

Utah DOT

Payson Bridge Deck Replacement

Contractor: Ralph L. Wadsworth Construction Company

Stimulus: American Reinvestment Recovery Act (ARRA)

US SPEC Products: MP Grout

The Utah Department of Transportation (UDOT) has successfully implemented a program that is saving millions of dollars and shaping bridge construction for the future. This program is called the Accelerated Bridge Construction or ABC. This program's main benefit is the drastic reduction of lane and road closures. There are also ancillary benefits such as enhanced quality and increased safety for drivers and construction workers as well. The ABC program utilized several innovative techniques to overcome the heightened degree of technical fortitude necessary for such a venture.

ABC methods appear simple in concept; however, they require a few key systems to be in place to ensure success. Essentially, the bridge to be replaced remains in use while the replacement bridge deck is manufactured. Once the replacement bridge deck is complete, the old bridge is taken out using either a self-propelled modular transport (SPMT) or a crane. The new bridge is then moved into place. What could have been months of lane and road closures is reduced to 24-48 hours.

Ralph L. Wadsworth Construction Company has experience working on large transportation projects in Utah including the 4500 South Bridge Replacement of I-215, the largest ABC project to date. The Payson Bridge Deck replacement used a crane to remove the existing bridge and to place the new pre-cast deck panels. Innovations and new synergies were utilized as the bridge decks were cast off-site and then grouted into place on existing abutments.

A grouting material was needed to fill the void between the top flange of girders and panels. To keep this accelerated project moving along, the grout needed to provide the high compressive strengths necessary to allow a quick turnaround for an epoxy deck coating. Ralph L. Wadsworth selected US SPEC MP Grout to fill the voids within the replacement bridge deck structure. MP Grout met all the performance requirements for the project and provided high flexural and compressive strength performance from damp pack to fluid consistencies.

This project was completed during the colder months in Salt Lake City. US SPEC provided several recommendations for cold weather grouting including storing the material at room temperature for a minimum of 10 hours prior to mixing, heating of the mixing water, and protecting the grout from wind and freezing by using thermal blankets.

US SPEC commends UDOT and Ralph L. Wadsworth Construction for their efforts in utilizing innovation to improve the construction industry.



US SPEC PRODUCTS

MP Grout

High Flow, High Strength, Non-Shrink Grout

US SPEC MP Grout is a blend of portland cement, special admixtures and proprietary aggregates designed to provide high flexural and compressive strength performance from damp pack to fluid consistencies.

USES

MP Grout is ideal for a variety of precision applications including:

- **Precision Grouting:** Machinery bases, compressors, punch presses, generators
- **Structural Grouting:** Steel columns, precast columns, crane rails, beams
- **Anchoring:** Guard rails, sign posts, dowels, rods bolts
- **Pumping Applications:** Excellent flowability

STANDARDS

MP Grout has been specifically formulated to exceed the requirements of ASTM C-1107, Grade B, Corp of Engineers CRD C-621.

MP Grout meets all the Utah DOT requirements for a non-shrink grout.

