June 22, 2011

CIRCULAR LETTER 2011-07

ACCESSIBLE PARKING SPACES STRIPING

COUNTY ENGINEERS/SUPERINTENDENT OF HIGHWAYS MUNICIPAL ENGINEERS/DIRECTORS OF PUBLIC WORKS/MAYORS CONSULTING ENGINEERS

The Manual on Uniform Traffic Control Devices (MUTCD) Section 3B.19, Paragraph 03 provides an option that "blue lines may supplement white parking space markings of each parking space designated for use only by persons with disabilities." The MUTCD Section 3B.20, Paragraph 18 recommends that "the International Symbol of Accessibility parking space marking (see Figure 3B-22) should be placed in each parking space designated for use by persons with disabilities." Therefore, all on-street accessible parking spaces must be marked with white stripes, which may be outlined in blue and should be marked with a wheelchair symbol in compliance with the MUTCD requirements. The MUTCD is available at www.dot.il.gov/mutcd/utcdmanual.html.

The Illinois Accessibility Code (IAC), 71 Illinois Administrative Code, Section 400.310(c)(3) requires "a high quality yellow paint recommended by the paint manufacturer for pavement striping shall be used for parking and passenger loading zones." The MUTCD Introduction, paragraph 03, item C provides "parking areas, including the driving aisles within those parking areas, that are either publicly or privately owned shall not be considered to be 'open to public travel' for the purposes of MUTCD applicability." Therefore, all off-street parking spaces owned by local public agencies must be in compliance with the IAC. The IAC is available at www.cdb.state.il.us/IAC.shtml.

Please contact the Local Policy and Technology Unit at dot.localpolicy@illinois.gov for more information.

Sincerely,

Darrell W. Lewis, P. E.

Acting Engineer of Local Roads and Streets

cc: Aaron Weatherholt Larry Gregg Kyle Armstrong

Vickie Simpson, Illinois Office of Attorney General

Attachments

2009 Edition Page 385

Support:

10 Chapter 4F contains information on Pedestrian Hybrid Beacons. Section 4L.03 contains information regarding Warning Beacons to provide active warning of a pedestrian's presence. Section 4N.02 contains information regarding In-Roadway Warning Lights at crosswalks. Chapter 7D contains information regarding school crossing supervision.

Guidance:

Because non-intersection pedestrian crossings are generally unexpected by the road user, warning signs (see Section 2C.50) should be installed for all marked crosswalks at non-intersection locations and adequate visibility should be provided by parking prohibitions.

Support:

- Section 3B.16 contains information regarding placement of stop line markings near crosswalk markings. Option:
- For added visibility, the area of the crosswalk may be marked with white diagonal lines at a 45-degree angle to the line of the crosswalk or with white longitudinal lines parallel to traffic flow as shown in Figure 3B-19.
- When diagonal or longitudinal lines are used to mark a crosswalk, the transverse crosswalk lines may be omitted. This type of marking may be used at locations where substantial numbers of pedestrians cross without any other traffic control device, at locations where physical conditions are such that added visibility of the crosswalk is desired, or at places where a pedestrian crosswalk might not be expected.

Guidance:

If used, the diagonal or longitudinal lines should be 12 to 24 inches wide and separated by gaps of 12 to 60 inches. The design of the lines and gaps should avoid the wheel paths if possible, and the gap between the lines should not exceed 2.5 times the width of the diagonal or longitudinal lines.

Option:

When an exclusive pedestrian phase that permits diagonal crossing of an intersection is provided at a traffic control signal, a marking as shown in Figure 3B-20 may be used for the crosswalk.

Guidance:

Crosswalk markings should be located so that the curb ramps are within the extension of the crosswalk markings.

Support:

Detectable warning surfaces mark boundaries between pedestrian and vehicular ways where there is no raised curb. Detectable warning surfaces are required by 49 CFR, Part 37 and by the Americans with Disabilities Act (ADA) where curb ramps are constructed at the junction of sidewalks and the roadway, for marked and unmarked

crosswalks. Detectable warning surfaces contrast visually with adjacent walking surfaces, either light-on-dark, or dark-on-light. The "Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)" (see Section 1A.11) contains specifications for design and placement of detectable warning surfaces.

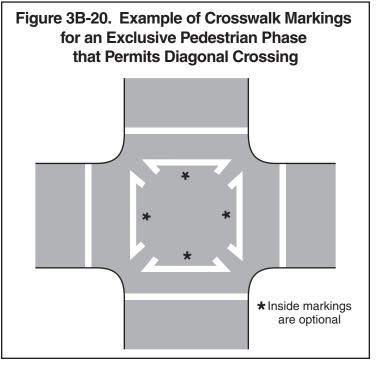
Section 3B.19 Parking Space Markings Support:

Marking of parking space boundaries encourages more orderly and efficient use of parking spaces where parking turnover is substantial. Parking space markings tend to prevent encroachment into fire hydrant zones, bus stops, loading zones, approaches to intersections, curb ramps, and clearance spaces for islands and other zones where parking is restricted. Examples of parking space markings are shown in Figure 3B-21.

Standard:

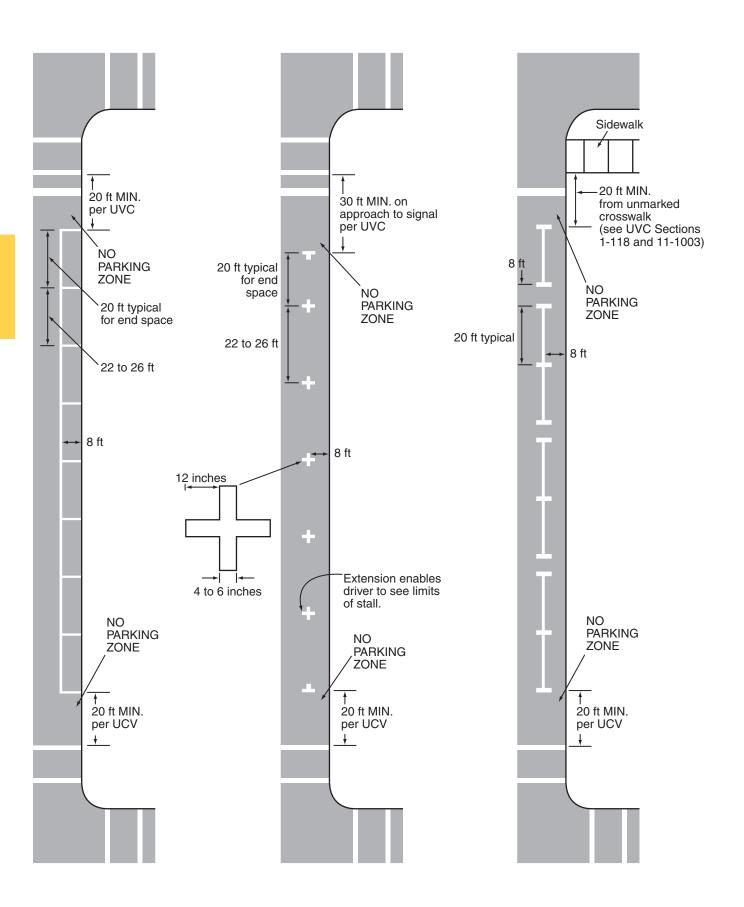
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Parking space markings shall be white.



Page 386 2009 Edition

Figure 3B-21. Examples of Parking Space Markings



Sect. 3B.19 December 2009

2009 Edition Page 387

Option:

Blue lines may supplement white parking space markings of each parking space designated for use only by persons with disabilities.

Support:

Additional parking space markings for the purpose of designating spaces for use only by persons with disabilities are discussed in Section 3B.20 and illustrated in Figure 3B-22. The design and layout of accessible parking spaces for persons with disabilities is provided in the "Americans with Disabilities Act Accessibility Guidelines (ADAAG)" (see Section 1A.11).

Section 3B.20 Pavement Word, Symbol, and Arrow Markings

Support:

Word, symbol, and arrow markings on the pavement are used for the purpose of guiding, warning, or regulating traffic. These pavement markings can be helpful to road users in some locations by supplementing signs and providing additional emphasis for important regulatory, warning, or guidance messages, because the markings do not require diversion of the road user's attention from the roadway surface. Symbol messages are preferable to word messages. Examples of standard word and arrow pavement markings are shown in Figures 3B-23 and 3B-24.

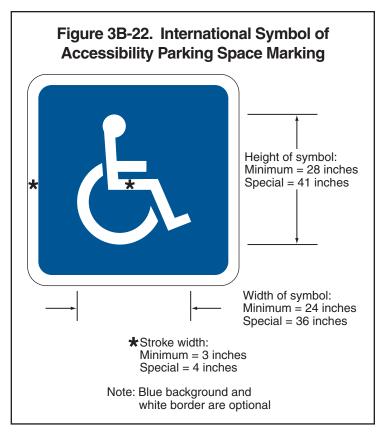
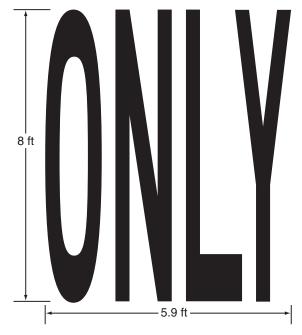


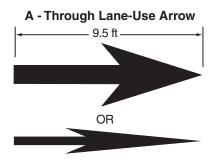
Figure 3B-23. Example of Elongated Letters for Word Pavement Markings

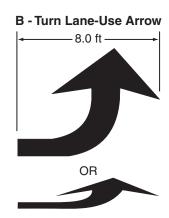


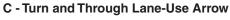
December 2009 Sect. 3B.19 to 3B.20

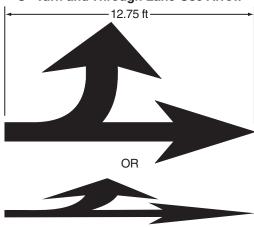
Page 388 2009 Edition

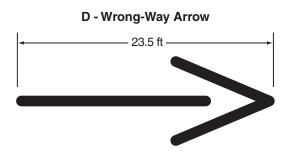
Figure 3B-24. Examples of Standard Arrows for Pavement Markings



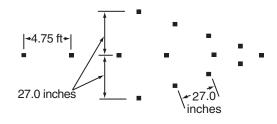




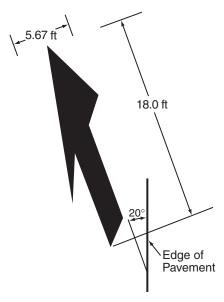




E - Wrong-Way Arrow Using Retroreflective Raised Pavement Markers



F - Lane-Reduction Arrow



Notes:

- 1. Typical sizes for normal installation; sizes may be reduced approximately one-third for low-speed urban conditions; larger sizes may be needed for freeways, above average speeds, and other critical locations.
- 2. The narrow elongated arrow designs shown in Drawings A, B, and C are optional.
- 3. For proper proportion, see the Pavement Markings chapter of the "Standard Highway Signs and Markings" book (see Section 1A.11).

Sect. 3B.20 December 2009

2009 Edition Page 389

Option:

Word, symbol, and arrow markings, including those contained in the "Standard Highway Signs and Markings" book (see Section 1A.11), may be used as determined by engineering judgment to supplement signs and/or to provide additional emphasis for regulatory, warning, or guidance messages. Among the word, symbol, and arrow markings that may be used are the following:

A. Regulatory:

- 1. STOP
- 2. YIELD
- 3. RIGHT (LEFT) TURN ONLY
- 4. 25 MPH
- 5. Lane-use and wrong-way arrows
- 6. Diamond symbol for HOV lanes
- 7. Other preferential lane word markings

B. Warning:

- 1. STOP AHEAD
- 2. YIELD AHEAD
- 3. YIELD AHEAD triangle symbol
- 4. SCHOOL XING
- 5. SIGNAL AHEAD
- 6. PED XING
- 7. SCHOOL
- 8. R X R
- 9. BUMP
- 10. HUMP
- 11. Lane-reduction arrows

C. Guide:

- 1. Route numbers (route shield pavement marking symbols and/or words such as I-81, US 40, STATE 135, or ROUTE 10)
- 2. Cardinal directions (NORTH, SOUTH, EAST, or WEST)
- 3. TO
- 4. Destination names or abbreviations thereof

Standard:

- Word, symbol, and arrow markings shall be white, except as otherwise provided in this Section.
- Pavement marking letters, numerals, symbols, and arrows shall be installed in accordance with the design details in the Pavement Markings chapter of the "Standard Highway Signs and Markings" book (see Section 1A.11).

Guidance:

- Letters and numerals should be 6 feet or more in height.
- Word and symbol markings should not exceed three lines of information.
- If a pavement marking word message consists of more than one line of information, it should read in the direction of travel. The first word of the message should be nearest to the road user.
- Except for the two opposing arrows of a two-way left-turn lane marking (see Figure 3B-7), the longitudinal space between word or symbol message markings, including arrow markings, should be at least four times the height of the characters for low-speed roads, but not more than ten times the height of the characters under any conditions.
- The number of different word and symbol markings used should be minimized to provide effective guidance and avoid misunderstanding.
- Except for the SCHOOL word marking (see Section 7C.03), pavement word, symbol, and arrow markings should be no more than one lane in width.
- Pavement word, symbol, and arrow markings should be proportionally scaled to fit within the width of the facility upon which they are applied.

Option:

On narrow, low-speed shared-use paths, the pavement words, symbols, and arrows may be smaller than suggested, but to the relative scale.

December 2009 Sect. 3B.20

Page 390 2009 Edition

Pavement markings simulating Interstate, U.S., State, and other official highway route shield signs (see Figure 2D-3) with appropriate route numbers, but elongated for proper proportioning when viewed as a marking, may be used to guide road users to their destinations (see Figure 3B-25).

Standard:

- Except at the ends of aisles in parking lots, the word STOP shall not be used on the pavement unless 14 accompanied by a stop line (see Section 3B.16) and STOP sign (see Section 2B.05). At the ends of aisles in parking lots, the word STOP shall not be used on the pavement unless accompanied by a stop line.
- 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.

Option:

A yield-ahead triangle symbol (see Figure 3B-26) or YIELD AHEAD word pavement marking may be used on approaches to intersections where the approaching traffic will encounter a YIELD sign at the intersection.

Standard:

The yield-ahead triangle symbol or YIELD AHEAD word pavement marking shall not be used unless a YIELD sign (see Section 2B.08) is in place at the intersection. The yield-ahead symbol marking shall be as shown in Figure 3B-26.

Guidance:

The International Symbol of Accessibility parking space marking (see Figure 3B-22) should be placed in each parking space designated for use by persons with disabilities.

Option:

- A blue background with white border may supplement the wheelchair symbol as shown in Figure 3B-22. Support:
- Lane-use arrow markings (see Figure 3B-24) are used to indicate the mandatory or permissible movements in certain lanes (see Figure 3B-27) and in two-way left-turn lanes (see Figure 3B-7). Guidance:
- Lane-use arrow markings (see Figure 3B-24) should be used in lanes designated for the exclusive use of a 21 turning movement, including turn bays, except where engineering judgment determines that physical conditions or other markings (such as a dotted extension of the lane line through the taper into the turn bay) clearly discourage unintentional use of a turn bay by through vehicles. Lane-use arrow markings should also be used in lanes from which movements are allowed that are contrary to the normal rules of the road (see Drawing B of Figure 3B-13). When used in turn lanes, at least two arrows should be used, one at or near the upstream end of the full-width turn lane and one an appropriate distance upstream from the stop line or intersection (see Drawing A of Figure 3B-11).

Figure 3B-25. Examples of Elongated Route Shields for Pavement Markings

A - Interstate Shield on dark or light pavement



B - U.S. Route Shield on dark pavement



C - U.S. Route Shield on light pavement



on dark pavement



D - State Route Shield E - State Route Shield on light pavement



- 1. See the "Standard Highway Signs and Markings" book for other sizes and details
- 2. Colors and elongated shapes simulating State route shield signs may be used for route shield pavement markings where appropriate

Sect. 3B.20

SUBCHAPTER b

iv) Areas of rescue assistance in multi-story public facilities and multi-story housing units with a supervised automatic sprinkler system, if stairs are provided leading to grade that are part of a code-required entrance, an accessible exterior platform at the level of exit discharge shall be provided. The platform shall provide an area of at least 10 square feet, in addition to that area required for exiting, that does not reduce the required travel width and is not reduced by the swing of the door. This space shall be accessible to an environmentally limited person in a wheelchair and have a configuration that will accommodate one wheelchair.

c) Parking and Passenger Loading Zones

1) Minimum Number. If any parking is provided for employees or visitors, or both, the minimum number of accessible parking spaces to be provided for environmentally limited persons is as follows:

TOTAL OFF STREET PARKING	REQUIRED MINIMUM NUMBER OF
SPACES PROVIDED	ACCESSIBLE SPACES
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501-1000	2% of total number
Over 1000	20 plus 1 for each 100 over 1000
(Table from ADAAG 4.1.2(5)(a))	

2) **Location**. Accessible parking spaces serving a particular building shall be located on the shortest accessible route of travel from adjacent parking to an accessible entrance. In parking facilities that do not serve a particular building, accessible parking shall be located on the shortest accessible route of travel to an accessible

SUBCHAPTER b

pedestrian entrance of the parking facility. In buildings with multiple accessible entrances with adjacent parking, accessible parking spaces shall be dispersed and located closest to the accessible entrances. The total number of accessible parking spaces may be distributed among parking lots, if greater accessibility is achieved in consideration of such factors as anticipated usage, number and location of entrances and level of parking areas. (ADAAG 4.6.2)

- 3) Dimensions and Markings. Each parking space, except on-street spaces, shall consist of a sixteen foot wide parking space including an eight foot wide diagonally striped access aisle. Adjacent parking spaces shall not share a common access aisle (see Illustration B, Fig. 9(a)). In the alternative, all required parking spaces may be provided in conformance with "Universal Parking Design" (ADAAG Appendix A4.6.3), except that such spaces shall not utilize a shared access aisle with an adjacent space (ADAAG 4.1.2(5)(b) Exception.). Under Universal Parking Design, all accessible spaces are sixteen feet wide, including a space eleven feet (132 in., 3350 mm) wide with a five foot (60 in., 1525 mm) diagonally striped access aisle (see Illustration B, Fig. 9(b)). A high quality yellow paint recommended by the paint manufacturer for pavement striping shall be used. Each parking space shall have its own access aisle and all access aisles shall blend to a common level with an accessible route. Parking spaces and access aisles shall be level with surface slopes not exceeding 1:50 (2%) in all directions. (ADAAG 4.6.3) Minimum vertical clearance of 98 in. (2490 mm) at the parking space and along at least one vehicle access route to such spaces from site entrance(s) and exit(s) shall be provided. (ADAAG 4.6.5)
- 4) Attendant-Only or Valet Parking. No accessible parking shall be required if attendant-only or valet parking is provided and is available at all times the facility is open for public use. However, such parking facilities shall provide a passenger loading zone complying with subsection (c)(5) of this Section located on an accessible route to the entrance of the facility. (ADAAG 4.1.2(5)(e)) If accessible at-grade parking is available, at least one space for self-parking of a vehicle with sensitive specialized control devices shall be provided.
- Passenger Loading Zones. Passenger loading zones shall provide an access aisle at least 60 in. (1525 mm) wide and 20 ft. (240 in.) (6100 mm) long adjacent and parallel to the vehicle pull-up space (see Illustration B, Fig. 10). If there are curbs between the access aisle and the vehicle pull-up space, then a curb ramp complying with subsection (d) of this Section shall be provided. Vehicle standing spaces and access aisles shall be level with surface slopes not exceeding 1:50 (2%) in all directions. Accessible passenger loading

SUBCHAPTER b

zones shall provide minimum vertical clearance of 114 in. (2895 mm) at accessible passenger loading zones and along at least one vehicle access route to such areas from site entrance(s) and exit(s). (ADAAG 4.6.6)

- 6) **Medical Facilities**. At facilities providing medical care and other services for persons with mobility impairments, parking spaces shall be provided in accordance with subsection (c) of this Section except as follows:
 - A) Outpatient units and facilities: 10% of the total number of parking spaces provided serving each such outpatient unit or facility *shall be designated as accessible spaces*;
 - B) Units and facilities that specialize in treatment or services for persons with mobility impairments: 20% of the total number of parking spaces provided serving each such unit or facility *shall be designated* as accessible spaces. (ADAAG 4.1.2(5)(d)(i) and (ii))
- 7) **Signage**. Accessible parking spaces shall be designated as reserved for environmentally limited persons by providing a R7-8 (U.S. Department of Transportation standard) sign which contains the international symbol of accessibility (see Illustrations C and D). Such signs shall exhibit the words "\$100 Fine" (or higher amount if required by local ordinance). (See Illinois Vehicle Code [625 ILCS 5/11-301 and 301.1].) Signs shall be vertically mounted on a post or wall at front center of the parking space, no more than 5 feet horizontally from the front of the parking space and set a minimum of 4 feet from finished grade to the bottom of the sign. Such signs shall be located so they cannot be obscured by a vehicle parked in the space. (ADAAG 4.6.4)

d) Curb Ramps

- 1) **Location**. Curb ramps shall be provided wherever an accessible route crosses a curb (ADAAG 4.7.1) *and shall comply with the following*:
- 2) **Slope.** Slopes of curb ramps shall comply with subsection (e)(2) of this Section. The slope shall be measured as shown in Illustration B, Fig. 11. Transitions from ramps to walks, gutters, or streets shall be flush and free of abrupt changes. Maximum slopes of adjoining gutters, road surface immediately adjacent to the curb ramp, or accessible route shall not exceed 1:20. (ADAAG 4.7.2)
- 3) **Width**. The minimum width of a curb ramp shall be 36 in. (915 mm), exclusive of flared sides. (ADAAG 4.7.3)