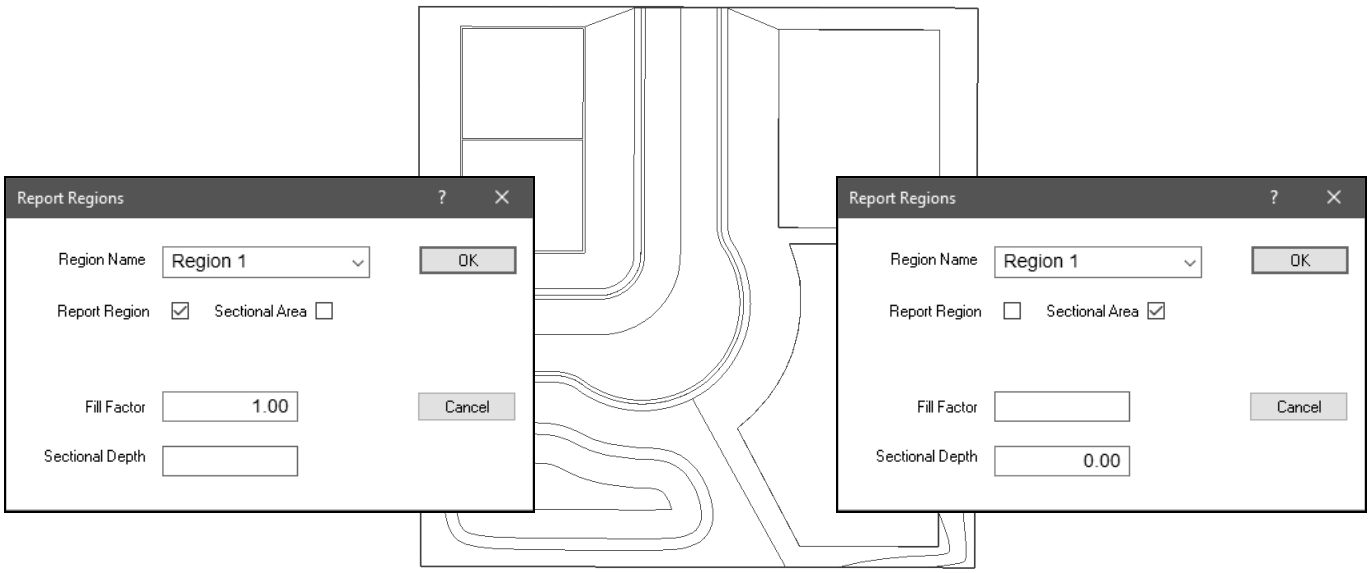
Earthwork Modeling Step-by-Step
Report Regions and Sectional Areas Defined

Report Regions and **Sectional Areas** share a common entry dialog and both objects can be created at the same time with a single combined entry. But these two objects are stored on their own *Layers* in the AGTEK project file, they serve completely different purposes, and they can be entered independently . . .



Use Report Regions to:

(1) Define different horizontal areas for cut/fill quantity subtotals (pavements, landscape, phases, etc.). Each Report Region will be listed as an individual line item on *Part 1* of the Volume Report (see page 212).

(2) Apply an optional area-specific ***Fill Factor*** to adjust for shrink/swell***** due to compaction. The default Fill Factor is ***1.00*** and implies bank cut and compacted fill volumes of equal density (no shrink or swell from bank cut to compacted fill*****). A Fill Factor ***less than 1.00*** (e.g., 0.90) implies bank cut density is greater than compacted fill density (swell from cut to fill); a Fill Factor ***greater than 1.00*** (e.g., 1.10) implies bank cut density is less than compacted fill density (shrink from cut to fill).

***** *See pages 215-224 for a detailed discussion on shrink/swell adjustments and corresponding AGTEK Fill Factors.*

Use Sectional Areas to:

Create a Subgrade surface by defining horizontal areas where a specified vertical offset (***Sectional Depth***) is applied to the Design surface model (reflecting deductions****** for the thickness of pavements, slabs, re-spread topsoil, etc.—materials that close the gap between design finish grade and "dirt" subgrade). Each Sectional Area will be listed as an individual line item on *Part 3* of the Volume Report (see page 212).

****** *The resulting Subgrade surface will be lower than the corresponding Design surface in almost all cases; however, if needed, the Subgrade surface could be made higher by entering a negative Sectional Depth value. Also, modifying a Sectional Depth is an easy way to model different design "lifts" for machine control (e.g., sub-base, base and finish courses at pavements).*