1. **Scope**

Test guardrail hardware to insure specifications are maintained.

2. **Referenced Documents**

2.1 AASHTO Standards
   - M 180  Corrugated Sheet Steel Beams for Highway Guardrail
   - M 232  Zinc Coating (Hot-Dip) on Iron and Steel Hardware

2.2 ASTM Standards
   - A 153  Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
   - A 307  Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength

2.3 SCDOT Standards
   - Standard Drawings 805-1,2, 7, 9A, 11 and 12

2.4 Other Standards
   - ANSI/ASME Standards B1.1 and B 18.2.1

3. **Apparatus**

3.1 Steel ruler
3.2 Micrometer
3.3 Magnetic thickness gauge

4. **Test Specimens**

4.1 One each of all different items.

5. **Procedure**

5.1 Measure each piece of hardware for correct dimensions.
5.2 Check bolts for A.307 designation.
5.3 Check pieces that can be checked for zinc coating and express in oz./sq. ft.

6. **Calculations**

Mils ÷ 1.7 = oz./sq. ft.
7. **Report**

Size of each piece, weight of zinc coating, and if the articles meet specifications. Test results are reported on Lab Form 921. Data and calculations are recorded on worksheet 921W.