910 Signing and Pavement Markings

910.1 General

The New Mexico Department of Transportation (NMDOT) uses signing as the primary mechanism for regulating, warning, and guiding traffic. Signing must be in place when any section of a highway is open to the motoring public.

The primary function of pavement markings is to provide the visual information needed by a driver to operate a vehicle in a variety of situations. Pavement markers and delineators use retroreflectance, which is the reflecting of light from a vehicle's headlights back to the driver, to enhance an object's visibility at nighttime. It is important to maintain an adequate level of retroreflectivity for both traffic signs and pavement markings for motorists during hours of darkness and during adverse weather conditions.

910.2 References

The following references are used in the planning, design, and construction of signing and pavement markings installed on state highways. Conformance with federal and state laws and codes is required.

910.2.1 Federal/State Laws and Codes

- New Mexico Administrative Code (NMAC) Title 18, Transportation and Highways; Chapter 20, Traffic Safety (18.20 NMAC); and Title 18 Chapter 21, Traffic Control Signage (18.21 NMAC).
- New Mexico Statutes Annotated (NMSA) Motor Vehicle Code, Sections 1 through 8 of Chapter 66 (Section 66-7-101 requires the

State Transportation Commission to adopt a manual and specifications for a uniform system of traffic control devices).

910.2.2 Design Guidance

- American Association of State Highway and Transportation Officials (AASHTO) Roadside Design Guide, current edition.
- A Policy on Geometric Design of Highways and Streets (Green Book), AASHTO, current edition.
- Guide for the Development of Bicycle Facilities, AASHTO, current edition.
- Guide for the Planning, Design, and Operation of Pedestrian Facilities, AASHTO, current edition.
- Guidelines for the Selection of Supplemental Guide Signs for Traffic Generators Adjacent to Freeways, AASHTO, current edition.
- Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), United States Department of Transportation (USDOT), Federal Highway Administration (FHWA), current edition.
- NMDOT Approved Products List.
- NMDOT, IDD-2014-03 Sign Sheeting Requirements, 2014.
- NMDOT Standard Drawings.
- NMDOT Standard Specifications for Highway and Bridge Construction, current edition.
- Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way, (PROWAG), SNPRM, 2013.
- Retroreflective Sheeting Identification Guide, FHWA, September 2005.
- Standard Highway Signs Manual and Supplement, FHWA, 2012.
- Traffic Control Devices Handbook, Second Edition, Institute of Transportation Engineers (ITE), 2013.

- Travel Better, Travel Longer: A Pocket Guide to Improve Traffic Control and Mobility for Our Older Population, FHWA-OP-03-098, 2003.
- Uniform Vehicle Code (UVC) and Model Traffic Ordinance, National Committee on Uniform Traffic Laws and Ordinances, 2000 edition.

910.3 Definitions

- **Conventional road** - A street or highway other than a freeway or expressway.
- **Expressway** - A divided highway with partial control of access.
- **Freeway** - A divided highway with full control of access.

910.4 Development of Signing Plans

The determination of the particular sign(s) to be applied to a specific condition shall ordinarily comply with the MUTCD, the Standard Highway Signs Manual and Supplement, the NMDOT Sign Code Listing, and the criteria set forth in the following sections.

910.4.1 General

910.4.1.1 Requests to Experiment with Unique Traffic Control Devices

Designers who wish to experiment with a traffic control device or request an official change to or an interpretation of the requirements of the MUTCD shall do the following through the NMDOT Project Development Engineer (PDE):

- Submit a request in writing to the State Traffic Engineer with the Traffic Technical Support Bureau, who will coordinate with the FHWA. The request must include information in accordance with the MUTCD relating to interpretations, experimentation, changes and interim approvals.
- Identify the information that will be compiled during any experiment identified in the request, as the collection of any data and the development of any follow-up report will be a conditional part of the request.
- If appropriate, the State Traffic Engineer will forward the request to FHWA.

910.4.1.2 Standardization of Application

The use of nonstandard signs is strongly discouraged and their use requires the approval of the State Traffic Engineer. In situations where the designer believes that unique sign messages are required, approval of the State Traffic Engineer is required to develop and use a special sign message, but any new sign must be of the same shape and color as standard signs of similar type.

Guide signing provides the motorist with directional information to destinations. This information is always presented in a consistent manner. In some cases, there are specific laws, regulations, and policies governing the content of the messages on guide signs. All proposed guide signs for a project require the approval of the District Traffic Engineer.

Highway signs shall not be used for advertising or for any purpose other than related to traffic control. Tourist-oriented directional signs (TODS) and specific service signs are motorist service signs, and not advertising signs.

910.4.1.3 Design of Signs

Uniform designs and applications of traffic signs help everyone, because as drivers we can see and understand the sign messages, and the systematic advance placement of warning signs provides sufficient notice for us to take appropriate actions. To that end, the MUTCD establishes the basic framework for the design and application of signs, and the Standard Highway Signs Manual and Supplement provides detailed drawings of the standard signs, alphabets, symbols, and arrows.

Like all other states, New Mexico has a need for unique signs in order to satisfy state legislation and NMDOT initiatives, and the need to personalize some signs. Many of these unique signs are not in the Standard Highway Signs Manual and Supplement but are included in the NMDOT Sign Code Listing.

The NMDOT Sign Code Listing includes a list of signs approved for use in New Mexico. Those that are New Mexico sign designs always have the "NM" identifier in the sign code. In addition to the sign code, the NMDOT Sign Code Listing includes information such as sign width and height, size, route number for shields,

numerals for speed signs, "R" or "L" for right or left, and suggested application on what type of roadway. The NMDOT Sign Code Listing also provides sign face layout details for some of the signs not included in the Standard Highway Signs Manual and Supplement.

On rare occasions it may be necessary to design a unique regulatory or warning sign that is not in either the Standard Highway Signs Manual and Supplement or the NMDOT Sign Code Listing, and then obtain the State Traffic Engineer's approval as part of the approval of the design plans. In these situations, the designer should do the following:

- Adhere to the basic principles established in the MUTCD relating to sign shape, color, legend, size, and application.
- Ensure that word messages are clear so that all motorists have the same understanding of the sign message. Avoid confusing abbreviations, words, and phrases listed in the MUTCD.

910.4.1.4 Bilingual Messages

One of the benefits of using international style signs is the benefit of universally recognized sign shapes, colors, and symbols. Although some sections of New Mexico have extensive populations that are not fluent in English, these drivers can understand most signs. For example, a STOP sign's shape and color is universal; therefore, there is no need to use bilingual STOP signs with messages such as "STOP / ALTO".

To assist drivers with limited knowledge of the English language, symbol-type signs should always be used when they are available. If limited understanding of some signs may be a significant problem, the State Traffic Engineer should be contacted to discuss the possibility of using a limited number of bilingual signs.

910.4.1.5 Retroreflection and Illumination

The MUTCD requires traffic signs to be either retroreflective or illuminated to show the same shape and color both day and night. Because it is more cost effective to make signs retroreflective than it is to illuminate them, NMDOT requires retroreflective sheeting material on all signs. The designer should reference the MUTCD,

NMDOT IDD-2014-03, and the NMDOT Standard Drawings and Specifications for retroreflectivity sheeting material standards acceptable for NMDOT use.

Because of the NMDOT's specifications for retroreflective sheeting materials, sign lighting is not required.

910.4.1.6 Standardization of Location

The longitudinal spacing between signs in a series may vary but as a rule, the spacing should be as follows:

- On freeways and expressways - approximately 1,000 feet, but a minimum of 800 feet.
- On conventional roads - approximately 200 feet. Greater distances, such as 500 feet, are recommended on high-speed conventional roads, and it may be necessary to use reduced spacing in urban areas.

While it is preferable to erect signs individually (except where one sign supplements another or where guide signs must be grouped), it is sometimes advantageous to group signs together to eliminate extra posts. This is particularly true in urban areas where the number of signs is greater than the space available. As a rule, a minimum 200-foot spacing should be maintained between sign assemblies. Urban areas, in particular, may require a case-by-case review.

Because it is not always possible to install signs at their normal location, the NMDOT has established the following standard priority order:

1. **Regulatory signs** - Stop, yield, turn prohibitions, lane restrictions, and speed limit, followed by parking restrictions and various other regulatory signs.
2. **Warning signs** - Curve, cross road, stop ahead, yield ahead, signal ahead, merging traffic, road narrows, narrow bridge, ramp narrows, divided highway, and various other warning signs.
3. **Guide signs** - Route markers, trailblazers, destination, advance guide, and exit directional.

4. **General service signs for emergencies** - Hospital, pharmacy, and police.
5. **General service signs** - Tourist information.
6. **Public transportation signs** - Park and ride, bus stop, and light rail.
7. **Traffic generators signs** - Airports, college or university, military bases, convention centers, stadiums, state and national parks, museums, municipal golf courses, and ski areas.
8. **General information signs** - County line, reservation boundaries, city, or village, reference location (i.e., mileposts).

If reference location signs cannot be located within 50 feet of the true location, they should not be placed at all. The NMDOT Standard Drawings provide additional information for sign installation and placement.

910.4.1.7 Sign Upgrades

When developing a signing plan for a project on an existing roadway, it is very important not to just replace existing signs with the same types of signs and in the same locations. Instead, the designer should consider making changes to the signs to conform to the current MUTCD and NMDOT standards. It is also important to remove all non-essential signs.

The following criteria should be used when determining whether to replace existing signs with an upgrade:

- Lack of nighttime retroreflectivity
- Substantial damage, vandalism, or deterioration
- Age of signs
- Change in sign use policy
- Improper location
- Message or destination changes necessary to satisfy commitments to public or local agencies
- Substandard mounting height
- Change in jurisdiction (e.g., a county road becomes a state route)
- Sign inconsistent with proposed improvements

910.4.1.8 Sign Materials

The most widely used sign blank materials are aluminum, steel, and plywood; however, aluminum is currently the only substrate approved for sign panels by NMDOT. Aluminum is lightweight and does not rust, but it requires cross-bracing or extrusions for the larger-size signs. Aluminum provides a long life span and can be straightened or refaced as needed.

The thickness of aluminum sign panels shall be 0.125-inch; 0.080-inch aluminum shall be used if the width of the sign is 24 inches or less. All blanks shall be 6061-T6 aluminum alloy.

Specifications for sign materials are in NMDOT's Standard Specifications for Highway and Bridge Construction; the NMDOT Approved Products List identifies those materials approved for use in New Mexico.

910.4.1.9 Sign Installations – Up to 50 Square Feet

Generally, signs with areas up to 50 square feet shall be constructed with flat panel aluminum substrate and mounted on a single post, double post, or up to a maximum of three posts depending on sign area, as shown in the NMDOT Standard Drawings.

Signposts shall be approved breakaway posts, and shall consist of either of the following:

- Square tubing (1.75-inch to 2.5-inch) inserted into a larger base post or attached to an approved slip base connection.
- U-channel (four pounds per foot) with a lap-splice or attached to an approved slip base connection. Signs shall not be installed on a single U-channel signpost because they lack torsional resistance, and signs tend to flutter in the wind and eventually blow over.

910.4.1.10 Sign Installations – Greater Than 50 Square Feet

All signs with an area greater than 50 square feet shall be fabricated from extruded aluminum panels that are 12 inches in height; however, one, six-inch high extruded aluminum panel shall be used on primary and secondary panels to accommodate sign heights that are not an even increment of 12 inches, such as a 30-inch high exit

panel. The maximum dimensions for an extruded panel sign are 30 feet wide and 16 feet high.

The majority of extruded panel signs used in New Mexico are located on either freeways or expressways. All extruded panel signs shall be mounted on two or three I-beam posts with a 90 mile per hour (mph) wind load rating. All sign installations need to be on an approved breakaway system and in accordance with the NMDOT Standard Drawings.

The designer should refer to the AASHTO Roadside Design Guide for sign clear zones based on traffic volumes and embankment slopes. Although signs with 36-foot setbacks do not technically need guardrail protection, when possible, they should be located behind existing or required roadside barriers. When installed behind guardrail, the sign support must be outside the anticipated maximum deflection of the barrier to ensure that the barrier functions properly if hit, and to prevent damage to the sign and sign supports.

910.4.1.11 Overhead Sign Installations

The MUTCD provides a list of locations where designers should consider overhead signs. When used, overhead signs shall be installed on tubular post support systems. All overhead sign structures require shielding in the form of guardrail, barriers, attenuators, or a combination of properly placed devices.

New Mexico uses the following four types of overhead sign support systems; the NMDOT Standard Drawings show details for the placement of overhead signs on the supports

- **Cantilever sign support** is generally limited to one sign panel centered directly over the appropriate lane, and is primarily for right- or left-hand lane drops, and exit direction signs.
- **Butterfly sign support** is limited to one sign panel per direction of travel, typically in the median for interchange sequence signs on urban freeways or expressways. Butterfly sign supports shall not be installed in gores or other unprotected areas.
- **A two-post sign bridge** may span up to 156 feet over multi-lane roadways, especially urban freeways and expressways where

there is limited space for sign placement (e.g., closely spaced interchanges, for sign spreading, where multiple exits exist, or where there are complex or unusual roadway geometrics). Where a median is 12 feet wide or narrower, sign bridges should generally span the entire roadway without a center support. Sign bridges may include signage for both directions of travel.

- **Bridge-mounted signs** are signs attached to highway bridges by use of a structural steel mounting frame, as necessary. Mounting signs on highway bridge overpasses is not a preferred method because it affects the bridge's aesthetics.

910.4.2 Regulatory Signs

910.4.2.1 SPEED LIMIT Sign (R2-1)

New Mexico has four statutory speed limits identified in paragraphs 1, 2, 3, and 4 of Subsection A of Section 66-7-301 NMSA, but nothing in this law explicitly states that speed limit signs are required for enforcement of the 30 mph statutory speed limit in business or residence districts or the 75 mph speed limit.

The speed regulation (Section 66-7-301) states:

- No person shall drive a vehicle on a highway at a speed greater than:
  - 15 mph on all highways when passing a school while children are going to or leaving school and when the school zone is properly posted.
  - 30 mph in a business or residence district.
  - 55 mph on a county road without a posted speed limit.
  - 75 mph.
  - The posted speed limit in construction zones posted as double fine zones or other safety zones posted as double fine zones as designated by the [state] highway and transportation department, provided that the posted speed limit shall be determined by an engineering study performed by the state highway and transportation department.

Based on a traffic engineering study, the NMDOT may post speed limits different than those authorized in Section 66-7-303 NMSA, if the statutory speed is greater or less than is reasonable or safe under the conditions found to exist upon any part of a state highway. The study shall be prepared under the direction of the District Traffic Engineer and approved by the State Maintenance Engineer. The study shall conclude with a speed zone resolution, and both the study and the resolution shall be filed with the Traffic Safety Bureau. No speed limit shall be greater than 75 mph.

Speed limit signs should not be installed until after the speed zone study is approved and the study and resolution are filed with the Traffic Safety Bureau.

Speed limits should be based on the following factors:

- Observed speeds
- Roadway geometry
- Roadside environment
- Building setbacks
- Driveway and intersection density
- Crashes
- Presence of multimodal traffic

The District Traffic Engineer can provide the standard speed study form to the designer. Although technicians can collect spot speed data required for a speed study, only a qualified traffic engineer can actually recommend speed limits based on analysis of the data and through personal observations. If there are no extenuating circumstances, the speed limit should be established to the nearest five mph increment at or below the 85th percentile speed. Extenuating circumstances may be derived from any of the factors listed above.

When a reduction in consecutive posted speed limits would be greater than 15 or 20 mph, additional time should be provided for motorists to reduce their speed without applying their brakes by either:

- Reducing the speed limit in increments by establishing an intermediate transitional speed zone about one-fourth mile in length.
- Using the speed reduction (W3-5) sign to provide additional advance warning.

The following signs may be mounted on the same post as the speed limit (R2-1) sign:

- Truck speed limit (R2-2)
- Nighttime speed limit (R2-3)
- Minimum speed limit (R2-4)
- Safety corridor (SC-NM-06a)

An R2-1 sign should be placed at every location where the speed limit changes. Also, R2-1 signs should be installed at intermediate locations such as beyond major intersections to inform drivers of entering vehicles of the speed limit, and at other locations where it is necessary to remind the road users of the applicable speed limit. However, speed limits signs should not be placed immediately in advance of a curve or turn, especially because warning signs with a conflicting advisory speed may be present, for example, a lower advisory speed on an Advisory Speed (W13-1) plaque.

Neither the MUTCD nor New Mexico statutes contain any maximum spacing requirements for Speed Limit (R2-1) signs. In the absence of specific spacing requirements, Exhibit 910-1 provides suggested spacing of R2-1 signs.

Exhibit 910-1
Suggested Spacing for Speed Limit Signs

Road Type	Normal Placement	Maximum Interval (miles)
Urban conventional roads	At the beginning of the speed limit, at municipal boundaries, and after each major intersection	0.5 miles
Rural conventional roads, 40 mph and less	At the beginning of the speed limit, at municipal boundaries, and after each major intersection	1 mile
Rural conventional roads, 45 mph and greater	At the beginning of the speed limit, at municipal boundaries, and after each major intersection	3 miles
Expressways	At the beginning of the speed limit, at the entrance to the state, after each major intersection, and after each interchange	5 miles
Freeways	At the entrance to the state, at the beginning of the speed limit, and after each interchange	10 miles

On expressways and freeways, an R2-1 sign should be placed about 1,000 feet after the confirmation route marker after each interchange when space is available.

It is also very important that appropriate speed limit signs be in place within safety corridors, as shown in the NMDOT Standard Drawings.

910.4.2.2 New Mexico Speed Limit Notification Signs

Section 66-7-102.1 NMSA, states that the State Transportation Commission shall erect billboard-size signs at entry points into New Mexico on interstate and major state highways, warning and informing motorists of New Mexico speed limits, the fines for speeding in New Mexico, and New Mexico's commitment to enforce its speed limits. The sign should be located within the first mile inside the New Mexico state line.

In rural districts on US and state numbered routes, R2-1 signs indicating the statutory speed limits should be placed at entrances to municipal boundaries. A special oversize sign is often desirable at these locations.

910.4.2.3 DO NOT PASS Sign (R4-1)

Although signs are not legally required to supplement a no-passing zone pavement marking in accordance with Section 66-7-315 NMSA, designers are encouraged to, as a minimum, place a sign at

the beginning of a no-passing zone on a two-lane two-way roadway to advise motorists of the no-passing restriction.

When placing a sign, the left-side-mounted NO PASSING ZONE (W14-3) pennant should be used instead of the DO NOT PASS (R4-1) sign for the following reasons:

- The NO PASSING ZONE (W14-3) pennant has a unique shape that cannot be confused with any other sign. In effect, the W14-3 pennant is a large yellow arrowhead pointing back to the right side of the roadway, and is recognizable from a distance of approximately 1,000 feet. On the other hand, from a distance, the DO NOT PASS (R4-1) sign looks like many other regulatory signs, and the standard six-inch legend is not legible until motorists are within about 240 feet.
- Signs on the left side of the roadway are more visible when passing because the vehicle in the right lane frequently reduces visibility to the right side of the roadway.

If a no-passing type sign is to be installed within a no-passing zone on a two-lane, two- way highway to remind motorists of the restriction, the only acceptable sign is the DO NOT PASS (R4-1) sign.

910.4.2.4 DO NOT ENTER Sign (R5-1)

A DO NOT ENTER (R5-1) sign may be mounted back-to-back with a STOP (R1-1) or YIELD (R1-2) sign on a one-way roadway such as an off-ramp if the R5-1 sign is smaller than the STOP or YIELD sign and is positioned in such a manner that it does not obscure the outline of the STOP or YIELD sign. The NMDOT Standard Drawing "Typical Wrong Way Signing for Diamond Interchange Only" provides additional information for wrong way signing.

910.4.2.5 ENGINE BRAKE USE PROHIBITED Sign (R5-NM-2b)

When a local ordinance prohibits the use of engine brakes, the NMDOT may install the ENGINE BRAKE USE PROHIBITED (R5-NM-2b) sign at the municipal limits. The ordinance number must be identified on the sign.

910.4.2.6 Weigh Station Signing

Standard signing for a Weigh Station shall include the following signs:

- Advance sign (D8-1)
- Regulatory sign (R13-NM-2)
- Exit direction sign (D8-2)
- Gore sign (D8-3)

The MUTCD provides an example of weigh station signing; however, New Mexico State Law requires the R13-NM-2-84 sign (in lieu of the R13-1 sign shown in the MUTCD) on conventional roads for all weigh station signing because it contains the text approved by the New Mexico State Transportation Commission. On freeways and expressways, R13-NM-2-198 is required by state law for use instead of R13-1.

910.4.2.7 NO TURN ON RED (R10-11) Signs

In accordance with Section 66-7-105 NMSA, making a right turn on red after stopping (or on a one-way street, making a left turn on red after stopping), may be prohibited by posting an R10-11 series sign at the intersection on the basis of an engineering study. The MUTCD, in the guidance statement for this sign series, lists several conditions that may warrant prohibiting a turn on red. To warrant the turn prohibition, the study shall find that at least one of the conditions exists at the turn location. The study shall be documented and saved in the design file.

910.4.2.8 Other Regulatory Signs

The NMDOT Sign Code Listing includes many other regulatory signs that are not in the MUTCD. For example, the following signs may be used when experience indicates that signs may be necessary to provide public notice for enforcement purposes:

- IT'S OUR LAW (R16-NM-2)
- Do Not Drink and Drive (R16-NM-5)
- DO NOT DRINK AND DRIVE (R16-NM-5a)
- Operation DWI, Checkpoints Everywhere (R16-NM-6)
- ACCESS CONTROLLED (R16-NM-10)

- STATE PROPERTY DO NOT DISTURB (R16-NM-21)
- TREE CUTTING PROHIBITED (R16-NM-23)
- REMOVING ROCK PROHIBITED (R16-NM-24)
- DO NOT THROW LITTER (R16-NM-25)
- DO NOT LITTER $300 FINE (R16-NM-25a)
- NO DUMPING ALLOWED (R16-NM-26)
- NO FISHING FROM BRIDGE (R16-NM-28)

910.4.3 Warning Signs

The standard warning signs described in the Design Manual and in the MUTCD cover the majority of the situations likely to be encountered when developing signing plans. If there is a need for other warning signs, they shall be of standard warning sign color and shape and have a brief and easily understood legend consistent with the MUTCD. The use of the signs shall be based on a traffic engineering study and/or on engineering judgment. The designer may also propose combinations of messages to eliminate unnecessary warning signs.

Before fabrication of any warning sign that is not included in the Standard Highway Signs Manual and Supplement or the NMDOT Sign Code Listing, the State Traffic Engineer must approve the sign face drawing.

910.4.3.1 Size of Warning Signs

At a minimum, the size of warning signs shall comply with the size identified in the NMDOT Sign Code Listing for the type of roadway: conventional roadway, expressway, or freeway. Oversized and larger size diamond-shaped signs may be specified where engineering judgment indicates that there is a need for increased emphasis, better recognition, or increased legibility.

On high-speed conventional roads (two lanes with a speed limit of 40 mph or higher, or more than two lanes and a speed limit of 35 mph or higher), the designer should use the next larger size (e.g., 48 inches by 48 inches instead of 36 inches by 36 inches) warning sign than the size listed in the NMDOT Sign Code Listing, and any associated plaques, for conventional roads.

910.4.3.2 Placement of Warning Signs

On relatively straight, rural conventional roads without development, there are few reasons for warning signs. However, on winding rural roads, there is a natural tendency to install too many warning signs when a better practice may be to use signs such as the winding road (W1-5) sign with a distance plaque (e.g., W7-3a) with a message such as NEXT 2 MILES.

Similarly, in developed areas, there is a tendency to install signs for intersections, sometimes even when the intersections are visible. It is not recommended to place four or five warning signs within a mile in the same direction of travel.

The MUTCD provides recommended sign placement distances. Engineers should treat the advance placement distances in the MUTCD as minimums, and are encouraged to use longer distances.

910.4.3.3 Winter Weather Signs

In addition to the BRIDGE ICES BEFORE ROAD (W8-13) sign included in Section 2C.28 of the MUTCD, in New Mexico the ICY (W24-NM-12) and WATCH FOR SNOWPLOWS (W24-NM-13) signs may be used where applicable.

Because these signs must be covered or closed during seasons of the year when the message is not relevant, the sign must be designed so that the bottom half of the sign folds upward; the top of the signpost(s) must not extend above the sign when it is folded.

910.4.3.4 Lane Ends Sign (W4-2)

The W4-2 sign shall be used within a truck-climbing lane in accordance with NMDOT Standard Drawings. The W4-2 sign shall not be used to indicate the end of an acceleration lane; instead, the Merge (W4-1) sign shall be used in this situation.

910.4.3.5 Distance Plaques

NMDOT's larger NEXT XX MILES (W7-NM-3a) plaque (measuring 36 inches by 18 inches) shall be used with the 48 inches by 48 inches Hill (W7-1) sign, or other 48-inch warning signs as applicable, in lieu of the smaller NEXT XX MILES (W7-3a) plaque.

910.4.3.6 Advisory Speed Plaque

An advisory speed is a recommended safe speed; therefore, an advisory speed is only a recommendation. If a regulatory speed limit, as displayed by black-and-white signs, is not appropriate at a turn or curve, the appropriate advisory speed should be used. The W13-1 plaque shall not be mounted or used as a primary sign and, when used, it shall be mounted below the warning sign on a common post. The size of the plaque varies according to the size of the warning sign it supplements.

The most common application of the Advisory Speed (W13-1) plaque is below the Turn (W1-1) sign or Curve (W1-2) sign, but a W13-1 plaque may be installed below any warning sign.

Advisory speed plaques may be used at other locations such as below intersection signs like the Cross Road (W2-1) sign or the Side Road (W2-2) sign, when the engineer determines that there may be a problem with a limited sight distance.

Regardless of the application or methodology, an advisory speed limit plaque shall not be used unless it is at least five mph less than the posted speed limit or the statutory speed limit.

910.4.3.7 Advance Street Name Plaques

An Advance Street Name (W16-8, W16-8a) plaque, with a black legend on a yellow background, may be placed below any Intersection sign (W2 series) or an Advance Traffic Control sign (W3 series). Warning signs shall not be placed for the sake of adding Advance Street Name (W16-8, W16-8a) plaques. In these cases, use of the D3-2 (Advance Street Name) sign by itself may be appropriate.

910.4.3.8 Object Markers

The MUTCD allows several types of object markers, including markers with three or more yellow retroreflectors that are a minimum of three inches in diameter. These circular devices are typically acrylic retroreflectors that are very bright when viewed at an angle normal to the face of the retroreflector, but they have almost no retroreflectivity when viewed at an angle of 30 degrees or more from normal.

Consequently, designers should not use object markers with these circular retroreflectors because the object markers frequently are not visible to drivers – for example, when turning at intersections, traveling around sharp turns and curves, or at any location where the markers become misaligned. Exhibit 910-2 shows the object markers allowable for use on NMDOT highways.

Exhibit 910-2
Object Markers Allowable for Use on NMDOT Highways

Objects within the roadway should be marked with either Type 1 or Type 3 object markers. The OM-3L marker is used on the left side of the intended travel path and the OM-3R marker is used on the right side of the intended travel path. Whenever possible, the inside edge of the OM-3L or OM-3R marker should be aligned with the inside edge of the object. If traffic can pass on either side of the object, the OM-3C Object Marker is used.

The placement and mounting height of object markers is described in the MUTCD.

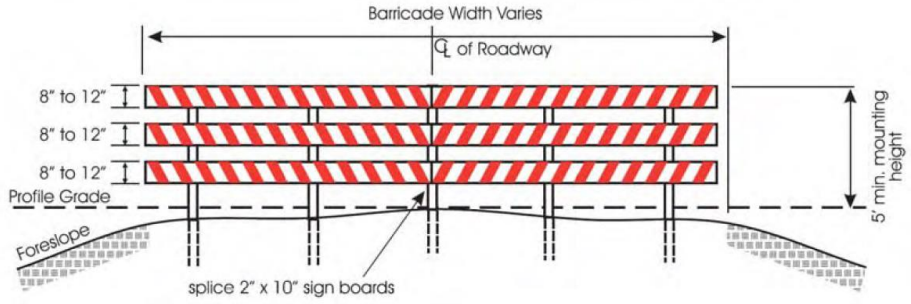
910.4.3.9 End-of-Roadway Markers

End-of-roadway markers warn road users of the end of a dead-end roadway where there are no alternative vehicular paths. Exhibit 910-2 depicts the OM4-3 end-of-roadway marker.

To increase the target value, a series of three or more of the OM4-3 end-of-roadway markers should be used across the end of the roadway. Alternatively, a red-and-white Type III barricade may be placed across the end of the roadway as illustrated in Exhibit 910-3. This barricade would have three retroreflective rails. Appropriate warning signs must always be placed in advance of the end-of-roadway barricade to warn of the road closure, because the barricade is a formidable object that may not be crashworthy.

An end-of-roadway barricade shall not be used at any location where it could be hit from the side unless it has been crash tested at that angle and determined to be crashworthy at the prevailing traffic speed.

Exhibit 910-3
End-of-Roadway Barricade



By definition, T-intersections are not end-of-roadway situations because there are alternate vehicular paths. At T-intersections, a 48-inch by 24-inch two-direction large arrow (W1-7) sign should be placed on the far side of the through roadway facing traffic on the stem of the T-intersection. The larger 60 inch by 30 inch sign should only be used if it is unlikely that a vehicle on the through roadway could hit the edge of the sign.

910.4.4 Guide Signs for Conventional Roads

By their very nature and application, traffic engineers need to personalize guide signs for their specific location. Therefore, these signs typically need some final design details to determine the sign layout and dimensions. Guide signs should be carefully checked as part of the plan review process.

There are several computer software programs available to help design signs, including such details as sign layouts, legends, quantities, and structure supports. NMDOT currently uses GuidSIGN; consequently, before purchasing any software other than GuidSIGN designers should contact the Traffic Technical Support Bureau to determine compatibility for use on NMDOT design projects.

910.4.4.1 General Criteria for All Guide Signs

Guide signs are necessary to guide the motorist along streets and highways; to inform them of intersecting routes; to direct them to cities, towns, villages, or other important destinations; to identify nearby rivers, streams, parks, forests, and historical sites; and generally to give such information as will help them along their way in the most simple, direct manner possible.

Signs that provide questionable traffic service or that were requested primarily for recognition or advertising purposes shall not be installed. No sign or its support shall bear any commercial advertising information, except special service signs authorized by state statute.

Because of their need to be custom-designed, the Standard Highway Signs Manual and Supplement does not contain many design details for most guide signs. Therefore, states typically have unique design details for destination and distance signs and major guide signs as used on expressways and freeways. Some of the differences include the respective sizes of legend on major guide signs, spacing and justification of legends, border widths and radii, and fonts. As a result, the sign software manufacturers often have custom design software for every state.

910.4.4.2 Design of Guide Signs

Guide signs vary in width and height depending upon the length of message, number of lines of text, and letter and numeral size. The legend on a guide sign must be determined by using the appropriate letter and numeral height, font series, and symbol size before the overall sign dimensions can be determined.

NMDOT uses several guide sign sizes depending on the type of roadway facility. Under some circumstances, the available right-of-way space may limit sign width. Where clearances are limited, and standard sign design cannot be used, a reduced letter height, font, interline, and edge spacing may be used. However, the letter height shall not be less than the standard set forth for conventional road guide signs as specified in the MUTCD.

The MUTCD, Standard Highway Signs Manual and Supplement, and NMDOT Standard Drawings provide the information required for the design of a custom guide sign.

910.4.4.3 Route Signs

The NMDOT Sign Code Listing includes the following route signs that are unique to New Mexico:

- Interstate route marker with direction and shield (M1-NM-1a)
- New Mexico Route (M1-NM-5)
- FRONTAGE XXXX ROAD (M1-NM-10)
- Historical New Mexico US 66 (M1-NM-11)

State Route (M1-NM-5)

For post-mounted route marker assemblies, the state route (M1-NM-5) sign should be used. It consists of black numerals within a round red Zia symbol surrounded by a black border. The standard size for the M1-NM-5 marker is 24 inches by 24 inches for one- and two-digit route numbers and 30 inches by 30 inches for three-digit route numbers. The NMDOT Sign Code Listing illustrates the M1-NM-5 sign.

The M1-NM-5 sign shall only be used as an independent assembly with the M2-1 junction auxiliary, the M5-1 through M6-9 arrow auxiliaries, or as a confirmation or reassurance assembly.

When the state route number is required on a guide sign panel such as the M2-2 and larger, the circular state route (M1-5) sign shall be used for one- and two-digit route numbers and the oval design shall be used for three-digit route numbers, in accordance with the NMDOT Sign Code Listing.

County Route Sign (M1-6)

County governments within the state have the authority to establish a system of numbering county roads. The County Route sign (M1-6) is the standard pentagon shape with a yellow legend on a blue background. The M1-6 sign shall have minimum dimensions of 24 inches by 24 inches for one- and two-digit route numbers, and 30 inches by 30 inches for three- and four-digit route numbers.

Frontage XXXX Road Marker (M1-NM-10)

The Frontage XXXX Road (M1-NM-10) markers shall be used on designated frontage roads. The M1-NM-10 marker shall have black letters on a white background. The M1-NM-10 marker shall be 30 inches by 30 inches, as shown in the NMDOT Sign Code Listing.

Confirming or Reassurance Assemblies

Confirming assemblies should be placed on conventional highways just beyond major intersections (within 25 to 200 feet), including all intersections with any state highway, to keep road users informed of their route. The assemblies shall consist of a route sign and cardinal direction auxiliary, and reassure drivers that they have correctly followed the intersection signing.

The standard width for these assemblies for all US and state numbered traffic routes on conventional roads is 24 inches for one- and two-digit route numbers and 30 inches for all three-digit route numbers. The cardinal direction auxiliary, NORTH, SOUTH, EAST and WEST (M3-1 through M3-4) signs shall have a standard size of 24 inches by 12 inches. The background color of all auxiliary signs must always match the color of the route marker.

Confirming assemblies should also be installed beyond major intersections at intervals of at least every five miles in rural areas and every three to five blocks in urban areas to keep the driver informed.

910.4.4.4 Destination Signs (D1 Series)

On state highways, Destination (D1-1 through D1-3) signs should be installed in advance of all intersections with US and state numbered traffic routes. The D1-1a through D1-3a signs should be used because they provide additional distance information not included on the D1-1 through D1-3 signs.

910.4.4.5 Street Name Signs (D3-1, D3-NM-3, D3-NM-3a)

The NMDOT Standard Drawings provide detailed drawings showing approved sign face details for Street Name signs.

Street Name (D3-1) Sign

To reduce costs and the number of fixed objects, D3-1 signs may be mounted above STOP (R1-1) or YIELD (R1-2) signs. To avoid

compromising the unique shapes of these regulatory signs, the bottom of any D3-1 sign with the same orientation as the STOP sign should be at least six inches above the top of the R1-1 or R1-2 sign.

Unless overhead street name signs are used, a minimum of one D3-1 sign should be placed in each direction. In business districts and on numbered traffic routes, as a minimum, D3-1 signs should be placed on diagonally-opposite corners, with the signs parallel to the streets they name.

Street Name Signs for Freeway Frontage Roads

Where a name has been established for a freeway frontage road, for instance, the Pan American Frontage Road along I-25 through Albuquerque, the convention is to name the frontage road in accordance with the direction of traffic it is serving. As an example, the frontage road serving northbound traffic along northbound I-25 would be called "Pan American Frontage Road Northbound."

Overhead Street Name (D3-NM-3 and D3-NM-3a) Sign

To improve visibility, designers should use the Overhead Street Name (D3-NM-3, 3a) sign above the roadway, especially on traffic signal mast arms. At intersection crossroads where the crossroad has different names for each of the directions of travel, the Overhead Street Name (D3-NM-3a) sign should be used with the street name to the left above the street name to the right.

To help reduce the wind loading on larger overhead street name signs, the signs should be mounted to the right of the overhead traffic signals, possibly centered above the right edge line. Also, mast arms must be designed to accommodate the extra wind loading. If installing D3-NM-3 or D3-NM-3a signs on existing mast arms with unknown structural capabilities, sign hardware that allows the sign to rotate and spill the wind must be specified.

At locations where a study indicates that the visibility of a reflectorized sign may be inadequate due to competition from ambient lighting, internally illuminated street name signs may be installed. The designer should note that the extra weight of internally illuminated signs may require stronger poles.

Advance Street Name Signs (D3-2)

Advance Street Name (D3-2) signs identify the street name at an upcoming signalized or unsignalized intersection. D3-2 signs need to be located a minimum of 200 feet in advance of the intersection to allow the road user to make any necessary lane changes or to slow down in preparation for a turn. The NMDOT Standard Drawings provide further information and sample sign face drawings.

In rural areas, an Advance Street Name (W16-8) plaque, with black legend on a fluorescent yellow background, may be more appropriate than the D3-2 sign because it may be possible to mount a W16-8 plaque on an existing signpost.

910.4.4.6 Parking Area Sign (D4-1)

For parking areas on conventional roads, the smaller D5-NM-3a-72 sign should be used at a location 1/4 mile to one mile in advance of the parking area to allow the driver ample time to reduce speed and safely exit, and the D5-NM-4a-66 sign should be used for the exit directional sign at the turnoff point to the parking area.

910.4.4.7 Signing of Named Highways

A legislative act or a resolution by the Cabinet Secretary must exist before installing any memorial names on signs along a highway.

910.4.4.8 National Scenic Byways Signs (D6-4, D6-4a)

New Mexico has 26 highways and trails designated by the USDOT as National Scenic Byways. A list of these is provided on the NMDOT website. The D6-4 and D6-4a ("AMERICA'S BYWAYS") signs may only be installed on these routes.

910.4.5 Guide Signs for Freeways and Expressways

The sections below provide guidance on the design of guide signs for freeways in New Mexico. Signs on sections of expressway with interchanges shall be designed the same as freeways.

910.4.5.1 Designation of Destinations

The selection of destinations to be shown on guide signs along freeways and expressways should be consistent, and generally include the following four types of destinations.

Control Cities

On interstate highways, NMDOT uses the control cities included in AASHTO's List of Control Cities for Use in Guide Signs on Interstate Highways. The control cities used on interstate highways in New Mexico are included in Exhibit 910-4 and listed in order from west to east, or south to north. For each of the interstate highways, the first and the last control city is in an adjacent state

Exhibit 910-4
Interstate Control Cities

Interstate Route	Approved Control Cities
10	Tucson, Lordsburg, Deming, Las Cruces, El Paso
25	El Paso, Las Cruces, Albuquerque, Santa Fe, Las Vegas, Raton, Pueblo, Colorado Springs
40	Flagstaff, Gallup, Albuquerque, Santa Rosa, Tucumcari, Amarillo

The next control city will be the destination name in each of the following situations:

- At interchanges between freeways.
- At separation points of overlapping freeway routes.
- On directional signs on intersecting routes, to guide traffic entering the freeway.
- On all pull-through signs.
- On the bottom line of all post-interchange distance signs.

Local Community Names

Most interchanges use local community names as the destinations on advance guide signs and exit directional signs; however, there are two exceptions:

- Designers should always use control cities as the destination at freeway-to-freeway interchanges, including the separation point of overlapping freeway routes. As an example, where I-10 West splits into I-10 West and I-25 North south of Las Cruces, "Albuquerque" should be used as the destination on the I-25 North exit sign, and "Deming" should be used as the destination on the I-10 West pull-through sign.
- For cities with multiple exits, designers should use either street names or traffic route numbers.

When local community names are used, the normal practice is to use the closest city or town identified on the current edition of the New Mexico Transportation Map, one to the left and one to the right of the freeway. An exception may be made when the intersecting route is a US or NM numbered traffic route, and a larger but more distant community exists along the same traffic route and all of the following are satisfied:

- The population-to-distance (distance to the freeway) ratio is 50 percent greater than the population-to-distance ratio of the closer community.
- The more distant community does not have a closer interchange along the freeway or expressway.
- The larger community is within 20 miles.

The destination(s) used on the advance guide signs and exit direction signs at a specific interchange should also be used as the destination(s) on the top line(s) of the post-interchange distance signs at adjacent interchanges for approaching traffic.

Street Names

Except for freeway-to-freeway interchanges in urbanized areas with more than one exit, street names should be the principal destination shown on advance guide signs, exit directional signs, post-interchange distance signs, and interchange sequence signs.

When determining the distance to show on an advance guide sign, it should be measured between the sign and the gore of the exit ramp.

If the intersecting street is a numbered traffic route, a route marker and cardinal direction marker should also be included on the advance guide sign or exit directional sign. However, on post-interchange distance signs and interchange sequence signs, the route marker and cardinal direction marker should be used in lieu of the street name.

A city name and a street name shall not be used on the same Advance Guide sign or Exit Direction sign.

Supplemental Destinations

A supplemental guide sign may show one or two extra destinations accessible from an interchange that are not included on the standard interchange signing. These bonus destinations may be communities or other large traffic generators. Exhibit 910-5 shows criteria to select these large traffic generators.

910.4.5.2 Overhead Arrow-per-Lane Guide Sign

Where a freeway guide sign is needed to indicate a freeway split with an option lane or a multi-lane exit with an option lane, an Overhead Arrow-per-Lane Guide sign shall be used. The NMDOT no longer uses diagrammatic guide signs.

910.4.5.3 Route Signs and Trailblazer Assemblies

As noted in the MUTCD, the cutout route marker shields should be used on large directional guide signs. Accordingly, the round or oval state route (M1-5) markers should be used on M2-2 and larger guide signs as detailed in the NMDOT Sign Code Listing and in the NMDOT Standard Drawings.

On interstate highways, the Interstate route marker with direction and shield (M1-NM-1a) should be used for all route confirmation assemblies. The normal location is about 1,500 feet beyond the last acceleration lane after each interchange.

910.4.5.4 Interchange Exit Numbering

NMDOT uses the reference location exit numbering system (commonly called the "milepost exit numbering system") as discussed in the MUTCD. To assist motorists, it is important to use the same exit number in both directions at full interchanges. The nearest milepost number to the center of the interchange is used, instead of the nearest milepost to the beginning of the exit ramps.

Interchange exit numbers are displayed on an exit number panel (E1-5) on all advance guide signs and exit direction signs. The E1-5 panel includes the word EXIT (or EXITS for multiple exits), the exit number, and any suffix letter for multiple exits.

If an E1-5 panel does not have two primary signposts supporting the panel, two 5.5-foot W6x9 upright supports, or other optional exit number panel supports, should be used in accordance with the NMDOT Standard Drawings.

In addition, exit numbers are displayed on all exit gore signs, supplemental signs, general motorist service signs, and specific service signs. The NMDOT Standard Drawings provide additional details.

910.4.5.5 Next Exit Plaques

Because of the rural nature of most of New Mexico, Next Exit plaques should only be used when interchanges are more than 15 miles apart.

910.4.5.6 Supplemental Guide Signs

Supplemental guide signs can provide destination information to the road user that is not on the standard interchange signs (e.g., advance guide signs and exit directional signs). For example, if the standard interchange signs are using street names for a city but significant communities exist outside of the immediate area, it is possible to use the community names on the supplemental guide sign.

The MUTCD only permits one supplemental guide sign for each interchange approach, with a maximum of two traffic generators on each sign. Prior to installing any supplemental guide signing, it must be ensured that all complementary signing is in place at ramp terminals and along the interchanging road and other roads as necessary to direct the motorist to the traffic generator.

Attractions may be the most common supplemental destinations. For these, the NMDOT has adopted AASHTO's Guidelines for the Selection of Supplemental Guide Signs for Traffic Generators

Adjacent to Freeways. This document clarifies what attractions qualify for supplemental signing, and is summarized in Exhibit 910-5.

Exhibit 910-5
Acceptable Destinations for Listing on Supplemental Guide Signs

Type of Generator	Specific Criteria	Major Metro Area (pop. > 250,000)	Urban Area (5,000 < pop. < 250,000)	Rural Area (pop. < 5,000)
Public Airport	No. of scheduled flights per day	35	15	10
	Distance from interchange	5 miles	10 miles	20 miles
College or University	Total enrollment full and part-time students	4,000	2,000	1,000
	Distance from interchange[a]	5 miles	10 miles	20 miles
Arenas, auditoriums, convention halls, stadiums, state and national parks/monuments, major recreational areas (fairgrounds, historical interest facilities, arboretums, municipal golf course, ski areas) and other transportation systems	Annual attendance	100,000	50,000	25,000
	No. of seats (if applicable)	4,000	2,000	1,000
	Distance from interchange[a]	20 miles	50 miles	100 miles

a The maximum distance increases one mile for each 10 percent over the minimum requirement listed, up to a maximum of two times the minimum distance listed.

Under unusual circumstances, the District Engineer or his or her designee may authorize supplemental signing for traffic generators not listed in Exhibit 910-5. Unusual conditions may include locations with safety or operational problems, temporary need, or major special events. However, any exception to Exhibit 910-5 should be considered a temporary fix, either for the duration of the special event or for no longer than one year.

910.4.5.7 Exit Direction Signs

The exit direction sign repeats the information as shown on the advance guide sign or signs and includes an "up arrow" at a 45-degree angle in the direction of the exit point. An exit direction sign should be installed at all interchanges, either as a ground-mount or as an overhead sign. Exits with a lane drop require an overhead exit direction sign.

910.4.5.8 Exit Gore Signs (E5-1a)

NMDOT uses the exit gore sign (E5-1a), with the exit number within the sign area. The E5-1a sign is placed in the interchange gore to indicate the exit or departure point from the main roadway. The "up arrow" is typically aligned at a 45-degree upward angle, but the actual angle should approximate the angle of departure.

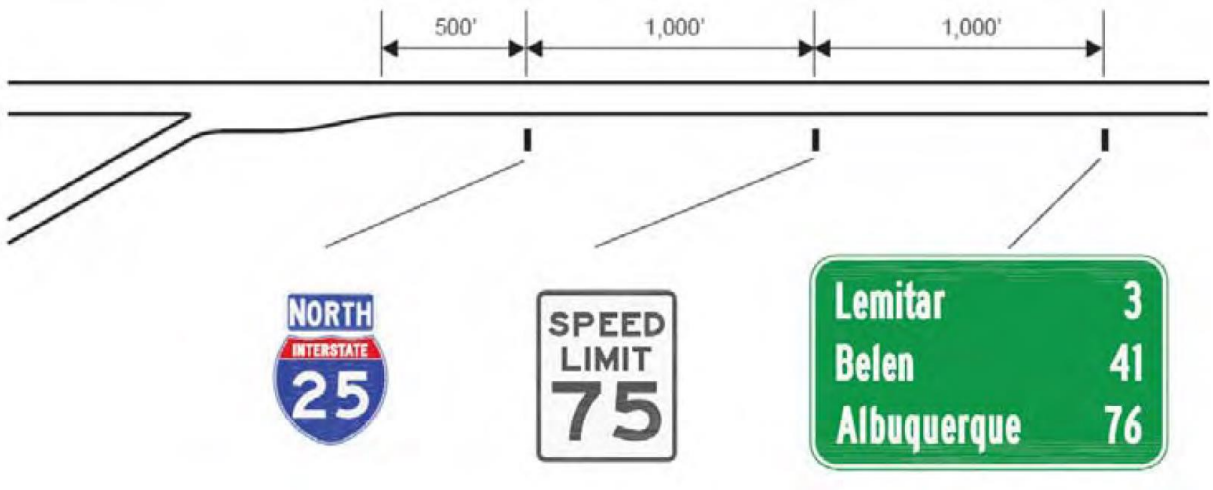
The E5-1a sign is fabricated from a flat aluminum panel attached to backing zees. The assembly is attached to three 2.50-inch by 2.50-inch square tubing posts with each post attached to an approved slip base system. Any E5-1 sign with three or more digits that also has the optional E13-1 warning panel will need to be constructed of extruded aluminum and mounted on I-Beam posts and base posts.

910.4.5.9 Post-Interchange Distance Signs

Post-interchange distance signs should be used in rural areas where there are greater distances between exits. The post-interchange distance sign shall always have at least two lines of text but no more than three. The top line of text shall identify the next meaningful interchange with the name of the community near or through which the route passes, or if there is no community, the route number or name of the intersected highway. The text in the second line of the distance sign may vary on successive signs. The third or bottom line of text must always be the name of the appropriate control city.

Exhibit 910-6 shows the relative position of the route marker confirmation assembly, the speed limit sign, and post-interchange distance signs.

Exhibit 910-6
Spacing of Signs After an On-Ramp



910.4.5.10 Interchange Sequence Signs

Interchange sequence signs are primarily used in urban areas where there is less than 800 feet between interchanges. These signs should be installed in the median as an overhead sign, and are typically installed back-to-back on a butterfly support, with one sign for each direction of travel.

Although similar to a post-interchange distance sign, the interchange sequence sign shows the next two or three interchanges to alert drivers of the close proximity of the upcoming interchanges.

With these closely spaced interchanges, drivers may only see one, two, or at the most three interchange sequence signs before seeing an exit directional sign.

910.4.5.11 Diamond Interchanges

New Mexico has many diamond interchanges. To help prevent wrong way movements, DO NOT ENTER (R5-1) and WRONG WAY (R5-1a) signs shall always be installed at the end of exit ramps as illustrated in the NMDOT Standard Drawings.

910.4.6 Other Signs

910.4.6.1 General Information Signs (I series)

General information signs convey information of interest to the traveler but not directly necessary for guidance. The following are general information signs specific to use on New Mexico state highways:

- County line (I-NM-2a, 2b and 2c)
- City limit and elevation (I-NM-2d)
- Town limit (I-NM-2e)
- River crossing (I-NM-3 and 3a)
- End state maintenance (I-NM-10)
- Freeway entrance (I-NM-11a)
- Entering or leaving reservation (I-NM-12, 12a, 12b)
- Adopt-a-highway litter control next X mile (I-NM-12c)
- Business name (I-NM-12d, mounted below I-NM-12c)

910.4.6.2 Reference Location System Signs

Reference Location signs (D10-1, D10-2, and D10-3), commonly referred to as mileposts, are installed at one-mile intervals along a route, in both directions of travel on all two-lane, two-way traffic state and US routes. These signs identify mileage that assists the road user in estimating their progress. They also provide a method of identifying the location of emergency incidents, and aid in highway maintenance operations and services. Signs are placed in an ascending order with the zero or lowest number point beginning at the south and west state lines or at the south and west terminus point where routes begin within the state. The distance numbering is continuous for each route.

If the D10-1, D10-2, or D10-3 sign cannot be placed at the correct location, it can be moved up to 50 feet in either direction. If a 50-foot adjustment cannot accommodate the sign, then it should be omitted.

In addition to the reference location signs (D10-1, D10-2, and D10-3), intermediate reference location signs (D10-1a, D10-2a, and D10-3a) may be installed at 1/10th-mile intervals between the mileposts on freeways and four-lane divided arterials.

Reference location signs are mounted at a height of four feet from the top of the paved roadway to the bottom of sign. The signs may be positioned up to 30 feet from the edge of the driving lane.

Sign sizes vary according to number of digits and type of roadway classification. The NMDOT Standard Drawings and NMDOT Sign Code Listing provide guidance for installation and proper size.

910.4.6.3 Adopt-A-Highway Signs

NMDOT's Adopt-a-Highway signs are an example of an acknowledgment sign as defined in the MUTCD. The purpose of NMDOT's Adopt-A-Highway program is to reduce NMDOT maintenance costs by allowing the business community to volunteer to pick up litter in return for recognition of their service.

When the NMDOT enters into an agreement with a business, the business's name shall be displayed on a business name (I-NM-12d) plaque beneath the ADOPT-A-HIGHWAY LITTER CONTROL NEXT # MILE (I-NM-12c) sign.

910.4.6.4 General Service Signs

NMDOT no longer authorizes General Service signs for gas, food, lodging, and camping, because:

- In rural areas, these services are frequently within sight of the road, and these services are normally eligible for TODS in accordance with 18.21.4 NMAC (see Section 910.4.6.8).
- In urban areas, NMDOT does not permit General Service signing for these common services because they would create driver overload and sign clutter.

Therefore, general service signs are limited for use for the following services:

- Hospital - A facility approved as a hospital by the Department of Health, and which provides continuous emergency care to the public with a doctor on duty 24 hours a day, seven days a week.
- Pharmacy - A pharmacy that is open, with a state-licensed pharmacist present and on duty, 24 hours per day, seven days per week. The D9-20 sign shall have a 24 HR (D9-20aP) plaque mounted below it.
- Police - A station manned by state police 24 hours a day, 7 days a week.
- Tourist information - A facility approved by the appropriate public agency as a tourist or visitor information center which is open at least six months each year, including the period between Memorial Day and Labor Day. During the open season, the facility shall be open at least eight hours per day, seven days a week.

General Service signs for hospitals, 24-hour pharmacies, police stations and tourist information may be placed at locations within 3 miles of the facility in urban areas and 5 miles of the facility in rural areas.

Except for HOSPITAL and 24-HR PHARMACY, general service signs should not be used in urban areas. In rural areas, general service signs should only be used where the road user can return to the highway and continue in the same direction of travel.

910.4.6.5 Rest Area and Scenic Area signs

All signs for rest areas and scenic areas shall have white legend, symbols, and border on a blue background. Rest areas and scenic areas shall have at least one advance guide sign one or two miles in advance of the facility. Between the advance sign and the gore of the rest area, a REST AREA NEXT RIGHT (D5-1b) sign may be placed.

For rest areas on conventional roads, the smaller D5-NM-1a-60 sign should be used at a location 1/4 mile to one mile in advance of a rest area to allow the driver ample time to reduce speed and safely exit. The D5-NM-2a-48 sign should be used for the exit directional sign at the turnoff point to a rest area on a conventional road. Signing for rest areas and scenic areas on freeways and expressways require larger signs.

910.4.6.6 Tourist Information and Welcome Center Signs

New Mexico has several tourist information and welcome centers generally situated at entry points into the state. Tourist information signs direct the road user to a location where maps, literature, and other information are available. Tourist information signs shall have white lettering and border on a blue background.

The E-NM-23-240 sign should be used for information centers on expressways and freeways. The tourist information sign for free maps and literature (E-NM-23-96) should be installed for tourist information centers located on or near conventional roadways.

910.4.6.7 Specific Service Signs

Specific service signs, commonly referred to as logo signs, are guide signs that provide road users on interstate highways and other freeways with business identification and directional information for services or qualified attractions.

The MUTCD addresses specific service signs, and New Mexico's rules for this program are provided in 18.21.3 NMAC. The use of specific service signs should be limited to areas primarily rural in character where adequate sign spacing can be maintained.

The signs have a white legend and border on a blue background and up to six attached logos, each of which identifies a specific business by its symbol or trademark, or by the business's name.

Specific Service signs provide the road user with commercial logo information under the headings GAS, FOOD, LODGING, CAMPING, and ATTRACTIONS. The signs are for use only on interstate highways and on other freeways on the National Highway System. When used on non-interstate freeways, the signs are identical to those on interstate highways. The mainline signs are

placed beginning about one mile or more from an interchange. Additional signs are frequently necessary to provide directional guidance. These might include ramp signs along off-ramps that provide access in more than one direction or trailblazer signs along other roads when the business is not clearly visible.

The NMDOT commercial logo program administrator (headquartered in Santa Fe in the Traffic Services Section) administers the logo program. In addition to the NMDOT policy in 18.21.3 NMAC, the layout and design of logo signing shall be in accordance with the MUTCD.

Traffic control devices and their supports should not bear any advertising messages that are not related to traffic control. It is important to recognize, however, that TODS and Specific Services Signs are not classified as advertising, but rather motorist service signing.

910.4.6.8 Tourist-Oriented Directional Signs

TODS provide direction to eligible businesses located in rural areas or in communities with a population of 2,000 or less. TODS cannot be installed on freeways or prior to an interchange on an expressway.

The MUTCD addresses TODS, and New Mexico's rules for this program are provided in 18.21.4 NMAC. The layout and design of logo signing shall be in accordance with the MUTCD.

910.4.6.9 Recreational and Cultural Interest Signs

In accordance with the MUTCD, recreational and cultural interest areas are attractions or qualified traffic generators that are open to the public for the purpose of play, amusement or relaxation.

In New Mexico, the following sign types, rather than white-on-brown recreational and cultural interest signs, should be used to direct motorists to these facilities:

- On freeways, a business logo on either the ATTRACTION or CAMPING specific service signs should be placed as appropriate. In areas without specific service signs (e.g., urban

areas), large attractions should be named on supplemental guide signs.

- On conventional highways, a TODS should be used. If TODS cannot be installed in urban areas, generic symbols from the MUTCD should be used.

In New Mexico, white-on-brown recreational and cultural interest signs are limited to use for facilities under the administration of the National Park Service (NPS). New Mexico has approximately 19 facilities in the NPS system, at locations all over the state. The NPS has a sole provider for its signs; therefore, the designer should coordinate with the NPS to obtain the signs required for a project.

910.4.6.10 Historic Markers

Historic markers are special signs that are located in various areas throughout the state. These signs denote a specific event, location, and/or person(s) in New Mexico history. They have a unique rustic design developed in conjunction with the New Mexico Department of Cultural Affairs (NMDCA) – Historic Preservation Division. The NMDCA must approve all text on Historic Markers. The text is usually limited to 50 words. Design details and information for Historic Markers is available from the NMDCA.

Historic markers do not have breakaway posts; therefore, these signs must be outside of the clear zone, regardless of whether a designated pull out area is provided or not.

910.4.6.11 Trail Signs

Trail signs provide road users with route information concerning a particular trail of cultural, historical or educational significance. These signs should be installed only if approved by the NMDOT. They are a low priority sign.

910.4.6.12 DWI Memorial Signs

The Traffic Safety Bureau manages the DWI Memorial Signing Program as part of its public education and information series. The application for the program and the sign layout are available from the Traffic Safety Bureau.

910.4.6.13 Safety Corridor Signing

Safety corridors are segments of highways identified by the Traffic Safety Bureau as having higher traffic crash rates than statewide averages for similar roadways. Safety corridor signs identify these segments of highway to alert the road user to be cautious and to obey all traffic laws when driving in these areas. Safety corridor signing is considered as a temporary solution until the crash rate can be reduced and sustained, or until major improvements are funded and made. The NMDOT Standard Drawings contain sheets addressing Safety Corridor signing.

910.4.7 School Area Signing

Each school district's Traffic Safety Committee is responsible for developing the safe school route plan, identifying the major school crossings and, for facilities on state highways, coordinating with the appropriate District Traffic Engineer.

On state highways, the District Traffic Engineer is responsible for specifying the necessary traffic control devices and determining their costs, preparing a reimbursement agreement for the school district's approval, and implementing the plan after the school district signs the agreement.

910.4.8 Railroad Signing

910.4.8.1 Highway-Rail Grade Crossing Warning Sign

The NMDOT Standard Drawings provide guidance on the location of highway-rail grade crossing signs and pavement markings.

910.4.8.2 Signing to Stations

In an effort to promote intermodalism, it is desirable to install the train station (I-7) sign or the light rail transit station (I-12) sign in both directions of travel on the nearest state highway. If a trailblazer is also necessary on a local roadway, the installation on the state highway would be contingent upon a commitment by local authorities to install the necessary trailblazer on their roadway.

The name of the station may be installed above the I-7 or I-12 sign, and an appropriate directional arrow below the sign. Guide signs showing the Rail Runner Express logo and station name may also be used.

910.4.9 Bicycle and Multi-use Facility Signing

The design and placement of bicycle signs should generally be in accordance with the MUTCD. All bicycle warning signs in New Mexico shall use an approved fluorescent yellow-green retroreflective sheeting material.

910.4.9.1 Bicycle Signing on the Interstate Highways

State rule 18.31.3 NMAC provides for the use of bicycles on rural interstate highways. Four of the five contiguous states also allow bicycles on the shoulders of their interstate highways, in part because they believe that using the shoulders of interstate highways may be less dangerous than using some alternative rural highways. In addition, in some cases the interstate highway is the only option for travel to a given destination.

Bicyclists are permitted to use the shoulder of an interstate highway except at the following locations:

- Within the boundaries of cities with a population of 50,000 or more.
- At any location deemed inappropriate by the Cabinet Secretary or his or her designee, and the appropriate signs are in place to inform bicyclists.

Currently, Albuquerque, Las Cruces, and Santa Fe are the only areas where bicycles are prohibited on the interstate highway (because of their population). Accordingly, the designer may place the NON-MOTORIZED TRAFFIC PROHIBITED (R5-7-48) sign or the No Bicycles (R5-6-48) sign on the on-ramps within these areas, and along the mainline of the interstate highways approaching these two areas at locations where bicyclists must exit.

The designer should note that 18.31.3.6 NMAC states, in part: "Allowing bicycles on the shoulders of some interstate highways is not intended to stand as a route recommendation, nor to imply that such shoulders are safer for bicyclists than other routes."

910.4.9.2 Bicycle Routes

The purpose of bicycle route signing is to provide guidance for cyclists. For consideration as a candidate for a designated bicycle route, a high-speed conventional road must accommodate bicycles reasonably well, including either a bike lane, a useable paved shoulder, or a wide curb lane.

The Statewide Bicycle-Pedestrian-Equestrian (BPE) Coordinator shall be consulted when considering a bicycle route or when planning highway improvement projects. The BPE Coordinator, along with the District Engineer and/or the District Traffic Engineer, will make the needed determination of the suitability of the state highway for designation as a bicycle route. Off-system facilities such as city and county roads or paved trails may also be integrated into state bicycle routes through signage with approval of the local entity involved.

910.4.9.3 Numbered Bicycle Routes

Continuous sections of state highway with meaningful starting and ending points are preferred for designated bicycle routes. The numbering of a designated bicycle route shall follow the criteria established by the BPE Technical Committee and the BPE Coordinator. Routes with a numerical bicycle route designation shall use the bicycle route (M1-8-NM) sign. The M1-8-NM sign shall contain the route designation on a green background with a retroreflective white legend and border.

The M1-8-NM signs should be placed at the beginning of the designated bicycle route, immediately after intersections with other state highways or bicycle routes, in advance of locations where the bicycle route changes direction, and at other locations where the sign would be beneficial. On segments of highway that would otherwise require M1-8-NM signs at intervals of 20 miles or more, at least one M1-8-NM sign should be placed at roughly the mid-point of the gap. Destination (D1-1b, D1-1c) plaques may be mounted directly below the M1-8-NM sign, and the M4-11 through M4-13 supplemental plaques may be mounted above the M1-8-NM sign. If used, the appropriate arrow (M7-1 through M7-7) should be placed as the bottom sign in the sign assembly.

910.4.9.4 Non-Numbered Bicycle Routes

Some state highways have generic Bike Route (D11-1) signs, which are also an acceptable means to designate a bike route. D11-1 signs do not conflict with the M1-8-NM sign and need not be removed except to be replaced by an M1-8-NM sign with a specific numerical designation. These signs may mark a spur or other segment that will not receive a specific numerical designation or to mark a non-state bicycle route that intersects a state highway.

910.4.9.5 Shared Route Signing

If a state highway does not meet the designated bicycle route criteria but bicyclists routinely use it, the route should be considered for a shared route designation. For these highways, the bicycle warning (W11-1) sign should be used in combination with the SHARE THE ROAD (W16-1) plaque. It is acceptable to use a single sign assembly just at specific problem locations, or to repeat the sign assemblies as infrequently as every 10 to 20 miles.

If a designated bicycle route terminates for reason of facility inadequacy, a W11-1 sign and the W16-1 plaque may be used at the location if bicyclists continue using the state highway despite the termination of the designated bicycle route. This combination of signs is also appropriate within a designated bicycle route, or elsewhere, in order to warn motor vehicles and bicyclists of a condition that may temporarily necessitate shared use of the roadway. The distance signage is placed in advance of a specific condition and should follow MUTCD recommendations per the posted speed limit.

910.4.10 Sign Structure Design

To accommodate tall vehicles, the bottom of all overhead sign structures shall be at least 18 feet from the top of pavement over all driving lanes. The engineer shall consider future sign expansions and additions, as well as future pavement resurfacing, when designing overhead sign structures.

Where overhead sign structures or I-beam posts are required for the placement of signs, the designer shall verify that the standard foundation drawings are appropriate for the particular situation; i.e., the conditions are within the design parameters shown in

NMDOT's Standard Drawings. Where conditions require a custom foundation design for a sign structure, it shall be submitted to the State Bridge Engineer for approval.

910.5 Development of Pavement Marking Plans

The development of plans for pavement markings shall ordinarily comply with the MUTCD and the criteria set forth in the following sections.

910.5.1 General

All pavement-marking materials used on state highways shall meet the requirements, including the retroreflectivity requirements, of the NMDOT Standard Specifications for Highway and Bridge Construction.

Exhibit 910-7 and Exhibit 910-8 below show recommendations for which pavement marking materials should be used based on the road's traffic volume, pavement material, and remaining service life. The specifications for thermoplastic (thermo), water-based paint (WB Paint), tape, epoxy, polyurea, and methyl methacrylate (MMA) pavement marking materials are provided in the NMDOT Standard Specifications for Highway and Bridge Construction or by special provision.

Exhibit 910-7
Recommended Pavement Marking Materials for Bituminous Pavements

	Pavement Remaining Service Life		
Traffic Characteristics	**0 – 2 years**	**2 – 4 years**	**4 years**
ADT* < 1,000	Thermo, WB Paint	Thermo, WB Paint	Thermo, WB Paint, Epoxy, Polyurea, MMA
1,000 < ADT < 10,000	Thermo, WB Paint	Thermo, Epoxy, Polyurea, MMA	Thermo, Tape, Epoxy, Polyurea, MMA
ADT > 10,000	Thermo, Epoxy	Thermo, Tape, Epoxy, Polyurea, MMA	Tape, Thermo, Epoxy, Polyurea, MMA
Heavy Weaving or Turning	Thermo, Epoxy	Thermo, Epoxy, Polyurea, MMA	Thermo, Epoxy, Polyurea, MMA

* *Average Daily Traffic (ADT)*

Exhibit 910-8
Recommended Pavement Marking Materials for Portland Cement Pavements

	Pavement Remaining Service Life		
Traffic Characteristics	**0 – 2 years**	**2 – 4 years**	**4 years**
ADT < 10,000	Thermo, Epoxy, WB Paint	Epoxy, Thermo, WB Paint, Polyurea, MMA	Epoxy, Thermo, Polyurea, WB Paint, MMA
10,000 < ADT < 50,000	Thermo, Epoxy, WB Paint, Polyurea	Epoxy, Thermo, Tape, Polyurea, WB Paint, MMA	Epoxy, Thermo, Polyurea, MMA
ADT > 50,000	Epoxy, Thermo	Epoxy, Thermo, Tape, Polyurea, MMA	Tape, Thermo, Polyurea, Epoxy, MMA
Heavy Weaving or Turning	Epoxy, Thermo, Polyurea	Epoxy, Thermo, Tape, Polyurea, MMA	Epoxy, Thermo, Tape, Polyurea, MMA

910.5.2 Eradication

Water blasting is the preferred method to remove pavement markings if traffic patterns change. The NMDOT Standard Specifications for Highway and Bridge Construction cover removal of pavement markings. Other methods of pavement eradication should have written approval by the District Engineer, District Traffic Engineer, or their designees.

Black paint or non-reflective black removable marking tape is not an acceptable method of obliterating a pavement marking, even for a short time period.

910.5.3 Pavement Markings

910.5.3.1 No-Passing Zone Pavement Markings

In addition to placing no-passing zone markings where specified in the MUTCD, the NMDOT recommends that no-passing zones should be marked at the following locations:

- In advance of an obstruction such as a bridge support pillar, a channelizing island, or a safety zone, that separates the two lanes of traffic.
- In advance of, and on or within, any bridge, tunnel, or underpass designated as a narrow bridge or underpass.
- In advance of a STOP (R1-1) sign, YIELD (R1-2) sign, or a traffic signal.

- In advance of an intersection with a state highway or a major roadway where passing may be undesirable due to the high number of crossing or turning movements.
- In advance of a highway-rail grade crossing.
- In advance of and within a school zone.
- In advance of a divided highway.
- In areas where an analysis of vehicle crashes shows an unusually high number of passing-related crashes.
- In areas where the roadside development includes many driveways and intersections where passing would create frequent potential conflicts.
- At locations where the roadway width is very restrictive, shoulders are nonexistent or in poor condition, the roadway cross-section has an excessive crown, or obstacles are close to the roadway.
- In areas where traffic volumes are very heavy and there would be limited opportunities for motorists to pass other vehicles.
- Where a passing zone would otherwise be less than 400 feet in length.
- Where engineering judgment indicates that allowing passing is undesirable because a better passing area exists farther ahead.

If a no-passing zone is established for one of the reasons above, the recommended minimum length of no-passing zone in advance of the physical feature should be as indicated in Exhibit 910-9.

Exhibit 910-9
Advance Distance for No-Passing Zones

Speed Limit or 85th Percentile Speed (in mph)	Distance (in feet)
35 or less	250
40	300
45	350
50	400
55	450
60	500
65	550
70	600
75	650

910.5.3.2 White Lane Line Pavement Markings and Warrants

On state highways, white lane line markings shall be used on all freeways, expressways, and multilane roadways to delineate the separation of adjacent travel lanes going in the same direction of travel.

New Mexico uses six-inch wide lane lines on freeways and multilane roadways for better visibility. Broken lane lines should become solid lane lines at a distance in advance of the intersection that is approximately equal to the values for no-passing zones in

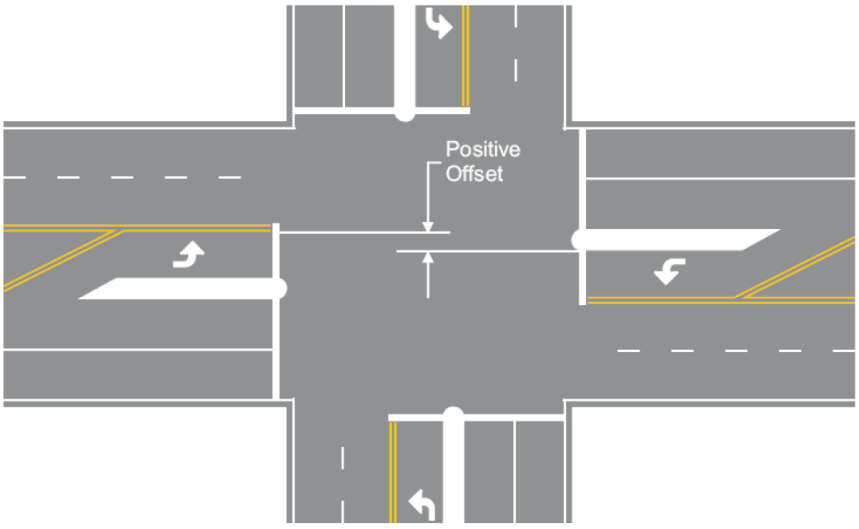
Exhibit 910-9. Solid white lane line markings should be used to separate through lanes from auxiliary lanes such as uphill truck lanes, left- or right-turn lanes, and preferential lanes. The designer should use wider lane lines, such as eight-inch wide lines, to emphasize the fact that something is unusual.

910.5.3.3 Opposing Left-Turn Lanes

Whenever possible, at unsignalized intersections and signalized intersections with permissive left-turn phases a positive offset should be used at opposing left-turn lanes to reduce the sight distance obstruction caused by a vehicle in the opposing left-turn lane. A three-foot positive offset will usually negate the sight-distance problem caused by a vehicle in the opposing left-turn lane.

On undivided highways where pavement width allows, solid white lines can be used to form a parallel or tapered island between the left-turn lane and the adjacent through lane, as shown in Exhibit 910-10. In some cases, it may be feasible to use reduced-width lanes at the intersection to accommodate the creation of this marked island.

Exhibit 910-10
Positive Offset at Opposing Left-Turn Lanes



910.5.3.4 Channelizing Lines at Entrance and Exit Ramps

In accordance with the NMDOT Standard Drawings, white channelizing lines at entrance and exit gores on freeways and expressways shall be 12 inches wide.

Both the MUTCD and the NMDOT Standard Drawings show an optional dotted extension line at exit ramps. Although optional, the designer should use dotted lines (three-foot long white stripe and a nine-foot gap) and make them the same width as the right-hand edge line to clearly delineate the ramps. A similar treatment may also be used for entrance ramps.

910.5.3.5 Chevron and Cross-Hatch Markings

The NMDOT Standard Drawings show chevron markings in the neutral area between the white channelizing lines for both entrance and exit ramps. Because chevron markings create an on-going maintenance issue, they should be considered optional at exit ramps and should not be used at entrance ramps.

If used, chevron markings in the exit ramp gore should be designed per the following:

- The chevron stripes should be 12-inch wide white lines placed at an angle as shown in the NMDOT Standard Drawings.
- The center-to-center spacing of the chevron markings is a function of the posted speed limit as shown in the NMDOT Standard Drawings.

910.5.3.6 Extensions through Intersections and Interchanges

Dotted extension lines should be used through intersections and interchange areas as included in the NMDOT Standard Drawings. These extension lines should be four inches wide and two feet long, with a four-foot space between the ends of the markings.

Although extension lines are normally optional, they are mandatory for dual turn lanes in order to emphasize the need to turn into the proper lane and to help vehicles avoid sideswiping other vehicles. In these situations, the pavement markings should be designed in conformance with the MUTCD.

910.5.3.7 Lane Reduction Transition Markings

The MUTCD discusses lane reductions from two directional lanes to one directional lane, with several different scenarios identified. The lane-reduction arrow should be used within the lane that is ending to emphasize the lane reduction, and spaced in accordance with the NMDOT Standard Drawings.

910.5.3.8 Crosswalk Markings

Before striping a crosswalk at an uncontrolled location, the designer shall consider the latest federal research on where doing so is recommended.

When used, the designer should coordinate with the local entity to determine the type of crosswalk marking. At mid-block locations, the designer should also determine if signals such as the Pedestrian Hybrid Beacon (also known as a "HAWK" signal) or Rectangular Rapid Flashing Beacon may be appropriate (Sections 1100.3 and 1200.10.3 provide additional guidance). The minimum effective width of the crosswalk must be six feet, as measured between any transverse markings. The table included in Exhibit 910-11 also shows some key design elements.

Exhibit 910-11
Crosswalk Design Elements

Type of Crosswalk	Minimum Width of Transverse Markings	Minimum Width of Longitudinal Markings[a]
Standard – two solid white parallel transverse lines	6 inches	n/a
Zebra - two solid white transverse lines with solid white diagonal longitudinal stripes	6 inches	12 to 24 inches
Ladder style – two solid white parallel transverse lines with solid white perpendicular longitudinal stripes	6 inches	12 to 24 inches
Continental style – solid white parallel longitudinal stripes	n/a	12 to 24 inches

a *Longitudinal markings should be placed to avoid the wheel paths.*

910.5.3.9 Parking Space Markings

At rest areas and along state highways with on-street parking, all parking space markings should be white in color and a minimum of four inches wide.

Within parking lots, the preferred minimum parking space dimensions are nine feet wide and 17.5 feet long for the typical 90-degree parking angle. Suggested dimensions are included in the ITE Traffic Engineering Handbook, current edition.

Parking along streets and highways is a secondary use of the roadway and in general its use is limited to state highways that run through smaller cities and towns. Parking prohibitions can be either on a full-time basis or during peak hours.

Parallel parking spaces along streets should be eight feet wide by 22 to 26 feet in length, except the first and last stall may be as short as 20 feet. Minimum parking prohibition distances in Section 66-7-351 NMSA, include the following:

- Fire hydrants - 15 feet
- Crosswalk at intersection - 20 feet
- Stop sign, traffic signal, or flashing beacon - 30 feet
- Railroad crossing - 50 feet
- Fire station entrance - 20 feet

Conventional Angle Parking

Section 66-7-352 NMSA, prohibits angle parking on any federal-aid or state highway unless the State Transportation Commission has determined by resolution or order entered in its minutes that the roadway is of sufficient width to permit angle parking without interfering with the free movement of traffic.

Although business owners generally like angle parking because it provides approximately twice as many parking spaces as provided by parallel parking, there are safety concerns because of limited sight distance when patrons are backing out of the stalls. This is especially difficult when there is a mix of vehicles such as small cars and large sport utility vehicles.

Angle parking along streets should only be considered where the following criteria are satisfied:

- The parking and maneuver area equals or exceeds the distance indicated in Exhibit 910-12.
- Parked vehicles do not adversely affect the available intersection sight distance.
- Additional travel lanes are not required for the existing traffic volumes to achieve a satisfactory level of operation.
- Pedestrian/bicycle activity is minimal within the parking maneuver area.

If the State Transportation Commission approves angle parking, the parking stalls should be designed in accordance with the request.

Exhibit 910-12
Diagonal Parking Minimum Maneuver Area

Parking Angle (degrees)	Minimum Parking Maneuver Area (feet)[a]
45	30
60	37
90	43

a perpendicular distance between the right edge of the nearest travel lane and the front edge of the parking stalls.

Back-in Angle Parking

Because of sight restrictions involving conventional angle parking, a new trend is to use back-in angle parking. Although back-in angle parking is different, the practice of backing into stalls in parking lots is very common, and much easier than parallel parking.

One of the most obvious benefits of back-in angle parking is that less maneuver space is required. Some of the reported advantages of back-in angle parking versus pull-in angle parking include:

- Similar to backing into parallel parking space, but with fewer movements.
- Easy and safe exit from space.
- No blind backing into traffic.
- Better visibility for bicycles.
- Curbside loading.
- Vehicle doors open towards curb.

Because of its merits, back-in angle parking should be considered as an alternative to conventional angle parking, especially on roadways commonly used by bicyclists.

If using back-in angle parking, special BACK-IN ANGLE PARKING ONLY signs shall be used along the roadway. The signs should have green legend and border on a white background.

3.2.9 Reserved Parking and ADA Requirements

PROWAG establishes the minimum number of required accessible parking spaces, based on the total number of spaces in the parking area. Where the New Mexico Accessible Parking Standards and Enforcement Act (Section 66-7-352.4 NMSA) mandates a higher number of disabled parking spaces, the New Mexico law shall prevail. The designer should refer to Chapter 1200 on pedestrian accessibility for further information on the design of accessible parking spaces.

910.5.3.10 Pavement Word and Symbol Markings

The use of word-type pavement messages is an effective way to communicate with drivers, provided the markings are visible. The designer is encouraged to use horizontal signing to supplement traditional regulatory, warning, and directional signs. Details for pavement word and symbol markings are included in the NMDOT Standard Drawings. Thermoplastic is the recommended material for words and symbol messages. Route marker signs may be supplemented with elongated route markers and directional arrows on the pavement.

The standard height of word messages is eight feet on all types of roads, except that the SCHOOL and XING markings are 10 feet high. A maximum of three lines of message may be used, and when two or three lines of message are used, they are read in the direction of travel, so that the motorist encounters and reads the first word of the message first.

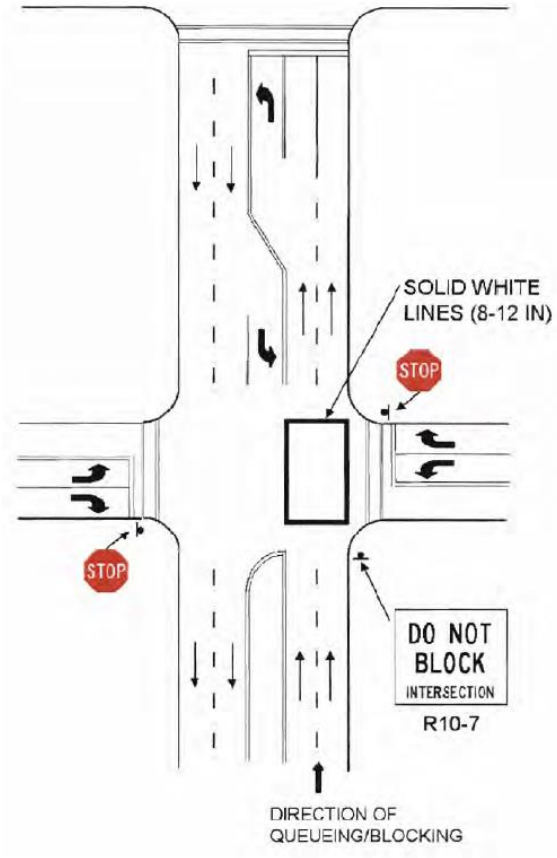
Within two-way left-turn lanes, at least one set of white two-way left turn lane-use arrows should be placed near both ends of every two-way left-turn lane.

910.5.3.11 Do Not Block Intersection Markings

Do Not Block Intersection markings may be used to mark the edges of an intersection area that is close to a signalized intersection, railroad crossing, or other nearby traffic control that may cause vehicles to stop within the intersection and impede other traffic entering the intersection.

If used, the Do Not Block Intersection markings should be consistent with Option A from the MUTCD, as illustrated in Exhibit 910-13. The box should envelop the area normally enclosed within the extension of the edge lines or centerlines, but may be expanded to encompass the left-turn lane if operational problems exist with left-turn vehicles. A minimum of four feet should exist between any crosswalks and the box.

Exhibit 910-13
Do Not Block Intersection Markings



Do Not Block Intersection markings shall not be used unless accompanied by one or more DO NOT BLOCK INTERSECTION (R10-7), DO NOT STOP ON TRACKS (R8-8), or similar signs.

As the number of approach lanes increase, it is more difficult to ensure the safety of drivers either turning across the markings or entering the roadway and crossing the markings. Therefore, Do Not Block Intersection markings shall not be used on roadways with more than two approach lanes.

910.5.3.12 Speed Hump Markings

The NMDOT does not allow speed humps on any state highways.

910.5.3.13 Rumble Strips/Rumble Bars

When considering the use of rumble strips, the designer should consider the following:

- Rumble strips are difficult for bicyclists to ride on or over.
- Depressions that are too deep may cause driver panic.
- Rumble strips may have noise impacts on adjacent residential areas.

Transverse Rumble Strips

The MUTCD and NMDOT Standard Drawings address transverse rumble strips to alert drivers to unusual vehicular traffic conditions. Depressions should not be greater than 3/8 inch.

When using transverse rumble strips, the standard recommends using five sets of rumble strip clusters in advance of the intersection, beginning 100, 200, or 350 feet in advance of the stop bar for speeds of 25, 35, and 45 mph, respectively. The spacing of the clusters should be 100 feet between the first (i.e., closest to stop bar) and second clusters, and the second and third clusters; 200 feet between the third and fourth clusters; and 300 feet between the fourth and fifth clusters.

Longitudinal Rumble Strips

Several types of longitudinal rumble strips alert drivers if their vehicle strays from its normal travel path, including the following:

- Rumble bars, as historically used on flush, concrete islands
- Shoulder rumble strips
- Centerline rumble strips
- Edge line rumble strips

Shoulder rumble strips (SRS) are included in the NMDOT Standard Drawings. Milled centerline and edge line rumble strips, where the rumble strips are centered over the centerline and edge line pavement markings, are also used. In both cases, the pavement surface should be in good condition to accept the milling process without raveling or deteriorating. When the pavement markings break at intersections, the rumble strips also must be discontinued.

Centerline rumble strips (CLRS) may reduce the occurrence of head-on and sideswipe crashes on undivided two-lane or four-lane highways. The milled rumble strips should be very similar to the milled SRS shown on NMDOT Standard Drawings, except the depth should be 7/16 to 9/16 inch, which would be continuous on 12-inch centers.

Edge line rumble strips (ELRS) may help prevent run-off-the-road crashes similar to SRS. If the lane width is less than 12 feet wide or the paved shoulders are six feet wide or wider, SRS should be used

instead of ELRS. When ELRS are used, they should be six inches wide and be repeated continuously at 12-inch centers. The recommended length of the milled surface is about five inches long and the recommended depth is 5/16 to 7/16 inches. ELRS should not be placed within 25 feet of any intersection widening.

910.5.4 Raised Pavement Markers

A raised pavement marker (RPM) is a safety device used to show roadway alignment or to replace or supplement other pavement markings. Reflective RPMs are used in conjunction with striping for longitudinal delineation and provide increased visibility at night.

The NMDOT Standard Drawings provide additional information on the use of RPMs in New Mexico.

910.5.5 Delineators

Delineators are primarily nighttime guidance devices, and they may be mounted on approved steel posts or on restorable plastic posts for raised median or island applications. Normal placement is two to eight feet from outer edge of shoulder, with a mounting height of three to four feet above pavement surface. The color of delineators shall conform to the color of edge lines.

The NMDOT Standard Drawings provide additional information on delineators, including the spacing on curves and in advance of and beyond curves.

Chevron alignment (W1-8) signs also serve as delineation, but as the name implies, the W1-8 is a sign, and it provides both daytime and nighttime guidance. Moreover, when used, W1-8 signs essentially eliminate the need for other delineation.

A 1/10 mile delineator has a reflective rectangular panel measuring four inches wide by eight inches high. These delineators have the same mounting and location requirements as a standard delineator. 1/10-mile delineators should be installed on a steel post or a flexible plastic post. In the event that a standard delineator and a 1/10-mile delineator conflict, the 1/10-mile delineator shall have priority.

1/10-mile delineators should be used on all freeways and high-speed four-lane divided expressways. The NMDOT Standard Drawings provide installation details.

910.6 Documentation

- Speed limit study
- Speed zone resolution
- Study documenting the need to prohibit turns on red (if applicable)
- Approval letter from State Traffic Engineer for non-standard signs
- State Bridge Engineer approval of custom-designed sign structure foundation (if applicable)