TRANSPORTING INNOVATIONS

March, 2012

REVISED Regional CI Conference Planning

In order to create a positive experience for the employees and provide high quality projects to celebrate, the timeframe for the first Regional CI Conferences has been extended to **the Fall of 2013 ("after Halloween and before Thanksgiving"), with the State CI Conference following in the Spring of 2014.**

1. The CI Coordinators within each region (eastern, central, western) are encouraged to organize conference planning meetings to discuss the format of their regional conference and create a budget for approval by their managers.
2. The Regional Conference Planning Group should strive to plan a gathering that is inclusive, accessible, and offers a venue for celebrating accomplishments. The cost of the gathering should be discussed among the managers in each Region to determine if the apportioned cost is acceptable.
3. CI Coordinators should request information on current continuous improvement initiatives from employees within each Division/ Business Unit in each Region.
4. CI Coordinators should encourage employees to submit their CI ideas/ projects via the online submission form as soon as possible.

The QEU—CI team will provide frequent updates for the CI Coordinators to distribute to all employees in their Division/Business Unit via email, staff meetings, safety meetings, etc.

"Celebrate what you want to see more of." (Tom Peters)

The major focus of this newsletter is on continuous improvement as a way of conducting business at NCDOT and each quarterly issue will feature current innovative ideas and techniques NCDOT employees have suggested and/or implemented..

Update on Kiosk Installations— Bridging The Communication Gap

For those of you who may not have heard about the Kiosk project, it was implemented because very few of the great Continuous Improvement (CI) ideas were being documented and shared with the rest of the Department. The overall goal is to reach out to the Transportation Workers in all 14 Divisions to inform them about the CI Program. The Division Engineers decided how many kiosk workstations they wanted in each Division. The number of kiosks they wanted to "Implement Now" was 124. Currently, a total of 104 workstations have been successfully installed!

In addition to the effort to promote innovative CI projects, connections to the following systems have also been made available : Inside DOT, Benefits, Career Info,, BEACON, E-Learning courses, MS Outlook, news and weather updates, and more.

Cynthia Squires, QEU Continuous Improvement team member, is in the process of traveling to the Divisions to offer training to those who are not as comfortable using the system. For more detailed information, contact Cynthia at (919) 508-1875, or email her at csquires@ncdot.gov.

Organization

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NEWSLETTER DEDICATED TO INNOVATION AND CONTINUOUS IMPROVEMENT

Transporting Innovations
Margaret Anderson, Editor

Division 13's Coffer Dam Design

A project team in Division 13 created their own design for a coffer dam. The coffer dam is used to dam water above a project area and allow it to be pumped around the project area. This prevents any work being performed in water, and helps to minimize erosion issues and the foot print into the stream area. The use of the coffer dam replaces the need to fill sandbags and build a temporary dam, pump the water around the work area, then remove the sand bags from the stream when work is finished.

The coffer dam is transported by flat-bed truck to the project location and set in place with the bypass door closed. During work hours, the stream water is pumped around the construction area back into the existing stream bed or designated area. At night, weekends and holidays when no work is taking place, a jumper pipe is attached to the bypass door, run through the work area and empties downstream by gravity flow. When work resumes, the bypass door is closed and pumping continues.

The coffer dam has saved the Department an estimated $5,000 to $12,000 per project because it has eliminated the need to purchase extra materials such as sand bags, sand, polyurethane, and other materials typically used to build temporary dams. These figures also include the labor costs of preparing such damming materials.

The process of using the coffer dam is safer because there is no lifting and carrying of heavy sand bags up or down embankments and in the stream bed. Employees are completely out of harm's way, because the coffer dam is set by an excavator.

For more detailed information about this coffer dam, team contact is Garry Moore at (828) 298-1128

Coffer Dam loaded on truck ready for installation.

Coffer Dam installed in a stream.

Division 2 — Testing a Vehicle-Mounted Fuel Master

The Fuel-Master Management System is a fully automated, paperless refueling system that provides for positive driver and vehicle identification and electronic registration of the odometer reading at the time of refueling. It utilizes the very latest in radio frequency smart card technology. Fuel Master offers fleet users an on-road diesel refueling system that is: fraud free, accurate, convenient and, reliable..
The team in Division 2 (Pitt County) has designed and fabricated a fuel truck mounted Fuel-Master system designed to provide mobile refueling while utilizing the features of a stationary mounted unit, much like the fuel sites we have in place across the state.. This configuration will allow maintenance vehicles to be fueled at any time at any location, and does not require the presence of the vehicle's driver at time of fueling. This eliminates long waits at the pump at a stationary system.

For additional information on the operation of this vehicle-mounted Fuel Master, contact Buddy Dixon, (252) 830-3499.

The photo shows the fuel vehicle with the Fuel-Master unit installed.

Division 7 — Motor Grader Mounted Asphalt Cutting Blade

Seeking a way to reduce the time and cost associated with asphalt dig-outs, Kevin Hazelwood of the Guilford County (Sandy Camp) Maintenance yard constructed an asphalt blade attachment kit that mounts to a motor grader. The asphalt blade is made from a 24" section of a worn snow plow blade. This section of blade is bolted to an angled steel plate that is vertically welded to an 8" by 18" steel plate that mounts to the blade of a motor grader using two 4" bolts. Once in place, the asphalt blade will cut up to 6" deep.

Prior to implementing the asphalt cutting blade, an asphalt dig-out required the use of a jackhammer and a rotation of four workers for a typical 60' cut. The time required to complete the job averaged 30 minutes. A controlled test was conducted that revealed the time needed to complete the task using the asphalt blade was reduced by a factor of 6:1, from 30 minutes to 5 minutes. The cost savings were greater, being reduced by a factor of 9:1, from $666.00 per hour to $73.80 per hour. In addition, worker fatigue and the potential for injuries to the wrists, arms, shoulders, neck, and back are reduced, as well as potential hearing and vision problems.

To learn more, contact Kevin Hazelwood at (336) 613-7253.