Bridge Information Modeling (BrIM): Understanding Features and Terminology

T- 19

Scot Becker
Presentation Outline

• The Vertical Industry What is BIM?
• Benefits of Bridge Information Modeling to SCOBS
• Information Modeling – Terms and Terminology
What is BIM? - Video
What’s in it for SCOBS?
Bridging the Information Gaps

• Marketplace for BrIM in the Bridge Process

Design
Build
Operate

Planning
Design
Fabrication
Construction
Management
Maintenance

- Informed Planning
- Coordinated Documents
- Better Designs
- Better Built Assets
- Faster Completion
- Reduced Cost of Construction
- Commissioning
- Optimal Use of Asset
- Efficient Operation
- Increased ROI
Design

- Visualizations
- Import / Export into FEM
- Virtual Construction
- Data Model Creation
- Integration into Refined Analysis
- Fabrication
- Interference – Clash Detection
- Model Handoff
Visualizations
Clash Detection Micro Level
Clash Detection Macro Level
Integration into Refined Analysis
Construction

- Schedule
- Sequencing
- Demolition Planning
- Virtual Fit Up
- Bill of Materials Supplied
- Fabrication
- As Built Conditions
- Model Handoff
Construction Schedule and Sequence
Deck Removal Sequencing
Own and Operate

- Oversize Over Weight Permits
- Perform Rating and Posting analysis
- Attach Information from / to Inspection Reports
- Bridge Management
- As built Conditions
- Cyclic Maintenance – Workflow
- Operations Real time Monitoring
  – Videos, gates, loads etc
Service Investigation
CIM 3D Modeling: Zoo Interchange
Design-grade/Post-construction Surveys
Mission:
Fostering an environment for advancing the use of software and technologies for bridges and structures

Vision:
Leverage software and technology for the bridge community to work effectively and efficiently
What is T-19 doing?

- Educating SCOBS Members on Information Modeling
- Working with Cross AASHTO and TRB committees
- Participating with FHWA in their Information Modeling efforts
- Resourcing a 20-07 to have workshop and provide road map of next steps
Up Coming Events

• April 14 Iowa’s 3D Modeling Workshop

• April 22 SCOBS- Today’s Presentation to State Bridge Engineers
Up Coming Events

• June 11 International Bridge Conference (IBC) FHWA Workshop

• ??? National Workshop on a road map to a Standardized Bridge Information Model
What Can We Do to Foster Change?

• Get Involved
  – Participate at Events
  – Champion Change

• Require Models as Deliverables for Owning and Operating Facilities

• Partner with Contracting Industry to Transform Industry Construction of Structures
  – Fabrication – early Win-Win
BIM Terminology and Usage
Thank You