

The CVN "material highway" gets a new bridge

By Murry Rexin, Code 713.1, with input from many

PSNS & IMF is scheduled to perform several maintenance availabilities on Nimitz-class aircraft carriers in the upcoming years. During these availabilities, transporting and distributing production material is a critical aspect of work to be performed. A "material highway" allows Code 740 to support the Command's CVN work force with production essentials delivered right to the hanger deck.

Out with the old

The old material highway consisted of a ramp which was constructed between the inner elevator edge and the pier. Ramp installation was critical path work and required up to 10 riggers attaching steel beams and installing a wooden deck for the bridge. This took as many as four to five days working two shifts to complete. Plus, no fork trucks could drive on or off the hanger deck until the ramp was completed. A better, safer way was needed.

Finding a better way

Code 980 teamed with Code 700 to procure a better tool for the job. They envisioned a bridge that could be backed into place on wheels instead of a ramp pieced together on site. This would cut installation time drastically and reduce the installation team size from 10 to three. A group, with members from CVN Project Management, Code 980 Procurement, Code 740 Riggers and Code 710 Crane Engineering was formed in January 2010. Their goal was to have a new material highway ready for use by December of the same year.

The bridge would need to be custom designed to fit the CVN-class ship and the specific space, size and loading constraints of Dry Dock 6. The largest Bremerton site forklift and fire truck had to be able to drive up and down the bridge safely and efficiently. Nothing similar existed in use at the other shipyards and no suitable industry standards were available to use either. The team researched several areas for applicable requirements; areas investigated ranged from highway bridge design, steel building codes and bridge crane design standards. After three months of refining desired capabilities and necessary requirements, the team emerged with a contract. The contract

was a blend of performance standards and technical requirements designed to provide the new tool—a bridge that could be safely backed onto the ship and installed quickly.

Fleet and Industrial Supply Center, Puget Sound, joined the team to award the contract to the most qualified bidder. EDCO of Mount Vernon received the contract and proved to be an extremely resourceful and competent member of the Navy industry team. The EDCO design subcontractor EISI worked closely with the Command to finalize the bridge design and EDCO worked tirelessly to fabricate, test and deliver the bridge in time for its first use. Code 740 team members joined Code 710 and Code 980 in performing on-site quality control inspections at EDCO's manufacturing plant and their input ensured the final design worked smoothly at PSNS & IMF.

In with the new

The one-of-a-kind bridge installation was performed flawlessly by a handful of Code 740 riggers (compared to

up to 10 in the past) in a little more than four hours (compared to two shifts a day for four to five days). The bridge was open for use and the first fork truck was driven onto the carrier before the dry dock was completely pumped dry. The CVN bridge is now a "specialized tool" available for use on all future CVN dry dockings. The bridge allows Code 740 to get the material highway up and running both quicker and safer than before while improving material availability.

Team members included: Dave Jensen, Code 980 project manager, retired; Ron Murdoch, Code 980 project manager; Josh Carter, FISC contracting officer; Tacy Nordlander, FISC contract specialist; Dale Coyle, CVN project manager; Doc Robinson, CVN rigging project manager; Chris Luby, rigging supervisor; Gene Barnett, rigging work leader; Brian Peterson, Code 980 project engineer; Richard Rock, Code 713 project/structural engineer; Partha Roy, Code 980 engineer; and Murry Rexin, Code 713 project/mechanical engineer.

*See *Salute* cover for photos.



Puget Sound Naval Shipyard & Intermediate Maintenance Facility

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