TAPER, BUFFER ZONE & SIGN SPACING CHART

ROAD TYPE	POSTED SPEED MPH (S)	MINIMUM TAPER LENGTH(L)	LENGTH OF BUFFER(BZ)	MINIMUM SIGN SPACING (SS)				ONE LANE TWO-WAY FLAGGING
		12 FT LANE CLOSURE	DESIREABLE	A	B	C	D	TAPER LENGTH
		FT	FT	FT	FT	FT	FT	FT
CONVENTIONAL	30 AND LOWER	180	200	100	100	100	100	50
	35	245	250	350	350	350	175	
	40	320	305					
	45	540	360	500	500	500	250	100
	50	600	425					
	55	660	495					
	60	720	570					
	65	780	645					
FREEWAY/ EXPRESSWAY	65	780	645	1000	1640	2640	500	
	70	840	730					
	75	900	820					
	80	960	910					

1- TAPER LENGTH FORMULAS

SPEED	FORMULA
FOR SPEEDS OF 40 MPH AND LESS	$L = \frac{WS^2}{60}$
FOR SPEEDS OF 45 MPH AND GREATER	L= WS

L = TAPER LENGTH IN FEET
W = WIDTH OF OFFSET IN FEET
S = SPEED IN MPH

⅓ L = FOR SHOULDER CLOSURE TAPER
½ L = FOR LANE SHIFT TAPER

2- CHANNELIZING DEVICES

A) MERGING AND SHIFTING TAPERS: USE A MINIMUM OF 1 DEVICE PER FT OF LANE CLOSURE WIDTH, PLUS 1 ADDITIONAL DEVICE TO START.

B) SHOULDER, ONE-LANE TWO-WAY, AND DOWNSTREAM TAPERS: USE A MINIMUM OF 1 DEVICE PER 3 FT OF WIDTH (OR PORTION THEREOF), PLUS 1 ADDITONAL DEVICE TO START.

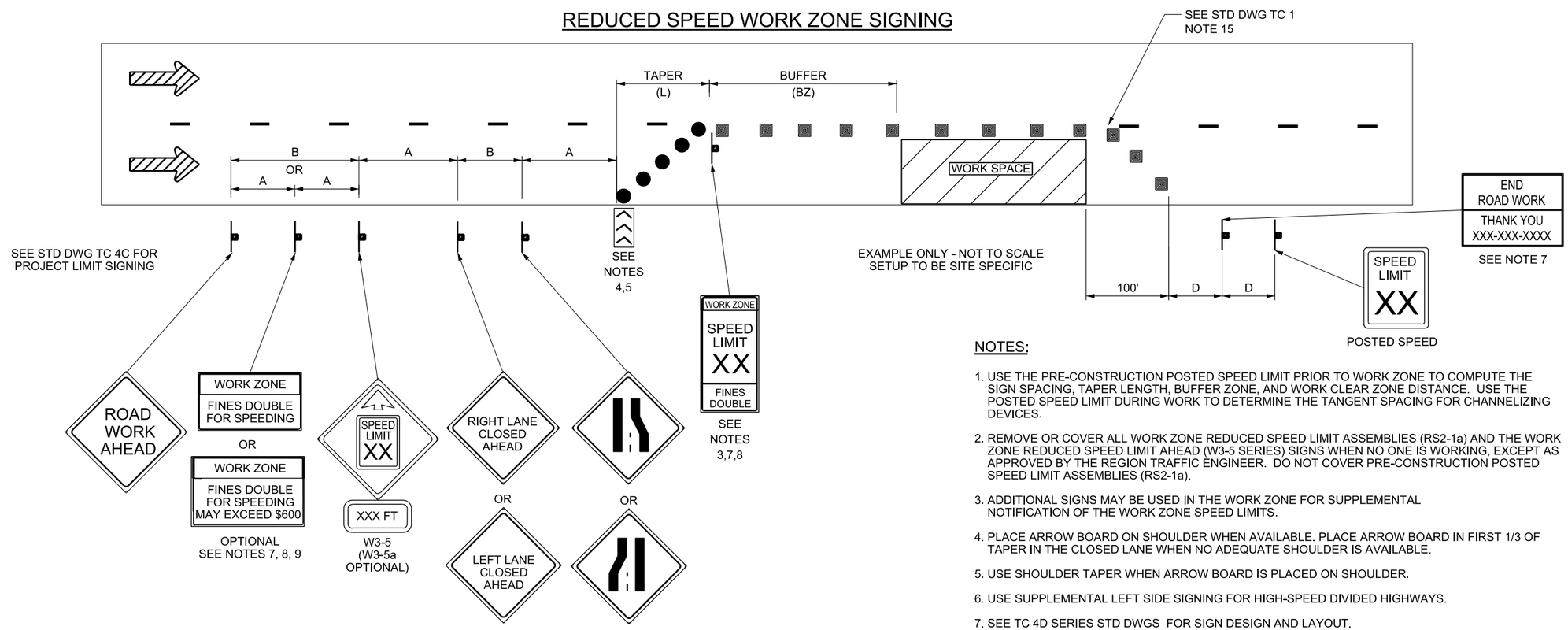
C) ON TANGENT: S x 2 = SPACING UP TO 120 FT MAXIMUM.

D) LENGTH OF BUFFER ZONE (BZ) IS THE DISTANCE FROM END OF LANE CLOSURE TAPER TO WORK SPACE, OR ANY OBSTRUCTION PRIOR TO WORK SPACE.

TRAFFIC CONTROL DEVICE LEGEND

- SIGN (FIXED OR PORTABLE)
- CHANNELIZING DEVICE (SEE STD DWG TC 2A)
- DRUMS OR DIRECTIONAL INDICATOR BARRICADE
- FLAGGING STATION
- ARROW BOARD
- BARRIER
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- DIRECTION OF WORK VEHICLE

REDUCED SPEED WORK ZONE SIGNING



NOTES:

1. USE THE PRE-CONSTRUCTION POSTED SPEED LIMIT PRIOR TO WORK ZONE TO COMPUTE THE SIGN SPACING, TAPER LENGTH, BUFFER ZONE, AND WORK CLEAR ZONE DISTANCE. USE THE POSTED SPEED LIMIT DURING WORK TO DETERMINE THE TANGENT SPACING FOR CHANNELIZING DEVICES.
2. REMOVE OR COVER ALL WORK ZONE REDUCED SPEED LIMIT ASSEMBLIES (RS2-1a) AND THE WORK ZONE REDUCED SPEED LIMIT AHEAD (W3-5 SERIES) SIGNS WHEN NO ONE IS WORKING, EXCEPT AS APPROVED BY THE REGION TRAFFIC ENGINEER. DO NOT COVER PRE-CONSTRUCTION POSTED SPEED LIMIT ASSEMBLIES (RS2-1a).
3. ADDITIONAL SIGNS MAY BE USED IN THE WORK ZONE FOR SUPPLEMENTAL NOTIFICATION OF THE WORK ZONE SPEED LIMITS.
4. PLACE ARROW BOARD ON SHOULDER WHEN AVAILABLE. PLACE ARROW BOARD IN FIRST 1/3 OF TAPER IN THE CLOSED LANE WHEN NO ADEQUATE SHOULDER IS AVAILABLE.
5. USE SHOULDER TAPER WHEN ARROW BOARD IS PLACED ON SHOULDER.
6. USE SUPPLEMENTAL LEFT SIDE SIGNING FOR HIGH-SPEED DIVIDED HIGHWAYS.
7. SEE TC 4D SERIES STD DWGS FOR SIGN DESIGN AND LAYOUT.
8. FINES DOUBLE (RS2-6c) AND FINES DOUBLE WITH FINE NOTIFICATION (RS2-6d) SIGNS MAY BE USED INTERCHANGEABLY.
9. PLACE ADDITIONAL WORK ZONE SPEED LIMIT ASSEMBLIES (RS2-1a), FINES DOUBLE (RS2-6c), AND/OR FINES DOUBLE WITH FINE NOTIFICATION (RS2-6d) SIGNS AT ALL MAJOR INTERSECTIONS AND INTERCHANGES WITHIN THE PROJECT WHEN REDUCED SPEEDS AND/OR THE FINES DOUBLE OR THE FINES DOUBLE WITH FINE NOTIFICATION SIGNING OPTION IS USED.

SUPPLEMENTAL DRAWING

REVISIONS

NO.	DATE	APPR.	REMARKS
1	08/30/12	SDD	REVISED NOTE 2. REVISED TC 1 CALL OUT.

UTAH DEPARTMENT OF TRANSPORTATION
STANDARD DRAWINGS FOR ROAD AND BRIDGE CONSTRUCTION
SALT LAKE CITY, UTAH

RECOMMENDED FOR APPROVAL — AUG.30, 2012 DATE
CHAIRMAN STANDARDS COMMITTEE APPROVED — AUG.30, 2012 DATE
DEPUTY DIRECTOR

STANDARD DRAWING TITLE
REDUCED SPEED WORK ZONE SIGNING GENERAL

STD. DWG. NO.
TC 4B1

DGN File: L:\Standard Drawings\Imperial\2012Approved_Supplemental Issues\Supp14approved\TC04B1.dgn
12-SEP-2012