



EXECUTIVE SUMMARY

FROM HUNDREDS OF AGC/ALLIANT Build America Award entries, judges from the construction industry selected 21 projects that highlight Associated General Contractors of America members and their remarkable construction of the nation's most impressive projects. Nominations came from the building, highway and transportation, utility infrastructure, and federal and heavy divisions.

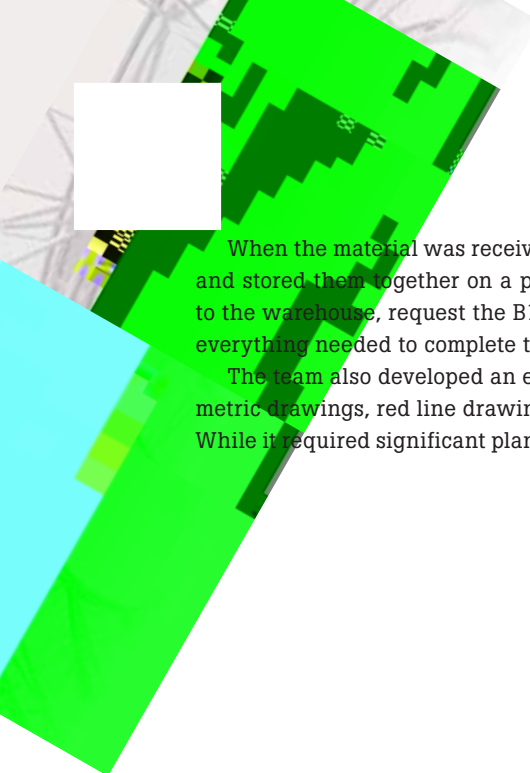
The roads, bridges and structures themselves present tangible evidence of the significance of these projects. The winners excelled in project management, safety, client service, community relations, envi-



INTRODUCTION


THE 2018 AGC/ALLIANT BUILD America Awards showcase Associated General Contractors of America members building the nation's most impressive construction projects, ranging across the building, high-





When the material was received, it arrived with that number. The team organized all of those materials and stored them together on a pallet. When the foreman was ready for the material, he or she would go to the warehouse, request the B1 work package, and it was all prepared and ready to go to the field with everything needed to complete that work.

The team also developed an electronic “book” for each work package, which included test reports, isometric drawings, red line drawings, RFIs, submittals, etc., to give to the owner at the project’s conclusion. While it required significant planning at the front end of the project to create these work packages, as well



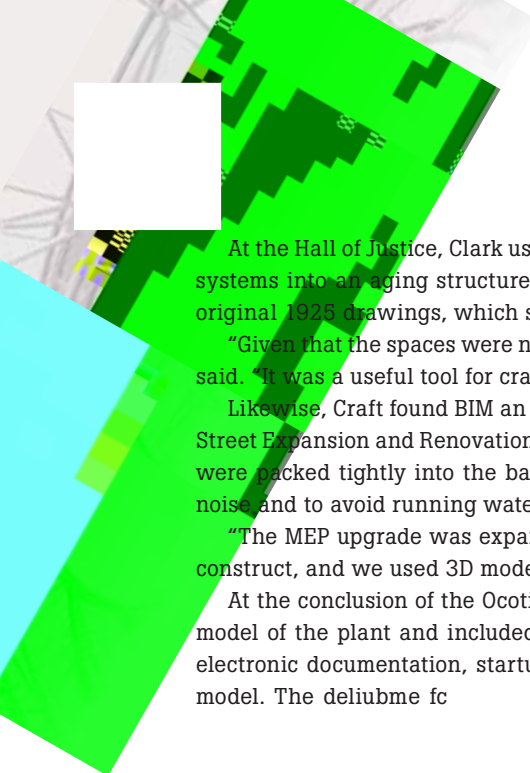


The photographs featured images of all the historic elements and fabric, with descriptions of how each element was removed, so Clark could return them properly to the right spot when the project was nearing completion, explained Hope Hall, senior project manager for Clark on the Hall of Justice project.

“When we had the database vs. the construction documents, merging those two pieces together made the historic retrofit more accurate,” Hall said.

Zinberg added, “By m.





At the Hall of Justice, Clark used BIM to incorporate modern electrical, mechanical and fire suppression systems into an aging structure, which was previously void of these elements. The model included the original 1925 drawings, which showed where the structural steel was located.

“Given that the spaces were never designed to have that much stuff, BIM was really important,” Zinberg said. “It was a useful tool for cramming as much stuff in as quickly as possible.”

Likewise, Craft found BIM an essential tool in the coordination of MEP systems at Skanska’s 32 Quincy Street Expansion and Renovation project. The air distribution equipment and 400,000 pounds of ductwork were packed tightly into the basement to minimize the need for access into gallery ceilings, to reduce noise and to avoid running water over galleries.

“The MEP upgrade was expansive,” Craft said. “It required a massive amount of layered duct work to construct, and we used 3D modeling successfully for clash detection.”

At the conclusion of the Ocotillo project, Sundt took an overlapped laser scan of the site with the BIM model of the plant and included the operation and maintenance manuals, submittal data, all RFIs and electronic documentation, startup checklists and training information and embedded the files into the model. The deliubme fc0-37.4(i)4.9(u25(n)-3.59(te)-14.1(d)-(c)-21.3(c)-21p8.7(n)4, a)6-30.6(id)-23.7(15 73.5 590.6(l)-4(l)-89.9(l)-64.9




"It saved everyone a lot of headaches and money and produced a first-class product," said Rick Heltzel, president of Healy Tibbitts Builders in Aiea, Hawaii, lead partner on the Guam MACC Builders' Apra Harbor project.

CREATING MOCK-UPS

Many of the award-winning contractors used mock-ups to ensure quality and owner satisfaction with the final structures.

"We used the mock-up program to control risk and enhance the product," said Zinberg about the Hall





“When you walked it, it offered a three-dimensional glimpse of what it would be in the future,” Murphy said.

JP Cullen considered mock-ups critical while developing a theme for the Epic Deep Space building, which is a cave and natural landscape that resembles a nearby state park. The team took a trip to that park, photographed the rock cliffs and mimicked them in sculptured concrete for the exterior facade. The company also mocked up window systems, LED screens and interior finishes. Mock-ups allowed designers and tradespeople to display their creativity, and then let the owner look at and bless it.

“It’s best to always show a mock-up and move on to make sure we have it right,” Schumacher said. “It’s better to mock it up than to rebuild it.”

UNIQUENESS DRIVES INNOVATION

While this paper highlights several construction techniques that made these winning entries in the AGC/Alliant Build America Awards competition, this is by no means an exhaustive list. The uniqueness of the various projects created opportunities to reshape the status quo. For instance, a commitment to

