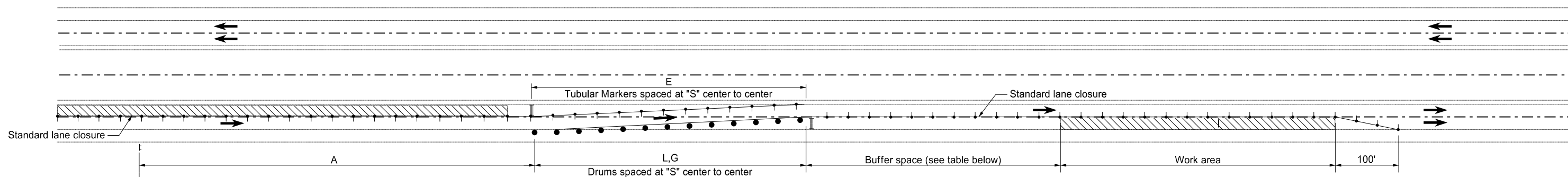


TRAFFIC CONTROL SYSTEM  
LANE SHIFT BETWEEN A LANE CLOSURE AND AN OPPOSITE LANE CLOSURE



QUANTITIES	
TYPE III BARRICADES	2 Each
DELINEATOR DRUMS	13 Each
TUBULAR MARKERS	13 Each
RAISED PAVEMENT MARKERS (White)	Varies
OBLITERATION OF PAVEMENT MARKING	Varies

KEY			
	Work area		Delineator drum
	Type III barricade		Tubular markers
	Traffic Direction		Sign

LEGEND	
E	Obliteration of pavement marking (10' line, 30' skip centerline)
G	Raised pavement markers (white) 5' ctrs.

Notes

- Variables
  - S = Numerical value of posted speed limit, off-peak 85th percentile speed prior to work starting, or the anticipated operating speed in mph.
  - W = Width of offset in feet.
  - L = Taper length in feet. Speeds 40 mph or less  $L = WS^2 / 60$ . Speeds 45 mph or greater  $L = WS$ .
- Place signs and barricade on roadway on moveable assemblies.
- Cover existing speed limit signs within reduced speed zones.
- Upon approval, the Engineer will measure obliterated or covered pavement marking as Obliteration of Pavement Marking.
- As an option, use portable sign supports in lieu of post mounted sign in accordance with NDDOT Standard Drawing D-704-14.
- Place "Minimum Fee \$80" signs below speed limit signs when placing traffic control devices to reduce speed.
- When duration of work is 14 days or less, obliteration of pavement marking (10' line, 30' skip, centerline) and raised pavement markers are not required.

Longitudinal Buffer Space	
*Speed (mph)	Length Min (feet)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820

\* Posted speed, off-peak 85th percentile speed prior to work starting, or the anticipated operating speed in mph.

ADVANCE WARNING SIGN SPACING			
Road Type	Distance Between Signs Min. (ft)		
	A	B	C
Urban - Low Speed (30 mph or less)	150	150	150
Urban - Low Speed (over 30 to 40 mph)	280	280	280
Urban - High Speed (over 40 mph to 50 mph)	360	360	360
Rural - High Speed (over 50 mph to 65 mph)	720	720	720
Urban Expressway and Freeway (55 mph to 60 mph)	850	1350	2200
Rural Expressway and Freeway (70 mph to 75 mph)	1000	1500	2640
Interstate/4-Lane Divided (Maintenance and Surveying)	750	1000	1500

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
10-26-2012	
REVISIONS	
DATE	CHANGE
9-27-17	Updated to active voice
11-01-19	Clarified work zone

This document was originally issued and sealed by  
Kirk J Hoff,  
Registration Number  
PE- 4683,  
on 11/1/19 and the original document is stored at the North Dakota Department of Transportation