

Global Engineering Firm Partners with Bentley for Infrastructure Project

OpenRoads™ Designer and OpenBridge Modeler® Training Program Sets up the Team for Success

Overview The firm adopted a digital workflow to undertake a major highway development with complex deliverables. By strategically partnering with Bentley on a comprehensive training program for OpenRoads, OpenBridge Modeler, and SUDA™, they were able to fulfil their client requirements.

User Background A world leading engineering and consultancy solutions firm won the contract to deliver a multimillion-dollar highway bypass interchange project in a joint venture alliance with an infrastructure consulting firm and another engineering and construction company.

Challenge The main challenge that the mobility design team faced on this project was that the client required a single, federated model in the Industry Foundation Class (IFC) format to be delivered as the final digital output. This change to their client's needs meant that the firm had to devise new and more complex solutions.

To meet the client's changing requirements and utilize this as an opportunity to optimize the methods of project delivery, they needed to:

- ◆ Implement a common data environment (ProjectWise®) for project collaboration with integration of ISO 19650.
- ◆ Redefine the workflow processes by incorporating interoperable design authoring tools such as OpenRoads Designer, OpenBridge Modeler, and SUDA software applications.
- ◆ Ensure a smooth transition so the workforce could adopt the new workflow process and the new technology for project delivery.

However, from the outset, the joint venture alliance lacked confidence that a new technology coupled with a new workflow process could be smoothly introduced to the project team.

Solution The first step that the firm took was sharing the past project challenges with the construction and design teams within the alliance.

As part of the process, they prepared a set of metadata criteria for the contractor that would benefit the alliance with procurement, costing, and coordination. This initiative helped them to gain the trust of the contractor, which led to a successful synergy between them.

When all the project stakeholders aligned with the workflow, the engineering firm partnered with Bentley to implement a comprehensive training program. It included the execution of both foundational and coaching Blueprints on OpenRoads, OpenBridge Modeler, and SUDA. This made the workforce more knowledgeable about the applications and prepared them to adopt a new workflow.

Success The engineering firm now wants to apply this new technology and workflow to other major projects, replacing 12D and Autodesk products with Bentley solutions.

There were numerous cost savings across the project due to optimized design, which minimized land take and material quantities, reduced risk particularly in relation to high maximum ground water levels (MGLs), reduced error by having a single source of truth and uniform deliverables, and improved efficiency through product integration. In addition, the solutions helped the alliance meet the client requirements on time and as requested.

