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**Part I**

**Signs**

**A**

**General Provisions**

**Sec. 14-298-500 Uniformity**

- (a) All regulatory and warning signs on public highways, parking lots having a capacity of 20 or more vehicles, commercial establishments and private roads shall be of the type approved by the state traffic commission.
- (b) They shall conform as noted in these regulations, except that those signs that are used on interstate systems shall conform to interstate standards.
- (c) Any exceptions to these regulations shall be based on an engineering study subject to approval of the state traffic commission.
- (d) The Connecticut Department of Transportation's catalogue of signs may be used as a guide.
- (e) All dimensions in this part are expressed in English units. Any Connecticut Department of Transportation standards, manuals and guidelines which have been developed in metric dimensions are considered equivalent.

**Sec. 14-298-501 Legal Authority**

- (a) Traffic signs shall be placed only by the authority of a public body or official having jurisdiction, for the purpose of regulating, warning or guiding traffic.
- (b) No traffic sign or its support installed for the purpose of regulating, warning or guiding traffic shall bear any message that is not essential to traffic control.

**Sec. 14-298-502 Standardization of Application**

- (a) Each standard sign shall be displayed only for the specific purpose presented for it in these regulations.
- (b) Before any new highway or any detour or temporary route is opened to traffic all necessary signs shall be in place.
- (c) Signs required by road conditions or restrictions shall be removed without undue delay when those conditions cease to exist or the restrictions are withdrawn.

**Sec. 14-298-503 Variable Message Signs**

Repealed, December 9, 1999.

**Sec. 14-298-504 Classification of Signs**

- (a) Regulatory signs give notice of traffic laws or regulations.
- (b) Warning signs call attention to conditions on or adjacent to a highway or street that are potentially hazardous to traffic operations.
- (c) Guide signs show route designations, destinations, directions, distances, services, points of interest and other geographical, recreational or cultural information.

**Sec. 14-298-505 Standardization of Signs**

- (a) In situations where messages are required other than those herein provided for, the signs should be of the same shape and color as standard signs of the same functional type.
- (b) The term "legend" as used in these regulations includes all word messages and symbol designs that are intended to convey specific meanings. For purposes of design, borders are included as part of the sign legend.
- (c) As rapidly as feasible, signs of non-standard design or application shall be replaced by new standard signs. Signs which are not dangerously inconsistent with current standards or not clearly inadequate may remain in use for a period of normal service life.

**Sec. 14-298-506 Design**

- (a) Uniformity in design includes shape, color, dimensions, legends and illumination or reflectorization.
- (b) Standardization of these designs does not preclude further improvement by minor changes in the proportion of symbols, width of borders or layout of word messages, but all shapes and colors shall be as indicated.

**Sec. 14-298-507 Shapes**

- (a) The octagon shall be reserved exclusively for the STOP sign.
- (b) The equilateral triangle, with one point downward, shall be reserved exclusively for the YIELD sign.
- (c) The round shape shall be used for the advance warning of a railroad crossing and for the emergency evacuation route marker.

- (d) The pennant shape, an isosceles triangle, with its longest axis horizontal, shall be used to warn of no passing zones.
- (e) The diamond shape shall be used only to warn of existing or possible hazards either on the roadway or adjacent thereto.
- (f) The rectangle, ordinarily with the longer dimension vertical, shall be used for regulatory signs, with the exception of STOP signs and YIELD signs.
- (g) The rectangle, ordinarily with the longer dimensions horizontal, shall be used for guide signs, with the exception of certain route markers and recreational area guide signs.
- (h) The pentagon, point up, shall be used for school advance and School Crossing signs.

**Sec. 14-298-508 Colors**

The colors to be used on standard signs shall be as follows:

- (a) Red is used only as a background color for STOP signs, multi-way supplemental plates, DO-NOT-ENTER messages, WRONG WAY signs and on Interstate route markers; as a legend color for YIELD signs, parking prohibition signs, the circular outline and diagonal bar prohibitory symbol.
- (b) Black is used as a background on ONE WAY signs, certain weigh station signs and night speed limit signs as specified herein. Black is used as a message on white, yellow, fluorescent yellow-green and orange signs.
- (c) White is used as the background for route markers, guide signs, the Fallout Shelter Directional sign, and regulatory signs, except STOP signs, and for the legend on brown, green, blue, black and red signs.
- (d) Orange is used as a background color for construction and maintenance signs and shall not be used for any other purpose.
- (e) Yellow is used as a background color for warning signs, except where orange is specified herein, and for school signs.
- (f) Brown is used as a background color for guide and information signs related to points of recreational or cultural interest.
- (g) Green is used as a background color for guide signs (other than those using brown or white), mileposts, and as a legend color with a white background for permissive parking regulations.

- (h) Blue is used as a background color for information signs related to motorist services (including police services and rest areas) and the Evacuation Route Marker.
- (i) Wherever white is specified herein as a sign color, it is understood to include silver-colored reflecting coatings or elements that reflect white light.
- (j) Fluorescent yellow-green may be used instead of yellow for pedestrian warning, bicycle warning, school bus and school warning signs.
- (k) Fluorescent pink may be used as an alternate background for incident management signing.

**Sec. 14-298-509 Dimensions**

- (a) The sign dimensions prescribed in these regulations shall be standard for application on public highways. Increases above these standard sizes are desirable where greater legibility or emphasis is needed.
- (b) In expressways and freeways, special designs or large signs are prescribed. In the enlargement of signs, standard shapes and colors shall be used and standard proportions shall be retained insofar as practicable. Wherever practicable, the overall dimensions of the sign plates should be increased to 6-inch increments.

**Sec. 14-298-510 Illumination and Reflectorization**

Regulatory and warning signs, unless excepted in the standards covering a particular sign or group of signs, shall be reflectorized or illuminated to show the same shape and color both by day and night. All overhead sign installations should be illuminated where an engineering study shows that reflectorization will not perform effectively.

**Sec. 14-298-511 Sign Borders**

All signs shall have a border of the same color as the legend, at or just inside the edge. A dark border should be set in from the edge, while a white border should extend to the edge of the panel.

**Sec. 14-298-512**

Reserved

**Sec. 14-298-513 Supplemental Beacons**

A hazard identification beacon may be used only to supplement an appropriate warning or regulatory sign. The beacon shall not be included within the border of the sign, except school speed limit signs.

**Sec. 14-298-514 Height**

- (a) Signs erected at the side of the road in rural districts shall be mounted at a height of at least 5 feet, measured from the bottom of the sign to the near edge of the pavement.
- (b) In business, commercial and residential districts where parking and/or pedestrian movement is likely to occur or where there are other obstructions to view, the clearance to the bottom of the sign shall be at least 7 feet. The height to the bottom of a secondary sign mounted below another sign may be 1 foot less than the appropriate height specified above.
- (c) Directional signs on expressways shall be erected with a minimum height of 7 feet (from the level) of the near edge of the pavement to the bottom of the sign. If, however, a secondary sign is mounted below another sign, the major sign shall be at least 8 feet and the secondary sign at least 5 feet above the level of the pavement edge.
- (d) All route markers and warning and regulatory signs on expressways shall be at least 7 feet above the level of the pavement edge. However, where signs are placed 30 feet or more from the edge of the nearest traffic lanes for increased roadside safety, the height to the bottom of such signs may be 5 feet above the level of the pavement edge.
- (e) Overhead signs shall provide a vertical clearance of not less than 17 feet over the entire width of the pavement and shoulders except where a lesser vertical clearance is used for the design of other structures. The vertical clearance to overhead sign structures or supports need not be greater than 1 foot in excess of the minimum design clearance of other structures.

**Sec. 14-298-515 Lateral Clearance**

Signs shall have the maximum practical lateral clearance from the edge of the traveled way.

**Sec. 14-298-516 Position of Signs**

- (a) A warning sign is placed in advance of the condition to which it calls attention.
- (b) A regulatory sign normally is placed where its mandate or prohibition applies or begins.
- (c) Guide signs are placed, where needed, to keep drivers well informed as to the route to their destination.

**Sec. 14-298-517 Erection**

Signs should be mounted approximately at right angles to the direction of, and facing, the traffic that they are intended to serve.

**Sec. 14-298-518 Maintenance**

- (a) All traffic signs should be kept in proper position, clear and legible at all times.
- (b) Damaged signs should be replaced without undue delay.

**B**

**Regulatory Signs**

**Sec. 14-298-519 Application of Regulatory Signs**

- (a) Regulatory signs shall be used to inform highway users of traffic laws or regulations that apply at given places or on given highways, disregard of which is punishable by law.
- (b) Regulatory signs shall be erected at those locations where the regulations apply, and shall be mounted so as to be easily visible and legible to the motorist whose actions they are to govern. The message on the sign shall clearly indicate the requirements imposed by the regulation.
- (c) Signs that have been erected but are no longer applicable shall be removed.

**Sec. 14-298-520 Classification of Regulatory Signs**

- (a) Right-of-way series:
  - 1. Stop sign
  - 2. Yield sign
- (b) Speed series
- (c) Movement series:
  - 1. Turning
  - 2. Alignment
  - 3. Exclusion
  - 4. One Way
- (d) Parking series

- (e) Pedestrian series
- (f) Miscellaneous series

**Sec. 14-298-521 Design of regulatory signs**

All regulatory signs shall be reflectorized or illuminated to show the same shape and color both by day and by night, unless excepted in the standards covering a particular sign or group of signs.

**Sec. 14-298-522 Stop signs**

- (a) STOP signs are intended for use on roadways where traffic is required to stop.
- (b) The STOP sign shall be an octagon with white message and border on a red background.
- (c) The standard size shall be 30 inches by 30 inches. Where greater emphasis or visibility is required, a larger size is recommended. On low-volume local streets and secondary roads with low approach speeds, a 24-inch by 24-inch size may be used.
- (d) At a multiway stop intersection, a supplementary plate should be mounted just below each STOP sign. If the number of approach legs to the intersection is three or more, the numeral on the supplementary plate shall correspond to the actual number of legs, or the legend ALL-WAY may be used. The supplementary plate shall have white letters on a red background and shall have a standard size of 12 inches by 6 inches or 18 inches by 6 inches.
- (e) A STOP sign beacon or beacons may be used in conjunction with a STOP sign.
- (f) Secondary messages shall not be used on STOP sign faces.

**Sec. 14-298-523 Application of Stop Sign**

- (a) STOP signs should never be used on the through roadways of expressways.
- (b) STOP signs shall not be erected at intersections where traffic control signals are operating.
- (c) Where two main highways intersect, the STOP sign or signs would normally be posted on the minor street to stop the lesser flow of traffic. Traffic engineering studies, however, may justify a decision to install STOP sign or signs on the major street.
- (d) For other than temporary or emergency purposes portable or part-time STOP signs shall not be used.
- (e) STOP signs shall not be used for speed control.

**Sec. 14-298-524 Yield sign**

- (a) The YIELD sign assigns right-of-way to traffic on certain approaches to an intersection.
- (b) Vehicles controlled by a YIELD sign need stop only when necessary to avoid interference with other traffic that is given the right-of-way.
- (c) The YIELD sign shall be a downward pointing, equilateral triangle having a red border band and a white interior and the word YIELD in red inside the border band; the border band to be 5 inches for the 36-inch sign, 6 inches for the 48-inch sign and 8 inches for the 60-inch sign.

**Sec. 14-298-525 Location of Stop Sign and Yield Sign**

- (a) A STOP sign should be erected at the point where the vehicle is to stop or as near thereto as possible, and may be supplemented with a STOP line and/or the word STOP on the pavement.
- (b) A YIELD sign should be erected in the same manner, at the point where the vehicle is to stop if necessary to yield the right-of-way. Where there is a marked crosswalk on the pavement, the sign should be erected approximately 4 feet in advance of the crosswalk line nearest to approaching traffic.
- (c) Where only one sign, STOP or YIELD, is used, it shall be on the right-hand side of the traffic lanes to which it applies.
- (d) At an intersection where a wide throat exists on the signed approach, observance of the sign may be improved by the erection of an additional sign on the left side of the approach road, and by the use of a STOP line.
- (e) Where two lanes of traffic are subject to the STOP sign, a second sign should be placed where it is visible to traffic in the inner lane. At certain channelized intersections, the additional sign may be effectively placed on a channelizing island.
- (f) In no instance shall one STOP or YIELD sign be mounted above another on the same post.
- (g) Where two roads intersect at an acute angle, the STOP or YIELD sign should be positioned at an angle, or shielded, so that the message is out of view of traffic to which it does not apply.
- (h) In the event the visibility of a STOP sign or a YIELD sign at any location is restricted, the sign shall be located as specified, and a STOP AHEAD sign or a YIELD AHEAD sign shall be erected in advance of the STOP or YIELD sign.

**Sec. 14-298-526 Speed Limit Sign**

- (a) The Speed Limit sign shall display the limit established by law, or by regulation, after an engineering and traffic investigation has been made in accordance with established traffic engineering practices.
- (b) The speed limits shown shall be in multiples of 5 miles per hour.
- (c) No more than three speed limits should be displayed on any one speed limit sign or assembly. Where a special speed limit applies to trucks or other vehicles, the legend TRUCKS 40, or such similar message as is appropriate, shall be shown below the standard message or on a separate plate. When used independently, the Truck Speed sign should carry a reference to SPEED or MPH.
- (d) Minimum speeds shall be displayed only in combination with the posted speed limit.
- (e) The standard Speed Limit sign shall be 24 inches by 30 inches. On expressways the sign should be at least 36 inches by 48 inches, with 48 inches by 60 inches prescribed for use on freeways.

**Sec. 14-298-527 Minimum Speed Sign**

Driving slower than the minimum limit is illegal except when necessary for safe operation or in compliance with the law. The minimum speed shall be displayed only in combination with the posted speed limit, and if desired, these two signs may be combined. The Minimum Speed sign shall have a standard, and minimum, size of 24 inches by 30 inches.

**Sec. 14-298-528 Location of Speed Limit Sign**

- (a) Speed Limit signs, indicating speed limits for which posting is required by law, shall be located at the points of change from one speed limit to another. These signs shall not be erected until the speed limits are approved and officially authorized.
- (b) At the end of the section to which a speed limit applies, a Speed Limit sign showing the next speed limit shall be erected. Additional signs shall be installed beyond major intersections and at other locations where it is necessary to remind motorists of the limit that is applicable.

**Sec. 14-298-529 Turn Prohibition Signs**

- (a) Turn prohibition signs should be used to indicate the turns that are prohibited or restricted at a particular intersection. These signs should be placed where they will be most easily seen by drivers intending to turn.

- (b) The standard and minimum size of the NO RIGHT TURN sign, the NO LEFT TURN sign and the NO TURNS sign shall be 24 inches by 24 inches.
- (c) The NO RIGHT TURN sign shall be placed at the near right-hand corner of the intersection.

**Sec. 14-298-530 U-Turn Prohibition Sign**

- (a) The NO U TURN sign is intended for use at or between intersections to indicate locations where U turns are prohibited.
- (b) The sign shall have a standard size of 24 inches by 24 inches.
- (c) The word message, NO U TURN, on a 24 inch by 30 inch panel may be used as an alternate.

**Sec. 14-298-531 Lane-Use Control Signs**

- (a) Lane-Use Control signs shall be used where turning movements are required or where unconventional turning movements are permitted from specific lanes at an intersection.
- (b) The standard size of these signs shall be as indicated in the most current catalog of signs maintained by the Connecticut Department of Transportation.
- (c) Signs for overhead mounting shall be mounted over the lanes to which they apply.
- (d) The Mandatory Movement sign shall show a single arrow and the regulatory word message ONLY.
- (e) The optional movement sign shall show a straight-through and a curved arrow with the lower ends of their shafts superimposed, to indicate that either of the movements symbolized is permissible.
- (f) The optional movement sign shall not be used alone to effect a turn prohibition.
- (g) The mandatory turn sign designed for post mounting may carry the message Right (or Left) Lane Must Turn Right (or Left).
- (h) Double-turn signs for post mounting may be needed at such locations as at the right curb (for double right turns) or on the left side of a one-way street or on the median of a divided highway (for double right turns). The post-mounted double-turn signs should carry side by side on the same plate, two arrow symbols similar to the designs for the overhead signs.
- (i) Lane-use signs are not required at signalized intersections where separate turn signals and turning bays are provided.

**Sec. 14-198-532 Applications of Lane-Use Control Signs at Intersections**

Lane-use Control signs shall be used at intersections whenever it is desired to require vehicles in certain lanes to turn, or to permit turns from an adjacent lane.

**Sec. 14-298-533 Location of Lane-Use Control Signs**

- (a) Overhead lane-use control signs shall be placed over the lanes to which they apply.
- (b) When only post-mounted lane-use control signs are used, one sign shall be placed at the intersection where feasible. A second lane-use control sign may be placed at an adequate distance in advance of the intersection so that motorists can select and properly enter the appropriate lane.
- (c) Supplementary pavement markings should be used with mandatory turn signs.

**Sec. 14-298-534 Do Not Pass Sign**

The standard DO NOT PASS sign shall be 24 inches by 30 inches in size, with a minimum size for minor roads of 18 inches by 24 inches.

**Sec. 14-298-535 Slower Traffic Keep Right**

- (a) The SLOWER TRAFFIC KEEP RIGHT sign may be used on multiple-lane roadways to reduce unnecessary weaving. It should be erected just beyond the beginning of a multiple-lane pavement, and at selected locations on the median strip of a divided highway where there is a tendency on the part of the motorist to drive in the left-hand lane (or lanes) below the normal speed of traffic. It should not be used on the approach to an interchange or through an interchange area.
- (b) This sign shall have a standard, and minimum, size of 24 inches by 30 inches. Because it is not used on secondary roads, no small design is provided. On expressways the sign should be at least 36 inches by 48 inches, with 48 inches by 60 inches prescribed for freeways.

**Sec. 14-298-536 Signs for Uphill Traffic Lanes**

- (a) Where an extra lane has been provided on an upgrade for slow-moving traffic, it should be preceded by a sign directing such traffic into this "climbing" lane. The SLOWER TRAFFIC KEEP RIGHT sign is applicable for this purpose, or more specific messages such as TRUCKS USE RIGHT LANE and/or SLOW VEHICLES KEEP RIGHT may be used.
- (b) The standard, and minimum, size of these signs shall be 24 inches by 30 inches.

**Sec. 14-298-537 Keep Right Sign**

- (a) The Keep Right sign should be used within and at the ends of medians, parkways, loading islands, and refuge islands, at traffic islands, and at underpass piers, where traffic is required to keep to the right.
- (b) The Keep Right sign shall have a standard size of 24 inches by 30 inches. On expressways the sign should be at least 36 inches by 48 inches, with 48 inches by 60 inches prescribed for use on freeways. A smaller size of 18 inches by 24 inches is permissible for use on narrow medians and at median openings to serve entering cross traffic and to remind through traffic of the regulation.

**Sec. 14-298-538 Do Not Enter Sign**

- (a) The DO NOT ENTER sign shall be a minimum 30-inch white square on which is inscribed a 29-inch diameter red circle, with a white band 5 inches in width placed horizontally across the center of the circle.
- (b) The legend DO NOT ENTER shall appear in white letters with the words DO NOT above the band and ENTER below the band. Larger sizes are prescribed for use on major streets or on expressways with one-way ramp or roadway connections.

**Sec. 14-298-539 One Way Sign**

- (a) The ONE WAY sign shall be used when required to indicate streets or roadways upon which vehicular traffic is allowed to travel in one direction only.
- (b) The sign shall be either a white arrow, right or left, on a black horizontal rectangle of a standard, and minimum, size of 36 inches by 12 inches with the words ONE WAY centered in the arrow; or a vertical rectangle of a standard, and minimum, size of 18 inches by 24 inches with black lettering and a right or left arrow on a white background.
- (c) One Way signs shall be placed on the near right-hand and the far left-hand corners of the intersection so as to face traffic entering or crossing the one-way street. At signalized intersections, the signs may be placed near the appropriate signal faces. One Way signs should also be placed parallel to the one-way street directly opposite the exits from alleys and other public ways.

**Sec. 14-298-540 Parking and Stopping Signs**

- (a) The legend on parking signs shall state whatever regulations apply.

- (b) Parking signs shall display the following information as is appropriate, from top to bottom of the sign, in the order listed: 1. restriction or prohibition. 2. time of day it is applicable, if not at all hours. 3. day of week applicable, if not every day.
- (c) Parking prohibition signs shall have red letters and border on a white background.
- (d) Permissive parking signs shall have green letters and border on a white background.
- (e) Parking signs shall have a minimum standard size of twelve inches by eighteen inches.
- (f) Handicapped parking by permit signs shall have white letters and border on a blue background.

**Sec. 14-298-541 Emergency Parking Signs**

- (a) These signs are designed as horizontal rectangles and shall have a black legend on a white background.
- (b) A size of 48 inches by 36 inches is prescribed for use on freeways.

**Sec. 14-298-542 Traffic Signal Signs**

The Pedestrian Actuated Sign shall be 9 inches by 12 inches in size and shall be mounted immediately above or incorporated in the pedestrian push-button unit.

**Sec. 14-298-543 Keep Off Median Sign**

The KEEP OFF MEDIAN sign shall have a standard, and minimum, size of 24 inches by 30 inches. On expressways it should be at least 36 inches by 48 inches, with 48 inches by 60 inches prescribed for freeways.

**Sec. 14-298-544 Road Closed Sign**

- (a) The Road Closed sign shall have a standard, and minimum, size of 48 by 30 inches.
- (b) Where the sign faces through traffic, it shall be preceded by an Advance Road Closed warning sign and, if applicable, an Advance Detour warning sign.

**Sec. 14-298-545 Local Traffic Only Sign**

- (a) The Local Traffic Only sign should be used where through traffic must detour to avoid a closing of the highway for construction or maintenance work or for a temporary emergency some distance beyond, but where the highway is open for traffic up to the point of closure.
- (b) It shall carry the legend ROAD CLOSED (00) MILES AHEAD-LOCAL TRAFFIC ONLY or optionally for urban application, ROAD CLOSED TO THRU TRAFFIC. Both signs shall be designed as horizontal rectangles.

- (c) The words BRIDGE OUT (or similar message) may be substituted for ROAD CLOSED where applicable.
- (d) Where the sign faces through traffic, it shall be preceded by an Advance Road Closed warning sign with the secondary legend AHEAD and, if applicable, an Advance Detour warning sign.

**Sec. 14-298-546 Weight Limit Sign**

- (a) A Weight Limit sign shall be located immediately in advance of the section of highway or the structure to which it applies.
- (b) The standard, and minimum, size shall be 24 inches by 30 inches but a larger size is desirable on major roads and streets.

**Sec. 14-298-547 Weigh Station Signs**

A regulatory sign is required to direct the concerned traffic into the weigh station.

**Sec. 14-298-548 Two Way Left Turn Only Signs**

- (a) TWO WAY LEFT TURN ONLY signs shall be used where a lane in the center of a highway is reserved for the exclusive use of left-turning vehicles in either direction and is not used for overtaking.
- (b) Pavement markings shall be used in conjunction with these signs. Overhead mounted signs should be used, but a post-mounted sign may be used as an alternate to or a supplement to the overhead mounted sign.

**Sec. 14-298-549 Preferential Lane Signing**

- (a) Preferential lanes are lanes where usage is limited according to class of vehicle or vehicle occupancy. Signing for these lanes should follow the standard regulatory signing principles – black legend on white background, rectangular shape, and reflectorized or illuminated if applicable during periods of reduced visibility.
- (b) The diamond lane marking symbol used to designate preferential lanes should be incorporated in the body of the signs, as a white symbol on a black background.
- (c) The signs are intended for use with a preferential lane to indicate the particular restrictions applying to that lane.
- (d) Signs should be located adjacent to the preferential lane or should be mounted directly over the lane.
- (e) The message format of a bus-carpool lane for overhead signs should have the following sequence.

- (1) top line - lanes applicable (e.g. center lane, curb lane, right two lanes, this lane)
  - (2) middle lines - applicable vehicle (e.g. buses only, buses and carpools, buses and right turns only)
  - (3) bottom lines - applicable time and day (e.g. 7:00 to 9:00 a.m., 4:00 to 6:00 p.m., Monday through Friday)
- (f) The message format of signs post mounted should have this sequence:
- (1) top lines - applicable vehicles (e.g. buses only, buses and carpools, buses and right turns only)
  - (2) bottom lines - applicable time and day (e.g. 7:00 to 9:00 a.m., 4:00 to 6:00 p.m., Monday through Friday); the time and day are separated from a down arrow.
- (g) The diamond symbol on these signs preferably should appear in the top left quadrant.
- (h) When overhead lane use control signals or changeable message signs are used to convey the preferential lane-use restrictions, signs are not mandatory but may be used to supplement other controls.
- (i) Pavement markings for these lanes shall be used in conjunction with these signs.
- (j) Advance notification of preferential lane-use roadways is desirable. "Restricted Lane Ahead" signs may be used for this purpose.
- (k) At the end of a signed section of preferential lanes, a "Restricted Lane Ends" sign shall be used.

**Sec. 14-298-550 Wrong Way**

- (a) The WRONG WAY sign may be used as a supplement to the DO NOT ENTER sign.
- (b) The WRONG WAY sign shall have a white legend and red background with a white border.
- (c) The standard and minimum of this sign shall be 36 inches by 24 inches.

**Sec. 14-298-551 No Turn On Red**

- (a) The NO TURN ON RED sign shall be used to indicate that a right turn on red is not permitted.
- (b) The sign should be erected near the appropriate signal head.

**Sec. 14-298-552 Other Regulatory Signs**

Other miscellaneous regulatory signs as may be needed shall be of a design and size approved by the state traffic commission.

## C

**Warning Signs****Sec. 14-298-553 Application of Warning Signs**

Warning signs shall be used for the purpose of warning traffic of existing or potentially hazardous conditions either on or adjacent to the road.

**Sec. 14-298-554 Design of Warning Signs**

- (a) All warning signs in this part with the following exceptions shall be diamond shaped (square with one diagonal vertical) with black legend on a yellow background.
- (1) large arrow sign - horizontal rectangle with large black single or double head arrow and black border on yellow background.
  - (2) chevron alignment sign - vertical rectangle with black chevron symbol on a yellow background.
  - (3) stop ahead sign - a solid red octagon with white border located below a black vertical arrow on a yellow diamond with a black border alternate for black legend stop ahead on yellow diamond with a black border.
  - (4) yield ahead sign - a downward pointing, equilateral triangle having a red border band and a white interior located below a black vertical arrow on a yellow diamond with a black border: alternate for a black legend yield ahead on a yellow diamond with a black border.
  - (5) signal ahead sign - red, yellow, green and black signal ahead on a yellow diamond with a black border.
  - (6) supplemental plaques - a horizontal rectangle with black legend and border on a yellow background.
  - (7) advisory speed plate - a square with black legend and border on a yellow background.
  - (8) advisory exit speed or ramp speed signs - a vertical rectangle with black legend and border on a yellow background.
  - (9) no passing zone - sign - pennant shaped with black legend and border on a yellow background.
  - (10) railroad advance warning sign - round with black legend and border on a yellow background.
  - (11) school advance warning and school crossing signs - pentagon shaped with black symbol and border on a yellow or fluorescent yellow-green background.

- (12) weight limit advance warning signs - square or rectangular with black legend and/or symbols and border on a yellow background.
  - (13) pedestrian warning, bicycle warning, playground warning and school bus and school warning signs may have black legend and border on a yellow or fluorescent yellow-green background.
  - (14) further exceptions to the above shall be based on competent engineering study.
- (b) All warning signs having significance during hours of darkness shall have a fully reflectorized background or be illuminated.

**Sec. 14-298-555 Placement of Warning Signs.**

Repealed December 9, 1999.

**Sec. 14-298-556 - 14-298-599**

Reserved

**Part II****Markings****A****General Provisions****Sec. 14-298-600 Legal Authority**

Markings as described in sections 14-298-601 to 14-298-636, inclusive, shall be placed or caused to be placed only by the traffic authority having jurisdiction over the regulating, warning and guiding of traffic.

**Sec. 14-298-601 Standardization**

- (a) All markings used on public and private highways shall conform as prescribed in these regulations, except those markings that are used on the Interstate system shall conform to Interstate standards. Any exceptions to these regulations shall be based on an engineering study and subject to the approval of the State Traffic Commission.
- (b) All dimensions in this part are expressed in English units. Any Connecticut Department of Transportation standards, manuals and guidelines that have been developed in metric dimensions are considered equivalent.

**Sec. 14-298-602 Materials**

Reflectorized paint, plastic or other suitable materials used as pavement markings shall conform to the color, reflectorization, dimensions, and other specifications set forth in these regulations.

**Sec. 14-298-603 Colors**

Pavement markings shall be yellow, white, blue or red. The use of black is permitted in combination with the above colors where the pavement itself does not provide sufficient contrast.

**Sec. 14-298-604 Longitudinal Pavement Markings**

Longitudinal pavement markings shall conform to the following basic concepts:

- (1) Yellow lines delineate the separation of traffic flows in opposing directions or mark the left edge of the roadway of divided and one-way highways and ramps or separation of two-way left turn lane and reversible lane from other lanes.

- (2) White lines delineate the separation of traffic flows in the same direction or the right edge of the roadway.
- (3) Red markings (other than paint) delineate roadways that shall not be entered or used by the viewer of those markings.
- (4) Broken lines are permissive in character.
- (5) Solid lines are restrictive in character.
- (6) Width of line indicates the degree of emphasis.
- (7) Double lines indicate maximum restrictions.
- (8) Pavement markings shall be reflectorized and shall be visible at night.

#### **Sec. 14-298-605 Widths and Patterns of Longitudinal Lines**

The widths and patterns of longitudinal lines shall be as follows:

- (1) A normal width line is 4" to 6" wide.
- (2) A wide line is usually twice the width of a normal line.
- (3) A double line consists of two normal width lines separated by a discernible space.
- (4) A broken line is formed by segments and gaps, usually in the ratio of 1:3. On rural highways, a commonly used standard is 10 foot segments and 30 foot gaps. Other dimensions in this ratio may be used as best suit traffic speeds and need for delineation.
- (5) A dotted line is formed by short segments, normally two feet in length, and gaps, normally four feet or longer.

#### **Sec. 14-298-606 Types of Longitudinal Lines**

- (a) A normal broken white line shall be used to delineate the edge of a travel path where travel is permitted in the same direction on both sides of the line.
- (b) A normal broken yellow line shall be used to delineate the left edge of a travel path where travel on the other side of the line is in the opposite direction and where crossing the centerline marking for passing with care is permitted for traffic traveling in either direction.
- (c) A normal solid white line shall be used to delineate the edge of a travel path where travel in the same direction is permitted on both sides of the line but crossing the line is discouraged and as a right pavement edge marking. A wide solid white line is used for emphasis where the crossing requires unusual care.

- (d) A double solid white line shall be used to delineate a travel path where travel in the same direction is permitted on both sides of the line, but crossing the line is prohibited.
- (e) A double line consisting of a normal broken yellow line and a normal solid yellow line delineates a separation between travel paths in opposite directions where overtaking and passing is permitted with care for traffic adjacent to the broken line and is prohibited for traffic adjacent to the solid line. This is a one direction no-passing marking. It is used on a two-way, two and three-lane roadways to regulate passing and to delineate the edges of a lane in which travel in either direction is permitted. In the latter application, the markings are to be placed with the solid lines on the outside and the dashed lines on the inside of the lane. Traffic adjacent to the solid line may cross this marking with care only as part of a left-turn maneuver.
- (f) A double line consisting of two normal solid yellow lines delineates the separation between travel paths in opposite directions where overtaking and passing is prohibited in both directions. This is a two direction no-passing marking. Crossing this marking with care is permitted only as part of a left-turn maneuver.
- (g) A double normal broken yellow line delineates the edge of a lane in which the direction of travel is changed from time to time in such a way that the line serves as the centerline during some period. Its use is for a reversible lane.
- (h) A normal dotted line shall be used to delineate the extension of a line through an intersection or interchange area. It shall be the same color as the line it extends.
- (i) A solid yellow line delineates the left edge of a travel path to indicate a restriction against passing on the left or delineates the left edge of each roadway of divided streets or highways, one-way roadways and ramps, in the direction of travel.

#### **Sec. 14-298-607 Transverse Markings**

Transverse markings including shoulder markings, word and symbol markings, stop lines, crosswalk lines, and parking space markings shall be white except that:

- (1) Transverse median markings shall be yellow.
- (2) Markings visible only to traffic proceeding in the wrong direction on a one-way roadway may be red.

**B****Pavement and Curb Markings****Sec. 14-298-608 Center Lines**

A centerline separates traffic traveling in opposite directions. It need not be at the geometrical center of the pavement. The centerline markings on two-lane, two-way highways shall be either:

- (1) a normal broken yellow line where passing is permitted; or
- (2) a double line consisting of a normal broken yellow line and a normal solid yellow line where passing is permitted in one direction, or
- (3) a double line consisting of two normal solid yellow lines where passing is prohibited in both directions.

The centerline on undivided highways, where four or more lanes are always available, shall be a double solid yellow line.

**Sec. 14-298-609 Lane Lines**

Lane lines shall be used to separate lanes of traffic traveling in the same direction. They shall be used:

- (1) On all multi-lane highways.
- (2) At congested locations where the roadway will accommodate more lanes of traffic than would be the case without the use of lane lines.

Lane lines shall be normally broken white lines which permit lane changing with care.

A normal solid white line may be used as the lane line in critical areas where it is advisable to discourage lane changing and to separate through traffic lanes from special secondary lanes.

A double solid white line shall be used when lane changing is prohibited.

**Sec. 14-298-610 No Passing Zone Markings**

Where center lines are installed, no-passing zones shall be established on two-lane highways where an engineering study indicates passing must be prohibited because of inadequate sight distances or other special conditions.

A no-passing zone shall be marked by either a one direction, no-passing marking ((e) Sec. 14-298-606) or a two direction, no-passing marking ((f) Sec. 14-298-606).

**Sec. 14-298-611 Application of No Passing Zone Markings**

On a two-lane highway the no passing marking shall be parallel to and extended along the centerline throughout the no passing zone.

In addition to the pavement markings here prescribed, no passing zone signs may be used to emphasize the existence of a no passing zone.

The no passing marking shall also be used on two-way roadways at pavement width transitions and on approaches to obstructions which must be passed on the right. It shall also be used on approaches to railroad grade crossings. It may also be used at other locations where passing should be prohibited.

**Sec. 14-298-612 Warrants for No Passing Zones at Curves**

A no passing zone at a horizontal or vertical curve is warranted where the sight distance, based on engineering study, is less than the minimum necessary for safe passing at the prevailing speed of traffic.

**Sec. 14-298-613 Pavement Edge Lines**

Pavement edge lines shall be used only as a supplement to and not as a substitute for standard center and lane lines.

Edge lines should be provided on all Interstate Highways and may be used on other classes of roads. The lines shall be white except on the left edge of each roadway of divided streets and highways, and on one-way roadways in the direction of travel they shall be yellow.

**Sec. 14-298-614 Pavement Marking Extensions Through Intersections or Interchanges**

Where road design or reduced visibility conditions make it desirable to provide control or to guide vehicles through an interchange or intersection, (such as at offset, skewed, complex multi-legged intersections or where multiple turn lanes are used) a dotted line may be used to extend markings as necessary through the interchange or intersection area. Where a greater degree of restriction is required, solid lane lines or channelizing lines may be continued through intersections.

**Sec. 14-298-615 Lane Reduction Transitions**

Where pavement markings are used, lane reduction markings shall be used to guide traffic at points where the pavement width changes to a lesser number of through lanes. No passing markings shall be used to prohibit passing in the direction of the convergence, throughout the transition area.

**Sec. 14-298-616 Channelizing Line**

The channelizing line shall be a wide or double solid white line. The channelizing line may be used to form traffic islands where travel in the same direction is permitted on both sides. Other markings in the island area such as crosshatching shall be white.

**Sec. 14-298-617 Median Islands Formed by Pavement Markings**

Two double yellow lines shall be used to form continuous median islands where these islands separate travel in opposite directions. Other markings in the median island such as crosshatching shall be yellow.

**Sec. 14-298-618 Marking of Interchange Ramps**

For exit ramps, channelizing lines should be placed along both sides of the neutral area between the main roadway and the exit ramp lane. With a parallel deceleration lane, a lane line should be extended from the beginning of the channelizing line for a distance of approximately one-half the length of the full width deceleration lane. White markings may be placed in the neutral area for special emphasis.

For entrance ramps, a channelizing line should be placed along the side of the neutral area adjacent to the ramp lane. With a parallel acceleration lane, a lane line should be extended from the end of the channelizing line for a distance approximately one-half the length of the full width acceleration lane. With a tapered acceleration lane; a lane line may be placed to extend the channelizing line, but not beyond a point where the tapered lane meets the near side of the through traffic lane.

**Sec. 14-298-619 Combination Lane and Center Line Markings for Unique Applications**

- (a) For reversible lane markings, each edge of the lane shall be marked by the use of a normal broken double yellow line with the gaps and segments adjacent to one another. Signs and/or signals shall be used to supplement the pavement markings.
- (b) A two-way left-turn lane is a lane reserved in the center of a highway for exclusive use of left-turn vehicles and shall not be used for passing and overtaking or travel by a driver except to make a left turn. The lane may be used by drivers making the left turn in either direction. A two-way left-turn lane shall be marked by a broken yellow line toward the two-way left-turn lane and a solid yellow line toward the adjacent lane.

**Sec. 14-298-620 Approach to an Obstruction**

- (a) Pavement markings shall be used to guide traffic on the approach to fixed obstructions within a paved roadway. An obstruction may be so located that all traffic must keep to the right of it or it may be between two lanes of traffic moving in the same direction. The markings in either case shall be designed to guide traffic away from the obstruction. The use of channelizing lines or no passing markings are generally effective.
- (b) Obstruction approach markings for bridge supports, refuge islands, median islands and channelizing islands shall consist of a diagonal line (or lines) extending from the center line of a lane line to a point one to two feet to the right side or to both sides of the approach end of the obstruction.
- (c) If traffic is required to pass only to the right of the obstruction, the marking shall consist of a no passing marking at least twice the length of the diagonal portion. Yellow markings may be placed in the triangular area so formed.
- (d) If traffic may pass either to right or left of the obstruction, the markings shall consist of two channelizing lines diverging from the lane line, one to either side of the obstruction. In advance of the point of divergence, a wide, solid white line or double white line shall be extended in place of the broken lane line for a distance equal to the length of the diverging lines. It may be desirable where traffic is permitted to pass to both right and left of an obstruction, to place additional white markings in the triangular area between the markings.

**Sec. 14-298-621 Stop Lines**

- (a) Stop lines are solid white lines, normally 12 to 24 inches wide, extending across all approach lanes.
- (b) Stop lines should be used in both rural and urban areas where it is important to indicate the point, behind which vehicles are required to stop, in compliance with a STOP sign, traffic signal, officers' direction, or other legal requirement.
- (c) Stop lines, where used, should ordinarily be placed 4 feet in advance of the nearest crosswalk line. The stop line should be placed perpendicular to the centerline of the roadway on which the traffic is required to stop. In the absence of a marked crosswalk, the stop line should be placed at the desired stopping point, not more than 50 feet or less than 4 feet from the nearest edge of the intersecting roadway.

- (d) If a stop line is used in conjunction with a STOP sign, it should ordinarily be placed in line with the STOP sign. However, if the sign cannot be located exactly where vehicles are expected to stop, the Stop line should be placed at the stopping point.

**Sec. 14-298-622 Crosswalk and Crosswalk Lines**

- (a) Crosswalk lines shall be solid white lines marking both edges of a crosswalk. They shall not be less than six inches in width and should not be spaced less than six feet apart.
- (b) Crosswalks should be marked at all intersections where there is substantial conflict between vehicle and pedestrian movements. Marked crosswalks should also be provided at other appropriate points where pedestrians could not otherwise recognize the proper place to cross. For added visibility, the area of the crosswalk may be marked with white diagonal lines or with white longitudinal lines. These lines shall be approximately 12 inches to 24 inches wide and spaced 16 inches to 24 inches apart. When diagonal or longitudinal lines are used to mark a crosswalk, the transverse crosswalk lines referred to in subsection (a) may be omitted. School crosswalks shall use 24 inch wide longitudinal lines, spaced 24 inches apart.

**Sec. 14-298-623 Speed Measurement Markings**

A speed measurement marking is a transverse marking placed on the roadway for the purpose of assisting in the enforcement of speed regulations. Speed measurement markings shall be white and shall not be greater than 24 inches wide. They may extend approximately 2 feet on either side of the centerline or edgeline of the paved surface at 1/4 mile intervals over a one-mile length of roadway. Advisory signs may be used in conjunction with these signs.

**Sec. 14-298-624 Parking Space Markings**

Parking space markings shall be white.

**Sec. 14-298-625 Pavement Word and Symbol Markings**

- (a) Word and symbol markings on the pavement may be used for the purpose of guiding, warning, or regulating traffic. They shall be limited to not more than a total of three lines of words and/or symbols. They shall be white in color.
- (b) The word "STOP" shall not be used on the pavement unless accompanied by a stop line and STOP sign.
- (c) The word STOP shall not be placed on the pavement in advance of a stop line, unless every vehicle is required to stop at all times.

**Sec. 14-298-626 Preferential Lane Markings**

- (a) When a lane is assigned full or part time to a particular class or classes of vehicles, the preferential lane markings shall be used. The marking is intended to convey that a restriction on the class or classes of vehicles permitted to use the lane exists, and it is supplemental to signs or signals conveying the specific restrictions. Signs or signals shall be used with the preferential lane markings.
- (b) The preferential lane markings for a high-occupancy vehicle lane shall be the elongated diamond detailed in the Standard Alphabets for Highway Signs and Pavement Markings. The diamond shall be formed by white lines at least 6 inches in width, shall be at least 2 1/2 feet in width and 12 feet long and shall be placed coincident with the longitudinal center of each restricted lane.

**C****Object Markings****Sec. 14-298-627 Object Marker Design**

When obstructions within or adjacent to the roadway require marking, the marker shall consist of an arrangement of one or more of the following designs:

Type 1 - Either a marker consisting of nine yellow reflectors, each with a minimum dimension of approximately 3", mounted symmetrically on an 18" yellow or black diamond panel, or an all yellow reflective diamond panel of the same size. Type 1 markers may be larger if conditions warrant.

Type 2 - Either a marker consisting of three yellow reflectors, each with a minimum dimension of approximately 3", arranged either horizontally or vertically on a white panel; or an all yellow reflective panel, 6" x 12". Type 2 markers may be larger if conditions warrant.

Type 3 - Striped marker consisting of a vertical rectangle approximately 1 foot by 3 feet in size with alternating black and reflectorized yellow stripes sloping downward at an angle of 45° toward the side of the obstruction on which traffic is to pass. The minimum width of the yellow stripe shall be 3 inches. A better appearance can be achieved if the black stripes are wider than the yellow stripes.

**Sec. 14-298-628 Objects in the Roadway**

Obstructions within the roadway, shall be marked with a Type 1 or Type 3 object marker.

**Sec. 14-298-629 Objects Adjacent to the Roadway**

Objects not actually in the roadway may be so close to the edge of the road that they need a marker. Type 2 or 3 object markers are intended for use at such locations. The inside edge of the marker should be in line with the inner edge of the obstruction.

**Sec. 14-298-630 End of Roadway**

The marker for the end of a roadway, at which point there is no alternate vehicular path, should be either a marker consisting of nine red reflectors, each with a minimum dimension of approximately 3", mounted symmetrically on an 18 inch square, red or black panel; or an 18 inch square reflectorized red-panel. More than one marker or a larger marker may be used at the end of the roadway where conditions warrant. The minimum mounting height of this marker should be four feet. Appropriate advance warning signs should be used.

**D****Delineation****Sec. 14-298-631 Design**

Delineators shall consist of reflector units capable of clearly reflecting light under normal atmospheric conditions from a distance of 1,000 feet when illuminated by the high beams of standard automobile lights. Reflective elements for delineators should have a minimum dimension of approximately 3 inches.

**Sec. 14-298-632 Curb Markings for Delineation**

Reflectorized solid yellow markings should be placed on the curbs of islands located in the line of traffic flow where the curb serves to channel traffic to the right of the obstruction. Reflectorized solid white markings should be used when traffic may pass on either side of the island.

**Sec. 14-298-633 Delineator Application**

(a) The color of delineators shall, in all cases, conform to the color of edge lines.

- (b) Delineators used on through two-lane, two-way roadways shall be single white reflector units on the right side.
- (c) Single delineators shall be provided on the right side of expressway roadways and on at least one side of the interchange ramps.
- (d) Single delineators should be provided on the outside curves on the interchange ramps.
- (e) Double or vertically elongated delineators should be installed at 100 foot intervals along acceleration and deceleration lanes.
- (f) Delineation is optional on sections of roadway between interchanges where continuous lighting is in operation.

**Sec. 14-298-634 Delineator Placement and Spacing**

Delineators, if used, should be mounted on suitable supports so that the top of the highest reflector is about 4 feet above the near roadway edge. They should be placed not less than 2 or more than 8 feet outside the outer edge of the shoulder, or if appropriate, in the line of the guardrail.

**E****Colored Pavements****Sec. 14-298-635 Colored Pavements**

Repealed December 9, 1999.

**Sec. 14-298-636 Colors**

The use of the following colors for pavements shall be limited to the purposes noted:

- (1) Red shall be used only on the approaches to a STOP sign which is in use 24 hours a day.
- (2) Yellow shall be used only for medians separating traffic flows in opposing directions.
- (3) White shall be used for delineation on shoulders, on channelizing islands where traffic flows pass on both sides in the same general direction, and for crosswalks.

**Sec. 14-298-637 - 14-298-699**

Reserved

**Part III****Signals****A****General Provisions****Sec. 14-298-700 Legal Traffic Authority**

Traffic control signals shall be installed or caused to be installed only by the traffic authority having jurisdiction to install, operate and maintain traffic control signals on public highways in accordance with Section 14-299 of the general statutes.

**Sec. 14-298-701 Standardization**

- (a) All traffic control signals used on public highways shall conform as noted in these regulations. Any exception to these regulations shall be based on an engineering study and shall be subject to approval by the State Traffic Commission. Traffic control signals of non-standard design or application in operation or in use on the effective date of these regulations may continue to operate, but shall be replaced as soon as feasible, by traffic control signals to conform with Section 14-298-700 through Section 14-298-741 of these regulations.
- (b) All dimensions in this part are expressed in English units. Any Connecticut Department of Transportation standards, manuals and guidelines that have been developed in metric dimensions are considered equivalent.

**Sec. 14-298-702 Installation and Operation of Signals**

Traffic control signals shall be installed and operated only when: the warrants for installation as determined by competent engineering study completed in conjunction with the Manual on Uniform Traffic Control Devices (latest edition) are satisfied, and said signals are approved by the State Traffic Commission.

**Sec. 14-298-703 Area of Control**

A traffic control signal shall control traffic only at the intersection or mid-block location where the installation is placed.

**Sec. 14-298-704 Portable Traffic Control Signals**

Portable traffic control signals shall conform to the standards and requirements as set forth in these regulations.

**Sec. 14-298-705 Meaning of Signal Indications**

The following meanings shall be given to highway traffic signal indications, except those on pedestrian signals:

- (a) Green indications shall have the following meanings:
  - (1) Traffic facing a circular green may proceed straight through or turn right or left except as such movement is modified by lane-use signs, turn prohibition signs, lane markings or roadway design. But, vehicular traffic, including vehicles turning right or left, shall yield the right-of-way to other vehicles and to pedestrians lawfully within the intersection or an adjacent crosswalk, at the time such signal indication is exhibited.
  - (2) Traffic facing a green arrow, shown alone or in combination with another indication, may cautiously enter the intersection only to make the movement indicated by such arrow or such other movement as is permitted by other indications shown at the same time. Such vehicular traffic shall yield the right-of-way to pedestrians lawfully within an adjacent crosswalk and to other traffic lawfully using the intersection.
  - (3) Unless otherwise directed by a pedestrian signal, pedestrians facing any green indication, except when the sole green indication is a turn arrow, may proceed across the roadway within any marked or unmarked crosswalk.
- (b) Steady yellow indications shall have the following meanings:
  - (1) Traffic facing a steady circular yellow or yellow arrow signal is thereby warned that the related green movement is being terminated or that a red indication will be exhibited immediately thereafter when vehicular traffic shall not enter the intersection.
  - (2) Pedestrians facing a steady circular yellow or yellow arrow signal, unless otherwise directed by a pedestrian signal, are thereby advised that there is insufficient time to cross the roadway before a red indication is shown, and no pedestrian shall then start to cross the roadway.

- (c) Steady red indications shall have the following meanings:
- (1) Vehicular traffic facing a steady circular red signal alone shall stop at a clearly marked stop line, but if none, before entering the crosswalk on the near side of the intersection, or if none, then before entering the intersection and shall remain standing until an indication to proceed is shown except as provided in (2) below.
  - (2) Except when a sign is in place prohibiting a turn, vehicular traffic facing any steady red signal may cautiously enter the intersection to turn right after stopping as required by (1) above. Such vehicular traffic shall yield the right-of-way to pedestrians and other vehicles lawfully using the intersection.
  - (3) Unless otherwise directed by a pedestrian signal, pedestrians facing a steady circular red signal alone or red arrow signal alone shall not enter the roadway.
  - (4) Vehicular traffic facing a steady red arrow signal shall not enter the intersection to make the movement indicated by the arrow and, unless entering the intersection to make a movement permitted by another signal, shall stop at a clearly marked stop line, but if none, before entering the crosswalk on the near side of the intersection, or if none, then before entering the intersection and shall remain standing until an indication permitting the movement indicated by such red arrow is shown except as provided in (2) above.
- (d) Flashing signal indications shall have the following meanings:
- (1) Flashing red (stop signal) - when a red lens is illuminated with rapid intermittent flashes, drivers of vehicles shall stop at a clearly marked stop line, but if none, before entering the crosswalk on the near side of the intersection, or if none, at the point nearest the intersecting roadway where the driver has a view of approaching traffic on the intersecting roadway before entering the intersection, and the right to proceed shall be subject to the rules applicable after making a stop at a "Stop" sign.
  - (2) Flashing yellow (caution signal) - when a yellow lens is illuminated with rapid intermittent flashes, drivers of vehicles may proceed through the intersection or past such signal only with caution.
  - (3) Flashing red arrow and flashing yellow arrow indications have the same meaning as the corresponding flashing circular indications; except they apply only to drivers of vehicles intending to make the movements indicated.

**Sec. 14-298-706 Application of Signal Indications**

Basic displays used in signal operations are the steady circular red, circular yellow or circular green indication, used on each of the approaches. The application for these signal indications shall be as follows:

- (a) A steady circular red indication:
  - (1) Shall be given when it is intended to prohibit traffic, except pedestrians directed by a pedestrian signal, from entering the intersection or other controlled area.
  - (2) May be displayed with the appropriate green arrow indications when it is intended to permit traffic to make a specified turn or turns and to prohibit traffic from proceeding straight ahead through the controlled area. This display is not required where it is physically impossible for traffic to go straight ahead, as at the head of a "T" intersection.
- (b) A steady circular yellow indication:
  - (1) Shall be given following a circular green indication in the same signal face, except if the signal face controls an exclusive left-turn lane and the circular green indication is to be followed by a green arrow indication.
  - (2) Is an optional alternative to a yellow arrow indication following a green arrow indication in a separate signal face used exclusively to control a single directional movement.
- (c) A steady circular green indication shall be given only when it is intended to permit traffic to proceed in any direction which is lawful and practical.
- (d) Steady red arrow, yellow arrow and green arrow indications may be used in lieu of the corresponding circular indications at the following locations:
  - (1) On an approach intersecting a one-way street.
  - (2) Where certain movements are prohibited.
  - (3) Where certain movements are physically impossible.
  - (4) On an intersection approach which has an exclusive lane for turning movements.
  - (5) Where turning movements are "protected" from conflicting movements by other indications or by the signal sequence.

- (6) Where all the movements on the approach do not begin or end at the same time and where the indications for the turning movements will also be visible to traffic with other allowable movements.
- (e) Steady arrow indications are used as follows:
- (1) A steady yellow arrow indication shall be used following a green arrow indication which has been displayed simultaneously with a circular red indication in the same signal face, except in the following case. When a green right turn arrow (or left turn arrow displayed to one-way traffic) is followed immediately by a circular green indication shown alone, during which time no prohibitions are in effect for the indicated turn, the yellow arrow display is not desirable.
  - (2) A steady yellow arrow indication or optional circular yellow shall follow a green arrow indication in a signal face which is used exclusively to control a single directional movement.
  - (3) A steady yellow arrow indication may be used to indicate the clearance interval following the termination of green arrow indication which has been displayed simultaneously with a continuing circular green indication in the same signal face.
  - (4) A steady green arrow indication shall be used only to allow vehicular movements which are completely protected from conflict with other vehicles moving on a green indication or with pedestrians crossing in conformance with a "Walk" or flashing "Dont Walk" indication.
  - (5) A steady left green arrow indication shall be used as the green display on a signal face which controls an exclusive left turn lane, if that left turn movement is protected by the signal sequence.
- (f) The following combinations of signal indications shall not be simultaneously displayed on any one signal face:
- (1) Circular green with circular yellow.
  - (2) Straight-through green arrow with circular red.
  - (3) Circular red with circular yellow.
  - (4) Circular green with circular red.
- (g) The above combinations shall not be simultaneously displayed in different signal faces on any one approach unless:

- (1) One of the faces is a turn signal controlling only an exclusive turn lane and a sign "Left" or "Right Turn Signal" is located adjacent to each such signal face.
  - (2) One of the faces is a turn signal controlling only an exclusive turn lane and consists entirely of arrow indications.
  - (3) The signal faces are shielded, hooded, louvered, positioned or designed so that the combination is not confusing to approaching drivers.
- (h) When a traffic control signal is put on flashing operation, normally a yellow indication should be used for the major street and a red indication for the other approaches. The following applications shall apply whenever signals are placed on flashing operation:
- (1) A circular yellow indication shall be flashed instead of any yellow arrow indication which may be included in that signal face.
  - (2) No circular green or green arrow indication or flashing yellow indication shall be terminated and immediately followed by a steady red or flashing red indication without the display of the steady yellow change indication; however transition may be made directly from a circular green or green arrow indication to a flashing yellow indication.
  - (3) All signal faces on an approach shall flash the same color, either yellow or red (circular or arrow), except that separate signal faces for separately controlled turn movements may be flashed the other color. The requirements of other sections of these regulations regarding shielding or positioning of conflicting displays apply to flashing indications as well as steady indications. The flashing yellow signal indication for through traffic does not have to be shielded or positioned to prevent visual conflict for drivers in the left turn lane.

**Sec. 14-298-707 Number of Lenses Per Signal Face**

Each signal face, except in pedestrian signals, shall have at least three lenses, but not more than five. The lenses shall be red, yellow or green in color and shall be given a circular or arrow type of indication. Allowable exceptions to the above are:

- (1) Where a single section green arrow lens is used alone to indicate a continuous movement.
- (2) Where a variable indication signal section is used to display alternately a green arrow and a yellow arrow.

**Sec. 14-298-708 Size and Design of Signal Lenses**

- (a) The aspect of all signal lenses, except in pedestrian signals, shall be circular. There shall be two sizes for lenses, eight inches and twelve inches nominal diameter.
- (b) Arrows shall be pointed vertically upward to indicate a straight-through movement and in a horizontal direction to indicate a turn at approximately right angles. When the angle of the turn is substantially different from a right angle, the arrow should be positioned on an upward slope at an angle approximately equal to that of the turn.
- (c) Each arrow lens shall show only one arrow direction. The alternate display of two arrow indications in the same lens, a green arrow or a yellow arrow shall be permitted. The arrow shall be the only illuminated part of the lens visible.
- (d) In no case shall letters or numbers be displayed as part of a vehicular signal indication.

**Sec. 14-298-709 Arrangement of lenses in Signal Faces**

- (a) The lenses in a signal face shall be arranged in a vertical or horizontal straight line except that in a vertical array lenses of the same color may be arranged horizontally adjacent to each other at right angles to the basic straight line arrangement. Such clusters shall be limited to two identical lenses or to two or three different lenses of the same color.
- (b) In each signal face, all red lenses in vertical signals shall be located above and in horizontal signals shall be located to the left of all yellow and green lenses.
- (c) The relative positions of lenses within the signal face shall be as follows:
  - (1) In a vertical signal face from top to bottom:
    - Circular red
    - Left turn red arrow
    - Right turn red arrow
    - Circular yellow
    - Circular green
    - Straight through green arrow
    - Left turn yellow arrow

Left turn green arrow

Right turn yellow arrow

Right turn green arrow

- (2) In a horizontal signal face from left to right:

Circular red

Left turn red arrow

Right turn red arrow

Circular yellow

Left turn yellow arrow

Left turn green arrow

Circular Green

Straight through green arrow

Right turn yellow arrow

Right turn green arrow

- (3) In a cluster, identical signal indications may be repeated in adjacent vertical or horizontal locations within the same signal face. If adjacent indications in a cluster are not identical, their arrangement shall follow paragraph 1 or 2 above, as applicable.

**Sec. 14-298-710 Illumination of Lenses**

Each signal lens shall be illuminated independently.

**Sec. 14-298-711 Number and Location of Signal Faces**

- (a) The primary consideration in signal face placement shall be visibility.
- (b) A minimum of two signal faces for each approach shall be provided and should be continuously visible from a point determined by a competent engineering study based on speed and visibility distances.
- (c) Separate signal faces should be used when protected only turning movements are controlled by green arrows.
- (d) Where physical conditions prevent drivers from having a continuous view of at least two signal indications, as determined above, a "Signal Ahead" sign shall be erected to warn approaching traffic.

Hazard identification beacons may be surmounted upon these signs to emphasize the message. Special warning signs may be used to indicate driver action in adverse situations.

- (e) A single signal face is permissible for the control of an exclusive turn lane. Such signal face shall be in addition to the minimum of two signal faces for through traffic.
- (f) At least one and preferably all of the signal faces required should be located within the range of forty to one hundred twenty feet from the stop bar, except at intersections where multi-lane cross streets or other conditions make it physically impractical. However, in no case shall this distance exceed one hundred fifty feet, unless a supplemental signal face is provided.
- (g) Where both of the signal faces required are post mounted, they shall be on the far side of the intersection - one on the right and one on the left or on the median island if practical, except as noted in (i) below.
- (h) Where all signal faces are suspended by span wire or mast arm, they shall be visible from the lane of approach but shall not be to the left of the centerline. Where conditions warrant, exceptions may be permitted. On one-way streets, it is permissible to erect signal faces on both sides of the medial line.
- (i) When deemed to be required, near-side post-mounted signals should be located as near as practicable to the stop line unless substantially greater visibility may be achieved by locating it elsewhere.
- (j) Where a signal face controls a specific lane or lanes of an approach, its transverse position should be unmistakably in line with the path of that movement.
- (k) Required signal faces for any one approach shall not be less than eight and should not be more than twenty feet apart measured horizontally between center of faces.
- (l) Supplemental signal faces should be used when an engineering study has shown that they are needed to achieve either advance or immediate intersection visibility. When used, they should be located to provide optimum visibility for the movement to be controlled. The following limitations apply:
  - (1) Left turn arrows shall not be used in near right faces.
  - (2) Right turn arrows shall not be used in far left faces. A far side median mount signal shall be considered as a far left signal for this application.

**Sec. 14-298-712 Height of Signal Faces**

- (a) The bottom of the housing of a signal face, not mounted over a roadway, shall not be less than eight feet nor more than fifteen feet above the sidewalk or, if none, above the pavement grade at the center of the highway.
- (b) The bottom of the housing of a signal face suspended over a roadway shall not be less than fifteen feet nor more than nineteen feet above the pavement grade at the center of the roadway.

**Sec. 14-298-713 Vehicle Change Interval**

- (a) A yellow vehicle change interval shall be used following each circular green interval and, after each green arrow interval if the movement is terminated.
- (b) In no case shall a circular yellow indication be displayed in conjunction with the change from circular red to circular green.
- (c) The exclusive function of the steady yellow interval shall be to warn traffic of an impending change in the right-of-way assignment.
- (d) Yellow vehicle change intervals should have a range of three to six seconds.
- (e) The yellow vehicle change interval should be followed by a short all-way red clearance interval of sufficient duration to permit the intersection to clear before cross traffic is released.
- (f) A clearance interval shall be provided between the termination of a green arrow indication and the showing of a green indication to any conflicting traffic movements.

**Sec. 14-298-714 Coordination of Traffic Control Signals**

Traffic control signals should normally be coordinated with one another when the normal travel time between the intersections is less than thirty seconds.

**Sec. 14-298-715 Flashing Operation of Traffic Control Signals**

- (a) The illuminating element in a flashing signal shall be flashed continuously at a rate of not less than fifty nor more than sixty times per minute.
- (b) The illuminated period of each flash shall be not less than half and not more than two-thirds of the total flash cycle.

**Sec. 14-298-716 Continuity of Operation**

- (a) A traffic signal installation shall be operated as a stop-and-go device or as a flashing device.
- (b) When a signal installation is not in operation it shall be hooded, turned or taken down to clearly indicate that the signal is not in operation.
- (c) When a traffic signal installation is being operated in the stop-and-go or flashing manner, at least one indication in each signal face shall be illuminated.

**Sec. 14-298-717 Traffic Signals Near Grade Crossings**

When a railroad/highway grade crossing actuated traffic control device is within 200' of a highway intersection controlled by traffic control signals, the two signal systems should be coordinated.

**Sec. 14-298-718 Emergency Operation of Traffic Signals**

Systems in which traffic control signals are preempted by emergency vehicles shall operate to permit a normal change interval to take place in the change from green to yellow to red (or flashing red) before arrival of the emergency vehicle at the preempted location.

**Sec. 14-298-719 Maintenance of Traffic Control Signals**

A record of the operation, malfunction and maintenance of an approved traffic control signal shall be kept by the permittee.

**Sec. 14-298-720 Painting**

The insides of visors (hoods) and the entire surface of louvers, and fins, and the front surface of backplates shall have a dull black finish to minimize light reflection to the side of the signals.

**Sec. 14-298-721 Auxiliary Signs**

- (a) Signal instruction signs used with traffic signals may be located adjacent to the signal face to which they apply.
- (b) Stop signs shall not be used in conjunction with any signal operation except:
  - (1) when the indication flashes red at all times or
  - (2) when a minor street or driveway is located within or adjacent to the controlled area of an extreme complex signalized intersection, but does not warrant separate signal control.

- (c) When used in conjunction with traffic signals, illuminated signs shall be designed and mounted in such a manner as to avoid glare and reflections that seriously detract from the signal indications.

## **B**

### **Pedestrian Signals**

#### **Sec. 14-298-722 Meaning of Pedestrian Indications**

The meanings of pedestrian signal indications either lettered or symbolized are as follows:

- (a) the don't walk indication, steadily illuminated, means that a pedestrian shall not enter the roadway in the direction of the indication.
- (b) the don't walk indication, while flashing, means that a pedestrian shall not start to cross the roadway in the direction of the indication, but that any pedestrian who has partly completed his crossing during the steady walk indication shall proceed to a sidewalk, or to a safety island.
- (c) the walk indication, steadily illuminated, means that pedestrians facing the signal indication may proceed across the roadway in the direction of the indication and shall be given the exclusive right of way by the drivers of all vehicles.
- (d) the walk indication, while flashing, means that there is a possible conflict of pedestrians with vehicles.

#### **Sec. 14-298-723 Application of Pedestrian Signal Indications**

Pedestrian signal indications shall be installed in conjunction with vehicular traffic signals under any of the following conditions:

- (a) when a traffic signal is installed under the pedestrian volume or school crossing warrant as referred to in Sections 4c-5 and 4c-6 respectively of the Manual on Uniform Traffic Control Devices (latest edition).
- (b) when an exclusive interval or phase is provided or made available for pedestrian movement in one or more directions, with all conflicting vehicular movements being stopped.
- (c) when vehicular indications are not visible to pedestrians such as on one-way streets, at "T" intersections, or when the vehicular indications are in a position which would not adequately serve pedestrians.
- (d) at established school crossings at intersections signalized under any warrant, as determined by an engineering study.

**Sec. 14-298-724 Design of Pedestrian Signals**

- (a) Pedestrian indications should attract the attention of and be readable to the pedestrian (day and night) at all distances from ten feet to the full width of the area to be crossed.
- (b) All pedestrian indications shall be rectangular in shape and shall consist of the lettered or symbolized messages "Walk" and "Don't Walk." Only internal illumination shall be used. Symbol designs are set forth in the "Standard Highway Signs" booklet.
- (c) When illuminated, the "Walk" indication shall be lunar white. All except the letters or symbols shall be obscured by an opaque material.
- (d) When illuminated, the "Don't Walk" indication shall be portland orange with all letters or symbols obscured by an opaque material.
- (e) When not illuminated, the "Walk" and "Don't Walk" messages shall not be distinguishable by pedestrians at the far end of the crosswalks they control.
- (f) The letters shall be at least three inches high or the symbols shall be at least six inches high for a crossing where the distance from the near curb to the pedestrian signal indication is sixty feet or less. For distances over sixty feet, the letters should be at least four and one half inches high and the symbols should be at least nine inches high.

**Sec. 14-298-725 Location of Pedestrian Signals**

- (a) Pedestrian signal faces shall be mounted with the bottom of the housing not less than eight feet nor more than ten feet above the sidewalk level, and so there is a pedestrian indication in the line of pedestrian's vision which pertains to the crosswalk being used.
- (b) The don't walk indication shall be mounted directly above or integral with the walk indication.
- (c) The pedestrian signal head shall be so positioned and adjusted as to provide maximum visibility at the beginning of the controlled crossing.
- (d) When mounted with other signal heads there shall be a physical separation between the two heads.

**Sec. 14-298-726 Pedestrian Intervals and Phases**

- (a) A pedestrian clearance interval shall always be provided where pedestrian signal indications are used. It shall consist of a flashing don't walk indication.
- (b) When a traffic signal installation is being operated as a flashing device, the pedestrian indications shall not be illuminated.

**C****Other Highway Traffic Signals****Sec. 14-298-727 Hazard Identification Beacon**

- (a) A hazard identification beacon is one or more sections of a standard traffic signal head with a flashing circular yellow indication in each section.
- (b) A hazard identification beacon shall be used only to supplement an appropriate warning or regulatory sign or marker.
- (c) The hazard identification beacon shall not be incorporated within the border of the sign except for school speed limit signs. The edge of the housing should normally be located no closer than twelve inches outside the nearest edge.
- (d) Hazard identification beacons, when used at intersections, shall not face conflicting vehicular approaches.

**Sec. 14-298-728 Speed Limit Sign Beacon**

A speed limit sign beacon shall only be used and consist of one or more signal sections of a standard traffic control signal face, with flashing circular yellow signal indication in each signal section. The signal lenses shall have a nominal diameter of not less than 8 inches. If two lenses are used, they shall be vertically aligned, except that they may be horizontally aligned if the speed limit sign is longer horizontally than vertically. If two lenses are used, they shall be alternately flashed.

**Sec. 14-298-729 Intersection Control Beacon**

- (a) An intersection control beacon consists of one or more sections of a standard traffic signal head, having flashing circular yellow or circular red indications in each face.
- (b) They are installed and are used only at an intersection to control two or more directions of travel.

- (c) Application shall be limited to:
  - (1) Yellow on one route and red for remaining approaches
  - (2) Red for all approaches
- (d) A stop sign should be used with a flashing red intersection control beacon.
- (e) Flashing yellow indications shall not face conflicting vehicular approaches.

**Sec. 14-298-730 Stop Sign Beacon**

- (a) A stop sign beacon is one or two sections of a standard traffic signal head with a flashing circular red indication in each section.
- (b) Where two lenses are used, they shall be not less than eight inch nominal diameter size, aligned horizontally and they shall be flashed simultaneously.
- (c) The bottom of the housing of a stop sign beacon shall be not less than twelve nor more than twenty-four inches above the top of a stop sign.

**Sec. 14-298-731 General Design and Operation of Beacons**

- (a) Flashing beacon units and their mountings shall follow the general design specifications for traffic control signals, which shall include the following:
  - (1) Each signal unit lens shall have a visible diameter of not less than eight inches.
- (b) Beacons shall be flashed at a rate of not less than fifty nor more than sixty times per minute. The illuminated period of each flash shall not be less than one-half and nor more than two-thirds of the total cycle.

**Sec. 14-298-732 Hazard Identification Beacon Location**

The hazard or other condition warranting hazard identification beacons should largely govern their location with respect to the roadway. If used alone and located at the roadside, the bottom of the beacon unit shall be at least eight feet and not more than twelve feet above the pavement. Hazard identification beacons should not normally be suspended over the roadway, however if this mounting is used, clearance above the pavement shall be not more than nineteen feet nor less than fifteen feet. In no case should they be mounted on pedestals in the roadway unless the pedestal is within the confines of a traffic or pedestrian island.

**Sec. 14-298-733 Intersection Control Beacon Location**

An intersection control beacon should normally be suspended over the center of an intersection; however it may be mounted by other means if this is necessary to increase the visibility of the beacon. If suspended over the roadway, the clearance above the pavement shall be at least fifteen feet but not more than nineteen feet. If pedestal mounting is used, the bottom of the signal head shall be at least eight feet but not more than fifteen feet above the pavement. In no case should it be mounted on a pedestal in the roadway unless the pedestal is within the confines of a traffic or pedestrian island.

**Sec. 14-298-734 Meaning of Lane Use Control Signal Indications**

The meanings of lane-use control signals are as follows:

- (a) A steady downward green arrow means that a driver is permitted to drive in the lane over which the arrow signal is located.
- (b) A steady red x means that a driver shall not drive in the lane over which the signal is located, and that this indication shall modify accordingly the meaning of all other traffic controls present.
- (c) A steady yellow x means that a driver should prepare to vacate in a safe manner the lane over which the signal is located because a lane control change is being made, and to avoid occupying that lane when a steady red x is displayed.

**Sec. 14-298-735 Design of Lane Use Control Signals**

All lane-use control signal indications shall be in units with rectangular faces. Nominal minimum height and width of each face shall be twelve inches for typical applications. Each lane to be reversed shall have signal faces with a downward green arrow on an opaque background, and a red x symbol on an opaque background. Signal faces with a yellow x symbol on an opaque background may be provided. Each nonreversible lane immediately adjacent to a reversible lane shall have a downward green arrow displayed to traffic traveling in the permitted direction and a red x symbol displayed in the opposite direction. Other nonreversible lanes on any street so controlled may also be provided with these indications. The indications provided for each lane may be in separate units or may be superimposed in the same unit. When in separate units, the red x symbol shall be on the left, the yellow x symbol, if used, shall be in the middle and the downward green arrow symbol shall be on the right.

**Sec. 14-298-736 Location of Lane-Use Control Signals**

Lane use control signal units shall be located approximately over the center of the lane controlled. All lane-use control indications shall be located in a straight line across the roadway at right angles to the roadway alignment. The bottom of any lane-use control signal unit shall be not less than fifteen feet nor more than nineteen feet above the pavement grade.

**Sec. 14-298-737 Operation of Lane Use Control Signals**

During changeover periods, a steady yellow x may follow the termination of the steady downward green arrow. The steady red x shall follow the steady yellow x, when used, or at the termination of the steady downward green arrow. A clearance period of appropriate length shall be provided, during which the steady red x shall be shown in both directions over the lane, before the steady downward green arrow indication is shown for traffic in the opposite direction. When used, lane-use signals shall be operated continuously, except that lane-use control signals that are used only for special events or other infrequent occurrences and lane-use control signals on nonreversible freeway lanes may be darkened when not in operation. The change from normal operation to nonoperation shall occur only when the lane-use control signals display signal indications that are appropriate for the lane use that applies when the signals are not operated. The lane-use control signals shall display indications that are appropriate for the existing lane use when changed from nonoperation to normal operation. Also, traffic control devices shall clearly indicate the proper lane use when the lane control signals are not in operation.

**Sec. 14-298-738 Application of Traffic Signals at Drawbridges**

Drawbridge signals shall always be used in conjunction with gates and other types of protection commonly employed at drawbridges.

**Sec. 14-298-739 Design of Movable Bridge Signals and Gates**

- (a) The signal heads and mountings of movable bridge signals shall follow the standard design specifications for traffic control signals.
- (b) Nominal eight-inch signal indications are standard. However, if prevailing approach speeds are in excess of 25 mph or when considerations such as roadway width or geometrics, signal locations, conflicting lights or objects in the background, etc., indicate the need for greater signal effectiveness, signal heads with twelve inch diameter lenses should be provided.

- (c) Movable bridge signals may be supplemented with bells to provide additional warning to drivers and pedestrians. The standard three color (red, yellow and green) traffic signal indications shall be utilized.
- (d) A "Drawbridge Ahead" warning sign shall be used in advance of movable bridge signals and gates to give advance warning to motorists, except in urban conditions where such signing would not be practicable. Such signs may be supplemented by a hazard identification beacon.
- (e) If the movable bridge is close to a railroad grade crossing and there is a possibility that traffic may be stopped on the crossing as a result of the bridge opening, a traffic control device should be provided to give notification to the driver not to stop on the railroad tracks. Extreme care should be used in planning such installations to avoid creating confusion or hazardous conditions.
- (f) Signals on adjacent streets and highways should be interconnected with the drawbridge control, if indicated by engineering considerations.

#### **Sec. 14-298-740 Location of Movable Bridge Signals and Gates**

Two signal indications shall be provided for each approach to the movable span. Insofar as practicable, the height and lateral placement of signals should conform to the requirements for other traffic control signals. They should be located not more than fifty feet in advance of the warning gate or other barrier. Warning gates, where used, shall extend at least across the full width of roadway.

#### **Sec. 14-298-741 Operations of Movable Bridge Signals and Gates**

- (a) Traffic control devices at movable bridges shall be coordinated with the movable span so that signals, gates and movable span are controlled by the bridge tender through an interlocked control.
- (b) The green signal indication shall be illuminated at all times between bridge opening periods, except that when the bridge is not expected to be open for continuous periods in excess of five hours a flashing yellow indication may be used. The signal shall display continuous red when traffic is required to stop.
- (c) The yellow interval between the display of green and red shall be predetermined and shall be displayed normally approximately three to six seconds.

#### **Sec. 14-298-742 – 14-298-799**

Reserved

**Part IV**

**Traffic Control for Highway**

**Construction and Maintenance**

**A**

**Operation**

**Sec. 14-298-800 Responsibility**

The provisions for public protection established herein are for application by:

- (1) The Department of Transportation, and municipal forces performing construction or maintenance operations on roads or streets.
- (2) Contractors employed in road or street construction or maintenance under contract to any governmental authority and
- (3) All others, including employees of public utility companies, performing any work on highways or so closely adjacent as to create hazards for the public or for themselves.

**Sec. 14-298-801 General Requirements**

- (a) All traffic control devices used on road or street construction or maintenance work shall conform to the applicable specifications of these regulations.
- (b) Traffic control devices shall be installed at the inception of construction or maintenance operations and shall be properly maintained and/or operated during the time such special conditions exist. They shall remain in place only as long as they are needed and shall be removed immediately thereafter. Where operations are performed in stages, there shall be in place only these devices that apply to the conditions present.
- (c) Signs that do not apply in existing conditions shall be removed, covered, or turned so as not to be readable by oncoming traffic.
- (d) All dimensions in this part are expressed in English units. Any Connecticut Department of Transportation standards, manuals and guidelines that have been developed in metric dimensions are considered equivalent.

**B****Signs****General****Sec. 14-298-802 Design**

- (a) Special construction and maintenance signs follow the basic standards for all highway signs as to shape. Warning signs in construction areas shall have a black legend on an orange background. Existing yellow warning signs already in place within these areas may remain in use. Color for other signs shall follow the standard for all highway signs.
- (b) The use of standard orange flags or yellow flashing warning lights in conjunction with signs is permitted so long as they do not interfere with a clear view of the sign face.

**Sec. 14-298-803 Illumination and Reflectorization**

All signs shall be reflectorized or illuminated. Street or highway lighting is not regarded as meeting the requirements for sign illumination.

**Sec. 14-298-804 Position of Signs**

- (a) Signs shall be placed in positions where they will convey their messages most effectively and placement must therefore be accommodated to highway design and alignment. Signs shall be so placed that the driver will have adequate time for response.
- (b) As a general rule, signs shall be located on the right-hand side of the street or roadway. Where special emphasis is deemed necessary, dual installations may be made which consist of duplicate signs opposite each other on the left and right sides of the roadway.
- (c) For signs mounted on portable supports or barricades, the bottom of the sign shall not be less than one foot above the pavement.
- (d) Where open highway conditions prevail on the approach to the work site, advance warning signs should be placed approximately 1,500 feet in advance of the condition to which they are calling attention. When a series of advance warning signs are used, the warning sign nearest the work site should be placed approximately 500 feet from the point of restriction with the additional signs at 500 - 1,000 foot intervals.

On expressway and limited access facilities, the advance warning distance should be increased to one-half mile or more.

### **Regulatory Signs**

#### **Sec. 14-298-805 Authority**

The use of regulatory construction and/or maintenance signs shall be authorized by the public body or official having jurisdiction.

#### **Sec. 14-298-806 Design**

All regulatory signs shall conform to the standards prescribed in Part I of these regulations.

### **Warning Signs**

#### **Sec. 14-298-807 Design and Application**

- (a) Warning signs for construction and maintenance shall be diamond shaped (square with one diagonal vertical), having a black symbol or message on an orange background except as provided for herein. Special warning signs related to the work being done may be rectangular in shape and have a black message on an orange background.
- (b) The square advisory speed plate shall have a black message and border, and shall have an orange background when used in conjunction with an orange background sign and shall have a yellow background when used with a yellow background sign. It shall have a minimum 24" x 24" size.
- (c) Where any part of the roadway is obstructed or closed, construction approach warning signs are required to alert traffic well in advance of these obstructions or restrictions to normal traffic flow. Because of their importance, these signs shall have a standard size of 48 inches by 48 inches when used on expressways and limited access facilities and shall be the standard diamond shape for warning signs, except as provided for above.
- (d) Where speeds and volumes are relatively low, a minimum size of 36 inches by 36 inches may be used for Construction Approach Warning Signs, provided that a minimum letter size of 5 inches can be accommodated on this size with the appropriate legend. On secondary roads or city streets where speeds are low, the use of signs 6 inches smaller on a side than the standard size, but not less than 24 inches, may be used for warning signs having short work messages or clear symbols.

### Guide Signs

#### Sec. 14-298-808 Function and Design of Information and Guide Signs

The following informational signs are required at construction and maintenance sites:

- (1) Standard directional signs and route markings, to the extent that temporary route changes are necessary.
- (2) Special information signs relating to the work being done. These signs shall have a black message on an orange background.

### C

#### Barricades and Channelizing Devices

##### Sec. 14-298-809 Barricade Design

- (a) Markings for barricade rails shall be alternate orange and white stripes, sloping downward at an angle of 45 degrees in the direction traffic is to pass.
- (b) The entire area of white and orange stripes shall be reflectorized.

##### Sec. 14-298-810 Cone Design

- (a) Cones shall be a minimum of 18 inches in height with a broadened base.
- (b) Orange shall be the predominant color on cones.
- (c) For nighttime use they shall be reflectorized or equipped with lighting devices for maximum visibility.

##### Sec. 14-298-811 Drum Design

- (a) Drums used for traffic warning or channelization shall be a minimum of 36 inches in height and a minimum of 18 inches in width regardless of orientation.
- (b) The markings on drums shall be horizontal, circumferential, orange and white reflectorized stripes four to eight inches wide, using a material that has a smooth, sealed outer surface which will display the same approximate size, shape and color day and night.
- (c) There shall be at least two orange and two white stripes on each drum. If there are non-reflectorized spaces between the horizontal orange and white stripes, they shall be no more than three inches wide.

##### Sec. 14-298-812 – 14-298-899

Reserved

**Part V****Traffic Control Systems for Railroad/Highway****Grade Crossings****A****General Provisions****Sec. 14-298-900 Functions**

Traffic control systems for railroad/highway grade crossings include all signs, markings, signals, control or warning devices, and illumination devices and their supports along highways approaching and at railroad/highway crossings at-grade.

**Sec. 14-298-901 Legal Authority**

The determination of need and selection of devices at a grade crossing shall be made by the public agency with jurisdictional authority.

**Sec. 14-298-902 Standardization**

- (a) Subject to such determination and selection, the design, installation and operations shall be in accordance with standards contained herein.
- (b) Where a railroad track has been abandoned or its use discontinued, all related traffic control signs, markings, signals and devices shall be removed and the tracks should be removed or covered to provide a safe roadway.
- (c) All dimensions in this part are expressed in English units. Any Connecticut Department of Transportation standards, manuals and guidelines that have been developed in metric dimensions are considered equivalent.

**B****Signs and Pavement Markings****Sec. 14-298-903 Railroad Crossing Sign (Crossbuck)**

- (a) The railroad crossing sign, commonly identified as the "crossbuck" sign, shall be white reflectorized with the words "Railroad Crossing" in black lettering.

- (b) As a minimum, one crossbuck sign shall be used on each roadway approach to every grade crossing, alone or in combination with other traffic control devices. If there are two or more tracks between the signs, the number of tracks shall be indicated on an auxiliary sign of inverted T-shape mounted below the crossbuck.
- (c) The crossbuck sign shall be installed on the right-hand side of the roadway on each approach to the crossing. Where an engineering study finds restricted sight distance or unfavorable road geometry, additional crossbuck signs should be installed. Crossbuck signs should be located not less than 12' from the centerline of the nearest track and as near thereto as possible. Where crossing signals are used, the crossbuck is an integral part of the signal assembly.

#### **Sec. 14-298-904 Railroad Advance Warning Sign**

- (a) The railroad advance warning sign shall be yellow reflectorized background with black legend.
- (b) A railroad advance warning sign shall be used on each roadway in advance of every grade crossing except on low volume, low-speed roadways crossing minor spurs or other tracks which are infrequently used and which are flagged by train crews, in the business districts of large cities where active grade crossing traffic control devices are in use or where physical conditions do not permit even a partially effective display of the sign. On divided highways it is desirable to erect an additional sign on the left side of the roadway.
- (c) Placement of the sign shall be normally 750 feet or more in advance of the crossing in rural areas and 250 feet in advance of the crossing in urban areas except that in a residential or business district where low speeds are prevalent the sign may be placed a minimum distance of 100 feet from the crossing. If there is a street intersection within 100 feet, an additional sign or signs may be placed to warn traffic approaching the crossing from each intersected street.

#### **Sec. 14-298-905 Turn Restriction Sign**

- (a) At a signalized highway intersection within 200 feet of a grade crossing, where the intersection traffic control signals are preempted by the approach of a train, all existing turning movements toward the grade crossing should be prohibited by proper placement of a "No Right Turn" sign or a "No Left Turn" sign or both. In each case these signs shall be visible only when the restriction is to be in effect.
- (b) The signs shall be black and white and have a standard size of 24 inches by 30 inches.

**Sec. 14-298-906 "Do Not Stop on Tracks" Sign**

- (a) Whenever an engineering study determines that the potential for vehicles stopping on the tracks is high, a "Do Not Stop on Tracks" sign should be used. The sign should normally be placed on the far right side of the grade crossing. On multi-lane roads and one-way roadways, a second sign should be placed on the far left side of the grade crossing.
- (b) The sign shall be white reflectorized with the words "Do Not Stop on Tracks" in black lettering.

**Sec. 14-298-907 Pavement Markings**

- (a) Pavement markings in advance of a grade crossing shall consist of an X, the letters RR, a no-passing marking (2-lane roads), and certain transverse lines.
- (b) Identical markings shall be placed in each approach lane on all paved approaches to grade crossings where grade crossing signals or automatic gates are located and at all other grade crossings where the prevailing speeds of highway traffic is 40 mph or greater.
- (c) The markings shall also be placed at crossings where engineering studies indicate there is a significant potential conflict between vehicles and trains. At minor crossings or in urban areas, these markings may be omitted if engineering study indicates that other devices installed provide suitable control.

**C****Crossing Signals****Sec. 14-298-908 Application**

- (a) Flashing Light Signal -- When indicating the approach or presence of a train, the flashing light signal shall display toward approaching highway traffic the aspect of two red lights in a horizontal line flashing alternately. The typical flashing light signal assembly on a side of the roadway location includes a standard crossbuck sign and where there is more than one track an auxiliary "number of tracks" sign, all of which indicate to vehicle operators and pedestrians at all times the location of a grade crossing. A bell may be included in the assembly.
- (b) The flashing light signals should normally be placed to the right of approaching highway traffic on all roadway approaches to a crossing. At crossings of a highway with traffic in both directions, flashing

lights shall be placed on each side of the tracks. On one-way streets and divided highways, signals shall be placed on the approach side of the crossing normally on both sides of the roadway and may be equipped with back lights. Where required for better visibility to approaching traffic, cantilever-mounted flashing light signals should be used. Additional signals may be mounted on the same support and directed toward roadway approaches other than the principal highway.

- (c) Gate -- A gate is a traffic control device used as an adjunct to flashing lights. The device consists of a drive mechanism and a fully reflectorized red and white striped gate arm with lights and which, in the down position, extends across the approaching lanes of highway traffic about 4 feet above the top of the pavement. The flashing light signal may be supported on the same post with the gate mechanism or separately mounted. In its normal upright position when no train is approaching or occupying the crossing, the gate arm should be vertical or nearly so. Minimum clearance is 2 feet from face of vertical curb to closest part of signal or gate arm in its upright position for a distance of 17 feet above the crown of the roadway. Where there is no curb, a minimum horizontal clearance of 2 feet from edge of a paved or surfaced shoulder shall be provided with a minimum clearance of 6 feet from the edge of the traveled roadway.

#### **Sec. 14-298-909 Operation**

- (a) Sequence of Operation (Flashing Lights) -- The flashing lights shall operate for a minimum of 20 seconds before arrival of each train. The operation shall continue until the train clears the crossing.
- (b) Sequence of Operation (Gates) -- The flashing lights and lights on the gate shall operate for a minimum of 20 seconds before arrival of any train. The gate shall start its downward motion a minimum of 3 seconds after the lights begin to operate and shall reach its horizontal position a minimum of 12 seconds before the arrival of any train. When the train clears the crossing and no other train is approaching, the gate shall ascend to its upright position in not more than 12 seconds, following which the flashing lights and lights on the gate shall cease operation.
- (c) Sequence of Operation (Bell) -- The bell, when used, shall begin ringing when the flashing lights begin operation and should continue ringing until the lights cease operation or until a gate begins its upward motion after the train clears the crossing.

**Sec. 14-298-910 Motorist Response to Railroad/Highway Grade Crossing Signals**

Whenever a clearly visible electric or mechanical device is activated, a crossing gate is lowered or a flagman gives or continues to give a signal indicating the approach or passage of a railroad train, the driver of an approaching vehicle shall:

- (a) stop within 50 feet, but not less than 15 feet, from the nearest rail of such railroad and shall refrain from proceeding until the train shall have passed;
- (b) not drive any vehicle through, around or under any gate or barrier at a railroad crossing while such gate or barrier is in a horizontal position across the approaching traffic lanes or is being lowered or raised.

**Sec. 14-298-911 Traffic Signals at or Near Grade Crossings**

- (a) When highway intersection traffic control signals are within 200 feet of a railroad grade crossing equipped with an active traffic control system, the normal sequence of highway intersection signal indications should be preempted upon approach of trains to avoid entrapment of vehicles on the crossing by conflicting aspects of the highway traffic signals and the grade crossing signals. Where multiple or successive preemption may occur from differing modes, train actuation should receive first priority and emergency vehicles second priority.
- (b) Highway traffic control signals shall not be used on mainline railroad crossings in lieu of flashing light signals. However, at industrial track crossings and other places where train movements are very slow (as in switching operations), highway traffic control signals may be used in lieu of conventional flashing light signals to warn vehicle operations of the approach or presence of a train.