Q&A for …. March 2021

CADD Bridge Modeling updates and BIM Standardization

FDOT Symposium Webinar (September 2020)

Q: I'm late to this webinar, would the recording be available to view from the beginning later?

A: Yes. The webinars are recorded and links posted to the Symposium web page.
https://transportationsymposium.fdot.gov

Q: When does FDOT expect consultants to begin modeling?

A: Our FDOTConnect OBM is official now for production per PSM20-01.

Q: Will these model files be available for us to download as study materials after the presentation?

A: FDOTConnect for OBM training material is available at the following site.
FDOT OBM Training Course

Q: Are these tools already available? Or is this still under development?

A: The FDOTConnect workspace provides all the resources for Modeling a Structure. The tools shown today are available in OpenBridge Modeler Connect Edition. Additional enhancements are being developed for future releases of FDOTConnect (additional tools and resources)

Q: Will the red FDOT ribbon be in FDOT Connect similar to SS4/SS10?

A: The bar menu is not moving forward from the FDOTSS10. A new Ribbon Tab is being utilized in the Connect platforms from Bentley. A new FDOT Tab has been developed for the FDOTConnect workspace that has many of the tools that were on the FDOT bar Menu from the Select series workspace.

Q: For standards that have multiple features i.e. steel railings with curb mounted railing will there be different templates? Also how will the railing in elevation view be modeled?

A: The barriers/curbs are template elements (separate from railings/posts for each shape). Railings/posts are not modeled in the templates. They can be added with custom cells, 3D line styles or 2D linework for elevation views.

Q: Will the parametric model you showed be maintained after exporting to IFC and then re-importing back into Bentley?

A: The solids can be exported to IFC and then re-imported into in OBM or other IFC supporting software. However, the parametrics and OBM attributes will not be retained when exporting to IFC.

Q: So we can model rebar in OBM, but the training does not cover it yet? Is that correct?

A: Yes, rebar can be fully modeled in OBM or OBD. This workflow is not covered in the initial training manual but will be covered in a future advanced manual.

Q: What program was used for the rebar in the pier model?

A: OBM for the rebar modeling. ProConcrete would be required for custom annotations, schedule creation, etc.

Q: Does FDOT have and influence on Bentley to develop better integration of the Generative Components with OBM

A: We have also been using Generative Components in workflows and will add to the list of enhancement requests to Bentley.

Q: So ProConcrete will not be required to detail reinforcing on plan sheets? Everything will be available within OBM or OBD itself?

A: If rebar automated annotations and schedules are desired by the user, then ProConcrete is required currently. The current OBM versions can be used to model the rebar.

Q: Can the geometry created in the software be exported to commercially available design software as inputs to that design software?

A: Yes, geometry created in OBM can be pushed to the Bentley bridge design software: LEAP Bridge Concrete, LEAP Bridge Steel, & RM Bridge. In fact, Bentley has started to direct users to generate & modify all analytical geometry in OBM/OBD and push to their analytical solutions.

Q: Can the geometry be exported to software not owned by Bentley?

A: In order for this to be possible, the bridge specific IFC standards will need to be further developed by the Transportation Pooled Fund program and adopted by OBM. The framework is already in place in OBM to create an IFC model which will be a universal file type (similar to PDF in concept). Additionally, exporting geometry data to other programs have been completed by other means (dxf for geometry, etc.).

Q: What is the relationship between FDOT Connect (OBM) and Infrawork (Autodesk)?

A: OBM and Infrawork are similar model authoring software packages. In the future FDOT will expand on the Autodesk workflow as another option for bridge model development.

Q: The bridge model is created in Infraworks and then imported to OBM or can it be created in OBM directly?

A: The video showed two separate workflows, one in Autodesk and one in OBM. The Autodesk presentation shown is for a model created in Infraworks, but not imported to OBM. The Bentley workflow described in the rest of the presentation is for models created directly in OBM.

Q: Have the FDOT Man-hour Guidelines been updated to provide guidance on man-hour effort associated with utilization of OBM/OBD?

A: See newly released Production Office Memorandum PSM21-01 for Design Staff Hour Estimation guidelines. Specifically, Tab 36 addresses staff hours estimation on bridge and miscellaneous structures.

Q: Given that there is internal management effort and time, it would seem appropriate that "model management" should be considered as a percentage under Tab 9 similar to QAQC and Supervision. Has that been considered for review? Also, the roadway tab accounts for separate 3D modeling effort. Given bridge construction is more complex than roadway construction, how has it been determined that 3D modeling for bridge design will not require any more effort and time than a 2D plan set? This is especially true for widenings.

A: See newly released Production Office Memorandum PSM21-01 for Design Staff Hour Estimation guidelines. Specifically, Tab 36 addresses staff hours estimation on bridge and miscellaneous structures.

Q Is it possible to get the speakers' contact information for further questions?

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