

# GraniteXpress Automated Loading System 1994 NOVA Award Nomination 05

## GraniteXpress Automated Aggregate Loading System

The NOVA Award was presented to GraniteXpress for inNOVAtion in loading trucks with construction materials.



Conventional methods for loading aggregate into large haulers are inaccurate and require filling with front-end loaders, weighing before and after loading, and time-consuming paperwork. Prior to its reNOVAtion in 1989, the average load at the Arthur R. Wilson quarry of the Granite Rock Company took 24 minutes to deliver.



In 1989 a team of Granite Rock Company employees, in concert with Roberts and Shaffer Engineering Company, redesigned the aggregates loading system in the sprawling distribution complex. Dubbed GraniteXpress, the new system stores aggregates in elevated hoppers. Computerized weigh-scales are located in a drive-through bay beneath each loading chute.

GraniteXpress customers are issued plastic cards similar to ATM cards. At the GraniteXpress loading area, drivers present their cards for access, which starts the billing process. The driver pulls the rig under the proper chute and pulls a cord to load. Computerized scales weigh the load as it is delivered.

When the load is complete, so is the weighing, enabling the driver to use the express checkout where the Granite-Xpress computer calculates the bill and issues two copies to the driver via pneumatic tube. After signing one copy and returning it via the tube, the driver is on his way back to the job site with a load metered accurately to within 60 pounds.

GraniteXpress has cut the average 24-minute loading cycle to just 7 minutes - a 70% reduction - and allows Granite Rock Co. to provide aggregate loading 24 hours a day, seven days a week.

Abandoning traditional front-end loaders and weighing systems, the project team at Granite Rock Company created a "drive-thru" aggregate loading system with the convenience and fast cycle time of a bank ATM system.

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