UDOT’s BIM for Bridges and Structures Initiative

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Project Overview

- 25 miles west of Salt Lake City
- Two bridge replacements
  - I-80 EB and WB over UPRR at Blackrock
  - Tooele Interchange Bridge at Lakepoint
- Delivery method
  - CMGC
Project Overview

I-80 EB and WB over UPRR at Blackrock

AASHTO Subcommittee on Bridges and Structures – June 2017
Project Overview

Tooele Interchange Bridge at Lakepoint

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Goals

Department

- Advance electronic delivery efforts
- Develop and advertise bridge designs within a Bridge Information Modeling (BrIM) environment
- Implement 3D Engineered Models for construction by utilizing 3D design tools in preconstruction
- Provide design files to contractors
- Develop processes and procedures to advertise projects with the models as the legal document
- Focus on the development of the BrIM with the exchange of structural analysis to the geomatic models
Goals

Project

- Develop an integrated 3D model independent of specific software (geomatics, structures design, and construction planning)
- Deliver the project contract documents electronically and eliminate the use of plan sheets
- Develop BrIM standards, workflow processes, and procedures for construction to include sub-contractors and fabricators in the process
- Create a seamless electronic information transfer between design, construction, and asset management
Project Schedule

- Design – in progress
- Construction – 2018
Challenges

- **Data**
  - Data Exchange
  - Data Accuracy and Accountability
  - Data Definition
  - Data Ownership and Management

- **Software**

- **Hardware**

- **People**

- **Bridge Project Delivery**

- **Roles and Responsibilities**

- **Contractual Changes**

- **Mindset and culture change**
  - New project Development
  - Enhance value if different disciplines

- **Legal, liability and security**

- **Insurance**

- **Investment, cost and effort**