

Appendix A—DEFINITIONS

General Definitions

1. *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.

2. *Curb*—A vertical or sloping member generally along and defining the edge of a roadway.

3. *Curb line*—The boundary between a roadway and a sidewalk, usually marked by a curb.

4. *District, Business*—The territory contiguous to and including a highway when within any 600 feet along such highway there are buildings in use for business or industrial purposes, including but not limited to hotels, banks, or office buildings, railroad stations, and public buildings which occupy at least 300 feet of frontage on one side or 300 feet collectively on both sides of the highway.

5. *District, Residence*—The territory contiguous to and including a highway not comprising a business district when the property on such highway for a distance of 300 feet or more is in the main improved with residences or residences and buildings in use for business.

6. *District, Rural*—Any territory not included in a business or residence district as defined herein, whether or not within the boundaries of a municipality.

7. *District, Urban*—The territory contiguous to and including any street which is built up with structures devoted to business, industry, or dwelling houses situated at intervals of less than 100 feet for a distance of a quarter of a mile or more.

8. *Expressway*—A divided arterial highway for through traffic with full or partial control of access and generally with grade separations at intersections.

9. *Freeway*—A divided arterial highway with full control of access and with no crossings at grade.

10. *Gore*—The area immediately beyond the bifurcation of two roadways, bounded by the edges of those roadways.

11. *Highway (or Street)*—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.

12. *Highway, Arterial*—A general term denoting a highway primarily for through traffic, usually on a continuous route.

13. *Highway, Controlled-Access*—Every highway, street, or roadway in respect to which owners or occupants of abutting lands and other persons have no legal right of access to or from the same except at such points only and in such manner as may be determined by the public authority having jurisdiction over such highway, street, or roadway.

14. *Highway, Divided*—A highway with separate roadways for traffic in opposite directions.

15. *Highway, Major*—The roadway approach or approaches at an intersection normally carrying the major volume of vehicular traffic.

16. *Highway, Minor*—The roadway approach or approaches at an intersection normally carrying the minor volume of vehicular traffic.

17. *Highway, Through*—A highway on which preference is given to the through movement of traffic by the utilization of Stop signs and/or other traffic-control devices on intersecting highways.

18. *Intersection*—The area embraced within the prolongation or connection of the lateral curb lines, or, if none, then the lateral boundary lines of the roadways, of two highways which join one another at, or approximately at, right angles; or the area within which vehicles traveling upon different highways joining at any other angle may come in conflict.

19. *Median*—The portion of a divided highway separating the traveled ways for traffic in opposite directions.

20. *Official Traffic Control Devices*—All signs, signals, markings, and devices placed or erected by authority of a public body or official having jurisdiction, for the purpose of regulating, warning, or guiding traffic.

21. *Pavement*—That part of a roadway having a constructed surface for the facilitation of vehicular traffic.

22. *Pedestrian*—Any person afoot.

23. *Ramp*—An inclined section of way over which traffic passes for the primary purpose of ascending or descending so as to make connections with other ways. Also, an interconnecting roadway of a traffic interchange, or any connection between highway facilities of different levels, on which vehicles may enter or leave a designated highway.

24. *Right-of-Way*—The privilege of the immediate use of the roadway.

25. *Roadway*—That portion of a highway improved, designed, or ordinarily used for vehicular travel, exclusive of the berm or shoulder. In the event a highway includes two or more separate roadways, the term "roadway," as used herein, refers to any such roadway separately but not to all such roadways collectively.

26. *Shoulder*—The portion of the roadway contiguous with the traveled way for accommodation of stopped vehicles, for emergency use, and for lateral support of base and surface courses.

27. *Sidewalk*—That portion of a street between the curb line, or the lateral line of a roadway, and the adjacent property lines, intended for the use of pedestrians.

28. *Street*—(See highway).

29. *Traffic*—Pedestrians, ridden or herded animals, vehicles, streetcars, and other conveyances either singly or together while using any highway for purposes of travel.

30. *Traffic Lane*—A strip of roadway intended to accommodate the forward movement of a single line of vehicles.

31. *Transit Vehicle*—A vehicle designed for carrying more than 10 passengers and used for transportation of persons for compensation.

32. *Vehicle*—Every device in, upon, or by which any person or property is or may be transported or drawn upon a highway, except devices moved by human power or used exclusively upon stationary rails or tracks.

Definitions Relating to Signs

1. *Guide Sign*—A sign used to direct traffic along a route or toward a destination or to give information concerning places or points of interest.

2. *Lane-Use Sign*—A sign indicating regulations governing use of specific lanes.

3. *Legend*—Any message on a sign, whether expressed in words or symbols.

4. *Public Parking Area (or Facility)*—A parking facility available for use by the general public, with or without payment of a fee.

5. *Regulatory Sign*—A sign used to indicate regulations governing use of the highway.

6. *Traffic Sign*—A device mounted on a fixed or portable support whereby a specific message is conveyed by means of words or symbols, officially erected for the purpose of regulating, warnings, or guiding traffic.

7. *Warning Sign*—A sign used to indicate actual or potential hazards to highway users.

Definitions Relating to Markings

1. *Barrier Line*—A line which, when placed parallel to a center or lane line, or to another barrier line, indicates that all traffic must keep to the right thereof.

2. *Center Line*—A line indicating the division of the roadway between traffic moving in opposite directions.

3. *Channelizing Line*—A line which directs traffic and indicates that traffic should not cross but may proceed on either side.

4. *Delineator*—A light-reflecting device mounted at the side of the roadway, in series with others, to indicate the alinement of the roadway.

5. *Edge Line*—A line which indicates the edge of the roadway.

6. *Lane Line*—A line separating two lanes for traffic moving in the same direction.

7. *Stop Line (or Limit Line)*—A line which indicates where vehicles should stop when directed by a traffic officer or traffic control device.

8. *Traffic Markings*—All lines, patterns, words, colors, or other devices, except signs, set into the surface of, applied upon, or attached to the pavement or curbing or to objects within or adjacent to the roadway, officially placed for the purpose of regulating, warning, or guiding traffic.

Definitions Relating to Signals

Signals

1. *Highway Traffic Signal*—Any power-operated traffic-control device, except a sign or a flasher, by which traffic is warned or is directed to take some specific action.

2. *Traffic Control Signal*—Any device whether manually, electrically, or mechanically operated by which traffic is alternately directed to stop and permitted to proceed.

3. *Pretimed Signal*—A type of traffic control signal which directs traffic to stop and permits it to proceed in accordance with predetermined time schedules.

4. *Traffic-Actuated Signal*—A type of traffic control signal in which the intervals are varied in accordance with the demands of traffic as registered by the actuation of detectors.

a. *Semi-traffic-actuated signal*—A type of traffic-actuated signal in which means are provided for traffic actuation on one or more but not all approaches to the intersection.

b. *Full traffic-actuated signal*—A type of traffic-actuated signal in which means are provided for traffic actuation on all approaches to the intersection.

c. *Traffic-Adjusted Signal*—A type of traffic control signal in which characteristics of signal display at local controllers in an area or for an artery are continuously varied in accordance with the receipt of traffic-flow information supplied to a computing master control by sampling detectors located at typical flow points in the area.

5. *Flashing Beacon*—A section of a standard traffic signal head, or a similar type of device, having a yellow or red lens in each face, which is illuminated by rapid intermittent flashes.

6. *Pedestrian Signal*—A traffic control signal which is erected for the exclusive purpose of directing pedestrian traffic at signalized locations.

7. *Lane-Direction-Control Signal*—A traffic control signal which is erected to control the direction of vehicular traffic movement in an individual lane.

8. *Train-Approach Signal*—A signal which indicates to highway traffic the approach and passage of railroad trains at a railroad-highway grade crossing.

Signal Systems

1. *Signal System*—Two or more signal installations operating in coordination.

2. *Simultaneous System*—A signal system in which all signals along a given street always give the same indication at essentially the same time.

3. *Alternate System*—A signal system in which alternate signals or groups of signals give opposite indications to a given street at the same time.

4. *Limited Progressive System*—A signal system in which the various signal faces controlling a given street give Go indications in accordance with a time schedule to permit (as nearly as possible) continuous operation of groups of vehicles along the street at a planned rate of speed, which may vary in different parts of the system.

5. *Flexible Progressive System*—A signal system in which the intervals at any signalized intersection may be independently adjusted to the traffic requirements to give the maximum efficiency.

6. *Through Band*—The time in seconds elapsed between the passing of the first and the last possible vehicle in a group of vehicles moving in accordance with the designed speed of a progressive signal system.

7. *Offset*—The number of seconds or percent of the time cycle that the green indication appears at a given traffic control signal after a certain instant used as a time reference base.

8. *Out-of-Step*—That condition of a traffic control signal instal-

lation belonging to a signal system when its operation does not possess the intended relationship to the system.

9. *Recoordination*—Restoration of the intended interrelationship of operation of signals in a signal system.

10. *Remote Cycle Change*—A mechanism applied to the timer of the master controller to make possible, by means of manual operation or by means of an automatic time switch, a change in the time cycle in operation at all local controllers interconnected within a signal system.

11. *Shutdown Feature*—A relay or other device installed in a controller which, when energized from a remote point or by an automatic time switch, discontinues normal traffic control signal operation and turns the signal indications off.

12. *Flashing Feature*—A relay or other device installed in a controller which, when energized from a remote point or by an automatic clock switch, discontinues normal signal operation and causes the flashing of any predetermined combination of signal lights.

Signal Operation

1. *Major Street*—The roadway approach or approaches at an intersection normally carrying the major volume of vehicular traffic.

2. *Minor Street*—The roadway approach or approaches at an intersection normally carrying the minor volume of vehicular traffic.

3. *Signal Indication*—The illumination of a traffic signal lens or equivalent device or a combination of several lenses or equivalent devices at the same time.

4. *Time Cycle*—The time period required for one complete sequence of signal indications.

5. *Interval*—Any one of the several divisions of the time cycle during which signal indications do not change.

6. *Interval Sequence*—A predetermined consecutive order of appearance of signal indications during successive intervals within a time cycle.

7. *Traffic Phase (traffic movement)*—A part of the time cycle allocated to any traffic movement receiving the right-of-way or to any combination of traffic movements receiving the right-of-way simultaneously during one or more intervals.

8. *Vehicular Phase (vehicular movement)*—A traffic phase allocated to vehicular traffic.

9. *Pedestrian Phase (pedestrian movement)*—A traffic phase allocated to pedestrian traffic.

a. *Combined Pedestrian-Vehicle Phase*.—A traffic phase wherein pedestrians are directed to move on certain cross-

walks parallel to the through vehicular movement and wherein vehicles are permitted to turn across the said cross walks.

b. *Semi-Exclusive Pedestrian-Vehicle Phase*—A traffic phase wherein pedestrians are directed to move on certain crosswalks with parallel or other vehicular movements, but vehicles are not permitted to turn across the said crosswalks during the pedestrian movement.

c. *Leading Pedestrian Phase*—Signal phasing wherein an exclusive pedestrian phase, in advance of the minor-street vehicular green phase, is provided for pedestrians crossing the main street only.

d. *Exclusive Pedestrian Phase*—A traffic phase wherein pedestrians are directed to move on any crosswalks or cross the intersection diagonally during an exclusive phase while all vehicles are stopped.

10. *Clearance Interval (generally yellow)*—The time of display of the signal indication following the green interval.

a. *Pedestrian Clearance Interval*—The time of display of the DONT WALK indication following the WALK interval, before opposing vehicles receive a green indication.

11. *Carry-Over*—The effect which a passing platoon (closely spaced group of vehicles) exerts on the controller for the benefit of prompt assignment of the right-of-way for the next following platoon on that traffic phase.

12. *Initial Portion*—The first part of the green interval which is timed out or separately controlled by a traffic-actuated controller before the extendible portion of the interval takes effect.

13. *Extendible Portion*—The part of the green interval following the initial portion.

14. *Unit Extension*—The minimum time during the extendible portion for which the right-of-way must remain on any traffic phase following an actuation on that phase, but subject to the extension limit.

15. *Extension Limit*—The maximum time for which actuations on any traffic phase may retain the right-of-way after actuation on another traffic phase.

16. *Minimum Period*—The shortest period of time that a green interval may be displayed during any traffic phase.

Controllers

1. *Beacon Flasher*—A complete electrical mechanism for controlling the operation of a flashing beacon, including all necessary auxiliary apparatus.

2. *Controller*—A complete electrical mechanism for controlling

the operation of traffic control signals, including the timer and all necessary auxiliary apparatus mounted in a cabinet.

a. *Automatic Controller*—A self-operating controller for operating traffic control signals automatically.

b. *Manual Controller*—A controller for operating traffic control signals by hand.

c. *Pretimed Controller*—An automatic controller for supervising the operation of traffic control signals in accordance with a predetermined, fixed time cycle and divisions thereof.

d. *Synchronous Motor Controller*—An automatic controller operated by a synchronous motor which will maintain a constant speed governed by the frequency of the power supply circuit.

e. *Master Controller*—An automatic controller for supervising a system of secondary controllers, maintaining definite time interrelationship, or accomplishing other supervisory functions.

f. *Traffic-Adjusted Master Controller*—A type of master controller designed to make continuous and automatic selection of cycle lengths, offsets, or other system operating features based on traffic flow information supplied to it from vehicle detectors located within the signal system.

g. *Secondary Controller*—An automatic controller for operating the traffic control signals at an intersection under the supervision of a master controller.

h. *Local Controller*—A controller for operating traffic control signals at an intersection (or two or three proximate intersections) which may be isolated or included in a signal system.

i. *Electronic Controller*—An automatic controller using electronic timing circuits.

j. *Traffic-Actuated Controller*—An automatic controller for supervising the operation of traffic control signals in accordance with the varying demands of traffic as registered with the controller by detectors or push buttons.

3. *Manual Switch*—An auxiliary device for manual operation of an automatic controller.

4. *Timer*—An automatic timing unit in a controller including all dials, circuit contacts, motors, gears, camshaft, etc.

5. *Timing (or Interval) Dial*—A calibrated dial or similar mechanism on an automatic timer equipped with adjusting devices by means of which it is possible to divide the time cycle into the required number of intervals and set up the offset and interlock.

6. *Reset*—An adjustment mechanism applied to an automatic

controller providing for the setting up of the timing arrangement of the start of the green traffic control signal indication.

7. *Automatic Reset*—A reset by means of which the offset or beginning of the green indication is checked automatically, and adjusted if necessary once each time cycle.

8. *Remote Flashing Relay*—A relay installed in a local controller which, when energized from a remote point, causes normal signal operation to be discontinued and specified signal lights to be operated in a flashing manner.

Detectors

1. *Traffic Detector (general definition)*—A device by which vehicles, streetcars, trolley buses, or pedestrians are enabled to register their presence with a traffic-actuated controller.

2. *Pressure-Sensitive Vehicle Detector*—A detector installed in the roadway capable of being actuated by the pressure of a vehicle passing over its surface.

3. *Magnetic Vehicle Detector*—A detector installed in or near the roadway, capable of being actuated by the magnetic or electrical disturbance caused by the passage of a vehicle.

a. *Compensated Magnetic Vehicle Detector*—Any magnetic detector which is so designed and constructed as not to be affected by changing electromagnetic influences other than those resulting from the passage of a vehicle. When properly equipped, a compensated magnetic detector has substantial directional characteristics.

b. *Noncompensated Magnetic Detector*—Any magnetic detector other than a compensated magnetic detector.

4. *Sound-Sensitive Vehicle Detector*—A detector installed in the roadway capable of being operated by sound waves generated by the passage of a vehicle over the surface of the detector.

5. *Light-Sensitive Vehicle Detector*—A detector consisting of a light source and photoelectric cell or cells, capable of being operated by the passage of a vehicle interrupting the beam or beams of light. When properly equipped, directional characteristics are present.

6. *Radar Vehicle Detector*—A detector installed over the roadway capable of being actuated by the passage of a vehicle through its field of emitted microwave energy.

7. *Nondirectional Detector*—A detector capable of being actuated by vehicles proceeding in either direction.

8. *Directional Detector*—A detector capable of being actuated only by vehicles proceeding in one direction.

9. *Pedestrian Detector*—A detector, usually of the push-button type, installed near the roadway capable of being operated by hand.

10. *Sampling Detector*—Any suitable type of vehicle detector used to obtain traffic-flow information for a traffic-adjusted master controller.

11. *Detector Amplifier*—Any device such as a relay, vacuum tube amplifier, or other equipment capable of intensifying the electrical energy produced by a detector to a degree sufficient to affect the controller.

General and Accessory Equipment

1. *Signal Installation*—All of the equipment and material involved in the signal control of traffic at one intersection.

2. *Signal Support*—The physical means whereby a signal head is supported in a particular location.

3. *Lens*—That part of the optical unit which redirects the light coming directly from the lamp and its reflector.

4. *Optical Unit*—An assembly of redirecting cover glass or lens, reflector, lamp and lamp socket with the necessary supporting parts to be used for providing a single signal indication.

5. *Cabinet*—A dustproof and weatherproof enclosure for housing the controller and associated equipment.

6. *Emergency Feature*—A relay or other device installed in a controller which, when energized from a remote point, discontinues the normal signal operation and displays special signal indications for unusual conditions.

7. *Power-Failure Indicator*—A pilot lamp mounted on or in the controller cabinet which, when illuminated, indicates that power has failed and that the controller requires manual recoordination.

8. *Recall Switch*—A manual switch in a traffic-actuated controller which may cause the automatic return of the right-of-way to a street regardless of the absence of actuation on that street.

Definitions Relating to Islands

1. *Approach End (or Nose)*—An end of an island or area between roadways which faces approaching traffic passing to one or both sides.

2. *Buffer*—A structure at the approach end of a safety zone designed to deflect or stop any vehicle which collides with it.

3. *Island*—An area within a roadway from which vehicular traffic is intended to be excluded, together with any area at the approach thereto occupied by protective deflecting or warning devices.

4. *Island, Channelizing*—A traffic island located in a roadway area to confine specific movements of traffic to definite channels.

5. *Island, Divisional*—A traffic island, usually elongated and narrow, following the course of the roadway to separate traffic moving in the same or opposite directions.

6. *Island, Loading*—A pedestrian island especially provided for the protection of transit vehicle users.

7. *Island, Pedestrian Refuge*—An island designed for the use and protection of pedestrians. A pedestrian island includes the safety zone together with the area at the approach end occupied or outlined by protective deflecting or warning devices. This includes loading islands.

8. *Island, Traffic*—An island designed to separate or direct streams of vehicle traffic. Included are both divisional and channelizing islands.

9. *Median Lane*—A speed-change and storage lane within the median to accommodate left-turning vehicles.

10. *Raised Bars*—A series of bars extending above the normal pavement surface to make any wheel encroachment obvious to a vehicle operator without loss of control of the vehicle.

11. *Safety Zone*—The area or space officially set apart within a roadway for the exclusive use of pedestrians, and which is protected or is so marked or indicated by adequate signs as to be plainly visible at all times while set apart as a safety zone.

12. *Traffic Button*—A rounded object extending above the normal pavement surface for the purpose of channelizing traffic movement.

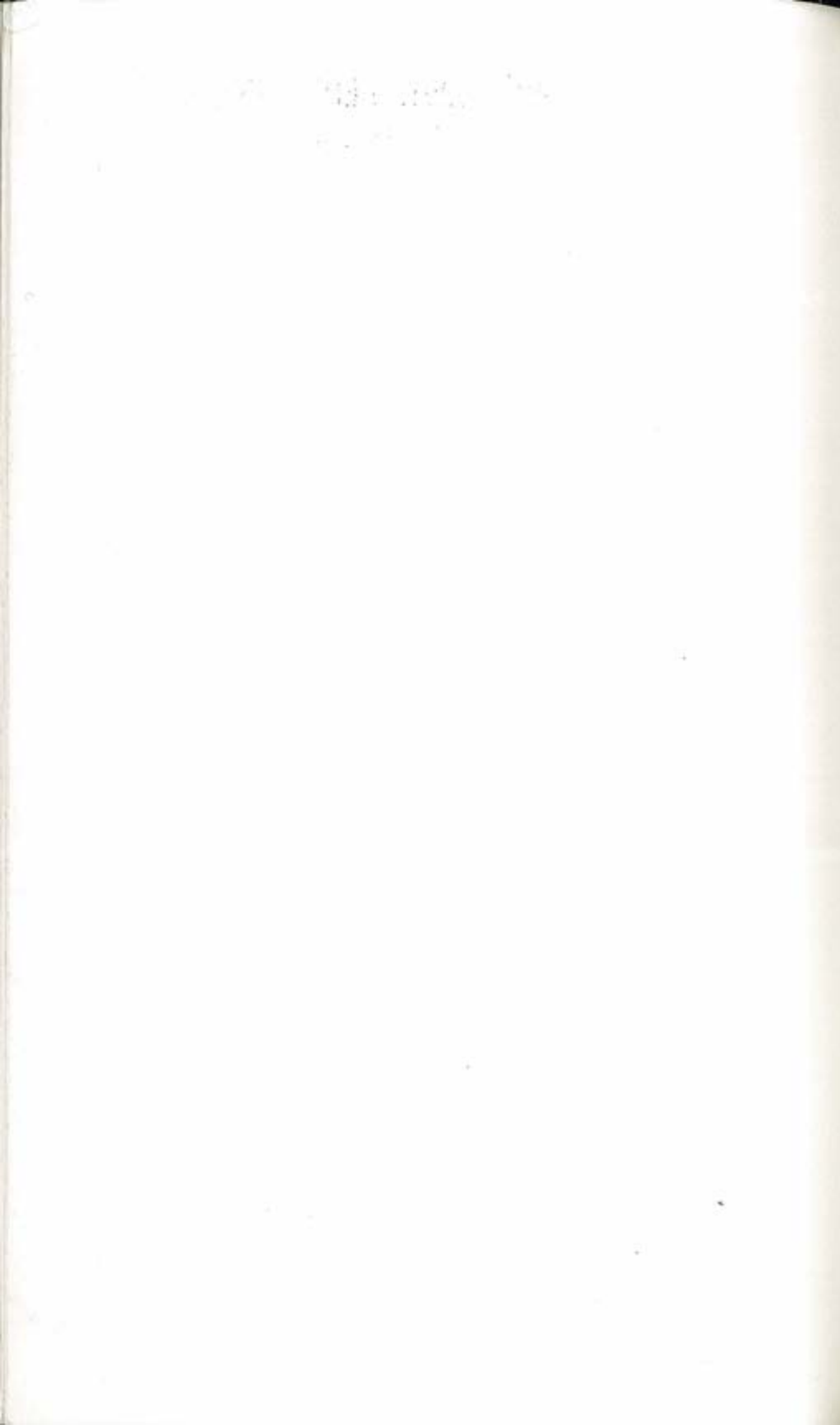
Definitions Relating to Construction and Maintenance Traffic Controls

1. *Barricade*—A portable or fixed barrier having object markings, used to close all or a portion of the right-of-way to vehicular traffic.

a. *Wing Barricade*—A barricade placed on the road shoulder as a warning device, implying a constriction or closing of the roadway ahead.

2. *Flasher*—A portable power-operated lens-directed enclosed light, illuminated by rapid intermittent flashes of short duration, temporarily installed for advance warning or for the marking of severe or unexpected hazards in or near the roadway.

ARIZ. HWY. DEPT. LIBRARY
PHOENIX, ARIZONA



ARIZ. HWY. DEPT. LIBRARY
PHOENIX, ARIZONA

INDEX

[References are to section numbers unless otherwise indicated]

A		Section	Section	
Abbreviations, sign legend	.....	1A-14	Barrier, pedestrian, on divisional island	4C-3
Accidents:			Beacon, flashing (see Flashing beacon)	
Data needed for signal installa-	.....	3D-2	Bells, with drawbridge signals	3G-17
Types reduced by traffic signals	.....	3D-8	Black (see also Colors):	
Warrant for pretimed signals	.....	3D-8	Gaps in broken white line	2A-6
Warrant for traffic-actuated signals	.....	3E-3	Sign backgrounds:	
<i>Adjustable Face Traffic Control Signal</i>			Expressway signs	1A-11
<i>Head Standards (ITE)</i>	.....	3B-4, 6, 8, 3G-5	Guide signs	1A-11, 1D-3
Advance Detour sign	.....	5B-20	Regulatory signs	1A-11, 1B-3, 5B-6
Advance Flagman sign	.....	5B-25	Stripes:	
Advance guide signs, expressway	1D-38, 39		Barriades	5C-3
Advance Lane Closed sign	.....	5B-23	Clearance markers	2D-2
Advance One Lane Road sign	.....	5B-22	Object markings	2A-6, 2C-2, 3
Advance Road Closed sign	.....	5B-21	Blue (see also Colors):	
Advance Road Construction sign	.....	5B-19	Evacuation Route marker	6A-3
Advance Single Lane sign	.....	5B-24	Interstate Route Marker and auxiliaries	1D-10, 11
Advance Turn Arrow	.....	1D-15	Rest Area signs	1D-41
Advertising lights, confusing	.....	3B-17	Services signs	1D-42
Advertising on traffic signs	.....	1A-3	Borders, sign	1A-19
Advisory Speed plate	.....	1C-36, 5B-34	Bridle Path sign	1C-38
All-red clearance period	.....	3B-5, 23, 26	Broken lines, pavement markings	2A-7
			Buffers, pedestrian islands	4B-3
Alphabets for highway signs (see Lettering, signs)			Bump sign	1C-25, 5B-33
Alternate routes and markers	.....	1D-18 to 24	Bureau of Public Roads	Introduction
Alternate system, pretimed signals	.....	3D-19	Business Route Marker	1D-22
American Association of State Highway Officials	.....	Introduction	Interstate	1D-10
American Municipal Association	.....	Introduction	Buttons, mushroom, pavement marking	2A-5, 4A-4
American Standards Association	.....	3B-4	By-pass Route Marker	1D-21
Angle parking	.....	2B-24		
Application of signs and markings (see also listing of individual devices)	.....	1A-4, 2A-3	C	
Approach-end treatment, islands (see also Islands)	.....	4A-4	Cable, traffic signal	3B-20
Area Closed sign	.....	6A-4	Capital letters (see Lettering, signs)	
Arrows, pavement markings	.....	2B-25, 26	Cardinal Direction marker	1D-25
Arrows, sign:			Cattle Crossing sign	1C-33
Advance Turn marker	.....	1D-15	Caution, signal indication (see also Flashing beacon; Traffic signals, flashing operation)	3B-5, 24, 3G-3, 5
Curve and Turn signs	.....	1C-4 to 8	Caution signs (see Warning signs)	
Destination sign	.....	1D-28	Center lines	2B-1, 2, 3
Detour marker	.....	1D-24, 5B-39	Color	2A-6, 2B-2, 3
Directional marker	.....	1D-16, 17	Reflectorization	2A-9
Double Arrow sign	.....	1C-34	Rural roads	2B-2
Expressway guide signs	.....	1D-36	Urban streets	2B-3
	.....	37, 41	Warrants	2B-2
Keep Right sign	.....	1B-25	Channelizing devices	2B-15
Lane-Use Control sign	.....	1B-18		5C-1 to 10
Large Arrow sign	.....	1C-9	Channelizing islands (see Islands)	4D-1 to 6
One Way sign	.....	1B-28	Channelizing line	2B-15
Parking signs	.....	1B-31, 1D-43	Civil Defense:	
Arrows, traffic signal	.....	3B-3 to 6	Signal controls	3B-27
Association of American Railroads	.....	1C-34, 3H-6 to 9	Signs	6A-2 to 8
Axle Weight Limit sign	.....	1B-40	Cleaning (see Maintenance)	
			Clearance interval:	
B			All-red	3B-5, 23, 26, 5E-11
Barricades:			Pedestrian	3F-7
Application	.....	5C-2	Vehicular	3B-3, 5, 23
Design and construction	.....	5C-3, 4, 5	Clearance markers	2C-5, 2D-2
Signs on	.....	5C-6	Clearance sign	1C-35
Wing	.....	5C-5	Clearances:	
Barrier, function	.....	5C-1	Lateral, for signs	1A-23, 5B-3
Barrier line	.....	2A-6, 2B-8, 9	Overhead, for signals	3B-14
Application (see also No-passing zones)	.....	2B-9, 13, 14, 18, 23	Overhead, for signs	1A-22
Color	.....	2A-6, 2B-8	Color cards	1A-11, 2A-6
Design	.....	2B-8	Colors:	
Meaning	.....	2A-7, 2B-8	Curb markings	2A-6, 2B-27, 2C-4, 4A-3
			Delineators	2A-6, 2D-4

	Section		Section
Hazard Markers	2A-6, 2D-2	Distance signs	1D-27, 30, 31
Object markings	2A-6	Divided Highway sign	1C-22
Pavement markings	2A-6	Divided Highway Ends sign	1C-23, 5B-33
Signals	3B-4, 5	Divisional islands	4C-1 to 6
Signs	1A-11	Do Not Enter sign	1B-26
Combination Junction sign	1D-14	Do Not Pass sign	1B-21
Cones	5C-7	Do Not Throw Litter sign	1B-41
Confirming Route Marker	1D-9, 10, 12	Don't Walk signal (see Pedestrian signals)	
Construction and maintenance control devices:		Double Arrow sign	1C-34
Barriers	5C-1 to 9, 5F-3	Draw Bridge sign	1C-38
Flagging	5E-3 to 6	Drawbridge signals	3G-15 to 19
General	5A-1 to 6	Drawings, sign	1A-9, 13, 15, 5B-1
Lane closures	5E-1, 2	Drums	5C-7
Lighting devices	5D-1 to 4		
One-way control	5E-7 to 11	E	
Pavement markings	5C-10	Edge line (see Pavement edge line)	
Pilot car	5E-10	Elongated letters, pavement markings	2B-25
Signals	5E-11	Emergency Aid Center sign	6A-8
Signs (see also individual sign listings):		Emergency Parking Only sign	1B-33
Design	5B-1	Emergency Speed sign	6A-6
Guide signs	5B-35 to 40, 5F-2	End Construction sign	5B-37
Illumination	5B-2	End (35) Miles Speed sign	1B-15
Position	5B-3, 4	End One Way sign	1B-30
Reflectorization	5B-2	End protection (see Islands)	
Regulatory	5B-5, to 13, 5F-2	End Road Work sign	5B-38
Warning	5B-14 to 34, 5F-2	End Speed Zone sign	1B-15
Urban control	5B-1, 2, 3	Entrance (Factory) sign	1C-38
Controllers, signal (see Traffic signals, controllers)		Evacuation Route Marker	1A-10, 6A-3
Coordination, signal	3D-16 to 21, 3E-7, 8	Exclusion signs	1B-27
Cross on Green Light Only sign	1B-35	Exit Direction signs, expressways	1D-37
Cross on Walk Signal Only sign	1B-35	Exit Sign, at gore	1D-36
Cross Only at Cross Walks sign	1B-35	Exit sign, warning	1C-38
Cross Road sign	1C-10	Exit Speed sign	1B-10, 1C-36
Cross Walk sign	1C-33	Expressway, defined	1A-2
Crossbuck, railroad sign	1C-32		
Crossing signs	1C-33	F	
Crosswalk lines	2B-22	Factory Entrance sign	1C-38
Curb markings:		Falling Rock sign	1C-38, 5B-33
On islands	2C-4	Federal Highway Administrator Introduction	
Parking restrictions	2B-27	Federal yellow (see Highway yellow)	
Curve sign	1C-5	Fixed-time traffic signal (see Pretimed signals)	
D		Flag, red	5B-1
Dashed lines (see Broken lines)		Flag, signal	5E-3
Decontamination Center sign	6A-8	Flag-carrying car, one-way traffic control	5E-9
Deer Crossing sign	1C-33	Flagman:	
Definitions	Appendix	Hand signaling devices	5E-3
Delineators (see also Markers, reflector)	2D-3, 4, 5, 5C-9	One-way traffic control	5E-8
Demand signals (see Traffic-actuated signals)		Procedure	5E-4
Destination signs:		Qualifications	5E-6
Design	1D-27, 28	Station	5E-5
Expressways	1D-36 to 39, 44	Flashers	5D-3
Location	1D-29	Flashing beacon (see also Traffic signals, flashing operation):	
Warrants	1D-28	Application	3G-2
Detectors, installation and location	3E-21 to 25, 3F-6	Controls	3G-4
Detectors, types	3E-11	Definition	3G-2, Appendix
Directional	3E-12	Design	3G-5
Magnetic, compensated and non-compensated	3E-13, 24	Islands, use on	4A-4
Nondirectional	3E-12	Location	3G-6
Pressure-sensitive	3E-12, 24	Operation	3G-7
Push-button, pedestrian	3E-15, 25, 3F-6	Red, with Stop sign	1B-4
Radar	3E-14, 24	Warrants	3G-3
Traffic-density control	3E-23	Flashing light, with sign	1A-17
Detour Arrow sign	1D-24, 5B-39	Flexible progressive system	3D-21
Detour marker	1D-23	Four-way stop	1B-6
Dip sign	1C-26, 5B-33	Fresh Oil (or Tar) sign	5B-28
Directional Arrow marker	1D-16	Full traffic-actuated signals (see also Traffic-actuated signals)	3C-1, 3E-1, 6, 16, 17, 21
Directional assembly	1D-16, 17	Application	3E-6
Directional signs, expressways	1D-33 to 39	G	
		Gas - Food - Lodging sign	1D-42
		Gates, railroad crossing (see also Railroad crossing signals)	3H-1 to 10
		Gore signs	1D-36
		Grade crossing (see Railroad crossing)	

	Section		Section
Green:		Illumination	4A-4, 4B-4, 4C-4, 4D-4
Business route marker, Interstate	1D-10	Loading (see also Islands, refuge)	4B-7
Color cards	1A-11	Pavement markings	2B-15, 18, 4A-4
Expressway guide signs	1A-11, 1D-3	Pedestrian (see Islands, refuge)	
Parking Area sign	1D-43	Raised bars and buttons	4A-3, 4
Parking restriction signs	1B-31	Refuge	4B-1 to 7
Traffic signals, meaning in	3B-5	Safety zone, (see Islands, refuge)	4A-2
Green arrows:		Signs on	1B-9, 25, 1C-34, 4A-4, 4B-5, 4C-5, 4D-5
Separate signal faces	3B-5, 23		
Traffic signals, meaning in	3B-5	J	
Guide signs:		Jiggle bars	2A-5, 4A-3, 4
Application and classification	1D-1	Junction marker	1D-13, 14
Color and design (see also individual signs)	1A-10, 11, 15, 1D-3 to 8	Assembly	1D-13
Expressways	1D-1 to 12, 30, 31, 33 to 46	Combination sign	1D-14
Function	1A-7	K	
Lettering	1A-15, 1D-5	Keep Off Median sign	1B-37
Location	1A-22, 23, 24	Keep Off Wet Paint sign	1B-41
		Keep Right Except to Pass sign	1B-23
H		Keep Right sign	1B-25
Hazard markers (see also markers, reflector)	2C-2, 3, 2D-2, 4A-4	L	
Heads, signal (see Traffic signals)		Lamps, traffic signal	3B-8, 29
Height:		Lane closures	5E-1, 2
Signals	3B-14, 3F-6	Lane-direction-control signals	3G-8 to 14
Signs	1A-22	Controls	3G-12
High Water sign	1C-38	Definition	3G-8
Highway Capacity Manual	3D-14	Design	3G-9
Highway traffic signal (see Traffic signals)		Location	3G-13
Highway yellow	1A-11, 1C-2, 2A-6, 5B-15	Operation	3G-14
		Warrants	3G-11
Hill sign	1C-24	Lane-direction control signs	1B-29
Historical region sign	1D-44	Lane lines	2B-4
		Rural roads	2B-5
I		Urban streets	2B-6
Illumination (see Lighting)		Lane-use control	
Illumination, signs (see also Reflectorization)	1A-16, 17, 5B-2	Pavement markings	2B-26
Construction signs	5B-2	Signs	1B-18, 19, 20, 5D-2
Means of	1A-17, 5B-2	Lanterns	5D-2
Overhead signs	1A-16	Large Arrow sign	1C-9, 5B-33
Variable signs	1A-5	Legal authority	Introduction, 1A-3, 2A-2, 3A-4, 4B-1, 4C-1, 4D-1, 5B-5
With traffic signals	3B-10	Legend:	
Information Center sign	1D-41	Abbreviations	1A-14
Information signs	1D-46	Amount of, guide signs	1D-7
Institute of Traffic Engineers Introduction, 3B-4, 6, 8, 3E-10, 3F-4, 3G-5		Defined	1A-8
Interchanges, expressway signs	1D-33 to 42	Symbols	1A-13
Exit direction sign	1D-37	Word messages	1A-14
Exit sign	1D-36	Length of Construction sign	5B-36
Gore signs	1D-36	Lenses, traffic signal (see also Railroad crossing signals):	
Information Area sign	1D-41	Arrow specifications	3B-6
Next Exit sign	1D-40	Color	3B-3, 4
1-Mile Advance sign	1D-38	Illumination	3B-8
2-Mile Advance sign	1D-39	Lane-direction control	3G-9
Rest Area sign	1D-41	Lettering on, prohibited	3B-7
Services sign	1D-42	Number in signal face	3B-3
Sign requirements	1D-34, 35	Pedestrian	3F-4
International Municipal Signal Association	3B-20	Position	3B-4
Interstate System (see also standards for individual control devices) Introduction		Shielding	3B-9
Intervals, traffic signal:		Size	3B-6
Sequence	3B-23, 3E-29, 3F-7	Vehicular	3B-6
Timing	3D-14, 15, 3E-16, 17, 18, 28, 3F-7	Visibility	3B-9
Islands	4A-1 to 4D-6	Lettering:	
Approach end treatment	4A-4	Pavement marking	2B-25
Channelizing	4D-1 to 6	Signs	1A-15, 1D-6
Classification	4A-2	Lighting (see also Illumination, signs):	
Curbs	4A-3	Construction sites	5D-4
Defined	4A-1	Hazard warning	5D-1 to 4
Design	4A-3, 4B-3, 4C-3, 4D-3	Islands	4A-4, 4B-4, 4C-4, 4D-4
Divisional	4C-1 to 6	Limit line (Stop line)	2B-21
Functions	4A-1, 4B-2, 4C-2, 4D-2	Limited progressive system	3D-20
		Lines, pavement marking	2A-7, 8
		Load Limit sign (Weight Limit sign)	1B-40, 5B-10
		Loading islands (see also Islands, refuge)	4B-7
		Local Traffic Only sign	1B-39, 5B-9

	Section		Section
Loose Gravel sign	1C-38, 5B-33	One-way restricted zone, traffic signals	3B-26, 5E-11
Low Clearance sign	1C-35	One Way signs (see also Do Not Enter sign: Two Way Traffic Ahead sign)	1B-28, 29, 30 3B-26, 5E-7 to 11
Low Shoulder sign	1C-38, 5B-33	One-way traffic, alternating	5E-7 to 11
Lower-case letters (see Lettering, signs)		One-way traffic control, coordination	5E-7
M			
Magnetic detector (see Detectors)		One-way transition signs	1B-30
Maintain Top Safe Speed sign	6A-6	Overhead signals	3B-11, 13, 14
Maintenance:		Overhead signs:	
Markings	2A-10	Clearance	1A-22
Signals	3B-28 to 33	Warrants	1A-21
Signs	1A-28, 5A-6	P	
Maintenance operations (see Construction)		Paddles, sign	5E-3
Mandatory Turn sign	1B-18	Pan American Highway Route Marker	1D-10
Markers, reflector	1A-29, 2D-1 to 5, 5C-9	Parking Area sign	1D-43
Clearance	2D-2	Parking restrictions:	
Delineators	2D-3, 4, 5, 5C-9	At signalized intersections	3B-18
Hazard	2D-2	Curb markings	2B-27
Markings (see also individual types		Signs	1B-31, 32, 33
of markings)	2A-4	Parking space limits, marking	2B-24
Colors	2A-6	Pass With Care sign	1B-22
Functions	2A-1	Pavement edge line	2B-11, 12, 13
Islands	4A-4, 4B-6, 4C-6, 4D-6	Pavement Ends sign	1C-27, 5B-33
Legal authority	2A-2	Pavement markings:	
Limitations	2A-1	Approach to obstruction	2B-17, 18
Maintenance of	2A-10	Broken lines	2A-7
Materials	2A-5	Center lines	2B-1, 2, 3
Reflectorization	2A-5	Channelizing line	2B-15
Standardization	2A-3	Colors	2A-6
Types	2A-4	Construction sites	5C-10
Median (see also Divisional islands)	4C-3	Crosswalk lines	2B-22
Medical Center sign	6A-8	Dashed lines (see Broken lines)	
Men Working sign	5B-27	Edge lines	2A-8, 2B-11, 12, 13
Merging Traffic sign	1C-17	Lane lines	2B-4, 5, 6
Mileposts	1D-45	Lane-use control	2B-26
Minimum Speed sign	1B-12	Legal authority	2A-2
Model Traffic Ordinance	Introduction	Maintenance	2A-10
Mushroom buttons	2A-5, 4A-4	No-passing zones	2B-8, 9
N			
Narrow Bridge sign	1C-20	Obstruction, approach to	2B-17, 18
Narrowing roadway signs	1C-18 to 21	Parking space limits	2B-24
National Association of County		Paved shoulder markings	2B-12
Officials	Introduction	Railroad crossings	2B-23
National Committee on Uniform Traffic Laws	Introduction	Ramps, expressway	2B-16
and Ordinances	Introduction	Reflectorization	2A-9
National Joint Committee on Uniform Traffic	Introduction	Stop lines	2B-21
Control Devices	Introduction	Transverse lines	2B-20
Next Exit sign	1D-40	Turns	2B-19
Next Services sign	1D-42	Types of lines	2A-7
Night Speed sign	1B-11	Uphill traffic lanes	1B-24
No Dumping Allowed sign	1B-41	Width of lines	2A-8
No Fishing from Bridge sign	1B-41	Width transitions	2B-14
No Hitch Hiking sign	1B-41	Words and symbols	2B-25
No Left Turn sign	1B-16	Pavement Width Transition sign	1B-24, 1C-18
No Left Turn signal (see Railroad		Pedestrian-actuated signal (see Pedestrian	
crossing signals)		signals)	
No Parking signs	1B-31 to 33	Pedestrian-actuated Signal sign	1B-36
No Parking Except on Shoulder sign	1B-33	Pedestrian crossing signs	1B-35, 1C-33
No Parking on Pavement sign	1B-33	Pedestrian detector	3E-15
No-passing zones:		Installation	3E-25
Legal basis for	2B-7	Push button sign	1B-36
Markings	2B-8, 9	Pedestrian islands (see Refuge islands)	4A-2
Signs	1B-21, 22	Pedestrian sign, Walk on Left Facing	
Warrants	2E-10	Traffic	1B-34
No Pedestrian Crossing sign	1B-35	Pedestrians Prohibited sign	1B-27
No Right Turn sign	1B-16	Pedestrian signals	3F-1 to 7
No Right Turn signal (see Railroad		Clearance interval	3F-7
crossing signals)		Control	3F-3
No Stopping signs (see No Parking signs)		Definition	3F-1
No Stopping on Pavement sign	1B-33	Design	3F-4
No Trucks sign	1B-27	Indications	3F-5
No U Turn sign	1B-17	Location	3F-6
O			
Object markings	2A-5, 2C-1 to 5, 5C-3, 7, 8	Non-intersectional	3E-4, 3F-3
Obstruction approach markings	2B-17, 18	Operation	3F-7
Office of Civil and Defense Mobilization	6A-1	Vehicular signals, use with	3F-7
Official car, one-way traffic control	5E-9	Warrants	3F-2
One Lane Bridge sign	1C-21	Ped Xing sign	1C-33
		Phone sign	1D-42
		Picnic Table sign	1D-41

	Section
Pilot car	5E-10
Pilot Car sign	5B-40
Playground sign	1C-38
Policy on Arterial Highways in Urban Areas	4A-1
Policy on Geometric Design of Rural Highways	4A-1
Policy on Maintenance of Safety and Traffic Control Devices	1A-28, 5A-1
Portable signals	3A-2
Portable signs	1A-26, 1C-30, 5B-15
Pressure-sensitive detectors	3E-12
Pretimed, Fixed Cycle Traffic Signal Controllers (ITE)	3D-10
Pretimed signals:	
Accident experience warrant	3D-8
Advantages	3C-1, 2
Alternate system	3D-19
Combination of warrants	3D-9
Controller types	3D-10 to 13
Coordination	3D-13, 16 to 21
Definition	3D-1
Division of cycle time	3D-15
Efficiency	3D-22
Flexible progressive system	3D-21
Interruption of continuous traffic warrant	3D-5
Limited progressive system	3D-20
Manual control	3D-23
Nonsynchronous controller	3D-11
Pedestrian intervals	3D-15, 3F-2, 7
Pedestrian volume warrant	3D-6
Progressive movement warrant	3D-7
Simultaneous system	3D-18
Speed control	3D-24
Speeds for progressive systems	3D-24
Synchronous controller	3D-12, 13
Timed speed sign	1C-37, 3D-25
Timing	3D-14
Unfavorable conditions	3D-22
Vehicular volume warrant	3D-4
Warrants	3D-3 to 9
Priority Permit sign	6A-7
Progressive System	3D-20, 21
Push-button detector (see Pedestrian detector)	
Push Button for Green Light (or for Walk Signal) sign	1B-36
R	
Railroad Advance Warning sign	1C-31
Railroad Crossbuck sign	1C-32
Railroad crossing gates (see Railroad crossing signals)	
Railroad crossing pavement markings	2B-23
Railroad crossing signals (including gates)	3H-1 to 9
Classification	3H-2
Controls	3H-5
Definition	3H-2
Design	3H-6
Flashing light	3H-2
Installation	3H-8
Interconnection with traffic signals	3B-25
Lenses	3H-6
Location	3H-7
Maintenance	3H-10
Meaning	3H-4
No Right (or Left) Turn signal	3H-2, 3, 6, 9
Operation	3H-9
Preemption of traffic signals	3B-25
Track circuits	3H-9
Turn prohibition signals	3H-2, 6
Wigwag	3H-2
Railroad crossing signs	1C-31, 32
Railroad crossing, traffic signals near	3B-25
Railroad-highway grade crossing (see Railroad crossing)	
Railroad-Highway Grade-Crossing Protection Bulletin (AAR)	3H-6, 8

	Section
Ramps:	
Delineators	2D-4, 5
Expressway signing	1D-36, 37
Pavement markings	2B-16
Range Cattle sign	1C-38
Reassurance Route Markers	1D-10, 12
Recreational region signs	1D-44
Red:	
Flags	5B-1, 5E-3
Flashing (see Red flashing signals)	
Parking prohibition signs	1B-31
Stop signs	1B-4
Traffic signals	3B-5
Red flashing signals	
Beacons	1B-4, 3G-3 to 7
Railroad crossing signals	3H-2, 5, 9
Traffic signals	3B-5, 24
Reflecting coatings	1A-18
Reflector buttons	1A-18
Reflector markers (see Markers, reflector)	
Reflectorization:	
Colors	1A-18
Construction signs	5B-2
Materials	1A-18
Night Speed Sign	1B-11
Signs	1A-16, 5B-2
Refuge islands (see Islands)	4B-1 to 7
Registration Center sign	6A-8
Regulatory signs (see also individual sign listings)	1B-1 to 41, 5B-5 to 13
Application	1B-1, 5B-7
Classification	1B-2
Color	1A-11, 1B-3, 5B-6
Construction and maintenance	5B-5 to 13
Design	1B-3, 5B-6
Expressways	1B-1
Function	1A-7
Location	1A-24, 1B-1, 5B-3
Rest Area sign	1D-41
Reverse Curve sign	1C-7
Reverse Turn sign	1C-6
Reversible flow signs	1B-29
Reversible lane operation (see also Lane-direction-control signals)	1B-29, 3G-8 to 14
Right Lane Must Turn Right sign	1B-18
Road Closed sign	1B-38, 5B-8
Road Machinery Ahead sign	5B-29
Road Narrows sign	1C-19, 5B-33
Road Work Ahead sign	5B-30
Roadside Parking Area sign	1D-41
Roadside Rest sign	1D-41
Rough Road sign	1C-38, 5B-33
Route Marker (see also Junction marker; Advance Turn Arrow; Directional Arrow; Alternate routes; Cardinal Direction marker; Trailblazer)	1D-9 to 39, 26, 36 to 39
Application	1D-9
Assemblies	1D-9, 11
Auxiliary markers	1D-9, 11, 13 to 26
Confirming	1D-9, 10, 12
Design	1D-10
Expressways	1D-9, 36 to 39
Reassurance	1D-9, 10, 12
Route Turn assembly	1D-15
S	
Safety zone (see Islands, refuge)	4A-2
Sandbags	5C-8
Scenic Area sign	1D-41
School crossings	
Guards	3D-6
Portable signs	1C-30
Signal warrants	3D-6
Signs	1C-30
School Crossing Sign	1C-30

	Section
School sign	1C-30
Schoolboy patrols	3D-6
Selective exclusion signs	1B-27
Semi-traffic-actuated signals (see Traffic-actuated signals)	
Services signs	1D-42
Shapes, traffic signs (see also individual sign listings)	1A-10, 1B-3, 1C-2, 1D-3, 5B-6, 15
Shoulder Work Ahead sign	5B-31
Side Road sign	1C-11
Signal Ahead sign	1C-16, 3B-12
Signals (see Traffic signals)	
Signs (see also individual sign listings):	
Civil Defense (see Civil Defense)	
Classification (functional)	1A-7
Colors	1A-11
Construction and maintenance (see Construction and maintenance)	
Design	1A-9 to 16, 5B-1
Drawings	1A-9, 5B-1
Dimensions	1A-12, 14, 1C-2, 1D-4, 5B-1
Erection	1A-20, 22 to 26, 5B-3, 4
Excessive use of	1A-6
Function	1A-1
Guide signs	1D-1 to 46, 5B-35 to 40
Height	1A-22
Illumination	1A-16, 17, 5B-2
Lateral clearance	1A-23
Legal authority	Introduction, 1A-3, 5B-5
Lettering	1A-12, 15, 1D-5, 6
Location	1A-24
Maintenance	1A-28
Materials	1A-27
Overhead	1A-21, 22, 23
Portable	1A-26, 1C-30, 5B-15
Posts	1A-26
Regulatory signs	1B-1 to 41, 5B-5 to 13
Removal when not applicable	1A-4
Replacement of nonstandard	1A-8
Shapes	1A-10
Structures, clearance	1A-23
Symbols	1A-13
Uniformity:	
Application	1A-4
Design	1A-9
Variable legend	1A-5
Warning signs	1C-1 to 38, 5B-14 to 34
Simultaneous system	3D-18
Slippery When Wet sign	1C-31
Slower Traffic Keep Right sign	1B-23, 24
Soft Shoulder sign	1C-28, 5B-33
Solid lines, pavement marking	2A-7
Speed control (see also Speed signs):	
Progressive signal system	3D-24
Traffic-actuated signals	3E-2
Speed Limit sign	1B-10
Speed signs:	
Advisory Speed plate	1C-36, 5B-34
End (35) Mile Speed	1B-15
End Speed Zone	1B-15
Minimum Speed	1B-12
Night Speed	1B-11
Speed Limit	1B-10
Speed Zone Ahead	1B-14
Traffic signal speed	1C-37, 3D-25
Truck speed	1B-10
Speed Zone Ahead sign	1B-14
Speed Zones	1B-13
Stop Ahead sign	1C-14
Stop (or Limit) line	2B-21

	Section
Stop sign	1B-4, 5, 6, 9
Design	1B-4
Flashing red light with	1A-17, 1B-4
Four-way	1B-6
Legislation	1B-4
Location	1B-9
Pavement markings with	1B-9, 2B-21
Red flashing signal, as alternative	1B-5, 3B-5, 24, 3G-2 to 7
Secondary messages prohibited	1B-4
Stop line	1B-9, 2B-21
Warrants	1B-5
Stop signal (see Flashing beacon)	
Stop-Traffic Regulation Post sign	6A-5
Stopping signs (Parking restrictions)	1B-31, 32, 33
Street Name sign	1D-32
Striping (see Pavement markings; Object markings)	
Supervisory background cycle	3E-8
Survey Party sign	5B-32
Symbols (see also individual signs and markings)	
Desirability of	1A-13
Synchronous controllers	3D-11, 12

T

T Symbol sign	1C-12
Temporary Route Marker	1D-19, 23
Temporary signs:	
Construction and maintenance	5A-5
Crossing signs	1C-33
Detour marker	1D-23
Timing (see Pretimed signals)	
Torches	5D-2
Tow-away Zone sign	1B-31
Track circuits, railroad crossing signals	3H-9
Tractors With Lugs Prohibited sign	1B-41
Traffic Engineering Handbook	3D-14
Traffic Regulation Post sign	6A-5
Traffic signals:	
All-way red interval	3B-5, 23, 26, 5E-11
Arrows	3B-3 to 6
Auxiliary signs with	3B-10, 22, 3D-25
Back plates	3B-9
Cable	3B-20
Civil defense	3B-27
Classification	3A-5
Clearance interval	3B-23, 3F-7
Colors	3B-3, 4, 5
Conflicts during green interval	3B-22
Continuity of operation	3B-21
Controllers	3B-31, 3D-10 to 13, 20, 21, 23, 3E-16, 19
Cost factors	3C-4
Definition	3A-1
Drawbridges	3G-15 to 19
Efficiency of operation	3B-21
Emergency operation of	3B-27
Faces:	
Design	3B-3, 4
Height	3B-14
Location	3B-13, 14, 15
Number	3B-12
Flashing operation	3B-5, 24
Future needs, provision for	3B-2, 18
General aspects	3B-1
Green indication	3B-5, 22
Heads	3B-4, 6, 10, 11
Indications, meaning of	3B-5
Interference of advertising lights	3B-17
Intervals (see Intervals, traffic signal)	
Lamps	3B-8, 29
Legal authority	3A-4
Lenses (see Lenses, traffic signal)	
Louvers	3B-9
Maintenance	3B-28 to 33
Manual operation	3D-14, 23
One-way restricted zone control	3B-26, 5E-11
Overhead	3B-13, 14

	Section
Traffic signals—Continued	
Painting	3B-32
Pedestrian (see Pedestrian signals)	
Pedestrian-actuated	3E-9, 25, 3F-3
Preemption:	
By emergency vehicles	3B-27
By railroad signals	3E-25
Pretimed (see Pretimed signals)	
Railroad grade crossings (see also Railroad crossing signals)	
Traffic signals near	3B-25
Red indication	3B-5
School crossings	3D-6
Semi-traffic-actuated (see Traffic-actuated signals)	
Signs with	3B-10, 22, 3D-25
Standardization	3A-3
Traffic-adjusted (see Traffic-actuated signals)	
Value	3A-2
Visors	3B-9
Yellow indication	3B-5, 23
Traffic Signal Speed sign	1C-37
Traffic volume, signal warrants:	
Flashing signals	3D-3
Pedestrian signals	3D-6, 3F-2
Pretimed signals	3D-4, 6
Traffic-actuated signals	3E-3
Traffic-actuated signals:	
Adjustments and operation	3E-16 to 19, 26 to 29
Advantages	3C-3
Allowed gap	3E-28
Applications	3C-1, 3E-2, 5E-11
Characteristics	3C-1, 3E-26
Clearance interval	3E-16 to 19, 28
Continuous operation	3E-27
Control types	3E-2
Controllers	3E-10
Adjustment features	3E-16
Range of adjustments	3E-17, 18
Special equipment	3E-19
Definition	3E-1
Detectors (see Detectors)	
Extension limit	3E-16, 17, 18, 28
Full-traffic-actuated control	3E-1, 6
Initial period	3E-16, 17, 28
Installation	3E-20
Minimum period	3E-16, 17, 28
Multiphase operation	3E-6
Mutual coordination	3E-8
Nonintersection control	3E-4, 5E-11
One-way restricted zone control	3B-26, 5E-11
Operation	3E-16, 17, 26 to 29
Passage time	3E-18, 28
Pedestrian intervals	3E-17, 19, 28
Pedestrian-actuated	3E-9
Platoon carry-over	3E-18, 28
Pretimed system, use with	3E-8
Recall switch	3E-16, 17, 28
Semi-traffic-actuated	3E-1, 5
Sequences of intervals	3E-29
Speed control	3E-2
Supervisory background cycle	3E-8
Traffic-adjusted control	3C-1, 3E-1, 7
Traffic-density control	3E-6, 18, 28
Unit extension	3E-16, 17, 28
Vehicle clearance interval	3E-16
Warrants	3E-3, 4
Traffic-Actuated Traffic Controllers and Detectors (ITE)	3E-10
Traffic-adjusted control (see Traffic-actuated signals)	
Trailblazer	1D-26
Train-approach signals (see Railroad crossing signals)	

	Section
Transverse lines, pavement markings	2B-20 to 23
Truck crossing sign	1C-33, 5B-33
Truck Lane (500) Feet sign	1B-24
Trucks Excluded sign	1B-27
Trucks Use Right Lane sign	1B-24
Tunnel sign	1C-38
Turn markings, pavement	2B-19
Turn prohibition signs	1B-16
Turn sign	1C-4
Two Way Traffic Ahead sign	1B-30, 5B-11
Two Way Traffic sign	5B-12

U

Uneven Tracks sign	1C-38
Uniform Vehicle Code	<i>Introduction</i>
Uphill traffic lanes	1B-24
Upper-case letters (see Lettering, signs)	
U-Turn Prohibition sign	1B-17

W

Walk on Left sign	1B-35
Walk signal (see Pedestrian signals)	
Warning signs (see also individual sign listings)	1C-1 to 38, 5B-14 to 34
Application	1C-1
Color	1C-2
Construction signs	5B-14 to 34
Design	1C-2, 5B-15
Expressways	1C-2
Function	1A-7
Location	1A-20, 1C-3
Size	1C-2, 5B-16
Warrants (see individual control devices)	
Weight Limit sign	1B-40, 5B-10
Welfare Center sign	6A-8
White (see also Colors):	
Barricades	5C-3
Delineators	2A-6
Object markings	2C-2, 3, 5
Pavement markings	2A-6
Stripes:	
Barricades	5C-3
Clearance markers	2D-2
Object markings	2A-6, 2C-2, 3, 5

Widening roadway, at signalized intersection	3B-18
Wigwag signals (see Railroad crossing signals)	
Winding Road sign	1C-8
Wing barricade	5C-5
Word messages	1A-14

Y

Y Symbol sign	1C-13
Yellow:	
Barricades	5C-3
Beacon	3G-2, 3
Color cards	1A-11
Cones and drums	5C-7
Curbs	2B-27, 2C-4
Delineators	2D-4
Flashers	5D-3
Hazard markers	2D-2, 5D-4
Pavement markings	2A-6
Sandbags	5C-8
Signs	1A-11, 1C-2, 5B-14
Traffic signals	3B-3, 5
Yield Ahead sign	1B-9, 1C-15
Yield sign	1B-7, 8, 9
Design	1B-7
Legislation	1B-7
Location	1B-9
Warrants	1B-8