

Selected Portions of the United States Army Corp of Engineers Sign Standards Manual

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This document is available as publication EP 310-1-6A and EP 310-1-6B (two volumes) and is available at no cost. Contact the USACE via its web site (see section VI.B) to request these documents. Make sure to request all updates when ordering this document, as there have been several updates to the manual.

(Note: Numbers/letters in parentheses indicate the original section in the USACE manual)

The *Manual on Uniform Traffic Control Devices for Streets and Highways* has been adopted as the standard for all Regulatory and Warning signs used on Corps project roadways for vehicular traffic.

A display of the most commonly used Regulatory and Warning Traffic signs is included in this section as a convenience to users when ordering these types of signs (pages 9.2-8). For a complete display of all regulatory, warning, and other traffic control devices, refer to the MUTCD and the Forest Service publication *Placement Guide for Traffic Control Devices*, available from the U.S. Government Printing Office.

A general Traffic sign mounting and placement guideline has been included on page 9.9. For detailed instructions, refer to the latest edition of the MUTCD.

Three important traffic-related sign types in the Corps sign standards vary from the MUTCD. These include: Approach and Project Roadway Directional signs (see Section 6), Symbol signs (see Section 8), and Parking and No Parking signs. A complete display of the standard Corps Parking and No Parking signs is shown in this section (pages 9.10-14), along with mounting and placement guidelines.

It should be noted that the decision to use a particular traffic control device at a specific location should be made on the basis of a standard traffic engineering study of the location. Sign size should be based on traffic conditions. Where these conditions are the same, all signs of a similar type should be the same size. Thus, while this manual and the MUTCD provide standards for design and application of traffic control devices, they are not a substitute for engineering judgment. It is intended that the provisions of these manuals be standards for traffic control devices installation, but not a legal requirement for installation.

The identification code number shown for Regulatory and Warning signs on pages 9.2-8 is a Federal standard for this type of sign and is unrelated to the Corps sign code used for all other types of signs in this manual. Shown below is a description of how this code is constructed. The dimensions below the code on pages 9.2-8 identify the standard size for each respective sign. Refer to the MUTCD for guidelines on the selection of the appropriate size sign for a specific roadway condition.

The control of vehicle parking is one of the difficult aspects of managing Corps projects and facilities. This problem is compounded when parking regulations are different for various types of vehicles such as cars with trailers, recreation vehicles, etc.

The Corps Parking and No Parking signs have adopted a standard design format. The "Parking Allowed" sign uses a capital letter "P" placed within a bold green circle. The "P" and qualifying legend are in black on a white background (see page 4.12).

No Parking signs integrate the red prohibition circle and slash used on all Prohibition Symbol signs. This is placed over the letter "P". The qualifying legend and "P" are printed in black (see page 4.12).

Consistent use of this sign design with the graphically conspicuous red and green circles will establish a visual uniformity for all parking regulation signs on a project. The effect of each individual sign and the cumulative effect of the overall parking control program will be heightened with the standardized use of these signs.

The sign formats are shown on pages 9.10 and 9.12. A complete display of the approved sign legends are shown on pages 9.11 and 9.13. Refer to page 9.14 for placement instructions.

W1-3R 24" x 24"

W

Type: Denotes functional type of sign (R = regulatory, W = warning, D = guide signs, and M = route markers).

1-3

Number: A unique two-number, hyphenated identifier assigned to this sign.

R

Arrow Direction: Denotes direction of arrow as needed (R = right, L = left, S = straight ahead, UR = 45° right, UL = 45° left).

24" x 24"

Size: Denotes horizontal dimension of panel unless otherwise noted.

Shown below and on the following two pages are commonly used regulatory type traffic signs from the *Manual on Uniform Traffic Control Devices*. For regulatory signs not shown in this display, refer to the MUTCD.

The signs are available in a variety of sizes depending on the speed and distance from which they will be viewed. For size and placement guidelines, refer to the MUTCD.

Group 1: Regulatory Signs

R1-1
24" x 24"
30" x 30"
36" x 36"



R1-3
12" x 6"



R1-2
30" x 30" x 30"
36" x 36" x 36"



R3-1R
R3-2L
24" x 24"
30" x 30"



R3-4
24" x 24"
30" x 30"



R4-7A
18" x 24"
24" x 30"



R4-7
24" x 30"



R4-1
18" x 24"
24" x 30"



R5-1
30" x 30"
36" x 36"



R5-2
24" x 24"
30" x 30"



R5-9
36" x 24"



R6-2L
R6-2R
12" x 18"
18" x 24"
24" x 30"



R11-2
48" x 30"



Group 2: Regulatory Signs

R2-1
18" x 24"
24" x 30"
Specify Speed



R2-2
24" x 24"
36" x 36"
Specify Speed



R2-8
18" x 24"
24" x 30"
Specify Speed



R2-5C
18" x 24"
24" x 30"



R2-4
18" x 24"
24" x 30"
Specify Speed



R2-5A
18" x 24"
24" x 30"



R3-7L
R3-7R
30" x 30"



R5-5
18" x 24"
24" x 30"



R5-6
24" x 24"
30" x 30"



R6-3A
24" x 24"
30" x 30"



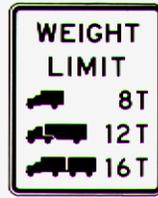
R6-3
24" x 18"



R12-1
12" x 18"
18" x 24"
24" x 30"



R12-1A
24" x 30"
30" x 36"



R4-7P
24" x 18"



Shown below and on the following three pages are commonly used warning signs intended to advise the driver of existing road hazards. Refer to the adjacent code and size availability information when ordering. A complete display is shown in the latest edition of the *Manual on Uniform Traffic Control Devices*.

The signs are available in a group of sizes and are sized to the specific viewing distance and approach conditions. Refer to the MUTCD for size and placement guidelines.

Group 1: Warning Signs

W1-1L
W1-1R
24" x 24"
30" x 30"
36" x 36"



W2-2
24" x 24"
30" x 30"
36" x 36"



W1-2R
W1-2L
24" x 24"
30" x 30"
36" x 36"



W2-3
24" x 24"
30" x 30"
36" x 36"



W1-3R
W1-3L
24" x 24"
30" x 30"
36" x 36"



W2-4
30" x 30"
36" x 36"



W1-4R
W1-4L
30" x 30"
36" x 36"



W2-5
24" x 24"
30" x 30"
36" x 36"



W1-5R
W1-5L
24" x 24"
30" x 30"
36" x 36"



W3-1A
30" x 30"
36" x 36"



W2-1
24" x 24"
30" x 30"
36" x 36"



W3-2A
30" x 30"
36" x 36"



W3-3
30" x 30"
36" x 36"



W6-2
30" x 30"
36" x 36"



W4-1
30" x 30"
36" x 36"



W6-3
30" x 30"
36" x 36"



W4-2
30" x 30"
36" x 36"



W7-1
30" x 30"
36" x 36"



W5-1
24" x 24"
30" x 30"
36" x 36"



W8-1
24" x 24"
30" x 30"
36" x 36"



W5-2A
24" x 24"
30" x 30"
36" x 36"



W8-2
24" x 24"
30" x 30"
36" x 36"



W5-3
24" x 24"
30" x 30"
36" x 36"



W8-3A
24" x 24"
30" x 30"
36" x 36"



W6-1
30" x 30"
36" x 36"



W8-4
24" x 24"
30" x 30"
36" x 36"



W8-8
24" x 24"
30" x 30"
36" x 36"



W13-1
Specify Speed
18" x 18"
24" x 24"
30" x 30"



W8-9
24" x 24"
30" x 30"
36" x 36"



W14-3
36" x 48" x 48"
48" x 64" x 64"



W9-1L
W9-1R
30" x 30"
36" x 36"



W1-8
12" x 18"
18" x 24"
24" x 30"
30" x 36"



W10-1
24" x 24"
30" x 30"
36" x 36"



W1-6
48" x 24"



W12-2
Specify Height
30" x 30"
36" x 36"

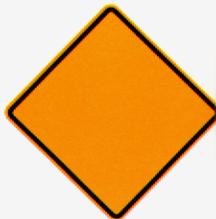


W1-7
48" x 24"



Group 2: Warning Signs

W41-1
24" x 24"
30" x 30"
36" x 36"
48" x 48"
Blank Panel
Specify Legend



W14-1
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-5
30" x 30"
36" x 36"



W14-2
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W11-1
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W11-8
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W11-2A
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W11-9
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W11-3
30" x 30"
36" x 36"
48" x 48"



W11-10
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W11-4
30" x 30"
36" x 36"



W15-1
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W11-5
24" x 24"
30" x 30"
36" x 36"
48" x 48"



Special
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W11-6
24" x 24"
30" x 30"
36" x 36"



Special
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W11-7
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-7
24" x 24"
30" x 30"
36" x 36"
48" x 48"



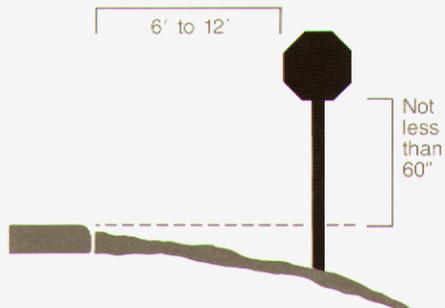
Standardization of sign positions cannot always be attained. The general rule, however, is to locate signs on the right-hand side of the roadway where drivers would be looking for them. Signs in other locations, except for those mounted overhead, should be considered supplementary to signs in their normal locations.

A reference handbook, *Placement Guide for Traffic Control Devices* (FS 8171 2603), has been prepared by the Forest Service and supplements the MUTCD. It contains detailed information on signs as well as pavement markings, delineators, and road closures. The text and illustrations below are for general reference.

In general, signs should be located to optimize night-time visibility and minimize the effects of mud splatter. Signs should be located so that they do not obscure each other or are hidden from view by other roadside objects. Signs should be placed with regard to the alignment of approaching traffic. This may not necessarily follow a predetermined angle with the roadway edge on curved or rolling roads.

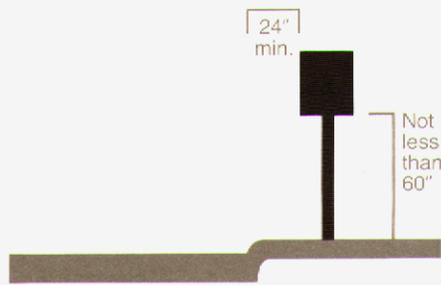
Whenever possible, each traffic sign should be mounted on an individual post to provide minimum competition among groups of signs. Speed advisory signs are an exception because they should serve as a supplementary message to a warning sign.

The lateral clearance for Regulatory and Warning signs or the smaller Directional signs should be from 6 to 12 feet from the edge of the pavement, as shown in the illustrations below. For larger Approach Roadway Directional signs (see Section 6), the lateral clearance may be up to 30 feet from the edge of the pavement.



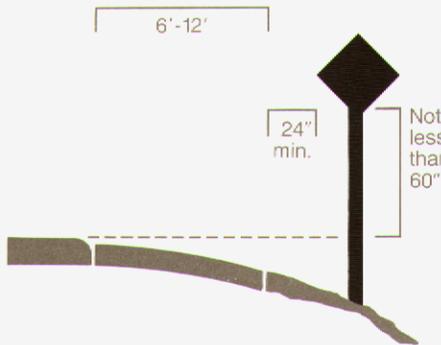
Regulatory and warning signs are placed 6' to 12' from the edge of the roadway pavement.

To make certain that the sign is not obscured by parked or standing vehicles, the recommended minimum mounting height of 5 feet should always be followed in order to ensure uniformity in sign placement.



Sign panel is at least 24" from the edge of the curb.

The exact placement location of Regulatory and Warning signs will differ depending on the type of sign and road condition. In general, Regulatory signs are to be installed where the mandate or prohibition applies or begins; Warning signs are to be placed in advance of the conditions to which they call attention; Guide signs are to be placed as needed to keep drivers adequately informed.



Regulatory and warning signs are placed 24" from the edge of a paved shoulder.

More specifically, the following guidelines should be followed on the conventional streets and highways:

1) General Traffic Sign Mounting Guidelines:

a) STOP and YIELD signs should be placed at the point at which compliance is to be made. Even in open areas, STOP signs should not be placed more than 50 feet from the intersecting roadway. A suitable stop line or other marking device should be placed on the roadway at the intended point of compliance to supplement the STOP sign if the sign is not at or near the point at which the vehicle should stop.

b) Warning signs are generally placed slightly in advance of the point of compliance. On projects where speeds are relatively low, Warning signs should be posted no more than 250 feet in advance of the hazardous condition to which they are directing attention. On higher-speed roadways, Warning signs should be posted at a distance from 750 to 1,500 feet in advance of the hazard. These distances are necessary to permit the driver to make

the appropriate response to comply with the regulation.

c) Symbol signs and road number guide signs are posted in advance of intersections and within the intersections themselves. Placement locations should follow a uniform plan so that motorists, once accustomed to the plan, will be able to find signs easily. Junction signs and advance turn arrows should be erected no less than 400 feet in advance of the intersections.

d) Directional signs are to be located not less than 200 feet or more than 300 feet in advance of the intersection. Within projects, shorter distances are permissible (see Section 6).

2) Posts and Mountings: The standard mounting for all Regulatory and Warning signs that are less than 36" square is 4" x 4" redwood posts. Signs larger than 36" x 36" will use two 4" x 4" posts or one 6" x 6" post. These posts break easily when struck by a car. The posts are to be stained Corps Brown (refer to the Color Reference Chart in Appendix B).

3) Liability: Missing, damaged or deteriorated traffic control devices or those that do not conform with national or state standards can cause accidents. An improper installation, the failure to replace or repair a damaged or missing control device, or failure to conform to standards outlined in the MUTCD may lead to liability on the part of the Corps or the responsible Corps employees themselves.

4) Sign Maintenance: Adequate maintenance of the traffic sign system is of equal importance to adherence to guidelines and good installation practices of the original installation. An inspection program for the system should be made during daylight hours and during darkness on a routine basis to ensure proper visibility, legibility, and material integrity.

To ensure adequate maintenance, a suitable schedule for inspection, cleaning, and replacement of signs should be established. Corps employees whose duties require that they travel on Corps project roadways should report any damaged or obscured signs immediately.

Maintenance should include washing signs with a good soap or detergent as often as local conditions demand or cleaning by means of a steam generator unit. The cleaning cycle may range from once every two years for self-cleaning surfaces in clean areas to once every few months. Special attention and necessary action should be taken to see that weeds, trees, shrubbery, and construction materials do not obscure the face of any sign.

The Corps standard format for signs to identify allowable parking areas is shown below. This sign has a green circle around the capital letter "P". The "P" and qualifying legend below are black on a white sign panel (see page 4.12).

A series of Parking signs with commonly used legends are displayed with order code numbers on page 9.11. Parking signs

with legends not included should be constructed the same way as Prohibition Symbol signs. Use the grid on pages 18.17-18.

The "P" graphic with circle is to be sized and reproduced photographically using the reproduction artwork on pages F.118-127. All legend lettering should follow Corps guidelines for Helvetica Bold type (see Section 4).



*Panel height varies with legend length. The shorter panel is for a one-line legend; the longer panel is for a two-line legend.

Sign Type	Legend Size (A)	Panel Size	Post Size	Specification Code	Mounting Height	Color Bkg/Lgd
PRK-00	.75"	9" x 11/12.12" *	4" x 4"	ALU-5	60"	WH/BK-GR
PRK-00	1"	12" x 14.66/16.16" *	4" x 4"	ALU-5	60"	WH/BK-GR
PRK-00	1.25"	15" x 18.325/20.2" *	4" x 4"	ALU-5	60"	WH/BK-GR
PRK-00	1.5"	18" x 22/24.24" *	4" x 4"	ALU-5	60"	WH/BK-GR

Shown in the display below are commonly used Parking sign panels. These are available in four sizes. Appropriate size will be determined by sign placement location and viewing distance requirements. For Parking signs requiring legends not included below, refer to page 9.10 for layout guidelines.

To order Parking signs, specify the sign by the code number shown to the left along with the sign size.

P-Visitors Only
PRK-01



P-Government
Vehicles Only
PRK-06



P-Employees Only
PRK-02



P-Authorized
Vehicles Only
PRK-07



P-Buses Only
PRK-03



P-Tiedown Only
PRK-08



P-Boat Trailers
Only
PRK-04



P-On Paved
Roads Only
PRK-09



P-Cars With
Trailers Only
PRK-05



P-Recreation
Vehicles Only
PRK-10



The No Parking sign format is shown below. This sign is white with the red prohibition circle and slash graphic placed over the capital "P" parking symbol. The legend below the symbol qualifies the type of No Parking regulation being imposed. Both the "P" symbol and sign legend are black (see page 4.12).

Commonly used No Parking signs are displayed on page 9.13. Fabrication of signs not shown should follow the grid formats shown in the prohibition symbol section, pages 8.17-18.

All reproduction and sizing of symbols is to be done photographically, using the reproduction artwork on pages F.128-133.

The Helvetica Bold legend lettering is to follow Corps spacing guidelines (see Section 4).



Grid A



Grid B

Grid A

Sign Type	Legend Size (A)	Panel Size	Post Size	Specification Code	Mounting Height	Color Bkg/Lgd
NPK-00	.5"	6" x 7.33"	4" x 4"	ALU-5/HDO-5	36-60"	WH/BK-RD
NPK-00	.75"	9" x 11"	4" x 4"	ALU-5/HDO-5	36-60"	WH/BK-RD
NPK-00	1"	12" x 14.66"	4" x 4"	ALU-5/HDO-5	36-60"	WH/BK-RD
NPK-00	1.25"	15" x 18.325"	4" x 4"	ALU-5/HDO-5	36-60"	WH/BK-RD
NPK-00	1.5"	18" x 22"	4" x 4"	ALU-5/HDO-5	36-60"	WH/BK-RD

Grid B

Sign Type	Legend Size (A)	Panel Size	Post Size	Specification Code	Mounting Height	Color Bkg/Lgd
NPK-00	.5"	6" x 8"	4" x 4"	ALU-5/HDO-5	36-60"	WH/BK-RD
NPK-00	.75"	9" x 12"	4" x 4"	ALU-5/HDO-5	36-60"	WH/BK-RD
NPK-00	1"	12" x 16.16"	4" x 4"	ALU-5/HDO-5	36-60"	WH/BK-RD
NPK-00	1.25"	15" x 20.20"	4" x 4"	ALU-5/HDO-5	36-60"	WH/BK-RD
NPK-00	1.5"	18" x 24.25"	4" x 4"	ALU-5/HDO-5	36-60"	WH/BK-RD

Shown below are frequently requested No Parking signs. To order, use the sign identification code number to the left of each display along with the sign size. Refer to sizing guidelines on page 9.14 to determine appropriate panel size requested. To

fabricate a sign with legend not shown in the display below, refer to the grid format guide on page 9.12.

NP-Any Time
NPK-01



NP-On the Grass
NPK-04



NP-Fire Lane
NPK-02



NP-Beyond this Point
NPK-05



NP-Along Roadway
NPK-03



NP-am-pm
Indicate times
NPK-06



The Corps guidelines for mounting and placement of Parking and No Parking signs are different from those of the Regulatory and Warning signs shown on pages 9.2-9.

The signs are generally placed at eye level as viewed from an automobile. Placing these signs at a lower height will help

to reduce visual clutter on project roadways. The size of Parking and No Parking signs is considerably smaller than traffic signs because they are viewed at slower speeds, and have high target values and easy-to-read legends.

Shown below are the standard mounting and placement guidelines as well as a

viewing distance guide to be used when determining the appropriate size sign panel.

The 12" wide panel (depth will vary depending on which format grid is used to lay out sign) mounted on a 4" x 4" wood post is to be considered the standard size Parking and No Parking sign for use on project roadways.

On low speed roadways that are free of other types of signs a smaller 9" wide panel mounted on a 4" x 4" post may be more appropriate. The mounting height for 9" wide Parking and No Parking signs can be reduced to 48" in selected areas to minimize unnecessary clutter. These are ideally placed behind guard rails on roads and within a camping or picnic area.

The two larger size panels (15" wide and 18" wide) are provided for use in unusual conditions where the smaller panels will not be effective.

The mounting distance required between signs will need to be determined by a field review because conditions vary greatly.

Although eye level (5' to bottom of sign panel) mounting heights are recommended wherever possible, it is allowable to post the signs up to standard (MUTCD) mounting heights if sight lines require.



Parking and No Parking Signs Panel Size and Viewing Distance Guide

Panel Size	Viewing Distance
9"	120'
12"	160'
15"	200'
18"	240'