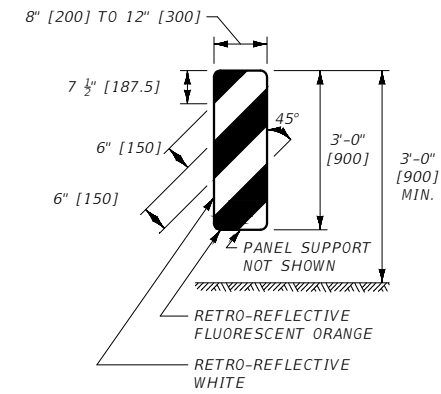


TYPE 2 OBJECT MARKER

TYPE 2 OBJECT MARKER NOTES:

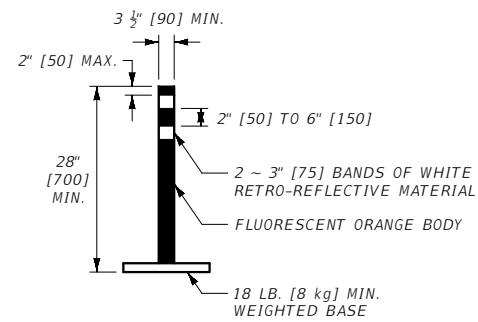
- ① USE TYPE 2 OBJECT MARKERS TO DELINEATE ROADSIDE CONSTRICTIONS OF THE CLEAR ZONE (i.e. DROP OFFS, OBSTACLES, ABRUPT CHANGES IN ROADWAY ALIGNMENT, ETC.)
 - ② DO NOT USE TYPE 2 OBJECT MARKERS AS CHANNELIZING DEVICES.
 - ③ ATTACH PANELS TO POSTS AT BOTH TOP AND BOTTOM HOLE LOCATIONS.
 - ④ USE RETRO-REFLECTIVE SHEETING AS PER THE CONTRACT.
- * REDUCE OR ELIMINATE THE 2'-0" [0.6 m] DISTANCE WHEN OBSTACLE OR HAZARD IS LESS THAN 2'-0" [0.6 m] FROM THE EDGE OF THE DRIVING LANE.



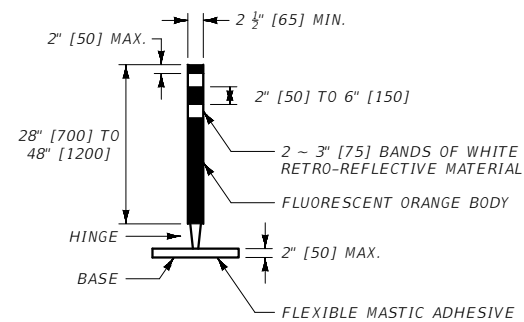
PORTABLE VERTICAL PANEL
(VP-1R SHOWN. REVERSE FOR VP-1L.)

PORTABLE VERTICAL PANEL NOTES:

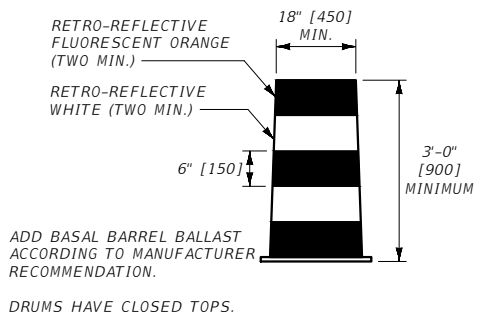
- ① USE PORTABLE VERTICAL PANELS AS CHANNELIZING DEVICES ONLY. DO NOT USE PORTABLE VERTICAL PANELS TO DELINEATE ROADSIDE CONSTRICTIONS OF THE CLEAR ZONE.
- ② VERTICAL PANELS DESIGNATED "R" ARE PLACED TO THE RIGHT SIDE OF APPROACHING TRAFFIC. THOSE DESIGNATED "L" ARE PLACED TO THE LEFT SIDE.
- ③ USE RETRO-REFLECTIVE SHEETING AS PER THE CONTRACT.



FLEXIBLE GUIDE POST
(TUBULAR MARKER)



HINGED FLEXIBLE GUIDE POST
(TUBULAR MARKER)
(SELF RIGHTING AFTER IMPACT)



PLASTIC DRUM

FLEXIBLE GUIDE POST AND PLASTIC DRUM NOTES:

- ① USE FLEXIBLE GUIDE POSTS AND PLASTIC DRUMS AS CHANNELIZING DEVICES.
- ② USE ASTM TYPE III RETRO-REFLECTIVE SHEETING ON ALL PLASTIC DRUMS AND FLEXIBLE GUIDE POSTS.
- ③ USE ONE SIZE GUIDE POST FOR CONTINUOUS RUNS.

UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

DETAILED DRAWINGS	
REFERENCE STANDARD SPEC. SECTION 618	DWG. NO. 618-00

CHANNELIZING DEVICES AND OBJECT MARKERS

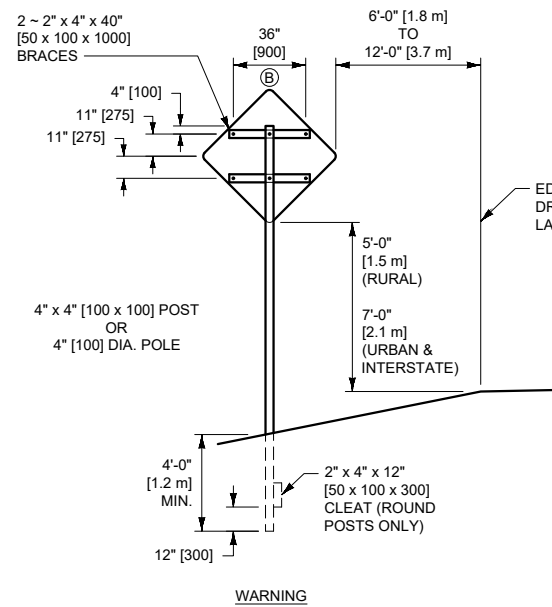
EFFECTIVE: JAN 23, 2020

GENERAL NOTES:

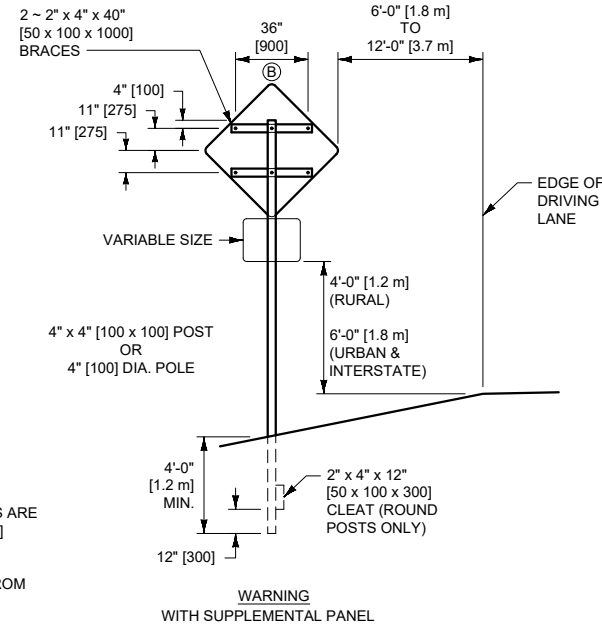
- ① SEE THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PART 6 FOR ADDITIONAL INFORMATION.

--REVISED--
APR 28, 2022
JUN 27, 2024

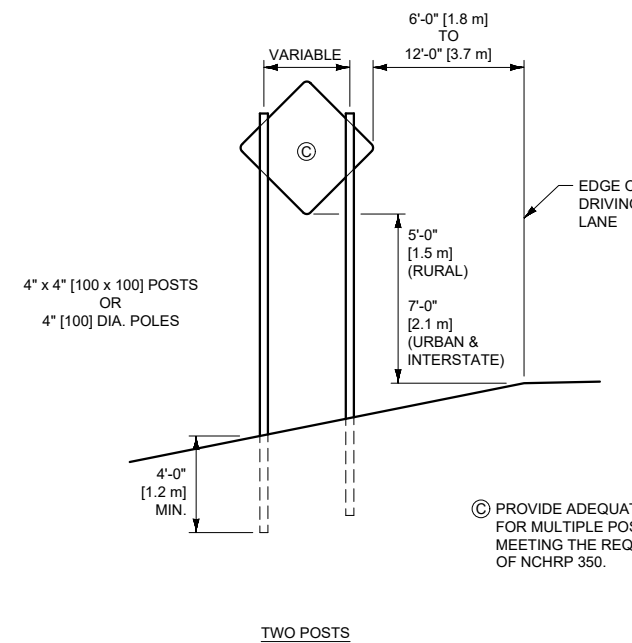




(A) ALL WARNING SIGNS ARE 48" x 48" [1200 x 1200] IN SIZE.
 (B) DIMENSIONS ARE FROM | BOLT TO | BOLT.

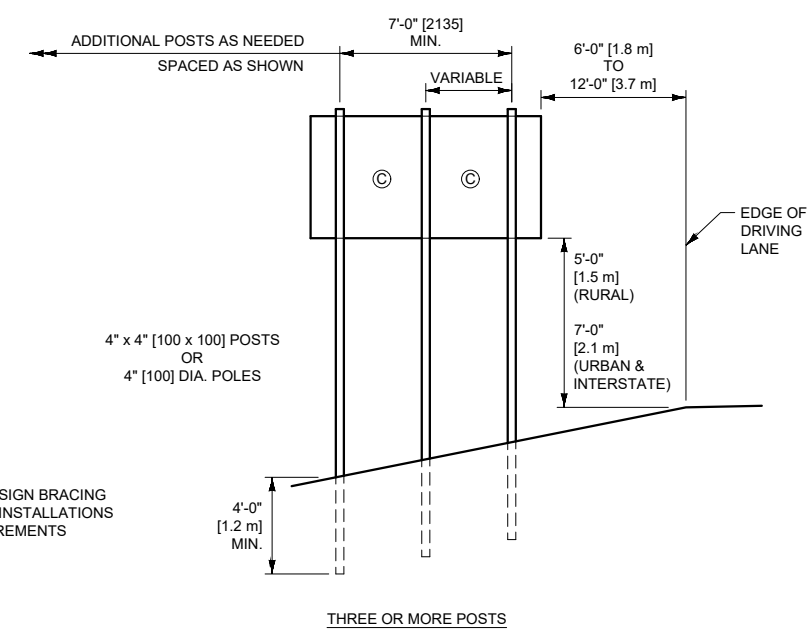


WARNING WITH SUPPLEMENTAL PANEL



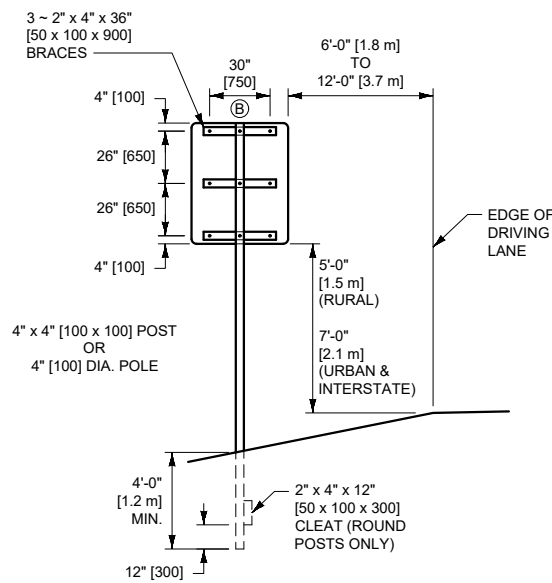
(C) PROVIDE ADEQUATE SIGN BRACING FOR MULTIPLE POST INSTALLATIONS MEETING THE REQUIREMENTS OF NCHRP 350.

TWO POSTS

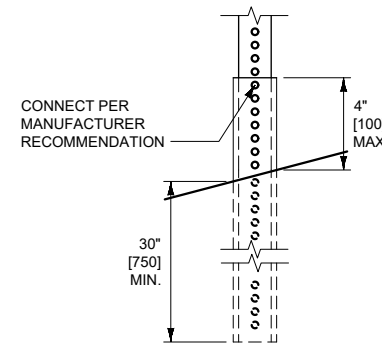


THREE OR MORE POSTS

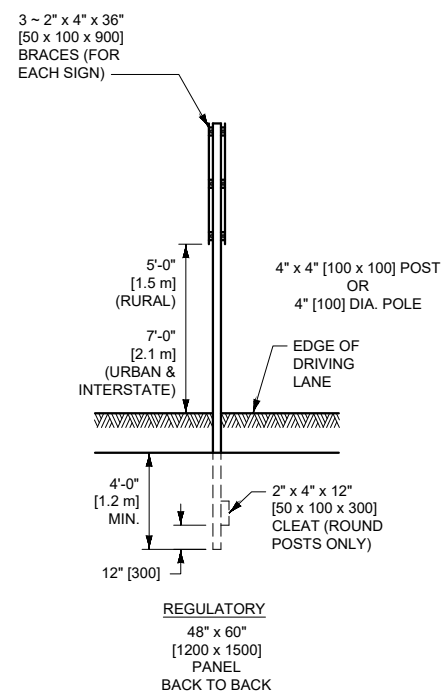
TYPICAL MULTIPLE POST INSTALLATIONS (FOR CONSTRUCTION SIGNING ONLY)



REGULATORY 48" x 60" [1200 x 1500] PANEL

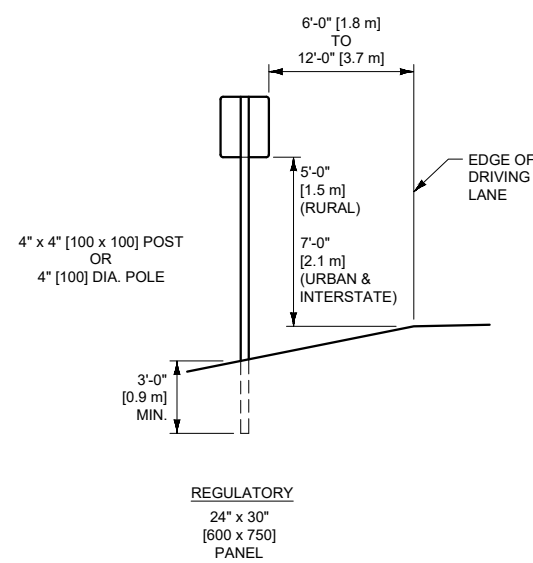


OPTIONAL TELES PAR MOUNTING (FOR CONSTRUCTION SIGNING ONLY)

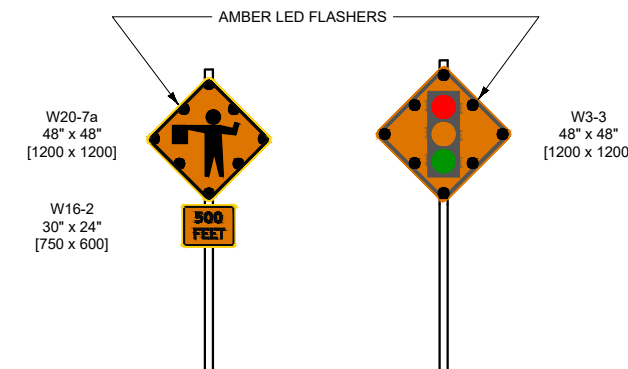


REGULATORY 48" x 60" [1200 x 1500] PANEL BACK TO BACK

TYPICAL SIGN MOUNTINGS (FOR CONSTRUCTION SIGNING ONLY)

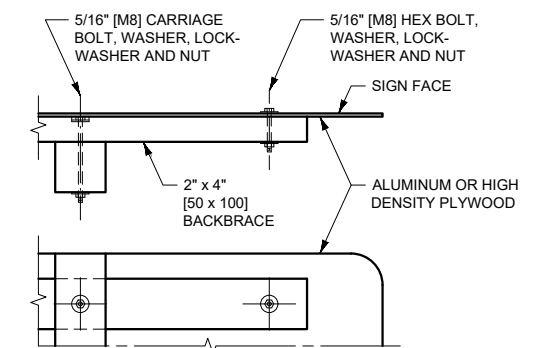


REGULATORY 24" x 30" [600 x 750] PANEL



FLASHING FLAGGER AND SIGNAL AHEAD SIGN

- NOTES:
- FURNISH POST INSTALLATIONS MEETING NCHRP 350 OR MASH CRASH TEST REQUIREMENTS.
 - FURNISH POST OR POLE LENGTHS TO ACCOMMODATE FOUNDATION DEPTH, MOUNTING HEIGHT AND MOUNTINGS.
 - BACKFILL FOUNDATION HOLES USING THOROUGHLY COMPACTED 8" LIFTS.
 - IN HIGH WIND AREAS INSTALL LARGER POSTS OR POLES COMPLYING WITH THE FOUNDATION AND BREAKAWAY REQUIREMENTS OF DTL DWG. NO. 619-20. THE MINIMUM POST SPACING FOR MULTIPLE POSTS LARGER THAN 4" [100] IS 7'-0" [2135].
 - SIGN VERTICAL ALIGNMENT MUST BE WITHIN 5" OF PLUMB.
 - USE THE URBAN MOUNTING HEIGHTS IN BUSINESS, COMMERCIAL, AND RESIDENTIAL DISTRICTS WHERE PARKING AND/OR PEDESTRIAN MOVEMENT IS LIKELY TO OCCUR, OR VIEW IS OBSTRUCTED. URBAN MOUNTING HEIGHTS MAY ALSO BE USED IN RURAL AREAS FOR INCREASED VISIBILITY.
 - AMBER LED FLASHERS MUST MEET STANDARD SPECIFICATION SECTION 715 REQUIREMENTS.



SIGN FASTENING DETAILS

UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

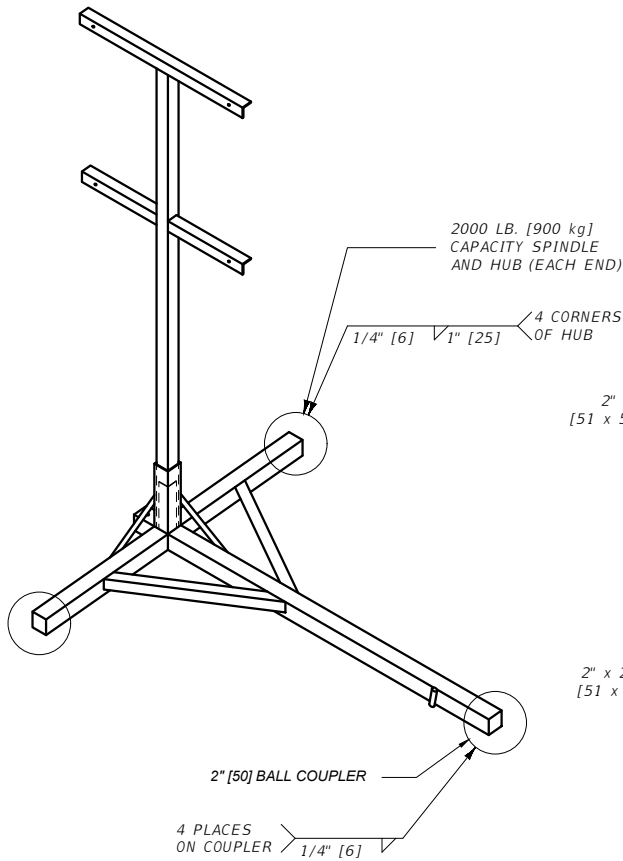
DETAILED DRAWINGS	
REFERENCE STANDARD SPEC. SECTION 618, 715	DWG. NO. 618-01

CONSTRUCTION SIGN DETAILS

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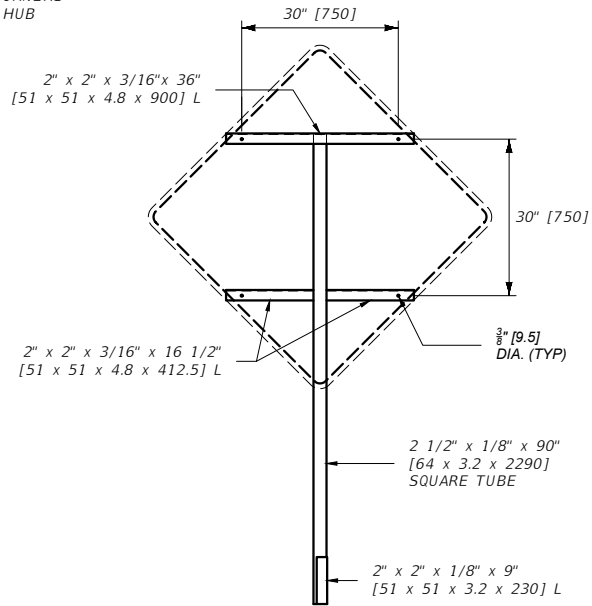
--REVISED-- JUN 27, 2024





NOTES:

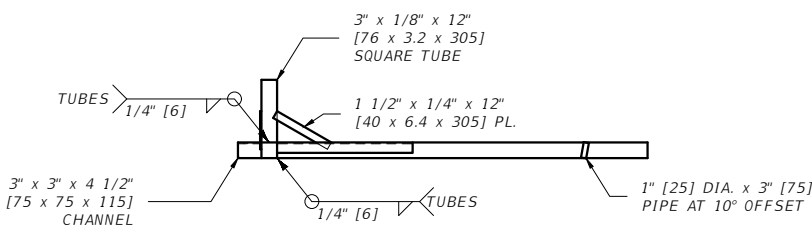
- ① MAXIMUM ASSEMBLY WEIGHT IS 250 LBS.
- ② USE 14" [355] WHEEL AND TIRE.
- ③ DO NOT USE AUTOMOTIVE OR EQUIPMENT AXLE ASSEMBLIES WITH TRAILED SIGN SUPPORTS.
- ④ NCHRP 350 OR MASH APPROVED ASSEMBLIES ARE ACCEPTABLE.



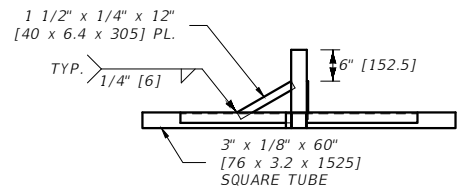
FRONT

RIGHT

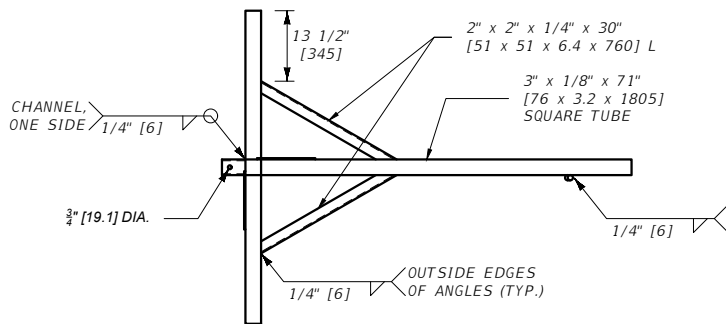
SIGN SUPPORT



FRONT



RIGHT



TOP

TRAILER

UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

DETAILED DRAWINGS

REFERENCE STANDARD SPEC. SECTION 618, 715	DWG. NO. 618-02
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PORTABLE SIGN SUPPORT ASSEMBLY

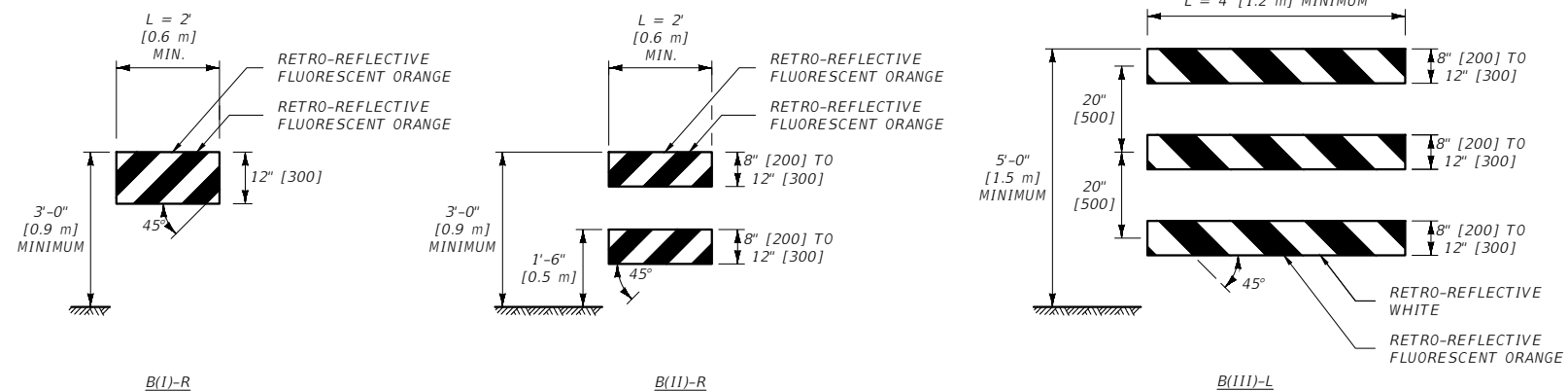
EFFECTIVE: JAN 23, 2020



MONTANA Department of Transportation

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JUN 27, 2024

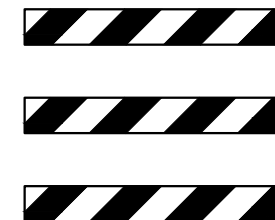
PORTABLE BARRICADES



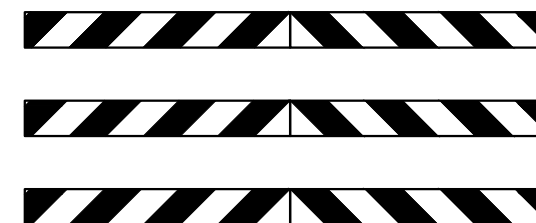
PORTABLE BARRICADE NOTES:

- ① RAIL STRIPES ARE 6" [150] IN WIDTH FOR BARRICADES 3' [0.9 m] OR GREATER IN LENGTH. FOR BARRICADES LESS THAN 3' [0.9 m] IN LENGTH, 4" [100] STRIPES MAY BE USED.
- ② THE PREDOMINANT COLOR FOR OTHER BARRICADE COMPONENTS IS WHITE, BUT UNPAINTED GALVANIZED METAL OR ALUMINUM COMPONENTS MAY BE USED.
- ③ B(111) BARRICADES FACING TRAFFIC FROM BOTH DIRECTIONS MUST BE STRIPED ON BOTH SIDES.
- ④ USE MATERIALS FOR BARRICADE FRAMEWORK, ASSEMBLY, ATTACHED SIGNS, AND MEANS OF SIGN ATTACHMENT MEETING NCHRP 350 AND/OR MASH REQUIREMENTS FOR WORK ZONE DEVICES. OPTIONS FOR SIGN ATTACHMENT ARE:
 - SIGNS UP TO 10 SQ FT [1.0 SQ m] BOLTED TO TOP RAIL.
 - SIGNS OVER 16 SQ FT [1.5 SQ m] BOLTED TO RAILS AND BOTH UPRIGHT SUPPORTS.
 - SIGNS MAY BE MOUNTED BEHIND BARRICADES ON SEPARATE NCHRP 350 AND/OR MASH APPROVED SIGN SUPPORTS.
- ⑤ SUFFICIENTLY WEIGHT SANDBAGS TO ANCHOR BARRICADES. WATERPROOF SANDBAGS DURING FREEZING WEATHER.
- ⑥ USE RETRO-REFLECTIVE SHEETING IN ACCORDANCE WITH THE CONTRACT.

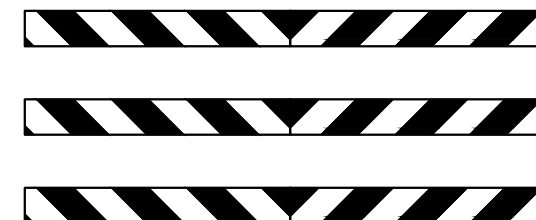
RAIL STRIPES



WHERE BARRICADES EXTEND ACROSS THE ENTIRE ROADWAY, POSITION BARRICADES WITH STRIPES SLOPING DOWNWARD IN THE DIRECTION VEHICLES MUST TURN.



WHERE BOTH LEFT AND RIGHT TURNS ARE PERMITTED, POSITION BARRICADES WITH STRIPES SLOPING DOWNWARD LEFT AND RIGHT AWAY FROM BARRICADE CENTER.



WHERE TURNING IS NOT PERMITTED, POSITION BARRICADES WITH STRIPES SLOPING DOWNWARD TOWARD BARRICADE CENTER.

GENERAL NOTES:

- ① SEE THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PART 6 FOR ADDITIONAL INFORMATION.

UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

DETAILED DRAWINGS

REFERENCE	DWG. NO.
STANDARD SPEC.	618-03
SECTION 618	

BARRICADES

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JUN 27, 2024

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