

2C-39 No Passing Zone Sign (W14-3)

The NO PASSING ZONE sign may be used on a two-lane road to warn of the beginning of a no-passing zone identified by conventional pavement markings. When used it shall be erected on the left side of the roadway at the beginning of the no-passing zone and may supplement the DO NOT PASS sign (sec. 2B-20).



W14-3
36" x 48" x 48"

2C-40 Other Warning Signs

Warning signs other than those specified above may be required under special conditions. Special expressway design features may warrant the use of warning signs to meet unusual conditions. Warning signs should conform with the general specifications for shape, color, and placement of warning signs (sec. 2C-3).

The applications of such signs are sufficiently apparent as to require no detailed specifications.

Special warning signs for highway construction and maintenance sites are to be found in Part VI of this Manual.

D. GUIDE SIGNS—CONVENTIONAL ROADS

2D-1 Scope of Conventional Road Guide Sign Standards

Specifications for Conventional Road Guide Signs prescribed herein shall apply to any road or street other than an expressway or freeway.

2D-2 Application

Guide signs are essential to guide the motorist along streets and highways, to inform him of intersecting routes, to direct him to

cities, towns, villages, or other important destinations, to identify nearby rivers and streams, parks, forests, and historical sites, and generally to give him such information as will help him along his way in the most simple, direct manner possible.

2D-3 Color, Reflectorization, and Illumination

Except where otherwise specified herein for individual signs or groups of signs or markers, Guide signs on conventional roads and streets shall have a white message on a green background, or as an alternate for this class of roads only, a black message on a white background. In either case, there should be consistency of application on any given highway.

Requirements for reflectorization or illumination are stated under the specific headings for individual guide signs or groups of signs. General provisions are given in sections 2A-16 through 2A-18.

2D-4 Size of Signs

For most guide signs the legend is so variable that there can be no rigidly standardized size. The sign size must be fixed primarily in terms of length of the message and the size of the lettering and spacing necessary for proper legibility. However, for signs with standardized designs, such as route markers, it is practicable to fix standard sizes.

Under some circumstances, particularly for overhead signs, the available space may limit sign width. A sign mounted over a particular roadway lane to which it applies may have to be limited in width to the width of the lane. Where vertical clearances are limited, and standard sign design cannot be used, a reduced letter height, interline and edge spacing may be used. When a reduction in the standard size is necessary, the design used should be as nearly comparable to standards as possible.

2D-5 Lettering Style

The standard lettering for conventional highway signs is upper-case letters (sec. 2A-15). However, when letter height exceeds 8 inches, place names on guide signs should be composed of lower-case letters with an initial upper-case letter. The initial upper-case letters shall be $1\frac{1}{3}$ times the "loop" height of the lower-case letters. Recommended designs have been developed for the upper-case and lower-case alphabets, together with tables of spacing.⁴

⁴ Available from the Federal Highway Administration, Washington, D.C. 20591.

2D-6 Size of Lettering

For guide signs with varying legend, sign legibility is a direct function of letter size. The legibility distance must give the driver sufficient time to read the sign before he has passed it. Although under the best conditions a guide-sign message can be read and understood in a brief glance, a reasonable safety factor must be allowed for inattention, blocking of view by other vehicles, unfavorable weather, inferior eyesight, or other causes for delayed or slow reading. On the other hand, the usual repetition of guide information on successive signs where conditions permit often gives a driver more than one opportunity to obtain the information he needs.

Though the reading time for any given sign varies greatly with the approach speed, standard lettering sizes should be consistent on any particular class of highways. The same conditions that induce lower speed—heavy traffic, frequent intersections or interchanges, unfavorable alignment, or extraneous distractions—usually create a need for greater legibility. Hence the size standards set forth are related to the type of highway rather than to variable speeds on any class of highways (Table II-1).

The minimum sizes specified should be exceeded where conditions indicate a need for greater legibility.

In rural districts on major routes, the principal legend on guide signs shall be in letters at least 6 inches in height. On less important rural roads and on urban streets the principal legend shall be in letters at least 4 inches high. Sign panels shall be large enough to accommodate the required legend without crowding.

Recommended layouts have been developed for standard highway signs showing interline, edge spacing and other specification detail.⁵

2D-7 Amount of Legend

Regardless of letter size, the legend on a guide sign must be kept to a minimum to be legible at a glance during the few moments that a driver can turn his eyes from the road. Guide signs should be limited to three lines of principal legend. Where two or more signs are included in the same overhead display, extra effort should be made to further reduce and simplify the amount of legend.

“Principal legend” here includes only place names, route numbers, and street names. Symbols, action information, cardinal directions

⁵ Ibid.

and exit numbers may make up other lines of legend, within reasonable limits.

2D-8 Arrows and Symbols

Arrows are used on many guide signs to indicate the directions toward designated routes or destinations. Arrows are pointed at any desired angle to convey a clear comprehension of the direction to be taken. At right-angle intersections a horizontal arrow is appropriate. On a roadside sign a directional arrow for a straight-through movement should point upward. For a turn the arrow should be pointed upward as will best describe the design of the intersection, and at an angle related to the sharpness of the turn.

On overhead signs where it is desired to indicate a lane to be followed, the arrow shall point downward toward the center of that lane. Where a roadway is leaving the through lanes, the arrows shall point upward at an angle representative of the alignment of the exit roadway. If required, the through roadway lanes will be identified by downward pointing arrows.

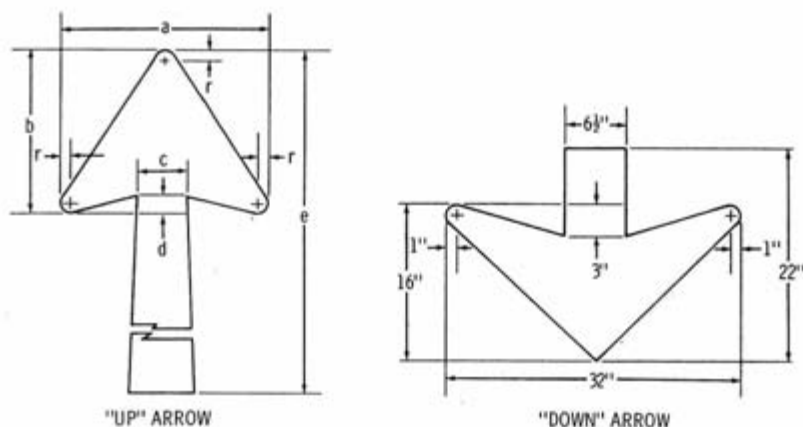
Downward pointing arrows shall be used only on overhead guide signs which restrict the use of specific lanes to traffic bound for the destination(s) and/or route(s) indicated by these arrows. Downward pointing arrows shall not be used unless an arrow can be pointed to each lane that can be used to reach the destination shown on the sign.

Arrows may be placed below the other sign legend, or to one side of it. At an exit, an arrow at the far side of the sign may help to emphasize the directional significance of the sign. For adequate legibility it is recommended that the width across the barbs of the arrow be at least equal to the height of the largest letters on the sign, and for short downward pointing arrows on overhead signs about $1\frac{3}{4}$ times the letter height (figure 2-7).

Diagrammatic signing using arrows should approximate the intersection roadway geometrics, or the necessary part of it, in a clear, understandable manner to impart a glance-legible message (secs. 2E-20, 2E-24). Therefore, the standard arrow designs and applications may not be applicable to this type of signing. Other symbol designs should be essentially as shown in this Manual.

2D-9 Numbered Highway Systems

The purpose of numbering and marking highway systems is to identify routes and facilitate travel over the shortest and best roads.



Dimensions of Arrow When Used With
Various Letter Sizes

LETTER SIZE (Upper-Case)	Arrow Dimensions in Inches					
	a	b	c	d	e*	r
8"	15-1/8	11-9/16	3-3/4	1-5/16	17-25	13/16
10"-13 1/3"	18-1/4	14	4-1/2	1-1/2	20-30	3/4
16"	22-1/4	17	5-3/8	1-3/4	25-35	1

* Taper of 1/2" per ft. should be held constant for longer or shorter shaft lengths.

Figure 2-7. Dimensions of arrows on guide signs.

The Interstate System and the United States (U.S.) System are numbered by the American Association of State Highway Officials, upon recommendation of the State highway departments. State and county systems are numbered by the appropriate authorities.

The basic guide for designating and numbering the U.S. System is the "Purpose and Policy in the Establishment and Development of United States Numbered Highways," published by the American Association of State Highway Officials.⁶

The principles of this policy should be followed in establishing other systems, with effective coordination between adjacent jurisdictions. Care should be taken to avoid the use of numbers or other designations which have been assigned to Interstate, U.S. or State routes in the same area. Overlapping numbered routes should be

⁶ Available from the American Association of State Highway Officials, 341 National Press Building, Washington, D.C. 20004.

avoided, and the systems shall be given preference, in this order: Interstate, United States, State and County.

2D-10 Route Markers and Auxiliary Markers

Route markers shall be used to identify and mark numbered highways, including Federal, State, or County roads, and park, forest and other public roads. The markers for each system of numbered highways, which are distinctive in shape and color, shall be used only on that respective system and the approaches thereto.

To accomplish their purpose route markers are usually mounted in assemblies which are formed when the route markers are accompanied by any of the various types of auxiliary markers.

Route markers as well as any auxiliary markers which accompany them shall be reflectorized for nighttime visibility as detailed in subsequent sections.

2D-11 Design of Route Markers (M1-1 to 7)

The design of route markers shall be established by the authority having jurisdiction. Specifications and provisions are as follows:

1. Interstate Route Markers for use on intersecting highways and roads approaching an interchange with an Interstate route shall consist of a cutout shield, with the route number and State name in white letters on a blue background, the word INTERSTATE in white letters on a red background, and white border. A 24-inch by 24-inch size is prescribed to accommodate route numbers with one or two digits, and a 30-inch by 24-inch size for route numbers having three digits or two digits and a suffix letter (sec. 2F-37).



Interstate
Route Marker

M1-1

24" x 24" (2-digit)
30" x 24" (3-digit)



Off-Interstate
Business Loop Marker

M1-2

24" x 24" (2-digit)
30" x 24" (3-digit)



Off-Interstate
Business Spur Marker

M1-3

24" x 24" (2-digit)
30" x 24" (3-digit)

2. Off-Interstate Business Route Markers shall consist of a cutout shield carrying the number of the connecting Interstate route and the words BUSINESS (LOOP or SPUR). The legend and border shall be white on a green background, and the shield shall be of the same shape and dimensions as the Interstate Route Marker previously described. In no instance is the word INTERSTATE to appear on the Off-Interstate Business Route Marker. This marker may be used on a major highway that is not a part of the Interstate System, but one that serves the business area of a city from interchanges on the System (sec. 2F-37).

3. U.S. Route Markers shall consist of a rectangular 24-inch by 24-inch or 30-inch by 24-inch plate, with black numerals on a white shield surrounded by a black background, without a border (fig. 2-8). This marker shall be used on all U.S. routes and in connection with route marker assemblies on intersecting highways.

4. State Route Markers are to be designed by the individual State highway departments. However, the States are encouraged to adopt a uniform State Route Marker. It is proposed that this Marker be a rectangular plate of approximately the same size as the U.S. Route Marker, with black numerals on a white area surrounded by a black background without a border. The shape of the white area is to be circular in the absence of any determination to the contrary by the individual States concerned.

5. Wherever County road authorities elect to establish and identify a special system of important County roads, County road identification markers are to be designed and used as specified in the publication "A Proposal for a Uniform County Route Marker Program on a National Scale."⁷ The Uniform County Route Marker shall be a pentagonal shape and shall consist of a reflectorized yellow legend (County name, route letter and number) and border on a blue back-



U.S.
Route Marker
M1-4
24" x 24" (2-digit)
30" x 24" (3-digit)



County
Route Marker
M1-5
24" x 24"

⁷ Available from the National Association of Counties, Washington, D.C. 20006.



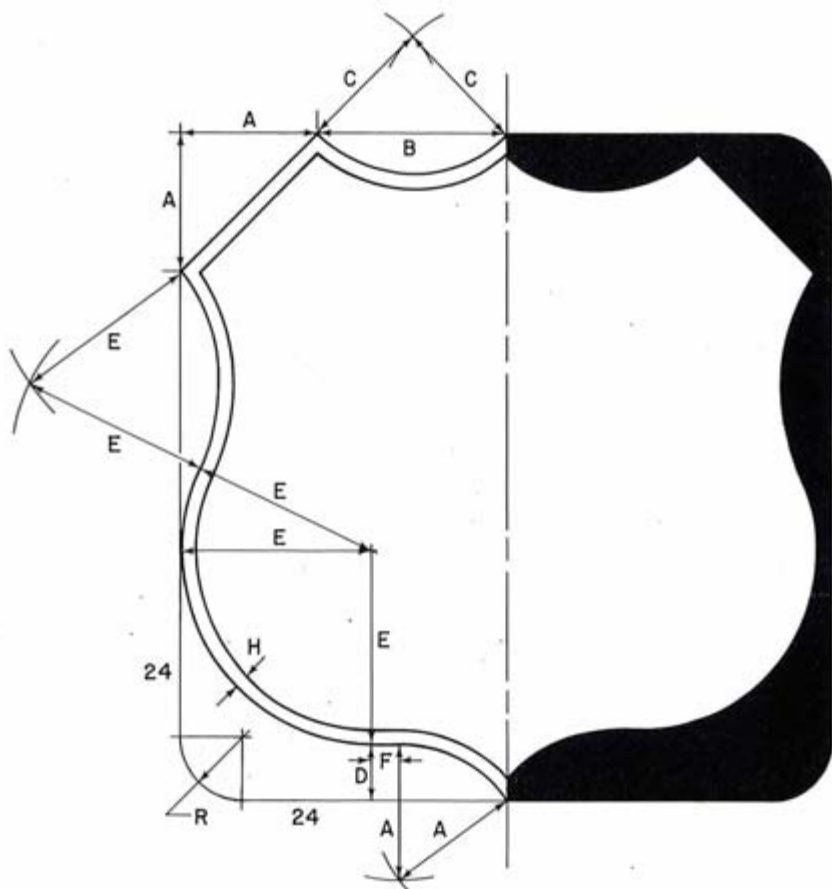
State Route Marker
M1-6

24" x 24" (2-digit) or 30" x 24" (3-digit)



Forest Route Marker
M1-7

24" x 24"



	A	B	C	D	E	F	H	R
24 X 24	5	7	5	2	7	1	1/2	1 1/2
30 X 24	5	10	9	2	7	4	1/2	1 1/2
36 X 36	7 1/2	10 1/2	7 1/2	3	10 1/2	1 1/2	3/4	2 1/4
45 X 36	7 1/2	15	13 1/2	3	10 1/2	5 1/2	3/4	2 1/4
48 X 48	10	14	10	4	14	2	1	3
60 X 48	10	20	18	4	14	8	1	3

Figure 2-8. U.S. route markers for use in assemblies or independently.

ground, of a size compatible with other route markers used in common assemblies.

6. Route markers for park and forest roads are to be designed with adequate distinctiveness and legibility and of a size compatible with other route markers used in common assemblies.

Route markers of any type may be proportionally enlarged to any required size where greater legibility is needed. Detailed drawings of U.S. Route Markers used independently or in assemblies are shown in figure 2-8. Where U.S. or State Route Markers are used as components of guide signs, only the outline of the shield or other distinctive shape should be used as shown in the illustration of the Combination Junction sign (sec. 2D-14).

Route markers may be either fully reflectorized or only in the numerals and, where applicable, the border. However, where they are a part of a reflectorized background sign, they shall be fully reflectorized if color design permits.

2D-12 Design of Route Marker Auxiliaries

Route marker auxiliaries carrying word legends, except the JCT marker, should have a standard size of 24 inches by 12 inches. Those carrying arrow symbols, or the JCT marker, should have a standard size of 21 inches by 15 inches. Auxiliary markers carrying word messages and mounted with 30-inch by 24-inch Interstate Route Markers should be 30 inches by 15 inches. With route markers of larger sizes, the auxiliary markers should be suitably enlarged, but should not exceed the width of the route marker itself.

Route marker auxiliaries shall have black legend on a reflectorized white background, except for the following:

1. Where posted with Interstate Route Markers, the auxiliaries shall have reflectorized white legend on reflectorized blue background.
2. Where posted with Off-Interstate Business Route Markers, the auxiliaries shall have reflectorized white legend on reflectorized green background.

Detour markers have a distinctive design as described in section 2D-24.

If desired, a route marker and any auxiliaries used with it may be combined on a single panel of approximately the same overall dimensions as the assembly.

2D-13 Junction Marker (M2-1)

The Junction marker shall carry the abbreviated legend JCT and is intended to be mounted at the top of an assembly (sec. 2D-29), either directly above the route marker or above a marker for an

alternative route (sec. 2D-17) which is part of the route designation. The minimum size of the Junction marker shall be 21 inches by 15 inches for compatibility with auxiliary markers carrying arrow symbols.



M2-1
21" x 15"

2D-14 Combination Junction Sign (M2-2)

As an alternative to the standard Junction assembly where more than one route is to be intersected or joined, a rectangular sign may be used carrying the word JUNCTION above the route numbers. The sign will normally have a black or green background with reflectorized white border and lettering for the word JUNCTION, reflectorized white route marker shields, and black for the route designations. Other designs may be used to accommodate State and County Route Markers. The size of the sign will depend on the number of routes involved, and the numerals should be large enough for clear legibility, comparable with those in the individual route markers.



M2-2
Variable Size

2D-15 Cardinal Direction Marker (M3-1 to M3-4)

The Cardinal Direction marker carrying the legend EAST, WEST, NORTH or SOUTH is intended to be mounted directly

above a route marker to indicate the general direction of the entire route.



M3-1
24" x 12"



M3-2
24" x 12"



M3-3
24" x 12"



M3-4
24" x 12"

2D-16 Markers for Alternative Routes

Markers indicating an alternative routing for a special purpose, carrying the legend ALTERNATE, BYPASS, BUSINESS or TRUCK are intended to be mounted directly above a route marker for use on a route designated as an alternate to a route of the same number between two points on that route.

2D-17 Alternate Marker (M4-1, M4-1a)

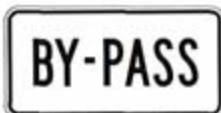
The ALTERNATE (or ALT) marker is intended to be used to indicate an officially designated alternate routing of a numbered route between two points on that route. The shorter or better constructed route should be given the regular number.



M4-1
24" x 12"



M4-1a
24" x 12"



M4-2
24" x 12"



M4-3
24" x 12"

2D-18 Bypass Marker (M4-2)

The BYPASS marker is intended to be used to designate a route that branches from the regular numbered route through a city, bypasses a part of the city or congested area, and rejoins the regular numbered route beyond the city.

2D-19 Business Route Marker (M4-3)

The BUSINESS route marker is intended to be used to designate an alternate route that branches from a regular numbered route, passes through the business portion of a city and rejoins the regularly numbered route beyond that area.

2D-20 Truck Route Marker (M4-4)

The TRUCK marker is intended to be used to designate an alternate route that branches from a regular numbered route, bypasses an area which is congested or where height or weight limitations have been established, and rejoins the regularly numbered route beyond that area.

2D-21 To Marker (M4-5)

The TO marker is intended to be used to provide directional guidance to a particular road facility (sec. 2D-34) from other highways in the vicinity and is to be mounted directly above a route marker.



M4-4
24" x 12"



M4-5
24" x 12"



M4-6
24" x 12"



M4-7
24" x 12"

2D-22 End Marker (M4-6)

The END marker is intended for use where the route being traveled ends at a junction with another route. This marker is to be

mounted either directly above a route marker, or above a marker for an alternative route (sec. 2D-16) which is part of the designation of the route being terminated.

2D-23 Temporary Marker (M4-7)

The TEMPORARY marker is intended to be used to mark for an interim period a section of highway connecting completed portions of a route that is not planned as a permanent part of a regular numbered route. This marker is to be mounted either directly above the route marker or above a Cardinal Direction marker or a marker for an alternative route which is part of the route designation.

Where it is planned to relocate a route at a later date, use of the "Temporary" designation will often help to avoid future misunderstanding and ill feeling.

Temporary markers shall be promptly removed when the temporary route is abandoned.

2D-24 Detour Marker (M4-8)

The DETOUR marker is intended to be used to mark a temporary route that branches from a regular numbered route, bypasses a section of a route which is closed or blocked by construction, major maintenance, roadway damage or traffic emergency and rejoins the regularly numbered route beyond that section.

The DETOUR marker shall have a black legend on a reflectorized orange background. It is to be mounted at the top of a route marker assembly.



M4-8
24" x 12"



M4-9R
30" x 24"

2D-25 Detour Sign (M4-9R and 9L)

An alternative method for marking detours, particularly in emergencies, is the use of the DETOUR sign (M4-9). This is a rectangular sign having a black message and border on a reflectorized orange background.

This sign is to be used where a route number does not exist; or where, over relatively short distances, it is not necessary to show route numbers to guide traffic along the detour and back to its desired route. It is intended for use in emergency situations and for periods of short duration. The Detour Arrow sign (sec. 6B-38) is prescribed for use on barricades in the roadway where a road is closed for construction or for major maintenance operations.

2D-26 Advance Turn Arrow (M5-1, M5-2)

The Advance Turn Arrow marker displays a right or left arrow, the shaft of which is bent at a right angle or at a 45° angle. It is intended to be mounted below the route marker in advance turn assemblies.



M5-1
21" x 15"



M5-2
21" x 15"

2D-27 Directional Arrow (M6-1 to M6-7)

The Directional Arrow marker displays a single- or double-headed arrow pointing in the general direction that a route may be followed. It is intended to be mounted below the route marker in directional assemblies.



M6-1
21" x 15"



M6-2
21" x 15"



M6-3
21" x 15"



M6-4
21" x 15"



M6-5
21" x 15"



M6-6
21" x 15"



M6-7
21" x 15"

2D-28 Route Marker Assemblies

A Route Marker assembly consists of a route marker and auxiliary markers which further identify the route and indicate direction. Assemblies for two or more routes, or for different directions on the same route, are mounted in groups on a common support.

Route Marker assemblies shall be erected on all approaches to the intersection of numbered routes, and may be erected on the approaches to numbered routes on unnumbered roads and streets which carry an appreciable amount of traffic destined for the numbered route.

Where two or more routes follow the same section of highway, the Route Markers for Interstate, U.S., or State and County routes shall be mounted in that order from the left in horizontal arrangements and from the top in vertical arrangements. Subject to this order of precedence, Route Markers for lower-numbered routes shall be placed at the left or top.

Within groups of assemblies, information for routes intersecting from the left shall be mounted at the left in horizontal arrangements and at the center of vertical arrangements. Similarly, information for routes intersecting from the right shall be at the right or bottom, and for straight-through routes at the center or top.

Route Marker assemblies shall be mounted in accordance with the general specifications for highway signs, with the lowest unit in the assembly at the height prescribed for single signs.

The design and location of route marker assemblies as indicated, is made mandatory by the word "shall" in the descriptive para-

graphs. However, it should be recognized that groups of assemblies which include overlapping routes and multiple turns may be confusing. Where studies indicate this possibility exists, omission or combination of either route markers or auxiliary markers is permitted, provided that clear directions are given to motorists.

2D-29 Junction Assembly

A Junction assembly shall consist of a Junction marker and a Route Marker, plus an alternative route marker, if applicable.

The Junction assembly shall be erected in advance of every intersection where a marked route is intersected or joined by another marked route. The Route Marker shall carry the number of the intersected or joined route. Where two or more routes are to be indicated, one Junction marker shall be used for the assembly and all Route Markers grouped in a single mounting, or a Combination Junction sign (sec. 2D-14) may be used.

In urban districts, the Junction assembly shall be erected approximately midway in the block preceding the intersection, but generally not more than 300 feet in advance of the intersection.

In rural districts, the Junction assembly shall be erected not less than 400 feet in advance of the intersection, on the right-hand side of the road. In such areas, the minimum distance between the Destination sign, the Route Turn assembly, and the Junction assembly shall be 200 feet. Where prevailing speeds are above 45 m.p.h., greater spacings are desirable.

2D-30 Advance Route Turn Assembly

An Advance Route Turn assembly shall consist of a Route Marker and an Advance Turn Arrow marker, plus an alternative route marker if applicable, and a Cardinal Direction marker if needed.

The Advance Route Turn assembly shall be erected in advance of a turn which must be made to follow the indicated route.

In rural districts, the Route Turn assembly shall be erected not less than 400 feet in advance of the turn. In urban areas, the Route Turn assembly should be erected 300 feet in advance of the turn. The assembly should never be placed where there is an intersection between it and the designated turn.

2D-31 Directional Assembly

A Directional assembly shall consist of a Route Marker and a Directional Arrow, plus an alternative route marker if applicable, and a Cardinal Direction marker if needed.

The various uses of Directional assemblies are outlined below:

1. Straight-through movements should be indicated by a Directional assembly with a Route Marker displaying the number of the

continuing route, and a vertical arrow. A Directional assembly should not be used for a straight-through movement in the absence of other assemblies indicating right or left turns, as the Confirming marker beyond the intersection normally provides adequate guidance.

2. Turn movements (indicated in advance by a Route Turn assembly) shall be marked by a Directional assembly with a Route Marker displaying the number of the turning route and a single-headed arrow pointed in the direction of the turn.

3. The beginning of a route (indicated in advance by a Junction assembly) shall be marked by a Directional assembly with a Route Marker displaying the number of that route and a single-headed arrow pointed in the direction of the turn.

4. The end of a route shall be marked by a Directional assembly with an END marker and a Route Marker displaying the number of that route.

5. An intersected route (indicated in advance by a Junction assembly) shall be marked by:

a. A Directional assembly with a Route Marker displaying the number of the intersected route and a double-headed arrow, pointing at appropriate angles to the left, right or ahead, or

b. Two Directional assemblies, each with a Route Marker displaying the number of the intersected route, Cardinal Direction markers and single-headed arrows pointed in the directions of movement on that route.

Directional assemblies should be located on the near right-hand corner of the intersection. At major intersections and at Y or offset intersections it is often desirable to install additional assemblies on the far right-hand or left-hand corner to confirm the near-side assemblies.

It is more important that guide signs be readable at the right time and place than that they be located with absolute uniformity. When the near-corner position is not practical for Directional assemblies, the far right-hand corner is the preferred alternative, with oversize signs if necessary for legibility. Similarly, if it is found advantageous to place a Directional assembly where it can be read at close range without interference from cross traffic, the most suitable location should be determined by engineering judgment.

2D-32 Confirming Assembly

A Confirming assembly shall consist of a Cardinal Direction marker and a Route Marker, plus an alternative Route Marker if applicable.

The Confirming assembly shall be erected just beyond intersections of numbered routes where there may be some doubt as to the proper choice of route.

In rural districts, the Confirming assembly should be placed not less than 25 feet nor more than 200 feet beyond the far shoulder or curb line of the intersected highway. In urban districts these distances should be 10 feet and 100 feet respectively.

2D-33 Confirming Assembly Used as a Reassurance Marker

As a Reassurance marker, a Confirming assembly shall consist of a Route Marker, plus an alternative Route Marker if applicable, and should include a Cardinal Direction marker.

Reassurance markers should be erected between intersections in urban districts as required and beyond the built-up area of any incorporated city or town.

Route markers for either confirming or reassurance purposes should be spaced at such intervals as necessary to keep the driver informed of his route. In congested urban areas, the proper location of route markers is extremely important because it is very easy for the traveler to become confused and lose his route. Extreme care should be taken to erect the markers where they can be seen easily. If necessary, they should be located on the far-side of every intersection along a numbered route, or so that at all times a route marker is visible ahead.

2D-34 Trailblazers

Some traffic authorities have found it desirable to provide directional guidance to a particular road facility from other highways in the vicinity. This is accomplished by means of "Trailblazers" erected at strategic locations, usually along major urban arterials, to indicate the direction to the nearest or most convenient point of access. The use of the word TO indicates that the road or street where the marker is posted is not a part of the indicated route, and that a driver is merely being directed progressively to the route.

A Trailblazer assembly shall consist of a TO marker, a Cardinal Direction marker if needed, a Route Marker or a special road facility symbol, and a single-headed Directional Arrow pointed along the route leading to the facility. The Route Marker or symbol should not exceed 24 inches by 24 inches unless a 3-digit route numeral or equivalent designation must be accommodated, in which case the appropriate enlarged size may be used. The TO marker, Cardinal Direction marker, and Directional Arrow should be of the size specified for auxiliary markers of their respective type.

Trailblazer assemblies may be erected in groups with other route marker assemblies, or alone, in the immediate vicinity of designated facilities, but their use should not be extended for long distances.



Trailblazer
Assembly

2D-35 Destination and Mileage Signs

In addition to guidance by route numbers it is necessary to supply the traveler information concerning the destinations that can be reached by way of numbered or unnumbered routes. This is done by means of Destination and Mileage signs.

These signs shall have a reflectorized white legend and border on a green background, or as an alternate on conventional roads only, a black legend and border on a reflectorized white background. Reflectorization of the green background is optional. On any particular highway, reflectorization should be consistently uniform.

Destination names should be in lower-case letters with initial upper-case when letter height exceeds 8 inches.

2D-36 Destination Signs (D1-1 to 3)

Except where special interchange signing is prescribed, the Destination sign shall be a horizontal rectangle carrying the name of a city, town, village, or other objective, and a directional arrow. The mileage to the place named may also be shown. If several destinations are to be shown at a single point, the several names may be placed on a single panel with an arrow (and the mileage, if desired) for each name. If more than one destination lies in the same direc-

tion, a single arrow may be used for such a group of destinations, but in any case adequate separation should be made between any destinations or group of destinations in one direction and those in other directions, by suitable design of the arrows, spacing of lines of legend, heavy lines entirely across the panel, or separate panels.

An arrow pointing to the right shall be at the extreme right of the sign, and an arrow pointing left or vertically shall be at the extreme left for signs mounted on the right side of the roadway. The mileage figures, if used, shall follow after the destination name. As a general rule, the directional arrows should be horizontal or vertical, but at an irregular intersection a sloping arrow will sometimes convey a clearer indication of the direction to be followed.

The size of the lettering for U.S. and State numbered routes and other major routes shall be no less than that specified in section 2D-6. If several individual name panels are assembled into a group, all panels in the assembly should be of the same length.



D1-1
Variable Size



D1-2
Variable Size



D1-3
Variable Size



D1-1a
Variable Size



D1-2a
Variable Size



D1-3a
Variable Size

Destination signs are generally warranted:

1. At the intersections of U.S. or State numbered routes with Interstate, U.S. or State numbered routes.
2. At points where they serve to direct traffic from U.S. or State numbered routes to the business section of towns, or to other destinations reached by unnumbered routes.

Not more than three names shall be used on a destination sign. The next most important destination lying straight ahead should

be at the top of the sign or assembly, and below it the next important destinations to the left and to the right, in that order. In the case of overlapping routes, there should be shown only one destination in each direction for each route. If there is more than one destination shown in any direction, the name of the nearest city or town shall appear above that of any farther away. The destination shown for each direction should ordinarily be the next county seat or the next principal city, rather than a more distant destination.

2D-37 Location of Destination Signs

In rural districts, Destination signs should be located not less than 200 feet in advance of the intersection, and following any Junction or Route Turn assemblies that may be required. In urban districts shorter distances may be justified. The Destination sign is of lesser importance than the Junction, Turn or Directional assemblies; therefore, when sign spacing is critical the Destination sign can be eliminated.

Height and lateral placement of Destination signs shall be in accordance with the general standards for sign erection.

Figures 2-6a, b and c show the use of Destination signs at rural intersections.

2D-38 Mileage Sign (D2-1 to 3)

The Mileage sign shall be a horizontal rectangle of a size appropriate to the required legend, carrying the names of not more than three cities, towns, or villages, and the mileages (to the nearest mile) to those places.

The top name should be that of the next place on the route having a post office, railroad station, route number or name of an intersected highway, or other significant geographical identity. The lowermost name should be that of the major destination or "control city." If three destinations are shown, the middle line should be used to indicate communities of general interest along the route, or important route junctions. The choice of names for this middle line can be varied on successive mileage signs to give motorists maximum information concerning communities served by the route..

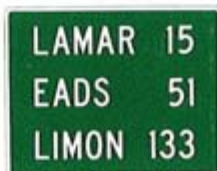
The "control city" should remain the same on successive signs throughout the length of the route until that destination is reached. There are circumstances, however, under which more than one distant point may properly be designated, as for example, where the route divides at some distance ahead to serve two destinations of similar importance. If these two destinations cannot appear on the same sign, some alteration of the two names may be justified. On a route continuing into another State, the name of a city in the adjacent State may be shown.



D2-1
Variable Size



D2-2
Variable Size



D2-3
Variable Size

2D-39 Location of Mileage Signs

Mileage signs should be erected on important routes leaving municipalities, and just beyond intersections of numbered routes in rural areas.

Mileage signs shall be placed on the right-hand side of the road facing traffic leaving the municipality, approximately 500 feet outside of the municipal limits, or at the edge of the built-up district if it extends beyond the corporation limits. Where overlapping routes separate a short distance from the corporation limits, the Mileage sign at the corporation limits should be omitted, and instead should be erected 300 feet beyond the junction of the two routes.

Where, just outside of an incorporated municipality, two routes are concurrent and continue concurrent to the next incorporated municipality, the top name on the sign placed at such a point should be that of the place where the routes separate; the lower name should be that of the city in which the greater part of the through traffic is interested.

Mileage signs shall be erected in accordance with the general standards for sign erection.

Figures 2-6a, b and c show the use of Mileage signs at rural intersections.

2D-40 Street Name Sign (D3)

Street Name signs should be erected in urban areas at all street intersections regardless of other route marking that may be present and should be erected in rural districts to identify important roads not otherwise marked.

Lettering on street name signs should be at least 4 inches high. Supplementary lettering to indicate the type of street (e.g., Street, Avenue, Road, etc.) or section of city (e.g., N.W.) may be in smaller lettering, at least 2 inches high. Conventional abbreviations are acceptable except for the street name itself.

The Street Name sign should be reflectorized or illuminated. The legend and background shall be of contrasting colors and should have a white message and border on a green background.

In business districts and on principal arterials, Street Name signs should be placed at least on diagonally opposite corners so that they will be on the far right-hand side of the intersection for traffic on the major street. Signs naming both streets should be erected at each location. They should be mounted with their faces parallel to the streets they name.

In residential districts at least one Street Name sign should be mounted at each intersection.

A supplemental advance street name sign may be erected on more important intersection approaches or below an intersection warning sign. When combined with a yellow diamond sign, the color should be a black message on a yellow background.



D3
Variable Size



D4
30" x 24"

2D-41 Parking Area Sign (D4)

The Parking Area sign may be used where it is desired to show the direction to a nearby public parking area. The sign shall be a horizontal rectangle of a standard size of 30 inches by 24 inches with a smaller size of 18 inches by 15 inches for secondary, low-speed streets. It shall carry the word PARKING, with the letter P five times the height of the remaining letters, and a directional arrow. The legend and border shall be green on a reflectorized white background.

If used, the Parking Area sign should be erected on major thoroughfares at the nearest point of access to the parking facility and where it can help relieve the local streets of traffic seeking a place to park. In general, the sign should not be used more than three or four blocks from the parking area. It shall be mounted in accordance with the general specifications for the erection of signs (secs. 2A-23, 24).

2D-42 Rest Area Signs (D5-1 to 5)

It is common practice on rural highways to provide roadside parks or rest areas where a traveler may stop safely away from passing traffic. It is desirable to erect word messages or symbols in advance of such areas to permit the driver to reduce speed and leave the highway safely if he desires to stop. Messages such as REST AREA (1) MILE (D5-1), PARKING AREA (1) MILE (D5-3), or ROADSIDE TABLE (D5-5) are typical. Other messages such as ROADSIDE PARK 1000 FEET, PICNIC TABLE $\frac{1}{4}$ MILE, or PARKING AREA $\frac{1}{2}$ MILE are also appropriate. Signs for this purpose shall have reflectorized white letters, symbols and border on a blue background.



D5-1



D5-2



D5-3



D5-4



D5-5



D5-5a
24" x 24"
24" x 6"

2D-43 Scenic Area Signs (D6-1 to 3)

Scenic areas may be marked by signs carrying the message SCENIC AREA, SCENIC VIEW or the equivalent together with appropriate directional information. The design of the signs should be consistent with that specified for rest areas and should have reflectorized white letters, symbols, and border on a blue background. An advance sign and an additional sign at the turnoff point are usually required for this kind of attraction.



D6-1



D6-2



D6-3

2D-44 Recreation Area Signs (D7-1, 2)

Where public parks and recreation areas are a significant destination on a numbered highway route, special signs may be posted for such parks and areas, at least to the first point at which an access road intersects the highway. In lieu of the regular Guide sign shape and color, such signs may have a trapezoidal shape and shall have reflectorized white letters, symbols, and border on a brown background.



D7-1
Variable Size



D7-2
Variable Size

2D-45 Weigh Station Signing (D8-1 to 3)

The general concept for Weigh Station signing is similar to Rest Area signing, since in both cases traffic using either area remains within the right-of-way.

The standard installation for Weigh Stations shall include three basic signs:

1. Advance sign (D8-1)
2. Exit Direction sign (D8-2)—optional
3. Exit Point sign (D8-3)

The location, legend, color, and letter size is shown in figure 2-9.

Where State law requires a regulatory sign in advance of the Weigh Station, a fourth sign (sec. 2B-40) may be located following the Advance sign. If used, the Exit Direction sign shall be limited to three lines of message in addition to NEXT RIGHT or RIGHT LANE at the bottom. The supplemental panel on the Exit Direction sign or Advance sign should be a changeable message displaying either OPEN or CLOSED. Design of this panel for remote control of the changeable message is recommended, but provision may be made for changing the message manually.

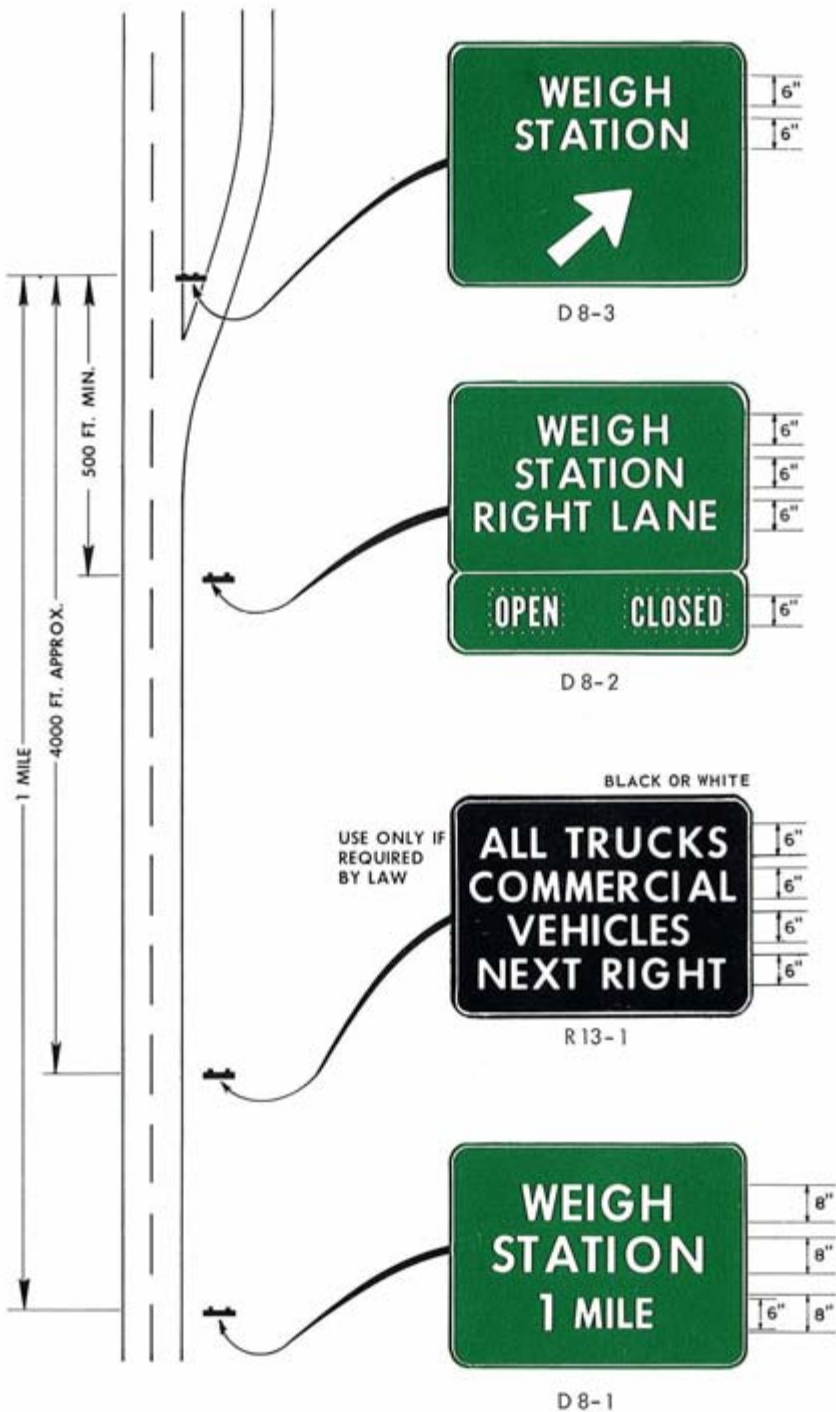


Figure 2-9. Weigh station signing.

2D-46 Service Signs (D9-1 to 3)

On conventional highways commercial services such as gas, food and lodging are generally within sight and available to the traveler at reasonably frequent intervals along the route. Consequently, there is not expected to be much need on this class of roads for special signs calling attention to these services. Moreover, it is assumed that service signing will not be required in urban areas.

It is quite likely, however, that general motorist service signs will be desirable or necessary where such services are infrequent, and are to be found only on an intersecting highway or crossroad. Under such conditions, States that elect to provide service signing should establish a statewide policy or warrant for its use and criteria for the availability of services, based on national guidelines. Local jurisdictions responsible for such signing should follow the State policy for the sake of uniformity.

General motorist service signs, if used, shall carry word legends for one or more of the following services: FOOD, GAS, LODGING, CAMPING, PHONE, HOSPITAL, along with a directional legend NEXT RIGHT, SECOND RIGHT, or the like. Individual symbol-type signs may be used for separate facilities (D9-1 to D9-3). The signs shall have reflectorized white letters, symbols and border on a reflectorized or opaque blue background and are to be erected at a suitable distance in advance of the turnoff point or intersecting highway.

Although word messages for service signs are standard for the United States, research and experimentation is encouraged to develop adequate symbols which can be incorporated in subsequent revisions.



D9-1
24" x 30"



D9-2
24" x 24"
24" x 6"



D9-3
24" x 24"
24" x 6"



D9-3
24" x 24"
24" x 6"

Where the distance to the next point at which services are available is 10 miles or more, a sign NEXT SERVICES (12) MILES may be used as a separate panel mounted under the general motorist services sign.

2D-47 Mileposts (D10-1 to 3)

To assist the driver in estimating his progress, to provide a means for identifying the location of emergency incidents, and to aid in highway maintenance and servicing, Mileposts may be erected along any section of a numbered highway route. Zero mileage should begin at the south and west state lines and at junctions where routes begin.

The mileage numbering shall be continuous for each route within a State, except where overlaps occur. With overlapped routes, continuity shall be established for only one of the routes. On the route without milepost continuity, the first milepost beyond the overlap should indicate the total distance traveled on the route so that a motorist may have a means of correlating his travel distance between mileposts with that shown on his odometer.

Milepost signs shall be vertical panels with 6-inch white numerals, a border and the word MILE in 4-inch letters on a green background and shall be reflectorized. Milepost signs shall be mounted at a minimum height and lateral placement equal to that used for delineators.

For divided highways, mileage measurement shall be made on northbound and eastbound roadways. The mileposts for southbound and westbound roadways shall be set at locations directly opposite. When a milepost cannot be erected in its correct location, it may be moved in either direction as much as 50 feet. If it cannot be placed within 50 feet of its correct location, it should be omitted.

While milepost signs serve as a guide sign for motorists, they also provide a means of identifying traffic accident locations and sections of highway for maintenance or other purposes. To further enhance the usefulness of the mileposting, delineators may be spaced at 528 feet ($\frac{1}{10}$ mile) or 264 feet ($\frac{1}{20}$ mile) and can be marked in fractions of a mile by stencil on the back of the delineator or post or by a small plate on the delineator post. This plate shall not be considered as a milepost, therefore will not be green and white in color. The numerical size shall be small and preferably on the back side of the post or delineator.



D10-1
10" x 18"



D10-2
10" x 27"



D10-3
10" x 36"

2D-48 Bicycle Route (D11-1)

A guide for marking an officially designated bicycle trail shall be a 24 inch by 18 inch sign with a white legend consisting of a bicycle symbol, the word BIKE ROUTE, and a border in white on a green



D11-1
24" x 18"
24" x 6"



11-1
12" x 18"

background. This sign is intended to guide cyclists on a predetermined bicycle route that may be a trail, secondary road, or a combination of safe and suitable surfaces.

When needed, a supplementary sign with a directional arrow may be placed below the BIKE ROUTE sign. The supplementary plate shall be 24 inches by 6 inches with a white arrow and border on a green background.

2D-49 Traffic Signal Speed Sign (II-1)

The Traffic Signal Speed sign, reading SIGNALS SET FOR (25) M.P.H., may be used to indicate the beginning of a section of highway on which the traffic control signals are coordinated into a pre-timed progressive system and timed for a specified speed at all hours during which they are operated on a stop-and-go basis. Where used, the sign should be mounted on, or as near as possible, to each signal face where the timed speed changes, and at intervals of several blocks throughout any section where the timed speed remains constant.

This sign shall be a minimum of 12 inches by 18 inches with the longer dimension vertical. It shall always have a white reflectorized message and border on a green reflectorized background.

2D-50 General Information Signs (I Series)

Of interest to the traveler, though not directly necessary for his guidance, are numerous kinds of information that may properly be conveyed by information signs. They include such items as State lines, city limits, and other political boundaries, stream names, elevations, landmarks and similar items of geographical interest. Such



12
Variable Size



13
Variable Size



14
24" x 24"
24" x 6"

signs should not be installed within a series of guide signs or at other equally critical locations, unless there are specific reasons for orienting the highway user or identifying control points for activities that are clearly in the public interest.

On all such signs the design should be simple and dignified, devoid of any advertising and in general conformance with other guide signing.

Such signs shall conform to the general standards for guide signs, and shall be reflectorized where required to provide nighttime visibility.

These signs shall be erected in accordance with the general specifications (secs. 2A-23, 24).

2D-51 Signing of Named Highways

Numbered highways are not to be signed as memorial routes. Where legislatures name highways or bridges, appropriate plaques may be erected in rest areas or at other appropriate points to recognize this designation, but the affected highways and bridges are not to be signed with memorial names for viewing by traffic.

The use of route markers will be restricted to markers officially used for guidance of traffic in accordance with this Manual and the "Purpose and Policy" statement of the American Association of State Highway Officials, which applies to Interstate and U.S. numbered routes. However, the marking of unnumbered routes having major importance to the proper guidance of traffic is permissible if carried out in accordance with the aforementioned policies.

E. GUIDE SIGNS—EXPRESSWAY

2E-1 Scope of Expressway Guide Sign Standards

Specifications for Expressway Guide signs prescribed herein shall apply to any divided highway with partial control of access.

2E-2 Application

Expressways call for an intermediate level of signing more advanced than that prescribed for Conventional Roads (Part II-D), but less demanding in their requirements and specifications than Freeway signing standards (Part II-F). Since there are many geometric design variables to be found in existing expressways, a signing concept commensurate with prevailing conditions must be the primary consideration. Whenever possible, expressway signing should be planned at the design stage.