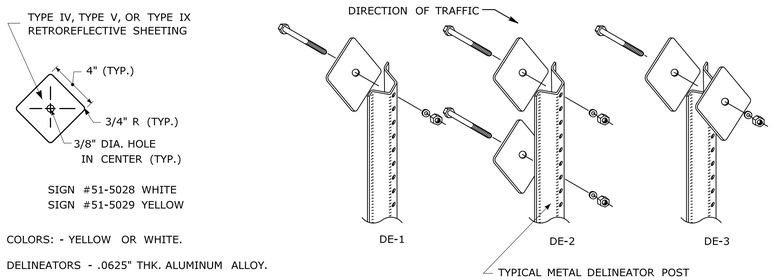
DELINEATORS DE-1, DE-2, DE-3

INSTALLATION ON DELINEATOR POSTS



SIGN #51-5028 WHITE
SIGN #51-5029 YELLOW

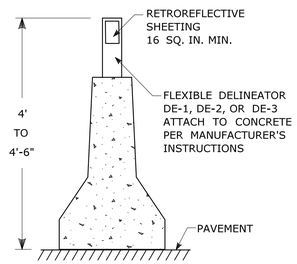
COLORS: - YELLOW OR WHITE.

DELINEATORS - .0625" THK. ALUMINUM ALLOY.

FACE SHALL BE PRESSURE SENSITIVE, SELF ADHERING, TYPE IV, TYPE V, OR TYPE IX RETROREFLECTIVE SHEETING.

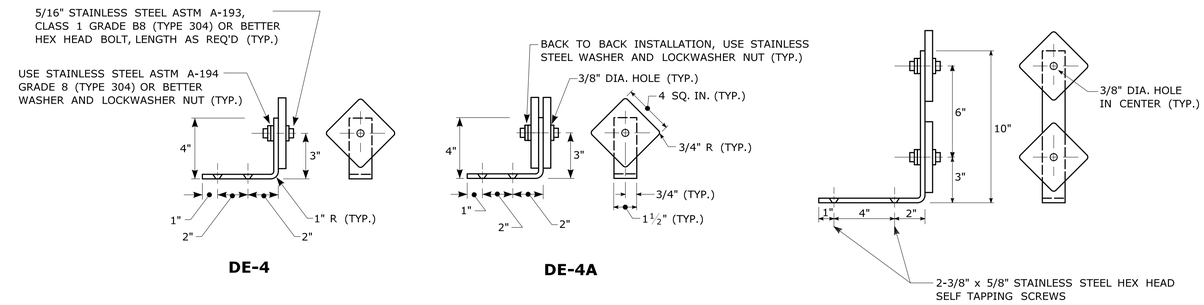
DELINEATORS SHALL BE FASTENED WITH 5/16" STAINLESS STEEL ASTM A-193 CLASS 1, GRADE B8 (TYPE 304) OR BETTER HEX HEAD BOLT (LENGTH AS REQUIRED), WASHER AND FIBER INSERT SELF LOCKING NUT, ON STANDARD METAL DELINEATOR POST.

INSTALLATION ON PERMANENT CONCRETE BARRIER, BRIDGE PARAPETS AND RETAINING WALLS



DELINEATORS DE-1, DE-2, DE-3 TO BE PAID FOR UNDER SECTION 12.05 DELINEATORS.

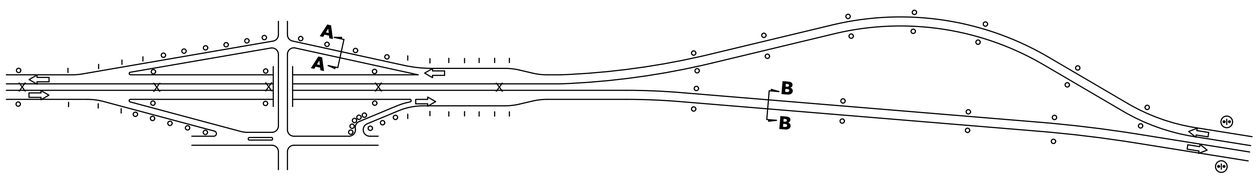
DELINEATORS DE-4, DE-4A, DE-5 FOR INSTALLATION ON METAL BRIDGE RAIL

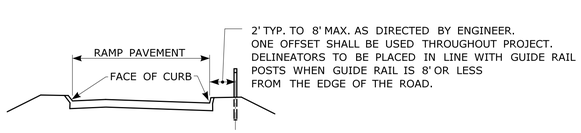


COLORS: - YELLOW OR WHITE.
DELINEATORS - .0625" THK. ALUMINUM ALLOY.
BRACKET - .125" THK. ALUMINUM ALLOY, AND SHALL CONFORM TO SPECIFICATION M.18.07-03 BRIDGE RAIL MOUNTING BRACKETS.
FACE SHALL BE PRESSURE SENSITIVE, SELF ADHERING, TYPE IV, TYPE V, OR TYPE IX RETROREFLECTIVE SHEETING.
USE STAINLESS STEEL WASHERS ON FACE OF DELINEATORS, 5/8" O.D. X 3/8" I.D. X .032" THK. (TYP.)

DELINEATORS TYPE DE-4, DE-4A, AND DE-5 TO BE PAID FOR UNDER SECTION 12.05 DELINEATORS.

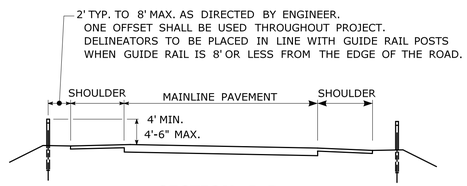
TYPICAL MAINLINE & INTERCHANGE DELINEATION





SECTION A-A

DELINEATOR PLACEMENT ON RAMPS
ON TANGENT SECTIONS - RIGHT SIDE OF RAMP
ON CURVED SECTIONS - BOTH SIDES OF CURVE



SECTION B-B

DELINEATOR PLACEMENT ON MAINLINE

DELINEATOR SPACING NOTES:

1) AT LOCATIONS WHERE THE MEDIAN WIDTH (BETWEEN SHOULDERS) IS 12' OR LESS, AND MEDIAN BEAM RAIL IS PRESENT, TYPE DE-3 DELINEATORS SHALL BE MOUNTED WITHIN THE MEDIAN BEAM RAIL.

2) SPACING ON MAINLINE EXPRESSWAY TANGENTS SHALL BE 400'.

3) SPACING ON MAINLINE EXPRESSWAY CURVES SHALL BE AS SPECIFIED IN TABLE 3F-1 OF THE MUTCD.

4) ON ACCELERATION AND DECELERATION LANES AND ON-RAMP TANGENT SECTIONS, DELINEATOR SPACING SHALL BE 100'.

5) ON CURVED PORTIONS OF RAMPS, DELINEATOR SPACING SHALL BE IN ACCORDANCE WITH TABLE 3F-1 OF THE MUTCD, BUT NOT TO EXCEED 100'.

LEGEND:

- ∘ DE-1 DELINEATORS OR DE-4 DELINEATOR ASSEMBLY
- ı DE-2 DELINEATORS OR DE-5 DELINEATOR ASSEMBLY
- X DE-3 DELINEATORS ASSEMBLY OR DE-4A DELINEATOR
- (H) D10-1, 2, 3, OR 4 ASSEMBLY TO BE INSTALLED WHERE SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.

COLOR APPLICATION, FOR DE-1 THRU DE-5

LEFT SIDE OF ALL ROADWAYS AND RAMPS - YELLOW
RIGHT SIDE OF ALL ROADWAYS AND RAMPS - WHITE

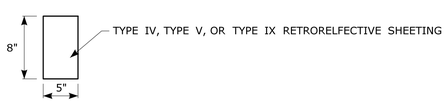
MUTCD TABLE 3F-1 APPROXIMATE SPACING FOR DELINEATORS ON HORIZONTAL CURVES

RADIUS (R) OF CURVE (feet)	APPROXIMATE SPACING (S) ON CURVE (feet)
50	20
115	25
180	35
250	40
300	50
400	55
500	65
600	70
700	75
800	80
900	85
1,000	90

DISTANCE IN FEET WERE ROUNDED TO THE NEAREST 5 FEET. SPACING FOR SPECIFIC RADII MAY BE INTERPOLATED FROM TABLE. THE MINIMUM SPACING SHOULD BE 20 FEET. THE SPACING ON CURVES SHOULD NOT EXCEED 300 FEET. IN ADVANCE OF OR BEYOND A CURVE, AND PROCEEDING AWAY FROM THE END OF THE CURVE, THE SPACING OF THE FIRST DELINEATOR IS 2S, THE SECOND IS 3S, AND THE THIRD 6S BUT NOT TO EXCEED 300 FEET.

S REFERS TO THE DELINEATOR SPACING FOR SPECIFIC RADII COMPUTED FROM THE FORMULA: $S=3\sqrt{R-50}$.

DELINEATORS DE-7, DE-7A, DE-7B, DE-7D FOR INSTALLATION ON TEMPORARY PRECAST CONCRETE BARRIER CURB AND TEMPORARY PRECAST CONCRETE BARRIER CURB (STRUCTURE)



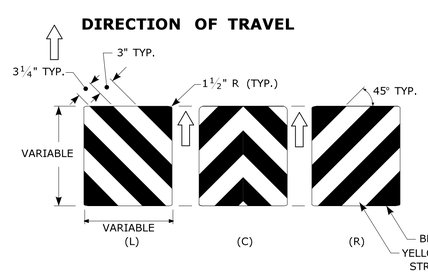
DE-7 ONE WAY WHITE
DE-7A ONE WAY YELLOW
DE-7B TWO WAY YELLOW
DE-7D TWO WAY WHITE
TEMPORARY PRECAST CONCRETE BARRIER DELINEATORS ARE TO BE FABRICATED OF ALUMINUM, STEEL, PLASTIC, OR OF A MATERIAL APPROVED BY THE ENGINEER AND MOUNTED IN THE CENTER OF EACH SECTION OF TEMPORARY BARRIER AS REQUIRED AND PER MANUFACTURER'S INSTRUCTIONS.

SPACING FOR TEMPORARY BARRIER CURB DELINEATORS:

ON THE LEADING TAPERED SECTION - EVERY 20',
ON THE FIRST 100' OF THE PARALLEL SECTION - EVERY 20',
ON THE REMAINING LENGTH - EVERY 100', MINIMUM OF 2 IF LESS THAN 100',
ALTERNATING ONE WAY TRAFFIC - EVERY 20',
ALL OTHER ROADWAYS SHALL BE DELINEATED IN ACCORDANCE WITH MUTCD.

DELINEATORS DE-7, DE-7A, DE-7B, AND DE-7D TO BE PAID FOR UNDER SECTION 12.05 DELINEATORS.

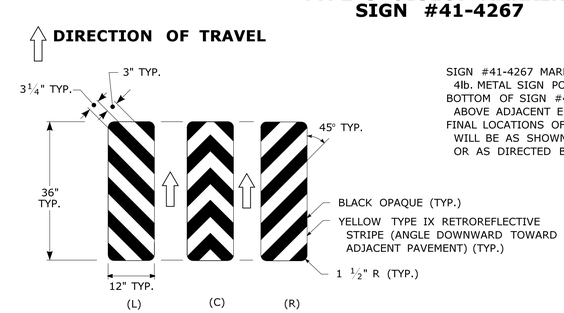
ATTENUATOR REFLECTORS SIGN #40-4266



THIS SHEETING WITHOUT A SUBSTRATE TO BE INSTALLED ON THE NOSE OF THE IMPACT ATTENUATOR WITH ADHESIVE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
THE SHEETING SHALL COVER THE NOSE OF THE IMPACT ATTENUATOR.
ON A CURVED NOSE, THE WIDTH OF THE SHEETING SHALL EXTEND 1" BEYOND THE POINT OF CURVATURE ON EACH SIDE OF THE NOSE.
THE HEIGHT AND WIDTH OF THE SHEETING VARIES DEPENDING ON THE SIZE OF THE NOSE OF THE IMPACT ATTENUATOR.

ATTENUATOR REFLECTOR TO BE PAID FOR UNDER SECTION 18.0 IMPACT ATTENUATOR

TYPE 3 OBJECT MARKERS SIGN #41-4267



SIGN #41-4267 MARKER MOUNTED ON 4lb. METAL SIGN POST.
BOTTOM OF SIGN #41-4267 TO BE 4' ABOVE ADJACENT EDGE OF PAVEMENT.
FINAL LOCATIONS OF SIGN #41-4267 MARKERS WILL BE AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.

TYPE 3 OBJECT MARKER TO BE PAID FOR UNDER SECTION 12.08 SIGN FACE SHEET ALUMINUM

REV.	DATE	REVISION DESCRIPTION
5	8-2018	INCLUDED DE-7D AND REMOVED DE-7C, DE-9, AND DE-10.
4	4-2017	REVISED ATTENUATOR REFLECTOR AND TYPE 3 OBJECT MARKERS.
3	8-2015	UPDATED PER MUTCD AND FORM 816 JAN 2015 REVISION.
2	2-2011	MINOR REVISIONS.
1	1-2010	INCLUDED DETAILS IN D10-1, D10-2, D10-3 DELINEATORS.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 8/10/2018

NOT TO SCALE

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: TR-1205_01_1_2018.dgn Model: TR-1205_01

SUBMITTED BY: NAME/DATE/TIME: Mark F. Makuch, P.E. 2018.08.17 09:04:28-04'00'
APPROVED BY: NAME/DATE/TIME: Mark F. Carlino, P.E. 2018.08.21 07:47:46-04'00'

CTDOT STANDARD SHEET
OFFICE OF ENGINEERING

STANDARD SHEET TITLE:
DELINEATION, DELINEATORS AND OBJECT MARKER DETAILS

STANDARD SHEET NO.: TR-1205_01