

MANUAL ON
UNIFORM TRAFFIC CONTROL DEVICES
FOR STREETS AND HIGHWAYS

REVISIONS

APPROVED BY

JOINT COMMITTEE ON UNIFORM TRAFFIC CONTROL DEVICES

February, 1939

REVISIONS OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
FOR STREETS AND HIGHWAYS

Note: The following revisions of the Manual have been approved by the Joint Committee at a meeting on July 13, 1938 and by subsequent correspondence. A complete new edition of the Manual is not contemplated at the present time, pending research as to certain elements of sign design and size recommended by the Joint Committee.

Revisions and references are based on the printed Manual, edition of November 1935, reprinted September 1937.

Pages 4-5. Definitions

A. (1) STREET OR HIGHWAY. The entire width between the boundary lines of every way publicly maintained when any part thereof is open to the use of the public for purposes of vehicular travel.

A. (7) CROSSWALK. (a) That part of a roadway at an intersection included within the connections of the lateral lines of the sidewalks on opposite sides of the highway measured from the curbs or in the absence of curbs from the edges of the traversable roadway;

(b) Any portion of a roadway at an intersection or elsewhere distinctly indicated for pedestrian crossing by lines or other markings on the surface.

PART I - SIGNS

Classification (page 10)

Insert after item 3 of paragraph A, a new item 4, renumbering present items 4 and 5:

4. Stopping and Standing.

Section 101 - Legal Authority

Add to first paragraph, in bold-face type:

No traffic sign or signal, nor its support, shall bear any commercial advertising.

In second paragraph, third and fourth lines, change reference to Uniform Vehicle Code to "Sections 19, 30, 31, 32"

and 33." In last line of paragraph, change reference to "Section 38."

Change third paragraph:

It is essential that signs be installed only under public authority; otherwise they cannot be enforced and violators will be dismissed in court. Signs placed without authority by private organizations do not fit the program, are frequently poorly placed and maintained, and are not legally binding. The Uniform Act (Section 37) prohibits the display of unauthorized signs, and of signs bearing commercial advertising; and all unofficial and nonessential signs should be removed, as they weaken the value of the necessary signs.

Insert, following the foregoing:

This should not, however, prohibit authorizing public utility companies, without obtaining specific permission in each case, to erect temporary MEN WORKING signs to protect construction, maintenance or repair work in a public highway, provided that such signs conform reasonably to the Manual standards as to size, shape and color. Some utility companies have found that smaller MEN WORKING signs, on lower standards, and otherwise different in some details from those herein prescribed, are most effective for their purposes. Such signs should be permitted if approved by the proper authorities.

Section 108 - Speed Signs

Insert, as first paragraph, in bold-face type:

Where signs are erected to indicate changes in speed limits, they shall merely show the limit applying to the zone to be entered and shall not be designated as the beginning or end of a speed zone.

Add, in ordinary type:

When a restricted speed zone has been established on any highway for which highway a general speed limit has not been set, it is essential that an END SPEED ZONE sign be used at the end of such restricted speed zone.

Change present first paragraph:

Speed limit signs should be erected on main thoroughfares at entrances to built-up districts in municipalities and at other points where established limits are changed.

Section 109 - Movement Signs

In second paragraph of Subsection 109c, change Uniform Vehicle Code reference to "Section 70."

Add to Subsection 109d, following present paragraph in ordinary type:

In bold-face type:

A NO PASSING sign shall be used at the approach to a hillcrest, curve or other hazard on an important 2-lane or 3-lane highway where there is not a clear view ahead a sufficient distance to permit overtaking and passing in safety, and there shall also be placed an END NO PASSING ZONE sign indicating the point beyond which the prohibition does not apply.

In ordinary type:

Such signs will indicate the beginning and end of a zone where overtaking and passing is prohibited under the Uniform Vehicle Code.

In addition to these signs, Sections 204.1 and 226 prescribe that on 2-lane highways with center line marking and on 3-lane highways with lane markings, there shall be additional marking to indicate zones where overtaking and passing is prohibited.

(New) Section 109.1 - NO STOPPING and NO STANDING Signs

In ordinary type:

The Uniform Vehicle Code (Act V, Section 110) lists points where it is unlawful to "stop, stand, or park a vehicle," except when necessitated by conflicting traffic or traffic control requirements. In many communities there are additional points where it is desirable, at least during certain periods of the day, to apply the same prohibition; other points where momentary stopping is permissible to allow a person to alight from or enter the vehicle, but not standing for longer than necessary for this

purpose; and still other points where standing for a brief period, with a driver at the wheel, is not objectionable, but where parking, according to the common acceptance of the term, is prohibited or restricted. In addition to the parking signs referred to in the following section, therefore, there is need for NO STOPPING and NO STANDING signs to take care of the first two situations above.

Section 110 - Parking Signs

In Subsection 110a, second paragraph, change Uniform Vehicle Code reference to "Section 110."

Section 119 - Route Markers at Intersections

Change title of section as above indicated.

Change and amplify matter in bold-face type:

A turn in a route at an intersection shall be indicated by (1) A route marker with the letter "R" or the letter "L" in advance of the intersection, (2) a route marker with confirmatory arrow at the intersection, and (3) a confirmatory route marker beyond the turn.

When some routes proceed straight through an intersection while others turn, confirmatory route markers for all of the routes going straight through shall be placed conspicuously on the far side of the intersection.

Except in the case of the confirmatory marker, each route marker at an intersection shall have its own directional marker. Where this is a letter, it shall be immediately below the route marker. Where it is a turn or straight-through arrow, it shall be immediately below or a part of the route marker. Straight-through shall be indicated by a vertical arrow pointed upward.

Insert, in ordinary type, following the foregoing:

Arrows in place of the letters "R" and "L" in advance of an intersection are disapproved because of the danger of directing the turn into a secondary street or alley in advance of the proper turning point.

Change present third paragraph:

Route turn markers may be omitted when the character of the roadway shows clearly the course of the route. On the other hand, advance straight-through markers are desirable at some intersections to eliminate uncertainty as to whether a turn should be made.

Section 120 - Route Junction Markers

Change first paragraph:

When a marked route is crossed or joined by another route, the junction shall be indicated on each route as it approaches the intersection by an auxiliary junction sign over or in combination with a marker indicating the other route.

Section 123 - Destination Signs

Substitute for second paragraph:

The principal destination sign at an intersection should preferably not carry more than four names. From the top down these names should be the principal cities in the following sequence: straight ahead, obliquely to the right, sharply to the right, obliquely to the left and sharply to the left. Where it will not necessitate more than four names, however, directly under each principal city should be shown the first intermediate town of importance on the same route.

Section 126 - Shape and Color

Change first line of table as follows:

Stop	Octagon	Yellow	Black
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In table, under line beginning with "Exclusion", insert:

Stopping and standing	Vertical	White	Red
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Add footnote to railroad crossing sign:

Specifications of the Association of American Railroads (see Section 146) require that the railroad crossbuck sign, when reflectorized, shall have white letters on a black background.

Section 128 - Dimensions

Change first paragraph:

All signs shall have the minimum dimensions shown in subsequent sections covering detailed designs. Where conditions require greater visibility necessitating a larger sign the longer outside dimension shall be lengthened by 6 inches or a multiple thereof and the shorter dimension in proportion.

Add, in ordinary type:

The size of a sign and its message should be based upon the best available information as to the proper relationship between size of sign and appropriate driving speed approaching the sign.

Section 130 - Letters and Figures

Change second paragraph:

Rounded corners of letters and figures are recommended where dies are not involved (see Fig. 130).

Section 133 - Illumination

Change second paragraph:

The symbols and/or main messages of STOP, slow-type, and speed-limit signs, and both the cross and letters "R R" of railroad advance warning signs shall be illuminated.

Transfer next bold-face paragraph to end of section and substitute for present three paragraphs in ordinary type:

Experience has shown that illumination of the outline of a sign to show its shape is not a sufficient warning to motorists, and such illumination may detract from the legibility of the message. Therefore the symbol or main message of the sign should be illuminated, and the size of the sign should be increased, if necessary, to permit satisfactory illumination thereof. Secondary messages, however, should not be illuminated.

It is recommended that route markers and their auxiliary signs and also principal destination signs

be illuminated. While the illumination of parking signs is not ordinarily warranted, it is desirable to illuminate one-way and certain other movement signs which should be readable at night and sometimes at considerable speed.

Section 134 - Method of Illumination

Change first paragraph:

Illumination of signs shall be white, except that flashing red self-illumination may be used in the lettering on STOP signs.

Insert in ordinary type after first paragraph:

With STOP signs it is recommended that there be also a red element provided in one of the following ways:

- (a) Flashing red self-illumination of the message.
- (b) An auxiliary round flashing red signal in or directly below the sign.
- (c) A red reflecting element in or directly below the sign.

Eliminate at bottom of page 25, last paragraph in ordinary type and fine-print paragraph.

Sections 140 - 145

Change "buttons" to "elements" in all cases.

Section 140 - Detailed Design of STOP Sign

Change paragraph (b):

(b) Colors. Yellow background, black letters and border. Flashing red self-illumination or white reflecting elements for word "STOP".

Following paragraph (f) insert, in ordinary type:

A separate flashing red signal or red reflecting element (See Section 134) is recommended if the word "STOP" is reflectorized.

Section 141 - Detailed Design of Other Regulatory Signs

In table, eliminate first two signs, "Begin 25-mile Speed" and "End 25-mile Speed." Substitute sign as follows:

End Speed Zone 4 C 18 by 24

Change next sign to read:

Speed Limit 40 (4 C)
 (8 D) 18 by 24

Immediately under heading, "Alignment Regulations" insert:

No Passing 5 B 18 by 24

End No Passing Zone 3 C 18 by 24

Eliminate sign "No Passing _____ Feet."

At bottom of page 28 insert center heading "Stopping and Standing Prohibitions" and below that heading insert the following:

No Stopping (3 D)
 (2 E) 12 by 18

No Standing (3 D)
 (2 E) 12 by 18

Eliminate "No Stopping" sign from its position under heading, "Miscellaneous Regulations."

Section 158 - Slow-Type and Caution-Type Signs

Change first paragraph:

Slow-type and caution-type signs shall be located a distance in advance of the hazard equal to the stopping distance as indicated in Appendix C at speeds commonly used by drivers approaching such a point, but in no case less than 100 feet.

Section 159 - Route Markers

In bold-face type:

Route markers at an intersection shall be placed on the far right corner of the intersection.

Route markers set beyond an intersection to "pull" traffic through shall be located not more

than 100 feet from the intersection, and in plain view from the approach side of it.

Advance route markers shall be placed a sufficient distance in advance of the intersection to give ample warning to motorists approaching at reasonable speed, and shall be in advance of any special lane marking approaching the intersection.

In ordinary type:

Care should be taken not to place an advance marker at such point as to turn traffic into an alley or secondary street in advance of the proper turn. (See Fig. 159 for typical signs and markers at an intersection of two numbered routes.)

The clear marking of routes through towns and cities is much more difficult than rural marking, and frequently of more importance in order to prevent confusion of drivers in heavy traffic. Great care, therefore, should be taken to place signs where they will be in plain view at all times regardless of traffic conditions, and at relatively short intervals.

Section 160 - Destination Signs

Insert after heading, in bold-face type:

Destination signs on major routes at or in advance of intersections shall be substantially at right angles to the direction of travel which they are primarily intended to serve.

In ordinary type:

The practice, still used in some localities, of placing such signs parallel with the direction of travel they are to serve is strongly condemned.

Change first paragraph in ordinary type:

Destination signs at intersections should be placed at the most favorable points to be read by approaching motorists. It is often desirable to erect an auxiliary destination sign in advance of the intersection to give an approaching motorist the necessary information without forcing him to stop or reduce his speed greatly.

Section 162 - Position in Relation to Roadway

Change first paragraph:

Signs other than temporary signs in the roadway shall be placed on the right side of the roadway and approximately at right angles to it. They shall not be located on the insides of curves, in sags in the profile or behind objects which would obstruct their view.

Add to second paragraph:

At traffic circles or other points where there is a sharp change in alignment signs or markers on the far side of the roadway, directly ahead of the driver, may be justified. Signs on traffic islands also constitute an exception to the general rule.

Section 164 - Height

Insert after third paragraph:

Signs larger than the minimum standards should be mounted with the lowest edge 2-1/2 feet above the crown of the pavement.

PART II - MARKINGS

Section 202 - Lines on Pavements

Eliminate from paragraph (a) the words "in dangerous locations."

Insert new paragraph (c):

(c) "No Passing" zones in conjunction with center lines and traffic lane markings.

Reletter present paragraph (c) and succeeding paragraphs.

Section 203 - Center Lines

Change first paragraph:

Line markings on pavement shall be placed on the medial line of the roadway in the following locations:

(a) On the approach to the crest of a hill where the clear view ahead is less than

the required passing sight distance for the prevailing speed at that location.

(b) On any curve having a radius less than 600 feet or where the clear view ahead is less than the required passing sight distance for the prevailing speed at that location.

(c) On pavements wider than 40 feet.

Eliminate last paragraph. (Matter to be covered by new Section 204.1 and revised Section 226.)

Section 204 - Lane Markings

Transfer bold-face paragraph and next succeeding paragraph with revisions indicated to new Section 204.1. Retain last paragraph of Section 204.

(New) Section 204.1 - "No Passing" Markings

In bold-face type:

In zones on 2-lane highways marked with a center line where overtaking and passing is dangerous and unlawful there shall be marked alongside the center line, on the side from which crossing the line is prohibited, auxiliary marking as described in Section 226.

In ordinary type:

In such markings it should be noted that the purpose is to prevent overtaking and passing wherever the clear view ahead is inadequate for safe passing without being unduly restrictive when the danger zone is passed. Therefore in each direction approaching a hillcrest the auxiliary marking should begin a considerable distance below the hillcrest but terminate just beyond it. The same principle will often apply at curves and other points of hazard.

In bold-face type (revised from present Section 204):

On highways marked with an odd number of traffic lanes, there shall be such marking that the middle lane will be discontinued on hillcrests and curves throughout any section of the highway where the clear view ahead is insufficient for safe passing, at railroad grade crossings, on bridges narrower than the adjoining pavements, and at signalized intersections.

In ordinary type:

The foregoing applies particularly to 3-lane highways on which overtaking and passing at such places is extremely dangerous. Essential requirements in the design of such marking are indicated in Section 226.

Lane markings should not be depended upon solely to prevent overtaking and passing in hazardous areas, but such areas should be marked by NO PASSING signs as indicated in Section 109a.

Section 226 - Markings to Prohibit Overtaking and Passing at Hazardous Points

Change title of section as above indicated.

Substitute for present text:

In bold-face type:

Auxiliary markings to indicate zones on 2-lane highways where overtaking and passing is prohibited shall be by means of additional lines of a different width or color from the center line, or by additional broken lines of the same color.

In ordinary type:

Various methods of marking are being tried to indicate NO PASSING zones on 3-lane highways. The essential requirement is that traffic in each direction shall be diverted to the right an ample distance before reaching the point of hazard. Any marking permitting traffic in either direction to reach such point of hazard in or to the left of the center of the roadway is strongly disapproved.

Section 228 - Limit Lines

Add in ordinary type:

A limit line several feet in advance of the crosswalk has been found effective in a number of cities in preventing motorists from encroaching upon the crosswalk.

Section 229 - Approach to an Obstruction

Change paragraph:

Pavement markings to give warning of approach to an obstruction shall be in the form of two lines starting 6 inches outside of each corner of the approach end of the obstruction and converging at a point distant at least ten times the width of the obstruction, from which point a single line shall be extended 100 feet farther from the obstruction (see Figs. 229 and 229a).

Add in ordinary type:

The greater the normal speed of approaching traffic, the greater should be the length of the pavement markings.

Section 234 - Pavement Edges

Where a line marking is used to connect the edge of a wider pavement with that of an adjacent narrower section, the length of the diagonal connecting line should be at least ten times the offset distance.

PART III - SIGNALS

Division A - Traffic Control Signals

In the introductory matter at the bottom of page 55, add to the classification of traffic-actuated control a third class:

(c) Pedestrian-actuated, which may be in conjunction with either full traffic-actuated or semi-actuated signals.

Section 303 - Heavy Left Turn Warrant for Fixed-Time Signals

Change sub-paragraph (b):

(b) Vehicular volume making a left turn from one or more directions must involve at least an average of 5 vehicles per minute for the heaviest traffic hour and cross through an opposing stream of at least equal volume.

Change the next paragraph:

Occasionally where there is insufficient volume on the cross street to warrant traffic control operation, one or more left turns are so heavy and intersect with such heavy traffic

coming from the opposite direction that traffic control operation may be warranted. If the customary simple cycle described in Section 366 were used, however, there would be little merit to signalization since both conflicting movements would take place on the same green indication. In order to avoid such conflict it is necessary to provide through the signal operation separate times for the conflicting movements. This may be accomplished by having the GO indication for one of the directions involved in the conflict appear several seconds sooner than the GO indication for the other direction. Or an exclusive left turn interval may be used where roadways are wide enough to set aside a lane for left turns only.

Section 304 - Minimum Pedestrian Volume Warrant for Fixed-Time Signals

Change first paragraph at top of page 60:

Provision for safe and convenient crossing of roadways by pedestrians warrants greater attention than it has heretofore received. Nearly two-thirds of all persons killed in traffic accidents in cities are pedestrians. Intersections which meet this warrant justify control where cross vehicular traffic is too light to warrant a signal solely on the vehicular basis.

In second line of second fine-print paragraph change "intersection" to "intersections".

Section 318 - Progressive Movement Warrant for Traffic-Actuated Signals

Substitute for entire section, in ordinary type:

Varying block lengths, multiple-entrance intersections, necessary left-turn intervals and other complications sometimes involve considerable displacement or shortening of the GO band in the best possible timing plan for a fixed-time progressive system. Under such conditions and where the moving of maximum volume is of great importance, consideration should be given to a progressive traffic-actuated system.

Such a system should be so designed that it will retain the desired constant relationship between the times when the green light appears on the same

highway at adjacent intersections. One of the principal advantages of a progressive system is control of speed, and this control cannot be maintained unless the intended relationship is retained between the appearances of GO indications just mentioned.

The advantage gained by progressive traffic-actuated systems of this kind is in lengthening the GO band each cycle that cross traffic at an intersection does not require as great a proportion of the cycle as it would be allocated in a fixed-time system.

However, a progressive traffic-actuated system possesses certain disadvantages which should always be carefully weighed. One is considerably increased cost. Another is that in lengthening the GO interval, the traffic-actuated feature may so increase the number of vehicles passing through the intersection on one green interval as to overload a short block or cause serious delays at a succeeding signalized intersection where the GO interval may be inadequate to handle the increased vehicular load. Furthermore, the traffic-actuated lengthening of the GO interval may diminish the effectiveness of speed control.

Nevertheless, progressive traffic-actuated systems have been installed in a number of difficult situations and, where properly designed and applied, have proved successful.

Section 324 - Special Pedestrian Signals

Change first paragraph:

Special pedestrian signals are used for two different purposes:

Beginning with unfinished paragraph on page 69, substitute for remainder of section:

The addition of a separate pedestrian interval slows up the entire cycle and is therefore justified only in exceptional cases where there are many vehicular turns combined with heavy pedestrian traffic or where vehicular movement through which the pedestrian must cross would otherwise be continuous, as in some traffic circles.

Special pedestrian signals are recommended in conjunction with the standard cycle where justified by heavy traffic volume or high speed. Ordinarily the indication to walk will first appear simultaneously with the appearance of the green signal for vehicles in the same direction and will disappear a sufficient number of seconds before the disappearance of the green so pedestrians who start on their signal can clear the intersection before the green signal is given to vehicles in the other direction. In special cases, as where turns are permitted during part but not all of the green interval for vehicles, the signal to walk may be arranged to appear during any desired portion of the green interval.

NOTE: The substance of the matter eliminated above, disapproving the use of combinations of green, yellow and red and suggesting a design for special WALK signals, is transferred to Section 332.1.

Section 327 - Number of Lenses per Signal Face

Change last paragraph:

The foregoing does not apply to special pedestrian signals.

Section 330 - Illumination of Lens

Change first paragraph:

Each lens shall be illuminated independently of any other lens. Except in the case of green arrows the illumination shall be by a clear lamp of not less than 40-watt capacity, especially designed for traffic signals. Each green arrow lens shall be illuminated by a clear lamp of not less than 25-watt capacity.

There shall be no ribbing on any lens carrying an arrow.

Revise next paragraph and insert two paragraphs:

Independent illumination of each lens is essential to permit uniform position of lenses, give satisfactory brilliance and provide the necessary flexibility in signal indications. Special lamps with sturdy filaments and other appropriate characteristics have been designed to meet traffic signal requirements. While 60-watt lamps have been exten-

sively used, special 40-watt traffic-signal lamps are now available. They permit economy in current consumption and will give reasonable satisfaction if the lenses and reflectors are kept thoroughly cleaned and no darkened reflectors are used.

A lower wattage for lamps behind green arrow lenses is recommended to prevent blurring and creating an appearance of solid green. Visibility is not necessary at so great a distance as in the case of the standard STOP and GO signals.

Where illuminated building signs would otherwise reduce the visibility of traffic signals, higher wattages should be used, or black backgrounds should be placed behind the signals, or there may be auxiliary signals over the intersection on mast arms or cables, as indicated in Section 343.

Section 332 - Lettering on Lenses

Eliminate last paragraph of section.

(New) Section 332.1 - Design of Special Pedestrian Signals

Insert (based in large part on matter eliminated from present Section 324):

In bold-face type:

Special pedestrian signals shall be of distinctive design and shall not use colors or combinations of colors used in traffic-control signals for vehicular traffic. There shall be one signal carrying the word "WALK" and another carrying the word "WAIT."

In ordinary type:

A suggested design (Figure 332.1) consists of two rectangular lenses, one when illuminated showing the word "WALK" in white letters on a black background, the other showing the word "WAIT" in black letters on a white background. The letters should be at least three inches high, and the signals should be at a height of about six feet, carried either on the same post as the vehicle signals or on a separate post.

Section 343 - Location of Signal Faces at the Intersection

Substitute for last two paragraphs:

The Committee believes that in the interest of uniformity corner location of signals is normally preferable to center location even in rural areas. Where such signals mounted on posts would be obscured by overhanging trees, or where their visibility would be impaired by illuminated signs on buildings, however, the signals may be suspended from mast arms (see Section 349), or center-suspension signals may be used to supplement the post-mounted signals.

Pedestals in the roadway to carry signals are driving hazards and are not recommended. This is not intended, however, to preclude the use of signals on pedestals or posts on islands in divided roadways.

Section 346 - Number of Signal Faces per Corner

Revise and amplify first paragraph in ordinary type:

Each direction of vehicular traffic warrants a signal face virtually in front of it as it approaches and crosses the intersection. These conditions can be provided only by a separate signal face for each stream to be controlled.

At every intersection where there is considerable pedestrian movement it is important that there be a signal readily seen and understandable by the pedestrian on whichever side of the street and in whichever direction he is proceeding. Under some existing installations, he is required to depend upon a signal barely visible diagonally across the street, or upon a red signal visible against traffic on the street he desires to cross. In many instances no yellow signal is visible to him and he has no warning that the signals are about to change. With the increasing use of special turning arrows and the signaling of one-way streets, there are points at busy intersections where he has no indication whatever as to when he should proceed.

If it is not possible to provide additional signal faces on existing signal heads, reasonable protection of the pedestrian requires the placing of additional signals. In these cases, however, consideration should be given to more complete protection by special pedestrian signals rather than additional STOP and GO signals.

Section 360 - Continuous Operation of Traffic-Control Signals

Change title of section as indicated.

Section 362 - Meaning of Color, Arrow and Special Pedestrian Indications

Amplify title as above.

In second paragraph, change Uniform Vehicle Code reference to "Sections 34, 35 and 36."

Transpose Subsections 362a, b, and c, and revise material in bold-face type:

362a - Green

1. Vehicular traffic facing the signal may proceed straight through or turn right or left unless a sign at such place prohibits either such turn. But vehicular traffic shall yield the right of way to other vehicles and to pedestrians lawfully within the intersection at the time such signal is exhibited.

2. Pedestrians facing the signal may proceed across the roadway within any marked or unmarked crosswalk.

362b - Yellow

1. Vehicular traffic facing the signal shall stop before entering the nearest crosswalk at the intersection, but if such stop cannot be made in safety a vehicle may be driven cautiously through the intersection.

2. Pedestrians facing such signal are thereby advised that there is insufficient time to cross the roadway, and any pedestrian then starting to cross shall yield the right of way to all vehicles.

362c - Red

1. Vehicular traffic facing the signal shall stop before entering the nearest crosswalk at an intersection or at such other point as may be indicated by a clearly visible line and shall remain standing until green is shown alone.

2. No pedestrian facing such signal shall enter the roadway unless he can do so safely and without interfering with any vehicular traffic.

362d - Red with Green Arrow

1. Vehicular traffic facing such signal may cautiously enter the intersection only to make the movement indicated by such arrow but shall yield the right of way to pedestrians lawfully within a crosswalk and to other traffic lawfully using the intersection.

2. No pedestrian facing such signal shall enter the roadway unless he can do so safely and without interfering with any vehicular traffic.

362e - Flashing Red (Stop Signal)

When a red lens is illuminated by rapid intermittent flashes, drivers of vehicles shall stop before entering the nearest crosswalk at an intersection or at a limit line when marked and the right to proceed shall be subject to the rules applicable after making a stop at a STOP sign.

362f - 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.

Change second paragraph in Subsection 362d:

It is apparent that the utility of these special green arrow indications is dependent upon there being a lane available for the movement so indicated. Such lanes should be clearly marked on the roadway surface at all times.

Eliminate paragraph in ordinary type in Subsection 362e.

Add, in bold-face type, a new Subsection 362g:

362g - Pedestrian Walk and Wait Signals

Whenever special pedestrian control signals exhibiting the words "WALK" or "WAIT" are in place such signals shall indicate as follows:

(a) WALK - Pedestrians facing such signal may proceed across the roadway in the direction of the signal and shall be given the right of way by the drivers of all vehicles.

(b) WAIT - No pedestrian shall start to cross the roadway in the direction of such signal, but any pedestrian who has partially completed his crossing on the walk signal shall proceed to a sidewalk or safety island while the wait signal is showing.

Section 363 - Removal of Confusing Colored Lights

Change Uniform Vehicle Code reference to "Section 37."

Section 364 - Unexpected Conflicts During GO Interval

Insert after next to last paragraph:

The foregoing applies not only to conflicts as between vehicles but also as between vehicles and pedestrians. For example, when right turns are permitted on a red signal accompanied by a green arrow, motorists facing the arrow are likely to make the turn without stopping, not realizing that a pedestrian seeking to cross the street on which they are approaching has the right of way, while the pedestrian, not even knowing of the exception at this point to the general rule, is likely to proceed on his GO signal directly into the path of these motorists. Permitting such turns where there is considerable pedestrian movement should therefore be avoided. If there are compelling reasons for permitting them, clearly legible signs should be erected to warn pedestrians.

Section 365 - Length of Cycle

Change footnote at bottom of page 88:

The National Safety Council has published a report on this subject entitled "Timing Stop and Go Signals," Public Safety Memo No. 84. A memorandum on the subject is also available from the American Automobile Association.

Section 366 - Rotation of Intervals

Remove parentheses from Simple Cycle with Pedestrian Clearance Period and place the words "Walk" and "Wait" in quotation marks. Insert a third cycle below this one, reading as follows:

Simple Cycle with Exclusive Pedestrian Period

Interval Number	Main Street		Cross Street	
	Vehicles	Pedestrians	Vehicles	Pedestrians
1	Green	"Wait"	Red	"Wait"
2	Yellow	"Wait"	Red	"Wait"
3	Red	"Wait"	Green	"Wait"
4	Red	"Wait"	Yellow	"Wait"
5	Red	"Walk"	Red	"Walk"
6	Red	"Wait"	Red	"Wait"

and repeat

Change paragraph under table:

It should be noted that the second and fourth intervals in the first cycle, the second, third, fifth and sixth in the second cycle and the second, fourth and sixth in the third cycle are each of only a few seconds duration to provide adequate clearance for vehicles and pedestrians. The cycles are presented as they would be viewed by an automobile driver. Controllers designed to provide for more intervals can repeat the same color combination in consecutive intervals as may be needed.

Section 376 - Conditions Affecting Efficiency of Signal System

Change second and third paragraphs in ordinary type:

Nevertheless, some type of flexible progressive system generally secures the best results possible by fixed-time control under such street and traffic handicaps as cannot be removed or relieved.

If conditions are unfavorable to fixed-time flexible progressive control, progressive traffic-actuated control or independent traffic-actuated operation may prove more efficient. (See Section 318)

Delete the next paragraph in small type.

Change last paragraph:

Equipment is available for a dual type of signal control in which signals will operate under isolated traffic-actuated control during light traffic hours, but when traffic on the main street reaches a predetermined density or when cross traffic appears frequently enough, the progressive master

controller will become effective and permit cross flow only in a part of the master time cycle that will not interfere with the progressive band of travel. When the traffic on the main street falls below a predetermined density, the system automatically returns to traffic-actuated control. While the signals are in separate traffic-actuated operation, there is no systematic movement in progressive bands.

PART IV - ISLANDS

Article A-I - Legal Authority

In second paragraph, change Uniform Vehicle Code reference to "Section 101."

Section 413 - Signs at Safety Zones

In second paragraph, change Uniform Vehicle Code reference to "Section 110."

Section 424 - Divisional Traffic Island

Revise matter to end of fine print:

The divisional type of traffic island, placed longitudinally in a roadway, is recommended to separate the two different directions of traffic in a roadway of four or more lanes in open country.

Divisional islands may also be used to separate streams of traffic under any of the following conditions:

(a) In a roadway of two lanes where it is desired to prevent vehicles going in the same direction from passing one another, as, for example, at narrow bridges, viaducts or underpasses or on dangerous curves.

(b) In a roadway of six or more lanes where it is desired to separate the slow moving local traffic serving the abutting property along the sides from the faster through traffic moving in the same direction nearer the center.

(c) In a roadway of any width where it is desired to provide guides to traffic approaching a fixed obstruction, such as a bridge support or a safety zone.

(d) In a roadway at the ends of tunnels or bridges or where traffic is regularly stopped for toll or inspection purposes.

