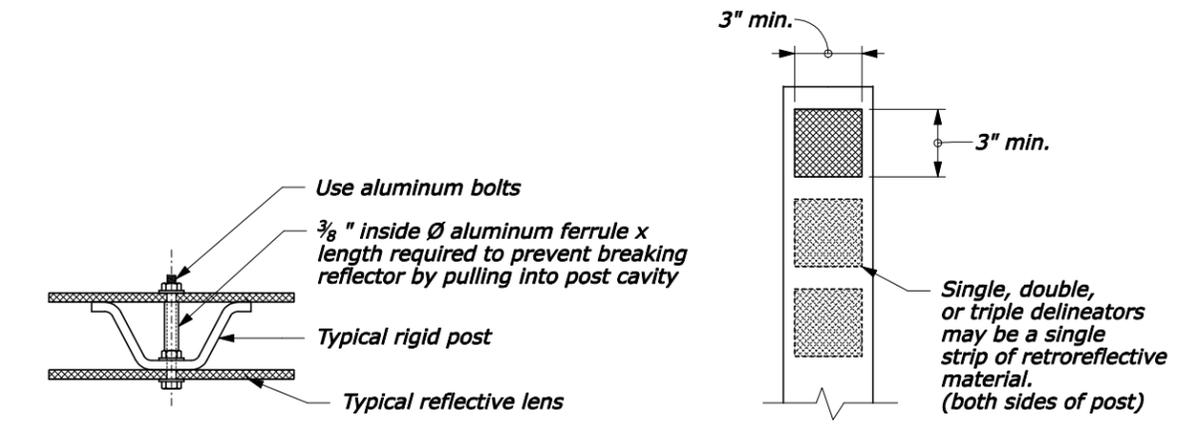


- NOTE:**
- Match the color of the reflective element with the edge line.
 - Use yellow reflective elements for triple delineators installed to mark obstructions.
 - Install double delineators on 100-foot spacing for acceleration and deceleration lanes or to mark changes in width.
 - Install reflective elements according to the manufacturer's recommendations.
 - Alternate delineator types may be used with approval of the CO. Provide delineators conforming to the MUTCD and install according to the manufacturer's recommendations.
 - Place delineators at a constant distance from the edge of the pavement. Where guardrail intrudes into the space between the edge of pavement and the delineator offset, locate the delineator immediately behind the guardrail.
 - Delineators meeting current state-approved standards and the MUTCD may be used if approved by the CO.

POST DETAILS



DELINEATOR SPACING ON CURVES

RADIUS OF CURVE (R)	SPACING ON CURVE (S)	SPACING ON TANGENTS AT CURVE ENDS		
		1st Space (2 S)	2nd Space (3 S)	3rd Space (6 S)
(feet)	(feet)	(feet)	(feet)	(feet)
50	20	40	60	120
115	25	50	75	150
180	35	70	105	210
250	40	80	120	240
300	50	100	150	300
400	55	110	165	300
500	65	130	195	300
600	70	140	210	300
700	75	150	225	300
800	80	160	240	300
900	85	170	255	300
1,000	90	180	270	300

- DELINEATOR SPACING NOTES**
- Spacing for specific radii may be interpolated from the table.
 - Values shown for S in the table are computed from the formula $S = 3\sqrt{R-50}$, where S = delineator spacing and R = horizontal curve radius. Values are rounded to the nearest 5 feet.

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

U.S. CUSTOMARY DETAIL

DELINEATORS

DETAIL APPROVED FOR USE 03/2011

REVISIONS:

DETAIL
C633-51



NOTES TO THE DESIGNER

Last Updated: March 2011

General Information

1. ***Appropriate Applications.*** Delineators are considered guidance devices rather than warning devices (MUTCD, Section 3F.01, Line 02).

Refer to the MUTCD Chapter 3F.

Applicable SCRs

None

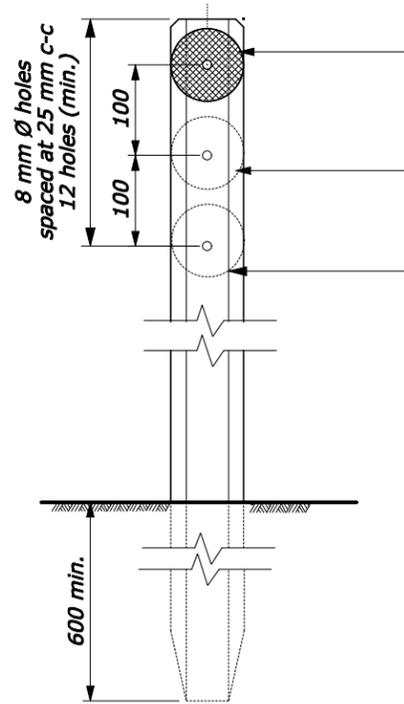
Typical Pay Item Used

- 63309-0100 Delineator, type 1 [EA] or 63309-0200 Delineator, type 2 [EA]

Updates

March 2011

- New CFL Detail drawing



DELINEATOR (RIGID)
(TYPE 1 - acrylic plastic lens)

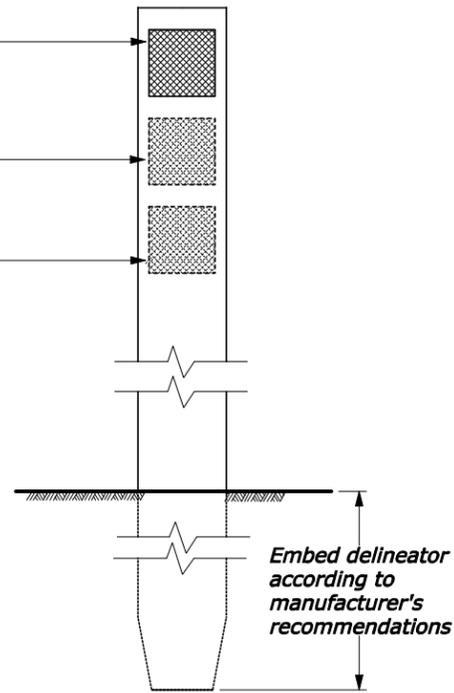
Single delineator
(Normal application)

Double delineator
(Accel/Decel Lanes)

Triple delineator
(Object marker)

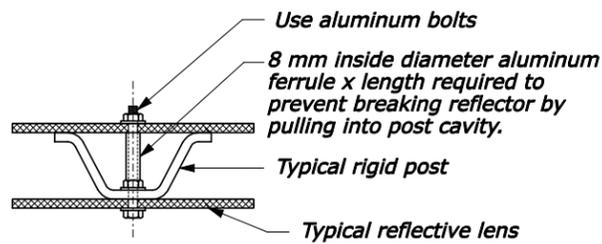
POST NOTES

1. Furnish either (a) rigid posts of steel or aluminum or (b) flexible (plastic) posts, according to the FP-03 Subsection 718.09.
2. A minimum of 12 holes, spaced on 25 mm centers, are required for all rigid post.
3. Furnish anti theft hardware for mounting retroreflectors as required.

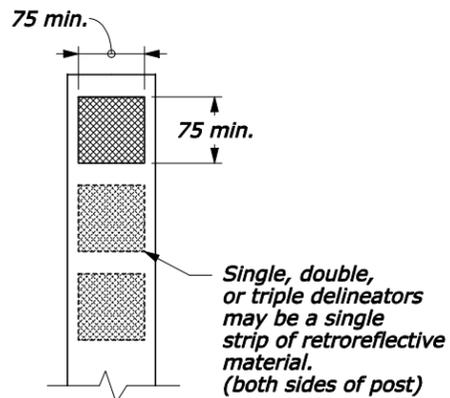


DELINEATOR (FLEXIBLE)
(TYPE 2 - retroreflective sheeting)

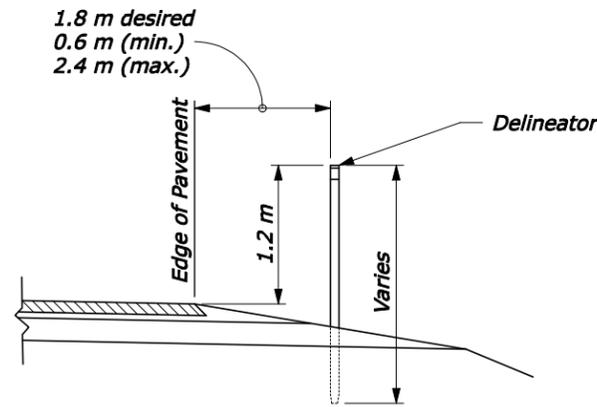
POST DETAILS



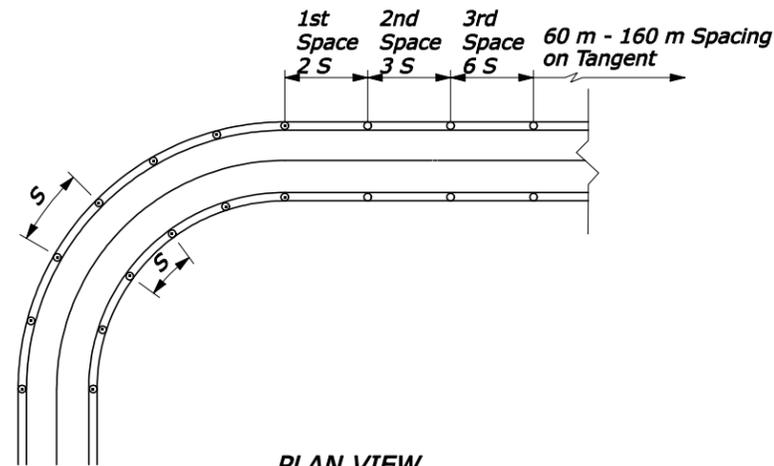
ATTACHMENT DETAIL
(for rigid metal posts)



RETROREFLECTIVE SHEETING DETAIL



LOCATION OF DELINEATOR



PLAN VIEW
DELINEATOR SPACING

RADIUS OF CURVE (R)	SPACING ON CURVE (S)	SPACING ON TANGENTS AT CURVE ENDS		
		1st Space (2 S)	2nd Space (3 S)	3rd Space (6 S)
(meters)	(meters)	(meters)	(meters)	(meters)
15	6	12	18	36
35	8	16	24	48
55	11	22	33	66
75	13	26	39	78
95	15	30	45	90
125	18	36	54	90
155	20	40	60	90
185	22	44	66	90
215	24	48	72	90
245	26	52	78	90
275	27	54	81	90
305	29	58	87	90

DELINEATOR SPACING NOTES

1. Spacing for specific radii may be interpolated from the table.
2. Values shown for S in the table are computed from the formula $S = 3\sqrt{R-15}$, where S = delineator spacing and R = horizontal curve radius. Values are rounded to the nearest meter.

NOTE:

1. Match the color of the reflective element with the edge line.
2. Use yellow reflective elements for triple delineators installed to mark obstructions.
3. Install double delineators on 30 m spacing for acceleration and deceleration lanes or to mark changes in width.
4. Install reflective elements according to the manufacturer's recommendations.
5. Alternate delineator types may be used with approval of the CO. Provide delineators conforming to the MUTCD and install according to the manufacturer's recommendations.
6. Place delineators at a constant distance from the edge of the pavement. Where guardrail intrudes into the space between the edge of pavement and the delineator offset, locate the delineator immediately behind the guardrail.
7. Delineators meeting current state-approved standards and the MUTCD may be used if approved by the CO.
8. Dimensions without units are millimeters.

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

METRIC DETAIL

DELINEATORS

DETAIL APPROVED FOR USE 03/2011

REVISID:

DETAIL
CM633-1



NOTES TO THE DESIGNER

Last Updated: March 2011

General Information

1. ***Appropriate Applications.*** Delineators are considered guidance devices rather than warning devices (MUTCD, Section 3F.01, Line 02).

Refer to the MUTCD Chapter 3F.

Applicable SCRs

None

Typical Pay Item Used

- 63309-0100 Delineator, type 1 [EA] or 63309-0200 Delineator, type 2 [EA]

Updates

March 2011

- New CFL Detail drawing