

BASELine

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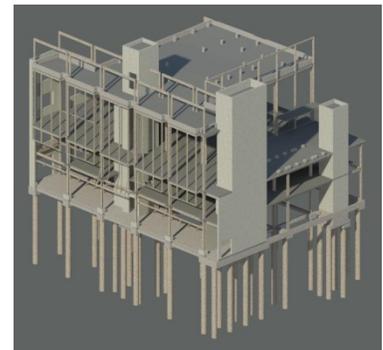
Burt Jenkins

Building Information Modeling (BIM) can be a tool for the sharing of a 3D model of a project by the architect, engineers, contractor and the project owner. BIM provides potential to expedite the coordination of all components of a project, creating opportunities for more efficient team collaboration and communication. BASE was an early implementer of Bentley analysis and Revit modeling software and today uses BIM for a variety of project tasks. The following are a sampling of some of these.

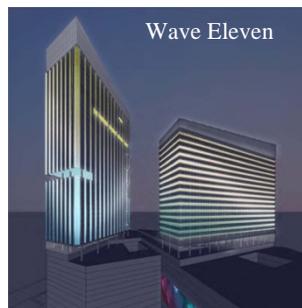


During the early design development stages of **2230 Kalakaua (Waikiki Shopping Plaza expansion project)** when a lot of different ideas were being explored, the BIM model helped expedite this process by serving as a great communication platform to present and discuss proposed concepts. BIM was also

critical during the final stages of design when small changes on the architectural or structural side, which may have easily fallen through the cracks, were identified and coordinated in the BIM model. BIM allowed BASE to view, query all the architectural properties of the model, perform interference checks between architectural and structural models, and between structural objects and model objects.



The structural services on the approximately 4.85 million sq. ft. **Wave One and Eleven** mixed use projects in Noida, India included assistance in material quantity takeoffs. BASE combined information from BIM analysis and drawing models into simplified

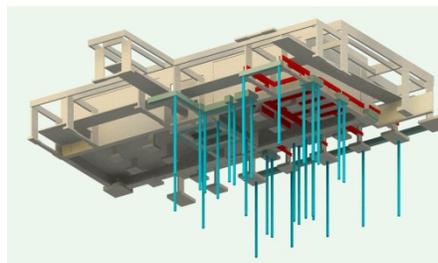
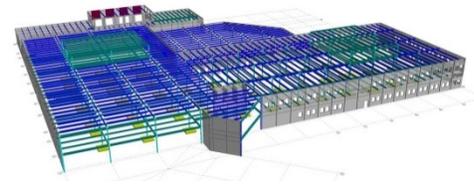


spreadsheets to assist the contractor in tracking construction costs. These models were also used for coordination purposes and as a base for renderings used in façade studies.



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BIM was used in the design and construction of the two-level, \$318 million Operations & Data Center of the **Hawaii Regional Security Operations Center (HRSOC)** completed in August 2010. To assist in meeting a short construction schedule, BASE created a structural BIM analysis model used to design and procure fabricated steel and precast load bearing panels for the structure's primary frame. This initial BIM model was later integrated into an overall project model to assist in coordination with other key consultants whose design was completed after construction of the structure had begun. The final model helped to detect and address potential construction issues allowing the project to meet very aggressive project milestone dates.



The program to provide ground settlement stabilization for the **USS Arizona Memorial Visitor Center Theaters** required a complicated shoring plan that included driving deep piles around the perimeter of the structure and threading new steel

transfer beams through an existing crawl space to support the building. A BIM model was created by BASE to assist in visualizing the placement of the new steel framing and how it would be connected to both the existing building and the new deep pile supports.

The structural work for the **Andaz Wailea Hotel and Residences Remodel and Construction** included complicated demolition and restructuring of the existing hotel's central lobby and guest services areas. In order to better



understand how the structure's gravity and lateral load resisting systems would be impacted, BASE utilized the existing 1976 construction documents to build a BIM model of the building. The model, which could be easily spun or cut to create views of important structural elements, was used to assist in determining critical areas that would need to be reinforced or replaced with new structure. The model also proved valuable in the creation of 3D structural analysis models and as a background for permit and construction drawings.



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