That CAD Girl

Sneak Preview — Mass Haul Analysis in Carlson 2014

July 11, 2013

Todd Carlson helped me out with a demonstration of Carlson Takeoff a couple months ago and the company we were presenting to was looking for some particular features in a mass haul analysis routine. They had looked at several other programs as well as Takeoff and had yet to find a solution to their particular issue.

Fast-forward about a month and Todd followed up to let us know that the new functionality had been incorporated into the software and would be available in **Carlson Civil** and **Carlson Construction/Takeoff 2014**. This is a perfect illustration of how responsive Carlson is to their customers (or even prospects, in this case).

I asked Todd to write up a little preview of the new Mass Haul Analysis routine we'll see in Carlson 2014:

Mass Haul Analysis in a nutshell:

That CAD Girl

Mass Haul Analysis determines the volume and haul distance for groups of net cut and net fill station ranges along a road. The program calculates the optimized cut to fill movements so that the total volume-distance moved is minimized.
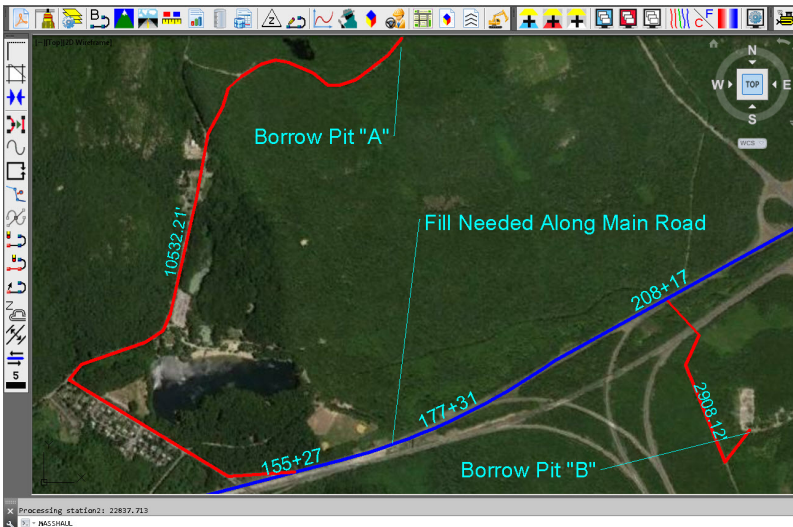
New Feature:
When dealing with multiple external hauls, users can now input the distance (and a "road conditions" factor) a borrow pit or dump pile is from its entry station. The program will then use this information when minimizing earth movement along the road.

For example, as shown in the first graphic below, an image of the area was inserted into the drawing from **[Google Earth](#)** or the **[Esri Mapping Service](#)**. CAD polylines were sketched along the travel paths from multiple pit locations to the project site.

Then, purely based off stationing, borrow pit (A) may be closer to a fill area than borrow pit (B). However, if the distance from borrow pit (B) to its entry station is closer than borrow pit (A)'s, the program may determine to use (B) as the borrow pit over (A) to optimize the earth movement.
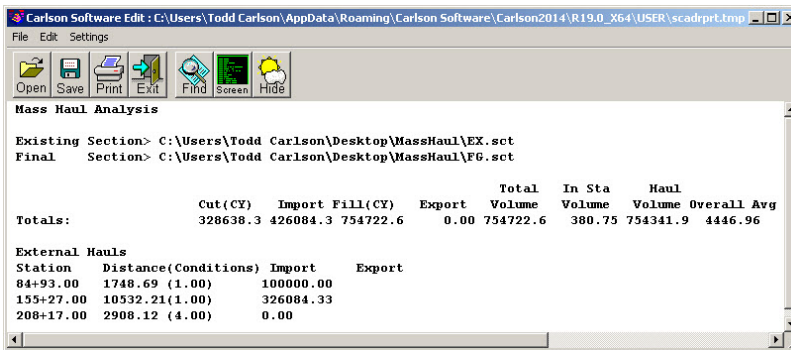
Edit External Haul dialog:

- Station: 8493.000
- Distance: 1748.687 [Set]
- Road Conditions: 1.000

Source Type
- ● Import
- ○ Export

☑ Set Volume Limit
Volume (CY): 5000

[OK] [Cancel] [Help]

Mass Haul Analysis

Existing Section> C:\Users\Todd Carlson\Desktop\MassHaul\EX.sct
Final   Section> C:\Users\Todd Carlson\Desktop\MassHaul\FG.sct

	Cut(CY)	Import Fill(CY)	Export	Total Volume	In Sta Volume	Haul Volume	Overall Avg
Totals:	328638.3	426084.3 754722.6	0.00	754722.6	380.75	754341.9	4446.96

External Hauls

Station	Distance(Conditions)	Import	Export
84+93.00	1748.69 (1.00)	100000.00	
155+27.00	10532.21(1.00)	326084.33	
208+17.00	2908.12 (4.00)	0.00	

Learn more about **Carlson Civil** and **Carlson Takeoff**