

CITY OF DETROIT
SPECIAL PROVISION
FOR
DELINEATOR POST

SGJJR:BPC

1 of 2

01-24-17

a. Description. This work consists of furnishing and installing delineator posts as shown on the plans and as directed by the Engineer. Complete this work in accordance to the applicable sections of the standard specifications and this special provision. Follow industry standards and conform to the details as shown on the plans.

b. Materials. Furnish tools and equipment as recommended by the manufacturer and as approved by the Engineer. Use equipment and materials from a single manufacturer throughout the entire project.

Design - The delineator post shall consist of a modified T-shaped tubular post a minimum of 3.00 inches wide by 2.00 inches deep, with 0.125 inch (min.) walls, comprised of flat front and curved rear surfaces and sides to create areas of opposing compression stresses on the inner and outer walls when impacted resulting in superior rebound. All delineator posts shall be capable of sustaining a minimum of fifty (50) direct wheel-over impacts at 60 MPH (100 km/h) without damage to the post or the reflective sheeting applied to the post. All posts shall be easily replaceable. All posts shall be constructed of UV-stabilized thermo-plastic polyurethane (TPU) for superior durability, conforming to the following material specifications:

Property	ASTM Test	Results
Specific Gravity (min.)	D 792	1.10
Hardness (min.)	D 2240	90 A
Tear Strength (min PSI)	D 624, Die C	800
Tensile Strength @ yield, (min PSI)	D 412	4,000
Tensile Elongation @ break (min. %)	D 412	450
Cold Temp. Impact Test (-7°F)	FL/DOT	Pass
Gloss (min. units)	N/A	12.1

Bases - Delineator posts shall mount to a base unit with two (2) nylon locking pins. For highest visibility and durability, posts shall be mounted to bases of the same color as the post and curb and the corresponding lane line (yellow & yellow, white & white, etc.) and shall be 1.5 # in weight. All bases shall be constructed of a UV-stable high-impact thermo-plastic styrenic alloy conforming to the following material specifications:

Property	ASTM Test	Results
Specific Gravity (min.)	D 792	1.02
Gardner Impact (min.)	N/A	160
Flexural Strength (min.)	D 790	5,500

Florescent and Standard Colors - Delineator posts and bases shall be constructed of UV-stabilized polymers and colors. The color shall be solid throughout and stabilized to resist UV degradation.

Locking Pins - The delineator posts shall be secured to the base units with rust-proof black nylon locking pins conforming to the same material specifications as the base units to prevent dislocation when posts are impacted and to ease replacement of old posts.

Reflective Sheeting - All posts shall have retro-reflective sheeting applied. The minimum reflective sheeting shall be two (2) 6-inch wide wraps of sheeting one (1) inch down from the top of the post with a six (6) inch gap between wraps. The sheeting shall be Reflexite® AR 1000 cube-corner micro-prismatic reflective sheeting for superior brightness, scratch resistance and durability. For bike lane applications the sheeting shall be green.

Lengths - Delineator posts shall be provided in height of 36 inches, as specified in the construction plans.

NCHRP 350 Acceptance - The delineator posts shall be fully crash-tested on the AASHTO's NTPEP Test Deck and meet requirements for Category 1 devices as specified in NCHRP Report # 350. All delineator posts shall have the acceptance of the U.S. Department of Transportation, Federal Highway Administration. Certifications of acceptance to these standards must be supplied by the manufacturer upon request.

Warranty - The delineator posts shall be covered by warranty for a period of one (1) year from the date of purchase covering breakage of the posts. A copy of the manufacturers' warranty document shall be provided to the Engineer.

c. Construction. Delineator posts shall be secured to the roadway with removable and reusable one-piece anchor bolts with a finished hex head, integral washer, dual lead threads and chamfered tip. One-piece bolts shall be used to eliminate improper assembly; dual-thread bolts shall be used to prevent bolts spinning in holes when tightened. All delineator posts shall be completely removable with standard power tools.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay items:

Pay Item	Pay Unit
_Delineator Post, 36 inch, White	Each

_Delineator Post, 36 inch, White will be measured and paid for at the contract unit price per each unit installed. The Delineator post to be 36" height and provided with a white post, white base and green reflective sheeting. The unit price shall be payment in full for furnishing all labor, equipment and material to furnish and install posts as shown on the plans or as directed by the Engineer.