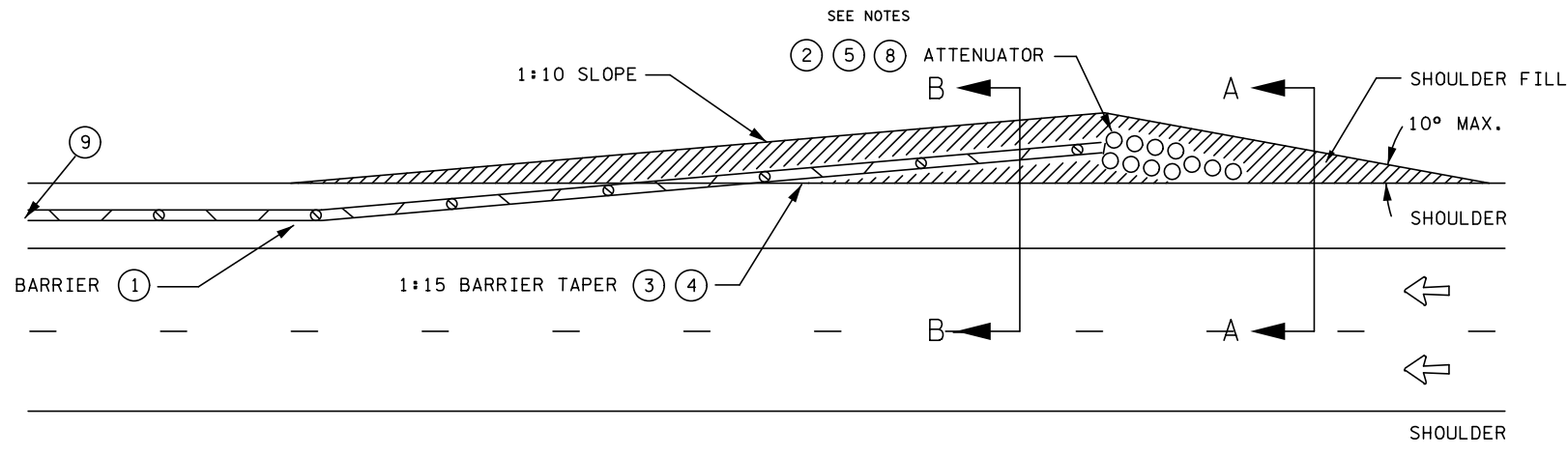


SAND FILLED BARREL ATTENUATOR



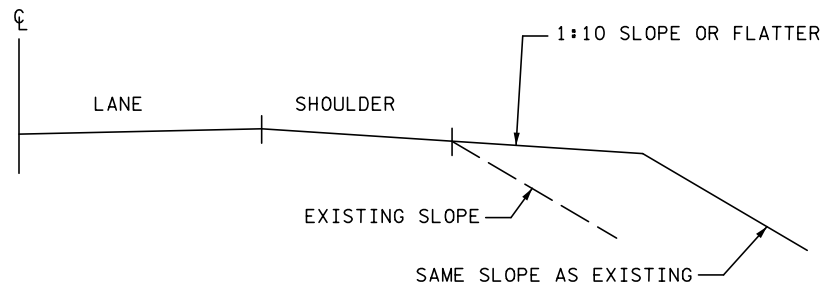
SEE NOTES

DESIGNER NOTES (REMOVE FROM LAYOUT BEFORE INSERTING IN PLAN):

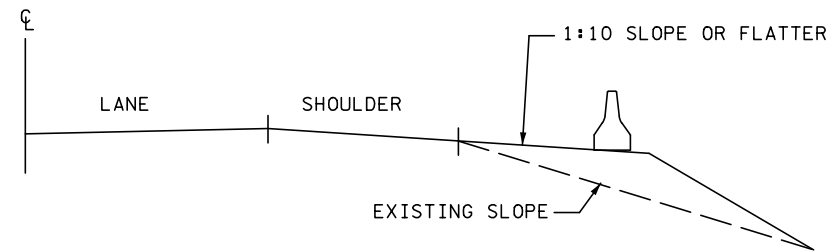
- ① IT IS DESIRABLE TO MAINTAIN FULL SHOULDER WIDTH WHENEVER POSSIBLE. IF THAT IS NOT POSSIBLE, THE MINIMUM DESIRABLE LATERAL OFFSETS ARE BASED ON THE FOLLOWING POSTED SPEED LIMITS:
 70 MPH - 12.0 FEET
 60 MPH - 8.0 FEET
 50 MPH - 6.5 FEET
 40 MPH - 5.0 FEET

 FOR RESTRICTED CONDITIONS, LESSER OFFSETS MAY BE USED. THE OFFSETS SHOULD BE A MINIMUM OF 2 FEET UNLESS THE CONDITIONS ARE EXTREME. LATERAL OFFSETS ARE MEASURED TO THE BOTTOM OF THE BARRIER. BARRIER OFFSET FROM THE EDGE OF THE THRU LANE SHOULD NOT EXCEED 15 FEET.
- ② DESIRABLE TREATMENTS FOR EXPOSED BARRIER ENDS ARE; A CONNECTION TO EXISTING BARRIER; IMPACT ATTENUATOR; TAPER AWAY TO THE EDGE OF THE CLEAR ZONE; AND EXTENDING THROUGH A PLATE BEAM GUARDRAIL BY REMOVING A PANEL.

 FOR POSTED SPEED LIMITS OF 30 MPH OR LESS, THE TAPERING AWAY FROM THE TRAFFIC IS DESIRABLE AND THE USE OF AN IMPACT ATTENUATOR IS OPTIONAL.
- ③ A 1:8 TAPER MAY BE USED WHEN THE POSTED SPEED LIMIT IS 35 MPH OR LESS.
 A 1:12 TAPER MAY BE USED WHEN THE POSTED SPEED LIMIT IS 45 MPH OR LESS.
- ④ IF THE BARRIER IS TO BE EXTENDED BEYOND THE SHOULDER, ADDITIONAL FILL WILL BE NEEDED IN ORDER TO PROVIDE A FLAT (1:10) APPROACH AREA TO THE BARRIER. (SEE SHOULDER FILL DETAIL).
- ⑤ THE IMPACT ATTENUATOR BARRELS SHOULD BE OFFSET A MINIMUM OF 2 FEET FROM THE EDGE OF THE THRU LANE AND ORIENTED TO ACCOMMODATE THE PROBABLE IMPACT ANGLE OF THE ENCROACHING VEHICLE. FOR MOST ROADSIDE CONDITIONS, AN ANGLE OF APPROXIMATELY 10 DEGREES, AS MEASURED BETWEEN THE HIGHWAY AND THE IMPACT ATTENUATOR LONGITUDINAL CENTERLINE, IS CONSIDERED APPROPRIATE. (SEE SHOULDER FILL DETAIL). SEE MANUFACTURERS SPECIFICATIONS FOR BARREL ARRAY AND INSTALLATION.
- ⑥ SPECIFY (NON-GATING, REDIRECTIVE) OR (GATING, NON-REDIRECTIVE) STYLE OF ATTENUATOR.
- ⑦ SEE MANUFACTURERS SPECIFICATIONS FOR ATTENUATOR ARRAY AND INSTALLATION.
- ⑧ SPECIFY REQUIRED TEST LEVEL AND MPH.
- ⑨ FOR TWO-LANE, TWO-WAY TRAFFIC, BOTH ENDS OF THE BARRIER SHOULD BE TREATED IN THE SAME MANNER AS DESCRIBED IN ②.

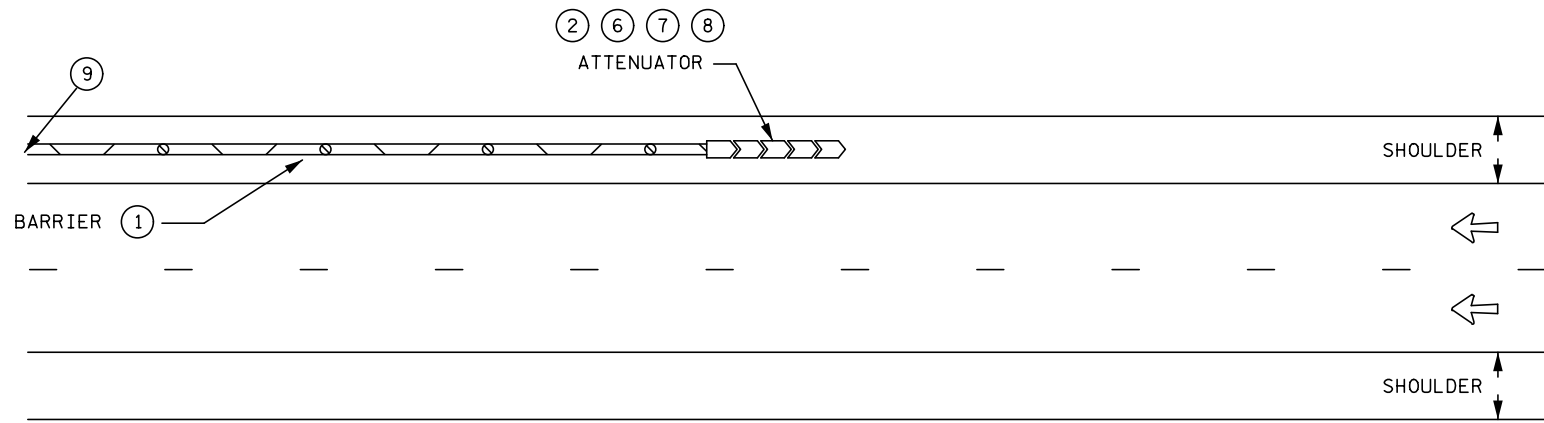


SECTION A-A



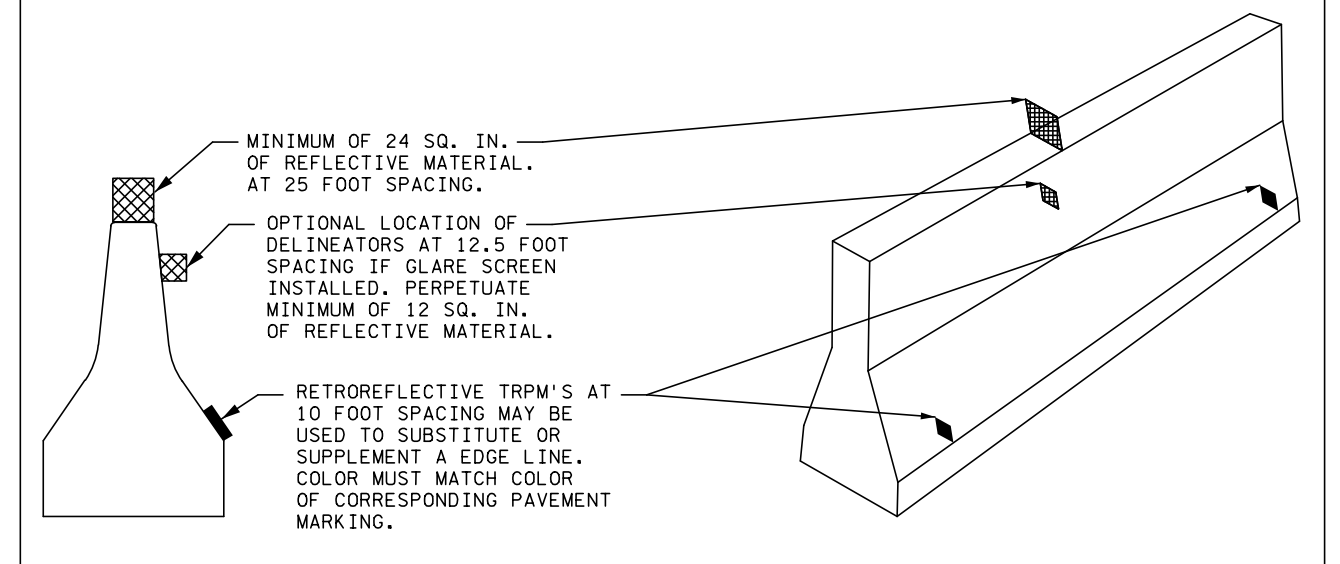
SECTION B-B

(NON-GATING, REDIRECTIVE) OR (GATING NON-REDIRECTIVE) ATTENUATOR



NOT TO SCALE

DELINEATION OPTIONS FOR BARRIER



PORTABLE CONCRETE BARRIER PLACEMENT AND END TREATMENT