



MIN. 1.0' SELECT GRANULAR BORROW ABOVE COARSE FILTER AGGREGATE

URBAN ROAD SECTION RURAL ROAD SECTION

DAYLIGHT TO DITCH

BOTTOM OF SAND SUBGRADE

MIN. 1.0'
MIN. 1.0'
MIN. 0.5'

COARSE FILTER AGGREGATE (MNDOT SPEC. 3137.3 TYPE CA-3 FOR GRADATION PURPOSES ONLY) THE AGGREGATE SHALL BE ROUND RIVER ROCK, WASHED AND FREE OF FINE PARTICLES.

CONNECTION TO STORM SEWER STRUCTURE SHALL BE AT SPRING LINE OR 6" MIN. ABOVE INVERT ALL GROUTING MUST BE AN APPROVED NON-SHRINKABLE GROUT.

INVERT OF DRAIN TILE SHALL BE EVEN WITH OR BELOW SAND SUBCUT.

PVC PERFORATED UNDERDRAIN PIPE (PIPE AND FITTINGS SHALL BE PVC, MEETING ASTM F949 OR D3034 WITH MIN. PIPE STIFFNESS 46 P.S.I., RESIN 12454B (ASTM D1784) GASKETED JOINTS, SLOT, OR ROUND HOLE PERFORATIONS (1.9 IN /L.F.) AT 5 AND 7 O'CLOCK POSITIONS OR APPROVED EQUAL. ALL UNDERDRAINS SHALL BE 6" IN DIAMETER.

FILTER FABRIC WRAP SHALL BE INSTALLED AROUND COARSE AGGREGATE FILTER WITH 1' OVERLAP

NOTE: ALL DRAINTILE MUST HAVE TRACER WIRE INSTALLED WITHIN THE TRENCH WHEN INSTALLED ALONG RURAL ROAD SECTIONS AND NOT BETWEEN STRUCTURES. TRACER WIRE WILL BE 8 GAUGE AND SHALL BE TAPED TO THE TOP OF PIPE AND WILL BE BROUGHT TO THE SURFACE AT EACH STRUCTURE OR CLEAN OUT. FOLLOW U.S.E. GUIDELINES FOR UNDERGROUND BURY. FOLLOWING COMPLETION CONTRACTOR WILL BE REQUIRED TO PERFORM A LOW VOLTAGE CONDUCTIVITY TEST.



STORM SEWER
STREET CROSSING
UNDERDRAIN DETAIL

PLATE NO. LV-STM-9A

DATE 01/2020