



Building Information Modeling Helps Double the Panama Canal's Transit Capacity

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MWH Global Earns Autodesk BIM Experience Award for Work on Historic Transportation Landmark

SAN RAFAEL, Calif., Nov 08, 2011 (BUSINESS WIRE) --

[Autodesk, Inc.](#) (NASDAQ:ADSK), a leader in 3D design, engineering and entertainment software, announced that [MWH Global](#), a leader in wet infrastructure projects and programs, including water, hydropower and civil infrastructure, has been selected to receive an [Autodesk BIM Experience Award](#). The firm is being honored for using a [Building Information Modeling](#) (BIM) process, together with Autodesk BIM software, to help design the *Third Set of Locks* project for the [Panama Canal](#), intended to double the canal's shipping traffic capacity.

The award specifically recognizes MWH Global for the exemplary use of a BIM process to:

- Improve the quality of design for the *Third Set of Locks* project of the Panama Canal
- Increase productivity and profitability by efficiently managing design changes
- Facilitate communication with clients and builders through visualizations

"The use of intelligent 3D models on the *Third Set of Locks* project has brought significant benefit to the design-build delivery team," said Nick Pansic, deputy design engineer for MWH Global. "These tools have enabled a diverse team of engineers -- located in five widely dispersed design offices around the world -- to collaborate efficiently, helping them to resolve design conflicts prior to construction and keeping project design and construction documentation better coordinated."

Expanding the Panama Canal

Completed in 1914, the Panama Canal currently handles approximately five percent of the global shipping trade. The purpose of the expansion project, including the *Third Set of Locks*, is to make it possible for the canal to accommodate today's larger ships, referred to as "Post-Panamax" ships. The *Third Set of Locks* project includes two massive lock facilities - one on the Atlantic side and another on the Pacific - each with three chambers. Innovative design elements include water basins that save and reuse 60 percent of the fresh water used in the lock system and state-of-the-art seismic analysis. New excavation began in 2009, and the project is scheduled for completion in 2014, coinciding with the 100th anniversary of the opening of the original canal.

In 2009, the Panama Canal Authority awarded the \$3.12 billion contract for the *Third Set of Locks* project to [Grupo Unidos por el Canal](#) (GUPC). MWH Global is leading the design team's joint venture called [CICP Consultores Internacionales LLC](#) (CICP), and is one of only two U.S. firms in the consortium.

To help meet the challenges of the project, MWH Global used a BIM process and Autodesk BIM solutions to address the following tasks:

- [Autodesk 3ds Max Design](#) software is being used for conceptual and detailed design and was used to produce design visualizations to help the client understand several design options.
- [Autodesk Revit Architecture](#), [Autodesk Revit Structure](#) and [Autodesk Revit MEP](#) software is being used for detailed design of the canal's new lock structures, buildings, control towers and a multitude of supporting facilities.
- [AutoCAD Civil 3D](#) software is helping create more efficient and accurate site designs.
- [Autodesk Navisworks Manage](#) software is being used for improved multidiscipline coordination and collaboration, helping resolve design conflicts prior to construction, increasing the quality of the project and helping to prevent costly field changes.
- [AutoCAD Electrical](#) software is being used by the electrical subcontractor to MWH Global for the electrical schematics and panel layouts.
- For project handover to the Panama Canal Authority, the team is capitalizing on its use of a BIM workflow to capture asset information such as equipment identification tags for inclusion in an operations manual incorporating project models and data.

"MWH Global's exemplary work on the Panama Canal demonstrates how Autodesk's comprehensive portfolio of BIM for infrastructure solutions helps civil engineers and designers take advantage of the rich information in intelligent models to improve the way they plan, design, build and manage projects," said Jay Bhatt, senior vice president, Architecture, Engineering and Construction Solutions, Autodesk. "We're proud to see our software playing a critical role in the success of this important infrastructure project."

Autodesk Consulting assisted MWH Global in its transition from a predominantly 2D workflow to the use of intelligent 3D model-based processes for the Panama Canal Expansion project. Autodesk Consulting also provided MWH Global with initial product implementation and training services, and continues to provide product support and mentoring.

About Autodesk BIM Solutions

Building Information Modeling (BIM) is an intelligent model-based process that provides insight for creating and managing building and infrastructure projects faster, more economically and with less environmental impact. Autodesk BIM solutions for building and infrastructure lifecycles are based on intelligent models created with Autodesk Revit software products and AutoCAD Civil 3D software. Helping to expand the benefits of BIM is a powerful set of complementary solutions for visualizing and simulating projects virtually, documentation and professional drafting, and data management and

collaboration. [Autodesk Building Design Suite](#) and [Autodesk Infrastructure Design Suite](#) offer comprehensive sets of tools to support BIM workflows in single, cost-effective packages.

About MWH Global

MWH Global provides strategic management, technical engineering, and construction services for wet infrastructure projects. The wet infrastructure sector encompasses a full range of water-related projects and programs, including water supply, treatment and storage, water resources management, hydropower and renewable energy, and natural resources. With more than 7,000 employees on six continents, the firm provides solutions to some of the most challenging infrastructure challenges in the world. Founded in 1844, MWH Global is headquartered in Broomfield, Colorado, with operations in North and South America, Asia Pacific, Europe, Africa and the Middle East.

About Autodesk

Autodesk, Inc., is a leader in [3D design](#), engineering and entertainment software. Customers across the manufacturing, architecture, building, construction, and media and entertainment industries -- including the last 16 Academy Award winners for Best Visual Effects -- use Autodesk software to design, visualize and simulate their ideas. Since its introduction of AutoCAD software in 1982, Autodesk continues to develop the broadest portfolio of state-of-the-art software for global markets. For additional information about Autodesk, visit www.autodesk.com.

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