Chapter 2 Signs

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2-1 General

Effective signing is the primary method to provide regulatory, warning, and guidance information to transportation system users (motorists, pedestrians, rollers, and bicyclists). Signing that is clear, concise, and accurate supports safe behaviors and safe operation, legal, and orderly travel on public roadways and transportation facilities. Sign use must be limited and conservative since signs can lose their effectiveness when used to excess. Signs are not typically used to confirm Rules of the Road.

This chapter contains information about signing on the state highway system and is intended for persons involved in traffic operations or traffic design. Specific policies and guidelines are included that clarify the *Manual on Uniform Traffic Control Devices* (MUTCD) information. Situations not addressed in this chapter or the MUTCD may need to be determined on a case-by-case basis using engineering judgment.

Where a change to the current sign installation is indicated by information in this chapter, replace as the current sign's service life is reached. For MUTCD Target Compliance Dates, see the 11th Edition MUTCD, Section 1B.03, Table 1B-1for required sign replacements.

State law requires the department to adopt uniform standards for traffic control devices, including signs, along public roadways. WAC 468-95 adopts the MUTCD and Washington State Modifications to the MUTCD as these standards. The MUTCD and WSDOT modifications provide guidance on the intended use and placement of regulatory, warning, guide, and motorist information signs, as well as specific information on sizes and installation.

This chapter supplements the MUTCD and WSDOT modifications with specific interpretations and unique applications for signs on the state highway system.

Guidelines for the use of traffic control signs are discussed in the following MUTCD chapters:

MUTCD Chapter	Sign Type
Chapter 2B	Regulatory Signs, Barricades, and Gates
Chapter 2C	Warning Signs and Object Markers
Chapter 2D	Guide Signs – Conventional Roads
Chapter 2E	Guide Signs – Freeways and Expressways
Chapter 2F	Toll Road Signs
Chapter 2G	Preferential and Managed Lane Signs
Chapter 2H	General Information Signs
Chapter 2I	General Service Signs
Chapter 2J	Specific Service Signs
Chapter 2L	Changeable Message Signs
Chapter 2M	Recreational and Cultural Interest Signs
Chapter 2N	Emergency Management Signs
Part 6	Work Zone Signs
Part 7	School Area Signs
Part 8	Railroad and Light Rail Signs
Part 9	Bicycle Facility Signs

2-2 Sign Design

The WSDOT *Sign Fabrication Manual* M 55-05 contains geometric layout details for most signs used by the department.

The sign designation codes indicated in the *Sign Fabrication Manual* and other departmental publications are exclusive to WSDOT and may not correspond to MUTCD number codes for similar signs.

Whenever practicable, the overall dimensions of the sign should be in multiples of 6 inches.

Any modification to a symbol regulatory or warning sign requires FHWA experimentation approval, contact Headquarters HQ Transportation Operations Office.

Any non-standard sign design shall be submitted to the State Traffic Signing Specialist for the State Traffic Engineer's approval.

2-2.1 Designing a Sign Message

This section contains information about layout and fabrication of signs that are not addressed in the *Sign Fabrication Manual*.

A. **Message Content** – A sign message must convey the necessary information in a simple, direct manner using clear and concise wording. English language is used on signs on the state transportation system. Historical names (including non-English) may be used for place names such as for a town or natural or cultural feature. Native Tribal language may be used on jurisdictional boundary and geographic features signs.

Letter Sizing – Letter sizes for primary and supplemental guide signs are determined by roadway type and operating speed. A sign message must be large enough to give the viewer adequate time to read and comprehend the information, and to respond with a driving task or other action as required. MUTCD Tables 2E-2 through 2E-5 show the appropriate standard letter sizes to be used. Signs on non-roadway portions of the transportation system (i.e., bicycle or pedestrian paths, transit stations) are sized to reflect the specific conditions of use.

Studies indicate the average driver comprehends three words per second, after a message perception time of up to two seconds. Unique messages require more perception time than messages that are commonly used. Determine the needed letter height for a particular sign by using the following formula that combines the comprehension rate and the perception time with the operational speed of the roadway.

$$\text{LETTER HEIGHT} = (N/3 + 2)\, f$$

Where:

N = Number of words in the message. f = Legibility factor (see Exhibit 2-1).

(Found by dividing vehicle speed in feet per second (fps) by 30, the legibility distance per inch of letter height.)

Exhibit 2-1 'f' Values by Speed

*MPH	(fps)	f
25	37	1.2
30	44	1.5
35	51	1.7
40	59	2.0
45	66	2.2
50	73	2.4
55	81	2.7
60	88	2.9
65	95	3.2
70	103	3.4

*Speed (legal speed limit or 85th percentile speed).

The following example applies the formula and calculates desirable letter height:

Example message:

"SNOQUALMIE PASS RADIO TRAFFIC INFO 1 MILE"

Roadway Posted Speed Limit	=	65 mph
N	=	7
f	=	3.2
Height	=	(7/3 + 2) 3.2 = 14 inches
LETTER HEIGHT	=	Use 14-inch letters

B. **Message Layout and Spacing** – Sign message layout and spacing requirements are specified in the *Sign Fabrication Manual*.

C. **Abbreviations** – Abbreviations must be immediately recognizable by the viewer and are only used to avoid excessively long sign messages. Do not use abbreviations if the controlling (longest) message line is long enough to allow use of the complete word. Do not abbreviate place names except for those approved in the list below.

To maintain statewide uniformity, the HQ Transportation Operations office must approve abbreviations other than those listed below. Periods are not used in sign abbreviations, except for British Columbia (B.C.) and United States (U.S. Customs).

The following are the only pre-approved abbreviations:

AFB	Air Force Base
Alt	Alternate
Ave	Avenue
B.C.	British Columbia
Bch	Beach
Blvd	Boulevard
Coll	College
Comm	Community
Co	County
Cr	Creek
Ct	Court
Ctr	Center
DNR	Department of Natural Resources (campground, etc.)
Dr	Drive
E	East
Elev	Elevation
FS	Forest Service
Ft	Fort
Fwy	Freeway
Fy	Ferry
Hist	Historic (as in "Nat'l Hist District")
HOV	High Occupancy Vehicle
Hts	Heights

Hwy	Highway and State Route
Info	Information
Int'l	International
Jct	Junction
km	Kilometers
Lab	Laboratory
Lk	Lake
Ln	Lane
Lp	Loop
Lt	Left
M	Meters
Max	Maximum
Med	Medical
Mi	Mile(s)
Min	Minimum
MPH	Miles Per Hour
Mt	Mount (Rainier)
Mtn	Mountain
N	North
NE	North East
NW	North West
NAS	Naval Air Station
Nat'l	National
Ore	Oregon
ORV	Off Road Vehicle
Pk	Park
Ped	Pedestrian
Pkwy	Parkway
Pl	Place
Pop	Population
Pt	Port or Point
Rd	Road
Rec Area	Recreational Area
Res	Reservation
RR	Railroad
Rt	Right
Rte	Route
RV	Recreational Vehicle
S	South
SE	South East
SW	South West
Sea-Tac Airport	Seattle-Tacoma Airport
Spdwy	Speedway
St	Street

Temp	Temporary
Thru	Through
Univ	University
U.S.	U.S. (Customs, etc.)
USA	United States of America
USFS	U.S. Forest Service
W	West
Wy	Way
WSDOT	Washington State Department of Transportation
State Patrol	Washington State Patrol
Xing	Crossing

2-2.2 Reflective Sign Sheeting Material Requirements

Traffic control signs are fabricated using various types of reflective sheeting material. Each sheeting type has different retroreflective properties and different practical applications. The sign type and its location determine the specific sheeting to be used. The following sheeting types are designated in ASTM Specification D 4956:

- **Type I** – Medium-intensity retroreflective sheeting, referred to as "Engineer Grade." Warranty life of 7 years.
- **Type II** – Medium-high-intensity retroreflective sheeting referred to as "Super Engineer Grade." Warranty life of 10 to 12 years.
- **Type III** – High-intensity retroreflective sheeting referred to as "High Intensity." Warranty life of 10 years.
- **Type IV** – High-intensity prismatic retroreflective sheeting, referred to as "High Performance." Warranty life of 10 years.
- **Type VIII** – Super high-intensity prismatic retroreflective sheeting, referred to as "Super High Performance." Warranty life of 10 years.
- **Type IX** – Very high-intensity prismatic retroreflective sheeting, referred to as "VIP Diamond Grade" or "Omni-View." Warranty life of 12 years.
- **Type X** – Super-high-intensity prismatic retroreflective sheeting, referred to as "Fluorescent Orange Prismatic." Warranty life of 3 years.
- **Type XI** – Very high-intensity prismatic retroreflective sheeting, referred to as "Diamond Grade Cube" or "Omni-Cube." Warranty life of 12 years.

The following table shows the specific sheeting type to use, based on the sign type, location, and lighting environment. When ordering a sign from the WSDOT Central Sign Shop, specify the sheeting type.

Exhibit 2-2

Sign Type	Sheeting Type (Background)	Sheeting Type (Legend, Symbols, Border)
Regulatory		
• Ground Mounted	IV, XI[5]	N/A[1]
• Overhead	XI	N/A
Warning		
• Ground Mounted	IV	N/A
• Overhead	XI	N/A
Guide Signs		
• Ground Mounted	IV,XI[5]	IV, XI[5]
• Overhead Exit Only	XI[2]	XI
• Overhead Left Side Exits	XI	XI
• Other Overhead Guide	XI	XI
• Overhead Street Name	IV[7], XI	XI
• **Route Markers** (M-Series Signs)	IV	IV[3]
General Information (I-Series Signs)	IV	IV
School (S-Series Signs)[4] (S1-1, S4-3, "School" portion of S5-1, and S5-101)	XI	N/A
Milepost Markers	IV	IV
Blue and Brown Background Signs	IV	IV
Fluorescent Orange (Work Zone Signs)	VIII, IX, XI[6]	N/A

Notes:

[1] Red is Type XI, except R7 Series parking signs which may be Type IV, black is non-reflective.

[2] For Yellow Background sheeting, use Type XI Fluorescent sheeting.

[3] Black is non-reflective.

[4] Fluorescent Yellow Green (FYG) sheeting.

[5] Stop (R1-1), Yield (R2-1), Do Not Enter (R1-5), Wrong Way (R1-5A), and Freeway/Highway Entrance (D13-3, D13-4) signs shall be Type XI sheeting unless otherwise specified in contract plans.

[6] Replaces former Type X sheeting. Type VIII, IX and XI sheeting meets or exceeds previous Type X requirements.

[7] Type IV sheeting shall be used for Overhead Street Name Signs if called for in project plans.

2-3 Sign Location, Installation, and Storage

2-3.1 Sign Location

Signs shall be located and positioned according to standards outlined in the MUTCD Sections 2A.05 and 2A.16–2A.21, *Design Manual* Chapters 1020 and 1510, and Standard Plan G-20.10-00. These standards address sign mounting height and lateral and longitudinal placement.

- Place signs in a manner that provides a clear view for the roadway user and to not obstruct other signs.Space signs to allow the roadway user time for making required decisions and to safely execute any necessary maneuver.
- Overloading roadway users with too much information may cause confusion; use engineering judgment based on Perception Reaction Time (PRT) and posted speed limit.
- Signs should be individually installed on separate posts or mountings except where one sign supplements another or where route or directional signs must be grouped. An exception is an Adopt-A-Highway sign with a Milepost marker.
- Avoid obscuring exclusive sign shapes (octagon, triangle, circle, pennant) when mounting signs back-to-back on the same post. Consider using a separate mounting or upsize the size of exclusive shaped sign.
- Signs should be placed in locations to avoid blocking the pedestrian circulation path. Sign posts shall not reduce the width of the pedestrian path to less than four (4) feet.
- Signs should be located as far from the traveled way as possible, while remaining visually effective (road user's cone of vision). They should be placed on the backslope of a ditch, rather than the in slope or bottom.
- Sign spacing on Freeways and Expressways:
  - Minimum mainline spacing between all primary and supplemental guide signs shall be 800 feet.
  - Minimum sign spacing between all other signs except Milepost (MP) and Object Marker signs shall be 500 feet. This shall include spacing to primary and supplemental guide signs, Highway Advisory Radio (HAR) signs, and Variable Message Signs (VMS).
  - Minimum spacing on ramps shall be 100 feet.
- Sign spacing on Conventional Highways:
  - Minimum spacing between all signs except Milepost (MP) Markers and Object Marker signs is 500 feet desirable and a minimum of 350 feet for posted limit of 40 mph or greater.
  - Minimum spacing between all signs except Milepost (MP) Markers and Object Marker signs is 300 feet desirable and a minimum of 100 feet for posted limit of 35 mph or less.

2-3.2 Sign Installation

Signs shall be installed according to standards contained in *Design Manual* Chapter 1020, Standard Plans Section G, and 11th Edition MUTCD sections 2A.13 - 2A.20. Refer to these documents for installation standards for:

- Ground mounted signs on steel and wood posts.
- Overhead sign installations, including service walkways.
- Height of sign (vertical clearance or "v" dimension).
- Horizontal location of sign ("w" dimension).
- Sign post break-away and slip base safety features as required.
- Wind load information, see Standard Plans Section G or contact the HQ Transportation Operations office.

2-3.3 Temporary and Permanent Attention Devices

Attention getting devices, such as flags, may be used temporarily with newly installed warning or regulatory signs. They can draw attention to a traffic revision such as a speed limit change or the addition of a traffic signal. Temporary attention devices are fluorescent yellow in color. They are generally displayed for a minimum of two weeks and a maximum of one month. Devices may be displayed up to two months when greater conspicuity is needed.

Attention devices may be permanently placed when a high impact continues to be needed to improve compliance with a specific traffic regulation or other traffic control. Permanent attention devices have been used on Interstate or other major roadways where there is a speed limit reduction of 10 mph or greater.

Permanent attention devices shall be diamond shaped with fluorescent yellow prismatic sheeting and must be approved by the region traffic engineer following an engineering investigation, which includes a review of crash and speed data. The unnecessary use of attention devices erodes their effectiveness and must be avoided. Therefore, permanent attention devices should be re-evaluated every 12 to 24 months for continued effectiveness and re-approved by the Region Traffic Engineer.

2-3.4 Controlling Vegetation Around Signs

The department's maintenance crews are responsible for maintaining visibility to signs by clearing vegetation that obscures the full view of a sign face. Thoughtful sign placement can reduce the need for vegetation control.

The following guidance will generally provide sign visibility. Greater clearing may be necessary in some situations to achieve full visibility to the sign.

Exhibit 2-3

Area Description	Distance* From Vegetation	Width**
Low Speed Urban	200 feet	Varies
Rural	500 feet	Varies
Freeways and All Guide Signs	800 feet	Varies

*Distance is measured in the direction that the sign faces, along the edge of the traveled way.

**Width varies. Clear vegetation from edge of pavement to 5 feet beyond the sign edge that is farthest from the roadway, or to the edge of the right of way.

For vegetation control at grade intersections with county roads, the department is only responsible for vegetation within state highway right of way. The county is responsible for the vegetation on their legs of the intersection outside of state highway right of way. For vegetation on private property, the department has no authority to remove or cut back. Maintenance should try working with the property owner on these vegetation issues.

2-3.5 Sign Storage

Store signs to prevent damage to the sign face. Sign sheeting is damaged by exposure to dirt and water during storage, which can reduce its retro reflectivity. **Never store signs lying flat. Moisture accumulation between signs will cause sheeting failure.**

Store all packaged signs on edge and indoors. If packaged signs become wet, unpack them immediately and separate the signs to dry (clothespins work well). Provide ample space between signs to allow free air circulation and moisture evaporation from each sign face.

If outdoor storage is required for short periods, remove all packing materials so nothing is against the sign face. Store signs on edge, separated with clothespins, and set above the ground in a clean area.

2-4 Sign Installation and Maintenance Jurisdiction

Jurisdictional responsibility for traffic control signs (and other traffic control devices) on public highways is assigned through several state statutes.

- The department is responsible for erecting and maintaining traffic control signs upon every state highway (RCW 47.36.050) and (WAC 468-18-040). Local jurisdictions are assigned the responsibility to erect and maintain traffic control signs on roadways within their jurisdiction (RCW 47.36.060).

  These responsibilities are further defined:

  - On limited access roadways, including any interchange cross-streets, the department is responsible for signing (RCW 47.52.020 and RCW 47.24.020(2)). This can be superseded by an agreement with a local agency that designates other responsibility arrangements (RCW 47.52.090).
  - Responsibility for signing along city streets that are part of the state highway system is assigned based on the population of the city (RCW 47.24.020(12) and (13)) and is shown in Exhibit 2-4. Population is determined by the Washington State Office of Fiscal Management and can be found at www.ofm.wa.gov/sites/default/files/public/dataresearch/pop/april1/ofm_april1_population_final.pdf.

It is important to work with each city to ensure that city signs are not installed on department sign posts and that adequate sign spacing is maintained. The only exception is for STREET NAME signs above a STOP sign. Cities are to obtain approval from the department prior to installing their signs on a state highway (RCW 46.61.085).

Exhibit 2-4 Sign Installation and Maintenance Responsibility Non-Limited Access Highways

Sign Type	Responsibility Based on City Population	
	Over 32,500[1]	Under 32,500[1]
Regulatory	City	State
Parking	City	City
Warning	City	State
Route Markers	State	State
Primary Guide Signs	State	State
Street Name	City	City
School	City	State
MIS Logo	City	City*
Informational	City	City
DUI Victim Memorial	City	City*

[1] Thirty-two thousand five hundred **(32,500) on July 1, 2025** and Thirty-five thousand **(35,000) on July 1, 2030.**

*The department may install these signs, if authorized through a specific agreement with a city or town.

2-5 Traffic Sign Management System (TSMS)

TSMS is a statewide sign inventory computer program that provides both a complete inventory and a history of maintenance actions for each sign on the state highway system.

The Headquarters and Region Traffic Offices use TSMS to provide accurate records regarding:

- Sign location.
- Original installation and replacement dates.
- Sign message.
- Sign size.
- Letter height.
- Direction of sign face.
- Sheeting type and color.
- Post Size, type, and number
- Program Code (What Program – M, Q, or Other paid for the last Maintenance Action).
- Maintenance history.

The Region Traffic Offices are the data stewards and are responsible for keeping the TSMS up to date including:

- Entering new sign data.
- Conducting periodic field inventories.
- Inventorying all signs installed by contract.
- Updating inventory after construction projects are completed.
- Night reflectivity review.

Maintenance personnel in the regions are responsible for filling out a Highway Activity Tracking System (HATS) report that details each activity performed. This provides important history and identifies needed maintenance actions. The HATS report is sent to the region Traffic Office for input into the TSMS. In some regions, maintenance personnel input HATS data directly into TSMS in cooperation with the region Traffic Office.

Regions also provide TSMS reports to Traffic, Maintenance, or other offices as requested.

The Headquarters Traffic Operations Office is responsible for maintaining and updating the TSMS program to meet the department's business needs, including data storage and selective retrieval of sign inventory and maintenance activity data.

2-6 State Traffic Laws and Regulations Requiring a Sign for Enforcement

Some Rules of the Road (RCW 46.61) are not enforceable unless appropriate signs are posted. The following signs must be installed to enforce a regulation (RCW). Place these signs at the point of regulation or where the prohibition begins and ends.

Exhibit 2-5 Signs Needed for Enforcement

Sign Message	Sign Number	RCW
STOP AND YIELD	R1-1 and R1-2	47.36.110
SPEED LIMIT	R2-1	46.61.405 46.61.480
SPEED LIMIT, TRUCKS	R2-2	46.61.410
MINIMUM SPEED LIMIT	R2-4	46.61.425
HOV FACILITIES	R3-10, 11, 12, 13	46.61.165
TRUCKS USE RIGHT LANE	R4-5	46.61.100 47.36.260
TRUCK LANE 500 FEET	R4-6	47.36.260
NO MOTORIZED FOOT SCOOTERS	R5-1003 and R5-1004	46.61.710
PARKING RESTRICTIONS, TOW AWAY ZONES	R7 SERIES	46.61.575
RESERVED PARKING FOR DISABLED PERSONS	R7-801	46.61.581
NO STOPPING RESTRICTIONS	R8 SERIES	46.61.570
NO HITCHHIKING	R9-4 and R9-4A	46.61.255
PEDESTRIAN, BICYCLE, MOTORIZED FOOT SCOOTER PROHIBITION	R5 SERIES	WAC 468-58-030 WAC 468-58-050
WEIGHT RESTRICTIONS, etc.	R12 SERIES	46.61.450
SCHOOL SPEED LIMIT	S5-1	46.61.440
RANGE AREA	I2-401 and I2-501	16.24.060
LIMITED ACCESS	I2-601 and I2-701	47.52.110
SLOW VEHICLES MAY USE SHOULDER	I8-501	46.61.428
TRACTION DEVICE REQUIREMENTS	R16-2100 SERIES	47.36.250

2-7 Regulatory Signs

Regulatory signs alert transportation system users to applicable traffic laws or regulations, and provide information and instructions required for compliance. Regulatory signs, whose installation is required for enforcement of a law, are listed in Section 2-6.

All Regulatory sign sizes are per Table 2B-1 in the MUTCD, unless specifically stated otherwise in the Regulatory sign section.

2-7.1 Stop Signs

The department shall install and maintain all STOP (R1-1) signs at the intersections of county roads with state highways (RCW 47.36.100).

The department shall install and maintain all STOP signs at the intersections of city streets with state highways within the corporate limits of cities having populations less than 32,500 (RCW 47.24.020(13)).

STOP signs shall be a minimum 36 × 36 inches on all roadways. A 48 × 48 inch sign may be used on divided highways with at-grade intersections, at ramp terminals, or where otherwise indicated by engineering judgment.

Existing STOP signs with smaller sign sizes, as described above, may remain in place until they need to be replaced.

2-7.2 Yield Signs

YIELD (R1-2) signs are installed to assign right of way to traffic on certain approaches to an intersection. In addition to guidance in the MUTCD, YIELD signs are installed as follows:

- They shall be installed to assign right of way at the entrance to a roundabout intersection per the MUTCD.
- They should be installed along freeway or expressway on-ramps where acceleration ramp geometry and/or sight distance do not meet *Design Manual* minimum standards. Install the Yield sign so that it is primarily visible only to ramp traffic.
- They may be installed at entrances to ramp and at-grade intersections with right turn islands.

Use the tables in *Design Manual* Chapter 1360, Exhibit 1360-10 to determine the appropriate minimum length for the acceleration lane portion of an on-ramp.

2-7.3 Speed Limit Signs

SPEED LIMIT (R2-1) signs are installed to display the maximum allowable vehicle speed as established by law or regulation. Install a TRUCKS XX (R2-2) sign below the standard speed limit sign where a special speed limit is mandated for trucks over 10,000 pounds gross weight, or vehicles in combination, or where the maximum speed limit for cars and trucks is different.

Speed limit signs are prominently located for maximum awareness at the following locations:

- At the location where a speed limit changes to another.
- On the far side of major interchanges or intersections, including between state highways.
- At entrances to Washington State and at boundaries of cities and towns.
- In rural areas, at 10- to 20-mile intervals.

On **conventional roadways**, locate a sign for each direction of travel, opposite one another at the speed zone boundary. If existing features prohibit opposite installation, the signs may be offset up to 150 feet in either direction from the speed zone boundary and located a maximum of 300 feet apart. If the signs cannot be installed within these parameters, the speed zone boundary may be changed by the State Traffic Engineer to accommodate sign installation.

On **multilane divided highways**, install signs on both the right and left sides of the roadway at speed zone boundaries. Confirmation speed limit signs may be installed on the right side only.

On **freeways**, install signs a minimum of 1,500 feet beyond on-ramp acceleration lanes (MUTCD Section 2E.47). Where interchange ramps are closely spaced, use engineering judgment to determine the most effective intervals for posting speed limit signs. On freeways with three or more lanes in one direction consider installing signs on both the right and left sides of the roadway.

Do not place a speed limit sign between a CURVE or TURN warning sign and the roadway curve or turn itself. Adjust the speed limit boundary location if necessary, to avoid this placement.

See Appendix 2-1 for typical Speed Limit sign layout. See Section 2-8.8 for use of the REDUCED SPEED LIMIT AHEAD (W3-5) warning sign.

See Chapter 6 for information on setting permanent speed limits and Chapter 5 for guidelines on temporary construction zone speed limits.

2-7.4 U-Turn Prohibition and U-Turns Allowed

The MUTCD states that TURN PROHIBITION signs (R3-1 through R3-4, R3-18) shall be installed where U-turns are prohibited. U-turns are allowed where the maneuver can be made safely, without interfering with other traffic, and at least 500 feet from a horizontal or vertical curve (RCW 46.61.295).

On limited access roadways, with median sections, restricted U-turn locations are installed for use by law enforcement, maintenance, and emergency vehicles only (RCW 47.52.120). Sign these median locations with a NO U-TURN (R3-4) sign.

U-Turns are allowed at some roadway intersections, both inside and outside of cities and towns. Signing may be installed to designate where U-turns are allowed and that the side street must yield to the U-turn movement. Appendix 2-2 shows typical U-turn signing associated with left turn lanes at signalized intersections.

2-7.5 Two-Way Left Turn Lane

TWO-WAY LEFT TURN ONLY signs may be installed where a lane in the center of a highway is reserved for the use of left-turning vehicles (in either direction) and is not used for passing or overtaking. The post-mounted (R3-9a or R3-9b) or the overhead mounted (R3-9) sign may be used to supplement two-way left turn lane pavement markings. A plaque indicating BEGIN or END may be mounted above either sign to identify the limits of the two-way left turn area.

Additional WSDOT criteria apply to the use of two-way left turn lane signs:

- Install the initial sign near the beginning of the two-way left turn lane and repeat installation as necessary, based on engineering judgment.
- BEGIN or END plaques are not installed where a two-way left turn lane is interrupted by left turn channelization on either one or both intersection approaches.

2-7.6 Auxiliary Climbing and Passing Lanes

For sections of state highway that include auxiliary climbing lanes:

- Install a TRUCK LANE XXX MILES (D17-2) sign in advance of the climbing lane.
- Install a SLOWER TRAFFIC KEEP RIGHT (R4-3) sign near the beginning of the climbing lane.
- Install a RIGHT LANE ENDS (W9-1R) in advance of the climbing lane terminus, where spacing allows.
- Install a LANE ENDS (W4-2L) sign in advance of the climbing lane terminus. A distance plaque may be installed as a supplement to this sign.

See Appendix 2-3 for signing layout.

For sections of state highway that include auxiliary passing lanes:

- Install a PASSING LANE XXX MILES (D17-4) sign ¼ to ½ mile in advance of the passing lane. Show the approximate distance to the passing lane, measured to the nearest ¼ mile.
- Install a KEEP RIGHT EXCEPT TO PASS (R4-16) sign at the beginning of the passing lane.
- Install a RIGHT LANE ENDS (W9-1R) sign in advance of the passing lane terminus, where spacing allows.
- Install a LANE ENDS (W4-2L) sign in advance of the passing lane terminus. A distance plaque may be installed as a supplement to this sign.
- An optional NEXT PASSING LANE XXX MILES (D17-3) sign may be installed up to 500 feet beyond the passing lane terminus to show the approximate distance to the next passing lane.

See Appendix 2-4 for signing layout.

2-7.7 Keep Right Except to Pass

The KEEP RIGHT EXCEPT TO PASS sign (R4-16) may be used on multi-lane roadways to remind motorists of state law RCW 46.61.100 which requires vehicles to stay in the right lane of multilane roadways, except to pass. The sign has also been installed at the request of law enforcement agencies to aid their enforcement efforts at specific locations.

Use the following criteria when determining sign locations:

- The preferred sign location is in the median.
- Signs are not to be placed within ½ mile in advance of an interchange.
- Signs are not to be placed through an interchange area.
- Signs are not to be placed within 5 miles of each other in the same direction of travel.

2-7.8 Vehicles Over 10,000 lbs. Prohibited in Left Lane

VEHICLES OVER 10,000 LBS. PROHIBITED IN LEFT LANE (R4-302) signs shall be installed on multilane roadways with three or more lanes in one travel direction to remind drivers of large vehicles that they are prohibited from travelling in the left lane per RCW 46.61.100(3) and WAC 468-510-020.

2-7.9 Do Not Enter and Wrong Way Signing

DO NOT ENTER (R5-1) signs shall be installed at every location where traffic is prohibited from entering a restricted roadway. ONE WAY (R6-1) signs are to be installed above DO NOT ENTER signs. Install WRONG WAY (R5-1a) signs as a supplement to the DO NOT ENTER signs at each location. WRONG WAY signs are placed further from the crossroad than DO NOT ENTER sign.

Complete WRONG WAY signing for freeway at-grade intersections, interchange ramps, and roundabouts shall be installed as shown in Appendices 2-5, 2-6, and 2-7.

2-7.10 Bicycle and Motorized Foot Scooters Prohibition

As part of vehicular traffic, bicycles are permitted on all state highways except where restricted by regulation (RCW 46.61.160 and WAC 468-58-050).

Additionally, “motorized foot scooters may have access to highways of the state to the same extent as bicycles” (RCW 46.61.710(5)); thus, they are also restricted in the same areas as bicycles. Restrictions are located primarily on limited access freeways but may be determined for other locations based on an engineering investigation. They are noted at Bicycling in Washington | WSDOT

Install advance signing to inform bicyclists and motorized foot scooter riders of the upcoming restricted section, and to give alternate route directions.

- On the mainline, install a BICYCLE (SYMBOL) MUST EXIT ¼ MILE (R5-601) or a BICYCLES AND MOTORIZED FOOT SCOOTERS MUST EXIT 1/4 MILE (R5-602) sign in advance of the prohibited area.

- Install a BICYCLE (SYMBOL) MUST EXIT (R5-601A) or BICYCLE AND MOTORIZED FOOT SCOOTERS MUST EXIT (R5-602A sign at the closest off-ramp or intersection in advance of the restricted segment.
- Install a BICYCLES AND MOTORIZED FOOT SCOOTERS PROHIBITED (R5-1003) sign at a prohibition point such as an access to a prohibited highway segment.
- On limited access facilities, Install PEDESTRIANS, HITCHHIKERS, BICYCLES, AND MOTORIZED FOOT SCOOTERS PROHIBITED (R5-1004) sign at on-ramp entrances to prohibited areas.

2-7.11 Roundabout Directional Arrow

The ONE WAY (R6-1) or (R6-2) shall be used at the central island of the roundabout in place of the Roundabout Directional Arrow (R6-4, now discontinued) when replacing existing signs. New roundabouts shall use the R6-1.

2-7.12 No Pedestrian Crossing

NO PEDESTRIAN CROSSING signing (R9-3 or R9-3A) may be installed at a signalized intersection or other locations, based on engineering judgment, where pedestrian crossing is prohibited. Locate the sign so that it is visible to all pedestrians who may consider crossing, normally on the opposite side of the roadway in line with the travel path of the pedestrian. Additional signage may be needed to direct pedestrians to alternative crossings. Prohibiting pedestrian crossings may be considered on a case by case basis but should not be used systematically to limit pedestrian crossing opportunities. The supplemental sign USE CROSSWALK (R9-3B R or L) may be installed below.

For More information on closed pedestrian crossings, see *Design Manual* Chapter 1510, Section 1510.09(2)(c).

2-7.13 Pedestrian Prohibition

Install a PEDESTRIANS PROHIBITED sign (R5-10 series) at access points to fully controlled limited access highways where pedestrians are prohibited by a department regulation (WAC 468-58-050).

2-7.14 No Turn On Red

When a turn is prohibited, based on engineering judgment, at a signalized intersection install a NO TURN ON RED BALL (R10-11A) sign on the signal mast arm or signal pole.

When existing NO TURN ON RED (R10-11 or R10-11B) signs need to be replaced, use a NO TURN ON RED BALL (R10-11A) sign.

2-7.15 Shoulder Driving

Shoulder driving is permitted on selected portions of two-lane highways (RCW 46.61.428). Section 7-14, of this manual defines the roadway characteristics required to designate a shoulder driving area. Identify designated shoulder driving areas by installing signs to inform roadway users of the permitted action.

- Install a SLOW VEHICLES MAY USE SHOULDER (I8-501) sign at the beginning of the shoulder driving zone.
- Supplement with a NEXT XXX MILES (I7-702) advisory distance plaque and a DAYLIGHT HOURS ONLY (I8-701) sign.
- Repeat this signing as appropriate at a maximum interval of 5 miles.
- Install an END SHOULDER DRIVING (I8-601) sign at the end of the designated shoulder driving zone.
- Consider bicycle traffic that may be using shoulder, see Section 2-8.19.B, BIKES ON SHOULDERS when there is less than minimum stopping sight distance along the driving section.

See Appendix 2-8.

2-7.16 Specialized Haul Vehicle Weight Restrictions

Specialized Hauling Vehicles (SHV's) are closely spaced multi-axle single unit trucks introduced by the trucking industry in the last decade. SHV's exhibit concentrated loads in short wheel lengths, resulting in greater stress in certain bridge members.

The Bridge Preservation Office (BPO) will identify the bridge location, and what specific message is to be used. Install SPECIALIZED HAUL VEHICLE WEIGHT RESTRICTION (R12- 5B, R12-5C, or R12-5D) signs.

2-7.17 Emergency Vehicle Weight Restrictions

The Fixing America's Surface Transportation (FAST) Act revised the weight limits of emergency vehicles. For bridges on the Interstate System and bridges within one-road- mile of the Interstate System with a load rating that results in an operating factor less than 1.0 for emergency vehicles, weight limit restrictions signs shall be posted. More information is available at: FHWA Load Rating for EV's.

The Bridge Preservation Office (BPO) will identify the bridge location, and what specific message is to be used. Install EMERGENCY VEHICLE WEIGHT RESTRICTION (R12-701 or R12-702) signs at bridge approaches and additional advance posting signs in advance of the nearest intersecting roads, ramps or a wide point in the road where a first responder's vehicle can detour or turn around.

2-7.18 Slow Vehicle Turnouts

Slow vehicle turnouts provide passing opportunities along state roadways and are identified by specific signing to inform motorists of the turnout location:

- Install a SLOW VEHICLES USE TURNOUTS NEXT XXX MILES (I8-101) sign where turnouts occur at several consecutive locations. Place in advance of the initial turnout.
- Install the DELAY OF 5 VEHICLES ILLEGAL (I8-201) sign in advance of each turnout.
- Install the SLOW VEHICLE TURNOUT XXX FT/MILE (I8-401) sign in advance of each turnout.
- Install a SLOW VEHICLE TURNOUT "arrow" (I8-301) sign at the beginning of each turnout.
- NO PARKING (R8-3) or NO PARKING SYMBOL (R8-3A) signs may be installed within the turnout area.

See Appendix 2-9.

2-7.19 Range Area

A RANGE AREA WATCH OUT FOR LIVESTOCK sign (I2-401) shall be installed wherever a state highway enters an open range area, as determined by the local county government (RCW 16.24.060). Repeat signing at points designated by the governing county commissioners and install signs at county boundaries if the range area spans adjoining counties. Some county websites list the designated range areas within their county.

Install the LEAVING RANGE AREA (I2-501) sign where a state highway leaves an open range area.

2-7.20 Unmuffled Compression Brakes

It is against the law to use **unmuffled** compression brakes (RCW 46.37.395). The department installs signs (R4-605) near border crossings used by trucks, a few miles inside state boundaries and along the ramps to or from weigh stations to inform drivers of this regulation.

When installing a R4-605 use these guidelines to determine spacing between a R4-605 sign and other roadway signing:

- On freeway installations, use a minimum spacing of 500 feet.
- On multilane high speed roadways with at grade intersections, use a minimum spacing of 400 feet.
- On two-lane, high-speed roadways, use a minimum spacing of 300 feet.
- On multilane and two-lane, low speed facilities within incorporated areas, use a minimum spacing of 150 feet.

The department will not install these signs on non-access controlled highways within incorporated areas. The local agency may install and maintain such signing.

2-7.21 Compression Brake Prohibition

Signs prohibiting compression brake use may be installed only where a local agency ordinance prohibiting their use has been adopted (RCW 70A.20.060(3)) and where sign spacing is available. The local agency must enter into an agreement (DOT Form 224-099) with WSDOT to pay the fabrication, installation, and subsequent maintenance costs.

Install signs (R4-604) before the restricted area as follows:

- On limited access routes, install signs beyond major interchanges. Locate between the route marker assembly and the speed limit signs. Where sign space is limited, install below the city entrance marker.
- Along non-access controlled routes outside corporate limits, install signs upon leaving corporate limits, and beyond the junction of major intersections, not to exceed one sign every 5 miles.
- Along non-access controlled city streets that are also state highways, the local agency may work with the department to install signs about the prohibition.

When installing an R4-604 use these guidelines to determine spacing between an R4-604 sign and other roadway signing:

- On freeway installations, use a minimum spacing of 500 feet.
- On multilane high speed roadways with at grade intersections, use a minimum spacing of 400 feet.
- On two-lane, high-speed roadways, use a minimum spacing of 300 feet.
- On multilane and two-lane, low speed facilities within incorporated areas, use a minimum spacing of 150 feet.

Note: Compression brake regulations are noise regulations rather than traffic regulations. The department does not regulate compression brake use.

2-7.22 Traction Device Requirements for Snow Prone Areas

Install TRACTION DEVICE REQUIREMENTS (R16-2100 Series) signs per RCW 47.36.250 for snow prone areas approaching mountain passes and other areas where snow and ice are prevalent during winter months.

These signs should be turned away from traffic during non-winter months. See Appendix 2-28.

2-8 Warning Signs

Warning signs are installed to alert roadway users to unexpected conditions on or adjacent to the roadway that require special attention and that may require a reduction in speed or other action desired from the road users while operating on the roadway. These conditions may include expected presence of pedestrians and/or bicyclists.

Determine the appropriate placement of warning signs based on the MUTCD Guidelines for Advanced Placement of Warning Signs, Table 2C-3, and on an engineering judgment. The guidelines provide minimum advance placement distances, based on vehicle speeds and location specific conditions.

Warning signs are installed on both sides of the road on multilane divided roadways that have two or more lanes in one direction. Speed limit signs should not be located between any warning sign and the condition warned for when the warning sign indicates a need to reduce speed.

Warning signs may be supplemented with a warning beacon(s) when additional warning is needed for vehicles approaching a crossing or other locations. Some examples include mid- block crossings, narrow shoulders with bicyclists and/or pedestrians, and less than adequate stopping sight distance per MUTCD Section 4S.03.

Yellow is the standard background color for warning signs. Fluorescent yellow/green (FYG) may be used for bicycle, pedestrian, or playground signs where there are an unusual number of conflicts or where greater attention is needed for the sign because of distracting surroundings.

Exhibit 2-7 Warning (Diamond Shape) Sign Sizes

Roadway Type	Minimum Sign Size
Freeways and Expressways – Mainline and Ramps	48″ × 48″
Multilane and Conventional Roadways	36″ × 36″

2-8.1 Turn and Curve (Horizontal Alignment) Signs and Advisory Speed Plaques

TURN and CURVE signs are installed to alert motorists to horizontal curvature in the roadway alignment. Advisory speed plaques supplement the signs as determined by a traffic engineering study (generally using a ball banking instrument to provide readings as the study vehicle traverses each curve).

WSDOT has adopted the following application when determining curve and advisory speed signing installations:

Exhibit 2-8

Advisory Speed (mph)	Maximum Ball Bank Reading
20 mph or less	14
25 and 30 mph	12
35 mph and greater	10

The TURN (W1-1L/R) sign is used where the engineering and traffic investigation indicates the advisory speed for a horizontal turn to be 30 mph or less.

The CURVE (W1-2L/R) sign is used where the engineering and traffic investigation indicates the advisory speed for a horizontal curve to be from 35 mph to 65 mph.

Install the appropriate TURN or CURVE sign where the recommended curve speed is **5 MPH or more below** the posted speed limit.

Install a supplemental ADVISORY SPEED PLAQUE (W13-1P) below the TURN or CURVE sign if the advisory speed is 5 mph or more below the posted speed limit, or if engineering judgment indicates the need for the sign.

If a supplemental DISTANCE PLAQUE is used, such as beneath a WINDING ROAD (W1- 5L/R) sign, show the distance as a fraction of a mile rather than a decimal (½ mile rather than **.5 mile**). The fraction is more quickly read and easily understood by the motorists.

The placement of the horizontal alignment signs should be located per MUTCD Table 2C-3.

2-8.2 Hairpin Curve

Install a HAIRPIN CURVE sign (W1-11L/R) where the change in the roadway horizontal alignment is 135 degrees or more, and:

- A traffic engineering analysis of roadway, geometric, and operating conditions shows the recommended curve speed to be 30 mph or less.
- The recommended curve speed is equal to or less than the posted speed limit.

Install a supplemental advisory speed plaque (W13-1P) below the HAIRPIN CURVE sign if an engineering and traffic investigation indicates the need for the sign. Large arrow sign(s) (W1-6L/R) or chevron alignment signs (W1-8L/R) should be used in conjunction with the hairpin curve sign.

2-8.3 Large Arrow

LARGE ARROW (W1-6L/R) signs are used at curves where the curve speed advisory is 15 mph or more below the speed limit, or when a curve radius is 1,200 feet or less, or when there is not enough space to install three chevrons in sequence, or where run off the road crashes have demonstrated an operational deficiency.

2-8.4 Chevron Alignment

CHEVRON ALIGNMENT (W1-8L/R) signs are used to provide emphasis and guidance for a change in horizontal road alignment. When the curve advisory speed is 15 mph or more below the speed limit, CHEVRONS shall be installed.

If used, CHEVRONS shall be installed on the outside of a turn or curve, in line with and at approximately a right angle to approaching traffic. Install a minimum of three signs in a series, with at least two signs visible to the motorist at all times throughout the curve.

They should be installed on circular interchange ramps, or on other curving alignments where run off the road crashes have demonstrated an operational deficiency.

2-8.5 Truck Tipping

The TRUCK ROLLOVER (W1-13) sign may be installed in advance of a horizontal curve where there is a history of truck tipping crashes, a ball bank indication of 12 degrees or more, or a side friction factor of f=>0.21*. Display the recommended speed on an ADVISORY SPEED PLAQUE (W13-1P) below the TRUCK ROLLOVER sign. Install the TRUCK ROLLOVER sign in addition to standard CURVE, TURN, LARGE ARROW, and/or CHEVRON warning signs.

* Use the following formula for a third method to determine the truck speed of a curve:

$$V^2 = 15\ R\ (e + f)$$

Where:

V = Speed in miles per hour
R = Radius curve in feet
e = Rate of super-elevation in feet per foot
f = > 0.21 (Safe coefficient of side friction)

2-8.6 Stop Ahead/Signal Ahead

Install a STOP AHEAD (W3-1) sign if the stop sign is not visible for at least the minimum distance indicated in MUTCD Table 2C-3 - Advanced Placement of Warning Signs. Install a SIGNAL AHEAD (W3-3) sign if the traffic signal is not visible for at least the minimum distance indicated in MUTCD Table 4D-2 (Minimum Sight Distance for Signal Visibility).

On county or city road approaches to state highways, the county or city is responsible for installation and maintenance of these signs.

2-8.7 Signal Ahead Sign With Flashing Beacons

Install a SIGNALIZED INTERSECTION WARNING (SIW) sign assembly to warn motorists of the signal installation when:

- The posted speed limit is 55 mph or above; and
- The intersection is more than 2 miles away from the adjacent signalized intersection; or
- The visibility requirements to the signal in Table 4D-2 of the MUTCD cannot be met.

The recommended SIW sign assembly consists of:

- A modified 48″ × 48″ W3-3 sign on an optional black back plate for added target value.
- Two 8-inch LED yellow beacons.
- A flasher circuit activated continuously by a separate circuit from the service.
- A lighting circuit.

Locate the sign per the MUTCD Table 2C-3.

The use of a PREPARE TO STOP WHEN FLASHING (PTSWF) system may also be considered. More information on Advance Warning Systems (i.e. Flashing Beacons) i

s available at: https://wsdot.wa.gov/sites/default/files/2022-09/WSDOT-Traffic-Electrical-REES-P2-AdvanceWarningSystems.pdf

2-8.8 Reduced Speed Limit Ahead

The REDUCED SPEED LIMIT AHEAD (W3-5) warning sign is installed at locations where the speed limit reduces by 10 mph or greater or where engineering judgement indicates the need for advance notice to comply with the posted speed limit ahead. On multilane divided roadways, install a REDUCED SPEED LIMIT AHEAD sign on both the left and right sides. Locate the sign to allow sufficient distance to slow the vehicle to the reduced speed as shown in Exhibit 2-9.

Exhibit 2-9 Reduced Speed Limit Ahead Signs Location

		Approach Speed Limit (mph)								
		70	65	60	55	50	45	40	35	30
Reduced Speed Limit (mph)	65	430								
	60	720	390							
	55	1000	660	350						
	50	1250	910	600	310					
	45	1470	1140	820	540	270				
	40	1670	1340	1030	740	470	230			
	35	1850	1520	1200	920	650	410	200		
	30	2000	1670	1360	1070	810	570	350	160	
	25	2140	1800	1490	1200	940	700	480	290	120
	20	2240	1910	1600	1310	1040	800	590	390	230

2-8.9 Low Vertical Clearance

The installation of new low vertical clearance warning signs or the replacement of existing low vertical clearance warning signs shall be as follows:

The maximum legal vehicle height permitted on state highways is 14 feet (RCW 46.44.020). At the direction of the MUTCD, and through operational experience, a 15-inch buffer (which includes 3 inches for frost heave) has been added to the 14-foot maximum legal height, setting the minimum LOW CLEARANCE signing threshold at 15′3″.

The advance posting of a low vertical clearance is to be consistent with (RCW 46.61.450).

The MUTCD defines “Traveled Way” as the portion of the roadway for the movement of vehicles, exclusive of the shoulders, berms, sidewalks, and parking lanes. The MUTCD defines “Roadway” as a portion of a highway improved, designed, or ordinarily used for vehicular travel and parking lanes, but exclusive of the sidewalk, berm, or shoulder even though such sidewalk, berm, or shoulder is used by persons riding bicycles or other human-powered vehicles. In the event a highway includes two or more separate roadways, the term roadway as used in this manual shall refer to any such roadway separately, but not to all such roadways collectively. RCW 46.04.500 defines “Roadway” as a portion of a highway improved, designed, or ordinarily used for vehicular travel, exclusive of the sidewalk or shoulder.

The Bridge Office periodically measures vertical clearance heights for bridges and tunnels during inspections. The actual clearance height is to the nearest inch rounded down (*actual measurement of 15’ 1-3/4” equals 15’1”*). Bridge clearance data is available through the Bridge Engineering Information System (BEIST) at: http://beist/InventoryAndRepair/Inventory/BRIDGE.

Criteria for new or replacement of existing LOW CLEARANCE (W12-2; W12-2A or W12- 302L/R) warning signs:

- A bridge or a tunnel is signed for a low vertical clearance of 15'-3" or less, the height on the low vertical warning signs shall be the actual measured opening minus three inches.

Criteria for replacing existing LOW CLEARANCE (W12-2; W12-2A or W12-302L/R) warning signs:

- If the actual measured opening for a bridge or tunnel increases by 2" or less the existing signing may remain. (*e.g. a bridge clearance changes from 15'-0" to 15'-2", the existing warning sign of 14'-9" may remain.*)
- If the actual measured opening for a bridge or tunnel increases by more than 2" the signs shall be replaced. (*e.g. a bridge clearance changes from 14'-9" to 15'-0", the existing warning sign of 14'-6" shall be corrected.*)
- If the actual measured opening for a bridge or tunnel decreases by 1" or less the existing signs may remain. (*e.g. a bridge clearance changes from 15'-0" to 14'-11", the existing warning sign of 14'-9" may remain.*)
- If the actual measured opening for a bridge or tunnel decreases by more than 1" the existing signs shall be replaced. (*e.g. a bridge clearance changes from 14'-10" to 14'-8", the existing warning sign of 14'-7" shall be corrected.*)

Through Truss Bridges:

There are two key conditions with Through Truss Bridges – minimum vertical clearance over the bridge deck (***includes traveled lanes and shoulders***), and shoulder width between right side of the edge stripe and curb or barrier. When there is no edge line present the height is measured from the face of the curb or barrier to the bottom of the portal. See Exhibit 2-10 for Conditions and Signing requirements.

Exhibit 2-10 Through Truss Bridges

Condition	See Appendix	Shoulder Width (Ft.)	Required Low Vertical Clearance Signs		
			W12-2	W12-302L	W12-302R
Clearance on any portion of the structure is between **14′3″ and 15′3″**	2-10-1	< 2	X[1,2]	X[3]	X[3]
Clearance above traveled lanes is between **14′3″ and 15′3″**	2-10-2	> 2	X[1]	X[3]	X[3]
Clearance above shoulders is **15′3″ or less**	2-10-3			X[3]	X[3]

[1] Install a W12-2 before the vertical restriction, in accordance with MUTCD Table 2C-3.

[2] Install a second W12-2 in advance of the closest intersecting road that provides a vehicle a turnaround or detour. Supplement the W12-2 with an ADVISORY DISTANCE (W16-3P) plaque, showing the distance to the vertical restriction.

[3] Install the appropriate sign(s) to fit the vertical restriction (i.e. arch structure, etc.).

[4] On divided highways where the lowest vertical clearance is over the traveled lane nearest the median install an additional W12-2 sign in the median.

Non-Truss Bridges:

The key condition with Non-Truss Bridges is the minimum vertical clearance over traveled roadway to the bridge above, see Exhibit 2-11 for Condition's and Signing requirements.

Exhibit 2-11 Non-Truss Bridges

Condition (*See* Footnotes)	See Appendix	Required Low Vertical Clearance Signs			
		W12-2	W12-301	W12-302L	W12-302R
Clearance on any portion of the structure is **14′3″ or less** over the traveled lanes	2-10-4	X[1,2,4]	X[3]	X[3]	X[3]
Clearance is greater than **14′3″and to 15′3″** over the traveled lanes	2-10-5, 2-10-6, or 2-10-7	X[4]	X[3]	X[3]	X[3]

[1] Install a W12-2 before the vertical restriction, in accordance with MUTCD Table 2C-3.

[2] Install a second W12-2 in advance of the closest intersecting road that provides a vehicle a turnaround or detour. Supplement the W12-2 with an ADVISORY DISTANCE (W16-3P) plaque, showing the distance to the vertical restriction.

[3] Install the appropriate sign(s) to fit the vertical restriction (i.e. arch structure, etc.).

[4] On divided highways where the lowest vertical clearance is over the traveled lane nearest the median install an additional W12-2 sign in the median.

Tunnels:

The key condition with Tunnels is the minimum vertical clearance over traveled roadway to the tunnel above, see Exhibit 2-12 for Condition's and Signing requirements.

Exhibit 2-12 Tunnels

Condition	Required Low Vertical Clearance Signs			
	W12-2	W12-2A	W12-302L	W12-302R
Where any portion of the structure is **15′3″ or less** over the traveled lanes (See Appendix 2-10-8)	X		X	X

Other Vertical Clearance Restrictions:

- At locations with a divided highway where the minimum clearance is between **14′3″ and 15′3″** over the traveled lane at the median side, (See Appendix 2-10-7).
- At locations where a mounted sign, utilities, or lights extend below the structure, the appurtenance is at **15′3″**or less:
  - Region Traffic and Maintenance coordinate to relocate/remove the appurtenance. If that is not possible, sign for appurtenance (actual measurement minus 3-inches), sign in advance of the structure with a W12-2 and on the structure with either a W12-2A or W12-302.

- At locations with Parking Lots and Private Roads under Bridges:
  - Case by case; Region Maintenance work with a parking lot owner or request the private road owner to lower the grade underneath the bridge.
  - When low vertical clearance signing is requested at bridge locations with a minimum vertical clearance greater than 15′3″ over the traveled lane; the bridge has a history of being hit by over height vehicles and work with the local entities to determine why the bridge is being struck. The signing shall be approved by the Region Traffic Engineer.
  - At locations (gore areas, or tapers to exit ramps) where shoulder running is common due to traffic backups with an actual lower vertical clearance of **15′3″ or less** over any portion over the shoulder lanes. Consider partnering with enforcement. If these items are not successful and signing is still recommended, the signing shall be approved by the Region Traffic Engineer. Vertical clearance for all overhead signs shall be in accordance with *Design Manual* Chapter 1020.

2-8.10 Merge

Install the MERGE (W4-1L/R) sign to warn mainline motorists of upcoming merging movements, where sight distance to the merge point is less than MUTCD Table 2C-3 Condition A. Locate the sign on the major alignment in advance of the point where two roads converge. An additional MERGE sign may be placed on the entering roadway, particularly where acceleration ramp geometry and/or sight distance do not meet *Design Manual* Chapter 1360 minimum standards, see Exhibit 1360-9. Do not use this sign where roads converge with added lanes and no merging movement is required.

See Appendix 2-20.

2-8.11 Added Lane

An ADDED LANE (W4-3L/R) sign is used in advance of a point where two roadways converge, but merging movements are not required. The sign should be used at all added lane conditions that are greater than 700 feet in length to eliminate unnecessary mainline lane changes. Install the sign so it is visible from both roadways, if possible. Otherwise, install an ADDED LANE sign on each roadway.

See Appendix 2-22.

2-8.12 Lane Ends

Install a LANE ENDS (W4-2L/R) sign:

- To warn of a reduction in the number of same direction traffic lanes on a Multi-lane highway.
- To emphasize that a parallel on-connection is ending, as shown in Standard Plan M-1.80-02.
- In advance of the downstream end of an extra lane provided for slower vehicles.
- A RIGHT/LEFT LANE ENDS (W9-1L/R) or a LANE ENDS MERGE RIGHT/LEFT (W9-2L/R) sign may be used, if sign space is available to supplement the LANE ENDS (W4-2L/R) sign.
- The LANE ENDS sign shall not be used in drop-lane situations. See Appendix 2-21.

2-8.13 Exit Advisory Speed

Install the EXIT ADVISORY SPEED (W13-2) sign at freeway/expressway exit ramps to inform motorists of the recommended exit speed. Locate the sign along the right shoulder of the deceleration lane prior to the exit gore, at a point that allows time for the motorist to make a safe slowing and exiting maneuver. Exit speed is determined by an engineering and traffic study.

In some locations, a CURVE sign is warranted beyond the exit gore. Install standard curve advisory signs in accordance with MUTCD Table 2C-3 as space allows. Otherwise, consider the advisory speeds for the entire ramp when determining the speed to put on the exit speed sign.

2-8.14 Ramp Advisory Speed

Install a RAMP ADVISORY SPEED (W13-3) sign to inform motorists of the recommended speed for traversing a ramp alignment with curvature or other unexpected conditions. Use this sign where needed on freeway/expressway entrance ramps, and freeway/expressway to freeway/expressway connection ramps. Locate signs in accordance with MUTCD Table 2C-3. Ramp speed is determined by an engineering and traffic study.

In addition, if an advisory speed condition is located well beyond the gore or ramp entrance from surface streets, install a standard TURN or CURVE sign with an advisory speed plaque (W13-1AP) in accordance with MUTCD Table 2C-3 as space allows. Otherwise, consider the advisory speeds for the entire ramp when determining the speed to put on the ramp advisory sign.

2-8.15 Intersection Warning

The INTERSECTION WARNING (W2 Series) sign indicates the presence of an intersection with the possibility of turning or entering traffic and the possibility of pedestrian/bicyclist crossing at the intersection. Consider installing this sign where the side road approach is not continuously visible to mainline traffic for a minimum distance as shown in MUTCD Table 2C-3, use engineering judgment to place the sign for distances greater than the MUTCD minimums and where any of the following conditions exist:

- The intersection is not channelized.
- Left-turning vehicles may queue in the traveled lane.
- Approach to the intersection does not provide adequate stopping sight distance.
- Un-signalized channelized intersections.

Do not use INTERSECTION WARNING signs on approaches controlled by STOP or YIELD signs, or at signalized intersections.

INTERSECTION WARNING signs may be modified to show offset intersection geometrics or approach curves. The relative importance of the roadways may be shown by varying the line widths used.

As guidance to motorists, the INTERSECTION WARNING sign shall be supplemented with the black on yellow ROAD NAME (D3-201) sign. The road name shall be upper/lower case letters. Refer to the MUTCD Section 8B.06, for installation criteria for railroad/intersection signs, W10-2L/R, W10-3L/R, and W10-4L/R.

2-8.16 Circular Intersection

CIRCULAR INTERSECTION (W2-6) signs shall be installed in advance of any roundabout established on a state highway and may be supplemented with the ROUNDABOUT AHEAD plaque (W2-6P), and SPEEDADVISORY (W13-1P) plaque may be installed based on engineering judgment.

2-8.17 Slippery When Wet

The HQ's Materials Lab is responsible for the testing of skid resistance on the state highway system pavement on a two-year cycle, any newly or overlaid pavement, and retest locations with skid numbers at or below 30, see *Pavement Policy*.

For locations with an average skid number at or below 30, and a surface treatment to increase the skid resistance number is not feasible, install a SLIPPERY WHEN WET SYMBOL (W8-5) sign in advance of the location. The SLIPPERY WHEN WET sign may be supplemented with a SPEED ADVISORY (W13-1P) plaque and/or a DISTANCE (W16-3P) plaque.

2-8.18 Tunnel Ahead

A TUNNEL AHEAD (W3-1001) sign should be installed in advance of any tunnel that has an obscured entrance, is not illuminated, or has a shoulder width of less than four feet.

A TUNNELS AHEAD sign may be used to address a series of tunnels.

2-8.19 Vehicular Traffic Signs

Vehicular traffic signs may be used to alert roadway users to locations where entering traffic would be unexpected; where road users may encounter other modes of transportation in the traveled lanes or on the shoulder; or where sight distance for the road user ahead is restricted. The vehicular traffic signs may be supplemented with an activated flashing beacon(s) when there are sight distance restrictions and/or when there are narrow or no shoulders.

A. **Bicycle –** A BICYCLE SYMBOL (W11-1) sign may be used to alert road users to locations where there is restricted stopping sight distance or where unexpected entries into the roadway by bicyclists may occur, such as at bicycle path crossings. It may also be considered where there are conflicts between users of different modes. Use fluorescent yellow green sheeting as the background color in areas where extra attention must be drawn to the crossing, such as urban areas with many distractions. A BICYCLE/PEDESTRIAN SYMBOL (W11-15) sign may be used at locations such as shared-use paths where there is a mix of pedestrian and bicycle traffic at the crossing. When used at a specific crossing, the sign shall be supplemented with a diagonal downward pointing arrow plaque (W16-7P) showing the crossing location.

B. **Bikes on Road –** The BICYCLE SYMBOL sign (W11-1) may be used with the BIKES ON ROAD plaque (W11-101) to alert motorists to narrow shouldered roadway sections where bicyclists may be in the lanes. Use a mileage plaque to inform motorists of the distance they can expect to encounter people biking in the traveled lane. Do not install these signs on highways that have designated bicycle lanes. Consider using these signs on sections of state highway where the paved shoulder width is less than 4 feet and one or more of the following conditions are met:

   - Average Daily Traffic volume is greater than 1,700 vehicles, based on the WSDOT's Traffic Geoportal: www.wsdot.wa.gov/data/tools/geoportal/?config=traffic.
   - The state highway is part of a recreational or commuter bicycle route that is officially recognized by the department, or a county or regional transportation organization, such as a Regional Transportation Planning Organization or Municipal Planning Organization.
   - When there is a history of public complaints, or ongoing operational issues observed by law enforcement and/or department staff.
   - Install the BICYCLE sign with a BIKES ON ROAD plaque in advance of or within the first 300 feet of the narrow shoulder area. If the narrow shoulder distance is between 3 and 8 miles, a reminder sign should be placed at mid-point. If the mileage distance exceeds eight miles, reminder signs should be placed at 5-mile spacing.
   - This sign can be modified to "BIKES ON BRIDGE" and installed at bridge locations where there is inadequate shoulder (less than 4 feet) for bicyclists.
   - This sign can be modified to "BIKES ON SHOULDER" and should be installed at the beginning of highway sections where shoulder driving is allowed and there is less than minimum stopping sight distance for vehicles approaching bicyclists on the shoulder.

C. **Share the Road –** WSDOT does not use the supplemental SHARE THE ROAD (W16-1) plaque. Instead, use a BIKES ON ROAD plaque (W11-101) to supplement a warning sign that indicates the specific roadway condition, such as NO SHOULDERS (W8-23) or NARROW SHOULDERS.

D. **Fire Station/Emergency Vehicle –** FIRE STATION/EMERGENCY VEHICLE (W11-8) signs with the EMERGENCY SIGNAL AHEAD (W11-12P) or EMERGENCY SIGNAL (W11-1201P) supplemental plaque shall be placed in advance of all emergency vehicle traffic control signals. The signs may also be installed at locations where there is limited sight distance to the fire station road approach or where the approach is in an area where a motorist would not normally expect to see a fire truck or emergency vehicle enter the roadway. Fire station/emergency vehicle warning signs are not generally used at intersections, unless an emergency vehicle traffic control signal is present.

E. **Snowmobile –** A snowmobile crossing which is located at least 100 feet from any public roadway intersection (RCW 46.10.460) may be signed with SNOWMOBILE (W11-6) signs. This sign is seasonal and should be removed, folded, or covered when the condition does not exist.

F. **Farm Machinery –** FARM MACHINERY signs (W11-5,) may be installed at locations where farm machinery or equipment enters, crosses, or travels along a roadway and where there is limited sight distance or an operational concern. If the farm machinery will be on the roadway for more than ¼ mile, a supplemental DISTANCE PLAQUE (W13-401) may be added. Consider sign installation where:

- There is limited stopping sight distance to the farm machinery crossing or entrance onto the roadway.
- The road user would not normally expect to see a farm vehicle, such as where a farm is operating in an area that has or is being developed for residential or commercial use.
- There is less than minimum stopping sight distance to a slow-moving vehicle along the roadway.
- There is a history of police, farmer, or public complaints, or operational conflicts.

To reduce operational conflicts, work with the farmer to restrict highway driving to daylight hours and non-peak periods, to drive on the shoulder if possible, and to use alternate routes if available.

Farm equipment used on the roadway must be equipped with a reflective hazard triangle sign and a flashing beacon (RCW 46.37.160).

G. **Wheeled All Terrain Vehicle (WATV) -**

Cities and Counties shall submit an application to Local Programs requesting WATV warning signs on WSDOT right of way for WATV's to travel on the state highway and/or cross a state highway. Local Programs will forward the applications to the Region Traffic Office for review and consideration.

WATV's Traveling Along State Highways – Install WHEELED ALL TERRIAN VEHICLES (W11-1601) or WHEELED ATV'S (W11-1602) on state highways with a posted speed limit of 35 mph or less, and the city or county has passed an ordinance to allow WATV's within their jurisdiction, and WSDOT has reviewed and approved the segment in accordance with RCW 46.09.455. The WATV sign shall be supplemented with an ON ROAD NEXT X MILES (W13-1601) plaque.

WATV's Crossing State Highways – Install WHEELED ALL TERRIAN VEHICLES (W11-1601) or WHEELED ATV'S (W11-1602) signs on state highways in advance of an at-grade intersection in accordance with RCW 46.09.455. The WATV sign should be located in advance of the intersection per MUTCD Table 2C-3. The WATV sign shall be supplemented with a CROSSING AHEAD (W16-1601) plaque. Only when all of the following conditions are met:

- WATV may cross state highways only at controlled intersections;
- The intersection should be approximately at a 90-degree angle (30 degrees +/-);
- The state highway intended for crossing has a posted speed limit between 35-60 MPH;
- Approved city or county ordinance allowing the use of WATV's;
- Review and approval from the Region Traffic Office. This is part of the approval process for the local agency to secure grant money from Local Programs to pay for fabrication and installation of the WATV signs.

WATV Route Markers – A WHEELED ALL TERRAIN VEHICLES (I4-1601 or I4-1601A) sign may be used to identify a wheeled all terrain routes. Changes to the background color may be required for signs that are used along federal and state lands.

2-8.20 Pedestrian Signs

Pedestrian signs may be used to alert road users to general locations (e.g. narrow shoulders, mid-block crossings, ramps) where unexpected entries into the roadway or shared use of the roadway may occur.

A PEDESTRIAN CROSSING sign (W11-2) may be installed where attention needs to be drawn to the pedestrian presence, as evidenced by a traffic engineering analysis, operational issues reported by individuals, or Level of Traffic Stress analysis and other information provided from the Active Transportation Division. Fluorescent yellow green may be used as a background sign color where extra attention needs to be drawn to a crossing, such as in urban areas with many distractions.
A BICYCLE/PEDESTRIAN SYMBOL (W11-15) sign may be used at locations such as shared-use paths where there is a mix of pedestrian and bicycle traffic at the crossing. When used at a specific crossing,

the sign shall be supplemented with a diagonal downward pointing arrow plaque (W16-7PL/R) showing the crossing location.

For additional information on pedestrian crossings, see Chapter 4 of the *Traffic Manual*.

2-8.21 Non-Vehicular Traffic Signs

NON-VEHICULAR TRAFFIC signs may be used to alert road users to general locations where unexpected entries into the roadway or shared use of the roadway may occur.

A. **Deer/Elk/Moose/Wildlife Crossing** – Install DEER CROSSING (W11-3 or W11-3A), ELK CROSSING (W11-20 or W11-20A), MOOSE CROSSING (W11-21 or W11-W21A), WILDLIFE CROSSING (W11-23) signs to alert motorists when approaching an area where deer, elk, moose or other wildlife may unexpectedly enter the roadway.

   Gather information from the following sources when considering sign installation:

   - Region Maintenance personnel.
   - HATS
   - WSDOT Headquarters Environmental Services Office, Fish and Wildlife program. They compile a Wildlife Carcass Removal data base which notes deer and other wildlife killed on state highways.
   - Records of crashes with wildlife, maintained by the WSDOT Travel and Collision Data Office.
   - The Department of Fish and Wildlife's regional biologists have additional information on concentrations and migratory routes of deer.

   Consider the following criteria before installing DEER/ELK/MOOSE/WILDLIFE CROSSING signs:

   - Minimum of five documented deer/vehicle collisions per mile per year for at least two of the past 10 years. The crash data is available through Cognos.
   - Minimum of 10 carcass counts per one mile per year for at least three of the past 10 years. The carcass information can be found in HATS, for Choose Type: select Roadkill from pull down menu, for Activity: select 1671 – Roadkill/Animal Disposal, fill in the begin date and end date, select SR, and fill in Start SRMP and End SRMP.
   - Concurrence from region maintenance personnel.

   Existing DEER/ELK/MOOSE/WILDLIFE CROSSING sign locations should be reviewed every five years. If a W11-3 or W11-20 symbol sign is found to be missing or stolen, consider replacing with a W11-3A or W11-20A sign as appropriate.

   Consider using a WILDLIFE CROSSING (W11-23) if reports indicate that several different species are making unexpected entries into the roadway at a location.

B. **Cattle** Crossing **(Livestock)** – The CATTLE CROSSING (W11-4) or HORSE CROSSING (W11-7) sign may be used where there are frequent cattle, horse, or other livestock crossings at a specific site. Consider each request based on roadway type, traffic volumes, and number of crossings. A crossing site used once a day would warrant a sign, whereas one used once a month would not.

Cattle signs are not used for the movement of livestock along a highway such as a sheep or cattle drive. Requests for temporary traffic control to accommodate livestock movement are handled by the region on a case-by-case basis.

2-8.22 Congested Area

CONGESTED AREA (W8-2801) signs may be installed at locations where traffic congestion occasionally occurs. Examples include rural areas where businesses or other community development periodically generate traffic volumes greater than normally would be expected at that location.

2-8.23 Congestion Ahead

The CONGESTION AHEAD (W8-2802) sign is only used where sight distance to the congested area is restricted.

2-8.24 Grated Bridge Deck

The GRATED BRIDGE DECK sign (W8-1602) shall be installed in advance of all bridges with grated decks on any portion of the roadway. Because deck grates may affect the handling characteristics of some vehicles, particularly motorcycles and bicycles, it is important to alert these road users to the road surface condition.

2-8.25 Rough Road Signing

ROUGH ROAD (W8-8) signing is determined based on an engineering study or on engineering judgement in accordance with the MUTCD and is intended to call attention to segments of road with rough or damaged pavement, potholes, or other factors that could lead to vehicle vibration or movements at the posted speed limit. Coordination between the Region Traffic Offices and Region Maintenance offices is needed to determine sign need and placement. On multilane divided highways, post signs on both sides of the roadway. See MUTCD, Table 2C-3 for warning sign placement and Exhibit 2-7 in WSDOT *Traffic Manual* M 51-02.10 for sign size. All warning signs shall be black on yellow and standard layouts are shown in Appendix 2-29 through 2-32.

- If the condition is short in nature and does not require an advisory speed, a ROUGH ROAD sign may be installed based on engineering judgement. A DISTANCE PLAQUE (W13-401) may be installed under ROUGH ROAD sign to indicate the length of the condition.
- For conditions less than 1 mile in length or if an engineering investigation results in an advisory speed reduction of 10 MPH or less, an ADVISORY SPEED PLAQUE (W13-1P) may be installed below the ROUGH ROAD sign.
- If the condition extends beyond 1 mile or the engineering investigation results in an advisory speed reduction of more than 10 MPH, a permanent speed reduction via calendar action may

be needed, see Chapter 6 for further details. Post a SPEED LIMIT REDUCTION (W3-5) sign and a SPEED LIMIT (R2-1) sign prior to the ROUGH ROAD sign. A DISTANCE PLAQUE (W13-401) may be installed under ROUGH ROAD sign to indicate the length of the affected area.

2-8.26 Rocks

The ROCKS sign (W8-1701) may be installed to alert roadway users to roadway sections that are known to have or are subject to frequent rockfall occurrences.

Maintenance crew's track and input "Roadway Rock Removal" activities into Highway Activities Tracking System (HATS) https://hats.wsdot.wa.gov/OtherActivityRecords/Records. The Engineering Geology and Geotechnical Engineering Office in the Materials Lab developed a numerical rating system for identifying and ranking unstable slopes which is available at: Unstable Slope Database.

When a potential rockfall location has a numerical rating of 200 points or greater, a ROCK sign should be installed. A separate sign is not required at each location if adjacent locations can be combined using a FOR XX MILES (W13-401) sign.

Exhibit 2-13 Rating Criteria

Category	3 Points	9 Points	27 Points	81 Points
Problem Type: Soil	Cut or Fill Slope Erosion	Settlement or Piping	Slow Moving Landslides	Rapid Landslides or Debris Flow
Problem Type: Rock	Minor Rockfall Good Catchment	Moderate Rockfall Fair Catchment	Major Rockfall Limited Catchment	Major Rockfall No Catchment
Average Daily Traffic	< 5,000	5,000 to 20,000	20,000 to 40,000	> 40,000
Decision Sight Distance	Adequate	Moderate	Limited	Very Limited
Impact of Failure on Roadway	< 50 Feet	50 to 200 Feet	200 to 500 Feet	> 500 Feet
Roadway Impedance	Shoulder Only	½ of Roadway	¾ of Roadway	Full Roadway
Average Vehicle Risk	< 25% of the Time	25% to 50% of the Time	50% to 75% of the Time	> 75% of the Time
Pavement Damage	Minor – Not Noticeable	Moderate – Driver Must Slow	Severe – Driver Must Stop	Extreme – Not Traversable
Failure Frequency	No Failures in Last 5 Years	One Failure in Last 5 Years	One Failure Each Year	More Than One Failure per Year
Annual Maintenance Costs	< $5,000 per Year	$5,000 to $10,000 per Year	$10,000 to $50,000 per Year	> $50,000 per Year
Economic Factor	No Detours Required	Short Detours < 3 Miles	Long Detours > 3 Miles	Sole Access No Detours
Collisions in Last 10 Years	0 or 1	2 or 3	4 or 5	> 5

2-8.27 Transit Stop Ahead

Install the TRANSIT STOP AHEAD (W14-1101) symbol sign in advance of a Region Traffic office approved transit stop in the travel lane of a state highway when:

- The transit stop is located in an unincorporated area; and
- There is less than 500 feet of sight distance to the transit stop.

Install the sign in accordance with MUTCD Table 2C-3. Refer to WAC 468-46 and Section 7-9 of this manual for further information about the transit stop approval process.

For pedestrian crossings at or near a transit stop, see Chapter 4 for additional information.

2-8.28 Left Turning Vehicles Ahead

The LEFT TURNS AHEAD (W2-601) sign or LEFT TURNING TRAFFIC AHEAD (W2-601A) sign may be used in advance of intersections to alert to possible left turning movement conflicts, as determined by an engineering judgment. Consider installing this sign at locations where any of the following conditions exist:

- The intersection is not channelized.
- Left-turning road users with a history of rear-end crashes.
- Approach to the intersection does not provide less than minimum stopping sight distance.

2-8.29 Lateral Clearance Markers (Object Markers)

The department installs Type 3 OBJECT/LATERAL CLEARANCE MARKERS (W12-401 L/R) to identify objects or conditions within or adjacent to the roadway such as:

- narrow bridges with reduced width shoulders
- drop-offs
- small traffic islands
- underpass piers
- bridge abutments
- barriers
- handrails
- culvert headwalls

IMPACT ATTENUATOR MARKERS (OM3-501L/R and OM3-502) are used to identify the nose section of an impact attenuator. Install a W12-501 when traffic approaching an attenuator passes only one side of the attenuator. Install a W12-502 when approaching traffic passes on both sides of the attenuator.

MUTCD Section 2C.70 though 2C.74 addresses appropriate use and installation requirements of lateral clearance markers. See Appendix 2-11-1 and 2-11-2.

2-8.30 Water Over Roadway

The WATER OVER ROADWAY (W8-1501) sign may be installed where water periodically and consistently accumulates. Hinge the sign to allow crews to open and close it as needed based on field personnel observations in the vicinity of the sign.

2-8.31 Severe Side Winds Ahead

The SEVERE SIDE WINDS AHEAD (W8-2101) sign may be installed where geologic or geographic features or other unique situations create unexpected and severe windy conditions that can impact the handling of a vehicle based on engineering judgment.

2-8.32 Watch for Ice

The department no longer routinely uses WATCH FOR ICE (W8-1601) signs. They may be considered in unique conditions such as where a natural or manmade feature causes consistent roadway wetness and where ice is likely to form during cold temperatures. Examples may include, but are not limited to locations where:

- A waterfall causes roadway moisture.
- An industrial facility consistently causes spray on the roadway.
- There is wetness from short or long-term drainage problems.
- Pavement sensors connected to the WATCH FOR ICE sign discern the outside temperature and flash an alert to motorists about the potential of ice on the roadway.
- Moisture vapor forms on the highway.

Any decision to post a WATCH FOR ICE sign must be based on a traffic engineering analysis and approved by the State Traffic Engineer, in consultation with the appropriate Region Traffic Engineer.

2-8.33 Grooved Pavement

Install the GROOVED PAVEMENT sign (W8-15) where the roadway surface features closely spaced longitudinal grooves. Do not use this sign in areas of rutted pavement. RCW 47.36.200 notes that where a GROOVED PAVEMENT sign is used, a MOTORCYCLES USE EXTREME CAUTION (W21-1701) sign must also be used.

2-8.34 School Areas

School related signing is installed to alert motorists to an upcoming school bus stop or school crossing, and the possible presence of children standing near, walking along, or crossing the roadway. Fluorescent yellow-green (FYG) is the standard background color for school signs.

The department is responsible for school bus stop and crossing related signing. Additional signs (such as an overhead School Crossing sign) are generally the responsibility of the school district requesting them.

2-8.35 School Bus Stops

WAC 392-145-011(6) requires school bus stops with less than 500 feet of visibility be moved or have signs installed prior to the stop location. Install a SCHOOL BUS STOP AHEAD (S3-1) sign where there is less than minimum stopping sight distance to the bus stop, or when engineering judgment indicate the need for a warning sign. If a stop is located on a hill, consult Exhibit 1260-2 in the *Design Manual* for guidance on stopping sight distance on grades.

Where there is less minimum stopping sight distance to the bus stop, it should be relocated if possible, to provide ample visibility. All school bus stops requiring an advance school bus stop sign must be reviewed and approved by the Region Traffic Operations staff. Because of the frequent changes to bus stop locations, they should be reviewed before the start of each school year for possible sign removal or relocation.

The Region Traffic Engineer must approve any school bus stops on limited access facilities (WAC 468-58-030) and provide this information to the State Traffic Engineer who maintains an inventory of the locations. See Figure 7-2 for the School Bus Stop Worksheet.

2-8.36 School Bus Turnaround

The SCHOOL BUS TURNAROUND (S3-201) sign may be installed to alert motorists to an upcoming school bus turnaround location, where minimum sight distance to the turnaround is less than that shown in MUTCD Table 2C-3, or when other operational factors indicate the need for a warning sign. Department policy is to not use the SCHOOL BUS TURN AHEAD sign as shown in the MUTCD.

2-8.37 Signing for Reduced School Zone Speed Limit

Reduced speed limits in school zones are established in compliance with RCW 46.61.440(1) which establishes a 20-mph speed zone **at a marked school or playground crosswalk** when the crosswalk is posted with standard school or playground speed limit signing, or on a roadway bordering a school or playground when posted. See Section 6-4 for additional information on reduced school speed zones.

Standard reduced school zone speed limit signing at a marked school or playground crosswalk is shown in Appendix 2-12 and includes:

- The SCHOOL (S1-1) sign with AHEAD plaque (W16-9P).
- The SCHOOL SPEED LIMIT (S5-101) sign assembly.
- The SCHOOL (S1-1) sign with ARROW plaque (W16-7PL/R).
- The END SCHOOL ZONE (S5-2) sign with the subsequent SPEED LIMIT (R2-1) sign below.

The SCHOOL SPEED LIMIT (S5-501) sign assembly consists of three sections:

- SCHOOL legend (S4-3P) with black letters on a fluorescent yellow green background.
- 20 MPH SPEED LIMIT sign (R2-1).
- WINDOW OF ENFORCEMENT legend.

The enforcement legend is determined by the school district and can be any of the following:

- WHEN FLASHING (S5-1) used in conjunction with a flashing beacon above the sign, as described in MUTCD Section 4S.04.
- WHEN CHILDREN ARE PRESENT (S5-101) used in conjunction with definitions provided in WAC 392-151-035 and WAC 468-95-335.
- WHEN FLAGGED (S5-102) used in conjunction with warning flags that are installed on the sign during the window of enforcement. The school is responsible for installation and removal of the flags.
- X:00 A.M. TO X:00 A.M./P.M. (S4-1P) used to display the specific hours of the school speed limit.

2-8.38 Flashing Beacons or Flags

The SCHOOL SPEED ZONE sign assembly may be supplemented with flashing beacons or flags to draw attention and increase compliance with the reduced speed zone. A Washington State Traffic Safety Commission study noted that WHEN FLASHING school zone signs were more effective in slowing vehicles than either WHEN CHILDREN ARE PRESENT or WHEN FLAGGED signs. The study notes that where the approach speed to a school speed zone is 35 mph or above, schools with WHEN FLASHING signs had significantly fewer vehicles travelling in excess of 35 mph (only 3 percent) than WHEN CHILDREN ARE PRESENT signs (30 percent) and WHEN FLAGGED signs (23 percent).

On highways where the approach speed to a school speed zone is 35 mph or more, or where a wide roadway increases children's exposure, consider the use of flashing beacons above the SCHOOL SPEED ZONE assembly. Beacons are generally paid for by the school district requesting the speed zone. An MOU between the region and the school district should be created to address questions on who is responsible for the maintenance, replacement and associated costs of the beacons.

2-8.39 School Crossings

School crossings may be established either adjacent to the school or as part of a school pedestrian route. Install a SCHOOL sign (S1-1) with a Diagonal Arrow plaque (W16-PL/R) at or near the crossing, and a SCHOOL sign (S1-1) with an AHEAD plaque (W16-9P) in accordance with MUTCD Table 2C-3.

- The SCHOOL (S1-1) sign may be installed at a crossing controlled by a traffic signal.
- Do not install a SCHOOL (S1-1) sign at an intersection crossing controlled by a STOP or YIELD sign.

2-8.40 Overhead School Crosswalk Sign

The OVERHEAD CROSSWALK (W11-201) sign is used only at marked school crosswalks where a traffic engineering study has determined that conventional traffic control measures are not adequate. The sign is installed in addition to the standard school crosswalk signing. The OVERHEAD CROSSWALK sign must include pedestrian or school activated flashing lights. The MUTCD allows the option to use the STOP FOR PEDESTRIANS overhead sign (R1-9C) instead. Consider these factors when determining installation of this sign:

- Approach speed of traffic.
- Width of crossing.
- Number of lanes.

Costs associated with installing and maintaining this traffic control device generally are the responsibility of the requesting school district and should be addressed through an installation, fabrication and/or maintenance agreement.

2-9 Guide Signs

Guide signs direct roadway users along roads and highways by providing information about:

- Route designation.
- Directional and distance information (includes multimodal connections: air, rail, ferries, or transit stations.
- Geographical, recreational, or cultural points of interest.
- Motorist services.

The department receives frequent requests for guide signs. The quantity and spacing of guide signs are controlled so that the roadway user has adequate time to read, understand, and respond to the sign messages.

The *Design Manual* notes that guide sign plans are needed for Interstate highways and require Headquarters Traffic approval. Where a highway passes through a national forest or national park, there may be agreements in place that designate which agency is responsible for each sign type, as well as design requirements for signs. Sign design must consider these requirements.

Review sign requests by considering both the MUTCD sign purpose and the sign spacing criteria. Work with local groups to review conflicting requests, and to determine the most essential and effective signing. It may be necessary to remove or relocate existing signs to accommodate the addition of a more important sign, while avoiding sign proliferation.

Guide signs shall not include advertising.

2-9.1 Types of Guide Signs

Guide signs are grouped by their purpose. Their use is determined according to standards and guidance in the MUTCD.

- **Route Markers** display the official highway number or US Bicycle Route number and direction of travel.
- Primary Guide Signs include advance directional signs, exit directional signs, diagrammatic signs and pull-through signs. They direct roadway users to exit points for principal destinations served by intersections or interchanges, and to cities located on intersecting state routes.
- Distance Signs display distances to destinations and junctions along state routes.
- Supplemental Guide Signs provide direction to major traffic generators or other points of interest, or to destinations preempted from the primary guide sign.

- Follow-Through Signs provide continued direction, beginning at the point of exit from the state highway, and following through to the destination displayed on the guide sign.
- General Motorist Service Signs (MSS) provide information for the unfamiliar traveler about services available at or accessed from upcoming intersections and interchanges.
- Motorist Information Signs (MIS) provide information about specific businesses that meet certain service criteria. The MIS program is regulated by RCW 47.36.310, RCW 47.36.320, and WAC 468-70.

Where sign space is available, guide signs on expressways or freeways generally include:

- One or two advance directional signs where interchange spacing allows.
- An exit directional sign.
- One supplemental guide sign, installed approximately halfway between the advance directional and exit directional sign. It is only installed if spacing requirements can be met.

MUTCD minimum spacing requirements between directional guide signs are:

- 800 feet for freeway and expressways.
- 500 feet for two-lane, high-speed roadways.
- 300 feet for high speed multilane with at-grade intersections
- 200 feet for two-lane and multilane low speed highways within incorporated areas.

2-9.2 Guide Sign Color

Guide signs are generally white letters on a green background. However, some types of signs use other background colors to distinguish the type of destination to which they are signing.

Following are standard guide sign background colors:

- **Brown** – Heritage Markers, State Parks, National parks, U.S. Forest Service facilities, Department of Natural Resources campgrounds, Recreation Activity signs with symbols, Watchable Wildlife, State Public fishing areas.
- **Blue** – Motorist Service signs (MSS), Motorist Information signs (MIS), Washington State Patrol, fire district boundary, fish related signs.
- **Green** – All other guide signs.

2-9.3 Guide Signs on Conventional Roads

Install guide signs in accordance with guidelines in MUTCD Chapter 2D. Guide sign installation for route intersections is shown in Appendix 2-13 for:

- Junctions of state highways.
- Junctions of county roads or city streets that lead to significant destinations.

2-9.4 Guide Signs on Expressways and Freeways

Install guide signs in accordance with guidelines in MUTCD Chapter 2E. Guide sign installation illustrations are shown in Appendices 2-14 through 2-22 for:

- Crossroad Interchange Approach (Appendix 2-14)
- Expressway Intersection Approach (Appendix 2-15)
- Expressway Interchange Approach (Appendix 2-16)
- Freeway Interchange Approach (Appendix 2-17)
- Freeway Exit Ramp (Appendix 2-18)
- Freeway Post Interchange (Appendix 2-19)
- Auxiliary Freeway Lane – Less than ¼ mile long (Appendix 2-20)
- Parallel On Connection – More than ¼ mile long (Appendix 2-21)
- Auxiliary Freeway Lane – More than ¼ mile long (Appendix 2-22)

2-10 Route Signs

A route sign assembly consists of a route sign and auxiliary signs that further identify the route and indicate direction of travel. For conventional roadways, MUTCD Section 2D.29 through 2D.34 provide guidance for the various types of route sign assemblies.

For expressways and freeways, route sign assemblies are typically used for route confirmation and trailblazing purposes. In addition to the guidance provided in MUTCD Section 2E.55, install route confirmation sign assemblies at these locations:

- Entrances to Washington State.
- Beyond interchanges.
- On the far side of intersections with other numbered routes or major local roads.
- Beyond city limits.

In urban and residential areas, install route confirmation sign assemblies at intervals that will keep an unfamiliar motorist informed of the route. Note that where interchanges and intersections are closely spaced and available sign space is limited, speed limit signs are a higher priority than route confirmation sign assemblies.

2-11 Primary Guide Signs

2-11.1 General

Advance directional, exit directional, diagrammatic, and pull-through signs are all considered primary guide signs that provide guidance to the motorist about destinations served by upcoming exits or intersections. The MUTCD defines the required and allowable numbers of guide signs for the various roadway types and interchange classifications. Information is also provided about installation, location, and letter/legend criteria for these signs.

On Conventional roads, a maximum of three lines of destinations may be displayed on a primary guide

sign (MUTCD Section 2D.06). On Freeways/Expressways, a maximum of two destinations may be displayed on a primary guide sign (MUTCD Section 2E.15). A sign support having two or more signs may display a maximum of three destinations. Display the same message on all advance and exit directional signs installed in a series. This provides consistent and effective information to the roadway user, especially the unfamiliar traveler.

Department guidelines require that any freeway exit that is a left-hand rather than right- hand exit must be signed with a yellow LEFT EXIT plaque on both the advance directional and the exit directional sign.

2-11.2 Destination Selection

Display the primary destination(s) served by the upcoming exit or intersection and a second destination using the prioritized list below.

Consider:

- The control city along the intersecting route.
- A junction with another numbered highway.
- The name of a city or town (when multiple cities are requesting to be added; choose a city with the largest population).
- A tribal reservation.
- A street name or roadway name.
- Other major destination such as mountain passes, National Parks, or major airports.

Apply the same destination selection criteria for signs on all conventional roads, expressways, and freeways. As development occurs, it may be necessary to replace existing destinations with ones that have become more essential.

Ventures operated by private entities for profit, and to other ventures not of general interest to the traveling public are not signed on guide signs on state highways. These entities may instead qualify for Motorist Service Signs (MIS), Tourist Activity signs, or Recreation signing.

Current ventures must be signed under the new criteria when the current sign service life is over. Shopping malls that qualify for signing under RCW 47.36.270 are an exception and may be signed on primary or supplemental guide signs.

2-11.3 Control City on Destination Signing

A control city is used on guide signs at junctions with other highways (MUTCD Chapter 2D). The designated control city for selected state routes is shown as follows:

US 2

EB from Everett	Wenatchee
EB from Wenatchee	Spokane
EB from Spokane	Newport
WB from Idaho State Line	Spokane
WB from Spokane	Davenport
WB from Davenport	Wenatchee
WB from Wenatchee	Everett

I-5

NB from Vancouver, WA	Seattle
NB from Seattle	Vancouver, B.C.
SB from Vancouver, B.C.	Seattle
SB from Seattle	Portland

US 12

EB from Aberdeen	Olympia
EB from Elma	Centralia
EB from I-5	Yakima
EB from Yakima	Richland
EB from Pasco	Walla Walla
EB from Walla Walla	Lewiston
WB from Idaho State Line	Walla Walla
WB from Walla Walla	Pasco
WB from Richland	Yakima
WB from Yakima	Interstate 5
WB from I-5	Aberdeen

SR 14

EB from Vancouver	I-82
WB from I-82	Vancouver

SR 20

EB from Keystone	Anacortes
EB from Anacortes	Burlington
EB from Burlington	Okanogan
EB from Okanogan	Colville
EB from Colville	Newport
WB from Idaho State Line	Colville
WB from Colville	Okanogan
WB from Okanogan	Burlington
WB from Burlington	Anacortes
WB from Anacortes	Coupeville

I-82

EB from Ellensburg	Yakima
EB from Yakima	Richland
EB from Richland	Hermiston
WB from Oregon State Line	Kennewick
WB from Kennewick	Yakima
WB from Yakima	Ellensburg

I-90

EB from Seattle	Spokane
EB from Spokane	Coeur d'Alene
WB from Idaho State Line	Spokane
WB from Spokane	Seattle

US 97

NB from Oregon State Line	Yakima
NB from Ellensburg	Wenatchee
NB from Wenatchee	Okanogan
NB from Okanogan	Penticton, B.C.
SB from Canadian Border	Wenatchee
SB from Wenatchee	Ellensburg
SB from Yakima	Goldendale

US 101

NB from Oregon State Line	Aberdeen
NB from Aberdeen	Port Angeles
NB from Olympia	Port Angeles
SB from Port Angeles (East Leg)	Olympia
SB from Port Angeles (West Leg)	Aberdeen
SB from Aberdeen	Astoria

I-182

EB from I-82	Richland
EB from Richland	Pasco
WB from Pasco	Richland
WB from Richland	I-82/Yakima

US 195

NB from Idaho State Line	Spokane
SB from Spokane	Lewiston

I-205

NB from Oregon State Line	Seattle
SB from Jct. I-5	Salem

US 395

NB from Oregon State Line	Kennewick
NB from Pasco	Spokane
NB from Spokane	Colville
NB from Colville	Grand Forks, B.C.
SB from Canadian Border	Spokane
SB from Ritzville	Pasco

I-405

NB from Jct. I-5 (Southcenter)	Renton
NB from Renton	Bellevue
NB from Bellevue	Lynnwood
SB from Jct. I-5 (Lynnwood)	Bellevue
SB from Bellevue	Renton

2-12 Distance Signs

2-12.1 General

A distance sign can display up to three destinations (MUTCD Section 2D.43 and 2E.48). Apply the same destination selection criteria for signs on all conventional roads, expressways, and freeways.

- On the first line, identify the next city with services available, or the next intersected numbered route.
- On the second line, if used, identify communities of general interest along the route. Vary the named community on successive distance signs to provide maximum information to the traveler.
- On the third or bottom line, display the next control city along the route or terminal destination.

Install distance signs at the following locations:

- Beyond intersections and interchanges of numbered state highway routes.
- Beyond city limits or urban boundaries.
- In rural areas at 10- to 15-mile intervals.
- At entrances to Washington State.

Where two or more of these locations occur within 10 miles, sign the most effective location.

2-12.2 Determining Mileage Displayed on Distance Signs

A. **Freeways and Expressways –** Display the distance (in miles) from the sign to either the first interchange/intersection within the destination city limits, or to the city center. Regions must work with city administration to determine the preferred city center reference location.

B. **Conventional Highways –** Display the distance in miles from the sign to the destination city limits. For destinations such as Mt. Rainier National Park, display the distance to the park boundary.

2-13 Supplemental Guide Signs

2-13.1 General

Supplemental guide signs direct unfamiliar motorists to additional destinations or points of interest that are not displayed on the primary guide signs. ***The MUTCD allows only one supplemental guide sign to be installed for each interchange approach and it shall display a maximum of two destinations. Supplemental guide signs shall be installed only when MUTCD minimum spacing requirements can be met.***

Supplemental guide signs should not be installed for a traffic generator that would require a motorist to travel on the interchanging road beyond a second state highway (i.e., I-5 to SR 18 to SR 164).

In general, destinations that generate the greatest traffic volume or have the widest scope of recognition are given highest priority. Nationally recognized traffic generators receive priority over

those that have state, regional, or local recognition. Evaluate the given interchange and select the destinations that provide the most benefit to the highway user.

As development occurs, it may be necessary to replace existing destinations with ones that have become more essential.

2-13.2 Destination Selection Factors for Supplemental Guide Signs

Apply the destination selection criteria equally, whether the signs are on conventional roads, freeways, or expressways. Consider the following factors when evaluating a supplemental sign request:

- On an expressway or freeway, determine if the destination meets criteria contained in the American Association of State Highway and Transportation Officials (AASHTO) publication *Guidelines for the Selection of Supplemental Guide Signs for Traffic Generators Adjacent to Freeways Fifth Edition*.
- State law mandates destination signing for State Parks and regional shopping centers when distance criteria are met.
- Consider how the proposed signing will affect local roadway traffic operations. Work with the local agency to determine the route to a destination and the sign locations. In general, sign to the supplemental destination from the interchange or intersecting road that provides the most direct route to the destination.
- Determine if follow-through signing is needed and work with the local agency to determine sign locations. Local agencies assume responsibility for sign installation and maintenance and must concur with any proposed signs.
- Avoid signing to destinations that require complex navigation on multiple highways, unless the activity is of national significance.

2-13.3 Destination Selection Priorities

A. **Overflow Messages From Primary Guide Signs** – Occasionally, essential messages cannot be included on primary guide signs due to space limitations. Instead, place these essential messages on supplemental guide signs, giving them priority over any other supplemental sign messages.

B. **Destinations Mandated by Statute**

1. **State Parks** – State law (RCW 47.36.290) directs the department to install guide signing on interstate highways to State Parks located within 15 miles of the highway. These destinations have first priority on supplemental guide signs on interstate highways. Additionally, WSDOT policy is to install guide signs to a State Park within 15 miles of *any* state highway.

   The department installs and maintains these signs and provides follow through signing on any state route that connects the state highway to the park. All State Park signs shall have white letters, symbols, and border on a brown background.

   The State Parks and Recreation Commission is responsible for any State Park signing not located on a state highway.

a. **Freeway and Expressway Interchanges**

Mainline – Install signs displaying the name of the STATE PARK and a directional message, such as NEXT EXIT, in advance of the interchange, located to meet guide sign spacing requirements. If the park has restricted hours or days of operation, add a supplemental plaque displaying the operating schedule (i.e., CLOSED TUESDAYS) below the STATE PARK sign. No other supplemental plaques are used on the freeway mainline sign. Do not install mainline signing until all follow through signing is in place.

Ramp – Install signs displaying the message STATE PARK and a directional message, with a maximum of four recreational symbol plaques. Display the mileage to the park from the ramp terminal, using ¼ mile increments if the distance is less than 1 mile.

b. **Conventional Roadway Intersections** – **Install** signs displaying the name of the STATE PARK and a directional message (NEXT RIGHT/NEXT LEFT) in **advance** of the intersection **leading** most directly to the park. Install a maximum of four recreational symbol plaques below.

Install a white on brown sign with the message STATE PARK (D1-1 or D1-1A) and a directional arrow at the intersection of a state route and roadway leading to a state park. Display the mileage to the park from the intersection. Use ¼-mile increments if the distance is less than 1 mile.

c. **Recreational Symbol Plaques** – A maximum of four recreational symbol plaques may be displayed under a state park directional sign, on both conventional roads and on freeway off-ramps.

- Plaques are 24 inch × 24 inch with white message on a brown background.
- If the park does not have camping facilities, display the text message NO CAMPING as one of the recreational plaques.
- If a park has restricted hours or days of operation, display the operating schedule (i.e., CLOSED TUESDAYS) as one of the plaques.
- The park manager for each individual park will determine the additional supplemental symbols to be displayed.
- If a BEACH message is to be shown, use a text message plaque instead of a symbol.
- Before replacing any state park sign, contact the park manager, to determine if any plaque changes are needed.
- If the symbols are seasonal, a written agreement is developed between the state park manager, the local maintenance superintendent, and region Traffic Operations. The agreement outlines who will be responsible for changing the symbols, at what specific time periods, as well as any cost reimbursement that may be involved.

- Headquarters Transportation Operations maintains an inventory of the recreational symbols used at each state park. Inform Headquarters Traffic Transportation Operations when symbol plaques are changed, added, or removed.

d. **Additional Signs** – CAMPGROUND FULL signs may be used at off- ramps and on conventional highways in conjunction with a State Park directional sign. It can be either a post mounted stand-alone sign or a changeable message plaque under the ramp or conventional highway sign. CAMPGROUND FULL signs may not be displayed on a freeway mainline.

A written agreement is developed between the state park manager, the local maintenance superintendent, and region Traffic Operations. The agreement outlines who will be responsible for changing the CAMPGROUND FULL sign, and for the sign fabrication, installation, maintenance, and removal. State Parks will be responsible for all associated costs, administered through a J account.

During seasonal closures, STATE PARK CLOSED plaques are installed on all state parks guide signs, including those on the freeway mainline. This is done rather than removing or turning them. Mount the plaque diagonally from lower left corner to upper right corner on the sign face. Use a panel size that is large enough to effectively cover the legend and a letter size at least as large as the upper case letters in the STATE PARK message. See Exhibit 2-14.

Exhibit 2-14 State Park Closed

2. **Regional Shopping Centers** – State law (RCW 47.36.270) and WAC 468-95-140 requires that regional shopping centers be signed from state highways, if spacing requirements can be met and the shopping center:
   - Has at least 500,000 square feet of leasable retail space.
   - Contains at least three major department stores owned by a national or regional retail chain.
   - Is located within 1 highway mile of a state highway.
   - Generates a minimum of 9,000 daily one-way vehicle trips.

All costs associated with fabricating, installing, and maintaining signs shall be the responsibility of the shopping center.

If the shopping center is not clearly visible from the state highway point of exit, follow-through signing must be in place on city or county roads prior to mainline sign installation.

Signing on the state highway to a county road or city street that bears the name of the regional shopping center fulfills the statutory requirements for signing to those centers.

C. **Other Supplemental Guide Sign Destinations** – The following non-prioritized list includes examples of destinations (traffic generators) that may warrant supplemental guide signing. It is intended to aid in determining appropriate destinations.

Airports

Amtrak/Other Railroad Bike Routes

Business Routes

Colleges/Universities

Event Venues

Fairgrounds

Ferries

Historic District
(may be signed as a Tourist Activity under MIS program if guide signs are full)

Industrial Parks

Military Installations

National Parks

Natural/Cultural/Historic Attractions

Park and Ride Lots

Ports/Port Districts

Recreational Areas

Scenic Byways

Stadiums (Sports Facilities)

Trails/Trailheads

Tribal Reservations

USFS (Headquarters Facilities/Campground)

2-14 Destination Selection Requirements and Installation Details for Specific Types of Traffic Generators

Specific traffic generators (destinations) must meet the criteria listed below to warrant a message on a supplemental guide sign. Appendix 2-23 contains the criteria for freeway installations in a table format. Supplemental guide signing shall be installed in accordance with the specific details shown below.

2-14.1 Airports

Airports are eligible for signing if they are included in the National Plan of Integrated Airport Systems and meet these criteria:

- Associated with an area population of 10,000 or more.
- Located within 5 miles of interchange or intersection.
- Airport runway shall be paved, lighted and 2,500 feet or more in length.
- Municipally or privately owned, and used for commercial enterprise with the following minimum number of regularly scheduled commercial flights per day:
  - 35 flights per day in major metropolitan area (greater than 50,000).
  - 20 flights per day in an urban area (5,000-49,999).
  - 15 flights per day in rural areas.

Contact the WSDOT Aviation Division to determine if a specific airport meets these criteria. Airports that have scheduled flights can be signed with the airport name.

All other airports are signed with the airport symbol or word message.

Airports at remote locations serving a smaller population may be signed when their location is not obvious from the state highway, even if there are no commercial flights.

Existing signs to airports that do not meet these criteria may remain in place until a higher priority destination warrants a supplemental sign.

2-14.2 Amtrak/Other Passenger Rail Stations

Install Amtrak logo signing to Amtrak stations as described below. For other types of rail passenger stations such as those of a Public Transit Authority, a specific logo may be cooperatively developed with Public Transit Authority and department approval, and installed as described below.

A. **Conventional Roadways**

- Use Amtrak symbols or other approved logo signs in the trailblazer format with the appropriate directional arrows.

B. **Multilane Highways**

- If there is enough space to install an individual sign, the Amtrak symbol plaque or other approved logo may be placed on a green background panel with either of these messages: NEXT RIGHT or EXIT XXX (Appendix 2-24, part a).
- If there is not enough space to install an individual sign, the Amtrak symbol plaque or approved logo sign may be installed below the advance exit or the exit directional sign, on the post closest to the traveled way (Appendix 2-24, part b).
- If the sign cannot be installed as above, the Amtrak symbol plaque or approved logo sign may be installed below the supplemental guide sign, on the post closest to the traveled way (Appendix 2-24, part c).
- Install Amtrak trailblazer signs or other approved logo signs along freeway ramps or at ramp terminals. All trailblazer signs must be in place before any mainline signs are installed.

- The Amtrak symbol plaque or other approved logo sign may be installed as part of a multi-modal transportation logo board, along with approved symbols for other modes of transportation.

2-14.3 Business Route

BUSINESS ROUTE signs (M4-3) direct motorists to alternate routes passing through the business portion of a city or through a district of continuous business development. BUSINESS ROUTE signing is generally installed at the request of a local agency.

Any addition or deletion of an Interstate or US highway segment as a Business Route must first be approved by AASHTO. Proposals to add or delete such routes should be sent to the department's Transportation Data GIS & Modeling Office (TDGMO).

Designated Business Routes may be signed as follows:

- Install signing on a state highway business route only if it passes adequately and logically through a business district.
- BUSINESS LOOP or SPUR (M1-2 or M1-3) trailblazers along the route are installed and maintained by the local agency which has jurisdiction over the business route. A written agreement or MOU clarifies the jurisdiction.

2-14.4 Colleges and Universities

Supplemental signing may be considered for a State College or University, their satellite campuses, other regional public or private colleges and universities, and technical schools if they meet the guidelines below and if sign spacing requirements can be met.

Signing is installed from the state highway nearest the campus and is limited to the nearest and most direct interchange or intersection. Signing may also be installed from a freeway or expressway to a conventional state highway where the conventional highway is used primarily by local traffic. Signing is not provided from a freeway or expressway to another freeway or expressway.

Supplemental signing may be installed when:

- The school is accredited in Washington State. Accredited schools are listed on the Northwest Commission on Colleges and Universities (NWCCU) agency website at www.nwccu.org.
- The main or satellite campus is located within 5 miles of a state highway.
- Enrollment criteria are met. Call the Washington Student Achievement Council at 360-753-7800 for the current enrollment figures.

Enrollment criteria (including part time and full time) based on any semester or quarter within the last school year:

- 4,500 students in a major metropolitan area (50,000 or greater).
- 2,500 students in an urban area (5,000-49,999).
- 1,000 students in a rural area.

In metropolitan and urban areas where two or more colleges or universities share a common campus, enrollments may be combined. The enrollment for the minor school should be at least 1,000 students. Metropolitan and urban area boundaries can be determined from the state urban boundary map.

If school enrollment falls below the minimum number for one year, the school will be given written notice that the highway signing will be removed if the following fall semester or quarter enrollment does not reach the minimum number.

Two schools may not share the same sign if they do not share a common campus. If two schools are located in the same area, but do not share a common campus, determine which school is shown on the sign by the following order of priority:

- State university.
- State college.
- Private university or college.
- Technical college or school.

University Mascot Logos – At a University's request, a University mascot logo may be installed on guide signs under the following conditions:

- It is a State University.
- The university name is already displayed on the guide sign.
- Mascot logos may be added only on signs for main campuses.
- The university must supply the logos and pay all costs including engineering, fabrication, installation, and traffic control.
- Maximum logo size is 30″ × 30″.

If there is insufficient space to display a mascot logo on the sign face, the logo will be installed directly above the upper left-hand corner of the guide sign. If the university wants the logo incorporated onto the face of the guide sign, they have the option of paying for a complete new guide sign to include the logo.

When the guide sign is due for replacement, it may be enlarged to incorporate the mascot logo onto the sign face at no cost to the university.

2-14.5 Event Venues, Arenas, Auditoriums, Convention Halls, Fairgrounds, Stadiums

Event venues may be considered for supplemental guide signs using the following criteria, but only where MUTCD spacing guidelines are met.

- In a major metropolitan area of 50,000 or greater population, the venue must be within 2 miles of the state highway, and the annual attendance at the facility must be at least 300,000.
- In an urban area of 5,000-49,999 population, the venue must be within 2 miles of the state highway, and the annual attendance at the facility must be at least 250,000.
- In rural areas, the venue must be within 5 miles of the state highway, and the annual attendance at the facility must be at least 200,000.
- Signs may be installed directing venue traffic from one state highway to another.

2-14.6 Industrial Parks

Supplemental guide signing to an industrial park may be considered using the following criteria, but only where MUTCD spacing guidelines are met.

- The industrial park has at least 500,000 square feet of space available for lease (may include a mix of manufacturing, service, and warehouse facilities).
- The industrial park is within 5 miles of the state highway.

2-14.7 Natural, Historic, and Cultural Attractions

A. **General Criteria** – Consider supplemental guide signing to natural, historic, and cultural attractions if the attraction meets guidelines shown below, but only where MUTCD sign spacing guidelines can be met. Signing is not provided if the attraction is readily visible from and has direct access to the state highway. Privately operated commercial attractions (i.e., Wild Waves) are signed as part of the Motorist Information Sign (MIS) program as a Tourist Activity.

Periodic reviews by region personnel confirm that signing is displayed only for attractions that meet eligibility criteria and that signs are removed or covered when the attraction is closed for the season, no longer meets criteria, or is no longer in operation. Reviews may also identify new attractions that meet eligibility criteria.

Natural, historic, and cultural attractions must meet the following general criteria to be considered for supplemental signing:

- The attraction must have regional or national significance and meet destination or traffic generator guidelines. Do not sign attractions that are primarily of local interest.
- The attraction must be located within 10 miles of the interchange or intersection being signed. Signing is installed only on the state highway nearest to the attraction. Any necessary follow-through signing shall be in place prior to installing state highway signs.
- The attraction must be open without appointment to the general public.
- Attractions must be accessible by a two-lane, all-weather road as a minimum.
- The attraction must be maintained in good repair and presented in a professional manner.
- If the attraction charges an entrance fee, the activity is responsible for all costs for fabrication, installation, maintenance and replacement. A co-signed agreement with the business or organization establishes the approximate costs and payment method. Examples are Fort Vancouver Historic Site and Maryhill Museum.
- If the activity is operated by a governmental agency or organization, the department will install the signs at no cost to that agency or organization.

- The signs shall be white letters on a green background. This color change increases the reflective service life of the signs. All existing white on brown signs should be replaced with white on green as normal service life expires. **Signing for Heritage Markers, State Parks, National Parks, or U.S. Forest Service facilities will remain white on brown.**
  - For attractions located more than 1 mile from the interchange or intersection, display mileage information on the ramp terminal or direction signs.
  - For seasonal operations, signs must be removed or covered with a CLOSED plaque during the off season. See Exhibit 2-14 for example.

B. **Natural Attractions** – In addition to the general criteria above, consider signing to natural attractions if they are unique or of a type not generally accessible to the public. Examples of natural attractions are the Snoqualmie Falls, Palisades Rock Formation, the Ice Caves west of Trout Lake, Hurricane Ridge, and the Snake River Canyon.

C. **Historic Attractions** – In addition to the general criteria above, historic attractions may be considered for signing if:
   - They are included in the National Register of Historic Places or the Washington Heritage Register as designated and maintained by the Washington State Department of Archaeology and Historic Preservation.
   - The attraction includes one or more of the following features at the site:
     a. An interpretive center and/or a guided tour.
     b. Visible historic buildings, features, or ruins with interpretive markers.

     Examples of historic attractions are the Whitman Mission, Steptoe Battlefield, Jackson House, Fort Simcoe, and the Monticello Convention Site. The application form (Appendix 2-24) may be used to document if the attraction meets the eligibility criteria.

     Determine if the attraction is included on the National Register of Historic Places or the Washington Heritage Register at: https://wisaard.dahp.wa.gov.

D. **Cultural Attractions** – In addition to the general criteria above, consider signing to cultural attractions if they are similar to, or fall within, one of the following categories:
   - **Museums** –Affiliate Organization of the Washington State Historical Society (Washington State Historical Society (washingtonhistory.org).
   - **Religious** – Sites, shrines, etc., that are of a unique religious nature and provide visitor facilities or tours.
   - **Educational** – Centers other than public or private schools, vocational schools, or colleges and universities that are of outstanding educational value and provide visitor facilities or tours.
   - **Scientific** – Locations used for research or scientific advancement that provide visitor facilities or tours.

   Examples of cultural attractions are the Maryhill Museum, St. Mary's Mission, the Forest Learning Center near Mount St. Helens, and the Goldendale Observatory. The form in Appendix 2-25 may be used as an application for cultural attractions.

2-14.8 Heritage Markers

HERITAGE MARKER signs (I5-103/104) guide motorists to historical or other interpretive markers located along state highways (see Section 7-11). They are used where there is a marker but no building or other facility. Use both the advance sign as well as the "at point" sign to give adequate guidance and time for a motorist response. HERITAGE MARKER signs are white on a brown background and replace existing HISTORIC MARKER and ROADSIDE ATTRACTION signs. Examples of HERITAGE MARKER sites include Willy Keil's Grave, the Bridge of the Gods, and Earthquake Point north of Entiat.

Do not use a HERITAGE MARKER sign to direct motorists to a historical site on either the national or state registers. These sites are signed using Historical attraction criteria and signing.

2-14.9 Ports/Port Districts

Supplemental guide signing to Ports, or Port Districts may be considered if sign space is available per the MUTCD, using the following criteria:

- The facility is served by two or more modes of transportation and is generating commercial traffic.
- Goods move in and out of the facility.

For more information on Marine Ports, see Chapter 2 of the *Marine Ports and Navigation Plan*.

2-14.10 Recreational Activities and Areas

Supplemental guide signs to specific recreation activities open to the public (such as Emerald Downs racetrack, Cheney Stadium, or Northwest Trek) may be considered if MUTCD spacing guidelines are met, together with the following annual attendance criteria:

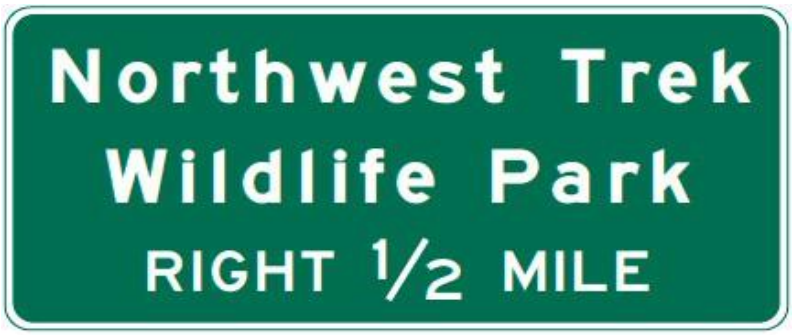
- Major Metropolitan Area – 300,000
- Urban Area – 250,000
- Rural Area – 100,000

Install RECREATION AREA (D7-7701) signing to guide motorists to public or private recreational activities that meet the criteria below. Display a maximum of four activity symbol plaques below the RECREATION AREA and direction message.

- The activity is not readily visible from the highway, and has no direct access to the highway.
- The activity is within 10 miles of the interchange or intersection being signed, and is served by at least a two lane, all-weather road.
- The activity is open to the public, without appointment, at least eight hours a day, five days a week including a Saturday and/or a Sunday.
- The destination facility must be maintained in good repair and presented in a professional manner.

- Location shall include free public restroom facilities with a sink and running water for hand washing, a flush toilet, toilet tissue, and sanitary towels or other hand-drying devices. Restroom facilities shall contain appropriate locks for occupant security and must be ADA accessible.
- If the activity charges an entrance fee, all costs for fabrication, installation, maintenance, and replacement are paid by the activity or organization.
- A co-signed agreement with the business or organization establishes the approximate costs and method for payment.
- Privately owned or operated recreational activities should be signed under the Motorist Information Signing Program, where applicable.
- Signing is installed only on the state highway nearest to the attraction. Follow-through signing shall be in place prior to installing state highway signs. For activities more than 1 mile from a freeway interchange, display mileage information on the ramp terminal sign. On conventional roads, show the mileage on the direction signs. The hours of operation may also be shown.
- Recreation signs without symbols shall be white letters on a green background. Replace existing brown and white signs as service life expires.

Exhibit 2-15



- For seasonal operations, signs must be removed or covered with a CLOSED plaque during the off season.

Along non-access controlled city streets that are part of the state highway system, within incorporated cities or towns with populations over 32,500 the local agency has jurisdiction for this signing.

Supplemental guide signs to specific recreation areas may be considered when the area is of regional significance such as Quinault Recreation Area. Signs and the symbol plaques shall be white on brown. See Exhibit 2-16.

Exhibit 2-16

Public Recreation Areas – Display the AREA NAME (e.g., CAPITAL FOREST).

Multiple Agency Recreation Areas – Display the AREA NAME (e.g., CUSHMAN- STAIRCASE RECREATION AREA) and each agency's logo.

Do not include recreational activity symbols on multi-agency signs. Requesting agencies shall coordinate installation of follow-through signing with local road jurisdictions.

The following symbol plaques may be used:

Exhibit 2-17

Recreational Activity	Sign Designation Number
Picnic Area	D7-2201
Fishing	D7-1301
Trailer Camping	D9-3a
Boat Launch	D7-1101
Swimming	D7-1401
Hiking*	D7-501
Skiing	D7-2001
Snowmobile Area	D7-2101
Public Golf Course	D7-701
Public Beach Area	D7-1402

****Note:*** Sign trails of regional or statewide significance such as the Pacific Crest Trail, the John Wayne Trail, the Willapa Trail, and the Pacific Northwest Trail. Trail signs shall be a white on brown trail symbol with trail name below. Provide additional arrows and/or distance information as necessary.

2-14.11 Tribal Signing

A. **Reservation Boundary Signing** – ENTERING/LEAVING and (NAME OF) RESERVATION signs may be installed at reservation boundaries where the state highway passes through a tribal reservation. The boundary limits indicated are to be the original treaty boundary limits. If the reservation has a "patch work" boundary layout, place the boundary signs to encompass the entire patch work layout rather than installing individual sets of signs for each boundary crossing location. Signs shall be white letters on a green background.

B. **Directional/Distance Signing** – As sovereign nations, a tribal reservation may be considered as a primary or supplemental destination along with other local jurisdictions (a city or town). Tribal logos may be incorporated on directional signs. Any wording that refers to or implies a commercial enterprise is not allowed. Directional and distance signs shall be white letters on a green background.

   Signing may be from one state highway to another if sign space is available. Ramp follow-through signing should show the mileage if the reservation is more than 1 mile away. Additional signing for the Tribal Center or Community Center may be considered at the nearest and most direct interchange or intersection, if it meets heritage, cultural, historic, or museum criteria.

   Examples:

(NAME OF) RESERVATION	(NAME OF) TRIBAL CENTER
NEXT RIGHT or "X" Miles	NEXT RIGHT or "X" Miles

   Tribal logo may be incorporated into the guide sign. The maximum logo size is 30″ x 30″. The logo shall show the shape and color both day and night.

   If there is insufficient space to display a tribal logo on an existing sign face, the logo will be installed directly above the upper left-hand corner of the guide sign. If the Tribe wants the logo incorporated onto the face of the guide sign, they have the option of paying for a complete new guide sign to include the logo.

   When the guide sign is due for replacement, it may be enlarged to incorporate the tribe logo onto the sign face at no cost to the Tribe.

C. **Tribal Language Signs** – Tribal Governments have requested certain traffic signs display both English and their tribal language on roads and highways that traverse tribal lands. WSDOT worked with the Washington Indian Transportation Policy Advisory Committee (WITPAC) to develop this signing program.

   Information about the meanings of the words on the signs will be publicly available on the WSDOT Tribal Liaison webpage https://wsdot.wa.gov/about/contacts/tribal-contacts after the signs are installed.

   Tribal Governments may request dual language signing on jurisdictional boundary and geographic features signs on or adjacent to tribal lands roadways under WSDOT jurisdiction. The following is the WSDOT's guidance on the display of both the English and tribal language on traffic signs.

The display of both the English and tribal languages on a single sign or sign assembly may be approved by WSDOT, based on the following guidelines:

1. Requests may include any jurisdictional boundary or geographic feature signs, including the following signs: Reservation Boundary signs, City entrance signs, County line boundaries and bodies of water such as lakes, rivers, streams, or creeks when that body of water is crossed by the state highway by the use of a bridge or the body of water is visible to the motorist. A letter of concurrence from the City or County is required for city entrance signs or county boundary signs. The letter of concurrence needs to specify that they are in agreement that both languages be displayed and identify the placement, above or below, of each language.
2. Such signs shall be limited to locations on or adjacent to tribal lands.
3. The sign message shall be tribal language as specified by the requesting Tribal Government.
4. Tribal languages shall not be displayed on any other sign including, but not limited to, Regulatory, Warning (including School Zone), and all other Guide (including Destination, Mileage, Street Name, General or Specific Service (Logo Signs), Tourist-Oriented Directional (Specific Service Signs), Scenic Byway Routes, and Acknowledgment) signs.
5. Tribal language signs for jurisdictional boundaries or geographic features may be installed on conventional highways. On freeway or expressway type highways, only signs for jurisdictional boundaries may be installed. Freeways are high speed highways that have entrance and exit ramps. Examples include I-5, I-90, I-405, I-705, I-205, I-82, I-182, SR 520, SR 16, SR 167, SR 512 and others. Expressways are generally high speed 4-lane divided highways like SR 8 between Olympia and Aberdeen, parts of US 101, US 97 and US 12. Three sections of Expressways that are on or next to Tribal lands: US 97 from Union Gap to Toppenish, SR 20 from Anacortes to I-5 and US 101 near Kamilche.
6. Such signs shall be post mounted on WSDOT approved crashworthy roadside sign structures and not be overhead installations.
7. Installation of the signs shall not interfere with the placement of any other necessary signing and shall not compromise the safety or efficiency of traffic flow. The signing shall be limited to one sign at an appropriate location in each route direction.
8. All letters and numerals displayed on the sign for the main characters of the tribal language shall be as provided in the *Standard Highway Signs and Markings* reference publication. Unique characters that are necessary for the proper translation, but not provided in the FHWA Standard Alphabets, may be used. These unique characters are to be kept to a minimum and shall be based on the characteristics of the letter forms of the Standard Alphabets, such as stroke width and arc, to the extent practicable.

Process Overview

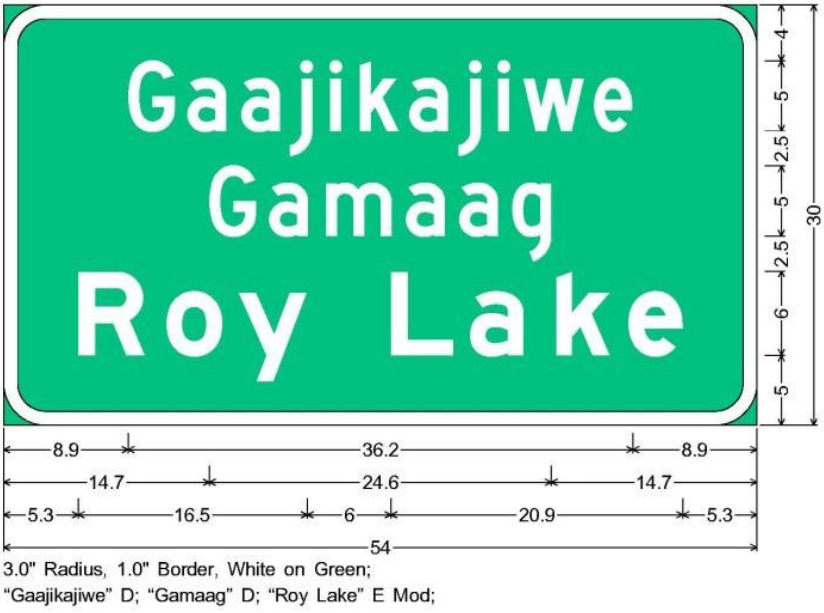
1. The Tribal Government will request signs through WSDOT HQ Transportation Operations Office.
2. The Tribe will include the following items with the request:
   a. Submittal Letter
   b. Documentation that illustrates action of approval by the Tribal Government to request signs. For example, letter from Tribal Chair or Tribal Council Resolution.
   c. Letter of concurrence from the City or County is required for any requested city entrance signs or county boundary signs. The letter or concurrence needs to specify that they are in agreement that both languages be displayed and identify the placement, above or below, of each language.
   d. List of requested signs as entered into the spreadsheet: Tribal Language Signs. xlsx. Because of the length of some tribal words, some signs could be very large unless the word or phrase is separated onto two lines. Where possible, recommend where the word or phrase can be separated onto two lines without changing the meaning.
   e. If possible, submit electronically the spreadsheet referenced above to the WSDOT Traffic Office so information can be added to the spreadsheet as described below.
3. The WSDOT Regional Traffic Office will provide the following information back to the Tribe:
   a. Sign Panel designs (PDF)
   b. Completed spreadsheet: Tribal Language Signs.xlsx
   c. Cost estimate for each sign fabrication and installation according to WSDOT Regional Traffic Office.
   d. J-agreement for cost reimbursement, sign design, location, sign maintenance and replacement.
4. The Tribe will review the sign panel designs for accuracy. If there are errors in the sign design, the Tribe should contact the Regional Traffic Office with revisions. Once the tribal sign design is approved, the Tribe will send the WSDOT HQ Transportation Operations Office a completed agreement and payment.
5. When the completed agreement and payment are received, signs will be ordered for fabrication and installation.
6. If the sign needs to be replaced because it is damaged, the replacement cost will be the responsibility of the Tribe.

7. The WSDOT Regional Traffic Office will send the completed spreadsheet to the WSDOT Tribal Liaison who will make the English words, the tribal language words, and the English translation of the tribal words, and a phonetic representation of the words available on the WSDOT Tribal Liaison website.

Sign Panel Design

1. The tribal language may be placed above the English language on a case by case basis. Both languages are upper lower case lettering.
2. Due to the length of some tribal words and phrases it is recommended to use the highway font Series D instead of E Mod. Series D is a similar font to E Mod but has less breadth to the letters by approximately 35 percent. By using the Series D font and one inch less than the standard font height, the overall width of the signs when placing the tribal language on two lines should in most cases fit two post sign structures. If the word or phrase cannot be displayed on two lines the overall size of the sign may require a larger sign structure. This will increase the cost of the sign.
3. The I3-101 (Body of water) and I2-501 (County boundary) sign will include the tribal language in Series D, 6-inch font and the English language in E Mod, 6-inch font.
4. The I2-301 (City Entrance Signs) will include the tribal language in Series D, 8-inch font and the City Name with the English language in E Mod, 8-inch font.

Exhibit 2-18 Sign Design Example from Minnesota DOT



2-14.12 United States Forest Service (USFS) Facilities

Supplemental guide signing to a USFS facility (campground, Visitor's Center, or a Headquarters building) may be considered if distance criteria are met and sign space in accordance with the MUTCD is available.

The facility must be located within 1 mile of an interchange or intersection in a major metropolitan or urban area, and within 10 miles in a rural area. These signs are white letters on a brown background per agreement with the USFS (GCB 1336). Contact the Headquarters Transportation Operations office for further guidance.

2-15 Unwarranted Traffic Generators/Destinations

Guide signs to activities operated by private entities for profit, and to other activities not of general interest to the traveling public are not permitted on state highways.

Traffic generators that do not warrant guide signing include:

Businesses

TV/Radio Stations
Theaters
Casinos
Nurseries

Cemeteries

Local or State
Private/Public
Military (exception: A National Cemetery or VA Granted Cemetery, as designated by the U.S. Dept. of Veteran Affairs, that is located within 10 miles of the nearest intersection or interchange, may be signed.)

Communities

Civic Centers
Libraries
Churches
Subdivisions
Neighborhoods

Governmental

Research/Experimental
Facilities County Facilities
Courthouses
Vehicle Emissions Testing Facilities
Drivers and Vehicle License Centers
Transportation Buildings
Civil Defense Facilities
Maintenance Facilities
Power Plants

Schools

Grade/High
Seminaries

Medical

Mental Facilities
Research Facilities
Treatment Centers
County, Fraternal, or Nursing Homes
Retirement Facilities

Military Sites or Detachments

Armories
Arsenals

Tree Nurseries/Arboretums

Camps

Scout, Church, 4-H, Youth, and YMCA/YWCA (because these are not open to the public).

2-16 Follow-Through Signing

Follow-through signing provides motorists (after being directed off the state highway) with confirmation to destinations. Signs are installed and maintained by the agency responsible for the local roadway and must be in place before any directional signs are installed on the state highway.

When considering a destination for a supplemental guide sign, determine whether the local agency will install follow-through signing on the local roadway and coordinate the signing plan with them. Provide MUTCD guidelines for follow-through sign sizing to local agencies. Use 6-inch D series letters in high traffic volume or high speed areas. Use 5-inch C series letters, as a minimum, on lower volume or slower speed roadways. Include directional information or arrows as part of the legend.

Install follow-through signing in advance of decision points where route changes are required. Additional trailblazer signs may be placed at mandatory stop locations, but do not install these signs in combination with regulatory or warning signs.

2-17 General Service Signs

2-17.1 General

The MUTCD directs States to establish signing guidelines for several types of general services. Install GENERAL SERVICE signs where the services are not readily apparent to travelers and where they meet the criteria noted below.

Do not combine GENERAL SERVICE signing and MOTORIST INFORMATION (MIS LOGO) signs on the same back panel. If a specific MIS back panel is in place do not also install GENERAL SERVICE signs for that service. (e.g., if a FOOD back panel exists then a general service food sign will not be installed). A specific business can join the MIS program instead.

Periodic reviews by region personnel confirm that signing is displayed only for services and facilities

that meet eligibility criteria and that signs are removed or covered when the service or facility is closed for the season or no longer in operation.

The following motorist service signs may be installed:

Exhibit 2-19

Sign Symbol	Sign Fabrication Number
Gas (Diesel)	D9-7 (D9-11)
Food	D9-8
Lodging	D9-9
Phone	D9-1
Hospital	D9-2
Emergency Medical Care Facility	D9-13
Camping	D9-3
Recreational Vehicle Park	D9-3A
RV Sanitary Station	D9-12
Restrooms	D9-5B
Propane	D9-15
Electrical Vehicle (EV) Charging Station	D9-11B

Install one GENERAL SERVICE sign assembly at an interchange or intersection, with a maximum of four plaques. Combine the GENERAL SERVICE message with a directional message such as NEXT RIGHT, SECOND RIGHT, or the EXIT NUMBER (D9-101, D9-102, or D9-103).

The NEXT SERVICES MILES (D9-1601) sign may be placed below the MOTORIST SERVICE sign if the next services are more than 20 miles away.

A separate word message VISITOR INFORMATION sign may be installed under the GENERAL SERVICE sign.

When services are not readily visible from an interchange, install follow-through signs at ramp terminals, using the same legends or symbols as on the mainline signs. If the services are located more than 1 mile from the interchange or intersection, display the distance to the services on the ramp terminal or direction sign respectively.

Signs have white symbols or letters on a blue background.

GENERAL SERVICE plaques may be installed in conjunction with other guide signs:

- On ground mounted signs, install the plaque on either post below the sign.
- If more than two GENERAL SERVICE plaques are required, place them on a bracket below the guide sign, in a manner that does not interfere with the breakaway safety features of the sign structure.
- On overhead signs, a GENERAL SERVICE plaque is installed above the guide sign.

The department uses the following criteria to determine if a general service sign is warranted. The State Traffic Engineer can approve minor deviations on a case-by-case basis.

2-17.2 Gas, Diesel, and/or L-P Gas

- Vehicle services are required to include fuel, oil, and water to be consider as vehicle services.
- Location shall include free ADA accessible public restroom facilities with a sink and running water for hand washing, a flush toilet, toilet tissue, and sanitary towels or other hand-drying devices. Restroom facilities shall contain appropriate locks for occupant security.
- A free potable water drinking fountain and free cups as necessary must be supplied for public use.
- The facility must operate for at least 16 uninterrupted hours per day, seven days per week.
- A telephone must be available to the public.
- The facility must be within 1 mile of an interstate highway interchange, or within 5 miles, and not readily visible from a non-interstate highway.

2-17.3 Food

- The facility is required to be licensed or approved by the appropriate county health agency.
- The facility is required to operate for at least 12 uninterrupted hours per day, seven days per week, and serve breakfast, lunch, and dinner.
- Location shall include free ADA accessible public restroom facilities with a sink and running water for hand washing, a flush toilet, toilet tissue, and sanitary towels or other hand-drying devices. Restroom facilities shall contain appropriate locks for occupant security.
- A telephone must be available to the public.
- Seating capacity for a minimum of 20 patrons and parking for a minimum of ten vehicles, or drive-in service facilities must be provided.
- The facility must be within 1 mile of an interstate highway interchange, or within 5 miles, and not readily visible from a non-interstate highway.

2-17.4 Lodging

- The facility is required to be licensed by the Washington State Department of Health and provide proof of the license.
- Facilities signed from an interstate highway must have 12 units or more, each with a private bath.
- Facilities signed from non-interstate highways must have six units or more, each with a private bath.
- A telephone must be available to the public.
- The facility must be within 1 mile of an interstate highway interchange, or within 5 miles, and not readily visible from a non-interstate highway.

2-17.5 Phone

- Phone service is required to be available 24 hours per day, seven days per week.
- The phone is required to be located within 1 mile of an interstate highway interchange.
- Phone signing is not required if another service near the interchange has met the phone criteria as part of qualification.

2-17.6 Hospital

- Continuous emergency care service is required to be available, with a doctor on duty, or on immediate call 24 hours per day, seven days per week.
- Written certification of emergency care capability is required to be obtained from the Washington State Department of Health and provided to the department prior to sign installation.
- The hospital is required to be located not more than 20 minutes driving time from the interchange or intersection.
- For an area with two or more qualifying hospitals, provide signs to the closest facility, by approach direction, located within 20 minutes driving time from the interchange or intersection.
- Follow-through trailblazer signs are required from the highway to the hospital. They shall be installed and maintained by the local agency.

2-17.7 Emergency Medical Services Facility

- The facility is required to operate continuously 24 hours per day, seven days per week.
- Written certification of emergency care capability is required to be obtained from the Washington State Department of Health and provided to the department prior to sign installation.
- The facility is required at all times to have:
  - A Physician, a Registered Nurse, or a Paramedic on duty.
  - Or, an Emergency Medical Technician on duty, plus a Physician, Registered Nurse, or Paramedic on immediate call.
- Emergency transportation capabilities must be available.
- The facility must be located within 20 minutes driving time of the highway.
- For an area with two or more qualifying emergency care facilities, install signs to the closest facility (by approach direction).
- Do not use the Emergency Medical Services Facility sign if a hospital sign is installed at that intersection or interchange.

2-17.8 Camping

- The campground is required to be licensed or approved.
- Campground facilities are required to be within 5 miles of an interstate highway interchange, or within 8 miles of, and not readily visible from a non-interstate highway.
- Facilities are required to have at least 20 camping sites, 10 of which will accommodate tents.
- Facilities shall provide free ADA accessible public restrooms with a sink and running water for hand washing, a flush toilet, toilet tissue, and sanitary towels or other hand-drying devices. Restroom facilities shall contain appropriate locks for occupant security.
- Facilities shall provide free potable drinking water and free cups, as necessary, for public use.

- Camp area facilities are required to be available 24 hours per day with a full-time attendant on duty.
- For seasonal operations, the department removes or covers the sign with a CLOSED plaque during the off season.

2-17.9 Recreational Vehicle Park

- Recreational vehicle parks are required to be licensed or approved by the appropriate county office.
- Adequate parking must be provided for at least 10 recreational vehicles (camper truck, motor home, or recreational trailer).
- Facilities shall provide free ADA accessible public restrooms with a sink and running water for hand washing, a flush toilet, toilet tissue, and sanitary towels or other hand-drying devices. Restroom facilities shall contain appropriate locks for occupant security.
- Facilities shall provide free potable drinking water and free cups, as necessary for public use.
- All facilities are required to be available 24 hours per day.
- A telephone is required to be available to the public.
- The RV Park must be within 5 miles of either an interstate highway interchange or a non-interstate highway.
- For seasonal operations, the department removes or covers the sign with a CLOSED plaque during the off season.

2-17.10 Police (Local or State)

- The law enforcement agency is required to have an officer on the premises at all times, or a dispatcher on duty with an officer within radio or local telephone contact.
- The law enforcement agency is required to be located within a reasonable distance from the state highway.

2-17.11 Visitor Information Centers (VIC)

VISITOR INFORMATION CENTER (VIC) signs direct unfamiliar road users to a facility whose sole function is to provide tourist information and that meets the following criteria:

- The Visitor Information Center must operate a minimum of eight hours per day, seven days a week from Memorial Day to Labor Day, or during the months that tourists customarily visit the area. The Region Traffic Engineer may approve different operating hours if the Visitor Center operators can document that a variance is reasonable and justified.
- The VIC must be operated by a nonprofit organization; however, the center may be sponsored by a commercial enterprise. For example, the VIC could be located within a commercial establishment such as a mall or shopping center provided the VIC is visibly separate from the commercial activity.
- Literature and information on visitor attractions are required to be provided to the public free of charge.

- The VIC is required to have either a full-time attendant on duty during the hours of operation, whose primary duty is to provide visitor information, or a functioning electronic means available to answer visitor questions.
- The VIC must be large enough to accommodate the anticipated number of visitors and provide the necessary display space for material of local and statewide interest.
- Parking space, for both cars and recreational vehicles, is required to accommodate the expected number of visitors.
- A telephone is required to be available to the public during operating hours.
- The VIC is required to be within 1 mile of an interstate highway interchange, or within 5 miles of a non-interstate highway, and not readily visible from it. Follow-through signing is required if the VIC is not visible from the interchange or intersection.
- During hours of operation, the center shall provide free ADA accessible public restroom facilities with a sink and running water for hand washing, a flush toilet, toilet tissue, and sanitary towels or other hand-drying devices. Restroom facilities shall contain appropriate locks for occupant security.
- Facilities shall provide free potable drinking water and free cups for public use.

Only one Visitor Information Center may be signed from an interchange or intersection. Where more than one facility requests signs, work with each to determine which best serves the public. Consider which VIC provides the most complete information, the ease of travel from the highway to the Center, and the amenities of each facility. Request that the signed VIC provide motorists with information about the other VIC including directions to it.

The VISITOR INFORMATION CENTER sign can be combined with a second message for either a museum, historical, cultural, or recreational attraction, if that attraction meets the appropriate guidelines. The VIC must provide information about the attraction, through an on-premise outdoor kiosk or within the Center.

For seasonal operation, remove the sign or cover with a CLOSED plaque.

VIC supplemental signing is required to meet MUTCD sign spacing criteria. Where there is not adequate sign space available, a VIC text message plaque may be installed on an existing ground mounted sign.

The department generally provides VIC signing. However, if a Center changes locations within a one or two year period, it may be asked to pay for all relocation costs.

2-17.12 Electrical Vehicle (EV) Charging Stations

The Alternate Electric Vehicle Charging Symbol sign (D9-11B) may be installed when the following criteria are met:

- Open to the public;
- Within three miles of a state highway interchange or state highway intersection;
- Continuous operations for at least 16 hours per day, 7 days per week;
- Adequate parking to accommodate the recharging of vehicles and provide safe ingress/egress;

- Level 3 – 480 Volt 3-phase power and the transformer is required to have adequate capacity to serve DC Rapid Charger(s).
- Follow through signing shall be in place prior to installing the symbol sign on the state highway system.

The Alternate EV Charging Symbol sign (D9-11b Alternate) shall be 24" × 24" on conventional highways, and 30" × 30" on expressways and freeways, and the sign is white on blue in color.

The Alternate Electric Vehicle Charging Symbol sign (D9-11B) shall be supplemented with a Directional Arrow 90 Degrees (M6-1B) when a left or right turn is required from a conventional highway, expressway, or freeway off ramp.

The requesting group is responsible for the sign fabrication and installation costs. A J account is to be set up to administer the funds. Sign installation and removal will be by WSDOT personnel.

2-18 Other Essential Guide Signs

2-18.1 Street Name and Advance Street Name Signs

STREET NAME (D3 Series) signs are useful navigational tools for the roadway user and are installed at roadway intersections. Street name signs are white letters on a green background. Upper and lower case letters are used.

Signs showing the historical street name may be used in conjunction with a current street name sign. All costs associated with the historic street name shall be the responsibility of the local agency making the request.

In urban areas, STREET NAME signs are installed at the intersection. For significant cross streets, channelized intersections, and at signalized intersections, ADVANCE STREET NAME signs should also be installed. Place them 200 feet or more in advance of intersections to alert motorists to the upcoming roadway and the possibility of turns or lane changes, etc.

A directional chevron or arrow may be used on the street name sign indicating the direction of the side street.

In rural areas, where a county road intersects the state highway, a STREET NAME sign identifying the state route is installed above the state installed STOP sign. The county is responsible for the original installation, and the department maintains these signs.

Where ADVANCE INTERSECTION WARNING signs are used, (primarily in rural or suburban areas) it is WSDOT policy to install the black on yellow ROAD NAME (D3-201) sign above or below the INTERSECTION WARNING sign.

On city streets that are part of state highways, the local agency shall install and maintain street signs within the corporate limits (RCW 47.24.020).

Use this table to determine appropriate letter size for street name signs:

Exhibit 2-20

Roadway Type	Single or Multilane	Single Lane	Single Lane	Multilane	Multilane	Signal Mast Arm
Posted Speed Limit (mph)	25	30–45	50+	30–40	45+	N/A
Street Name Letter Size	4″/3″	6″/4.5″	6″/4.5″	6″/4.5″	8″/6″	12”/9” #
Advance Street Name Letter Size	6″/4.5″*	6″/4.5″	6″/4.5″	6″/4.5″	8″/6″	N/A
Fabrication Number	D3-101 D3-102	D3-101 D3-102 D3-103 D3-201 D3-301 D3-302** D3-401	D3-101 D3-102 D3-103 D3-201 D3-301 D3-302** D3-401	D3-101 D3-102 D3-103 D3-201 D3-301 D3-302** D3-401	D3-101 D3-102 D3-201 D3-301 D3-302** D3-401	D3-501 D3-501A D3-502 D3-502A D3-502B D3-503 D3-503A D3-503B

*Use only at urban signalized intersections and channelized intersections with exclusive turn lanes.

**Use at Advance Street Name sign installations only.

#For posted speed limits less than 40 mph, 8″/6″ letter heights may be used.

2-18.2 Border Crossing – Canadian Customs

Several Canadian Customs border crossing stations have limited hours of operation and are closed to motorists outside these hours. For these crossing stations, install signing to inform motorists of the hours of operation and locate the signs to provide them an opportunity to find an alternate route or to delay their crossing. Place the sign in advance of the closest exit before the border where overnight accommodations are available.

Canadian Customs at 24-hour border crossings do not need advance signing showing hours of operation.

2-18.3 City and County Entrance

The department is responsible for installing CITY and COUNTY ENTRANCE signs (I2- 201/301) on state highways (RCW 47.36.120). The signs shall be white on green. These signs are placed at city and county boundary limits and are different than CITY ENTRANCE MARKERS discussed in Section 2-19.3.

Instead of the standard ENTRANCE (I2-201/I2-301) sign, the city or county may supply and maintain a sign with a political jurisdiction logo, per the MUTCD (2H.05).

2-18.4 Unincorporated Community

COMMUNITY ENTRANCE signs (I2-301) may be installed on each non-limited access state highway approach to an unincorporated community that has:

- A United States Postal Service office, and
- At least two motorist services, which may be any combination of gas, food, or lodging.

Supplemental destination guide signing to the community may be considered if it is within 10 miles from a rural state highway interchange or intersection.

Do not install destination signing to unincorporated communities from an urban area interchange.

2-18.5 City Center

Historically, the department has provided CITY CENTER signs at the request of local governments, to direct motorists to local government buildings (i.e., city hall, courthouse). Currently, requests for CITY CENTER signs often come from local business communities to direct motorists to business areas within a city.

CITY CENTER signing requests should include the following information:

- Description and location of all city center exits within the corporate limits.
- The interchange or intersection name of the proposed sign location.
- Verification of the location of the city center.

When reviewing CITY CENTER signing requests, conduct a field review to determine the effectiveness and feasibility of sign locations and confirm other details of the request letter. Include the local government, business community, and other interested groups to assure agreement on the location of the city center.

All costs for sign fabrication and installation are the responsibility of the city making the signing request.

2-18.6 Milepost Markers

MILEPOST MARKERS are numbered location markers installed along all state highways and used primarily for reference purposes. The Statewide Travel and Collision Data Office establishes each milepost location, which is signed with a MILEPOST MARKER in accordance with the following criteria (adopted from rescinded department Directive D32-20).

- On two-lane roadways, install the double-faced MILEPOST MARKER (D10-101, D10- 102, and D10-103) on the right side of the roadway, in the direction of increasing milepost.
- On multilane highways, install the single faced MILEPOST MARKER (D10-1, D10-2, and D10-3) for each roadway direction, on the right side of the roadway.
- MILEPOST MARKERS on spur routes display the letter “S” below the mileage figure.
- MILEPOST MARKERS must be installed within 50 feet of their designated location. If that is not physically possible, do not install that MILEPOST MARKER.

When a milepost marker is relocated it must be documented in the Traffic Sign Maintenance System (TSMS). Headquarters Transportation Operations supplies this information to the Roadway Data Office

annually so the milepost marker can be accurately relocated in the State Highway Log.

See Standard Plan G-10.10-00 and G20.10-00 for installation details.

2-18.7 Highway and Freeway Entrance

Install the HIGHWAY ENTRANCE sign (D13-4) on two-lane two-way undivided highways where interchanges are provided at intersecting crossroads. Install signs on both sides of the on-ramp, facing approaching traffic, to clearly identify the entrance to the on-ramp.

Install the FREEWAY ENTRANCE sign (D13-3) on both sides of each freeway or expressway on-ramp, facing approaching traffic, to identify the ramp entrance.

2-18.8 Other Agencies

Consider installation of supplemental guide signs to facilities of other federal, state and local agencies when space is available per the MUTCD. Sign colors are determined by the type of sign destination (recreation, emergency, or direction).

- **Department of Natural Resources Campgrounds** – White letters on brown background.
- **State Patrol** – White letters on blue background.
- **State Public Fishing Areas** – White letters on brown background.
- **Government Fish Hatcheries Open to the Public** – White letters on green background.
- **Department of Corrections Facilities** – White letters on green background.
- **County Parks** – White letters on green background.

2-19 Miscellaneous Signing

2-19.1 Adopt-a-Highway or Adopt-a-Trail

ADOPT-A-HIGHWAY/TRAIL (AAH/AAT) signs are installed to recognize both volunteer groups and businesses that sponsor litter pick up, or other roadside, or trail enhancement activities as part of the AAH program. The program is administered through the Headquarters Maintenance Office, with regional coordinators assigning locations to groups. Adopted roadside sections can include one or both sides of the roadway.

AAH signs are placed at or near the beginning of an adopted section. Lateral placement of the AAH signs may be up to 50 feet from the edge of the travel lane, if right of way is available and the signs are still visible from the traveled lanes. All AAH signs mounted on the same post must be the same width.

The name displayed on the AAH recognition sign shall be the official name of the organization, individuals, or business sponsoring the section and must be pre-approved by the department.

Volunteer adoption sections are signed as follows:

- Sections adopted by volunteer groups are signed using I6-906, I6-906A, and I6-906B signs.
- If the section includes both directions of travel, install signs for each.
- On divided highways, AAH signs are installed on the right shoulder only.

Sponsored adoption sections are signed as follows:

- Sections adopted by businesses are signed using an I6-906 sign.
- On divided highways, AAH signs may be installed on either the median or the right shoulder.
- The sponsor's logo/name plaque is provided to the region for WSDOT installation on the AAH sign. The plaque will be a 0.050 inch aluminum overlay.
- Size requirements are a maximum of three lines, with 20 spaces per line.
- If a sponsor's name will not fit within the sign width, the letter height will be reduced until it can.

AAH recognition signs may also be installed for special enhancement projects such as landscaping at interchanges, or other areas. In these cases, the smaller sign shall be used and the Region Traffic Engineer shall determine sign placement on a case-by-case basis.

Spacing between AAH signs and other traffic control signs shall conform to MUTCD Section 2H.13. AAH signs are shown in Appendices 2-26 and 2-27.

2-19.2 Roadside Memorial Sign Program

The Headquarters Transportation Operations office administers the Roadside Memorial signing program and approves all locations for signing. Refer citizen requests for Memorial signs (I-20 series) to the Headquarters Transportation Operations office. More information on this program can be found in Chapter 7 of the *Traffic Manual*.

2-19.3 City/Community Entrance Markers

WSDOT may allow cities or communities, either by permit or agreement, to construct and maintain city/community entrance beautification areas on state highway right of way. The agreement may include a CITY or COMMUNITY ENTRANCE MARKER.

On a state highway, one ENTRANCE MARKER may be installed for each direction of travel near where it enters a city or community. Any landscaping associated with the marker shall be in compliance with the WSDOT *Roadside Policy Manual* M 3100, and approved by the region Landscape Architect.

An ENTRANCE MARKER for a neighborhood community that lies within the corporate limits of a city or town may be allowed if the city or town approves the neighborhood's marker.

This marker will count as one of the two allowed per city or town.

An ENTRANCE MARKER visible to any state highway is required to meet these guidelines:

- Be simple, dignified, and devoid of advertising.
- Be positioned in accordance with *Design Manual* Chapter 1600, nor reduce available space for those who walk and bike, reduce accessibility for person with disabilities, or reduce sight distance below minimum design criteria.
- Shall not interfere with, nor distract from any existing or future traffic control or safety device.
- Any lighting associated with the marker shall comply with RCW 47.36.180.
- Be sponsored by the city or a community group in which it is located.

The city or community group is responsible for maintaining the marker and any associated landscaping. Inadequate maintenance of either, as determined by the department, may result in marker removal.

If a highway project (such as roadway widening) will displace an ENTRANCE MARKER, the city or community group is responsible for relocating and/or removing it. Markers not relocated shall be removed by WSDOT, with removal and disposal costs billed to the city or community group.

A. **Entrance Markers on Limited Access Highways** – The total marker area shall not exceed 100 square feet, and the message area shall not exceed approximately 60 square feet. At highway interchanges, the marker must be oriented so it can be read by the motorist leaving the ramp and not by the motorist on the highway mainline.

   Non-Profit Service Club Plaques (i.e., Kiwanis, Lions, Rotary) may not be installed on ENTRANCE MARKERS within limited access highways. These signs are considered to be Type (1)(c) signs and are regulated under the Scenic Vistas Act (RCW 47.42 and WAC 468-66).

   1. **Interstate** – ENTRANCE MARKERS installed on Interstate right of way require FHWA approval. The State Traffic Engineer reviews the design and placement of city ENTRANCE MARKER requests on interstate roadways before recommending approval to the FHWA. If approved, the marker is placed between the interchange ramp and the right of way line, in the area of the ramp terminal with the connecting city street, and not visible to mainline traffic.

   2. **Non-Interstate** – The Region Traffic Engineer approves the design and placement of the marker on non-interstate routes. If there are any deviations from the guidelines above, the design must be submitted to the State Traffic Engineer for approval. For undivided highways, the marker is placed just inside corporate limits, or at the far side of an intersection located inside corporate limits.

B. **Entrance Markers on Non-Limited Access Highways** – The total marker size shall not exceed 150 square feet, including the border and trim, and service club plaques. The service club plaque area of the sign shall not be disproportional to the marker message. The maximum size for each service club plaque is 24″ × 24″.

   Non-Profit Service Club Plaques (i.e., Kiwanis, Lions, Rotary) may be installed on a city ENTRANCE MARKER along a state highway if the marker is located within corporate limits and is not within a limited access area. These signs are considered to be Type (1) (b) signs and are regulated by the Scenic Vistas Act (RCW 47.42 and WAC 468-66).

The Region Traffic Engineer shall approve the design and placement of the marker. If there are any deviations from the guidelines, the design and placement shall be submitted to the State Traffic Engineer for approval.

Install the city ENTRANCE MARKER inside the city limits, beyond the curb line or outside edge of the roadway. ENTRANCE MARKERS for unincorporated communities may be considered for placement on state highway right of way. The marker must be located beyond the clear zone if it does not meet break-away standards.

2-19.4 Carpool Information

CARPOOL INFORMATION signs (D12-202. D12-203) may be installed along conventional two-lane roads, on-ramps to multilane highways, and in park and ride lots. They should not be placed on the mainline of multilane facilities.

Transit logos may be included in the sign design in accordance with MUTCD Section

2D.48. These signs are considered incidental and can be removed if sign space is needed for a higher priority sign.

The requesting agency is responsible for sign fabrication and initial installation costs. WSDOT is responsible for the sign maintenance. Sign spacing:

- Use a 300-foot spacing between signs on conventional two-lane, high-speed roadways.
- Use 150-foot spacing for freeway on-ramps, and for both multilane and two-lane, low-speed roadways in incorporated areas.

2-19.5 Commercial Dump Prohibition

Some rest areas along state highways provide Recreation Vehicle dump stations for use by noncommercial vehicles. Install the COMMERCIAL VEHICLE USE PROHIBITED (I8-704) sign in the rest area at these RV dump sites. This is the only valid application for this sign on state highways.

2-19.6 Fire District Boundary

The ENTERING FIRE DISTRICT and LEAVING FIRE DISTRICT signs (I8-804) may be installed at Fire District boundaries along state highways using these guidelines:

- Upon region approval, signs shall be installed and maintained by the jurisdiction requesting the sign(s). A General Permit issued by the area maintenance office is required.
- Signs should be installed at the district boundary, if possible, or no further than 1,000 feet from the boundary.
- Signs may be placed away from the roadway near the edge of the right of way. They shall not obstruct a driver's view or constitute a hazard by their location.
- Mounting posts shall be of wood, no larger than 4 inches × 4 inches, or they may be perforated square steel. Mounting height shall be 7 feet to the bottom of the sign. Installation shall be as shown in the Standard Plans.
- The sign color shall be white letters on blue background.
- A jurisdictional logo may be included on the sign.

2-19.7 Fire Danger Information

FIRE DANGER INFORMATION signs (with arrow indicator) are requested or sponsored by either the Department of Natural Resources (DNR) or the local fire district authority who submits a written request to the region Traffic Office.

DNR or the fire district shall be responsible for the sign fabrication, installation, and maintenance costs, as well as for the daily message changes. WSDOT can fabricate and/or install the sign via a J Agreement, or the fire district can fabricate and install the sign if the department approves. A General Permit issued through the area maintenance office is required.

The fire district must agree to properly maintain the sign and to cover it during the winter when there is no fire danger, or to replace the sign when the message or colors begin to fade or fail.

Signs are not allowed on Interstate right of way. Install the FIRE DANGER sign at or near the right of way line. If the sign is within the clear zone, it must have appropriate safety breakaway features. Mounting posts shall be of wood, no larger than 4 inches × 4 inches, or they may be perforated square steel. Mounting height shall be 7 feet to the bottom of the sign per Standard Plan (G-20.10)

2-19.8 Fire Hydrant Marker

FIRE HYDRANT MARKER (I7-401) signs may be installed on limited access highways to help fire department personnel locate fire hydrants that are outside of the right of way. The sign shall be placed parallel to, and facing the roadway. The sign shall be visible from the shoulder, mounted either on the right of way fence or on a post, and shall display the distance from the edge of traveled way to the fire hydrant. If requested by the fire department, a 24-inch plaque may be added below the sign to indicate the nearest street or intersection.

The region traffic office shall contact local fire departments to determine signing needs for fire hydrants located near limited access highways.

The department is responsible for installing and maintaining these signs.

2-19.9 Apple Maggot

Many people carry homegrown fruit and municipal waste throughout the state without realizing that they may also be transporting harmful pests, such as the apple maggot, thereby increasing the insects' range. Washington State Department of Agriculture (WSDA) established specific geographical boundaries where the transport of homegrown fruit is prohibited. At their request, signs were installed at several locations throughout the state in an effort to stop the transport of homegrown fruit. Sign fabrication, installation, and maintenance costs are paid for by WSDA through an Interagency Agreement. Contact Headquarters Transportation Operations before replacing any apple maggot signs. Sign locations and messages are:

State Borders and Quarantine Area Borders	DON'T CROSS THE LINE NO HOMEGROWN FRUIT BEYOND THIS POINT ENTERING APPLE MAGGOT PEST – FREE AREA

2-19.10 Landscape and Vegetation Acknowledgement

Community, local groups, or businesses sometimes install and/or maintain landscaping or vegetation plantings within state highway right of way, generally as part of beautification of a community entrance. A General Permit issued by the department is required.

One sign acknowledging the group may be allowed as described below:

- The sign design, including size, message layout, color, and sign fabrication material is submitted to the region Traffic Office for review and approval.
- Sign size is limited to 3 feet × 3 feet; letter size is limited to 2 inches. This is not considered a highway sign and is not intended to be read by motorists.
- The sign shall not contain any advertising or service club information, or resemble a city/community entrance sign.
- The sign is installed at or near the right of way line. On limited access facilities, the sign is placed between the ramp and right of way line, and not visible to mainline traffic.
- The sign sponsor shall be notified and instructed to replace the sign when needed. The sign shall be removed if it is not replaced in a timely manner.
- When the General Permit expires without renewal, or the landscaping/vegetation is no longer maintained, the sign shall be removed.

2-19.11 Limited Access

For state highways that operate with intermittent access control, install ENTERING LIMITED ACCESS AREA (I2-601) and LEAVING LIMITED ACCESS AREA (I2-701) signs in accordance with RCW 47.52.110. Fully controlled limited access highways do not need signs.

2-19.12 Litter Control

The Washington State Department of Ecology (ECY) has worked with WSDOT to place signing along the highway in an effort to deter littering. WSDOT and ECY have installed KEEP WASHINGTON LITTER FREE (I6-103) signs along several routes through reimbursable agreements. Contact HQ Transportation Operations before replacing these signs.

2-19.13 Post Offices

Post offices may be signed from state highways in unincorporated areas if the post office is not visible from the state highway and there is a demonstrated need for the sign (D1-1). Cities or towns may sign for post offices inside incorporated limits.

2-19.14 Private Roads

WSDOT does not supply, fabricate, install, or maintain STOP signs or STREET NAME signs for private roadways that intersect with state highways. Citizens may install their own signs at such intersections, in accordance with the MUTCD, and working with the area Maintenance Superintendent. A general permit is required when a STOP sign or private ROAD NAME sign is installed on WSDOT right of way at a private road approach. The citizen requesting the sign must secure the permit and coordinate installation details with the area Maintenance Superintendent. Maintenance for private road signs is the responsibility of the citizen installing the signs.

Private road name signs (D3-104) shall be fabricated in accordance with the *Sign Fabrication Manual* and must indicate the road is private either by a sign header or by words ("Private" or "PVT") on the sign. White letters on a green background is the preferred color but a local jurisdiction may determine that white on blue or black on white are acceptable.

2-19.15 Refuse Station

REFUSE STATION signing may be installed under the following conditions:

- The site is required to be county or city owned and open to the general public. Private refuse stations will not be signed.
- This is required to be a major refuse station, not just a drop-off location.
- Signs are not installed on any freeway facility.
- The refuse station must be located within ½ mile of the state highway.
- Use the word "Refuse" instead of the word "Transfer" to avoid possible confusion with transportation hub centers that may also be called Transfer stations. The word "Garbage" is not used.
- The REFUSE STATION sign shall be a 24 inch × 24 inch white on green plaque.
- Install the plaque above or below any ground mounted guide or information sign at the intersection. If there are no signs, the plaque may be placed on its own sign post.
- A city or county may install a REFUSE STATION sign on its right of way at an intersection, instead of a highway sign. The sign would be considered a Type 1 sign under the Scenic Vistas Act (WAC 468-66-050).

2-19.16 Salmon and Other Fish

WSDOT receives requests from fish related user groups to sign a stream or body of water with a specific fish related message. Signs related to preserving the fish habitat may be installed along a state highway; however, only one type of fish related sign will be allowed for a location. Where several user groups (i.e., salmon, steelhead, or trout) request signing in a location, suggest that they work together to develop a single fish related sign message and to seek support from the local jurisdiction. An overall signing plan with support documentation should be submitted to the region Traffic Office, preferably by the local jurisdiction or by an official organization or agency.

- The stream crossing or body of water is required to be year round.
- Multiple signs, supported, endorsed, or maintained by different user groups (i.e., salmon, steelhead, and trout) will not be allowed.
- The requesting user group is responsible for the sign fabrication, installation costs, and all maintenance and replacement costs. A reimbursable account can be set up to administer the funds. Sign installation and removal will be by WSDOT personnel.
- Sign size will be 18″ × 24″, 24″ × 24″, or 24″ × 36″, dependent on the fish logo and line message approved by WSDOT.
- Sign colors are white letters on a blue background.

2-19.17 Water Crossing

A STREAM NAME or WATER CROSSING (I3-101) sign may be installed on a state roadway to identify a body of water that traverses or parallels a state highway, using these guidelines:

- The body of water is required to be identified by name on a USGS map.
- If the body of water traverses the highway, the waterway must be bridged by a highway structure. A single culvert crossing or a seasonal stream does not qualify for a sign.
- Sign color shall be white on green.
- On conventional roadways, letter height is 6″ uppercase and 4½″ lowercase letters.
- On expressways or freeways, letter height is 8″ upper-case and 6″ lower-case letters.

2-19.18 Watersheds

Watershed Signs may be installed per the following:

- The Watershed has to be recognized by Washington Department of Ecology (Watershed Finder)

Within State Highway Right of Way –

- The requesting agency or group is responsible for the sign fabrication, installation costs, and all future maintenance and replacement costs. A reimbursable account can be set up to administer the funds. Sign installation and removal will be by WSDOT personnel.
- The maximum sign size is 12 square feet.
- The sign colors are white legend on either blue background or green background.
- The Watershed name may be combined with the water crossing (river, creek, or stream – Colville River Watershed).

Outside of State Highway Right of Way –

- Can be treated as Type 1 signs (WAC 468-66-050) and installed off the state right of way. Type 1 signs must be supported by an official agency or organization.
- Permission of the land owner is required.

2-19.19 Water Related Signs NOT to Be Installed

The following water related signs shall not be installed on any state highway:

- Conservation District Boundary Area
- Drainage Basin
- Drinking and Ground Water Management Area
- Groundwater Protection Region or Area
- Groundwater Conservation Region or Area
- Surface Water Management Area
- Wellhead Protection Area

These signs do not assist motorists in their driving, but can be treated as Type 1 signs (WAC 468-66-050) and installed off the state right of way. Type 1 signs must be supported by an official agency or organization.

2-19.20 Watchable Wildlife

The WILDLIFE VIEWING (D5-907) signs may be installed for locations that are open to the public and within 10 miles of the state highway. Install the sign on the highway exit or intersection nearest the viewing area. Use the BINOCULARS symbol sign for a trailblazer and for site identification if no other signing is posted. Signs are white on a brown background.

2-19.21 Evacuation Route

Install EVACUATION ROUTE (EM1-2, EM1-2A, EM1-3) symbol signs to indicate the route that people should follow to leave an area when a tsunami, volcanic eruption, fire, or other hazard is threatening. Region Traffic Offices are to coordinate the location of Evacuation Route signs with City, County, or Tribal Emergency Management personnel.

2-19.22 Cold Water Shock

Install COLD WATER SHOCK (I20-401) signs as described in RCW 47.36.410. Region Traffic Offices should consult with applicable City, County, Washington State Patrol, and Washington Department of Health offices to determine suitable locations or evaluate signing requests. When it is determined that signing is appropriate, post mount signs so they are visible to pedestrian traffic at each end of the bridge. Longer structures may require additional signing mid-span or placed using engineering judgement. Consult with the Bridge and Structures office if signs are to be attached to bridges. Signs should not be oriented toward vehicular traffic.

2-19.23 988 Signs

Install 988 SIGNS (I20-402) as described in RCW 39.04.420(1)(i). Region Traffic Offices should consult with applicable City, County, Washington State Patrol, and Washington Department of Health offices to determine suitable locations or evaluate signing requests. When it is determined that signing is appropriate, mount signs so they are visible to pedestrian traffic at each end of the bridge. Longer

structures may require additional signing mid-span or placed using engineering judgement. Consult with the Bridge and Structures office if signs are to be attached to bridges. Signs should not be oriented toward vehicular traffic.

2-19.24 Purple Heart State Signs

In conjunction with the Washington State Department of Veterans Affairs (WDVA), WSDOT may install "Purple Heart State" signs on the state highway system at border crossings. HQ Transportation Operations receives requests from WDVA and will work with the regions to fulfill them. More information on the sign program can be found on the WDVA website linked here: https://www.dva.wa.gov/purpleheartstate

2-19.25 No Trespassing

NO TRESPASSING signs (R17-2) may be installed at locations where requested by maintenance or law enforcement with approval of the Region Traffic Engineer. If requested by law enforcement, modification of the R17-2 sign can be modified to include a reference to RCW 9A.52.080.2.

2-20 Variable Message Signs

Variable Message Signs (VMS) are traffic control devices designed to display diverse messages to alert roadway users about specific conditions or situations. VMS are part of WSDOT's Traffic Management System and are operated by each region Traffic Management Center (TMC).

VMS are located on many highways throughout the state. Some are used exclusively to provide information about variable speed limits, lane use restrictions, active traffic management, or traction requirements. Others may provide information about:

- Traffic incident information.
- Traffic restrictions or emergency conditions.
- Special event related traffic impact information.
- Upcoming road closures or other impacts.

Operation of the Variable Message Signs is coordinated by the region's TMC and is governed by the Variable Message Sign Policies, Guidance, Operations at: Traffic Operations - VMS Operations Policy 2013-02.pdf - All Documents (sharepoint.com).

2-21 Highway Advisory Radio (HAR) and Traveler Information Station (TIS) Signing

HAR and TIS systems are low power AM radio stations installed to provide the traveling public with traffic alerts or traveler information. They are sometimes used in conjunction with a Variable Message Sign (VMS). Both HAR and TIS installations must comply with Federal Communications Commission (FCC) requirements and must be approved by and coordinated through the WSDOT ITS and Communications office. HAR and TIS system messages are governed by the HAR/TIS procedures which can be found at Traffic Operations - HARPolicy.pdf - All Documents (sharepoint.com).

HAR and TIS signs are secondary to official traffic control signs (i.e., regulatory and warning signs, guide signs) and are installed only when MUTCD and WSDOT sign spacing requirements can be met.

2-21.1 Highway Advisory Radio (HAR) System Signs

- Install a TRAFFIC ADVISORY TUNE XX AM WHEN FLASHING (I35-101) at each HAR location.
- Install flashing beacons above the sign that are activated by the TMC when HAR messages are being broadcast.
- HAR signs, Traffic Alert/Traffic Advisory signs, and Mountain Pass Information/Road Conditions signs shall be a non-reflective black legend on a reflective yellow background.

2-21.2 Traveler Information Signs (TIS)

TIS systems give tourist and recreational information.

- Install a "TRAVEL INFORMATION TUNE (XXXX) AM" at any TIS location.
- The sign shall be a reflective white legend on a reflective blue background, with the exceptions of TIS signs for recreation in National Parks, National Forests, and National Historic Reserves. These are the **ONLY** TIS signs that may be a white reflective legend on a brown reflective background. As well, these agencies may incorporate their official agency logo on the TIS sign.
- When the preemptive message EMERGENCY INFO WHEN FLASHING is included in the TIS sign, it shall be a non-reflective black message on a reflective yellow background. Flashing beacons shall be installed to be activated by the TMC when emergency messages are being broadcast.
- All TIS sign fabrication, installation, and maintenance costs are the responsibility of the requesting agency. Signs will be fabricated to WSDOT standards and may only be installed by WSDOT crews.

2-22 Appendices

Appendix 2-1	Speed Zone Signing
Appendix 2-2	Intersection U-Turn Signing
Appendix 2-3	Auxiliary Climbing Lane Signing
Appendix 2-4	Auxiliary Passing Lane Signing
Appendix 2-5	Wrong Way Signing for At-Grade Intersections
Appendix 2-6-1	Wrong Way Signing for Diamond Interchange Ramps
Appendix 2-6-2	Wrong Way Signing for Partial Cloverleaf (Barrier or Curb Separated) Interchange Ramps
Appendix 2-6-3	Wrong Way Signing for Partial Cloverleaf (Paint Separated) Interchange Ramps
Appendix 2-6-4	Wrong Way Signing for Slip Exit Ramp
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Appendix 2-11-1	Lateral Clearance Markers – Objects within Outside Shoulder
Appendix 2-11-2	Lateral Clearance Markers – Objects Within Inside Shoulder
Appendix 2-12-1	Reduced School Speed Zone Signing at School Crosswalks
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Appendix 2-23	Supplemental Guide Sign Criteria
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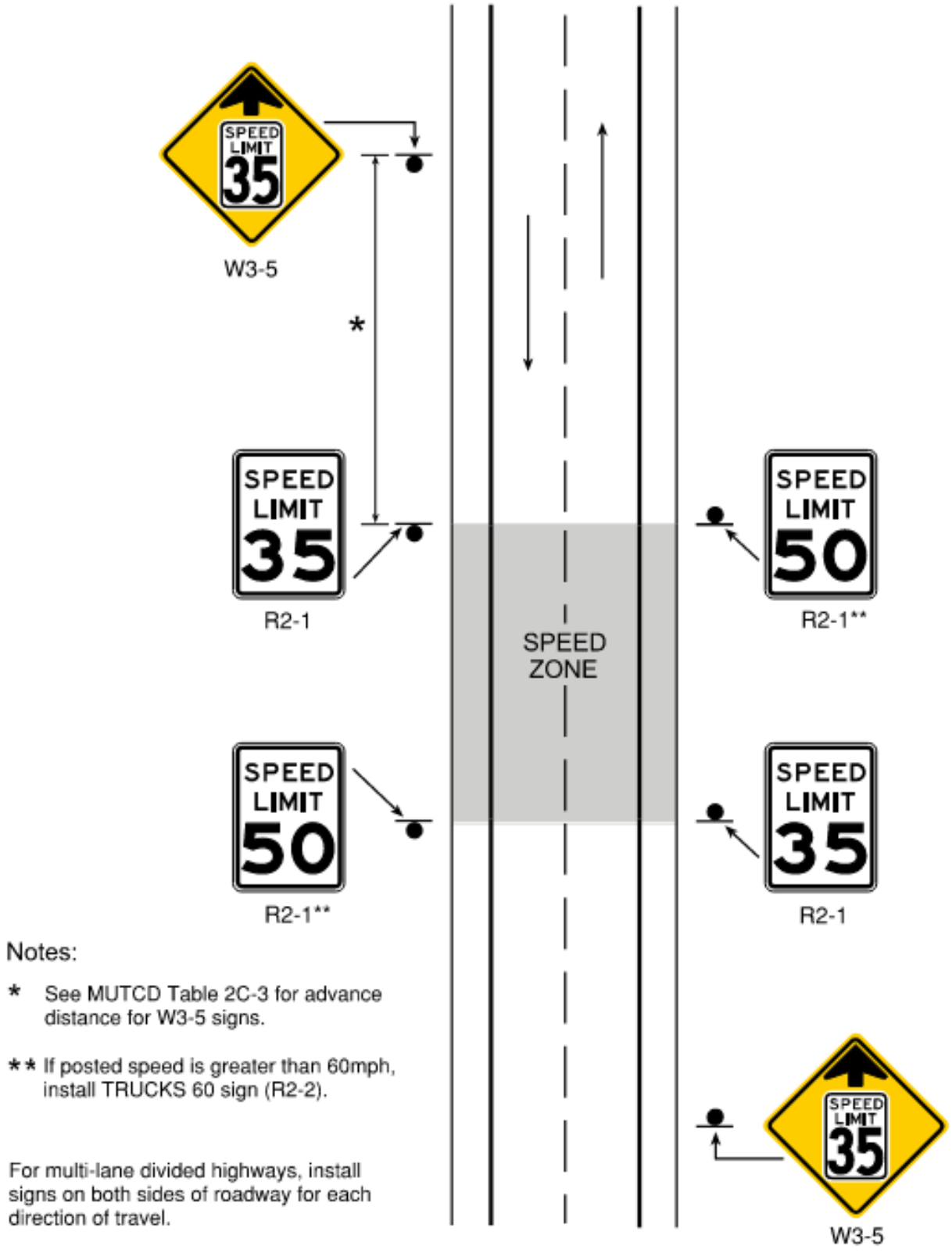
Appendix 2-27	Adopt-a-Highway/Trail Signs for Business Sponsored Groups
Appendix 2-28	Traction Device Requirements for Snow Prone Areas
Appendix 2-29	Rough Road Signing – Multi-Lane Section Greater than 1 Mile or Speed Reduction of More than 10 MPH
Appendix 2-30	Rough Road Signing – Multi Lane Section Less Than 1 Mile or Advisory Speed Reduction of 10 MPH or Less
Appendix 2-31	Rough Road Signing – Single Lane Two-Direction Greater than 1 Mile or Speed Reduction of More Than 10 MPH
Appendix 2-32	Rough Road Signing – Single-Lane Two Direction Less than 1 Mile or Speed Reduction 10 MPH or Less

Appendix 2-1 Speed Zone Signing



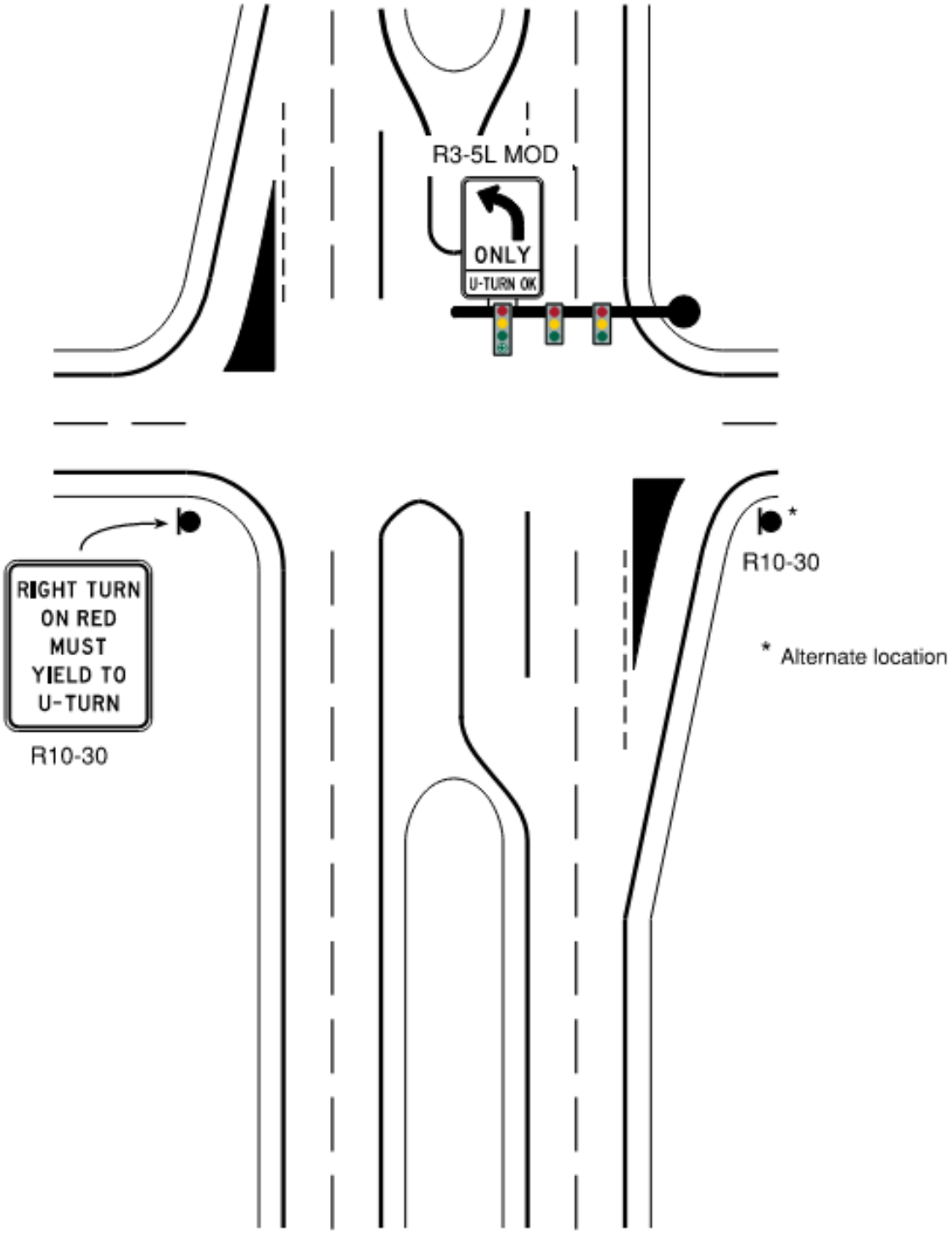
Notes:

* See MUTCD Table 2C-3 for advance distance for W3-5 signs.

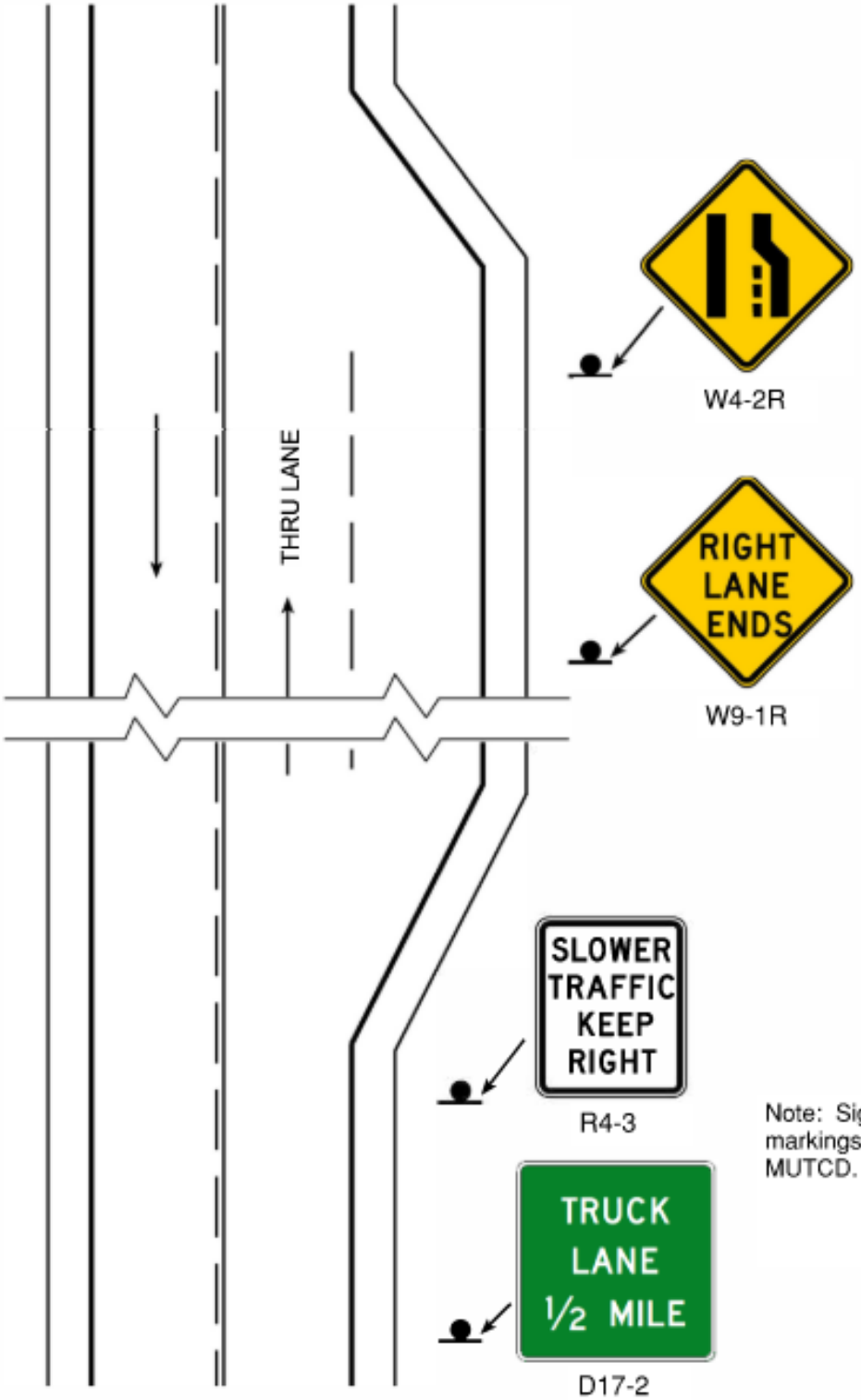
** If posted speed is greater than 60mph, install TRUCKS 60 sign (R2-2).

For multi-lane divided highways, install signs on both sides of roadway for each direction of travel.

Appendix 2-2 Intersection U-Turn Signing

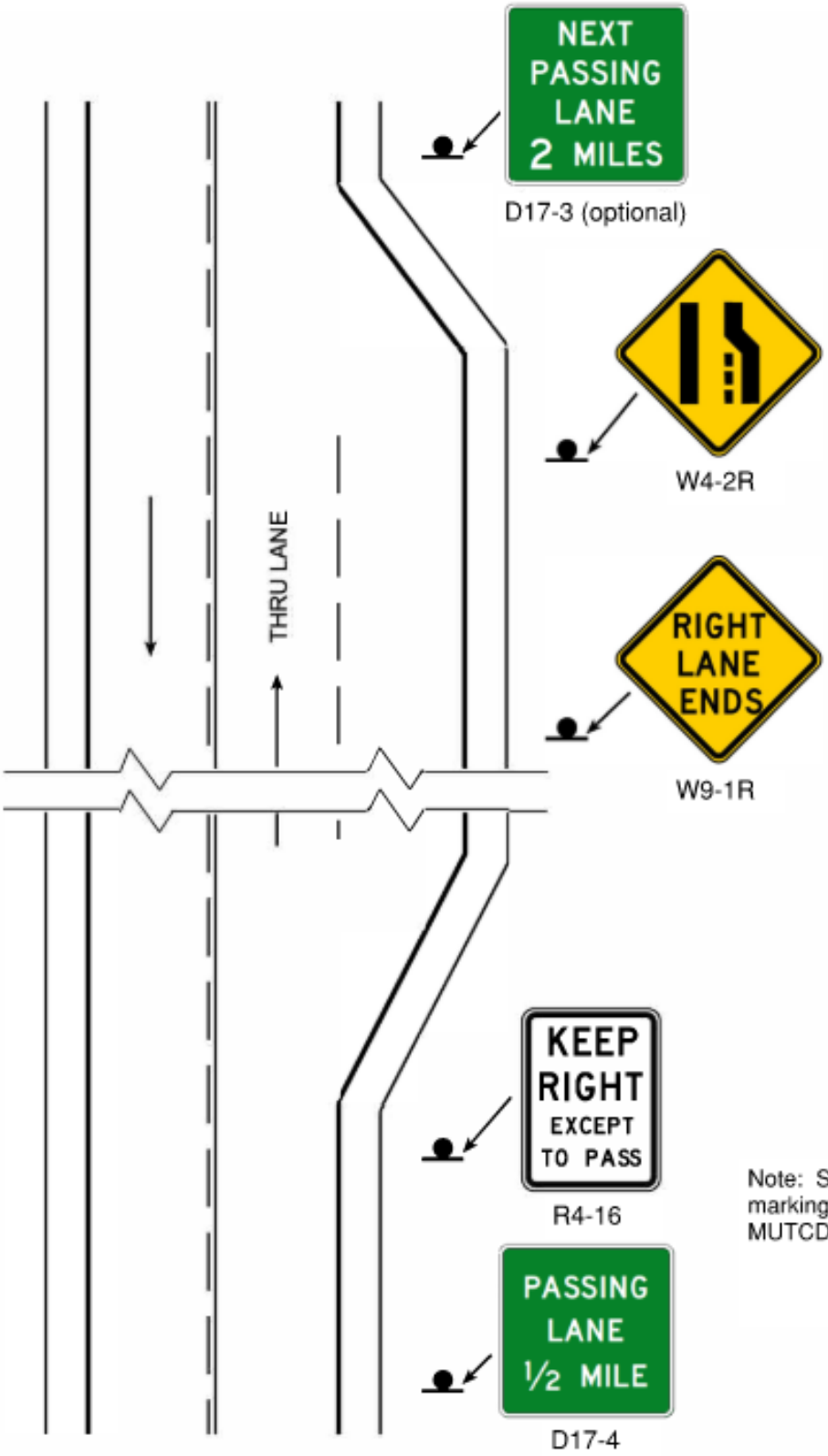


Appendix 2-3 Auxiliary Climbing Lane Signing



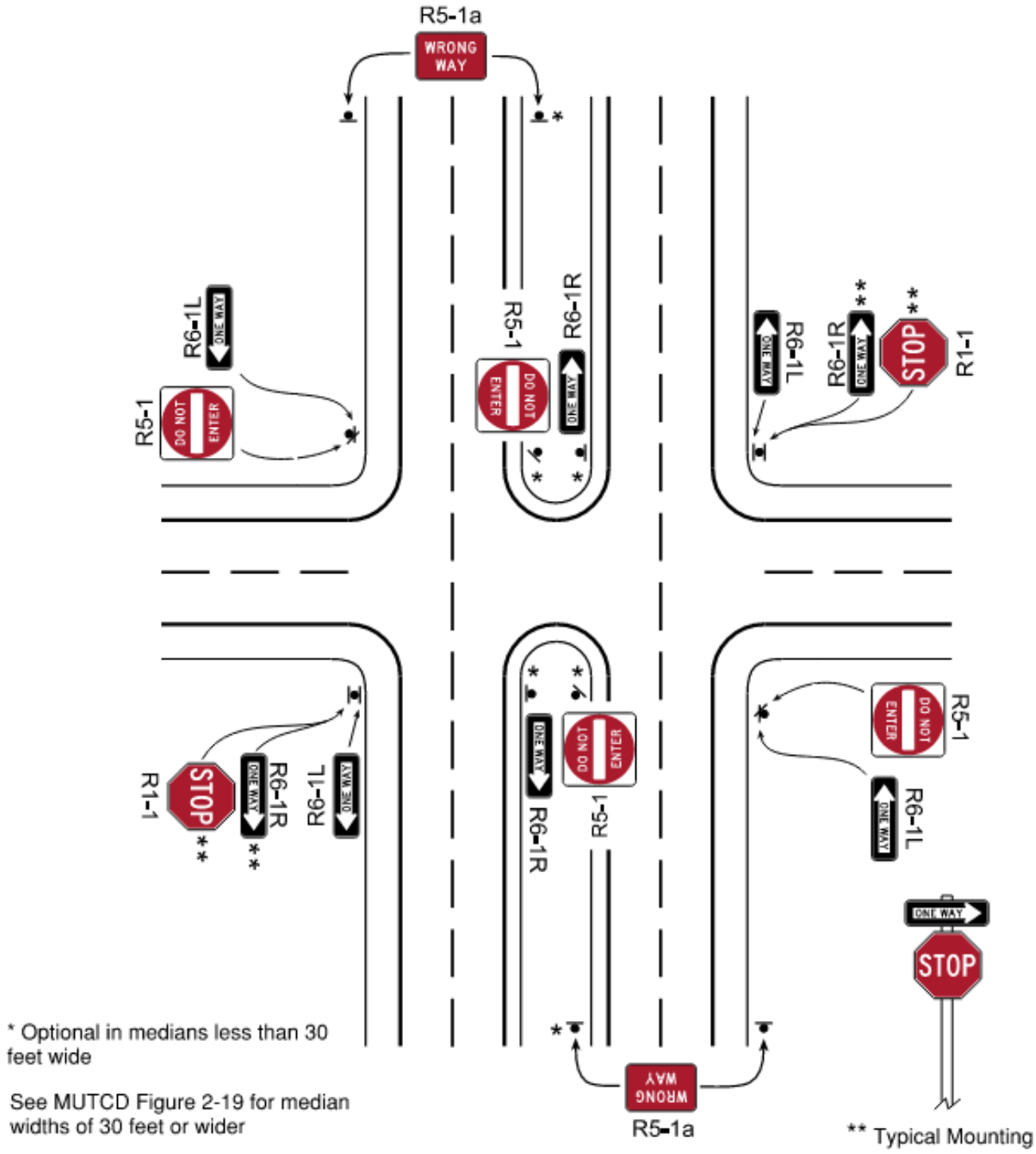
Note: Sign spacing and pavement markings shall be installed per the MUTCD.

Appendix 2-4 Auxiliary Passing Lane Signing

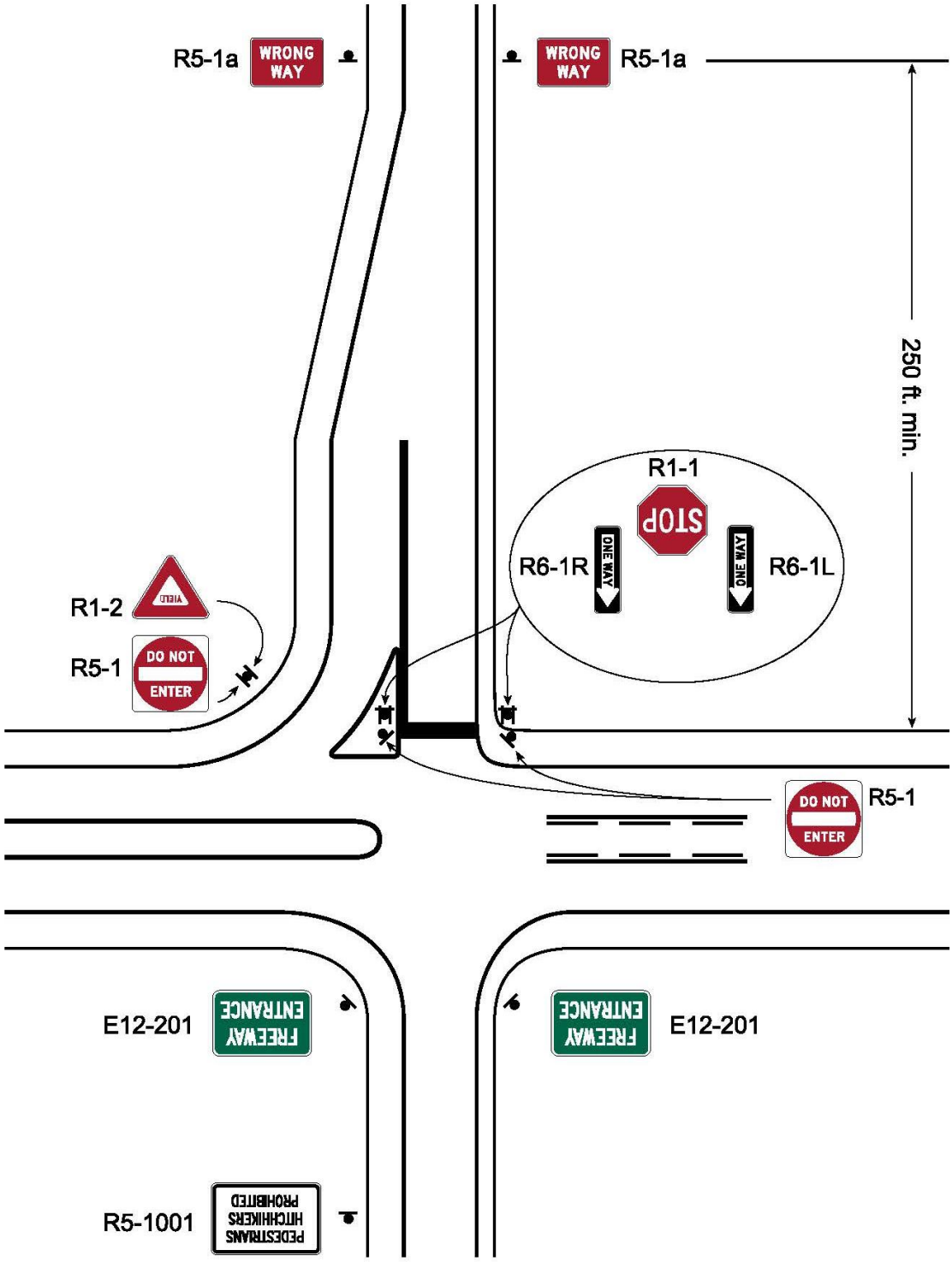


Note: Sign spacing and pavement markings shall be installed per the MUTCD.

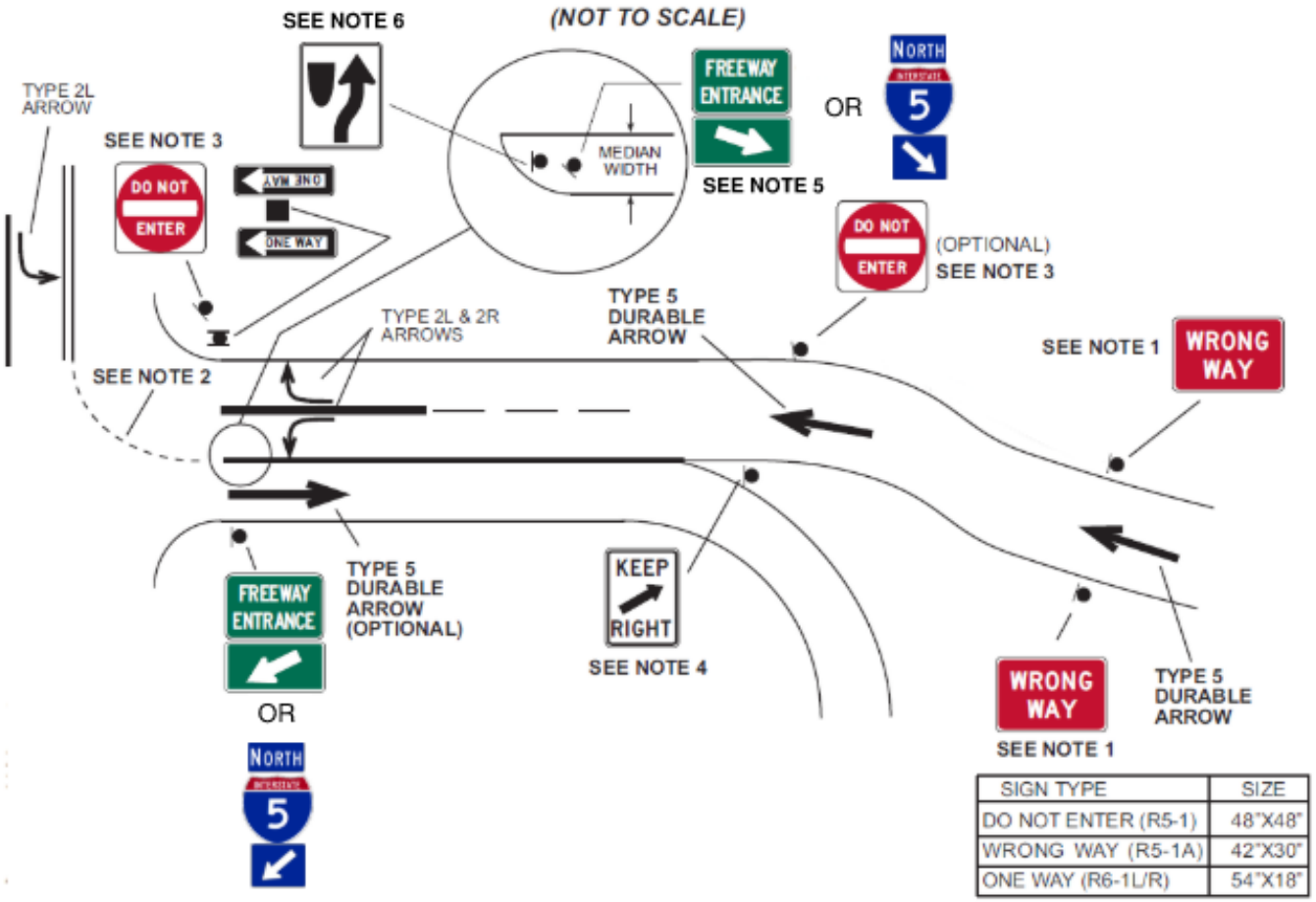
Appendix 2-5 Wrong Way Signing for At-Grade Intersections



Appendix 2-6-1 Wrong Way Signing for Diamond Interchange Ramps



Appendix 2-6-2 Wrong Way Signing for Partial Cloverleaf (Barrier or Curb Separated) Interchange Ramps



SIGN TYPE	SIZE
DO NOT ENTER (R5-1)	48"X48"
WRONG WAY (R5-1A)	42"X30"
ONE WAY (R6-1L/R)	54"X18"

NOTES:

1) Install WRONG WAY (R5-1A) signs a minimum of 4 feet above the edge of the traveled way when conditions allow.

2) Install durable dotted extension line.

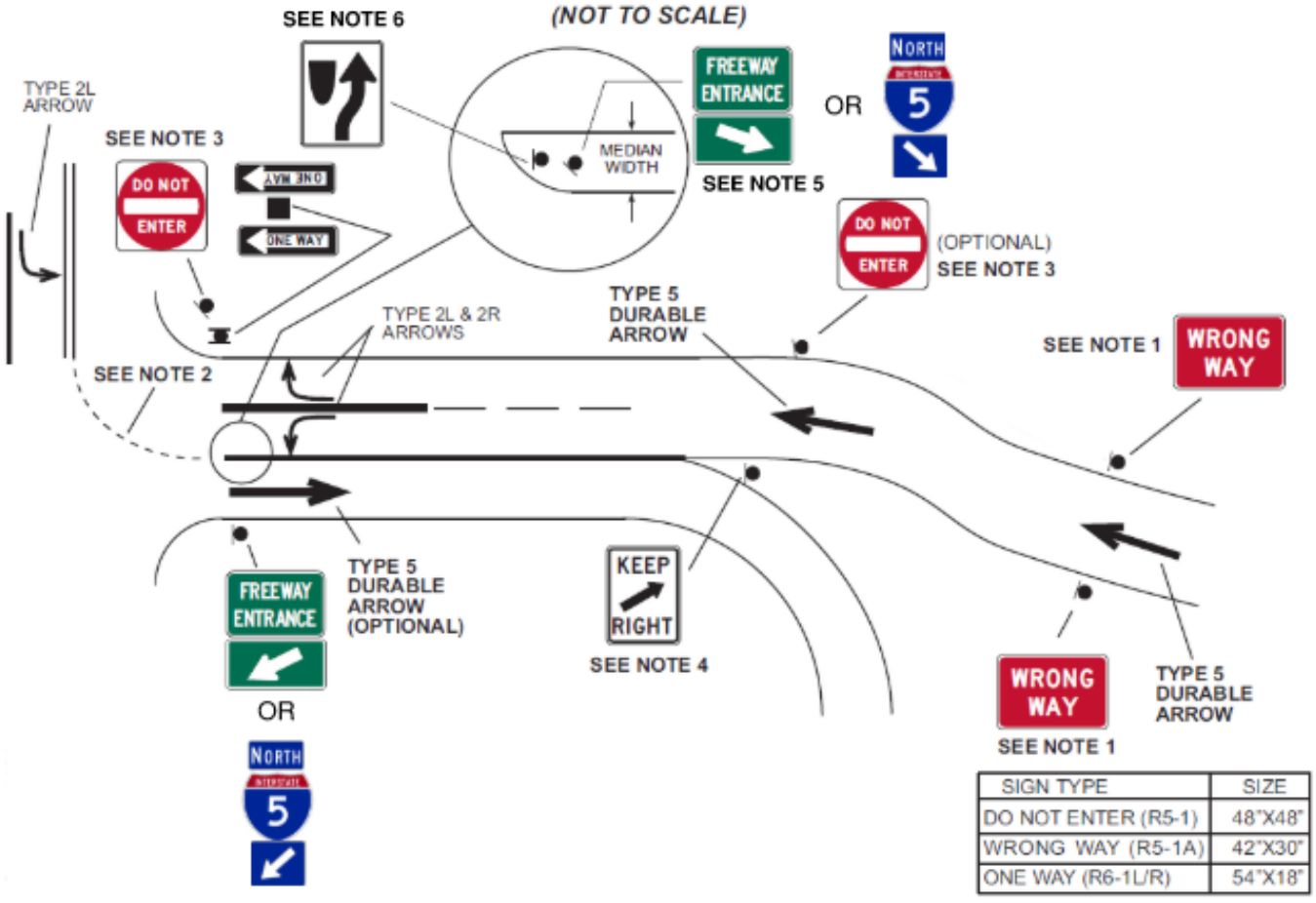
3) DO NOT ENTER (R5-1) signs may be installed at 4 feet above the edge of the traveled way if the lower height does not create a sight triangle issue for ramp traffic and /or does not interfere with pedestrian movements.

4) Install KEEP RIGHT (R4-7B) sign if median for two-way ramp is striped only.

5) Install FREEWAY/HIGHWAY ENTRANCE (D13-3/D13-4) sign and DIAGIONAL ARROW (W16-7PR) if median width is greater than 6 ft., 6 in.

6) Install KEEP RIGHT (R4-7) sign if median width is sign width plus 4 feet; or install narrow KEEP RIGHT (R4-7C) is less than 4 feet.

Appendix 2-6-3 Wrong Way Signing for Partial Cloverleaf (Paint Separated) Interchange Ramps



SIGN TYPE	SIZE
DO NOT ENTER (R5-1)	48"X48"
WRONG WAY (R5-1A)	42"X30"
ONE WAY (R6-1L/R)	54"X18"

NOTES:

1) Install WRONG WAY (R5-1A) signs a minimum of 4 feet above the edge of the traveled way when conditions allow.

2) Install durable dotted extension line.

3) DO NOT ENTER (R5-1) signs may be installed at 4 feet above the edge of the traveled way if the lower height does not create a sight triangle issue for ramp traffic and /or does not interfere with pedestrian movements.

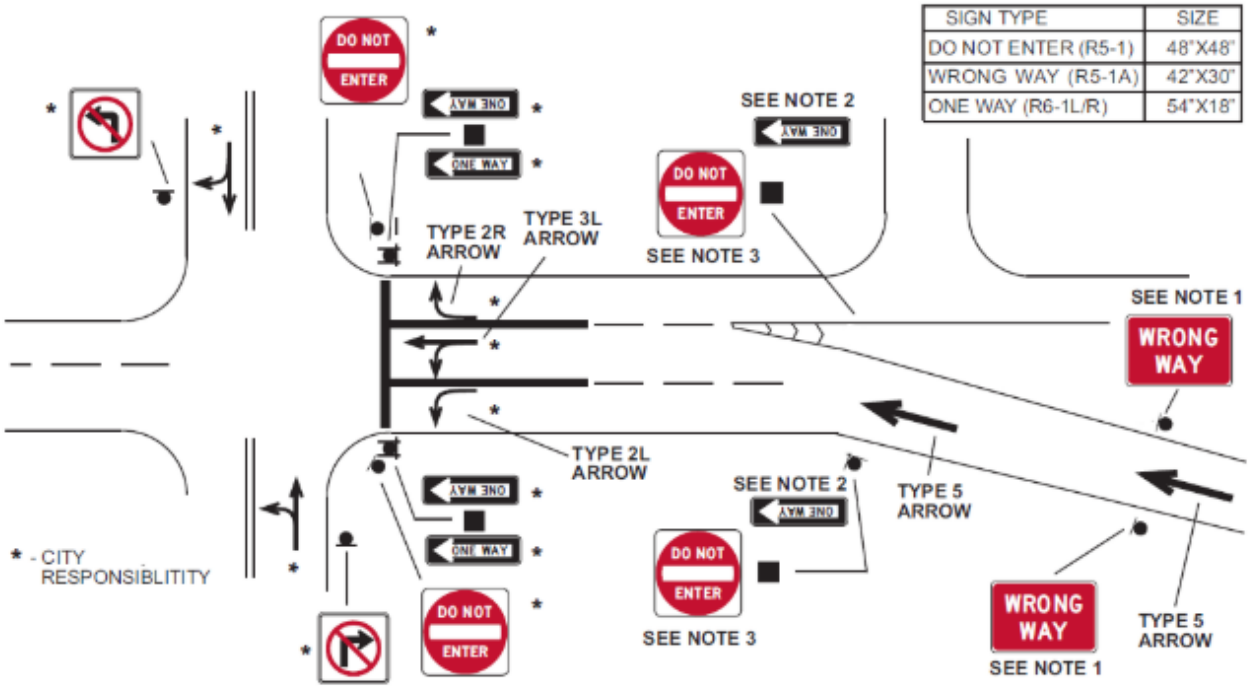
4) Install KEEP RIGHT (R4-7B) sign if median for two-way ramp is striped only.

5) Install FREEWAY/HIGHWAY ENTRANCE (D13-3/D13-4) sign and DIAGIONAL ARROW (W16-7PR) if median width is greater than 6 ft., 6 in.

6) Install KEEP RIGHT (R4-7) sign if median width is sign width plus 4 feet; or install narrow KEEP RIGHT (R4-7C) is less than 4 feet.

Appendix 2-6-4 Wrong Way Signing for Slip Exit Ramp

(NOT TO SCALE)



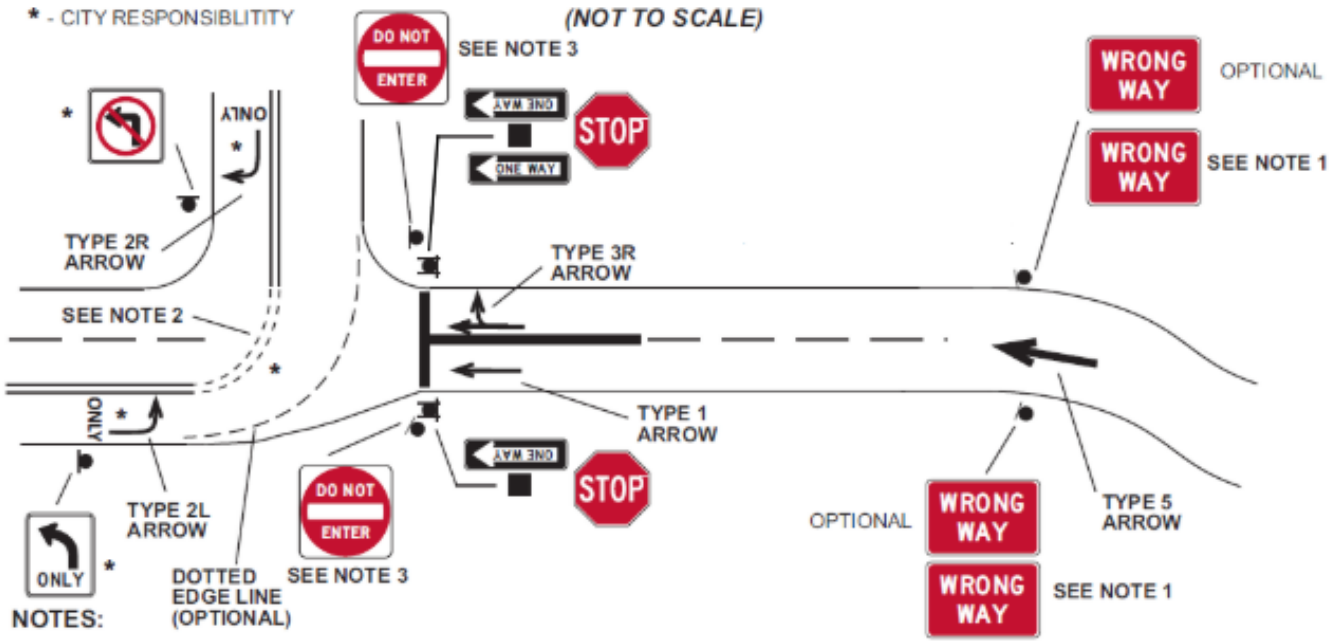
NOTES:

1) Install WRONG WAY (R5-1A) signs a minimum of 4 feet above the edge of the traveled way when conditions allow.

2) Install ONE WAY (R6-1L/R) signs as shown if there is an existing cross street or driveway near the exit gore area.

3) DO NOT ENTER (R5-1) signs may be installed at 4 feet above the edge of the traveled way if the lower height does not create a sight triangle issue for ramp traffic and /or does not interfere with pedestrian movements.

Appendix 2-6-5 Wrong Way Signing for Two-Way Traffic



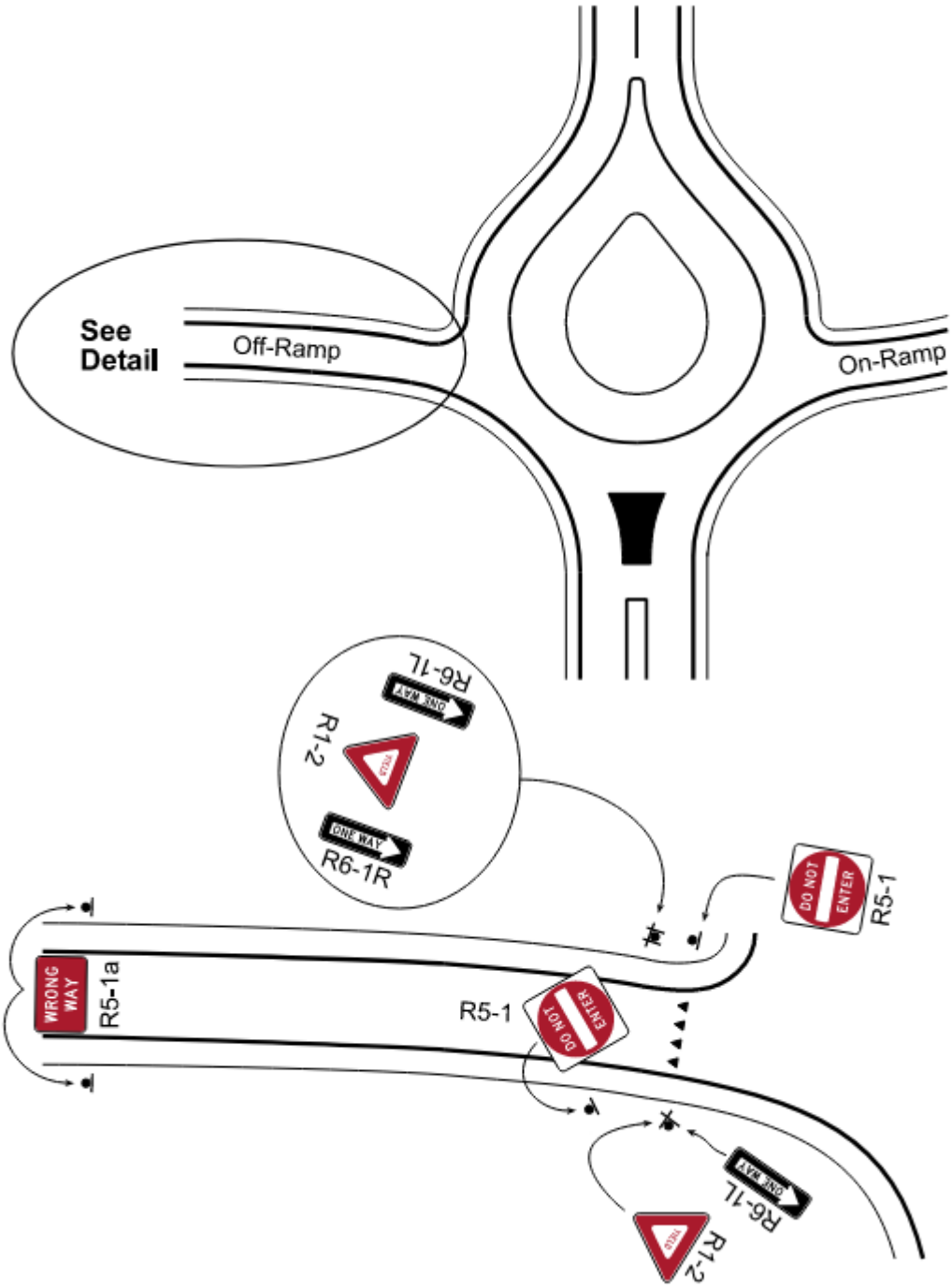
NOTES:

1) Install WRONG WAY (R5-1A) signs a minimum of 4 feet above the edge of the traveled way when conditions allow. The second WRONG WAY sign is optional an to be mounted at 7 feet above the edge of the traveled way.

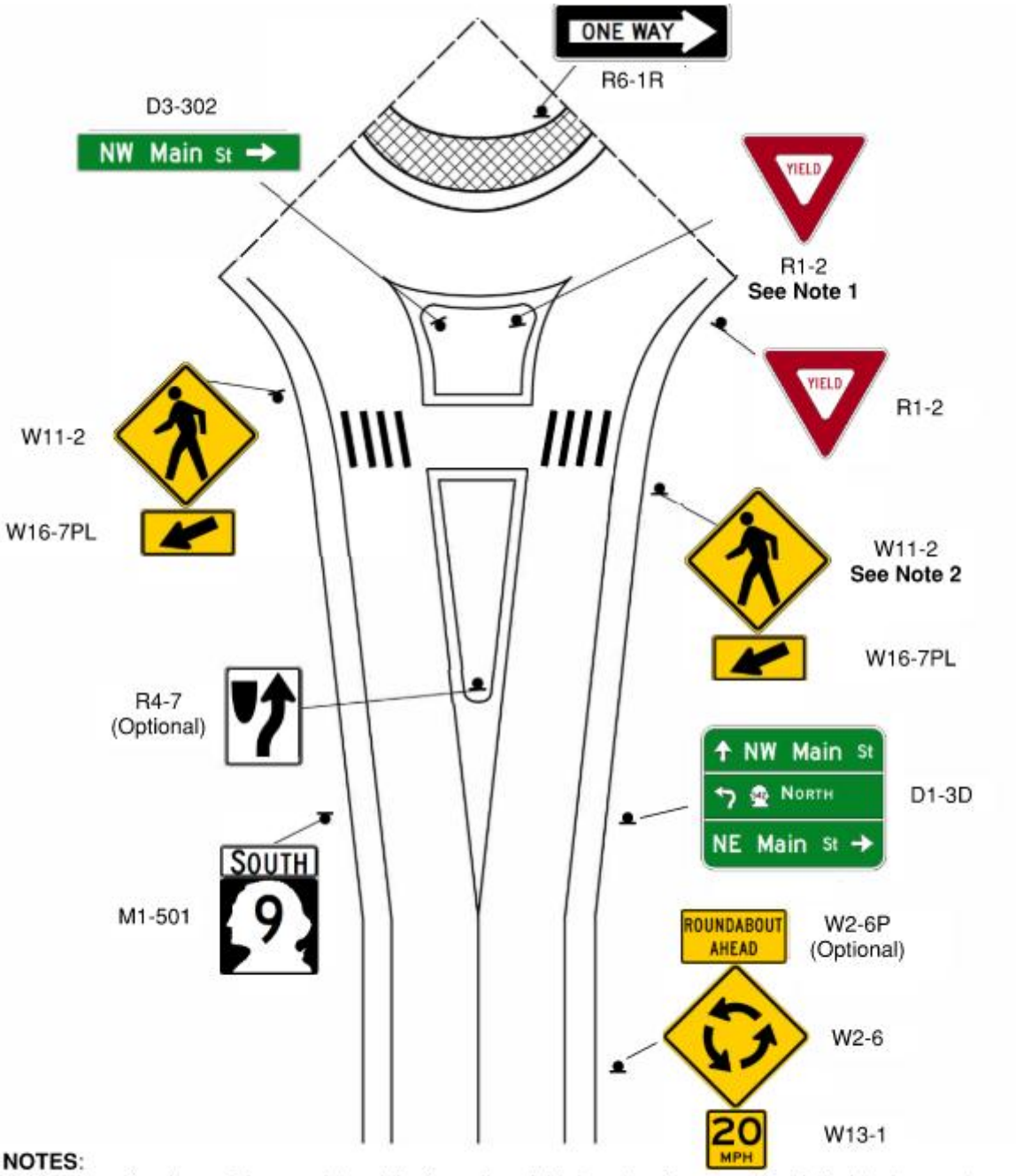
2) Install durable dotted lane lines.

3) DO NOT ENTER (R5-1) signs may be installed at 4 feet above the edge of the traveled way if the lower height does not create a sight triangle issue for ramp traffic and /or does not interfere with pedestrian movements.

Appendix 2-6-6 Wrong Way Signing for Roundabouts



Appendix 2-7 Roundabout Signing



NOTES:

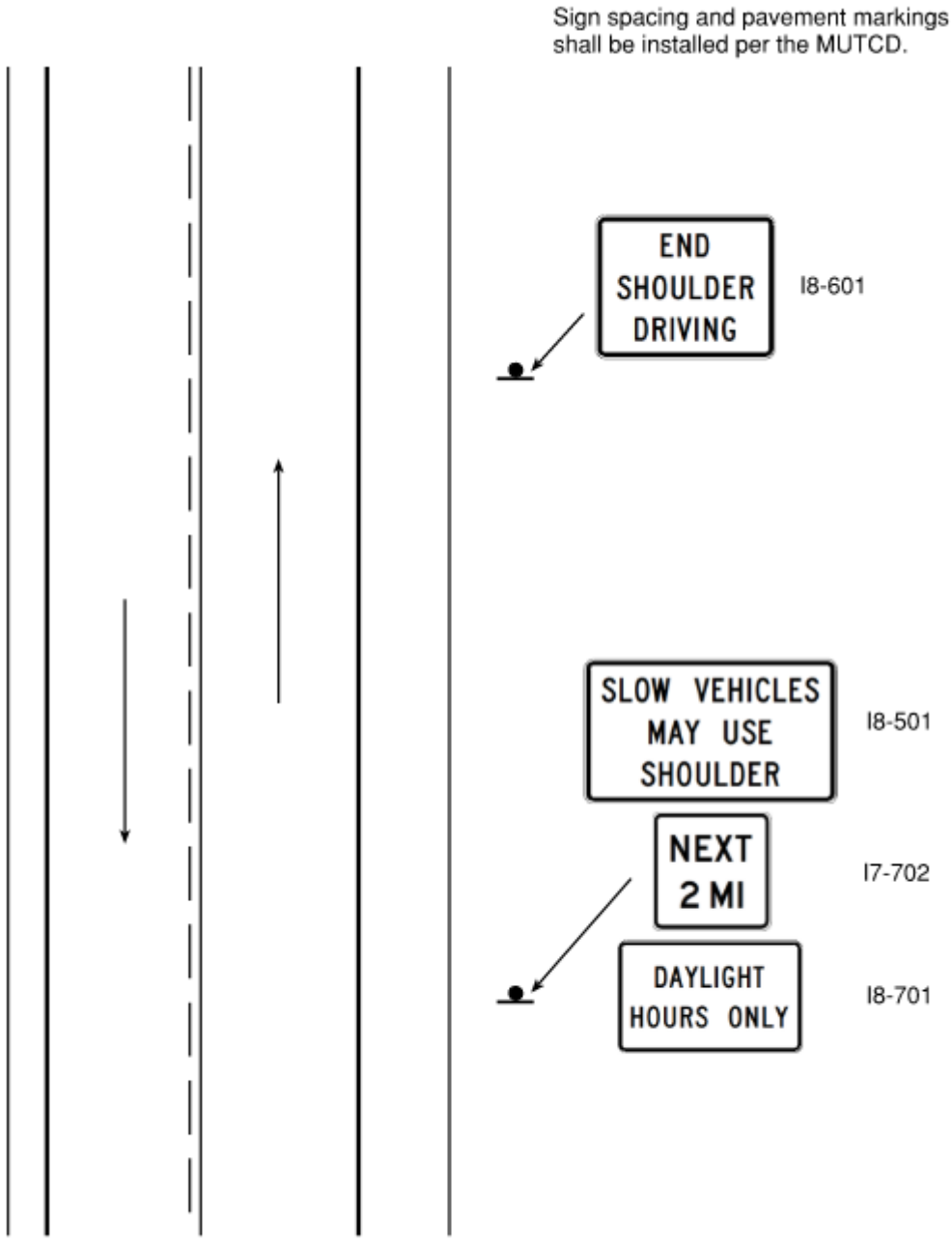
1) Provide on two-lane entries; consider adding the yellow yield sign when the view of the right side sign may be obstructed.

2) Ensure the pedestrian warning sign does not obstruct the view of the yield sign.

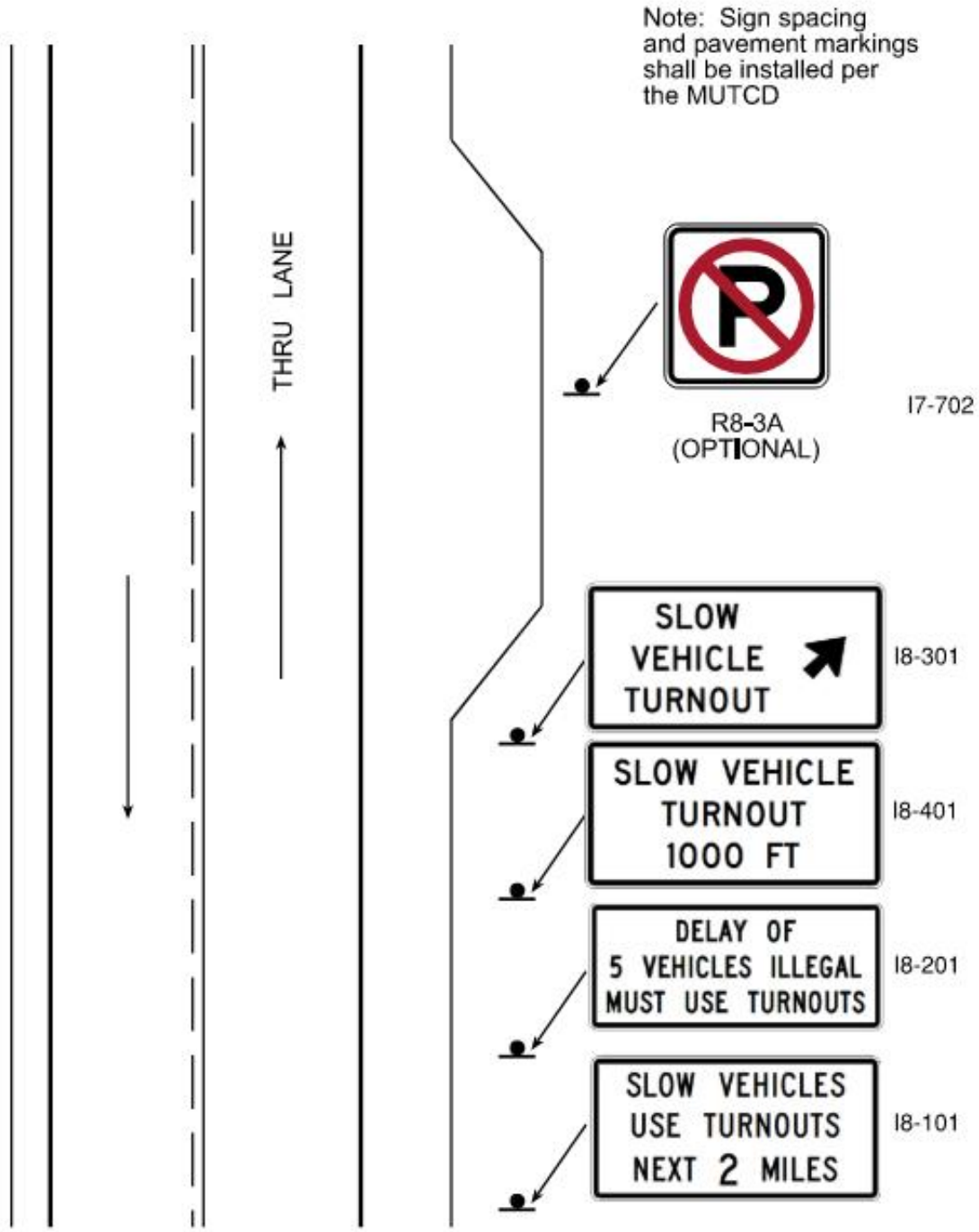
3) See Section 2.7(11) for sign sizes.

4) Install a R3-8 MOD (Advance Circular Lane Control) sign for multi-lane roundabout in advance of the Pedestrian Crossing (W11-2) sign.

Appendix 2-8 Shoulder Driving Signing



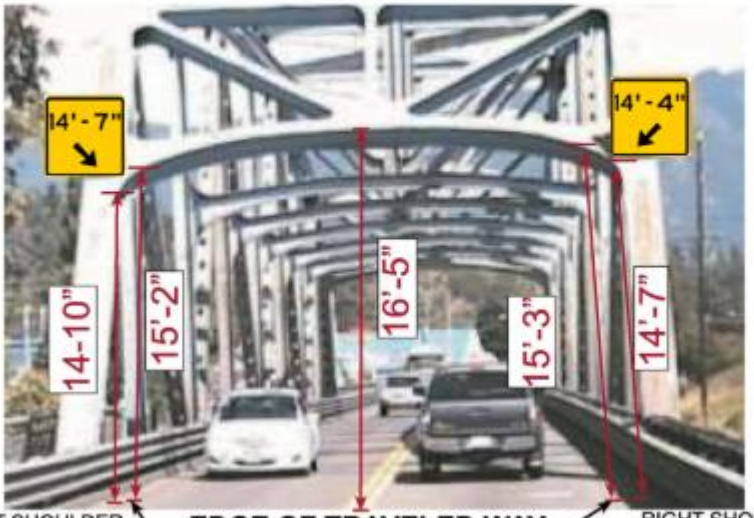
Appendix 2-9 Slow Moving Vehicle Turn-Out Signing



Appendix 2-10-1 Low Clearance Signing

Through Truss Bridge

Two Lane Highway - Vertical Clearance between 14'-3" and 15'-3" over Traveled Lanes
Shoulder Widths 2' Feet or Less Shoulders
(Looking East)

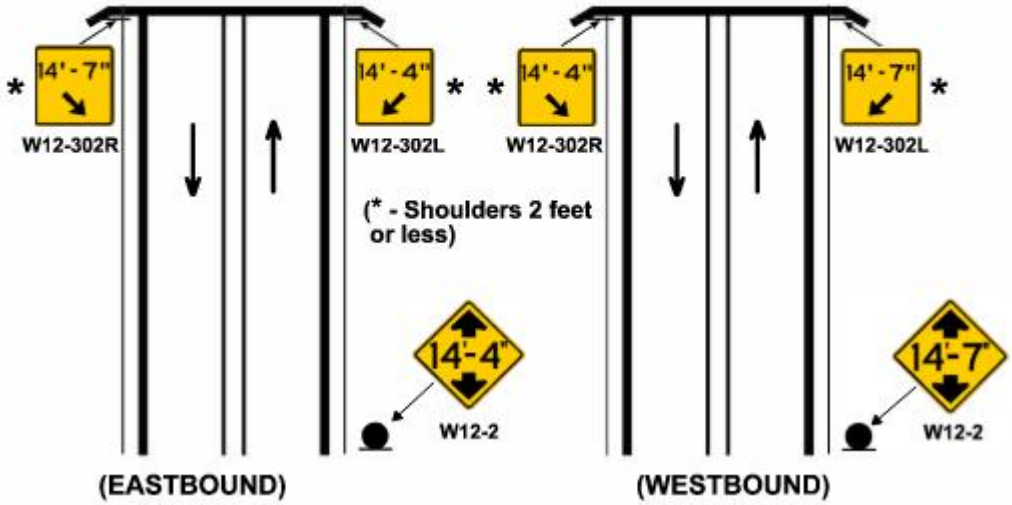


Notes:

1.

Actual Measured Opening	Measured Height Difference	Sign Revision Required
Increases	≤ 2 inches	No
Increases	> 2 inches	Yes
Decreases	≤ 1 inch	No
Decreases	> 1 inch	Yes

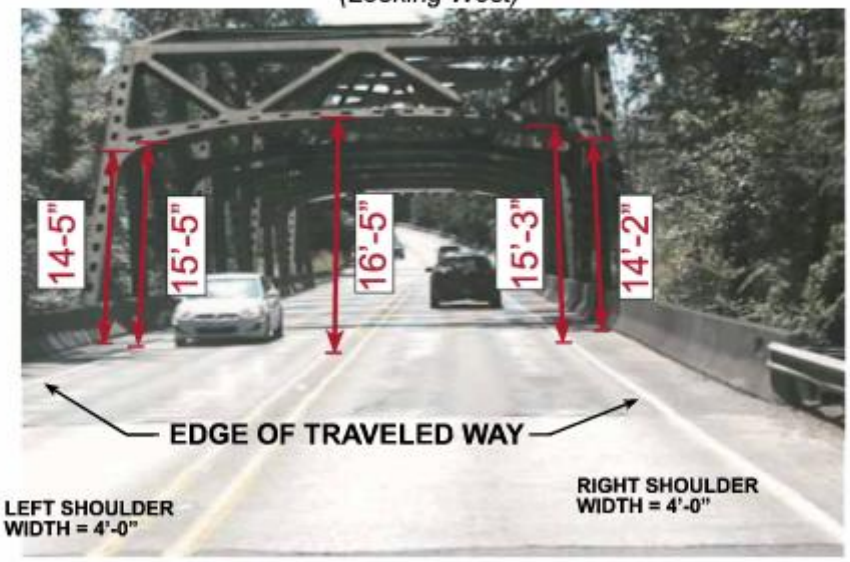
2. **See MUTCD Table 2C-3 for the placement of W12-2 signs.**



Appendix 2-10-2 Low Clearance Signing

Through Truss Bridge

Two Lane Highway - Vertical Clearance between 14'-3" and 15'-3" over Traveled Lanes
Shoulders Greater than Two Feet
(Looking West)

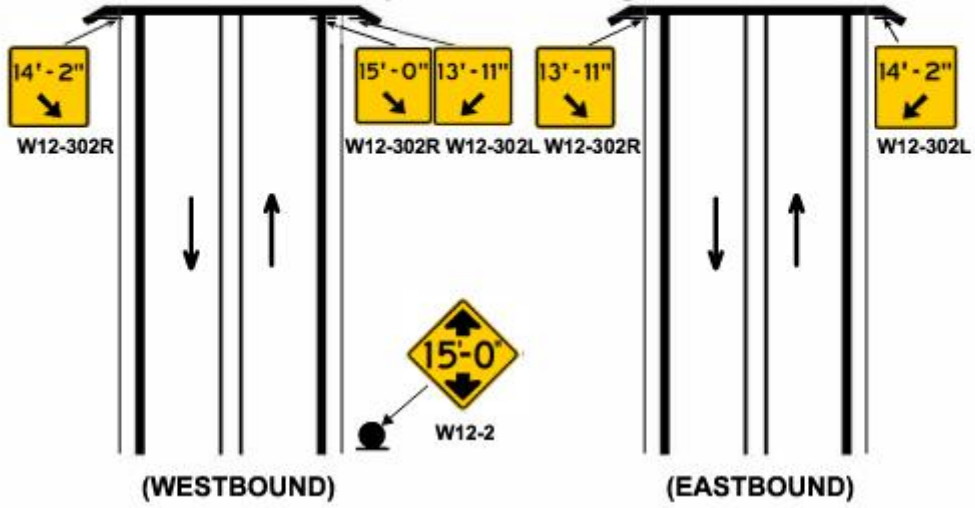


Notes:

1.

Actual Measured Opening	Measured Height Difference	Sign Revision Required
Increases	≤ 2 inches	No
Increases	> 2 inches	Yes
Decreases	≤ 1 inch	No
Decreases	> 1 inch	Yes

2. See MUTCD Table 2C-3 for the placement of W12-2 signs.



Appendix 2-10-3 Low Clearance Signing

Through Truss Bridge

Multi-Lane Highway - 15'-3" or less Vertical Clearance over Shoulders
Shoulders Widths Greater than Two Feet
(Looking South)

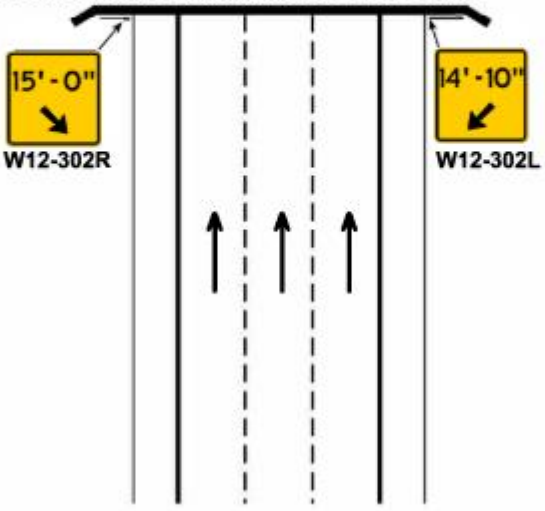
LEFT SHOULDER WIDTH = 5'- 6" — EDGE OF TRAVELED WAY — RIGHT SHOULDER WIDTH = 5'- 8"

Notes:

1.

Actual Measured Opening	Measured Height Difference	Sign Revision Required
Increases	≤ 2 inches	No
Increases	> 2 inches	Yes
Decreases	≤ 1 inch	No
Decreases	> 1 inch	Yes

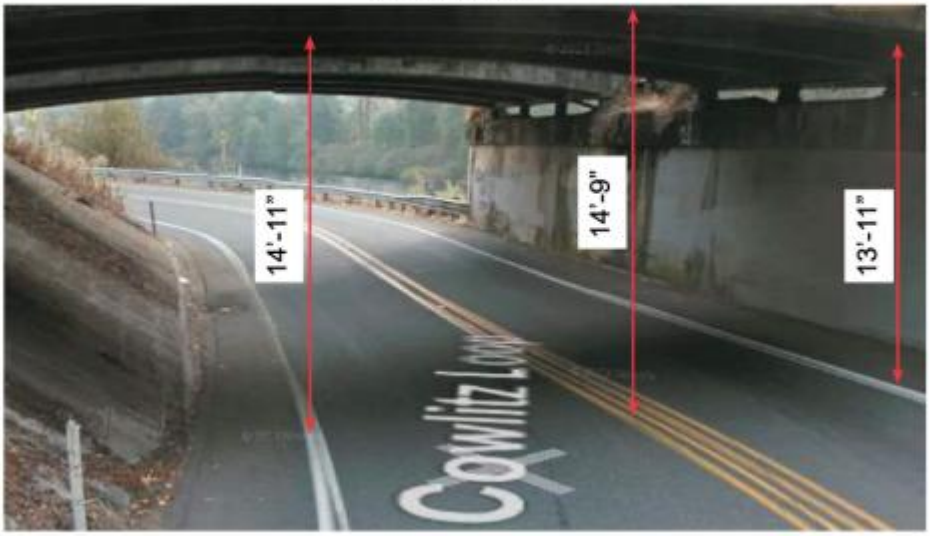
2. See MUTCD Table 2C-3 for the placement of W12-2 signs.



Appendix 2-10-4 Low Clearance Signing

Non-Through Truss Bridge

Vertical Clearance 14'-3" or less over Traveled Lanes
(Looking East)

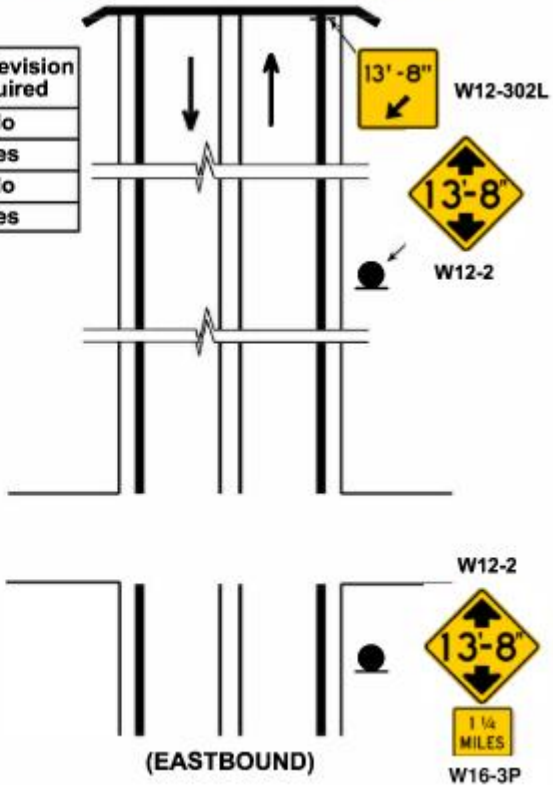


Notes:

1.

Actual Measured Opening	Measured Height Difference	Sign Revision Required
Increases	≤ 2 inches	No
Increases	> 2 inches	Yes
Decreases	≤ 1 inch	No
Decreases	> 1 inch	Yes

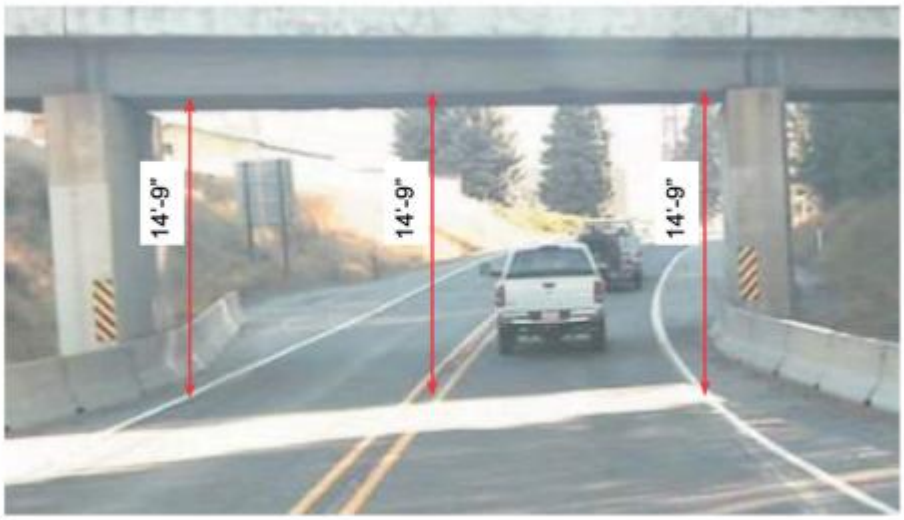
2. See MUTCD Table 2C-3 for the placement of W12-2 signs.



Appendix 2-10-5 Low Clearance Signing

Non-Through Truss Bridge

Vertical Clearance between 14'-3" and 15'-3" over Traveled Lanes
(Looking North)

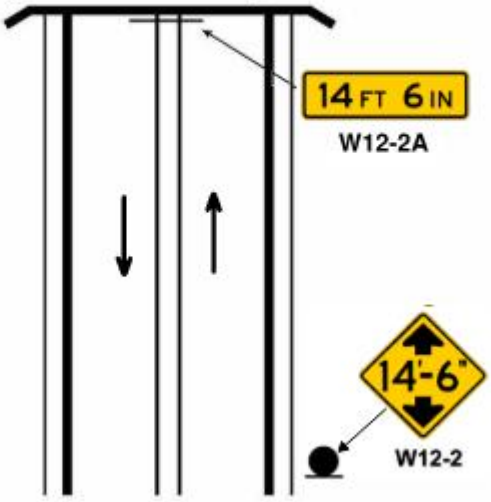


Notes:

1.

Actual Measured Opening	Measured Height Difference	Sign Revision Required
Increases	≤ 2 inches	No
Increases	> 2 inches	Yes
Decreases	≤ 1 inch	No
Decreases	> 1 inch	Yes

2. **See MUTCD Table 2C-3 for the placement of W12-2 signs.**

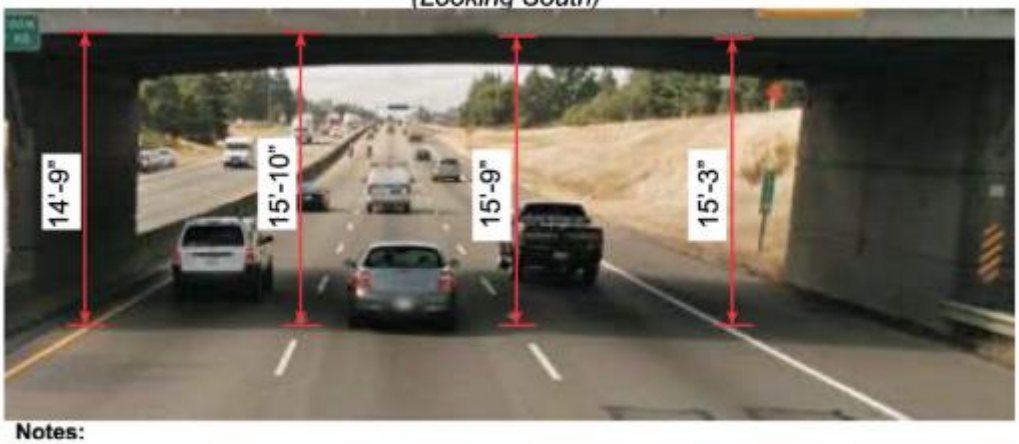


(NORTHBOUND)

Appendix 2-10-6 Low Clearance Signing

Non-Through Truss Bridge

Multi Lane Highway - Vertical Clearance between 14'-3" and 15'-3" over Traveled Lanes
Varied Heights over Traveled Lanes
(Looking South)

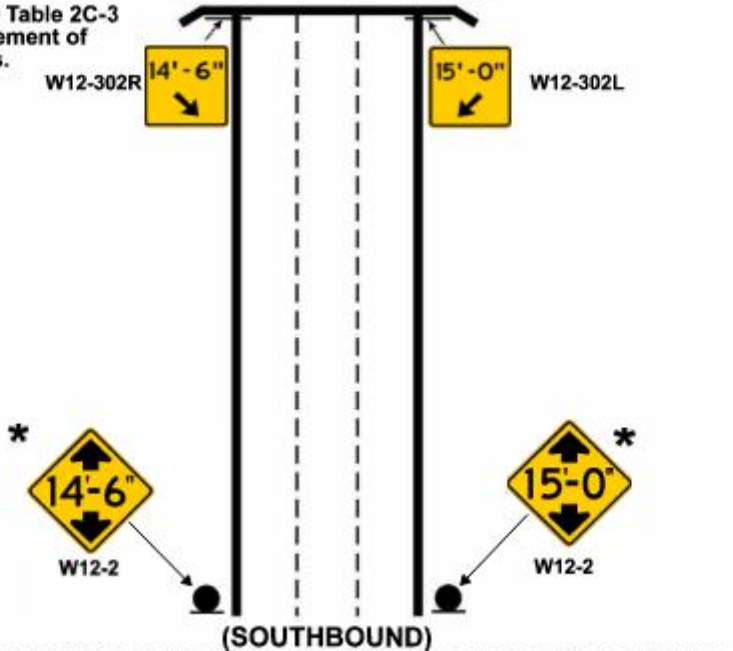


Notes:

1.

Actual Measured Opening	Measured Height Difference	Sign Revision Required
Increases	≤ 2 inches	No
Increases	> 2 inches	Yes
Decreases	≤ 1 inch	No
Decreases	> 1 inch	Yes

2. See MUTCD Table 2C-3 for the placement of W12-2 signs.

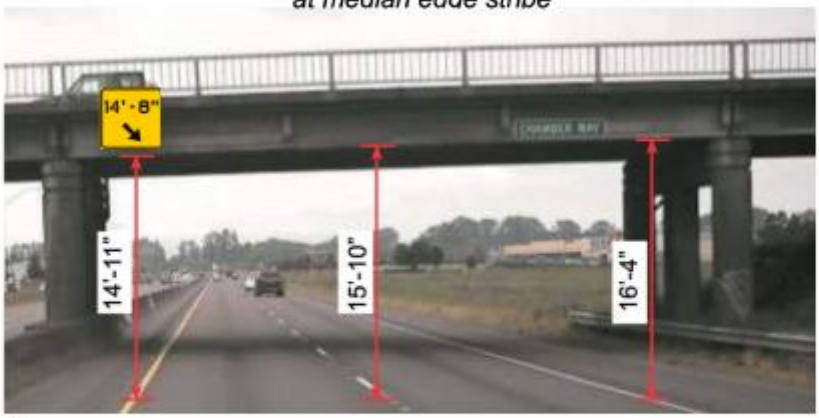


* - When applicable install the W12-2 signs in advance of an existing exit ramp, per Condition "A" in MUTCD Table 2C-3.

Appendix 2-10-7 Low Clearance Signing

Non-Through Truss Bridge

Multi Lane Highway - Vertical Clearance between 14'-3" and 15'-3", at median edge stripe

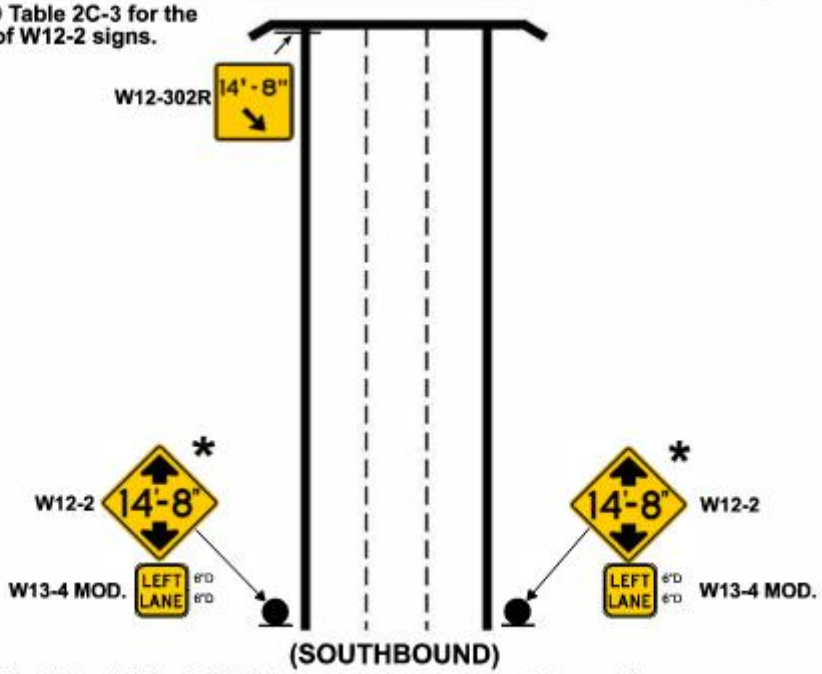


Notes:

1.

Actual Measured Opening	Measured Height Difference	Sign Revision Required
Increases	≤ 2 inches	No
Increases	> 2 inches	Yes
Decreases	≤ 1 inch	No
Decreases	> 1 inch	Yes

2. See MUTCD Table 2C-3 for the placement of W12-2 signs.

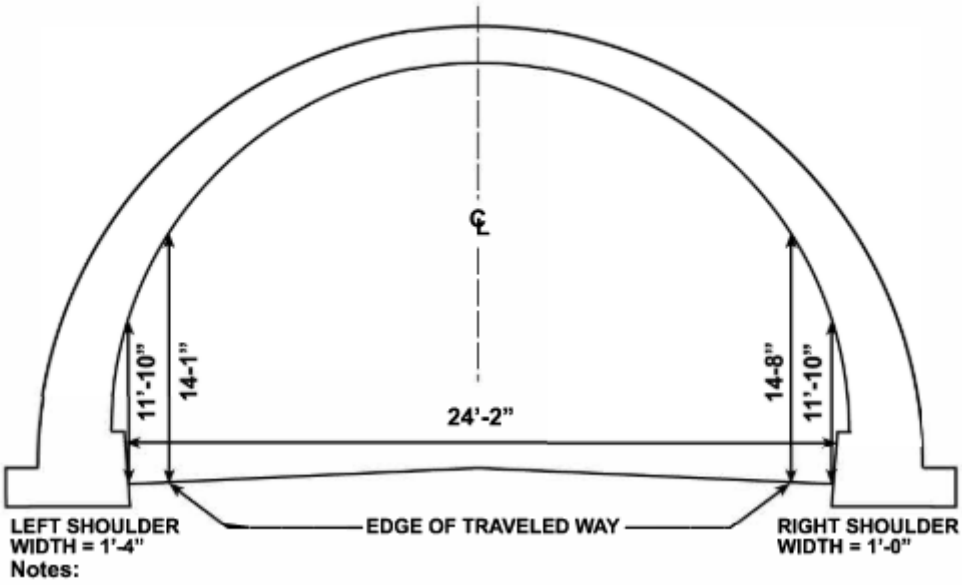


* - When applicable install the W12-2 signs in advance of an existing exit ramp, per Condition "A" in MUTCD Table 2C-3.

Appendix 2-10-8 Low Clearance Signing

Arched Tunnel

Two Way Traffic - Vertical Clearance between 14'-3" and 15'-3" over Traveled Lanes

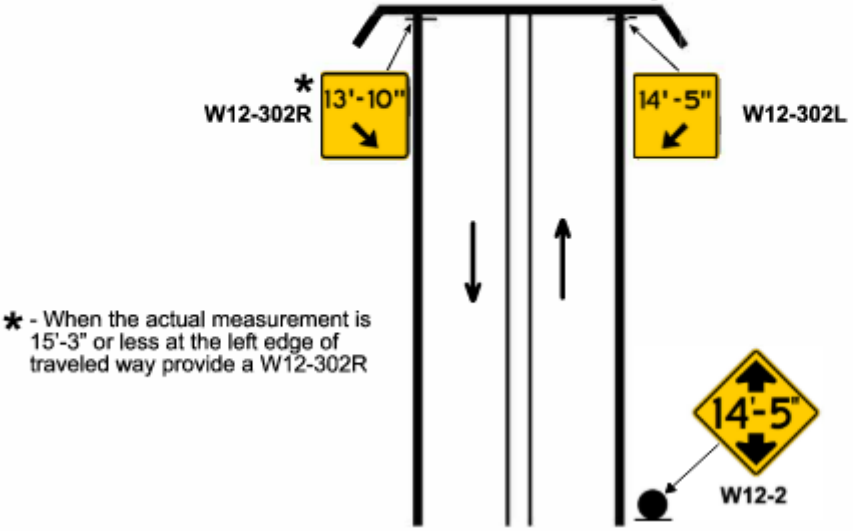


Notes:

1.

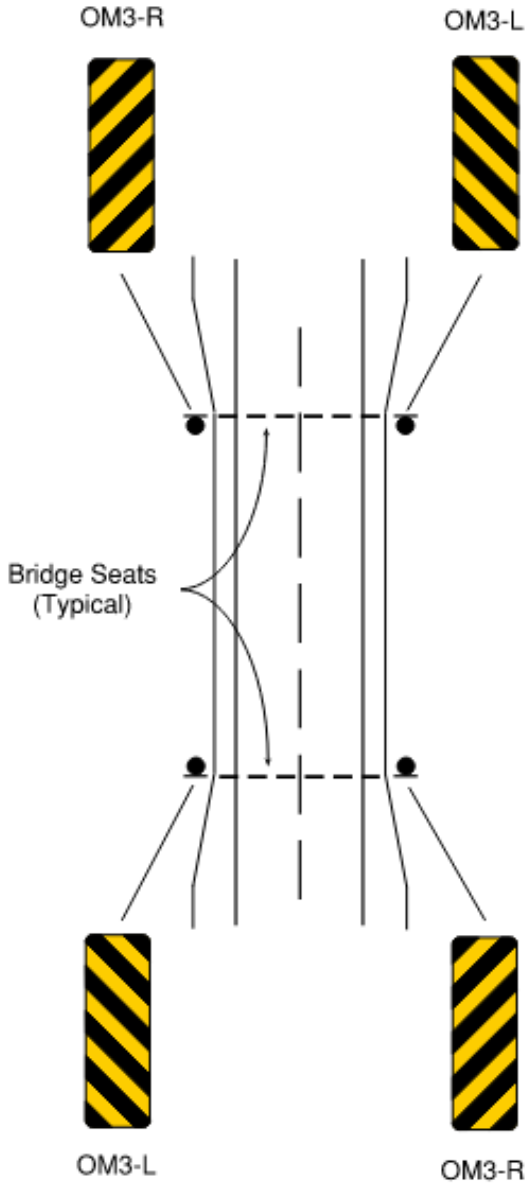
Actual Measured Opening	Measured Height Difference	Sign Revision Required
Increases	≤ 2 inches	No
Increases	> 2 inches	Yes
Decreases	≤ 1 inch	No
Decreases	> 1 inch	Yes

2. See MUTCD Table 2C-3 for the placement of W12-2 signs.



* - When the actual measurement is 15'-3" or less at the left edge of traveled way provide a W12-302R

Appendix 2-11-1 Lateral Clearance Markers – Objects within Outside Shoulder



Notes:

Object Markers are used to mark obstructions within or adjacent to the roadway (MUTCD, Sections 2C.71 and 2C.72).

Used to mark bridge piers, narrow shoulders, islands, shoulder drop-offs, barriers, etc. (MUTCD, Section 2C.72).

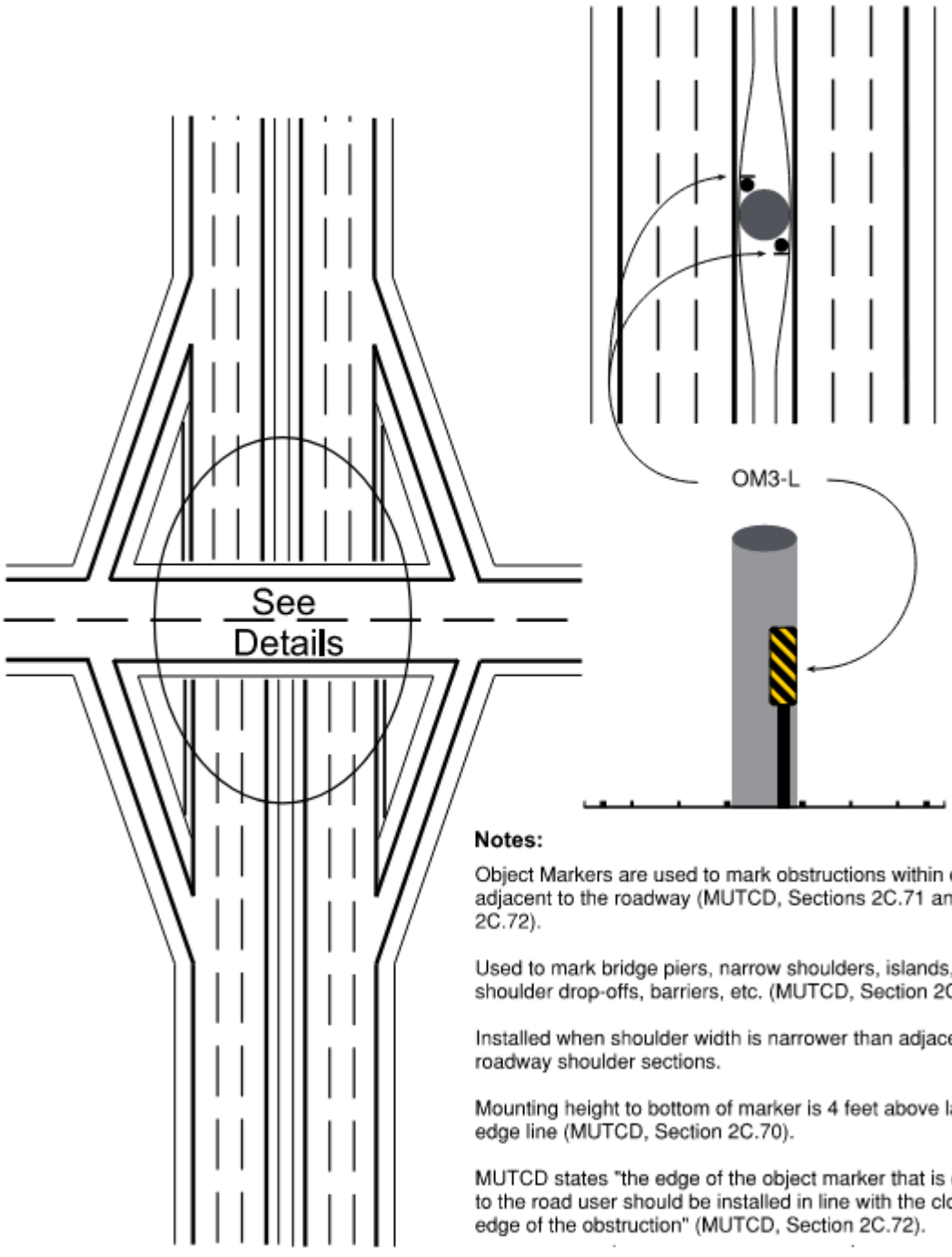
Installed when shoulder width is narrower than adjacent roadway shoulder sections.

Mounting height to bottom of marker is 4 feet above lane edge line (MUTCD, Section 2C.70).

MUTCD states "the edge of the object marker that is closest to the road user should be installed in line with the closest edge of the obstruction" (MUTCD, Section 2C.72).

Chevron Alignment Signs (W1-8L/R) shall not be used to mark obstructions within or adjacent to the roadway, including the beginning of guardrails or barriers (MUTCD, Section 2C.08).

Appendix 2-11-2 Lateral Clearance Markers – Objects Within Inside Shoulder



Notes:

Object Markers are used to mark obstructions within or adjacent to the roadway (MUTCD, Sections 2C.71 and 2C.72).

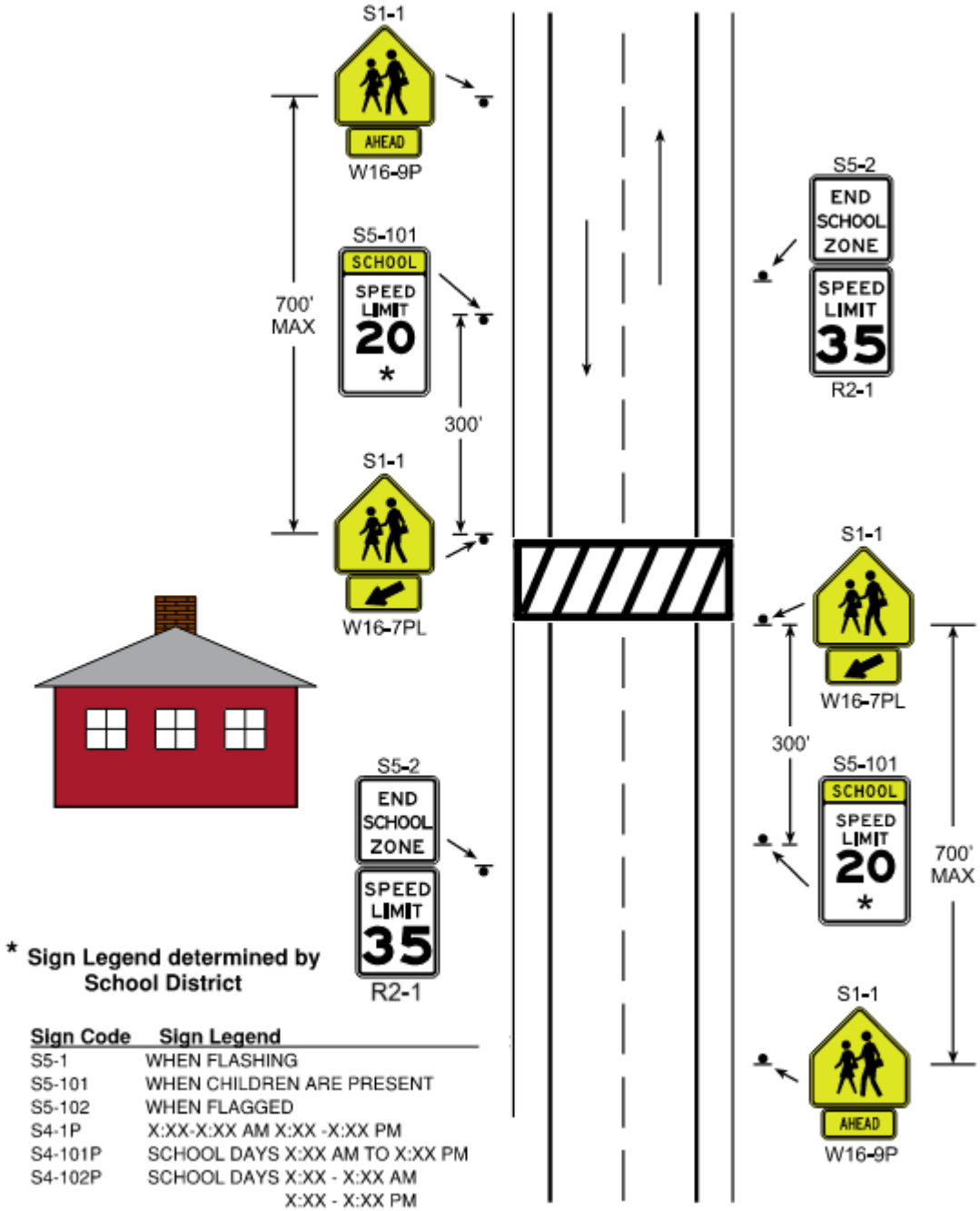
Used to mark bridge piers, narrow shoulders, islands, shoulder drop-offs, barriers, etc. (MUTCD, Section 2C.72).

Installed when shoulder width is narrower than adjacent roadway shoulder sections.

Mounting height to bottom of marker is 4 feet above lane edge line (MUTCD, Section 2C.70).

MUTCD states "the edge of the object marker that is closest to the road user should be installed in line with the closest edge of the obstruction" (MUTCD, Section 2C.72).

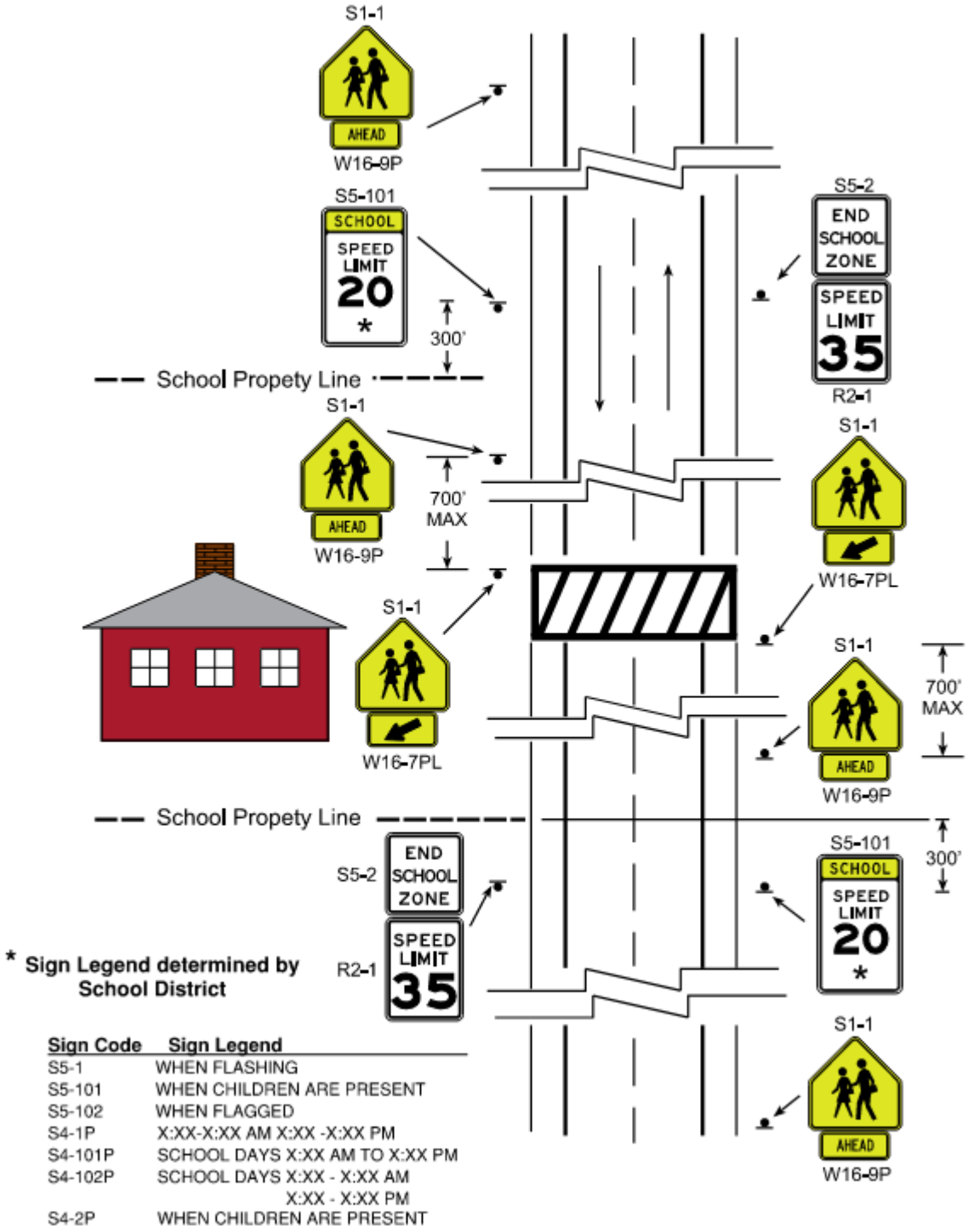
Appendix 2-12-1 Reduced School Speed Zone Signing at School Crosswalks



* Sign Legend determined by School District

Sign Code	Sign Legend
S5-1	WHEN FLASHING
S5-101	WHEN CHILDREN ARE PRESENT
S5-102	WHEN FLAGGED
S4-1P	X:XX-X:XX AM X:XX -X:XX PM
S4-101P	SCHOOL DAYS X:XX AM TO X:XX PM
S4-102P	SCHOOL DAYS X:XX - X:XX AM X:XX - X:XX PM
S4-2P	WHEN CHILDREN ARE PRESENT

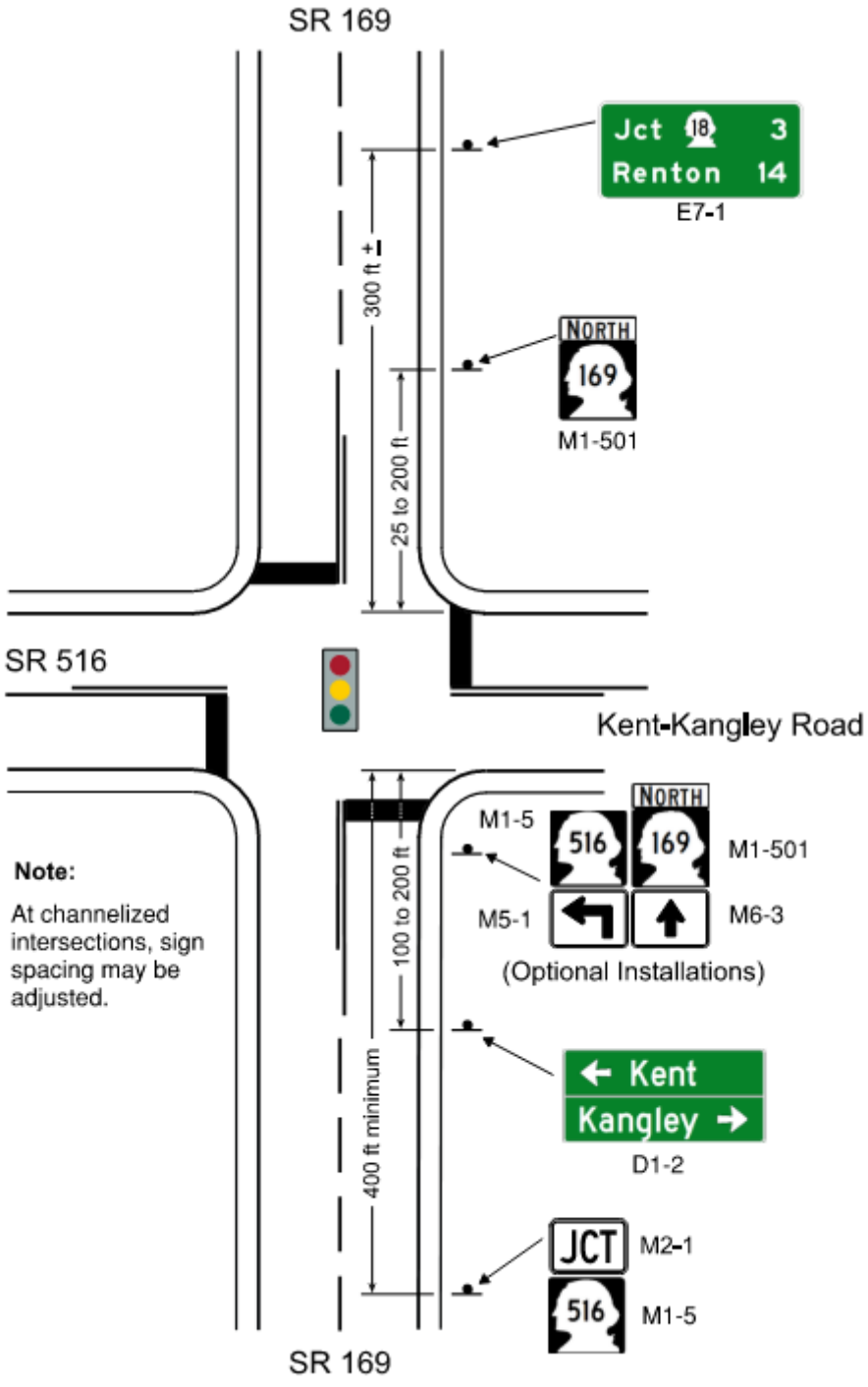
Appendix 2-12-2 Reduced School Speed Zone Signing at School Property Line



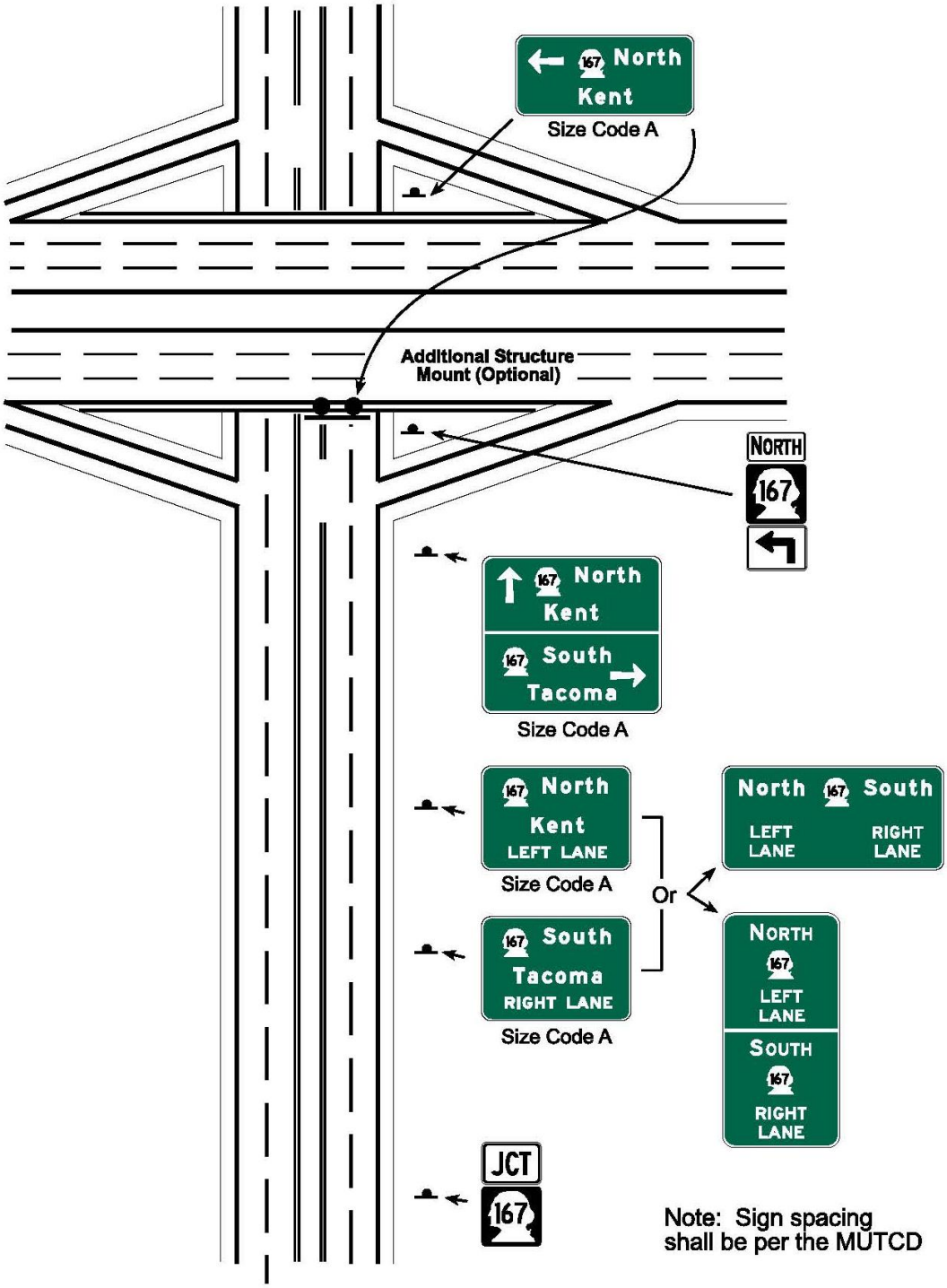
* **Sign Legend determined by School District**

Sign Code	Sign Legend
S5-1	WHEN FLASHING
S5-101	WHEN CHILDREN ARE PRESENT
S5-102	WHEN FLAGGED
S4-1P	X:XX-X:XX AM X:XX -X:XX PM
S4-101P	SCHOOL DAYS X:XX AM TO X:XX PM
S4-102P	SCHOOL DAYS X:XX - X:XX AM X:XX - X:XX PM
S4-2P	WHEN CHILDREN ARE PRESENT

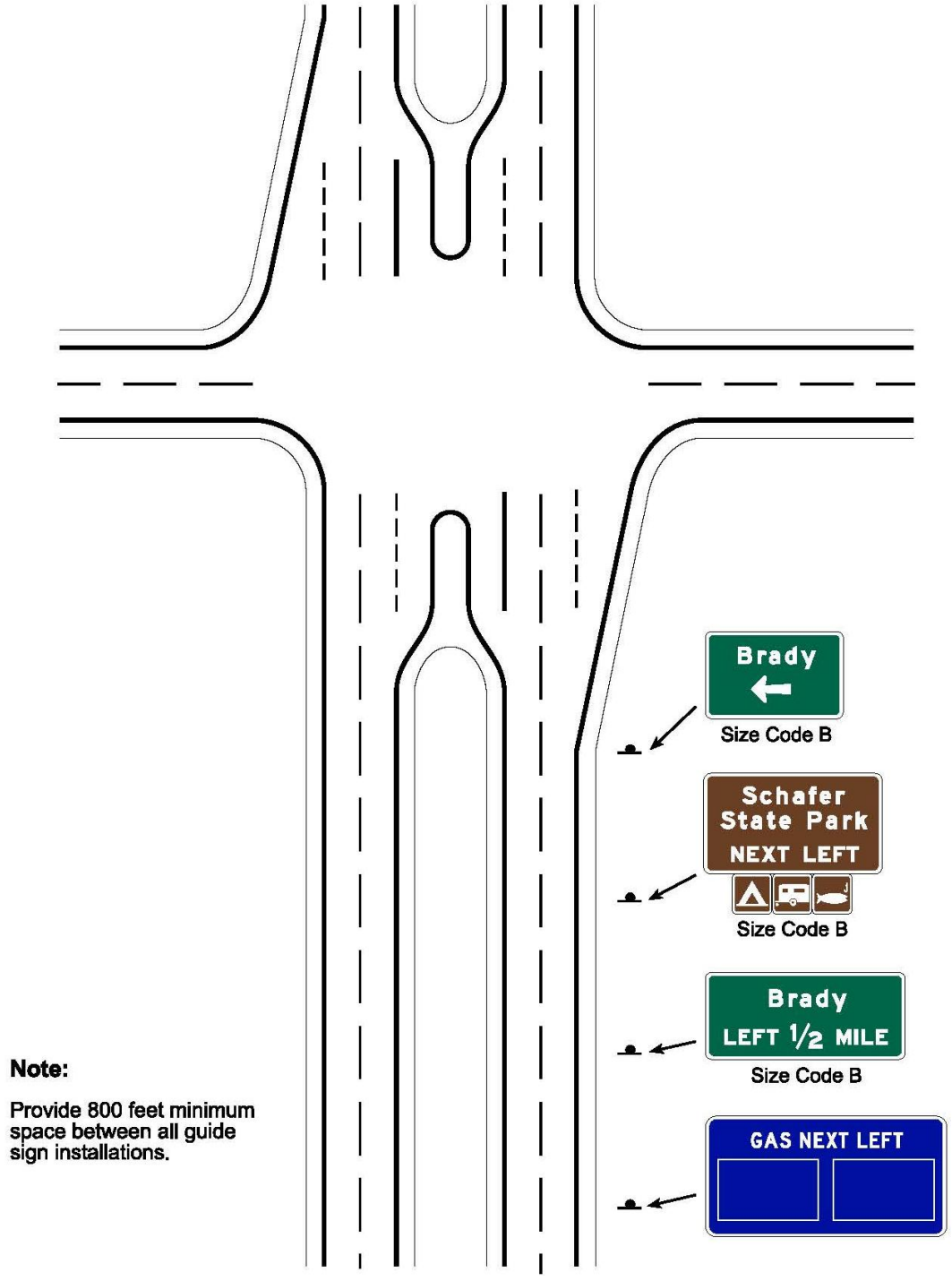
Appendix 2-13 Route Intersection Guide Signing



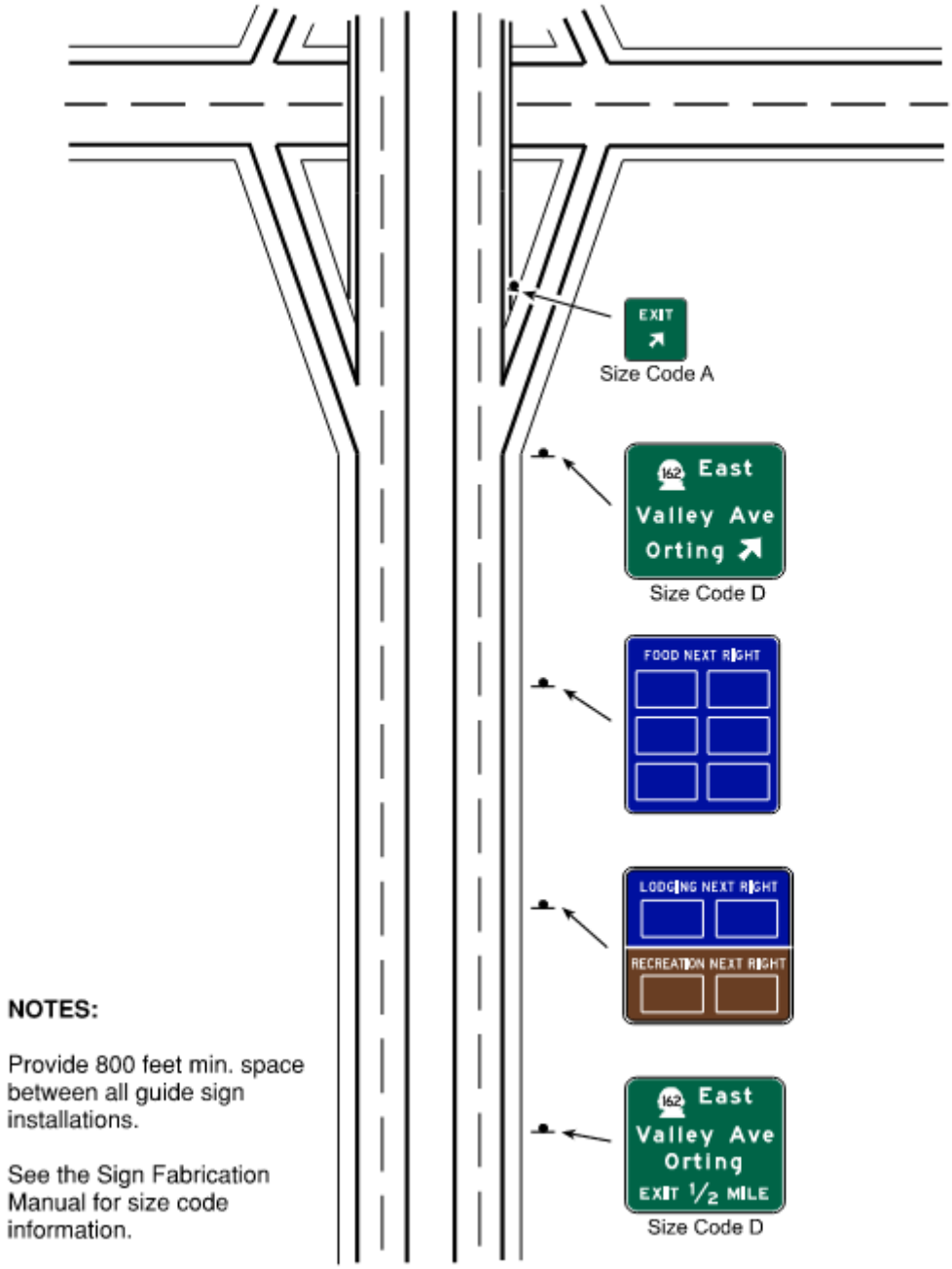
Appendix 2-14 Crossroad Interchange Approach Guide Signs



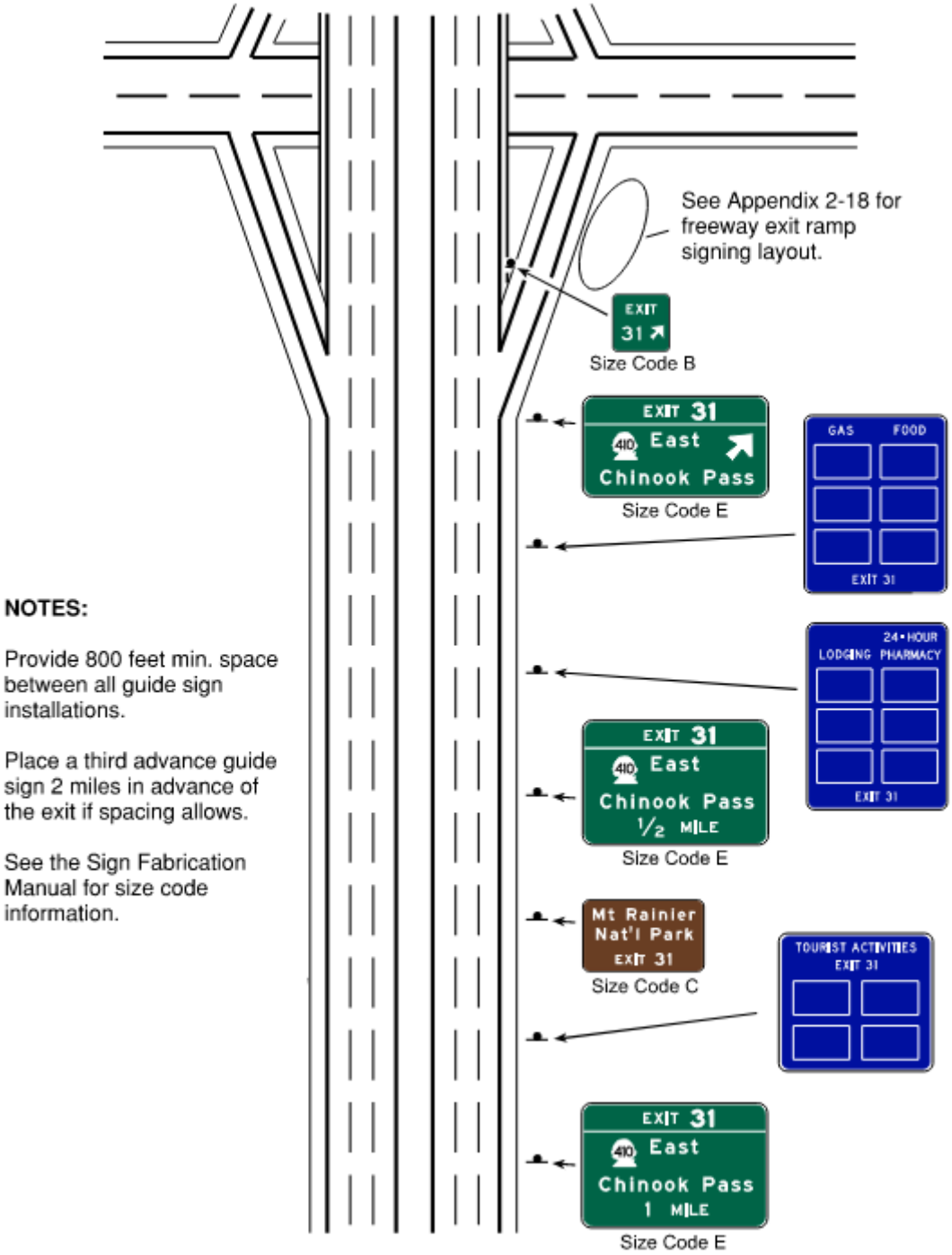
Appendix 2-15 Expressway Intersection Approach Guide Signs



Appendix 2-16 Expressway Interchange Approach Guide Signs



Appendix 2-17 Freeway Interchange Approach Signing



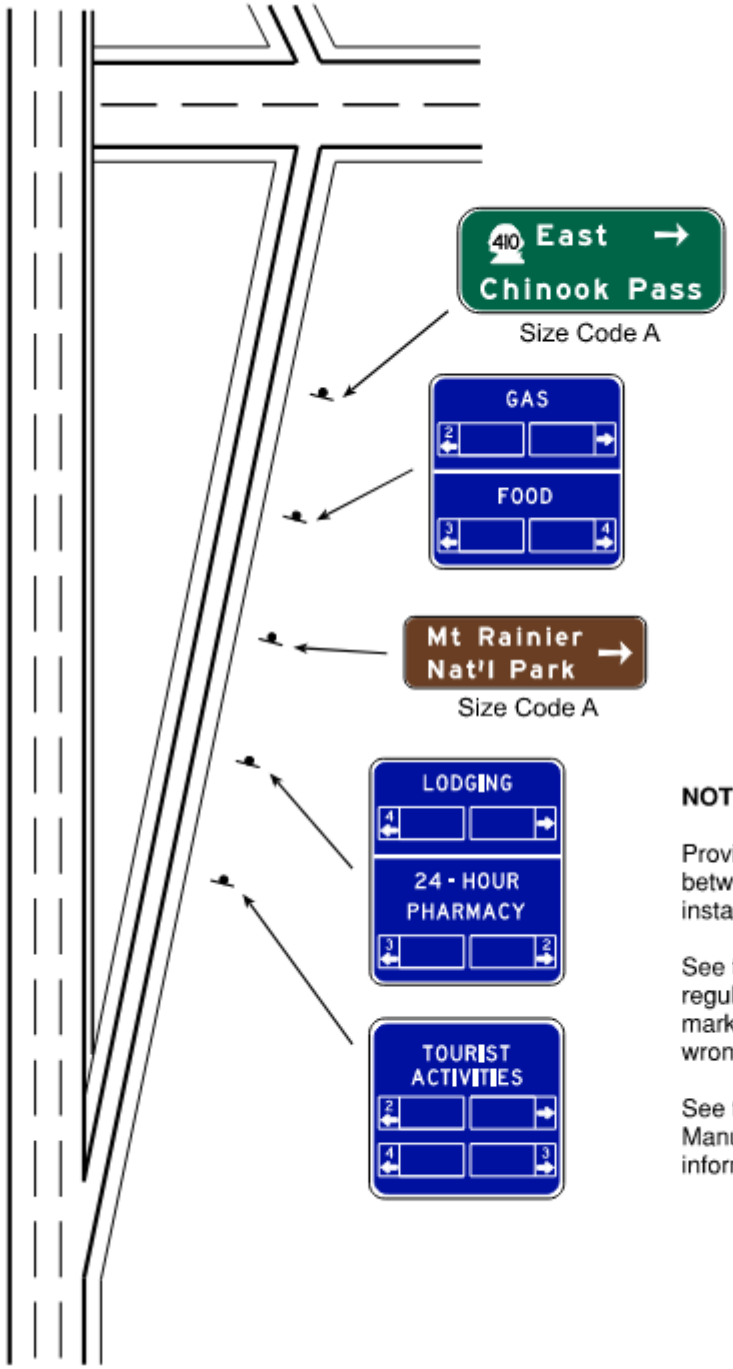
NOTES:

Provide 800 feet min. space between all guide sign installations.

Place a third advance guide sign 2 miles in advance of the exit if spacing allows.

See the Sign Fabrication Manual for size code information.

Appendix 2-18 Freeway Exit Ramp Guide Signs



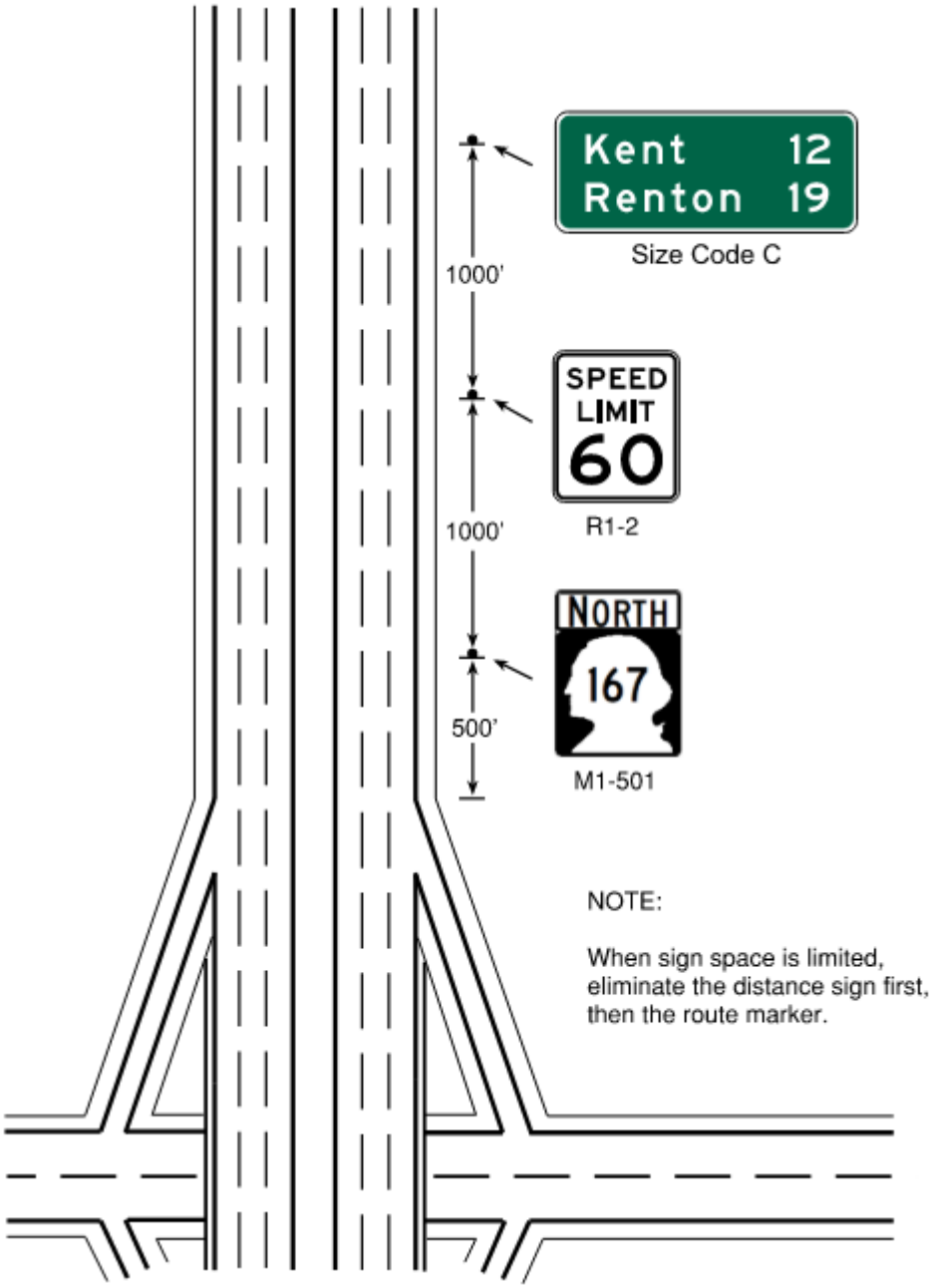
NOTES:

Provide 100 feet min. space between all guide sign installations.

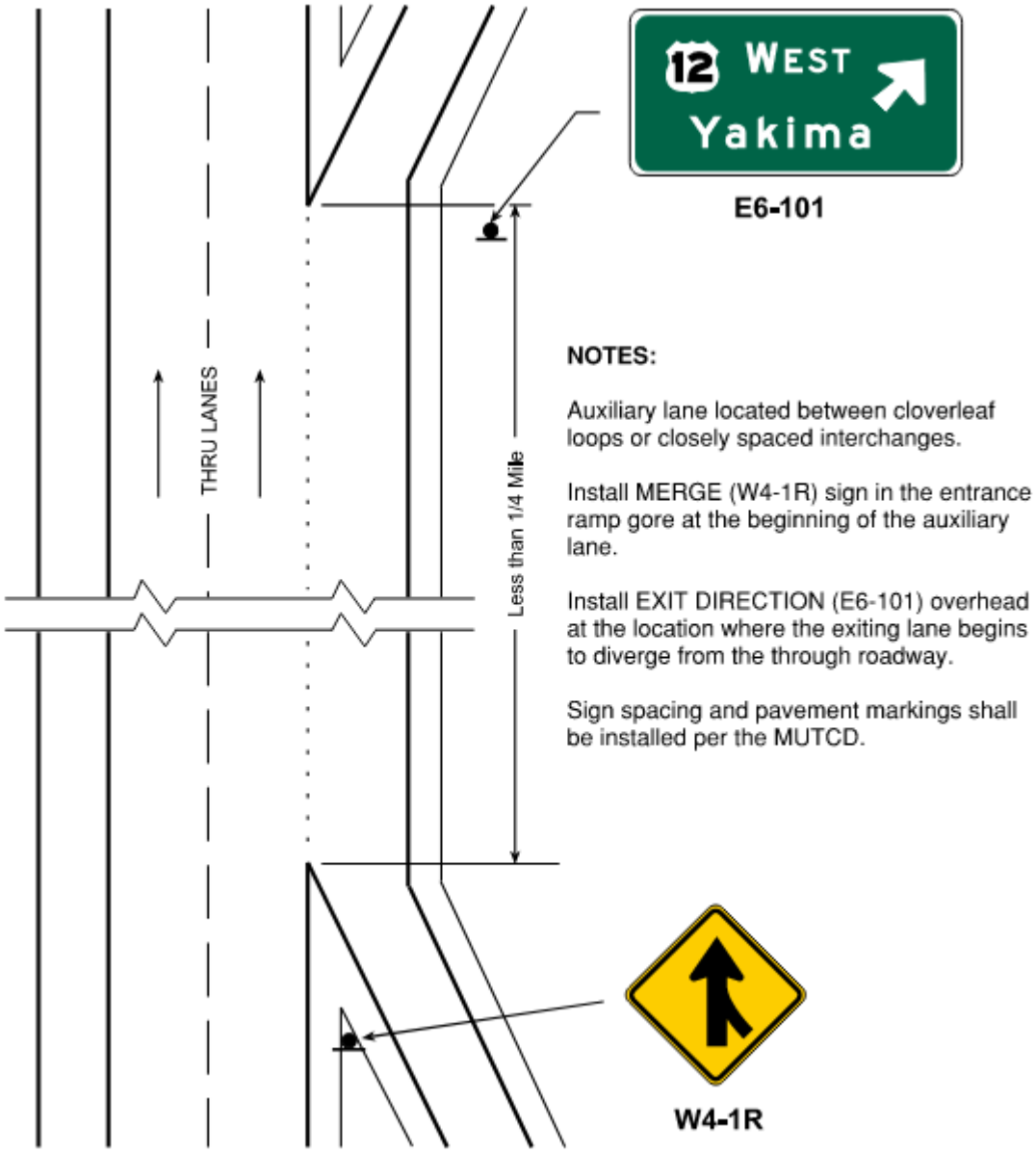
See the MUTCD for regulatory signing and marking examples to deter wrong-way entry.

See the Sign Fabrication Manual for size code information.

Appendix 2-19 Freeway Post Interchange Signs



Appendix 2-20 Auxiliary Freeway Lane Less than 1/4 Mile Long



NOTES:

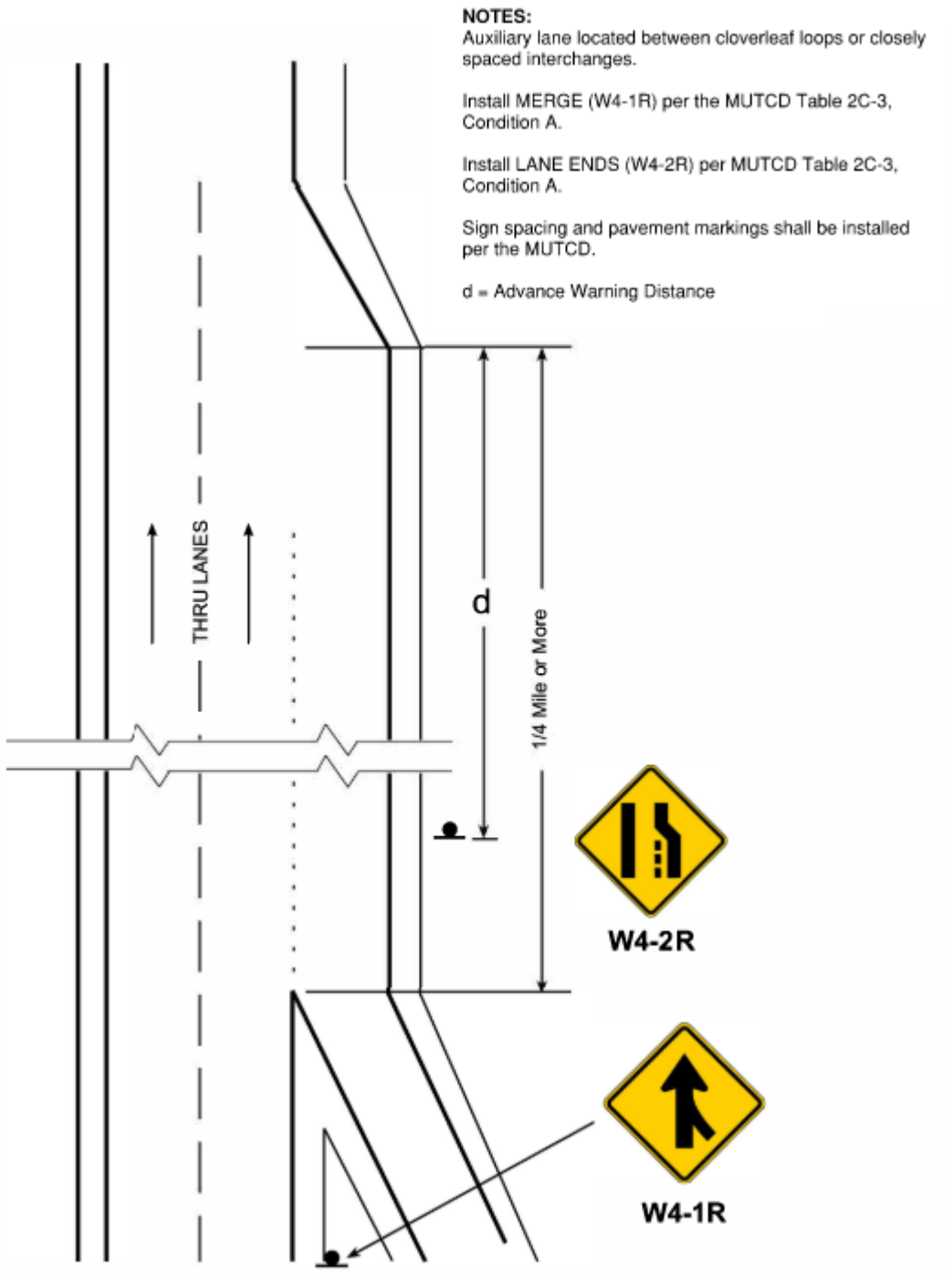
Auxiliary lane located between cloverleaf loops or closely spaced interchanges.

Install MERGE (W4-1R) sign in the entrance ramp gore at the beginning of the auxiliary lane.

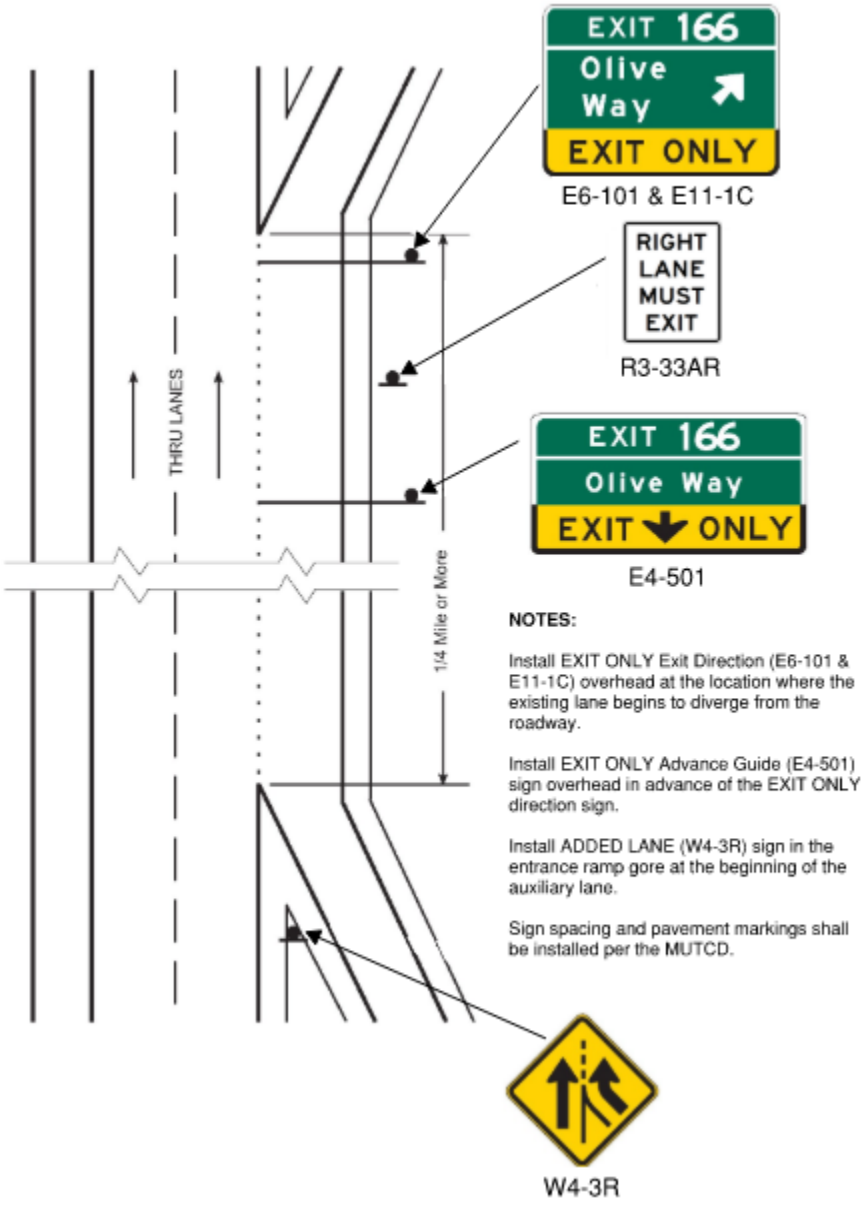
Install EXIT DIRECTION (E6-101) overhead at the location where the exiting lane begins to diverge from the through roadway.

Sign spacing and pavement markings shall be installed per the MUTCD.

Appendix 2-21 Parallel on Connection More Than 1/4 Mile



Appendix 2-22 Auxiliary Freeway Lane 1/4 Mile or More in Length



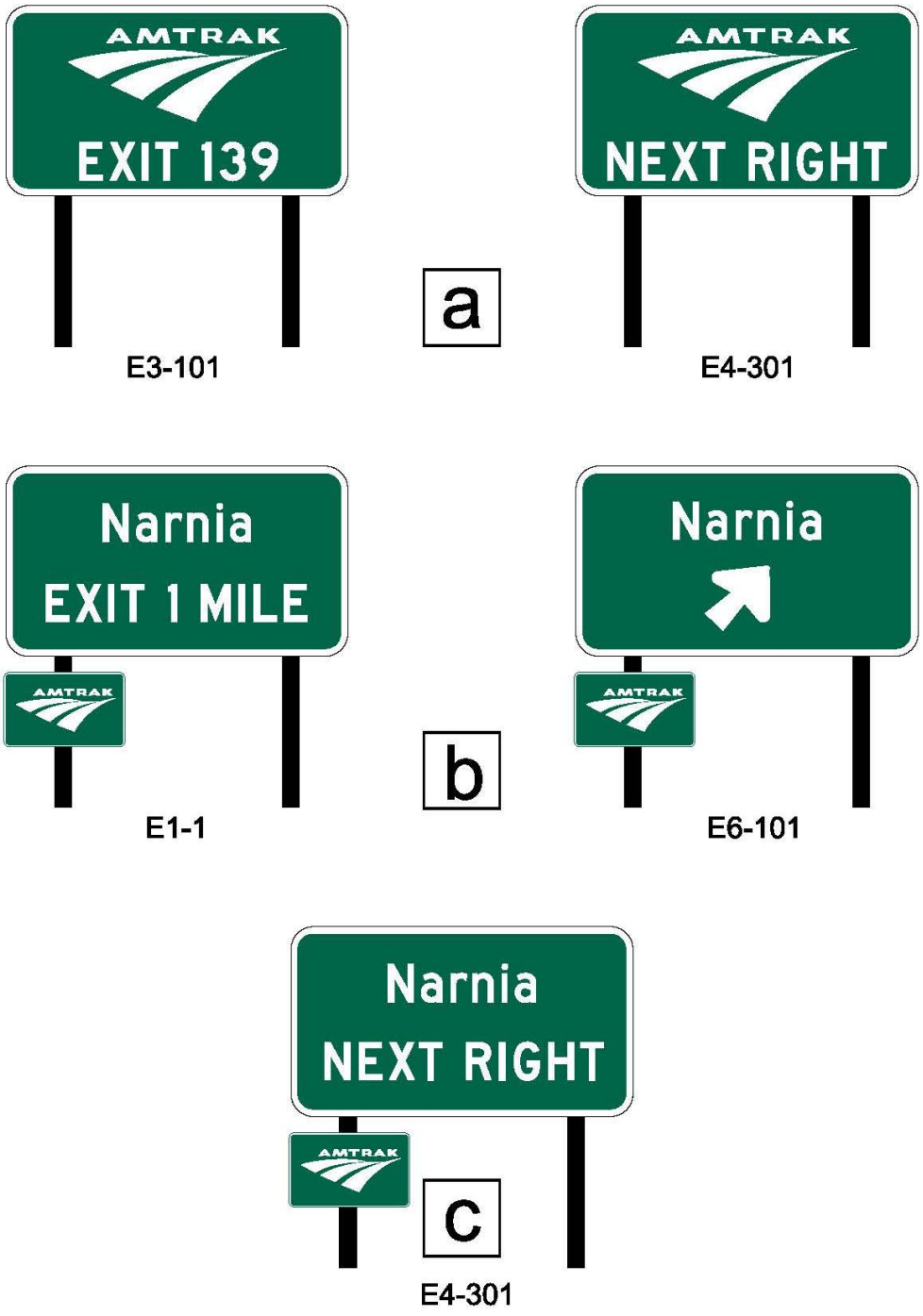
Appendix 2-23 Supplemental Guide Sign Criteria

CRITERIA FOR SELECTING TRAFFIC GENERATORS AS DESTINATIONS ON SUPPLEMENTAL GUIDE SIGN

Type of Generator	Specific Criteria	Major Metro Area[1]	Urban Area[2]	Rural Area
Airports - (Destination name only, not symbol)	Regularly Scheduled Commercial Flights Per Day	35	20	15
	Distance from Interchange (miles)	5	5	5
	Paved &Lighted Runway ≥ 2,500 ft long[3]	-	-	-
Colleges, Universities, and Branch Campuses	Must Be Accredited. Total Enrollment , full & part time students:	4,500	2,500	1,000
	Distance from Interchange (miles)	5	5	5
Regional Shopping Centers	3 Major Department Stores; 500,000 sq ft of Leasable Space; Minimum 9,000 Daily One Way Trips[4]	-	-	-
	Distance from Interchange (miles)	1	1	1
Industrial Parks	500,000 sq ft of leasable space[5]	-	-	-
	Distance from Interchange	5	5	5
Ports/Port Districts	Served by two or more Transportation Modes (Water, Highway, Rail, Air)			
	Distance from Interchange	5	5	5
Event Venues	Annual Attendance	300,000	250,000	200,000
	Distance from Interchange (miles)	2	2	2
Major Recreation Areas	Annual Attendance (open to public)	300,000	250,000	100,000
National Parks	Sign from Major Junctions; Case by Case			
State Parks[6]	Distance from Interchange (miles)	15	15	15
USFS Facilitiess (Campgrounds, HQ's)	Distance from Interchange (miles)	1	1	10

[1] Population greater than 50.000
[2] Population 5,000 - 49,999
[3] See section 2.15(1) for additional criteria
[4] See WAC 468-95-025 for additional criteria
[5] Leasable space can be a mix of manufacturing, service, and warehouse facilities
[6] Per RCW 47.36.290

Appendix 2-24 Signing to Amtrak



Appendix 2-25 Application for Historic/Cultural Sign

Name of Organization _____

Organization Address _____

_____

_____

Mailing Address (if different) _____

_____

_____

Name of authorizing Official (include title, e.g., Director, Trustee, etc.)

_____

Address of Authorizing Official _____

_____

_____

Telephone # _____

email address _____

Has your organization been granted *non-profit* status (IRS 501 (c)(3)) Y N

Please provide the following information about your organization:

- **What are your visitation hours and when are you open to the general public (note any seasonal variations to schedule of operation)?**

  _____

  _____

- **Is the facility easily accessible to all visitors, including ADA features-Y N**
- **Is the facility readily visible from the highway-Y N**
- **If not, how far is your facility from the state highway on which the sign is being requested** _____
- **Is the road serving your facility a two-lane, all-weather road- Y N**
- **Please indicate the name or number of the road, street or highway serving your facility**_____
- **Please describe where you would like the sign to be located. Be specific, include the state highway number and milepost, or distance to the nearest important intersection or junction**

  _____

  _____

  _____

- **Please answer the following questions for a Historic site: Is your site included in the *Washington Heritage Register* - Y N Is there an interpretive center or guided tour- Y N Has your facility been approved by the Heritage Resource Center of the Washington State Historical Society - Y N**

Sign approved Sign disapproved Reason for disapproval _____

_____

_____

_____

_____ _____

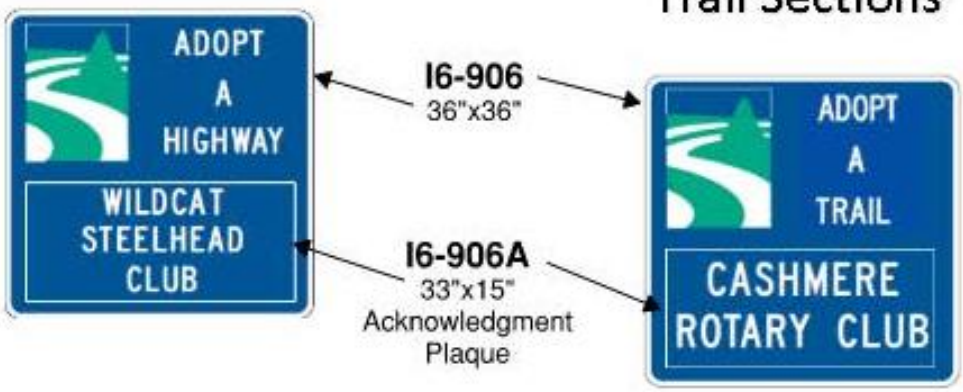
Chair, Review Committee **Date**

Appendix 2-26 Adopt-a-Highway/Trail Signs for Volunteer Groups

Multi Lane Highway

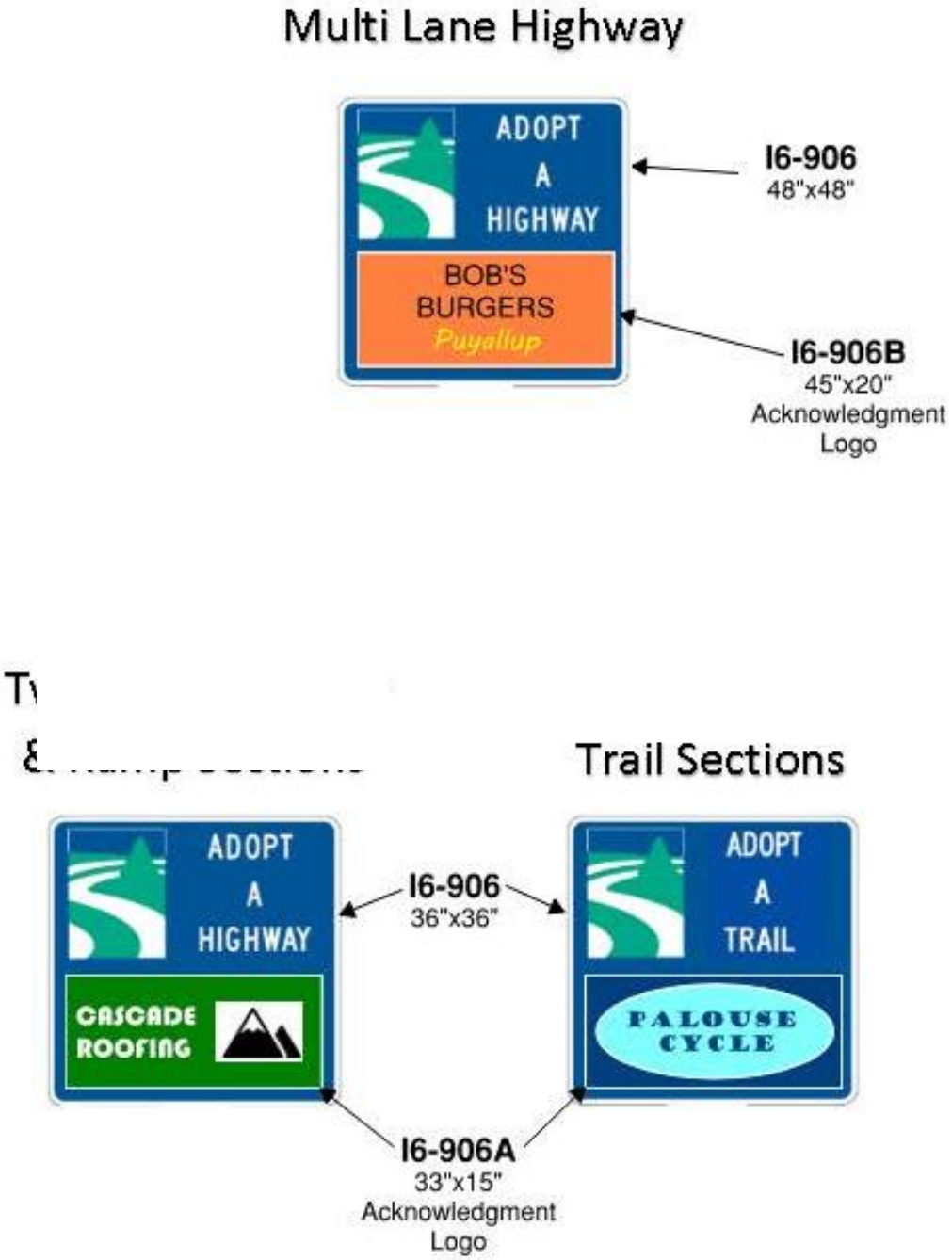
Two Lane Highway
& Ramp Sections

Trail Sections



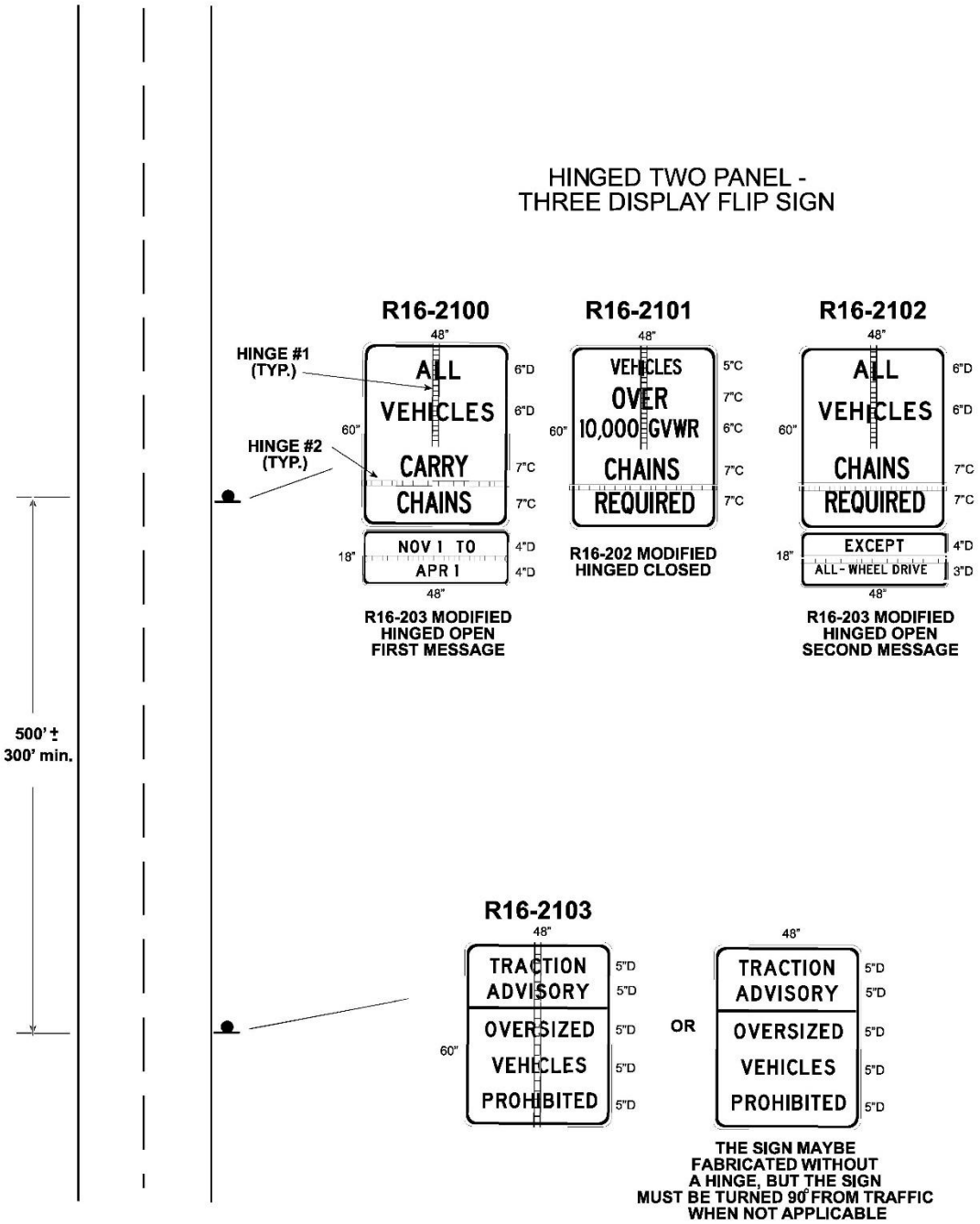
NOTE: Volunteer Names can be overlayed if needed.

Appendix 2-27 Adopt-a-Highway/Trail Signs for Business Sponsored Groups

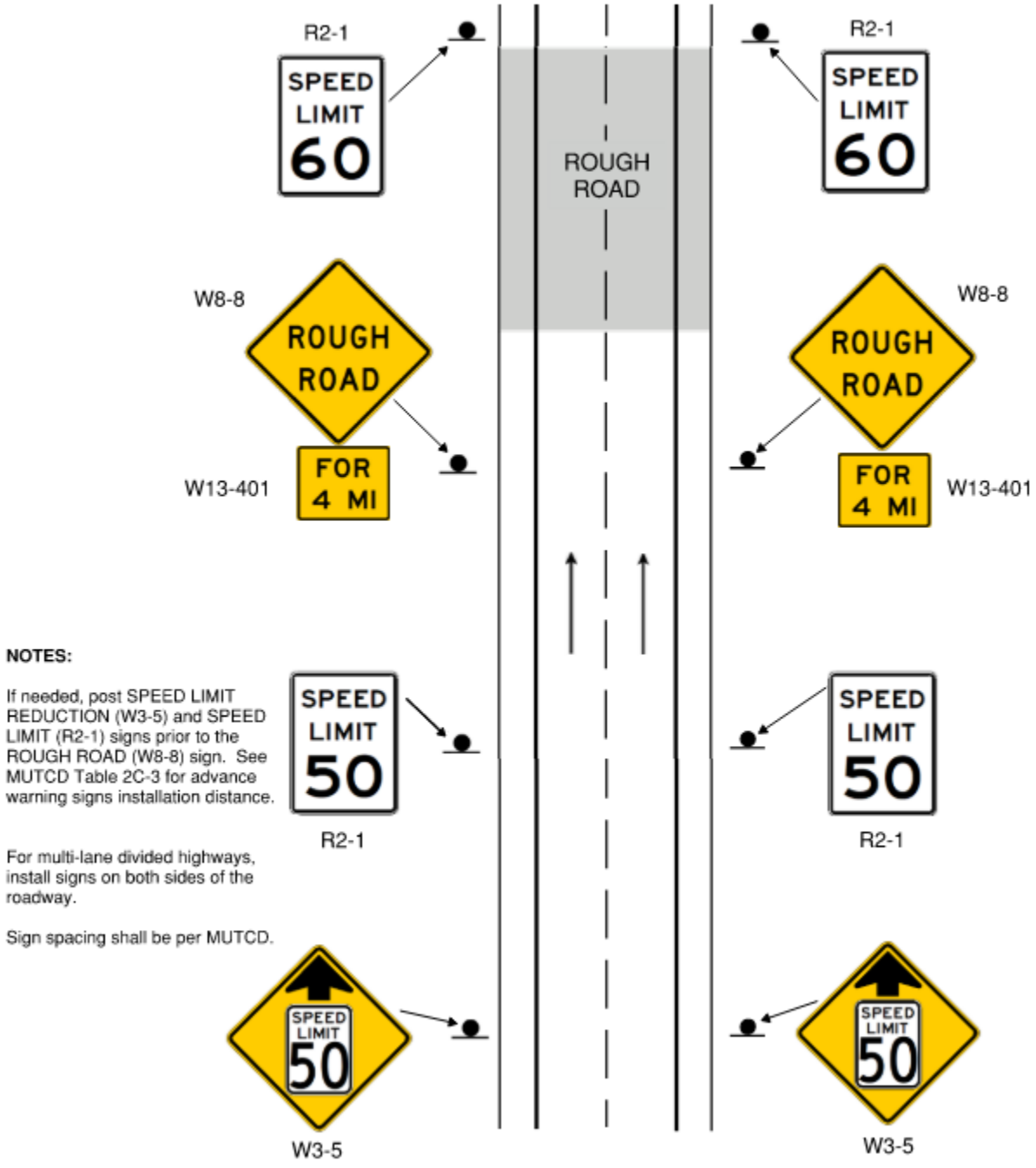


NOTE: Sponsor Names can be overlayed if needed.

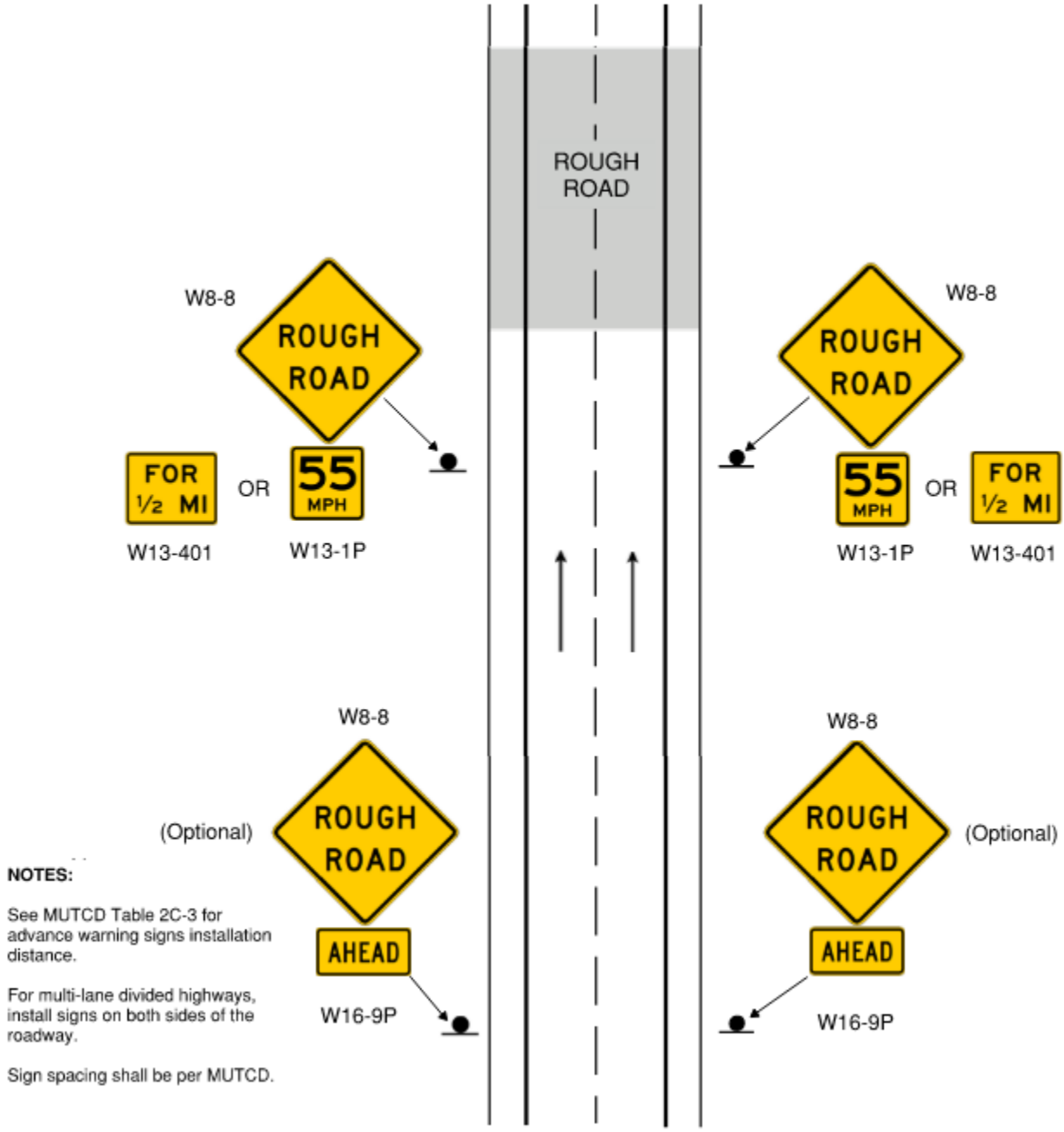
Appendix 2-28 Traction Device Requirements for Snow Prone Areas



Appendix 2-29 Rough Road Signing – Multi-Lane Section Greater than 1 Mile or Speed Reduction of More than 10 MPH



Appendix 2-30 *Rough Road Signing – Multi Lane Section Less Than 1 Mile or Advisory Speed Reduction of 10 MPH or Less*



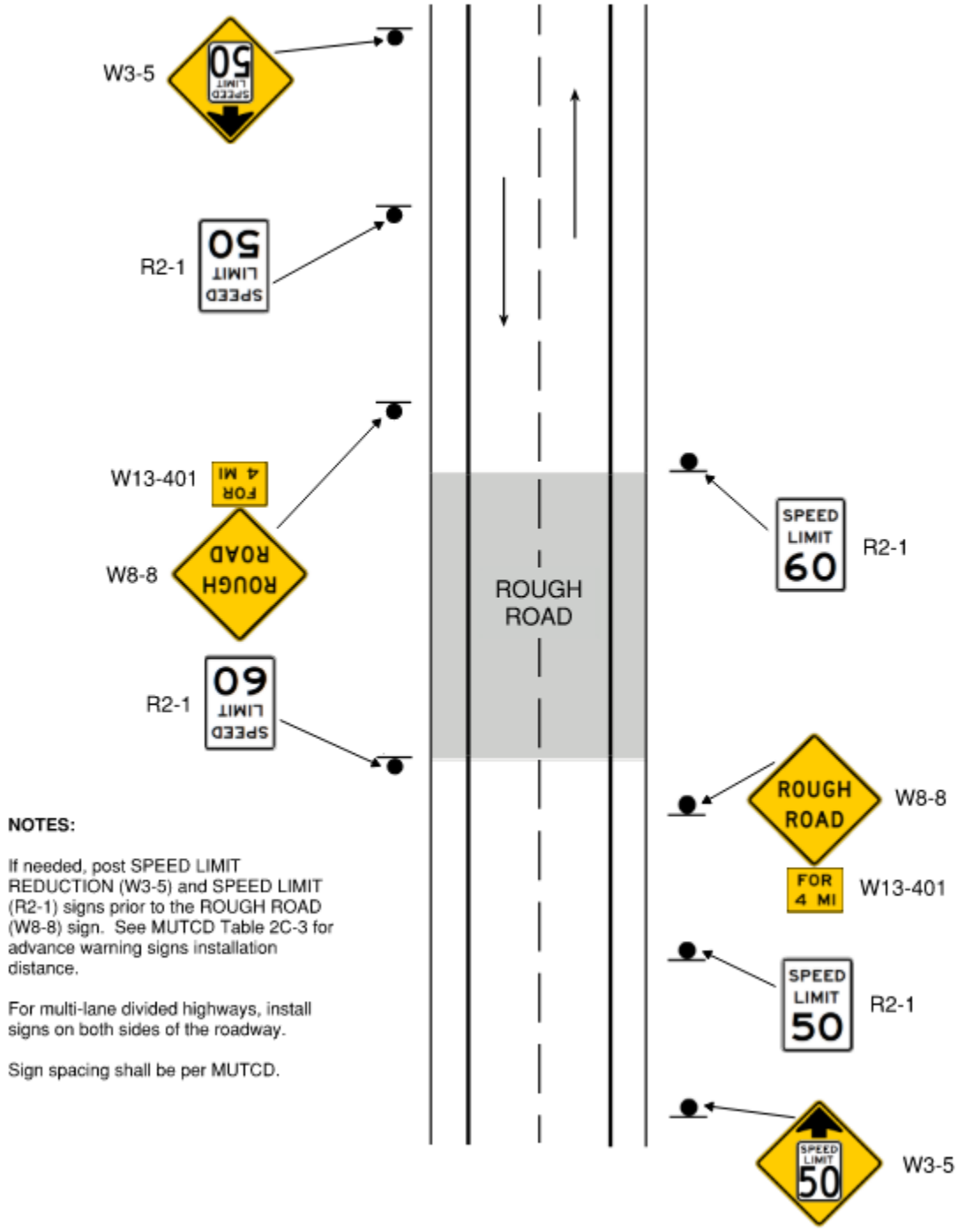
NOTES:

See MUTCD Table 2C-3 for advance warning signs installation distance.

For multi-lane divided highways, install signs on both sides of the roadway.

Sign spacing shall be per MUTCD.

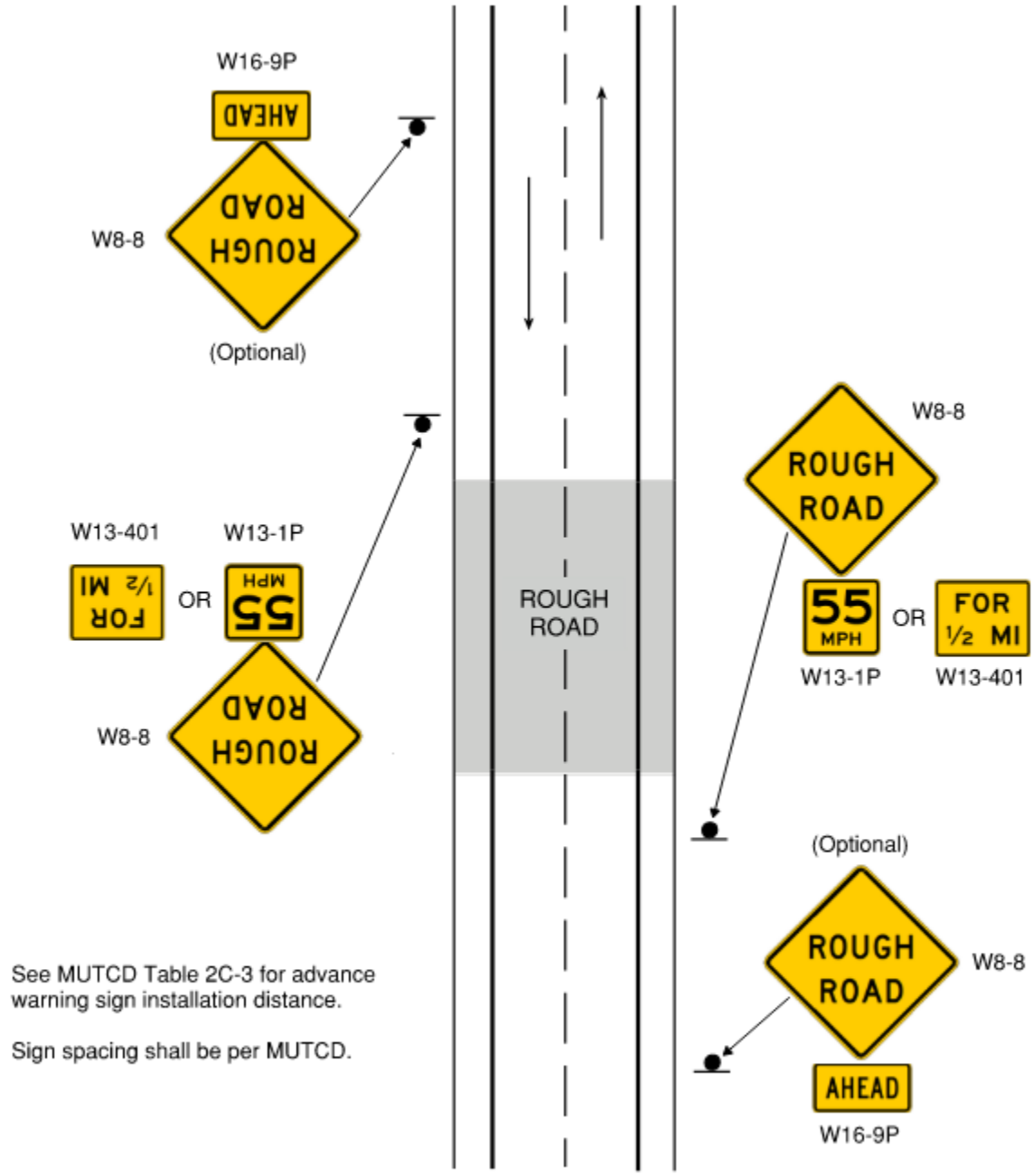
Appendix 2-31 Rough Road Signing – Single Lane Two-Direction Greater than 1 Mile or Speed Reduction of More Than 10 MPH



NOTES:

If needed, post SPEED LIMIT REDUCTION (W3-5) and SPEED LIMIT (R2-1) signs prior to the ROUGH ROAD (W8-8) sign. See MUTCD Table 2C-3 for advance warning signs installation distance.

For multi-lane divided highways, install signs on both sides of the roadway.

Sign spacing shall be per MUTCD.

Appendix 2-32 *Rough Road Signing – Single-Lane Two Direction Less than 1 Mile or Speed Reduction 10 MPH or Less*