To LiDAR or Not to LiDAR

Presented to:

March 10th, 2015

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LiDAR or not to LiDAR
5 Key Elements

• What is LiDAR?
• Other Survey Methods
• Why Consider LiDAR compared to Conventional, GPS, or Photogrammetric Surveying?
• What are the benefits of LiDAR compared to the other methods of surveying?
• Case Studies
What is LiDAR?
What is LiDAR?

The Acronym for LiDAR is

Light imaging, Detection, And Ranging
What is LiDAR?
Some Examples:

Mobile LiDAR
Some Examples:

Airborne LiDAR
Some Examples:

Static LiDAR
“Point Cloud”
LiDAR Processing
Other Survey Methods

• Aerial Survey – Photogrammetry

• Conventional Survey
Survey Instruments
Survey Instruments
Survey Instruments
Survey Instruments
Control Networks

13 Miles of Route Survey & Topographic Survey
Along I-69 Hamilton County
Control Networks
Control Networks
Supplemental Survey

I-69 Campus Parkway
Why Consider LiDAR to Conventional, GPS, or Photogrammetric Surveying?
When is LiDAR Optimal?

- YES
- NO
- POSSIBLY
Why Consider LiDAR

What is your scope?
Why Consider LiDAR

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Why Consider LiDAR

What is your scope?

Runway vs. Rural
Why Consider LiDAR

What is your scope?
Why Consider LiDAR

What is your scope?
Why Consider LiDAR

What are your accuracy requirements?
What is your schedule?

Why Consider LiDAR
Why Consider LiDAR

What is your schedule?
Why Consider LiDAR

What is your schedule?
Why Consider LiDAR

What are your goals or expectations of the survey?
What are the Benefits of LiDAR Compared to Other Methods of Surveying?

“What is the Best Tool?”
What are the Benefits?

Safety
More Data in Less Time

What are the Benefits?

MORE FIELD DATA
What are the Benefits?

Real-time Data with Images and Conditions Documented
What are the Down Sides to Using LiDAR?
What are the Down Sides?

Control Network LiDAR
Weather & Site Conditions

Rain and Snow

What are the Down Sides?
What are the Down Sides?

Small Projects
We are always asking ourselves, "What is the right tool for the job?"
I-94 Northern Indiana Highway
I-94 Northern Indiana Highway
I-94 Northern Indiana Highway

Case Studies
I-94 Northern Indiana Highway

Case Studies
Case Studies

I-94 Northern Indiana Highway
Case Studies

Fort Wayne International Airport

Civil Engineering | Surveying | Inspection
Case Studies

Fort Wayne International Airport
Case Studies

Fort Wayne International Airport
Fort Wayne International Airport
Greencastle Stellar Community Project

4100 Feet of Detailed Urban Area

Greencastle Streetscape Improvements
Case Studies

Greencastle Stellar Community Project
Case Studies

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4100 Feet of Detailed Urban Area