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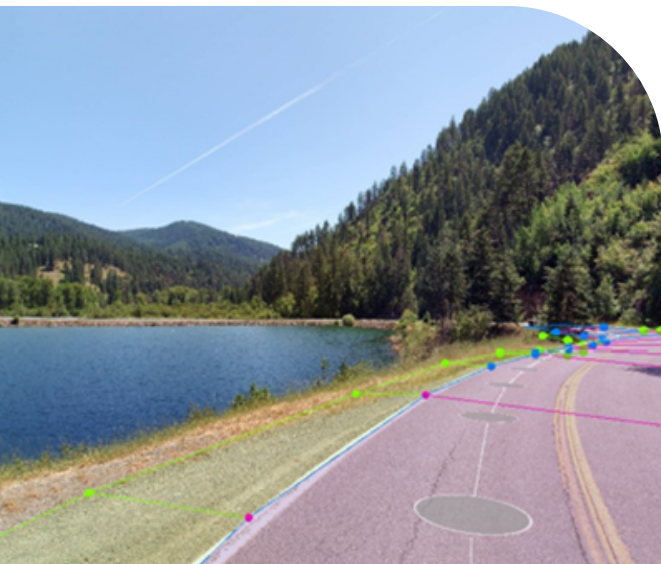
Curve and Grade

Roadway geometry for your organization

Cyclomedia, the leading roadway asset data provider to state and local agencies, understands the complexities these customers face. Our solutions provide ground truth-based datasets and valuable insights to enhance data-driven decision making.

Curve and Grade data is difficult and time-consuming to collect. Additionally, these datasets are required components for HPMS, MIRE reporting, and safety planning. Cyclomedia leverages the most advanced AI and Machine Learning technologies to deliver customers consistent and precise curve and grade data to support their HPMS, HSIP and Strategic Highway Safety Plan requirements.

Cyclomedia has a solution– here's how it works

- Cyclomedia devised a fully automated process leveraging AI and ML technology to extract all your roadway's curve and grade data elements.

- Cyclomedia uses our patented high precision collection system, the DCR10, equipped with a mobile LiDAR sensor casting out a 360° 3D mesh of both the road and surrounding right-of-way to provide an overall view of your roadways geometric values.

- This product allows you to virtually assess your road geometry at a network-wide level, quickly identifying areas of concern or reporting your HPMS data through a streamlined process.

- This product uses our extracted LiDAR-based attributes from our Edge of Travel dataset to ascertain the geometry of the lanes and the shoulders separately.

Real data.
True understanding.
Big impact.

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Curve

Curve is delivered as a polygon feature encompassing the entire travel area of the roadway. A new polygon will be started anytime the curve radius changes by more than 5% or if 1/10th of a mile is reached.

Attributes Include

- ID
- Route ID
- Begin mile
- End mile
- Begin x/y/z
- End x/y/z
- Curve Radius
- Length
- Super Elevation Min
- Super Elevation Max
- Recording Data
- Street Smart URL

Shoulder Slope

Shoulders are delivered as two features represented as a polygon encompassing 2ft from the edge of travel plus 3ft beyond. A new polygon will be started when the slope changes by more than 1% or if 1/10th of a mile is reached.

Attributes Include

- ID
- Route ID
- Begin mile
- End mile
- Begin x/y/z
- End x/y/z
- Cross Slope
- Length
- Recording date
- Street Smart URL

Grade

Grade is delivered as a polygon feature encompassing the entire roadway travel area. A new polygon is started when the grade changes by more than 1% or if 1/10th of a mile is reached.

Attributes Include

- ID
- Route ID
- Begin mile
- End mile
- Begin x/y/z
- End x/y/z
- Grade
- Length
- Recording date
- Street Smart URL

Cross Section

Cross sections are delivered every 15ft as polyline features along the entire road network. The feature will extend from the edges of travel and represent the elevation changes along the road cross-section.

Attributes Include

- ID
- Route ID
- Begin mile
- End mile
- Begin x/y/z
- End x/y/z
- Slope
- Length
- Crown height
- Recording date
- Street Smart URL