Inter-Office Correspondence

MISSOURI DEPARTMENT OF TRANSPORTATION

Date: December 14, 2007

To: Jay Bestgen
Design Division

From: Robert G. Becker, AE
Southern Area Engineer

Subj: Submission for Non-Project Practice Award for Excellence

During the **Tour of Missouri Bike Race**, MoDOT was asked to assist with traffic control along state routes in order to keep the racers and the traveling public safe.

The Branson Area was the venue for Stage 3 of the race. This stage was the time trial course, which involved closing an 18-mile course for a minimum of 4 hours. A section of the course was a 2500-foot ramp lane between Route 248 and the Bee Creek Interchange along U S 65.

In order to keep the cyclist and public safely separated, it was required that MoDOT install a physical barrier between the cyclist and the freeway traffic.

Setting Concrete Traffic Barriers

Our first plan was to install MoDOT's typical type F traffic barrier. The logistics of this operation was costly and very time consuming for a 4-hour closure. The steps of the process are as follows:

Transport 250 barriers to staging area
- 42 Loads of Barrier
- 204 labor hours
- 10 truck with trailers
- 2 loaders
- 1504 gallons of fuel

Setting 240 Barriers:
- 5 loaders
- 70 hours of labor
- 80 gallons of fuel
- 8 hours Lane Closure

Breaking Down closure
- 5 loaders
- 70 hours of labor
- 80 gallons of fuel
- 8 hours Lane Closure

Transporting 250 Barriers back to storage:
- 42 loads of barriers
- 10 trucks with trailers
- 2 loaders
- 204 labor hours
- 1604 gallons of fuel

This typical barrier would require a lane closure of 20 hours in order to set-up, have the race and remove these barriers. Another process needed to be evaluated.

Using the MoDOT Fleet as the Barrier

Regional Maintenance Supervisor Kevin Clayton proposed using truck, attenuators and trailers as a barrier alternative. This process would be faster and less costly than the traditional method and should reduce the time of closure by more than half.

The proposal was evaluated as follows:

Equipment needed:
- 60 trucks
- 20 trailers
- 20 truck-mounted attenuators
- 360 labor hours
- 480 gallons of fuel

Lane Closure set by 8:00 a.m.
Equipment staged at shop by 8:00 a.m.
Equipment set in closure by 9:00 a.m.
Equipment removed from closure 2:00 p.m.
All lanes opened 3:00 p.m.

This process would involve the coordination of a large number of equipment and personnel at one time but it saves a great amount of time, money and fuel.

One concern was how do we justify 60 people's time for 4 hours during the time trial?
The District 8 Safety and Health Manager, Gary McLarry offered to schedule a necessary 4-hour safety training that day. All drivers were transported back to the Branson shop from the site, given the training and transported back to the shop after the race.

The MoDOT fleet barrier system worked very well. The public, the media and the racing association recognized this as an excellent way to provide a safe short term barrier in an efficient and cost effective way.

Accounting for labor cost, fuel cost and user cost, this process saved just over $62,000.00 and can easily be repeated throughout the State.

TYPICAL TYPE F BARRIER

MoDOT FLEET AS PHYSICAL BARRIER

MoDOT FLEET AS PHYSICAL BARRIER

NON-PROJECT PRACTICE
2008 APPLICATION FORM
(required for each entry)

Process or Product Using MoDOT Fleet as physical barrier

Description (brief description of process or product before and after analysis) MoDOT was required to have a physical barrier between the Tour of Missouri Bike Racer's and the Highway 65 traffic during the time trials. This required using 2,500 feet of barrier. Setting traditional concrete barriers would have required, A 20 hour lane and ramp closure, 550 hours of labor and over 3,300 gallon's of fuel, Using MoDOT trucks and trailers to block the lane only required a 7 hour lane and ramp closure, 360 labor hours and 480 gallons of fuel.

Team Leader Kevin Clayton

Other Key personnel (limit of 9)

Steve Dunn	Joey Aldredge
Bob Becker	Mike Peck
Joe Rickman	Earl Wallace

Overall Savings:

Cost of using process or product before value analysis $ 77,130

Explanation 552 hours of labor ($15,880.00), 3368 gallons of fuel ($8,750.00), 20 hours lane closure ($52,500 user cost)

Cost of using process or product after value analysis $15,110

Explanation 360 hours of labor ($10,360.00), 480 gallons of fuel ($1,250.00), 7 hours lane closure ($3,500.00 user cost)

What would make this entry stand out from the rest of the entries when considering MoDOT's practical design philosophy?

In the past in order to set up a physical barrier, concrete barriers were used. This process takes many hours for the set up and removal of the barriers. Using the MoDOT Fleet Vehicles provides the same type of protection while eliminating the many hours of set-up and removal. This process saves; time in set-up and removal, money due to labor hours and fuel cost, public inconvenience due to disruptions in their commute and exposure time in traffic. The shorter time we work in traffic the safer it is for MoDOT's worker and the traveling public.

Send entries to: MoDOT Design Division, ATTN: Jay Bestgen
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ALL ENTRIES MUST BE RECEIVED NO LATER THAN CLOSE OF BUSINESS ON DECEMBER 15, 2007.