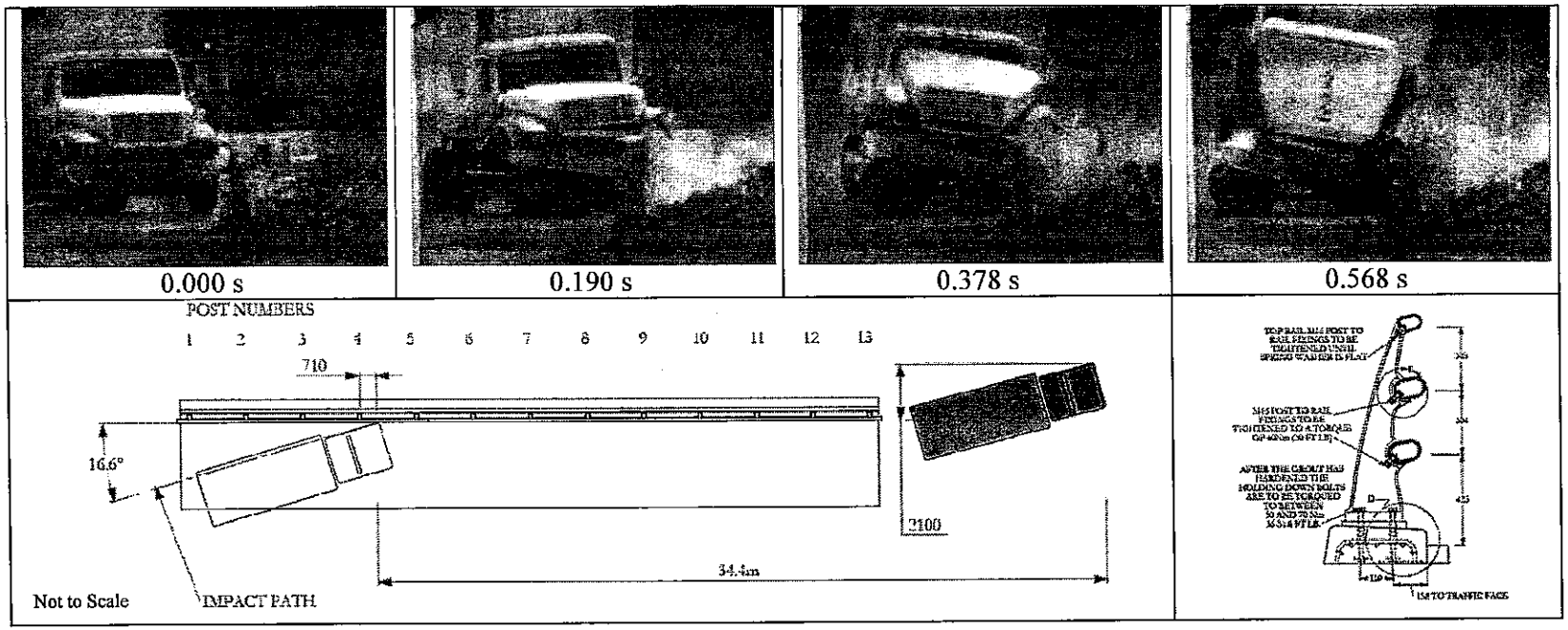

General Information
- Test Agency ..... Texas Transportation Institute
- Testing Standard Test No. ..... *NCHRP Report 350* 4-12
- Test No. 401761-VGL3
- Date 2010-04-29

Test Article
- Type ..... Bridge Rail
- Name ..... VGAN 300 Aluminum Bridge Parapet
- Installation Length ..... 30.3 m
- Material or Key Elements ..... 3 horizontal extruded 6082 T6 aluminum tubes sections on A444.0 T4 aluminum posts spaced at 2.44 m

Soil Type and Condition ..... Concrete Deck, Dry

Test Vehicle
- Type/Designation 8000S
- Make and Model ..... 1999 International 4700
- Curb ..... 5647 kg
- Test Inertial ..... 7951 kg
- Dummy ..... No dummy
- Gross Static ..... 7951 kg

Impact Conditions
- Speed ..... 82.1 km/h
- Angle ..... 16.6 degrees
- Location/Orientation ..... 710 mm dwn of post 4

Exit Conditions
- Speed ..... Not obtainable
- Angle ..... Not obtainable

Occupant Risk Values
- Impact Velocity
  - Longitudinal ..... 3.9 m/s
  - Lateral ..... 3.4 m/s
- Ridedown Accelerations
  - Longitudinal ..... -4.4 G
  - Lateral ..... 6.5 G
- THIV ..... 19.8 km/h
- PHD ..... 7.2 G
- ASI 0.42
- Max. 0.050-s Average
  - Longitudinal ..... -3.7 G
  - Lateral ..... 3.6 G
  - Vertical ..... 2.7 G

Post-Impact Trajectory
- Stopping Distance ..... 40.2 m dwnstrm 1 m twd traffic

Vehicle Stability
- Maximum Yaw Angle ..... -17 degrees
- Maximum Pitch Angle ..... 14 degrees
- Maximum Roll Angle ..... -18 degrees
- Vehicle Snagging ..... No
- Vehicle Pocketing ..... No

Test Article Deflections
- Dynamic ..... Not obtainable
- Permanent ..... 300 mm
- Working Width ..... 787 mm

Vehicle Damage
- VDS 01LFQ4
- CDC 01LFEW3
- Max. Exterior Deformation ..... 50 mm
- Max. Occupant Compartment Deformation ..... 0 mm

Figure 23. Summary of results for *NCHRP Report 350* test 4-12 on the VGAN 300 aluminum bridge rail.