

Innovative survey solutions to limited survey budgets

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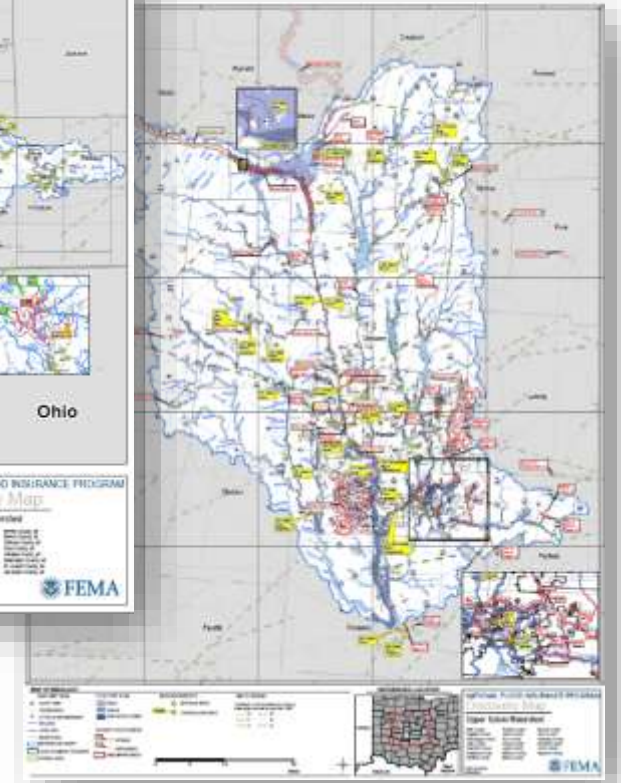
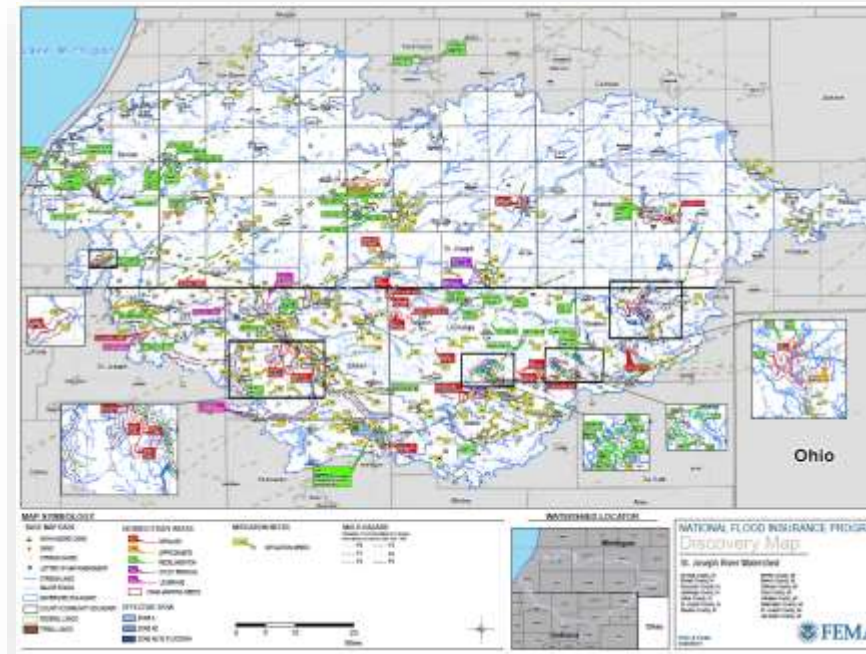
BEN REDDING, CONTINENTAL MAPPING

JUNE 20TH, 2018

Tackling Watershed Detailed Modeling



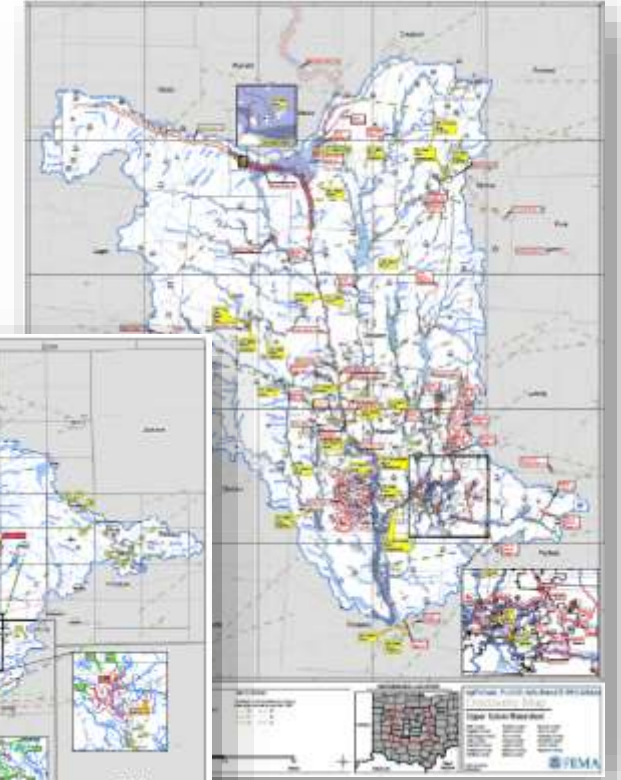
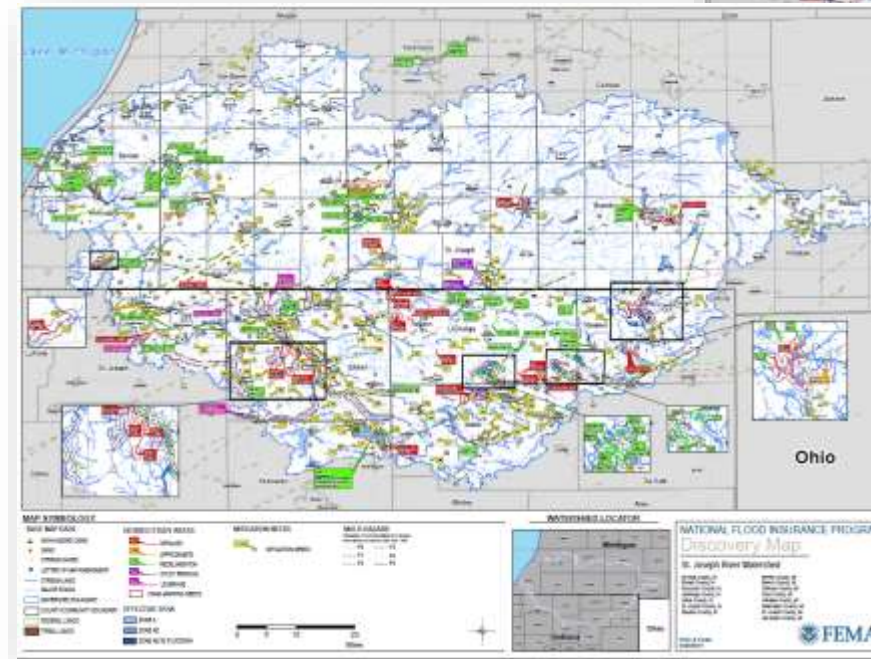
- Scope for Modeling and Survey
- Supplemental Information
- Conventional Methods
- Enhanced Approach
- Conclusion



Tackling Watershed Detailed Modeling



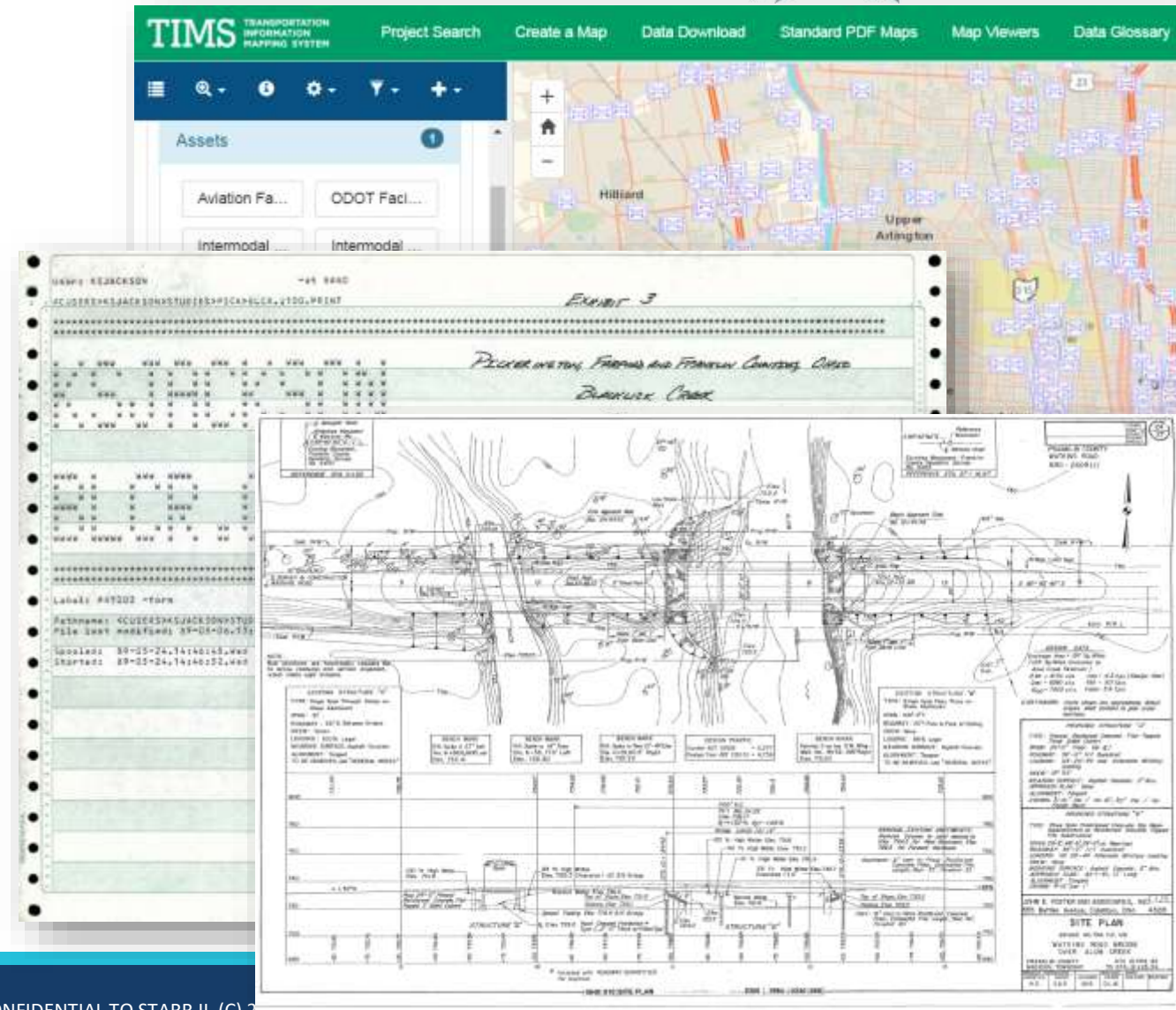
- Modeling ~ 700 miles of Detailed Study in 3 HUC8 watersheds
 - Hydrology – mix of Regression, Gage, and Rainfall-Runoff
 - Hydraulics – Steady State HEC RAS
- Mix of Rural and Urban stream reaches
 - Assumed Structure Count – 224
 - Actual Structure Count – ~ 900



Supplemental Information

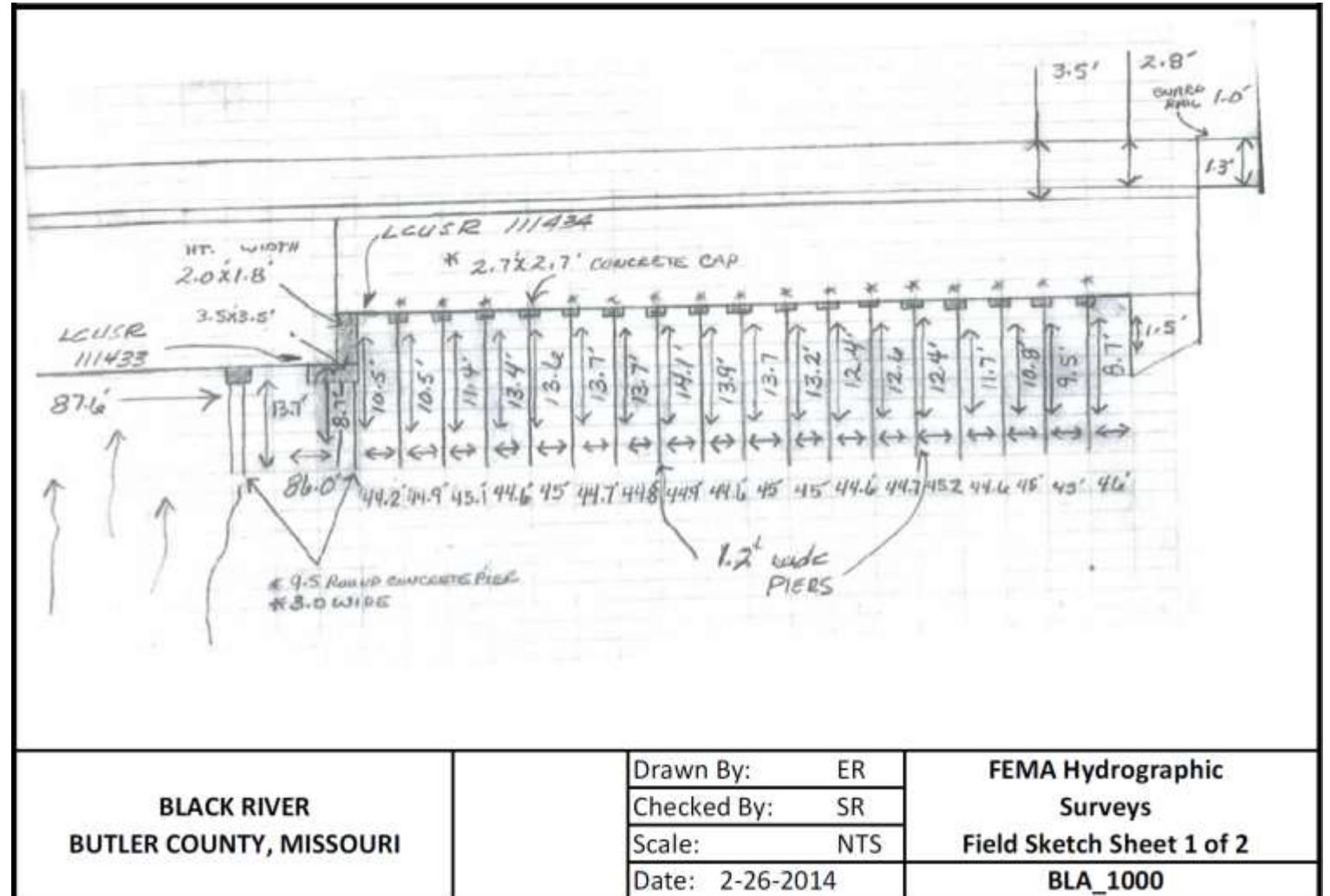


- Collect As-Built plans
 - State DOT
 - County Engineer
 - Municipal Engineer
- CNMS and Effective FIS
 - FIS Report and Engineering Data Request
- Current and Historical Orthophotos



Survey Enhanced Approach

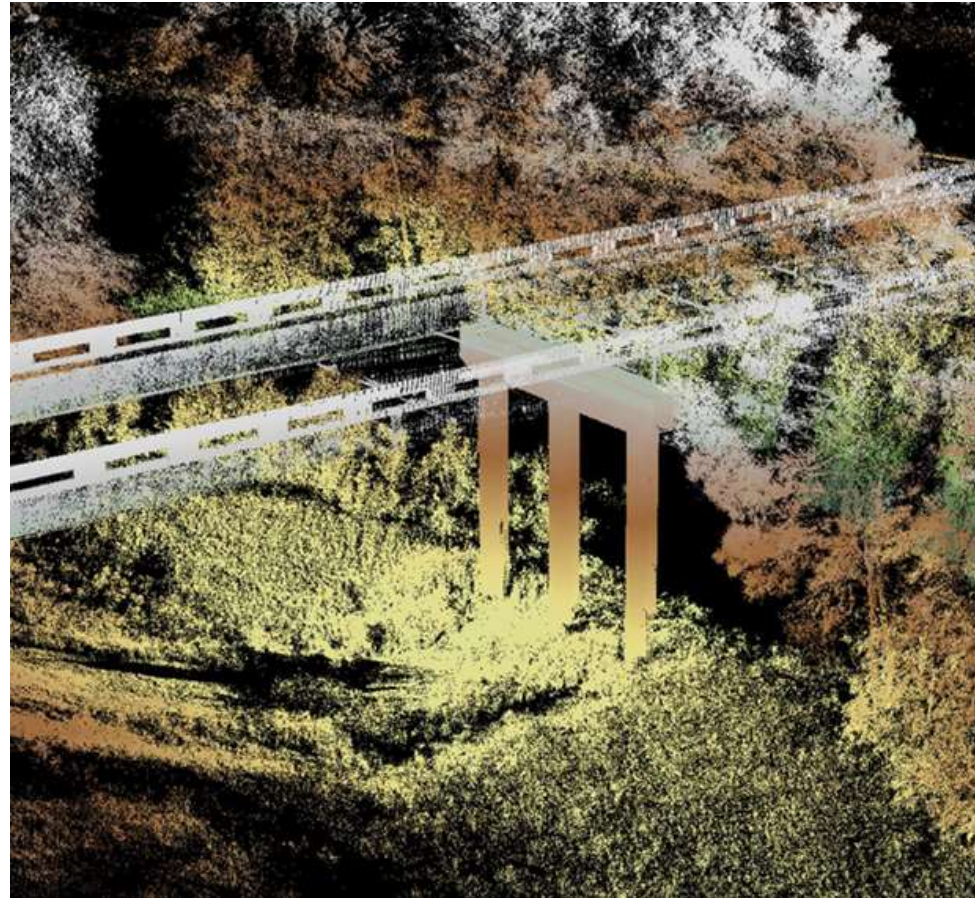
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Survey Enhanced Approach



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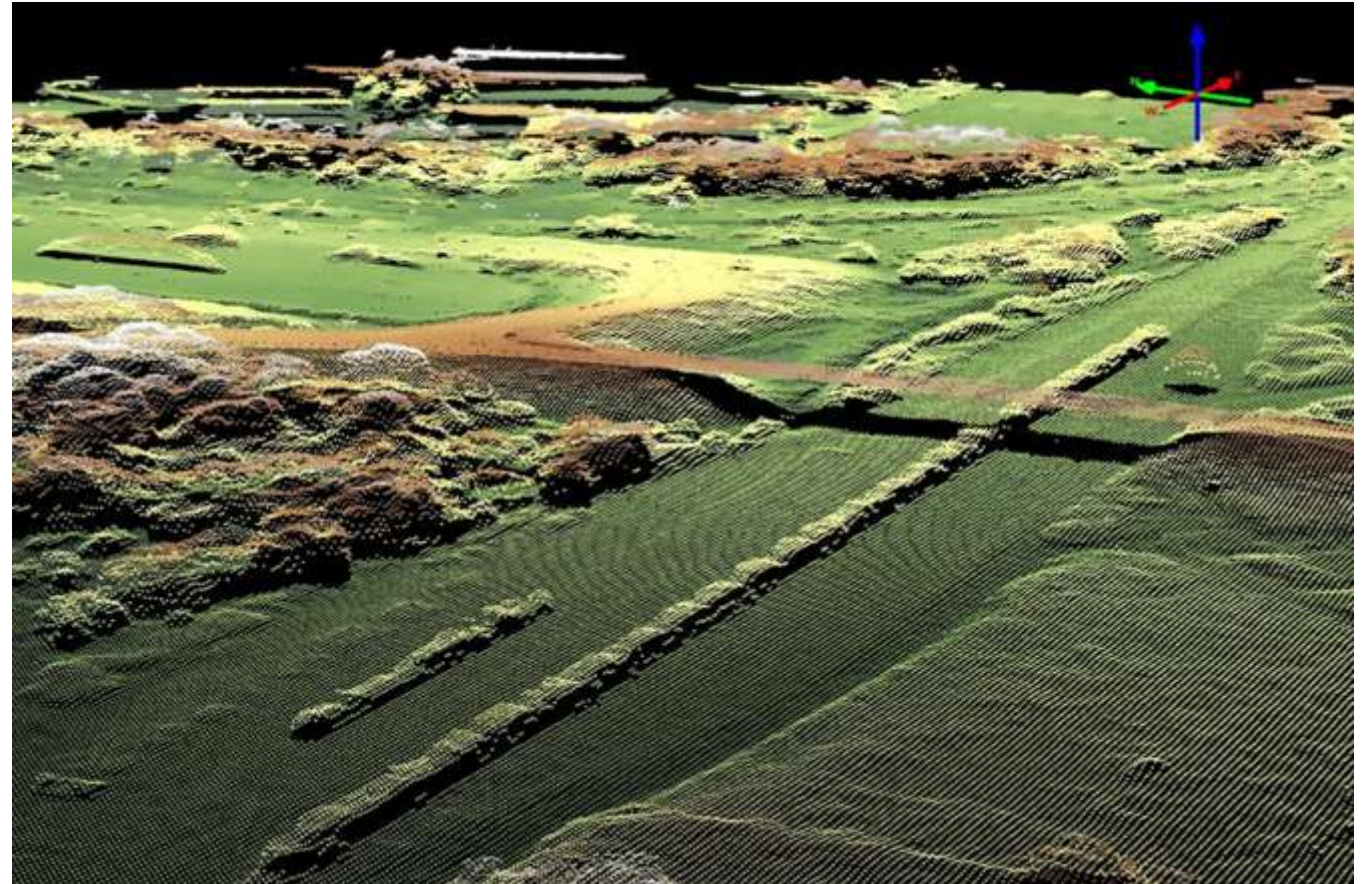
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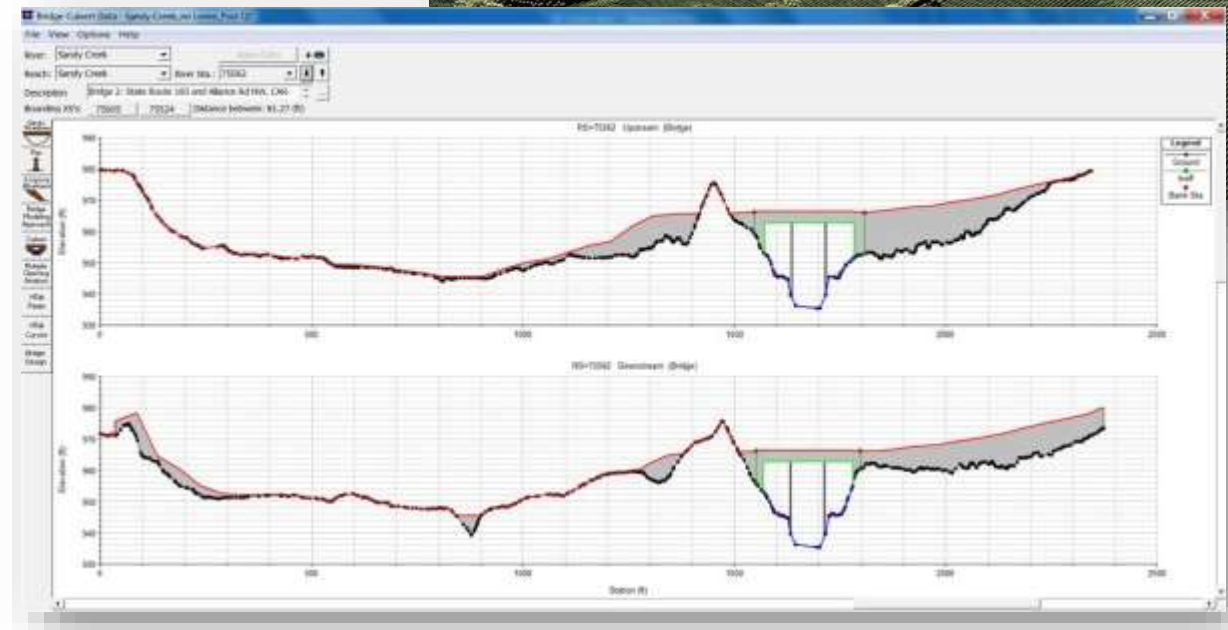
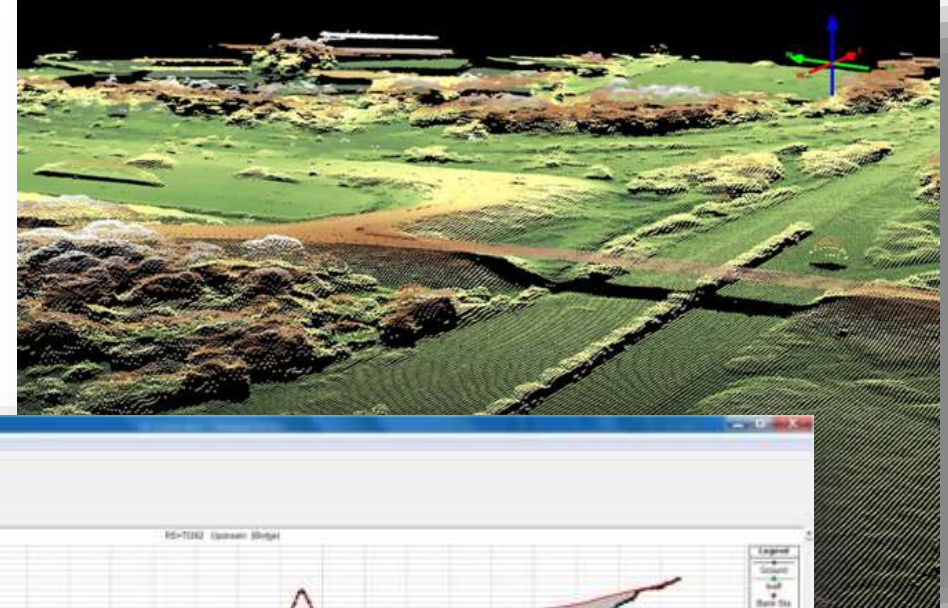


Survey Enhanced Approach



Conclusion

- Able to efficiently collect many structures.
 - Flexible output...if you need more info its there.
 - Revisit data to collect additional measurements
 - Coupled with supplemental information you can build comprehensive models
- Creates good visuals for outreach and presentation of results



Questions



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