

01005 - 1 SPAN STEEL PONY TRUSS WITH 3 SIMPLE SPAN CONCRETE TEE BEAM APPROACHES – GUSSET PLATES

ASSUMPTIONS:

1. Based on the year built (1933) and the VDOT BARS Custom Data:
 - Assumed structural steel yield point = 30 ksi
 - Assumed steel minimum tensile strength = 60 ksi
2. Based on the year built (1933) and the FHWA Bridge Design Guidance No. 1 Part A, assumed the factored shear strength of one rivet = 18 ksi.
3. For the L0 gusset plate check, assumed the fasteners along member 3 stopped at a certain point to simplify gusset plate check. The fasteners were stopped (counting right to left along member 3) after 8 fasteners on the top and after 9 fasteners along the bottom.
4. For the L2 gusset plate check, assumed the fasteners in members 4 and 5 were spaced the same.
5. Assumed the reduction in area of a truss member was the maximum for that member when comparing both the left and right truss.
6. Based on the inspection report, case IR112007 has the following deterioration:

Plate	Member	Reduction in thickness of member (in.)
L0	L0 – U1	0.12
L0	L0 – L1	0.109
L1	L0 – L1, L1 – L2	0.109, 0.105
L2	L1 – L2, L2 – L3	0.071
U1	U1 – L0	0.12