Alaska Department of Transportation and Public Facilities

Alaska Traffic Manual Supplement

Effective January 17, 2003

Supplementing the Millennium Edition of the MUTCD with:

- Errata No. 1 dated June 14, 2001
- Revision No. 1 dated December 28, 2001

INTRODUCTION

Traffic control devices installed on state roads are required to conform to the Alaska Traffic Manual (ATM). Traffic control devices on roads under municipal jurisdiction are required to conform "as far as practicable." To promote uniformity and understandability of traffic control devices, private property owners are also encouraged to conform to this manual when installing devices on roads on private property.

The ATM is comprised of this document, *The Alaska Traffic Manual Supplement*, and the *Manual on Uniform Traffic Control Devices, Millennium Edition* (MUTCD), published by the Federal Highway Administration.

Devices installed or replaced after the publication date of the *Alaska Traffic Manual Supplement* shall conform to the ATM upon installation. Unless noted otherwise, existing devices that do not conform to the current ATM shall be replaced at the end of their useful life.

The intent of the ATM is to enhance road safety and operation by requiring uniform, understandable, and effective traffic control devices on Alaska roads.

How to Use the Alaska Traffic Manual Supplement

This document supplements the 2000 MUTCD Millennium Edition dated December 2000, including Errata No. 1 dated June 14, 2001 and Revision No. 1 dated December 28, 2001. Both the Alaska Traffic Manual Supplement and the MUTCD need to be consulted when researching traffic control issues.

The *Alaska Traffic Manual Supplement* conforms to the organization and section numbering of the MUTCD. The two documents interact as follows:

- Unless otherwise noted, language in the *Alaska Traffic Manual Supplement* is added to the end of the referenced MUTCD section.
- In other cases, the MUTCD language is deleted and/or the *Alaska Traffic Manual Supplement* language inserted as directed by the instructions in italics.
- Where no equivalent section exists in the MUTCD, the section in the *Alaska Traffic Manual Supplement* is the standard.

Obtaining the MUTCD

The MUTCD and revisions may be obtained from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 371954, Pittsburgh, PA 15250-7954, Stock No. 650-001-00001-0. It may also be downloaded or purchased on the Web at http://mutcd.fhwa.dot.gov/ser-pubs.htm.

Other Related Documents

Design details for signs and markers are not included in the ATM. They are in the *Alaska Sign Design Specifications* (ASDS).

The Alaska Department of Transportation and Public Facilities (DOT&PF) *Alaska Preconstruction Manual* contains additional information on highway construction, street lighting, and supports for signs, streetlights, and traffic. It pertains only to DOT&PF construction projects.

The DOT&PF *Standard Specifications for Highway Construction* contains descriptions, material requirements, and construction methods for traffic control devices and other items. It pertains only to DOT&PF construction projects.

Obtaining the Supplement and Other DOT&PF Documents

You may purchase these documents in hard copy from the Alaska Department of Transportation and Public Facilities, 3132 Channel Drive, Room 115, Juneau, Alaska 99801, (907) 465-2985. They are available in electronic form at no cost at the DOT&PF Design and Construction Standards Web site at: http://www.dot.state.ak.us/stwddes/dcsaboutus/index.html.

The Web site also provides information on the latest updates to the ATM.

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PART 1. GENERAL

CHAPTER 1A. GENERAL

Section 1A.07 Responsibility for Traffic Control Devices

Add the following to the end of the section:

Standard:

Responsibility for traffic control devices on state highways in Alaska rests with the state and all its political subdivisions that have jurisdiction over highways. Alaska Statutes (Sec. 19.10.040) state:

> **The Department of Transportation and Public Facilities shall classify, designate, and mark highways under its jurisdiction and shall provide a uniform system of marking and posting these highways. The system of marking and posting shall correlate with and shall, as far as possible, conform to the recommendations of the Manual on Uniform Traffic Control Devices as adopted by the American Association of State Highway and Transportation Officials. (Sec. 3, Art. III Title II Ch. 152 SLA 1957)**

The required uniform system of marking and posting is defined in the *Alaska Traffic Manual.*

The Department of Transportation and Public Facilities determines the need for all traffic control devices on state highways, prepares designs, maintains records, and supervises their installation. These activities may be done by contract with others or by state forces. Traffic control devices that are not in conformance with this standard or that require specific approval for their installation shall not be installed without the approval of the state traffic engineer.

As additional specific powers, the Department of Transportation and Public Facilities "may conduct investigations..." and "shall determine safe speed limits, with the assistance of the Department of Public Safety" (AS 19.10.070) and may designate through highways by erecting stop signs on side road approaches (AS 19.10.080). The Department is authorized to make policy for installing, maintaining, and performing all related functions pertaining to traffic control devices on state highways.

Section 1A.08 Authority for Placement of Traffic Control Devices

Insert the following at the end of the first Standard subsection:

The Department of Transportation and Public Facilities is responsible for erecting and maintaining traffic control devices on state highways.

Alaska Statute 28.01.010, the Alaska Uniform Traffic Laws Act, states, in part, that a municipality is required to "erect necessary official traffic control devices on streets and highways within its jurisdiction that as far as practicable conform to the current edition of the *Alaska Traffic Manual* prepared by the Department of Transportation and Public Facilities."

Section 1A.10 Interpretations, Experimentations, and Changes

Insert the following after the first Standard subsection:

To promote the use of uniform, understandable, and effective traffic control devices; to avoid varying official interpretations, and to facilitate the orderly development of traffic control policy, the state traffic engineer shall be the focal point for policy in all matters concerning the ATM.

A. Official interpretations for purposes of Alaska Department of Transportation and Public Facilities' practice of these standards shall be made by the state traffic engineer.

B. Those who desire interpretation of a clause in this standard, a revision, or permission to experiment with a traffic control device not in the *Alaska Sign Design Specifications* or in the Alaska Department of Transportation and Public Facilities' *Standard Drawings* shall submit a written request to the state traffic engineer. The request should clearly identify the existing standard (if any), and the proposed standard including a complete statement as to how and when it is to be applied, the date, and the name and address of the person making the request. The state traffic engineer will circulate requests for new traffic control devices and significant changes in policy to the regional traffic engineers, the FHWA Alaska Division safety/traffic engineer, and the Anchorage traffic engineer for their input. Responses to the requestor will be sent within 60 days of receipt of the request.

C. Revisions to the MUTCD will not become part of the ATM until they have been reviewed by the state traffic engineer, any necessary changes have been made to the *Alaska Traffic Manual Supplement,* the FHWA has approved those changes, and the state traffic engineer informs users of the adoption of the revised MUTCD.

Insert the following at the end of the first Support subsection:

The state has two years from date of final ruling to adopt or revise MUTCD revisions.

Section 1A.11 Relation to Other Documents

Delete the reference to the Standard Highway Signs, 1979 Edition (FHWA).

Insert the following at the end of the Standard subsection:

The *Alaska Sign Design Specifications* (ASDS) and not the *Standard Highway Signs* shall be the source document for all signs in the *Alaska Traffic Manual* (ATM).

Section 1A.12 Color Code

Delete Item I. of the Standard subsection and insert the following:

I. Fluorescent Yellow-Green: pedestrian warning, bicycle warning, and school warning

All school signs shall have fluorescent yellow-green backgrounds.

Insert the following at the end of the section:

Option:

Pedestrian warning and bicycle warning signs may have either yellow or fluorescent yellow-green backgrounds.

Support:

Each municipality or other operational jurisdiction should decide whether to reserve fluorescent yellow-green exclusively for school signs or to also use it for pedestrian or bicycle warning signs.

Section 1A.13 Definitions of Words and Phrases in This Manual

Insert the following at the end of definition 87, Traveled Way:

On two-lane gravel roads or paved roads without striping, the traveled way is considered the 24-foot area centered between hinge points. If the distance between hinge points is 24 feet or less, the traveled way shall be considered 20 feet wide in placement of traffic control devices.

Insert the following definitions at the end of the section: Note numbers 93 through 199 are reserved for future MUTCD definitions.

200. **Alaska Sign Design Specifications: The *Alaska Sign Design Specifications* (ASDS) contains drawings showing dimensions, shapes, colors, and other information necessary for laying out the signs that are used in Alaska. The ASDS is a supplement to the ATM.**

201. **Alaska Traffic Manual: The *Alaska Traffic Manual* (ATM) consists of the Millennium Edition of the *Manual on Uniform Traffic Control Devices* (MUTCD), including Errata No. 1 dated June 14, 2001, and Revision No. 1 dated December 28, 2001, and this *Alaska Traffic Manual Supplement*.**

202. **City Traffic Engineer: An employee of a local government agency with road jurisdiction who is responsible for traffic control devices.**

203. **Commissioner: All references to the commissioner herein, not otherwise identified, shall refer to the commissioner of the Alaska Department of Transportation and Public Facilities; the commissioner's duly authorized agents, representatives, and assigns; and those who by nature of their regular duties or emergency situations are required to act in matters of policy concerning traffic control devices. "Duly authorized" in times of emergency does not relieve anyone of the responsibility of obtaining approvals and authority from the regular authority when the emergency has passed.**

204. **Hinge Point: The angle point where the top surface of a road intersects a foreslope, typically at the outside edge of the shoulder.**

205. **Public Roadways: All vehicular ways maintained by state, borough, or municipal bodies, and under their respective jurisdictions.**

206. **Regional Traffic Engineer (RTE): One of three DOT&PF employees with this title. There is one in the Northern Region (based in Fairbanks), another in the Central Region (based in Anchorage), and another in the Southeast Region (based in Juneau).**

207. **Shoulder: That portion of the roadway outside of the traveled way. Left shoulders on divided roadways are considered part of the median. Shoulders should normally be considered refuge or emergency lanes rather than parking areas.**

208. **State Highways: All public vehicular ways designated as state highways in accordance with Title 19 of the Alaska Statutes, and all state-maintained roads.**

209. **State-Maintained Roads: The roads maintained by state forces or maintained by others at state expense.**

210. **State Traffic Engineer: Individual with this title employed by the Design and Construction Standards Section of the Design and Engineering Services Division of DOT&PF in Juneau.**

CHAPTER 2A. GENERAL

Section 2A.06 Design of Signs

Delete the third paragraph under the first Support subsection.

Add the following at the end of the Standard subsection:

Specific sign designs are provided in the *Alaska Sign Design Specifications* (ASDS), latest edition. The material specifications for traffic control devices for use on DOT&PF-owned roads are specified in the Alaska DOT&PF *Standard Specifications for Highway Construction,* latest edition.

Signs not shown in the ASDS or specified in the ATM shall be used only after completing the process described under Section 1A.1 (B.), except for custom text-only signs for temporary traffic control zones, or in temporary emergency situations.

Section 2A.12 Dimensions

Delete the first Support and Standard subsections and insert the following:

Standard:

The sizes of signs to be used on all classes of highways in Alaska shall be as specified in the ASDS, latest edition. Roadway classes for purposes of sign size specification are as follows:

Table 2A-100 Roadway Classes

Roadway Class	Definition
Bike	Signs intended for the exclusive use by bicyclists
Minimum	Local roads (as defined by AASHTO) with no more than one lane in each direction and speed limits of 25 mph or less
Conventional	Streets or highways other than freeways, expressways, and roads that fall under the Minimum class above
Expressway	Divided highways with partial control of access
Freeway	Divided highways with full control of access
Oversized	Where special emphasis is needed

Section 2A.13 Symbols

Insert the following at the end of the section:

Guidance:

Whenever the ATM allows a choice of symbols or words to convey a sign message, the symbol should be used. As older signs are replaced under routine maintenance operations, symbol signs should be installed.

Section 2A.14 Word Messages

Delete the last Option subsection and insert the following:

Standard:

Unless otherwise shown in the ASDS, word messages on guide signs shall be composed of a combination of lower-case letters with an initial upper-case letter.

Section 2A.16 Standardization of Location

Add the following at the end of the section:

Standard:

See Section 2A.100, for order of priority for sign installation.

Section 2A.18 Mounting Height

Delete the first paragraph of the Standard subsection and insert the following:

Signs installed at the side of the road in rural districts shall be at least 7 feet, measured from the bottom of the sign to the near edge of the pavement.

Delete the third paragraph of the Standard subsection and insert the following:

Overhead signs, not including signs on traffic signal mast arms, shall provide a vertical clearance of not less than 18.5 feet to the sign, light fixture, or sign bridge, over the entire width of the pavement and shoulders except when mounted on a structure with less clearance. Where clearance is restricted to less than 18.5 feet by the structure a sign is mounted on, the sign shall be mounted as low as is practical without further restricting clearance. Signs mounted on traffic signal mast arms shall provide a vertical clearance of not less than 17.5 feet.

Section 2A.21 Orientation

Add the following paragraphs at the end of the Guidance subsection:

The face of all overhead signs should be tilted at least 3 degrees downward to reduce the amount of dirt, dust, snow, and bird droppings that would otherwise build up on the face of a sign.

Parking signs are excepted from being mounted at right angles to the direction of the traffic they serve.

Section 2A.24 Wrong Way Traffic Control

Add the following at the end of the section:

Support:

More information is available in the following sections: 2B.29, 2B.30, and 2E.50 of the MUTCD.

Section 2A.100 Directional and Service Signing

This is a new section. There is no corresponding section in the MUTCD.

Section 2A.25 through 2A.99 are reserved for future MUTCD use.

Support:

Table 2A-101 provides a quick reference summary of the signs used in Alaska to direct travelers to roads, destinations, and services.

Standard:

When signs compete for roadside space, place those with the highest priority, as shown in Table 2A-101, first.

Only permanent signs have been prioritized. Place Construction Warning signs where they do not interfere with permanent signs, where possible.

Reference the Alaska Administrative Code (AAC) for information about all signs that have an AAC reference listed under the "Regulation" column. Regulation information is not duplicated in this publication.

Table 2A-101 Summary of Directional / Service Signs

Sign Type	Sign No(s) from ASDS	Purpose	Color	Prior-ity *	Applicable References			Allowed on Expwy or Fwy?	Permit Avail-able ?	Remarks
					Reg-ulation	ATM Supp-lement	MUTCD			
Guide, Conven-tional Roads	D1 to D11 excluding signs below	Direction to roads and destinations	White on Green	4	n/a	2D	2D	No	No	
Guide, Freeway & Expwy	E1 to E11	Direction to roads and destinations	White on Green	4	n/a	2E	2E	Yes	No	
General Service	D9-1 to D9-308	Direction to generic services	White on Blue	5	n/a	2D.44, 2E.51	2D.44, 2E.51	Expy OK Fwy No	No	
General Information	I-1 to I-181	Identification of roadside points of Interest	White on Blue	6	n/a	2D.47	2D.47	Yes	No	
RCIA	D7-1 to D7-105	Direction to recreational or cultural points of interest	White on Brown	7	17 AAC 60.201 to .215	n/a	2H	Yes	Yes	See regulation for permit requirements
Com-munity Service	D9-204	Direction to communities and identification of services	White on Blue	8	n/a	2D-100a	n/a	Yes	No	May be installed where TODS, RCIA, or LOGO signs are too numerous
Specific Service - LOGO	LG-C1 to LG-G3	Direction to services identified by business symbol or name	White on Blue	9	17 AAC 60.101 to .120	n/a	2F	Yes	Yes	See regulation for permit requirements
Tourist Oriented Directional Signs (TODS)	D9-205	Direction to businesses identified by business name	White on Blue	10	17 AAC 60.001 to .020	n/a	2G	No	Yes	See regulation for permit requirements
Traveler Information Kiosks (not traffic control devices)	n/a	Direction to community services (signs not visible from road)	No sign color spec-ified	n/a	17 AAC 60.401 to .420	n/a	n/a	In turnouts only	Yes	See reg. for permit rqmts. May be installed where TODS, RCIA, or LOGO signs are too numerous.

** Priorities shown in the table begin with Priority #4 because regulatory, warning, and school signs (not shown in table) have the top three priorities, not necessarily in that order. Sign precedence for regulatory, warning, and school signs shall be determined based on the specifics of each case.*

CHAPTER 2B. REGULATORY SIGNS

Section 2B.03 Size of Regulatory Signs

Delete the words "Table 2B-1" and insert the words "the ASDS" in the first sentence of the Standard subsection.

Delete Table 2B-1. Regulatory Sign Sizes (Sheets 1 through 4).

Section 2B.06 Stop Sign Placement

Insert the following paragraphs at the end of the section.

Option:

STREET NAME (D3-1) signs and ONE WAY (Arrow) (R6-1) signs may be mounted on the same post above a STOP (R1-1) sign to conserve space and reduce the number of posts at urban intersections. The DO NOT ENTER (R5-1) sign may be mounted back-to-back to a STOP (R1-1) sign (see below). No other signs may be installed on the same post unless permitted in other sections of the ATM.

Guidance:

In locations such as off-ramp intersections or one-way streets where the DO NOT ENTER (R5-1) sign is installed back-to-back with a STOP (R1-1) sign, the dimensions of the R5-1 sign should be less than that of the R1-1 sign so as not to hide the shape of the R1-1 sign.

Section 2B.10 YIELD Sign Placement

Insert at the end of the section:

Option:

STREET NAME (D3-1) signs and ONE WAY (Arrow) (R6-1) signs may be mounted on the same post above a YIELD (R1-2) sign to conserve space and reduce the number of posts at urban intersections. No other signs may be installed on the same post unless permitted in other sections of the ATM.

Section 2B.11 Speed Limit Sign (R2-1)

Add the following to the start of the first Standard subsection:

Speed limits on state highways shall be set following DOT&PF Procedure 05.05.020 PDR.

Section 2B.13 Night Speed Limit Sign (R2-3)

Delete the wording in this section and insert the following:

Standard:

Night Speed Limit signs shall not be used in Alaska.

Section 2B.26 SLOWER TRAFFIC KEEP RIGHT Sign (R4-3)

Add the following to the end of the Guidance subsection:

Signs and pavement markings for climbing and passing lanes should be installed as shown in Figure 2B-24 of the *Alaska Traffic Manual Supplement*.

Section 2B.27 SLOW MOVING TRAFFIC LANE Signs (R4-5 and R4-6)

Add the following at the end of the section:

Guidance:

Signs and pavement markings for climbing and passing lanes should be installed as shown in Figure 2B-24 of the *Alaska Traffic Manual Supplement*.

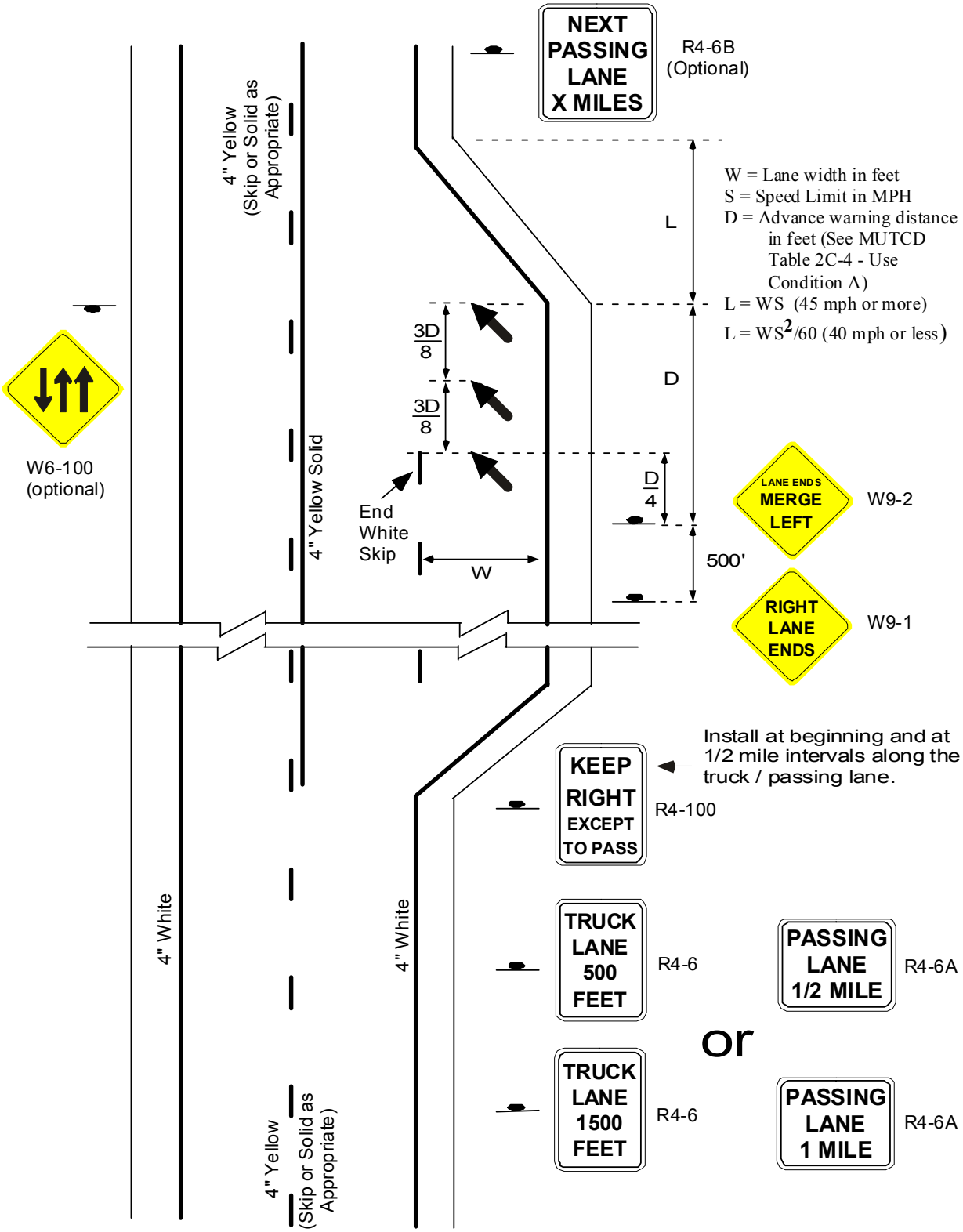


Figure 2B-100
Typical Signing/Striping
for Truck/Passing Lanes

Section 2B.29 DO NOT ENTER Sign (R5-1)

Insert the following paragraph at the end of the Guidance subsection:

At locations where the DO NOT ENTER (R5-1) sign is installed back-to-back with a STOP (R1-1) sign, the dimensions of the R5-1 sign should be less than those of the R1-1 sign so as not to hide the shape of the R1-1 sign. See Section 2B.06 of the MUTCD.

Section 2B.31 Selective Exclusion Signs

Delete the first paragraph of the second Option subsection.

Delete C. from the Support subsection.

Insert the following subsections at the end of the section:

Standard:

The COMMERCIAL VEHICLES EXCLUDED (R5-4) sign shall not be used in the State of Alaska.

Option:

When an R5-2 NO TRUCKS sign is used, it shall be installed in the far right position at the last intersection where trucks may turn to avoid the prohibited street. A supplemental R5-2 sign may be necessary on the left side of the restricted roadway if additional emphasis is needed.

Guidance:

A TRUCK ROUTE (R14-1 series) sign should be installed on the right, 500 feet or one-half block (whichever is less) in advance of the intersection where commercial vehicles must turn to avoid entering a restricted section of roadway. The R14-1 series signs should also be used in the same manner as trail markers to guide the trucker along the truck route unless other signing gives sufficient direction.

If used, the VEHICLES WITH LUGS PROHIBITED (R5-5) sign should be used to designate areas where pavement damage has occurred or is likely to occur due to vehicles with lugs traversing the pavement. Install the sign on the right where a vehicle with lugs can leave the roadway before arriving at the paved roadway.

Section 2B.36 Placement of Parking, Stopping, and Standing Signs

Insert the following at the end of the section:

Guidance:

NO STOPPING (R7S series) signs shall not be used in combination with NO PARKING (R7 series) signs in the same zone. They should be used only where the full roadway is required for moving traffic and where there is no shoulder area for stopping outside the traffic stream.

Section 2B.40 Traffic Signal Signs (R10-1 through R10-13)

Delete the first Option subsection and insert the following:

Guidance:

R10-100 signs [(left-turn arrow) ONLY YIELD ON GREEN (symbolic green ball)] should be installed on signal mast arms at intersections with exclusive left turn lanes and protected-permitted left turn phasing.

Option:

R10-12 signs [LEFT TURN MUST YIELD ON GREEN (symbolic green ball)] may be installed on signal mast arms at intersections with shared left turn lanes and protected-permitted phasing.

A supplemental post-mounted R10-12 Sign [LEFT TURN MUST YIELD ON GREEN (symbolic green ball)] may be installed adjacent to or above the far left signal display at intersections with protected-permitted phasing.

Delete the first sentence of the first Standard subsection and insert the following:

Traffic signal signs applicable to pedestrian actuation, with the exception of the R10-101, shall be mounted immediately above or incorporated in pedestrian pushbutton units (see Section 4E.07).

Add the following to the end of the first Standard subsection:

E. Meaning of Pedestrian Indications (R10-101)

Add a new Guidance subsection after the first Standard subsection:

Guidance:

When used, the R10-101, Meaning of Pedestrian Indications, sign should be placed above and centered between pedestrian pushbutton units.

Delete the last paragraph of the second Guidance subsection.

Add the following to the third Option subsection:

When right turn on red is permitted and pedestrian crosswalks are marked, a TURNING TRAFFIC MUST YIELD TO PEDESTRIANS (R10-15) sign may be used.

Section 2B.43 Weight Limit Signs (R12-1 to R12-5)

Insert the following at the beginning of the section:

Guidance:

Roadways, bridges, and other structures should be posted with signs R12-1 to R12-101 indicating the maximum safe sustainable loading to which they may be subjected if that loading is less than the maximum load allowed without a permit.

On state highways, bridge postings should be approved by the chief bridge engineer of the Alaska Department of Transportation and Public Facilities.

Section 2B.44 Weigh Station Signs (R13 Series)

Delete the first Option subsection and insert the following:

Standard:

The standard color of the ALL TRUCKS/COMMERCIAL VEHICLES/NEXT RIGHT (R13-1) sign shall be white lettering on a black background.

Section 2B.51 Other Regulatory Signs

Add the following subsections to the end of the section:

Section 2B.51a STUDDED TIRES PROHIBITED (R5-100)

Standard:

The STUDDED TIRES PROHIBITED (R5-100) sign shall be installed on the right in conspicuous locations at major entrances to an area where a law, commissioner's order (AS 28.38.155), or local ordinance prohibits the use of studded tires.

Section 2B.51b NO STUDDED TIRES MAY 1 TO SEPT. 15 (APRIL 15 TO SEPT. 30) (R12-103)

Option:

The NO STUDDED TIRES MAY 1 TO SEPT. 15 (APRIL 15 TO SEPT. 30) (R12-103) sign may be installed on all highways in conspicuous locations. Use "MAY 1 to SEPT. 15" north of 60oN latitude and "APRIL 15 TO SEPT. 30" south of 60oN latitude, as per AS 28.35.155.

Section 2B.51c NO ROAD MAINTENANCE AFTER (date) Sign (R11-100)

Guidance:

The NO ROAD MAINTENANCE AFTER (date) (R11-100) sign should be installed at the location where year-round maintenance ends.

Standard:

In locations where the R11-100 signs are not permanently installed, signs shall be posted at least one month before the effective date.

Option:

This sign may be installed on a Type III barricade in addition to being post-mounted on the right side of the roadway with the appropriate advance warning signs such as END MAINTENANCE 1000 FT. (W14-102) sign. An additional sign may be placed on the left where the roadway exceeds 40 feet in width.

Section 2B-51d LEGAL LIMIT (variable %) OF MAX AXLE LOAD Sign (R12-102)

Standard:

Temporary restriction signs reading LEGAL LIMIT (variable %) OF MAX. AXLE LOAD (R12-102) shall be posted on state highways during spring breakup or at any time when roadway conditions require restriction of weights. These signs shall be posted in conspicuous locations when so ordered by the regional director of operations after suitable public notice. These signs need not be posted on all the affected routes when the restrictions apply to an area.

Option:

An AXLE WEIGHT LIMIT 5 TONS (variable weight) (R12-2) sign may be mounted under an R12-102 sign.

Section 2B.51e $1000 FINE FOR LITTERING Sign (R16-106)

Support:

Alaska Statutes, Section AS 46.06.100, state "The penalties for littering shall be posted along the public highways of the state, at visitor centers, at entrances to State Parks and recreational areas, at public beaches, and other publicly-owned areas that the Commissioner of Environmental Conservation determines necessary to accomplish the purposes of this chapter. The state agency or municipality responsible for litter removal from a public place shall post the notice required for this section."

Standard:

The $1000 FINE FOR LITTERING (R16-106) sign shall also be posted near the state boundary on each primary and secondary highway.

Section 2B.51f No Shooting Signs (R16-104, R16-105)

Option:

When used the NO SHOOTING FROM ROADWAY (R16-104) sign or NO SHOOTING WITHIN 1/4 MILE OF THE ROADWAY (R16-105) sign may be posted adjacent to the roadway where shooting on or near the roadway is a proven problem or is likely to occur.

Section 2B.51g Chains Required Signs (R12-104 through R12-107)

Standard:

Signs requiring the use of chains shall not be used except where required by conditions and ordered by the commissioner. Ice or snow must be such that chains are necessary to prevent traffic congestion and accidents. Do not install the signs until the commissioner or the commissioner's designated representative certifies by means of an order (similar to a speed zone order) that the use of the roadway by vehicles without chains is not permitted.

The CHAINS REQUIRED ON ALL VEHICLES (R12-105) sign shall be installed where chains are required before a vehicle may proceed.

Install an END CHAIN AREA (R12-107) sign at the end of the designated roadway section.

Option:

The CHAINS REQUIRED AHEAD (R12-104) sign may be installed in advance of a location where chains may be installed and the location where they must be used. Locate the sign at a distance in advance of the installation point as indicated in Table 2C-4 in the MUTCD, using the posted speed as the approach speed and "stop" as the speed at the installation point. Greater distances may be advisable where ice and snow conditions on the roadway require longer stopping distances.

The INSTALL CHAINS HERE (Arrow) (R12-106) sign may be used to indicate a wide shoulder, pullout, rest area, or other parking area where a motorist may pull off the road to turn around or to install chains.

Section 2B.51h Custom Station Sign (R13-103)

Guidance:

The ALL VEHICLES STOP AT CUSTOMS (R13-103) sign should be installed between a D8-102 and a D8-103 sign (see Section 2S.06 of this *Alaska Traffic Manual Supplement*). The R13-103 sign should be in place only when the Customs Station is in operation. It should be removed or covered at all other times. It should be installed 4,000 feet in advance of the Customs Station or at the beginning of the deceleration lane, whichever distance is greater.

Section 2B.51i DELAY OF 5 VEHICLES ILLEGAL MUST USE TURNOUTS Sign (R16-103)

Guidance:

The DELAY OF 5 VEHICLES ILLEGAL MUST USE TURNOUTS (R16-103) sign should be used on two-lane, rural state highways at locations determined by the regional traffic engineer to alert drivers of slow moving vehicles to use turnouts to prevent delays in areas where passing is difficult. (See 13AAC 02.050)

These signs should only be placed on sections of highway where slow moving vehicle turnouts meeting the requirements of Section 1120.5. of the DOT&PF *Alaska Preconstruction Manual* are periodically available. Slow-moving vehicle turnouts should be signed in accordance with Section 2S.03 of the ATM.

Section 2B 51j BUCKLE UP FOR SAFETY (Symbol) Sign (R16-1)

Guidance:

The BUCKLE UP FOR SAFETY (symbol) (R16-1) sign should be used near major state entry points to inform visitors of Alaska's mandatory safety belt law, and at other points as necessary to remind and encourage motorists to use their seat belts.

Section 2B.51k DRIVE WITH HEADLIGHTS ON AT ALL TIMES (R16-110)

Support:

The DRIVE WITH HEADLIGHTS ON AT ALL TIMES (R16-110) sign is intended for use in areas where higher-than-normal head-on accidents are occurring.

Standard:

The DRIVE WITH HEADLIGHTS ON AT ALL TIMES (R16-110) sign shall be posted only in accordance with 13 AAC 04.010.

Section 2B.51l KEEP RIGHT EXCEPT TO PASS Sign (R4-100)

Guidance:

If an extra lane has been provided for slow-moving traffic, a KEEP RIGHT EXCEPT TO PASS (R4-100) sign should be installed at the beginning of the lane and at intervals along the lane. See Figure 2B-100.

CHAPTER 2C. Warning Signs

Section 2C.03 Design of Warning Signs

At the end of the last sentence in the Standards subsection, substitute Alaska Sign Design Specifications *for "Standard Highway Signs."*

Section 2C.04 Size of Warning Signs

Delete the Support subsection and insert the following:

Standard:

The size of warning signs shall be as detailed in the ASDS for the various classification of roads. See Section 2A.12 and Table 2A-100 in the *Alaska Traffic Manual Supplement.*

Delete the words "Table 2C-3" in the Standard subsection and substitute "ASDS."

Section 2C.05 Placement of Warning Signs

Insert the following subsection:

Guidance:

On all multi-lane one-way roadways, expressways and freeways, signs should be mounted on the left as well as on the right.

Delete Tables 2C-2. Warning Sign Sizes and Table 2C-3 Minimum Size of Supplemental Warning Plaques.

Section 2C.06 Horizontal Alignment Signs (W1-1 through W1-5)

Delete the first sentence under the second Option subsection.

Add the following to the end of the Standard subsection:

All W1-series Turn and Curve signs shall be accompanied by an Advisory Speed Plaque (W13-1) (see Section 2C.42) when the safe speed on the curve is 8 or more mph below the posted speed limit.

Change the fourth line, third column of Table 2C-5 Horizontal Alignment Sign Usage, from Reverse Turn to Reverse Curve.

Section 2C.07 Combination Horizontal Alignment/Advisory Speed Sign (W1-9)

Delete the last sentence of the Standard subsection and insert the following:

The advisory speed for this sign shall be determined utilizing the information in Section 2C.42 of the *Alaska Traffic Manual Supplement.*

Section 2C.11 Hill Signs (W7-1, W7-1a, W7-1b)

Delete the first sentence of the Option subsection.

Section 2C.13 ROAD NARROWS Sign (W5-1)

Insert the following subsection:

Standard:

The ROAD NARROWS (W5-1) sign shall not be used to indicate a change in width of shoulders. See Section 2C.100s for the SHOULDER NARROWS sign.

Section 2C.14 NARROW BRIDGE Sign (W5-2)

Delete the last sentence of the Option subsection.

Section 2C.20 Low Clearance Signs (W12-2, W12-2A, and W12-2P)

Add the following subsection at the beginning of the section:

Support:

LOW CLEARANCE (W12-2 or W12-2P) signs are located on and in advance of low-clearance structures and indicate the clear height from the surface of the traveled way to the lowest point of the structure directly above.

Delete the first sentence of the Standard subsection and insert the following:

Low Clearance signs shall be installed when marked "Required" in the following table:

Table 2C-100 Low Clearance Sign Requirements

Minimum Clearance	Sign on Structure (W12-2A or W12-2P)	Advance W12-2 signs	
		At Advance Warning Distance	At 1st Upstream Intersection
17' or less	Required		
16' or less	Required	Recommended	
14' 6" or less	Required	Required	Recommended

Structure-mounted low clearance signs shall either be the W12-2A or W12-2P.

Delete the second and third paragraph of the Guidance subsection and insert the following after the first paragraph:

Low Clearance signs should be installed when marked "Recommended" in Table 2C-100. W12-2 signs to be installed at the "Advance Warning Distance" should be located at the distance in advance of the low-clearance structure indicated in Table 2C-4 of the MUTCD, using "Condition A."

W12-2 signs to be installed at the "1st Upstream Intersection" should be located at the distance indicated in Table 2C-4, using "Condition B, Stop Condition," in advance of the last intersection where an alternate route may be taken. Additional signs should be installed beyond this intersection to identify the roadway with the clearance restriction.

When used, the distance indicated on the "X" MILE AHEAD (W12-100) distance plate should be the mileage (to the closest ¼ mile) between the sign and the clearance restriction.

Section 2C.26 Advance Traffic Control Signs (W3-1, W3-2, W3-3, W3-4)

Delete the second paragraph of the first Option subsection.

Section 2C.27 CROSS TRAFFIC DOES NOT STOP Plaque (W4-4P)

Delete this section in its entirety.

Delete the detail of the W4-4P sign from page 2C-24.

Section 2C.33 Advisory Exit, Ramp, and Curve Speed Signs (W13-2, W13-3, W13-5)

Insert the following at the end of the Standard subsection:

Determine the safe speed at exits, ramps, and curves for the W13-2, W13-3, and W13-5 signs as indicated in Section 2C.42 of this *Alaska Traffic Manual Supplement.*

Section 2C.34 Intersection Warning Signs (W2-1 through W2-6)

Add the following to the end of the first paragraph of the Option subsection:

Delete the W2-6 sign from the signs detailed on page 2C-29 of the MUTCD. Use the sign detailed in the ASDS instead.

Section 2C.37 Crossing Signs (W11-1, W11-2, W11-3, W11-4, W16-7P)

Delete the first paragraph of the Standard subsection and insert the following:

When crossing signs are installed right at the crossing location, they shall be supplemented with a diagonal downward pointing arrow plaque (W7-1P) showing the location of the crossing.

When the crossings occur randomly over a segment of roadway the diagonal downward pointing arrow plaque (W16-7P) shall not be used.

Delete the second paragraph in the second Option subsection and add the following:

Pedestrian and bicycle signs may be fluorescent yellow-green when supplemented with the diagonal downward pointing arrow plaque (W16-7P).

Section 2C.38 PLAYGROUND Sign (W15-1)

Delete the second sentence of the Option subsection.

Section 2C.41 Distance Plaques (W16-2, W16-3, W16-4, W7-3a)

Add the following at the end of the Option subsection:

Standard:

The Advisory Distance Plaque, NEXT "X" MILES (W13-1A) sign shall only be installed in conjunction with roadway condition signs: WINDING ROAD (W1-5), BUMPS (W8-1A), DIPS (W8-2A), SOFT SHOULDER (W8-4A), etc., where traffic, geometric, surface, materials, and other characteristics are similar throughout the indicated roadway section. This sign is not a substitute for signs warning of any abrupt change of the roadway character.

When used, advisory distance plaques shall be installed on the same post directly below the primary warning sign. See Sections 2C.11 in the MUTCD and 2C.20 of this *Alaska Traffic Manual Supplement* for use of advisory distance plaques to warn of steep hills and bridges with low clearance.

Section 2C.42 ADVISORY SPEED Plaque (W13-1)

Add the following to the Standard subsection:

The ADVISORY SPEED plaque (W13-1) shall only be installed in conjunction with another appropriate warning sign to indicate the safe speed that may be used to traverse the condition indicated on the primary sign. It shall be installed on the same post directly below the primary warning sign.

The safe speed for Turn and Curve signs shall be determined by the following procedures:

A. Existing Curves:

Use ball-bank indicator readings from trial speed runs and Table 2C-101 of the *Alaska Traffic Manual Supplement.*

Table 2C-101
Safe Speed and Ball Bank Readings

Safe Speed (mph)	Reading (degrees)
0-20	15.0
25-30	12.5
35-65	10.0

B. Curves on Design Projects:

Use Figure 2C-100 on the following page.

Add the following to the beginning of the Guidance subsection:

The posted advisory speed should be the closest 5-mph increment to the speed determined using either the Ball Bank method or Figure 2C-100 on the following page.

The speed indicated should be the maximum safe speed estimated for travel through the area of concern under normal, dry-roadway conditions. In noncurve situations, the indicated speed will depend on engineering judgment. In order to prevent driver contempt, care should be taken to avoid posting advisory speeds too low.

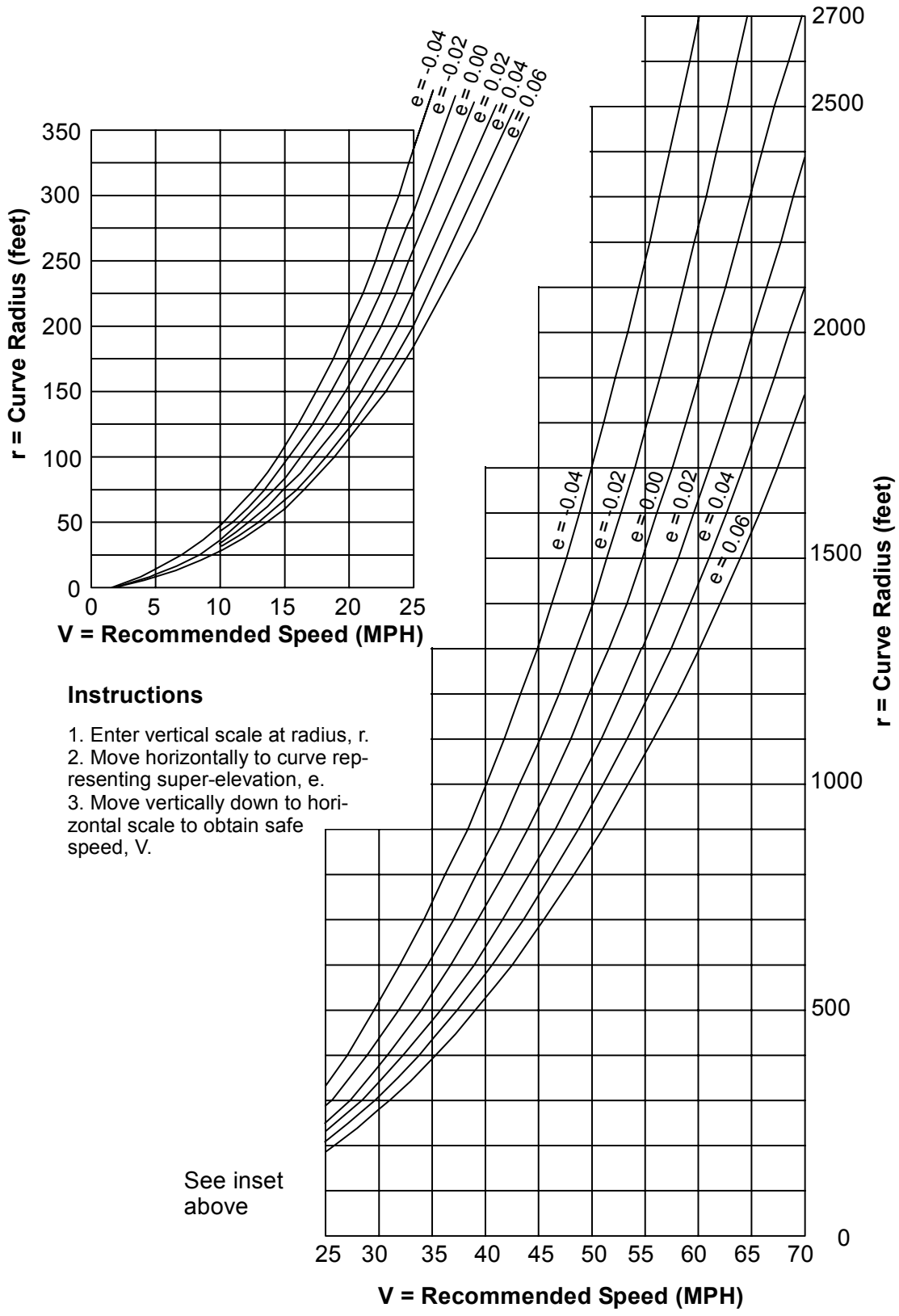


Figure 2C-100
Safe Speed on Horizontal Curves

Section 2C.46 DEAD END/NO OUTLET Plaques (W14-1P, W14-2P)

Delete the first paragraph of the Option subsection and insert the following:

DEAD END (W14-1P) or NO OUTLET (W14-2P) plaques may be used in combination with Street Name (D3-1) signs (see Section 2D.38) to warn turning traffic that the cross street ends in the direction indicated by the arrow.

At locations where the cross street does not have a name, DEAD END or NO OUTLET plaques may be used alone in place of a street name sign.

Delete the Standard subsection.

Section 2C.100 Other Warning Signs

This is a new section. There is no corresponding section in the MUTCD.

Sections 2C.50 through 2C.99 are reserved for future MUTCD use.

Add the following subsections:

Section 2C.100a TURN ARROW 180 DEGREE Sign (W1-100)

Option:

The TURN ARROW 180 DEGREE sign may be used to indicate a change in horizontal alignment generally in excess of 90 degrees up to 180 degrees, or when the roadway connecting two curves in the same direction is insufficient to allow independent posting of each curve on a tangent section.

Determine the advisory speed for this sign utilizing Section 2C.42 of the *Alaska Traffic Manual Supplement.*

Section 2C.100b TURN ARROW 360 DEGREE Sign (W1-101)

Option:

The TURN ARROW 360 DEGREE sign maybe used to indicate changes in horizontal alignment generally in excess of 180 degrees subject to the same restrictions and installation limitations as provided for the TURN ARROW 180 DEGREE (W1-100) sign.

Determine the advisory speed for this sign utilizing Section 2C.42 of this *Alaska Traffic Manual Supplement.*

Section 2C.100c One Lane Opposing Two Lane Symbol Sign (W6-100)

Option:

The One Lane Opposing Two Lane Symbol (W6-100) sign may be used on two-way roadways that have no median or divider but have two through lanes in one direction and one lane in the other direction.

Guidance:

If used, One Lane Opposing Two Lane Symbol (W6-100) signs should be posted near the beginning of the condition.

Option:

The One Lane Opposing Two Lane Symbol (W6-100) signs may be posted at intermediate points within the segment that has two through lanes in one direction and one lane in the other.

Section 2C.100d LOAD LIMIT WARNING Sign (W12-101)

Standard:

The LOAD LIMIT WARNING (W12-101) sign shall be used to indicate the presence of a bridge with a restricted load-carrying capacity as determined by an engineering investigation. Use only in conjunction with a W12-100 distance accessory plate indicating the distance from the sign to the condition of concern. The W12-101 sign shall be installed as indicated in Table 2C-4 of the MUTCD, using Condition A, in advance of an intersection where a driver may make a decision to take an alternate route or where a large tractor/semitrailer can turn off the highway. uitable WEIGHT LIMIT (R12 Series) signs shall be installed at the bridge before this sign is installed.

Section 2C.100e End Signs (W14-100, W14-101, and W14-102)

Support:

The END (W14-100) sign is used in the head-on position at the end of a public road.

Standard:

The END-OF-ROAD (OM-4) marker shall be mounted below the W14-100 sign.

The END ROAD 1000 FT. (W14-101) sign shall be installed approximately 1,000 feet in advance of the END (W14-100) sign. In special situations where the distance is substantially less than 1000 feet, the distance on the sign shall be modified accordingly.

The END MAINTENANCE 1,500 FT. (Variable Distance) (W14-102) sign shall be installed in conjunction with the NO ROAD MAINTENANCE (R11-100) sign or STATE MAINTENANCE ENDS (I-181) sign to warn of the approach of a road section that will

temporarily not be maintained. Install 500 to 1500 feet in advance of the R11-100 sign with the appropriate distance figure, as indicated by conditions, in the legend.

Option:

A second W14-101 sign with the appropriate distance may be installed between the initial W14-101 sign and the W14-100 sign when additional emphasis is needed.

Section 2C.100f Slide Area Signs (W16-100 and W16-101)

Support:

A slide area is defined as any section of roadway where rocks, snow (avalanches), or other natural debris may be expected to encroach on the roadway and create a condition that requires caution on the part of the motorist.

Standard:

The SLIDE AREA (W16-100) sign shall be installed an appropriate distance in advance of the beginning of a known slide area using Table 2C-4 of the MUTCD and "Stop" as the speed at the condition of concern. The END SLIDE AREA (W16-101) sign shall be installed on the right in the vicinity of the end of a slide area only where W16-100 signs have been installed at the beginning of the slide area. The SLIDE series signs shall be removed if the slide condition ceases to exist. In some areas, this may require periodic installation and removal of the signs.

Section 2C.100g WATCH FOR ICE (W16-102)

Option:

The WATCH FOR ICE (W16-102) sign may be used to alert a motorist driving at normal speeds on ice-free pavement of an isolated condition that is not readily apparent. The sign is not intended to define a general, overall road condition.

Section 2C.100h WATER OVER ROADWAY Sign (W16-103)

Standard:

When used, the WATER OVER ROADWAY (W16-103) sign shall be installed on the right an appropriate distance in advance of the flooded section of roadway using Table 2C-4 of the MUTCD and Condition B, Stop.

Option:

The sign may be used to warn of temporary flooding or a low spot where the roadway is normally under water.

Standard:

When used to warn of temporary flooding, the signs shall be covered or removed when flooding ceases for more than 48 hours.

Section 2C.100i Avalanche Area Signs (W16-110 through W16-112)

Support:

An avalanche area is defined as any section of road where major snow slides (avalanches) may be expected to encroach on the roadway.

Standard:

The AVALANCHE AREA (W16-110) sign shall be installed on the right, an appropriate distance in advance of the avalanche area, using Table 2C-4 of the MUTCD and "Stop" as the speed at the condition of concern. The W16-110 sign shall always be followed by an END AVALANCHE AREA (W16-111) sign. The signs shall be removed or covered after the avalanche danger has abated.

Option:

The AVALANCHE AREA NEXT X MILES DO NOT STOP (W6-112) sign may be used for additional emphasis.

Section 2C.100j WIND AREA Sign (W16-104)

Guidance:

WIND AREA (W16-104) sign should be used to indicate locations where winds regularly reach velocities that substantially affect the driving task. The signs should be removed or covered during those seasons of the year when high winds are unlikely.

Section 2C.100k ROCKS Sign (W16-105)

Guidance:

The ROCKS (W16-105) sign should only be installed in advance of rock cut areas where falling rocks or rocks on the road may be encountered by motorists.

Section 2C.100l END FREEWAY ½ MILE Sign (W16-107)

Guidance:

The END FREEWAY ½ MILE (W16-107) sign should be used to indicate the end of a multilane, divided roadway facility with full access control and no at-grade intersections. Install it on the right and left approximately one-half mile in advance of the first access where through traffic may encounter cross-traffic and a definite change in the facility is obvious (entering two-lane facility or city street section). It should not ordinarily be used at transitions from freeways to expressways (multilane divided roadway with access control and at-grade intersections).

Section 2C.100m ROAD CLOSED AHEAD (W14-104) and BRIDGE CLOSED AHEAD (W14-103 and W14-104) Signs

Standard:

The ROAD CLOSED AHEAD (W14-103) and BRIDGE CLOSED AHEAD (W14-104) signs shall be installed using Table 2C-4 of the MUTCD and "Stop" as the speed at the condition of concern, in advance of an intersection where a driver may take an alternate route. The ADVISORY DISTANCE PLATE (W12-100) shall be used in conjunction with the W14-103 or W14-104 signs.

Guidance:

Additional signs should be installed beyond this intersection to identify the roadway with the closure.

Section 2C.100n LOW FLYING AIRCRAFT Sign (W16-106)

Option:

The LOW FLYING AIRCRAFT (W16-106) sign may be used in those areas where low-flying aircraft are encountered, such as roadways passing near the end of an airfield.

Section 2C.100o AIRCRAFT Crossing Sign (W16-114)

Guidance:

The AIRCRAFT CROSSING (W16-114) sign should be used in those areas where taxiing aircraft cross roadways.

Section 2C.100p JET BLAST AREA Signs (W16-108 and W16-109)

Guidance:

The JET BLAST AREA (W16-108) sign should be used in advance of a section of roadway, which is subject to high winds and the possibility of flying debris from aircraft exhausts. Use Table 2C-4 of the MUTCD and "Stop" as the speed at the condition of concern. It should be used in conjunction with NO STOPPING OR STANDING (R7S-) signs posted from boundary to boundary of the jet blast area.

Option:

The END JET BLAST AREA (W16-109) sign may be used where the limits of exposure are not immediately obvious.

Section 2C.100q SLOW MOVING VEHICLE Sign (W7-100)

Option:

The SLOW MOVING VEHICLES (W7-100) sign may be used on roadways where vehicles moving substantially slower than the established speed limit are common.

Section 2C.100r TRAVEL BEYOND THIS POINT NOT RECOMMENDED . . . Sign (W14-105)

Option:

The TRAVEL BEYOND THIS POINT NOT RECOMMENDED . . . (W14-105) sign may be used during the winter on roads that are seasonally closed.

Guidance:

This sign should not be used alone. It should be used as a supplement to other signs notifying motorists that the road is not maintained beyond that point.

Section 2C.100s SHOULDER NARROWS Sign (W5-1a)

Option:

The SHOULDER NARROWS (W5-1a) sign may be used to indicate a reduction in shoulder width.

Section 2C-100t HILL BLOCKS VIEW Sign (W7-101)

Option:

A HILL BLOCKS VIEW (W7-101) sign may be used in advance of a crest vertical curve when sight distance is limited.

When a HILL BLOCKS VIEW sign is used, it may be supplemented by an Advisory Speed (W13-1) plaque indicating the recommended speed based on available sight distance.

Section 2C-100u HIDDEN DRIVEWAY Sign (W7-102)

Option:

A HIDDEN DRIVEWAY (W7-102) sign may be used in advance of a driveway when sight distance is restricted by a hill or roadside sight obstruction.

When a HIDDEN DRIVEWAY sign is used, it may be supplemented by an Advisory Speed (W13-1) plaque indicating the recommended speed based on available sight distance. It may also be supplemented with W16-9P, "AHEAD" or W16-2P "500 FT" plaques.

Guidance:

HIDDEN DRIVEWAY signs should not be used on residential or low-volume streets where the majority of the traffic is local to the area and driveways are expected.

This sign should only be used when attaining required driveway sight distance is not feasible.

CHAPTER 2D. GUIDE SIGNS CONVENTIONAL ROADS

Section 2D.05 Lettering Style

Delete the first two paragraphs under the Standards subsection and insert the following:

Unless otherwise shown in the ASDS, word messages on guide signs shall be composed of a combination of lower-case letters with an initial upper-case letter.

Section 2D.06 Size of Lettering

Delete the first two paragraphs in the Standard subsection and insert the following:

Expressway and freeway destination and distance guide signs shall have legends of the size indicated in Section 2E.13 of the MUTCD. On major urban roads without access control, the principal legend on D-Series guide signs shall be 8-inch uppercase/6-inch lowercase letters. On any road with a speed limit of 45 mph or higher, the principal legend on D-Series guide signs should be 8-inch uppercase/6-inch lowercase letters. Other D-Series guide signs shall have a minimum principal legend of 6-inch uppercase/4.5-inch lowercase letters.

Section 2D.09 Numbered Highway Systems

Add the following at the end of the Standard subsection:

The route numbers shown on Figure 2D-100, Alaska Numbered Routes, shall be used on route markers.

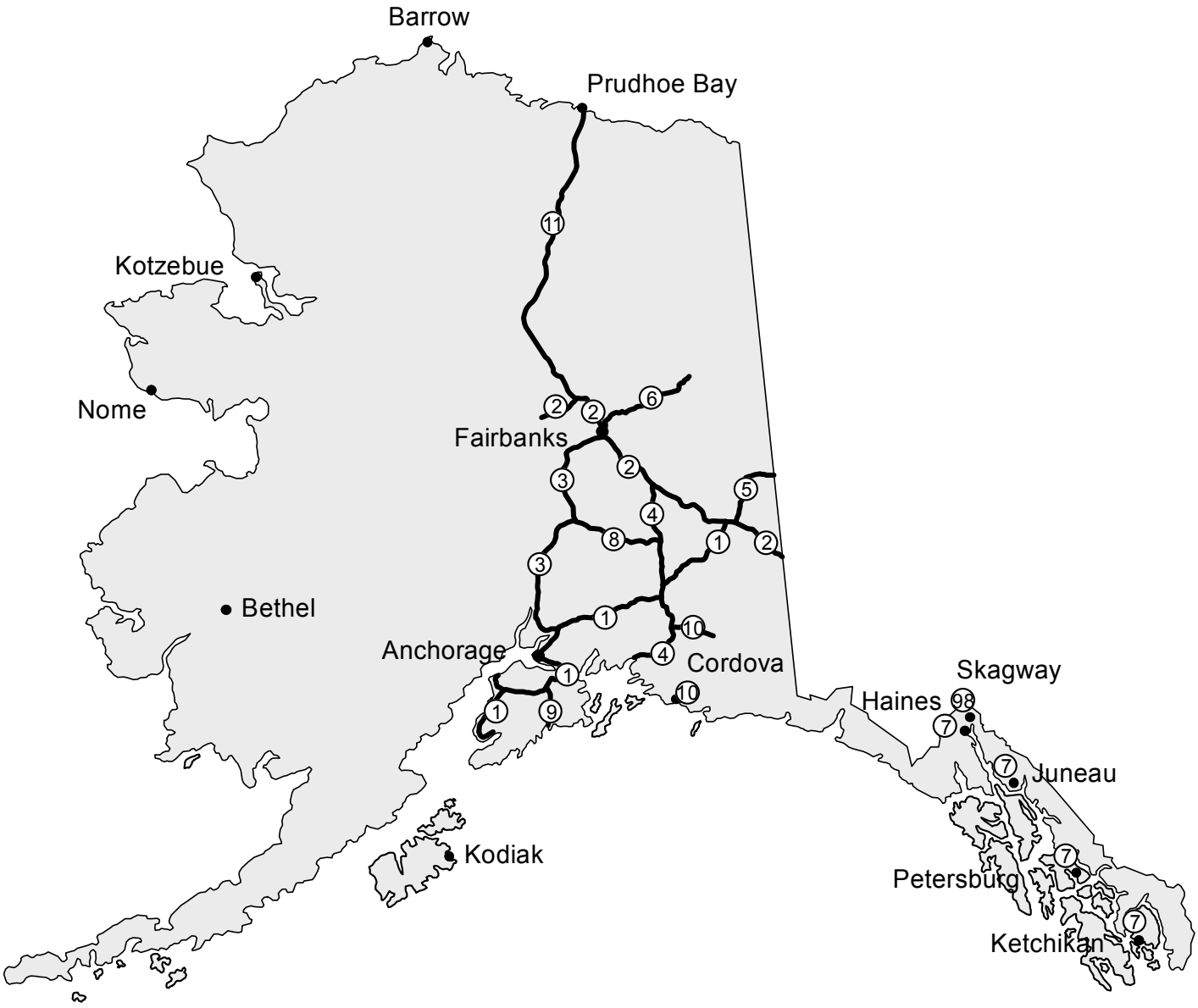


Figure 2D-100
Alaska Numbered Routes

Description of Numbered Routes Shown on Figure 2D-100

AK-1: Homer to Tok, via:

Sterling Hwy, Homer to junction with Seward Hwy
Seward Hwy, junctions with Sterling Hwy to Anchorage
Glenn Hwy, Anchorage to Glennallen
Richardson Hwy, Glennallen to Gakona Junction
Tok Cutoff, Gakona Junction to Tok

AK-2: Canadian border to Manley Hot Springs, via:

Alaska Hwy, Border to Fairbanks
Steese Hwy, Fairbanks to Junction with Elliott Hwy
Elliott Hwy, junction with Steese Hwy to Manley Hot Springs

AK-3: Parks-Glenn intersection to Fairbanks, via:

George Parks Hwy, junction with Glenn Hwy to junction with Mitchell Expy in Fairbanks
Mitchell Expy, junction with Parks Hwy to junction with Richardson Hwy

AK-4: Valdez to Delta Junction via Richardson Hwy

AK-5: Tetlin Junction to border via Taylor Hwy

AK-6: Elliott/Steese junction to Circle via Steese Hwy

AK-7: Major highways in Southeast, including:

South Tongass Hwy, North Tongass Hwy (Ketchikan)
Nordic Drive, Mitkoff Hwy (Petersburg)
Glacier Hwy, Egan Drive (Juneau)
Haines Hwy, Haines to Border

AK-8: Parks Hwy to Richardson Hwy via Denali Hwy

AK-9: Seward Hwy, Seward to Junction with Sterling Hwy

AK-10: Copper River Hwy, Cordova to end

Edgerton Hwy, Chitina to Junction with Richardson Hwy

AK-11: Elliott/Dalton junction to Prudhoe Bay via James Dalton Hwy

AK-98: Skagway to border via Klondike Hwy

Section 2D.11 Design of Route Signs

Add the following to the third paragraph of the third Standards subsection:

Route Markers for all Numbered State Highways shall be M1-5 signs as shown in the *Alaska Sign Design Specifications.*

Section 2D.33 Destination and Distance Signs

Add the following subsections:

Standard:

The control and intermediate destinations in Table 2D-100 shall be used for destination and distance signs.

Option:

In addition to control cities, hamlets and unincorporated communities may be shown on destination signs on state roads when allowed by regional policy.

Table 2D-100 Destination Control Cities for Alaska Guide Signs

Road Segment	Route Number(s)	Control Destinations	Intermediate Destinations
Sterling Highway, Homer to Soldotna	1	Homer, Anchorage	Soldotna, Kenai
Sterling Highway, Soldotna to Seward "Y"	1	Homer, Anchorage, Seward	Soldotna, Kenai
Seward Highway, Seward to Seward "Y"	9	Seward, Homer, Anchorage	Kenai Fjords Nat. Park
Seward Highway, Seward "Y" to Anchorage	1	Homer, Seward, Anchorage	Girdwood, Hope Road Junction
Glenn Highway, Anchorage to Parks/Glenn junction	1	Anchorage, Fairbanks, Tok	Eagle River, Palmer
Parks Highway, Parks/Glenn junction to Fairbanks	3	Anchorage, Fairbanks	Wasilla, Cantwell, Denali Nat. Park, Healy, Nenana
Glenn Highway, Parks/Glenn junction to Glennallen	1	Anchorage, Valdez, Tok	Palmer, Glennallen
Tok Cutoff Highway, Gakona Junction to Tok	1	Anchorage, Tok	Glennallen
Richardson Highway, Valdez to Glennallen	4	Valdez, Fairbanks, Anchorage	Edgerton junction, Glennallen, Delta Jct.
Richardson Highway, Glennallen to Gakona Junction	4, 1	Valdez, Fairbanks, Anchorage	Edgerton junction, Glennallen, Delta Jct.
Richardson Highway, Gakona Junction to Delta Jct.	4	Valdez, Fairbanks, Anchorage	Edgerton junction, Glennallen, Delta Jct.
Alaska Highway, Border to Tok	2	Border, Fairbanks, Anchorage	Taylor Hwy Jct.
Alaska Highway, Tok to Delta Junction	2	Tok, Fairbanks	
Alaska Highway, Delta Jct. to Fairbanks	2	Tok, Fairbanks, Anchorage	Eielson AFB, North Pole
Steese/Elliot/Dalton, Fairbanks to Prudhoe Bay	2, 11	Fairbanks, Prudhoe Bay	Coldfoot

Section 2D.34 Destination Signs

Insert the following before the first Standard subsection:

Guidance:

Destination signs should only be used where they will provide a significant service to motorists.

Support:

In addition to guidance by route markers, it is necessary to direct traffic to communities and other destinations on the route and on other roads intersecting the state route.

It is not feasible to place signs along highways listing all possible destinations that can be reached from the highway. Normally, a single community, facility, or other feature readily identifiable from a road map can be used to direct motorists to other less important destinations on the same route. Make every effort to correlate destination signs with features readily identifiable on conventional service station tourist maps.

Guidance:

The following criteria should be met before a directional sign can be considered. However, they are not warrants and do not guarantee placement of signs. On state highways, it is the responsibility of the regional traffic engineer to consider other factors such as interference with higher-priority signing and other destinations that now or in the future will compete for sign space.

Option:

Signs may direct to the following places, consistent with the foregoing discussion:

A. Incorporated cities
B. Unincorporated cities
C. Major parks or mountains
D. Lakes and mountain passes in areas where there are no other places of greater importance
E. Rivers, valleys, and other geographical points if they identify areas, and
F. Sports arenas, fairgrounds, theaters, and other public or private attractions that are major driver attractions

Support:

Consider the following information in determining the inclusion of the following types of destinations:

A. Military installations, churches, city parks, public buildings, businesses, subdivisions, clubs, shopping centers, courthouses, zoos, museums, and other local places normally will not be signed. Signing can be considered for a nonqualifying facility that is the principal destination from the interchange or cross road, and which cannot be identified with a road or community.

To qualify, such a facility should be located where there is no qualifying destination sign and motorists could not reasonably be expected to find their destination without signs, even with the aid of a map.

B. Sign dams, reservoirs, mountain peaks, and other geographical features only when necessary to indicate direction or to identify areas; or if they are the principal destination and a significant one from the interchange or cross road, and cannot be identified with a road name or community.

C. Airports that have regularly scheduled commercial air travel and mail pickup, or airports that are owned and operated by political subdivisions, can be signed from conventional highways and expressways. On freeways, sign only to those airports that have regularly scheduled air carrier and mail service, or where there is an off-ramp that serves the airport as either the only or the principal destination. Use AIRPORT (I-5) signs unless there are two or more airports with significant traffic within a municipality.

Section 2D.35 Location of Destination Signs

Delete the first paragraph of the Guidance subsection and insert the following:

Signing in advance of major intersections on a state-numbered route in rural areas will normally consist of a nonmileage destination (D1-1, D1-2 or D1-3) sign which may be located up to 1,200 feet in advance of the intersection, spacing the sign as is appropriate with respect to directional assemblies (see 2D.30) and advance warning signs (Sections 2C-26 and 2C-34).

A D1 series sign should be followed with a Distance Sign (D2-1, D2-2 or D2-3) beyond the intersection (see Section 2D.36 and 2D.37).

On minor state highways that are not through routes, with an ADT of 500 or less, only the mileage destination sign D1-1A, D1-2A, or D1-3A should be used.

Option:

A MILEAGE DESTINATION sign (D1-1A, D1-2A, or D1-3A) may be located either on the near-right quadrant of the intersection (adjacent to the R1-1 STOP sign), head-on at the intersection, or 200 feet in advance of it.

Either mileage or nonmileage destination signs may be used as needed on channelized intersections.

Because the Destination sign is of lesser importance than the Junction, Advance Route Turn, or Directional assemblies, the Destination sign may be eliminated when sign spacing is critical.

Section 2D.38 Street Name Signs (D3)

Insert the following at the start of the section:

Standard:

Overhead Street Name (D3-1B or D3-2B) signs shall be installed on all expressways and major arterials at signalized intersections to indicate the location and name of roadways. They shall be installed overhead and to the far right-hand side of the intersection on traffic signal poles or mast arms. When mounted on the mast arm, they shall be horizontal.

Delete the first paragraph of the first Guidance subsection and insert the following:

Overhead Street Name (D3-1B and D3-2B) signs should be installed at all signalized intersections to indicate the location and name of roadways. They should be installed overhead and to the far right-hand side of the intersection on traffic signal poles or mast arms. When mounted on the mast arm, they shall be horizontal.

Street Name (D3-1, or D3-1A, or D3-1D) signs should be installed at all intersections with public roads (rural and urban) to identify the cross street.

Advance Street Name (D3-1C and D3-2) signs should be installed on major arterials and expressways in advance of major intersections. They should be installed on the right at least 300 to 600 feet in advance of the intersection on rural roads and one-half block in advance of major intersections in urban areas, where the 300 to 600 feet distance can not be met.

Section 2D.39 Parking Area Sign (D4-1)

Insert the following at the end of the section:

Standard:

The PARKING AREA (D4-1) sign shall not be used on rural routes.

Section 2D.41 Rest Area Signs (D5 Series)

Delete the first sentence of the Standard subsection and insert the following:

The REST AREA (D5-5A Symbol) sign shall only be used where the guidelines for D9 series signs are met; see Section 2D.44 of this *Alaska Traffic Manual Supplement*.

Section 2D.42 Scenic Area Signs (D6 Series)

Delete the first paragraph under Option subsection and insert the following:

Scenic areas may be marked by the SCENIC VIEW SYMBOL (D9-102) sign. Follow the guidelines for D9 series signs in Section 2D.44 of this *Alaska Traffic Manual Supplement*.

Section 2D.44 General Service Signs (D9 Series)

Delete the first sentence of the first Support subsection and insert the following:

Due to the sparse settlement of rural Alaska, it can be advantageous to place motorist service signs on conventional roads.

General Service signs are installed for the benefit of the motorist, not to promote businesses.

Other signs for businesses are listed in Table 2A-101.

Standard:

General Service (D9 series) signs shall be installed only when the particular service is available within one mile of the intersection and the facility is not visible to the approaching motorist until they are within 800 feet of the turn off to that facility. An exception to the visibility requirement can be made for hospitals and Emergency Medical Service facilities.

The sign(s) shall be covered or removed when the service is no longer available, such as at a seasonal facility.

The particular service shall also meet all of the requirements listed below for that service.

A. A camping area (D9-3 series, D9-4 series, and D9-100 Signs) is typically located adjacent to a lake, creek, or river in an area with scenic, historic, or recreational interest such as a trailhead. It may include a firewood stock, shelters, a developed water supply, and sanitary dump facilities for campers or trailers. It must include a parking area, picnic tables, litter disposal facilities, toilets, and locations where campers may be parked and/or tents erected.

B. A rest area (D5-2 and D5-102 Sign) must have a parking area, picnic tables, litter disposal facilities, and toilets. (See Section 2D.41) Overnight camping facilities are generally not provided.

C. A parking area (D9-105 Sign) is generally more modest than a rest area and does not include toilets. It may include picnic tables, and must include litter disposal facilities and at least a 1,600-square-foot area separate from the highway for vehicles to park. The typical truck turnout created by widening the roadway is not considered a parking area since it is not separate from the roadway.

D. A scenic viewpoint (D9-102 Sign) is a turnout or parking area with a particularly attractive view of an identified feature.

E. A food service facility (D9-6 Sign) is a café, snack bar, or restaurant permitted by the Alaska Department of Environmental Conservation. As a minimum, it must provide hot food and beverages, a public telephone, and modern sanitation facilities, and be open for business to the public at least 16 hours per day, seven days a week.

F. Telephones (D9-1 series Sign) qualify if they are readily accessible to the public for all types of calls 24 hours per day, seven days per week.

G. Gasoline (D9-7, D9-11 Signs) may be identified if the facility sells both motor oil and gasoline in commercial quantities from pumps licensed by the Department of Transportation and Public Facilities Division of Measurement Standards and Commercial Vehicle Enforcement, at least 16 hours per day, seven days a week. The availability of diesel fuel, tires, electrical service, restrooms, an automobile hoist, and qualified service technician shall be considered in the case of competing facilities.

H. Lodging (D9-9 Sign) must consist of at least beds and bedding in a permanent, all-weather, heated building equipped with toilet and bathing facilities for at least 10 hours per night throughout the week. The facility should have at least six rooms available for guests.

I. A hospital (D9-2 Sign) is a permanent medical facility that serves the public with 24-hour emergency medical service and has a licensed physician readily available.

J. An Emergency Medical Service (Staff-of-Life Symbol) (D9-13 Sign) facility must be staffed by emergency medical technicians certified by the Emergency Services Section, Alaska Department of Health and Social Services; and must be readily accessible and manned 24 hours a day. The signed location should be the dispatch point for the EMS, not necessarily the garage for the ambulance. The Emergency Medical Service symbol shall be supplemented by a sign identifying the type of service provided.

Option:

HOSPITAL (D9-2) signs and EMERGENCY MEDICAL SERVICE (D9-13) symbol signs may be installed within urban areas. Mark each turn from the adjacent major or through highway to the emergency service entrance to the facility with additional signs and appropriate directional arrows and/or distance plaques.

CAMPING [D9-3 series, D9-4 series, and the RV PARK (D9-100)], the SANITARY DUMP (D9-12), PUBLIC DUMPSTER (D9-230), and TOURIST INFORMATION (D9-10) signs may be used in urban areas, but should be kept to a minimum.

The D9 series signs may be supplemented with ARROW and/or DISTANCE Plaques on conventional highways and expressways in advance of the turn to the facility to aid the motorist.

Support:

Consider using 1 MILE (D9-103) as well as 1,500 FT (D9-308) plaques mounted below the Camping (D9-3 series, D9-4 series, and D9-100) signs to allow motorists additional time to make the decision to use these facilities.

Section 2D.45 Reference (Mile) Posts (D10-1 through D10-3)

Add the following at the beginning of the section:

Support:

In this manual, "Reference Posts" (as the MUTCD refers to them) are called mileposts.

Add the following at the end of the section:

Support:

Because mileposts are used as permanent location references on Alaska highways for residences, businesses and topographical features, they are not ordinarily changed when a road segment is reconstructed or realigned, and therefore do not necessarily correspond to actual mileage along a route.

Guidance:

When a road is realigned in a manner that either shortens or lengthens the road, milepost locations should be interpolated between existing mileposts on either side of the realigned segment. Mileposts before or beyond the realigned section should not be adjusted to reflect the change in route mileage.

When installing mileposts on state routes that have not been previously marked, mile numbering shall be marked starting at the south or west terminus of the route or at the connection point on a spur route. In absence of an agreement to the contrary, where two routes become the same roadway, only the mileposts for the lower number state route shall be installed. However, when the routes again diverge, the mileage for the higher number state route shall resume as if it had continued through the combined section.

Standard:

Milepost signs shall be installed on the east side of the roadway on North-South routes and on the north side of the roadway on East-West routes. Install 15 to 30 feet from the edge of the traveled way oriented at 90 degrees to the roadway, with two legends, one visible from each direction.

Section 2D.47 General Information Signs (I Series)

Add the following at the end of the section:

Standard:

The ENTERING (LEAVING) ALASKA TIME ZONE CHECK TIME AT CUSTOMS (D12-3A & B) sign shall be placed, where possible, between the border and customs station.

The signs shall not interfere with the sequence of D8-102 through D8-104 signs (see Section 2S.06, *Alaska Traffic Manual Supplement*), or other traffic control devices.

Section 2D.100 Other Directional Signs

This is a new section. There is no corresponding section in the MUTCD.

Sections 2D.51 through 2D.99 are reserved for future MUTCD use.

Add the following subsections:

Section 2D.100a Community Service Sign (D9-204)

Option:

Community Services signs may be installed to provide direction to communities and to identify services available there. They are a single-sign alternative to multiple business-identifying (D9-205 TODS, or LG-series LOGO) signs.

Standard:

Where Community Service signs are installed, existing TODS and LOGO signs shall be removed.

CHAPTER 2E. GUIDE SIGNS – FREEWAYS AND EXPRESSWAYS

Section 2E.53 Tourist Information and Welcome Centers

Add the following at the end of the section:

Option:

TOURIST INFORMATION CENTER and WELCOME CENTER signs may be installed on highways other than freeways when the applicant meets the following criteria:

Standard:

A. There shall be a minimum of ten off-street parking spaces provided.

B. The tourist information center shall be located adjacent to the highway.

C. The tourist information center shall have information about the surrounding region as well as the area near the center.

Applicants for these signs shall submit an official designation as a Welcome Center or Tourist Information Center from the local city or borough government and letter of concurrence from the local Chamber of Commerce to the appropriate city or regional traffic engineer. Applicants shall not fabricate or install signs until approval from the city or regional traffic engineer is obtained.

Only one center should be designated for communities located along a single major through route. Multiple visitor centers may be designated for larger communities with a network of several major through routes. These should be limited to no more than one for each entry point to the community. Visitor/information centers shall be located within the community or region they serve.

The name of the operating agency, community, group, or enterprise shall not appear in the legend of the sign.

The operating agency shall purchase and install the original signs.

CHAPTER 2I. EMERGENCY MANAGEMENT SIGNING

Section 2I.03 Evacuation Route Sign (EM-100) (Previously CD-100)

Add the following at the end of the section:

Support:

TSUNAMI EVACUATION ROUTE (EM-100) signs guide people to safe ground when a tidal wave approaches.

Standard:

The signs shall only be installed on state highways after a regional traffic engineer has approved a tsunami evacuation route plan done by the Alaska Division of Emergency Services (ADES). The plan must be done in accordance with the procedure transmitted a memo from Robert E. Heavilin, ADES Director, to Michael Downing of the DOT&PF on March 16, 1998.

Guidance:

Communities desiring tsunami evacuation route signs should submit their requests to the ADES.

CHAPTER 2S. SPECIAL SIGNS

This is a new chapter. There is no corresponding chapter in the MUTCD.

Section 2S.01 Highway Fatality Memorial Signs (I-160 through I-164)

Support:

Highway Fatality Memorial Signs memorialize victims of fatal highway accidents.

Standard:

The PLEASE DON'T DRINK AND DRIVE (I-160) sign is used when a legally drunk driver caused the fatal accident. This sign shall be used in conjunction with one of the following:

A. An IN MEMORY OF . . . (I-162) plaque, when the deceased was a victim of a drunk driver, OR

B. A SPONSORED BY . . . (I-163) plaque, when the deceased was the drunk driver

The PLEASE DRIVE SAFELY (I-161) sign is used in other cases and shall be used in conjunction with the I-162 plaque.

Month and year of installation shall be clearly marked on the back of each sign and plaque with long-lasting black paint.

Before installation on state highways, the DOT&PF regional office right-of-way chief or designee must approve the use of these signs in keeping with the Highway Fatality Memorial Sign Program. Applicants for the signs must comply with program requirements.

These are the only memorials for fatal traffic accidents allowed within state highway right-of-way.

Section 2S.02 State Maintenance Begins/Ends Signs (I-180 and I-181)

Option:

The STATE MAINTENANCE BEGINS (I-180) sign may be installed at the point on the roadway where maintenance becomes the responsibility of the Department of Transportation and Public Facilities.

The STATE MAINTENANCE ENDS (I-181) signs may be installed at the point on the roadway where maintenance becomes the responsibility of another agency or private party.

Standard:

The I-180 and I-181 signs shall be installed on the right at the maintenance area boundary.

Section 2S.03 Slow Vehicle Turnout Signs (I-120, I-121, and I-122)

Guidance:

The SLOW VEHICLE TURNOUT (I-121) and the SLOW VEHICLE TURNOUT XXX FT (I-122) signs should be used to indicate the location of turnouts provided primarily for slow-moving vehicles that impede traffic on two-lane rural highways.

The SLOW VEHICLES USE TURNOUTS NEXT XX MILES (I-120) should be used in addition to the other signs when multiple turnouts are available within a section of highway.

Standard:

These signs shall only be used to indicate turnouts to the right.

Option:

NO PARKING (R8-3) signs may be installed within the turnout.

Section 2S.04 Watchable Wildlife Sign (D7-RG-1000)

Option:

The WATCHABLE WILDLIFE (R7-RG-1000) sign may be used to direct motorists to watchable wildlife sites identified in *Alaska's Watchable Viewing Guide.* Sites must be accessible to the motoring public and have a safe traffic pullout.

Standard:

On state highways, the regional traffic engineer shall approve identified watchable wildlife sites before they are signed.

The signs shall not be mounted on the same post as regulatory or warning signs.

Guidance:

The WATCHABLE WILDLIFE signs should follow the guidelines for D9 series signs. See Section 2D.44 of the ATM.

Option:

The WATCHABLE WILDLIFE signs may be installed on the same post as guide, recreational, general service, and similar signs.

Section 2S.05 Speedometer Check Station Signs (I-140, I-141B, I-141E and I-142)

Option:

Where appropriate, a measured distance (third order accuracy) may be signed on a generally straight roadway section to allow motorists to check odometer accuracy.

Guidance:

The measure section should be at least 5 miles in length. The SPEEDOMETER CHECK STATION AHEAD (I-140) sign should be located 1,500 feet in advance of the BEGIN CHECK MILE 0 sign (I-141B). The MILE 1 through MILE 4 (I-142) signs should be located at the 1- through 4-mile marks, followed by the END CHECK MILE 5 (I-141E) sign.

Section 2S.06 Customs Station Signing (D-102, D8-103, D8-104, and R13-103)

Support:

The general concept for Customs Station signing is similar to weigh station signing (see Sections 2D.43 and 2B.51h of this *Alaska Traffic Manual Supplement*).

Standard:

CUSTOMS STATION (D8-102 through D8-104 and R13-103) signs shall take precedence over all service and information signing. The following four signs shall be installed in sequence toward the facility on all classes of highways:

A. CUSTOMS 1 MILE (D8-102)

B. ALL VEHICLES STOP AT CUSTOMS (R13-103)

C. CUSTOMS 1000 FT. OPEN/CLOSED (D8-103)

D. CUSTOMS (Arrow) D8-104R or L

Section 2S.07 FIRE HYDRANT Sign (M12-1)

Option:

The FIRE HYDRANT (M12-1) sign may be used to mark hydrants that are hard to see. A number sequence as designated by the local fire department may be included on the sign.

CHAPTER 3B. PAVEMENT AND CURB MARKINGS

Section 3B.02 No-Passing Zone Pavement Markings and Warrants

Insert the following at the end of the second Standard subsection:

Option:

A one-way no-passing marking may be placed on any approach to an intersection.

Guidance:

No-passing zone markings should be placed on stopped approaches to intersections to prohibit passing for the last five seconds of travel distance at the posted speed. See Table 3B-100 of this *Alaska Traffic Manual Supplement*.

Insert the following between paragraph one and two of the third Standard subsection:

The minimum length of the no-passing zone for one direction of traffic shall be not less than 500 feet. The minimum gap in successive no passing zones for one direction of traffic shall be not less than ten seconds travel at the 85th percentile, or the posted speed, whichever is higher.

Insert the following at the end of the last Support subsection:

Where placement depends on advance time of travel, Table 3B-100 gives equivalent distances. Distances are rounded to the nearest 5 feet.

Table 3B-100
Distance Traveled (Feet)

Speed (mph)	Time (sec.)	
	5	10
15	110	220
20	145	295
25	185	365
30	220	440
35	255	515
40	295	585
45	330	660
50	365	735
55	405	805
60	440	880
65	480	955
70	515	1030

Section 3B.05 Other White Longitudinal Pavement Markings

Delete the third Option subsection second paragraph and insert the following:

Lane drop markings as shown in Figure 3B-10 may be used in advance of lane drops at exit ramps to distinguish a lane drop from a normal exit ramp or from an auxiliary lane. The lane drop marking may consist of a 8-inch wide, white dotted line with line segments 3 feet in length, separated by 9-foot gaps.

Section 3B.17 Crosswalk Markings

Add the following at the beginning of the first Standard subsection:

Crosswalk markings shall be placed at the following locations:

A. At officially designated school crossings

B. At intersections controlled by traffic signals where pedestrian phases are used

Delete the second sentence of the Standards subsection and insert the following:

They shall be 24 inches wide.

Delete the first sentence of the first Guidance subsection and add the following:

Marked crosswalks should not be less than 10 feet wide.

Delete the third, fourth, and fifth paragraphs of the Guidance subsection and add the following:

Where crosswalks are marked on approaches controlled by traffic signals or stop signs, border (transverse line) crosswalks should be used.

Where crosswalks are marked at other locations, ladder crosswalks (using longitudinal lines but not transverse lines) should be used.

Decisions to mark crosswalks should be made in accordance with Table 3B-101.

Table 3B-101 Recommended Practice for Crosswalk Marking at Uncontrolled Crossings

No of Lanes	Raised Median?	Vehicle ADT ≤9,000				Vehicle ADT >9,000 to 12000				Vehicle ADT >12,000 to 15,000			Vehicle ADT >15,000		
		Speed Limit (MPH)													
		≤30	35	40	≥45	≤30	35	40	≥45	≤30	35	≥40	≤30	35	≥40
2	No	C	C	M	N	C	C	M	N	C	C	N	C	M	N
3	No	C	C	M	N	C	M	M	N	M	M	N	M	N	N
≥4	Yes	C	C	M	N	C	M	N	N	M	M	N	N	N	N
≥4	No	C	M	N	N	M	M	N	N	N	N	N	N	N	N

C

Candidate sites for marked crosswalks. Before marking a crosswalk, the site should be studied to ensure it is suitable. The study may include a review of pedestrian volumes, available gaps, sight distance (see A below), vehicle mix, pedestrian mix, distance to adjacent crossings (see B below), etc. Crosswalks should not be installed at locations with fewer than 20 pedestrian crossings per peak hour (or 15 for elderly and/or child pedestrians).

M

Marginal candidate sites for marked crosswalks: Pedestrian accident risk may increase if crosswalks are marked. If pedestrian improvements are necessary, other options should be explored before marking crosswalks.

N

Crosswalks should not be installed at these locations.

Source: FHWA-RD-01-075, *Safety Effects of Marked vs. Unmarked Crosswalks at Uncontrolled Locations*, 2002

A. Marked crosswalks should not be installed at uncontrolled crossings where visibility distance of pedestrians or the crosswalk would be less than the "Stopping Sight Distance for Design" given in the latest version of the AASHTO *A Policy on Geometric Design of Highways and Streets*. Desirably, crosswalks would only be installed where there is sufficient sight distance to allow pedestrians to cross the road without conflicting with vehicles continuing at the 85th percentile speed, assuming the pedestrian starts walking at the moment the vehicle comes into sight. Pedestrian crossing time should be computed in accordance with the procedure for determining adequate gaps given in the Institute of Transportation Engineers *Traffic Engineering Handbook* (page 78 in the 4th Edition).

B. Crosswalks should not be installed at uncontrolled locations where they will encourage pedestrians to divert from nearby signalized or grade-separated pedestrian crossings.

At mid-block crossings, parking shall be prohibited for at least 40 feet in advance of the crosswalk and at least 20 feet beyond the crosswalk for each direction of approaching traffic. Prohibiting parking 100 feet in advance and 50 feet beyond the crosswalk is desirable. These provisions do not apply when the curb is extended to near the edge of the parking lane at the crosswalk.

Add the following after the second Support subsection:

Locate crosswalks at intersections as shown in Figure 3B-100 on the following page.

Delete the first Option subsection.

Delete the first and second sentences of the second Guidance section and insert the following:

If used, the "rungs" of ladder crosswalks should be 24 to 36 inches wide and spaced 24 to 36 inches apart. The spacing design should avoid wheel paths.

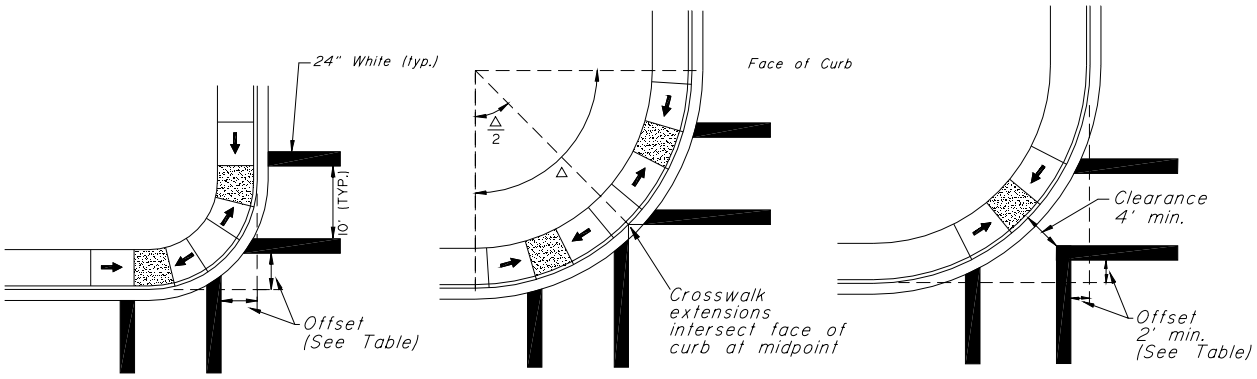
Section 3B.100 Markings for Climbing and Passing Lanes

This is a new section. There is no corresponding section in the MUTCD.

Sections 3B.28 through 3B.99 are reserved for future MUTCD use.

Support:

See Figure 2B-100 for pavement marking layout for climbing and passing lanes.



CASE 1

Dual Curb Ramps
Radius ≤ 25'

CASE 1	
Crosswalk Offset From Face of Curb	
Radius (ft.)	Offset (ft.)
5	5
10	6
15	7
20	8
25	9

CASE 2

Dual Curb Ramps
25' < Radius ≤ 50'

CASE 3

Single Central Curb Ramp
25' ≤ Radius ≤ 50'
(Not Recommended)

CASE 3	
Crosswalk Offset From Face of Curb	
Radius (ft)	Offset (ft)
25	2
30	3
35	5
40	6
45	8
50	9

NOTES:

1. The crosswalk locations shown in Figure 3B-100 assume a 90-degree intersection. Adjust as necessary on skewed intersections to ensure that crosswalk landings (for parallel curb ramps) or ramp runs (for perpendicular curb ramps) fall within the inner edges of crosswalk strips. If Case 3 (not recommended) is used, the layout should also be adjusted to provide at least the minimum clearance while maximizing the offset.
2. Although border (transverse line) crosswalks are shown, these details also apply to ladder (longitudinal line) crosswalks. When used, the outside of 10-feet wide ladder crosswalks should coincide with the inside of border crosswalks as shown here.
3. If only one crosswalk connects with a curb radius, it should be located as if there were two connecting crosswalks.
4. Case 3, the layout for a single central curb ramp, should be used only when installing two ramps is not feasible. It should not be used for radii under 25 feet on roads where parking is not allowed.
5. Radius is measured to the face of curb.

Figure 3B-100
Crosswalk Location at Intersections

CHAPTER 3C. OBJECT MARKERS

Section 3C.02 Markings for Objects in the Roadway

Add the following subsection after the first Standard subsection:

Guidance:

Type 1 Object Markers (OM-1) should be mounted directly below:

A. Each R4-7 sign on the lead end of a median

B. Each W12-1 DOUBLE ARROW sign

Insert the following at the end of the first Option subsection:

They may be mounted directly below each W1-6 and W1-7 ARROW sign.

Section 3C.03 Markings for Objects Adjacent to the Roadway

Add the following subsection after the first Support subsection:

Guidance:

Type 3 Object markers should be installed at bridges when any of the following conditions exist:

A. Total road width (shoulders plus traveled way) on the bridge is narrower than the total road width of the approaching roadway.

B. Total two-way road width is less than 18 feet.

C. No guardrail is attached to the bridge end (this is not meant to imply that object markers are an adequate substitute for crashworthy treatment of bridge ends).

When used, object markers should be on the nearest guardrail post to bridge abutments when there is an approach guardrail. When there is no approach guardrail, they should be mounted on the end of the bridge rail or on a separate post.

CHAPTER D. DELINEATORS

Section 3D.03 Delineator Application

Add the following at the end of the first Standard subsection:

Install delineators in accordance with Table 3D-100 on the following page. Delineators may also be used for applications not covered by the table, including safety emphasis areas.

See Section 3D of the MUTCD for additional guidance.

Add the following at the end of the section:

Guidance:

When used, snow pole delineators should be constructed in accordance with Figure 3D-100 and Figure 3D-101 of the *Alaska Traffic Manual Supplement*.

Option:

Snow poles may be installed in three layout patterns: Opposite, one-sided, or staggered.

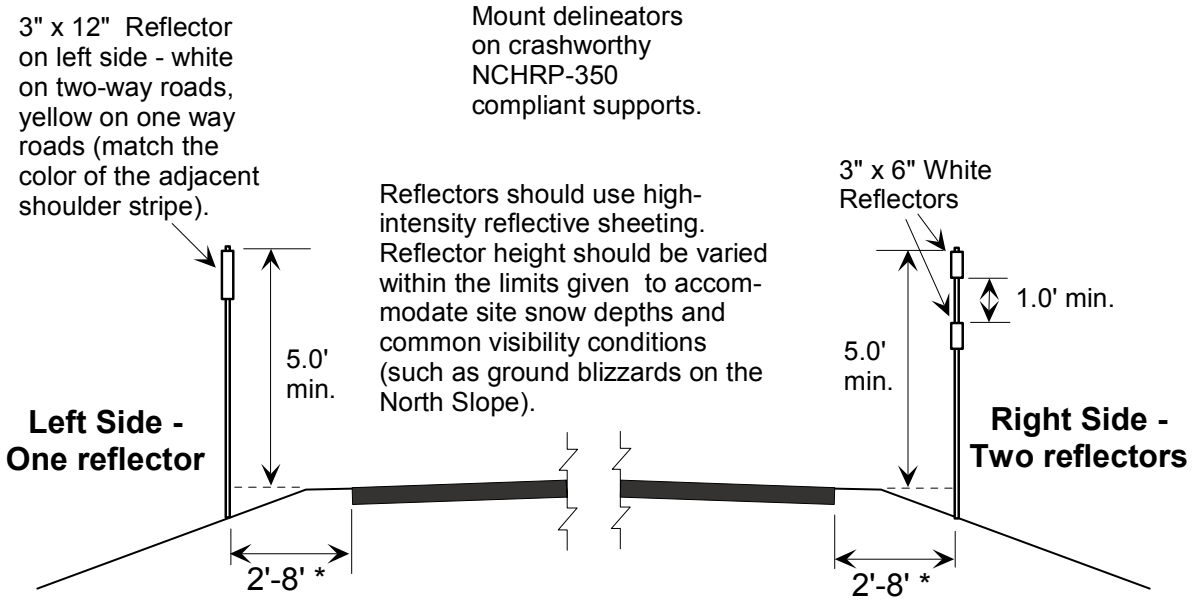
A. Opposite Layout (where poles are placed directly across from each other): The opposite layout is the most desirable because drivers just drive through the "gate" between poles in low-visibility conditions.

B. One-sided Layout: The one-sided layout has the advantage of being less expensive than the opposite layout (at a given spacing) and of not confusing drivers as to whether they should drive to the left or right of a pole (as the staggered layout does).

C. Staggered Layout: The staggered layout is the least desirable layout because drivers sometimes lose count when they can only see one delineator at a time and forget whether they should drive to the left or right of delineators.

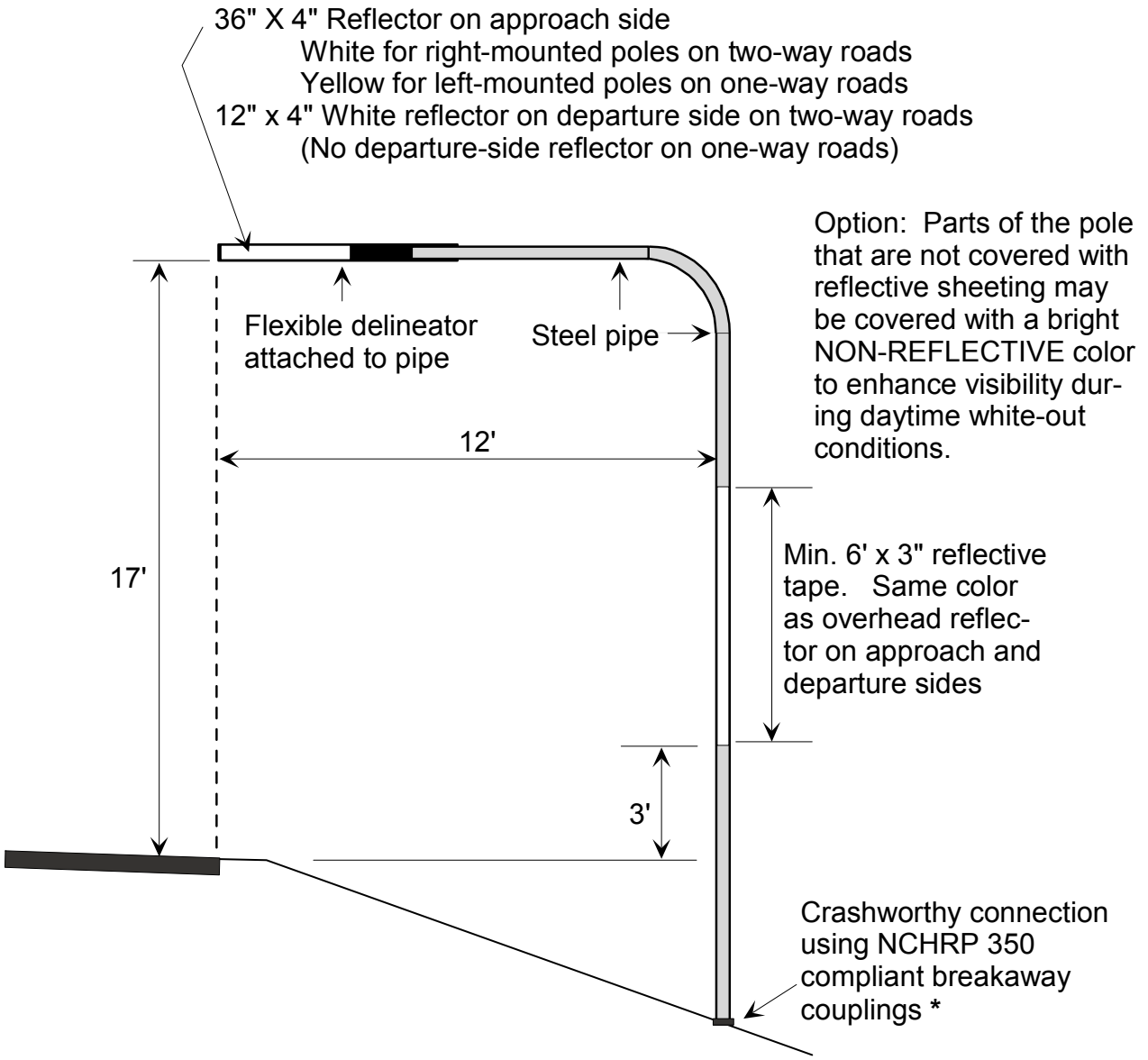
Table 3D-100
Delineator Application

Application	Required/ Optional	Delineator Type	Spacing		Offset from Edge of Pvmt	Post Material	Notes
			Tangent	Curves <40 MPH			
Right side of Freeways and Expressways, and one side of interchange ramps	Required except when exempting conditions of MUTCD Section 3D.03 are met	See MUTCD Section 3D.02	See MUTCD Section 3D.04	See MUTCD Section 3D.04	8'	Crash-worthy support (NCHRP-350)	Red reflectors should be placed on the back of delineators on one-way roads.
Along acceleration or deceleration lanes and at median cross-overs	Optional	See MUTCD Section 3D.02 (double height reflector)	See MUTCD Section 3D.04	See MUTCD Section 3D.04	2' – 8'	Crash-worthy support (NCHRP-350)	Delineators provide better guidance to motorists when they are placed close (2') to the edge of pavement. However, offsets nearer 8' make road maintenance easier. Maintenance workers should be consulted when determining delineator offsets.
Areas with poor winter visibility	Optional	Shoulder snow pole (see Figure 3D-100)	200' max.	100' max.	2' - 8'	Crash-worthy support (NCHRP-350)	
Areas with poor winter visibility and extremely heavy snow accumulations	Optional	Overhead snow pole (see Figure 3D-101)	200' max.	100' max.	12'	Steel pipe, concrete foundation, breakaway base	
Guardrail End Terminals (GETs)	Required On state highways	Terminal Marker Posts	On every GET	On every GET	At GET	Two flexible delineators, one at each end of GET	Each delineator should have at least a3” x 6" area of reflective sheeting with color matching edgeline



* Delineators provide better guidance to motorists when they are placed close (2') to the edge of pavement. However, offsets nearer 8' makes road maintenance easier. Maintenance workers should be consulted when determining delineator offsets.

Figure 3D-100
Shoulder Snow Pole



* Where installed 4 feet or more behind the near edge of the nearest guardrail post and where it is not possible for a vehicle to penetrate a guardrail end terminal and strike the support, the breakaway couplings may be omitted.

Figure 3D-101
Overhead Snow Pole

CHAPTER 4D. TRAFFIC CONTROL SIGNAL FEATURES

Section 4D.02 Responsibility for Operation and Maintenance

Add the following to the Guidance subsection:

I. Keep a signal record in each signal cabinet along with a phasing schematic and wiring diagrams. The signal record or log should contain the following:

1. Current signal timing, unless the signals are connected to a central computer that can upload and download timings

2. Date and time of changes or maintenance operations

3. Initials of person changing timing or performing maintenance

4. Type of maintenance operation and characteristics of equipment failure or faulty operation evident before repair

Section 4D.06 Application of Steady Signal Indications for Left Turns

Delete the first paragraph of the first Standard subsection C. Protected/Permissive Mode, 4. and insert the following:

A supplementary sign shall not be required. If used, it shall be a LEFT TURN YIELD ON GREEN (symbolic green ball) sign (R10-12) or R10-100 LEFT TURN ONLY ON GREEN BALL (symbol).

Section 4D.15 Size, Number, and Location of Signal Faces by Approach

In the first Standard subsection delete Items B. and C. and insert the following:

C. If the nearest signal face is between 120 feet and 180 feet beyond the stop line, unless a supplemental near-side signal face is provided

D. For signal faces located more than 180 feet from the stop line

In the second Standard subsection delete Item D. 1. (b) and insert the following:

(b). Not more than 180 feet beyond the stop line unless a supplemental near side signal face is provided

In Figure 4D-2 Horizontal Location of Signal Faces, change 45 m (150 ft) reference to 180 feet.

Insert the following at the end of the first Support subsection:

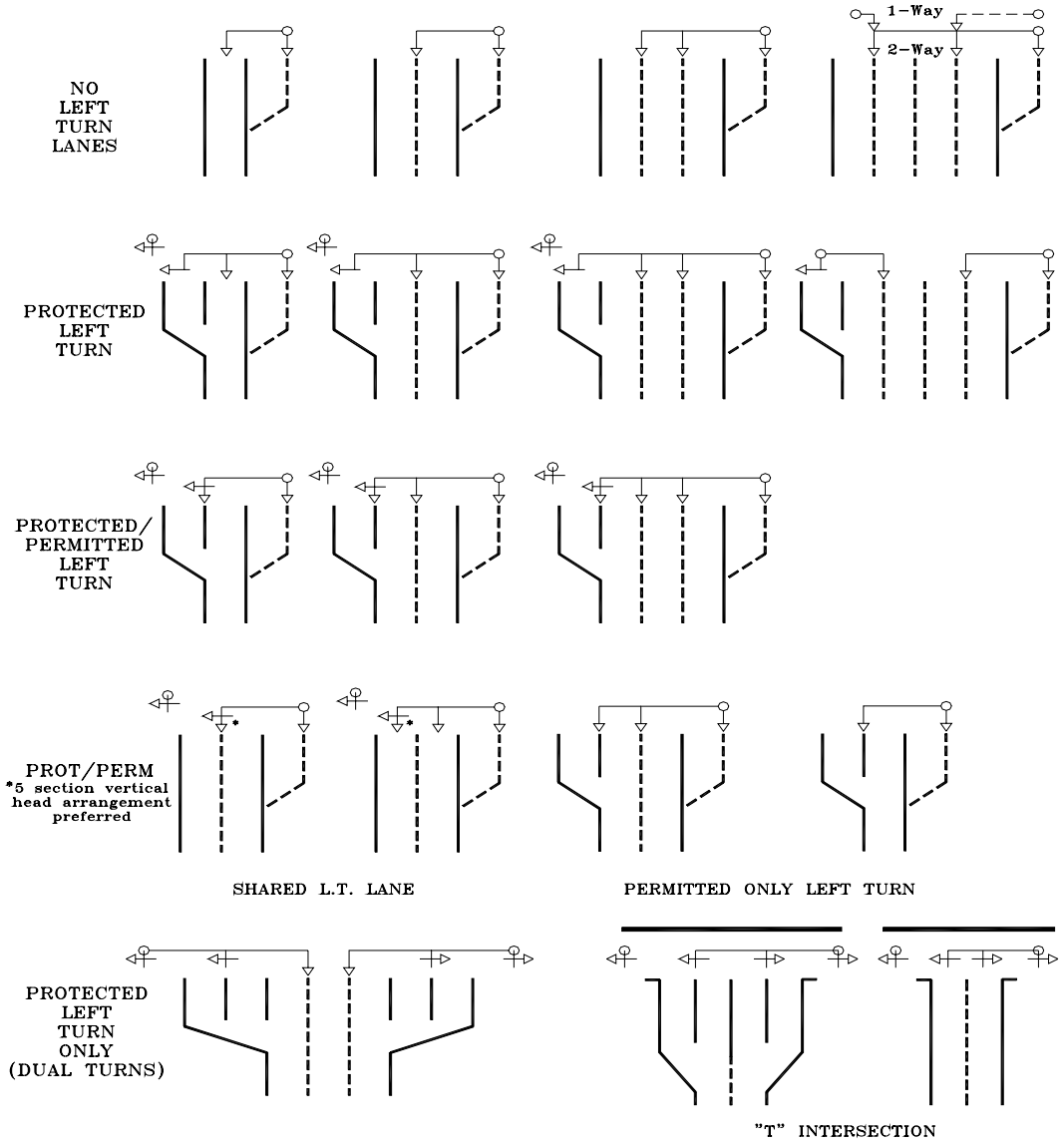


Table 4D-100 shows typical signal head locations at various intersections.

NOTE: Near-side heads (not shown) may be needed on wide intersections.

Figure 4D-100
Typical Signal Head Locations

Add the following to the end of the Standard subsection:

Vehicular signals shall consist of the following minimum configurations for each approaching direction:

A. The primary indicator for through traffic at signal-controlled intersections shall be a side-mounted or post-mounted signal face on the far side of the cross street and to the right of traffic approaching the signal (far-right position). In urban centers and other locations where the far-right position signal would be obscured or outside of the cone of vision as shown in Figure 4D-2 of the MUTCD, an overhead signal face over through lanes may be substituted as the primary indicator.

B. The primary through traffic indicator shall be supplemented with no less than the number of through indicators required by Table 4D-100 on the following page. On a one-way street that is three or more lanes wide, an additional post-mounted signal face shall be installed on the far left side of the intersection.

The primary indicator for turning traffic at intersections with separate turn phasing shall be a signal face with 12-inch diameter lenses with arrow(s) on the far side of the cross street and placed to be in conformance with the following:

A. The primary indication for right-turn traffic with exclusive right-turn phasing which overlaps the through-traffic phase shall be a 12-inch diameter green arrow mounted on the far side below the primary indicator.

B. The primary indication for a protected left-turn phase shall be as close as possible to:

1. The prolongation of the center of the lane on a single left-turn lane approach

2. The prolongation of the separating lane line on a dual left-turn approach

C. The primary indication for a protected/permitted left-turn phase shall be as close as possible to:

1. The prolongation of the lane line separating the turn lane from the adjacent through lane, where an exclusive turn lane is provided

2. The prolongation of the center of the left-most lane or the prolongation of the lane line separating the left-most two lanes where an exclusive turn lane is not provided

Guidance:

A supplemental far-side left-turn indicator should be provided where there is protected or protected-permitted left-turn phasing. The indicator shall consist of a three section head (all arrows) with protected phasing and a five section vertically arranged head with protected-permitted phasing.

Option:

Protected-permitted signal faces in these locations may be supplemented with the R10-12 sign adjacent to each signal face.

Table 4D-100
Number of Through Overhead Signals

NUMBER OF THROUGH APPROACH LANES	TYPE OF LEFT TURNING MOVEMENT			
	NONE OR COMPLETELY PROTECTED		PROTECTED/PERMITTED	
	HEADS [A]	SPACING [B]	HEADS	SPACING [B]
1-LANE	1	--	0 [C]	--
2-LANES	1	--	1	12
3-LANES	2	12	2	12
4&5-LANES	2	24	--	--

A. Number of heads centered over the through approach
B. Approximate spacing between the overhead signals (based on 12' lane width)
C. Overhead indication is provided by the protected/permitted signal head

Section 4D.17 Visibility, Shielding, and Positioning of Signal Faces

Delete the first sentence of the fourth paragraph under the Standard subsection and insert the following:

The bottom of the signal housing and any related attachments to a vehicular signal face located over a roadway shall be at least 17.5 feet above the roadway immediately below the signal.

Delete the seventh and eighth paragraphs under the Standard subsection and insert the following:

A. Shall be at least 10 feet but not more than 19 feet above the sidewalk or, if there is no sidewalk, above the pavement grade at the center of the roadway

B. Shall be at least 7 feet but not more than 19 feet above the median island grade of a center medial island if located on the near side of the intersection

Delete the tenth and eleventh paragraphs under the Standard subsection and insert the following:

A. Shall be at least 10 feet but not more than 22 feet above the sidewalk or, if there is no sidewalk, above the pavement grade at the center of the roadway

B. Shall be at least 7 feet but not more than 22 feet above the median island grade of a center median island if located on the near side of the intersection

Section 4D.18 Design, Illumination, and Color of Signal Sections

Insert the following to the end of the second Standard subsection:

All remaining ungalvanized surfaces shall be painted dark olive green.

Delete the sentence under the second Guidance subsection.

CHAPTER 4E. PEDESTRIAN CONTROL FEATURES

Section 4E.02 Meaning of Pedestrian Signal Indications

Add the following at the end of the Standard subsection:

At all locations with a pedestrian signal indication, THE MEANING OF PEDESTRIAN SIGNALS (R10-101) sign or sticker should be installed on each pole, between and immediately above the push buttons. These signs or stickers need not be reflectorized.

Section 4E.07 Pedestrian Detectors

Delete the first sentence of the third Guidance subsection and insert the following:

The use of additional pedestrian detectors and pedestrian signal indications on islands or medians where a pedestrian might become stranded should be considered.

Section 4E.09 Pedestrian Intervals and Signal Phases

Delete the first paragraph of the last Option subsection and insert the following:

The pedestrian clearance time may be entirely contained within the green interval for the adjacent green movement, or may be entirely contained within the vehicular green and yellow change interval.

CHAPTER 4K. FLASHING BEACONS

Section 4K.02 Intersection Control Beacon

Add the following before the first Standard subsection:

Option:

Intersection beacons may be considered at an intersection if:

A. There have been a total of four or more left-turn and/or right-angle accidents in a 12-consecutive-month period, or

B. There have been a total of six or more left-turn and/or right-angle accidents in a 24-consecutive-month period.

Guidance:

When intersection beacons are used, if the ratio of entering minor street traffic volume to entering major street traffic volume is 0.50 or less, the beacon should display red toward the minor volume and yellow toward the major volume. If the ratio of minor volume to major volume exceeds 0.50, red should be shown and STOP (R1-1) signs installed on all approaches.

Section 4K.03 Warning Beacons

Delete the second paragraph in the Standard subsection and insert the following:

A warning beacon shall be used only to supplement an appropriate warning or regulatory sign or marker. The beacon shall not be included within the border of the sign.

Delete the last paragraph of the Standard subsection and insert the following:

If a warning beacon is suspended over the roadway, the clearance above the pavement shall comply with the requirements of Section 4D.17.

CHAPTER 4Z. ACTIVE ADVANCE WARNING FLASHERS

This is a new chapter. There is no corresponding chapter in the MUTCD.

Section 4Z.01 Application of Active Advance Warning Flashers

Support:

Active Advance Warning Flashers (AAWFs) are a special type of highway traffic signal installed in advance of conventional traffic signals to provide advance notice of the onset of the yellow indication.

Guidance:

AAWFs should only be installed when all of the following conditions are met:

A. High-speed (55 mph or higher) approaches

B. At the first signalized intersection after 10 or more miles of uninterrupted highway

C. Where sight distance to the conventional traffic signal indications meets or exceeds standards

Section 4Z.02 Design of Active Advance Warning Flashers

Guidance:

AAWFs should be installed 500 feet in advance of the stop bar.

The AAWF sign and flashers should be designed to:

A. Appear distinctively different than standard flashing signal ahead signs/beacons to alert drivers to its different meaning (impending yellow indication)

B. Communicate at a glance that the warning refers to a signal, not construction activity, pedestrian crossing, etc.

C. Provide a failsafe message. That is, when the power goes out, it should not imply to drivers that they may proceed through the intersection, as a nonflashing “Prepare to Stop When Flashing” sign does.

D. Be easily visible from all lanes on the approach

Figure 4Z-100 shows the recommended AAWF configuration.

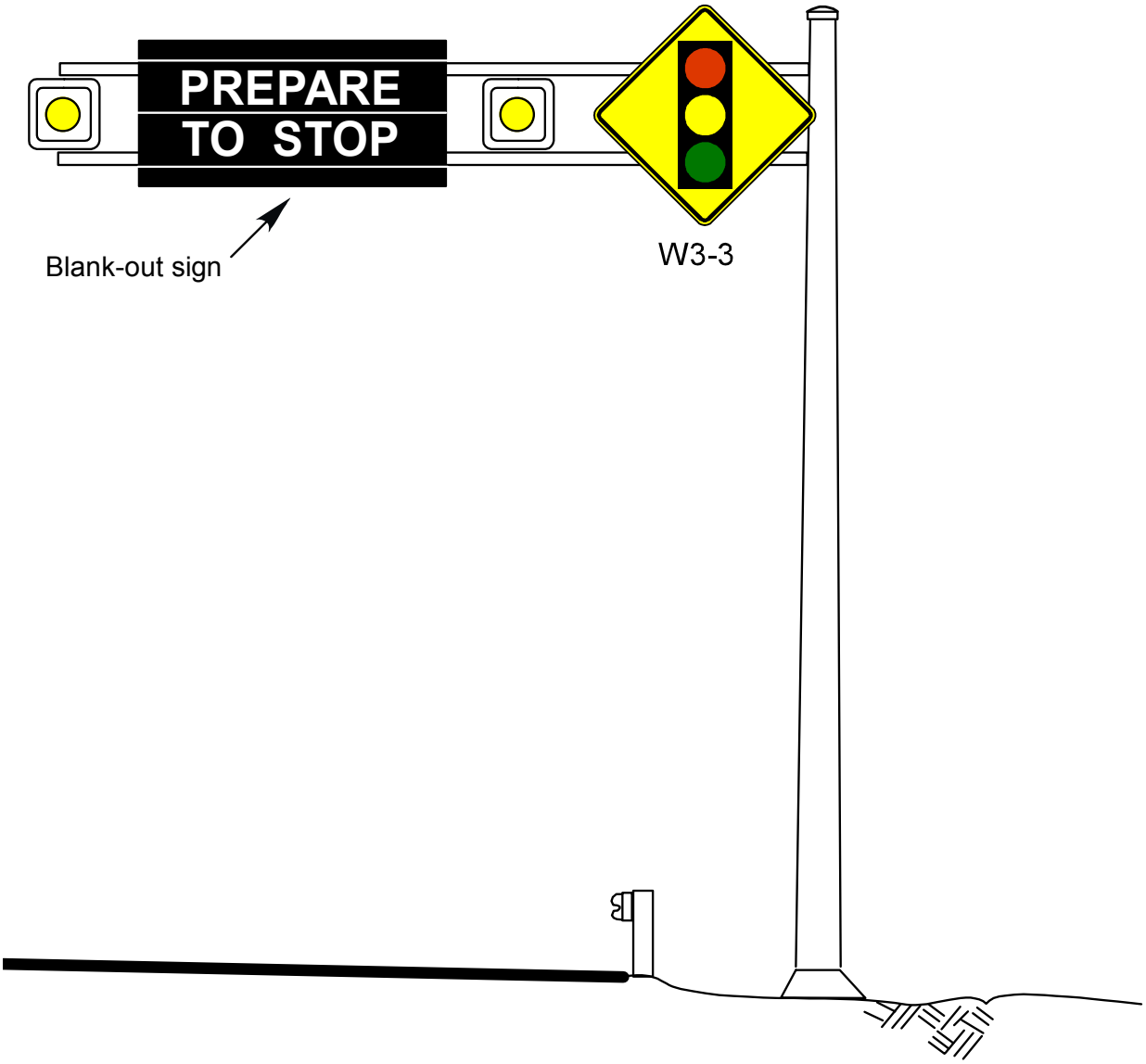


Figure 4Z-100
Active Advance Warning Flasher

PART 5. TRAFFIC CONTROL DEVICES FOR LOW-VOLUME ROADS

CHAPTER 5A. GENERAL

Section 5A.03 Design

Delete the second paragraph under the Standard subsection and insert the following:

The minimum sizes for signs installed on low-volume roads shall be as shown in the ASDS.

Delete Table 5A-1. Minimum Sign Sizes on Low-Volume Roads.

Section 5A.04 Placement

Add the following Support subsection after the Option subsection:

Support:

Investigate clearing the vegetation before locating signs as close to the edge of the road as 2 feet.

CHAPTER 5C. WARNING SIGNS

Section 5C.04 Stop Ahead and Yield Ahead Signs (W3-1a, W3-2a)

Delete the Option subsection.

Section 5C.05 Narrow Bridge Sign (W5-2a)

Delete the first and second paragraph of the Option subsection and insert the following:

The Narrow Bridge Sign (W5-2) may be used on an approach to a bridge or culvert that has a clear width less than that of the approach roadway.

Delete the detail of the W5-2a symbol narrow bridge sign from page 5C-3 of the MUTCD.

Section 5C.07 Hill Sign (W7-1a)

Delete the last paragraph of the Option subsection.

Section 5C.10 Advisory Speed Plaque (W13-1)

Add the following to the end of the Option subsection:

See Section 2C.42 for additional information on the use of these signs.

Section 5C.12 NO TRAFFIC SIGNS Sign (W16-2)

Delete this section in its entirety.

Delete the NO TRAFFIC SIGNS sign from the detail shown on page 5C-3 of the MUTCD.

Section 5C.13 Other Warning Signs

Insert the following new subsection at the end of the section:

Section 5C.13a PRIMITIVE ROAD NO WARNING SIGNS (W16-113)

Option:

The PRIMITIVE ROAD NO WARNING SIGNS sign (W16-113) may be used on low-volume roads with the following characteristics:

A. AADT of less than 25, and

B. Soil or gravel surface

In addition to installing this sign at the beginning of the no-warning sign area, additional signs may be installed at intermediate points within the area.

Standard:

The Advisory Distance Plaque (W13-1A) shall be installed below the W16-113 sign.

CHAPTER 5F. TRAFFIC CONTROL FOR HIGHWAY-RAIL GRADE CROSSINGS

Section 5F.02 Highway-Rail Grade Crossing (Crossbuck) Sign (R15-1, R15-2)

Delete the second paragraph of the Standard subsection and insert the following:

A strip of high intensity or brighter retroreflective white material not less than 6 inches in width shall be mounted on the back of each blade of each crossbuck sign for the length of each blade. Also, a similar 2-inch strip shall be used for the full length of the front and back of each support from the crossbuck sign/Number of Tracks sign to near ground level.

CHAPTER 6A. GENERAL

Section 6A.01 General

Add the following to the end of the section:

Standard:

DOT&PF Policy and Procedure DPDR 05.05.020 shall be followed when establishing speed limits for DOT&PF construction zones.

CHAPTER 6B. FUNDAMENTAL PRINCIPLES

Section 6B.01 Fundamental Principles of Temporary Traffic Control

Add the following to the last paragraph B of the second Guidance section:

Generally, signs should not be posted on construction projects directing motorists to businesses. However, it may be necessary when one of the following conditions exist:

A. When a business that was previously easily visible from the road is completely hidden by road construction activity

B. When the route to a business that was previously readily evident from the road is hidden by road construction activity

Temporary business-identifying signs should be removed immediately when conditions A. and B. cease to exist.

Temporary business-identifying signs, if used, should be made from retroreflective sheeting on an inexpensive substrate. They should be designed so they will not be confused with official construction, warning, directional, or regulatory signs.

Temporary business-identifying signs should never be installed for the purpose of advertising. They are only acceptable as mitigation for construction activities that hide the business or the route to it.

Standard:

Temporary business-identifying signs shall have black legends and borders on orange backgrounds.

CHAPTER 6F. TEMPORARY TRAFFIC CONTROL ZONE DEVICES

Section 6F.03 Sign Placement

Delete the first sentence of the first Standard subsection and insert the following:

Post-mounted signs installed at the side of the road in rural areas shall be mounted at a height of at least 7 feet, measured from the bottom of the sign to the near edge of the pavement.

Section 6F.14 Special Regulatory Signs

Add the following new subsection at the end of the section:

Section 6F.14a Double Fine in Work Zone Signs (R16-100, R16-101, R16-102, R2-100, CW20-102)

Support:

The WORK ZONE, BEGIN DOUBLE TRAFFIC FINES (R16-100) and END DOUBLE TRAFFIC FINES (R16-101) signs legally establish the beginning and end of double fine zones. See 13 AAC 40.010 and 17 AAC 99.010.

Standard:

On DOT&PF construction projects, the DOT&PF regional traffic engineer shall identify projects to receive double fine signs. On DOT&PF maintenance projects, the regional Maintenance and Operations chief shall make that decision. All decisions shall be made in accordance with the information given in this section.

Guidance:

Double fine signs should be posted in designated double fine zones in all road construction, repair, maintenance, or utility work areas except for the following:

A. Mobile operations, such as striping, grading, brush cutting, etc.

B. Work on low-volume, low-speed roads

C. Pilot car operations that extend the entire length of a project

D. Work that will last less than 48 hours

Standard:

Within the previously-described road work areas, roadway segments where one or more of the following conditions exist are designated double fine zones:

A. Active work areas: Areas where road workers and/or machinery are presently working on or adjacent to a road

B. Detours on new temporary roads built for that purpose; this does not include detours on existing streets.

C. Sections of paved roads where pavement has been removed

D. Roads where unmatched asphalt lifts result in a vertical lip between lanes

Double fine signs shall be used only in designated double fine zones. They shall be removed or covered when work ceases for more than two days and conditions B. through D. above do not exist.

Double fine signs shall be confined to areas where the above conditions exist, with the following exceptions:

Option:

A. If the project is 2 miles or shorter in length, the entire project maybe posted for double fines when the above conditions exist on any part of the project.

B. When the above conditions exist at multiple locations separated by less than 2 miles, the locations and intervening segments may be posted as a single double fine zone.

Support:

"Work Zone Speed Limit Signs," as used here, refer either to WORK ZONE SPEED LIMIT XX DOUBLE FINES (R2-100) signs or standard SPEED LIMIT (R2-1) signs with DOUBLE FINES (CW20-102) plaques mounted below them.

Standard:

The speed limit shown on Work Zone Speed Limit signs may be either the existing limit before work began or, if a work zone speed order has been approved in accordance with DOT&PF Procedure 05.05.020 PDR, a reduced limit.

Work Zone Speed Limit signs shall be posted at the beginning of every double fine zone, regardless of whether the speed limit has been reduced from the preconstruction limit.

The END DOUBLE FINES (R16-101) sign shall be posted at the end of every double fine zone.

The speed limit for the road beyond the construction zone shall be posted at the end of every double fine zone.

All existing regulatory speed limit signs within the double fines zone shall either be replaced with Work Zone Speed Limit (R2-100) signs or supplemented with CW20-102 plaques.

When a double fine zone is longer than 2 miles, Work Zone Speed Limit signs shall be posted at spacings not greater than 2 miles within the double fines zone.

Signs shall be installed at major intersections within the double fine zones, using one of the following methods, to warn entering drivers of double fines.

A. Install work zone speed limit signs on the main street on either side of the intersection. If the speed limit in the work zone has been reduced from the preconstruction limit, these signs are mandatory.

B. Install Work Zone Begin Double Traffic Fines (R16-100) signs with CW1-7 Arrow Panels mounted below them on the side street(s). The use of this signing eliminates the need for Road Work Ahead (CW20-100) signs.

Option:

DOUBLE FINES WHERE POSTED (R16-102) signs may be posted at Alaska border entry points or at other locations where it is important to notify drivers of Alaska's double fines law.

Support:

The use of the double fines zone signs is not intended to be a reason for diminishing the number of warning signs that would normally be required in the work zone.

Overuse of the double fine signs will diminish respect for, and effectiveness of, the signs. It will also result in needlessly increased fines for traffic citations.

Section 6F.15 Warning Sign Function, Design, and Application

Insert the following after the first Support subsection:

Option:

All warning signs may be used in construction and maintenance operations if the background color is changed to construction orange.. Reference to such signs will be designated with the prefix "C," denoting Construction, followed by the standard sign code. For example, the construction warning sign for a right-turn is a CW1-1R, which refers to a TURN sign with a construction-orange background.

Unless otherwise noted, locate construction warning signs in advance of the condition of concern by the distance given in Table 2C.05 of the MUTCD.

Delete the first paragraph under the second Standard subsection and insert the following:

The size of advance warning signs shall be as designated in the ASDS.

Delete the first two paragraphs under the last Option subsection.

Section 6F.42 UNEVEN LANES Sign (W8-11) [ASDS CW8-11]

Delete the first sentence under the Guidance subsection and insert the following:

The UNEVEN LANES (CW8-11) sign should be used during operations that create a difference in elevation between adjacent lanes of 1.5 inches or greater.

Section 6F.44 Other Warning Signs

Insert the following new subsection at the end of the section.

Section 6F.44a NEW TRAFFIC PATTERN (CW3-100)

Guidance:

The NEW TRAFFIC PATTERN (CW3-10) sign should be used to notify motorists of signal phasing modifications, traffic re-routing, etc.

Section 6F.45 Advisory Speed Plaque (W13-1) [ASDS CW13-1]

Delete the third sentence of the first paragraph of the Standard subsection and insert the following:

The sign size shall be as called for in the ASDS.

Insert the following at the end of the Standard subsection:

Advisory speeds shall be determined utilizing Section 2C.42 of this *Alaska Traffic Manual Supplement.*

PART 7. TRAFFIC CONTROLS FOR SCHOOL AREAS

CHAPTER 7A. GENERAL

Section 7A.02 School Routes and Established School Crossings

Add the following subsection at the beginning of the section:

Standard:

Before speed limits are reduced for school zones, the local school district shall develop a school walking route plan and submit it to the appropriate Regional or City Traffic Engineer. This walking route plan should be prepared in accordance with Section 7A.02 of the MUTCD. This plan shall evaluate and propose safe walking routes separate from the highway directing students to a designated crossing point near the school. When there are alternative crossing points, the designated crossing point should be the one most suitable for pedestrian crossing. Once a walking route plan has been approved by the local school district and accepted by the highway department, the Regional or City Traffic Engineer shall select the appropriate traffic control devices in accordance with Sections 7A.100 and 7A.101.

Section 7A.04 Scope

Add the following to the Support subsection:

The urban and rural traffic control matrices presented in Table 7A-100 and Table 7A-101 apply only to roads abutting school property and nonabutting roads at designated school crossings.

Section 7A.08 Placement Authority

Add the following Guidance subsection before the existing Support subsection:

Guidance:

On state roads, any significant deviation from the traffic control treatments shown in Tables 7A-100 and 7A-101 requires documented justification and approval from the regional director. Deviation on non-state roads requires approval from the road authority with jurisdiction.

Section 7A.100 Rural School Zone Traffic Control Summary

This is a new section. There is no corresponding section in the MUTCD.

Sections 7A.11 through section 7A.99 are reserved for future MUTCD use.

Support:

Traffic control treatments for rural school zones are given in Table 7A-100.

For this application, "rural" is defined as a sparsely populated area where the majority of land is not subdivided.

Rural schools have different traffic control than urban schools because there are generally fewer students that walk to school. Students are usually bused or driven because these areas are more sparsely settled and homes are farther away. Placing 20 mph zones on rural high speed roads where few student pedestrians are seen by drivers would generate disrespect for school speed zones in general, thereby making all school zones less safe.

Guidance:

School districts should develop policies that consider crossing guards where students in grades K-8 (K-4 in particular) are required to cross major streets.

Table 7A-100
Rural School Zone Traffic Control

Road Adjacent to School Grounds		***Road Not Adjacent to School Grounds***
Speed Limit ≤35 mph	Speed Limit ≥40 mph	School Zone traffic control devices should not be placed on roads that do not abut school grounds unless a crossing guard is present at the site. Any exceptions to this rule must be based on a site-specific engineering study.
Advance School Signs (S1-1)	Advance School Signs (S1-1) (beacon optional)	

Section 7A.101 Urban School Zone Traffic Control Summary

This is a new section. There is no corresponding section in the MUTCD.

Support:

Traffic control treatments for urban school zones are shown in Table 7A-101 on the following page.

Table 7A-101
Urban School Zone Traffic Control

Grade Level (Lowest Grade Taught at School)	Students Required to Cross Road at Grade									Students Not Required to Cross Road At-Grade (Could be grade-separated or just no crossing)	
	Traffic Signal at Crossing		No Traffic Signal at Crossing							Completely Fenced? (1)	
			STOP Con-trolled Cross-ing	Crossing Not STOP-Controlled				Grade Separ-ation	Ped. Signal (if warr-anted) (3)	Yes	No
				Sufficient Gaps (2)		Insufficient Gaps (2) Address by re-routing students, busing students, or one of the following:					
						Crossing Guard (If < 4 lanes)					
	Speed Limit ≤25	Speed Limit >25		Speed Limit ≤25	Speed Limit >25	Speed Limit ≤25	Speed Limit >25				
9-12	C	C	C – major streets only	C	C	n/a	n/a	See Students Not Required to Cross Road At-Grade	See Students Required to Cross Road At-Grade/ Traffic Signal at Crossing		
5-8	C	C,G?	C – major streets only, G?	C	C,G?	C,G	C,G				
K-4	C,G?	C,G?	C – major streets only, G?	C,G?	C,G?	C,G	C,G				

LEGEND	
n/a	Does not apply: Crossing guards should not be used for high school students.
	No School Signs
	Advance School Sign (S1-1) Only
	Advance (S1-1) and Crossing (S1-1 with W16-7p) School Signs: Overhead (S1-1) signs with flasher optional
	Advance (S1-1) and Crossing (S1-1 with W16-7p) School Signs + 20 mph When Flashing (S5-1) Sign and Flasher: Overhead (S1-1) with flasher signs optional (4)
C	Marked crosswalk: Install at nearest intersection, if within 400 feet. If a crosswalk exists within 400 feet, consider using it as the school crosswalk. Use school crosswalk signs at mid-block crosswalks if within a school zone.
G	Crossing Guard
G?	School districts should develop policies that consider crossing guards at these locations (for crossings of major streets).

The following notes pertain to Table 7A-101.

1. "Completely fenced" means fencing that restricts all access from the street side of the school to the street.

2. See Section 7A.03 of the MUTCD for gap sufficiency determination: When gaps are insufficient for crossing, student re-routing or busing should be the first options considered. Guards or pedestrian signals should be viewed as last resorts.

3. Traffic signals may be installed (but are not mandated) for pedestrians when the Minimum Pedestrian Volume or School Crossing warrants defined in Section 4C.06 of the MUTCD are met. Although these signals may be installed mid-block, every effort should be made to install them at intersections and run them as conventional signals.

4. The "Overhead Signs with Flashers" referenced in the legend are S1-1 school crossing signs with flashing lights hung over the road at or near the crosswalk. The flashing lights may be either inside of an internally illuminated sign or external. If the site has advance school flashers, the overhead flashers shall flash when the school flashers flash.

CHAPTER 7B. SIGNS

Section 7B.01 Size of School Signs

Delete the first sentence of the Standard subsection and insert the following:

The size or signs and plaques to be used shall be as shown in the ASDS.

Delete Table 7B-1. Size of School Area Signs and Plaques.

Section 7B.07 Sign Color for School Warning Signs

Delete the first sentence of the Standard subsection and insert the following:

The following signs shall be black on fluorescent yellow-green background:

A. School Crossing Signs (S1-1)

B. School Plaque (S4-3)

C. School Speed Limit Signs (S5-1) (not including the part of the sign with white background)

D. XXX FEET plaque (W16-2 series)

E. AHEAD plaque (W16-9p)

F. Diagonal Arrow plaque (W16-7p)

Delete the Option subsection in its entirety.

Section 7B.08 School Advance Warning Sign (S1-1)

Delete the second paragraph of the Standard subsection and insert the following:

If used, the School Advance Warning sign shall be installed not less than 150 feet nor more than 700 feet in advance of the school grounds or school crossings; see Figure 7B-100, Advance School Signing in the Alaska Traffic Manual Supplement.

Section 7B.09 School Crosswalk Warning Assembly (S1-1 with Diagonal Arrow)

Change W16-7 to W16-7P for sign designations on page 7B-5 of the MUTCD.

Delete Figure 7B-1. Typical Signing for School Area Traffic Control.

Delete the first paragraph under the Guidance subsection and insert the following:

The School Crosswalk Warning assembly should be installed at marked crosswalk(s), including those at signalized locations, used by students going to and from school (see Figure 7B-9 Advance School Signing in the *Alaska Traffic Manual Supplement*).

Section 7B.10 SCHOOL BUS STOP AHEAD Sign (S3-1)

Delete the first paragraph under the Guidance subsection and insert the following:

The SCHOOL BUS STOP AHEAD (S3-1) sign should be installed in advance of bus stops where the top flashing lights of a school bus are not visible for a distance of 700 feet in advance, and where there is no opportunity to relocate the bus stop to provide 700 feet of visibility.

The SCHOOL BUS STOP AHEAD (S3-1) sign should be located in accordance with Table 2C-4, Section 2C.05 of the MUTCD, and "Stop" as the speed at the condition of concern.

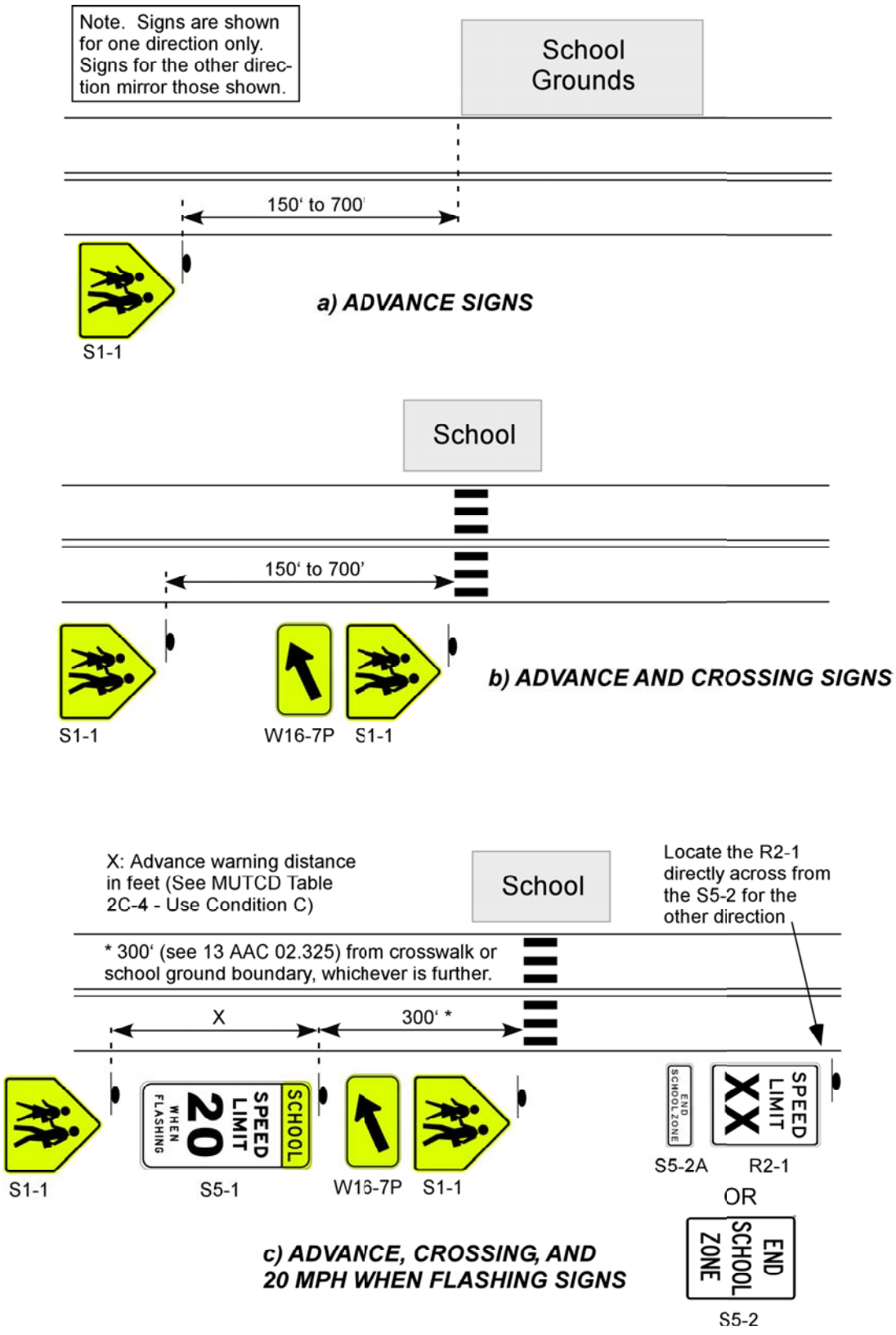


Figure 7B-100
School Traffic Control

Section 7B.11 School Speed Limit Assembly (S4-1, S4-2, S4-3, S5-1)

Delete the last paragraph under the Option subsection.

Add the following subsection to the end of the section:

Guidance:

The SCHOOL SPEED LIMIT 20 WHEN FLASHING (S5-1) sign should consist of three signal heads with 8-inch diameter yellow lenses. They should be mounted vertically directly above the S5-1 sign. The bottom two beacons should be illuminated alternately and face the oncoming traffic. The top flashing beacon should face the opposite direction to indicate when the signals are in operation.

Section 7B.100 DRUG FREE SCHOOL ZONE (S6-1)

Standard:

Alaska Statute 28.01.010(d) states, "The municipality shall post a sign indicating that the school is a drug-free school zone at each location in which it has installed a sign identifying the location of a school." Accordingly, signs conveying this message shall be placed below, or near, all School Advance Warning (S1-1) signs.

Guidance:

The posting of this sign is a municipal, not a state, responsibility.

Option:

The sign may be the S6-1 shown in the ASDS or another sign that conveys the required message. Sign colors may be either black legend on white background or black legend on fluorescent yellow-green background.

CHAPTER 7C. MARKINGS

Section 7C.03 Crosswalk Markings

Delete the first paragraph of the Standard subsection and insert the following:

Crosswalk markings shall be placed at officially designated school crossings.

School crosswalks shall be installed in accordance with the applicable provisions of Section 3B.17 of this Alaska Traffic Manual Supplement.

Delete the Option subsection.

Delete the first sentence of the first Guidance subsection.

Delete the second Guidance subsection.

CHAPTER 7E. CROSSING SUPERVISION

Section 7E.01 Types of Crossing Supervision

Insert the following subsection at the end of the section:

Standard:

School districts shall be responsible for deciding where to provide crossing guards and for compensating them.

PART 8. TRAFFIC CONTROLS FOR HIGHWAY-RAIL GRADE CROSSINGS

CHAPTER 8A. GENERAL

Section 8A.02 Use of Standard Devices, Systems, and Practices

Delete the second paragraph under the Standard subsection and insert the following:

Guidance:

Before any improvement is made at a railroad-highway crossing, an engineering study should be undertaken to determine what actions should be taken to enhance safety at the crossing. Actions may include the installation of traffic control systems or other improvements that have a demonstrated capacity to enhance safety and operations at the crossing.

With regard to traffic control systems, the following would apply:

A. As a minimum, crossbucks, advance warning signs, and pavement markings as prescribed in Part 8 of the MUTCD shall be installed.

B. The determination of the type of highway traffic control system, other than the minimum as required in A. above, at a particular crossing is a two-step process.

1. The first step is to calculate a hazard index (APV) or hazard level of the crossing in question. The APV would be expressed in accidents per year.

   The Accident Prediction Value (APV) shall be calculated using the procedures from the *Rail-Highway Crossing Resource Allocation Procedure-User's Guide, Second Edition*. FHWA-IP-86-11.[1]

   Using the calculated APV and the existing type of highway traffic control system at the crossing, the calculated APV shall be compared to threshold values in Table 8A-100 of this *Alaska Traffic Manual Supplement* to determine the type of traffic control system that should be installed.

2. The second step is to have the crossing evaluated by a diagnostic team as required by the Alaska Policy on Railroad/Highway Crossings.

C. In using the quantitative procedure described in B., where a diagnostic team recommends the installation of a traffic control system different from that indicated by the threshold values, or recommends another type of crossing improvement, the recommendation of the diagnostic team shall take precedence over the quantitative procedure.

[1] Available through the National Technical Information Service, Springfield Virginia, 22161.

Table 8A-100
Qualitative Procedure

EXISTING TRAFFIC CONTROL DEVICE	Calculated Accident Prediction Value, APV	RECOMMENDED ACTION FOR IMPROVEMENT
Passive	0.08 to 0.12[2] 0.12 to 0.15 0.15 to 0.23	See note below. Flashing lights Flashing lights or gates and flashing lights
	0.23 to 12.4	Gates and flashing lights
	12.4 to 18.5	Gates and flashing lights or grade separation
	Greater than 18.5	Grade separation
Flashing lights	0.12 to 0.18[2] 0.18 to 3.7	See note below Gates and flashing lights
	3.7 to 5.6	Gates and flashing lights or grade separation
	Greater than 5.6	Grade separation
Gates	1.32 to 1.98[2] Greater than 1.98	See note below Grade separation

[1] When the calculated hazard index falls within this range, the decision may be to do nothing, improve the existing traffic control system, install a different type of traffic control system, or make some other improvement at the crossing.

Support:

Other improvements that may be considered for enhancing crossing safety include:

A. Improving sight distance to increase the visibility of the crossing and the train
B. Closing the crossing
C. Improving the approach alignment and/or grade of the roadway
D. Instituting and enforcing railroad and/or highway operating regulations
E. Improving the crossing surface
F. Illuminating the crossing

The improvements shall also be in keeping with the Alaska Policy on Railroad/Highway Crossings.[3]

[3] Available through the Alaska Railroad Corporation, Pouch 7-2111 (RAR-34), Anchorage, Alaska 99510-7069.

CHAPTER 8B. SIGNS AND MARKINGS

Section 8B.02 Highway-Rail Grade Crossing (Crossbuck) Sign (R15-1, R15-2)

Delete the second paragraph of the first Standard subsection and insert the following:

A strip of high intensity or brighter retroreflective white material not less than 6 inches in width shall be mounted on the back of each blade of each crossbuck sign for the length of each blade. Also, a similar 2-inch strip shall be used for the full length of the front and back of each support from the crossbuck sign/Number of Tracks sign to near ground level.

Section 8B.03 Highway-Rail Crossing Advance Warning Sign (W10 Series)

Delete the last paragraph in the first Standard subsection and insert the following:

Placement of the Highway-Rail Crossing Advance Warning sign shall be in accordance with Table 2C-4 in Chapter 2C, using "Stop" as the speed at the condition of concern.

Section 8B.100 BICYCLES (skewed track crossing symbol) USE CAUTION (W10-100)

This is a new section. There is no corresponding section in the MUTCD.

Sections 8B.19 through 8B.99 are reserved for future MUTCD use.

Standard:

The BICYCLES (skewed track crossing symbol) USE CAUTION (W10-100) sign shall be used on all paved roadways and paths in advance of the railroad grade crossings that are skewed 15 degrees or more.

Guidance:

If used, the sign should be placed 65 feet in advance of the near rail of the skewed railroad crossing.

PART 9. TRAFFIC CONTROLS FOR BICYCLE FACILITIES

CHAPTER 9B. SIGNS

Section 9B.02 Design of Bicycle Signs

Delete the first and second paragraphs of the Standard subsection and insert the following:

If the sign applies to both drivers and bicyclists, then the size shall be as shown for motor vehicles in the ASDS.

The sign sizes for shared-use paths shall be those shown in the ASDS for bicycles, and shall be used only for signs installed exclusively for bicycle traffic applications.

Delete Table 9B-1. Sign Size for Shared-Use Paths.

Section 9B.15 Bicycle Crossing Warning Sign (W11-1)

Delete the second Option subsection and insert the following:

Bicycle signs may be fluorescent yellow-green when supplemented with the diagonal downward pointing arrow plaque (W16-7P).

PART 10. TRAFFIC CONTROLS FOR HIGHWAY-LIGHT RAIL TRANSIT GRADE CROSSINGS

No modification to this part.