

TR1007
Light Detection and Ranging (LiDAR) Technology Evaluation

Q: It is said that: "Data provided by MoDOT will include: Control survey for the project, map showing the project limits, 2D MicroStation drawing of collected planimetric features, an orthomosaic of the project, 3D Triangulated model in MicroStation and GEOPAK format of the mapped terrain associated with the project." Does it mean MoDOT will provide all photogrammetry models, static AND mobile terrestrial Lidar, and air born Lidar data? Or we have to collect them by ourselves?

A: MoDOT will provide the data it used to create deliverables for Roadway design on this project. This project was flown for Photogrammetry, control for the photogrammetry work was surveyed, and MoDOT mapped the job using Photogrammetry procedures. All of this information will be provided. MoDOT does not have any Lidar data for the project. That is the work that is part of this research project. The data MoDOT provides is for use in the analysis of quality and cost effectiveness of the Lidar collection and modeling.

Q: If MoDOT can provide all data, can you send me a detailed data description, such as Spatial resolution, providers, processing methods, history et al? Those are necessary info in a proposal.

A: MoDOT will provide that to the successful proposer. At this point, it should be sufficient to know that the data we will provide is sufficient to meet our mapping delivery requirements in MoDOT's Engineering Policy Guide. [Engineering Policy Guide at: epg.modot.mo.gov](http://epg.modot.mo.gov)

Q: "All data collected shall meet the requirements of MoDOT's Engineering Policy Guide for Photogrammetric and survey data delivery. (epg.modot.mo.gov) " Can you give me a specific link to this particular Engineering Policy Guide?

A: In general, we want files of a standard MoDOT format that we can analyze.

Survey data: [http://epg.modot.mo.gov/index.php?title=238.2_Land_Surveying - 238.2.18.6_Recording_the_Location_Survey](http://epg.modot.mo.gov/index.php?title=238.2_Land_Surveying_-_238.2.18.6_Recording_the_Location_Survey)

Electronic file delivery:

http://epg.modot.mo.gov/index.php?title=237.14_Electronic_Design_Data_Delivery

Q: After reviewing Missouri's Highways and Transportation's recent RFP for LiDAR Technology, we were curious if a specific system (i.e. Optech) was preferred to be used.

A: Selection of the equipment used to meet the specifications of the RFP is at the discretion of the organization making the proposal. MoDOT has no preference.

Q: What does 'schedule flexibility' mean?

A: Current methods of Photogrammetry provide a narrow window of time each year to obtain bare ground leaf off photography. We believe Lidar technologies may be able to expand that window of collection time. We expect the researcher to be able to quantify this and describe its effects on our ability to provide mapping for projects.

Q: What does 'Data Quality Accuracy for roadway design use' exactly mean?

A: Photogrammetric accuracy is required to be '1/2 a contour interval'. We are asking for documented evidence of accuracy levels of this technology. We also are expecting an analysis of this data compared to our existing data. We would expect a quality assurance process to be used for feature collection and comparison of planimetric features and tin-to-tin data analysis.

Q: Are there any accuracy specifications you would like to be used?

A: MoDOT is asking the researcher to use their experience to determine these that meet or exceed our existing EPG requirements.

Q: Did you intend for items c and d in section (B) Deliverables: 3) to be the same?

A: It is a Duplication, we apologize for the confusion.

Q: Will you accept/consider alternates and/or value proposals?

A: Since this is a research project, the research teams method and performance should consider alternates. MoDOT is interested in obtaining the most information from this project that assists us to understand this technology and it's application to MoDOT.

Q: *What horizontal and vertical datum will you require the data to be referenced to?*

A: NAD83 horizontal and NVD88 Vertical

Q: *Do you have any point density requirements for the airborne LiDAR?*

A: The researcher should determine the most cost effective requirement that meets or exceeds MoDOT's EPG accuracy requirements.