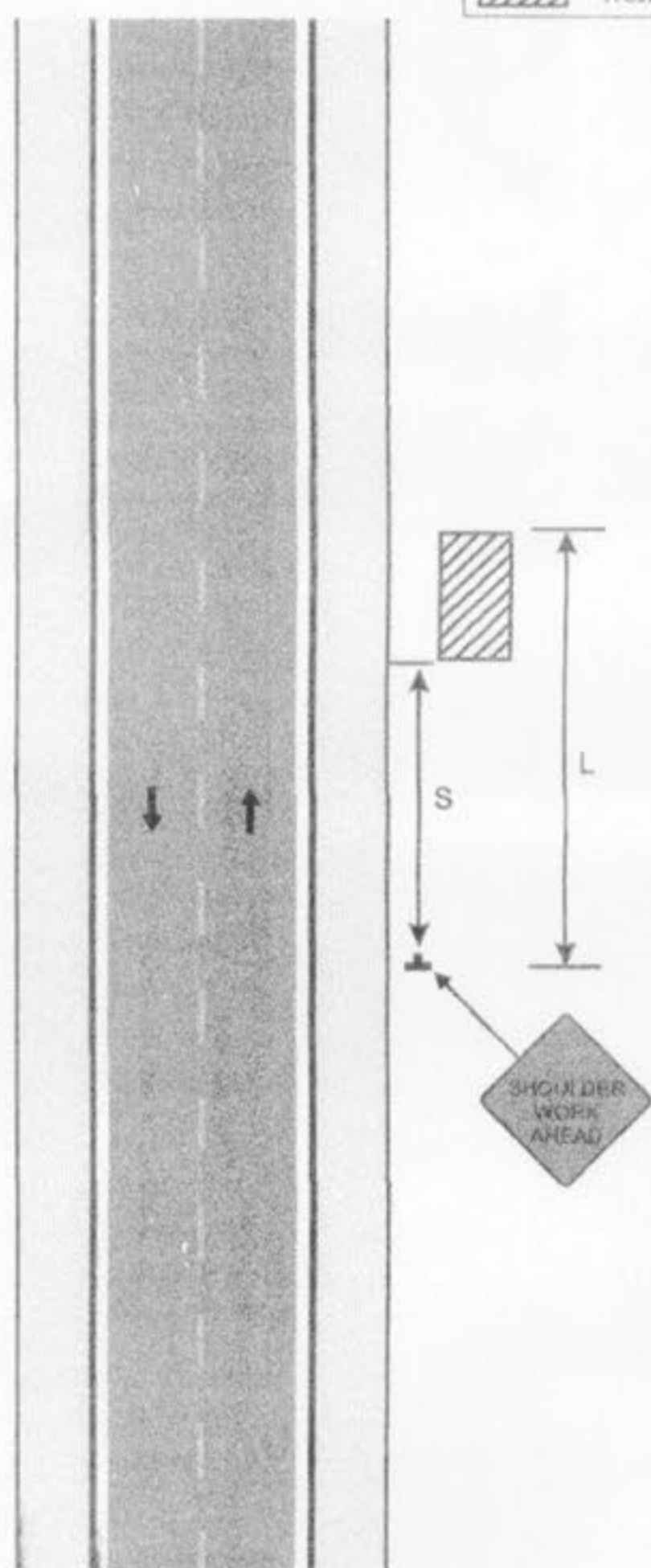


Work Beyond the Shoulder on Divided and Undivided Highways

SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL BUFFER LENGTH (ft.) (B)	CHANNELIZER SPACING (ft.)	
	Undivided (S)	Divided (S)	Shoulder ¹ (T1)	Lane ² (T2)		Tapers	Buffer/ Work Areas
0-35	200	200	-	-	-	-	-
40-45	350	500	-	-	-	-	-
50-55	500	1000	-	-	-	-	-
60-70	1000	1000	-	-	-	-	-

¹ Shoulder taper length based on 10 ft. (standard shoulder width) offset ² Lane taper length based on 12 ft. (standard lane width) offset

TYPE ROADWAY	SIGN HEIGHT	MAXIMUM WORK ZONE LENGTH (L)
URBAN	1' Portable 7' Post	1 Mi.
RURAL DIVIDED	1' Portable 7' Post	2 Mi.
RURAL UNDIVIDED	1' Portable 5' Post	3 Mi.



Notes:

If work vehicles or equipment are located on the shoulder, refer to appropriate shoulder work typical applications.

On multi-lane, divided highways, signs advising of shoulder work or the condition of the shoulder **should** be placed only on the side of the affected shoulder.

If work is being performed in the median, signs **may** be required for both directions of travel based on the following paragraph.

The SHOULDER WORK AHEAD sign **may** be omitted where the work space is 15 ft. or more from the edge of any shoulder, beyond the ditch line, or behind the curb. Should the roadway not have a shoulder, then 15 ft. or more from the edge of the roadway.

For short duration or mobile operations, signs **may** be reduced or eliminated if a work vehicle with activated rotating lights or strobe lights is used.

Other appropriate signs **may** be used in lieu of the SHOULDER WORK AHEAD sign.

Where sidewalks are impacted refer to TA-24 or TA-25.

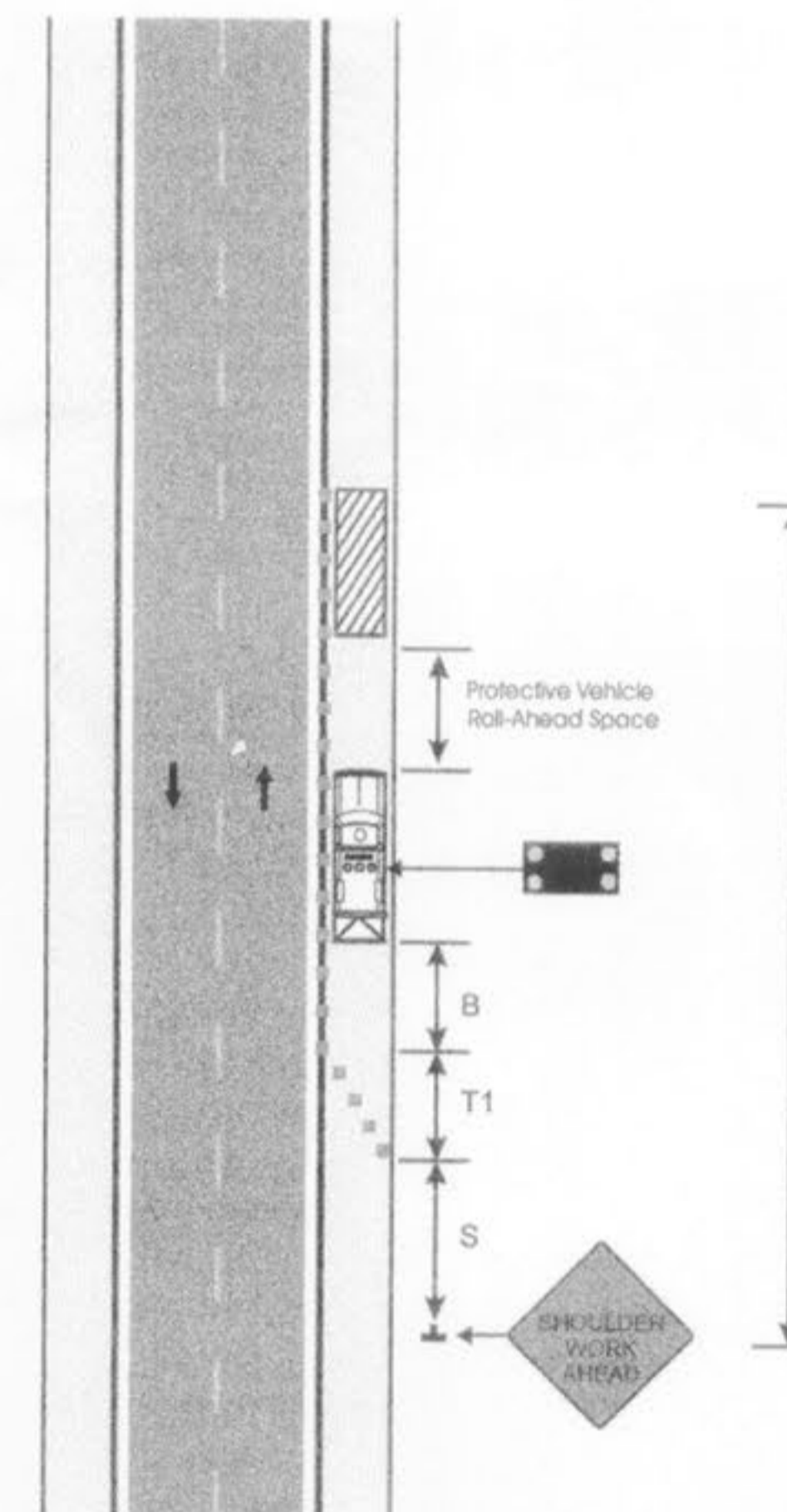
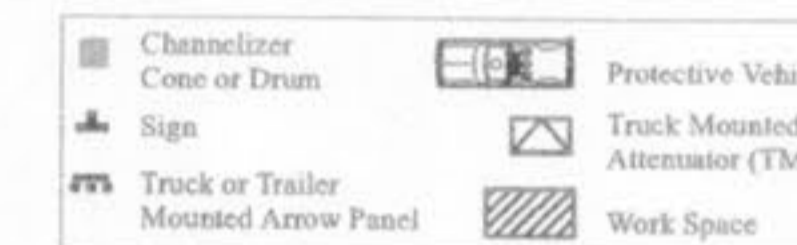
TA-1

Shoulder Work on Undivided Highways

SPEED	SIGN SPACING (ft.)		TAPER LENGTH (ft.)		OPTIONAL BUFFER LENGTH (ft.) (B)	CHANNELIZER SPACING (ft.)	
	Undivided (S)	Divided (S)	Shoulder ¹ (T1)	Lane ² (T2)		Tapers	Buffer/ Work Areas
0-35	200	-	70	-	120	35	50
40-45	350	-	150	-	220	40	100
50-55	500	-	185	-	335	50	100
60-70	1000	-	235	-	550	60	100

¹ Shoulder taper length based on 10 ft. (standard shoulder width) offset ² Lane taper length based on 12 ft. (standard lane width) offset

TYPE ROADWAY	SIGN HEIGHT	MAXIMUM WORK ZONE LENGTH (L)
URBAN	1' Portable 7' Post	1 Mi.
RURAL UNDIVIDED	1' Portable 5' Post	3 Mi.



Notes:

In addition to shoulder work, this typical application is applicable to work beyond shoulder where vehicles and equipment are parked on the shoulder.

A protective vehicle **shall** be used while work is in progress. The protective vehicle **should** be equipped with a TMA and positioned at least 150 ft. in advance of the work space.

If encroachment onto driving surface occurs and there is not 10 ft. of driving surface available for the lane of traffic, that traffic lane **shall** be closed. Refer to appropriate lane closure typical applications.

If an arrow panel is used for an operation on the shoulder, the caution mode **shall** be displayed.

For short duration or mobile operations, signs, channelization devices and protective vehicles **may** be reduced or eliminated if a work vehicle with activated rotating lights or strobe lights is used. However, if limited sight distance exists in a stationary operation or workers are on foot, a protective vehicle **should** be used. This protective vehicle **should** be equipped with a TMA and truck mounted flashing arrow panel and positioned at least 150 ft. in advance of the work space or work vehicle, as applicable. If a protective vehicle is used, a vehicle mounted sign **shall** be mounted at a recommended height of 48 in. above the road surface.

For work beyond shoulder, where vehicles and equipment are parked on the shoulder, the protective vehicle **may** be eliminated if a work vehicle with activated rotating lights or strobe lights is used.

Additional warning signs **shall** be erected at each intersection with another state highway within the work zone. Upon the discretion of the supervisor, additional warning signs **may** be erected at other intersections within the work zone.

Other appropriate signs **may** be used in lieu of SHOULDER WORK AHEAD sign.

TA-2