

607 ROADSIDE SIGN SUPPORTS

Breakaway, perforated, and U-channel post are the 3 main types of sign support. Sign supports are designed to minimize damage and injury during a crash. They may become a safety hazard if not installed properly. Signing and Marking Standard Drawings S-1 through S-11 show where and how the various types are typically installed. Sign locations should be staked as soon as possible in order to allow as much time as possible for fabrication of the sign supports.

Usually sign post lengths are determined by the Department based on the survey information provided by the Contractor. The procedure is for the Resident Engineer to collect the survey information on the sign foundations from the Contractor's surveyors and forward this information on to the Sign Designer for the project. However to do this, the Contractor should have most of the shoulder grading complete before staking. Otherwise errors in sign foundation elevations and signpost lengths can occur.

The Designer determines the appropriate post lengths and returns this information to the Resident Engineer who passes it on to the Contractor.

Breakaway Sign Supports

Breakaway signposts can be a tricky item for Resident Engineers. Pay attention to where breakaway signpost are called for in the Project Plans, but pay closer attention to how slopes are built around those locations. Many errors in breakaway sign installations can be traced back to changes in slope work that did not conform to the Contractor's staking plan.

Breakaway sign support foundations are set so that the top of the concrete footing is flush with the ground and the top of the slip base is 2 1/2 to 3 inches (65 to 75 mm) above the concrete. The tops of concrete footings are sloped or rounded to drain (see [Signing and Marking Standard Drawing S-5](#)). It is important that the Contractor does not pour breakaway sign foundations until the slopes are nearly complete. The sign foundation elevations must be based on the finished slopes (including topsoil plating). Do not regrade the slopes immediately adjacent to the sign foundation to match the sign foundation elevation. This can create a bump or dip in the slopes near the foundation that aggravates any vehicle collision with the sign.

After all topsoil plating and final grading work is finished, check the footings again to be sure that the tops of the footings are clean and that no dirt or debris remains on or around the stub post or slip plate assembly. The posts must be free to move when hit.

Bolts for fuse plates and base mounts are required to be torqued. The amount of torque and the tightening procedure are shown in the Standard Drawings. Subsection 604-2.03 of this manual has additional information on torque wrenches and torquing requirements not covered in the Standard Drawings.

Tightening bolts on breakaway sign bases requires close inspection. If the bases are not tight enough, the sign can "walk off" the plate under repeated wind loading. If over-tightened, the breakaway feature will not work.