

If slope staking is performed by data collection stakeout software, then electronic files may be submitted in place of notebooks. However any electronic file submitted would need to contain the same information that the slope stake notebooks contain. Such as the catch point information (distance, elevation, cut/fill) and the offset point information (distance, elevation, cut/fill). Anything less than this will be unacceptable, and in this case the slope stake information would need to be transferred into a notebook in the same format as discussed above.

Sec. 8.09 **Fine Grade Stakes**

Fine grade or other stakes, required for the construction of the project, are to be set as the work progresses, with the exception of secondary roads. Fine grade stakes should be set on all projects on which the plans show definite grade lines. On tangents, the fine grade hubs are to be set on one side with distances and grades referenced to the finished grade on centerline. On curves, fine grade hubs may be required on both sides with offsets and grades referenced to the edge of pavement. Clear, concise notes are to be kept on fine grade stakes showing dates, etc. Fine grade hubs are not to be set for rough grading, as the slope stakes should suffice in these instances.

In regard to secondary projects, fine grade stakes will be set only on those with curb and gutter, unless otherwise requested by the Resident Engineer.

On projects where grading and paving is done under the same contract, only one set of fine grade stakes is to be set. This one set of stakes is to be used for both cutting the fine grade and for paving. For marking fine grade stakes see [Figure 8-I](#).

Sec. 8.10 **Right-of-Way Stakes**

Hub and tack points will be set for Standard RM-1 monuments by the VDOT Surveyor as shown in Section 105.13 and 517 of the Road and Bridge Standards. Standard RM-2 monuments will be set by the VDOT Survey Personnel or Consultant at the time of stakeout or after construction is completed, if pin location is within the construction limits. Intermediate stakes for fencing will be set only on curves, and then only as needed. There may be instances on curves in rough terrain where staking by the VDOT or Contract Surveyor will be required, but in many cases the fence line can be established by measuring from the centerline. See [Figure 8-I](#) for marking standard RM-1 stakes. **In all instances, the staking of all RM-1 & RM-2 monumentation shall be in accordance with Section 105.13 and 517 and [Figure 4](#).**

Sec. 8.11 **Federal and Non-Federal Aid State Force Account Projects**

Construction surveys for these type projects shall be made in accordance with the **General Provision in Section 105.13 and 517** of the Road and Bridge Specifications and the **Construction Manual** with its corresponding sections.