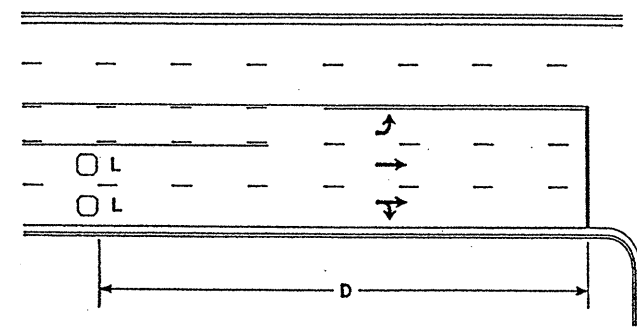


High Speed Detection [≥40 mph (64 km/hr)]

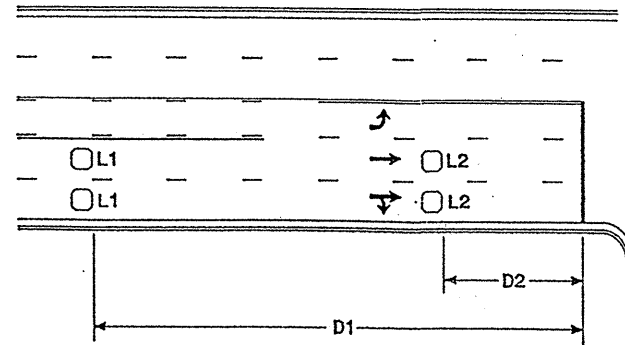


Speed Limit mph (km/hr)	D ft (m)
40 (64)	250 (75)
45 (72)	300 (90)
50 (80)	355 (110)
55 (88)	420 (130)

L = 6ft X 6ft (1.8m X 1.8m)
Wired in series for TS1
Controllers
Wired separately for TS2,
170, and 2070L Controllers

Volume Density Operation

OR

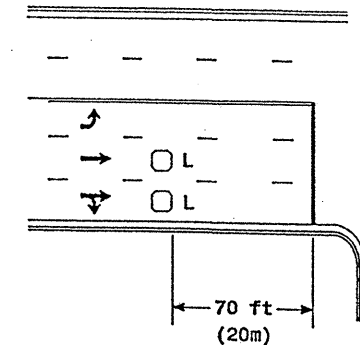


Speed Limit mph (km/hr)	D1 ft (m)	D2 ft (m)
40 (64)	250 (75)	80 (25)
45 (72)	300 (90)	90 (27)
50 (80)	355 (110)	100 (30)
55 (88)	420 (130)	110 (35)

L1 = 6ft X 6ft
(1.8m X 1.8m)
Wired in series
L2 = 6ft X 6ft
(1.8m X 1.8m)
Wired in series

"Stretch" Operation

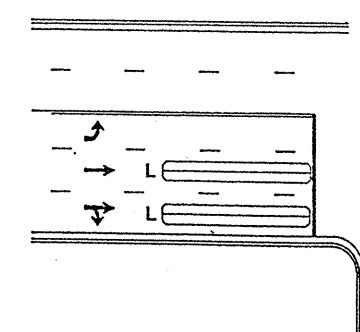
Low Speed Detection [≤35 mph (56 km/hr)]



L = 6ft X 6ft (1.8m X 1.8m)
Wired in series

Volume Density Operation

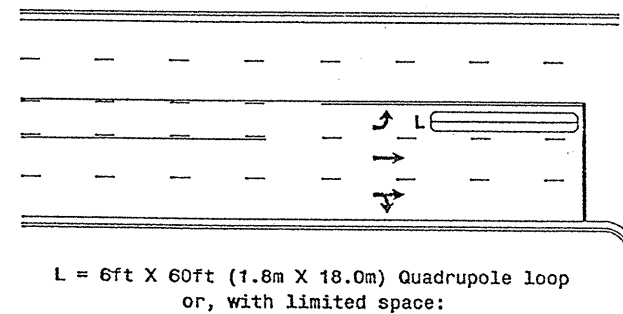
OR



L = 6ft X 60ft (1.8m X 18.0m)
Quadrupole loop, wired separately

"Stretch" Operation

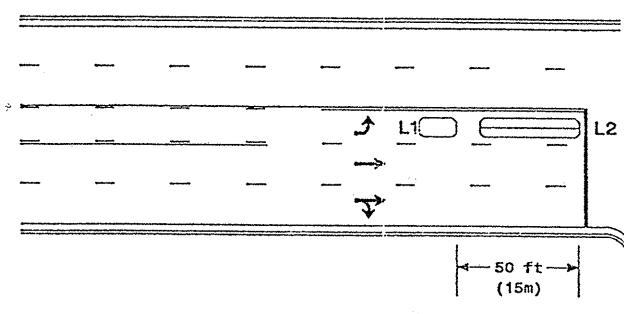
Left Turn Lane Detection



L = 6ft X 60ft (1.8m X 18.0m) Quadrupole loop
or, with limited space:
6ft X 50ft (1.8m X 15.0m) Quadrupole loop
or
6ft X 40ft (1.8m X 12.0m) Quadrupole loop

Presence Loop Detection

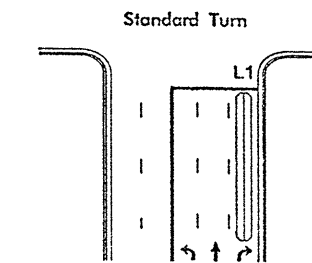
OR



L1 = 6ft X 15ft (1.8m X 4.6m) Queue detector
L2 = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop

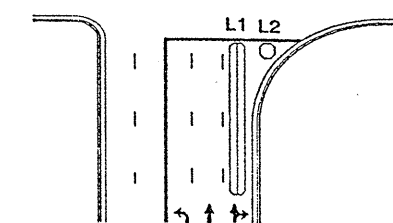
Queue Loop Detection

Right Turn Lane Detection

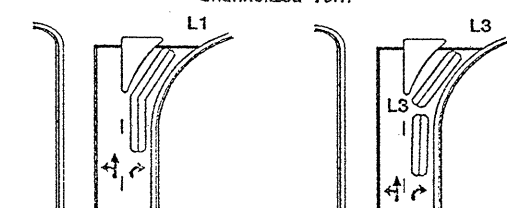


L1 = 6ft X 60ft (1.8m X 18.0m) Quadrupole loop
L2 = 6ft X 6ft (1.8m X 1.8m) [Minimum] Presence loop
Wired separately
L3 = 6ft X 30ft (1.8m X 9.0m) Quadrupole loop
Wired in series

Standard Turn

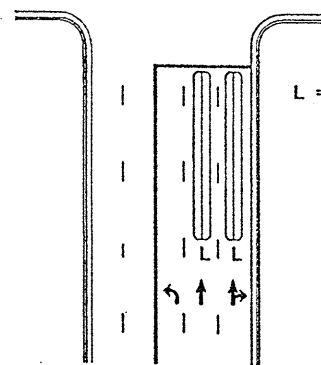


Wide Radius Turn



Channelized Turn

Side Street Detection

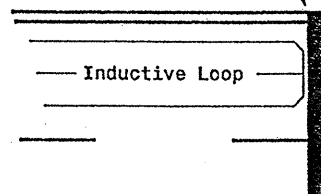


L = 6ft X 60ft (1.8m X 18.0m)
Quadrupole loop
Wired to separate
detectors/channels

Side Street Detection

Presence Loop Placement at Stop Lines

Locate loop slightly
behind leading
edge of stop line



Note:
Loop may be located in advance
of stop line when stop line is
greater than 15' (4.5m) from edge
of intersecting roadway; or, when
loop detects a permitted or
exclusive/permitted left turn.

Presence Loop Placement at Stop Lines

Recommended Number of Turns

Single 6' X 6' (1.8m X 1.8m)
loop (wired separately):

Length of Lead-in ft (m)	Number of Turns
< 250 (75)	3
250-375 (75-115)	4
375-525 (115-160)	5
> 525 (160)	6

Quadrupole loops: Use 2-4-2 turns

6' X 15' (1.8m X 4.6m) Loops:

Lead-in < 150' (45 m), use 2 turns
Lead-in > 150' (45 m), use 3 turns

Recommended Number of Turns

	Typical Loop Locations		
	PLAN DATE: July 2003 PREPARED BY: P. L. Alexander	REVIEWED BY: REVIEWED BY:	
SIGNATURE: <i>P. L. Alexander</i> DATE: 7/15/03			SIG. INVENTORY NO.: