Blended LiDAR Surveys

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ABNA Engineering
Introduction

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Introduction

• ABNA Engineering
  • Full service Civil Engineering company
  • 23 years of experience in the surveying and transportation industry
  • Project experience ranging from streetscapes to 40+ mile corridor surveys
  • Offices in Chicago and St Louis
Surveying

- All survey projects are unique
- Safety is first and foremost to all we do
- Pioneering emerging technologies
Surveying

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- Pioneering emerging technologies
Innovation

• Increase safety on ALL our projects
• Seek new ways to delight and serve our clients
• Create new workflows and methodologies to go above and beyond the needs and requirements of our clients
LiDAR Surveys

- LiDAR – Light Detection and Ranging
- 3D scanning – creates a 3D model of remote or inaccessible areas
LiDAR Surveys

- LiDAR – Light Detection and Ranging
- 3D scanning – creates a 3D model of remote or inaccessible areas
- Minimizes time in the field
- Allows more detail and attributes to be picked up that can be referenced at a later date
Blended LiDAR Surveys

- Multiple sources of Survey Data
- Enables us to respond creatively to practical, time, and budgetary constraints
- Respond to different risk elements of project conditions
- This can involve aerial LiDAR, mobile LiDAR, terrestrial/static LiDAR, and conventional survey methods
Blended LiDAR Surveys

- Allows us to cherry pick the best solutions to multiple different survey scenarios - cost permitting
- Create custom scenarios that can prioritize certain sections based upon need and client request
Examples of Applications

• 40 miles of Smart Highway Design
• 6 ½ miles of Streetscape Work
• Underground Tunnel Replacements
• Interstate interchange redesign
• Park upgrades and redesign
How?

- Either at the point cloud or the csv point file level
- Combining multiple sources using programs like Microstation and Trimble Business Center/RealWorks
Additional Benefits

- Confirm multiple sources are all accurate
- Increased measure of QA/QC
Additional Benefits

- Confirm multiple sources are all accurate
- Increased measure of QA/QC
- All data sources are checked against each other as combining takes place
- Multiple views of same data
- Optimize resources
- Safety is paramount!
Conclusion

• Very effective way of capturing survey data in different scenarios
• Added level of QC and data accuracy
• Can save on future field mobilizations
• Cost and time effective
• Adds additional safety measures to all our field work
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