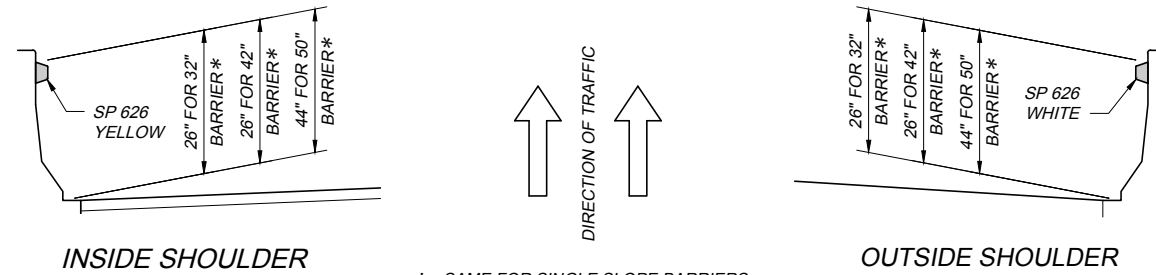
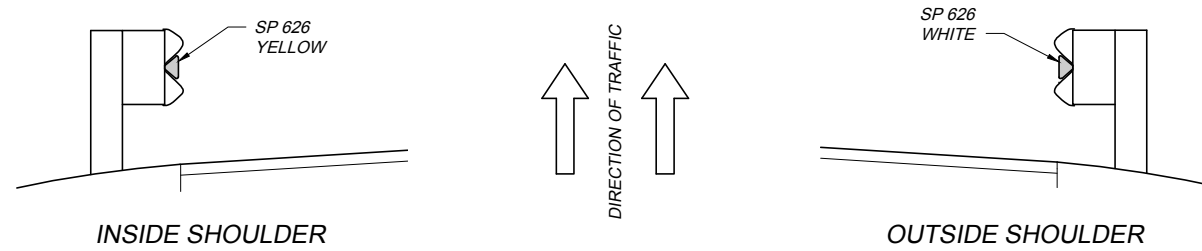


CONCRETE BARRIER DELINEATION



* - SAME FOR SINGLE SLOPE BARRIERS

GUARDRAIL DELINEATION



DELINEATOR POST

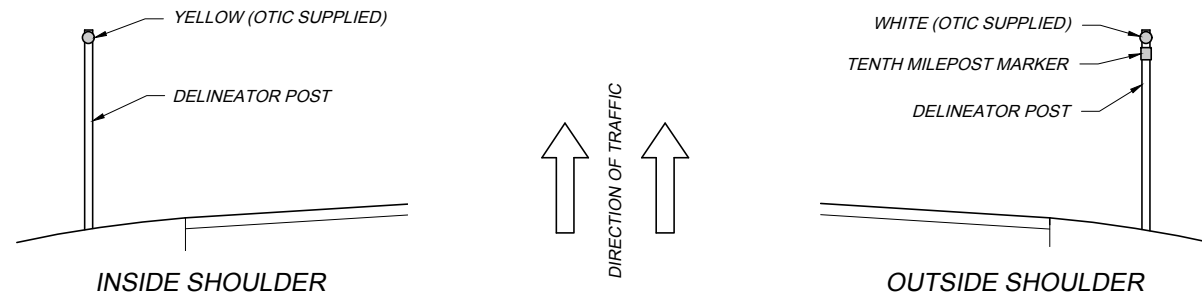
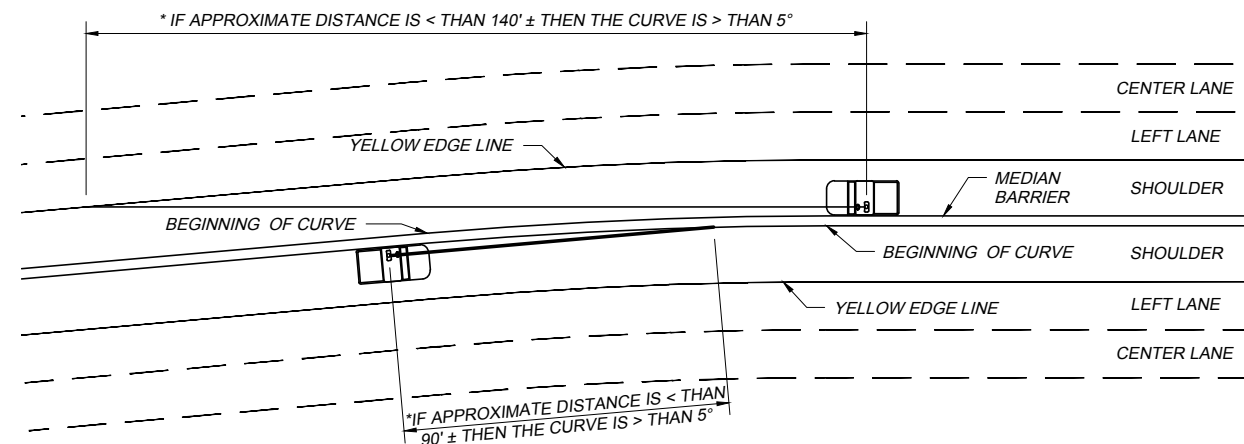


FIGURE 1



NOTE:

* WORK VEHICLE MUST BE APPROXIMATELY ONE (1) FOOT FROM THE FACE OF THE BARRIER WITH THE FRONT OF THE WORK VEHICLE AT THE BEGINNING OF THE CURVE. THE APPROXIMATE DISTANCE IS TO BE MEASURED FROM THE DRIVERS POSITION IN WORK VEHICLE STRAIGHT AHEAD TO WHERE THE YELLOW EDGELINE OR CONCRETE BARRIER FACE INTERSECTS THE VIEWER'S LINE OF SIGHT. THE VIEWER'S BODY SHOULD BE PERPENDICULAR WITH THE TANGENT OF THE CURVE,

NOTES:

DELINEATION SHALL BE CONSISTENT IN SPACING, MOUNTING HEIGHT, ORIENTATION, AND RETROREFLECTIVITY.

GUARDRAIL AND BARRIER DELINEATION LAYOUT, SPACING AND HEIGHT

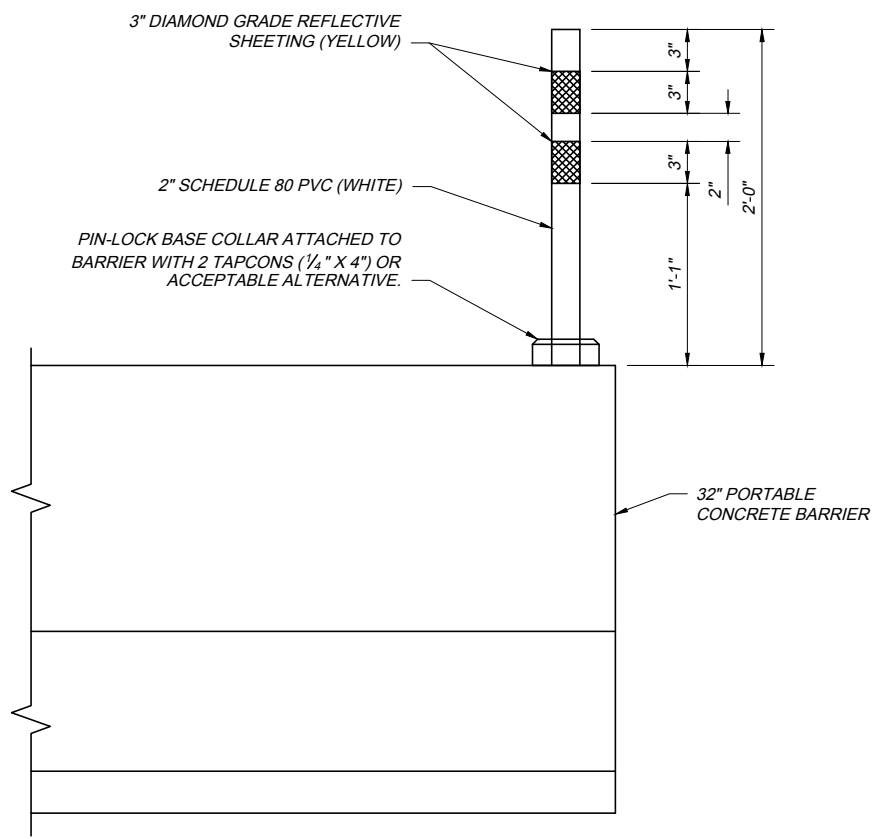
- STEEL DELINEATOR POSTS SHALL BE INSTALLED EVERY TWENTIETH OF A MILE WITH THE APPROPRIATE REFLECTOR. THE "TENTH" DELINEATOR POST SHALL HAVE THE PROPER MARKER INSTALLED WITH A WHITE NUMBER ON A BLACK BACKGROUND.
- ALL GUARDRAIL AND BARRIER SHALL HAVE A REFLECTOR AT THE BEGINNING AND THE END OF THE RUN AND AT LEAST ONE (1) EVENLY SPACED BETWEEN THE TERMINI. THE REFLECTORS SHALL BE SPACED AT 100 FEET ON TANGENTS AND ON CURVES OF LESS THAN 5 DEGREES. THE REFLECTORS SHALL BE SPACED AT 50 FEET FOR CURVES OF 5 DEGREES OR GREATER (SEE FIGURE 1 FOR ASSISTANCE IN IDENTIFYING FIVE-DEGREE CURVES).

THE SPACING ON TANGENTS AND CURVES LESS THAN 5 DEGREES MAY VARY FROM 75 FEET TO 125 FEET IN THE FINAL 250 FEET TO ACHIEVE EVEN SPACING OF THE REFLECTORS.
- WHEN A GUARDRAIL ANCHOR ASSEMBLY OR A GUARDRAIL BRIDGE TERMINAL ASSEMBLY IS USED, THE FIRST (OR LAST) REFLECTOR SHALL BE PLACED NEAR THE FIRST (OR LAST) POST RATHER THAN AT THE END OF THE ASSEMBLY.
- WHEN A BUFFER END SECTION OR SIMILAR DEVICE IS PROVIDED ON THE END OF THE GUARDRAIL, THE FIRST REFLECTOR SHALL BE PLACED SO THAT IT IS VISIBLE TO APPROACHING TRAFFIC.
- WHEN GUARDRAIL, BARRIERS, RETAINING WALLS, OR BRIDGE PARAPETS ARE TIED TOGETHER IN A CONTINUOUS RUN, THE TOTAL LENGTH OF THE RUN SHALL BE USED FOR DETERMINING THE NUMBER AND LOCATION OF REFLECTORS.
- WHEN A RUN OF RAIL/BARRIER IS INSTALLED THAT IS AT VARYING DISTANCES FROM THE EDGE OF PAVEMENT, A REFLECTOR SHALL BE PLACED WHERE THE RUN FIRST APPROACHES CLOSEST TO THE PAVEMENT. IF THIS RESULTS IN SPACING GREATER THAN 125 FEET, OR 65 FEET IN CASES WHERE 50 FOOT STANDARD SPACING IS REQUIRED, AN ADDITIONAL REFLECTOR SHALL BE INSTALLED.
- MEDIAN WALL DELINEATION: REDUCE SPACING TO 20 FEET WHERE BARRIER WALL IS WIDER AT BRIDGE PIERS AND OVERHEAD SIGN SUPPORTS. THE 20 FOOT SPACING SHALL BEGIN WHERE THE SHOULDER BEGINS TO NARROW.
- BARRIER DELINEATOR (BRIDGE PARAPET WALLS): ONE PLACED 14 FEET FROM EACH END AND THEN 50 FEET (MAX) EVENLY SPACED BETWEEN THE ENDS. IF THERE ISN'T GUARDRAIL AT THE TRAILING END OF THE BRIDGE PARAPET, ADD A DELINEATOR TO THE END OF THE PARAPET.
- BARRIER DELINEATOR (PIER PROTECTION): ONE PLACED 14 FEET FROM EACH END AND 50 FEET (MAX) EVENLY SPACED BETWEEN THE ENDS. A MINIMUM OF 3 DELINEATORS SHALL BE PLACED ON EACH PIER PROTECTION RUN. IF THERE ISN'T GUARDRAIL AT THE TRAILING END OF THE PIER PROTECTION, ADD A DELINEATOR TO THE END OF THE PIER PROTECTION.
- ON 50 INCH CONCRETE BARRIER, RETAINING WALLS AND BRIDGE PARAPETS, THE HEIGHT OF THE TOP OF THE REFLECTOR SHALL BE 44 INCHES ABOVE THE NEAR EDGE OF PAVEMENT, EXCEPT THAT THE TOP OF THE REFLECTOR SHALL NOT BE LESS THAN 3 INCHES BELOW THE TOP OF THE CONCRETE BARRIER, 32 INCH OR 42 INCH CONCRETE BARRIER, RETAINING WALLS AND BRIDGE PARAPETS, THE HEIGHT OF THE TOP OF THE REFLECTOR SHALL BE 26 INCHES ABOVE THE NEAR EDGE OF PAVEMENT, EXCEPT THAT THE TOP OF THE REFLECTOR SHALL NOT BE LESS THAN 3 INCHES BELOW THE TOP OF THE CONCRETE BARRIER.
- GUARDRAIL REFLECTORS SHALL BE INSTALLED WITHIN THE CONCAVE OF THE GUARDRAIL. ATTACHMENT SHALL BE BY USE OF A BRACKET WHICH FITS UNDER THE HEAD OF THE POST BOLT.

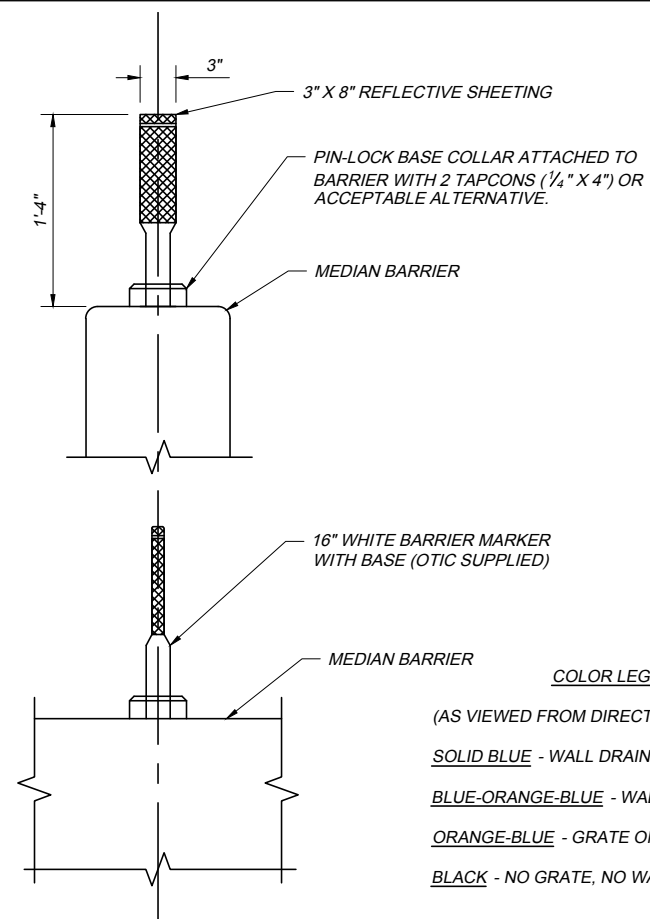
GUARDRAIL AND BARRIER DELINEATION INSTALLATION

- ATTACHMENT OF THE REFLECTOR SHALL BE BY A SUITABLE CORROSION RESISTANT MECHANICAL FASTENER, MECHANICAL BRACKET FOR GUARDRAIL DELINEATORS AND APPROPRIATE ADHESIVE FOR CONCRETE BARRIER WALLS.
- THE SURFACE OF THE CONCRETE BARRIER SHALL BE WIRE BRUSHED TO REMOVE ANY LOOSE CONCRETE, RUST, DIRT, OR OTHER LOOSE MATERIAL. DUST CREATED BY WIRE BRUSHING SHALL BE REMOVED PRIOR TO APPLICATION OF ADHESIVE. ADHESIVE SHALL BE APPLIED TO CLEAN AND MOISTURE-FREE SURFACES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- THE REFLECTOR FACE SHALL BE CLEAN AND FREE OF DUST, DIRT, ADHESIVE OR ANY FOREIGN MATERIAL AFTER INSTALLATION.
- EXCEPT WHEN MOUNTED IN THE CONCAVE RECESS OF GUARDRAIL, SINGLE-DIRECTIONAL REFLECTORS SHALL HAVE THE REFLECTIVE FACE ROTATED FORWARD FROM THE VERTICAL (OR PLUMB) POSITION BY APPROXIMATELY 2 DEGREES TO FACILITATE "RAIN WASHING" OF THE REFLECTOR FACE.
- WHEN REPLACING REFLECTORS ON A CONCRETE SURFACE, THE NEW LOCATION OF THE REFLECTOR SHALL BE LOCATED APPROXIMATELY 3 INCHES HORIZONTALLY IN EITHER DIRECTION FROM THE OLD LOCATION.
- BARRIER REFLECTORS SHALL BE THE SAME COLOR AS THE ADJACENT EDGE LINE.

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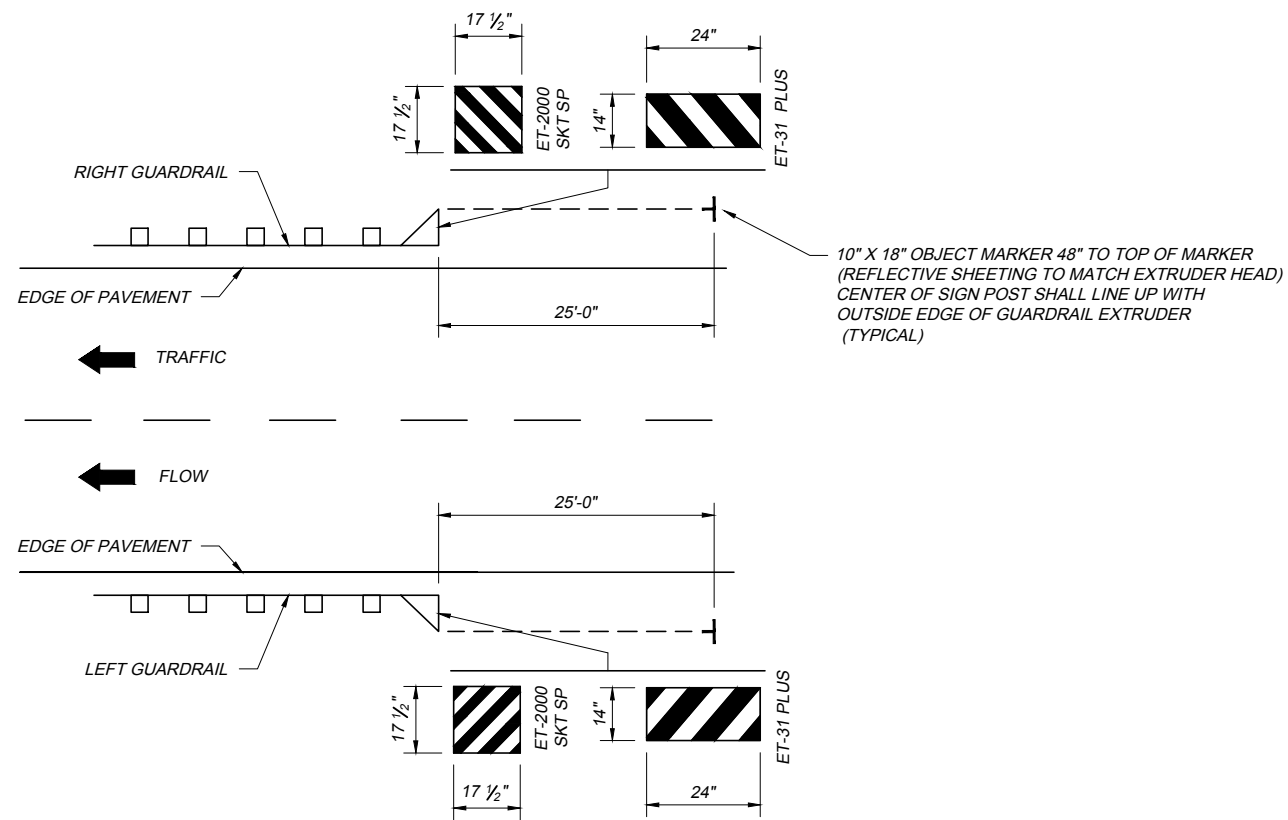


MEDIAN BARRIER CROSS-OVER DELINEATOR

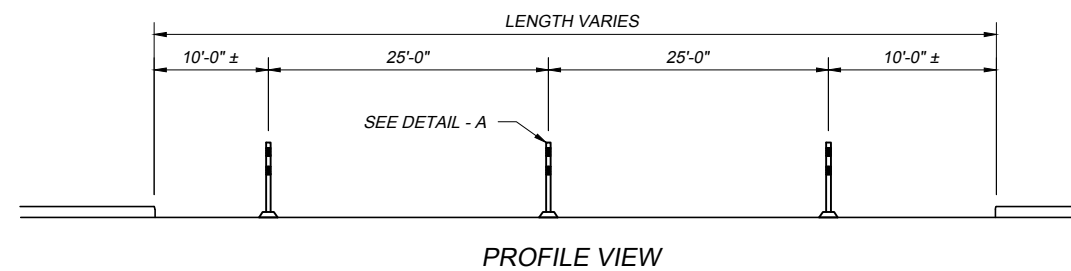


COLOR LEGEND FOR MARKER
 (AS VIEWED FROM DIRECTION OF TRAVEL) FACED WITH 8" TALL BLUE SHEETING
SOLID BLUE - WALL DRAIN ONLY, NO GRATE (3" x 8" BLUE)
BLUE-ORANGE-BLUE - WALL DRAIN WITH GRATE (2" BLUE, 4" ORANGE, 2" BLUE)
ORANGE-BLUE - GRATE ONLY, NO WALL DRAIN (4" ORANGE ON TOP, 4" BLUE ON BOTTOM)
BLACK - NO GRATE, NO WALL DRAIN THIS SIDE

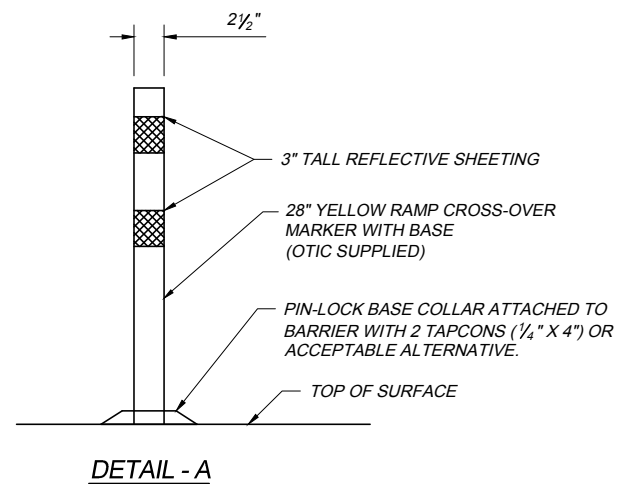
MEDIAN DRAIN DELINEATOR



GUARDRAIL EXTRUDER DELINEATOR



PROFILE VIEW



DETAIL - A

TURNPIKE RAMP CROSS-OVER DELINEATORS

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DATE: OCTOBER 20, 2017

STANDARD DRAWING

TRAFFIC CONTROL
MISCELLANEOUS DELINEATION

TC-3

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OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

OHIO TURNPIKE

OHIO TURNPIKE