FDOT Earthwork Volumes

FDOT State Kit for AutoCAD Civil 3D

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WORKFLOW FOR CREATING EARTHWORK VOLUMES FROM CORRIDORS

Create Corridors

- There will be a lot of Corridors – Recommend a Maximum Corridor Length and number of Intersections
- Corridors Abut
- Create Corridor Surface(s)
- Create Data Shortcuts for Corridor Surface(s)
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Create Surface Refinement Drawing by surface type (i.e., Datum, Base Course, Top…whatever they need)

- Data reference Corridor Surfaces
- Create Refinement Surface
- Paste Corridor Surfaces
- Build in Edits to surfaces to complete complex areas
    - Feature Lines
    - Grading
    - Polylines
- Create Shortcut for Refinement Surface

Section Views use the Refinement surfaces.

- A sure fire way to check to see if your surfaces are good is to turn on the Corridor Display and compare the Refinement Surface to the Corridor
- Do no display Corridor Links in Final Section Views, except possibly the pavement structure.
- Do display Corridor labels in the Final Section Views.

Earthwork uses the Refinement Surfaces.

- Earthwork and Section Views are two different processes.
- In order to get accurate volumes from average end areas we can set ourselves up better by using different spacing and matchline configurations than what you need for Section views.
- If sharing sample lines across Drawings is a problem, you can use base sample lines by creating a DWG of just the sample lines (you'll have to explode them to polylines)
    - Create a new DWG
    - Data Reference the main alignment
    - Xreference, Bind, include and Explode the Sample Lines DWG into the Drawing you are creating
    - Create the new Sample Lines by selecting Existing Polylines

To create your AMG models

- Create an AMG Model Surface DWG (by type)
- Data Reference the Refinement surface for that type (possibly could be more than one)
- Turn display on to triangles
- Export to an earlier version of AutoCAD

Basically creates 3D triangles representing the surface.