Roadway Excavation

Typically, contractors are paid for material that is cut regardless of whether the material is from within the project or from a borrow area.

**EXCAVATION, CLASS 10 ROADWAY AND BORROW**: Total cut volume of Class 10 material. This does not include any shrink, wasted materials, or rock materials that will be bid as Class 12 or Class 13. A shrink factor is used on the fill side to determine this quantity.

**EXCAVATION, CLASS 10, WASTE**: Total cut volume of Class 10 material that will be removed from the project. Even if some of the waste material can be reincorporated back into the project, it is bid as waste. The contractor decides how to handle the excess material.

*Note: This quantity does not include shrink. It is the quantity that is cut.*

**EXCAVATION, CLASS 12, BOULDER OR ROCK FRAGMENTS**: Total volume of large rock material removed from, or buried on, the project. This quantity is supplied by soils design section.

**EXCAVATION, CLASS 12, ROADWAY AND BORROW**: Total cut volume of material indicated as rock in the cross sections. This volume should be subtracted out of the total cut when determining the Class 10 Roadway & Borrow bid item quantity. If there is room for this material in the fill, it should be placed there. If the contractor wants to use it for other purposes, it would be their responsibility to provide replacement material.

**EXCAVATION, CLASS 13, ROADWAY AND BORROW**: Total cut volume of any material not classified as Class 10 or Class 12 in the embankment for roadway construction.

**EXCAVATION, CLASS 13, WASTE**: Total cut volume of Class 13 material to be removed from the project.

**EMBANKMENT-IN-PLACE**: Total calculated volume of fill material needed within the template when the quantity is less than 10,000 cubic yards. No shrink factor is applied to this bid item quantity.

**EMBANKMENT-IN-PLACE, CONTRACTOR FURNISHED**: Total calculated volume of fill material needed within the template when the quantity is greater than or equal to 10,000 cubic yards. No shrink factor is applied to this bid item quantity.

Topsoil Excavation

**TOPSOIL, FURNISH AND SPREAD**: Total calculated volume of Topsoil material needed within the template brought from an outside source to be spread on a project. The bid item quantity does not include any shrink factor. However, a shrink factor is used on the cut material to determine this quantity.

**TOPSOIL, SPREAD**: Total calculated volume of Topsoil material needed within the template to be spread on a project. This is material already stockpiled within the project limits. The bid item quantity does not include any shrink factor. However, a shrink factor is used on the fill material to determine this quantity.

**TOPSOIL, STRIP, SALVAGE AND SPREAD**: Total calculated volume of Topsoil material within the template to be stripped, stored in the project limits, then placed in designated areas. The bid item quantity does not include any shrink factor. However, a shrink factor is used on the fill material to determine this quantity.
TOPSOIL, STRIP AND STOCKPILE: Total calculated template volume of Topsoil material to be stripped and saved for a later operation (excess of Topsoil material stripped after the fill quantity is satisfied). The bid item quantity does not include any shrink factor. However, a shrink factor is used on the cut material to determine this quantity.

Examples of Bid Item Usage

See Section 1F-20 for examples.
**Chronology of Changes to Design Manual Section:**

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/5/2016</td>
<td>Revised</td>
</tr>
<tr>
<td></td>
<td>Revised Class 10 and Class 12 descriptions. Added reference to Section 1F-20</td>
</tr>
<tr>
<td></td>
<td>for examples. Moved shrink for Class 10 and topsoil from cut to fill.</td>
</tr>
<tr>
<td>7/31/2015</td>
<td>NEW</td>
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<td>New</td>
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