



Greg Horn, District Engineer

**ADDENDUM 001
REQUEST FOR BID
SL14-130-RW, Pervious Concrete Replacement**

Bidders shall acknowledge receipt of Addendum 001 (ONE) by signing and including it with original bid. The due date for receipt of this bid **does NOT change** by this Addendum. Accordingly, the following clarifications, additions/deletions, questions and answers are believed to be of general interest to all potential bidders. All other terms and conditions remain unchanged and in full force.

Name and Title of Signer (Print or type)	Name and Title of Department Authority Teresa (Terri) Mount Sr. Procurement Agent
Bidder Signature	Department of Transportation <i>Terri Mount</i>
<div>Signature of person authorized to sign</div>	<div>Authorizing Signature</div>
Date Signed:	Date Signed: July 1, 2014

Pre-Bid Meeting Minutes June 23, 2014.

THIS PAGE MUST BE SIGNED AND RETURNED WITH ORIGINAL RFB.

Route 141 Pervious Concrete removal and Replacement -Draft Bid Meeting

Meeting Minutes

June 23, 2014 9:30-11:00

MoDOT St. Louis District Office

Room 160

Attendees:

Name	Company	Contact
Mike Castro	MoDOT	314-453-1850
Cheryl Reeb	MoDOT	314-453-1734
Ted Reitz	SCI	314-575-9541
Bill Stone	MoDOT	573-526-4328
Larry Brooks	MoDOT	314-453-1732
Ken Leischeidt	Mo/Ks ACPA	314-651-2721

The meeting began with Bill Stone, Research Administrator providing a bit of background on the TxActive project that concrete that has been coined “Smog-Eating Concrete” which was placed on mainline in a two-lift placement in October 2011. Iowa State is conducting research on the roadway test section to determine the amount of air emission improvement that is exhibited by the concrete. Due to the cost of the TxActive cement only the top 2 inches of the roadway pavement were TxActive with the lower 7 inches being normal Type I cement mix.

In conjunction with the two-lift pavement there were some pervious shoulders constructed to investigate the runoff and pollution reducing effects of the TxActive. In the north TxActive test section there was 75 feet of pervious shoulder placed. The 75 foot section is divided up into 3 smaller sections. One 25 foot section has a strip drain just off of the roadway to capture the roadway runoff and collect the water through a drainage system. Another 25 foot section contains a drain under the pervious shoulder that collects the water for analysis as it filters through the pervious shoulder. The last 25 foot section contains a drain under the base of the shoulder to collect the water for analysis as it filters through the pervious shoulder and the base. Similarly there is 75 foot section of pervious shoulder constructed with Type 1 cement with similar 3 – 25 foot sections with drainage similar to the test section. The Type I section is described as the control section.

However, each of the 75 foot sections were placed and the pervious capabilities of the concrete were not acceptable as they did not filter down through the shoulder as hoped. Thus, MoDOT has interest to remove and replace some of these shoulder sections within this bid. The strip drain sections in both the Control and Test sections will NOT be removed. The strip drains are still collecting the water as it runs off the roadway. The remaining 50 foot in the control section and the remaining 50 foot test section are to be removed. They are to be sawed in close proximity to the roadway and on the barrier curb side to be removed a distance that is practical to be able to finish the pervious shoulder on the barrier side. A roller screed was used during the initial placement prior to the placement of the barrier curb. MoDOT did not want to restrict the contractor in this bid to a specific distance and did not want to call out the method to finish.

The project has a requirement of a test batch no less than 3 cubic yards at an agreed upon off-site location. The test batch is to be constructed of Type I cement. Type I cement and TxActive cement have similar properties and with the higher cost of the TxActive cement, MoDOT decided to only require the test batch with the Type I cement. The test batch and final mix will be tested using ASTM C1701 with an infiltration rate greater than 500 inches/hour. MoDOT will be performing strength properties testing of the pervious sections along with the infiltration testing. The mix design will be submitted to MoDOT for preapproval along with the sources of materials. The mix design is to have 24% voids. This is where the original pervious sections appeared to have gone wrong as they had too much paste and not enough void structure. Dr. John Kevern of University of Missouri-Kansas City (UMKC) is the lead researcher for the pervious shoulder process as part of the overall project that is led by Iowa State. UMKC will be supplying the Super Absorbent Polymer as noted in the bid Scope of Work. The contractor will be responsible for purchasing the TxActive cement from ESSROC Corporation. The requirement is to use the Self-Cleaning and Pollution Reducing version of the TxActive cement for this project.

The contractor will be responsible for the traffic control for the project and is to have the work done within one day. MoDOT has offered the option to the contractor to perform the work in daytime (9am-3pm) or at nighttime (7pm-5am). There are liquidated damages outlined in the bid package if the one day construction is not met.

Bids will be opened at the St. Louis District Office on July 9, 2014. The Completion Date for the project is September 19, 2014.

Larry Brooks will be point of contact for questions; he may have to coordinate with the other researchers prior to responding for those questions relating to the research elements of the project.

Contact information for Dr. John Kevern

Dr. John Kevern UMKC kevernj@umkc.edu 816-235-5977

Contact information for ESSROC Corporation of Steve Grytza:

Steve Grytza

Essroc Cement

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