

TEXAS DEPARTMENT OF TRANSPORTATION  
GENERAL SERVICES DIVISION

SPECIFICATION NO.  
TXDOT 968-84-87\*  
REVISED: NOVEMBER 2012

TRAFFIC CONTROL, TRENCHING, AND DATA COLLECTION SERVICES  
PUBLICATION

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1. SCOPE: This solicitation is to provide services for traffic control, trenching, and data collection for the TxDOT and Federal Highway Administration (FHWA), on the Long-Term Pavement Performance (LTPP), the LTPP Transverse Profile Study test sites and any TX DOT identified potential test site.

NOTE: A crew may function as both lane closure technicians and flagging personnel, however flagging personnel may not be utilized without accompanying lane closure and traffic control services.

2. ACRONYMS

- 2.1. ATSSA – American Traffic Safety Services Association
- 2.2. BC-03 – Barricade & Construction Standard Sheets
- 2.3. CWZTCD – Compliant Work Zone Traffic Control Device List
- 2.4. FWD – Falling Weight Deflectometer
- 2.5. GPS – General Pavement Studies
- 2.6. HMAC – Hot Mix Asphaltic Concrete.
- 2.7. POC – Point of Contact
- 2.8. ROW – Right of Way
- 2.9. SHRP – Strategic Highway Research Program

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\* This Specification Supersedes TxDOT Specification No. 968-84-87, Revised January 2010.

- 2.10. SMERP – Supplemental Maintenance Effectiveness Research Program
- 2.11. SPS – Specific Pavement Study
- 2.12. SRCO – Southern Region Coordination Office
- 2.13. TCP – Traffic Control Plan
- 2.14. TEEX – Texas Engineering Extension Service
- 2.15. TMUTCD – Texas Manual on Uniform Traffic Control Devices for Streets and Highways
3. APPLICABLE LAWS AND STANDARDS: The vendor shall provide the specified service requirements in accordance with all federal, state and local applicable laws, standards and regulations necessary to perform the services including, but not limited to:
  - 3.1. TxDOT Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges. For a hard copy of this publication, contact the General Services Division at (512) 465-3016 or, for a downloadable copy, go online at:  
<http://ftp.dot.state.tx.us/pub/txdot-info/des/specs/specbook.pdf>
  - 3.2. Texas Manual on Uniform Traffic Control Devices for Streets and Highways (TMUTCD); Part VI – Standards and Guides for Traffic Controls for Street and Highway Construction, Maintenance, Utility, and Incident Management Operations. For a hard copy of this publication, contact TxDOT Traffic Operations Division at (512) 416-3134 or, for a downloadable copy, go online at:  
<http://ftp.dot.state.tx.us/pub/txdot-info/trf/tmutcd/2011/complete.pdf>
  - 3.3. TxDOT Compliant Work Zone Traffic Control Device List. For a hard copy of this list, contact TxDOT Traffic Operations Division at (512) 416-3134 or, for a downloadable copy, go online at:  
[http://ftp.dot.state.tx.us/pub/txdot-info/trf/pdf/cwztcd\\_9\\_2012.pdf](http://ftp.dot.state.tx.us/pub/txdot-info/trf/pdf/cwztcd_9_2012.pdf)
  - 3.4. Texas Transportation Code, Section 521.021, TR 007.521.021.3.1.
  - 3.5. Texas Government Code 612, Section 612.002 of Texas Statutes.
  - 3.6. Code of Federal Regulations, Title 49, Part 18.32, Property Management, and Part 1836, Procurement.

4. **BACKGROUND:** There are currently 78 LTPP test site sections statewide. The LTPP test site sections consist of 61 General Pavement Studies (GPS), and seventeen Specific Pavement Studies (SPS). Additionally, there are five Falling Weight Deflectometer (FWD) LTPP seasonal test sites and nine test sites for the LTPP Transverse Profile Study.

Traffic control services are required during visual data collection and FWD testing of the LTPP sites. Traffic control services may be required for the LTPP Transverse Profile Study test sites. Trenching services, including sawing, backhoe and manual excavation services, are required for all Transverse Profile Study test sites. Data collection for the LTPP sites is provided by the FHWA LTPP Southern Region Coordination Office (SRCO), Fugro Consultants, Inc., Austin, Texas. LTPP data collection activities will be coordinated and scheduled by Fugro. Additional data collection will be directed by TxDOT personnel.

It is the responsibility of the FHWA-SRCO to contact each district office prior to installation of traffic control to obtain concurrence in regard to the proposed setup for LTPP test sections.

FHWA-SRCO provides the designated TxDOT district representative with the location, time, purpose of the traffic control setup, and proposed plan. In the event of a disagreement concerning the appropriate traffic control installation, the appropriate designated TxDOT district representative's decision will prevail.

5. **RESPONDENT QUALIFICATIONS:** The respondent shall:

- 5.1. Be a company engaged in the business of providing work zone traffic control and trenching services, including measurement and data gathering services for research studies at test sites for a minimum of four years within the last six years. Recent start-up businesses do not meet the requirements of this solicitation.

**NOTE:** A start-up business is defined as a new company that has no previous operational history or expertise in the relevant business and is not affiliated with a company that has that history or expertise. Two companies are affiliated if the two companies have a common parent company or if one is the parent or subsidiary of the other. (Ref. Schedule 1 – Respondent Qualifications and Experience).

- 5.2. Have a minimum of four years experience within the last six years in managing and supplying trained personnel to provide traffic control, trenching, and data collection services for research data. Experience shall include but not be limited to managing and providing field personnel and equipment.

**NOTE:** Field experience in traffic control, trenching, and data collection services as a supervisor, in lieu of business experience, is not acceptable, insufficient, and will not be considered. TxDOT will be the sole judge of whether or not a company demonstrates acceptable experience.

- 5.3. Be in good financial standing and current in payment of all taxes and fees such as state franchise fees. TxDOT reserves the right to request a copy of the respondent's audited or un-audited financial statement.

TxDOT may request a statement from the president, owner or financial officer on company letterhead certifying that the company is in good financial standing, current in payment of all taxes and fees or request financial statements.

When financial statements are requested, TxDOT will review the respondent's audited or un-audited financial statement to this solicitation in accordance with Texas Government Code, Title 10, Subtitle D, Section 2156.007 to evaluate the sufficiency of the respondent's financial resources and ability to perform the contract or provide the service required in the solicitation. TxDOT will be the sole judge in determining the sufficiency of the respondent's financial resources and ability to perform the contract or provide the service. Factors to be reviewed include:

- 5.3.1. Balance sheets.
- 5.3.2. Net working capital.
- 5.3.3. Current asset ratio.
- 5.3.4. Liquidity ratio.
- 5.3.5. Auditor(s) notes.
- 5.3.6. Any notes to the financial statements.

6. RESPONDENT REFERENCES: The respondent shall submit a minimum of three references to substantiate the qualifications and experience requirements for similar services completed for four years within the past six years. References shall illustrate respondent's ability to provide the services outlined in the specification. References shall include name, point of contact (POC), telephone number, and dates services were performed. The response may be disqualified if TxDOT is unable to verify qualification and experience requirements from the respondent's references. The response may be disqualified if TxDOT receives negative responses. TxDOT will be the sole judge of references (Ref. Respondent References form).

7. RESPONDENT PERSONNEL QUALIFICATIONS: The respondent shall provide the following respondent personnel:

- 7.1. SUPERVISOR: Supervisor shall:

- 7.1.1. Have a minimum of three years experience within the last five years in managing traffic control and trenching service projects, including actual experience in trenching data collection and measurement.

7.1.2. Be certified by the TEEEX Infrastructure Training and Safety Institute, or the Roadway Safety Training Institute of ATSSA, as an instructor in flagging, and certified in work zone traffic control, by completing and successfully passing, the following courses:

7.1.2.1. TEEEX – HWS114 (Train the Trainer Flaggers), and HWS002 (Work Zone Traffic Control – Open Enrollment) and meeting experience pre-requisites (TxDOT – 4000 hours). Supervisor and all students must recertify every four years in Work Zone Traffic Control.

7.1.2.2. ATSSA – 19618 (Flagger Instructor Training) after passing courses TCT (Traffic Control Technician), TCS (Traffic Control Supervisor), and meeting experience pre-requisites (ATSSA – 4000 hours). Supervisor and all students must recertify every three years .

NOTE: The Lead Crewmember or other permanent company personnel may serve as a flagging instructor(s) as long as the pre-requisites for either TEEEX or ATSSA have been met, and the Lead Crewmember is certified.

7.2. LEAD CREWMEMBER: Lead Crewmember shall:

7.2.1. Have a minimum of two years of experience within the last three years in traffic control and trenching service projects.

7.2.2. Crewmember shall be certified by TEEEX or ATSSA (Ref. Paras. 7.1.2.1. and 7.1.2.2.) in work zone traffic control, and flagging, and experienced in trenching data collection and measurement.

8. VENDOR REQUIREMENTS: The vendor shall:

8.1. Adhere to the TxDOT Terms and Conditions identified on the solicitation.

8.2. Provide all labor, material, and equipment necessary to furnish the goods or perform the service(s) throughout the term of the purchase order.

8.3. Provide a primary POC (Ref. Paras. 9.1.1. and 9.2.2.).

8.4. Adhere to the FHWA trenching schedule provided by TxDOT or FHWA-SRSCO or both.

8.5. Provide a telephone number where complaints can be referred. The number shall be available to the public during normal work hours and answered by vendor personnel or an answering machine. The answering machine shall be monitored by vendor who shall respond to the complainant within five calendar days of the complaint (Ref. Para. 22.). The vendor shall provide TxDOT with this telephone number upon award of the purchase order.

8.6. Furnish an email address to TxDOT upon award of the purchase order and respond to email messages received from TxDOT within one working day.

- 8.7. Ensure all work zone traffic control and flagging personnel recertify in work zone traffic control and flagging respectively, every three to four years, dependent upon the certifying entity (Ref. Para. 7.1.2. through 7.1.2.2.).
- 8.8. BACKGROUND CHECK: Conduct statewide DPS, Texas and out-of-state county courthouse verification of criminal and sex offender background checks on all vendor's permanent and temporary personnel scheduled to work on TxDOT projects prior to beginning service start-up. Upon award, supporting documentation confirming the completion of these comprehensive background checks may be subject to review upon request by TxDOT or the TxDOT designee, or both, prior to beginning the service. Failure to produce the requested documentation may be cause for cancellation of the purchase order. The background checks shall include, but not be limited to, the following:
  - 8.8.1. Social Security Number verification.
  - 8.8.2. Statewide criminal and sex offender records for all Texas counties and out-of-state counties based on the current and previous addresses of the applicant for the last seven years.

9. RESPONDENT PERSONNEL REQUIREMENTS

- 9.1. SUPERVISOR: The Supervisor's primary responsibility shall be the day-to-day, on-site supervision and operation of the service in accordance with the requirements of the purchase order. The Supervisor shall:
  - 9.1.1. Be a permanent staff person and shall serve as a constant primary POC for TxDOT. Supervisor shall monitor all traffic control personnel and trenching activities. Supervisor shall also ensure the TxDOT required Traffic Control Plan (TCP) is implemented correctly by the vendor's work zone traffic control personnel, and ensure that trenching activities are monitored, including measurement, and data services.
  - 9.1.2. Serve as the company employed instructor for flagging (Ref. Para. 7.1.2.).
  - 9.1.3. Certify and report by return documentation to TEEX or ATSSA, all individuals who are trained by the company instructor in flagging.
  - 9.1.4. Be responsible for supplying original flagging certification cards provided by the certifying entities above to all flagging personnel. Cards shall be carried at all times by flagging personnel.
  - 9.1.5. Be responsible for ensuring copies of original work zone traffic control certificates issued by the above certifying entities are carried at all times, by personnel performing work zone traffic control (i.e. lane closures, flagging, etc.).
  - 9.1.6. Be responsible for daily fielding and supervision of personnel assigned to the project.

- 9.1.7. Travel to any county requiring supervisory assistance within four hours of a request by TxDOT.
- 9.1.8. Be available by cellular phone 24 hours per day, seven days per week, to answer any questions. Immediately report any problems to TxDOT which may occur.
- 9.1.9. Handle any vendor personnel problems which may arise in regard to the vendor's personnel or subcontractors.
- 9.2. LEAD CREWMEMBER: The Lead Crewmember shall:
  - 9.2.1. Be present at each site and responsible for leading all crewmembers required for the TCP, while monitoring work zone traffic control, trenching, and data collection services.
  - 9.2.2. Serve as the field POC at each job site in the absence of the Supervisor.

10. SERVICE REQUIREMENTS

- 10.1. TRAFFIC CONTROL: Traffic control shall consist of providing, installing, moving, replacing, maintaining, cleaning and removing upon completion of work, all barricades, signs, barriers, cones, lights, signals, arrow boards, truck-mounted attenuators and other traffic control devices necessary to provide a safe work zone for LTPP data collection activities. Traffic control shall include all costs associated with traffic control operations, including but not limited to, mobilization, transportation, labor, equipment, demobilization, travel and per diem.
  - 10.1.1. All traffic control and traffic control devices shall conform to the requirements in the publications referenced in Para. 3.
  - 10.1.2. The vendor may propose an alternate TCP. The alternate TCP may be used if approved in writing by TxDOT and the FHWA-SRCO. Prior to beginning work, the vendor shall designate, in writing, an on-site supervisor and lead crewmember to be responsible and available on the project site to ensure compliance with the TCP. TxDOT or the FHWA-SRCO will designate a qualified person to observe implementation and who will have the authority to assure compliance with the TCP.
  - 10.1.3. The vendor shall provide service for the specified number of days shown on the solicitation for Regular and Standby Traffic Control Operations.

- 10.1.4. Regular Traffic Control Operation for one day is defined as a 24-hour period, or portion thereof, from the beginning of placement of the traffic control, actual traffic control, through stowage of equipment at the end of the day and shall include all costs for the traffic control activities identified in Para. 10.1. If more than 24 hours are worked, then those hours exceeding 24 hours shall be considered as a second day. A second day will be paid if the second group of 24 hours exceeds two hours.

NOTE: Message boards may be needed seven days prior to the traffic control operation.

- 10.1.5. Standby Traffic Control Operation is defined as a 12-hour period or portion thereof, during which the vendor is mobilized but data collection activities cannot be performed due to a rain-out, bad weather conditions or as determined by the FHWA-SRCO (Ref. Para. 10.1.4.).

- 10.1.6. TxDOT may require the vendor to perform at any time of the day.

- 10.2. TRENCHING SERVICE: Trenching service shall include pavement sawing, backhoe and manual excavation of trenches, and excavated material handling for trenches which shall be cut into the LTPP Transverse Profile Study asphaltic concrete pavements. Service information shall also include trench measurements and pavement data. The vendor shall provide mobilization, equipment, power tools, hand tools, manpower and other incidental equipment and supplies necessary to excavate a maximum of three trenches per each Transverse Profile Study test site. In addition, the necessary equipment and manpower necessary to stockpile, or remove the excavated materials, or both, from the worksite, shall be provided.

- 10.2.1. Each pavement trench shall be approximately one lane width wide (12 feet) and a minimum of 3 feet long in the direction of traffic flow. The trench depth shall vary depending on the pavement structure but in no case will exceed 4 feet in depth.

- 10.2.1.1. The 3 foot x 12 foot outline of the trench shall be sawed through the asphaltic concrete surface layer in order to provide a clean, well-defined trench edge. The saw used for this operation shall be air or water cooled and cut a clean kerf through the entire thickness of the asphalt surface layer. The vendor shall minimize the water used to cool the saw blade, as the in-situ moisture content of the trench base material must be preserved. The vendor shall take steps to minimize contamination of the base and subgrade. The thickness of the asphalt surface layer will vary depending on site conditions and may range from 1.5 inches to 14 inches.

- 10.2.1.2. The asphaltic concrete surface layer shall be removed from the trench using a backhoe and handwork as necessary to prevent damage to the trench face. The vendor shall then smooth the surface of the base layer and then smooth the subbase and subgrade, if necessary, so that testing may be performed by TxDOT on each layer's surface. In some cases, there may be only asphalt-stabilized base material. In these cases, all of the asphaltic concrete layers shall be removed. The base and sub-base layers shall be removed in a similar fashion to expose the full depth of the pavement structure for measurement purposes.
- 10.2.1.3. After the testing has been completed by TxDOT on each of the pavement layers, the remainder of the base or subbase material, or both, shall be removed with no disturbance of the subgrade surface. The vendor shall then smooth the surface of the subgrade, so that testing may be done by others.
- 10.2.1.4. Once the testing on the subgrade surface has been completed by TxDOT, the vendor shall remove the subgrade to a total depth of 3 to 4 feet, and then smooth one wall of the trench.
- 10.2.2. Each TxDOT district will choose the option which best fits the district's needs at the project site (Ref. Attachment A – Long Term Pavement Performance Test Sites):
  - 10.2.2.1. Option 1: The vendor shall stockpile the excavated material in the ROW within 100 feet of the test pit area.
  - 10.2.2.2. Option 2: The vendor shall place the excavated material in a dump truck provided by TxDOT.
  - 10.2.2.3. Option 3: The vendor shall place the excavated material back in the trench after measurements are taken. The material shall be compacted in 4 inch lifts.

NOTE: TxDOT will repave with hot mix asphalt concrete (HMAC) surfacing, be responsible for any resulting roughness, and dispose of the original HMAC material.

10.3. MESSAGE BOARD: Each unit shall:

- 10.3.1. Include a trailer-mounted message board, all necessary controls, including but not limited to, personal computer (PC) keyboard or alpha-numeric hand-held data entry device, wireless modem with external hi-gain antenna mounted on trailer, software, solar panel, batteries, and trailer, and shall interface with PCs, cellular phones, and radar devices.
  - 10.3.1.1. Meet or exceed legal visibility and all other requirements of the Manual on Uniform Traffic Control Devices (MUTCD) and Texas Manual on Uniform traffic control Devices (TXMUTCD).

- 10.3.1.2. Meet the minimum Daytime Character Luminance of 1000 cd/m<sup>2</sup> with a contrast ratio of five, and a minimum Nighttime Character Luminance of 600 cd/m<sup>2</sup> measured at the character level in candela as is published in Report 4940-2, 'Photometric Requirements for Portable Changeable Message Signs', conducted by the Texas Transportation Institute (TTI).
- 10.3.1.3. Software: Meet current National Transportation Communications for Intelligent Transportation Systems protocol (NTCIP) compliant standards for portable signs in place on the date the solicitation is advertised.
- 10.3.2. NCHRP 350 Compliance: Meet the National Cooperative Highway Research program (NCHRP) 350 crash worthiness requirements by the due date when federally mandated. All units furnished after the mandated due date shall be labeled as meeting the NCHRP 350 requirements.
- 10.3.3. Message Board: Time shall be defined:
  - 10.3.3.1. Week – Seven calendar day, 24-hour period, or portion thereof, from the beginning of placement of the message board, actual placement, through stowage of equipment at the end of the day and shall include all costs for the message board activities identified in Para. 10.3. If more than seven days are worked, then those hours exceeding seven days shall be considered as a second week or day. A second day will be paid if time exceeds 26 hours
  - 10.3.3.2. Day – 24-hour period, or portion thereof, from the beginning of placement of the traffic control, actual traffic control, through stowage of equipment at the end of the day and shall include all costs for the message board activities identified in Para. 10.3. If more than 24 hours are worked, then those hours exceeding 24 hours shall be considered as a second day. A second day will be paid if time exceeds 26 hours.
- 10.4. DATA COLLECTION: For each of the LTPP Transverse Profile Study Sites when trenching, the vendor shall:
  - 10.4.1. Collect measurements and information.
  - 10.4.2. Provide and use a FACE<sup>®</sup> Dipstick with a fixed footpad of 12 inches to collect transverse profile measurements at each of the three marked locations. Five circuits of transverse profile measurements on each of the marked locations shall be performed as described in the SHRP/LTPP Distress Identification Manual. A maximum of 15 circuits shall be performed for each of the LTPP Transverse Profile Study locations.

NOTE: TxDOT will provide a FACE<sup>®</sup> Dipstick for the vendor's use provided the dipsticks are returned at the end of each day's collection in the same condition as when received by the vendor. Vendor shall accept all responsibility for any dipstick provided by TxDOT and shall be responsible for damage to any dipstick.

- 10.4.3. Collect FACE<sup>®</sup> Dipstick and rod and level readings at transverse locations specified by TxDOT. The transverse profile locations will be marked by TxDOT and be coordinated with the TxDOT automated rutbar and profile measurement locations.
- 10.4.4. Use a surveyor's rod and level to collect transverse profile measurements at each of the marked transverse profile locations. The vendor shall begin the rod and level survey at the edge of the travel lane and collect rod and level measurements across the entire width of the lane. The rod and level measurements shall be spaced six inches apart by using a steel tape measure to ensure that six inch spacing is maintained. The measurements shall be recorded in a field book provided by the vendor and shall be given to TxDOT upon completion of measurements at each test section.
- 10.4.5. Collect one set of rut depth measurements in each wheel path using both a four foot and a six foot straightedge. The rut depth measurements shall be collected at each of the transverse profile locations and recorded in a field book provided by the vendor. The rut depth measurement shall be performed as described in the SHRP/LTPP Distress Identification Manual.
- 10.4.6. In each trench location, and as directed by TxDOT, measure the thickness of the asphalt surface, base and sub-base layers at five different locations within the wheel path using a steel ruler. The location of the thickness measurements shall be as directed by TxDOT.
- 10.4.7. Record the thickness measurements in inches correct to the first decimal point in a field book provided by the vendor and the field book shall be given to TxDOT upon completion of each test section. The field book shall include a sketch showing the pavement structure and the location of each layer thickness measurement taken.
- 10.5. TxDOT will enhance the pavement layers with chalk or colored string lines so the pavement layers may be clearly photographed. TxDOT will take digital pictures of all four sides of each trench to show the total pavement structure and each individual layer.
- 10.6. TxDOT will run a mechanical profiler at each trench line. After the trench is opened, the profiler will be put back into position at the trench line. The vendor shall then use the profiler's aluminum beam as a reference to measure the depth to each pavement layer. Measurements shall be completed by vendor's personnel at a four-inch interval for the length of the trench. Measurements shall be logged by the vendor's personnel, into the same field book used for rod-and-level measurements.

11. LOCATIONS

- 11.1. A location description for each LTPP test site is provided on Attachment A – Long Term Pavement Performance Test Sites. Maps showing the general location of each test site may be found at: <http://www.bre.fugro.com/ltp>. Traffic control shall be performed on both two-lane and four-lane divided highways.
- 11.2. Each LTPP GPS and FWD Seasonal Monitoring Test Site, traffic control work zone shall consist of a full-lane closure 500 feet in length, excluding approach or departure tapers. The traffic control shall be located in, but not limited to the outside (right) traffic lane. The LTPP SPS traffic control work zones may be up to one mile in length, excluding approach or departure tapers, and shall be located in, but not limited to the outside (right) lane. The five FWD Seasonal Monitoring sites are located within the test site limits of five separate GPS sites as indicated in Attachment A – LTPP Test Sites. All SPS sites except three are located near a GPS site, but not within the GPS test site limits.
- 11.3. The location of the LTPP Transverse Profile Study test sites will be identified at a later date and may occur anywhere within the state. When feasible, work required on the Transverse Profile Study test sites will be coordinated with work on the LTPP GPS, SPS and FWD Seasonal monitoring sites in order to minimize unnecessary mobilization and travel time.

12. VENDOR PERFORMANCE: Vendor performance will be monitored on a regular basis by TxDOT. TxDOT may consider the following performance by the vendor as unsatisfactory performance. An unsatisfactory performance determination includes, but is not limited to:

- 12.1. Two instances within one year of vendor personnel assigned to a worksite without the required certification to provide the service. (Ref. Paras. 7.1.2. and 7.2.2.).
- 12.2. Removal of three employees at the request of TxDOT, for any reason, during the term of service, TxDOT may, at its sole discretion, cancel the purchase order. (Ref. Para. 14.3.).
- 12.3. Failure to provide TxDOT a telephone number available to the public during normal work hours which is answered either by vendor employees or an answering machine where complaints can be referred will be grounds for cancellation of the purchase order. (Ref. Para. 8.5.).

NOTE: Unsatisfactory performance may result in a negative vendor performance report, or cancellation of the purchase order or both.

13. SCHEDULING: The scheduling of data collection on the LTPP and LTPP Transverse Profile Study test sites is a dynamic process and is weather dependent. The vendor shall coordinate all work schedules with the FHWA-SRCO. The schedule is dictated by the FHWA-SRCO and it is imperative that this schedule be met. The dynamics, logistics, coordination, and weather considerations for the schedule, precludes the ability of the FHWA-SRCO or TxDOT to guarantee more than a 72-hour notice for mobilization of traffic control and trench excavation services for the test sites. One-week prior to the end of each month, the FHWA-SRCO will provide both TxDOT and the vendor with a schedule for the coming month with an explanation for any deviations in the schedule for the current month. The requested traffic control may need to be extended to the next working day.

14. PERSONNEL CONTINUITY AND REPLACEMENT

- 14.1. TxDOT recognizes that events beyond the control of the vendor such as the death, physical or mental incapacity, long-term illness, or the voluntary termination of employment of the key personnel will require the vendor propose a replacement. In the event such a replacement is necessary, vendor agrees that personnel shall not begin work on the project without prior written approval from TxDOT.
- 14.2. The key personnel shall remain available for the entire term of the purchase order as long as that individual is employed by the vendor.
- 14.3. If TxDOT determines key personnel, vendor employees, or subcontractors are unable to perform in accordance with the service requirements or to communicate effectively, the vendor shall immediately remove that person.
- 14.4. Proposed replacement personnel shall meet minimum qualifications and have experience comparable to the person(s) being replaced. Replacement personnel shall be provided at no additional cost to TxDOT. Resume(s) and reference(s) may be requested for the proposed key personnel replacement(s). TxDOT may reject any replacement if references or past working performance is questionable or unfavorable. TxDOT will be the sole judge of the qualifications of the proposed replacement personnel.

15. VENDOR PERSONNEL SAFETY: The vendor shall provide all required safety equipment and instruct personnel to observe all safety policies, rules and requirements at all times, including, but not limited to:

- 15.1. Provide ANSI approved steel-toed footwear and safety hard hats which shall be worn at all times by vendor's employees or subcontractors, or both, in the field.
- 15.2. Other safety equipment such as eye protection, respirators, and inclement weather gear is recommended, but not required.
- 15.3. Safety vests shall be ANSI approved, Class II or III reflective vests, which meet or exceed the current or most recent specifications for quality and visibility factors required by TxDOT and the TMUTCD.
- 15.4. Communication devices shall be UHF, minimum two watts, have a minimum two miles communication distance, eight hours of talk-time, and a spare battery, tested and verified operational prior to lane closure(s) and traffic control assignments. Cellular phones with fully charged batteries and available extra batteries may be used when topography or location inhibits the use of UHF radio communication, without a repeater. If allowed, cellular phones shall be used for business only, to ensure adequate communication between the vendor's personnel and TxDOT in the field. Use of cellular phones for business only, must be pre-approved by the designated TxDOT representative.
- 15.5. One extra two-way communication device shall be provided for the designated TxDOT representative at each job site to enable communications between the vendor's employee(s) and TxDOT. Should cellular phones be used, one extra cellular phone with a fully charged battery and cellular phone battery charger shall be provided to TxDOT.

16. SUBCONTRACTING

- 16.1. Subcontractors providing service under the purchase order shall meet the same service requirements and provide the same quality of service required of the vendor.
- 16.2. No subcontract under the purchase order shall relieve the primary vendor of responsibility for the services.
- 16.3. The vendor shall be the primary contact for TxDOT and subcontractor(s).
- 16.4. The vendor shall manage all quality and performance, project management, and schedules for subcontractors. The vendor shall be held solely responsible and accountable for the completion of all work for which the vendor has subcontracted.
- 16.5. TxDOT reserves the right to request the removal of vendor's subcontractor staff deemed unsatisfactory by TxDOT.
- 16.6. Subcontracting shall be at the vendor's expense.
- 16.7. During the term of the purchase order, if the vendor determines a need for a subcontractor change, TxDOT shall be notified in writing by the vendor within five working days of any proposed change. The vendor shall be required to provide references and work history for any proposed subcontractor to TxDOT. No change will be allowed without written authorization by TxDOT.
- 16.8. SOLICITATIONS OVER \$100,000: TxDOT will make an initial determination of whether subcontracting is probable. It is the respondent's determination if they choose to subcontract any of the work under this purchase order with a Texas Certified Historically Underutilized Business (HUB) or other businesses.
  - 16.8.1. If TxDOT has determined that subcontracting opportunities are probable, the class and items in which HUBs may be registered will be noted in the solicitation.
  - 16.8.2. The respondent shall identify all proposed HUB and other subcontractors at the time of response submittal. The required forms with video instructions can be found at the following website:  
  
<http://www.window.state.tx.us/procurement/prog/hub/hub-subcontracting-plan>
  - 16.8.3. **RESPONSES THAT DO NOT INCLUDE A COMPLETED HUB SUBCONTRACTING PLAN AS INDICATED ON THE SOLICITATION SHALL BE REJECTED PURSUANT TO TEXAS GOVERNMENT CODE §2161.252(B).**

- 16.9. **HUB SUBCONTRACTING PLAN (HSP) PRIME CONTRACTOR PROGRESS ASSESSMENT REPORT:** After award of the purchase order, the vendor shall report all HUB and non-HUB subcontractor information using the HSP Prime Contractor Progress Assessment Report form. The report shall be submitted to the TxDOT contract manager monthly. The report shall be submitted monthly even during the months the vendor is not invoicing TxDOT. All payments made to subcontractors shall be reported. TxDOT may verify the amounts being reported as paid by requesting copies of cancelled checks paid to subcontractors.
17. **TRAVEL:** All travel and per diem shall be included in the unit price.
18. **CONFLICT OF INTEREST:** The vendor, vendor's personnel and vendor's subcontractor(s) shall affirm not to have, nor acquire any interest during the term of the purchase order that would conflict in any manner with the performance of the vendor's obligations in regards to services authorized.
19. **LIQUIDATED DAMAGES:** Liquidated damages of \$2,065.00 per day for LTPP sections, and \$1,005.00 per day for SMERP or LTPP Transverse Profile Study sections, or both, will be assessed if the vendor neglects, fails, or refuses to complete the work and adhere to the schedule as prescribed by the FHWA-SRCO and TxDOT. Each calendar day the specified work is delayed will be considered as a breach of contract unless the vendor has been granted an extension in writing by TxDOT.
- 19.1. Failure to perform in accordance with the specification and terms and conditions of the purchase order, after having been notified in writing by TxDOT of the specific deficiency, may result in TxDOT requiring the vendor to pay liquidated damages until the deficiency is corrected. If the deficiency is not corrected within five calendar days, the vendor may be considered in default.
- 19.2. This provision is not intended as a penalty, but as liquidated damages.
20. **FEDERAL FUNDING:** The purchase order will be supported in part with federal funds, therefore, the following federal laws and standards apply, including the following:
- 20.1. Title 42 U.S.C. §§ 2000d-2000d-7, with the exception of sections 2000d-5 and 2000d-6, also known as – Title VI of the Civil Rights Act of 1964.
- 20.2. Title 49 CFR Subtitle A – Office of the Secretary of Transportation.
- 20.3. OMB Circular A-87 – Office of Management and Budget Circular relating to Cost Principles for State, Local and Indian Tribal governments.
- 20.4. OMB Circular A-102 – Office of Management and Budget Circular relating to Grants and Cooperative Agreements with State and Local Governments.
- 20.5. OMB Circular A-133 – Office of Management and Budget Circular relating to Audits of States, Local Governments and Non-Profit Organizations.

21. COMPLAINTS: Complaints filed by the public against the vendor, or any vendor personnel, regarding work performed by the vendor under this service shall be answered in writing by the vendor to the complainant within five calendar days of receipt of the complaint. For any complaint, vendor shall provide email notification to the TxDOT POC within one day of receipt of the complaint. A copy of the vendor's written response to the complainant shall be provided to the TxDOT POC via email, on the day the vendor responds to the complaint. Failure to adhere to these requirements will be deemed grounds for cancellation of the purchase order (Ref. Paras. 8.5. and 8.6.).
22. RECORDS: The vendor shall maintain all books, documents, papers, accounting records, and other evidence pertaining to costs incurred at its office during the purchase order period and for three years from the date of final payment under the purchase order. If the purchase order is federally funded, such materials shall be made available during the specified period for inspection by TxDOT, the USDOT, the Office of the Inspector General, and any authorized representatives for the purpose of making audits, examinations, excerpts, and transcriptions.
23. INVOICING INSTRUCTIONS: The vendor shall provide:
  - 23.1. ORIGINAL INVOICE: A comprehensive and detailed invoice with reference to the basis for each item charged. The original invoice shall be emailed to [FIN\\_Invoices@txdot.gov](mailto:FIN_Invoices@txdot.gov) unless otherwise indicated on the purchase order to ensure timely payment and shall include the following:
    - 23.1.1. Complete 16-digit purchase order number.
    - 23.1.2. Vendor Employer Identification Number (EIN).
    - 23.1.3. Date and time of service.
    - 23.1.4. Location of service.
    - 23.1.5. Type of traffic control (regular or stand-by hours), and number of trenches.

NOTE: Invoices requiring correction shall be re-submitted with a new invoice date.
  - 23.2. COPY OF INVOICE: A copy of the invoice shall be e-mailed to the designated TxDOT representative.
24. PAYMENT REQUIREMENTS: Payment will be based on the following:
  - 24.1. Trenching services will be paid by the trench. The amount of payment shall be calculated by multiplying the number of trenches actually excavated. The number of trenches excavated will be pre-approved daily by TxDOT (Ref. Paras 10.1.4. and 10.1.5.).
  - 24.2. No payment will be made for official state holidays (unless otherwise approved by TxDOT in writing), lunch hour, illness or any time when work is not actually performed. No payment will be made for time associated with late arrival to or early departure from the designated work location (Ref. 10.1.4. and 10.1.5.).

25. TXDOT RESPONSIBILITIES: TxDOT will:
- 25.1. Provide a designated TxDOT POC at each site.
  - 25.2. Provide a designated contract manager.
  - 25.3. Provide a trenching schedule determined by TxDOT in cooperation with FHWA-SRSCO as stated in Para. 8.4.
  - 25.4. Provide contract administration, perform periodic audits or field reviews as needed to ensure that the vendor is providing the service as specified, and measurements are accurate.
  - 25.5. All traffic control will be coordinated by TxDOT.
26. RESPONSE SUBMISSION:
- 26.1. The following **shall** be submitted with the response. Failure by the respondent to submit the documentation listed below **will** disqualify the respondent from further consideration.
    - 26.1.1. Original, signed, dated, and completed IFB.
    - 26.1.2. Schedule 1 – Respondent Qualifications and Experience.
    - 26.1.3. Certifications, Flagging or Work Zone Traffic Control.
    - 26.1.4. HUB Subcontracting Plan (This requirement is stated on the IFB if applicable.).
  - 26.2. Respondent References **should** be submitted with the response. Failure by the respondent to submit references **may** disqualify the respondent from further consideration.
27. AWARD: TxDOT reserves the right to award a single purchase order to the most responsive, responsible respondent meeting the specification.
28. CONTRACT ADMINISTRATION: Administration of the purchase order is a joint responsibility of the TxDOT Contract Administrator and TxDOT Purchasing. TxDOT Purchasing staff will be responsible for administering the contractual business relationship with the vendor.
- 28.1. Any proposed changes to work to be performed, whether initiated by TxDOT or the vendor, must receive final written approval in the form of a Purchase Order Change Notice signed by the authorized TxDOT purchasing agent.

- 28.2. Upon issuance of purchase order, TxDOT will designate an individual who will serve as the Contract Manager and point of contact between the agency and the vendor. The Contract Manager does not have any express or implied authority to vary the terms of the purchase order, amend the purchase order in any way or waive strict performance of the terms or conditions of the purchase order. This individual's contract management and contract administration responsibilities include, but are not limited to:
  - 28.2.1. Monitoring the vendor's progress and performance and ensuring services conform to established specification requirements.
  - 28.2.2. Managing the financial aspects of the contract including approval of payments.
  - 28.2.3. Meeting with the vendor as needed to review progress, discuss problems, and consider necessary action.
- 28.3. Identifying a breach of contract by assessing the difference between contract performance and non-performance.
- 28.4. Other areas as identified by the Comptroller of Public Accounts Contract Management Guide, latest edition.