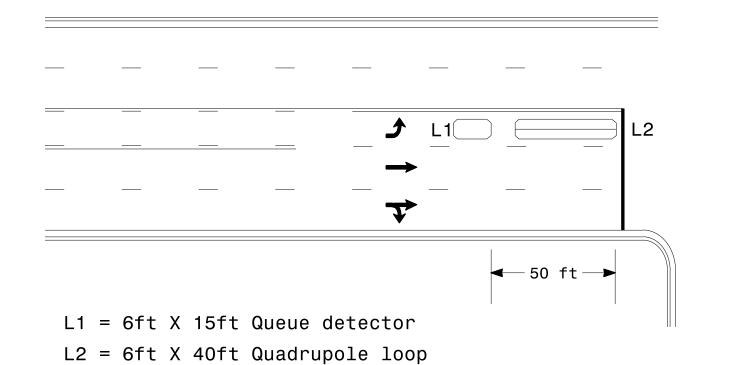
Presence Loop Detection
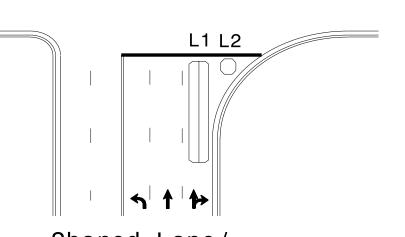
50 ft

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
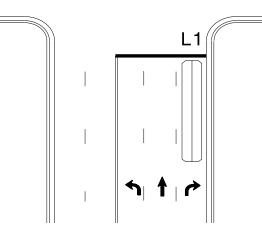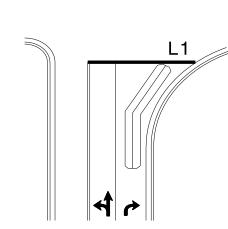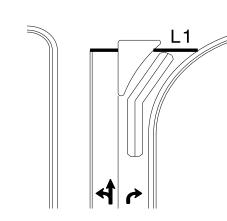
Shared Lane/ Wide Radius Turn

Standard Turn
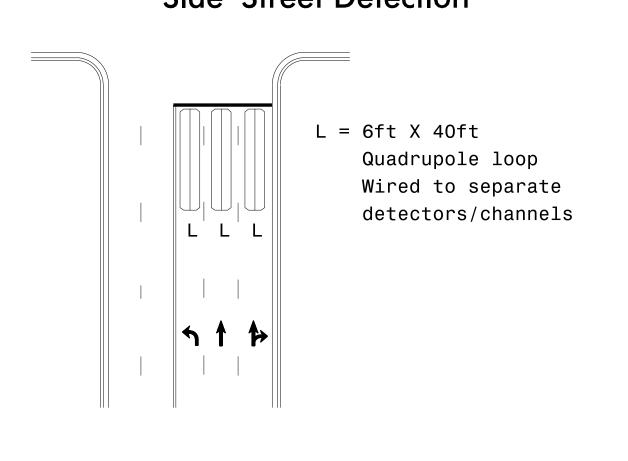
Wide Radius Turn
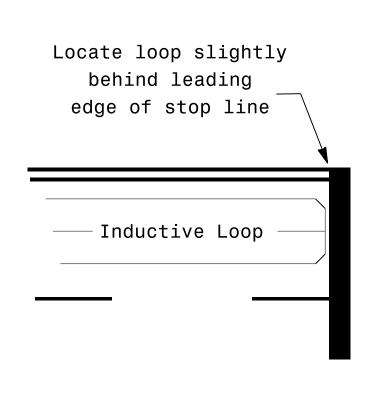
Channelized Turn

Side Street Detection

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

Presence Loop Placement at Stop Lines

Locate loop slightly
behind leading
edge of stop line

Inductive Loop

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 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