

MEMORANDUM OF UNDERSTANDING
REGARDING WORK ORDER WITH URETEK USA, INC.

This MEMORANDUM OF UNDERSTANDING between the **FORT BEND COUNTY TOLL ROAD AUTHORITY** (the “Authority”) and **FORT BEND COUNTY** (the “County”) (collectively the “Parties”) sets forth the Authority utilizing Uretek USA, Inc. (“Uretek”) to address the compaction and settlement issues on approach slabs on the Fort Bend Parkway (the “Project”); and

The County has entered into a competitively procured contract with Uretek for hydro-intensive polyurethane foam materials and labor (Bid 14-013); and

The Authority proposes to utilize Uretek for the scope of work described on the attached proposal dated November 12, 2015 and revised August 31, 2016; and

It is understood between the Parties that the Authority will be responsible for directing all work with Uretek. Payment for the work will be made from the Toll Road Authority Revenue Fund.



November 12, 2015 Revised 8-31-16

Quote Per Current Fort Bend County Contract.

URETEK USA, Inc.
PO Box 1929
Tomball TX
77377-1929

13900 Humble Rd
Tomball TX
77377

T: 888-287-3835
T: 281-351-7800
F: 281-351-0884

The URETEK Method®
Deep Injection®
Stitch-In-Time®

Mr. Phil Martin
Mike Stone & Associates
1950 Lockwood Bypass
Richmond TX. 77469

**Ref: Fort Bend County Toll Rd. Concrete Bridge Approach and Departures
Void Fill and Lift to Grade. North and South Bound over
Fondren and Fuqua Roads Missouri, City TX 77489. GPS Lat. 29.596412
Long. -95.504816**

Mr. Martin

Thank you for the opportunity to address the compaction and settlement issues for the above location. After RE-inspection, as requested under your direction, URETEK USA is confident we can provide an economical and timely solution.

ANALYSIS

The pavement has experienced settlement due to a combination of past water infiltration, compaction and drought. Ultimately, this combination led to the development of stress cracks, settlement, and loss of support.

- **Treatment approach is to **inject directly under the pavement** displace any free water from directly under the slab, fill the voids with polyurethane and Lift the pavement.**
- **No digging and no down time for traffic.**
- **Less expensive repair; however not necessarily a long-term fix**
 - **Any problems in the soils that caused the settlement and could cause resettlement WILL NOT be addressed with this methodology.**
 - **Sleeper Slab can be lifted but without use of URETEK Deep Injection into the soils – the pavement slab could be lifted off the sleeper slab putting polyurethane material between the sleeper slab and the pavement slabs.**

Scope of Work: URETEK METHOD

URETEK USA, will inject URETEK 486 Star Polyurethane directly under the cited pavement system, and sleeper slab. Laser levels will be used to ensure proper Lifting.

URETEK crews will utilize a hole spacing of 4 foot on centers for polymer injection. Material consumption at each injection point will vary based

upon size of immediate void and amount of lift. Following polymer injection, all injection holes will be drilled out 2" in depth and then filled with a non-shrink grout.

The following specifications apply to each location:

- Injection Pattern – 4' Centers
- Uretek Method –Just below the pavement.
- Polymer – URETEK 486 STAR Polyurethane (Premium; 4- pcf Free Rise; hydro-insensitive.
- Primary Objectives
 - Displace water from directly under the pavement
 - Fill voids and lifts pavement

Bridge Departures North and South Bound over Fondren and Fuqua Roads
Quote, **per the current FORT BEND COUNTY CONTRACT with URETEK USA, Inc.**

- Area 40' Length x 60' Wide = 2400 Sq. Ft. each.
- Polymer estimated at 6000 pounds at \$4.95LB. for each Approach and Departure. 4 Approach and 4 Departures
- Cost is estimated \$237,600.00

Each production truck is equipped with meters that measure the chemicals (to check correct injection ratio) and pounds for accurate measurement for payment. The below estimate describes mobilization, and is inclusive of materials, trained technicians, tools and insurance.

SUMMATION

Mobilization – No Charge Local

Estimated pounds for injections 6000lbs. and will not be exceeded unless approved. Charges are only for material injected.

Cost per pound \$4.95

Total Estimate \$237,600.00

Traffic Control: Not included.

If you have any questions, please call me at 281-389-3087.

URETEK USA, looks forward to working for you.

Best Regards

Jim Reid

Jim Reid

