

# NOTE:

- 1. Erect all project adva
- 2. Not all details shown to this project. The C traffic control plan as
- 3. Where advance warn locate the warning si messages as required
- 4. Additional or differen construction conditio
- 5. Install advisory spee indicate a maximum
- 6. Ensure all sign suppo NCHRP-350 or MASH
- 7. Maintain two-way tra
- 8. Do not store traffic c post-mounted signs
- 9. If W20-1 is placed or construction work oc of the road on which
- *10. The message on the the distance to the w sign when approach signs "B" feet apart a*
- 11. For work zones that each end of the proje whole mile.
- 12. If signing on a roadw that an encroachmer
- 13. State standards may
- 14. Refer to the Section retroreflective sheeti

		STATE	PROJECT	SHEET NUMBER
nce warning si	igns before startiı	ng consi	truction work.	
on the tempor ontractor may necessary to a	ary traffic contro add or delete inf accommodate acl	l sheets ormatio tual ope	<i>may be applicable n and details in this rations.</i>	
ing signs, place gns as determi 1.	ed as shown, inte ined by the CO fo	erfere w er best re	ith permanent signs, esults. Vary	
t message sign ns.	ns may be require	ed to fit	<i>the actual</i>	
l plates under recommended	the W20 series w speed through th	varning . he const	signs as needed to ruction area.	
rts exposed to for crashworth	impact by traffic hiness.	: meet ti	he requirements of	
ffic during all r	non-work hours e	xcept a	s approved by the Co	Э.
ontrol devices a when not appli	along the roadwa cable.	y when	not in use. Cover	
a roadway oth curs, include a the constructio	her than that on supplementary p on does occur (ap	which th Maque ir Oplies to	ne actual ndicating the name major roads only).	
W20-1 signs m ork area in fee speeds exceed ccording to the	ay be "ROAD WC t or in miles. Ins 50 MPH. When t e Sign Spacing Ta	DRK AHE stall an a used pla able.	EAD" or may specify additional W20-1 ice the two W20-1	
are 2 miles or i act. Show the	more in length, in distance on the G	istall G2 G20-1 si	20-1 signs at gn to the nearest	
ay under a jur t permit has b	<i>isdiction other th</i> een obtained.	an the c	lient agency, verify	
be used as an	alternative if app	proved t	by the CO.	
535 of the Spe na types.	cial Contract Req	uiremer	nts for allowable	
.5 .77				
г				
	U.S. DEF FEDER/ F	-AKTMENT AL HIGHW EDERAL L/	AY ADMINISTRATION	
F	U.S. (	CUSTOM	IARY STANDARD	
	TEMPORA	RY TF	RAFFIC CONT	ROL
	ADV		E SIGNING	_

STANDARD APPROVED FOR USE 6/2005 REVISED: DRAFT: 6/2014

standard
635-1



- 2. Not all details shown to this project. The C traffic control plan as
- 3. Where advance warn locate the warning si messages as require
- 4. Additional or differen construction conditio
- 5. Install advisory speed indicate a maximum
- 6. Ensure all sign suppo NCHRP-350 or MASH
- 7. Maintain two-way tra
- 8. Do not store traffic c post-mounted signs
- 9. If W20-1 is placed or construction work oc of the road on which
- 10. The message on the the distance to the w sign when approach two W20-1 signs "B"
- 11. For work zones that each end of the proje whole mile.
- 12. If signing on a roadw that an encroachmer
- 13. State standards may
- 14. Refer to the Section retroreflective sheeti

		STATE	PROJECT	SHEET
ance warni	ng signs before stai	ting cons	truction work	(. 
on the ter Contractor s necessary	<i>mporary traffic cont may add or delete i y to accommodate a</i>	rol sheets nformatic actual ope	s may be app on and details erations.	<i>licable ; in this</i>
ning signs, igns as det ed.	placed as shown, ir rermined by the CO	terfere w for best i	rith permaner results. Vary	nt signs,
nt message ons.	e signs may be requ	ired to fit	the actual	
ed plates ur recommer	nder the W20 series nded speed through	warning the cons	signs as need truction area.	ded to
orts expose I for crashv	ed to impact by traf worthiness.	fic meet t	he requireme	ents of
affic during	all non-work hours	except a	s approved b	y the CO.
control devi when not a	ices along the roadv applicable.	way when	not in use.	Cover
n a roadwa ccurs, inclu the constr	ay other than that o de a supplementary ruction does occur (	n which t plaque i applies to	he actual ndicating the major roads	name s only).
W20-1 sig vork area ii speeds exo ' meters ap	ns may be "ROAD V n feet or in miles. 1 ceed 80 km/h [50 N part according to the	VORK AH nstall an 1PH]. Whe sign Sp	EAD" or may additional W2 en used place acing Table.	specify 20-1 e the
are greate ect. Show	r than 3 km in leng the distance on the	th, install G20-1 s	G20-1 signs ign to the nea	at arest
vay under a nt permit h	a jurisdiction other as been obtained.	than the o	client agency,	, verify
∕ be used a	s an alternative if a	pproved	by the CO.	
635 of the ing types.	Special Contract Re	equireme	nts for allowa	ble
	U.S. DE	PARTMENT C	)F TRANSPORTAT	ION
	FEDER F	AL HIGHWA	Y ADMINISTRATIC	N
	TEMPODA	METRIC S		
		ANCE	SIGNIN	IG
SCALF	STANDARD APPR	OVED FOR USE	6/2005	STANDARD
JUALL	REVISED: DRAFT: 6/2014			M635-1



ed pavement markers for lines, use the following	
two pavement markers spaced 2' apart gap shown based on curvature.	
e: pavement markers spaced on 10' centers.	
e: two pavement markers, side by side, spaced on	
'ane roads, signs may be used instead of temporary gs as shown on Standard 635-3.	
U.S. DEPARTMENT OF TRANSPORTATIO	ON
FEDERAL HIGHWAY ADMINISTRATIO FEDERAL LANDS HIGHWAY	N
U.S. CUSTOMARY STANDAR	D
TEMPORARY	
PAVEMENT MARKIN	IGS
STANDARD APPROVED FOR USE 6/2005	STANDARD

STATE

PROJECT

SHEET NUMBER



		STATE	PROJECT	NUMBER					
ed pavemen	t markers for line	s, use t	he following						
line: two pa gap shown	vement markers s based on curvatu	spaced re.	0.6 m apart						
e: pavement markers spaced on 3 m centers.									
ne: two pav	ement markers, s	ide by s	side, spaced or	ז					
lane roads, . Igs as shown	signs may be used o on Standard M63	d instea 35-3.	d of temporar	y					
out units are	millimeters.								
	U.S. DEF FEDER/	PARTMENT	OF TRANSPORTAT	TON ON					
	FI	EDERAL L	ANDS HIGHWAY						
		ГЕМР	ORARY						
	PAVE	MEN	T MARKII	NGS					
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	REVISED:	JVED FOR U	36 0/2005	STANDARD M635-2					
	DKAFT: 9/2016								



	STATE	PROJECT	SHEET NUMBER
ment on two- or three-lane road days when providing signs accor y use the vehicle positioning gui on.	ds may r rding to des to p	remain unmark this standard. rovide addition	ed nal
s with radius less than 500', red	luce cycl	e length to 20'	
anent markings plan to determi ction of travel.	ine no p	assing zones fo	or
4-1 at 1 mile intervals.			
'8-12 after each major intersect y traffic control zones greater th	ion and nan 3 mi	every 2 miles i iles long.	for
PASS WITH CARE" (R4-2) sign a sing zone only if a "DO NOT PAS at the upstream end of the zone	at the do S" (R4 e.	ownstream end 1) sign has bee	of en
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	N	10 🔪	
	K CEN		
	LI		
รกก'		J VV8-12	
◄ 500		-	
	•	•	
Traffic flow <			
Traffic flow			
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<b>&gt;&gt;</b>			
	PARTMENT	OF TRANSPORTAT	ION
FEDER FEDER	RAL HIGHW	AY ADMINISTRATIC	DN
U.S.	CUSTON	1ARY STANDAR	RD
DELINEA		N AND SI	GNING
FOR UNM	1ARK		MENTS
		SE 6/2005	CTANDADD
SCALE REVISED: DRAFT: 8/2013	U FUK U	JE 0/2003	635-3



		STATE	PROJECT	SHEET NUMBER
		_		
ment on two- days when pr ⁄ use the veh n.	or three-lane roa oviding signs acc icle positioning gu	ads may ording t uides to	remain unma o this standard provide additi	rked d. onal
s with radius	less than 150 m,	reduce	cycle length to	o 6 m.
anent markir ction of trave	ngs plan to detern I.	nine no	passing zones	for
4-1 at 1.5 km	n intervals.			
'8-12 after ea y traffic conti	ach major intersed rol zones greater :	tion an than 5 l	d every 3 km i km long.	for
PASS WITH C ing zone only at the upstrea	CARE" (R4-2) sign v if a "DO NOT PA am end of the zor	at the ( SS" (R4 ne.	downstream e I-1) sign has b	nd of een
			$\wedge$	
			NO	
		(CE		
		N.	W8-12	
	150 m		<ul><li></li><li></li></ul>	
			•	
	Traffic flow <del>&lt;</del>			
I —	Traffic flow —	>		
<b>~~</b>				
	U.S. DE FEDER	PARTMENT AL HIGHW	OF TRANSPORTAT	TON ON
	F	EDERAL L	ANDS HIGHWAY	
		<b>TTA</b>		ONTRIG
			N AND SI	GNING
	FOR UNM	IARK	ED PAVE	MENTS
SCALE	STANDARD APPRO	OVED FOR U	SE 6/1998	STANDARD
	REVISED: 6/2005 DRAFT: 8/2013			M635-3

LENGTH AND SPACING TABLE					
APPROACH	BUFFER SPACE	CHANNELIZING DEVICE			
SPEED*	LENGTH	TAPER	BUFFER	WORK	
мдн	FFFT	AREA	SPACE	SPACE	
	, , , , , , , , , , , , , , , , , , , ,	SPA	SPACING IN FEET		
20	115	20	20 40		
25	155	20-25	50	50	
30	200	20-30	60	60	
35	250	20-35	70	70	
40	305	20-40	80	80	
45	360	20-45	90	90	
50	425	20-50	100	100	
55	495	20-55	110	110	
60	570	20-60	120	120	
65	645	20-65	130	130	
70	730	20-70	140	140	

SIGN SPACING TABLE						
ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET					
	Α	В	С			
Urban and Rural 30 MPH and less	100	100	100			
Urban and Rural 35 MPH to 50 MPH	350	350	350			
Rural greater than 50 MPH	500	500	500			
Expressway / Freeway	1000	1500	2640			

- 1. Signs are shown those depicted for
- 2. If the area approa no passing zone, conflicting pavem
- 3. If the tangent dis use an appropriat Reverse Curve" s Curve" sign (W1original alignmen diversion has sha
- 4. If the diversion is "ROAD WORK AH
- 5. Place channelizin
- 6. Do not allow equi the buffer space.



	STATE	PROJECT	NUMBER
for one direction of travel only. or the opposite direction of trave	Place d I.	levices similar	to
paching diversion is not already s add signing and/or marking as nent markings.	signed a appropr	nd marked as iate. Remove	a
stance along the temporary dive te "Reverse Curve" sign (W1-4) sign (W24-1). Install a second, o -4) in advance of the second rev tt. Use "Reverse Turn" signs (W arp curves with recommended sp	rsion is instead appropr erse cu 1-3) ins peeds oi	more than 600 of the "Double iate "Reverse rve back to the stead when the f 30 mph or les	0', e e ss.
s completely within the project li IEAD" (W20-1) and "END ROAD	imits, el WORK"	iminate the (G20-2) signs	
ng devices outside temporary roa	dway.		
ipment, materials, or vehicles to	be par	ked or stored i	in
	• •		
TAPER AREA			
<b>→</b>			
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		ENID	
Use at least the minimum		ROAD WO	RK
radius for the signed speed		<u> </u>	
tor all diversion curves		See Note	e 4
U.S. DEF FEDER/	PARTMENT AL HIGHW	OF TRANSPORTAT	ION DN
F		ANDS HIGHWAY	
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TEMPORAI	RY TI		ONTROL
		VEDETAN	
FO	'R DI	VERSION	
STANDARD APPRO	VED FOR U	SE 6/2005	STANDARD
SCALE REVISED: DRAFT 6/2015			635-4
5.0111 0/2015			

I FNGTH AND SPACING TABLE						
APPROACH BUFFER SPACE CHANNELIZING DEVICE						
SPE	ED*	LENGTH	TAPER	BUFFER	WORK	
мрн	km/h	METER	AREA	SPACE	SPACE	
		THE TER	SPAC	CING IN ME	TERS	
20	30	35	6	12	12	
25	40	45	6-7.5	15	15	
30	50	60	6-9	18	18	
35	55	75	6-10.5	21	21	
40	65	95	6-12	24	24	
45	70	110	6-13.5	27	27	
50	80	130	6-15	30	30	
55	90	150	6-16.5	34	34	
60	95	175	6-18	37	37	
65	105	195	6-19.5	40	40	
70	115	225	6-21	43	43	

SIGN SPACING TABLE						
ROAD TYPE	DISTANCE BETWEEN SIGNS IN METERS					
	A	В	С			
Urban and Rural $\leq$ 50 km/h [ $\leq$ 30 MPH]	30	30	30			
Urban and Rural 60-80 km/h [35-50 MPH]	100	100	100			
Rural greater than 80 km/h [50 MPH]	150	150	150			
Expressway / Freeway	300	450	800			

# NOTE:

- 1. Signs are shown those depicted for
- 2. If the area approa no passing zone, conflicting pavem
- 3. If the tangent dis use an appropriat Reverse Curve" s Curve" sign (W1original alignmen diversion has sha
- 4. If the diversion is "ROAD WORK AH
- 5. Place channelizin
- 6. Do not allow equi the buffer space.



NO

	STATE	PROJECT	SHEET
			I
for one direction of travel only or the opposite direction of trav	∙. Place ∕el.	devices simila	ar to
paching diversion is not already add signing and/or marking a nent markings.	r signed s appro	' and marked a priate. Remov	as a /e
stance along the temporary div te "Reverse Curve" sign (W1-4 sign (W24-1). Install a second -4) in advance of the second re nt. Use "Reverse Turn" signs ( arp curves with recommended	version ) instea , appro- verse c W1-3) i speeds	is less than 18 ad of the "Dou priate "Reverse curve back to t nstead when t of 30 mph or 1	0 m, ble e he he less.
s completely within the project IEAD" (W20-1) and "END ROAL	limits, D WORF	eliminate the <" (G20-2) sigi	ns.
ng devices outside temporary re	oadway		
ipment, materials, or vehicles	to be p	arked or store	d in
TAPER AREA			
0.00			
	A		
		•	
		EN	D
Use at least the minimum		ROAD V	VORK
for all diversion curves		G20-2	oto 4
		See M	
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U.S. DEF FEDER/	ARTMENT	OF TRANSPORTAT	ION ON
FI N	METRIC	STANDARD	
TEMPODA	 v <b>-</b>		
	KT		
FO	R DI	VERSION	
SCALE STANDARD APPRC	OVED FOR U	SE 6/2005	STANDARD
REVISED: DRAFT: 6/2015			M635-4

SIGN SPACING TABLE					
ROAD TYPE		DISTANCE BETWEEN SIGNS IN FEET			
	A	В	С		
Urban and Rural 30 MPH and less	100	100	100		
Urban and Rural 35 MPH to 50 MPH	350	350	350		
Rural greater than 50 MPH	500	500	500		
Expressway / Freeway	1000	1500	2640		

# NOTE:

- 1. Signs are shown f those depicted for
- 2. Final location and conditions as app
- 3. For pilot car opera at a conspicuous I name of the Conti
- 4. If closure is comp WORK AHEAD" (V
- 5. For night time fla
- 6. Do not allow equi the buffer space.

LENGTH AND SI	PACING TABLE
APPROACH SPEED*	BUFFER SPACE LENGTH
МРН	FEET
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730



	STATE	PROJECT	SHEET NUMBER
for one direction of travel only. or the opposite direction of trave	Place c el.	levices similar	to
d spacing of signs and devices n proved by the CO.	nay be c	changed to fit f	ïeld
ration, mount the "PILOT CAR F location on the rear of vehicle. tractor on the pilot car.	OLLOW Promine	ME" (G20-4) si ently display th	ign Ie
pletely within the project limits, W20-1) and "END ROAD WORK"	elimina '' (G20-2	te the "ROAD ?) signs.	
agging operation, provide floodli	ighting a	at flagger statio	ons.
ipment, materials, or vehicles to	o be par	ked or stored i	in
SPACE			
ngth and			
i Table) — Flaggi	er locati	on	
• <del>*</del>			
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		•	
- A			
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TERMINATION AREA			
			ר ו
		ROAD WORK	
		G20-2	-
		See Note 4	
	PARTMENT	OF TRANSPORTAT	ION
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STANDARD APPR	OVED FOR U	SE 6/2005	- J STANDARD
SCALE REVISED: DRAFT: 8/2013			635-5

LENGTH AND SPACING TABLE				
APPROACH SPEED*		BUFFER SPACE LENGTH		
MPH km/h		METER		
20	30	35		
25	40	45		
30	50	60		
35	55	75		
40	65	95		
45	70	110		
50	80	130		
55	90	150		
60	95	175		
65	105	195		
70	115	225		

SIGN SPACING TABLE					
ROAD TYPE	DISTANCE BETWEEN SIGNS IN METERS				
	A	В	С		
Urban and Rural ≤ 50 km/h [≤ 30 MPH]	30	30	30		
Urban and Rural 60-80 km/h [35-50 MPH]	100	100	100		
Rural greater than 80 km/h [50 MPH]	150	150	150		
Expressway / Freeway	300	450	800		

- 1. Signs are shown f those depicted for
- 2. Final location and conditions as app
- *3. For pilot car opera at a conspicuous l* name of the Cont
- 4. If closure is comp WORK AHEAD" (V
- 5. For night time flag
- 6. Do not allow equip the buffer space.



		STATE	PROJECT		SHEET
					NUMBER
e shown for one direc picted for the opposit	tion of travel only te direction of trav	. Place rel.	devices simila	ar to	
ation and spacing of s ns as approved by the	signs and devices a	may be	changed to fi	t field	
car operation, mount spicuous location on t the Contractor on th	t the "PILOT CAR I the rear of vehicle. e pilot car.	=OLLOV . Promi	V ME" (G20-4) nently display	sign the	
e is completely within HEAD" (W20-1) and	n the project limits "END ROAD WORK	, elimin (" (G20	ate the "ROAL -2) signs.	2	
t time flagging operat	tion, provide flood	lighting	at flagger sta	tions.	
llow equipment, mate er space.	erials, or vehicles	to be p	arked or store	d in	
BUFFER SPACE					
(optional) (See Length and					
Spacing Table)	— Flagg	ger loca	tion		
					_
				_	
					-
			<b>₽</b>		
	Å	4			
ł	4		▶		
TERM	INATION AREA				
			END ROAD WOR	ak I	
			G20-2		
			See Note	e 4	
	U.S. DEP FEDERA FE	ARTMENT	OF TRANSPORTAT AY ADMINISTRATI ANDS HIGHWAY	'ION ON	
METRIC STANDARD					
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LENGTH AND SPACING TABLE					
APPROACH	BUFFER SPACE	CHANNELIZING DEVICE			
SPEED*	LENGTH	TAPER	BUFFER	WORK	
мрн	FEET	AREA	SPACE	SPACE	
METT		SPA	CING IN F	EET	
20	115	20	40	40	
25	155	20	20 50		
30	200	20	60	60	
35	250	20	70	70	
40	305	20	80	80	
45	360	20	90	90	
50	425	20	100	100	
55	495	20	110	110	
60	570	20	120	120	
65	645	20	130	130	
70	730	20	140	140	

\* Approach speed based on the regulatory posted speed,

not the advisory speed.

SIGN SPACING TABLE					
ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET				
-	A	В	С		
Urban and Rural 30 MPH and less	100	100	100		
Urban and Rural 35 MPH to 50 MPH	350	350	350		
Rural greater than 50 MPH	500	500	500		
Expressway / Freeway1000150026					

- Requirements, Section 156.
- the buffer space.





LENGTH AND SPACING TABLE						
APPR	ОАСН	BUFFER SPACE	CHANN	IELIZING D	DEVICE	
SPE	ED*	LENGTH	TAPER	BUFFER	WORK	
мон	km/h	METER	AREA	SPACE	SPACE	
	KIIIJII	MLILK	SPAC	ING IN ME	TERS	
20	30	35	6	6 12		
25	40	45	6	6 15		
30	50	60	6	18	18	
35	55	75	6	21	21	
40	65	95	6	24	24	
45	70	110	6	27	27	
50	80	130	6	30	30	
55	90	150	6	34	34	
60	95	175	6	37	37	
65	105	195	6	40	40	
70	115	225	6	43	43	

\* Approach speed based on the regulatory posted speed,

not the advisory speed.

SIGN SPACING TABLE					
DISTANCE BETWEEN SIGNS IN METERS					
Α	В	С			
30	30	30			
100	100	100			
150	150	150			
300	450	800			
	BLE DISTA SIGN A 30 100 150 300	BLE           DISTANCE BET           SIGNS IN ME           A           30           100           150           300           450			

- Requirements, Section 156.
- the buffer space.







SIGN SPACING TABLE						
ROAD TYPE		DISTANCE BETWEEN SIGNS IN FEET				
	A	В	С			
Urban and Rural 30 MPH and less	100	100	100			
Urban and Rural 35 MPH to 50 MPH	350	350	350			
Rural greater than 50 MPH	500	500	500			
Expressway / Freeway	1000	1500	2640			

- of the MUTCD.
- 50 MPH.





SIGN SPACING TA	BLE		
ROAD TYPE	DISTA SIGN	NCE BET	WEEN TERS
	Α	В	С
Urban and Rural $\leq$ 50 km/h [ $\leq$ 30 MPH]	30	30	30
Urban and Rural 60-80 km/h [35-50 MPH]	100	100	100
Rural greater than 80 km/h [50 MPH]	150	150	150
Expressway / Freeway	300	450	800

- of the MUTCD.
- 80 km/h [50 MPH].
- Requirements, Section 156.
- in the buffer space.













	LENGTH AND SPACI	NG TABLE				
APPROACH	MINIMUM TADED LENGTH**	BUFFER SPACE	CHANN	ELIZING	DEVICE	
SPEED*		LENGTH	TAPER	BUFFER	WORK	
мрн	FEET	FEFT	AREA	SPACE	SPACE	
PIFIT			SPA	CING IN I	FEET	
20	Shoulder taper formula:	115	20	40	40	
25	$I = \frac{WS^2}{for S < 40}$ MDH	155	25	50	50	
30	$L = \frac{1}{180}$ 101 3 $\leq 40$ MPH	200	30	60	60	
35	WS for S > 45 MDH	250	35	70	70	
40	$\begin{bmatrix} L - \frac{1}{3} \end{bmatrix}$ 101 3 2 43 MPH	305	40	80	80	
45	Where:	360	45	90	90	
50	L = Minimum length of taper	425	50	100	100	
55	W = Width of offset in feet	495	55	110	110	
60	S = Numerical value of posted speed	570	60	120	120	
65	limit or 85 percentile speed prior	645	65	130	130	
70	to work in miles per hour	730	70	140	140	

SIGN SPACING TA	BLE		
ROAD TYPE	DISTA SIC	NCE BET GNS IN FL	WEEN EET
	Α	В	С
Urban and Rural 30 MPH and less	100	100	100
Urban and Rural 35 MPH to 50 MPH	350	350	350
Rural greater than 50 MPH	500	500	500
Expressway / Freeway	1000	1500	2640

\*\* Lengthen taper as needed to provide minimum of three channelizing devices in taper at required spacing.





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		LENGTH AND SPACI	NG TABLE			
APPR	ОАСН	MINIMUM TADED / ENGTH**	BUFFER SPACE	CHANN	ELIZING	DEVICE
SPE	ED*	MINIMON TAPER LENGTH	LENGTH	TAPER	BUFFER	WORK
мон	km/h	METED	METED	AREA	SPACE	SPACE
	KIIIJII	METER	METER	SPAC	ING IN MI	ETERS
20	30	Shoulder taper formula:	35	6	12	12
25	40	$I = \frac{WS^2}{VS^2}$ for $S < 70 \ km/h$	45	8	15	15
30	50	$L = \frac{1}{465}$ 101 3 < 70 km/m	60	9	18	18
35	55	$V = \frac{WS}{VS}$ for $S > 70  km/b$	75	11	21	21
40	65	$L = \frac{1}{4.8}  101.3 \ge 70 \text{ km/m}$	95	12	24	24
45	70	Where:	110	14	27	27
50	80	L = Minimum length of taper	130	15	30	30
55	90	W = Width of offset in meters	150	17	34	34
60	95	S = Metric equivalent of posted speed	175	18	37	37
65	105	limit or 85 percentile speed prior	195	20	40	40
70	115	to work in kilometers per hour	225	21	43	43

SIGN SPACING TA	BLE		
ROAD TYPE	DISTA SIGN	NCE BET NS IN ME	WEEN TERS
	А	В	С
Urban and Rural $\leq$ 50 km/h [ $\leq$ 30 MPH]	30	30	30
Urban and Rural 60-80 km/h [35-50 MPH]	100	100	100
Rural greater than 80 km/h [50 MPH]	150	150	150
Expressway / Freeway	300	450	800

\*\* Lengthen taper as needed to provide minimum of three channelizing devices in taper at required spacing.





	LENGTH AND SPACI	NG TABLE			
APPROACH		BUFFER SPACE	CHANN	ELIZING	DEVICE
SPEED*	MINIMOM TAPER LENGTH	LENGTH	TAPER	BUFFER	WORK
моц	EEET	EEET	AREA	SPACE	SPACE
		FLLT	SPA	CING IN I	FEET
20	Shifting taper formula:	115	20	40	40
25	$I = \frac{WS^2}{for S < 40}$ MDH	155	25	50	50
30	$\begin{bmatrix} L = \frac{1}{120} & 101 & 3 & 40 & 101 \\ \hline 120 & 101 & 101 & 3 & 40 & 101 \\ \hline 120 & 101 & 101 & 101 \\ \hline 120 & 101 & 101 & 101 \\ \hline 120 & 101 & 101 & 101 \\ \hline 120 & 101 & 101 & 101 \\ \hline 120 & 101 \\ \hline 120 & 101 & 101 \\ \hline 120 & 101 & 101 \\ \hline 120 & 101 \\ \hline 120 & 101 & 101 \\ \hline 120 &$	200	30	60	60
35	WS for S > 45 MDH	250	35	70	70
40	$\begin{bmatrix} L = \frac{1}{2} \end{bmatrix} = \begin{bmatrix} 101 & 32 & 43 & 101 \\ 2 & 101 & 32 & 43 & 101 \\ \end{bmatrix}$	305	40	80	80
45	Where:	360	45	90	90
50	L = Minimum length of taper	425	50	100	100
55	W = Width of offset in feet	495	55	110	110
60	S = Numerical value of posted speed	570	60	120	120
65	limit or 85 percentile speed prior	645	65	130	130
70	to work in miles per hour	730	70	140	140

SIGN SPACING TABLEROAD TYPEDISTANCE BETWEN SIGNS IN FETABCUrban and Rural 30 MPH and less100100Urban and Rural 35 MPH to 50 MPH350350Rural greater than 50 MPH500500Expressway / Freeway10001500	SIGN SPACING TABLEDISTANCE BETWEN SIGNS IN FETROAD TYPEDISTANCE BETWEN SIGNS IN FETABCUrban and Rural 30 MPH and less100100Urban and Rural 35 MPH to 50 MPH350350Rural greater than 50 MPH500500Expressway / Freeway10001500					1
ROAD TYPEDISTANCE BETWEN SIGNS IN FEETABCUrban and Rural 30 MPH and less100100Urban and Rural 35 MPH to 50 MPH350350Rural greater than 50 MPH500500Expressway / Freeway10001500	DISTANCE BETWEN SIGNS IN FEETABCUrban and Rural 30 MPH and less100100Urban and Rural 35 MPH to 50 MPH350350Rural greater than 50 MPH500500Expressway / Freeway10001500	SIGN SPACING TA	BLE			
A         B         C           Urban and Rural 30 MPH and less         100         100         100           Urban and Rural 35 MPH to 50 MPH         350         350         350           Rural greater than 50 MPH         500         500         500           Expressway / Freeway         1000         1500         2640	A         B         C           Urban and Rural 30 MPH and less         100         100         100           Urban and Rural 35 MPH to 50 MPH         350         350         350           Rural greater than 50 MPH         500         500         500           Expressway / Freeway         1000         1500         2640	ROAD TYPE	DISTA SIC	NCE BET GNS IN FL	WEEN EET	
Urban and Rural 30 MPH and less         100         100         100           Urban and Rural 35 MPH to 50 MPH         350         350         350           Rural greater than 50 MPH         500         500         500           Expressway / Freeway         1000         1500         2640	Urban and Rural 30 MPH and less       100       100         Urban and Rural 35 MPH to 50 MPH       350       350         Rural greater than 50 MPH       500       500         Expressway / Freeway       1000       1500       2640		A	В	С	
Urban and Rural 35 MPH to 50 MPH         350         350         350           Rural greater than 50 MPH         500         500         500           Expressway / Freeway         1000         1500         2640	Urban and Rural 35 MPH to 50 MPH         350         350         350           Rural greater than 50 MPH         500         500         500           Expressway / Freeway         1000         1500         2640	Urban and Rural 30 MPH and less	100	100	100	
Rural greater than 50 MPH500500Expressway / Freeway100015002640	Rural greater than 50 MPH         500         500           Expressway / Freeway         1000         1500         2640	Urban and Rural 35 MPH to 50 MPH	350	350	350	
Expressway / Freeway 1000 1500 2640	Expressway / Freeway 1000 1500 2640	Rural greater than 50 MPH	500	500	500	
		Expressway / Freeway	1000	1500	2640	





		LENGTH AND SPACI	NG TABLE				
APPR	OACH		BUFFER SPACE	CHANN	ELIZING	DEVICE	
SPE	ED*	MINIMUM TAPER LENGTH	LENGTH	TAPER	BUFFER	WORK	
мон	line /h	METER	МЕТЕр	AREA	SPACE	SPACE	
	KIII/II	METER	METER	SPAC	ING IN MI	IETERS	
20	30	Shifting taper formula:	35	6	12	12	
25	40	$WS^2$ for S < 70 km/b	45	8	15	15	
30	50	$L = \frac{1}{310}  101 \text{ S} < 70 \text{ km/m}$	60	9	18	18	
35	55	$I = \frac{WS}{VS}$ for $S > 70  km/h$	75	11	21	21	
40	65	$L = \frac{1}{3.2}$ 101 S 2 70 KIN/II	95	12	24	24	
45	70	Where:	110	14	27	27	
50	80	L = Minimum length of taper	130	15	30	30	
55	90	W = Width of offset in meters	150	17	34	34	
60	95	S = Metric equivalent of posted speed	175	18	37	37	
65	105	limit or 85 percentile speed prior	195	20	40	40	
70	115	to work in kilometers per hour	225	21	43	43	

SIGN SPACING TA	BLE		
ROAD TYPE	DISTA SIGN	NCE BET	WEEN TERS
	A	В	С
Urban and Rural ≤ 50 km/h [≤ 30 MPH]	30	30	30
Urban and Rural 60-80 km/h [35-50 MPH]	100	100	100
Rural greater than 80 km/h [50 MPH]	150	150	150
Expressway / Freeway	300	450	800





	ELINGTITAND SP		LL CHANN	ELIZING	DEVICE	WORK ZONE
APPROACH SPEED*	MINIMUM TAPER LENGTH	SPACE LENGTH	TAPER AREA	BUFFER SPACE	WORK SPACE	CLEAR ZONE WIDTH
MPH	FEET	FEET	SPA	CING IN F	EET	FEET
20	Shifting taper formula:	115	20	40	40	10
25	$WS^2$ for S < 40 MDH	155	25	50	50	10
30	$L = \frac{120}{120}$ 101 S $\leq 40$ MPH	200	30	60	60	10
35	WS for S > 45 MDH	250	35	70	70	10
40	$L = \frac{1073243}{2}$	305	40	80	80	15
45	Where:	360	45	90	90	20
50	L = Minimum length of taper	425	50	100	100	20
55	W = Width of offset in feet	495	55	110	110	20
60	S = Numerical value of posted speed	570	60	120	120	30
65	limit or 85 percentile speed prior	645	65	130	130	30
70	to work in miles per hour	730	70	140	140	30

SIGN SPACING	TABLE		
ROAD TYPE	DISTA SIC	ANCE BET GNS IN FL	WEEN EET
	A	В	С
Urban and Rural 30 MPH and less	100	100	100
Urban and Rural 35 MPH to 50 MPH	350	350	350
Rural greater than 50 MPH	500	500	500
Expressway / Freeway	1000	1500	2640







		LENGTH AND SP	ACING TAE	LE				SIGN SPACING TABLE	
APPR SPE	OACH ED*	MINIMUM TAPER LENGTH	BUFFER SPACE	CHANN TAPER	ELIZING BUFFER	DEVICE WORK	WORK ZONE CLEAR ZONE	ROAD TYPE DISTANCE BETWEEN SIGNS IN METERS	ľ 1.
	1 (1	METER	LENG I H MFTFR	AREA		SPACE	METER	A B C	
<u>900 70 70 70 70 70 70 70 70 70 70 70 70 7</u>	кт/п 20	Shifting tappar formula:	25	SPAC.		ETERS	2.0	Urban and Rural S 50 km/n [S 30 MPH] 30 30 30	2.
20	30 40		<u>35</u>	8	12	12	3.0	Oldali alla Rulai 60-60 kili/il [55-50 MPH]         100         100         100           Rural greater than 80 km/b [50 MPH]         150         150         150	
20	50	$L = \frac{WS^2}{310}$ for S < 70 km/h	60	9	15	15	3.0	Kurai greater than 60 km/m [50 mm]     150     150     150       Expressway / Freeway     300     450     800	3
35	55	WS	75	11	21	21	3.0		0.
40	65	$L = \frac{10}{3.2}  \text{for } S \ge 70 \text{ km/h}$	95	12	24	24	4.6		1
45	70	Where:	110	14	27	27	6.1		4
50	80	<i>L</i> = <i>Minimum length of taper</i>	130	15	30	30	6.1		
5	90	W = Width of offset in meters	150	17	34	34	6.1		_
50	95	S = Metric equivalent of posted speed	175	18	37	37	9.0		5
55	105	limit or 85 percentile speed prior	195	20	40	40	9.0		
70	115	to work in kilometers per hour	225	21	43	43	9.0		
		G20-2 See Note 5 ROAD WOR	К						9.
		-	Α					Remove conflicting	4
	Traffic	€ flow <	A Double 100 mi ellow centerli	n tempora	ary solid Vote 4 —			Remove conflicting pavement markings	<b>4</b> −−1
	Traffic	c flow <	A Pouble 100 mr ellow centerli	n tempora ne. See N	ary solid Note 4 —			Remove conflicting pavement markings	<b>۹</b> ا
	Traffic	c flow <	A Double 100 mr ellow centerli 100	n tempora ne. See I	ary solid Note 4 — mporary s	rolid		Remove conflicting pavement markings	• • •
	Traffic	c flow <	A Pouble 100 mi ellow centerli 100 wh	n tempora ne. See l ) mm Ten ite edge li	ary solid Note 4 — pporary s ine. See	olid Note 4 –	W/2	Remove conflicting pavement markings	•
•	Traffic Traffic	$c flow < \qquad $	A Double 100 mr ellow centerlin 100 wh	n tempor ne. See l ) mm Ten ite edge li	ary solid Note 4 — nporary s ine. See	olid Note 4 – Ø	W/2 W/2 ices See Note 7	Remove conflicting pavement markings 3 m min. See Note 3 3 m min. See Note 3 W W W	
•	Traffic	c flow <	A Double 100 mr ellow centerli 100 wh	n tempora ne. See l 0 mm Ten ite edge li	ary solid Note 4 — nporary s ine. See Channe. (Se	olid Note 4 – Ø lizing dev e Length	W/2 W/2 ices See Note 7 and Spacing Tab	Remove conflicting pavement markings 3 m min. See Note 3 3 m min. See Note 3 W W W W W W W W W W W W W	
•	Traffic	c flow <	A Pouble 100 mi ellow centerli 100 wh	n tempor ne. See l mm Ten ite edge li	ary solid Note 4 — nporary s ine. See Channe. (Se	olid Note 4 – Ø lizing dev e Length	W/2 W/2 ices See Note 7 and Spacing Tab	Remove conflicting pavement markings 3 m min. See Note 3 3 m min. See Note 3 W W W W W W W W W W W W W	
•	Traffic	c flow <	A Double 100 mr ellow centerlin 100 wh	n tempor. ne. See l ) mm Ten ite edge li	ary solid Vote 4 — nporary s ine. See Channe. (Se	olid Note 4 – Ø lizing dev e Length	W/2 W/2 ices See Note 7 and Spacing Tab	Remove conflicting pavement markings 3 m min. See Note 3 3 m min. See Note 3 W W W W W W W W W W W W W	
•	Traffic	c flow <	A Double 100 mr ellow centerlin 100 wh	n tempor ne. See l 0 mm Ten ite edge li	ary solid Note 4 nporary s ine. See Channe (Se	olid Note 4 – Ø lizing dev e Length TAPER Al	W/2 w/2 ices See Note 7 and Spacing Tab	Remove conflicting pavement markings 3 m min. See Note 3 3 m min. See Note 3 W W W W W W W W W W W W W	
•	Traffic	c flow <	A pouble 100 mr ellow centerlin 100 wh ting Table)	n tempor ne. See l mm Ten ite edge li	ary solid Note 4 nporary s ine. See Channe (Se	olid Note 4 – Ø lizing dev e Length TAPER Al	W/2 W/2 See Note 7 and Spacing Tab	Remove conflicting pavement markings 3 m min. See Note 3 3 m min. See Note 3 W W W VARIABLE WORK SPACE	
	Traffic Traffic	c flow <	A pouble 100 mr ellow centerlin 100 wh sing Table) A VS W5-1 W13-1P (optional)	n tempor ne. See l ) mm Ten ite edge li	ary solid Note 4 nporary s ine. See Channe. (Se	olid Note 4 – Ø lizing dev e Length TAPER Al	W/2 W/2 See Note 7 and Spacing Tab	Remove conflicting pavement markings	



	LENGTH AND SPACING TABLE							
APPROACH	BUFFER SPACE	CHANI	VELIZING D	PEVICE	CONCRETE	WORK ZONE		
SPEED*	LENGTH	TAPER AREA	BUFFER SPACE	WORK SPACE	BARRIER FLARE	CLEAR ZONE WIDTH		
MPH	FEET	SPA	CING IN F	EET	RATE	FEET		
20	115	20	40	40	1:8	10		
25	155	20	50	50	1:8	10		
30	200	20	60	60	1:8	10		
35	250	20	70	70	1:9	10		
40	305	20	80	80	1:10	15		
45	360	20	90	90	1:12	20		
50	425	20	100	100	1:14	20		
55	495	20	110	110	1:16	20		
60	570	20	120	120	1:16	30		
65	645	20	130	130	1:16	30		
70	730	20	140	140	1:16	30		



- 1. Install signs and Standard 635-6, devices may be c
- 2. Place barrier acco barrier ends outs with a crash cush
- 3. For project specil Section 156.
- *4. Place channelizin when access is n*
- 5. Do not allow equ the buffer space.
- 6. Reduce or elimin to provide access

		STATE	PROJECT	SHEET NUMBER
other devices fo 7, 8, or 9. Fina hanged to fit fie	r single lane clo. I location and sp Id conditions as	sure acc acing of approve	cording to f signs and ed by the CO.	
ording to the AA. ide the work zor nion. Include ret	SHTO Roadside ne clear zone or flectors on barrie	Design protect er at 25	Guide. Termina the barrier en ' intervals.	ate ds
ic minimum wid	lth, refer to Spec	cial Con	tract Requirem	ents,
g devices at dov	vnstream taper o	during n	on-work hours	s or
ipment, materia	ls, or vehicles to	o be pari	ked or stored i	n
ate drums and b to work space.	oarrier in downst	ream ta	per if necessa	ΓY
	©			
R AREA (50' - 1	00')			
See Note 4				
_				
	U.S. DEF FEDER F	PARTMENT AL HIGHW EDERAL LA	OF TRANSPORTAT	ION DN
	U.S. (	CUSTOM	IARY STANDAR	D
	TEMPORAI SINGLE LA	RY TF NE C	RAFFIC CO LOSURE	ONTROL LAYOUT
1	(WITH TE	МРО	RARY BA	RRIER)
	<u>(</u>			
SCALE RE	STANDARD APPRO	OVED FOR US	GE 6/2005	STANDARD

r								
	LENGTH AND SPACING TABLE							
APPR	OACH	BUFFER SPACE	CHANNELIZING DEVICE			CONCRETE	WORK ZONE	
SPE	ED*	LENGTH	TAPER AREA	BUFFER WORK SPACE SPACE		BARRIER FLARE	CLEAR ZONE WIDTH	
MPH	km/h		SPAC.	ING IN MET	TERS	RATE	METER	
20	30	35	6	12	12	1:8	3.0	
25	40	45	6	15	15	1:8	3.0	
30	50	60	6	18	18	1:8	3.0	
35	55	75	6	21	21	1:9	3.0	
40	65	95	6	24	24	1:10	4.6	
45	70	110	6	27	27	1:12	6.1	
50	80	130	6	30	30	1:14	6.1	
55	90	150	6	34	34	1:16	6.1	
60	95	175	6	37	37	1:16	9.0	
65	105	195	6	40	40	1:16	9.0	
70	115	225	6	43	43	1:16	9.0	



- 1. Install signs and Standard M635-6 devices may be c
- 2. Place barrier acco barrier ends outsi with a crash cush
- 3. For project specif Section 156.
- *4. Place channelizing when access is no*
- 5. Do not allow equi the buffer space.
- 6. Reduce or elimination to provide access

			SHEET
	STATE	PROJECT	NUMBER
other devices for single lane c 5, 7, 8, or 9. Final location and	losure a d spacin	eccording to g of signs and	,
changed to fit field conditions a	as appro	oved by the CC	),
ording to the AASHTO Roadsid side the work zone clear zone c hion. Include reflectors on bar	'e Desigi or prote rrier at 7	n Guide. Term ct the barrier e 7.6 m intervals	inate ends :.
fic minimum width, refer to Sp	ecial Co	ontract Require	ements,
ng devices at downstream tape ot needed.	r during	non-work hou	ırs or
ipment, materials, or vehicles	to be pa	arked or store	d in
ate drums and barrier in down s to work space.	stream	taper if neces	sary
= D A D E A (15 - 30 m)			
See Note 4			
U.S. DE FEDER	PARTMENT AL HIGHW	OF TRANSPORTAT	TON ON
F	EDERAL LA	STANDARD	
TEMPORA	RY TI		
SINGLE LA	ANE C	LOSURE	LAYOUT
(WITH TE	ΞΜΡΟ	RARY BA	RRIER)
SCALE STANDARD APPRO	OVED FOR U	SE 6/2005	STANDARD
DRAFT: 6/2015			M635-13



SINGLE POST SIGN

TWO POST SIGN

WOOD POST SELECTION TABLE						
WIDTH "X"	AREA (m2)	NUMBER OF POSTS	POST SIZE (mm)	D (mm)	HOLE SIZE (mm)	
Diamond ≤ 915 mm	< 1 9	1	100 x 100	900	0	
Other Shapes ≤ 1220 mm	< 0.5	1	100 x 150	1200	40	
Diamond ≤ 1220 mm	0.9 - 1.9	1	150 x 150	1200	50	
Diamond ≤ 1220 mm	0.9 - 1.9	2	100 x 100	900	0	
Other Shapes $\leq 3.7 \text{ m}$	1.9 - 4.6	2	100 x 150	1200	40	
> 4 m	4.6 - 6.0	2	150 x 150	1200	50	
3.7 m - 4.9 m	4.6 - 6.0	3	100 x 150	1200	40	
> 5 m	6.0 - 8.9	4	100 x 150	1200	50	
> 9 m	6.0 - 8.9	3	150 x 150	1200	50	



POST DETAIL

		STATE	PROJECT	SHEET NUMBER
tach sign par	nels with a minim	num of 2	- 6.25 mm Ø	bolts
and H2 = 0	verall post lengt	h.		
lect post leng	gths to fit field co	onditions		
= Post embe	dment depth for	average	soil conditions	5.
areas where eral offset of minimum late e curb may b	lateral distance 600 mm may be eral distance of 3 e used.	is limited e used. 800 mm l	d, a minimum In areas with o behind the faco	curbs, e of
pedestrian lo e 2.1 m mini d 1.8 m mini	ocations, or in ar mum mounting l imum mounting l	eas with height fo height fo	obstructed vie r main sign r secondary si	ews, gn.
e 2.1 m mini 0 mm x 150	imum spacing be mm or larger.	etween p	osts for sign p	osts
ate standards the CO.	s may be used a:	s an alte	rnative if appr	oved
mensions wit	hout units are m	illimeter	S.	
	200			
•	90°			
cal tangent			93°	
ent alignmer	nt 93°	60 r	n 🕨	
STON		ττον		
51GN 1	INSTALLA	1101	ANGLE	
	U.S. D FEDE	EPARTMENT RAL HIGHW FEDERAL L	OF TRANSPORTAT	TON ON
	TEMPODA			
		N INS	TALLATI	ONIKUL
22415	STANDARD APP			STANDAPD
SCALE	REVISED: DRAFT: 9/2014			M635-14



SINGLE POST SIGN

TWO POST SIGN

WOOD POST SELECTION TABLE						
WIDTH "X"	AREA (SQFT)	NUMBER OF POSTS	POST SIZE (INCH)	D (INCH)	HOLE SIZE (INCH)	
Diamond ≤ 36"	< 10	1	4 x 4	36	0	
Other Shapes $\leq 48"$		1	4 x 6	48	1.5	
Diamond ≤ 48"	10 - 20	1	6 x 6	48	2	
Diamond ≤ 48"	10 - 20	2	4 x 4	36	0	
Other Shapes $\leq 12'$	20 - 50	2	4 x 6	48	1.5	
> 13'	50 - 65	2	6 x 6	48	2	
12' - 16'	50 - 65	3	4 x 6	48	1.5	
> 17'	65 - 95	4	4 x 6	48	2	
> 30'	65 - 95	3	6 x 6	48	2	



POST DETAIL

		STATE	PROJECT	SHEET NUMBER
DTE:				
tach sign pane r post.	ls with a minimun	n of 2 -	¼" dia. bolts	
and H2 = Ove lect post lengt	erall post length. hs to fit field cond	litions.		
= Post embedr	ment depth for ave	erage s	oil conditions.	
areas where la eral offset of 2 minimum latera e curb may be	ateral distance is l '' may be used. In al distance of 1' bo used.	imited, n areas ehind th	a minimum with curbs, ne face of	
pedestrian loc e 7' minimum d 6' minimum	ations, or in areas mounting height f mounting height f	s with o for main for seco	bstructed view sign ndary sign.	s,
e 7' minimum x 6" or larger.	spacing between <sub>i</sub>	posts fo	er sign posts	
ate standards i the CO.	may be used as ai	n altern	ative if approv	ed
				-
cal tangent			93°	
ont oliginations in t	0.20	2001		
ent alignment	93°	200		
SIGN II	NSTALLATI	ON A	ANGLE	
	U.S. DEF FEDER/	PARTMENT AL HIGHW EDERAL	OF TRANSPORTAT	ION DN
	U.S. (	CUSTON	1ARY STANDAR	۲D
	TEMPORAI	RY TI	RAFFIC C	ONTROL
	SIGN	INS	TALLATI	ON
	Ν	100[	) POSTS	
SCALE	STANDARD APPRC REVISED: DRAFT: 9/2014	VED FOR U	SE 6/2005	standard 635-14