

All references to the baseline and benchmarks are to be so placed that they will be entirely outside of the area likely to be disturbed by the operation in and around the borrow pits.

Borrow Pits will be surveyed by creating a digital DTM surface. DTM's are used to secure elevations, then an appropriate number of control stations should be used to insure the integrity of the pit and readings should be secured at appropriate intervals in insure accurate coverage for computations of volume.

In the event a borrow pit covers two or more properties, all property lines shall be clearly shown in the notes and on the diagrammatic sketch, in order that the amount of material removed from each property may be determined. It should be noted in the book, ascii file or digital file whether borrow pit data was secured before or after topsoil and/or rootmat was stripped and care should be exercised to see that the final sections are taken in the same way. (This paragraph should be added to second paragraph.)

According to the Road and Bridge Specifications Section 303.04 (b) the borrow excavation areas shall be bladed and left in a shape to permit accurate measurements for finals.

#### *Sec. 8.06 Culvert Stakeout*

All box culverts are to be staked, according to furnished alignment and grades. The Contract Surveyor should check that the dimensions given for the culvert are consistent with the typical section of the roadway, giving attention that the toe of the slope intersects with the proper point of the culvert. Should any major differences be found, the Contract Surveyor is to immediately notify the District Survey Manager so the differences can be resolved. For minor differences, such as the length of the culvert, the stakes for the proposed culvert should be adjusted to match the slope of the section, with notes made on the stakeout sketch and in red pencil on the contractor's and inspector's plans. [Figure 8-L](#) illustrates a procedure for checking the stake out of a box culvert. **All culverts will be staked in accordance with Section 105.13 and 517 and [Figure 1](#).**

All pipe culverts, 48" and larger, and all culverts with design grades, are to be staked in accordance with Section 105.13 & 517 Road and Bridge Specifications. All pipe culverts less than 48" will be staked by contract personnel.

All pipe culverts with design grades, such as storm sewers, regardless of size are to be staked by the Contract Surveyor. All pipe culverts that are in critical locations will be staked by the Contract Surveyor when specifically requested by the Project Engineer.