









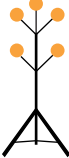


CHAPTER 4

TYPICAL TRAFFIC CONTROL LAYOUTS FOR LONG DURATION WORK ZONES

LEGEND	
	TUBULAR MARKER – TYPE D
	CONE – TYPE A, B or C
	SIGN
	TRAFFIC CONTROL PERSON (TCP)
	SHADOW, BUFFER or WORK VEHICLE
	(360°) FLASHING YELLOW LIGHT
	WORK AREA
	PORTABLE LANE CONTROL SIGNAL
	BARRICADES and FENCING
	FLASHING ARROW BOARD (FAB)
	HIGH LEVEL WARNING DEVICE (HLWD)

Exception for Emergency and Brief Duration Work

If the work being carried out is of an emergency or brief duration nature, as defined, and is within a speed limit of 60 km/h or less, it may not be practicable to provide the TCPs or advance signing called for in Chapters 3 and 4 of the Traffic Control Manual.

TABLE A

Positioning of devices on conventional roadways for various speed limits.

*	Regulatory speed limit	50 km/h	60 km/h	70 km/h	80 km/h	90-100 km/h
1a	Taper length for lane closure	35 (1:10)	55 (1:15)	75 (1:20)	90 (1:25)	110 (1:30)
1b	Taper length for shoulder work or where TCPs used (min. 3 cones)	5	8	10	12	15
2	Maximum distance between cones or tubular markers for 1a	10	10	10	10	10
3	Minimum tangent distance between tapers	30	60	90	120	150
4	Distance between construction signs	40	60	80	100	150

Dimensions shown are in metres and are minimums except for 2*.

Cones and tubular markers are generally used only in daylight but if used at night must be reflectorized. Barricades, flexible drums or temporary delineator posts are generally used during hours of darkness and must be reflectorized.

Dimensions 1b* apply to downstream tapers, shoulder tapers, and to two-way traffic tapers on travelled lanes where traffic is controlled by TCPs, portable lane control signals or temporary traffic signals.

Dimensions 4* represent the minimum advance placement distances for initial signs as well as distances between subsequent signs in multi-sign series.

Figure 4.1.1 Typical Construction Speed Zone Signing

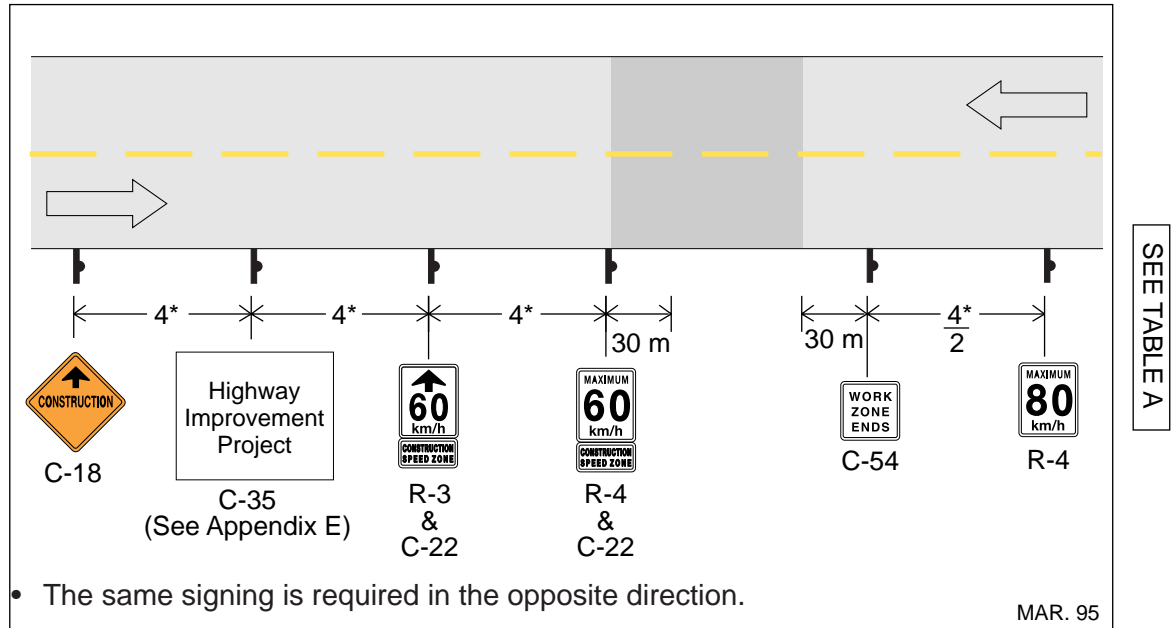
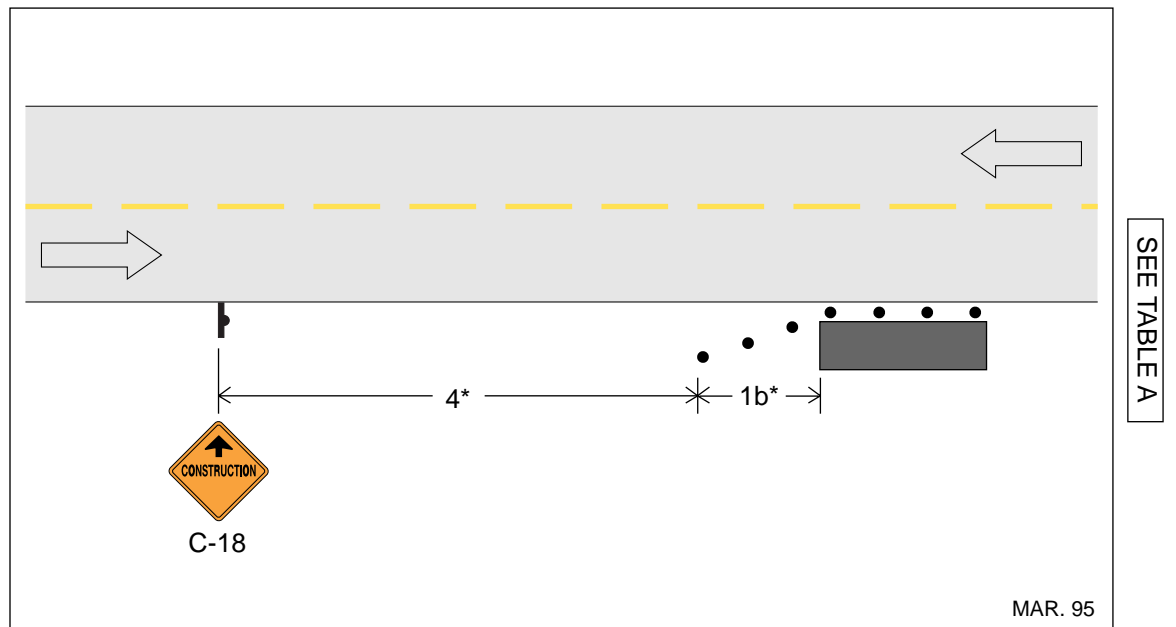
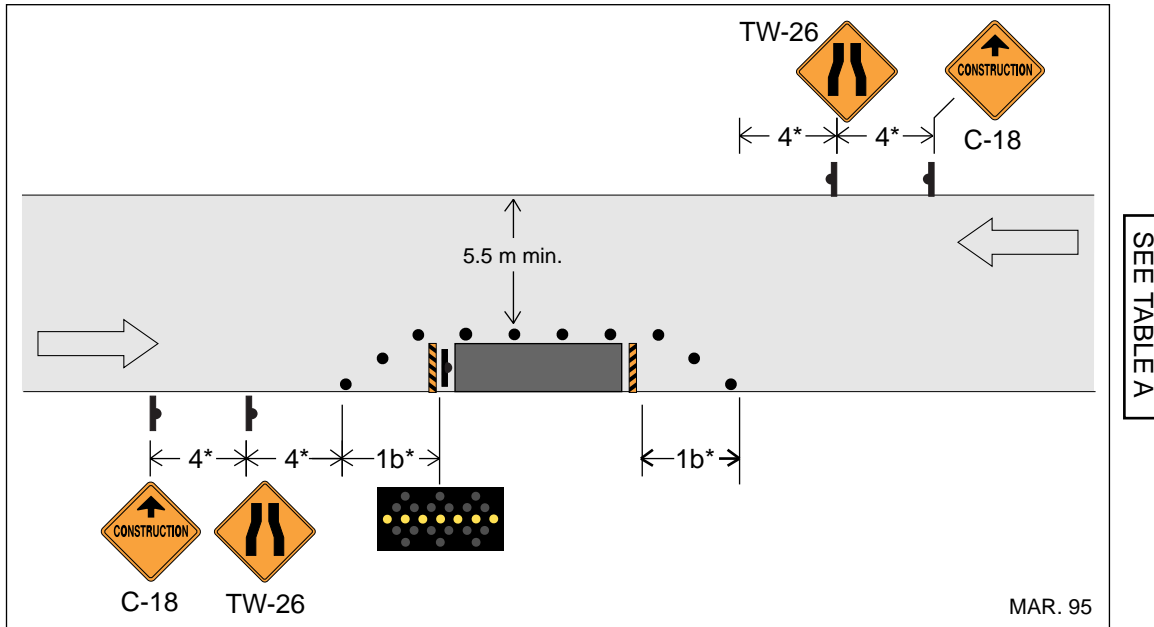


Figure 4.2.1 Work on Shoulder



- When work is not in progress but the work area has not been cleared, care should be taken to isolate it from the travelled roadway with delineation devices and Type A flashers.

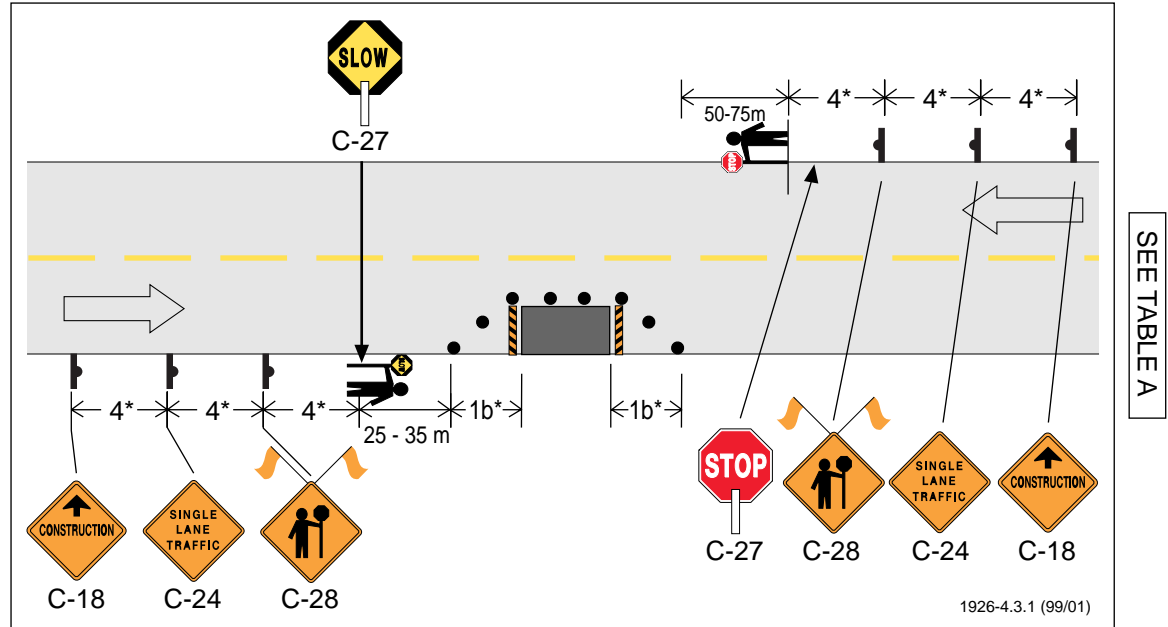
Figure 4.2.2 Work on Low Volume Roadway – No Centreline



- FAB is required if workers are present.
- Use a lane closure if the speed limit is 70 km/h or greater, if sight distance is restricted (i.e., dust, curves etc.) or if there is less than approximately 5.5 m of road width remaining.
- Substitution for the FAB sign may be made as follows:

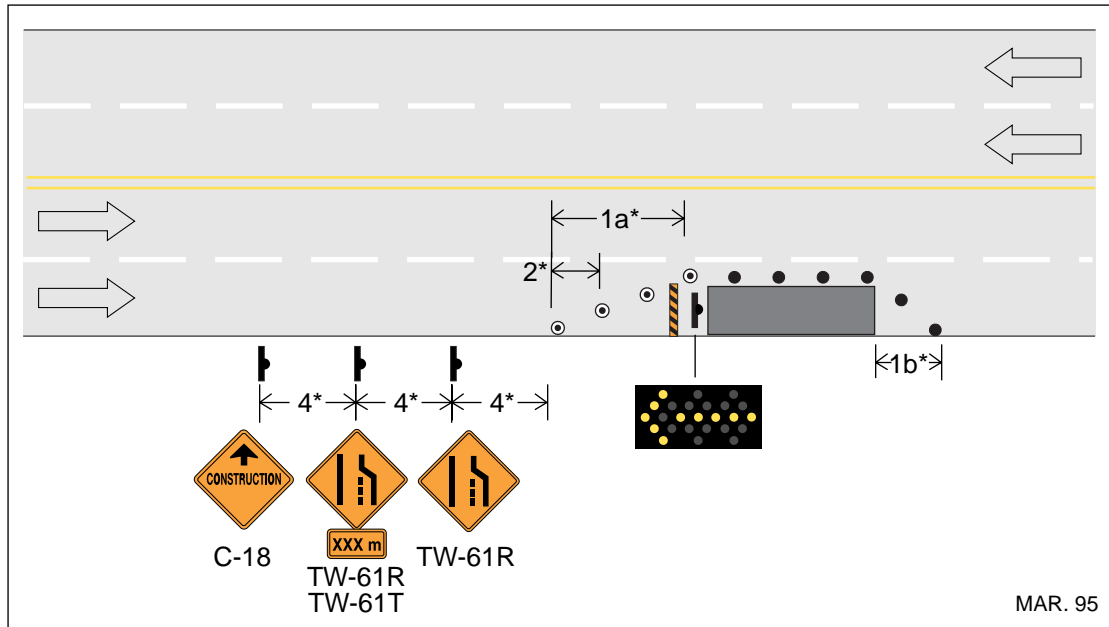
	Workers or Work Vehicle Present	No Workers or Vehicles Present
Day	360° & 4 way flashers or HLWD	HLWD
Night	360° & 4 way flashers	Type A flashers

Figure 4.3.1 Lane Closure With TCPs – Two Lane Two-way Roadway



- If the one lane section is sufficiently short (eg., a spot obstruction), sight distance is adequate, and traffic volumes are light, it may be possible to omit the TCP for the open lane or possibly even both TCPs, and let traffic flow be self regulating. If the TCP for the open lane is omitted, the corresponding C-28 sign must be omitted. If the TCP for the closed lane is also omitted, the C-28 for that direction must be replaced with an R-56 Yield to Oncoming Traffic.

Figure 4.3.2 Right Lane Closed – Multilane Roadway



- If the speed limit is 60 km/h or less the upstream TW-61R may be omitted and the C-18 moved downstream by 4*.
- Substitution for the Fab sign may be made as indicated in the following table:

Speed Limit	Light Condition	Workers or Work Vehicle Present	No Workers or Vehicles Present
≥ 60	Day	C-53 plus 360° & 4 way flashers or C-53 plus HLWD	C-53 plus HLWD
	Night	C-53 plus 360° & 4 way flashers	C-53 plus Type A flashers
≥ 70	Day	No Substitution	C-53 plus HLWD
	Night	No Substitution	C-53 plus Type A flashers

Figure 4.3.3 Left Lane Closed – Multilane Roadway

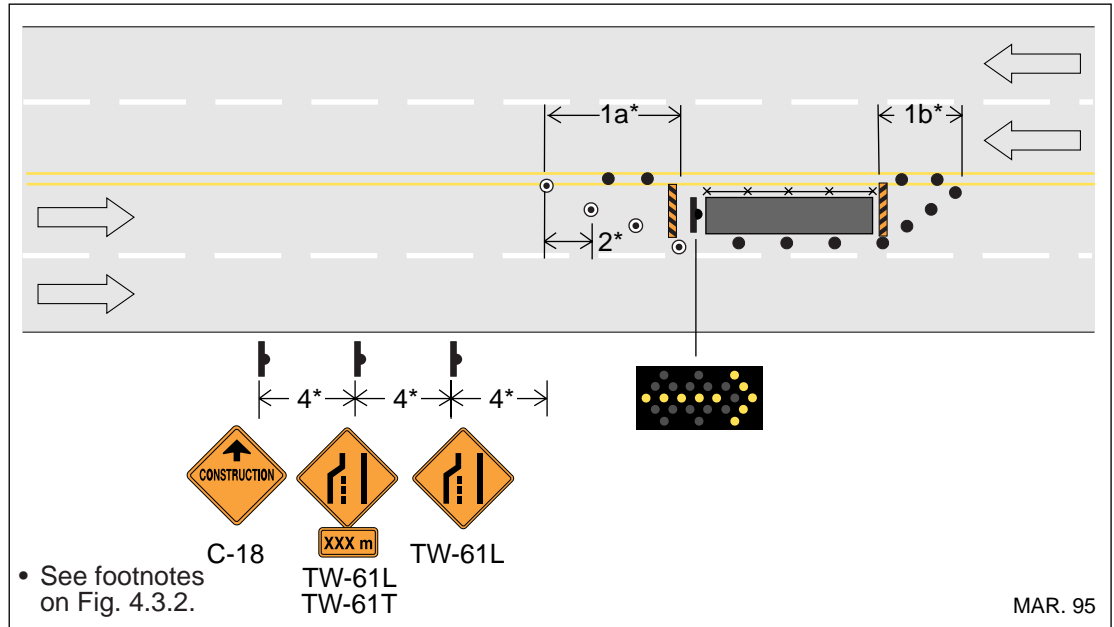
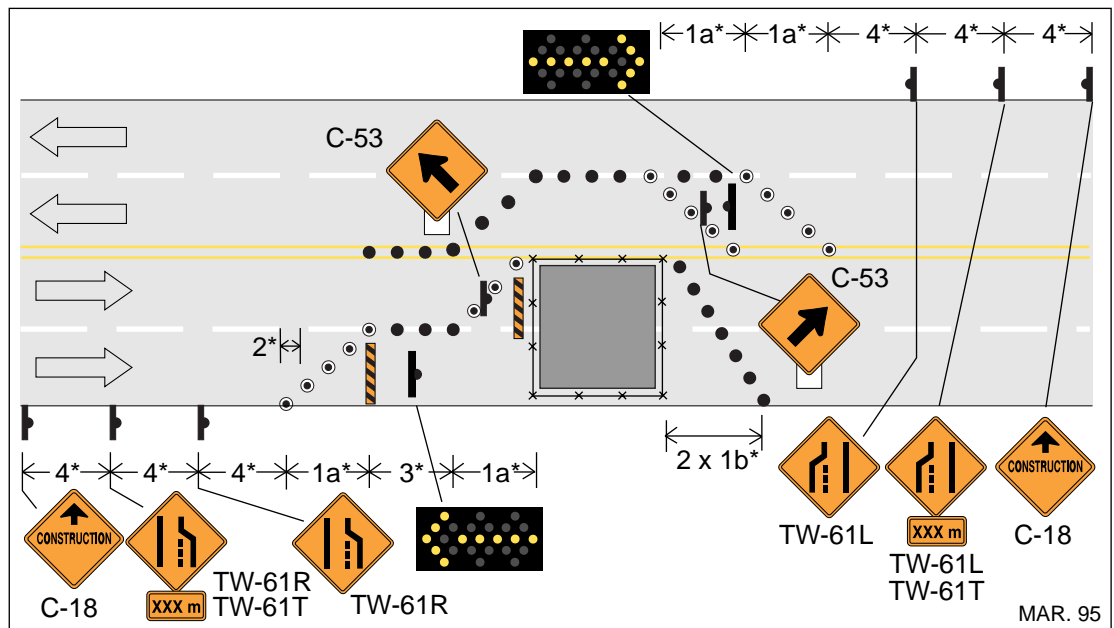
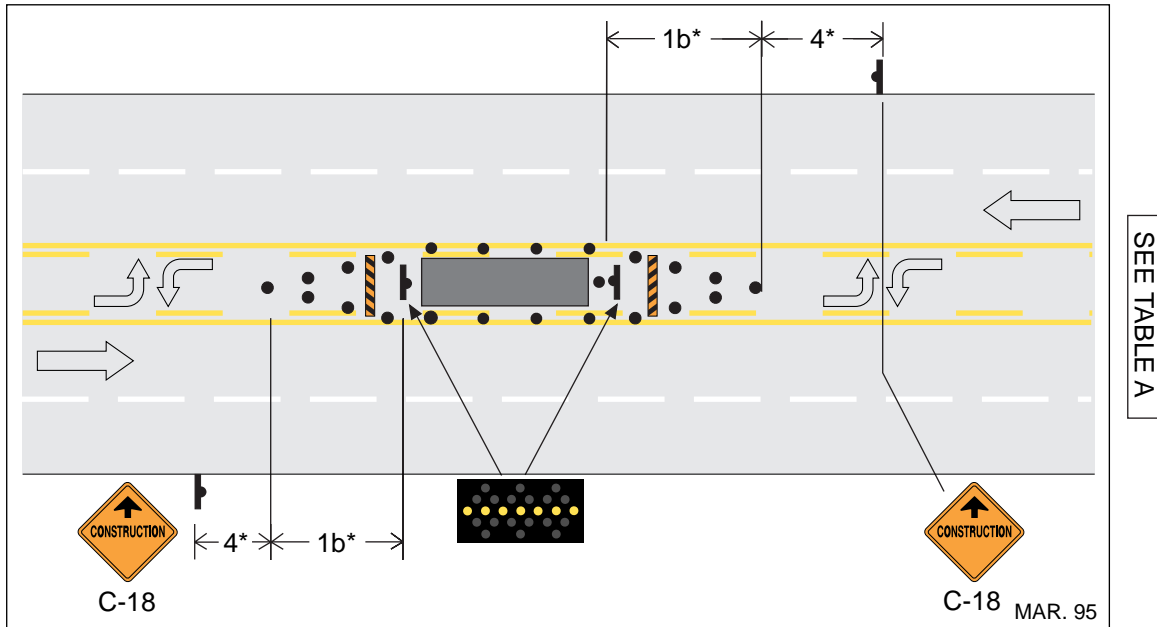


Figure 4.3.4 Median Crossover – Multilane Roadway



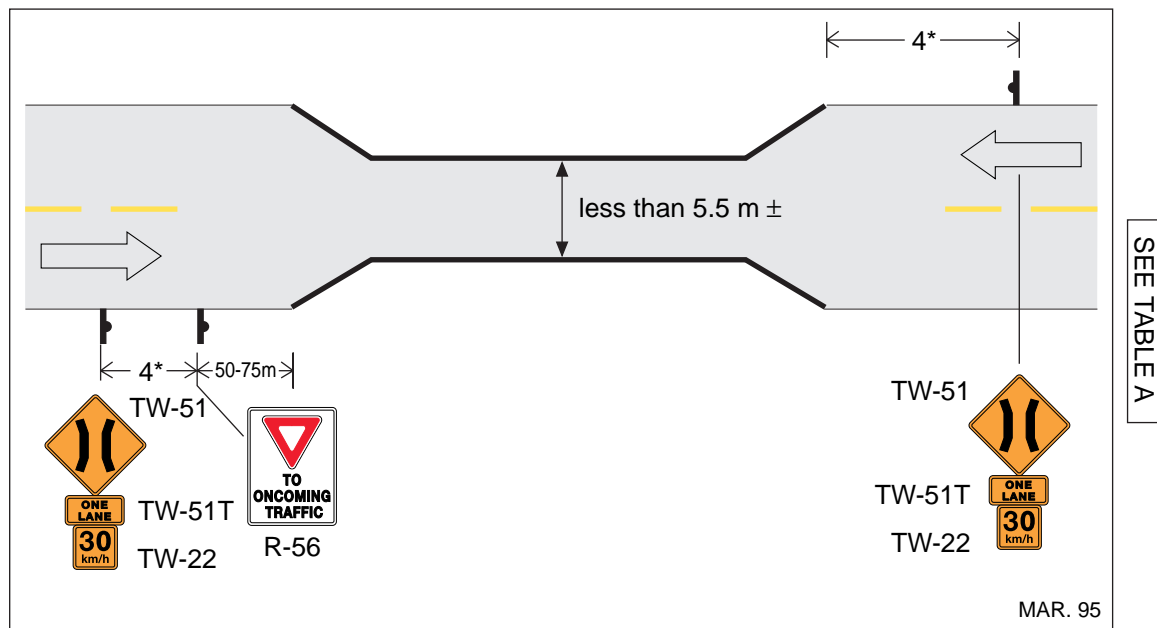
- For high volume roads, concrete barriers may be considered to separate opposing traffic.
- See footnotes on Fig. 4.3.2.

Figure 4.3.5 Two-way Left Turn Lane Closed



- Two-way Left Turn Lanes are generally used where the speed limit is 60 km/h or less. Under this condition, other devices may be substituted for the FAB as indicated in the table in the footnotes for Fig. 4.3.2 but omitting the C-53.

Figure 4.3.6 One Lane Bridge or Roadway



- Traffic from one approach always yields (The side with the best sight distance).
- Advisory speed tabs used when required.
- For one lane roadway, substitute C-24 for TW-51 and TW-51T signs.

Figure 4.4.1 One Lane Closed (Near Side) – Multilane Intersection

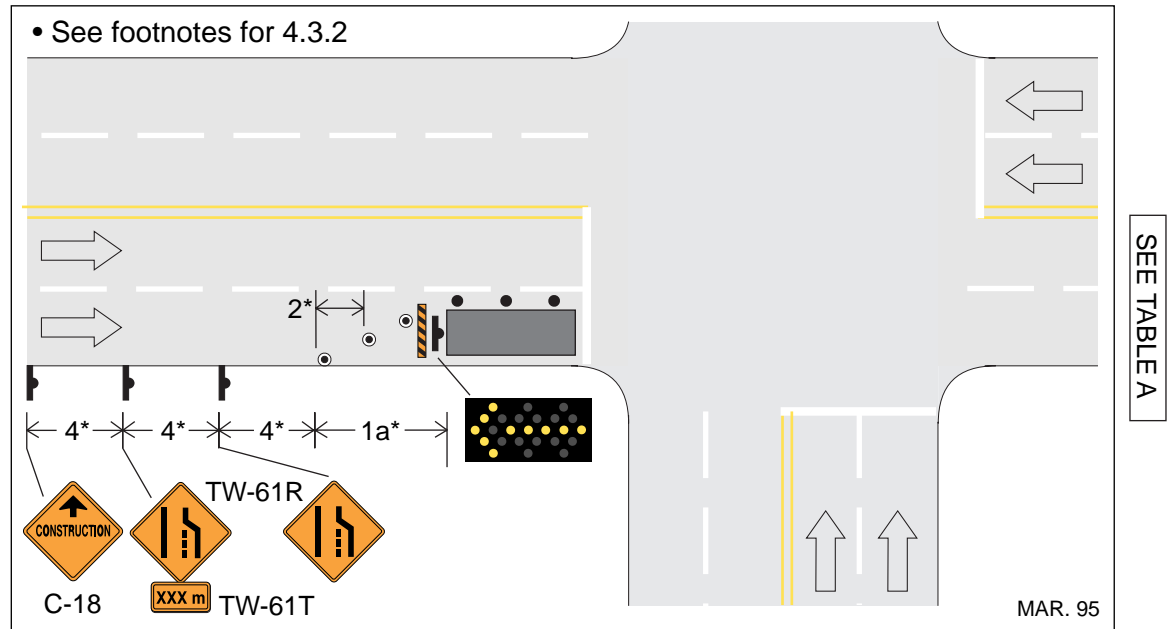
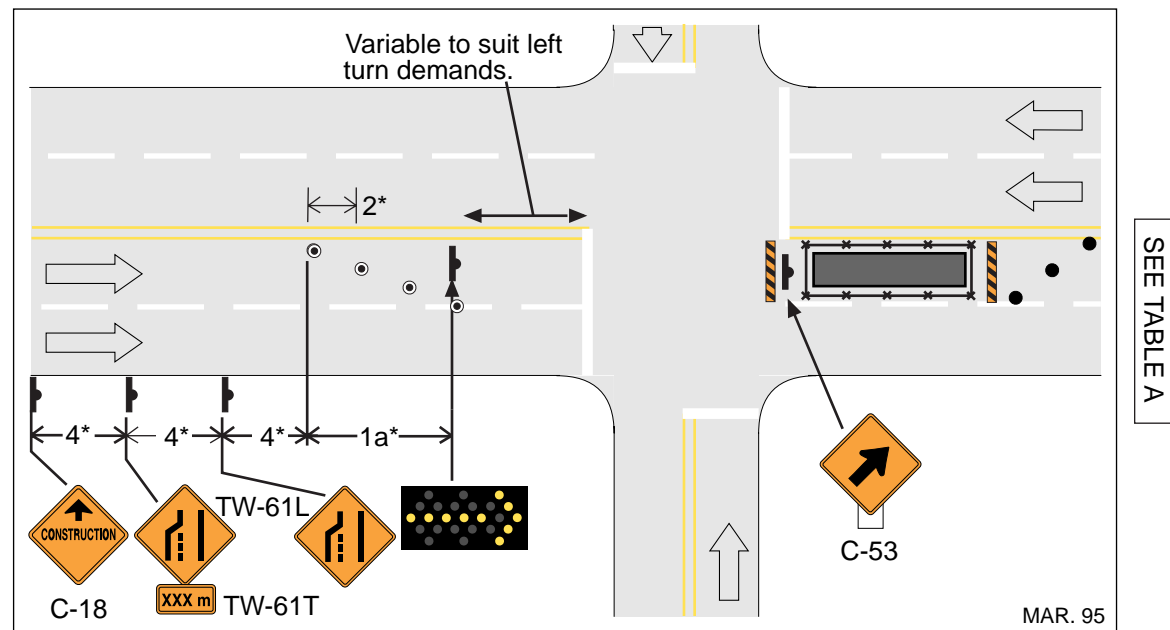
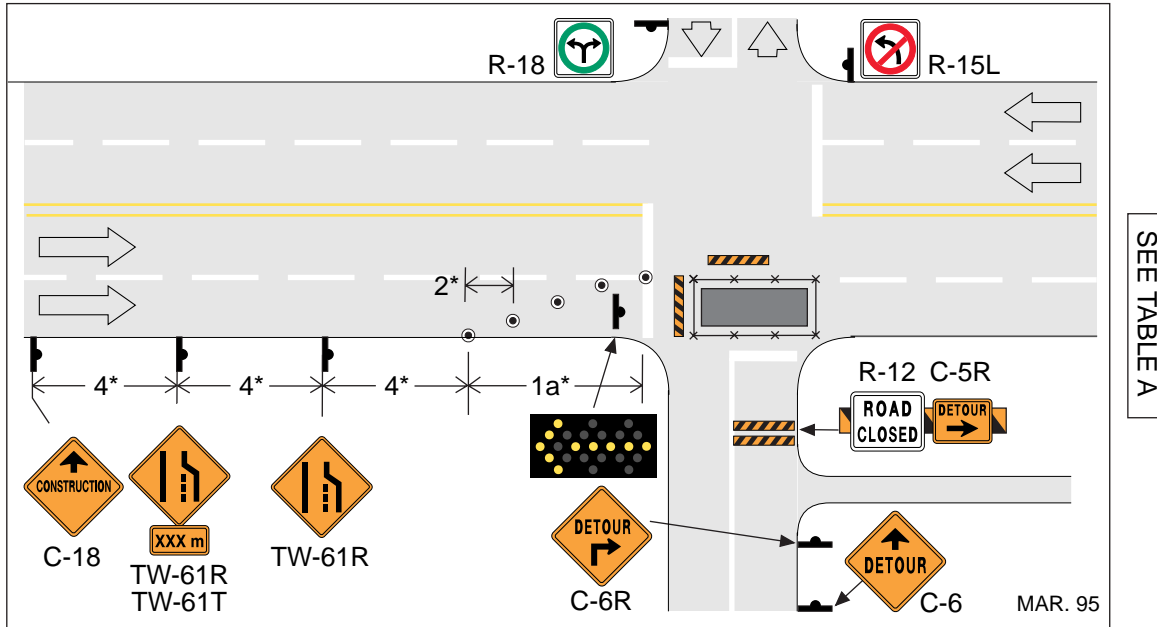


Figure 4.4.2 One Lane Closed (Far Side) – Multilane Intersection



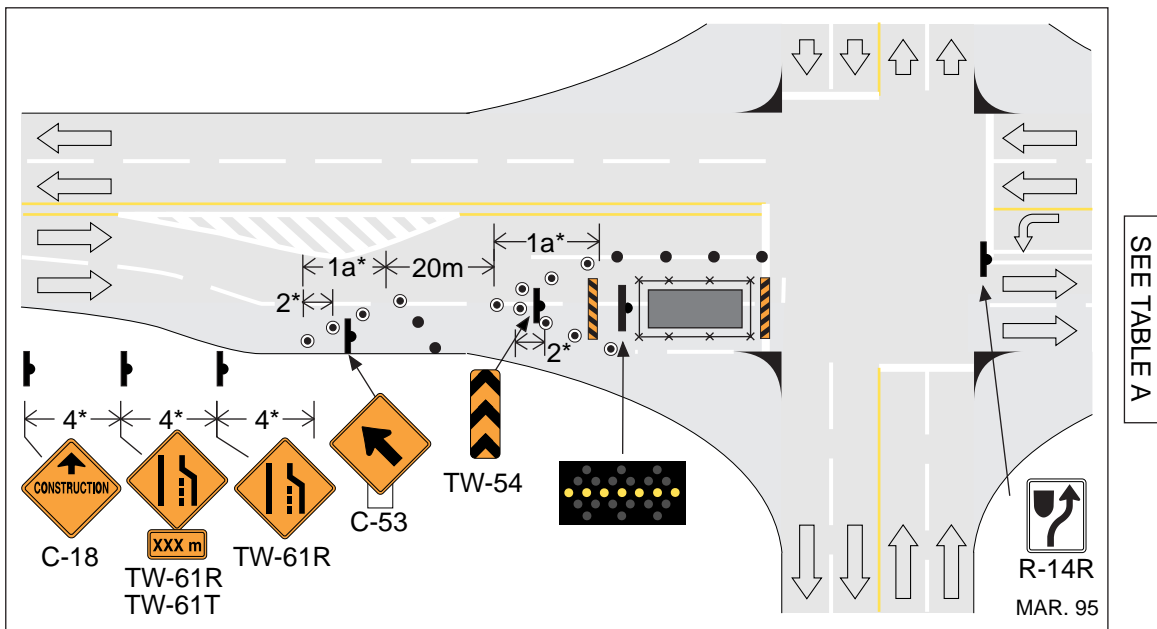
- Curb parking should be prohibited next to the work area and the taper.
- See footnotes for figure 4.3.2.

Figure 4.4.3 One Lane Closed – Multilane Intersection



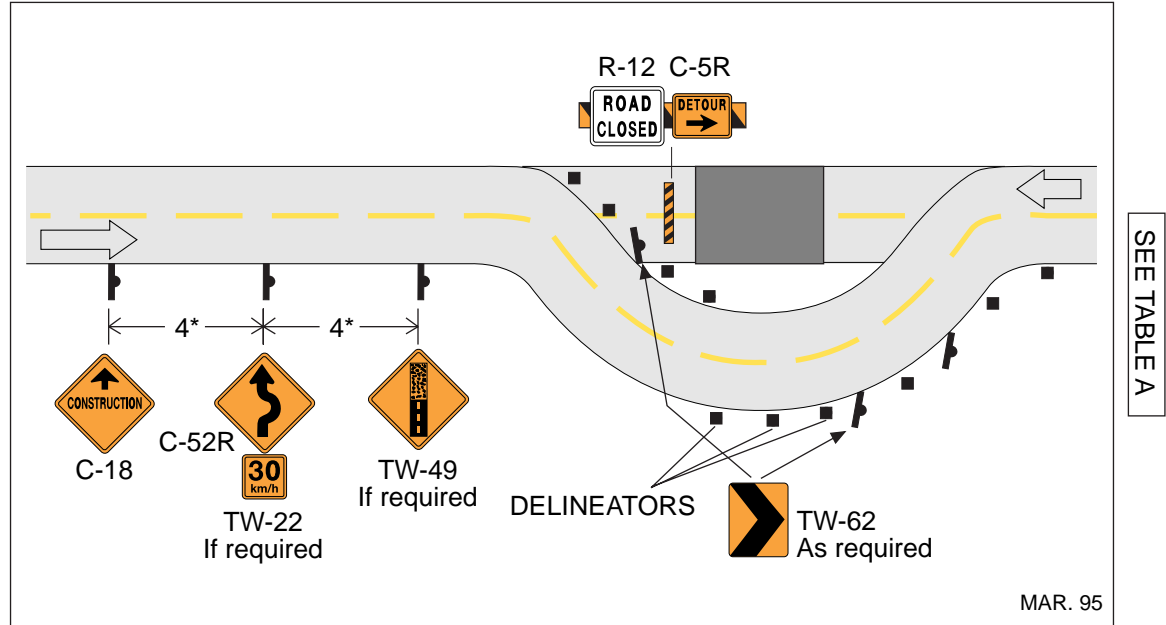
- Detour signing is also required on the intersection leg opposite the closure.
- See footnotes on Fig. 4.3.2.

Figure 4.4.4 Two Lanes Closed (Near Side) – Multilane Intersection



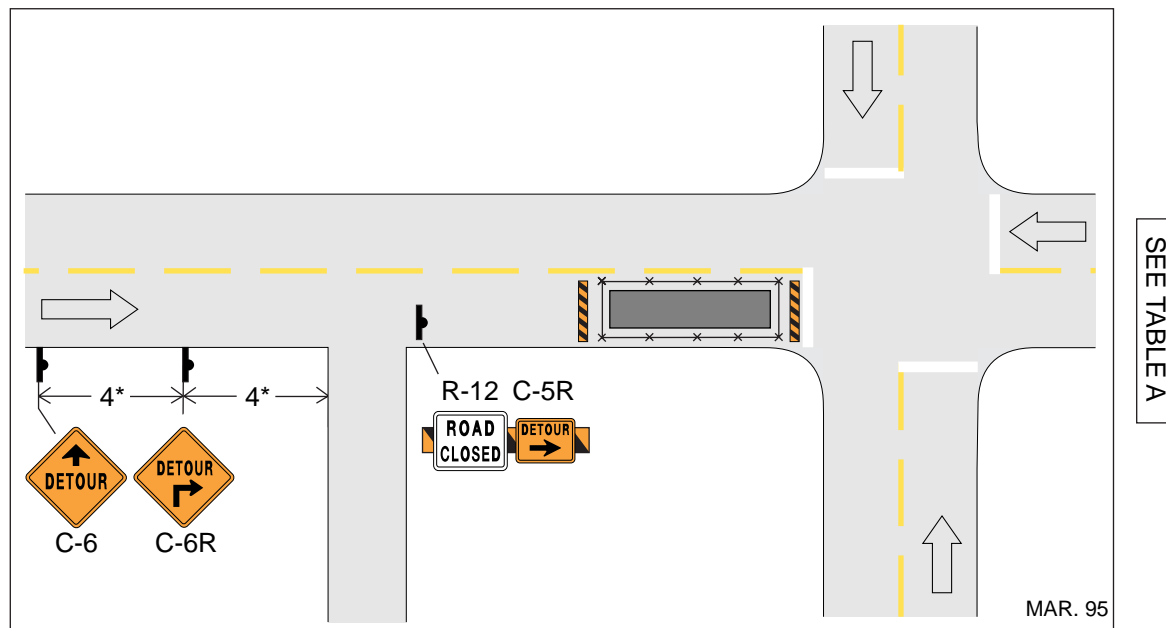
- It may be necessary to prohibit certain turning movements.
- Other devices may be substituted for the FAB as indicated in the Table in the footnotes for Figure 4.3.2, but omitting the C-53.

Figure 4.5.1 Roadside Diversion – Two Lane Two-way Roadway



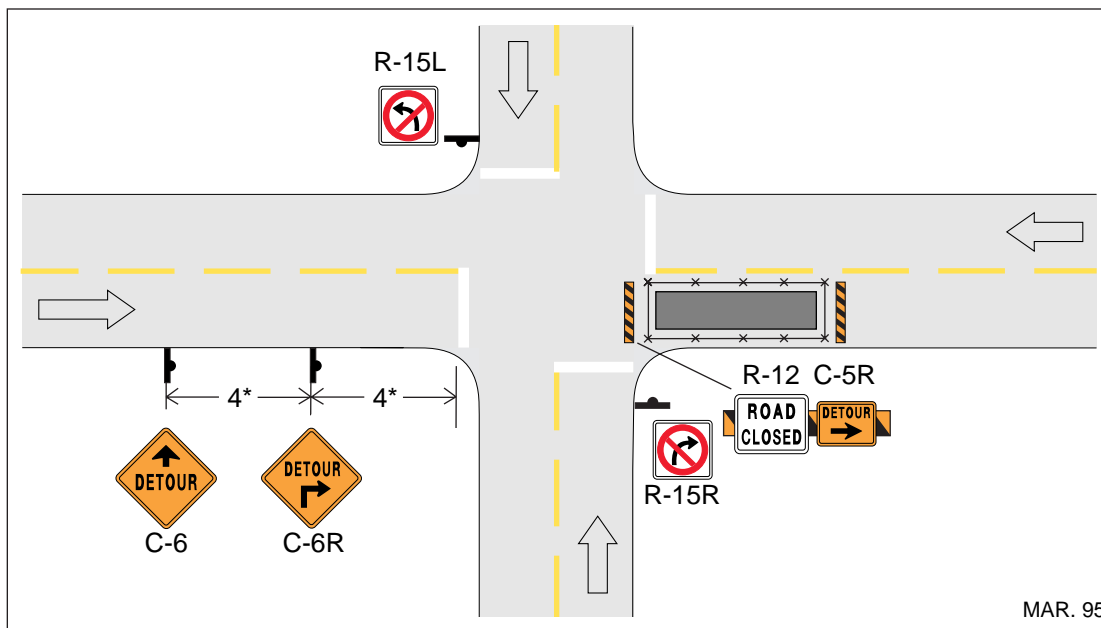
- If the diversion is paved, temporary pavement markings are required.
- Similar signing is required for opposing traffic.

Figure 4.5.2 One Lane Closed (Near Side) – Two Lane Two-way Intersection



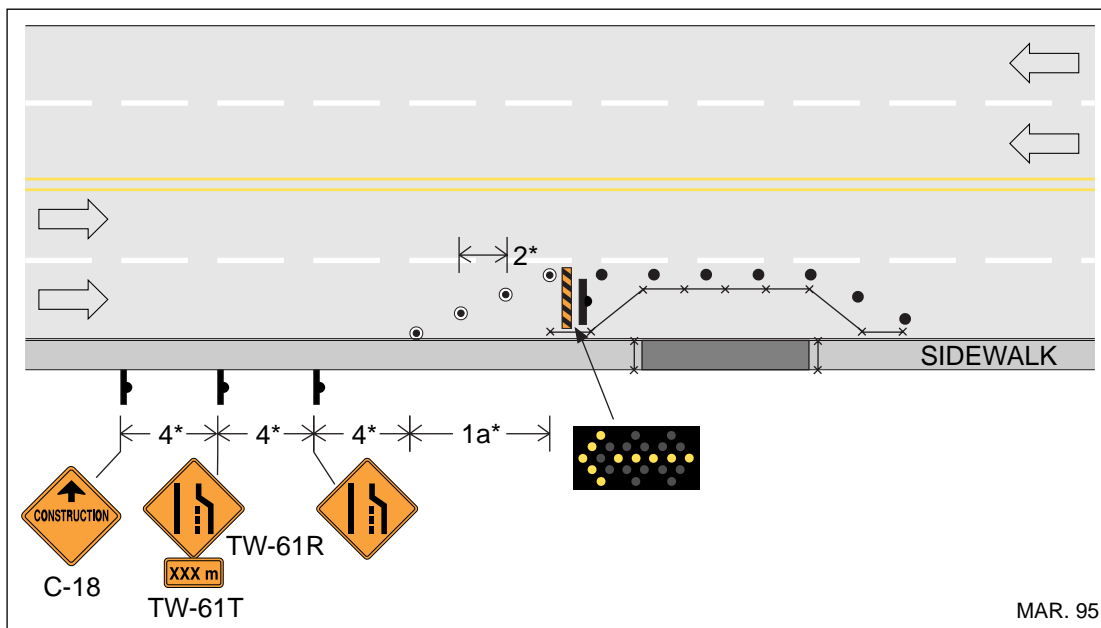
- This layout is to be used if an alternate route detour is available; if not, TCPs are required and the layout shown in Figure 4.3.1 should be used.

**Figure 4.5.3 Detour for One Lane Closed (Far Side)
– Two Lane Two-way Intersection**



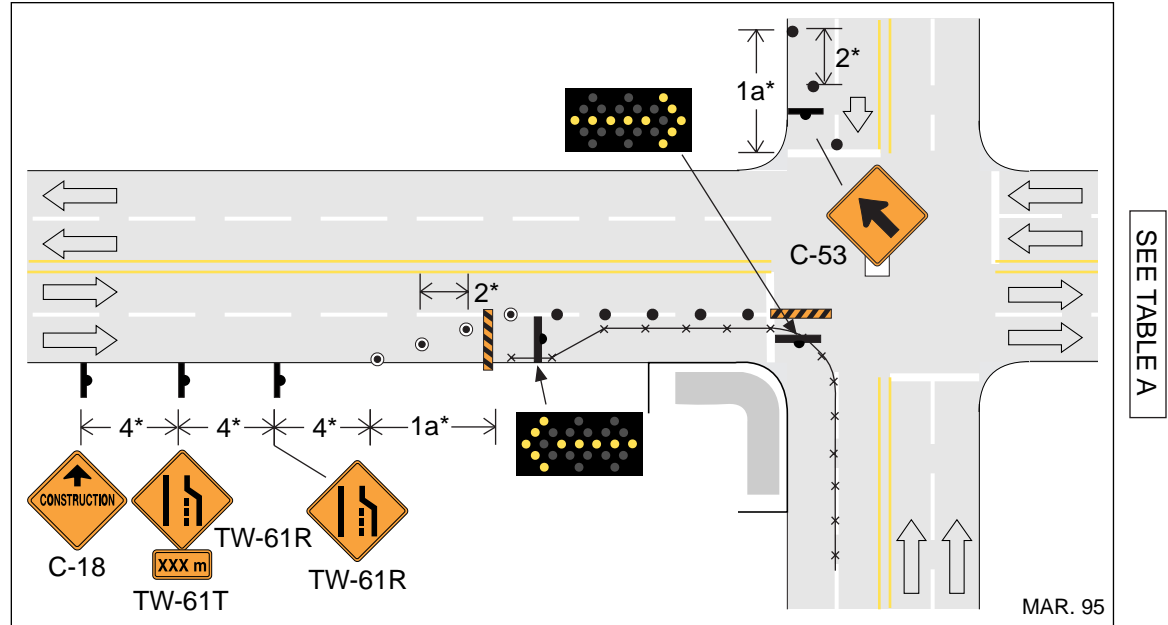
- This layout is to be used if an alternate route detour is available; if not, TCPs are required and the layout shown in Figure 4.3.1 should be used.

Figure 4.6.1 Sidewalk Detour – Multilane Roadway



- For sidewalk closures of long duration, a boardwalk and railing should be provided.
- See footnotes on Fig. 4.3.2.

Figure 4.6.2 Sidewalk Detour – Multilane Intersection



- The same advance signing is required on the cross street approach opposite the sidewalk detour.
- See footnotes on Fig. 4.3.2.

