

F. GUIDE SIGNS—FREEWAYS

Section 2F-1 Scope of Freeway Sign Standards

Specifications for Freeway Guide signs prescribed herein shall apply to any Expressway with full control of access, including the National System of Interstate and Defense Highways. These standards, with the exception of certain markers reserved exclusively for the Interstate Highway System, provide a uniform and effective system of highway signing that will be fully adequate for high-volume, high-speed motor vehicle traffic on all modern freeways. The specific requirements for the Interstate Highway System,¹¹ as developed and approved by the American Association of State Highway Officials, have been incorporated herein with amendments to provide in one document standards now applicable to all streets and highways.

Existing toll roads incorporated in the Interstate System are not required to comply with the standards defined herein until major replacements are necessary. However, full uniformity in traffic control devices is a national goal, and the earliest practicable compliance with the standards on those facilities should be obtained.

Where appropriate, to reduce redundancy, reference is made to other applicable sections of Part II for selected specifications for freeway signing.

2F-2 Freeway Signing Principles

The development of a signing system for freeways must be approached on the premise that the signing is primarily for the benefit and direction of drivers who are not familiar with the route or area. The signing must furnish drivers with clear instructions for orderly progress to their destinations.

Sign installations are an integral part of the freeway facility and, as such, must be planned concurrently with the development of highway location and geometric design. Plans for signing must be analyzed during the earliest stages of preliminary design and details correlated as final design is developed.

Interstate routes are not to be signed as memorial highways. This provision does not prohibit the erection and maintenance of memorial plaques indicating the highway is, for instance, a Blue Star Memorial Highway, if such plaques are placed in rest and recreational areas within or adjacent to the right-of-way of Interstate highways which have been designated as a memorial highway by State law or by official administrative action by the State highway department.

¹¹ *Manual for Signing and Pavement Marking of the National System of Interstate and Defense Highways*, 1970, American Association of State Highway Officials, Washington, D.C. 20004.

The naming of a bridge or highway on the Interstate System to recognize an individual or group of individuals is not to be recognized as a part of the official signing of the Interstate Highway System.

Under no conditions shall an Interstate route, that is officially designated as a memorial highway by State legislative or State highway administrative action, have signs erected along the route carrying the memorial name of the highway.

Except where they interfere with signing for interchanges or other equally critical points, miscellaneous guide signs of various types may be used to show State, county and other significant local jurisdictional boundaries. Signs of this character should not be installed unless there are specific reasons for orienting the users of the freeway or identifying control points for activities that are clearly to the public interest.

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

2F-3 General Characteristics of Freeway Signing

Freeway signing should always be considered and developed as a planned system of installations. Engineering study will be necessary for proper solution of the problems of many individual locations, but, in addition, consideration of an entire route is necessary. The excessive signing found on many major highways usually is the result of using a multitude of signs too small and poorly designed and placed to accomplish the purpose intended.

Drivers should be confronted with consistent signing on the approaches to interchanges, as they drive from one State to another, and when driving through rural or urban areas. Geographical, geometric, and operating factors regularly create significant differences between urban and rural freeway conditions, and the signing must take these into account.

The standards prescribed for sign letter size on freeways are the same for both urban and rural areas. Space is often at a premium on urban sections, but the typical traffic pattern is also more complex for the driver to negotiate, and large easy-to-read copy is, therefore, just as necessary as on rural highways. The lower speeds characteristic of urban operation may well support consideration of different highway geometrics in design, but do not justify different sign standards.

2F-4 Characteristics of Urban Freeway Signing

The distinctive characteristics of freeway interchange signing for urban conditions are outlined in section 2E-17.

Urban conditions are characterized not so much by reason of physical city limits or other arbitrary boundaries, as by some or all of the following features:

1. Mainline roadways with more than 2 lanes.
2. High traffic volumes on the through roadways.
3. High volumes of entering and leaving traffic at certain interchanges.
4. Interchanges closely spaced.
5. Roadway lighting at some or all interchanges, and sometimes continuous lighting.
6. Three or more interchanges serving the major city.
7. A loop, circumferential or spur serving a sizable portion of the urban population.

2F-5 Characteristics of Rural Freeway Signing

Rural signing ordinarily benefits from greater distances between interchanges. This permits adequate spacing for the sequences of signs on the approach to and departure from each interchange. The tendency to group all signing in the immediate vicinity of rural interchanges should be avoided by considering the entire route in the evolution of sign plans. Extra effort should be given to the placement of signs at natural target locations to command the attention of the driver, particularly when the message to be conveyed has a high relative priority.

Rural sections of freeways are subjected to high speed traffic. The absence of traffic in adjoining lanes and on entering or leaving ramps, often adds monotony to rural driving. This increases the importance of signs and markings that call for decision or action. Accordingly, where there are long distances between interchanges and the alignment is relatively unchanging, signs should be positioned for their best effect on drivers.

2F-6 Sign Layouts

There should be general adherence to the prescribed horizontal and vertical sequences for route markers, cardinal directions, destination names, arrows and other components of the sign display. The present standards are intended to result in nationwide uniformity and yet contain provisions flexible enough for most signing problems. Minor departures may be necessary when symbols are employed.

2F-7 Diagrammatic Signs (figs. 2-22, 2-23)

Diagrammatic or symbol signs have shown promise not only for application to warning and regulatory type messages but also for certain freeway guide signs. The use of diagrammatic signing at



Figure 2-22. Sample diagrammatic sign for cloverleaf interchange.



Figure 2-23. Sample diagrammatic sign for directional interchange.

interchanges offers a rapid way of conveying to the driver the maneuvers which are required to reach a given destination. A pictorial representation of this kind may have special value at large complex interchanges where a motorist may be confronted with

multiple exits, both left and right off-ramps, or where he is required to make more than one maneuver to reach his chosen destination.

Symbol designs are encouraged for freeway application and shall be essentially like those shown in this Manual. Interchange diagrams, if used, should be as straight forward and simple as possible.

This Manual does not prescribe specifications for diagrammatic signing, but samples of such signs are shown in figures 2-22 and 2-23. Highway departments are encouraged to develop and experiment with diagrammatic signing (sec. 1A-5) and to carefully evaluate installations where it is used so that specific standards may be incorporated in future editions of the Manual. Guidelines for designing these signs are available.¹²

2F-8 Designation of Destinations

Freeways offer superior traffic service to population centers located on or near them. For this reason, the course of the freeway route and the major destinations or "control cities" along it must always be clearly identified. Destination legends should provide the drivers the best orientation possible. Continuity in successive sign messages and consistency with available map information are essential.

National guidelines for the selection of control cities are not available; accordingly, each State should determine its list of control cities in cooperation with adjacent States with the objective of achieving continuity in signing. Any given route should have the same control cities for both directions of movement, although "satellite" cities may be selected for movements outbound from a major urban area, while only that area will be signed for approaching traffic.

The determination of major destinations or control cities will be important to the quality of service provided by the freeway, and control city legends should be used in the following situations:

1. Interchanges between freeways;
2. Separation points of overlapping freeways;
3. On directional signs on intersecting routes, to guide traffic entering the freeway;
4. As an alternate to the THRU TRAFFIC message;
5. On the bottom line of post interchange mileage signs.

2F-9 Limit on Destination Legends

Destination names and directional information must not exceed the amount of copy that most drivers will be able to comprehend readily. The limitations on destination legends described in section

¹² Available from the Federal Highway Administration, Washington, D.C. 20591.

2E-8 shall apply to major guide signs on freeways. Population figures or other similar information on exit guide signs should not be used.

2F-10 Routing to a Given Destination

A route diverging from a freeway should not be posted with any of the same destination names as are shown at that point for the freeway route. At any decision point, a given destination should be indicated over only one route.

2F-11 Overhead Sign Installations

Overhead signs have application in lieu of or as an adjunct to ground signs when engineering study indicates that they are needed. Factors which may justify the erection of overhead signs are enumerated in section 2A-22. In addition to those listed, lane drops and left exit ramps are also to be considered. These factors should be evaluated to arrive at decisions to erect overhead signs.

Information relative to the design of sign structures has been standardized by the American Association of State Highway Officials, and other agencies.¹³

Use of overcrossing structures for the support of overhead signs is described in section 2E-16.

2F-12 Style of Lettering and Legend Spacing

Letter style and height, and arrow design have been standardized for freeway signs to assure uniform and effective application. With all freeway signs, the message dimensions shall be determined first, and the outside sign dimensions secondarily. The prescribed numeral and letter sizes according to interchange classification and component of sign legend appear in table II-2. Other sign letter size requirements not specifically identified elsewhere in this Manual should be guided by these specifications.

All names of places, streets, and highways on freeway guide signs shall be composed of lower-case letters with initial upper-case letters. The initial upper-case letters shall be $1\frac{1}{2}$ times the "loop" height of the lower-case letters. Other word legends shall be in upper-case letters. Suitable designs for upper-case and lower-case alphabets are available, together with tables of recommended letter spacing, from the Federal Highway Administration.¹⁴ The initial letters

¹³ Available from the American Association of State Highway Officials, Washington, D.C. 20004.

¹⁴ Available from the Federal Highway Administration, Washington, D.C. 20591.

and the numerals used will be Series E(M) of the Standard Alphabets for Highway Signs (Series E modified by widening the stroke width to approximately one-fifth of the letter or numeral height).

Interline and edge spacing shall be as specified in section 2E-11.

Abbreviations are to be kept to a minimum. The provisions of sections 2A-14 and 2E-12 shall apply.

TABLE II-2 Letter and Numeral Sizes for Freeway Guide Signs

A. Advance Guide, Exit Direction, and Overhead ~~Gore~~ Signs

	Major*		Inter- mediate*	Minor*	Overhead Gore	
	Category (a)*	Category (b)*				
Exit Panel						
Word....	10"	10"	10"	10"	10"	
Numeral..	15"	15"	15"	15"	15"	
Letter...-	15"	15"	15"	15"	15"	
Route Marker						
Interstate						
Numeral..	24"	18"	-----	-----	18"	
Shield						
(1-2 Digit)-	48"x48"	36"x36"	-----	-----	36"x36"	
(3 Digit)---	60"x48"	45"x36"	-----	-----	45"x36"	
U.S. or State						
Numeral..	24"	18"	18"	18"	12"	18"
Shield						
(1-2 Digit)-	48"x48"	36"x36"	36"x36"	36"x36"	24"x24"	36"x36"
(3 Digit)---	60"x48"	45"x36"	45"x36"	45"x36"	30"x24"	45"x36"
or Alternate						
(Ex: U.S. 56)						
Initials..	15"	15"	12"	12"	10"	12"
Numeral..	18"	18"	15"	15"	12"	15"
Cardinal						
Word....	15"	15"	12"	12"	8"	12"
Name of Place, Street, or Highway						
Word....	20"/15"	20"/15"	16"/12"	16"/12"	13.3"/10"	16"/12"
Distance						
Numeral..	18"	18"	15"	15"	12"	15"
Fraction..	12"	12"	10"	10"	8"	10"
Word....	12"	12"	10"	10"	8"	10"
Action Message (Exit Direction Signs)						
Word	12"	12"	12"	12"	8"	12"

*See Section 2E-21, Interchange Classification

Note: (|) Vertical bar signifies separation of desirable and minimum sizes.

(/) Slanted bar signifies separation of upper-case and lower-case alphabets.

B. *Ground Mounted Gore Signs*

At major interchange, category (a)*

Cardinal direction.....	12"
Route marker.....	36"x36"

At major (category b)- and intermediate interchanges

Word.....	12"
Numeral.....	18"

At minor interchanges

Word.....	8"
Numeral.....	10"
Letter.....	8"

C. *Thru Traffic Signs*

"Thru Traffic" Message

Word.....	15"
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Destination Message

Word.....	16"/12"
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Route Marker as Message

Cardinal Direction.....	12"
Route Marker.....	16"x36"

D. *Supplemental Guide Signs*

Exit Number

Word.....	10"
Numeral.....	15"
Letter.....	15"

Place name.....	13.3"/10"
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Action message.....	10"
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*See Section 2E-21, Interchange Classification

E. *Interchange Sequence Signs*

Word.....	13.3"/10"
Distance Numeral.....	13.3"
Fraction.....	10"

F. *"Next—Exits" Signs*

Place name.....	13.3"/10"
NEXT—EXITS.....	10"

G. *Mileage Signs*

Word.....	8"/6"
Numeral.....	8"

H. *General Motorist Services Signs*

Exit Number

Word.....	10"
Number.....	15"
Letter.....	15"
Services.....	10"

I. *Rest Area and Scenic Area Signs*

Word.....	12"
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Distance	
Numeral.....	15"
Fraction.....	10"
Word.....	12"
Action Message	
Word.....	12"
J. Mileposts	
Word.....	4"
Numeral	10"
K. Boundary and Orientation Signs	
Word.....	8"/6"
L. "Next Exit" and "Next Services" Signs	
Word.....	8"
Numeral.....	8"
M. "Exit Only"	
Word.....	10"

2F-13 Sign Borders

Signs shall have a border of the same color as the legend, to outline their distinctive shape and thereby give them easy recognition and a finished appearance. For guide signs larger than approximately 10 feet by 6 feet, the border should have a width of approximately 2 inches. For guide signs smaller than 10 feet by 6 feet, a width of approximately $1\frac{1}{4}$ inches may be used, but the width should not generally exceed the stroke width of the major lettering on the sign.

Corner radii of sign borders should be approximately one-eighth of the minimum dimension on guide signs, except that the radii should not exceed 12 inches on any sign. The sign area outside the corner radius need not be trimmed.

2F-14 Color, Reflectorization, and Illumination

Color, reflectorization and illumination of freeway guide signs shall conform to the provisions for expressway guide signs set forth in sections 2E-5 and 2E-6. In addition, the background of all overhead signs that are not independently illuminated shall be reflectorized.

Technological developments have produced a variety of types of illumination for highway signs. Internally illuminated signs, having translucent faces, are especially effective for freeway use. Their use may be justified for some installations. Where internal illumination is used, the sign colors shall appear essentially the same by night and by day.

2F-15 Sign Arrows

The design and application of arrows for freeway guide signs shall be the same as that specified in section 2E-14 for expressway signs. Dimensional detail for "Up" and "Down" arrows is shown in figure 2-7.

2F-16 Viewing Factors

The requirements set forth in section 2E-15 concerning placement of signs for effective viewing shall apply to freeway signing.

2F-17 Vertical Clearance

In ground installations, directional signs shall, except as noted below, be erected at a minimum height of 7 feet above the edge of the pavement to the bottom of the sign. If a sign is mounted below another sign, the major sign shall be at least 8 feet and secondary sign at least 5 feet above the level of the pavement edge.

When signs are positioned away from the pavement edge to increase roadside safety, the vertical clearance on such signs may be reduced to 5 feet above the pavement edge. Notwithstanding the above, all route markers and warning and regulatory signs shall be at least 6 feet above the level of the pavement edge.

Overhead signs shall have a vertical clearance of not less than 17 feet to the sign, light fixture, or sign bridge, over the entire width of the pavement and shoulders except that where a lesser vertical clearance is used for design of other structures the vertical clearance to overhead signs, light fixtures, or sign bridges need not be greater than one foot in excess of the clearance at other structures. In special cases it may be necessary to reduce the vertical clearance still further because of substandard dimensions in tunnels and other major structures such as double-deck bridges.

2F-18 Horizontal Clearance

To provide a roadside recovery area for out-of-control vehicles, liberal horizontal clearances should be provided for roadside signs and overhead sign supports. No specific minimum clearance is established, but in no case shall any part of the sign or sign structure, which is within the applicable vertical clearance dimension and which is exposed to traffic, be less than 2 feet beyond any surface prepared for normal or emergency travel of vehicles.

Rigid criteria for lateral clearances should not be followed, but advantage should be taken of the longitudinal location of existing guardrail, overcrossing structures and similar conditions to lessen

the exposure to traffic of signs and sign supports. Breakaway or yielding supports should be located as far from the traveled portion of the roadway as feasible.

Light standards may be used in place of separate sign supports to accommodate the installation of smaller signs and route markers wherever this is practicable.

2F-19 Interchange Classification

For freeway signing purposes, interchanges are classed as major, intermediate, or minor. These terms are defined in section 2E-21.

2F-20 Interchange Exit Numbering (figs. 2-24 through 2-26)

The milepost numbers along freeways provide valuable orientation for the driver, and the appropriate milepost number shall be used in signing each interchange exit. The general plan for numbering interchange exits is shown in figures 2-24 through 2-26.

Interchange exit numbers shall be displayed with each advance guide sign, the exit direction sign, and the gore sign. They may be used with supplemental guide signs and service signs. The milepost exit number preferably will be displayed on a separate panel at the top of the major sign, or at a location below the major sign where conditions make this more practical. Details of typical panel designs are shown in figures 2-11 and 2-15 and, as incorporated on guide signs, in figures 2-27 through 2-35.

Subject to the exceptions noted herein, the standard exit number legend shall include the word EXIT in 10-inch capital letters. The appropriate milepost number shall be in 15-inch numerals and the suffix letter "A" or "B" (on multi-exit interchanges) in 15-inch capital letters in a single-line format on a panel 24 inches in vertical dimension.

Consistent with the AASHO action to adopt the consecutive numbering system for the Interstate System and with the Federal requirement for a milepost numbering system, the two systems may be combined by displaying an auxiliary panel with a single line legend "MILE (number)—EXIT (number)" in conjunction with the advance guide, exit direction and overhead gore signs. For the ground-mounted EXIT gore sign that already displays a consecutive number, the auxiliary panel will read only "MILE (number)."

A general upgrading of the design of milepost installations is prescribed in Section 2F-36. With this improvement the association of mileposting and interchange exit numbers will help to keep the road user aware of his location and the progress of his trip toward a selected exit.

Where a route originates within a State, the southernmost or westernmost terminus shall be the beginning point for numbering. If a loop, spur, or circumferential route crosses State boundaries, the sequence of numbering shall be coordinated by the States to provide continuous numbering.

For circumferential freeway routes, the numbering of interchanges shall be in a clockwise direction. The numbering shall begin with the first interchange west of an imaginary north-south line bisecting the circumferential route at a radial freeway or other Interstate

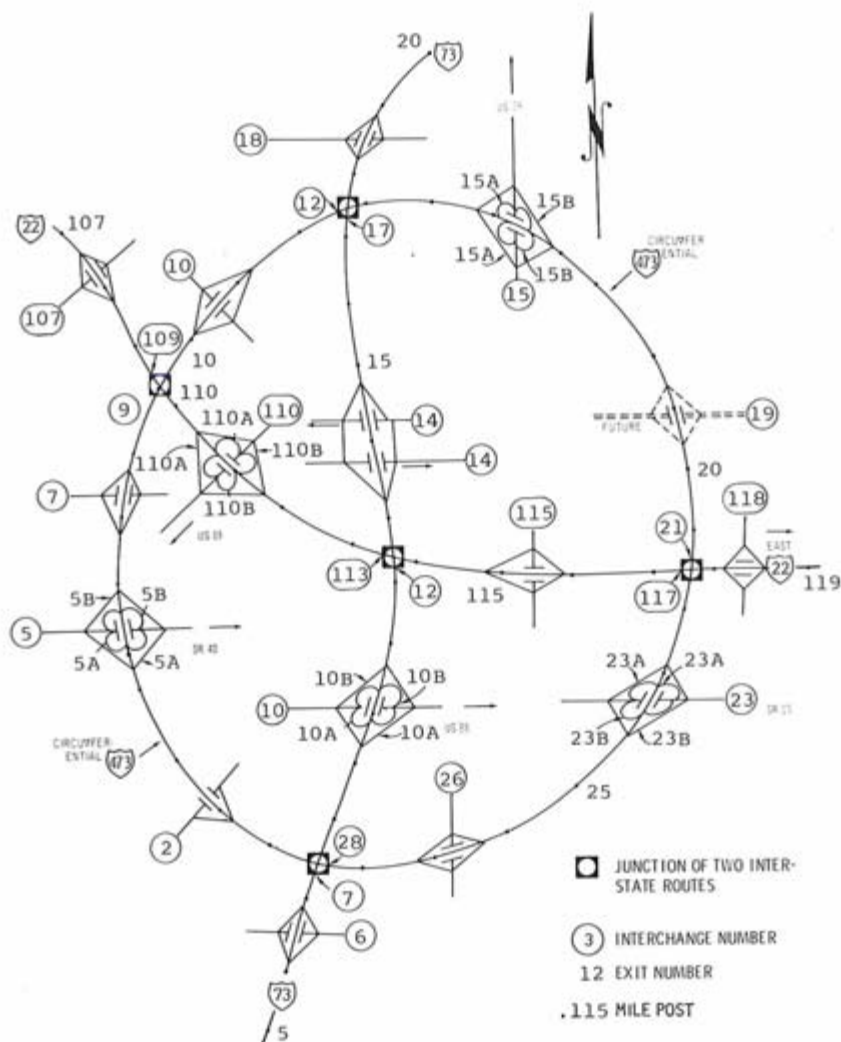


Figure 2-24. Typical interchange numbering for mainline and circumferential routes.

TYPICAL NUMBERING OF INTERCHANGES FOR MAINLINE LOOP AND SPUR ROUTES

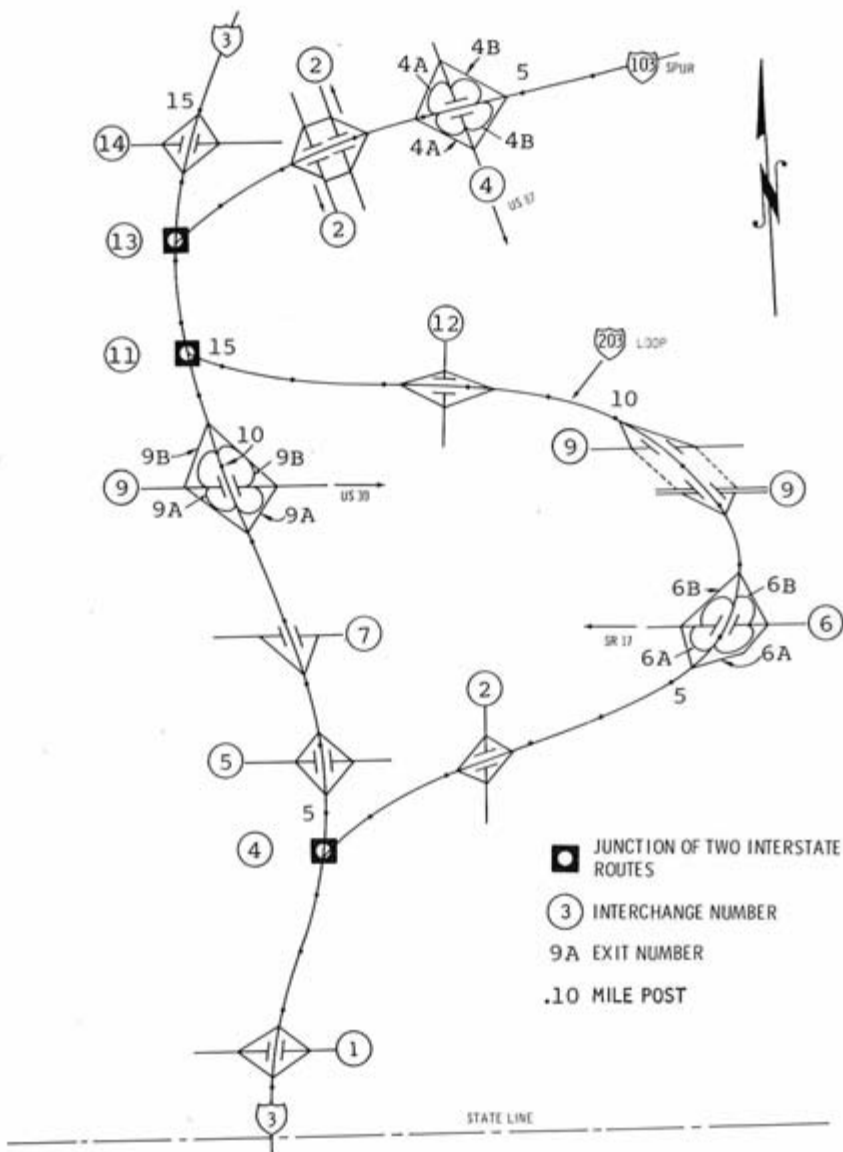


Figure 2-25. Typical interchange numbering for mainline loop and spur routes.

TYPICAL INTERCHANGE NUMBERING WHERE
2 INTERSTATE ROUTES OVERLAP

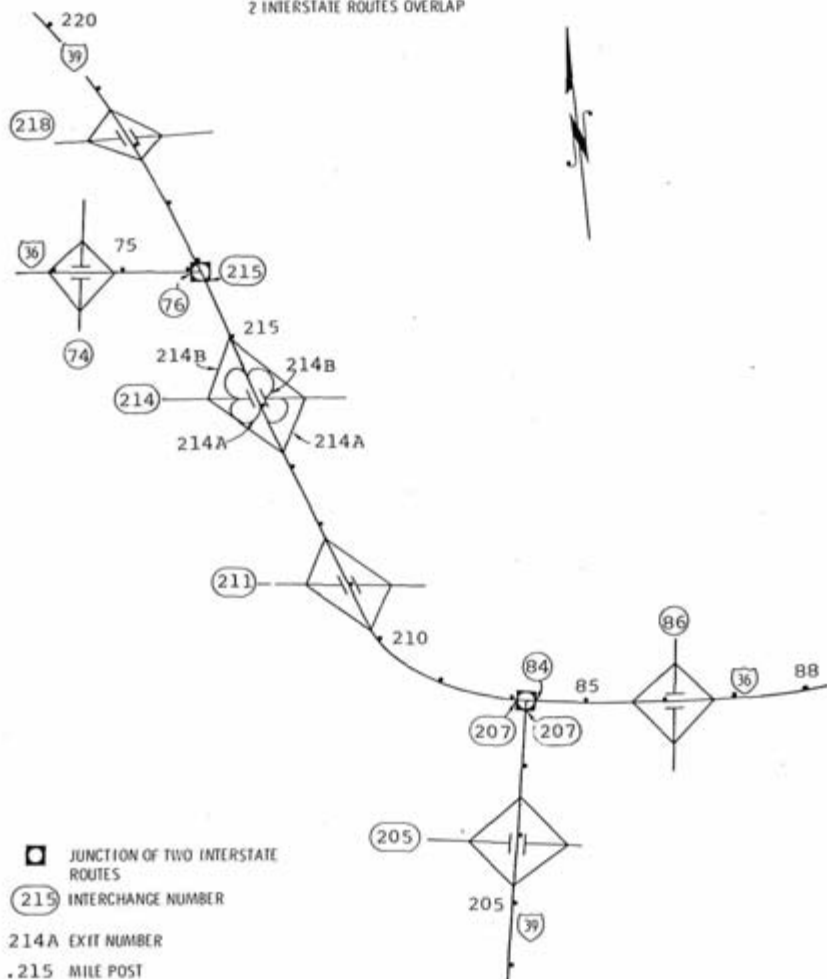


Figure 2-26. Typical interchange numbering where freeway routes overlap.

route, or some other conspicuous landmark in the circumferential near a south polar location. (See figure 2-24.)

The interchange numbers on loop freeway routes shall begin at the loop interchange nearest the south or west main line junction and increase in magnitude toward the north or east main line junction. Spur route interchanges shall be numbered in ascending order starting at the interchange where the spur leaves the main line of the principal freeway route. (See figure 2-25.)

Where numbered freeway routes overlap, continuity of interchange numbering shall be established for only one of the routes. Either route may be selected, but the one chosen should also have continuity in mileposting. (See figure 2-26.)

2F-21 Interchange Guide Signs

As in the case of expressways with grade separations, the major signs at freeway interchanges and on their approaches are advance guide signs, exit direction signs and gore signs. It is essential that the same destination messages be displayed on these three types of signs. New destination information should not be introduced into the major sign sequence for one interchange, nor should information be dropped.

Reference should be made to sections 2E-24 through 2E-32 for a detailed description of the signs, in order, that should appear at the approach to and at each interchange. Supplemental guide signing should be used sparingly as provided in section 2E-26. Letter and numeral sizes for freeway interchange signs are shown in table II-2.

2F-22 Post Interchange Signs

Where space between interchanges permits, a fixed sequence of post interchange signs should be displayed. The provisions of sections 2E-29 and 2E-30 apply to the use and placement of these signs.

2F-23 Signing by Class of Interchange

Motorists need signs to help identify the geometric layout of interchanges, as well as to obtain route, direction and destination information for specific exit ramps. Signing layouts, therefore, must be consistent for each type of interchange. For the sake of uniform application the significant features of the signing plan for each of the more frequent kinds of interchanges, as described in sections 2F-23 through 2F-30 and illustrated in figures 2-27 through 2-33, should be followed as closely as possible. Where unusual geometric features exist, variations in signing layout are permissible, but should be held to a minimum.

The interchange layouts shown in most of the figures illustrate only the major guide signs for one direction of traffic on the through road and on the crossroad.

2F-24 Interchanges Between Freeways (fig. 2-27)

Interchanges between freeways are major decision points where the effect of taking a wrong ramp cannot be easily corrected. Reversing direction on the crossroad or reentering to continue on the intended course is usually not possible. The sign messages should contain only the route shield, cardinal direction, and the name of the next control city on that route. Where routes overlap in a way that requires the naming of two control cities, signing should be as shown in figure 2-27.

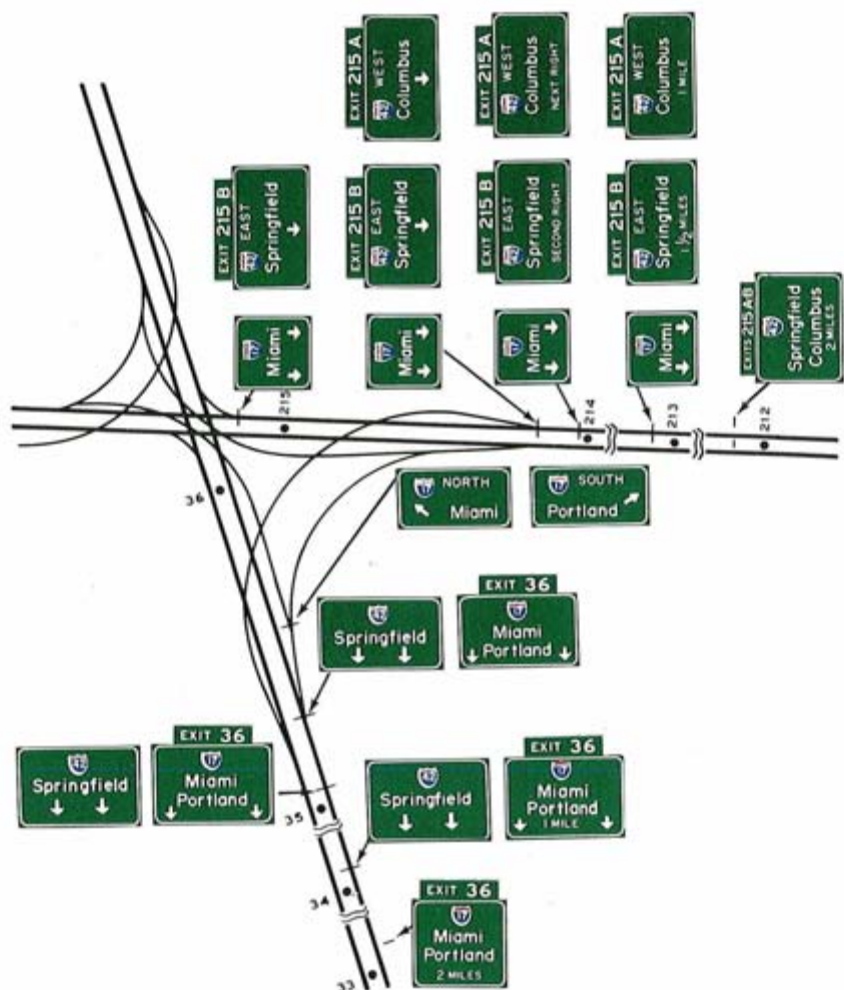


Figure 2-27. Interchange between freeway routes.

Overhead signs are required at a distance of one mile and at the theoretical gore of each connecting ramp, and may be used at the two mile point and in the normal location of exit direction signs. Arrows should point as indicated in section 2D-8, unless a diagrammatic representation of the interchange layout requires otherwise. The name of the control city and/or arrow may be omitted on signs which indicate the straight-ahead continuation of a route. A ground-mounted sign showing the route shield, cardinal direction and arrow may be mounted in the gore, in the position normally occupied by the ground mounted exit gore sign.

Warning signs with the message RAMP (35) MPH shall be used where appropriate, rather than EXIT (35) MPH as on other type interchanges.

2F-25 Cloverleaf (figs. 2-28, 2-29)

This type of interchange has two exits for each direction of travel. The exits are closely spaced and have common advance guide signs.



Figure 2-28. Cloverleaf interchanges.

The advance guide signs should include two place names, one corresponding to each exit ramp, with the name of the place served by the first exit on the upper line. An overhead sign shall be placed at the theoretical gore point of the first exit ramp, with an upward-sloping arrow on the sign for that exit and the message NEXT RIGHT on the sign for the second exit, as shown in figure 2-28. Alternately, the exit messages may be included on a single sign, with only one route shield, as shown in figure 2-29. Over the left lane(s), a sign containing the name of the next control city and/or the Route Marker shield (with or without a cardinal direction) or the message THRU TRAFFIC may be used.

The second exit shall be indicated by an overhead exit gore sign over the right-hand through lane, on the structure of the freeway passes under the crossroad, or on a cantilever or full-span structure if the freeway passes over the crossroad. A ground-mounted gore sign may also be used at each exit.

Exit numbers shall not indicate the cardinal directions of the cross route. Multi-exit interchanges shall be numbered as described in Section 2F-20 with an appropriate suffix.



Figure 2-29. Single sign as alternate to two right-hand signs overhead at gore in Figure 2-28.

2F-26 Cloverleaf with Collector-Distributor Roadways (fig. 2-30)

Signing on the collector-distributor roadway shall be basically the same as on a cloverleaf interchange. However, the advance guide signs shall use the singular EXIT as shown in the figure.

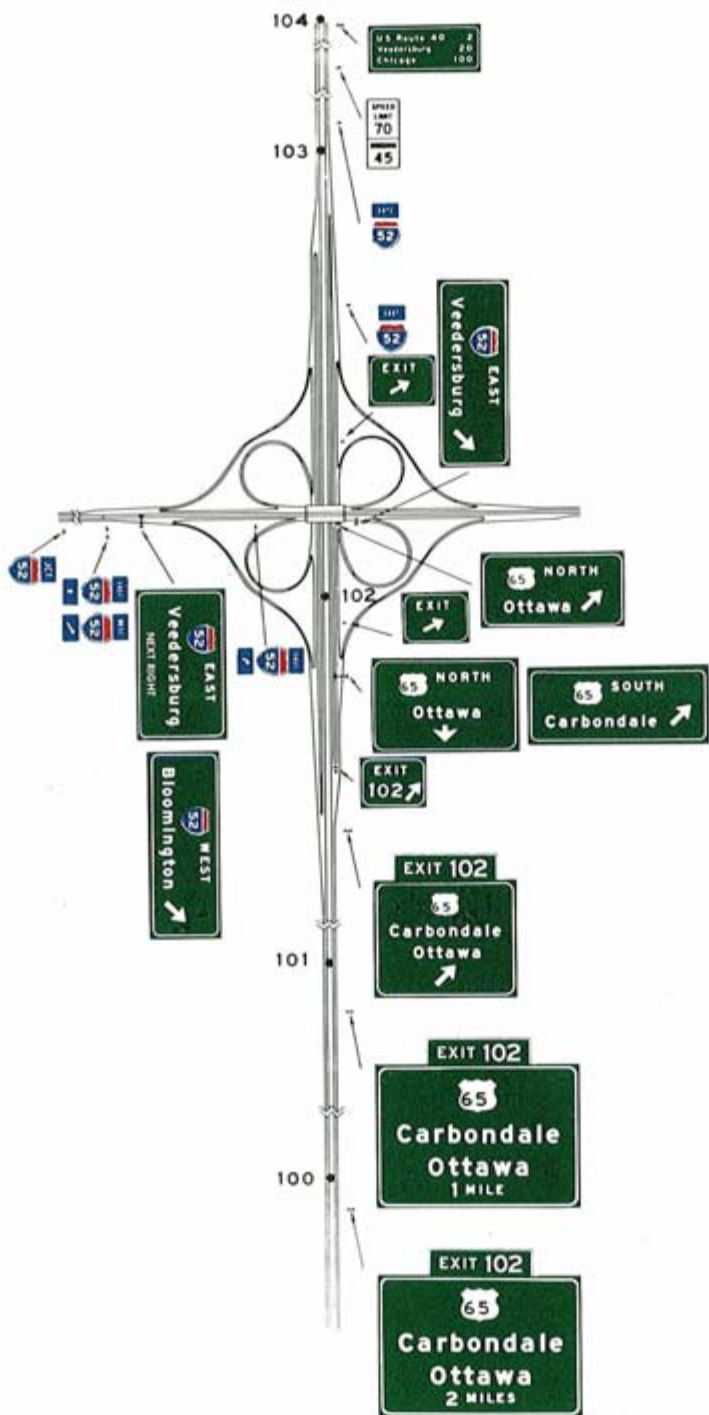


Figure 2-30. Full cloverleaf interchange with collector-distributor roads.

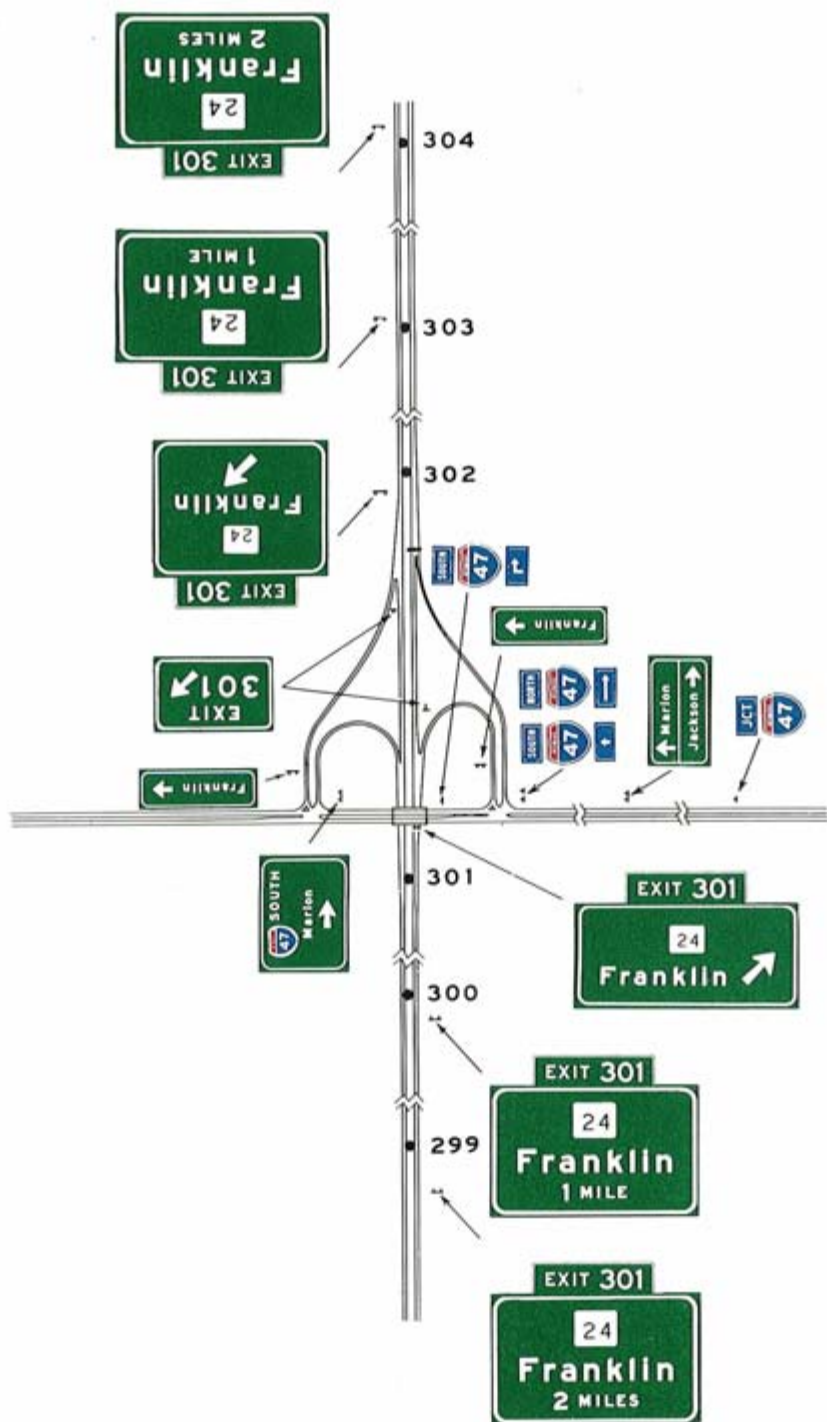


Figure 2-31. Partial cloverleaf interchange.

2F-27 Partial Cloverleaf (fig. 2-31)

As in the figure, the overhead exit direction sign should be placed on the structure if the freeway passes under the crossroad and the exit roadway is located beyond the structure. A ground-mounted gore sign may also be used.

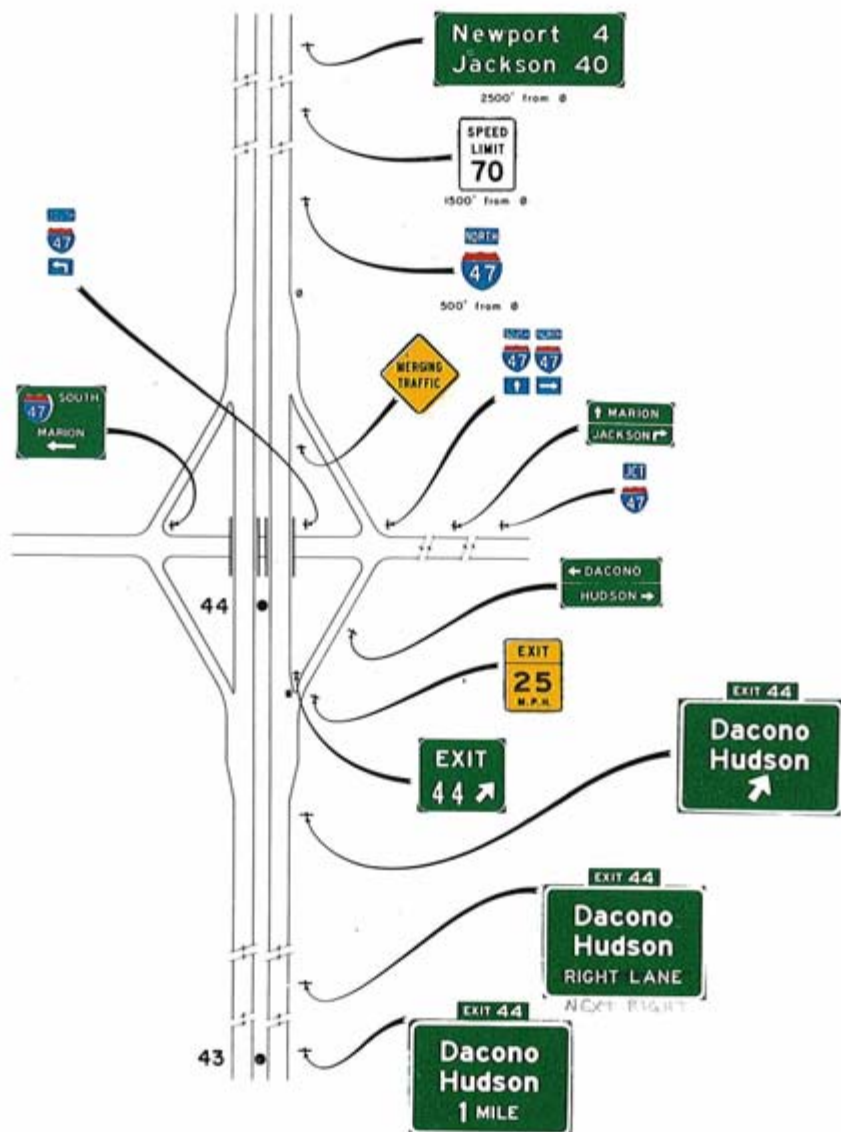


Figure 2-32. Diamond interchange.

2F-28 Diamond (fig. 2-32)

The signing layout for all interchanges having only one exit ramp in the direction of travel should be similar, regardless of the interchange type (figs. 2-31 through 2-33). The singular message EXIT shall be used on advance guide and exit directional signs. Exit numbers shall not include the cardinal initials corresponding to the direction of the cross route. Only one destination name is necessary, although two may be used.



Figure 2-33. Urban diamond interchange.

2F-29 Urban Diamond (fig. 2-33)

In urban areas, street names are often shown as the principal message in destination signs. If interchanges are too closely spaced

to properly locate the advance guide signs, they may be placed closer to the exit, and the mileage figures adjusted accordingly. Where two or more interchanges serve the same community, the interchange sequence sign is useful in helping motorists make a choice of exits, and may be incorporated in the signing layout, as shown in figure 2-33.

2F-30 Closely Spaced Interchanges (fig. 2-34)

When a series of interchanges is closely spaced, the advance guide sign for the next interchange may be mounted on an overhead structure at the theoretical gore point for the preceding interchange. Information for more than two exits shall not be shown on such signs.

Interchange sequence signs should be utilized, showing street names and distance for the next three exits, as shown in figure 2-34.

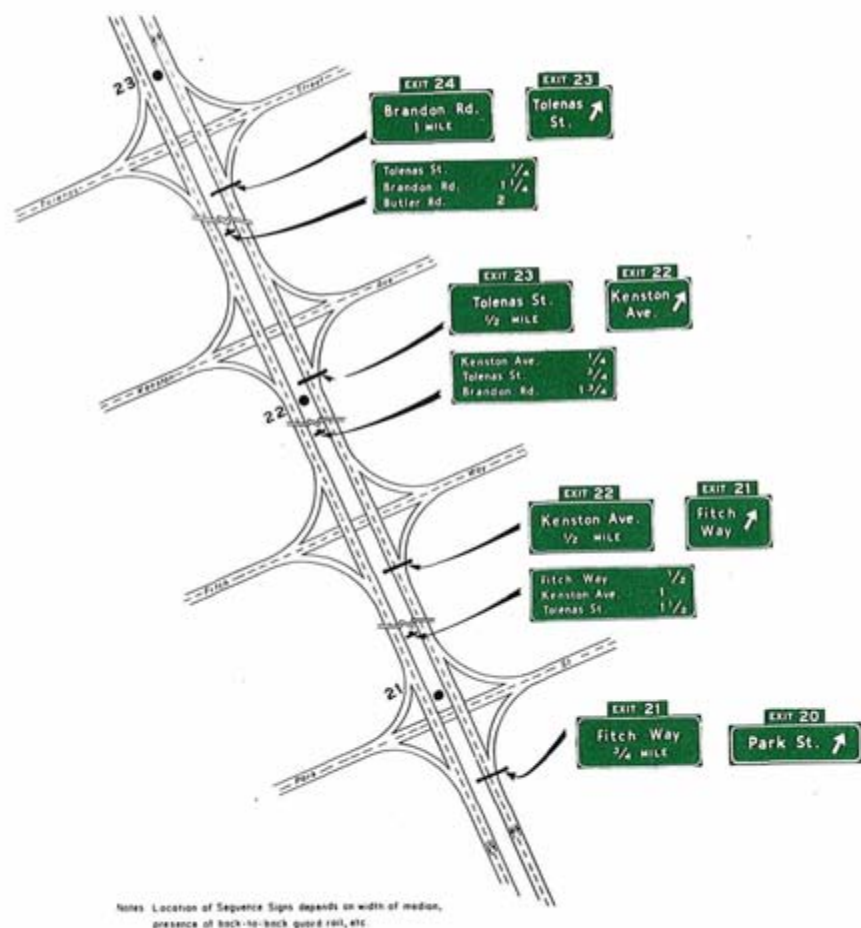


Figure 2-34. Series of closely spaced interchanges requiring sequence signs.

2F-31 Minor Interchange (fig. 2-35)

A lower standard of signing is prescribed for a minor interchange because such an interchange customarily serves low volumes of local traffic only. The size of messages to be used is shown in table II-2.

At least one advance guide sign and a ground-mounted gore sign shall be placed at a minor interchange, as shown in figure 2-35.

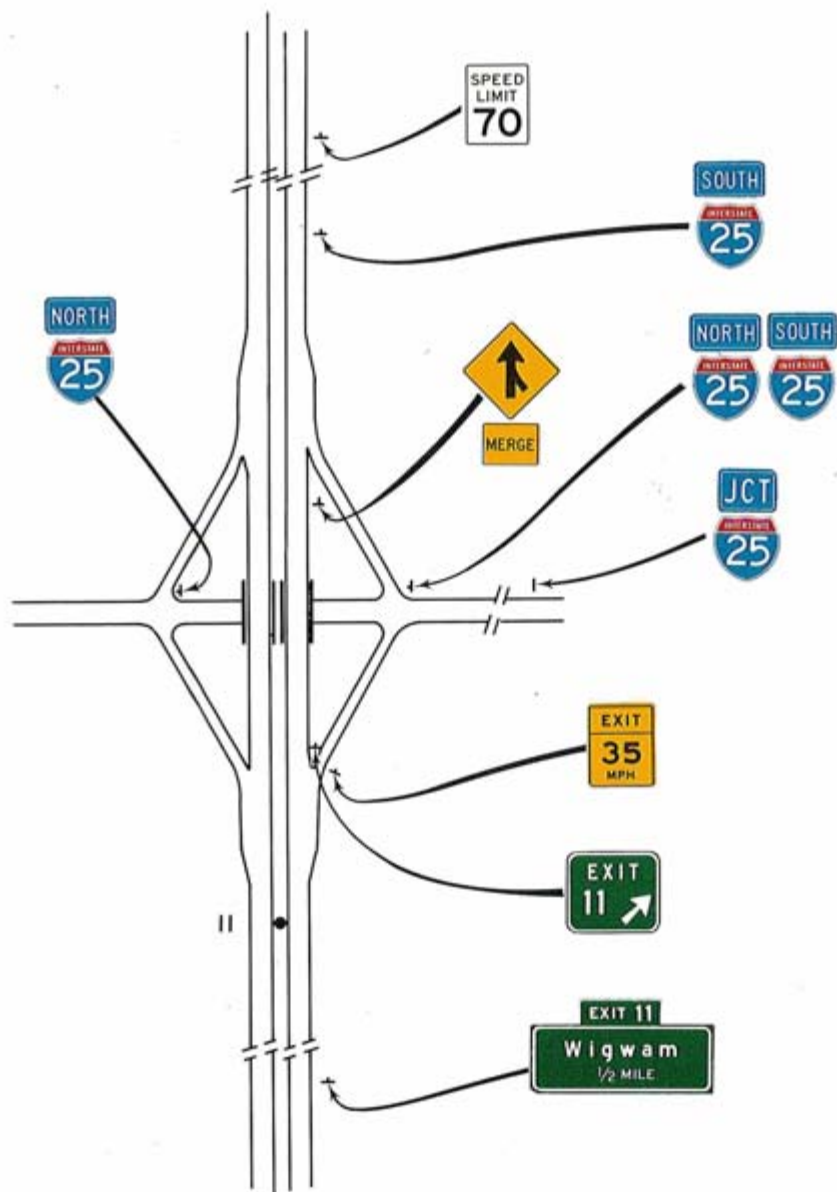


Figure 2-35. Minor interchange.

2F-32 Signing for Services (fig. 2-36)

Inasmuch as freeways are considered here to be highways with full control of access, it is assumed that generally there will be no commercial services available to the traveler between interchanges. It is expected that adequate fuel, motor services, food service and lodging will be available near most major interchange sites. It is also assumed that service signing will not be required in urban areas.



Figure 2-36. Motorist services signs.

However, on those rural sections where such services are infrequent, the driver will need information to enable him to plan his stops.

Only services that adequately serve the needs of the freeway motorist should be shown. Where services are not within sight of the interchange, the road authority may elect to repeat the service signing in smaller size, on the intersecting highway, with arrows indicating the direction to the services. Service signing should only be provided at interchanges where the motorist can return to the freeway and continue in the same direction of travel.

Where road authorities elect to provide service signing there should be a statewide policy for such signing and criteria for the availability of the various types of services. The criteria should include the following:

1. *Gas (and associated services)*
 - a. Vehicle services such as fuel, oil, lubrication, tire repair and water.
 - b. Restroom facilities and drinking water.
 - c. Continuous operation at least 16 hours per day, 7 days a week.
 - d. Telephone.
2. *Food*
 - a. Licensing or approval, where required.
 - b. Continuous operation to serve 3 meals a day, 7 days a week.
 - c. Telephone.
3. *Lodging*
 - a. Licensing or approval, where required.
 - b. Adequate sleeping accommodations.
 - c. Telephone.
4. *Telephone*
 - a. Continuous operation, 7 days a week.
5. *Hospital*
 - a. Continuous emergency care capability, with a doctor on duty 24 hours a day, 7 days a week.
6. *Camping*
 - a. Licensing or approval by appropriate public agency.
 - b. Adequate parking accommodations.
 - c. Modern, sanitary facilities and drinking water.
 - d. Signs to be removed if operated on a seasonal basis only.

Freeway signs for services shall conform to the format for general motorist service signs covered in sections 2D-46 and 2E-33 and shown in figure 2-36. Letter and numeral sizes for freeway design are given in table II-2. The services available shall be shown at specific locations on the sign, and the sign space normally reserved for a given service is to be left blank when that service is not present, to

provide flexibility for the future when the service may become available. The standard display recommended is FOOD and PHONE in that order on the top line, and GAS and LODGING on the second line. Where used, HOSPITAL and CAMPING should be on separate lines.

A separate telephone sign (sec. 2D-46) with the word PHONE or the approved symbol may be erected when telephone facilities are located adjacent to the freeway at places where telephones would not normally be expected. The color, general design, location and use of the telephone sign shall conform with the provisions for service signs.

In some locations, signs may be useful to indicate that services are not available.

Tourist information centers have been constructed within rest areas on the Interstate System and other freeways and are operated either by a State or a private organization. Others have been located within close proximity to these facilities and operated by civic clubs, chambers of commerce, or private enterprise.

The following criteria for signing should prevail regardless of the location of the tourist information center:

1. Tourist information centers are regarded as motorist services; therefore, the signing would require the use of white legend and border on a blue background.

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

3. Additional criteria as developed by individual States.

4. Continuous operation eight hours a day, seven days a week. If operated only on a seasonal basis, the signs shall be removed during the off-seasons.

For freeway rest area locations, additional signing criteria are as follows:

1. The location of the advance guide, exit direction, and gore signs is to meet service signing requirements.

2. If the signing for the tourist information center is to be accomplished in conjunction with the initial signing for the rest area, the message may be placed on one sign and should be "REST AREA—TOURIST INFORMATION CENTER—____ MILE(S) or (NEXT RIGHT)."

3. If the initial rest area signing is in place, a supplemental sign should include the legend "TOURIST INFORMATION CENTER." When incorporated in existing sign installations, such panels must be attached so as not to interfere with existing breakaway support action.

4. The gore sign should contain only the legend "REST AREA" with the arrow and not be supplemented with any legend pertaining to the tourist information center.

For information centers located off the Interstate or other freeway facility, the following additional signing criteria shall apply:

1. Each State should have or develop a policy establishing the maximum distance the information center can be located from the interchange in order to be included on official signs.

2. The location of the signing shall be in accordance with requirements pertaining to service signing.

3. Signing along the crossroad should be installed to guide the motorist from the interchange to the information center.

2F-33 Specific Services Information

In addition to the general motorist services signs, State policy may prescribe the use of special panels or displays to provide motorists with specific services information, according to the national criteria for such postings given in the Federal Register, Vol. 24, No. 15, January 23, 1969.¹⁵ These installations may consist of the following:

1. Specific information panels located so as to be readable from the main traveled way approaching an interchange, giving the name, brand or trademark of the services available at that interchange; and/or

2. Roadside area information panels or displays erected in safety rest areas, scenic overlooks, roadside turnouts and similar areas, so as not to be readable from the main traveled way, and giving the name, brand or trademark of services available at interchanges preceding the next roadside area.

2F-34 Rest and Scenic Area Signs (fig. 2-37)

On the approach to rest areas, an advance guide sign shall be placed one mile or two miles in advance of the rest area. Between the advance guide sign and the gore of the rest area exit, there may be a sign reading REST AREA which shall carry either an arrow or the words NEXT RIGHT as a part of the message.

At the rest area exit, there shall be a sign with a message REST AREA together with an arrow indicating the appropriate turn as shown in figure 2-37. All signs for rest areas shall have reflectorized white letters, symbols, and borders on a blue background.

¹⁵ National Standards and Criteria for Official Highway Signs Within Interstate Rights-of-way Giving Specific Service Information for the Traveling Public, Part 22, Chapt I, Title 23—USC (1969).

Scenic area signing should be consistent with that specified for rest areas. Standard messages should read SCENIC AREA or SCENIC VIEW or the equivalent.



Figure 2-37. Freeway rest area gore sign.

2F-35 Weigh Station Signing (fig. 2-38)

Weigh station signing on freeways shall be the same as that specified in section 2D-45, except for lettering size and advance posting distance. The recommended sign layouts and posting distances for freeway application are shown in figure 2-38.

2F-36 Milepost Markers

Milepost signs shall be placed on all freeway facilities and shall conform to the general provisions for mileposts contained in section 2D-47. Markers shall contain 10-inch white numerals on 12-inch wide vertical green panels with a white border. Panels shall be

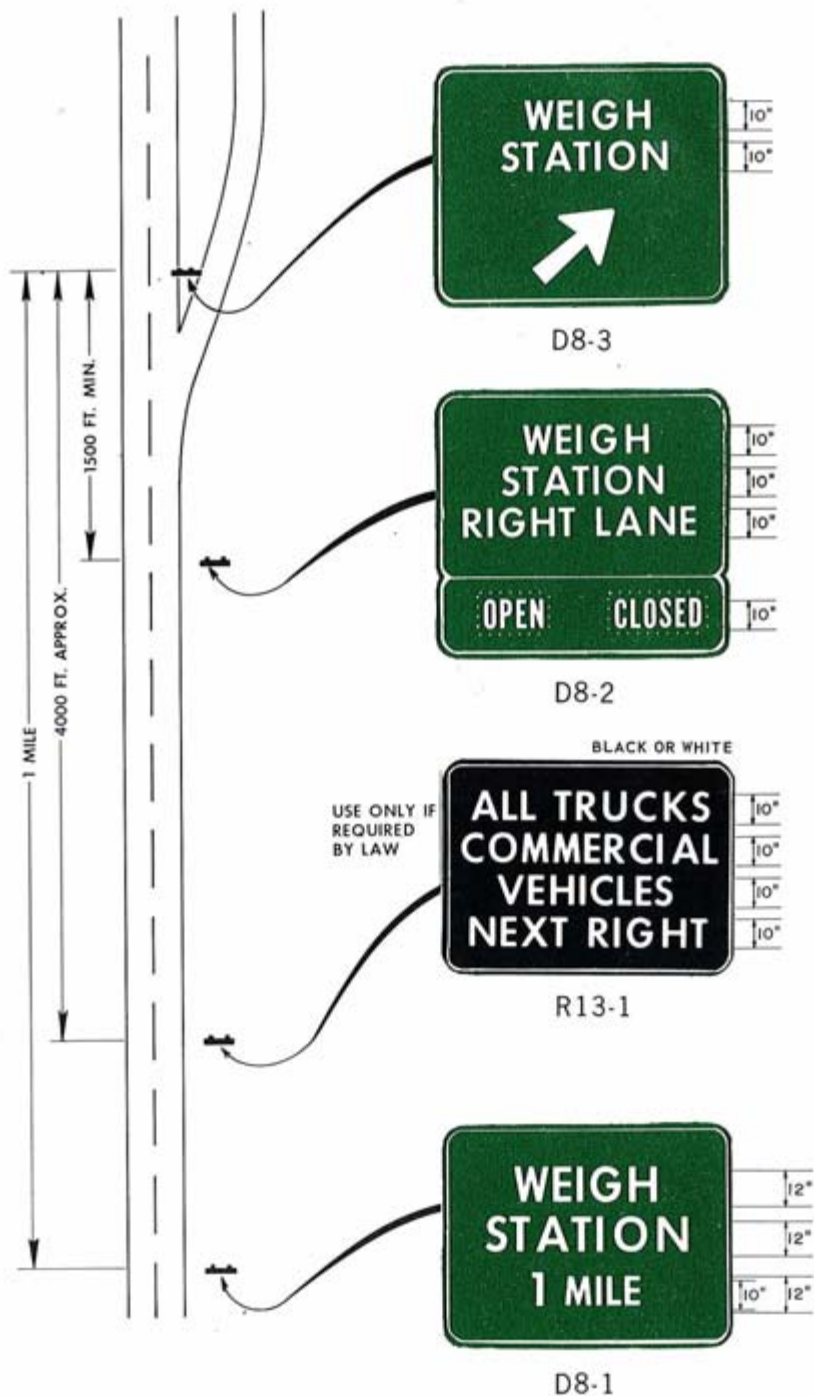


Figure 2-38. Weigh station signing on freeways.

24", 36", or 48" in length for one, two, or three digits, respectively, and contain the word MILE. Mileposts shall be located in line with delineator posts with the bottom of the marker at the same height as the delineator. The mileage numbering shall be continuous for each route within any State except where overlaps occur. With overlapped routes, continuity shall be established for one of the routes which should also have continuity in the interchange exit numbering (sec. 2F-20). On the route without milepost continuity, the first milepost beyond the overlap should be such as to 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.

2F-37 Route Markers and Trailblazers (figs. 2-39 through 2-41)

As in the case of expressways (sec. 2E-19), route markers on freeways will ordinarily be incorporated as shields or other distinctive shapes into large directional guide signs. The use of independent markers on freeways will be limited primarily to route confirmation assemblies as shown in figures 2-28, 2-30 and 2-33. The designs of route marker shields for guide sign use and independent use are shown in figures 2-39 through 2-41.

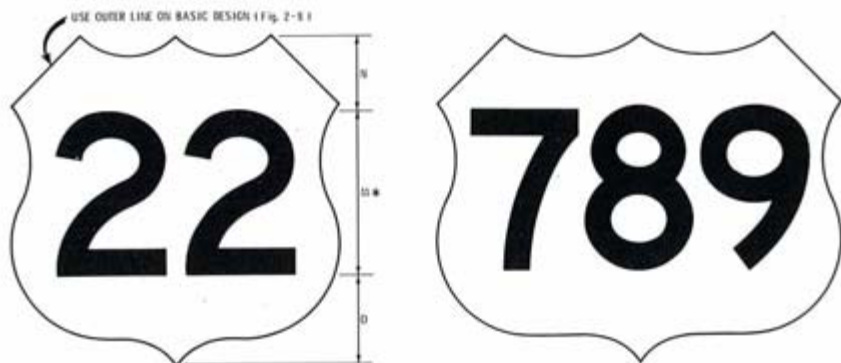
The official route marker for the Interstate Highway System is the red, white and blue reflectorized distinctive shield adopted by AASHO on August 14, 1957. Where the Interstate shield is displayed in an assembly or on the face of a guide sign with US or State route markers, the Interstate numeral should be at least equal in size to these other route markers. The Interstate shield may be either fully reflectorized or only in the numerals and border. However, where it is part of a reflectorized background sign, it shall be fully reflectorized.

The standard Trailblazer assembly (sec. 2D-34) will usually have application on roads leading to a freeway. Where there are gaps between completed sections of a freeway route, the trailblazer assembly should be used to indicate the best routing between the termini of the completed sections.

The commonly used name or trailblazer symbol for a toll facility may be displayed on free sections of the Interstate System at:

1. The last exit before entering a toll section of the Interstate System;
2. The interchange or connection with a toll facility, whether or not the toll facility is a part of the Interstate System; and
3. At other locations within a reasonable approach distance of toll facilities when the name or trailblazer symbol for the toll fa-

FOR GUIDE SIGN USE



	M*	N	O
24 x 24	12	5 1/2	6 1/2
30 x 24	12	5 1/2	6 1/2
36 x 36	18	8 1/4	9 3/4
45 x 36	18	8 1/4	9 3/4
48 x 48	24	11	13
60 x 48	24	11	13

FOR INDEPENDENT USE



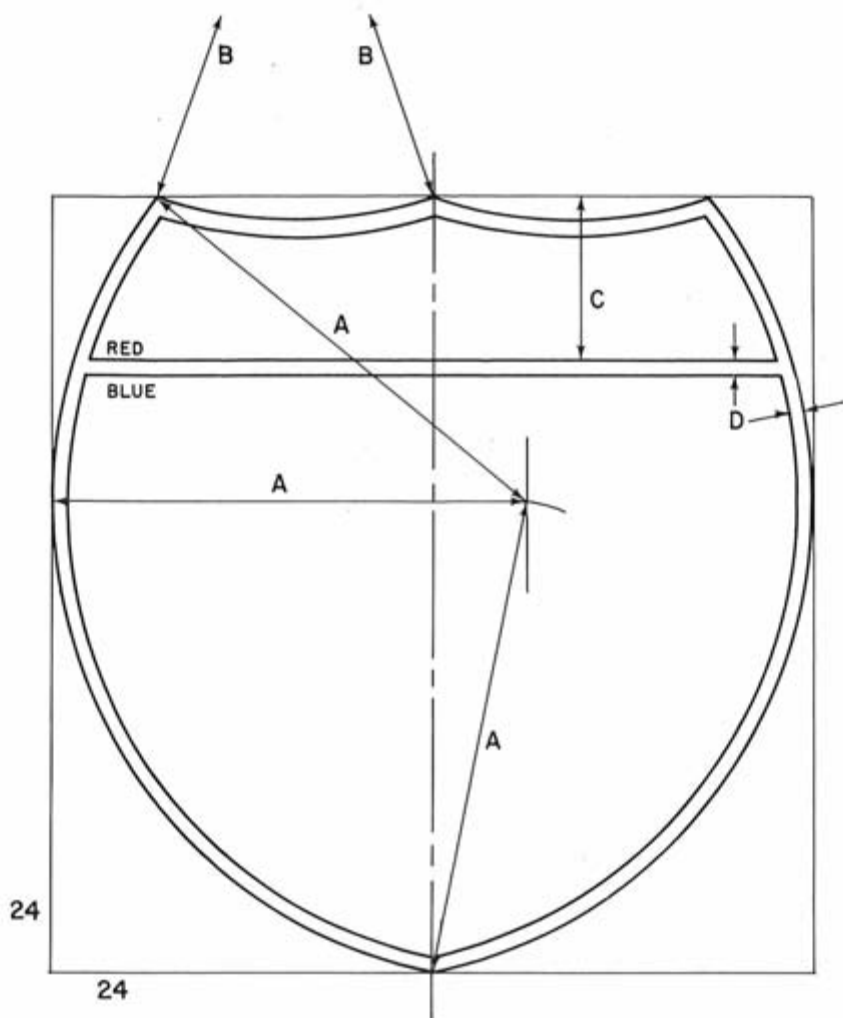
Figure 2-39. Design of U.S. shields.

cility would provide better guidance to drivers unfamiliar with the area than would place names and route numbers.

The toll facility name or marker may be included as a part of the guide sign installations on intersecting highways and approach roads to indicate the interchange with a toll section of an Interstate highway. Where needed for the proper direction of traffic, a trailblazer for a toll facility that is part of the Interstate System may be displayed with the Interstate trailblazer assembly.

2F-38 Miscellaneous Freeway Guide Signs

Certain other guide signs, in addition to those previously discussed, may be used on freeways if they do not interfere with sign-



	A	B	C	D
24 X 24	15	15	5	1/2
30 X 24	17	24	5	1/2
36 X 36	22 1/2	22 1/2	7 1/2	3/4
45 X 36	25 1/2	36	7 1/2	3/4
48 X 48	30	30	10	1
60 X 48	34	48	10	1

Figure 2-40. Design of Interstate shields.

ing for interchanges or other critical points. These include the types described in sections 2E-36 and 38.

The EXIT ONLY panel described in sec. 2E-38 may be used in either of the forms shown in figure 2-21. A down arrow shall always

be used in combination with these panels. The white arrow should be used between the separate panels EXIT and ONLY and above or below the single panel. If it is desired to utilize a full width

FOR GUIDE SIGN USE



* In a few cases numerals cannot be accommodated within the space available. For these situations, the standard Series B numeral may be reduced to Series C, or as a second choice to the next smaller height commonly available.

	SH	N	O
24 x 24	1/2	6 1/2	5 1/2
30 x 24	1/2	6 1/2	5 1/2
36 x 36	1/2	9 3/4	8 1/4
45 x 36	1/2	9 3/4	8 1/4
48 x 48	2/3	11	11
60 x 48	2/3	11	11

FOR INDEPENDENT USE



	D	E	F	G	H
24 x 24	1/2	2 1/2	1	1 1/2	10
30 x 24	1/2	2 1/2	1	1 1/2	10
36 x 36	3/4	3 3/4	1 1/2	2 1/4	15
45 x 36	3/4	3 3/4	1 1/2	2 1/4	15
48 x 48	1	5	2	3	20
60 x 48	1	5	2	3	20



SPUR

Figure 2-41. Interstate Shields and Off-Interstate markers.

yellow background on the bottom of the guide sign, a black down arrow of standard dimensions shall be placed between the words EXIT and ONLY.

Supplemental guide signs with a white legend and border on a brown background may be used when a park or recreational area is being signed as a significant destination for users of the Interstate and other freeway systems. The same color combination can be used for advance guide and exit direction signs for an interchange where the crossroad leads exclusively to a park or recreational area.

Where the crossroad is a numbered route or leads to other destinations, the advance guide and exit direction signs shall retain the white on green color combination. All ground-mounted gore signs shall remain with a white legend on a green background. The background color of interchange exit number panels shall match the color of the guide sign proper.

2F-39 Signing on Freeway Approaches

Freeway signing standards may have to be extended to the approach roads for some of the major interchanges. Frontage roads need not be signed to freeway standards, but otherwise should be consistent with requirements for roadways of their particular class.

G. SIGNING FOR CIVIL DEFENSE

2G-1 Civil Defense Emergencies

Advance planning of local action in response to warning of an attack is the responsibility of State and local authorities. The Federal Government will provide guidance to the States as necessitated by changing circumstances. Civil defense signing is a tool of contingency planning. It is not possible to be sure in advance that any hazardous conditions will, or will not occur at any given place. First emphasis must be given to planning the use of the best shelter available at any time. The fallout shelter is the core of civil defense.

Mass evacuation is not a fruitful planning contingency by itself. Evacuation planning without shelter planning is self-defeating. Signing for preattack evacuation to distant shelters may be thought desirable as an alternative for some communities. Contingency planning for postattack evacuation is desirable for all communities. Plans have been developed for the control of highway traffic under emergency conditions such as could result from accidental disaster or enemy attack. Particularly these plans are concerned with possibilities of nuclear warfare.

In the event of disaster there will be a closing of highways that cannot be used, a controlled operation of certain designated high-