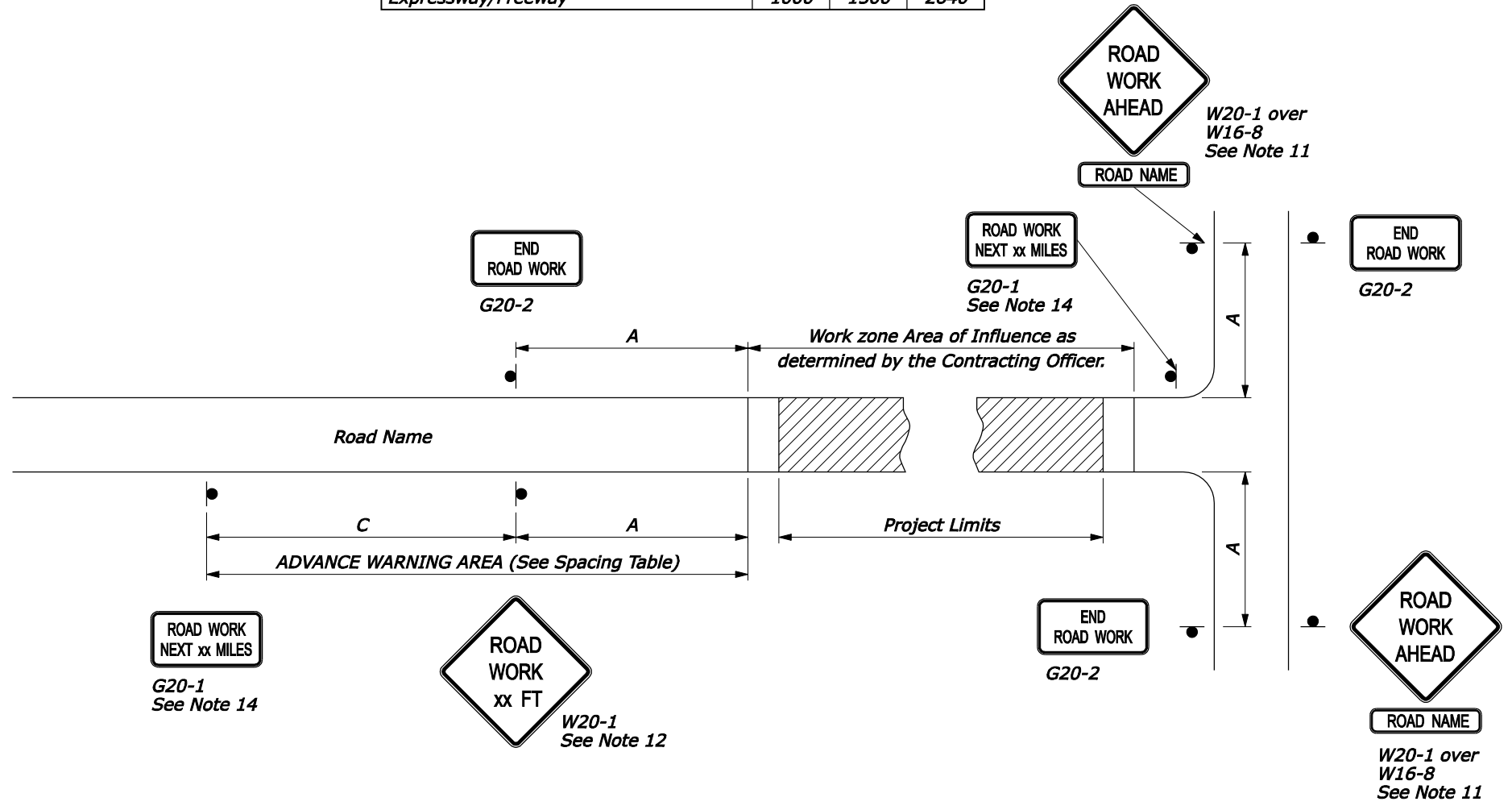


SIGN SPACING TABLE			
ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET		
	A	B	C
Urban 40 MPH and less	100	100	100
Urban 45 MPH and greater	350	350	350
Rural	500	500	500
Expressway/Freeway	1000	1500	2640

NOTE:

- Erect all advance warning signs before starting construction work.
- Not all details shown on the temporary traffic control sheets may be applicable to this project. The Contractor may add or delete information and details in this traffic control plan as necessary to accommodate actual operations.
- Where advance warning signs, placed as shown, interfere with permanent signs, locate the warning signs as determined by the CO for best results. Vary messages as required.
- Use Type III or higher type sheeting on all signs and channelizing devices. Warning lights are not normally needed on devices with Type III or higher type sheeting, but may be beneficial to attract the drivers attention in fog or other special conditions. When used, apply the appropriate type of warning light (Type A, B, C, or D) per the MUTCD Chapter 6F.
- When established in the contract, furnish beacons with the appropriate lens color as specified in the MUTCD Chapter 4K.
- Additional or different message signs may be required to fit the actual construction conditions.
- Install advisory speed plates under the W-20 series warning signs as needed to indicate a maximum recommended speed through the construction area.
- Ensure all sign supports exposed to impact by traffic meet the requirements of NCHRP-350 for crash worthiness.
- Maintain two-way traffic during all non-work hours except as approved by the CO.
- Do not store traffic control devices along the roadway when not in use. Cover post-mounted signs when not applicable.
- If W20-1 is on a roadway other than that on which the actual construction work occurs, include a supplementary plaque indicating the name of the road the work is on.
- The message on the W20-1 signs may be "ROAD WORK AHEAD" or may specify the distance to the work area in feet or in miles. Install an additional W20-1 sign when approach speeds exceed 50 MPH. When used place the two W20-1 signs "B" feet apart.
- When flagger warning sign series extend into project advance warning area, the second and third signs in the flagger series may be placed over the W20-1 sign(s) in project advance warning series.
- For work zones that are more than 2 miles in length, install G20-1 sign. Show the distance on the G20-1 sign to the nearest whole mile.
- If signs will be in place more than 72 consecutive hours, use ground-mounted post.
- If signing on a roadway under a jurisdiction other than the client agency, verify that an encroachment permit has been obtained.
- State standards may be used as an alternative if approved by the CO.



NO SCALE

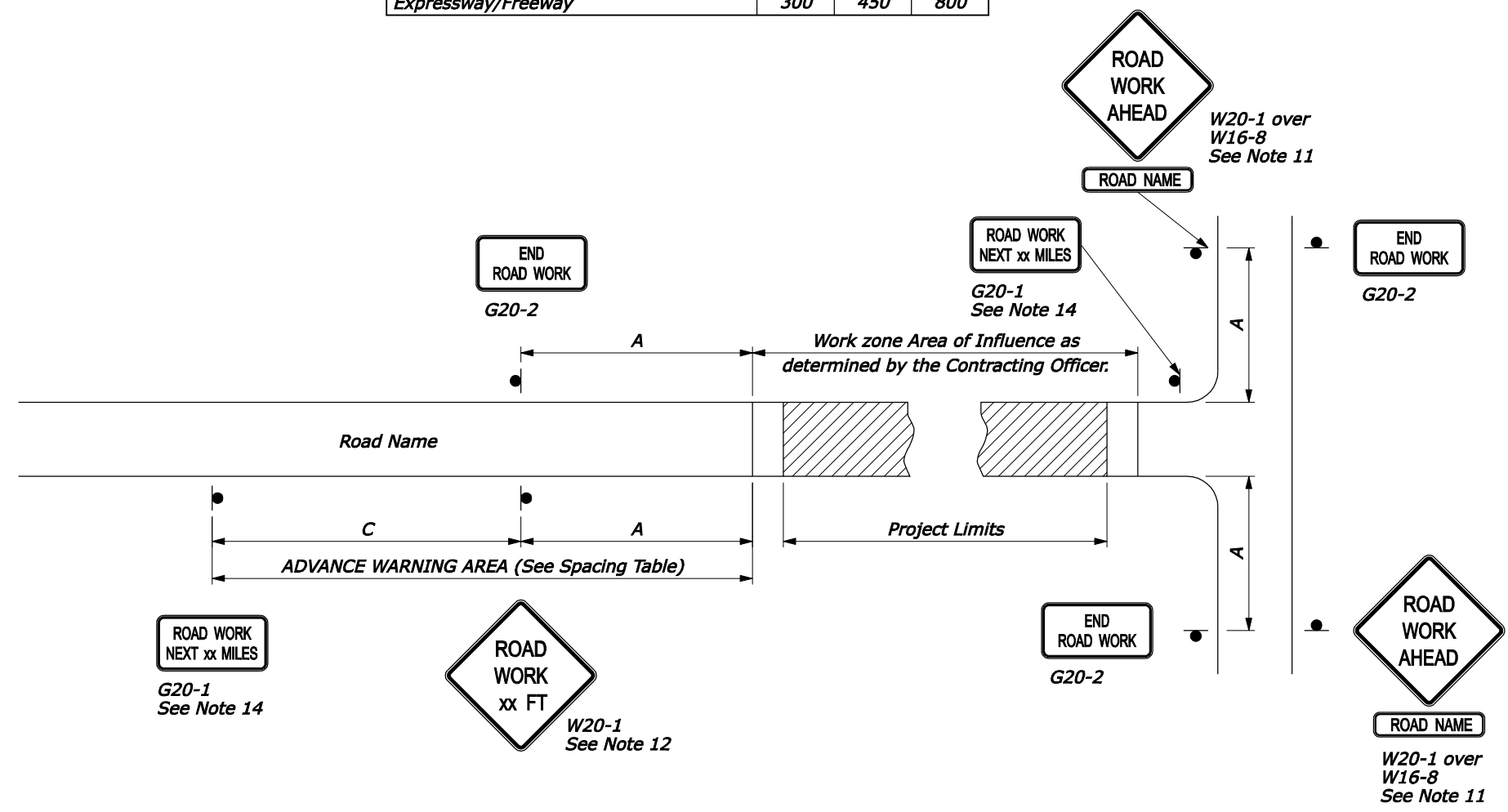
U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION FEDERAL LANDS HIGHWAY	
U.S. CUSTOMARY STANDARD	
TEMPORARY TRAFFIC CONTROL ADVANCE SIGNING	
STANDARD APPROVED FOR USE 6/2005	STANDARD 635-1
REVISED: DRAFT: 1/2007	

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SIGN SPACING TABLE			
ROAD TYPE	DISTANCE BETWEEN SIGNS IN METERS		
	A	B	C
Urban less than 70 km/h [\leq 40 MPH]	30	30	30
Urban 70 km/h and greater [\geq 45 MPH]	100	100	100
Rural	150	150	150
Expressway/Freeway	300	450	800

NOTE:

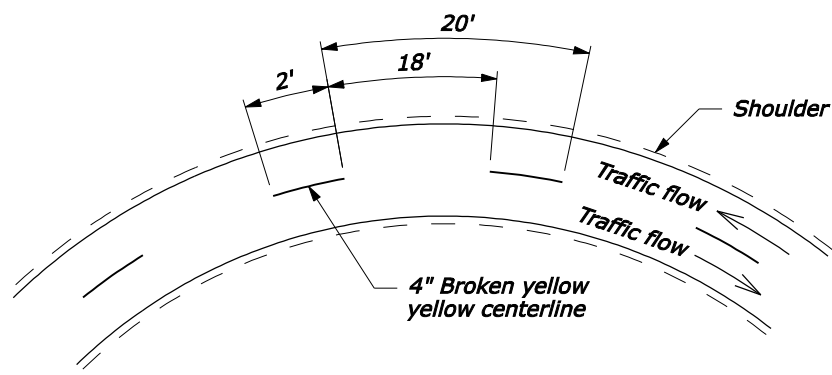
- Erect all advance warning signs before starting construction work.
- Not all details shown on the temporary traffic control sheets may be applicable to this project. The Contractor may add or delete information and details in this traffic control plan as necessary to accommodate actual operations.
- Where advance warning signs, placed as shown, interfere with permanent signs, locate the warning signs as determined by the CO for best results. Vary messages as required.
- Use Type III or higher type sheeting on all signs and channelizing devices. Warning lights are not normally needed on devices with Type III or higher type sheeting, but may be beneficial to attract the drivers attention in fog or other special conditions. When used, apply the appropriate type of warning light (Type A, B, C, or D) per the MUTCD Chapter 6F.
- When established in the contract, furnish beacons with the appropriate lens color as specified in the MUTCD Chapter 4K.
- Additional or different message signs may be required to fit the actual construction conditions.
- Install advisory speed plates under the W-20 series warning signs as needed to indicate a maximum recommended speed through the construction area.
- Ensure all sign supports exposed to impact by traffic meet the requirements of NCHRP-350 for crash worthiness.
- Maintain two-way traffic during all non-work hours except as approved by the CO.
- Do not store traffic control devices along the roadway when not in use. Cover post-mounted signs when not applicable.
- If W20-1 is on a roadway other than that on which the actual construction work occurs, include a supplementary plaque indicating the name of the road the work is on.
- The message on the W20-1 signs may be "ROAD WORK AHEAD" or may specify the distance to the work area in feet or in miles. Install an additional W20-1 sign when approach speeds exceed 80 km/h [50 MPH]. When used place the two W20-1 signs "B" meters apart.
- When flagger warning sign series extend into project advance warning area, the second and third signs in the flagger series may be placed over the W20-1 sign(s) in project advance warning series.
- For work zones that are greater than 3 km in length, install G20-1 sign. Show the distance on the G20-1 sign to the nearest whole mile.
- If signs will be in place more than 72 consecutive hours, use ground-mounted post.
- If signing on a roadway under a jurisdiction other than the client agency, verify that an encroachment permit has been obtained.
- State standards may be used as an alternative if approved by the CO.



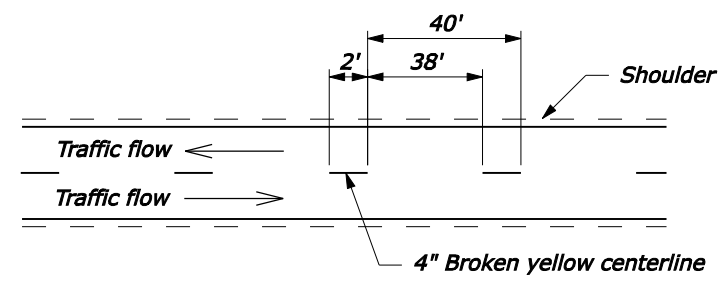
NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION FEDERAL LANDS HIGHWAY	
METRIC STANDARD	
TEMPORARY TRAFFIC CONTROL ADVANCE SIGNING	
STANDARD APPROVED FOR USE 6/2005	STANDARD M635-1
REVISED: DRAFT: 1/2007	

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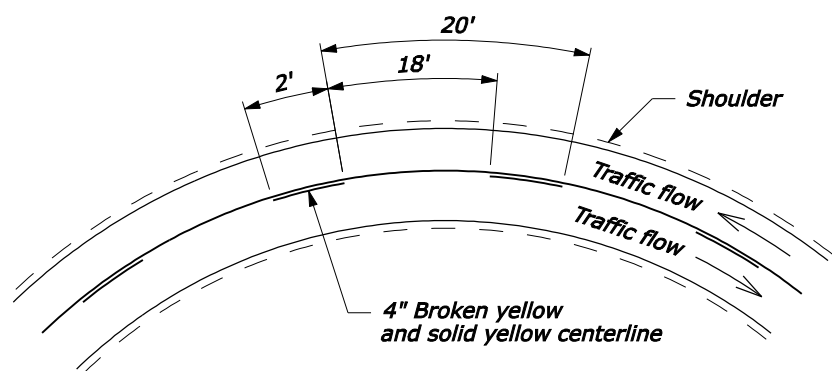
DETAIL A1
*Passing zone both directions
 Two-way traffic*



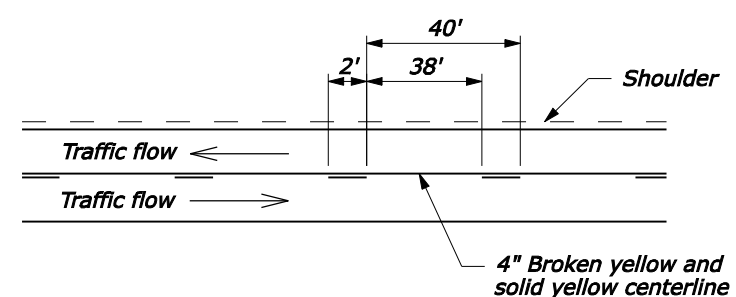
DETAIL B1
*Passing zone both directions
 Two-way traffic*

NOTE:

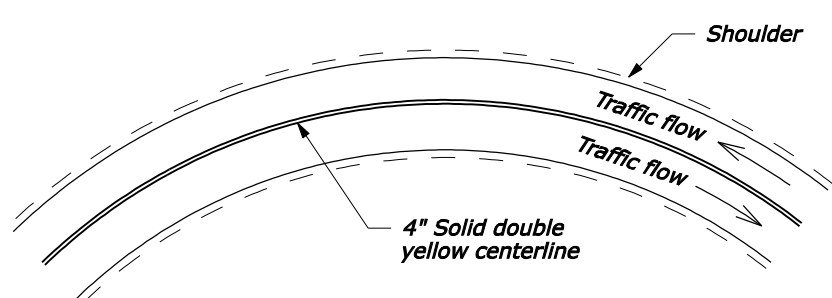
1. Use permanent pavement marking layout as designated in the contract to determine no passing zones for each direction of travel.
2. To substitute raised pavement markers for lines, use the following patterns:
 2' broken line: two pavement markers spaced 2' apart allowed by the gap shown based on curvature.
 Single solid line: pavement markers spaced on 10' centers.
 Double solid line: two pavement markers, side by side, spaced on 10' centers.
3. For ADT of greater than 1000 and periods of 3 days or less, Standard 635-3 may be used as an alternate. For ADT of 1000 or less, Standard 635-3 may be used as an alternate for the full 14 day temporary marking period.



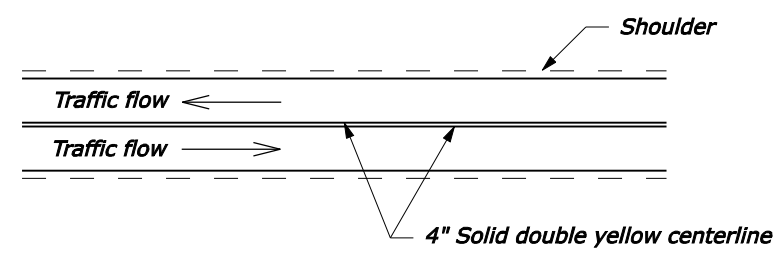
DETAIL A2
*No passing zone one direction
 Two-way traffic*



DETAIL B2
*No Passing zone one direction
 Two-way traffic*



DETAIL A3
*No passing zone both directions
 Two-way traffic*



DETAIL B3
*No Passing zone both directions
 Two-way traffic*

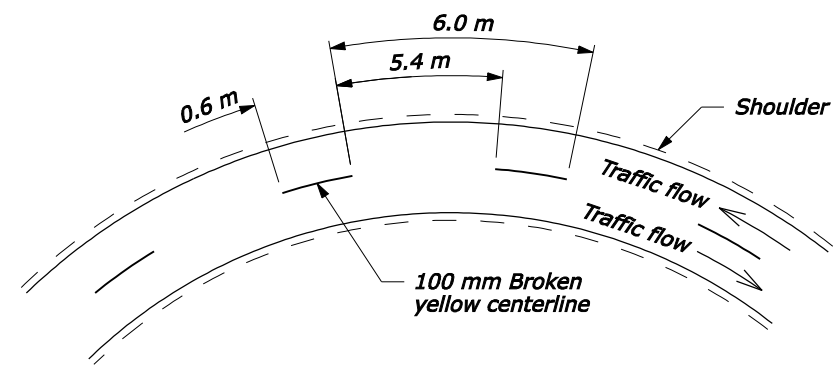
DETAIL A
Curves < 500' Radius

DETAIL B
Tangents or Curves ≥ 500' Radius

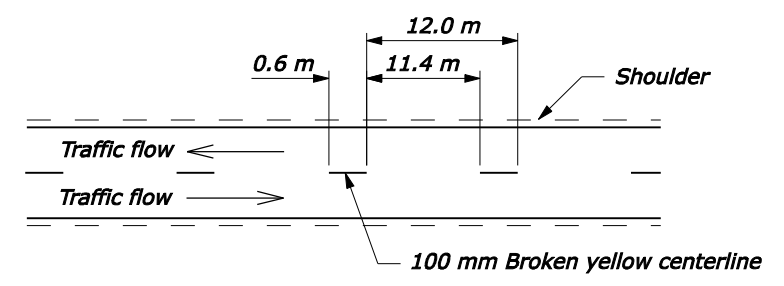
NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION FEDERAL LANDS HIGHWAY	
U.S. CUSTOMARY STANDARD	
TEMPORARY PAVEMENT MARKINGS	
STANDARD APPROVED FOR USE 6/2005	STANDARD
REVISED: DRAFT: 11/2007	635-2

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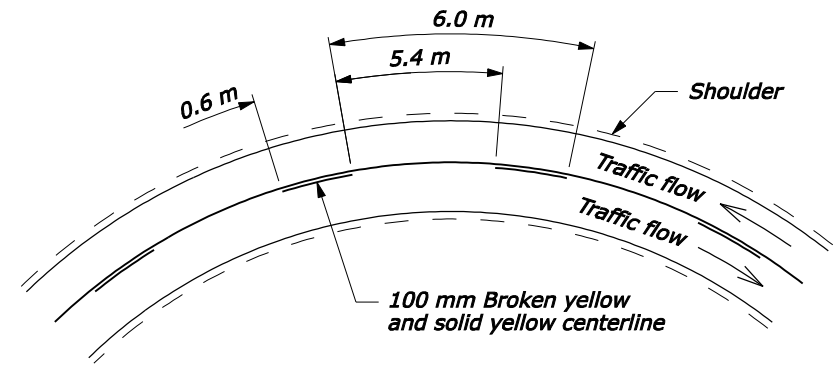
DETAIL A1
*Passing zone both directions
 Two-way traffic*



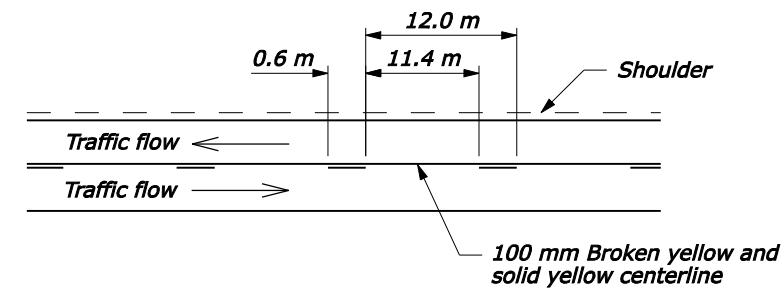
DETAIL B1
*Passing zone both directions
 Two-way traffic*

NOTE:

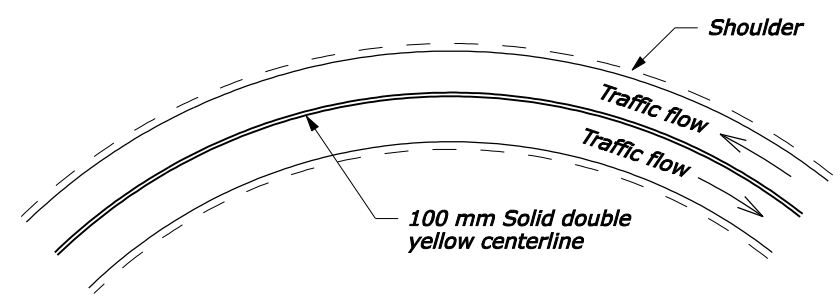
1. Use permanent pavement marking layout as designated in the contract to determine no passing zones for each direction of travel.
2. To substitute raised pavement markers for lines, use the following patterns:
 0.6 m broken line: two pavement markers spaced 0.6 m apart allowed by the gap shown based on curvature.
 Single solid line: pavement markers spaced on 3 m centers.
 Double solid line: two pavement markers, side by side, spaced on 3 m centers
3. For ADT of greater than 1000 and periods of 3 days or less, Standard M635-3 may be used as an alternate. For ADT of 1000 or less, Standard M635-3 may be used as an alternate for the full 14 day temporary marking period.
4. Dimensions without units are millimeters.



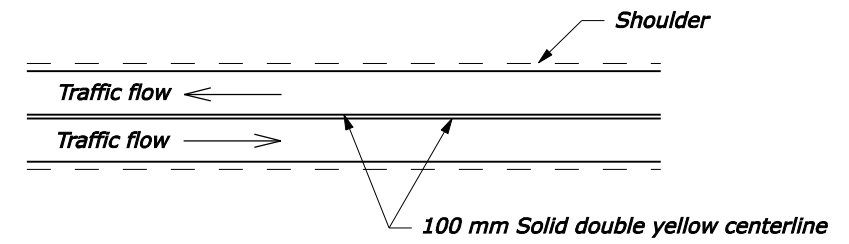
DETAIL A2
*No passing zone one direction
 Two-way traffic*



DETAIL B2
*No Passing zone one direction
 Two-way traffic*



DETAIL A3
*No passing zone both directions
 Two-way traffic*



DETAIL B3
*No Passing zone both directions
 Two-way traffic*

DETAIL A
Curves < 150 m Radius

DETAIL B
Tangents or Curves ≥ 150 m Radius

NO SCALE

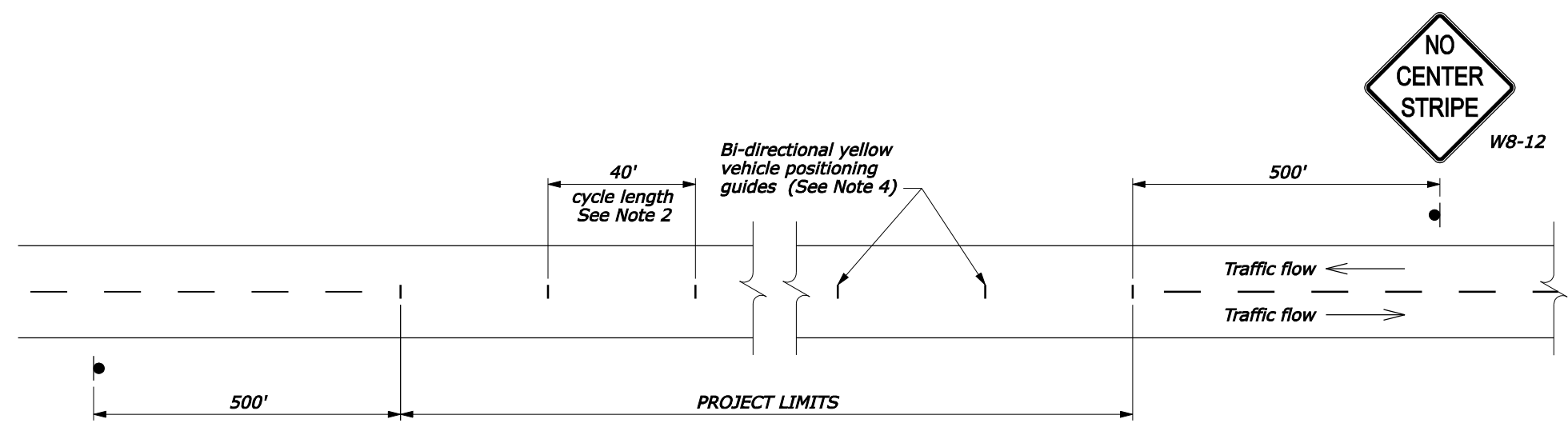
U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION FEDERAL LANDS HIGHWAY	
METRIC STANDARD	
TEMPORARY PAVEMENT MARKINGS	
STANDARD APPROVED FOR USE 6/2005	STANDARD M635-2
REVISED: DRAFT: 11/2007	

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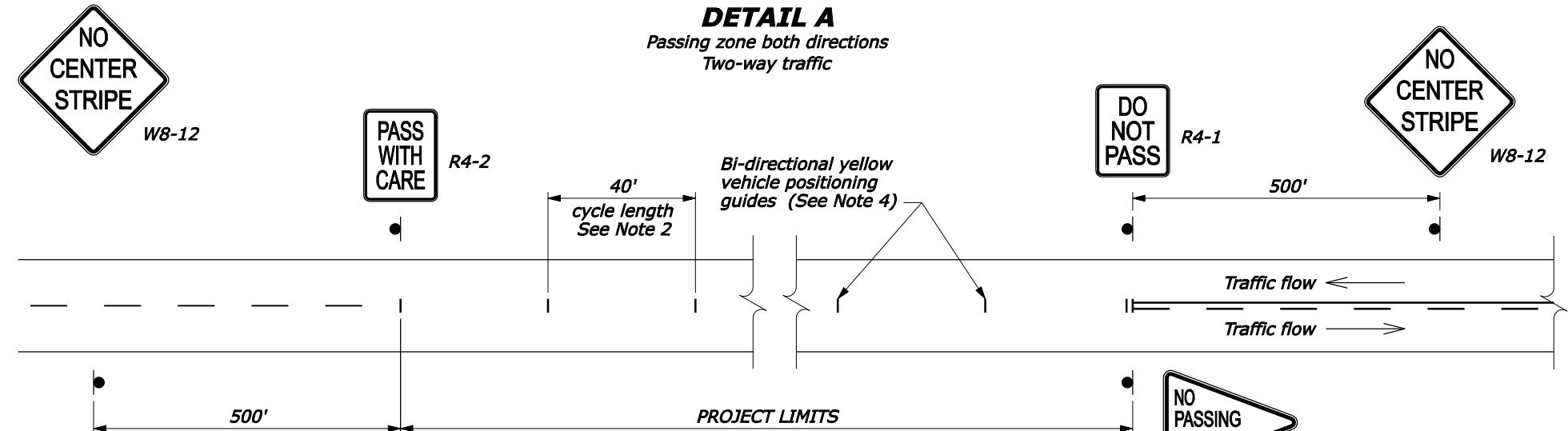
NOTE:

1. For periods noted in Table A, pavement may be unmarked if vehicle positioning guides and signing are provided per this detail. For longer periods/higher ADT or for application of temporary markings with paint or tape, use Standard 635-2.
2. On curves with radius less than 500', reduce cycle length to 20'.
3. Use permanent markings plan to determine no passing zones for each direction of travel.
4. Ensure vehicle positioning guides meet the requirements of Sub-Section 718.21(b), Raised pavement markers.
5. Repeat R4-1 at 1 mile intervals.
6. Repeat W8-12 after each major intersection.
7. If signs will be in place more than 72 consecutive hours, use ground-mounted post.

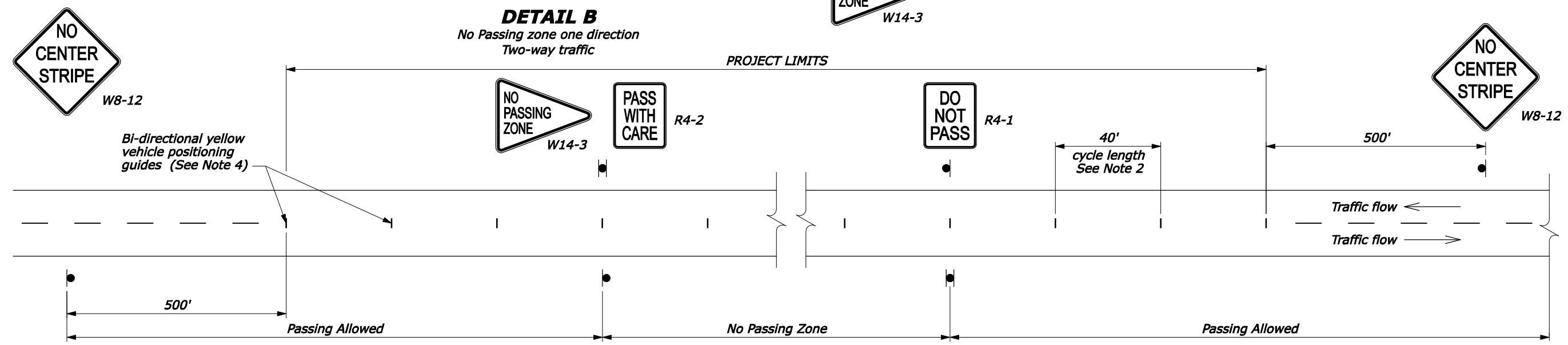
ADT	Maximum Duration Before Markings Are Required
≤ 1000	14 Days
> 1000	3 Days



DETAIL A
Passing zone both directions
Two-way traffic



DETAIL B
No Passing zone one direction
Two-way traffic



DETAIL C
No Passing zone both directions
Two-way traffic

NO SCALE

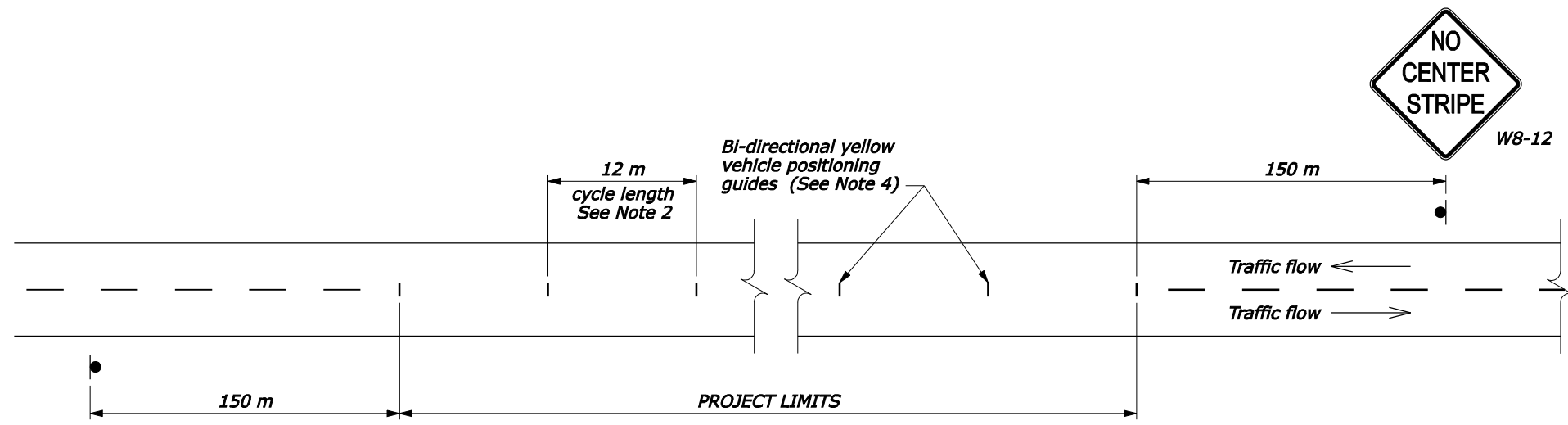
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL LANDS HIGHWAY

U.S. CUSTOMARY STANDARD

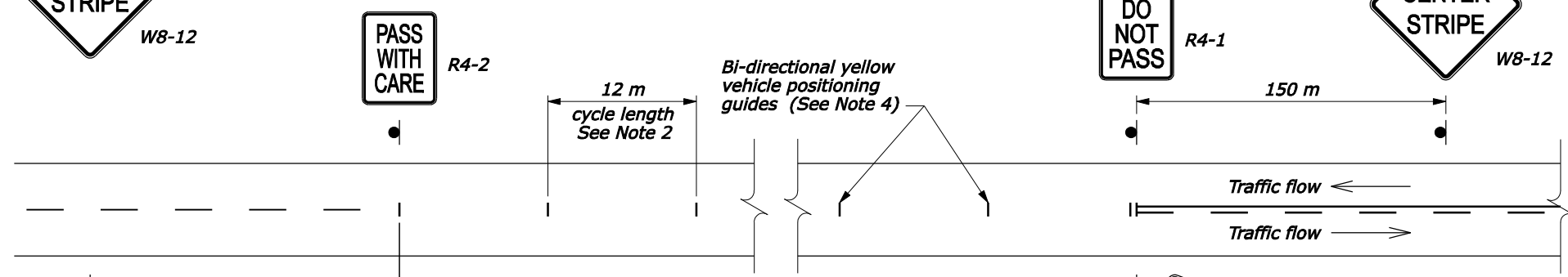
**DELINEATION AND SIGNING
FOR UNMARKED PAVEMENTS**

STANDARD APPROVED FOR USE 6/2005	STANDARD
REVISED: DRAFT: 1/2007	635-3

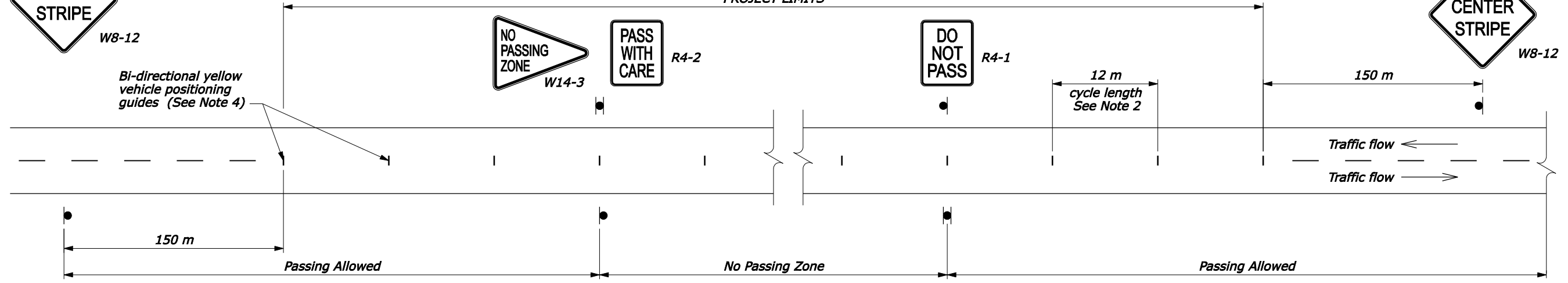
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DETAIL A
Passing zone both directions
Two-way traffic



DETAIL B
No Passing zone one direction
Two-way traffic



DETAIL C
No Passing zone both directions
Two-way traffic

NOTE:

1. For periods noted in Table A, pavement may be unmarked if vehicle positioning guides and signing are provided per this detail. For longer periods/higher ADT or for application of temporary markings with paint or tape, use Standard M635-2.
2. On curves with radius less than 150 m, reduce cycle length to 6 m.
3. Use permanent markings plan to determine no passing zones for each direction of travel.
4. Ensure vehicle positioning guides meet the requirements of Sub-Section 718.21(b), Raised pavement markers.
5. Repeat R4-1 at 1.5 km intervals.
6. Repeat W8-12 after each major intersection.
7. If signs will be in place more than 72 consecutive hours, use ground-mounted post.

ADT	Maximum Duration Before Markings Are Required
≤ 1000	14 Days
> 1000	3 Days

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL LANDS HIGHWAY
METRIC STANDARD

**DELINEATION AND SIGNING
FOR UNMARKED PAVEMENTS**

STANDARD APPROVED FOR USE 6/1998
REVISED: 6/2005
DRAFT: 1/2007

STANDARD
M635-3

NO SCALE

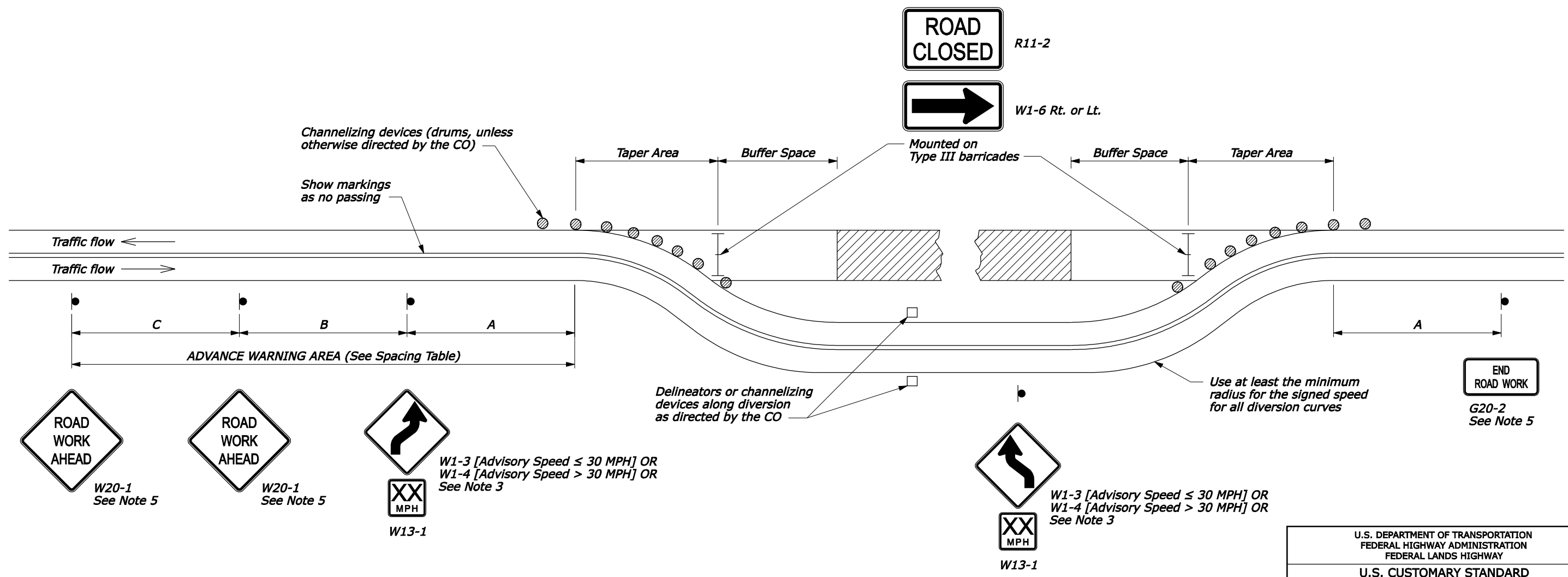
APPROACH SPEED*	LENGTH OF BUFFER SPACE FEET	CHANNELIZING DEVICE		
		TAPER AREA	BUFFER SPACE	WORK SPACE
25	155	25	50	50
30	200	30	60	60
35	250	35	70	70
40	305	40	80	80
45	360	45	90	90
50	425	50	100	100
55	495	55	110	110

* Approach speed based on the regulatory posted speed, not the advisory speed.

ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET		
	A	B	C
Urban 40 MPH and less	100	100	100
Urban 45 MPH and greater	350	350	350
Rural	500	500	500
Expressway/Freeway	1000	1500	2640

NOTE:

1. Signs are shown for one direction of travel only. Place devices similar to those depicted for the opposite direction of travel.
2. If the area approaching diversion is not already signed and marked as a no passing zone, add signing and/or marking as appropriate. Remove conflicting pavement markings.
3. If the tangent distance along the temporary diversion is less than 600', use the "Double Reverse Curve" sign (W24-1) at the location of the first Reverse Curve sign and eliminate the second Reverse Curve sign.
4. Place channelizing devices outside temporary roadway.
5. If diversion is completely within the project limits, eliminate the "ROAD WORK AHEAD" (W20-1) and "END ROAD WORK" (G20-2) signs.
6. Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
7. If signs will be in place more than 72 consecutive hours, use ground-mounted post.



NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 FEDERAL LANDS HIGHWAY

U.S. CUSTOMARY STANDARD

**TEMPORARY TRAFFIC CONTROL
 FOR DIVERSION**

STANDARD APPROVED FOR USE 6/2005
 REVISED:

STANDARD
 635-4

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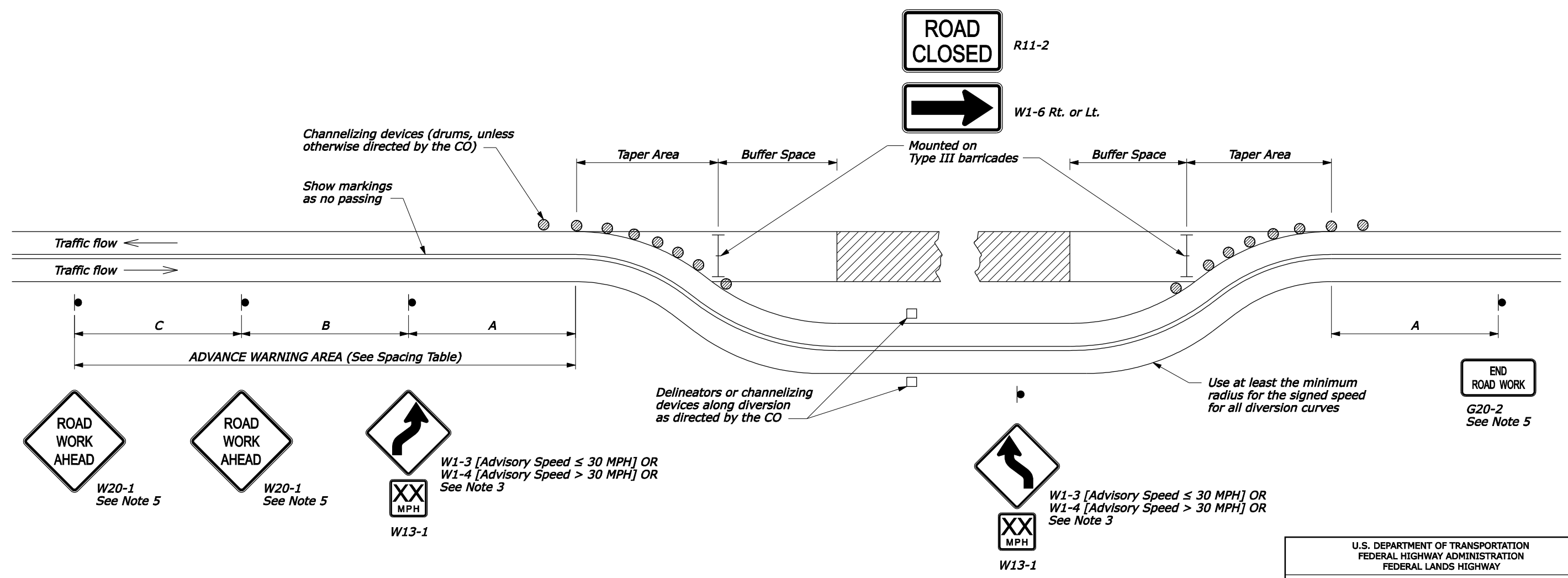
LENGTH AND SPACING TABLE					
APPROACH SPEED*		LENGTH OF BUFFER SPACE METER	CHANNELIZING DEVICE		
MPH	km/h		TAPER AREA	BUFFER SPACE	WORK SPACE
25	40	50	7	15	15
30	50	65	9	18	18
35	55	75	10	21	21
40	65	95	12	24	24
45	70	105	13	27	27
50	80	130	15	30	30
55	90	160	16	33	33

* Approach speed based on the regulatory posted speed, not the advisory speed.

ROAD TYPE	DISTANCE BETWEEN SIGNS IN METERS		
	A	B	C
Urban less than 70 km/h [≤ 40 MPH]	30	30	30
Urban 70 km/h and greater [≥ 45 MPH]	100	100	100
Rural	150	150	150
Expressway/Freeway	300	450	800

NOTE:

1. Signs are shown for one direction of travel only. Place devices similar to those depicted for the opposite direction of travel.
2. If the area approaching diversion is not already signed and marked as a no passing zone, add signing and/or marking as appropriate. Remove conflicting pavement markings.
3. If the tangent distance along the temporary diversion is less than 180 m, use the "Double Reverse Curve" sign (W24-1) at the location of the first Reverse Curve sign and eliminate the second Reverse Curve sign.
4. Place channelizing devices outside temporary roadway.
5. If diversion is completely within the project limits, eliminate the "ROAD WORK AHEAD" (W20-1) and "END ROAD WORK" (G20-2) signs.
6. Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
7. If signs will be in place more than 72 consecutive hours, use ground-mounted post.



U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 FEDERAL LANDS HIGHWAY

METRIC STANDARD

**TEMPORARY TRAFFIC CONTROL
 FOR DIVERSION**

STANDARD APPROVED FOR USE 6/2005

REVISIION: _____

STANDARD M635-4

NO SCALE

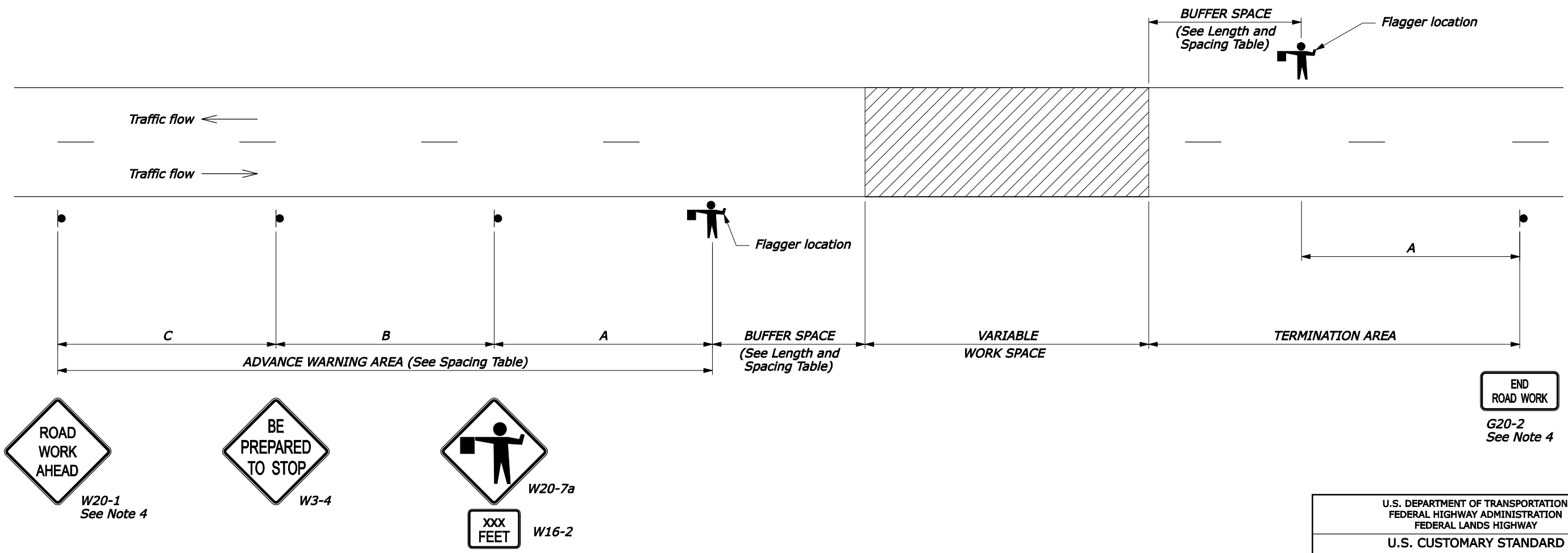
APPROACH SPEED*	LENGTH OF BUFFER SPACE
MPH	FEET
25	155
30	200
35	250
40	305
45	360
50	425
55	495

* Approach speed based on the regulatory posted speed, not the advisory speed.

ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET		
	A	B	C
Urban 40 MPH and less	100	100	100
Urban 45 MPH and greater	350	350	350
Rural	500	500	500
Expressway/Freeway	1000	1500	2640

NOTE:

1. Signs are shown for one direction of travel only. Place devices similar to those depicted for the opposite direction of travel.
2. Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO.
3. For pilot car operation, mount the PILOT CAR FOLLOW ME (G20-4) sign at a conspicuous location on the rear of vehicle. Prominently display the name of the Contractor on the pilot car.
4. If closure is completely within the project limits, eliminate the "ROAD WORK AHEAD" (W20-1) and "END ROAD WORK" (G20-2) signs.
5. For night time flagging operation, provide floodlighting at flagger stations.
6. Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
7. If signs will be in place more than 72 consecutive hours, use ground-mounted post.



NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION FEDERAL LANDS HIGHWAY	
U.S. CUSTOMARY STANDARD	
TEMPORARY TRAFFIC CONTROL ROAD CLOSURE LAYOUT (WITH FLAGGERS)	
STANDARD APPROVED FOR USE 6/2005	STANDARD
REVISED:	635-5

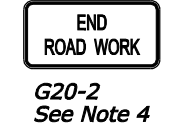
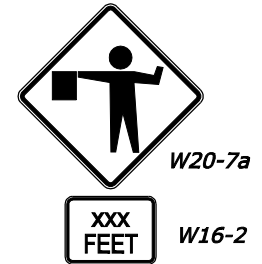
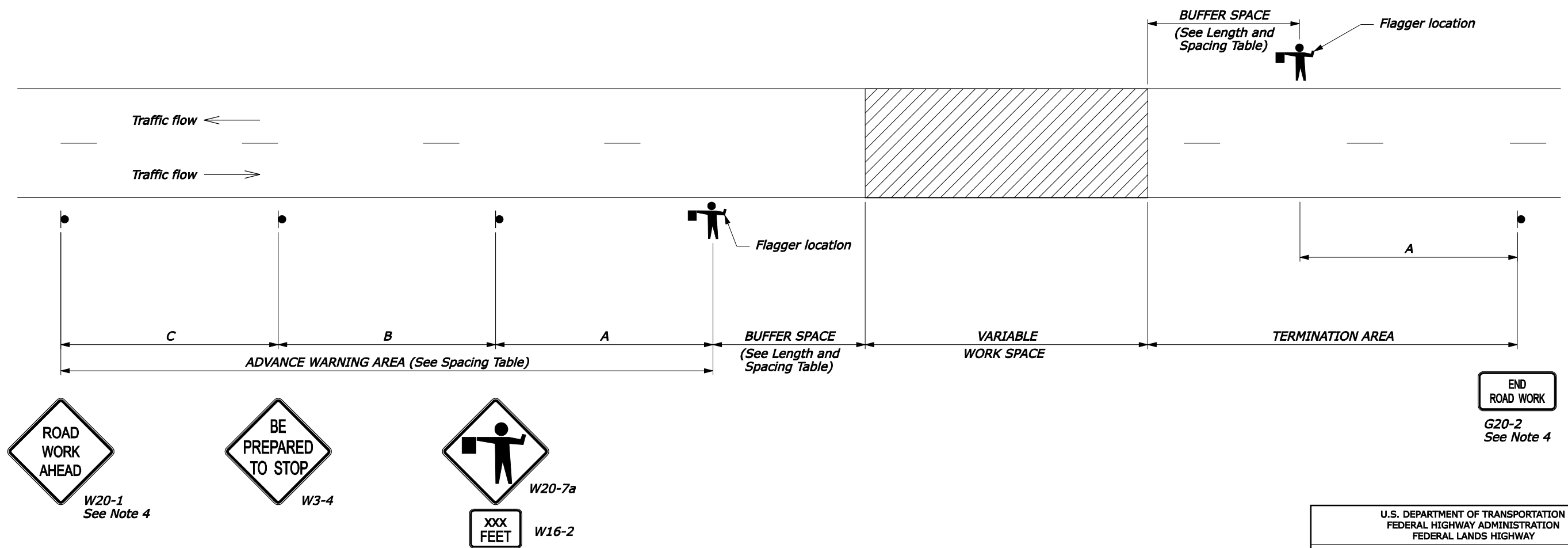
APPROACH SPEED*		LENGTH OF BUFFER SPACE
MPH	km/h	METER
25	40	50
30	50	65
35	55	75
40	65	95
45	70	105
50	80	130
55	90	160

* Approach speed based on the regulatory posted speed, not the advisory speed.

ROAD TYPE	DISTANCE BETWEEN SIGNS IN METERS		
	A	B	C
Urban less than 70 km/h [≤ 40 MPH]	30	30	30
Urban 70 km/h and greater [≥ 45 MPH]	100	100	100
Rural	150	150	150
Expressway/Freeway	300	450	800

NOTE:

1. Signs are shown for one direction of travel only. Place devices similar to those depicted for the opposite direction of travel.
2. Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO.
3. For pilot car operation, mount the PILOT CAR FOLLOW ME (G20-4) sign at a conspicuous location on the rear of vehicle. Prominently display the name of the Contractor on the pilot car.
4. If closure is completely within the project limits, eliminate the "ROAD WORK AHEAD" (W20-1) and "END ROAD WORK" (G20-2) signs.
5. For night time flagging operation, provide floodlighting at flagger stations.
6. Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
7. If signs will be in place more than 72 consecutive hours, use ground-mounted post.



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL LANDS HIGHWAY

METRIC STANDARD

**TEMPORARY TRAFFIC CONTROL
ROAD CLOSURE LAYOUT
(WITH FLAGGERS)**

STANDARD APPROVED FOR USE 6/2005

REVISOR: _____

STANDARD
M635-5

NO SCALE

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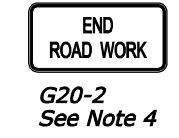
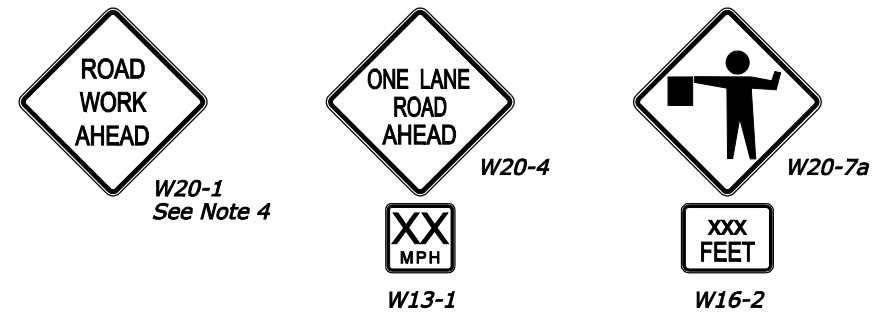
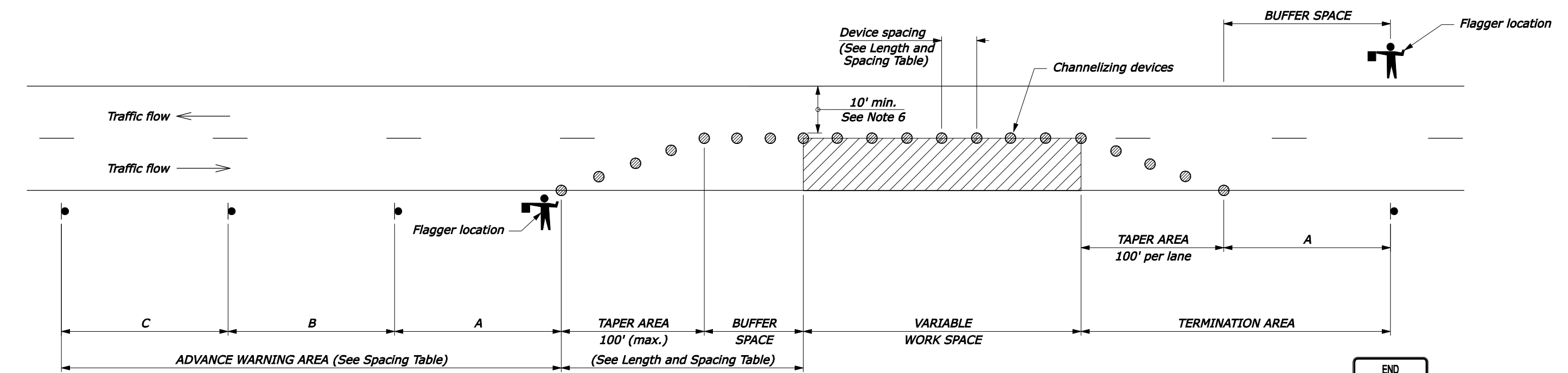
LENGTH AND SPACING TABLE				
APPROACH SPEED*	LENGTH OF BUFFER SPACE	CHANNELIZING DEVICE		
		TAPER AREA	BUFFER SPACE	WORK SPACE
MPH	FEET	SPACING IN FEET		
25	155	20	50	50
30	200	20	60	60
35	250	20	70	70
40	305	20	80	80
45	360	20	90	90
50	425	20	100	100
55	495	20	110	110

* Approach speed based on the regulatory posted speed, not the advisory speed.

SIGN SPACING TABLE			
ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET		
	A	B	C
Urban 40 MPH and less	100	100	100
Urban 45 MPH and greater	350	350	350
Rural	500	500	500
Expressway/Freeway	1000	1500	2640

NOTE:

1. Signs are shown for one direction of travel only. Place devices similar to those depicted for the opposite direction of travel.
2. Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO.
3. For pilot car operation, mount the PILOT CAR FOLLOW ME (G20-4) sign at a conspicuous location on the rear of vehicle. Prominently display the name of the contractor on the pilot car.
4. If closure is completely within the project limits, eliminate the "ROAD WORK AHEAD" (W20-1) and "END ROAD WORK" (G20-2) signs.
5. For night time flagging operation, provide floodlighting at flagger stations.
6. For project specific minimum width, refer to Special Contract Requirements, Section 156.
7. Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
8. If signs will be in place more than 72 consecutive hours, use ground-mounted post.



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL LANDS HIGHWAY

U.S. CUSTOMARY STANDARD

**TEMPORARY TRAFFIC CONTROL
SINGLE LANE CLOSURE LAYOUT
(WITH FLAGGERS)**

STANDARD APPROVED FOR USE 6/2005

REVISOR: DRAFT: 1/2007

STANDARD 635-6

NO SCALE

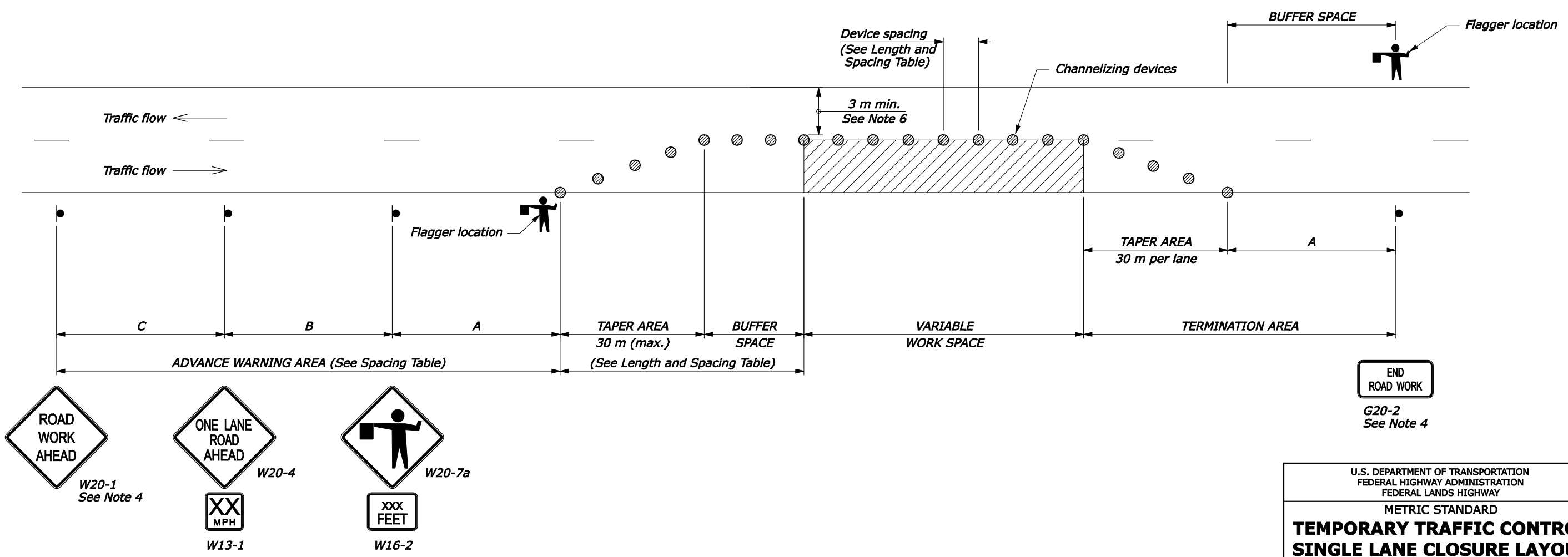
LENGTH AND SPACING TABLE					
APPROACH SPEED*		LENGTH OF BUFFER SPACE METER	CHANNELIZING DEVICE		
MPH	km/h		TAPER AREA	BUFFER SPACE	WORK SPACE
25	40	50	6	15	15
30	50	65	6	18	18
35	55	75	6	21	21
40	65	95	6	24	24
45	70	105	6	27	27
50	80	130	6	30	30
55	90	160	6	33	33

* Approach speed based on the regulatory posted speed, not the advisory speed.

ROAD TYPE	DISTANCE BETWEEN SIGNS IN METERS		
	A	B	C
Urban less than 70 km/h [≤ 40 MPH]	30	30	30
Urban 70 km/h and greater [≥ 45 MPH]	100	100	100
Rural	150	150	150
Expressway/Freeway	300	450	800

NOTE:

1. Signs are shown for one direction of travel only. Place devices similar to those depicted for the opposite direction of travel.
2. Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO.
3. For pilot car operation, mount the PILOT CAR FOLLOW ME (G20-4) sign at a conspicuous location on the rear of vehicle. Prominently display the name of the contractor on the pilot car.
4. If closure is completely within the project limits, eliminate the "ROAD WORK AHEAD" (W20-1) and "END ROAD WORK" (G20-2) signs.
5. For night time flagging operation, provide floodlighting at flagger stations.
6. For project specific minimum width, refer to Special Contract Requirements, Section 156.
7. Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
8. If signs will be in place more than 72 consecutive hours, use ground-mounted post.



NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 FEDERAL LANDS HIGHWAY
 METRIC STANDARD
**TEMPORARY TRAFFIC CONTROL
 SINGLE LANE CLOSURE LAYOUT
 (WITH FLAGGERS)**
 STANDARD APPROVED FOR USE 6/2005
 REVISED: 1/2007
 DRAFT: 1/2007
 STANDARD M635-6

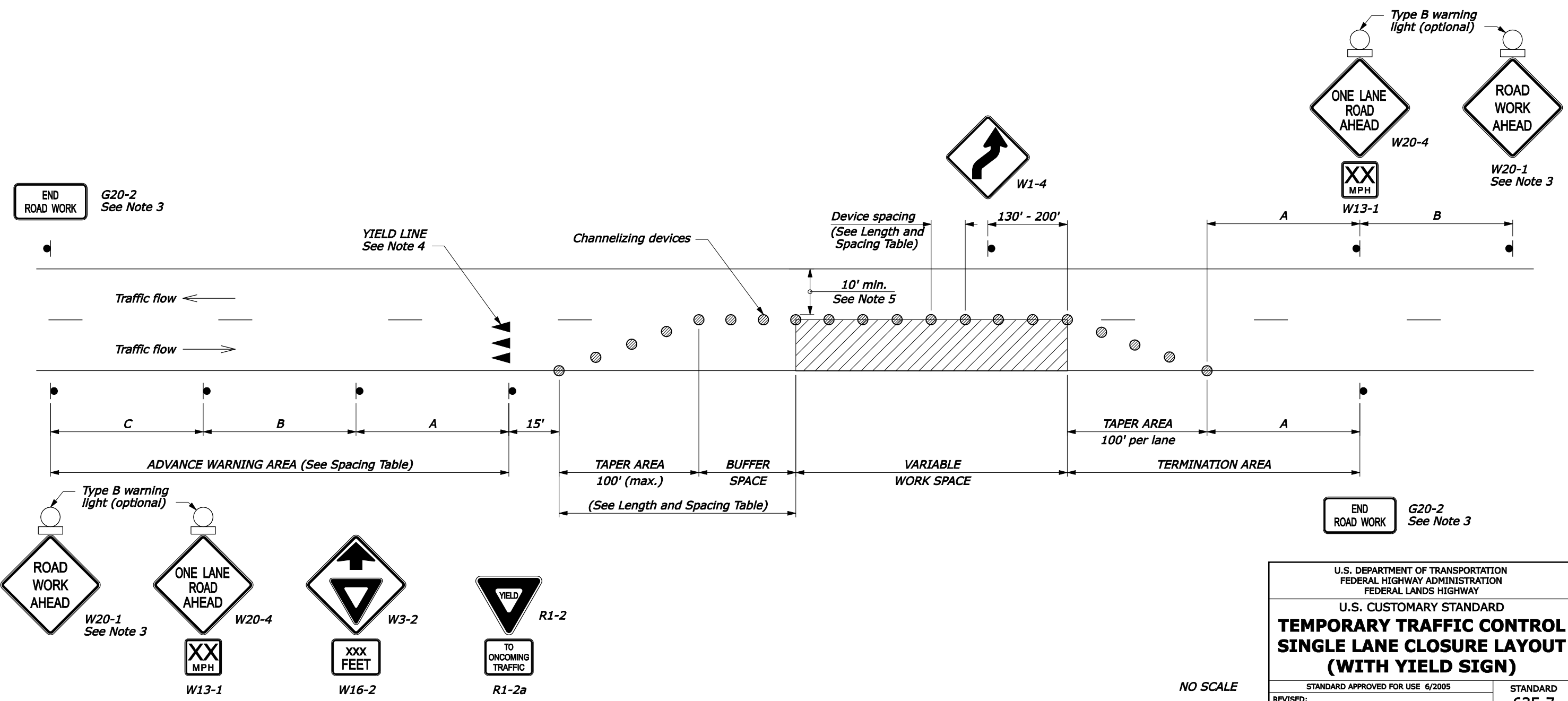
LENGTH AND SPACING TABLE				
APPROACH SPEED*	LENGTH OF BUFFER SPACE	CHANNELIZING DEVICE		
		TAPER AREA	BUFFER SPACE	WORK SPACE
MPH	FEET	SPACING IN FEET		
25	155	20	50	50
30	200	20	60	60
35	250	20	70	70
40	305	20	80	80
45	360	20	90	90
50	425	20	100	100
55	495	20	110	110

* Approach speed based on the regulatory posted speed, not the advisory speed.

SIGN SPACING TABLE			
ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET		
	A	B	C
Urban 40 MPH and less	100	100	100
Urban 45 MPH and greater	350	350	350
Rural	500	500	500
Expressway/Freeway	1000	1500	2640

NOTE:

1. Use this layout only if sufficient gaps in oncoming traffic exist for traffic that must yield, and if drivers from both directions are able to see approaching traffic through and beyond the work site.
2. Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO.
3. If lane closure is completely within the project limits, eliminate the "ROAD WORK AHEAD" (W20-1) and "END ROAD WORK" (G20-2) signs.
4. If the surface is paved, install yield lines that comply with Section 3B.16 of the MUTCD.
5. For project specific minimum width, refer to Special Contract Requirements, Section 156.
6. Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
7. If signs will be in place more than 72 consecutive hours, use ground-mounted post.



U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 FEDERAL LANDS HIGHWAY

U.S. CUSTOMARY STANDARD

**TEMPORARY TRAFFIC CONTROL
 SINGLE LANE CLOSURE LAYOUT
 (WITH YIELD SIGN)**

STANDARD APPROVED FOR USE 6/2005

REVISOR: 1/2007

STANDARD 635-7

NO SCALE

11-Jan-2008 01:32 PM P:\198.145.186.2\std.pln\std3907.dgn [US Customary]

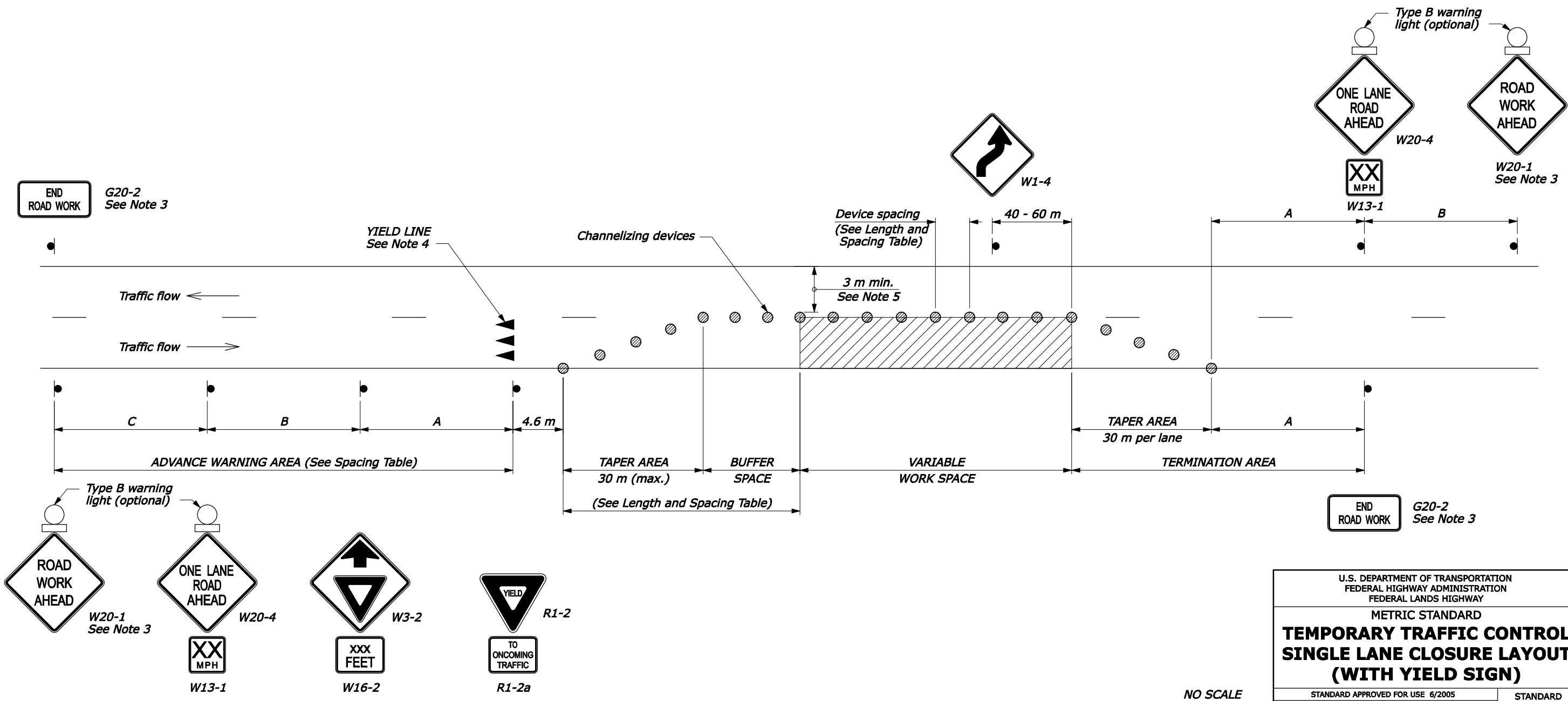
APPROACH SPEED*		LENGTH OF BUFFER SPACE METER	CHANNELIZING DEVICE		
MPH	km/h		TAPER AREA	BUFFER SPACE	WORK SPACE
25	40	50	6	15	15
30	50	65	6	18	18
35	55	75	6	21	21
40	65	95	6	24	24
45	70	105	6	27	27
50	80	130	6	30	30
55	90	160	6	33	33

* Approach speed based on the regulatory posted speed, not the advisory speed.

ROAD TYPE	DISTANCE BETWEEN SIGNS IN METERS		
	A	B	C
Urban less than 70 km/h [≤ 40 mph]	30	30	30
Urban 70 km/h and greater [≥ 45 mph]	100	100	100
Rural	150	150	150
Expressway/Freeway	300	450	800

NOTE:

1. Use this layout only if sufficient gaps in oncoming traffic exist for traffic that must yield, and if drivers from both directions are able to see approaching traffic through and beyond the work site.
2. Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO.
3. If lane closure is completely within the project limits, eliminate the "ROAD WORK AHEAD" (W20-1) and "END ROAD WORK" (G20-2) signs.
4. If the surface is paved, install yield lines that comply with Section 3B.16 of the MUTCD.
5. For project specific minimum width, refer to Special Contract Requirements, Section 156.
6. Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
7. If signs will be in place more than 72 consecutive hours, use ground-mounted post.



U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 FEDERAL LANDS HIGHWAY

METRIC STANDARD

**TEMPORARY TRAFFIC CONTROL
 SINGLE LANE CLOSURE LAYOUT
 (WITH YIELD SIGN)**

STANDARD APPROVED FOR USE 6/2005

REVISED: 1/2007

STANDARD M635-7

NO SCALE

11-Jan-2008 01:31 PM
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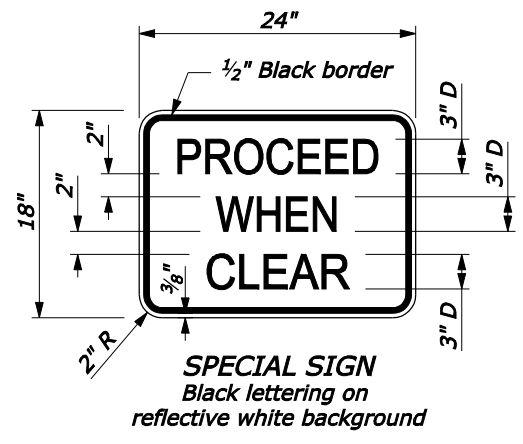
LENGTH AND SPACING TABLE				
APPROACH SPEED*	LENGTH OF BUFFER SPACE	CHANNELIZING DEVICE		
		TAPER AREA	BUFFER SPACE	WORK SPACE
MPH	FEET	SPACING IN FEET		
25	155	20	50	50
30	200	20	60	60
35	250	20	70	70
40	305	20	80	80
45	360	20	90	90
50	425	20	100	100
55	495	20	110	110

* Approach speed based on the regulatory posted speed, not the advisory speed.

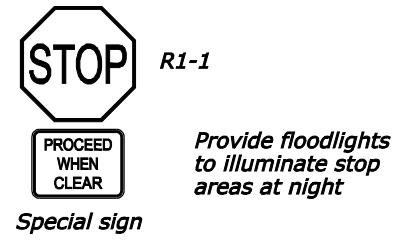
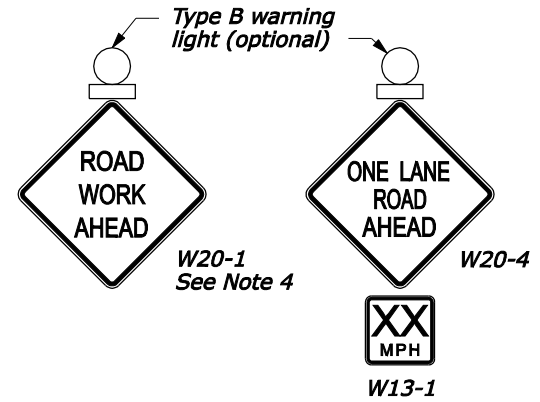
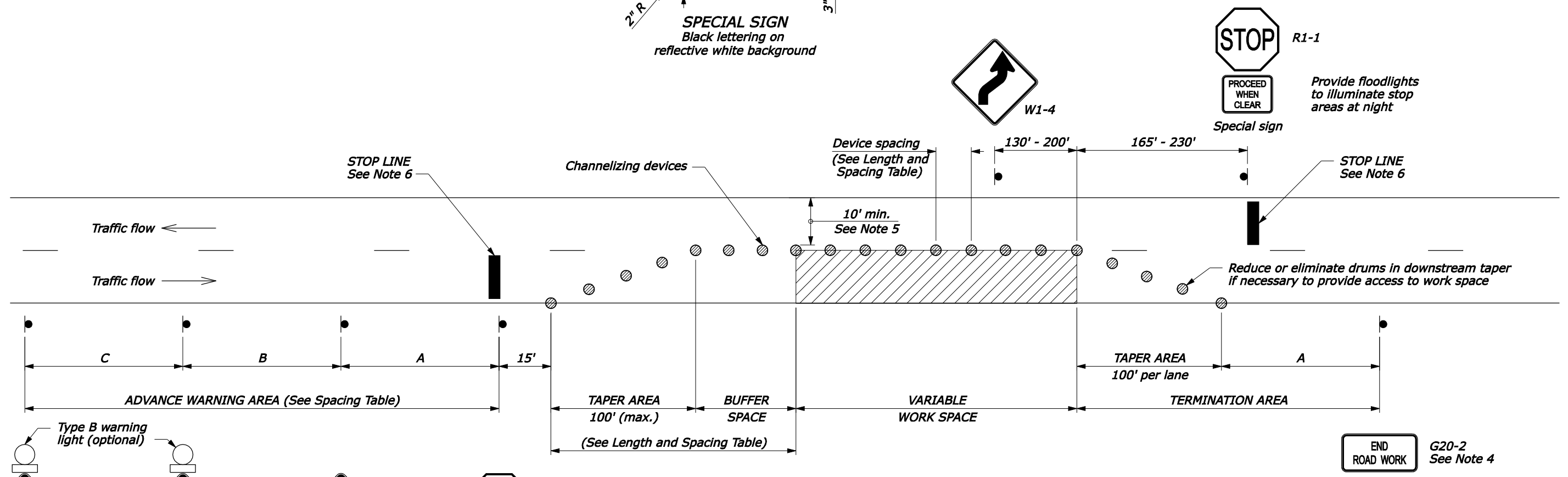
ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET		
	A	B	C
Urban 40 MPH and less	100	100	100
Urban 45 MPH and greater	350	350	350
Rural	500	500	500
Expressway/Freeway	1000	1500	2640

NOTE:

1. Use this layout only if drivers from both directions are able to see traffic through the work site and to opposing stop sign.
2. Advance warning area signs are shown for one direction of travel only. Place devices similar to those depicted for the opposite direction of travel.
3. Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO.
4. If lane closure is completely within the project limits, eliminate the "ROAD WORK AHEAD" (W20-1) and "END ROAD WORK" (G20-2) signs.
5. For project specific minimum width, refer to Special Contract Requirements, Section 156.
6. If the roadway surface is paved, install stop lines that comply with Section 3B.16 of the MUTCD.
7. Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
8. If signs will be in place more than 72 consecutive hours, use ground-mounted post.



SPECIAL SIGN
Black lettering on reflective white background



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL LANDS HIGHWAY

U.S. CUSTOMARY STANDARD
**TEMPORARY TRAFFIC CONTROL
SINGLE LANE CLOSURE LAYOUT
(WITH STOP SIGNS)**

STANDARD APPROVED FOR USE 6/2005
REVISOR: 1/2007
STANDARD 635-8

NO SCALE

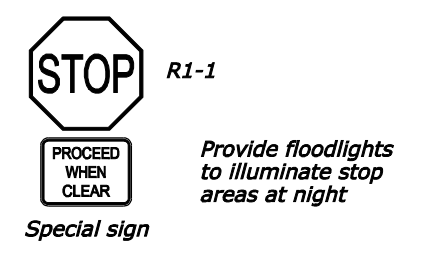
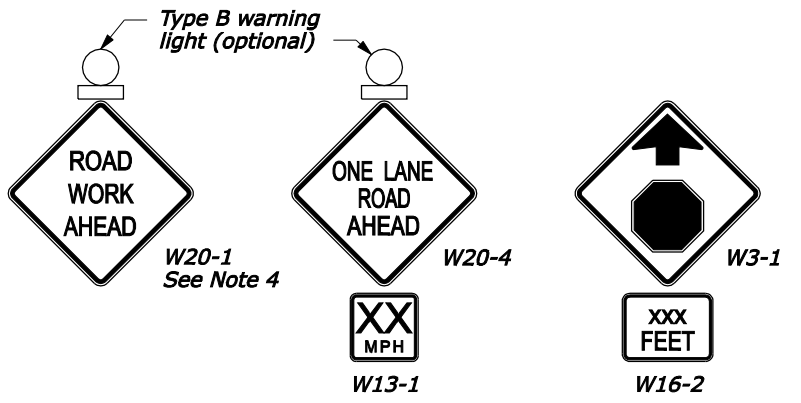
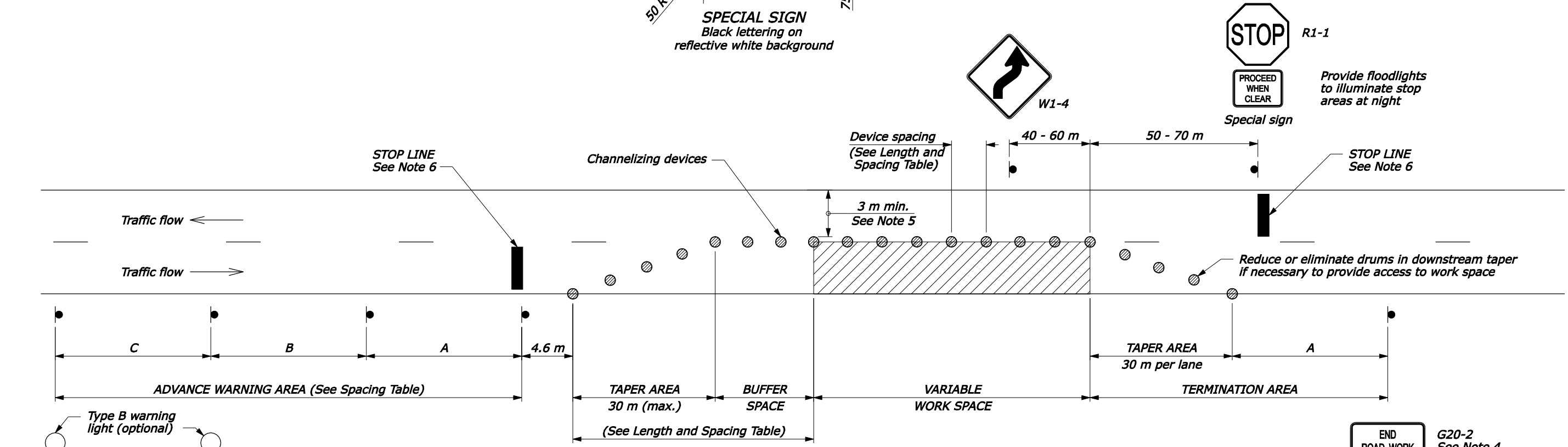
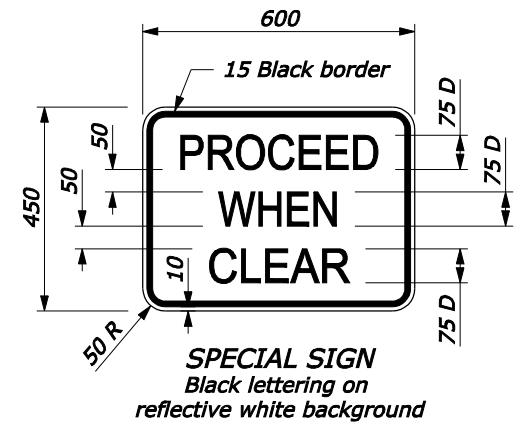
LENGTH AND SPACING TABLE					
APPROACH SPEED*		LENGTH OF BUFFER SPACE METER	CHANNELIZING DEVICE		
MPH	km/h		TAPER AREA	BUFFER SPACE	WORK SPACE
25	40	50	6	15	15
30	50	65	6	18	18
35	55	75	6	21	21
40	65	95	6	24	24
45	70	105	6	27	27
50	80	130	6	30	30
55	90	160	6	33	33

* Approach speed based on the regulatory posted speed, not the advisory speed.

ROAD TYPE	DISTANCE BETWEEN SIGNS IN METERS		
	A	B	C
Urban less than 70 km/h [≤ 40 MPH]	30	30	30
Urban 70 km/h and greater [≥ 45 MPH]	100	100	100
Rural	150	150	150
Expressway/Freeway	300	450	800

NOTE:

1. Use this layout only if drivers from both directions are able to see traffic through the work site and to opposing stop sign.
2. Advance warning area signs are shown for one direction of travel only. Place devices similar to those depicted for the opposite direction of travel.
3. Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO.
4. If lane closure is completely within the project limits, eliminate the "ROAD WORK AHEAD" (W20-1) and "END ROAD WORK" (G20-2) signs.
5. For project specific minimum width, refer to Special Contract Requirements, Section 156.
6. If the roadway surface is paved, install stop lines that comply with Section 3B.16 of the MUTCD.
7. Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
8. If signs will be in place more than 72 consecutive hours, use ground-mounted post.
9. Dimensions without units are millimeters.



U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 FEDERAL LANDS HIGHWAY
 METRIC STANDARD
**TEMPORARY TRAFFIC CONTROL
 SINGLE LANE CLOSURE LAYOUT
 (WITH STOP SIGNS)**
 STANDARD APPROVED FOR USE 6/2005
 REVISION: 1/2007
 STANDARD M635-8

NO SCALE

11-Jan-2008 01:27 PM
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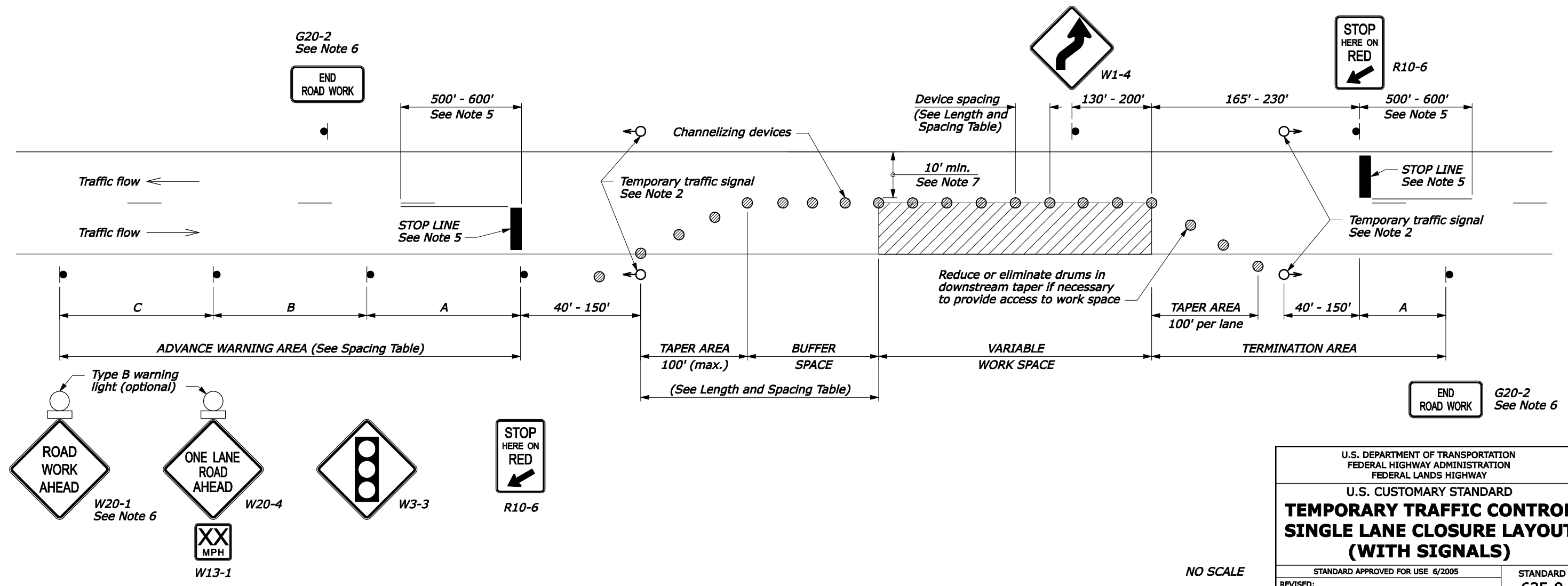
LENGTH AND SPACING TABLE				
APPROACH SPEED*	LENGTH OF BUFFER SPACE	CHANNELIZING DEVICE		
		TAPER AREA	BUFFER SPACE	WORK SPACE
MPH	FEET	SPACING IN FEET		
25	155	20	50	50
30	200	20	60	60
35	250	20	70	70
40	305	20	80	80
45	360	20	90	90
50	425	20	100	100
55	495	20	110	110

* Approach speed based on the regulatory posted speed, not the advisory speed.

SIGN SPACING TABLE			
ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET		
	A	B	C
Urban 40 MPH and less	100	100	100
Urban 45 MPH and greater	350	350	350
Rural	500	500	500
Expressway/Freeway	1000	1500	2640

NOTE:

1. Advance Warning Area signs are shown for one direction of travel only. Place devices for opposite direction of travel.
2. A single signal installation is acceptable, on the right-hand side of the road, if it has two signal faces that are at least 8 feet apart and meets the other requirements of Part 4 of the MUTCD.
3. Install and operate temporary traffic control signals in accordance with the provisions of the MUTCD, Part 4. Signal timing shall be established by a qualified engineer. When the signal is changed to the flashing mode either manually or automatically, ensure red signal indications are flashed to both approaches.
4. Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO. If signals are moved, revised signal timing must be determined by a qualified engineer.
5. If the roadway surface is paved, install stop lines that comply with Section 3B.16 of the MUTCD. Remove existing conflicting pavement markings and raised markers between the work space and the stop line. Add no-passing lines in advance of the stop line.
6. If lane closure is completely within the project limits, eliminate the "ROAD WORK AHEAD" (W20-1) and "END ROAD WORK" (G20-2) signs.
7. For project specific minimum width, refer to Special Contract Requirements, Section 156.
8. Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
9. If signs will be in place more than 72 consecutive hours, use ground-mounted post.



U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 FEDERAL LANDS HIGHWAY

U.S. CUSTOMARY STANDARD
**TEMPORARY TRAFFIC CONTROL
 SINGLE LANE CLOSURE LAYOUT
 (WITH SIGNALS)**

STANDARD APPROVED FOR USE 6/2005
 STANDARD 635-9

NO SCALE

REVISOR: 1/2007

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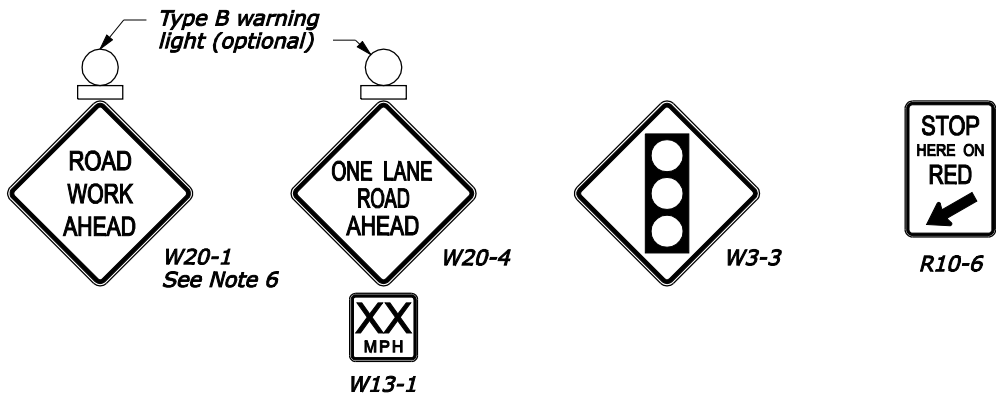
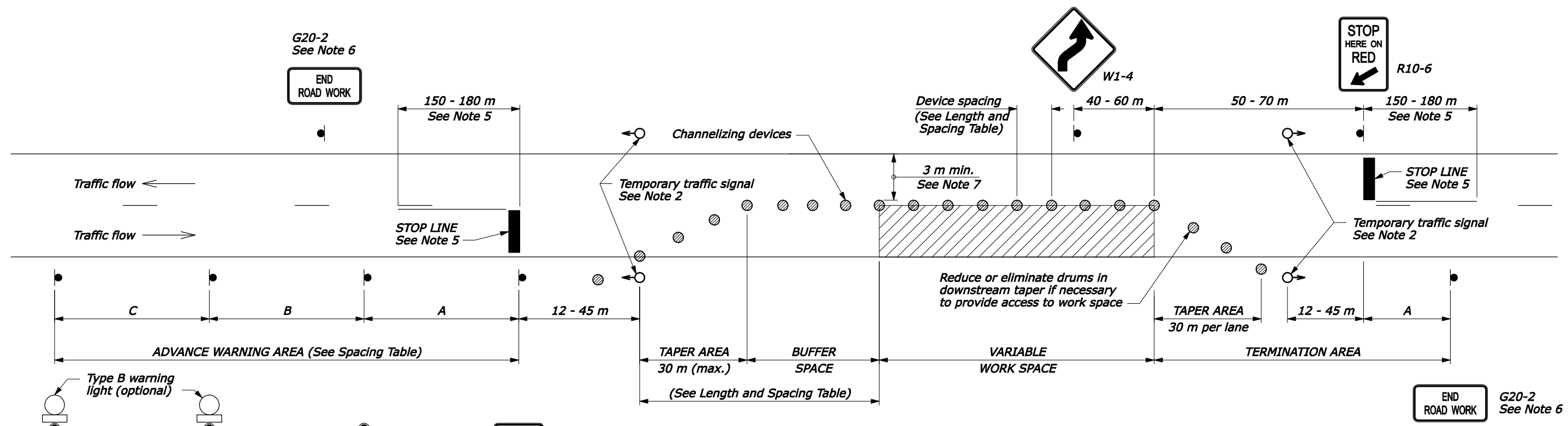
APPROACH SPEED*		LENGTH OF BUFFER SPACE METER	CHANNELIZING DEVICE		
MPH	km/h		TAPER AREA	BUFFER SPACE	WORK SPACE
25	40	50	6	15	15
30	50	65	6	18	18
35	55	75	6	21	21
40	65	95	6	24	24
45	70	105	6	27	27
50	80	130	6	30	30
55	90	160	6	33	33

* Approach speed based on the regulatory posted speed, not the advisory speed.

ROAD TYPE	DISTANCE BETWEEN SIGNS IN METERS		
	A	B	C
Urban less than 70 km/h [≤ 40 MPH]	30	30	30
Urban 70 km/h and greater [≥ 45 MPH]	100	100	100
Rural	150	150	150
Expressway/Freeway	300	450	800

NOTE:

- Advance Warning Area signs are shown for one direction of travel only. Place devices for opposite direction of travel.
- A single signal installation is acceptable, on the right-hand side of the road, if it has two signal faces that are at least 2.4 m apart and meets the other requirements of Part 4 of the MUTCD.
- Install and operate temporary traffic control signals in accordance with the provisions of the MUTCD, Part 4. Signal timing shall be established by a qualified engineer. When the signal is changed to the flashing mode either manually or automatically, ensure red signal indications are flashed to both approaches.
- Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO. If signals are moved, revised signal timing must be determined by a qualified engineer.
- If the roadway surface is paved, install stop lines that comply with Section 3B.16 of the MUTCD. Remove existing conflicting pavement markings and raised markers between the work space and the stop line. Add no-passing lines in advance of the stop line.
- If lane closure is completely within the project limits, eliminate the "ROAD WORK AHEAD" (W20-1) and "END ROAD WORK" (G20-2) signs.
- For project specific minimum width, refer to Special Contract Requirements, Section 156.
- Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
- If signs will be in place more than 72 consecutive hours, use ground-mounted post.



U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 FEDERAL LANDS HIGHWAY

METRIC STANDARD

**TEMPORARY TRAFFIC CONTROL
 SINGLE LANE CLOSURE LAYOUT
 (WITH SIGNALS)**

STANDARD APPROVED FOR USE 6/2005

REVISOR: DRAFT: 1/2007

STANDARD M635-9

NO SCALE

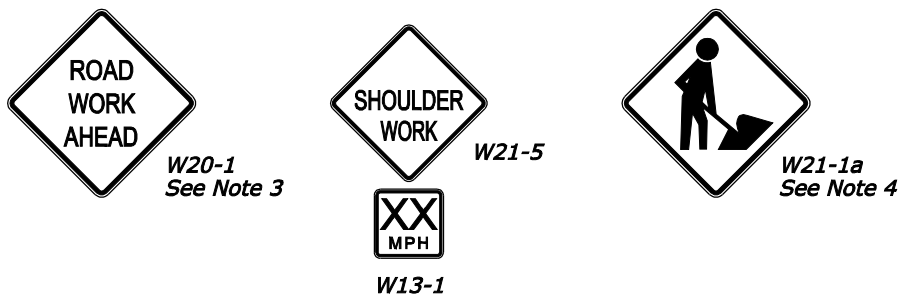
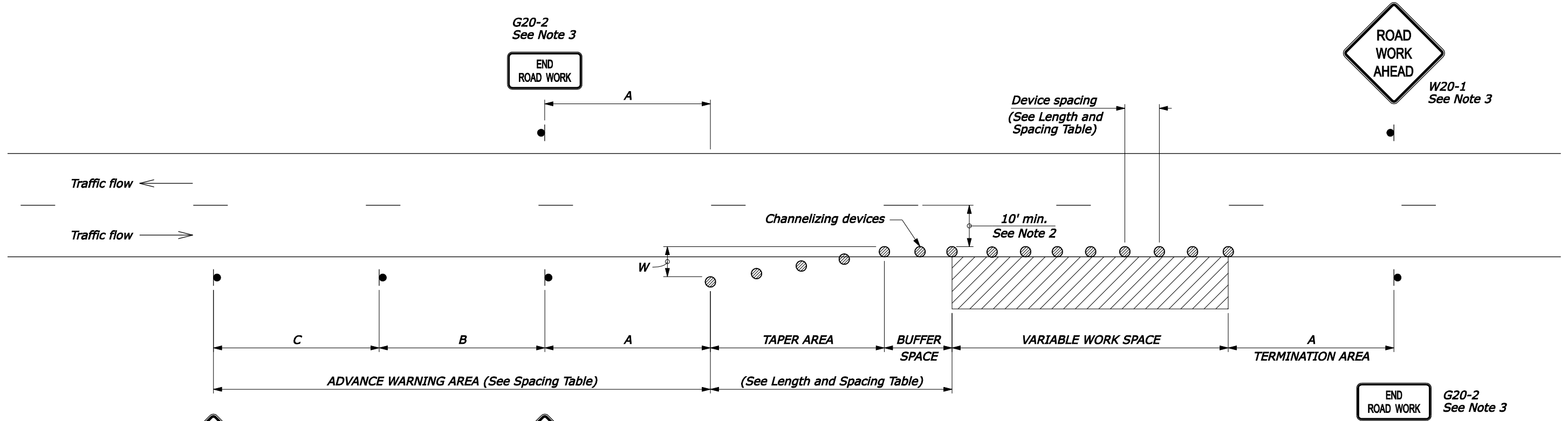
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LENGTH AND SPACING TABLE					
APPROACH SPEED*	MINIMUM TAPER LENGTH**	LENGTH OF BUFFER SPACE	CHANNELIZING DEVICE		
			TAPER AREA	BUFFER SPACE	WORK SPACE
MPH	FEET	FEET	SPACING IN FEET		
25	Shoulder taper formula: $L = \frac{WS^2}{180}$ for $S \leq 40$ MPH	155	25	50	50
30		200	30	60	60
35	$L = \frac{WS}{3}$ for $S \geq 45$ MPH	250	35	70	70
40		305	40	80	80
45	Where: L = Minimum length of taper W = Width of offset in feet	360	45	90	90
50	S = Numerical value of posted speed limit or 85 percentile speed prior to work in miles per hour	425	50	100	100
55		495	55	110	110

* Approach speed based on the regulatory posted speed, not the advisory speed.
 ** Lengthen taper as needed to provide minimum of three channelizing devices in taper at required spacing.

ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET		
	A	B	C
Urban 40 MPH and less	100	100	100
Urban 45 MPH and greater	350	350	350
Rural	500	500	500
Expressway/Freeway	1000	1500	2640

- NOTE:**
- Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO.
 - For project specific minimum width, refer to Special Contract Requirements, Section 156.
 - If shoulder closure is completely within the project limits, eliminate the "ROAD WORK AHEAD" (W20-1) and "END ROAD WORK" (G20-2) signs.
 - Remove or cover Workers symbol sign (W21-1a) when workers are not present.
 - Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
 - If signs will be in place more than 72 consecutive hours, use ground-mounted post.



U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 FEDERAL LANDS HIGHWAY

U.S. CUSTOMARY STANDARD

**TEMPORARY TRAFFIC CONTROL
 SHOULDER CLOSURE LAYOUT**

STANDARD APPROVED FOR USE 6/2005

REVISOR: 1/2007

STANDARD 635-10

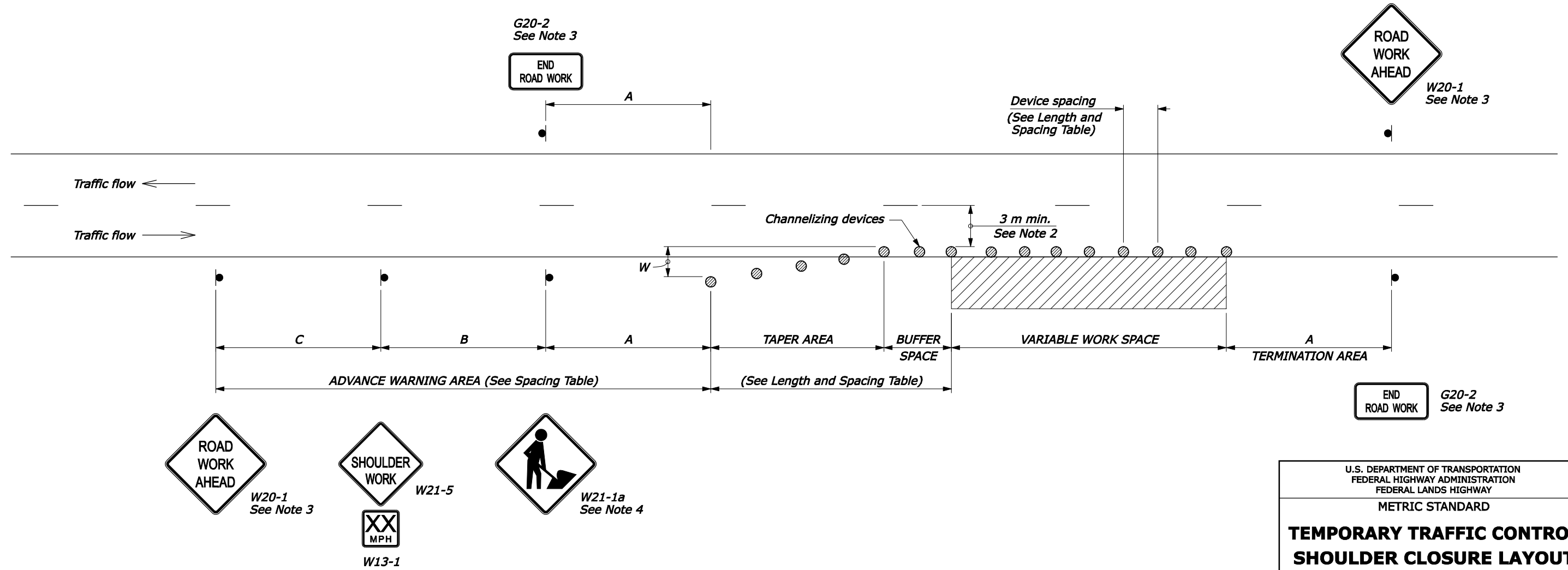
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LENGTH AND SPACING TABLE						
APPROACH SPEED*		MINIMUM TAPER LENGTH**	LENGTH OF BUFFER SPACE	CHANNELIZING DEVICE		
MPH	km/h			TAPER AREA	BUFFER SPACE	WORK SPACE
25	40	Shoulder taper formula: $L = \frac{WS^2}{465}$ for $S < 70$ km/h	50	8	15	15
30	50		65	9	18	18
35	55	$L = \frac{WS}{4.8}$ for $S \geq 70$ km/h	75	10	21	21
40	65		95	12	24	24
45	70	Where: L = Minimum length of taper W = Width of offset in meters S = Metric equivalent of posted speed limit or 85 percentile speed prior to work in kilometers per hour	105	14	27	27
50	80		130	15	30	30
55	90		160	16	33	33

* Approach speed based on the regulatory posted speed, not the advisory speed.
 ** Lengthen taper as needed to provide minimum of three channelizing devices in taper at required spacing.

SIGN SPACING TABLE			
ROAD TYPE	DISTANCE BETWEEN SIGNS IN METERS		
	A	B	C
Urban less than 70 km/h [≤ 40 MPH]	30	30	30
Urban 70 km/h and greater [≥ 45 MPH]	100	100	100
Rural	150	150	150
Expressway/Freeway	300	450	800

- NOTE:**
- Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO.
 - For project specific minimum width, refer to Special Contract Requirements, Section 156.
 - If shoulder closure is completely within the project limits, eliminate the "ROAD WORK AHEAD" (W20-1) and "END ROAD WORK" (G20-2) signs.
 - Remove or cover Workers symbol sign (W21-1a) when workers are not present.
 - Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
 - If signs will be in place more than 72 consecutive hours, use ground-mounted post.



U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 FEDERAL LANDS HIGHWAY
 METRIC STANDARD

**TEMPORARY TRAFFIC CONTROL
 SHOULDER CLOSURE LAYOUT**

STANDARD APPROVED FOR USE 6/2005

REVISED: 1/2007

STANDARD M635-10

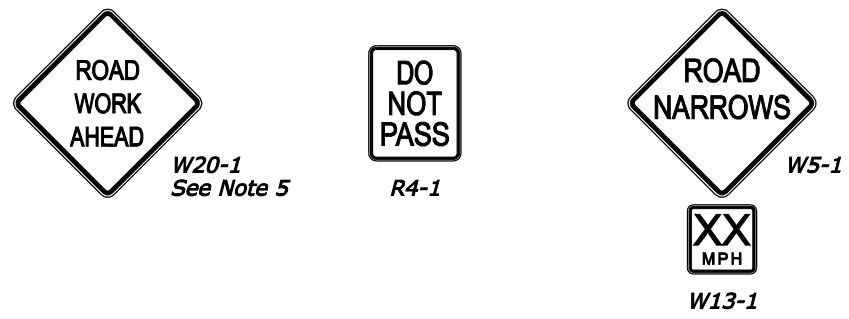
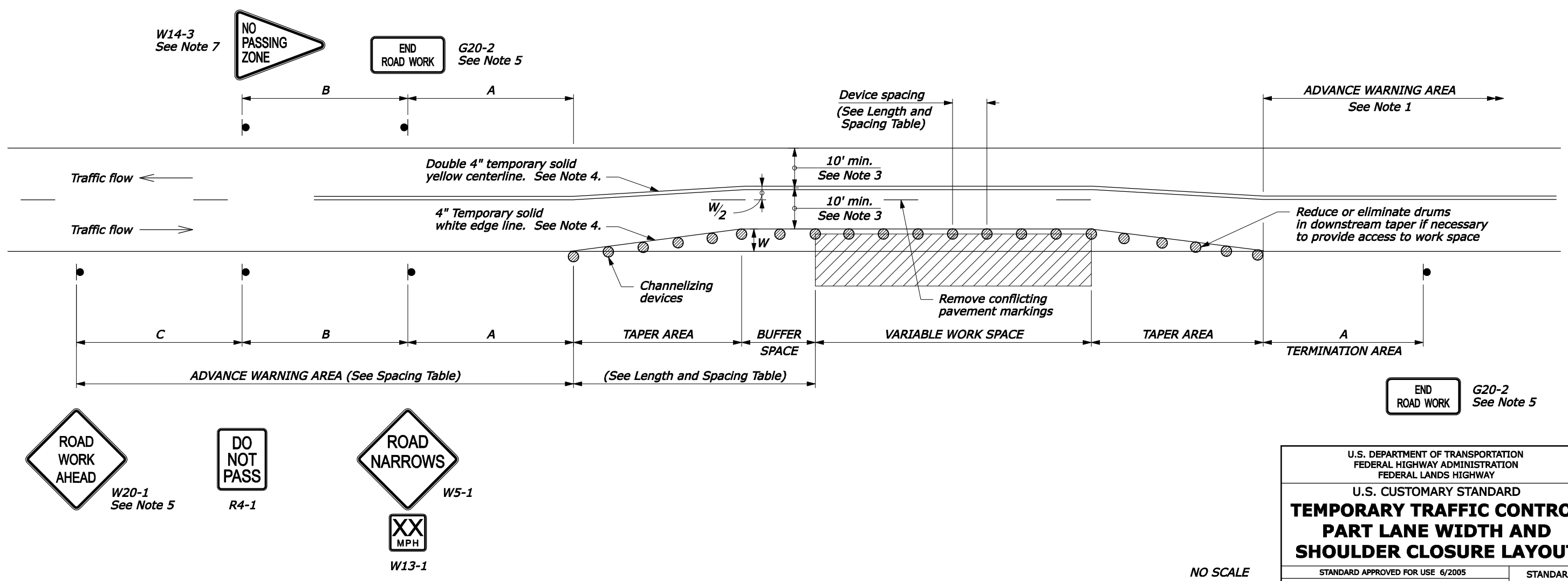
NO SCALE

APPROACH SPEED*	MINIMUM TAPER LENGTH**	LENGTH OF BUFFER SPACE	CHANNELIZING DEVICE		
			TAPER AREA	BUFFER SPACE	WORK SPACE
MPH	FEET	FEET	SPACING IN FEET		
25	Shoulder taper formula: $L = \frac{WS^2}{120}$ for $S \leq 40$ MPH $L = \frac{WS}{2}$ for $S \geq 45$ MPH Where: L = Minimum length of taper W = Width of offset in feet S = Numerical value of posted speed limit or 85 percentile speed prior to work in miles per hour	155	25	50	50
30		200	30	60	60
35		250	35	70	70
40		305	40	80	80
45		360	45	90	90
50		425	50	100	100
55	495	55	110	110	

* Approach speed based on the regulatory posted speed, not the advisory speed.
 ** Lengthen taper as needed to provide minimum of three channelizing devices in taper at required spacing.

ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET		
	A	B	C
Urban 40 MPH and less	100	100	100
Urban 45 MPH and greater	350	350	350
Rural	500	500	500
Expressway/Freeway	1000	1500	2640

- NOTE:**
1. Signs are shown for one direction of travel only. Place devices similar to those depicted for the opposite direction of travel.
 2. Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO.
 3. For project specific minimum width, refer to Special Contract Requirements, Section 156.
 4. If the roadway surface is paved, install temporary pavement markings. If nearest no-passing zone is within 400', extend markings to connect zones.
 5. If closure is completely within the project limits, eliminate the "ROAD WORK AHEAD" (W20-1) and "END ROAD WORK" (G20-2) signs.
 6. Install "PASS WITH CARE" sign (R4-2) at ends of no-passing zone if directed by the CO.
 7. Omit the W14-3 sign if already within a no-passing zone.
 8. Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
 9. If signs will be in place more than 72 consecutive hours, use ground-mounted post.



NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 FEDERAL LANDS HIGHWAY

U.S. CUSTOMARY STANDARD

**TEMPORARY TRAFFIC CONTROL
 PART LANE WIDTH AND
 SHOULDER CLOSURE LAYOUT**

STANDARD APPROVED FOR USE 6/2005	STANDARD
REVISED: DRAFT: 11/2007	635-11

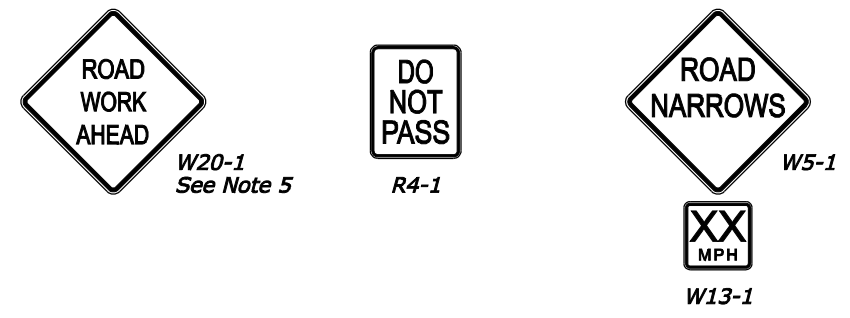
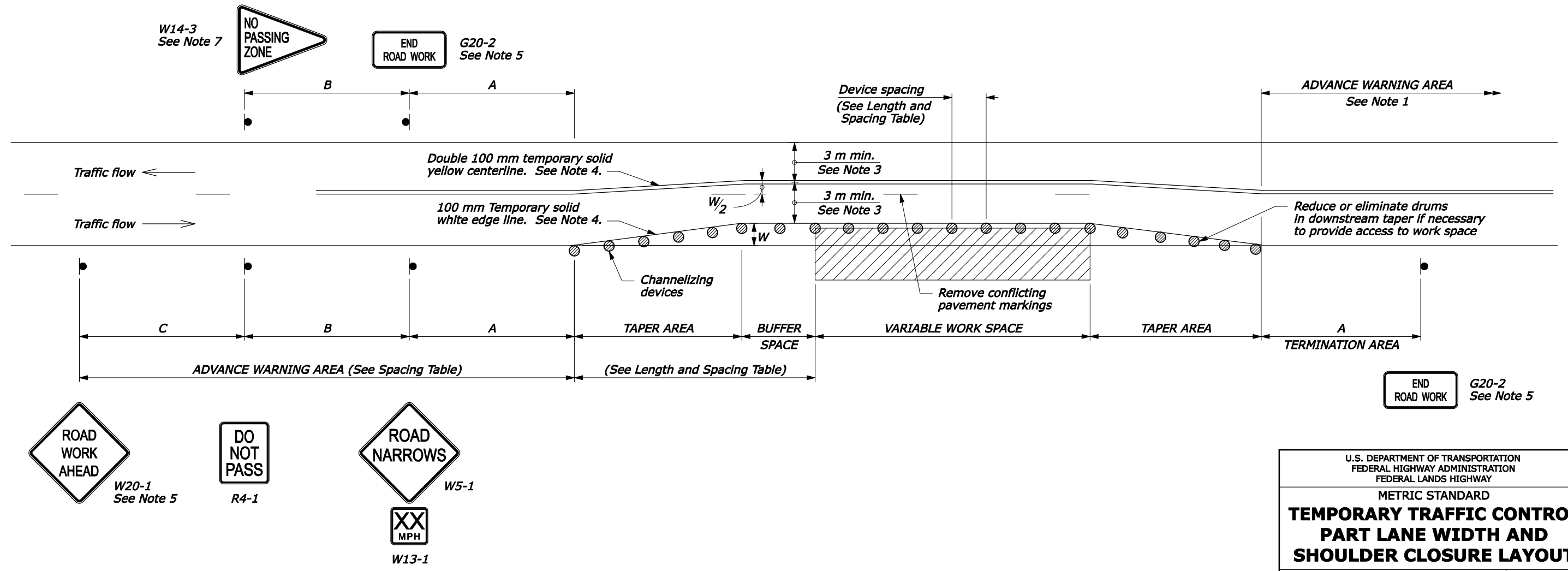
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LENGTH AND SPACING TABLE						
APPROACH SPEED*		MINIMUM TAPER LENGTH**	LENGTH OF BUFFER SPACE	CHANNELIZING DEVICE		
MPH	km/h			TAPER AREA	BUFFER SPACE	WORK SPACE
25	40	Shoulder taper formula: $L = \frac{WS^2}{310}$ for $S < 70$ km/h	50	8	15	15
30	50		65	9	18	18
35	55	$L = \frac{WS}{3.2}$ for $S \geq 70$ km/h	75	10	21	21
40	65		95	12	24	24
45	70		105	14	27	27
50	80	Where: L = Minimum length of taper W = Width of offset in meters S = Metric equivalent of posted speed limit or 85 percentile speed prior to work in kilometers per hour	130	15	30	30
55	90		160	16	33	33

SIGN SPACING TABLE			
ROAD TYPE	DISTANCE BETWEEN SIGNS IN METERS		
	A	B	C
Urban less than 70 km/h [≤ 40 MPH]	30	30	30
Urban 70 km/h and greater [≥ 45 MPH]	100	100	100
Rural	150	150	150
Expressway/Freeway	300	450	800

- NOTE:**
1. Signs are shown for one direction of travel only. Place devices similar to those depicted for the opposite direction of travel.
 2. Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO.
 3. For project specific minimum width, refer to Special Contract Requirements, Section 156.
 4. If the roadway surface is paved, install temporary pavement markings. If nearest no-passing zone is within 120 m, extend markings to connect zones.
 5. If closure is completely within the project limits, eliminate the "ROAD WORK AHEAD" (W20-1) and "END ROAD WORK" (G20-2) signs.
 6. Install "PASS WITH CARE" sign (R4-2) at ends of no-passing zone if directed by the CO.
 7. Omit the W14-3 sign if already within a no-passing zone.
 8. Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
 9. If signs will be in place more than 72 consecutive hours, use ground-mounted post.
 10. Dimensions without units are millimeters.

* Approach speed based on the regulatory posted speed, not the advisory speed.
 ** Lengthen taper as needed to provide minimum of three channelizing devices in taper at required spacing.



U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 FEDERAL LANDS HIGHWAY

METRIC STANDARD

**TEMPORARY TRAFFIC CONTROL
 PART LANE WIDTH AND
 SHOULDER CLOSURE LAYOUT**

STANDARD APPROVED FOR USE 6/2005

REVISED: 11/2007

STANDARD M635-11

NO SCALE

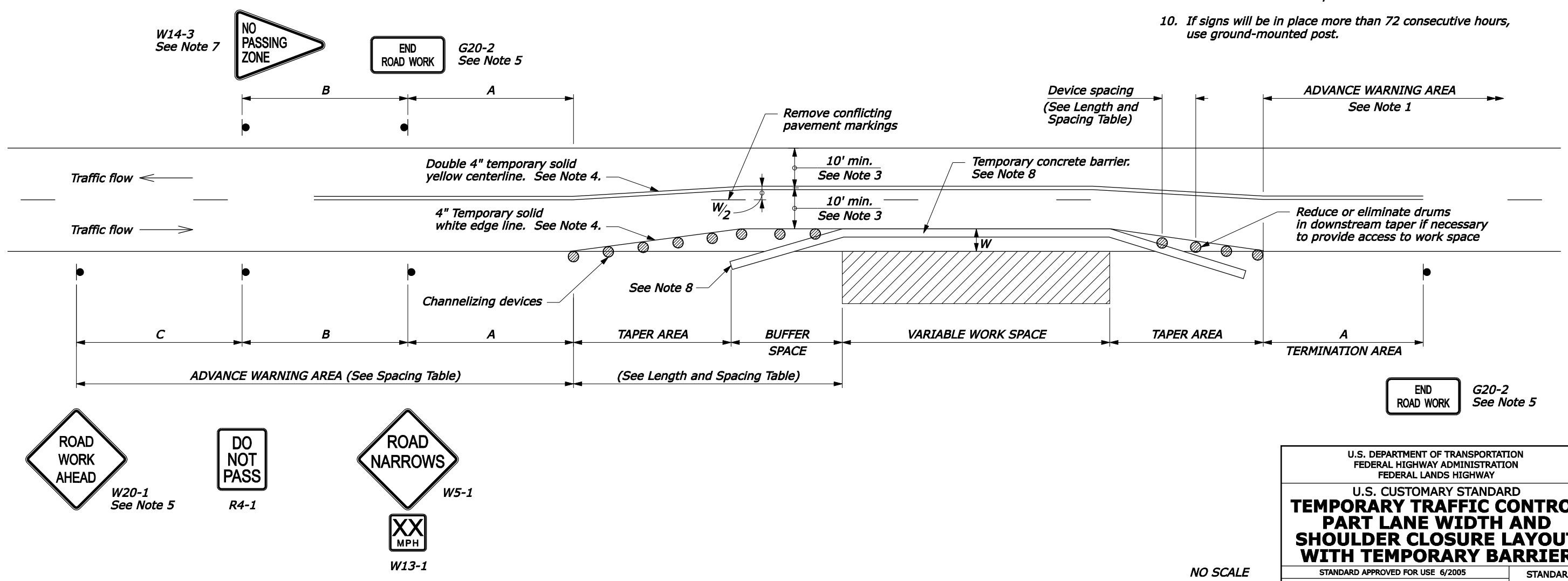
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LENGTH AND SPACING TABLE					
APPROACH SPEED*	MINIMUM TAPER LENGTH**	LENGTH OF BUFFER SPACE	CHANNELIZING DEVICE		
			TAPER AREA	BUFFER SPACE	WORK SPACE
MPH	FEET	FEET	SPACING IN FEET		
25	Shoulder taper formula:	155	25	50	50
30	$L = \frac{WS^2}{120}$ for $S \leq 40$ MPH	200	30	60	60
35	$L = \frac{WS}{2}$ for $S \geq 45$ MPH	250	35	70	70
40	Where:	305	40	80	80
45	L = Minimum length of taper	360	45	90	90
50	W = Width of offset in feet	425	50	100	100
55	S = Numerical value of posted speed limit or 85 percentile speed prior to work in miles per hour	495	55	110	110

* Approach speed based on the regulatory posted speed, not the advisory speed.
 ** Lengthen taper as needed to provide minimum of three channelizing devices in taper at required spacing.

ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET		
	A	B	C
Urban 40 MPH and less	100	100	100
Urban 45 MPH and greater	350	350	350
Rural	500	500	500
Expressway/Freeway	1000	1500	2640

- NOTE:**
1. Signs are shown for one direction of travel only. Place devices similar to those depicted for the opposite direction of travel.
 2. Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO.
 3. For project specific minimum width, refer to Special Contract Requirements, Section 156.
 4. If the roadway surface is paved, install temporary pavement markings. If nearest no-passing zone is within 400', extend markings to connect zones.
 5. If closure is completely within the project limits, eliminate the "ROAD WORK AHEAD" (W20-1) and "END ROAD WORK" (G20-2) signs.
 6. Install "PASS WITH CARE" sign (R4-2) at ends of no-passing zone if directed by the CO.
 7. Omit the W14-3 sign if already within a no-passing zone.
 8. Place the barrier according to the Roadside Design Guide by the American Association of State Highway and Transportation Officials (AASHTO). Terminate barrier ends outside the clear zone or protect the ends of the barrier with a crash cushion.
 9. Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
 10. If signs will be in place more than 72 consecutive hours, use ground-mounted post.



NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 FEDERAL LANDS HIGHWAY

U.S. CUSTOMARY STANDARD
**TEMPORARY TRAFFIC CONTROL
 PART LANE WIDTH AND
 SHOULDER CLOSURE LAYOUT
 WITH TEMPORARY BARRIER**

STANDARD APPROVED FOR USE 6/2005
 STANDARD 635-12

REVISOR: 11/2007
 DRAFT:

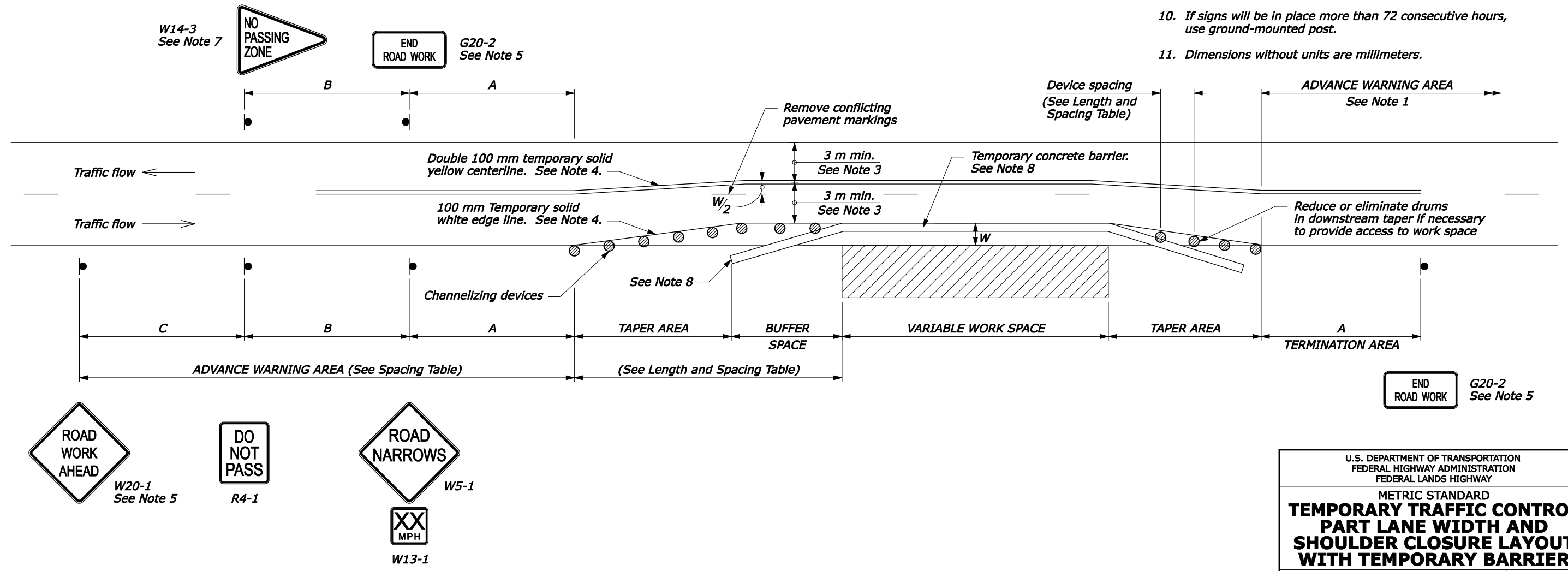
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LENGTH AND SPACING TABLE						
APPROACH SPEED*		MINIMUM TAPER LENGTH**	LENGTH OF BUFFER SPACE	CHANNELIZING DEVICE		
MPH	km/h			TAPER AREA	BUFFER SPACE	WORK SPACE
25	40	Shoulder taper formula: $L = \frac{WS^2}{310}$ for $S < 70$ km/h	50	8	15	15
30	50		65	9	18	18
35	55	$L = \frac{WS}{3.2}$ for $S \geq 70$ km/h	75	10	21	21
40	65		95	12	24	24
45	70	Where: L = Minimum length of taper W = Width of offset in meters S = Metric equivalent of posted speed limit or 85 percentile speed prior to work in kilometers per hour	105	14	27	27
50	80		130	15	30	30
55	90		160	16	33	33

SIGN SPACING TABLE			
ROAD TYPE	DISTANCE BETWEEN SIGNS IN METERS		
	A	B	C
Urban less than 70 km/h [≤ 40 MPH]	30	30	30
Urban 70 km/h and greater [≥ 45 MPH]	100	100	100
Rural	150	150	150
Expressway/Freeway	300	450	800

- NOTE:**
- Signs are shown for one direction of travel only. Place devices similar to those depicted for the opposite direction of travel.
 - Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO.
 - For project specific minimum width, refer to Special Contract Requirements, Section 156.
 - If the roadway surface is paved, install temporary pavement markings. If nearest no-passing zone is within 120 m, extend markings to connect zones.
 - If closure is completely within the project limits, eliminate the "ROAD WORK AHEAD" (W20-1) and "END ROAD WORK" (G20-2) signs.
 - Install "PASS WITH CARE" sign (R4-2) at ends of no-passing zone if directed by the CO.
 - Omit the W14-3 sign if already within a no-passing zone.
 - Place the barrier according to the Roadside Design Guide by the American Association of State Highway and Transportation Officials (AASHTO). Terminate barrier ends outside the clear zone or protect the ends of the barrier with a crash cushion.
 - Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
 - If signs will be in place more than 72 consecutive hours, use ground-mounted post.
 - Dimensions without units are millimeters.

* Approach speed based on the regulatory posted speed, not the advisory speed.
 ** Lengthen taper as needed to provide minimum of three channelizing devices in taper at required spacing.



U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 FEDERAL LANDS HIGHWAY

METRIC STANDARD
TEMPORARY TRAFFIC CONTROL
PART LANE WIDTH AND
SHOULDER CLOSURE LAYOUT
WITH TEMPORARY BARRIER

STANDARD APPROVED FOR USE 6/2005
 STANDARD M635-12

NO SCALE

REVISED: 11/2007
 DRAFT: 11/2007

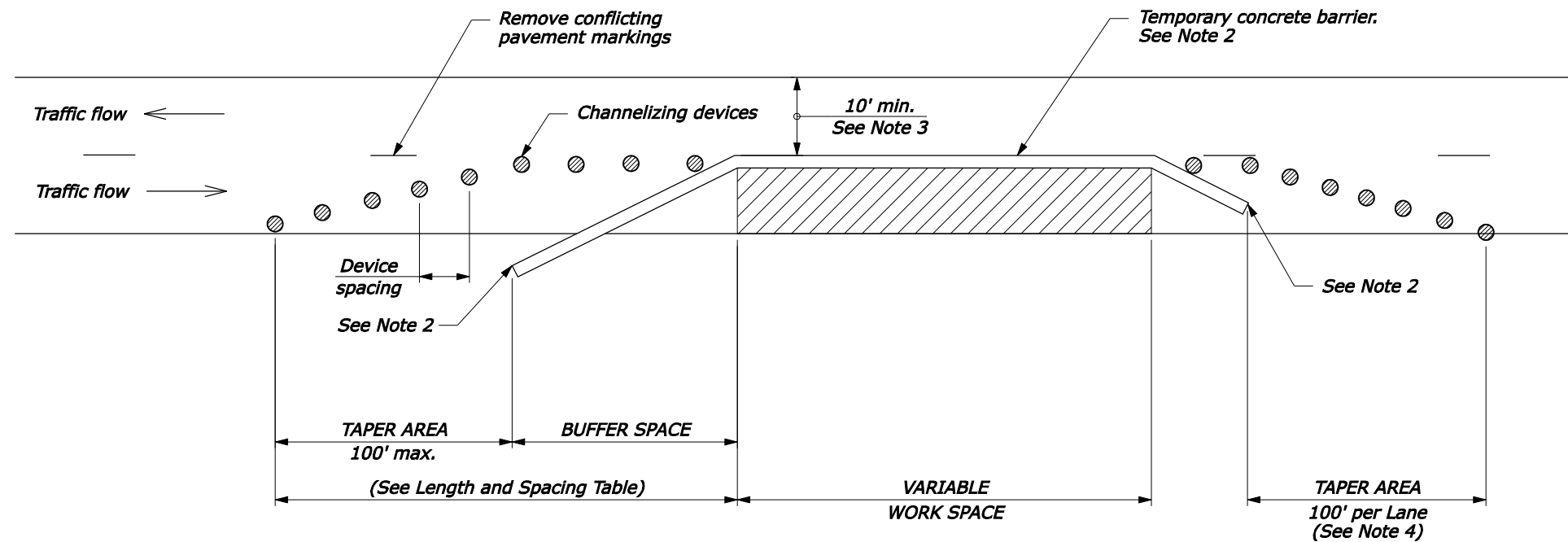
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LENGTH AND SPACING TABLE					
APPROACH SPEED*	LENGTH OF BUFFER SPACE FEET	CHANNELIZING DEVICE			CONCRETE BARRIER FLARE RATE
		TAPER AREA	BUFFER SPACE	WORK SPACE	
MPH	FEET	SPACING IN FEET			
25	155	20	50	50	1:8
30	200	20	60	60	1:8
35	250	20	70	70	1:9
40	305	20	80	80	1:10
45	360	20	90	90	1:12
50	425	20	100	100	1:14
55	495	20	110	110	1:16

* Approach speed based on the regulatory posted speed, not the advisory speed.

NOTE:

1. Install signs and other devices for single lane closure according to Standard 635-6, 7, 8, or 9. Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO.
2. Place barrier according to the Roadside Design Guide published by the American Association of State Highway and Transportation Officials (AASHTO). Terminate barrier ends outside the clear zone or protect the ends of the barrier with a crash cushion.
3. For project specific minimum width, refer to Special Contract Requirements, Section 156.
4. Place channelizing devices at downstream taper during non-work hours or when access is not needed.
5. Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
6. Reduce or eliminate drums and barrier in downstream taper if necessary to provide access to work space.



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NO SCALE

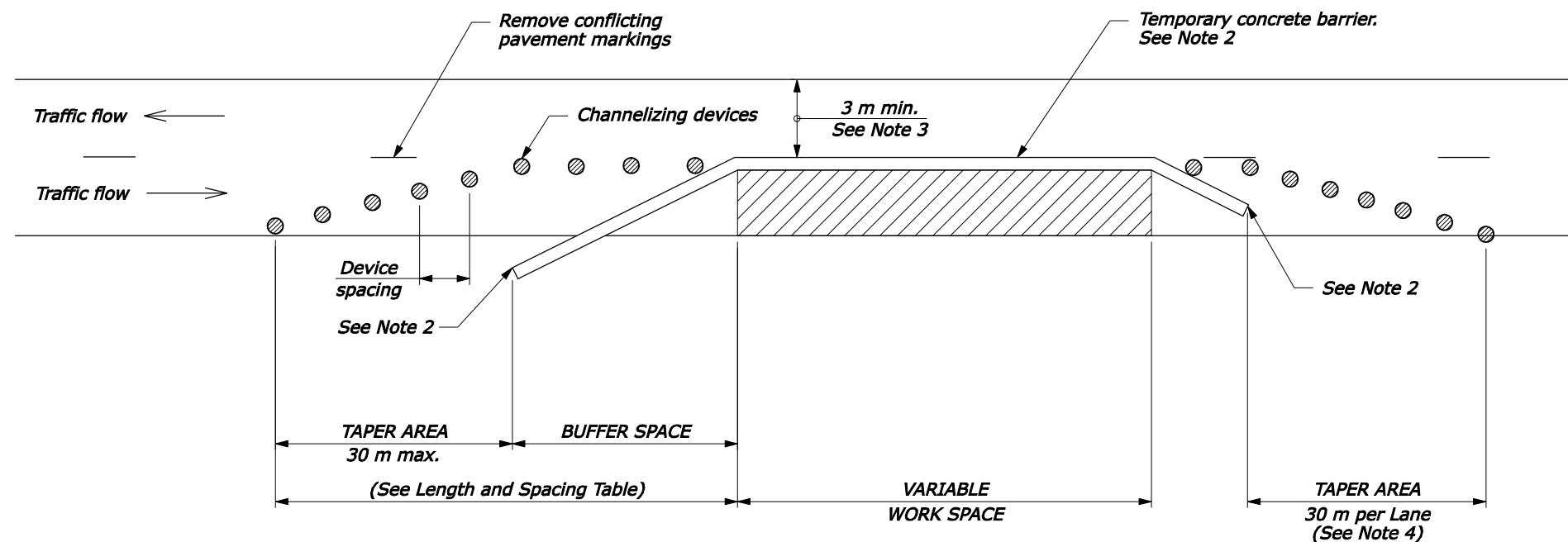
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U.S. CUSTOMARY STANDARD	
TEMPORARY TRAFFIC CONTROL SINGLE LANE CLOSURE LAYOUT (WITH TEMPORARY BARRIER)	
STANDARD APPROVED FOR USE 6/2005	STANDARD
REVISED: DRAFT: 11/2007	635-13

LENGTH AND SPACING TABLE						
APPROACH SPEED*		LENGTH OF BUFFER SPACE METER	CHANNELIZING DEVICE			CONCRETE BARRIER FLARE RATE
MPH	km/h		TAPER AREA	BUFFER SPACE	WORK SPACE	
		SPACING IN METERS				
25	40	50	6	15	15	1:8
30	50	65	6	18	18	1:8
35	55	75	6	21	21	1:9
40	65	95	6	24	24	1:10
45	70	105	6	27	27	1:12
50	80	130	6	30	30	1:14
55	90	160	6	33	33	1:16

* Approach speed based on the regulatory posted speed, not the advisory speed.

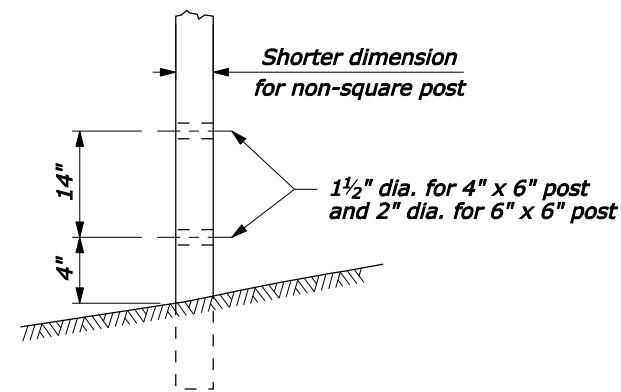
NOTE:

1. Install signs and other devices for single lane closure according to Standard M635-6, 7, 8, or 9. Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO.
2. Place barrier according to the Roadside Design Guide published by the American Association of State Highway and Transportation Officials (AASHTO). Terminate barrier ends outside the clear zone or protect the ends of the barrier with a crash cushion.
3. For project specific minimum width, refer to Special Contract Requirements, Section 156.
4. Place channelizing devices at downstream taper during non-work hours or when access is not needed.
5. Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
6. Reduce or eliminate drums and barrier in downstream taper if necessary to provide access to work space.

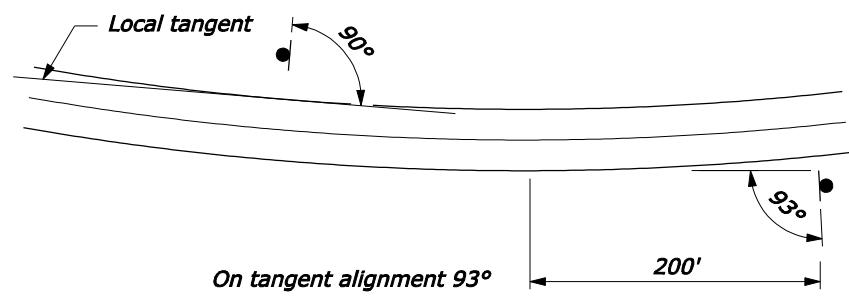


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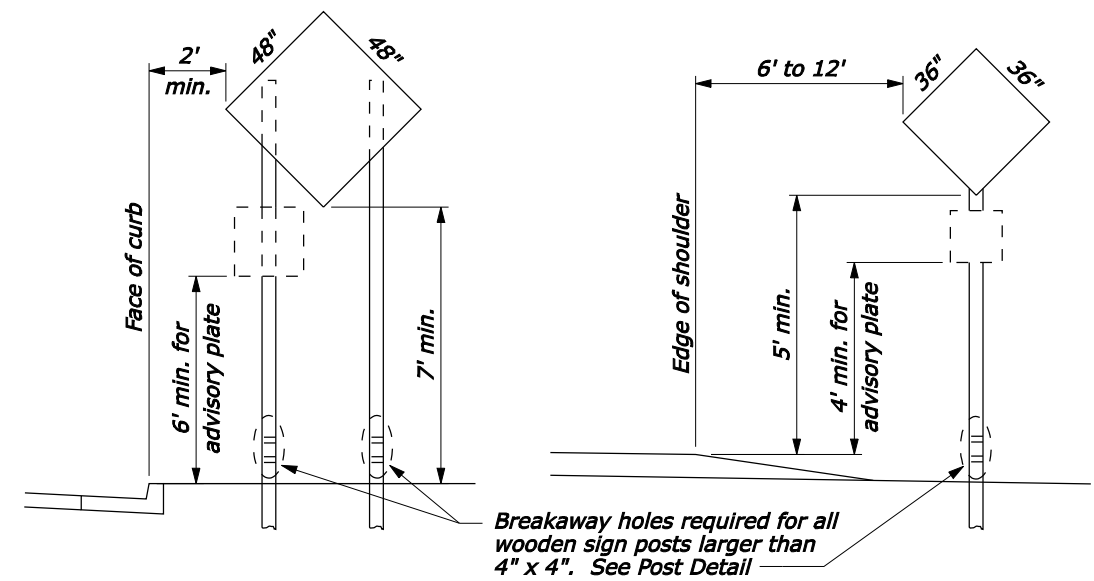
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METRIC STANDARD	
TEMPORARY TRAFFIC CONTROL SINGLE LANE CLOSURE LAYOUT (WITH TEMPORARY BARRIER)	
STANDARD APPROVED FOR USE 6/2005	STANDARD
REVISED: DRAFT: 11/2007	M635-13



POST DETAIL



SIGN INSTALLATION ANGLE



URBAN AREAS
(or pedestrian or parking areas)

RURAL AREAS

NOTE: Mount signs with area 9 sqft and under on a single 4" x 4" wood post. Use double wood posts for signs wider than 36" or signs with an area over 9 sqft. Steel may be used in lieu of wood posts (See Note 2)

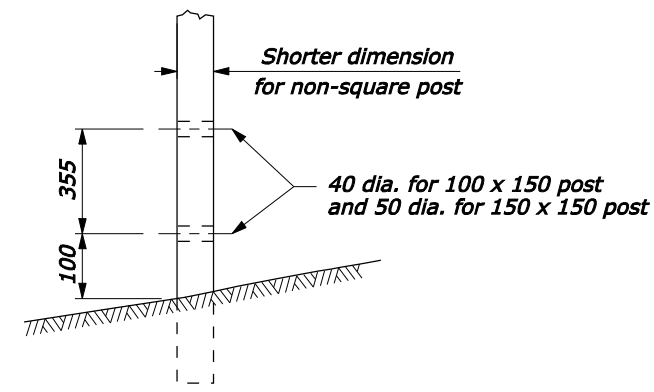
SIGN PLACEMENT

NOTE:

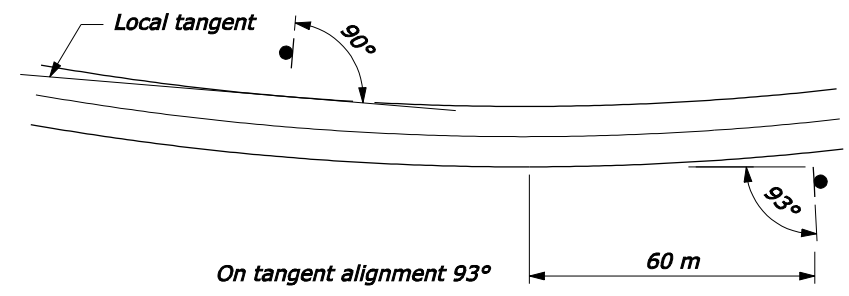
1. Use Type III or higher type sheeting on all signs and channelizing devices. Warning lights are not normally needed on devices with Type III or higher type sheeting, but may be beneficial to attract the drivers attention in fog or other special conditions. When used, apply the appropriate type of warning light (Type A, B, C, or D) per the MUTCD Chapter 6F.
2. Ensure all sign supports exposed to impact by traffic meet the requirements of NCHRP-350 for crash worthiness.
3. Do not store traffic control devices along the roadway when not in use. Cover post-mounted signs when not applicable.
4. State standards may be used as an alternative if approved by the CO.

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION FEDERAL LANDS HIGHWAY	
U.S. CUSTOMARY STANDARD	
TEMPORARY TRAFFIC CONTROL SIGN INSTALLATION	
STANDARD APPROVED FOR USE 6/2005	STANDARD
REVISED: DRAFT: 11/2007	635-14



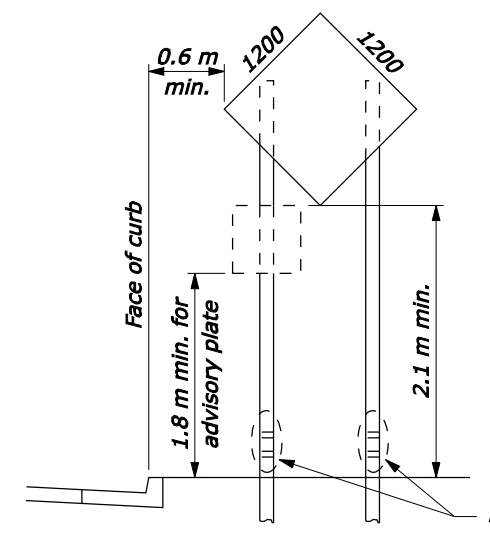
POST DETAIL



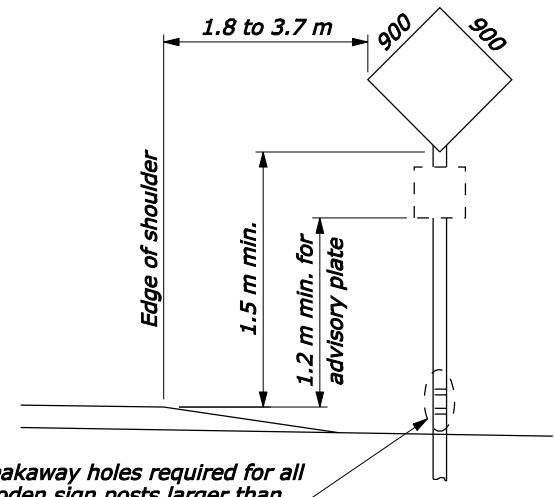
SIGN INSTALLATION ANGLE

NOTE:

1. Use Type III or higher type sheeting on all signs and channelizing devices. Warning lights are not normally needed on devices with Type III or higher type sheeting, but may be beneficial to attract the drivers attention in fog or other special conditions. When used, apply the appropriate type of warning light (Type A, B, C, or D) per the MUTCD Chapter 6F.
2. Ensure all sign supports exposed to impact by traffic meet the requirements of NCHRP-350 for crash worthiness.
3. Do not store traffic control devices along the roadway when not in use. Cover post-mounted signs when not applicable.
4. State standards may be used as an alternative if approved by the CO.
5. Dimensions without units are millimeters.



URBAN AREAS
(or pedestrian or parking areas)



RURAL AREAS

Breakaway holes required for all wooden sign posts larger than 100 x 100. See Post Detail

NOTE: Mount signs with area 0.9 m² and under on a single 100 x 100 wood post. Use double wood posts for signs wider than 900 mm or signs with an area over 0.9 m². Steel may be used in lieu of wood posts (See Note 2)

SIGN PLACEMENT

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION FEDERAL LANDS HIGHWAY	
METRIC STANDARD	
TEMPORARY TRAFFIC CONTROL SIGN INSTALLATION	
STANDARD APPROVED FOR USE 6/2005	STANDARD
REVISED: DRAFT: 11/2007	M635-14

NO SCALE