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Engineering/CADD System Support
February 15, 2016
Session Overview

- This session will focus on the OpenRoads Vertical Geometry tools. Specifically, a side by side comparison with the legacy GEOPAK Road VPI based “Profile Generator” tool will be demonstrated and the steps necessary to operate the new tools to replicate the old.
Profiles – Legacy GEOPAK Dialogs
Vertical Geometry Tools:

- Import/Export Profiles
- Vertical Design Standards
- Edit Profile by VPI
- Profile Reports
- Construct Profiles
- Intersecting Profiles
- Profile by Offsets
Profiles with OpenRoads

- Import from GPK or XML
- Create
- Edit/ Move / Modify VPI or Curves
- Extend, Join, Add, Subtract
- Copy, Drop, Trim, Trace
- Projected
- Export
Import/Export Profiles

- Import Geometry Tool
  - Used to store chains, profiles into SS3 design file
Imported Profiles - General Guidelines

- OpenRoads can import profiles from the gpk, alg, or xml files.

- OpenRoads profile manipulators can be used to edit an imported profile with exceptions!

- The alignment name of an imported profile should not be changed, the imported alignment name is hard-coded in the element properties.

- Imported profiles can be updated/edited from the source file and re-imported.

- Re-build profiles with OpenRoads if you intend to make edits in the design file.
Design Standards Checks
Edit Profile by VPI
Profile Reports
Profile Reports

Vertical Alignment Review Report

Report Created: 5/21/2014
Time: 2:31pm

Project: Default
Description:
File Name: LineProjects\222049555201\roadway\ALIGNRD01_SS3.dgn
Last Revised: 5/21/2014 14:28:46

Notes: All units in this report are in feet unless specified otherwise.

Horizontal Alignment: CL-CONST
Horizontal Description:
Horizontal Style: Centerline(CL)

Vertical Alignment: Pr:Profile-S61
Vertical Description:
Vertical Style: Centerline(CL)

<table>
<thead>
<tr>
<th>Element</th>
<th>Station</th>
<th>Elevation</th>
</tr>
</thead>
<tbody>
<tr>
<td>POB</td>
<td>R1 700+00.00</td>
<td>36.24</td>
</tr>
<tr>
<td>PVC</td>
<td>R1 707+07.30</td>
<td>31.90</td>
</tr>
<tr>
<td>Tangent Grade</td>
<td>-0.4723%</td>
<td></td>
</tr>
<tr>
<td>Tangent Length</td>
<td>707.301555</td>
<td></td>
</tr>
</tbody>
</table>

Element: Symmetrical Parabola

| PVC | R1 707+07.30 | 31.90 |
| PVI | R1 707+67.30 | 31.61 |
| PVT | R1 708+27.30 | 33.15 |
| VLOW| R1 707+26.00 | 31.85 |
| Length| 120.0000000 |       |
Construct Profiles

Intersection Profiles
Intersecting Profiles

This is the plan element of the profile to show intersecting lines.
Intersecting Profiles
Intersecting Profiles
Intersecting Profiles

Slope = -0.8949%
Length = 4.008993
Intersecting Profiles
Intersecting Profiles
Intersecting Profiles
Construct Profiles

Curb Return Profiles
Construct Profiles
Construct Profiles
Profile by Offsets
Profile by Offsets
QUESTIONS AND COMMENTS

Thank you for attending!

Engineering/CADD System Support