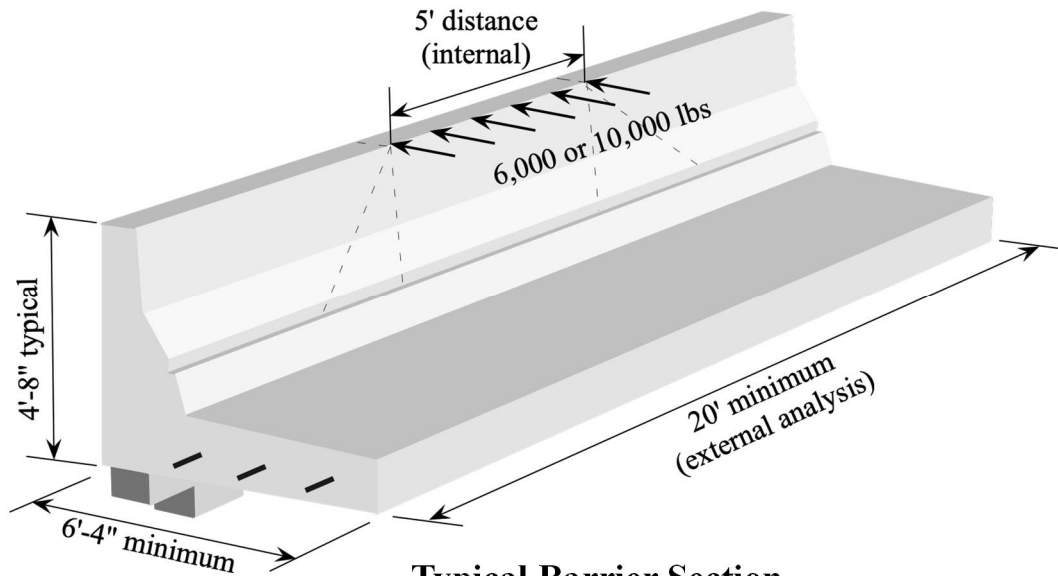
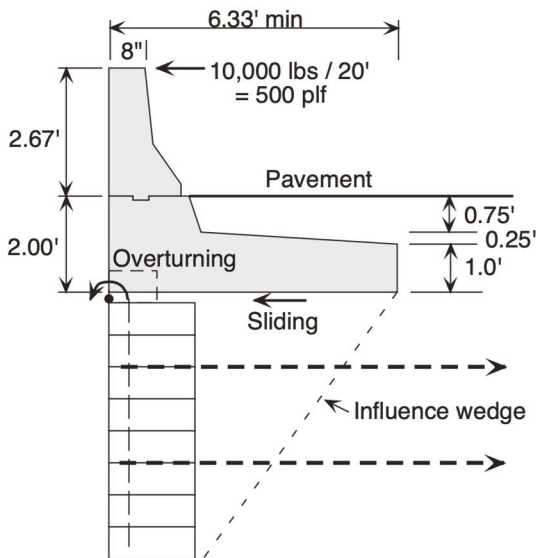


# Traffic Barrier



**Typical Barrier Section**



**Typical Design Section**

Barrier can impart additional load to the upper reinforcement levels. AASHTO testing of steel reinforcement systems requires that 2300 and 600 plf be added to the top two reinforcement levels regardless of slab configuration and type of soil reinforcement. This probably overstates the loads considerably for geosynthetic reinforcement.

"Jersey" crash barriers are typically designed as independent structures on top of MSE wall structures to avoid negative interaction between the flexible wall system and a rigid barrier system. A flexible pavement design section is shown with the "leg" under the pavement. Concrete pavement designs are similar but can incorporate the pavement or sidewalk as the "leg".

Typically, the momentary loading condition of a traffic impact to the barrier does not impart a significant loading to the MSE wall system due to the inertial mass of the large heavily reinforced section. However, AASHTO design criteria establishes a pseudo-static analysis of 10,000 lbs applied over a 5' width for rigid traffic barrier systems which becomes a 500 plf loading when transmitted through the junction slab to the wall system as shown (pour lengths are 20' minimum, 30' maximum, and the barrier section is separated from the wall system). Note that each state may have their own barrier design requirements based on TL ratings for roadways. Therefore any barrier design should reference each individual state code.

The analysis of the upper two reinforcement levels for this additional loading may consider reduced factors of safety or elimination of creep factors for geogrid materials since the loading condition is momentary and may never occur over the life of the structure. Pullout resistance may consider the entire length of reinforcement.